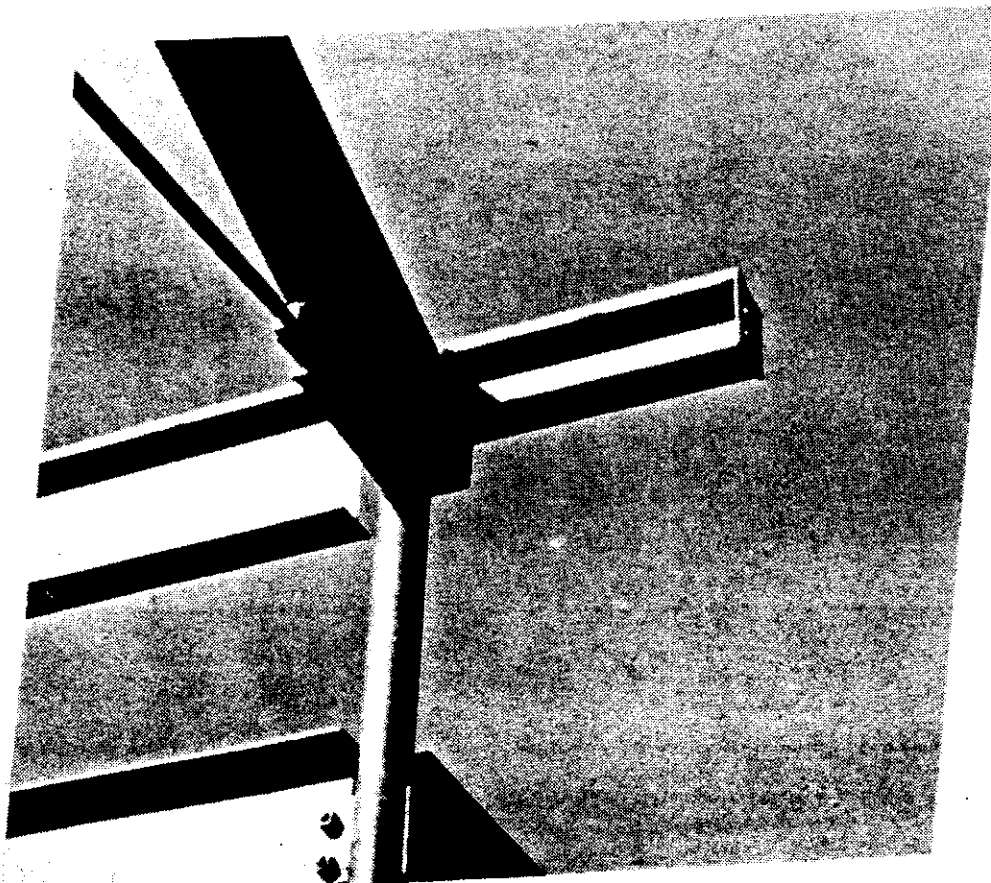


TECHNICAL PUBLICATION NO. 83

**AN UPDATED STUDY OF THE IMPACT OF
THE CONSTRUCTION INDUSTRY ON
FLORIDA'S ECONOMY**

**SPONSORED BY A GRANT FROM THE BUILDING
CONSTRUCTION INDUSTRY ADVISORY COMMITTEE**



**By: Brisbane H. Brown, Jr.
Vincent Stone**

**School of Building Construction
University of Florida**

1992

AN UPDATE STUDY OF THE CONSTRUCTION INDUSTRY ON FLORIDA'S ECONOMY

**SPONSORED BY A GRANT FROM THE BUILDING
CONSTRUCTION INDUSTRY ADVISORY COMMITTEE**

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EXECUTIVE SUMMARY

The purpose of this report was to determine and document the impact of the construction industry on the economy of the state of Florida. The study revealed that construction is one of the most important industries in Florida because of the following points:

1. The economic indicators for Florida all show positive growth since 1970, except for the brief recessions of 1974-1975, 1981-1982, and the 1989-1991. Overall, Florida's economy is one of the nation's leaders for positive growth.
2. Employment in construction accounted for 6.1% of Florida's total employment in 1990. This is more than double the cumulative employment in Agriculture, forestry, and fisheries. Construction employment is greater than Transportation, communications, and public utilities. Construction employs more people than Wholesale trade. Construction employment is on par with Government employment, as well as Finance, insurance, and real estate employment. On par is referring to the fact that these industries alternate their positions within the employment standings from year to year. Construction employment is only consistently surpassed by the employment in Services, Retail trade, and Manufacturing.
3. Construction employment is by far the most volatile of all industry groups.
4. Residential construction accounted for 58.3% of the total value of building permits in 1990.
5. The true impact of the construction industry on Florida's economy as a whole is very profound and this is demonstrated by the fact that the total output multiplier for New Construction is 2.1207, second only to the insurance industry's total output multiplier. This means that for every additional dollar spent on new construction, \$1.1207 of additional economic activity is created.

Copies of this report may be obtained by contacting:

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Table of Contents

Chapter 1

FLORIDA GROWTH	1	
I. Growth Indicators.....		2
II. Population Trends.....		2
III. Gross Sales.....		5
IV. Employment & Personal Income.....		7

Chapter 2

CONSTRUCTION'S ROLE IN THE FLORIDA ECONOMY	13	
I. Contract Construction.....		14
II. Construction's Relationship to Other Industry Divisions.....		17
Wholesale and Retail Trade.....		18
Mining.....		19
Agriculture.....		20
Manufacturing.....		21
Public Administration and Transportation.....		22
Services.....		23
Government.....		23
Finance, Insurance, and Real Estate.....		24
III. Construction's Contribution to Tax Revenues.....		25

Chapter 3

EXPLANATION OF CONSTRUCTION SUB-SECTORS	27	
Introduction.....		28
I. General Classification, Definitions and U.S. Data.....		28
Categories & Grouping.....		28
United States Census Definitions and Assumptions.....		31
United States Construction Industry Data.....		31
Florida Construction Industry Data.....		32
II. Mining in Florida.....		34
Materials and Uses.....		34
III Residential and Operative Builders in Florida.....		35
Florida Census Data.....		35
General Contractor - Single Family Housing.....		35
Operative Builders.....		36
Residential Other than Single Family in Florida.....		38
IV. Non-residential and Industrial Construction in Florida.....		38
Non-residential Other than Industrial and Warehouse.....		38
Industrial Warehouse.....		39
V. Heavy Construction in Florida.....		39
Bridge, Tunnel, and Elevated Highway.....		39
Water, Sewer, Pipe Line, Communication, and Power Line.....		40
Heavy Construction Contractors, Not Elsewhere Classified.....		40
VI. Highway and Street Contractors in Florida.....		41
VII. Plumbing, Heating, and Air Conditioning in Florida.....		41
VIII. Electrical in Florida.....		42
IX. Roofing and Sheet Metal in Florida.....		42
X. Finishes in Florida.....		43
Masonry, Stone Setting, and Other Stonework.....		43

Plastering, Drywall, Acoustical, and Insulation Work	44
Terrazzo, Tile, Marble, and Mosaic Work	44
XI. Concrete Work in Florida	45
XII. Special Trade Contractors Not Elsewhere Classified in Florida	45
Painting, Paper Hanging, and Decorating	46
Carpentering	46
Floor Laying and other Floor Work	46
Water Well Drilling	47
Glass and Glazing Work	47
Excavation and Foundation Work	47
Wrecking and Demolition Work	48
Special Trade Contractors, Not Else Where Classified	48
XIII. Mobile Homes and Prefabricated Wood Products in Florida	49

Chapter 4

REGIONAL MULTIPLIERS:

CONSTRUCTION'S IMPACT ON THE FLORIDA ECONOMY	51
Introduction	52
The Regional Input-Output Modeling System	54
Standard Industrial Divisions	54
39 Standard Industry Divisions	55
Regional Output, Earnings, and Employment Multipliers From RIMS II	56
Output Multipliers	56
Earnings Multipliers	57
Employment Multipliers	59
The Three Levels of RIMS II	60
Total Multipliers	62
Second Level Multipliers	64
Third Level Multipliers	68
New Construction Sub-classifications (36)	68
Maintenance/Repair Construction (17)	69
Source of Florida RIMS II Multipliers	70
Regional Multiplier Applications	70
Projecting Economic Impact	71

Chapter 5

CONCLUSIONS	72
Conclusions	73

Endnotes 77

Appendix A 84

Chapter 1.

FLORIDA GROWTH

I. Growth Indicators

Florida is one of the nation's leading growth states. In 1990 Florida's 13 million residents will account for approximately 5 percent of this nation's population. Since 1970 the population in Florida has increased 89.5 percent.¹ In the same time frame, gross sales have increased 729.2 percent; while, non-agricultural employment has increased 151.1 percent. Total state personal income has also seen a substantial amount of growth in the past two decades with a growth of 790.7 percent. Although these figures show a substantial amount of growth within the past two decades, it is important to stress the fact that these are percentages that have been aggregated over many years and do not show all the economic booms and lulls. Their intent is to show that Florida is one of the nation's highest growth states.

II. Population Trends

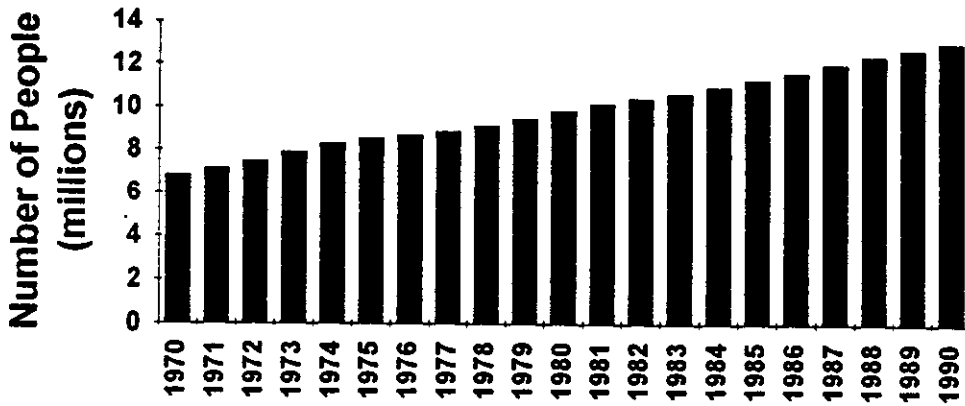
For the past two decades, the population growth rate for the state of Florida has been one of the highest in the United States. When compared to the other forty nine states, Florida has the fourth largest population.² Only California, New York, and Texas have larger populations.

