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ECONOMIC IMPACTS OF HISTORIC PRESERVATION

RESEARCH OVERSIGHT

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FOREWORD

In 1987, the voters of New Jersey enabled, with the blessing of the Legislature, an exciting experiment in public spending. For more than a decade, voters in general elections had cheerfully and overwhelmingly agreed that the State should sell public debt to purchase recreational lands and open space. In 1987, a $25 million fund for capital projects at historic sites was added to a Green Acres bond referendum that also included farmland preservation and dollars for regional cultural centers. With the approval of subsequent funding in 1992 and 1995—again through Green Acres bond referenda—there was the undreamt of sum of nearly $60 million for a matching grants program to help rehabilitate the state's historic sites. From "a state of ruins," New Jersey had leapt into the front ranks of states reinvesting in their history.

Now ten years, more than 500 applications and 152 projects later, the dramatic transformations realized with the aid of the Historic Preservation Bond Fund are clear reminders of the public's investment. As the fund's administrators, we were also curious about the economic by-products of this public initiative. While compiling a study of the capital needs of historic sites in 1989, we had searched everywhere for information on the economic consequences of preservation-related activity. Surprisingly, there were few quantitative studies nationally and virtually no data for New Jersey, surely one of the nation's richest states in numbers of historic buildings and a state with a booming tourism industry. Given the sharp reductions in state and federal programs, including the federal historic rehabilitation tax credit, the need for better information on the economic effects of preservation activity has assumed greater urgency. A $60 million "bricks and mortar" fund for historic preservation projects made for a wonderful lab rat, as we knew from observation that work on historic structures is labor and materials intensive and requires skilled and higher paid workers. We began tracking the number of professional and trade jobs on every bond program project. The strength of the job numbers relative to dollars invested surprised us. We knew the topic merited serious attention by public policy analysts.

Fortunately, the confluence of a number of planning initiatives gave new emphasis to these inquiries and suggested that the time was ripe for a fuller examination of the economic consequences of investing in history. They included the convening of a series of history issues conferences; publication of a first-even "action agenda" for historic preservation in New Jersey; creation of a Task Force on New Jersey History by the New Jersey Legislature; and the development of a state Economic Master Plan. Rising interest in heritage tourism and serious discussion about state tax incentives to encourage reuse of historic buildings provided even more impetus for examining the economic consequences of historic rehabilitation.

The resulting study, we are told by experts, is the most comprehensive analysis of its type undertaken to date. Our hope is that this exciting new data will help fuel a reevaluation and new appreciation of the place of history in our economic life. We are very grateful to the National Center for Preservation Technology and Training, the Task Force on New Jersey History, and the Casino Reinvestment and Development Authority for joining with us to fund this analysis.

Harriette C. Hawkins
Executive Director
New Jersey Historic Trust

EXECUTIVE SUMMARY

STUDY OBJECTIVE AND ORGANIZATION

Historic preservation has acknowledged cultural and aesthetic benefits; less known and appreciated are preservation's significant economic effects. This study examines these effects with a focus on the many substantial economic benefits brought forth by historic preservation in New Jersey. It is the most detailed statewide analysis of the economic impacts of historic preservation ever conducted.

The study examines the *total* economic effects from historic preservation; these encompass both the *direct* and *multiplier* effects. The latter incorporate what are referred to as *indirect* and *induced* economic consequences. Economists estimate these indirect and induced effects using an input-output model. The *direct impact* component consists of labor and material purchases made specifically for the preservation activity. The *indirect impact* component consists of spending on goods and services by industries that produce the items purchased for the historic preservation activity. Finally, the *induced impact* component focuses on the expenditures made by the households of workers involved either directly or indirectly with the activity. To illustrate, lumber purchased at a hardware store for historic rehabilitation is a direct impact. The purchases of the mill that produced the lumber is an indirect impact. The household expenditures of the workers at both the mill and hardware store are induced impacts.

This study specifies the total economic effects of the major components of historic preservation in New Jersey via a state-of-the-art input-output (I-O) model developed by the Regional Science Research Corporation (RSRC). The historic preservation components considered, and to which the RSRC model is applied, include historic rehabilitation, heritage tourism, and the operations of historic sites and organizations. There are also very brief analyses of the amount of property taxes paid by historic buildings and how landmark designation enhances property values.

The results of RSRC's I-O model include many fields of data. Among them, the most significant for the purposes of this study are the total impacts with respect to:

- **Jobs:** *Employment, both part- and full-time, by place of work*, estimated using the typical job characteristics of each detailed industry. (Manufacturing jobs, for example, tend to be full-time; in retail trade and real estate, part-time jobs predominate.) All jobs generated at businesses in the region are included, even though the associated labor income of in-commuters may be spent outside of the region. In this study, all results are for activities occurring within the time frame of one year. Thus, the job figures should be read as job-years, i.e., several individuals might fill one job-year on any given project.
- **Income:** *"Earned" or "labor" income—specifically wages, salaries, and proprietors' income.* Income does not include nonwage compensation (i.e., benefits, pensions, or insurance), transfer payments, or dividends, interest, or rents.
- **Wealth:** *Value added—the equivalent at the subnational level of gross domestic product (GDP).* At the state level this is called gross state product (GSP). Value added is widely accepted by economists as the best measure of economic well-being. It is estimated from state-level data by industry. For a firm, value added is the difference between the value of goods and services produced and the value of goods and nonlabor services purchased. For an industry, therefore, it is composed of labor income (net of taxes), taxes, nonwage labor compensation,

profit (other than proprietors' income), capital consumption allowances, and net interest, dividends, and rents received.

- **Taxes:** *Tax revenues generated by the activity.* The tax revenues are detailed for the federal, state, and local levels of government. Totals are calculated by industry.

  Federal tax revenues include corporate and personal income, social security, and excise taxes, estimated from the calculations of value added and income generated.

  State tax revenues include personal and corporate income, state property, excise, sales, and other state taxes, estimated using the calculations of value added and income generated (e.g., purchases by visitors).

  Local tax revenues include payments to substate governments mainly through property taxes on new worker households and businesses, but can also include revenues from local income, sales, and other taxes.

The exposition is contained in nine chapters and multiple appendices. The first chapter sets the overall perspective, followed by a series of linked chapters that analyze, in tandem, the direct and the total effects of historic rehabilitation (Chapters Two and Three); heritage tourism (Chapters Four and Five); and the operations of historic sites and organizations (Chapters Six and Seven). Chapter Eight considers property valuation and property tax issues, while Chapter Nine summarizes the findings, sets them in perspective and shows how the study's findings and analytic procedures can be used by others and can inform policy discussion.

The major findings of the study are highlighted below. In all instances, impacts are shown for the latest years for which complete information was available at the time of the analysis.

ECONOMIC IMPACTS OF NEW JERSEY HISTORIC REHABILITATION

- In 1994, a total of $2.7 billion was spent on new construction in New Jersey and $2.0 billion was spent on rehabilitation of existing properties.
- Of the $2.0 billion spent on rehabilitation, an estimated $123 million, or about 6 percent of the total, was effected in historic properties (properties designated on national, state, and/or local registers of historic sites). This estimate of historic rehabilitation volume is quite conservative; it does not include construction occurring in properties eligible for, but not yet on, a register.
- Historic rehabilitation is especially important in New Jersey's cities and older suburbs. Almost $80 million of historic rehabilitation (out of the $123 million statewide total) was effected in these communities. That amounts to about 9 percent of all the rehabilitation in New Jersey's cities and older suburbs.
- The direct effects of historic rehabilitation are translated into multiplier effects, which encompass, as noted, such dimensions as *jobs* (employment by place of work), *income* (total wages, salaries, and proprietor's income), *gross domestic product* or GDP (total wealth accumulated; at the state level this is referred to as

gross state product or GSP), *taxes* (federal, state, and local), and *in-state wealth* (GSP less "leakage" in the form of federal taxes).

- The total economic impacts from the $123 million spent on statewide historic rehabilitation included: 4,607 new jobs; $156 million in income; $207 million in gross domestic product; and $65 million in taxes. New Jersey garnered about half of these economic benefits, and as a result, captured $93 million in in-state wealth. The other effects were distributed outside New Jersey.

Total Economic Impacts of the Annual New Jersey Historic Rehabilitation ($123 Million)

	In New Jersey	*Outside New Jersey*	*Total (U.S.)*
Jobs (person years)	2,316	2,291	4,607
Income ($ 000)	$81,085	$75,212	$156,297
GDP/GSP ($ 000)	$116,404	$90,631	$207,035
Total Taxes ($ 000)	$38,217	$26,876	$65,093
Federal ($ 000)	$22,915	$17,871	$40,786
State ($ 000)	$8,322	$4,874	$13,196
Local ($ 000)	$6,980	$4,131	$11,111
In-State Wealth ($000) (GSP minus Federal Taxes)	$93,489	--------	--------

GDP/GSP=Gross Domestic Product/Gross State Product

ECONOMIC IMPACTS OF NEW JERSEY HERITAGE TOURISM

- During the 1993-1995 period, an estimated 9.1 million adult trips were made annually in New Jersey that had some heritage linkage (5.0 million adult daytrips and 4.1 million adult overnight trips). The 9.1 million adult trips comprised slightly more than 1 in 20 (5.4 percent) of all 1993-1995 annual adult travel trips (167 million) in New Jersey.
- Direct expenditures by New Jersey heritage day-trippers and overnight visitors amounted to $432 million annually on average during the 1993-1995 period.
- The total annual economic impacts from the $432 million in spending by New Jersey heritage travelers, encompassing both direct and multiplier effects, included, at the national level: 15,530 jobs, $383 million in income, $559 million in gross domestic product, and $216 million in taxes. New Jersey received roughly half of these gains and realized annual in-state wealth creation of about $230 million.

Total Economic Impacts of the Annual New Jersey Heritage Tourism Spending ($432 Million)

	In New Jersey	*Outside New Jersey*	*Total (U.S.)*
Jobs (person years)	7,085	8,445	15,530
Income ($000)	$168,332	$214,835	$383,167
GDP/GSP ($000)	$286,522	$272,882	$559,404
Total Taxes ($000)	$134,367	$81,898	$216,265
Federal ($000)	$56,445	$53,758	$110,203
State ($000)	$62,191	$15,444	$77,635
Local ($000)	$15,731	$12,696	$28,427
In-State Wealth ($000) (GSP minus Federal Taxes)	$230,077	-------	-------

GDP/GSP=Gross Domestic Product/Gross State Product

ECONOMIC IMPACTS OF NEW JERSEY HISTORIC SITES AND ORGANIZATIONS

- New Jersey historic sites and organizations are vital to preserving and communicating the state's historical legacy. In addition, they not only further heritage tourism, but their own expenditures—some $25 million (net)[1] in 1996—also have economic benefits for the state.
- The total economic impacts, including both direct and multiplier effects, from the $25 million in annual spending by the New Jersey historic sites and organizations, included a gain in 1996 of 1,438 jobs, $33 million in income, $43 million in gross domestic product, and $14 million in taxes. The in-state New Jersey gains were roughly one-half these figures, with in-state wealth creation of $16 million.

Total Economic Impacts of the Annual Net[1] Spending by New Jersey Historic Sites and Organizations ($25 Million)

	In New Jersey	*Outside New Jersey*	*Total (U.S.)*
Jobs (person years)	739	699	1,438
Income ($000)	$13,772	$19,482	$33,254
GDP/GSP ($000)	$20,034	$22,995	$43,029
Total Taxes ($000)	$6,446	$7,159	$13,605
Federal ($000)	$3,947	$4,530	$8,477
State ($000)	$1,369	$1,415	$2,784
Local ($000)	$1,130	$1,214	$2,344
In-State Wealth ($000) (GSP minus Federal Taxes)	$16,087	---------	---------

GDP/GSP=Gross Domestic Product/Gross State Product

[1] This figure is net of outlays for capital purposes and visitor-supported revenues. The capital outlays and visitor revenues are netted out because these spending components have already been included in the historic rehabilitation and the heritage tourism economic calculations, respectively.

HISTORIC PROPERTY VALUATION AND PROPERTY TAX PAYMENTS

On an order-of-magnitude basis, New Jersey's historic properties:

- Have a market value for property tax purposes of $6 billion—about 1 percent of the total state property equalized valuation of $550 billion.
- Have a higher market value because of historic designation, but the exact magnitude of this effect is hard to specify.
- Pay about $120 million in annual property (local, school, and county) taxes—about 1 percent of the roughly $10 billion in total property taxes paid statewide. Of this $120 million, about $62 million goes to school districts, $30 million to municipalities, and $28 million to county governments.
- Are increasing in value and property tax generation because of ongoing rehabilitation.

SUMMARY OF BENEFITS

To capsulize, historic preservation in New Jersey is not just important culturally and aesthetically, but also fosters significant economic activity and benefits in its own right.

- Annual direct economic effects, calculated conservatively, include $123 million in historic rehabilitation, $432 million in heritage tourism spending, and $25 million in net spending by historic sites and organizations—for a total of $580 million. The landmark properties are valued at $6 billion.
- When multiplier effects are taken into account, the total annual impacts to the nation include a gain of 21,575 jobs, $572 million in income, $929 million in GDP, and $415 million in taxes (Exhibit 1). The New Jersey benefits include a gain of 10,140 jobs, $263 million in income, $543 million in GSP, $298 million in taxes, and $460 million in in-state wealth. As part of these benefits, New Jersey historic properties pay annually $120 million in property taxes. These tax payments, along with the underlying value of the properties, will be enhanced by continued historic rehabilitation.
- A further breakout of the economic benefits from the $580 million in direct historic preservation spending (not including the $120 million in property taxes) is shown in Exhibit 2 (national impacts) and Exhibit 3 (in-state or New Jersey specific effects). The exhibits show that although all sectors of the economy benefit, many of the 21,575 new jobs at the national level are found in such industries as retail trade (7,689 jobs), services (5,914 jobs), manufacturing (2,737 jobs), and construction (1,282 jobs). National income and GDP effects are also clustered in the above sectors (Exhibit 2); and a similar pattern is observed for New Jersey (Exhibit 3).
- The above estimates of impacts are *conservative*, because they do not include the effects from construction on historic properties that are *eligible* for landmark designation but not yet listed. The count of heritage tourists and, consequently, estimates of their spending are also likely to be on the low side given the conservative way we have identified heritage travelers.

Exhibit 1
Summary of the Annual Economic Impacts of Historic Preservation in New Jersey

NEW JERSEY DIRECT EFFECTS		*I. Historic Rehabilitation* $123 million historic rehabilitation annually results in:	*II. Heritage Tourism* 9.1 million annual adult heritage travelers, spending $432 million annually, results in:	*III. Spending by NJ Historic Sites and Organizations* $25 million in annual spending results in:	*IV. Historic Stock Valuation* Landmark properties, valued at $6 billion, annually pay property taxes of:	*V. Total Examined Economic Impacts* *(Sum I-IV)*
↓						
		National Total (Direct and Multiplier) Impacts				
NATIONAL TOTAL IMPACTS (DIRECT and MULTIPLIER)	Jobs	4,607	15,530	1,438		21,575
	Income	$156 million	$383 million	$33 million		$572 million
	GDP*	$207 million	$559 million	$43 million	$120 million	$929 million
	Taxes: *Federal*	*$41 million*	*$110 million*	*$9 million*		*$160 million*
	State	*$13 million*	*$78 million*	*$3 million*		*$94 million*
	Local	*$11 million*	*$28 million*	*$2 million*	*$120 million*	*$161 million*
	Tax Subtotal	$65 million	$216 million	$14 million	$120 million	$415 million
↓						
		In-State NJ Total (Direct and Multiplier) Impacts				
NJ PORTION of NATIONAL TOTAL IMPACTS	Jobs	2,316	7,085	739		10,140
	Income	$81 million	$168 million	$14 million		$263 million
	GSP*	$116 million	$287 million	$20 million	$120 million	$543 million
	Taxes: *Federal*	*$23 million*	*$56 million*	*$4 million*		*$83 million*
	State	*$8 million*	*$62 million*	*$1 million*		*$71 million*
	Local	*$7 million*	*$16 million*	*$1 million*	*$120 million*	*$144 million*
	Tax Subtotal	$38 million	$134 million	$6 million	$120 million	$298 million
	In-State Wealth**	$93 million	$231 million	$16 million	$120 million	$460 million

*GDP=Gross Domestic Product; GSP = Gross State Product

** GSP less Federal tax payments

Source: Rutgers University, Center for Urban Policy Research, 1997

Exhibit 2
National Economic and Tax Impacts of
$580 Million in Annual Historic Preservation Spending in New Jersey

	Economic Component		
	Employment (jobs)	Income ($000)	Gross Domestic Product ($000)
I. TOTAL EFFECTS (Direct and Indirect/Induced)*			
Private			
1. Agriculture	57	6,819	11,328
2. Agri. Serv., Forestry, & Fish	137	3,967	4,619
3. Mining	76	4,284	16,088
4. Construction	1,282	49,661	52,274
5. Manufacturing	2,737	105,265	156,225
6. Transport. & Public Utilities	893	42,232	78,104
7. Wholesale	458	19,613	51,933
8. Retail Trade	7,689	126,164	145,202
9. Finance, Ins., & Real Estate	1,707	61,399	108,141
10. Services	5,914	143,133	176,058
Private Subtotal	20,949	562,508	799,894
Public			
11. Government	626	10,210	9,574
Total Effects (Private and Public)	21,575	572,718	809,469
II. DISTRIBUTION OF EFFECTS/MULTIPLIER			
1. Direct Effects	9,806	209,763	330,326
2. Indirect and Induced Effects	11,769	362,955	479,142
3. Total Effects	21,575	572,718	809,469
4. Multipliers (3÷1)	2.200	2.730	2.451
III. COMPOSITION OF GROSS DOMESTIC PRODUCT			
1. Wages--Net of Taxes			518,193
2. Taxes			
a. Local			41,883
b. State			93,614
c. Federal			
General			93,089
Social Security			66,377
Federal Subtotal			159,466
d. Total taxes (2a+2b+2c)			294,963
3. Profits, dividends, rents, and other			(11,763)
4. Total Gross Domestic Product (1+2+3)			801,393
EFFECTS PER MILLION DOLLARS OF INITIAL EXPENDITURE			
Employment (Jobs)			37.2
Income			$988,164
State Taxes			$161,446
Local Taxes			$72,263
Gross Domestic Product			$1,396,568

Note: Detail may not sum to totals due to rounding.
*Terms:
Direct Effect (National)—the amount of goods and services purchased in the nation.
Indirect Effects—the value of goods and services needed to support the provision of those direct economic effects.
Induced Effects—the value of goods and services needed by households that provide the direct and indirect labor.

Source: Rutgers University Center for Urban Policy Research, 1997.

Exhibit 3

In-State Economic and Tax Impacts of $580 Million in Annual Historic Preservation Spending in New Jersey

	Economic Component		
	Employment (jobs)	Income (000$)	Gross Domestic Product (000$)
I. TOTAL EFFECTS (Direct and Indirect/Induced)*			
Private			
1. Agriculture	9	39	160
2. Agri. Serv., Forestry, & Fish	28	570	1,562
3. Mining	10	274	445
4. Construction	1,019	41,248	46,790
5. Manufacturing	881	29,376	57,837
6. Transport. & Public Utilities	353	9,836	23,038
7. Wholesale	199	15,838	34,301
8. Retail Trade	3,367	63,394	90,055
9. Finance, Ins., & Real Estate	279	12,366	35,110
10. Services	3,764	86,775	130,202
Private Subtotal	9,909	259,702	419,440
Public			
11. Government	231	3,487	3,520
Total Effects (Private and Public)	10,140	263,189	422,960
II. DISTRIBUTION OF EFFECTS/MULTIPLIER			
1. Direct Effects	7,119	179,524	317,519
2. Indirect and Induced Effects	3,020	83,665	105,441
3. Total Effects	10,140	263,189	422,960
4. Multipliers (3÷1)	1.424	1.466	1.332
III. COMPOSITION OF GROSS DOMESTIC PRODUCT			
1. Wages--Net of Taxes			231,147
2. Taxes			
a. Local			23,841
b. State			71,882
c. Federal			
General			48,624
Social Security			34,683
Federal Subtotal			83,306
d. Total taxes (2a+2b+2c)			179,029
3. Profits, dividends, rents, and other			4,707
4. Total Gross Domestic Product (1+2+3)			414,884
EFFECTS PER MILLION DOLLARS OF INITIAL EXPENDITURE			
Employment (Jobs)			17.5
Income			$454,159
State Taxes			$123,955
Local Taxes			$41,138
Gross Domestic Product			$729,777

Note: Detail may not sum to totals due to rounding.
*Terms:
Direct Effect (State)—the amount of goods and services purchased in New Jersey.
Indirect Effects—the value of goods and services needed to support the provision of those direct economic effects.
Induced Effects—the value of goods and services needed by households that provide the direct and indirect labor.

Source: Rutgers University Center for Urban Policy Research, 1997.

- The economic benefits of historic preservation are particularly important to urban areas—but gains are felt by all categories of communities.
- The economic benefits of historic preservation (e.g., total job creation, and increases in income and GDP per $1 million invested) surpass those of such "alternative" investments as new housing or commercial construction. Every $1 million invested in historic nonresidential rehabilitation, for instance, generates 38.3 jobs, whereas the same amount spent on nonhistoric nonresidential rehabilitation or highway construction generates only 36.1 or 33.6 jobs respectively.
- Given the powerful economic pump-priming effect of historic preservation, including its considerable tax benefits, public programs to foster preservation can realize sizable economic development gains—often at little or no net cost to the taxpayer.
- The New Jersey Historic Trust (NJHT) had made about $55 million in grants for historic rehabilitation through mid-1997. This sum will leverage (with private and other funds) about $403 million in total historic rehabilitation. The impacts are listed in the following table:

Total Economic Impacts of the NJHT-Induced Historic Rehabilitation ($403 Million)

	In New Jersey	*Outside New Jersey*	*Total(U.S.)*
Jobs (person years)	6,199	7,286	13,485
Income ($000)	$222,389	$235,593	$457,982
GDP/GSP ($000)	$307,392	$297,208	$604,600
Total Taxes ($000)	$101,955	$88,239	$190,194
Federal ($000)	$60,556	$58,550	$119,106
State ($000)	$22,576	$16,014	$38,590
Local ($000)	$18,823	$13,674	$32,497
In-State Wealth ($000) (GSP minus Federal Taxes)	$246,836	---	---

GDP/GSP=Gross Domestic Product/Gross State Product

- The tax gains from the NJHT-induced historic rehabilitation, coupled with other enhanced tax revenues (e.g., from the increased heritage tourism), significantly reduce the net cost of NJHT's preservation grants program to New Jersey taxpayers.

CHAPTER ONE

Background to the Analysis of the Economic Impacts of Historic Preservation

NEED FOR INFORMATION ON THE ECONOMIC IMPACTS OF HISTORIC PRESERVATION

Until almost the mid-twentieth century, the idea of historic preservation sentiment was alien to the American reverence for the new. There were but a handful of exceptions. Independence Hall, slated for demolition, was purchased by the City of Philadelphia in 1816, and Mount Vernon was saved by a valiant private women's group in the 1860s. Private philanthropy from the Rockefeller family helped restore Colonial Williamsburg in the mid-1920s. In the mid-1930s, there was some nascent public preservation action. The federal government, authorized by the 1935 Historic Sites Act, began identifying nationally significant landmarks on the National Register of Historic Sites and Buildings. From the 1930s to the 1950s, a handful of communities, most notably New Orleans and Charleston (South Carolina), established local preservation commissions to identify and protect selected historic districts.

These preservation activities, however, were the exceptions. More typical was destruction of even acknowledged landmarks. Penn Central Station in New York City is a prime example. In fact, federal programs, ranging from urban renewal to the interstate highway systems, fueled the demolition of the nation's historic heritage. Partly in reaction to the widespread losses of historic properties, a regulation system for preservation developed by the 1960s. At the federal level, the National Historic Preservation Act (NHPA) of 1966 created a National Register of Historic Places and a review process, Section 106 of the NHPA, to evaluate federal undertakings that threatened National Register resources. With federal funds from the NHPA, state historic preservation offices (SHPOs) were established which helped identify sites and structures to be placed on the national as well as state registers. Many states further enacted "mini-106" procedures to evaluate state and local government actions threatening properties on the state register.

Most significant was the establishment of local preservation commissions (LPCs). LPCs were created to conduct surveys to identify historic resources and then take appropriate action to designate these resources as landmarks. Once designated, the landmarks could not be demolished or their facades altered in an historically accurate fashion without the approval of the LPCs; at minimum, these actions would be delayed pending LPC review.

In a short period historic preservation has mushroomed in scope. From about 1,000 entries on the National Register of Historic Places in 1968, today there are nearly 70,000. There have been almost 50,000 Section 106 reviews. In a few years the National Trust for Historic Preservation's "Main Street Program," designed to revitalize older downtowns, has grown from a handful to hundreds of successful examples nationally. Local historic commissions totaled only about 20 as of the mid-1950s. Civic spirit fueled by the Bicentennial increased that number to 100, and today there are almost 2,000 local commissions. Other barometers of historic preservation activity also show quantum increases (Exhibit 1.1); still, preservation remains the exception rather than the rule.

Preservation has accomplished much. Icons that have been saved, such as Grand Central Station, are important to the perception of quality of life. Less dramatic, but equally as important, is the preservation of thousands of residential neighborhoods and downtowns throughout the United States.

Exhibit 1.1
Growth of Historic Preservation Activity: Selected Indicators

FISCAL YEAR	Annual Listings on National Register of Historic Places (entries)	Cumulative Listings on National Register of Historic Places (entries)	Annual Advisory Council Section 106 Review (cases)	Cumulative Advisory Council Section 106 Review (cases)	Local Historic District Commissions	Annual Historic Preservation Fund (millions of dollars)	Cumulative Historic Preservation Fund (millions of dollars)	Annual Rehab Tax Credit Investment (millions of dollars)	Cumulative RehabTax Credit Investment (millions of dollars)	Annual Tax Credit Projects Approved	Cumulative Tax Credit Projects Approved
1955					20						
1966					100						
1967			0	0							
1968	1,204	1,204	5	5		$0.69328 3	$0.69328 3				
1969	359	1,563	22	27		0.1	0.4				
1970	832	2,395	57	84		1.0	1.4				
1971	1,026	3,421	81	165		6.0	7.4				
1972	1,533	4,954	152	317		6.0	13.4				
1973	2,162	7,116	311	628		7.5	20.9				
1974	2,151	9,267	689	1,317		11.5	32.4				
1975	1,987	11,254	1,104	2,421		20.0	52.4				
1976	2,284	13,538	2,263	4,684	492	24.8	77.2				
1977	1,563	15,101	2,369	7,053		17.5	94.7				
1978	3,120	18,221	1,759	8,812	578	45.0	139.7	$140	$140	512	512
1979	2,783	21,004	2,264	11,076		60.0	199.7	300	440	635	1,147
1980	3,027	24,031	1,623	12,699		55.0	254.7	346	786	614	1,761
1981	518	24,549	2,700	15,399		26.0	280.7	738	1,524	1,375	3,136
1982	3,140	27,689	1,827	17,226	832	25.4	306.1	1,128	2,652	1,802	4,938
1983	4,525	32,214	2,261	19,487	1,000	51.0	357.1	2,165	4,817	2,572	7,510
1984	3,814	36,028	2,241	21,728		27.5	384.6	2,123	6,940	3,214	10,724
1985	994	37,022	1,094	22,822		25.5	410.1	2,416	9,356	3,117	13,841
1986	3,401	40,423	1,400	24,222		23.7	433.8	1,661	11,017	2,964	16,805
1987	2,498	42,921	2,453	26,675		24.3	458.1	1,084	12,101	1,931	18,736
1988	2,035	44,956	1,700	28,375		28.3	486.4	866	12,967	1,092	19,828
1989	3,157	48,113	2,186	30,561		30.5	516.9	927	13,894	994	20,822
1990	2,285	50,398	1,544	32,105		32.9	549.8	750	14,644	814	21,636
1991	3,834	54,232	1,647	33,752		34.5	584.3	608	15,252	456	22,092
1992	1,837	56,069	2,000	35,752		35.5	619.8	777	16,029	655	22,747
1993	1,539	57,608	2,332	38,084	1,863	36.9	656.7	548	16,577	566	23,313
1994	1,718	59,326	2,911	40,995		40.0	696.7	483	17,060	521	23,834
1995	1,514	60,840	2,831	43,826	2,000+	41.4	738.1	469	17,529	548	24,382

The aesthetic and quality-of-life benefits of preservation are acknowledged. Regarding the quantifiable economic contribution of preservation, however, there is often a defensiveness. While proponents of investment in such areas as public infrastructure and new housing construction tout the job, income, and other financial benefits of their respective activities, historic preservationists are much less vocal about the economic benefits that accrue from their activities.

A dearth of information on the economic benefits of preservation has unfortunate consequences, especially in competing for public and other supports. Take, for instance, the federal preservation tax incentive (hereafter referred to as the FPTI). Initiated in the late 1970s, the FPTI has generated $17.5 billion investment in historic preservation, encompassing about 25,000 separate projects. The FPTI is the most significant federal financial support for preservation, eclipsing even the Historic Preservation Fund that supports SHPOs (see Exhibit 1.1). Despite its accomplishments, the FPTI has been under assault from those working to reduce federal tax incentives. In 1986, the FPTI tax credit was reduced from 25 to 20 percent, and there are periodic calls for further reductions or even elimination of the FPTI. Critics of the FPTI harp on its costs to the Federal Treasury. Preservationists, however, have failed to document the FPTI's full economic benefits. This omission, in part due to the fact that a methodology for documenting the FPTI's benefits is not readily at hand, puts preservation at a competitive disadvantage against those arguing for federal tax breaks for other investments (e.g., capital gains and infrastructure) and marshaling arrays of statistics to support their respective causes.

There are parallel developments at the state level. With the federal government cutting back and states ascending as implementers and funders, state activity has become more significant in historic preservation. It is no accident that a recent publication from the National Trust for Historic Preservation is entitled *Smart States, Better Communities* (Beaumont 1997). Numerous states, including Florida, Maryland, New Jersey, and Vermont, have passed bond issues to foster preservation. New Jersey, in fact, is a national leader in this regard. But there are many demands on the public purse, and state bond monies for preservation is in competition for bond support for other state investments ranging from adding new or rehabilitating existing highways to providing affordable mortgages for new housing. Preservationists often do not have hard numbers on the economic benefits of their projects, as do the proponents of competing investments. The same is true when other state preservation incentives are proposed, such as a state income tax credit. State legislators might be more inclined to support such a credit if they were presented with evidence that their home constituencies would benefit from increased jobs, income, and spending as a result of the credit-induced preservation. Yet, such evidence is often not marshaled because the procedures for measuring the economic benefits deriving from preservation projections are not developed.

In summary, the dearth of "hard" economic numbers on preservation and procedures to quantify these benefits have significant adverse implications. It should not be this way, for historic preservation generates extensive economic accomplishments. In fact, preservation's benefits surpass those yielded by such alternative investments as infrastructure and new housing construction.

This study documents the benefits of preservation and develops procedures for assessing its economic effects that others may apply. The focus of the study is the state

of New Jersey. No previous analysis has examined the economic impacts at a statewide level to the scope and detail of this study. To set the perspective for the current investigation, prior literature is briefly reviewed here. (An extensive listing of relevant literature and annotations of critical studies are contained in the bibliography.)

PRIOR LITERATURE ON THE ECONOMIC IMPACTS OF HISTORIC PRESERVATION

Studies conducted in the late 1970s and early 1980s on the nominal topic of the economic benefits of historic preservation in fact focused less on economic benefits and more on financial feasibility. (This was still a time when the feasibility of preservation vis-à-vis new construction was still an issue.) For example, the *Economic Benefits of Preserving Old Buildings* (National Trust for Historic Preservation 1982) considered such topics as hidden assets of old buildings, the costs of preservation, the types of government grants available for the preservation process, and the advantages of historic preservation from a private financier's viewpoint.

Some of the early literature did introduce into the discussion economic effects, typically in anecdotal or case study fashion. For instance, *The Contribution of Historic Preservation to Urban Revitalization* (Advisory Council on Historic Preservation [ACHP] 1979), investigated the effect of historic preservation activities in Alexandria (Virginia), Galveston (Texas), Savannah (Georgia), and Seattle (Washington). According to the ACHP, historic designation and attendant preservation activities provide many benefits including saving important properties from demolition, fostering construction, and providing a concentrated area of interest to attract tourists and metropolitan-area visitors. Designation also was found to have the beneficial effect of strengthening property values—an impact documented by comparing the selling prices of buildings located within versus outside the historic districts in Alexandria and other cities studied.

The economic topics considered by the Advisory Council on Historic Preservation in 1979—preservation's relationship to property values, tourism, and construction—have been revisited numerous times, typically on a case study basis (see bibliography). For instance, Samuels (1981) examined increases in property values in designated historic neighborhoods in Washington, D.C.; Schaeffer and Ahern (1988), Benson and Klein (1988), Ford (1989), Gale (1991), and Leithe et al. (1991), did similar property value analyses in Chicago, Cleveland, Baltimore, Washington, D.C., and Galveston, respectively.

Construction and tourism effects from preservation have also been studied by numerous authors. For instance, Lane (1982) and Johnson and Sullivan (1992) examined the tourism benefits from Civil War battlefield visitation. Avault and Van Buren (1985) examined the economic contributions of historic rehabilitation construction activity in Boston, and a similar analysis was done in Atlanta by the Center for Business and Economic Studies (1986).

Our review of the existing literature shows some changes over time. The geographical scale of analysis in considering economic impact has expanded. Whereas earlier the focus was typically a neighborhood or two (e.g., Philadelphia's Society Hill or Seattle's Pioneer Square), investigations are now more typically citywide (e.g., Fredericksburg, Virginia, and Galveston, Texas), and there have been some examples of

statewide studies, such as in Virginia (Preservation Alliance of Virginia 1996) and Rhode Island (University of Rhode Island 1993). In combination, some of these more geographically encompassing studies have examined not only the direct but the total economic effects of historic preservation, the latter including multiplier benefits to the larger state and regional economies.

For example, the University of Rhode Island (1993) reviewed the impacts of the Rhode Island Historical Preservation Commission's (RIHPC) programs on the state economy in the areas of employment, wages, value added, and tax revenues generated. To that end, the study used computer models of the state economy to incorporate both direct and multiplier impacts. The study found that the greatest impacts of RIHPC's programs were in the construction-related industries, with retail sales and service industries affected positively as well.

A methodology for examining the total (direct and multiplier) impacts of preservation was developed by Joni Leithe, Thomas Muller, John Peterson, and Susan Robinson of the Government Finance Research Center (Leithe et al. 1991) for the National Trust for Historic Preservation. This work, important to the field, included approaches for estimating the benefits of construction activity, real estate activity (e.g., historic property value appreciation), and commercial activity (e.g., enhanced tourism). Leithe et al. applied the methodology in Fredericksburg, Virginia, and Galveston, Texas (Government Finance Officers Association 1995). For instance, in Fredericksburg, historic preservation was found to have the following effects:

- Over an eight-year period, 777 projects totaling $12.7 million were undertaken in the historic district. These projects created approximately 293 construction jobs and approximately 284 jobs in sales and manufacturing.
- Property values, both residential and commercial, experienced a dramatic increase. Between 1971 and 1990, residential property values in the historic district increased an average of 674 percent as compared to a 410 percent average increase in properties located elsewhere in the city.
- In 1989 alone, $11.7 million in tourist purchases were made within the historic district, and another $17.4 million outside the district, with secondary impacts resulting in $13.8 million.

No overview of literature on the subject would be complete without mentioning *The Economics of Historic Preservation* by Donovan Rypkema (1994), which compiled results from numerous studies showing the economic benefits of preservation. Rypkema also was the author of the Virginia report (Virginia Preservation Alliance 1996) that summarized how preservation benefited the state's economy from tourism, construction, business development, and property value enhancement. Rypkema's numerous and important contributions to the field are noted in the bibliography to this study.

CURRENT STUDY SCOPE AND METHODOLOGY

The current investigation builds from, and adds to, the state of the art as reflected in the extant literature. Some of the distinguishing characteristics of the current study are its:

1. statewide scope
2. development of preservation-specific data
3. comprehensive linked analysis
4. use of a state-of-the-art input–output model

Statewide Scope

The current investigation is truly statewide in scope. It develops statewide figures on the amount of historic rehabilitation and heritage tourism, and the operations of historic sites and organizations. Other state investigations have not done this to the same scale. For instance, the Virginia study (Preservation Alliance of Virginia 1996) examined the construction impacts from the rehabilitation of some Virginia historic properties, as opposed to the full inventory of such state activity—information which was simply not available. In the present New Jersey study, figures are developed via sampling and estimating on the statewide historic rehabilitation that is effected; further, these data are differentiated by area (e.g., amount occurring in urban, mature suburb, developing suburb, and rural communities) and related to the scale of new construction and nonhistoric rehabilitation.

Development of Preservation-Specific Data

Some other studies have developed preservation-specific information, such as the profile and spending of heritage versus non-heritage tourists (Preservation Alliance of Virginia 1996), but few do this to the extent accomplished here. Thus, the chapter on heritage tourism in this study develops side-by-side profiles of all tourists (historic and non-historic), as well as such subgroups as heritage versus non-heritage day-trippers, heritage versus non-heritage overnighters, and still further declensions (e.g., "primary" versus "partial" heritage overnighters). This side-by-side profiling is accomplished for many types of characteristics such as demographic background, trip length and origins, and trip spending, with the latter differentiated into many components (e.g., food, retail purchases, vehicle expenses, and sightseeing and recreation) and subcomponents (e.g., vehicle expenses broken down into gasoline, parking, rentals, and repairs). The point is not detail for detail's sake, but rather that the more precisely the nature of spending of heritage travelers is detailed, the more precise the projection of economic impact of this aspect of preservation.

The more refined development of preservation-specific data is especially pronounced in the current study concerning the breakout of historic rehabilitation expenditures. Many studies to date use "canned programs" that have information on rehabilitation in general. But historic rehabilitation is not the same as "general rehabilitation." To that end, the current study "deconstructs" in great detail the components of historic rehabilitation. It examines almost 60 historic rehabilitation projects encompassing nearly $100 million of construction of different buildings (single-family, multifamily, and nonresidential) and of different types of work (e.g., less versus more extensive systems upgrading, and interior versus exterior repair). From these detailed case studies, the current analysis specifies the precise "bundle" of construction activities comprising historic rehabilitation according to a 16-division taxonomy which includes such components as "doors and windows," "finishes," "metals," "masonry," and so on. This detailed breakout of the components of historic rehabilitation permits a

much more precise estimate of the economic impacts of historic rehabilitation, which in turn, is one of the most important components of historic preservation.

Comprehensive Linked Analysis

As there are many facets to historic preservation, a study of its economic impacts should incorporate as many of these as possible. The current investigation attempts to do this by analyzing the respective economic contribution of 1) historic rehabilitation, 2) heritage tourism, 3) operation of historic sites and organizations, and 4) property value and property tax contributions. This is not to say that "everything" is included: for instance, business development from "Main Street" programs is not included. (New Jersey, however, does not have as long-established a Main Street initiative as some other states.) The study does, however, include the economic contribution of historic sites and organizations, such as historic house museums and historic societies. These entities are vital to historic preservation efforts in the United States, yet their economic contribution has heretofore not been included in studies of the economic benefits of historic preservation.

The comprehensive inclusion of the many components of historic preservation in an economic assessment must carefully avoid double counting. For instance, if all the activity of Main Street investments, historic rehabilitation, heritage tourism, and the operation of historic sites and organizations were included, there would be duplicative counting because each one of these entities includes historic rehabilitation, which presumably is already tallied in the separate historic rehabilitation component.

The current study avoids this. For instance, in considering the economic contribution of historic sites and organizations, we *net* out from their budgets capital spending and revenue derived from visitors, because these are considered in the earlier tallied historic rehabilitation and heritage tourism projections, respectively.

The current study also links the different components of historic preservation that bear on its economic contribution. For instance, historic sites and organizations were asked to estimate their current unfunded needs (e.g., underfunding that limits operating hours) and to relate how their visitation would increase if funding deficiencies were subsequently addressed. There is no question that both of these items—current unfunded needs and potential future visitation upon funding—are difficult to determine precisely, especially the latter. Once having established the order of magnitude of these figures, however, we can figure the economic return of making at least a portion of the investment (e.g., through rehabilitation grants from the New Jersey Historic Trust) by translating the added visitation into enhanced tourism spending—a projection made possible by the earlier profiling of heritage travelers and their spending.

Use of a State-of-the-Art Input–Output Model

As other recent studies have done, the current investigation of the economic impacts of historic preservation considers direct effects of preservation-related activities as well as indirect and induced economic impacts. The total or multiplier effect, sometimes referred to as the ripple effect, has three segments:

1. A *direct effect* (the initial drop causing the ripple effects) is the change in purchases due to a change in economic activity.

2. An *indirect effect* is the change in the purchases of suppliers to the economic activity directly experiencing change.

3. An *induced effect* is the change in consumer spending that is generated by changes in labor income within the region as a result of the direct and indirect effects.

To illustrate briefly, the *direct effects* encompass the goods and services immediately involved in the economic activity analyzed, such as historic rehabilitation. This could include, for historic rehabilitation, carpenters hired and steel purchased. *Indirect effects* encompass the value of goods and services needed to support the provision of the direct effects (e.g., materials purchases by the steel plant). *Induced effects* include the goods and services needed by households to provide the direct and indirect labor required to rehabilitate an historic structure (e.g., food purchases by the carpenters' or steel workers' households). The estimation of indirect and induced effects typically is accomplished by what is referred to as an input-output model.

In this study the projection of the total or multiplier effects from historic preservation is accomplished by application of an input–output model developed by the Regional Science Research Corporation (RSRC), termed the RSRC PC I–O Model. This model is state-of-the-art and offers significant advantages in detailing the total economic effects of an activity (such as historic rehabilitation), including multiplier effects (see Appendix C).

The analysis in the subsequent chapters first presents the direct effects of the components of historic preservation—historic rehabilitation, heritage tourism, and spending by historic sites and organizations—and then applies the RSRC PC I–O Model to derive total or multiplier effects.

CHAPTER TWO

Profile of, and Direct Economic Impacts from, Historic Rehabilitation

INTRODUCTION AND SUMMARY

This chapter first sets the perspective for considering historic rehabilitation by examining overall trends in new construction and all rehabilitation (historic and nonhistoric) for the nation and for New Jersey. It then focuses on describing the profile and magnitude of historic rehabilitation in New Jersey. The analysis is for the year 1994, which, when this study commenced, was the last annual period for which construction information was fully available. The results of the analysis are summarized below:

- Nationally, all rehabilitation amounted to $44 billion in 1994, or about 20 percent of the total $211 billion construction activity ($167 billion in new construction and $44 billion in rehabilitation) for 1994.
- Statewide there was $4.7 billion of total construction in New Jersey in 1994.

  Of that total, $2.7 billion (58 percent) consisted of new construction and $2.0 billion (42 percent) comprised rehabilitation.
- There is no specific recording of historic rehabilitation activity per se, so its quantification can only be estimated. In the current instance, the estimate is made by sampling of rehabilitation activity in communities representative of different types of jurisdictions in New Jersey—urban, mature suburbs, developing suburbs, and rural communities.
- Of the total $2 billion in rehabilitation, about $123 million, or 6 percent, is estimated to be taking place in historic properties. The $123 million involves all rehabilitation (not just that related to preservation) effected on properties designated on federal, state, or local historic registers. Not surprisingly, historic rehabilitation as a share of total rehabilitation (and as a share of total construction) is highest in urban and mature suburbs.

NEW JERSEY TOTAL AND HISTORIC REHABILITATION (1994)

Community Type	Total Rehabilitation ($ in millions)	Total Historic Rehabilitation ($ in millions)	Historic Rehabilitation as Percent[1] of All Rehabilitation	Historic Rehabilitation as Percent[1] of Total Construction (New and All Rehabilitation)
1. Urban	$404	$38	9.3%	6.6%
2. Mature Suburb	$422	$38	8.4%	5.1%
3. Developing Suburb	$1,108	$45	4.0%	1.4%
4. Rural	$45	$2	4.9%	0.8%
All Communities	$1,979	$123	6.2%	2.6%

1. Percentages calculated on more precise data than that summarized here.

- The $123 million in New Jersey historic rehabilitation is comprised disproportionately of rehabilitation undertaken on nonresidential properties.

NEW JERSEY REHABILITATION BY PROPERTY TYPE (1994)

Property Type	Historic Rehabilitation ($ in Millions)	% of Total Historic Rehabilitation
Residential	$40	33%
Nonresidential	83	67
TOTAL	$123	100%

- The estimated amount of New Jersey statewide historic rehabilitation—some $123 million or 6 percent of all rehabilitation—is quite conservative. The magnitude could actually be substantially larger, especially if it included rehabilitation effected not only on officially designated properties (i.e., listed on federal, state, or local registers) but also properties *eligible* for such designation.

PERSPECTIVE ON CONSTRUCTION ACTIVITY IN THE NATION AND IN NEW JERSEY

It is important to first set the overall perspective for construction activity. For simplicity's sake, construction can be segregated into two major components—"new construction" and "rehabilitation," the latter including the Census-defined categories of additions, alterations, and improvements.

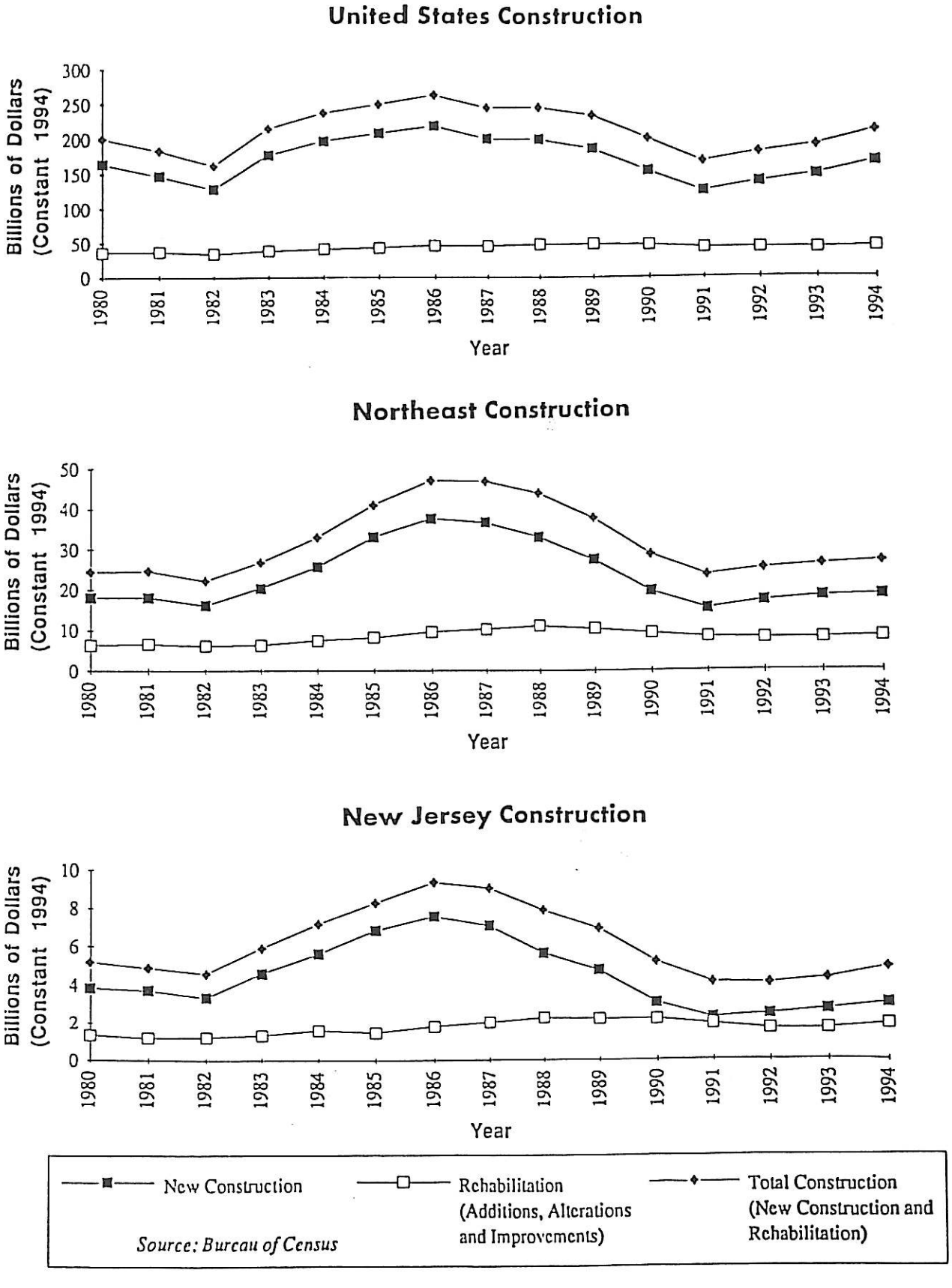
Figure 2.1 summarizes the construction emphasis in the United States, the Northeast, and New Jersey from 1980 to the mid-1990s (ending in 1994). While in all areas the cyclical swings experienced by the construction industry are readily apparent (e.g., "boom" in the mid-1980s and a "bust" in the early 1980s and early 1990s), across the years certain patterns hold. For the United States as a whole, new construction dominates. In 1994, for example, the $211 billion in total construction comprised $167 billion in new construction (79 percent) and $44 billion (21 percent) in rehabilitation.

In the Northeast, where the housing stock is older relative to that of the nation, rehabilitation is understandably more important. In 1994, the $8 billion of rehabilitation in the Northeast comprised 31 percent of the total region's $27 billion construction of all types (new and rehabilitation).

In New Jersey rehabilitation is even more significant. In fact, in the early 1990s, when new construction in the state plummeted, there was nearly as much rehabilitation in New Jersey as new construction (see Figure 2.1). Although that is no longer the case, rehabilitation remains very important. As of 1994, New Jersey's $2 billion in rehabilitation comprised 42 percent of the $4.7 billion of all construction activity (new and rehabilitation)—twice the national rehabilitation incidence (21 percent) and one-third larger than the percentage (31 percent) for the Northeast as a whole.

Total new construction and rehabilitation can be further differentiated into activity by type of property: 1) one- to three-family housing (referred to here as single-family); 2) multifamily housing (i.e., containing 4 or more residential units); and 3) nonresidential structures. In 1994, there was $2.725 billion of new construction in New Jersey and $1.979 billion of rehabilitation. Of the $1.979 billion in rehabilitation, $0.724 billion was effected in residential structures ($0.614 billion in single-family and

FIGURE 2.1


United States Construction
Billions of Dollars (Constant 1994)
300
250
200
150
100
50
0
1980
1981
1982
1983
1984
1985
1986
1987
1988
1989
1990
1991
1992
1993
1994
Year
Northeast Construction
Billions of Dollars (Constant 1994)
50
40
30
20
10
0
Year
New Jersey Construction
Billions of Dollars (Constant 1994)
10
8
6
4
2
0
Year
New Construction
Rehabilitation (Additions, Alterations and Improvements)
Total Construction (New Construction and Rehabilitation)
Source: Bureau of Census

$0.110 billion in multifamily buildings) and $1.255 billion in nonresidential properties (Exhibit 2.1).

The figures presented above represent all rehabilitation; historic rehabilitation is a subset of that total. First, however, we must define more precisely what is meant by historic rehabilitation.

HISTORIC REHABILITATION IN NEW JERSEY

Definition of Historic Rehabilitation

For the purposes of this study, historic rehabilitation includes all "rehabilitation" that is effected in "historic" properties. "Rehabilitation" is defined as encompassing all construction work that the Census classifies as "alterations." Not included are minor repairs or structures added to buildings (i.e., the Census categories "repairs" and "additions"). All rehabilitation is included—not just work of a historic nature (e.g., facade restoration)—as long as the rehabilitation is effected in an historic property. Historic, in turn, is defined as a property that is designated as a national, state, or local landmark or is located in a national, state or local historic register district. Rehabilitation in properties eligible for, but not yet designated as historic as defined above, is *not* counted.

This definition of rehabilitation is straightforward (from the Census); however, the specification of "historic" as used in the present study bears further comment. Inclusion of landmarks listed by all levels of government—federal, state, and local—acknowledges that all of these listings are important. Including only entries on the National Register of Historic Places and omitting local landmarks would fail to incorporate the tremendous interest in preservation and the local level and significance of local involvement, as evidenced by the numbers of landmark and historic district designations and related rehabilitation of these resources.

Our specification of historic, however, includes only those properties already officially listed on registers, whether federal, state, or local, and *not* properties eligible for such listing. In the field of preservation, eligibility for designation is in fact a recognized status. At the federal level, a Section 106 review is triggered when federal action threatens properties both on, and eligible for, the National Register. In a similar vein, the New Jersey Historic Trust (NJHT) considers certification for designation (i.e., eligible for, but not yet on, a register) sufficient to qualify a site to be considered for an investment of public monies. (A valid nomination for listing is required for NJHT funding.)

There is a valid reason why eligibility for listing is recognized by historic preservationists, principally that the time gap between eligibility status and official listing should not thwart the ultimate goal of protecting legitimate historic resources. Nonetheless, the authors of this study tally only the rehabilitation effected on already listed as opposed to register-eligible properties because, especially on a statewide basis, there is no data on properties that are eligible for designation. (This information often is not even specified for much more micro-geographical levels, such as a neighborhood or an individual community.) Statewide, there is only conjecture about the scale of properties eligible for landmarking; in fact, there is scant statewide information on properties that are already listed, as is discussed below.

EXHIBIT 2.1

State of New Jersey: Total New Construction and Total Rehabilitation[1] By Area and Property Type (1994)

	TOTAL NEW CONSTRUCTION BY PROPERTY TYPE				TOTAL REHABILITATION BY PROPERTY TYPE			
AREA	SINGLE-FAMILY	MULTIFAMILY	NON-RESIDENTIAL	TOTAL $ AMOUNT NEW CONSTRUCTION	ONE & TWO FAMILY	MULTIFAMILY	NON-RESIDENTIAL	TOTAL $ AMOUNT REHABILITATION
TOTAL—URBAN	$30,266,163	$8,412,408	$120,094,414	**$158,772,985**	$61,576,231	$46,329,369	$295,660,753	**$403,566,353**
TOTAL—MATURE SUBURB	$177,543,702	$15,887,562	$126,714,956	**$320,146,220**	$179,655,977	$28,304,106	$214,467,050	**$422,427,133**
TOTAL—DEVELOPING SUBURB	$1,389,291,265	$92,518,790	$570,294,723	**$2,052,104,778**	$349,232,068	$35,227,843	$723,798,397	**$1,108,258,308**
TOTAL—RURAL	$160,451,398	$1,116,891	$32,402,269	**$193,970,558**	$23,368,294	$496,718	$20,961,672	**$44,826,684**
TOTAL ALL AREAS	$1,757,552,528	$117,935,651	$849,506,362	**$2,724,994,541**	$613,832,570	$110,358,036	$1,254,887,872	**$1,979,078,478**

Note: 1. Includes all construction work that the Census classifies as "alterations" (not included are the Census categories of "repairs" and "additions.") It should further be clarified that rehabilitation includes alterations effected in both non-historic and historic properties (properties on federal, state, or local historic registers).

Source: New Jersey Department of Community Affairs building permit data.

Scale of Historic Rehabilitation in New Jersey

Were the data available, determining the share of the some $2 billion of New Jersey's rehabilitation occurring in the historic stock would be accomplished by:

1. Listing by block and lot numbers the properties for all communities in New Jersey where rehabilitation occurred;
2. Identifying, for all communities, the block and lot numbers of historic properties;
3. Cross-indexing the information from steps 1 and 2.

Although the data for step one above are available, there is no information for step two. There is no file of the historic stock in New Jersey by block and lot numbers. In the present analysis, "proxy" data are developed to fill that information gap, via sampling, using the following approach:

1. The 567 communities in New Jersey are categorized into 4 *groups or types of municipalities:* 1) urban, 2) mature suburb, 3) developing suburb, and 4) rural.
2. The *total amount* of rehabilitation in the four groups of communities by property type (e.g., single- and multifamily residential and nonresidential) is identified. The historic incidence of the total rehabilitation—that is, the amount of rehabilitation by property type effected in the historic stock—is then calculated following steps 3-8.
3. *Sample communities* within the four community types are identified—a sample "urban" community, a representative "mature suburb," and so on.
4. The *total amount* of rehabilitation by property type (e.g., single- and multifamily residential and commercial) in the four sample communities is calculated, and the activity is recorded by building block and lot numbers.
5. The *block and lot numbers* of all *historic properties* in the four sample communities are obtained.
6. The information in steps 4 and 5 is cross-indexed to identify the *rehabilitation by property type occurring in the historic stock* in the four sample communities.
7. The amount of rehabilitation in the historic stock (step 6), divided by the total rehabilitation volume in the four respective communities (step 4), yields an *historic rehabilitation percentage* by category of community (urban, mature suburb, developing suburb, and rural) and by property type (single- and multifamily residential and nonresidential).
8. These historic rehabilitation percentages (step 7), applied to the total rehabilitation by property type in the four categories of communities statewide (step 2), yields the dollar value of historic rehabilitation by property type in urban, mature suburban, developing suburban, and rural communities throughout New Jersey. Summing these amounts yields the *estimated total historic rehabilitation* effected in the state.

The calculation of steps 1-8 is detailed in Appendix A and is summarized here.

The breakout of the total rehabilitation by community category is as follows. As of 1994, $404 million of the total $1.979 billion in rehabilitation statewide for New Jersey was effected in urban communities; $422 million in mature suburbs; $1.108 billion in developing suburbs; and a modest amount ($45 million) in rural communities. The respective amounts by community category by property type—for single-family and multifamily residential and nonresidential—are further detailed in Exhibit 2.1. That exhibit shows, for instance, that for all the community categories—but especially for the urban group—nonresidential properties dominate the total rehabilitation investment.

Of further note is the significance of rehabilitation vis-à-vis new construction in the urban and mature suburban communities. For the state as a whole, the rehabilitation investment of $1.979 billion comprises 42.1 percent of the total $4.704 billion construction activity ($1.979 billion rehabilitation and $2.725 new construction). For mature suburbs, the rehabilitation share of total construction is 56.9 percent; for urban areas, it is 71.8 percent. By contrast, the rehabilitation share of total construction drops to 35.1 percent in developing suburbs and to less than 20 percent in rural communities.

The question that must be answered concerns how much of this total rehabilitation is occurring in the historic stock. It is answered by sampling, as explained earlier. To illustrate, Trenton was selected as an example of an urban community. The following series of calculations was applied by the Rutgers University Center for Urban Policy Research (CUPR).

1. Rehabilitation activity was scrutinized at Trenton's block and lot level to ascertain the city's rehabilitation activity by property type. It was found that of the $48.4 million in rehabilitation that had been effected in Trenton in 1994, $7.8 million was in single-family (one- to three-family) properties, $1.2 million in multifamily properties, and the remainder—$39.4 million—in nonresidential structures.

2. CUPR obtained the block and lot numbers of all the historic properties (i.e., listed on federal, state, or local registers) located in Trenton and then matched these historic parcel block and lot numbers against all the block and lot numbers where rehabilitation had taken place. In Trenton, a total of $6.8 million of rehabilitation was found to have been effected in historic properties in 1994. Of that $6.8 million total, $0.4 million was in historic single-family properties, $0.1 million in historic multifamily properties, and $6.3 million in historic nonresidential structures.

3. Having obtained the total rehabilitation dollar activity in Trenton and the portion of total rehabilitation that comprised this city's historic rehabilitation, it was a simple matter to calculate the "derived historic percentage" by dividing the latter data by the former. These figures are shown below (after the comments in item 4).

4. An adjustment is applied, however. Because Trenton is more active with respect to historic designation and historic rehabilitation than sister urban cities in New Jersey, its derived historic rehabilitation percentage would likely overstate the extent of historic rehabilitation activity in New Jersey cities generally. Thus, the derived historic rehabilitation percentages are reduced by

one-third.* The "estimated (i.e., adjusted) historic rehabilitation percentage" (and these percentages by building type) is shown below and represent an order-of-magnitude identification for the likely share of all urban rehabilitation by building type that is occurring in historic parcels.

TRENTON TOTAL AND HISTORIC REHABILITATION (1994)

Building Type	Total Rehabilitation ($ millions)	Historic Rehabilitation ($ millions)	Calculated Historic Rehab. %[1]	Estimated Historic Rehab. %[2]
1.Single-family residential	$7.8	$0.4	5.2%	3.5%
2.Multifamily residential	1.2	0.1	7.6	5.1
3.Nonresidential	39.4	6.3	15.9	10.6
TOTAL 1-3	$48.4	$6.8	14.0%	9.3%

[1] Percentages calculated on more precise data than that shown here.

[2] Equals .67 x the calculated historic rehabilitation percentage.

5. As a final step, the estimated historic rehabilitation percentages by property type derived for Trenton—as a mirror of all urban communities—were then applied to the total rehabilitation activity by property type for all urban communities to estimate how much historic rehabilitation is occurring statewide in urban areas. It was previously derived that in 1994 there was $404 million in total rehabilitation in urban communities of which $296 million was nonresidential and the remainder residential (single- and multifamily). The estimated nonresidential historic rehabilitation percentage for urban properties (derived from Trenton) is 10.6 percent. Applying this historic percentage to the total urban nonresidential rehabilitation yields an estimate of $44 million in total urban nonresidential rehabilitation that is historic. Using the same procedure, $2 million in urban single-family rehabilitation and $3 million in urban multifamily rehabilitation is estimated as historic (see Appendix A for details.) Summing all property categories results in an estimated $38 million of rehabilitation in New Jersey being effected in historic properties in 1994 (Exhibit 2.2).

The same procedure was applied for the other categories of communities—mature suburbs, developing suburbs, and rural municipalities. Representative sample communities were selected for each category. Total rehabilitation and historic rehabilitation activity was analyzed at the block/lot and property-type levels to derive

* The one-third adjustment is an order of magnitude rather than a precise adjustment. It was derived subsequent to discussions with planners and preservationists knowledgeable about Trenton and the state.

EXHIBIT 2.2

Estimated New Jersey Historic Rehabilitation[1]
By Property Type

	ESTIMATED HISTORIC REHABILITATION BY PROPERTY TYPE				
AREA	SINGLE-FAMILY	MULTIFAMILY	RESIDENTIAL SUBTOTAL	NONRESIDENTIAL	TOTAL ALL CATEGORIES
TOTAL— URBAN	$2,296,357	$2,522,160	$4,818,517	$32,686,036	**$37,504,553**
TOTAL— MATURE SUBURB	$25,984,944	$82,249	$26,067,193	$12,149,667	**$38,216,860**
TOTAL— DEVELOPING SUBURB	$7,675,860	0	$7,675,860	$37,675,533	**$45,351,393**
TOTAL—RURAL	$1,444,573	0	$1,444,573	$83,857	**$1,528,430**
TOTAL ALL AREAS	$37,401,734	$2,604,409	$40,006,143	$82,595,093	**$122,601,236**

Source: 1. See text. Equals total rehabilitation by property type (Exhibit 2.1) multiplied by the estimated historic rehabilitation percentages by property type.

estimated historic rehabilitation percentages and other construction measures (i.e., historic rehabilitation as a share of total construction). The results are shown below.

NEW JERSEY HISTORIC REHABILITATION (1994)

Community Type	Estimated Historic Rehabilitation as % of Total Rehabilitation	Historic Rehabilitation as % of Total Construction (New and All Rehabilitation)
Urban	9.3%	6.6%
Mature Suburb	8.4%	5.1%
Developing Suburb	4.0%	1.4%
Rural	4.9%	0.8%
All	6.2%	2.6%

The estimated historic rehabilitation percentages (in actuality, the estimated historic rehabilitation percentages as a share of total rehabilitation by building type, as detailed in Appendix A), are then applied to the total rehabilitation dollar activity in

the mature suburbs, developing suburbs, and rural communities to derive their respective historic rehabilitation tallies, with the following results. In 1994, there was an estimated $38 million in historic preservation in mature suburbs, $45 million in developing suburbs, and $2 million in rural communities. Adding these to the previously estimated $38 million of historic preservation activity in urban communities yields a total estimated statewide level of historic preservation of $123 million in 1994 (Exhibit 2.2). The breakout by property type is estimated as follows:

Property Type	Estimated 1994 New Jersey Historic Rehabilitation (in $ millions)
1. Single-family residential	$37
2. Multifamily residential	3
3. Nonresidential	83
TOTAL 1-3	$123

The estimated 1994 statewide historic rehabilitation amount—$123 million—could be higher in other years because the total rehabilitation amount can fluctuate—as it has in the past (see Figure 2.1). Further, the present analysis is based on a sampling procedure, and a limited sample at that. Consequently, the dollar amount of historic preservation produced here is an *estimate*. The estimate, however, is the most empirically available figure and, if anything, is *conservative*—that is, likely at the low end. The estimate includes only rehabilitation effected on already designated properties as opposed to the likely larger group of properties eligible for designation. The analysis applies this conservative approach because there is no information source for properties eligible for designation. It could very well be that the rehabilitation effected on landmark-eligible property is 50 percent more than the rehabilitation volume on designated properties, or as large, if not larger. Thus, data limitations impede the estimation of historic rehabilitation and, accordingly, constrain this estimate by limiting it to rehabilitation of officially designated properties. The $123 million figure is at the lower order of the likely actual magnitude of historic rehabilitation effected on all historic properties in the state in 1994.

CHAPTER THREE

Total Economic Impacts from Historic Rehabilitation

INTRODUCTION AND SUMMARY

This chapter discusses how the *total economic impact* of the $123 million of rehabilitation effected in historic properties annually (estimated in Chapter Two) is derived. First, the typical purchases for each type of property on which historic rehabilitation is taking place—single-family, multifamily, and nonresidential—are detailed by industry. The lists of typical labor, material, and service purchases for each property type are then standardized. These estimated economic "recipes" for historic renovation are then multiplied by the amount of annual such activity for each property type. The resulting vectors of historic rehabilitation volume are then applied to input-output models that calculate total economic impacts (direct, indirect, and induced) for the state of New Jersey and the nation. The results are as follows:

Annual Total Economic Impacts of the Annual Historic Rehabilitation in New Jersey ($123 Million)

	In New Jersey	Outside New Jersey	Total (U.S.)
Jobs (person years)	2,316	2,291	4,607
Income ($000)	$81,085	$75,212	$156,297
GDP/GSP ($000)	$116,404	$90,631	$207,035
Total Taxes ($000)	$38,217	$26,876	$65,093
Federal ($000)	$22,915	$17,871	$40,786
State ($000)	$8,322	$4,874	$13,196
Local ($000)	$6,980	$4,131	$11,111
In-State Wealth ($000) (GSP Minus Federal Taxes)	$93,489	--------	--------

GDP/GSP = Gross domestic product/Gross state product

"RECIPES" FOR HISTORIC REHABILITATION

The first category of total economic impact—*direct effects*, or direct requirements—are readily identified once a project has been bid and once its costs have been calculated and summed. In theory, the best way to estimate a project's direct requirements would be to use bid sheets that apply cost elements (i.e., labor and materials) to items specified by the project's architects and engineers. Bid sheets would provide sufficient detail on project requirements to identify the industry that supplies the components, as well as the type of labor needed for the work. The quality of the estimates of a project's direct requirements, in turn, determines the quality of the estimates of other categories of economic impacts. Thus, estimates demand an unusual amount of thoroughness and care. In ideal circumstances, the thoroughness extends to identifying where the direct requirements come from as well as a very detailed specification of the supplying industry.

In the case of this study, CUPR obtained detailed cost information on renovations effected on a variety of historic properties by:

- Contacting developers/sponsors active in historic preservation
- Obtaining files on historic rehabilitation projects certified for federal preservation tax credits
- Obtaining files on projects in New Jersey that had received funding from the New Jersey Historic Trust.

In all instances, the information obtained approached the detail of a bid sheet. Based on these sources, CUPR received information on 56 historic properties requiring $97.4 million in recent rehabilitation (see Appendix B for details). The detailed cost estimates for these projects were summed by property type—single-family residential, multifamily residential, and nonresidential (again, see Appendix B). Using information from the detailed cost estimates as well as the prior experience of the Regional Science Research Corporation in similar studies (Intergovernmental Policy Analysis Program, University of Rhode Island 1993), the cost estimates by property type were converted into purchases of goods and services, including labor, by industry. This lengthy, sometimes subjective, conversion process enabled the specification required to get accurate results by industry from the economic model. The result is an "economic recipe" of the direct requirements for historic rehabilitation by property type. (See Appendix B for these recipes.)

ESTIMATING TOTAL ECONOMIC IMPACTS

Total economic impacts encompass both *direct* and *multiplier* effects. The latter incorporate *indirect* and *induced* impacts. The character of the direct impacts of historic preservation is derived from the recipes noted above. The process for estimating a given project's indirect and induced economic impacts is more roundabout. By definition, a project's first round of indirect impact includes the purchases of any supplies and/or services that are required to produce the direct effects. Subsequent purchases of supplies and services generate other rounds of indirect impacts. The induced impacts are the purchases that arise, in turn, from the increase in aggregate labor income of households. Aggregate labor income is defined as the sum of wages, salaries, and proprietors' income earned by workers. Both the indirect and induced economic impacts demonstrate how the demand for direct requirements reverberates through an economy.

Figure 3.1 details the economic impacts of the rehabilitation of historic properties. The *direct impact* component consists of purchases made specifically for the construction project. Direct impacts on the local economy are composed only of purchases from local organizations. The *indirect impact* component consists of spending on goods and services by industries that produce the items purchased by the contractors who are preserving the property. Among his many business relationships, for example, a contractor might purchase windows from "Jerry's Home Improvement Inc." (JHI), which makes custom windows. In order to produce windows, JHI must hire craftsmen as well as contract with firms that supply glass, adhesives, paints and coatings, glazing, and wood products. JHI also hopes to make a profit for its owners/shareholders.

In order to meet JHI's needs, its suppliers must also hire workers and obtain materials and specialized services. The same process is repeated for their suppliers, and

so on. Thus, an extensive network of relationships is established based upon round after round after round of business transactions that emanate from a single preservation project. It is this network of transactions that describes the set of indirect impacts. Of course, a firm's net indirect contribution to the preservation activity largely depends on: (1) the total value of its transactions in the network; and (2) the proximity of its business relationship(s) to the preservation contractor within the project's business network. Similar to direct impacts, local indirect impacts are composed only of indirect business transactions that occur in the local economy.

Finally, *induced impacts* are a measure of household spending. They are a tally of the expenditures made by the households of the construction workers on a preservation project, as well as the households of employees of the supplying industries.

Figure 3.1: Examples of Direct and Multiplier Effects (Indirect and Induced Impacts) from Historic Preservation

	MULTIPLIER EFFECTS	
DIRECT IMPACTS	INDIRECT IMPACTS	INDUCED IMPACTS
Purchases for: • Architectural design • Site preparation • Construction labor • Building materials • Machinery & tools • Finance & insurance • Inspection fees	Purchases of: • Lumber & wood products • Machine components • Stone, clay, glass, & gravel • Fabricated metals • Paper products • Retail & wholesale services • Trucking & warehousing	Household spending on: • Food, clothing, day care, • Retail services, public transit, utilities, car(s), oil & gasoline, property & income taxes, medical services, and insurance

One means of estimating indirect and induced impacts would be to conduct a survey of the business transactions of the primary contractor. The business questionnaire for this survey would ask for the names and addresses of the contractor's suppliers; what and how much they supply; the names and addresses of the contractor's employees; and the annual payroll.

A related questionnaire would cover the household spending of the employees of the surveyed firms. It would request a characterization of each employee's household budget by detailed line items, including names and addresses of the firms or organizations from which each line item is purchased.

Both questionnaires subsequently could be used to measure indirect and induced impacts of the primary contractor's activity. The business questionnaire would be sent to the business addresses identified by the primary contractor; and the household questionnaire, in turn, would be sent to the homes of the employees of those businesses that responded to the survey. This "snowball-type" sampling would continue until time or money was exhausted. In order to keep each organization's or household's contribution to the project in proper perspective, its total spending would be weighted by the size of its transaction with its customers who were included in the survey

activity. The sum of the weighted transaction values obtained via the surveys would be the total economic impact of the project.

This survey-based approach to estimating indirect and induced impacts consumes a great deal of money and time, however. In addition, response rates by firms and households on surveys regarding financial matters are notoriously low. Hence, in the rare cases where survey work has been conducted to measure economic impacts, the results have tended to be not statistically representative of the targeted network of organizations and households. Consequently, relatively less expensive economic models based on Census data are typically used to measure economic impacts.

The economic model that has proven to estimate the indirect and induced economic effects of events most accurately is the input-output model. Its advantage stems from its level of industry detail and its depiction of interindustry relations. As shown in Appendix C, a single calculation—known as the Leontief inverse—simulates the many rounds of business and household surveys. Input-output tables are constructed from nationwide Census surveys of businesses and households. The most difficult part of regional impact analysis is modifying a national input-output model so that it can be used to estimate impacts at a subnational level. "Regionalization" of the model typically is undertaken by the model producer and requires a large volume of data on the economy being modeled. This study employs regional input-output models to estimate the extent of the indirect and induced economic effects of a direct investment in historic preservation activities. The economic effects of historic rehabilitation are studied in this chapter; the effects of heritage tourism and the operations of historic sites and organizations are studied in later chapters.

THE REGIONAL SCIENCE RESEARCH CORPORATION'S INPUT-OUTPUT MODEL

The regional input-output model used by this study to derive the total economic impacts is the PC I-O Model produced by the Regional Science Research Corporation (RSRC) of Hightstown, New Jersey. RSRC's model produces very accurate estimates of the total regional impacts of an economic activity and employs detail for more than 500 industries in calculating the effects.

RSRC's models have proven to be the best of the nonsurvey-based regional input-output models at measuring a region's economic self-sufficiency. The models also have a wide array of measures that can be used to analyze impacts. In particular, RSRC produces one of the only regional economic models that enables an analysis of governmental revenue (i.e., tax) impacts and an analysis of gains in total regional wealth. (See Appendix C for more details on the relative higher quality of the RSRC model.)

The results of RSRC's PC I-O model include many fields of data. Among them, the most significant for the purposes of this study, are the total impacts with respect to:

- **Jobs:** *Employment, both part- and full-time, by place of work,* estimated using the typical job characteristics of each detailed industry. (Manufacturing jobs, for example, tend to be full-time; in retail trade and real estate, part-time jobs

predominate.) All jobs generated at businesses in the region are included, even though the associated labor income of commuters may be spent outside of the region. In this study, all results are for activities occurring within the time frame of one year. Thus, the job figures should be read as job-years, i.e., several individuals might fill one job-year on any given project.

- **Income:** *"Earned" or "labor" income—specifically wages, salaries, and proprietors' income.* Income does not include nonwage compensation (i.e., benefits, pensions, or insurance), transfer payments, or dividends, interest, or rents.
- **Wealth:** *Value added—the equivalent at the subnational level of gross domestic product (GDP).* At the state level this is called gross state product (GSP). Value added is widely accepted by economists as the best measure of economic well-being. It is estimated from state-level data by industry. For a firm, value added is the difference between the value of goods and services produced and the value of goods and nonlabor services purchased. For an industry, therefore, it is composed of labor income (net of taxes), taxes, nonwage labor compensation, profit (other than proprietors' income), capital consumption allowances, and net interest, dividends, and rents received.
- **Taxes:** *Tax revenues generated by the activity.* The tax revenues are detailed for the federal, state, and local levels of government. Totals are calculated by industry.

  Federal tax revenues include corporate and personal income, social security, and excise taxes, estimated from the calculations of value added and income generated.

  State tax revenues include personal and corporate income, state property, excise, sales, and other state taxes, estimated using the calculations of value added and income generated (e.g., purchases by visitors).

  Local tax revenues include payments to substate governments mainly through property taxes on new worker households and businesses, but can also include revenues from local income, sales, and other taxes.

TOTAL ECONOMIC IMPACTS OF ANNUAL NEW JERSEY HISTORIC REHABILITATION

Chapter Two estimated that $123 million in historic rehabilitation is effected annually in New Jersey. Of this, $39 million tends to be in residential historic properties (single- and multifamily) and $84 million in nonresidential historic properties. What is the total economic benefit of this activity? What proportion of these benefits accrues to New Jersey?

To answer these questions, the study team applied the direct requirements of $123 million in historic rehabilitation construction activity to economic models of New Jersey and the United States. This yielded total economic impacts for the country as a whole (national or U.S. effects) and for the state of New Jersey (in-state effects). For both the nation and state, the significant economic indicators were jobs created, resident

income generated, resident wealth generated (gross domestic or state product), and taxes generated by level of government.

Besides the four above measures, at the state level, CUPR estimated an additional gauge of activity termed **in-state wealth.** This measure consists of in-state generation of value added (or gross state product), less the amount that "leaks" out of the state's economy in the form of taxes paid to the federal government. Since taxes paid to the state and local governments remain in state, they cannot be said to "leak" and, thus, are considered part of the accumulated in-state wealth.

The RSRC PC I-O model expresses the resulting jobs, income, and wealth impacts in various levels of industry detail. The most convenient application breaks the industry-level results at the one-digit standard industrial code (SIC) or division level. This level has eleven industry divisions:

1. Agriculture
2. Agricultural, Fishing, and Forestry Services
3. Mining
4. Construction
5. Manufacturing
6. Transportation and Public Utilities (TPU)
7. Wholesale Trade
8. Retail Trade
9. Finance, Insurance, and Real Estate (FIRE)
10. Services
11. Government

The RSRC model provides results in two other industry breakouts, which detail subcategories under each of these eleven groups. These breakouts use the two-digit SIC (86-industry) specification and the full industry specification of the input-output model (about 515 industries).

Jobs are also specified by occupation; and the RSRC model disaggregates occupations at two levels. The model results, however, are only as good as the data that go into them. Thus, when the direct requirements are estimated, and the industry-level purchases are also estimated (as is the case in this study), care should be taken in interpreting model results, especially when they contain extreme categorical detail. Hence, the main body of this report focuses on the one-digit SIC level results, but data on the two-digit SIC results and the more aggregate occupational breakouts of jobs are made available in the appendices. The purpose of providing such detail is to enable a better idea of the quality of jobs that are likely to be created and of the types of industries that are most likely to be affected by historic rehabilitation activities.

The total economic impacts of the $123 million in historic rehabilitation spending are summarized below and detailed in Exhibits 3.1 through 3.6:

	In New Jersey	Outside New Jersey	Total (U.S.)
Jobs (person years)	2,316	2,291	4,607
Income ($000)	$81,085	$75,212	$156,297
GDP/GSP ($000)	$116,404	$90,631	$207,035
Total Taxes ($000)	$38,217	$26,876	$65,093
Federal ($000)	$22,915	$17,871	$40,786
State ($000)	$8,312	$4,884	$13,196
Local ($000)	$6,980	$4,131	$11,111
In-State Wealth ($000) (GSP Minus Federal Taxes)	$93,489	--------	--------

GDP/GSP = Gross domestic product/Gross state product

Item 1 of Section II in Exhibit 3.1 shows how the $123 million translates into direct economic effects nationwide. It creates 1,617 jobs (technically "job-years"), which produce $64.5 million in labor income and $76.5 million in GDP. The difference between the initial investment ($123 million) and the GDP subsequently created by it ($77 million) implies that historic building rehabilitation requires significant amounts of imported materials.

The indirect and induced effects of historic preservation activity require 2,990 more jobs, and generate $91.8 million more in income, and $131 million more in GDP in their support. As a consequence, the total economic impact—the sum of the direct and indirect and induced effects—of historic building rehabilitation is 4,607 jobs (1,617 + 2,990); $156 million in income ($64.5 million + $91.8 million); and $207 million in GDP ($76.5 million + $130.5 million). In other words, the multiplier effects are greater than the direct effects. The national multipliers are always substantially greater than 2.0.

According to Exhibits 3.1 and 3.4, of the 4,607 jobs created annually, about 50 percent (2,316 jobs) are created within the state. New Jersey retains nearly all of the jobs (1,501 of the 1,617) created directly by state-based historic rehabilitation activity. However, the indirect and induced impacts of New Jersey historic rehabilitation activity tend to leak out of the state. This finding is not surprising, in light of New Jersey's suburban role to both New York City and Philadelphia; goods and services are demanded from across boundaries at both ends of the state. Indeed, separately the two multi-state metropolitan areas that dominate New Jersey are likely to be more self-sufficient economically than the state itself.

Most of the jobs created outside of the state are created indirectly in manufacturing industries to produce rehabilitation materials or to meet the demands of households. New Jersey maintains only 52 percent (445 of 850) of all the high-paying manufacturing jobs that support the rehabilitation activity. Out-of-state manufacturers pay much higher wages than those in-state—$47,035 versus $32,903. As a consequence,

out-of-state household consumption of goods and services plus the activity of out-of-state manufacturers combine to induce the out-of-state share of jobs in the agricultural, mining, and finance industries to extraordinarily high levels (77, 58, and 94 percent, respectively).

We can learn other interesting aspects of the impacts by examining them by detailed industry (see Exhibits 3.2 and 3.5). For example, the New Jersey manufacturing industries that are stimulated most by the preservation activity (listed in order of their share in the increase in the manufacturing component of GSP) are: fabricated metal products (25.8%); stone, clay, and glass products (13.9%); lumber and wood products (11.2%); electrical and electronic machinery (8.2%); mechanical machinery (8.1%); primary metals (5.9%); petroleum and coal products (5.3%); and chemicals and allied products (4.8%). Except for electrical and electronic machinery, and chemicals and allied products, these industries have all been declining in New Jersey. Hence, historic preservation activity provides a boost to the state's economy where it is most needed.

Outside of the construction, manufacturing, and wholesale trade industries, the two detailed New Jersey sectors that are most affected by preservation activity are engineering and management services (EMS) and real estate. The communications industry and trucking and warehousing feel the impact as well.

The distribution of nationwide impacts across industries is similar to that for New Jersey. As might be expected, however, the state experiences more of an impact in such industries as construction, wholesale trade, real estate, and EMS. Some consumer-oriented industries loom larger in the national mix of affected sectors. In particular, preservation activities contribute relatively more to GDP in such industries as food and kindred products, printing and publishing, and transportation equipment (automobile) manufacturing than they do to GSP. The contribution to GDP is also relatively larger for air transportation services; electricity, gas, and sanitary services; non-real estate finance industries; and business services. Of these, only business services is a producer-oriented industry. The influence on this industry is difficult to interpret, however, since it is largely composed of temporary help services, which are ultimately used by all other industries in the economy.

Exhibits 3.3 and 3.6 provide a breakdown of the occupations that support New Jersey historic building rehabilitation activity, both nationally and within the state. As might be expected, the lion's share of the skilled labor, technician, and trade jobs generated by preservation activities are located in New Jersey (71, 58, and 58 percent, respectively). The state also maintains a fair share of the managerial and professional-specialty jobs (about 48 percent of both). In the other major occupation divisions, the state's share of jobs is less sanguine. Nevertheless, with the exception of some sales agents and brokers, the pay scale of these occupations (in marketing and sales, administrative support, service, and agriculture) is at the low end.

The average annual income of all jobs created by historic rehabilitation activity nationwide (in New Jersey and other states) is estimated to be $33,926. Multiplying this figure by the total number of new jobs created (4,607) reveals that the $123 million investment in historic preservation is more than returned to the nation in the form of $156 million in increased income. In one sense, therefore, historic rehabilitation activity

in New Jersey can be viewed as an income reallocation and enhancement program for the nation. The average annual income for the New Jersey jobs created by the investment is somewhat higher than for the jobs in the rest of the nation—$35,011 versus $32,829. This $2,182 income-per-job gap is due largely to the higher proportions of skilled labor and trade jobs created on-site at the historic properties. The income gap makes the proportion of income accruing to New Jersey (52 percent) higher than the proportion of jobs accrued in New Jersey (50 percent).

Labor income composes about 77 percent of gross domestic product in all industries nationwide in any given year. For New Jersey historic building rehabilitation, the proportion is somewhat lower—75 percent. Nonetheless, the wealth accruing to the state from the better-paying New Jersey jobs created by historic rehabilitation activity is higher than equivalent wealth accrual outside of the state. The magnitude of the difference between them is somewhat startling—$50,261 versus $39,560 per job, or a wealth gap of $10,701. This gap compares to a difference in labor income of $2,182 per job ($35,011 versus $32,829). The wealth gap is due to the concentration of construction jobs created within New Jersey by state-based historic rehabilitation activity. This gap substantially improves the economic return to the state: indeed, 76 percent ($93.5 million) of the $123 million investment is returned to the state through the accumulation of in-state wealth (gross state product minus federal taxes). The return to the nation is also boosted; nearly $1.69 is returned to the nation for each dollar invested—for a total return of $207 million on the original $123 million investment. What's more, this high return does not even consider the enhanced attractiveness for business or tourism purposes of the properties involved.

Estimates of the economic impacts from the constituent components of the historic rehabilitation—single-family ($36 million), multifamily ($3 million), nonresidential ($84 million)—are shown separately in Appendix F. Naturally, since it has the largest amount of investment annually, historic rehabilitation of nonresidential buildings has the largest impact on each measure. But does it also give the best return on investment or "biggest bang for the buck?" The summary exhibits in Appendix F in the section labeled "EFFECTS PER MILLION DOLLARS OF INITIAL EXPENDITURE" address this question. It turns out that the rehabilitation of historic nonresidential buildings does tend to yield the greatest economic return per dollar of investment to both New Jersey and the rest of the nation. More interesting, however, is the finding that not much difference exists in the size of the economic return per dollar invested among the three property types. This finding is somewhat surprising, considering the vast differences in the materials and labor types used in the three types of rehabilitation projects.

In summary, the economic impacts estimated through RSRC's input-output models of the New Jersey and the U.S. economies reveal that the annual historic rehabilitation activity in New Jersey returns significantly more to the nation in terms of income and, hence, wealth than it costs to undertake. Nationwide, the $123 million New Jersey investment creates about 4,600 new jobs, $156 million in additional income, and over $207 million in total wealth. A little over 50 percent of each of these measures accumulates in New Jersey itself.

Exhibit 3.1
National Economic and Tax Impacts of Annual New Jersey Historic Building Rehabilitation ($123 Million)

	Economic Component		
	Employment (jobs)	Income (000$)	Gross Domestic Product (000$)
I. TOTAL EFFECTS (Direct and Indirect/Induced)*			
Private			
1. Agriculture	8	981	1,608
2. Agri. Serv., Forestry, & Fish	31	563	854
3. Mining	24	1,266	3,965
4. Construction	1,082	41,993	44,203
5. Manufacturing	850	33,691	46,196
6. Transport. & Public Utilities	265	12,681	22,263
7. Wholesale	102	4,486	12,670
8. Retail Trade	733	13,772	15,737
9. Finance, Ins., & Real Estate	443	16,375	26,258
10. Services	927	28,257	31,223
Private Subtotal	4,466	154,061	204,968
Public			
11. Government	141	2,236	2,067
Total Effects (Private and Public)	4,607	156,297	207,035
II. DISTRIBUTION OF EFFECTS/MULTIPLIER			
1. Direct Effects	1,617	64,473	76,479
2. Indirect and Induced Effects	2,990	91,823	130,557
3. Total Effects	4,607	156,297	207,035
4. Multipliers (3÷1)	2.849	2.424	2.707
III. COMPOSITION OF GROSS DOMESTIC PRODUCT			
1. Wages--Net of Taxes			141,417
2. Taxes			
a. Local			11,111
b. State			13,196
c. Federal			
General			23,809
Social Security			16,977
Federal Subtotal			40,786
d. Total taxes (2a+2b+2c)			65,093
3. Profits, dividends, rents, and other			526
4. Total Gross Domestic Product (1+2+3)			207,035
EFFECTS PER MILLION DOLLARS OF INITIAL EXPENDITURE			
Employment (Jobs)			37.6
Income			$1,274,853
State Taxes			$107,634
Local Taxes			$90,630
Gross Domestic Product			$1,688,706

Note: Detail may not sum to totals due to rounding.

*Terms:

Direct Effect (National)—the amount of goods and services purchased in the nation.

Indirect Effects—the value of goods and services needed to support the provision of those direct economic effects.

Induced Effects—the value of goods and services needed by households that provide the direct and indirect labor.

Source: Rutgers University Center for Urban Policy Research, 1997.

Exhibit 3.2
National Economic Impacts of Annual New Jersey Historic Building Rehabilitation ($123 Million)

INDUSTRY	Industry Component: Employment (jobs)	Income ($000)	Gross Domestic Product ($000)
Agriculture	**8**	**981**	**1,608**
Dairy Prod., Poultry, & Eggs	1	177	239
Meat Animals & Misc. Livestock	2	208	267
Cotton	0	31	41
Grains & Misc. Crops	3	382	681
Tobacco	0	56	92
Fruits, Nuts, & Vegetables	0	38	127
Forest Prod.	0	39	100
Greenhouse & Nursery Prod.	1	51	63
Agri. Serv., Forestry, & Fish	**31**	**563**	**854**
Agri. Services (07)	18	318	334
Forestry (08)	9	53	316
Fishing, Hunting, & Trapping (09)	4	193	204
Mining	**24**	**1,266**	**3,965**
Metal Mining (10)	3	213	256
Coal Mining (12)	0	0	0
Oil & Gas Extraction (13)	12	692	3,093
Nonmetal Min.-Ex. Fuels (14)	9	362	616
Construction	**1,082**	**41,993**	**44,203**
General Bldg. Contractors (15)	320	13,339	14,041
Heavy Const. Contractors 16)	103	4,239	4,462
Special Trade Contractors (17)	660	24,415	25,700
Manufacturing	**850**	**33,691**	**46,196**
Food & Kindred Prod. (20)	52	1,959	3,107
Tobacco Manufactures (21)	1	73	344
Textile Mill Prod. (22)	26	651	1,143
Apparel & Other Prod. (23)	33	611	666
Lumber & Wood Prod. (24)	92	3,021	4,241
Furniture & Fixtures (25)	19	522	607
Paper & Allied Prod. (26)	21	1,050	1,754
Printing & Publishing (27)	57	1,985	2,646
Chemicals & Allied Prod. (28)	30	1,833	2,869
Petroleum & Coal Prod. (29)	7	677	1,939
Rubber & Misc. Plastics (30)	42	1,539	1,751
Leather & Leather Prod. (31)	9	183	224
Stone, Clay, & Glass (32)	90	3,361	4,061
Primary Metal Prod. (33)	54	3,051	3,387
Fabricated Metal Prod. (34)	145	5,847	7,820
Machinery, Except Elec. (35)	60	2,588	3,226
Electric & Elec. Equip. (36)	52	2,000	3,032
Transportation Equipment (37)	27	1,612	2,072
Instruments & Rel. Prod. (38)	26	859	912
Misc. Manufacturing Ind's. (39)	8	271	395

Exhibit 3.2 (continued)
National Economic Impacts of Annual New Jersey Historic Building Rehabilitation ($123 Million)

INDUSTRY	Industry Component: Employment (jobs)	Income ($000)	Gross Domestic Product ($000)
Transport. & Public Utilities	**265**	**12,681**	**22,263**
Railroad Transportation (40)	26	1,357	2,177
Local Pass. Transit (41)	22	577	645
Trucking & Warehousing (42)	96	3,819	4,007
Water Transportation (44)	7	274	420
Transportation by Air (45)	14	838	1,110
Pipe Lines-Ex. Nat. Gas (46)	1	40	189
Transportation Services (47)	9	380	419
Communication (48)	50	3,006	6,146
Elec., Gas, & Sanitary Serv. (49)	40	2,391	7,150
Wholesale	**102**	**4,486**	**12,670**
Whlsale-Durable Goods (50)	54	2,488	8,148
Whlsale-Nondurable Goods (51)	49	1,998	4,522
Retail Trade	**733**	**13,772**	**15,737**
Bldg. Mat.-Garden Supply (52)	34	944	1,041
General Merch. Stores (53)	76	1,306	1,915
Food Stores (54)	67	1,336	1,493
Auto. Dealers-Serv. Stat. (55)	77	2,190	2,450
Apparel & Access. Stores (56)	32	545	851
Furniture & Home Furnish. (57)	11	332	406
Eating & Drinking Places (58)	294	4,126	4,827
Miscellaneous Retail (59)	143	2,994	2,752
Finance, Ins., & Real Estate	**443**	**16,375**	**26,258**
Banking (60)	56	2,030	3,667
Nondep. Credit Institut. (61)	50	1,801	1,622
Security, Comm. Brokers (62)	22	1,741	2,402
Insurance Carriers (63)	62	2,687	2,883
Ins. Agents, Brokers (64)	102	3,923	4,123
Real Estate (65)	46	358	8,107
Holding and Invest. Off. (67)	106	3,835	3,454
Services	**927**	**28,257**	**31,223**
Hotels & Other Lodging (70)	60	983	1,732
Personal Services (72)	97	1,781	1,899
Business Services (73)	212	6,096	6,933
Auto Repair, Serv., Garages (75)	52	1,834	2,166
Misc. Repair Services (76)	43	1,174	1,239
Motion Pictures (78)	35	756	699
Amusement & Recreation (79)	23	544	652
Health Services (80)	60	2,002	2,123
Legal Services (81)	23	1,463	1,618
Educational Services (82)	28	556	603
Social Services (83)	26	378	427
Museums, Botan.-Zoo. Gardens (84)	1	31	30
Membership Organizations (86)	68	1,339	1,309
Engineer. & Manage. Serv. (87)	196	9,171	9,637
Miscellaneous Services (89)	3	149	155
Government	**141**	**2,236**	**2,067**
Total	**4,607**	**156,297**	**207,035**

Note: Detail may not sum to totals due to rounding.

Exhibit 3.3
National Employment Impacts by Occupation of Annual New Jersey Historic Building Rehabilitation ($123 Million)

OCCUPATION TITLE	Employment (jobs)
Total, All Occupations	**4,607**
Exec., Admin., and Management Occupations	**524**
Managerial and Administrative Occupations	378
Management Support Occupations	146
Professional Specialty Occupations	**239**
Engineers	64
Architects and Surveyors	22
Life Scientists	2
Computer, Math, and Operations Res. Analysts	17
Physical Scientists	5
Social Scientists	1
Social, Recreational, and Relig. Workers	13
Lawyers and Judicial Workers	8
Teachers, Librarians, and Counselors	31
Health Diagnosing Occupations	3
Health Assessment & Treating Occupations	16
Writers, Artists, and Entertainers	43
All Other Professional Workers	13
Technicians and Related Support Occupations	**125**
Health Technicians and Technologists	37
Engineering & Science Technicians & Technologists	63
Technicians, Except Health and Engin. & Science	28
Marketing and Sales Occupations	**421**
Cashiers	78
Counter and Rental Clerks	16
Insurance Sales Workers	26
Real Estate Agents, Brokers, & Appraisers	7
Salespersons, Retail	129
Securities and Financial Service Sales Workers	8
Stock Clerks, Sales Floor	34
Travel Agents	2
All Other Sales and Related Workers	125
Administrative Support Occupations, incl. Clerical	**842**
Adjusters, Investigators, & Collectors	50
Communications Equipment Operators	11
Computer & Peripheral Equipment Operators	10
Financial Records Processing Occupations	130
Information Clerks	47
Mail Clerks and Messengers	9
Postal Clerks and Mail Carriers	49
Mat'l Record., Sched., Dispatch, & Distrib. Occs.	80
Records Processing Occupations, except Financial	30
Secretaries, Stenographers, and Typists	164
Other Clerical and Administrative Support Workers	264

Exhibit 3.3 (continued)
National Employment Impacts by Occupation of Annual New Jersey Historic Building Rehabilitation ($123 Million)

OCCUPATION TITLE	Employment (jobs)
Service Occupations	**520**
Cleaning & Building Service Occs., except Private	101
Food Preparation and Service Occupations	287
Health Service Occupations	26
Personal Service Occupations	47
Protective Service Occupations	37
All Other Service Workers	24
Agric., Forestry, Fishing, & Related Occupations	**50**
Animal Caretakers, except Farm	2
Farm Occupations	21
Farm Operators and Managers	3
Fishers, Hunters, and Trappers	0
Forestry and Logging Occupations	7
Gardeners & Groundskeepers, except farm	12
Supervisors, Farming, Forestry, & Agricul. Occs.	2
All Other Agric., Forestry, Fishing, & Rel. Workers	2
Precision Production, Craft, & Repair Occupations	**959**
Blue-collar Worker Supervisors	110
Construction Trades	476
Extractive and Related Workers, Incl. Blasters	7
Mechanics, Installers, and Repairers	228
Production Occupations, Precision	130
Plant and System Occupations	7
Operators, Fabricators, and Laborers	**925**
Mach. Setters, Set-up Ops, Operators, & Tenders	223
Hand Workers, incl. Assemblers & Fabricators	113
Transp. & Material Moving Machine & Vehicle Ops.	261
Helpers, Laborers, & Material Movers, Hand	329

Note: Detail may not sum to totals due to rounding.

Exhibit 3.4
In-State Economic and Tax Impacts of Annual New Jersey Historic Building Rehabilitation ($123 Million)

	Economic Component		
	Employment (jobs)	Income (000$)	Gross State Product (000$)
I. TOTAL EFFECTS (Direct and Indirect/Induced)*			
Private			
1. Agriculture	1	5	23
2. Agri. Serv., Forestry, & Fish	8	142	225
3. Mining	10	258	419
4. Construction	932	37,726	42,836
5. Manufacturing	445	14,642	24,356
6. Transport. & Public Utilities	132	3,898	8,996
7. Wholesale	56	3,773	8,961
8. Retail Trade	234	4,849	7,397
9. Finance, Ins., & Real Estate	72	3,350	7,671
10. Services	375	11,752	14,856
Private Subtotal	2,265	80,395	115,734
Public			
11. Government	51	689	670
Total Effects (Private and Public)	2,316	81,085	116,404
II. DISTRIBUTION OF EFFECTS/MULTIPLIER			
1. Direct Effects	1,501	58,443	76,479
2. Indirect and Induced Effects	815	22,642	39,925
3. Total Effects	2,316	81,085	116,404
4. Multipliers (3÷1)	1.543	1.387	1.522
III. COMPOSITION OF GROSS STATE PRODUCT			
1. Wages--Net of Taxes			71,057
2. Taxes			
a. Local			6,980
b. State			8,322
c. Federal			
General			13,370
Social Security			9,545
Federal Subtotal			22,915
d. Total taxes (2a+2b+2c)			38,217
3. Profits, dividends, rents, and other			7,131
4. Total Gross State Product (1+2+3)			116,404
EFFECTS PER MILLION DOLLARS OF INITIAL EXPENDITURE			
Employment (Jobs)			18.9
Income			$661,376
State Taxes			$67,876
Local Taxes			$56,935
Gross State Product			$949,464

Note: Detail may not sum to totals due to rounding.

