

A LAND ACQUISITION FEASIBILITY
ANALYSIS PROCESS

by

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I. INTRODUCTION

This project was undertaken for the following reasons:

- desire to learn more about the development process
- study the appraisal process of land valuation
- produce a product utilizing skills studied in graduate course work
- engage in a project involving several methods of research
- learn more about local government interaction with the private development process
- research a project that is realistic and practical in its applicability
- produce a product which would be helpful in displaying skills to a possible future employer.

My objectives for doing the project were to: 1) produce a comprehensive site analysis and data packet, 2) test a development strategy based on market demand, 3) provide a learning exercise for students and 4) value the subject property and its feasibility for development.

The subject site is a 15-1/2 acre tract of land bounded by: north Main Street to the northeast, Price's Fork Road to the northwest, and

Turner Street to the south, in Blacksburg, Virginia. This land is currently occupied by a mix of light commercial structures and older residential buildings. The commercial properties are situated as a strip layout along north Main Street and along the eastern end of Turner Street. The majority of the commercial properties are recently constructed fast food restaurants. The residential buildings are of general low quality with the average age being thirty-five years and with no consistent character in architectural style. The majority of residential properties have been owned for a long period of time by the land owners. (Refer to Exhibits 1 and 2).

Reasons for my choosing this site for study are: 1) its proximity to Virginia Tech, indicating prime potential for development, 2) an existing mix use of residential and commercial properties, 3) a high number of properties with older, poor quality structures present, suggesting the potential for a new, better use of land, 4) already existing public infrastructure (utilities, town services) and 5) the site accomodates local governments' desire to support developments which are located in "in-fill" areas of the town.



Residential Area at Southwest Corner,
Looking East on Turner St.



Commercial Properties at Corner of North Main St.
and Turner St.

Exhibit 1

Photographs of Subject Site



Residential Properties on Barger St.



Typical Residential House

Exhibit 2

Photographs of Subject Site

II. EVOLUTION OF PROCESS

As stated previously, the original goal of this study was to perform a land feasibility analysis using several development scenarios based upon relevant site, town, market, and valuation data. To generate several development proposals I assumed a land developer role and students from residential and commercial development classes in the School of Architecture assumed a site developers role with individual project proposals and investor requirements. This game playing with the students provided checks and balances to my analysis study. To encourage this land developer posture, I provided the students with a data packet containing all relevant site, town, and market data upon which specific feasibility studies would be performed (Refer to Appendix A, B, C, D and E). Additionally, I drew up business objectives for my role and architectural standards and covenants for development to the site (Exhibits F.1, F.2, F.3). To add another realistic dimension in this process and to simulate market competition, I would sign a contract, as developed by each student team, with the proposal which most closely met my objectives and valuation for the subject site.

It was originally assumed that the student teams could provide design proposals which I could incorporate in a land feasibility analysis. But as the interaction with student proposals proceeded, I realized that I would also have to perform a development proposal and analysis due to the initial low valuation of land cost in preliminary development proposals.

As the project was completed the following objectives were met:

- 1) compilation of site, town, and market data packet,
- 2) survey and definition of target submarkets,
- 3) tested development strategies to meet this submarket demand,
- 4) provided realistic role playing developer posture with student/development teams,
- 5) performed valuation of subject land using several appraisal methods and determined minimum land values required from student proposals,
- 6) evaluated feasibility of student proposals and
- 7) determined conditions required for the subject site to be feasible for development and what would most likely happen to this site in the future.

EXHIBIT 3

PROCESS FLOW CHART

SITE SELECTION

DATA COMPILATION

Property Description:
· location
· ownership
· current use
· zoning

Physical Resource Analysis:
· soils
· topography
· flora & fauna
· solar optim.
· scenic views
· climate
· environmental considerations
· municipal services

Town and Site Analysis:
· town identity
· linkages
· history
· access

Urban Environment Inventory Analysis:
· town
· population
· employment
· demographics
· land use
· municipal services
· overall environment

Market Analysis:
· existing housing profile
· townhouses
· apartments
· commercial

SUBMARKET DEFINITION

- Survey of Target Market
- Submarket Characteristics & Housing Preferences

DEVELOPMENT STRATEGY

- Matching Unit Type to Target Market
- Density Calculation & Site Review
- Construction/ Development Cost Estimates

VALUATION PROCESS & SUMMARY

- Division of Site into Purchaseable Parcels
 - Valuation Theory & Methods
 - Valuation Methods Utilized
 - Valuation Summary

CONCLUSIONS

- Development Feasibility
- Conditions for Feasibility
- Probable Future of Site

III. METHODS OF DATA COLLECTION

The compilation of data spanned approximately five months and included all information relative to the subject site, both specific and general.

Property Description (Refer to Appendix A)

The data collection process began with site specific information such as the locational description and present ownership of the property on the site. Two primary sources provided this information; the Town of Blacksburg Engineering and Public Works Department and the Montgomery County Office of Real Estate and Property Taxes. From the Town Engineering Department, aerial photographs and topographic maps were transferred into a larger scale for a more detailed site analysis. This involved a series of photo-plate pictures taken of the topographic map until an appropriate enlarged scale was achieved.

From the Montgomery County Real Estate and Tax Office, platt maps listing individual platt ownership for the subject site were transferred to the enlarged base maps. With the individual platt numbers assigned to the property, land ownership could be determined. Tax roles in the county courthouse listed each property owner alphabetically with the corresponding platt number providing the owners present address, land and improvement assessments, and the amount of taxes paid to the county (Exhibit A.6).

The next step in this process was to locate: 1) the date the property was purchased, 2) the purchase price paid, 3) the size of the lot, and 4) any standing easements. Locating this information proved to be the most time consuming in the property description section. Ideally, the deed book number recording the date of purchase and the parties involved would be listed on the tax role. But this proved to be the exception rather than the rule, so a deed search had to be performed for the majority of the subject properties. This involved checking Grantee and Grantor books in the record vault of the courthouse which recorded all sales of property according to name and date. Since several of the subject properties have been in original ownership since the nineteenth century, this became a very tedious process. Occasionally, deed books would list the size of the platt and this figure would be checked against the enlarged base maps. Easements for some of the properties were listed in deed books and it was not uncommon to find covenants which are now unenforceable, such as barring the sale or rental of property to particular races. Often times the purchase price would not be listed in deed books so this required additional research for receipt books recording the transaction. Non-taxable properties proved to be exceptionally difficult to find relevant data, particularly for church properties because the land is very often donated by previous landowners.

A site visitation was conducted to interview each owner or tenant on the subject site to determine present occupancy and use for the existing structures. These personal interviews had to be carefully conducted to acquire the necessary information. The interviews also

provided an insight on the character of the present landowner and their motivation for purchasing this property. In addition, the interview process gave accurate rental rates for tenant occupied properties and provided a basis for future valuation analysis. A qualitative analysis was also performed at this time to determine age, quality, and size of the structures using an appraisal handbook (Exhibit A.8).

Zoning information was acquired from the Town Planning Department and at this time of the research process the development policy of the local government was obtained. The town logic for the present zoning classification and possible future changes in this zoning were questioned. In addition, any new addendums or variances to the zoning district were noted (i.e., platt number 125 and 126 on the subject site granted new variance for commercial use on the first floor). (Refer to Exhibits A.9 thru A.12)

Physical Resource Analysis (Refer to Appendix B)

Physical resource information of the site was obtained by site visitations and public map review. Often times a town or municipality will have performed an environmental analysis of the subject area which provides a good source for reviewing any environmentally sensitive considerations for the site. For this study an environmental report for the Blacksburg area was studied.¹ Important features of the site were located and noted such as major tree stands and natural drainage patterns from site visitations and map review (Exhibits B.1 thru B.6).

The existing public infrastructure and municipal services to the subject site were recorded. A municipality is typically responsible for mechanical lines such as water and sewer with other services provided by the utility companies. For this site, water, sanitary sewer, and storm sewer locations on the site were provided by maps at the Town Engineering Department. The other service line locations were found by personal visitations to the respective utility companies. By visiting these service providers, questions concerning present service capacity and possible future expansion were answered. Additionally, the methods of preferred installation were discussed, such as the placing of cable T.V. lines on telephone poles at the subject site as opposed to underground installation. The gathering of physical resource information for the subject site required several weeks of work and review but the time expended is highly dependent on the utility companies' response and complexity or size of the site. (Refer to Exhibits B.7 thru B.13)

Town and Site Analysis (Refer to Appendix C)

Town and site analysis data includes a discussion of neighborhood identity and the relationship of the neighborhood to supporting facilities. To acquire resident attitudes and perceptions of a particular neighborhood, a survey of area residents would normally be conducted. But due to the inconsistent character of the subject site, the limitation of time and manpower to perform an adequate survey, and the high ratio of temporary tenants to landowners as residents on

the subject site, a survey was not conducted. Therefore other sources were researched to locate a study on resident attitudes and perceptions including the local government, private market research, and the local college. A survey conducted by the College of Business at Virginia Tech was found to be the only source providing resident perceptions of Blacksburg (Exhibit C.1).

Linkages are a distance relationship between a specific site and its supporting facilities. For the subject site these distances were determined by scaling area maps and my actual driving measurement (Exhibits C.2 and C.3). To determine if any landmarks or historical structures were located on the subject site, the local historical commission was contacted.

Urban Environment Inventory Analysis (Refer to Appendix D)

General information concerning the town was included in an Urban Environment Inventory section. Blacksburg's guidelines for development growth and predictions for the next twenty years were obtained from the town's comprehensive plan. Population, employment, and growth predictions were extracted from a growth management study performed by the Division of Environmental and Urban Systems of VPI.¹ This document proved to be very important due to the comprehensive nature of the study and the more accurate growth predictions provided as opposed to those forecasted by the town. Growth predictions by the town were considered overly optimistic. Demographic information was obtained from the 1980 Census. This information was relatively

difficult to acquire due to the late release of the past census stemming from continuing law suits by large municipalities. Some of the census data had to be personally correlated to the Blacksburg area because of this late release.

Past and present mill rates were included to give a profile of property taxing policy. Attempts to indicate the town services provided for each dollar of property tax revenues proved futile. The expenditures in relation to property taxes were not broken down individually, therefore a table listing the percentage of property taxes to total revenue and the percentage of expenses to total expenditures was included (Exhibit D.7).

Housing and Commercial Market Analysis (Refer to Appendix E)

Information concerning the existing housing profile in Blacksburg was obtained from the latest census and from the building and inspection department of the town. Compiling recent market information for single-family housing units proved to be a difficult task. At the time of this study a local multiple listing service among the realtors was not available. Therefore it was difficult to document present and past sales prices and the total number of units for each housing category. Local realtors could give a "feel" for these values and numbers, but hard data was unavailable. The next best method was to perform a "windshield" survey and interview realtors, builders, and town officials to determine present and planned construction activity. An alternative source was located with recent sale prices

for single-family units as researched by a Virginia Tech student.⁵ This source included a number of single-family units sold over the past five years as recorded from local realtors' comparable sales books and personal interviews with home owners (Exhibits E.2 and E.3).

Apartment and multifamily market analysis involved contacting major complexes in town by phone. Relevant information such as vacancy rates, number and type of units, rental rates, and amenities provided by each complex was acquired. This was a relatively quick and easy method to calculate prevailing vacancy rates, existing multifamily housing stock, and the average rental rates the market was charging (Exhibits E.5, E.6, and E.7).

Because the subject site includes commercial zoning, a review of the commercial market was necessary. Commercial market activity information was provided by the town and by interviewing local appraisers and realtors. Comparable sales and rental properties were listed for C-1 zoning (Exhibit E.10). Attempting to determine possible market demand for various commercial uses was extremely difficult and time consuming. The only existing market survey of commercial/retail trade in the area was a subjective consumer survey performed by the College of Business at Virginia Tech (Exhibit E.11).

Because an objective local retail analysis was not available, an attempt to compare Blacksburg with other similar cities was performed. Gross retail revenues for various types of businesses were compiled from cities which had similar population characteristics as Blacksburg (Exhibit E.12). The eventual goal was to compare Blacksburg's

retail revenue dollars of various businesses to figures for similar cities across the nation. This data would provide a basis for determining possible new businesses which might be needed in Blacksburg. The Blacksburg information would be based off Virginia sales tax figures or town business license figures from state or local sources. The Virginia state sales tax source was ineffective because Blacksburg is presently under town status and figures were provided for cities or entire counties only. For local sources the Chamber of Commerce and the town finance department were interviewed. The Blacksburg Chamber of Commerce is presently being reorganized and developed so this source was also ineffective. The town finance department provided the only hope for detailed dollar figures for various business categories but this information would not be available until the new computer system for the department was properly programmed. Therefore the column for Blacksburg had to be left blank until this information was made available.

IV. SUBMARKET DEFINITION

The primary market for the subject site are the housing needs of Virginia Tech University. This was determined because of the close proximity of the site to the University and the high percentage of University associated residents to the total town population (over 80%). The University housing market is comprised of several submarkets including: undergraduate students, married and single graduate students, University staff, and tenured and untenured faculty. The characteristics of the site were reviewed to obtain probable target markets:

- present zoning of R-16 at 25 units per acre
indicating mid to high density development
- initial estimate of development costs suggested
units which must sell in the higher price range
of the market
- smaller units due to high density
- proximity to University and downtown area
- urban nature of the site

The potential market for the subject site was determined to be young, untenured faculty such as assistant professors, associate professors, and graduate students, married or unmarried. These submarkets have housing requirements which are unique from one another. To help

identify these individual housing requirements, a telephone survey was conducted by students in the development class. Approximately seventy-five faculty and graduate students were interviewed. The survey was structured to determine preferred housing type, size of the unit required, design considerations of the unit, amenities desired, and affordability or disposable income applied towards housing costs (Exhibit G.1). The survey was limited in complexity and accuracy due to the nature of the telephone survey method. The telephone method was chosen over mailing and direct personal interviews for reasons of speed and cost. The original survey form served as a learning exercise for the students and their suggestions for modification of the survey to correct its shortcomings were recorded for future use. Characteristics and preferences were determined as follows:

Assistant Professors - Younger, untenured faculty without a family or having a small family requiring smaller units, average disposable income, privacy of ownership, close to University, low maintenance housing, prefer single-family units.

Associate Professors - Young to mid age untenured faculty with smaller families requiring small to mid size units, relatively high disposable income, several amenities, privacy of ownership, close to University, low maintenance, prefer detached single-family units.

Graduate Students - Higher disposable income than undergraduate students, shared housing units (average two residents per unit), close to University, little to no amenities, no maintenance, prefer lower cost housing - multifamily.

V. DEVELOPMENT STRATEGY

By reviewing the survey results and market analysis data I chose the following housing unit types and their respective target market for further development study:

Assistant Professor = Townhouse

Associate Professor = Detached Single-Family

Graduate Students = Apartments

The next step was to determine likely density levels for each type of housing on the subject site. Various site plans were sketched, evaluated, and then tested with the Land Use Intensity Ratings for Planned Unit Developments as established by the FHA (Exhibit H.1). From these initial site plans and design studies the following units were examined for development costs:

- 1200 and 1400 s.f. townhouse at 12 units per acre
- 1300 and 1500 s.f. detached single-family at 6 units
per acre utilizing zero lot line development
- 800 to 900 s.f. 3-story apartments at 25 units
per acre

With market information of size, quality, design, and amenities for each housing type, calculations of probable construction costs in

Blacksburg were performed (Exhibit H.2) yielding the following values:

1200 s.f. townhouse	= \$36,447
1400 s.f. townhouse	= \$40,740
1300 s.f. detached house	= \$44,628
1500 s.f. detached house	= \$48,831
900 s.f. apartment	= \$20,500

To these hard building costs, project costs had to be applied to arrive at a total unit cost before land value. The calculation of project costs is a difficult process because these values will vary for different developers. The percentages chosen were considered to be likely project costs for an average developer.

Townhouses	= 31%
Detached houses	= 33%
Apartments	= 25%

(Refer to Exhibit H.2 for breakdown of project costs.)

Applying the project costs to construction costs yielded total unit costs for each housing type before land valuation as follows:

1200 s.f. townhouse	= \$47,746
1400 s.f. townhouse	= \$53,369
1300 s.f. detached house	= \$59,355
1500 s.f. detached house	= \$64,945
900 s.f. apartment	= \$25,625

These total unit costs were used for comparison purposes and in the valuation of the subject land process. A developer's profit would likely be added to these unit costs to arrive at a total selling price.

VI. VALUATION PROCESS AND SUMMARY

To begin the valuation process the subject site was divided into parcels calculated to be attainable. Properties with existing commercial structures were considered inappropriate for purchase due to the high acquisition cost. This left approximately 8-1/2 acres of individual platts. These were divided into four parcels to be individually valued and used in development scenarios for student proposals. This division into four parcels was performed for several reasons:

- Valuing several parcels vs. one large tract yields more accurate estimates.
- Provide values for development proposals which would not require the entire 8-1/2 acres and to facilitate development in phases.
- Provide several parcels for use in student involvement.

To determine an optimum number of parcels for sale and the most appropriate division of each parcel, a series of maps were weighed and scored according to the following criteria (Refer to Exhibit I.1):

- consistent topography
- ability to obtain property
- density potential

- integrity of ownership
- development and design potential
- cost of land
- access and visibility
- difficulty in purchasing

Existing boundary lines for parcel layout were used as opposed to separating individual platts due to the following reasons:

- large number of platts on the tract
- information provided was based on whole lot division
- undesirable to have out-parcels in development scheme
- owners are likely to require high severance costs if individual platts are divided

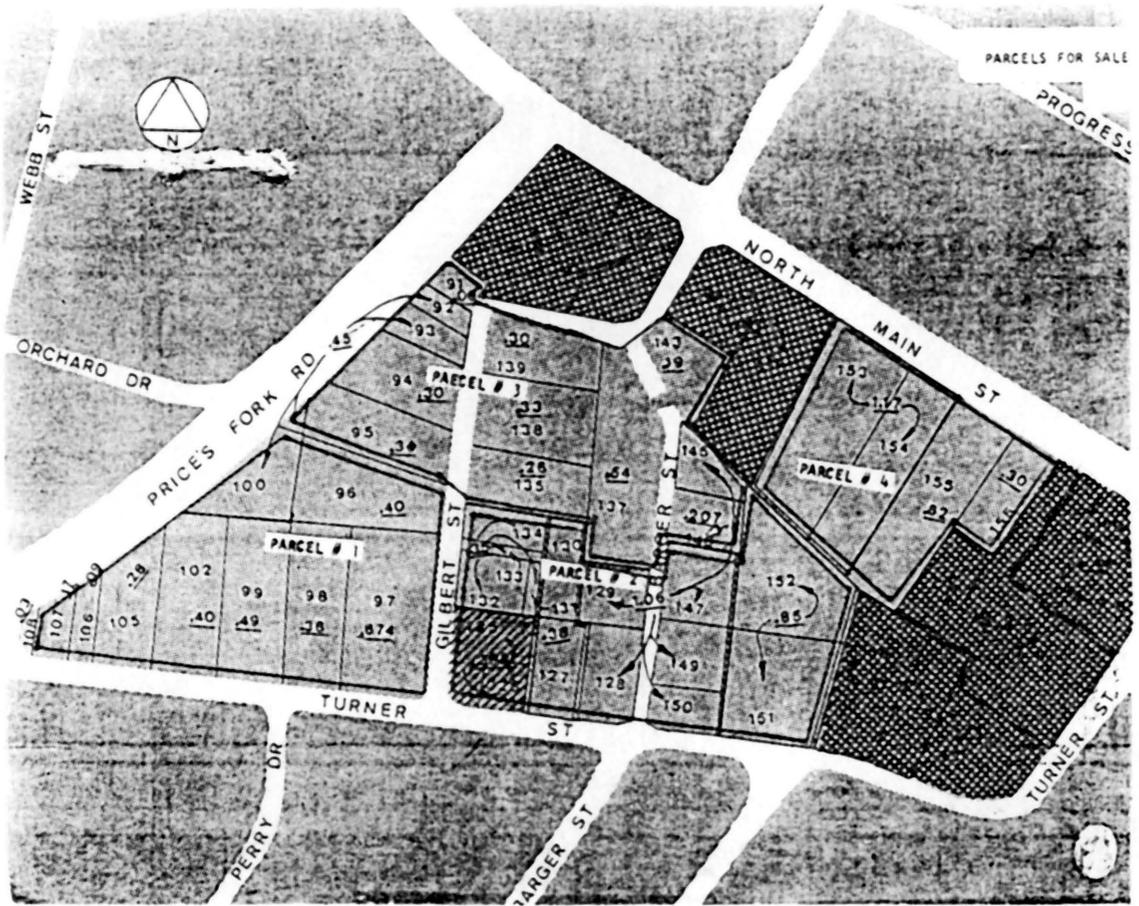
The above process yielded the map on page 24, Exhibit 4.

Traditional Valuation Methods

Traditional methods of valuation include the following three methods: replacement cost approach, income approach and market comparable approach.

The cost approach relies on the principle of substitution. This approach states that the worth of a property is roughly equal to:

- 1) the cost of reproducing the property minus, 2) a figure that approximates the amount of value of the property that has been "used up"



▣ = Parcels calculated to be unattainable

▨ = Option plat, Indicates high acquisition cost, possibility of including in parcel number 2.

PARCELS FOR SALE

	<u># 1</u>	<u># 2</u>	<u># 3</u>	<u># 4</u>
Acres	3.15	2.51-2.79	2.84	2.09
% Slope	3-10	3-7	5-15	3-7
# of Platts	9	15	12	4
# of Owners	9	5	11	3

EXHIBIT 4

PARCELS FOR SALE MAP

in the course of its life.¹⁸ In short, a property is worth its reproduction cost minus accrued depreciation. The cost approach is most reliable when a property is relatively new and accurate estimates of construction costs and depreciation schedules can be made. Therefore this method was determined to be inappropriate for use in this study due to the large number of older structures on the subject property. Additionally, the cost approach requires a detailed interior survey of each structure which would have been very difficult to obtain in this study.

The second traditional method of valuation, the income approach, states that the worth of a property is equal to the present value of the anticipated stream of future benefits.¹⁸ This method is based on determining the amount, certainty, and the length of time of the future flow of income. Then a dollar valuation is placed on the future flow of income by applying an appropriate capitalization rate*. This method was also determined to be inappropriate for use on the subject property for the following reasons:

- Difficulty in predicting potential rental rates for the large number of single-family structures on the site.
- Very arbitrary to adjust each property's potential income for location, situs, and land size.

*value = net operating income ÷ capitalization rate

- Non-consideration of different land sizes for properties earning the same rent.
- Value would be based upon present rental rates when the rental market is constantly changing.
- Difficulty in predicting expenses and lossed income for each property.
- Appreciation value of property is not adequately considered, only cash flows are valued in this method when usually the major reason for investing in real estate is for appreciation value.
- Difficult to produce an adequate capitalization rate, inconsistent local market and confidentiality of records of individual owners.

The third traditional appraisal method, the market data approach, relies on the principle of substitution. This method states that a property is worth approximately the same as another property offering similar utility.¹⁸ Of the three methods of appraisal theory, the market data approach is most often used and considered most reliable. This method was applied in the subject study and was given the strongest weight of accuracy because it considers the most recent sales in the same type of zoning district as the subject platts. Therefore the market data approach is most likely to reflect prices which the market must pay.

Valuation Methods Utilized

The first step in using the market data approach was to compile a listing of properties that have been sold in the same zoning district as the subject site. Sources for this information included local appraisers and realtors, the county real estate office, and several individual owners of property in the same zoning district. The sales search resulted in a compilation of R-16 and C-1 property listings (Exhibits I.2 and I.3). As each subject platt was reviewed it was compared to the comparable listings to determine the most similar comparable properties and adjustments were made for time, location, and any existing structures. This resulted in a value per square foot for each individual platt (Exhibit I.4). Values using market comparables were also determined by using a per unit allowable method. This value was based on the maximum number of units a property could support given R-16 zoning limitations (9,000 s.f. for the first unit and 1,440 s.f. for each additional unit to maximum of 25 units per acre). Reviewing the comparable sales listing, the average price per allowable unit adjusted for time was calculated to be \$5,570. This number was applied to the maximum number of units allowable for each subject platt. A comparison of the square foot values to the per unit allowable values reveals the higher premium paid for dealing with a large number of individual land owners. The per unit values are consistently lower than the square foot values for the parcels because the unit method weighs heavily in favor of larger tracts of land under one owner. By contrast, the square foot method emphasizes the

higher prices paid for smaller lots with numerous owners and for land which has existing structures.

Because two of the three traditional approaches to obtaining property value were not appropriate for use in this study, other forms of valuation needed to be considered to provide a stronger basis for land value conclusions. Since county assessment values were readily available for each platt, these numbers were adjusted for time and applied to each parcel (Exhibit I.5). Review of previous assessment records indicated an average increase of residential property value of 25 to 30% between assessment time (3-4 years). The assessment approach indicates how assessment valuations are typically below market value (Refer to Valuation Summary, page 32, Exhibit 5). Assessments do not adequately consider the income value of properties and in a neighborhood of older properties assessments are usually considerably lower than market value. Additionally, inaccuracies develop when there are a number of parcels involved which are non-taxable entities, such as town, state, and church owned, which are all represented on the subject site.

A third and final valuation method was applied to the subject site utilizing the theory of highest and best use approach to land value. The essence of this concept is that land is valued on the basis of the use which, at the time the appraisal is made, is likely to produce the greatest return. This best use or development method was used in this study as an attempt to determine land value given a residential development built within the parameter of market requirements. As

stated previously, a development strategy was constructed which would respond to the housing needs for several submarkets comprised of Assistant Professors, Associate Professors, and graduate students. Likely development costs for each housing type responding to these submarkets were calculated from residential building cost indexes. Next, land value per unit was calculated as the difference between the building cost and a realistic total project cost. By applying the proposed number of units to be built per acre for each housing type (townhouses = 12/acre, detached houses = 6/acre, apartments = 25/acre) to their respective land costs, a total land valuation per acre to support the development proposal was determined (Exhibit I.6). These values fell far short of the most probable cost of the land as determined by market sales of similar properties.

To test the ability of each market group to purchase the proposed units, affordability tables and value graphs were constructed. These graphs indicate that interest rates would have to fall to 10% or less for the target groups to purchase their respective housing unit at the most probable valuation of the subject land (Exhibits I.7 and I.8).

To test the feasibility of an apartment development on the subject site, an internal rate of return was calculated to measure project feasibility. The internal rate of return calculations were based on a probable net operating income and several different mortgage interest rates (Exhibit I.9). To achieve adequate IRR's one of several conditions would have to take place:

- Capitalization rate would have to drop unrealistically low to achieve a high resale value of property.
- Unrealistically high net operating figures would have to be used.
- Land value as a percent of project cost would have to fall well below probable land values for subject site.

From this development approach, it was concluded that these development proposals are not feasible or probable for the subject property.

It became evident that a development of much higher density would be necessary to warrant the high cost of the land.

Valuation Summary

Reviewing the Valuation Summary Sheet on page 32, Exhibit 5, I arrive at the following valuations of the subject property (Refer to page , Exhibit 4 for parcel map):

- Parcel #1 = \$310,000
- Parcel #2 = \$325,000
- Parcel #3 = \$400,000
- Parcel #4 = \$520,000

The total value of attainable property is approximately \$1,550,000. Parcel number 4 is especially prohibitive to residential development due to its location in C-1 zoning and its value therefore reflects this higher use zoning.

EXHIBIT 5

VALUATION SUMMARY

I. Market Comprable Approach

A. Square Foot Method

Parcel # 1 = \$316,703
 Parcel # 2 = \$345,678
 Parcel # 3 = \$415,421
 Parcel # 4 = \$518,034

B. Unit Method

Parcel # 1 = \$306,300
 Parcel # 2 = \$300,780
 Parcel # 3 = \$289,640
 Parcel # 4 = Not Applicable

II. Assessment Approach

A. Square Foot Method

Parcel # 1 = \$185,406
 Parcel # 2 = \$285,855
 Parcel # 3 = \$397,595
 Parcel # 4 = \$528,114

III. Best Use Approach

A. Development Method

A-1. Townhouses at 12 units an acre:

1200 S.F. unit = \$63,660/acre: 1400 S.F. unit = \$71,160/acre

Parcel # 1 = \$200,529	Parcel # 1 = \$224,154
Parcel # 2 = \$159,786	Parcel # 2 = \$178,612
Parcel # 3 = \$180,794	Parcel # 3 = \$202,094
Parcel # 4 = \$133,049	Parcel # 4 = \$148,724

A-2. Detached Single-Family at 6 units an acre:

1300 S.F. unit = \$89,040/acre 1500 S.F. unit = \$97,416

Parcel # 1 = \$280,476	Parcel # 1 = \$306,860
Parcel # 2 = \$223,490	Parcel # 2 = \$244,514
Parcel # 3 = \$252,874	Parcel # 3 = \$276,661
Parcel # 4 = \$186,094	Parcel # 4 = \$203,599

VII. CONCLUSIONS

Proposals for single-family development cannot generate the density high enough to warrant the high cost of the subject land. More intensive density use would have to be implemented to make development of this land feasible.

Development proposals which are intensive in density, such as high rise structures, may achieve the revenue returns necessary to support the high cost of the land. However, a high rise proposal is likely to meet opposition from town officials or strict setbacks would be required which would in turn increase the land necessary for development and therefore its cost. Additionally, it is likely that with the softening of demand for multifamily units in the near future, the market would not be able to absorb the large number of units which a project of this scale would produce.

Evaluating student proposals for development, I found all scenarios to be unfeasible except for a development proposal which included mid-rise condominium units for sale. This perhaps would achieve the correct combination of density, low building cost per unit, and land value per unit to revenues from sales. However, it is questionable whether a number of condominium units could be absorbed in the Blacksburg market since this form of development would be new for the area.

For this subject property to be feasible, at least one of the following conditions would have to take place:

1. The use of eminent domain, either by local, state, or federal government for public welfare. By acquiring the land for development the town could purchase the property at lower interest rates than private developers could obtain and the local government could therefore produce a development that is most responsive to community needs.

This condition is highly unlikely since the town has never undertaken a project similar to this proposal in the past and the local government does not have the financial strength to purchase a tract of land of this expense.

State agencies would not become involved in the project since it is a project for profit and the present federal housing policy is to encourage the private sector to meet housing demand.

2. A non-profit housing co-op is formed to purchase the property. This organization would form in order to accommodate the high cost of land by avoiding developers profit and by buying down the debt service expenses for prospective home buyers.

This scenario is also unlikely since it would take many years to organize and their desires for development may not match what is offered by the subject site.

3. A large developer comes into the project who can utilize large economies of scale with the ability to bring in projects at very low building and project costs.

This would perhaps be unrealistic because the future market demand predictions do not support a proposal that would bring in a large developer.

4. A very favorable mortgage market where interest rates are at 11-1/2% or below.

This may not happen for long time because interest rates are based on an earning rate for lending institutions plus an inflation factor. To realize low interest rates the economy will need a long period of stable, low inflation rates. Additionally, high recent losses due to past lending practices by money institutions will keep rates relatively high until these losses are recouped.

5. A developer who can offer low interest rates by buying down the mortgage rate so as to offer units at an affordable price.

This is unlikely since the buying down of interest rates would increase the developers costs and adversely affect his profit margins.

From this study and my years of residence in Blacksburg, I have come into close contact with the development process in Blacksburg. With this knowledge I believe the subject property will most likely be developed in a pattern which is characteristic of the rest of the town. Small pockets of inconsistent development will take place on the site as recently evidenced by the quick market store built on

Turner Street at the subject site (Refer to page 37, Exhibit 6). This unfortunate forecast is the consequence of both the high cost of the land and the inability of the local government to coordinate and control planned development in a consistent fashion.



Quick Market/Apartment Structure
on Turner Street

Exhibit 6

Photograph of Quick Market

SOURCES OF INFORMATION

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29. National Association of Home Builders, Cost Effective Site Planning, National Association of Home Builders, 1976.

APPENDIX A

DATA PACKET

"PROPERTY DESCRIPTION"

EXHIBIT A.1

PROPERTY DESCRIPTION

A. Locational Description

1. The subject site is located in the north-central area of Blacksburg on approximately 15 1/2 acres. The land is bounded by two major arterials and a secondary road; see map #6 and aerial photo.

- Northeast - North Main Street
- Northwest - Price's Fork Road
- South - Turner Street

2. Adjacent site uses: The area has developed from a low density, single family area to a mix of higher density multifamily and strip commercial.

- Northeast - Strip commercial typified by fast-food and restaurants (across from and on the subject site) with small single family.
- Northwest - Trailer park and multifamily apartment complexes.
- Southwest - VPI property - commuter parking lots.
- Southeast - VPI property - power plant and classroom and dormitory buildings.

B. Present Ownership

The land is divided into 53 separate platts (refer to map #'s 6,7,&8) with land owners consisting of the Commonwealth of Virginia, Town of Blacksburg, private commercial, and private residential. The unusual division of platts along Price's Fork Road, and ownership by the state and town of several of these platts, is due to the condemnation of properties for the construction of Price's Fork Road extension in 1978. Several houses and trailers were removed for this construction (see aerial photo - preconstruction). Chart #1 lists the owners with corresponding platt #'s and includes information on owners address, property assessment, date purchased, purchase price, if taxes paid, size, and any pertinent easements.

C. Current Use

The structures on the site consist mostly of older single family structures that are rented out to tenants. There are six commercial buildings and one that is a combination commercial/residential and two that are rented by VPI for office space (refer to map # 9). The residential structures are in various condition with several having been converted from single family houses to individual apartment units (refer to chart # 2). Students predominate as tenants in the structures.

AERIAL PHOTO-1978
(Before Road Ext.)

