The Contribution of Office, Industrial and Retail Development and Construction to the U.S. Economy

2008 Edition

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Prepared for and Funded by
the NAIOP Research Foundation

Construction data provided by
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By
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About NAIOP

NAIOP is the nation's leading trade association for developers, owners, investors and other professionals in industrial, office and mixed-use real estate. Founded in 1967, NAIOP comprises more than 17,500 members in 55 North American chapters and provides networking opportunities, educational programs, research on trends and innovations and strong legislative representation. For more information, visit www.naiop.org.

The NAIOP Research Foundation was established in 2000 as a 501(c)(3) organization to support the work of individuals and organizations engaged in real estate development, investment and operations. The Foundation's core purpose is to provide these individuals and organizations with the highest level of research information on how real properties, especially office, industrial and mixed-use properties, impact and benefit communities throughout North America. The initial funding for the Research Foundation was underwritten by NAIOP and its Founding Governors with an endowment fund established to fund future research. For more information, visit www.naioprf.org.

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About this Report

It is important to remember that the data collection measures included in this report should be regarded as guidelines rather than as absolute standards. The information readily available may differ according to the geographic area in question, and results may vary accordingly. Local and regional economic performance is a key factor. Further study and evaluation are recommended before any investment decisions are made.

This project is intended to provide information and insight to industry practitioners and does not constitute advice or recommendations. NAIOP disclaims any liability for action taken as a result of this project and its findings.

Executive Summary

The value of commercial buildings extends well beyond their initial construction value. In order to establish the full measure of this value, the pre-construction, construction and post-construction outlays associated with commercial buildings must be calculated. The direct spending for construction-related services and materials and the operations of completed buildings all generate additional jobs and payroll, which in turn are re-spent within the local and national economies, generating additional economic benefits. The total economic impact of these initial or direct construction-related outlays can be calculated by applying national and state (and local multipliers) that measure their total contribution to the economy (Gross National Product), the new personal earnings generated and the total jobs supported throughout the economy (in addition to the direct construction jobs). A complete accounting of these economic impacts encompasses the full range of pre- and post-construction activities and their direct and indirect (and induced) effects on the national economy as the direct construction-related expenditures are re-spent over and over again within the economy.

Key Terms

Gross Domestic Product (GDP) – the value of goods and services produced within the economy of the respective geographic area (nation, state).

Hard Costs – a category of construction costs that reflects the outlays for the building construction phase. Cost of labor and materials are the two primary categories. Hard costs exclude soft costs, site development and tenant improvements.

Total construction spending in the United States in 2007 totaled $1.16 trillion, accounting directly for approximately 8.5 percent of the nation's economy—its Gross Domestic Product (GDP). Non-residential construction outlays accounted for 34.4 percent of all construction spending increasing its share for a second year since residential building spending began to decline in 2006. As a result of its increased spending, non-residential building construction spending has helped to smooth out the variability in the other categories of construction spending over the current slowing in the business cycle and should continue to do so until the residential building sector recovers.

In 2007, non-government office, industrial, warehouse and retail construction spending totaled $89.2 billion and added 839 million square feet of building space to the existing inventory of 31.6 billion square feet existing in 2006. **The combined direct and indirect impacts of these outlays added $283.7 billion to the national economy (GDP) in 2007 as the full impact of the direct construction spending (payroll and purchases) circulated through the economy. This construction spending supported 2.5 million jobs (full-time, year-round equivalent) across all sectors of the economy with personal earnings of $85.5 billion.**

Hard costs accounted for 51 percent of the construction budget for the office, industrial, warehouse and retail building space in 2007, with the remaining 49 percent including soft costs, site development costs and outlays for tenant improvements. This construction-related spending totaled an estimated $85.5 billion and contributed $265 billion to the nation's GDP. This direct construction-related spending supported a total of 2.4 million jobs and generated $84.7 billion in new personal earnings.

Note: This executive summary has been prepared solely to provide a general overview. It should not be relied upon for any purpose except that for which it was prepared. Please rely on the full report for detailed information about findings, definitions and discussion points.

Economic Benefits of Office, Industrial, Warehouse and Retail Construction Spending in 2007
($s in billions, jobs in millions)

Sources	Direct Outlays	Total Output	Personal Earnings	Jobs Supported
Construction	**$174.7**	**$548.7**	**$170.2**	**4.9**
Hard Costs	89.2	283.7	85.5	2.5
Other*	85.5	265.0	84.7	2.4

*Other = Soft costs, site improvements, tenant improvements

Key Points

- Non-government office, industrial, warehouse and retail construction spending totaled $274.7 billion, adding 839.0 million square feet of building space to the existing commercial inventory
- Combined direct and indirect impacts of construction spending added $548.7 billion to the national economy in 2007 and supported 2.5 million full-time, year-round equivalent jobs with personal earnings of $85.5 billion
- Operating outlays associated with the office, industrial, warehouse and retail space built in 2007 alone are estimated to total $2.4 billion annually
- The 839.0 million square feet of new space built in 2007 provided space to house 2.0 million workers

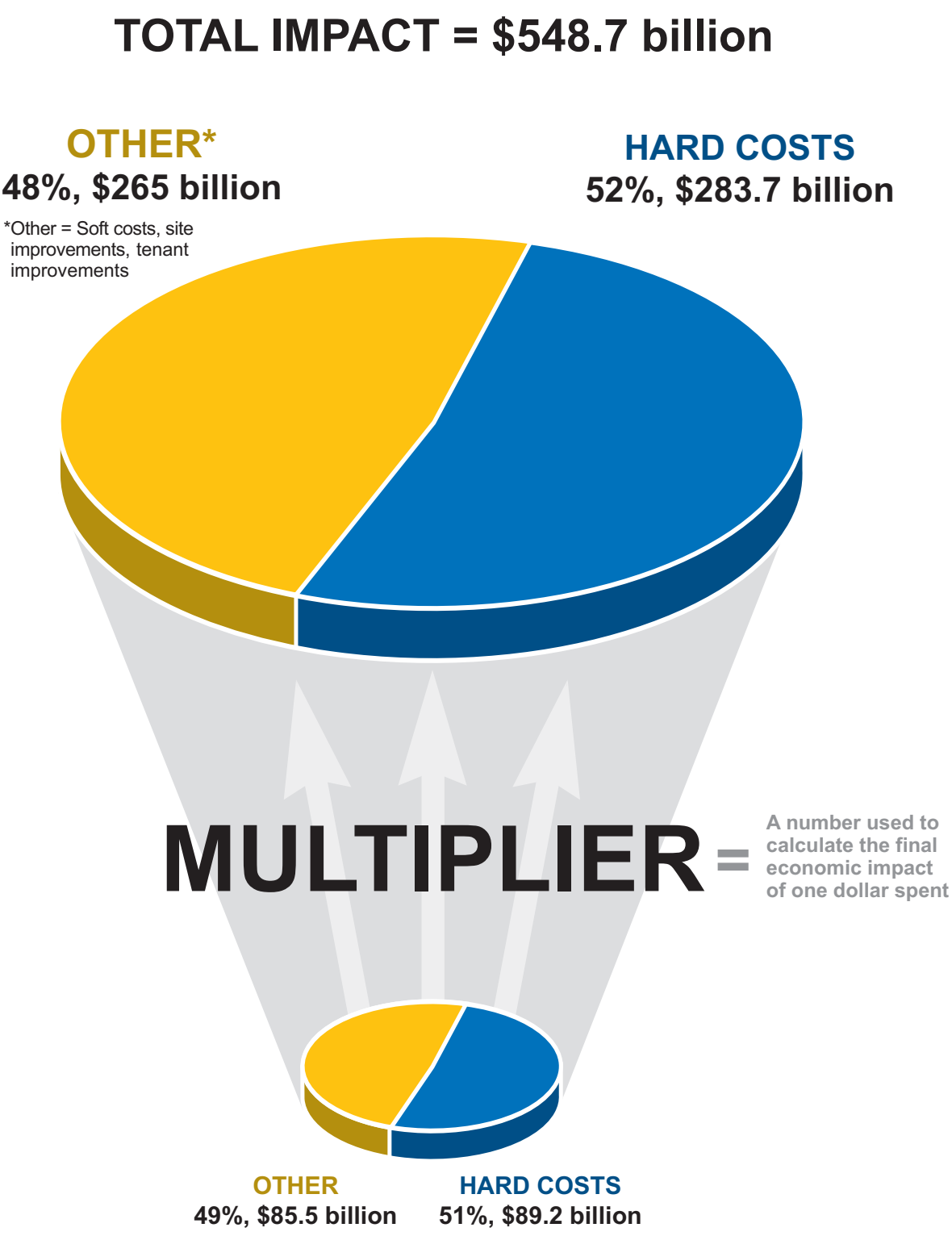
While the construction impacts of building 851.5 million square feet of new building space represents a significant contribution to GDP and job and income growth nationwide, these new buildings continue to provide economic benefits to their host economies after their construction is complete. These economic impacts include outlays required to maintain and operate these buildings and the value of their productive output. **The operating outlays associated with the office, warehouse and retail space built in 2007 are estimated to total $2.4 billion annually. This direct spending of building operations would add $5.1 billion to GDP, support 56,887 new jobs and generate $1.6 billion in new personal earnings. These operating outlays are annual and recur yearly over the life span of the building.**

Similarly, the potential productive value of these new building spaces represent a significant annual contribution to the local, state and national economies. The actual total output value of this new space is the sum of the value of the work done in these buildings. A partial measure of this total value is represented by the jobs that could be housed in this space and the earnings that these jobs may generate. **Using standard jobs-per-square feet estimates, this new space could house 2 million jobs with an annual payroll of $86.2 billion.**

The magnitude of economic impacts associated with the building industry has been shown to be a large and a significance source of new jobs and income. Additionally, this new building space—office, industrial, warehouse and retail—provides the essential capacity required for the economy to grow each year. The 839 million square feet of new space added to the productive capacity of the national economy in 2007 provided space to house 2 million workers. These jobs, the payroll they support, the value of the work they perform and the operations of this building space are essential to the vitality of the national economy.

Figure 1

How Commercial Building Construction Contributes to the U.S. Economy



Introduction

The value of commercial building construction is much more than the sum of pre-construction (soft costs) and construction outlays (site development, building construction and tenant improvements). Additionally, commercial buildings generate continuing post-construction value within the local and national economies as a result of the spending associated with their operations and the value of output generated by the workers and businesses they house. The full contribution of office, industrial, warehouse and retail development (construction and operations) to the nation's GDP consists of this annual direct spending and the cumulative economic benefits resulting from the re-spending of these outlays that supports jobs across all sectors of the economy and generates new personal earnings to the benefit of the local and national economy.

While the economic contributions accruing from the construction of new buildings is widely understood and valued, the pre-construction and post-construction impacts are often overlooked and undervalued. The job growth and income generated and supported by annual building operations represent a continuing flow of expenditures into the local economy that extend over the life of the structures. Additionally, these new buildings represent an expansion of the productive capacity of their host economies. The jobs and output associated with the newly built capacity contribute significant annual benefits to the local and national economies. As these post-construction benefits are cumulative, their economic impacts become increasingly significant to the economy's growth expanding and extending the initial economic benefits of the larger up-front construction outlays.

Understanding the range and magnitude of the industry's contributions to the local and national economies, and their patterns of performance over the business cycle, is important for local, state and national government officials, investors, developers and builders so that they can better manage the development process to the benefit of the economy's performance. The analyses presented in this report define the economic impacts of this industry highlighting the economic impacts flowing from office, industrial, warehouse and retail construction and operations.

Commercial Construction Counterbalances Residential

According to the U.S. Census Bureau, construction spending in the United States totaled $1.16 trillion in 2007. This construction spending consisted of residential and non-residential buildings and non-building construction outlays. These are shown in Table 1, U.S. Total Construction Spending, 2007.

Residential construction spending declined in 2007 (and in 2006) after growing in each year since 1995. The contraction of the residential building sector in 2007 more than offset the increased spending for commercial and non-building construction resulting in a 2.3 percent decline in construction spending overall. In contrast to the contraction being experienced in the residential sector, spending for non-residential buildings increased 17.2 percent and non-building construction grew by 13 percent.

Non-residential building construction accounted for $400.6 billion or 34.4 percent of all construction spending in 2007. In comparison, in 2005, non-residential spending ($317.2 billion) accounted for 27.7 percent of total construction spending. This substantial shift in construction spending across major building classes illustrates the cyclical differences that characterize the different market segments in the construction industry.

As residential building construction spending declined, spending for non-residential building construction grew. These offsetting trends have been reinforced by gains in non-building spending.

Less significant shifts in construction spending are evident within non-residential building construction as presented in Table 2. Non-residential construction includes nine major building types. Among these, office, manufacturing (industrial), warehouse (flex) and retail accounted for approximately 47 percent of total new construction spending.

The patterns of total construction spending by major category over the business cycle reveal important differences. These patterns are shown in Figure 3 for the 1995-2007 period. The cyclical patterns of construction spending for residential and non-residential building and non-building (largely public) construction spending provide a sequence in which the increases and decreases in one type of construction have been compensated for by corresponding changes in the other types of construction spending so that construction outlays continue to underpin the national economy throughout the business cycle. This pattern is particularly evident since 2005. **As residential building construction spending declined, spending for non-residential building construction grew. These offsetting trends have been reinforced by gains in non-building spending. In 2007, the value of these two growing segments of the construction industry totaled $579.78 billion, up $45.8 billion or 8.6 percent from their value in 2006, while the value of residential construction in 2007 was down by $20 billion or 3.2 percent from 2006.**

Table 1

U.S. Total Construction Spending, 2007
(in billions of 2007 dollars)

Type	Value	Percent Change*
Residential	$360.7	-23.7%
Residential Improvements**	174.3	-0.3%
Nonresidential Building	400.6	17.2%
Nonbuilding***	229.2	13.0%
Totals	1,164.8	-2.3%

Sources: U.S. Department of Commerce, Census Bureau
*change in value between 2006 and 2007
**includes remodeling, renovation, and replacement work
***infrastructure such as water and sewer, highways, power, transport

Table 2

U.S. Nonresidential Construction Spending, 2007
(in billions of 2007 dollars)

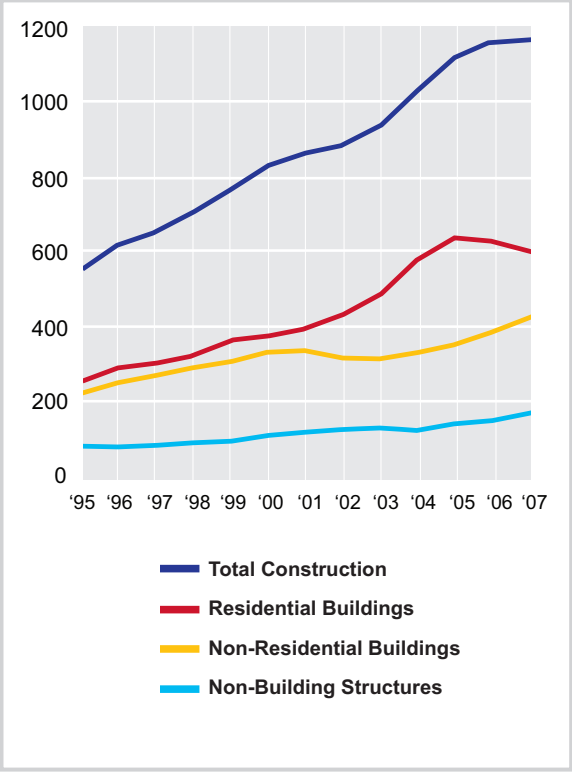
Type	Value	Percent Change*
Lodging	$30.1	66.8%
Office	65.7	20.3%
Commercial (retail)	85.7	13.5%
Health Care	45.2	14.4%
Education	98.5	14.6%
Religious	7.6	-1.2%
Public Safety	10.1	29.6%
Amusement/Recreation	20.6	12.7%
Manufacturing**	37.0	7.4%
Totals***	400.6	17.2%

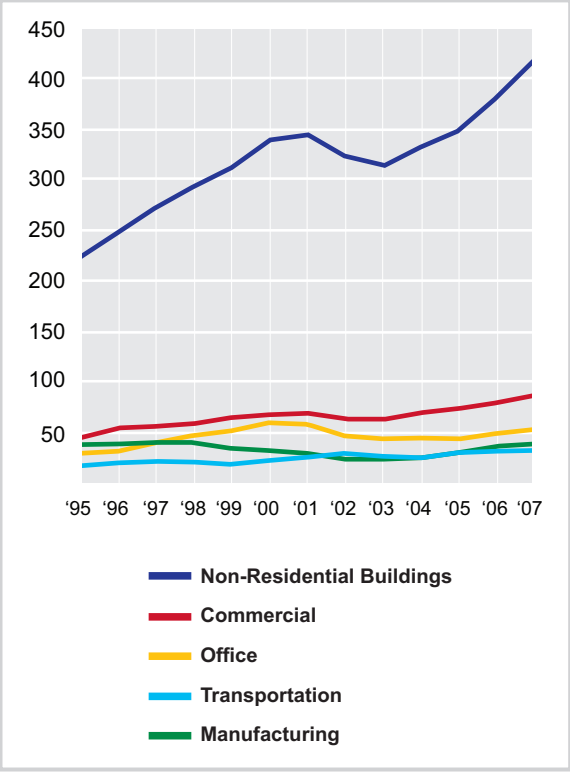
Sources: U.S. Department of Commerce, Census Bureau
*change in value between 2006 and 2007
**includes warehouse/flex space
*** totals include some miscellaneous state and local government buildings

The 2000-2007 period illustrates these performance differences among major building categories. During the recession of 2001 and continuing into 2002, residential construction slowed and then accelerated in each of the next three years. After peaking in 2005, residential construction spending declined in 2006 by 1.4 percent and 3.2 percent in 2007. Non-residential construction outlays remained strong in 2001, even as the economy slowed, but declined in 2002 and 2003. This lag in construction outlays permitted the commercial building markets to equalize (they are demand-driven) during this period. Declining vacancy rates in 2003 and 2004 supported expanded investment in office, warehouse, retail and other non-residential building categories and total outlays increased, growing 5.4 percent in 2004, 5.7 percent in 2005, 10 percent in 2006 and 9 percent in 2007.

Figure 3

Construction Spending in the United States, 1995-2007
(in billions of 2007 dollars)





Sources: The 2007 U.S. Markets Construction Overview, FMI

While GDP growth slowed in 2006, and continues to be constrained in response to declining residential construction outlays, compensating increases in outlays for non-residential and non-building structures cushioned the impacts of this slowdown in 2007 and will likely help stabilize the economy's performance in 2008.

Within the non-residential construction category, office construction was the most volatile, declining in 2001, 2002 and 2003 before increasing in 2004, while commercial (retail) declined only slightly in 2002 and 2003 before resuming its upward trend in 2004 and continuing on through 2007. Construction spending for transportation (warehousing) declined only in 2003, while outlays for manufacturing (industrial) construction fell sharply in 1999 (-19%) and declined for five consecutive years losing a total of 47 percent. In 2004, construction spending for manufacturing facilities was up 10.2 percent, and in 2005 construction spending grew a strong 21.5 percent. This upward trend continued in 2006 and 2007, with gains of 16 percent and 14 percent respectively.

This pattern of offsetting construction outlays with growth in non-residential construction spending compensating for declining residential construction spending has become most evident since 2005. **While GDP growth slowed in 2006, and continues to be constrained in response to declining residential construction outlays, compensating increases in outlays for non-residential and non-building structures cushioned the impacts of this slowdown in 2007 and will likely help stabilize the economy's performance in 2008.**

...the total impact of construction spending — direct, indirect and induced — on the U.S. economy in 2007 accounted for 28.8 percent of all economic activity that year.

Economic Impacts of Construction Spending

Total direct construction spending in the United States in 2007 was $1.16 trillion and accounted directly for 8.4 percent of the nation's GDP of $13.8 trillion. The direct construction spending also generates new personal earnings and supports jobs across all sectors of the economy.

In 2007, the $1.16 trillion in direct construction spending:
- supported 33.2 million jobs throughout the U.S. economy; and
- generated personal earnings totaling $1.225 trillion.

With an output multiplier of 3.423, each dollar of this construction spending generated an additional $2.42 of value to the economy reflecting the cumulative effects of the initial construction outlay as it was re-spent throughout the economy. Applying this multiplier to the total value of direct construction spending in 2007 increases the value of its overall contribution to GDP to $3.97 trillion or 28.8 percent; that is, **the total impact of construction spending—direct, indirect and induced—on the U.S. economy in 2007 accounted for 28.8 percent of all economic activity that year.**

In 2007, non-government office, industrial, warehouse and retail building construction totaled 839 million gross square feet of new building space and accounted for outlays totaling $89.2 billion (see Table 3). The economic impact of this construction activity can be calculated by applying the national construction multipliers for its contribution to GDP (3.423), personal earnings (1.0521) and employment (28.5). State multipliers for the construction industry are included in Appendix H. *It should be noted that individual state construction multipliers are smaller than the U.S. multipliers as they reflect a smaller portion of construction outlays that are retained within the respective state economy and exclude the construction-related spending flows that leak out of the state economy to other states.* The smaller states and state economies that are less well developed tend to retain smaller portions of the benefits from construction spending as these circulate through the national economy.

Table 3

Office and Industrial Construction in the United States, 2007
(square feel in millions, values in billions of 2007 dollars)

Building Type	Square Feet	Construction Value
Office	212.4	$31.2
Industrial	78.6	16.5
Warehouse and Transportation	239.4	12.6
Retail and Entertainment	308.4	28.9
Totals	839.0	89.2

Sources: McGraw-Hill Construction Analytics; GMU Center for Regional Analysis

See Appendix D.