*Terms:

Direct Effect (State)—the amount of goods and services purchased in New Jersey.

Indirect Effects—the value of goods and services needed to support the provision of those direct economic effects.

Induced Effects—the value of goods and services needed by households that provide the direct and indirect labor.

Source: Rutgers University Center for Urban Policy Research, 1997.

Exhibit 3.5
In-State Economic Impacts of Annual New Jersey Historic Building Rehabilitation ($123 Million)

INDUSTRY	Industry Component: Employment (jobs)	Income ($000)	Gross State Product ($000)
Agriculture	**1**	**5**	**23**
Dairy Prod., Poultry, & Eggs	0	0	0
Meat Animals & Misc. Livestock	0	0	0
Cotton	0	0	0
Grains & Misc. Crops	0	0	2
Tobacco	0	0	2
Fruits, Nuts, & Vegetables	0	0	0
Forest Prod.	0	0	5
Greenhouse & Nursery Prod.	1	5	14
Agri. Serv., Forestry, & Fish	**8**	**142**	**225**
Agri. Services (07)	8	132	177
Forestry (08)	0	1	7
Fishing, Hunting, & Trapping (09)	0	9	41
Mining	**10**	**258**	**419**
Metal Mining (10)	0	0	0
Coal Mining (12)	0	0	0
Oil & Gas Extraction (13)	2	6	7
Nonmetal Min.-Ex. Fuels (14)	8	252	412
Construction	**932**	**37,726**	**42,836**
General Bldg. Contractors (15)	270	11,124	13,796
Heavy Const. Contractors 16)	77	4,014	4,273
Special Trade Contractors (17)	585	22,588	24,766
Manufacturing	**445**	**14,642**	**24,356**
Food & Kindred Prod. (20)	10	327	871
Tobacco Manufactures (21)	0	1	3
Textile Mill Prod. (22)	8	183	462
Apparel & Other Prod. (23)	5	93	155
Lumber & Wood Prod. (24)	72	1,790	2,732
Furniture & Fixtures (25)	6	210	267
Paper & Allied Prod. (26)	8	222	400
Printing & Publishing (27)	9	269	437
Chemicals & Allied Prod. (28)	15	590	1,173
Petroleum & Coal Prod. (29)	10	483	1,293
Rubber & Misc. Plastics (30)	14	382	644
Leather & Leather Prod. (31)	0	8	12
Stone, Clay, & Glass (32)	72	2,096	3,388
Primary Metal Prod. (33)	19	899	1,437
Fabricated Metal Prod. (34)	102	4,018	6,303
Machinery, Except Elec. (35)	39	1,272	1,984
Electric & Elec. Equip. (36)	43	1,327	2,002
Transportation Equipment (37)	3	134	266
Instruments & Rel. Prod. (38)	9	266	403
Misc. Manufacturing Ind's. (39)	2	74	124

Exhibit 3.5 (continued)
In-State Economic Impacts of Annual New Jersey Historic Building Rehabilitation ($123 Million)

INDUSTRY	Industry Component: Employment (jobs)	Income ($000)	Gross State Product ($000)
Transport. & Public Utilities	**132**	**3,898**	**8,996**
Railroad Transportation (40)	20	682	1,341
Local Pass. Transit (41)	12	241	326
Trucking & Warehousing (42)	59	1,470	2,687
Water Transportation (44)	2	138	207
Transportation by Air (45)	4	142	293
Pipe Lines-Ex. Nat. Gas (46)	0	3	21
Transportation Services (47)	3	109	171
Communication (48)	16	803	2,785
Elec., Gas, & Sanitary Serv. (49)	17	311	1,165
Wholesale	**56**	**3,773**	**8,961**
Whlsale-Durable Goods (50)	41	2,211	6,021
Whlsale-Nondurable Goods (51)	15	1,562	2,940
Retail Trade	**234**	**4,849**	**7,397**
Bldg. Mat.-Garden Supply (52)	12	327	513
General Merch. Stores (53)	33	584	1,092
Food Stores (54)	25	533	818
Auto. Dealers-Serv. Stat. (55)	21	696	1,024
Apparel & Access. Stores (56)	13	247	518
Furniture & Home Furnish. (57)	5	127	234
Eating & Drinking Places (58)	74	1,299	1,711
Miscellaneous Retail (59)	51	1,037	1,488
Finance, Ins., & Real Estate	**72**	**3,350**	**7,671**
Banking (60)	13	648	1,313
Nondep. Credit Institut. (61)	11	490	536
Security, Comm. Brokers (62)	4	293	319
Insurance Carriers (63)	16	970	1,036
Ins. Agents, Brokers (64)	5	138	241
Real Estate (65)	15	415	3,795
Holding and Invest. Off. (67)	9	396	432
Services	**375**	**11,752**	**14,856**
Hotels & Other Lodging (70)	48	899	1,254
Personal Services (72)	38	677	967
Business Services (73)	56	554	789
Auto Repair, Serv., Garages (75)	14	410	1,041
Misc. Repair Services (76)	8	166	344
Motion Pictures (78)	4	98	159
Amusement & Recreation (79)	6	175	210
Health Services (80)	19	723	861
Legal Services (81)	9	516	686
Educational Services (82)	13	283	319
Social Services (83)	3	79	128
Museums, Botan.-Zoo. Gardens (84)	0	4	5
Membership Organizations (86)	19	475	551
Engineer. & Manage. Serv. (87)	138	6,642	7,465
Miscellaneous Services (89)	1	49	77
Government	**51**	**689**	**670**
Total	**2,316**	**81,085**	**116,404**

Note: Detail may not sum to totals due to rounding.

Exhibit 3.6
In-state Employment Impacts by Occupation of Annual New Jersey Historic Building Rehabilitation ($123 Million)

OCCUPATION TITLE	Employment (jobs)
Total, All Occupations	**2,316**
Exec., Admin., and Management Occupations	**250**
Managerial and Administrative Occupations	191
Management Support Occupations	59
Professional Specialty Occupations	**115**
Engineers	44
Architects and Surveyors	19
Life Scientists	0
Computer, Math, and Operations Res. Analysts	7
Physical Scientists	3
Social Scientists	0
Social, Recreational, and Relig. Workers	3
Lawyers and Judicial Workers	3
Teachers, Librarians, and Counselors	10
Health Diagnosing Occupations	1
Health Assessment & Treating Occupations	5
Writers, Artists, and Entertainers	12
All Other Professional Workers	5
Technicians and Related Support Occupations	**72**
Health Technicians and Technologists	16
Engineering & Science Technicians & Technologists	46
Technicians, Except Health and Engin. & Science	10
Marketing and Sales Occupations	**157**
Cashiers	27
Counter and Rental Clerks	5
Insurance Sales Workers	3
Real Estate Agents, Brokers, & Appraisers	3
Salespersons, Retail	49
Securities and Financial Service Sales Workers	1
Stock Clerks, Sales Floor	13
Travel Agents	0
All Other Sales and Related Workers	55
Administrative Support Occupations, incl. Clerical	**325**
Adjusters, Investigators, & Collectors	9
Communications Equipment Operators	3
Computer & Peripheral Equipment Operators	3
Financial Records Processing Occupations	65
Information Clerks	17
Mail Clerks and Messengers	3
Postal Clerks and Mail Carriers	7
Mat'l Record., Sched., Dispatch, & Distrib. Occs.	38
Records Processing Occupations, except Financial	10
Secretaries, Stenographers, and Typists	80
Other Clerical and Administrative Support Workers	90

Exhibit 3.6 (continued)
In-state Employment Impacts by Occupation of Annual New Jersey Historic Building Rehabilitation ($123 Million)

OCCUPATION TITLE	Employment (jobs)
Service Occupations	**168**
Cleaning & Building Service Occs., except Private	37
Food Preparation and Service Occupations	84
Health Service Occupations	8
Personal Service Occupations	19
Protective Service Occupations	12
All Other Service Workers	8
Agric., Forestry, Fishing, & Related Occupations	**13**
Animal Caretakers, except Farm	0
Farm Occupations	5
Farm Operators and Managers	0
Fishers, Hunters, and Trappers	0
Forestry and Logging Occupations	1
Gardeners & Groundskeepers, except farm	5
Supervisors, Farming, Forestry, & Agricul. Occs.	0
All Other Agric., Forestry, Fishing, & Rel. Workers	0
Precision Production, Craft, & Repair Occupations	**678**
Blue-collar Worker Supervisors	71
Construction Trades	407
Extractive and Related Workers, Incl. Blasters	5
Mechanics, Installers, and Repairers	119
Production Occupations, Precision	73
Plant and System Occupations	3
Operators, Fabricators, and Laborers	**540**
Mach. Setters, Set-up Ops, Operators, & Tenders	101
Hand Workers, incl. Assemblers & Fabricators	67
Transp. & Material Moving Machine & Vehicle Ops.	153
Helpers, Laborers, & Material Movers, Hand	219

Note: Detail may not sum to totals due to rounding.

CHAPTER FOUR

Profile of, and Direct Economic Impacts from, Heritage Tourism

INTRODUCTION

Giant and growing, the U.S. travel and tourism industry has captured the attention of state and local governments eager to bolster local economies and enhance community amenities.

The $400 billion travel industry—one of America's fastest-growing business segments—accounts for approximately 6 percent of the nation's gross domestic product. Demographic, socioeconomic, and lifestyle factors are affecting the industry's volume and its predominant component—the pleasure trip market. Heritage tourism, one of the top reasons for pleasure travel, has become increasingly important to travelers and the communities they visit, and offers significant benefits to the community. Heritage tourism can offset the costs of maintaining historic sites, help stimulate preservation efforts, and perpetuate the "sense of place" that lends communities their unique character and identity. At the same time, heritage tourism can realize important economic gains with respect to jobs, income, and tax revenues.

New Jersey is a national leader in the travel and tourism industry; the state ranked seventh in the nation in 1993 with respect to travel revenues. Atlantic City's casinos and the Jersey shore are the state's dominant travel destinations, but they face formidable competition from nearby markets. New Jersey's numerous historic and cultural resources are underdeveloped as a travel destination; they represent an opportunity to diversify the state's travel business and assure better long-term industry growth. Industry experts expect visits to historic and cultural sites to figure more prominently in vacation and short-term pleasure trips—both nationally and in New Jersey.

This chapter analyzes heritage tourism in the nation and in New Jersey. First, an overview of the U.S. travel market sets out a perspective on the market's size, features, trends, and impacts. Next, heritage tourism's growth factors, benefits, and impacts are briefly surveyed at the national level. Finally, the New Jersey travel market and data compiled on the features and economic impacts of New Jersey heritage tourism are closely reviewed.

SUMMARY OF FINDINGS

National Travel and Heritage Tourism

- Travel in the United States is significant in scale—there were over one billion domestic trips of 100 miles or more in 1994.
- Travel is significant economically. In 1994, Americans traveling in the United States and foreigners visiting the country, together spent almost $400 billion. This spending has a multiplier benefit of roughly 2 to 2.5 times, which means that total travel-related spending in the economy in 1994 was between $800 billion and $1 trillion.
- About 30 percent of domestic travel is for business, and 70 for percent pleasure trips.
- There are numerous trends in the travel market fostering heritage tourism, including and increase in travel for pleasure, as opposed to business, and a growing tendency toward shorter duration and shorter distance trips. Baby boomers—large in number

and with growing discretionary income—also have a proclivity toward heritage tourism.

- While the precise scale of national heritage tourism is unavailable, it is by all accounts a significant component of pleasure travel. Forty percent of families traveling on vacation stop at historic sites (Schiller 1996), and museums and cultural events rank among Americans' favorite tourist attractions (McDowell 1997).
- Numerous reports show heritage tourism's significant contribution to the economy. In Virginia, for instance, historic preservation visitors were found to stay longer, visit twice as many places, and spend on average over two and one-half times more money in that state than other visitors.

New Jersey Travel and Heritage Tourism

- Travel and tourism are also significant to New Jersey's economic well-being. The 163 million adult trips (of all distances) made in New Jersey in 1995 generated $11 billion in traveler expenditures—approximately three percent of the state's gross domestic product. Travel is one of the state's three largest industries; it creates about five percent of all New Jersey jobs.
- There are weaknesses in the New Jersey travel market however. Day-trip travel is much more frequent than overnight travel (and overnighters spend more). Relatedly, touring travel is not fully exploited; travel in the state is driven by convenience and the dual major attractions of the shore and gaming (Atlantic City). New Jersey's tourism also draws disproportionately from closer rather than more distant locations (e.g., from the Mid-Atlantic market as opposed to other regions). The state must also fight a negative image as an unattractive destination (however unjustified).
- Enhanced heritage tourism in New Jersey would not only expand the overall travel market in the state, but would also address some of the weaknesses noted above. Heritage tourism would increase overnight and touring vacations and would expand the now overly concentrated travel objectives (the shore and the casinos) and travel origins (mid-Atlantic market). In addition, New Jersey is rich in historic and other interesting sites, which are at the core of heritage travel.
- Heritage travel is already an important component of the New Jersey travel market as is depicted below:

Annual Average Trip Distribution for New Jersey (1993-1995)

Trip Type (Adult)	Total NJ Trips	Heritage Trips	Heritage as % of Total NJ Trips
Daytrips	131.6 million	5.0 million	3.8%
Overnight Trips	35.8 million	4.1 million	11.4%
All Trips (Day and Overnight)	167.4 million	9.1 million	5.4%

- The profile of the heritage traveler in New Jersey leans heavily toward middle-aged, married, Caucasian adults who are relatively well-educated and have middle or higher incomes.

- The profile of the heritage trip compared to all New Jersey trips—is a longer trip; a group trip (often part of a family trip); one that is planned further in advance than other trips, and from which travelers derive a higher level of satisfaction (i.e., the trips have a higher overall positive rating).
- Heritage travelers spend much more than their non-heritage counterparts.

Average Spending per Trip for New Jersey (1993-1995)

Trip Type (Adult)	All New Jersey Travelers	Heritage Traveler	Heritage as % of All New Jersey Travelers
Daytrips	$47	$55	117%
Overnight Trips	$157	$252	161%

- Travel expenditures of New Jersey heritage travelers, counting only the spending attributable to the heritage portion of their travels, amount to some $433 million annually. In the case of a lawyer traveling to Newark on business, for example, and stopping at historic Ballantine House, only a fraction of this trip's expenditure would be counted as a heritage trip expenditure.

Annual Total Trip Spending for New Jersey (1993-1995)

Trip Type (Adult)	Total NJ Trips	Heritage Trips	Heritage Spending as % of Total NJ Trip Spending
Daytrips	$6,140 million	$277 million	4.5%
Overnight Trips	$5,597 million	$156 million	2.8%
All Trips (Day and Overnight)	$11,737 million	$433 million	3.7%

NATIONAL TRAVEL AND TOURISM OVERVIEW

- Americans took over 1 billion domestic trips in 1994 of 100 miles or more (U.S. Travel Data Center 1994) away from home.
- Domestic travel in the United States is predominantly comprised of pleasure trips (69%) and business trips (31%). The three main components of pleasure travel are visiting friends and family (53%), outdoor recreation (16%), and entertainment (31%).
- A look at the demographic characteristics of U.S. resident travelers in 1994 (Exhibit 4.1) shows that the travelers are most apt to be: male, married, middle-aged, professional, and affluent.
- Almost half of all U.S. resident trips involved a hotel/motel stay in 1994; another third of the travelers stayed with friends and relatives. No accommodations were used during 11 percent of all trips, as Americans again increased their frequency of daytrips. The average pleasure trip lasted 3.7 nights, but the average business trip duration was shorter, 3.0 nights.

- In 1994, Americans traveling 100 miles or more from home spent $333 billion. In addition, an estimated 46 million foreigners spent $57 billion while visiting the United States.
- Travel expenditures create secondary impacts that magnify travel's contribution to the economy, as shown in Exhibit 4.2. This exhibit indicates the direct, the indirect and induced, and finally the total economic impacts of travel in the United States in 1990.
- There are a number of overall forces affecting travel and tourism in the United States that bear on heritage tourism. These include:

  1. A stimulus for travel growth is expected to come from the increasing numbers of pleasure trips. More and more, consumers seem to prefer long weekend getaways instead of lengthier vacations to more distant spots. Perhaps this reflects the rise in numbers of two-income households with more money but less free time (Standard and Poors 1996). Overall travel data also suggest an increasing trend toward shorter-duration trips—more daytrips and one-night visits—and shorter-distance trips. Heritage tourism compares well with these trends.

  2. Baby boomers are in or approaching their peak earning years and have discretionary income to spend. They represent great potential for the pleasure travel market. "The one thing baby-boomers have left to collect is experiences, and that's what travel and the arts offer." (Cook 1996)

In short, due to demographic reasons, such as the coming of age of baby boomers, and the evolving nature of travel in the United States (e.g., increasing numbers of short pleasure trips), heritage tourism is becoming a more potent force in the travel market as a whole (Gaede 1994).

EXHIBIT 4.1
Demographic Characteristics of U.S. Resident Travelers in 1994

Gender:	
Male	59%
Female	41%
Marital Status:	
Married	61
Not Married	39%
Age:	
18-34	36%
35-54	40%
55-75+	22%
No Answer	2%
Average Age (years):	44
Completed College:	26%
Occupation:	
Professional/managerial	40%
Other white collar	19%
Blue collar	12%
Retired	15%
Other	14%
Family Income:	
Less than $20,000	11%
$20,000-$49,000	42%
$50,000 or more	47%
Household:	
One person	15%
Two people	29%
Three or more people	56%
One wage earner	38%
Two wage earners	36%
Other	26%

Source: U.S. Travel Data Center's National Travel Survey, as published in *1994 Travel Market Report*

EXHIBIT 4.2
Measures of Impact of Travelers on the U.S. Economy in 1990

Impact Measure	Direct Impact	Indirect & Induced Impact	Total Impact	Multiplier
Expenditures (Billions)	$290.4	$407.3	$697.7	2.40
Earnings (Billions)	$79.1	$117.6	$196.7	2.49
Employment (Millions)	5.2	5.3	10.5	1.92

Source: Impact of Travel on State Economies, 1990, U.S. Travel Data Center, October 1992

HERITAGE TOURISM IN THE UNITED STATES

Historic sites play a crucial role in fostering pleasure travel. As travel expert Arthur Frommer explained, "[p]eople travel in massive numbers to commune with the past. We all gain solace, pleasure and inspiration from contact with our roots.... [Y]ou cannot deny that seeing the cultural achievements of the past, as enshrined in period buildings, is one of the major motivators for travel." (Frommer 1993)

Precise data on heritage tourism's share of the overall travel market is not available. But various surveys report that historic site visits are increasingly included on family travel itineraries. Noting a 1993 *Better Homes and Garden Survey*, economist Tim Schiller (1996) wrote:

> Historic sites are growing in popularity as destinations for pleasure trips: 40 percent of families traveling on vacation stop at historic sites. Several factors account for this increased interest. First, such trips tend to be less expensive than other types of vacations or pleasure travel. Second, family travel has increased, and often, historic sites are something of interest to all family members. Third, vacationers, especially family groups, are more concerned about adding educational opportunities to their vacation plans.

Heritage tourism's burgeoning growth has also garnered business and government support.

1. American Express Travel Related Services underwrote the 1993 publication of *Getting Started: How to Succeed in Heritage Tourism*, by the National Trust for Historic Preservation. The booklet is designed to help communities combine the preservation of historic, cultural, and natural resources with tourism and help sustain local economies and community character.
2. Black heritage tourism is increasing exponentially, and African Americans have formed tour companies that focus on black cultural heritage throughout the U.S. (American Vision 1994).
3. The United States Travel and Tourism Administration and the Minority Business Development Agency began a joint economic initiative in 1990 to broaden awareness of minority historical and cultural tourist destinations and to bolster minority-owned businesses, particularly in travel and tourism. The multifaceted program is considered an initiative "to assist interested communities in preserving and celebrating their cultural identities through tourism." (Doggett 1993)

The $16 billion spent on the restoration of American historic sites since 1976 has produced a critical mass of saved resources in many communities (Travel Holiday 1996). As the number of preserved historic sites and neighborhoods mounts, new tourism "product" becomes available for both domestic and international visitors and the tourism-preservation cycle continues.

> [T]he tourism industry needs more attractive, educational and authentic destinations to meet the needs of growing numbers of domestic and international travelers; the preservation community needs the political support and economic benefit that travelers provide to the sites and the communities they visit. That support and the resulting economic benefit are catalysts for continued protection, maintenance and promotion of these heritage areas. (*Touring Historic Places.*)

Recognition of heritage tourism's economic contribution (or potential) can be found throughout the country.

- More than 85 regional heritage areas are in varying phases of development across the U.S. These efforts reflect broad-based collaboration to protect a regional landscape, preserve historic resources, enhance recreation, or stimulate economic development and regional strength through tourism.
- An analysis of historic preservation's impact on Maryland's tourism industry found that visiting historic sites is one of the most popular activities among travelers. But, historic properties, responsible for generating a very large share of the state's tourism income, needed to be more widely promoted.
- In Virginia, the impact of travel to historic sites was found to be crucial to the state's economy.

  Historic preservation visitors stay longer, visit twice as many places, and spend on average, over two-and-one-half times more money in Virginia than do other visitors. The economic impact of Colonial Williamsburg alone on Virginia's economy is over half a billion dollars a year. (Virginia 1996)
- A report on the economic impact of Wisconsin's heritage tourism program showed that visitors spent over $215 million on admission fees alone to cultural/historic activities in 1995.

NEW JERSEY TRAVEL AND TOURISM MARKET OVERVIEW

New Jersey's travel and tourism market is sizable and important economically. The 163 million adult trips made to New Jersey or within the state in 1995 generated $11 billion in traveler expenditures[1]—approximately 3 percent of the state's gross domestic product. As an industry, travel is one of the state's three largest businesses—more important than construction, agriculture or mining. Travel creates almost 5 percent of all New Jersey jobs.

Much of the travel data for New Jersey is derived from the Longwoods International Travel survey. The New Jersey Division of Travel and Tourism hired Longwoods International in 1991 to monitor New Jersey travel. The Longwoods data include far more trips than those counted by the U.S. Data Center, described earlier. For example, the Longwoods New Jersey Travel Monitor tracks trips of less than 100 miles, but the U.S. Data Center does not. Besides capturing more of the shorter-distance (and hence shorter-duration) trips, the Longwoods data also reflect more visits by New Jerseyans and residents of nearby states than the national survey data does. Further background on the Longwoods survey is found in Appendix D of this study. The discussion which follows relies on the Longwoods survey data, unless otherwise noted.

[1] There are varying estimates of travel expenditures in New Jersey. The ones reported in this chapter are figures developed from the Longwoods survey of travelers (see text). Longwoods information shows total travel outlays of about $11 billion as of 1995. Other estimates of travel outlays in New Jersey (based in part on surveys of lodging places) are as high as $23 billion. Thus, the figures reported in this chapter are at the lower, conservative end.

Travel in New Jersey is overwhelmingly daytrip in nature. As shown in Exhibit 4.3, nearly eight out of ten trips are daytrips. The number of daytrips has fluctuated somewhat since 1993; the overnight market has been growing slightly.

While there are many more day-trippers, the greater economic impacts come from the higher per traveler spending by overnighters. Overnight visitors far outspend day visitors ($157 per overnight trip in 1995 versus $47 per daytrip).

EXHIBIT 4.3
New Jersey Travel Adult Trips (1993-1995) (in Millions)

	1993		1994		1995	
	Trips	%	Trips	%	Trips	%
Daytrips	130.5	78.7%	137.1	79.3%	127.1	77.9%
Overnights	35.3	21.3%	35.8	20.7%	36.1	22.1%
Total Trips	165.8	100.0%	172.9	100.0%	163.2	100.0%

Source: Longwoods International and Center for Urban Policy Research, Rutgers University

Whether on a day or overnight trip, nearly three-fourths of all travelers come to New Jersey to visit friends or relatives, casinos or the beach. Longwoods International summed up the New Jersey travel market as:

- convenience-driven
- narrowly focused on beach and casino resort segments
- concentrated in Atlantic City and shore regions
- limited by the state's negative image of being urbanized, polluted and unsafe.

Longwoods recommended that the state improve the stability and strength of the New Jersey travel market by emphasizing the "touring" vacation. The firm noted that there is a "natural fit between New Jersey's [travel] product and the specific interests of touring vacationers: landmarks, historic places, scenery, and interesting places to explore." (Longwoods 1993)

Longwoods also found that New Jersey's proportion of overnight touring vacationers was underdeveloped compared to national norms—three percent for New Jersey versus nine percent for the United States. Touring vacations could be a long-term growth vehicle for the state's travel business and could help diversify the state's reliance on beach and casino trips, which face stiff competition from other states.

In summary, heritage travel is very important to New Jersey on numerous interrelated counts:

1. It has the potential to increase overall travel and tourism in the state with attendant economic benefits.
2. It has the potential of broadening the state's travel objectives, now overly concentrated at the shore and the casinos (Atlantic City).
3. Heritage tourism can increase overnight touring travel in the state—a sector which is currently underdeveloped compared to national norms. Overnight travelers spend more than day-trippers and thus generate greater economic benefits.

4. Likewise, heritage tourism can lure travelers from farther away than the state's "traditional" Mid-Atlantic market.
5. New Jersey is rich in historic and other sites (e.g., sites of ethnic and/or minority interest), which are at the core of heritage travel.
6. Increased heritage travel to New Jersey can alter the state's negative image as an unattractive destination.

As elsewhere, heritage travel in New Jersey can benefit from changes occurring generally in the county and from specific trends affecting travel. These include: an aging population; a population with enhanced interest in education, tradition, and roots; a large baby-boom population with discretionary income; and an increase in family travel, domestic travel, and shorter-duration and shorter-distance trips.

To obtain a better sense of heritage tourism in New Jersey, it behooves us to examine in greater detail the profile and scope of the state's current heritage travelers.

NEW JERSEY HERITAGE TOURISM

The Center for Urban Policy Research (CUPR) at Rutgers University has analyzed Longwoods International's New Jersey travel information for the period 1993-1995. While the Longwoods data are not focused on heritage tourism per se, the survey results can be assembled for such an analysis, as detailed in Appendix D. Using the base survey data, CUPR and Longwoods identify the following groups and subgroups of New Jersey tourists.

Overnight Visitors:

1. *All New Jersey overnight travelers:* all overnight visitors.
2. Heritage tourists—
   a. *Primary Heritage Overnighters:* Overnight visitors whose exclusive or primary interest is of a heritage nature.
   b. *Partial Heritage Overnighters:* Overnight visitors who spend part of their trip on historic activities, but these activities are likely not the exclusive or main trip purpose.
3. *Non-heritage Overnighters*: Overnight visitors who are neither heritage tourists nor primary heritage tourists.

For day-trippers, because of the more limited information on this group, similar but not identical groups are identified.

Daytrip Tourists:

1. *All New Jersey Daytrip Travelers*: All daytrip visitors.
2. *Heritage Day-trippers*: Day-trippers having some identifiable historic trip purpose. Excluded from the heritage day-tripper group are casino patrons. (Casino visitors dominate the New Jersey day-tripper category.)
3. *Non-heritage Day-trippers*: Day-trippers who do not participate in historic activities (i.e., are not identified as daytrip heritage tourists).

Thus, for both the overnight visitors and day-trippers, an overall traveler group is identified, as well as non-heritage and heritage tourists. The difference, however, is that with the overnight visitors, two "levels" of heritage tourists ("partial heritage overnighter" and "primary heritage overnighter") are demarcated, while for the day-trippers only one category of heritage visitor ("heritage day-tripper") is identified. Information about each respective category and subcategory follows.

Scale of Heritage Travel

As indicated in Exhibits 4.4A and 4.4B, there were a total of 394,731,905 adult daytrips of all types in New Jersey and 107,264,618 overnight adult trips of all types during three years 1993 to 1995. Annually that averages to 131,577,302 daytrips and 35,754,873 overnight trips.

From 1993 to 1995, there was an average of 4,982,809 heritage daytrips per year—3.8 percent of all daytrips (Exhibit 4.4A). From 1993 to 1995, there was an average 4,076,575 overnight heritage trips per year of which 657,761 are flagged as being primary heritage overnighters. Heritage trips as a group comprised 11.4 percent of all New Jersey overnight trips, while the primary heritage overnighters constituted, as expected, a smaller share—1.8 percent (Exhibit 4.4B).

In short, heritage tourism in New Jersey is a noticeable, but still very modest part of the state's travel market. According to CUPR-Longwoods, heritage travel's 9.1 million average annual trips (day and overnight trips) to New Jersey accounted for approximately 5.4 percent of all state travel in the 1993-1995 period (Exhibit 4.4C).

Who Travels to New Jersey's Historic Sites?

Overnight heritage visitors—both primary and partial—are mostly comprised of *married adults with an average age of about 45* (Exhibit 4.5). The overnight visitor is more likely to be female than male, especially the primary heritage overnighter. These characteristics are not that distinct from that of the average non-heritage overnighter.

More than 80 percent of all overnight heritage travelers (primary and partial) have at least some college education, and their average annual income is in the $40,000 to $45,000 range. Average non-heritage overnighters are somewhat less educated and have somewhat lower incomes ($38,000 to $40,000 per year). Like most overnight travelers in New Jersey, heritage overnighters predominantly hold full-time, white collar jobs. More than one out of every four partial heritage overnighters (and one out of every three primary heritage overnighters) is a New Jerseyan—a significantly higher ratio than non-heritage overnighters. Both subgroups of heritage overnighters are somewhat less likely to have traveled from outside the Mid-Atlantic region, leading to the conclusion that the out-of-immediate-region potential of overnight heritage travel is presently not realized. Finally, about 90 percent of all heritage overnighters are white.

Daytrip heritage visitors are also mostly married adults with an average age of 45; half are female (Exhibit 4.6). Three-fourths of daytrip heritage tourists have at least some college education, and their average family income is in the $45,000 to $50,000 range—considerably more than non-heritage day-trippers, whose average family income is in the $38,000 to $40,000 range. Heritage daytrip travelers are much less likely to

EXHIBIT 4A
New Jersey Daytrip Distribution

Period	Total NJ Trips (Trips)	(% of NJ Total)	Heritage (Trips)	(% of NJ Total)	Non-Heritage (Trips)	(% of NJ Total)
Annual Average 1993-1995	131,577,302	100%	4,982,809	3.8%	126,594,493	96.2%
Total 1993-1995	394,731,905	100%	14,948,427	3.8%	379,783,478	96.2%

EXHIBIT 4B
New Jersey Overnight Trip Distribution

Period	Total NJ Overnight Trips (Trips)	(% of NJ Total)	Partial Heritage (Trips)	(% of NJ Total)	Primary Heritage (Trips)	(% of NJ Total)	Total Partial and Primary Heritage (Trips)	(% of NJ Total)	Non-Heritage (Trips)	(% of NJ Total)
Annual Average 1993-1995	35,754,873	100%	3,419,114	9.6%	657,761	1.8%	4,076,875	11.4%	31,677,998	88.6%
Total 1993-1995	107,264,618	100%	10,257,342	9.6%	1,973,283	1.8%	12,230,625	11.4%	95,033,993	88.6%

EXHIBIT 4C
New Jersey Total Trip Distribution
Daytrip and Overnight

Period	Total NJ Trips (Trips)	(% of NJ Total)	Heritage (Trips)	(% of NJ Total)	Non-Heritage (Trips)	(% of NJ Total)
Annual Average 1993-1995	167,332,175	100%	9,059,684	5.4%	158,272,491	94.6%
Total 1993-1995	501,996,523	100%	27,179,052	5.4%	474,817,471	94.6%

Notes: All trips are adult trips.
Partial Heritage = spend part of their trip on heritage activities.
Primary Heritage = spend all or most of their time on heritage activities.

Source: Longwoods International/Rutgers University Center for Urban Policy Research, 1997

EXHIBIT 4.5
Overnight Visitors: Demographics

DEMOGRAPHICS	All New Jersey Overnighters	Non-Heritage Overnighters	Partial Heritage Overnighters	Primary Heritage Overnighters
Gender				
Male	48%	47%	49%	37%
Female	52%	53%	51%	63%
Marital Status				
Married	57%	57%	60%	58%
Not married	43%	43%	40%	42%
Age				
18-24 years	6%	6%	5%	15%
25-34 years	26%	26%	24%	11%
35-44 years	22%	21%	26%	36%
45-54 years	18%	18%	17%	9%
55-64 years	13%	13%	10%	13%
65 and over	15%	15%	18%	16%
Average age	45	45	46	45
Education				
High school or less	23%	23%	19%	16%
Some college	30%	30%	30%	35%
College graduate	27%	27%	30%	38%
Post-graduate	20%	20%	21%	11%
Family Income				
Less than $20,000	13%	13%	12%	12%
$20,000-$29,000	13%	13%	8%	7%
$30,000-$39,000	14%	14%	13%	10%
$40,000-$49,000	15%	15%	16%	17%
$50,000-$74,999	25%	25%	25%	39%
$75,000 or more	21%	20%	26%	15%
Average income range *	$37.5K - $39.9K	$37.5K - $39.9K	$40K - $45K	$40K - $45K

EXHIBIT 4.5 (continued)

DEMOGRAPHICS	All New Jersey Overnighters	Non-Heritage Overnighters	Partial Heritage Overnighters	Primary Heritage Overnighters
Household Size				
1 member	27%	27%	25%	35%
2 members	35%	35%	37%	33%
3 members	15%	15%	17%	12%
4 members	15%	15%	15%	19%
5 members or more	8%	8%	5%	1%
Average Household Size	2	2	2	2
No child in household	56%	56%	55%	63%
Occupation				
Managerial/ professional	43%	43%	45%	38%
Other white collar	20%	20%	17%	27%
Blue collar	6%	6%	7%	4%
Retired/student/other	31%	31%	31%	31%
Employment				
Full time	64%	64%	63%	64%
Part time	11%	11%	12%	14%
Retired	16%	16%	17%	16%
Not employed	8%	8%	7%	6%
Race				
White	82%	81%	87%	96%
African American	13%	14%	6%	4%
Other	3%	3%	7%	0%
State of Residence				
NJ	17%	16%	27%	34%
NY	21%	22%	16%	13%
PA	17%	17%	15%	15%
Other	45%	45%	42%	39%

EXHIBIT 4.5 (continued)

DEMOGRAPHICS	All New Jersey Overnighters	Non-Heritage Overnighters	Partial Heritage Overnighters	Primary-Heritage Overnighters
Residence—				
Geographic Region				
New England	9%	9%	6%	4%
Mid-Atlantic	55%	55%	58%	61%
East North Central	8%	8%	6%	18%
West North Central	1%	1%	2%	0%
South Atlantic	20%	20%	18%	12%
East South Central	1%	2%	1%	3%
West South Central	2%	2%	3%	0%
Mountain	1%	2%	0%	1%
Pacific	3%	3%	7%	1%

Note: Details may not total 100% due to rounding.

* Interval estimate based on a variable of 24 income ranges and rounding the corresponding mean code values to the nearest tenth.
Partial Heritage = spend part of their trip on heritage activities
Primary Heritage = spend all or most of their trip on heritage activities

have a child in the household than non-heritage day-trippers, and much more likely to have full-time employment in a white-collar job. Day-trippers who visit New Jersey's historic sites are predominantly New Jerseyans (66 percent), as compared to non-heritage day-trippers (only 30 percent of whom are New Jerseyans.) And like overnight heritage visitors, daytrip heritage tourists are overwhelmingly white (95 percent), compared to non-heritage day-trippers (77 percent white).

In summary, although oversimplified, *the profile of the heritage traveler in New Jersey leans towards middle-aged, married, Caucasian adults who are relatively well-educated and have middle or higher incomes.*

What Are New Jersey Heritage Trips Like?

Overnight heritage travelers *stay longer* and *travel in larger groups* than non-heritage overnighters. (See Exhibit 4.7.) Primary heritage travelers visit with significantly larger travel groups (4.6 people on average in the party versus 2.4 people for non-heritage overnighters). They spend more time here (average stay of 3.2 nights) than non-heritage overnighters (average stay of 2.7 nights); but overnight visitors who combine heritage activities with other activities spend even more time in New Jersey—4.7 nights on average; they also travel in somewhat larger groups (3.2 party size).

Overnight heritage visitors *plan their trip somewhat further ahead* than non-heritage tourists; about 60 percent of all (primary and partial) heritage overnighters plan their trips 2 months or more in advance versus 47 percent of non-heritage overnighters.

Like most New Jersey travelers, heritage overnighters are *repeat visitors;* about 90 percent of all (primary and partial) heritage overnighters have traveled to the state

EXHIBIT 4.6
Day Trip Visitors: Demographics

DEMOGRAPHICS	All New Jersey Day-trippers	Non-Heritage Day-trippers	Heritage Day-trippers
Gender			
Male	54%	54%	51%
Female	46%	46%	49%
Marital Status			
Married	58%	57%	77%
Not married	42%	43%	23%
Age			
18-24 years	11%	11%	0%
25-34 years	22%	22%	19%
35-44 years	26%	25%	43%
45-54 years	17%	17%	18%
55-64 years	10%	10%	16%
65 and over	15%	15%	3%
Average age	43	43	45
Education			
High school or less	30%	30%	26%
Some college	23%	23%	26%
College graduate	31%	31%	30%
Post-graduate	16%	16%	18%
Family Income			
Less than $15,000	10%	11%	0%
$15,000 - $24,999	12%	12%	3%
$25,000 - $39,999	20%	20%	28%
$40,000 - $49,999	14%	14%	5%
$50,000 - $74,999	24%	23%	43%
$75,000 - $99,999	14%	14%	10%
$100,000 +	7%	7%	10%
Average income range	$37.5K - $40K	$37.5K - $40K	$45K - $50K

Note: Details may not add to 100% due to rounding.

EXHIBIT 4.6 (continued)

DEMOGRAPHICS	New Jersey Day-trippers	Non-Heritage Day-trippers	Heritage Day-trippers
Household Size			
1 member	27%	28%	20%
2 members	29%	30%	14%
3 members	18%	18%	18%
4 members	15%	15%	32%
5 or more members	10%	10%	17%
Average Household Size	3	2	3
No child in household	52%	32%	65%
Occupation			
Managerial/professional	41%	41%	63%
Other white collar	14%	15%	3%
Blue collar	14%	15%	8%
Retired/student/other	30%	30%	26%
Employment*			
Full time	66%	65%	78%
Part time	9%	9%	5%
Retired	13%	13%	12%
Not employed	8%	8%	5%
	96%	95%	100%
Race			
White	77%	76%	95%
African American	11%	11%	5%
Other	12%	13%	0%
State of Residence			
NJ	31%	30%	66%
NY	38%	39%	8%
PA	20%	20%	11%
Other state	11%	11%	15%

Note: Details may not add to 100% due to rounding.
* Not adjusted for non-response.

EXHIBIT 4.7

OVERNIGHT VISITORS: TRIP CHARACTERISTICS

TRIP CHARACTERISTICS	All New Jersey Overnighters	Non-Heritage Overnighters	Partial Heritage Overnighters	Primary Heritage Overnighters
Travel Party Size				
One	20%	21%	11%	11%
Two	43%	43%	41%	45%
Three	11%	11%	18%	10%
Four	13%	13%	13%	21%
Five or more	13%	13%	18%	13%
Average travel party size	3.0	2.9	3.2	4.6
Average number of adults per party	2.5	2.4	2.6	4.6
Length of Stay *				
1 night	17%	18%	6%	26%
2-3 nights	33%	33%	38%	43%
4-5 nights	23%	22%	39%	27%
10 or more nights	4%	4%	8%	1%
Average # of nights	2.9	2.7	4.7	3.2
Lodging				
Hotel/motel/inn/b&b/rented condo	59%	62%	54%	84%
Rented campground/trailer park site	2%	1%	4%	6%
Private homes	36%	37%	44%	11%
Other	2%	2%	2%	1%
Prior NJ visit				
yes	92%	92%	93%	88%
no	8%	8%	7%	12%
Spending on Trip				
Less than $100	33%	35%	18%	18%
$100 to < $249	24%	24%	22%	20%
$250 to <$499	20%	20%	18%	25%
$500 to < $749	10%	9%	16%	17%
$750 to <$999	5%	5%	6%	5%
$1000 or more	8%	7%	20%	15%

Note: Details may not total 100% due to rounding.

* Excludes nights spent outside NJ.

EXHIBIT 4.7 (continued)

TRIP CHARACTERISTICS	New Jersey Overnighters	Non-Heritage Overnighters	Partial Heritage Overnighters	Primary Heritage Overnighters
Trip Planning				
More than one year	2%	2%	5%	1%
6 to 12 months	10%	10%	15%	12%
3 to 5 months	14%	14%	17%	28%
2 months	18%	18%	21%	18%
1 month or less	53%	53%	41%	39%
DK or did not respond	3%	3%	2%	2%
Overall Trip Experience Rating				
Superior	11%	10%	21%	16%
Above average	34%	33%	45%	49%
Average	43%	44%	30%	31%
Below average	5%	5%	3%	2%
Poor	1%	1%	0%	0%
DK or did not respond	6%	7%	1%	2%
Poor	1%	1%	0%	0%
Average overall trip rating	Average	Average	Above Average	Above Average
Distance Traveled From Home				
Under 50 miles	6%	6%	6%	7%
50 - 99 miles	18%	18%	17%	16%
100 - 299 miles	36%	35%	41%	52%
300 - 499 miles	15%	15%	10%	12%
500 - 1,000 miles	13%	13%	10%	9%
Over 1,000 miles	13%	13%	16%	3%
Average distance traveled *	300 miles	300 miles	300 miles	220 miles
Trip Type (distribution of adult trips)				
Visit friends or relatives	37%	38%	39%	-
Casino trip	22%	24%	5%	-
Ocean beach resort trip	13%	12%	28%	-
Touring trip	4%	3%	2%	100%
Business trip	9%	10%	5%	-
Special event trip	4%	5%	4%	-
Combined business/pleasure trip	3%	3%	4%	-
Outdoors trip	2%	2%	4%	-

EXHIBIT 4.7 (continued)

TRIP CHARACTERISTICS	New Jersey Overnighters	Non-Heritage Overnighters	Partial Heritage Overnighters	Primary Heritage Overnighters
Theme park trip	1%	2%	-	-
City trip	1%	1%	4%	-
Country resort trip	1%	1%	2%	-
Ski trip	0%	0%	-	-
Cruise vacation	0%	0%	0%	-
Other	1%	0%	2%	-

Note: Details may not total 100% due to rounding.
* Estimates based on mean coded values weighted within the estimated mean distance range of 200 to 400 miles.

before. But heritage travelers differ from other New Jersey overnighters in one sense: they *give their trip experiences a higher overall positive rating.* About 65 percent of both the primary and partial heritage overnighters consider their New Jersey trip experience above average or superior versus only 43 percent of non-heritage overnighters.

Daytrip heritage tourists also travel in larger groups than non-heritage day-trippers (see Exhibit 4.8). Daytrip heritage visitors tour with an average travel party size of 5, comprised of an average 1.3 children and 3.7 adults, compared to non-heritage day-trippers who have an average party size of 4, 0.6 children and 3.4 adults. This suggests that many heritage daytrips *may be family trips.*

In short, the profile of *the heritage trip compared to all New Jersey trips is one of longer duration; a trip in a group (often as part of a family trip); one that is planned further in advance and from which the travelers derive a higher level of satisfaction.*

What Do Heritage Tourists Spend in New Jersey?

Partial heritage overnighters spent an average $252 per adult trip (Exhibit 4.9). This *spending level is much higher than that of non-heritage tourists* (who spent an average of $147 per adult), and those who traveled to the state primarily for heritage tourism, who spend an average $101 per adult trip.

Partial heritage overnighters, on average, stayed longer (4.7 nights) in New Jersey than either the non-heritage or primary heritage overnighter; this helps explain the higher average per trip expenditures on accommodations and restaurant food and beverage. Restaurant food and beverage totals $68 per trip for the partial heritage overnighter compared to the $40 for the primary heritage overnighter and $38 for the non-heritage overnighter. Primary heritage overnighters, who had a much shorter average distance traveled (220 miles) than partial heritage overnighters (300 miles) and non-heritage overnighters (300 miles), also spent much less on accommodations, vehicle expense and sightseeing and recreation than other overnighters (Exhibits 4.9 and 4.10).

In general, daytrip heritage visitors (Exhibit 4.11) *spent much more* ($56 per adult) than non-heritage day tourists ($46 per adult), but they spent considerably more on restaurant food and beverage and retail purchases such as antiques, crafts, gifts and souvenirs, than non-heritage tourists, for example, but significantly less on transportation and recreation.

EXHIBIT 4.8
Daytrip Visitors: Trip Characteristics

TRIP CHARACTERISTICS	All New Jersey Day-trippers	Non-Heritage Day-trippers	Heritage Day-trippers
Travel Party Size			
One	23%	23%	7%
Two	36%	36%	35%
Three	13%	13%	2%
Four	17%	17%	23%
Five or more	12%	11%	34%
Average travel party size	4.1	4.0	5.0
Average adults per travel party	3.4	3.4	3.7
Spending on Trip			
Less than $100	64%	65%	37%
$100 to <$249	21%	21%	24%
$250 to <$499	8%	8%	25%
$500 or more	7%	6%	14%
Trip Type			
Visit friends or relatives	33%	32%	51%
Casino trip	24%	25%	0%
Special event trip	9%	9%	0%
Theme park trip	8%	8%	0%
Business trip	6%	7%	0%
Ocean beach resort trip	6%	6%	0%
City trip	5%	5%	0%
Outdoors trip	3%	2%	30%
Touring trip	2%	2%	19%
Ski trip	1%	1%	0%
Country resort trip	0%	0%	0%
Other	4%	4%	0%

Note: Details may not add to 100% due to rounding.

EXHIBIT 4.9

Overnight Visitors: Average Trip Expenditures per Adult

	All New Jersey Overnighters	Non-Heritage Overnighters	Partial Heritage Overnighters	Primary Heritage Overnighters
Total Trip Average	**$156.50**	**$147.43**	**$251.54**	**$100.70**
Accommodations	**$49.86**	**$47.90**	**$71.27**	**$32.05**
Restaurant Food & Beverage	**$41.22**	**$38.37**	**$67.88**	**$40.24**
Breakfast	$6.01	$5.74	$8.72	$4.60
Lunch	$8.35	$7.73	$14.03	$8.35
Dinner	$23.21	$21.51	$39.04	$23.33
Snack purchases	$3.66	$3.39	$6.10	$3.96
Retail	**$24.98**	**$23.32**	**$59.25**	**$17.61**
Antiques/crafts	$1.79	$1.18	$7.59	$2.03
Gifts/souvenirs	$10.23	$9.04	$22.07	$6.97
Liquor/wine/beer	$2.80	$2.47	$6.24	$1.40
Drug/groceries	$5.78	$5.14	$12.12	$4.08
Sports equipment/clothing	$3.25	$2.84	$7.35	$2.19
Other retail	$1.07	$1.08	$1.12	$0.37
Vehicle Expenses	**$15.24**	**$15.19**	**$17.50**	**$5.65**
Gasoline	$8.06	$7.85	$10.64	$4.58
Parking	$0.87	$0.85	$1.13	$0.37
Rentals	$4.38	$4.50	$4.03	$0.06
Repairs	$1.02	$1.11	$0.31	$0.00
Other	$1.94	$1.99	$1.71	$0.64
Sightseeing & Recreation	**$24.22**	**$21.06**	**$38.06**	**$5.72**
Boardwalk activities	$2.77	$2.57	$5.18	$0.28
Bars/discos/nightclubs	$2.22	$2.22	$2.64	$0.00
Entertainment/shows	$4.99	$4.61	$9.45	$0.12
Guided tours	$0.10	$0.01	$0.96	$0.23
Landmarks/historic sites	$0.31	$0.03	$2.40	$3.03
Museums/science exhibits	$0.14	$0.09	$0.54	$0.28
Other activities	$13.69	$11.52	$16.88	$1.79

EXHIBIT 4.10

Overnight Visitors: Average Daily Expenditures per Adult

	All New Jersey Overnighters	Non-Heritage Overnighters	Partial Heritage Overnighters	Primary Heritage Overnighters
Daily Trip Average	**$54.22**	**$54.45**	**$53.72**	**$31.10**
Accommodations	**$17.27**	**$17.69**	**$15.22**	**$9.90**
Restaurant Food & Beverage	**$14.28**	**$14.17**	**$14.50**	**$12.43**
Breakfast	$2.08	$2.12	$1.86	$1.42
Lunch	$2.89	$2.86	$3.00	$2.58
Dinner	$8.04	$7.94	$8.34	$7.21
Snack purchases	$1.27	$1.25	$1.30	$1.22
Retail	**$8.66**	**$8.61**	**$12.65**	**$5.44**
Antiques/crafts	$0.62	$0.44	$1.62	$0.63
Gifts/souvenirs	$3.54	$3.34	$4.71	$2.15
Liquor/wine/beer	$0.97	$0.91	$1.33	$0.43
Drug/groceries	$2.00	$1.90	$2.59	$1.26
Sports equipment/clothing	$1.12	$1.05	$1.57	$0.68
Other retail	$0.37	$0.40	$0.24	$0.12
Vehicle Expenses	**$5.28**	**$5.61**	**$3.74**	**$1.74**
Gasoline	$2.79	$2.90	$2.27	$1.41
Parking	$0.30	$0.31	$0.24	$0.12
Rentals	$1.52	$1.66	$0.86	$0.02
Repairs	$0.35	$0.41	$0.07	$0.00
Other	$0.67	$0.73	$0.36	$0.20
Sightseeing & Recreation	**$8.39**	**$7.78**	**$8.13**	**$1.77**
Boardwalk activities	$0.96	$0.95	$1.11	$0.08
Bars/discos/nightclubs	$0.77	$0.82	$0.56	$0.00
Entertainment/shows	$1.73	$1.70	$2.02	$0.04
Guided tours	$0.04	$0.00	$0.21	$0.07
Landmarks/historic sites	$0.11	$0.01	$0.51	$0.94
Museums/science exhibits	$0.05	$0.03	$0.12	$0.09
Other activities	$4.74	$4.26	$3.61	$0.55

EXHIBIT 4.11

Daytrip Visitors: Average Transportation Expenditures per Adult

	All New Jersey Day-trippers	Non-Heritage Day-trippers	Heritage Day-trippers
Total Trip Average	$46.66	$46.32	$55.51
Transportation/Vehicle Expenses	$6.67	$6.77	$4.25
Rentals	$0.54	$0.56	$0.00
Gasoline	$3.44	$3.43	$3.68
Parking	$0.50	$0.51	$0.14
Repairs	$1.65	$1.71	$0.00
Commercial fares	$0.37	$0.39	$0.00
Other	$0.17	$0.16	$0.43
Restaurant Food & Beverage	$11.72	$11.32	$21.88
Breakfast	$1.48	$1.43	$2.60
Lunch	$2.83	$2.74	$5.08
Dinner	$6.08	$5.86	$11.85
Snacks	$1.33	$1.29	$2.35
Retail	$8.24	$8.08	$12.06
Drug/groceries	$1.63	$1.64	$1.30
Gifts/souvenirs	$2.84	$2.76	$4.77
Sports equipment/clothing	$1.06	$1.02	$1.95
Antiques/crafts	$0.81	$0.75	$2.23
Liquor/wine/beer	$0.87	$0.84	$1.78
Other retail	$1.04	$1.06	$0.03
Recreation & Sightseeing	$20.04	$20.15	$17.32
Boardwalk activities	$1.98	$1.95	$2.91
Bars/discos/nightclubs	$1.76	$1.81	$0.60
Entertainment/shows	$3.11	$3.17	$1.66
Short guided tours	$0.11	$0.11	$0.00
Landmarks/historic sites	$0.22	$0.19	$0.83
Museums/science exhibits	$0.25	$0.24	$0.49
Other activities	$12.60	$12.68	$10.82
Average Total Trip Spending	$46.66	$46.32	$55.51
Transportation/Vehicle Expenses	$6.67	$6.77	$4.25
Restaurant Food & Beverage	$11.72	$11.32	$21.88
Retail	$8.24	$8.08	$12.06
Recreation & Sightseeing	$20.04	$20.15	$17.32

ECONOMIC IMPACTS OF NEW JERSEY HERITAGE TOURISM

As previously indicated, there are an average of 4,982,809 heritage day-trippers annually in New Jersey, and the per capita day-tripper expenditure is about $56—which translates into a total annual outlay for this group of $276,591,487.

There are, on average, 657,761 primary heritage overnighters in New Jersey annually. At an average outlay of about $101, this group generates total direct outlays of $66,234,253 (Exhibit 4.12A).

The 3,419,114 annual partial heritage overnighters spend far more—about $252 per trip—for an annual outlay by this group of $860,043,650. Since they spend only a portion of this sum on heritage-related matters, however, it would be unfair to credit the full $860 million trip expenditure to heritage tourism. CUPR, working with Longwoods, has therefore estimated the share of the total outlay by the partial heritage overnighters that could realistically be credited to heritage purposes. For instance, a business traveler staying overnight in Princeton who visited the Princeton Historic Society (at Bainbridge House) at some point in the trip would likely have made the lion's share of his travel expenditures for purposes other than heritage tourism. CUPR-Longwoods estimates that on average the partial heritage overnighter spends about 10.4 percent of the total average trip outlay ($252) for heritage purposes. Thus, the 3,419,114 partial heritage overnighters spend about $89,278,676 for heritage-related activities (see Exhibit 4.12B).

Direct outlays of New Jersey's heritage travelers include:

Group	Outlay
Heritage Day-trippers	$276,591,487
Primary Heritage Overnighters	$66,234,253
Partial Heritage Overnighters	$89,278,676
Subtotal of Primary and Partial	$155,512,929
All Heritage Travelers	$432,104,416

EXHIBIT 4.12A
Spending by New Jersey Heritage Tourists

	Annual Number of Heritage Tourists	Average Expenditure Each Trip	Heritage-Attributed Expenditures Per Trip		Total Annual Expenditures
			%	$	
DAYTRIP					
Heritage Visitor	4,982,809	$55.51	100%	$55.51	$276,591,487
OVERNIGHT					
Partial Heritage	3,419,114	$251.54	10.4%	$26.16	$89,278,676
Primary Heritage	657,761	$100.70	100%	$100.70	$66,234,253
Overnight	4,076,875				$155,512,929
Subtotal					
TOTAL					
Daytrip and Overnight	9,059,684				$432,104,416

NA = Not applicable

Source: Longwoods International/Rutgers University Center for Urban Policy Research, 1997

EXHIBIT 4.12B
Spending by All New Jersey Tourists

	Annual Number of Heritage Tourists	Average Expenditure Each Trip	Heritage-Attributed Expenditures Per Trip	Total Annual Expenditures
DAYTRIP	131,577,302	$46.66	NA	$6,139,396,911
OVERNIGHT	35,754,873	$156.50	NA	$5,596,637,623
TOTAL	167,332,175			$11,736,034,534

NA = Not applicable

Source: Longwoods International/Rutgers University Center for Urban Policy Research, 1997

These heritage expenditures relative to the total spending for all New Jersey travel is shown below.

Annual Total Trip Spending for New Jersey

Trip Type	Total New Jersey Trip Spending	Heritage Trip Spending	Heritage as % of Total New Jersey
Daytrip	$6,140 million	$277 million	4.5%
Overnight	$5,597 million	$156 million	2.8%
All Trips (Day and Overnight)	$11,737 million	$433 million	3.7%

CHAPTER FIVE

Total Economic Impacts from Heritage Tourism

INTRODUCTION AND SUMMARY

Chapter Four indicated that, on average, the direct expenditures of New Jersey heritage travelers amounted to $432 million annually between 1993 and 1995. Of that total, heritage day-trippers spent $277 million and heritage overnighters $156 million.

This chapter translates this direct spending into total economic benefits by applying the Regional Science Research Corporation's PC I–O Model. An overview of the results is contained in the table below. It shows that the total annual economic impacts of the $432 million in average annual spending by New Jersey heritage travelers include 15,530 new jobs, $383 million in income, $559 million in gross domestic product, and $216 million in taxes. As in the case of historic rehabilitation construction, New Jersey receives roughly half of these gains. In-state wealth creation amounts to about $230 million.

Total Economic Impacts of Annual
New Jersey Heritage Tourism Spending ($432 Million)

	In New Jersey	Outside New Jersey	Total (U.S.)
Jobs (person years)	7,085	8,445	15,530
Income ($000)	$168,332	$214,835	$383,167
GDP/GSP ($000)	$286,522	$272,882	$559,404
Total Taxes ($000)	$134,367	$81,898	$216,265
Federal ($000)	$56,445	$53,758	$110,203
State ($000)	$62,191	$15,444	$77,635
Local ($000)	$15,731	$12,696	$28,427
In-State Wealth ($000) (GSP Minus Federal Taxes)	$230,077	-------	-------

GDP/GSP = Gross domestic product/Gross state product

TOTAL ECONOMIC IMPACTS FROM HERITAGE TOURISM

Nationwide Impacts

The details of the economic effects of the $432 million in direct heritage tourism spending are contained in Exhibits 5.1 to 5.6. Item 1 of Section II in Exhibit 5.1 shows, for instance, that the direct effects of heritage tourism spending to the nation translate into 7,497 new jobs, and an increase of $134 million in income and $243 million in GDP. The GDP/investment ratio (0.56) reveals even more significant levels of importing in the support of heritage tourism than in the support of historic building rehabilitation (GDP/investment ratio = 0.62). Multiplier effects add 8,033 more jobs, $249 million more income, and $316 million more GDP. Therefore, the total economic impacts of New Jersey heritage tourism—the sum of its direct and indirect and induced effects—are 15,530 jobs (7,497 + 8,033), $383 million income ($134 million + $249 million), and $559 million in GDP ($243 million + $316 million).

In all instances, the indirect and induced effects exceed the direct effects (the traditional multipliers are greater than 2.0). Nevertheless, the multipliers tend to be lower for heritage tourism than for historic building rehabilitation. This difference is due to the relatively greater amount of imported goods required to support heritage tourism. An economy can generate only limited multiplier effects from imported goods and services.

Of the total 15,530 jobs generated nationwide by New Jersey heritage tourism, the bulk is three major industries: retail trade (6,794 jobs), services (4,096 jobs), and manufacturing (1,738 jobs). Of the total $383 million in labor income generated, these same three industries account for $109 million, $99 million, and $66 million, respectively. Simple division of the number of jobs into the amount of labor income generated shows that nationwide the labor income per job supporting heritage tourism is $16,105 for retail trade, $24,117 for services, and $37,905 for manufacturing. Because of New Jersey heritage tourism's emphasis in retail trade and services, the nation's average labor income per job supporting the tourism is $24,673. This figure is substantially lower than the $33,926 average income per job supporting the state's historic building rehabilitation, because the rehabilitation requires many more high-paying construction jobs.

The dichotomy in job quality is even starker between jobs created indirectly and directly by New Jersey heritage tourism. Items 1 and 2 in Section II of Exhibit 5.1 reveals that indirectly created jobs pay on average $30,957, while jobs created directly pay on average $17,939—a difference of $13,018 per job. Low-paying jobs, in other words, create indirectly other high-paying jobs. Some, but not all, of the pay gap between direct and indirect jobs is due to the part-time nature of the direct jobs created in the retail trade and service industries. A finer breakout of national economic impacts by industry (Exhibit 5.2) shows that of the 4,096 jobs created in the service industries, about a third (1,483 jobs) are in the hotels/lodging category. Further, over 70 percent of the 6,794 retail jobs created through New Jersey heritage tourism are in eating/drinking establishments. These two industries are notorious for paying low wages and are composed of part-time jobs in unusually high proportions. An examination of Exhibit 5.3 provides even more information. Low-paying sales, service, and administrative support occupations comprise nearly 66 percent of all New Jersey heritage tourism jobs. Blue-collar occupations make up 19 percent; while a meager 13 percent are in high-paying managerial and professional specialty jobs.

An evaluation of the job productivity (GDP per job) reveals a much slimmer gap of $6,919 ($39,361 versus $32,442) between indirect and direct jobs supporting New Jersey heritage tourism. The differences between the two indirect-to-direct-job pay gaps (labor income/job and GDP/job) suggests that the firms creating heritage tourism's direct jobs gain large profits at the expense of the wages of their employees. At any rate, the pay gap between the indirectly and directly created jobs in this category causes the traditional national multiplier for labor income to be higher for heritage tourism than for historic building rehabilitation. It also causes the national employment multiplier to be extraordinarily low.

Which helps the national economy more on average, $1 million in heritage tourism spending or $1 million in historic building rehabilitation? The last section of Exhibits 3.1 and 5.1 provide the answer. A comparison of these two sections reveals that historic building rehabilitation provides a substantially higher return for every measure except state taxes. One can also readily infer that weak investment in historic building rehabilitation will eventually lead to lower annual spending on heritage tourism. Hence, while technically historic building rehabilitation "helps" the national economy more than does heritage tourism, it may be difficult to get one without the other.

The economic effects from the constituent components of the spending by heritage day-trippers ($277 million), and heritage overnighters ($155 million) are separately indicated in Appendix G. The results reflect the orders of magnitude of the

respective travelers. Thus, day-tripper heritage tourists have greater economic consequences than overnighters: nationally they generate 10,134 jobs, $247 million in income, and $359 million in GDP, out of the total of 15,530 jobs, $383 million in income, and $559 million of GDP. This does not mean that the heritage day-tripper is "more important" than the heritage overnighter. It simply means that under today's conditions, there are more heritage day-trippers (about 5 million annually) than there are heritage overnighters (about 4.1 million annually), and that much more of the heritage day-tripper's spending can reasonably be "credited" to heritage purposes.

After controlling for the amount of spending by tourist type, one can see that the spending of day-trippers still provides more economic benefits nationwide than does the spending of overnighters. (Compare the effects per one million dollars of initial expenditure in Exhibits G-1 and G-4.) The difference in the impact provided by the two types is virtually insignificant. Hence, the greater spending by overnighters on accommodations is clearly not an economic advantage to the nation.

State-Level Impacts

Exhibits 5.4 through 5.6 present the total economic effects of heritage tourism spending in state. Item 1 in Section II of Exhibit 5.4 show that New Jersey retains about 5,070 or 68 percent of the total direct jobs (7,497) created in support of heritage tourism. This percentage is substantially lower the 93 percent job retention rate for historic building rehabilitation, because much of the heritage tourism spending is on items that, although purchased at retailers in the state, are produced outside of the state (e.g., gifts, food items, gasoline). New Jersey retains an even lower proportion of the indirect and induced heritage tourism employment impacts—only about 25 percent (2,015 of 8,033 jobs). Again, the state's status as a suburb to New York City and Philadelphia serves to explain this phenomenon.

In sum, through heritage tourism New Jersey gains 7,085 jobs (46 percent of the total 15,530 jobs generated nationally), $168 million in income (44 percent of the $383 million in income generated nationally), and $287 million in wealth (51 percent of the $559 million added to national GDP). Heritage tourism's state multiplier effects (measured by subtracting one from the multipliers and dividing the region's multiplier by the nation's)[1] range between 19 and 37 percent of the nation's (Exhibits 5.1 and 5.4).

Thus, the economic benefits of heritage tourism that accrue to New Jersey are concentrated in the direct effects. As we mentioned earlier, the jobs created are relatively low-paying. At $23,759, the average labor income per job in New Jersey generated through the state's heritage tourism is somewhat below the equivalent national average labor income per job of $24,673. Even the jobs that New Jersey's gets indirectly through heritage tourism do not pay all that well—$27,697 per job—compared to what the rest of the nation receives—$30,957 per job.

Finer grained detail of state impacts by industry (Exhibit 5.5) and occupation (Exhibit 5.6) are also available and reflect concentrations similar to those noted at the national level. Of the 7,085 total state-level jobs derived from heritage tourism, most are

[1] Multipliers are defined as the sum of direct, indirect, and induced effects divided by the direct effects. Since direct effects are in both the numerator and denominator, multipliers can alternatively be defined as one plus the sum of indirect and induced effects divided by the direct effects. Hence by subtracting one we get only the multiplier effect itself, which is the sum of indirect and induced effects divided by the direct effects.

to be found in eating/drinking places (2,159 jobs) and hotels/lodging (1,857 jobs). Of the total $168 million generated in annual income, the eating/drinking and hotels/lodging industries garner $38 million and $43 million, respectively. The eating/drinking and hotels/lodging industries also comprise $50 million and $69 million, respectively, of the total $287 million increase in state gross domestic product (Exhibit 5.5). The breakout of impacts by occupation (Exhibit 5.6) shows a similarly disproportionate number of jobs in the food preparation/services category (2,400 jobs) and among cashiers and retail salespersons (577 jobs).

The economic effects on New Jersey from the constituent components of the spending by heritage day-trippers ($277 million), and heritage overnighters ($155 million) are shown separately in Appendix G. As in the case of the nation, the economic results reflect the orders of magnitude of the respective travelers. In other words, day-tripper heritage tourists have greater economic consequences (nearly twice the magnitude) in the state than do overnighters; they generate 4,652 jobs, $108 million in income, and $182 million in production, out of the statewide total of 7,085 jobs, $168 million in income, and $287 million of production. Despite the large differences in their outcome, the economic importance of heritage day-trip visitors vis-à-vis heritage overnight visitors is not entirely clear. A large proportion of day-trippers are New Jerseyans who might spend the same amount of cash or invest in New Jersey products or services in any event. Overnight heritage travelers are much more likely to originate from locales outside of the state. Their net economic addition to the economy is more certain.

Another way to examine the relative importance of the two types of heritage tourists is to control for the amount that they spend by calculating the relative impacts per million dollars of spending. These comparisons are presented at the bottom of Exhibits G-7 and G-10. From these exhibits it is clear that dollar-for-dollar the spending of day-trippers provides more economic benefits than does the spending of overnighters. The net differences in the benefits are quite small, however. Hence, the greater spending by overnighters on accommodations (the main difference in the spending patterns between the two groups) is not a clear economic advantage. Yet the overnighters provide the benefits of spending more per trip and comprise a larger share of out-of-state residents whose spending is a net "import" to New Jersey's economy.

Exhibit 5.1
National Economic and Tax Impacts of Annual New Jersey Heritage Tourism Spending ($432 Million)

	Economic Component		
	Employment (jobs)	Income (000$)	Gross Domestic Product (000$)
I. TOTAL EFFECTS (Direct and Indirect/Induced)*			
Private			
1. Agriculture	47	5,610	9,336
2. Agri. Serv., Forestry, & Fish	102	3,307	3,642
3. Mining	50	2,857	11,489
4. Construction	179	6,880	7,242
5. Manufacturing	1,738	65,879	102,036
6. Transport. & Public Utilities	584	27,364	51,703
7. Wholesale	341	14,514	37,666
8. Retail Trade	6,794	109,424	126,067
9. Finance, Ins., & Real Estate	1,164	41,485	75,461
10. Services	4,096	98,782	128,188
Private Subtotal	15,095	376,077	552,765
Public			
11. Government	435	7,090	6,639
Total Effects (Private and Public)	15,530	383,167	559,404
II. DISTRIBUTION OF EFFECTS/MULTIPLIER			
1. Direct Effects	7,497	134,493	243,220
2. Indirect and Induced Effects	8,033	248,674	316,184
3. Total Effects	15,530	383,167	559,404
4. Multipliers (3÷1)	2.071	2.849	2.300
III. COMPOSITION OF GROSS DOMESTIC PRODUCT			
1. Wages—Net of Taxes			346,688
2. Taxes			
a. Local			28,427
b. State			77,635
c. Federal			
General			64,332
Social Security			45,871
Federal Subtotal			110,203
d. Total taxes (2a+2b+2c)			216,265
3. Profits, dividends, rents, and other			(11,626)
4. Total Gross Domestic Product (1+2+3)			551,328
EFFECTS PER MILLION DOLLARS OF INITIAL EXPENDITURE			
Employment (Jobs)			35.9
Income			$886,747
State Taxes			$179,667
Local Taxes			$65,788
Gross Domestic Product			$1,294,604

Note: Detail may not sum to totals due to rounding.

*Terms:

Direct Effect (National)—the amount of goods and services purchased in the nation.

Indirect Effects—the value of goods and services needed to support the provision of those direct economic effects.

Induced Effects—the value of goods and services needed by households that provide the direct and indirect labor.

Source: Rutgers University Center for Urban Policy Research, 1997.

Exhibit 5.2
National Economic Impacts of Annual New Jersey Heritage Tourism Spending ($432 Million)

INDUSTRY	Industry Component: Employment (jobs)	Income ($000)	Gross Domestic Product ($000)
Agriculture	**47**	**5,610**	**9,336**
Dairy Prod., Poultry, & Eggs	8	1,111	1,466
Meat Animals & Misc. Livestock	16	1,504	1,927
Cotton	1	81	108
Grains & Misc. Crops	14	1,883	3,761
Tobacco	4	596	972
Fruits, Nuts, & Vegetables	1	231	817
Forest Prod.	0	23	60
Greenhouse & Nursery Prod.	3	181	225
Agri. Serv., Forestry, & Fish	**102**	**3,307**	**3,642**
Agri. Services (07)	45	743	780
Forestry (08)	5	31	184
Fishing, Hunting, & Trapping (09)	52	2,533	2,678
Mining	**50**	**2,857**	**11,489**
Metal Mining (10)	4	256	304
Coal Mining (12)	0	0	0
Oil & Gas Extraction (13)	42	2,435	10,888
Nonmetal Min.-Ex. Fuels (14)	4	166	297
Construction	**179**	**6,880**	**7,242**
General Bldg. Contractors (15)	34	1,417	1,492
Heavy Const. Contractors 16)	22	851	896
Special Trade Contractors (17)	124	4,611	4,854
Manufacturing	**1,738**	**65,879**	**102,036**
Food & Kindred Prod. (20)	358	13,521	23,156
Tobacco Manufactures (21)	8	472	2,469
Textile Mill Prod. (22)	62	1,513	2,103
Apparel & Other Prod. (23)	136	2,505	2,719
Lumber & Wood Prod. (24)	37	1,126	1,676
Furniture & Fixtures (25)	32	785	924
Paper & Allied Prod. (26)	71	3,557	6,001
Printing & Publishing (27)	218	7,561	9,997
Chemicals & Allied Prod. (28)	92	5,619	9,894
Petroleum & Coal Prod. (29)	17	1,727	5,432
Rubber & Misc. Plastics (30)	92	3,328	3,792
Leather & Leather Prod. (31)	35	711	868
Stone, Clay, & Glass (32)	42	1,518	1,750
Primary Metal Prod. (33)	43	2,462	2,744
Fabricated Metal Prod. (34)	74	3,186	4,156
Machinery, Except Elec. (35)	58	2,545	3,047
Electric & Elec. Equip. (36)	45	1,830	2,756
Transportation Equipment (37)	75	4,237	5,526
Instruments & Rel. Prod. (38)	62	2,437	2,605
Misc. Manufacturing Ind's. (39)	181	5,237	10,422

Exhibit 5.2 (continued)
National Economic Impacts of Annual New Jersey Heritage Tourism Spending ($432 Million)

INDUSTRY	Industry Component: Employment (jobs)	Income ($000)	Gross Domestic Product ($000)
Transport. & Public Utilities	**584**	**27,364**	**51,703**
Railroad Transportation (40)	22	1,136	1,822
Local Pass. Transit (41)	129	3,304	3,695
Trucking & Warehousing (42)	111	4,410	4,628
Water Transportation (44)	11	427	655
Transportation by Air (45)	33	1,975	2,614
Pipe Lines-Ex. Nat. Gas (46)	2	126	596
Transportation Services (47)	22	908	997
Communication (48)	136	8,133	16,349
Elec., Gas, & Sanitary Serv. (49)	116	6,945	20,345
Wholesale	**341**	**14,514**	**37,666**
Whlsale-Durable Goods (50)	103	4,756	15,577
Whlsale-Nondurable Goods (51)	238	9,759	22,089
Retail Trade	**6,795**	**109,424**	**126,067**
Bldg. Mat.-Garden Supply (52)	75	2,102	2,319
General Merch. Stores (53)	393	6,754	9,909
Food Stores (54)	274	5,460	6,106
Auto. Dealers-Serv. Stat. (55)	272	7,764	8,685
Apparel & Access. Stores (56)	127	2,139	3,337
Furniture & Home Furnish. (57)	27	822	1,007
Eating & Drinking Places (58)	4,862	68,333	79,950
Miscellaneous Retail (59)	765	16,051	14,754
Finance, Ins., & Real Estate	**1,164**	**41,485**	**75,461**
Banking (60)	146	5,308	9,589
Nondep. Credit Institut. (61)	125	4,503	4,056
Security, Comm. Brokers (62)	56	4,496	6,203
Insurance Carriers (63)	152	6,624	7,108
Ins. Agents, Brokers (64)	251	9,654	10,146
Real Estate (65)	169	1,312	29,724
Holding and Invest. Off. (67)	265	9,588	8,636
Services	**4,096**	**98,782**	**128,188**
Hotels & Other Lodging (70)	1,483	25,476	48,512
Personal Services (72)	437	7,954	8,469
Business Services (73)	696	18,360	20,358
Auto Repair, Serv., Garages (75)	195	7,567	9,213
Misc. Repair Services (76)	125	3,454	3,647
Motion Pictures (78)	151	3,787	3,430
Amusement & Recreation (79)	201	5,091	5,831
Health Services (80)	191	6,751	7,135
Legal Services (81)	74	4,797	5,309
Educational Services (82)	69	1,357	1,474
Social Services (83)	79	1,095	1,225
Museums, Botan.-Zoo. Gardens (84)	4	108	106
Membership Organizations (86)	173	3,532	3,466
Engineer. & Manage. Serv. (87)	209	8,999	9,540
Miscellaneous Services (89)	9	453	472
Government	**435**	**7,090**	**6,639**
Total	**15,530**	**383,167**	**559,404**

Note: Detail may not sum to totals due to rounding.

Exhibit 5.3
National Employment Impacts by Occupation of Annual New Jersey Heritage Tourism Spending ($432 Million)

OCCUPATION TITLE	Employment (jobs)
Total, All Occupations	**15,530**
Exec., Admin., and Management Occupations	**1,431**
Managerial and Administrative Occupations	1,091
Management Support Occupations	340
Professional Specialty Occupations	**579**
Engineers	66
Architects and Surveyors	4
Life Scientists	5
Computer, Math, and Operations Res. Analysts	38
Physical Scientists	12
Social Scientists	4
Social, Recreational, and Relig. Workers	41
Lawyers and Judicial Workers	26
Teachers, Librarians, and Counselors	88
Health Diagnosing Occupations	14
Health Assessment & Treating Occupations	65
Writers, Artists, and Entertainers	169
All Other Professional Workers	46
Technicians and Related Support Occupations	**247**
Health Technicians and Technologists	114
Engineering & Science Technicians & Technologists	61
Technicians, Except Health and Engin. & Science	71
Marketing and Sales Occupations	**1,869**
Cashiers	534
Counter and Rental Clerks	63
Insurance Sales Workers	62
Real Estate Agents, Brokers, & Appraisers	21
Salespersons, Retail	606
Securities and Financial Service Sales Workers	21
Stock Clerks, Sales Floor	155
Travel Agents	6
All Other Sales and Related Workers	401
Administrative Support Occupations, incl. Clerical	**2,330**
Adjusters, Investigators, & Collectors	134
Communications Equipment Operators	39
Computer & Peripheral Equipment Operators	29
Financial Records Processing Occupations	333
Information Clerks	236
Mail Clerks and Messengers	23
Postal Clerks and Mail Carriers	163
Mat'l Record., Sched., Dispatch, & Distrib. Occs.	224
Records Processing Occupations, except Financial	90
Secretaries, Stenographers, and Typists	368
Other Clerical and Administrative Support Workers	692

Exhibit 5.3 (continued)
National Employment Impacts by Occupation of Annual New Jersey Heritage Tourism Spending ($432 Million)

OCCUPATION TITLE	Employment (jobs)
Service Occupations	**6,016**
Cleaning & Building Service Occs., except Private	736
Food Preparation and Service Occupations	4,563
Health Service Occupations	75
Personal Service Occupations	285
Protective Service Occupations	138
All Other Service Workers	219
Agric., Forestry, Fishing, & Related Occupations	**179**
Animal Caretakers, except Farm	7
Farm Occupations	75
Farm Operators and Managers	12
Fishers, Hunters, and Trappers	2
Forestry and Logging Occupations	5
Gardeners & Groundskeepers, except farm	62
Supervisors, Farming, Forestry, & Agricul. Occs.	7
All Other Agric., Forestry, Fishing, & Rel. Workers	10
Precision Production, Craft, & Repair Occupations	**1,114**
Blue-collar Worker Supervisors	144
Construction Trades	125
Extractive and Related Workers, Incl. Blasters	10
Mechanics, Installers, and Repairers	528
Production Occupations, Precision	287
Plant and System Occupations	20
Operators, Fabricators, and Laborers	**1,768**
Mach. Setters, Set-up Ops, Operators, & Tenders	552
Hand Workers, incl. Assemblers & Fabricators	209
Transp. & Material Moving Machine & Vehicle Ops.	547
Helpers, Laborers, & Material Movers, Hand	461

Note: Detail may not sum to totals due to rounding.

Exhibit 5.4
In-State Economic and Tax Impacts of Annual New Jersey Heritage Tourism Spending ($432 Million)

	Economic Component		
	Employment (jobs)	Income (000$)	Gross State Product (000$)
I. TOTAL EFFECTS (Direct and Indirect/Induced)*			
Private			
1. Agriculture	7	33	133
2. Agri. Serv., Forestry, & Fish	19	414	1,310
3. Mining	0	15	24
4. Construction	76	3,064	3,440
5. Manufacturing	405	13,751	31,821
6. Transport. & Public Utilities	210	5,588	13,099
7. Wholesale	140	11,755	24,699
8. Retail Trade	3,091	57,704	81,401
9. Finance, Ins., & Real Estate	191	8,342	25,305
10. Services	2,781	65,222	102,856
Private Subtotal	6,920	165,873	284,036
Public			
11. Government	165	2,459	2,486
Total Effects (Private and Public)	7,085	168,332	286,522
II. DISTRIBUTION OF EFFECTS/MULTIPLIER			
1. Direct Effects	5,070	112,522	230,412
2. Indirect and Induced Effects	2,015	55,810	56,111
3. Total Effects	7,085	168,332	286,522
4. Multipliers (3÷1)	1.398	1.496	1.244
III. COMPOSITION OF GROSS STATE PRODUCT			
1. Wages--Net of Taxes			147,983
2. Taxes			
a. Local			15,731
b. State			62,191
c. Federal			
General			32,950
Social Security			23,495
Federal Subtotal			56,445
d. Total taxes (2a+2b+2c)			134,367
3. Profits, dividends, rents, and other			(3,904)
4. Total Gross State Product (1+2+3)			278,446
EFFECTS PER MILLION DOLLARS OF INITIAL EXPENDITURE			
Employment (Jobs)			16.4
Income			$389,562
State Taxes			$143,926
Local Taxes			$36,405
Gross State Product			$663,086

Note: Detail may not sum to totals due to rounding.

*Terms:

Direct Effect (State)—the amount of goods and services purchased in New Jersey.

Indirect Effects—the value of goods and services needed to support the provision of those direct economic effects.

Induced Effects—the value of goods and services needed by households that provide the direct and indirect labor.

Source: Rutgers University Center for Urban Policy Research, 1997.

Exhibit 5.5
In-State Economic Impacts of Annual New Jersey Heritage Tourism Spending ($432 Million)

INDUSTRY	Industry Component: Employment (jobs)	Income ($000)	Gross State Product ($000)
Agriculture	**7**	**33**	**133**
Dairy Prod., Poultry, & Eggs	1	5	12
Meat Animals & Misc. Livestock	0	0	1
Cotton	0	0	0
Grains & Misc. Crops	0	0	6
Tobacco	2	9	54
Fruits, Nuts, & Vegetables	0	0	3
Forest Prod.	0	0	4
Greenhouse & Nursery Prod.	4	18	54
Agri. Serv., Forestry, & Fish	**19**	**414**	**1,310**
Agri. Services (07)	10	164	238
Forestry (08)	0	1	8
Fishing, Hunting, & Trapping (09)	9	248	1,064
Mining	**0**	**15**	**24**
Metal Mining (10)	0	0	0
Coal Mining (12)	0	0	0
Oil & Gas Extraction (13)	0	0	0
Nonmetal Min.-Ex. Fuels (14)	0	15	24
Construction	**76**	**3,064**	**3,440**
General Bldg. Contractors (15)	16	662	821
Heavy Const. Contractors 16)	7	354	373
Special Trade Contractors (17)	53	2,049	2,246
Manufacturing	**405**	**13,751**	**31,821**
Food & Kindred Prod. (20)	104	3,532	10,418
Tobacco Manufactures (21)	0	1	5
Textile Mill Prod. (22)	5	155	221
Apparel & Other Prod. (23)	22	444	758
Lumber & Wood Prod. (24)	2	69	104
Furniture & Fixtures (25)	2	60	84
Paper & Allied Prod. (26)	24	684	1,220
Printing & Publishing (27)	46	1,334	2,149
Chemicals & Allied Prod. (28)	58	2,246	5,116
Petroleum & Coal Prod. (29)	11	705	3,384
Rubber & Misc. Plastics (30)	13	364	603
Leather & Leather Prod. (31)	1	36	58
Stone, Clay, & Glass (32)	19	511	862
Primary Metal Prod. (33)	3	165	258
Fabricated Metal Prod. (34)	16	627	989
Machinery, Except Elec. (35)	10	323	473
Electric & Elec. Equip. (36)	6	204	325
Transportation Equipment (37)	6	288	562
Instruments & Rel. Prod. (38)	10	346	782
Misc. Manufacturing Ind's. (39)	45	1,658	3,451

Exhibit 5.5 (continued)
In-State Economic Impacts of Annual New Jersey Heritage Tourism Spending ($432 Million)

INDUSTRY	Industry Component: Employment (jobs)	Income ($000)	Gross State Product ($000)
Transport. & Public Utilities	**210**	**5,588**	**13,099**
Railroad Transportation (40)	1	32	62
Local Pass. Transit (41)	96	1,919	2,595
Trucking & Warehousing (42)	24	584	1,068
Water Transportation (44)	1	92	137
Transportation by Air (45)	5	169	350
Pipe Lines-Ex. Nat. Gas (46)	0	1	10
Transportation Services (47)	6	222	340
Communication (48)	36	1,811	6,088
Elec., Gas, & Sanitary Serv. (49)	42	758	2,449
Wholesale	**140**	**11,755**	**24,699**
Whlsale-Durable Goods (50)	57	3,065	8,346
Whlsale-Nondurable Goods (51)	83	8,690	16,353
Retail Trade	**3,091**	**57,704**	**81,401**
Bldg. Mat.-Garden Supply (52)	21	562	882
General Merch. Stores (53)	227	4,036	7,543
Food Stores (54)	128	2,727	4,183
Auto. Dealers-Serv. Stat. (55)	101	3,273	4,819
Apparel & Access. Stores (56)	58	1,110	2,326
Furniture & Home Furnish. (57)	10	268	495
Eating & Drinking Places (58)	2,159	37,913	49,934
Miscellaneous Retail (59)	388	7,815	11,221
Finance, Ins., & Real Estate	**191**	**8,342**	**25,305**
Banking (60)	33	1,572	3,187
Nondep. Credit Institut. (61)	23	1,055	1,154
Security, Comm. Brokers (62)	9	713	776
Insurance Carriers (63)	33	2,048	2,185
Ins. Agents, Brokers (64)	11	288	503
Real Estate (65)	64	1,812	16,568
Holding and Invest. Off. (67)	18	852	932
Services	**2,782**	**65,223**	**102,856**
Hotels & Other Lodging (70)	1,857	42,853	68,685
Personal Services (72)	239	4,136	5,812
Business Services (73)	207	1,739	2,476
Auto Repair, Serv., Garages (75)	65	2,044	6,186
Misc. Repair Services (76)	37	780	1,615
Motion Pictures (78)	46	1,323	1,535
Amusement & Recreation (79)	95	3,087	3,923
Health Services (80)	71	2,967	3,613
Legal Services (81)	35	2,011	2,673
Educational Services (82)	26	583	656
Social Services (83)	10	272	391
Museums, Botan.-Zoo. Gardens (84)	0	20	25
Membership Organizations (86)	43	1,176	1,397
Engineer. & Manage. Serv. (87)	47	2,074	3,626
Miscellaneous Services (89)	4	158	246
Government	**165**	**2,459**	**2,486**
Total	**7,085**	**168,332**	**286,523**

Note: Detail may not sum to totals due to rounding.

Exhibit 5.6
In-state Employment Impacts by Occupation of Annual New Jersey Heritage Tourism Spending ($432 Million)

OCCUPATION TITLE	Employment (jobs)
Total, All Occupations	**7,085**
Exec., Admin., and Management Occupations	**567**
Managerial and Administrative Occupations	467
Management Support Occupations	100
Professional Specialty Occupations	**201**
Engineers	19
Architects and Surveyors	1
Life Scientists	2
Computer, Math, and Operations Res. Analysts	10
Physical Scientists	4
Social Scientists	1
Social, Recreational, and Relig. Workers	17
Lawyers and Judicial Workers	12
Teachers, Librarians, and Counselors	31
Health Diagnosing Occupations	7
Health Assessment & Treating Occupations	28
Writers, Artists, and Entertainers	54
All Other Professional Workers	16
Technicians and Related Support Occupations	**97**
Health Technicians and Technologists	57
Engineering & Science Technicians & Technologists	19
Technicians, Except Health and Engin. & Science	21
Marketing and Sales Occupations	**866**
Cashiers	277
Counter and Rental Clerks	27
Insurance Sales Workers	6
Real Estate Agents, Brokers, & Appraisers	7
Salespersons, Retail	300
Securities and Financial Service Sales Workers	3
Stock Clerks, Sales Floor	76
Travel Agents	2
All Other Sales and Related Workers	168
Administrative Support Occupations, incl. Clerical	**859**
Adjusters, Investigators, & Collectors	24
Communications Equipment Operators	22
Computer & Peripheral Equipment Operators	9
Financial Records Processing Occupations	139
Information Clerks	183
Mail Clerks and Messengers	7
Postal Clerks and Mail Carriers	31
Mat'l Record., Sched., Dispatch, & Distrib. Occs.	87
Records Processing Occupations, except Financial	29
Secretaries, Stenographers, and Typists	132
Other Clerical and Administrative Support Workers	196

Exhibit 5.6 (continued)
In-state Employment Impacts by Occupation of Annual New Jersey Heritage Tourism Spending ($432 Million)

OCCUPATION TITLE	Employment (jobs)
Service Occupations	**3,407**
Cleaning & Building Service Occs., except Private	592
Food Preparation and Service Occupations	2,400
Health Service Occupations	27
Personal Service Occupations	203
Protective Service Occupations	71
All Other Service Workers	114
Agric., Forestry, Fishing, & Related Occupations	**60**
Animal Caretakers, except Farm	1
Farm Occupations	14
Farm Operators and Managers	2
Fishers, Hunters, and Trappers	0
Forestry and Logging Occupations	0
Gardeners & Groundskeepers, except farm	38
Supervisors, Farming, Forestry, & Agricul. Occs.	1
All Other Agric., Forestry, Fishing, & Rel. Workers	3
Precision Production, Craft, & Repair Occupations	**416**
Blue-collar Worker Supervisors	45
Construction Trades	53
Extractive and Related Workers, Incl. Blasters	2
Mechanics, Installers, and Repairers	228
Production Occupations, Precision	80
Plant and System Occupations	7
Operators, Fabricators, and Laborers	**612**
Mach. Setters, Set-up Ops, Operators, & Tenders	164
Hand Workers, incl. Assemblers & Fabricators	48
Transp. & Material Moving Machine & Vehicle Ops.	235
Helpers, Laborers, & Material Movers, Hand	165

Note: Detail may not sum to totals due to rounding.

CHAPTER SIX

Profile of, and Direct Effects from, New Jersey Historic Sites and Organizations

INTRODUCTION

Historic sites and organizations have been, and continue to be, important to the furtherance of our historic and cultural heritage. Much that was accomplished in historic preservation in the United States from roughly the mid-1800s to mid-1900s can be credited to these preservation organizations. Examples include the preservation of Mount Vernon by the Mount Vernon Ladies Association in the 1850s and 1860s, the regional preservation efforts by the Society for the Preservation of New England Antiquities in 1910, the congressional chartering of the National Trust for Historic Preservation in 1949, and the Trust's stewardship of historic homes and many other activities.

Government intervention in preservation, with some exceptions (e.g., 1906 Antiquities Act, 1935 National Historic Sites Act, and the establishment of local districts in Charleston and New Orleans in the 1930s), was not a significant force until roughly the 1960s. The 1966 National Historic Preservation Act established the National Register of Historic Places and a review process (Section 106) to protect against federal actions that would threaten resources either on, or eligible for, the National Register. Other historic protections were put in place by the 1966 Department of Transportation Act (e.g., Section 4f review) and environmental assessments required by the 1969 National Environmental Policy Act. Federal tax incentives for preservation were put in place by legislation starting in the 1970s, and, relatedly, the Secretary of the Interior established national standards for preservation. The 1960s and 1970s also saw the establishment of many local historic districts.

While the last few decades have witnessed an increase in public intervention in preservation, private organizations have remained important voices and implementers. The National Trust for Historic Preservation has mushroomed in membership and activities. States and cities often have historic organizations that advocate preservation and frequently act as caretakers of historic sites. Examples are the New York Landmarks Conservancy, the Boston Preservation Alliance, and Preservation North Carolina.

All of these activities parallel developments in New Jersey. The New Jersey Register Act came along slightly later than the National Register of Historic Places, and like many other states, the New Jersey Register was an outgrowth of the National Historic Preservation Act. The 1976 Bicentennial encouraged a flurry of preservation activity, including the creation of local historic commissions and districts in numerous New Jersey municipalities.

Yet, preservation in New Jersey, much like preservation at the national level, often builds from a nucleus of activity spearheaded by private historic organizations and sites that are reliant on locally generated contributions or revenues. For instance, the Old Barracks Association was organized in the first decade of the century to save Trenton's Old Barracks; Ford Mansion enthusiasts banded together even earlier to save it.

In part because many of these historic sites and organizations are private, rely on volunteers, and are local or neighborhood in orientation, little is known about them in

any systematic fashion. To further our knowledge of history and preservation in New Jersey, Rutgers University conducted a survey of historic sites and history-associated organizations (e.g., historic societies) in New Jersey. Approximately 200 New Jersey historic sites and organizations were contacted and 64 responded (two-thirds private and one-third public), for a response rate of almost one-third. The survey's objective was to obtain information on the profile, staffing, spending, and other characteristics of these sites and organizations as well as their cultural and economic contributions.

The complete New Jersey historic sites and organizations questionnaire is contained in Appendix E. The major findings are detailed below.

SUMMARY OF FINDINGS FROM THE SURVEY OF HISTORIC SITES AND ORGANIZATIONS

- In total, the respondents have about 30,000 members. Individual organizational membership, however, tends to be modest (average of 478 members and median of 175 members).
- The New Jersey historic sites and organizations are important caretakers. Almost 90 percent of the sites are either designated as landmarks or eligible for landmark designation.
- The New Jersey historic sites and organizations house millions of various artifacts (e.g., furniture, documents, textiles, photographs, paintings, and maps).
- The historic sites and organizations have significant visitation: the respondents host 3.5 million visitors annually. Including the non-responding sites/organizations, total yearly visitation is roughly 6.4 million.
- Visitors of all ages come:

  5% pre-school (4 years and under
  32% school age (5-18 years)
  42% adults (19-64 years)
  21% seniors (65 years +)
  100%

- About four-fifths of the visitors come from in-state, while one-fifth come from out of state.
- Annual budgets range from a few hundred dollars to $1-2 million. The cumulative budget of all the historic sites and organizations responding to the survey was $17 million. Pyramiding to the state, to include non-respondents, results in an estimated statewide budgetary total of $36 million.
- Historic sites and organizations have to "cobble" their revenues from disparate sources. Even government-supported entities have to secure various sources of nonpublic moneys. This "layering" of support from multiple sources is very pronounced for the private historic sites and organizations. For all, permanent

sources of funds, such as from an endowment, are practically nonexistent, as is evident in the following table.

Budget Revenue Sources of New Jersey Historic Sites and Organizations

Revenue Source	All Respondents	Public Respondents	Private Respondents
1. Government	43%	94%	16%
2. Foundations and businesses	13%	3%	18%
3. Endowment	7%	1%	11%
4. Visitor spending	16%	0%	24%
5. All other sources (e.g., membership)	21%	2%	31%
Total (1–5)	*100%*	*100%*	*100%*

- Labor costs generally comprise the largest share of any organization's budget. Since volunteers often comprise such a large portion of the total staff of the historic sites and organizations, and paid staff are modestly compensated, labor expenses do not predominate. For all the historic sites and organizations, labor expenses on average comprise only 35 percent of the budget, with nonlabor operating and capital expenditures comprising 49 and 16 percent, respectively. Labor as a share of total expenses is an even smaller share for the private, as opposed to public, historic sites and organizations, as shown below.

Budget Spending Allocation of New Jersey Historic Sites and Organizations

Expenditure Category	All Respondents	Public Respondents	Private Respondents
1. Labor expenses	35%	46%	29%
2. Nonlabor operating expenses	49%	40%	54%
3. Capital and debt-service expenses	16%	14%	17%
Total (1–3)	*100%*	*100%*	*100%*

- As noted, volunteers are fundamentally important to the work of the historic sites and organizations. The imputed monetary value of the volunteer support to New Jersey's historic sites and organization exceeds half of their actual total budgets and is two-thirds greater than their current labor outlays. Put another way, absent volunteers, the New Jersey historic sites and organizations would have to increase their budgets and fundraising by one-half and their labor costs by two-thirds. These resources would simply not be available. Thus it is important for both the public and private sectors to encourage continued volunteerism.
- Many constraints confront the historic sites and organizations, including:

    1. *Identification of the artifacts.* Only about 85% of all the responding New Jersey historic sites and organizations have accessioned and catalogued their artifacts; 15 percent have not. Of those who have accessioned and catalogued their artifacts, only about 80 percent of the artifacts have been so indexed. Thus, a gap exists between the entities who have done

accessioning and cataloguing and the extent of their coverage in this regard.

2. *Condition of the artifacts.* Almost 25 percent of the respondents indicated that their artifacts are in fair or poor condition. Funding limitations inhibit proper conservation measures. Cumulatively, the respondents indicated a need over what is available today of almost $4 million annually for conservation. On an order-of-magnitude basis, that would pyramid statewide for all the historic sites and organizations to some $5.3 million annually. On a related note, more than one-third of the artifacts are uninsured.

3. *Limited operating hours.* About one-fifth of the sites are open only seasonally. Furthermore, whether open yearly or for a portion of the year, many of the historic sites and organizations can be accessed only during a limited number of hours per week. Over a third of all the respondents are open fewer than 10 hours a week, and half are open 20 hours a week or less. Only a quarter are open 40 hours a week or more. Average weekly operating hours are 23; the median, 21.

4. *Deficient amenities.* Many of the sites lack basic amenities. Fifteen percent do not have a restroom, and of those with such facilities, only half are accessible to the disabled. (In fact, 40 percent of the sites do not have accessible entry.) Other amenities often not available are food provision or a library or archival collection open to the public.

5. *Limited staff.* Most sites do not have enough paid staff to perform all the functions they would like to perform: staying open longer hours (see above), programming, outreach, marketing, and publications. On average, the respondents indicated a need for 3 additional staff, added to an existing average staff size of roughly six—in other words, a 50 percent increase in staffing. A linchpin to operations is a cadre of volunteers, but their availability is subject to the vagaries of people's time and willingness to commit.

6. *Limited resources.* As described earlier, many of the historic sites and organizations make ends meet by raising funds from disparate sources—few of which they can count on year to year. Resources are stretched and this curtails conservation, limits operating hours, and so on. The estimated extent of the currently unfunded needs of New Jersey's historic sites and organizations are listed in the following table. The figures are not precise estimates, but rather should be interpreted as showing that New Jersey's historic sites and organizations conservatively face unfunded needs of tens of millions of dollars annually.

Area of Annual Unfunded Needs	Amount Indicated by Survey Respondents	Estimated Statewide Total
1. Annual funds to *maintain* existing physical facilities;	$1.7 million	$4.2 million
2. Annual dollars to *improve/rehabilitate* existing physical facilities;	$12.6 million	$14.9 million
3. Annual funds to *hire staff* for a variety of operating purposes (e.g., programming, expanded hours, and outreach); and	$4.2 million	$10.4 million
4. Annual funds for *conservation and other items* (not included above).	$4.5 million	$6.1 million
Totals (1–4)	*$23.0 million*	*$35.6 million*

- The New Jersey historic sites and organizations are vital for preserving the state's heritage, but there is also a more prosaic reason for meeting the unfunded needs indicated above. Such an investment would substantially increase visitation of the New Jersey historic sites and organizations by a rough order of magnitude of 75 to 100 percent. (The economic return of "investing"—by meeting the unfunded need—is examined in detail in the following chapter.)

The full detail of the survey of the New Jersey historic sites and organizations follows. The discussion presents the questionnaire's administration and content, and details the survey's findings.

SURVEY STRATEGY AND CONTENT

In the summer-fall of 1996, Rutgers University first identified New Jersey sites and organizations associated with history. For the purpose of the survey, "history" was defined broadly to encompass events, persons, and places as well as cultural, architectural, and/or artistic achievements. "Historic (or history-related) activities" refer to those associated with, or furthering, "history" as just defined; an "historic site" is a place associated with history as defined above. Included, as examples, are a building housing an historic society, a museum with some historic mission/activities, a park with an historic association, as well as an officially designated landmark (or a site eligible to be designated landmark).

