

REPORT
ON THE
TOWN OF CHRISTIANSBURG—COUNTY OF MONTGOMERY
ANNEXATION ACTION



COMMISSION ON LOCAL GOVERNMENT
COMMONWEALTH OF VIRGINIA

REPORT ON THE
TOWN OF CHRISTIANSBURG - COUNTY OF MONTGOMERY
ANNEXATION ACTION

Commission on Local Government

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TABLE OF CONTENTS

PROCEEDINGS OF THE COMMISSION 1

SCOPE OF REVIEW 4

GENERAL CHARACTERISTICS OF THE TOWN, THE COUNTY, AND
THE AREA PROPOSED FOR ANNEXATION 6

 Town of Christiansburg 6

 County of Montgomery 8

 Area Proposed for Annexation 11

STANDARDS AND FACTORS FOR ANNEXATION 12

 Need of the Town to Expand Tax Resources 13

 Need of the Town for Land for Development 16

 Adverse Impact on the County 21

 Urban Service Considerations 23

 Compliance with Applicable State Policies 64

 Community of Interest 68

 Arbitrary Refusal to Cooperate 76

 Interest of the State 77

FINDINGS AND RECOMMENDATIONS 78

 Area Recommended for Annexation 78

 Terms and Conditions of Annexation 81

CONCLUDING COMMENT 85

APPENDIX A - Statistical Profile of the Town of Christiansburg,
County of Montgomery, and the Area Proposed for
Annexation.

APPENDIX B - Map of the Town of Christiansburg and the Area Proposed
for Annexation.

APPENDIX C - Technical Comment on the Use of the Chi-square Test

TOWN OF CHRISTIANSBURG - COUNTY OF MONTGOMERY
ANNEXATION ACTION

PROCEEDINGS OF THE COMMISSION

On May 9, 1986 the Town of Christiansburg filed notice with the Commission on Local Government, pursuant to the provisions of Section 15.1-945.7(A) of the Code of Virginia, of its intention to petition for the annexation of 7.96 square miles of territory in Montgomery County. In accordance with the Commission's Rules of Procedure, the Town's notice was accompanied by data and exhibits supporting Christiansburg's proposed annexation.¹ Further, as required by statute, the Town concurrently gave notice of its annexation action to Montgomery County and to 32 other local governments with which it shared functions, revenue, or tax sources.² Furthermore, the Town's notice to the Commission advised that Christiansburg would "continue to work towards an amicable resolution of [the annexation issue] with the appropriate officials of Montgomery County."³

On June 9, 1986 the Commission met with representatives of the Town of Christiansburg and Montgomery County for purposes of making preliminary arrangements for its review of the Town's annexation action and to offer mediation assistance in negotiations between the jurisdictions. At that meeting the Town of Blacksburg requested the Commission to recognize that jurisdiction as an interested party in the Christiansburg annexation proceedings and to defer the establishment of a schedule for

¹Town of Christiansburg, Town of Christiansburg Annexation Notice and Supporting Data (hereinafter cited as Christiansburg Annexation Notice), 2 vols., Apr. 1986. The second volume (Vol. II) of the submissions consisted of a set of maps depicting features of the Christiansburg area relevant to the annexation issue.

²Sec. 15.1-945.7(A), Code of Va.

³This statement appeared in a resolution adopted by the Town Council on April 29, 1986. The resolution is set forth in

review of the annexation issue for a 30-day period in order that Blacksburg might have an opportunity to determine its response to Christiansburg's annexation action. Montgomery County also requested at that meeting that the Commission defer scheduling its review of the annexation action in order to provide the County with additional time to negotiate with Christiansburg prior to preparation for adversarial proceedings. Pursuant to those requests, the Commission announced that it would defer its review process, as authorized by law, for a 60-day period and would postpone establishing a schedule for its review of the proposed annexation until its next meeting.⁴

Consistent with that determination, the Commission met with representatives of the three jurisdictions on June 9, 1986, received a status report on their interlocal discussions, and, following receipt of that report, established a schedule for its review of the annexation issue.⁵ The schedule established by the Commission called for the submission of responsive materials by Montgomery County and the Town of Blacksburg by October 8, 1986, for oral presentations and a public hearing on the annexation issue during the period October 20-22, 1986,

Christiansburg Annexation Notice, Vol. I, pp. 4-6.

⁴The Commission is authorized by Sec. 15.1-945.7(A) of the Code of Virginia to extend by its own volition the date for its submission of a report by 60 days.

⁵Representatives of the Town of Christiansburg indicated at that meeting that the Town Council desired to continue to negotiate regarding the annexation issue but that the Council requested the Commission to proceed with the establishment of a schedule for its review of the proposed annexation. Representatives of the Town of Blacksburg advised that Blacksburg would not initiate an annexation action of its own at the current time but that the Town would oppose, in part, the annexation proposed by Christiansburg. The position of Blacksburg on the proposed annexation is set forth in Town of Blacksburg, Response to Christiansburg Annexation Filing (hereinafter cited as Blacksburg Response), 3 vols., Sep. 1986. In its submissions to the Commission, Blacksburg indicated that it would oppose Christiansburg's annexation of that portion of Parcel A north of State Route 114 but that it would "not take a position on other areas of Montgomery County that Christiansburg proposes to annex." (Blacksburg Response, Vol. I, p. 5.)

and for the submission of the Commission's report by January 23, 1987.⁶

On September 8, 1986 the Commission received notice from Christiansburg that the Town wished to invoke Section 15.1-945.7(E) of the Code of Virginia with respect to its negotiations regarding the annexation issue. In that notice to the Commission, Christiansburg advised that, notwithstanding its invocation of Section 15.1-945.7(E), it did not request "any change in the format of negotiations that had been occurring between the Town, Montgomery County, and Blacksburg."⁷ On September 30, 1986 the Commission met with representatives of the three jurisdictions in response to Christiansburg's invocation of the referenced statute. At that meeting the Commission designated Drs. James Wolf and Orion White of Virginia Polytechnic Institute and State University (VPI&SU) as independent mediators to assist the parties in their negotiations, but it reaffirmed its previously adopted schedule which called for hearings on the annexation action in October 1986.⁸

Consistent with its adopted schedule, the Commission toured relevant areas and facilities in the Town of Christiansburg, Montgomery County, and the Town of Blacksburg on October 19, 1986 and received oral testi-

⁶The date established for the issuance of the Commission's report exceeded by approximately 16 days the 60-day extension which the Commission was authorized to take by its own volition. The Town of Christiansburg agreed to this added 16-day delay upon the condition that the Commission would reduce, by a comparable period, any subsequent request made to the court for an extension of the reporting deadline. The Commission indicated its acceptance of the condition raised by the Town of Christiansburg for the added extension in the reporting deadline. In January 1987 the parties agreed to an extension of the Commission's reporting deadline until February 6, 1987.

⁷Carter Glass, IV, Special Counsel, Town of Christiansburg, letter to staff of Commission on Local Government, Sep. 5, 1986.

⁸As a result of the Town of Christiansburg's invocation of Section 15.1-945.7(E), Montgomery County petitioned the Commission to defer its administrative hearings on the annexation issue during the period of negotiations under that statute. The Town of Christiansburg, however, opposed any further postponement in the Commission's administrative proceedings. Since the Commission did not interpret the invocation of Section 15.1-945.7(E) as mandating a delay in its

mony from the parties on the annexation issue on October 20-22, 1986.⁹ In addition, the Commission solicited comment from other potentially affected political subdivisions and from the public. Each locality receiving notice of Christiansburg's annexation action was invited by the Commission to submit testimony for its consideration. Further, the Commission held a public hearing, which was advertised in accordance with the requirements of Section 15.1-945.7(B) of the Code of Virginia, on the evening of October 21, 1986 at the National Guard Armory in Christiansburg. The public hearing was attended by approximately 35 persons and produced testimony from 16 individuals. In order to permit receipt of additional public comment, the Commission agreed to keep open its record for written submissions from the public through December 21, 1986.

SCOPE OF REVIEW

The Commission on Local Government is directed by statute to review proposed annexations and other local boundary change issues prior to their being presented to the courts for ultimate disposition. Upon receipt of notice of such a proposed action, the Commission is directed "to hold hearings, make investigations, analyze local needs" and to submit a report containing findings of fact and recommendations to the

administrative review, and since the Commission had already utilized fully its authority to postpone unilaterally its proceedings, it adhered to the schedule which it had previously adopted for review of the annexation issue.

⁹In addition to presentations received from the three jurisdictions, the Commission received testimony from the Montgomery County Citizens Opposing Christiansburg Annexation, who were opposed to the annexation of the Belmont Community in the northern portion of Parcel A, and from a second citizens group which was opposed to the annexation of property totaling 1.59 square miles of territory in that portion of Parcel A located between Crab Creek and U. S. Highway 11 West. The Commission recognized both citizen groups as parties to its proceedings and granted time to each for presentations during its hearings.

affected local governments.¹⁰ The Commission's report on each proposed action must be based upon, as required by Section 15.1-945.7(B) of the Code of Virginia, "the criteria and standards established by law" for consideration in such actions.

The criteria and standards prescribed for consideration in annexation cases are set forth in Chapter 25 of Title 15.1 of the Code of Virginia, principally in Section 15.1-1041. That statute directs the annexation court, and thus the Commission, to determine "the necessity for and expediency of annexation." As a guide in determining such "necessity and expediency," Section 15.1-1041 requires the reviewing entity to consider "the best interests of the people of the county and the [annexing municipality], services to be rendered and needs of the people of the area proposed to be annexed, the best interests of the people in the remaining portion of the county, and the best interests of the State in promoting strong and viable units of government." This statute specifies a number of fiscal concerns, public service functions, community of interest factors, and State policies which are to be evaluated in considering the best interests of the parties and the State. Since the Town of Christiansburg may be precluded under State law from initiating any subsequent annexation action for a decade after the institution of the court's review in this case, the analysis of this proposed annexation must involve not only an appraisal of current circumstances, but also a reasonable projection of relevant conditions and factors.

The analysis and recommendations which follow in this report are based upon the Commission's collective experience in local government administration and operations. It is the intention of the Commission to leave questions of law for appropriate resolution elsewhere. The Commission trusts that this report will be of assistance to the parties, the court, the citizens of the area, and the Commonwealth generally.

¹⁰Sec. 15.1-945.7(A), Code of Va.

GENERAL CHARACTERISTICS OF THE TOWN, THE COUNTY, AND
THE AREA PROPOSED FOR ANNEXATION

TOWN OF CHRISTIANSBURG

The Town of Christiansburg was incorporated in 1833 by special act of the General Assembly. As a result of its consolidation with the former Town of Cambria in 1964 and two subsequent annexations, Christiansburg has grown to its present-day size of 7.96 square miles. The Town's last boundary expansion occurred in 1975, when it annexed an area of 3.03 square miles of territory in Montgomery County.¹¹

With respect to its population, the data indicate that between 1970 and 1980 the Town's populace increased from 7,858 to 10,345 persons, or by 31.7%.¹² A considerable portion (43.1%) of that increase, however, was the result of the 1975 annexation, which added 1,072 persons to the Town's population.¹³ Official estimates for 1984 place Christiansburg's population at 11,657 persons, reflecting a growth in the Town's populace of 12.7% since the preceding decennial census.¹⁴ Based on the 1984 population estimate and its current land area of 7.96 square miles, Christiansburg has a population density of 1,464 persons per square mile.¹⁵

In terms of the nature of its population, the evidence reveals that the Town's populace is somewhat older and generally has lower income than that of the State as a whole. Data indicate that, as of 1980, the median age of Christiansburg's residents was 31.3 years, a statistic above that for the State overall (29.8 years).¹⁶ Further, the per-

¹¹Christiansburg Annexation Notice, Vol. I, p. 28.

¹²Ibid., p. 30.

¹³Ibid.

¹⁴Ibid.

¹⁵See Appendix A for a statistical profile of the Town of Christiansburg, Montgomery County, and the area proposed for annexation.

¹⁶U. S. Department of Commerce, Bureau of the Census, 1980 Census of Population, General Population Characteristics, Virginia, Table 14.

centage of the Town's 1980 population age 65 and over was 11.0%, or slightly in excess of the comparable figure for the State generally (9.5%).¹⁷ In terms of personal earnings, statistics reveal that, as of 1979 (the latest year for which such data are available), the median family income in Christiansburg was \$16,668, or 83.3% of that for the Commonwealth as a whole (\$20,018).¹⁸

In terms of the Town's present physical development, 1986 land use data reveal that 40% of Christiansburg's total area is devoted to residential development, 10% is engaged in commercial enterprise, 4% is committed to industrial activity, 10% is utilized for public or semi-public purposes, while 36% (1,830 acres) remains wooded, vacant, or engaged in agricultural production.¹⁹ With respect to the 1,830 acres of undeveloped property, however, the Town has submitted data indicating that 482 acres of the total are located in the floodplain or on slopes greater than 20%. The exclusion of such property leaves Christiansburg with 1,348 acres, or 26% of its total area, vacant and generally available for development.²⁰

In regard to Christiansburg's regional significance, it should be noted that the Town is one of Montgomery County's two principal urban areas and constitutes one of the County's principal employment centers. Christiansburg is also a source of urban services to a significant percentage of the County's population, and it is the site of numerous public offices and commercial facilities which serve residents of the general area.

¹⁷Ibid.

¹⁸U. S. Department of Commerce, Bureau of the Census, 1980 Census of Population, General Social and Economic Characteristics, Virginia, Tables 61, 161.

¹⁹Christiansburg Annexation Notice, Vol. I, p. 145.

²⁰Ibid. The Commission notes that a portion of the vacant land within the Town which is free of environmental restrictions is located within agricultural and forestal districts, thereby restricting its development potential.

COUNTY OF MONTGOMERY

The County of Montgomery was created in 1777 from territory formerly a part of Botetourt, Pulaski, and Fincastle Counties.²¹ Between 1970 and 1980 the County's population increased from 47,157 to 63,516 persons, or by 34.7%.²² Official estimates for 1984 place the County's population at 64,800 persons, an increase of 2.0% since the preceding decennial census.²³ On the basis of the 1984 population estimate and a land area of 392.6 square miles, the County has an overall population density of 165.1 persons per square mile.²⁴

It is significant to note, however, that, according to the 1984 estimate, approximately 42,100 persons, or 64.8% of the County's total population, lived within the boundaries of Montgomery County's two incorporated towns. Exclusive of the population and land area of the two incorporated towns, Montgomery County had, as of 1984, an overall population density of 62.5 persons per square mile.²⁵

²¹J. Devereux Weeks, Dates of Origin of Virginia Counties and Municipalities, (Charlottesville: Institute of Government, University of Virginia, 1967). The County of Fincastle became extinct in 1776 when it was divided among Montgomery, Washington, and Kentucky Counties. The latter County presently forms a portion of the State of Kentucky. [Emily J. Salmon, ed., Hornbook of Virginia History, (Richmond: Virginia State Library, 1983), p. 109.]

²²U. S. Department of Commerce, Bureau of the Census, 1980 Census of Population, Number of Inhabitants, Virginia, Table 4. The population growth in Montgomery County during the 1970s was reduced by the City of Radford's annexation of 337 persons as of December 31, 1976.

²³Julia H. Martin and David W. Sheatsley, Estimates of The Population of Virginia Counties and Cities: 1984 and 1985 (Charlottesville: Tayloe Murphy Institute, University of Virginia, 1986), Table 1. The County's population growth between 1980 and 1984 was affected by the annexation of 272 persons by the City of Radford on December 31, 1980.

²⁴The County's land area is given in County of Montgomery, Response of County of Montgomery To the Town of Christiansburg's Notice of Intent to Petition For Annexation (hereinafter cited as Montgomery County Response), 2 vols., Vol. I, Tab 2, Table 2.

²⁵Between 1980 and 1984 the population growth in the unincorporated portion of Montgomery County was estimated to be 276 persons, or

With respect to the nature of its population, various statistical indices disclose that the County's overall population is significantly younger but has lower income than that of the State generally.²⁶ Data indicate that, as of 1980, the median age of residents of Montgomery County was 23.3 years, while that of the State as a whole was 29.8 years.²⁷ Further, statistics reveal that, as of 1980, approximately 6.9% of the County's population was age 65 or over, a percentage markedly less than that for the State overall (9.5%).²⁸ In terms of earnings, the estimated median family income for County residents in 1979 (the latest year for which such data are available) was reported as \$17,084, or 85.3% of the comparable figure for the Commonwealth generally (\$20,018).²⁹

While, as noted above, Montgomery County contains two of the Commonwealth's largest towns, it remains, in terms of its general development, largely rural and sparsely populated. Land use data for 1982 reveal that, including the territory within the two incorporated municipalities, only 3% of the County's total area was devoted to residential usage, 1.2% was engaged in commercial or industrial activity, 3.5% was committed to public or semi-public purposes, while 91.6% remained wooded, vacant, or engaged in agricultural production.³⁰ Further,

only 1.2%.

²⁶The number of students in Blacksburg significantly affects the County's overall population profile. In 1980 approximately 8.8% of the population of the unincorporated portion of the County was age 65 or over. (Christiansburg Annexation Notice, Vol. I, p. 152.)

²⁷1980 Census of Population, General Population Characteristics, Virginia, Table 14. Data for Montgomery County include information concerning the residents of incorporated jurisdictions.

²⁸Ibid.

²⁹1980 Census of Population, General, Social and Economic Characteristics, Virginia, Tables 61, 171. County data include information for those persons residing in the two incorporated towns.

³⁰County of Montgomery, Montgomery County Comprehensive Plan, 1983.

1982 data published by the U. S. Bureau of the Census reveal that Montgomery County then contained 565 farms, collectively cultivating 101,783 acres.³¹ Moreover, according to information published in 1986 by the U. S. Forest Service, there were 146,183 acres of forest land in Montgomery County.³²

While the above data attest to the County's overall rural nature, recent employment statistics do indicate that the County has developed a diversified economy. Employment statistics for the quarter ending December 31, 1985 disclose that there were 26,662 positions of nonagricultural wage and salary employment located in the County.³³ Nearly 49% of those positions were either in the manufacturing sector (7,631) or in retail trade activity (5,432).³⁴ Much of this nonagricultural wage and salary employment is concentrated, however, within the boundaries of the County's incorporated towns.

³¹U. S. Department of Commerce, Bureau of the Census, 1982 Census of Agriculture, Virginia, Table 1, p. 128. Dairy products constituted the largest component of agricultural activity in the County. It is significant to note that, as of 1983, the County had 10 agricultural and forestal districts as authorized by Chapter 36 of Title 15.1, Code of Va. Those districts encompassed collectively more than 30,000 acres. (Montgomery County Comprehensive Plan.)

³²U. S. Department of Agriculture, Forest Service, Forest Statistics For The Southern Mountains of Virginia, 1986, Apr. 1986, Table I. Forest land is defined by the Forest Service as being at least 16.7% stocked by forest trees of any size, or formerly having had such tree cover, and not developed currently for nonforest use. Such property is also included in the Census Bureau's definition of farm lands.

³³Virginia Employment Commission, Covered Employment and Wages in Virginia for Quarter Ending December 31, 1985 - Montgomery County.

³⁴Ibid. The largest number of nonagricultural wage and salary employment positions in the County was in governmental functions (8,198).

AREA PROPOSED FOR ANNEXATION

The area proposed for annexation by the Town of Christiansburg embraces three parcels - Parcel A, situated west of Christiansburg's present corporate limits and constituting the largest segment of the area proposed for annexation; Parcel B, located east of the Town's corporate boundary, extending along U. S. Routes 11 and 460; and Parcel C, a small segment of territory north of Christiansburg and adjacent to the intersection of State Route 643 and the U. S. Route 460 Bypass.³⁵ Those parcels collectively embrace 7.96 square miles of territory containing a 1985 estimated population of 2,504 persons and 1985 assessed property values of \$63.4 million.³⁶ Those figures reveal that, as of the dates indicated, the area proposed for annexation encompassed 2.0% of Montgomery County's total land area, 3.9% of its total population, and 5.6% of its total assessed property values.³⁷ Based on its area and the 1985 population estimate, the area proposed for annexation has a population density of 315 persons per square mile, or more than five times that of the unincorporated portion of Montgomery County generally (62.5 persons/square mile).

In terms of current physical development, the area proposed for annexation contains approximately 13 residential subdivisions, a shopping mall currently under construction, a nonoperating industrial facility (Corning Glass Works), and significant agricultural proper-

³⁵See Appendix B for map of the area proposed for annexation by the Town of Christiansburg.

³⁶Christiansburg Annexation Notice, Vol. I, pp. 30-32. The assessed property values include those for real estate, public service corporation, personal property, machinery and tools, and mobile homes. The values for real estate reflect use value assessment. (Glass, letter to staff of Commission on Local Government, Sep. 4, 1986.) Montgomery County estimated the 1986 population of the area proposed for annexation to be 2,709 persons. (Montgomery County Response, Vol. I, Tab 2, Table 2.)

³⁷Christiansburg Annexation Notice, Vol. I, pp. 30-32.

ties. A majority of the area proposed for annexation lies in a sector identified by the County's comprehensive plan as an "urban expansion area." Further, major portions of the territory are presently served by utility lines owned by the Town of Christiansburg, the Town of Blacksburg, or the Blacksburg - Christiansburg - VPI Water Authority.

The extent and character of development in the area proposed for annexation are revealed by 1985 land use data which indicate that 14.2% of the total area is devoted to residential purposes, 1.6% is committed to commercial enterprise, 3.0% is utilized for industrial activity, while 81.2% remains vacant, wooded, or engaged in agricultural purposes.³⁸ Exclusive of the vacant land located in the floodplain or on slopes of 20% or more (413.8 acres) and the acreage presently in agricultural and forestal districts (699 acres), the area proposed for annexation contains approximately 3,026 acres of property vacant and generally suited for development.³⁹ In sum, the area proposed for annexation presently contains significant development and other property which is expected to experience notable growth in future years.

STANDARDS AND FACTORS FOR ANNEXATION

As noted previously, the Code of Virginia directs this Commission, and ultimately the court, to consider in each annexation issue the best interest of the municipality, the area proposed for annexation, the remaining portion of the county, and, in addition, the best interests of the State. Further, the annexation statutes prescribe a series of factors for consideration in the evaluation of the best interests of each

³⁸Glass, letter to staff of Commission on Local Government, Sep. 4, 1986. County land use statistics for the area proposed for annexation differ slightly from those calculated by the Town. The County does report, however, that only 68.8% of the proposed area remains vacant, wooded or in agricultural usage. (Montgomery County Response, Vol. I, Tab 20, Table 5.)

³⁹Glass, letter to staff of Commission on Local Government, Sep. 4, 1986.

of the parties. The following sections of this report constitute the Commission's analysis of these various considerations.

NEED OF THE TOWN TO EXPAND TAX RESOURCES

Various data indicate that the Town of Christiansburg is a fiscally sound community whose residents bear a comparatively moderate local tax burden. The evidence reveals that in relation to six other Virginia towns with populations between 6,000 and 14,000 persons and located in nonmetropolitan areas of the State, total general property tax collections in Christiansburg in FY1984-85 were \$51.96 per capita, or 93.0% of the average (\$55.86) of the other six municipalities.⁴⁰ With respect to all local-source revenues for FY1984-85, a comparative analysis of the same towns reveals that Christiansburg collected \$187.20 per capita, or 97.5% of the average for the other six municipalities (\$191.93).⁴¹ These data suggest that Christiansburg does not bear an inordinate local fiscal burden in relation to Virginia towns of comparable size and location.