Migration has accounted for the majority of Florida's growth with a disproportionate percentage focused on retirees. Florida had a net migration of 2.3 million persons for the eighties and currently ranks second in the United States behind California.³ In fact, one out of every four American retirees that decides to relocate will move to Florida.⁴ In April of 1990, 18.1 percent of the Florida population were

age 65 or older.

Figure 1-1

Florida: Population 1970-1990

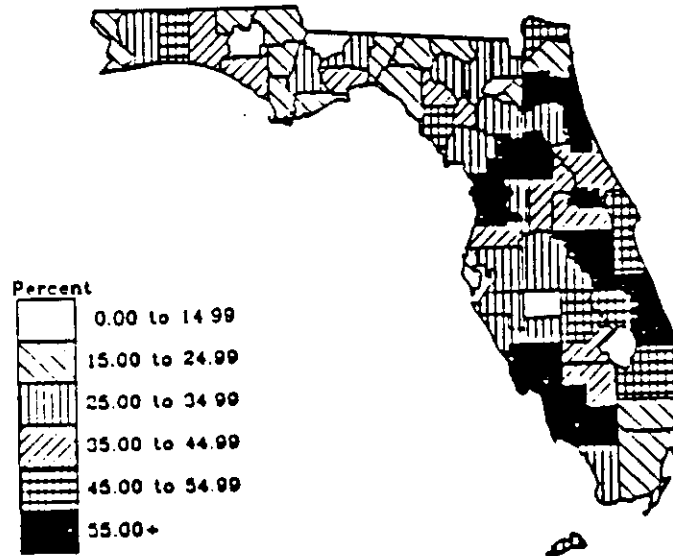


Source: The Florida Long-Term Economic Forecast 1991

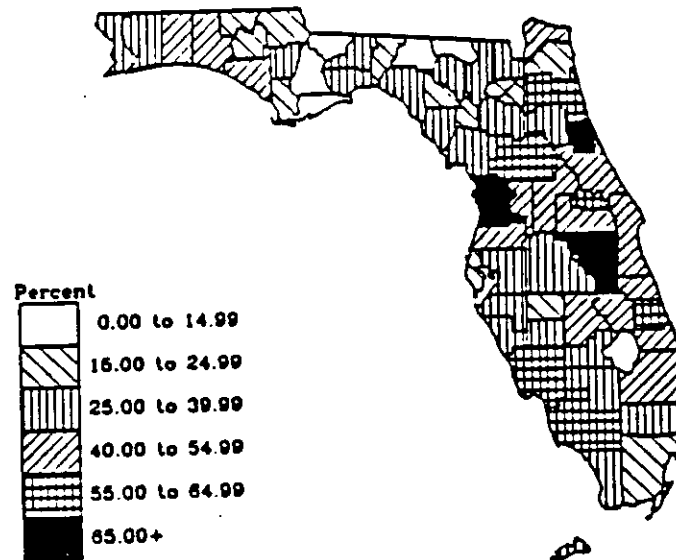
Figure 1-1 shows Florida population growth since 1970. ⁵ Figure 1-1 shows a relatively stable growth rate with few fluctuations over the past two decades. The two humps in the graph can be explained by the recessions in the mid-seventies and the early eighties where the population leveled out due to uncertainties in the economy. For more information concerning the actual numbers in Figure 1-1 refer to Table 1-1 at the end of this chapter.

Map 1-1 POPULATION

Growth Rates, 1980-1990



Projected Growth Rates, 1990-2010



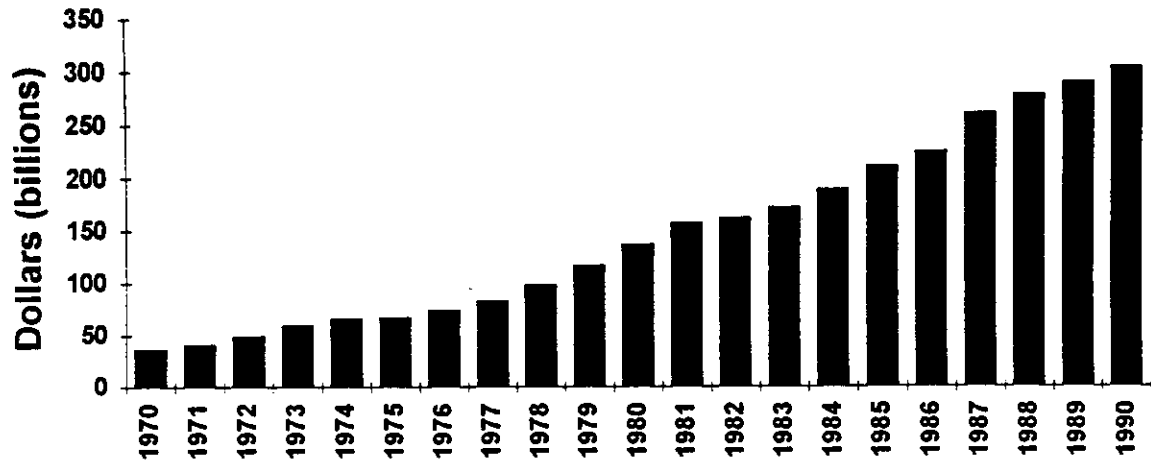
Source: Florida County Comparisons 1991

III. Gross Sales

The consumer price index rose 236.86 percent from 1970 to 1990. During this period, gross sales increased 727.2 percent. Figure 1-2 depicts this change graphically.⁶ It is again important to notice the two periods of relatively slow or negative growth during the mid-seventies and early eighties. However, Figure 1-2 does not accurately show the 'REAL' economic growth, because it does not compare the data in constant dollars. It is not realistic to compare the value of 1970 dollars with that of 1990 dollars without some adjustment to account for inflation and the passage of time. Figure 1-3 has been adjusted to account for these effects by applying the consumer price index (CPI). The consumer price index is based on the average value of a dollar from 1982 to 1984 being equal to 100 (1982-84 = 100). The CPI for 1990 is 130.7.⁷ This simply means that it took \$130.70 to purchase the same goods and services in 1990 that were purchased on the average from 1982 to 1984 for \$100.00. Figure 1-3's adjustment shows the 'REAL' changes that have occurred in Florida gross sales. It also shows a more accurate picture of the effects of the recessions. Instead of appearing to be periods of little or no growth they actually show a decrease in 'REAL' gross sales. Refer to Tables 1-1 and 1-2 at the end of this chapter for detailed information pertaining to Figures 1-2 and 1-3 respectively.

Figure 1-2

Florida: Gross Sales 1970-1990

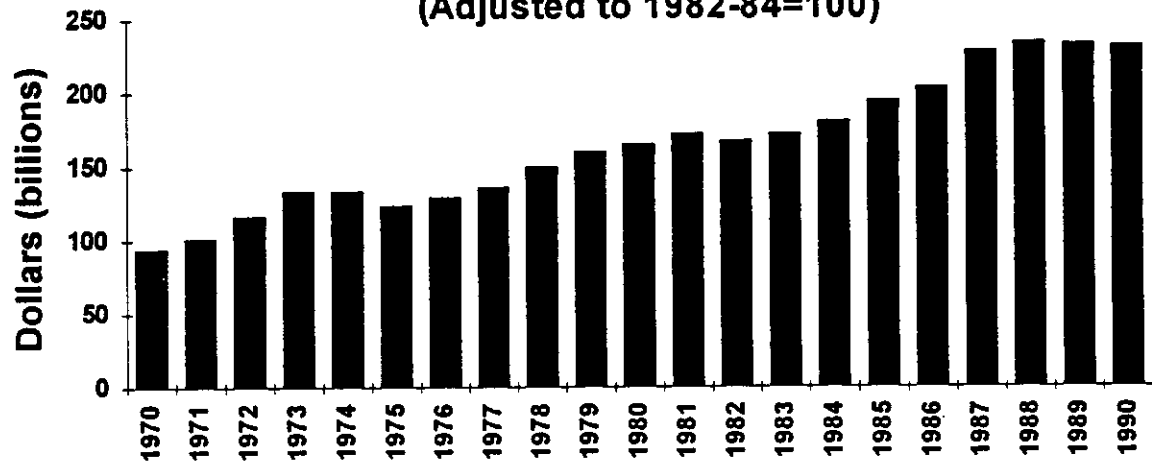


Source: The Florida Long-Term Economic Forecast 1991

Figure 1-3

Florida: Gross Sales 1970-1990

(Adjusted to 1982-84=100)



Source: The Florida Long-Term Economic Forecast 1991

IV. Employment & Personal Income

Total non-agricultural employment for the state of Florida is another important indicator which includes all industries in Florida except those involved in farming, fishing, and forestry. Total employment has grown from 2.152 million in 1970 to a current level of 5.403 million.⁸ An increase of 151.1 percent. Figure 1-4 shows the growth in non-agricultural employment for the past two decades. It is again important to note the two down turns in employment for 1974-76 and 1981-82. Another interesting note is the fact that employment seems to be exhibiting a slower rate of growth after 1988.