The $89.2 billion in construction spending (hard costs) for office, industrial, warehouse and retail buildings in 2007 added $194.5 billion in indirect (and induced) benefits to the national economy for a total contribution of $283.7 billion to GDP (see Table 4). The complementary pre-construction and non-building construction outlays that are linked to these hard costs (soft costs, site development and tenant improvements) totaled $85.5 billion or 48.9 percent of total building costs. Adding these direct outlays and their indirect and induced benefits to those generated by the outlays for hard costs increases their total contribution to the nation's GDP to $548.7 billion in 2007.

The total direct spending of $174.7 billion that underlies this contribution to total output also:

- supported 24.9 million jobs (full-time equivalent, year-round) during 2007;
- generated new personal earnings totaling $170.2 billion

Table 4

Summary of Office, Industrial, Warehouse and Retail Construction and Annual Operations Impacts on the U.S. Economy, 2007
(in billions of 2007 dollars)

Sources	Direct Outlays	Total Output (1)	Personal Earnings (2)	Jobs Supported (3)
Construction	$174.73	$548.74	$170.17	$4,898,946
Soft Costs	27.91	81.77	29.45	773,234
Site Dev.*	30.03	95.52	28.79	843,961
Hard Costs	89.20	283.71	85.50	2,506,627
Tenant Imp.**	27.58	87.73	26.44	775,124
Operations	2.43	5.06	1.59	56,887

Sources: McGraw-Hill Construction Analytics; GMU Center for Regional Analysis
Notes: (1) the total value of goods and services generated directly and indirectly as a result of the initial construction outlays within the United States; (2) the additional earnings generated within the United States from direct outlays during the construction phase; (3) the additional new jobs supported nationwide by the spending and re-spending of direct outlays associated with the outlays for new construction.
*Site development includes grading, infrastructure, parking and landscaping.
**Tenant improvements exclude furniture and equipment.

See Appendices F and G.

Calculating Economic Impact

Existing National Inventory of Space
(in billions of square feet)

Office	7.89
Industrial	16.47
Retail	8.03
Total	**32.39**

The full measure of the economic impact of office, industrial, warehouse and retail construction must include all the outlays associated with the development process—soft costs, site development costs, hard costs and costs associated with tenant improvements. In addition to the wide range of onsite construction services, these outlays also support a wide range of professional and business services, including:

- Architecture and engineering services;
- Legal services;
- Marketing and management services;
- Grading, paving and landscaping services;
- Site engineering services;
- Interior design and construction services.

This combination of outlays for pre-construction, construction and post-construction activities required to deliver buildings ready for occupancy represent this industry's total direct contribution to the national and local economies. It provides the appropriate basis for calculating the economic impacts of this spending as represented by its contribution to Gross Domestic Product (GDP), personal earnings and employment.

Calculating the Economic Impact of Soft Costs, Site Development Costs and Outlays for Tenant Improvements

To estimate these non-hard cost expenditures, NAIOP surveyed office, industrial warehouse and retail developers in April 2007. This survey duplicated a similar survey conducted in November 2006. The survey methodology and results are reported in Appendix I. The findings from these two surveys were combined for use in calculating the distribution of these complementary costs by building type relative to their respective outlays for hard costs. In total, the soft costs, site development costs and outlays for tenant improvements in 2007 totaled an estimated $85.5 billion and accounted for 48.9 percent of the $174.7 billion in total construction spending inclusive of hard costs.

This additional spending that is linked directly to the hard cost outlays is presented in Table 5. The variations in the distribution of these costs by building type reflect differences in building design and function.

Table 5

Estimated Outlays by Building Category:
Soft Costs. Site Development and Tenant Improvements, 2007
(in billions of 2007 dollars)

Sources	Soft Costs	Site Development	Tenant Improvements	Totals
Office	$10.88	$9.44	$11.39	$31.72
Industrial	4.02	5.78	4.18	13.98
Warehouse	3.29	4.11	3.23	10.63
Retail	9.72	10.71	8.78	29.21
Total	27.91	30.03	27.58	85.53

Sources: NAIOP; GMU Center for Regional Analysis

See Appendices B, C, and E.

The direct spending associated with soft costs (financing fees, insurance and taxes are not included as these have little immediate economic impact), site development costs and outlays for tenant improvements generate economic impacts beyond the initial value of these outlays. These economic impacts are calculated by applying national multipliers to determine their contributions to GDP, personal earnings and employment. Composite multipliers were developed to reflect the mix of services and activities associated with each category of outlay:

Soft Costs:

- For each $1 of soft cost expenditure, a total contribution to GDP of $2.93 is generated;
- For each $1 million of soft cost outlays personal earnings increase by $1,055,000 and 27.7 jobs are supported.

Site Development:

- For each $1 of site development and tenant improvement spending, a total contribution to GDP of $3.18 is generated.
- For each $1 million of site development and tenant improvement outlays, personal earnings increase by $958,514 and 28.1 jobs are supported.

Nationwide, the $27.9 billion in direct soft cost outlays in 2007

- added $81.8 billion to the nation's economy (GDP);
- generated $29.4 billion in new personal earnings for U.S. residents; and
- supported 773,233 jobs.

Site development outlays of $30 billion in 2007

- added $95.5 billion to the U.S. economy (GDP);
- generated $28.8 billion in new personal earnings for U.S. residents; and,
- supported 843,961 jobs.

Tenant improvement outlays of $27.6 billion in 2007

- Added $87.7 billion to the U. S. economy (GDP);
- Generated $26.4 billion in new personal earnings for U.S. residents; and
- Supported 775,124 jobs.

These economic impacts for office, industrial, warehouse and retail construction in 2007 are shown in Table 6.

Table 6

The Impacts of Construction Outlays for Soft Costs, Site Development And Tenant Improvements on the U.S. Economy, 2007
(in billions of 2007 dollars)

Sources	Direct Outlays	Total Output (1)	Personal Earnings (2)	Jobs Supported (3)
Office				
Soft Costs	10.88	31.87	11.48	301,365
Site Dev.*	9.44	30.03	9.05	265,356
Tenant Imp.**	11.39	36.24	10.92	320,175
Totals	**31.72**	**98.14**	**31.45**	**886,896**
Industrial				
Soft Costs	4.02	11.78	4.24	111,416
Site Dev.	5.78	18.37	5.54	162,295
Tenant Imp.	4.18	13.30	4.01	117,481
Totals	**13.98**	**43.45**	**13.79**	**391,192**
Warehouse				
Soft Costs	3.29	9.64	3.47	91.180
Site Dev.	4.11	13.07	3.94	115,461
Tenant Imp.	3.23	10.27	3.10	90,766
Totals	**10.63**	**32.98**	**10.51**	**297,408**
Retail				
Soft Costs	9.72	28.48	10.25	269,272
Site Dev.	10.71	34.05	10.26	300,849
Tenant Imp.	8.78	27.92	8.42	246,702
Totals	**29.21**	**90.45**	**28.93**	**816,823**
Totals				
Soft Costs	27.91	81.77	29.45	773,234
Site Dev.	30.03	95.52	28.79	843,961
Tenant Imp.	27.58	87.73	26.44	775,124
Totals	**85.53**	**265.03**	**84.67**	**2,392,318**

Sources: NAIOP; GMU Center for Regional Analysis
Notes: (1) the total value of goods and services generated directly and indirectly as a result of the initial construction outlays within the United States; (2) the additional earnings generated within the United States from direct outlays during the construction phase; (3) the additional new jobs supported nationwide by the spending and re-spending of direct outlays associated with the outlays for new construction.
*Site development includes grading, infrastructure, parking and landscaping.
**Tenant improvements exclude furniture and equipment.

See Appendices B, C and E.

Calculating the Economic Impact of Hard Costs

The U.S. Census reported that construction spending in 2007 totaled $1.16 trillion, with non-residential building construction outlays totaling $400.6 billion. Construction spending (hard costs only) reported by McGraw-Hill Construction Analytics for office, industrial, warehouse and retail structures totaled $89.2 billion and represented the addition of 839 million square feet of new building space in 2007. By applying the national construction multiplier for office, industrial and commercial building construction of 3.1805, the full economic impact of this spending (contribution to GDP) can be calculated to have been $283.7 billion (see Table 7). These direct and indirect and induced benefits supported 2.5 million jobs across all sectors of the economy and generated $85.5 billion in new personal earnings.

Table 7

The Impacts of Direct Construction Outlays on the U.S. Economy, 2007
(in billions of 2007 dollars)

Sources	Direct Outlays	Total Output (1)	Personal Earnings (2)	Jobs Supported (3)
Office	$31.2	$99.3	$29.9	877,693
Industrial	16.5	52.5	15.8	463,729
Warehouse	12.6	40.1	12.1	354,476
Retail	28.9	91.8	27.7	810,729
Totals	89.2	283.7	85.5	2,506,627

Sources: McGraw-Hill Construction Analytics; GMU Center for Regional Analysis
Notes: (1) the total value of goods and services generated directly and indirectly as a result of the initial construction outlays within the United States; (2) the additional earnings generated within the United States from direct outlays during the construction phase; (3) the additional new jobs supported nationwide by the spending and re-spending of direct outlays associated with the outlays for new construction.

See Appendix D.

Construction Value by State

The 10 states with the largest construction values accounted for almost 55 percent of the construction outlays in the United States, while the top 20 states accounted for almost 78 percent of these outlays. The most populous states and those with the largest and fastest growing economies tend to rank highest by value of construction outlay although there are variations depending on building type. This is especially the case with industrial building outlays that was lead by South Carolina with Iowa ranking second—neither were ranked in the top 10 in 2005.

Still, several of the traditional industrial states continue to rank high for industrial construction outlays while states that have comparative transport advantages often rank higher for warehouse construction outlays than their population sizes alone would support. These states are identified and shown in rank order by value of construction in Table 6 and Figure 2. The values for all states are shown in Appendix Tables 1-7.

Table 8

Top 10 States by Construction Value, 2007

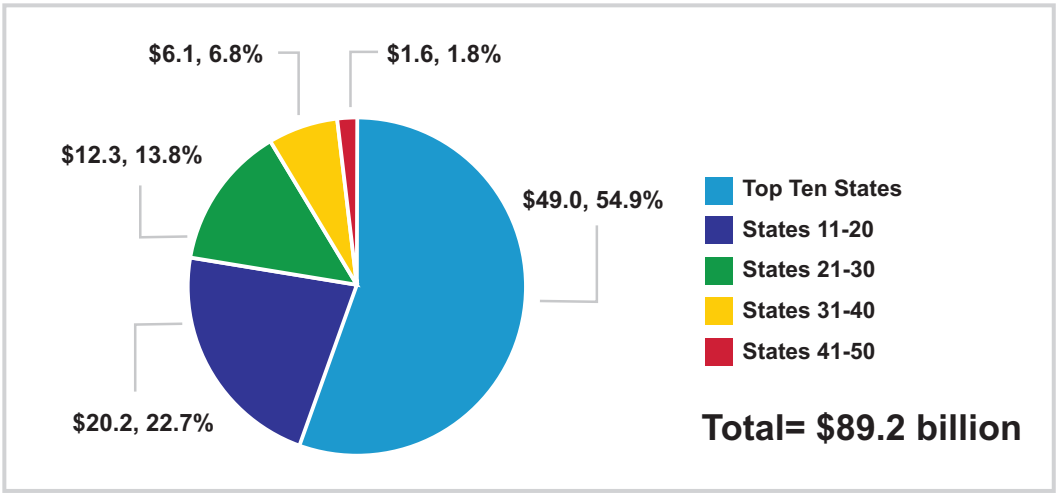
Ranking	Office	Industrial	Warehouse	Retail	All Categories
1	Texas	South Carolina	Texas	Florida	Texas
2	California	Iowa	Florida	California	Florida
3	Florida	Indiana	California	Texas	California
4	New York	Louisiana	Illinois	New York	New York
5	North Carolina	Georgia	Georgia	Illinois	South Carolina
6	Georgia	New York	Arizona	Georgia	Georgia
7	Illinois	Ohio	Pennsylvania	Arizona	Illinois
8	Arizona	Utah	New Jersey	Ohio	Arizona
9	Washington	Texas	Indiana	Nevada	North Carolina
10	Tennessee	Pennsylvania	Ohio	North Carolina	Indiana

Sources: McGraw-Hill Construction Analytics; GMU Center for Regional Analysis

See Appendices A and D.

Figure 2

Top 10 States by Construction Value in Four Categories, 2007
(hard costs only in billions of 2007 dollars)



Calculating the Economic Impact of Building Operations

The existing stock of built space represents a large and continuing source of economic activities that support job and income growth across the full breadth of local and state economies. While the construction outlays associated with new building in 2007 represent a significant contribution to the national economy, once the construction is complete, these benefits end. However, the outlays that support the new buildings' operations add on-going annual sources of economic benefits that accumulate over the life span of the buildings. As a result, these costs extend and magnify the economic benefits that the construction of office, industrial, warehouse and retail buildings has on their host economies.

Building operations includes outlays for regular maintenance and repair, custodial (cleaning) services, utilities and management. Management outlays represent a wide range of services including building supervision, marketing, leasing, security, building engineering services, finance and accounting. Each of these services has a multiplier effect on the economy and supports on- and off-site jobs within the local, regional and national economies and generates additional personal earnings to the benefit of local residents. These multipliers vary by type of service and state (see Appendix Tables H-3 to H-7). A sampling of national multipliers is presented in Table 9.

Table 9

Total Output, Income and Employment Multipliers for Selected Categories of Buildings Operations

Categories	Total Output (1)	Personal Earnings (2)	Employment (3)
Building Services	2.96	0.93	37.74
Management	2.97	1.08	29.69
Utilities	2.53	0.65	15.37

Sources: U.S. Department of Commerce, Bureau of Economic Analysis
Notes: (1) the total value of goods and services generated directly and indirectly as a result of the initial construction outlays within the United States; (2) the additional earnings generated within the United States from direct outlays during the construction phase; (3) the additional new jobs supported nationwide by the spending and re-spending of direct outlays associated with the outlays for new construction.

See Appendix H.

The 839 million square of new office, industrial, warehouse and retail building space built in 2007 will require $2.4 billion in annual operating outlay to maintain and service.

Each year these new operating outlays will

- **contribute $5.1 billion to the national economy (GDP);**
- **support 56,887 jobs; and**
- **generate total personal earnings of $1.588 billion.**

These economic impacts are presented by building type in Table 10. The cumulative economic impact of these outlays for building operations is illustrated by adding these new operating outlays for building added to the stock in 2007 to the operating outlays associated with the total commercial building stock existing in 2006 (31.6 billion square feet would generate operating expenditures estimated to total $73.1 billion in 2007).

Table 10

Annual Impacts of Post-Construction Outlays on the U.S. Economy, 2007
(in millions of 2007 dollars)

Sources	Direct Outlays	Total Output (1)	Personal Earnings (2)	Jobs Supported (3)
Office	$1,435.1	$2,980.4	$931.7	33,303
Industrial	70.2	143.2	44.9	1,706
Warehouse	156.9	332.2	103.2	3,722
Retail	771.1	1,601.2	507.9	18,156
Totals	2,433.3	5,057.0	1,587.8	56,887

Sources: BOMA; McGraw-Hill Construction Analytics; GMU Center for Regional Analysis
Notes: (1) the total value of goods and services generated directly and indirectly as a result of building operating outlays within the United States; (2) the additional earnings generated within the United States from outlays for building operations; (3) the additional new jobs supported nationwide by the spending and re-spending of outlays associated with building operations. Operations impacts include maintenance and repair, cleaning, utilties, roads and grounds, security and administrative expenses.

See Appendix G.

These new buildings house workers and business activities that are generated by the expansion of the national economy. While the value of this added productive capacity depends on the usage of each building, one measure of the value of this work is the jobs and payroll they support. Using a standard jobs-per-square-foot estimate for each category of building, the total number of employees that could be housed within the buildings built in 2007 can be calculated. The total payroll value of

The total post-construction value of this new office, industrial, warehouse and retail space to local, state and national economies includes these buildings' daily operations and the productive capacity they add to the existing building stock.

these new workers also can be calculated by multiplying this employment estimate by the U.S. average wage earnings per worker respectively for jobs associated with each category of building.

These calculations are presented in Table 11 and show that the 839,000 square of new office, industrial, warehouse and retail building space constructed in 2007 will have the capacity to house 2 million new workers with a total estimated payroll of $86.2 billion.

The actual value of this work and its contribution to GDP is a multiple of payroll as output value, and must generate sufficient income to cover not only the costs of payroll but also the outlays associated with business operations, payments to vendors, profit and taxes. **The total post-construction value of this new office, industrial, warehouse and retail space to local, state and national economies includes these buildings' daily operations and the productive capacity they add to the existing building stock. These contributions to the economy include jobs, income and the economic activities supported by the spending and re-spending of this new income as it circulates throughout the local and national the economies.**

Table 11

Employment and Income Impacts of the Office, Industrial, Warehouse and Retail Building Space Constructed in 2007
(square feet in millions; jobs in thousands; payroll in billions of dollars)

Building Category	Square Feet	Sq. Ft. per Job	New Jobs	Average Earnings	Total Earnings
Office	212.4	215	988.09	$40,840	$40.35
Industrial	78.6	900	87.39	74,660	6.52
Warehouse	239.4	900	266.03	70,735	18.82
Retail	308.4	450	685.43	29,890	20.49
Totals	839.0	414	2,026.94	42,520	86.18

Sources: GMU Center for Regional Analysis; NPA Data Services, Inc.

Appendix A: Construction Outlays by State (Hard Costs Only)

Appendix Table A-1
Value of Office Construction in Rank Order, 2007
(hard costs only)

	STATE	Direct Spending (billions)
1	Texas	3.113
2	California	3.004
3	Florida	2.796
4	New York	2.337
5	North Carolina	1.596
6	Georgia	1.418
7	Illinois	1.202
8	Arizona	1.146
9	Washington	1.053
10	Tennessee	0.945
	TOP 10 STATES	**18.611**
11	Virginia	0.932
12	Ohio	0.850
13	District of Columbia	0.766
14	Colorado	0.763
15	Maryland	0.668
16	Massachusetts	0.595
17	Indiana	0.580
18	Missouri	0.494
19	Louisiana	0.487
20	Oregon	0.434
	NEXT 10 STATES (11-20)	**6.569**
21	New Jersey	0.406
22	Pennsylvania	0.403
23	South Carolina	0.400
24	Minnesota	0.385
25	Alabama	0.373
26	Kansas	0.359
27	Wisconsin	0.323
28	Utah	0.320
29	Nevada	0.313
30	Michigan	0.313
	NEXT 10 STATES (21-31)	**3.595**

	STATE	Direct Spending (billions)
31	Iowa	0.309
32	Connecticut	0.264
33	Kentucky	0.228
34	Mississippi	0.215
35	Nebraska	0.208
36	Oklahoma	0.171
37	New Mexico	0.157
38	Arkansas	0.134
39	Rhode Island	0.127
40	Idaho	0.125
	NEXT 10 STATES (31-40)	**1.938**
41	Alaska	0.092
42	New Hampshire	0.076
43	South Dakota	0.075
44	West Virginia	0.065
45	Hawaii	0.047
46	Maine	0.045
47	Delaware	0.040
48	Montana	0.037
49	North Dakota	0.017
50	Vermont	0.015
51	Wyoming	0.013
	NEXT 11 STATES (41-51)	**0.522**
	TOTAL	**31.235**

Source: CRA with data from McGraw-Hill Construction Analytics (2007)

Appendix Table A-2
Value of Industrial Construction in Rank Order, 2007
(hard costs only)

	STATE	Direct Spending (billions)
1	South Carolina	3.744
2	Iowa	1.361
3	Indiana	1.162
4	Louisiana	1.157
5	Georgia	0.667
6	New York	0.633
7	Ohio	0.612
8	Utah	0.543
9	Texas	0.510
10	Pennsylvania	0.476
	TOP 10 STATES	**10.866**
11	California	0.413
12	Michigan	0.412
13	Wisconsin	0.373
14	Kansas	0.371
15	Florida	0.338
16	Illinois	0.320
17	Massachusetts	0.317
18	Mississippi	0.287
19	Alabama	0.278
20	Arizona	0.257
	NEXT 10 STATES (11-20)	**3.366**
21	Arkansas	0.251
22	Minnesota	0.222
23	North Carolina	0.214
24	Washington	0.198
25	Oklahoma	0.173
26	New Jersey	0.144
27	Connecticut	0.141
28	Oregon	0.132
29	Virginia	0.124
30	Tennessee	0.087
	NEXT 10 STATES (21-31)	**1.686**

	STATE	Direct Spending (billions)
31	Maine	0.082
32	Missouri	0.079
33	Maryland	0.069
34	Colorado	0.059
35	New Hampshire	0.058
36	Kentucky	0.055
37	Nebraska	0.050
38	South Dakota	0.042
39	Idaho	0.028
40	Vermont	0.019
	NEXT 10 STATES (31-40)	**0.541**
41	West Virginia	0.012
42	New Mexico	0.011
43	Alaska	0.009
44	Nevada	0.006
45	Montana	0.005
46	Wyoming	0.000
47	Delaware	0.000
48	North Dakota	0.000
49	District of Columbia	0.000
50	Hawaii	0.000
51	Rhode Island	0.000
	NEXT 11 STATES (41-51)	**0.044**
	TOTAL	**16.503**

Source: CRA with data from McGraw-Hill Construction Analytics (2007)