The identification was made by Rutgers in collaboration with the Task Force on New Jersey History and the New Jersey Historic Trust. A total of 197 sites and organizations, as described above, were identified and a detailed questionnaire was then sent to them. The organizations consisted mainly of those who steward or operate

sites as opposed to the larger universe of historical societies, many without collections or sites. Those not initially returning the survey were repeatedly called to increase the response rate. At the end of this process, 64 of the questionnaires were returned, for a response rate of almost one-third. The 64 responding institutions were then matched against the universe of the 197 sites and organizations in order to pyramid[1] the results from the responses on some of the questions (e.g., those involving expenditures) to a statewide total. It should be noted, however, that the respondents tended be to the larger sites and organizations so the survey's results are somewhat biased in this regard.

The survey was organized into five sections:

1. organization/facility profile
2. visitation and amenities
3. expenditures and revenues
4. staffing
5. unfunded needs

The responses to the five sections follow; questions from the survey are indicated in italics.

ORGANIZATION AND FACILITY PROFILE

Nature of the Sites and Organizations

The responding sites and organizations reflect the diversity of history and preservation. Among the respondents were: Craftsman's Farms ("living" historical farm); Delaware Bay Schooner (restored schooners); Morven (NJ Governor's residence); Newark Museum (historic Ballantine House and major arts museum); Waterloo Village (restored village with crafts demonstrations); Monocacy Battle Monument (battle site); Morris Canal Historic District (historic/scenic district); Grover Cleveland Birthplace (birthplace of 20th President); Cranbury Museum (local museum in Cranbury's National Register downtown); and Barnegat Lighthouse (regionally important lighthouse)

While their specific missions differ widely, from restoring historical Delaware Bay schooners, to showcasing 19th century crafts, to preserving historic birthplaces and battlegrounds, the historic sites and organizations share certain commonalities. Almost 60 percent, for instance, were historic house museums. Further, these and the other historic sites and organizations shared a broad common mission—namely, the furtherance of history and preservation.

[1] This pyramiding allows for a *rough order of magnitude* of a statewide total. Essentially, while the 64 respondents represent about a third of the total universe of historic sites and organizations, the 64 include disproportionately the largest and strongest entities in terms of membership, spending, technical expertise, and the like. Therefore, the cumulative results from the 64 respondents referred to as the "survey total" are weighted by the expected scale of the non-respondents rather than by .33 to arrive at an "estimated statewide total." The latter is accurate only on an order-of-magnitude basis.

What is the nature of your organization?
(Question 3b)

Examples:

The New Jersey Historical Society, the oldest cultural institution in the state, collects, preserves, and interprets the rich and intricate political, social, cultural, and economic history of the state. Its mandate is to provide the residents of New Jersey and those concerned with the state's past—be they scholar or lappers, child or adult—with an opportunity to understand the complexity and context of the state's history through collections, exhibitions, publications, and programming.

The Waterloo Foundation for the Arts provides a historic site open for tours. Its mission is to promote, foster, and encourage public interest in American and New Jersey history and agrarian, technical and cultural arts.

The New Jersey State Park Service provides recreational and historic interpretation opportunities while protecting the land and historic resources assigned to it.

The Cranbury Historical and Preservation Society is committed to the furthering of interest and knowledge in the history of Cranbury; the promotion, support and encouragement of beautification of the land and buildings located in Cranbury; and the restoration and preservation of Cranbury's old and historic buildings and sites. The Society operates the Cranbury Museum and Cranbury History Center.

The Mid-Atlantic Center for the Arts is a multifaceted organization devoted to the restoration, interpretation, and enhancement of the cultural environment of greater Cape May through administering two historic sites, sponsoring a wide range of exterior and interior tours of Cape May, and offering a year-round schedule of special events that promote cultural and ecological tourism.

Description of Organization

The historic sites and organizations comprise both private and public entities. There is also a "blending" of roles, such as a private group acting as a caretaker or "friend" of a public site. The distribution is as follows:

Which best describes your organization?
(Question 3a)

Response	% of All Respondents
a. Private	63%
b. Public	37
	100%

Examples:

	1. Private	2. Public
1.	Cranbury Historical Society (Cranbury Museum)	1. Middlesex County (Cornelius Low House)
2.	Lambertville Historical Society (Marshall House)	2. State of New Jersey Park Service (Monocacy Battle Monument)
3.	Newark Museum (Ballantine House)	3. Federal Park Service (Edison National Historic Site)

Organizational Age

While about 5 percent of the organizations date to the 1800s (e.g., the New Jersey Historical Society, founded in 1845, and the New Jersey State Museum, founded in 1895), much more common were groups formed in the twentieth century; 76 percent were founded after 1950.

When was your organization founded?
(Question 3c)

Response	% of All Respondents
a. pre-1900	8%
b. 1900–1949	16
c. 1950–1969	27
d. 1970–1996	49
	100%

Organizational Membership

The respondents differ considerably with respect to the scale of their membership. The governmental entities, for instance, don't have membership in a formal sense. While the Middlesex County Cultural and Heritage Commission (MCCHC) may avail itself of some volunteers in staffing the Cornelius Low House, the MCCHC is not a membership organization. Other respondents, such as the historical societies, however, are membership organizations, and although membership size varies, most are modest-sized, with a few hundred members each. The average membership is 478; the median is 175. Some larger organizations include the Newark Museum, Waterloo Village, and the New Jersey Historical Society, which each have hundreds to thousands of members.

How many members do you have?
(Question 3d)

Response	% of All Respondents
a. 0	28%
b. 1-199	23
c. 200-399	15
d. 400-599	8
e. 600-799	8
f. 800 or more	18
	100%
Survey Average:	478
Survey Median:	175
Survey Total:	29,143

Caretaker Role of the Historic Sites and Organizations and Landmark Status

While the individual historic sites and organizations are often modest-sized with respect to membership and other factors, such as budget and staffing (as shall shortly be described), they are essential caretakers. At times, the caretaking focuses on the site itself (e.g., battlefield monument). In this regard, it should be pointed out that most sites are either already designated as historic landmarks, that is, they are listed individually as a federal, state, or local historic property; are located in a federal, state, or local historic district; or are eligible for such designation.

Are any of your facilities designated as landmarks or eligible for landmark designation?
(Question 26)

Response	% of All Respondents
a. Yes—designation as a landmark	79%
b. Yes—eligible for landmark status	7
c. No—neither designated a landmark nor eligible for landmark designation	12
d. Do not know	2
	100%

Scale of Artifacts at the Historic Sites and Organizations

Most sites contain artifacts, and these frequently comprise extensive collections. Artifacts refer to objects of art, culture, and history—such as paintings, photographs, manuscripts, documents, papers, furnishings, and machinery. The descriptions obtained below from some of the respondents point to the fact that in numerous instances, a significant number of artifacts are contained in the sites. Also evident from the responses is the variety of artifacts that are found.

While an exact census of artifacts is unavailable, there is no doubt that the New Jersey historic sites and organizations house many millions of artifacts. Just three of the respondents, the Edison National Historic Site, the New Jersey State Museum, and the New Jersey Historic Society, held 6 million, 2 million, and 1.5 million artifacts, respectively.

Describe your major artifactual collection.
(Question 27g)

Site/Organization	Artifacts
New Jersey Historical Society	500 pieces of furniture, 2,000 costumes and accessories, 3,000 documents; 1500 ceramic, glass, silver items, 350 paintings, 10,000 household items and memorabilia, 150 textiles, 300 weapons, 150 busts and models, 5,000 manuscripts, 370 maps, 150 atlases, 1,000 prints, 1,000,000 photographs, 10,000 Native American items, 131,000 books
Whitebog Village— Lebanon State Forest	25 pieces of farm equipment and tools, 12 berry sorting tables, 100 crates, 50 photographs, 1 painting, 6 boxes of farm records, 10 farm machines
National Society for the Colonial Dames in the State of New Jersey— Peachfield Plantation	100 pieces of furniture, 20 paintings, 30 textiles, 300 ceramic items
Passaic County Historical Society— Lambert Castle Museum	600 paintings, 10 sculptures, 300 pieces of furniture, 500 ceramic items, 100 glassware items, 500 toys and games, 3400 miscellaneous items, 50,000 photographs, 5,000 books, 300 prints, 50,000 silk samplers, archival holdings (manuscripts, documents, scrapbooks), 500 textiles, clothing, quilts, samplers, equipment and tools, ceramics and glass, furniture, paintings and drawings, military artifacts
New Jersey State Museum and Morven	500 paintings, 3,000 prints, 100 drawings, 10 sculptures, 150 photographs, 5,000 ceramic items, 1,000 glassware items, 600 silver items, 2,000 iron and metal items, 1,500 textiles, 300 pieces of furniture, 2,600 miscellaneous items, 2 million archaeology items, 4,000 ethnographic specimens
Historic Society of the Somerset Hills— Historic Cold Spring Village	Trade artifacts

Site/Organization	Artifacts
Wheaton Village	10,000 glassware items, 1 000 ceramics items, 2 000 archival papers, photographs, and books
New Jersey Department of Environmental Protection—Skylands Manor	Furnishings and artifacts
Edison National Historic Site	5,000,000 documents, 70,000 photographs and films, 60,000 sound recordings, 21 structures, 400,000 objects including lab furnishings and equipment, phonographs, film equipment, lighting equipment and estate furnishings. (Edisonia)
Johnson Ferry House	50 pieces of furniture, 15 prints, maps, photographs, 40 hearth and cooking utensils, 25 ceramic items, 10 textiles, 6 books, 25 pewter items, 6 glass bottles, 8 wooden brackets
Trenton City Museum	700 ceramic items, 40 paintings, 75 photographs, 20 prints and drawings, 16 silver items, 50 archival papers, 13 pieces of equipment, 11 clothing items, 50 pieces of furniture, 6 instruments, 47 arch pieces, 30 pieces of memorabilia
Delaware and Raritan Canal State Park	Machinery parts
New Jersey Department of Environmental Protection—Long Ponds Ironworks Historic Village	Tools

Artifact Identification (Accessioned/Catalogued)

Artifacts need to be accessioned, catalogued, and conserved; insurance is also prudent protection. Yet budget constraints often impede the proper caretaking of the artifacts in the historic sites. The survey indicates that many, but far from all, of the artifacts in the historic sites have been accessioned and catalogued. The responses are differentiated between the public historic sites and organizations that responded (termed "public respondents") and the private historic sites and organizations (termed "private respondents"). The combined public and private respondents are termed "all respondents."

Have your site's artifacts been accessioned?
(Question 28a)

Response	% of All Respondents	% of Public Respondents	% of Private Respondents
a. Yes	83%	74%	88%
b. No	17	26	12
	100%	100%	100%

Percentage of Artifacts Accessioned (where artifacts have been accessioned)
(Question 28a)

Response (% of artifacts accessioned)	% of All Respondents	% of Public Respondents	% of Private Respondents
a. 1–24%	7%	14	3
b. 25–49%	0	0	0
c. 50–74%	0	0	0
d. 75–100%	93	86	97
	100%	100%	100%
Survey average:	87%	84%	89%
Survey median:	95%	97%	95%

Have your site's artifacts been catalogued?
(Question 28b)

Response	% of All Respondents	% of Public Respondents	% of Private Respondents
a. Yes	80%	67%	86%
b. No	20	33	14
	100%	100%	100%

Percentage of Artifacts Catalogued (where artifacts have been catalogued)
(Question 28b)

Response (% of artifacts catalogued)	% of All Respondents	% of Public Respondents	% of Private Respondents
a. 1–24%	7%	8	7
b. 25–49%	7	9	7
c. 50–74%	15	8	17
d. 75–100%	71	75	69
	100%	100%	100%
Survey average:	74%	74%	74%
Survey median:	80%	80%	80%

In short, while about 85 percent of all the responding New Jersey historic sites and organizations have accessioned and catalogued their artifacts, 15 percent have not. Of those who have accessioned and catalogued their artifacts, only about 80 percent of the artifacts have been so indexed. Thus, a gap exists between the entities who have done accessioning and cataloguing and the extent of their coverage in this regard.

When the historic sites and organizations are differentiated by public versus private entities, it appears that a somewhat higher share of the public entities have neither accessioned nor catalogued their collections. Of the public entities that have done so, however, they generally have indexed their collections as extensively as their private counterparts.

Insurance of Artifacts

Artifacts should be insured; but in practice, this is often but not always done. About a third of all respondents indicated that their collection was *uninsured*; the public historic locations and organizations were more than twice as likely to be uninsured as private organizations.

Is the collection insured?
(Question 28f)

Response	% of All Respondents	% of Public Respondents	% of Private Respondents
a. Yes	64%	41%	75%
b. No	36	59	25
	100%	100%	100%

Condition of Artifacts

The condition of the artifacts is generally described as being "excellent" to "good," but about one-fifth of the respondents report "fair" or even "poor" conditions. A much larger share of the public respondents report "fair" to "poor" conditions than private respondents.

Condition of artifacts
(Question 28c)

Response	% of All Respondents	% of Public Respondents	% of Private Respondents
a. excellent	4%	5%	3%
b. good	73	58	82
c. fair	21	32	15
d. poor	2	5	0
	100%	100%	100%

Conservation Measures

Conservation measures are typically reported as being routinely performed, though there are frequent exceptions. Where conservation is applied it is done by a mix of professional conservationists, staff, volunteers, and friends.

Are conservation measures routinely performed? If so by whom?
(Question 28d)

Examples:
New Jersey Historical Society—No
Waterloo Village—No
Cranbury Museum—Yes, by volunteers
Lambert Castle—Yes, by staff and volunteers
Wheaton Village—Yes, by curator
Long Pond Ironworks—Yes, by friends, group and state park service
Skylands Manor—No
Station at Califon—Yes, by museum director
Morris Canal Historic District—No
American Labor Museum—No
Edison National Historic Site—Yes, by professional conservationists
Trenton City Museum at Ellarslie Mansion—No

Respondents spoke of the critical state of conservation at their respective sites and frequently mentioned the problems this poses to their collections. The following are illustrative comments:

Respondent	Comments
Lambert Castle	Substandard storage prior to 1990 led to some deterioration; 1990-1995 spent improving storage and conservation measures. Funds needed for even better conservation and storage measures.
Grover Cleveland Birthplace	Collection beginning to be better cared for. Many unique objects from the Cleveland family should be properly published and made more available to public. Funds are limited; "We dream of a proper museum building for the entire collection."
Milltown Historic Society	Need to computerize collection and modernize curatorial attention.

Respondent	Comments
Fosterfield's Living Historic Farm	Better care needed.
Rockingham State Historic Site	Artifacts need attention and conservation, yet there is little provision for this. "These objects are the tangible pieces of our past—yet they may be lost."
Morris County Historic Society—Acorn Hall	Museum quality climate control needed; more storage needed; conservation supplies are expensive.
Allaire Village	Property storage and curatorial services needed.
Lambertville Historic Society—Marshall House Museum	Paid consultant retained in 1996 to inventory and preserve our collection. Further efforts will be by volunteers; cost and manpower for this effort is unknown.
Historic Society of Haddonfield—Greenfield Hall and Samuel Mickle House	Clothing collection should be critically reviewed in terms of maintaining quality; conversation and storage facilities should be upgraded.
Delaware Bay Schooner	Many artifacts still in community. We must have a proper facility before acquiring them.

Additional Funds Needed for Conservation

Not surprisingly, most respondents cited a need for additional funds over what is available today for the proper conservation of their artifacts. On average, the respondents estimated that about $96,000 annually is needed for proper conservation. The median need was much lower however—$10,000. The average is so much higher because it includes very high estimated funds for conservation indicated by a few of the respondents. Paralleling the prior finding that artifacts at public locations are more at risk, the public respondents indicated a much higher level of need for the proper conservation of their artifacts. The average public response was $206,000; the median was $50,000. Cumulatively, the 64 public/private respondents indicated a need, over what is available today, of almost $4 million annually for proper conservation. On an order-of-magnitude basis that would pyramid statewide for all the historic sites and organizations to a need of some $5.3 million[2] annually for proper conservation.

[2] This statewide figure, based on median values, is a lower-order estimate. A statewide estimate of conservation needs, based on average values, is $17.5 million. The more conservative (i.e., lower) statewide estimates of need are indicated in the text, as well as for operating, maintenance, rehabilitation, and other needs (see note 3).

What additional annual funds are needed over what is available today for the proper conservation of the collection?
(Question 28e)

Response	% of All Respondents	% of Public Respondents	% of Private Respondents
a. $0–4,999	37%	36%	38%
b. 5,000–9,999	13	7	15
c. 10,000–49,999	23	7	31
d. 50,000–99,999	10	14	8
e. $100,000	17	36	8
	100%	100%	100%
Survey average:	$95,618	$206,457	$31,673
Survey median:	$10,000	$50,000	$6,750
Survey total:	$3,920,350	$3,096,850	$823,500

Estimated Statewide Total: $5.3 million

Hours of Operation

Budget constraints not only impede conservation, but also often limit the number of hours the historic sites and collections are open to the public. Nineteen percent of all the respondents indicated that they are open only seasonally. Across the board, however, whether open yearly or for a portion of the year, many of the historic sites and organizations can be accessed only during a limited number of hours per week. Over a third of all the respondents are open fewer than 10 hours a week, and half 20 hours a week or less. Only a quarter are open 40 hours a week or more. The average weekly operating hours are 23; the median, 21. Generally, the private sites and organizations have much more sharply curtailed hours than their public peers; their average and median weekly public operating hours are 19 and 11 respectively—a fraction of that of their public peers average, 32 and 28 hours, respectively.

How many hours are you open to the public?
(Question 6)

Response (in hours per week)	% of All Respondents	% of Public Respondents	% of Private Respondents
a. 1-9	37%	23%	45%
b. 10–19	11	9	13
c. 20–29	17	27	11
c. 30–39	8	5	11
e. 40 or more	27	36	20
	100%	100%	100%
Survey average (hours):	23	32	19
Survey median (hours):	21	28	11

Given their often limited hours of operation, not surprisingly, many of the sites aspire to be open additional hours.

Are you satisfied with your hours of operation?
(Question 7)

Response	% of All Respondents	% of Public Respondents	% of Private Respondents
a. Yes	41%	38%	43%
b. No	59	62	57
	100%	100%	100%

If no, how many hours, funds permitting, would you want the historic site to be open to the public?
(Question 8)

Response	% of All Respondents	% of Public Respondents	% of Private Respondents
Additional hours per week want to be open			
a. 1-9	51%	33%	65%
b. 10–19	29	27	30
c. 20–29	3	7	0
d. 30–39	0	0	0
e. 40 or more	17	33	5
	100%	100%	100%
Survey average (hours):	15	24	8
Survey median (hours):	8	14	6

Site Interpretation

Whatever the hours, a yeoman's effort is made to interpret the respective sites. The interpretation is often done by volunteers, not infrequently in conjunction with some paid staff. Expectedly, volunteers play a much more important role in the private sites and organizations than in public ones. School programs are often provided.

Who does the interpretation?
(Question 27c)

Response	% of All Respondents	% of Public Respondents	% of Private Respondents
a. Volunteers	29%	5%	44%
b. Paid staff	8	5	9
c. Volunteers and paid staff	63	90	47
	100%	100%	100%

Do you provide programs to school groups?
(Question 27d)

Response	% of All Respondents	% of Public Respondents	% of Private Respondents
a. Yes	96%	90%	100%
b. No	4	10	0
	100%	100%	100%

The respondents stage a wide variety of activities to interpret their diverse historic sites, and their site interpretation is often a dynamic process. When asked if "site interpretation has changed over time in terms of nature/period/theme/other programs, staffing, and/or school programs"(Question 27e), almost two-thirds of all the respondents answered that changes had occurred. Examples of some of these changes are shown below. Of note is the common addition or expansion of school programs, social interpretation, and enhanced research and publications.

Illustrative responses to site interpretation (Question 27)

Respondent	Overall Site Interpretation	Programs	Changes in Programs or Interpretation
Middlesex County Cultural and Heritage Commission (Cornelius Low House)	NJ history	Workshops, school programs, special events, symposia, community outreach	School and community programs are new
Waterloo Foundation—Village of Waterloo	Local/regional NJ history and life	Reenactments, demonstrations, festivals	Publications and outreach increasing
National Society for the Colonial Dames of America in the State of NJ (Old School House)	NJ education from 1759 to establishment of public school system	Costumes, school programs, lectures, hands-on demonstrations	Living history programs added for children
NJ State Museum	Furnishings, artifacts, art of NJ	Tours, publications, workshops, lectures, demonstrations, children's theater	More volunteers due to loss of museum educator position; school programs now reinforce core curriculum concepts; new school programs
Wheaton Village	American glasswork	Tours	School programs expanded

Respondent	Overall Site Interpretation	Programs	Changes in Programs or Interpretation
Historic Society of the Somerset Hills—Brick Academy	Schoolhouse of the early 19th century	Public meetings, summer camp, lectures	More programs, more school programs
Historic Cold Spring Village	Rural community of the 19th century	Demonstration, education programs, workshops, living history, special events	Refined to meet mission statement and fit schematic theme; improved interpretation through research
Harding Township Historical Society—Tunnis-Ellicks House	Lifestyle of turn of the 19th century; 1840s garden	Reenactments, demonstrations, lectures, slides, music, storytelling, parade float	Demonstrations added; more temporary exhibits (museum opened in 1990), fewer school programs due to fewer volunteers and changing interest of local teachers
Historical Society of Princeton—Bainbridge House	Theme exhibits	Lectures, workshops, school programs	Earlier period rooms are now thematic exhibitions; oral history of the house
Lacey Township Historical Society—Lacey Township Schoolhouse	Schoolhouse of the late 19th century	Tours, holiday house tour, festival, lectures	Increased school programs and citizen awareness

Respondent	Overall Site Interpretation	Programs	Changes in Programs or Interpretation
Craftman Farms	American arts and crafts movement	Lectures, summer camp, symposia, special events	Addition of summer camp
Johnson Ferry House	Furnishings and artifacts of the 18th century and American Revolution	School programs, theme days, concerts, educational programs, demonstrations	Changes based on current and continuing research
Museum of Early Trades and Crafts—James Library	Early trades and crafts	Hands-on demonstrations, discussions, educational programs, school programs, workshops, lectures, festivals	Changes based on current and continuing research
Trenton City Museum	Furnishings and artifacts of 19th century Trenton history	Lectures, slides, demonstrations, education programs	Continually refined
New Jersey Parks Service—Rockingham Historic Site	Furnishings and artifacts of the 18th century, Revolutionary Headquarters	Tours, special events, educational programs, community outreach	Increased school programs; added children's museum; obtained publicity/promotion grant
Morris County Historical Society—Acorn Hall	County/state/national history	Lectures, holiday house tour, special events	More emphasis on social history and interpretation of material culture; added school program and exhibit; added holiday exhibit

Respondent	Overall Site Interpretation	Programs	Changes in Programs or Interpretation
Mid-Atlantic Center for the Arts	Furnishings of the late 19th century; lighthouse lifestyle and history, seaside resort of the 19th century; ecology of the area	Tours, video	Interpretation has become more professional as poorly trained volunteers have been replaced by well-trained, paid staff; increased variety of tours, educational programs added
Walt Whitman House	Furnishings and artifacts of the 19th century	Tours, lectures, poetry readings, dramatizations	Greater variety of programs
Historical Society of Haddonfield—Greenfield Hall and Samuel Mickle House	Furnishings of the 19th century	Tours, school programs	Added children's tour

VISITATION AND AMENITIES

Total Visitation

Given the varying organization sizes and differing types of sites and locations (e.g., a major art museum in the state's largest city versus an historic house museum in a small rural community), there is, not surprisingly, considerable range in the level of annual visitation. There is very significant visitation to such sites as the Delaware and Raritan Canal State Park, the Mid-Atlantic Center for the Arts, the New Jersey State Museum, the Newark Museum, and Waterloo Village—with 750,000, 350,000, 335,000, 300,000, and 170,000 annual visitors, respectively. In contrast, such historic sites as the Cranbury History Center, the Old School House, the Station at Califon, the Milltown Historic Society Museum, and the Lacey Township School House have 100, 325, 400, 500 and 860 annual visitors, respectively. Further variability in visitation is shown below. The average annual visitation is 58,000, with a much lower median of 5,800. (Again, the average is so much higher than the median because it is influenced upward by the very large visitation at a handful of the sites.) Annual visitation is much higher at the public sites and organizations (96,000 average and 13,000 median) than at their private peers (34,000 average and 3,000 median)—a likely reflection of such factors as the public sites' longer operating hours, enhanced resources for programs, and the like.

What is your annual visitation?
(Question 9)

Response— Annual visitors	% of All Respondents	% of Public Respondents	% of Private Respondents
a. 0–499	12%	0%	19%
b. 500–999	10	0	16
c. 1,000–4,999	23	26	22
d. 5,000–9,999	12	13	11
e. 10,000–24,999	17	22	13
f. 25,000–49,999	3	4	3
g. 50,000–99,999	8	13	5
h. 100,000–or more	15	22	11
	100%	100%	100%
Sample average:	57,925	95,776	34,396
Sample median:	5,766	13,476	2,500
Sample total:	3,475,474	2,202,839	1,272,635
Estimated statewide total:	6.4 million		

Cumulatively, the responding historic sites and organizations reported annual visitation of 3.5 million. Statewide, that pyramids to an estimated 6.4 million visitors on an order-of-magnitude basis. That is substantially less than the 9 million adult heritage tourism trips reported in the previous chapter. It is important to remember, however, that the annual visitation to these historic sites and organizations represents only site- or destination-oriented visitation. By way of illustration, Cape May is a quintessential historic community in New Jersey that attracts many thousands of visitors annually because of its historic character. Relatively few of the visitors to this community, however, visit the Historic Colonial House (c. 1755) or the Historic Barn (c. 1800) (Combined annual visitation at these two sites is only 4,500.) Thus, the full amount of heritage tourism often goes far beyond the visitation to the historic sites and organizations reported in this survey.

Age Distribution of Visitors

Holding aside the issue of total visitation, the Rutgers survey provides the following data on the age distribution and residence of the visitors to this historic sites and organizations.

Approximately what percentage of your visitors were (age):
(Question 10)

Response	% of All Respondents	% of Public Respondents	% of Private Respondents
a. Preschool children (4 years and under)	5%	6%	4%
b. School-age children (5-18 years)	32	32	32
c. Adults (19-64 years)	42	43	42
d. Seniors (65 years +)	21	19	22
	100%	100%	100%

As the figures indicate, there are few pre-school visitors at these historic sites (only about 5 in 100), but school age-visitors comprise a third of the total. Adult, nonseniors comprise about four-tenths of the total, and seniors about one-fifth of the annual visitation. When these statistics are examined more closely, the relatively low visitation by pre-schoolers stands but there is considerable variety among the different sites in terms of their visitors' ages. For instance, 40 percent of all the respondents indicated that seniors comprised between one-quarter and one-half of their visitors. Public and private respondents had similar visitor age profiles.

What is the age of your visitors?
(Question 10)

	All Respondents			
Response	Pre-school children (4 years and under)	School-age children (5-18 years)	Adults (19-64 years)	Seniors (65+ years)
0–24%	98%	41%	17%	59%
25–49%	2	41	41	41
50–74%	0	12	37	0
75–100%	0	6	5	0
	100%	100%	100%	100%

What is the age of your visitors?
(Question 10)

	Public Respondents			
Response	Pre-school children (4 years and under)	School-age children (5 to 18 years)	Adults (19—64 years)	Seniors (65+ years)
0–24%	100%	41%	14%	64%
25–49%	0	45	36	36
50–74%	0	5	45	0
75–100%	0	9	5	0
	100%	100%	100%	100%

What is the age of your visitors?
(Question 10)

	Private Respondents			
Response	Pre-school children (4 years and under)	School-age children (5 to 18 years)	Adults (19—64 years)	Seniors (65+ years)
0–24%	100%	41%	19%	57%
25–49%	0	38	43	43
50–74%	0	16	33	0
75–100%	0	5	5	0
	100%	100%	100%	100%

Visitor Origins

Whatever their age, the lion's share—more than four-fifths—of the visitors to the New Jersey historic sites and organizations come from in-state, usually from the same county as that of the historic site or organization. Out-of-state visitation was somewhat higher for the public historic sites and organizations.

Of total visitors indicated, approximately what percentage came from (where):
(Question 11)

Response	% of All Respondents	% of Public Respondents	% of Private Respondents
a. New Jersey—same county as your location	46%	36%	53%
b. New Jersey—other counties	36	42	32
c. Outside New Jersey	18	22	15
	100%	100%	100%

Although most visitors came from New Jersey, there were expected variations among this group of historic sites and organizations. For instance, the Edison National Historic Site had 50 percent of its visitors come from outside New Jersey, as did a few others (e.g., Mid-Atlantic Center for the Arts and Village of Waterloo).

Where do your visitors come from?
(Question 11)

	All Respondents		
Response	New Jersey—same county	New Jersey—other counties	Outside New Jersey
0–24%	26%	31%	74%
25–49	24	43	21
50–74	28	16	3
75–100	22	10	2
	100%	100%	100%

Where do your visitors come from?
(Question 11)

	Public Respondents		
Response	New Jersey—same county	New Jersey—other counties	Outside New Jersey
0–24%	36%	23%	68%
25–49	36	41	23
50–74	14	18	5
75–100	14	18	4
	100%	100%	100%

Where do your visitors come from?
(Question 11)

	Private Respondents		
Response	New Jersey—same county	New Jersey—other counties	Outside New Jersey
0–24%	19%	36%	78%
25–49	17	44	19
50–74	36	14	3
75–100	28	6	0
	100%	100%	100%

What visitor amenities do you have?
(Question 12)

Response	All Respondents			Public Respondents			Private Respondents		
	Yes	No	Total	Yes	No	Total	Yes	No	Total
a. Is the site served by public transportation?	42%	58%	100%	38%	62%	100%	45%	55%	100%
b. Do you have public restroom facilities?	87	13	100	92	8	100	85	15	100
c. Do you have a parking area for visitors?	81	19	100	92	8	100	74	26	100
d. If yes, is it large enough for buses?	70	30	100	77	23	100	65	35	100
e. Is the site accessible to the disabled?						100			100
Entry?	61	39	100	74	26	100	54	46	100
Restroom?	51	49	100	63	37	100	44	56	100
Programs?	68	32	100	73	27	100	65	35	100
f. Do you have a visitor center?	34	66	100	46	54	100	26	74	100
g. Do you have an exhibit area?	85	15	100	63	37	100	100	0	100
h. Do you provide staffed interpretive and/ or educational opportunities									
On-site?	90	10	100	88	12	100	92	8	100
Off-site?	68	32	100	43	57	100	86	14	100
i. Do you have an auditorium?	21	79	100	29	71	100	15	85	100
j. Do you have a museum shop/book store?	67	33	100	42	58	100	82	18	100
k. Do you sell food?	19	81	100	25	75	100	15	85	100
l. Do you have a picnic facility?	54	46	100	58	42	100	51	49	100
m. Are there nature/hiking trails in close proximity?	59	41	100	75	25	100	49	51	100
n. Are there other recreational and/or cultural activities in close proximity?	90	10	100	96	4	100	87	13	100
o. Do you have any joint sponsorship of events, marketing, etc. with these proximate recreational/cultural sites?	65	35	100	63	37	100	66	34	100
p. Do you have a library archive or a research collection?	76	24	100	54	46	100	90	10	100
q. If you have a library archive/research collection, is it open to the public?	53	47	100%	45	55	100%	59	41	100%
r. Any other comments about on-site amenities? (illustrative responses) "trying to do more with less" or "collections for professional use only"									

Visitor Amenities

Respondents also indicated visitor amenities that were or were not provided, and the provision of amenities ranges considerably. While almost all have public restrooms, about 15 percent do not, and only half of the restrooms are accessible to the disabled. (In fact, 40 percent of the sites do not have accessible entry.) Certain other amenities are often lacking, such as the ability to purchase food or the presence of an auditorium or visitor center. In only about half of the cases was the library or archival collection open to the public. Almost 60 percent of the sites are not served by public transportation. There is also a sense of opportunities lost; many sites do not jointly sponsor events with proximate recreational or cultural places, for instance, and many sites have a library but do not open it up to the public. Item-by-item, responses to the presence of various amenities follow. It is evident that the public sites tend to have a higher level of amenities than their private peers.

Adding amenities requires funds that are often unavailable to the historic sites and organizations, especially the private entities. This is reflected in their typical modest budgets.

EXPENDITURES AND REVENUES

Annual Total Budgets

Annual budgets ranged from a few hundred dollars to $1-2 million. A measure of dispersion around the central value, the standard deviation, was quite high: $.5 million. The average annual budget for all respondents was $311,000, but this figure is inflated by a number of very large annual outlays for such respondents as the Mid-Atlantic Arts Center ($2,000,000), the Edison National Historic site ($1,600,000), the New Jersey State Museum ($1,584,000), and Waterloo Village ($766,000). The median for all the respondents was $60,000. In general, the public sites and organizations have comparable budgets to their private peers.

What is your annual budget?
(Question 13)

Response	% of All Respondents	% of Public Respondents	% of Private Respondents
a. $0–$9,999	22%	25	21
b. $10,000–$49,999	24	15	29
c. $50,000–$99,999	9	20	3
d. $100,000–$499,999	24	15	26
e. $500,000–$999,999	9	10	9
f. $1 million or more	12	15	12
	100%	100%	100%
Survey average:	$311,060	$306,814	$313,487
Survey median:	$60,000	$60,000	$95,000
Survey standard deviation:	$544,459	$510,929	$570,012
Survey total:	$17,108,318	$6,136,272	$10,972,046
Estimated statewide total:	$35.8 million		

The cumulative budgets of all the historic sites and organizations responding to the survey was $17 million. Pyramiding to the state to include nonrespondents results in an estimated statewide total of $36 million, on an order-of-magnitude basis.

Budget Composition

Labor costs generally comprise the largest share of any organization's budget. Since volunteers often comprise almost all of the staff of the historic sites and organizations, however, and paid staff are modestly compensated, labor expenses do not predominate. For all the historic sites and organizations, labor expenses on average comprise only 35 percent of the budget, but there is considerable range as indicated below. Other budget components—nonlabor operating costs and capital expenditures, for instance—also vary widely. These, on average, for all the respondents comprise 49 and 16 percent, respectively, of the historic organizations' budgets. Also evident in the budgetary allocations is that the public historic sites and organizations have much higher labor expenses as a share of the total budget than the private ones.

The tables below report a weighted percentage, that is, percents weighted by the scale of spending. As a result, weighted labor budgetary percentage is higher than it would be unweighted because the higher-spending sites and organizations have higher labor costs as a share of their budgets.

Percent of budget spent on:
(Question 14)

	All Respondents				
Response	Simple Average %	Weighted %	Median	Range	Standard Deviation
a. Labor expenses	35%	60%	37%	0 to 90%	29%
b. Nonlabor operating	49%	31%	43%	10 to 100%	27%
c. Capital expenditures	16%	9%	8%	0 to 70%	21%
	100%	100%			

Percent of budget spent on:
(Question 14)

	Public Respondents				
	Simple Average %	Weighted %	Median	Range	Standard Deviation
a. Labor expenses	46%	66%	45%	0 to 90%	29%
b. Nonlabor operating	40%	24%	28%	10 to 100%	29%
c. Capital expenditures	14%	10%	0%	0 to 70%	21%
	100%	100%			

Percent of budget spent on:
(Question 14)

	Private Respondents				
	Simple Average %	Weighted %	Median	Range	Standard Deviation
a. Labor expenses	29%	56%	23%	0 to 75%	28%
b. Nonlabor operating	54%	35%	50%	10 to 100%	25%
c. Capital expenditures	17%	9%	10%	0 to 70%	20%
	100%	100%			

Percent of budget allocated for:
(Question 14)

	All Respondents		
Response	Labor	Nonlabor Operating Expenses	Capital Expenditures
a. 0–24%	45%	22%	74%
b. 25–49	17	35	10
c. 50–74	29	20	16
d. 75–100	9	23	0
	100%	100%	100%

Percent of budget allocated for:
(Question 14)

	Public Respondents		
Response	Labor	Nonlabor Operating Expenses	Capital Expenditures
a. 0–24%	33%	44%	67%
b. 25–49	17	31	20
c. 50–74	28	6	13
d. 75–100	22	19	0
	100%	100%	100%

Percent of budget allocated for:
(Question 14)

	Private Respondents		
Response	Labor	Nonlabor Operating Expenses	Capital Expenditures
a. 0–24%	50%	11%	77%
b. 25–49	17	37	6
c. 50–74	30	26	17
d. 75–100	3	26	0
	100%	100%	100%

In short, compared to most organizations, labor expenses as a share of the total budget are relatively modest in the historic sites and organizations; their nonlabor operating outlays as a share of the budget dominate; and capital expenses are a moderate but not inconsequential portion of the budget.

Capital Expenditures

Capital expenditures of historic sites and organizations tend to be "lumpy," or inconsistent. For any single organization, they may be high in one year and nonexistent in the next. To arrive at a "non-lumpy" figure, the historic sites and organizations were asked for their average annual capital expenditures *over the past five years*. This average for all the respondents was $82,000, and the median was $20,000, with a range from $0 to $1,000,000. Capital spending reported by the public respondents was higher than that reported by the private respondents.

What is your annual average capital expenditure over the next five years? (Question 15)

Response	All Respondents	Public Respondents	Private Respondents
a. Survey average:	$81,682	$146,206	$44,811
b. Survey median:	$20,000	$42,500	$7,928
c. Survey range:	$0-1,000,000	$0-1,000,000	$0-200,000
Survey total:	$3,594,014	$2,339,300	$1,254,714
Estimated statewide total:	$7.3 million		

Revenue Sources

In parallel to the expenditure breakout, revenue sources were elicited. On average, of the total budgets of the New Jersey historic sites and organizations, 43 percent came from government, 13 percent from foundations/business, 7 percent from endowment, 16 percent from visitor spending, and 21 percent from all other sources. There is considerable range in these apportionments, however, by individual organization. Expectedly, the private historic sites and organizations derived a much lower portion of their budgets from government and a much higher share from foundations/businesses, visitor spending, and other sources. In all instances, endowments are only a modest source of financing.

What percentage of your budget is funded by:
(Question 16)

Response	All Respondents				
	Simple Average %	Weighted %	Median	Range	Standard Deviation
a. Government	43%	47%	23%	0 to 100%	44%
b. Foundations and businesses/ other contributions	13	12	5	0 to 93%	20
c. Endowment	7	5	0	0 to 80%	19
d. Visitor spending	16	24	5	0 to 95%	24
e. All other sources (e.g., membership and education/program fees)	21	12	5	0 to 100%	29
	100%	100%			

What percentage of your budget is funded by:
(Question 16)

Response	Public Respondents				
	Simple Average %	Weighted %	Median	Range	Standard Deviation
a. Government	94%	97%	100%	0 to 100%	23%
b. Foundations and businesses/other contributions	3	1	0	0 to 40%	9
c. Endowment	1	0	0	0 to 10%	2
d. Visitor spending	0	1	0	0 to 5%	1
e. All other sources (e.g., membership and education/ program fees)	2	1	0	0 to 50%	11
	100%	100%			

What percentage of your budget is funded by:
(Question 16)

	Private Respondents				
Response	Simple Average %	Weighted %	Median	Range	Standard Deviation
a. Government	16%	19%	6%	0 to 86%	25%
b. Foundations and businesses/other contributions	18	19%	10	0 to 93%	22
c. Endowment	11	8	0	0 to 80%	23
d. Visitor spending	24	36	13	0 to 95%	27
e. All other sources (e.g., membership and education/ program fees)	31	18	20	0 to 100%	31
	100%	100%			

Percent of budget derived from:
(Question 16)

	All Respondents				
Response	Government	Foundations/ Business	Endowment	Visitors	All other
a. 0–24%	51%	82%	93%	78%	67%
b. 25–49%	6	13	2	9	11
c. 50–74%	7	2	0	6	13
d. 75–100%	36	3	5	7	9
	100%	100%	100%	100%	100%

Percent of budget derived from:
(Question 16)

	Public Respondents				
Response	Government	Foundations/ Business	Endowment	Visitors	All other
a. 0–24%	11%	95%	100%	100%	95%
b. 25–49%	0	5	0	0	0
c. 50–74%	0	0	0	0	5
d. 75–100%	89	0	0	0	0
	100%	100%	100%	100%	100%

Percent of budget derived from:
(Question 16)

	Private Respondents				
Response	Government	Foundations/ Business	Endowment	Visitors	All other
a. 0–24%	75%	75%	89%	67%	52%
b. 25–49%	8	17	3	14	17
c. 50–74%	11	3	0	8	17
d. 75–100%	6	5	8	11	14
	100%	100%	100%	100%	100%

As the figures indicate, historic sites and organizations have to "cobble" their revenues from disparate sources. Even government-supported entities have to secure various sources of nonpublic moneys, albeit to a modest extent. This "layering" of support from multiple sources is particularly pronounced for the private historic sites and organizations. Compounding the difficulty of raising money for all is the fact that endowments are modest, so support from foundations/businesses, from visitors, and from other sources, such as membership, is vital.

An important means by which the New Jersey historic sites and organizations are able to operate on lean budgets is the support given by volunteers. (This is the reason labor costs do not dominate outlays.) Staffing and volunteerism are further discussed below.

STAFFING

Number of Paid Staff and Volunteers

In most organizations, full-time paid staff dominate, with relatively few part-time staff or volunteers. Historic sites and organizations display an opposite pattern with part-timers and volunteers dominating the staff, especially at the private historic sites and organizations.

Total number of staff
(Question 18)

	All Respondents			
Response	Average #	Median #	Range	Standard Deviation
a. Number of full-time paid staff	4	1	0 to 37	9
b. Number of part-time paid staff	4	1	0 to 75	12
c. Number of unpaid volunteers	32	25	0 to 200	37

Total number of staff
(Question 18)

	Public Respondents			
Response	Average #	Median #	Range	Standard Deviation
a. Number of full-time paid staff	5	1	0 to 37	10
b. Number of part-time paid staff	2	1	0 to 10	2
c. Number of unpaid volunteers	20	20	0 to 60	19

Total number of staff
(Question 18)

	Private Respondents			
Response	Average #	Median #	Range	Standard Deviation
a. Number of full-time paid staff	3	1	0 to 34	8
b. Number of part-time paid staff	5	0	0 to 75	15
c. Number of unpaid volunteers	32	30	0 to 200	43

Time Commitment and Change in Profile of Volunteers' Time

Volunteers, on average, contributed 6 hours per week, though many contributed more. The historic sites and organizations noted that there have been changes in the profile of volunteers over time. For instance, with more people in the labor force, there are more volunteers who are employed. Grade school students have reduced their volunteering, while seniors are volunteering more.

Average hours weekly by unpaid volunteers?
(Question 20)

Response (Hours per week)	% of All Respondents	% of Public Respondents	% of Private Respondents
a. 0–4	56%	50%	60%
b. 5–9	27	25	29
c. 10–14	7	10	6
d. 15–19	4	5	3
e. 20 or more	6	10	2
	100%	100%	100%
Survey average (hours):	6	7	6
Survey median (hours):	4	5	4

Changes in volunteer profile
(Question 20a)

	All Respondents			
Response	More	Fewer	Similar	Total
1. Women	19%	14%	67%	100%
2. Grade school students (up to grade 12)	20	22	58	100%
3. College students (under-graduate to graduate)	20	17	63	100%
4. Seniors (65 years +)	37	6	57	100%
5. Employed individuals	19	14	67	100%
6. Minorities	9	9	82	100%
7. College educated	37	0	63	100%
8. "Locals" (live in same or nearby community as organization)	17	4	79	100%
9. Average volunteer time commitment	37	14	49	100%

Significance of Volunteers

The fundamental importance of volunteers to the work of the historic sites and organizations is further manifest in the aggregation of some of the tabulations presented thus far. On average, each of the historic sites and organizations has 32 volunteers committing an average of 6 hours a week. That amounts to 192 hours per week of volunteer time or 9,984 hours per year (192 x 52 weeks). For the 64 respondents the volunteer contribution aggregates to about 640,000 hours of time committed each year (9,984 x 64). At a modest $15 per hour "value," the 640,000 hours of volunteer time has an imputed "worth" of $9.6 million.

By comparison, the entire aggregate annual budget of the 64 respondents was only $17 million, of which about one-third or $5.6 million was for labor costs. In other words, the monetary value of the volunteer support to New Jersey's historic sites and organization exceeded half of their total budget and was two-thirds greater than their labor outlays. Put another way, absent volunteers, the New Jersey historic sites and organizations would have to increase their budgets and fundraising by one-half and their labor costs by two-thirds. These resources would simply not be available.

Given the importance of volunteers, recommendations were solicited to encourage enhanced volunteerism. Illustrative recommendations for the public and private sectors follow.

Recommendations to encourage volunteering at historic sites/organizations (Question 20b)

Actions by Government

- recognition
- tax incentives
- parking privileges
- marketing
- publicity
- training grants/guidelines
- encouragement of government employees to volunteer
- statewide volunteer resource book
- volunteer insurance

Actions by the Private Sector

- recognition
- stipends for volunteers
- corporate time-sharing; more flexible and nontraditional hours
- carpooling, shuttle service
- publicity
- training
- development of internship opportunities
- cooperative advertising and joint training with other sites
- professional volunteer coordinators
- access to expertise and supplies

UNFUNDED NEEDS

The discussion thus far has indicated many constraints confronting the New Jersey historic sites and organizations, including:

1. Limited operating hours, especially for the private locations.
2. Inadequate visitor amenities at both the public and private locations, but especially at the latter.
3. Artifact collections that are neither fully accessioned/catalogued nor insured, especially at the public historic sites and locations, as well as the need for enhanced conservation of the artifacts.
4. Low endowments which necessitate raising funds from disparate sources. This is especially true for private sites.
5. A dependence on volunteers, especially by the private historic locations and organizations.

Estimated Unfunded Needs

Not surprisingly an overwhelming share—about 85 percent—of the respondents indicated they had unfunded needs. This gap was indicated by the public as well as the private historic sites and organizations.

Do you have unfunded needs for history-related activities and their administration? (Question 21)

Response	% of All Respondents	% of Public Respondents	% of Private Respondents
a. No	15%	5%	19%
b. Yes	85	95	81
	100%	100%	100%

Unfunded needs were indicated in the four major areas shown below and are expressed to a common time period—needs per year. Further, the statewide total is quite conservative, that is, at the low end of the need.

	Survey Total	Estimated Statewide Total
1. Annual funds to maintain existing physical facilities;	$1.7 million	$4.2 million
2. Annual funds to improve/rehabilitate existing physical facilities;	$12.6 million	$14.9 million
3. Annual funds to hire staff for a variety of operating purposes (programming expanded hours, outreach, marketing, publications); and	$4.2 million	$10.4 million
4. Annual funds for conservation and other purposes (not included in items 1–3).	$4.5 million	$6.1 million
Total 1-4	*$23.0 million per year*	*$35.6 million per year*

Unfunded Maintenance

Larger unfunded maintenance needs were indicated by the public historic sites and organizations than by the private sites and organizations.

Amount needed annually to maintain existing physical facility?
(Question 22a)

Response	% of All Respondents	% of Public Respondents	% of Private Respondents
a. 0–$4,999	27%	15%	38%
b. $5,000–$9,999	7	0	14
c. $10,000–$49,999	37	40	33
d. $50,000–$99,999	15	20	10
e. $100,000+	14	25	5
	100%	100%	100%
Survey average:	$42,220	$66,075	$19,500
Survey median:	$10,000	$20,000	$8,000
Survey standard deviation:	$75,529	$100,886	$25,085
Survey total:	$1,731,000	$1,321,500	$409,500
Estimated statewide total:	$4.2 million		

Examples:

Respondent	Description of Unfunded Maintenance Deeds
Cornelius Low House	Structural repair, general maintenance and address, soil erosion
NJ Historical Society	HVAC upgrade and external repairs
Ringwood Manor	General maintenance and investment in fire and HVAC systems
Caldwell Parsonage	External repairs and painting, plumbing/electrical repairs
Lawrence House	HVAC upgrade and painting; roof, parking lot, and sidewalk repairs

Unfunded Physical Improvements

Even larger amounts were indicated as being needed to improve/rehabilitate the existing physical facilities. On an annual basis, the needs translate roughly into $12.6 million for the respondents and $14.9 million statewide ($125.7 million x .1 and $148.9 million x .1, respectively).

Amount needed to improve/rehabilitate existing physical facility?
(Question 22b)

Response	% of All Respondents	% of Public Respondents	% of Private Respondents
a. 0–$9,999	8%	0%	15%
b. $10,000–$49,999	24	6	40
c. $50,000–$99,999	13	6	20
d. $100,000–$249,999	11	11	10
e. $250,000–$499,999	5	11	0
f. $500,000–$999,999	16	22	10
g. $1,000,000+	23	44	5
	100%	100%	100%
Survey average:	$3,308,289	$6,822,778	$145,250
Survey median:	$125,000	$700,000	$30,000
Survey standard deviation	$9,725,041	$13,450,497	$264,824
Survey total:	$125,715,000	$122,810,000	$2,905,000
Estimated statewide total:	$148.9 million		

Examples of the needed improvements and rehabilitation are listed below. Commonly cited was the need to provide access to the disabled, to upgrade basic systems, and to provide essential amenities, such as public restrooms.

Respondent	Description
Cornelius Low House	Building rehabilitation and parking
Whitebog Village	Public museum, restroom, office space
Waterloo Village	Improvements to buildings and festival areas; ADA compliance and new exhibits
Brick Academy	Improve restrooms, HVAC, and lighting. Add new accessible space at lower level
Long Ponds Ironworks	Repair infrastructure, paved parking lots and village trail
Skylands Manor	Replace roof, update kitchen, upgrade elevators, and plaster and paint upper floors

Respondent	Description
Ringwood Manor	Add roof and structural upgrades, new heating system, fire protection system, ADA accessibility, and landscaping
Milltown Historic Society Museum	ADA compliance
Morris Canal Historic District	Renovate canal and structures and install interpretive hiking trail
Twin Lights Historic Site	Expand parking, upgrade auditorium and landscaping
Edison National Historic Site	Remove nonhistoric building; rehab historic buildings; construct new visitor facilities; and add collection storage space
Indian King Tavern and Museum	Reconstruct part of original structure, add handicap accessibility, and add amenities (bathroom, souvenir shop, library)
Mid-Atlantic Center for the Arts	Renovate the carriage house; add wheelchair lift; build an office wing; reinterpret and redecorate most of the period rooms; restock the grounds
Other	Restore train shed; add public restrooms; meet ADA compliance; and complete area archeology

Unfunded Operating Needs

The estimated unfunded needs for operating purpose were also significant. On average, the respondents indicated a need for 3 additional staff (4 for the public sites, 2 for the private sites) for a wide variety of operating purposes from enhanced programming to expanded operating hours. Costs for these staff and for other operating purposes are shown below. Larger unfunded operating needs were indicated by the public historic sites and organizations than the private ones.

Amount needed annually for operating purposes?
(Question 22c)

Response	% of All Respondents	% of Public Respondents	% of Private Respondents
a. 0–$9,999	14%	0%	24%
b. $10,000–$49,999	42	45	40
c. $50,000–$99,999	22	25	20
d. $100,000–$249,999	11	5	16
e. $250,000+	11	25	0
	100%	100%	100%
Survey average:	$93,537	$144,100	$53,086
Survey median:	$40,000	$55,000	$35,000
Survey standard deviation:	$134,220	$181,809	$54,996
Survey total:	$4,209,160	$2,882,000	$1,327,160
Estimated statewide total:	$10.4 million		

Examples of the purposes for needed operating funds include:

Respondent	Description of Unfunded Operating Needs
Cornelius Low House	Expanded hours, publications, weekend children's programming, expanded volunteer program
NJ Historical Society	Collections care, publications, education, curatorial research
Waterloo Village	Hire director of development, public relations tour coordinator, village supervisor, public relations representative
Peachfield Plantation	We have no paid director, curator, or clerical help
Cranbury Historic Society	Conservation of clothing, historic records, artifacts
Lambert Castle	Hire librarian/archivist, curator, 2 part-time docents/volunteer coordinators, maintenance person
NJ State Museum	Staffing—basic, Cultural History Museum, Archeology/Ethnology, Fine Arts
Skylands Manor	Hire historic preservation specialist, 2 tour guides, staff to develop volunteer program, staff to oversee historic programs and outreach, four maintenance/ housekeeping staff
Ringwood Manor	Educational program development, increase tour hours

Respondent	Description of Unfunded Operating Needs
Bainbridge House	Curator, part-time development /marketing consultant
Milltown Historic Society	Part-time student workers in archives/special events
Morris Canal Historic District	Educational planning, master plan, outreach, research, publications, joint programs with nearby facilities
Craftman Farms	Hire educator, marketing/public relations/ communications officer
Barnegat Lighthouse	Hire historic preservation specialist
Edison National Historic Site	Staff for education, curatorial activities, resource protection
Trenton City Museum	Start educational program for schools
Morris County Historic Society—Acorn Hall	More staff to expand hours, develop more education and outreach, collections conservation, publications
Historic Society of Ocean Grove	Staff for collections, management, and grants applications
Readington Township Museum	Hire staff for programming, educate volunteers, expand hours
Mid-Atlantic Center for the Arts	Professional staff needed, hire educational director, volunteer coordinator, development director, clerical and development support staff
Walt Whitman House	Marketing, outreach, educational programming, extended hours
Newark Museum	Hire educational programming director

Other Unfunded Needs

In addition to the amounts needed for maintenance, improvements/ rehabilitation, and operating expenses, funds for "other purposes" were also indicated. This "other" category included such purposes as a "bus to bring visitors from economically disadvantaged neighborhoods," "adding historic markers, publications, and educational materials," and "increasing staff salaries which are currently too low." For these and other miscellaneous purposes, the following amounts were projected, with the public respondents again indicating a greater degree of unfunded need.

Amount needed for "other" purposes.
(Question 22d)

Response	% of All Respondents	% of Public Respondents	% of Private Respondents
a. 0–$9,999	30%	21%	39%
b. $10,000–$49,999	7	7	8
c. $50,000–$99,999	19	22	15
d. $100,000–$249,999	18	21	15
e. $250,000+	26	29	23
	100%	100%	100%
Survey average:	$205,459	$350,400	$49,369
Survey median:	$30,000	$40,000	$25,000
Survey standard deviation:	$525,434	$708,017	$64,874
Survey total:	$5,547,400	$4,905,600	$641,800
Estimated statewide total:	$8.0 million		

Annualizing the above total other amounts translates into $0.6 million for the survey respondents ($5.5 million x .1) and $0.8 million for the statewide total ($8.0 million x .1) If we add this to the previously indicated much larger annual amounts needed for conservation ($3.9 million for the survey respondents and $5.3 million for the estimated statewide total) the total is $4.5 million for the survey respondents and $6.1 million statewide.

Adding all the unfunded needs for 1) maintenance, 2) improvements/ rehabilitation, 3) staffing/operating, and 4) conservation/other purposes tallies on an annual basis to $23.0 million for the survey respondents and an estimated $35.6 million statewide. In both instances, but especially with respect to the statewide figures, these are gross orders-of-magnitude estimates. Figuring needs more precisely could be the subject of a separate needs study. In fact, a less conservative statewide estimate of need, and one expressed on a *total* and not on an annual basis, could be as high as $700 to $800 million.[3] The main point is that annually there are tens of millions of dollars of

[3] The estimated unfunded statewide needs indicated in this section were based on median values because the averages were so high (as a result of very high outlier values). Were the averages applied, and were needs shown on a total and not annualized basis, then an order of magnitude of statewide need is $700 to $800 million ($56 million [$5.6 million annual x 10) for maintenance, $378 million for rehabilitation, $143 million [$14.3 million annual x 10] for operating, and $212 million for conservation and other purposes [$17.5 million annual for conservation x 10, and $37 million for other needs]).

unfunded needs, and in total hundreds of millions of dollars of unfunded needs, confronting the New Jersey historic sites and organizations.

Why make the added investment in history? Besides the obvious gain as one respondent noted, of "preserving the tangible and intangible remains of our heritage," some pragmatic reasons for enhanced investment noted in the survey included:

Respondent	Comments on Economic Impacts and Financial Needs
Long Ponds Ironworks	State recently invested over $300,00 for renovation of Old Country Store which remains unstaffed
Delaware and Raritan Canal	The higher the quality resource you provide, the more repeat visits you get and the better word of mouth advertisements. Quality and diverse programming result in enhanced and diverse attendance
Barnegat Lighthouse	Staffing limitations prohibit opening during off-season; visitor center would permit year round operation
Museum of Early Trades and Crafts	Capital renovation will have dramatic effect on services and impact; goal is to increase visitation to 25,000 and to attract tour bus operators to the site and district
Trenton City Museum	Museum saw increase of 41% with addition of 2 months of programming; would like to become associated with nearby Trent House
Grover Cleveland Birthplace	Public wants increased site availability; state must realize its responsibility to site and the public; much time and energy expended in fighting partial closure
Burlington County Historic Society	Money needed for collections conservation as well as purchasing of artifacts. Former is rarely considered in financial needs assessments; past should be preserved via built environment as well as artifacts (facilities limitations)
Monmouth County Historic Society	Budget hampers serving a large audience; improved and enlarged museum, library, and increased staffing would increase visitation 100%; large crowds and school groups currently hard to handle: "It is a struggle for us . . . just too big"
Newark Museum	Pending opening of NJ Performing Arts Center will increase pressure on museum and other Newark sites to expand operations for increased city visitors
New Jersey State House	State House should match the attendance of sister states which have visitation of 50,000 and 100,000 annually. (The current New Jersey State House visitation is 25,000.)

Heritage Tourism and Investing in Historic Sites

A frequent refrain in the above comments is that added investment in history would spur heritage tourism. In fact, 90 percent of respondents felt that if the unfunded needs were financed, visitation would increase, often by a considerable amount (noted below). Public respondents especially anticipated a very significant gain in tourism with added support for their operations.

"If all the spending/staffing you indicated were accomplished, what is your best estimate of the percentage increase in visitation to your facility that would ensue?"
(Question 24)

Response	% of All Respondents	% of Public Respondents	% of Private Respondents
a. No impact on tourism	8%	0%	14%
b. Visitation would increase	92%	100%	86%
	100%	100%	100%
% increase in tourism			
a. 0–49%	47%	29%	63%
b. 50–99%	7	5	8
c. 100–149%	22	33	12
d. 150–199%	2	5	0
e. 200%+	22	28	17
	100%	100%	100%
Survey average:	107%	138%	80%
Survey median:	75%	100%	30%

The following chapter (Chapter Seven) considers the total economic benefit of the operations of New Jersey's historic sites and organizations. A later discussion (Chapter Nine) examines the economic return of meeting the unfunded needs of New Jersey's historic sites and organizations and calculates the substantial gains in heritage tourism the state could reap.

CHAPTER SEVEN

Total Economic Impacts from the Operations of Historic Sites and Organizations

INTRODUCTION AND SUMMARY

The previous chapter traced the profile and operations of the New Jersey historic sites and organizations. In addition to their vital cultural and preservation role, the state's historic sites and organizations make an important economic contribution. The economic benefits of the rehabilitation effected to and the visitor spending at the sites are discussed in Chapters Three and Five respectively. In addition, the New Jersey historic sites and organization generate, at the national level, about 1,400 jobs, $33 million in income and $43 million in gross domestic product annually. The state garners about half these benefits, as summarized below.

Annual Total Economic Impacts of the New Jersey Historic Sites and Organizations Net Spending[†] ($25 Million)

	In New Jersey	Outside New Jersey	Total (U.S.)
Jobs (person years)	739	699	1,438
Income ($000)	13,772	19,482	33,254
GDP/GSP ($000)	20,034	22,995	43,029
Total Taxes ($000)	6,446	7,159	13,605
Federal ($000)	3,947	4,530	8,477
State ($000)	1,369	1,415	2,784
Local ($000)	1,130	1,214	2,344
In-State Wealth ($000) (GSP Minus Federal Taxes)	16,087	-----	-----

GDP/GSP=Gross domestic product/Gross state product

[†] Net of outlays for capital purposes and visitor-supported revenues

THE DIRECT NET SPENDING OF THE NEW JERSEY HISTORIC SITES AND ORGANIZATIONS

The direct spending of New Jersey historic sites and organizations was detailed in the previous chapter, using the data developed by a survey administered by Rutgers University. The survey also generated data on economic impacts through questions on the expenditures as well as the revenues of the historic sites and organizations.

Expenditures:

1. What was your organization's annual budget for history-related activities?
2. Of the annual budget indicated in Question 1, approximately what percentage was spent on: labor compensation (e.g., staff salaries and benefits); nonlabor operating costs (e.g., utilities, routine building maintenance, small repairs, exhibition costs, internal and external program expenses, insurance outlays, etc.); capital expenditures (e.g., major repairs, rehabilitation, additions, and other capital outlays for major furnishings, HVAC, ADA access, etc.)?

Revenues (assumed in this instance to equal expenditures):

3. Of the annual budget indicated in question 1, approximately what percentage was funded by: Government; foundations and businesses/other contributions; endowment; visitor spending; all other sources (e.g., membership and education/program fees)?

4. Of total visitor revenues, approximately what percent was derived from: entry/tour; all other visitor revenues (e.g., gift and food purchases)?

The expenditure and revenue questions are *designed to avoid double counting* the economic impacts of historic preservation. We want to ascertain the economic impact *added* by the historic sites and organizations *over and above the economic* contributions of historic preservation already detailed in this study. In considering the added economic effects from historic sites and organizations, we must therefore exclude: 1) moneys the historic sites and organizations expend for rehabilitation; and 2) revenues they receive from visitors, since these have already been counted in the historic rehabilitation and heritage tourism projections respectively. This is accomplished as follows:

1. In tallying the expenditures of the historic sites and organizations, capital outlays are excluded since these have already been tallied as historic rehabilitation outlays.

2. In addition, visitor revenues are excluded from the budgets of the historic sites and organizations, since these are included in the calculation of total spending by heritage tourists.

These two subtractions leave the *net* spending of historic sites and organizations. The calculation proceeds as follows:

1. The total annual spending of the responding historic sites and organizations, is $17 million.

2. Pyramiding from this figure to an estimated state order-of-magnitude total (to include nonresponding historic sites and organizations), the total annual statewide spending by New Jersey historic sites and organizations is $36 million.

3. From the total $36 million, we wish to derive the *net* spending—i.e., the amount not already included in the historic rehabilitation and heritage tourism components, respectively—as indicated above.

4. According to the survey, capital expenditures average 9 percent of total outlays, and on average 24 percent of revenues are derived from visitors (weighted percentage).

5. These respective percentages are applied to the estimated $36 million in total statewide spending by New Jersey's historic sites and organizations.

6. The result is $25 million.

Another way to look at the calculation:

A. Total estimated statewide spending by NJ historic sites and organizations	$36 million
B. Estimated percentage of spending by NJ historic sites and organizations for capital purposes	9 percent
C. Estimated percentage of spending by NJ historic sites and organizations for noncapital purposes (100%-B)	91 percent
D. Total estimated statewide spending by NJ historic sites and organizations net of capital outlays (A x C)	$33 million
E. Estimated percentage of revenues by NJ historic sites and organizations derived from visitors	24 percent
F. Estimated percentage of revenues by NJ historic sites and organizations net of visitor contributions (100%-E)	76 percent
G. Total estimated non-capital spending by New Jersey historic sites and organizations net of visitor contributions (D x F)	$25 million

The result of this calculation, $25 million, represents the net direct spending by New Jersey's historic sites and organizations. This direct outlay must then be translated into the larger total economic consequences, encompassing multipliers or ripple effects. Application of the RSRC PC I-O model (explained in Chapter Three and Appendix C) shows the total economic benefits of New Jersey's historic sites and organizations in detail.

TOTAL ECONOMIC IMPACTS FROM THE OPERATIONS OF HISTORIC SITES AND ORGANIZATIONS

Nationwide Impacts

The details of the total economic effects from the operations of historic sites and organizations are shown in the accompanying exhibits (Exhibits 7.1 through 7.6). At the national level, Item 1 of Section II in Exhibit 7.1 shows that 692 jobs are generated directly by historic sites and organizations, creating $10.8 million in labor income, and producing $10.6 million in wealth (GDP). Exhibit 7.1 further reveals that the direct effect on labor income is greater than the direct effect on GDP, suggesting that unearned income is negative, i.e., that historic sites and organizations nationwide tend to lose rather than make money. For administrators of such facilities this finding is likely no surprise, but it does highlight a need for more external financial support. Although held down in part because of the operating losses, the low direct GDP/investment ratio

(0.43) also suggests a heavy use of imported goods to support the operations of historic sites and organizations. This phenomenon is attributed mainly to the gift shops, which sell items that are now largely produced overseas.

The multiplier effects of the operations of historic sites and organizations add 746 more jobs nationwide, $22.5 million more in income, and $32.4 million more in GDP. Therefore, the total nationwide economic impacts of New Jersey heritage tourism—the sum of its direct and indirect and induced effects—are 1,438 jobs (692 + 746), $33.3 million in income ($10.8 million + $22.5 million), and $43.0 million in GDP ($10.6 million + $32.4 million). In all instances, the indirect and induced effects exceed the direct effects (the traditional multipliers are greater than 2.0).

Interestingly the multipliers are lowest for jobs (2.079), relatively high for labor income (3.08), and even higher for GDP (4.049). This phenomenon is due to the relatively low pay of workers (often volunteers) at historic sites and organizations. The low average pay means that the income of these workers ($15,603 on average) cannot induce many other jobs through household consumption. Nevertheless, the jobs that they do induce offer better wages than their own (an average of $30,103). Hence, the income multiplier is much higher than the multiplier for jobs. Similarly, since historic sites and organizations tend to be nonprofit operations, they produce small amounts of GDP compared to other industries. As Exhibit 7.1 demonstrates, the wealth created per indirect worker is nearly three times as high that created per direct worker ($43,433 versus $15,358).

Nearly 62 percent of all of the jobs created are in the services industry. Most of these are direct jobs as revealed by the finer breakout of national economic impacts by industry in Exhibit 7.2. This exhibit shows that of the 891 jobs created in the services industry most (81 percent) reside in three industries: engineering and management services (average income per job = $16,702); membership organizations (average income per job = $15,800); and museums (average income per job = $15,621). And an examination of Exhibit 7.3 shows that low-paying sales, service, and administrative support occupations comprise nearly 56 percent of jobs founded by the operation of New Jersey museums and historic sites. Blue-collar occupations (agricultural and related, and other skilled labor) make up 18 percent of the jobs. Writers, artists, social scientists, and technicians (professions at the lower end of the pay scale) comprise another 10 percent of the jobs. Only 16 percent of all jobs generated by the historic sites and museums are high-paying managerial jobs; and only 24 percent of these 229 jobs are management support occupations.

A different perspective of the national economic effects from the operations of historic sites and organizations is presented at the bottom of Exhibit 7.1. Here, the effects per one million dollars of initial expenditure (by the sites/organizations) are detailed. This exhibit shows that every one million dollars in spending results in an additional 58 jobs, $1.3 million in income and $1.7 million in GDP—effects that are quite "competitive" with the effects per one million dollars of initial outlay for historic rehabilitation. However, the return on the investment in terms of state and federal government tax revenues is substantially lower compared to the returns yielded by the other forms of New Jersey historic economic activity. This phenomenon is, again, due to the nonprofit (and hence usually nontaxable) nature of the historic sites and organizations.

State-Level Impacts

Exhibits 7.4 through 7.6 present the effects of the $25 million in spending by New Jersey's historic sites and organizations to the state itself. Item 1 in Section II of Exhibit 7.4 shows that New Jersey retains 79 percent of the direct jobs (692 jobs) created nationwide in support of its historic organizations and sites. Although higher than the percentage for heritage tourism direct jobs, this percentage is lower than the 93 percent of direct jobs garnered by historic building rehabilitation. Much of the spending by these historic sites and organizations is on items that, although purchased at retailers in the state, are produced outside of the state (e.g., gifts, educational material, snack foods). New Jersey retains an even lower proportion of the indirect and induced employment impacts—only about 25 percent. Again its status as a suburb to New York City and Philadelphia helps to explain this phenomenon.

In sum, through its historic sites and organizations New Jersey gains 739 jobs (51 percent of the total 1,438 jobs generated nationally), $13.8 million in income (41 percent of the $33.3 million in income generated nationally), and $20.0 million in wealth (46.6 percent of the $43.0 million added to national GDP). The state multiplier effects (measured by subtracting one from the multipliers)[1] range between 29 and 32 percent of the national multipliers (Exhibits 7.1 and 7.4).

Hence, the economic benefits of New Jersey's historic sites and organizations that accrue to the state are concentrated in the direct effects. As mentioned earlier, the jobs that are created are relatively low-paying. At $18,636, the average income per job in New Jersey generated through the operation of historic sites and organizations is somewhat below that the national average—$23,125 per job. Even the indirect jobs which New Jersey gains, do not pay all that well on average—$27,437 per job—compared to the national average of $31,014 per job.

Finer grained detail of state impacts by industry (Exhibit 7.5) and occupation (Exhibit 7.6) reflect stronger concentrations than those noted at the national level. Of the 739 jobs derived statewide via the operation of New Jersey's historic sites and organizations, 82 percent are in the services industry. Of these 608 services jobs, 91 percent (555 jobs) are in three industries: membership organizations; engineering and management services; and museums, botanical-zoological gardens. Printing and publishing is the New Jersey manufacturing industry that is most affected, but the impact on it is relatively small (20 jobs). The state's eating and drinking establishments receive a similarly small impact.

[1] Multipliers are defined as the sum of direct, indirect, and induced effects divided by the direct effects. Since direct effects are in both the numerator and denominator, multipliers can alternatively be defined as one plus the sum of indirect and induced effects divided by the direct effects. Hence by subtracting one we get only the multiplier effect itself, which is the sum of indirect and induced effects divided by the direct effects.

Exhibit 7.1
National Economic and Tax Impacts of Annual Spending by New Jersey Historic Sites / Organizations ($25 Million)

	Economic Component		
	Employment (jobs)	Income (000$)	Gross Domestic Product (000$)
I. TOTAL EFFECTS (Direct and Indirect/Induced)*			
Private			
1. Agriculture	2	228	383
2. Agri. Serv., Forestry, & Fish	4	97	122
3. Mining	3	160	634
4. Construction	21	788	829
5. Manufacturing	148	5,695	7,992
6. Transport. & Public Utilities	43	2,188	4,138
7. Wholesale	14	613	1,597
8. Retail Trade	162	2,968	3,399
9. Finance, Ins., & Real Estate	100	3,540	6,422
10. Services	891	16,094	16,647
Private Subtotal	1,388	32,370	42,162
Public			
11. Government	50	884	868
Total Effects (Private and Public)	1,438	33,254	43,029
II. DISTRIBUTION OF EFFECTS/MULTIPLIER			
1. Direct Effects	692	10,797	10,628
2. Indirect and Induced Effects	746	22,457	32,401
3. Total Effects	1,438	33,254	43,029
4. Multipliers (3÷1)	2.079	3.080	4.049
III. COMPOSITION OF GROSS DOMESTIC PRODUCT			
1. Wages--Net of Taxes			30,088
2. Taxes			
a. Local			2,344
b. State			2,784
c. Federal			
General			4,948
Social Security			3,528
Federal Subtotal			8,477
d. Total taxes (2a+2b+2c)			13,605
3. Profits, dividends, rents, and other			(663)
4. Total Gross Domestic Product (1+2+3)			43,029
EFFECTS PER MILLION DOLLARS OF INITIAL EXPENDITURE			
Employment (Jobs)			57.5
Income			$1,330,152
State Taxes			$111,341
Local Taxes			$93,779
Gross Domestic Product			$1,721,179

Note: Detail may not sum to totals due to rounding.

*Terms:

Direct Effect (National)—the amount of goods and services purchased in the nation.

Indirect Effects—the value of goods and services needed to support the provision of those direct economic effects.

Induced Effects—the value of goods and services needed by households that provide the direct and indirect labor.

Source: Rutgers University Center for Urban Policy Research, 1997.

Exhibit 7.2
National Economic Impacts of Annual Spending by New Jersey Historic Sites / Organizations ($25 Million)

INDUSTRY	Industry Component: Employment (jobs)	Income ($000)	Gross Domestic Product ($000)
Agriculture	**2**	**228**	**383**
Dairy Prod., Poultry, & Eggs	0	39	53
Meat Animals & Misc. Livestock	1	58	73
Cotton	0	5	7
Grains & Misc. Crops	1	91	180
Tobacco	0	14	22
Fruits, Nuts, & Vegetables	0	8	28
Forest Prod.	0	3	7
Greenhouse & Nursery Prod.	0	10	13
Agri. Serv., Forestry, & Fish	**4**	**97**	**122**
Agri. Services (07)	3	45	47
Forestry (08)	1	4	24
Fishing, Hunting, & Trapping (09)	1	48	51
Mining	**3**	**160**	**634**
Metal Mining (10)	0	16	19
Coal Mining (12)	0	0	0
Oil & Gas Extraction (13)	2	133	595
Nonmetal Min.-Ex. Fuels (14)	0	11	20
Construction	**21**	**788**	**829**
General Bldg. Contractors (15)	4	173	182
Heavy Const. Contractors 16)	2	96	101
Special Trade Contractors (17)	14	519	546
Manufacturing	**148**	**5,695**	**7,992**
Food & Kindred Prod. (20)	12	447	711
Tobacco Manufactures (21)	0	15	73
Textile Mill Prod. (22)	4	104	147
Apparel & Other Prod. (23)	8	141	153
Lumber & Wood Prod. (24)	3	100	153
Furniture & Fixtures (25)	3	68	80
Paper & Allied Prod. (26)	9	512	846
Printing & Publishing (27)	65	2,240	2,969
Chemicals & Allied Prod. (28)	5	326	525
Petroleum & Coal Prod. (29)	1	90	283
Rubber & Misc. Plastics (30)	6	235	269
Leather & Leather Prod. (31)	2	39	47
Stone, Clay, & Glass (32)	2	83	100
Primary Metal Prod. (33)	3	153	171
Fabricated Metal Prod. (34)	6	241	313
Machinery, Except Elec. (35)	4	181	218
Electric & Elec. Equip. (36)	4	152	228
Transportation Equipment (37)	6	341	437
Instruments & Rel. Prod. (38)	4	166	177
Misc. Manufacturing Ind's. (39)	2	62	91

Exhibit 7.2 (continued)
National Economic Impacts of Annual Spending by New Jersey Historic Sites / Organizations ($25 Million)

INDUSTRY	Industry Component: Employment (jobs)	Income ($000)	Gross Domestic Product ($000)
Transport. & Public Utilities	**43**	**2,188**	**4,138**
Railroad Transportation (40)	2	93	149
Local Pass. Transit (41)	5	118	132
Trucking & Warehousing (42)	9	341	357
Water Transportation (44)	1	34	52
Transportation by Air (45)	5	302	400
Pipe Lines-Ex. Nat. Gas (46)	0	8	40
Transportation Services (47)	2	96	105
Communication (48)	11	686	1,392
Elec., Gas, & Sanitary Serv. (49)	9	510	1,510
Wholesale	**14**	**613**	**1,597**
Whlsale-Durable Goods (50)	4	206	675
Whlsale-Nondurable Goods (51)	10	407	922
Retail Trade	**162**	**2,968**	**3,399**
Bldg. Mat.-Garden Supply (52)	6	174	192
General Merch. Stores (53)	15	251	369
Food Stores (54)	13	260	291
Auto. Dealers-Serv. Stat. (55)	16	450	503
Apparel & Access. Stores (56)	7	113	176
Furniture & Home Furnish. (57)	2	71	87
Eating & Drinking Places (58)	75	1,059	1,239
Miscellaneous Retail (59)	28	590	543
Finance, Ins., & Real Estate	**100**	**3,540**	**6,422**
Banking (60)	12	448	809
Nondep. Credit Institut. (61)	11	387	348
Security, Comm. Brokers (62)	5	366	505
Insurance Carriers (63)	13	571	613
Ins. Agents, Brokers (64)	22	834	876
Real Estate (65)	14	112	2,530
Holding and Invest. Off. (67)	23	823	741
Services	**891**	**16,094**	**16,647**
Hotels & Other Lodging (70)	21	358	673
Personal Services (72)	21	380	406
Business Services (73)	59	1,585	1,745
Auto Repair, Serv., Garages (75)	13	453	530
Misc. Repair Services (76)	10	258	271
Motion Pictures (78)	8	167	154
Amusement & Recreation (79)	8	211	240
Health Services (80)	13	426	452
Legal Services (81)	5	333	369
Educational Services (82)	6	117	127
Social Services (83)	6	82	92
Museums, Botan.-Zoo. Gardens (84)	119	1,859	1,830
Membership Organizations (86)	261	4,124	4,057
Engineer. & Manage. Serv. (87)	342	5,712	5,670
Miscellaneous Services (89)	1	29	30
Government	**50**	**884**	**868**
Total	**1,438**	**33,254**	**43,029**

Note: Detail may not sum to totals due to rounding.

Exhibit 7.3
National Employment Impacts by Occupation of Annual Spending by New Jersey Historic Sites / Organizations ($25 Million)

OCCUPATION TITLE	Employment (jobs)
Total, All Occupations	**1,438**
Exec., Admin., and Management Occupations	**229**
Managerial and Administrative Occupations	174
Management Support Occupations	55
Professional Specialty Occupations	**108**
Engineers	5
Architects and Surveyors	1
Life Scientists	1
Computer, Math, and Operations Res. Analysts	5
Physical Scientists	1
Social Scientists	2
Social, Recreational, and Relig. Workers	8
Lawyers and Judicial Workers	6
Teachers, Librarians, and Counselors	15
Health Diagnosing Occupations	4
Health Assessment & Treating Occupations	11
Writers, Artists, and Entertainers	35
All Other Professional Workers	14
Technicians and Related Support Occupations	**33**
Health Technicians and Technologists	11
Engineering & Science Technicians & Technologists	8
Technicians, Except Health and Engin. & Science	14
Marketing and Sales Occupations	**152**
Cashiers	20
Counter and Rental Clerks	4
Insurance Sales Workers	5
Real Estate Agents, Brokers, & Appraisers	2
Salespersons, Retail	25
Securities and Financial Service Sales Workers	2
Stock Clerks, Sales Floor	7
Travel Agents	20
All Other Sales and Related Workers	67
Administrative Support Occupations, incl. Clerical	**480**
Adjusters, Investigators, & Collectors	11
Communications Equipment Operators	8
Computer & Peripheral Equipment Operators	4
Financial Records Processing Occupations	47
Information Clerks	63
Mail Clerks and Messengers	8
Postal Clerks and Mail Carriers	27
Mat'l Record., Sched., Dispatch, & Distrib. Occs.	23
Records Processing Occupations, except Financial	11
Secretaries, Stenographers, and Typists	117
Other Clerical and Administrative Support Workers	162

Exhibit 7.3 (continued)
National Employment Impacts by Occupation of Annual Spending by New Jersey Historic Sites / Organizations ($25 Million)

OCCUPATION TITLE	Employment (jobs)
Service Occupations	**173**
Cleaning & Building Service Occs., except Private	37
Food Preparation and Service Occupations	89
Health Service Occupations	7
Personal Service Occupations	14
Protective Service Occupations	11
All Other Service Workers	15
Agric., Forestry, Fishing, & Related Occupations	**45**
Animal Caretakers, except Farm	31
Farm Occupations	3
Farm Operators and Managers	1
Fishers, Hunters, and Trappers	0
Forestry and Logging Occupations	1
Gardeners & Groundskeepers, except farm	8
Supervisors, Farming, Forestry, & Agricul. Occs.	0
All Other Agric., Forestry, Fishing, & Rel. Workers	3
Precision Production, Craft, & Repair Occupations	**88**
Blue-collar Worker Supervisors	13
Construction Trades	12
Extractive and Related Workers, Incl. Blasters	1
Mechanics, Installers, and Repairers	39
Production Occupations, Precision	21
Plant and System Occupations	2
Operators, Fabricators, and Laborers	**130**
Mach. Setters, Set-up Ops, Operators, & Tenders	49
Hand Workers, incl. Assemblers & Fabricators	12
Transp. & Material Moving Machine & Vehicle Ops.	36
Helpers, Laborers, & Material Movers, Hand	33

Note: Detail may not sum to totals due to rounding.

Exhibit 7.4
In-State Economic Impacts of Annual Spending by New Jersey Historic Sites / Organizations ($25 Million)

	Economic Component		
	Employment (jobs)	Income (000$)	Gross State Product (000$)
I. TOTAL EFFECTS (Direct and Indirect/Induced)*			
Private			
1. Agriculture	0	1	4
2. Agri. Serv., Forestry, & Fish	1	14	27
3. Mining	0	2	3
4. Construction	11	457	514
5. Manufacturing	32	983	1,660
6. Transport. & Public Utilities	11	350	943
7. Wholesale	4	310	641
8. Retail Trade	42	840	1,257
9. Finance, Ins., & Real Estate	16	675	2,134
10. Services	608	9,801	12,490
Private Subtotal	723	13,434	19,670
Public			
11. Government	15	339	364
Total Effects (Private and Public)	739	13,772	20,034
II. DISTRIBUTION OF EFFECTS/MULTIPLIER			
1. Direct Effects	548	8,559	10,628
2. Indirect and Induced Effects	190	5,213	9,406
3. Total Effects	739	13,772	20,034
4. Multipliers (3÷1)	1.347	1.609	1.885
III. COMPOSITION OF GROSS STATE PRODUCT			
1. Wages--Net of Taxes			12,108
2. Taxes			
a. Local			1,130
b. State			1,369
c. Federal			
General			2,304
Social Security			1,643
Federal Subtotal			3,947
d. Total taxes (2a+2b+2c)			6,446
3. Profits, dividends, rents, and other			1,480
4. Total Gross State Product (1+2+3)			20,034
EFFECTS PER MILLION DOLLARS OF INITIAL EXPENDITURE			
Employment (Jobs)			29.5
Income			$550,896
State Taxes			$54,767
Local Taxes			$45,194
Gross State Product			$801,341

Note: Detail may not sum to totals due to rounding.

*Terms:

Direct Effect (State)—the amount of goods and services purchased in New Jersey.

Indirect Effects—the value of goods and services needed to support the provision of those direct economic effects.

Induced Effects—the value of goods and services needed by households that provide the direct and indirect labor.

Source: Rutgers University Center for Urban Policy Research, 1997.

Exhibit 7.5
In-State Economic Impacts of Annual Spending by New Jersey Historic Sites / Organizations ($25 Million)

INDUSTRY	Industry Component: Employment (jobs)	Income ($000)	Gross State Product ($000)
Agriculture	**0**	**1**	**4**
Dairy Prod., Poultry, & Eggs	0	0	0
Meat Animals & Misc. Livestock	0	0	0
Cotton	0	0	0
Grains & Misc. Crops	0	0	1
Tobacco	0	0	0
Fruits, Nuts, & Vegetables	0	0	0
Forest Prod.	0	0	0
Greenhouse & Nursery Prod.	0	1	2
Agri. Serv., Forestry, & Fish	**1**	**14**	**27**
Agri. Services (07)	1	12	16
Forestry (08)	0	0	1
Fishing, Hunting, & Trapping (09)	0	2	10
Mining	**0**	**2**	**3**
Metal Mining (10)	0	0	0
Coal Mining (12)	0	0	0
Oil & Gas Extraction (13)	0	0	0
Nonmetal Min.-Ex. Fuels (14)	0	2	3
Construction	**11**	**457**	**514**
General Bldg. Contractors (15)	3	102	126
Heavy Const. Contractors 16)	1	55	58
Special Trade Contractors (17)	8	301	330
Manufacturing	**32**	**983**	**1,660**
Food & Kindred Prod. (20)	2	63	170
Tobacco Manufactures (21)	0	0	0
Textile Mill Prod. (22)	0	8	11
Apparel & Other Prod. (23)	1	18	31
Lumber & Wood Prod. (24)	0	5	8
Furniture & Fixtures (25)	0	5	7
Paper & Allied Prod. (26)	1	36	69
Printing & Publishing (27)	20	591	829
Chemicals & Allied Prod. (28)	1	55	113
Petroleum & Coal Prod. (29)	1	29	123
Rubber & Misc. Plastics (30)	0	13	21
Leather & Leather Prod. (31)	0	1	2
Stone, Clay, & Glass (32)	1	20	34
Primary Metal Prod. (33)	0	10	16
Fabricated Metal Prod. (34)	1	45	70
Machinery, Except Elec. (35)	0	16	25
Electric & Elec. Equip. (36)	1	18	28
Transportation Equipment (37)	0	22	44
Instruments & Rel. Prod. (38)	0	15	35
Misc. Manufacturing Ind's. (39)	0	13	22

Exhibit 7.5 (continued)
In-State Economic Impacts of Annual Spending by New Jersey Historic Sites / Organizations ($25 Million)

INDUSTRY	Industry Component: Employment (jobs)	Income ($000)	Gross State Product ($000)
Transport. & Public Utilities	**11**	**350**	**943**
Railroad Transportation (40)	0	3	5
Local Pass. Transit (41)	2	38	52
Trucking & Warehousing (42)	2	46	84
Water Transportation (44)	0	8	11
Transportation by Air (45)	1	44	92
Pipe Lines-Ex. Nat. Gas (46)	0	0	0
Transportation Services (47)	1	24	37
Communication (48)	3	155	529
Elec., Gas, & Sanitary Serv. (49)	2	33	132
Wholesale	**4**	**310**	**641**
Whlsale-Durable Goods (50)	1	68	186
Whlsale-Nondurable Goods (51)	2	242	455
Retail Trade	**42**	**840**	**1,257**
Bldg. Mat.-Garden Supply (52)	2	41	65
General Merch. Stores (53)	5	83	154
Food Stores (54)	4	78	119
Auto. Dealers-Serv. Stat. (55)	3	108	159
Apparel & Access. Stores (56)	2	40	84
Furniture & Home Furnish. (57)	1	22	40
Eating & Drinking Places (58)	18	322	424
Miscellaneous Retail (59)	7	148	212
Finance, Ins., & Real Estate	**16**	**675**	**2,134**
Banking (60)	3	130	263
Nondep. Credit Institut. (61)	2	84	91
Security, Comm. Brokers (62)	1	47	51
Insurance Carriers (63)	3	167	178
Ins. Agents, Brokers (64)	1	23	41
Real Estate (65)	6	157	1,436
Holding and Invest. Off. (67)	1	68	74
Services	**608**	**9,801**	**12,490**
Hotels & Other Lodging (70)	13	257	378
Personal Services (72)	6	115	165
Business Services (73)	18	169	244
Auto Repair, Serv., Garages (75)	3	102	246
Misc. Repair Services (76)	2	37	78
Motion Pictures (78)	1	17	27
Amusement & Recreation (79)	2	69	81
Health Services (80)	3	124	147
Legal Services (81)	2	102	135
Educational Services (82)	2	47	53
Social Services (83)	0	13	22
Museums, Botan.-Zoo. Gardens (84)	44	683	848
Membership Organizations (86)	248	3,899	4,835
Engineer. & Manage. Serv. (87)	263	4,160	5,221
Miscellaneous Services (89)	0	7	10
Government	**15**	**339**	**364**
Total	**739**	**13,772**	**20,034**

Note: Detail may not sum to totals due to rounding.

Exhibit 7.6
In-state Employment Impacts by Occupation of Annual Spending by New Jersey Historic Sites / Organizations ($25 Million)

OCCUPATION TITLE	Employment (jobs)
Total, All Occupations	**739**
Exec., Admin., and Management Occupations	**136**
Managerial and Administrative Occupations	106
Management Support Occupations	29
Professional Specialty Occupations	**64**
Engineers	2
Architects and Surveyors	1
Life Scientists	1
Computer, Math, and Operations Res. Analysts	2
Physical Scientists	0
Social Scientists	1
Social, Recreational, and Relig. Workers	5
Lawyers and Judicial Workers	4
Teachers, Librarians, and Counselors	8
Health Diagnosing Occupations	2
Health Assessment & Treating Occupations	7
Writers, Artists, and Entertainers	21
All Other Professional Workers	9
Technicians and Related Support Occupations	**17**
Health Technicians and Technologists	5
Engineering & Science Technicians & Technologists	4
Technicians, Except Health and Engin. & Science	8
Marketing and Sales Occupations	**75**
Cashiers	8
Counter and Rental Clerks	1
Insurance Sales Workers	1
Real Estate Agents, Brokers, & Appraisers	1
Salespersons, Retail	7
Securities and Financial Service Sales Workers	0
Stock Clerks, Sales Floor	2
Travel Agents	15
All Other Sales and Related Workers	41
Administrative Support Occupations, incl. Clerical	**282**
Adjusters, Investigators, & Collectors	2
Communications Equipment Operators	5
Computer & Peripheral Equipment Operators	2
Financial Records Processing Occupations	27
Information Clerks	44
Mail Clerks and Messengers	5
Postal Clerks and Mail Carriers	7
Mat'l Record., Sched., Dispatch, & Distrib. Occs.	11
Records Processing Occupations, except Financial	5
Secretaries, Stenographers, and Typists	79
Other Clerical and Administrative Support Workers	97

Exhibit 7.6 (continued)
In-state Employment Impacts by Occupation of Annual Spending by New Jersey Historic Sites / Organizations ($25 Million)

OCCUPATION TITLE	Employment (jobs)
Service Occupations	**70**
Cleaning & Building Service Occs., except Private	17
Food Preparation and Service Occupations	32
Health Service Occupations	2
Personal Service Occupations	6
Protective Service Occupations	5
All Other Service Workers	9
Agric., Forestry, Fishing, & Related Occupations	**32**
Animal Caretakers, except Farm	24
Farm Occupations	1
Farm Operators and Managers	0
Fishers, Hunters, and Trappers	0
Forestry and Logging Occupations	0
Gardeners & Groundskeepers, except farm	5
Supervisors, Farming, Forestry, & Agricul. Occs.	0
All Other Agric., Forestry, Fishing, & Rel. Workers	2
Precision Production, Craft, & Repair Occupations	**29**
Blue-collar Worker Supervisors	5
Construction Trades	5
Extractive and Related Workers, Incl. Blasters	0
Mechanics, Installers, and Repairers	14
Production Occupations, Precision	5
Plant and System Occupations	0
Operators, Fabricators, and Laborers	**36**
Mach. Setters, Set-up Ops, Operators, & Tenders	11
Hand Workers, incl. Assemblers & Fabricators	2
Transp. & Material Moving Machine & Vehicle Ops.	12
Helpers, Laborers, & Material Movers, Hand	10

Note: Detail may not sum to totals due to rounding.

CHAPTER EIGHT

Historic Property Values and Property Tax Payments

INTRODUCTION AND SUMMARY

The study thus far has considered the economic impacts of historic preservation. These impacts include the economic effects of rehabilitation effected on historic properties and the benefits from heritage tourism and the operation of historic sites and organizations.

Yet another economic consideration is the impact of historic designation[1] on property value. As we shall see shortly, there are numerous ways in which designation can enhance property value. This effect is often cited by historic preservationists and is also recognized by planners, economic development experts, and the like. But there are also those who claim that designation can detract from property value. This effect underlies the legal issue of whether designation is a "taking of property." The courts have overwhelmingly decided that designation is not a "taking" but rather is a police power regulation that justifiably furthers the public's health, safety, and welfare while recognizing the rights of private property owners. Yet designation's property value impact continues to be discussed (as does the more general issue of public land-use regulations) in both legal and nonlegal forums.

These issues have equity considerations. How should the burden of a public good—in this instance, preservation—be borne and shared between the affected private property owner and the public at large? There are also linked economic considerations: if we attempt to account for preservation's economic impacts, shouldn't its imprimatur, in the form of designation, be factored with respect to effects on property value? Holding aside the question of whether designation adds to or detracts from property value, landmark properties, with the exception of those that are tax exempt, are paying property taxes. Should not the order of magnitude of those taxes be identified in accounting for designation's economic effects?

These are far-ranging investigations in their own right and it is important to set out what can be done in the current study. A definitive empirical resolution of the major issue at hand—designation's effect on property values—goes far beyond the scope of the current investigation. But to inform us on this issue this chapter does the following:

1. It examines theoretically the possible effects of historic designation on property value and finds that there are both value-enhancing and value-detracting influences.
2. It reviews the literature on this subject and finds that most studies point to a positive or sometimes neutral effect from designation, whereas only a handful of investigations show that designation has a materially negative impact on property value. There are, however, serious gaps in the extant literature that suggest this body of studies is far from definitive.
3. While bearing in mind the deficiencies in what is known, we can, in an exploratory fashion, by bringing together the findings of literature and New Jersey base data, identify the order-of-magnitude consequences

[1] The reader should remember that although historic preservation often involves the designation of properties on an official register, preservation and designation are not synonymous.

concerning landmark properties, historic designation, and property taxes in New Jersey. These are:

- Historic properties in New Jersey—that is, properties on national, state, or local registers—have a market value of $6 billion—of which perhaps $300 million is attributable to designation's value-enhancing effect.
- These historic properties pay about $120 million yearly in total local property taxes, of which about $6 million is attributable to designation's value-appreciating effect.
- Over and above the "stock" amounts there is a "flow" effect from the annual $123 million in rehabilitation (detailed in Chapter Two). Thus, rehabilitation, by increasing property values, adds to the annual property taxes paid on New Jersey's historic properties by about $1.5 million annually.

The reader is cautioned that the above figures are exploratory. This discussion, however, points to yet another dimension of historic preservation's economic contribution: its support of property value and the payment of property taxes.

THEORETICAL DISCUSSION OF HISTORIC DESIGNATION'S POSSIBLE EFFECTS ON PROPERTY VALUE

The discussion below considers the myriad ways in which historic designation—that is, placing a property on a national, state, or local register—affects its market attractiveness or value. This, in turn, often involves complicated economic considerations such as "current use" and "highest and best use." Current use is the existing utilization of a property; highest and best use is the most profitable use incorporating those uses that are legally permissible, physically possible, and financially or economically feasible (Kinnard 1971, 39).

To illustrate, assume there are two townhouses in a community's central business district (CBD) where the underlying zoning is for high-rise buildings. One townhouse is designated an historic landmark, which prohibits its demolition, whereas the other is not so designated. In both instances, the current use is a townhouse. The highest and best use of the nondesignated townhouse is likely to demolish the structure and redevelop the site for a high-rise. The highest and best use of the designated townhouse is its legally permissible use—that is, an historic townhouse.

Assume that the historic designated townhouse is appraised at its current use (which is also its highest and best use given the landmark designation) at $200,000, whereas the nondesignated townhouse, given its highest and best use as a redevelopment site, is appraised at $300,000. In this case, landmark status can be said to detract from value by $100,000.

Assume an altered set of circumstances with zoning and other conditions as above but where designation does not prohibit demolition (it may only delay it, or just cause the historic commission to comment on the request to demolish,

with the owner not bound by the commissioner's recommendation). In this instance, designation may have little discernible impact.

But let us assume yet a different set of circumstances—the same two townhouses, one designated (with stringent landmark controls) and one not, but both located in a residential zone where townhouses are the "maximum" permitted use (e.g., from a land use, density, and floor-area ratio [FAR] perspective). In other words, a townhouse is both the current as well as the highest and best use. In this instance, it could very well be the case that the historic townhouse, with its prestige of official landmark designation and assurance that its desirable historic amenities will be fostered into the future by public regulation, is worth $200,000, whereas the nondesignated townhouse is worth $175,000. Here, historic designation adds $25,000 to market value.

These are examples of the many possible effects of designation. The point to be emphasized is that there can be varied relationships between official historic designation and property value. When a building is landmarked, the property's value could be enhanced by the recognition of its historical importance, by the prestige accorded by governmental recognition, or by the rejuvenation encouraged in the surrounding neighborhood if the landmark encompasses a larger area. The impact of these influences, in turn, may be affected by designation type and property type.

Designation Type. Although it is difficult to generalize, prestige, protection, and other supports are likely most strongly enhanced by district, as opposed to individual, property designation. Since district designation acts on an area-wide basis, it may achieve the spatial critical mass necessary to encourage rehabilitation by the property owner, financial institution investment, community organization activity, and other spin-offs, which ultimately may translate into enhanced property values. These reactions may or may not be as strong when an individual building is accorded historic status. In that case, although the individual building is "honored" by designation, property owners are not protected against adverse surrounding redevelopment or alteration activity, for example. Consequently, neighborhood rather than individual property designation may be more influential in bolstering historic building sales prices.

Property Type. Property type (residential, commercial, or industrial) may also bear on whether landmark prestige, protection, and other forces translate into higher property values. Again, although it is difficult to generalize, landmark effects are more likely to have important considerations for residential buildings where owner/tenants are often willing to pay a premium for special landmark recognition, assurance that desirable neighborhood features will be retained, and so on. Certain types of commercial properties may similarly benefit from designation's prestige and related supports. In the case of commercial buildings that house—or potentially contain—specialized retail, restaurant, or office uses, for example, owners/tenants may be willing to pay a premium for a landmarked property because of ambiance and perceived image. In contrast, owners/tenants of second-order commercial properties and many industrial structures where utility rather than image or continuity is important (e.g., discount stores,

warehouses, or light assembly plants) are often not willing to pay extra for a landmark imprimatur.

Landmark designation, however, may also involve restrictions on alterations and demolition (or at least administrative review, and/or some delay, of such actions), and may demand maintenance of exterior ornamentation and other historic facade treatments over and above those required in the jurisdiction's general maintenance code. These landmark restrictions and demands can possibly exert a downward pressure on prices. The presence and strength of such influences, in turn, may be affected by numerous variables including a given building facade's physical characteristics, property alteration potential, landmark regulatory procedure, and current/highest and best economic use.

Facade Physical Characteristics. Facade maintenance costs are a factor (although typically a minor one) only with respect to those landmarks having exteriors so difficult to maintain that, in the absence of designation, they would likely be replaced. Examples include buildings with stucco, gilded finishes, or elaborate exterior ornamentation such as cornices or parapets.

Property Alteration Potential and the Landmark Regulatory Process. Regulatory expenses are more likely to be incurred where facade or other changes are subject to regulatory review. One example would be a fashionable retail establishment where significant and regular alterations for storefront and related purposes can be expected. The nature of the landmark regulatory process itself is another consideration. Regulatory costs will be higher if all landmark alterations are subject to examination and if the review procedure itself is protracted.