Figure 1-4

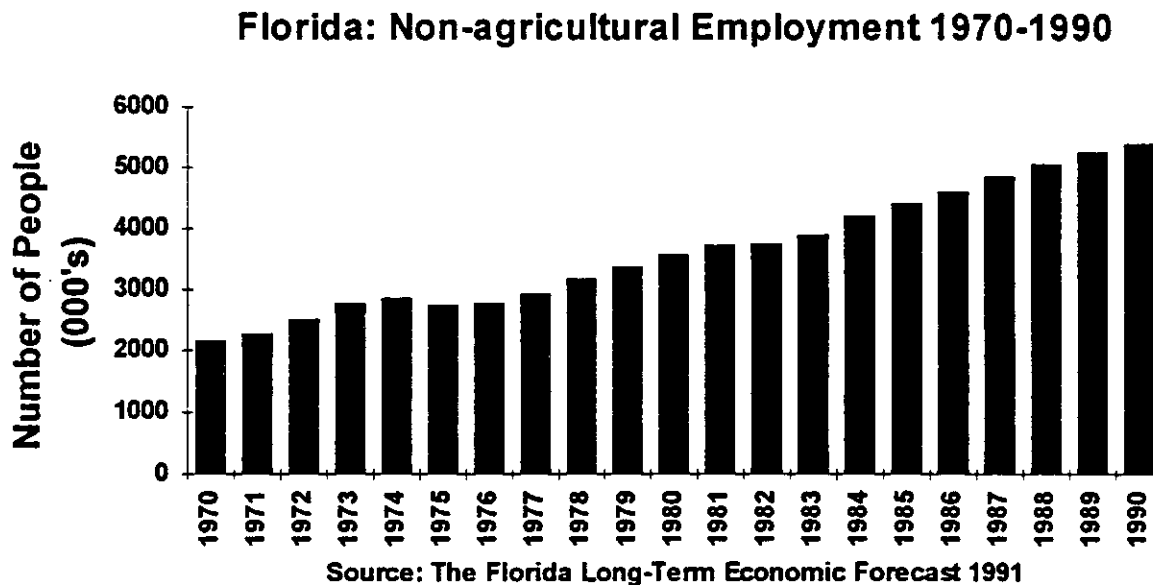
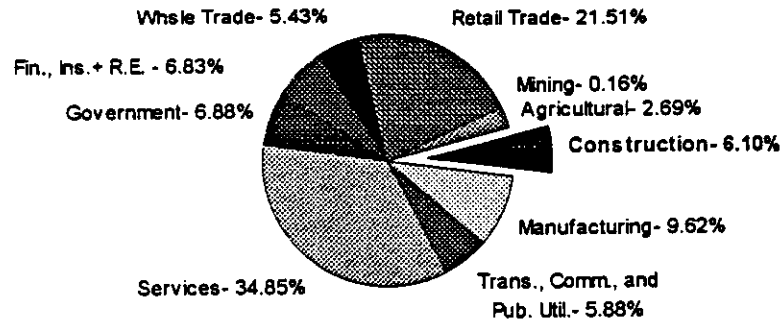


Figure 1-5 shows the state employment picture by percentage for 1990. The construction directly accounts for 6.10 percent of the industry in Florida. Table 1-3 at the end of this chapter shows the actual figures and percentages for this figure.

Figure 1-5

Florida: Industry Employment 1990

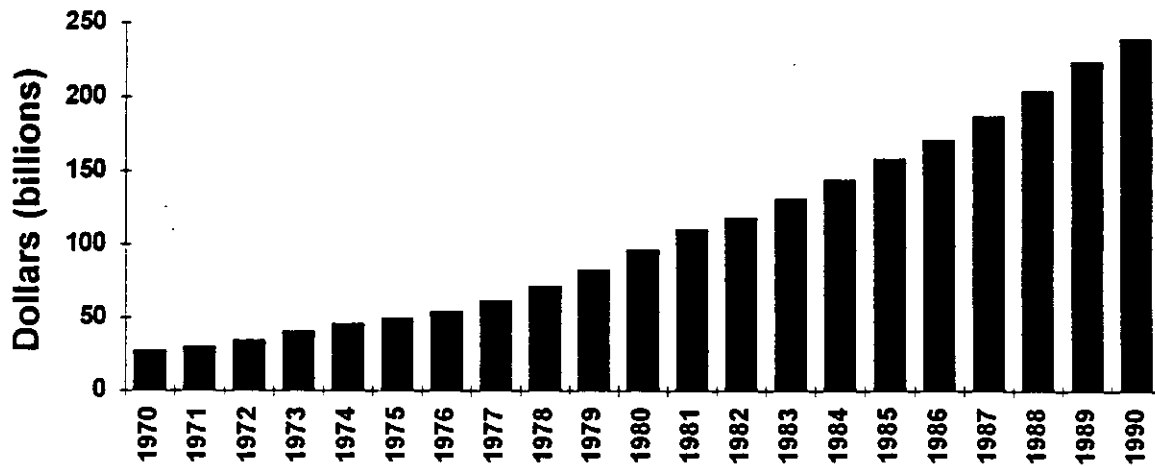


Source: Florida Statistical Abstract 1991

Total personal income reached 240.5 billion dollars in the state of Florida 1990. Figure 1-6 depicts the year to year growth.⁹ Total personal income is measured by dollar amount of the year for which it is reported as was gross sales. For the same reason as explained earlier, it is necessary to have all figures in constant dollars to make an accurate comparison. Figure 1-7 shows total personal income adjusted with the consumer price index (1982-84 = 100). Refer to Table 1-1 at the end of this chapter for the figures that produced Figure 1-4.

Figure 1-6

Florida: Personal Income 1970-1990

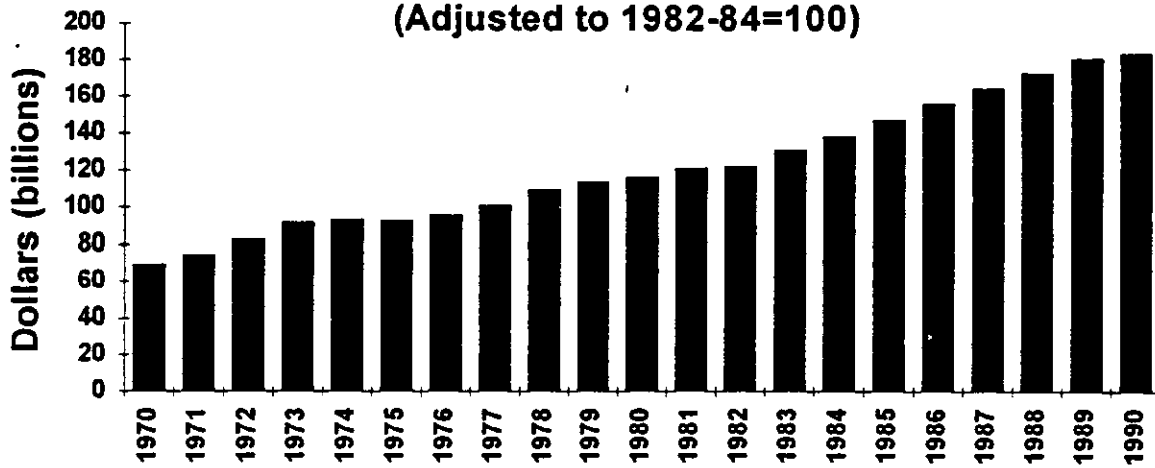


Source: The Florida Long-Term Economic Forecast 1991

Figure 1-7

Florida: Personal Income 1970-1990

(Adjusted to 1982-84=100)



Source: The Florida Long-Term Economic Forecast 1991

Table 1-1

Florida: General Trends

Year	Population		Gross Sales		Employment		Non-agricultural Personal Income	
	(000)s	%Chg	(\$Billion)	%Chg	(000)s	%Chg	(\$Billion)	%Chg
1970	6865.5		36.6		2152.1		27.0	
1971	7163.0	4.33	41.1	12.30	2276.4	5.78	30.2	11.85
1972	7521.4	5.00	49.0	19.22	2513.1	10.40	34.8	15.23
1973	7927.2	5.40	59.3	21.02	2778.6	10.56	40.8	17.24
1974	8317.1	4.92	65.9	11.13	2863.8	3.07	46.0	12.75
1975	8541.6	2.70	66.8	1.37	2746.4	-4.10	49.8	8.26
1976	8695.2	1.80	73.8	10.48	2784.3	1.38	54.5	9.44
1977	8888.8	2.23	82.7	12.06	2933.2	5.35	61.3	12.48
1978	9131.4	2.73	98.2	18.74	3180.6	8.43	71.3	16.31
1979	9470.5	3.71	116.4	18.53	3381.2	6.31	82.4	15.57
1980	9840.4	3.91	136.2	17.01	3576.2	5.77	95.9	16.38
1981	10170.4	3.35	156.5	14.90	3736.9	4.49	110.2	14.91
1982	10415.3	2.41	161.7	3.32	3761.9	0.67	118.2	7.26
1983	10644.3	2.20	171.6	6.12	3905.6	3.82	130.5	10.41
1984	10962.0	2.98	188.2	9.67	4209.0	7.77	144.0	10.34
1985	11302.2	3.10	210.0	11.58	4410.0	4.78	158.4	10.00
1986	11631.0	2.91	223.6	6.48	4599.0	4.29	171.1	8.02
1987	12000.2	3.17	259.8	16.19	4848.1	5.42	187.1	9.35
1988	12357.7	2.98	277.5	6.81	5066.6	4.51	204.5	9.30
1989	12699.5	2.77	289.1	4.18	5260.9	3.83	224.4	9.73
1990	13008.0	2.43	303.5	4.98	5403.0	2.70	240.5	7.17

Source: The Florida Long-Term Economic Forecast 1991

Table 1-2 Florida: General Trends
(Adjusted to 1982-84=100)

Year	Population		Gross Sales		Employment		Non-agricultural Personal Income	
	(000)s	%Chg	(\$Billion)	%Chg	(000)s	%Chg	(\$Billion)	%Chg
1970	6865.5		94		2152.1		70	
1971	7163.0	4.33	101	7.45	2276.4	5.78	75	7.14
1972	7521.4	5.00	117	15.84	2513.1	10.40	83	10.67
1973	7927.2	5.40	134	14.53	2778.6	10.56	92	10.84
1974	8317.1	4.92	134	0.00	2863.8	3.07	93	1.09
1975	8541.6	2.70	124	-7.46	2746.4	-4.10	93	0.00
1976	8695.2	1.80	130	4.84	2784.3	1.38	96	3.23
1977	8888.8	2.23	136	4.62	2933.2	5.35	101	5.21
1978	9131.4	2.73	151	11.03	3180.6	8.43	109	7.92
1979	9470.5	3.71	160	5.96	3381.2	6.31	113	3.67
1980	9840.4	3.91	165	3.13	3576.2	5.77	116	2.65
1981	10170.4	3.35	172	4.24	3736.9	4.49	121	4.31
1982	10415.3	2.41	168	-2.33	3761.9	0.67	122	0.83
1983	10644.3	2.20	172	2.38	3905.6	3.82	131	7.38
1984	10962.0	2.98	181	5.23	4209.0	7.77	139	6.11
1985	11302.2	3.10	195	7.73	4410.0	4.78	147	5.76
1986	11631.0	2.91	204	4.62	4599.0	4.29	156	6.12
1987	12000.2	3.17	229	12.25	4848.1	5.42	165	5.77
1988	12357.7	2.98	235	2.62	5066.6	4.51	173	4.85
1989	12699.5	2.77	233	-0.85	5260.9	3.83	181	4.62
1990	13008.0	2.43	232	-0.43	5403.0	2.70	184	1.66

