THE CITY OF CHARLOTTESVILLE'S PROPOSED DEVELOPMENT OF VINEGAR HILL

Christopher Charles Valtin
McLean, Virginia

B.A., University of Virginia, 1980

A Thesis Presented to the Graduate
Faculty of the University of Virginia
in Candidacy for the Degree of
Master of Arts

James Wilson Department of Economics

University of Virginia

August, 1984

SIGNATURES OF APPROVAL

DIRECTOR OF GRADUATE STUDIES

David E. Mills
Associate Professor of Economics

FIRST READER

Arthur Snow

Arthur A. Snow
Assistant Professor of Economics

SECOND READER

Edgar K. Browning

Edgar K. Browning
Professor of Economics

THE
CITY OF CHARLOTTESVILLE'S
PROPOSED DEVELOPMENT
OF
VINEGAR HILL

I. INTRODUCTION

The proposed development of Vinegar Hill, as agreed to by the City of Charlottesville and Bland and Hoye Developers in 1981, has provoked almost two years of spirited controversy among the members of the business community and among the citizenry of Charlottesville, Virginia. At issue is the question of whether the City should use public monies to subsidize the building of a luxury hotel in its downtown neighborhood. This paper will examine factors relevant to that issue: it will predict the distributional impact of the undertaking, it will relate the project to efficient resource allocation, and it will conduct an overall cost-benefit analysis. In short, this paper will demonstrate that the City has been ill-advised to participate in the proposed project.

II. BACKGROUND [1]

Vinegar Hill is a twenty-acre tract of land located in the heart of Charlottesville's downtown business district. Prior to 1960, this area was in desperate decay and was characterized as a bottleneck to downtown business expansion. In 1960, this acreage became the target of a three million dollar urban renewal project. With financial help from the Federal Government, the City purchased the land and completely cleared it. Residents of the area were relocated to a nearby Federal Housing project, and the City proceeded to sell bits and pieces of Vinegar Hill to various private developers. Eventually, fourteen of the twenty acres of land were privately developed.

In 1978, City Council formed the Charlottesville Development Group. The Group, composed of community and business representatives, had as its objective the search for a plan which would strengthen the economic base of the City. Their study recommended that the remaining six acres of Vinegar Hill be given top priority for development. Two reasons were given in the report -- 1) that the land, in that it was barren, acted as a deterrent to downtown expansion westward towards the campus of the University of Virginia and 2) that this site offered an unusual opportunity for the City in its effort to stimulate business activity in the central business district.

Soon thereafter, a private consultant was hired by the City to make recommendations concerning the use of the Vinegar Hill site. The consultant's initial plan called for the building of a large, luxury hotel, suggesting that such a structure would best fulfill the City's desire to gain maximum potential from the use of the six-acre plot. Further study of a more intensive and practical nature, however, led the consultant to augment the original proposal. In order to assure hotel trade in the downtown area, the consultant's report argued, a conference center should be located nearby. Additionally, acknowledging that existing parking space in downtown Charlottesville is currently inadequate for the traffic which would accompany such an influx of people and noting that acquiring sufficient space for additional surface parking would be impossible, it was determined that a parking garage would necessarily have to be built as well. A hotel located along a public roadway outside the City would not need such a center and garage to generate activity. Roadway traffic would bring lodgers, and surface parking would be inexpensive and readily available. But, the thesis concluded, since the objective of the plan was to vitalize downtown Charlottesville -- in line with the aim to develop Vinegar Hill -- these two structures were crucial to the viability of the overall project.

The consultant's calculations disclosed, however, that any additional expenses beyond those geared for the actual construction of the hotel itself would make the development an unprofitable investment for a private contractor. Therefore, in order for the downtown development plan to materialize, the City -- that is, public funds -- would have to subsidize the hotel project by bearing the costs of constructing the conference center and the parking garage.

After private discussions and a public hearing on the subject, City Council committed itself to support of the concept of the proposed plan. For the next two years, the City worked with the consultant to select a private developer and, in February of 1981, the City entered a tentative agreement with Bland and Hoye Developers. Bland and Hoye proceeded to employ their own financial consultants, and these consultants likewise concluded that the project would be feasible. Finally, in June of 1981, Bland and Hoye formally agreed to build a hotel, provided the City would follow through in its commitment to build the conference center and the accompanying parking garage.

The projected cost to the City for these two facilities is six million dollars. Under the proposed plan, the money would be raised by issuing and selling municipal bonds. These bonds would be amortized over twenty years at 8% interest, adding another five million dollars in interest payments. Hence, the total cost borne by the City is estimated to be eleven million dollars spread over a twenty-year period. These figures are taken directly from the City's financial consultant's report of 1981. This report (prepared by Zuchelli, Hunter and Associates, Inc. and entitled "Vinegar Hill Project: Financial Costs and Benefits to the City of Charlottesville") has been relied on exclusively by the City.

Additional tax revenues would have to be generated in order to meet the annual cost of servicing the six million dollar bond issue. According to a cost-benefit analysis prepared by the City's *consultant, however, the collection of additional tax revenues would only be necessary for the first nine years of the project. By the tenth year, the development's direct tax revenues would effectively pay the annual bond service costs. The proposed project, as formulated, would require raising additional tax revenues for the first nine-year period of the project.*

Two alternative ways of raising additional revenues for the nine-year period are currently being studied by the City. They are: 1) an increase in the real property tax rate, and 2) an increase in both the meals tax rate and the transient lodging tax rate.

Alternatives to the hotel-conference center have been formulated by City Officials. 2 In fact, "...the development possibilities are numerous..." 3 The alternative development plan given most (although not serious) attention consists of 50 multifamily condominium housing units. There are two main reasons why condominium units are an attractive, feasible alternative to the hotel-conference center.