Appendix Table A-3

Value of Warehouse and Transportation Terminal Construction in Rank Order, 2007

(hard costs only)

	STATE	Direct Spending (billions)
1	Texas	1.528
2	Florida	1.366
3	California	1.087
4	Illinois	0.986
5	Georgia	0.790
6	Arizona	0.734
7	Pennsylvania	0.660
8	New Jersey	0.530
9	Indiana	0.463
10	Ohio	0.365
	TOP 10 STATES	**8.508**
11	North Carolina	0.348
12	Colorado	0.266
13	Tennessee	0.246
14	Washington	0.236
15	New York	0.208
16	Nevada	0.205
17	Maryland	0.201
18	Virginia	0.195
19	Kentucky	0.190
20	Minnesota	0.189
	NEXT 10 STATES (11-20)	**2.285**
21	Oregon	0.144
22	Missouri	0.142
23	South Carolina	0.136
24	Wisconsin	0.132
25	Utah	0.128
26	Connecticut	0.125
27	Louisiana	0.112
28	Iowa	0.109
29	Kansas	0.106
30	Michigan	0.104
	NEXT 10 STATES (21-31)	**1.238**

	STATE	Direct Spending (billions)
31	Alabama	0.088
32	Mississippi	0.088
33	Massachusetts	0.082
34	Idaho	0.045
35	Hawaii	0.041
36	Oklahoma	0.040
37	New Mexico	0.034
38	Nebraska	0.031
39	Alaska	0.021
40	Arkansas	0.018
	NEXT 10 STATES (31-40)	**0.490**
41	Maine	0.017
42	New Hampshire	0.015
43	District of Columbia	0.015
44	South Dakota	0.010
45	Vermont	0.009
46	Montana	0.007
47	West Virginia	0.007
48	Delaware	0.005
49	North Dakota	0.003
50	Rhode Island	0.003
51	Wyoming	0.002
	NEXT 11 STATES (41-51)	**0.094**
	TOTAL	**12.615**

Source: CRA with data from McGraw-Hill Construction Analytics (2007)

Appendix Table A-4
Value of Retail and Entertainment Construction in Rank Order, 2007
(hard costs only)

	STATE	Direct Spending (billions)
1	Florida	2.900
2	California	2.645
3	Texas	2.581
4	New York	1.679
5	Illinois	1.360
6	Georgia	1.246
7	Arizona	1.086
8	Ohio	0.858
9	Nevada	0.818
10	North Carolina	0.772
	TOP 10 STATES	**15.943**
11	Tennessee	0.753
12	Pennsylvania	0.730
13	Washington	0.729
14	Virginia	0.727
15	Indiana	0.664
16	Michigan	0.618
17	Colorado	0.574
18	Massachusetts	0.572
19	South Carolina	0.546
20	Alabama	0.493
	NEXT 10 STATES (11-20)	**6.405**
21	Missouri	0.488
22	New Jersey	0.479
23	Wisconsin	0.457
24	Maryland	0.424
25	Louisiana	0.410
26	Oregon	0.309
27	Iowa	0.307
28	Oklahoma	0.307
29	Minnesota	0.300
30	Connecticut	0.292
	NEXT 10 STATES (21-31)	**3.773**

	STATE	Direct Spending (billions)
31	Utah	0.276
32	Kentucky	0.273
33	Mississippi	0.272
34	Nebraska	0.264
35	Arkansas	0.223
36	Kansas	0.215
37	Maine	0.179
38	New Hampshire	0.169
39	Idaho	0.144
40	New Mexico	0.129
	NEXT 10 STATES (31-40)	**2.143**
41	Hawaii	0.128
42	Rhode Island	0.084
43	Alaska	0.070
44	West Virginia	0.063
45	South Dakota	0.044
46	North Dakota	0.040
47	Delaware	0.037
48	Montana	0.035
49	Vermont	0.033
50	District of Columbia	0.029
51	Wyoming	0.025
	NEXT 11 STATES (41-51)	**0.587**
	TOTAL	**28.852**

Source: CRA with data from McGraw-Hill Construction Analytics (2007)

Appendix Table A-5

Value of Construction in Four Categories in Rank Order, 2007

	STATE	Direct Spending (billions)
1	Texas	7.731
2	Florida	7.400
3	California	7.150
4	New York	4.857
5	South Carolina	4.826
6	Georgia	4.121
7	Illinois	3.867
8	Arizona	3.223
9	North Carolina	2.930
10	Indiana	2.869
	TOP 10 STATES	**48.974**
11	Ohio	2.686
12	Pennsylvania	2.269
13	Washington	2.215
14	Louisiana	2.166
15	Iowa	2.086
16	Tennessee	2.031
17	Virginia	1.977
18	Colorado	1.662
19	Massachusetts	1.565
20	New Jersey	1.559
	NEXT 10 STATES (11-20)	**20.218**
21	Michigan	1.446
22	Maryland	1.362
23	Nevada	1.342
24	Wisconsin	1.286
25	Utah	1.266
26	Alabama	1.233
27	Missouri	1.202
28	Minnesota	1.096
29	Kansas	1.051
30	Oregon	1.019
	NEXT 10 STATES (21-31)	**12.304**

	STATE	Direct Spending (billions)
31	Mississippi	0.861
32	Connecticut	0.822
33	District of Columbia	0.810
34	Kentucky	0.747
35	Oklahoma	0.691
36	Arkansas	0.626
37	Nebraska	0.554
38	Idaho	0.343
39	New Mexico	0.331
40	Maine	0.322
	NEXT 10 STATES (31-40)	**6.106**
41	New Hampshire	0.319
42	Hawaii	0.216
43	Rhode Island	0.214
44	Alaska	0.192
45	South Dakota	0.172
46	West Virginia	0.147
47	Montana	0.084
48	Delaware	0.083
49	Vermont	0.076
50	North Dakota	0.060
51	Wyoming	0.040
	NEXT 11 STATES (41-51)	**1.602**
	TOTAL	**89.204**

Source: CRA with data from McGraw-Hill Construction Analytics (2007)

Appendix Table A-6
Top Ten States by Construction Value, All Categories, 2007
(hard costs only in billions)

Groupings of States	Office		Industrial		Warehouse		Retail		Total	
	Value	%	Value	%	Value	%	Value	%	Value	%
Top Ten	18.6	59.6	10.9	65.8	8.5	67.4	15.9	55.3	49.0	54.9
Next 10 (11-20)	6.6	21.0	3.4	20.4	2.3	18.1	6.4	22.2	20.2	22.7
Next 10 (21-30)	3.6	11.5	1.7	10.2	1.2	9.8	3.8	13.1	12.3	13.8
Next 10 (31-40)	1.9	6.2	0.5	3.3	0.5	3.9	2.1	7.4	6.1	6.8
Next 11 (41-51)	0.5	1.7	0.0	0.3	0.1	0.7	0.6	2.0	1.6	1.8
Totals	**31.2**	**100.0**	**16.5**	**100.0**	**12.6**	**100.0**	**28.9**	**100.0**	**89.2**	**100.0**

Appendix Table A-7

New Personal Income Generated by all Four Categories of Construction Outlays* by State in Rank Order, 2007

	STATE	Direct Spending (billions)
1	Texas	12.103
2	California	10.630
3	Florida	10.256
4	Georgia	5.997
5	South Carolina	5.976
6	New York	5.567
7	Illinois	5.543
8	Arizona	4.400
9	North Carolina	4.023
10	Ohio	3.814
	TOP 10 STATES	**68.310**
11	Indiana	3.793
12	Pennsylvania	3.195
13	Washington	3.017
14	Tennessee	2.874
15	Louisiana	2.705
16	Virginia	2.518
17	Iowa	2.508
18	Colorado	2.404
19	Massachusetts	1.984
20	Michigan	1.975
	NEXT 10 STATES (11-20)	**26.973**
21	New Jersey	1.951
22	Utah	1.766
23	Maryland	1.727
24	Alabama	1.694
25	Wisconsin	1.680
26	Nevada	1.587
27	Missouri	1.559
28	Minnesota	1.497
29	Oregon	1.307
30	Kansas	1.236
	NEXT 10 STATES (21-31)	**16.003**

	STATE	Direct Spending (billions)
31	Mississippi	1.063
32	Connecticut	1.006
33	Oklahoma	0.954
34	Kentucky	0.913
35	Arkansas	0.772
36	Nebraska	0.702
37	Idaho	0.422
38	New Mexico	0.418
39	Maine	0.410
40	New Hampshire	0.392
	NEXT 10 STATES (31-40)	**7.052**
41	Hawaii	0.270
42	District of Columbia	0.253
43	Rhode Island	0.240
44	Alaska	0.220
45	South Dakota	0.199
46	West Virginia	0.157
47	Montana	0.103
48	Vermont	0.089
49	Delaware	0.070
50	North Dakota	0.066
51	Wyoming	0.043
	NEXT 11 STATES (41-51)	**1.709**
	TOTAL	**120.048**

Source: CRA with data from McGraw-Hill Construction, BEA and NAIOP

*Construction outlays are the sum of soft costs, site development costs, hard costs and tenant improvement costs for office, industrial, warehouse and retail projects.

Appendix B: Soft Costs Impacts by State

Appendix Table B-1
Impacts of Office Soft Costs on State Economies, 2007

State	Direct Spending (billions)	Total Output (billions)	Personal Income (billions)	Jobs
Alabama	0.130	0.236	0.094	3,119
Alaska	0.032	0.064	0.024	792
Arizona	0.399	0.745	0.288	11,136
Arkansas	0.047	0.097	0.038	1,122
California	1.046	2.429	0.924	24,065
Colorado	0.266	0.600	0.234	6,242
Connecticut	0.092	0.178	0.066	1,572
Delaware	0.014	0.019	0.002	51
District of Columbia	0.267	0.458	0.138	3,469
Florida	0.974	2.079	0.812	23,665
Georgia	0.494	1.134	0.421	10,862
Hawaii	0.016	0.033	0.013	463
Idaho	0.044	0.083	0.032	1,214
Illinois	0.419	0.798	0.308	12,182
Indiana	0.202	0.464	0.171	4,242
Iowa	0.107	0.214	0.080	2,676
Kansas	0.125	0.244	0.085	2,860
Kentucky	0.080	0.156	0.056	1,829
Louisiana	0.169	0.327	0.127	4,322
Maine	0.016	0.032	0.012	283
Maryland	0.233	0.479	0.169	4,465
Massachusetts	0.207	0.393	0.150	5,446
Michigan	0.109	0.221	0.085	2,341
Minnesota	0.134	0.291	0.110	3,152
Mississippi	0.075	0.152	0.051	1,534
Missouri	0.172	0.315	0.118	4,540
Montana	0.013	0.024	0.010	385
Nebraska	0.073	0.153	0.058	1,719
Nevada	0.109	0.197	0.073	2,834
New Hampshire	0.027	0.051	0.020	702
New Jersey	0.141	0.276	0.100	2,787
New Mexico	0.055	0.118	0.041	983
New York	0.814	1.563	0.616	21,645
North Carolina	0.556	1.044	0.399	10,562
North Dakota	0.006	0.011	0.004	90
Ohio	0.296	0.635	0.236	7,108
Oklahoma	0.060	0.123	0.047	1,785
Oregon	0.151	0.309	0.115	3,963
Pennsylvania	0.140	0.306	0.109	2,778
Rhode Island	0.044	0.083	0.030	950
South Carolina	0.139	0.281	0.106	3,485
South Dakota	0.026	0.046	0.017	657
Tennessee	0.329	0.721	0.258	7,705
Texas	1.084	2.551	0.950	24,503
Utah	0.111	0.244	0.094	3,428
Vermont	0.005	0.011	0.004	94
Virginia	0.325	0.600	0.229	7,791
Washington	0.367	0.782	0.297	9,059
West Virginia	0.023	0.046	0.017	597
Wisconsin	0.113	0.197	0.076	2,758
Wyoming	0.005	0.008	0.003	118
State totals	**10.878**	**22.624**	**8.514**	**256,131**
Interstate spillovers		**9.246**	**2.962**	**45,233**
USA total	**10.878**	**31.870**	**11.476**	**301,365**

Source: CRA with data from McGraw-Hill Construction, BEA and NAIOP

Appendix Table B-2
Impacts of Industrial Soft Costs on State Economies, 2007

State	Direct Spending (billions)	Total Output (billions)	Personal Income (billions)	Jobs
Alabama	0.068	0.123	0.049	1,629
Alaska	0.002	0.005	0.002	56
Arizona	0.063	0.117	0.045	1,748
Arkansas	0.061	0.128	0.050	1,476
California	0.101	0.234	0.089	2,317
Colorado	0.014	0.033	0.013	339
Connecticut	0.034	0.067	0.025	589
Delaware	0.000	0.000	0.000	0
District of Columbia	*	*	*	*
Florida	0.082	0.176	0.069	2,004
Georgia	0.163	0.374	0.139	3,578
Hawaii	*	*	*	*
Idaho	0.007	0.013	0.005	188
Illinois	0.078	0.149	0.057	2,268
Indiana	0.283	0.651	0.239	5,945
Iowa	0.332	0.662	0.246	8,260
Kansas	0.090	0.177	0.062	2,072
Kentucky	0.013	0.026	0.009	309
Louisiana	0.282	0.544	0.211	7,192
Maine	0.020	0.041	0.015	362
Maryland	0.017	0.035	0.012	325
Massachusetts	0.077	0.146	0.056	2,029
Michigan	0.100	0.203	0.079	2,158
Minnesota	0.054	0.117	0.044	1,270
Mississippi	0.070	0.142	0.047	1,432
Missouri	0.019	0.035	0.013	505
Montana	0.001	0.002	0.001	35
Nebraska	0.012	0.026	0.010	288
Nevada	0.002	0.003	0.001	41
New Hampshire	0.014	0.027	0.010	370
New Jersey	0.035	0.069	0.025	692
New Mexico	0.003	0.006	0.002	49
New York	0.154	0.297	0.117	4,106
North Carolina	0.052	0.098	0.037	990
North Dakota	0.000	0.000	0.000	0
Ohio	0.149	0.320	0.119	3,581
Oklahoma	0.042	0.087	0.033	1,264
Oregon	0.032	0.066	0.024	846
Pennsylvania	0.116	0.253	0.090	2,299
Rhode Island	*	*	*	*
South Carolina	0.912	1.840	0.692	22,809
South Dakota	0.010	0.018	0.007	257
Tennessee	0.021	0.046	0.017	496
Texas	0.124	0.292	0.109	2,807
Utah	0.132	0.290	0.112	4,075
Vermont	0.005	0.010	0.003	86
Virginia	0.030	0.056	0.021	723
Washington	0.048	0.103	0.039	1,189
West Virginia	0.003	0.006	0.002	75
Wisconsin	0.091	0.159	0.061	2,228
Wyoming	0.000	0.000	0.000	2
State totals	**4.022**	**8.270**	**3.109**	**97,356**
Interstate spillovers		**3.513**	**1.134**	**14,060**
USA total	**4.022**	**11.783**	**4.243**	**111,416**

Appendix Table B-3

Impacts of Warehouse and Transportation Terminal Soft Costs on State Economies, 2007

State	Direct Spending (billions)	Total Output (billions)	Personal Income (billions)	Jobs
Alabama	0.023	0.042	0.017	552
Alaska	0.005	0.011	0.004	133
Arizona	0.192	0.357	0.138	5,343
Arkansas	0.005	0.010	0.004	115
California	0.284	0.659	0.250	6,523
Colorado	0.069	0.157	0.061	1,632
Connecticut	0.033	0.063	0.023	558
Delaware	0.001	0.002	0.000	5
District of Columbia	0.004	0.007	0.002	50
Florida	0.356	0.761	0.297	8,659
Georgia	0.206	0.473	0.176	4,534
Hawaii	0.011	0.022	0.008	303
Idaho	0.012	0.023	0.009	329
Illinois	0.257	0.490	0.189	7,482
Indiana	0.121	0.278	0.102	2,536
Iowa	0.028	0.057	0.021	707
Kansas	0.028	0.054	0.019	634
Kentucky	0.050	0.097	0.035	1,142
Louisiana	0.029	0.057	0.022	747
Maine	0.004	0.009	0.003	81
Maryland	0.053	0.108	0.038	1,009
Massachusetts	0.021	0.041	0.016	564
Michigan	0.027	0.055	0.021	583
Minnesota	0.049	0.107	0.040	1,161
Mississippi	0.023	0.047	0.016	471
Missouri	0.037	0.068	0.025	978
Montana	0.002	0.003	0.001	55
Nebraska	0.008	0.017	0.007	195
Nevada	0.053	0.097	0.036	1,389
New Hampshire	0.004	0.008	0.003	105
New Jersey	0.138	0.270	0.097	2,722
New Mexico	0.009	0.019	0.007	162
New York	0.054	0.104	0.041	1,444
North Carolina	0.091	0.171	0.065	1,726
North Dakota	0.001	0.002	0.001	12
Ohio	0.095	0.204	0.076	2,287
Oklahoma	0.010	0.022	0.008	312
Oregon	0.037	0.076	0.028	981
Pennsylvania	0.172	0.375	0.134	3,410
Rhode Island	0.001	0.001	0.000	16
South Carolina	0.035	0.072	0.027	887
South Dakota	0.003	0.005	0.002	68
Tennessee	0.064	0.140	0.050	1,501
Texas	0.399	0.938	0.349	9,009
Utah	0.033	0.073	0.028	1,031
Vermont	0.002	0.005	0.002	43
Virginia	0.051	0.094	0.036	1,220
Washington	0.062	0.131	0.050	1,520
West Virginia	0.002	0.004	0.001	47
Wisconsin	0.034	0.060	0.023	844
Wyoming	0.001	0.001	0.000	15
State totals	**3.291**	**6.945**	**2.611**	**77,833**
Interstate spillovers		**2.697**	**0.861**	**13,347**
USA total	**3.291**	**9.643**	**3.472**	**91,180**

Source: CRA with data from McGraw-Hill Construction, BEA and NAIOP

Appendix Table B-4
Impacts of Retail and Entertainment Soft Costs on State Economies, 2007

State	Direct Spending (billions)	Total Output (billions)	Personal Income (billions)	Jobs
Alabama	0.166	0.302	0.120	3,989
Alaska	0.024	0.047	0.018	582
Arizona	0.366	0.683	0.264	10,205
Arkansas	0.075	0.156	0.061	1,809
California	0.891	2.069	0.787	20,497
Colorado	0.194	0.437	0.171	4,547
Connecticut	0.098	0.191	0.070	1,682
Delaware	0.013	0.017	0.002	47
District of Columbia	0.010	0.017	0.005	128
Florida	0.977	2.086	0.814	23,736
Georgia	0.420	0.964	0.358	9,232
Hawaii	0.043	0.086	0.034	1,212
Idaho	0.049	0.092	0.035	1,349
Illinois	0.458	0.873	0.338	13,330
Indiana	0.224	0.514	0.189	4,700
Iowa	0.104	0.207	0.077	2,578
Kansas	0.072	0.142	0.049	1,658
Kentucky	0.092	0.180	0.065	2,114
Louisiana	0.138	0.267	0.103	3,522
Maine	0.060	0.125	0.046	1,096
Maryland	0.143	0.294	0.104	2,741
Massachusetts	0.193	0.366	0.140	5,065
Michigan	0.208	0.422	0.163	4,475
Minnesota	0.101	0.219	0.083	2,376
Mississippi	0.092	0.186	0.062	1,876
Missouri	0.164	0.301	0.112	4,337
Montana	0.012	0.022	0.009	349
Nebraska	0.089	0.188	0.071	2,109
Nevada	0.276	0.498	0.185	7,163
New Hampshire	0.057	0.110	0.042	1,507
New Jersey	0.161	0.315	0.114	3,181
New Mexico	0.043	0.094	0.033	780
New York	0.566	1.086	0.428	15,043
North Carolina	0.260	0.489	0.187	4,942
North Dakota	0.014	0.026	0.009	208
Ohio	0.289	0.620	0.230	6,938
Oklahoma	0.103	0.214	0.081	3,102
Oregon	0.104	0.212	0.079	2,723
Pennsylvania	0.246	0.536	0.191	4,867
Rhode Island	0.028	0.052	0.019	602
South Carolina	0.184	0.371	0.140	4,598
South Dakota	0.015	0.026	0.010	373
Tennessee	0.254	0.555	0.199	5,934
Texas	0.869	2.046	0.762	19,649
Utah	0.093	0.204	0.078	2,860
Vermont	0.011	0.023	0.008	202
Virginia	0.245	0.452	0.173	5,876
Washington	0.246	0.523	0.199	6,064
West Virginia	0.021	0.042	0.016	552
Wisconsin	0.154	0.269	0.103	3,772
Wyoming	0.008	0.014	0.006	220
State totals	**9.720**	**20.232**	**7.640**	**232,496**
Interstate spillovers		**8.245**	**2.614**	**36,776**
USA total	**9.720**	**28.476**	**10.254**	**269,272**