Source: The Florida Long-Term Economic Forecast 1991

Table 1-3 **Florida: Industry Employment Based on
Employment Covered by Unemployment
Compensation Law - 1990**

S.I.C. #		Percent	Employment
10-14	Mining	0.16%	8,886
01-09	Agricultural	2.69%	145,229
15-17	Construction	6.10%	329,399
20-39	Manufacturing	9.62%	519,385
40-49	Trans., comm., and public util.	5.88%	317,511
70-89	Services	34.85%	1,882,489
91-97	Government	6.88%	371,509
60-67	Fin., Ins., + Real Est.	6.83%	368,784
50-51	Wholesale Trade	5.43%	293,090
52-59	Retail Trade	21.51%	1,161,920
	Total Employment	100%	5,400,969

Source: The Florida Statistical Abstract 1991

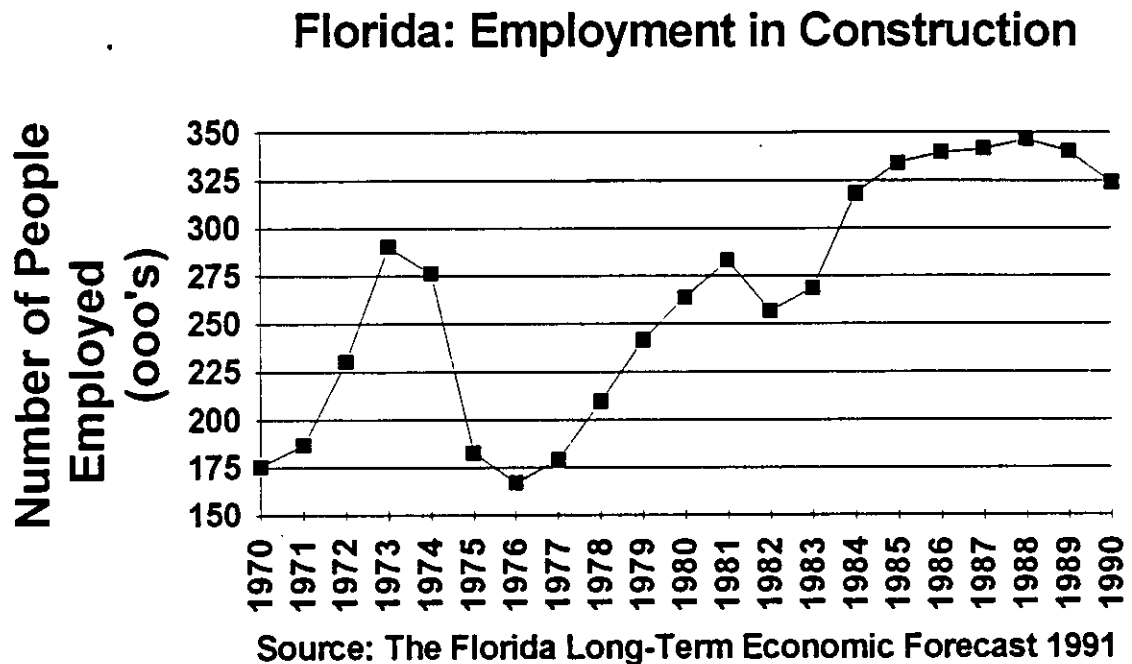
Chapter 2.

CONSTRUCTION'S ROLE IN THE FLORIDA ECONOMY

I. Contract Construction

Contract construction is perhaps the most volatile of the nine major industry divisions shown in Table 1-3. Contract construction accounted for 6.10 percent of the employment in the state for 1990. Figure 2-1 depicts the employment in contract construction over the past two decades. ¹⁰

Figure 2-1



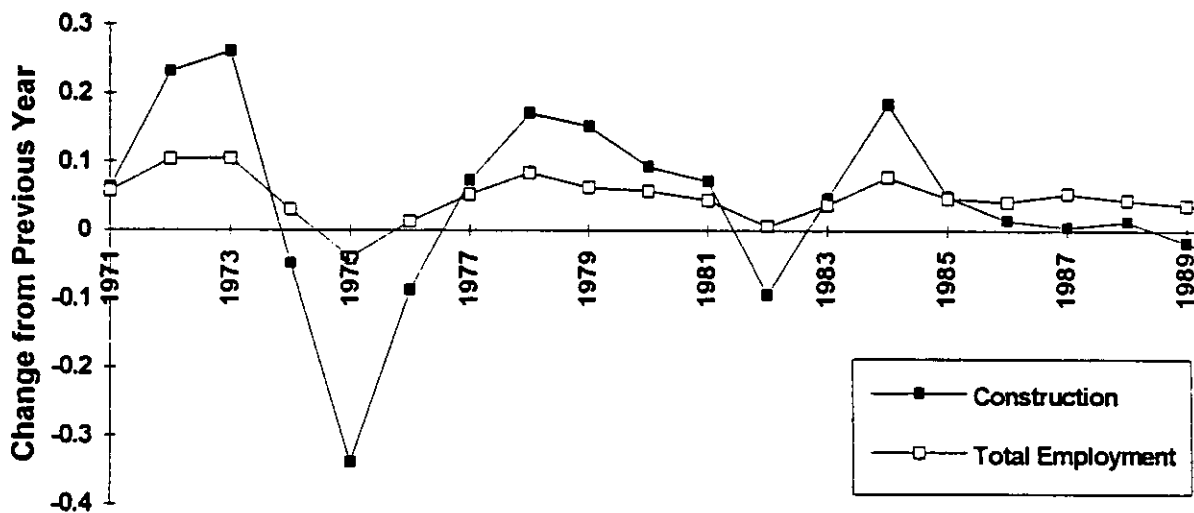
Note the three major dips in employment. These three down turns coincide with the three economic recessions Florida has experienced in the past 20 years. One happened during the mid-seventies and a second occurred in the early eighties. The third recession is the one Florida and the rest of the United States are currently

experiencing.

Figure 2-2 illustrates the volatility of employment in the construction industry compared to the total employment in Florida. ¹¹ Note that construction industry employment and total industry employment follow the same basic trends. However, employment in construction fluctuates by a much larger margin than that of the industry as a whole. Another important observation to be made is that employment in construction for the past six years is on the average below that of aggregated industry.

Figure 2-2

Florida: Employment Changes in Construction and Total Employment (change from previous year)

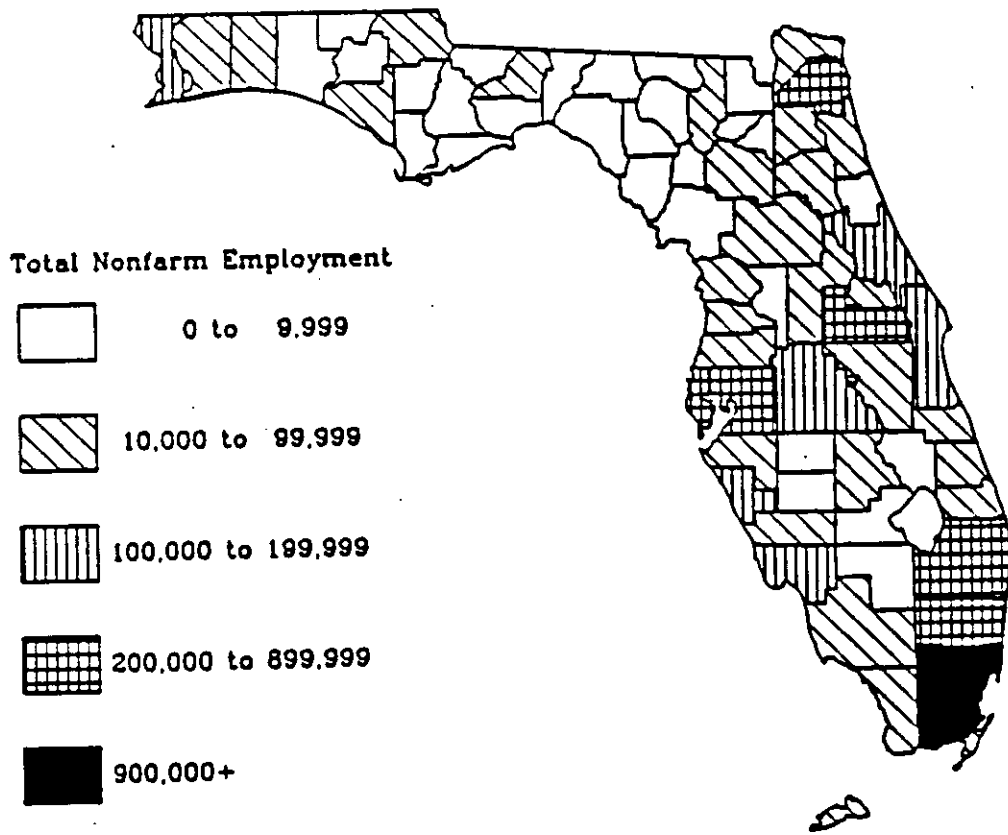


Source: The Florida Long-Term Economic Forecast 1991

Contract construction employment accounted for approximately 7% of the nonfarm employment in Florida during 1987. The total nonfarm employment distribution is shown in Map 2-1.

Map 2-1

TOTAL NONFARM EMPLOYMENT, 1988



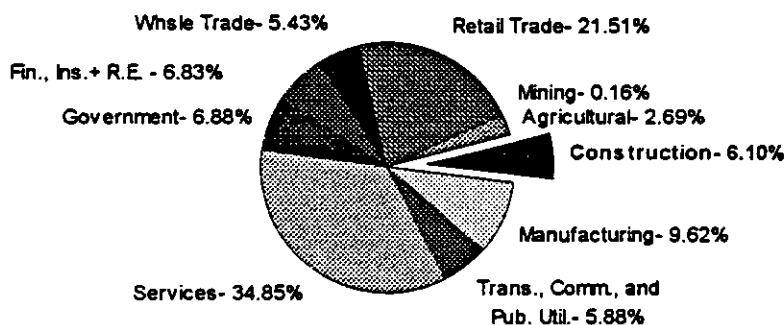
Source: Florida County Comparisons 1991

II. Construction's Relationship to Other Industry Divisions

The Bureau of Economic and Business Research divides Florida's economy into industry divisions. Presented below in Figure 2-3 is a pie chart which depicts their relationship to one another in terms of employment. It is apparent that all industries interact with one another as one industry purchases goods and services from another industry. For example, the construction industry buys prefabricated metal doors from the manufacturing sector and concrete is made with materials purchased from the mining sector. It is easy to see that when the construction industry suffers, so do many other industries.