In certain instances, as noted, landmark designation is essentially honorific; thus, not all designated areas have design controls. In other instances, designation leads to strict local oversight concerning alterations and demolition. Required design review, however, does not necessarily equate with lowered property value; often, just the opposite occurs. Nevertheless, design review imposes an added regulatory expense that, at least in theory, might be negatively capitalized.

Property Current/Highest and Best Economic Use. As noted, the relationship between these uses influences the practical significance of landmark alteration/demolition restrictions. If there is little difference between the current and the highest and best use, designation's development constraints have little significance (e.g., the example given above of the two townhouses in the residential zone). In contrast, if there is considerable divergence between current and highest use, then designation's legal restrictions on alteration and demolition can exert a property value discount influence in those markets where a maximum productive use is possible. Such a situation is exemplified when a nominal underimprovement is mandated by the property's historic status (e.g., the example cited earlier of an historic townhouse in the city's CBD with overall high-rise zoning).

"Highest and best use" itself is subject to numerous influences. What can be built given zoning and other public land-use controls? What should a prudent

investor develop, given market demand for certain types of uses and the costs of construction/rehabilitation versus the expected return from such activity?

A property's highest and best use and its relationship to the landmark's current use is one of the more, if not the most, important variables determining the extent to which designation affects a landmark's property value. The importance of this relationship, as well as how it may change over time, is illustrated by the following New York City example.

When New York's famous Plaza Hotel was designated in 1975, the hospitality industry was depressed. At that time, the owners of The Plaza were considering demolishing the hotel and replacing it with a "highest and best use"—an office tower similar in size to the General Motors building that had recently been constructed across the street. Designation of The Plaza prohibited its redevelopment—an impact that in 1975 the owners of The Plaza believed worked to their disadvantage. Market conditions have changed over time, and with them so has the impact of The Plaza's landmark status. First-class Manhattan hotels are today considered prime investments. A portion of The Plaza is in fact being converted by Donald Trump into very expensive residential apartments—a conversion abetted by The Plaza's landmark status. The Plaza, thus, is close to or at its highest and best use; the current market no longer supports replacement of this hotel with an office tower.

In sum, landmark designation can exert various effects. By according prestige, protection, and other supports, designation has the potential of appreciating value. By imposing facade maintenance expenses, regulatory costs, and especially alteration/demolition restraints (where these are stringent), historic status may lower property value. The degree to which these varying effects are exerted in any given situation, in turn, is influenced by numerous factors ranging from the type of designation to the relationship between a landmark's current and highest and best use.

The observed influence of designation on value, as examined by the extant literature, is summarized below.

OVERVIEW OF THE LITERATURE ON LANDMARK DESIGNATION AND PROPERTY VALUE

The literature on the subject of historic designation's influence on property value generally points to a positive, or sometimes neutral, effect from designation. Only a handful of studies that specifically consider the costs of alteration and demolition come to a negative impact conclusion. The literature reviewed by this study consists of analyses dating from the 1970s; these are presented below in chronological order. More detailed annotations are found in the bibliography.

Costonis (1974) attempted to develop a formula that determines the financial cost of alteration and demolition restraints that are imposed as a result of designation. For illustration, he calculated that four landmarked Chicago office towers incurred a loss of value from $400,000 to more than $3,500,000 per building.

Heudorfer (1975) looked at four designated districts in New York City (Central Park West–76th Street, Chelsea, Mount Morris Park and Riverside Drive–West 105th Street) and contrasted them with four comparable adjacent areas. She concluded that landmark status had a small to negligible influence on property values. Properties in the historic districts sold for a premium both before and after designation. In some cases, the premium increased after designation.

In a study of the overall economic benefits of designation during the prior 20 years, Scribner (1976) found that in Alexandria, Virginia, unrestored buildings in the Old Town were worth approximately two and a half times more than those outside of the historic district. A similar pattern was found in the Capital Hill area of Washington D.C., where buildings in the Capitol Hill historic district increased about 40 percent in value, whereas those off the Hill decreased by 25 percent.

Rackham (1977) echoed these findings in a study of Georgetown in Washington, D.C. He found that historic Georgetown had the highest rate of growth of house prices in the city and that, for almost all classes of residential properties, location within the historic district commanded a premium. Comparable trends were observed in other cities.

The New York Landmarks Conservancy (1977) studied three historic districts in New York City (Mount Morris Park, Park Slope, and West 76th Street), comparing the prices of the designated areas with adjacent non-designated neighborhoods. The Conservancy found that designation did not exert a quantifiable independent effect. Moreover, in Park Slope, the greatest price increase came before designation; after designation, price growth was about the same as in the controls case.

The U.S. Advisory Panel on Historic Preservation (1979) examined four historic neighborhoods across the nation: Alexandria (Virginia), Galveston (Texas), Savannah (Georgia), and Seattle (Washington). Comparisons of property selling prices inside and outside these areas over three decades (1950s to 1970s) led the council to conclude that there was a direct link between location in a historic district and higher values.

Cohen (1980) looked at decennial census tract data from 1950, 1960, and 1970 for six Chicago historic districts and compared the median value of owner-occupied housing (self-reported) in these neighborhoods with the city as a whole. He found that with one exception, there was a greater rise in values in the historic districts from 1950 to 1970. Median rents also increased faster, with the same exception, over the same period.

The St. Louis Development Agency (1980) considered the implications of landmark alteration and demolition restrictions for St. Louis's central business district. The results were mixed. Some buildings may not have been affected, but others that were suitable for intense development were put at a "disadvantage," i.e., landmark designation reduced their value.

Samuels (1981) examined changes in residential sales prices from 1972 to 1978 in five residential historic districts in Washington, D.C. They were compared with five nondesignated but comparable neighborhoods that had

experienced gentrification, had structures built in the last century, and were located in older sections of the city. She found that none of the five historic districts had a significant difference in the growth rate of property values compared to the non-historic areas. Rather, she argued that the growth rates were related to the "stage" of revitalization in each neighborhood. Where revitalization was more advanced, rates of appreciation in landmark areas were also higher. Since two of the areas were designated in 1978 and one in 1976, there may not have been enough time for any impact to manifest itself, since the study was undertaken in 1981.

The Virginia Historic Landmarks Commission (1986), in a multi-city study, showed large average annual increases in property values for historic districts. No data from comparable nondesignated neighborhoods were reported, however.

Schaeffer and Ahern (1988), in a study of Chicago, found a significant increase in prices and turnover in the residential neighborhoods listed on the National Register of Historic Places, but no corresponding increase in two neighborhoods listed on the local register. The authors speculate that the difference lay in the more stringent controls imposed in the two local districts and in the prestige of location in a nationally recognized neighborhood.

In an analysis of the effects of historic district designation on property value, Benson and Klein (1988) examined property transfers by price range between 1980 and 1984 in two historic neighborhoods in Cleveland (Ohio City and Shaker Square) and in non-designated adjacent areas. They found that there was a relatively low level of real estate activity (i.e., property transfers) in the historic neighborhoods, and those that occurred were in the lower price range. They further observed that numerous property owners bought parcels adjacent to the historic districts to "take advantage of the benefits and to avoid the drawbacks of being in the historic areas." Based on this outcome, the authors concluded that historic districts are "not necessarily a panacea for urban decline."

Deborah Ford (1989), in an article in the *Journal of the American Real Estate and Urban Economics Association*, examined the value of owner-occupied housing in historic versus non-historic neighborhoods in Baltimore. Data were obtained for these areas from the Baltimore Realtors Multiple Listing Service for 1980 and 1985. Information from the 1980 census for the respective neighborhoods was obtained as well. Ford concluded that if neighborhood and house characteristics are held constant, the effect on prices of a historic district designation is positive. Prices of housing in designated neighborhoods were higher than in similar non-historic areas, and Ford attributed this effect to homebuyers willing to pay a premium "for the assurance that the neighborhood surrounding their houses will remain unchanged over time."

Gale (1991) examined three historic districts in Washington, D.C., and compared them to three similar nondesignated districts using property tax assessment data. For the historic districts, post-designation growth rates did not diverge from those in the non-historic controls over the same period. However, the *decline* in the growth rate before and after designation was less than the city average for two of the historic districts, whereas all three of the control non-

historic districts had greater declines than the city average. Gale concluded that designation may insulate property values from cyclical peaks and troughs, but there is no evidence that there was an *increase* in values from designation per se.

A legislatively mandated study in Virginia (State of Virginia 1991) that examined assessed values inside and outside national and state designated historic districts found that assessed values were not reduced as a result of designation.

In a study for the National Trust for Historic Preservation, Leithe and others (1991) considered methodologies for examining the "economic benefits of preserving community character." One dimension considered was "real estate activity," for which the authors recommended that property value trends be examined in historic and in control "comparison areas." The authors conducted case studies according to the recommended comparative methodologies and found that in Galveston, Texas, prices in two historic neighborhoods increased by two to five times the appreciation in the city as a whole. In Fredericksburg, Virginia, the appreciation in residential properties in historic districts was 75 percent greater than the citywide increase in residential prices, and there was an even greater differential with respect to historic versus non-historic commercial properties.

A report by the Oregon State Historic Preservation Office (1992) found that in Multnomah County, single-family homes that were located in designated historic districts experienced price appreciation almost double the county average between 1985 and 1991.

Kilpatrick (1995) showed that properties in Columbia, South Carolina, that were in designated historic neighborhoods generally experienced a 25 percent higher appreciation rate than properties in other residential areas in the city. The study used home sales data. In brief, the Kilpatrick analysis examined sales transactions over a 12-year period from early 1983 to mid-1995. Sales data were collected on every home within Columbia's historic districts that sold at least twice during the study period. Kilpatrick used these sales prices and the period between transactions to develop an index of home appreciation within historic districts. In parallel, an appreciation index was developed for the market as a whole. The crux of Kilpatrick's finding was that the historic area price appreciation exceeded that of overall trends by a factor of almost 25 percent.

The Preservation Alliance of Virginia (1996) cited numerous instances in the state in which property value appreciation (as measured by assessment data) in historic areas exceeded that in non-historic neighborhoods. The research for this study was done by Donovan Rypkema. Rypkema found that in Staunton, Virginia, between 1987 and 1995, residential property assessments citywide grew by 51 percent, and nonresidential property values appreciated 25 percent. By contrast, assessments on historic residential properties appreciated 52 to 66 percent and historic commercial properties gained from 28 to 256 percent. (The values varied by historic area.)

Some of the analyses noted above were cited in an excellent "compilation" of the economic effects of historic preservation developed by Rypkema (1994) in a study for the National Trust for Historic Preservation. Rypkema cited the studies, described above, by Leithe, Ford, and the State of

Virginia. He also noted numerous other analyses done both abroad (e.g., Canada) and in municipalities and states in the United States showing that historic designation did not depreciate the value but, in fact, enhanced the value of the designated properties.

Critique of the Literature on Landmark Designation and Property Value

The difference-in-difference methodology used in most of the above studies relies solely on comparing sample averages of the growth rate in property values in historic areas versus non-historic areas. Typically, no other variables (e.g., property characteristics) are controlled for, and to the extent that there may be variables independent of designation that explain the changes in property values, the results will be biased and inconsistent. (Exceptions are the few studies such as Ford [1989] and Gale [1991], which included statistical controls.) A multi-variable statistical approach would be much preferred, but given data limitations the difference-in-difference approach noted above may be the best available. It must be recognized, however, that the results are not entirely convincing because of this omission.

Information on the variances in property value growth within neighborhoods is rarely reported; thus, the statistical significance of any difference between designated and nondesignated areas cannot be determined. Again, this serious flaw is due to a lack of adequate data.

The choice of comparison districts is also a problem in some cases. By the very distinction of being historic, many districts have no comparable control. The Gale (1991) study is the most forceful in pointing this out, and he tries to convince the reader that his three control districts are indeed comparable. Hence, the study isolates the effect of designation per se on property market outcomes. However, there must have been a reason why the control neighborhoods were not designated, and if this is in any way related to property values, then the results are spurious.

There is also the issue of timing. For a study to be meaningful, growth rates have to be compared during the same calendar time, otherwise city or economy-wide effects must be controlled for. However, taking the designation date of the historic district and comparing growth rates around the same date for non-historic districts may confuse the fact that the subject and the control are at different stages with respect to rehabilitation. The issue of timing is key, as Samuels (1981) points out. If designation takes place before the area has experienced significant rehabilitation and restoration, results will be very different than they would be if designation occurred when renovation was complete.

In fact, those studies that do show a relationship between designation and property values can reveal only a correlation; the direction of causation is merely assumed. Designation could be endogenous. It is important to determine why a particular building or district becomes designated. If designation is the result of preservation efforts by existing owners, then designation itself may have little impact on the path of property values, which would have increased even in the absence of designation. Indeed, some studies show that prices increased more

prior to designation than after (New York Landmarks Conservancy's [1977] study of Park Slope).

The use of appropriate price data depends on the focus of the researcher. If the main concern is for tax payments, then clearly the assessed value is appropriate. But for an investor, the sales price is perhaps more appropriate. To determine economic value, where possible, sale prices should be used, since these reflect real transactions rather than the subjective opinion of an appraiser or assessor. Self-reported values such as those found in Census data can be seriously biased since owners may perceive value differently from the market. However, if one can argue that the bias is consistently in the same direction and of the same magnitude (e.g., owners always overestimate value by 10 percent), then the measurement error becomes unimportant. If, on the other hand, there is asymmetry because owners in historic districts have a different bias than other owners, then the measurement error problem is much more severe.

The simulation approach has its own set of problems, among them the definition of what is and is not permitted by historic status. Any decline in value will obviously be determined by the stringency of the restrictions, and often these cannot be gauged in advance since the specifics are determined on a case-by-case basis.

As a final note, the empirical studies are much less "contextually rich" than the theoretical discussion of designation's possible property value effects that commenced this chapter. That discussion noted that many contextual factors, ranging from the nature of the designation to the facade ornamentation of an individual property, affected the interrelationship between property value and designation. The empirical studies omit much of this contextual detail.

The state of the art of the literature would be improved by more expansive empirical research. This research should focus on utilizing better data sources so that more independent variables can be considered in the analysis. The basic difference-in-difference framework is a sound starting point, though individual property-level data would do much to counter some of the criticisms presented above. If individual sales data are available, then at the very least, standard errors can be computed and simple confidence tests performed.

A superior analysis would call for individual property and neighborhood characteristics to be entered into a multiple regression framework. As discussed previously, features of certain properties (e.g., elaborate facade work) make them prone to either increases or decreases in value. It is desirable to be able to isolate the effects of these variables. A multi-variable analysis can specify the significance of size, ornamentation, location, usage, and so on. Only then can conflicting influences be teased out. Knowing the size of a negative impact that is totally offset by a positive impact is far more informative than just knowing, for instance, that designation has a neutral effect.

Once such a model is set up, it will be easier to predict the possible impact of future designations on particular neighborhoods by running simulations based on the characteristics of those neighborhoods. Of course, such an analysis would require a significant data-collection effort—gathering both property characteristic and price data over time.

tax exempt). The historic stock thus has an estimated market property value of about $6 billion ($550 billion x .01).

3. Assuming that designation has a modest value-enhancing effect in New Jersey of 5 percent, designation is increasing the value of the state's landmark stock by an order of magnitude $300 million ($6 billion x .05).
4. Holding aside the effect of designation, the extant total property taxes paid by the New Jersey historic stock should be identified separately. In New Jersey, total municipal, school, and county taxes collected amount to about $10 billion annually. Raised from a total full value (or equalized) property tax base of $550 billion, the average equalized property tax rate is $2.00 per $100 of market value. (Of this $2.00 equalized rate, roughly $1.04 [52 percent]) is for school purposes, $0.50 [25] percent) is the municipal rate, and $0.46 [23 percent] is the county rate).
5. The total New Jersey historic stock, valued at $6 billion, therefore pays a total of about $120 million yearly ($6 billion x .0200) in total local property taxes. That consists of $62 million in school taxes, $30 million in municipal taxes, and $28 million in county taxes.
6. Assuming the 5 percent value-enhancing effect from designation, this effect results in $6 million ($300 million x .05) "added property taxes" per year.
7. Rehabilitation is effected on historic properties on a regular basis over time. Besides being important to its preservation, the rehabilitation increases property value and ultimately leads to gains in property tax payments. The amount of such rehabilitation can be estimated by the procedures detailed in Chapter Two. On an annual basis, the historic rehabilitation amounts to $123 million—$40 million in residential properties and $83 million in nonresidential properties.
8. Because of various tax abatement programs and other factors (e.g., the rehabilitation effected on civic-institutional properties—many of which are tax exempt), only a share of the rehabilitation investment noted above can reasonably be assumed to increase valuations and hence property taxes. That share is conservatively estimated at 60 percent. In other words, the $123 million in rehabilitation "translates" into $74 million in added value that is taxable. Thus the historic stock, which has a total estimated taxable value of $6 billion, increases in taxable value annually (because of the enhancements brought about by the rehabilitation) by $74 million.
9. At a $2.00 equalized tax rate, the $74 million annual gain in taxable value leads to increased annual property taxes of $1.480 million, which is over and above the yearly property tax payments already obligated (before the rehabilitation) of $120 million.

CHAPTER NINE

Putting the Economic Impacts of Historic Preservation in Perspective

INTRODUCTION AND SUMMARY OF THE ECONOMIC IMPACTS OF HISTORIC PRESERVATION

This chapter synthesizes and lends perspective to the study's findings and illustrates how the data and analytic approaches assembled in the current analysis can be put to good use by preservationists.

To recap, the study considers in detail the economic impacts of historic rehabilitation, heritage tourism, and the operations of historic sites and organizations in New Jersey. Direct spending in these three areas annually amount to $123 million, $432 million, and $25 million respectively, for a total of $580 million. In all three cases, base data were assembled and input-output analyses applied to project total effects (direct and indirect/induced) of these activities. The issue of historic property values and property tax payments was considered as well, but in a much more exploratory fashion.

The results are summarized in Exhibit 9.1. On an annual basis, historic preservation activities in New Jersey result in 21,575 jobs (i.e., person years of employment), $572 million in income, $929 million in total wealth as realized in gross domestic product (GDP), and $415 million in total tax payments ($160 million federal, $94 million state, and $161 million local). These are the effects realized by the entire nation. The renovation of the New Jersey State House, for instance, would likely include steel purchased from Michigan, lumber from Oregon, and paint from New Jersey.

New Jersey garners nearly half of the jobs, income, and wealth benefits, and 70 percent of the taxes. On an annual basis, the in-state effects include 10,140 jobs, $263 million in income, $543 million in gross state product (GSP), and $298 million in taxes ($83 million federal, $71 million state, and $144 million local). The net in-state wealth is $460 million annually ($543 million GSP minus $83 million in federal taxes).

As noted in numerous instances in this study, the above estimates of historic preservation benefits are, if anything, *conservative*. Historic rehabilitation is understated because construction work on properties eligible for, but not yet on, federal, state, or local landmark registers is not included. Another consideration is that with financial incentives for rehabilitation on register-listed properties, which today are largely *unavailable*, the amount of rehabilitation effected on the register-listed properties would likely be significantly greater than the $123 million estimated in this study. Further, our estimate of heritage travel is also understated both in terms of the number of heritage travelers counted and the share of their spending (for heritage overnighters) that is attributed to heritage purposes. Thus, the total economic benefits attributed to New Jersey historic preservation—the 22,000 jobs (10,200 jobs in-state), $572 million income ($263 million in-state), and other substantial wealth and tax effects—are "lower" rather than "higher" estimates of magnitude.

COMPARING THE BENEFITS

How "large" are the above benefit figures? The standard economic response to almost any query is "it depends." Here, the yardstick of comparison is particularly important. Compared to the total economic scale at the national or state levels, historic preservation does not loom large. As of the mid-1990s, New Jersey has 3.7 million people employed, and its nearly 8 million residents annually earn about $150 billion. The in-state economic benefits of historic preservation—10,200 jobs and $263 million in income—is clearly a minute fraction of the statewide employment and earnings totals.

Exhibit 9.1
Summary of the Annual Economic Impacts of Historic Preservation in New Jersey

	I. *Historic Rehabilitation* $123 million historic rehabilitation annually results in:	II. *Heritage Tourism* 9.1 million annual adult heritage travelers, spending $432 million annually, results in:	III. *Spending by NJ Historic Sites and Organizations* $25 million in annual spending results in:	IV. *Historic Stock Valuation* Landmark properties, valued at $6 billion, annually pay property taxes of:	V. *Total Examined Economic Impacts* (*Sum I-IV*)
NEW JERSEY DIRECT EFFECTS ↓	*National Total (Direct and Multiplier) Impacts*				
NATIONAL TOTAL IMPACTS (DIRECT and MULTIPLIER) ↓					
Jobs	4,607	15,530	1,438		21,575
Income	$156 million	$383 million	$33 million		$572 million
GDP*	$207 million	$559 million	$43 million	$120 million	$929 million
Taxes: *Federal*	*$41 million*	*$110 million*	*$9 million*		*$160 million*
State	*$13 million*	*$78 million*	*$3 million*		*$94 million*
Local	*$11 million*	*$28 million*	*$2 million*	*$120 million*	*$161 million*
Tax Subtotal	$65 million	$216 million	$14 million	$120 million	$415 million
NJ PORTION of NATIONAL TOTAL IMPACTS ↓	*In-State NJ Total (Direct and Multiplier) Impacts*				
Jobs	2,316	7,085	739		10,140
Income	$81 million	$168 million	$14 million		$263 million
GSP*	$116 million	$287 million	$20 million	$120 million	$543 million
Taxes: *Federal*	*$23 million*	*$56 million*	*$4 million*		*$83 million*
State	*$8 million*	*$62 million*	*$1 million*		*$71 million*
Local	*$7 million*	*$16 million*	*$1 million*	*$120 million*	*$144 million*
Tax Subtotal	$38 million	$134 million	$6 million	$120 million	$298 million
In-State Wealth**	$93 million	$231 million	$16 million	$120 million	$460 million

*GDP=Gross Domestic Product; GSP = Gross State Product

** GSP less Federal tax payments

Source: Rutgers University, Center for Urban Policy Research, 1997

In part, the fraction is so small because economic activity in a given state is far from fully contained within that state. Recall the New Jersey State House restoration using materials from around the country. But even at the national level, historic preservation may appear of minor import when it is compared to the total economic scale of the country.

To give some order of magnitude, in the United States there is annually almost $50 billion of rehabilitation (Chapter Two) and $290 billion of travel expenditures (Chapter Four). If the New Jersey incidences of historic activity were applied (a big "if"), then nationally, on an annual basis, about $3 billion in historic rehabilitation is taking place and about $12 billion in heritage travel outlays is made. That would translate at the national level to about 600,000 jobs and $15 billion in income generated from the combination of historic rehabilitation and heritage travel. Although these national figures are consequential, when compared to national totals of about 130 million people employed and total $4.1 trillion in income (as of the mid-1990s), historic preservation does not comprise a large segment of economic activity.

Although comparing historic preservation to total economic activity at both the state and national levels is somewhat instructive, it is also misleading: nearly any individual economic activity will not appear large against the sum of all activities. For instance, of the total 125 million individuals employed in the United States as of the mid-1990s, "only" 650,000 are lawyers—or one-half of one percent of the nation's total employment; yet lawyers, and for that matter any other singled-out professional group, are not viewed as small in number.

Rather than measuring historic preservation's economic benefits by the yardstick of *all* economic activity, it is more meaningful to examine it against a more appropriate scale—of which there are many. One, for instance, is a "linked" economic activity. Thus, while preservation is not a major New Jersey employer in the totality of all employment, preservation is a contributor to the travel industry, and travel ranks third as a New Jersey economic activity.

The geographical scale of comparison is a further consideration. Thus far, we have been considering the more global scales of nation and state, but to paraphrase the adage about politics, to a practical extent "all economics are local." At the local level—and certainly for financially distressed communities, the economic contribution of historic preservation is much more noticeable. Take, for instance, the example of Trenton. Heritage tourism to this community from visitation to the State House, the Trenton Barracks, and other historic sites in the state's capital is more important to Trenton's economy than the average heritage travel effect in New Jersey.

The same is true with respect to the penetration of "bricks and mortar" historic preservation. As of 1994, about $7 million in historic rehabilitation was effected in Trenton (Chapter Two). Historic rehabilitation generates in-state income benefits of $661,376 per $1 million of initial expenditures (Exhibit 9.2). Therefore, the $7 million in Trenton historic rehabilitation translates into $5 million worth of income at the state level. While only a small share of that $5 million, in turn, is captured in Trenton, the net to Trenton is meaningful in a city with a 12 percent unemployment rate and $11,000 per capita income. By comparison, New Jersey as a whole has a 6 percent unemployment rate and $19,000 per capita income.

Exhibit 9.2

Economic Effects by Component of Historic Preservation Activity

Economic Sector	Historic Preservation Activity: Historic Rehabilitation	Heritage Tourism	Operation of Historic Sites/Organizations
	Effects Per Million Dollars of Initial Expenditure		
National			
Employment (jobs)	37.6	35.9	57.5
Income	$1,274,853	$886,747	$1,330,152
GDP	$1,688,706	$1,294,604	$1,721,179
Taxes			
State	$107,634	$179,667	$111,341
Local	$90,630	$65,788	$93,779
State			
Employment (jobs)	18.9	16.4	29.5
Income	$661,376	$389,562	$550,896
GSP	$949,464	$663,086	$801,341
Taxes			
State	$67,876	$143,926	$54,767
Local	$56,935	$36,405	$45,194
	Multipliers of Total Effects Compared to Direct Effects		
National			
Employment	2.849	2.071	2.079
Income	2.424	2.849	3.080
GDP	2.707	2.300	4.049
State			
Employment	1.543	1.398	1.347
Income	1.387	1.496	1.609
GSP	1.522	1.244	1.885

Notes: GDP = Gross Domestic Product
GSP = Gross State Product

Source: Rutgers University, Center for Urban Policy Research, 1997

Further, there is the positive support that historic rehabilitation lends to other construction activity in a community. When buildings in an historic neighborhood are rehabilitated in Trenton, doesn't this encourage further rehabilitation in the city? What often makes urban areas distinct is their place in history, so the preservation of these places fosters further rounds of renovation (as well as added tourism and other benefits). There was a total of $41 million of non-historic rehabilitation effected in Trenton—generating an in-state total benefit (including multiplier effects) of $27 million of income. Some of that income, fostered by the seed of historic preservation activity, works its way back to Trenton.

In a complementary way, much as historic rehabilitation encourages all rehabilitation in a community and, for that matter, new construction there as well, these other activities improve the climate for historic preservation. We cannot currently disentangle and measure all these effects. But the fact that they are unquantified does not mean they don't exist. The point is that at a micro scale, such as at the city of Trenton level, historic preservation has effects that loom relatively much more significant

in import than when preservation is related to the overall magnitude of national or state economic activity.

A final note on the scale of the historic preservation benefit also relates to the inadequacy of our measuring capabilities. The quality of life, educational, and other benefits of preservation are not being tallied here. For instance, in the renovation of the State House (or Waterloo Village, Monmouth Battlefield State Park, and other historic resources), we count as an economic benefit to the state's economy the job, income, and GDP-GSP effects from both the rehabilitation and the ongoing visitation. Not counted, however, is the benefit from the thousands of visitors who now, knowing more about New Jersey's important history and feeling more pride in the state, ultimately decide to live and work in the state, develop or expand businesses, refer others to visit, and so on. These benefits are elusive to measure but are there and add to the job, income, and GDP-GSP effects that are being tallied.

COMPONENTS OF THE BENEFITS

Of the benefits from historic rehabilitation noted earlier and summarized in Exhibit 9.1, the largest contribution is from heritage tourism, followed at a one-third level of impact (relative to heritage tourism) by historic rehabilitation, and then distantly by the operations of the historic sites and organizations. The main reason for the differences in their total contributions is the varying orders of magnitude of the direct effects of the respective activities. Heritage tourism leads, with $432 million in annual spending, followed by the $123 million in historic rehabilitation, and then the much more modest annual expenditure—$25[1] million by the historic sites and organizations.

The respective component contributions must be viewed holistically, however. Vibrant historic organizations and restored historic sites throughout the state are essential to a healthy heritage tourism industry in New Jersey. In fact, the multiplier effects from the operations of historic sites and organizations compare quite favorably with those of the other activities of historic rehabilitation and heritage tourism, as is shown in Exhibit 9.2. In a parallel vein is the economic "bang" per million dollars of directly invested "buck" for the different historic preservation activities, also shown in Exhibit 9.2. Construction generates a relatively high number of jobs per $1 million invested, but actually the historic sites and organizations have the highest job generator of all (perhaps reflecting their more modest wages per job). The historic sites and organizations component also has relatively high income and GDP-GSP effects per million dollars invested (Exhibit 9.2).

Thus, in looking at the components of historic preservation benefits, there is no question that on one level—that of aggregate and individual contributions with respect to jobs, income, and production—heritage tourism and historic rehabilitation are the most significant. On other levels, however, such as multiplier effects and returns per increment (e.g., per $1 million) of investment, the historic sites and organizations are a significant component in their own right. Furthermore, while ascribing effects to separate components of historic preservation is useful on one level, it is also an artificial construct. It is historic preservation in its collective whole that impacts on the economy,

[1] While the $25 million outlay represents a reduced figure for calculation purposes to avoid double counting, that figure is net of the historic rehabilitation and visitor-supported revenues associated with the historic sites/organizations. The total gross expenditures (including historic rehabilitation and visitor-supported revenues) of the historic sites and organizations is $36 million. The $36 million is clearly a fraction of the outlays of $123 million and $432 million for historic rehabilitation and heritage tourism, respectively.

and certain activities would not realize their maximum vigor in the absence of others (e.g., heritage tourism without historic sites).

Nationwide Impacts

The details of the economic effects of the $580 million in direct spending related to historic preservation activity ($123 million, $432 million, and $25 million in spending for historic rehabilitation, heritage tourism, and the operation of historic sites and organizations respectively) are contained in Exhibits 9.3 to 9.8. Item 1 of Section II in Exhibit 9.3 shows, for instance, that the direct effects to the nation of spending related to New Jersey historic preservation activity translate into 9,806 new jobs, $210 million in income, and $330 million in GDP. The GDP/investment ratio (0.57) indicates significant levels of importing of goods and services into the state in the support of the activity. From previous Chapters it is clear that this importing is primarily due to activity not related to the rehabilitation of the buildings themselves, but rather to heritage tourism and the operation of historic sites. Multiplier effects add 11,769 more jobs, $363 million more in income, and $479 million more in GDP. Therefore, the total economic impacts of spending related to New Jersey historic preservation activity—the sum of its direct and indirect and induced effects—are 21,575 new jobs (9,806 + 11,769), $573 million in additional income ($210 million + $363 million), and $809 million added to GDP ($330 million + $479 million). In all instances, the indirect and induced effects exceed the direct effects (the traditional multipliers are greater than 2.0).

Of the total 21,575 jobs generated nationwide by New Jersey activities related to historic preservation, about 75 percent are concentrated in three major sectors: retail trade (7,689 jobs or 35.6 percent); services (5,914 jobs or 27.4 percent); and manufacturing (2,737 jobs or 12.7 percent). These same three industries account for about 65 percent of the total $573 million in labor income generated (Exhibit 9.3). The lower percentage for income relative to jobs is due to the relatively lower incomes generated in the retail and service sectors. Simple division of the number of jobs into the amount of labor income generated shows that nationwide the labor income per job supporting activity related to historic preservation is $16,408 for retail trade, $24,202 for services, and $38,460 for manufacturing. Because of the concentration of jobs in retail trade and services through heritage tourism and the operation of historic sites, the nation's average labor income per job is $26,545, substantially lower than the $33,926 average income for jobs generated through the state's historic building rehabilitation. Most of these are higher-paying construction jobs.

The dichotomy in job quality is similarly stark between jobs created indirectly and directly by New Jersey activity related to historic preservation. Items 1 and 2 in Section II of Exhibit 9.3 reveal that indirectly created jobs pay on average $30,840, while direct jobs pay on average $21,391—a difference of $9,449 per job. Hence, the low-paying jobs that are created directly in turn generate higher-paying jobs. Some, but not all, of the pay gap between direct and indirect jobs is due to the part-time nature of the direct jobs created in the retail trade and service industries. A finer breakout of national economic impacts by industry (Exhibit 9.4) shows that of the 5,914 jobs created in the service industries, about a quarter (1,564 jobs) are in the hotels/lodging category. Further, 5,231 jobs, or about 68 percent of the 7,689 retail jobs created through New Jersey heritage tourism, are in eating/drinking establishments. These two industries are notorious for paying low wages and offer part-time job opportunities in unusually high

Exhibit 9.3
National Economic Impacts of
$580 in Annual Historic Preservation Spending in New Jersey

	Economic Component		
	Employment (jobs)	Income (000$)	Gross Domestic Product (000$)
I. TOTAL EFFECTS (Direct and Indirect/Induced)*			
Private			
1. Agriculture	57	6,819	11,328
2. Agri. Serv., Forestry, & Fish	137	3,967	4,619
3. Mining	76	4,284	16,088
4. Construction	1,282	49,661	52,274
5. Manufacturing	2,737	105,265	156,225
6. Transport. & Public Utilities	893	42,232	78,104
7. Wholesale	458	19,613	51,933
8. Retail Trade	7,689	126,164	145,202
9. Finance, Ins., & Real Estate	1,707	61,399	108,141
10. Services	5,914	143,133	176,058
Private Subtotal	20,949	562,508	799,894
Public			
11. Government	626	10,210	9,574
Total Effects (Private and Public)	21,575	572,718	809,469
II. DISTRIBUTION OF EFFECTS/MULTIPLIER			
1. Direct Effects	9,806	209,763	330,326
2. Indirect and Induced Effects	11,769	362,955	479,142
3. Total Effects	21,575	572,718	809,469
4. Multipliers (3÷1)	2.200	2.730	2.451
III. COMPOSITION OF GROSS DOMESTIC PRODUCT			
1. Wages--Net of Taxes			518,193
2. Taxes			
a. Local			41,883
b. State			93,614
c. Federal			
General			93,089
Social Security			66,377
Federal Subtotal			159,466
d. Total taxes (2a+2b+2c)			294,963
3. Profits, dividends, rents, and other			(11,763)
4. Total Gross Domestic Product (1+2+3)			801,393
EFFECTS PER MILLION DOLLARS OF INITIAL EXPENDITURE			
Employment (Jobs)			37.2
Income			$988,164
State Taxes			$161,446
Local Taxes			$72,263
Gross Domestic Product			$1,396,568

Note: Detail may not sum to totals due to rounding.
*Terms:
Direct Effect (National)—the amount of goods and services purchased in the nation.
Indirect Effects—the value of goods and services needed to support the provision of those direct economic effects.
Induced Effects—the value of goods and services needed by households that provide the direct and indirect labor.

Source: Rutgers University Center for Urban Policy Research, 1997.

Exhibit 9.4
National Economic Impacts of
$580 Million in Annual Historic Preservation Spending in New Jersey

INDUSTRY	Industry Component		
	Employment (jobs)	Income ($000)	Gross State Product ($000)
Agriculture	**57**	**6,819**	**11,328**
Dairy Prod., Poultry, & Eggs	9	1,327	1,757
Meat Animals & Misc. Livestock	19	1,770	2,267
Cotton	1	117	155
Grains & Misc. Crops	18	2,355	4,623
Tobacco	4	666	1,085
Fruits, Nuts, & Vegetables	2	277	972
Forest Prod.	0	65	168
Greenhouse & Nursery Prod.	4	242	301
Agri. Serv., Forestry, & Fish	**137**	**3,967**	**4,619**
Agri. Services (07)	65	1,105	1,161
Forestry (08)	15	87	525
Fishing, Hunting, & Trapping (09)	57	2,775	2,933
Mining	**76**	**4,284**	**16,088**
Metal Mining (10)	7	486	579
Coal Mining (12)	-	-	-
Oil & Gas Extraction (13)	56	3,259	14,577
Nonmetal Min.-Ex. Fuels (14)	14	539	932
Construction	**1,282**	**49,661**	**52,274**
General Bldg. Contractors (15)	358	14,930	15,715
Heavy Const. Contractors 16)	127	5,186	5,459
Special Trade Contractors (17)	797	29,545	31,100
Manufacturing	**2,737**	**105,265**	**156,225**
Food & Kindred Prod. (20)	422	15,926	26,973
Tobacco Manufactures (21)	9	560	2,886
Textile Mill Prod. (22)	92	2,268	3,393
Apparel & Other Prod. (23)	177	3,257	3,538
Lumber & Wood Prod. (24)	132	4,247	6,071
Furniture & Fixtures (25)	54	1,375	1,612
Paper & Allied Prod. (26)	101	5,120	8,601
Printing & Publishing (27)	340	11,786	15,612
Chemicals & Allied Prod. (28)	127	7,778	13,288
Petroleum & Coal Prod. (29)	25	2,495	7,654
Rubber & Misc. Plastics (30)	140	5,102	5,813
Leather & Leather Prod. (31)	46	933	1,139
Stone, Clay, & Glass (32)	134	4,963	5,911
Primary Metal Prod. (33)	100	5,666	6,302
Fabricated Metal Prod. (34)	224	9,274	12,289
Machinery, Except Elec. (35)	122	5,313	6,490
Electric & Elec. Equip. (36)	100	3,981	6,016
Transportation Equipment (37)	107	6,189	8,035
Instruments & Rel. Prod. (38)	92	3,462	3,694
Misc. Manufacturing Ind's. (39)	192	5,570	10,907

Exhibit 9.4 (continued)
National Economic Impacts of
$580 Million in Annual Historic Preservation Spending in New Jersey

INDUSTRY	Industry Component: Employment (jobs)	Income ($000)	Gross State Product ($000)
Transport. & Public Utilities	**893**	**42,232**	**78,104**
Railroad Transportation (40)	50	2,586	4,149
Local Pass. Transit (41)	156	3,998	4,472
Trucking & Warehousing (42)	216	8,569	8,992
Water Transportation (44)	20	735	1,127
Transportation by Air (45)	53	3,115	4,123
Pipe Lines-Ex. Nat. Gas (46)	3	174	825
Transportation Services (47)	34	1,385	1,522
Communication (48)	197	11,824	23,888
Elec., Gas, & Sanitary Serv. (49)	164	9,846	29,006
Wholesale	**458**	**19,613**	**51,933**
Whlsale-Durable Goods (50)	161	7,449	24,400
Whlsale-Nondurable Goods (51)	297	12,164	27,533
Retail Trade	**7,689**	**126,164**	**145,202**
Bldg. Mat.-Garden Supply (52)	115	3,220	3,552
General Merch. Stores (53)	484	8,311	12,193
Food Stores (54)	354	7,056	7,890
Auto. Dealers-Serv. Stat. (55)	364	10,404	11,639
Apparel & Access. Stores (56)	165	2,797	4,364
Furniture & Home Furnish. (57)	40	1,224	1,500
Eating & Drinking Places (58)	5,231	73,517	86,016
Miscellaneous Retail (59)	936	19,635	18,049
Finance, Ins., & Real Estate	**1,707**	**61,399**	**108,141**
Banking (60)	215	7,785	14,065
Nondep. Credit Institut. (61)	185	6,690	6,026
Security, Comm. Brokers (62)	83	6,602	9,109
Insurance Carriers (63)	226	9,883	10,604
Ins. Agents, Brokers (64)	374	14,411	15,145
Real Estate (65)	229	1,782	40,361
Holding and Invest. Off. (67)	394	14,246	12,831
Services	**5,914**	**143,133**	**176,058**
Hotels & Other Lodging (70)	1,564	26,817	50,917
Personal Services (72)	554	10,115	10,774
Business Services (73)	967	26,040	29,036
Auto Repair, Serv., Garages (75)	260	9,855	11,909
Misc. Repair Services (76)	177	4,887	5,157
Motion Pictures (78)	193	4,710	4,284
Amusement & Recreation (79)	232	5,846	6,723
Health Services (80)	264	9,179	9,711
Legal Services (81)	101	6,593	7,297
Educational Services (82)	103	2,030	2,204
Social Services (83)	112	1,555	1,745
Museums, Botan.-Zoo. Gardens (84)	124	1,998	1,967
Membership Organizations (86)	502	8,995	8,832
Engineer. & Manage. Serv. (87)	748	23,882	24,847
Miscellaneous Services (89)	12	632	657
Government	**626**	**10,210**	**9,574**
Total	**21,575**	**572,718**	**809,468**

Note: Detail may not sum to totals due to rounding.

Exhibit 9.5
National Employment Impacts by Occupation of Annual New Jersey Spending Related to Historic Sites ($580 Million)

OCCUPATION TITLE	Employment (jobs)
Total, All Occupations	**21,575**
Exec., Admin., and Management Occupations	**2,184**
Managerial and Administrative Occupations	1,643
Management Support Occupations	540
Professional Specialty Occupations	**926**
Engineers	136
Architects and Surveyors	26
Life Scientists	8
Computer, Math, and Operations Res. Analysts	60
Physical Scientists	17
Social Scientists	7
Social, Recreational, and Relig. Workers	63
Lawyers and Judicial Workers	40
Teachers, Librarians, and Counselors	134
Health Diagnosing Occupations	21
Health Assessment & Treating Occupations	92
Writers, Artists, and Entertainers	247
All Other Professional Workers	74
Technicians and Related Support Occupations	**405**
Health Technicians and Technologists	162
Engineering & Science Technicians & Technologists	131
Technicians, Except Health and Engin. & Science	113
Marketing and Sales Occupations	**2,442**
Cashiers	632
Counter and Rental Clerks	82
Insurance Sales Workers	92
Real Estate Agents, Brokers, & Appraisers	29
Salespersons, Retail	759
Securities and Financial Service Sales Workers	31
Stock Clerks, Sales Floor	197
Travel Agents	28
All Other Sales and Related Workers	594
Administrative Support Occupations, incl. Clerical	**3,652**
Adjusters, Investigators, & Collectors	195
Communications Equipment Operators	58
Computer & Peripheral Equipment Operators	43
Financial Records Processing Occupations	509
Information Clerks	346
Mail Clerks and Messengers	40
Postal Clerks and Mail Carriers	238
Mat'l Record., Sched., Dispatch, & Distrib. Occs.	327
Records Processing Occupations, except Financial	130
Secretaries, Stenographers, and Typists	650
Other Clerical and Administrative Support Workers	1,118

Exhibit 9.5 (continued)
National Employment Impacts by Occupation of Annual New Jersey Spending Related to Historic Sites ($580 Million)

OCCUPATION TITLE	Employment (jobs)
Service Occupations	**6,709**
Cleaning & Building Service Occs., except Private	874
Food Preparation and Service Occupations	4,939
Health Service Occupations	108
Personal Service Occupations	345
Protective Service Occupations	186
All Other Service Workers	258
Agric., Forestry, Fishing, & Related Occupations	**274**
Animal Caretakers, except Farm	40
Farm Occupations	98
Farm Operators and Managers	16
Fishers, Hunters, and Trappers	2
Forestry and Logging Occupations	14
Gardeners & Groundskeepers, except farm	82
Supervisors, Farming, Forestry, & Agricul. Occs.	9
All Other Agric., Forestry, Fishing, & Rel. Workers	15
Precision Production, Craft, & Repair Occupations	**2,161**
Blue-collar Worker Supervisors	267
Construction Trades	614
Extractive and Related Workers, Incl. Blasters	18
Mechanics, Installers, and Repairers	795
Production Occupations, Precision	438
Plant and System Occupations	28
Operators, Fabricators, and Laborers	**2,822**
Mach. Setters, Set-up Ops, Operators, & Tenders	824
Hand Workers, incl. Assemblers & Fabricators	334
Transp. & Material Moving Machine & Vehicle Ops.	843
Helpers, Laborers, & Material Movers, Hand	823

Note: Detail may not sum to totals due to rounding.

proportions. Exhibit 9.5 illustrates that low-paying marketing and sales, service, and administrative support occupations comprise nearly 60 percent of all jobs related to New Jersey's historic preservation activity. Blue-collar occupations (the last three major occupation categories in Exhibit 9.5) make up 23 percent of all jobs. Only a meager 12 percent of all jobs related to New Jersey historic preservation activity are in high-paying managerial-administrative and professional specialty jobs.

An evaluation of the job productivity (GDP per job) reveals a slimmer gap of $7,026 ($40,712 versus $33,686) between indirect and direct jobs supporting New Jersey's activity related to historic preservation (Exhibit 9.3). As we found out Chapter 5, the differences between the two indirect-to-direct-job pay gaps (labor income/job and GDP/job) is largely due to the nature of the spending on heritage tourism, which constitutes the lion's share (nearly three-quarters) of the $580 million in annual spending. At any rate, the pay gap between the indirectly and directly created jobs causes the traditional national employment multiplier (2.2) to be extraordinarily low.

State-Level Impacts

Exhibits 9.6 through 9.8 present the total economic effects of the $580 million in direct historic preservation spending in-state. Item 1 in Section II of Exhibit 9.6 shows that New Jersey retains about 7,119 jobs or 73 percent of the direct jobs (9,806 jobs) created nationally by activity related to New Jersey historic preservation. This percentage is substantially lower than the 93 percent of direct jobs generated by historic building rehabilitation that the state retains. Much of the spending on heritage tourism and on the operation of historic sites goes toward items that, although purchased at retail outlets in the state, are produced outside of the state (e.g., gifts, food items, gasoline). As the result, New Jersey retains a substantially lower proportion of the indirect and induced employment impacts—only about 26 percent (3,020 of 11,769 jobs). As stated throughout this report, the state's status as a suburb to New York City and Philadelphia serves to explain this phenomenon.

In sum, through activity related to historic preservation, New Jersey annually gains 10,140 jobs (47 percent of the total 21,575 jobs generated nationally), $263 million in income (46 percent of the $573 million in income generated nationally), and $423 million in wealth (52 percent of the $809 million added to national GDP). The economic benefits of historic preservation related activity that accrue to New Jersey are concentrated primarily in the direct effects. A large proportion of the direct jobs are in the relatively high-paying construction industry. Nevertheless, the impact of these jobs is offset by the even larger proportion of low-paying service and retail jobs. Hence, at $25,956, the average labor income per job in New Jersey generated through the state's historic preservation activity is nearly the same as the national average labor income per job of $26,545. Jobs that New Jersey gets indirectly through activity related to historic preservation, however, compare less favorably to those which the nation receives—$27,704 per job compared to $30,840 per job.

Finer grained detail of state impacts by industry (Exhibit 9.7) and occupation (Exhibit 9.8) reflect concentrations similar to those noted at the national level. The main difference, once again, is that the construction industry looms larger at the state level. Nonetheless, of the 10,140 total state-level jobs derived from historic preservation, the greatest concentrations are in eating/drinking places (2,251 jobs) and in hotels/other

Exhibit 9.6
In-State Economic and Tax Impacts of $580 Million in Annual Historic Preservation Spending in New Jersey

	Economic Component		
	Employment (jobs)	Income (000$)	Gross Domestic Product (000$)
I. TOTAL EFFECTS (Direct and Indirect/Induced)*			
Private			
1. Agriculture	9	39	160
2. Agri. Serv., Forestry, & Fish	28	570	1,562
3. Mining	10	274	445
4. Construction	1,019	41,248	46,790
5. Manufacturing	881	29,376	57,837
6. Transport. & Public Utilities	353	9,836	23,038
7. Wholesale	199	15,838	34,301
8. Retail Trade	3,367	63,394	90,055
9. Finance, Ins., & Real Estate	279	12,366	35,110
10. Services	3,764	86,775	130,202
Private Subtotal	9,909	259,702	419,440
Public			
11. Government	231	3,487	3,520
Total Effects (Private and Public)	10,140	263,189	422,960
II. DISTRIBUTION OF EFFECTS/MULTIPLIER			
1. Direct Effects	7,119	179,524	317,519
2. Indirect and Induced Effects	3,020	83,665	105,441
3. Total Effects	10,140	263,189	422,960
4. Multipliers (3÷1)	1.424	1.466	1.332
III. COMPOSITION OF GROSS DOMESTIC PRODUCT			
1. Wages--Net of Taxes			231,147
2. Taxes			
a. Local			23,841
b. State			71,882
c. Federal			
General			48,624
Social Security			34,683
Federal Subtotal			83,306
d. Total taxes (2a+2b+2c)			179,029
3. Profits, dividends, rents, and other			4,707
4. Total Gross Domestic Product (1+2+3)			414,884
EFFECTS PER MILLION DOLLARS OF INITIAL EXPENDITURE			
Employment (Jobs)			17.5
Income			$454,159
State Taxes			$123,955
Local Taxes			$41,138
Gross Domestic Product			$729,777

Note: Detail may not sum to totals due to rounding.
*Terms:
Direct Effect (State)—the amount of goods and services purchased in New Jersey.
Indirect Effects—the value of goods and services needed to support the provision of those direct economic effects.
Induced Effects—the value of goods and services needed by households that provide the direct and indirect labor.

Source: Rutgers University Center for Urban Policy Research, 1997.

Exhibit 9.7
In-State Economic Impacts of
$580 Million in Annual Historic Preservation Spending in New Jersey

INDUSTRY	Industry Component: Employment (jobs)	Income ($000)	Gross State Product ($000)
Agriculture	**9**	**39**	**160**
Dairy Prod., Poultry, & Eggs	1	5	13
Meat Animals & Misc. Livestock	-	0	1
Cotton	-	-	-
Grains & Misc. Crops	0	0	8
Tobacco	2	9	56
Fruits, Nuts, & Vegetables	-	0	3
Forest Prod.	-	0	8
Greenhouse & Nursery Prod.	5	24	71
Agri. Serv., Forestry, & Fish	**28**	**570**	**1,562**
Agri. Services (07)	18	308	432
Forestry (08)	0	2	15
Fishing, Hunting, & Trapping (09)	9	260	1,114
Mining	**10**	**274**	**445**
Metal Mining (10)	-	-	-
Coal Mining (12)	-	-	-
Oil & Gas Extraction (13)	2	6	7
Nonmetal Min.-Ex. Fuels (14)	8	268	438
Construction	**1,019**	**41,248**	**46,790**
General Bldg. Contractors (15)	289	11,888	14,743
Heavy Const. Contractors 16)	84	4,423	4,705
Special Trade Contractors (17)	646	24,937	27,342
Manufacturing	**881**	**29,376**	**57,837**
Food & Kindred Prod. (20)	116	3,921	11,458
Tobacco Manufactures (21)	0	2	9
Textile Mill Prod. (22)	14	345	694
Apparel & Other Prod. (23)	27	556	944
Lumber & Wood Prod. (24)	75	1,865	2,844
Furniture & Fixtures (25)	8	274	358
Paper & Allied Prod. (26)	33	942	1,689
Printing & Publishing (27)	75	2,194	3,416
Chemicals & Allied Prod. (28)	74	2,891	6,403
Petroleum & Coal Prod. (29)	22	1,217	4,800
Rubber & Misc. Plastics (30)	28	759	1,268
Leather & Leather Prod. (31)	1	45	72
Stone, Clay, & Glass (32)	92	2,627	4,284
Primary Metal Prod. (33)	23	1,074	1,711
Fabricated Metal Prod. (34)	119	4,690	7,362
Machinery, Except Elec. (35)	49	1,611	2,482
Electric & Elec. Equip. (36)	50	1,548	2,355
Transportation Equipment (37)	9	444	872
Instruments & Rel. Prod. (38)	19	627	1,220
Misc. Manufacturing Ind's. (39)	47	1,744	3,597

Exhibit 9.7 (continued)
In-State Economic Impacts of
$580 Million in Annual Historic Preservation Spending in New Jersey

INDUSTRY	Industry Component		
	Employment (jobs)	Income ($000)	Gross State Product ($000)
Transport. & Public Utilities	**353**	**9,836**	**23,038**
Railroad Transportation (40)	21	716	1,409
Local Pass. Transit (41)	110	2,199	2,973
Trucking & Warehousing (42)	85	2,100	3,839
Water Transportation (44)	4	237	356
Transportation by Air (45)	9	356	734
Pipe Lines-Ex. Nat. Gas (46)	0	4	31
Transportation Services (47)	9	354	548
Communication (48)	56	2,768	9,402
Elec., Gas, & Sanitary Serv. (49)	60	1,101	3,746
Wholesale	**199**	**15,839**	**34,301**
Whlsale-Durable Goods (50)	99	5,344	14,553
Whlsale-Nondurable Goods (51)	100	10,494	19,748
Retail Trade	**3,367**	**63,394**	**90,055**
Bldg. Mat.-Garden Supply (52)	35	931	1,459
General Merch. Stores (53)	265	4,702	8,788
Food Stores (54)	157	3,337	5,119
Auto. Dealers-Serv. Stat. (55)	125	4,076	6,002
Apparel & Access. Stores (56)	73	1,398	2,928
Furniture & Home Furnish. (57)	15	417	769
Eating & Drinking Places (58)	2,251	39,534	52,069
Miscellaneous Retail (59)	447	8,999	12,921
Finance, Ins., & Real Estate	**279**	**12,366**	**35,110**
Banking (60)	49	2,350	4,763
Nondep. Credit Institut. (61)	35	1,629	1,781
Security, Comm. Brokers (62)	13	1,053	1,146
Insurance Carriers (63)	52	3,185	3,399
Ins. Agents, Brokers (64)	17	450	785
Real Estate (65)	85	2,384	21,799
Holding and Invest. Off. (67)	29	1,315	1,438
Services	**3,764**	**86,775**	**130,202**
Hotels & Other Lodging (70)	1,918	44,009	70,316
Personal Services (72)	283	4,929	6,944
Business Services (73)	282	2,462	3,509
Auto Repair, Serv., Garages (75)	81	2,555	7,473
Misc. Repair Services (76)	46	983	2,037
Motion Pictures (78)	51	1,438	1,720
Amusement & Recreation (79)	103	3,332	4,214
Health Services (80)	93	3,814	4,621
Legal Services (81)	46	2,629	3,494
Educational Services (82)	41	913	1,027
Social Services (83)	13	365	541
Museums, Botan.-Zoo. Gardens (84)	44	706	877
Membership Organizations (86)	310	5,550	6,783
Engineer. & Manage. Serv. (87)	447	12,875	16,313
Miscellaneous Services (89)	5	214	333
Government	**230**	**3,488**	**3,519**
Total	**10,140**	**263,189**	**422,961**

Note: Detail may not sum to totals due to rounding.

Exhibit 9.8
In-State Employment Impacts by Occupation of Annual New Jersey Historic Preservation Spending ($580 Million)

OCCUPATION TITLE	Employment (jobs)
Total, All Occupations	**10,140**
Exec., Admin., and Management Occupations	**953**
Managerial and Administrative Occupations	764
Management Support Occupations	188
Professional Specialty Occupations	**379**
Engineers	64
Architects and Surveyors	21
Life Scientists	3
Computer, Math, and Operations Res. Analysts	19
Physical Scientists	7
Social Scientists	1
Social, Recreational, and Relig. Workers	26
Lawyers and Judicial Workers	19
Teachers, Librarians, and Counselors	49
Health Diagnosing Occupations	10
Health Assessment & Treating Occupations	39
Writers, Artists, and Entertainers	87
All Other Professional Workers	30
Technicians and Related Support Occupations	**186**
Health Technicians and Technologists	77
Engineering & Science Technicians & Technologists	69
Technicians, Except Health and Engin. & Science	38
Marketing and Sales Occupations	**1,097**
Cashiers	311
Counter and Rental Clerks	32
Insurance Sales Workers	10
Real Estate Agents, Brokers, & Appraisers	11
Salespersons, Retail	355
Securities and Financial Service Sales Workers	4
Stock Clerks, Sales Floor	91
Travel Agents	17
All Other Sales and Related Workers	264
Administrative Support Occupations, incl. Clerical	**1,465**
Adjusters, Investigators, & Collectors	34
Communications Equipment Operators	30
Computer & Peripheral Equipment Operators	15
Financial Records Processing Occupations	231
Information Clerks	243
Mail Clerks and Messengers	15
Postal Clerks and Mail Carriers	45
Mat'l Record., Sched., Dispatch, & Distrib. Occs.	136
Records Processing Occupations, except Financial	43
Secretaries, Stenographers, and Typists	291
Other Clerical and Administrative Support Workers	383

Exhibit 9.8 (continued)
In-State Employment Impacts by Occupation of Annual New Jersey Historic Preservation Spending ($580 Million)

OCCUPATION TITLE	Employment (jobs)
Service Occupations	**3,645**
Cleaning & Building Service Occs., except Private	645
Food Preparation and Service Occupations	2,516
Health Service Occupations	37
Personal Service Occupations	228
Protective Service Occupations	88
All Other Service Workers	131
Agric., Forestry, Fishing, & Related Occupations	**105**
Animal Caretakers, except Farm	26
Farm Occupations	19
Farm Operators and Managers	2
Fishers, Hunters, and Trappers	0
Forestry and Logging Occupations	1
Gardeners & Groundskeepers, except farm	47
Supervisors, Farming, Forestry, & Agricul. Occs.	1
All Other Agric., Forestry, Fishing, & Rel. Workers	5
Precision Production, Craft, & Repair Occupations	**1,123**
Blue-collar Worker Supervisors	121
Construction Trades	465
Extractive and Related Workers, Incl. Blasters	7
Mechanics, Installers, and Repairers	361
Production Occupations, Precision	158
Plant and System Occupations	11
Operators, Fabricators, and Laborers	**1,187**
Mach. Setters, Set-up Ops, Operators, & Tenders	276
Hand Workers, incl. Assemblers & Fabricators	118
Transp. & Material Moving Machine & Vehicle Ops.	400
Helpers, Laborers, & Material Movers, Hand	394

Note: Detail may not sum to totals due to rounding.

lodging (1,918 jobs). Of the total $263 million generated in annual income, the eating/drinking and hotels/lodging industries garner $40 million and $44 million, respectively. The eating/drinking and hotels/lodging industries also comprise $52 million and $70 million, respectively, of the total $423 million increase in state gross domestic product (Exhibit 9.5). The breakout of impacts by occupation (Exhibit 9.8) also shows a correspondingly disproportionate number of jobs in the food preparation/processing category (2,516) and among both cashiers and retail salespersons (666 jobs).

RELATIVE ECONOMIC EFFECTS OF HISTORIC PRESERVATION VERSUS OTHER ACTIVITIES

Another relative issue to be considered—one that transcends the in-state/out-of-state effects of the prior section—is how preservation fares as an economic pump-primer vis-à-vis other non-preservation investments. If all spending generates both direct and multiplier effects, can preservationists lay claim to an array of economic benefits—such as those identified in this study—that are more substantial than any other kind of spending?

Two points need to be considered here. One is whether other investments would, in fact, "do the same" economically. The second, and perhaps more fundamental issue concerns the appropriate measure of the economic effects of an activity (whether preservation or any other). Is the full array of economic activity generated to be considered, or just the delta, or the increase in economic consequences of one type of spending versus another?

In analyzing whether other investments would generate economic effects similar to historic preservation one must first ask, "What are the appropriate other areas of spending to which preservation should be compared?" Reflecting preservation's educational facet, is an appropriate comparison elementary/secondary education outlays? Or reflecting preservation's aesthetic and entertainment (leisure time) components, would spending on the performing arts or the theater yield a more appropriate comparison?

In practice, since an important manifestation of historic preservation involves construction, a common frame of reference is how well preservation, in the form of historic rehabilitation, "stacks up" economically against alternative *construction* endeavors. Because this study details the economic effects of historic rehabilitation on four different types of buildings—single-family, multifamily, nonresidential, and civic-institutional (e.g., courthouses), a natural comparison would be to relate historic rehabilitation's effects by building type to the effects of new construction of the same type of buildings. Further, since historic preservation often involves public support in the form of bond monies (e.g., for rehabilitation grants) or tax incentives, another appropriate frame of reference would be public investment that draws on the public purse and serves the public welfare, such as infrastructure. One archetype is new highway construction.

Exhibit 9.9 shows, in side-by-side fashion, the relative economic effects of the historic rehabilitation of different types of buildings (e.g., single and multifamily) vis-à-vis new construction of the same types of buildings. It further shows, for comparison

Exhibit 9.9

Relative Economic Effects of Historic Rehabilitation versus New Construction

Geographic Level/ Economic Effect	Construction Activity—Historic Rehabilitation and New Construction								
	Single-Family		Multifamily		Nonresidential		Highway	Civic/Institutional	
	Historic Rehabilitation	New Construction	Historic Rehabilitation	New Construction	Historic Rehabilitation	New Construction	New Construction	Historic Rehabilitation	New Construction
	Effects Per Million Dollars of Initial Expenditure								
National									
Employment (jobs)	36.7	36.0	36.4	36.1	38.3	36.1	33.6	37.8	36.9
Income ($000)	$1,240	$1,206	$1,226	$1,213	$1,302	$1,223	$1,197	$1,285	$1,250
GDP ($000)	$1,672	$1,604	$1,661	$1,606	$1,711	$1,600	$1,576	$1,695	$1,626
State Taxes ($000)	$106	$102	$105	$102	$110	$103	$101	$108	$105
Local Taxes ($000)	$89	$86	$88	$86	$92	$86	$85	$91	$88
Total Taxes ($000)	$530								
In-State									
Employment (jobs)	18.4	16.4	18.0	16.4	19.3	16.7	15.2	19.0	17.2
Income ($000)	$623	$578	$623	$577	$685	$600	$600	$675	$616
GSP ($000)	$937	$811	$915	$814	$964	$827	$806	$946	$843
State Taxes ($000)	$65	$59	$65	$59	$70	$61	$60	$69	$62
Local Taxes ($000)	$55	$49	$55	$49	$59	$51	$50	$58	$52
	Multipliers of Total Effects Compared to Direct Effects								
National									
Employment	2.87	2.79	2.95	2.78	2.84	2.79	3.12	2.84	2.78
Income	2.43	2.39	2.52	2.38	2.42	2.38	2.42	2.42	2.37
GDP	2.67	2.68	2.79	2.66	2.72	2.69	2.81	2.75	2.69
State									
Employment	1.52	1.51	1.56	1.52	1.55	1.53	1.63	1.55	1.54
Income	1.39	1.36	1.41	1.36	1.39	1.36	1.37	1.39	1.36
GSP	1.49	1.50	1.54	1.50	1.53	1.51	1.55	1.54	1.52

Notes: GDP = Gross Domestic Product
GSP = Gross State Product

See Appendix H for full details.

Source: Rutgers University, Center for Urban Policy Research, 1997.

sake, the economic effects of new highway construction. The economic impacts include total (direct and indirect/induced) income, wealth, and tax consequences per standard increment of investment ($1 million) at both the national and in-state levels (see Appendix H for details). Also shown (in Exhibit 9.9) are the multipliers (total effects compared to direct effects) for employment, income, and wealth for the competing investments.

The side-by-side comparisons in Exhibit 9.9 reveal that across all building and investment types, *historic preservation, in the form of historic rehabilitation, is a more potent economic pump-primer than new construction.* One million dollars spent on nonresidential historic rehabilitation, for instance, generates, at the national level, 38.3 jobs, $1,302,000 in income, $1,711,000 in gross domestic product (GDP), and $202,000 in state and local taxes. By contrast, $1 million spent on new nonresidential building generates nationally 36.1 jobs, $1,223,000 in income, $1,600,000 in GDP, and $189,000 in state and local taxes. The same size investment in new highway construction induces 33.6 jobs, $1,197,000 in income, $1,576,000 in GDP, and $186,000 in taxes.

But can historic preservation claim credit for all these generated economic effects or just the delta—that is, the enhanced benefit vis-à-vis other spending? Does historic rehabilitation's $1 million unit of investment in nonresidential buildings, in other words, garner, at the national level, *all* 38.3 jobs and $1,302,000 in income, or just the *added increment* vis-à-vis the same size investment in new nonresidential construction? If the latter case is true, the impact would be only 2.2 jobs (38.3 minus 36.1) and $79,000 in income ($1,302,000 minus $1,223,000) per $1 million investment increment—not the total 38.3 jobs and $1.3 million in income.

There are no easy answers. In fact, both measures of preservation's benefits are informative. Typically, when the economic impact of any given investment is analyzed—whether it be car manufacturing or defense spending—total benefits are reported. Yet, there is good reason to consider benefits at only the margin, or delta. By presenting an array of information in Exhibit 9.9, we are informing both points of view of how the benefits of historic preservation should be expressed. And on both counts—the total and the delta—preservation proves a "good" investment.

The bottom half of Exhibit 9.9 presents the set of traditional multipliers used for different types of construction. When measuring their impact on employment, income, and GDP (or GSP) for both the nation and the State of New Jersey, however, these multipliers can be highly misleading, because they measure total regional impacts per unit of regional direct effect. But they are presented here, because they are the most familiar measure to policy analysts.

It is the divisor, i.e., regional direct effects, that makes the traditional multipliers less than useful. Because the direct effects in the traditional multiplier are in the same units as the total impacts, the intensity of the direct effect—as compared to that for the indirect and induced effects—becomes an important factor in determining the magnitude of the traditional employment multiplier. Generally speaking, this factor is not at all important to analysts who want to measure multiplier effects. The possibility of differences in intensity of labor, income, or even GDP between the direct and indirect/induced effects makes it impossible to draw inferences from multiplier magnitudes across industries or events in a region or even for a single industry across regions.

Another reason the multipliers are less than useful is that analysts usually want to know how the totality of investment dollars affects an economy, not just some portion of the funds represented by the regional direct effects—the denominator of the traditional multipliers. This issue is important only when the economic disturbance, the impact of which is being measured, is demand-based (e.g., the increase in demand by museums for paper goods) as opposed to output-based (e.g., the amount of rehabilitation activity in New Jersey). In the case of an output-based change, the regional change *is* the total change. When a change in demand is involved, the demanding agent does not care *where* the demand goods and services come from. Hence, the total direct effect is discounted based upon the probability that the goods and services will be provided by local establishments.

Because the "bang for the buck" multipliers that we have used to compare the economic effects of various project types measure total regional impacts per unit of total direct effect in terms of millions of dollars only, the difficulties of the traditional multiplier are overcome on both counts. Our multipliers are return-on-investment type measures. Since the denominator of our "impacts per $ million" multiplier is not in the same units as its numerator, it is possible to compare the multiplier across regions and industries. Moreover, since the denominator is always the full direct effect, determining whether the economic disturbance is a demand or an output disturbance is unnecessary when a comparison is made. These multipliers are also readily understood, because they reflect, simply put, the total economic impacts that result from a million dollars of initial expenditure.

The figures in Exhibit 9.9 also show some of the pitfalls of impact interpretation. The traditional multipliers in the lower portion of the Exhibit would lead one to believe that in terms of employment and GDP effects, the construction of new highways would be the "wisest" investment alternative. The traditional multipliers of 3.12 (nation) and 1.63 (state) for employment and 2.81 and 1.55 for GDP (GSP) for the nation and State of New Jersey, respectively, are the largest in their rows of the exhibit. Inspection of the same "bang for the buck" multipliers on the upper half of the exhibit, show an opposite result, however. New highway construction appears to be the *least* lucrative investment of the set.

The reasons for this flip-flop in the ranking of new highway construction are multifold. First, highway construction jobs are among the highest-paying jobs in the construction industry. Hence, the earnings of highway construction workers *do* support more other jobs through induced effects than do the earnings of building construction workers, as implied by the relatively large size of the traditional multiplier. *But* because highway construction jobs are so lucrative, not as many construction jobs are created per million dollars of direct effect as might be otherwise. This fact lowers the denominator of the traditional multiplier, thus inflating the multiplier itself. The "bang for the buck" multiplier, meanwhile, tells analysts more precisely what they should expect for each million that is invested in a given activity. On that basis, investment in construction related to historic preservation has a large "bang for the buck" relative to "general" (nonhistoric) construction.

One other consideration of what comprises a "good investment" is the relative comparison of historic preservation investment versus investment in such sectors of the economy as manufacturing, publishing, and so on. On this basis, historic preservation also shows economic advantages, as illustrated below (see Appendix H for details):

Economic Impacts Per Million Dollars of Initial Expenditure in

Economic Effect	Nonresidential Historic Rehabilitation	Book Publishing	Pharmaceutical Production	Electronic Component Production
National				
Employment (jobs)	38.3	35.3	28.4	30.9
Income ($000)	$1,302	$1,160	$1,045	$1,018
GDP	$1,711	$1,722	$1,546	$1,483
State taxes ($000)	$110	$103	$93	$87
Local taxes ($000)	$92	$86	$79	$74

APPLICATIONS OF THE FINDINGS OF THIS STUDY

As noted earlier (Chapter One), this is the most comprehensive statewide study of historic preservation's economic effects ever conducted in the United States. It also develops, in multiple instances, preservation-specific data, including "recipes" for preservation construction. The "bang for the buck" comparisons noted above are also a contribution to this field of study. But there are many other "practical" as well as policy analysis benefits from the current investigation. Some examples are noted below.

Data and Systems for the "Practical" Projection of the Economic Benefits of Historic Preservation

Others who wish to estimate the economic benefits of historic preservation can readily use the data and systems developed in this study. For instance, assume that a local historic commission wanted to project the economic benefits of $10 million of single-family rehabilitation occurring in a historic district; or a county historic museum, with a $2 million budget, wanted to present to the county council the economic effects of its operations. These projections could easily be made by referring to the base data contained in this study. Exhibit 9.9 shows the employment, income, and GDP effects per $1 million of investment in single-family (and other historic) properties. By a tenfold scaling up of the figures shown in this exhibit, the local historic commission could easily calculate that the $10 million in historic district rehabilitation generates in New Jersey 184 jobs, $6.2 million in income, $9.4 million in GSP, $650,000 in state taxes, and $550,000 in local (all New Jersey communities) taxes. The historic county museum could reference Exhibit 9.2 and, by extrapolation, report New Jersey economic benefits of 60 jobs, $1.1 million in income, $1.6 million in GSP, $109,000 in state taxes, and $91,000 in local taxes.

This information can be broken down further by reference to the exhibits contained in Appendix H, which gives data by *industry* on the impacts per $1 million increment of investment in historic rehabilitation in different building types (as well as, for comparison, the impacts per $1 million of new construction investment in the same building types). Exhibit H.2, for example, shows that 36 percent of the in-state jobs created from single-family historic rehabilitation is in construction and 16 percent in manufacturing. The local historic commission, in the above example, could then readily calculate that of the 184 New Jersey jobs fostered by renovations in the historic district, 66 jobs are in construction and 29 jobs are in manufacturing.

The point of providing these data, which can readily be produced, is to inform the public and government officials that preservation makes an economic contribution. Besides improving the quality of life, preservation contributes to economic well being. This information can help turn the perspective of historic preservation being viewed as an economic "consumer" (e.g., in the form of local property tax exemption) to that of being an economic "producer."

The present study, by setting forth preservation's benefits, informs policy analysis. Some illustrative applications follow. One example is at the state level, the other, at the federal level. The first concerns financing to foster historic rehabilitation made available by the New Jersey Historic Trust through a state bond program; the second, the federal preservation tax credit.

Analysis of Support to New Jersey Historic Rehabilitation Provided by the New Jersey Historic Trust

The State of New Jersey has one of the nation's largest and most successful grants program to foster historic rehabilitation with monies raised from state bond issues (Historic Preservation Bond Program, or HPBP). These "bricks and mortar" HPBP grants are awarded by the New Jersey Historic Trust (NJHT).

By way of background, the NJHT, established by statute in 1967, is a nonprofit, state-affiliated organization created to preserve and protect New Jersey's historic resources. The NJHT has broad powers to initiate and promote preservation programs, with one important activity being the awarding of HPBP competitive grants to repair and restore historic properties owned by public agencies and nonprofit organizations. A sample of the 152 awards made to date includes rehabilitation of the New Jersey State House and Annex, Monmouth Battlefield State Park, and Cape May Point Lighthouse. The projects include some of New Jersey's defining historic resources and are, not coincidentally, important tourist attractions.

The HPBP was capitalized by a $60 million bond issue. It is anticipated that ultimately about $54.9 million in grants will be awarded under the HPBP for grants and loans, with the balance allocated for administrative expenses. Current (mid-year 1997) cumulative awards of $40,986,717 have leveraged a total investment of $259,853,385 in the historic sites that receive these awards. Total historic rehabilitation project activity ensuing from the NJHT's $40,986,717 in grants, therefore, is $300,840,102 ($40,986,717 + $259,853,385). Using a ratio of $7.34 of total historic rehabilitation project activity for each dollar awarded, about $403 million in cumulative historic rehabilitation project activity based on the HPBP should be expected when all of the funds ($54.9 million) are spent ($54.9 million x $7.34).

This $403 million in historic rehabilitation activity that is fostered by the HPBP generates additional secondary economic activity and benefits. These economic impacts, which are added through indirect and induced consequences, are calculated by applying the Regional Science Research Corporation's input–output model to the $403 million in total direct historic rehabilitation activity.

The detail of this $403 million direct rehabilitation expenditure plus the multiplier effects is shown in Appendix I and is summarized in Exhibit 9.10.

Exhibit 9.10
Total Economic Impacts of the Cumulative Historic Rehabilitation Fostered by the New Jersey Historic Trust ($403 Million)

	In New Jersey	Outside New Jersey	Total (U.S.)
Jobs (person years)	6,199	7,286	13,485
Income ($000)	$222,389	$235,593	$457,982
GDP/GSP ($000)	$307,392	$297,208	$604,600
Total Taxes ($000)	$101,955	$88,239	$190,194
Federal ($000)	$60,556	$58,551	$119,107
State ($000)	$22,576	$16,014	$38,590
Local ($000)	$18,823	$13,674	$32,497
In-State Wealth ($000) (GSP Minus Federal Taxes)	$246,836	---	---

Note: GDP/GSP - Gross Domestic Product/Gross State Product

The in-state *benefits* are of particular interest here because the HPBP is a state-level investment. From this perspective, it is clear that New Jersey benefits significantly from the HPBP. The $55 million in awards returns about $247 million in wealth to the state—a good rate of return for any public infrastructure investment. Much of this $247 million ($222 million, or 90 percent) is income. Further, it creates nearly 6,200 person years of work in the state. And there are substantial state and local taxes generated,[2] which are considered shortly.

But there are additional benefits. As examined earlier in this study, the economic impacts of historic preservation take other forms through heritage tourism and property values. For the HPBP, preservation's impacts on property values can be ignored. This is so because its awards are granted to nonprofit or government institutions. Such organizations typically do not pay taxes or intend to realize capital gains on their properties, which are the critical economic impacts of property value changes.

Heritage tourism, however, *is* very likely to increase from the enhancements to the historic stock fostered by the HPBP. From the results of the heritage tourism and historic sites and organizations survey data collected previously in this study, we calculate that the HPBP's $403 million of historic rehabilitation should increase heritage tourism

[2] The added local taxes are *not* from the enhanced value and tax payments of the properties rehabilitated under the HPBP since these properties typically are tax-exempt. The local tax increase, and for that matter the state tax gain, results from the enhanced *overall* economic activity (e.g., construction firms expanding), which ultimately results in more taxes being paid.

outlays in the state by roughly $23 million annually. The total (direct and indirect/induced) annual effects from this $23 million added by heritage tourism are summarized in Exhibit 9.11.

Exhibit 9.11
Total Annual Heritage Tourism Spending Impacts ($23 Million) of the Cumulative NJHT-Induced Historic Rehabilitation

	In New Jersey	Outside New Jersey	Total (U.S.)
Jobs (person years)	375	447	822
Income ($000)	$8,914	$11,376	$20,290
GDP/GSP ($000)	$15,173	$14,450	$29,623
Total Taxes ($000)	$7,544	$4,338	$11,882
Federal ($000)	$3,418	$2,847	$6,265
State ($000)	$3,293	$818	$4,111
Local ($000)	$833	$672	$1,508
In-State Wealth ($000) (GSP Minus Federal Taxes)	$11,755	-------	---------

Note: GDP/GSP - Gross Domestic Product/Gross State Product

The annual heritage tourism spending of $23 million fostered by the HPBP should created a total of 375 in-state jobs as well as $8.9 million in income and $15.2 million in GSP. Considerable tax payments are generated as well and shall be examined momentarily. In short, the HPBP is an economic pump-primer to the state with respect to jobs, income, and wealth ensuing from its historic rehabilitation and enhanced tourism effects.

What about the HPBP's effects to the taxpayers of New Jersey? Taxpayers benefit as employees and consumers from an enhanced state economy, but holding aside that "lift all boats" enhancement, what does the HPBP cost the taxpayers? When all tax debits and credits are figured, what is the net cost to the taxpayer?

One tax debit is, of course, the repayment of the $60 million principal of the HPBP bond. As these monies are raised from state bonds with interest paid to bond holders, over the approximate 20-year bond repayment period, the interest cost in real terms is about $48 million.[3] It is estimated that about one-quarter of the bonds are sold to New Jersey residents and the remaining three-quarters to out-of-state residents. Therefore, of the $48 million in real interest payments, $12 million ($48 million x 0.25) is paid to in-state residents and $36 million ($48 million x 0.75) is remitted to out-of-state residents.

The $12 million paid to in-state residents is, in effect, an economic "wash" since this amount is simply income redistributed from New Jersey taxpayers to New Jersey bondholders. Yet, there is a cost for these interest payments to New Jersey bondholders.

[3] Assume a 6 percent bond interest rate and 2 percent inflation rate for an average annual real interest cost of 4 percent. Therefore, $60 million x 4% = $2.4 million real interest annually; $2.4 million x 20 (20-year bond repayments) = $48 million.

The interest paid on the HPBP bonds is exempt from state (and federal) taxes. Since the effective state income tax rate is about 5 percent, the loss to the state from the $12 million in interest paid to in-state bondholders is $600,000.

Interest paid to out-of-state bondholders costs New Jersey $36 million in interest payments. In addition, the households of these out-of-state bondholders (as opposed to the households of the in-state bondholders) are unlikely to spend their interest payments in New Jersey. If they did, their spending would generate to New Jersey $1.6 million in state and local tax revenues. Therefore, the out-of-state bondholders cost New Jersey about $37.6 million ($36 million + $1.6 million).

The total interest-related cost of the HPBP, therefore, is the sum of the in-state bond holders' cost of $0.6 million and the out-of-state bond holders' cost of $37.6 million, for a total interest-related expense of about $38 million. The total debit to state taxpayers of the HPBP, therefore, is $98 million ($60 million principal and $38 million interest-related) over the 20-year term of its underlying bond cycle.

But the economic activity fostered by the HPBP induces state and local tax payments. From the historic rehabilitation fostered by the HPBP, there is a one-time (since construction occurs once) taxpayer gain of $23 million in state taxes and $19 million in local taxes (Exhibit 9.10). The heritage tourism fostered by the HPBP results in state tax gains of $3.3 million and local tax gains of $0.8 million in *annually recurring* tax payments (Exhibit 9.11). There is likely to be some lag, however, in the time that a capital investment is made in historic rehabilitation and the ensuing growth of heritage tourism, so that the annual tax gains just noted will likely not be realized for every year of the 20-year bond cycle. Assuming a 10 percent discount is applied to the tax gains to account for this lagged effect,[4] the enhanced tourism occurring because of the HPBP will increase state and local taxes over the 20-year bond period by an annual average of $3.0 million ($3.3 million x .9) and $0.7 million ($0.8 million x .9), respectively. Thus, over the 20-year bond cycle span, state taxpayers garner $60 million ($3 million x 20) and local taxpayers $14 million ($0.7 million x 20) from the added heritage tourism, for a total of $74 million. The total taxpayer credit over the twenty years from the combination of the HPBP-fostered historic preservation and enhanced tourism is therefore $116 million.

The net cost to the taxpayer is the difference between the cumulative taxpayers' debit and taxpayers' credit. In the current instance, the HPBP costs taxpayers in New Jersey $98 million. That amount is nearly offset by the credit to state taxpayers alone of $83 million from tax payments generated by the HPBP projects (i.e., from the construction activity) and the heritage tourism they foster. When the benefit to local taxpayers is added—some $33 million—the full taxpayer credit of $116 million exceeds the HPBP taxpayer cost of $98 million.

[4] The 10 percent discount due to a lag in the growth of tourism after historic rehabilitation is accounted for by assuming that visitation to the sites increases annually by an increment of 20 percent of its total potential during the first five years. Thus, in the first year, 20 percent of the tourism potential of the sites is achieved; 40 percent in the second year; 60 percent in the third year; 80 percent in the fourth year; and 100 percent thereafter. The total amount by which visitation is discounted over the course of the first four years, therefore, is 80 percent (100 minus 20) plus 60 percent (100 minus 40) plus 40 percent (100 minus 60) plus 20 percent (100 minus 80), or 200 percent of the annual tourism potential. This 200 percent means that two years of tourism potential are not achieved over the course of the 20-year period. Two years = 10 percent of twenty years.

HPBP-Fostered Activity	HPBP Taxpayer Credits Over 20 Years		
	Credits (in $ millions)		
	State Taxpayers	Local Taxpayers	Total Credited to Taxpayers
• Historic Rehabilitation	23	19	42
• Heritage Tourism	60	14	74
TOTAL	$83	$33	$116

Note: HPBP taxpayer credits represent added revenues to state and local tax coffers, respectively, from the HBPB-fostered activities.

The numbers above should be regarded as gross estimates. Recall that the study objective is not to derive a precise accounting but rather to apply the data and economic tools developed here to inform policy analysis of such programs as the New Jersey HPBP (numerous other states have similar programs). This review shows that when the economic activity and the ensuing tax payments fostered by publicly supported rehabilitation grants programs (such as the HPBP) are considered, the magnitude of induced economic activity and tax payments are such that there is negligible or even no net cost to the taxpayer.

The net cost of the Federal Preservation Tax Incentive, as discussed below, can be analyzed along similar lines.

Analysis of the Federal Preservation Tax Incentive

The Federal Preservation Tax Incentive (FPTI)—currently a 20 percent federal tax credit for historic rehabilitation of income-producing properties—is, as noted in Chapter One, the most significant federal preservation incentive. For fiscal year (FY) 1995, there were a total of $469 million in tax credit projects. Of the 548 approved projects, 47 percent involved housing, 23 percent were exclusively nonresidential (e.g., office or commercial), and 30 percent were mixed-use developments. Assuming for the moment that this project breakout equates with the dollar investment, the $469 million in historic rehabilitation encompasses $220.4 million, $107.9 million, and $140.7 million of housing, nonresidential, and mixed-use historic rehabilitation investment, respectively.

The input–output model developed in this study is applied to these respective outlays based on the detailed construction data matrices by property type described in Appendix B. (For mixed-use development, blended data for housing and nonresidential construction profiles are applied.) The results for the respective project categories—housing, nonresidential, and mixed use—are obtained and then summed to a national aggregate total, shown in Exhibit 9.12.

In brief, the $469 million of FPTI-aided historic rehabilitation resulted in a total impact (encompassing direct and secondary impacts) of 15,780 person years of work, $519 million in wages, and $695 million in gross domestic product (GDP). As would be expected, much of the jobs, wages, and GDP are concentrated in the construction, manufacturing, and services sectors, but there are additional benefits to all sectors of the economy, as Exhibit 9.12 shows.

Exhibit 9.12
Economic and Tax Impacts of Historic Rehabilitation Aided by the Federal Preservation Tax Incentive
(Fiscal Year 1995—$469 million Rehabilitation Investment)

	Economic Component		
	Employment (jobs)	Wages (000$)	Gross Domestic Product (000$)
I. TOTAL EFFECTS			
(Direct and Indirect/Induced)*			
Private			
1. Agriculture	29	$3,415	$5,669
2. Agriculture services	131	2,098	3,544
3. Mining	85	4,402	14,160
4. Construction	3,513	132,354	139,320
5. Manufacturing	3,136	119,926	164,902
6. Transport. & public utilities	713	33,892	62,653
7. Wholesale trade	432	18,321	50,786
8. Retail trade	2,503	45,784	52,027
9. Finance, insurance, and real estate	1,516	54,471	88,062
10. Services	3,238	97,050	107,142
Private subtotal	15,295	$511,698	$688,229
Public			
11. Government	485	7,527	6,970
Total Effects (Private and Public)	15,780	$519,225	$695,199
II. DISTRIBUTION OF EFFECTS/MULTIPLIER			
1. Direct effects	5,416	$208,632	$251,113
2. Indirect and induced effects	10,364	310,593	444,087
3. Total effects	15,780	$519,225	$695,199
4. Multipliers (3÷1)	2.914	2.489	2.768
III. COMPOSITION OF GROSS DOMESTIC PRODUCT			
1. Wages–Net of taxes			$469,793
2. Taxes			
a. Local			37,114
b. State			44,063
c. Federal			
General			79,948
Social Security			57,006
Federal Subtotal			136,954
d. Total taxes (2a+2b+2c)			218,131
3. Profits, dividends, rents, other			7,275
4. Total Gross Regional Product (1 + 2 + 3)			$695,199

Note: Detail may not sum to totals due to rounding.
*Terms:
Direct Effect (National)—the amount of goods and services purchased in the nation.
Indirect Effects—the value of goods and services needed to support the provision of those direct economic effects.
Induced Effects—the value of goods and services needed by households that provide the direct and indirect labor required to rehabilitate the historic structures.

Source: Rutgers University Center for Urban Policy Research, 1997.

The income and wealth created by the FPTI historic rehabilitation noted above are taxed, and the ensuing revenues are detailed in Exhibit 9.12. The $469 million FPTI-aided historic rehabilitation in FY 1995 increased local taxes by $37 million and state taxes by $44 million. These include taxes on property, corporate and personal income, sales, as well as other local and state levies.

At the national level, federal taxes on personal and business income and related federal levies amounted to $80 million. (This category is termed "general federal taxes" in Exhibit 9.12.) An additional $57 million was paid in federal Social Security, for a total of $137 million in federal taxes.

These figures allow comparison of FPTI "federal tax expenditures," as they are termed[5] versus revenues. In FY 1995, the tax expenditure of the FPTI was equal to 20 percent of the FPTI-aided rehabilitation of $469 million, or $94 million. But the $94 million tax expenditure induced hundreds of millions of dollars of economic activity that, in turn, generated $137 million in total federal taxes. Thus, the CUPR analysis shows that for every dollar allowed for a federal preservation tax credit, the United States Treasury received a return of $1.46 in tax revenues ($137 million tax return divided by $94 million tax expenditure).

Thus, tax incentives for historic rehabilitation, such as the FPTI, not only foster preservation but also are an important economic catalyst. Moreover, the federal tax revenues generated from the FPTI's economic pump-priming effects more than offset its federal tax expenditure. Perhaps states should be thinking about state income tax credits for historic preservation.

SUMMARY

Historic preservation has come into its own in the United States only in recent decades, and clearly much remains to be done. One area is to better understand preservation's economic benefits. Work has begun to inform us in this regard (see bibliography), and the current investigation adds to our body of knowledge.

This study has intertwined streams. It is a statewide investigation of the many ways that preservation influences a state's economy; it is the most extensive such statewide study ever done. At the same time, the data and analytic tools developed here have important implications far beyond New Jersey. The "recipes" of the labor and material components of historic rehabilitation allow for a more refined projection of the economic effects of such construction. The analysis of the heritage traveler gives the field a glimpse of how many such travelers there are as well as their socioeconomic profile and spending patterns. Insight is also afforded by knowing more about the state's historic sites and organizations. By bringing these different components together, their interconnectedness can be better appreciated. This was illustrated by the analysis of the HPBP, which integrated historic rehabilitation with enhanced attractiveness of historic sites and demonstrated how rehabilitation could foster heritage travel.

The present investigation also brings forth a powerful economic tool in the form of the Regional Science Research Corporation's (RSRC) input–output model. Preservationists should be more aware of input–output analysis, and the RSRC's model is one

[5] Federal tax expenditures are "costs" to the federal government in the form of taxes not collected because a tax incentive is offered.

of the better applications in this regard, especially when it is calibrated with the preservation-specific data developed for this study. This model can be used at various levels: the more technical-minded should consult Appendix C; those less concerned about the internal "black box" can readily just use the base figures summarized in Exhibits 9.2 and 9.9.

This study also points to areas where our knowledge is weaker. There is no current equivalent of an input–output model that can inform us with precision about property value effects of landmark designation and historic preservation. Values, on average, are likely enhanced, but the point is that we don't know by how much, nor will the outcome be the same in all circumstances. On a different note, there is much we do not know about linkages, such as the connections between historic rehabilitation, nonhistoric rehabilitation, and new construction in a Trenton or any other community. Basic measures are also open to question, including how economic benefits should be counted: as a total, or on an incremental basis (i.e., the delta of preservation's effects).

It is hoped that this study will contribute to the continued study of, and dialogue on, the economic effects of historic preservation.

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Advisory Council on Historic Preservation. *The Contribution of Historic Preservation to Urban Revitalization*. Washington, D.C.: U.S. Government Printing Office, January 1979. Report prepared by Booz, Allen and Hamilton, Inc.

This study investigates the effect of historic preservation activities in Alexandria (Virginia), Galveston (Texas), Savannah (Georgia), and Seattle (Washington). Included in the analysis is an examination of the physical, economic, and social changes occurring within historic neighborhoods in each of these cities. According to the study, historic designation and attendant preservation activities provide many benefits including saving important properties from demolition, assuring compatible new construction and land uses, and providing a concentrated area of interest to attract tourists and metropolitan-area visitors. Designation also has the beneficial effect of strengthening property values—an impact documented by comparing the selling prices of buildings located inside versus outside the historic districts.

Cloud, Jack M. "Appraisal of Historic Homes," *The Real Estate Appraiser* (September-October 1976): 44-47.

Difficulties of appraising historic homes are highlighted. To illustrate, appraisal assumes that the improvements on land are depreciating assets. In the historic context, however, the home represents "heritage" and therefore is not assumed to lose value. The article suggests three approaches to ascertaining value, all modifications of the traditional cost, market, and income approaches.

A modified cost methodology is recommended based on the following factors: (1) cost on a unit basis of an equally "historically desirable" dwelling in approximately the same physical condition (including site); (2) the average unit cost of an acceptable renovation and/or restoration; (3) less the estimated incurable physical deterioration; (4) plus the value of land and site improvements.

A second strategy uses a modified market approach. Value is determined by adjusting recent nearby "arm's-length" sales. This approach is commonly used in appraisal, but implementation in the historical context requires a number of special emphases. The temporal definition of "recent" sales has to be extended for the appraiser to obtain enough "comps" of historic homes—required because there are relatively few sales of historic properties. Second, and for similar reasons, the appraiser has to consider "comps" over a larger geographical area. Third, the appraiser must be careful to examine only arm's length transfers—donations of properties to private historical societies would not be included. Fourth, the appraiser must carefully adjust the "comps" for "historical value"—which encompasses such considerations as type of architecture, historical significance of the owner/builder, and so on. Fifth, the "comps" will have to be adjusted by considering required restoration/renovation costs as well as the amount and value of land in each transaction.

A third strategy for determining the value of the historic homes is to use an income approach. The article cautions that utilizing this method is "basically dangerous"

since it is often based on hypothetical situations that may or may not be possible or probable.

Costonis, John J. *Space Adrift: Saving Urban Landmarks Through the Chicago Plan.* Urbana: University of Illinois Press, 1974.

This monograph analyzes the transfer of development rights as a mechanism for preserving historic properties. As part of its overall analysis, it considers the impact of landmark restrictions on property value as well as the assessment of landmarks for tax purposes.

Chapter three discusses the cost of historic preservation restrictions—a measure termed "damages." Damages are determined by subtracting a landmark's present value from its fair-market value in the absence of designation. These "before and after" values are estimated by the income approach of appraisal. Other traditional appraisal methods are not so applicable. Applying the cost technique is problematical for it requires precise estimates of physical decline and functional obsolescence—factors inherently difficult to define in a landmark situation. Low sales frequency of landmarks often renders the market approach inappropriate.

Appendix four examines the relationship between landmarks and the property tax. It examines both the principles and practice of real estate taxation, notes how and when landmarks may be penalized by prejudicial assessment, and discusses "intergovernmental agreement" and other strategies for improving the equity of landmark's assessment/ taxation.

Economics Research Associates. *Economic Impact of the Multiple Resource Nomination to the National Register of Historic Places of the St. Louis Central Business District.* Report prepared for the St. Louis Community Development Agency. Boston: Economics Research Associates, 1980.

The ERA study examines the economic effect of designating the St. Louis central business district by: (1) considering the impact of comparable designation activity in Seattle (Pioneer Square), New Orleans (Vieux Carre), Savannah (Historic District), and other jurisdictions; and (2) evaluating the anticipated effect of historic status on numerous prototypical buildings located in the St. Louis CBD. The consultants conclude that designating the St. Louis CBD would have both positive and negative economic impacts, and that the overall effect would depend on such variables as: (1) the applicability/continuation of federal landmark income tax incentives; (2) the type/extent of designation; and (3) future demand for CBD locations.

Gale, Dennis. n.d. *The impact of historic district designation in Washington, DC.* Occasional Paper No. 6. Center for Washington Area Studies, Washington, DC. This paper examines the impact of historical preservation on property prices and values in order to determine if historic preservation does result in the displacement of the current population. The study compares three neighborhood both before and after historic designation. It also compares these three neighborhoods with three non

designated neighborhoods. The study found that there was no increase in rated growth of assessments in the pre and post preservation periods. Second, there was not much difference in property value between the districts designated as historic districts and those that were not, out of proportion to the general economic conditions at a city level. It did however recognize two problems: the study did not control for the time of designation; distortions may be caused by the federal income tax code.

Government Finance Officers Association, 1991A. *The Economic Benefits of Preserving Community Character: Fredericksburg, Virginia.*

Utilizing the methodology described in *The Economic Benefits of Preserving Community Character: A Practical Methodology* (Liethe, Muller, Petersen, and Robinson), the report examines the economic rewards gained as a result of efforts made to preserve the historic nature of the city and by providing incentives to merchants and residents to remain there. Currently, downtown Fredericksburg is made up of 350 buildings built prior to 1870 and seven 18th century homes and museums open to the public. In order to thwart the exodus of businesses and residents to suburban areas city officials implemented several bold initiatives. They moved the visitor's center to the heart of the historic district and publicized a walking tour of significant homes and buildings. They enacted a tax exempt program designed to attract the rehabilitation of historic properties by abating from taxation a portion of the increase value over a six year period. The city made esthetic improvements to the downtown area that included burial of overhead utility wires, implementation of historically accurate streetscaping, and improvements in traffic patterns and parking. The city also implemented the Facade Improvement Grant Program to entice shop owners to improve the appearance of their storefronts. Further, re-zoning of the downtown area to allow apartments above commercial establishments encouraged residential living. The study examined the economic benefits realized from these efforts by looking at construction activity, property values, and revenues from tourism. Construction activity provided important short-term benefits via employment of local workers, the purchase of materials from local business, and the spending of wages in the Fredericksburg area. Over an eight year period, 777 projects totaling $12.7 million were undertaken in the historic district. These projects created approximately 293 construction jobs and approximately 284 jobs in sales and manufacturing. Area governments reaped $33,442 in building permit fee revenues while the city accrued $243,729 in locally distributed sales tax revenues. Property values, both residential and commercial, experienced a dramatic increase. Between 1971 and 1990 residential property values in the historic district increased an average of 674% as compared to a 410% average increase in properties located elsewhere in the city. Commercial properties within the district rose an average of 480% compared to an increase of an average of 281% for other commercial properties. The study conducted a survey of downtown merchants as well as a telephone survey to estimate the amount of money coming into the city as a result of meals, lodging, and shopping. It estimates that, in 1989 alone, $11.7 million in tourist purchases were made within the historic district and another $17.4 million outside the district with secondary impacts resulting in $13.8 million. The fiscal benefits to

the city as a result of tourism and sales is estimated $1,128,060 ($487,200 in meals and lodging, $582,600 in state sales tax, and $58,260 from business and occupational license tax).

Government Finance Officers Association, 1991b. *The Economic Benefits of Preserving Community Character: Galveston, Texas.* In the early 1980's the Galveston Historical Foundation took several measures to assist owners of historic properties including a revolving fund, design and rehabilitation advice, and a paint partnership program. The city also dedicated one cent of the hotel/motel bed tax to historic preservation by establishing tax reinvestment zones throughout the city. Utilizing the methodology described in *The Economic Benefits of Preserving Community Character: A Practical Methodology* (Liethe, Muller, Petersen, and Robinson), the report estimates the economic benefits to the private sector (property owners and retail merchants) as well as the fiscal benefits gained by the city of Galveston. These assessments were made with respect to construction activity, property values, and commercial activity. Construction activity created jobs in construction labor, retail (the sale of construction supplies), manufacturing, and induced jobs by virtue of the workers spending money in the area. Building permit data indicate that over a 20 year period 1165 construction jobs, 86 manufacturing/sales jobs, and 874 induced jobs were created. The jobs produced $44.1 million in salary income while the fiscal benefits to the city were $274,943 in sales tax revenues and $63,727 in building permit fees. Over a 16 year period residential sales prices in the historic district rose by an average of 440% and commercial sales prices rose an average of 165%. It is estimated that, from July 1989 to June 1990, tourists visiting the historic district spent approximately $18 million and that the multiplier effects totaled $29.1 million in sales and $2.7 million in wages. The state gained approximately $1.1 million from sales tax while the city of Galveston earned about $0.5 million.

Johnson, Daniel G., and Jay Sullivan. 1992. *Economic impacts of Civil War battlefield preservation: An ex ante evaluation.* Unpublished paper. Virginia Polytechnical Institute. Blackburn, Virginia. The authors attempt to predict the economic impact of war battlefield preservation before it is established. The methodological basis for this evaluation is a cost benefit analysis. The analysis includes foregone and projected benefits in the equation. The authors conclude that battleparks can generate important impacts for local economic development. Further, that battlefield preservation compares well with agricultural production in terms of income and employment. The benefits are, however, concentrated in the service sector.

Kilpatrick, John A. "The Impact of Historic Designation in Columbia, South Carolina." Study prepared for the South Carolina State Historic Preservation Office, 1995.

This study examined actual sales transactions (as opposed to assessments for property tax purposes) in historic neighborhoods (two nationally and locally designated districts) in Columbia South Carolina from early 1983 to mid-1995. Sales data were collected on all homes within the historic areas that had sold at least twice during the 1983 to 1995 period. Using prices and times between the sales, the study developed an index of house price appreciation within the historic district. A

comparable index of price appreciation was developed in parallel for the market as a whole. Comparing these two indices, the study found that "historic properties have an average rate of return higher than [that of] the Columbia market as a whole. The price differential in the historic districts was almost 25 percent greater than the overall community.