Source: CRA with data from McGraw-Hill Construction, BEA and NAIOP

Appendix Table B-5

Impacts of Soft Costs in Four Categories on State Economies, 2007

State	Direct Spending (billions)	Total Output (billions)	Personal Income (billions)	Jobs
Alabama	0.387	0.704	0.280	9,289
Alaska	0.063	0.127	0.048	1,563
Arizona	1.019	1.902	0.736	28,432
Arkansas	0.188	0.391	0.153	4,522
California	2.322	5.391	2.049	53,402
Colorado	0.543	1.227	0.479	12,760
Connecticut	0.257	0.500	0.184	4,401
Delaware	0.028	0.038	0.005	103
District of Columbia	0.281	0.481	0.145	3,647
Florida	2.389	5.102	1.992	58,064
Georgia	1.282	2.945	1.093	28,206
Hawaii	0.070	0.141	0.055	1,978
Idaho	0.111	0.211	0.080	3,080
Illinois	1.212	2.310	0.893	35,262
Indiana	0.830	1.907	0.700	17,423
Iowa	0.571	1.140	0.424	14,222
Kansas	0.315	0.617	0.215	7,224
Kentucky	0.234	0.459	0.165	5,393
Louisiana	0.619	1.195	0.463	15,783
Maine	0.100	0.208	0.077	1,821
Maryland	0.445	0.915	0.323	8,541
Massachusetts	0.498	0.946	0.361	13,104
Michigan	0.445	0.901	0.349	9,557
Minnesota	0.339	0.735	0.277	7,958
Mississippi	0.259	0.526	0.176	5,313
Missouri	0.392	0.720	0.269	10,360
Montana	0.028	0.052	0.021	825
Nebraska	0.182	0.385	0.145	4,311
Nevada	0.439	0.794	0.295	11,427
New Hampshire	0.102	0.196	0.075	2,684
New Jersey	0.476	0.929	0.335	9,381
New Mexico	0.110	0.237	0.083	1,973
New York	1.588	3.050	1.202	42,238
North Carolina	0.959	1.801	0.688	18,220
North Dakota	0.020	0.039	0.013	311
Ohio	0.830	1.780	0.661	19,914
Oklahoma	0.215	0.447	0.169	6,463
Oregon	0.325	0.664	0.246	8,513
Pennsylvania	0.674	1.470	0.524	13,354
Rhode Island	0.073	0.136	0.049	1,568
South Carolina	1.271	2.564	0.965	31,779
South Dakota	0.054	0.095	0.035	1,355
Tennessee	0.668	1.462	0.524	15,636
Texas	2.476	5.828	2.170	55,968
Utah	0.370	0.812	0.312	11,393
Vermont	0.023	0.048	0.017	425
Virginia	0.650	1.201	0.459	15,609
Washington	0.722	1.539	0.584	17,833
West Virginia	0.048	0.098	0.037	1,270
Wisconsin	0.392	0.685	0.263	9,603
Wyoming	0.014	0.023	0.009	355
State totals	**27.910**	**58.071**	**21.874**	**663,817**
Interstate spillovers		**23.701**	**7.571**	**109,416**
USA total	**27.910**	**81.772**	**29.445**	**773,234**

Source: CRA with data from McGraw-Hill Construction, BEA and NAIOP

Appendix C: Site Development Impacts by State

Appendix Table C-1

Impacts of Office Site Development on State Economies, 2007

State	Direct Spending (billions)	Total Output (billions)	Personal Income (billions)	Jobs
Alabama	0.113	0.264	0.078	2,843
Alaska	0.028	0.049	0.015	415
Arizona	0.346	0.761	0.239	7,727
Arkansas	0.040	0.084	0.024	901
California	0.908	2.101	0.659	16,985
Colorado	0.231	0.511	0.161	4,773
Connecticut	0.080	0.161	0.048	1,149
Delaware	0.012	0.022	0.006	167
District of Columbia	0.232	0.296	0.019	463
Florida	0.845	1.805	0.572	19,530
Georgia	0.429	1.033	0.310	9,687
Hawaii	0.014	0.027	0.009	241
Idaho	0.038	0.075	0.023	868
Illinois	0.363	0.890	0.266	6,941
Indiana	0.175	0.398	0.116	3,805
Iowa	0.093	0.195	0.057	2,034
Kansas	0.108	0.232	0.064	2,201
Kentucky	0.069	0.149	0.042	1,532
Louisiana	0.147	0.306	0.093	3,340
Maine	0.013	0.027	0.008	313
Maryland	0.202	0.433	0.126	3,614
Massachusetts	0.180	0.375	0.113	2,679
Michigan	0.095	0.207	0.065	1,824
Minnesota	0.116	0.258	0.079	2,259
Mississippi	0.065	0.139	0.041	1,527
Missouri	0.149	0.346	0.097	3,015
Montana	0.011	0.021	0.007	256
Nebraska	0.063	0.127	0.038	1,341
Nevada	0.095	0.180	0.055	1,552
New Hampshire	0.023	0.049	0.014	404
New Jersey	0.123	0.269	0.078	1,903
New Mexico	0.047	0.093	0.029	1,091
New York	0.706	1.328	0.383	9,748
North Carolina	0.483	1.111	0.332	11,244
North Dakota	0.005	0.009	0.003	103
Ohio	0.257	0.622	0.184	5,811
Oklahoma	0.052	0.117	0.036	1,348
Oregon	0.131	0.284	0.083	2,495
Pennsylvania	0.122	0.300	0.088	2,533
Rhode Island	0.039	0.073	0.021	613
South Carolina	0.121	0.269	0.078	2,735
South Dakota	0.023	0.044	0.013	504
Tennessee	0.286	0.686	0.200	6,374
Texas	0.941	2.385	0.733	22,307
Utah	0.097	0.219	0.068	2,377
Vermont	0.004	0.009	0.003	94
Virginia	0.282	0.624	0.177	5,608
Washington	0.318	0.682	0.211	5,986
West Virginia	0.020	0.035	0.010	368
Wisconsin	0.098	0.215	0.066	2,062
Wyoming	0.004	0.007	0.002	75
State totals	**9.443**	**20.902**	**6.240**	**189,766**
Interstate spillovers		**9.132**	**2.812**	**75,589**
USA total	**9.443**	**30.034**	**9.051**	**265,356**

Source: CRA with data from McGraw-Hill Construction, BEA and NAIOP

Appendix Table C-2
Impacts of Industrial Site Development on State Economies, 2007

State	Direct Spending (billions)	Total Output (billions)	Personal Income (billions)	Jobs
Alabama	0.097	0.228	0.068	2,456
Alaska	0.003	0.006	0.002	48
Arizona	0.090	0.198	0.062	2,007
Arkansas	0.088	0.184	0.053	1,961
California	0.145	0.335	0.105	2,706
Colorado	0.021	0.046	0.015	429
Connecticut	0.050	0.100	0.030	713
Delaware	0.000	0.000	0.000	1
District of Columbia	0.000	0.000	0.000	0
Florida	0.118	0.253	0.080	2,735
Georgia	0.234	0.563	0.169	5,278
Hawaii	0.000	0.000	0.000	0
Idaho	0.010	0.019	0.006	223
Illinois	0.112	0.274	0.082	2,138
Indiana	0.407	0.922	0.269	8,823
Iowa	0.476	0.997	0.293	10,385
Kansas	0.130	0.278	0.077	2,638
Kentucky	0.019	0.042	0.012	428
Louisiana	0.405	0.841	0.257	9,195
Maine	0.029	0.057	0.018	662
Maryland	0.024	0.052	0.015	435
Massachusetts	0.111	0.231	0.070	1,651
Michigan	0.144	0.316	0.098	2,782
Minnesota	0.078	0.172	0.053	1,505
Mississippi	0.100	0.214	0.063	2,357
Missouri	0.027	0.064	0.018	555
Montana	0.002	0.003	0.001	39
Nebraska	0.017	0.035	0.011	372
Nevada	0.002	0.004	0.001	37
New Hampshire	0.020	0.043	0.012	352
New Jersey	0.050	0.110	0.032	782
New Mexico	0.004	0.008	0.002	89
New York	0.222	0.417	0.120	3,059
North Carolina	0.075	0.172	0.051	1,743
North Dakota	0.000	0.000	0.000	0
Ohio	0.214	0.518	0.153	4,842
Oklahoma	0.060	0.137	0.042	1,579
Oregon	0.046	0.100	0.029	881
Pennsylvania	0.167	0.411	0.120	3,468
Rhode Island	0.000	0.000	0.000	0
South Carolina	1.310	2.910	0.842	29,612
South Dakota	0.015	0.028	0.009	327
Tennessee	0.030	0.073	0.021	679
Texas	0.178	0.452	0.139	4,227
Utah	0.190	0.432	0.134	4,675
Vermont	0.007	0.013	0.004	142
Virginia	0.043	0.096	0.027	861
Washington	0.069	0.148	0.046	1,300
West Virginia	0.004	0.007	0.002	76
Wisconsin	0.131	0.287	0.088	2,755
Wyoming	0.000	0.000	0.000	3
State totals	**5.776**	**12.797**	**3.800**	**124,010**
Interstate spillovers		**5.573**	**1.736**	**38,285**
USA total	**5.776**	**18.369**	**5.536**	**162,295**

Source: CRA with data from McGraw-Hill Construction, BEA and NAIOP

Appendix Label C-3

Impacts of Warehouse and Transportation Terminal Site Development on State Economies, 2007

State	Direct Spending (billions)	Total Output (billions)	Personal Income (billions)	Jobs
Alabama	0.029	0.067	0.020	724
Alaska	0.007	0.012	0.004	100
Arizona	0.239	0.525	0.165	5,332
Arkansas	0.006	0.012	0.004	133
California	0.354	0.819	0.257	6,621
Colorado	0.087	0.192	0.061	1,794
Connecticut	0.041	0.082	0.025	587
Delaware	0.002	0.003	0.001	25
District of Columbia	0.005	0.006	0.000	10
Florida	0.445	0.950	0.301	10,277
Georgia	0.257	0.620	0.186	5,815
Hawaii	0.013	0.025	0.008	227
Idaho	0.015	0.029	0.009	339
Illinois	0.321	0.786	0.235	6,131
Indiana	0.151	0.342	0.100	3,271
Iowa	0.035	0.074	0.022	773
Kansas	0.035	0.074	0.020	701
Kentucky	0.062	0.134	0.038	1,376
Louisiana	0.037	0.076	0.023	830
Maine	0.006	0.011	0.003	129
Maryland	0.066	0.141	0.041	1,175
Massachusetts	0.027	0.056	0.017	399
Michigan	0.034	0.074	0.023	653
Minnesota	0.062	0.137	0.042	1,197
Mississippi	0.029	0.061	0.018	674
Missouri	0.046	0.107	0.030	934
Montana	0.002	0.004	0.001	52
Nebraska	0.010	0.021	0.006	218
Nevada	0.067	0.127	0.039	1,094
New Hampshire	0.005	0.010	0.003	87
New Jersey	0.172	0.378	0.109	2,674
New Mexico	0.011	0.022	0.007	258
New York	0.068	0.127	0.037	935
North Carolina	0.113	0.261	0.078	2,643
North Dakota	0.001	0.002	0.001	21
Ohio	0.119	0.288	0.085	2,689
Oklahoma	0.013	0.029	0.009	339
Oregon	0.047	0.101	0.029	888
Pennsylvania	0.215	0.530	0.155	4,472
Rhode Island	0.001	0.002	0.000	15
South Carolina	0.044	0.098	0.028	1,001
South Dakota	0.003	0.007	0.002	75
Tennessee	0.080	0.192	0.056	1,786
Texas	0.498	1.261	0.388	11,794
Utah	0.042	0.095	0.029	1,028
Vermont	0.003	0.006	0.002	62
Virginia	0.063	0.140	0.040	1,263
Washington	0.077	0.165	0.051	1,444
West Virginia	0.002	0.004	0.001	42
Wisconsin	0.043	0.095	0.029	908
Wyoming	0.001	0.001	0.000	13
State totals	**4.109**	**9.383**	**2.838**	**86,028**
Interstate spillovers		**3.685**	**1.100**	**29,434**
USA total	**4.109**	**13.068**	**3.938**	**115,461**

Source: CRA with data from McGraw-Hill Construction, BEA and NAIOP

Appendix Table C-4

Impacts of Retail and Entertainment Site Development on State Economies, 2007

State	Direct Spending (billions)	Total Output (billions)	Personal Income (billions)	Jobs
Alabama	0.183	0.429	0.127	4,614
Alaska	0.026	0.045	0.014	387
Arizona	0.403	0.885	0.278	8,985
Arkansas	0.083	0.173	0.050	1,844
California	0.982	2.271	0.712	18,357
Colorado	0.213	0.473	0.149	4,412
Connecticut	0.108	0.219	0.066	1,560
Delaware	0.014	0.025	0.007	193
District of Columbia	0.011	0.014	0.001	22
Florida	1.076	2.297	0.727	24,855
Georgia	0.462	1.114	0.335	10,447
Hawaii	0.047	0.089	0.028	800
Idaho	0.053	0.105	0.032	1,224
Illinois	0.505	1.235	0.369	9,637
Indiana	0.247	0.559	0.163	5,350
Iowa	0.114	0.239	0.070	2,486
Kansas	0.080	0.170	0.047	1,619
Kentucky	0.101	0.219	0.062	2,248
Louisiana	0.152	0.316	0.097	3,454
Maine	0.066	0.134	0.042	1,539
Maryland	0.157	0.338	0.098	2,815
Massachusetts	0.212	0.442	0.133	3,161
Michigan	0.229	0.503	0.157	4,425
Minnesota	0.111	0.247	0.075	2,160
Mississippi	0.101	0.216	0.063	2,369
Missouri	0.181	0.420	0.117	3,656
Montana	0.013	0.024	0.008	294
Nebraska	0.098	0.198	0.059	2,088
Nevada	0.303	0.576	0.176	4,977
New Hampshire	0.063	0.133	0.038	1,100
New Jersey	0.178	0.390	0.113	2,757
New Mexico	0.048	0.093	0.029	1,097
New York	0.623	1.171	0.338	8,597
North Carolina	0.286	0.660	0.197	6,675
North Dakota	0.015	0.027	0.008	304
Ohio	0.318	0.770	0.227	7,196
Oklahoma	0.114	0.258	0.078	2,973
Oregon	0.114	0.247	0.072	2,175
Pennsylvania	0.271	0.668	0.195	5,632
Rhode Island	0.031	0.059	0.017	493
South Carolina	0.203	0.450	0.130	4,579
South Dakota	0.016	0.031	0.010	364
Tennessee	0.279	0.671	0.195	6,229
Texas	0.958	2.427	0.746	22,698
Utah	0.102	0.232	0.072	2,516
Vermont	0.012	0.023	0.007	255
Virginia	0.270	0.597	0.169	5,366
Washington	0.270	0.579	0.179	5,084
West Virginia	0.023	0.042	0.011	431
Wisconsin	0.170	0.373	0.114	3,579
Wyoming	0.009	0.015	0.005	177
State totals	**10.706**	**23.891**	**7.215**	**220,254**
Interstate spillovers		**10.160**	**3.047**	**80,595**
USA total	**10.706**	**34.052**	**10.262**	**300,849**

Source: CRA with data from McGraw-Hill Construction, BEA and NAIOP

Appendix Table C-5

Impacts of Site Development in Four Categories on State Economies, 2007

State	Direct Spending (billions)	Total Output (billions)	Personal Income (billions)	Jobs
Alabama	0.422	0.989	0.293	10,636
Alaska	0.064	0.111	0.034	950
Arizona	1.078	2.368	0.745	24,050
Arkansas	0.217	0.454	0.131	4,840
California	2.389	5.527	1.734	44,669
Colorado	0.551	1.222	0.386	11,409
Connecticut	0.278	0.562	0.169	4,009
Delaware	0.028	0.050	0.013	386
District of Columbia	0.247	0.316	0.020	495
Florida	2.485	5.305	1.680	57,397
Georgia	1.382	3.329	1.001	31,227
Hawaii	0.075	0.142	0.045	1,268
Idaho	0.116	0.228	0.070	2,653
Illinois	1.301	3.184	0.952	24,847
Indiana	0.979	2.220	0.648	21,249
Iowa	0.719	1.505	0.443	15,679
Kansas	0.353	0.754	0.209	7,159
Kentucky	0.252	0.543	0.153	5,584
Louisiana	0.741	1.539	0.470	16,818
Maine	0.114	0.230	0.071	2,642
Maryland	0.449	0.964	0.280	8,039
Massachusetts	0.529	1.104	0.332	7,889
Michigan	0.502	1.101	0.343	9,685
Minnesota	0.367	0.814	0.249	7,121
Mississippi	0.295	0.630	0.185	6,926
Missouri	0.404	0.938	0.262	8,160
Montana	0.028	0.052	0.017	642
Nebraska	0.189	0.382	0.114	4,019
Nevada	0.467	0.886	0.271	7,659
New Hampshire	0.111	0.234	0.067	1,943
New Jersey	0.524	1.147	0.332	8,116
New Mexico	0.110	0.216	0.067	2,535
New York	1.619	3.043	0.878	22,339
North Carolina	0.957	2.204	0.659	22,305
North Dakota	0.021	0.039	0.011	428
Ohio	0.909	2.198	0.649	20,538
Oklahoma	0.239	0.541	0.165	6,239
Oregon	0.339	0.732	0.214	6,440
Pennsylvania	0.774	1.910	0.559	16,106
Rhode Island	0.070	0.134	0.038	1,121
South Carolina	1.678	3.727	1.078	37,927
South Dakota	0.057	0.110	0.033	1,270
Tennessee	0.676	1.622	0.472	15,069
Texas	2.575	6.525	2.006	61,026
Utah	0.431	0.978	0.303	10,595
Vermont	0.026	0.051	0.015	553
Virginia	0.658	1.457	0.413	13,098
Washington	0.735	1.574	0.488	13,814
West Virginia	0.049	0.088	0.024	917
Wisconsin	0.441	0.970	0.296	9,304
Wyoming	0.014	0.023	0.007	268
State totals	**30.034**	**66.973**	**20.093**	**620,058**
Interstate spillovers		**28.551**	**8.695**	**223,903**
USA total	**30.034**	**95.524**	**28.788**	**843,961**

Source: CRA with data from McGraw-Hill Construction, BEA and NAIOP

Appendix D: Hard Costs Impacts by State

Appendix Table D-1
Impacts of Office Construction on State Economies, 2007

State	Direct Spending (billions)	Total Output (billions)	Personal Income (billions)	Jobs
Alabama	0.373	0.874	0.259	9,404
Alaska	0.092	0.161	0.050	1,373
Arizona	1.146	2.516	0.792	25,557
Arkansas	0.134	0.279	0.080	2,981
California	3.004	6.951	2.181	56,180
Colorado	0.763	1.691	0.534	15,788
Connecticut	0.264	0.533	0.160	3,800
Delaware	0.040	0.072	0.019	554
District of Columbia	0.766	0.980	0.061	1,532
Florida	2.796	5.971	1.891	64,596
Georgia	1.418	3.416	1.027	32,040
Hawaii	0.047	0.089	0.028	797
Idaho	0.125	0.247	0.076	2,871
Illinois	1.202	2.942	0.880	22,958
Indiana	0.580	1.315	0.384	12,587
Iowa	0.309	0.646	0.190	6,728
Kansas	0.359	0.766	0.213	7,281
Kentucky	0.228	0.493	0.139	5,068
Louisiana	0.487	1.011	0.309	11,047
Maine	0.045	0.090	0.028	1,035
Maryland	0.668	1.434	0.416	11,954
Massachusetts	0.595	1.240	0.373	8,860
Michigan	0.313	0.686	0.214	6,034
Minnesota	0.385	0.854	0.261	7,471
Mississippi	0.215	0.460	0.135	5,050
Missouri	0.494	1.146	0.320	9,974
Montana	0.037	0.069	0.022	846
Nebraska	0.208	0.421	0.126	4,436
Nevada	0.313	0.594	0.182	5,132
New Hampshire	0.076	0.161	0.046	1,336
New Jersey	0.406	0.890	0.258	6,296
New Mexico	0.157	0.307	0.096	3,607
New York	2.337	4.393	1.267	32,244
North Carolina	1.596	3.675	1.098	37,192
North Dakota	0.017	0.031	0.009	342
Ohio	0.850	2.057	0.607	19,219
Oklahoma	0.171	0.387	0.118	4,459
Oregon	0.434	0.939	0.274	8,253
Pennsylvania	0.403	0.994	0.291	8,379
Rhode Island	0.127	0.243	0.068	2,027
South Carolina	0.400	0.889	0.257	9,046
South Dakota	0.075	0.144	0.044	1,668
Tennessee	0.945	2.270	0.660	21,083
Texas	3.113	7.889	2.426	73,782
Utah	0.320	0.726	0.225	7,861
Vermont	0.015	0.028	0.009	311
Virginia	0.932	2.063	0.585	18,548
Washington	1.053	2.255	0.699	19,799
West Virginia	0.065	0.117	0.032	1,217
Wisconsin	0.323	0.711	0.217	6,821
Wyoming	0.013	0.022	0.006	248
State totals	**31.235**	**69.136**	**20.639**	**627,673**
Interstate spillovers		**30.206**	**9.300**	**250,020**
USA total	**31.235**	**99.342**	**29.938**	**877,693**