Figure 2-3

Florida: Industry Employment 1990

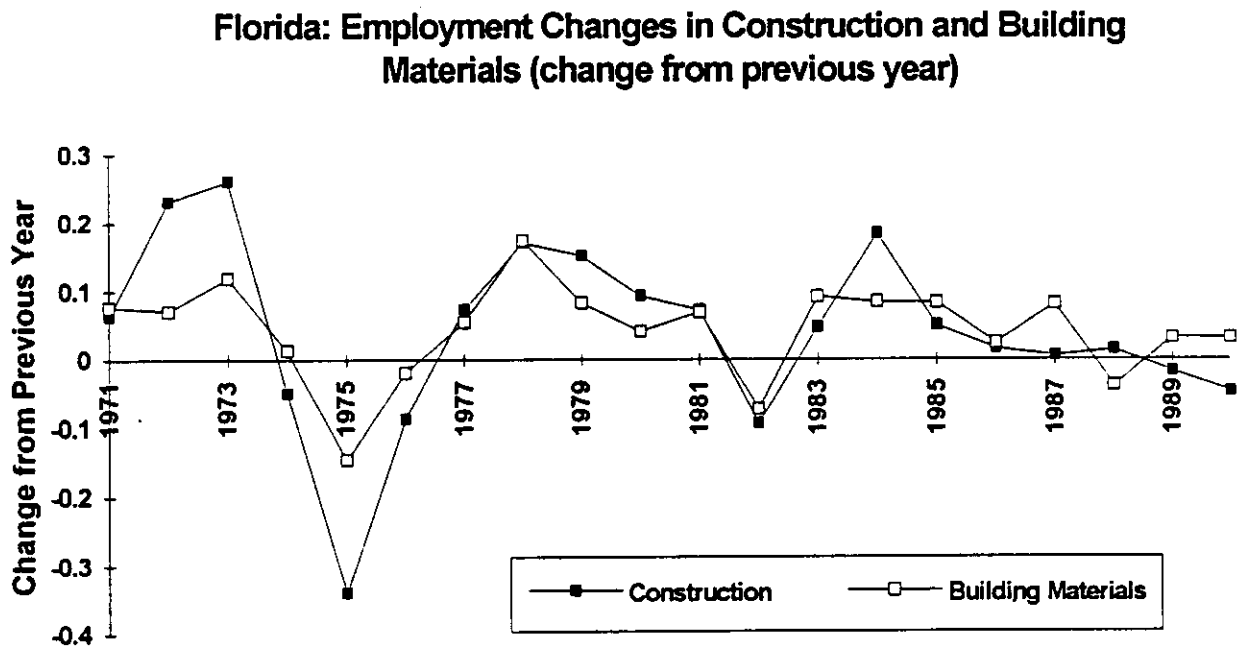


Source: Florida Statistical Abstract 1991

Wholesale and Retail Trade

Figure 2-4 compares the percentage change from year to year in employment in building materials and contract construction. Again, it is important to note the volatility of the construction industry and the fact that both curves follow the same general pattern. This is concurrent with the fact that the sale of building materials are closely tied to the construction industry. If employment in construction is high, so is employment in building materials.

Figure 2-4

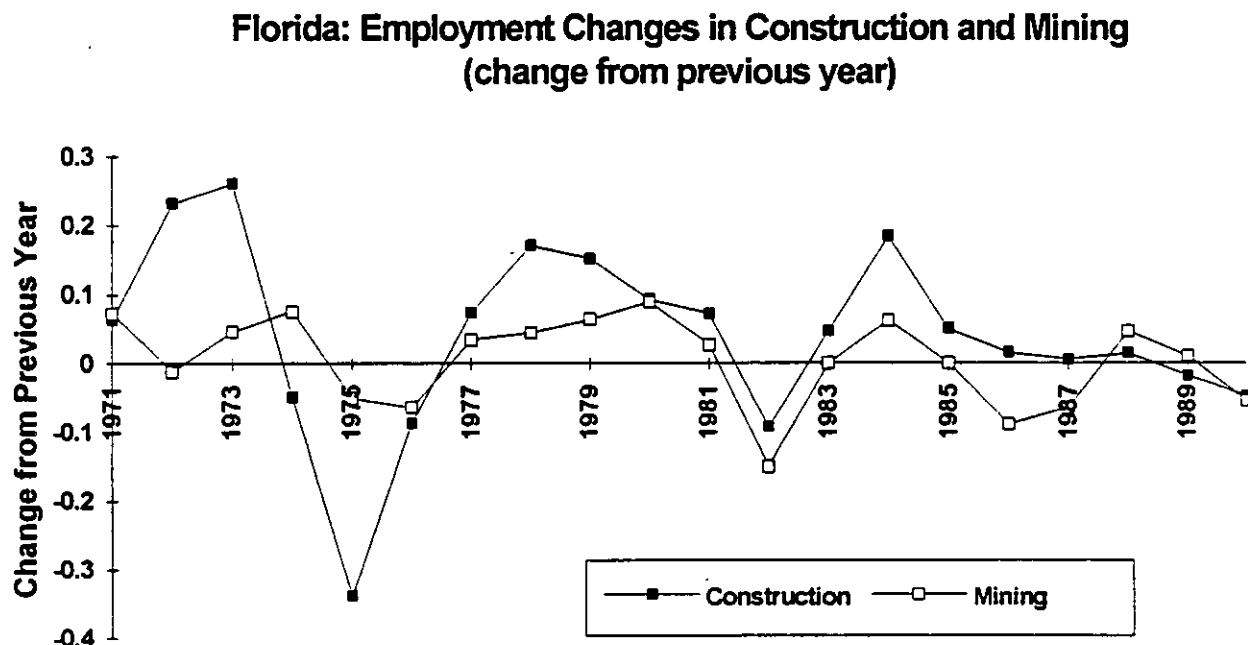


Source: The Florida Long-Term Economic Forecast 1991

Mining

In 1988, Florida ranked 6th in the United States in non-fuel mineral production, following Arizona, California, Nevada, Michigan, and Texas. This accounted for 4.64 percent of non-fuel mineral production in the United States.¹² Figure 2-5 illustrates the relationship of employment in mining to employment in construction for the past two decades.¹³ It is important to note that they both basically follow the same pattern with construction being the more volatile of the two. Refer to Table 2-1 for the actual mining employment figures.

Figure 2-5



Source: The Florida Long-Term Economic Forecast 1991

Agriculture

Agriculture in the state of Florida consists of crop, livestock, and related agricultural services. Although a small portion of building materials are made from agriculture by-products, such as fiberboard from sugar cane, they would be considered as part of the manufacturing subsector under food and kindred products and not a part of agriculture. Fisheries also have little direct relationship with the construction industry.

Florida currently ranks 4th in acreage of tree farms following Maine, Georgia, and Alabama. As of January 1, 1991 Florida had 6,976,544 acres of tree farms. This accounts for 7.34% of the tree farms in the United States.¹⁴

Forest products are mainly pulpwood and saw/veneer logs of both hard and soft woods. The majority of saw/veneer logs are used to make structural timbers, dimension lumber, boards, plywood, paneling, and other wood products directly linked to the construction industry. Pulpwood products include construction related items such as particle board, masonite, and pressboard products.

Hardwood production is concentrated in Dixie, Madison, and Levy counties. These three counties account for 22.23% of the hardwood production for the state of Florida with a total of 7,248,000 cubic feet produced in 1989.¹⁵ Softwood production leaders are Taylor (34,777,000 cf), Columbia (21,901,000 cf), and Bradford (18,738,000 cf) counties. The total softwood production for the state of Florida for 1989 was 450,095,000 cubic feet.¹⁶

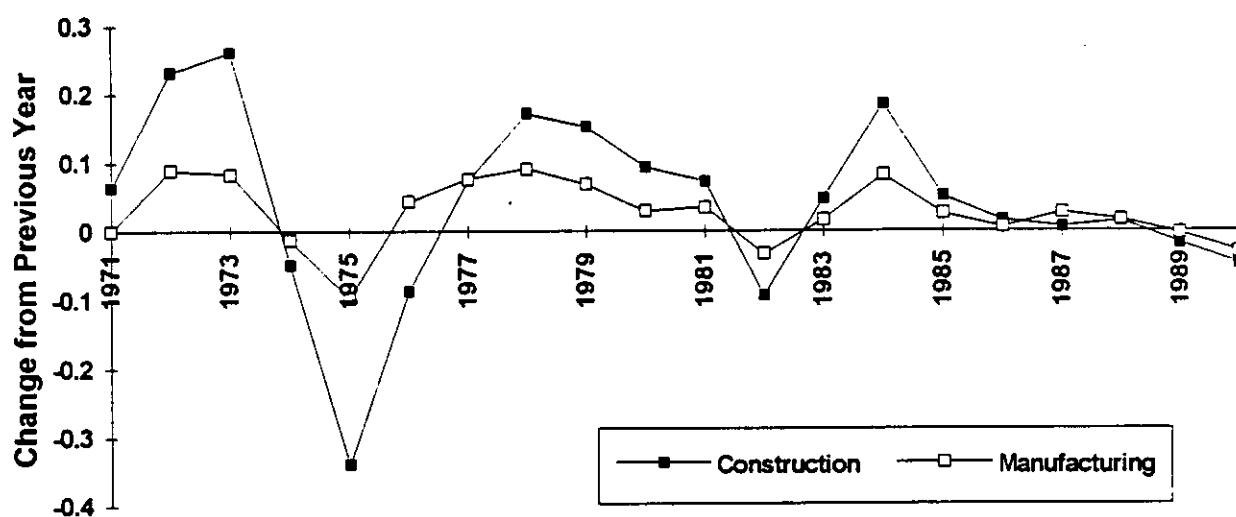
Manufacturing

Manufacturing is commonly divided into durable goods and non-durable goods. A significant portion of the durable goods that are produced in Florida are construction related. A considerable portion of the output from the manufacturing industry is input to the construction industry.