Leithe, Joni L., with Thomas Muller, John E. Petersen and Susan Robinson. *The economic benefits of preserving community character: A methodology.* Chicago: Government Finance Research Center of the Government Finance Officers Association, 1991.

This study examines the consequences of preservation regulations and incentives on a community's economy and their effects on a local government's fiscal condition. It provides an easy-to-use workbook, complete with sample tables, worksheets and survey forms, and explains how a community can measure economic activity in three broad areas: construction and rehabilitation activity, real estate activity and commercial activity.

- *Construction and Rehabilitation Activity.* To the extent that community preservation techniques stimulate the rehabilitation of property, economic benefits associated with rehabilitation construction activity itself can be documented.
- *Real Estate Market Activity.* The effect of community preservation on the overall local real estate market as a result of designation or incentive programs can be measured (whether or not directly related to rehabilitation activity).
- *Commercial Activity.* The stimulation or retention of businesses in areas that have been designated or protected or granted incentives and the resulting impact on local economic activity, such as retail sales and the number of business created, can be measured.

Lane, Bob. 1982. *The cash value of Civil War nostalgia: A statistical overview of the Fredericksburg Park.* A report for Virginia County, Virginia Lane argues that national parks based on civil war nostalgia suffer from an inherent contradiction. On the one hand they have been viewed as 'priceless historic jewels handed down from generation to generation, and to which no value can be assigned'; on the other hand they can be viewed as a continuing stream of cash, alternately contributing to the surrounding economy but also costing 'something' in lost taxes. Lane attempts to analyze the second viewpoint through a cost benefit analysis of the Fredericksburg and Spotsylvania National Park. Through his analysis of lost taxes vs. direct and indirect benefits Lane concludes that the historic sites in question contribute more to the surrounding economy than they take away.

National Trust for Historic Preservation. 1982. *Economic benefits of preserving old buildings.* Washington, DC: Preservation Press. This publication is the result of a conference held in Seattle to discuss historic preservation and the financial incentives of that process. The aim of the conference was to bring clearly into focus the successful record of the historic preservation process, including the benefits of recycling old buildings. The following topics were covered at the conference. Section

one discusses possible municipal actions in the preservation process. The hidden assets of old buildings, and continuing and adaptive uses for old buildings form the second and third sections of the publication. Section four discusses the costs of preservation whilst section five outlines the types of government grants available for the preservation process. Sections six and seven discuss the advantages of historic preservation from a private financiers viewpoint.

National Trust for Historic Preservation. "Values of Residential Properties in Urban Historic Districts: Georgetown, Washington, D.C. and Other Selected Districts." *Information: From the National Trust for Historic Preservation.* Washington, D.C.: Preservation Press, 1977. Study authored by John B. Rackham.

This research paper compares property values in a historic district (Georgetown in Washington, D.C.) to those outside this neighborhood. Property values in Society Hill (Philadelphia) and other historic districts are also briefly noted. Side-by-side comparison indicates that historic status increases property value. In the words of the study, "The imposition of historic district controls in an area, complemented by the general recognition that they have been appropriately placed, results in the following pattern of residential property demand and value: available quality housing in reasonable condition within the district is marketed readily at increasing price levels; existing housing in poorer condition is acquired—often by developers—and renovated; and land for building sites, if available, is obtained and improved in conformance with architectural controls."

Assessment/property-tax implications resulting from the property value appreciation within the historic neighborhoods are also considered. Various assessment strategies to alleviate inequitable landmark property taxation are reviewed, such as assessment at current use. The District of Columbia's efforts in this regard are highlighted.

New Jersey Historic Trust. 1990. *Historic preservation capital needs survey.* New Jersey: New Jersey Historic Trust. The survey examines the capital needs of historic properties throughout New Jersey. The survey showed a capital need of $ 400 million for historic preservation. This, however, is a conservative estimate as, first, the study was a survey; second, it was directed only at properties that met the eligibility criteria established by the bond act i.e. properties owned or operated by public or not for profit agencies. Apart from the findings of the survey, the study also provides some useful information on historic resources in New Jersey, the importance of historic preservation and historic tourism for economic development and case studies of successful preservation.

Preservation Alliance. "Virginia's Economy and Historic Preservation: The Impact of Preservation on Jobs, Business, and Community," Staunton, Virginia, 1996.

As part of a larger study of preservation's economic effects, the analysis cited cases of property values increasing relatively faster in historic versus non-historic areas. Examples cited included:

Fredericksburg. "Properties within Fredericksburg's historic district gained appreciably more in value over the last twenty years than properties located elsewhere in the city."

Richmond. "While assessments in the Shockoe Ship historic area appreciated by 245 percent between 1980 and 1990, the city's overall value of real estate increased by 8.9 percent."

Staunton. "Between 1987 and 1995, residential properties in Staunton's historic neighborhoods appreciated by 52 to 66 percent compared to a city-wide average residential appreciation of 51 percent. For commercial properties the average city-wide appreciation between 1987 and 1995 was 25 percent. By contrast, average rates of appreciation of commercial properties in historic districts ranged from 28 to 256 percent.

Robinson, Susan G. 1988/89. "The effectiveness and fiscal impact of tax incentives for historic preservation." *Preservation Forum* 2, 4 (Winter): 8–13. The study argues that the success of historic preservation depends on financial consideration; thus, before any program is undertaken, the fiscal impacts of the program should be examined. The study provides a methodology that a local government can use to assess the impacts of preservation. It does so by providing guidance for the evaluation of the effects of certain incentives programs based on the experience of Atlanta. The study examines the following incentives for historic preservation: compensation, protection, land use planning, the impact of federal tax credits, state and local tax incentive programs, property abasement tax, property tax, sales tax exemption, individual tax vs. cost to the city, public sector benefits vs. costs.

Reynolds, Judith and Anthony. "Factors Affecting Valuation of Historic Properties." *Information: From the National Trust for Historic Preservation.* Washington, D.C.: Preservation Press, 1976.

This paper presents an appraisal process for valuing landmarks. It notes the importance of proceeding in a step-by-step process that includes definition of the appraisal problem; identification of the property's environment and physical and historical characteristics; examination of alternative uses, including the actual use; collection of data; and estimating value through one or more of accepted appraisal approaches.

The paper stresses the importance of considering the "variable characteristics" of the landmark, including site features, improvement level/type, historical significance, as well as the "qualifications" for highest and best use. These characteristics must be examined on a case-by-case basis. In the words of the authors, the "highest and best use of a property with significant historical association or character, if the property is located in a complementary environment and its physical integrity is high, may include preservation or restoration; for historical properties of lesser significance, the highest and best use may be preservation through adaptive use such as conversion of

a dwelling to a law office; finally, if the aspects of physical integrity, functional utility and environment are insufficient to warrant preservation, then the highest economic use may be demolition of the structure."

Rypkema, Donovan D. *The Economics of Historic Preservation.* Washington, D.C.: National Trust for Historic Preservation, 1994.

Amongst other economic impacts, Rypkema examines the effects of designation and preservation activity on property values. Rypkema compiles the results from numerous studies. Examples from Rykema are cited below.

In every heritage district designated in Canada in the last 20 years, property values have risen, despite the fact that development potential has been reduced.
(Federal Heritage Buildings Review Office Code of Practice, Government of Canada)

Therefore, it would seem reasonable that, at worst, the listing of property on either of the two registers would have no effect on value, but most likely, at least in the City of Norfolk, such listing would enhance value. (Wayne N. Trout, Real Estate Assessor, City of Norfolk, cited in: *The Financial Impact of Historic Designation*)

The virtually unanimous response from local assessors and commissioners of the revenue has been that no loss of assessed value has occurred as a result of historic designation, and that values have risen in general accord with the values of surrounding properties over the years. (*The Financial Impact of Historic Designation*)

Generally, the assessed values have risen at a rate similar to all other properties. As such, we have no evidence that the listing of a property in either the National Register of Historic Places or the Virginia Landmarks Register adversely influences the assessed value relative to surrounding and/or similar properties. (John Cunningham, Manager of Assessments, Prince William County, cited in *The Financial Impact of Historic Designation*)

The appreciation of renovated historic properties is substantially greater than the appreciation rates for new construction and unrestored historic properties. . . Unrestored historic properties appreciate at almost identical rates to new construction over the same period. (Kim Chen, *The Importance of Historic Preservation in Downtown Richmond: Franklin Street, A Case Study*)

Sanderson, Edward F. 1994. *Economic Effects of Historic Preservation in Rhode Island.* The Journal of the National Trust for Historic Preservation. Sanderson reviews a study completed by the University of Rhode Island Intergovernmental Policy Analysis Program. The purpose of that study was to calculate the direct, indirect, and induced effects of historic preservation programs that were implemented by the Rhode Island Historical Preservation Commission from 1971 to 1993. Sanderson notes that the Preservation Commission showed $240 million in expenditures since 1971 and that projects that qualified for federal tax credits accounted for about 80% of this total. Further, he states that when federal, state, local and private funds are

taken into account it represents a 9:1 leveraging ratio of private investment to all sources of public expenditure. He concludes that the economic impact reported in the study significantly understated the real economic benefits of historic preservation. His supporting evidence is as follows. Of the $240 million for goods and services expended since 1971 approximately $186 million (78%) went to purchase goods and services in Rhode Island. These historic preservation expenditures resulted in a increase in "value added" in Rhode Island of $232 million. (Value added measures regional output in the same sense that gross domestic product measures national output). Over a twenty year period, historic preservation created at least 10,722 person-years of employment. (A person-year is defined as one person employed full time for one year). Each $10 million in expenditures created 285 jobs in Rhode Island. These jobs included construction, services, retail, manufacturing, finance and real estate. Federal tax revenue increased by $64 million, state coffers received $13.5 million, and local tax collectors receive $8.1 million. Federal tax credits for rehabilitation of income producing historic buildings totaled 266 tax credit projects with a cumulative value of $211.5 million. Of these properties, 111 provide space for economically beneficial offices, manufacturing, and retail.

Scribner, David, Jr. "Historic Districts as an Economic Asset to Cities," *The Real Estate Appraiser* (May-June 1976), pp. 7-12.

This article examines how historic districts in major urban areas are delineated, and also considers the impact of designation on city revitalization. It notes that the property values of buildings within historic areas are higher than sister structures located outside of such neighborhoods. In the Old Town area of Virginia, landmarks are worth approximately 2.5 times comparable buildings located just beyond the boundaries of this historic district. In Capitol Hill in Washington, D.C., values are four times greater; in the Federal Hill area in Baltimore, values are 7.5 times higher. The author argues that the linkage between property value and historic designation should be recognized by appraisers, and recommends that appraisers rethink some of their rules of thumb that are inapplicable in landmark situations.

University of Rhode Island, Intergovernmental Policy Analysis Program. 1993. *Economic Effects of the Rhode Island Historical Preservation Commission Program Expenditures from 1971 to 1993.* The study reviews the impacts of the Rhode Island Historical Preservation Commission's programs on the state economy in the areas of employment, wages, valued added, and tax revenues generated since 1971. It does not, however, assess the cultural value of historic preservation or the degree to which the preservation of historical landmarks contribute to the overall attraction of tourists. The study uses computer models of the state economy to conduct a full economic impact analysis for each of the Commission's programs. These programs are compared to other types of public construction that supply economic stimulus and/or improve public infrastructure. Findings indicate that the greatest impacts of the Commission's programs are in the construction related industries with retail sales and the service industries being strong contributors. Dollar for dollar, historic preservation programs generate approximately the same number of jobs as some

other construction and maintenance programs. Notably, about 93.4% of the funding for the Commission's programs have come from matching federal funds and tax credits thereby yielding approximately $1.50 dollars in state tax revenues for each dollar spent.

Walter, Jackson J. 1987. *Historic preservation and places to live: A natural partnership for healthy American communities.* Speech before the Policy Advisory Board, of the Joint Center for Housing Studies of MIT and Harvard University. Pebble Beach California. Walter argues that historic preservation can also play an important role in the preservation and provision of inner city housing. It is also an important component in the revitalization of the cities, not only to economically, but also culturally. However, in order for cities to take advantage of their heritage, leadership and creativity are needed.

Wilcoxon, Sandra K. 1991. *Historic House Museums: Impacting Local Economies.* Historic Preservation Forum. Utilizing a written questionnaire administered four times throughout the year the Frank Lloyd Wright Home and Studio Foundation in Oak Park, Illinois attempted to assess the direct and indirect economic impact of the home and studio on the local and greater metropolitan areas. The survey addressed the following: restaurants and hotels patronized, amount spent per person on meals, transportation method, and visitors' plans to shop in the area. An analysis of direct spending found that of the home and studios' $1.6 million dollar operating budget, 36% was spent in the local area, 37% in Chicago, and 27% in other parts of the United States. Indirect spending was calculated using a tourism multiplier of 6 and a wage multiplier of 1.4 for employee salaries. By applying the multipliers to direct spending figures it was calculate that the impact of the home and studio, its visitors and employees on the Chicago area account for $21.4 million. Combining direct and indirect spending yields totals of $26.4 million impact on the greater Chicago area and $5.5 million on the village of Oak Park. Using an employment multiplier that states each $1 million in direct spending creates 39 new jobs, it is calculate that the home and studio has created 47 jobs in Oak Park and 133 jobs in Chicago. Counting their own employees this totals 204 jobs.

Wonjo, Christopher T. 1991. "Historic preservation and economic development." *Journal of Planning Literature* 15, 3 (February): 296-307. Wonjo argues that historic preservation and economic development are two tools that can be used in the revitalization of failing cities. He points out that recent economic developments have often included aspects of historic preservation, and that the two jointly seek to improve city conditions, as well as conditions within communities. Wonjo then examines the history of federal involvement in preservation from the 1906 Antiquities Act until the NHPA of 1966 and the 1986 tax code incentives. He argues that the changes in the 1986 tax code was a response to flaws in the NHPA of 1966 that protected only federally owned sites, and lacked an implementation capacity. Wonjo also examines local and state incentives for historic preservation, as well as the question of how planners can contribute to historic preservation efforts.

Appendix A

Estimating the Historic Rehabilitation Effected Statewide in New Jersey

This appendix estimates the historic rehabilitation (as defined in Chapter Two) effected in New Jersey, as of 1994—the last full year for which data are fully available. In that year, there was $2.725 billion of new construction in New Jersey and $1.979 billion of rehabilitation. Of the $1.979 billion in rehabilitation, $0.724 billion was effected in residential structures ($0.614 billion in single-family and $0.110 billion in multifamily buildings) and $1.255 billion in nonresidential properties.

As there is no separately available data on historic properties in New Jersey, determining the share of the $1.979 billion in rehabilitation occurring in the historic stock is accomplished by sampling, using the following approach:

1. The 567 communities in New Jersey are categorized into 4 *groups or types of municipalities:* 1) urban, 2) mature suburb, 3) developing suburb, and 4) rural.
2. The *total amount* of rehabilitation in the four groups of communities by property type (e.g., single- and multifamily residential and nonresidential) is identified. The historic incidence of the total rehabilitation—that is, the amount of rehabilitation by property type effected in the historic stock—is then calculated following steps 3-8.
3. *Sample communities* within the four community types are identified—a sample "urban" community, a representative "mature suburb," and so on.
4. The *total amount* of rehabilitation by property type (e.g., single- and multifamily residential and commercial) in the four sample communities is calculated, and the activity is recorded by building block and lot numbers.
5. The *block and lot numbers* of all *historic properties* in the four sample communities are obtained.
6. The information in steps 4 and 5 is cross-indexed to identify the *rehabilitation by property type occurring in the historic stock* in the four sample communities.
7. The amount of rehabilitation in the historic stock (step 6), divided by the total rehabilitation volume in the four respective communities (step 4), yields an *historic rehabilitation percentage* by category of community (urban, mature suburb, developing suburb, and rural) and by property type (single- and multifamily residential and nonresidential).
8. These historic rehabilitation percentages (step 7), applied to the total rehabilitation by property type in the four categories of communities statewide (step 2), yields the dollar value of historic rehabilitation by property type in urban, mature suburban, developing suburban, and rural communities throughout New Jersey. Summing these amounts yields the *estimated total historic rehabilitation* effected in the state.

The calculation of steps 1-8 are further detailed below.

STEP 1: CLASSIFY MUNICIPALITIES

The Rutgers University Bureau of Government Research *Legislative Data Book* separates municipal areas in New Jersey into 9 classifications. These are:

1. major urban center
2. urban center
3. urban center—rural
4. urban-suburban
5. suburban
6. suburban-rural
7. rural center
8. rural center—rural
9. rural

This nine-member grouping has been reclassified into four groups—urban, mature suburban, developing suburban, and rural—as follows:

- Communities identified in the *Legislative Data Book* as major urban centers, urban centers, or urban center—rural are classified as URBAN.
- Communities identified in the *Legislative Data Book* as urban-suburban are classified as MATURE SUBURBAN.
- Communities identified in the *Legislative Data Book* as suburban or suburban-rural are classified as DEVELOPING SUBURBAN.
- Communities identified in the *Legislative Data Book* as rural, rural center, or rural center—rural are classified as RURAL.

The classifications have been further refined because since 1985 numerous communities classified as rural (rural, rural center, or rural center—rural) have experienced significant population growth—growth propelling these communities into the developing suburban group. To reflect the changes, communities classified as rural, rural-center, or rural center-rural in the *Legislative Data Book* that grew in population by a minimum of 25 percent between 1980 and 1990 are reclassified as developing suburban.

Applying the above procedure to all 567 municipalities in New Jersey results in the following:

1. 33 communities grouped as urban.
2. 194 communities grouped as mature suburban.
3. 270 communities grouped as developing suburban.
4. 70 communities grouped as rural

   567 communities

STEP 2: IDENTIFY TOTAL REHABILITATION BY CATEGORY OF COMMUNITY

The rehabilitation data consisted of a computer file from the New Jersey Department of Community Affairs (DCA) of all rehabilitation activity, by block and lot numbers, for all 567 municipalities in the state. Using the definitions set forth in step 1, these rehabilitation records from the DCA file for each community in New Jersey were aggregated by the four community groupings. As Exhibit A.1 shows, $404 million of the total $1.979 billion in rehabilitation statewide for New Jersey in 1994, was effected in

Exhibit A.1
State of New Jersey: Total New Construction and Total Rehabilitation[1] by Area and Property Type (1994)

	TOTAL NEW CONSTRUCTION BY PROPERTY TYPE				TOTAL REHABILITATION BY PROPERTY TYPE			
AREA	SINGLE-FAMILY	MULTIFAMILY	NON-RESIDENTIAL	TOTAL $ AMOUNT NEW CONSTRUCTION	ONE & TWO FAMILY	MULTIFAMILY	NON-RESIDENTIAL	TOTAL $ AMOUNT REHABILITATION
TOTAL—URBAN	$30,266,163	$8,412,408	$120,094,414	**$158,772,985**	$61,576,231	$46,329,369	$295,660,753	**$403,566,353**
TOTAL—MATURE SUBURB	$177,543,702	$15,887,562	$126,714,956	**$320,146,220**	$179,655,977	$28,304,106	$214,467,050	**$422,427,133**
TOTAL—DEVELOPING SUBURB	$1,389,291,265	$92,518,790	$570,294,723	**$2,052,104,778**	$349,232,068	$35,227,843	$723,798,397	**$1,108,258,308**
TOTAL—RURAL	$160,451,398	$1,116,891	$32,402,269	**$193,970,558**	$23,368,294	$496,718	$20,961,672	**$44,826,684**
TOTAL ALL AREAS	$1,757,552,528	$117,935,651	$849,506,362	**$2,724,994,541**	$613,832,570	$110,358,036	$1,254,887,872	**$1,979,078,478**

Note: 1. Includes all construction work that the Census classifies as "alterations" (not included are the Census categories of "repairs" and "additions.") It should further be clarified that rehabilitation includes alterations effected in both non-historic and historic properties (properties on federal, state, or local historic registers).

Source: New Jersey Department of Community Affairs building permit data.

urban communities; $422 million in mature suburbs; $1.108 billion in developing suburbs; and a modest amount ($45 million) in rural communities. The respective amounts—by community category, by property type, for single-family and multifamily residential and nonresidential—are further detailed in Exhibit A.1. That exhibit shows that for all the community categories, especially for the urban group, nonresidential properties dominate the total rehabilitation investment (see also Exhibit A.2).

Apportioning from that total rehabilitation the amount occurring in the historic stock is done by sampling.

Exhibit A.2
Distribution of New Jersey Construction Activity (1994)

	Dollar Amount of Construction Activity ($ in millions)		
Community Type	Total New Construction	Total Rehabilitation	**Historic Rehabilitation**
Urban	$159	$404	**$38**
Mature Suburb	320	422	**38**
Developing Suburb	2,052	1,108	**45**
Rural	194	45	**2**
Total (All Areas)	$2,725	$1,979	**$123**
	Percentage Distribution of Construction Activity		
	Rehabilitation as a % of Total New Construction and Rehabilitation	Historic Rehabilitation as a % of Total New Construction and Rehabilitation	**Estimated Historic Rehabilitation as a % of Total Rehabilitation**
Urban	71.8	6.6	**9.3**
Mature Suburb	56.9	5.1	**8.4**
Developing Suburb	35.1	1.4	**4.0**
Rural	18.4	0.8	**4.9**
Total (All Areas)	42.1	2.6	**6.2**

Source: See text.

STEP 3: SELECT SAMPLE COMMUNITIES BY COMMUNITY TYPE

Sample communities within the four categories of municipalities were selected after consultation with historic preservation officials, planners, and others (e.g., officials at the State Historic Preservation Office and the New Jersey Historic Trust). The sample municipalities chosen were:

Sample Community	Community Type
1. City of Trenton (Mercer County)	1. Urban
2. Montclair Township (Essex County)	2. Mature suburban
3. Cranbury Township (Middlesex County)	3. Developing suburban
4. Tewksbury Township (Hunterdon County)	4. Rural

There is a "catch 22" in selecting the sample communities. CUPR found that requisite information for the analysis, such as a listing of the block and lot numbers of the historic properties in a community, was available with a "reasonable" level of effort (e.g., CUPR not having to identify every property in a locality) only in municipalities where there was a higher than average interest in preservation. For example, only the city of Trenton, of all urban areas of New Jersey, had a computerized listing of its many hundreds of historic properties by block and lot numbers and other descriptors. Thus, the sample communities chosen are admittedly more active in historic preservation activities than their peers—that is, they have designated a somewhat larger share of the local stock as historic, and there is likely more rehabilitation occurring in their historic inventory.

To compensate for the selection biases, the "historic rehabilitation percentage" derived from the sample communities was ultimately reduced. Steps 4 and 5, however, assume the four sample communities are neutrally representative.

STEP 4: IDENTIFY THE TOTAL REHABILITATION IN THE FOUR SAMPLE COMMUNITIES

The DCA municipal file on rehabilitation by block and lot numbers was "run" for the four sample municipalities to derive their total rehabilitation activity by property type (e.g., single- and multifamily dwellings and nonresidential properties). Of the $48.4 million in rehabilitation that had been effected in Trenton, for example, in 1994, $7.8 million was in single-family (one-to three-family) properties; $1.2 million in multifamily; and the rest, $39.4 million, in nonresidential structures. The total rehabilitation results for the three other sample communities are shown in Exhibit A.3.

STEP 5: IDENTIFY THE BLOCK AND LOT NUMBERS OF THE HISTORIC PROPERTIES IN THE FOUR SAMPLE COMMUNITIES

CUPR obtained the block and lot numbers of all the historic properties located in the four sample communities. As described in Chapter Two, "historic" is defined as properties on the National Register of Historic Places and/or state or local registers. Properties are either individually listed as landmarks or, more typically, are located in an historic district. Properties eligible for a register, but not yet officially designated, are not counted as historic.

In Trenton, the tax assessor had the requisite information about historic buildings already on the tax records; in the other three sample municipalities the data were obtained from the local historic preservation commissions. Using this data, 1,486 historic properties were identified in Trenton (urban community), 648 in Montclair (mature suburb), 112 in Cranbury (developing suburb), and 130 in Tewksbury (rural community).*

* Tax block and lot listings. Of further note is that the total number of parcels in Trenton, Montclair, Cranbury, and Tewksbury are 25,550, 10,316, 1,115, and 2,610 respectively. Thus, the historic stock as a percentage of all parcels is 5.8, 6.3, 10.0, and 5.0 in Trenton, Montclair, Cranbury, and Tewksbury respectively. Many of the historic properties were not taxable, however, (e.g., they are government buildings, churches, or otherwise tax exempt). In the sample communities the taxable assessed value of the historic properties amounted to roughly 1 to 2 percent of the total community taxable assessed valuations.

Exhibit A.3
Total Rehabilitation[1] in the
Sample Municipalities by Property Type (1994)

		TOTAL REHABILITATION BY PROPERTY TYPE				
SAMPLE COMMUNITY	AREA	$ AMOUNT SINGLE-FAMILY HOUSING	$ AMOUNT MULTIFAMILY HOUSING	TOTAL $ AMOUNT RESIDENTIAL	$ AMOUNT NONRESIDENTIAL	TOTAL $ REHABILITATION
TRENTON CITY	URBAN	$7,808,201	$1,241,134	$9,049,335	$39,354,482	**$48,403,817**
MONTCLAIR TOWNSHIP	MATURE SUBURB	$4,309,987	$1,395,600	$5,705,587	$3,438,463	**$9,144,050**
CRANBURY TOWNSHIP	DEVELOPING SUBURB	$631,867	0	$631,867	$1,479,494	**$2,111,361**
TEWKSBURY TOWNSHIP	RURAL	$936,078	0	$936,078	$181,805	**$1,117,883**
TOTALS		$13,686,133	$2,636,734	$16,322,867	$44,454,244	**$60,777,111**

Note: 1. Includes all construction work that the Census classifies as "alterations." (Not included are the Census categories of "repairs" and "additions.") It should further be clarified that rehabilitation includes alterations effected in both non-historic and historic properties (properties on federal, state, or local historic registers.

Source: See text.

STEP 6: IDENTIFY THE HISTORIC REHABILITATION AND THE SAMPLE HISTORIC REHABILITATION INCIDENCE PERCENTAGES

The next step was to cross-link all the ordinary rehabilitation effected in the four sample communities with the rehabilitation effected on historic properties. In practice this meant that CUPR cross-matched, through a program called Paradox for Windows, rehabilitation data by block and lot numbers for the four sample communities (step 4) with the block and lot numbers of the historic properties in the four municipalities (step 5). In this matching program, information was carried forth on rehabilitation by property type—single- and multifamily residential and nonresidential.

The common occurrences—the instances where rehabilitation occurred in an historic property—in the four sample communities are shown in Exhibits A.3 through A.5.

Exhibit A.4
Total Historic[1] Rehabilitation[2] in the Sample Municipalities by Property Type (1994)

		TOTAL HISTORIC REHABILITATION BY PROPERTY TYPE				
SAMPLE COMMUNITY	AREA	$ AMOUNT SINGLE-FAMILY HOUSING	$ AMOUNT MULTIFAMILY HOUSING	TOTAL $ AMOUNT RESIDENTIAL	$ AMOUNT NONRESIDENTIAL	TOTAL $ HISTORIC REHABILI-TATION
TRENTON CITY	URBAN	$407,153	$94,475	$501,628	$6,268,456	$6,770,084
MONTCLAIR TOWNSHIP	MATURE SUBURB	$871,638	$5,671	$877,309	$272,476	$1,149,785
CRANBURY TOWNSHIP	DEVELOPING SUBURB	$19,419	0	$19,419	$107,732	$127,151
TEWKSBURY TOWNSHIP	RURAL	$80,911	0	$80,911	$1,017	$81,928
TOTALS		$1,379,121	$100,146	$1,479,267	$6,649,681	$8,128,948

Notes:
1. Includes all alterations as defined by the Census effected in historic properties (properties on federal, state, or local registers).
2. Includes all construction work that the Census classifies as "alterations" (not included are the Census categories of "repairs" and "additions.") It should further be clarified that rehabilitation includes alterations effected in both non-historic and historic properties (properties on federal, state, or local historic registers).

Source: See text.

Exhibit A.5
Total Rehabilitation[1] and Total Historic Rehabilitation[2] ($ and %)
for the Sample Communities (1994)

Sample Community	Area	Total $ Rehabilitation	Total $ Historic Rehabilitation	Derived Historic Rehabilitation Percentage[3]	Estimated Historic Rehabilitation Incidence[4]
Trenton City	Urban	$48,403,817	$6,770,084	14.0%	9.3%
Montclair Township	Mature Suburb	$9,144,050	$1,149,785	12.6%	8.4%
Cranbury Township	Developing Suburb	$2,111,361	$127,151	6.0%	4.0%
Tewksbury Township	Rural	$1,117,883	$81,928	7.3%	4.9%

Notes:
1. Includes all construction work that the Census classifies as "alterations." (Not included are the Census categories of "repairs" and "additions.") It should further be clarified that rehabilitation includes alterations effected in both non-historic and historic properties (properties on federal, state, or local historic registers).
2. Includes all alterations as defined by the Census effected in historic properties (properties on federal, state, or local registers).
3. Equals historic rehabilitation (Exhibit A.4) divided by total rehabilitation (Exhibit A.3).
4. Equals derived historic rehabilitation percentage multiplied by .67.

Source: See text.

In Trenton, a total of $6.8 million of rehabilitation was effected in historic properties in 1994. Of that $6.8 million total, $0.4 million was in historic single-family properties, $0.1 million in historic multifamily properties, and $6.3 million in historic nonresidential structures (Exhibit A.4). (The figures for the other sample communities are also summarized in Exhibit A.4.)

Having obtained the total rehabilitation dollar activity in the four municipalities (step 4), and the historic rehabilitation incidence (step 5), it was a simple matter to calculate the "derived historic rehabilitation percentage" by dividing the latter data by the former. In Trenton, this percentage turned out to be 14.0 percent. (Of the total $48.4 million in total rehabilitation in 1994, $6.8 million was in the historic stock (Exhibit A.5). For Montclair, the historic rehabilitation percentage was somewhat lower—12.6 percent—but the incidence dropped to 6.0 percent for Cranbury and 7.3 percent for Tewksbury (Exhibit A.5).

These calculations suggest that if the sample communities are representative (a point returned to shortly), then roughly $14 of every $100 in rehabilitation occurring in an urban community takes place in an historic property. In a mature suburb, the ratio is

slightly lower—$13 out of every $100. The ratio declines to $6 in $100 in developing suburbs and a similar share—$7 in $100—in rural communities.

The above shares are for historic rehabilitation in all types of properties from single-family residential to nonresidential. Rehabilitation percentages have also been developed separately for single-family properties, multifamily properties, and nonresidential buildings. These separate percentages for the four sample communities are shown in Exhibit A.6. In Trenton, 5.2 percent of all single-family rehabilitation, 7.6 percent of all multifamily rehabilitation, and 15.9 percent of all nonresidential rehabilitation is historic.

Exhibit A.6
Derived Historic Rehabilitation Percentages[1] for the Sample Communities by Property Type (1994)

		DERIVED HISTORIC REHABILITATION PERCENTAGE BY PROPERTY TYPE				
SAMPLE COMMUNITY	AREA	SINGLE-FAMILY HOUSING	MULTIFAMILY HOUSING	ALL RESIDENTIAL	NONRESIDENTIAL	TOTAL[2]
TRENTON CITY	URBAN	5.2%	7.6%	5.5%	15.9%	**14.0%**
MONTCLAIR TOWNSHIP	MATURE SUBURB	20.2%	0.4%	15.4%	7.9%	**12.6%**
CRANBURY TOWNSHIP	DEVELOPING SUBURB	3.1%	0	3.1%	7.3%	**6.0%**
TEWKSBURY TOWNSHIP	RURAL	8.6%	0	8.6%	0.6%	**7.3%**

Notes: 1. Equals historic rehabilitation by property type (Exhibit A.4) divided by the total rehabilitation by property type (Exhibit A.3).
2. Percentage for all property types.

Source: See text and Exhibits A.3 and A.4.

As noted earlier, there is a "catch 22". The full set of data to derive the historic rehabilitation percentages is available only in historically more active communities. Thus, the percentages derived are on the high side. It can be expected that in "historically less active" communities, the historic percentages will be lower. We do not know exactly how much "lower," but to be conservative, CUPR decided to take only two-thirds of the calculated historic rehabilitation percentages. This is an order-of-magnitude adjustment and was established by speaking to planners and preservationists knowledgeable about the four sample communities and the state as a whole. The adjustment to the derived percentages result (i.e., reduction by one-third) in the following "estimated historic rehabilitation percentages."

	Type of Community	Estimated Historic Rehabilitation Percentage
1.	Urban	9.3%
2.	Mature suburb	8.4%
3.	Developing suburb	4.0%
4.	Rural	4.9%
	All (communities)	6.2%

In other words, roughly about $9 in every $100 of urban rehabilitation is estimated as historic and about $8 of every $100 in mature suburbs. The ratio drops to $4 of every $100 in developing suburbs and to $5 of every $100 in rural communities (Exhibit A.7). In a parallel fashion, estimated shares can be obtained by property class. In urban communities (with Trenton as the basis), 3.5 percent of the single-family rehabilitation, 5.1 percent of the multifamily rehabilitation, and 10.6 percent of the nonresidential rehabilitation is estimated as occurring in the historic stock (Exhibit A.7).

Of further note is the historic rehabilitation's percentage as a share of total construction (the sum of all rehabilitation and new construction). It was previously shown that rehabilitation in general was more dominant in urban areas and older suburbs and that a higher share of rehabilitation in urban locations was historic (Exhibit A.2). These trends are found to a somewhat lesser extent in developing suburbs and rural communities. The upshot is that historic rehabilitation comprises a higher percentage of total construction activity in cities and older suburbs, as noted below.

	Type of Community	Historic Rehabilitation as a Percentage of Total Construction Activity
1.	Urban	6.6%
2.	Mature suburb	5.1%
3.	Developing suburb	1.4%
4.	Rural	0.8%
	All (communities)	2.6%

Exhibit A.7
Estimated Historic Rehabilitation Percentages[1]
by Property Type in Four Sample Communities (1994)

		ESTIMATED HISTORIC REHABILITATION PERCENTAGE BY PROPERTY TYPE				
SAMPLE COMMUNITY	AREA	SINGLE-FAMILY HOUSING	MULTIFAMILY HOUSING	TOTAL RESIDENTIAL	NONRESIDENTIAL	TOTAL[2]
TRENTON CITY	URBAN	3.5%	5.1%	3.7%	10.6%	9.3%
MONTCLAIR TOWNSHIP	MATURE SUBURB	13.5%	0.3%	10.3%	5.3%	8.4%
CRANBURY TOWNSHIP	DEVELOPING SUBURB	2.0%	0	2.0%	4.9%	4.0%
TEWKSBURY TOWNSHIP	RURAL	5.8%	0	5.8%	0.4%	4.9%

Notes: 1. Equals derived historic rehabilitation percentage (Exhibit A.6) multiplied by .67.
2. Percentage for all property types.

Source: See text.

STEP 7: ESTIMATE THE DOLLAR VOLUME OF HISTORIC REHABILITATION

As a final step, the estimated historic rehabilitation percentage by property type (step 6; Exhibit A.6) in the four categories of communities (urban, mature suburb, developing suburb, and rural) was applied to the total dollar value of rehabilitation activity statewide by property type for each of the four community categories. The calculations for urban communities, including Trenton, are illustrative. In step 2 it was derived that in 1994 there was $403,566,353 in total rehabilitation in urban communities, of which $61,576,231 was single-family, $46,329,369 multifamily, and $295,660,953 nonresidential. The estimated historic rehabilitation percentages for the three categories of properties (derived from Trenton) are 3.5 percent for single-family, 5.1 percent for multifamily, and 10.6 percent for nonresidential. Applying the urban historic percentages to the total urban rehabilitation volume by property type yields the following: An estimated $2,296,357* of the total $61,572,231 in urban single-family rehabilitation in New Jersey is historic ($61,572,231 x 3.5 percent)*; an estimated $2,522,160* of the total $46,329,369 in urban multifamily rehabilitation is historic ($46,329,369 x 5.1 percent)*, and an estimated $32,686,036* of the total $295,660,753 in nonresidential rehabilitation is historic $295,660,753 x 10.6 percent)* . Summing all three categories results in an estimated $37,504,553 of rehabilitation in urban communities in New Jersey being effected in historic properties in 1994 (Exhibit A.8).

* Figures do not calculate exactly because the analysis applies percentages to more decimal places than shown here.

The same procedure was applied for the other categories of communities, with the following results: In 1994 there was an estimated $38,216,860 in historic preservation in mature suburbs, $45,351,393 in developing suburbs, and $1,528,430 in rural communities. Adding these to the previously estimated $37,504,533 of historic preservation activity in urban communities yields a total estimated statewide level of historic preservation of $122,601,236 in 1994. A more detailed breakout by property type is shown in Exhibit A.8. As noted, however, in all instances, these figures are estimated and are likely conservative—that is, low—estimates.

Exhibit A.8
Estimated New Jersey Historic Rehabilitation[1]
by Property Type

	ESTIMATED HISTORIC REHABILITATION BY PROPERTY TYPE				
AREA	SINGLE-FAMILY	MULTIFAMILY	RESIDENTIAL SUBTOTAL	NONRESIDENTIAL	TOTAL ALL CATEGORIES
TOTAL— URBAN	$2,296,357	$2,522,160	$4,818,517	$32,686,036	**$37,504,553**
TOTAL— MATURE SUBURB	$25,984,944	$82,249	$26,067,193	$12,149,667	**$38,216,860**
TOTAL— DEVELOPING SUBURB	$7,675,860	0	$7,675,860	$37,675,533	**$45,351,393**
TOTAL—RURAL	$1,444,573	0	$1,444,573	$83,857	**$1,528,430**
TOTAL ALL AREAS	$37,401,734	$2,604,409	$40,006,143	$82,595,093	**$122,601,236**

Source: 1. See text. Equals total rehabilitation by property type (Exhibit A.1) multiplied by the estimated historic rehabilitation percentages by property type.

Appendix B

Specification of Construction Activities and Spending Comprising Historic Rehabilitation

INTRODUCTION

The projection of the economic benefits ensuing from rehabilitation in the historic stock requires the specification of the "bundle" of construction activities—ranging from site to plumbing work—comprising historic rehabilitation, with each activity including outlays for both labor and materials. If one is examining an individual rehabilitation project, such information is typically available from plans prepared by an architect, engineer, cost estimator, and so on. But, when individual project information is unavailable—such as in the current case when historic rehabilitation statewide (New Jersey) is being examined—what generically does the rehabilitation of historic buildings comprise in terms of different types of construction activities and spending? In other words, for every dollar spent on historic rehabilitation, how many cents on average will go for site work, how many cents for mechanical work, and so on, with each of these groups further specified by spending for materials versus outlays.

This appendix develops these data and to that end proceeds in a multi-step analysis as follows:

Step 1: Develop a typology of construction activities/spending

Step 2: Calibrate the typology of construction activities/spending for the rehabilitation of historic buildings

Step 3: Refine the historic construction activity/spending data

STEP 1: DEVELOP A TYPOLOGY OF CONSTRUCTION ACTIVITIES/SPENDING

There are different approaches to apportioning a construction project into a series of component tasks and outlays. Such specification is typically accomplished for cost estimation before a job begins, and for cost control and other financial purposes once construction ensues (e.g., a bank extending loans for work as it is completed). Hanscomb, one of the world's largest professional construction management consulting firms has developed a multiple-level construction taxonomy that apportions a construction job into 12 categories: 1. foundations; 2. substructure; 3. superstructure; 4. exterior closure; 5. roofing; 6. interior construction; 7. conveying; 8. mechanical; 9. electrical; 10. equipment; 11. site work; and 12. general. Each category is comprised of numerous subcategories. Hanscomb's site work (category 11) encompasses "site preparation," "site improvements," "site utilities," and "off-site work," while the mechanical group (category 8) includes "plumbing," "HVAC," "fire protection," and "special mechanical systems."

Another taxonomy has been developed by the Construction Systems Institute (CSI), which apportions construction into 16 divisions as follows:

CSI Divisions #	Description
1	General Requirements
2	Site Work
3	Concrete
4	Masonry
5	Metals
6	Wood and Plastics
7	Thermal and Moisture Protection
8	Doors and Windows
9	Finishes
10	Specialties
11	Equipment
12	Furnishings
13	Special Construction
14	Conveying Systems
15	Mechanical
16	Electrical

Each of the CSI divisions, in turn, encompasses numerous subcategories that are assigned their own subcodes. For example, masonry (division 4) includes "mortar and masonry accessories" (04100), "unit masonry" (04200), "stone" (04400), "masonry restoration" (04500), and "corrosion resistant masonry" (04600).

CUPR decided to apply the CSI construction taxonomy in the current analysis because, of the various construction organizational systems, CSI is the most widely used by architects, construction cost estimators, and so on. As an illustration, when funds are requested from the New Jersey Historic Trust (NJHT) to finance rehabilitation on a historic building, the NJHT application requests a breakout of expenditures by CSI categories.

CUPR decided to apply the major group of the CSI system—the 16 divisions—instead of the further more detailed level of the divisions' subcategories because these 16 divisions, in themselves, provide sufficient information to project the economic impacts of historic rehabilitation via input-output analysis (see Chapter Two). Moreover, there are so many CSI activity subcategories (140) that it would be a "data nightmare" to collect and require specification of historic rehabilitation construction job data at so fine a level.

In short, for both substantive and practical reasons, historic rehabilitation construction activity is specified according to the CSI typology—at the 16 division level. For each one of the 16 categories, we further need to know the apportionment into outlays for labor versus materials. Thus the construction activity and spending data matrix has 32 cells—the 16 CSI divisions multiplied by the 2 labor versus materials cells.

The 32 cell construction data matrix will also differentiate by type of historic property in which the rehabilitation occurs. Although to a certain extent every property

is unique, four broad categories can be differentiated and should be considered as a starting basis:

1. residential—single family (1–3 units)
2. residential—multifamily (4+ units)
3. nonresidential (e.g., commercial and industrial)
4. civic-institutional (e.g., courthouse or city hall)

In sum, the end result of Step 1 is the establishment of a 32 cell construction data matrix—(16 CSI divisions by labor/material subcomponents) for four categories of buildings. The next step is to calibrate the 32 cell data matrix from a sample of historic rehabilitation properties.

STEP 2: CALIBRATE THE TYPOLOGY OF CONSTRUCTION ACTIVITY/SPENDING FOR THE REHABILITATION OF HISTORIC BUILDINGS

CUPR obtained information on rehabilitation effected on a variety of historic properties by:

1. Contacting developers/sponsors known to be active in historic preservation in New Jersey and in the New York metropolitan area as well as nationally.

2. Contacting the National Park Service as well as numerous state historic preservation offices (e.g., New Jersey SHPO) for files on historic rehabilitation projects certified for federal tax credits.

3. Obtaining files on historic rehabilitation projects in New Jersey that had received funding from the New Jersey Historic Trust.

From these three sources, CUPR obtained detailed information on 56 historic rehabilitation projects encompassing $97.4 million of rehabilitation. These included: 13 single-family (one- to three-unit) historic rehabilitation projects valued at $1.2 million; 9 multifamily (four or more units) projects valued at $26.9 million; and 34 nonresidential and civic-institutional projects valued at $69.3 million. The profile of the 56 case studies is summarized in Exhibit B.1.

The projects that were analyzed ranged considerably in terms of: dollars expended (see Exhibit B.1); nature of the rehabilitation (e.g., from cosmetic exterior repairs, such as painting, to extensive facade restoration, such as regilding); interior restoration work, from extensive to virtually none; location (e.g., rural, suburban, and inner city); sponsors (e.g., nonprofits and for-profits, public and private, and novice to experienced); and other dimensions (e.g., privately funded versus publicly aided; and federal tax credit jobs versus jobs not qualifying for or applying for such credits). All of the projects were relatively current, however. The rehabilitation was conducted from roughly 1990 to 1995.

Construction data by the 16 CSI divisions were obtained for each of the projects and when available (i.e., when a developer was willing to release the data) the apportionment of each division into labor versus materials spending was recorded. The data were aggregated by the four building types and averages from the results of the individual projects by building type were then obtained. For instance, the sample data for the single-family category indicated that, on average, 5.2 percent of total

rehabilitation construction outlays falls in the masonry group (CSI division 4), 18.0 percent falls in the wood and plastics category (CSI division 6), and so on for a total of 100 percent of spending. An average breakout of labor versus materials spending by CSI division was calculated as well. In the wood and plastics category, for instance, in the sample single-family historic buildings, 37 percent of the outlays were for labor and 63 percent for materials.

Exhibit B.1
Historic Rehabilitation Projects Examined by CUPR

Type	Number of Properties	Total $ Value	Average Project $
Residential Single Family	13	$1,220,992	$93,922
Residential Multifamily	9	26,942,869	2,993,652
Nonresidential and Civic-Institutional	34	69,300,883	2,038,261
	56	$97,464,744	$1,740,442

Source: See text.

STEP 3: REFINE THE CONSTRUCTION ACTIVITY DATA

The data obtained from steps 1 and 2 reflect the experiences of the sample projects. To broaden the analysis, CUPR had the sample construction activity data studied by an expert, Anthony T. Baiono. Mr. Baiono is an architect of some 40 years experience who, in the last 10 years, has specialized in construction cost estimating. Over his long career, Mr. Baiono has examined construction (rehabilitation and new construction) bids and outlays for thousands of buildings—both historic and nonhistoric. His review led to the refinement of the sample construction activity data as follows.

1. The expert concluded that on an order of magnitude basis, the 32 cell data matrix (16 CSI divisions by labor/materials) developed for the 4 property categories was "reasonable."
2. The expert recommended that in addition to building type (single-family, multifamily, nonresidential, and civic-institutional), the construction activity (32 cell) data matrix should be differentiated by other variables including:
    a. *Building composition* (masonry versus wood)
    b. *Scope of exterior building work* (less versus more extensive)
    c. *Scope of interior building work* (less versus more extensive)
    d. *Site work scope* (less versus more extensive)
    e. *Systems scope* (the degree to which existing plumbing and/or electrical systems are retained or conversely renewed—i.e., replaced or significantly upgraded.

These respective building type/activity variables are summarized in Exhibit B.2.

Exhibit B.2
Building Type/Activity Characteristics for Identifying Historic Rehabilitation Spending Patterns

Building Type/ Activity Variables	Categories	
1. Building Type		
	a. Single-family residential—1-3 housing units	
	b. Multifamily residential—4+ housing units	
	c. Nonresidential—commercial and industrial	
	d. Civic-institutional—courthouse, city hall, etc.	
2. Building Material		
	a. Wood	
	b. Masonry	
3. Exterior (Building) Work Scope		
	a. Extensive for wood building	(e.g., considerable work on exterior studs, shingles, exterior trim, blocking, siding)
	b. Standard for wood building	(e.g., some trim and/or siding repair/replacement)
	c. Extensive for masonry building	(e.g., extensive repointing, work on stone trim, and major masonry repair/replacement)
	d. Standard for masonry building	(e.g., some cleaning and repointing)
4. Interior (Building) Work Scope		
	a. Extensive	(e.g., extensive stripping, refinishing or restoration most floors, doors, panels)
	b. Standard	(e.g., some cleaning and painting of floors, doors, and panels)
5. Site Work Scope		
	a. Extensive	(e.g., extensive removal and cartage, such as from major repair of roof or partitions; also encompasses extensive landscaping)
	b. Standard	(e.g., minor removal, cartage, and/or landscaping)
6. Systems Scope		
	a. Extensive	(e.g., major upgrade or replacement of plumbing, HVAC, sprinkler, and/or electrical systems)
	b. Standard	(e.g., repair to or minor replacement of plumbing, HVAC, and/or electrical systems)

Separate 32 cell (16 CSI divisions by 2 labor/material cells) construction activity/spending matrices were developed, in turn, for the different building type/activity variables. This was done by the expert examining the sample project data assembled by CUPR and suggesting modifications as appropriate. For instance, since many of the single-family rehabilitation projects surveyed by CUPR were *wooden* structures, the expert recommended adjusting the single-family buildings category to reflect relatively higher rehabilitation spending in the CSI wood category (division 6) and lower outlays in the CSI masonry division. The expert further suggested a labor and materials breakout by the 16 CSI divisions, as shown in Exhibit B.3.

The details of the multiple cell construction activity/spending data matrices by the six respective building type/activity variables are shown in Exhibit B.4. (The full 32 cell construction activity/data matrix is contained in CUPR's computer files). Some of the differences are highlighted below:

1. Building Type	Higher relative allocation of spending for electrical (CSI division 16) in civic-institutional versus single-family buildings
2. Building Material	Higher relative allocation of spending in wood (CSI division 6) for wooden buildings and higher in masonry (CSI division 4) for masonry structures
3. Exterior (Building) Work Scope	Still higher allocation of spending in wood (CSI division 6) if extensive exterior work is effected in a wooden building
4. Interior (Building) Work Scope	Spending on finishes (CSI division 9) is higher if extensive interior work is effected
5. Site Work Scope	If there is extensive cartage or landscaping, relative spending in the site work category (CSI division 2) is increased
6. Systems Scope	Higher relative allocation of spending in the mechanical and electrical groups (CSI divisions 15 and 16) in instances where these systems are replaced or extensively upgraded

The above discussion just touches upon the many permutations of spending emphasis by the type of building and rehabilitation activity. The full details are contained in Exhibit B.4 which shows generically (when project-specific data are unavailable), the allocation of spending encompassing the rehabilitation of historic buildings.

Exhibit B.3
Labor and Materials Distribution by CSI Divisions
(excluding soft costs)

Construction Division	Labor	Materials	Total
1. General Requirements	90	10	100%
2. Site work	60	40	100%
3. Concrete	60	40	100%
4. Masonry	60	40	100%
5. Metals	40	60	100%
6. Wood and Plastic	35	65	100%
7. Thermal and Moisture Protection	45	55	100%
8. Doors and Windows	35	65	100%
9. Finishes	35	65	100%
10. Specialties	30	70	100%
11. Equipment	15	85	100%
12. Furnishings	15	85	100%
13. Special Construction	15	85	100%
14. Conveying Systems	15	85	100%
15. Mechanical	60	40	100%
16. Electrical	60	40	100%
If soft costs are included			
0. Architect/Engineer	90	10	100%
17. Attorney/other	90	10	100%

Source: See text.

Exhibit B.4 is presented in two versions. The first (Exhibit B.4) *excludes* professional costs for architects, engineers, attorneys, and so on. The second (Exhibit B.4A) *includes* these professional outlays. The professional outlays in Exhibit B.4A are overlaid on the 16 category CSI index, with these "soft costs" shown in an added category "0" (architecture and engineering) and category 17 (attorney /other).

Exhibit B.4 (and Exhibit B.4A) thus show generically (when project-specific data are unavailable) the allocation of spending encompassing the rehabilitation of historic buildings.

APPLYING THE HISTORIC REHABILITATION CONSTRUCTION DATA

The information presented in Exhibit B.4 can be applied in two ways. To deconstruct a specific historic rehabilitation project, the applicable cost component data by: 1. building type, 2. building material, 3. interior work scope, 4. exterior work scope, 5. site work scope, and 6. systems scope would be used. For instance, if one million dollars (excluding professional costs) was spent for the rehabilitation of a historic masonry court house where extensive work was done throughout the structure then Exhibit B.4 (as opposed to B.4A, which includes professional costs) would be referenced for the following building type/variables.

1. Building type—civic-institutional
2. Building materials—wood
3. Exterior work scope—extensive
4. Interior work scope—extensive
5. Site work scope—extensive
6. Systems work scope—extensive

Of the million dollars of historic rehabilitation in the example above, on average this work would consist of $132,000 in site work, $130,000 in doors and windows, and $91,000 in concrete work (CSI divisions 2, 8, and 3 respectively) with the remaining outlays in the other CSI divisions detailed in Exhibit B.4. If one wanted to include the breakout of outlays with soft costs as well, then the allocation of Exhibit B.4A would be referenced.

Where full detail on the type of historic rehabilitation is unavailable, then the best available information is used. For instance, with respect to the historic rehabilitation in New Jersey, the only breakout available concerns the building type. Of the total $122.6 million of historic rehabilitation in this state, the distribution by building type is as follows:

Building Type	Amount of Historic Rehabilitation ($ in millions)
1. single-family	$37.4
2. multifamily	2.6
3. non-residential	82.6
TOTAL	$122.6

The average cost breakout by building type noted in Exhibit B.4 (the average is taken for wood and masonry buildings, standard and extensive exterior work, and so on) is then applied to the above historic rehabilitation investment by building type to detail the components (e.g., outlays for concrete versus metals and materials versus

labor spending) of the $122.6 million of historic rehabilitation effected in New Jersey. Once this investment is deconstructed into its constituent detailed outlays, these outlays are entered as inputs into a larger input-output model of the economy.

In a similar fashion, when the economic impacts of the rehabilitation financed by the New Jersey Historic Trust (NJHT) is examined (Chapter Nine), the average cost breakout for civic-institutional historic rehabilitation is applied because that is the type of historic rehabilitation that the NJHT fosters. This allows the deconstruction of the NJHT-aided activity, such as for concrete versus metals and materials versus labor spending that then allows an input-output model to be applied to the NJHT's historic rehabilitation.

EXHIBIT B.4

Construction Activity and Spending Matrix (Excluding Professional Costs)

Category 1: Single-Family Housing
Standard Interior

Standard Systems

Division	*Standard Site Work*				*Extensive Site Work*			
	Masonry & Standard Exterior	Masonry & Extensive Exterior	Wood & Standard Exterior	Wood & Extensive Exterior	Masonry & Standard Exterior	Masonry & Extensive Exterior	Wood & Standard Exterior	Wood & Extensive Exterior
1. General Requirements	9.8%	9.8%	9.8%	9.8%	9.6%	9.6%	9.6%	9.6%
2. Site Work	12.5%	12.5%	12.5%	12.5%	14.5%	14.5%	14.5%	14.5%
3. Concrete	2.3%	2.3%	2.3%	1.1%	2.3%	2.3%	2.3%	1.1%
4. Masonry	10.0%	12.4%	6.3%	3.9%	9.8%	12.1%	6.2%	3.8%
5. Metals	0.6%	0.6%	0.6%	0.6%	0.6%	0.6%	0.6%	0.6%
6. Wood and Plastic	18.2%	15.8%	21.8%	25.5%	17.8%	15.4%	21.3%	24.9%
7. Thermal and Moisture Protection	5.0%	5.0%	5.0%	5.0%	4.9%	4.9%	4.9%	4.9%
8. Doors and Windows	12.3%	12.3%	12.3%	12.3%	12.0%	12.0%	12.0%	12.0%
9. Finishes	16.7%	16.7%	16.7%	16.7%	16.4%	16.4%	16.4%	16.4%
10. Specialties	0.2%	0.2%	0.2%	0.2%	0.2%	0.2%	0.2%	0.2%
11. Equipment	2.6%	2.6%	2.6%	2.6%	2.5%	2.5%	2.5%	2.5%
12. Furnishings	0.0%	0.0%	0.0%	0.0%	0.0%	0.0%	0.0%	0.0%
13. Special Construction	0.0%	0.0%	0.0%	0.0%	0.0%	0.0%	0.0%	0.0%
14. Conveying Systems	0.0%	0.0%	0.0%	0.0%	0.0%	0.0%	0.0%	0.0%
15. Mechanical	7.0%	7.0%	7.0%	7.0%	6.8%	6.8%	6.8%	6.8%
16. Electrical	2.7%	2.7%	2.7%	2.7%	2.6%	2.6%	2.6%	2.6%
Total	**100.0%**	**100.0%**	**100.0%**	**100.0%**	**100.0%**	**100.0%**	**100.0%**	**100.0%**

Extensive Interior

Standard Systems

Division	*Standard Site Work*				*Extensive Site Work*			
	Masonry & Standard Exterior	Masonry & Extensive Exterior	Wood & Standard Exterior	Wood & Extensive Exterior	Masonry & Standard Exterior	Masonry & Extensive Exterior	Wood & Standard Exterior	Wood & Extensive Exterior
1. General Requirements	9.8%	9.8%	9.8%	9.8%	9.6%	9.6%	9.6%	9.6%
2. Site Work	12.5%	12.5%	12.5%	12.5%	14.5%	14.5%	14.5%	14.5%
3. Concrete	1.1%	1.1%	1.1%	-0.1%	1.1%	1.1%	1.1%	-0.1%
4. Masonry	8.8%	11.2%	5.1%	2.7%	8.6%	10.9%	5.0%	2.6%
5. Metals	0.6%	0.6%	0.6%	0.6%	0.6%	0.6%	0.6%	0.6%
6. Wood and Plastic	17.0%	14.5%	20.6%	24.3%	16.6%	14.2%	20.1%	23.7%
7. Thermal and Moisture Protection	5.0%	5.0%	5.0%	5.0%	4.9%	4.9%	4.9%	4.9%
8. Doors and Windows	12.3%	12.3%	12.3%	12.3%	12.0%	12.0%	12.0%	12.0%
9. Finishes	20.4%	20.4%	20.4%	20.4%	19.9%	19.9%	19.9%	19.9%
10. Specialties	0.2%	0.2%	0.2%	0.2%	0.2%	0.2%	0.2%	0.2%
11. Equipment	2.6%	2.6%	2.6%	2.6%	2.5%	2.5%	2.5%	2.5%
12. Furnishings	0.0%	0.0%	0.0%	0.0%	0.0%	0.0%	0.0%	0.0%
13. Special Construction	0.0%	0.0%	0.0%	0.0%	0.0%	0.0%	0.0%	0.0%
14. Conveying Systems	0.0%	0.0%	0.0%	0.0%	0.0%	0.0%	0.0%	0.0%
15. Mechanical	7.0%	7.0%	7.0%	7.0%	6.8%	6.8%	6.8%	6.8%
16. Electrical	2.7%	2.7%	2.7%	2.7%	2.6%	2.6%	2.6%	2.6%
Total	**100.0%**	**100.0%**	**100.0%**	**100.0%**	**100.0%**	**100.0%**	**100.0%**	**100.0%**

Division Breakdown

Category 1: Single-Family Housing
Standard Interior

Division	*Extensive Systems*							
	Standard Site Work				*Extensive Site Work*			
	Masonry & Standard Exterior	Masonry & Extensive Exterior	Wood & Standard Exterior	Wood & Extensive Exterior	Masonry & Standard Exterior	Masonry & Extensive Exterior	Wood & Standard Exterior	Wood & Extensive Exterior
1. General Requirements	10.9%	10.9%	10.9%	10.9%	10.6%	10.6%	10.6%	10.6%
2. Site Work	13.9%	13.9%	13.9%	13.9%	15.9%	15.9%	15.9%	15.9%
3. Concrete	1.9%	1.9%	1.9%	0.9%	1.9%	1.9%	1.9%	0.9%
4. Masonry	8.2%	10.2%	5.2%	3.2%	8.0%	10.0%	5.1%	3.1%
5. Metals	0.5%	0.5%	0.5%	0.5%	0.5%	0.5%	0.5%	0.5%
6. Wood and Plastic	15.0%	13.0%	18.0%	21.0%	14.6%	12.7%	17.5%	20.5%
7. Thermal and Moisture Protection	4.1%	4.1%	4.1%	4.1%	4.0%	4.0%	4.0%	4.0%
8. Doors and Windows	10.1%	10.1%	10.1%	10.1%	9.9%	9.9%	9.9%	9.9%
9. Finishes	13.8%	13.8%	13.8%	13.8%	13.5%	13.5%	13.5%	13.5%
10. Specialties	0.2%	0.2%	0.2%	0.2%	0.2%	0.2%	0.2%	0.2%
11. Equipment	2.1%	2.1%	2.1%	2.1%	2.1%	2.1%	2.1%	2.1%
12. Furnishings	0.0%	0.0%	0.0%	0.0%	0.0%	0.0%	0.0%	0.0%
13. Special Construction	0.0%	0.0%	0.0%	0.0%	0.0%	0.0%	0.0%	0.0%
14. Conveying Systems	0.0%	0.0%	0.0%	0.0%	0.0%	0.0%	0.0%	0.0%
15. Mechanical	13.9%	13.9%	13.9%	13.9%	13.6%	13.6%	13.6%	13.6%
16. Electrical	5.3%	5.3%	5.3%	5.3%	5.2%	5.2%	5.2%	5.2%
Total	**100.0%**	**100.0%**	**100.0%**	**100.0%**	**100.0%**	**100.0%**	**100.0%**	**100.0%**

Extensive Interior

Division	*Extensive Systems*							
	Standard Site Work				*Extensive Site Work*			
	Masonry & Standard Exterior	Masonry & Extensive Exterior	Wood & Standard Exterior	Wood & Extensive Exterior	Masonry & Standard Exterior	Masonry & Extensive Exterior	Wood & Standard Exterior	Wood & Extensive Exterior
1. General Requirements	10.9%	10.9%	10.9%	10.9%	10.6%	10.6%	10.6%	10.6%
2. Site Work	13.9%	13.9%	13.9%	13.9%	15.9%	15.9%	15.9%	15.9%
3. Concrete	0.9%	0.9%	0.9%	-0.1%	0.9%	0.9%	0.9%	-0.1%
4. Masonry	7.2%	9.2%	4.2%	2.2%	7.1%	9.0%	4.1%	2.2%
5. Metals	0.5%	0.5%	0.5%	0.5%	0.5%	0.5%	0.5%	0.5%
6. Wood and Plastic	14.0%	12.0%	17.0%	20.0%	13.6%	11.7%	16.6%	19.5%
7. Thermal and Moisture Protection	4.1%	4.1%	4.1%	4.1%	4.0%	4.0%	4.0%	4.0%
8. Doors and Windows	10.1%	10.1%	10.1%	10.1%	9.9%	9.9%	9.9%	9.9%
9. Finishes	16.8%	16.8%	16.8%	16.8%	16.4%	16.4%	16.4%	16.4%
10. Specialties	0.2%	0.2%	0.2%	0.2%	0.2%	0.2%	0.2%	0.2%
11. Equipment	2.1%	2.1%	2.1%	2.1%	2.1%	2.1%	2.1%	2.1%
12. Furnishings	0.0%	0.0%	0.0%	0.0%	0.0%	0.0%	0.0%	0.0%
13. Special Construction	0.0%	0.0%	0.0%	0.0%	0.0%	0.0%	0.0%	0.0%
14. Conveying Systems	0.0%	0.0%	0.0%	0.0%	0.0%	0.0%	0.0%	0.0%
15. Mechanical	13.9%	13.9%	13.9%	13.9%	13.6%	13.6%	13.6%	13.6%
16. Electrical	5.3%	5.3%	5.3%	5.3%	5.2%	5.2%	5.2%	5.2%
Total	**100.0%**	**100.0%**	**100.0%**	**100.0%**	**100.0%**	**100.0%**	**100.0%**	**100.0%**

Category 2: Multifamily Housing
Standard Interior

Standard Systems

Division	*Standard Site Work*				*Extensive Site Work*			
	Masonry & Standard Exterior	Masonry & Extensive Exterior	Wood & Standard Exterior	Wood & Extensive Exterior	Masonry & Standard Exterior	Masonry & Extensive Exterior	Wood & Standard Exterior	Wood & Extensive Exterior
1. General Requirements	6.9%	6.9%	6.9%	6.9%	6.7%	6.7%	6.7%	6.7%
2. Site Work	11.1%	11.1%	11.1%	11.1%	13.1%	13.1%	13.1%	13.1%
3. Concrete	2.5%	2.5%	2.5%	1.9%	2.5%	2.5%	2.5%	1.9%
4. Masonry	10.1%	13.9%	7.6%	5.7%	9.9%	13.6%	7.4%	5.6%
5. Metals	2.2%	2.2%	2.2%	2.2%	2.2%	2.2%	2.2%	2.2%
6. Wood and Plastic	16.5%	12.7%	19.0%	21.5%	16.1%	12.4%	18.6%	21.0%
7. Thermal and Moisture Protection	3.4%	3.4%	3.4%	3.4%	3.3%	3.3%	3.3%	3.3%
8. Doors and Windows	12.5%	12.5%	12.5%	12.5%	12.2%	12.2%	12.2%	12.2%
9. Finishes	16.0%	16.0%	16.0%	16.0%	15.6%	15.6%	15.6%	15.6%
10. Specialties	0.6%	0.6%	0.6%	0.6%	0.6%	0.6%	0.6%	0.6%
11. Equipment	2.1%	2.1%	2.1%	2.1%	2.0%	2.0%	2.0%	2.0%
12. Furnishings	0.6%	0.6%	0.6%	0.6%	0.6%	0.6%	0.6%	0.6%
13. Special Construction	2.8%	2.8%	2.8%	2.8%	2.8%	2.8%	2.8%	2.8%
14. Conveying Systems	1.7%	1.7%	1.7%	1.7%	1.7%	1.7%	1.7%	1.7%
15. Mechanical	7.0%	7.0%	7.0%	7.0%	6.8%	6.8%	6.8%	6.8%
16. Electrical	3.9%	3.9%	3.9%	3.9%	3.8%	3.8%	3.8%	3.8%
Total	**100.0%**	**100.0%**	**100.0%**	**100.0%**	**100.0%**	**100.0%**	**100.0%**	**100.0%**

Extensive Interior

Standard Systems

Division	*Standard Site Work*				*Extensive Site Work*			
	Masonry & Standard Exterior	Masonry & Extensive Exterior	Wood & Standard Exterior	Wood & Extensive Exterior	Masonry & Standard Exterior	Masonry & Extensive Exterior	Wood & Standard Exterior	Wood & Extensive Exterior
1. General Requirements	6.9%	6.9%	6.9%	6.9%	6.7%	6.7%	6.7%	6.7%
2. Site Work	11.1%	11.1%	11.1%	11.1%	13.1%	13.1%	13.1%	13.1%
3. Concrete	1.3%	1.3%	1.3%	0.6%	1.2%	1.2%	1.2%	0.6%
4. Masonry	8.9%	12.6%	6.4%	4.5%	8.7%	12.3%	6.2%	4.4%
5. Metals	2.2%	2.2%	2.2%	2.2%	2.2%	2.2%	2.2%	2.2%
6. Wood and Plastic	15.2%	11.5%	17.7%	20.2%	14.9%	11.2%	17.3%	19.8%
7. Thermal and Moisture Protection	3.4%	3.4%	3.4%	3.4%	3.3%	3.3%	3.3%	3.3%
8. Doors and Windows	12.5%	12.5%	12.5%	12.5%	12.2%	12.2%	12.2%	12.2%
9. Finishes	19.8%	19.8%	19.8%	19.8%	19.3%	19.3%	19.3%	19.3%
10. Specialties	0.6%	0.6%	0.6%	0.6%	0.6%	0.6%	0.6%	0.6%
11. Equipment	2.1%	2.1%	2.1%	2.1%	2.0%	2.0%	2.0%	2.0%
12. Furnishings	0.6%	0.6%	0.6%	0.6%	0.6%	0.6%	0.6%	0.6%
13. Special Construction	2.8%	2.8%	2.8%	2.8%	2.8%	2.8%	2.8%	2.8%
14. Conveying Systems	1.7%	1.7%	1.7%	1.7%	1.7%	1.7%	1.7%	1.7%
15. Mechanical	7.0%	7.0%	7.0%	7.0%	6.8%	6.8%	6.8%	6.8%
16. Electrical	3.9%	3.9%	3.9%	3.9%	3.8%	3.8%	3.8%	3.8%
Total	**100.0%**	**100.0%**	**100.0%**	**100.0%**	**100.0%**	**100.0%**	**100.0%**	**100.0%**

Category 2: Multifamily Housing
Standard Interior

Division	*Extensive Systems*							
	Standard Site Work				*Extensive Site Work*			
	Masonry & Standard Exterior	Masonry & Extensive Exterior	Wood & Standard Exterior	Wood & Extensive Exterior	Masonry & Standard Exterior	Masonry & Extensive Exterior	Wood & Standard Exterior	Wood & Extensive Exterior
1. General Requirements	8.2%	8.2%	8.2%	8.2%	8.0%	8.0%	8.0%	8.0%
2. Site Work	13.1%	13.1%	13.1%	13.1%	15.1%	15.1%	15.1%	15.1%
3. Concrete	2.0%	2.0%	2.0%	1.5%	2.0%	2.0%	2.0%	1.5%
4. Masonry	8.1%	11.1%	6.1%	4.6%	7.9%	10.8%	6.0%	4.5%
5. Metals	1.8%	1.8%	1.8%	1.8%	1.8%	1.8%	1.8%	1.8%
6. Wood and Plastic	13.2%	10.2%	15.2%	17.2%	12.9%	10.0%	14.8%	16.8%
7. Thermal and Moisture Protection	2.7%	2.7%	2.7%	2.7%	2.7%	2.7%	2.7%	2.7%
8. Doors and Windows	10.0%	10.0%	10.0%	10.0%	9.7%	9.7%	9.7%	9.7%
9. Finishes	12.8%	12.8%	12.8%	12.8%	12.5%	12.5%	12.5%	12.5%
10. Specialties	0.5%	0.5%	0.5%	0.5%	0.5%	0.5%	0.5%	0.5%
11. Equipment	1.7%	1.7%	1.7%	1.7%	1.6%	1.6%	1.6%	1.6%
12. Furnishings	0.5%	0.5%	0.5%	0.5%	0.5%	0.5%	0.5%	0.5%
13. Special Construction	2.3%	2.3%	2.3%	2.3%	2.2%	2.2%	2.2%	2.2%
14. Conveying Systems	1.4%	1.4%	1.4%	1.4%	1.3%	1.3%	1.3%	1.3%
15. Mechanical	13.9%	13.9%	13.9%	13.9%	13.6%	13.6%	13.6%	13.6%
16. Electrical	7.8%	7.8%	7.8%	7.8%	7.6%	7.6%	7.6%	7.6%
Total	**100.0%**	**100.0%**	**100.0%**	**100.0%**	**100.0%**	**100.0%**	**100.0%**	**100.0%**

Extensive Interior

Division	*Extensive Systems*							
	Standard Site Work				*Extensive Site Work*			
	Masonry & Standard Exterior	Masonry & Extensive Exterior	Wood & Standard Exterior	Wood & Extensive Exterior	Masonry & Standard Exterior	Masonry & Extensive Exterior	Wood & Standard Exterior	Wood & Extensive Exterior
1. General Requirements	8.2%	8.2%	8.2%	8.2%	8.0%	8.0%	8.0%	8.0%
2. Site Work	13.1%	13.1%	13.1%	13.1%	15.1%	15.1%	15.1%	15.1%
3. Concrete	1.0%	1.0%	1.0%	0.5%	1.0%	1.0%	1.0%	0.5%
4. Masonry	7.1%	10.1%	5.1%	3.6%	6.9%	9.9%	5.0%	3.5%
5. Metals	1.8%	1.8%	1.8%	1.8%	1.8%	1.8%	1.8%	1.8%
6. Wood and Plastic	12.2%	9.2%	14.2%	16.2%	11.9%	9.0%	13.9%	15.8%
7. Thermal and Moisture Protection	2.7%	2.7%	2.7%	2.7%	2.7%	2.7%	2.7%	2.7%
8. Doors and Windows	10.0%	10.0%	10.0%	10.0%	9.7%	9.7%	9.7%	9.7%
9. Finishes	15.8%	15.8%	15.8%	15.8%	15.4%	15.4%	15.4%	15.4%
10. Specialties	0.5%	0.5%	0.5%	0.5%	0.5%	0.5%	0.5%	0.5%
11. Equipment	1.7%	1.7%	1.7%	1.7%	1.6%	1.6%	1.6%	1.6%
12. Furnishings	0.5%	0.5%	0.5%	0.5%	0.5%	0.5%	0.5%	0.5%
13. Special Construction	2.3%	2.3%	2.3%	2.3%	2.2%	2.2%	2.2%	2.2%
14. Conveying Systems	1.4%	1.4%	1.4%	1.4%	1.3%	1.3%	1.3%	1.3%
15. Mechanical	13.9%	13.9%	13.9%	13.9%	13.6%	13.6%	13.6%	13.6%
16. Electrical	7.8%	7.8%	7.8%	7.8%	7.6%	7.6%	7.6%	7.6%
Total	**100.0%**	**100.0%**	**100.0%**	**100.0%**	**100.0%**	**100.0%**	**100.0%**	**100.0%**

Category 3: Nonresidential Properties
Standard Interior

Division	Standard Systems: Standard Site Work: Masonry & Standard Exterior	Masonry & Extensive Exterior	Wood & Standard Exterior	Wood & Extensive Exterior	Standard Systems: Extensive Site Work: Masonry & Standard Exterior	Masonry & Extensive Exterior	Wood & Standard Exterior	Wood & Extensive Exterior
1. General Requirements	13.2%	13.2%	13.2%	13.2%	12.9%	12.9%	12.9%	12.9%
2. Site Work	5.3%	5.3%	5.3%	5.3%	7.3%	7.3%	7.3%	7.3%
3. Concrete	4.4%	4.4%	4.4%	4.4%	4.3%	4.3%	4.3%	4.3%
4. Masonry	9.4%	13.1%	7.0%	5.7%	9.2%	12.8%	6.8%	5.6%
5. Metals	8.5%	8.5%	8.5%	8.5%	8.3%	8.3%	8.3%	8.3%
6. Wood and Plastic	11.2%	7.5%	13.7%	14.9%	11.0%	7.4%	13.4%	14.6%
7. Thermal and Moisture Protection	13.9%	13.9%	13.9%	13.9%	13.6%	13.6%	13.6%	13.6%
8. Doors and Windows	8.8%	8.8%	8.8%	8.8%	8.6%	8.6%	8.6%	8.6%
9. Finishes	5.6%	5.6%	5.6%	5.6%	5.5%	5.5%	5.5%	5.5%
10. Specialties	0.8%	0.8%	0.8%	0.8%	0.8%	0.8%	0.8%	0.8%
11. Equipment	6.5%	6.5%	6.5%	6.5%	6.4%	6.4%	6.4%	6.4%
12. Furnishings	0.1%	0.1%	0.1%	0.1%	0.1%	0.1%	0.1%	0.1%
13. Special Construction	1.2%	1.2%	1.2%	1.2%	1.1%	1.1%	1.1%	1.1%
14. Conveying Systems	1.2%	1.2%	1.2%	1.2%	1.1%	1.1%	1.1%	1.1%
15. Mechanical	6.8%	6.8%	6.8%	6.8%	6.7%	6.7%	6.7%	6.7%
16. Electrical	3.2%	3.2%	3.2%	3.2%	3.2%	3.2%	3.2%	3.2%
Total	**100.0%**	**100.0%**	**100.0%**	**100.0%**	**100.0%**	**100.0%**	**100.0%**	**100.0%**

Extensive Interior

Division	Standard Systems: Standard Site Work: Masonry & Standard Exterior	Masonry & Extensive Exterior	Wood & Standard Exterior	Wood & Extensive Exterior	Standard Systems: Extensive Site Work: Masonry & Standard Exterior	Masonry & Extensive Exterior	Wood & Standard Exterior	Wood & Extensive Exterior
1. General Requirements	13.2%	13.2%	13.2%	13.2%	12.9%	12.9%	12.9%	12.9%
2. Site Work	5.3%	5.3%	5.3%	5.3%	7.3%	7.3%	7.3%	7.3%
3. Concrete	3.1%	3.1%	3.1%	3.1%	3.1%	3.1%	3.1%	3.1%
4. Masonry	8.2%	11.9%	5.7%	4.5%	8.0%	11.6%	5.6%	4.4%
5. Metals	8.5%	8.5%	8.5%	8.5%	8.3%	8.3%	8.3%	8.3%
6. Wood and Plastic	10.0%	6.3%	12.4%	13.7%	9.8%	6.2%	12.2%	13.4%
7. Thermal and Moisture Protection	13.9%	13.9%	13.9%	13.9%	13.6%	13.6%	13.6%	13.6%
8. Doors and Windows	8.8%	8.8%	8.8%	8.8%	8.6%	8.6%	8.6%	8.6%
9. Finishes	9.3%	9.3%	9.3%	9.3%	9.1%	9.1%	9.1%	9.1%
10. Specialties	0.8%	0.8%	0.8%	0.8%	0.8%	0.8%	0.8%	0.8%
11. Equipment	6.5%	6.5%	6.5%	6.5%	6.4%	6.4%	6.4%	6.4%
12. Furnishings	0.1%	0.1%	0.1%	0.1%	0.1%	0.1%	0.1%	0.1%
13. Special Construction	1.2%	1.2%	1.2%	1.2%	1.1%	1.1%	1.1%	1.1%
14. Conveying Systems	1.2%	1.2%	1.2%	1.2%	1.1%	1.1%	1.1%	1.1%
15. Mechanical	6.8%	6.8%	6.8%	6.8%	6.7%	6.7%	6.7%	6.7%
16. Electrical	3.2%	3.2%	3.2%	3.2%	3.2%	3.2%	3.2%	3.2%
Total	**100.0%**	**100.0%**	**100.0%**	**100.0%**	**100.0%**	**100.0%**	**100.0%**	**100.0%**

Category 3: Nonresidential Properties
Standard Interior

	Extensive Systems							
	Standard Site Work				*Extensive Site Work*			
Division	**Masonry & Standard Exterior**	**Masonry & Extensive Exterior**	**Wood & Standard Exterior**	**Wood & Extensive Exterior**	**Masonry & Standard Exterior**	**Masonry & Extensive Exterior**	**Wood & Standard Exterior**	**Wood & Extensive Exterior**
1. General Requirements	15.4%	15.4%	15.4%	15.4%	15.1%	15.1%	15.1%	15.1%
2. Site Work	6.2%	6.2%	6.2%	6.2%	8.2%	8.2%	8.2%	8.2%
3. Concrete	3.6%	3.6%	3.6%	3.6%	3.5%	3.5%	3.5%	3.5%
4. Masonry	7.7%	10.7%	5.7%	4.7%	7.5%	10.4%	5.6%	4.6%
5. Metals	7.0%	7.0%	7.0%	7.0%	6.8%	6.8%	6.8%	6.8%
6. Wood and Plastic	9.1%	6.1%	11.1%	12.1%	8.9%	6.0%	10.9%	11.9%
7. Thermal and Moisture Protection	11.3%	11.3%	11.3%	11.3%	11.1%	11.1%	11.1%	11.1%
8. Doors and Windows	7.1%	7.1%	7.1%	7.1%	7.0%	7.0%	7.0%	7.0%
9. Finishes	4.6%	4.6%	4.6%	4.6%	4.5%	4.5%	4.5%	4.5%
10. Specialties	0.7%	0.7%	0.7%	0.7%	0.7%	0.7%	0.7%	0.7%
11. Equipment	5.3%	5.3%	5.3%	5.3%	5.2%	5.2%	5.2%	5.2%
12. Furnishings	0.1%	0.1%	0.1%	0.1%	0.0%	0.0%	0.0%	0.0%
13. Special Construction	1.0%	1.0%	1.0%	1.0%	0.9%	0.9%	0.9%	0.9%
14. Conveying Systems	1.0%	1.0%	1.0%	1.0%	0.9%	0.9%	0.9%	0.9%
15. Mechanical	13.6%	13.6%	13.6%	13.6%	13.3%	13.3%	13.3%	13.3%
16. Electrical	6.5%	6.5%	6.5%	6.5%	6.3%	6.3%	6.3%	6.3%
Total	**100.0%**	**100.0%**	**100.0%**	**100.0%**	**100.0%**	**100.0%**	**100.0%**	**100.0%**

Extensive Interior

	Extensive Systems							
	Standard Site Work				*Extensive Site Work*			
Division	**Masonry & Standard Exterior**	**Masonry & Extensive Exterior**	**Wood & Standard Exterior**	**Wood & Extensive Exterior**	**Masonry & Standard Exterior**	**Masonry & Extensive Exterior**	**Wood & Standard Exterior**	**Wood & Extensive Exterior**
1. General Requirements	15.4%	15.4%	15.4%	15.4%	15.1%	15.1%	15.1%	15.1%
2. Site Work	6.2%	6.2%	6.2%	6.2%	8.2%	8.2%	8.2%	8.2%
3. Concrete	2.6%	2.6%	2.6%	2.6%	2.5%	2.5%	2.5%	2.5%
4. Masonry	6.7%	9.7%	4.7%	3.7%	6.5%	9.5%	4.6%	3.6%
5. Metals	7.0%	7.0%	7.0%	7.0%	6.8%	6.8%	6.8%	6.8%
6. Wood and Plastic	8.1%	5.1%	10.1%	11.1%	8.0%	5.0%	9.9%	10.9%
7. Thermal and Moisture Protection	11.3%	11.3%	11.3%	11.3%	11.1%	11.1%	11.1%	11.1%
8. Doors and Windows	7.1%	7.1%	7.1%	7.1%	7.0%	7.0%	7.0%	7.0%
9. Finishes	7.6%	7.6%	7.6%	7.6%	7.4%	7.4%	7.4%	7.4%
10. Specialties	0.7%	0.7%	0.7%	0.7%	0.7%	0.7%	0.7%	0.7%
11. Equipment	5.3%	5.3%	5.3%	5.3%	5.2%	5.2%	5.2%	5.2%
12. Furnishings	0.1%	0.1%	0.1%	0.1%	0.0%	0.0%	0.0%	0.0%
13. Special Construction	1.0%	1.0%	1.0%	1.0%	0.9%	0.9%	0.9%	0.9%
14. Conveying Systems	1.0%	1.0%	1.0%	1.0%	0.9%	0.9%	0.9%	0.9%
15. Mechanical	13.6%	13.6%	13.6%	13.6%	13.3%	13.3%	13.3%	13.3%
16. Electrical	6.5%	6.5%	6.5%	6.5%	6.3%	6.3%	6.3%	6.3%
Total	**100.0%**	**100.0%**	**100.0%**	**100.0%**	**100.0%**	**100.0%**	**100.0%**	**100.0%**

Category 4: Civic-Institutional Buildings
Standard Interior

Standard Systems

Division	*Standard Site Work*				*Extensive Site Work*			
	Masonry & Standard Exterior	Masonry & Extensive Exterior	Wood & Standard Exterior	Wood & Extensive Exterior	Masonry & Standard Exterior	Masonry & Extensive Exterior	Wood & Standard Exterior	Wood & Extensive Exterior
1. General Requirements	6.8%	6.8%	6.8%	6.8%	6.7%	6.7%	6.7%	6.7%
2. Site Work	9.3%	9.3%	9.3%	9.3%	11.3%	11.3%	11.3%	11.3%
3. Concrete	2.5%	2.5%	2.5%	2.5%	2.4%	2.4%	2.4%	2.4%
4. Masonry	12.3%	14.7%	9.9%	8.7%	12.0%	14.3%	9.7%	8.5%
5. Metals	5.7%	5.7%	5.7%	5.7%	5.6%	5.6%	5.6%	5.6%
6. Wood and Plastic	16.9%	14.5%	19.3%	20.5%	16.6%	14.2%	18.9%	20.1%
7. Thermal and Moisture Protection	12.7%	12.7%	12.7%	12.7%	12.4%	12.4%	12.4%	12.4%
8. Doors and Windows	6.5%	6.5%	6.5%	6.5%	6.4%	6.4%	6.4%	6.4%
9. Finishes	12.3%	12.3%	12.3%	12.3%	12.0%	12.0%	12.0%	12.0%
10. Specialties	3.4%	3.4%	3.4%	3.4%	3.3%	3.3%	3.3%	3.3%
11. Equipment	0.6%	0.6%	0.6%	0.6%	0.6%	0.6%	0.6%	0.6%
12. Furnishings	0.3%	0.3%	0.3%	0.3%	0.3%	0.3%	0.3%	0.3%
13. Special Construction	0.6%	0.6%	0.6%	0.6%	0.6%	0.6%	0.6%	0.6%
14. Conveying Systems	1.3%	1.3%	1.3%	1.3%	1.3%	1.3%	1.3%	1.3%
15. Mechanical	4.3%	4.3%	4.3%	4.3%	4.2%	4.2%	4.2%	4.2%
16. Electrical	4.5%	4.5%	4.5%	4.5%	4.4%	4.4%	4.4%	4.4%
Total	**100.0%**	**100.0%**	**100.0%**	**100.0%**	**100.0%**	**100.0%**	**100.0%**	**100.0%**

Extensive Interior

Standard Systems

Division	*Standard Site Work*				*Extensive Site Work*			
	Masonry & Standard Exterior	Masonry & Extensive Exterior	Wood & Standard Exterior	Wood & Extensive Exterior	Masonry & Standard Exterior	Masonry & Extensive Exterior	Wood & Standard Exterior	Wood & Extensive Exterior
1. General Requirements	6.8%	6.8%	6.8%	6.8%	6.7%	6.7%	6.7%	6.7%
2. Site Work	9.3%	9.3%	9.3%	9.3%	11.3%	11.3%	11.3%	11.3%
3. Concrete	1.3%	1.3%	1.3%	1.3%	1.3%	1.3%	1.3%	1.3%
4. Masonry	11.1%	13.5%	8.7%	7.5%	10.8%	13.2%	8.5%	7.3%
5. Metals	5.7%	5.7%	5.7%	5.7%	5.6%	5.6%	5.6%	5.6%
6. Wood and Plastic	15.7%	13.3%	18.1%	19.3%	15.4%	13.1%	17.7%	18.9%
7. Thermal and Moisture Protection	12.7%	12.7%	12.7%	12.7%	12.4%	12.4%	12.4%	12.4%
8. Doors and Windows	6.5%	6.5%	6.5%	6.5%	6.4%	6.4%	6.4%	6.4%
9. Finishes	15.9%	15.9%	15.9%	15.9%	15.5%	15.5%	15.5%	15.5%
10. Specialties	3.4%	3.4%	3.4%	3.4%	3.3%	3.3%	3.3%	3.3%
11. Equipment	0.6%	0.6%	0.6%	0.6%	0.6%	0.6%	0.6%	0.6%
12. Furnishings	0.3%	0.3%	0.3%	0.3%	0.3%	0.3%	0.3%	0.3%
13. Special Construction	0.6%	0.6%	0.6%	0.6%	0.6%	0.6%	0.6%	0.6%
14. Conveying Systems	1.3%	1.3%	1.3%	1.3%	1.3%	1.3%	1.3%	1.3%
15. Mechanical	4.3%	4.3%	4.3%	4.3%	4.2%	4.2%	4.2%	4.2%
16. Electrical	4.5%	4.5%	4.5%	4.5%	4.4%	4.4%	4.4%	4.4%
Total	**100.0%**	**100.0%**	**100.0%**	**100.0%**	**100.0%**	**100.0%**	**100.0%**	**100.0%**

Category 4: Civic-Institutional Buildings
Standard Interior

Division	*Extensive Systems*							
	Standard Site Work				*Extensive Site Work*			
	Masonry & Standard Exterior	Masonry & Extensive Exterior	Wood & Standard Exterior	Wood & Extensive Exterior	Masonry & Standard Exterior	Masonry & Extensive Exterior	Wood & Standard Exterior	Wood & Extensive Exterior
1. General Requirements	8.2%	8.2%	8.2%	8.2%	8.0%	8.0%	8.0%	8.0%
2. Site Work	11.2%	11.2%	11.2%	11.2%	13.2%	13.2%	13.2%	13.2%
3. Concrete	2.1%	2.1%	2.1%	2.1%	2.0%	2.0%	2.0%	2.0%
4. Masonry	10.3%	12.3%	8.3%	7.3%	10.1%	14.0%	8.1%	7.1%
5. Metals	4.8%	4.8%	4.8%	4.8%	4.7%	4.7%	4.7%	4.7%
6. Wood and Plastic	14.2%	12.2%	16.2%	17.2%	13.9%	9.9%	15.8%	16.8%
7. Thermal and Moisture Protection	10.6%	10.6%	10.6%	10.6%	10.4%	10.4%	10.4%	10.4%
8. Doors and Windows	5.4%	5.4%	5.4%	5.4%	5.3%	5.3%	5.3%	5.3%
9. Finishes	10.3%	10.3%	10.3%	10.3%	10.1%	10.1%	10.1%	10.1%
10. Specialties	2.8%	2.8%	2.8%	2.8%	2.8%	2.8%	2.8%	2.8%
11. Equipment	0.5%	0.5%	0.5%	0.5%	0.5%	0.5%	0.5%	0.5%
12. Furnishings	0.3%	0.3%	0.3%	0.3%	0.3%	0.3%	0.3%	0.3%
13. Special Construction	0.5%	0.5%	0.5%	0.5%	0.5%	0.5%	0.5%	0.5%
14. Conveying Systems	1.1%	1.1%	1.1%	1.1%	1.0%	1.0%	1.0%	1.0%
15. Mechanical	8.6%	8.6%	8.6%	8.6%	8.4%	8.4%	8.4%	8.4%
16. Electrical	9.1%	9.1%	9.1%	9.1%	8.9%	8.9%	8.9%	8.9%
Total	**100.0%**	**100.0%**	**100.0%**	**100.0%**	**100.0%**	**100.0%**	**100.0%**	**100.0%**

Extensive Interior

Division	*Extensive Systems*							
	Standard Site Work				*Extensive Site Work*			
	Masonry & Standard Exterior	Masonry & Extensive Exterior	Wood & Standard Exterior	Wood & Extensive Exterior	Masonry & Standard Exterior	Masonry & Extensive Exterior	Wood & Standard Exterior	Wood & Extensive Exterior
1. General Requirements	8.2%	8.2%	8.2%	8.2%	8.0%	8.0%	8.0%	8.0%
2. Site Work	11.2%	11.2%	11.2%	11.2%	13.2%	13.2%	13.2%	13.2%
3. Concrete	1.1%	1.1%	1.1%	1.1%	1.1%	1.1%	1.1%	1.1%
4. Masonry	9.3%	11.3%	7.3%	6.3%	9.1%	11.0%	7.1%	6.1%
5. Metals	4.8%	4.8%	4.8%	4.8%	4.7%	4.7%	4.7%	4.7%
6. Wood and Plastic	13.2%	11.2%	15.2%	16.2%	12.9%	10.9%	14.8%	15.8%
7. Thermal and Moisture Protection	10.6%	10.6%	10.6%	10.6%	10.4%	10.4%	10.4%	10.4%
8. Doors and Windows	5.4%	5.4%	5.4%	5.4%	5.3%	5.3%	5.3%	5.3%
9. Finishes	13.3%	13.3%	13.3%	13.3%	13.0%	13.0%	13.0%	13.0%
10. Specialties	2.8%	2.8%	2.8%	2.8%	2.8%	2.8%	2.8%	2.8%
11. Equipment	0.5%	0.5%	0.5%	0.5%	0.5%	0.5%	0.5%	0.5%
12. Furnishings	0.3%	0.3%	0.3%	0.3%	0.3%	0.3%	0.3%	0.3%
13. Special Construction	0.5%	0.5%	0.5%	0.5%	0.5%	0.5%	0.5%	0.5%
14. Conveying Systems	1.1%	1.1%	1.1%	1.1%	1.0%	1.0%	1.0%	1.0%
15. Mechanical	8.6%	8.6%	8.6%	8.6%	8.4%	8.4%	8.4%	8.4%
16. Electrical	9.1%	9.1%	9.1%	9.1%	8.9%	8.9%	8.9%	8.9%
Total	**100.0%**	**100.0%**	**100.0%**	**100.0%**	**100.0%**	**100.0%**	**100.0%**	**100.0%**

EXHIBIT B.4A

Construction Activity and Spending Matrix (Including Professional Costs)

Category 1: Single-Family Housing
Standard Interior

Division	Standard Systems / Standard Site Work: Masonry & Standard Exterior	Standard Systems / Standard Site Work: Masonry & Extensive Exterior	Standard Systems / Standard Site Work: Wood & Standard Exterior	Standard Systems / Standard Site Work: Wood & Extensive Exterior	Standard Systems / Extensive Site Work: Masonry & Standard Exterior	Standard Systems / Extensive Site Work: Masonry & Extensive Exterior	Standard Systems / Extensive Site Work: Wood & Standard Exterior	Standard Systems / Extensive Site Work: Wood & Extensive Exterior
0. Architecture & Engineering	10.4%	10.4%	10.4%	10.4%	10.2%	10.2%	10.2%	10.2%
1. General Requirements	8.5%	8.5%	8.5%	8.5%	8.3%	8.3%	8.3%	8.3%
2. Site Work	10.9%	10.9%	10.9%	10.9%	12.9%	12.9%	12.9%	12.9%
3. Concrete	2.0%	2.0%	2.0%	1.0%	2.0%	2.0%	2.0%	1.0%
4. Masonry	8.7%	10.8%	5.5%	3.4%	8.5%	10.6%	5.4%	3.3%
5. Metals	0.6%	0.6%	0.6%	0.6%	0.5%	0.5%	0.5%	0.5%
6. Wood and Plastic	15.8%	13.7%	19.0%	22.1%	15.5%	13.4%	18.6%	21.7%
7. Thermal and Moisture Protection	4.4%	4.4%	4.4%	4.4%	4.3%	4.3%	4.3%	4.3%
8. Doors and Windows	10.7%	10.7%	10.7%	10.7%	10.5%	10.5%	10.5%	10.5%
9. Finishes	14.6%	14.6%	14.6%	14.6%	14.2%	14.2%	14.2%	14.2%
10. Specialties	0.2%	0.2%	0.2%	0.2%	0.2%	0.2%	0.2%	0.2%
11. Equipment	2.3%	2.3%	2.3%	2.3%	2.2%	2.2%	2.2%	2.2%
12. Furnishings	0.0%	0.0%	0.0%	0.0%	0.0%	0.0%	0.0%	0.0%
13. Special Construction	0.0%	0.0%	0.0%	0.0%	0.0%	0.0%	0.0%	0.0%
14. Conveying Systems	0.0%	0.0%	0.0%	0.0%	0.0%	0.0%	0.0%	0.0%
15. Mechanical	6.1%	6.1%	6.1%	6.1%	5.9%	5.9%	5.9%	5.9%
16. Electrical	2.3%	2.3%	2.3%	2.3%	2.3%	2.3%	2.3%	2.3%
17. Attorney/Other	2.6%	2.6%	2.6%	2.6%	2.6%	2.6%	2.6%	2.6%
Total	**100.0%**	**100.0%**	**100.0%**	**100.0%**	**100.0%**	**100.0%**	**100.0%**	**100.0%**

Extensive Interior

Division	Standard Systems / Standard Site Work: Masonry & Standard Exterior	Standard Systems / Standard Site Work: Masonry & Extensive Exterior	Standard Systems / Standard Site Work: Wood & Standard Exterior	Standard Systems / Standard Site Work: Wood & Extensive Exterior	Standard Systems / Extensive Site Work: Masonry & Standard Exterior	Standard Systems / Extensive Site Work: Masonry & Extensive Exterior	Standard Systems / Extensive Site Work: Wood & Standard Exterior	Standard Systems / Extensive Site Work: Wood & Extensive Exterior
0. Architecture & Engineering	10.4%	10.4%	10.4%	10.4%	10.2%	10.2%	10.2%	10.2%
1. General Requirements	8.5%	8.5%	8.5%	8.5%	8.3%	8.3%	8.3%	8.3%
2. Site Work	10.9%	10.9%	10.9%	10.9%	12.9%	12.9%	12.9%	12.9%
3. Concrete	1.0%	1.0%	1.0%	-0.1%	1.0%	1.0%	1.0%	-0.1%
4. Masonry	7.6%	9.7%	4.5%	2.3%	7.5%	9.5%	4.4%	2.3%
5. Metals	0.6%	0.6%	0.6%	0.6%	0.5%	0.5%	0.5%	0.5%
6. Wood and Plastic	14.8%	12.6%	17.9%	21.1%	14.4%	12.4%	17.5%	20.6%
7. Thermal and Moisture Protection	4.4%	4.4%	4.4%	4.4%	4.3%	4.3%	4.3%	4.3%
8. Doors and Windows	10.7%	10.7%	10.7%	10.7%	10.5%	10.5%	10.5%	10.5%
9. Finishes	17.7%	17.7%	17.7%	17.7%	17.3%	17.3%	17.3%	17.3%
10. Specialties	0.2%	0.2%	0.2%	0.2%	0.2%	0.2%	0.2%	0.2%
11. Equipment	2.3%	2.3%	2.3%	2.3%	2.2%	2.2%	2.2%	2.2%
12. Furnishings	0.0%	0.0%	0.0%	0.0%	0.0%	0.0%	0.0%	0.0%
13. Special Construction	0.0%	0.0%	0.0%	0.0%	0.0%	0.0%	0.0%	0.0%
14. Conveying Systems	0.0%	0.0%	0.0%	0.0%	0.0%	0.0%	0.0%	0.0%
15. Mechanical	6.1%	6.1%	6.1%	6.1%	5.9%	5.9%	5.9%	5.9%
16. Electrical	2.3%	2.3%	2.3%	2.3%	2.3%	2.3%	2.3%	2.3%
17. Attorney/Other	2.6%	2.6%	2.6%	2.6%	2.6%	2.6%	2.6%	2.6%
Total	**100.0%**	**100.0%**	**100.0%**	**100.0%**	**100.0%**	**100.0%**	**100.0%**	**100.0%**

Division Breakdown (Including #0 & #17)
Category 1: Single-Family Housing
Standard Interior