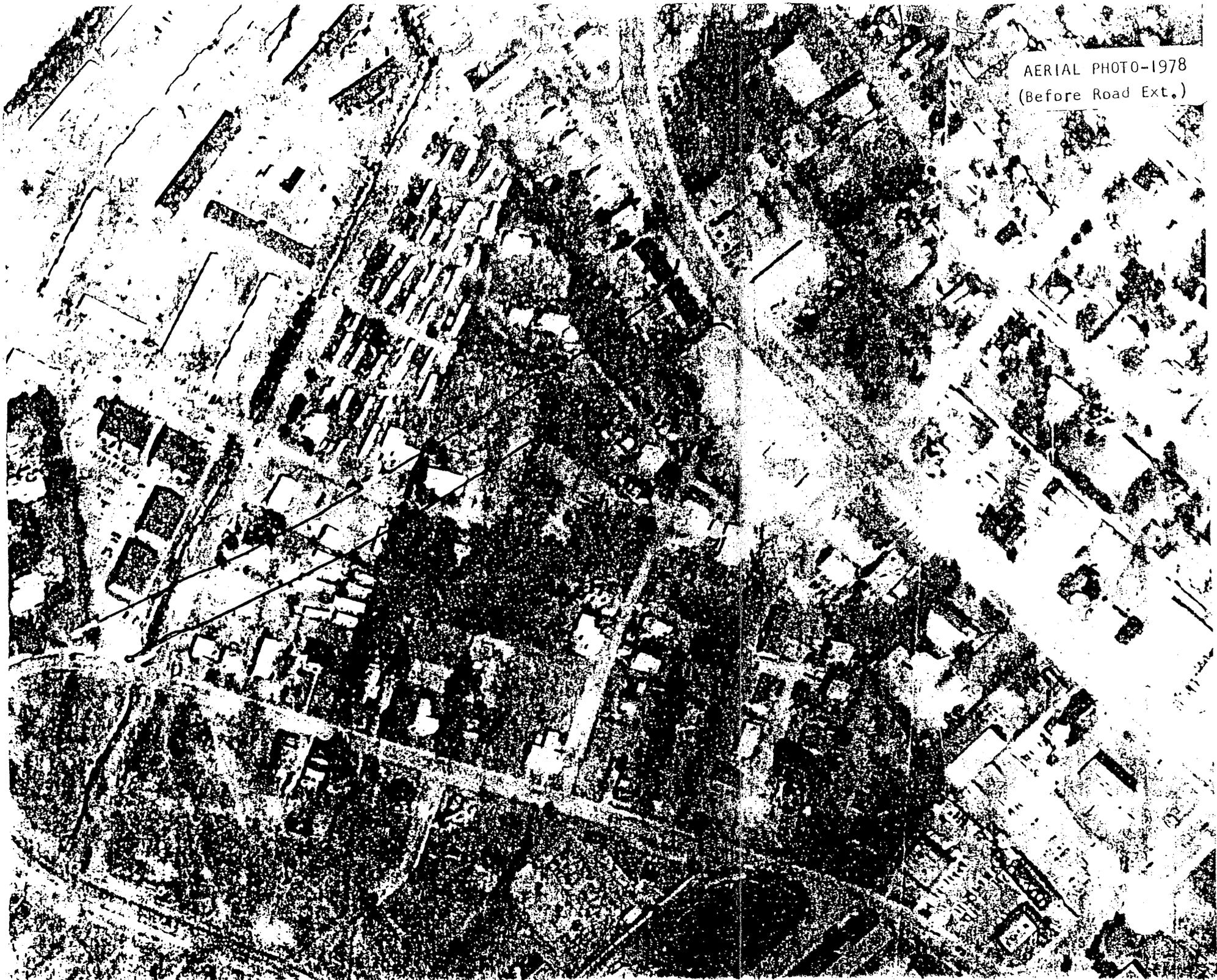


EXHIBIT A.2
AERIAL PHOTO

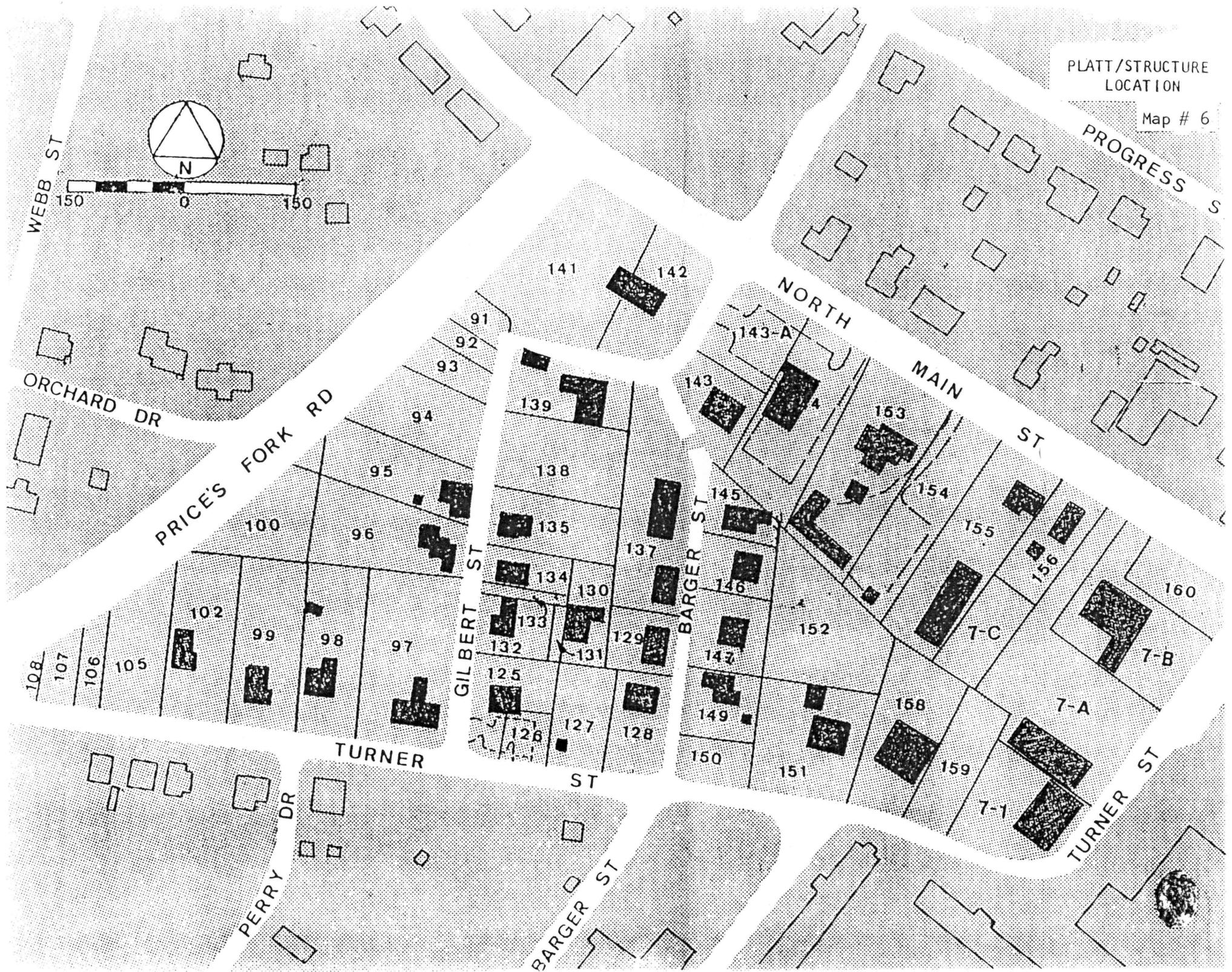


EXHIBIT A.3

PLATT/STRUCTURE LOCATION

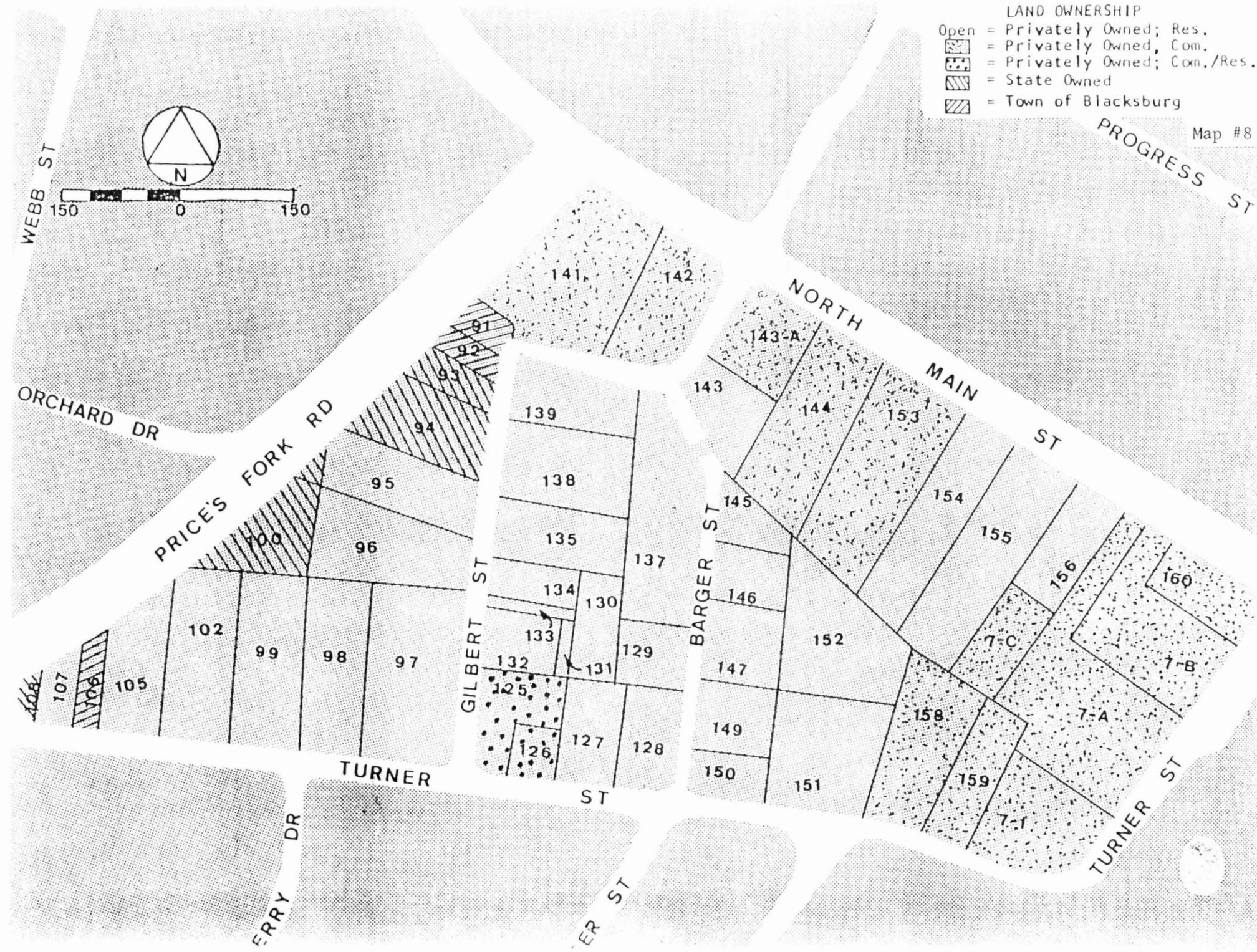


EXHIBIT A.5

LAND OWNERSHIP

EXHIBIT A.6

PLAT #	OWNER'S NAME	PRESENT ADDRESS	CHART # 1		DATE PURCHASED	PURCHASE PRICE	TAXES PAID	SIZE	EASEMENTS
			ASSESSMENT:	LAND/BLDG./TAX*					
91	Town of Blacksburg							.064	
92	Town of Blacksburg							.061	
93	Commonwealth of Va.							.10	
94	Commonwealth of Va.							.30	
95	Mays, Preston	110 Gilbert St. Blacksburg, Va.	6,500/8,500/126.00		4/1951	\$ 2,500	Yes	.34 acre	see note 1
96	Johnson, Douglas	212 Gilbert St. Blacksburg, Va.	6,500/10,500/142.80		9/1946	2,500	Yes	.40	
97	Blacksburg Community Bible Class	Gilbert St. Blacksburg, Va.	9,000/41,000/NA		12/1956	3,000	NA	.674	
98	Winn, J Thomas	432 Turner St. Blacksburg, Va.	5,000/19,500/295.80		2/1974	20,000	Yes	.36	Sewer Line
99	Holmes, Ella S	610 Kelsey La. Blacksburg, Va.	10,000/12,800/191.52		8/1944	2,200	Yes	.49	
100	Commonwealth of Va.							.29	
101	Commonwealth of Va.							.	
102	Shannon, Arthur	1016 W. 45 th St. Richmond, Va.	10,000/12,900/192.36		7/1944	3,500	Yes	.40	Sewer Line
105	Perry, Walter H	209 Marlinton Ave. Blacksburg, Va.	3,000/NA/25.20		7/1979	4,000	Yes	.28	
106	Town of Blacksburg							.09	
107	Herakovich, Carl	590 Stonegate Blacksburg, Va.	1,730/NA/14.53		3/1973	28,000	Yes	see note 2	
108	Commonwealth of Va.							.03	
125	Noonkester, James	1106 N Main St. Blacksburg, Va.	7,000/NA/58.80		7/1977	7,000	Yes	.202	
126	Noonkester, James	Previous	4,000/NA/33.60		10/1977	20,300	Yes	.086	see note 3
127	Cregger, Ann L	306 Turner St. Blacksburg, Va.	5,000/320/44.69		7/1951	9,000	Yes	.206	12' road, east
128	Hurst, Homer T	501 Milhurst Dr. Blacksburg, Va.	7,000/21,000/235.20		11/1977	31,390	Yes	.202	
130	Cregger, Ann L	Previous	6,000/22,550/239.82		7/1951	Previous	Yes	.17	
131	Bell, Hunter	211 Gilbert St. Blacksburg, Va.	370/100/3.95		11/1978	400	Yes	.35	
132	Bell, Rachel	Previous	6,000/10,000/134.40					"	
133	Bell, Hunter	Previous	300/NA/2.52					"	
134	Bell, Hunter	Previous	6,000/28,359/288.54					"	
135	A.M.E. Church	Gilbert St.	6,000/8,000/NA			NA	NA	.26	
137	Teske Leasing Co.	401 Washington St. Blacksburg, Va.	16,000/75,550/759.02		6/1978	85,000	Yes	.54	Power Line
138	Mays, Katherine	6597 Penn Ave. c/o Pauline Shelton Suitland, Md.	6,000/NA/50.40		5/1887	50	Yes	.33	
129	Hurst, Homer T	Previous	5,000/21,750/224.70		11/1977	26,230	Yes	.17	

* = Montgomery county tax only @ .81 per \$100 assessed value

EXHIBIT A.6 CONT'D

CHART # 1 CONT'D								
PLAT #	OWNER'S NAME	PRESENT ADDRESS	ASSESSMENT: LAND/BLDG./TAX*	DATE PURCHASED	PURCHASE PRICE	TAXES PAID	SIZE	EASEMENTS
139	Clement, June P	202 Barger St. Blacksburg, Va.	10,000/61,950/604.38	8/1976	\$ 27,950	Yes	.30 acre	
141	Boatwright, Charles	200 Country Club La Blacksburg, Va.	60,000/320/506.69	11/1977	see note 4	Yes	.54	Sant. Sewer
142	Boatwright, Charles	Previous	60,000/138,000/1,667.8	11/1977	see note 4	Yes	.41	
143	McCauley, Mary C	201 Frankline Blacksburg, Va.	10,000/43,550/449.82	6/1951	8,500	Yes	.19	
143A	Boatwright, Charles	Previous	24,180/NA/203.11	9/1965	23,000	Yes	.285	
144	Boatwright, Charles	Previous	60,000/115,000/1,470.0	2/1977	35,000	Yes	.524	
145	Hurst, Homer T	Previous	6,000/20,000/225.96	11/1977	26,230	Yes	.12	
146	Ruse, James D	116 Dorset Ct. Charlottesville, Va.	6,000/30,300/304.92	4/1978	24,000	Yes	.207	
147	Hurst, Homer T	Previous	8,110/21,750/250.82	1/1976	30,000	Yes	.211	
149	Hurst, Homer T	Previous	6,000/16,900/192.30	4/1966	4,000	Yes	.20	
150	Hurst, Homer T	Previous	6,000/NA/50.40	4/1966	w/#149	Yes	.16	Street
151	Bock, Betty L	9 Cove Court La. Annapolis, Md.	7,500/38,500/386.40	10/1973	NA/Inherit.	Yes	.45	Power Line
152	Bock, Betty L	Previous	4,000/NA/33.60	10/1973	NA/Inherit.	Yes	.40	Power Line
153	Foresman, E	318 N. Main St. Blacksburg, Va.	75,000/93,530/1,415.65	7/1974	91,500	Yes	1.17	
154	Foresman, E	Previous	45,000/720/384.05	7/1974	w/#153	Yes	w/#153	
155	Heiskell, Lawrence	216 Price St. Blacksburg, Va.	63,750/101,500/1,388.10	7/1966	see note 5	Yes	.62	
156	Nu Prime Chapter Housing Corp.	600 Lucas Dr. Blacksburg, Va.	45,000/33,850/662.34	3/1979	80,000	Yes	.30	
158	Crestwood Associates	c/o R. Sloan Roanoke, Va. (Burger King)	45,000/NA/378.00	7/1975	9,455 see note 6	Yes	.637	
159	Crestwood Associates	Previous	45,000/192,700/2,021.88	7/1975	w/#158	Yes	.27	
160	First Nat'l Bank of Christiansburg	Christiansburg, Virginia	72,150/283,500/2,987.46	2/1975	65,000	Yes	.224	
7-A	Franchise Realty	Box 66207	127,500/183,000/2,608.0	10/1974	369,757	Yes	1.003	
7-C	Interstate Corp.	AMF O'HARE AIRPORT Chicago, IL. (MacDonalds)						
7-B	First Nat'l Bank of Christiansburg	Previous	138,000/NA/1,165.50	2/1975	100,000	Yes	.52	
7-1	Blacksburg Enterprizes	112 Turner St. Blacksburg, Va.	75,000/217,250/2,454.90	7/1980	470,478	Yes	.34	

NA = Not Applicable

* = Montgomery county tax only @ .8% per \$100 assessed value

NOTES TO EXHIBIT A.6

- Note 1 Preston Mays deceased in 1978, left house to wife Maggie who recently passed away, will stated land to be left for the A.M.E. Church.
- Note 2 Mr. Herakovich purchased .44 acre in 1973 for \$28,000. In 1977 the State Highway Commission paid Herakovich \$40,000 for 11,821 square feet. The remainder is approximately 7,535 square feet or .173 acre.
- Note 3 Mr. Noonkester recently improved property by removing old single family structure and erected a two story building. The upper floor consists of two, two bedroom apartments and the lower floor is a small quick mart. (Noonkester achieved a special variance in the zoning law to allow commercial on the bottom floor of residential unit)
- Note 4 Mr. Boatwright paid \$28,000 in 1965 for parcel #141 and 142 for a total of .95 acre. Also in 1965, Mr. Boatwright paid \$23,000 for parcel #143-A.
- Note 5 Mr. Heiskeli inherited property in 1966. The original purchase was made in 1942 for \$4,250.
- Note 6 Crestwood Associates purchased property from Crestwood Gardens in 1975. Crestwood Gardens purchased property from Ida Watson in 1967 for \$35,000. Crestwood Associates is a partnership consisting of four members. The similarity of the names of both companys and the low purchase price of \$9,455 in 1975 indicates similar ownership.

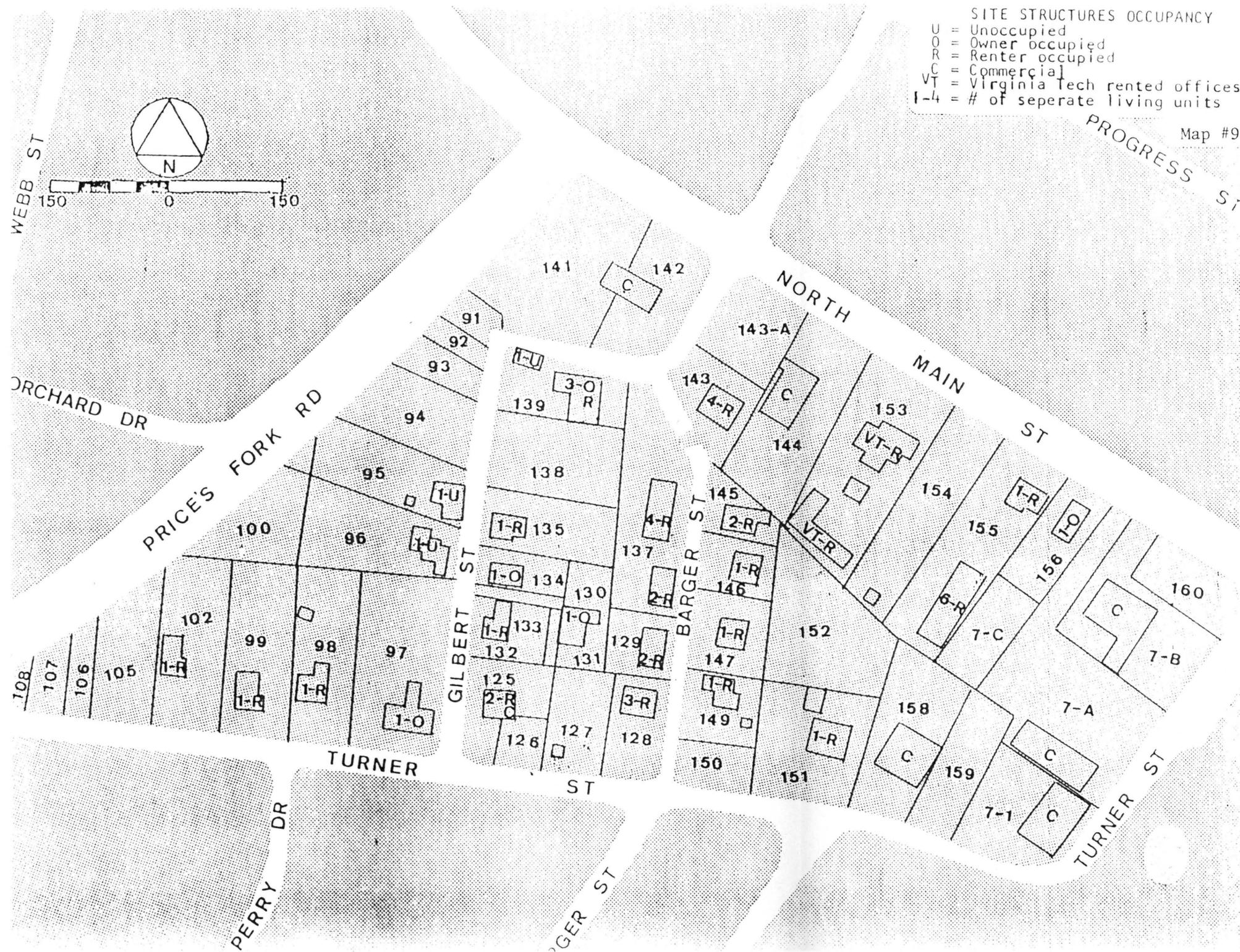


EXHIBIT A.7

SITE STRUCTURES OCCUPANCY

EXHIBIT A.8

PLAT #	# OF STORIES	APTS	BED-ROOMS	APPROXIMATE DATE BUILT	CHART # 2		OWNER OCCUPIED	STUDENTS	NON-STUDENTS	LEASE TERM	LEASE RATE
					QUALITY	MAINTENANCE					
95	1.5	NO	NA	1930-40	AVERAGE	BADLY WORN	DECEASED	NO	NA	NA	NA
96	1	NO	NA	1940-50	LOW	BADLY WORN	DECEASED	NO	NA	NA	NA
97	1	NO	NA	1956-60	AVERAGE	AVERAGE	YES	NO	NA	NA	NA
98	1	NO	NA	1940-50	FAIR	BADLY WORN	NO	YES	NO	1-YEAR	350/MO
99	2	NO	NA	1935-45	FAIR	AVERAGE	NO	NO	1	NA	NA
102	1.5	NO	2	1940-45	AVERAGE	AVERAGE	NO	2	NO	1-YEAR	225/MO
128	1	3	1-EA	1955-65	FAIR	AVERAGE	NO	6	NO	6-MONTH	NA
129	1	2	2-EA	1955-65	FAIR	AVERAGE	NO	4	NO	1-YEAR	210/MO
130	1	NO	NA	1950-55	AVERAGE	GOOD	YES	NO	NO	NA	NA
132	1	NO	NA	1925-35	FAIR	AVERAGE	NO	1	NO	OPEN	125/MO
134	1.5	NO	NA	1940-50	AVERAGE	GOOD	YES	NO	2	NA	NA
135	1	NO	2	1915-25	FAIR	BADLY WORN	NO	2	NO	OPEN	NA
137	1	2	2-EA	1955-65	FAIR	AVERAGE	NO	4	NO	1-YEAR	195/MO
137	2	4	2-EA	1970-75	FAIR	AVERAGE	NO	8	NO	1-YEAR	250/MO
139	1.5	3	2-EA	1965-75	AVERAGE	GOOD	YES	1	4	OPEN	NA
143	2	4	2-EA	1955-65	FAIR	GOOD	NO	8	NO	1-YEAR	150+/MO
145	1.5	2	2 & 3	1930-40	AVERAGE	AVERAGE	NO	5	NO	1-YEAR	220+/MO 250+/MO
146	1.5	NO	5	1965-70	AVERAGE	GOOD	NO	4	NO	1-YEAR	425+/MO
147	1	NO	3	1955-65	AVERAGE	GOOD	NO	5	NO	1-YEAR	430+/MO
149	1	NO	2	1965-66	LOW	BADLY WORN	NO	3	NO	1-YEAR	285/MO
151	2	SORORITY HOUSE		1920-30	GOOD	VERY GOOD	NO	9	NO	3-YEAR	NA
153	2.5	VIRGINIA TECH OFFICES (MANAGEMENT SYSTEMS LABS)		1915-25	AVERAGE	GOOD	NO	NA	NA	5-YEAR (MAY-82)	NA

EXHIBIT A.8 CONT'D

CHART # 2 CONT'D

PLAT #	# OF STORIES	APTS.	BED-ROOMS	APPROXIMATE DATE BUILT	QUALITY**	MAINTENANCE***	OWNER OCCUPIED	STUDENTS	NON-STUDENTS	LEASE TERM	LEASE RATE
153	1		VIRGINIA TECH OFFICES	1940-50	FAIR	GOOD	NO	NA	NA	5-YEAR	NA
155	1.5		ANTIQUA SHOP	1892	GOOD	VERY GOOD	NO	NA	1	NA	NA
155	2	6	2-EA	1965-75	FAIR	GOOD	NO	12	NO	1-YEAR	225+/MO
156	1.5		FRATERNITY HOUSE	1920-30	AVERAGE	VERY GOOD	YES	3+	NO	NA	NA
125	2	2	2-EA COMMERCIAL LOWER FLOOR	1981-NEW	FAIR	VERY GOOD	NO YES	4	NO	1-YEAR	280+/MO

**QUALITY; Basic Descriptions of Different Levels of Construction Quality:¹

- Low Quality- Houses in this level are competitive, low cost dwellings. They are specifically designed to minimum building code requirements. Interior and exterior finishes are plain and inexpensive with little attention to detail. Architectural design is primarily concerned with function, not appearance.
- Fair Quality- Houses are frequently mass produced. Overall quality of materials and workmanship is below average, but these homes are not substandard and will meet minimum requirements of lending institutions, mortgage insuring agencies and building codes. Architectural detail is limited to low cost aspect. Interior finish is plain with few refinements. The exterior front elevation may have inexpensive finish materials which add to its appearance.
- Average Quality- Houses are usually mass produced and will meet or exceed the minimum construction requirements of pertinent agencies and codes. The quality of workmanship and materials are acceptable, but do not reflect custom craftsmanship. Cabinets, doors, hardware, plumbing and heating are usually stock items. Architectural design will include ample fenestration and some ornamentation.
- Good Quality- Homes of good quality may be custom built for individual owners or mass produced in above average residential developments. Good quality standard materials are used throughout. Good quality homes exceed minimum building requirements. Architectural design is attractive with attention given to refinements and detail. Interiors are well finished, usually with good quality wallpaper or wood paneling. Exteriors frequently have ornamental materials.
- Very Good- These homes are generally built in the better residential districts. They are frequently an individual designed home in the executive bracket. Particular attention is given to interior refinements and detail. Exteriors are attractive with good fenestration and custom ornamentation.

***MAINTENANCE; Descriptions of the General Condition or Frequency of Maintenance:¹

- Very Good- All items well maintained, many having been overhauled and repaired as soon as they showed signs of wear.
- Good- No obvious maintenance required but neither is everything new.
- Average- Evidence of deferred maintenance in that some minor repairs and refinishing are needed.
- Badly Worn- Much needed repair. Many items need refinishing or overhauling.

¹ As described in Marshall and Swift's Residential Cost Handbook.

EXHIBIT A.9

D. Zoning (Refer to map no. 10 & table 12)

1. Zoning for the subject site is currently R-16 and C-1. R-16 is the highest use residential zoning comprizing approximately 8 1/2 acres of the site and C-1 is Central Business District commercial zoning with just over 7 acres on the site. R-16 allows a maximum density of 25 dwelling units per acre (appendix B). The R-16 zone had a recent variance amended to allow commercial establishments if they are on the ground floor of a residential building, as evidenced by the recently built structure on platt # 125 on the subject site. Uses for C-1 are realitively unrestricted (except for industrial purposes) and there are no minimum lot sizes required, but coverage of the lot must not exceed 80% (appendix B).

2. Planned Development Residential (PDR) is a zoning district recognized by the town planning department which could possibly be utilized for the subject site. The PDR allows greater flexibility and integration of commercial and residential uses than generally is possible under conventional zoning. The PDR could permit a higher density level, which is set by the town after analysing each proposal, and provide open green space in areas determined to be inappropriate for development. To qualify for PDR, the proposal must be at least 10 acres in size and ownership must either be by a single owner or in a joint ownership with all parties filing. (See appendix B and Table for zoning matrix comparing PDR with R-16).

3. The subject site also provides an ideal opportunity to utilize cluster development. This variation in zoning allows an adjustment in the location and density of development on the site as long as the total number of units does not exceed a set number or density ratio. The technique is ideal to use on a site which owing to slope, tree cover, or other factors, is difficult to develop, and can thus be left as open space. This would allow the preservation of natural drainage areas and reduce the problem of site runoff.

Cluster zoning allows a reduction in lot sizes and a more efficient layout, thus reducing development costs such as curb and gutter, pavement, etc. These savings can be passed on to the buyer as lower priced units. Most localities presently using cluster zoning across the country usually assume the same density level as existing conventional zoning but density bonuses are common. Cluster development tends to be most acceptable in areas already zoned as multifamily (such as the subject site). Additionally, many restraints of conventional zoning are eliminated, allowing more innovative and creative site design. The town of Blacksburg is presently reviewing cluster zoning for possible implementation in zoning regulations. Interviews with planning department personnel indicate a favorable attitude towards the use of cluster development on the subject site if this policy is adopted. 13.

EXHIBIT A.10

Table 12
Residential Zoning Matrix

Zoning Matrix	R - 16	VS.	PDR
USES:			
1. Single Unit Dwellings	X		X
2. Two Unit Dwellings	X		X
3. Multiple Unit Dwellings	X		X
4. Home Occupations	X		
5. Public Parks, Playgrounds and Playfields	X		X
6. Signs (by Art.11,div.10)	X		X
7. Accessory Structures Associated with Permitted Uses	X		X
8. Office Facilities for Management	X		X
9. Recreation Facilities for Residents	X		X
10. Churches	As Special Use ²		X
11. Schools	As Special Use ³		X
12. Commercial and Professional Use Structures ¹	Professional as Special Use ⁴		
	Amendment Forming for Special Commercial Use ⁵		X ¹
14. Child Care, Preschool, Nursery	As Special Use ⁶		X
15. Fraternity/Sorority	X		
16. Single Unit Attached			X
17. Double Unit Attached			X
18. Public Institution Structures	As Special Use ⁷		X ⁷
LAND RESTRICTIONS:			
19. Size (Average)	None		10 acre minimum
20. Ownership	None		Yes ⁸
DEVELOPMENT STANDARDS:			
21. Density	25 units/acre maximum		Set by town
22. Lot Size	3500 sq.ft. minimum		after analyzing
23. Yard Requirements Side	30ft. total 15ft. each side minimum		25ft. min.

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Side - Special Use	30ft. minimum	None
	each side	
Rear - Major Buildings	25ft. minimum	None
Right-of-way Setback	| 35ft. from road	| 30ft. from
	| side 50ft. wide*	| PDK bdry.
	| 60ft. from ctr.	| 55ft. from
	| of read <50ft.	| ctr. of
	|	| rt.-of-way
24. Lot Coverage	| 35% of maximum	| None
25. Height Restrictions	| 35% ⁹	| 35% ⁹
26. Open Space	|	| 20% min.

Subnotes:

- ¹Commercial and Professional are restricted to uses.
- ²Restrictions of 1 cre per 100 seats be provided.
- ³Restrictions of 5 acre minimum for school.
- ⁴Professional uses have construction restrictions
- ⁵Ground floor commercial usage amendment in legislation.
- ⁶Requirement of 200sq. ft. per child play area.
- ⁷Has to be associated with surrounding uses.
- ⁸Parcel of land must either be:
 - A-in one ownership (written option to buy deemed as ownership)
 - B-in joint ownership with all parties filing
- ⁹For every foot above 35', 1 foot of rear, side, and front yard

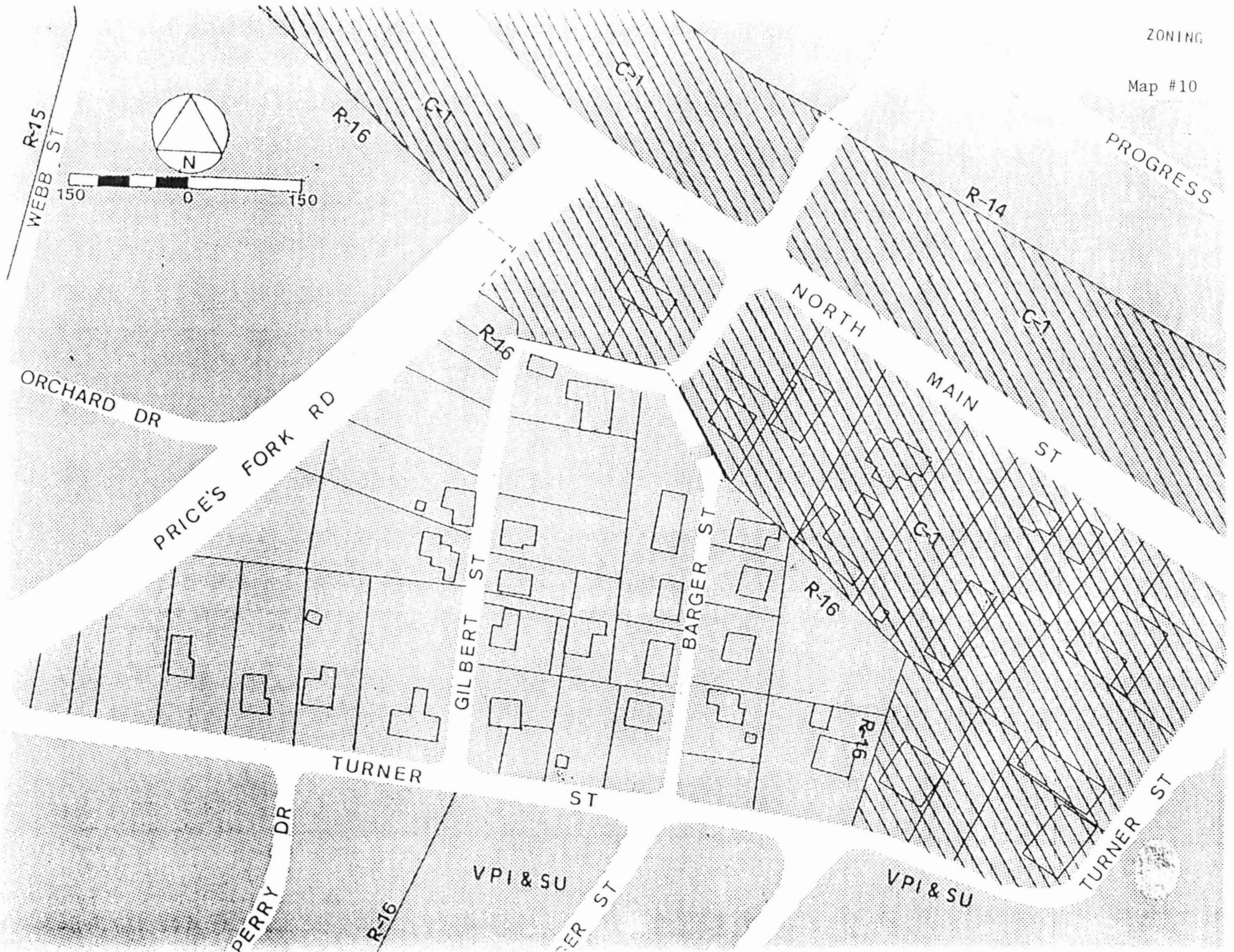


EXHIBIT A.11

EXHIBIT A.12

ZONING 16

encourage the physical concentration of a broad range of individual commercial establishments which together may constitute an area of general commercial activity. These regulations are intended to protect and improve the central business district for performance of its primary functions, and to discourage uses not requiring a central location which would create friction in the efficient performance of primary functions of the central business district. The proper development of commercial uses in this district is not only right under law, but a responsibility to the entire community.

Sec. 12-2. Permitted uses—By right.

The following uses shall be permitted by right in the C-1 District:

- (a) Residential uses.
- (b) Administrative, business, executive and editorial offices.
- (c) Professional offices.
- (d) Financial offices, including banks and real estate, insurance or other general business offices, notwithstanding drive-in regulations for the central business district.
- (e) Medical, dental and clinical offices or laboratories.
- (f) Undertaking establishments and funeral homes.
- (g) Public billiard parlors, poolrooms, dance halls or similar forms of public amusement.
- (h) Rental establishments (nonindustrial).
- (i) Retail businesses primarily engaged in selling merchandise and services for personal, household or business consumption.
- (j) Entertainment and recreation establishments.
- (k) Lodging, including hotels, motels, rooming, and boarding houses.

(Amend. No. 4, § 2, 2-8-77)

ARTICLE XII. CENTRAL BUSINESS DISTRICT C-1*

Sec. 12-1. State of intent.

The central business district forms the community's center for commercial, financial, professional and cultural activities. This district is provided in recognition of the need to promote a convenient and efficient distribution of a broad range of retail goods and services to meet consumer demands, to satisfy commercial land use space requirements, to achieve a stable and compatible urban land use pattern, and to encourage a visually satisfying urban environment. The central business district is intended to

EXHIBIT A.12 CONT'D

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Sec. 12-3. Same—Special uses.