First, it is generally accepted that a demand exists for condominiums in the downtown area of Charlottesville. This belief is supported by recent development of such units adjacent to Vinegar Hill. Furthermore, condominiums have practical benefits which City officials must appreciate. The troublesome question of parking facilities does not come into play -- and thus this kind of development overcomes one of the problem areas that has plagued many of the plans under consideration. Insofar as parking facilities are needed, each condominium unit would presumably provide those spaces which are deemed essential for each unit. As a result, this alternative development would be entirely privately financed. Public funds -- that is, money provided by Charlottesville's taxpayers -- would not be utilized.

While the condominium plan is most favored among the various alternative schemes City Officials are considering, "staff continues to support the hotel-conference facility as the highest and best use of the property." 4 As such, discussion has not been based on which development to support, but rather on whether the city should put up its share of money for the hotel-conference center.

At this writing, while the community continues to debate the wisdom of the favored plan, City Council is preparing to make a final decision as to whether they will provide the subsidy for the development of a luxury hotel in Vinegar Hill.

III. DISTRIBUTIONAL EFFECTS

An examination of expenditure-related and tax-financing related distributional effects will follow. Although the condominium alternative development plan has not received much serious attention *from City Officials, it will be utilized here in assessing the hotel-conference center's effect on area prices. In analyzing the impact of any development scheme for the presently vacant Vinegar Hill area, the relevent comparison (in which to assess the distributional impact of such a plan) is <u>not</u> a comparison between the proposed development and the present situation but, rather, between the proposed development and the best alternative use of the site. Based upon what City Officials have said about the condominium development scheme, this plan will represent Vinegar Hill's best alternative use. The analysis of the hotel-conference center's distributional impact, therefore, will consist of a hypothetical comparison between the center's and the condominiums' effects on area input and output prices. Before examining this distributional impact, an important assumption must be explained.*

In regard to the hotel-conference center, the following two financial claims have been made by City officials: first, that the additional City taxes levied to finance the City's portion of the project will be of temporary duration and will be recinded once the project breaks even in the tenth year; and second, that tax revenues from the hotel complex after the break-even year can be put to use in the City's general budget, permitting a reduction in individual tax burdens from today's pre-project levels. The predictions of tax revenues that the hotel-conference center will generate, however, are subject to considerable guesswork and, indeed, may prove to be incorrect. Reflecting his skepticims regarding these claims, Charlottesville Mayor Frank Buck stated the following: "I'm not going to tell anybody, after the project goes into effect, that I'm going to be able to reduce your taxes..."5 The consultant's financial analysis on which the prediction of future tax rates is based will be examined below in Section V. For the purpose of this section, however, an exact assumption must be made. This analysis -- notwithstanding its stated criticism on this matter -- will assume that the generating of additional tax revenues to finance the project will indeed only be temporarily necessary. But it will not assume that individual tax burdens will actually be decreased from today's pre-project levels after the tenth year of the project: this claim -- closely examined below -- is not convincingly substantiated so as to be taken as valid.

Expenditure Effects

Whether Vinegar Hill is developed with a subsidized hotel-conference center or with multifamily condominium units, the prices of land and rental rates will rise in the immediate area of downtown Charlottesville near Vinegar Hill. (That is, both the price received by owners for its sale and the price paid by renters for its use will rise in this particular area.) Suppliers of goods and services that complement either the hotel-conference center or multifamily condominium units will desire to locate their businesses close to the proposed site. This interest will create heightened demand for property near Vinegar Hill. Since the supply of land near this site is perfectly inelastic, the increase in demand will work to push up the price of this land. Rental rates in the Vinegar Hill area will follow the same pattern as a result of the enhanced desire to locate near the hotel-conference center or the housing units. Predicting the magnitude of this increase is beyond the scope of this paper.

The increased cost of land and rents in the Vinegar Hill area will reflect the movement of economic activity to and from this downtown space. Under the hotel-conference center alternative, the movement to the area (as discussed above) involves those facilities and services that complement such a complex. Businesses such as restaurants, bars, and gift shops -- all of which offer goods and services typically utilized by visitors who attend conferences -- will move to the Vinegar Hill area. On the other hand, under the multifamily condominium alternative, businesses that complement housing needs -- such as department and hardware stores -- will move to the Vinegar Hill area. (In either case, those enterprises which cannot bear the increased costs of remaining in the downtown area will move away.) While both alternatives will increase downtown area land prices and rents, the resulting composition of economic activity in this area will depend on which plan is chosen.

The Real Estate Assessment Office will react to these workings of the market and somewhat offset the property value gain accruing to owners of downtown real estate. The official, City-assessed value of this land will be revised upward, thereby increasing real property taxes. This upward reassessment will reduce the selling price of this land. However, the actions of the Real Estate Assessment Office will only partially offset the market value gain created by the subsidized hotel-conference center or the multifamily condominium units.

Either development plan, then, will heighten the value of locating in the downtown area of Charlottesville adjacent to Vinegar Hill. Those who own land in this community will incur greater opportunity costs; and those who rent will incur greater rents.

Tax-Related Effects

In that the multifamily condominium scheme would not require public monies, the following analysis of tax-related effects applies only to the hotel-conference center proposal (since it will require a nine-year tax increase).