Division	Extensive Systems							
	Standard Site Work				*Extensive Site Work*			
	Masonry & Standard Exterior	Masonry & Extensive Exterior	Wood & Standard Exterior	Wood & Extensive Exterior	Masonry & Standard Exterior	Masonry & Extensive Exterior	Wood & Standard Exterior	Wood & Extensive Exterior
0. Architecture & Engineering	10.4%	10.4%	10.4%	10.4%	10.2%	10.2%	10.2%	10.2%
1. General Requirements	9.4%	9.4%	9.4%	9.4%	9.2%	9.2%	9.2%	9.2%
2. Site Work	12.0%	12.0%	12.0%	12.0%	14.0%	14.0%	14.0%	14.0%
3. Concrete	1.7%	1.7%	1.7%	0.8%	1.6%	1.6%	1.6%	0.8%
4. Masonry	7.1%	8.9%	4.5%	2.8%	7.0%	8.7%	4.4%	2.7%
5. Metals	0.5%	0.5%	0.5%	0.5%	0.4%	0.4%	0.4%	0.4%
6. Wood and Plastic	13.0%	11.3%	15.6%	18.2%	12.7%	11.0%	15.3%	17.8%
7. Thermal and Moisture Protection	3.6%	3.6%	3.6%	3.6%	3.5%	3.5%	3.5%	3.5%
8. Doors and Windows	8.8%	8.8%	8.8%	8.8%	8.6%	8.6%	8.6%	8.6%
9. Finishes	12.0%	12.0%	12.0%	12.0%	11.7%	11.7%	11.7%	11.7%
10. Specialties	0.2%	0.2%	0.2%	0.2%	0.2%	0.2%	0.2%	0.2%
11. Equipment	1.9%	1.9%	1.9%	1.9%	1.8%	1.8%	1.8%	1.8%
12. Furnishings	0.0%	0.0%	0.0%	0.0%	0.0%	0.0%	0.0%	0.0%
13. Special Construction	0.0%	0.0%	0.0%	0.0%	0.0%	0.0%	0.0%	0.0%
14. Conveying Systems	0.0%	0.0%	0.0%	0.0%	0.0%	0.0%	0.0%	0.0%
15. Mechanical	12.1%	12.1%	12.1%	12.1%	11.8%	11.8%	11.8%	11.8%
16. Electrical	4.6%	4.6%	4.6%	4.6%	4.5%	4.5%	4.5%	4.5%
17. Attorney/Other	2.6%	2.6%	2.6%	2.6%	2.5%	2.5%	2.5%	2.5%
Total	**100.0%**	**100.0%**	**100.0%**	**100.0%**	**100.0%**	**100.0%**	**100.0%**	**100.0%**

Extensive Interior

Division	Extensive Systems							
	Standard Site Work				*Extensive Site Work*			
	Masonry & Standard Exterior	Masonry & Extensive Exterior	Wood & Standard Exterior	Wood & Extensive Exterior	Masonry & Standard Exterior	Masonry & Extensive Exterior	Wood & Standard Exterior	Wood & Extensive Exterior
0. Architecture & Engineering	10.4%	10.4%	10.4%	10.4%	10.2%	10.2%	10.2%	10.2%
1. General Requirements	9.4%	9.4%	9.4%	9.4%	9.2%	9.2%	9.2%	9.2%
2. Site Work	12.0%	12.0%	12.0%	12.0%	14.0%	14.0%	14.0%	14.0%
3. Concrete	0.8%	0.8%	0.8%	-0.1%	0.8%	0.8%	0.8%	-0.1%
4. Masonry	6.3%	8.0%	3.7%	1.9%	6.1%	7.8%	3.6%	1.9%
5. Metals	0.5%	0.5%	0.5%	0.5%	0.4%	0.4%	0.4%	0.4%
6. Wood and Plastic	12.1%	10.4%	14.8%	17.4%	11.9%	10.2%	14.4%	17.0%
7. Thermal and Moisture Protection	3.6%	3.6%	3.6%	3.6%	3.5%	3.5%	3.5%	3.5%
8. Doors and Windows	8.8%	8.8%	8.8%	8.8%	8.6%	8.6%	8.6%	8.6%
9. Finishes	14.6%	14.6%	14.6%	14.6%	14.3%	14.3%	14.3%	14.3%
10. Specialties	0.2%	0.2%	0.2%	0.2%	0.2%	0.2%	0.2%	0.2%
11. Equipment	1.9%	1.9%	1.9%	1.9%	1.8%	1.8%	1.8%	1.8%
12. Furnishings	0.0%	0.0%	0.0%	0.0%	0.0%	0.0%	0.0%	0.0%
13. Special Construction	0.0%	0.0%	0.0%	0.0%	0.0%	0.0%	0.0%	0.0%
14. Conveying Systems	0.0%	0.0%	0.0%	0.0%	0.0%	0.0%	0.0%	0.0%
15. Mechanical	12.1%	12.1%	12.1%	12.1%	11.8%	11.8%	11.8%	11.8%
16. Electrical	4.6%	4.6%	4.6%	4.6%	4.5%	4.5%	4.5%	4.5%
17. Attorney/Other	2.6%	2.6%	2.6%	2.6%	2.5%	2.5%	2.5%	2.5%
Total	**100.0%**	**100.0%**	**100.0%**	**100.0%**	**100.0%**	**100.0%**	**100.0%**	**100.0%**

Category 2: Multifamily Housing
Standard Interior

Division	Standard Systems / Standard Site Work: Masonry & Standard Exterior	Standard Systems / Standard Site Work: Masonry & Extensive Exterior	Standard Systems / Standard Site Work: Wood & Standard Exterior	Standard Systems / Standard Site Work: Wood & Extensive Exterior	Standard Systems / Extensive Site Work: Masonry & Standard Exterior	Standard Systems / Extensive Site Work: Masonry & Extensive Exterior	Standard Systems / Extensive Site Work: Wood & Standard Exterior	Standard Systems / Extensive Site Work: Wood & Extensive Exterior
0. Architecture & Engineering	8.0%	8.0%	8.0%	8.0%	7.9%	7.9%	7.9%	7.9%
1. General Requirements	6.2%	6.2%	6.2%	6.2%	6.0%	6.0%	6.0%	6.0%
2. Site Work	9.9%	9.9%	9.9%	9.9%	11.9%	11.9%	11.9%	11.9%
3. Concrete	2.3%	2.3%	2.3%	1.7%	2.2%	2.2%	2.2%	1.7%
4. Masonry	9.0%	12.4%	6.8%	5.1%	8.8%	12.1%	6.7%	5.0%
5. Metals	2.0%	2.0%	2.0%	2.0%	2.0%	2.0%	2.0%	2.0%
6. Wood and Plastic	14.7%	11.4%	17.0%	19.2%	14.4%	11.1%	16.6%	18.8%
7. Thermal and Moisture Protection	3.0%	3.0%	3.0%	3.0%	3.0%	3.0%	3.0%	3.0%
8. Doors and Windows	11.1%	11.1%	11.1%	11.1%	10.9%	10.9%	10.9%	10.9%
9. Finishes	14.3%	14.3%	14.3%	14.3%	14.0%	14.0%	14.0%	14.0%
10. Specialties	0.5%	0.5%	0.5%	0.5%	0.5%	0.5%	0.5%	0.5%
11. Equipment	1.9%	1.9%	1.9%	1.9%	1.8%	1.8%	1.8%	1.8%
12. Furnishings	0.6%	0.6%	0.6%	0.6%	0.6%	0.6%	0.6%	0.6%
13. Special Construction	2.5%	2.5%	2.5%	2.5%	2.5%	2.5%	2.5%	2.5%
14. Conveying Systems	1.5%	1.5%	1.5%	1.5%	1.5%	1.5%	1.5%	1.5%
15. Mechanical	6.2%	6.2%	6.2%	6.2%	6.1%	6.1%	6.1%	6.1%
16. Electrical	3.5%	3.5%	3.5%	3.5%	3.4%	3.4%	3.4%	3.4%
17. Attorney/Other	2.7%	2.7%	2.7%	2.7%	2.6%	2.6%	2.6%	2.6%
Total	**100.0%**	**100.0%**	**100.0%**	**100.0%**	**100.0%**	**100.0%**	**100.0%**	**100.0%**

Extensive Interior

Division	Standard Systems / Standard Site Work: Masonry & Standard Exterior	Standard Systems / Standard Site Work: Masonry & Extensive Exterior	Standard Systems / Standard Site Work: Wood & Standard Exterior	Standard Systems / Standard Site Work: Wood & Extensive Exterior	Standard Systems / Extensive Site Work: Masonry & Standard Exterior	Standard Systems / Extensive Site Work: Masonry & Extensive Exterior	Standard Systems / Extensive Site Work: Wood & Standard Exterior	Standard Systems / Extensive Site Work: Wood & Extensive Exterior
0. Architecture & Engineering	8.0%	8.0%	8.0%	8.0%	7.9%	7.9%	7.9%	7.9%
1. General Requirements	6.2%	6.2%	6.2%	6.2%	6.0%	6.0%	6.0%	6.0%
2. Site Work	9.9%	9.9%	9.9%	9.9%	11.9%	11.9%	11.9%	11.9%
3. Concrete	1.1%	1.1%	1.1%	0.6%	1.1%	1.1%	1.1%	0.6%
4. Masonry	7.9%	11.3%	5.7%	4.0%	7.7%	11.0%	5.6%	3.9%
5. Metals	2.0%	2.0%	2.0%	2.0%	2.0%	2.0%	2.0%	2.0%
6. Wood and Plastic	13.6%	10.3%	15.8%	18.1%	13.3%	10.0%	15.5%	17.7%
7. Thermal and Moisture Protection	3.0%	3.0%	3.0%	3.0%	3.0%	3.0%	3.0%	3.0%
8. Doors and Windows	11.1%	11.1%	11.1%	11.1%	10.9%	10.9%	10.9%	10.9%
9. Finishes	17.6%	17.6%	17.6%	17.6%	17.2%	17.2%	17.2%	17.2%
10. Specialties	0.5%	0.5%	0.5%	0.5%	0.5%	0.5%	0.5%	0.5%
11. Equipment	1.9%	1.9%	1.9%	1.9%	1.8%	1.8%	1.8%	1.8%
12. Furnishings	0.6%	0.6%	0.6%	0.6%	0.6%	0.6%	0.6%	0.6%
13. Special Construction	2.5%	2.5%	2.5%	2.5%	2.5%	2.5%	2.5%	2.5%
14. Conveying Systems	1.5%	1.5%	1.5%	1.5%	1.5%	1.5%	1.5%	1.5%
15. Mechanical	6.2%	6.2%	6.2%	6.2%	6.1%	6.1%	6.1%	6.1%
16. Electrical	3.5%	3.5%	3.5%	3.5%	3.4%	3.4%	3.4%	3.4%
17. Attorney/Other	2.7%	2.7%	2.7%	2.7%	2.6%	2.6%	2.6%	2.6%
Total	**100.0%**	**100.0%**	**100.0%**	**100.0%**	**100.0%**	**100.0%**	**100.0%**	**100.0%**

Category 2: Multifamily Housing
Standard Interior

Division	Extensive Systems / Standard Site Work / Masonry & Standard Exterior	Masonry & Extensive Exterior	Wood & Standard Exterior	Wood & Extensive Exterior	Extensive Site Work / Masonry & Standard Exterior	Masonry & Extensive Exterior	Wood & Standard Exterior	Wood & Extensive Exterior
0. Architecture & Engineering	8.0%	8.0%	8.0%	8.0%	7.9%	7.9%	7.9%	7.9%
1. General Requirements	7.3%	7.3%	7.3%	7.3%	7.1%	7.1%	7.1%	7.1%
2. Site Work	11.7%	11.7%	11.7%	11.7%	13.7%	13.7%	13.7%	13.7%
3. Concrete	1.8%	1.8%	1.8%	1.4%	1.8%	1.8%	1.8%	1.3%
4. Masonry	7.2%	9.9%	5.4%	4.1%	7.1%	9.7%	5.3%	4.0%
5. Metals	1.6%	1.6%	1.6%	1.6%	1.6%	1.6%	1.6%	1.6%
6. Wood and Plastic	11.8%	9.1%	13.6%	15.3%	11.5%	8.9%	13.3%	15.0%
7. Thermal and Moisture Protection	2.4%	2.4%	2.4%	2.4%	2.4%	2.4%	2.4%	2.4%
8. Doors and Windows	8.9%	8.9%	8.9%	8.9%	8.7%	8.7%	8.7%	8.7%
9. Finishes	11.4%	11.4%	11.4%	11.4%	11.2%	11.2%	11.2%	11.2%
10. Specialties	0.4%	0.4%	0.4%	0.4%	0.4%	0.4%	0.4%	0.4%
11. Equipment	1.5%	1.5%	1.5%	1.5%	1.4%	1.4%	1.4%	1.4%
12. Furnishings	0.5%	0.5%	0.5%	0.5%	0.4%	0.4%	0.4%	0.4%
13. Special Construction	2.0%	2.0%	2.0%	2.0%	2.0%	2.0%	2.0%	2.0%
14. Conveying Systems	1.2%	1.2%	1.2%	1.2%	1.2%	1.2%	1.2%	1.2%
15. Mechanical	12.4%	12.4%	12.4%	12.4%	12.2%	12.2%	12.2%	12.2%
16. Electrical	7.0%	7.0%	7.0%	7.0%	6.8%	6.8%	6.8%	6.8%
17. Attorney/Other	2.7%	2.7%	2.7%	2.7%	2.6%	2.6%	2.6%	2.6%
Total	**100.0%**	**100.0%**	**100.0%**	**100.0%**	**100.0%**	**100.0%**	**100.0%**	**100.0%**

Extensive Interior

Division	Extensive Systems / Standard Site Work / Masonry & Standard Exterior	Masonry & Extensive Exterior	Wood & Standard Exterior	Wood & Extensive Exterior	Extensive Site Work / Masonry & Standard Exterior	Masonry & Extensive Exterior	Wood & Standard Exterior	Wood & Extensive Exterior
0. Architecture & Engineering	8.0%	8.0%	8.0%	8.0%	7.9%	7.9%	7.9%	7.9%
1. General Requirements	7.3%	7.3%	7.3%	7.3%	7.1%	7.1%	7.1%	7.1%
2. Site Work	11.7%	11.7%	11.7%	11.7%	13.7%	13.7%	13.7%	13.7%
3. Concrete	0.9%	0.9%	0.9%	0.5%	0.9%	0.9%	0.9%	0.5%
4. Masonry	6.3%	9.0%	4.5%	3.2%	6.2%	8.8%	4.4%	3.1%
5. Metals	1.6%	1.6%	1.6%	1.6%	1.6%	1.6%	1.6%	1.6%
6. Wood and Plastic	10.9%	8.2%	12.7%	14.5%	10.6%	8.0%	12.4%	14.1%
7. Thermal and Moisture Protection	2.4%	2.4%	2.4%	2.4%	2.4%	2.4%	2.4%	2.4%
8. Doors and Windows	8.9%	8.9%	8.9%	8.9%	8.7%	8.7%	8.7%	8.7%
9. Finishes	14.1%	14.1%	14.1%	14.1%	13.8%	13.8%	13.8%	13.8%
10. Specialties	0.4%	0.4%	0.4%	0.4%	0.4%	0.4%	0.4%	0.4%
11. Equipment	1.5%	1.5%	1.5%	1.5%	1.4%	1.4%	1.4%	1.4%
12. Furnishings	0.5%	0.5%	0.5%	0.5%	0.4%	0.4%	0.4%	0.4%
13. Special Construction	2.0%	2.0%	2.0%	2.0%	2.0%	2.0%	2.0%	2.0%
14. Conveying Systems	1.2%	1.2%	1.2%	1.2%	1.2%	1.2%	1.2%	1.2%
15. Mechanical	12.4%	12.4%	12.4%	12.4%	12.2%	12.2%	12.2%	12.2%
16. Electrical	7.0%	7.0%	7.0%	7.0%	6.8%	6.8%	6.8%	6.8%
17. Attorney/Other	2.7%	2.7%	2.7%	2.7%	2.6%	2.6%	2.6%	2.6%
Total	**100.0%**	**100.0%**	**100.0%**	**100.0%**	**100.0%**	**100.0%**	**100.0%**	**100.0%**

Category 3: Nonresidential Properties
Standard Interior

Division	Standard Systems / Standard Site Work / Masonry & Standard Exterior	Standard Systems / Standard Site Work / Masonry & Extensive Exterior	Standard Systems / Standard Site Work / Wood & Standard Exterior	Standard Systems / Standard Site Work / Wood & Extensive Exterior	Standard Systems / Extensive Site Work / Masonry & Standard Exterior	Standard Systems / Extensive Site Work / Masonry & Extensive Exterior	Standard Systems / Extensive Site Work / Wood & Standard Exterior	Standard Systems / Extensive Site Work / Wood & Extensive Exterior
0. Architecture & Engineering	7.1%	7.1%	7.1%	7.1%	7.0%	7.0%	7.0%	7.0%
1. General Requirements	11.8%	11.8%	11.8%	11.8%	11.5%	11.5%	11.5%	11.5%
2. Site Work	4.7%	4.7%	4.7%	4.7%	6.7%	6.7%	6.7%	6.7%
3. Concrete	3.9%	3.9%	3.9%	3.9%	3.8%	3.8%	3.8%	3.8%
4. Masonry	8.4%	11.7%	6.2%	5.1%	8.2%	11.4%	6.1%	5.0%
5. Metals	7.6%	7.6%	7.6%	7.6%	7.5%	7.5%	7.5%	7.5%
6. Wood and Plastic	10.0%	6.7%	12.2%	13.3%	9.8%	6.6%	11.9%	13.0%
7. Thermal and Moisture Protection	12.4%	12.4%	12.4%	12.4%	12.1%	12.1%	12.1%	12.1%
8. Doors and Windows	7.8%	7.8%	7.8%	7.8%	7.7%	7.7%	7.7%	7.7%
9. Finishes	5.0%	5.0%	5.0%	5.0%	4.9%	4.9%	4.9%	4.9%
10. Specialties	0.7%	0.7%	0.7%	0.7%	0.7%	0.7%	0.7%	0.7%
11. Equipment	5.8%	5.8%	5.8%	5.8%	5.7%	5.7%	5.7%	5.7%
12. Furnishings	0.1%	0.1%	0.1%	0.1%	0.1%	0.1%	0.1%	0.1%
13. Special Construction	1.0%	1.0%	1.0%	1.0%	1.0%	1.0%	1.0%	1.0%
14. Conveying Systems	1.0%	1.0%	1.0%	1.0%	1.0%	1.0%	1.0%	1.0%
15. Mechanical	6.1%	6.1%	6.1%	6.1%	6.0%	6.0%	6.0%	6.0%
16. Electrical	2.9%	2.9%	2.9%	2.9%	2.8%	2.8%	2.8%	2.8%
17. Attorney/Other	3.6%	3.6%	3.6%	3.6%	3.5%	3.5%	3.5%	3.5%
Total	**100.0%**	**100.0%**	**100.0%**	**100.0%**	**100.0%**	**100.0%**	**100.0%**	**100.0%**

Extensive Interior

Division	Standard Systems / Standard Site Work / Masonry & Standard Exterior	Standard Systems / Standard Site Work / Masonry & Extensive Exterior	Standard Systems / Standard Site Work / Wood & Standard Exterior	Standard Systems / Standard Site Work / Wood & Extensive Exterior	Standard Systems / Extensive Site Work / Masonry & Standard Exterior	Standard Systems / Extensive Site Work / Masonry & Extensive Exterior	Standard Systems / Extensive Site Work / Wood & Standard Exterior	Standard Systems / Extensive Site Work / Wood & Extensive Exterior
0. Architecture & Engineering	7.1%	7.1%	7.1%	7.1%	7.0%	7.0%	7.0%	7.0%
1. General Requirements	11.8%	11.8%	11.8%	11.8%	11.5%	11.5%	11.5%	11.5%
2. Site Work	4.7%	4.7%	4.7%	4.7%	6.7%	6.7%	6.7%	6.7%
3. Concrete	2.8%	2.8%	2.8%	2.8%	2.7%	2.7%	2.7%	2.7%
4. Masonry	7.3%	10.6%	5.1%	4.0%	7.2%	10.4%	5.0%	3.9%
5. Metals	7.6%	7.6%	7.6%	7.6%	7.5%	7.5%	7.5%	7.5%
6. Wood and Plastic	8.9%	5.6%	11.1%	12.2%	8.7%	5.5%	10.9%	11.9%
7. Thermal and Moisture Protection	12.4%	12.4%	12.4%	12.4%	12.1%	12.1%	12.1%	12.1%
8. Doors and Windows	7.8%	7.8%	7.8%	7.8%	7.7%	7.7%	7.7%	7.7%
9. Finishes	8.3%	8.3%	8.3%	8.3%	8.1%	8.1%	8.1%	8.1%
10. Specialties	0.7%	0.7%	0.7%	0.7%	0.7%	0.7%	0.7%	0.7%
11. Equipment	5.8%	5.8%	5.8%	5.8%	5.7%	5.7%	5.7%	5.7%
12. Furnishings	0.1%	0.1%	0.1%	0.1%	0.1%	0.1%	0.1%	0.1%
13. Special Construction	1.0%	1.0%	1.0%	1.0%	1.0%	1.0%	1.0%	1.0%
14. Conveying Systems	1.0%	1.0%	1.0%	1.0%	1.0%	1.0%	1.0%	1.0%
15. Mechanical	6.1%	6.1%	6.1%	6.1%	6.0%	6.0%	6.0%	6.0%
16. Electrical	2.9%	2.9%	2.9%	2.9%	2.8%	2.8%	2.8%	2.8%
17. Attorney/Other	3.6%	3.6%	3.6%	3.6%	3.5%	3.5%	3.5%	3.5%
Total	**100.0%**	**100.0%**	**100.0%**	**100.0%**	**100.0%**	**100.0%**	**100.0%**	**100.0%**

Category 3: Nonresidential Properties

Standard Interior

Extensive Systems

Division	*Standard Site Work*				*Extensive Site Work*			
	Masonry & Standard Exterior	Masonry & Extensive Exterior	Wood & Standard Exterior	Wood & Extensive Exterior	Masonry & Standard Exterior	Masonry & Extensive Exterior	Wood & Standard Exterior	Wood & Extensive Exterior
0. Architecture & Engineering	7.1%	7.1%	7.1%	7.1%	7.0%	7.0%	7.0%	7.0%
1. General Requirements	13.8%	13.8%	13.8%	13.8%	13.5%	13.5%	13.5%	13.5%
2. Site Work	5.5%	5.5%	5.5%	5.5%	7.5%	7.5%	7.5%	7.5%
3. Concrete	3.2%	3.2%	3.2%	3.2%	3.1%	3.1%	3.1%	3.1%
4. Masonry	6.9%	9.5%	5.1%	4.2%	6.7%	9.3%	5.0%	4.1%
5. Metals	6.2%	6.2%	6.2%	6.2%	6.1%	6.1%	6.1%	6.1%
6. Wood and Plastic	8.2%	5.5%	9.9%	10.8%	8.0%	5.4%	9.7%	10.6%
7. Thermal and Moisture Protection	10.1%	10.1%	10.1%	10.1%	9.9%	9.9%	9.9%	9.9%
8. Doors and Windows	6.4%	6.4%	6.4%	6.4%	6.2%	6.2%	6.2%	6.2%
9. Finishes	4.1%	4.1%	4.1%	4.1%	4.0%	4.0%	4.0%	4.0%
10. Specialties	0.6%	0.6%	0.6%	0.6%	0.6%	0.6%	0.6%	0.6%
11. Equipment	4.8%	4.8%	4.8%	4.8%	4.7%	4.7%	4.7%	4.7%
12. Furnishings	0.0%	0.0%	0.0%	0.0%	0.0%	0.0%	0.0%	0.0%
13. Special Construction	0.8%	0.8%	0.8%	0.8%	0.8%	0.8%	0.8%	0.8%
14. Conveying Systems	0.8%	0.8%	0.8%	0.8%	0.8%	0.8%	0.8%	0.8%
15. Mechanical	12.2%	12.2%	12.2%	12.2%	11.9%	11.9%	11.9%	11.9%
16. Electrical	5.8%	5.8%	5.8%	5.8%	5.7%	5.7%	5.7%	5.7%
17. Attorney/Other	3.6%	3.6%	3.6%	3.6%	3.5%	3.5%	3.5%	3.5%
Total	**100.0%**	**100.0%**	**100.0%**	**100.0%**	**100.0%**	**100.0%**	**100.0%**	**100.0%**

Extensive Interior

Extensive Systems

Division	*Standard Site Work*				*Extensive Site Work*			
	Masonry & Standard Exterior	Masonry & Extensive Exterior	Wood & Standard Exterior	Wood & Extensive Exterior	Masonry & Standard Exterior	Masonry & Extensive Exterior	Wood & Standard Exterior	Wood & Extensive Exterior
0. Architecture & Engineering	7.1%	7.1%	7.1%	7.1%	7.0%	7.0%	7.0%	7.0%
1. General Requirements	13.8%	13.8%	13.8%	13.8%	13.5%	13.5%	13.5%	13.5%
2. Site Work	5.5%	5.5%	5.5%	5.5%	7.5%	7.5%	7.5%	7.5%
3. Concrete	2.3%	2.3%	2.3%	2.3%	2.2%	2.2%	2.2%	2.2%
4. Masonry	6.0%	8.6%	4.2%	3.3%	5.8%	8.5%	4.1%	3.2%
5. Metals	6.2%	6.2%	6.2%	6.2%	6.1%	6.1%	6.1%	6.1%
6. Wood and Plastic	7.3%	4.6%	9.1%	9.9%	7.1%	4.5%	8.9%	9.7%
7. Thermal and Moisture Protection	10.1%	10.1%	10.1%	10.1%	9.9%	9.9%	9.9%	9.9%
8. Doors and Windows	6.4%	6.4%	6.4%	6.4%	6.2%	6.2%	6.2%	6.2%
9. Finishes	6.8%	6.8%	6.8%	6.8%	6.6%	6.6%	6.6%	6.6%
10. Specialties	0.6%	0.6%	0.6%	0.6%	0.6%	0.6%	0.6%	0.6%
11. Equipment	4.8%	4.8%	4.8%	4.8%	4.7%	4.7%	4.7%	4.7%
12. Furnishings	0.0%	0.0%	0.0%	0.0%	0.0%	0.0%	0.0%	0.0%
13. Special Construction	0.8%	0.8%	0.8%	0.8%	0.8%	0.8%	0.8%	0.8%
14. Conveying Systems	0.8%	0.8%	0.8%	0.8%	0.8%	0.8%	0.8%	0.8%
15. Mechanical	12.2%	12.2%	12.2%	12.2%	11.9%	11.9%	11.9%	11.9%
16. Electrical	5.8%	5.8%	5.8%	5.8%	5.7%	5.7%	5.7%	5.7%
17. Attorney/Other	3.6%	3.6%	3.6%	3.6%	3.5%	3.5%	3.5%	3.5%
Total	**100.0%**	**100.0%**	**100.0%**	**100.0%**	**100.0%**	**100.0%**	**100.0%**	**100.0%**

Category 4: Civic-Institutional Buildings
Standard Interior

Standard Systems

Division	*Standard Site Work*				*Extensive Site Work*			
	Masonry & Standard Exterior	Masonry & Extensive Exterior	Wood & Standard Exterior	Wood & Extensive Exterior	Masonry & Standard Exterior	Masonry & Extensive Exterior	Wood & Standard Exterior	Wood & Extensive Exterior
0. Architecture & Engineering	6.8%	6.8%	6.8%	6.8%	6.7%	6.7%	6.7%	6.7%
1. General Requirements	6.2%	6.2%	6.2%	6.2%	6.1%	6.1%	6.1%	6.1%
2. Site Work	8.4%	8.4%	8.4%	8.4%	10.4%	10.4%	10.4%	10.4%
3. Concrete	2.3%	2.3%	2.3%	2.3%	2.2%	2.2%	2.2%	2.2%
4. Masonry	11.2%	13.3%	9.0%	7.9%	10.9%	13.0%	8.8%	7.7%
5. Metals	5.2%	5.2%	5.2%	5.2%	5.1%	5.1%	5.1%	5.1%
6. Wood and Plastic	15.4%	13.2%	17.6%	18.6%	15.1%	12.9%	17.2%	18.2%
7. Thermal and Moisture Protection	11.5%	11.5%	11.5%	11.5%	11.3%	11.3%	11.3%	11.3%
8. Doors and Windows	5.9%	5.9%	5.9%	5.9%	5.8%	5.8%	5.8%	5.8%
9. Finishes	11.2%	11.2%	11.2%	11.2%	10.9%	10.9%	10.9%	10.9%
10. Specialties	3.1%	3.1%	3.1%	3.1%	3.0%	3.0%	3.0%	3.0%
11. Equipment	0.5%	0.5%	0.5%	0.5%	0.5%	0.5%	0.5%	0.5%
12. Furnishings	0.3%	0.3%	0.3%	0.3%	0.3%	0.3%	0.3%	0.3%
13. Special Construction	0.6%	0.6%	0.6%	0.6%	0.6%	0.6%	0.6%	0.6%
14. Conveying Systems	1.2%	1.2%	1.2%	1.2%	1.1%	1.1%	1.1%	1.1%
15. Mechanical	3.9%	3.9%	3.9%	3.9%	3.8%	3.8%	3.8%	3.8%
16. Electrical	4.1%	4.1%	4.1%	4.1%	4.0%	4.0%	4.0%	4.0%
17. Attorney/Other	2.3%	2.3%	2.3%	2.3%	2.2%	2.2%	2.2%	2.2%
Total	**100.0%**	**100.0%**	**100.0%**	**100.0%**	**100.0%**	**100.0%**	**100.0%**	**100.0%**

Extensive Interior

Standard Systems

Division	*Standard Site Work*				*Extensive Site Work*			
	Masonry & Standard Exterior	Masonry & Extensive Exterior	Wood & Standard Exterior	Wood & Extensive Exterior	Masonry & Standard Exterior	Masonry & Extensive Exterior	Wood & Standard Exterior	Wood & Extensive Exterior
0. Architecture & Engineering	6.8%	6.8%	6.8%	6.8%	6.7%	6.7%	6.7%	6.7%
1. General Requirements	6.2%	6.2%	6.2%	6.2%	6.1%	6.1%	6.1%	6.1%
2. Site Work	8.4%	8.4%	8.4%	8.4%	10.4%	10.4%	10.4%	10.4%
3. Concrete	1.2%	1.2%	1.2%	1.2%	1.1%	1.1%	1.1%	1.1%
4. Masonry	10.1%	12.2%	7.9%	6.8%	9.9%	12.0%	7.7%	6.7%
5. Metals	5.2%	5.2%	5.2%	5.2%	5.1%	5.1%	5.1%	5.1%
6. Wood and Plastic	14.3%	12.1%	16.5%	17.6%	14.0%	11.9%	16.1%	17.2%
7. Thermal and Moisture Protection	11.5%	11.5%	11.5%	11.5%	11.3%	11.3%	11.3%	11.3%
8. Doors and Windows	5.9%	5.9%	5.9%	5.9%	5.8%	5.8%	5.8%	5.8%
9. Finishes	14.4%	14.4%	14.4%	14.4%	14.1%	14.1%	14.1%	14.1%
10. Specialties	3.1%	3.1%	3.1%	3.1%	3.0%	3.0%	3.0%	3.0%
11. Equipment	0.5%	0.5%	0.5%	0.5%	0.5%	0.5%	0.5%	0.5%
12. Furnishings	0.3%	0.3%	0.3%	0.3%	0.3%	0.3%	0.3%	0.3%
13. Special Construction	0.6%	0.6%	0.6%	0.6%	0.6%	0.6%	0.6%	0.6%
14. Conveying Systems	1.2%	1.2%	1.2%	1.2%	1.1%	1.1%	1.1%	1.1%
15. Mechanical	3.9%	3.9%	3.9%	3.9%	3.8%	3.8%	3.8%	3.8%
16. Electrical	4.1%	4.1%	4.1%	4.1%	4.0%	4.0%	4.0%	4.0%
17. Attorney/Other	2.3%	2.3%	2.3%	2.3%	2.2%	2.2%	2.2%	2.2%
Total	**100.0%**	**100.0%**	**100.0%**	**100.0%**	**100.0%**	**100.0%**	**100.0%**	**100.0%**

Category 4: Civic-Institutional Buildings
Standard Interior

Division	*Extensive Systems*							
	Standard Site Work				*Extensive Site Work*			
	Masonry & Standard Exterior	Masonry & Extensive Exterior	Wood & Standard Exterior	Wood & Extensive Exterior	Masonry & Standard Exterior	Masonry & Extensive Exterior	Wood & Standard Exterior	Wood & Extensive Exterior
0. Architecture & Engineering	6.8%	6.8%	6.8%	6.8%	6.7%	6.7%	6.7%	6.7%
1. General Requirements	7.5%	7.5%	7.5%	7.5%	7.3%	7.3%	7.3%	7.3%
2. Site Work	10.2%	10.2%	10.2%	10.2%	12.2%	12.2%	12.2%	12.2%
3. Concrete	1.9%	1.9%	1.9%	1.9%	1.8%	1.8%	1.8%	1.8%
4. Masonry	9.4%	11.2%	7.5%	6.6%	9.1%	10.9%	7.4%	6.5%
5. Metals	4.3%	4.3%	4.3%	4.3%	4.2%	4.2%	4.2%	4.2%
6. Wood and Plastic	12.9%	11.1%	14.7%	15.6%	12.6%	10.8%	14.4%	15.3%
7. Thermal and Moisture Protection	9.7%	9.7%	9.7%	9.7%	9.4%	9.4%	9.4%	9.4%
8. Doors and Windows	4.9%	4.9%	4.9%	4.9%	4.8%	4.8%	4.8%	4.8%
9. Finishes	9.4%	9.4%	9.4%	9.4%	9.2%	9.2%	9.2%	9.2%
10. Specialties	2.6%	2.6%	2.6%	2.6%	2.5%	2.5%	2.5%	2.5%
11. Equipment	0.4%	0.4%	0.4%	0.4%	0.4%	0.4%	0.4%	0.4%
12. Furnishings	0.3%	0.3%	0.3%	0.3%	0.2%	0.2%	0.2%	0.2%
13. Special Construction	0.5%	0.5%	0.5%	0.5%	0.5%	0.5%	0.5%	0.5%
14. Conveying Systems	1.0%	1.0%	1.0%	1.0%	1.0%	1.0%	1.0%	1.0%
15. Mechanical	7.8%	7.8%	7.8%	7.8%	7.6%	7.6%	7.6%	7.6%
16. Electrical	8.3%	8.3%	8.3%	8.3%	8.1%	8.1%	8.1%	8.1%
17. Attorney/Other	2.3%	2.3%	2.3%	2.3%	2.2%	2.2%	2.2%	2.2%
Total	**100.0%**	**100.0%**	**100.0%**	**100.0%**	**100.0%**	**100.0%**	**100.0%**	**100.0%**

Extensive Interior

Division	*Extensive Systems*							
	Standard Site Work				*Extensive Site Work*			
	Masonry & Standard Exterior	Masonry & Extensive Exterior	Wood & Standard Exterior	Wood & Extensive Exterior	Masonry & Standard Exterior	Masonry & Extensive Exterior	Wood & Standard Exterior	Wood & Extensive Exterior
0. Architecture & Engineering	6.8%	6.8%	6.8%	6.8%	6.7%	6.7%	6.7%	6.7%
1. General Requirements	7.5%	7.5%	7.5%	7.5%	7.3%	7.3%	7.3%	7.3%
2. Site Work	10.2%	10.2%	10.2%	10.2%	12.2%	12.2%	12.2%	12.2%
3. Concrete	1.0%	1.0%	1.0%	1.0%	1.0%	1.0%	1.0%	1.0%
4. Masonry	8.4%	10.3%	6.6%	5.7%	8.3%	10.0%	6.5%	5.6%
5. Metals	4.3%	4.3%	4.3%	4.3%	4.2%	4.2%	4.2%	4.2%
6. Wood and Plastic	12.0%	10.2%	13.8%	14.7%	11.7%	9.9%	13.5%	14.4%
7. Thermal and Moisture Protection	9.7%	9.7%	9.7%	9.7%	9.4%	9.4%	9.4%	9.4%
8. Doors and Windows	4.9%	4.9%	4.9%	4.9%	4.8%	4.8%	4.8%	4.8%
9. Finishes	12.1%	12.1%	12.1%	12.1%	11.8%	11.8%	11.8%	11.8%
10. Specialties	2.6%	2.6%	2.6%	2.6%	2.5%	2.5%	2.5%	2.5%
11. Equipment	0.4%	0.4%	0.4%	0.4%	0.4%	0.4%	0.4%	0.4%
12. Furnishings	0.3%	0.3%	0.3%	0.3%	0.2%	0.2%	0.2%	0.2%
13. Special Construction	0.5%	0.5%	0.5%	0.5%	0.5%	0.5%	0.5%	0.5%
14. Conveying Systems	1.0%	1.0%	1.0%	1.0%	1.0%	1.0%	1.0%	1.0%
15. Mechanical	7.8%	7.8%	7.8%	7.8%	7.6%	7.6%	7.6%	7.6%
16. Electrical	8.3%	8.3%	8.3%	8.3%	8.1%	8.1%	8.1%	8.1%
17. Attorney/Other	2.3%	2.3%	2.3%	2.3%	2.2%	2.2%	2.2%	2.2%
Total	**100.0%**	**100.0%**	**100.0%**	**100.0%**	**100.0%**	**100.0%**	**100.0%**	**100.0%**

Appendix C

Input-Output Analysis: Technical Description and Application

This appendix discusses the history and application of input-output analysis and details an input-output model developed by the Regional Science Research Coporation (RSRC) termed the RSRC PC I-O model. This model offers significant advantages in detailing the total economic effects of an activity (such as historic rehabilitation and heritage tourism) including multiplier effects.

ESTIMATING MULTIPLIERS

The fundamental issue determining the size of the multiplier effect is the "openness" of regional economies. Regions that are more "open" are those that import their required inputs from other regions. Imports can be thought of as substitutes for local production. Thus, the more a region depends on imported goods and services instead of its own production, the more economic activity leaks away from the local economy. Businessmen noted this phenomemon, and subsequently formed local chambers of commerce with the explicit purpose of containing as much as possible such leakage from their locality by instituting a "buy local" policy among their membership. Similarly during the 1970s, as an import invavsion was well underway, businessmen and union leadership announced a "buy American" policy in the hope of regaining the ground the U.S. was losing at home vis-à-vis its international competition. Therefore, one of the main goals of regional economic multiplier research has been to discover better ways to estimate the leakage of purchases out of a region or, symmetrically, to determine the region's level of self-sufficiency.

The earliest attempts to systematize the procedure for estimating multiplier effects used the economic base model, which is still used in many econometric models today. This approach assumes that all economic activities in a region can be divided into two categories: "basic" activities that produce exclusively for export and region-serving or "local" activities that produce strictly for internal regional consumption. Since this approach is simpler but similar to the approach used by regional input-output analysis, let us explin briefly how multplier effects are estimated using the economic base approach. If we let x be export employment, l be local employment and t be total employment then

$$t = x + l$$

For simplification, we create the ratio a as

$$a = l/t$$

so that

$$l = at$$

then substituting into the first equation we obtain

$$t = x + at$$

By bringing all of the terms with t to one side of the equation we get

$$t - at = x \quad \text{or} \quad t(1-a) = x$$

Solving for t we get

$$t = x/(1-a)$$

Thus, if we know the amount of export-oriented employment, x, and the ratio of local to total employment, a, we can readily calculate total employment by applying the economic base multiplier, $1/(1-a)$, which is embedded in the above formula. Thus if 40

percent of all regional employment is used to produce exports, then the regional multiplier would be 2.5. The assumption behind this multiplier is that all remaining regional employment is required to support the export employment. Thus, the 2.5 can be decomposed into two parts the direct effect of the exports, which is always 1.0, and the indirect and induced effects, which is the remainder—in this case 1.5. Hence, the multiplier can be read as telling us that for each export-oriented job another 1.5 jobs are needed to support it.

This notion of the multiplier has been extended so that x is understood to represent an economic change demanded by an organization or institution outside of an economy—so called "final demand." Such changes can be those effected by government, households, or even by an outside firm. Changes in the economy can therefore be calculated by a minor alteration in the multiplier formula:

$$\Delta t = \Delta x/(1-a)$$

The high level of industry aggregation and the regidity of the economic assumptions that permit the application of the economic base multiplier have caused this approach to be subject to extensive criticism. Most of the discussion has focused on the estimation of the parameter **a**. Estimating this parameter requires that one be able to distinguish those parts of the economy that produce for local consumption from those that do not. Indeed, virtually all industries, even services, sell to customers both inside and outside the region. As a result, regional economists devised an approach by which to measure the *degree* to which each industry is involved in the nonbase activities of the region, better known as the industry's *regional purchase coefficient*. Thus, they expanded the above formulations by calculating for each *i* industry

$$l_i = r_i d_i$$

and

$$x_i = t_i - r_i d_i$$

given that d_i is the total regional demand for industry *i*'s product. Given the above formulae and data on regional demands by industry, one can calculate an accurate traditional aggregate economic base parameter by the following:

$$a = l/t = \Sigma l_{ii}/\Sigma t_i$$

Although accurate, this approach only facilitates the calculation of an aggregate multiplier for the entire region. That is, we cannot determine from this approach what the effects are on the various sectors of an economy. This is despite the fact that one must painstakingly calculate the regional demand as as well the degree to which they each industry is involved in nonbase activity in the region.

As a result, a different approach to multiplier estimation that takes advantage of the detailed demand and trade data was developed. This approach is called "input-output analysis."

Regional Input-Output Analysis: A Brief History

The basic framework for input-output analysis originated nearly 250 years ago when François Quesenay published *Tableau Economique* in 1758. Quesenay's "tableau" graphically and numerically portrayed the relationships between sales and purchases of the various industries of an economy. More than a century later, his description was adapted by Leon Walras, who advanced input-output modeling by providing a concise theoretical formulation of an economic system (including consumer purchases and the economic representation of "technology").

It was not until the twentieth century, however, that economists advanced and tested Walras's work. Wassily Leontief greatly simplified Walras's theoretical formulation by applying the Nobel Prize-winning assumptions that both technology and trading patterns were fixed over time. These two assumptions meant that the pattern of flows among industries in an area could be considered stable. These assumptions permitted Walras's formulation to use data from a single time period, which generated a great reduction in data requirements.

Although Leontief won the Nobel Prize in 1973, he first used his approach in 1936 when he developed a model of the 1919 and 1929 U.S. economies to estimate the effects of the end of World War I on national employment. Recognition of his work awaited wider acceptance and use of the approach. This meant development of a standardized procedure for compiling the requisite data (today's national economic census of industries) and enhanced capability for calculations (i.e., the computer).

The federal government immediately recognized the importance of Leontief's development and has been publishing input-output tables of the U.S. economy since 1939. The most recently published tables are those for 1987. Other nations followed suit. Indeed, the United Nations maintains a bank of tables from most member nations with a uniform accounting scheme.

Framework

Input-output modeling focuses on the interrelationships of sales and purchases among sectors of the economy. Input-output is best understood through its most basic form, the *interindustry transactions table* or matrix. In this table (see Figure 1 for an example), the column industries are consuming sectors (or markets) and the row industries are producing sectors. The contents of a matrix cell is the value of shipments that the row industry delivers to the column industry. Conversely, it is the value of shipments that the column industry receives from the row industry. Hence, the interindustry transactions table is a detailed accounting of the disposition of the value of shipments in an economy. Indeed, the detailed accounting of the interindustry transactions at the national level is performed not so much to facilitate calculation of national economic impacts as it is to back out an estimate of the nation's gross domestic product.

Figure 1: Interindustry Transactions Matrix

	Agriculture	Manu-facturing	Services	Other	Final Demand	Total Output
Agriculture	10	65	10	5	10	100
Manufacturing	40	25	35	75	25	200
Services	15	5	5	5	90	120
Other	15	10	50	50	100	225
Value Added	20	95	20	90		
Total Input	100	200	120	225		

For example, in Figure 1, agriculture, as a producing industry sector, is depicted as selling $65 million of goods to manufacturing. Conversely, the table depicts that the manufacturing industry purchased $65 million of agricultural production. The sum

across columns of the interindustry transaction matrix is called the *intermediate outputs vector*. The sum across rows is called the *intermediate inputs vector*.

A single *final demand* column is also included in Figure 1. Final demand, which is outside the square interindustry matrix, includes imports, exports, government purchases, changes in inventory, private investment, and sometimes household purchases.

The *value added* row, which is also outside the square interindustry matrix, includes wages and salaries, profit-type income, interest, dividends, rents, royalties, capital consumption allowances, and taxes. It is called "value added" because it is the difference between the total value of the industry's production and the value of the goods and nonlabor services that it requires to produce. Thus, it is the *value* that an industry *adds* to the goods and services it uses as inputs in order to produce output.

The value added row measures each industry's contribution to wealth accumulation. In a national model, therefore, its sum is better known as the gross domestic product (GDP). At the state level, this is known as the gross state product—a series produced by the U.S. Bureau of Economic Analysis and published in the Regional Economic Information System. Below the state level, it is known simply as the regional equivalent of the GDP—the gross regional product.

Input-output economic impact modelers now tend to include the household industry within the square interindustry matrix. In this case, the "consuming industry" is the household itself. Its spending is extracted from the final demand column and is appended as a separate column in the interindustry matrix. To maintain a balance, the income of households must be appended as a row. The main income of households is labor income, which is extracted from the value-added row. Modelers tend not to include other sources of household income in the household industry's row. This is not because such income is not attributed to households but rather because much of this other income derives from sources outside of the economy that is being modeled.

The next step used in producing input-output multipliers is to calculate the *direct requirements matrix*, which is also called the "technology matrix." The calculations are based entirely on data from Figure 1. As shown in Figure 2, the values of the cells in the direct requirements matrix are derived by dividing each cell in a column of Figure 1, the interindustry transactions matrix, by its column total. For example, the cell for manufacturing's purchases from agriculture is 65/200 = .33. Each cell in a column of the direct requirements matrix shows how many cents of each producing industry's goods and/or services are required to produce one dollar of the consuming industry's production and are called *technical coefficients*. The use of the terms "technology" and "technical" derive from the fact that a column of this matrix represent a recipe for a unit of an industry's production. It, therefore, shows the needs of each industry's production process or "technology."

Figure 2:
Direct Requirements Matrix

	Agriculture	Manufacturing	Services	Other
Agriculture	.10	.33	.08	.02
Manufacturing	.40	.13	.29	.33
Services	.15	.03	.04	.02
Other	.15	.05	.42	.22

Next in the process of producing input-output multipliers, the *Leontief Inverse* is calculated. To explain what the Leontief Inverse is, let us temporarily turn to equations. Now, from Figure 1 we know that the sum across both the rows of the square interindustry transactions matrix (Z) and the final demand vector (y) is equal to vector of production by industry (x). That is,

$$x = Zi + y$$

where i is a summation vector of ones. Now, we calculate the direct requirements matrix (A) by dividing the interindustry transactions matrix by the production vector or

$$A = ZX^{-1}$$

where X^{-1} is a square matrix with inverse of each element in the vector x on the diagonal and the rest of the elements equal to zero. Rearranging the above equation yields

$$Z = AX$$

where X is a square matrix with the elements of the vector x on the diagonal and zeros elsewhere. Thus,

$$x = (AX)i + y$$

or, alternatively,

$$x = Ax + y$$

solving this equation for x yields

$$x = (I-A)^{-1} y$$

Total	=	Total	Final
Output		Requirements	Demand

The Leontief Inverse is the matrix $(I-A)^{-1}$. It portrays the relationships between final demand and production. This set of relationships is exactly what is needed to identify the economic impacts of an event external to an economy.

Because it does translate the direct economic effects of an event into the total economic effects on the modeled economy, the Leontief Inverse is also called the *total requirements matrix*. The total requirements matrix resulting from the direct requirements matrix in the example is shown in Figure 3.

Figure 3:
Total Requirements Matrix

	Agriculture	Manufacturing	Services	Other
Agriculture	1.5	.6	.4	.3
Manufacturing	1.0	1.6	.9	.7
Services	.3	.1	1.2	.1
Other	.5	.3	.8	1.4
Industry Multipliers	.33	2.6	3.3	2.5

In the direct or technical requirements matrix in Figure 2, the technical coefficient for the manufacturing sector's purchase from the agricultural sector was .33, indicating

the 33 cents of agricultural products must be directly purchased to produce a dollar's worth of manufacturing products. The same "cell" in Figure 3 has a value of .6. This indicates that for every dollar's worth of product that manufacturing ships out of the economy (i.e., to the government or for export) agriculture will end up increasing its production by 60 cents. The sum of each column in the total requirements matrix is the *output multiplier* for that industry.

Multipliers

A *multiplier* is defined as the system of economic transactions that follow a disturbance in an economy. Any economic disturbance affects an economy in a fashion similar to that which a drop makes in a still pond. It creates a large primary "ripple" by causing a *direct* change in the purchasing patterns of affected firms and institutions. The suppliers of the affected firms and institutions must change their purchasing patterns to meet the demands placed upon them by the firms originally affected by the economic disturbance, thereby creating a smaller secondary "ripple." In turn, those who meet the needs of the suppliers must change their purchasing patterns to meet the demands placed upon them by the suppliers of the original firms, and so on; thus, a number of subsequent "ripples" are created in the economy.

The multiplier effect has three components—direct, indirect, and induced effects. Because of the pond analogy, it is also sometimes referred to as the *ripple effect*.

- A *direct effect* (the initial drop causing the ripple effects) is the change in purchases due to a change in economic activity.
- An *indirect effect* is the change in the purchases of suppliers to the economic activity directly experiencing change.
- An *induced effect* is the change in consumer spending that is generated by changes in labor income within the region as a result of the direct and indirect effects of the economic activity. Including households as a column and row in the interindustry matrix allows this effect to be captured.

Extending the Leontief Inverse to pertain not only to relationships between *total* production and final demand of the economy but also to *changes* in each permits its multipliers to be applied to many types of economic impacts. Indeed, in impact analysis the Leontief Inverse lends itself to the drop-in-a-pond analogy discussed earlier. This is because the Leontief Inverse multiplied by a change in final demand can be estimated by a power series. That is

$$(I-A)^{-1}\,\Delta y = \Delta y + A\,\Delta y + A(A\,\Delta y) + A(A(A\,\Delta y)) + A(A(A(A\,\Delta y))) + \ldots$$

Assuming that Δy—the change in final demand—is the "drop in the pond," then succeeding terms are the ripples. Each "ripple" term is calculated as the previous "pond disturbance" multiplied by the direct requirements matrix. Thus, since each element in the direct requirements matrix is less than one, each ripple term is smaller than its predecessor. Indeed, it has been shown that after calculating about seven of these ripple terms that the power series approximation of impacts very closely estimates those produced by the Leontief Inverse directly.

In impacts analysis practice, Δy is a single column of expenditures with the same number of elements as there are rows or columns in the direct or technical requirements

matrix. This set of elements is called an *impact vector*. This term is used because it is the *vector* of numbers that is used to estimate the *economic impacts* of the investment.

There are two types of changes in investments, and consequently economic impacts, generally associated with projects—*one-time impacts* and *recurring impacts*. *One-time impacts* are impacts that are attributable to an expenditure that occurs once over a limited period of time. For example, the impacts resulting from the construction of a project are one-time impacts. Recurring impacts are impacts that continue permanently as a result of new or expanded ongoing expenditures. The ongoing operation of a new train station, for example, generates recurring impacts to the economy. Examples of changes in economic activity are investments in the preservation of old homes, tourist expenditures, or the expenditures required to run a historical site. Such activities are considered changes in final demand and can be either positive or negative. When the activity is not made in an industry, it is generally not well represented by the input-output model. Nonetheless, the activity can be represented by a special set of elements that are similar to a column of the transactions matrix. This set of elements is called an economic disturbance or *impact vector*. The latter term is used because it is the *vector* of numbers that is used to estimate the *impacts*. In this study, the impact vector is estimated by multiplying one or more economic *translators* by a dollar figure that represents an investment in one or more projects. The term "translator" is derived from the fact that such a vector *translates* a dollar amount of an activity into its constituent purchases by industry.

One example of an industry multiplier is shown in Figure 4. In this example, the activity is the preservation of a historic home. The *direct impact* component consists of purchases made specifically for the construction project from the producing industries. The *indirect impact* component consists of expenditures made by producing industries to support the purchases made for this project. Finally, the *induced impact* component focuses on the expenditures made by workers involved in the activity on-site and in the supplying industries.

Figure 4: Components of the Multiplier for the Historic Rehabilitation of a Single-family Residence

DIRECT IMPACT	INDIRECT IMPACT	INDUCED IMPACT
Excavation/Construction Labor Concrete Wood Bricks Equipment Finance and Insurance	Production Labor Steel Fabrication Concrete Mixing Factory and Office Expenses Equipment Components	Expenditures by wage earners on-site and in the supplying industries for food, clothing, durable goods, entertainment

REGIONAL INPUT-OUTPUT ANALYSIS

Because of data limitations, *regional* input-output analysis has some considerations beyond those for the nation. The main considerations are those regarding the depiction of regional technology and the adjustment of the technology to account for interregional trade by industry.

In the regional setting, local technology matrices are not readily available. An accurate region-specific technology matrix requires a survey of a representative sample of organizations for each industry to be depicted in the model. Such surveys are extremely expensive.[1] Because of the expense, regional analysts have tended to use national technology as a surrogate for regional technology. This substitution does not affect the accuracy of the model as long as local industry technology does not vary widely from the nation's average.[2]

Even when local technology varies widely from the nation's average for one or more industries, model accuracy may not be much affected. This is because interregional trade may mitigate the error that would be induced by the technology. That is, in estimating economic impacts via a regional input-output model, national technology must be regionalized by a vector of regional purchase coefficients,[3] **r**, in the following manner:

$$(\mathbf{I}-\mathbf{rA})^{-1}\,\mathbf{r}\cdot\Delta\mathbf{y}$$

or

$$\mathbf{r}\cdot\Delta\mathbf{y} + \mathbf{rA}\,(\mathbf{r}\cdot\Delta\mathbf{y}) + \mathbf{rA}(\mathbf{rA}\,(\mathbf{r}\cdot\Delta\mathbf{y})) + \mathbf{rA}(\mathbf{rA}(\mathbf{rA}\,(\mathbf{r}\cdot\Delta\mathbf{y}))) + \ldots$$

where the vector-matrix product **rA** is an estimate of the region's direct requirements matrix. Thus, if national technology coefficients—which vary widely from their local equivalents—are multiplied by small RPCs, the error transferred to the direct requirements matrices will be relatively small. Indeed, since most manufacturing industries have small RPCs and since technology differences tend to arise due to substitution in the use of manufactured goods, technology differences have generally been found to be minor source error in economic impact measurement. Instead, RPCs and their measurement error due to industry aggregation have been the focus of research on regional input-output model accuracy.

A Comparison of Three Major Regional Economic Impact Models

In the United States there are three major vendor of regional input-output models. They are U.S. Bureau of Economic Analysis's (BEA) RIMS II multipliers, Minnesota IMPLAN Group Inc.'s (MIG) IMPLAN Pro model, and Regional Science Research Corporation's (RSRC) PC I-O model. CUPR has had the privilege of using them all.

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[1]The most recent statewide survey-based model was developed for the State of Kansas in 1986 and cost on the order of $60,000 (in 1990 dollars). The development of this model, however, leaned heavily on work done in 1965 for the same state. In addition the model was aggregated to the 35-sector level, making it inappropriate for many possible applications since the industries in the model do not represent the very detailed sectors that are generally analyzed.

[2]Only recently have researchers studied the validity of this assumption. They have found that large urban areas may have technology in some manufacturing industries that differs in a statistically significant way from the national average. As will be discussed in a subsequent paragraph, such differences may be unimportant after accounting for trade patterns.

[3]A regional purchase coefficient (RPC) for an industry is the proportion of the region's demand for a good or service that is fulfilled by local production. Thus, each industry's RPC varies between zero (0) and one (1), with one implying that all local demand is fulfilled by local suppliers. As a general rule, agriculture, mining, and manufacturing industries tend to have low RPCs, and both service and construction industries tend to have high RPCs.

Although the three systems have important similarities, there are also significant differences that should be considered before deciding which system to use in a particular study. This document compares the features of the three systems. Further discussion can be found in Brucker, Hastings, and Latham's article in the Summer 1987 issue of *The Review of Regional Studies* entitled "Regional Input-Output Analysis: A Comparison of Five 'Ready-Made' Model Systems." Since that date, RSRC and MIG have added a significant number of new features to PC I-O and IMPLAN, respectively.

Model Accuracy

RIMS II, IMPLAN, and PC I-O all employ input-output (I-O) models for estimating impacts. All three "regionalize" the U.S. national I-O technology coefficients table at the highest levels of disaggregation (more than 500 industries). Since aggregation of sectors has been shown to be an important source of error in the calculation of impact multipliers, the retention of maximum industrial detail in these regional systems is a positive feature that they share. The systems diverge in their regionalization approaches, however. The difference is in the manner that they estimate regional purchase coefficients (RPCs), which are used to regionalize the technology matrix. An RPC is the proportion of the region's demand for a good or service that is fulfilled by the region's own producers rather than by imports from producers in other areas. Thus, it expresses the proportion of the purchases of the good or service that do not leak out of the region, but rather feed back to its economy, with corresponding multiplier effects. Thus, the accuracy of the RPC is crucial to the accuracy of a regional I-O model, since the regional multiplier effects of a sector vary directly with its RPC.

The techniques for estimating the RPCs used by RSRC and MIG in their models are theoretically more appealing than the location quotient (LQ) approach used in RIMS II. This is because the former two allow for crosshauling of a good or service among regions and the latter does not. Since crosshauling of the same general class of goods or services among regions is quite common, the RSRC-MIG approach should provide better estimates of regional imports and exports. Statistical results reported in Stevens, Treyz, and Lahr (1989) confirm that LQ methods tend to overestimate RPCs. By extension, inaccurate RPCs may lead to inaccurately estimated impact estimates.

Further, the estimating equation used by RSRC to produce RPCs should be more accurate than that used by MIG. The difference between the two approaches is that MIG estimates RPCs at a more aggregated level (two-digit SICs, or about 86 industries) and applies them at a desegregate level (over 500 industries). RSRC both estimates and applies the RPCs at the most detailed industry level. The application of aggregate RPCs can induce as much as 50% error in impact estimates (Stevens and Lahr, 1990).

Although both PC I-O and IMPLAN use an RPC-estimating technique that is theoretically sound and update it using the most recent economic data, some practitioners question their accuracy. The reasons for doing so are three-fold. First, the observations currently used to estimate their implemented RPCs are based on 20-years old trade relationships—the Commodity Transportation Survey (CTS) from the 1977 Census of Transportation. Second, the CTS observations are at the state level. Therefore RPC's estimated for substate area's are extrapolated. Hence, there is the potential that RPCs for counties and metropolitan areas are not as accurate as might be expected. Third, the observed CTS RPCs are only for shipments of goods. The interstate provision of services is unmeasured by the CTS. IMPLAN replies on relationships from the 1977 US Multiregional Input-Output Model, which are not clearly documented. PC I–O replies on the same econometric relationships that it does for manufacturing industries but employs expert judgment to construct weight/value ratios (a critical variable in the RSRC RPC-estimating equation) for the nonmanufacturing industries.

The fact that BEA creates the RIMS II multipliers gives it the advantage of being constructed from the full set of the most recent regional earnings data available. BEA is the main federal government purveyor of employment and earnings data by detailed industry. It therefore has access to the fully disclosed and disaggregated versions of these data. The other two model systems rely on older data from *County Business Patterns* and Bureau of Labor Statistic's ES202 forms, which have been "improved" by filling-in for any industries that have disclosure problems (this occurs when three or fewer firms exist in an industry of a region).

Model Flexibility

For the typical user, the most apparent differences among the three modeling systems are the level of flexibility they enable and the type of results that they yield. PC I-O is packaged with main-frame-like interactive programming combined with LOTUS 123® that allows the user to make changes in individual cells of the 515-by-515 technology matrix as well as in the eleven 515-sector vectors of region-specific data that are used to produce the regionalized model. The eleven sectors are: output, demand, employment per unit output, labor income per unit output, total value added per unit of output, taxes per unit of output (state and local), nontax value added per unit output, administrative and auxiliary output per unit output, household consumption per unit of labor income, and the RPCs. Although rather cumbersome due to its DOS-based batch-job orientation, the PC I-O model tends to be simple to use. Its User's Guide is straightforward and concise, providing instruction about the proper implementation of the model as well as the interpretation of the model's results.

The software for IMPLAN Pro is Windows-based, and its User's Guide is more formalized. Of the three modeling systems it is the most user friendly. The Windows orientation has enabled MIG to provide many more options in IMPLAN without increasing the complexity of use. Like PC I-O, IMPLAN's regional data on RPCs, output, labor compensation, industry average margins, and employment can be revised. It does not have complete information on tax revenues other than those from indirect business taxes (excise and sales taxes), and those cannot be altered. Also like PC I-O, IMPLAN allows users to modify the cells of the 538-by-538 technology matrix. It also permits the user to change and apply price deflators so that dollar figures can be updated from the default year, which may be as many as four years prior to the current year. The plethora of options, which are advantageous to the advanced user, can be extremely confusing to the novice. Although default values are provided for most of the options, the accompanying documentation does not clearly point out which items should get the most attention. Further, the calculations needed to make any requisite changes can be more complex than those needed for the PC I-O model. Much of the documentation for the model dwells on technical issues regarding the guts of the model. For example, while one can aggregate the 538-sector impacts to the one- and two-digit SIC level, the current documentation does not discuss that possibility. Instead, the user is advised by the Users Guide to produce an aggregate model to achieve this end. Such a model, as was discussed earlier, is likely to be error ridden.

For a region, RIMS II typically delivers a set of 38-by-471 tables of multipliers for output, earnings, and employment; supplementary multipliers for taxes are available at additional cost. Athough the model's documentation is generally excellent, use of RIMS II alone will not provide proper estimates of a region's economic impacts from a change in regional demand. This is because no RPC estimates are supplied with the model. For example, in order to estimate the impacts of rehabilitation, one not only needs to be able to convert the engineering cost estimates into demands for labor as well as for materials and services by industry, but must also be able to estimate the percentage of the labor income, materials, and services which will be provided by the region's households and

industries (the RPCs for the demanded goods and services). In most cases, such percentages are difficult to ascertain; however, they are provided in the PC I-O and IMPLAN models with simple triggering of an option. Further, it is impossible to change any of the model's parameters if superior data are known. This model ought not to be used for evaluating any project or event where superior data are available or where the evaluation is for a change in regional demand (a construction project or an event) as opposed to a change in regional supply (the operation of a new establishment).

Model Results

Detailed total economic impacts for about 500 industries can be calculated for jobs, labor income, and output from PC I-O and IMPLAN only. These two modeling systems can also provide total impacts as well as impacts at the one- and two-digit industry levels. RIMS II provides total impacts and impacts on only 38 industries for these same three measures. Only the manual for PC I-O warns about the problems of interpreting and comparing multipliers and any measures of output, also known as the value of shipments.

As an alternative to the conventional measures and their multipliers, PC I-O and IMPLAN provide results on a measure known as "value added." It is the region's contribution to the nation's gross domestic product (GDP) and consists of labor income, nonmonetary labor compensation, proprietors' income, profit-type income, dividends, interest, rents, capital consumption allowances, and taxes paid. It is, thus, the region's production of wealth and is the best single economic measure of the total economic impacts of an economic disturbance.

In addition to impacts in terms of jobs, employee compensation, output, and value added, IMPLAN provides information on impacts in terms of personal income, proprietor' income, other property type income, and indirect business taxes. PC I-O breaks out impacts into taxes collected by the local, state, and federal governments. It also provides the jobs impacts in terms of either about 90 or 400 occupations at the users request. It goes a step farther by also providing a return-on-investment-type multiplier measure, which compares the total impacts on all of the main measures to the total original expenditure that caused the impacts. Although these latter can be readily calculated by the user using results of the other two modeling systems, they are rarely used in impact analysis despite their obvious value.

In terms of the format of the results, IMPLAN is the most flexible. On request, it prints the results directly or into a file (Excel® 4.0, Lotus 123®, Word® 6.0, tab delimited, or ASCII text). It can also permit previewing of the results on the computer's monitor. PC I-O automatically prints out its results as text files. It does offer the option of printing out the job impacts in either or both levels of occupational detail. Recently RSRC has improved the formatting of the results so that they are comma delimited, enabling importing into Excel and other spread sheet programs.

RSRC Equation

The equation currently used by RSRC in estimating RPCs is reported in Treyz and Stevens (1985). In this paper, the authors show that they estimated the RPC from the 1977 CTS data by estimating the demands for an industry's production of goods or services that are fulfilled by local suppliers (LS) as

$$LS = D^{e(-1/x)}$$

and where for a given industry

$x = k\, Z_1^{a1} Z_2^{a2}\, P_j\, Z_j^{aj}$ and D is its total local demand.

Since for a given industry RPC = LS/D then

$$\ln\{-1/[\ln(\ln LS/\ln D)]\} = \ln k + a_1 \ln Z_1 + a_2 \ln Z_2 + S_j a_j \ln Z_j$$

which was the equation that was estimated for each industry.

This odd nonlinear form not only yielded high correlations between the estimated and actual values of the RPCs, but it also assured that the RPC value ranges strictly between 0 and 1. The results of the empirical implementation of this equation are shown in Treyz and Stevens (1985, Table 1). The table shows that total local industry demand (Z_1), the supply/demand ratio (Z_2), the weight/value ratio of the good (Z_3), the region's size in square miles (Z_4), and the region's average establishment size in terms of employees for the industry compared to the nation's (Z_5) are the variables that influence the value of the RPC across all regions and industries. The latter of these maintaining the least leverage on RPC values.

Because the CTS data are at the state level only, it is important for the purposes of TELUS that the local industry demand, the supply/demand ratio, and the region's size in square miles are included in the equation. They allow the equation to extrapolate the estimation of RPCs for areas smaller than states. It should also be noted here that the CTS data only cover manufactured goods. Thus, although calculated via the above equation, RPC estimates for services are based on fabricated weight/value ratios that vary by service industry. These service weight/value ratios, however, are grounded on the 30 years of evidence, observation, and experience gained by RSRC. For example, given that the estimating equation is indeed the same for all industries, one is forced to assume that the weight/value ratio of eating establishment industry is much higher than that for the hotel and motel industry. This is because for an area like North Jersey we would expect that most everyone who visits local eating and drinking establishments is likely to be from the area. A very high weight/value ratio forces the industry to meet this demand through local production. Hence, it is no surprise that the region's RSRC RPC for this sector is about 0.89. Similarly, hotels and motels tend to be used by visitors from outside the area. Thus, a weight/value ratio on the order of that for industry production would be expected. Hence, the RSRC RPC for this sector is about 0.25.

The accuracy of RSRC's estimating approach is exemplified best by this last example. Ordinary location quotient approaches would show hotel and motel services serving local residents. Similarly, Implan RPCs are built from data that combine this industry with eating and drinking establishments (among others). The results of such aggregation process is an RPC that represents neither industry (a value of about 0.50) but which is applied to both. In the end, not only is the RSRC RPC-estimating approach the most sound, but it is also widely acknowledged by researchers in the field as being the state of the art.

Advantages and Limitations of Input-Output Analysis

Input-output modeling is one of the most accepted means for estimating economic impacts. This is because it provides a concise and accurate means for articulating the interrelationships among industries. The models can be quite detailed. For example, the current U.S. model currently has more than 500 industries representing many four-digit Standard Industrial Classification (SIC) codes. The RSRC model used in this study has 515 sectors. Further, the industry detail of input-output models provides not only a consistent and systematic approach but also more accurately assesses multiplier effects of changes in economic activity. Research has shown that results from

more aggregated economic models can have as much as 50 percent error inherent in them. Such large errors are generally attributed to poor estimation of regional trade flows resulting from the aggregation process.

Input-output models also can be set up to capture the flows among economic regions. For example, the model used in this study can calculate impacts for a county as well as the total New Jersey state economy.

The limitations of input-output modeling should also be recognized. The approach makes several key assumptions. First, the input-output model approach assumes that there are no economies of scale to production in an industry; that is, the proportion of inputs used in an industry's production process does not change regardless of the level of production. This assumption will not work if the technology matrix depicts an economy of a recessional economy (e.g., 1982) and the analyst is attempting to model activity in a peak economic year (e.g., 1989). In a recession year, the labor-to-output ratio tends to be excessive because firms are generally reluctant to lay off workers when they believe an economic turnaround is about to occur.

A less-restrictive assumption of the input-output approach is that technology is not permitted to change over time. It is less restrictive because the technology matrix in the United States is updated frequently and, in general, production technology does not radically change over short periods.

Finally, the technical coefficients used in most regional models are based on the assumption that production processes are spatially invariant and are well-represented by the nation's average technology. In a region as large and diverse as New Jersey, this assumption is likely to hold true.

Appendix D

Heritage Tourism Definition and Methodological Notes

LONGWOODS INTERNATIONAL AND NEW JERSEY TRAVEL INFORMATION/SURVEY

The information in this study on heritage tourism in New Jersey was developed from data supplied by Longwoods International, a company that conducts tourism surveys and research throughout the United States and internationally. Longwoods administers a "Travel USA Monitor" in which a total of 200,000 households are contacted. The households are members of a major consumer mail panel which is designed to be representative of the U.S. in terms of household income, household size, community size, and census division of residence. Of the 200,000 households contacted, returns in recent years have totaled about 140,000, for a return rate of 70 percent.

In the Travel USA Monitor, Longwoods obtains information on the travel patterns of a randomly selected person from within the household. Data are obtained for:

1. Trips (up to 8) to all 50 U.S. states, 19 specific cities, and 20 foreign countries;
2. Trip characteristics—purpose (e.g., 3 types of business trips and 12 types of pleasure trips), planning, spending, and so on; and
3. Traveler characteristics (demographic information is available from the mail panel database).

From 1994 onward, the Travel USA monitor captured all trips, not just those involving travel of 100 miles or more.

New Jersey travel data are obtained as follows. From the Travel USA Monitor, Longwoods identifies a representative sample of business and pleasure travelers to New Jersey. This is in contrast to the convenience sample that is typical of other types of travel research, such as intercept studies. Longwoods mails a four page questionnaire to 1,600 of the New Jersey visitors identified through the Travel USA Monitor. A copy of the 1994 questionnaire is contained here. In 1994, of the 1,600 New Jersey visitors sent questionnaires, there were about 1,200 returns for a return rate of roughly 80 percent. The data from the returned questionnaires are weighted prior to analysis.

A breakdown of the returns from 1993 to 1995:

Year	New Jersey Returned Questionnaires		
		Visitors	
	Total	Overnight	Daytripper
1993	1,181	933	248
1994	1,177	952	225
1995	981	736	245

The purpose of the New Jersey travel questionnaire, or as Longwoods refers to it the "New Jersey Visitor Monitor" (the state parallel to the Travel USA Monitor), is to identify:

1. trip planning;
2. itinerary within New Jersey (a map accompanying the survey helps travelers identify the places they have visited);
3. sightseeing, recreation, and sports activities on the trip;

4. New Jersey's trip "product" delivery (accommodations, food, attractions, etc.);
5. travel expenditures for input into an economic impact model;
6. image of New Jersey following the trip; and
7. traveler demographics (from the mail panel database)

To obtain the information noted above, the New Jersey Visitor Monitor elicits such information as:

I. Nature of the Trip Item	Questionnaire # (See enclosed questionnaire) 1
1. trip type—different types of business and pleasure trips (e.g., touring pleasure trip versus sales business trip)	
2. trip experience—things visited or experienced (e.g., shopping versus going to a beach)	9
3. trip attraction—specific attractions/places visited (from Waterloo Village to the Short Hills Mall)	10
4. trip activity—nature of activities participated in (from skiing to visiting a theme park)	15f
II. Travel spending/other characteristics **Item**	
5. trip spending—outlays for transportation, food, lodging, etc.	15a–15f
6. trip planning (e.g., how much advance planning and in what form)	7
7. trip satisfaction	19b
8. traveler profile	From mail panel database

IDENTIFYING NEW JERSEY HERITAGE TOURISTS

The Longwoods data is the product of an extensive, statistically reliable survey and sample. While it is not focused on heritage tourism per se, its comprehensive data fields allow for such an analysis. The Rutgers University Center for Urban Policy Research (CUPR), working with Longwoods, obtained information on New Jersey heritage tourism as follows.

From the "trip nature" data (see prior section, items 1–4) CUPR–Longwoods identifies of all visitors to New Jersey, those that are visiting for heritage purposes. This is accomplished for both daytrippers and overnight visitors. Once heritage tourists are identified, their demographic profile, spending, trip satisfaction, and other characteristics are analyzed from the respective Longwoods data fields (see prior section, items 5–8).

Heritage daytrippers are identified by keying to visitors indicating trip types (Question 1) and trip activities (Question 15f) connoting a heritage objective. As a further stipulation, casino daytrippers are categorically excluded. The detailed specifications for identifying "heritage daytrippers"—referring to the Longwoods questionnaire are:

Question #	Question Type	Response flagging heritage daytripper
Question 1	Trip type	"a touring trip" or "an outdoor trip" or "a visit to friends" and No "a casino trip"
	and	
Question 15f	Trip activity	"landmark/historic sites" or "short guided tour"

For overnight visitors to New Jersey, there were fields of information superior to "trip type" to flag an overnight heritage visitor. These included trip experiences (Question 9), trip attraction (Question 10), and trip activities (Question 15f) related to heritage travel. The variety of information led to two alternative specifications for flagging a heritage overnight visitor. One specification is as follows:

Question #	Question Type	Response flagging overnight heritage tourist
15f	trip activity	"landmark/historic sites" or "short guided tour"
	and	
10	trip attraction	indicated from list of 133 attractions, one of 26 attractions deemed historic/heritage in nature. These include, as examples, "historic Chester," "Waterloo Village," "Cape May Victorian Week," "Great Falls National Historic District," "Red Bank Battlefield," and "Lucy the Elephant"
	or	
9	trip experience	experience "historic areas" or "interesting architecture" or "small towns/villages"

Alternatively, a heritage overnight visitor is flagged solely from the responses to trip experience (Question 9) and trip attractions (Question 10) as follows[1]

Question #	Question Type	Response flagging overnight heritage tourist
9	trip experience	experience "heritage areas" or "interesting architecture" or "small towns/villages"
	and	
10	trip attractions	Indicated from list of 133 attractions, two of 26 attractions deemed historic/heritage in nature

In short, under the first specification, an overnight traveler has to indicate a heritage trip activity (e.g., "landmark/historic sites" or "short guided tour") and a "lighter" level of heritage trip attractions (1 of 26). Under the second specification, an

[1] In this second specification of overnight heritage tourists, a respondent did not have to indicate under trip activity (Question 15f) either "landmark/historic sites" or "short guided tour." These responses to Question 15f were required in the first specification of overnight heritage tourists (see text).

overnight traveler does not have to indicate a heritage trip-activity, but has to have more pronounced heritage trip attractions (2 of 26) as well as a trip experience that connotes heritage travel (e.g., experiences "heritage areas" or "interesting architecture" or "small towns/villages").

In addition to the flagging of overnight heritage tourists under the two specifications noted, CUPR–Longwood attempts to further specify those overnight heritage travelers whose exclusive or major purpose is heritage tourism. This traveler is termed a "primary heritage tourist." There is not a foolproof way of doing this, but the following further specification was added to identify a primary heritage tourist. A "primary heritage tourist" is flagged as a traveler qualifying as a "heritage tourist" (i.e., satisfying one of the two alternative specifications) but with a more significant heritage purpose. The latter is linked to trip type (Question 1) and trip location (Question 2a) as follows.

Question #	Question Type	Response flagging a primary heritage tourist A heritage tourist who further replies only
Question 1	Trip type	"a touring trip"
	and	
Question 2a	Trip location	and did not visit Atlantic City

Those travelers not flagged as heritage tourists or primary heritage tourists are categorized as "non-heritage tourists." All travelers comprise the sum of heritage tourists, including those who are primary heritage travelers, and non-heritage tourists.

In short, working with descriptors contained in the Longwoods New Jersey Travel Monitor, CUPR and Longwoods identify the following groups and subgroups of New Jersey tourists (see also attached page on definitions).

OVERNIGHT VISITORS

1. All New Jersey overnight travelers—all overnight visitors.
2. Heritage tourists—
   a. Primary Heritage Overnighter—Overnight visitors whose exclusive or primary interest is of a heritage nature.
   b. Partial Heritage Overnighter—Overnight visitors who spend part of their trip on historic activities, but these activities are likely not the exclusive or main trip purpose.
3. Non-heritage Overnighter—An overnight visitor who is neither heritage tourist nor a primary heritage tourist.

DEFINITIONS OF ADULT VISITORS UTILIZED IN CUPR LONGWOODS ANALYSES

Daytrip Heritage Traveler:	Daytrip visitor who visited a landmark/historic site or took a short guided tour and whose trip type is described as touring, visiting, etc.
Overnight Heritage Travelers:	Overnight visitors who spent part of their trip on historic activities, but these were not the exclusive or major trip purpose. They visited a landmark/historic site or took a short guided tour **and** experienced interesting small towns **or** interesting architecture or visited an historic area or visited one of the 26 separately listed historic sites in New Jersey. **OR** They visited at least two historic sites and experienced heritage areas or interesting architecture or small town/village.
Overnight Primary Heritage Traveler:	Overnight visitor whose exclusive or main trip purpose is historic tourism. They are a subgroup of Overnight Heritage tourists with the further requirement that the trip purpose be a touring vacation and the main destination of the trip is not Atlantic City.
Historic Sites: (separately identified in Longwoods survey)	Historic Chester, Waterloo Village, Red Bank Battlefield, Princeton, Cape May, Wheaton Village, Smithville, Delaware and Raritan Canal and State Park, Edison National Historic Site, Historic Cranbury, Historic Patterson, Historic Ringwood, Batsto Village, the Twin Lights of Navesink, Delaware/Raritan Canal State Park, Franklin Mineral Museum & Sterling Mine, Historic Morristown, Lambertville, Millbrook Village, Old Dutch Parsonage/Somerville, Shad Festival/Lambertville, Cape May Victorian Week, Delaware Bay Schooner, East Point Lighthouse, American Labor Museum/Botto House, Edison National Historic Site, Osborn Cannonball House, Springfield Battlegrounds/Hist. Presbyterian Church, Historic Society Museum, Mount Holly, and Mullica Hill
Non-Heritage Tourist:	Visitor who did not participate in historic activities. A daytrip visitor who is not a heritage tourist or an overnight visitor who is not a heritage tourist nor a primary heritage tourist.

For daytrippers because of the more limited information on this group, similar but not identical groups are identified.

DAYTRIP TOURISTS

1. All New Jersey Daytrip Travelers—All daytrip visitors
2. Heritage Daytrippers—A daytripper having some identifiable historic trip purpose. Excluded from the heritage daytripper group are casino patrons. (Casino visitors dominate the daytripper category.)
3. Non-heritage Daytrippers—A daytripper who does not participate in historic activities (i.e., is not identified as a day trip heritage tourist).

Thus, for both the overnight visitors and daytrippers, an overall traveler group is identified, as are non-heritage and heritage tourists. The difference, however, is that with the overnight visitors, two "levels" of heritage tourists ("partial heritage overnighter" and "primary heritage overnighter") are demarcated while for the daytrippers only one category of heritage visitor ("heritage daytripper") is identified. The number of trips of each respective category and subcategory and the other results are reported on in the body of the text.

1. The day or overnight trip described above will be referred to as THIS TRIP. Before I ask you about THIS TRIP, I want to know about overnight trips you have taken to New Jersey. Referring to the definitions on page 2 of the enclosed booklet, and using just one definition for each trip, how many overnight trips, INCLUDING THIS TRIP (if it was an overnight trip), of each type did you take in each of April, May, or June of 1995 that included New Jersey? (Write In #s Below. Write In "0" If You Took No Overnight Trips Of That Type.)

Pleasure Trips	April	May	June
A Visit To Friends Or Relatives			
A Touring Trip			
An Outdoors Trip			
A Casino Trip			
A Beach Resort Trip			
A Country Resort Trip			
A Ski Trip			
A City Trip			
A Cruise Trip			
A Theme Park Trip			
A Special Event Trip			
Business Trips			
A Sales/Service Trip			
A Convention/Conference/Trade Show Trip			
A Meeting Trip			
A Combined Business/Pleasure Trip			

2a. Returning now to THIS TRIP only, the day or overnight trip described above, what was your main destination -- that is, the place where you spent the most time? (X ONE Box)
1 ☐ Atlantic City 2 ☐ Another place in New Jersey 3 ☐ Another state

2b. Was this trip . . . 1 ☐ An overnight trip - (Continue) 2 ☐ A day trip - (Skip To Qu. 5)

3a. Please write in the total number of nights you were away on THIS TRIP. (Write In # Of Nights): _____

3b. How many nights were spent in: (Write In # Of Nights For EACH Place)
Atlantic City:_____ Another place in New Jersey:_____ Another state:_____

4a. Was THIS TRIP a combined business/pleasure trip? 1☐ Yes - (Continue) 2☐ No - (Skip To Qu. 5)

4b. Thinking just about the extra nights for pleasure, how many were spent in: (Write In # Of Nights For EACH Place)
Atlantic City:_____ Another place in New Jersey:_____ Another state:_____

5. Approximately how many miles from home did you travel to get to New Jersey on THIS TRIP? (X ONE Box)
1 ☐ Under 50 miles 3 ☐ 100 - 299 miles 5 ☐ 500 - 1,000 miles
2 ☐ 50 - 99 miles 4 ☐ 300 - 499 miles 6 ☐ Over 1,000 miles

6. On THIS TRIP, did your immediate travel party travel as part of an escorted group tour? 1☐ Yes 2☐ No

7a. How long before you took THIS TRIP did you start planning it? (X ONE Box In Column 7a Below)

7b. And how long before you took THIS TRIP did you start booking it? (X ONE Box In Column 7b Below)

	"7a" - Started Planning	"7b" - Started Booking
More than 1 year in advance	1 ☐	1 ☐
6 to 12 months	2 ☐	2 ☐
3 to 5 months	3 ☐	3 ☐
2 months	4 ☐	4 ☐
1 month or less	5 ☐	5 ☐
Did not book anything in advance	--	6 ☐ → (Skip To Qu. 7d)

7c. Did you use a travel agent to book all or part of THIS TRIP? 1 ☐ Yes 2 ☐ No

7d. Which of the following sources of information did you use to plan THIS TRIP? (X ALL That Apply)

01 ☐ A travel agent	10 ☐ Television
02 ☐ A company that specializes in group tours	11 ☐ Radio
03 ☐ An airline/commercial carrier	12 ☐ Magazines
04 ☐ An auto club	13 ☐ Newspapers
05 ☐ A hotel or resort	14 ☐ Books
06 ☐ A government tourism office	15 ☐ On line services
07 ☐ A local visitors' bureau/chamber of commerce	16 ☐ Advice from relatives or friends
08 ☐ An association/club	17 ☐ Personal experience from past visit(s)
09 ☐ A 1-800 number	18 ☐ None of these

8a. Please refer to the map of New Jersey on the back of the booklet, and indicate the regions of New Jersey where you spent time on THIS TRIP. (X ALL That Apply In Column 8a Below)

8b. How many nights, if any, did you spend in each region you visited? (Write In #'s In Column 8b Below. Write In "0" If This Was A Day Trip Or If You Spent No Nights In A Region.)

8c. And which of these regions would you say was your main New Jersey destination? (X ONE Box In Column 8c Below)

	"8a" Spent Time	"8b" # Of Nights	"8c" Main Destination
Skylands Region	1 ☐		1 ☐
Greater Atlantic City Region	2 ☐		2 ☐
Southern Shore Region	3 ☐		3 ☐
Delaware River Region	4 ☐		4 ☐
Shore Region	5 ☐		5 ☐
Gateway Region	6 ☐		6 ☐

9. Which of these things did you personally see, visit, or experience in New Jersey on THIS TRIP? (X ALL That Apply)

- 01 ☐ Wilderness areas
- 02 ☐ Rural farming areas
- 03 ☐ Lakes/rivers
- 05 ☐ Beaches/ocean
- 06 ☐ Small towns/villages
- 08 ☐ Wildlife I don't usually see
- 12 ☐ Explore natural environment
- 20 ☐ Friends/relatives
- 21 ☐ Shopping
- 22 ☐ Interesting architecture
- 23 ☐ Unique local foods
- 24 ☐ Elegant restaurants
- 25 ☐ Historic areas
- 26 ☐ Local music
- 30 ☐ None of these

10. What New Jersey communities, attractions, or events did you personally see or visit on THIS TRIP? (To Answer, Select The Appropriate Codes From The "Attractions Code List" On Page 2 Of The Booklet and Write The Number(s) In The Spaces Below. Please, Write Only ONE Code On A Line.)

WRITE IN CODE FROM THE "ATTRACTIONS CODE LIST"

_____	_____	_____	_____	_____
_____	_____	_____	_____	_____
_____	_____	_____	_____	_____
_____	_____	_____	_____	_____
_____	_____	_____	_____	_____

11. In comparison to other places you have visited, please rate NEW JERSEY as a vacation destination with respect to the following. (Use The Following Scale: 1= Superior; 2 = Above Average; 3 = Average; 4 = Below Average; 5 = Poor) (Write In A Number For EACH Statement)

a. Overall trip experience ..... _____
b. Quality of the food ..... _____
c. Quality of the accommodations ..... _____
d. Friendliness of people ..... _____
e. Sight-seeing and attractions ..... _____
f. Music/nightlife/entertainment ..... _____
g. Value for money ..... _____

The following questions are about you, your immediate travel companions, if any, and what your immediate travel party spent on this trip. If some of the expenses were part of a "package", please report them separately, as instructed.

12a. Did your immediate travel party travel as part of a larger group? 1 ☐ Yes 2 ☐ No

12b. Including yourself, write in the number of people in your immediate travel party in each of the following age groups.

Under 18 ..... _____ 25 - 34 ..... _____ 45 - 54 ..... _____ 65 and over _____
18 - 24 ..... _____ 35 - 44 ..... _____ 55 - 64 ..... _____

12c. In addition to yourself, which of the following were in your immediate travel party? (X ALL That Apply)

1 ☐ Spouse/partner 2 ☐ Child(ren) 3 ☐ Parent(s) 4 ☐ Other relative(s) 5 ☐ Friend(s) 6 ☐ Business associate(s) 7 ☐ No one, I traveled on my own

13a. Was THIS TRIP a pre-paid travel package? 1 ☐ Yes - (Continue) 2 ☐ No - (Skip To Qu. 14a)

13b. What did this package include? (X ALL That Apply)

1 ☐ Transportation 2 ☐ Accommodations 3 ☐ All meals 4 ☐ Some meals 5 ☐ Entertainment 6 ☐ Casino stake (Write In Amount): $_____

13c. What was the approximate total cost of this package for just your immediate travel party?

(Write In Amount): $_____

14a. Which type(s) of transportation did you use inside New Jersey? (X ALL That Apply In Column 14a)

If You Started THIS TRIP Inside New Jersey And Remained There, Place an "X" Here ☐ And Skip To Qu. 15

14b. Which type of transportation did you use as you entered New Jersey? (X ONE Box In Column 14b)
14c. And which type of transportation did you use as you left New Jersey? (X ONE Box In Column 14c)
14d. For the type(s) of commercial transportation used to enter or leave New Jersey, write in the total fare(s) paid by your immediate travel party. If this was a package trip, write in the amount spent in addition to the package cost reported in Question 13c or a "P" if the package covered the total fare. (Write In Amount Or A "P" In Column 14d)

	"14a" Inside New Jersey	"14b" Enter New Jersey	"14c" Leave New Jersey	"14d" Fare(s) To Enter/Leave
Personally Operated Vehicles:				
Your own car or that of a friend/relative	1 ☐	1 ☐	1 ☐	--
Rental car	2 ☐	2 ☐	2 ☐	--
Your own/rented truck, van, or R.V.	3 ☐	3 ☐	3 ☐	--
Bicycle/motorcycle	4 ☐	4 ☐	4 ☐	--
Motorboat/sailboat	5 ☐	5 ☐	5 ☐	--
Did not use personally operated vehicles	6 ☐	6 ☐	6 ☐	--
Commercial Transportation:				
Plane	7 ☐	7 ☐	7 ☐	$_____
Train	8 ☐	8 ☐	8 ☐	$_____
Bus	9 ☐	9 ☐	9 ☐	$_____
Taxi	10 ☐	10 ☐	10 ☐	$_____
Ferry/cruise ship/boat	11 ☐	11 ☐	11 ☐	$_____
Did not use commercial transportation	12 ☐	12 ☐	12 ☐	--

15. This section deals with expenditures, if any, in Greater Atlantic City or other regions of New Jersey. Provide your best estimate of the expenditures made by your immediate travel party (i.e., those identified in Question 12c) during your entire time in Greater Atlantic City or other regions of New Jersey, including insurance, taxes, and tips. Record "0" if you spent no money on that item.

NOTE: If THIS TRIP was a package trip, write in the amount spent in addition to the package cost reported in Question 13c, or a "P" if the package covered the total expense for that item. If it was a business or combined business/pleasure trip, include "business" expenses, even if they were paid for by your company.

	Amount Spent: Greater Atlantic City	Amount Spent: All Other Regions
A. Transportation for your immediate travel party:		
i. Rental charge for vehicles rented inside New Jersey	$_____	$_____
ii. Operating expenses for any personally operated road vehicle, whether owned or rented, during your entire time in New Jersey:		
Gasoline	$_____	$_____
Parking	$_____	$_____
Repairs	$_____	$_____
Other	$_____	$_____
iii. Fares for commercial transportation inside New Jersey	$_____	$_____

QUESTION 15 CONTINUED ON NEXT PAGE →

15. *CONTINUED:*

B. **Lodgings and Accommodations** for your immediate travel party:
(Answer Section "B" ONLY If This Was An Overnight Trip. If This Was A Day Trip, Skip To Section "C")

i. **A seasonally rented** facility is one that you rented longer than 4 weeks. Was your accommodation on THIS TRIP a seasonally rented facility? 1 ☐ Yes - (Continue) 2 ☐ No - (Skip To Qu. viii)

ii. What type of accommodation did you rent for the season?
1 ☐ Campground/Trailer Park 2 ☐ Condominium 3 ☐ Cottage/Cabin/Camp

iii. Was this accommodation . . . (X ONE Box)
1 ☐ In Greater Atlantic City
2 ☐ On or near the coast of the Shore or Southern Shore Regions
3 ☐ In some other part of New Jersey

iv. For how long did you rent the facility? (Do Not Include Time When The Facility Was Sublet Or Paid For By Other Travel Parties) (Write In # Of Nights): _____

v. How many nights did you use the facility during the entire time you rented it? (Write In # Of Nights): _____

vi. How many nights did you spend in the rented facility just on THIS TRIP? (Write In # Of Nights): _____

vii. How much rent did you pay for the entire rental period? (Do Not Include Rent For Which You Were Reimbursed By A Sublet Or By Other Travel Parties)
(Write In Amount): $ _____

viii. Write in the number of nights spent in each type of accommodation listed below. (If ALL The Nights Were Spent In The Seasonally Rented Facility Above, Place An "X" Here - ☐ And Skip To Section "C")

	# Of Nights In Greater Atlantic City	# Of Nights In All Other Regions
A casino hotel	_____	_____
Other hotel	_____	_____
A motel	_____	_____
A country inn/lodge	_____	_____
Bed and breakfast	_____	_____
Time sharing unit	_____	_____
Rented campground/trailer park site	_____	_____
Rented condominium unit	_____	_____
Rented cottage/cabin/camp	_____	_____
Your own house/cottage/cabin/condo/campsite	_____	_____
Cottage/cabin/condo/campsite of friends/relatives not paid for	_____	_____
Other (Write In): _____	_____	_____

ix. How much was spent on lodgings for all nights in New Jersey on this trip? (Do NOT include amounts reported already for a seasonal rental. Remember that if this was a package trip, write in the amount spent in addition to the package cost or a "P" if the package covered the total expense.)

	Amount Spent In Greater Atlantic City	Amount Spent In All Other Regions
	$_____	$_____

x. If this rate included any meals, how many meals per day were included? (Write In # Per Day)

	#_____	#_____

C. **Restaurant Food and Beverage** for your immediate travel party. Exclude meals already covered in section "B":

	Amount Spent Greater Atlantic City	Amount Spent All Other Regions
Breakfast	$_____	$_____
Lunch	$_____	$_____
Dinner	$_____	$_____
Snacks	$_____	$_____

D. **Retail Purchases** for your immediate travel party:

Drug store/groceries/snacks bought at retail outlets	$_____	$_____
Gifts/souvenirs	$_____	$_____
Sports equipment/clothing	$_____	$_____
Antiques/crafts	$_____	$_____
Liquor/wine/beer (for off-premise consumption)	$_____	$_____
Other (Write In): _____	$_____	$_____

E. Did you visit a **casino** on THIS TRIP? 1 ☐ Yes - (Continue) 2 ☐ No - (Skip To Section F).

i. What was the total gambling budget for your immediate travel party -- that is, the amount you and they would be willing to lose if your luck was not good? $_____

ii. What was the final win/loss position at the casino for your immediate travel party at the end of your trip? (X If Overall You Won Or Lost AND Write In The $ Amount Won/Lost Excluding Any Casino Stake Reported As Part Of A Package in Question 13b) 1 ☐ Won 2 ☐ Lost $_____

F. **Recreation and Sight-seeing** for your immediate travel party, including taxes and tips. "X" ALL activities participated in. Then write in the total amount spent (admission, fee, rental, license, guide, etc.), or a "0" if your participation cost nothing. Remember if this was a package trip, write in the amount spent in addition to the package cost reported in Question 13c or a "P" if the package covered the total cost. Do not include expenditures already reported earlier in this survey.

	"X" If Participated Or Visited	Greater Atlantic City	All Other Regions
Day cruise (not overnight) 03	☐	$_____	$_____
Short guided tour 05	☐	$_____	$_____
Power boating/sailing 06	☐	$_____	$_____
Snorkeling/scuba diving 07	☐	$_____	$_____
Birdwatching 08	☐	$_____	$_____
Canoeing/kayaking 10	☐	$_____	$_____
Boardwalk activities 11	☐	$_____	$_____
Bowling 12	☐	$_____	$_____
Miniature golf 13	☐	$_____	$_____
Went to an ocean beach 14	☐	$_____	$_____
Went to a lakeside beach 15	☐	$_____	$_____
Water skiing 17	☐	$_____	$_____
Fishing (freshwater) 18	☐	$_____	$_____
Fishing (saltwater) 19	☐	$_____	$_____
Snow skiing 21	☐	$_____	$_____
Entertainment/shows 35	☐	$_____	$_____
"Pick you own" farms 37	☐	$_____	$_____
Bar/disco/nightclub 50	☐	$_____	$_____
National/State park 51	☐	$_____	$_____

	"X" If Participated Or Visited	Greater Atlantic City	All Other Regions
Museum/science exhibit 52	☐	$_____	$_____
Zoo 53	☐	$_____	$_____
Art gallery 54	☐	$_____	$_____
Fair/exhibition/festival 55	☐	$_____	$_____
Landmarks/historic sites 56	☐	$_____	$_____
Theme park 57	☐	$_____	$_____
Rock concert 58	☐	$_____	$_____
Theater/dance/ symphony/opera 59	☐	$_____	$_____
Professional/college sports event 60	☐	$_____	$_____
Car/dog/horse race 61	☐	$_____	$_____
Bicycling 62	☐	$_____	$_____
Golf 63	☐	$_____	$_____
Tennis 64	☐	$_____	$_____
Swam in a pool 65	☐	$_____	$_____
Used a sauna or hot tub 66	☐	$_____	$_____
Hiking 67	☐	$_____	$_____
Other 80	☐	$_____	$_____

16. In this question, I would like you to give your personal impressions of the state of New Jersey as a vacation destination by telling me how much you agree or disagree that each of the following statements applies. Use a 10-point scale, where "1" means you do not agree at all that New Jersey has that characteristic and "10" means you agree completely.

Even though you did not experience everything in the statements, it is your impressions of New Jersey I am interested in. So please use your personal experience as well as what you have seen and read in the media or heard from friends or relatives. Write in "0" only when you have no impression at all.

Do Not Agree			RATING SCALE:						Agree Completely	No Impression
1	2	3	4	5	6	7	8	9	10	0

	Rating
I. Distance:	
Not too far away	____
II. Weather:	
Excellent climate overall	____
III. Scenery:	
Truly beautiful scenery	____
Truly unique scenery	____
IV. Price/Value:	
Affordable to get to	____
Good vacation packages	____
Excellent vacation value for the money	____
V. Food and Accommodations:	
Elegant, sophisticated restaurants	____
Affordable to eat there	____
Noted for its unique local cooking	____
First-class hotels	____
First-class resorts	____
Affordable accommodations	____
VI. Sports Amenities:	
Great beaches	____
Great for swimming	____
Excellent hunting	____
Good place for camping	____
Excellent snow skiing	____
Excellent mountain climbing	____
Great for boating/water sports	____
Excellent fishing	____
Good for viewing wildlife/birds	____
Great for golfers	____
VII. Variety/Cultural Activities/Heritage:	
Interesting cities	____
interesting small towns/villages	____
Protected environmental areas	____
Lots of things to see and do	____

	Rating
VII. Continued:	
Interesting architecture	____
Excellent shopping	____
Exciting casinos	____
Exciting nightlife/entertainment/shows	____
Excellent museums/art galleries	____
Great for theater and the arts	____
Great live music	____
Interesting festivals/fairs/events	____
Well-known landmarks	____
Noted for its history	____
Interesting local people	____
Warm, friendly people	____
Different cultures/ways of life	____
Great for a conference/convention	____
VIII. Familiarity:	
Well-known destination	____
Popular with vacationers	____
I often notice advertising for this place	____
IX. Atmosphere:	
Has great Boardwalks	____
Vacation there is a real adventure	____
An exciting place	____
Good place to relax	____
Safe to travel in tourist areas	____
Not too crowded	____
Good place for families to visit	____
Children would especially enjoy this place	____
Provides a unique vacation experience	____
A place everyone should visit at least once	____
A place I'd really enjoy visiting again	____
Safe to travel anywhere in this place	____

17a. Many U.S. states, cities, and foreign countries sponsor advertising promoting themselves as tourism destinations. This advertising is promoting the destination itself, rather than specific hotels, resorts, or attractions. Have you seen any such advertising for the state of New Jersey in the past six months?

1 ☐ Yes - (Continue)
2 ☐ No - (Skip To Qu. 18)

17b. Where did you see or hear this advertising? (X ALL That Apply)

1 ☐ Magazine
2 ☐ Newspaper
3 ☐ Radio
4 ☐ Television
5 ☐ Brochures
6 ☐ Other (Write In):_____

17c. Did you call or write for information on New Jersey as a result of seeing or hearing this advertising?