An analysis of expenditure data for Christiansburg and the above-cited set of Virginia towns provides a similar fiscal profile. Data reveal that total maintenance and operation expenditures by Christiansburg in FY1984-85 were \$201.66 per capita, or 74.0% of the average of that by the other six municipalities (\$272.48).⁴² In

⁴⁰Auditor of Public Accounts, Commonwealth of Virginia, Comparative Cost of Local Government: Year Ended June 30, 1985, Exh. B. The six towns included in this comparative analysis with Christiansburg were Front Royal (Warren County), Pulaski (Pulaski County), Wytheville (Wythe County), Farmville (Prince Edward County), Marion (Smyth County), and Culpeper (Culpeper County). Christiansburg's total general property tax revenues per capita in FY1984-85 were 64.8% of the weighted mean of that for all the 30 towns covered in the report by the Auditor of Public Accounts (\$80.22).

⁴¹Ibid., Exh. A. Christiansburg's total local-source revenues per capita in FY1984-85 were 80.4% of the weighted mean of that for the 30 towns covered in the Auditor's report.

⁴²Ibid., Exh. A. The Town of Christiansburg's total per capita expenditures for maintenance and operation in FY1984-85 were 69.94% of the weighted average of that of the 30 towns covered in the Auditor's

addition, the amount of Christiansburg's outstanding debt suggests that the Town currently confronts comparatively modest debt service obligations. Statistics for FY1984-85 reveal that Christiansburg carried an unfunded, long-term debt obligation of \$120.00 per capita, or only 46.3% of the average of that carried of the other six towns utilized in our survey (\$259.00).⁴³ In sum, the Town of Christiansburg's expenditure burden, according to the most recent data available, is comparatively modest and has permitted that Town to impose upon its residents a moderate fiscal burden for municipal services.

It should be noted, however, that Christiansburg's residents do bear a significantly greater local tax burden than do residents of the unincorporated portions of Montgomery County. During FY1984-85 residents of the Town of Christiansburg contributed, not only to the local-source revenues collected by Montgomery County (\$240.64 per capita), but also to the local-source revenues collected by the Town (\$166.13 per capita).⁴⁴ Thus, on the basis of this measure, residents of the Town of Christiansburg bore a local fiscal burden of \$406.77 in FY1984-85, or 169.0% of that borne by residents of the unincorporated portion of Montgomery County.

In terms of Christiansburg's future fiscal prospects, several considerations should be noted. First, the data indicate that between 1980 and 1985 the true value of real estate increased within the municipality by 19.6%, a growth virtually identical to that in the County as a

report (\$288.33).

⁴³Ibid., Exh. G. The Town of Christiansburg's long-term, unfunded debt per capita (\$120.00) in FY1984-85 was 37.6% of the weighted average of that for the 30 towns listed in the Auditor's report (\$319.00).

⁴⁴The local-source revenues of general government, as defined by the Virginia Auditor of Public Accounts, exclude payments from federal and State authorities, non-revenue receipts, and inter-fund transfers.

whole (20.6%).⁴⁵ Thus, data for the first half of the current decade reveal that Christiansburg has experienced a growth in real property values commensurate with that of its general area.

Further, the evidence does not suggest that Christiansburg has entered a period of diminished commercial and industrial activity. Indeed, during the period from 1980 through 1985 the Town experienced significantly more commercial and industrial construction than did the unincorporated portions of Montgomery County. The data reveal that during that six-year period Christiansburg issued 260 building permits (valued at \$14.0 million) for various forms of commercial and industrial construction, while during the same span of years the County issued only 105 permits (valued at \$2.1 million) for such activity in the unincorporated portions of its jurisdiction.⁴⁶ While future commercial and industrial construction in Christiansburg will be affected by many factors, statistics for the first six years of the present decade do not reveal a pattern of diminished development within that municipality.

It is important to note here, however, that the New River Valley Mall currently under construction in the area proposed for annexation can be expected to have a notable impact on retail activity and, consequently, on commercial property values in the Christiansburg area. A consultant for Christiansburg has contended, and we agree, that the new mall will reduce the competitiveness of commercial sites in the Town and adversely affect their value. The consultant testified

⁴⁵Christiansburg Annexation Notice, Vol. I, p. 146. The cited values do not include those attributable to public service corporation property. Christiansburg has calculated that, on a per capita basis, true real estate values in the Town increased between 1980 and 1985 by 6.1%, while those in the County overall grew by 17.9%. The increase in per capita true real estate values in the unincorporated portion of the County during this same period was 19.9%. (*Ibid.*) The true value for real estate in the Town was determined using the median assessment ratio calculated for Montgomery County. Statistics for 1985 for the Town and County were extrapolated from 1984 data.

⁴⁶John Lemley, Town Manager, Town of Christiansburg, letter to staff of Commission on Local Government, Dec. 23, 1986; and Tunstall

that, based on his research regarding the impact of malls in similar environments, the New River Valley Mall could be expected to displace approximately 12-15% of Christiansburg's current retail activity.⁴⁷

In sum, statistics indicate that the Town of Christiansburg is fiscally sound, bears a comparatively moderate municipal tax burden, and has experienced development in recent years reflecting a vigorous economy. The proposed development on its northern boundary does pose, however, some concerns for Christiansburg's fiscal future.

NEED OF THE TOWN FOR LAND FOR DEVELOPMENT

As indicated earlier, the Town of Christiansburg currently has 1,830 acres, or 36% of its total land area, vacant or engaged in agricultural production.⁴⁸ Of that vacant land, however, 482 acres are located in the floodplain or on slopes greater than 20%.⁴⁹

Exclusive of such property restricted in its development potential by major environmental factors, Christiansburg retains 1,348 acres, or 26% of its total land area, vacant and environmentally suited for development.⁵⁰ It is important to note that a considerable portion of this vacant land is limited in its development potential by parcel

C. Powers, Planning Director, County of Montgomery, letters to staff of Commission on Local Government, Dec. 12, 1986 and Jan. 6, 1987.

⁴⁷Testimony of Dr. Thomas Muller, Consultant, Town of Christiansburg, Transcript of Hearings before Commission on Local Government, (hereinafter cited as Transcript), October 20-22, 1986, 3 Vols., Vol. II, pp. 69-70. Concerning specific sectors of the Town's retail market potentially affected by the mall, Dr. Muller estimated that the sale of general merchandise, apparel, furniture, and related items within Christiansburg would decline by 40% to 50% from current levels after the mall opens. (See Muller, "Projected Fiscal Impact of New River Valley Mall on Christiansburg," Attachment 6, Glass, letter to staff of Commission on Local Government, Nov. 21, 1986.)

⁴⁸Christiansburg Annexation Notice, Vol. I, p. 145.

⁴⁹Ibid.

⁵⁰Ibid. A portion of these 1,348 acres is located within an agricultural and forestal district and, accordingly, is currently unavailable for development.

size, poor access to transportation facilities, multiple ownership, or by adjacent land uses. While this Commission recognizes that such factors are not absolute barriers to development, they are considerations which constitute significant impediments which render vacant sites within the Town less attractive to prospective developers. Based on such considerations, and for the reasons set forth below, the Commission concludes that the Town of Christiansburg does have a need for additional land for future development.

With respect to Christiansburg's prospects for future industrial growth, the data reveal that the Town contains 250.7 acres of vacant property zoned for industrial purposes.⁵¹ Of this total, however, only 166.9 acres are environmentally suited for development and are located on sites of ten acres or more, the minimum parcel size generally sought for major industrial activity.⁵² The remaining acreage which is vacant and zoned for industrial usage is located on tracts of less than ten acres (17.1 acres) or is restricted in its development potential by environmental factors (67.0 acres).⁵³

It should be noted that Christiansburg has experienced some industrial growth in recent years. Between January 1, 1980 and December 31, 1985 the Town issued five building permits valued at approximately \$1.9 million for industrial construction.⁵⁴ In

⁵¹Glass, letter to staff of Commission on Local Government, Nov. 10, 1986.

⁵²Ibid. State economic development officials have suggested that sites proffered for industrial usage should contain a minimum of ten acres. [See Virginia Division of Industrial Development (now the Virginia Department of Economic Development), Are You Ready? A Guide to Community Preparedness for Industrial Development in Virginia, p. 14.]

⁵³Glass, letter to staff of Commission on Local Government, Nov. 10, 1986.

⁵⁴Lemley, letter to staff of Commission on Local Government, Dec. 23, 1986.

contrast, Montgomery County issued nine building permits for such construction, valued at \$274,000, during the same span of years.⁵⁵ Thus, during the first half of the present decade, industrial sites within Christiansburg have competed successfully with those in the unincorporated portion of the County.

With respect to Christiansburg's prospects for future commercial growth, statistics indicate that the Town retains 235.0 acres of vacant property environmentally suited for development and zoned for commercial usage.⁵⁶ Of that total, 159.5 acres are located on tracts of three acres or more, thus possessing increased development potential.⁵⁷ As in the case of industrial activity, Christiansburg has fared well in relation to the unincorporated portions of Montgomery County in terms of commercial development during the first half of the present decade. Statistics indicate that between January 1, 1980 and December 31, 1985 the Town issued 255 building permits, valued at approximately \$12.1 million, for various forms of commercial construction.⁵⁸ During the same period of time, Montgomery County issued 96 building permits for commercial construction, valued at approximately \$1.8 million.⁵⁹ In sum, while the Commission has been advised that at least 11 businesses or industries have terminated their operations in Christiansburg in recent years, the available data suggest that the Town has been comparatively successful in its efforts

⁵⁵Powers, letters to staff of Commission on Local Government, Dec. 12, 1986 and Jan. 6, 1987.

⁵⁶Glass, letter to staff of Commission on Local Government, Nov. 10, 1986.

⁵⁷Ibid.

⁵⁸Lemley, letter to staff of Commission on Local Government, Dec. 23, 1986. These permits were issued for new construction, alterations, and additions.

⁵⁹Powers, letters to staff of Commission on Local Government, Dec. 12, 1986 and Jan. 6, 1987. The commercial permits reflect alterations and additions to existing establishments as well as construction of new facilities.

to attract new industrial and commercial construction.⁶⁰

Finally, with respect to the Town's need for land for future residential development, the Commission notes that Christiansburg contains 157.8 acres of vacant property environmentally suited for development and zoned for various categories of residential usage.⁶¹ Of this total, 128.1 acres are located on tracts of three acres or more, thereby increasing their prospects for significant development.⁶² In terms of residential construction within Christiansburg during the first half of the current decade, statistics disclose that Christiansburg issued 527 permits for various forms of residential construction, valued at approximately \$10.7 million.⁶³ During the same span of years Montgomery County issued 2,112 permits, valued in excess of \$31.8 million, for various categories of residential construction.⁶⁴ It is relevant to note that of the County's residential building permits issued during the period in question, 154 were for construction within the area proposed for annexation by Christiansburg.⁶⁵

⁶⁰Glass, letter to staff of Commission on Local Government, Sep. 4, 1986. The New River Valley Mall can be expected to have a significant effect on future commercial activity in Christiansburg. The Commission notes that Leggett and Sears will be anchor stores at the new mall. The new stores which will be constructed by those firms at the mall may well affect the continued operation of the retail facilities which they presently operate in Christiansburg.

⁶¹Glass, letter to staff of Commission on Local Government, Jan. 7, 1987.

⁶²Ibid.

⁶³Lemley, letter to staff of Commission on Local Government, Dec. 23, 1986. The total value of the permits issued include that attributable to mobile homes.

⁶⁴Powers, letters to staff of Commission on Local Government, Dec. 12, 1986 and Jan. 6, 1987. The total value of the permits issued does not include that attributable to mobile homes.

⁶⁵Montgomery County Response, Vol. I, Tab 20, Table 13.

A closer examination of building permit data for the period in question reveals that the area proposed for annexation by Christiansburg has experienced a notable degree of single-family residential construction. Between 1980 and 1985 Montgomery County issued 135 building permits for single-family residential construction within that area, with the number varying annually between 19 and 48 permits.⁶⁶ In contrast, the Town of Christiansburg issued 190 permits during the same span of years for single-family residential construction, with the number of permits issued not exceeding 39 per year.⁶⁷ Accordingly, the area proposed for annexation has experienced a degree of single-family residential development in recent years that, based on the number of building permits issued, is 71.1% of that which occurred within Christiansburg. Moreover, given the relative acreage available for residential development, it is reasonable to conclude that the area proposed for annexation will experience an increasing share of new residential construction in the Christiansburg environs in future years.

In regard to future residential construction in the Christiansburg area, we wish to observe, as we have done in previous reports, that the general viability of a community rests, in part, upon its capacity to attract and retain a heterogeneous population. A prerequisite for the retention of such a population is, in our judgment, a locality's ability to offer an array of housing alternatives to prospective residents. The absence of moderately priced single-family residential alternatives can result in the loss of young families which contribute significantly to a community's economic, social, and civic life.

With respect to the above-mentioned concern, we note that, as of

⁶⁶Ibid. The total value of the permits issued for single-family residential construction within the area proposed for annexation was approximately \$4.6 million. Thus, the average value of the permits issued for single-family residential construction in the area proposed for annexation was \$34,341.

⁶⁷Lemley, letter to staff of Commission on Local Government, Dec. 23, 1986. The total value of the permits issued by the Town of Christiansburg for single-family residential construction was approxi-

1980, 11.0% of Christiansburg's population was age 65 and over, while 8.8% of the population of the unincorporated portions of Montgomery County was in that age category.⁶⁸ Moreover, during the decade of the 1970s, the number of persons under the age of 18 and residing in married couple families increased in Christiansburg by 1.5%, while the number of such persons in the unincorporated portions of Montgomery County increased during the same period by 112.5%.⁶⁹ These statistics suggest a changing population profile in the Town and County. The availability of land for future residential development will be a factor in Christiansburg's ability to maintain the younger segment of its population.

While the various statistics cited above indicate that the Town of Christiansburg has, during the first half of the present decade, shared fully in the growth of its general area, there is evidence suggesting that the Town will confront some difficulty in sharing in the commercial and residential growth in its vicinity in the years ahead. Accordingly, this Commission finds that Christiansburg does have a need for additional land to enable it to continue to share in the general growth of its area.

ADVERSE IMPACT ON THE COUNTY

The annexation proposed by the Town of Christiansburg would, if ultimately sanctioned by the court, initially reduce to a modest degree the County's local tax revenue. While all properties annexed by Christiansburg would remain subject to taxation by Montgomery County, the proposed annexation would diminish initially County receipts from some of its minor revenue sources. According to calculations by the County, the proposed annexation would result in a

mately \$6.3 million. The average value of the permits issued by the Town was \$33,391.

⁶⁸Christiansburg Annexation Notice, Vol. I, p. 152.

⁶⁹1980 Census of Population, General Population Characteristics, Virginia, Tables 35, 48; and U. S. Department of Commerce, Bureau of the Census, 1970 Census of Population, Characteristics of the Population,

constriction of County tax revenues during FY1986-87 of \$203,578.⁷⁰ Accepting as correct the County's estimate of local tax loss, the proposed annexation would reduce Montgomery County's anticipated local revenues for FY1986-87 (\$14.9 million) by 1.4%.⁷¹ This relatively modest revenue loss, coupled with the fact that Montgomery County can anticipate some expenditure reductions as a consequence of the expansion of Christiansburg's boundaries, indicate that the proposed annexation should have only a minor effect on the County's fiscal status in FY1986-87.⁷² Moreover, the extension of Town utilities and services to the area proposed for annexation should have a positive effect on the future economic development of that area, with fiscal benefits accruing to both Christiansburg and Montgomery County.⁷³ In brief, from our perspective, the proposed annexation can promote the social and economic viability of Montgomery County.

Virginia, Tables 31, 38.

⁷⁰Testimony of Walter Cox, Consultant, County of Montgomery, Transcript, Vol. III, p. 138. The revenue losses experienced by Montgomery County would be in receipts from local sales taxes (\$106,815), consumer utility and license taxes (\$75,973), and motor vehicle licenses (\$20,790). It should be observed that all local option sales taxes collected within Montgomery County, including those collected within its incorporated towns, are returned by the State to the County. One-half of such receipts are subject to distribution to the two towns based on their percentage of the County's overall schoolage population. [See Sec. 58-1-605(H), Code of Va.] Thus, the annexation proposed by Christiansburg will constrict the County's sales tax receipts only to the extent that the annexation increases the number of schoolage children in the Town.

⁷¹Town of Christiansburg, Supplemental Data, Oct. 1986, Tab 10. This set of supplemental materials submitted by the Town has been identified as Vol. IV of their submissions to the Commission.

⁷²The County has estimated that it would experience a savings in operating and capital expenditures as a result of the proposed annexation of approximately \$30,000. (Montgomery County Response, Vol. I, p. 21-1.)

⁷³The Town of Christiansburg has proposed capital expenditures of approximately \$2.3 million for various water (\$306,600) and sewer (\$1.9 million) facilities and road improvements (\$102,250) within the

In its submissions to the Commission, Montgomery County asserted that the annexation proposed by Christiansburg raised prospective concerns which should be considered in these proceedings. The County contended:

In every instance where a large town seeks to annex, it must be recognized that towns with a population in excess of 5,000 are potentially independent units of general purpose government. . . . Annexation, followed by conversion to city status by Christiansburg, Blacksburg or both would devastate Montgomery.⁷⁴

While this Commission fully recognizes the major fiscal ramifications which would be experienced by all the local governments serving residents in Montgomery County should independent city status be pursued by one of the incorporated towns, we fail to see any legal or practical basis for the inclusion of such considerations in the resolution of this annexation issue. As we have noted in other reports, the prospect of such transitions are speculative, and if such options are eventually pursued by any eligible municipality, they must be addressed within the context of the circumstances and conditions which prevail at that time.⁷⁵ Towns should not be denied the opportunity to grow, if such is otherwise justified, merely because of their eligibility for city status. Such arbitrary denial might well encourage consideration of city status where towns would otherwise consider such action undesirable.

URBAN SERVICE CONSIDERATIONS

The statutes governing municipal annexation in Virginia require consideration of the urban service needs of an area proposed for annexation, the level of services currently provided by the municipality pro-

area proposed for annexation.

⁷⁴Montgomery County Response, Vol. I, pp. 21-5--21-6.

⁷⁵The Commission notes that the transition to city status requires approval by the voters of a town as well as review by the Commission and a special three-judge court as to (1) the fiscal abi-

posing annexation and the affected county, and the relative ability of the two jurisdictions to serve the area in question. In this instance, the area proposed for annexation by the Town of Christiansburg contains 7.96 square miles (2.0% of Montgomery County's total land area) and a 1985 estimated population of 2,504 persons (3.9% of the County's population). These statistics indicate that, as noted previously, the area has a current population density of 315 persons per square mile. The population density and the prospects for future development in the area proposed for annexation create a need for urban services different from that which exists in the outlying portions of Montgomery County. The following sections of this report address these urban service considerations.

Sewerage

The Town's sewage treatment plant, which was constructed in 1980 as a regional facility to serve Christiansburg and its environs, has a rated capacity of 2.0 million gallons per day (MGD).⁷⁶ The plant currently treats an average daily flow of 1.2 MGD, leaving an excess capacity of approximately 0.8 MGD.⁷⁷ Due to operational problems experienced by the plant, however, the Town has taken steps to expand the capacity of its facility to 3.0 MGD.⁷⁸

lity of the town to function as a city, (2) the town's ability to provide appropriate urban services (including an independent school system), and (3) the impact of the proposed transition on the affected county. (See Secs. 15.1-982.8, 15.1-1003, Code of Va.) In addition, if a town were to become a city within five years following the effective date of an annexation, the town would confront the possibility of payment of significant compensation to the county. [See Sec. 15.1-1042(d), Code of Va.]

⁷⁶Testimony of John E. Lemley, Town Manager, Town of Christiansburg, Transcript, Vol. I, p. 87. The total cost of the Town's sewage treatment plant was \$6.7 million, with approximately \$1.5 million provided by the Town. The plant is located approximately 2.25 miles west of Christiansburg and discharges into Crab Creek.

⁷⁷Christiansburg Annexation Notice, Vol. I, p. 46.

⁷⁸Operational problems are experienced at the plant during the

The Town's present sewage collection system consists of 76 miles of gravity and force mains located within and beyond Christiansburg's present boundaries.⁷⁹ The Town's collection system provides service to approximately 4,260 connections, including 182 in the area proposed for annexation.⁸⁰ Moreover, it should be noted that the Town of Christiansburg is the only source of centralized sewage treatment presently available to serve the area. Residents of the area not served

winter months when cold weather inhibits the proper digestion of sludge produced in the treatment process. In analyzing solutions to that problem, Town officials determined that increasing the plant's treatment capacity would be cost effective and, further, that State regulations would require such in the near future. The Town has entered into contracts for the design of the plant expansion. The expansion is estimated to be completed by June 1988. The total cost of the project will be approximately \$2.4 million and will be borne entirely by the Town. (Testimony of Lemley, Transcript, Vol. I, pp. 87-91.)

⁷⁹Approximately 5.2 miles of Town sewage collection lines are located within the area proposed for annexation, primarily in Parcel A. In addition, the Town maintains nine sewage pump stations, which are all located within its current boundary. (Christiansburg Annexation Notice, Vol. I, pp. 43-44.) The Town also maintains sewage collection lines between the western boundary of Parcel A and its sewage treatment plant located on Crab Creek. The Commission notes that the Town's sewerage system has experienced problems resulting from the infiltration of groundwater and the inflow of stormwater, but efforts by the Town to correct such problems, which have included the expenditure of approximately \$33,000 of local funds during FY1984-85, have reduced infiltration and inflow by approximately 20%. (Christiansburg Annexation Notice, Vol. I, p. 46.) Further, the Town of Christiansburg was one of the first localities in Virginia to adopt and have approved by the Virginia Department of Health, a Local Standards and Review Program for Water and Sewer Line Extensions. Having such an approved program allows the Town to design and install certain types of sewerage lines and facilities without prior approval from the State. (Ibid., p. 45.)

⁸⁰Glass, letter to James W. Jennings, Jr., Special Counsel, County of Montgomery, Aug. 28, 1986. Town sewage collection lines are available to approximately 92% of the residences and businesses in Christiansburg. (Testimony of Lemley, Transcript, Vol. I, p. 84.) Town sewer service within the area proposed for annexation is available primarily to the residents of three subdivisions located to the west of Christiansburg in Parcel A. The Town also will provide sewage collection services to the New River Valley Mall which is under construction

by Christiansburg are dependent on individual septic tanks.⁸¹

Montgomery County began its involvement in the provision of sewage collection and treatment services to its residents in 1969 with the creation by the Board of Supervisors of the Montgomery County Public Service Authority (MCPSA).⁸² To assist the efforts of the MCPSA, the County has supplemented the revenues of that entity with general fund appropriations for both operating expenses and matching funds for grants for the construction of various water and sewer projects.⁸³ Although the MCPSA does not have any sewage collection lines within the area proposed for annexation, the Authority has an agreement with Christiansburg to receive and treat effluent emanating from a portion of that area at such time as lines are installed in

in the northern portion of Parcel A.