The following uses may be allowed as special uses in the central business district subject to Article II, Division 3:

- (a) Drive-in businesses (including drive-in and fast food restaurants) provided:
 - (1) One or two (2) curb cuts per street frontage per development will be allowed. The number of curb cuts will be determined by factors such as the condition of the street which will serve the establishment, the number of existing curb cuts in the area, potential for increased traffic hazards and congestion, and the number of travel lanes of the street which will serve the establishment.
 - (2) The maximum height of outdoor lighting structures shall be twenty (20) feet in height. No lighting of any kind should cast a direct glare on adjacent land uses.
 - (3) Exterior speakers shall be designed such that noise from such speakers cannot be heard by nearest residential property to the site.
 - (4) Side and rear yard screening no less than four (4) feet in height will be required to shield adjacent properties from headlights and wind-carried debris.
 - (5) A traffic analysis shall be provided by the developer as part of the application for a special use permit. Such analysis shall include, but not be limited to, the projected traffic flows, sight visibility for emerging vehicles, and other public safety factors as may be required by the town engineer and the administrator.
- (b) Living quarters as an integral part of a business use permitted by right.
- (c) Church or other place of worship.
- (d) Public offices and institutions.
- (e) Lodges and private clubs.

- (f) Public utilities including; poles, lines, distribution transformers, switching facilities and other facilities necessary for the provision and maintenance of public utilities including water and sewer facilities. Towers or structures such as microwave or high tension towers shall be excluded unless found to be in harmony with the surrounding neighborhood. Parking shall be provided for office space or service vehicles in accordance with Article II, section 2-43 and section 2-45.

Sec. 12-4. Development standards.

In addition to the provisions of Article II of this chapter, the following standards for arrangement and development of land and buildings are required in the central business district:

- (a) *Minimum lot requirements:*
 - (1) No minimum lot size is required; however, lot size shall be adequate to provide the yard space required by this article.
 - (2) No minimum lot width is required; however, all lots shall abut a public right-of-way and have adequate width to provide the yard space required by this article.
- (b) *Minimum yard requirements:*
 - (1) A side yard shall be required if such yard abuts a residential zoning district. This required side yard shall equal or exceed the sum of the height and depth of the building divided by four (4), but in no case shall be less than twenty (20) feet nor more than forty-five (45) feet.
 - (2) A rear yard shall be required if such yard abuts a residential zoning district. This required rear yard shall equal or exceed the sum of the height and width of the building divided by four (4), but in no case shall be less than twenty (20) feet nor more than forty-five (45) feet.
 - (3) All structures shall be located a minimum of thirty (30) feet from the center line of any street right-of-way, except for those buildings not presently meeting this requirement.
- (c) *Maximum lot coverage by all buildings:*
 - (1) Only one permitted use or one main structure shall be placed on a lot; however, main structures may contain more than one permitted use.
 - (2) Main and accessory structures shall occupy no more than eighty (80) per cent of the total lot area.

EXHIBIT A.12 CONT'D

- (3) Parking is provided in accordance with section 2-43 of this ordinance, and parking areas are arranged so as to be compatible with the neighborhood. Screening will be provided for all parking areas.
- (4) Any site lighting shall be subdued and appropriated to a residential setting.
- (5) The hours that the office is open to the public or clients may be restricted.
- (6) Existing, mature trees on the site shall be preserved, where feasible. Adequate landscaping shall be provided on the site in order that the use may blend in with the surrounding area.
- (7) For existing structures, no external changes may be made that are nonresidential in character. External construction of new structures shall be compatible with the surrounding residential area.
- (8) The use is compatible with the neighborhood. Incompatible uses are those uses which have characteristics such as, but not limited to, noise, the creation of traffic and/or parking problems, and/or other qualities not compatible to the character of the neighborhood.
- (h) Private schools and colleges; provided that a minimum lot size is provided at one acre plus one acre per thirty-five (35) students which the facility will serve to a maximum requirement of five (5) acres. Resident schools shall not be permitted. Acreage per student shall not be prorated.
- (i) More than two (2) roomers in a single dwelling unit.
- (j) Commercial uses in the first floor of residential structures. Such uses shall include retail businesses designed to provide personal or household goods and services, administrative offices, and financial offices and services. Such uses shall provide:
 - (1) Minimize problems such as increased litter or noise by providing a minimum four-foot high screening from adjacent property when goods are sold to be carried off-premises.

EXHIBIT A.12 CONT'D

ARTICLE IX. HIGH DENSITY MULTIPLE-UNIT
RESIDENTIAL DISTRICT R-16*

Sec. 9-1. Statement of intent.

The high density multiple-unit residential district is provided in recognition that certain land in the town may be appropriately developed as areas of high population concentration if developed in accordance with the existing and potential development character of the vicinity and if adequate public services and facilities can be provided. The high density multiple-unit residential district is intended to allow multiple-unit dwellings in association with other residential development types while maintaining a reasonable population density within the total residential area. To this end, the site development and architectural concept of the apartment structure together with the provision of associated facilities shall be an important consideration in achieving an attractive residential environment of sustained desirability with all development in harmony to promote stability, order and efficiency of the residential area.

Sec. 9-2. Permitted uses—By right.

The following uses shall be permitted by right in the high density multiple-unit residential district;

- (a) Single-unit dwelling structures.
- (b) Two-unit dwelling structures.
- (c) Multiple-unit dwelling structures.
- (d) Home occupations, Class A and B.
- (e) Parks, playgrounds and playfields open to the public without fee.
- (f) Signs as permitted by Article II, Division 10.
- (g) Accessory structures and uses in association with permitted dwellings as specified in Article II, Division 7, including:
 - (1) Office facilities for management functions, including property sales, necessary to the development and operation of the area.
 - (2) Such other facilities, including recreation, as may be provided for the use and the amenities of the occupants of the dwellings.
- (h) Temporary housing unit.
- (i) Family care home.
- (j) Rooming house.

Sec. 9-3. Same—Special uses.

The following uses may be allowed as special uses in the high density multiple-unit residential district subject to Article II, Division 3:

- (a) Kindergartens, nurseries or child care as an accessory use of a dwelling or as the principal use of the lot; provided, it occupies a lot of not less than one acre and there shall be an out-of-door play area of two hundred (200) square feet or more per child. Such play area shall be arranged in accordance with the provisions of this article for accessory uses and shall be enclosed with a chain link fence or its equivalent to the height of four (4) feet or more.
- (b) Public schools offering general educational courses and having no rooms regularly used for housing or sleeping of students; provided, it occupies a lot of not less than five (5) acres.
- (c) Churches or other places of worship, provided there is a minimum lot size of two (2) acres. Structures and off-street parking facilities shall not exceed a lot coverage of sixty (60) per cent of the total lot.
- (d) Public utilities, poles, lines, distribution transformers, and other facilities necessary for the provision and maintenance of public utilities including water and sewage facilities.
- (e) Public offices and institutions; provided, that such development shall be associated with residentially zoned land; and provided further, that buildings or groups of buildings be surrounded by landscaped open areas.
- (f) Fraternity or sorority housing structures; provided, there is one acre or more per twenty (20) beds with a minimum of two (2) acres.
- (g) Offices in association with a permitted use or as a principal use provided:
 - (1) The minimum lot size shall be nine thousand (9,000) square feet.
 - (2) Screening is provided between such use and any adjacent residential use. Such screening shall be maintained in good condition.

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- (2) Provision must be made for separate access to the building and privacy of the residents of the building where first floor commercial [use] is proposed.
- (3) Signs for commercial uses in this district shall be subject to the same provisions as allowed in the C-1, Central Business District, outlined in section 2-65 of this chapter, with the exception that no freestanding signs shall be permitted for commercial uses in this district.

(k) Home occupations, Class C.

(l) Municipal offices and institutions; provided that such development is compatible with the surrounding residential area and is designated to minimize impacts on the surrounding area by such methods as screening, restricted access points and the like; and provided that buildings or groups of buildings be surrounded by landscaped open areas.

(Amend. No. 11, 5-10-77; Amend. No. 20, 12-13-77; Amend. No. 36, 5-9-78; Amend. No. 36, 5-9-78; Amend. No. 69, 8-14-79; Amend. No. 73, 7-10-79; Amend. No. 76, 9-11-79; Amend. No. 81, 4-8-80)

Sec. 9-4. Development standards.

In addition to the provisions of Article II of this chapter, the following standards for arrangement and development of land and buildings shall be followed in the high density multiple-unit residential district:

(a) *Minimum lot requirements:*

- (1) For residential uses permitted in this district, the maximum density shall be twenty-five (25) dwelling units per acre; however, the minimum lot size for any residential use shall be seven thousand (7,000) square feet.
- (2) Reserved.
- (3) The minimum lot area shall be nine thousand (9,000) square feet or more for the first dwelling

unit plus one thousand four hundred and forty (1,440) square feet or more for each additional dwelling unit.

- (4) For a single-unit or two-unit dwelling, there shall be a lot width of seventy (70) feet or more at the front line of the dwelling; and for each dwelling unit more than two (2), there shall be required an additional ten (10) feet of lot width. However, a lot width at the front line of the dwelling shall not be required to exceed one hundred and fifty (150) feet. Such lot shall have access to and abut on a public right-of-way for a distance to two-thirds of the required lot width, but such distance shall not be required to exceed one hundred (100) feet. Lots or land without access to or abutting on a public right-of-way may be developed only in accordance with section 2-26.1.
- (5) For each use permitted by right and special use, the lot width shall be adequate to meet the requirements of this article.

(b) *Minimum yard requirements:*

- (1) For dwellings or associated accessory structures, there shall be a total of side yards of twenty (20) feet or more with a minimum of ten (10) feet on any one side, except corner lots. On corner lots, a minimum of a twenty-foot side yard shall be provided on the side facing the street.
- (2) For other uses permitted by right or special uses, including fraternity or sorority houses, there shall be a side yard on each side of a structure of thirty (30) feet or more.
- (3) For main buildings there shall be a rear yard of twenty-five (25) feet or more.
- (4) All structures shall be located thirty-five (35) feet or more from any street right-of-way which is fifty (50) feet or more in width, or sixty (60) feet or more from the center line of any street right-of-way less than fifty (50) feet in width. The line formed shall be known as the "setback line."

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- (5) Additional side and rear yard space shall be required if development occurs adjacent to a residential zoning district other than multiple unit. These required yards shall equal or exceed the sum of the height and depth of the building divided by four (4) but in no case shall be less than thirty-five (35) feet from the property line and no yard greater than sixty (60) feet shall be required. Screening shall be provided in the required yard space.
 - (c) *Maximum lot coverage by all buildings:* A lot shall not be covered more than thirty-five (35) per cent by permitted structures.
 - (d) *Maximum height of structures:* Buildings may be erected up to seventy (70) feet in height, provided:
 - (1) An additional rear and side yard of one-half foot shall be required for each foot in height over thirty-five (35) feet.
 - (2) Church spires, belfries, cupolas, monuments, water towers, chimneys, flues, flagpoles, television antennae and radio aerials are exempt.
 - (3) No accessory building shall be greater in height than thirty-five (35) feet or the principal building, whichever is less.
- (Amend. No. 1, 2-8-77; Amend. No. 8G, 7-12-77; Amend. No. 8K, 7-12-77; Amend. No. 34, 2-28-78; Amend. No. 116, 6-23-81)

ARTICLE X. PLANNED DEVELOPMENT RESIDENTIAL DISTRICT PDR*

Sec. 10-1. Statement of intent.

The intent of the PDR district is to allow greater flexibility and, consequently, more creative design for the development

*Editor's note—Amend. No. 64, enacted Feb. 26, 1980, deleted former Art. X in its entirety. Art. X had consisted of §§ 10-1—10-19, and had derived from Amend. No. 811, adopted July 12, 1977, and Amend. No. 8K, adopted that same date; Amend. No. 19, adopted Dec. 13, 1977; Amend. No. 53, adopted Jan. 9, 1979; and Amend. No. 55, adopted Feb. 13, 1979. Former Art. X pertained to the PDR district. Amend. No. 64 enacted new Art. X, §§ 10-1—10-8, also pertaining to the PDR district. Supp. No. 3

of residential areas than generally is possible under conventional zoning district regulations. It is further intended to promote a mixture of land uses designed to provide a variety of community needs and services while allowing a harmonious variety of housing choices, a higher level of attractiveness and value, the preservation of natural scenic open spaces, and the protection of existing and future development while achieving the goals of the comprehensive plan. (Amend. No. 64, 2-26-80)

Sec. 10-2. Procedure generally.

(a) *Eligibility.* Planned developments shall include at least ten (10) acres of contiguous land.

(b) *Permitted uses.* Permitted uses in the PDR district shall include a variety of land uses. The basic design of a PDR district shall be for residential purposes, with all other uses designed to supplement the residential character of the district. Such diverse uses as parks, churches, appropriate commercial uses and others may be integrated within the district to primarily serve the residents of the PDR district. The specific land uses to be permitted will be determined by planning commission and town council through the approval of the preliminary development plan as outlined in section 10-3(b). Commercial service and office uses shall be permitted with the approval of the planning commission and the town council provided that:

- (1) Commercial facilities are primarily designed to serve the needs of residents in the PDR district;
- (2) That such facilities are designed and located to protect the character of the district and surrounding residential districts. Such facilities shall be landscaped in such a manner as to minimize adverse impacts on residential areas within the PDR district. Landscaping and/or screening may be required by the planning commission and the town council for the protection of residential areas within and without the PDR district in accordance with screening standards in section 2-35;

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- (3) All subsequent changes in use shall be approved by the town council or its agent;
- (4) Construction of commercial facilities shall not begin until twenty-five (25) per cent of the residential units or two hundred and fifty (250) dwelling units, whichever is less, of the total planned development have been completed. (Amend. No. 64, 2-26-80)

Sec. 10-3. Application.

(a) *Pre-application conference.* To obtain information, each applicant shall confer with the staff of the planning department, town engineer, and other affected town staff to provide for a mutual understanding of the PDR regulations. The general outline of the proposal, evidenced schematically by sketch plans, may be reviewed at this time before submission of the PDR application.

(b) *PDR constitutes conditional zoning.* The proposals in the preliminary development plan shall constitute proffers as outlined in sections 1-10.1 through 1-10.5 of this chapter and, once approved by town council, the features in the preliminary development plan shall constitute conditions as outlined under those same sections.

(c) *Preliminary development plan.* The materials below form the basis of information upon which a zoning change will be reviewed. An application shall include the following items:

Written documents:

- (1) A legal description of the total site proposed for development, including location, size and shape of the subject property;
- (2) A statement of planning objectives to be achieved by the PDR through the approach proposed by the applicant, including a description of the character and rationale behind the proposed development;
- (3) An approximate development schedule, indicating various stages of development within the district;

- (4) Engineering feasibility studies for storm water and sanitary sewer services;
- (5) Data for the following: Total number and type of dwelling units; average and minimum single-family parcel size; maximum gross and net residential densities; total amount of open space that meets the eligibility requirements in section 10-7(d)(2); and the total acreage of nonresidential construction;
- (6) Evidence that the applicant has sufficient control over the land to effectuate the development; names, addresses, and evidence of agreement of all property owners. (The applicant must evidence legal title or the execution of a binding sales agreement before final approval of a plan);
- (7) A generalized statement of the methods and agreements necessary to govern the maintenance of common open space.

Schematic site plan and supporting maps:

- (8) A land use plan of the proposed development and a surveyed boundary map;
- (9) The existing site conditions including approximate contours, watercourses, floodplains, unique natural features, and tree cover;
- (10) The location and size of all areas to be conveyed, dedicated or reserved as common open spaces, public parks, recreational areas, school sites, and similar public and semi-public uses;
- (11) The existing and proposed circulation system of arterial and collector streets. The approximate location of any proposed points of access to existing public rights-of-way;
- (12) The existing and proposed pedestrian and bicycle circulation system as it relates to the circulation system described in No. 11 above;

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- (13) The existing major sanitary sewers, storm sewers, and water lines expected to serve the development;
- (14) A generalized landscape plan indicating the treatment of open spaces, and especially the perimeter buffer of the PDR;
- (15) Information on land areas adjacent to the proposed PDR to indicate the relationships between the proposed development and existing adjacent areas, including land uses, zoning classifications, circulation systems, public facilities, and unique natural features.

(d) *Approval of the preliminary plan.* Approval of the preliminary plan shall be granted in the same manner as outlined in sections 1-10 through 1-15 of this ordinance, with the following time limit in effect from receipt to action:

- (1) Within ninety (90) days or less after receipt of the rezoning request and the preliminary development plan, the planning commission shall forward the plan to the town council with a written report recommending that the plan be disapproved, approved, or approved with modification, and giving the reasons for these recommendations. Failure of the planning commission to report ninety (90) days after the proposed amendment has been submitted for rezoning to the commission shall be deemed approval.
- (2) The developer or his agent shall have sixty (60) days after the planning commission receives the rezoning request and preliminary plan to initiate any modifications or suggested changes to the preliminary plan.
- (3) The town council shall have sixty (60) days or less to review the planning commission report and schedule a public hearing under section 15.1-431 of the Code of Virginia. The report shall be made publicly available at least fifteen (15) days before the public hearing. After the public hearing, the town council shall disapprove or approve the preliminary development plan. If modifications are desired by the town council, the plan shall be referred back to the planning

commission for thirty (30) days. The public hearing by the town council described above will be rescheduled upon receipt of the planning commission report. Failure of the town council to take action on the planning commission's recommendation within sixty (60) days of receipt shall be considered a denial of a request, unless the request is referred back to the planning commission.

- (4) If the preliminary development plan is approved by the town council, approval shall be for a period of twelve (12) months during which time a final site development plan shall be filed. The zoning map shall be amended to show the planned development but no building permits may be issued on land within the planned development until final plans for the development have been approved by the administrator under the procedures provided in subsection (e) below.

(e) *Approval of final plans.* Upon approval of the preliminary plan, the administrator shall be authorized to approve or disapprove a final site development plan after a period not to exceed ninety (90) days from receipt of such plan and provided it is in substantial conformance with the approved preliminary plan. Such final plan may include one or more sections of the overall PDR and shall meet all applicable federal, state and town regulations (especially sections 2-63 through 2-73); and shall contain specific details of information required generally in the preliminary plan, including, if applicable, documents of a homeowners' association fully incorporated under laws of the Commonwealth of Virginia, declaration of covenants and restrictions, and other similar documents. The applicant must evidence legal title or the execution of a binding sales agreement, before final approval of a plan. If a final development plan is not submitted within the time allotted, the applicant is deemed to have applied for rezoning to the prior classification and public hearings shall be held pursuant to the provisions of sections 1-10 through 1-15 of this ordinance. A notice of revocation of the final development plan shall be filed with the clerk of the circuit

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court should the final development plan lapse under the provisions of this ordinance. (Amend. No. 64, 2-26-80)

Sec. 10-4. Amendments.

(a) *Preliminary site development plan.* Substantial changes to the approved preliminary plan must be submitted and approved in the same manner as the original preliminary plan, through the administrator.

(b) *Final site development plan.* Minor changes in the location, siting and height of building and structures or decreases in dwelling unit density may be authorized by the administrator, if changes in conditions have occurred since approval of the final site development plan. The administrator may not permit changes in the standards required to be shown in the preliminary plan or beyond the minimum or maximum requirements set forth in this ordinance. Changes of the type listed below may be authorized by the planning commission if required by a change in conditions not foreseen at the time the final plan was approved:

- (1) An increase in the density of dwelling units within the PDR which does not increase the overall dwelling unit density.
- (2) Any rearrangement of ten (10) or more lots, blocks, or building tracts;
- (3) Any changes in provisions for common open space;

All other changes in use, or rearrangements of building tracts, or any changes other than those listed above, must be made by the town council after a report of the planning staff and recommendation by the planning commission, according to the procedural steps in section 10-3(a), (b) and (c). (Amend. No. 64, 2-26-80)

Sec. 10-5. Failure to begin development.

If no construction has begun or no use established in the planned development within one year from the approval of the final development plan, such plan shall lapse and be of

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no further effect. For good cause, the town council may upon receipt of written application, extend for an additional one year the period for the beginning of construction or the establishment of a use. If the final development plan lapses under the provisions of this section, the applicant is deemed to have applied for rezoning to the prior classification and public hearings shall be held pursuant to the provisions of sections 1-10 through 1-15 of this ordinance. A notice of revocation of the final development plan shall be filed with the clerk of the circuit court should the final development plan lapse under the provisions of this ordinance. (Amend. No. 64, 2-26-80)

Sec. 10-6. Control following approval of final development plan.

The administrator shall periodically inspect the site and review all building permits issued for the development to ensure that the development schedule is generally complied with. The provision and construction of all of the common open space and public and recreational facilities shown on the final development plan must proceed at the same rate as the construction of dwelling units. If the administrator finds that the development schedule has not been followed, no permits, except for the abovementioned facilities, shall be issued until the developer complies with the development schedule, unless the developer has, with approval of the planning commission, provided a performance bond or similar instrument to guarantee that such common open space and/or public and recreational facilities will be provided for at a specified date. (Amend. No. 64, 2-26-80)

Sec. 10-7. Development standards.

(a) At all edges of the planned development, yards, height restrictions, and frontage restrictions shall be required as needed for protection of the district and of surrounding area and as needed to make appropriate transition from adjoining districts. Fences, walls and/or vegetation may be required by the planning commission and town council as part of the preliminary plan approval process. In no case

EXHIBIT A.12 CONT'D

§ 10-7

BLACKSBURG CODE

§ 10-7

shall any yard directly adjacent to the boundary of a single-family residential district without an intervening street or alley have lesser dimensions than the minimum required for the adjoining yard in such residential districts, unless the yards in the PDR district are adequately screened from the adjacent district.

(b) Screening shall be provided as follows:

- (1) Around parking areas containing more than five (5) spaces where they directly adjoin any residential district without an intervening street;
- (2) Service areas for loading, storage, collection or refuse;
- (3) Commercial developments within the PDR district.

(c) Streets within a PDR district may be dedicated to public use or may be retained under private ownership. Public streets shall be constructed according to the standards required by and contained within the subdivision ordinance [Appendix B of this volume]. Private nondedicated streets may be approved, provided:

- (1) They are not designed as through streets;
- (2) They serve no more than thirty (30) residences with a minimum right-of-way of forty (40) feet or serve not more than eight (8) residences with a minimum right-of-way of twenty-five (25) feet;
- (3) That all deeds state that when three-fifths or more of the property owners on a nondedicated street declare that they will dedicate the necessary right-of-way at no cost to the town, and pay full cost to bring the streets up to town standards. All property owners abutting said street shall share equitably in all common costs involved.

(d) Common open space. Common open space and common recreational areas shall be specifically included in the development schedule and be constructed and fully improved by the developer at an equivalent, or greater, rate than the construction of residential structures. Common

open space shall be designed and evaluated according to the following standards:

- (1) A minimum of twenty (20) per cent of the total gross area of the development shall be reserved as common open space and/or recreational areas.
- (2) The minimum countable open space shall contain at least five thousand (5,000) square feet which is contiguous and may be for both passive and/or active recreational purposes. Passive recreational areas may include, but [are] not limited to, outdoor sitting areas, picnic areas and paved areas overlooking scenic views. Active recreational areas may include, but are not limited to, pedestrian trails, bicycle trails, tennis courts, multiuse paved areas, swimming and boating areas, playgrounds and playfields and bridle paths.
- (3) Recreational structures designed for indoor recreation may comprise a maximum of five (5) per cent of the common open space of a particular PDR district.
- (4) Off-site permanent open space and facilities appropriate to the need of residents and generally open to such residents of the PDR district may be approved to meet a maximum of fifty (50) per cent of the open space requirements. Such areas shall meet the standards outlined for common open space contained in this section. Such areas shall also abut the PDR district without an intervening street, unless provisions for adequate pedestrian safety is provided.
- (5) Common open space shall not include areas such as proposed street rights-of-way; open parking areas and driveway; school and church sites, common open space with a horizontal dimension of less than fifty (50) feet; and any land determined as unsuitable by the planning commission and town council at the time the preliminary development plan is approved. (Amend. No. 64, 2-26-80)

EXHIBIT A.12 CONT'D

§ 10-8

BLACKSBURG CODE

Sec. 10-8. Control following completion.

(a) The town council shall issue a certificate certifying the completion of the planned development, and the zoning administrator shall note the issuance of the certificate on the recorded final development plan. After such certificate has been issued, no changes may be made in the approved final development plan except as specified elsewhere in this section.

(b) Any uses not authorized by the approved final plan, but permitted in the planned development under the provisions of this chapter, may be added to the final development plan under procedures outlined for preliminary plan approval provided in this chapter.

(c) A building or structure that is totally or substantially destroyed may be reconstructed only in compliance with the final development plan as approved.

(d) Changes in the use of common open space may be authorized by an amendment to the final development plan. Changes in the amount of land reserved for common open space must be approved by the planning commission and town council.

(e) All other changes in the final development plan shall be made under the procedures authorized by this chapter. No changes shall be made in the final development plan unless they are required for the continued successful functioning of the planned development, or unless they are required by changes in the development policy of the community. (Amend. No. 64, 2-26-80)

APPENDIX B

DATA PACKET

"PHYSICAL RESOURCE ANALYSIS"

EXHIBIT B.1

PHYSICAL RESOURCE ANALYSIS

A. Soils

The soil strata is man modified with various forms of clay-like soil. Test borings are recommended for a more updated, reliable analysis concerning bearing capacity, etc.

B. Topography

The site has a gradual slope from 0 to 15% (refer to map #'s 11 & 12). Drainage runs generally from east to west and empties into a perennial stream running along Webb Street (see map # 13). Minimal limitations to development is presented by the topography. Natural contours may possibly be preserved and incorporated into street and building layout.

C. Flora and Fauna

There are no unusual or endangered species of flora or fauna on the site.¹ The area is predominated by deciduous trees and scrub growth. As noted on the tree location map, # 14, there is a number of trees of substantial size and quality. These trees should be considered for retention so as to enhance the natural landscaping as strongly desired in town development policy.

D. Solar Optimization

The site would be ideal for a project utilizing solar design concepts due to the large amount of unobstructed southern exposure (refer to map # 15).

E. Scenic Views

The best scenic views look to the west where Brush's Mountain can be seen from the higher areas of the site. The immediate views to the south and west are realitively poor in quality due to the proximity to VPI parking lots and the power plant for the university.

F. Climate and Prevailing Winds

Blacksburg's climate can be classified as humid continental, modified by medium altitude temperatures (2100 ASL) and mountain ridges. The weather is controlled by warm air moving northeasterly from the Gulf of Mexico and cool air traveling easterly from the Canadian Arctic. Blacksburg is in the zone of frequent contact between these two types of air masses with the nearby mountains producing various steering, blocking, and modifying effects. The town's weather is thus variable, but seldom extreme. The average temperature for January is 30.2⁰ while in July it is 71.6⁰F. The average precipitation is approximately 38 inches and is well distributed throughout the year.

EXHIBIT B.1 CONT'D

The prevailing winds are generally westerly with a more northerly component (northwest) in winter and a more southerly component (southwest) in summer. A development scheme should consider using the natural ridge of the site for protection from cold northwesterly winds in winter and maximize the use of cooling southwesterly winds blowing up into the site in summer.

G. Environmental Considerations

The major environmental concern for this site is in handling additional site run-off due to development. The existing storm sewer facilities are close to capacity and the town has expressed concern in the handling of runoff in this area. On site drainage retention and delay will have to be implemented in development using such methods as berming, ponding, and replacement of grass and foliage where possible. In addition, an effort should be made to locate structures and pavements on impermeable soils and locate recreation areas over permeable soils so as to avoid losing as much of the natural drainage effects of the soil as possible. Parking areas should be kept to a minimum and thus a design scheme might incorporate garage or underneath the structure parking.

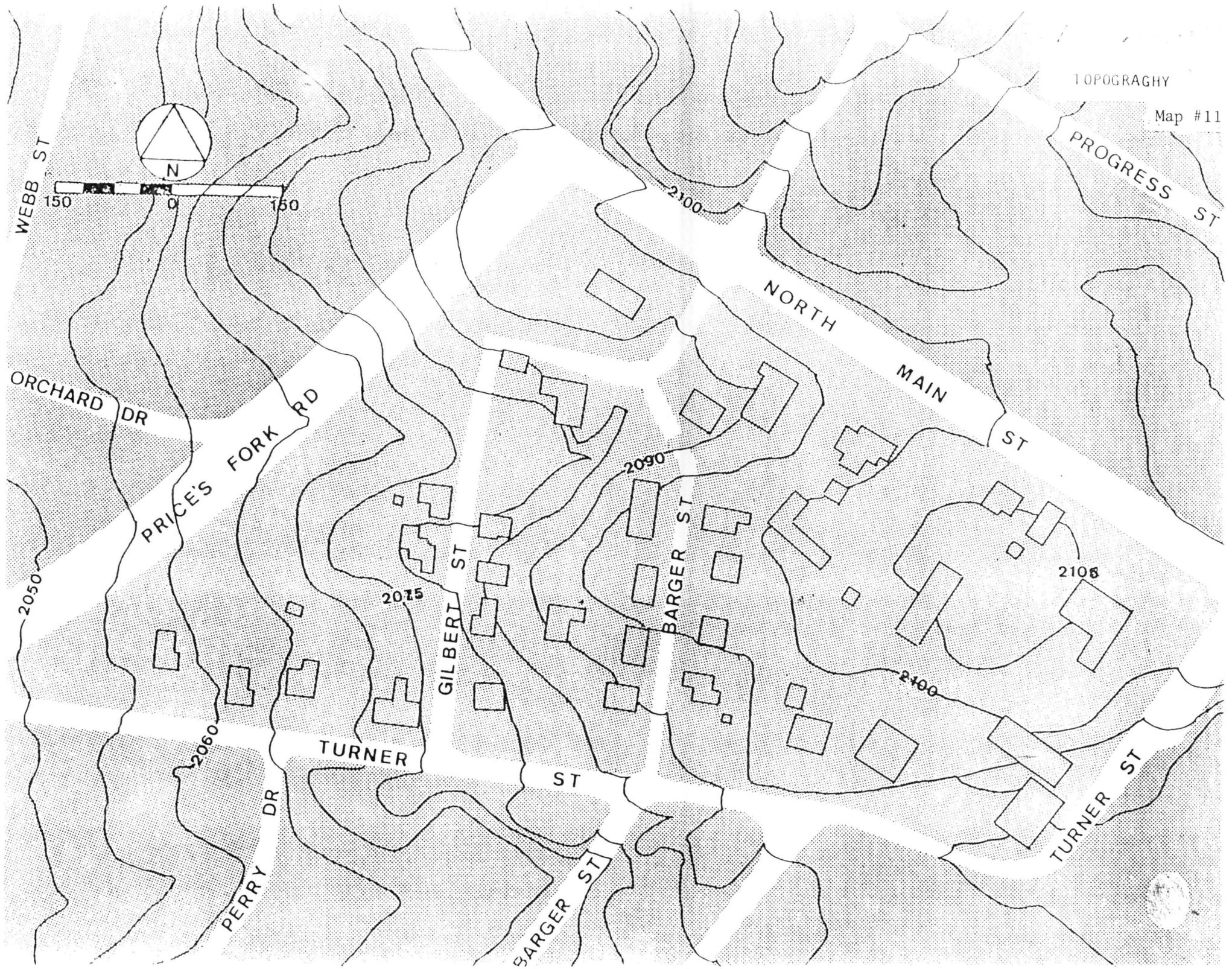
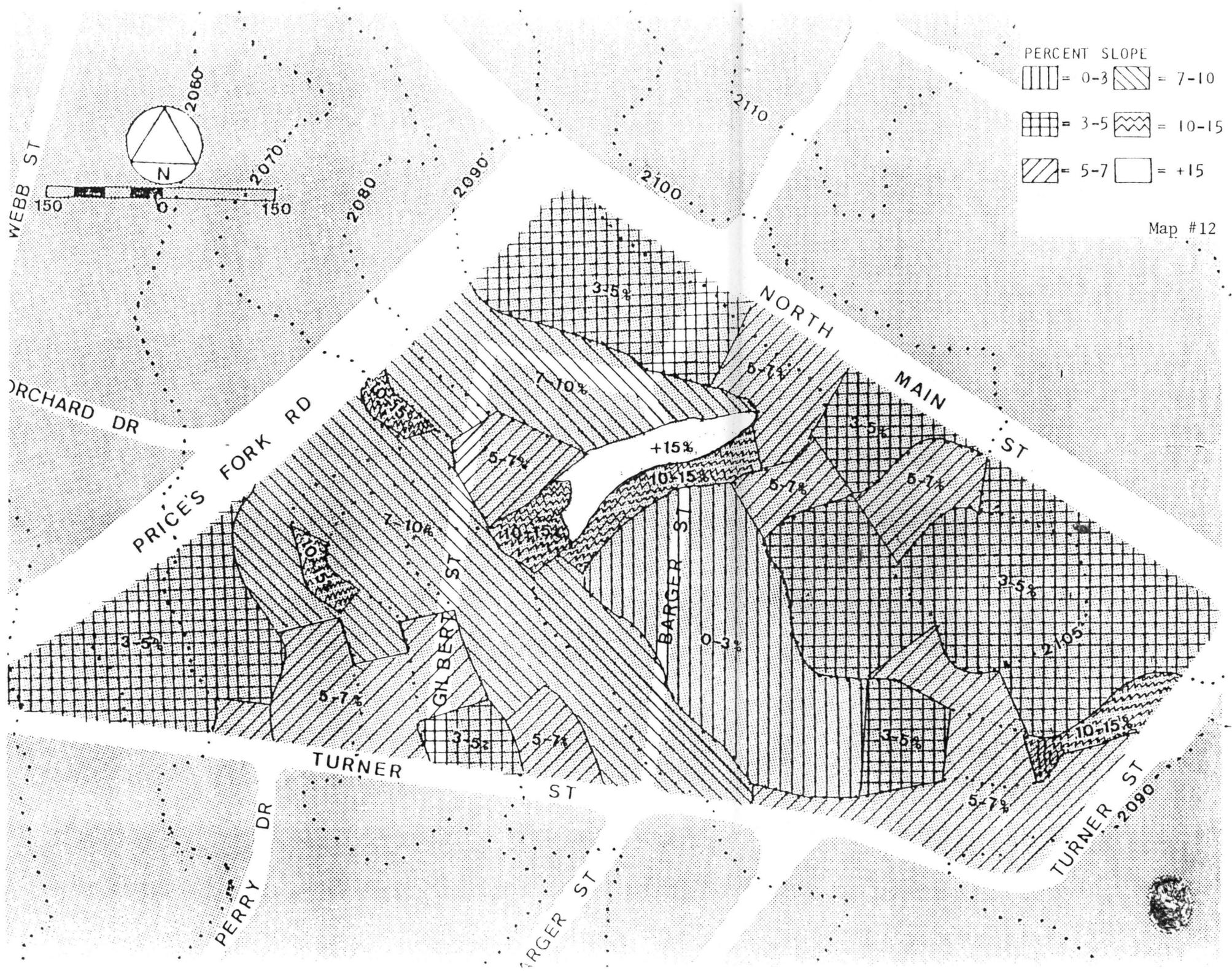