Tax-Related Effects: Increased Real Property Tax Alternative

Under the increased real property tax rate alternative for *financing the City's portion of the hotel-conference center, the initial increase in the real property tax rate will be six cents per $100 of assessed value. The impact of an additional six cents on the owners of real property (land and/or buildings-homes) is as follows:*

Property Value	*Increase in Monthly Tax Bill*
$30,000	*$1.50*
50,000	*2.50*
80,000	*4.00*

As the tax revenues generated by the hotel-conference center increase each year, these revenues will gradually offset the initial tax increase. The initial increase of six cents will step down to five cents, to four cents, to three cents, etc.. Finally, in the tenth year of the project, there will be no additional cost to the taxpayer. 6

The proposed temporary increase in the real property tax rate will lower the value of all City land by the amount of each year's rate-increase (as shown in the table above). However, regardless of the increased annual tax payments imposed by the proposed project, the present demand for locating activity within the City outside the Vinegar Hill area will not be significantly altered. For two reasons, those presently owning land in the City will not consider relocating outside of the City in order to avoid the increased real property taxes. First, the increased tax payments cannot be avoided by moving because an owner of City property will have to sell his property for less as a result of the tax. And, second, the costs of moving one's business or residence will be greater than the benefits of avoiding the increased tax payments. An example demonstrates this situation.

A commercial or residential property is valued at $80,000. For simplicity, suppose that the initial real property tax rate increase of six cents remains at that level for the entire nine-year period. (That is, assume the tax-increase does not step down to five cents, to four cents, etc., as described in the development plan.) The annual increase in real property taxes would be $48, and the total increase assuming a 10% discount rate would be $304.07 over the nine-year period. (The discounted present value, at i=10%, of (9x48)=304.07). Since the initial increase of six cents was not stepped-down in these calculations, this figure is the absolute maximum increase in taxes that would occur under the plan. Since the costs of moving a business or residence out of the City to surrounding County land surely would be greater than $304.07, it is very unlikely that such a movement will occur.

The increased real property tax rate, then, will not affect the demand for locating within the City. The price of land in the City will not be significantly modified by the proposed tax increase.

And increasing the real property tax rate will have no perceivable effect on City rents. The proposed increment is so small that even if owners of property passed-on increased tax payments to area renters, the rise in rental fees would be negligible.

Tax-Related Effects: Increased Meals Tax Rate/Increased Transient Lodging Tax Rate

Under this alternative for financing the proposed subsidy, the meals tax rate will increase from 4% to 6%. The present rate of 4% is due to a statewide sales tax; the proposed 2% increase will be collected by the City. Additionally, the transient lodging tax rate will rise from 6% to 8%. The State presently collects 4% through the sales tax while the City collects 2%; under the proposal, the City will also collect 4%. Once again, both of these tax rate increases will be temporary, lasting only for the first nine years of the project. 7

Restaurants and hotels located in the City are in competition with similar facilities situated in the surrounding County. Under conditions of perfect competition, in that the two tax-increases will not be imposed on County restaurants and hotels, restaurants and hotels located in the City would not be able to pass on the added costs created by the increased tax payments to their customers: these consumers would simply avoid increased output prices by shifting their trade to County restaurants and hotels. Thus (according to theory) competition would prohibit any upward movement of output prices, and the profits of City restaurants and hotels would decrease in the short run. This line of reasoning, however, is not appropriate in this instance, as perfect competition requires all goods to be homogeneous to ensure elastic demand facing any one firm. City restaurant meals and hotel services violate this condition. In fact, as will be argued below, the demand for services at a City restaurant or hotel is quite inelastic.

Restaurants build clientele for a variety of reasons -- quality of food, menu selection and atmosphere. In other words, there is no "one" product that sells for "one" price. Similarly, hotel services also cannot be lumped together and viewed as "one" commodity. Different hotels offer different types of services: some are elegant, some are cut-rate, some are suited especially well for business meetings, etc. And hotel guests -- typically visitors to the

Charlottesville area -- probably would not even be familiar with the 2% increase in the transient lodging tax rate.

Two examples further undermine the above theoretical predictions. Suppose a restaurant meal is priced at $10. Today, an additional $.40 must be paid in taxes. Under the proposed tax increase, and assuming the tax is fully passed-on to consumers, tax payments on the meal will rise by $.20, and a total of $.60 will be charged for taxes. For those cost-conscious customers considering whether to seek out only those establishments located in the County -- in order to avoid the additional tax payments incurred by City restaurants -- the relevant comparison is $10.40 versus $10.60. This meager rate difference surely will not induce marked abandonment of a favorite City restaurant. A 2% price increase will not alter the existing demand for dining in the City.

Now assume that the price of a hotel room is $40.00 per night. Presently -- whether the hotel is located in the City or in the County -- an additional $2.40 must be paid in taxes. (The County also imposes a 2% transient lodging tax on top of the 4% state sales tax.) Under the planned 2% increase and again assuming that the tax is fully passed on to consumers, tax payments will rise by $.80; total tax payments will be $3.20. The comparison, then, is $42.40 versus $43.20. Again, this is a negligible difference. It seems unlikely, therefore, that the increased transient lodging tax rate will take a significant amount of business away from Charlottesville hotels.

Even if fully reflected in output prices, then, the two tax increases should not appreciably affect the demand for City restaurant meals and hotel services. As a result, the increased tax payments imposed by the proposal will, in all likelihood, be fully passed-on to area consumers.

Summary of Distributional Effects

A project's distributional impact is evaluated by identifying the changes in economic well-being which, if put into effect, the project will create. Since the multifamily housing unit alternative development scheme has not received serious attention from City Council, this analysis will evaluate only the hotel-conference center's distributional impact. Such an identification follows.

Under either of the alternative tax-increase plans for financing the hotel-conference center, property value in the immediate vicinity of Vinegar Hill will rise significantly. And the business activity of those goods and services which complement the complex will substantially flourish. These small groups of property owners and businesses, therefore, represent the subsidy's gainers.