⁸¹The closest MCPSA sewage collection lines to the area proposed for annexation are the Plum Creek interceptor, located approximately two miles west of Parcel A adjacent to the City of Radford, and the Shawsville system, located approximately three miles east of Parcel B.

⁸²Montgomery County Response, Vol. I, pp. 4-1--4-2. The governing body of the MCPSA is composed of seven members, one from each election district in Montgomery County. At the present time, five of the seven members of the MCPSA board are also members of the County Board of Supervisors. (Testimony of Gary W. Gibson, Utilities Director, County of Montgomery, Transcript, Vol. II, p. 251.)

⁸³For FY1986-87 the County has budgeted approximately \$300,000 to fund the operating costs of the MCPSA. These monies, which will be primarily utilized for the salaries and fringe benefits of MCPSA personnel, comprise approximately 50% of the Authority's operating budget for FY1986-87. (Testimony of Gibson, Transcript, Vol. II, p. 238.) County expenditures for MCPSA capital projects have been made to address identified health hazard areas in Montgomery County. None of the MCPSA facilities, however, are located within the area proposed for annexation. (Ibid., p. 239.) The current policy of the Montgomery County Board of Supervisors with respect to the funding of capital projects for sewerage lines and facilities is that the areas which receive such facilities must have a sufficient customer base to make the projects self-supporting. (Testimony of Lindsay B. West, Chairman, Montgomery County Board of Supervisors, Transcript, Vol. II, p. 305.)

that sector.⁸⁴ Further, the County and MCPSA have recently received a comprehensive water and sewer study which recommends the installation of sewerage lines in portions of the area proposed for annexation and elsewhere in the County.⁸⁵ It should be noted that the County's current capital improvements plan does not allocate any funds for the construction of sewerage lines or appurtenances during the five-year period covered by that plan.⁸⁶

The evidence does indicate, however, that there currently exists a need in the area proposed for annexation for central sewage treatment facilities and that such need will increase with further development of the area. Surveys made by the U. S. Soil Conservation Service and VPI&SU reveal that the soils within that area possess qualities which

⁸⁴Christiansburg Annexation Notice, Vol. I, p. 47. The MCPSA signed an agreement in 1977 which gave the Authority 12% of the capacity of the Christiansburg sewage treatment plant and 12% of the capacity of the Town's interceptor lines to that facility. The agreement calls for the MCPSA to pay for a portion of the cost of the Town's treatment plant and interceptor lines, when it begins to discharge wastewater to the plant. The MCPSA has not utilized any of its allocated capacity in those facilities to the present time. (Ibid.; and testimony of Lemley, Transcript, Vol. I, pp. 93, 100.)

⁸⁵Anderson & Associates, Inc., Countywide Study, Water and Wastewater Facilities, Montgomery County, Oct. 10, 1986. The County is currently evaluating the recommendations contained within the study before proceeding with the construction of any additional wastewater facilities. The Commission notes that the Belmont Estates and Belmont Farms subdivisions in the northern portion of Parcel A were identified by the County's most recent study as one of six areas within Montgomery County having the greatest need for the immediate installation of sewage collection lines. (Ibid., p. 5-8.) The total cost of the projects recommended by the wastewater study to serve the entire area proposed for annexation are estimated to be approximately \$4 million, with construction recommended within the 1990-2000 time frame. (Ibid., Figure 35.) Montgomery County officials have stated that since 1974 the County and MCPSA have applied for State and federal funds to construct various sewerage projects within the area proposed for annexation without success. (Testimony of Gibson, Transcript, Vol. II, p. 245.)

⁸⁶See County of Montgomery, Montgomery County Capital Improvements Program, FY 1986-1987 - 1990-1991, July 18, 1986. In addition, the MCPSA does not have any funds currently reserved for

severely restrict the installation of septic tank absorption fields.⁸⁷ Further, examination of County records indicates that such soil conditions have limited the construction of new residential structures in certain portions of the area proposed for annexation which require on-site sewage disposal.⁸⁸ Furthermore, the soil characteristics of the area also inhibit the repair or replacement of existing septic tank absorption fields when such becomes necessary due to age or malfunctioning of the system.⁸⁹ Since 1968 various studies have proposed the installation of central sewerage facilities in Montgomery County and have emphasized the need of such facilities in

capital projects. (Testimony of Gibson, Transcript, Vol. II, p. 245.)

⁸⁷U. S. Department of Agriculture, Soil Conservation Service, Soil Survey of Montgomery County, Virginia, Sep. 1985.

⁸⁸Testimony of Taylor F. Turner, Jr., Consultant, Town of Christiansburg, Transcript, Vol. I, p. 275. A 1980 study of the State Route 114 area revealed that of the 23 lots platted in 1977 within a portion of the Belmont Estates Subdivision, 22 were unsuitable for residential structures due to soils which restricted the installation of on-site sewage disposal systems. (County of Montgomery, 114 Area Study, Aug. 1980, p. 13.) Further, a review of Montgomery County Health Department records between 1960 and 1986 revealed that within the area proposed for annexation there had been 45 applications for septic tank permits rejected due to soil limitations, while 62 repairs to existing septic tanks had been authorized. (Testimony of Turner, Transcript, Vol. I, pp. 280-81.)

⁸⁹See William H. Hatfield, M. D., Health Director, New River Health District, letter to C. Dean Upton, Anderson & Associates, Inc., Aug. 5, 1986, found in Appendix A of Countywide Study, Water and Wastewater Facilities, Montgomery County. Revised Sewage Handling and Disposal Regulations issued by the Virginia Department of Health do permit the construction of septic tank absorption systems in soils where such would have been denied under previous State regulations. The new regulations do require, however, more soil absorption system area than previously required for a similar size residence. Because of the slow permeability of the soils in Montgomery County, reserve space for expansion or repair of failing septic tank systems would be required in most areas. Thus, even when groundwater, bedrock, or steep slopes are not encountered in the installation of septic tank systems, the space required for an on-site wastewater disposal system can prohibit development of small to moderate sized subdivision lots. (Countywide Study, Water and Wastewater Facilities, Montgomery County, p. 2-21.)

the area surrounding the Town of Christiansburg specifically.⁹⁰

In terms of the extension of service to the area sought for annexation, Christiansburg proposes to construct approximately 28.2 miles of sewage collection lines and force mains, costing \$1.9 million, during the first seven years after annexation.⁹¹ The Town's plans for the first three-year period after annexation include proposals to extend lines to portions of Parcel A (including Belmont Farms, Belmont Estates, and Carma Heights subdivisions located adjacent to State Route 114) and to the developed areas along U. S. Route 460 North.⁹² It should also be noted that, since the Town places a 50% surcharge on sewerage connection fees and user charges for nonresidents, the cost of sewerage service will be reduced in areas annexed by

The Commission notes, however, that there are no declared health hazard areas located within the area proposed for annexation. (Testimony of Powers, Transcript, Vol. II, p. 231.)

⁹⁰In addition to the recent wastewater study received by the County, there have been at least six other studies which have recommended the installation of sewer lines in various portions of the area proposed for annexation and in the County generally. The Commission observes that the Town of Christiansburg has received a petition containing 135 signatures from Parcel B requesting sewer service to a portion of that area. The Town has also received one request for such service from a property owner in the U. S. Route 460 North corridor of Parcel A. (Testimony of Turner, Transcript, Vol. I, p. 281.)

⁹¹Christiansburg Annexation Notice, Vol. I, pp. 160-62; and Vol. II, Exh. M-6. Town officials have indicated that within the area proposed for annexation all structures built after the completion of Town sewage collection lines will be required to connect to those lines. The Town will not, however, require existing structures to connect to sewerage lines unless existing septic tanks fail to function properly or are required to be pumped out. (Testimony of Lemley, Transcript, Vol. I, p. 84.)

⁹²Christiansburg Annexation Notice, Vol. I, pp. 160-62; and Vol. II, Exh. M-6. The portions of the area proposed to be served by the Town within the first three years after annexation are those with the largest population concentrations and existing septic tank problems. The Town does not plan to serve Parcel B, whose residents have petitioned for such service, until three to five years following the effective date of the annexation.

Christiansburg.⁹³

In sum, the area proposed for annexation has an existing need for central sewage collection and treatment facilities, and the need for such facilities will increase with the further development of that area.

Water Supply and Distribution

The Town of Christiansburg obtains its treated water through purchases from the Blacksburg - Christiansburg - VPI Water Authority. The Water Authority, which was created in 1950, operates a 12.4 MGD water treatment plant located on the New River west of Christiansburg.⁹⁴ At the present time, the distribution systems of the three entities which comprise the Water Authority collectively consume approximately 5.0 MGD, or only 41.1% of the plant's

⁹³Christiansburg Annexation Notice, Vol. I, p. 155. Christiansburg officials have indicated that one of the options for financing of the expansion of the Town's sewage treatment plant is to increase utility rates for all classes of users following the effective date of the annexation. (Testimony of Lemley, Transcript, Vol. II, p. 22.) With respect to the utility rates charged by the Town, the Town of Blacksburg has asserted that Christiansburg maintains those rates at an artificially low level and uses general fund revenues to subsidize the operations of the utility systems. (Blacksburg Response, Vol. I, p. 44.) Christiansburg officials contend that the audited revenues and expenditures for the utility systems do not include costs associated with depreciation or capital improvements and that utility rates are reviewed annually to insure the systems are self-supporting. (Testimony of Lemley, Transcript, Vol. II, pp. 20-21, 29-30.) It should be noted, however, that Christiansburg's audit report for FY1985-86 revealed that over the past two fiscal years the Town's water and sewer enterprise fund has generated losses of \$165,232 and \$287,969, respectively, after allowing for depreciation costs and interest charges. The audit report further indicates that the Town's adopted budget includes a budgeted deficit in the water and sewer enterprise fund which, in essence, acknowledges that the general fund is supporting the revenue fund. (Town of Christiansburg, Financial Statements (hereinafter cited as Christiansburg Financial Statements), June 30, 1986, p. 5.)

⁹⁴Christiansburg Annexation Notice, Vol. I, p. 54. The Water Authority also owns major transmission lines between its water treatment plant and the Towns of Blacksburg and Christiansburg as well as storage tanks along those lines for the purpose of maintaining ade-

capacity.⁹⁵

In terms of distribution and storage facilities, the Town owns and operates approximately 75 miles of lines, both within and beyond its corporate boundaries, and has seven storage tanks which collectively hold 3.0 million gallons of treated water.⁹⁶ These facilities serve approximately 4,400 connections within the Town's current borders and 700 in the area proposed for annexation.⁹⁷

Montgomery County, which is not a member of the Blacksburg - Christiansburg - VPI Water Authority, provides water supply and distri-

quate water pressure. The agreement which created the Water Authority assigns to Blacksburg and Christiansburg the responsibility for maintaining certain portions of the Authority's transmission lines and permits the Towns to connect customers to the Authority's transmission lines in those areas of maintenance responsibility.

⁹⁵Ibid. The Town of Christiansburg purchases approximately 1.0 MGD from the Authority. There are, however, no contractual limitations on the amount of water which members can purchase from the Authority. (Glass, letter to staff of Commission on Local Government, Sep. 4, 1986.)

⁹⁶Christiansburg Annexation Notice, Vol. I, pp. 53, 55. Christiansburg owns approximately 14 miles of water lines and one water storage tank in the area proposed for annexation. (Lemley, communication with staff of Commission on Local Government, Dec. 23, 1986.) During the past ten years the Town of Christiansburg has spent approximately \$1.3 million in local funds for improvements to its water distribution and storage system. As noted previously, the Town of Christiansburg was one of the first localities in Virginia to adopt and have approved by the Virginia Department of Health, a Local Standards and Review Program for Water and Sewer Line Extensions, which allows the Town's Public Works Department to design and install certain types of water lines and facilities without obtaining prior approval from the State.

⁹⁷Christiansburg Annexation Notice, Vol. I, p. 57; and Glass, letter to Jennings, Aug. 28, 1986. In addition, the Town has approximately 300 water connections along the Blacksburg - Christiansburg - VPI Water Authority transmission lines in other portions of Montgomery County. The Commission notes that almost all the population concentrations within the area proposed for annexation currently receive water service from the Town of Christiansburg. Within those areas, however, the Town of Blacksburg serves the northern portion of Parcel A, while a private water system serves one subdivision in Parcel B.

bution services to its residents through the MCPSA.⁹⁸ The MCPSA owns and operates nine water systems serving portions of the County not served directly by Christiansburg or Blacksburg.⁹⁹ As with sewer service, the County and MCPSA adhere to a policy of not competing with existing municipal utility systems in areas adjacent to the towns.¹⁰⁰ By virtue of this policy, MCPSA has not installed any water distribution facilities in the area proposed for annexation by Christiansburg.¹⁰¹

With respect to the public water needs of the area proposed for annexation, a substantial portion of the area is served currently by the Town of Christiansburg. The Town of Blacksburg also serves approximately 44 connections in the northern portion of Parcel A along both sides of U. S. Route 460 North.¹⁰² In addition, a private

⁹⁸Montgomery County did not seek to become a member of the Water Authority when it was created in 1950 because there was not a demand for central water service in the unincorporated portions of the County at that time. Since then, however, the County has attempted to become a member of the Authority but has been denied membership. (Testimony of West, Transcript, Vol. II, p. 307.) Officials of the Town of Christiansburg have stated that the reason Montgomery County has been denied membership in the Authority was that the members feared the population growth in the unincorporated portions of Montgomery County would rapidly consume the excess capacity in the Authority's treatment plant and transmission lines. (Testimony of Lemley, Transcript, Vol. II, pp. 36-37.)

⁹⁹Countywide Study, Water and Wastewater Facilities, Montgomery County, pp. 2-4--2-7. Two of the MCPSA water systems receive treated water from the Town of Blacksburg. The other seven MCPSA systems utilize wells as sources of water.

¹⁰⁰Montgomery County Response, Vol. I, p. 4-3. Montgomery County supports both the operating and capital activities of the MCPSA.

¹⁰¹MCPSA has an agreement with the Town of Christiansburg to purchase treated water to serve areas along the State Route 666 corridor in the southern portion of Parcel A, but it has not installed any lines in that area to date. (Testimony of Gibson, Transcript, Vol. II, pp. 248-49.)

¹⁰²Blacksburg Response, Vol. I, p. 46. The agreement creating the Blacksburg - Christiansburg - VPI Water Authority permits the Town of Blacksburg to serve connections along the Authority's main

water system serves a small subdivision in Parcel B east of the Town.¹⁰³ Those areas adjacent to the Town in the proposed annexation areas and not receiving central water service rely on individual wells. However, a recent study of the public water service needs in Montgomery County has recommended the installation of water lines in certain portions of the area proposed for annexation. While none of the needs identified in the study are currently considered critical, the findings indicate that public water distribution facilities will be required as the area develops.¹⁰⁴ Montgomery County has not included any funds in its current five-year capital improvements program to address those needs.¹⁰⁵

In terms of Christiansburg's plans to serve areas annexed, the Town proposes to invest \$307,000 in the construction of 5.6 miles of water

transmission line which parallels U. S. Route 460 North. Those connections include the Midway Heights Subdivision, the abandoned Corning Glass Works facility, and other businesses along that thoroughfare.

¹⁰³Testimony of Lemley, Transcript, Vol. I, pp. 232-33. Town officials have testified that the private water system, which utilizes a well to serve approximately 28 dwelling units in Parcel B, has experienced problems in recent years.

¹⁰⁴See Countywide Study, Water and Wastewater Facilities, Montgomery County, pp. 2-12, 2-21. This study recommends installation of MCPSA water lines along (1) the U. S. Route 11 West to improve fire protection and to eliminate reliance on individual wells, (2) State Route 666 to the west of Christiansburg to serve a proposed industrial site and to improve fire protection, and (3) U. S. Route 460 North to improve water service to areas not currently served from Water Authority transmission lines. Further, State Health Department officials have indicated that, due to the potential for contamination of wells serving trailer parks and subdivisions surrounding the Town of Christiansburg, connections should be made to central water systems, with existing wells abandoned. (John I. Capito, District Engineer, Division of Water Programs, Virginia Department of Health, letter to R. A. Worley, Jr., Anderson & Associates, Aug. 21, 1986, found in Appendix A, Countywide Study, Water and Wastewater Facilities, Montgomery County.)

¹⁰⁵Montgomery County Capital Improvements Program FY1986-87 - 1990-91. In addition, the MCPSA has not allocated any funds within its current budget for capital improvements. (Testimony of Gibson, Transcript, Vol. II, p. 245.)

lines during the seven-year period following annexation.¹⁰⁶ The Town's plans include projects to replace an existing water system serving a residential subdivision in Parcel B and to install water lines in the U. S. Route 11 West corridor during the first three-year period subsequent to annexation.¹⁰⁷ Further, it is relevant to note that the proposed annexation will have the effect of substantially reducing the cost of Town water service to residential, commercial, and industrial users in areas annexed. Since the Town imposes a 50% surcharge on connection fees and service to nonresidents, the annexation will have the effect of reducing substantially the cost for water service in areas incorporated into Christiansburg.¹⁰⁸

In sum, the area proposed for annexation will benefit from the future extension of Town water services and from a reduction in their cost. Moreover, the Town of Christiansburg has the capability and should be expected to serve the areas on its periphery.

Solid Waste Collection and Disposal

The Town of Christiansburg provides its residents with weekly solid waste collection service and extends to its business concerns a schedule of collections dependent on their needs.¹⁰⁹ The cost of this service for residential collection is \$2.50 per month.¹¹⁰ Seasonal collection of leaves and yard debris is provided at no additional charge. Christiansburg disposes of its refuse at its landfill, which

¹⁰⁶Christiansburg Annexation Notice, Vol. I, p. 159.

¹⁰⁷Ibid. The private water system to be replaced has, as noted previously, experienced service problems in recent years.

¹⁰⁸Ibid., p. 155.

¹⁰⁹Ibid., p. 64. The Town provides curbside solid waste collection to residential units. Currently 164 business concerns located within the Town utilize Christiansburg's solid waste collection services, but private solid waste contractors also provide service to other commercial and industrial establishments within the Town.

¹¹⁰Ibid., pp. 64-65. The cost of solid waste collection services to business concerns varies according to the frequency and type of

is located within the current boundaries of the Town.¹¹¹

Montgomery County does not provide any public solid waste collection service to individual residences. County residents, including those in the area proposed for annexation, can dispose of their household wastes at the County landfill, which is located adjacent to Parcel A east of U. S. Route 460 North, at no charge.¹¹² In addition, the County offers a bulk container service, with "green boxes" being located throughout its territory for solid waste disposal purposes. Within the area proposed for annexation, the County has six bulk containers available for public use.¹¹³ Some County residents and businesses, including those in the area proposed for annexation, also have the option of contracting directly with private entities for collection services, with the cost of such service determined by the frequency of

collection. The Town of Blacksburg has noted that Christiansburg subsidizes its solid waste collection services from general fund revenues and that during FY1984-85 such services produced a deficit of approximately \$77,000. (Blacksburg Response, Vol. I, p. 50.) Christiansburg officials assert, however, that although rates charged for solid waste collection services do not fund fully the expenses of operating such services, the low cost of the Town's solid waste collection encourages the proper collection and disposal of household and business refuse. (Christiansburg Annexation Notice, Vol. I, pp. 66-67.)

¹¹¹Testimony of Lemley, Transcript, Vol. I, pp. 113-14. Christiansburg does not impose additional charges for direct disposal of refuse by Town residents or businesses at the landfill. In 1983 it was estimated that the Christiansburg landfill would reach its capacity within the next 20 years.

¹¹²Montgomery County Response, Vol. I, p. 5-4. The County landfill is utilized by the Town of Blacksburg, VPI&SU, the Radford Arsenal, and private collection contractors. In addition, the Town of Christiansburg disposes a limited amount of refuse at the County's landfill. The Commission notes that the County and the Town of Blacksburg operate an innovative recycling program for paper, glass, and aluminum at the facility. The County estimates that its landfill will reach its capacity within the next 25 years.

¹¹³Roy L. Thorpe, Jr., County Attorney, County of Montgomery, letter to staff of Commission on Local Government, Dec. 9, 1986. In addition, the County maintains seven bulk containers within Christiansburg and one within the area proposed for annexation for private use.

collection.¹¹⁴

While the Commission finds that the solid waste collection and disposal services in the area proposed for annexation are generally adequate for the area's needs, an extension of Town services to the area would be beneficial. In our judgment, the provision of regular and inexpensive municipal solid waste collection service does encourage and facilitate improved disposal of refuse. As areas adjacent to Christiansburg increase in development, the Town's solid waste services should grow in significance.

Public Planning, Zoning and Subdivision Regulation

The Town of Christiansburg established its first planning commission in the 1950s and adopted its current comprehensive plan in 1985.¹¹⁵ With respect to the Town's current comprehensive plan, we note that the instrument does not include a detailed implementation section with specific recommendations for the utilization of its zoning, subdivision, and other development control ordinances.¹¹⁶ Further, Christiansburg has adopted only a limited number of supplemental planning documents and does not have a specific program which coordinates the Town's five-year capital improvements program with its comprehensive planning process.¹¹⁷ Furthermore, the Town has no

¹¹⁴Montgomery County Response, Vol. I, p. 5-2. Within the area proposed for annexation private solid waste contractors charge \$5.00 per month for curbside collection service. (Glass, letter to staff of Commission on Local Government, Sep. 4, 1986.)

¹¹⁵Christiansburg Annexation Notice, Vol. I, pp. 70-71. Although Section 15.1-454 of the Code of Virginia requires comprehensive plans to be reviewed at least once every five years by the local planning commission, Christiansburg did not complete the update and revision of its 1975 comprehensive plan until 1985.

¹¹⁶Town of Christiansburg, Christiansburg Comprehensive Plan, Mar. 1984, p. 29. Despite the above-cited limitations, the Town's comprehensive plan appears to be in general compliance with requirements of Secs. 15.1-446.1 and 15.1-447 of the Code of Virginia.

¹¹⁷The Town does, however, annually revise and publish a long-range capital improvements plan as part of its budgetary process. There

staff assigned full-time to the administration and application of its planning and development control instruments.¹¹⁸

With respect to zoning, Christiansburg's current ordinance, which was adopted in 1947, establishes 7 discrete districts - 3 residential, 1 business, 2 industrial, and 1 agricultural.¹¹⁹ The Commission observes, however, that the Town's zoning ordinance contains significant deficiencies which could make inappropriate its application to the area proposed for annexation. Although the Town currently has within its boundary active agricultural operations and an agricultural and forestal district, and while it is seeking to annex additional agricultural properties, its agricultural zoning district does not include as one of its stated purposes the protection of existing and future farming operations and watersheds, and, indeed, it allows a variety of uses which could be detrimental to the protection and the continuation of such resources.¹²⁰ Further, the presence of only

is no evidence that this plan is reviewed by the Town's planning commission. With respect to supplemental planning documents, Christiansburg was one of the first towns located outside of a metropolitan area and having a population greater than 3,500 persons to adopt a thoroughfare plan. (Testimony of Lemley, Transcript, Vol. I, p. 116.)

¹¹⁸Ibid., pp. 114-15. The Christiansburg's Town Manager acts as the Town's planner and land development control administrator. He is assisted in these activities by the Assistant Town Manager, Town Engineer, and Building Inspector. The Town also utilizes planning services provided by the New River Valley Planning District Commission and by private consultants. As part of the Town's proposals to serve the area proposed for annexation, Christiansburg plans to hire a full-time planner after the effective date of the annexation. (Ibid., p. 122.)