EXHIBIT B.2

TOPOGRAPHY



Map #12

EXHIBIT B.3

PERCENT SLOPE

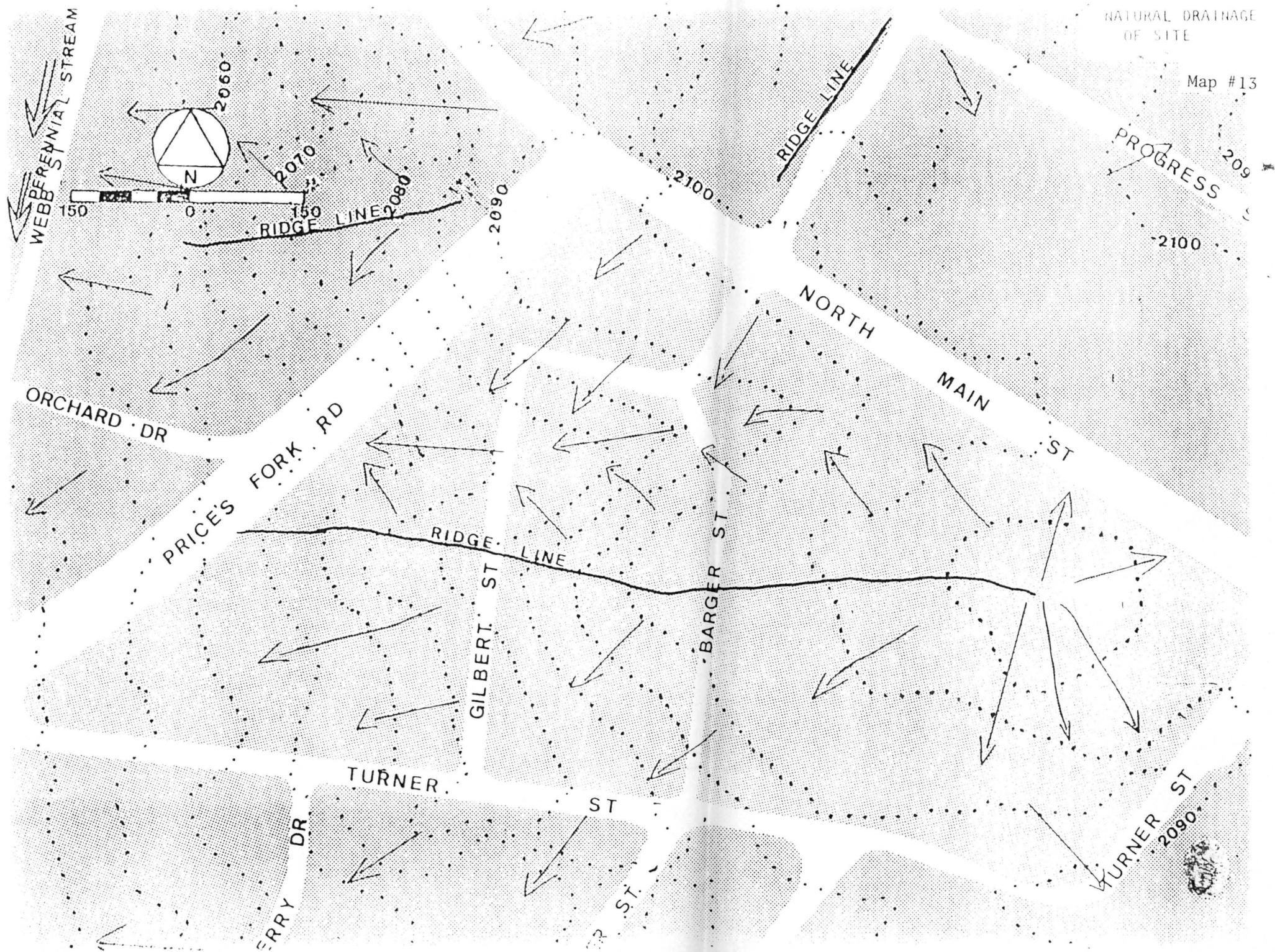


EXHIBIT B.4
NATURAL DRAINAGE OF SITE

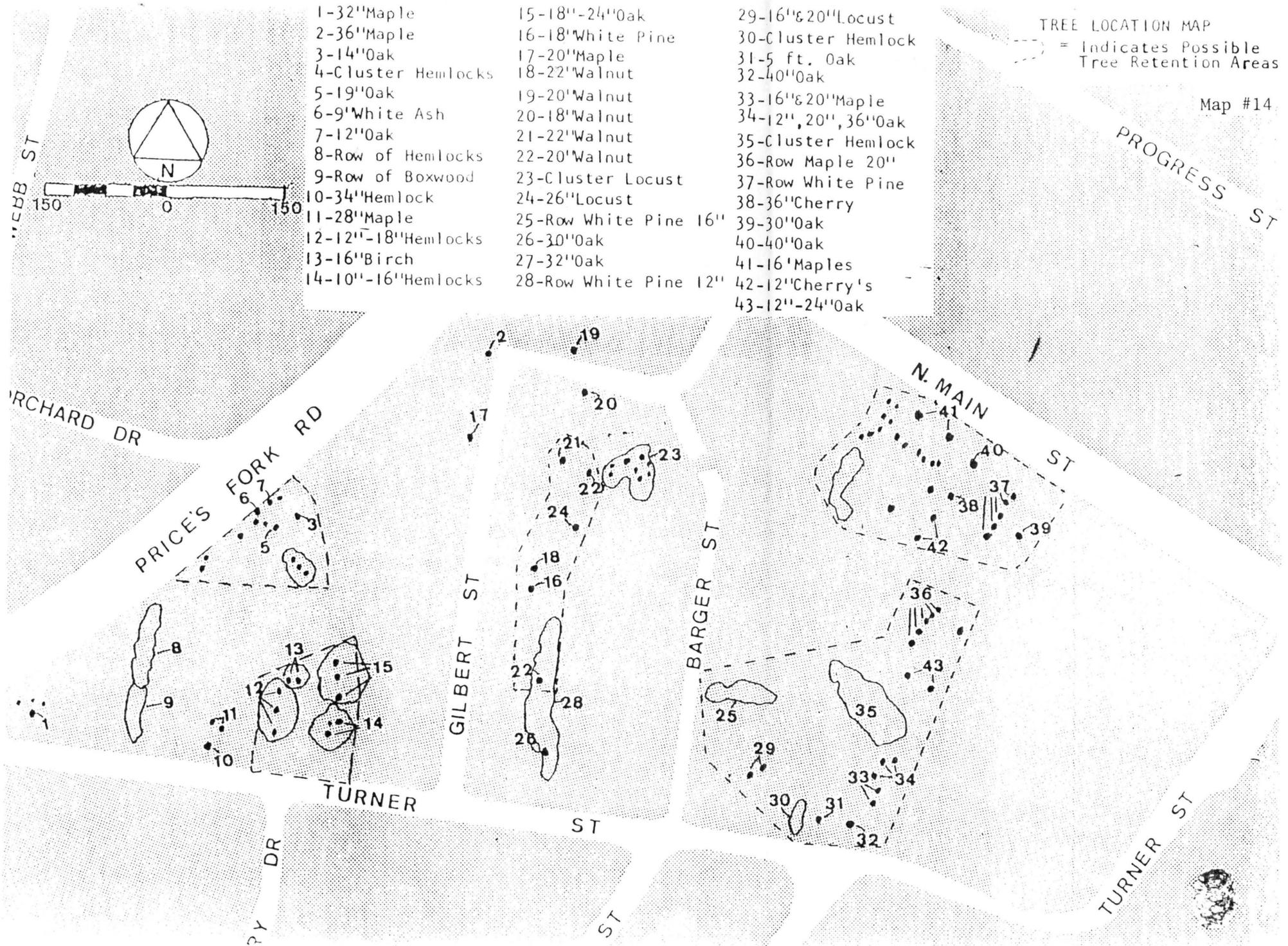


EXHIBIT B.5

TREE LOCATION MAP

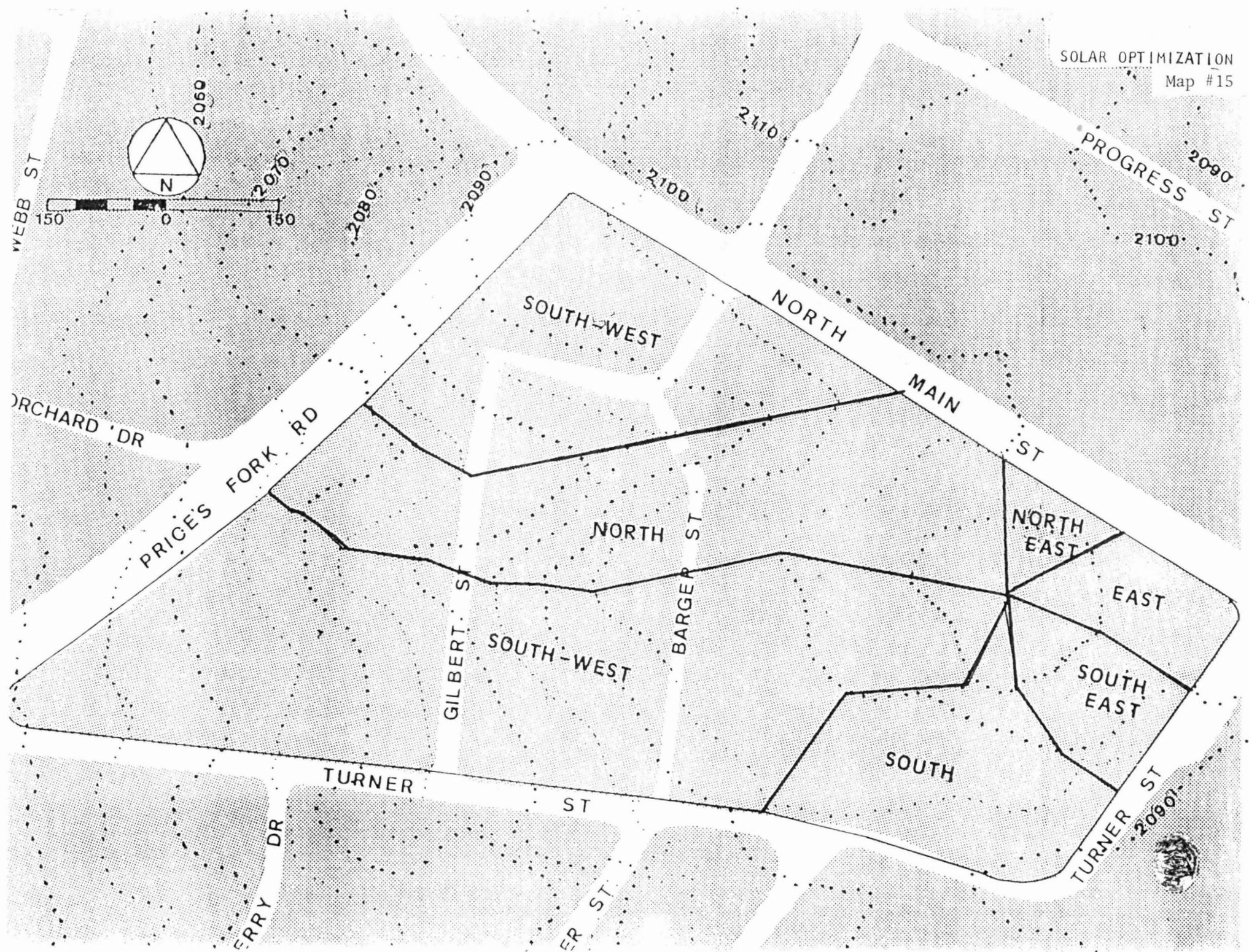


EXHIBIT B.6

SOLAR OPTIMIZATION

EXHIBIT B.7

MUNICIPAL SERVICES

H. Municipal Services

1. Water lines: Town water lines surround and run thru the site. Ample capacity is provided (see map # 16).
2. Sanitary sewer: The major line runs east to west along the bottom of the property. Some sections of these lines may need to be upgraded. (map # 17)
3. Storm Sewer: Large 24" sewer lines run south along Price's Fork Road but the town may encourage additional drainage measures on the property (map # 18).
4. Electrical lines: The site is well serviced due to its proximity to a major substation for Virginia Tech Electric located on the south side of Turner Street and next to Barger Street. A major utility easement runs north between Gilbert and Barger Streets on the property carrying nine voltage lines for service to the Main Street area. These lines are in a critical area for development consideration on the property, thus relocation or some other action must be seriously considered. (map # 19)
5. Gas lines: The property is presently well serviced by gas lines and should be considered for primary heating in a development proposal. (map # 20)
6. Cable T.V.: Cable T.V. is available for the site and a line runs along the utility easement. (map # 21)

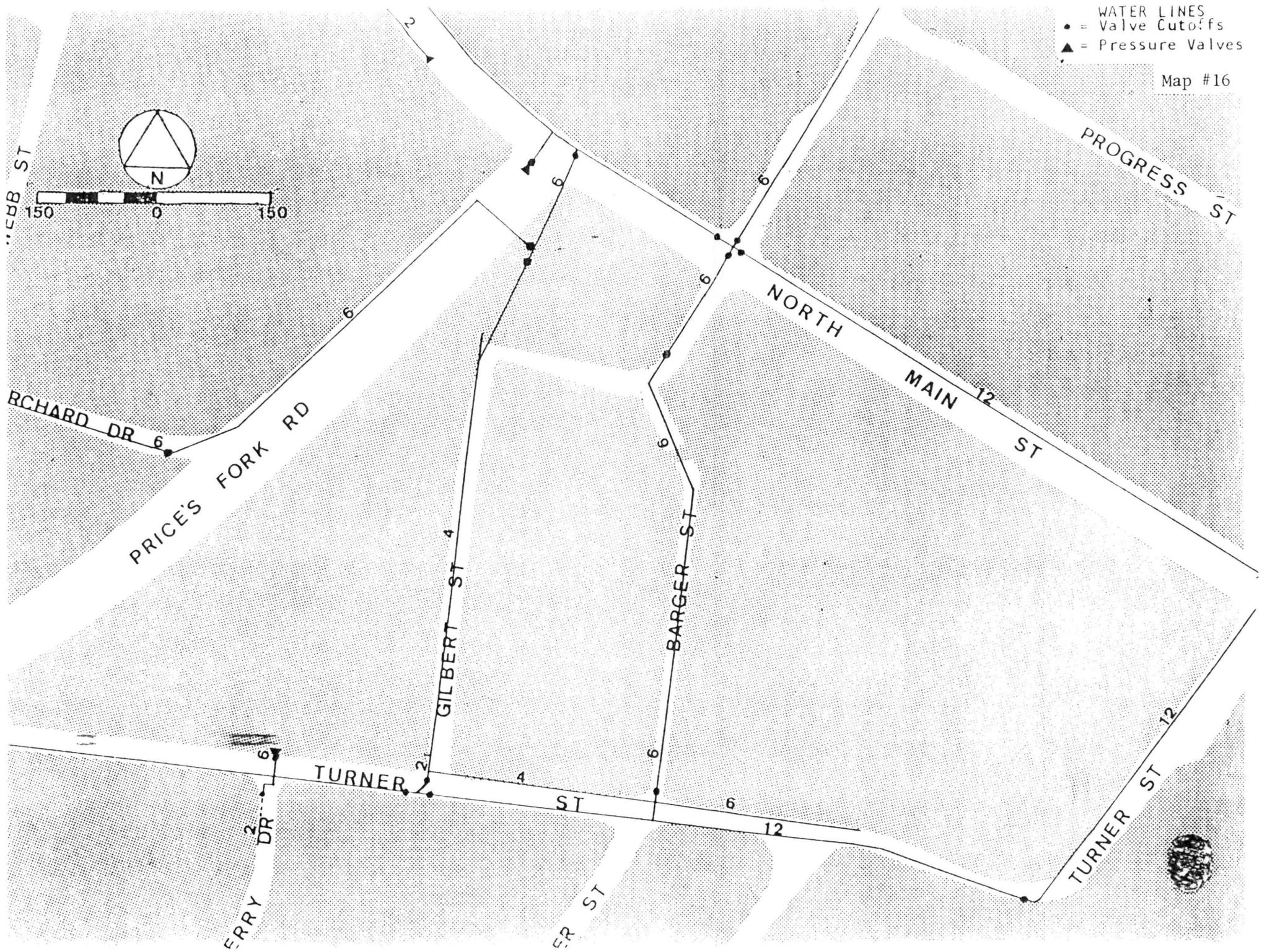


EXHIBIT B.8

WATER LINES

SANITARY SEWER
Map #17

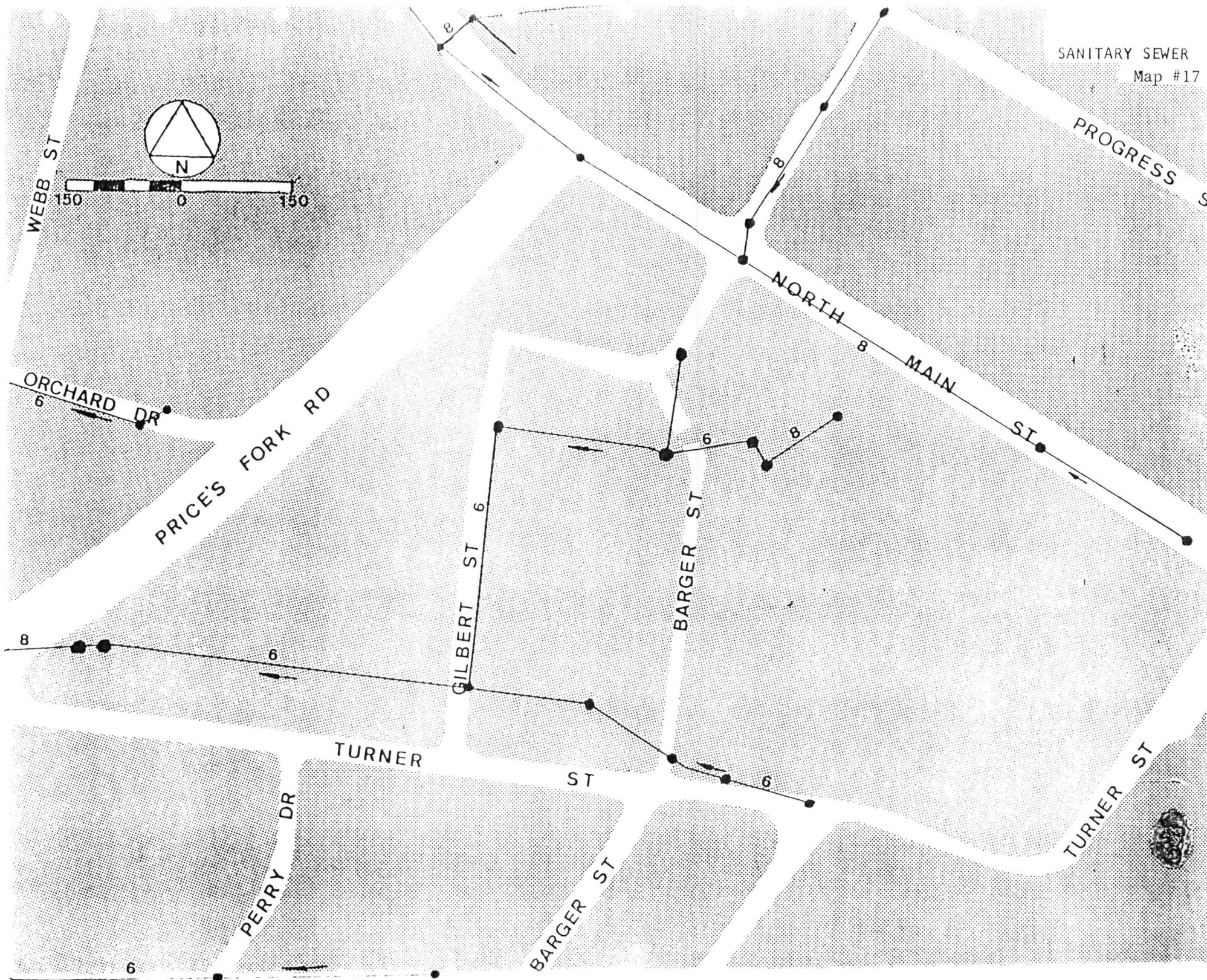


EXHIBIT B.9

SANITARY SEWER

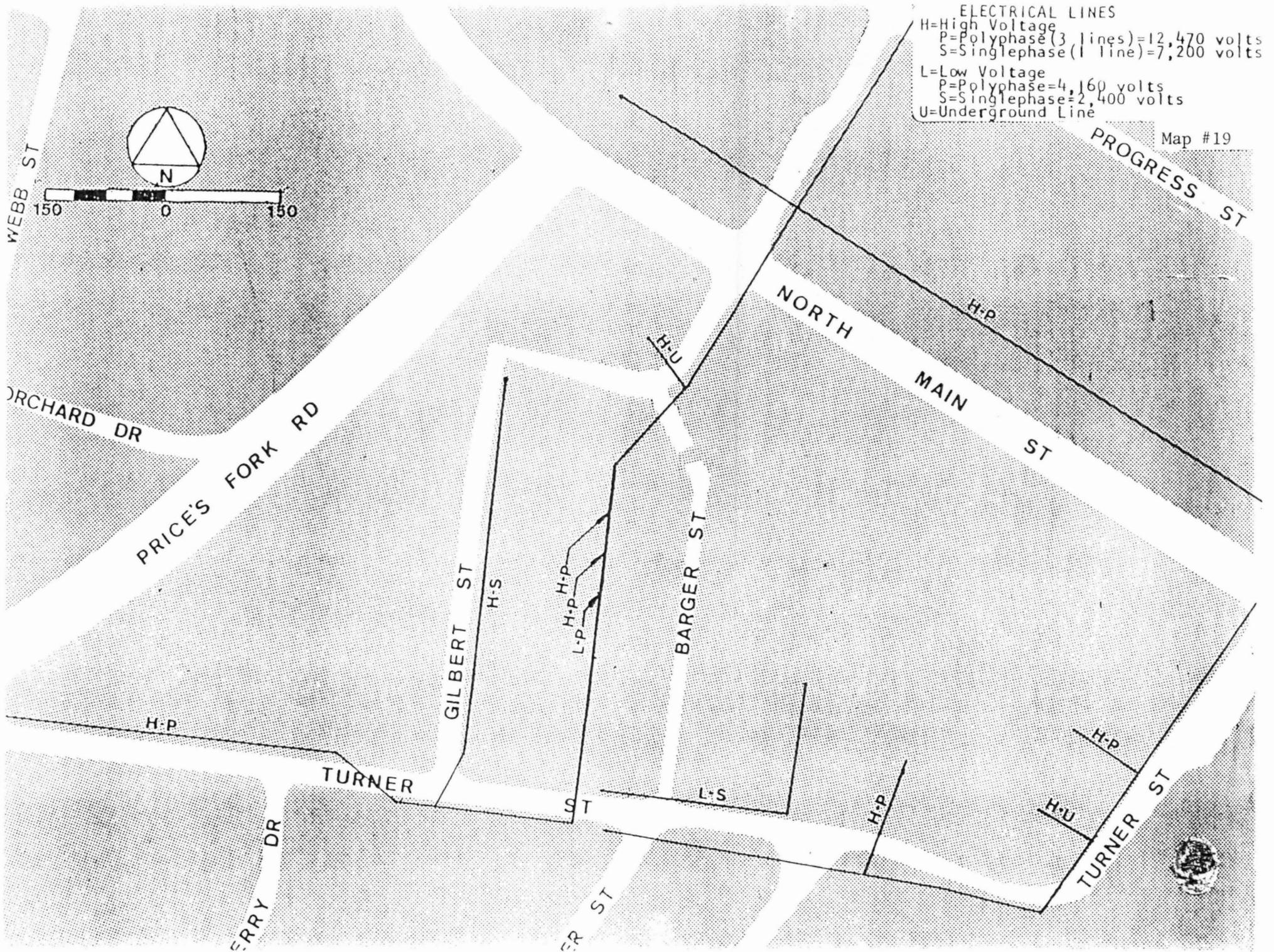


EXHIBIT B.11

ELECTRICAL LINES

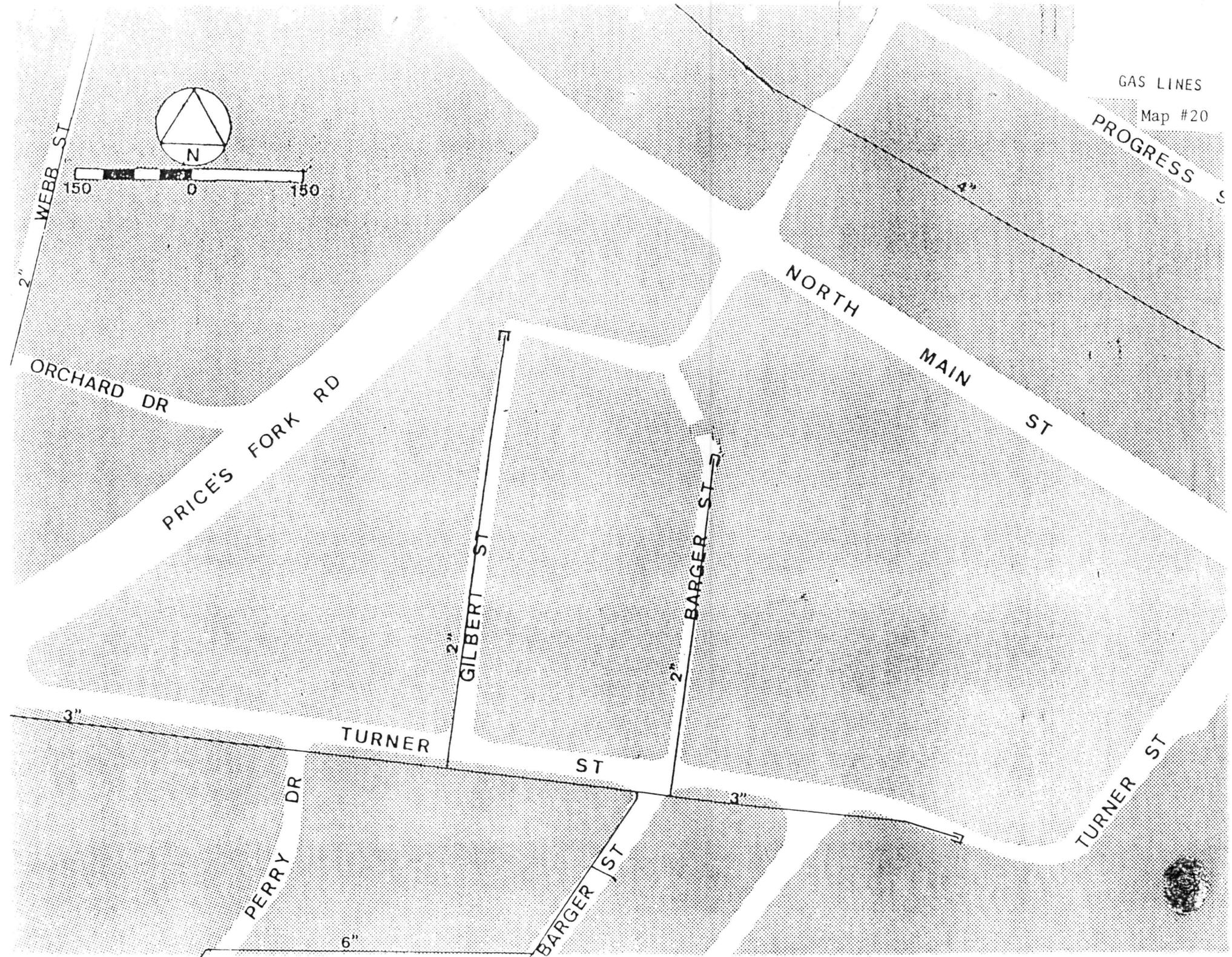


EXHIBIT B.12

GAS LINES

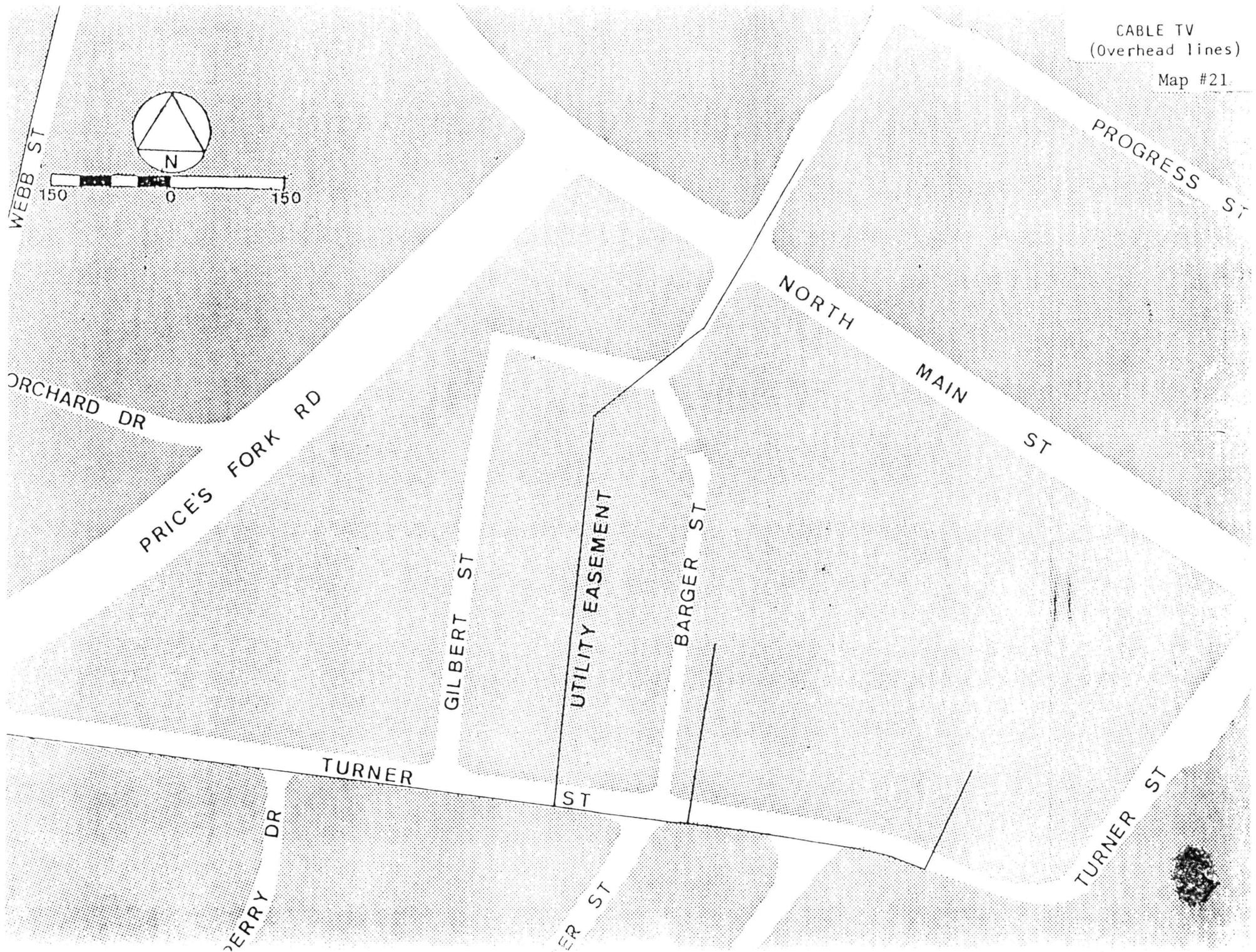


EXHIBIT B.13

CABLE T.V.

APPENDIX C

DATA PACKET

"TOWN AND SITE ANALYSIS"

EXHIBIT C.1

PERCEPTION SURVEY

A. Town Identity

* 1. In 1978 a series of surveys were conducted with 243 families and households in Blacksburg.¹⁰ This survey centered on questions concerning respondents general perception of Blacksburg and its housing. Since the sample was random and of adequate size, the survey findings are likely to present a reasonably comprehensive profile of the Blacksburg population and its attitude towards Blacksburg in general.

a. Housing: This question dealt with the availability of single family dwellings. Only 2.9% of the respondents appeared to be fully satisfied, more than 49% were dissatisfied;

-- Availability of single family housing in Blacksburg:

	<u>#</u>	<u>%</u>
Excellent	8	2.9
Very Good	47	16.8
Good	85	30.4
Fair	94	33.6
Poor	46	16.4

b. Apartments: 41.8% of the respondents were dissatisfied with the availability of apartments in Blacksburg;

-- Availability of apartments in Blacksburg:

Excellent	22	7.8
Very Good	77	27.3
Good	65	23.1
Fair	83	29.4
Poor	35	12.4

c. Housing quality: 73% of the respondents considered housing quality in Blacksburg to be good or better;

-- Quality of housing in Blacksburg:

Excellent	9	3.1
Very Good	59	20.4
Good	143	49.5
Fair	71	24.6
Poor	7	2.4

d. Attractiveness: Overall attractiveness of housing in Blacksburg rated as follows;

-- Overall attractiveness:

Excellent	14	4.8
Very Good	87	29.7
Good	126	43.0
Fair	58	19.8
Poor	8	2.7

EXHIBIT C.1 CONT'D

e. Neighborhoods: Neighborhoods were judged as being of rather poor quality. The respondents generally felt that the neighborhoods in Blacksburg were not adequately protected and preserved;

-- Neighborhoods in Blacksburg:

	<u>#</u>	<u>%</u>
Excellent	11	4.0
Very Good	30	10.8
Good	98	35.3
Fair	88	31.7
Poor	51	18.3

-- Over 80% of the respondents said that they felt good about being a resident in Blacksburg and 79% judged the visual quality of Blacksburg as being good or better.

* The above survey was conducted using a marketing approach and is subjective in its nature. It is included in this report only to give a general viewpoint from the general population and does not in any way provide a definitive analysis.

EXHIBIT C.2

LINKAGES

Linkages are time and distance relationships between a particular use, such as a residential development and supporting facilities, e.g. schools, shopping, employment, and recreation. These uses are interrelated and they must be provided through either public or private market action. Major linkages for the subject site include:

1. Schools:

<u>SCHOOL</u>	<u>CAPACITY</u>	<u>PRESENT ENROLLMENT</u>	<u>PUPILS PER ROOM</u>	<u>YEAR BUILT</u>	<u>DISTANCE FROM SITE</u>
Beeks Elementary	800	584	18.7	1963,73	1.74 % Mile
Linkous Elementary	675	579	21.7	1964,73	.50
Harding Ave. Elem.	525	386	24.4	1973	.53
Blacksburg Middle	1,015	930	NA	1953,71,81	.57
Blacksburg High	1,400	1,169	18.2	1974	1.25
Burrus Hall (VPI)					.38

2. Employment centers:

	<u>% Mile</u>
-- Federal Mogul	3.33
-- Wolverine	3.33
-- Poly-Scientific	1.17
-- Electro Tech	1.20
-- Radford Arsenal	10.30
-- Corning Glass	4.09
-- Burrus Hall (VPI)	.38

3. Shopping facilities: Major chain supermarkets are located in the two shopping centers and a local supermarket is .9 miles in distance:

	<u>% Mile</u>
-- Gables Shopping Center	1.52
-- University Mall	.64
-- Center of Town (College Ave. & Main St.)	.30

4. Recreation: Comparing Blacksburg and VPI recreational facilities to national averages, Blacksburg rates average overall in the following activity groups; childrens play areas, field-play areas-young adults, older children and adult activities (above average), tennis-outdoor basketball, swimming and golf. A new recreation center was recently constructed and is within one mile of the subject site: 11

	<u>% Mile</u>
-- Town Recreation Center	.70
-- Municipal Golf Course	1.67
-- VPI Golf Course	.72
-- Coliseum and Stadium	1.00
-- McBride Childrens Lot	.76
-- Owens Childrens Lot	.45

EXHIBIT C.2 CONT'D

5. Churches: Denominations of various faths are represented in Blacksburg:

-- Episcapal	.10
-- Baptist	.40
-- Methodist	.50
-- Jewish Center	.50
-- Church of God	.50
-- Catholic	.25

6. Public services: The fire and police departments have recently had major capital improvements in their facilities and equipment. The fire department has eight vehicles with a support crew of thirty five and the police operate seventeen vehicles with forty-four officers, detectives, and dispatchers. The number of police and fire calls to the subject property area is average-being neither higher nor substantially lower than the rest of the town. Thus insurance rates are at a comparable level with other areas within the town. Both departments are closeby, the fire department is approximately 1/3 mile and police headquarters are a little over half a mile. In a recent survey of 270 homeowners, over 80% stated police service as being good to excellent and over 90% rated fire and rescue as being good to excellent:

	<u>% Mile</u>
-- Fire Department	.34
-- Police Department	.64
-- Town Municipal Building	.57
-- Library	.61
-- Airport	4.02

EXHIBIT C.2 CONT'D

C. History

No historical structures of any significance are located on the subject site as interpreted by the Town of Blacksburg and the Virginia Historic Landmarks Commission. There are several structures that were built in the late 1800's that are still standing.

D. Access to Subject Property

Two secondary roads intersect the site; Gilbert Street entering from North Main Street and on Turner Street, and Barger Street entering from Turner Street only. Barger Street is a dead end and is not maintained by the town. The only other paved drive into the site is the parking access road for a office building leased by VPI which connects to North Main Street.