Source: CRA with data from McGraw-Hill Construction and BEA

Appendix Table D-2
Impacts of Industrial Construction on State Economies, 2007

State	Direct Spending (billions)	Total Output (billions)	Personal Income (billions)	Jobs
Alabama	0.278	0.652	0.194	7,017
Alaska	0.009	0.016	0.005	138
Arizona	0.257	0.564	0.178	5,734
Arkansas	0.251	0.525	0.151	5,603
California	0.413	0.957	0.300	7,731
Colorado	0.059	0.131	0.041	1,227
Connecticut	0.141	0.286	0.086	2,037
Delaware	0.000	0.000	0.000	2
District of Columbia	0.000	0.000	0.000	0
Florida	0.338	0.722	0.229	7,816
Georgia	0.667	1.608	0.483	15,081
Hawaii	0.000	0.000	0.000	0
Idaho	0.028	0.055	0.017	637
Illinois	0.320	0.783	0.234	6,108
Indiana	1.162	2.634	0.769	25,210
Iowa	1.361	2.849	0.838	29,674
Kansas	0.371	0.793	0.220	7,537
Kentucky	0.055	0.119	0.034	1,223
Louisiana	1.157	2.403	0.735	26,272
Maine	0.082	0.164	0.051	1,891
Maryland	0.069	0.149	0.043	1,242
Massachusetts	0.317	0.660	0.199	4,716
Michigan	0.412	0.904	0.281	7,948
Minnesota	0.222	0.492	0.150	4,301
Mississippi	0.287	0.613	0.180	6,734
Missouri	0.079	0.182	0.051	1,587
Montana	0.005	0.009	0.003	111
Nebraska	0.050	0.101	0.030	1,064
Nevada	0.006	0.012	0.004	105
New Hampshire	0.058	0.121	0.035	1,007
New Jersey	0.144	0.316	0.091	2,234
New Mexico	0.011	0.022	0.007	254
New York	0.633	1.191	0.343	8,741
North Carolina	0.214	0.492	0.147	4,981
North Dakota	0.000	0.000	0.000	1
Ohio	0.612	1.481	0.437	13,836
Oklahoma	0.173	0.392	0.119	4,511
Oregon	0.132	0.286	0.084	2,517
Pennsylvania	0.476	1.175	0.344	9,908
Rhode Island	0.000	0.000	0.000	0
South Carolina	3.744	8.314	2.405	84,612
South Dakota	0.042	0.081	0.024	933
Tennessee	0.087	0.209	0.061	1,940
Texas	0.510	1.291	0.397	12,078
Utah	0.543	1.233	0.382	13,357
Vermont	0.019	0.037	0.011	406
Virginia	0.124	0.273	0.078	2,459
Washington	0.198	0.423	0.131	3,713
West Virginia	0.012	0.021	0.006	218
Wisconsin	0.373	0.820	0.250	7,873
Wyoming	0.000	0.001	0.000	7
State totals	**16.503**	**36.565**	**10.858**	**354,336**
Interstate spillovers		**15.922**	**4.960**	**109,393**
USA total	**16.503**	**52.487**	**15.818**	**463,729**

Source: CRA with data from McGraw-Hill Construction and BEA

Appendix Table D-3

Impacts of Warehouse and Transportation Terminal Construction on State Economies, 2007

State	Direct Spending (billions)	Total Output (billions)	Personal Income (billions)	Jobs
Alabama	0.088	0.207	0.061	2,222
Alaska	0.021	0.036	0.011	307
Arizona	0.734	1.612	0.507	16,368
Arkansas	0.018	0.038	0.011	409
California	1.087	2.515	0.789	20,328
Colorado	0.266	0.590	0.186	5,508
Connecticut	0.125	0.253	0.076	1,801
Delaware	0.005	0.010	0.003	75
District of Columbia	0.015	0.019	0.001	30
Florida	1.366	2.916	0.923	31,551
Georgia	0.790	1.903	0.572	17,853
Hawaii	0.041	0.078	0.025	696
Idaho	0.045	0.089	0.027	1,039
Illinois	0.986	2.412	0.721	18,824
Indiana	0.463	1.049	0.306	10,043
Iowa	0.109	0.228	0.067	2,373
Kansas	0.106	0.227	0.063	2,153
Kentucky	0.190	0.411	0.116	4,224
Louisiana	0.112	0.233	0.071	2,548
Maine	0.017	0.034	0.011	395
Maryland	0.201	0.432	0.126	3,606
Massachusetts	0.082	0.171	0.052	1,224
Michigan	0.104	0.228	0.071	2,006
Minnesota	0.189	0.420	0.128	3,673
Mississippi	0.088	0.188	0.055	2,068
Missouri	0.142	0.329	0.092	2,867
Montana	0.007	0.013	0.004	161
Nebraska	0.031	0.064	0.019	670
Nevada	0.205	0.389	0.119	3,359
New Hampshire	0.015	0.032	0.009	267
New Jersey	0.530	1.160	0.336	8,209
New Mexico	0.034	0.067	0.021	793
New York	0.208	0.391	0.113	2,872
North Carolina	0.348	0.802	0.240	8,113
North Dakota	0.003	0.006	0.002	63
Ohio	0.365	0.884	0.261	8,256
Oklahoma	0.040	0.090	0.028	1,042
Oregon	0.144	0.310	0.091	2,727
Pennsylvania	0.660	1.628	0.476	13,731
Rhode Island	0.003	0.005	0.002	46
South Carolina	0.136	0.302	0.087	3,073
South Dakota	0.010	0.020	0.006	231
Tennessee	0.246	0.590	0.172	5,484
Texas	1.528	3.872	1.190	36,210
Utah	0.128	0.291	0.090	3,155
Vermont	0.009	0.017	0.005	189
Virginia	0.195	0.431	0.122	3,878
Washington	0.236	0.505	0.157	4,435
West Virginia	0.007	0.012	0.003	129
Wisconsin	0.132	0.290	0.089	2,787
Wyoming	0.002	0.004	0.001	41
State totals	**12.615**	**28.807**	**8.714**	**264,112**
Interstate spillovers		**11.314**	**3.377**	**90,364**
USA total	**12.615**	**40.121**	**12.091**	**354,476**

Source: CRA with data from McGraw-Hill Construction and BEA

Appendix Table D-4

Impacts of Retail and Entertainment Construction on State Economies, 2007

State	Direct Spending (billions)	Total Output (billions)	Personal Income (billions)	Jobs
Alabama	0.493	1.156	0.343	12,433
Alaska	0.070	0.122	0.038	1,043
Arizona	1.086	2.384	0.750	24,212
Arkansas	0.223	0.466	0.134	4,969
California	2.645	6.120	1.920	49,467
Colorado	0.574	1.273	0.402	11,890
Connecticut	0.292	0.590	0.177	4,205
Delaware	0.037	0.068	0.018	520
District of Columbia	0.029	0.037	0.002	58
Florida	2.900	6.191	1.960	66,979
Georgia	1.246	3.002	0.902	28,153
Hawaii	0.128	0.241	0.077	2,156
Idaho	0.144	0.283	0.087	3,298
Illinois	1.360	3.328	0.995	25,970
Indiana	0.664	1.506	0.440	14,416
Iowa	0.307	0.643	0.189	6,700
Kansas	0.215	0.459	0.127	4,363
Kentucky	0.273	0.589	0.166	6,057
Louisiana	0.410	0.851	0.260	9,307
Maine	0.179	0.360	0.112	4,147
Maryland	0.424	0.910	0.264	7,587
Massachusetts	0.572	1.192	0.359	8,518
Michigan	0.618	1.356	0.422	11,925
Minnesota	0.300	0.665	0.203	5,822
Mississippi	0.272	0.581	0.171	6,385
Missouri	0.488	1.132	0.316	9,851
Montana	0.035	0.065	0.020	793
Nebraska	0.264	0.534	0.160	5,625
Nevada	0.818	1.552	0.475	13,412
New Hampshire	0.169	0.358	0.102	2,965
New Jersey	0.479	1.050	0.304	7,429
New Mexico	0.129	0.252	0.078	2,957
New York	1.679	3.156	0.910	23,166
North Carolina	0.772	1.777	0.531	17,988
North Dakota	0.040	0.074	0.021	819
Ohio	0.858	2.076	0.613	19,393
Oklahoma	0.307	0.695	0.211	8,010
Oregon	0.309	0.667	0.195	5,862
Pennsylvania	0.730	1.800	0.526	15,177
Rhode Island	0.084	0.159	0.045	1,328
South Carolina	0.546	1.212	0.351	12,339
South Dakota	0.044	0.085	0.026	980
Tennessee	0.753	1.807	0.526	16,786
Texas	2.581	6.540	2.011	61,166
Utah	0.276	0.626	0.194	6,780
Vermont	0.033	0.063	0.019	688
Virginia	0.727	1.608	0.456	14,462
Washington	0.729	1.561	0.484	13,701
West Virginia	0.063	0.112	0.031	1,163
Wisconsin	0.457	1.005	0.307	9,644
Wyoming	0.025	0.041	0.012	477
State totals	**28.852**	**64.382**	**19.443**	**593,542**
Interstate spillovers		**27.380**	**8.212**	**217,187**
USA total	**28.852**	**91.762**	**27.654**	**810,729**

Source: CRA with data from McGraw-Hill Construction and BEA

Appendix Table D-5

Impacts of Construction in Four Categories on State Economies, 2007

State	Direct Spending (billions)	Total Output (billions)	Personal Income (billions)	Jobs
Alabama	1.233	2.889	0.857	31,076
Alaska	0.192	0.335	0.103	2,860
Arizona	3.223	7.076	2.227	71,871
Arkansas	0.626	1.309	0.377	13,963
California	7.150	16.542	5.190	133,707
Colorado	1.662	3.686	1.164	34,413
Connecticut	0.822	1.661	0.499	11,843
Delaware	0.083	0.150	0.039	1,152
District of Columbia	0.810	1.036	0.065	1,620
Florida	7.400	15.800	5.003	170,942
Georgia	4.121	9.929	2.985	93,126
Hawaii	0.216	0.408	0.130	3,650
Idaho	0.343	0.674	0.207	7,845
Illinois	3.867	9.466	2.830	73,861
Indiana	2.869	6.505	1.898	62,256
Iowa	2.086	4.366	1.285	45,476
Kansas	1.051	2.246	0.623	21,334
Kentucky	0.747	1.613	0.455	16,573
Louisiana	2.166	4.499	1.375	49,175
Maine	0.322	0.649	0.201	7,469
Maryland	1.362	2.925	0.849	24,389
Massachusetts	1.565	3.263	0.982	23,318
Michigan	1.446	3.174	0.988	27,913
Minnesota	1.096	2.430	0.743	21,267
Mississippi	0.861	1.841	0.541	20,237
Missouri	1.202	2.790	0.779	24,279
Montana	0.084	0.156	0.049	1,912
Nebraska	0.554	1.120	0.336	11,796
Nevada	1.342	2.546	0.779	22,008
New Hampshire	0.319	0.672	0.192	5,574
New Jersey	1.559	3.415	0.989	24,167
New Mexico	0.331	0.647	0.202	7,612
New York	4.857	9.131	2.633	67,022
North Carolina	2.930	6.746	2.016	68,274
North Dakota	0.060	0.111	0.032	1,225
Ohio	2.686	6.497	1.919	60,704
Oklahoma	0.691	1.564	0.476	18,023
Oregon	1.019	2.202	0.643	19,359
Pennsylvania	2.269	5.597	1.637	47,196
Rhode Island	0.214	0.407	0.114	3,401
South Carolina	4.826	10.717	3.101	109,070
South Dakota	0.172	0.330	0.100	3,812
Tennessee	2.031	4.876	1.419	45,294
Texas	7.731	19.593	6.024	183,235
Utah	1.266	2.876	0.890	31,153
Vermont	0.076	0.146	0.044	1,594
Virginia	1.977	4.376	1.242	39,347
Washington	2.215	4.744	1.470	41,648
West Virginia	0.147	0.263	0.072	2,725
Wisconsin	1.286	2.827	0.862	27,125
Wyoming	0.040	0.067	0.020	773
State totals	**89.204**	**198.890**	**59.653**	**1,839,664**
Interstate spillovers		**84.823**	**25.849**	**666,964**
USA total	**89.204**	**283.713**	**85.502**	**2,506,627**

Source: CRA with data from McGraw-Hill Construction and BEA

Appendix E: Tenant Improvement Impacts by State

Appendix Table E-1

Impacts of Office Tenant Improvement on State Economies, 2007

State	Direct Spending (billions)	Total Output (billions)	Personal Income (billions)	Jobs
Alabama	0.136	0.319	0.095	3,430
Alaska	0.034	0.059	0.018	501
Arizona	0.418	0.918	0.289	9,323
Arkansas	0.049	0.102	0.029	1,088
California	1.096	2.536	0.795	20,494
Colorado	0.278	0.617	0.195	5,759
Connecticut	0.096	0.194	0.058	1,386
Delaware	0.015	0.026	0.007	202
District of Columbia	0.279	0.357	0.022	559
Florida	1.020	2.178	0.690	23,564
Georgia	0.517	1.246	0.375	11,688
Hawaii	0.017	0.032	0.010	291
Idaho	0.046	0.090	0.028	1,047
Illinois	0.438	1.073	0.321	8,375
Indiana	0.212	0.480	0.140	4,592
Iowa	0.113	0.236	0.069	2,454
Kansas	0.131	0.280	0.078	2,656
Kentucky	0.083	0.180	0.051	1,849
Louisiana	0.178	0.369	0.113	4,030
Maine	0.016	0.033	0.010	378
Maryland	0.244	0.523	0.152	4,361
Massachusetts	0.217	0.452	0.136	3,232
Michigan	0.114	0.250	0.078	2,201
Minnesota	0.140	0.311	0.095	2,725
Mississippi	0.078	0.168	0.049	1,842
Missouri	0.180	0.418	0.117	3,638
Montana	0.014	0.025	0.008	309
Nebraska	0.076	0.154	0.046	1,618
Nevada	0.114	0.217	0.066	1,872
New Hampshire	0.028	0.059	0.017	487
New Jersey	0.148	0.325	0.094	2,297
New Mexico	0.057	0.112	0.035	1,316
New York	0.852	1.602	0.462	11,762
North Carolina	0.582	1.341	0.401	13,567
North Dakota	0.006	0.011	0.003	125
Ohio	0.310	0.750	0.222	7,011
Oklahoma	0.062	0.141	0.043	1,627
Oregon	0.158	0.342	0.100	3,011
Pennsylvania	0.147	0.363	0.106	3,057
Rhode Island	0.047	0.088	0.025	740
South Carolina	0.146	0.324	0.094	3,300
South Dakota	0.027	0.053	0.016	608
Tennessee	0.345	0.828	0.241	7,691
Texas	1.136	2.878	0.885	26,915
Utah	0.117	0.265	0.082	2,868
Vermont	0.005	0.010	0.003	113
Virginia	0.340	0.752	0.214	6,766
Washington	0.384	0.823	0.255	7,223
West Virginia	0.024	0.043	0.012	444
Wisconsin	0.118	0.259	0.079	2,488
Wyoming	0.005	0.008	0.002	91
State totals	**11.394**	**25.220**	**7.529**	**228,970**
Interstate spillovers		**11.019**	**3.392**	**91,205**
USA total	**11.394**	**36.239**	**10.921**	**320,175**

Source: CRA with data from McGraw-Hill Construction, BEA, NAIOP

Appendix Table E-2
Impacts of Industrial Tenant Improvement on State Economies, 2007

State	Direct Spending (billions)	Total Output (billions)	Personal Income (billions)	Jobs
Alabama	0.071	0.165	0.049	1,778
Alaska	0.002	0.004	0.001	35
Arizona	0.065	0.143	0.045	1,453
Arkansas	0.064	0.133	0.038	1,420
California	0.105	0.242	0.076	1,959
Colorado	0.015	0.033	0.011	311
Connecticut	0.036	0.072	0.022	516
Delaware	0.000	0.000	0.000	1
District of Columbia	0.000	0.000	0.000	0
Florida	0.086	0.183	0.058	1,980
Georgia	0.169	0.407	0.122	3,821
Hawaii	0.000	0.000	0.000	0
Idaho	0.007	0.014	0.004	161
Illinois	0.081	0.198	0.059	1,548
Indiana	0.294	0.667	0.195	6,387
Iowa	0.345	0.722	0.212	7,518
Kansas	0.094	0.201	0.056	1,909
Kentucky	0.014	0.030	0.009	310
Louisiana	0.293	0.609	0.186	6,656
Maine	0.021	0.042	0.013	479
Maryland	0.018	0.038	0.011	315
Massachusetts	0.080	0.167	0.050	1,195
Michigan	0.104	0.229	0.071	2,014
Minnesota	0.056	0.125	0.038	1,090
Mississippi	0.073	0.155	0.046	1,706
Missouri	0.020	0.046	0.013	402
Montana	0.001	0.002	0.001	28
Nebraska	0.013	0.026	0.008	270
Nevada	0.002	0.003	0.001	27
New Hampshire	0.015	0.031	0.009	255
New Jersey	0.037	0.080	0.023	566
New Mexico	0.003	0.005	0.002	64
New York	0.160	0.302	0.087	2,214
North Carolina	0.054	0.125	0.037	1,262
North Dakota	0.000	0.000	0.000	0
Ohio	0.155	0.375	0.111	3,505
Oklahoma	0.044	0.099	0.030	1,143
Oregon	0.034	0.073	0.021	638
Pennsylvania	0.121	0.298	0.087	2,510
Rhode Island	0.000	0.000	0.000	0
South Carolina	0.948	2.106	0.609	21,436
South Dakota	0.011	0.020	0.006	236
Tennessee	0.022	0.053	0.015	492
Texas	0.129	0.327	0.101	3,060
Utah	0.138	0.312	0.097	3,384
Vermont	0.005	0.009	0.003	103
Virginia	0.031	0.069	0.020	623
Washington	0.050	0.107	0.033	941
West Virginia	0.003	0.005	0.001	55
Wisconsin	0.095	0.208	0.063	1,994
Wyoming	0.000	0.000	0.000	2
State totals	**4.181**	**9.263**	**2.751**	**89,767**
Interstate spillovers		**4.034**	**1.257**	**27,714**
USA total	**4.181**	**13.297**	**4.007**	**117,481**

Source: CRA with data from McGraw-Hill Construction, BEA, NAIOP

Appendix Table E-3

Impacts of Warehouse and Transportation Terminal Tenant Improvement on State Economies, 2007

State	Direct Spending (billions)	Total Output (billions)	Personal Income (billions)	Jobs
Alabama	0.023	0.053	0.016	569
Alaska	0.005	0.009	0.003	79
Arizona	0.188	0.413	0.130	4,191
Arkansas	0.005	0.010	0.003	105
California	0.278	0.644	0.202	5,205
Colorado	0.068	0.151	0.048	1,410
Connecticut	0.032	0.065	0.019	461
Delaware	0.001	0.003	0.001	19
District of Columbia	0.004	0.005	0.000	8
Florida	0.350	0.747	0.236	8,079
Georgia	0.202	0.487	0.147	4,571
Hawaii	0.011	0.020	0.006	178
Idaho	0.012	0.023	0.007	266
Illinois	0.252	0.618	0.185	4,820
Indiana	0.119	0.269	0.078	2,572
Iowa	0.028	0.058	0.017	608
Kansas	0.027	0.058	0.016	551
Kentucky	0.049	0.105	0.030	1,082
Louisiana	0.029	0.060	0.018	653
Maine	0.004	0.009	0.003	101
Maryland	0.052	0.111	0.032	923
Massachusetts	0.021	0.044	0.013	313
Michigan	0.027	0.058	0.018	514
Minnesota	0.048	0.107	0.033	941
Mississippi	0.023	0.048	0.014	529
Missouri	0.036	0.084	0.024	734
Montana	0.002	0.003	0.001	41
Nebraska	0.008	0.016	0.005	172
Nevada	0.052	0.099	0.030	860
New Hampshire	0.004	0.008	0.002	68
New Jersey	0.136	0.297	0.086	2,102
New Mexico	0.009	0.017	0.005	203
New York	0.053	0.100	0.029	735
North Carolina	0.089	0.205	0.061	2,077
North Dakota	0.001	0.001	0.000	16
Ohio	0.094	0.226	0.067	2,114
Oklahoma	0.010	0.023	0.007	267
Oregon	0.037	0.079	0.023	698
Pennsylvania	0.169	0.417	0.122	3,516
Rhode Island	0.001	0.001	0.000	12
South Carolina	0.035	0.077	0.022	787
South Dakota	0.003	0.005	0.002	59
Tennessee	0.063	0.151	0.044	1,404
Texas	0.391	0.991	0.305	9,272
Utah	0.033	0.075	0.023	808
Vermont	0.002	0.004	0.001	48
Virginia	0.050	0.110	0.031	993
Washington	0.060	0.129	0.040	1,136
West Virginia	0.002	0.003	0.001	33
Wisconsin	0.034	0.074	0.023	714
Wyoming	0.001	0.001	0.000	10
State totals	**3.230**	**7.376**	**2.231**	**67,628**
Interstate spillovers		**2.897**	**0.865**	**23,138**
USA total	**3.230**	**10.273**	**3.096**	**90,766**