¹¹⁹The Town's zoning ordinance allows residential uses within the business and industrial districts with conditional use permits. Such pyramidal zoning can cause land use conflicts unless properly administered. The Commission notes that the provisions in the Christiansburg zoning ordinance related to the discontinuation of non-conforming uses appears to be in conflict with Section 15.1-492 of the Code of Virginia.

¹²⁰The stated intent of the agricultural district is for " . . . the specific purpose of providing for the orderly expansion of urban development and discouraging the random scattering of residential, com-

one type of business district in the Town's zoning ordinance makes it difficult to control commercial development in such diverse areas as the central business district (which requires higher densities) neighborhood shopping centers (where protection of surrounding land uses is a prominent consideration) and along major thoroughfares.¹²¹

Moreover, the Town's recently revised sign regulations afford minimal control over the installation of signs in the business, industrial, and agricultural zoning districts, and its application could lead to unnecessary visual pollution.¹²²

In terms of subdivision regulations, Christiansburg's current ordinance was adopted in 1952 and applies to all divisions of property into two or more parcels, except those which result in lots of five acres or more in size and which do not involve the establishment of a

mercial, and industrial uses into the area." (See Christiansburg Town Code, Sec. 30-42.) Within the agricultural district all uses permitted by the Town's residential and business districts, including mobile home parks, are allowed upon issuance of a conditional use permit.

¹²¹See Christiansburg Town Code, Chapt. 30, Art. V. It should be noted that regulations pertaining to the Town's business zoning district contain no provisions for front or side yard setbacks or height restrictions for structures. Although the absence of such provisions may foster design flexibility, minimum requirements are desirable to prevent unsightly conditions in communities which have only one business district regulating commercial establishments of different character.

¹²²See Christiansburg Town Code, Chapt. 31, adopted by the Christiansburg Town Council, Jan. 3, 1984. Although the recently revised Town sign ordinance contains more extensive regulations than previously enumerated in the zoning ordinance, permitted uses within the business, agricultural, and industrial districts are allowed to erect as many as 8 to 10 signs with a collective surface of more than 500 square feet. Further, the total surface area of some of the area signs permitted within those zoning districts can be increased depending on lot dimension, setback of the signs from the street right-of-way, and other factors. (See Christiansburg Town Code, Chapt. 31, Art. III.) Town officials have stated, however, that since the enactment of the new sign ordinance, no business has requested permission to erect more than a total of three signs per individual use. (Lemley, communication with staff of Commission on Local Government, Dec. 11, 1986.)

new street or easement.¹²³ By virtue of a provision in the Town's charter, Christiansburg's subdivision regulations apply within a two-mile area of the County adjacent to the Town's current boundary. This two-mile sector embraces all of the area proposed for annexation.¹²⁴ Thus, the Town's regulations for subdivisions, which include a prohibition of private streets, mandatory connection to Town utilities where available, the installation of fire hydrants (if water lines are in place) and street construction standards, currently apply to the area Christiansburg now seeks to annex.¹²⁵

Montgomery County established its first planning commission in 1950 and adopted its current comprehensive plan in 1983.¹²⁶ The County's current comprehensive plan is founded on recent data and contains specific goals and implementation measures for various sub-areas of the County.¹²⁷ Further, the County has adopted a five-year capital improvements plan and has produced other planning documents for areas confronting development pressures.¹²⁸ Furthermore,

¹²³See Christiansburg Town Code, Sec. 26-2; and Christiansburg Annexation Notice, Vol. I, p. 71.

¹²⁴Christiansburg Annexation Notice, Vol. I, p. 71; and testimony of Lemley, Transcript, Vol. I, p. 115. The Town of Christiansburg has exercised extraterritorial subdivision jurisdiction since 1961. Montgomery County still retains authority for the administration of zoning regulations and building codes within the area subject to Christiansburg's subdivision regulations.

¹²⁵See Christiansburg Town Code, Secs. 26-4(e), 26-4(j), and 26-7(b).

¹²⁶Montgomery County Response, Vol. I, pp. 6-2--6-3. The County's review and revision of its comprehensive plan in 1983 was done within five years after the adoption of its previous comprehensive plan.

¹²⁷Montgomery County Comprehensive Plan. The plan contains goals and policies for the County collectively and for sub-areas of the County designated for urban expansion, rural expansion, rural, agricultural, and conservation. In addition, plans are also developed for five specific planning districts within the County. The Montgomery County comprehensive plan appears to meet the requirements of Secs. 15.1-446.1 and 15.1-447 of the Code of Virginia.

¹²⁸Testimony of Powers, Transcript, Vol. II, p. 185. The

Montgomery County maintains a staff of five persons to assist in the administration and management of its planning and land development control instruments.¹²⁹

The County's current zoning ordinance, which was adopted in 1969 and substantially revised in 1974, establishes 12 districts - 6 residential, 2 business, 1 industrial, and 1 each for agricultural, conservation and conservation-agricultural purposes.¹³⁰ The County's zoning ordinance reflects, in several ways, the rural and suburban nature of the territory to which it applies. First, the agricultural-conservation district was established to protect agricultural and forestry operations and allows only uses which are compatible with such activity.¹³¹ Second, the County's two business districts differentiate between intensive and nonintensive commercial uses.¹³² Third, the sign regulations contained in the County's zoning ordinance

County has also adopted a specific plan for the State Route 114 corridor, a portion of which is in Parcel A.

¹²⁹Montgomery County Response, Vol. I, p. 6-1. Montgomery County also utilizes the resources of the New River Planning District Commission.

¹³⁰Montgomery County Code, Chapt. 18. In addition, the zoning ordinance provides for cluster development and flood protection overlay zoning districts. Within the County's business and industrial districts, residential uses are not permitted.

¹³¹See Montgomery County Code, Sec. 18-37.1. No conditional uses are permitted within the agricultural-conservation zoning district. The Montgomery County zoning ordinance also contains provisions for an agricultural district similar to that found within the Christiansburg zoning ordinance. The County's agricultural district is intended to apply (1) to areas located adjacent to incorporated municipalities where growth is projected to occur, (2) to land currently in agricultural or forestry uses but where future conversion to other uses is expected, and (3) to other areas which do not qualify for more exclusive agricultural uses such as found in the agricultural-conservation zoning district. (See Montgomery County Code, Sec. 18-31.)

¹³²See Montgomery County Code, Chapt. 18, Arts. XI and XI-A. The County's zoning ordinance contains separate regulations for a general business district which require direct and frequent public access and for a community business district engaged in the provision

limit the total number and collective surface area of signs in various districts and, with proper application, can preserve and enhance the visual environment of the County generally.¹³³ With respect to the County's zoning instrument, however, the Commission notes that Montgomery County's zoning map is not available in a format suitable for public distribution.¹³⁴

The County's current subdivision ordinance, which was adopted in 1961 and subjected to major revision in 1978, applies to the division of land into three or more parcels in instances in which any resulting parcel is less than five acres each. If the subdivision of land, however, results in the creation of a new street, the County's ordinance would apply regardless of lot size.¹³⁵ Exempt from the provisions of the ordinance are certain subdivisions of property for the creation of lots for family members.¹³⁶ It should be recalled, however, that the coverage of Montgomery County's subdivision ordinance does not extend to County areas within the extraterritorial sub-

of nonintensive commercial services to agricultural and rural residential areas. The regulations for both districts contain provisions for building setbacks and height regulations, but they do not specify restrictions on side or rear yards unless the commercial structure adjoins residential, agricultural, or conservation zoning districts.

¹³³See Montgomery County Code, Chapt. 18, Art. XV-A. Within either business district the total number of signs permitted by the County's zoning regulations is four, with the total signage not exceeding 166 square feet.

¹³⁴Testimony of Powers, Transcript, Vol. II, p. 206.

¹³⁵Montgomery County Code, Sec. 16-2.

¹³⁶Ibid., Sec. 16-16. The County's subdivision regulations permit private streets in instances where a subdivision has both a median lot size of three acres or more and a ratio of length of street per lot of 150 feet or greater. Such private streets, however, are only permitted to deviate from Virginia Department of Transportation regulations with regard to maximum percent of grade, minimum width of surface or pavement, and type of surface and treatment of surface. (See Montgomery County Code, Sec. 16-21.)

division jurisdiction of the Town of Christiansburg.¹³⁷

In sum, the Commission notes that both the Town and County have adopted an appropriate array of planning and development control measures. In addition, we note that development within the area proposed for annexation is already subject to Christiansburg's subdivision ordinance. In our view, however, Montgomery County's planning and land development control efforts, especially with respect to the regulation of businesses and signage, the protection of agricultural properties, and the employment of a full-time planning staff, demonstrate a greater commitment to public planning than has been exhibited by the Town. While the Town's planning and zoning regulations were drafted for managing urbanizing environments, this Commission cannot conclude that the area proposed for annexation would benefit from the application of the Town's current planning and development control measures.

Crime Prevention and Protection

Law enforcement services within the Town of Christiansburg are provided through the Town's Police Department. This Department has a total of 19 full-time sworn law enforcement personnel, 16 of whom are assigned patrol responsibility.¹³⁸ This number of patrol officers is sufficient to provide Christiansburg with one such officer for each 729 Town residents based on 1984 population estimates.

In terms of patrol activity, the data indicate that the Town maintains patrols on its streets 24 hours per day, with an average of four patrol officers on duty at all times.¹³⁹ This assignment schedule provides the Town with a geographic intensity of patrol equivalent to

¹³⁷Ibid., Sec. 16-16.

¹³⁸Christiansburg Annexation Notice, Vol. I, pp. 76-77. The Town's Police Department employs 24 full-time personnel. The efforts of the Town's patrol division are assisted by two investigators. The Police Department has seven automobiles for its use.

¹³⁹Ibid., p. 78. During the period between 3:00 a. m. and 8:00 a. m. only three Town police officers are on patrol, but between 7:00

one officer for each 1.99 square miles of territory. A second measure of the intensity of patrol service in a locality is the number of "calls for service" being answered by each law enforcement position serving such area. With respect to Christiansburg, the data indicate that during 1985 each patrol officer in the Town was responsible for an average of 680 "calls for service."¹⁴⁰ Despite this workload, the Town's overall level of patrol staffing allowed it to respond to emergency calls in an average of three minutes during 1985.¹⁴¹

With respect to crime prevention activities, Christiansburg's Police Department has assigned two police officers to such activities on a part-time basis. The Town estimates, however, that these officers spend only 40 hours per year providing crime prevention programs to civic groups, senior citizen organizations, and County schools within Christiansburg.¹⁴² Further, the Town's Police Department has not established any neighborhood watches for the protection of Christiansburg's residents.¹⁴³

Any examination of the quality of law enforcement services in a

p. m. and midnight five officers are routinely assigned to patrol duty. Each shift includes one sergeant who acts as a shift supervisor but who also bears patrol responsibility.

¹⁴⁰Ibid., pp. 83-84. The term "calls for service" in the law enforcement context includes everything from response to major crimes, which constitute a small portion of the total demands on law enforcement agencies, to noncriminal request for assistance. "Calls for service" more accurately measures the total activity of a locality's law enforcement efforts than do published crime rates which only reflect incidents of major crimes. The category "major crime" consists of murder, non-negligent manslaughter, forcible rape, robbery, aggravated assault, burglary, larceny, and motor vehicle theft. (Virginia Department of State Police, Crime in Virginia, 1985.)

¹⁴¹Christiansburg Annexation Notice, Vol. I, p. 83. The Town's Police Department provides its own dispatching service.

¹⁴²Ibid., p. 82.

¹⁴³Ibid., p. 83.

locality requires consideration of the training and education of the personnel engaged in the provision of those services. In the Commission's judgment, there is no public service which requires a greater degree of maturity and personal development than law enforcement. The evidence indicates that all new law enforcement personnel employed by the Town are required to complete a six-month probationary period with the Police Department in addition to completing the basic training program at the New River Valley Regional Criminal Justice Training Academy in Radford.¹⁴⁴ Although new personnel are supervised during this probationary period by experienced officers, there is no official in the Department assigned on a full-time basis to supervise the probationary program or other departmental training activities.¹⁴⁵

In addition to the basic training given to each recruit, the officers in the Town's Police Department receive a notable amount of training in excess of that mandated by State regulation. Christiansburg officials have advised that the Town's law enforcement officers have taken collectively 4,016 hours of advanced and specialized training

¹⁴⁴Ibid., p. 80; and Glass, letter to staff of Commission on Local Government, Sep. 4, 1986. Attendance at basic training by Town police officers may be scheduled during or after the six month probationary period. Although the State requires all new full-time law enforcement officers to complete 375 hours of basic training (315 hours of classroom instruction and 60 hours of field training supervised by the local law enforcement agency), the course of instruction for new officers at the New River Valley Criminal Justice Training Academy consists of a minimum of 460 hours (400 hours of classroom instruction and 60 hours of supervised field training). New officers of the Christiansburg Police Department may also be required to complete additional courses of instruction in civil process and courtroom security, which would increase their initial classroom training hours to between 415 and 430 hours. (Virginia Department of Criminal Justice Services, "Rules Relating to Compulsory Minimum and In-Service Training Standards for Law Enforcement Officers"; and Greg Barnes, Director, New River Valley Criminal Justice Training Academy, communication with staff of Commission on Local Government, Jan. 6, 1987.)

¹⁴⁵Glass, letter to staff of Commission on Local Government, Sep. 4, 1986. The Town's Chief of Police assumes the duties of training

during their respective careers.¹⁴⁶ Moreover, it is significant to note that four officers of the Christiansburg Police Department have earned associate degrees in police science from institutions of higher learning.¹⁴⁷

Several other aspects of the Town's law enforcement activities should be cited. First, the Town is installing an enhanced 911 emergency service system and expects to have that system operational in 1987.¹⁴⁸ Second, Christiansburg's criminal justice efforts are assisted by Montgomery County's jail facilities and prosecutorial staff. Finally, data indicate that during FY1985-86 the Town expended a total of \$678,846 in support of its law enforcement activities, or \$58.24 per capita.¹⁴⁹ With respect to the latter point, we contend that any analysis of law enforcement, as well as many other public services, requires consideration of the fiscal resources committed to their provision.

In sum, the Christiansburg Police Department is, in our judgment, a professionally managed, well-trained, and effective law enforcement agency. In order to extend services to the area proposed for annexation, the Town has indicated its intention to employ and equip five additional police officers and to purchase two additional

officer on a part-time basis.

¹⁴⁶Christiansburg Annexation Notice, Vol. I, p. 86. This statistic does not include college-level courses.

¹⁴⁷Ibid., p. 80. In addition, one police officer is enrolled in a course of instruction which will lead to an associates degree and another is in the process of completing a bachelors degree program.

¹⁴⁸Ibid., p. 79.

¹⁴⁹Christiansburg Financial Statements, Schedule 2. This per capita statistic is based on the Town's 1984 population estimate. During the same year, the County of Montgomery expended \$ 891,349 for law enforcement services, or \$39.08 per capita, based upon the 1984 population estimate for the unincorporated portion of the County. Of that amount, \$179,715, or \$7.88 per capita, was from local funds. (County of Montgomery, "Comparative Cost Transmittal Forms, FY1985-86," Draft.)

vehicles.¹⁵⁰

Law enforcement services in the area proposed for annexation and in Montgomery County generally are provided through the County Sheriff's Department. The personnel complement of the Sheriff's Department consists of 29 full-time sworn officers, 23 of whom are assigned regular patrol responsibility.¹⁵¹ This level of staffing provides the County with one sworn patrol deputy for each 992 residents of the unincorporated portion of the County.¹⁵²

For purposes of patrol activity, the County is divided into three patrol districts, each approximately 120 square miles in area, with the boundaries of the patrol areas radiating from the Montgomery County Sheriff's Department offices in Christiansburg. As a result, portions of the area proposed for annexation are included in each patrol

¹⁵⁰Christiansburg Annexation Notice, Vol. I, p. 157. The Town proposes to employ an additional four patrol officers and one investigator to serve the annexation area.

¹⁵¹Montgomery County Response, Vol. I, p. 8-3. The County currently has 24 sworn law enforcement personnel, including three investigators. At the present time there are only 18 County deputies assigned patrol responsibility, but recent action by the Virginia State Compensation Board has increased the total number of State-funded law enforcement deputies in the County Sheriff's Department by five positions. The County Sheriff has indicated that these new positions will result in increasing the total number of patrol deputies to 23. (Thorpe, letter to staff of Commission on Local Government, Dec. 9, 1986.) Although these positions are not currently filled, the Commission has included them in calculating the statistics reported for the County's law enforcement services. In addition, the County's law enforcement efforts are aided by 39 officers employed by the Town of Blacksburg and 31 officers of the VPI&SU Police Department. (Crime in Virginia, 1985.) The County Sheriff's Department has available 35 automobiles to support its various functions.

¹⁵²The County also contends that the personnel of the Virginia State Police assigned to Montgomery County should be considered as being available to assist regularly and routinely with the County's law enforcement responsibility. The Commission notes that State Police have traffic enforcement and accident investigation as their principal responsibilities and do not normally respond to minor criminal calls and other matters requiring action by local law enforcement agencies. In 1985 the State Police handled only 16 (4.6%) of the 348 major crimes reported in the unincorporated portion of the County. (Crime in

district.¹⁵³ Patrol service in the County is provided on a 24-hour a day basis by three shifts, with an average of five patrol deputies on duty during each shift.¹⁵⁴ One officer is assigned to each patrol district, with the other officers patrolling according to need. A sergeant provides shift supervision and backup assistance as required. Thus, the unincorporated portion of the County generally has a geographic intensity of patrol service equivalent to one officer for each 73.2 square miles of territory.¹⁵⁵

With respect to the relationship between staffing level and "calls for service," data for the unincorporated portion of Montgomery County reveal that during calendar year 1985 there were a total of 4,190 "calls for service" which were the initial responsibility of the offi-

Virginia, 1985, Table III.) Further, a recent study of the activities of the State Police revealed that only approximately 2% of a State Trooper's time is involved with criminal action and follow-up investigations. (Virginia Department of Planning and Budget, A Review of The Mission and Staffing of The Department of State Police, Dec. 1984.) Although the State Police do relieve the Sheriff's Department of primary responsibility for patrolling the interstate and primary roads in the County, the local law enforcement agencies in Montgomery County have no control over the location of the State Police and cannot assign them routine "calls for service," which constitute the bulk of local law enforcement activity.

¹⁵³Montgomery County Response, Vol. II, Exh. 8.

¹⁵⁴Ibid., Vol. I, p. 8-3. The five additional officers recently authorized by the State Compensation Board for Montgomery County will allow the Sheriff's Department to increase the number of patrol deputies during each shift, but no decision has been made at this time on manpower assignments. (Thorpe, letter to staff of Commission on Local Government, Dec. 9, 1986; and Louis E. Barber, Sheriff, County of Montgomery, communication with staff of Commission on Local Government, Jan. 6, 1987.)

¹⁵⁵A majority of the County's law enforcement officers live within the Town or the area proposed for annexation. (Montgomery County Response, Vol. II, Exh. 8.) The Sheriff's recent request to the State Compensation Board sought State funding for 11 additional positions, six of which were to be utilized for patrol activity. Five of the latter six positions were granted. In that request, the Sheriff indicated that recent changes in federal law governing employee work hours had created a critical situation with respect to

cers assigned to patrol duties on a daily basis.¹⁵⁶ Thus, each patrol position responded to an average of 233 "calls for service" during that calendar year.¹⁵⁷

In terms of crime prevention activity, the County's Sheriff's Department has assigned one officer full-time to drug education and crime prevention services, with that officer being assisted by approximately six other deputies on a part-time basis.¹⁵⁸ The Sheriff's Department's crime prevention programs are directed toward the establishment of neighborhood watches in various locations throughout the County, with six such programs having been initiated and maintained in the area proposed for annexation.¹⁵⁹

With respect to the training and education of its personnel, the evidence indicates that the Montgomery County Sheriff's Department requires its new deputies to complete 480 hours of initial formal training at the Regional Criminal Justice Training Academy, a figure in excess of the State-mandated requirement.¹⁶⁰ Following grad-

patrolling the County and had resulted in " . . . response time(s) . . . dangerously long on emergency calls." (Montgomery County Sheriff's Department, Budget Request Documentation, FY 1986-87, Feb. 25, 1986.)

¹⁵⁶Montgomery County Response, Vol. I, Tab 8., Table 5. Between January 1984 and April 1986, the average response times to "calls for service" to Mountain Top, the U. S. Routes 11 and 460 East corridor (Parcel B); to Midway, the U. S. Route 460 North corridor (Parcel A); and to Belmont, the State Route 114 corridor (Parcel A); were 4.5 minutes, 5.0 minutes, and 6.9 minutes, respectively. (Ibid.)

¹⁵⁷The statistic for the average number of "calls for service" handled by the County's patrol deputies was calculated using 18 patrol officers, the total number of patrol positions authorized and filled during 1985.

¹⁵⁸Montgomery County Response, Vol. I, p. 8-8; and testimony of Barber, Transcript, Vol. II, p. 294.

¹⁵⁹Montgomery County Response, Vol. I, p. 8-8. The neighborhood watches within the area proposed for annexation are located primarily in the Belmont Estates and Belmont Farms subdivisions in Parcel A. (Testimony of Barber, Transcript, Vol. II, pp. 293-94.)

¹⁶⁰Testimony of Barber, Transcript, Vol. II, pp. 264-65.

uation from the Academy, the deputies are required to complete a probationary period in the Sheriff's Department under the supervision of senior officers.¹⁶¹ With respect to advanced and specialized training, records indicate that the law enforcement personnel of the County Sheriff's Department have completed collectively 3,852 hours of such training during their respective careers with the Department.¹⁶² Further, within the law enforcement division of the Sheriff's Department, four officers have attained associates degrees, one has been awarded a bachelors degree, and an additional officer has earned a masters degree in fields related to criminal justice.¹⁶³

Several additional factors regarding the County's law enforcement activities should be noted. First, the County and the Town of Blacksburg are installing jointly an enhanced 911 emergency service system, and it is estimated that the system will be operational by 1988.¹⁶⁴ Second, the County Sheriff's Department has developed a policy and personnel manual to guide the activities of its personnel

Although the State requires new full-time law enforcement officers to complete only 375 hours of basic training, the course of instruction for new officers at the Cardinal Criminal Justice Training Academy in Salem consists of 460 hours (400 hours of classroom instruction and 60 hours of supervised field training). The Sheriff's Department requires an additional 20 hours of field training. (Lt. Bill Mayo, Director, Cardinal Criminal Justice Training Center, communication with staff of Commission on Local Government, Jan 5., 1987.)

¹⁶¹Testimony of Barber, Transcript, Vol. II, pp. 264-65. The Department's Chief Deputy assumes the duties of training officer on a part-time basis. The probationary period for new deputies is of indefinite length, but a formal review of an officer's performance is undertaken six months after his/her graduation from basic training. (Barber, communication with staff of Commission on Local Government, Jan. 7, 1987.)

¹⁶²Thorpe, letter to staff of Commission on Local Government, Dec. 9, 1986.

¹⁶³Montgomery County Response, Vol. I, Tab 8, Table 2.