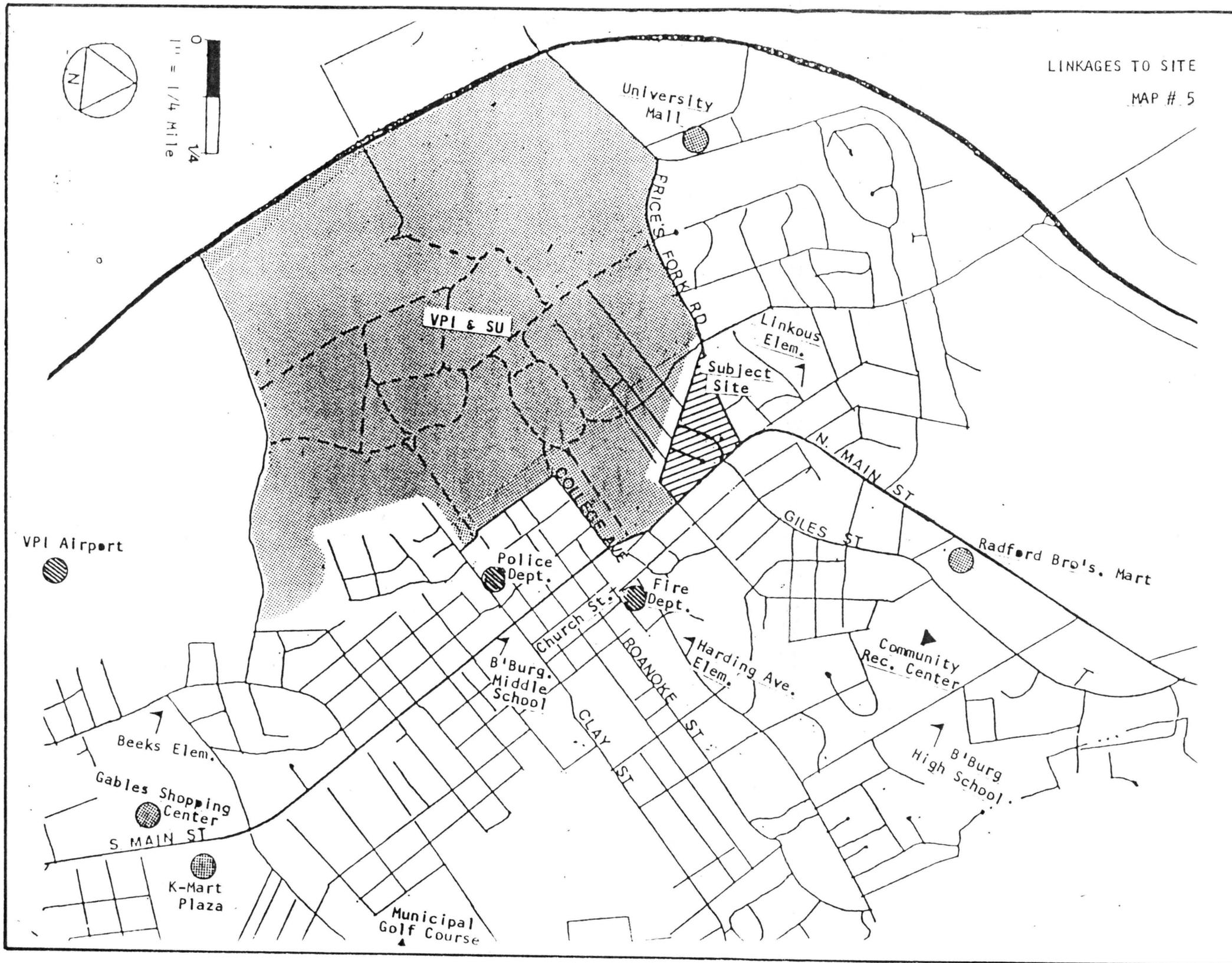


EXHIBIT C.3

LINKAGES TO SITE

APPENDIX D

DATA PACKET

"URBAN ENVIRONMENT INVENTORY ANALYSIS"

EXHIBIT D.1

TOWN INTRODUCTION

A. Town

1. Blacksburg is located 38 miles southwest of Roanoke City, founded in 1798 and incorporated in 1871. Blacksburg has developed from a small farm community to a collegiate-industrial town. The university, VPI&SU, is a state land grant college established in 1872 and is closely intergrated with the town.
2. Annexation: There has been three annexations in Blacksburg's history. The most recent was awarded on January 1, 1973 which brought the town from 2,139 acres to a total of 11,900 acres (or 18.7 sq. miles). This new annexation makes Blacksburg the largest town in Virginia.
3. Local governments position on development: managed growth.
 - a. In the past the town has not had a comprehensive plan concerning growth other than basic zoning regulations. In 1978 Blacksburg adopted its comprehensive plan providing general guidelines for anticipated growth of the town over the next 20 years; it also contains a number of specific policies that are to be used in day to day decisions that the town government makes.
 - b. The basic tenets of this plan include: ¹
 - Encourage the preservation of the rural character of out-lying areas of town, through the protection of forested lands and productive agricultural lands; also provide adequate open space for parks and recreation;
 - Encourage higher density and cluster forms of development in the interest of energy conservation and in the interests of saving street and utility costs which can be passed on as lower housing costs to the buyer and lower maintenance costs to the town;
 - Encourage infilling of vacant land in the center of town since it is extremely wasteful not to use existing public facilities and since scattered development wastes energy due to travel needs and also spoils the countryside;
 - Encourage sound, orderly and equitable decisions toward the development of land through the adoption and implementation of this plan and its growth management objectives.

Goals for Blacksburg:

ENVIRONMENT-- To preserve an ecologically balanced environment in which citizens can have a high quality of life.

OPEN SPACE, RECREATION AND CULTURE-- To establish and maintain a system of open space, recreation, and cultural opportunities for the benefit and enrichment of all citizens.

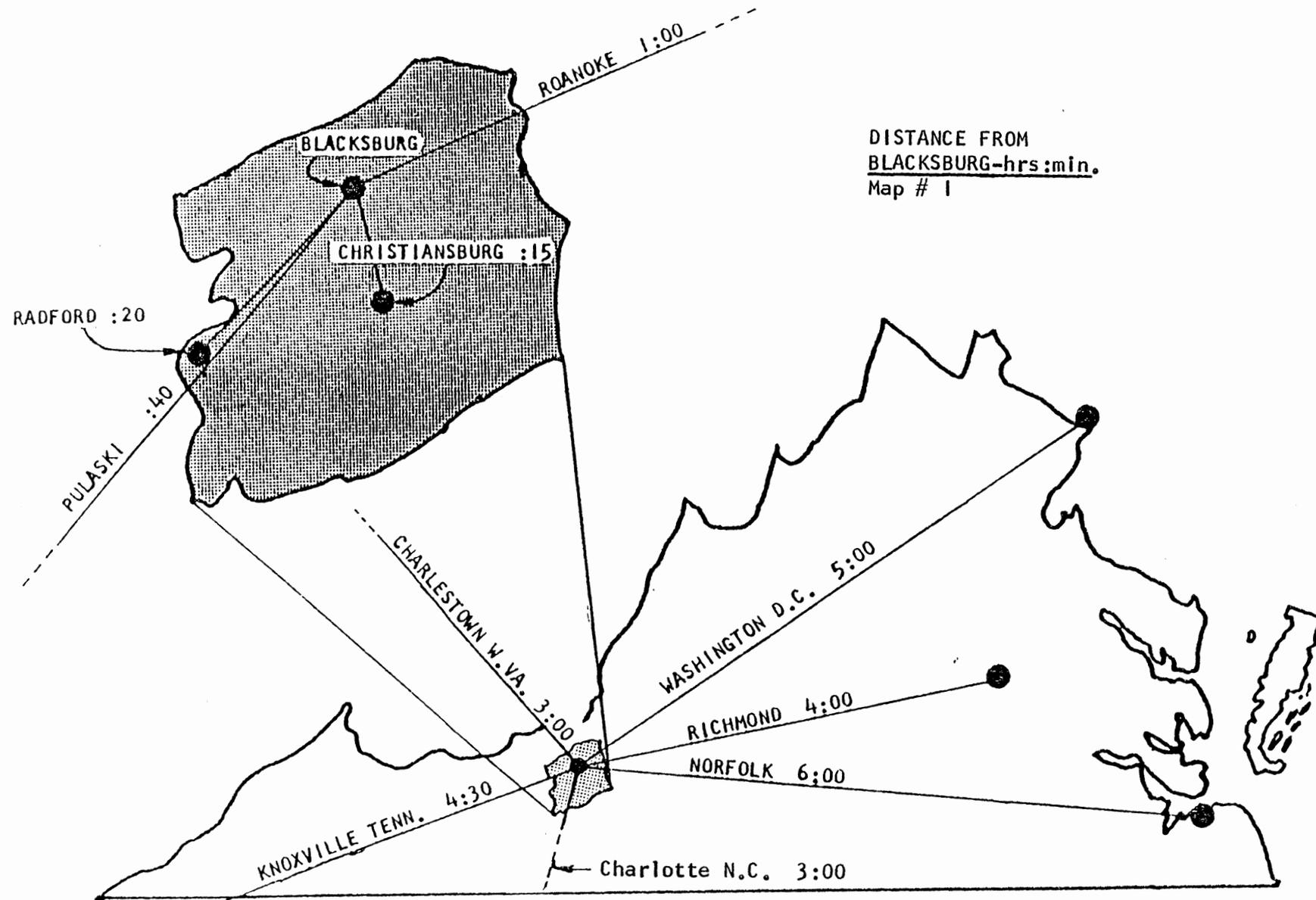


EXHIBIT D.2

TOWN OF BLACKSBURG

MAP # 2

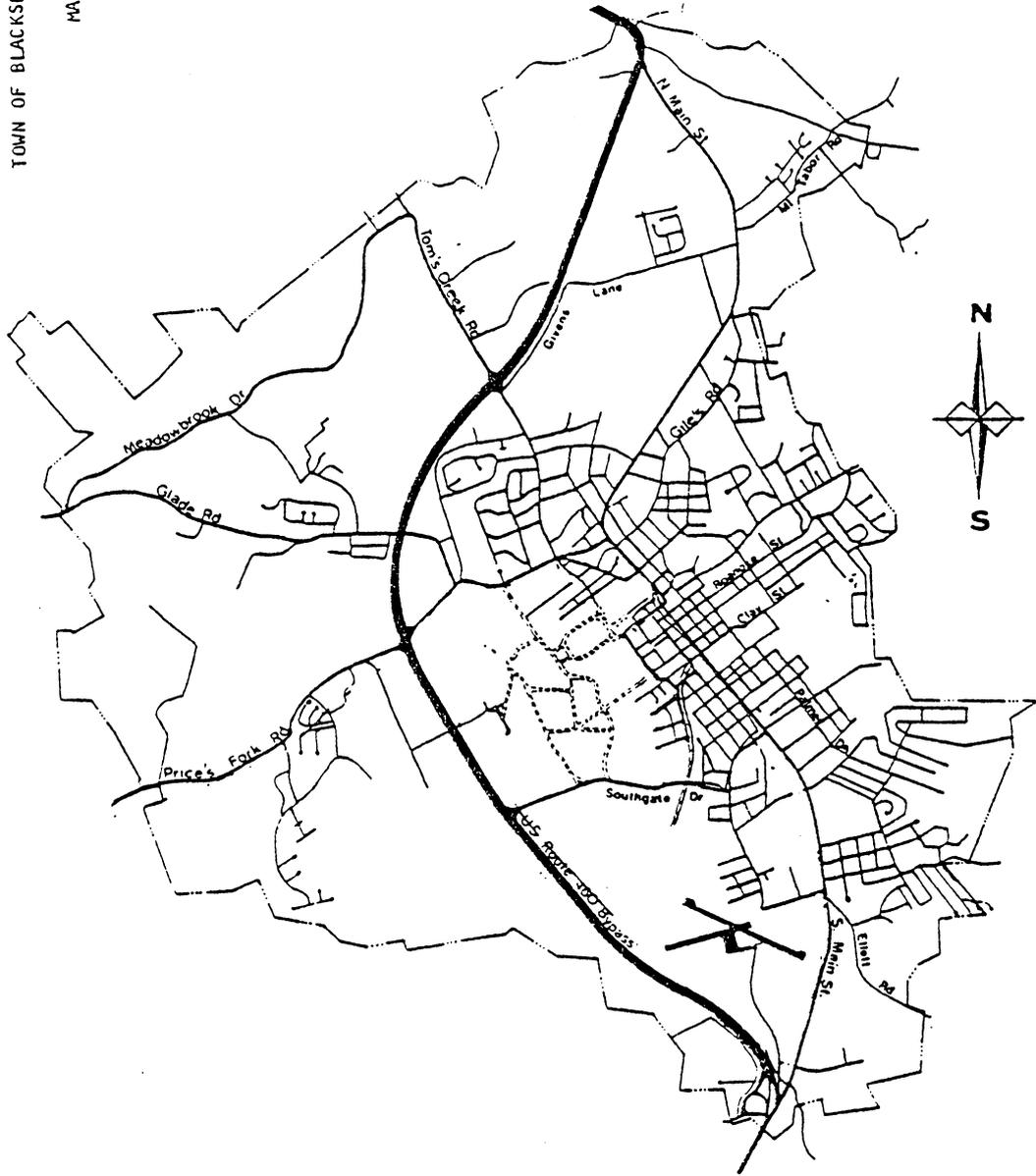


EXHIBIT D.3

TOWN OF BLACKSBURG

EXHIBIT D.4

DEMOGRAPHIC DATA ¹B. Population

1. Since 1960 the town's population has grown from 12,544 to a 1980 total population of 30,638 (including VPI students). ²

2. The largest age group is in the 20-24 range representing 38% of the population. The age group most typically buying housing units, 25-44, is 11% of the population (see page for breakdown of population by age and sex).

3. Population growth predictions: A moderate growth rate appears to be the most realistic forecast, representing an upturn in local and regional development trends, and a 9 percent increase in student enrollment at VPI in the next 20 years. University recruitment will place a greater emphasis on research and graduate education, thereby increasing the demand for faculty and staff. The figures in table 1 also represent an increase in construction employment and a moderate increase in industrial employment. With these facts considered, the total population of the town would be expected to increase 16%.

Table 1

<u>Component of Population</u>	<u>Present Conditions (1980)</u>	<u>Moderate Growth</u>
VPI ENROLLMENT	21,069	23,000
VPI EMPLOYMENT		
Student:faculty ratio	11.0:1	10.5:1
Total faculty employed	1,915	2,200
Total staff employed	2,639	2,900
CONSTRUCTION EMPLOYMENT		
Regional growth rate	1.4%	2.0%
Total employed	180	260
AGRICULTURAL EMPLOYMENT		
Total employed	10	6
INDUSTRIAL EMPLOYMENT		
Regional growth rate	1.4%	2.0%
Total employed	1,309	2,000
RESIDENTS WHO WORK OUT OF TOWN		
Annual growth rate		3.0%
Total employed	994	2,000
UNEMPLOYED		
Percent of resident labor force	4.0%	4.0%
Residents unemployed	210	270
SERVICE TRADES AND PROFESSIONS		
Total employed	3,254	3,900

EXHIBIT D.4 CONT'D

<u>Component of Population</u>	<u>Present Conditions (1980)</u>	<u>Moderate Growth</u>
SPOUSES NOT IN LABOR FORCE	1,961	2,400
CHILDREN (ages 0-18)	3,823	5,600
RETIREED		
Percent of population	3.3%	5.0%
Number retired	1,000	1,800
NOT SEEKING WORK		
Percent of non-student population not seeking work	2.0%	2.0%
Number not seeking work	250	360
TOTAL NUMBER OF PERSONS EMPLOYED IN BLACKSBURG	10,000	13,000
NUMBER OF EMPLOYED BLACKSBURG RESIDENTS	5,300	6,700
RESULTING TOTAL BLACKSBURG POPULATION	30,738	36,000

C. Employment

1. The economic base is realitively stable and strongly orientated to the university and support services.

a. VPI accounts for 44% of Blacksburg's total jobs. Industry represents 13% and service type jobs is 32%.

b. Some of the staff positions and support services are directly student dependent and thus fluctuate with the school session (9 months school vs. summer).

c. The greater majority of jobs in Blacksburg are realitively immune to the macro economics of the rest of the nation (unemployment in Blacksburg is 2% vs. approximately 8.5% in the nation).

TABLE 2¹

Blacksburg Labor Force - 1980

	<u>Total Positions</u>	<u>No. Residing in Blacksburg</u>
VPI FACULTY	1,915	1,515
VPI STAFF	2,639	705
CONSTRUCTION	180	50
AGRICULTURE	10	5
INDUSTRY	1,309	288
WORK OUT OF TOWN		994
SERVICES	3,254	1,698
UNEMPLOYED		210
TOTAL	<u>9,759</u>	<u>5,465</u>

EXHIBIT D.4 CONT'D

D. General Demographics 2

1. Age and sex breakdown:

<u>AGE</u>	<u>TOTAL MALE & FEMALE</u>	<u>FEMALE ONLY</u>	<u>% OF TOTAL</u>
Under 5	976	440	3.2
5-9	940	432	3.1
10-14	1006	468	3.3
15-19	6607	2896	21.6
20-24	11744	4653	38.3
25-29	2608	1045	8.5
30-34	1446	694	4.7
35-44	1813	898	5.9
45-54	1268	629	4.1
55-59	527	276	1.7
60-64	461	250	1.5
65-74	720	411	2.4
75 & Over	<u>522</u>	<u>353</u>	<u>1.7</u>
Total	30,638	13,445	100.0%

2. Housing units occupied by race:

<u>RACE</u>	<u>OWNER OCCUPIED</u>	<u>RENTER OCCUPIED</u>
White	2,965	5,646
Black	51	144
American Indian	2	11
Asian & Pacific	38	156
Other	6	69

3. Housing units occupied by number of people:

<u># OF PEOPLE</u>	<u>OWNER OCCUPIED</u>	<u>RENTER OCCUPIED</u>
1 Person	518	1,466
2 People	983	2,493
3 People	605	1,443
4 People	613	472
5 People	237	108
6 or more	106	44

Average # is 2.43

4. Number of housing units with more than one person per room:

- Owner occupied = 187
- Renter occupied = 468

EXHIBIT D.5

LAND USE

E. Land Use

1. There are approximately 1,260 acres of vacant land in Blacksburg that are readily developable because they are:

- Not in flood plains
- Not excessively steep
- Not owned by VPI or by any other public agency
- Are presently served by sewers, or can be served realitively easily.

In addition, there are approximately 530 acres of vacant land in Blacksburg that have the same general conditions as above but require sewer extensions in excess of 500 feet.

2. If moderate growth continues in Blacksburg for the next 20 years then an additional 775 acres of land will be needed for urban purposes. It was also found that if the growth were to follow a more compact pattern, then only 642 acres will be required.

BLACKSBURG LAND USE - 1976 AND PROJECTED TO 2000¹
(Based on Moderate Growth Rate Scenario)

Land Use	1976 Area (acres)	1976-2000 Growth (acres)	Total In Year 2000 (acres)
RESIDENTIAL			
Single family	1,258	410	1,668
Multifamily	339	25	364
Subtotal	<u>1,597</u>	<u>435</u>	<u>2,032</u>
COMMERCIAL	180	33	213
INDUSTRIAL	140	75	215
PUBLIC and SEMI-PUBLIC	246	40	286
VPI CENTRAL CAMPUS	950	0	950
Subtotal	<u>1,516</u>	<u>148</u>	<u>1,664</u>
ROADS	<u>782</u>	<u>192</u>	<u>974</u>
Subtotal (all above)	3,895	775	4,670
Other			
VPI LANDS	1,547	0	1,547
AGRIC and VACANT	<u>6,458</u>	<u>-775</u>	<u>5,683</u>
Subtotal	8,005	-775	7,230
TOTAL	<u><u>11,900</u></u>	<u><u>0</u></u>	<u><u>11,900</u></u>

EXHIBIT D.6

F. Municipal Services

1. Transportation:

a. Ground transportation is primarily geared to the private automobile. The route 460 by-pass provides major access to areas outside of the business district with route 460 business (Main St.) and Price's Fork Rd. and Harding Ave. providing the major arterials for north/south and east/west business access. Bicycle paths and sidewalks are used extensively by students commuting to and from the university.

b. Bus and taxi service: A small private taxi service operates within the town and a private shuttle/limousine service operates between the 2 major motels and Roanoke Municipal Airport. Presently, the only regular bus service is provided by a large apartment complex (Foxridge) on the west side of town for their residents which consists mostly of students and faculty, thus the bus delivers only to campus. A proposed town bus system is pending approval/disapproval by the town council at this time. The system would include six routes serving most major apartment complexes (the subject site is at the crossroads of two of these routes) and would be user-financed, using no local taxes or federal funds.

2. Utilities:

a. Gas and Electric: Tennessee Virginia Energy Corporation provides gas service to selected sections of the town with no limitations for future commercial use. Virginia Tech Electric provides the majority of Blacksburg's electric service.

b. Water and Sewer: The town provides both of these services and is presently reviewing its policies to limit additional capital improvements to rural areas of town.

c. Cable TV: Cable TV is available in many areas of town and is privately owned, Blacksburg Cable TV Inc.

3. Tax rate: The property tax rate in Blacksburg has two components including both a town and county rate. Presently the Montgomery County rate is .84¢ per \$100 of total assessed value and the town rate is .31¢ per \$100 assessed value for a total rate in Blacksburg of \$1.15. (Refer to Table 4 for historical data on mill rates and tax levies for Blacksburg, and Table 5 for revenue sources and expenditures for Blacksburg).³

EXHIBIT D.7

MILL RATES
&
FINANCIAL STATEMENT OF BLACKSBURG

TABLE 4

PROPERTY TAX RATES AND TAX LEVIES ³

Fiscal Year	Tax Rate Per \$100 Assessed Valuation			Tax Levy		
	Town	County	Total	Town	County	Total
1982	.3097	.84	1.15	NA	NA	NA
1981	.3097	.75	1.0597	\$ 966,609	\$ 2,340,838	\$ 3,307,447
1980	.3129	.56	.8729	937,197	1,662,254	2,599,451
1979	2.6500	6.90	9.5500	853,216	2,221,581	3,074,797
1978	2.6500	6.90	9.5500	827,128	2,153,654	2,980,782
1977	2.6500	6.90	9.5500	794,265	2,068,085	2,862,350
1976	2.6500	6.90	9.5500	759,703	1,978,095	2,737,798
1975	2.6500	6.90	9.5500	692,350	1,802,724	2,495,074
1974	2.6500	6.90	9.5500	634,234	1,651,402	2,285,636
1973	3.0000	7.15	10.1500	304,535	725,808	1,030,343

- 1973 taxed at approximately 15% of assessed value
 -- 1974 thru 1979 taxed at 20% of assessed value
 -- 1980 to present taxed at 100% of assessed value

TABLE 5

1980-81 FINANCIAL STATEMENT OF BLACKSBURG ³

Revenue Sources	Amount	Percentage Of Total	Expenditures	Amount	Percentage Of Total
Property Taxes	\$ 972,975	23.4	Legislative	\$ 56,701	1.4
Other Local Taxes	885,111	21.3	Executive	75,701	1.9
Licenses & Permits	522,960	12.6	Legal	50,796	1.3
Revenue From Agencies	736,774	17.7	Finance	233,016	6.0
Current Services	355,792	8.6	Police	769,989	19.7
Fines & Forfeits	73,604	1.8	Fire	105,947	2.7
Use Of Money Revenue	96,312	2.3	Planning	65,521	1.7
Other Revenue	21,087	.5	Parks & Rec.	133,453	3.4
Interfund Transfers	489,516	11.8	Public Works	1,126,232	28.9
Total	\$4,154,131	100.0%	Capital Outlay	407,777	10.5
			Employee Benefits	298,693	7.6
			Insurance	34,445	.9
			Other	30,057	.8
			Interfund		
			Transfers	516,100	13.2
			Total	\$3,903,977	100.0%

Revenues from property taxes represent 23.4% of total revenues -- \$972,975 of \$4,154,131

EXHIBIT D.8

OVERALL ENVIRONMENT

G. Overall Environment

1. The Blacksburg area has several ideal characteristics for development:

a. A substantial amount of vacant "fill in " land located close in to the central part of town with a strong public infrastructure already existing (water, sewer, etc.). And a new emphasis by the town planning department to promote development in areas in close proximity to town to support energy conservation and limit capital improvement costs. The subject site fits very well in this policy.

b. Realitively stable local economic environment.

c. An increase in the number of graduate students and support faculty at VPI and an expected increase in light manufacturing/industry in town. Thus resulting in a population increase in the age group most likely to purchase a housing unit.

APPENDIX E

DATA PACKET

"HOUSING AND COMMERCIAL MARKET ANALYSIS"

EXHIBIT E.1

A. Existing Housing Profile

1&2

TABLE 6

HOUSING IN BLACKSBURG (1950 - 1980)

	<u>1950</u>	<u>1960</u>	<u>1970</u>	<u>1977*</u>	<u>1980*</u>
TOTAL UNITS	971	2,292	3,330	7,652	9,777
OWNER OCC.	466	1,348	1,577	2,388	3,751
RENTER OCC.	595	944	1,753	5,264	6,026
O. OCC./R. OCC.	47/53	59/41	47/53	30/70	38/62
MEDIAN VALUE	\$9,780	\$15,100	\$25,000	\$40,000	\$62,400
MEDIAN RENT	\$50.49	\$66.00	\$97.00	\$180.00	\$220.00
VACANT	27	197	NR	163	684

* = Includes students living in VPI & SU dormitories

GRAPH 1 4

NUMBER OF INDIVIDUAL UNITS BUILT PER YEAR - BASED UPON BUILDING PERMITS

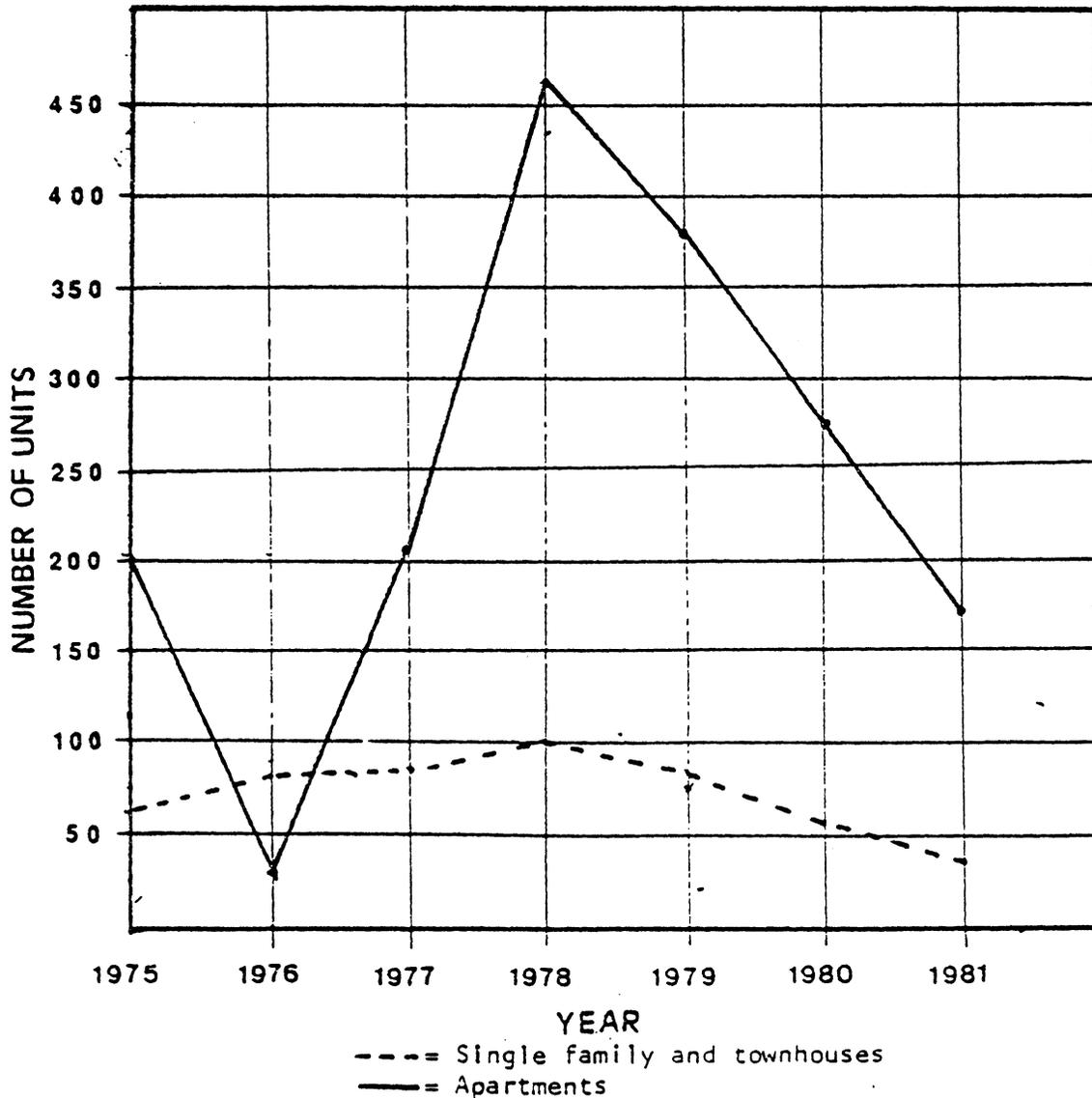


EXHIBIT E.1 CONT'D

A. Existing Housing Profile Cont'd - Household Information 2

1. Number of persons in occupied housing:
 - Total (town) = 22,101
 - Renter occupied (town) = 13,486
 - VPI (on campus) = 8,501
2. Number of households with only one person:
 - Male = 1,063
 - Female = 921
3. Number of households with two or more persons:
 - Married couple family = 3,491
 - Single spouse family:
 - male householder, no wife present = 176
 - female householder, no husband present = 465
 - Non-family household:
 - male householder = 1,871
 - female householder = 1,101
4. Households with one or more persons under 18 years:
 - Married couple family = 1,658
 - Single spouse family:
 - male householder, no wife present = 56
 - female householder, no husband present = 308
5. Households with one or more non-relatives present = 3,145

EXHIBIT E.2

8. Townhouses

1. Construction activity: Recent activity in townhouse construction has been realitively slow. A development is presently being constructed on the northwest side of town on Progress Street. This project consists of sixty, 3 bedroom townhouses with 1357 square feet and includes amenities such as washer and dryers and trash compacters. The development is split between units for sale and units for rent with thirty units selling at \$66,950 and thirty for \$500 per month. A large development is planned on the eastern side of town in the county with the first phase tentatively planned for 275 townhouse units. This proposal is presently being debated between the Blacksburg planning commission and the developers concerning the extension of public services and the widening of Clay Street.

2. Townhouse ownership can be divided between units which are owner occupied and units which are purchased for rental occupancy:

a. Owner occupied: Owner occupied townhouses comprise the larger percentage of the two forms of townhouse occupancy. The present sales price for a 1600 square foot 3 bedroom townhouse without basement is approximately \$58,000, or \$36.25 per square foot.⁵ Studying sales prices since 1976, the average unit indicates an appreciation rate of 69.75% over five years or an average annual increase of \$4,405 (refer to graph #'s 2-5)*.

b. Renter occupied: The present sales price for a 1600 square foot 3 bedroom without basement rental townhouse is approximately \$60,800 or \$37.50 per square foot.⁵ Five years of sales prices beginning in 1976 yields an appreciation rate of 111.02% and an average increase of \$5,792 (refer to graph #'s 2-5)*.

c. Comparison of owner occupied vs. renter occupied: Comparing the sales of the ~~two~~ types of townhouse occupancy indicates that the value of townhouse rental properties is appreciating at a much faster rate than owner occupied property (69.75% vs. 111.02% over 5 years). Although rental properties had lower sales prices at the beginning of the study period (1976) their rapid appreciation rate has resulted in present sale prices being higher than owner occupied units. This higher value is most likely due to the increasing demand for rental space in Blacksburg (vacancy rates being a low 2%) which pushes up the rental rates that the market is willing to pay and thus leading to inflated sales prices for rental units. This information would indicate a strong demand for a development project featuring townh use units for rental purposes.

EXHIBIT E.2 CONT'D

*(The study population involves townhouse sales located in two major townhouse projects on the west end of Blacksburg - Haymarket Square and Oak Manor. Most sales information was obtained from local real estate companies' comparable sales books beginning in 1975. This information was chosen due to it being the most reliable and available⁵).

3. Average annual expenses: See table 7 for the average annual expenses for a planned unit development including townhouses in the \$35,000 to \$75,000 price range⁶.