On the other hand, increased real property taxes will cause the value of City real property to fall. An increase in both the meals tax rate and transient lodging tax rate will cause the prices of these goods and services to rise. As a result, either the owners of real property within the City or the consumers of City restaurant meals and City hotel services will be the project's losers.

In short, the project's losers greatly exceed the project's gainers in numbers.

IV. EFFICIENT RESOURCE ALLOCATION *

This section will consider whether the use of public monies to subsidize the development of a luxury hotel is consistent with efficient resource allocation. If the luxury hotel, the conference center, or the parking garage is a public good, or if consumption of any of these facilities' services produces positive, real external effects, the City might have economic justification for participating in the proposed development project. The City, however, can claim no such justification.

Clearly, none of the complex's three structures qualify as a public good. It would be possible -- indeed, quite easy -- to confine the benefits of any of these facilities to those selected

---

*This section will concentrate only on the hotel-conference center.

persons who pay for its services. Public financing is not necessary. On the basis of public-good analysis, the City of Charlottesville should not provide the proposed subsidy.

All of the proposed facilities will produce external effects, but these external effects do not warrant a government subsidy because the "externalities" produced are actually pecuniary externalities. Pecuniary externalities are external effects that are transmitted exclusively through the price system. Only those activities which produce positive real external effects, ones which occur without a market transaction, can justify government subsidies. An example of such an externality will clarify the point.

When a person is inoculated against a contagious disease, he himself benefits for obvious reasons. But other citizens benefit as well because they are less likely to catch the disease. The external benefits to those not directly inoculated represent net social benefits an individual does not consider. As a result, the private production of inoculation services is insufficient. Government subsidies that encourage greater production of this activity can help to rectify this inefficiency. In this instance, a public subsidy is desirable to enhance the efficiency of resource allocation.

The external effects produced by the luxury hotel, conference center, and parking garage, in contrast, will be transmitted solely through the price system: the prices of particular inputs and outputs in the downtown area will increase. In this instance, there will not be any net social gain or loss, for the gain to some (as a result of the changes in input and output prices) is exactly offset by the loss to others. In sum, these effects represent pecuniary effects which do not indicate an inefficient allocation of resources. Only real external effects, such as in the innoculation case above, impede the attainment of efficiency. The City, therefore, cannot justify its proposed subsidy on the grounds that the complex will produce external effects.

Economic efficiency considerations do not justify the City's involvement in the project. Nonetheless, there are a series of arguments which presume to show that the project represents a public good because it will greatly benefit the City.

Proponents of the project claim that the hotel-conference center will:

- *increase the City's tax base and tax revenues*

- *encourage private investment*

- *create new employment and construction expenditures*

- *subsidize businesses*

These contentions, although attractive on face value, are deceptively simple. Close scrutiny uncovers the basic flaws which undermine these arguments.

Increase the City's Tax Base and Tax Revenues.

The most popular and appealing argument put forth by the project's boosters is that the hotel-conference center will increase the City's tax base and, in turn, augment City tax revenues. While this consequence is certainly true, it is a relative factor and must be weighted.

Compared to dollar benefits of the present situation at Vinegar Hill -- idle land from which the City earns zero tax revenues -- the building of a complex will bolster City tax receipts significantly. But this comparison is hardly relevant. Rather, the City should consider the potential tax revenues that could be generated by one of the alternative development schemes which the City has formulated and has before it for consideration. It is to these plans that the City should look for a more sensible revenue-producing alternative. One merely has to compare a publicly-financed project with a privately-financed development to see the point and to understand the potential that the City will be sacrificing if it proceeds. Under the hotel-conference plan, the bulk of collected revenues will necessarily be earmarked for the financing of the development itself. The tax revenues generated by private investment, however, would be utilized in the City's general budget.

Encourage Private Investment

One of the objectives of the Charlottesville Development Group was to find ways to encourage private investment in downtown Charlottesville. It has been promised that the complex would trigger such activity. There are two problems with this claim.

With a tax increase in effect, the City might actually discourage private investment in Charlottesville: augmenting the real property tax rate could decrease the desirability of locating any activity in the City, and increasing both the meals tax rate and the transient lodging tax rate could discourage future hotel and restaurant trade. In short, although the effect on area consumers as discussed above will be negligible, the increased taxes which the City will charge may be viewed by investors as a bad precedent, thereby decreasing the overallattractiveness of investing in Charlottesville real estate.

Moreover, if the ultimate objective is to increase private downtown investment, the City can achieve this goal most expeditiously -- both directly and simply -- by putting the Vinegar Hill acreage on the open market for the highest bidder.

Create New Employment and Construction Expenditures

The City's consultant has determined that the development of the hotel-conference center will create 177 new permanent jobs and construction expenditures on wages and materials worth $12 million. 8 However, these claims are deceptive.

As they relate to the Vinegar Hill complex, the jobs and construction expenditures will be made possible in part by an increase in City taxes. In effect, then, it will be the taxpayers of Charlottesville -- not the hotel-conference center -- who will be "creating" this business activity for the area. Furthermore, the consultant's analysis has failed to recognize that the tax money used to finance the project will not be available -- as it otherwise would be -- to spend on other goods and services. In truth, these "created" expenditures will not actually be created at all. Rather, they will be made possible, in part, by sacrificing expenditures on other area commodities.

Subsidize Businesses By Building a Parking Garage

As required by Virginia state law, a local municipality must assess the same real property tax rate on all land, whether business or residential property. But businesses, in fact, require fewer publicly financed services than do residences. Educational services, for example, while not needed by businesses, are provided for residences. In short, businesses are discriminated against.

As a result, the argument continues, the City should finance the construction of a parking garage in the downtown area in order to subsidize businesses in this community. In this way, these inequities will be corrected.