¹⁶⁴Barber, communication with staff of Commission on Local Government, Jan. 6, 1987. The average amount of time required to implement the enhanced 911 system is approximately two years. The

and to standardize its operational procedures.¹⁶⁵ Third, the Commission notes that during FY1985-86 a total of \$891,349, or \$39.08 per capita based on 1984 population estimates for the unincorporated portions of Montgomery County, was expended for law enforcement services provided by the Sheriff's Department.¹⁶⁶

In sum, the Commission concludes that the nature and character of development in the area proposed for annexation is such that the area would benefit from the more intensified law enforcement services which can be provided by the Town. As a result of staffing levels, the intensity of patrolling, and the level of financial support, we find that the law enforcement services offered by the Town of Christiansburg are more appropriate for the area proposed for annexation.

Public Recreation

The Town of Christiansburg has only 10.5 acres of public park land for the recreational use of its residents and those of the general area. This acreage represents the combined area of three recreational sites.¹⁶⁷ Located at those three sites are two lighted athletic fields, three basketball courts, various playground and picnic areas,

Town of Christiansburg was invited by Montgomery County and the Town of Blacksburg to participate in the installation of an areawide enhanced 911 emergency services system, but the Town chose to develop its own system for the area within its current boundary. (Testimony of Lemley, Transcript, Vol. I, pp. 124-26.)

¹⁶⁵Montgomery County Response, Vol. I, pp. 8-4--8-5. The Sheriff's Department's manual contains policies with respect to the use of force, discharge of firearms, treatment of persons in custody, and domestic disturbances. (Montgomery Sheriff's Department, Policy and Procedure Manual.)

¹⁶⁶"Comparative Cost Transmittal Forms, FY1985-86," Draft.

¹⁶⁷Christiansburg Annexation Notice, Vol. I, pp. 108-10. One of the Town's recreation sites (the Kiwanis Park) is owned by the Kiwanis Club, but it is maintained by the Town and utilized for its recreational programs. With respect to the need for park land within the Town, the application of the standard of 10 acres of public park land per 1,000 population recommended by the Virginia Commission of Outdoor Recreation indicates that Christiansburg has a deficiency of

a senior citizens center, and a recreation center.¹⁶⁸ The recreation center, which was opened in 1974, contains arts and craft, game, and meeting rooms.¹⁶⁹ In addition to the three sites mentioned above, Christiansburg utilizes facilities at the four Montgomery County schools located within the municipality, as well as the national guard armory, in the provision of recreational services.¹⁷⁰

For the conduct of its various recreational activities, the Town employs five full-time and a varying number of part-time and seasonal personnel.¹⁷¹ The Town's recreational programs consist primarily of organized athletic leagues for adults and children, senior citizen activities, special events, and a limited number of instructional classes. Participation in these programs is open to residents of the general area, but nonresidents are charged additional fees for various programs.¹⁷² During FY1985-86 the Town of Christiansburg expended \$170,623 on its park and recreational activities, with this level of expenditure reflecting an investment by the Town of \$14.64 per

approximately 95 acres of park and recreation sites. (Virginia Commission of Outdoor Recreation (now Division of Parks and Recreation), Outdoor Recreation Planning Standards for Virginia, 1980, p. 2.)

¹⁶⁸Christiansburg Annexation Notice, Vol. I, pp. 108-10.

¹⁶⁹Ibid., pp. 102-03. In 1974 the Town's recreation center was named the "Best New Facility" in the State by the Virginia Recreation and Park Society.

¹⁷⁰Ibid., pp. 108-10. The Town has an informal agreement with the Montgomery County School Board for the use of school properties for recreational purposes. Collectively, these properties within the Town contain 6 multi-purpose ballfields, 6 tennis courts, 2 gymnasiums, and 7 basketball courts.

¹⁷¹Ibid., p. 102. Currently the Town employs four part-time personnel in its recreational programs.

¹⁷²Ibid., pp. 105-07. In 1985, 25% of the adult participants and 15% of the youth participants in the Town's recreational programs were nonresidents.

capita.¹⁷³

Public recreational facilities and programs in Montgomery County are administered by the County's Parks and Recreational Department, which was established in 1975.¹⁷⁴ In terms of facilities, the Parks and Recreation Department owns and operates only one park site, containing approximately 90 acres, but it utilizes a number of school properties in its provision of recreational services.¹⁷⁵ Additional recreational opportunities are available to County residents through facilities owned by VPI&SU, U. S. Forest Service, neighborhood associations, and private entities.¹⁷⁶

With respect to its recreational programs, the County employs a staff of 6 full-time and 20 part-time personnel to administer and over-

¹⁷³Christiansburg Financial Statements, Schedule 2. This per capita statistic was calculated using the 1984 population estimate for the Town of Christiansburg. County revenues derived from the residents and businesses within Christiansburg also support the recreational programs and facilities of Montgomery County.

¹⁷⁴Montgomery County Response, Vol. I, p. 11-1. Based upon the State recommended standard of 10 acres of park and recreation sites per 1,000 population, the residents of the unincorporated portions of Montgomery County should have access to approximately 228 acres of public park land. (Outdoor Recreation Planning Standards for Virginia, p. 2.) Although the County is currently deficient in its inventory of park and recreation areas, the Commission acknowledges that portions of the approximately 20,000 acres of land within the County owned by the State and federal governments are available for recreational uses by County residents generally.

¹⁷⁵Montgomery County Response, Vol. I, p. 11-4. School Board property utilized by Montgomery County in its recreational services collectively comprise approximately 60 acres. (Thorpe, letter to staff of Commission on Local Government, Dec. 9, 1986.) The Commission notes that the Montgomery County Park, which is located adjacent to the northeastern boundary of Parcel A on the site of the former County landfill, contains four athletic fields, a playground, biking and fitness trails, an amphitheater, and the only public swimming pool available to the residents of the area proposed for annexation.

¹⁷⁶Montgomery County Response, Vol. I, pp. 11-5--11-8. Residents of the unincorporated portion of Montgomery County also utilize the recreational facilities provided by the Towns of Blacksburg and

see its operations, with seasonal employees and instructors being utilized as needed.¹⁷⁷ With the assistance of that staff, the Department of Parks and Recreation promotes the operation of organized athletic leagues, instructional classes, special events, and activities for the elderly at various sites throughout the County, including some within the Towns of Christiansburg and Blacksburg.¹⁷⁸ With respect to overall financial support, we note that Montgomery County expended \$468,215 during FY1985-86 for its parks and recreational programs.¹⁷⁹ Thus, the County expended \$7.21 per capita for recreational services during that fiscal year.¹⁸⁰

While this Commission recognizes Montgomery County's commitment to the provision of recreational services to its citizens, it is obliged to conclude that the residents of the area proposed for annexation have a need for recreational facilities and programs. Although according to State recommended standards both Christiansburg and Montgomery County lack sufficient park land to serve their respective residents, the evidence reveals that the Town has made a significantly greater financial commitment to public recreational services than the County. In our judgment, as the area proposed for annexation continues to develop there will be an increasing need for a higher level of public recreational facilities and services which the Town should be expected to provide.

Christiansburg.

¹⁷⁷Ibid., pp. 11-2--11-3.

¹⁷⁸Ibid., pp. 11-5--11-8. The County's recreational programs are open to all residents of Montgomery County, including those of the two incorporated towns, on an equal basis.

¹⁷⁹"Comparative Cost Transmittal Forms, FY1985-86," Draft. Of that amount, approximately \$150,000 were federal funds.

¹⁸⁰Ibid. Since County recreational services are provided to all residents of Montgomery County on an equal basis, the per capita amount expended for such services was calculated using the total estimated 1984 population of Montgomery County.

Curbs, Gutters, Sidewalks and Storm Drains

Christiansburg's subdivision ordinance does not mandate the installation of curbs, gutters, or sidewalks in new developments. It is the policy of the Town Council, however, to require the installation of curbs and gutters in new developments if street grades are such as to create a concern for roadside erosion.¹⁸¹ Further, the Town will pay the entire cost of installing curbs, gutters, as well as sidewalks, along streets undergoing reconstruction. Furthermore, in areas where street reconstruction projects are not planned, the Town has a policy by which it will install curbs, gutters, and sidewalks upon citizen request and upon their agreement to bear 50% of the construction cost.¹⁸²

With respect to stormwater management, Christiansburg's subdivision ordinance requires the installation of drainage facilities in all new developments.¹⁸³ Further, the Town will bear the expense of installing storm drains which are included as part of street improvement projects. Furthermore, in terms of addressing existing drainage problems in its older areas, the Town will install storm drains upon request of property owners and upon their agreement to reimburse the Town for 50% of the cost of such work.¹⁸⁴

Since the Town's subdivision regulations apply within the area proposed for annexation, its provisions regarding the installation of curbs, gutters, and storm drains currently regulate new development in that area. After annexation, the Town will extend its policies con-

¹⁸¹Christiansburg Town Code, Sec. 26-7; and Christiansburg Annexation Notice, Vol. I, p. 116. In lieu of curbs and gutters, the Town may require paved drainage ditches to be installed in new developments.

¹⁸²Christiansburg Annexation Notice, Vol. I, p. 116. During the past five years, the Town has installed 395 linear-feet of curb and gutter and 1,108 linear-feet of sidewalks. (Ibid., p. 117.)

¹⁸³Christiansburg Town Code, Secs. 26-4 and 26-7.

¹⁸⁴Christiansburg Annexation Notice, Vol. I, p. 116. During the past five years the Town of Christiansburg has installed 4,639 linear-

cerning the construction of curbs, gutters, sidewalks, and storm drains in street improvement projects and with respect to assisting property owners in the installation of such facilities in existing developments.

Montgomery County's land development regulations do not specifically require the installation of curbs and gutters in new subdivisions unless such facilities are requirements imposed by the Virginia Department of Transportation (VDOT).¹⁸⁵ Further, the County has no program for financially assisting property owners with the installation of these facilities where such is desired in existing developments.¹⁸⁶ With respect to sidewalks, Montgomery County's ordinances require only that walkways be provided in new subdivisions located within districts zoned for planned residential development. Few such developments exist currently, however, within Montgomery County.¹⁸⁷

In terms of storm drains, the County's subdivision ordinance requires the installation of such facilities in all developments subject to its provisions.¹⁸⁸ The County does not have any policy, however, of providing financial assistance to property owners in existing developments who desire the installation of drainage facilities abutting

feet of half-pipe or paved ditches and 3,659 linear-feet of storm drains. (Ibid., p. 117.)

¹⁸⁵Montgomery County Response, Vol. I, p. 13-1.

¹⁸⁶Testimony of West, Transcript, Vol. II, p. 334.

¹⁸⁷Montgomery County Response, Vol. I, p. 13-1. The County's policy of requiring walkways in new subdivisions located within planned residential development zoning districts would apply within the area proposed for annexation because it is contained within the County's zoning ordinance. The Commission notes that the County does not have a policy to assist financially property owners requesting the installation of sidewalks or walkways. (Testimony of West, Transcript, Vol. II, p. 334.)

¹⁸⁸Montgomery County Code, Sec. 16-25.

their premises.

As noted previously, the installation of curbs, gutters, sidewalks, and storm drains in new subdivisions within the area proposed for annexation is currently governed by the Town of Christiansburg's subdivision ordinance, and that situation will continue regardless of the outcome of this annexation issue. Thus, any existing or future problems caused by the absence of these facilities within the proposed annexation area would be attributable to the Town's subdivision control instrument. With respect to this point, the Commission has no knowledge of any major unaddressed problems resulting from inadequate curbs, gutters, sidewalks, or storm drains in the area proposed for annexation. While the Town's plans to serve that area do not call for the expenditure of funds to install curbs, gutters, sidewalks, or storm drains, we find that Town policies with respect to the installation of such facilities in existing developments will be beneficial in addressing problems which may occur in the future.

Streetlighting

The Town of Christiansburg adheres to a general policy which calls for the installation and operation, at public expense, of streetlights at all road intersections and at intervals of 200 to 400 feet along streets with straight alignment.¹⁸⁹ In addition, the Town will consider requests from residents for the installation of other streetlights.¹⁹⁰ Town officials have reported that during FY1985-86 Christiansburg expended \$29,199 for the operation of 757 streetlights

¹⁸⁹Christiansburg Annexation Notice, Vol. I, p. 124. The Town will also cause streetlights to be installed at sharp curves along public roadways. Streetlights within Christiansburg are actually installed and maintained by the Appalachian Power Company, but at the expense of the Town.

¹⁹⁰Glass, letter to staff of Commission on Local Government, Sep. 4, 1986.

within its current boundaries.¹⁹¹

Montgomery County currently does not have any policy for the installation or operation of streetlights within its jurisdiction.¹⁹² The streetlights which do exist in the County generally and in the area proposed for annexation are the responsibility of individual property owners.

In our judgment, the Town's policies with respect to the installation and operation of streetlights, as well as its policy for the consideration of citizen requests for additional facilities, will be beneficial to the area proposed for annexation. It is significant to note that in order to serve properly the area proposed for annexation, Christiansburg proposes to install 301 streetlights at various locations in that area following the effective date of annexation.¹⁹³

Street Maintenance

The proposed annexation would result in the Town of Christiansburg assuming responsibility for the construction and maintenance of the public thoroughfares in areas annexed. Currently, all public roads in the area proposed for annexation, and in the County generally, are owned and maintained by the Virginia Department of Transportation (VDOT) in accordance with State-prescribed policies. Although the Town receives significant contributions from VDOT for the maintenance of the public thoroughfares within its current boundaries, Christiansburg has shown a willingness to expend additional local funds to address its road needs.¹⁹⁴ The evidence reveals that between FY1980-81 and FY1984-85

¹⁹¹Christiansburg Financial Statements, Schedule 2; and Christiansburg Annexation Notice, Vol. I, p. 124.

¹⁹²Montgomery County Response, Vol. I, p. 14-1; and testimony of West, Transcript, Vol. II, pp. 234-35.

¹⁹³Glass, letter to staff of Commission on Local Government, Sep. 4, 1986; and Town of Christiansburg, Supplemental Maps, Oct. 1986, Exh. M-2. This set of supplemental maps submitted by the Town has been identified as Vol. III of their submissions to the Commission.

¹⁹⁴Christiansburg Annexation Notice, Vol. I, p. 120. According

the Town spent nearly \$80,000 in local revenue to assist with the maintenance of the 132.7 lane-miles of roadway within its corporate boundaries.¹⁹⁵

The proposed annexation would bring within the Town 9.82 lane-miles of primary roads and 43.49 lane-miles of secondary roadway.¹⁹⁶ Information concerning the condition of those thoroughfares reveal some problems. Data disclose that approximately 6.4 lane-miles of secondary roadway in that area, or 17.7% of the total, are unpaved and classified by VDOT as "nontolerable," denoting characteristics requiring improvement.¹⁹⁷ While the factors denoting "nontolerable" conditions involve more than the quality of road maintenance, they are indicators that point to certain unmet thoroughfare needs in the area proposed for annexation. In addition to this "nontolerable" roadway in the State system there are approximately 2.3 lane-miles of public roads in the proposed annexation area not maintained by the

to Town officials, only 4.58 lane-miles of streets within Christiansburg do not qualify for State maintenance payments. Of this amount, 2.66 lane-miles are scheduled to be resurfaced during calendar year 1986 and will subsequently qualify for State maintenance payments. Further, 1.92 lane-miles of the nonqualifying roadway in Christiansburg require dedication of sufficient right-of-way in order to receive State maintenance funds. It should be noted, however, that the Town of Christiansburg maintains all streets within its current boundaries, including those not qualifying for State maintenance payments.

¹⁹⁵Ibid., p. 118; and Glass, letter to staff of Commission on Local Government, Dec. 11, 1986. Town revenues represented 3.5% of the total funds utilized for street maintenance in Christiansburg between FY1980-81 and FY1984-85. During that period, the Town of Christiansburg also expended approximately \$700,000 of its own funds on street construction and improvements within its current boundaries.

¹⁹⁶Christiansburg Annexation Notice, Vol. I, p. 120.

¹⁹⁷Ibid.; and testimony of Lemley, Transcript, Vol. I, p. 138. The State defines "nontolerable roads" as those which do not have the capability of providing a reasonable level of service based on pavement width, strength, alignment, or gradient. (Virginia Department of Highways & Transportation (now Virginia Department of Transportation), Guide For Secondary Road Improvements, p. 14.)

State.¹⁹⁸

If annexation is ultimately granted, Christiansburg will assume responsibility for all of the roads incorporated into the Town. In that event, the Town proposes to make the necessary improvements to bring all, where possible, nonqualifying secondary roads in areas annexed up to the standards required for receipt of State maintenance payments.¹⁹⁹ In the Commission's judgment, this assumption of responsibility and the Town's willingness to expend local funds for the construction, maintenance, and improvement of its public roadways will benefit the area proposed for annexation.

Snow Removal

Snow removal services in the Town of Christiansburg are the responsibility of the Town's Public Works Department, which has available 19 pieces of equipment for that activity.²⁰⁰ With respect to the Town's direct expenditures for snow removal services, Christiansburg's financial records reveal that during FY1985-86 the Town expended a total of \$22,700 for such services.²⁰¹

As in the case of all other road-related functions, snow removal

¹⁹⁸Glass, letter to staff of Commission on Local Government, Dec. 8, 1986. A portion of the roadway within the area proposed for annexation was constructed to VDOT standards, but it lacks the required number of residents along its length to qualify for State maintenance.

¹⁹⁹Christiansburg Annexation Notice, Vol. I, p. 158. The Town's proposed road improvements within the area proposed for annexation are estimated to cost approximately \$102,000. (Ibid., p. 163.) Town officials have stated that Christiansburg will assume maintenance responsibility for all those roads within the area proposed for annexation which cannot meet State standards for receipt of maintenance assistance because of insufficient right-of-way or other reasons.

²⁰⁰Christiansburg Annexation Notice, Vol. I, p. 126. The Town of Christiansburg also collects and hauls snow from its central business district.

²⁰¹Christiansburg Financial Statements, Schedule 2. During the past five fiscal years, the Town's average annual expenditure for snow removal has been \$30,500 per year. (Christiansburg Annexation Notice,

services in Montgomery County are the responsibility of the VDOT. This activity is directed from the two offices which the VDOT maintains within the County, one of which is located in the Town of Christiansburg. Those two offices collectively have available 52 pieces of State-owned equipment, as well as other leased vehicles, to provide snow removal services to the areas of their responsibility.²⁰² It should be noted that during FY1985-86 the State allocated \$486,500 for snow removal services in the County.²⁰³

This Commission is unable to conclude that snow removal services in the area proposed for annexation would be improved as a result of annexation by Christiansburg.

Library Services and Fire Protection

This Commission observes that two major public activities (library and fire services) in the area proposed for annexation would, in the main, be unaffected by the incorporation of that area into Christiansburg. With respect to library services, the Town and Montgomery County jointly support the Montgomery-Floyd Regional Library. The main library of that system is located in Christiansburg and offers a full range of services to the residents of the general area. No change in library services to residents of the area is contemplated as a result of the proposed annexation.

In regards to fire prevention and protection services, the annexation would have little or no immediate impact on the residents of areas annexed. Both Christiansburg and Montgomery County support the Christiansburg Fire Department (CFD), a volunteer organization which serves the Town, the area proposed for annexation, and an additional portion of central Montgomery County. Both the Town and County own

Vol. I, p. 127.)

²⁰²Montgomery County Response, Vol. I, p. 15-1.

²⁰³Ibid.

equipment operated by the CFD, with the apparatus utilized initially in each fire run being determined by the site of the fire. If back-up assistance is needed in any instance, the equipment owned by the other jurisdiction is utilized.²⁰⁴ Fire suppression equipment owned by the Town will also respond to such calls if needed.²⁰⁵ The capabilities of the CFD and other relevant considerations (e. g., availability of hydrants, water flow, distance from station) are such that residential properties within the Town have been assigned a fire protection classification of "7" by the Insurance Services Offices (ISO) of Virginia in terms of their exposure to fire loss, while similar properties in the area proposed for annexation have been assigned

²⁰⁴The CFD operates under Christiansburg's Charter as a functional department of the Town. Christiansburg exercises, however, only fiscal and not operational control over the CFD. (Testimony of Lemley, Transcript, Vol. I, p. 182.) Between FY1980-81 and FY1984-85 the CFD answered, on an annual basis, 202 fire calls from within the Town and 238 fire calls from the remainder of its service area outside Christiansburg. (Christiansburg Annexation Notice, Vol. I, p. 101; and Glass, letter to staff of Commission on Local Government, Sep. 4, 1986.) During that period, the Town of Christiansburg provided an average of \$47,864 to the annual budget of the CFD, or \$237 per fire call answered within the Town. These funds provided by the Town include support for custodial services; utilities; fuel; liability insurance; operation and maintenance costs of buildings, grounds, and Town-owned fire apparatus; and travel and training expenses for the volunteers. Also included in the total is the Town's pro-rata share of workmen's compensation insurance for CFD personnel. (Christiansburg Annexation Notice, Vol. I, p. 93.) Between FY1980-81 and FY1984-85, Montgomery County contributed an average of \$29,203 annually to the operating expenses of the CFD, or \$120 per fire call answered outside the current boundaries of Christiansburg. County contributions include funds provided for liability insurance, operating and maintenance costs, travel and training of volunteers, and workmen's compensation insurance. (Glass, letter to staff of Commission on Local Government, Sep. 4, 1986.) The reported contributions by the Town and the County to the CFD do not include funds set aside for the purchase of new equipment.

²⁰⁵Lemley, communication with staff of Commission on Local Government, Jan. 20, 1987. County-owned fire equipment will also respond to fire calls received from within the Town if needed. The CFD normally responds initially to fire calls received from within the Town with three pumpers, which have a collective pumping capacity of 3,000 gallons per minute and an equipment van. (Testimony of Lemley,

a classification of "9" or "10."²⁰⁶ In terms of beneficial consequences of the proposed annexation for areas annexed, two factors should be noted. First, the Town has committed itself to the installation of additional fire hydrants in the area proposed for annexation.²⁰⁷ The installation of those hydrants will enhance the fire protection services available to properties adjacent to them. Second, Christiansburg has an adopted fire prevention code for the protection of its residents and property, and that code will be extended to areas

Transcript, Vol. I, p. 127.) For those fire calls received from outside the Town's current boundaries, the CFD initially responds (using equipment owned by Montgomery County) with three pumpers having a collective pumping capacity of 1,800 gallons per minute, a brush truck, having a pumping capacity of 150 gallons per minute, and a 2,700 gallon tanker truck. (Christiansburg Annexation Notice, Vol. I, p. 100.) All equipment is housed in a fire station centrally located within Christiansburg and constructed in 1979 entirely with Town funds.

²⁰⁶Christiansburg Annexation Notice, Vol. I, p. 91. The ISO classification is based on a scale of "1" to "10" for comparison with other municipal fire protection systems and represents an indication of a system's ability to defend against the major fire which may be expected in any given community. Where protection class "10" is assigned, there is usually no or minimal protection. Protection class "1" is assigned in instances where there is a fire protection system of extreme capability. The principal features used by ISO in grading a community's fire system are water supply, fire department operations, fire communications, and fire safety control. [John L. Bryan and Raymond C. Picard, Managing Fire Services, (Washington, D. C.: International City Management Association, 1979), p. 102.] Residential properties located more than five road-miles from a fire station are automatically assigned a protection class of "10" by the ISO.