Source: CRA with data from McGraw-Hill Construction, BEA, NAIOP

Appendix Table E-4

Impacts of Retail and Entertainment Tenant Improvement on State Economies, 2007

State	Direct Spending (billions)	Total Output (billions)	Personal Income (billions)	Jobs
Alabama	0.150	0.352	0.104	3,783
Alaska	0.021	0.037	0.011	317
Arizona	0.330	0.725	0.228	7,368
Arkansas	0.068	0.142	0.041	1,512
California	0.805	1.862	0.584	15,053
Colorado	0.175	0.388	0.122	3,618
Connecticut	0.089	0.179	0.054	1,280
Delaware	0.011	0.021	0.005	158
District of Columbia	0.009	0.011	0.001	18
Florida	0.882	1.884	0.597	20,381
Georgia	0.379	0.913	0.275	8,567
Hawaii	0.039	0.073	0.023	656
Idaho	0.044	0.086	0.026	1,003
Illinois	0.414	1.013	0.303	7,903
Indiana	0.202	0.458	0.134	4,387
Iowa	0.094	0.196	0.058	2,039
Kansas	0.065	0.140	0.039	1,328
Kentucky	0.083	0.179	0.051	1,843
Louisiana	0.125	0.259	0.079	2,832
Maine	0.054	0.110	0.034	1,262
Maryland	0.129	0.277	0.080	2,309
Massachusetts	0.174	0.363	0.109	2,592
Michigan	0.188	0.413	0.128	3,629
Minnesota	0.091	0.202	0.062	1,771
Mississippi	0.083	0.177	0.052	1,943
Missouri	0.148	0.344	0.096	2,998
Montana	0.011	0.020	0.006	241
Nebraska	0.080	0.163	0.049	1,712
Nevada	0.249	0.472	0.144	4,081
New Hampshire	0.052	0.109	0.031	902
New Jersey	0.146	0.319	0.092	2,261
New Mexico	0.039	0.077	0.024	900
New York	0.511	0.960	0.277	7,049
North Carolina	0.235	0.541	0.162	5,474
North Dakota	0.012	0.022	0.006	249
Ohio	0.261	0.632	0.187	5,901
Oklahoma	0.093	0.212	0.064	2,438
Oregon	0.094	0.203	0.059	1,784
Pennsylvania	0.222	0.548	0.160	4,618
Rhode Island	0.025	0.048	0.014	404
South Carolina	0.166	0.369	0.107	3,755
South Dakota	0.013	0.026	0.008	298
Tennessee	0.229	0.550	0.160	5,108
Texas	0.785	1.990	0.612	18,613
Utah	0.084	0.190	0.059	2,063
Vermont	0.010	0.019	0.006	209
Virginia	0.221	0.489	0.139	4,401
Washington	0.222	0.475	0.147	4,169
West Virginia	0.019	0.034	0.009	354
Wisconsin	0.139	0.306	0.093	2,935
Wyoming	0.008	0.013	0.004	145
State totals	**8.779**	**19.591**	**5.916**	**180,613**
Interstate spillovers		**8.332**	**2.499**	**66,089**
USA total	**8.779**	**27.923**	**8.415**	**246,702**

Source: CRA with data from McGraw-Hill Construction, BEA, NAIOP

Appendix Table E-5

Impacts of Tenant improvement in Four Categories on State Economies, 2007

State	Direct Spending (billions)	Total Output (billions)	Personal Income (billions)	Jobs
Alabama	0.379	0.889	0.264	9,560
Alaska	0.063	0.109	0.034	931
Arizona	1.002	2.199	0.692	22,335
Arkansas	0.185	0.387	0.111	4,124
California	2.284	5.284	1.658	42,711
Colorado	0.536	1.189	0.375	11,099
Connecticut	0.253	0.511	0.154	3,643
Delaware	0.027	0.049	0.013	380
District of Columbia	0.292	0.374	0.023	584
Florida	2.338	4.992	1.581	54,004
Georgia	1.268	3.054	0.918	28,647
Hawaii	0.067	0.126	0.040	1,125
Idaho	0.108	0.213	0.065	2,478
Illinois	1.186	2.902	0.868	22,645
Indiana	0.827	1.874	0.547	17,937
Iowa	0.579	1.212	0.356	12,619
Kansas	0.317	0.678	0.188	6,444
Kentucky	0.229	0.495	0.140	5,083
Louisiana	0.624	1.296	0.396	14,170
Maine	0.096	0.193	0.060	2,220
Maryland	0.442	0.948	0.275	7,907
Massachusetts	0.492	1.026	0.309	7,332
Michigan	0.433	0.950	0.296	8,357
Minnesota	0.336	0.746	0.228	6,527
Mississippi	0.256	0.548	0.161	6,021
Missouri	0.385	0.893	0.249	7,772
Montana	0.027	0.051	0.016	619
Nebraska	0.177	0.358	0.107	3,771
Nevada	0.417	0.791	0.242	6,840
New Hampshire	0.098	0.207	0.059	1,713
New Jersey	0.466	1.021	0.296	7,225
New Mexico	0.108	0.211	0.066	2,483
New York	1.577	2.965	0.855	21,761
North Carolina	0.961	2.211	0.661	22,380
North Dakota	0.019	0.035	0.010	390
Ohio	0.820	1.984	0.586	18,531
Oklahoma	0.210	0.475	0.144	5,474
Oregon	0.323	0.697	0.204	6,130
Pennsylvania	0.659	1.625	0.475	13,701
Rhode Island	0.073	0.138	0.039	1,155
South Carolina	1.295	2.877	0.832	29,277
South Dakota	0.054	0.104	0.031	1,202
Tennessee	0.659	1.582	0.460	14,695
Texas	2.441	6.187	1.902	57,859
Utah	0.371	0.842	0.261	9,122
Vermont	0.023	0.043	0.013	474
Virginia	0.642	1.422	0.403	12,783
Washington	0.716	1.534	0.475	13,468
West Virginia	0.048	0.085	0.023	886
Wisconsin	0.385	0.847	0.258	8,131
Wyoming	0.013	0.022	0.006	248
State totals	**27.584**	**61.451**	**18.427**	**566,978**
Interstate spillovers		**26.281**	**8.013**	**208,146**
USA total	**27.584**	**87.732**	**26.440**	**775,124**

Source: CRA with data from McGraw-Hill Construction, BEA, NAIOP

Appendix F: Total Impacts by State

Appendix Table F-1
Impacts of Office Soft Costs, Site Development, Hard Costs, and Tenant Improvement on State Economies, 2007

State	Direct Spending (billions)	Total Output (billions)	Personal Income (billions)	Jobs
Alabama	0.752	1.694	0.526	18,796
Alaska	0.186	0.333	0.107	3,081
Arizona	2.310	4.940	1.608	53,743
Arkansas	0.269	0.563	0.172	6,093
California	6.055	14.017	4.559	117,724
Colorado	1.537	3.419	1.124	32,562
Connecticut	0.532	1.067	0.333	7,907
Delaware	0.080	0.139	0.034	975
District of Columbia	1.544	2.091	0.240	6,023
Florida	5.636	12.033	3.964	131,356
Georgia	2.857	6.829	2.133	64,276
Hawaii	0.095	0.181	0.060	1,792
Idaho	0.253	0.494	0.158	6,000
Illinois	2.423	5.703	1.775	50,456
Indiana	1.169	2.657	0.810	25,226
Iowa	0.622	1.291	0.397	13,893
Kansas	0.723	1.522	0.440	14,999
Kentucky	0.460	0.978	0.288	10,278
Louisiana	0.981	2.012	0.642	22,739
Maine	0.090	0.182	0.059	2,008
Maryland	1.346	2.869	0.862	24,393
Massachusetts	1.198	2.460	0.772	20,216
Michigan	0.630	1.365	0.441	12,401
Minnesota	0.776	1.714	0.545	15,608
Mississippi	0.433	0.918	0.276	9,953
Missouri	0.995	2.226	0.651	21,167
Montana	0.075	0.140	0.046	1,796
Nebraska	0.420	0.856	0.268	9,115
Nevada	0.631	1.187	0.376	11,390
New Hampshire	0.154	0.320	0.096	2,929
New Jersey	0.819	1.759	0.529	13,283
New Mexico	0.316	0.630	0.201	6,997
New York	4.709	8.886	2.728	75,400
North Carolina	3.217	7.171	2.229	72,566
North Dakota	0.034	0.063	0.019	660
Ohio	1.714	4.065	1.249	39,148
Oklahoma	0.344	0.769	0.243	9,219
Oregon	0.875	1.874	0.572	17,722
Pennsylvania	0.812	1.963	0.594	16,747
Rhode Island	0.257	0.487	0.143	4,330
South Carolina	0.807	1.763	0.535	18,567
South Dakota	0.151	0.286	0.090	3,437
Tennessee	1.905	4.505	1.359	42,853
Texas	6.274	15.704	4.994	147,506
Utah	0.644	1.454	0.468	16,532
Vermont	0.030	0.058	0.018	612
Virginia	1.879	4.039	1.205	38,713
Washington	2.123	4.542	1.462	42,067
West Virginia	0.132	0.242	0.071	2,625
Wisconsin	0.652	1.382	0.437	14,130
Wyoming	0.026	0.044	0.014	532
State totals	**62.950**	**137.882**	**42.921**	**1,302,541**
Interstate spillovers		**59.603**	**18.466**	**462,048**
USA total	**62.950**	**197.485**	**61.387**	**1,764,589**

Source: CRA with data from McGraw-Hill Construction, BEA and NAIOP

Appendix Table F-2
Impacts of Industrial Soft Costs, Site Development, Hard Costs, and Tenant Improvement on State Economies, 2007

State	Direct Spending (billions)	Total Output (billions)	Personal Income (billions)	Jobs
Alabama	0.514	1.169	0.359	12,879
Alaska	0.017	0.030	0.010	277
Arizona	0.475	1.022	0.330	10,941
Arkansas	0.464	0.970	0.292	10,460
California	0.764	1.768	0.570	14,713
Colorado	0.109	0.243	0.079	2,306
Connecticut	0.261	0.525	0.162	3,856
Delaware	0.000	0.000	0.000	3
District of Columbia	0.000	0.000	0.000	0
Florida	0.625	1.334	0.436	14,535
Georgia	1.232	2.952	0.914	27,757
Hawaii	0.000	0.000	0.000	0
Idaho	0.051	0.101	0.032	1,210
Illinois	0.591	1.404	0.433	12,062
Indiana	2.146	4.874	1.471	46,366
Iowa	2.514	5.230	1.590	55,837
Kansas	0.686	1.449	0.415	14,156
Kentucky	0.102	0.217	0.063	2,270
Louisiana	2.138	4.398	1.389	49,315
Maine	0.151	0.305	0.097	3,394
Maryland	0.128	0.274	0.082	2,317
Massachusetts	0.585	1.205	0.374	9,591
Michigan	0.761	1.653	0.530	14,901
Minnesota	0.409	0.905	0.285	8,165
Mississippi	0.529	1.124	0.336	12,228
Missouri	0.145	0.327	0.095	3,050
Montana	0.009	0.017	0.006	214
Nebraska	0.092	0.188	0.058	1,994
Nevada	0.012	0.022	0.007	209
New Hampshire	0.106	0.222	0.066	1,984
New Jersey	0.266	0.575	0.171	4,274
New Mexico	0.020	0.041	0.013	456
New York	1.170	2.206	0.667	18,120
North Carolina	0.395	0.887	0.273	8,975
North Dakota	0.000	0.000	0.000	2
Ohio	1.131	2.694	0.820	25,764
Oklahoma	0.319	0.715	0.224	8,497
Oregon	0.245	0.525	0.159	4,882
Pennsylvania	0.880	2.137	0.641	18,185
Rhode Island	0.000	0.000	0.000	0
South Carolina	6.915	15.170	4.549	158,469
South Dakota	0.078	0.147	0.046	1,754
Tennessee	0.161	0.381	0.114	3,607
Texas	0.941	2.363	0.745	22,171
Utah	1.003	2.267	0.724	25,491
Vermont	0.036	0.069	0.021	737
Virginia	0.228	0.494	0.146	4,665
Washington	0.365	0.781	0.249	7,142
West Virginia	0.022	0.039	0.011	424
Wisconsin	0.689	1.474	0.462	14,850
Wyoming	0.001	0.001	0.000	14
State totals	**30.481**	**66.895**	**20.518**	**665,469**
Interstate spillovers		**29.041**	**9.086**	**189,452**
USA total	**30.481**	**95.936**	**29.604**	**854,921**

Source: CRA with data from McGraw-Hill Construction, BEA and NAIOP

Appendix Table F-3

Impacts of Warehouse and Transportation Terminal Soft Costs, Site Development, Hard Costs, and Tenant Improvement on State Economies, 2007

State	Direct Spending (billions)	Total Output (billions)	Personal Income (billions)	Jobs
Alabama	0.162	0.369	0.114	4,067
Alaska	0.038	0.068	0.022	618
Arizona	1.353	2.906	0.941	31,234
Arkansas	0.034	0.071	0.021	762
California	2.003	4.637	1.498	38,678
Colorado	0.490	1.090	0.356	10,344
Connecticut	0.231	0.463	0.143	3,408
Delaware	0.010	0.017	0.004	124
District of Columbia	0.027	0.037	0.004	97
Florida	2.517	5.374	1.758	58,566
Georgia	1.456	3.484	1.081	32,774
Hawaii	0.076	0.145	0.048	1,405
Idaho	0.084	0.164	0.052	1,973
Illinois	1.816	4.306	1.330	37,257
Indiana	0.853	1.937	0.586	18,422
Iowa	0.201	0.417	0.127	4,461
Kansas	0.195	0.413	0.118	4,039
Kentucky	0.351	0.747	0.218	7,824
Louisiana	0.207	0.425	0.135	4,778
Maine	0.031	0.063	0.020	706
Maryland	0.371	0.792	0.237	6,713
Massachusetts	0.151	0.312	0.097	2,500
Michigan	0.192	0.416	0.134	3,756
Minnesota	0.349	0.771	0.243	6,972
Mississippi	0.162	0.344	0.103	3,741
Missouri	0.262	0.589	0.171	5,513
Montana	0.013	0.024	0.008	310
Nebraska	0.058	0.118	0.037	1,255
Nevada	0.377	0.711	0.224	6,702
New Hampshire	0.028	0.059	0.017	527
New Jersey	0.976	2.104	0.628	15,706
New Mexico	0.064	0.126	0.040	1,417
New York	0.383	0.723	0.220	5,986
North Carolina	0.642	1.439	0.444	14,559
North Dakota	0.006	0.011	0.003	112
Ohio	0.673	1.602	0.489	15,346
Oklahoma	0.074	0.165	0.052	1,961
Oregon	0.264	0.567	0.172	5,294
Pennsylvania	1.216	2.951	0.887	25,129
Rhode Island	0.005	0.010	0.003	88
South Carolina	0.251	0.549	0.165	5,748
South Dakota	0.019	0.036	0.011	434
Tennessee	0.453	1.074	0.322	10,177
Texas	2.815	7.062	2.232	66,284
Utah	0.236	0.534	0.171	6,021
Vermont	0.017	0.032	0.010	342
Virginia	0.359	0.776	0.229	7,354
Washington	0.435	0.930	0.297	8,535
West Virginia	0.013	0.023	0.007	251
Wisconsin	0.243	0.520	0.163	5,253
Wyoming	0.004	0.007	0.002	79
State totals	**23.245**	**52.512**	**16.395**	**495,601**
Interstate spillovers		**20.594**	**6.203**	**156,283**
USA total	**23.245**	**73.106**	**22.598**	**651,884**

Source: CRA with data from McGraw-Hill Construction, BEA and NAIOP

Appendix Table F-4
Impacts of Retail and Entertainment Soft Costs, Site Development, Hard Costs, and Tenant Improvement on State Economies, 2007

State	Direct Spending (billions)	Total Output (billions)	Personal Income (billions)	Jobs
Alabama	0.993	2.239	0.695	24,820
Alaska	0.141	0.252	0.081	2,329
Arizona	2.185	4.676	1.521	50,769
Arkansas	0.448	0.937	0.286	10,134
California	5.323	12.323	4.003	103,373
Colorado	1.156	2.571	0.844	24,468
Connecticut	0.588	1.179	0.367	8,727
Delaware	0.075	0.131	0.032	919
District of Columbia	0.059	0.080	0.009	226
Florida	5.835	12.457	4.099	135,951
Georgia	2.507	5.993	1.869	56,399
Hawaii	0.257	0.490	0.162	4,825
Idaho	0.290	0.567	0.181	6,874
Illinois	2.736	6.449	2.005	56,840
Indiana	1.337	3.038	0.925	28,852
Iowa	0.618	1.284	0.394	13,804
Kansas	0.433	0.911	0.263	8,968
Kentucky	0.549	1.167	0.343	12,262
Louisiana	0.825	1.693	0.539	19,115
Maine	0.360	0.728	0.234	8,044
Maryland	0.853	1.818	0.546	15,452
Massachusetts	1.150	2.363	0.741	19,335
Michigan	1.243	2.694	0.870	24,454
Minnesota	0.604	1.334	0.423	12,129
Mississippi	0.547	1.159	0.348	12,574
Missouri	0.981	2.198	0.642	20,842
Montana	0.070	0.131	0.043	1,678
Nebraska	0.531	1.083	0.339	11,533
Nevada	1.646	3.097	0.980	29,633
New Hampshire	0.341	0.709	0.213	6,474
New Jersey	0.964	2.074	0.623	15,627
New Mexico	0.259	0.515	0.164	5,734
New York	3.378	6.374	1.953	53,855
North Carolina	1.554	3.466	1.076	35,078
North Dakota	0.081	0.150	0.045	1,580
Ohio	1.727	4.098	1.257	39,429
Oklahoma	0.618	1.379	0.435	16,522
Oregon	0.621	1.330	0.405	12,545
Pennsylvania	1.468	3.551	1.073	30,295
Rhode Island	0.168	0.319	0.094	2,828
South Carolina	1.099	2.402	0.727	25,270
South Dakota	0.089	0.168	0.053	2,015
Tennessee	1.515	3.583	1.079	34,056
Texas	5.193	13.004	4.131	122,126
Utah	0.555	1.252	0.403	14,219
Vermont	0.066	0.128	0.040	1,355
Virginia	1.462	3.147	0.938	30,104
Washington	1.467	3.138	1.009	29,019
West Virginia	0.126	0.230	0.067	2,499
Wisconsin	0.920	1.953	0.617	19,929
Wyoming	0.050	0.083	0.026	1,018
State totals	**58.057**	**128.096**	**40.214**	**1,226,905**
Interstate spillovers		**54.117**	**16.371**	**400,647**
USA total	**58.057**	**182.213**	**56.585**	**1,627,552**

Source: CRA with data from McGraw-Hill Construction, BEA and NAIOP

Appendix Table F-5

Impacts of Soft Costs, Site Development, Hard Costs, and Tenant Improvement in Four Categories on State Economies, 2007

State	Direct Spending (billions)	Total Output (billions)	Personal Income (billions)	Jobs
Alabama	2.422	5.471	1.694	60,562
Alaska	0.382	0.683	0.220	6,305
Arizona	6.322	13.544	4.400	146,687
Arkansas	1.216	2.540	0.772	27,449
California	14.145	32.744	10.630	274,488
Colorado	3.293	7.323	2.404	69,680
Connecticut	1.611	3.233	1.006	23,897
Delaware	0.166	0.288	0.070	2,021
District of Columbia	1.630	2.207	0.253	6,347
Florida	14.612	31.199	10.256	340,407
Georgia	8.052	19.258	5.997	181,206
Hawaii	0.428	0.816	0.270	8,021
Idaho	0.677	1.325	0.422	16,057
Illinois	7.565	17.863	5.543	156,615
Indiana	5.504	12.506	3.793	118,866
Iowa	3.955	8.222	2.508	87,995
Kansas	2.036	4.295	1.236	42,161
Kentucky	1.462	3.110	0.913	32,633
Louisiana	4.150	8.528	2.705	95,947
Maine	0.632	1.279	0.410	14,152
Maryland	2.698	5.753	1.727	48,875
Massachusetts	3.085	6.339	1.984	51,642
Michigan	2.826	6.127	1.975	55,512
Minnesota	2.138	4.725	1.497	42,874
Mississippi	1.671	3.545	1.063	38,497
Missouri	2.383	5.340	1.559	50,572
Montana	0.167	0.312	0.103	3,997
Nebraska	1.101	2.245	0.702	23,897
Nevada	2.666	5.018	1.587	47,934
New Hampshire	0.629	1.310	0.392	11,914
New Jersey	3.025	6.512	1.951	48,890
New Mexico	0.659	1.311	0.418	14,604
New York	9.640	18.189	5.567	153,361
North Carolina	5.807	12.963	4.023	131,179
North Dakota	0.120	0.224	0.066	2,355
Ohio	5.244	12.459	3.814	119,687
Oklahoma	1.355	3.028	0.954	36,199
Oregon	2.005	4.296	1.307	40,443
Pennsylvania	4.376	10.602	3.195	90,356
Rhode Island	0.430	0.816	0.240	7,246
South Carolina	9.071	19.885	5.976	208,053
South Dakota	0.337	0.639	0.199	7,639
Tennessee	4.034	9.543	2.874	90,693
Texas	15.224	38.133	12.103	358,088
Utah	2.438	5.508	1.766	62,263
Vermont	0.149	0.288	0.089	3,046
Virginia	3.928	8.455	2.518	80,836
Washington	4.388	9.391	3.017	86,763
West Virginia	0.292	0.534	0.157	5,799
Wisconsin	2.504	5.329	1.680	54,162
Wyoming	0.081	0.135	0.043	1,644
State totals	**174.733**	**385.385**	**120.048**	**3,690,517**
Interstate spillovers		**163.356**	**50.127**	**1,208,429**
USA total	**174.733**	**548.741**	**170.175**	**4,898,946**

Source: CRA with data from McGraw-Hill Construction, BEA and NAIOP

Appendix G: Operating Impacts by State

Appendix Table G-1
Impacts of the Office Operations on State Economies, 2007

State	Direct Spending (000s)	Total Output (000s)	Personal Income (000s)	Jobs
Alabama	13,236.70	26,410.30	8,572.53	352
*Alaska	3,692.21	6,522.90	2,187.26	88
Arizona	70,990.90	143,091.63	48,226.49	1,680
Arkansas	6,547.63	12,146.08	3,939.06	183
California	162,778.69	366,778.38	121,248.42	3,793
Colorado	36,903.51	80,010.50	26,529.93	904
Connecticut	13,691.69	26,177.14	8,278.00	249
*Delaware	2,528.63	4,361.22	1,154.74	40
District of Columbia	28,228.02	36,586.34	3,520.03	141
Florida	162,872.93	335,621.38	113,180.40	3,958
Georgia	65,026.56	144,640.75	46,641.39	1,498
*Hawaii	1,771.61	3,425.29	1,159.69	47
Idaho	4,420.73	8,188.37	2,708.58	125
Illinois	62,895.22	141,103.32	44,942.82	1,394
Indiana	27,820.79	55,262.28	17,511.33	670
Iowa	16,910.98	31,702.45	10,126.86	454
Kansas	15,109.58	29,193.23	8,740.89	362
Kentucky	9,327.13	18,132.56	5,535.34	220
Louisiana	16,942.24	32,544.91	10,709.19	467
Maine	1,951.72	3,650.04	1,203.76	51
Maryland	40,004.04	79,794.72	24,421.13	811
Massachusetts	24,656.36	49,503.40	15,806.37	478
Michigan	15,001.20	29,930.89	9,902.29	334
Minnesota	24,066.45	50,554.78	16,464.66	570
Mississippi	5,873.67	10,824.00	3,448.43	161
Missouri	17,701.44	35,874.91	10,550.65	394
Montana	1,933.29	3,551.77	1,197.74	57
Nebraska	10,601.19	19,935.54	6,428.56	280
Nevada	18,845.04	34,313.68	11,204.63	378
*New Hampshire	3,408.43	6,539.98	2,018.36	69
New Jersey	17,796.04	37,492.69	11,402.51	341
New Mexico	5,968.03	11,054.59	3,712.91	159
New York	56,409.35	106,989.74	31,756.59	970
North Carolina	60,673.43	126,504.11	40,762.43	1,537
*North Dakota	854.59	1,528.32	480.88	22
Ohio	42,327.84	90,077.87	28,630.55	1,041
Oklahoma	6,443.10	13,192.47	4,302.92	195
Oregon	21,590.79	43,187.35	13,674.17	556
Pennsylvania	22,335.89	47,928.35	14,944.20	485
Rhode Island	6,219.78	11,424.69	3,506.09	128
South Carolina	22,861.47	45,373.16	14,361.57	588
*South Dakota	3,878.81	6,762.45	2,129.34	101
Tennessee	43,185.85	92,026.17	28,411.97	1,000
Texas	126,768.38	291,106.68	72,841.11	3,224
Utah	16,677.29	35,634.93	11,773.06	514
Vermont	781.75	1,405.48	445.49	19
Virginia	34,390.59	69,798.00	21,097.48	723
Washington	40,391.00	83,618.79	27,211.42	988
*West Virginia	1,255.49	2,181.24	687.55	29
Wisconsin	18,092.48	36,023.34	11,755.29	463
*Wyoming	439.21	729.96	243.98	12
State totals	**1,435,079.73**	**2,980,413.10**	**931,691.04**	**33,303**

Source: CRA with data from BOMA, McGraw-Hill Construction and BEA
*Direct spending for offices is calculated by multiplying BOMA's average operating costs in dollars per square foot with square foot. BOMA's 2007 data are averages of downtown and suburban operating costs for selected locations within each state. State-specific data did not exist for nine states. States without reported data were assigned the average of similar or adjacent, contiguous states except for Alaska and Hawaii, where the national average square foot operating cost value was used.