This argument does make use of sound logic. Businesses do not receive the same return on their local taxes as do residences. But this line of reasoning is poorly applied in this instance. To provide a specific downtown location with a parking garage would actually exacerbate this inequity. Consider those businesses located in the City that are not within reasonable walking distance of the proposed garage. They will hardly derive the same benefit from this facility. Although this argument has obvious merits for a portion of the business community, the building of a parking garage which grants preferential treatment to a particular area and group merely perpetuates unequal tax treatment.

In summary, the arguments in support of the proposed hotel-conference center do not justify the provision of a public subsidy.

V. COSTS AND BENEFITS

This section will examine the proposed subsidy's financial costs and benefits. The City's consultant, Zuchelli, Hunter and Associates (ZHA), has conducted a 20-year cost-benefit analysis; their findings will be reviewed initially. Then the shortcomings of the ZHA analysis will be recognized. Finally, the results of an alternative cost-benefit calculation will be discussed.

The ZHA Analysis [9]

The ZHA analysis has assumed that the City will initially sell $6 million worth of general obligation bonds to finance the subsidy. The bonds would be amortized over 20 years at 8% interest. The annual bond service costs -- composed of principal payments and interest payments -- reflect the public-sector costs of the project.

The complex's public-sector benefits are composed of the following:

Sales Tax Revenues

- *Room Sales Lodging Taxes*

- *Food and Beverage Sales Taxes*

Property Tax Revenues

- *Real Property Taxes*

- *Personal Property Taxes*

Utility Tax Revenues

- *Telephone Taxes*

- *Energy/Utility Taxes*

Multiplier Effects

Room Sales Lodging Taxes

ZHA's calculations of anticipated revenues derived from the City's transient lodging tax are based on a feasibility study performed by a public accounting firm (Pannell, Kerr, Forster). The *report projects occupancy estimates for the first 5 years of the complex's operation. Beginning in the sixth year, as recommended by the feasibility report, ZHA has assumed a stabilized occupancy rate and an annual 7.5% increase to account for expected future inflation. The analysis has assumed a 4% transient lodging tax rate.*

Food and Beverage Sales Taxes

For the first 5 years, ZHA has based its estimates of the expected tax revenues generated from the sales of food and beverages at the complex on the feasibility study mentioned above. For subsequent years, the analysis has applied on escalation rate of 7.5% per year to the fifth year projections. It has been assumed that the City will receive 1% of the total revenues generated from the complex's sales of food and beverages. This 1% is the amount which each locality presently receives from the state after it collects the state-wide 4% sales tax.

Real Property Taxes

Predictions of real property tax revenues are based on an estimate of the first year value of the hotel and conference center facilities made by the City Real Estate Assessment Office (the private developers will take ownership of both facilities once built). This value was then inflated at 7.5% annually for subsequent years.

A tax rate of $1.13 per $100 of assessed value was utilized; this is the City's present real property tax rate.

Personal Property Taxes

ZHA's calculations of anticipated personal property tax revenues rely on a projection made by City staff that the hotel and conference center facilities' personal property (furniture, fixtures, equipment, etc.) will have a total value of $1,500,000. The current 30% assessed-value-basis in use by the City and the current tax rate of $4.39 per $100 of this assessed value were assumed by the analysis. A seven-year depreciation schedule was assumed -- replacement began in the sixth year of the project's operation and occurred annually over the remaining years. As a result, after year six, the estimated personal property tax revenues were increased annually at a rate of 7.5%.

Telephone Taxes

For the first five years, estimated telephone tax revenues are based directly on information furnished by the private developers and the feasibility study. Starting in year 6, the analysis annually increased the anticipated tax revenues by 7.5%. ZHA assumed the current tax rate of 10%.

Utility Taxes

Utility taxes are based on the feasibility projections for the first five years. The current utility tax rate was assumed. After year 5, these expected revenues were inflated by 7.5% annually.

Multiplier Effects

In that the privately-financed portion of the project will come from a source outside of the Charlottesville area (Bland and Hoye) and since visitors to the center will be "outsiders" as well, ZHA has assumed that these new expenditures generated by the project would result first in direct tax benefits (as discussed above) and later in a series of secondary or "multiplier" effects. These multiplier effects were arrived at using the following: (multiplier effects in year i) = .6 (total direct tax revenues generated in year i).

Together, the direct tax revenues generated by the facility and their secondary effects compose the proposed subsidy's public-sector benefits.

Before examining the results obtained by ZHA, two points need mentioning. First, land sales are not included in the ZHA analysis: the value of the hotel property and terms of payment remain to be negotiated. And second, there will be both operating expenses and *operating revenues generated by the publicly provided and owned parking facility. ZHA has assumed that operating revenues will offset both operating expenses for this facility and for the maintenance of public areas surrounding the complex; thus the analysis does not contain estimates of these expenditures.*

The financial cost-benefit analysis, as prepared by ZHA, is summarized in brief by the following:

- *Over its first 20 years of operation (1984 through 2003), the project is projected to produce approximately $14.0 million in direct tax revenues for the City.*

- *In addition to the primary tax-related impacts, more than $8.0 million in secondary or multiplier tax impacts will be realized.*

Total costs borne by the City for the amortization of $6 million in general obligation bonds are likely to approximate $11,040,000 over the period of analysis.

Over the 20-year period of analysis, primary tax revenue sources are projected to exceed debt service costs by close to $3.0 million; when multiplier impacts are considered, net benefits are projected to be in excess of $11.0 million.

According to ZHA calculations, then, the project will be a profitable investment for the City of Charlottesville. However, several factors discount this prognostication.