²⁰⁷Testimony of Lemley, Transcript, Vol. I, pp. 129-30. Within the area proposed for annexation there are now approximately 68 fire hydrants, 10 of which are privately maintained. (Glass, letter to staff of Commission on Local Government, Sep. 4, 1986.) The Town proposes to install additional fire hydrants in the proposed annexation area along the proposed new water lines. The Town's current subdivision ordinance, which governs new developments within the area proposed for annexation, presently requires the installation of fire hydrants in areas where water lines are present. (Christiansburg Town Code, Sec. 26-4.)

annexed by the Town.²⁰⁸ In our judgment, these occurrences would benefit annexed areas.²⁰⁹

Summary of Urban Service Considerations

In the preceding sections of this report, this Commission has endeavored to consider the urban service needs of the area proposed for annexation by the Town of Christiansburg and the relative ability of the Town and Montgomery County to meet those needs. At issue here are concerns which are not amenable to complete resolution by any known statistical measures. While this Commission has analyzed the data with respect to these services which it considers relevant, that analysis is tempered by our direct experience in Virginia local government.

In this instance, the Commission finds that there are significant sewage collection and treatment needs in the area proposed for annexation and that the Town of Christiansburg currently has the capability to address those needs. With respect to other urban services, we conclude that portions of that area proposed for annexation would benefit from the higher level of urban services provided by the Town of Christiansburg. In our judgment, in terms of water distribution, solid waste collection, law enforcement, recreational programs, streetlighting, maintenance of roadways, the proposed annexation can benefit the developing portions of the area proposed for

²⁰⁸Christiansburg Annexation Notice, Vol. I, p. 92. Montgomery County has not adopted a fire prevention code. (Testimony of West, Transcript, Vol. II, p. 331.)

²⁰⁹The disparity in fire protection classifications between properties in the Town and the area proposed for annexation appears to be due to the interval since the latter territory was last evaluated by the ISO. Since a significant number of properties in the area proposed for annexation are already served by fire hydrants connected to Town water mains, and the assignment of a better fire protection classification to those properties will be unaffected by incorporation into Christiansburg. An improved fire protection classification for properties in the area proposed for annexation will depend upon a re-evaluation of the general fire suppression capabilities in the area. (Jerry D. Vance, Field Rating Representative, ISO Commercial Risk Services, Inc., communication with staff of Commission on Local Government, Jan. 21, 1986.)

annexation.²¹⁰ The Commission does find, however, that the County's planning processes and land development regulations are clearly superior to those currently utilized by the Town of Christiansburg.

COMPLIANCE WITH APPLICABLE STATE POLICIES

Another factor prescribed for consideration in annexation issues is the extent to which the affected jurisdictions have made efforts to comply with applicable State policies promulgated by the General Assembly. In our judgment, there are three State policies which merit consideration in this report. The following sections review those State policies.

Public Planning

The Code of Virginia requires localities to establish a planning commission and to adopt a comprehensive plan and subdivision regulations to guide their development.²¹¹ Consistent with these statutory requirements, the Town of Christiansburg and Montgomery County have established planning commissions and have adopted such development control instruments. In addition, each jurisdiction has adopted a zoning ordinance which enhances its ability to regulate its future development. In view of the fact that a previous section of this report has dealt extensively with each locality's public planning efforts, additional comment here is not required. While the County's public planning efforts are more extensive and provide better control of development, we find that both jurisdictions have taken the required steps to comply with the State's concern for public planning.²¹²

²¹⁰The Commission also finds that Town policies authorizing municipal assistance for the construction of curbs, gutters, and sidewalks in existing developments would benefit the urbanizing portion of the area proposed for annexation.

²¹¹Secs. 15.1-427.1, 15.1-446.1, and 15.1-465.1, Code of Va.

²¹²The Code of Virginia directs local planning commissions to review a jurisdiction's comprehensive plan once every five years to determine whether revisions are required. (Sec. 15.1-454, Code of Va.).

Agricultural Land Preservation

The Virginia General Assembly has declared that it is the policy of the Commonwealth to endeavor to preserve the State's agricultural properties.²¹³ Consistent with this policy, Montgomery County has taken several actions to ensure that agricultural properties within its boundaries are protected and enhanced. First, the County has formally recognized the conservation of agricultural properties as a major goal of its comprehensive planning efforts and has amended its development control regulations to protect such lands. Second, the County has adopted a program of use value assessment which reduces the fiscal pressures on agricultural and other qualifying properties.²¹⁴ As a result of this program, the County reduced the taxable value of qualifying properties by \$36.5 million during tax year 1985.²¹⁵ Finally, and consistent with the State's concern for the protection of agricultural lands, Montgomery County has authorized the establishment of agricultural and forestal districts within its territory as permitted by State statutes. Agricultural operations encompassed within these districts are provided an additional measure of protection from development pressures.²¹⁶ It is significant to note that, as of 1985, the County had created 11 agricultural and forestal districts containing approximately 48,000 acres (18.9% of the County's total land

The Town's previous comprehensive plan, which was adopted in 1975, was not revised until 1985.

²¹³Sec. 15.1-507, Code of Va.

²¹⁴Montgomery County's use value assessment program, which was adopted in 1979, applies only to qualifying agricultural and horticultural properties. [Albert W. Spengler, Tax Rates In Virginia's Cities, Counties, and Selected Towns: 1985 (Charlottesville: Institute of Government, University of Virginia, 1985), p. II-84.]

²¹⁵Virginia Department of Taxation, Annual Report, 1984-85, Table 5.4.

²¹⁶Chapt. 36 of Title 15.1, Code of Va., permits counties to create agricultural and forestal districts at the request of the owners of qualifying properties. Such districts must contain more than 500 acres of land area and may be in multiple ownership.

area).²¹⁷

The Commission observes that the Town of Christiansburg has also made efforts to comply with the State's concern for the protection of agricultural land, although these actions have not been as effective as those undertaken by the County.²¹⁸ In this regard, the Town has adopted a use value assessment program for qualifying properties which lessens the fiscal burden of maintaining agricultural operations within that municipality.²¹⁹ This use value assessment program constitutes a commitment by the Town to the preservation of the State's agricultural

Noncontiguous land may be included in a district as long as the nearest boundary of such land is within one mile of the boundary of the land encompassed in the district. In general, land contained within an agricultural and forestal district is protected from the activities of special purpose units of government, such as water and sewer authorities. In addition, local governments may not exercise any of their powers to enact laws or ordinances which would unreasonably restrict or regulate agricultural operations within a district. Further, a locality's land use planning decisions or ordinances must recognize each district and take into account the use of land within it. Furthermore, State agencies with land use concerns must also modify rules or procedures to encourage farming and forestry operations within such districts. Finally, properties within a district are granted certain protection from eminent domain exercised by local and State governments and public service corporations. (Sec. 15.1-1512, Code of Va.)

²¹⁷Tax Rates In Virginia's Cities, Counties, and Selected Towns: 1985, p. II-92. The Commission notes that the creation of the agricultural and forestal districts within the Town of Christiansburg were initially opposed by that Town.

²¹⁸As noted previously, the Town's agricultural zoning district permits a significant amount of development by special use permit, thereby reducing the effectiveness of zoning ordinance in protecting agricultural activity.

²¹⁹Tax Rates In Virginia's Cities, Counties, and Selected Towns: 1985, p. II-87. The Town's use value assessment program encompasses all four categories of property (agricultural, forestal, horticultural, and open space) which are eligible for such under State law. The Commission observes that the Town's adoption of use value assessment in 1975 preceded the County's adoption of that program by approximately four years.

lands.²²⁰

Public Housing

By various statutory provisions the General Assembly has recognized that proper housing for the State's residents is a matter of "grave concern to the Commonwealth."²²¹ This Commission notes that Montgomery County has made efforts to attend to this basic need of its residents by utilizing the resources of the Virginia Mountain Housing Corporation, a private, non-profit regional housing entity. This agency has administered the housing rehabilitation portion of the County's three Community Development Block grants and currently supervises for the County 85 housing units for low and moderate income families funded under the U. S. Department of Housing and Urban Development's Section 8 Existing Rental Assistance Program.²²² These various programs reflect on the part of Montgomery County an effort to address the housing needs of the low and moderate income residents merit recognition in this report.

The Commission notes that the Town of Christiansburg has not established a public housing authority nor undertaken other activities to address directly the housing needs of its low and moderate income residents. There are, however, assisted housing units within the Town as a result of private initiative or action by the Virginia Mountain Housing Authority. The Commission recommends that the Town consider assuming a more active role in addressing the housing needs and concerns of its residents.

²²⁰Application of use value assessment on qualifying agricultural properties in Montgomery County has the result of increasing the tax burden on other properties, including those within Christiansburg.

²²¹Sec. 36-2, Code of Va. See also Sec. 36-120, Code of Va.

²²²Janaka Casper, Executive Director, Virginia Mountain Housing Corporation, communication with staff of Commission on Local Government, Jan. 15, 1987. The housing rehabilitation activities were conducted in the Plum Creek, Elliston, and Kirk's Hollow communities which are residential areas with concentrations of low and moderate income

COMMUNITY OF INTEREST

Another of the factors prescribed by statute for consideration in the disposition of annexation issues directs this Commission and the reviewing court to consider the strength of the community of interest which ties the area proposed for annexation to the annexing municipality and that which joins such area to the remaining portion of the county. While analysis of the question of community of interest properly involves many elements, the most relevant considerations, from our perspective, are the public services, employment, and commercial bonds which create interdependency. Although not all of the factors which bear on the issue of community of interest are susceptible to quantification and precise measurement, there are data which do measure certain tangible aspects of such relationships. The following paragraphs review such data.

The evidence clearly reveals strong public service ties between the area proposed for annexation and the Town of Christiansburg. First, the Town provides water service to approximately 700 connections in the area proposed for annexation, including almost all of its residential concentrations.²²³ Second, Christiansburg provides sewage collection and treatment services to 182 connections within the area.²²⁴ Third, all of the area proposed for annexation falls within the two-mile extraterritorial subdivision jurisdiction of the Town, and, thus, Christiansburg's subdivision regulations have controlled the character

housing. This program involved rehabilitation of approximately 60 housing units at a total cost of \$300,000. The Virginia Mountain Housing Corporation also operates the Section 8 Existing Rental Assistance Program within all three jurisdictions in Montgomery County.

²²³Glass, letter to Jennings, Aug. 28, 1986. Within the northern portion of Parcel A the Town of Blacksburg serves approximately 44 water connections. A private water system in a subdivision in Parcel B serves approximately 28 dwelling units.

²²⁴Ibid. Town sewer services within the area proposed for annexation are available primarily to the residents of the three subdivisions located to the west of Christiansburg in Parcel A. The Town will also provide sewage collection services to the New River Valley

of new development occurring in that area for many years.²²⁵ Finally, various public facilities in Christiansburg area are utilized by residents of both the Town and the area proposed for annexation, reflecting other facets of the community of interest between the two jurisdictions. A significant number of nonresidents, for example, participate in the Town's recreational programs.²²⁶

There is also evidence which indicates strong employment ties between the proposed annexation area and the Town. Statistics disclose that the Town is the site of employment for a significant number of nonresidents. Statistics disclose that, as of 1980, there was a total of 5,000 positions of nonagricultural wage and salary employment in Christiansburg, with the Town being the location of 5 of the County's 12 largest employers.²²⁷ Commuting patterns reveal that, as of 1980, approximately 1,750 County residents living beyond Christiansburg's corporate limits were employed by firms in the Town.²²⁸

With respect to commercial relationships, 1982 U. S. Bureau of the Census data revealed that, as of that year, the Town contained 33% of

Mall in Parcel A when that facility is completed.

²²⁵Montgomery County Code, Sec. 16-16. The Town's subdivision regulations prohibit private streets, require connection to Town utilities where available, direct the installation of fire hydrants if water lines are in place, and mandate the construction of streets to certain specified standards. The Town has exercised its extraterritorial subdivision control since the 1960s.

²²⁶Christiansburg Annexation Notice, Vol. I, pp. 135-36. Further, numerous governmental offices located within Christiansburg serve residents of the general area.

²²⁷Christiansburg Comprehensive Plan, pp. 17-18. The five business firms in the Town collectively provided approximately 1,200 employment positions in 1982. The Commission notes, however, that Montgomery County's largest employers are located in the Town of Blacksburg or in the remaining portion of the County.

²²⁸Christiansburg Comprehensive Plan, p. 18. The commuting information is derived from unpublished U. S. Bureau of the Census data. These data cover only persons age 16 and over.

the County's service industries and 40% of its retail establishments.²²⁹ Further, although the Town then contained only 18% of the County's total population, retail sales in Christiansburg in 1982 constituted 44% of the total of such sales of the entirety of Montgomery County, inclusive of its incorporated municipalities.²³⁰ It is reasonable to conclude, therefore, that a significant amount of the retail trade activity of County residents residing in close proximity to the Town of Christiansburg is presently conducted at establishments within the Town.²³¹

The data also reveal that the Town is the center of wholesale trade in Montgomery County. Census Bureau statistics reveal that, as of 1982, Christiansburg contained 75% of the County's wholesale businesses.²³² In addition, the Town is the site of nine financial

²²⁹U. S. Department of Commerce, Bureau of the Census, 1982 Census of Service Industries, Virginia, Table 8; and 1982 Census of Retail Trade, Virginia, Table 8. The Census Bureau defines service industries as those primarily engaged in rendering a wide variety of services to individuals in business establishments (e. g., personal, business, legal, and repair services) and retail trade to include those establishments engaged in selling merchandise for personal or household consumption and those rendering services incidental to the sale of such goods.

²³⁰1982 Census of Retail Trade, Virginia, Table 8.

²³¹There are no significant retail operations located within the area proposed for annexation. A recent survey of persons residing in the Belmont Farms, Belmont Estates, and Carma Heights subdivisions in the northern portion of Parcel A by one of the intervenors to this annex issue indicated that in terms of grocery shopping and banking, residents of those subdivisions utilize, in the main, facilities in the Town of Christiansburg. (Montgomery County Concerned Citizens Opposing Christiansburg's Annexation, Belmont Area Survey, Sep. - Oct. 1986.) In addition, a survey recently undertaken in the southern portion of Parcel A between Crab Creek and U. S. Route 11 West by another of the intervenors indicated that the residents of that portion of the area proposed for annexation utilize facilities within the Town for the purchase of groceries, clothing, automobiles, general merchandise, prepared foods, and banking services. (Montgomery County Citizens Opposed to Annexation, Area B Association of Parcel A, Response to Annexation Initiated By Town of Christiansburg, 1986, p. 40.)

²³²U. S. Department of Commerce, Bureau of the Census, 1982 Census

institutions serving the general area.²³³ The various wholesale firms and financial institutions contribute to the commercial bonds between the Town and the area proposed for annexation.

Finally, the area proposed for annexation has a population density of approximately 315 persons per square mile, considerably in excess of the 1984 population density of the unincorporated portion of Montgomery County (62 persons per square mile).²³⁴ This density of population gives the area proposed for annexation an urban nature and service needs which more closely parallel those of the Town than those of the County. With respect to such urbanization in the area, this Commission observes that a number of developments around the periphery of Christiansburg are extensions of development patterns originating within the Town.²³⁵

On the basis of these various considerations, we have no difficulty concluding that there exist strong and varied bonds which unite the Town with the areas generally which it seeks to annex, constituting, in the aggregate, a significant community of interest.

The Commission also acknowledges that there are numerous factors which contribute to the interdependence of the area proposed for annexation and other portions of the County. The presence of Blacksburg, which is located approximately one mile from the northern boundary of Parcel A, has a major and pervasive effect on the economic and social life of the County generally. Within the boundaries of that Town is

of Wholesale Trade, Virginia, Table 8. Wholesale establishments are defined by the Census Bureau as those which do not sell to the general public.

²³³Christiansburg Annexation Notice, Vol. I, p. 131. The respondents to the two surveys conducted by the intervenors within portions of Parcel A indicated a significant utilization of banking facilities located within the Town of Christiansburg.

²³⁴The population density in the County overall in 1984 was 165 persons per square mile.

²³⁵Christiansburg Annexation Notice, Vol. II, Exh. M-3; and County of Montgomery, Annexation Proceedings, Maps, Exh. 12. These development patterns include those along U. S. Route 11 West, State

the largest employer in Montgomery County, VPI&SU, which in 1986 employed approximately 5,500 persons.²³⁶ In addition, Blacksburg contains two other entities which together in 1986 employed approximately 1,100 persons.²³⁷ It is reasonable to conclude that a significant number of persons living in the area proposed for annexation commute to Blacksburg for their employment.²³⁸

The Town of Blacksburg also constitutes a major center of medical and professional services and retail trade for the general area. Information from the U. S. Bureau of the Census, indicates that, as of 1982, there were 142 service establishments located within Blacksburg.²³⁹ More recent data reveal that Blacksburg contains the offices of 34 physicians and dentists and those of 74 other professionals.²⁴⁰ Further, the Town of Blacksburg had, as of 1982, within its boundaries, 211 retail establishments which collectively accounted for \$123.9 million of retail sales during that year. These figures represented, at that time, 45% of all retail establishments located in Montgomery County and 48% of the County's total retail sales.²⁴¹

In terms of other relationships between the area proposed for

Route 666, U. S. Route 460 North, and U. S. Routes 11 and 460 East.

²³⁶Blacksburg Response, Vol. I, pp. 65-66.

²³⁷Ibid.

²³⁸Of those persons responding to the survey conducted by the intervenors in the northern portion of Parcel A, 43.3% reported the Town of Blacksburg as the site of employment of various family members, while those indicating a location of employment within Christiansburg or the remaining portion of the County were 19.4% and 13.1%, respectively. (Belmont Area Survey.)

²³⁹In 1982 the Town of Blacksburg was the location for 57.5% of the service establishments within all of Montgomery County.

²⁴⁰Blacksburg Response, Vol. I, p. 70. The professional offices included in the data reported by the Town of Blacksburg include those of accountants, lawyers, engineers, and psychologists.

²⁴¹1982 Census of Retail Trade, Virginia, Table 8. As of that year, the unincorporated portion of Montgomery County had only 70

annexation and the Town of Blacksburg, we have noted previously that Blacksburg currently serves 44 water connections in the northern portion of Parcel A.²⁴² In addition, the location of a portion of VPI&SU's Horticultural Research Station in Parcel A establishes interests between that area and Blacksburg, the site of the University's main campus.²⁴³ Finally, U. S. Route 460 North transiting Parcel A is a major thoroughfare which serves as the southern "gateway" to the Town of Blacksburg. The quality and nature of development along that thoroughfare is of significance to that municipality.

With respect to the relationships between the area proposed for annexation and the unincorporated portion of Montgomery County, several points should be noted. First, the economic ties of the active agricultural properties in the proposed annexation area are principally with the agricultural community in the remaining portion of the County.²⁴⁴ Second, the Radford Arsenal, which is located adjacent to the County's northwestern boundary, is the site of employment for 3,800 persons in the general area, including residents of the area proposed for annexation. Finally, the 146-bed Montgomery Regional Hospital and allied facilities located immediately outside the southwestern border of Blacksburg serve residents from the areas adjacent to Christiansburg.

In sum, while there are interests and relationships which establish a community of interest between the area proposed for annexation and the remaining portion of Montgomery County, we do not

retail establishments, with total sales of \$21 million.

²⁴²Blacksburg Response, Vol. I, p. 46.

²⁴³The Commission notes that VPI&SU has recently divested itself of the site of the Horticultural Research Station, but horticultural activities will continue at that facility, to some degree, over the next three to five years. (Carolyn J. Moss, Secretary of Administration, Commonwealth of Virginia, letter to William E. Lavery, President, VPI&SU, Dec. 15, 1986.)

²⁴⁴The Commission observes that a large portion of Parcel A located south of Crab Creek is contained within an agricultural and

consider that community of interest equivalent to that which links the area proposed for annexation to the Town of Christiansburg. In terms of urban services, retail and professional facilities, governmental offices, and development patterns, we consider the community of interest between Christiansburg and the area on its periphery to be significant, pervasive, and exceeding that between such area and the outlying portion of Montgomery County.²⁴⁵

Prior to concluding our review of the community of interest issue, we should note that Montgomery County has presented data reflecting the presence of a regional community of interest among the jurisdictions of the New River Valley Region (the Counties of Floyd, Giles, Montgomery, Pulaski, and the City of Radford). The County has asserted that the strength of this regional community of interest is such that it surpasses, and perhaps supplants, any local community of interest which may exist between the Town of Christiansburg and the area proposed for annexation. This suggestion is based upon employment patterns and the occupational characteristics of the region's workers.²⁴⁶

forestal district which extends beyond the area proposed for annexation.

²⁴⁵The northern portion of Parcel A includes approximately one-half of an area known as the Belmont community. The Belmont community embraces generally the territory located between Slate Branch and Crab Creek and extending from Christiansburg's present boundary westward to the community of Vicker (a total of approximately 4.5 square miles). We note that Special Counsel for residents of this area has asserted that Belmont "is a very homogeneous community" and that the residents of the area "have a strong community interest of their own and . . . do not identify with Christiansburg, . . ." (Testimony of John W. L. Craig, II, Special Counsel, Montgomery County Citizens Opposing Christiansburg Annexation, Transcript, Vol. I, pp. 63, 65.) While we acknowledge the community facilities and activities which give the Belmont community social cohesion, such cohesion does not negate the various factors which, we believe, constitute a significant community of interest between the eastern portion of that area and the Town of Christiansburg.

²⁴⁶Montgomery County Response, Vol. I, pp. 18-2--18-3; and testimony of Garland L. Page, Jr., Consultant, County of Montgomery,

First, with respect to employment patterns, data was presented disclosing that Montgomery County was a significant employment center for the entire New River Valley region, with VPI&SU and the Radford Arsenal alone employing more than 9,000 persons.²⁴⁷ Further, the County contended that these and other business concerns employed significant numbers of nonresident workers and that the Town of Christiansburg was not a major employment center for residents of the area proposed for annexation, nor even for its own residents. While the Commission acknowledges that the Town of Christiansburg is not the primary employment center for Montgomery County, previously cited data regarding intracounty commuting patterns in 1980 revealed that approximately 1,750 County residents living outside Christiansburg were employed by firms located in that Town.²⁴⁸ Since the area proposed for annexation does not contain any significant employment centers, it is reasonable to conclude that a substantial number of the residents of the areas adjacent to Christiansburg commute to that municipality for employment.²⁴⁹

Second, with respect to the occupational characteristics of workers within the New River Valley region, Montgomery County has presented evidence which suggests that each of the jurisdictions within the region has distinct occupational profiles for its resident workers and that such varying profiles diminish local attachments and reflect

Transcript, Vol. III, p. 49.

²⁴⁷Blacksburg Response, Vol. 1, pp. 65-66. In 1980, 4,541 residents of the Counties of Floyd, Giles, and Pulaski and the City of Radford commuted to Montgomery County for employment. [Michael A. Spar, Transportation and Commuting in Virginia, 1980 (Charlottesville: Tayloe Murphy Institute, University of Virginia, 1984), Appendix 1.]

²⁴⁸Christiansburg Comprehensive Plan, p. 18. In addition, 250 residents of Pulaski County and 160 residents of the City of Radford commuted to Christiansburg for employment purposes in 1980.