Appendix Table G-2
Impacts of the Industrial Operations on State Economies, 2007

State	Direct Spending (000s)	Total Output (000s)	Personal Income (000s)	Jobs
Alabama	2,286.85	4,562.80	1,481.04	61
Alaska	44.02	77.76	26.08	1
Arizona	364.25	734.19	247.44	9
Arkansas	2,416.57	4,482.81	1,453.81	67
California	2,929.20	6,600.18	2,181.87	68
Colorado	227.26	492.72	163.38	6
Connecticut	1,027.05	1,963.61	620.95	19
Delaware	0.00	0.00	0.00	0
District of Columbia	*			
Florida	2,426.77	5,000.68	1,686.36	59
Georgia	2,199.46	4,892.32	1,577.60	51
Hawaii	*			
Idaho	210.17	389.28	128.77	6
Illinois	2,080.79	4,668.19	1,486.86	46
Indiana	5,210.95	10,350.85	3,279.94	125
Iowa	2,916.23	5,466.95	1,746.33	78
Kansas	1,371.52	2,649.92	793.42	33
Kentucky	615.02	1,195.64	364.99	15
Louisiana	1,130.64	2,171.89	714.68	31
Maine	618.15	1,156.05	381.26	16
Maryland	780.54	1,556.92	476.49	16
Massachusetts	1,408.52	2,827.93	902.96	27
Michigan	2,764.84	5,516.50	1,825.07	61
Minnesota	311.36	654.05	213.01	7
Mississippi	2,673.88	4,927.42	1,569.83	73
Missouri	1,474.77	2,988.86	879.01	33
Montana	53.39	98.09	33.08	2
Nebraska	136.40	256.51	82.72	4
Nevada	12.45	22.67	7.40	0
New Hampshire	824.41	1,581.84	488.19	17
New Jersey	570.46	1,201.84	365.51	11
New Mexico	27.90	51.69	17.36	1
New York	2,428.95	4,606.92	1,367.42	42
North Carolina	2,068.87	4,313.59	1,389.93	52
North Dakota	0.00	0.00	0.00	0
Ohio	3,976.40	8,462.17	2,689.64	98
Oklahoma	2,169.60	4,442.32	1,448.93	66
Oregon	1,226.13	2,452.59	776.55	32
Pennsylvania	2,623.76	5,630.07	1,755.47	57
Rhode Island	*			
South Carolina	2,901.37	5,758.35	1,822.64	75
South Dakota	404.75	705.66	222.20	10
Tennessee	762.03	1,623.83	501.34	18
Texas	5,087.08	11,681.79	2,923.03	129
Utah	661.43	1,413.31	466.93	20
Vermont	161.07	289.57	91.79	4
Virginia	1,253.98	2,545.04	769.28	26
Washington	1,554.06	3,217.28	1,046.97	38
West Virginia	61.05	106.07	33.43	1
Wisconsin	3,716.95	7,400.70	2,415.03	95
Wyoming	0.52	0.87	0.29	0
State totals	**70,171.83**	**143,190.32**	**44,916.29**	**1,706**

Source: CRA with data from McGraw-Hill Construction and BEA
*values not reported

Appendix Table G-3

Impacts of the Warehouse Operations on State Economies, 2007

State	Direct Spending (000s)	Total Output (000s)	Personal Income (000s)	Jobs
Alabama	1,249.35	2,492.75	809.12	33
Alaska	150.32	265.57	89.05	4
Arizona	5,676.64	11,442.02	3,856.33	134
Arkansas	315.79	585.80	189.98	9
California	12,902.46	29,072.25	9,610.61	301
Colorado	2,474.90	5,365.84	1,779.21	61
Connecticut	1,148.98	2,196.74	694.67	21
Delaware	51.60	88.99	23.56	1
District of Columbia	242.86	314.77	30.28	1
Florida	17,752.59	36,581.59	12,336.28	431
Georgia	11,138.52	24,775.79	7,989.29	257
Hawaii	340.31	657.97	222.77	9
Idaho	635.86	1,177.79	389.59	18
Illinois	13,713.07	30,764.81	9,798.90	304
Indiana	7,705.97	15,306.88	4,850.39	185
Iowa	2,336.12	4,379.45	1,398.95	63
Kansas	2,055.57	3,971.57	1,189.15	49
Kentucky	2,297.83	4,467.14	1,363.69	54
Louisiana	2,055.01	3,947.53	1,298.97	57
Maine	269.22	503.48	166.04	7
Maryland	1,860.06	3,710.20	1,135.51	38
Massachusetts	914.44	1,835.95	586.22	18
Michigan	973.14	1,941.65	642.37	22
Minnesota	1,727.91	3,629.71	1,182.12	41
Mississippi	1,350.42	2,488.55	792.83	37
Missouri	2,403.85	4,871.81	1,432.78	54
Montana	117.36	215.62	72.71	3
Nebraska	226.03	425.05	137.06	6
Nevada	1,687.00	3,071.74	1,003.03	34
New Hampshire	166.48	319.43	98.58	3
New Jersey	4,500.94	9,482.59	2,883.90	86
New Mexico	364.03	674.30	226.48	10
New York	1,691.54	3,208.28	952.28	29
North Carolina	4,016.29	8,373.97	2,698.28	102
North Dakota	38.31	68.52	21.56	1
Ohio	6,378.54	13,574.18	4,314.45	157
Oklahoma	890.02	1,822.34	594.38	27
Oregon	1,964.97	3,930.47	1,244.48	51
Pennsylvania	6,243.31	13,396.89	4,177.19	135
Rhode Island	27.75	50.97	15.64	1
South Carolina	2,049.01	4,066.67	1,287.19	53
South Dakota	173.51	302.50	95.25	4
Tennessee	2,466.68	5,256.34	1,622.83	57
Texas	21,858.14	50,194.32	12,559.69	556
Utah	836.57	1,787.53	590.56	26
Vermont	82.13	147.66	46.80	2
Virginia	2,824.62	5,732.75	1,732.81	59
Washington	3,138.47	6,497.36	2,114.38	77
West Virginia	59.41	103.22	32.54	1
Wisconsin	1,311.21	2,610.71	851.94	34
Wyoming	28.56	47.47	15.87	1
State totals	**156,883.70**	**332,197.44**	**103,248.56**	**3,722**

Source: CRA with data from McGraw-Hill Construction and BEA

Appendix Table G-4
Impacts of the Retail Operations on State Economies, 2007

State	Direct Spending (000s)	Total Output (000s)	Personal Income (000s)	Jobs
Alabama	10,948.66	21,845.14	7,090.72	291
Alaska	2,707.83	4,783.83	1,604.12	65
Arizona	53,085.97	107,001.85	36,063.07	1,256
Arkansas	4,553.54	8,446.98	2,739.41	127
California	92,943.94	209,424.39	69,230.84	2,166
Colorado	22,163.90	48,053.56	15,933.63	543
Connecticut	9,297.60	17,776.09	5,621.33	169
Delaware	745.06	1,285.03	340.24	12
District of Columbia	162.99	211.25	20.32	1
Florida	63,018.05	129,857.09	43,791.24	1,531
Georgia	25,938.49	57,695.85	18,604.82	597
Hawaii	2,361.74	4,566.27	1,545.99	63
Idaho	5,986.08	11,087.82	3,667.67	170
Illinois	36,169.00	81,143.94	25,845.16	802
Indiana	17,694.00	35,146.76	11,137.19	426
Iowa	7,835.56	14,689.07	4,692.20	211
Kansas	5,727.25	11,065.61	3,313.21	137
Kentucky	6,222.39	12,096.74	3,692.78	147
Louisiana	7,893.11	15,162.14	4,989.23	218
Maine	5,747.81	10,749.37	3,545.06	151
Maryland	8,392.00	16,739.25	5,123.04	170
Massachusetts	14,309.87	28,730.40	9,173.58	278
Michigan	15,507.89	30,941.86	10,236.76	345
Minnesota	8,451.76	17,754.05	5,782.13	200
Mississippi	6,374.33	11,746.61	3,742.37	175
Missouri	11,830.57	23,976.62	7,051.41	263
Montana	1,277.26	2,346.53	791.30	38
Nebraska	6,993.91	13,152.04	4,241.10	185
Nevada	24,800.33	45,157.27	14,745.45	497
New Hampshire	5,385.21	10,332.97	3,188.94	109
New Jersey	12,446.26	26,221.79	7,974.74	239
New Mexico	7,338.49	13,593.09	4,565.52	195
New York	32,240.26	61,149.02	18,150.19	555
North Carolina	17,125.16	35,705.95	11,505.25	434
North Dakota	1,451.77	2,596.29	816.91	38
Ohio	24,147.46	51,388.22	16,333.34	594
Oklahoma	5,996.27	12,277.56	4,004.51	182
Oregon	9,164.00	18,330.44	5,803.87	236
Pennsylvania	20,715.30	44,450.90	13,859.92	450
Rhode Island	1,298.57	2,385.26	732.00	27
South Carolina	11,588.25	22,999.20	7,279.74	298
South Dakota	1,193.38	2,080.58	655.13	31
Tennessee	15,810.57	33,691.28	10,401.78	366
Texas	54,728.15	125,675.89	31,446.79	1,392
Utah	11,253.30	24,045.31	7,944.08	347
Vermont	566.76	1,018.96	322.98	14
Virginia	14,978.77	30,400.42	9,188.98	315
Washington	29,623.02	61,326.56	19,957.03	725
West Virginia	1,222.78	2,124.42	669.64	29
Wisconsin	12,172.15	24,235.56	7,908.65	312
Wyoming	1,536.54	2,553.73	853.55	41
State totals	**771,123.32**	**1,601,216.78**	**507,918.92**	**18,156**

Source: CRA with data from McGraw-Hill Construction and BEA

Appendix Table G-5
Impacts of the Office, Industrial, Warehouse, and Retail Operations on State Economies, 2007

State	Direct Spending (000s)	Total Output (000s)	Personal Income (000s)	Jobs
Alabama	27,721.57	55,310.99	17,953.41	737
Alaska	6,594.37	11,650.06	3,906.51	157
Arizona	130,117.75	262,269.68	88,393.33	3,079
Arkansas	13,833.53	25,661.66	8,322.25	386
California	271,554.30	611,875.20	202,271.75	6,327
Colorado	61,769.57	133,922.61	44,406.15	1,513
Connecticut	25,165.32	48,113.58	15,214.95	457
Delaware	3,325.29	5,735.24	1,518.55	53
District of Columbia	28,633.86	37,112.35	3,570.64	143
Florida	246,070.34	507,060.73	170,994.28	5,980
Georgia	104,303.03	232,004.71	74,813.09	2,402
Hawaii	4,473.66	8,649.52	2,928.46	119
Idaho	11,252.84	20,843.26	6,894.62	319
Illinois	114,858.07	257,680.26	82,073.75	2,546
Indiana	58,431.70	116,066.78	36,778.86	1,406
Iowa	29,998.90	56,237.93	17,964.34	806
Kansas	24,263.92	46,880.33	14,036.68	582
Kentucky	18,462.37	35,892.09	10,956.80	436
Louisiana	28,021.00	53,826.47	17,712.07	772
Maine	8,586.91	16,058.94	5,296.12	225
Maryland	51,036.64	101,801.09	31,156.17	1,034
Massachusetts	41,289.19	82,897.68	26,469.12	801
Michigan	34,247.08	68,330.91	22,606.49	761
Minnesota	34,557.47	72,592.58	23,641.92	818
Mississippi	16,272.29	29,986.57	9,553.46	446
Missouri	33,410.63	67,712.20	19,913.85	744
Montana	3,381.30	6,212.01	2,094.83	99
Nebraska	17,957.53	33,769.13	10,889.45	475
Nevada	45,344.83	82,565.37	26,960.52	908
New Hampshire	9,784.53	18,774.23	5,794.07	198
New Jersey	35,313.70	74,398.90	22,626.66	677
New Mexico	13,698.46	25,373.66	8,522.27	365
New York	92,770.10	175,953.96	52,226.48	1,596
North Carolina	83,883.75	174,897.61	56,355.90	2,125
North Dakota	2,344.67	4,193.12	1,319.34	61
Ohio	76,830.24	163,502.44	51,967.98	1,890
Oklahoma	15,498.99	31,734.69	10,350.74	470
Oregon	33,945.90	67,900.85	21,499.07	874
Pennsylvania	51,918.26	111,406.21	34,736.78	1,127
Rhode Island	7,546.09	13,860.91	4,253.73	155
South Carolina	39,400.10	78,197.38	24,751.14	1,013
South Dakota	5,650.46	9,851.19	3,101.91	147
Tennessee	62,225.14	132,597.62	40,937.92	1,442
Texas	208,441.75	478,658.69	119,770.63	5,301
Utah	29,428.60	62,881.08	20,774.63	907
Vermont	1,591.70	2,861.67	907.06	39
Virginia	53,447.97	108,476.21	32,788.55	1,124
Washington	74,706.54	154,659.98	50,329.80	1,828
West Virginia	2,598.74	4,514.96	1,423.15	61
Wisconsin	35,292.80	70,270.31	22,930.91	903
Wyoming	2,004.83	3,332.03	1,113.69	53
State totals	**2,433,258.57**	**5,057,017.65**	**1,587,774.80**	**56,887**

Source: CRA with data from BOMA, McGraw-Hill Construction and BEA

Appendix H: National and State Multipliers

What is a Multiplier?

A number used to calculate the final economic impact of one dollar spent.

Appendix Table H-1

Output, Earnings, and Employment Multipliers: Construction

State	MULTIPLIERS		
	Output	Earnings	Employment
Alabama	2.3431	0.6952	25.2
Alaska	1.7473	0.5388	14.9
Arizona	2.1955	0.6910	22.3
Arkansas	2.0902	0.6016	22.3
California	2.3136	0.7258	18.7
Colorado	2.2171	0.7000	20.7
Connecticut	2.0190	0.6070	14.4
Delaware	1.8081	0.4727	13.9
District of Columbia	1.2786	0.0800	2.0
Florida	2.1351	0.6761	23.1
Georgia	2.4096	0.7243	22.6
Hawaii	1.8884	0.6004	16.9
Idaho	1.9664	0.6028	22.9
Illinois	2.4478	0.7319	19.1
Indiana	2.2673	0.6616	21.7
Iowa	2.0930	0.6158	21.8
Kansas	2.1369	0.5931	20.3
Kentucky	2.1604	0.6096	22.2
Louisiana	2.0767	0.6348	22.7
Maine	2.0151	0.6257	23.2
Maryland	2.1469	0.6230	17.9
Massachusetts	2.0853	0.6275	14.9
Michigan	2.1946	0.6830	19.3
Minnesota	2.2170	0.6776	19.4
Mississippi	2.1384	0.6284	23.5
Missouri	2.3211	0.6481	20.2
Montana	1.8630	0.5888	22.8
Nebraska	2.0228	0.6066	21.3
Nevada	1.8972	0.5804	16.4
New Hampshire	2.1112	0.6013	17.5
New Jersey	2.1904	0.6340	15.5
New Mexico	1.9563	0.6102	23.0
New York	1.8800	0.5421	13.8
North Carolina	2.3023	0.6879	23.3
North Dakota	1.8420	0.5316	20.4
Ohio	2.4190	0.7143	22.6
Oklahoma	2.2652	0.6889	26.1
Oregon	2.1612	0.6310	19.0
Pennsylvania	2.4669	0.7215	20.8
Rhode Island	1.9022	0.5348	15.9
South Carolina	2.2207	0.6425	22.6
South Dakota	1.9204	0.5813	22.2
Tennessee	2.4009	0.6984	22.3
Texas	2.5342	0.7792	23.7
Utah	2.2710	0.7030	24.6
Vermont	1.9128	0.5752	20.9
Virginia	2.2131	0.6280	19.9
Washington	2.1415	0.6635	18.8
West Virginia	1.7944	0.4899	18.6
Wisconsin	2.1990	0.6708	21.1
Wyoming	1.6656	0.5001	19.2
United States	3.1805	0.9585	28.1

Source: BEA

Appendix Table H-2
Output, Earnings, and Employment Multipliers: Soft Costs

State	MULTIPLIERS		
	Output	Earnings	Employment
Alabama	1.8182	0.7233	24
Alaska	2.0015	0.7617	24.7
Arizona	1.8663	0.7220	27.9
Arkansas	2.0825	0.8175	24.1
California	2.3219	0.8827	23.0
Colorado	2.2589	0.8819	23.5
Connecticut	1.9407	0.7143	17.1
Delaware	1.3689	0.1635	3.7
District of Columbia	1.7153	0.5179	13.0
Florida	2.1352	0.8338	24.3
Georgia	2.2970	0.8527	22.0
Hawaii	2.0051	0.7858	28.2
Idaho	1.9034	0.7236	27.8
Illinois	1.9066	0.7369	29.1
Indiana	2.2982	0.8442	21.0
Iowa	1.9952	0.7430	24.9
Kansas	1.9557	0.6815	22.9
Kentucky	1.9578	0.7034	23.0
Louisiana	1.9300	0.7477	25.5
Maine	2.0755	0.7719	18.2
Maryland	2.0581	0.7255	19.2
Massachusetts	1.8983	0.7251	26.3
Michigan	2.0276	0.7841	21.5
Minnesota	2.1694	0.8190	23.5
Mississippi	2.0280	0.6779	20.5
Missouri	1.8342	0.6845	26.4
Montana	1.8924	0.7505	29.8
Nebraska	2.1142	0.7948	23.7
Nevada	1.8076	0.6717	26.0
New Hampshire	1.9281	0.7358	26.4
New Jersey	1.9512	0.7043	19.7
New Mexico	2.1631	0.7589	18.0
New York	1.9210	0.7571	26.6
North Carolina	1.8785	0.7176	19.0
North Dakota	1.9338	0.6519	15.4
Ohio	2.1447	0.7966	24.0
Oklahoma	2.0743	0.7857	30.0
Oregon	2.0427	0.7581	26.2
Pennsylvania	2.1790	0.7772	19.8
Rhode Island	1.8611	0.6688	21.4
South Carolina	2.0172	0.7590	25.0
South Dakota	1.7581	0.6450	25.1
Tennessee	2.1886	0.7835	23.4
Texas	2.3532	0.8762	22.6
Utah	2.1947	0.8429	30.8
Vermont	2.0605	0.7136	18.2
Virginia	1.8471	0.7064	24.0
Washington	2.1314	0.8095	24.7
West Virginia	2.0133	0.7679	26.2
Wisconsin	1.7473	0.6722	24.5
Wyoming	1.6855	0.6682	26.3
USA Total	**2.9298**	**1.0550**	**27.7**