Figure 2-6 shows the percentage change in employment from year to year for both contract construction and manufacturing. Notice that both curves follow the same general cycles, but manufacturing is considerably more stable. Once again, this supports the idea that construction is closely linked to the manufacturing industry as a purchaser of manufactured goods.

Figure 2-6

Florida: Employment Changes in Construction and Manufacturing (change from previous year)



Source: The Florida Long-Term Economic Forecast 1991

Public Administration and Transportation

Public Administration consist of public servants that are necessary to govern people. Public administrators include building inspectors, fire inspectors and the other officials necessary to enforce building codes and regulations. The construction industry's performance effects the number of people employed in these construction supporting industry sectors.

Transportation includes the trucking industry which is employed by the

construction industry to transport materials needed for building and highway construction. The railroads are also used to transport mining products necessary to make concrete. The purpose of mentioning Public Administration and Transportation is only to show how far reaching the construction industry can be in effecting other industries.

Services

The construction related sector of services is also involved with business services. In addition to general business services, such as accounting, bookkeeping, and law, the construction industry is also based on the services of architects, engineers, and surveyors.

Government

Government, as an industry division, consists of the following subsectors. The Bureau of Economic and Business Research compiles data on these subsectors of government. They are denoted by Standard Industry Codes (S.I.C.) and are reported on annually in the Florida Statistical Abstract.

- 91 Executive, legislative & general government except finance
- 92 Justice, public order, and safety
- 93 Public finance, taxation, and monetary policy
- 94 Administration of human resources programs
- 95 Administration of environmental quality and housing programs
- 96 Administration of economic programs
- 97 National security and international affairs

Construction is affected by, taxation, monetary policy, and environmental programs; but, it is zoning and codes enforcement, building inspection, and permitting departments, planning and review committees, and housing programs of government that more directly effect the construction industry.

Finance, Insurance, and Real Estate

This report does not make a detailed breakdown of construction related areas of this industry division. However, the following should be considered. Nearly all new residential and commercial construction is financed by mortgages. These mortgages are normally processed through local lending institutions and a large percentage of lender proceeds are tied to the construction industry.

Almost all new construction, be it residential or commercial, is insured during construction with builders risk insurance and upon completion they are insured with hazard insurance. Most contractors purchase workers' compensation insurance from the insurance industry. This is because Florida law requires a business with 3 or more employees to secure the payment of compensation for employees who sustain job-related injuries or illnesses. ¹⁷ State licensing law requires employer's liability insurance coverage. Additionally construction firms, like any other business, carry their share of automotive liability, key man life insurance, theft, and other insurances.

A percentage of new residential construction is sold by real estate firms. Likewise on the commercial end, many spaces are leased, managed, and sold to clients by real estate firms. Most single family residential construction is resold through real estate firms. The real estate business shares a common bond with the building industry. On average when the building business is up so is the real estate industry.

III. Construction's Contribution to Tax Revenues

The state and local taxes that have the greatest affect on construction, mining, and prefabricated wood products are: ¹⁸

1. Corporate income tax - 5.5% income.
2. Documentary stamp tax - \$.32/\$100 on promissory notes, mortgages, trust deeds, and security agreements.
Documentary stamp tax - \$.55/100 on deeds and other instruments for the transfer of interests in real property.
3. Occupational licenses - local governing authority.
4. Severance tax on solid minerals - 5% of value at point of severance.
5. Unemployment compensation tax - up to 5.4% of first \$7,000 wages per employee.
6. Sales and use tax - 6%.

The sales and use tax is by far the largest contributor to total state taxes in Florida. For fiscal 1989-90 sales and use tax receipts were \$8,245,664,000 which was 62.87% of total state tax receipts. ¹⁹ It is important to note that the lumber, builders, and contractors group contributed a total of \$539,670,000 or 6.55% of the total sales and use tax for the 1989-1990 fiscal year.

Table 2-1 Florida: Construction and Related Employment
With Year to Year Percentage Change

Year	Construction		Mining		Building Materials		Total State Employment		Manufacturing Employment	
	(*1000)	% Chg	(*1000)	% Chg	(*1000)	% Chg	(*1000)	% Chg	(*1000)	% Chg
1970	175.7		8.3		21.34		2152.1		322.5	
1971	186.8	6.3%	8.9	7.2%	22.98	7.7%	2276.4	5.8%	322.7	0.1%
1972	230.1	23.2%	8.8	-1.1%	24.62	7.1%	2513.1	10.4%	351.3	8.9%
1973	290.2	26.1%	9.2	4.5%	27.55	11.9%	2778.6	10.6%	380.6	8.3%
1974	276.1	-4.9%	9.9	7.6%	27.9	1.3%	2863.8	3.1%	375.9	-1.2%
1975	182.5	-33.9%	9.4	-5.1%	23.81	-14.7%	2746.4	-4.1%	339.4	-9.7%
1976	166.7	-8.7%	8.8	-6.4%	23.35	-1.9%	2784.3	1.4%	354.0	4.3%
1977	178.9	7.3%	9.1	3.4%	24.61	5.4%	2933.2	5.3%	380.9	7.6%
1978	209.5	17.1%	9.5	4.4%	28.9	17.4%	3180.6	8.4%	415.5	9.1%
1979	241.4	15.2%	10.1	6.3%	31.3	8.3%	3381.2	6.3%	443.6	6.8%
1980	263.9	9.3%	11.0	8.9%	32.58	4.1%	3576.2	5.8%	456.4	2.9%
1981	283.1	7.3%	11.3	2.7%	34.84	6.9%	3736.9	4.5%	472.2	3.5%
1982	256.6	-9.4%	9.6	-15.0%	32.31	-7.3%	3761.9	0.7%	456.7	-3.3%
1983	268.8	4.8%	9.6	0.0%	35.29	9.2%	3905.6	3.8%	464.3	1.7%
1984	318.4	18.5%	10.2	6.3%	38.25	8.4%	4209.0	7.8%	501.9	8.1%
1985	334.2	5.0%	10.2	0.0%	41.43	8.3%	4410.0	4.8%	514.4	2.5%
1986	339.5	1.6%	9.3	-8.8%	42.43	2.4%	4599.0	4.3%	517.2	0.5%
1987	341.5	0.6%	8.7	-6.5%	45.87	8.1%	4848.1	5.4%	531.0	2.7%
1988	346.3	1.4%	9.1	4.6%	44.11	-3.8%	5066.6	4.5%	539.8	1.7%
1989	340.2	-1.8%	9.2	1.1%	45.50	3.2%	5260.9	3.8%	537.9	-0.4%
1990	324.1	-4.7%	8.7	-5.4%	46.92	3.1%	5403.0	2.7%	522.3	-2.9%

Source: The Long-Term Economic Forecast 1991

Chapter 3

EXPLANATION OF CONSTRUCTION SUB-SECTORS

Introduction

This chapter is primarily concerned with reporting the data that gives a more specific view of the construction industry. This will begin with an aggregate view of the nation as a whole with respect to the construction industry. Following the national view, will be a look at the construction industry as it performed in Florida. Next we will examine the subsectors of the construction industry in Florida to analyze the construction industry as it effects Florida's economic situation.

I. General Classification, Definitions and U.S. Data.

Categories & Grouping

The United States Census Bureau conducts two studies of the construction industry each decade. These studies include both an aggregate picture of the construction industry on a national basis and a detailed break down of the subsectors in the construction industry by state. They are conducted every second and seventh year after each census. There is a three year lag associated with the reporting of the data. Due to this lag, the most up to date information currently available reports on the year 1987. The next study that is to be published will not take place until 1992 and will not be published until 1995. Therefore 1987 is the most resent data available for this report.

The format which the Bureau of Census uses is as follows:²⁰

1. Private construction

A. Residential bldgs. (including farmhouses)

1). New housing

a. Single-unit

b. Multi-unit

2). Additions and alterations

3). Non-housekeeping (hotels/motels)

B. Non-residential buildings

1) Industrial

2) Office

3) Other commercial

4) Religious

5) Educational

6) Hospital & institutional

7) Misc. non-residential buildings

a. Amusement

b. Residential garages

c. Other structures

C. Farm non-residential

D. Public utilities

1) Telephone & telegraph

2) Gas

3) Electric power and light

4) Railroad

5) Petroleum pipelines

E. All other private

2. Public

A. Buildings

- 1) Housing & redevelopment
- 2) Industrial
- 3) Educational
- 4) Hospital
- 5) Other public buildings

B. Highways & streets

C. Military facilities

D. Conservation & development

E. Other public construction

- 1) Sewer systems
- 2) Water supply facilities
- 3) Misc. public construction

The subsectors of the construction industry for the state of Florida has be divided into the following contractor types: 21

1. General building contractors

- A. Residential building
- B. Operative builders
- C. Non-residential building

2. Heavy construction contractors

- A. Highway & street
- B. Heavy construction (except highway)

3. Special trade contractors

- A. Plumbing, heating, and air conditioning
- B. Painting, paperhanging, and decorating

- C. Electrical work
- D. Masonry, stonework, and plastering
- E. Carpeting and flooring
- F. Roofing and sheet metal
- G. Other

United States Census Definitions and Assumptions

A construction establishment is defined as a relatively permanent office or place of business from which the usual business related activities are conducted. Information for the census is collected from each establishment, but not from each job site. The data for each job site is included in the report from its respective home office. Foreign construction activities are not included in the census reports.

The 1987 census estimates for construction establishments with paid employees is based on a probability sample of 147,000 establishments from a universe of 533,000 construction companies. The data collected in this sample were weighted to represent all construction establishments.