²⁴⁹The results of the two surveys conducted by the separate groups of intervenors within their respective areas revealed that 19.4% of the respondents residing generally in that portion of Parcel A north of Crab Creek and 23% of the respondents to the survey who lived in

a regional interdependency.²⁵⁰ The County's contention rests upon a statistical analysis of occupational data from the 1980 census for the employment "core" of the New River Valley region - the Counties of Montgomery and Pulaski and the City of Radford.²⁵¹

While this Commission has reviewed with interest the evidence presented by Montgomery County, and while we readily acknowledge the presence of a regional community of interest affecting the New River Valley, we cannot conclude that the regional interest supplants and renders inconsequential the immediate and pervasive ties which exist between Christiansburg and the areas on its periphery. In our judgment, the latter bonds are more relevant to the disposition of this annexation issue.

ARBITRARY REFUSAL TO COOPERATE

A further factor prescribed for consideration in annexation issues is whether any of the affected jurisdictions has arbitrarily refused to cooperate in the joint provision of public services. The apparent intent of the General Assembly in directing consideration of this issue is to promote interlocal cooperation where such can be of mutual benefit to local governments and their residents. With respect to the annexation issue presently under review, this Commission has been presented no evidence of any instance of arbitrary refusal to cooperate by either locality. Indeed, the evidence indicates a history of cooperation between the Town of Christiansburg and Montgomery County in the provision of services to their residents. The data reveal that the Town and County have cooperated in the provision of fire and

Parcel A between U. S. Route 11 West and Crab Creek were employed within the Town of Christiansburg. (Belmont Area Survey; and Response to Annexation Initiated by The Town of Christiansburg, p. 40.)

²⁵⁰Montgomery County Response, Vol. I, p. 18-3; and testimony of Page, Transcript, Vol. III, pp. 50-51.

²⁵¹The County's analysis of the occupational profile of resident workers in the jurisdictions in the New River Valley region utilized a statistical concept identified by statisticians as the "chi-square" measure. This statistical instrument, we are advised,

rescue services, solid waste disposal, and public recreation.²⁵² Such collaborative efforts among local governments are vital to the State and should not be permitted to be jeopardized by boundary change proceedings.

INTEREST OF THE STATE

A final factor prescribed by statute for consideration in annexation issues is the ". . . best interest of the State in promoting strong and viable units of government."²⁵³ As previous sections of this report have indicated, the annexation proposed by Christiansburg will provide the Town with additional tax resources as well as a considerable amount of vacant land which can accommodate future development. Further, the infusion of present and future tax resources into the Town's fiscal base as a consequence of this proposed annexation will not be accompanied by any major adverse effect on the County's fiscal condition. While Montgomery County will initially experience a modest reduction in some revenue categories because of the proposed annexation, all future development occurring in the enlarged Town will redound to the benefit of the County as well as the municipality. In sum, the Commission finds that the annexation proposed by the Town of Christiansburg is consistent with the interest of the Commonwealth in promoting strong and viable units of local government.

was inappropriate for the purpose utilized. At our direction, the Commission's staff has prepared a technical analysis of the "chi-square" measure. This analysis is attached to this report as Appendix C.

²⁵²The Commission notes that the Town of Christiansburg has opted to establish a separate enhanced 911 system rather than to participate in the system presently being developed by Montgomery County and the Town of Blacksburg. The Commission encourages the Town of Christiansburg to consider the possible advantages of participating in the system being developed by the County and Blacksburg. Where areawide systems have been established in circumstances similar to those in the Montgomery County area, they have proven to be less costly, more effective, and less susceptible to "dead spots."

²⁵³Sec. 15.1-1041(b), Code of Va.

FINDINGS AND RECOMMENDATIONS

AREA RECOMMENDED FOR ANNEXATION

After extensive consideration of the data previously reviewed in this report, the Commission recommends that, subject to the conditions specified below, the Town of Christiansburg be granted an annexation to include (1) that portion of Parcel A north of the southern right-of-way of the Norfolk and Western Railway lines adjacent to Crab Creek, (2) that portion of Parcel A generally south of U. S. Route 11, encompassing Harmon Forest subdivision, (3) all of Parcel B, (4) all of Parcel C, and (5) all the territory east of the Town's present corporate limits and west of the western right-of-way of the U. S. Route 460 Bypass.²⁵⁴ The latter territory, it should be noted, is not included in the area proposed for annexation by Christiansburg. Our calculations indicate that the area recommended for annexation totals 5.4 square miles and contains approximately 2,300 persons and an estimated \$45 million in real estate values based on 1985 assessments. Thus, according to our calculations, the area recommended for annexation contains a population density of approximately 411 persons per square mile, or more than six times that of the unincorporated portions of Montgomery County generally (62.5 persons/square mile).

With respect to present development, the area recommended for annexation contains approximately 13 residential subdivisions, the site of the New River Valley Mall, a vacant industrial plant, and horticultural properties formerly belonging to VPI&SU. In addition, the area recommended for annexation embraces certain territory which has significant potential for future development. In particular, properties adjacent to U. S. Route 460 (North and East) and State Route 114 (West) will, in our judgment, be focal points of development in the future. Indeed, Montgomery County's comprehensive plan identifies the

²⁵⁴See Appendix B for map of the area recommended for annexation.

northern portion of Parcel A as an area in which high density development should be encouraged.²⁵⁵ In brief, the area recommended for annexation has experienced significant urbanization and is likely to be subjected to considerable development in the future.

While the Commission's recommendations are founded upon the entirety of the data previously cited in this report, there are several salient considerations which should be noted here. First, the Town of Christiansburg has facilitated a considerable portion of the development on its periphery through the construction of facilities serving the areas beyond its corporate boundaries. The data reveal that Christiansburg's utility systems currently serve approximately 660 water connections and 180 sewer connections within the area recommended for annexation.²⁵⁶ Moreover, the area recommended for annexation contains properties which are presently in need of utility services which Christiansburg can provide. The communities of Belmont Farms, Belmont Estates, and Carma Heights have a pronounced need for centralized sewerage service, while the Mountain Top area east of Christiansburg has a need for both sewer and improved water service.²⁵⁷ In our judgment, the Town of Christiansburg is the appropriate entity to address these public service concerns.

Second, while statistics disclose that the Town of Christiansburg has shared fully in the growth of its general area in recent years, development patterns suggest that the Town does confront a need for additional land for development. The construction of the New River Valley Mall immediately beyond the Town's present corporate limits will doubtless adversely affect the competitive position of commercial properties within the Town. In terms of residential development, the evidence indicates that future residential construction in the

²⁵⁵Montgomery County Comprehensive Plan, pp. 5-6.

²⁵⁶The statistics are calculated from data provided in Glass, letter to staff of Commission on Local Government, Nov. 10, 1986.

²⁵⁷Vacant lots in both Belmont Estates and Belmont Farms have been denied septic tanks permits in recent years. Further, lot sizes

Christiansburg area will increasingly be concentrated within the area proposed for annexation. In our judgment, Christiansburg's ability to continue to share in the commercial and residential growth of its general area rests upon a reasonable extension of its corporate boundaries.

Third, there exists a strong community of interest between Christiansburg and the areas on its periphery which supports an extension of the Town's boundaries. This community of interest is founded on urban service considerations, economic and social ties, and various terrain features. With respect to the latter factor, from our perspective, the Norfolk and Western Railway line in the north, and development patterns and topographical features to the west properly demarked that portion of Parcel A appropriate for annexation by Christiansburg. Similarly, the western right-of-way of the U. S. Route 460 Bypass properly delineates, in our view, the territory which should currently be made the urban service responsibility of the Town. While this Commission recognizes that the topographical features of this area restricts its development potential, we believe that any development which occurs in that area would be served best by the Town of Christiansburg.

With respect to those portions of Parcel A which the Commission recommends for exclusion from the area to be annexed by Christiansburg, several considerations should be stated. In terms of the property adjacent to and south of the Round Meadow County Club, we note that this area remains overwhelmingly devoted to agricultural or open space usage, with the predominant portion being located within agricultural and forestal districts.²⁵⁸ Moreover, this portion of Parcel A has not been subject to developmental pressures and has been designated by

in those communities restrict the ability of certain residential properties to repair existing septic tanks. The private water system presently serving a portion of the Mountain Top area has confronted operating problems.

²⁵⁸Approximately 75% of the property south of the Round Meadow County Club and north of U. S. Route 11 is located within the boun-

the County as an area to be preserved for agricultural activity.²⁵⁹ Thus, this portion of Parcel A has no current need of more intense urban services, nor is it likely afford Christiansburg property which would be available for development in the immediate future. In view of the present character of this property, the County's plan to protect its agricultural nature, and the development potential of other areas recommended for annexation, we find no compelling basis for proposing its incorporation into the Town of Christiansburg at this time.

In terms of the exclusion of other property in Parcel A from the area recommended for annexation, we observe that the territory south of Harmon Forest has also been outside the corridor of past development, that it lies partially within an agricultural and forestal district, and that it is served only to a limited degree by Town utilities. Further, the portion of Parcel A south of Interstate Highway 81 remains sparsely populated and unserved by Christiansburg's utility systems. We find no suitable basis for the inclusion of these portions of Parcel A within the area recommended for annexation by Christiansburg.

TERMS AND CONDITIONS OF ANNEXATION

Development Controls

In opposing Christiansburg's proposal to annex that portion of Parcel A north of State Route 114, identified as the "460 Corridor," the Town of Blacksburg asserted:

The 460 Corridor is the major entrance to Blacksburg and Virginia Tech for all travelers from Interstate 81. It serves as the town's front door and provides the first impression of Blacksburg for visitors and potential residents. The quality of planning and development that occurs in the corridor has major implications for Blacksburg's image and its

daries of the Country Club or on four active farms.

²⁵⁹With the exception of the provision of water to the Round Meadow Country Club, Christiansburg provides no services to this portion of Parcel A.

economic and social vitality.²⁶⁰

We fully agree with this statement and concur with Blacksburg's concern.

In our judgment, there is an evident need for the Town of Christiansburg to improve its development control instruments. While this Commission recognizes that the character of development in portions of Christiansburg is due, in part, to growth which occurred prior to the annexation of such property by the Town, and while we acknowledge Christiansburg's recent efforts to strengthen its development control instruments, we vigorously encourage that municipality to review critically its public planning, its zoning, and its subdivision regulations. The continuing urbanization of our Commonwealth makes it essential that increased attention be given to the establishment of development control instruments which address the full range of public concerns, including the protection of the aesthetic quality of our environment. The Town of Blacksburg is correct, in our judgment, when it asserts that the "quality of planning and development" in one locality has "major implications" for the community at large. We contend that the aesthetic quality of development in any community has a pervasive effect on the lives of its residents.

Accordingly, we recommend that the Town of Christiansburg develop, as a condition of this recommended annexation, improved development control regulations encompassing strengthened provisions regarding setbacks, side yards, screening, landscaping, and lot coverage for its business and industrial districts. As an adjunct to such revisions in its regulatory control instruments, Christiansburg should amend its sign regulations in a manner which would significantly increase the Town's ability to control the number, type, height, and square footage of all signage. Further, with respect to its zoning ordinance, Christiansburg should establish a zoning district which would have as

²⁶⁰Blacksburg Response, Vol. I, p. 63.

its primary purpose the protection of agricultural operations and which would prohibit all incompatible uses, even on a conditional basis.²⁶¹ Furthermore, since the development of the U. S. Route 460 corridor, north of Christiansburg does immediately impact the Town of Blacksburg, as well as Montgomery County generally, the Commission recommends that the three jurisdictions collaborate in the development of plans governing the future growth of that area.²⁶² The evident interdependence of Christiansburg, Blacksburg, and Montgomery County underscores the desirability of a collaborative approach to the future development of the U. S. Route 460 corridor and, indeed, to the public affairs of Montgomery County as a whole.²⁶³

Urban Services

Utilities. The Commission recommends that the Town of Christiansburg's plans to extend utility service to the areas proposed for annexation be amended to provide that sewer service shall be extended to the Mountain Top area of Parcel B within the first three years after annexation. The exclusion of portions of Parcel A from the area recommended for annexation would, if the Commission's recommendations are accepted, render unnecessary significant utility improvements planned for that area and, therefore, should enable the Town to address the needs of Parcel B in a more expeditious manner. In regard to this issue, we note that approximately 135 residents in Parcel B have previously petitioned the Town for the extension of

²⁶¹The Town of Christiansburg also should give consideration to eliminating the pyramidal aspect of its zoning ordinance.

²⁶²As an entity established for the planning and development of regional perspectives, the New River Valley Planning District Commission might play a role in assisting in the development of inter-jurisdictional plans for the area.

²⁶³The nature and intensity of future development in areas annexed by the Town of Christiansburg will have an impact on Montgomery County's facilities and services, particularly in the field of education.

sewer service.²⁶⁴ In our view, Christiansburg should be prepared to commence the extension of this service to those residents immediately if annexation is awarded by the court.²⁶⁵

With respect to utilities, the Commission also recommends that the Town negotiate with the Blacksburg-Christiansburg-VPI Water Authority for a revision in the agreement which would modify the service areas to conform with whatever changes are made in the Town's boundaries as a result of this annexation issue. Further, the Commission recommends that Christiansburg negotiate with the Town of Blacksburg for the purchase of its water line and connections in the U. S. Route 460 corridor if that area is brought within the Town's boundaries.²⁶⁶

Public Recreation. The Commission recommends that the Town of Christiansburg revise its plans to serve the area annexed in order to include the development of additional active recreational facilities. We note that Christiansburg is currently lacking in sufficient facilities for active recreational purposes and that the annexation recommended herein will increase the Town's need to respond to that deficiency.²⁶⁷ We recommend that Christiansburg present to the court revised plans which would increase the recreational facilities and services available to residents of the enlarged jurisdictions.

Other Services. With respect to other services, the Commission recommends that the court endorse Christiansburg's plans, as set forth in its various exhibits, to serve the area recommended for annexation.

²⁶⁴Town of Christiansburg, Supplemental Data, Tab 3.

²⁶⁵As noted previously, evidence indicates that the Town of Christiansburg subsidizes its utility operations through transfers from the general fund. (See note 93, p. 29.) The Commission recommends that the Town re-examine this fiscal arrangement which has the effect of subsidizing utility users with general fund revenues.

²⁶⁶Negotiations between the Town of Blacksburg and Christiansburg regarding water service within the U. S. Route 460 corridor should take cognizance of the vacant industrial site, which may ultimately be occupied by a high volume water user.

²⁶⁷In a preceding section of this report, the Commission noted that Christiansburg currently has a need for an additional 95 acres of

Retirement of County Debt

Montgomery County has contended that the Town of Christiansburg should assume responsibility for the retirement of a portion of the County's outstanding indebtedness based upon the amount of County revenues loss as a consequence of the proposed annexation.²⁶⁸ Annexation courts in Virginia have traditionally declined to assign to towns, as a consequence of annexation, responsibility for the retirement of any portion of a county's outstanding indebtedness. This judicial position has rested upon recognition that town annexations do not remove from the county any major tax sources. Moreover, it should be noted that town residents continue to bear, as citizens of the county, responsibility for the retirement of all the county's indebtedness. In view of these conditions, the Commission recommends that the court continue to adhere to its past practice of not assigning to a town responsibility for the retirement of any portion of a county's debt as a result of annexation.

CONCLUDING COMMENT

While the Commission has offered in this report, as required by law, recommendations with respect to the discrete annexation issue presented by the Town of Christiansburg, we consider it imperative to observe that there exist alternative approaches which could be examined with respect to the interlocal concerns in Montgomery County. Our intensive analysis of the annexation issue has heightened our understanding of the interdependence of Montgomery County and the Towns of Christiansburg and Blacksburg. As a result of Montgomery County's ability to rely principally upon Christiansburg and

public park land based upon the Town's present population. If the annexation recommended by this Commission is ultimately sanctioned by the court, that need will increase to 118 acres.

²⁶⁸Montgomery County Response, Vol. I, Tab 21.

Blacksburg for the provision of utilities and related urban services to residents of those communities, the County has been able to invest the predominant portion of its resources into an educational system for the benefit of its citizens generally.²⁶⁹ The cooperation and collaboration which has existed among the three jurisdictions has permitted, in our judgment, a proper and wise division of public service responsibilities. Accordingly, this Commission strongly encourages Christiansburg, Blacksburg, and Montgomery County to explore vigorously solutions to the intergovernmental concerns of the area which enable continued cooperation in the provision of governmental services.

In the exploration of comprehensive solutions to the interlocal concerns of the area, we would encourage the County to identify "spheres of influence" within which boundaries of Christiansburg and Blacksburg might be expanded in a simple and expedient manner.²⁷⁰ As a prerequisite for the adoption of such a simplified growth process for the two municipalities, the Commission recommends that Christiansburg and Blacksburg give assurances to Montgomery County of their willingness to remain constituent elements of that jurisdiction for an extended period of time, thereby removing for the foreseeable future the prospect of governmental fragmentation.²⁷¹ Finally, as noted by Blacksburg, the quality of development in one portion of Montgomery County affects the social and economic prospects of the whole. With this in mind, the Commission recommends that the three

²⁶⁹During FY1984-85 Montgomery County invested \$23.2 million in the operation of its educational system, or 75.6% of its total expenditures for that year for operations and maintenance. (Comparative Report of Local Government Revenue and Expenditure, Year Ended June 30, 1985, Exh. C.)

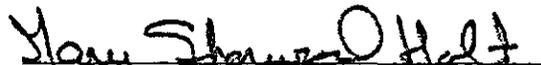
²⁷⁰Such "spheres of influence" should be based, in part, on topographic features, such as drainage areas, which affect service delivery.

²⁷¹The transition of the Town of Christiansburg or the Town of Blacksburg would result in the governmental fragmentation of Montgomery County and the division of resources to support public ser-

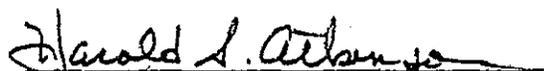
jurisdictions endeavor to collaborate closely in their plans for the future development of their region. While the recommendations set forth in the preceding section of this report equitably addressed, in our judgment, the immediate annexation issue raised by Christiansburg, we vigorously encourage the three jurisdictions to consider at this time the possibility of broader solutions which have the prospect of addressing the long-term needs of the area. The Commission is prepared to assist the three localities in their efforts to pursue alternative approaches to the concerns of their area.

vices in the area.

Respectfully submitted,


Mary Sherwood Holt, Chairman


Donald N. Johnston, Vice Chairman


Harold S. Atkinson


William S. Hubbard


Benjamin L. Susman, III

APPENDIX A

STATISTICAL PROFILE OF THE TOWN OF CHRISTIANSBURG,
COUNTY OF MONTGOMERY, AND THE AREA PROPOSED FOR ANNEXATION

	<u>Town of Christiansburg</u>	<u>County of Montgomery</u> ^{1.}	<u>Area Proposed for Annexation</u> ^{2.}
Population (1984)	11,657	64,900	2,504
Land Area (Square Miles)	7.96	393	7.96
Total Assessed Values (1985)	\$223,006,348	\$1,135,921,315 ^{3.}	\$63,398,798 ^{3.}
Real Estate Values (1985)	204,545,470	1,017,446,410 ^{3.}	55,777,800 ^{3.}
Personal Property (1985) Values	4,623,760	38,140,610	5,077,333
Machinery and Tools (1985)	657,980	4,017,810	80,000
Merchants Capital (1985)	N/A	4,974,730	158,908
Public Service Corporation Values (1984)	10,542,518	71,341,755	2,304,757
Land Use (Acres)			
Residential	2,040	7,690	723
Commercial	515	1,700	82
Industrial	179	1,200	152
Public and Semi-Public ^{4.}	530	8,940	N/A
Agricultural, Wooded or Vacant	1,830	231,470	4,138
School Age Population	2,497	11,269	720

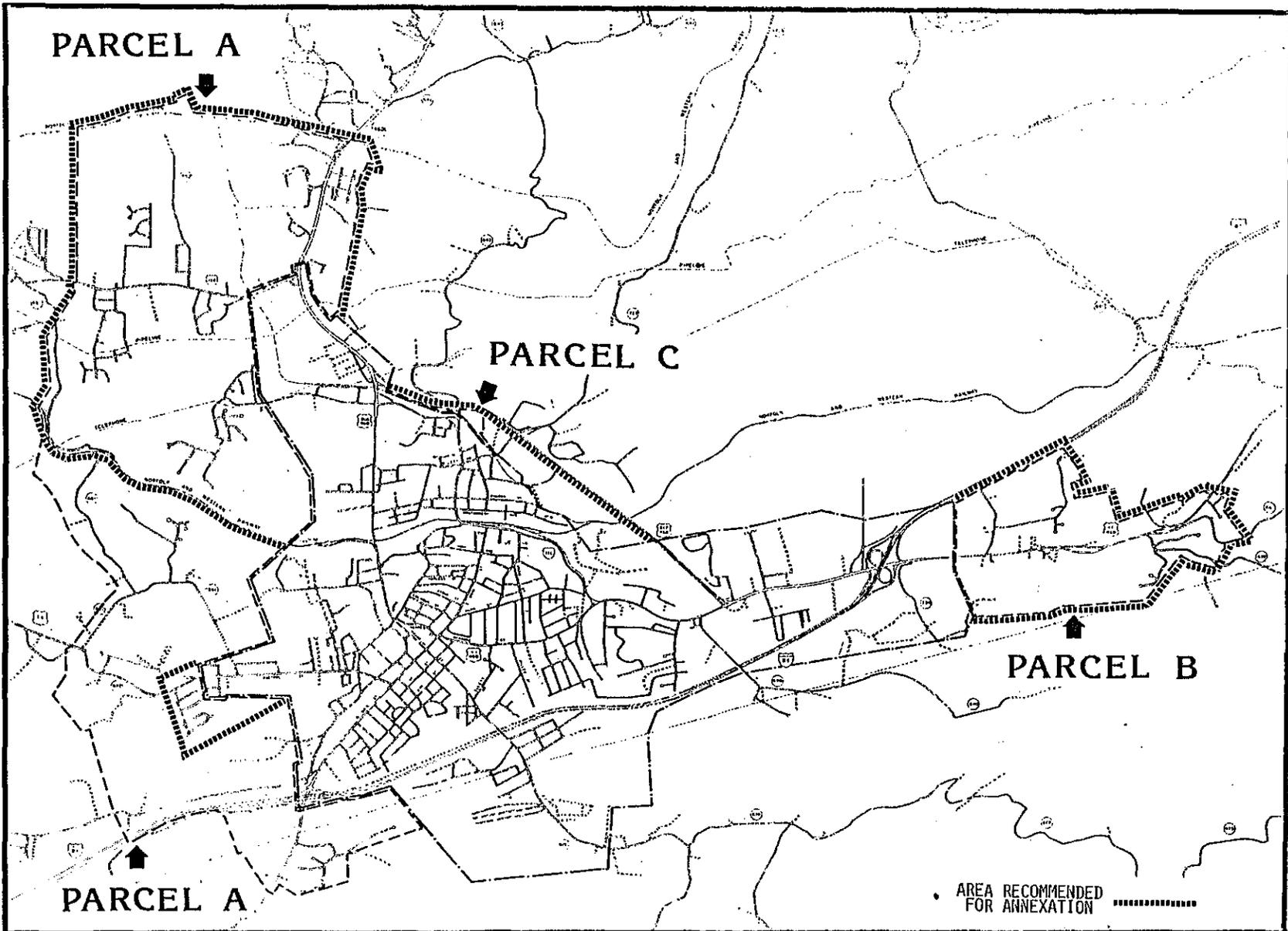
N/A = Not Available

NOTES:

1. County data include information for incorporated areas.
2. As estimated by the Town of Christiansburg.
3. Reflects use value assessment for real estate subject to local taxation.
4. Includes road and railroad rights-of-way.