Opportunity Costs

Of important consequence to be immediately recognized is that ZHA has neglected to include any opportunity costs in their calculation of costs. The opportunity costs of the proposed project equal the value of the net benefits produced by the best alternative development. It is these revenues that the City will sacrifice in order to use Vinegar Hill for a luxury hotel, a conference center, and a parking garage.

By not including opportunity costs in their projections, ZHA is assuming, in effect, that the land will remain vacant if the proposed development under examination does not take place. A review of building activity in the Vinegar Hill area, however, does not support this assumption, for this area has been the scene of significant recent development. During the last few years, a large grocery store and numerous small adjoining shops have been built. Albemarle County has completed a major renovation of an old City high school adjacent to Vinegar Hill for its administrative offices. A large condominium complex is presently under construction. These developments encompass -- within a block -- the proposed site for the hotel-conference center. If the six-acre plot had been sold to the highest bidder immediately after it had been cleared, this land, presumably, would have been developed -- as demonstrated by the activity abutting the property -- and would presently be producing tax revenues for the City. Clearly, there are positive opportunity costs associated with the proposed development, not zero as ZHA assumes.

Bond Service Costs

The ZHA analysis -- completed in June, 1981 -- amortized the general obligation bonds at an 8% interest rate. At this writing, such a low interest rate could not be secured. In fact, Charlottesville City Counselor Thomas E. Albro has admitted that "rising interest rates may make it too costly for the City to participate in the proposed Vinegar Hill project."[10] City Economic Development Coordinator George Ray has agreed that "current interest rates probably would make a 20-year issue too expensive." But he said that "the City has the option of issuing 2-year short-term bonds at about 8 1/2% -- and hoping for interest rates to decline."[11] ZHA's calculations of public costs -- based on speculation about interest rates -- are underestimated.

Room Sales Lodging Taxes

In estimating the transient lodging tax revenues generated by the luxury hotel, ZHA assumed a 4% tax rate. (This would be the tax rate if, in fact, the City chose the second alternative of financing the project as discussed above.) In effect, the analysis has assumed that rather than increasing the real property tax rate to finance the project, the City would increase both the meals tax rate and the transient lodging tax rate. However, City Manager Cole Hendrix stated in April, 1982 that the decision as to how to finance the subsidy has not yet been formulated by City officials. 12 In that the anticipated revenues generated by the imposition of a 4% transient lodging tax rate represent over half of the project's total direct tax revenues (in cumulative terms), a decision -- reached by City Council -- not to impose such an increase would have grave implications for the project's profitability.

Discounted Present Value

Finally, the ZHA analysis has failed to calculate the discounted (present) value of the twenty-year stream of costs and benefits. Instead, the analysis simply has summed-up the costs and benefits as they will occur during each year of the twenty-year period.

The discounted value calculation is necessary because of the "time value" of money. Since savings accounts offer the possibility of earning interest payments, the value of a particular sum of money changes over time. A hundred dollars today is actually worth more than a hundred dollars will be a year from now: today's hundred dollars, put into a savings account, earns interest over the year, thereby increasing its initial value. If costs and benefits occur in years (t+1) and (t-2), in year (t) one dollar's worth of costs and benefits accruing in year (t+1) are actually worth more than one dollar's worth of costs and benefits accruing in year (t+2). Simply adding these costs and benefits is to add apples and oranges. Instead, a rate of exchange is needed. To add total costs and benefits accruing in years (t+1) and (t+2), the discounted value must be calculated in order to overcome the changing value of these costs and benefits occurring in years (t+1) and (t+2). Two examples emphasize how essential this calculation is.

Suppose an investment costs $50 in year (t) and accrues $100 in benefits in year (t+10). If one simply summed-up total costs and benefits -- as the ZHA analysis has done -- total benefits exceed total costs by $50. But, by calculating the discounted value of these costs and benefits using a 10% interest rate, one discovers that the benefits of $100 accruing in year (t+10) are actually only worth $38.55 in year (t).* In other words, an investment of $38.55 in a savings account yielding a return of 10% in year (t) matures to $100 in year (t+10). The initial investment of $50 in

---

*38.55 = 100/(1+.10)10

year (t), therefore, is more than the amount necessary to earn $100 in year (t+10). Such an investment -- although viewed positively by ZHA methodology -- would be unwise.

In this instance, applying ZHA methodology, the City of Charlottesville would actually be financially better off by issuing the $6.0 million of bonds and simply placing the proceeds into a savings account for twenty years. In a savings account yielding 10% over twenty years, an initial $6.0 million deposit would accrue to $40.365 million. Subtracting the bond service costs of approximately $11.04 million (that the City would pay over the twenty-year period) nets a $29.325 million "profit" to the City. Although this methodology is erroneous, these examples should be very enlightening to City Officials.

In that the discounted value was not calculated, the ZHA propositions concerning total costs and benefits are meaningless.

An Alternative Cost-Benefit Analysis

In an attempt to overcome the flaws of the ZHA thesis, this section recalculated the proposed project's costs and benefits. Several factors need explanation.

While the ZHA analysis was relied on for the yearly estimates of bond service payments, direct hotel-conference tax revenues, and hotel-conference center multiplier effects, the streams of costs and benefits have been discounted. The rate used for discounting depends on the opportunity cost of money. At this writing, investments yielding between 10% to 15% are easily obtainable by the serious investor; thus the streams of costs and benefits have been discounted at rates of 10% and 15%.

Opportunity costs have been added to costs. The condominium scheme was assumed as the alternative development (used for calculating opportunity costs). The direct tax revenues which these condominiums would generate have been calculated by the City and were relied on here. 13 These revenues represent the hotel-conference center's opportunity costs, for it is these revenues that the City would be sacrificing if it goes ahead with its subsidized proposal. These revenues in addition to the direct costs associated with developing the complex represent the hotel-conference center's total costs.