EXHIBIT E.3

TOWNHOUSE SALES GRAPH

GRAPH # 2

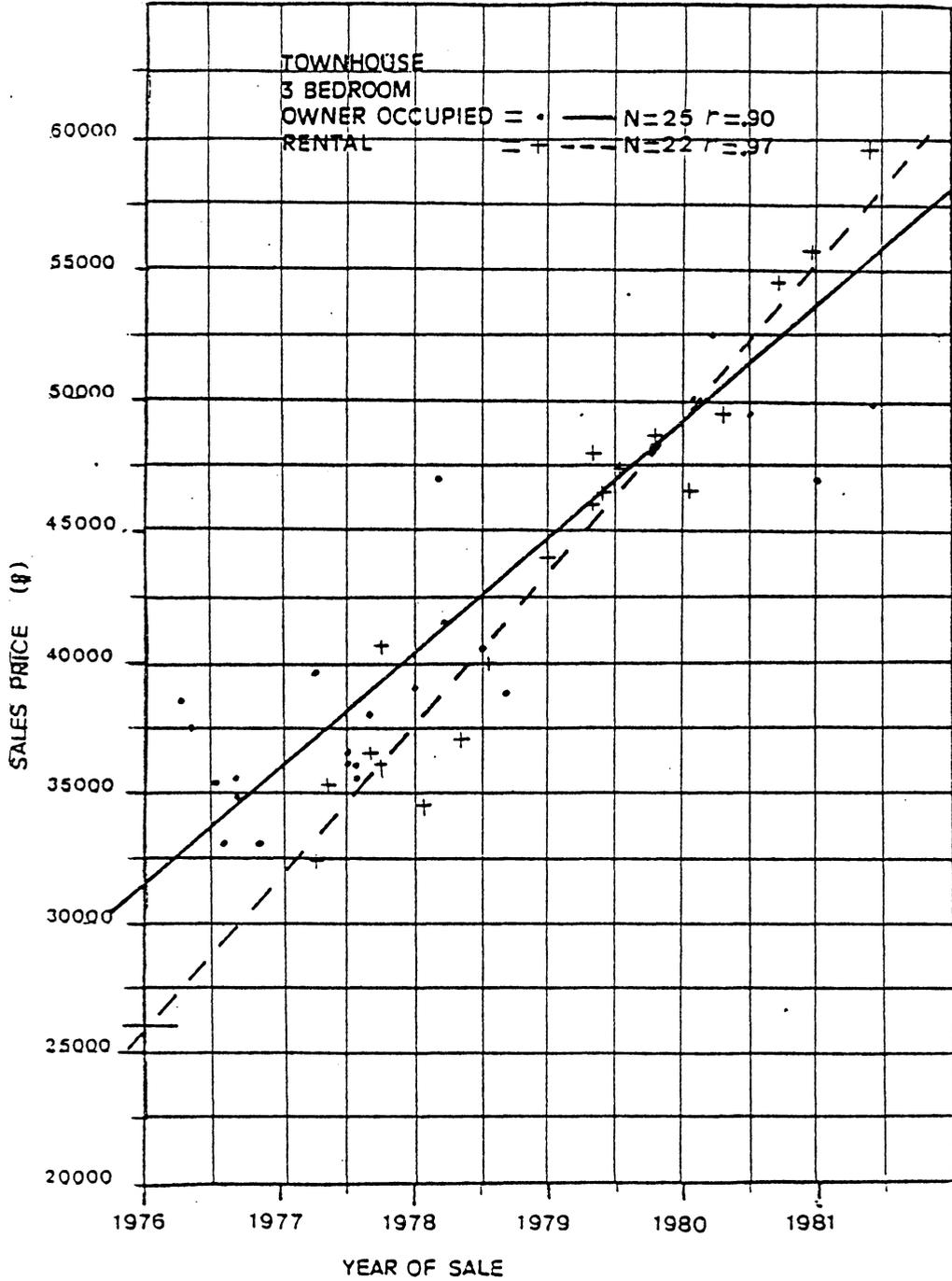


EXHIBIT E.3 CONT'D
TOWNHOUSE SALE GRAPH

GRAPH # 3

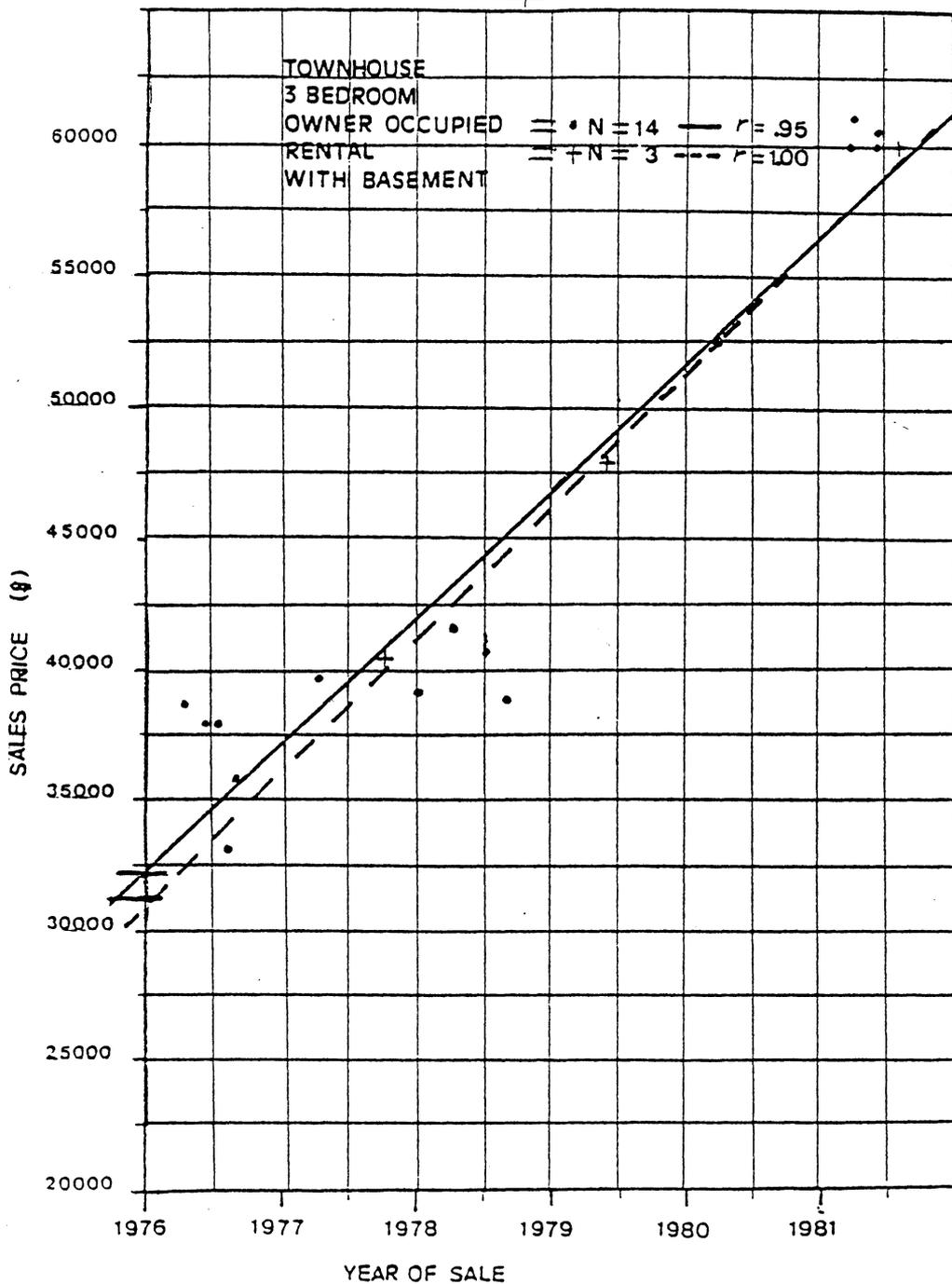


EXHIBIT E.3 CONT'D
TOWNHOUSE SALES GRAPH

GRAPH # 4

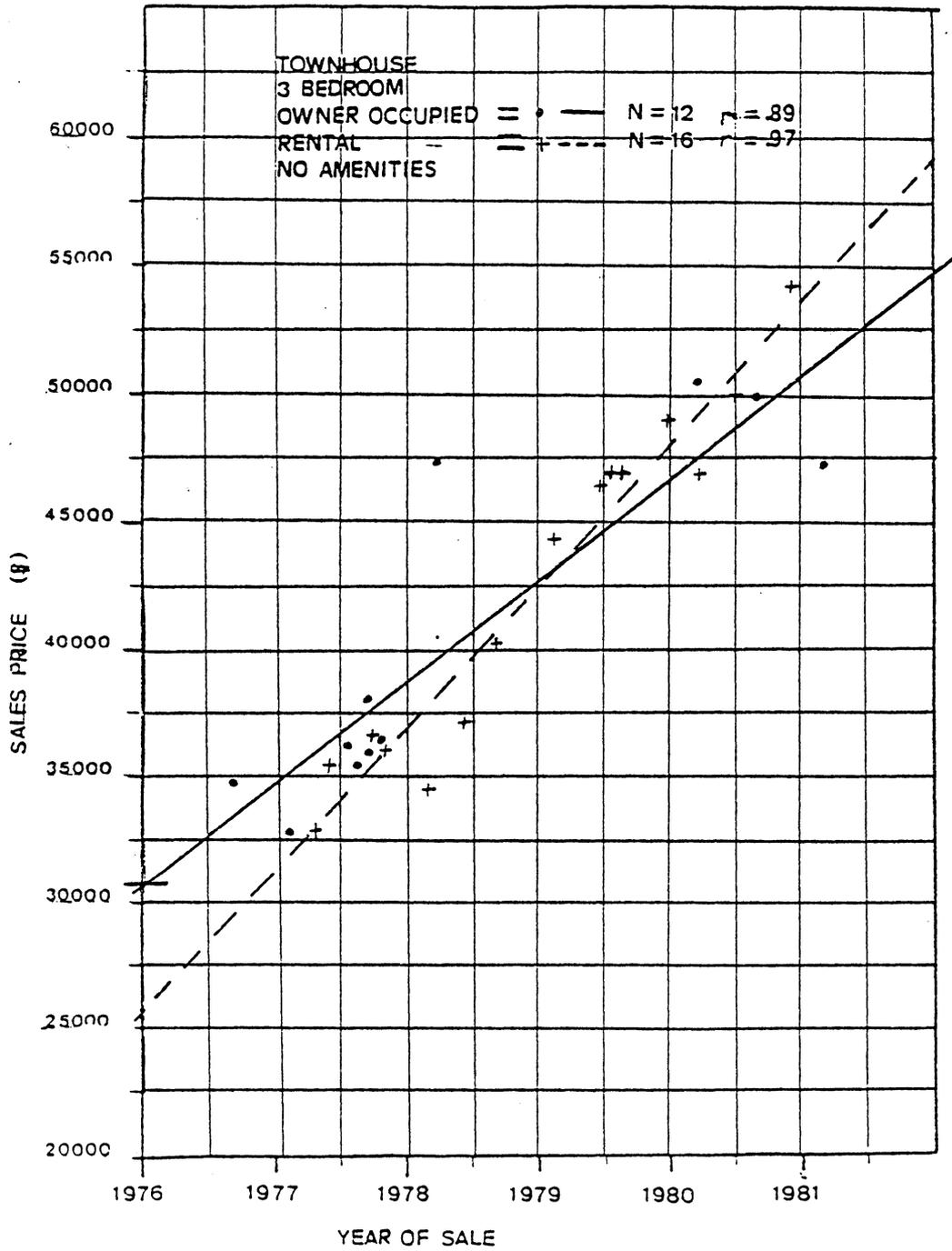


EXHIBIT E.3 CONT'D

TOWNHOUSE SALES GRAPH

GRAPH # 5

TOWNHOSE
 3 BEDROOM
 OWNER OCCUPIED = • — N=23 r=.86
 RENTAL = + --- N= 8 r=.92
 SALES PER SQ. FT. VS. TIME

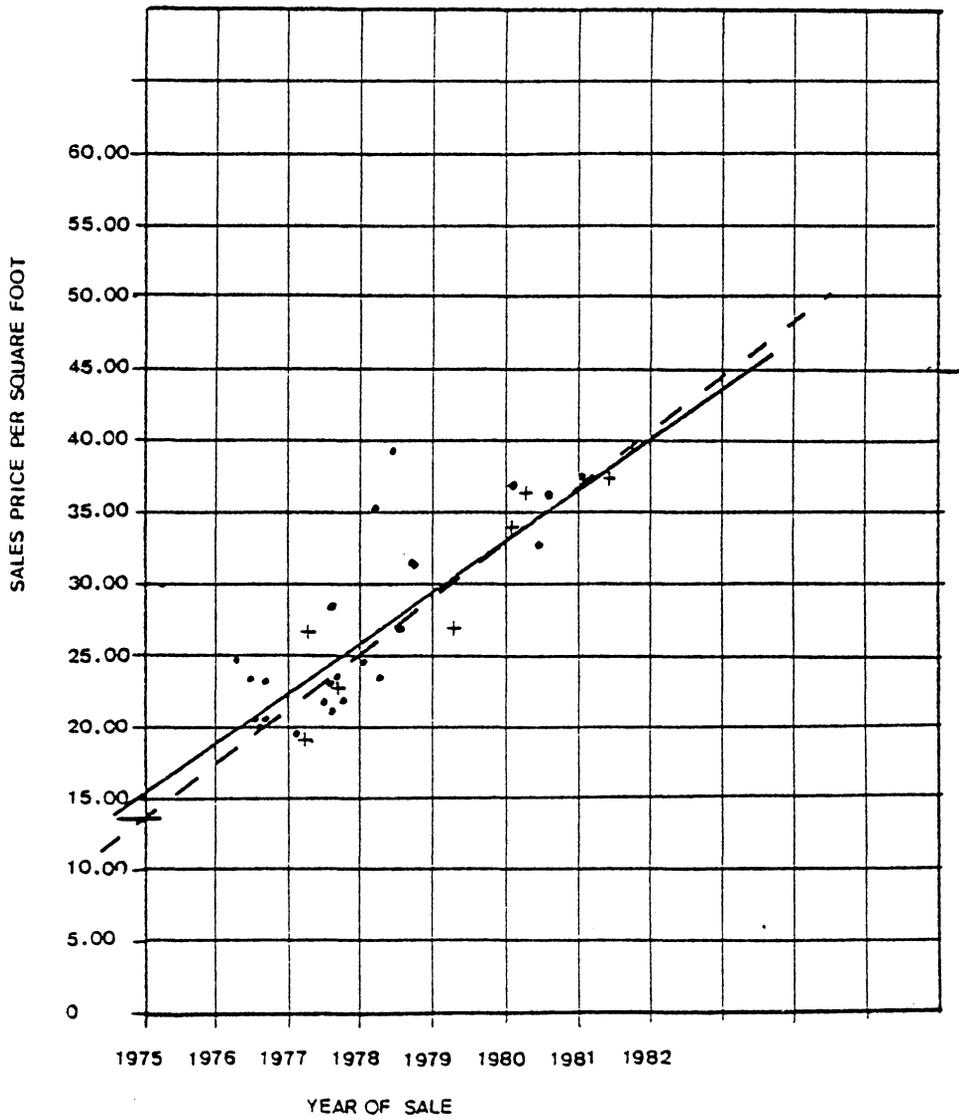


EXHIBIT E.4

TOWNHOUSE EXPENSE TABLE

P.U.D. ANALYSIS 6

TABLE 2

EXPENSES	MEDIAN ANNUAL EXPENSES - PUD TOWNHOUSE					BY PRICE RANGE				
	PROJECTS	UNITS	DOLLARS PER UNIT			PROJECTS	SQ. FT.	GROSS FLOOR AREA DOLLARS PER SQ. FOOT		
			MED	LOW	HIGH			MED	LOW	HIGH
ADMINISTRATIVE EXP.										
OFFICE SALARIES	1	264	66.75	66.75	66.75	1	343,200	.05	.05	.05
OFFICE EXPENSE	29	3,932	6.55	4.15	8.40	19	2,976,880	.00	.00	.01
MANAGEMENT FEE	26	3,181	68.97	60.00	77.39	17	2,431,445	.06	.05	.06
LEGAL	23	3,046	3.30	.82	7.26	15	2,214,960	.00	.00	.00
AUDIT	19	2,688	6.01	3.43	6.82	15	2,491,120	.00	.00	.01
TELEPHONE	12	2,420	2.47	.52	2.50	8	1,723,620	.00	.00	.00
OTHER	7	1,276	1.17	.30	1.90	3	715,210	.00	.00	.00
SUBDIAL ADMINISL.	30	4,043	83.25	64.52	98.43	20	3,112,855	.07	.05	.08
OPERATING EXPENSES										
ELEVATOR										
HEATING FUEL	2	590	7.14	1.52	7.14	1	343,200	.00	.00	.00
ELECTRICITY	27	3,770	29.43	17.02	36.20	18	2,875,130	.02	.01	.03
WATER/SEWER	24	3,415	46.71	15.28	135.52	15	2,509,930	.04	.01	.12
NATURAL GAS	9	1,399	10.50	7.14	16.81	6	900,420	.01	.01	.02
EXTERMINATING	13	1,289	5.76	3.25	11.00	7	836,120	.00	.00	.01
RUBBISH REMOVAL	23	3,297	35.42	31.50	47.70	16	2,527,680	.03	.03	.04
WINDOW WASHING										
MISCELLANEOUS	13	1,750	2.33	.78	4.27	12	1,767,945	.00	.00	.00
SUBDIAL OPERATING	30	4,043	98.32	36.44	204.70	20	3,112,855	.09	.03	.17
REPAIR AND MAINT.										
SECURITY	3	643	3.47	.23	3.47	3	710,500	.00	.00	.00
GROUND MAINTENANCE	30	4,043	151.61	111.40	230.41	20	3,112,855	.15	.10	.21
CUSTODIAL	8	1,049	2.65	1.52	7.66	6	1,013,900	.01	.00	.01
GENERAL MAINTENANCE	27	3,723	49.08	20.94	72.66	18	2,843,855	.04	.02	.06
HEAT/AC/VENT	6	806	3.69	.55	8.32	3	509,700	.01	.00	.01
PAINT-INT CA ONLY										
PAINT-EXTERIOR	14	2,249	51.12	9.14	76.90	10	1,880,435	.03	.01	.05
RECREATIONAL	26	3,633	40.20	24.67	49.62	17	2,811,365	.02	.02	.03
OTHER	8	1,202	6.66	2.65	7.00	6	1,125,120	.01	.00	.02
SUBDIAL REP/MAINT.	30	4,043	273.79	189.24	398.80	20	3,112,855	.27	.18	.32
FIXED EXPENSES										
REAL ESTATE TAX										
OTHER TAX	26	3,427	3.45	1.21	5.43	18	2,631,645	.00	.00	.00
INSURANCE	29	3,975	22.19	13.78	37.47	19	3,055,055	.01	.01	.03
PEC. FACIL. LEASED										
SUBDIAL FIXED EXP.	30	4,043	30.45	13.96	56.22	20	3,112,855	.02	.01	.04
TOTAL ALL EXPENSES	30	4,043	562.07	356.65	698.15	20	3,112,855	.44	.32	.54
GROUND RENT	1	75	108.32	108.32	108.32	1	80,000	.10	.10	.10
REPLACEMENT RESERVE	25	3,519	61.67	38.51	119.78	17	2,717,155	.04	.04	.09
AMENITIES										
POOL	24	3,368	37.94	21.44	44.30	15	2,475,210	.02	.02	.03
REC BUILDING	9	1,127	7.86	4.10	11.49	6	1,131,010	.00	.00	.01
OUTDOOR REC FACILITY	5	1,158	.91	.36	1.94	4	958,210	.00	.00	.00
OTHER	3	488	1.81	1.42	1.81	3	681,210	.00	.00	.00

\$35000 TO \$75000

EXHIBIT E.5

C. Apartments

1. Construction activity: Construction at this time is slow compared to previous years. One large complex, Lantern Ridge on the south side of town, is presently under construction bringing 120 units on line by September 1982. The largest multifamily builder, Snyder Hunt Corporation, has stopped all construction at this time.

2. Rental rates: There are approximately 6500 apartment units in Blacksburg with over 60% having two bedrooms. The average rental rates for units that are within walking distance of VPI and are unfurnished with heat and water included are as follows:

-- One bedroom = \$221.00

-- Two bedroom = \$281.00

-- Three bedroom = \$320.00 (Based on 1981-82 rates)

-- Refer to table 8 for listing of major apartment complexes.

3. Vacancy rates: The town is generally running at a vacancy rate of 2-3%. For comparison purposes, a national rate of 4-6% is considered healthy for competitive housing. Blacksburg's low vacancy rate indicates a strong demand for housing and this is characterized by high rental rates.

4. Income/expense analysis: Table 9 gives low, medium, and high income and expense rates for Roanoke, Va., Regional, and the total United States. For comparison, assuming an average of 850 square feet for a two bedroom apartment with a monthly rent of \$281.00, yields an average rental rate of .33¢/sq. ft. per month or \$3.97/sq. ft. per year. 7

5. University housing: The university on campus housing is presently 8,500. A new dormitory structure is under construction which will increase on campus housing capacity by 342 and another graduate building is planned which will add another 200 capacity. (These figures are based on capacity as designed. Due to a strong desire of students to live on campus, many of the dormitories are above capacity with some students living three to a room)

EXHIBIT E.6
MAJOR APARTMENT COMPLEXES

TABLE 8

LISTING OF MAJOR APARTMENT COMPLEXES

Apartments within walking distance of VPI:

MAP #	PROJECT	NUMBER OF UNITS/\$-RENT					VACANCY RATE	WHO PAYS			
		1-br	2-br	3-br	2-br T.H.	3-br T.H.		HEAT	WATER	LAUNDRY	POOL
1.	Apartments Height	16/225	102/350- 310	4/379	NA	NA	6%	0	0	YES	NO
2.	Carlton Scott	NA	16/290	16/325	NA	NA	0%	T	0	YES	NO
3.	Drapers Meadow	35/220- 225	156/240- 250	NA	NA	NA	2%	T	0	YES	YES
4.	Drapers Meadow West	72/230- 260	179/245- 285	19/285	NA	NA	2%	T	0	YES	YES
5.	Jefferson Apts.	107/210- 275	90/220- 239	18/280- 300	20/225	NA	0%	T 0	0	YES	NO
6.	Pack Apts. *	NA	27/290	9/315	NA	NA	1%	T	0	NO	NO
7.	Ramsgate *	3/220	31/246	2/285	NA	NA	0%	T	0	NO	NO
8.	Reynolds St. Apts.**	NA	34/235- 250	NA	NA	NA	0%	T	0	YES	NO
9.	Stonegate	4/245	56/290- 310	NA	NA	NA	0%	T	0	YES	NO
10.	Sturbridge Sq.**	NA	72/280	36/335	18/320	18/375	0%	T	0	YES	YES

Apartments not within walking distance of VPI:

11.	Carriage Hill	NA	NA	NA	59/280	32/315- 370	2%	T	0	NO	NO
12.	Dutch Village	20/190	96/220	42/245	NA	NA	0%	T	0	YES	YES
13.	Fairmont Village **	1/210	62/238	2/275	NA	NA	5%	T	0	YES	NO
14.	Foxridge	276/278	724/335	276/384	NA	NA	1%	0	0	YES	YES
15.	Heritage Acres	6/250	41/275	42/350	NA	NA	39% [†]	T	0	YES	YES
16.	Lantern Ridge	30/250	62/280	28/330	NA	NA	under construction	T	0	YES	YES
17.	Terrace View	148/228- 287	270/267- 345	130/316- 396	62/310	32/377	0%	T 0	0	YES	YES
18.	Windsor Hills **	78/235	152/270	45/310	NA	NA	3%	T	0	YES	YES

[†] High vacancy due to construction being completed after normal lease sign-up period.

The above rental rates are the newest predicted rates when available.

** Indicates rates for the present year, 1981-82, generally expect 6-8% increase next year.

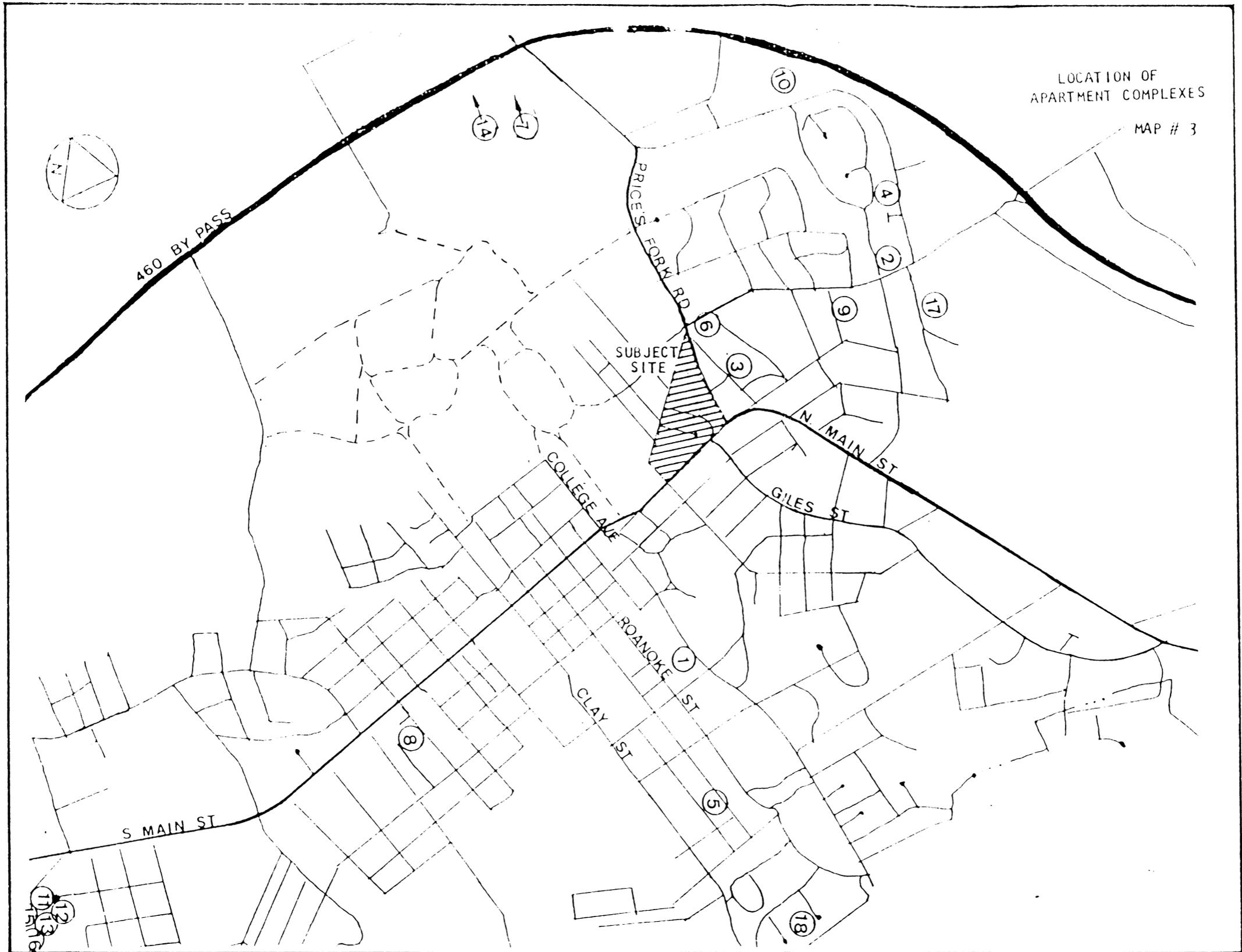


EXHIBIT E. 7

LOCATION OF APARTMENT COMPLEXES

EXHIBIT E.8

APARTMENT EXPENSE TABLE

INCOME/EXPENSE ANALYSIS 7

TABLE 9

	GARDEN TYPE BUILDINGS UNFURNISHED															SELECTED REGIONS, THE U.S.A. AND CANADA														
	ROANOKE, VA				REGION 3											TOTAL U.S.A.														
	# BLDGS.	# APTS.	# SQ. FT.		332 BUILDINGS			71,658 APARTMENTS			47,335,418 RENTABLE SQUARE FEET					2,402 BUILDINGS		399,572 APARTMENTS		312,079,553 RENTABLE SQUARE FEET										
BLDGS.	# OF GPTI	#/SOFT		BLDGS.	MEAN	LOW	HIGH	MEAN	LOW	HIGH	BLDGS.	MEAN	LOW	HIGH	MEAN	LOW	HIGH													
INCOME																														
RENTS-APARTMENTS	1	81	100.00	2.91	1	332	97.78	96.58	98.78	3.56	3.08	4.22	1	2602	97.68	96.18	98.88	3.74	3.09	4.47										
RENTS-GARAGE/PARKING	1	1			1	151	1.6	.4	3.2	.06			1	3951	1.8	.4	2.9	.07	.02	.12										
RENTS-STORAGES/OFFICES	1	1			1	121	3.4	.6	4.0	.10			1	451	1.6	.6	3.7	.07	.02	.15										
GROSS POSSIBLE RENTS	1	81	100.00	2.91	1	332	97.88	96.68	98.88	3.56	3.08	4.22	1	2602	97.88	96.58	99.08	3.76	3.10	4.45										
VACANCIES/PERCENT LOSS	1	81	6.1	.24	1	317	3.1	1.6	4.0	.12	.05	.24	1	2429	4.5	2.0	8.3	.18	.08	.33										
TOTAL RENTS COLLECTED	1	81	93.9	2.67	1	332	94.2	91.3	96.5	3.36	2.84	4.15	1	2602	93.4	88.9	98.3	3.51	2.84	4.23										
OTHER INCOME	1	41	4.7	.14	1	308	2.4	1.5	3.5	.09	.06	.14	1	2360	2.4	1.3	3.6	.09	.05	.14										
GROSS POSSIBLE INCOME	1	81	100.00	3.05	1	332	100.00	100.00	100.00	3.64	3.21	4.31	1	2602	100.00	100.00	100.00	3.76	3.20	4.61										
TOTAL COLLECTIONS	1	81	92.1	2.81	1	332	97.0	94.5	98.6	3.48	2.95	4.22	1	2602	95.8	92.0	98.4	3.60	2.97	4.32										
EXPENSES																														
MANAGEMENT FEE	1	81	5.7	.16	1	323	4.6	3.7	5.6	.17	.13	.21	1	2498	4.8	4.1	5.8	.18	.15	.23										
OTHER ADMINISTRATIVE**	1	51	4.6	.16	1	322	3.3	1.9	5.5	.13	.08	.21	1	2429	4.4	2.2	6.9	.17	.08	.24										
SUBSIDIARY ADMINISTRATIVE	1	81	6.58	.31	1	331	7.88	6.18	10.08	.29	.24	.35	1	2593	9.18	6.58	11.97	.34	.25	.45										
SUPPLIES	1	71	.7	.01	1	326	.5	.3	.7	.02	.01	.03	1	2349	.5	.2	.9	.02	.01	.05										
HEATING FUEL--CA ONLY	1	1			1	411	.4	.1	1.6	.01	.00	.03	1	497	.5	.2	1.6	.03	.01	.05										
CA E APTS. *	1	31	1.9	.05	1	231	7.5	5.0	10.6	.27	.18	.41	1	1271	4.6	2.3	7.8	.18	.09	.25										
ELECTRICITY--CA ONLY	1	71	2.2	.07	1	200	1.9	1.5	2.7	.07	.05	.10	1	1801	1.9	1.2	2.5	.07	.04	.09										
CA E APTS. *	1	11	2.1		1	131	6.5	4.7	11.7	.34	.19	.50	1	789	5.4	1.8	9.6	.23	.07	.40										
WATER/SEWER--CA ONLY	1	1			1	91	1.5			.05			1	97	1.4			.04	.02	.06										
CA E APTS. *	1	81	3.0	.13	1	323	3.4	2.3	4.8	.13	.08	.18	1	2489	7.5	1.6	3.7	.09	.03	.17										
GAS-----CA ONLY	1	11	2.4		1	501	.6	.2	2.6	.03	.01	.10	1	737	.7	.1	1.9	.01	.01	.07										
CA E APTS. *	1	21	4.4	.05	1	182	2.5	1.2	3.6	.09	.04	.13	1	941	2.3	1.4	3.4	.10	.06	.14										
BUILDING SERVICES	1	61	.5	.04	1	295	1.2	.8	1.7	.05	.03	.06	1	2060	1.2	.8	1.9	.05	.03	.07										
OTHER OPERATING	1	31	.1	.00	1	230	.3	.1	.9	.01	.00	.04	1	1521	.4	.2	1.6	.02	.01	.06										
SUBSIDIARY DEERATING	1	81	9.24	.30	1	332	17.48	11.18	25.88	.60	.36	1.01	1	2602	11.07	7.77	16.78	.41	.27	.64										
SECURITY**	1	11	.0	.00	1	73	.3	.1	.4	.01	.00	.02	1	776	.4	.2	.7	.02	.01	.03										
GROUNDS MAINTENANCE**	1	41	.9	.01	1	319	1.7	1.0	2.6	.04	.04	.10	1	2454	1.9	1.1	2.9	.07	.04	.12										
MAINTENANCE-REPAIRS	1	81	4.3	.14	1	332	5.8	3.5	8.2	.21	.14	.32	1	2595	5.7	3.3	8.2	.20	.12	.31										
PAINTING/DECORATING**	1	81	2.6	.09	1	323	2.1	1.4	2.9	.08	.05	.11	1	2469	2.2	1.3	3.5	.09	.05	.14										
SUBSIDIARY MAINTENANCE	1	81	9.68	.24	1	332	10.28	7.58	13.48	.38	.26	.52	1	2602	10.18	7.28	13.98	.39	.27	.54										
REAL ESTATE TAXES	1	81	6.4	.19	1	331	6.9	5.7	9.1	.27	.19	.34	1	2493	7.3	5.6	10.0	.28	.20	.39										
OTHER TAX/FEE/PERMIT	1	51	1.5	.05	1	255	.3	.1	.6	.01	.00	.02	1	1791	.4	.1	.8	.01	.00	.05										
INSURANCE	1	81	1.1	.03	1	329	1.7	1.2	2.5	.06	.04	.10	1	2590	1.8	1.3	2.5	.07	.05	.09										
SUBSIDIARY INSURANCE	1	81	8.08	.25	1	332	9.38	7.48	11.38	.35	.25	.43	1	2602	9.78	7.68	12.88	.37	.25	.49										
RECREATION/AMENITIES**	1	61	.8	.02	1	177	.8	.6	1.4	.04	.02	.06	1	1255	.8	.6	1.6	.07	.01	.04										
OTHER PAYROLL**	1	41	5.6	.18	1	281	6.3	4.7	8.4	.24	.16	.38	1	1590	4.9	2.8	7.0	.17	.10	.26										
TOTAL ALL EXPENSES	1	81	26.28	1.28	1	332	54.38	45.88	61.68	1.93	1.55	2.48	1	2602	45.98	38.98	55.28	1.73	1.42	2.17										
NET OPERATING INCOME	1	81	56.18	1.61	1	332	42.18	33.68	50.78	1.59	1.17	1.69	1	2602	47.88	39.68	56.18	1.81	1.33	2.34										
PAYROLL RECAP**	1	51	9.3	.28	1	308	9.7	7.2	12.0	.36	.28	.65	1	2218	8.6	6.2	10.9	.32	.24	.41										

FOOTNOTE For a description of Utility Expense (*) and Payroll Cost (**) reportings and method of data analysis, refer to the sections entitled "Guidelines for Utility Expense (*) and Payroll Cost (**)" reporting, and an explanation of the report and "Interpretation of a Page of Data". For definitions of the income and expense categories, refer to the Appendix, pages:

EXHIBIT E.9

D. Commercial

1. The Blacksburg Comprehensive Plan expects significant commercial expansion over the next two decades. The recent rapid growth in population is cited as reason to expect a proportionate increase in commercial support facilities. The existing commercial ratio is 6 acres per 1000 population in Blacksburg as compared to 8 acres per 1000 population national average.¹ Additionally, less than 2% of the total land acreage in town is commercially developed, whereas 6-8% is the norm for small communities. Presently there is approximately 180 acres devoted to commercial and office use with an expected increase of 33 acres over the next 20 years assuming a moderate growth scenario. Interviews with the new director of the Blacksburg Chamber of Commerce reveals a new strong and persuasive task force and marketing campaign being organized to attract new business and industry for Blacksburg.⁸

2. The Central Business District (C-1) consists of a six-block long, two-block wide section running east of and adjacent to the university campus along Main Street. Fast food restaurants and small commercial structures have grown up along this business section to both the north and south. The following is a listing of commercial properties in the Central Business District:¹⁴

a. William H. Price to First National Bank of Christiansburg. Corner of N. Main St. and Turner St. (Platt # 160 on subject site). 9,758 square feet, selling price = \$65,000. Sale date = March 6, 1975. \$6.66 per sq. ft.

b. Hatfield/Sandler to First National Bank of Christiansburg. Adjoins a above to the west (Platt # 7-B on subject site). 22,892 sq. ft., selling price = \$100,000. Sale date = November 15, 1974. \$4.37 per sq. ft.

c. VPI Educational Foundation to Ernestine Foresman. Corner of N. Main St. and Giles Rd. (Next to Longhorn Steak House and across from Wendy's). 29,260 sq. ft., selling price = \$115,000. Sale date = August, 1977. \$3.93 per sq. ft.
(Now being listed for \$190,000 or \$6.49 per sq. ft.)

d. Former Arthur Treachers. Rented from Hank Radford for \$1950 per month, net, net, net lease. All brick veneer and glass building. Contains 1500 square feet. Approximately 1/2 acre with parking for 30 cars. Expected new rent = 2000 per month net, net, net.

e. Main St. Apartments to Pizza Inn, Blacksburg. 33,846 sq. ft. lot at N. Main St. and Gilbert St. (Platt #143-A and 144 on subject site). Building contains 2990 square feet. Rent is \$2100 per month net, net, net 20 year lease with two 5-year renewal options plus 5% of all gross sales over \$504,000 annually.

EXHIBIT E.9 CONT'D

f. Main St. Apartments to Wendy's. N. Main St. and Giles Rd. (Platt #141 & 142 on subject site). 35,000 sq. ft. Building contains 2280 sq. ft. Rent is \$2750 per month net, net, net 20 year lease with two 5-year renewal options plus 5% of all gross sales over \$33,000 annually.

g. Karahalios to Arbys. N. Main St. just north of Turner St. (Across the street from platt #156 from subject site). 18,177 sq. ft. Building contains 2786 sq. ft. Rent is \$3277.55 per month net, net, net 20 year lease with three 5-year renewal options plus 5% of all gross sales over \$1283.34 each month.

-- Several real estate companys have been adjusting square footage values at 8% per year to update prices.

3. Estimated expenditures of population: It has been estimated that the 22,729 VPI students spend approximately \$20 per week in Blacksburg for various goods and services. This yields over 16.4 million dollars for nine months school and over 3 million dollars during summer months. Total retail sales for Blacksburg in 1979 were estimated at \$85,000,000. There are 1800 faculty and 3500 full time staff personnel at VPI with a monthly payroll of \$6,500,000 or \$78,000,000 annually. In addition, there are 4300 temporary, part time and student workers at the university who receive total monthly wages of over 1.1 million dollars.⁹
4. Study of consumption patterns and consumer problems: In the years 1970, 1977, and 1981 a series of market surveys were conducted with 243 families randomly selected in Blacksburg.¹⁰ Consumption patterns and consumer problems were studied (see appendix for pertinent tables from 1977 study). On quick inspection the major items which the respondents tended to purchase outside of Blacksburg were; furniture, carpeting, major appliances, and some forms of clothing. Major complaints of shopping in Blacksburg were; inadequacy of selections, parking, and high prices. (The 1981 survey is presently being compiled and bound).
5. Retail comparison: To aid in determining the demand for various retail stores in Blacksburg, a comparison of Blacksburg with eight other cities across the nation with very similar student and general population characteristics will be analysed. Table II lists the eight cities with Blacksburg. The data for Blacksburg is pending final retail sales breakdown from Slackburg's financial department new computer system.