United States Construction Industry Data

Employment in U.S. construction has risen from 4,234,887 in 1982 to 5,014,599 in 1987. This represents an increase of 18.24 percent. The employment in construction for 1987 is broken down in the following manner. The Bureau of Economic Analysis assigns a Standard Industry Classification (S.I.C.) Code to every recognized industry. Construction is divided into three general groups and each group has been assigned a Standard Industry Classification Code. General building contractors and operative builders (S.I.C. Code 15) employed 1,278,422 workers in

1987. Heavy construction and general contractors (S.I.C. Code 16) employed 827,126 workers in 1987. Specialty trade contractors (S.I.C Code 17) employed 2,909,050 workers in 1987.²²

The total value of construction for 1987 reached \$578,421,744,000.²³ General building and operative contractors accounted for \$252,552,632,000; heavy construction general contractors claimed \$87,518,148,000; and special trade contractors claimed \$238,350,963,000. The 1987 data was not reported in the same manner in the preceding censuses, therefore some comparisons with past census data could produce inaccurate correlations if compared.²⁴ The most significant change was "total construction receipts" which is now reported as "total value of construction." The Bureau of Census feels that the new method of reporting gives a better representation of the construction industry.

Value added is defined as total value of construction work subcontracted to others less payment for material, components, supplies, and fuels. The value added for the U.S. construction industry for 1987 was \$227,934,192,000.²⁵

Florida Construction Industry Data

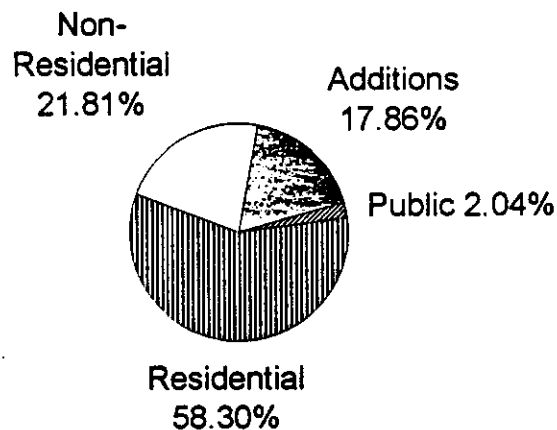
Employment in construction for the state of Florida has risen from 255,392 in 1982 to 324,573 in 1987. This represents an increase of 27.09 percent in employment. The employment in construction for 1987 is broken down in the following manner. General building contractors and operative builders (S.I.C. Code 15) employed 85,116 workers. Heavy construction and general contractors (S.I.C. Code 16) employed 44,265 workers. Specialty trade contractors (S.I.C Code 17) employed 195,192 workers.²⁶

The total value for construction in Florida for 1987 was \$35,098,246,000. General building and operative contractors accounted for \$17,479,675,000; heavy

construction general contractors claimed \$4,305,433,000; and special trade contractors claimed \$13,313,138,000.²⁷

Figure 3-1

Florida: Total Value of Building Permits 1990



Source: Florida Statistical Abstract 1991, pg. 315

The Bureau of Economic and Business Research at the University of Florida collects and reports annual information on building permit activity. Figure 3-1, above, shows the total value of building permits for the state of Florida in 1990.²⁸ The numbers that make up Figure 3-1 are listed in Table 3-1 at the end of this chapter.

II. Mining in Florida

Materials and Uses

The mining industry in the state of Florida employs approximately 9,000 people annually. Approximately 40 percent of the employment in mining is involved in the quarrying of limestone, dolomite, sand, and gravel.²⁹ The products from this sector of mining are primarily used to build roads, and manufacture cement. Products from this mining sector are a direct input to the construction industry. Employment in mining is strongly affected by the cycles that take place in the construction industry and it often follows the same cyclical trends.

The production of phosphate accounts for more than 40 percent of the employment in Florida's mining industry. Phosphate is the primary ingredient used in the production of the majority of agricultural fertilizers.³⁰ At the current time, Florida is the leader in the production of phosphate, supplying approximately 80 percent of the United States production and about 25 percent of the worlds production.³¹ Although the phosphate mining sector employs a large portion of the labor force working in mining, it has little relationship to the construction industry.

The remaining portion of employment in the mining industry is shared between oil and gas extraction and miscellaneous metal ore mining. Oil and gas extraction account for 8 percent of the industry's employment while miscellaneous metal ore mining accounts for 4 percent. Neither of these two sectors directly influence the construction industry. ³²

III Residential and Operative Builders in Florida

Florida Census Data

In this section both single family residential contractors, S.I.C. Code 1521, and operative builders, S.I.C. Code 1531, are addressed. Since the Census Bureau has changed its format for reporting data, it would not be accurate to compare all past data to current data. Comparisons between 1987 and 1982 data can be made for employment and value added, but can not be made for total value of construction, due to the new reporting procedure. Several research companies aggregate cost indices for the construction industry. These indices span a number of years and show increases and decreases in the cost of construction over time. The Bureau of the Census, for example, shows an increase of 9.7 percent from the 1987 level of 100 to the 1990 level of 109.7 for a fixed weighted composite index.³³ Engineering News Record, ENR, gives a cost index for buildings of 106.5 for 1990 with the 1987 level being 100.³⁴ The consumer price index rose from 100 for the 1982 to 1984 average (1982-84 = 100) to 130.7 for the year 1990.³⁵

General Contractor - Single Family Housing

The sector includes the new work, additions, alterations, remodeling and repair of single family houses, rowhouses, and townhouses. Employment in this category for general contractors increased 17 percent from its 1982 level of 21,766 to 25,482 in 1987.³⁶ Florida single family contractors had a total value of construction of \$3,174,374,000 for 1987. Value added was 1,006,086,000 for 1987, up 20.93 percent from its 1982 level of \$831,905,000.³⁷

Figure 3-2

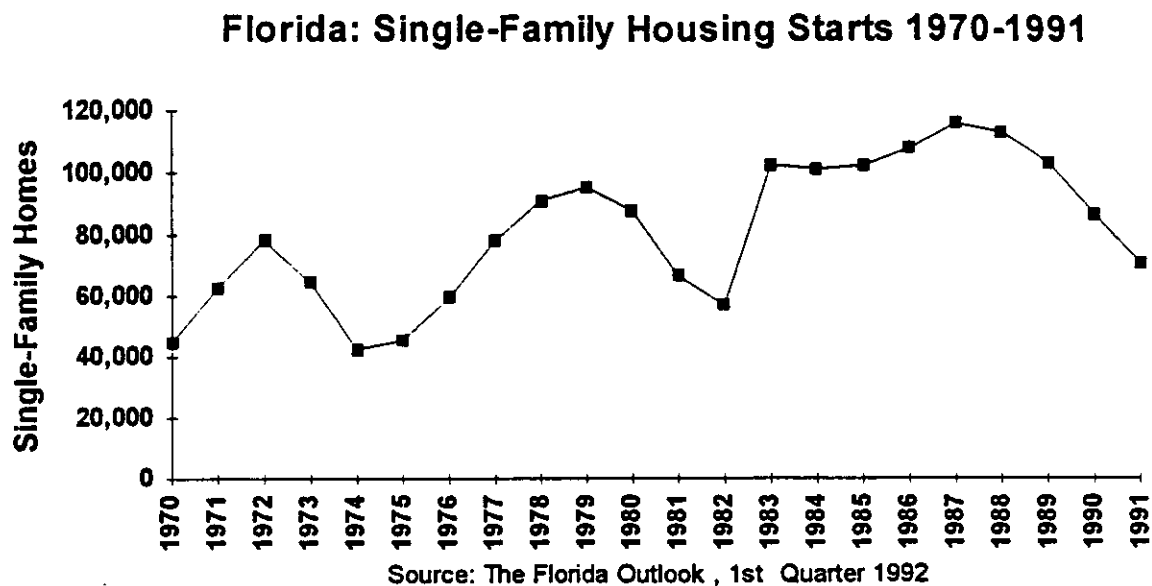


Figure 3-2, above, shows single-family housing starts for the past two decades. Note the general upward trend following the 1982-83 recession. Also note the dip in housing starts for the recession in the mid 1970's. Single-family housing starts tend to follow the same pattern as many of the other construction economic indicators.

Operative Builders

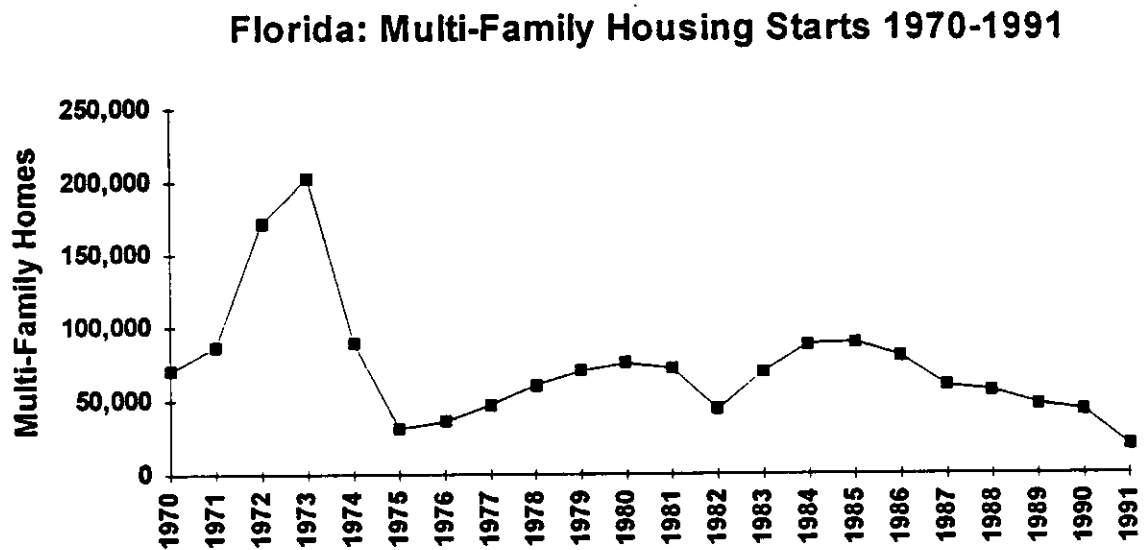
Operative builders are defined as establishments primarily engaged in the construction of single family houses and other buildings for sale on their own account rather than as contractors. This group includes speculative builders and condominium developers.

Florida operative builders employed 18,875 people in 1987, a 33.8 percent increase from their 1982 employment.³⁸ The total value of construction for 1987 was

\$5,120,878,000. Value added for 1987 was \$1,363,618,000 up 53.69 percent from the 1982 value of \$887,198,000.³⁹

Figure 3-3, below, depicts the multi-family housing starts for the past twenty years. Note the general downward trend throughout the later 1970's and 1980's. Over the past two decades Florida has experienced a steady increase in the number of single family homes while at the same time multi-family housing has been on the decline. Also note the dips in multi-family housing starts caused by the two recession.