1 ☐ Yes
2 ☐ No

18. Prior to THIS TRIP, had you ever visited New Jersey?

1 ☐ Yes
2 ☐ No

19a. Did you receive the New Jersey Travel Map and Guide? 1 ☐ Yes - (Continue) 2 ☐ No - (Skip To Qu. 19c)

19b. Please rate your satisfaction with the New Jersey Travel Map and Guide. (X ONE Box)

1 ☐ Very satisfied
2 ☐ Somewhat satisfied
3 ☐ Neither satisfied/dissatisfied
4 ☐ Somewhat dissatisfied
5 ☐ Very dissatisfied

19c. Did you stop at a New Jersey Visitor Center on THIS TRIP? 1 ☐ Yes 2 ☐ No

QUESTION 20 WILL NOT BE USED IN THIS QUESTIONNAIRE

21. Please indicate your ... AGE: ____ SEX: 1 ☐ Male 2 ☐ Female

Thank you! Once you have completed your questionnaire, please return it to me in the enclosed postage-paid envelope as soon as possible.

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The Attractions Code List

IN SKYLANDS REGION; CODE

- Action Park/Vernon Valley Ski Area ... 1
- Bridgewater Commons ... 2
- Craigmeur Ski Area ... 3
- Delaware/Raritan Canal State Park ... 4
- Delaware Water Gap National Recreation Area ... 5
- Duke Gardens ... 6
- Flemington ... 7
- Franklin Mineral Museum & Sterling Mine ... 8
- High Point State Park ... 9
- Historic Chester ... 10
- Historic Morristown ... 11
- Lake Hopatcong ... 12
- Lambertville ... 13
- Middlebrook Campgrounds ... 14
- Millbrook Village ... 15
- New Jersey Festival of Ballooning ... 16
- New Jersey Flower & Garden Show ... 17
- New Jersey Renaissance Festival ... 18
- New Jersey Shakespeare Festival ... 19
- Old Dutch Parsonage/ Somerville ... 20
- Pequest Fish Hatchery ... 21
- Peters Valley Craft Fair ... 22
- Shad Festival/Lambertville ... 23
- Somerville ... 24
- Tour of Somerville ... 25
- U.S. Bicycling Hall of Fame ... 26
- U.S. Golf Association Golf House Museum ... 27
- U.S. Equestrian Team-Meet of Champions ... 28
- Wallace House/Somerville ... 29
- Waterloo Village ... 30

IN SOUTHERN SHORE REGION:

- Bridgeton ... 31
- Cape May ... 32
- Cape May Victorian Week ... 33
- Delaware Bay Schooner ... 34
- East Point Lighthouse ... 35
- Fortescue ... 36
- Ocean City ... 37
- Port Norris ... 38
- Sea Isle City ... 39
- The Wildwoods ... 40
- Thompsons Beach ... 41
- Wetlands Institute ... 42
- Wheaton Village ... 43

IN GATEWAY REGION: CODE

- American Labor Museum/ Botto House ... 44
- Berkely Heights (Bell Labs) ... 45
- Crossroads Theater ... 46
- Edison National Historic Site ... 47
- Elizabeth (part of Newark Airport) ... 48
- Great Falls National Historic District/Paterson ... 49
- Hambletonian Harness Racing Classic ... 50
- Hoboken/New Jersey Waterfront ... 51
- Ikea Shopping Center/Elizabeth 52
- Kean College ... 53
- Mahwah Tennis Classic ... 54
- Meadowlands Sports Complex . 55
- Medieval Times ... 56
- Montclair Art Museum ... 57
- Newark ... 58
- Newark Airport ... 59
- Newark Museum ... 60
- New Brunswick (Rutgers) ... 61
- NJ Aviation Museum Hall of Fame-Teterboro ... 62
- Osborn Cannonball House ... 63
- Paper Mill Playhouse ... 64
- Paramus Malls ... 65
- Passaic ... 66
- Plainfield ... 67
- Port at Elizabeth ... 68
- Presby Gardens/Montclair ... 69
- Princeton Forrestal Center ... 70
- Rahway ... 71
- Ringwood/Skylands Gardens ... 72
- Scotch Plains ... 73
- Secaucus Outlet Shops ... 74
- Short Hills Mall ... 75
- State Street Theater ... 76
- Statue of Liberty/ Ellis Island/Liberty Science Center ... 77
- Spirit of New Jersey ... 78
- Springfield Battlegrounds/ Hist. Presbyterian Church ... 79
- Summit Hotel ... 80
- Wayne ... 81
- Westfield ... 82

IN GREATER ATLANTIC CITY REGION:

- Atlantic City ... 83
- Brigantine ... 84
- Lucy the Elephant/Margate ... 85
- Margate ... 86
- Marine Mammal Stranding Center/Brigantine .. 87
- Miss America Pageant ... 88
- New Jersey Seafood Festival ... 89
- Ocean City ... 90
- Renault Winery ... 91

IN SHORE REGION: CODE

- Barnegat Baymen's & Decoy Museum ... 92
- Belmar ... 93
- Freehold/Monmouth Park ... 94
- Jenkinson's Aquarium ... 95
- Lakehurst ... 96
- Long Beach Island ... 97
- New Jersey Seafood Festival ... 98
- Ocean Grove ... 99
- Point Pleasant Beach ... 100
- Riverfest/Red Bank ... 101
- Sandy Hook Gateway National Recreation Area 102
- Seaside Heights ... 103
- Six Flags Great Adventure 104
- Spring Lake ... 105
- Toms River ... 106
- Twin Lights of Navesink ... 107

IN DELAWARE RIVER REGION:

- American Indian Arts Festival . 108
- Antiquing ... 109
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Appendix E

New Jersey Historic Sites and Organizations Survey of Operations and Expenditures

New Jersey Historic Sites and Organizations— Survey of Operations and Expenditures

- This survey is being conducted by the Rutgers University Center for Urban Policy Research (CUPR) for the New Jersey Historic Trust with funds received from the National Park Service. CUPR is also addressing some issues for the Task Force on New Jersey History with this survey.
- Please fill out the survey as requested—this should take no more than 30 minutes.
- If you do not have detailed or exact information, *approximate figures suffice.*
- All *replies will be kept confidential.*
- If you have any questions concerning the survey, call Professor David Listokin of CUPR (see information below).

Please fax or send the completed survey to:

Professor David Listokin
Center for Urban Policy Research
33 Livingston Avenue, Suite 400
New Brunswick, NJ 08901-1982
Phone 908-932-3133 ext. 550
Fax 908-932-2363

I. Objective

The following questionnaire focuses on historic sites and history-associated organizations (e.g., historic societies) in New Jersey. Its objective is to obtain information on the profile, staffing, spending, and other characteristics of these sites and organizations.

II. Definitions

For the purpose of the questionnaire, *History* is defined broadly to encompass events, persons, and places as well as cultural, architectural, and/or artistic achievements.

Historic (or history-related) activities are those associated with, or furthering, "history" as defined above.

An *Historic Site* is a place associated with history as defined above. Included, as examples, are a building housing an historic society, a museum with some historic mission/activities, a park with an historic association, as well as an officially designated landmark/monument.

III. Directions

If you are an historic site/organization that is open to visitors, start with question 1 and continue to question 28 and stop.

If you are an historic site/organization that is not open to visitors, start with question 29 and continue to question 52 and stop.

If a question does not apply, indicate NA (for not applicable).

If you need further guidance, call Professor David Listokin at CUPR. (Phone 908-932-3133 ext. 550; Fax 908-932-2363)

There are blank sheets (starting on page 23) if you need additional space for your answers or comments. If you use these blank sheets, indicate the question number(s) that your response/comment refers to.

Organization/Facility Profile

1. Contact person completing form: _____

2. a. Telephone number of contact person: ( ) _____

   b. Fax number of contact person: ( ) _____

3. Name of organization: _____

3a. Of the following categories, which best describes your organization? *(circle one)*

59% { a. private, nonprofit
      b. public, nonprofit

38% c. government (federal, state, county, municipal—*circle one*)

3% d. other, describe _____

federal 5%
state 75%
county 15%
municipal 5%

3b. What is the nature of your of organization? *(Give brief description of mission and major activities.)*

3c. When was the organization founded? _____ *(year)*

pre-1900 8%
1900-1949 16%
1950-1969 27%
1970-present 49%

TOTAL 29,143
AVE 478

3d. How many members do you have? _____ *(Approximate membership will suffice.)*

0	28%
1-199	23%
200-399	15%
400-599	8%
600-799	8%
800+	18%

4. What is the formal name of the historic site (definition—page 2) owned/operated/managed by your organization? (e.g., historic name)

_____

_____

What is the popular name, if different?

_____

_____

5. Please give a brief description of the historic site (e.g., house, museum, battlefield, archeological site, or cultural center). *(Be brief, but specific.)*

historic house museum 56%
other historic museum 17%
site 24%
other museum 3%

6. How many hours is the historic site open to the public? *(Choose most appropriate category—an approximate hourly figure is sufficient.)*

a. Hours per week, year-round open to public — 0-9 37% _____ hours
10-19 11%
~~b. Hours per month, year-round open to public~~ — 20-29 17% _____ ~~hours~~
~~c. Hours per year, open to public~~ — 30-39 8% _____ ~~hours~~
40+ 27%

d. Other *(describe below)*

_____ year round 80%
seasonal 20%

7. Are you satisfied with these hours? *(circle one)*

38% a. yes
(If yes, go to question 9)

62% b. no
(If no, go to question 8)

8. If no, how many more hours, funds permitting, would you want the historic site to be open to the public? *(Choose most appropriate category—an approximate hourly figure is sufficient.)*

a. Additional hours per week, year-round open to public — 0-9 51% 10-19 29% _____ hours
~~b. Additional hours per month, year-round open to public~~ — 20-29 3% _____ ~~hours~~
~~c. Additional hours per year, open to public~~ — 30-39 0% 40+ 17% _____ ~~hours~~

d. Other *(describe below)*

_____ year round 89%
seasonal 11%

_____

_____

Visitation and Amenities

0 - 499 12%
500 - 999 10%
1000 4999 23%
5000 - 9999 12%
10,000 - 24999 17%
25,000 - 49,999 3%
50,000 - 99,999 8%
100,000 + 15%

TOTAL 3,475,474
AVG 57,925

9. What was the total number of annual visitors to the historic site in 1994 or 1995? *(circle year)*

_____ visitors
(Approximate number of annual visitors is sufficient.)

10. Approximately what percentage of the visitors that you indicated in question 9 above were (age):

AVG 5% a. Preschool children (4 years and under) 0-24 98% 25-49 2% 50-74 0% 75-100 0% ____%

AVG 32% b. School-age children (5 to 18 years) 0-24 41% 25-49 41% 50-74 12% 75-100 6% ____%

AVG 42 43% c. Adults (19-64 years) 0-24 17% 25-49 41% 50-74 37% 75-100 5% ____%

AVG 21 20% d. Seniors (65 years +). 0-24 59% 25-49 41% 50-74 0% 75-100 0% ____%

Total 100 %

(Approximate percentages suffice.)

11. To the best of your knowledge, of the total visitors indicated in question 9, approximately what percentage came from:

AVG 46% a. New Jersey—same county as your location 0-24 26% 25-49 24% 50-74 28% 75-100 22% ____%

AVG 36% b. New Jersey—other counties 0-24 31% 25-49 43% 50-74 16% 75-100 10% ____%

AVG 16% c. Outside New Jersey 0-24 74% 25-49 21% 50-74 3% 75-100 2% ____%

____

Total 100 %
(Approximate percentages suffice.)

12. Historic Site Visitor Amenities: *(circle one)*

a. Is the site served by public transportation?	yes 42%	no 58%
b. Do you have public restroom facilities?	yes 87%	no 13%
c. Do you have a parking area for visitors?	yes 81%	no 19%
d. If yes, is it large enough for buses?	yes 70%	no 30%
e. Is the site accessible to the disabled?		
Entry?	yes 61%	no 34%
Restrooms?	yes 51%	no 49%
Programs?	yes ~~34~~ 68%	no ~~66~~ 32%
f. Do you have a visitor center?	yes ~~66~~ 34%	no ~~34~~ 66%
g. Do you have an exhibit area?	yes 85%	no 15%
h. Do you provide staffed interpretive and/or educational opportunities		
On-site?	yes 90%	no 10%
Off-site?	yes 68%	no 32%
i. Do you have an auditorium?	yes 21%	no 79%
j. Do you have a museum shop/book store?	yes 67%	no 33%
k. Do you sell food?	yes 19%	no 81%
l. Do you have a picnic facility?	yes 54%	no 46%
m. Are there nature/hiking trails in close proximity?	yes 59%	no 41%
n. Are there other recreational and/or cultural activities in close proximity?	yes 90%	no 10%
o. Do you have any joint sponsorship of events, marketing, etc. with these proximate recreational/ cultural sites?	yes 65%	no 35%
p. Do you have a library archive or a research collection?	yes 76%	no 24%
q. If you have a library archive/research collection, is it open to the public?	yes 53%	no 47%

r. Any other comments about on-site amenities?

_____

_____

_____

Expenditures

$ 0 - 9999 22%
10,000 - 49,999 24%
50,000 - 99,999 9%
100,000 - 499,999 24%
500,000 - 999,999 9%
1 million + 12%

TOTAL $17,103,315
AVG $311,042

13. What was your organization's annual budget for history-related activities and their administration in 1994 or 1995? *(circle year)* (definition—page 2)
$ _____ *(annual budget)*

(If most of your organization's activities are history-related, then indicate the full budget.)

14. Of the annual budget indicated in question 13, approximately what percentage was spent on: *(Approximate percentages suffice.)*

AVG 33%
a. Labor compensation (e.g., staff salaries and benefits)
0-24 45%
25-49 17%
50-74 29%
75-100 9% _____ %

AVG 47%
b. Nonlabor operating costs (e.g., utilities, routine building maintenance, small repairs, exhibition costs, internal and external program expenses, insurance outlays, etc.)
0-24 22%
25-49 35%
50-74 20%
75-100 23% _____ %

AVG 16%
c. Capital expenditures (e.g., major repairs, rehabilitation, additions, and other capital outlays for major furnishings, HVAC, ADA access, etc.)
0-24 74%
25-49 10%
50-74 16%
75-100 0% _____ %

Total 100 %

TOTAL $3,594,014
AVG $61,662

15. What was your estimated average annual capital expenditure over the past 5 years? *(An approximate annual average figure suffices.)*

$_____ annual average over past 5 years. *(fill in)*

$0-4999 31%
5000-9999 9%
10,000-49,999 18%
50,000-99,999 9%
100,000-499,999 26%
500,000+ 2%

Revenues

16. Of the annual budget indicated in question 13, approximately what percentage was funded by: *(If zero, indicate 0%. Approximate percentages suffice.)*

AVG 43%
a. Government _____ %

AVG 13%
b. Foundations and businesses/other contributions _____ %

AVG 7%
c. Endowment _____ %

AVG 16%
d. Visitor spending _____ %
(If there are visitor revenues, go to question 17; If no visitor revenues, go to question 18)

AVG 21%
e. All other sources (e.g., membership and education/ program fees) _____ %

Total 100 %

OVER

17. Of total visitor revenues (16d), approximately what percent was derived from:

AVG 36%
a. Entry/tour fees _____ %

AVG 43%
b. All other visitor revenues (e.g., gift and food purchases)
0-24 42%
25-49 14%
50-74 14%
75-100 30%
_____ %

Total 100 %
(Approximate percentages suffice.)

0-24 48%
25-49 7%
50-74 20%
75-100 25%

Staffing

18. What is the total number of staff in history-related activities (definition—page 2), including administrators: *(An approximate number is sufficient.)*

AVG 4 a. Number of full-time paid staff (30 hours per week or more) _____ persons

AVG 4 b. Number of part-time paid staff (less than 30 hours per week) _____ persons

AVG 32 c. Number of unpaid volunteers, including interns _____ persons

19. Approximately what percentage of your paid staff live in:

AVG 78% a. New Jersey—same county as your location _____ %

AVG 19% b. New Jersey—other counties _____ %

AVG 2% c. Outside New Jersey _____ %

Total 100 %

(Approximate percentages suffice.)

AVG 6 20. Approximately, how many hours a week does your average unpaid volunteer work? _____

(Approximate hours per week)

0-4 56
5-9 27
10-14 7
15-19 4
20+ 6

20a. Please note any changes in the profile (e.g., gender, age, working status, education, etc.) and time commitment of your unpaid volunteers in the last 5 to 10 years as noted below.

(circle one)			Volunteer Profile
more 19%	fewer 14%	similar 67%	% women
more 20%	fewer 22%	similar 58%	% grade-school students (up to grade 12)
more 20%	fewer 17%	similar 63%	% college students (undergraduate to graduate)
more 37%	fewer 6%	similar 57%	% seniors (i.e., 65 years +)
more 19%	fewer 14%	similar 67%	% employed individuals
more 9%	fewer 9%	similar 82%	% minorities
more 37%	fewer 0%	similar 63%	% college educated
more 17%	fewer 4%	similar 79%	% "locals" (live in same or nearby communities as organization)
more 37%	fewer 14%	similar 49%	average volunteer time commitment

Please note any other changes in volunteer profile.

_____

_____

20b. What can be done to encourage greater volunteering (more people and more time)?

By government _____

_____

By others _____

_____

_____

_____

_____

_____

Unfunded Needs

21. Do you have unfunded needs for history-related activities (definition—page 2) and their administration?
(circle one)

15% a. No—there are virtually no unfunded needs.
If no, go to question 25.

85% b. Yes—there are unfunded needs.
If yes, go to question 22.

22. If there are unfunded needs for history-related activities, specify these needs, as appropriate:

TOTAL $1,731,000
AVG $42,220

a. $_____ annually to maintain existing physical facility (e.g., undertake deferred maintenance and minor repairs). *Describe briefly.*

$0 - 4999	27%
5000 - 9999	7%
10,000 - 49,999	37%
50,000 - 99,999	15%
100,000 +	14%

TOTAL $125,715,000
AVG $3,368,289

b. $_____ to improve/rehabilitate existing physical facility (e.g., enhance accessibility, make extensive repairs, add space, restrooms, parking, etc.). *Describe briefly.*

$0 - 9999	6%
10,000 - 49,999	24%
50,000 - 99,999	13%
100,000 - 249,999	10%
250,000 - 499,000	5%
500,000 - 999,999	16%
1 million +	24%

TOTAL $4,209,160
AVG $93,537

c. $_____ annually to hire approximately (AVG. 3) staff for the following operating purposes: programming, education, expanded hours, outreach, marketing, conservation, publications, etc. *Describe briefly.*

$0 - 9999	14%
10,000 - 49,999	42%
50,000 - 99,999	22%
100,000 - 249,999	11%
250,000 +	11%

TOTAL $5,547,410
AVG $205,459

d. $_____ for other purposes not indicated above. *If applicable, describe briefly.*

$0 - 4999	30%
5000 - 9999	7%
10,000 - 49,999	19%
50,000 - 99,999	18%
100,000 +	26%

23. Identify the priority of the unfunded needs described in question 22. _____ should be done first, followed by _____, _____, and _____.

	1st priority	2nd priority	3rd priority	4th priority
maint.	30%	33%	22%	15%
improve/rehab	30%	26%	26%	15%
staff/operating	38%	28%	23%	15%
other	2%	11%	29%	55%

24. If all the added spending/staffing you indicated in question 22 above were accomplished, what is your best estimate of the percentage increase in visitation to your facility that would ensue? *(A rough "guesstimate" will suffice.)*
(circle one)

8% a. No impact on visitation.

92% b. Total annual visitation would increase by an estimated (AVG 107%) %.
(It is understood, that only a rough "guesstimate" of change can be made.)

0-49	47%
50-99	7%
100-149	22%
150-199	2%
200+	22%

25. Additional comments on economic impacts/financial needs.

Final Questions

26. Are any of your facilities designated as landmarks* or eligible for landmark designation? *(circle one)*

79% a. Yes—designated as a landmark*

7% b. Yes—eligible for landmark* designation

12% c. No—neither designated landmark* nor eligible for landmark* designation

2% d. Do not know

* *(landmark = individually listed as a federal, state, or local historic property or located in a federal, state, or local historic district.)*

27. Site Interpretation—*if applicable.*
a. How do you interpret your site (period/theme/other)?

_____
_____
_____
_____
_____
_____
_____

b. What programs do you present to convey your interpretive message?

_____
_____
_____
_____
_____
_____
_____

c. Who does the interpretation? *(circle as appropriate)*

29% (a) volunteers

8% (b) paid staff

63% (c) volunteer and paid staff

(d) other _____

d. Do you provide programs to school groups? *(circle one)*

96% (a) Yes

4% (b) No

c. Has the site interpretation changed over time in terms of nature (period/theme/other), programs, staffing, and/or school programs? *(circle one)*

64% a. Yes

36% b. No

If yes, briefly describe changes.

28. Artifacts—*if applicable.*
Artifacts refer to objects of art, culture, and history—such as paintings, photographs, manuscripts, documents, papers, furnishings, and machinery.

a. Have your site's artifacts been accessioned? *(circle one)*

85% (a) Yes, (AVG 87%) percentage of artifacts accessioned *(approximate)*

0-24	7%
25-49	0%
50-74	0%
75-100	93%

17% (b) Not accessioned

b. Have your site's artifacts been cataloged? *(circle one)*

80% (a) Yes, (AVG 74%) percent cataloged *(approximate)*

0-24	7%
25-49	7%
50-74	15%
75-100	71%

20% (b) Not cataloged

c. Condition of artifacts *(circle one)*

(a) excellent 3% (b) good 74% (c) fair 21% (d) poor 2%

d. Are conservation measures routinely performed? If so, by whom?

TAL $3,920,350
G $95,618

e. What additional annual funds are needed over what is available today for the proper conservation of the collection?
$ _____ *(Approximate annual dollar estimate is sufficient.)*

$0-4999	39%
5000-9999	12%
10,000-49,999	22%
50,000-99,999	10%
100,000+	17%

f. Is the collection insured? *(circle one)*

61% (a) Yes

39% (b) No

g. Describe your major artifactual collections, including the number of objects in general categories (e.g., 125 ceramics, 50 paintings, 25 photographs, etc. *(Approximate numbers are sufficient.)*

h. Additional comments on artifacts.

If your organization has one, please indicate your electronic mail address and URL (Web page) number.

STOP

Fax or send the completed questionnaire to:

Professor David Listokin
Center for Urban Policy Research
33 Livingston Avenue, Suite 400
New Brunswick, NJ 08901-1982
Phone Number (908) 932-3133 ext. 550
Fax Number (908) 932-2363

Appendix F

Detailed Input-Output Tables (Historic Rehabilitation)

Exhibit F.1
National Economic and Tax Impacts of Annual New Jersey Historic Rehabilitation of Single-Family Buildings ($37 Million)

	Economic Component		
	Employment (jobs)	Income (000$)	Gross Domestic Product (000$)
I. TOTAL EFFECTS (Direct and Indirect/Induced)*			
Private			
1. Agriculture	3	308	519
2. Agri. Serv., Forestry, & Fish	13	198	370
3. Mining	7	362	1,205
4. Construction	305	11,853	12,477
5. Manufacturing	242	9,345	13,052
6. Transport. & Public Utilities	122	5,680	9,346
7. Wholesale	34	1,479	4,130
8. Retail Trade	217	4,090	4,674
9. Finance, Ins., & Real Estate	132	4,867	7,804
10. Services	258	7,534	8,366
Private Subtotal	1,331	45,714	61,939
Public			
11. Government	42	661	611
Total Effects (Private and Public)	1,373	46,375	62,550
II. DISTRIBUTION OF EFFECTS/MULTIPLIER			
1. Direct Effects	479	19,091	23,453
2. Indirect and Induced Effects	894	27,284	39,097
3. Total Effects	1,373	46,375	62,550
4. Multipliers (3÷1)	2.868	2.429	2.667
III. COMPOSITION OF GROSS DOMESTIC PRODUCT			
1. Wages--Net of Taxes			41,960
2. Taxes			
a. Local			3,326
b. State			3,948
c. Federal			
General			7,193
Social Security			5,129
Federal Subtotal			12,322
d. Total taxes (2a+2b+2c)			19,596
3. Profits, dividends, rents, and other			994
4. Total Gross Domestic Product (1+2+3)			62,550
EFFECTS PER MILLION DOLLARS OF INITIAL EXPENDITURE			
Employment (Jobs)			36.7
Income			$1,239,926
State Taxes			$105,548
Local Taxes			$88,919
Gross Domestic Product			$1,672,374

Note: Detail may not sum to totals due to rounding.

*Terms:

Direct Effects--(National) the amount of goods and services purchased in the nation.

Indirect Effects--the value of goods and services needed to support the provision of those direct economic effects.

Induced Effects--the value of goods and services needed by households that provide the direct and indirect labor.

Source: Rutgers University Center for Urban Policy Research, 1997.

Exhibit F.2
National Economic Impacts of Annual New Jersey Historic Rehabilitation of Single-Family Buildings ($37 Million)

INDUSTRY	Industry Component: Employment (jobs)	Income ($000)	Gross Domestic Product ($000)
Agriculture	**3**	**308**	**519**
Dairy Prod., Poultry, & Eggs	0	53	71
Meat Animals & Misc. Livestock	1	63	81
Cotton	0	10	13
Grains & Misc. Crops	1	114	205
Tobacco	0	17	28
Fruits, Nuts, & Vegetables	0	12	40
Forest Prod.	0	24	63
Greenhouse & Nursery Prod.	0	16	19
Agri. Serv., Forestry, & Fish	**13**	**198**	**370**
Agri. Services (07)	6	108	113
Forestry (08)	6	33	197
Fishing, Hunting, & Trapping (09)	1	57	60
Mining	**7**	**362**	**1,205**
Metal Mining (10)	1	44	53
Coal Mining (12)	0	0	0
Oil & Gas Extraction (13)	4	221	989
Nonmetal Min.-Ex. Fuels (14)	2	97	164
Construction	**305**	**11,853**	**12,477**
General Bldg. Contractors (15)	107	4,445	4,679
Heavy Const. Contractors 16)	8	395	416
Special Trade Contractors (17)	190	7,013	7,382
Manufacturing	**242**	**9,345**	**13,052**
Food & Kindred Prod. (20)	15	581	921
Tobacco Manufactures (21)	0	22	102
Textile Mill Prod. (22)	8	204	372
Apparel & Other Prod. (23)	10	178	194
Lumber & Wood Prod. (24)	52	1,754	2,459
Furniture & Fixtures (25)	4	110	129
Paper & Allied Prod. (26)	6	289	483
Printing & Publishing (27)	17	581	774
Chemicals & Allied Prod. (28)	9	567	894
Petroleum & Coal Prod. (29)	2	188	555
Rubber & Misc. Plastics (30)	11	409	467
Leather & Leather Prod. (31)	3	54	66
Stone, Clay, & Glass (32)	25	974	1,197
Primary Metal Prod. (33)	11	579	651
Fabricated Metal Prod. (34)	27	1,074	1,429
Machinery, Except Elec. (35)	12	533	671
Electric & Elec. Equip. (36)	12	474	720
Transportation Equipment (37)	8	488	630
Instruments & Rel. Prod. (38)	6	203	216
Misc. Manufacturing Ind's. (39)	3	83	121

Exhibit F.2 (continued)
National Economic Impacts of Annual New Jersey Historic Rehabilitation of Single Family Buildings ($37 Million)

INDUSTRY	Industry Component: Employment (jobs)	Income ($000)	Gross Domestic Product ($000)
Transport. & Public Utilities	**122**	**5,680**	**9,346**
Railroad Transportation (40)	17	886	1,421
Local Pass. Transit (41)	7	190	212
Trucking & Warehousing (42)	54	2,143	2,249
Water Transportation (44)	4	140	214
Transportation by Air (45)	4	256	339
Pipe Lines-Ex. Nat. Gas (46)	0	14	69
Transportation Services (47)	3	136	151
Communication (48)	18	1,095	2,253
Elec., Gas, & Sanitary Serv. (49)	14	820	2,438
Wholesale	**34**	**1,479**	**4,130**
Whlsale-Durable Goods (50)	17	773	2,531
Whlsale-Nondurable Goods (51)	17	706	1,598
Retail Trade	**217**	**4,090**	**4,674**
Bldg. Mat.-Garden Supply (52)	10	284	313
General Merch. Stores (53)	23	388	569
Food Stores (54)	20	398	445
Auto. Dealers-Serv. Stat. (55)	23	663	742
Apparel & Access. Stores (56)	10	160	250
Furniture & Home Furnish. (57)	3	98	121
Eating & Drinking Places (58)	87	1,221	1,428
Miscellaneous Retail (59)	42	878	807
Finance, Ins., & Real Estate	**132**	**4,867**	**7,804**
Banking (60)	17	601	1,085
Nondep. Credit Institut. (61)	15	535	482
Security, Comm. Brokers (62)	7	518	714
Insurance Carriers (63)	18	801	860
Ins. Agents, Brokers (64)	30	1,168	1,228
Real Estate (65)	14	106	2,410
Holding and Invest. Off. (67)	32	1,138	1,025
Services	**258**	**7,534**	**8,366**
Hotels & Other Lodging (70)	17	281	492
Personal Services (72)	29	528	563
Business Services (73)	62	1,762	2,005
Auto Repair, Serv., Garages (75)	16	569	673
Misc. Repair Services (76)	13	352	372
Motion Pictures (78)	10	225	208
Amusement & Recreation (79)	7	162	194
Health Services (80)	18	594	630
Legal Services (81)	7	435	482
Educational Services (82)	8	165	179
Social Services (83)	8	112	126
Museums, Botan.-Zoo. Gardens (84)	0	9	9
Membership Organizations (86)	20	395	386
Engineer. & Manage. Serv. (87)	42	1,903	2,003
Miscellaneous Services (89)	1	44	46
Government	**42**	**661**	**611**
Total	**1,373**	**46,375**	**62,550**

Note: Detail may not sum to totals due to rounding.

Exhibit F.3
National Employment Impacts by Occupation of Annual New Jersey Historic Rehabilitation of Single-Family Buildings ($37 Million)

OCCUPATION TITLE	Employment (jobs)
Total, All Occupations	**1,373**
Exec., Admin., and Management Occupations	**153**
Managerial and Administrative Occupations	110
Management Support Occupations	42
Professional Specialty Occupations	**62**
Engineers	14
Architects and Surveyors	4
Life Scientists	1
Computer, Math, and Operations Res. Analysts	5
Physical Scientists	1
Social Scientists	0
Social, Recreational, and Relig. Workers	4
Lawyers and Judicial Workers	2
Teachers, Librarians, and Counselors	9
Health Diagnosing Occupations	1
Health Assessment & Treating Occupations	5
Writers, Artists, and Entertainers	12
All Other Professional Workers	4
Technicians and Related Support Occupations	**32**
Health Technicians and Technologists	11
Engineering & Science Technicians & Technologists	14
Technicians, Except Health and Engin. & Science	8
Marketing and Sales Occupations	**126**
Cashiers	23
Counter and Rental Clerks	5
Insurance Sales Workers	7
Real Estate Agents, Brokers, & Appraisers	2
Salespersons, Retail	38
Securities and Financial Service Sales Workers	2
Stock Clerks, Sales Floor	10
Travel Agents	1
All Other Sales and Related Workers	38
Administrative Support Occupations, incl. Clerical	**253**
Adjusters, Investigators, & Collectors	15
Communications Equipment Operators	4
Computer & Peripheral Equipment Operators	3
Financial Records Processing Occupations	39
Information Clerks	14
Mail Clerks and Messengers	3
Postal Clerks and Mail Carriers	14
Mat'l Record., Sched., Dispatch, & Distrib. Occs.	25
Records Processing Occupations, except Financial	9
Secretaries, Stenographers, and Typists	48
Other Clerical and Administrative Support Workers	80

Exhibit F.3 (continued)
National Employment Impacts by Occupation of Annual New Jersey Historic Rehabilitation of Single-Family Buildings ($37 Million)

OCCUPATION TITLE	Employment (jobs)
Service Occupations	**154**
Cleaning & Building Service Occs., except Private	30
Food Preparation and Service Occupations	85
Health Service Occupations	7
Personal Service Occupations	14
Protective Service Occupations	11
All Other Service Workers	7
Agric., Forestry, Fishing, & Related Occupations	**21**
Animal Caretakers, except Farm	1
Farm Occupations	8
Farm Operators and Managers	1
Fishers, Hunters, and Trappers	0
Forestry and Logging Occupations	5
Gardeners & Groundskeepers, except farm	4
Supervisors, Farming, Forestry, & Agricul. Occs.	1
All Other Agric., Forestry, Fishing, & Rel. Workers	1
Precision Production, Craft, & Repair Occupations	**284**
Blue-collar Worker Supervisors	33
Construction Trades	141
Extractive and Related Workers, Incl. Blasters	2
Mechanics, Installers, and Repairers	69
Production Occupations, Precision	37
Plant and System Occupations	2
Operators, Fabricators, and Laborers	**286**
Mach. Setters, Set-up Ops, Operators, & Tenders	63
Hand Workers, incl. Assemblers & Fabricators	30
Transp. & Material Moving Machine & Vehicle Ops.	92
Helpers, Laborers, & Material Movers, Hand	101

Note: Detail may not sum to totals due to rounding.

Exhibit F.4
National Economic and Tax Impacts of Annual New Jersey Historic Rehabilitation of Multifamily Buildings ($3 Million)

	Economic Component		
	Employment (jobs)	Income (000$)	Gross Domestic Product (000$)
I. TOTAL EFFECTS (Direct and Indirect/Induced)*			
Private			
1. Agriculture	0	21	36
2. Agri. Serv., Forestry, & Fish	1	14	25
3. Mining	1	29	94
4. Construction	20	787	828
5. Manufacturing	20	765	1,061
6. Transport. & Public Utilities	4	215	395
7. Wholesale	3	125	344
8. Retail Trade	15	282	323
9. Finance, Ins., & Real Estate	9	336	543
10. Services	19	573	633
Private Subtotal	92	3,147	4,282
Public			
11. Government	3	47	43
Total Effects (Private and Public)	95	3,194	4,325
II. DISTRIBUTION OF EFFECTS/MULTIPLIER			
1. Direct Effects	32	1,266	1,552
2. Indirect and Induced Effects	63	1,928	2,773
3. Total Effects	95	3,194	4,325
4. Multipliers (3÷1)	2.956	2.523	2.786
III. COMPOSITION OF GROSS DOMESTIC PRODUCT			
1. Wages--Net of Taxes			2,890
2. Taxes			
a. Local			230
b. State			273
c. Federal			
General			497
Social Security			355
Federal Subtotal			852
d. Total taxes (2a+2b+2c)			1,354
3. Profits, dividends, rents, and other			81
4. Total Gross Domestic Product (1+2+3)			4,325
EFFECTS PER MILLION DOLLARS OF INITIAL EXPENDITURE			
Employment (Jobs)			36.4
Income			$1,226,245
State Taxes			$104,628
Local Taxes			$88,153
Gross Domestic Product			$1,660,531

Note: Detail may not sum to totals due to rounding.

*Terms:

Direct Effects--(National) the amount of goods and services purchased in the nation.

Indirect Effects--the value of goods and services needed to support the provision of those direct economic effects.

Induced Effects--the value of goods and services needed by households that provide the direct and indirect labor.

Source: Rutgers University Center for Urban Policy Research, 1997.

Exhibit F.5
National Economic Impacts of Annual New Jersey Historic Rehabilitation of Multifamily Buildings ($3 Million)

INDUSTRY	Industry Component		
	Employment (jobs)	Income ($000)	Gross Domestic Product ($000)
Agriculture	**0**	**21**	**36**
Dairy Prod., Poultry, & Eggs	0	4	5
Meat Animals & Misc. Livestock	0	4	6
Cotton	0	1	1
Grains & Misc. Crops	0	8	14
Tobacco	0	1	2
Fruits, Nuts, & Vegetables	0	1	3
Forest Prod.	0	2	4
Greenhouse & Nursery Prod.	0	1	1
Agri. Serv., Forestry, & Fish	**1**	**14**	**25**
Agri. Services (07)	0	8	8
Forestry (08)	0	2	13
Fishing, Hunting, & Trapping (09)	0	4	4
Mining	**1**	**29**	**94**
Metal Mining (10)	0	4	5
Coal Mining (12)	0	0	0
Oil & Gas Extraction (13)	0	16	74
Nonmetal Min.-Ex. Fuels (14)	0	9	16
Construction	**20**	**787**	**828**
General Bldg. Contractors (15)	7	297	312
Heavy Const. Contractors 16)	1	25	26
Special Trade Contractors (17)	13	465	490
Manufacturing	**20**	**765**	**1,061**
Food & Kindred Prod. (20)	1	40	64
Tobacco Manufactures (21)	0	2	7
Textile Mill Prod. (22)	1	11	18
Apparel & Other Prod. (23)	1	12	14
Lumber & Wood Prod. (24)	5	159	217
Furniture & Fixtures (25)	0	8	10
Paper & Allied Prod. (26)	1	26	43
Printing & Publishing (27)	1	42	56
Chemicals & Allied Prod. (28)	1	67	106
Petroleum & Coal Prod. (29)	0	13	40
Rubber & Misc. Plastics (30)	1	42	48
Leather & Leather Prod. (31)	0	4	5
Stone, Clay, & Glass (32)	2	72	89
Primary Metal Prod. (33)	1	45	51
Fabricated Metal Prod. (34)	3	97	128
Machinery, Except Elec. (35)	1	34	42
Electric & Elec. Equip. (36)	1	39	58
Transportation Equipment (37)	1	33	42
Instruments & Rel. Prod. (38)	0	14	15
Misc. Manufacturing Ind's. (39)	0	6	9

Exhibit F.5 (continued)
National Economic Impacts of Annual New Jersey Historic Rehabilitation of Multifamily Buildings ($3 Million)

INDUSTRY	Industry Component: Employment (jobs)	Income ($000)	Gross Domestic Product ($000)
Transport. & Public Utilities	**4**	**215**	**395**
Railroad Transportation (40)	0	18	29
Local Pass. Transit (41)	0	11	13
Trucking & Warehousing (42)	1	54	56
Water Transportation (44)	0	4	7
Transportation by Air (45)	0	16	21
Pipe Lines-Ex. Nat. Gas (46)	0	1	4
Transportation Services (47)	0	7	8
Communication (48)	1	57	116
Elec., Gas, & Sanitary Serv. (49)	1	47	142
Wholesale	**3**	**125**	**344**
Whlsale-Durable Goods (50)	1	61	198
Whlsale-Nondurable Goods (51)	2	64	146
Retail Trade	**15**	**282**	**323**
Bldg. Mat.-Garden Supply (52)	1	20	22
General Merch. Stores (53)	2	27	39
Food Stores (54)	1	27	31
Auto. Dealers-Serv. Stat. (55)	2	45	50
Apparel & Access. Stores (56)	1	11	17
Furniture & Home Furnish. (57)	0	7	8
Eating & Drinking Places (58)	6	85	100
Miscellaneous Retail (59)	3	61	56
Finance, Ins., & Real Estate	**9**	**336**	**543**
Banking (60)	1	42	76
Nondep. Credit Institut. (61)	1	37	33
Security, Comm. Brokers (62)	0	36	49
Insurance Carriers (63)	1	55	59
Ins. Agents, Brokers (64)	2	81	85
Real Estate (65)	1	8	171
Holding and Invest. Off. (67)	2	78	71
Services	**19**	**573**	**633**
Hotels & Other Lodging (70)	1	20	36
Personal Services (72)	2	37	39
Business Services (73)	5	128	145
Auto Repair, Serv., Garages (75)	1	38	45
Misc. Repair Services (76)	1	24	25
Motion Pictures (78)	1	16	15
Amusement & Recreation (79)	1	11	14
Health Services (80)	1	41	43
Legal Services (81)	1	31	34
Educational Services (82)	1	11	12
Social Services (83)	1	8	9
Museums, Botan.-Zoo. Gardens (84)	0	1	1
Membership Organizations (86)	1	28	27
Engineer. & Manage. Serv. (87)	4	178	187
Miscellaneous Services (89)	0	3	3
Government	**3**	**47**	**43**
Total	**95**	**3,194**	**4,325**

Note: Detail may not sum to totals due to rounding.

Exhibit F.6
National Employment Impacts by Occupation of Annual New Jersey Historic Rehabilitation of Multifamily Buildings ($3 Million)

OCCUPATION TITLE	Employment (jobs)
Total, All Occupations	**95**
Exec., Admin., and Management Occupations	**11**
Managerial and Administrative Occupations	8
Management Support Occupations	3
Professional Specialty Occupations	**5**
Engineers	1
Architects and Surveyors	0
Life Scientists	0
Computer, Math, and Operations Res. Analysts	0
Physical Scientists	0
Social Scientists	0
Social, Recreational, and Relig. Workers	0
Lawyers and Judicial Workers	0
Teachers, Librarians, and Counselors	1
Health Diagnosing Occupations	0
Health Assessment & Treating Occupations	0
Writers, Artists, and Entertainers	1
All Other Professional Workers	0
Technicians and Related Support Occupations	**3**
Health Technicians and Technologists	1
Engineering & Science Technicians & Technologists	1
Technicians, Except Health and Engin. & Science	1
Marketing and Sales Occupations	**9**
Cashiers	2
Counter and Rental Clerks	0
Insurance Sales Workers	1
Real Estate Agents, Brokers, & Appraisers	0
Salespersons, Retail	3
Securities and Financial Service Sales Workers	0
Stock Clerks, Sales Floor	1
Travel Agents	0
All Other Sales and Related Workers	3
Administrative Support Occupations, incl. Clerical	**17**
Adjusters, Investigators, & Collectors	1
Communications Equipment Operators	0
Computer & Peripheral Equipment Operators	0
Financial Records Processing Occupations	3
Information Clerks	1
Mail Clerks and Messengers	0
Postal Clerks and Mail Carriers	1
Mat'l Record., Sched., Dispatch, & Distrib. Occs.	2
Records Processing Occupations, except Financial	1
Secretaries, Stenographers, and Typists	3
Other Clerical and Administrative Support Workers	5

Exhibit F.6 (continued)
National Employment Impacts by Occupation of Annual New Jersey Historic Rehabilitation of Multifamily Buildings ($3 Million)

OCCUPATION TITLE	Employment (jobs)
Service Occupations	**11**
Cleaning & Building Service Occs., except Private	2
Food Preparation and Service Occupations	6
Health Service Occupations	1
Personal Service Occupations	1
Protective Service Occupations	1
All Other Service Workers	1
Agric., Forestry, Fishing, & Related Occupations	**1**
Animal Caretakers, except Farm	0
Farm Occupations	1
Farm Operators and Managers	0
Fishers, Hunters, and Trappers	0
Forestry and Logging Occupations	0
Gardeners & Groundskeepers, except farm	0
Supervisors, Farming, Forestry, & Agricul. Occs.	0
All Other Agric., Forestry, Fishing, & Rel. Workers	0
Precision Production, Craft, & Repair Occupations	**19**
Blue-collar Worker Supervisors	2
Construction Trades	9
Extractive and Related Workers, Incl. Blasters	0
Mechanics, Installers, and Repairers	5
Production Occupations, Precision	3
Plant and System Occupations	0
Operators, Fabricators, and Laborers	**19**
Mach. Setters, Set-up Ops, Operators, & Tenders	5
Hand Workers, incl. Assemblers & Fabricators	2
Transp. & Material Moving Machine & Vehicle Ops.	5
Helpers, Laborers, & Material Movers, Hand	7

Note: Detail may not sum to totals due to rounding.

Exhibit F.7
National Economic and Tax Impacts of Annual New Jersey Historic Rehabilitation of Nonresidential Buildings ($83 Million)

	Economic Component		
	Employment (jobs)	Income (000$)	Gross Domestic Product (000$)
I. TOTAL EFFECTS (Direct and Indirect/Induced)*			
Private			
1. Agriculture	5	651	1,054
2. Agri. Serv., Forestry, & Fish	17	352	458
3. Mining	17	875	2,666
4. Construction	756	29,354	30,899
5. Manufacturing	589	23,581	32,084
6. Transport. & Public Utilities	139	6,786	12,523
7. Wholesale	66	2,882	8,197
8. Retail Trade	500	9,400	10,740
9. Finance, Ins., & Real Estate	302	11,172	17,912
10. Services	650	20,150	22,223
Private Subtotal	3,043	105,200	138,748
Public			
11. Government	96	1,528	1,413
Total Effects (Private and Public)	3,139	106,728	140,161
II. DISTRIBUTION OF EFFECTS/MULTIPLIER			
1. Direct Effects	1,106	44,116	51,474
2. Indirect and Induced Effects	2,033	62,611	88,687
3. Total Effects	3,139	106,728	140,161
4. Multipliers (3÷1)	2.837	2.419	2.723
III. COMPOSITION OF GROSS DOMESTIC PRODUCT			
1. Wages--Net of Taxes			96,567
2. Taxes			
a. Local			7,556
b. State			8,976
c. Federal			
General			16,118
Social Security			11,493
Federal Subtotal			27,612
d. Total taxes (2a+2b+2c)			44,143
3. Profits, dividends, rents, and other			(549)
4. Total Gross Domestic Product (1+2+3)			140,161
EFFECTS PER MILLION DOLLARS OF INITIAL EXPENDITURE			
Employment (Jobs)			38.3
Income			$1,302,490
State Taxes			$109,538
Local Taxes			$92,211
Gross Domestic Product			$1,710,502

Note: Detail may not sum to totals due to rounding.

*Terms:

Direct Effects--(National) the amount of goods and services purchased in the nation.

Indirect Effects--the value of goods and services needed to support the provision of those direct economic effects.

Induced Effects--the value of goods and services needed by households that provide the direct and indirect labor.

Source: Rutgers University Center for Urban Policy Research, 1997.

Exhibit F.8
National Economic Impacts of Annual New Jersey Historic Rehabilitation of Nonresidential Buildings ($83 Million)

INDUSTRY	Industry Component		
	Employment (jobs)	Income ($000)	Gross Domestic Product ($000)
Agriculture	**5**	**651**	**1,054**
Dairy Prod., Poultry, & Eggs	1	120	163
Meat Animals & Misc. Livestock	2	141	180
Cotton	0	20	27
Grains & Misc. Crops	2	260	462
Tobacco	0	38	62
Fruits, Nuts, & Vegetables	0	25	84
Forest Prod.	0	13	34
Greenhouse & Nursery Prod.	0	34	42
Agri. Serv., Forestry, & Fish	**17**	**352**	**458**
Agri. Services (07)	11	202	213
Forestry (08)	3	18	106
Fishing, Hunting, & Trapping (09)	3	132	140
Mining	**17**	**875**	**2,666**
Metal Mining (10)	2	165	198
Coal Mining (12)	0	0	0
Oil & Gas Extraction (13)	8	454	2,031
Nonmetal Min.-Ex. Fuels (14)	6	256	437
Construction	**756**	**29,354**	**30,899**
General Bldg. Contractors (15)	206	8,598	9,050
Heavy Const. Contractors 16)	94	3,819	4,020
Special Trade Contractors (17)	457	16,937	17,829
Manufacturing	**589**	**23,581**	**32,084**
Food & Kindred Prod. (20)	36	1,337	2,122
Tobacco Manufactures (21)	1	50	235
Textile Mill Prod. (22)	17	436	754
Apparel & Other Prod. (23)	23	420	458
Lumber & Wood Prod. (24)	35	1,108	1,565
Furniture & Fixtures (25)	15	403	468
Paper & Allied Prod. (26)	15	736	1,228
Printing & Publishing (27)	39	1,361	1,815
Chemicals & Allied Prod. (28)	19	1,199	1,868
Petroleum & Coal Prod. (29)	5	476	1,345
Rubber & Misc. Plastics (30)	30	1,087	1,236
Leather & Leather Prod. (31)	6	125	153
Stone, Clay, & Glass (32)	62	2,316	2,775
Primary Metal Prod. (33)	43	2,427	2,686
Fabricated Metal Prod. (34)	116	4,677	6,263
Machinery, Except Elec. (35)	47	2,020	2,512
Electric & Elec. Equip. (36)	38	1,488	2,254
Transportation Equipment (37)	18	1,091	1,400
Instruments & Rel. Prod. (38)	20	642	681
Misc. Manufacturing Ind's. (39)	6	182	265

Exhibit F.8 (continued)
National Economic Impacts of Annual New Jersey Historic Rehabilitation of Nonresidential Buildings ($83 Million)

INDUSTRY	Industry Component: Employment (jobs)	Income ($000)	Gross Domestic Product ($000)
Transport. & Public Utilities	**139**	**6,786**	**12,523**
Railroad Transportation (40)	9	453	727
Local Pass. Transit (41)	15	375	420
Trucking & Warehousing (42)	41	1,622	1,702
Water Transportation (44)	4	130	199
Transportation by Air (45)	10	567	750
Pipe Lines-Ex. Nat. Gas (46)	0	25	116
Transportation Services (47)	6	237	260
Communication (48)	31	1,854	3,778
Elec., Gas, & Sanitary Serv. (49)	25	1,523	4,571
Wholesale	**66**	**2,882**	**8,197**
Whlsale-Durable Goods (50)	36	1,654	5,419
Whlsale-Nondurable Goods (51)	30	1,227	2,778
Retail Trade	**500**	**9,400**	**10,740**
Bldg. Mat.-Garden Supply (52)	23	640	706
General Merch. Stores (53)	52	891	1,308
Food Stores (54)	46	910	1,018
Auto. Dealers-Serv. Stat. (55)	52	1,482	1,658
Apparel & Access. Stores (56)	22	374	584
Furniture & Home Furnish. (57)	7	226	277
Eating & Drinking Places (58)	201	2,820	3,299
Miscellaneous Retail (59)	98	2,055	1,889
Finance, Ins., & Real Estate	**302**	**11,172**	**17,912**
Banking (60)	38	1,387	2,506
Nondep. Credit Institut. (61)	34	1,230	1,108
Security, Comm. Brokers (62)	15	1,188	1,638
Insurance Carriers (63)	42	1,831	1,964
Ins. Agents, Brokers (64)	69	2,674	2,810
Real Estate (65)	31	244	5,526
Holding and Invest. Off. (67)	72	2,619	2,359
Services	**650**	**20,150**	**22,223**
Hotels & Other Lodging (70)	41	682	1,205
Personal Services (72)	66	1,216	1,297
Business Services (73)	146	4,207	4,783
Auto Repair, Serv., Garages (75)	35	1,227	1,448
Misc. Repair Services (76)	29	798	842
Motion Pictures (78)	24	516	477
Amusement & Recreation (79)	16	371	444
Health Services (80)	41	1,367	1,450
Legal Services (81)	15	997	1,103
Educational Services (82)	19	379	412
Social Services (83)	18	259	293
Museums, Botan.-Zoo. Gardens (84)	1	21	21
Membership Organizations (86)	46	917	896
Engineer. & Manage. Serv. (87)	151	7,090	7,447
Miscellaneous Services (89)	2	102	106
Government	**96**	**1,528**	**1,413**
Total	**3,139**	**106,728**	**140,161**

Note: Detail may not sum to totals due to rounding.

Exhibit F.9
National Employment Impacts by Occupation of Annual New Jersey Historic Rehabilitation of Nonresidential Buildings ($83 Million)

OCCUPATION TITLE	Employment (jobs)
Total, All Occupations	**3,139**
Exec., Admin., and Management Occupations	**360**
Managerial and Administrative Occupations	260
Management Support Occupations	101
Professional Specialty Occupations	**172**
Engineers	49
Architects and Surveyors	18
Life Scientists	1
Computer, Math, and Operations Res. Analysts	12
Physical Scientists	4
Social Scientists	1
Social, Recreational, and Relig. Workers	9
Lawyers and Judicial Workers	6
Teachers, Librarians, and Counselors	21
Health Diagnosing Occupations	2
Health Assessment & Treating Occupations	11
Writers, Artists, and Entertainers	30
All Other Professional Workers	9
Technicians and Related Support Occupations	**90**
Health Technicians and Technologists	25
Engineering & Science Technicians & Technologists	48
Technicians, Except Health and Engin. & Science	19
Marketing and Sales Occupations	**286**
Cashiers	53
Counter and Rental Clerks	11
Insurance Sales Workers	18
Real Estate Agents, Brokers, & Appraisers	5
Salespersons, Retail	88
Securities and Financial Service Sales Workers	6
Stock Clerks, Sales Floor	23
Travel Agents	1
All Other Sales and Related Workers	84
Administrative Support Occupations, incl. Clerical	**572**
Adjusters, Investigators, & Collectors	34
Communications Equipment Operators	7
Computer & Peripheral Equipment Operators	7
Financial Records Processing Occupations	88
Information Clerks	32
Mail Clerks and Messengers	6
Postal Clerks and Mail Carriers	34
Mat'l Record., Sched., Dispatch, & Distrib. Occs.	53
Records Processing Occupations, except Financial	20
Secretaries, Stenographers, and Typists	113
Other Clerical and Administrative Support Workers	179

Exhibit F.9 (continued)
National Employment Impacts by Occupation of Annual New Jersey Historic Rehabilitation of Nonresidential Buildings ($83 Million)

OCCUPATION TITLE	Employment (jobs)
Service Occupations	**355**
Cleaning & Building Service Occs., except Private	69
Food Preparation and Service Occupations	196
Health Service Occupations	18
Personal Service Occupations	32
Protective Service Occupations	25
All Other Service Workers	16
Agric., Forestry, Fishing, & Related Occupations	**28**
Animal Caretakers, except Farm	1
Farm Occupations	12
Farm Operators and Managers	2
Fishers, Hunters, and Trappers	0
Forestry and Logging Occupations	2
Gardeners & Groundskeepers, except farm	8
Supervisors, Farming, Forestry, & Agricul. Occs.	1
All Other Agric., Forestry, Fishing, & Rel. Workers	1
Precision Production, Craft, & Repair Occupations	**656**
Blue-collar Worker Supervisors	75
Construction Trades	326
Extractive and Related Workers, Incl. Blasters	5
Mechanics, Installers, and Repairers	154
Production Occupations, Precision	90
Plant and System Occupations	5
Operators, Fabricators, and Laborers	**620**
Mach. Setters, Set-up Ops, Operators, & Tenders	155
Hand Workers, incl. Assemblers & Fabricators	81
Transp. & Material Moving Machine & Vehicle Ops.	164
Helpers, Laborers, & Material Movers, Hand	221

Note: Detail may not sum to totals due to rounding.

Exhibit F.10
In-State Economic and Tax Impacts of Annual New Jersey Historic Rehabilitation of Single-Family Buildings ($37 Million)

	Economic Component		
	Employment (jobs)	Income (000$)	Gross State Product (000$)
I. TOTAL EFFECTS (Direct and Indirect/Induced)*			
Private			
1. Agriculture	0	2	8
2. Agri. Serv., Forestry, & Fish	2	41	67
3. Mining	2	64	103
4. Construction	264	10,510	12,056
5. Manufacturing	124	3,796	6,447
6. Transport. & Public Utilities	81	2,379	5,281
7. Wholesale	19	1,290	3,014
8. Retail Trade	68	1,403	2,141
9. Finance, Ins., & Real Estate	21	969	2,217
10. Services	93	2,646	3,511
Private Subtotal	674	23,099	34,842
Public			
11. Government	15	199	194
Total Effects (Private and Public)	689	23,298	35,036
II. DISTRIBUTION OF EFFECTS/MULTIPLIER			
1. Direct Effects	453	16,754	23,453
2. Indirect and Induced Effects	236	6,544	11,584
3. Total Effects	689	23,298	35,036
4. Multipliers (3÷1)	1.521	1.391	1.494
III. COMPOSITION OF GROSS STATE PRODUCT			
1. Wages--Net of Taxes			20,482
2. Taxes			
a. Local			2,043
b. State			2,419
c. Federal			
General			4,029
Social Security			2,873
Federal Subtotal			6,902
d. Total taxes (2a+2b+2c)			11,364
3. Profits, dividends, rents, and other			3,190
4. Total Gross State Product (1+2+3)			35,036
EFFECTS PER MILLION DOLLARS OF INITIAL EXPENDITURE			
Employment (Jobs)			18.4
Income			$622,911
State Taxes			$64,686
Local Taxes			$54,622
Gross State Product			$936,747

Note: Detail may not sum to totals due to rounding.

*Terms:

Direct Effects--(State) the amount of goods and services purchased in New Jersey.

Indirect Effects--the value of goods and services needed to support the provision of those direct economic effects.

Induced Effects--the value of goods and services needed by households that provide the direct and indirect labor.

Source: Rutgers University Center for Urban Policy Research, 1997.

Exhibit F.11
In-State Economic Impacts of Annual New Jersey Historic Rehabilitation of Single Family Buildings ($37 Million)

INDUSTRY	Industry Component		
	Employment (jobs)	Income ($000)	Gross State Product ($000)
Agriculture	**0**	**2**	**8**
Dairy Prod., Poultry, & Eggs	0	0	0
Meat Animals & Misc. Livestock	0	0	0
Cotton	0	0	0
Grains & Misc. Crops	0	0	1
Tobacco	0	0	1
Fruits, Nuts, & Vegetables	0	0	0
Forest Prod.	0	0	3
Greenhouse & Nursery Prod.	0	1	4
Agri. Serv., Forestry, & Fish	**2**	**41**	**67**
Agri. Services (07)	2	38	51
Forestry (08)	0	1	4
Fishing, Hunting, & Trapping (09)	0	3	12
Mining	**2**	**64**	**103**
Metal Mining (10)	0	0	0
Coal Mining (12)	0	0	0
Oil & Gas Extraction (13)	1	2	2
Nonmetal Min.-Ex. Fuels (14)	2	62	101
Construction	**264**	**10,510**	**12,056**
General Bldg. Contractors (15)	90	3,712	4,604
Heavy Const. Contractors 16)	6	326	357
Special Trade Contractors (17)	168	6,471	7,095
Manufacturing	**124**	**3,796**	**6,447**
Food & Kindred Prod. (20)	3	94	249
Tobacco Manufactures (21)	0	0	1
Textile Mill Prod. (22)	3	62	163
Apparel & Other Prod. (23)	1	25	41
Lumber & Wood Prod. (24)	43	1,092	1,693
Furniture & Fixtures (25)	1	22	28
Paper & Allied Prod. (26)	2	51	91
Printing & Publishing (27)	3	75	122
Chemicals & Allied Prod. (28)	5	197	386
Petroleum & Coal Prod. (29)	2	120	357
Rubber & Misc. Plastics (30)	3	83	140
Leather & Leather Prod. (31)	0	2	3
Stone, Clay, & Glass (32)	20	590	980
Primary Metal Prod. (33)	4	171	261
Fabricated Metal Prod. (34)	17	629	995
Machinery, Except Elec. (35)	6	197	325
Electric & Elec. Equip. (36)	9	276	420
Transportation Equipment (37)	1	42	81
Instruments & Rel. Prod. (38)	1	44	70
Misc. Manufacturing Ind's. (39)	1	24	41

Exhibit F.11 (continued)
In-State Economic Impacts of Annual New Jersey Historic Rehabilitation of Single Family Buildings ($37 Million)

INDUSTRY	Industry Component: Employment (jobs)	Income ($000)	Gross State Product ($000)
Transport. & Public Utilities	**81**	**2,379**	**5,281**
Railroad Transportation (40)	17	582	1,144
Local Pass. Transit (41)	4	86	116
Trucking & Warehousing (42)	40	992	1,814
Water Transportation (44)	1	93	140
Transportation by Air (45)	1	49	102
Pipe Lines-Ex. Nat. Gas (46)	0	2	15
Transportation Services (47)	1	43	69
Communication (48)	7	357	1,247
Elec., Gas, & Sanitary Serv. (49)	9	175	635
Wholesale	**19**	**1,290**	**3,014**
Whlsale-Durable Goods (50)	13	697	1,897
Whlsale-Nondurable Goods (51)	6	594	1,117
Retail Trade	**68**	**1,403**	**2,141**
Bldg. Mat.-Garden Supply (52)	4	97	153
General Merch. Stores (53)	10	169	316
Food Stores (54)	7	155	238
Auto. Dealers-Serv. Stat. (55)	7	210	309
Apparel & Access. Stores (56)	4	70	146
Furniture & Home Furnish. (57)	1	37	67
Eating & Drinking Places (58)	21	372	490
Miscellaneous Retail (59)	15	293	421
Finance, Ins., & Real Estate	**21**	**969**	**2,217**
Banking (60)	4	187	380
Nondep. Credit Institut. (61)	3	141	154
Security, Comm. Brokers (62)	1	85	93
Insurance Carriers (63)	5	282	301
Ins. Agents, Brokers (64)	2	40	70
Real Estate (65)	4	120	1,095
Holding and Invest. Off. (67)	3	114	124
Services	**93**	**2,646**	**3,511**
Hotels & Other Lodging (70)	14	255	354
Personal Services (72)	11	195	278
Business Services (73)	16	154	216
Auto Repair, Serv., Garages (75)	4	126	326
Misc. Repair Services (76)	2	49	102
Motion Pictures (78)	1	28	46
Amusement & Recreation (79)	2	50	60
Health Services (80)	5	208	247
Legal Services (81)	3	151	200
Educational Services (82)	4	81	92
Social Services (83)	1	22	36
Museums, Botan.-Zoo. Gardens (84)	0	1	1
Membership Organizations (86)	6	135	156
Engineer. & Manage. Serv. (87)	25	1,176	1,373
Miscellaneous Services (89)	0	14	22
Government	**15**	**199**	**194**
Total	**689**	**23,298**	**35,036**

Note: Detail may not sum to totals due to rounding.

Exhibit F.12
In-state Employment Impacts by Occupation of Annual New Jersey Historic Rehabilitation of Single-Family Buildings ($37 Million)

OCCUPATION TITLE	Employment (jobs)
Total, All Occupations	**689**
Exec., Admin., and Management Occupations	**72**
Managerial and Administrative Occupations	55
Management Support Occupations	17
Professional Specialty Occupations	**26**
Engineers	8
Architects and Surveyors	3
Life Scientists	0
Computer, Math, and Operations Res. Analysts	2
Physical Scientists	1
Social Scientists	0
Social, Recreational, and Relig. Workers	1
Lawyers and Judicial Workers	1
Teachers, Librarians, and Counselors	3
Health Diagnosing Occupations	0
Health Assessment & Treating Occupations	1
Writers, Artists, and Entertainers	3
All Other Professional Workers	1
Technicians and Related Support Occupations	**17**
Health Technicians and Technologists	5
Engineering & Science Technicians & Technologists	9
Technicians, Except Health and Engin. & Science	3
Marketing and Sales Occupations	**46**
Cashiers	8
Counter and Rental Clerks	1
Insurance Sales Workers	1
Real Estate Agents, Brokers, & Appraisers	1
Salespersons, Retail	14
Securities and Financial Service Sales Workers	0
Stock Clerks, Sales Floor	4
Travel Agents	0
All Other Sales and Related Workers	17
Administrative Support Occupations, incl. Clerical	**99**
Adjusters, Investigators, & Collectors	3
Communications Equipment Operators	1
Computer & Peripheral Equipment Operators	1
Financial Records Processing Occupations	20
Information Clerks	5
Mail Clerks and Messengers	1
Postal Clerks and Mail Carriers	2
Mat'l Record., Sched., Dispatch, & Distrib. Occs.	12
Records Processing Occupations, except Financial	3
Secretaries, Stenographers, and Typists	23
Other Clerical and Administrative Support Workers	28

Exhibit F.12 (continued)
In-state Employment Impacts by Occupation of Annual New Jersey Historic Rehabilitation of Single-Family Buildings ($37 Million)

OCCUPATION TITLE	Employment (jobs)
Service Occupations	**49**
Cleaning & Building Service Occs., except Private	11
Food Preparation and Service Occupations	24
Health Service Occupations	2
Personal Service Occupations	6
Protective Service Occupations	4
All Other Service Workers	2
Agric., Forestry, Fishing, & Related Occupations	**5**
Animal Caretakers, except Farm	0
Farm Occupations	1
Farm Operators and Managers	0
Fishers, Hunters, and Trappers	0
Forestry and Logging Occupations	1
Gardeners & Groundskeepers, except farm	1
Supervisors, Farming, Forestry, & Agricul. Occs.	0
All Other Agric., Forestry, Fishing, & Rel. Workers	0
Precision Production, Craft, & Repair Occupations	**204**
Blue-collar Worker Supervisors	22
Construction Trades	121
Extractive and Related Workers, Incl. Blasters	1
Mechanics, Installers, and Repairers	38
Production Occupations, Precision	21
Plant and System Occupations	1
Operators, Fabricators, and Laborers	**172**
Mach. Setters, Set-up Ops, Operators, & Tenders	28
Hand Workers, incl. Assemblers & Fabricators	17
Transp. & Material Moving Machine & Vehicle Ops.	58
Helpers, Laborers, & Material Movers, Hand	69

Note: Detail may not sum to totals due to rounding.

Exhibit F.13
In-State Economic and Tax Impacts of Annual New Jersey Historic Rehabilitation of Multifamily Buildings ($3 Million)

	Economic Component		
	Employment (jobs)	Income (000$)	Gross State Product (000$)
I. TOTAL EFFECTS (Direct and Indirect/Induced)*			
Private			
1. Agriculture	-	0	1
2. Agri. Serv., Forestry, & Fish	0	3	5
3. Mining	0	6	11
4. Construction	18	696	798
5. Manufacturing	11	345	580
6. Transport. & Public Utilities	2	48	115
7. Wholesale	2	116	265
8. Retail Trade	5	97	148
9. Finance, Ins., & Real Estate	2	68	157
10. Services	7	229	291
Private Subtotal	46	1,608	2,371
Public			
11. Government	1	14	14
Total Effects (Private and Public)	47	1,622	2,384
II. DISTRIBUTION OF EFFECTS/MULTIPLIER			
1. Direct Effects	30	1,154	1,552
2. Indirect and Induced Effects	17	468	832
3. Total Effects	47	1,622	2,384
4. Multipliers (3÷1)	1.560	1.405	1.536
III. COMPOSITION OF GROSS STATE PRODUCT			
1. Wages--Net of Taxes			1,199
2. Taxes			
a. Local			142
b. State			168
c. Federal			
General			258
Social Security			196
Federal Subtotal			453
d. Total taxes (2a+2b+2c)			763
3. Profits, dividends, rents, and other			422
4. Total Gross State Product (1+2+3)			2,385
EFFECTS PER MILLION DOLLARS OF INITIAL EXPENDITURE			
Employment (Jobs)			18.0
Income			$622,652
State Taxes			$64,573
Local Taxes			$54,473
Gross State Product			$915,534

Note: Detail may not sum to totals due to rounding.

*Terms:

Direct Effects--(State) the amount of goods and services purchased in New Jersey.

Indirect Effects--the value of goods and services needed to support the provision of those direct economic effects.

Induced Effects--the value of goods and services needed by households that provide the direct and indirect labor.

Source: Rutgers University Center for Urban Policy Research, 1997.

Exhibit F.14
In-State Economic Impacts of Annual New Jersey Historic Rehabilitation of Multi-Family Buildings ($3 Million)

INDUSTRY	Industry Component		
	Employment (jobs)	Income ($000)	Gross State Product ($000)
Agriculture	**0**	**0**	**1**
Dairy Prod., Poultry, & Eggs	0	0	0
Meat Animals & Misc. Livestock	0	0	0
Cotton	0	0	0
Grains & Misc. Crops	0	0	0
Tobacco	0	0	0
Fruits, Nuts, & Vegetables	0	0	0
Forest Prod.	0	0	0
Greenhouse & Nursery Prod.	0	0	0
Agri. Serv., Forestry, & Fish	**0**	**3**	**5**
Agri. Services (07)	0	3	4
Forestry (08)	0	0	0
Fishing, Hunting, & Trapping (09)	0	0	1
Mining	**0**	**6**	**11**
Metal Mining (10)	0	0	0
Coal Mining (12)	0	0	0
Oil & Gas Extraction (13)	0	0	0
Nonmetal Min.-Ex. Fuels (14)	0	6	11
Construction	**18**	**696**	**798**
General Bldg. Contractors (15)	6	247	307
Heavy Const. Contractors 16)	0	20	22
Special Trade Contractors (17)	11	428	469
Manufacturing	**11**	**345**	**580**
Food & Kindred Prod. (20)	0	7	18
Tobacco Manufactures (21)	0	0	0
Textile Mill Prod. (22)	0	2	5
Apparel & Other Prod. (23)	0	2	3
Lumber & Wood Prod. (24)	4	103	156
Furniture & Fixtures (25)	0	2	3
Paper & Allied Prod. (26)	0	7	12
Printing & Publishing (27)	0	6	10
Chemicals & Allied Prod. (28)	1	35	67
Petroleum & Coal Prod. (29)	0	8	26
Rubber & Misc. Plastics (30)	1	14	24
Leather & Leather Prod. (31)	0	0	0
Stone, Clay, & Glass (32)	2	43	75
Primary Metal Prod. (33)	0	12	19
Fabricated Metal Prod. (34)	2	61	95
Machinery, Except Elec. (35)	0	11	18
Electric & Elec. Equip. (36)	1	25	38
Transportation Equipment (37)	0	3	5
Instruments & Rel. Prod. (38)	0	3	5
Misc. Manufacturing Ind's. (39)	0	2	3

Exhibit F.14 (continued)
In-State Economic Impacts of Annual New Jersey Historic Rehabilitation of Multi-Family Buildings ($3 Million)

INDUSTRY	Industry Component: Employment (jobs)	Income ($000)	Gross State Product ($000)
Transport. & Public Utilities	**2**	**48**	**115**
Railroad Transportation (40)	0	5	10
Local Pass. Transit (41)	0	4	6
Trucking & Warehousing (42)	1	16	29
Water Transportation (44)	0	2	2
Transportation by Air (45)	0	2	4
Pipe Lines-Ex. Nat. Gas (46)	0	0	0
Transportation Services (47)	0	2	3
Communication (48)	0	13	45
Elec., Gas, & Sanitary Serv. (49)	0	4	15
Wholesale	**2**	**116**	**265**
Whlsale-Durable Goods (50)	1	56	153
Whlsale-Nondurable Goods (51)	1	60	112
Retail Trade	**5**	**97**	**148**
Bldg. Mat.-Garden Supply (52)	0	7	11
General Merch. Stores (53)	1	12	22
Food Stores (54)	1	11	17
Auto. Dealers-Serv. Stat. (55)	0	14	20
Apparel & Access. Stores (56)	0	5	10
Furniture & Home Furnish. (57)	0	3	5
Eating & Drinking Places (58)	2	26	35
Miscellaneous Retail (59)	1	20	29
Finance, Ins., & Real Estate	**2**	**68**	**157**
Banking (60)	0	13	27
Nondep. Credit Institut. (61)	0	10	11
Security, Comm. Brokers (62)	0	6	6
Insurance Carriers (63)	0	20	21
Ins. Agents, Brokers (64)	0	3	5
Real Estate (65)	0	9	79
Holding and Invest. Off. (67)	0	8	9
Services	**7**	**229**	**291**
Hotels & Other Lodging (70)	1	18	26
Personal Services (72)	1	14	19
Business Services (73)	1	12	17
Auto Repair, Serv., Garages (75)	0	9	21
Misc. Repair Services (76)	0	3	7
Motion Pictures (78)	0	2	3
Amusement & Recreation (79)	0	4	4
Health Services (80)	0	15	17
Legal Services (81)	0	11	14
Educational Services (82)	0	6	6
Social Services (83)	0	2	3
Museums, Botan.-Zoo. Gardens (84)	0	0	0
Membership Organizations (86)	0	10	11
Engineer. & Manage. Serv. (87)	3	124	141
Miscellaneous Services (89)	0	1	2
Government	**1**	**14**	**14**
Total	**47**	**1,622**	**2,384**

Note: Detail may not sum to totals due to rounding.

Exhibit F.15
In-state Employment Impacts by Occupation of Annual New Jersey Historic Rehabilitation of Multifamily Buildings ($3 Million)

OCCUPATION TITLE	Employment (jobs)
Total, All Occupations	47
Exec., Admin., and Management Occupations	5
Managerial and Administrative Occupations	4
Management Support Occupations	1
Professional Specialty Occupations	2
Engineers	1
Architects and Surveyors	0
Life Scientists	0
Computer, Math, and Operations Res. Analysts	0
Physical Scientists	0
Social Scientists	0
Social, Recreational, and Relig. Workers	0
Lawyers and Judicial Workers	0
Teachers, Librarians, and Counselors	0
Health Diagnosing Occupations	0
Health Assessment & Treating Occupations	0
Writers, Artists, and Entertainers	0
All Other Professional Workers	0
Technicians and Related Support Occupations	1
Health Technicians and Technologists	0
Engineering & Science Technicians & Technologists	1
Technicians, Except Health and Engin. & Science	0
Marketing and Sales Occupations	3
Cashiers	1
Counter and Rental Clerks	0
Insurance Sales Workers	0
Real Estate Agents, Brokers, & Appraisers	0
Salespersons, Retail	1
Securities and Financial Service Sales Workers	0
Stock Clerks, Sales Floor	0
Travel Agents	0
All Other Sales and Related Workers	1
Administrative Support Occupations, incl. Clerical	7
Adjusters, Investigators, & Collectors	0
Communications Equipment Operators	0
Computer & Peripheral Equipment Operators	0
Financial Records Processing Occupations	1
Information Clerks	0
Mail Clerks and Messengers	0
Postal Clerks and Mail Carriers	0
Mat'l Record., Sched., Dispatch, & Distrib. Occs.	1
Records Processing Occupations, except Financial	0
Secretaries, Stenographers, and Typists	2
Other Clerical and Administrative Support Workers	2

Exhibit F.15 (continued)
In-state Employment Impacts by Occupation of Annual New Jersey Historic Rehabilitation of Multifamily Buildings ($3 Million)

OCCUPATION TITLE	Employment (jobs)
Service Occupations	**3**
Cleaning & Building Service Occs., except Private	1
Food Preparation and Service Occupations	2
Health Service Occupations	0
Personal Service Occupations	0
Protective Service Occupations	0
All Other Service Workers	0
Agric., Forestry, Fishing, & Related Occupations	**0**
Animal Caretakers, except Farm	0
Farm Occupations	0
Farm Operators and Managers	0
Fishers, Hunters, and Trappers	0
Forestry and Logging Occupations	0
Gardeners & Groundskeepers, except farm	0
Supervisors, Farming, Forestry, & Agricul. Occs.	0
All Other Agric., Forestry, Fishing, & Rel. Workers	0
Precision Production, Craft, & Repair Occupations	**13**
Blue-collar Worker Supervisors	1
Construction Trades	8
Extractive and Related Workers, Incl. Blasters	0
Mechanics, Installers, and Repairers	2
Production Occupations, Precision	2
Plant and System Occupations	0
Operators, Fabricators, and Laborers	**11**
Mach. Setters, Set-up Ops, Operators, & Tenders	3
Hand Workers, incl. Assemblers & Fabricators	1
Transp. & Material Moving Machine & Vehicle Ops.	3
Helpers, Laborers, & Material Movers, Hand	5

Note: Detail may not sum to totals due to rounding.

Exhibit F.16
In-State Economic and Tax Impacts of Annual New Jersey Historic Rehabilitation of Nonresidential Buildings ($83 Million)

	Economic Component		
	Employment (jobs)	Income (000$)	Gross State Product (000$)
I. TOTAL EFFECTS (Direct and Indirect/Induced)*			
Private			
1. Agriculture	1	4	14
2. Agri. Serv., Forestry, & Fish	6	98	153
3. Mining	7	188	305
4. Construction	650	26,521	29,982
5. Manufacturing	310	10,501	17,330
6. Transport. & Public Utilities	49	1,471	3,600
7. Wholesale	36	2,368	5,682
8. Retail Trade	162	3,349	5,108
9. Finance, Ins., & Real Estate	50	2,313	5,297
10. Services	275	8,877	11,054
Private Subtotal	1,545	55,689	78,521
Public			
11. Government	35	476	463
Total Effects (Private and Public)	1,580	56,165	78,984
II. DISTRIBUTION OF EFFECTS/MULTIPLIER			
1. Direct Effects	1,018	40,535	51,474
2. Indirect and Induced Effects	563	15,630	27,510
3. Total Effects	1,580	56,165	78,984
4. Multipliers (3÷1)	1.553	1.386	1.534
III. COMPOSITION OF GROSS STATE PRODUCT			
1. Wages--Net of Taxes			49,376
2. Taxes			
a. Local			4,795
b. State			5,734
c. Federal			
General			9,083
Social Security			6,477
Federal Subtotal			15,560
d. Total taxes (2a+2b+2c)			26,089
3. Profits, dividends, rents, and other			3,519
4. Total Gross State Product (1+2+3)			78,984
EFFECTS PER MILLION DOLLARS OF INITIAL EXPENDITURE			
Employment (Jobs)			19.3
Income			$685,430
State Taxes			$69,977
Local Taxes			$58,522
Gross State Product			$963,907

Note: Detail may not sum to totals due to rounding.

*Terms:

Direct Effects--(State) the amount of goods and services purchased in New Jersey.

Indirect Effects--the value of goods and services needed to support the provision of those direct economic effects.

Induced Effects--the value of goods and services needed by households that provide the direct and indirect labor.

Source: Rutgers University Center for Urban Policy Research, 1997.

Exhibit F.17
In-State Economic Impacts of Annual New Jersey Historic Rehabilitation of Nonresidential Buildings ($83 Million)

INDUSTRY	Industry Component: Employment (jobs)	Income ($000)	Gross State Product ($000)
Agriculture	**1**	**4**	**14**
Dairy Prod., Poultry, & Eggs	0	0	0
Meat Animals & Misc. Livestock	0	0	0
Cotton	0	0	0
Grains & Misc. Crops	0	0	1
Tobacco	0	0	1
Fruits, Nuts, & Vegetables	0	0	0
Forest Prod.	0	0	2
Greenhouse & Nursery Prod.	1	3	10
Agri. Serv., Forestry, & Fish	**6**	**98**	**153**
Agri. Services (07)	5	91	122
Forestry (08)	0	0	3
Fishing, Hunting, & Trapping (09)	0	7	28
Mining	**7**	**188**	**305**
Metal Mining (10)	0	0	0
Coal Mining (12)	0	0	0
Oil & Gas Extraction (13)	1	4	5
Nonmetal Min.-Ex. Fuels (14)	6	184	300
Construction	**650**	**26,521**	**29,982**
General Bldg. Contractors (15)	174	7,165	8,886
Heavy Const. Contractors 16)	70	3,667	3,895
Special Trade Contractors (17)	406	15,689	17,202
Manufacturing	**310**	**10,501**	**17,330**
Food & Kindred Prod. (20)	7	226	604
Tobacco Manufactures (21)	0	0	2
Textile Mill Prod. (22)	5	119	294
Apparel & Other Prod. (23)	3	67	111
Lumber & Wood Prod. (24)	26	595	884
Furniture & Fixtures (25)	5	186	236
Paper & Allied Prod. (26)	6	164	297
Printing & Publishing (27)	6	188	306
Chemicals & Allied Prod. (28)	9	358	720
Petroleum & Coal Prod. (29)	7	356	909
Rubber & Misc. Plastics (30)	10	284	479
Leather & Leather Prod. (31)	0	6	9
Stone, Clay, & Glass (32)	51	1,462	2,334
Primary Metal Prod. (33)	15	717	1,157
Fabricated Metal Prod. (34)	83	3,327	5,213
Machinery, Except Elec. (35)	32	1,063	1,641
Electric & Elec. Equip. (36)	33	1,026	1,545
Transportation Equipment (37)	2	89	180
Instruments & Rel. Prod. (38)	7	219	328
Misc. Manufacturing Ind's. (39)	1	48	80

Exhibit F.17 (continued)
In-State Economic Impacts of Annual New Jersey Historic Rehabilitation of Nonresidential Buildings ($83 Million)

INDUSTRY	Industry Component		
	Employment (jobs)	Income ($000)	Gross State Product ($000)
Transport. & Public Utilities	**49**	**1,471**	**3,600**
Railroad Transportation (40)	3	95	186
Local Pass. Transit (41)	7	151	204
Trucking & Warehousing (42)	19	462	845
Water Transportation (44)	1	43	65
Transportation by Air (45)	2	91	187
Pipe Lines-Ex. Nat. Gas (46)	0	1	6
Transportation Services (47)	2	63	99
Communication (48)	9	433	1,493
Elec., Gas, & Sanitary Serv. (49)	7	132	514
Wholesale	**36**	**2,368**	**5,682**
Whlsale-Durable Goods (50)	27	1,458	3,971
Whlsale-Nondurable Goods (51)	9	909	1,711
Retail Trade	**162**	**3,349**	**5,108**
Bldg. Mat.-Garden Supply (52)	8	223	350
General Merch. Stores (53)	23	403	754
Food Stores (54)	17	367	563
Auto. Dealers-Serv. Stat. (55)	14	472	695
Apparel & Access. Stores (56)	9	172	361
Furniture & Home Furnish. (57)	3	88	162
Eating & Drinking Places (58)	51	900	1,186
Miscellaneous Retail (59)	36	723	1,038
Finance, Ins., & Real Estate	**50**	**2,313**	**5,297**
Banking (60)	9	447	907
Nondep. Credit Institut. (61)	7	339	371
Security, Comm. Brokers (62)	2	202	220
Insurance Carriers (63)	11	668	713
Ins. Agents, Brokers (64)	4	95	166
Real Estate (65)	10	287	2,620
Holding and Invest. Off. (67)	6	274	300
Services	**275**	**8,877**	**11,054**
Hotels & Other Lodging (70)	33	626	874
Personal Services (72)	26	469	670
Business Services (73)	39	389	556
Auto Repair, Serv., Garages (75)	9	275	695
Misc. Repair Services (76)	5	113	234
Motion Pictures (78)	3	68	110
Amusement & Recreation (79)	4	121	145
Health Services (80)	13	501	596
Legal Services (81)	6	355	471
Educational Services (82)	9	196	221
Social Services (83)	2	55	90
Museums, Botan.-Zoo. Gardens (84)	0	3	3
Membership Organizations (86)	13	330	384
Engineer. & Manage. Serv. (87)	111	5,342	5,951
Miscellaneous Services (89)	1	34	53
Government	**35**	**476**	**463**
Total	**1,580**	**56,165**	**78,984**

Note: Detail may not sum to totals due to rounding.

Exhibit F.18
In-state Employment Impacts by Occupation of Annual New Jersey Historic Rehabilitation of Nonresidential Buildings ($83 Million)

OCCUPATION TITLE	Employment (jobs)
Total, All Occupations	**1,580**
Exec., Admin., and Management Occupations	**173**
Managerial and Administrative Occupations	132
Management Support Occupations	41
Professional Specialty Occupations	**87**
Engineers	35
Architects and Surveyors	16
Life Scientists	0
Computer, Math, and Operations Res. Analysts	5
Physical Scientists	2
Social Scientists	0
Social, Recreational, and Relig. Workers	2
Lawyers and Judicial Workers	2
Teachers, Librarians, and Counselors	7
Health Diagnosing Occupations	1
Health Assessment & Treating Occupations	4
Writers, Artists, and Entertainers	9
All Other Professional Workers	4
Technicians and Related Support Occupations	**54**
Health Technicians and Technologists	11
Engineering & Science Technicians & Technologists	36
Technicians, Except Health and Engin. & Science	7
Marketing and Sales Occupations	**108**
Cashiers	18
Counter and Rental Clerks	4
Insurance Sales Workers	2
Real Estate Agents, Brokers, & Appraisers	2
Salespersons, Retail	34
Securities and Financial Service Sales Workers	1
Stock Clerks, Sales Floor	9
Travel Agents	0
All Other Sales and Related Workers	37
Administrative Support Occupations, incl. Clerical	**219**
Adjusters, Investigators, & Collectors	6
Communications Equipment Operators	2
Computer & Peripheral Equipment Operators	2
Financial Records Processing Occupations	44
Information Clerks	12
Mail Clerks and Messengers	2
Postal Clerks and Mail Carriers	5
Mat'l Record., Sched., Dispatch, & Distrib. Occs.	25
Records Processing Occupations, except Financial	7
Secretaries, Stenographers, and Typists	55
Other Clerical and Administrative Support Workers	60

Exhibit F.18 (continued)
In-state Employment Impacts by Occupation of Annual New Jersey Historic Rehabilitation of Nonresidential Buildings ($83 Million)

OCCUPATION TITLE	Employment (jobs)
Service Occupations	**116**
Cleaning & Building Service Occs., except Private	25
Food Preparation and Service Occupations	58
Health Service Occupations	6
Personal Service Occupations	13
Protective Service Occupations	8
All Other Service Workers	6
Agric., Forestry, Fishing, & Related Occupations	**8**
Animal Caretakers, except Farm	0
Farm Occupations	4
Farm Operators and Managers	0
Fishers, Hunters, and Trappers	0
Forestry and Logging Occupations	0
Gardeners & Groundskeepers, except farm	4
Supervisors, Farming, Forestry, & Agricul. Occs.	0
All Other Agric., Forestry, Fishing, & Rel. Workers	0
Precision Production, Craft, & Repair Occupations	**461**
Blue-collar Worker Supervisors	48
Construction Trades	278
Extractive and Related Workers, Incl. Blasters	4
Mechanics, Installers, and Repairers	79
Production Occupations, Precision	50
Plant and System Occupations	2
Operators, Fabricators, and Laborers	**357**
Mach. Setters, Set-up Ops, Operators, & Tenders	70
Hand Workers, incl. Assemblers & Fabricators	49
Transp. & Material Moving Machine & Vehicle Ops.	92
Helpers, Laborers, & Material Movers, Hand	145

Note: Detail may not sum to totals due to rounding.

Appendix G

Detailed Input-Output Tables (Heritage Tourism)

Exhibit G.1
National Economic and Tax Impacts of Annual New Jersey Heritage Daytripper Spending ($277 Million)

	Economic Component		
	Employment (jobs)	Income (000$)	Gross Domestic Product (000$)
I. TOTAL EFFECTS (Direct and Indirect/Induced)*			
Private			
1. Agriculture	32	3,815	6,340
2. Agri. Serv., Forestry, & Fish	68	2,211	2,434
3. Mining	31	1,775	7,096
4. Construction	112	4,286	4,511
5. Manufacturing	1,160	43,549	67,606
6. Transport. & Public Utilities	380	17,692	33,279
7. Wholesale	225	9,564	24,822
8. Retail Trade	4,656	74,641	86,140
9. Finance, Ins., & Real Estate	748	26,678	48,396
10. Services	2,439	58,484	74,263
Private Subtotal	9,849	242,680	354,844
Public			
11. Government	285	4,655	4,361
Total Effects (Private and Public)	10,134	247,334	359,205
II. DISTRIBUTION OF EFFECTS/MULTIPLIER			
1. Direct Effects	4,975	87,604	154,499
2. Indirect and Induced Effects	5,159	159,731	204,706
3. Total Effects	10,134	247,334	359,205
4. Multipliers (3÷1)	2.037	2.823	2.325
III. COMPOSITION OF GROSS DOMESTIC PRODUCT			
1. Wages--Net of Taxes			223,787
2. Taxes			
a. Local			18,286
b. State			48,584
c. Federal			
General			41,309
Social Security			29,455
Federal Subtotal			70,764
d. Total taxes (2a+2b+2c)			137,634
3. Profits, dividends, rents, and other			(7,251)
4. Total Gross Domestic Product (1+2+3)			354,170
EFFECTS PER MILLION DOLLARS OF INITIAL EXPENDITURE			
Employment (Jobs)			36.6
Income			$894,222
State Taxes			$175,652
Local Taxes			$66,112
Gross Domestic Product			$1,298,685

Note: Detail may not sum to totals due to rounding.

*Terms:

Direct Effects--(National) the amount of goods and services purchased in the nation.

Indirect Effects--the value of goods and services needed to support the provision of those direct economic effects.

Induced Effects--the value of goods and services needed by households that provide the direct and indirect labor.

Source: Rutgers University Center for Urban Policy Research, 1997.

Exhibit G.2
National Economic Impacts of Annual New Jersey Heritage Daytripper Spending ($277 Million)

INDUSTRY	Industry Component: Employment (jobs)	Income ($000)	Gross Domestic Product ($000)
Agriculture	**32**	**3,815**	**6,340**
Dairy Prod., Poultry, & Eggs	5	761	1,003
Meat Animals & Misc. Livestock	11	1,032	1,322
Cotton	0	55	73
Grains & Misc. Crops	10	1,283	2,555
Tobacco	2	400	652
Fruits, Nuts, & Vegetables	1	156	554
Forest Prod.	0	15	39
Greenhouse & Nursery Prod.	2	114	141
Agri. Serv., Forestry, & Fish	**68**	**2,211**	**2,434**
Agri. Services (07)	29	480	504
Forestry (08)	3	20	121
Fishing, Hunting, & Trapping (09)	35	1,711	1,809
Mining	**31**	**1,775**	**7,096**
Metal Mining (10)	2	168	199
Coal Mining (12)	0	0	0
Oil & Gas Extraction (13)	26	1,499	6,703
Nonmetal Min.-Ex. Fuels (14)	3	109	194
Construction	**112**	**4,286**	**4,511**
General Bldg. Contractors (15)	21	879	926
Heavy Const. Contractors 16)	14	529	557
Special Trade Contractors (17)	77	2,877	3,028
Manufacturing	**1,160**	**43,549**	**67,606**
Food & Kindred Prod. (20)	244	9,202	15,770
Tobacco Manufactures (21)	6	357	1,883
Textile Mill Prod. (22)	42	1,025	1,419
Apparel & Other Prod. (23)	100	1,838	1,990
Lumber & Wood Prod. (24)	24	721	1,073
Furniture & Fixtures (25)	21	507	596
Paper & Allied Prod. (26)	47	2,341	3,957
Printing & Publishing (27)	137	4,769	6,313
Chemicals & Allied Prod. (28)	59	3,591	6,332
Petroleum & Coal Prod. (29)	10	1,056	3,319
Rubber & Misc. Plastics (30)	61	2,171	2,473
Leather & Leather Prod. (31)	26	528	644
Stone, Clay, & Glass (32)	27	964	1,112
Primary Metal Prod. (33)	28	1,612	1,797
Fabricated Metal Prod. (34)	48	2,079	2,713
Machinery, Except Elec. (35)	38	1,659	1,984
Electric & Elec. Equip. (36)	29	1,198	1,806
Transportation Equipment (37)	50	2,781	3,643
Instruments & Rel. Prod. (38)	41	1,605	1,716
Misc. Manufacturing Ind's. (39)	123	3,546	7,065

Exhibit G.2 (continued)
National Economic Impacts of Annual New Jersey Heritage Daytripper Spending ($277 Million)

INDUSTRY	Industry Component: Employment (jobs)	Income ($000)	Gross Domestic Product ($000)
Transport. & Public Utilities	**380**	**17,692**	**33,279**
Railroad Transportation (40)	14	740	1,187
Local Pass. Transit (41)	87	2,231	2,495
Trucking & Warehousing (42)	72	2,865	3,006
Water Transportation (44)	7	277	425
Transportation by Air (45)	22	1,282	1,696
Pipe Lines-Ex. Nat. Gas (46)	1	78	369
Transportation Services (47)	14	572	628
Communication (48)	87	5,207	10,469
Elec., Gas, & Sanitary Serv. (49)	74	4,441	13,004
Wholesale	**225**	**9,564**	**24,822**
Whlsale-Durable Goods (50)	68	3,137	10,274
Whlsale-Nondurable Goods (51)	157	6,427	14,548
Retail Trade	**4,656**	**74,640**	**86,140**
Bldg. Mat.-Garden Supply (52)	48	1,354	1,494
General Merch. Stores (53)	268	4,606	6,758
Food Stores (54)	194	3,864	4,320
Auto. Dealers-Serv. Stat. (55)	171	4,877	5,456
Apparel & Access. Stores (56)	95	1,606	2,506
Furniture & Home Furnish. (57)	17	529	649
Eating & Drinking Places (58)	3,354	47,144	55,158
Miscellaneous Retail (59)	508	10,660	9,799
Finance, Ins., & Real Estate	**748**	**26,678**	**48,396**
Banking (60)	94	3,400	6,143
Nondep. Credit Institut. (61)	80	2,902	2,614
Security, Comm. Brokers (62)	36	2,889	3,985
Insurance Carriers (63)	98	4,258	4,568
Ins. Agents, Brokers (64)	161	6,212	6,528
Real Estate (65)	108	838	18,992
Holding and Invest. Off. (67)	171	6,179	5,566
Services	**2,439**	**58,484**	**74,263**
Hotels & Other Lodging (70)	840	14,172	26,130
Personal Services (72)	289	5,251	5,591
Business Services (73)	443	11,672	12,933
Auto Repair, Serv., Garages (75)	114	4,297	5,183
Misc. Repair Services (76)	82	2,265	2,392
Motion Pictures (78)	67	1,433	1,330
Amusement & Recreation (79)	87	2,022	2,279
Health Services (80)	125	4,450	4,703
Legal Services (81)	48	3,092	3,422
Educational Services (82)	44	875	950
Social Services (83)	52	713	797
Museums, Botan.-Zoo. Gardens (84)	2	49	48
Membership Organizations (86)	110	2,224	2,182
Engineer. & Manage. Serv. (87)	131	5,677	6,021
Miscellaneous Services (89)	6	291	303
Government	**285**	**4,655**	**4,361**
Total	**10,134**	**247,334**	**359,205**

Note: Detail may not sum to totals due to rounding.

Exhibit G.3
National Employment Impacts by Occupation of Annual New Jersey Heritage Daytripper Spending ($277 Million)

OCCUPATION TITLE	Employment (jobs)
Total, All Occupations	**10,134**
Exec., Admin., and Management Occupations	**926**
Managerial and Administrative Occupations	707
Management Support Occupations	219
Professional Specialty Occupations	**363**
Engineers	43
Architects and Surveyors	3
Life Scientists	3
Computer, Math, and Operations Res. Analysts	25
Physical Scientists	8
Social Scientists	3
Social, Recreational, and Relig. Workers	26
Lawyers and Judicial Workers	17
Teachers, Librarians, and Counselors	55
Health Diagnosing Occupations	9
Health Assessment & Treating Occupations	43
Writers, Artists, and Entertainers	102
All Other Professional Workers	28
Technicians and Related Support Occupations	**160**
Health Technicians and Technologists	75
Engineering & Science Technicians & Technologists	39
Technicians, Except Health and Engin. & Science	46
Marketing and Sales Occupations	**1,234**
Cashiers	352
Counter and Rental Clerks	39
Insurance Sales Workers	40
Real Estate Agents, Brokers, & Appraisers	13
Salespersons, Retail	408
Securities and Financial Service Sales Workers	14
Stock Clerks, Sales Floor	106
Travel Agents	4
All Other Sales and Related Workers	258
Administrative Support Occupations, incl. Clerical	**1,495**
Adjusters, Investigators, & Collectors	87
Communications Equipment Operators	25
Computer & Peripheral Equipment Operators	18
Financial Records Processing Occupations	214
Information Clerks	144
Mail Clerks and Messengers	15
Postal Clerks and Mail Carriers	107
Mat'l Record., Sched., Dispatch, & Distrib. Occs.	146
Records Processing Occupations, except Financial	58
Secretaries, Stenographers, and Typists	235
Other Clerical and Administrative Support Workers	445

Exhibit G.3 (continued)
National Employment Impacts by Occupation of Annual New Jersey Heritage Daytripper Spending ($277 Million)

OCCUPATION TITLE	Employment (jobs)
Service Occupations	**3,965**
Cleaning & Building Service Occs., except Private	450
Food Preparation and Service Occupations	3,057
Health Service Occupations	49
Personal Service Occupations	179
Protective Service Occupations	86
All Other Service Workers	145
Agric., Forestry, Fishing, & Related Occupations	**114**
Animal Caretakers, except Farm	4
Farm Occupations	50
Farm Operators and Managers	8
Fishers, Hunters, and Trappers	1
Forestry and Logging Occupations	4
Gardeners & Groundskeepers, except farm	37
Supervisors, Farming, Forestry, & Agricul. Occs.	4
All Other Agric., Forestry, Fishing, & Rel. Workers	6
Precision Production, Craft, & Repair Occupations	**717**
Blue-collar Worker Supervisors	94
Construction Trades	79
Extractive and Related Workers, Incl. Blasters	6
Mechanics, Installers, and Repairers	336
Production Occupations, Precision	190
Plant and System Occupations	13
Operators, Fabricators, and Laborers	**1,161**
Mach. Setters, Set-up Ops, Operators, & Tenders	365
Hand Workers, incl. Assemblers & Fabricators	139
Transp. & Material Moving Machine & Vehicle Ops.	358
Helpers, Laborers, & Material Movers, Hand	299

Note: Detail may not sum to totals due to rounding.

Exhibit G.4
National Economic and Tax Impacts of Annual New Jersey Heritage Overnighter Spending ($155 Million)

	Economic Component		
	Employment (jobs)	Income (000$)	Gross Domestic Product (000$)
I. TOTAL EFFECTS (Direct and Indirect/Induced)*			
Private			
1. Agriculture	15	1,795	2,996
2. Agri. Serv., Forestry, & Fish	34	1,095	1,209
3. Mining	19	1,082	4,393
4. Construction	68	2,594	2,731
5. Manufacturing	578	22,329	34,431
6. Transport. & Public Utilities	204	9,671	18,423
7. Wholesale	116	4,950	12,843
8. Retail Trade	2,139	34,784	39,927
9. Finance, Ins., & Real Estate	416	14,807	27,064
10. Services	1,657	40,298	53,926
Private Subtotal	5,246	133,397	197,921
Public			
11. Government	150	2,435	2,278
Total Effects (Private and Public)	5,396	135,833	200,199
II. DISTRIBUTION OF EFFECTS/MULTIPLIER			
1. Direct Effects	2,522	46,889	88,720
2. Indirect and Induced Effects	2,874	88,944	111,478
3. Total Effects	5,396	135,833	200,199
4. Multipliers (3÷1)	2.140	2.897	2.257
III. COMPOSITION OF GROSS DOMESTIC PRODUCT			
1. Wages--Net of Taxes			122,901
2. Taxes			
a. Local			10,141
b. State			29,051
c. Federal			
General			23,023
Social Security			16,416
Federal Subtotal			39,439
d. Total taxes (2a+2b+2c)			78,631
3. Profits, dividends, rents, and other			(4,375)
4. Total Gross Domestic Product (1+2+3)			197,157
EFFECTS PER MILLION DOLLARS OF INITIAL EXPENDITURE			
Employment (Jobs)			34.7
Income			$873,450
State Taxes			$186,808
Local Taxes			$65,212
Gross Domestic Product			$1,287,345

Note: Detail may not sum to totals due to rounding.