EXHIBIT E.10

TABLE 10

COMPARABLE COMMERCIAL SALES AND LEASES

DESCRIPTION	A.	B	C	D	E	F	G
Owner (Tenant)	First Nat'l Bank Of Christiansburg	First Nat'l Bank Of Christiansburg	Ernestine Foresman	Hank Radford (Former Arthur Treachers)	Main St. Apts. (Pizza Inn)	Main St. Apts. (Wendy's)	Karahalios (Arby's)
Address	N. Main St. & Turner St. (platt # 160)	601 N. Main St. (platt # 7-B)	N. Main St. & Giles Rd.	N. Main St. & Progress St.	N. Main St. & Gilbert St.	N. Main St. & Giles Rd.	N. Main St. 1 Block West Of Turner St
Price	\$65,000	\$100,000	*\$115,000	For Rent	Present Lease 20 yr.-5 yr. renewal option	Present Lease 20 yr.-5 yr. renewal option	Present Lease 20 yr.-5 yr. renewal
Date	4-6-75	11-15-74	8-10-77	. . .	. . .	. . .	. . .
Lot Size (sq. ft.)	9,758	22,892	29,260	≈ 1/2 acre	33,846	35,000	18,177
Price/sq. ft. Lot	\$6.66	\$4.37	\$3.93	. . .	. . .	. . .	. . .
Gross Bldg. Area	. . .	NA	. . .	1,500	2,990	2,280	2,786
Construction Type	. . .	Brick Masonry & Glass	. . .	Brick Veneer & Glass	Brick Veneer & Glass	Brick Veneer & Glass	Wood Siding & Glass
Lease Rate	. . .	NA	. . .	\$2,000/mo. net, net, net	\$2,100/mo.+ 5% gross sales over \$504,000 annually net, net, net	\$2,750/mo.+ 5% gross sales over \$33,000 annually net, net, net	\$3,277/mo.+ 5% gross sales over \$1, each mor net, net net

. . . = Does not apply
 NA = Not Available
 * = Property presently being listed for \$190,000

EXHIBIT E.11
SURVEY RESULTS OF
CONSUMERS LIVING IN BLACKSBURG 10

WHERE THE RESPONDENTS PURCHASE VARIOUS
GOODS AND SERVICES (IN PERCENTAGES) (1974)

	University Mall Blacksburg	Downtown Blacksburg	Gables Shopping Center Blacksburg	Christiansburg	Radford	Downtown Roanoke	Crossroads Mall Shopping Center, Roanoke	Towers Shopping Center Roanoke	Hills Shopping Center Christiansburg	Anglewood Mall Roanoke	Other
Groceries	54.9	13.3	26.6	.9	.4	-	.4	-	.9	2.6	
Drugs	32.1	35.7	29.8	-	1.2	-	.5	-	-	.8	
Women's Under- garments	28.2	8.1	51.2	1.0	.5	3.8	-	1.4	1.0	4.3	
Women's Dresses	36.5	4.5	38.5	2.0	1.5	6.5	2.0	.5	1.0	7.0	
Women's Shoes	38.0	7.5	36.5	3.0	.5	9.5	3.0	-	1.5	5.5	
Men's Accessories	31.0	23.5	26.8	4.2	.5	4.2	2.3	-	1.4	6.1	
Men's Suits	22.8	26.4	20.8	8.6	1.0	9.1	3.0	-	1.0	7.1	
Men's Shoes	29.9	18.6	28.9	3.6	-	9.3	2.6	-	1.0	6.2	
Children's Wear	35.8	5.8	38.0	3.7	1.5	2.9	2.2	-	1.5	8.8	
Jewelry	31.9	24.7	20.9	1.6	.5	8.8	1.6	1.1	1.1	7.7	
TV, Transistors, Radios	15.2	38.2	18.2	4.8	2.4	8.5	2.4	1.2	3.0	6.1	
Major Appliances	10.1	20.8	28.3	10.7	8.8	10.7	3.8	1.3	1.3	4.4	
Children's Wear (Baby Goods)	37.8	7.1	26.5	2.4	3.1	5.1	1.0	1.0	4.1	12.2	
Furniture	6.8	18.2	5.4	22.3	10.0	20.9	5.4	.7	3.4	6.8	
Kitchen, Housewares Small Appliances	35.6	14.1	23.9	4.4	1.0	7.8	-	1.0	8.8	3.4	
TV and Radio Repairs	2.2	72.8	7.1	6.0	5.4	4.9	-	-	-	1.6	
Insurance	2.6	85.5	1.0	3.6	3.6	1.6	.5	.5	-	1.6	
Legal Services	2.9	77.1	2.4	8.8	2.4	2.4	.6	1.2	-	2.4	
Auto's (New)	-	53.8	2.3	16.9	8.5	9.2	.8	1.5	-	6.9	
Auto's (Old)	1.0	49.5	2.1	19.6	6.2	8.2	-	2.1	1.0	10.3	
Hardware and Lumber	3.3	63.0	6.2	23.7	-	.9	-	-	.9	1.9	
Barber Shop Service	2.6	75.5	14.6	2.5	-	-	-	-	-	-	
Beauty Shop Service	2.1	52.6	39.7	2.1	1.0	-	-	-	-	2.6	
Dry Cleaning	.8	90.4	2.2	2.2	1.7	.4	-	-	-	2.2	
Gasoline	2.6	73.2	19.7	2.2	.4	-	-	-	-	-	
Auto Parts	2.5	72.5	9.3	11.3	.5	1.5	-	-	-	2.5	
Auto Repair Service	4.0	66.3	11.4	10.9	1.0	3.5	.5	-	-	2.5	
Restaurants	19.5	53.2	17.7	2.3	.9	3.2	.9	-	-	-	
Drive-in Restaurants	4.2	78.0	11.5	2.6	-	-	-	-	-	3.7	
Piece Goods/ Yard Goods	29.3	23.2	37.0	5.0	1.1	.6	1.1	-	-	2.8	
Books (other than Textbooks)	22.1	65.3	6.1	1.4	1.4	.5	.9	-	.5	1.9	
Phonograph Records	11.8	66.9	6.4	1.0	.5	1.0	.5	.5	1.5	5.0	
Gift Shop Items - Stationary	55.9	21.6	16.7	.4	.9	.4	.9	.4	.9	1.8	
Sporting/Athletic Equipment	31.0	35.6	12.1	2.3	-	4.6	3.4	-	2.9	8.0	
Garden Equipment/ Supplies	33.9	30.6	15.1	10.2	1.1	1.1	2.2	-	2.2	3.8	
Rugs & Carpets	7.1	36.5	9.0	17.9	4.5	10.3	3.2	.6	3.2	7.7	
Doctors	2.4	78.2	1.5	5.3	7.3	2.4	1.0	.5	-	1.5	
Dentist	2.3	82.6	.5	6.1	3.8	2.8	.9	-	-	.9	
Banks	5.2	87.1	5.2	.9	.9	.4	-	-	.4	-	

EXHIBIT E.11 CONT'D

THE VOLUME OF SELECTED GOODS AND SERVICES
PURCHASED IN BLACKSBURG AND OUT OF BLACKSBURG

Categories	Percent of Income Devoted to Each Item	Dollar Amount Devoted To Each Category ^a	Dollar Amount Spent in Blacksburg	Dollar Amount Spent Outside Blacksburg
Groceries	15.5	8,718,750	8,265,375	453,375
Drugs	1.0	562,500	549,000	13,500
Women's Undergarments	.3	168,750	147,656	21,093
Women's Dresses	.6	337,500	268,312	69,187
Women's Shoes	.4	225,000	173,205	51,750
Men's Accessories	1.2	675,000	548,775	126,225
Men's Suits	.6	337,500	236,250	101,250
Men's Shoes	.3	168,750	130,612	38,137
Children's Wear	1.5	843,750	671,625	172,125
Jewelry (Men and Women)	.2	112,500	87,187	25,312
TV and Radio	.7	393,750	281,925	111,825
Major Appliances	1.0	562,500	244,687	317,812
Children's Wear (Baby Goods)	.1	56,250	40,162	16,087
Furniture	1.2	675,000	205,200	469,125
Kitchen Housewares	.3	168,750	124,200	44,550
TV and Radio Repair	.2	112,500	92,362	20,137
Autos	4.6	2,586,500	1,451,587	1,135,912
Hardware and Lumber	1.4	786,500	570,937	216,562
Barber Shop Service	.5	218,250	260,718	20,531
Beauty Shop Service	.6	337,500	318,600	18,900
Dry Cleaning	.7	393,750	367,762	25,987
Gasoline	2.5	1,406,250	1,342,968	63,281
Auto Parts and Repairs	.6	337,500	275,737	61,762
Restaurants	4.1	2,306,250	2,084,850	221,400
Piece Goods/Yard Goods	.2	112,500	100,687	11,812
Books (other than texts)	.1	56,250	52,593	3,656
Phonograph Records	1.2	675,000	607,500	67,500
Gift Shop Items - Stationary	.1	56,250	52,987	3,262
Sporting/Athletic Equipment	.5	281,250	221,343	59,906
Garden Supplies	.2	112,500	89,550	22,950
Rugs and Carpets	.3	168,750	88,762	79,987
Doctors	.9	506,250	415,631	90,618
Dentist	.8	450,000	384,300	65,700
Insurance	2.6	1,462,500	1,303,087	159,412
Legal Services	1.2	675,000	556,200	118,800
Total		26,327,500	22,611,232	3,716,268

^aBased on total income of \$56,250,000.

Note: Percentages were based on Bureau of Labor Statistics Survey of Consumer Expenditures and Income, 1961-1962.

Note: The table was computed on the basis of overall national consumption patterns. On the basis of the estimated total income and the proportions of total purchases reported to be taking place out of Blacksburg and on the basis of national averages of the total purchases of these goods and services, the dollar amounts spent out of Blacksburg were estimated.

EXHIBIT E.II CONT'D

PROPORTION OF SELECTED GOODS AND SERVICES
 THAT ARE PURCHASED OUT OF BLACKSBURG (IN PERCENTAGES) (1976)

Women's Undergarments	12.5
Women's Dresses	20.5
Women's Shoes	23.0
Men's Accessories	18.7
Men's Suits	30.0
Men's Shoes	22.6
Children's Wear	20.4
Jewelry	22.5
TVs and Transistor Radios	28.4
Major Appliances	40.8
Furniture	69.6
Kitchen Housewares/Small Appliances	26.4
TV and Radio Repair	17.9
Auto's (New)	27.0
Auto's (Old)	47.4
Hardware and Lumber	27.5
Auto Parts	15.7
Restaurants	9.6
Gift Shop Items	5.8
Rugs and Carpets	47.4
Piece Goods and Yard Goods	10.5
Sporting/Athletic Equipment	21.3

EXHIBIT E.12

CITY RETAIL TRADE COMPARISON

TABLE 11 15

RETAIL SALES DOLLARS IN SIMILAR CITIES (1981)

(Thousands)

	BLACKSBURG, VIRGINIA Population = 30,638	RICHMOND, KENTUCKY Population = 21,700	ATHENS, OHIO Population = 24,168	BOWLING GREEN, OHIO Population = 26,800	CARBONDALE, ILLINOIS Population = 42,452	EDWARDSVILLE, ILLINOIS Population = 12,458	MACOMB, ILLINOIS Population = 25,364	EDMOND, OKLAHOMA Population = 27,404	MOUNT PLEASANT, MICHIGAN Population = 35,830
TOTAL RETAIL SALES	\$	144,801	158,526	114,985	241,104	76,792	112,341	190,556	145,872
LUMBER/ HARDWARE	#	16	10	9	11	8	13	14	10
	\$	13,738	3,642	4,065	5,242	7,042	4,305	17,580	8,395
GENERAL HOUSE.	#	7	7	8	8	7	11	7	6
	\$	11,781	20,051	11,361	51,586	3,989	14,099	14,118	17,012
FOOD	#	48	25	15	23	17	12	23	21
	\$	30,569	36,039	28,283	33,350	18,049	22,647	42,946	33,957
AUTO	#	25	23	13	20	10	10	24	15
	\$	16,618	36,734	15,991	41,656	16,133	21,331	62,460	13,707
GASOLINE	#	31	17	24	24	15	27	26	23
	\$	21,517	15,190	14,337	14,726	8,817	10,029	14,919	13,842
APPAREL	#	27	16	16	31	12	25	20	34
	\$	7,373	3,755	3,038	12,938	3,837	6,870	7,445	14,526
FURNITURE	#	21	13	21	20	12	15	16	20
	\$	3,178	5,528	5,243	5,829	2,253	5,230	4,631	7,176
EAT/DRINK	#	49	56	40	70	37	47	35	50
	\$	15,954	15,705	13,848	22,300	7,896	13,503	13,345	14,972
DRUG STORE	#	7	6	7	8	4	7	6	8
	\$	4,915	4,371	4,346	5,856	3,310	3,147	2,470	7,362

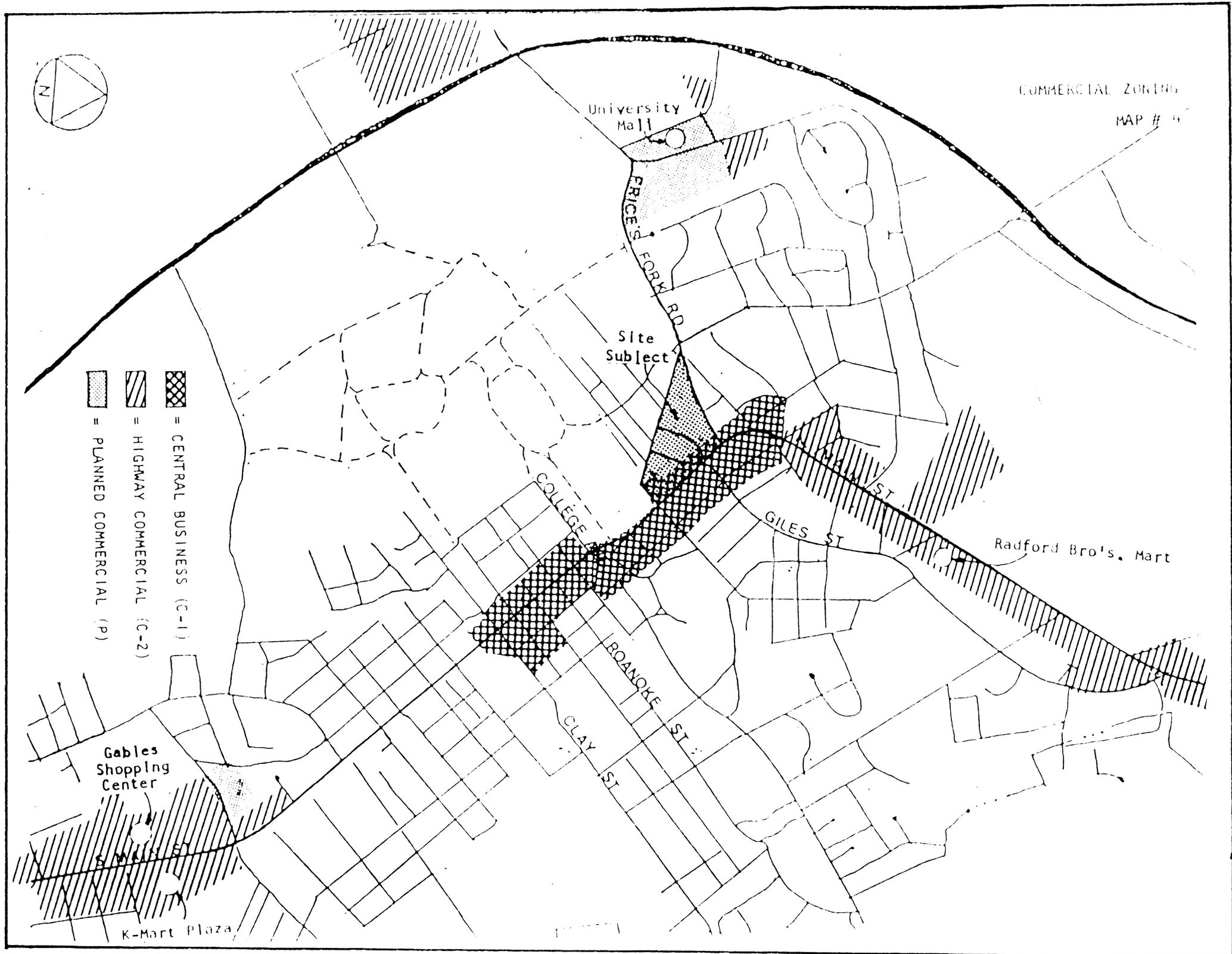


EXHIBIT E.15
COMMERCIAL ZONING

APPENDIX F
BUSINESS OBJECTIVES
AND
ARCHITECTURAL STANDARDS

EXHIBIT F.1

BUSINESS OBJECTIVES

A. Evaluation of Form of Ownership desired for this project based upon the following criteria and objectives:

1. Must have favorable tax treatment due to assumed present personal income tax rate of over 50%;

- a. Avoidance of double taxation - form of ownership which applies single tax on income. (partnership over corporate)
- b. Ability to pass income losses and tax losses from operation to shelter other income. (partnership over corporate)
- c. Maximize income tax deductions, an ownership which allows a large number of deductions. (corporate over partnership)
- d. Favorable capital gains treatment, upon resale of property, desire to have lower capital gains rate - individual @ 20% vs. corporate @ 50%.

2. Limitation of liability;

- a. Avoidance of exposure of personal assets for security on loans. (require nonrecourse mortgages and full coverage liability insurance)

3. Flexibility to conduct business in different real estate activities;

- a. Avoidance of government restrictions on types of activity undertaken by business.

4. Management control and decision capability;

- a. Ability to actively participate in operation of business and the decision-making process.

EXHIBIT F.1 CONT'D

A. Business objectives cont'd.

5. Continuation of business following project;
 - a. A form of ownership which can exist indefinitely vs. one which may only exist for only one or several projects.
 6. Favorable public image and good track record;
 - a. Want to portray a favorable image of business to target investor group and buyers.
 7. Minimize government controls and reporting requirements.
 8. Minimize required capital outlay;
 - a. Keep organization costs low
 9. Ability of syndicators to control property;
 - a. Desirable to allow participation of equity investors in major decisions and to facilitate additional equity capital if required.
- A-1. A decision matrix was developed listing the various development objectives and points were applied to weigh the most effective form of ownership entity meeting the criteria. The higher the points available, the more important the criteria. Review of the matrix reveals the joint venture form of ownership to meet the objective requirements for this project above the other forms of ownership considered.

EXHIBIT F.2

OBJECTIVES DECISION MATRIX

SELECTION CRITERIA	POINTS AVAILABLE	OWNERSHIP ALTERNATIVES					
		Tenancy in common	General partnership	Limited partnership	Joint venture	REIT	Corporation
Avoidance of double tax	10	10	10	9	10	8	0
Ability to pass income losses	15	15	15	14	15	0	0
Maximum income tax deductions	8	8	7	6	8	4	4
Favorable capital gains	8	8	8	8	8	4	2
Limitation of liability	10	8	8	10	8	10	10
Flexibility/allowed activities	7	7	7	4	7	0	4
Ability to Participate in management	10	10	10	5	10	3	3
Continuation of business	2	0	0	1	0	2	2
Favorable image/track record	10	3	8	4	10	4	6
Minimize gov't. controls	5	5	3	1	5	0	1
Minimize required capital	7	7	7	7	7	5	5
Ability of Syndicator to control property	8	5	6	8	6	8	7
TOTALS	100	86	89	77	<u>94</u>	48	44

EXHIBIT F.3

ARCHITECTURAL STANDARDS AND COVENANTS

PART A. GENERAL PROVISIONS

A-1. TERM. These covenants are to run with the land and shall be binding on all parties and all persons claiming under them for a period of thirty years from the date these covenants are recorded, after which time said covenants shall be automatically extended for successive periods of ten years unless an instrument signed by a majority of the then owners of the lots has been recorded, agreeing to change said covenants in whole or in part.

A-2. ENFORCEMENT. Enforcement of covenants shall come under the control of a Home Owners Association (except for architectural standards and review) to be set up in collaboration with the Developer and the land owners (see part C).

PART B. RESIDENTIAL AREAS

B-1. ARCHITECTURAL CONTROL. No building shall be erected, placed, or altered on any lot until the construction plans and specifications and a plan showing the location of the structure have been approved by the Architectural Control Committee as to quality of workmanship and materials, harmony of design with existing structures, and as to location with respect to topography and finish grade elevation. No fence or wall shall be erected without the approval of said committee. The committee shall consist of three members, each being a representative of; the developer, town planning commission, and a staff member from the College of Architecture - VPI&SU or by a representative designated by a majority of the members of said committee. In the event of death or resignation of any member of the committee, the remaining members shall have full authority to designate a successor.

B-2. LAND USE AND BUILDING TYPE. No lot shall be used for other than residential purposes exclusive of lots in parcel number 4 or unless approval is granted from the Architectural Control Committee. The following residential uses shall be permitted on all parcels with their respective location and areas binding:

B-2a. SINGLE FAMILY DETACHED.

Density. No more than 8 units per acre will be permitted for single family detached use.

Dwelling Size. No dwelling shall exceed two and one-half stories in height and a private garage for not more than two cars. The ground floor area of the main structure, exclusive of one-story open porches and garages, shall not be less than 1100 square feet for a one-story dwelling, nor less than 900 square feet for a dwelling of more than one-story.

EXHIBIT F.3 CONT'D

Setbacks. No building shall be located on any lot nearer to the front lot line than 20 feet unless that structure is for garage use in which case a minimum of 10 feet required. To encourage cluster development with zero lot line usage, no sideyard setbacks are required unless the lot is adjacent to a street in which case 20 feet is required. A minimum distance of 15 feet must exist between structures on adjacent lots.

Lot Area and Width. No building shall be erected on any lot having a width of less than 55 feet and an area of less than 4500 square feet.

B-2b. ATTACHED SINGLE FAMILY - TOWNHOUSES.

Density. No more than 14 units per acre will be permitted for townhouse use.

Dwelling Size. Limitations for single family attached are to be the same as for single family detached.

Setbacks. Front yard and side yard distance from streets are the same as for single family detached. A minimum distance of 10 feet is required between end units.

Lot Width. No building shall be erected on any lot having a width of less than 24 feet.

B-2c. APARTMENTS.

Development standards shall follow those outlined in the R-16 town ordinance except for the following:

- A maximum density of 25 units an acre.
- Apartments shall not be erected on a parcel which also contains single family units unless approved by the Architectural Control Committee.
- A minimum setback from an adjacent parcel of single family development of 35 feet.

B-3. LAND DEVELOPMENT. For all residential uses the Land Use Intensity standards established by the FHA shall be implemented concerning minimum open space and recreation area, and the minimum number of parking spaces required. The maximum land use indexes for the three types of residential housing are as follows:

- Single family detached = 4.0
- Single family attached = 4.8
- Multi-unit apartments = 6.0

The preservation of existing major trees, common green space, streetscaping, and under-structure or garage parking is strongly encouraged.

EXHIBIT F.3 CONT'D

- B-4. EASEMENTS. Where no alleys are provided, an easement is hereby reserved over the rear five feet of each building lot for utility installation and maintenance.
- B-5. NUISANCES. No noxious or offensive activity shall be carried on upon any lot, nor shall anything be done thereon which may become an annoyance or nuisance to the neighborhood.
- B-6. TEMPORARY STRUCTURES. No structure of a temporary character, trailer, basement, tent, shack, garage, barn, or other out-building shall be used on any lot at any time as a residence either temporary or permanently.
- B-7. SIGNS. No sign of any kind shall be displayed to the public view on any lot except one square foot, or a sign of not more than five square feet advertising the property for sale or rent. Commercial signs shall comply with town ordinance.
- B-8. OIL AND MINING. No oil drilling, oil development operations, or oil refining of any kind shall be permitted on any lot.
- B-9. LIVESTOCK AND POULTRY. No animals, livestock, or poultry of any kind shall be raised, bred or kept on any lot, except for dogs, cats, or other household pets.
- B-10. GARBAGE AND REFUSE DISPOSAL. No lot shall be used or maintained as a dumping ground for rubbish. Trash, garbage or other waste shall not be kept except in sanitary containers.
- B-11. WATER SUPPLY. No individual water supply or disposal system shall be permitted on any lot.
- B-12. FENCES. No fence, wall, hedge, or mass planting shall be permitted unless approved by the Architectural Control Committee.
- B-13. TRAILERS AND RV'S. The keeping of a mobile home or travel trailer either with or without wheels, on any lot is prohibited. A motor boat, house boat or other water vehicle can only be kept or stored if approved by the Architectural Control Committee, or by being parked in a specific designated compound area.
- B-14. ANTENNAS. No antennas or other communication equipment shall be used.
- B-15. SOLAR RIGHTS. No building or structure of any nature, landscaping, vegetation, or other object may be erected or maintained in such a manner as to intrude or encroach upon a particular roof space or area designed to collect sunlight for that period of time commencing at 9:00 a.m. true solar time, and continuing through 3:00 p.m. true solar time on each day of the year.

EXHIBIT F.3 CONT'D

PART C. HOME OWNERS ASSOCIATION

C-1. The owner of each building site to which these covenants apply is required to become a member of said Home Owners Association.

C-2. The purpose of the association is to collect assessments from members for use towards maintenance of common areas, enforcement of community regulations, and payment of property taxes on common areas.

C-3. Every person who is a record owner of any lot shall be a member of the association. All members shall be entitled to one voting right for each lot which they hold interest including the Developer.

C-4. The initial board of directors for the Home Owners Association shall consist of 7 members as appointed by the Developer. Following the sale of 33% of the available lots, 2 of the 7 positions will be made available to the residents as appointed by the board. Two additional positions will become available to residents each time following the sale of 66% and 80% of the lots. After 95% of the lots have been sold, the entire board will be comprised of the residents of the community.

APPENDIX G
SUBMARKET DEFINITION

EXHIBIT G.1

TARGET MARGET TELEPHONE SURVEY

Section I

INTRODUCTION:

Hello, my name is _____. I'm a student at Tech in the college of Architecture. We are conducting a housing market survey of Blacksburg residents to find out peoples' satisfaction with their present living accomadations. The purpose of this survey is to aid a group of graduate students preparing recommendations for future housing in Blacksburg. Your responses are confidential and you will not be identified as an individual. Would you mind answering a few questions ?

Thank you.

- (1) What type of dwelling are you presently living in ?
- | | |
|--------------|---------------------------------|
| a) Apartment | d) Single Family Detached House |
| b) Townhouse | e) Other |
| c) Trailer | |
- (2) Do you rent or own ?
- | | |
|---------|--------|
| a) Rent | b) Own |
|---------|--------|
- (3) How many adults live in your household ?
- | | |
|------|-------------------|
| a) 1 | d) 4 |
| b) 2 | e) 5 |
| c) 3 | f) Greater than 5 |
- (4) How many children live in your household ?
- | | |
|------|--------------|
| a) 0 | d) 3 |
| b) 1 | e) 4 |
| c) 2 | f) 5 or more |
- (5) How many bedrooms are in your dwelling ?
- | | |
|------|--------------|
| a) 0 | d) 3 |
| b) 1 | e) 4 |
| c) 2 | f) 5 of more |
- (6) How many full bathrooms are in your dwelling ?
- | | | |
|------|------|------|
| a) 1 | b) 2 | c) 3 |
|------|------|------|

EXHIBIT G.1 CONT'D

INTRO. CONT'D:

(7) How many half baths ?

- a) 0 b) 1 c) 2

(8) How many floors (or levels) are there ?

- a) 1 c) 3
b) 2 d) 4

*** (9) The front of your dwelling looks onto ?

- a) Street d) Footpath
b) Parking lot e) Neighbors back yard
c) community yard area

*** (10) The back of your dwelling looks onto ?

- a) Nothing d) Private backyard
b) Street e) Public open space
c) Parking lot

(11) How long have you lived in your present home ?

- a) 1 year or less c) 3 - 5 years
b) 1 - 3 years d) more than 5 years

(12) How long have you lived in Blacksburg ?

- a) 1 year or less c) 3 - 5 years
b) 1 - 3 years d) more than 5 years

(13) How many cars does your household have ?

- a) 0 d) 3
b) 1 e) 4
c) 2

*** (14) Think back to before you moved to your present address
what were some of your reasons for moving here ?

- a) Location d) The layout of the dwelling
b) Price e) The quality of the construction
c) Friends live here f) The amenities offered
g) Don't Know

(15) Would you use the same guidelines to select your next dwelling ?

- a) Yes b) No

(16) Are satisfied where you presently live ?

- a) Yes b) No

*** = Read each possible answer along with the question.

EXHIBIT G.1 CONT'D

DISSAT. CONT'D:

*** (9) Which of the following features would you pay extra for ?

- | | |
|-------------------------------------|---|
| a) Washer and dryer in the dwelling | d) Central air conditioning |
| b) Fireplace in the living room | e) An extra room or space to be used as a den, study, or hobby room |
| c) Garage | f) None |

***(10) In terms of walking distance, how close to Va. Tech would you like to live ?

- | | |
|-------------------------|---------------------------------------|
| a) Less than 5 minutes | c) Distance from Tech isn't important |
| b) Less than 15 minutes | |

(11) Is a home that requires little or no maintenance important to you ?

- | | |
|--------|-------|
| a) Yes | b) No |
|--------|-------|

***(12) In terms of total occupancy cost (i.e.; either rent exclusive of utilities or mortgage payment plus insurance and taxes) what is the maximum amount you would pay per month to the nearest \$100 ?

- | | |
|--------------------|--------------------|
| a) Less than \$300 | d) \$500-\$600 |
| b) \$300-\$400 | e) \$600-\$700 |
| c) \$400-\$500 | f) \$700-\$800 |
| | g) More than \$800 |

EXHIBIT G.1 CONT'D

Section II-B

SATISFIED:

- *** (1) What are the reasons you like where you presently live ?
- | | |
|-------------------------------|---------------------------------|
| a) Location | d) The size of the dwelling |
| b) Neighbors | e) Quality of construction |
| c) The layout of the dwelling | f) Amenities of the development |
| | g) Other |
- (2) What would encourage you to move ?
- | | |
|--------------------|--------------------|
| a) Better location | d) Larger dwelling |
| b) Cheap financing | e) Other |
| c) More amenities | |

Section III

GENERAL QUESTIONS AND CLOSING

- (1) How much longer do you plan to live in Blacksburg ?
- | | |
|-------------------|----------------------|
| a) 1 year or less | c) 3 - 5 years |
| b) 1 - 3 years | d) More than 5 years |
- (2) Given the quality of housing available, do you think home prices are too high in Blacksburg ?
- | | | |
|--------|-------|---------------|
| a) Yes | b) No | c) Don't know |
|--------|-------|---------------|
- (3) How do you rate Blacksburg with other college towns you might have lived in ?
- | | |
|-----------|---------------|
| a) Better | c) Worse |
| b) Same | d) Don't know |

THANK YOU FOR YOUR TIME AND CONSIDERATION. GOOD BYE.

APPENDIX H
DEVELOPMENT STRATEGY

EXHIBIT H.1

LAND USE INTENSITY RATINGS¹

UNIT/SIZE: 12 Townhouse units at 1200 s.f. each

LAND USE INTENSITY RATING: . . 4.6

FLOOR AREA RATIO: 0.303

TOTAL OPEN SPACE: 34,560 s.f. (factor 2.4)

LIVIBILITY SPACE: 21,600 s.f. (factor 1.5)

RECREATION SPACE: 2,160 s.f. (factor .15)

TOTAL CAR RATIO: 1.4 or 17 spaces

UNIT/SIZE: 12 Townhouse units at 1400 s.f. each

LAND USE INTENSITY RATIO: . . . 5.0 *

FLOOR AREA RATIO: 0.400

TOTAL OPEN SPACE: 30,240 s.f. (factor 1.8)

LIVIBILITY SPACE: 18,480 s.f. (factor 1.1)

RECREATION SPACE: 2,184 s.f. (factor .13)

TOTAL CAR RATIO: 1.2 or 15 spaces

UNIT/SIZE: 6 Detached Single-Family units at 1300 s.f.

LAND USE INTENSITY RATIO: . . . 3.8

FLOOR AREA RATIO: 0.174

TOTAL OPEN SPACE: 34,320 s.f. (factor 4.4)

LIVIBILITY SPACE: 23,400 s.f. (factor 3.0)

RECREATION SPACE: 1,248 s.f. (factor .16)

TOTAL CAR RATIO: 1.5 or 9 spaces

* This is above recommended intensity for townhouses, consider 11 units.

¹ Standards as established by FHA in 1963 for Planned Unit Developments.

EXHIBIT H.1 CONT'D

LAND USE INTENSITY RATINGS CONT'D

UNIT/SIZE: 6 Detached Single-Family units at 1500 s,f,
 LAND USE INTENSITY RATING: . . . 4.0
 FLOOR AREA RATIO: 0.200
 TOTAL OPEN SPACE: 34,200 s.f. (factor 3.8)
 LIVIBILITY SPACE: 23,400 s.f. (factor 2.6)
 RECREATION SPACE: 1,620 s.f. (factor .18)
 TOTAL CAR RATIO: 1.4 or 9 spaces

UNIT/SIZE:. 25 3-Story Apartments at 900 s.f. each
 LAND USE INTENSITY RATING:. . . 5.4
 FLOOR AREA RATIO: 0.528
 TOTAL OPEN SPACE: 31,500 s.f. (factor 1.4)
 LIVIBILITY SPACE: 17,325 s.f. (factor .77)
 RECREATION SPACE: 2,700 s.f. (factor .12)
 TOTAL CAR RATIO: 1.1 or 28 spaces

LIVIBILITY SPACE INCLUDES = Lawns, walks, sitting areas, unpaved ROW's.
 RECREATION SPACE INCLUDES = Exterior areas improved for recreation of all.
 TOTAL OPEN SPACE INCLUDES = Areas open for auto traffic and parking,
 offsite area credits, the livibility space,
 and the recreation space.