SOURCES:

Town of Christiansburg, Annexation Notice and Supporting Data, Vol. I, April 1986.
County of Montgomery, Comprehensive Plan, 1983.



PARCEL A

PARCEL C

PARCEL B

PARCEL A

AREA RECOMMENDED FOR ANNEXATION

GENERAL LEGEND:

- TOWN OF CHRISTIANBURG VA., CORPORATE LIMITS
- - - PROPOSED ANNEXATION BOUNDARY



MAP OF THE
TOWN OF CHRISTIANBURG, VA.
AND ENVIRONS

PREPARED BY
R. STUART ROYER & ASSOCIATES, INC.
RICHMOND, VIRGINIA

MAP COMPILED FROM U.S.G.S. QUADRANGLE SHEETS
AND DATA FURNISHED BY TOWN OF CHRISTIANBURG

APPENDIX B

APPENDIX C

TECHNICAL COMMENT ON THE USE OF THE CHI-SQUARE TEST

Drawing upon 1980 Census data,¹ Montgomery County has examined the occupational patterns of workers residing within a labor market area that includes the parties to the current annexation issue. Through the use of the chi-square test of statistical significance, the County has concluded that the localities comprising the focal economic region are "distinct" -- indeed, "not very similar to each other" -- in terms of the vocational activities pursued by their respective populations.² This argument implies, we submit, that impressive interjurisdictional variations characterize the occupational profiles of employed persons within the market area under analysis. Although an examination of the pertinent data might conceivably support such an inference, the outcome of the chi-square test represents, in the absence of other evidence, an insufficient basis for any such determination. Even the most vigorous proponents of the chi-square procedure hold to the view that it constitutes a necessary, but not a sufficient, condition for documenting the substantive importance of a relationship between such variables as place of residence and occupational classification.³

In assessing the appropriate evaluative role of the chi-square methodology,⁴ we note at the very outset that the procedure is

¹See Judith L. Dodson, Consultant, County of Montgomery, letter to staff of Commission on Local Government, Nov. 6, 1986; and U.S. Department of Commerce, Bureau of the Census, 1980 Census of Population: General Social and Economic Characteristics, Virginia, pp. 312, 315, 483, and 484. (Exhibits 1, 2, and 3 of this Appendix are based on the geographic and occupational categorizations used by the County in its analysis.)

²Montgomery County Response, Vol. I, p. 18-3. The County, in performing its chi-square exercise, has operated with five discrete "jurisdictions" -- Blacksburg Town, Christiansburg Town, the balance of Montgomery County, Radford City, and Pulaski County. See Dodson, letter to staff of Commission on Local Government, Nov. 6, 1986.

³See David Nachmias and Chava Nachmias, Research Methods in the Social Sciences (2d ed.; New York: St. Martin's Press, 1981), pp. 470-71.

⁴Background material for the ensuing discussion of the chi-

typically used to explore cross-tabulations of nominal-scale variables measured with data collected from independent random samples of designated populations.⁵ Since any bivariate relationship suggested by sample data may be due simply to chance in the selection of cases (e.g., housing units or individual citizens) from the populations of interest, the possibility always exists that there is no quantitative association between the relevant variables within the universe at large.⁶ The chi-square test is designed, accordingly, to appraise the "null" hypothesis of statistical independence with respect to the variables under investigation. That is, a researcher applies the chi-square procedure to sample data in the hope of rejecting the argument that certain populations classified with respect to the categories of the independent variable (e.g., place of residence) do not differ at all in terms of their percentage distribution across the categories of the dependent variable (e.g., occupational activity).⁷ Operating on the tentative assumption that the null hypothesis is correct, the analyst computes, for each cell of a cross-tabulation involving the target variables, the square of the difference between the number of cases observed in the appropriate sample and the total that would be anticipated on the basis of the null hypothesis, and then divides the squared

square testing procedure has been derived from Hubert M. Blalock, Jr., *Social Statistics* (2d ed. rev.; New York: McGraw-Hill Book Company, 1979), pp. 279-302; and Marija J. Norusis, *The SPSS Guide to Data Analysis* (Chicago: SPSS Inc., 1986), pp. 233-46, 273-74.

⁵A nominal-scale variable is a conceptual framework which allows the classification of a set of objects (for example, persons) into exhaustive and mutually exclusive categories that differ qualitatively but not quantitatively from one another. When employing nominal-scale variables such as place of residence and occupational activity, the policy analyst confronts observational devices whose component categories are typologically distinguishable but do not manifest an inherent numeric order.

⁶The universe at large encompasses the several populations from which samples have been drawn.

⁷Two variables are often labeled independent and dependent, respectively, when it is assumed that the first factor precedes in time,

deviation by the expected frequency associated with that cell.⁸ When the results of this two-step exercise are added for all cells in the table, the investigator emerges with an aggregate statistic representing the value of chi-square. He can then test the premise of quantitative independence by examining the cumulative statistic in relation to the theoretical sampling distribution of chi-square values⁹ appropriate to the degrees of freedom for the particular table under review.¹⁰ Through such a comparison the researcher is able to determine the probability of occurrence, or significance level, for the computed chi-square statistic given the assumption that the variables of concern are totally unrelated in the overall population (e.g., that of a specific labor market area) from which his samples were drawn; and, in turn, he can render a judgment about the validity of the null hypothesis. As applied to the 1980 Census data shown in Exhibit 1, the foregoing methodology generates a chi-square value of 7,517.71657, whose corresponding significance level (for a table with 40 degrees of freedom) is a

and functions as a source of change in, the second factor. It should be emphasized, however, that the chi-square test yields the same quantitative outcome regardless of the designation of a particular factor as either the independent (i.e., column) or dependent (i.e., row) variable in relation to some other factor with which it is cross-tabulated.

⁸The anticipated number of cases, or expected frequency, for a particular cell is directly established by (1) multiplying the row and column totals associated with that cell and (2) dividing the product of these figures by the aggregate number of sample cases represented in the table.

⁹An illustrative list of chi-square sampling distributions can be found in Alan Agresti and Barbara Finlay, Statistical Methods for the Social Sciences (2d ed.; San Francisco: Dellen Publishing Company, 1986), p. 529.

¹⁰The degrees of freedom pertaining to a given cross-tabulation are established through the multiplication of the number of rows minus one by the number of columns minus one. The resulting product denotes the number of cells in the table for which expected frequencies are independently computed (see Footnote 8) and not simply inferred by the subtraction of other expected frequencies from either row totals or column totals.

probability lower than .00005.¹¹ According to this statistical profile, the chances are less than five in one hundred thousand that a value equal to, or larger than, the computed figure for chi-square would have been obtained if the null hypothesis were true. It must be viewed as highly unlikely, in a word, that place of residence and occupational classification are totally independent of one another within the economic region analyzed by Montgomery County. We should note, however, that the chi-square procedure merely constitutes a test for the existence of a bivariate relationship. That realm of inquiry is, as one prominent statistician has observed, "completely different" from the determination of the practical importance -- i.e., the strength or magnitude -- of the observed relationship.¹²

Although it might be tempting to utilize the results of a chi-square test for the purpose of indicating the degree of relationship between nominal-scale variables, such an effort could easily give rise to

¹¹It should be observed that Exhibit 1 reports 47,033 cases for the economic region under analysis. This figure represents the total estimated population of employed persons within the labor market area, not the aggregate number of sample individuals drawn from its constituent localities. (John Thompson, Chief, Census Evaluation Branch, Statistical Methods Division, U.S. Census Bureau, communication with staff of Commission on Local Government, Jan. 7, 1987. See, also, U.S. Census Bureau, 1980 Census of Population: General Social and Economic Characteristics, Virginia, Appendix D.) The argument can be advanced that, in the strictest sense, Montgomery County should have applied the chi-square methodology to baseline sample statistics rather than the population values developed by the U.S. Census Bureau through its weighting of such data. Some researchers would undoubtedly contend, on the other hand, that the hypothesis-testing exercise may be performed quite legitimately in the current instance as a basis for generalizing the estimated relationship from the area-wide population at hand to a larger universe containing other populations of the same kind. (See Nachmias and Nachmias, Research Methods in the Social Sciences, p. 470.) It should be noted, however, that Montgomery County has expressed no desire to conduct an inferential effort of this nature with respect to identical working populations outside the focal economic region, even if it can be assumed that such aggregates actually exist.

¹²Blalock, Social Statistics, p. 299.

misleading conclusions. In this regard, it should be noted that the value of chi-square and its corresponding level of significance are heavily influenced by the number of cases subjected to a cross-tabulation analysis. It can be demonstrated that, for a table in which the cell-by-cell proportions of cases remain fixed, the chi-square statistic increases, and its associated probability of occurrence under the null hypothesis declines, with growth in the cumulative set of cases covered by the tabular display. Thus, when the aggregate case figure is quite sizable (e.g., the total of 47,033 persons reported in Exhibit 1), even a slight relationship between variables may generate a chi-square value so large that its low probability of occurrence virtually mandates the rejection of the statistical independence argument. The computation of a prodigious chi-square statistic, then, might reinforce one's confidence in the existence of a bivariate relationship within the universe of concern (e.g., the total working population of a given labor market area), but it does not necessarily identify an association that can be viewed as consequential from the standpoint of magnitude. In sum, once a cross-tabulation of two variables has survived the chi-square test, the substantive importance of the observed relationship remains to be established through the use of additional evidence which focuses upon the degree to which the factors are interconnected.

In an effort to probe the strength of association between nominal-scale variables, social scientists have developed a number of indicators. Some of these measures rest upon modifications of the chi-square statistic that are designed to reduce its sensitivity to varying case totals.¹³ One such instrument, Pearson's coefficient of contingency, divides the chi-square value by the sum of that statistic and the cumulative number of cases covered in the analysis. It then extracts the square root of the resulting quotient. The Pearsonian coefficient may vary from zero, denoting the absence of any relationship, through a maximum score whose exact value, though a function of the number of rows

¹³For a discussion of various indicators based on the chi-square statistic, see Albert M. Liebtrau, Measures of Association (Beverly Hills: Sage Publications, 1983), pp. 13-16; A.A. Afifi and S.P. Azen,

and columns in the table, is always less than one. For a cross-tabulation with row and column dimensions corresponding to those of Exhibit 1, the largest value attainable by the coefficient of contingency is .89443,¹⁴ which indicates a perfect bivariate association. With respect to the cross-tabulation data contained in Exhibit 1, the value of the Pearsonian coefficient is only .37123, a score that appears to be somewhat unimpressive when examined in relation to the theoretical upper limit associated with this table. As an alternative to the contingency coefficient, one might employ Cramer's V, which is also based upon the chi-square statistic. This measure has been operationally defined as the square root of a ratio whose numerator is the value of chi-square and whose denominator can be obtained through the multiplication of the case total for the table by either the number of rows minus one or the number of columns minus one, whichever figure is less. The V coefficient may assume any score ranging from zero through one, with the lower and upper limits of this continuum signifying no relationship and perfect association, respectively. When applied to the Census Bureau data cited by Montgomery County (see Exhibit 1), the computation for Cramer's V yields a value of .19990, which falls considerably below the highest attainable score for the statistic. It should be noted, however, that the V coefficient, like all other measures of the strength of association that are based upon the chi-square statistic, does not readily lend itself to a clear-cut interpretation which can be grasped in intuitive terms.

Given the foregoing problem, many researchers prefer to examine the magnitude of a bivariate relationship with indicators of proportional reduction in error (PRE) -- that is, instruments specifying the relative incidence of decline in classification mistakes when the values of the

Statistical Analysis: A Computer Oriented Approach (2d ed.; New York: Academic Press, 1979), pp. 99, 102-103; Norusis, The SPSS Guide to Data Analysis, pp. 275-77; and Blalock, Social Statistics, pp. 303-06.

¹⁴The formula governing the computation of this boundary-line score appears in Afifi and Azen, Statistical Analysis: A Computer Oriented Approach, p. 102.

independent variable are used to predict those of the dependent variable. PRE coefficients, as Garson has commented, "may correspond more closely to social scientists' 'common sense' impressions of what they mean by association" than do measures linked to the value of chi-square.¹⁵ One of the most widely used PRE indicators -- Goodman and Kruskal's lambda -- can be calculated by (1) determining the number of classification errors when prediction is tied solely to the largest row-total value of the dependent variable (Type 1 errors), (2) identifying the number of classification mistakes when prediction is governed by the most frequent value of the dependent variable for each category of the independent variable (Type 2 errors), (3) subtracting the total number of Type 2 errors from the cumulative number of Type 1 errors, and (4) dividing the obtained difference by the aggregate number of Type 1 errors.¹⁶ Computed in the foregoing manner, lambda achieves a maximum value of one if the classification of each case on the independent variable totally determines its classification with regard to the dependent phenomenon.¹⁷ The minimum limit of the measure is zero, a value attained when the independent variable carries no predictive utility in relation to the dependent dimension.¹⁸ In calculating lambda for the 1980 Census data displayed in the Exhibit 1 cross-tabulation, we produce a score of .07513 under the stipulation that

¹⁵G. David Garson, Political Science Methods (Boston: Holbrook Press, Inc., 1976), p. 303.

¹⁶The lambda coefficient is described and evaluated in Liebetrau, Measures of Association, pp. 17-24; Norusis, The SPSS Guide to Data Analysis, pp. 278-81; and Blalock, Social Statistics, pp. 310-11.

¹⁷When lambda equals one, all of the cases associated with any given category of the independent variable are contained in a single cell of the cross-tabulation.

¹⁸The lambda coefficient is always zero when two variables are completely unrelated; but, for certain distributions of the specified dependent variable, it may be zero even though a finding of statistical non-association is unsupported by other evidence. In the latter situation an alternative PRE coefficient, Goodman and Kruskal's tau, is preferable to lambda.

place of residence constitutes the independent variable.¹⁹ This finding indicates that knowledge of the values of the independent factor reduces the number of classification errors with respect to the dependent variable (i.e., type of occupation) by only 7.5%. A statistic of such tenuous magnitude serves to reinforce Blalock's caveat that a relationship which is statistically significant on the basis of the chi-square test may not be significant in any other sense.²⁰

Whatever meanings can be imposed upon the measures of association reviewed above, any final judgment regarding linkages between the variables under consideration must be founded on a direct analysis of the percentage distribution of employed persons in each locality across the occupational classes shown in Exhibit 2. The tabular display clearly indicates that workers residing in Blacksburg, to a markedly greater degree than the employed inhabitants of every other jurisdiction, engaged in professional specialty roles during 1980. Then, too, it can be seen that the working residents of Blacksburg, relative to their counterparts elsewhere in the economic region, were somewhat more likely to be involved in technical vocations and less apt to be employed as (1) machine operators, fabricators, and inspectors or (2) precision production personnel, craftsmen, and repairmen.²¹ Aside from the sharper differences between the university town of Blacksburg and the remaining components of the labor market area, interlocal variances within the economic region tended, on the whole, to be fairly modest. Perhaps the most noteworthy exceptions to this pattern were the jurisdictional splits involving Christiansburg and Radford in relation to Pulaski County with respect to the percentage of employed persons who

¹⁹If occupational classification is designated as the independent variable, lambda increases slightly to .10112. A symmetric version of the coefficient, which rests upon the successive treatment of each variable as a predictor of the other, yields a value of .08670.

²⁰Blalock, Social Statistics, p. 301.

²¹In comparing jurisdictional percentages, we have used an absolute difference of ten points or greater as our standard for the identification of a consequential variance. The data reported in Exhibit 2

performed machine operations and related tasks. In the main, however, the areas outside Blacksburg (including Christiansburg and the balance of Montgomery County) were characterized by commonality rather than pronounced differentiation in regard to their occupational profiles. Any suggestion that they manifested great dissimilarity at the outset of the present decade simply does not receive compelling support from the tabular data in Exhibit 2 or the graphic material in Exhibit 3.

clearly indicate that this criterion is satisfied by some, but not all, of the Blacksburg/other locality differences just mentioned.

Exhibit 1
Occupation of Employed Persons by Place of Residence
(Frequency Distribution)

Occupational Classification	Blacksburg Town	Christiansburg Town	Montgomery County (Balance)	Radford City	Pulaski County	All Areas
Executive, Administrative, and Managerial	1,047	501	641	440	971	3,600
Professional Specialty	3,503	580	1,039	939	1,292	7,353
Technicians	1,341	122	382	256	493	2,594
Sales	859	464	652	463	983	3,421
Administrative Support	1,534	860	1,134	838	1,874	6,240
Service	1,869	628	1,305	1,043	1,785	6,630
Farming, Forestry, and Fishing	171	47	339	22	393	972
Precision Production, Craft, and Repair	653	727	1,766	569	2,616	6,331
Mach. Operators, Fabricators, and Inspectors	243	508	1,465	519	3,162	5,897
Transportation and Moving Equip. Operators	144	184	604	126	825	1,883
Handlers, Helpers, and Laborers	294	205	620	187	806	2,112
Column Total	11,658	4,826	9,947	5,402	15,200	47,033

Data Source: U.S. Census Bureau, 1980 Census of Population:
General Social and Economic Characteristics, Virginia,
Part 48, pp. 312, 315, 483, and 484.

Statistical Profile:

Chi-Square: 7,517.71657

Degrees of Freedom: 40

Level of Significance: Probability < .00005

Pearson's Contingency Coefficient: .37123

Cramer's V Coefficient: .19990

Goodman and Kruskal's Lambda Coefficient:

With Place of Residence Independent: .07513

With Occupational Classification Independent: .10112

Symmetric: .08670

Source: Staff, Commission on Local Government
01/28/87

Exhibit 2
Occupation of Employed Persons by Place of Residence
(Percentage Distribution)

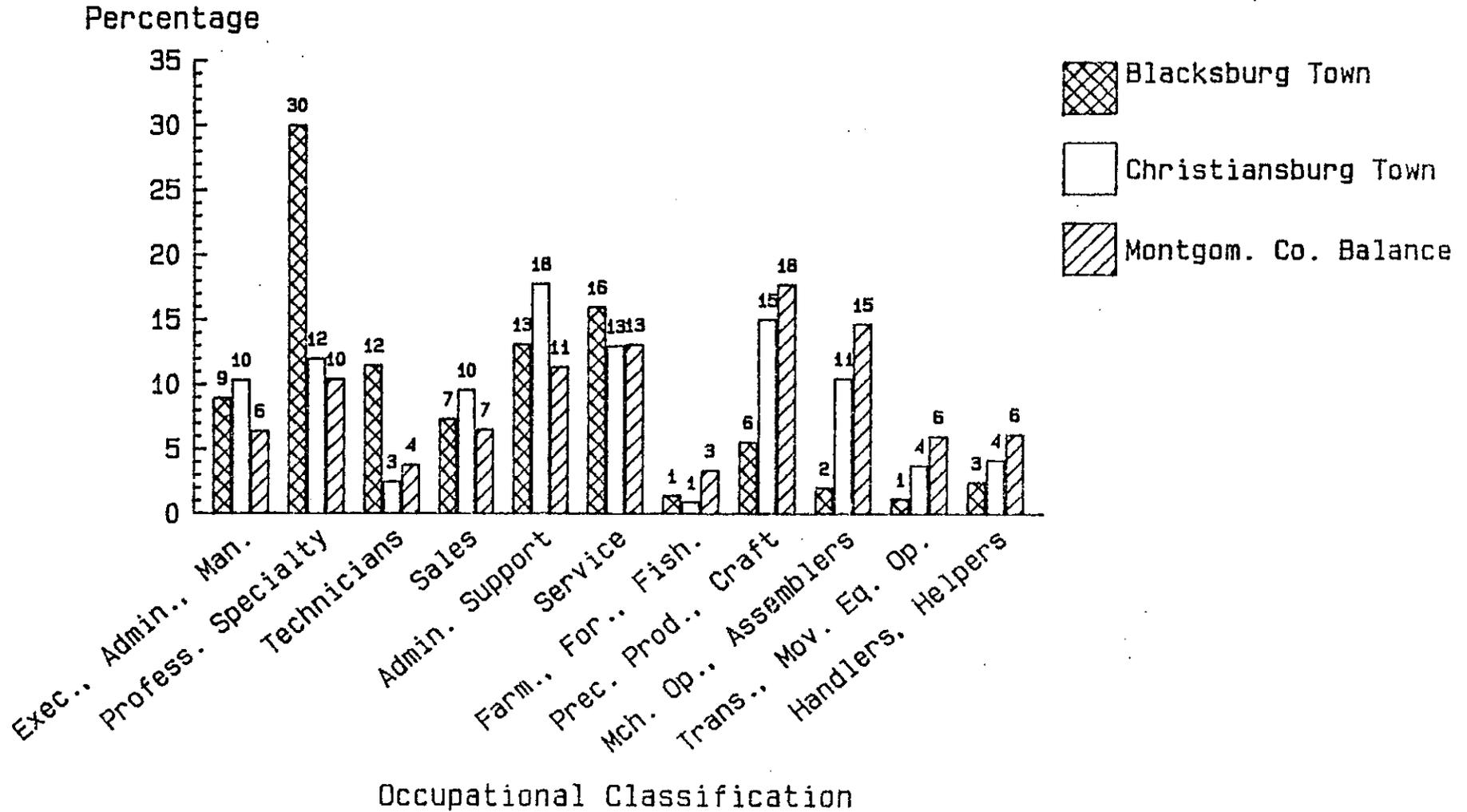
Occupational Classification	Blacksburg Town	Christiansburg Town	Montgomery County (Balance)	Radford City	Pulaski County	All Areas
Executive, Administrative, and Managerial	8.98	10.38	6.44	8.15	6.39	7.65
Professional Specialty	30.05	12.02	10.45	17.38	8.50	15.63
Technicians	11.50	2.53	3.84	4.74	3.24	5.52
Sales	7.37	9.61	6.55	8.57	6.47	7.27
Administrative Support	13.16	17.82	11.40	15.51	12.33	13.27
Service	16.03	13.01	13.12	19.31	11.74	14.10
Farming, Forestry, and Fishing	1.47	0.97	3.41	0.41	2.59	2.07
Precision Production, Craft, and Repair	5.60	15.06	17.75	10.53	17.21	13.46
Mach. Operators, Fabricators, and Inspectors	2.08	10.53	14.73	9.61	20.80	12.54
Transportation and Moving Equip. Operators	1.24	3.81	6.07	2.33	5.43	4.00
Handlers, Helpers, and Laborers	2.52	4.25	6.23	3.46	5.30	4.49
Column Total	100.00	99.99	99.99	100.00	100.00	100.00

Column totals may vary slightly from 100 because of rounding.

Data Source: U.S. Census Bureau: 1980 Census of Population:
General Social and Economic Characteristics, Virginia,
Part 48, pp. 312, 315, 483, and 484.
01/28/87

EXHIBIT 3

Percentage of Employed Residents by Occupational Classification, 1980



Data Source: U.S. Census Bureau
 Production Date: January 28, 1987