*Terms:

Direct Effects--(National) the amount of goods and services purchased in the nation.

Indirect Effects--the value of goods and services needed to support the provision of those direct economic effects.

Induced Effects--the value of goods and services needed by households that provide the direct and indirect labor.

Source: Rutgers University Center for Urban Policy Research, 1997.

Exhibit G.5
National Economic Impacts of Annual New Jersey Heritage Overnighter Spending ($155 Million)

INDUSTRY	Industry Component: Employment (jobs)	Income ($000)	Gross Domestic Product ($000)
Agriculture	**15**	**1,795**	**2,996**
Dairy Prod., Poultry, & Eggs	2	350	463
Meat Animals & Misc. Livestock	5	472	605
Cotton	0	27	35
Grains & Misc. Crops	5	600	1,206
Tobacco	1	196	320
Fruits, Nuts, & Vegetables	0	74	263
Forest Prod.	0	8	21
Greenhouse & Nursery Prod.	1	67	84
Agri. Serv., Forestry, & Fish	**34**	**1,095**	**1,209**
Agri. Services (07)	16	262	276
Forestry (08)	2	11	64
Fishing, Hunting, & Trapping (09)	17	822	869
Mining	**19**	**1,082**	**4,393**
Metal Mining (10)	1	88	105
Coal Mining (12)	0	0	0
Oil & Gas Extraction (13)	16	936	4,185
Nonmetal Min.-Ex. Fuels (14)	1	58	103
Construction	**68**	**2,594**	**2,731**
General Bldg. Contractors (15)	13	538	567
Heavy Const. Contractors 16)	8	322	339
Special Trade Contractors (17)	47	1,734	1,826
Manufacturing	**578**	**22,330**	**34,431**
Food & Kindred Prod. (20)	114	4,319	7,386
Tobacco Manufactures (21)	2	115	586
Textile Mill Prod. (22)	20	488	685
Apparel & Other Prod. (23)	36	668	729
Lumber & Wood Prod. (24)	13	406	603
Furniture & Fixtures (25)	11	278	328
Paper & Allied Prod. (26)	24	1,216	2,044
Printing & Publishing (27)	81	2,792	3,684
Chemicals & Allied Prod. (28)	33	2,029	3,562
Petroleum & Coal Prod. (29)	7	672	2,113
Rubber & Misc. Plastics (30)	31	1,157	1,319
Leather & Leather Prod. (31)	9	183	224
Stone, Clay, & Glass (32)	15	554	638
Primary Metal Prod. (33)	15	850	946
Fabricated Metal Prod. (34)	26	1,108	1,443
Machinery, Except Elec. (35)	20	886	1,063
Electric & Elec. Equip. (36)	15	631	950
Transportation Equipment (37)	25	1,456	1,883
Instruments & Rel. Prod. (38)	21	832	890
Misc. Manufacturing Ind's. (39)	58	1,691	3,356

Exhibit G.5 (continued)
National Economic Impacts of Annual New Jersey Heritage Overnighter Spending ($155 Million)

INDUSTRY	Industry Component: Employment (jobs)	Income ($000)	Gross Domestic Product ($000)
Transport. & Public Utilities	**204**	**9,671**	**18,423**
Railroad Transportation (40)	8	396	636
Local Pass. Transit (41)	42	1,073	1,200
Trucking & Warehousing (42)	39	1,545	1,621
Water Transportation (44)	4	150	230
Transportation by Air (45)	12	693	917
Pipe Lines-Ex. Nat. Gas (46)	1	48	227
Transportation Services (47)	8	336	370
Communication (48)	49	2,926	5,881
Elec., Gas, & Sanitary Serv. (49)	42	2,504	7,341
Wholesale	**116**	**4,950**	**12,843**
Whlsale-Durable Goods (50)	35	1,619	5,303
Whlsale-Nondurable Goods (51)	81	3,331	7,541
Retail Trade	**2,139**	**34,784**	**39,927**
Bldg. Mat.-Garden Supply (52)	27	748	825
General Merch. Stores (53)	125	2,148	3,151
Food Stores (54)	80	1,597	1,785
Auto. Dealers-Serv. Stat. (55)	101	2,887	3,229
Apparel & Access. Stores (56)	32	533	831
Furniture & Home Furnish. (57)	10	292	358
Eating & Drinking Places (58)	1,508	21,189	24,792
Miscellaneous Retail (59)	257	5,390	4,955
Finance, Ins., & Real Estate	**416**	**14,807**	**27,064**
Banking (60)	53	1,907	3,446
Nondep. Credit Institut. (61)	44	1,601	1,442
Security, Comm. Brokers (62)	20	1,607	2,217
Insurance Carriers (63)	54	2,367	2,539
Ins. Agents, Brokers (64)	89	3,443	3,618
Real Estate (65)	61	474	10,732
Holding and Invest. Off. (67)	94	3,409	3,070
Services	**1,657**	**40,298**	**53,926**
Hotels & Other Lodging (70)	643	11,304	22,382
Personal Services (72)	148	2,703	2,879
Business Services (73)	253	6,687	7,425
Auto Repair, Serv., Garages (75)	81	3,270	4,030
Misc. Repair Services (76)	43	1,189	1,255
Motion Pictures (78)	84	2,353	2,100
Amusement & Recreation (79)	114	3,069	3,552
Health Services (80)	66	2,301	2,432
Legal Services (81)	26	1,705	1,887
Educational Services (82)	24	482	524
Social Services (83)	28	382	428
Museums, Botan.-Zoo. Gardens (84)	2	59	58
Membership Organizations (86)	63	1,308	1,284
Engineer. & Manage. Serv. (87)	78	3,322	3,520
Miscellaneous Services (89)	3	162	169
Government	**150**	**2,435**	**2,278**
Total	**5,396**	**135,833**	**200,199**

Note: Detail may not sum to totals due to rounding.

Exhibit G.6
National Employment Impacts by Occupation of Annual New Jersey Heritage Overnighter Spending ($155 Million)

OCCUPATION TITLE	Employment (jobs)
Total, All Occupations	**5,396**
Exec., Admin., and Management Occupations	**507**
Managerial and Administrative Occupations	386
Management Support Occupations	121
Professional Specialty Occupations	**221**
Engineers	24
Architects and Surveyors	2
Life Scientists	2
Computer, Math, and Operations Res. Analysts	14
Physical Scientists	4
Social Scientists	2
Social, Recreational, and Relig. Workers	16
Lawyers and Judicial Workers	9
Teachers, Librarians, and Counselors	34
Health Diagnosing Occupations	5
Health Assessment & Treating Occupations	22
Writers, Artists, and Entertainers	69
All Other Professional Workers	19
Technicians and Related Support Occupations	**88**
Health Technicians and Technologists	39
Engineering & Science Technicians & Technologists	22
Technicians, Except Health and Engin. & Science	25
Marketing and Sales Occupations	**630**
Cashiers	180
Counter and Rental Clerks	25
Insurance Sales Workers	22
Real Estate Agents, Brokers, & Appraisers	7
Salespersons, Retail	194
Securities and Financial Service Sales Workers	7
Stock Clerks, Sales Floor	48
Travel Agents	2
All Other Sales and Related Workers	144
Administrative Support Occupations, incl. Clerical	**843**
Adjusters, Investigators, & Collectors	48
Communications Equipment Operators	15
Computer & Peripheral Equipment Operators	11
Financial Records Processing Occupations	119
Information Clerks	95
Mail Clerks and Messengers	8
Postal Clerks and Mail Carriers	56
Mat'l Record., Sched., Dispatch, & Distrib. Occs.	77
Records Processing Occupations, except Financial	32
Secretaries, Stenographers, and Typists	135
Other Clerical and Administrative Support Workers	249

Exhibit G.6 (continued)
National Employment Impacts by Occupation of Annual New Jersey Heritage Overnighter Spending ($155 Million)

OCCUPATION TITLE	Employment (jobs)
Service Occupations	**2,039**
Cleaning & Building Service Occs., except Private	295
Food Preparation and Service Occupations	1,482
Health Service Occupations	26
Personal Service Occupations	108
Protective Service Occupations	53
All Other Service Workers	74
Agric., Forestry, Fishing, & Related Occupations	**66**
Animal Caretakers, except Farm	3
Farm Occupations	25
Farm Operators and Managers	4
Fishers, Hunters, and Trappers	1
Forestry and Logging Occupations	2
Gardeners & Groundskeepers, except farm	26
Supervisors, Farming, Forestry, & Agricul. Occs.	2
All Other Agric., Forestry, Fishing, & Rel. Workers	3
Precision Production, Craft, & Repair Occupations	**400**
Blue-collar Worker Supervisors	51
Construction Trades	47
Extractive and Related Workers, Incl. Blasters	4
Mechanics, Installers, and Repairers	194
Production Occupations, Precision	96
Plant and System Occupations	7
Operators, Fabricators, and Laborers	**605**
Mach. Setters, Set-up Ops, Operators, & Tenders	185
Hand Workers, incl. Assemblers & Fabricators	70
Transp. & Material Moving Machine & Vehicle Ops.	188
Helpers, Laborers, & Material Movers, Hand	162

Note: Detail may not sum to totals due to rounding.

Exhibit G.7
In-State Economic and Tax Impacts of Annual New Jersey Heritage Daytripper Spending ($277 Million)

	Economic Component		
	Employment (jobs)	Income (000$)	Gross State Product (000$)
I. TOTAL EFFECTS (Direct and Indirect/Induced)*			
Private			
1. Agriculture	4	21	85
2. Agri. Serv., Forestry, & Fish	12	266	868
3. Mining	0	9	15
4. Construction	45	1,838	2,063
5. Manufacturing	268	9,065	20,964
6. Transport. & Public Utilities	138	3,636	8,422
7. Wholesale	92	7,730	16,249
8. Retail Trade	2,135	39,736	56,108
9. Finance, Ins., & Real Estate	121	5,284	16,035
10. Services	1,725	38,385	59,402
Private Subtotal	4,542	105,959	180,176
Public			
11. Government	110	1,660	1,684
Total Effects (Private and Public)	4,652	107,619	181,860
II. DISTRIBUTION OF EFFECTS/MULTIPLIER			
1. Direct Effects	3,377	72,301	145,132
2. Indirect and Induced Effects	1,275	35,318	36,728
3. Total Effects	4,652	107,619	181,860
4. Multipliers (3÷1)	1.378	1.488	1.253
III. COMPOSITION OF GROSS STATE PRODUCT			
1. Wages--Net of Taxes			94,609
2. Taxes			
a. Local			10,036
b. State			38,551
c. Federal			
General			20,914
Social Security			14,912
Federal Subtotal			35,826
d. Total taxes (2a+2b+2c)			84,413
3. Profits, dividends, rents, and other			(2,198)
4. Total Gross State Product (1+2+3)			176,824
EFFECTS PER MILLION DOLLARS OF INITIAL EXPENDITURE			
Employment (Jobs)			16.8
Income			$389,089
State Taxes			$139,380
Local Taxes			$36,283
Gross State Product			$657,502

Note: Detail may not sum to totals due to rounding.
*Terms:
Direct Effects--(State) the amount of goods and services purchased in New Jersey.
Indirect Effects--the value of goods and services needed to support the provision of those direct economic effects.
Induced Effects--the value of goods and services needed by households that provide the direct and indirect labor.

Source: Rutgers University Center for Urban Policy Research, 1997.

Exhibit G.8
In-State Economic Impacts of Annual New Jersey Heritage Daytripper Spending ($277 Million)

INDUSTRY	Industry Component: Employment (jobs)	Income ($000)	Gross State Product ($000)
Agriculture	**4**	**21**	**85**
Dairy Prod., Poultry, & Eggs	1	3	8
Meat Animals & Misc. Livestock	0	0	0
Cotton	0	0	0
Grains & Misc. Crops	0	0	3
Tobacco	1	6	37
Fruits, Nuts, & Vegetables	0	0	2
Forest Prod.	0	0	2
Greenhouse & Nursery Prod.	2	11	32
Agri. Serv., Forestry, & Fish	**12**	**266**	**868**
Agri. Services (07)	6	97	142
Forestry (08)	0	1	5
Fishing, Hunting, & Trapping (09)	6	168	721
Mining	**0**	**9**	**15**
Metal Mining (10)	0	0	0
Coal Mining (12)	0	0	0
Oil & Gas Extraction (13)	0	0	0
Nonmetal Min.-Ex. Fuels (14)	0	9	15
Construction	**45**	**1,838**	**2,063**
General Bldg. Contractors (15)	10	395	490
Heavy Const. Contractors 16)	4	211	223
Special Trade Contractors (17)	32	1,231	1,350
Manufacturing	**268**	**9,065**	**20,965**
Food & Kindred Prod. (20)	72	2,435	7,176
Tobacco Manufactures (21)	0	1	3
Textile Mill Prod. (22)	4	103	147
Apparel & Other Prod. (23)	17	341	579
Lumber & Wood Prod. (24)	2	42	62
Furniture & Fixtures (25)	1	38	54
Paper & Allied Prod. (26)	16	461	828
Printing & Publishing (27)	28	830	1,344
Chemicals & Allied Prod. (28)	37	1,414	3,234
Petroleum & Coal Prod. (29)	7	419	2,007
Rubber & Misc. Plastics (30)	9	233	386
Leather & Leather Prod. (31)	1	28	45
Stone, Clay, & Glass (32)	12	326	549
Primary Metal Prod. (33)	2	107	168
Fabricated Metal Prod. (34)	10	404	638
Machinery, Except Elec. (35)	6	207	303
Electric & Elec. Equip. (36)	4	132	210
Transportation Equipment (37)	4	188	364
Instruments & Rel. Prod. (38)	6	232	523
Misc. Manufacturing Ind's. (39)	31	1,125	2,344

Exhibit G.8 (continued)
In-State Economic Impacts of Annual New Jersey Heritage Daytripper Spending ($277 Million)

INDUSTRY	Industry Component: Employment (jobs)	Income ($000)	Gross State Product ($000)
Transport. & Public Utilities	**138**	**3,636**	**8,422**
Railroad Transportation (40)	1	21	40
Local Pass. Transit (41)	65	1,311	1,773
Trucking & Warehousing (42)	15	374	684
Water Transportation (44)	1	59	88
Transportation by Air (45)	3	110	228
Pipe Lines-Ex. Nat. Gas (46)	0	1	6
Transportation Services (47)	3	133	204
Communication (48)	23	1,145	3,852
Elec., Gas, & Sanitary Serv. (49)	27	482	1,547
Wholesale	**92**	**7,730**	**16,249**
Whlsale-Durable Goods (50)	37	2,024	5,511
Whlsale-Nondurable Goods (51)	55	5,706	10,738
Retail Trade	**2,136**	**39,736**	**56,108**
Bldg. Mat.-Garden Supply (52)	13	358	562
General Merch. Stores (53)	157	2,793	5,220
Food Stores (54)	94	2,002	3,070
Auto. Dealers-Serv. Stat. (55)	62	2,003	2,949
Apparel & Access. Stores (56)	46	881	1,846
Furniture & Home Furnish. (57)	6	171	315
Eating & Drinking Places (58)	1,498	26,299	34,638
Miscellaneous Retail (59)	260	5,229	7,508
Finance, Ins., & Real Estate	**121**	**5,284**	**16,035**
Banking (60)	20	986	1,998
Nondep. Credit Institut. (61)	15	673	736
Security, Comm. Brokers (62)	5	450	490
Insurance Carriers (63)	21	1,299	1,386
Ins. Agents, Brokers (64)	7	183	320
Real Estate (65)	41	1,150	10,511
Holding and Invest. Off. (67)	12	543	594
Services	**1,725**	**38,385**	**59,403**
Hotels & Other Lodging (70)	1,183	25,913	40,277
Personal Services (72)	159	2,749	3,862
Business Services (73)	129	1,085	1,543
Auto Repair, Serv., Garages (75)	35	1,112	3,223
Misc. Repair Services (76)	25	526	1,088
Motion Pictures (78)	8	197	327
Amusement & Recreation (79)	33	923	1,086
Health Services (80)	47	1,981	2,414
Legal Services (81)	23	1,292	1,717
Educational Services (82)	17	372	419
Social Services (83)	6	179	255
Museums, Botan.-Zoo. Gardens (84)	0	5	6
Membership Organizations (86)	27	701	830
Engineer. & Manage. Serv. (87)	29	1,250	2,199
Miscellaneous Services (89)	3	100	156
Government	**110**	**1,660**	**1,684**
Total	**4,652**	**107,619**	**181,860**

Note: Detail may not sum to totals due to rounding.

Exhibit G.9
In-State Employment Impacts by Occupation of Annual New Jersey Heritage Daytripper Spending ($277 Million)

OCCUPATION TITLE	Employment (jobs)
Total, All Occupations	**4,652**
Exec., Admin., and Management Occupations	**368**
Managerial and Administrative Occupations	304
Management Support Occupations	65
Professional Specialty Occupations	**121**
Engineers	12
Architects and Surveyors	1
Life Scientists	1
Computer, Math, and Operations Res. Analysts	6
Physical Scientists	3
Social Scientists	1
Social, Recreational, and Relig. Workers	11
Lawyers and Judicial Workers	8
Teachers, Librarians, and Counselors	18
Health Diagnosing Occupations	4
Health Assessment & Treating Occupations	19
Writers, Artists, and Entertainers	29
All Other Professional Workers	9
Technicians and Related Support Occupations	**63**
Health Technicians and Technologists	38
Engineering & Science Technicians & Technologists	12
Technicians, Except Health and Engin. & Science	13
Marketing and Sales Occupations	**580**
Cashiers	185
Counter and Rental Clerks	16
Insurance Sales Workers	4
Real Estate Agents, Brokers, & Appraisers	4
Salespersons, Retail	206
Securities and Financial Service Sales Workers	2
Stock Clerks, Sales Floor	53
Travel Agents	1
All Other Sales and Related Workers	108
Administrative Support Occupations, incl. Clerical	**553**
Adjusters, Investigators, & Collectors	16
Communications Equipment Operators	14
Computer & Peripheral Equipment Operators	6
Financial Records Processing Occupations	90
Information Clerks	116
Mail Clerks and Messengers	4
Postal Clerks and Mail Carriers	21
Mat'l Record., Sched., Dispatch, & Distrib. Occs.	58
Records Processing Occupations, except Financial	19
Secretaries, Stenographers, and Typists	84
Other Clerical and Administrative Support Workers	126

Exhibit G.9 (continued)
In-State Employment Impacts by Occupation of Annual New Jersey Heritage Daytripper Spending ($277 Million)

OCCUPATION TITLE	Employment (jobs)
Service Occupations	**2,265**
Cleaning & Building Service Occs., except Private	377
Food Preparation and Service Occupations	1,621
Health Service Occupations	**18**
Personal Service Occupations	**130**
Protective Service Occupations	45
All Other Service Workers	75
Agric., Forestry, Fishing, & Related Occupations	**36**
Animal Caretakers, except Farm	1
Farm Occupations	9
Farm Operators and Managers	1
Fishers, Hunters, and Trappers	0
Forestry and Logging Occupations	0
Gardeners & Groundskeepers, except farm	22
Supervisors, Farming, Forestry, & Agricul. Occs.	1
All Other Agric., Forestry, Fishing, & Rel. Workers	2
Precision Production, Craft, & Repair Occupations	**265**
Blue-collar Worker Supervisors	29
Construction Trades	32
Extractive and Related Workers, Incl. Blasters	1
Mechanics, Installers, and Repairers	145
Production Occupations, Precision	53
Plant and System Occupations	5
Operators, Fabricators, and Laborers	**400**
Mach. Setters, Set-up Ops, Operators, & Tenders	106
Hand Workers, incl. Assemblers & Fabricators	32
Transp. & Material Moving Machine & Vehicle Ops.	155
Helpers, Laborers, & Material Movers, Hand	106

Note: Detail may not sum to totals due to rounding.

Exhibit G.10
In-State Economic and Tax Impacts of Annual New Jersey Heritage Overnighter Spending ($155 Million)

	Economic Component		
	Employment (jobs)	Income (000$)	Gross State Product (000$)
I. TOTAL EFFECTS (Direct and Indirect/Induced)*			
Private			
1. Agriculture	3	12	49
2. Agri. Serv., Forestry, & Fish	7	148	442
3. Mining	0	6	9
4. Construction	30	1,226	1,377
5. Manufacturing	137	4,686	10,857
6. Transport. & Public Utilities	72	1,952	4,677
7. Wholesale	48	4,025	8,450
8. Retail Trade	956	17,968	25,293
9. Finance, Ins., & Real Estate	70	3,058	9,270
10. Services	1,056	26,838	43,454
Private Subtotal	2,378	59,914	103,861
Public			
11. Government	55	799	802
Total Effects (Private and Public)	2,433	60,713	104,663
II. DISTRIBUTION OF EFFECTS/MULTIPLIER			
1. Direct Effects	1,693	40,221	85,280
2. Indirect and Induced Effects	740	20,492	19,383
3. Total Effects	2,433	60,713	104,663
4. Multipliers (3÷1)	1.437	1.509	1.227
III. COMPOSITION OF GROSS STATE PRODUCT			
1. Wages--Net of Taxes			53,374
2. Taxes			
a. Local			5,695
b. State			23,640
c. Federal			
General			12,036
Social Security			8,582
Federal Subtotal			20,619
d. Total taxes (2a+2b+2c)			49,954
3. Profits, dividends, rents, and other			(1,706)
4. Total Gross State Product (1+2+3)			101,622
EFFECTS PER MILLION DOLLARS OF INITIAL EXPENDITURE			
Employment (Jobs)			15.6
Income			$390,405
State Taxes			$152,012
Local Taxes			$36,622
Gross State Product			$673,017

Note: Detail may not sum to totals due to rounding.

*Terms:

Direct Effect (State)--the amount of goods and services purchased in New Jersey.

Indirect Effects--the value of goods and services needed to support the provision of those direct economic effects.

Induced Effects--the value of goods and services needed by households that provide the direct and indirect labor.

Source: Rutgers University Center for Urban Policy Research, 1997.

Exhibit G.11
In-State Economic Impacts of Annual New Jersey Heritage Overnighter Spending ($155 Million)

INDUSTRY	Industry Component		
	Employment (jobs)	Income ($000)	Gross State Product ($000)
Agriculture	**3**	**12**	**49**
Dairy Prod., Poultry, & Eggs	0	1	4
Meat Animals & Misc. Livestock	0	0	0
Cotton	0	0	0
Grains & Misc. Crops	0	0	2
Tobacco	1	3	18
Fruits, Nuts, & Vegetables	0	0	1
Forest Prod.	0	0	1
Greenhouse & Nursery Prod.	2	8	23
Agri. Serv., Forestry, & Fish	**7**	**148**	**442**
Agri. Services (07)	4	67	96
Forestry (08)	0	0	3
Fishing, Hunting, & Trapping (09)	3	80	343
Mining	**0**	**6**	**9**
Metal Mining (10)	0	0	0
Coal Mining (12)	0	0	0
Oil & Gas Extraction (13)	0	0	0
Nonmetal Min.-Ex. Fuels (14)	0	6	9
Construction	**30**	**1,226**	**1,377**
General Bldg. Contractors (15)	6	266	330
Heavy Const. Contractors 16)	3	143	150
Special Trade Contractors (17)	21	817	896
Manufacturing	**137**	**4,686**	**10,857**
Food & Kindred Prod. (20)	32	1,096	3,242
Tobacco Manufactures (21)	0	0	2
Textile Mill Prod. (22)	2	52	74
Apparel & Other Prod. (23)	5	103	179
Lumber & Wood Prod. (24)	1	27	41
Furniture & Fixtures (25)	1	22	30
Paper & Allied Prod. (26)	8	223	391
Printing & Publishing (27)	17	504	805
Chemicals & Allied Prod. (28)	21	831	1,881
Petroleum & Coal Prod. (29)	5	286	1,377
Rubber & Misc. Plastics (30)	5	131	217
Leather & Leather Prod. (31)	0	8	13
Stone, Clay, & Glass (32)	7	186	314
Primary Metal Prod. (33)	1	57	90
Fabricated Metal Prod. (34)	6	223	351
Machinery, Except Elec. (35)	3	115	169
Electric & Elec. Equip. (36)	2	72	115
Transportation Equipment (37)	2	101	199
Instruments & Rel. Prod. (38)	3	115	259
Misc. Manufacturing Ind's. (39)	15	533	1,107

Exhibit G.11 (continued)
In-State Economic Impacts of Annual New Jersey Heritage Overnighter Spending ($155 Million)

INDUSTRY	Industry Component: Employment (jobs)	Income ($000)	Gross State Product ($000)
Transport. & Public Utilities	**72**	**1,952**	**4,677**
Railroad Transportation (40)	0	11	22
Local Pass. Transit (41)	30	609	823
Trucking & Warehousing (42)	8	210	384
Water Transportation (44)	0	33	49
Transportation by Air (45)	2	59	122
Pipe Lines-Ex. Nat. Gas (46)	0	0	4
Transportation Services (47)	2	89	135
Communication (48)	13	665	2,236
Elec., Gas, & Sanitary Serv. (49)	15	276	902
Wholesale	**48**	**4,025**	**8,450**
Whlsale-Durable Goods (50)	19	1,041	2,835
Whlsale-Nondurable Goods (51)	29	2,984	5,615
Retail Trade	**956**	**17,968**	**25,293**
Bldg. Mat.-Garden Supply (52)	8	204	320
General Merch. Stores (53)	70	1,243	2,323
Food Stores (54)	34	725	1,112
Auto. Dealers-Serv. Stat. (55)	39	1,270	1,869
Apparel & Access. Stores (56)	12	229	481
Furniture & Home Furnish. (57)	3	97	180
Eating & Drinking Places (58)	661	11,614	15,296
Miscellaneous Retail (59)	128	2,586	3,713
Finance, Ins., & Real Estate	**70**	**3,058**	**9,270**
Banking (60)	12	586	1,189
Nondep. Credit Institut. (61)	8	382	418
Security, Comm. Brokers (62)	3	263	287
Insurance Carriers (63)	12	749	800
Ins. Agents, Brokers (64)	4	105	183
Real Estate (65)	24	663	6,056
Holding and Invest. Off. (67)	7	309	338
Services	**1,056**	**26,838**	**43,454**
Hotels & Other Lodging (70)	674	16,939	28,408
Personal Services (72)	80	1,387	1,950
Business Services (73)	77	654	933
Auto Repair, Serv., Garages (75)	29	932	2,963
Misc. Repair Services (76)	12	254	527
Motion Pictures (78)	38	1,125	1,208
Amusement & Recreation (79)	62	2,164	2,836
Health Services (80)	24	986	1,199
Legal Services (81)	13	719	956
Educational Services (82)	10	211	237
Social Services (83)	3	94	136
Museums, Botan.-Zoo. Gardens (84)	0	15	18
Membership Organizations (86)	16	474	567
Engineer. & Manage. Serv. (87)	18	824	1,427
Miscellaneous Services (89)	1	57	89
Government	**55**	**799**	**802**
Total	**2,433**	**60,713**	**104,663**

Note: Detail may not sum to totals due to rounding.

Exhibit G.12
In-State Employment Impacts by Occupation of Annual New Jersey Heritage Overnighter Spending ($155 Million)

OCCUPATION TITLE	Employment (jobs)
Total, All Occupations	**2,433**
Exec., Admin., and Management Occupations	**199**
Managerial and Administrative Occupations	163
Management Support Occupations	35
Professional Specialty Occupations	**80**
Engineers	7
Architects and Surveyors	0
Life Scientists	1
Computer, Math, and Operations Res. Analysts	4
Physical Scientists	2
Social Scientists	0
Social, Recreational, and Relig. Workers	7
Lawyers and Judicial Workers	4
Teachers, Librarians, and Counselors	12
Health Diagnosing Occupations	2
Health Assessment & Treating Occupations	9
Writers, Artists, and Entertainers	25
All Other Professional Workers	7
Technicians and Related Support Occupations	**34**
Health Technicians and Technologists	19
Engineering & Science Technicians & Technologists	7
Technicians, Except Health and Engin. & Science	7
Marketing and Sales Occupations	**286**
Cashiers	92
Counter and Rental Clerks	11
Insurance Sales Workers	2
Real Estate Agents, Brokers, & Appraisers	2
Salespersons, Retail	94
Securities and Financial Service Sales Workers	1
Stock Clerks, Sales Floor	23
Travel Agents	1
All Other Sales and Related Workers	60
Administrative Support Occupations, incl. Clerical	**306**
Adjusters, Investigators, & Collectors	8
Communications Equipment Operators	8
Computer & Peripheral Equipment Operators	3
Financial Records Processing Occupations	49
Information Clerks	66
Mail Clerks and Messengers	2
Postal Clerks and Mail Carriers	10
Mat'l Record., Sched., Dispatch, & Distrib. Occs.	30
Records Processing Occupations, except Financial	10
Secretaries, Stenographers, and Typists	48
Other Clerical and Administrative Support Workers	71

Exhibit G.12 (continued)
In-State Employment Impacts by Occupation of Annual New Jersey Heritage Overnighter Spending ($155 Million)

OCCUPATION TITLE	Employment (jobs)
Service Occupations	**1,141**
Cleaning & Building Service Occs., except Private	215
Food Preparation and Service Occupations	779
Health Service Occupations	9
Personal Service Occupations	74
Protective Service Occupations	26
All Other Service Workers	39
Agric., Forestry, Fishing, & Related Occupations	**24**
Animal Caretakers, except Farm	1
Farm Occupations	5
Farm Operators and Managers	1
Fishers, Hunters, and Trappers	0
Forestry and Logging Occupations	0
Gardeners & Groundskeepers, except farm	16
Supervisors, Farming, Forestry, & Agricul. Occs.	0
All Other Agric., Forestry, Fishing, & Rel. Workers	1
Precision Production, Craft, & Repair Occupations	**151**
Blue-collar Worker Supervisors	16
Construction Trades	21
Extractive and Related Workers, Incl. Blasters	1
Mechanics, Installers, and Repairers	84
Production Occupations, Precision	27
Plant and System Occupations	2
Operators, Fabricators, and Laborers	**212**
Mach. Setters, Set-up Ops, Operators, & Tenders	57
Hand Workers, incl. Assemblers & Fabricators	16
Transp. & Material Moving Machine & Vehicle Ops.	80
Helpers, Laborers, & Material Movers, Hand	59

Note: Detail may not sum to totals due to rounding.

Appendix H

Comparative Input-Output Tables for Historic Rehabilitation, New Construction, and Other Economic Activities

Exhibit H.1
National Economic and Tax Impacts of New Jersey
Historic Rehabilitation of Single-Family Buildings ($1 Million)

	Economic Component		
	Employment (jobs)	Income (000$)	Gross Domestic Product (000$)
I. TOTAL EFFECTS (Direct and Indirect/Induced)*			
Private			
1. Agriculture	0	8	14
2. Agri. Serv., Forestry, & Fish	0	5	10
3. Mining	0	10	33
4. Construction	8	320	337
5. Manufacturing	7	253	353
6. Transport. & Public Utilities	3	154	253
7. Wholesale	1	40	112
8. Retail Trade	6	111	126
9. Finance, Ins., & Real Estate	4	132	211
10. Services	7	204	226
Private Subtotal	36	1,236	1,674
Public			
11. Government	1	18	17
Total Effects (Private and Public)	37	1,253	1,691
II. DISTRIBUTION OF EFFECTS/MULTIPLIER			
1. Direct Effects	13	516	634
2. Indirect and Induced Effects	24	737	1,057
3. Total Effects	37	1,253	1,691
4. Multipliers (3÷1)	2.868	2.429	2.667
III. COMPOSITION OF GROSS DOMESTIC PRODUCT			
1. Wages--Net of Taxes			1,134
2. Taxes			
a. Local			90
b. State			107
c. Federal			
General			194
Social Security			139
Federal Subtotal			333
d. Total taxes (2a+2b+2c)			530
3. Profits, dividends, rents, and other			27
4. Total Gross Domestic Product (1+2+3)			1,691
EFFECTS PER MILLION DOLLARS OF INITIAL EXPENDITURE			
Employment (Jobs)			36.7
Income			$1,239,926
State Taxes			$105,548
Local Taxes			$88,919
Gross Domestic Product			$1,672,374

Note: Detail may not sum to totals due to rounding.

*Terms:

Direct Effects--(National) the amount of goods and services purchased in the nation.

Indirect Effects--the value of goods and services needed to support the provision of those direct economic effects.

Induced Effects--the value of goods and services needed by households that provide the direct and indirect labor.

Source: Rutgers University Center for Urban Policy Research, 1997.

Exhibit H.2
In-State Economic and Tax Impacts of New Jersey
Historic Rehabilitation of Single-Family Buildings ($1 Million)

	Economic Component		
	Employment (jobs)	Income (000$)	Gross Domestic Product (000$)
I. TOTAL EFFECTS (Direct and Indirect/Induced)*			
Private			
1. Agriculture	0	0	0
2. Agri. Serv., Forestry, & Fish	0	1	2
3. Mining	0	2	3
4. Construction	7	284	326
5. Manufacturing	3	103	174
6. Transport. & Public Utilities	2	64	143
7. Wholesale	1	35	81
8. Retail Trade	2	38	58
9. Finance, Ins., & Real Estate	1	26	60
10. Services	3	72	95
Private Subtotal	18	624	942
Public			
11. Government	0	5	5
Total Effects (Private and Public)	19	630	947
II. DISTRIBUTION OF EFFECTS/MULTIPLIER			
1. Direct Effects	12	453	634
2. Indirect and Induced Effects	6	177	313
3. Total Effects	19	630	947
4. Multipliers (3÷1)	1.521	1.391	1.494
III. COMPOSITION OF GROSS DOMESTIC PRODUCT			
1. Wages--Net of Taxes			554
2. Taxes			
a. Local			55
b. State			65
c. Federal			
General			109
Social Security			78
Federal Subtotal			187
d. Total taxes (2a+2b+2c)			307
3. Profits, dividends, rents, and other			86
4. Total Gross Domestic Product (1+2+3)			947
EFFECTS PER MILLION DOLLARS OF INITIAL EXPENDITURE			
Employment (Jobs)			18.4
Income			$622,911
State Taxes			$64,686
Local Taxes			$54,622
Gross Domestic Product			$936,747

Note: Detail may not sum to totals due to rounding.
*Terms:
Direct Effects--(State) the amount of goods and services purchased in New Jersey.
Indirect Effects--the value of goods and services needed to support the provision of those direct economic effects.
Induced Effects--the value of goods and services needed by households that provide the direct and indirect labor.

Source: Rutgers University Center for Urban Policy Research, 1997.

Exhibit H.3
National Economic and Tax Impacts of New Jersey
Historic Rehabilitation of Multifamily Buildings ($1 Million)

	Economic Component		
	Employment (jobs)	Income (000$)	Gross Domestic Product (000$)
I. TOTAL EFFECTS (Direct and Indirect/Induced)*			
Private			
1. Agriculture	0	8	14
2. Agri. Serv., Forestry, & Fish	0	5	10
3. Mining	0	11	36
4. Construction	8	303	318
5. Manufacturing	8	294	408
6. Transport. & Public Utilities	2	83	152
7. Wholesale	1	48	132
8. Retail Trade	6	109	124
9. Finance, Ins., & Real Estate	4	129	209
10. Services	7	220	244
Private Subtotal	35	1,210	1,647
Public			
11. Government	1	18	17
Total Effects (Private and Public)	37	1,228	1,663
II. DISTRIBUTION OF EFFECTS/MULTIPLIER			
1. Direct Effects	12	487	597
2. Indirect and Induced Effects	24	741	1,066
3. Total Effects	37	1,228	1,663
4. Multipliers (3÷1)	2.952	2.523	2.786
III. COMPOSITION OF GROSS DOMESTIC PRODUCT			
1. Wages--Net of Taxes			1,111
2. Taxes			
a. Local			88
b. State			105
c. Federal			
General			191
Social Security			136
Federal Subtotal			328
d. Total taxes (2a+2b+2c)			521
3. Profits, dividends, rents, and other			31
4. Total Gross Domestic Product (1+2+3)			1,663
EFFECTS PER MILLION DOLLARS OF INITIAL EXPENDITURE			
Employment (Jobs)			36.4
Income			$1,226,245
State Taxes			$104,627.90
Local Taxes			$88,152.90
Gross Domestic Product			$1,660,531

Note: Detail may not sum to totals due to rounding.

*Terms:

Direct Effects--(National) the amount of goods and services purchased in the nation.

Indirect Effects--the value of goods and services needed to support the provision of those direct economic effects.

Induced Effects--the value of goods and services needed by households that provide the direct and indirect labor.

Source: Rutgers University Center for Urban Policy Research, 1997.

Exhibit H.4
In-State Economic and Tax Impacts of New Jersey Historic Rehabilitation of Multifamily Buildings ($1 Million)

	Economic Component		
	Employment (jobs)	Income (000$)	Gross Domestic Product (000$)
I. TOTAL EFFECTS (Direct and Indirect/Induced)*			
Private			
1. Agriculture	-	0	0
2. Agri. Serv., Forestry, & Fish	0	0	1
3. Mining	0	1	2
4. Construction	3	103	118
5. Manufacturing	2	51	86
6. Transport. & Public Utilities	0	7	17
7. Wholesale	0	17	39
8. Retail Trade	1	14	22
9. Finance, Ins., & Real Estate	0	10	23
10. Services	1	34	43
Private Subtotal	7	238	351
Public			
11. Government	0	2	2
Total Effects (Private and Public)	7	240	353
II. DISTRIBUTION OF EFFECTS/MULTIPLIER			
1. Direct Effects	4	171	230
2. Indirect and Induced Effects	2	69	123
3. Total Effects	7	240	353
4. Multipliers (3÷1)	1.560	1.405	1.536
III. COMPOSITION OF GROSS DOMESTIC PRODUCT			
1. Wages--Net of Taxes			177
2. Taxes			
a. Local			21
b. State			25
c. Federal			
General			38
Social Security			29
Federal Subtotal			67
d. Total taxes (2a+2b+2c)			113
3. Profits, dividends, rents, and other			62
4. Total Gross Domestic Product (1+2+3)			353
EFFECTS PER MILLION DOLLARS OF INITIAL EXPENDITURE			
Employment (Jobs)			18.0
Income			$622,652
State Taxes			$64,573
Local Taxes			$54,473
Gross Domestic Product			$915,534

Note: Detail may not sum to totals due to rounding.
*Terms:
Direct Effects--(State) the amount of goods and services purchased in New Jersey.
Indirect Effects--the value of goods and services needed to support the provision of those direct economic effects.
Induced Effects--the value of goods and services needed by households that provide the direct and indirect labor.

Source: Rutgers University Center for Urban Policy Research, 1997.

Exhibit H.5
National Economic and Tax Impacts of New Jersey
Historic Rehabilitation of Commercial Buildings ($1 Million)

	Economic Component		
	Employment (jobs)	Income (000$)	Gross Domestic Product (000$)
I. TOTAL EFFECTS (Direct and Indirect/Induced)*			
Private			
1. Agriculture	0	8	13
2. Agri. Serv., Forestry, & Fish	0	4	6
3. Mining	0	11	32
4. Construction	9	354	372
5. Manufacturing	7	284	387
6. Transport. & Public Utilities	2	82	151
7. Wholesale	1	35	99
8. Retail Trade	6	113	129
9. Finance, Ins., & Real Estate	4	135	216
10. Services	8	243	268
Private Subtotal	37	1,268	1,672
Public			
11. Government	1	18	17
Total Effects (Private and Public)	38	1,286	1,689
II. DISTRIBUTION OF EFFECTS/MULTIPLIER			
1. Direct Effects	13	532	620
2. Indirect and Induced Effects	24	754	1,069
3. Total Effects	38	1,286	1,689
4. Multipliers (3÷1)	2.837	2.419	2.723
III. COMPOSITION OF GROSS DOMESTIC PRODUCT			
1. Wages--Net of Taxes			1,163
2. Taxes			
a. Local			91
b. State			108
c. Federal			
General			194
Social Security			138
Federal Subtotal			333
d. Total taxes (2a+2b+2c)			532
3. Profits, dividends, rents, and other			(7)
4. Total Gross Domestic Product (1+2+3)			1,689
EFFECTS PER MILLION DOLLARS OF INITIAL EXPENDITURE			
Employment (Jobs)			38.3
Income			$1,302,490
State Taxes			$109,538
Local Taxes			$92,211
Gross Domestic Product			$1,710,502

Note: Detail may not sum to totals due to rounding.

*Terms:

Direct Effects--(National) the amount of goods and services purchased in the nation.

Indirect Effects--the value of goods and services needed to support the provision of those direct economic effects.

Induced Effects--the value of goods and services needed by households that provide the direct and indirect labor.

Source: Rutgers University Center for Urban Policy Research, 1997.

Exhibit H.6
In-State Economic and Tax Impacts of New Jersey
Historic Rehabilitation of Commercial Buildings ($1 Million)

	Economic Component		
	Employment (jobs)	Income (000$)	Gross Domestic Product (000$)
I. TOTAL EFFECTS (Direct and Indirect/Induced)*			
Private			
1. Agriculture	0	0	0
2. Agri. Serv., Forestry, & Fish	0	1	2
3. Mining	0	2	4
4. Construction	8	320	361
5. Manufacturing	4	127	209
6. Transport. & Public Utilities	1	18	43
7. Wholesale	0	29	68
8. Retail Trade	2	40	62
9. Finance, Ins., & Real Estate	1	28	64
10. Services	3	107	133
Private Subtotal	19	671	946
Public			
11. Government	0	6	6
Total Effects (Private and Public)	19	677	952
II. DISTRIBUTION OF EFFECTS/MULTIPLIER			
1. Direct Effects	12	488	620
2. Indirect and Induced Effects	7	188	331
3. Total Effects	19	677	952
4. Multipliers (3÷1)	1.553	1.386	1.534
III. COMPOSITION OF GROSS DOMESTIC PRODUCT			
1. Wages--Net of Taxes			595
2. Taxes			
a. Local			58
b. State			69
c. Federal			
General			109
Social Security			78
Federal Subtotal			187
d. Total taxes (2a+2b+2c)			314
3. Profits, dividends, rents, and other			42
4. Total Gross Domestic Product (1+2+3)			952

EFFECTS PER MILLION DOLLARS OF INITIAL EXPENDITURE	
Employment (Jobs)	19.3
Income	$685,430
State Taxes	$69,977
Local Taxes	$58,522
Gross Domestic Product	$963,907

Note: Detail may not sum to totals due to rounding.
*Terms:
Direct Effects--(State) the amount of goods and services purchased in New Jersey.
Indirect Effects--the value of goods and services needed to support the provision of those direct economic effects.
Induced Effects--the value of goods and services needed by households that provide the direct and indirect labor.

Source: Rutgers University Center for Urban Policy Research, 1997.

Exhibit H.7
National Economic and Tax Impacts of New Jersey
Historic Rehabilitation of Civic/Institutional Buildings ($1Million)

	Economic Component		
	Employment (jobs)	Income (000$)	Gross Domestic Product (000$)
I. TOTAL EFFECTS (Direct and Indirect/Induced)*			
Private			
1. Agriculture	0	8	13
2. Agri. Serv., Forestry, & Fish	0	5	6
3. Mining	0	13	44
4. Construction	9	365	385
5. Manufacturing	7	287	392
6. Transport. & Public Utilities	2	83	156
7. Wholesale	1	35	99
8. Retail Trade	6	118	135
9. Finance, Ins., & Real Estate	4	140	227
10. Services	8	265	292
Private Subtotal	38	1,319	1,748
Public			
11. Government	1	19	18
Total Effects (Private and Public)	39	1,339	1,766
II. DISTRIBUTION OF EFFECTS/MULTIPLIER			
1. Direct Effects	14	552	641
2. Indirect and Induced Effects	26	787	1,125
3. Total Effects	39	1,339	1,766
4. Multipliers (3÷1)	2.842	2.424	2.754
III. COMPOSITION OF GROSS DOMESTIC PRODUCT			
1. Wages--Net of Taxes			1,211
2. Taxes			
a. Local			95
b. State			113
c. Federal			
General			203
Social Security			145
Federal Subtotal			348
d. Total taxes (2a+2b+2c)			556
3. Profits, dividends, rents, and other			(1)
4. Total Gross Domestic Product (1+2+3)			1,766
EFFECTS PER MILLION DOLLARS OF INITIAL EXPENDITURE			
Employment (Jobs)			37.8
Income			$1,285,123
State Taxes			$108,281.60
Local Taxes			$91,182
Gross Domestic Product			$1,695,311

Note: Detail may not sum to totals due to rounding.

*Terms:

Direct Effects--(National) the amount of goods and services purchased in the nation.

Indirect Effects--the value of goods and services needed to support the provision of those direct economic effects.

Induced Effects--the value of goods and services needed by households that provide the direct and indirect labor.

Source: Rutgers University Center for Urban Policy Research, 1997.

Exhibit H.8
In-State Economic and Tax Impacts of New Jersey
Historic Rehabilitation of Civic/Institutional Buildings ($1 Million)

	Economic Component		
	Employment (jobs)	Income (000$)	Gross Domestic Product (000$)
I. TOTAL EFFECTS (Direct and Indirect/Induced)*			
Private			
1. Agriculture	0	0	0
2. Agri. Serv., Forestry, & Fish	0	1	2
3. Mining	0	2	3
4. Construction	8	329	373
5. Manufacturing	4	126	211
6. Transport. & Public Utilities	1	17	43
7. Wholesale	0	28	67
8. Retail Trade	2	42	64
9. Finance, Ins., & Real Estate	1	29	67
10. Services	4	122	150
Private Subtotal	19	697	980
Public			
11. Government	0	6	6
Total Effects (Private and Public)	20	703	986
II. DISTRIBUTION OF EFFECTS/MULTIPLIER			
1. Direct Effects	13	507	641
2. Indirect and Induced Effects	7	196	344
3. Total Effects	20	703	986
4. Multipliers (3÷1)	1.554	1.386	1.537
III. COMPOSITION OF GROSS DOMESTIC PRODUCT			
1. Wages--Net of Taxes			618
2. Taxes			
a. Local			60
b. State			72
c. Federal			
General			113
Social Security			81
Federal Subtotal			194
d. Total taxes (2a+2b+2c)			326
3. Profits, dividends, rents, and other			42
4. Total Gross Domestic Product (1+2+3)			986
EFFECTS PER MILLION DOLLARS OF INITIAL EXPENDITURE			
Employment (Jobs)			19.0
Income			$674,809
State Taxes			$68,843
Local Taxes			$57,553
Gross Domestic Product			$946,087

Note: Detail may not sum to totals due to rounding.

*Terms:

Direct Effects--(State) the amount of goods and services purchased in New Jersey.

Indirect Effects--the value of goods and services needed to support the provision of those direct economic effects.

Induced Effects--the value of goods and services needed by households that provide the direct and indirect labor.

Source: Rutgers University Center for Urban Policy Research, 1997.

Exhibit H.9
National Economic and Tax Impacts of New Jersey Spending on New Single-Family Building Construction ($1 Million)

	Economic Component		
	Employment (jobs)	Income (000$)	Gross Domestic Product (000$)
I. TOTAL EFFECTS (Direct and Indirect/Induced)*			
Private			
1. Agriculture	0	8	14
2. Agri. Serv., Forestry, & Fish	0	5	11
3. Mining	0	9	29
4. Construction	10	368	388
5. Manufacturing	7	251	349
6. Transport. & Public Utilities	2	75	140
7. Wholesale	1	41	114
8. Retail Trade	6	107	122
9. Finance, Ins., & Real Estate	3	127	202
10. Services	7	199	221
Private Subtotal	35	1,189	1,589
Public			
11. Government	1	17	16
Total Effects (Private and Public)	36	1,206	1,605
II. DISTRIBUTION OF EFFECTS/MULTIPLIER			
1. Direct Effects	13	505	600
2. Indirect and Induced Effects	23	701	1,005
3. Total Effects	36	1,206	1,605
4. Multipliers (3÷1)	2.792	2.387	2.675
III. COMPOSITION OF GROSS DOMESTIC PRODUCT			
1. Wages--Net of Taxes			1,091
2. Taxes			
a. Local			86
b. State			102
c. Federal			
General			185
Social Security			132
Federal Subtotal			316
d. Total taxes (2a+2b+2c)			504
3. Profits, dividends, rents, and other			9
4. Total Gross Domestic Product (1+2+3)			1,605
EFFECTS PER MILLION DOLLARS OF INITIAL EXPENDITURE			
Employment (Jobs)			36.0
Income			$1,205,995
State Taxes			$102,019
Local Taxes			$85,921
Gross Domestic Product			$1,604,478

Note: Detail may not sum to totals due to rounding.
*Terms:
Direct Effects--(National) the amount of goods and services purchased in the nation.
Indirect Effects--the value of goods and services needed to support the provision of those direct economic effects.
Induced Effects--the value of goods and services needed by households that provide the direct and indirect labor.

Source: Rutgers University Center for Urban Policy Research, 1997.

Exhibit H.10
In-State Economic and Tax Impacts of New Jersey
Spending on New Single-Family Building Construction ($1 Million)

	Economic Component		
	Employment (jobs)	Income (000$)	Gross Domestic Product (000$)
I. TOTAL EFFECTS (Direct and Indirect/Induced)*			
Private			
1. Agriculture	-	-	0
2. Agri. Serv., Forestry, & Fish	0	1	2
3. Mining	-	1	2
4. Construction	8	328	376
5. Manufacturing	2	74	125
6. Transport. & Public Utilities	0	11	29
7. Wholesale	1	35	81
8. Retail Trade	2	35	53
9. Finance, Ins., & Real Estate	1	24	54
10. Services	2	64	84
Private Subtotal	16	573	807
Public			
11. Government	0	5	5
Total Effects (Private and Public)	16	578	812
II. DISTRIBUTION OF EFFECTS/MULTIPLIER			
1. Direct Effects	11	426	543
2. Indirect and Induced Effects	6	152	269
3. Total Effects	16	578	812
4. Multipliers (3÷1)	1.514	1.356	1.495
III. COMPOSITION OF GROSS DOMESTIC PRODUCT			
1. Wages--Net of Taxes			508
2. Taxes			
a. Local			49
b. State			59
c. Federal			
General			93
Social Security			67
Federal Subtotal			160
d. Total taxes (2a+2b+2c)			268
3. Profits, dividends, rents, and other			36
4. Total Gross Domestic Product (1+2+3)			812
EFFECTS PER MILLION DOLLARS OF INITIAL EXPENDITURE			
Employment (Jobs)			16.4
Income			$577,746
State Taxes			$58,932
Local Taxes			$49,294
Gross Domestic Product			$811,469

Note: Detail may not sum to totals due to rounding.
*Terms:
Direct Effects--(State) the amount of goods and services purchased in New Jersey.
Indirect Effects--the value of goods and services needed to support the provision of those direct economic effects.
Induced Effects--the value of goods and services needed by households that provide the direct and indirect labor.

Source: Rutgers University Center for Urban Policy Research, 1997.

Exhibit H.11
National Economic and Tax Impacts of New Jersey Spending on New Multifamily Building Construction ($1 Million)

	Economic Component		
	Employment (jobs)	Income (000$)	Gross Domestic Product (000$)
I. TOTAL EFFECTS (Direct and Indirect/Induced)*			
Private			
1. Agriculture	0	8	13
2. Agri. Serv., Forestry, & Fish	0	4	8
3. Mining	0	8	27
4. Construction	9	360	379
5. Manufacturing	7	271	369
6. Transport. & Public Utilities	2	76	141
7. Wholesale	1	41	114
8. Retail Trade	6	107	122
9. Finance, Ins., & Real Estate	3	127	203
10. Services	7	193	215
Private Subtotal	35	1,196	1,590
Public			
11. Government	1	17	16
Total Effects (Private and Public)	36	1,213	1,606
II. DISTRIBUTION OF EFFECTS/MULTIPLIER			
1. Direct Effects	13	510	603
2. Indirect and Induced Effects	23	703	1,003
3. Total Effects	36	1,213	1,606
4. Multipliers (3÷1)	2.776	2.380	2.663
III. COMPOSITION OF GROSS DOMESTIC PRODUCT			
1. Wages--Net of Taxes			1,097
2. Taxes			
a. Local			86
b. State			102
c. Federal			
General			185
Social Security			132
Federal Subtotal			316
d. Total taxes (2a+2b+2c)			505
3. Profits, dividends, rents, and other			4
4. Total Gross Domestic Product (1+2+3)			1,606

EFFECTS PER MILLION DOLLARS OF INITIAL EXPENDITURE

Employment (Jobs)	36.1
Income	$1,212,761
State Taxes	$102,386
Local Taxes	$86,207
Gross Domestic Product	$1,606,318

Note: Detail may not sum to totals due to rounding.

*Terms:

Direct Effects--(National) the amount of goods and services purchased in the nation.

Indirect Effects--the value of goods and services needed to support the provision of those direct economic effects.

Induced Effects--the value of goods and services needed by households that provide the direct and indirect labor.

Source: Rutgers University Center for Urban Policy Research, 1997.

Exhibit H.12
In-State Economic and Tax Impacts of New Jersey Spending on New Multifamily Building Construction ($1 Million)

	Economic Component		
	Employment (jobs)	Income (000$)	Gross Domestic Product (000$)
I. TOTAL EFFECTS (Direct and Indirect/Induced)*			
Private			
1. Agriculture	-	-	0
2. Agri. Serv., Forestry, & Fish	-	1	1
3. Mining	-	1	2
4. Construction	8	320	367
5. Manufacturing	3	86	142
6. Transport. & Public Utilities	0	12	30
7. Wholesale	1	35	81
8. Retail Trade	2	35	53
9. Finance, Ins., & Real Estate	1	24	54
10. Services	2	60	79
Private Subtotal	16	572	809
Public			
11. Government	0	5	5
Total Effects (Private and Public)	16	577	814
II. DISTRIBUTION OF EFFECTS/MULTIPLIER			
1. Direct Effects	11	425	544
2. Indirect and Induced Effects	6	152	269
3. Total Effects	16	577	814
4. Multipliers (3÷1)	1.519	1.358	1.495
III. COMPOSITION OF GROSS DOMESTIC PRODUCT			
1. Wages--Net of Taxes			507
2. Taxes			
a. Local			49
b. State			59
c. Federal			
General			94
Social Security			67
Federal Subtotal			160
d. Total taxes (2a+2b+2c)			269
3. Profits, dividends, rents, and other			38
4. Total Gross Domestic Product (1+2+3)			814
EFFECTS PER MILLION DOLLARS OF INITIAL EXPENDITURE			
Employment (Jobs)			16.4
Income			$576,686
State Taxes			$58,898
Local Taxes			$49,295
Gross Domestic Product			$813,623

Note: Detail may not sum to totals due to rounding.
*Terms:
Direct Effects--(State) the amount of goods and services purchased in New Jersey.
Indirect Effects--the value of goods and services needed to support the provision of those direct economic effects.
Induced Effects--the value of goods and services needed by households that provide the direct and indirect labor.

Source: Rutgers University Center for Urban Policy Research, 1997.

Exhibit H.13
National Economic and Tax Impacts of New Jersey
Spending on New Commercial Building Construction ($1 Million)

	Economic Component		
	Employment (jobs)	Income (000$)	Gross Domestic Product (000$)
I. TOTAL EFFECTS (Direct and Indirect/Induced)*			
Private			
1. Agriculture	0	7	12
2. Agri. Serv., Forestry, & Fish	0	4	5
3. Mining	0	10	31
4. Construction	9	359	378
5. Manufacturing	6	254	346
6. Transport. & Public Utilities	2	75	140
7. Wholesale	1	33	93
8. Retail Trade	6	108	123
9. Finance, Ins., & Real Estate	4	128	205
10. Services	7	227	251
Private Subtotal	35	1,206	1,584
Public			
11. Government	1	17	16
Total Effects (Private and Public)	36	1,223	1,600
II. DISTRIBUTION OF EFFECTS/MULTIPLIER			
1. Direct Effects	13	514	596
2. Indirect and Induced Effects	23	709	1,005
3. Total Effects	36	1,223	1,600
4. Multipliers (3÷1)	2.785	2.378	2.686
III. COMPOSITION OF GROSS DOMESTIC PRODUCT			
1. Wages--Net of Taxes			1,107
2. Taxes			
a. Local			86
b. State			103
c. Federal			
General			184
Social Security			131
Federal Subtotal			315
d. Total taxes (2a+2b+2c)			504
3. Profits, dividends, rents, and other			(11)
4. Total Gross Domestic Product (1+2+3)			1,600
EFFECTS PER MILLION DOLLARS OF INITIAL EXPENDITURE			
Employment (Jobs)			36.1
Income			$1,223,147
State Taxes			$102,684
Local Taxes			$86,438
Gross Domestic Product			$1,600,429

Note: Detail may not sum to totals due to rounding.

*Terms:

Direct Effects--(National) the amount of goods and services purchased in the nation.

Indirect Effects--the value of goods and services needed to support the provision of those direct economic effects.

Induced Effects--the value of goods and services needed by households that provide the direct and indirect labor.

Source: Rutgers University Center for Urban Policy Research, 1997.

Exhibit H.14
In-State Economic and Tax Impacts of New Jersey Spending on New Commercial Building Construction ($1 Million)

	Economic Component		
	Employment (jobs)	Income (000$)	Gross Domestic Product (000$)
I. TOTAL EFFECTS (Direct and Indirect/Induced)*			
Private			
1. Agriculture	-	-	0
2. Agri. Serv., Forestry, & Fish	0	1	2
3. Mining	-	1	2
4. Construction	8	324	367
5. Manufacturing	3	85	141
6. Transport. & Public Utilities	0	12	30
7. Wholesale	0	26	62
8. Retail Trade	2	36	55
9. Finance, Ins., & Real Estate	1	25	56
10. Services	3	86	108
Private Subtotal	16	595	823
Public			
11. Government	0	5	5
Total Effects (Private and Public)	17	600	827
II. DISTRIBUTION OF EFFECTS/MULTIPLIER			
1. Direct Effects	11	441	547
2. Indirect and Induced Effects	6	159	280
3. Total Effects	17	600	827
4. Multipliers (3÷1)	1.531	1.361	1.513
III. COMPOSITION OF GROSS DOMESTIC PRODUCT			
1. Wages--Net of Taxes			528
2. Taxes			
a. Local			51
b. State			61
c. Federal			
General			95
Social Security			68
Federal Subtotal			163
d. Total taxes (2a+2b+2c)			275
3. Profits, dividends, rents, and other			25
4. Total Gross Domestic Product (1+2+3)			827
EFFECTS PER MILLION DOLLARS OF INITIAL EXPENDITURE			
Employment (Jobs)			16.7
Income			$600,336
State Taxes			$60,873
Local Taxes			$50,730
Gross Domestic Product			$827,398

Note: Detail may not sum to totals due to rounding.

*Terms:

Direct Effects--(State) the amount of goods and services purchased in New Jersey.

Indirect Effects--the value of goods and services needed to support the provision of those direct economic effects.

Induced Effects--the value of goods and services needed by households that provide the direct and indirect labor.

Source: Rutgers University Center for Urban Policy Research, 1997.

Exhibit H.15
National Economic and Tax Impacts of New Jersey
Spending on New Civic/Institutional Building Construction ($1 Million)

	Economic Component		
	Employment (jobs)	Income (000$)	Gross Domestic Product (000$)
I. TOTAL EFFECTS (Direct and Indirect/Induced)*			
Private			
1. Agriculture	0	8	12
2. Agri. Serv., Forestry, & Fish	0	4	5
3. Mining	0	9	27
4. Construction	9	359	378
5. Manufacturing	7	257	348
6. Transport. & Public Utilities	2	75	141
7. Wholesale	1	31	89
8. Retail Trade	6	110	126
9. Finance, Ins., & Real Estate	4	131	209
10. Services	8	249	274
Private Subtotal	36	1,233	1,610
Public			
11. Government	1	18	16
Total Effects (Private and Public)	37	1,250	1,626
II. DISTRIBUTION OF EFFECTS/MULTIPLIER			
1. Direct Effects	13	527	604
2. Indirect and Induced Effects	24	723	1,022
3. Total Effects	37	1,250	1,626
4. Multipliers (3÷1)	2.783	2.371	2.693
III. COMPOSITION OF GROSS DOMESTIC PRODUCT			
1. Wages--Net of Taxes			1,131
2. Taxes			
a. Local			88
b. State			105
c. Federal			
General			187
Social Security			133
Federal Subtotal			320
d. Total taxes (2a+2b+2c)			513
3. Profits, dividends, rents, and other			(18)
4. Total Gross Domestic Product (1+2+3)			1,626
EFFECTS PER MILLION DOLLARS OF INITIAL EXPENDITURE			
Employment (Jobs)			36.9
Income			$1,250,121
State Taxes			$104,673
Local Taxes			$88,098
Gross Domestic Product			$1,625,931

Note: Detail may not sum to totals due to rounding.

*Terms:

Direct Effects--(National) the amount of goods and services purchased in the nation.

Indirect Effects--the value of goods and services needed to support the provision of those direct economic effects.

Induced Effects--the value of goods and services needed by households that provide the direct and indirect labor.

Source: Rutgers University Center for Urban Policy Research, 1997.

Exhibit H.16
In-State Economic and Tax Impacts of New Jersey
Spending on New Civic/Institutional Building Construction ($1 Million)

	Economic Component		
	Employment (jobs)	Income (000$)	Gross Domestic Product (000$)
I. TOTAL EFFECTS (Direct and Indirect/Induced)*			
Private			
1. Agriculture	-	-	0
2. Agri. Serv., Forestry, & Fish	0	1	2
3. Mining	-	1	2
4. Construction	8	324	366
5. Manufacturing	3	87	142
6. Transport. & Public Utilities	0	12	31
7. Wholesale	0	24	57
8. Retail Trade	2	37	56
9. Finance, Ins., & Real Estate	1	25	57
10. Services	3	101	125
Private Subtotal	17	611	838
Public			
11. Government	0	5	5
Total Effects (Private and Public)	17	616	843
II. DISTRIBUTION OF EFFECTS/MULTIPLIER			
1. Direct Effects	11	452	554
2. Indirect and Induced Effects	6	164	288
3. Total Effects	17	616	843
4. Multipliers (3+1)	1.537	1.363	1.520
III. COMPOSITION OF GROSS DOMESTIC PRODUCT			
1. Wages--Net of Taxes			542
2. Taxes			
a. Local			52
b. State			62
c. Federal			
General			97
Social Security			69
Federal Subtotal			166
d. Total taxes (2a+2b+2c)			280
3. Profits, dividends, rents, and other			21
4. Total Gross Domestic Product (1+2+3)			843
EFFECTS PER MILLION DOLLARS OF INITIAL EXPENDITURE			
Employment (Jobs)			17.2
Income			$616,159
State Taxes			$62,334
Local Taxes			$51,880
Gross Domestic Product			$842,515

Note: Detail may not sum to totals due to rounding.

*Terms:

Direct Effects--(State) the amount of goods and services purchased in New Jersey.

Indirect Effects--the value of goods and services needed to support the provision of those direct economic effects.

Induced Effects--the value of goods and services needed by households that provide the direct and indirect labor.

Source: Rutgers University Center for Urban Policy Research, 1997.

Exhibit H.17
National Economic and Tax Impacts of New Jersey Spending on New Highway Construction ($1 Million)

	Economic Component		
	Employment (jobs)	Income (000$)	GDP (000$)
I. TOTAL EFFECTS (Direct and Indirect/Induced)*			
Private			
1. Agriculture	0	7	12
2. Agri. Serv., Forestry, & Fish	0	7	8
3. Mining	0	19	60
4. Construction	7	315	332
5. Manufacturing	5	205	290
6. Transport. & Public Utilities	2	80	145
7. Wholesale	1	24	68
8. Retail Trade	5	103	118
9. Finance, Ins., & Real Estate	3	126	205
10. Services	9	289	317
Private Subtotal	32	1,176	1,555
Public			
11. Government	1	17	16
Total Effects (Private and Public)	34	1,194	1,571
II. DISTRIBUTION OF EFFECTS/MULTIPLIER			
1. Direct Effects	11	492	560
2. Indirect and Induced Effects	23	702	1,012
3. Total Effects	34	1,194	1,571
4. Multipliers (3÷1)	3.119	2.426	2.807
III. COMPOSITION OF GROSS DOMESTIC PRODUCT			
1. Wages--Net of Taxes			1,080
2. Taxes			
a. Local			85
b. State			100
c. Federal			
General			181
Social Security			129
Federal Subtotal			310
d. Total taxes (2a+2b+2c)			495
3. Profits, dividends, rents, and other			(3)
4. Total Gross Domestic Product (1+2+3)			1,571

EFFECTS PER MILLION DOLLARS OF INITIAL EXPENDITURE

Employment (Jobs)	33.6
Income	$1,197,163
State Taxes	$100,666
Local Taxes	$84,802
Gross Domestic Product	$1,575,749

Note: Detail may not sum to totals due to rounding.

*Terms:

Direct Effects--(National) the amount of goods and services purchased in the nation.

Indirect Effects--the value of goods and services needed to support the provision of those direct economic effects.

Induced Effects--the value of goods and services needed by households that provide the direct and indirect labor.

Source: Rutgers University Center for Urban Policy Research, 1997.

Exhibit H.18
In-State Economic and Tax Impacts of New Jersey Spending on New Highway Construction ($1 Million)

	Economic Component		
	Employment (jobs)	Income (000$)	Gross Domestic Product (000$)
I. TOTAL EFFECTS (Direct and Indirect/Induced)*			
Private			
1. Agriculture	0	0	0
2. Agri. Serv., Forestry, & Fish	0	4	5
3. Mining	0	6	9
4. Construction	6	291	319
5. Manufacturing	2	71	125
6. Transport. & Public Utilities	0	14	34
7. Wholesale	0	16	39
8. Retail Trade	2	34	51
9. Finance, Ins., & Real Estate	1	25	57
10. Services	4	132	159
Private Subtotal	15	593	799
Public			
11. Government	0	5	5
Total Effects (Private and Public)	15	598	804
II. DISTRIBUTION OF EFFECTS/MULTIPLIER			
1. Direct Effects	9	437	520
2. Indirect and Induced Effects	6	161	284
3. Total Effects	15	598	804
4. Multipliers (3÷1)	1.630	1.369	1.545
III. COMPOSITION OF GROSS DOMESTIC PRODUCT			
1. Wages--Net of Taxes			526
2. Taxes			
a. Local			50
b. State			60
c. Federal			
General			92
Social Security			66
Federal Subtotal			158
d. Total taxes (2a+2b+2c)			269
3. Profits, dividends, rents, and other			10
4. Total Gross Domestic Product (1+2+3)			536
EFFECTS PER MILLION DOLLARS OF INITIAL EXPENDITURE			
Employment (Jobs)			15.2
Income			$599,743
State Taxes			$60,381
Local Taxes			$50,100
Gross Domestic Product			$806,410

Note: Detail may not sum to totals due to rounding.

*Terms:

Direct Effects--(State) the amount of goods and services purchased in New Jersey.

Indirect Effects--the value of goods and services needed to support the provision of those direct economic effects.

Induced Effects--the value of goods and services needed by households that provide the direct and indirect labor.

Source: Rutgers University Center for Urban Policy Research, 1997.

Exhibit H.19
National Economic and Tax Impacts of New Jersey Spending in Book Publishing ($1 Million)

	Economic Component		
	Employment (jobs)	Income (000$)	Gross Domestic Product (000$)
I. TOTAL EFFECTS (Direct and Indirect/Induced)*			
Private			
1. Agriculture	0.1	7.9	13.1
2. Agri. Serv., Forestry, & Fish	0.2	3.4	4.8
3. Mining	0.2	9.8	31.4
4. Construction	0.5	17.4	18.3
5. Manufacturing	14.3	566.4	852.6
6. Transport. & Public Utilities	1.6	76.5	142
7. Wholesale	0.7	28.8	73.8
8. Retail Trade	5.8	106.3	121.3
9. Finance, Ins., & Real Estate	3.5	122.7	223.4
10. Services	6.6	182.5	203.4
Private Subtotal	33	1,122	1,684
Public			
11. Government	2.1	37.9	37.7
Total Effects (Private and Public)	35.3	1159.6	1721.6
II. DISTRIBUTION OF EFFECTS/MULTIPLIER			
1. Direct Effects	6.6	279.4	459.7
2. Indirect and Induced Effects	28.7	880.2	1262
3. Total Effects	35.3	1159.6	1721.6
4. Multipliers (3÷1)	5.362	4.15	3.745
III. COMPOSITION OF GROSS DOMESTIC PRODUCT			
1. Wages--Net of Taxes			885.6
2. Taxes			
a. Local			86.3
b. State			102.6
c. Federal			
General			185.9
Social Security			141.2
Federal Subtotal			327.1
d. Total taxes (2a+2b+2c)			516.0
3. Profits, dividends, rents, and other			320
4. Total Gross Domestic Product (1+2+3)			1,722
EFFECTS PER MILLION DOLLARS OF INITIAL EXPENDITURE			
Employment (Jobs)			35.3
Income			$1,159,610
State Taxes			$102,621
Local Taxes			$86,290
Gross Domestic Product			$1,721,618

Note: Detail may not sum to totals due to rounding.

*Terms:

Direct Effects--(National) the amount of goods and services purchased in the nation.

Indirect Effects--the value of goods and services needed to support the provision of those direct economic effects.

Induced Effects--the value of goods and services needed by households that provide the direct and indirect labor.

Source: Rutgers University Center for Urban Policy Research, 1997.

Exhibit H.20
National Economic and Tax Impacts of New Jersey Spending in Drug Industry Production ($1 Million)

	Economic Component		
	Employment (jobs)	Income (000$)	Gross Domestic Product (000$)
I. TOTAL EFFECTS (Direct and Indirect/Induced)*			
Private			
1. Agriculture	0.1	8.9	14.8
2. Agri. Serv., Forestry, & Fish	0.1	3.5	4.2
3. Mining	0.1	6.3	22.7
4. Construction	0.4	15.8	16.6
5. Manufacturing	9.1	484.7	739.4
6. Transport. & Public Utilities	1.4	70.2	131.6
7. Wholesale	0.6	24.8	63.9
8. Retail Trade	5.4	98.1	112.1
9. Finance, Ins., & Real Estate	3.1	111.7	200.6
10. Services	7	203.8	223.9
Private Subtotal	27	1,028	1,530
Public			
11. Government	1.1	17.5	16.5
Total Effects (Private and Public)	28.4	1045.3	1546.2
II. DISTRIBUTION OF EFFECTS/MULTIPLIER			
1. Direct Effects	4.5	285.7	451.3
2. Indirect and Induced Effects	23.9	759.6	1095
3. Total Effects	28.4	1045.3	1546.2
4. Multipliers (3÷1)	6.356	3.658	3.426
III. COMPOSITION OF GROSS DOMESTIC PRODUCT			
1. Wages--Net of Taxes			945.8
2. Taxes			
a. Local			78.7
b. State			93.3
c. Federal			
General			178
Social Security			127
Federal Subtotal			305
d. Total taxes (2a+2b+2c)			477
3. Profits, dividends, rents, and other			124
4. Total Gross Domestic Product (1+2+3)			1,546

EFFECTS PER MILLION DOLLARS OF INITIAL EXPENDITURE	
Employment (Jobs)	28.4
Income	$1,045,291
State Taxes	$93,272
Local Taxes	$78,669
Gross Domestic Product	$1,546,242

Note: Detail may not sum to totals due to rounding.

*Terms:

Direct Effects--(National) the amount of goods and services purchased in the nation.

Indirect Effects--the value of goods and services needed to support the provision of those direct economic effects.

Induced Effects--the value of goods and services needed by households that provide the direct and indirect labor.

Source: Rutgers University Center for Urban Policy Research, 1997.

Exhibit H.21
National Economic and Tax Impacts of New Jersey Spending in Electronic Components ($1 Million)

	Economic Component		
	Employment (jobs)	Income (000$)	Gross Domestic Product (000$)
I. TOTAL EFFECTS (Direct and Indirect/Induced)*			
Private			
1. Agriculture	0.1	6.1	9.8
2. Agri. Serv., Forestry, & Fish	0.1	2.5	3
3. Mining	0.1	5.8	19.3
4. Construction	0.4	14.4	15.2
5. Manufacturing	14.5	546	801.2
6. Transport. & Public Utilities	1.2	59.9	114.8
7. Wholesale	0.5	23.4	66.7
8. Retail Trade	4.9	90.4	103.1
9. Finance, Ins., & Real Estate	2.8	105	169.6
10. Services	5.4	149.3	166.6
Private Subtotal	30	1,003	1,469
Public			
11. Government	0.9	14.9	13.8
Total Effects (Private and Public)	30.9	1017.8	1482.9
II. DISTRIBUTION OF EFFECTS/MULTIPLIER			
1. Direct Effects	9.2	331.9	510.1
2. Indirect and Induced Effects	21.7	686	972.8
3. Total Effects	30.9	1017.8	1482.9
4. Multipliers (3÷1)	3.365	3.067	2.907
III. COMPOSITION OF GROSS DOMESTIC PRODUCT			
1. Wages--Net of Taxes			920.9
2. Taxes			
a. Local			73.6
b. State			87.4
c. Federal			
General			170.5
Social Security			121.6
Federal Subtotal			292.1
d. Total taxes (2a+2b+2c)			453
3. Profits, dividends, rents, and other			109
4. Total Gross Domestic Product (1+2+3)			1,483

EFFECTS PER MILLION DOLLARS OF INITIAL EXPENDITURE	
Employment (Jobs)	30.9
Income	$1,017,835
State Taxes	$87,380
Local Taxes	$73,558
Gross Domestic Product	$1,482,914

Note: Detail may not sum to totals due to rounding.

*Terms:

Direct Effects--(National) the amount of goods and services purchased in the nation.

Indirect Effects--the value of goods and services needed to support the provision of those direct economic effects.

Induced Effects--the value of goods and services needed by households that provide the direct and indirect labor.

Source: Rutgers University Center for Urban Policy Research, 1997.

Exhibit H.22
National Economic and Tax Impacts of New Jersey Spending in Metals Production ($1 Million)

	Economic Component		
	Employment (jobs)	Income (000$)	Gross Domestic Product (000$)
I. TOTAL EFFECTS (Direct and Indirect/Induced)*			
Private			
1. Agriculture	0.1	8.5	13.8
2. Agri. Serv., Forestry, & Fish	0.1	3.3	4
3. Mining	0.4	24.4	56.9
4. Construction	0.7	26.9	28.3
5. Manufacturing	15.8	677.4	864.2
6. Transport. & Public Utilities	1.8	88.6	169.7
7. Wholesale	0.7	30.2	87.4
8. Retail Trade	6.2	116.2	132.3
9. Finance, Ins., & Real Estate	3.8	139.5	226.2
10. Services	7	191.2	213.2
Private Subtotal	37	1,306	1,796
Public			
11. Government	1.2	20.3	19
Total Effects (Private and Public)	37.9	1326.4	1814.9
II. DISTRIBUTION OF EFFECTS/MULTIPLIER			
1. Direct Effects	7.5	308.6	398.7
2. Indirect and Induced Effects	30.4	1017.8	1416.2
3. Total Effects	37.9	1326.4	1814.9
4. Multipliers (3÷1)	5.062	4.298	4.552
III. COMPOSITION OF GROSS DOMESTIC PRODUCT			
1. Wages--Net of Taxes			1027.7
2. Taxes			
a. Local			95.5
b. State			113.4
c. Federal			
General			196.0
Social Security			148.8
Federal Subtotal			344.8
d. Total taxes (2a+2b+2c)			554
3. Profits, dividends, rents, and other			233
4. Total Gross Domestic Product (1+2+3)			1,815
EFFECTS PER MILLION DOLLARS OF INITIAL EXPENDITURE			
Employment (Jobs)			37.9
Income			$1,326,434
State Taxes			$113,412
Local Taxes			$95,482
Gross Domestic Product			$1,814,853

Note: Detail may not sum to totals due to rounding.
*Terms:
Direct Effects--(National) the amount of goods and services purchased in the nation.
Indirect Effects--the value of goods and services needed to support the provision of those direct economic effects.
Induced Effects--the value of goods and services needed by households that provide the direct and indirect labor.

Source: Rutgers University Center for Urban Policy Research, 1997.

Appendix I

Detailed Input-Output Tables of the New Jersey Historic Trust's Historic Preservation Bond Program

Exhibit I.1
National Economic and Tax Impacts of New Jersey Historic Preservation Bond Program ($403 Million)

	Economic Component		
	Employment (jobs)	Income (000$)	Gross Domestic Product (000$)
I. TOTAL EFFECTS (Direct and Indirect/Induced)*			
Private			
1. Agriculture	23	2,791	4,514
2. Agri. Serv., Forestry, & Fish	79	1,633	2,087
3. Mining	82	4,453	15,377
4. Construction	3,233	124,285	130,826
5. Manufacturing	2,420	96,641	132,361
6. Transport. & Public Utilities	571	28,088	53,015
7. Wholesale	277	12,128	34,232
8. Retail Trade	2,150	40,371	46,134
9. Finance, Ins., & Real Estate	1,303	48,025	77,735
10. Services	2,931	92,978	102,240
Private Subtotal	13,070	451,391	598,520
Public			
11. Government	415	6,603	6,112
Total Effects (Private and Public)	13,485	457,982	604,600
II. DISTRIBUTION OF EFFECTS/MULTIPLIER			
1. Direct Effects	4,744	188,915	219,498
2. Indirect and Induced Effects	8,741	269,068	385,102
3. Total Effects	13,485	457,982	604,600
4. Multipliers (3÷1)	2.843	2.424	2.754
III. COMPOSITION OF GROSS DOMESTIC PRODUCT			
1. Wages--Net of Taxes			414,381
2. Taxes			
a. Local			32,497
b. State			38,590
c. Federal			
General			69,529
Social Security			49,577
Federal Subtotal			119,106
d. Total taxes (2a+2b+2c)			190,194
3. Profits, dividends, rents, and other			26
4. Total Gross Domestic Product (1+2+3)			604,600
EFFECTS PER MILLION DOLLARS OF INITIAL EXPENDITURE			
Employment (Jobs)			33.4
Income			$1,133,492
State Taxes			$95,509
Local Taxes			$80,430
Gross Domestic Product			$1,496,366

Note: Detail may not sum to totals due to rounding.

*Terms:

Direct Effects--(National) the amount of goods and services purchased in the nation.

Indirect Effects--the value of goods and services needed to support the provision of those direct economic effects.

Induced Effects--the value of goods and services needed by households that provide the direct and indirect labor.

Source: Rutgers University Center for Urban Policy Research, 1997.

Exhibit I.2
National Economic Impacts of New Jersey
Historic Preservation Bond Program ($403 Million)

INDUSTRY	Industry Component		
	Employment (jobs)	Income ($000)	Gross Domestic Product ($000)
Agriculture	**23**	**2,791**	**4,514**
Dairy Prod., Poultry, & Eggs	3	517	699
Meat Animals & Misc. Livestock	7	603	773
Cotton	0	81	108
Grains & Misc. Crops	8	1,116	1,987
Tobacco	1	164	267
Fruits, Nuts, & Vegetables	1	107	355
Forest Prod.	0	54	140
Greenhouse & Nursery Prod.	2	149	185
Agri. Serv., Forestry, & Fish	**79**	**1,633**	**2,087**
Agri. Services (07)	55	991	1,042
Forestry (08)	13	74	444
Fishing, Hunting, & Trapping (09)	12	568	601
Mining	**82**	**4,453**	**15,377**
Metal Mining (10)	9	632	759
Coal Mining (12)	0	0	0
Oil & Gas Extraction (13)	50	2,938	13,137
Nonmetal Min.-Ex. Fuels (14)	22	883	1,480
Construction	**3,233**	**124,285**	**130,826**
General Bldg. Contractors (15)	749	31,261	32,906
Heavy Const. Contractors 16)	342	14,084	14,825
Special Trade Contractors (17)	2,141	78,940	83,095
Manufacturing	**2,420**	**96,641**	**132,361**
Food & Kindred Prod. (20)	153	5,744	9,127
Tobacco Manufactures (21)	4	214	1,008
Textile Mill Prod. (22)	72	1,794	2,991
Apparel & Other Prod. (23)	96	1,780	1,941
Lumber & Wood Prod. (24)	151	4,825	6,833
Furniture & Fixtures (25)	84	2,442	2,796
Paper & Allied Prod. (26)	65	3,233	5,395
Printing & Publishing (27)	171	5,921	7,895
Chemicals & Allied Prod. (28)	78	4,845	7,607
Petroleum & Coal Prod. (29)	32	3,095	8,914
Rubber & Misc. Plastics (30)	120	4,438	5,048
Leather & Leather Prod. (31)	26	535	652
Stone, Clay, & Glass (32)	306	11,358	13,513
Primary Metal Prod. (33)	170	9,581	10,631
Fabricated Metal Prod. (34)	426	16,960	22,323
Machinery, Except Elec. (35)	156	6,750	8,389
Electric & Elec. Equip. (36)	114	4,637	6,939
Transportation Equipment (37)	77	4,663	5,982
Instruments & Rel. Prod. (38)	95	3,018	3,201
Misc. Manufacturing Ind's. (39)	25	809	1,177

Exhibit I.2 (continued)
National Economic Impacts of New Jersey
Historic Preservation Bond Program ($403 Million)

INDUSTRY	Industry Component: Employment (jobs)	Income ($000)	Gross Domestic Product ($000)
Transport. & Public Utilities	**571**	**28,088**	**53,015**
Railroad Transportation (40)	36	1,866	2,993
Local Pass. Transit (41)	63	1,624	1,816
Trucking & Warehousing (42)	146	5,816	6,103
Water Transportation (44)	14	534	820
Transportation by Air (45)	40	2,387	3,159
Pipe Lines-Ex. Nat. Gas (46)	3	151	717
Transportation Services (47)	25	1,013	1,112
Communication (48)	134	8,098	16,501
Elec., Gas, & Sanitary Serv. (49)	109	6,599	19,794
Wholesale	**277**	**12,128**	**34,232**
Whlsale-Durable Goods (50)	145	6,700	21,948
Whlsale-Nondurable Goods (51)	132	5,427	12,284
Retail Trade	**2,150**	**40,371**	**46,134**
Bldg. Mat.-Garden Supply (52)	97	2,739	3,022
General Merch. Stores (53)	222	3,825	5,611
Food Stores (54)	195	3,889	4,349
Auto. Dealers-Serv. Stat. (55)	223	6,377	7,134
Apparel & Access. Stores (56)	96	1,620	2,527
Furniture & Home Furnish. (57)	32	972	1,191
Eating & Drinking Places (58)	863	12,132	14,195
Miscellaneous Retail (59)	420	8,817	8,105
Finance, Ins., & Real Estate	**1,303**	**48,025**	**77,735**
Banking (60)	165	5,970	10,785
Nondep. Credit Institut. (61)	146	5,278	4,754
Security, Comm. Brokers (62)	64	5,127	7,073
Insurance Carriers (63)	180	7,855	8,428
Ins. Agents, Brokers (64)	298	11,475	12,059
Real Estate (65)	139	1,082	24,512
Holding and Invest. Off. (67)	311	11,238	10,123
Services	**2,931**	**92,978**	**102,240**
Hotels & Other Lodging (70)	180	2,973	5,270
Personal Services (72)	283	5,224	5,571
Business Services (73)	637	18,490	20,987
Auto Repair, Serv., Garages (75)	151	5,322	6,275
Misc. Repair Services (76)	126	3,468	3,659
Motion Pictures (78)	102	2,218	2,051
Amusement & Recreation (79)	68	1,591	1,906
Health Services (80)	177	5,866	6,221
Legal Services (81)	66	4,298	4,756
Educational Services (82)	83	1,633	1,773
Social Services (83)	78	1,110	1,254
Museums, Botan.-Zoo. Gardens (84)	3	90	89
Membership Organizations (86)	200	3,964	3,875
Engineer. & Manage. Serv. (87)	769	36,284	38,088
Miscellaneous Services (89)	8	447	465
Government	**415**	**6,603**	**6,112**
Total	**13,485**	**457,982**	**604,600**

Note: Detail may not sum to totals due to rounding.

Exhibit I.3
National Employment Impacts by Occupation of New Jersey Historic Preservation Bond Program ($403 Million)

OCCUPATION TITLE	Employment (jobs)
Total, All Occupations	**13,485**
Exec., Admin., and Management Occupations	**1,537**
Managerial and Administrative Occupations	1,105
Management Support Occupations	432
Professional Specialty Occupations	**782**
Engineers	229
Architects and Surveyors	92
Life Scientists	5
Computer, Math, and Operations Res. Analysts	48
Physical Scientists	19
Social Scientists	5
Social, Recreational, and Relig. Workers	39
Lawyers and Judicial Workers	24
Teachers, Librarians, and Counselors	89
Health Diagnosing Occupations	12
Health Assessment & Treating Occupations	48
Writers, Artists, and Entertainers	133
All Other Professional Workers	41
Technicians and Related Support Occupations	**415**
Health Technicians and Technologists	104
Engineering & Science Technicians & Technologists	232
Technicians, Except Health and Engin. & Science	82
Marketing and Sales Occupations	**1,228**
Cashiers	224
Counter and Rental Clerks	46
Insurance Sales Workers	72
Real Estate Agents, Brokers, & Appraisers	22
Salespersons, Retail	376
Securities and Financial Service Sales Workers	24
Stock Clerks, Sales Floor	99
Travel Agents	7
All Other Sales and Related Workers	357
Administrative Support Occupations, incl. Clerical	**2,464**
Adjusters, Investigators, & Collectors	147
Communications Equipment Operators	31
Computer & Peripheral Equipment Operators	31
Financial Records Processing Occupations	376
Information Clerks	138
Mail Clerks and Messengers	27
Postal Clerks and Mail Carriers	145
Mat'l Record., Sched., Dispatch, & Distrib. Occs.	220
Records Processing Occupations, except Financial	87
Secretaries, Stenographers, and Typists	492
Other Clerical and Administrative Support Workers	770

Exhibit I.3 (continued)
National Employment Impacts by Occupation of New Jersey Historic Preservation Bond Program ($403 Million)

OCCUPATION TITLE	Employment (jobs)
Service Occupations	**1,530**
Cleaning & Building Service Occs., except Private	297
Food Preparation and Service Occupations	847
Health Service Occupations	75
Personal Service Occupations	135
Protective Service Occupations	106
All Other Service Workers	70
Agric., Forestry, Fishing, & Related Occupations	**123**
Animal Caretakers, except Farm	5
Farm Occupations	51
Farm Operators and Managers	7
Fishers, Hunters, and Trappers	2
Forestry and Logging Occupations	12
Gardeners & Groundskeepers, except farm	36
Supervisors, Farming, Forestry, & Agricul. Occs.	5
All Other Agric., Forestry, Fishing, & Rel. Workers	7
Precision Production, Craft, & Repair Occupations	**2,826**
Blue-collar Worker Supervisors	309
Construction Trades	1,436
Extractive and Related Workers, Incl. Blasters	22
Mechanics, Installers, and Repairers	656
Production Occupations, Precision	381
Plant and System Occupations	22
Operators, Fabricators, and Laborers	**2,577**
Mach. Setters, Set-up Ops, Operators, & Tenders	637
Hand Workers, incl. Assemblers & Fabricators	321
Transp. & Material Moving Machine & Vehicle Ops.	688
Helpers, Laborers, & Material Movers, Hand	934

Note: Detail may not sum to totals due to rounding.

Exhibit I.4
In-State Economic and Tax Impacts of New Jersey Historic Preservation Bond Program ($403 Million)

	Economic Component		
	Employment (jobs)	Income (000$)	Gross State Product (000$)
I. TOTAL EFFECTS (Direct and Indirect/Induced)*			
Private			
1. Agriculture	3	15	57
2. Agri. Serv., Forestry, & Fish	29	512	761
3. Mining	14	411	644
4. Construction	2,791	112,628	126,911
5. Manufacturing	965	33,001	55,846
6. Transport. & Public Utilities	141	4,395	11,364
7. Wholesale	139	9,387	22,297
8. Retail Trade	642	13,267	20,248
9. Finance, Ins., & Real Estate	196	9,162	20,928
10. Services	1,141	37,740	46,536
Private Subtotal	6,061	220,512	305,576
Public			
11. Government	138	1,877	1,816
Total Effects (Private and Public)	6,199	222,389	307,392
II. DISTRIBUTION OF EFFECTS/MULTIPLIER			
1. Direct Effects	4,015	162,221	201,465
2. Indirect and Induced Effects	2,184	60,168	105,927
3. Total Effects	6,199	222,389	307,392
4. Multipliers (3÷1)	1.347	1.609	1.885
III. COMPOSITION OF GROSS STATE PRODUCT			
1. Wages--Net of Taxes			195,506
2. Taxes			
a. Local			18,823
b. State			22,576
c. Federal			
General			35,350
Social Security			25,206
Federal Subtotal			60,556
d. Total taxes (2a+2b+2c)			101,955
3. Profits, dividends, rents, and other			9,931
4. Total Gross State Product (1+2+3)			307,392
EFFECTS PER MILLION DOLLARS OF INITIAL EXPENDITURE			
Employment (Jobs)			15.3
Income			$550,406
State Taxes			$55,874
Local Taxes			$46,586
Gross State Product			$760,786

Note: Detail may not sum to totals due to rounding.

*Terms:

Direct Effects--(State) the amount of goods and services purchased in New Jersey.

Indirect Effects--the value of goods and services needed to support the provision of those direct economic effects.

Induced Effects--the value of goods and services needed by households that provide the direct and indirect labor.

Source: Rutgers University Center for Urban Policy Research, 1997.

Exhibit I.5
In-State Economic Impacts of New Jersey
Historic Preservation Bond Program ($403 Million)

INDUSTRY	Industry Component		
	Employment (jobs)	Income ($000)	Gross State Product ($000)
Agriculture	**3**	**15**	**57**
Dairy Prod., Poultry, & Eggs	0	0	1
Meat Animals & Misc. Livestock	0	0	0
Cotton	0	0	0
Grains & Misc. Crops	0	0	7
Tobacco	0	1	5
Fruits, Nuts, & Vegetables	0	0	1
Forest Prod.	0	0	3
Greenhouse & Nursery Prod.	3	14	40
Agri. Serv., Forestry, & Fish	**29**	**512**	**761**
Agri. Services (07)	28	484	640
Forestry (08)	0	2	10
Fishing, Hunting, & Trapping (09)	1	26	111
Mining	**14**	**411**	**644**
Metal Mining (10)	0	0	0
Coal Mining (12)	0	0	0
Oil & Gas Extraction (13)	0	0	0
Nonmetal Min.-Ex. Fuels (14)	14	411	644
Construction	**2,791**	**112,628**	**126,911**
General Bldg. Contractors (15)	648	26,715	33,132
Heavy Const. Contractors 16)	248	13,023	13,860
Special Trade Contractors (17)	1,894	72,890	79,919
Manufacturing	**965**	**33,001**	**55,846**
Food & Kindred Prod. (20)	27	895	2,386
Tobacco Manufactures (21)	0	2	7
Textile Mill Prod. (22)	6	142	236
Apparel & Other Prod. (23)	11	230	386
Lumber & Wood Prod. (24)	66	1,599	2,270
Furniture & Fixtures (25)	27	931	1,173
Paper & Allied Prod. (26)	20	548	986
Printing & Publishing (27)	25	733	1,190
Chemicals & Allied Prod. (28)	30	1,192	2,431
Petroleum & Coal Prod. (29)	45	2,229	6,550
Rubber & Misc. Plastics (30)	22	596	985
Leather & Leather Prod. (31)	0	21	33
Stone, Clay, & Glass (32)	217	6,289	10,082
Primary Metal Prod. (33)	49	2,260	3,556
Fabricated Metal Prod. (34)	240	9,387	14,316
Machinery, Except Elec. (35)	68	2,201	3,404
Electric & Elec. Equip. (36)	82	2,623	3,907
Transportation Equipment (37)	7	346	702
Instruments & Rel. Prod. (38)	18	566	889
Misc. Manufacturing Ind's. (39)	6	212	358

Exhibit I.5 (continued)
In-State Economic Impacts of New Jersey
Historic Preservation Bond Program ($403 Million)

INDUSTRY	Industry Component		
	Employment (jobs)	Income ($000)	Gross State Product ($000)
Transport. & Public Utilities	**141**	**4,395**	**11,364**
Railroad Transportation (40)	2	86	169
Local Pass. Transit (41)	29	592	800
Trucking & Warehousing (42)	41	1,006	1,838
Water Transportation (44)	2	136	203
Transportation by Air (45)	6	238	492
Pipe Lines-Ex. Nat. Gas (46)	0	1	9
Transportation Services (47)	6	229	355
Communication (48)	35	1,733	5,978
Elec., Gas, & Sanitary Serv. (49)	21	374	1,520
Wholesale	**139**	**9,387**	**22,297**
Whlsale-Durable Goods (50)	102	5,507	14,996
Whlsale-Nondurable Goods (51)	37	3,880	7,301
Retail Trade	**642**	**13,267**	**20,248**
Bldg. Mat.-Garden Supply (52)	33	887	1,391
General Merch. Stores (53)	91	1,611	3,011
Food Stores (54)	69	1,462	2,243
Auto. Dealers-Serv. Stat. (55)	57	1,871	2,756
Apparel & Access. Stores (56)	36	686	1,437
Furniture & Home Furnish. (57)	12	347	640
Eating & Drinking Places (58)	202	3,545	4,669
Miscellaneous Retail (59)	142	2,856	4,101
Finance, Ins., & Real Estate	**196**	**9,162**	**20,928**
Banking (60)	37	1,775	3,598
Nondep. Credit Institut. (61)	29	1,345	1,470
Security, Comm. Brokers (62)	10	792	862
Insurance Carriers (63)	43	2,657	2,835
Ins. Agents, Brokers (64)	14	379	661
Real Estate (65)	40	1,128	10,315
Holding and Invest. Off. (67)	24	1,086	1,187
Services	**1,141**	**37,740**	**46,536**
Hotels & Other Lodging (70)	131	2,472	3,455
Personal Services (72)	104	1,853	2,647
Business Services (73)	154	1,543	2,217
Auto Repair, Serv., Garages (75)	37	1,104	2,790
Misc. Repair Services (76)	22	461	956
Motion Pictures (78)	11	269	436
Amusement & Recreation (79)	15	476	571
Health Services (80)	51	1,983	2,360
Legal Services (81)	24	1,366	1,816
Educational Services (82)	35	776	873
Social Services (83)	7	213	347
Museums, Botan.-Zoo. Gardens (84)	0	11	13
Membership Organizations (86)	53	1,313	1,527
Engineer. & Manage. Serv. (87)	493	23,765	26,317
Miscellaneous Services (89)	3	136	212
Government	**138**	**1,877**	**1,816**
Total	**6,199**	**222,389**	**307,392**

Note: Detail may not sum to totals due to rounding.

Exhibit I.6
In-State Employment Impacts by Occupation of New Jersey Historic Preservation Bond Program ($403 Million)

OCCUPATION TITLE	Employment (jobs)
Total, All Occupations	**6,199**
Exec., Admin., and Management Occupations	**673**
Managerial and Administrative Occupations	514
Management Support Occupations	162
Professional Specialty Occupations	**350**
Engineers	135
Architects and Surveyors	72
Life Scientists	2
Computer, Math, and Operations Res. Analysts	14
Physical Scientists	10
Social Scientists	2
Social, Recreational, and Relig. Workers	10
Lawyers and Judicial Workers	7
Teachers, Librarians, and Counselors	27
Health Diagnosing Occupations	5
Health Assessment & Treating Occupations	14
Writers, Artists, and Entertainers	39
All Other Professional Workers	12
Technicians and Related Support Occupations	**217**
Health Technicians and Technologists	41
Engineering & Science Technicians & Technologists	150
Technicians, Except Health and Engin. & Science	24
Marketing and Sales Occupations	**420**
Cashiers	72
Counter and Rental Clerks	14
Insurance Sales Workers	7
Real Estate Agents, Brokers, & Appraisers	7
Salespersons, Retail	133
Securities and Financial Service Sales Workers	2
Stock Clerks, Sales Floor	36
Travel Agents	2
All Other Sales and Related Workers	145
Administrative Support Occupations, incl. Clerical	**857**
Adjusters, Investigators, & Collectors	22
Communications Equipment Operators	10
Computer & Peripheral Equipment Operators	10
Financial Records Processing Occupations	176
Information Clerks	43
Mail Clerks and Messengers	7
Postal Clerks and Mail Carriers	19
Mat'l Record., Sched., Dispatch, & Distrib. Occs.	87
Records Processing Occupations, except Financial	24
Secretaries, Stenographers, and Typists	222
Other Clerical and Administrative Support Workers	232

Exhibit I.6 (continued)
In-State Employment Impacts by Occupation of New Jersey Historic Preservation Bond Program ($403 Million)

OCCUPATION TITLE	Employment (jobs)
Service Occupations	**451**
Cleaning & Building Service Occs., except Private	97
Food Preparation and Service Occupations	232
Health Service Occupations	22
Personal Service Occupations	53
Protective Service Occupations	29
All Other Service Workers	22
Agric., Forestry, Fishing, & Related Occupations	**36**
Animal Caretakers, except Farm	0
Farm Occupations	17
Farm Operators and Managers	2
Fishers, Hunters, and Trappers	0
Forestry and Logging Occupations	0
Gardeners & Groundskeepers, except farm	12
Supervisors, Farming, Forestry, & Agricul. Occs.	2
All Other Agric., Forestry, Fishing, & Rel. Workers	2
Precision Production, Craft, & Repair Occupations	**1,906**
Blue-collar Worker Supervisors	181
Construction Trades	1,219
Extractive and Related Workers, Incl. Blasters	10
Mechanics, Installers, and Repairers	311
Production Occupations, Precision	176
Plant and System Occupations	7
Operators, Fabricators, and Laborers	**1,286**
Mach. Setters, Set-up Ops, Operators, & Tenders	220
Hand Workers, incl. Assemblers & Fabricators	145
Transp. & Material Moving Machine & Vehicle Ops.	347
Helpers, Laborers, & Material Movers, Hand	574

Note: Detail may not sum to totals due to rounding.