EXHIBIT H.2

DEVELOPMENT COSTS FOR PROPOSED UNITS †

	Size Sq. Ft.	Hard Const. Cost	Amenities *	Time Multiplier	Local Multiplier	Unit Cost Per Sq. Ft.	Total Const. Cost Hard	Project Cost Multiplier	Total Project Cost Before Land	Total Cost With Land	Possible Selling Price w/10% Profit	Land Cost Per Unit **	Land Value Per Acre *** Based on No. of Units
Townhouse	1200	32.17	3.63	1.01	.84	30.37	\$36,447	1.31	\$47,746	\$53,051	\$58,946	\$5,305	\$63,660
	1400	31.19	3.11	1.01	.84	29.10	\$40,740	1.31	\$53,369	\$59,299	\$65,888	\$5,930	\$71,160
Detached House	1300	32.72	7.74	1.01	.84	34.33	\$44,628	1.33	\$59,355	\$69,830 \$74,196	\$77,589 \$82,440	\$10,475 \$14,840	\$62,850 \$89,040
	1500	31.66	6.71	1.01	.84	32.55	\$48,831	1.33	\$64,945	\$76,406 \$81,181	\$84,895 \$90,201	\$11,461 \$16,236	\$68,766 \$97,416
Apartments	900	26.84	NA	1.01	.84	22.77	\$20,500	1.25	\$25,600	\$26,880	NA	\$ 1,280	\$32,000
										\$28,160		\$ 2,560	\$64,000
										\$29,440		\$ 3,840	\$96,000

* Amenities: Townhouse = Fireplace, Full Appliances
 Amenities: Detached Single-Family = Fireplace, Full Appliances, Garage

** Land costs are calculated as a percent of total project costs: Townhouses = 10%
 Detached Single-Family = 15% & 20%
 *** Number of units per acre: Townhouses = 12 units
 Detached Single-Family = 6 units
 Apartments = 5%, 10%, & 15%

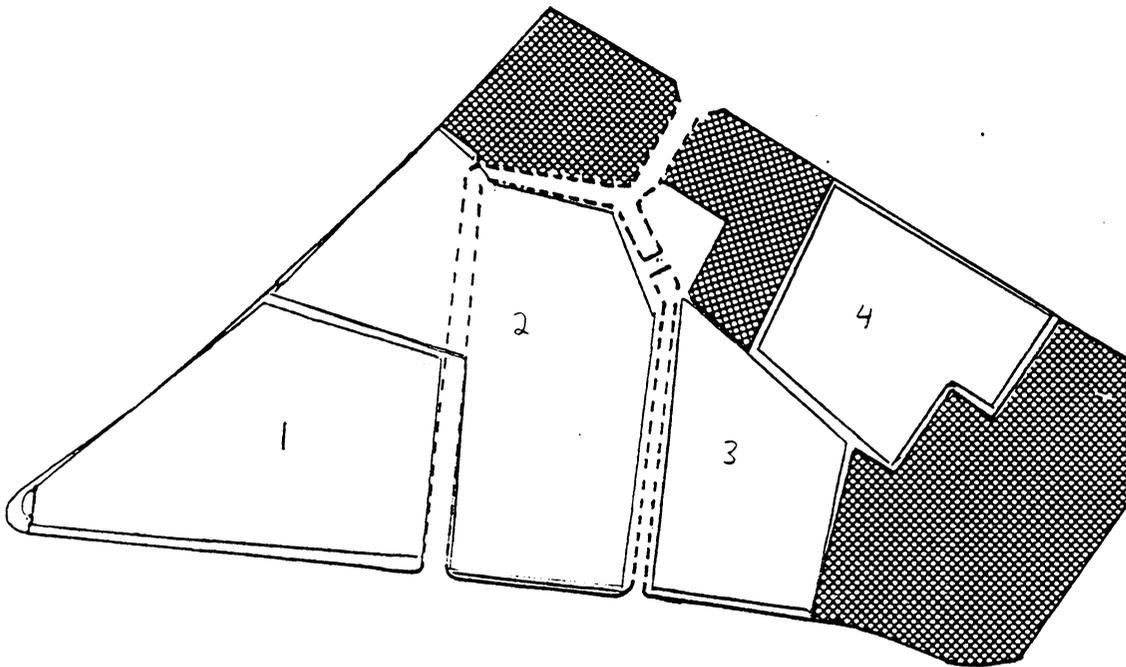
Project Cost For Townhouses:	Project Cost For Detached Units:	Project Cost For Apartments:
Carrying Charges 7%	Carrying Charges 7%	Carrying Charges 6%
Arch./Eng. Fees 6%	Arch./Eng. Fees 6%	Arch./Eng. Fees 6%
Selling Fees 5%	Selling Fees 5%	Mangt. 2%
Permits 3%	Permits 3%	Permits 3%
Site Work 4%	Site Work 8%	Site Work 4%
Contingency 4%	Contingency 4%	Contingency 4%
Total 31%	Total 33%	Total 25%

† From Marshall and Swift's Residential Cost Indexes, March, 1982

APPENDIX I
VALUATION PROCESS AND SUMMARY

EXHIBIT I.1

OPTIMUM PARCEL
DIVISION RATING PROCESS



PHYSICAL DATA:

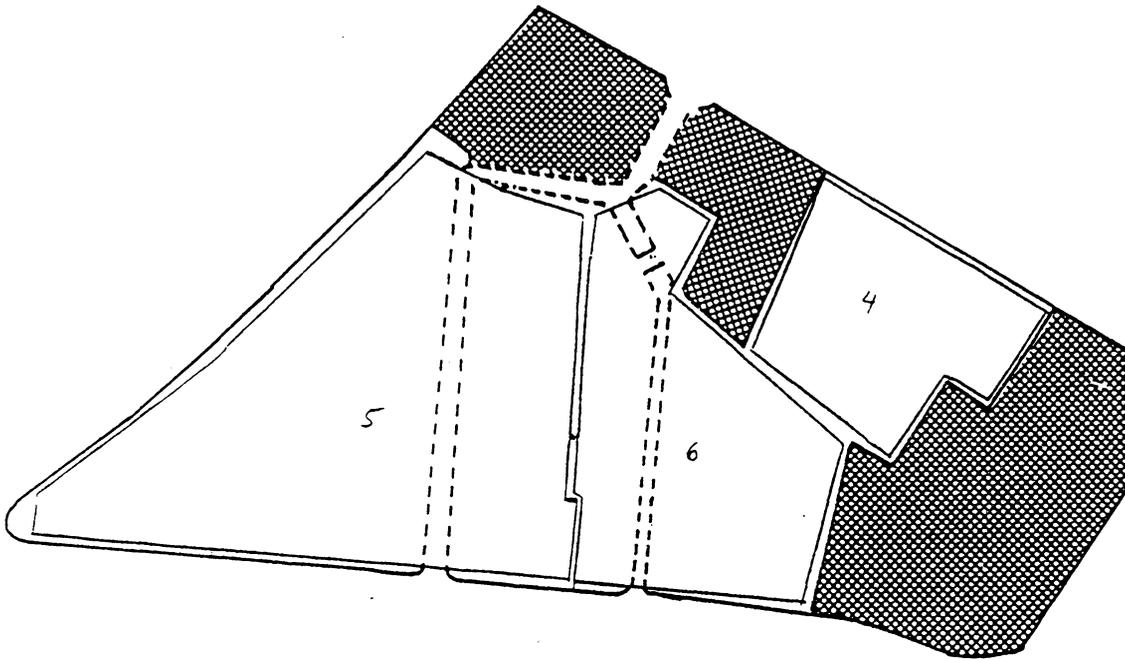
DEVELOPMENT RATINGS:

Platt #	#1	#2	#3	#4
Size (acre)	3.15	3.69	1.78	2.09
Depth	320	303	300	280
X	X	X	X	X
Width	375	530	250	285
% Slope	3-10	0-15+	0-5	3-7
No. of Platts	9	19	7	4
No. of Owners	9	11	3	3

Platt #	#1	#2	#3	#4
Integrity of Ownership	1	1	3	3
Cost of Land	3	2	3	1
Difficulty in Purchasing	2	1	2	3
Access and Visibility	2	2	1	4
Consistent Topography	3	2	4	4
Density Potential	3	4	1	2
Development and Design Potential	4	3	2	3
Potential Commercial Use	<u>1</u>	<u>1</u>	<u>2</u>	<u>4</u>
Total Each Parcel	19	16	18	24
Total Parcel Combination				<u>77</u>

Scale: 1 = very unsuitable
4 = very suitable

EXHIBIT I.1 CONT'D



PHYSICAL DATA:

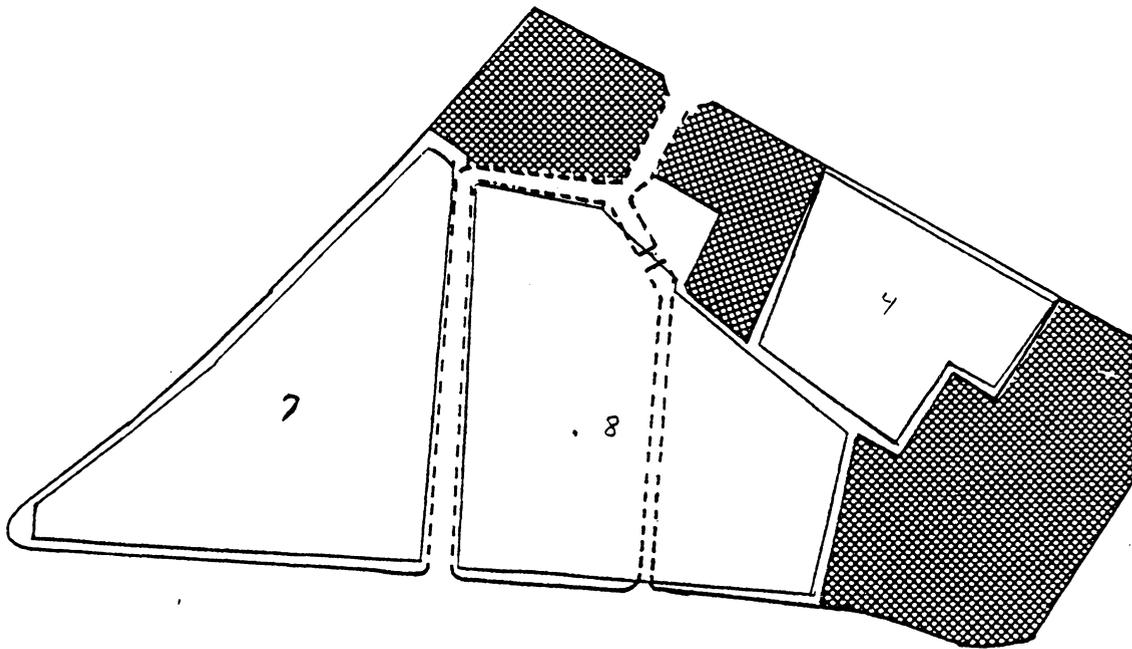
Platt #	#5	#6	#4
Size (acre)	5.93	2.85	2.09
Depth X	525	345	280
Width	400	360	285
% Slope	3-15	0-15	3-7
No. of Platts	25	11	4
No. of Owners	17	5	3

DEVELOPMENT RATINGS:

Platt #	#5	#6	#4
Integrity of Ownership	1	3	3
Cost of Land	2	2	1
Difficulty in Purchasing	1	2	3
Access and Visibility	4	2	4
Consistent Topography	2	3	4
Density Potential	4	3	2
Development and Design Potential	4	4	3
Potential Commercial Use	<u>1</u>	<u>1</u>	<u>4</u>
Total Each Parcel	19	19	24
Total Parcel Combination			<u>62</u>

Scale: 1 = very unsuitable
4 = very suitable

EXHIBIT I.1 CONT'D



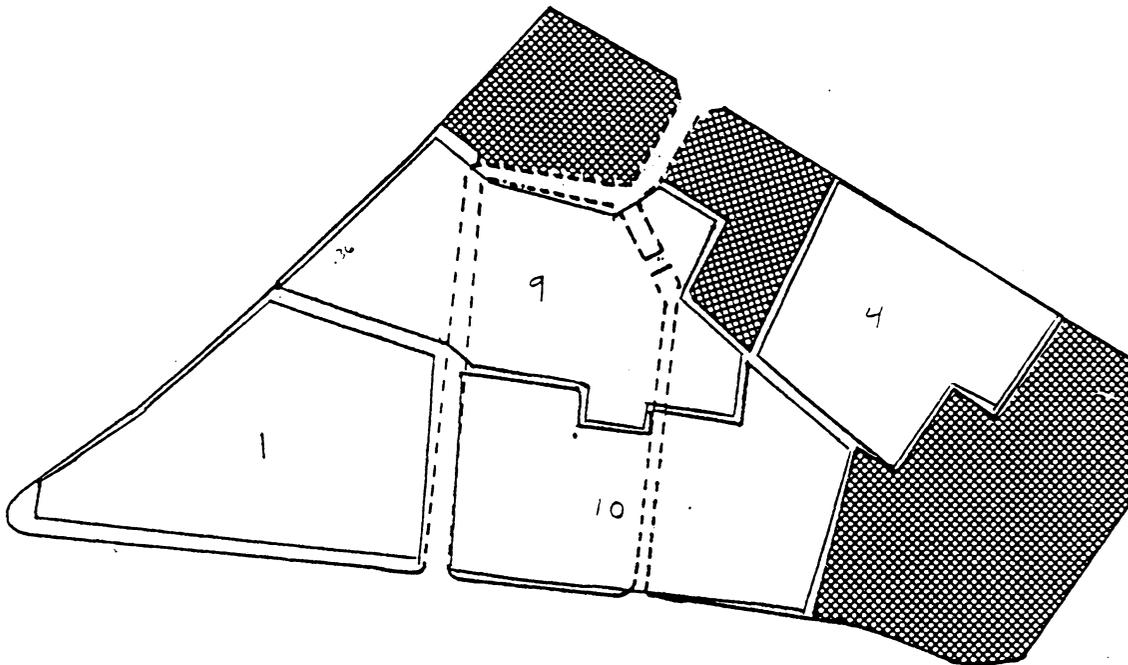
PHYSICAL DATA:

Platt #	#7	#8	#4
Size (acre)	4.02	4.76	2.09
Depth	525	400	280
X	X	X	X
Width	300	350	285
% Slope	3-15	0-15	3-7
No. of Platts	14	21	4
No. of Owners	11	10	3

DEVELOPMENT RATINGS:

Platt #	#7	#8	#4
Integrity of Ownership	1	1	3
Cost of Land	2	2	1
Difficulty in Purchasing	2	2	3
Access and Visibility	3	3	4
Consistent Topography	3	2	4
Density Potential	3	4	2
Development and Design Potential	2	4	3
Potential Commercial Use	<u>1</u>	<u>1</u>	<u>4</u>
Total Each Parcel	17	19	24
Total Parcel Combination			<u>60</u>
Scale: 1 = very unsuitable 4 = very suitable			

EXHIBIT I.1 CONT'D



PHYSICAL DATA:

Platt #	#9	#10	#1	#4
Size (acre)	2.84	2.79	3.15	2.09
Depth	285	365	320	280
X	X	X	X	X
Width	510	525	375	285
% Slope	5-15	3-7	3-10	3-7
No. of Platts	12	15	9	4
No. of Owners	11	5	9	3

DEVELOPMENT RATINGS:

Platt #	#9	#10	#1	#4
Integrity of Ownership	1	3	1	3
Cost of Land	3	2	3	1
Difficulty in Purchasing	2	3	2	3
Access and Visibility	2	3	2	4
Consistent Topography	2	4	3	4
Density Potential	3	3	3	2
Development and Design Potential	3	3	4	3
Potential Commercial Use	<u>1</u>	<u>1</u>	<u>1</u>	<u>4</u>
Total Each Parcel	17	22	19	24
Total Parcel Combination				<u>82</u>
Scale: 1 = very unsuitable 4 = very suitable				

EXHIBIT I.2

MARKET COMPRABLE SALES

SALE NO.	1	2	3	4	5	6	7	8	9
ZONING	R-16	R-16	R-16	R-16	R-16	R-16	R-16	R-16	R-16
LOCATION	Price's Fork Ext.	Orchard St.	Price's Fork Ext.	Price's Fork Ext.	Turner St.	Turner St.	Perry St.	Price's Fork Rd.	Price's Fork/Webb
OWNER	D. Perry	D. Perry	State of Va.	State of Va.	Noonkester	Winn	VPI	State of Va.	Jones
SALE DATE	10/78	10/79	Presently For Sale	Presently For Sale	10/77	2/74	12/75	1/78	5/74
STRUCTURES	Several Houses	Lot	Lot	Lot	House	House	Lot	Old House	Fair House
MAJOR ROAD FRONTAGE	Yes	No	Yes	Yes	Yes	Yes	No	Yes	Yes
SQ. FT. AREA	23,174	20,996	13,416	8,799	12,920	16,725	19,375	15,000	10,000
SALE PRICE PER SQ. FT.	1.61	2.38	3.00	2.50	1.93	1.20	1.91	1.50	2.15
PRICE PER ALLOWABLE UNIT (25 units/acre)	3,700 (10)	5,555 (9)	10,068 (4)	NA	8,333 (3)	3,333 (6)	4,637 (8)	4,283 (5)	21,500 (1)

ADJUSTMENTS

TIME ADJUST (.006/mo. to Jan. 1982)	1.23	1.16	Same	Same	1.31	1.57	1.44	1.29	1.55
TIME ADJUST VALUE PER SQ. FT.	1.99	2.77	Same	Same	2.52	1.88	2.75	1.93	3.34
TIME ADJUST VALUE PER UNIT	4,551	6,444	Same	Same	10,916	5,233	6,677	5,517	33,368

NA = Not Applicable
 . . . = Not Available

EXHIBIT I.2 CONT'D

MARKET COMPRABLE SALES CONT'D

SALE NO.	10	11	12	13	14	15	16	17	18
ZONING	R-16	R-16	R-16	R-16	R-16	R-16	R-16	R-16	R-16
LOCATION	Price's Fork/Webb	Price's Fk./Orch.	Barger St.	Barger St.	Barger St.	Barger St.	Barger St.	Barger St.	Gilbert St.
OWNER	. . .	. . .	Teske Leasing	H. Hurst	H. Hurst	H. Hurst	Rose	H. Hurst	Clement
SALE DATE	8/76	11/77	6/78	11/77	11/77	11/77	4/78	1/76	8/76
STRUCTURES	Lot	Lot	2-Bldg. (apts.)	House	House	House	House	House	Apt. House
MAJOR ROAD FRONTAGE	Yes	Yes	No	No	No	No	No	No	No
SQ. FT. AREA	15,095	28,257	23,522	7,405	8,799	6,969	9,017	9,191	13,068
SALE PRICE PER SQ. FT.	1.52	1.59	3.61	3.54	3.57	3.75	2.66	3.26	2.14
PRICE PER ALLOWABLE UNIT (25 units/acre)	4,600 (5)	3,214 (14)	7,727 (11)	NA	NA	NA	NA	NA	9,316 (3)

ADJUSTMENTS

TIME ADJUST (.006/mo. to Jan. 1982)	1.39	1.30	1.26	1.30	1.30	1.30	1.27	1.43	1.39
TIME ADJUST VALUE PER SQ. FT.	2.11	2.07	4.54	4.60	4.64	4.89	3.38	4.67	2.97
TIME ADJUST VALUE PER UNIT	6,396	4,178	9,721	NA	NA	NA	NA	NA	12,950

EXHIBIT I.3

C-1 COMMERCIAL SALES						
SALE NO.	C1	C2	C3	C4	C5	C6
ZONING	C-1	C-1	C-1	C-1	C-1	C-1
LOCATION	N. Main/ Turner	601 N. Main	N. Main/ Giles Rd.	318 N. Main	N. Main	Roanoke/ Church St.
OWNER	Bank of Christ.	Bank of Christ.	Foresman	Foresman	Nu Prime	. . .
SALE DATE	4/75	11/74	8/77	7/74	3/79	8/81
STRUCTURES	Park Lot	Bank	Lot	House	House	New Savings & Loan
SQ. FT. AREA	9,578	22,892	29,260	50,965	13,068	12,584
TOTAL SALE PRICE	65,000	100,000	115,000	91,500	80,000	95,000
SALE PRICE PER SQ. FT.	6.66	4.37	3.93	1.80	6.12	7.70
TIME ADJUST (.008/mo. to Jan. 1982)	1.64	1.68	NA	1.72	1.27	NA
TIME ADJUST VALUE PER SQ. FT.	10.92	7.37	6.49 (present listing price)	3.10	7.78	NA

EXHIBIT I.4

MARKET COMPRABLE VALUATION

Subject Platt No.	Most Similar To Comprable No.	Value By Square Foot Method		Subject Size	Total Price of Subject	Value By Unit Method	
		Time Adjusted Cost Per Sq. Ft. of Comprable	Adjusted Cost Per Sq. Ft. of Subject			Units Allow. on Subject	Value at \$5,570/unit
PARCEL NO. 1							
100	4	2.50	2.50	12,632	31,581	3	16,710
105	10,11	2.07-2.11	2.30	12,197	28,052	w/107	
106	10,11	2.07-2.11	1.65	3,920	6,468	w/107	
107	10,11	2.07-2.11	2.10	7,535	15,824	11	61,220
102	2,5,6,7	1.88-2.75	2.40	17,424	41,818	6	33,420
99	2,5,6,7	1.88-2.75	2.20	21,344	46,957	9	50,130
98	2,5,6,7	1.88-2.75	2.48	15,682	38,900	5	27,850
97	2,5,6,7	1.88-2.75	2.55	29,360	74,868	15	83,550
96	6,8	1.88-1.93	1.85	17,424	<u>32,234</u>	6	<u>33,420</u>
					<u>\$316,702</u>		<u>\$306,300</u>
PARCEL NO. 2							
131,132	6,8	1.88-1.93	1.85	7,146	13,220	w/133,134	
133,134	9,15,16	3.34-4.89	4.80	8,100	38,880	5	27,850
127	2,7,10,11	2.07-2.75	2.10	8,973	18,843	w/130	
130	5,15	2.52-4.89	4.00	7,405	29,620	6	33,420
128	5,13,14,15,17	2.52-4.89	3.75	8,799	32,996	w/150	
129	5,13,14,15,17	2.52-4.89	3.75	7,405	27,768	w/150	
147	5,13,14,15,17	2.52-4.89	4.20	9,191	38,602	w/150	
149	5,13,14,15,17	2.52-4.89	3.25	8,712	28,314	w/150	
150	5,13,14,15,17	2.52-4.89	2.10	6,969	14,634	23	128,110
151	9,13,14	3.34-4.64	4.00	19,602	78,408	w/152	
152	2,10	2.11-2.38	1.40	17,424	<u>24,393</u>	20	<u>111,400</u>
					<u>\$345,678</u>		<u>\$300,780</u>

EXHIBIT I.4 CONT'D

MARKET COMPRABLE VALUATION CONT'D

Subject Platt No.	Most Similar To Comprable No.	Value By Square Foot Method		Subject Size	Total Price of Subject	Value By Unit Method	
		Time Adjusted Cost Per Sq. Ft. of Comprable	Adjusted Cost Per Sq. Ft. of Subject			* Units Allow. on Subject	Value at \$5,570/unit
PARCEL NO. 3							
91,92	1,3,4	1.99-3.00	1.65	5,445	8,984	w/94	
93	3,4	2.50-3.00	2.50	4,356	10,890	w/94	
94	3,4	2.50-3.00	3.00	13,068	39,204	10	55,700
95	6,8	1.88-1.93	1.55	14,810	22,955	5	27,850
139	12,14	4.54-4.64	5.20	13,068	67,954	w/138	
138	2,4,10,11	2.07-2.70	1.50	14,374	21,561	13	72,410
135	6,8	1.88-1.93	1.40	11,325	15,855	2	11,140
137	12,14	4.54-4.64	4.50	23,522	105,850	11	61,270
143	12,14,17	4.54-4.67	5.40	8,276	44,690	w/146	
145	13,14,15	4.60-4.89	4.85	6,969	33,800	w/146	
146	13,14,15	4.60-4.89	4.85	9,017	<u>43,732</u>	11	<u>61,270</u>
					<u>\$415,421</u>		<u>\$289,640</u>
PARCEL NO. 4							
153,154	C3,C4	3.10-6.49	5.25	50,965	267,566	NA	NA
155	C5,15	4.54-6.12	6.25	27,007	168,793	NA	NA
156	C5	6.12	6.25	13,068	<u>81,675</u>	NA	NA
					<u>\$518,034</u>		

* Maximum number of units under R-16 is 25,-9,000 sq. ft. for first unit and 1,440 for each additional.
 NA = Not applicable

EXHIBIT I.5

ASSESSMENT VALUATION

Subject Platt No.	Present Assessment Value/Sq. Ft.	* Time Adjusted Value/Sq. Ft.	Subject Size	Total Price of Subject	Subject Platt No.	Present Assessment Value/Sq. Ft.	* Time Adjusted Value/Sq. Ft.	Subject Size	Total Price of Subject
PARCEL NO. 1					PARCEL NO. 2				
100	.55	.55	12,632	6,950	131 to 134	3.35	4.19	15,246	63,911
107	.23	.29	7,535	2,163	127	.56	.70	8,973	6,250
106	.23	.29	3,920	1,137	130	.81	1.01	7,405	7,500
105	.25	.31	12,196	3,750	128	3.57	4.46	8,799	39,265
102	1.31	1.64	17,424	28,531	129	3.54	4.43	7,405	32,768
99	1.07	1.34	21,344	28,500	147	3.26	4.08	9,191	37,454
98	1.56	1.95	15,682	30,625	149	2.63	3.29	8,712	28,625
97	1.70	2.13	29,360	62,500	150	.86	1.08	6,969	7,500
96	.98	1.22	17,424	<u>21,250</u>	151	2.35	2.94	19,602	57,581
				<u>\$185,406</u>	152	.23	.29	17,424	<u>5,000</u>
PARCEL NO. 3					PARCEL NO. 4				
95	1.01	1.27	14,810	18,750	153,154	4.20	5.25	50,965	267,567
94	.55	.55	13,068	7,169	155	6.12	7.65	27,007	175,547
93	.55	.55	4,356	2,396	156	6.12	7.65	13,068	<u>85,000</u>
91,92	.55	.55	5,445	2,995					<u>\$528,114</u>
139	5.51	6.89	13,068	90,006					
138	.42	.52	14,374	7,500					
135	1.24	1.55	11,325	17,500					
137	3.61	4.51	23,522	106,143					
143	6.47	8.09	8,276	66,956					
145	3.76	4.70	6,969	32,757					
146	4.03	5.04	9,017	<u>45,423</u>					
				<u>\$397,595</u>					

* Assessments are adjusted approximately 25% for time since last assessment except for state or town land.

EXHIBIT I.6

LAND VALUATION BASED ON

DEVELOPMENT COSTS FOR PROPOSED UNITS [†]

	Size Sq. Ft.	Hard Const. Cost	Amenities *	Time Multiplier	Local Multiplier	Unit Cost Per Sq. Ft.	Total Const. Cost Hard	Project Cost Multiplier	Total Project Cost Before Land	Total Cost With Land	Possible Selling Price W/10% Profit	Land Cost ^{**} Per Unit	Land Value Per Acre ^{***} Based on No. of Units
<u>Townhouse</u>	1200	32.17	3.63	1.01	.84	30.37	\$36,447	1.31	\$47,746	\$53,051	\$58,946	\$5,305	\$63,660
	1400	31.19	3.11	1.01	.84	29.10	\$40,740	1.31	\$53,369	\$59,299	\$65,888	\$5,930	\$71,160
<u>Detached House</u>	1300	32.72	7.74	1.01	.84	34.33	\$44,628	1.33	\$59,355	\$69,830 \$74,196	\$77,589 \$82,440	\$10,475 \$14,840	\$62,850 \$89,040
	1500	31.66	6.71	1.01	.84	32.55	\$48,831	1.33	\$64,945	\$76,406 \$81,181	\$84,895 \$90,201	\$11,461 \$16,236	\$68,766 \$97,416
<u>Apartments</u>	900	26.84	NA	1.01	.84	22.77	\$20,500	1.25	\$25,600	\$26,880 \$28,160 \$29,440	NA	\$ 1,280 \$ 2,560 \$ 3,840	\$32,000 \$64,000 \$96,000

* Amenities: Townhouse = Fireplace, Full Appliances
 Amenities: Detached Single-Family = Fireplace, Full Appliances, Garage

** Land costs are calculated as a percent of total project costs: Townhouses = 10%
 Detached Single-Family = 15% & 20%

*** Number of units per acre: Townhouses = 12 units
 Detached Single-Family = 6 units
 Apartments = 25 units

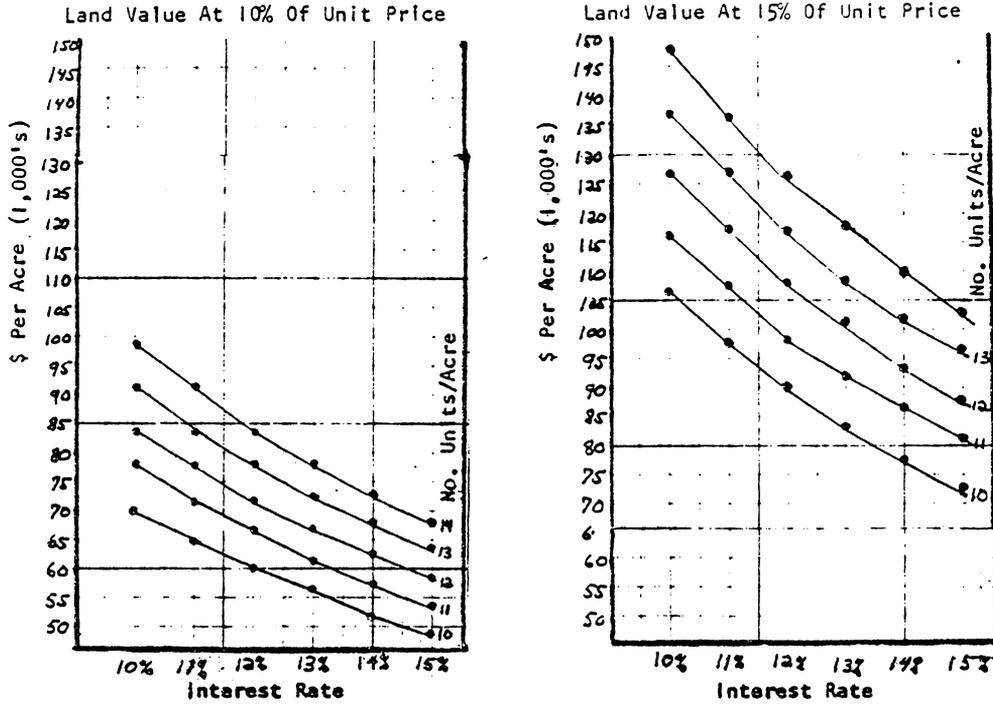
Project Cost For Townhouses: Carrying Charges 7% Arch./Eng. Fees 6% Selling Fees 5% Permits 3% Site Work 4% Contingency 4% Total 31%	Project Cost For Detached Units: Carrying Charges 7% Arch./Eng. Fees 6% Selling Fees 5% Permits 3% Site Work 8% Contingency 4% Total 33%	Project Cost For Apartments: Carrying Charges 6% Arch./Eng. Fees 6% Mangt. 2% Permits 3% Site Work 4% Contingency 4% Total 25%
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[†] From Marshall and Swift's Residential Cost Indexes, March, 1982

EXHIBIT I.7

LAND VALUATION GRAPHS

LAND VALUATION WITH RESPECT TO
PURCHASEABILITY OF ASSISTANT PROFESSORS

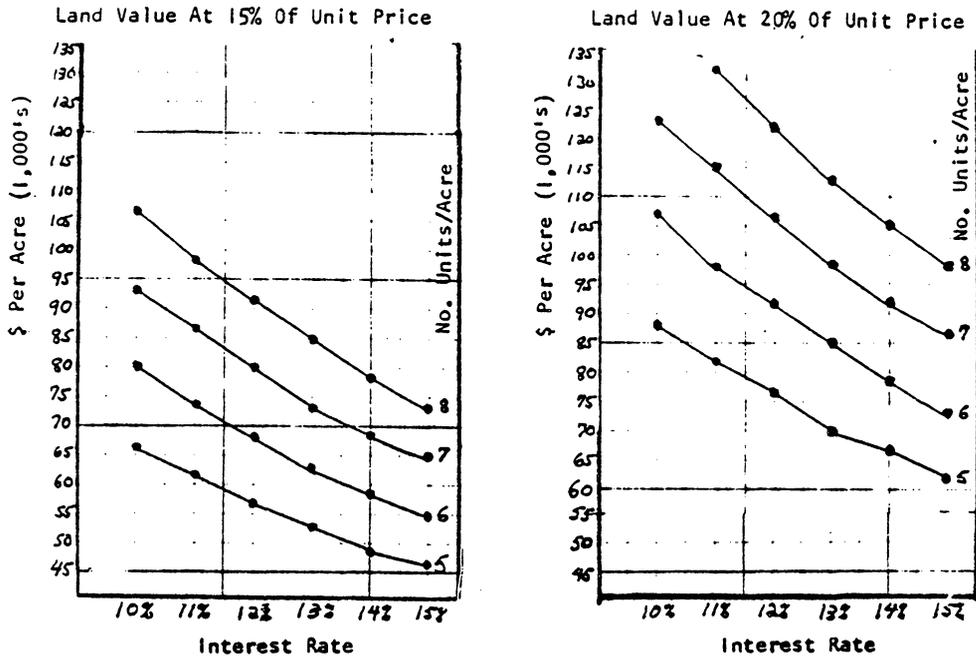


- TARGET MARKET Assistant Professor
- AVERAGE ANNUAL INCOME \$22,650
- SPENDABLE INCOME FOR HOUSING \$6,002 (26.5% of income)
- PERCENTAGE OF MORTGAGE LOAN TO PRICE 80%
- MORTGAGE PERIOD 30 Years
- INTEREST RATE RANGE 10-15%
- TYPE OF UNIT FOR TARGET MARKET Townhouse (2-3br., 1200-1400 s.f.)
- NUMBER OF UNITS PER ACRE 10-14

At Mortgage Interest Rate of:	Mortgage Constant	Affordable Sales Price of Unit is:
10%	.106079	\$70,725
11%	.115025	\$65,225
12%	.124144	\$60,434
13%	.133411	\$56,235
14%	.142803	\$52,537
15%	.152300	\$49,261

EXHIBIT I.7 CONT'D

LAND VALUATION WITH RESPECT TO
PURCHASEABILITY OF ASSOCIATE PROFESSORS



- TARGET MARKET Associate Professor
- AVERAGE ANNUAL INCOME \$28,557
- SPENDABLE INCOME FOR HOUSING. \$7,568 (26.5% of Income)
- PERCENTAGE OF MORTGAGE LOAN TO PRICE. 80%
- MORTGAGE PERIOD 30 Years
- INTEREST RATE RANGE 10-15%
- TYPE OF UNIT FOR TARGET MARKET. Detached Single-Family
(1300-1500 s.f.)
- NUMBER OF UNITS PER ACRE. 5-8

At Mortgage Interest Rate of:	Mortgage Constant	Affordable Sales Price of Unit is:
10%	.106079	\$89,179
11%	.115025	\$82,243
12%	.124144	\$76,202
13%	.133411	\$70,909
14%	.142803	\$66,245
15%	.152300	\$62,114

EXHIBIT I.8
AFFORDABILITY CALCULATIONS

SUMMARY OF AFFORDABILITY

BASED ON LAND VALUE

Unit Type: Townhouses

Target Market: Assistant Professors earning an average of \$22,650
a year.

Proposed Development Valuation: Selling price range = \$59,000 to \$65,000

Land value per unit = \$5,833

Land value per acre = \$70,000

Most Probable Cost of Land: \$10,000 per unit at 12 units per acre.
\$120,000 per acre.

At The Most Probable Cost of Land,

The Minimum Sales Price For A Unit Would Be: \$64,000 for a 1200 s.f. unit.
\$69,300 for a 1400 s.f. unit.

Affordable Sales Prices For Target Market

of Assistant Professors At Various Interest Rates:

<u>Interest Rate</u>	<u>Affordable Sales * Price of Unit</u>
10%	\$70,725
11%	\$65,225
12%	\$60,434
13%	\$56,235
14%	\$52,537
15%	\$49,261

Summary For Townhouses: Interest rates must drop to 11 to 12% for this market group to be able to purchase townhouses at proposed development land valuation. The rates would have to drop additionally to 10% or less for this group to afford a unit at the most probable valuation of the land.

* Affordable sales price is calculated by:

$$\text{sales price} = \frac{\text{spendable income (26.5\% of income)}}{\text{mortgage constant (Interest rate at 30 years)}} \div \text{\% of mortgage loan (75\%)}$$

EXHIBIT I.8 CONT'D

SUMMARY OF AFFORDABILITY

BASED ON LAND VALUE

Unit Type: Detached Single-Family

Target Market: Associate Professors earning an average of \$28,557
a year.

Proposed Development Valuation: Selling price range = \$76,000 to \$85,000.

Land value per unit = \$11,666

Land value per acre = \$70,000

Most Probable Cost of Land: \$20,000 per unit at 6 units per acre.
\$120,000 per acre.

At The Most Probable Cost of Land,

The Minimum Sales Price For A Unit Would Be: \$79,300 for a 1300 s.f. unit.
\$84,900 for a 1500 s.f. unit.

Affordable Sales Prices For Target Market

of Associate Professors At Various Interest Rates:

<u>Interest Rate</u>	<u>Affordable Sales Price of Unit</u>
10%	\$89,179
11%	\$82,243
12%	\$76,202
13%	\$70,909
14%	\$66,245
15%	\$62,114

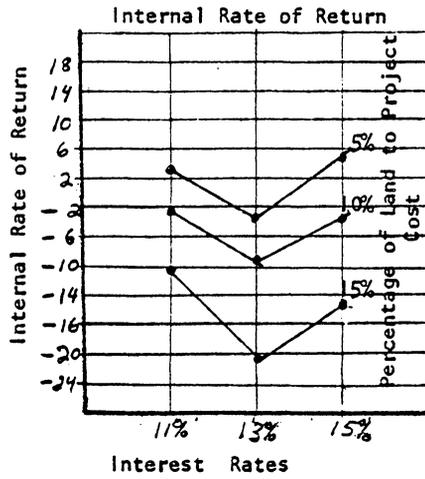
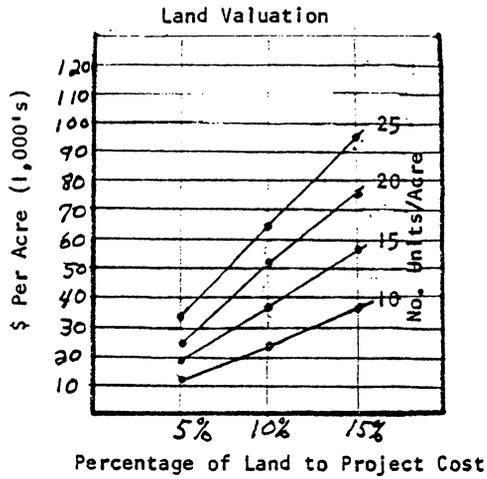
Summary For Detached Single-Family: Interest rates would have to drop
to approximately 10.5% for this market group to purchase Detached
Single-Family units for either valuation.

EXHIBIT I.9

RETURN ANALYSIS GRAPHS FOR APARTMENTS

LAND VALUATION AND IRR

FOR APARTMENTS



TARGET MARKET	Graduate St.	HOLDING PERIOD	7 Years
UNIT TYPE	Apartment	RENTAL RATE	325/mo.
SIZE	900 s.f.	OPERATING EXPENSES	33%
CONST. COST HARD.	22.77 s.f.	NET OPERATING INCOME	2,600
PROJECT COST MULTIPLIER.	1.25	DEPRECIATION METHOD	Straight Line
TOTAL COST PER APT.	25,600	BUILDING LIFE	15 Years
LAND VALUE PER UNIT:		CAPITALIZATION RATE	12 %
At 5% of project cost =	1,280	REQUIRED RETURN	12 %
At 10% of project cost =	2,560		
At 15% of project cost =	3,840		

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A LAND ACQUISITION FEASIBILITY
ANALYSIS PROCESS

by

James Wayne Gosnell

(ABSTRACT)

This study offers an interpretive assessment of how a land feasibility acquisition analysis might be performed. A discussion of the process which was utilized in presenting a "data packet" of all relevant information for developing a proposed site is provided. Additionally, a discussion of possible development scenarios and several methods of valuation of the subject site was performed. Finally, an analysis and feasibility of the most likely development occurrence for the subject site is included.