While mutliplier effects were included in ZHA's estimates of the hotel-conference center's annual total benefits (which were relied on here as noted above), multiplier impacts were not calculated for the condominium units. It was assumed that the condominiums would be *developed with local, private financing and that present, local residents would become the dwellers. Thus no "new" or "outside" money would be generated for the City's tax base.*

These assumptions (that the subsidized complex would produce multiplier impacts and the condominiums would not create secondary spending effects) were used here for simplicity. While the hotel-conference center would indeed create greater multiplier effects, the exact magnitude of the difference is ambiguous. ZHA's calculations did not take into account the fact that a substantial portion of the initial financing would be provided for by "local" money through the subsidy; thus their estimates are overstated. And since it is probable that the residents in the condominiums would be presently located outside of the City, the condominiums' multiplier effects are under estimated. Actually, then, this alternative cost-benefit analysis' calculations of multiplier impacts are biased towards the hotel-conference center.

Additionally, the following factors concerning the condominiums are pertinent: land sales have not been included (they were not included in the ZHA analysis of the hotel-conference center); and, as ZHA assumed in their analysis of the hotel-conference center, yearly direct tax revenues generated by the condominiums have been increased by 7.5% annually after year 5 to account for expected inflation.

The revised twenty year streams of costs and benefits are included in the three appendices to this paper. Appendix I lists these streams of costs and benefits as they are projected to occur each year. Appendix II and III again list these streams, but in the more meaningful discounted present value form. The following table summarzies the hotel-conference center's costs and benefits:

HOTEL-CONFERENCE CENTER

Costs & Benefits

to the

City of Charlottesville

Discount Rate	Total Costs	Total Benefits
10%	$6,504,591	$6,891,734
15%	5,119,572	4,391,720

These figures certainly depict an entirely different picture than those of ZHA. In the 10% case, total benefits exceed total costs by a mere $387,143. And in the 15% case, total benefits are <u>less</u> than total costs by $727,852. In other words, in the 10% case, the hotel-conference center's net benefits exceed the condominium's net benefits by only $387,143. In the 15% case, the City would actually accrue greater benefits by going with the condominium development plan as the condominium's net benefits are greater than the hotel-conference center's net benefits by $727,852. ZHA's claim that the City would accrue an $11 million profit on its subsidy is very misleading.

Deficiencies of Cost/Benefit Analysis

This alternative cost-benefit analysis of the hotel-conference center, in addition to the multiplier impact ambiguity discussed above, has another deficiency: social costs and social benefits have been neglected. The following identifies some of these social costs and social benefits that the complex will produce.

The developer's sketches of the proposed development depict a sleek and attractive complex. To most people, this will probably represent an improvement to the presently barren Vinegar Hill. Moreover, if the complex were to succeed in attracting national conferences, the City might gain improved national recognition. Although not true for everyone, most citizens of Charlottesville - in all likelihood - would find both of these factors desirous.

On the other hand, the complex will produce increased traffic to the downtown area. And, most importantly, there will be welfare costs associated with any tax increase to finance the public subsidy. These elements, undoubtedly, represent social costs.

Social costs and social benefits are extremely difficult to quantify and thus were ommitted from the alternative cost-benefit analysis. But they are significant to any publicly-financed undertaking. While the writer apologizes for not making an attempt to calculate these social effects (and the multiplier impacts more precisely), he does feel that this alternative analysis has overcome the major ZHA erroneous methodological techniques and that the financial numbers alone speak for themselves.

VI. ADDITIONAL CONSIDERATIONS

There are two additional considerations which undermine the subsidized project.

The downtown area of Charlottesville near Vinegar Hill is now an attractive, financially healthy neighborhood -- a far cry from the depressed state of twenty-five years ago. The vitality of the area is demonstrated by the recent influx of private developments which have located there. If that acreage were still beset by the neglect of the late fifties, the spending of public monies to transform the decaying character of the area might be in the best interest of the City as a whole. But this bleak situation is simply not the existing one. The City should have no trouble finding private investors eager to develop the 6-acre plot.

Finally, there is an equity question. Consumers making use of the services of a luxury hotel are, in the main, financially well-off. Should the taxpayers of Charlottesville subsidize activities for these patrons, especially in view of the fact that these activities do not produce real external effects?

VII. SUMMARY

Examing the project's distribution impact reveals that the project's losers greatly exceed the project's gainers in numbers. And, indeed, the few beneficiaries are probably financially better off than the bulk of those who will bear the project's cost. The proposed subsidy will violate widely-held equitable norms.

In a broader sense, too, every citizen of Charlottesville will be a loser: this subsidy will prohibit a totally privately-financed investment which would truly increase the City's tax base.

As the tenents of economic theory relate to the practical issue at hand, the proposed plan, in that it uses public funds to subsidize a private good, represents an impediment to efficient resource allocation.

Finally, a proper calculation of the subsidy's costs and benefits shows that the project would be a financially unprofitable venture for the City of Charlottesville.

VIII CONCLUSION

Public monies should only be used for financing activities that produce net social benefits. In the innoculation example above, government subsidies encourage greater consumption of innoculations which produce benefits for everyone. And in other cases, such as police protection and sewage disposal, public monies create social benefits. It is these types of activities that taxpayers should be paying for.

The City's proposed subsidy for the hotel-conference center will not produce net social benefits. In fact, in that losers will greatly exceed gainers, the subsidy will actually produce net social costs.