Source: BEA

Appendix Table H-3

Output, Earnings, and Employment Multipliers: Services to Buildings

State	MULTIPLIERS		
	Output	Earnings	Employment
Alabama	2.0528	0.6640	36.1733
Alaska	1.8130	0.5949	32.2781
Arizona	2.0699	0.6874	31.5453
Arkansas	1.8883	0.6062	36.0750
California	2.3495	0.7676	31.3480
Colorado	2.2218	0.7312	33.1436
Connecticut	1.9894	0.6287	26.8252
Delaware	1.7869	0.4913	25.5705
District of Columbia	1.2929	0.1524	9.7543
Florida	2.1365	0.7121	32.5323
Georgia	2.3185	0.7404	32.1480
Hawaii	2.0076	0.6752	32.4371
Idaho	1.9036	0.6324	36.0142
Illinois	2.2936	0.7271	30.3859
Indiana	2.0327	0.6455	31.4981
Iowa	1.8937	0.5978	34.3881
Kansas	1.9421	0.5717	30.4965
Kentucky	1.9811	0.6016	32.2390
Louisiana	1.9837	0.6544	38.0461
Maine	1.9588	0.6499	36.0812
Maryland	2.0694	0.6360	29.0983
Massachusetts	2.0919	0.6602	28.3138
Michigan	2.0974	0.6939	31.1620
Minnesota	2.1427	0.6924	32.3243
Mississippi	1.8927	0.6031	36.0085
Missouri	2.0941	0.6195	31.6347
Montana	1.8442	0.6168	37.4787
Nebraska	1.9042	0.6111	35.2278
Nevada	1.8823	0.6278	28.0478
New Hampshire	1.9907	0.6094	28.7311
New Jersey	2.2156	0.6703	27.7803
New Mexico	1.8922	0.6333	34.2356
New York	2.0049	0.6086	26.3115
North Carolina	2.1863	0.7018	35.8346
North Dakota	1.7940	0.5606	34.0981
Ohio	2.2285	0.7042	34.1431
Oklahoma	2.1127	0.6925	39.9450
Oregon	2.1004	0.6644	32.5760
Pennsylvania	2.2496	0.6953	31.2554
Rhode Island	1.9270	0.5909	27.6212
South Carolina	2.0512	0.6467	35.2981
South Dakota	1.7969	0.5860	35.7844
Tennessee	2.2404	0.6924	31.1539
Texas	2.3670	0.7571	36.8265
Utah	2.2304	0.7248	40.2420
Vermont	1.8491	0.5867	33.5425
Virginia	2.1198	0.6412	30.6847
Washington	2.1561	0.7001	31.4778
West Virginia	1.7678	0.5441	30.7445
Wisconsin	2.0478	0.6685	34.3078
Wyoming	1.6604	0.5462	34.2623

Source: BEA

Appendix Table H-4

Output, Earnings, and Employment Multipliers: Management Services

State	MULTIPLIERS		
	Output	Earnings	Employment
Alabama	2.0110	0.7686	28.1
Alaska	1.8176	0.7368	28.1
Arizona	2.0906	0.8319	26.7
Arkansas	1.8872	0.7336	32.1
California	2.3291	0.8934	25.1
Colorado	2.2633	0.8721	25.6
Connecticut	1.9451	0.7161	17.7
Delaware	1.7025	0.5098	13.8
District of Columbia	1.3699	0.1825	4.4
Florida	2.1431	0.8455	25.9
Georgia	2.3166	0.8670	23.0
Hawaii	2.0033	0.7945	33.7
Idaho	1.8924	0.7265	32.7
Illinois	2.3233	0.8601	22.2
Indiana	2.0075	0.7481	27.4
Iowa	1.9356	0.7426	32.7
Kansas	1.9690	0.6918	26.0
Kentucky	1.9767	0.7137	24.7
Louisiana	1.9194	0.7441	28.5
Maine	1.8930	0.7194	29.0
Maryland	2.0447	0.7177	20.5
Massachusetts	2.0798	0.7804	19.4
Michigan	2.0280	0.7855	23.5
Minnesota	2.1929	0.8353	26.2
Mississippi	1.8418	0.6903	30.6
Missouri	2.0622	0.7028	23.2
Montana	1.8893	0.7564	33.9
Nebraska	1.9423	0.7495	30.9
Nevada	1.8588	0.7061	20.2
New Hampshire	1.9628	0.7174	20.8
New Jersey	2.1647	0.7615	19.0
New Mexico	1.9140	0.7611	30.0
New York	1.9240	0.6374	15.8
North Carolina	2.1267	0.8029	25.1
North Dakota	1.8125	0.6738	29.9
Ohio	2.1723	0.8125	26.2
Oklahoma	2.0753	0.7850	33.7
Oregon	2.0512	0.7654	29.7
Pennsylvania	2.1874	0.7822	20.7
Rhode Island	1.8965	0.7043	24.7
South Carolina	2.0394	0.7767	27.7
South Dakota	1.7311	0.6079	27.3
Tennessee	2.1914	0.7801	24.6
Texas	2.3586	0.8834	23.9
Utah	2.2056	0.8563	34.8
Vermont	1.8649	0.7255	26.3
Virginia	2.0564	0.7128	19.1
Washington	2.1346	0.8159	28.3
West Virginia	1.7613	0.6835	27.7
Wisconsin	2.0259	0.7749	29.7
Wyoming	1.6931	0.6887	30.8

Source: BEA

Appendix Table H-5

Output, Earnings, and Employment Multipliers: Utilities

State	MULTIPLIERS		
	Output	Earnings	Employment
Alabama	1.8543	0.4561	12.3
Alaska	1.6381	0.3984	9.2
Arizona	1.7704	0.4513	10.5
Arkansas	1.6854	0.4054	11.9
California	1.9287	0.4950	10.8
Colorado	1.9942	0.5067	12.3
Connecticut	1.6563	0.3991	7.9
Delaware	1.5654	0.3155	6.6
District of Columbia	1.2043	0.0357	0.7
Florida	1.7410	0.4472	11.2
Georgia	1.8608	0.4638	11.0
Hawaii	1.6334	0.4158	10.2
Idaho	1.6356	0.4102	12.3
Illinois	2.0074	0.4935	11.2
Indiana	1.8338	0.4389	11.1
Iowa	1.6625	0.3906	10.6
Kansas	1.8090	0.4192	12.1
Kentucky	1.8241	0.4188	11.4
Louisiana	1.7953	0.4431	12.6
Maine	1.6328	0.4111	10.8
Maryland	1.7233	0.4075	8.9
Massachusetts	1.7046	0.4113	8.3
Michigan	1.7219	0.4295	9.7
Minnesota	1.8080	0.4479	10.2
Mississippi	1.7361	0.4175	12.2
Missouri	1.8251	0.4105	10.1
Montana	1.7569	0.4414	13.2
Nebraska	1.6738	0.3952	10.4
Nevada	1.5847	0.3807	9.0
New Hampshire	1.6488	0.3799	8.7
New Jersey	1.7701	0.4160	8.5
New Mexico	1.7517	0.4338	12.6
New York	1.6344	0.3800	7.5
North Carolina	1.7634	0.4306	11.5
North Dakota	1.7521	0.4159	11.7
Ohio	1.8850	0.4531	11.1
Oklahoma	1.8769	0.4671	13.8
Oregon	1.7086	0.4023	11.2
Pennsylvania	1.9747	0.4760	10.9
Rhode Island	1.5660	0.3372	7.5
South Carolina	1.6999	0.3895	10.9
South Dakota	1.5949	0.3906	11.3
Tennessee	1.8312	0.4347	11.0
Texas	2.0896	0.5250	12.7
Utah	1.9404	0.4898	14.0
Vermont	1.5438	0.3346	9.6
Virginia	1.8259	0.4307	10.5
Washington	1.7921	0.4374	10.7
West Virginia	1.6875	0.2815	10.0
Wisconsin	1.7387	0.4298	10.4
Wyoming	1.6456	0.3958	11.3

Source: BEA

Appendix Table H-6

Output, Earnings, and Employment Multipliers: Water, sewage and other systems

	MULTIPLIERS		
State	Output	Earnings	Jobs
Alabama	1.9219	0.5103	15.7
Alaska	1.6694	0.4455	11.1
Arizona	1.8864	0.5187	12.8
Arkansas	1.7896	0.465	15.5
California	2.0811	0.5736	13.5
Colorado	2.0192	0.5534	14.8
Connecticut	1.8012	0.469	10
Delaware	1.6848	0.3689	8.3
District of Columbia	1.2255	0.0392	0.8
Florida	1.9023	0.5271	14.5
Georgia	2.0379	0.5444	14
Hawaii	1.7894	0.4941	13.4
Idaho	1.7608	0.4792	16.4
Illinois	2.1135	0.5565	13.9
Indiana	1.9189	0.4947	13.3
Iowa	1.7947	0.4561	13.5
Kansas	1.8852	0.472	15.4
Kentucky	1.8744	0.4651	13.9
Louisiana	1.8597	0.4978	16.2
Maine	1.7587	0.481	13.5
Maryland	1.8699	0.4777	11.2
Massachusetts	1.8515	0.4826	10.5
Michigan	1.8603	0.5009	12
Minnesota	1.9663	0.5247	12.5
Mississippi	1.7939	0.4679	15.6
Missouri	1.9237	0.4658	12
Montana	1.778	0.4884	16.8
Nebraska	1.795	0.4586	13.2
Nevada	1.7214	0.4498	11.9
New Hampshire	1.8028	0.4497	11.1
New Jersey	1.9401	0.4904	10.7
New Mexico	1.7507	0.472	15.7
New York	1.7611	0.4429	9.5
North Carolina	1.942	0.5108	15.1
North Dakota	1.7586	0.4537	14.5
Ohio	1.9835	0.5125	13.5
Oklahoma	1.9546	0.526	17.3
Oregon	1.8492	0.4702	14.9
Pennsylvania	2.0504	0.5297	13.1
Rhode Island	1.687	0.3959	9.4
South Carolina	1.8635	0.4612	14.1
South Dakota	1.7023	0.453	14.7
Tennessee	1.961	0.5012	13.7
Texas	2.1635	0.5833	15.6
Utah	1.9742	0.5367	17.5
Vermont	1.6796	0.3974	13.1
Virginia	1.9125	0.4864	13.3
Washington	1.92	0.5051	13.6
West Virginia	1.683	0.4153	11.7
Wisconsin	1.8995	0.5058	12.8
Wyoming	1.6325	0.4316	14.4
National average	2.5899	0.7068	17.9

Source: BEA

Appendix Table H-7

Output, Earnings, and Employment Multipliers: Average of operating costs for management consulting services; water, sewage, and other systems; and building and dwellings services

	MULTIPLIERS		
State	Output	Earnings	Jobs
Alabama	1.9952	0.6476	26.6
Alaska	1.7667	0.5924	23.8
Arizona	2.0156	0.6793	23.7
Arkansas	1.8550	0.6016	27.9
California	2.2532	0.7449	23.3
Colorado	2.1681	0.7189	24.5
Connecticut	1.9119	0.6046	18.2
Delaware	1.7247	0.4567	15.9
District of Columbia	1.2961	0.1247	5.0
Florida	2.0606	0.6949	24.3
Georgia	2.2243	0.7173	23.0
Hawaii	1.9334	0.6546	26.5
Idaho	1.8523	0.6127	28.4
Illinois	2.2435	0.7146	22.2
Indiana	1.9864	0.6294	24.1
Iowa	1.8747	0.5988	26.9
Kansas	1.9321	0.5785	24.0
Kentucky	1.9441	0.5935	23.6
Louisiana	1.9209	0.6321	27.6
Maine	1.8702	0.6168	26.2
Maryland	1.9947	0.6105	20.3
Massachusetts	2.0077	0.6411	19.4
Michigan	1.9952	0.6601	22.2
Minnesota	2.1006	0.6841	23.7
Mississippi	1.8428	0.5871	27.4
Missouri	2.0267	0.5960	22.3
Montana	1.8372	0.6195	29.4
Nebraska	1.8805	0.6064	26.4
Nevada	1.8208	0.5946	20.0
New Hampshire	1.9188	0.5922	20.2
New Jersey	2.1068	0.6407	19.2
New Mexico	1.8523	0.6221	26.6
New York	1.8967	0.5630	17.2
North Carolina	2.0850	0.6718	25.3
North Dakota	1.7884	0.5627	26.2
Ohio	2.1281	0.6764	24.6
Oklahoma	2.0475	0.6678	30.3
Oregon	2.0003	0.6333	25.7
Pennsylvania	2.1458	0.6691	21.7
Rhode Island	1.8368	0.5637	20.6
South Carolina	1.9847	0.6282	25.7
South Dakota	1.7434	0.5490	25.9
Tennessee	2.1309	0.6579	23.2
Texas	2.2964	0.5746	25.4
Utah	2.1367	0.7059	30.8
Vermont	1.7979	0.5699	24.3
Virginia	2.0296	0.6135	21.0
Washington	2.0702	0.6737	24.5
West Virginia	1.7374	0.5476	23.4
Wisconsin	1.9911	0.6497	25.6
Wyoming	1.6620	0.5555	26.5
National average	2.8409	0.9050	28.4

Source: BEA

Appendix I: NAIOP Survey of Members

NAIOP developed and administered the survey used to determine the values of soft costs, site development costs and outlays for tenant improvements. Respondents were principal members of NAIOP throughout the United States who are mainly commercial real estate developers and owners. Participants were asked if they were involved in the construction of office, warehouse, manufacturing or retail facilities and what the percentage breakdown of costs was for soft costs, site development, construction (hard) costs and tenant improvements.

In 2006, questionnaires were sent by email to 4,956 NAIOP members on November 29. Responses were collected until December 3, 2006. A total of 188 responses were received, for a response rate of 3.79 percent. Responses were delivered to the George Mason University Center for Regional Analysis for analysis after the survey was completed. Results of cost distribution in percentages are as follows:

Sample Set 1: 2005 Survey

	Soft Costs	Site Development Costs	Building Construction Costs	Tenant Improvement
Office	17.13	15.76	49.49	17.62
Manufacturing	12.05	18.58	55.69	13.68
Warehouse	14.23	16.81	54.90	14.07
Retail	17.72	16.06	52.39	13.83
Combined	16.29	16.40	52.47	14.84

In 2008, a second questionnaire was sent by email to 2,700 NAIOP members on April 8. Responses were collected until April 25, 2008. A total of 101 responses were received for a response rate of 3.74 percent. Sixty-four respondents indicated that they developed office buildings, 61 developed warehouse/flex buildings, 18 developed retail properties and 17 developed manufacturing facilities (some respondents were involved in more than one property type). Responses were delivered to the George Mason University Center for Regional Analysis for analysis on July 8, 2008 after the survey was completed. Results of cost distribution in percentages are as follows:

Sample Set 2: 2007 Survey				
	Soft Costs	Site Development Costs	Building Construction Costs	Tenant Improvement
Office	17.43	14.24	49.74	18.58
Manufacturing	14.34	19.32	52.59	13.75
Warehouse	14.09	18.54	53.64	13.73
Retail	15.76	20.82	47.00	16.41
Combined	15.62	17.19	51.24	15.94

In order to increase the sample size and smooth the variation in responses across the building types and service categories, the two survey samples were averaged as follows:

2007 Average of Two Surveys				
	Soft Costs	Site Development Costs	Building Construction Costs	Tenant Improvement
Office	17.28	15.00	49.62	18.10
Manufacturing	13.19	18.95	54.14	13.72
Warehouse	14.16	17.68	54.27	13.90
Retail	16.74	18.44	49.70	15.12
Combined	15.95	16.79	51.86	15.39

To calculate the soft costs, site development costs and outlays for tenant improvement in this report, the hard costs provided by McGraw-Hill Construction Analytics were used for the hard cost component of the construction budget and the other cost categories were derived by applying the percentage distributions calculated by averaging the results of the two surveys as shown in the above table.

Appendix J: Definitions

Area of Analysis – the geographic unit of analysis, normally a political unit, for which economic, demographic and fiscal information is reported.

Building Value – construction value would include hard costs (costs of the structure) and soft costs (management, engineering, design, taxes, fees); the finished commercial value would reflect cash flow potential or current performance; assessed valuation for tax purposes may be accepted as an appropriate substitute for actual market value.

Direct Outlays (Costs) – all spending associated with the construction and operation of a building (on- and off-site expenditures) including *Hard* and *Soft Costs*. For a completed structure, direct outlays are those annual expenditures associated with building operations including management, maintenance and repairs, and operations (security, cleaning services, utilities, taxes). See *Hard Costs* and *Soft Costs*.

Economic Impact – the generation of new spending ($s) within a jurisdiction as a result of investing in and operating new economic activity, in this case, office, industrial, warehouse and retail buildings.

Fiscal Impact – the effect of real estate development on the host jurisdiction as a result of investing in and operating new economic activity, in this case, office, industrial, warehouse and retail buildings and related site improvements.

Gross Domestic Product (GDP), Gross State Product (GSP), Gross County Product (GCP) – the value of goods and services produced within the economy of the respective geographic area (nation, state, county/city).

Gross Square Feet – as a measure of an individual building size or aggregate inventory of building space reflecting the total envelope of the structures and not the occupied or usable building area.

Hard Costs – a category of construction costs that reflects the outlays for the building construction phase. Costs of labor and materials are the two primary categories. Excluded from these costs are soft costs, site development and tenant improvements.

Indirect Benefits – the additional economic benefits (measured in dollars or jobs) resulting from the accumulated additional value generated by the direct outlays or expenditures, as these dollars are re-spent within the economy. Indirect effects are calculated using **Multipliers** and include sales and purchases by businesses supplying goods and services in support of building construction and operation as well as the re-spending of payroll by workers (**Induced Effects**) associated with the new building.

Induced Effects – the impacts of the payroll spending by workers in the specific industry or sector on local businesses providing goods and services to households.

Infrastructure – utilities, roads, parking lots, storm drainage structures; other site improvements could be included in estimating these costs if not included elsewhere; if these improvements are financed by the private sector, whether on- or off-site, their costs should be reflected in the base values for calculating industry economic impacts.

Land Value – either assessed land value exclusive of structures or purchase price.

Multiplier – a number used to calculate the final economic impact of one dollar spent. Types of multipliers include:

> ***output multiplier*** measures the contribution (impact) of a direct outlay on the overall economy (Gross domestic product or gross state product);
>
> ***employment multiplier*** measures the total number of jobs that can be supported by a direct outlay (expressed in jobs supported per $1,000,000); and
>
> ***personal earnings multiplier*** measures the total personal earnings (wages and salaries) generated within the state as a result of a direct outlay and the jobs it supports.

Operating Costs – Costs (expenditures) associated with the day-to-day operation of an office, industrial, warehouse or retail building, including building management, utilities, normal maintenance and repair, custodial services and security. These costs do not include the operating costs incurred by building tenants.

Output – the goods and services produced for sale to other firms or industries as intermediate goods or services or for sale to consumers as final goods or services.

Sector – a grouping of industries or firms by similar characteristics of operations (e.g., retail trade sector, manufacturing sector, construction sector, mining sector, service sector, government sector).

Site Development – a category of construction costs that reflect improvements made to the site before a building can be constructed. These costs include site development, infrastructure, landscaping, surface and structured parking and other costs to prepare the site for construction.

Soft Costs – costs not directly associated with the structure, but incurred during the construction period. Soft costs may precede actual on-site construction by several years and include legal, architectural/engineering and other consultant services, inspections, loan origination, management, professional and other governmental fees, administrative costs, real estate taxes and insurance required to support the construction project. (Synonym: Indirect Costs).

Tenant Improvements – a category of construction costs that reflects improvements made to the premises to meet the needs of a specific tenant. Costs may include interior walls or partitions, floor covering, shelves, windows, bathrooms, etc. The improvements may be paid for by the builder or the tenant.

Total Output – total dollar contribution to gross state product generated by the initial spending and re-spending within the economy associated with the construction of a building.

Value Added – a measure of the incremental dollar value created by an industry, firm or individual employee as a result of its production (work performed) process; the value created beyond the value of the individual inputs.

The following are highlights of completed research projects funded by the NAIOP Research Foundation. For a complete listing and free download of research reports, please visit the Foundation's Web site at www.naioprf.org.

NAIOP Research Foundation Funded Research

Measuring the Impact of Hispanic Population Growth on the Location of and Demand for Commercial Real Estate in the United States (2008)

The Contribution of Office, Industrial and Retail Development and Construction on the U.S. Economy (2007)

Green Building Incentives That Work: A Look at How Local Governments Are Incentivizing Green Development (2007)

Commercial Real Estate in a Flat World, The Implications of Corporate Restructuring and Economic Globalization for Industrial, Office and Mixed-Use Property in America (2007)

Exploration of LEED Design Approaches for Warehouse and Distribution Centers (2007)

Developing Influencer Relationships to Accelerate Development Success (2005)

NAIOP Terms and Definitions: U.S. Office and Industrial Market (2005)

"The work of the Foundation is absolutely essential to anyone involved in industrial, office and mixed-use development. The Foundation's projects are a blueprint for shaping the future and a road map that helps to ensure the success of the developments where we live, work and play."

Ronald L. Rayevich, Founding Chairman
NAIOP Research Foundation

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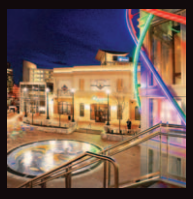


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