Public resources -- which have become ever so scarce as a result of today's trend of de-emphasizing the public sector's role in the economy -- have already been misspent. It behooves the City Council of Charlottesville to reconsider its commitment and, then, armed with *a better understanding of the project's ramifications, to vote down this specious proposal.*

APPENDIX I: 20-YEAR STREAMS OF COSTS AND BENEFITS

(numbers in thousands of dollars)

Period	0	1	2	3	4	5	6	7	8	9	10
Year	1984	1985	1986	1987	1988	1989	1990	1991	1992	1993	1994
HCC:Direct Tax Revenues	0	0	294	329	364	394	432	467	503	540	581
HCC: Multiplier Effects	0	0	176	197	218	236	259	280	302	324	349
HCC: Total Revenues	0	0	470	526	582	630	691	747	805	864	930
ALT:Direct Tax Revenues	0	0	63	63	63	63	63	68	73	78	84
HCC:Direct Costs	780	756	732	708	684	660	636	612	588	564	540
HCC:Total Costs (including ALT's Revenues)	780	756	795	771	747	723	699	680	661	642	624

HCC = Hotel-Conference Center ALT = Alternative Development

Period	11	12	13	14	15	16	17	18	19	20	21	
Year	1995	1996	1997	1998	1999	2000	2001	2002	2003	2004	2005	cumulative totals
HCC:Direct Tax Revenues	626	673	723	775	835	896	965	1035	1114	1198	1287	14,031
HCC:Multiplier Effects	376	404	434	465	501	538	579	621	668	719	772	8,418
HCC:Total Revenues	1002	1077	1157	1240	1336	1434	1544	1656	1782	1917	2059	22,449
ALT:Direct Tax Revenues	90	97	105	112	121	130	140	150	161	173	186	2,083
HCC:Direct Costs	516	492	468	444	420	396	372	348	324	0	0	11,040
HCC:Total Costs (inc. ALT's Revenues)	606	589	573	556	541	526	512	498	485	173	186	13,123

APPENDIX II: DISCOUNTED PRESENT VALUES OF COSTS & BENEFITS -- i = 10%

Total Revenues	Period-Year	Total Costs
$ 0	0-1984	$780,000
0	1-1985	687,273
388,430	2-1986	657,025
395,192	3-1987	579,264
397,541	4-1988	510,246
391,061	5-1989	448,790
389,955	6-1990	394,470
383,273	7-1991	348,897
375,466	8-1992	308,302
366,412	9-1993	272,265
358,520	10-1994	240,555
351,209	11-1995	212,408
343,212	12-1996	187,699
335,168	13-1997	165,991
326,488	14-1998	146,393
319,847	15-1999	129,519
312,078	16-2000	114,472
305,501	17-2001	101,306
297,842	18-2002	89,568
291,367	19-2003	79,300
284,929	20-2004	25,713
278,243	21-2005	25,135
6,891,734		

APPENDIX III: DISCOUNTED PRESENT VALUES OF COSTS & BENEFITS -- i= 15%

Total Revenues	Period-Year	Total Costs
$ 0	0-1984	$ 780,000
0	1-1985	657,391
355,253	2-1986	600,907
345,825	3-1987	506,903
332,762	4-1988	427,101
313,277	5-1989	359,523
298,746	6-1990	302,205
280,827	7-1991	255,639
263,158	8-1992	216,084
245,594	9-1993	182,490
229,857	10-1994	154,226
215,391	11-1995	130,267
201,308	12-1996	110,093
188,038	13-1997	93,125
175,240	14-1998	78,575
164,188	15-1999	66,486
153,238	16-2000	56,209
143,481	17-2001	47,579
133,807	18-2002	40,239
125,211	19-2003	34,078
117,126	20-2004	10,570
109,393	21-2005	9,882
4,391,720		5,119,572

FOOTNOTES

1. *This background information is based primarily on Charlottesville Mayor Frank Buck's column in The Daily Progress, July 12, 1981; it is also based on "Memories of Vinegar Hill," The Daily Progress, March 28, 1982.*

2. *Alternatives to the hotel-conference center were discussed at length in a memo to Cole Hendrix, City Manager, from George Ray, Economic Development Coordinator, dated April 3, 1981.*

3. *Memo to Cole Hendrix, City Manager, from George Ray, Economic Development Coordinator, dated April 3, 1981.*

4. *Memo to Cole Hendrix, City Manager, from George Ray, Economic Development Coordinator, dated April 3, 1981.*

5. *"Council Favors Hotel; Public Gets Say Tonight," The Daily Progress, June 29, 1981.*

6. *This description of the proposed property tax rate increase is taken directly from Charlottesville Mayor Frank Buck's column in The Daily Progress, July 12, 1981.*

7. *This description of the proposed meals tax rate increase and the transient lodging tax rate increase, except for the noted presumption that both increases will be temporary, is based on Charlottesville Mayor Frank Buck's column in The Daily Progress, July 12, 1981.*

8. *These employment and expenditure figures are taken directly from the analysis prepared by Zuchelli, Hunter and Associates, Inc., entitled "Vinegar Hill Project: Financial Costs and Benefits to the City of Charlottesville, Virginia."*

9. *This review of the ZHA analysis is taken directly from the analysis prepared by Zuchelli, Hunter and Associates, Inc., entitled "Vinegar Hill Project: Financial Costs and Benefits to the City of Charlottesville, Virginia."*

10. *"Albro Fears Costs of Hotel Complex," The Daily Progress, April 15, 1982.*

11. *"Vinegar Hill Hotel Funding Secured," The Daily Progress, April 10, 1982.*

12. *"Vinegar Hill Hotel Funding Secured," The Daily Progress, April 10, 1982.*

13. *The estimates of the direct tax revenues that the alternative development would generate are taken directly from a City memo to Cole Hendrix, City Manager, from George W. Ray, Economic Development Coordinator, dated April 3, 1981.*