Figure 3-3



Source: The Florida Outlook , 1st Quarter 1992

Residential Other than Single Family in Florida

The Bureau of Census defines this category as establishments engaged primarily in the construction of apartment buildings, hotels, motels, and dormitories. This includes all new work, additions, alterations, remodeling, and repair.

Florida employment by firms in this category decreased 12.54 percent from the 1982 level of 7800 people to a 1987 level of 6936.⁴⁰ Total value of construction work for Florida contractors in this group was \$1,042,668,000. Value added was \$248,104,000 for 1987, down 27.25 percent from its 1982 level of \$315,725,000.⁴¹

IV. Non-residential and Industrial Construction in Florida

Non-residential Other than Industrial and Warehouse

This category consists of establishments engaged primarily in the construction of commercial, institutional, religious, and amusement-recreational type buildings. The scope of this work includes new work, additions, alterations, remodeling, and repair.

This category employed 29,275 people in 1987, an increase of 41.54 percent over its 1982 level of 20,683.⁴² The total value of construction in this category for 1987 was \$4,661,665,000 and the value added that same year totaled \$1,218,976,000.⁴³ This represented an increase of 68.58 percent for value added in 1987 over its 1982 level of \$723,037,000.

Industrial Warehouse

Establishments in this category are primarily engaged in the construction of industrial buildings such as aluminum plants, automobile assembly plants, pharmaceutical manufacturing plants, and commercial warehouses. The scope of this work includes new work, additions, alterations, remodeling, and repair. This category employed 4,548 people in 1987, a decrease of 10.73 percent over its 1982 level of 5,036.⁴⁴ The total value of construction in this category for 1987 was \$595,060,000 and the value added that same year totaled \$170,901,000.⁴⁵ This represented an increase of 12.66 percent for value added in 1987 over its 1982 level of \$151,694,000.

V. Heavy Construction in Florida

Bridge, Tunnel, and Elevated Highway

These construction establishments are primarily engaged in the building of bridges, viaducts, elevated highways, and tunnels. These contractors employed 853 people in 1987 which is a considerable decrease compared to the 1982 level of employment of 1728. This represent a decrease of 49.36 percent.⁴⁶ The total value of construction in this category for 1987 was \$107,728,000 and the value added for that same year totaled \$33,219,000.⁴⁷ This represented a decrease of 38.32 percent for value added in 1987 below its 1982 level of \$86,672,000.

Water, Sewer, Pipe Line, Communication, and Power Line

These construction contractors are defined as those establishments that are primarily engaged in the installation of pipe lines, communication and power lines, and sewer and water mains. This group also includes contractors engaged in the construction of pumping stations, television towers, radio towers, and telephone lines. This category of heavy contractors employed 13,953 people in 1987. This represents an increase of 30.47 percent with the 1982 level of employment being 10,694.⁴⁸ The total value of construction in this category for 1987 was \$1,031,670,000 and the value added for that same year totaled \$579,351,000.⁴⁹ This represented an increase of 49.80 percent for value added in 1987 over its 1982 level of \$386,733,000.

Heavy Construction Contractors, Not Elsewhere Classified

This category of contractors includes those establishments primarily engaged in heavy construction projects which are not elsewhere classified (N.E.C.). These include construction of chemical complexes, dams and reservoirs, harbor and port facilities, missile facilities, oil refineries, subways, water and sewage treatment plants, power and light plants, industrial ovens and incinerators, flood control projects, and dredging and demolition contractors.

Florida heavy construction contractors N.E.C. employed 12,221 people in 1987. This represents an increase of 42.95 percent with the 1982 level of employment being 8,549.⁵⁰ The total value of construction in this category for 1987 was \$1,045,318,000 and the value added for that same year totaled \$537,580,000.⁵¹ This represented an increase of 15.73 percent for value added in 1987 over its 1982 level of \$464,496,000.

VI. Highway and Street Contractors in Florida

Highway and street contractors are those primarily engaged in the construction of roads, streets, sidewalks, guardrails, parkways, parking areas, airports, and athletic fields.

These contractors employed 17,238 people in 1987. This represents an increase of 46.01 percent with the 1982 level of employment being 11,806.⁵² The total value of construction in this category for 1987 was \$1,881,250,000 and the value added for that same year totaled \$923,701,000.⁵³ This represented an increase of 88.26 percent for value added in 1987 over its 1982 level of \$490,652,000.

VII. Plumbing, Heating, and Air Conditioning in Florida

These special trade contractors are engaged in plumbing, heating (except electric), or air conditioning work or any combination of the three. Sheet metal work associated with these trades is also included in this category, but roofing and sheet metal contractors are not.

Plumbing, heating, and air conditioning contractors employed 42,344 people in 1987. This represents an increase of 26.10 percent with the 1982 level of employment being 33,580.⁵⁴ The total value of construction in this category for 1987 was \$2,793,088,000 and the value added for that same year totaled \$1,412,969,000.⁵⁵ This represented an increase of 27.80 percent for value added in 1987 over its 1982

level of \$1,105,621,000.

VIII. Electrical in Florida

These contractors are primarily engaged in electrical work. This category also includes electrical heating contractors and establishment engaged in the installation of intercommunication equipment, sound equipment, burglar alarms, fire alarms, and telephones.

Electrical contractors employed 36,281 people in 1987. This represents an increase of 41.23 percent with the 1982 level of employment being 25,689.⁵⁶ The total value of construction in this category for 1987 was \$1,998,988,000 and the value added for that same year totaled \$1,130,468,000.⁵⁷ This represented an increase of 34.16 percent for value added in 1987 over its 1982 level of \$842,602,000.

IX. Roofing and Sheet Metal in Florida

This category consists of those contractors primarily engaged in the installation of siding and roofing (including spraying, painting, or coating). This group also includes those contractors engaged in sheet metal work with the exception of sheet metal work done in connection with heating, plumbing, or air conditioning.

Florida roofing and sheet metal contractors employed 17,824 people in 1987. This represents an increase of 19.38 percent with the 1982 level of employment being

14,931.⁵⁸ The total value of construction in this category for 1987 was \$1,008,422,000 and the value added for that same year totaled \$527,615,000.⁵⁹ This represented an increase of 25.84 percent for value added in 1987 over its 1982 level of \$419,280,000.

X. Finishes in Florida

Three categories make up this group: masonry, stone setting, and other stonework, plastering, drywall, acoustical and insulation work, and terrazzo, tile, marble, and mosaic work.

Masonry, Stone Setting, and Other Stonework

The masonry category consists of contractors primarily engaged in masonry work, stone setting, and other stonework, including boiler setting contractors, bricklaying contractors, cement block laying contractors, chimney construction contractors, exterior marble work contractors, and tuck pointing contractors.

These contractors employed 9,332 people in 1987. This represents an increase of 28.32 percent with the 1982 level of employment being 7,272.⁶⁰ The total value of construction in this category for 1987 was \$374,331,000 and the value added for that same year totaled \$226,009,000.⁶¹ This represented an increase of 55.02 percent for value added in 1987 over its 1982 level of \$145,786,000.

Plastering, Drywall, Acoustical, and Insulation Work

These contractors are primarily engaged in applying plain or ornamental plaster, installing lathing, or installing drywall. These contractors also install acoustical work and insulation.

This group of contractors employed 19,940 people in 1987. This represents an increase of 30.78 percent with the 1982 level of employment being 15,247.⁶² The total value of construction in this category for 1987 was \$1,194,405,000 and the value added for that same year totaled \$609,418,000.⁶³ This represented an increase of 47.11 percent for value added in 1987 over its 1982 level of \$414,235,000.

Terrazzo, Tile, Marble, and Mosaic Work

This grouping is composed of contractors primarily engaged in the setting and installation of ceramic tile, marble, and mosaic, and in mixing marble particles and cement to make terrazzo at the site of construction. This category also includes contractors engaged in fresco and mantel work.

These contractors employed 3280 people in 1987. This represents an increase of 33.06 percent with the 1982 level of employment being 2,465.⁶⁴ The total value of construction in this category for 1987 was \$200,112,000 and the value added for that same year totaled \$99,886,000.⁶⁵ This represented an increase of 55.48 percent for value added in 1987 over its 1982 level of \$64,234,000.

XI. Concrete Work in Florida

Contractors in this category are primarily engaged in concrete work and the surfacing of concrete floors, applying seal to concrete or asphalt surfaces, and constructing with gunite and stucco. This also includes the construction of private driveways and walks of all materials.

Concrete contractors employed 15,711 people in 1987. This represents an increase of 48.71 percent with the 1982 level of employment being 10,565.⁶⁶ The total value of construction in this category for 1987 was \$784,294,000 and the value added for that same year totaled \$455,722,000.⁶⁷ This represented an increase of 39.30 percent for value added in 1987 over its 1982 level of \$327,158,000.

XII. Special Trade Contractors Not Elsewhere Classified in Florida

This group consists of specialty trades which have not elsewhere been classified. The U.S. Census Bureau classifies the groups shown above under heading VII. through XI. as special trade contractors. For this study, however, those contractors have been treated separately. The following sections cover the remaining special trade contractors.

Painting, Paper Hanging, and Decorating

These contractors are engaged in interior and exterior painting (except roofs), paper hanging, and decorating. Their employment for 1987 was 10,776, a 21.62 percent increase over the 1982 employment of 8,860.⁶⁸ The total value of construction in this category for 1987 was \$400,418,000 and the value added for that same year totaled \$271,441,000.⁶⁹ This represented an increase of 39.50 percent for value added in 1987 over its 1982 level of \$194,586,000.

Carpentering

These contractors are engaged in wood carpentry and the installation of prefabricated windows and doors (except revolving doors). Ship joinery contractors are also included in this group. Their employment for 1987 was 10,700, a 33.75 percent increase over the 1982 employment of 8,000.⁷⁰ The total value of construction in this category for 1987 was \$531,014,000 and the value added for that same year totaled \$287,369,000.⁷¹ This represented an increase of 68.40 percent for value added in 1987 over its 1982 level of \$170,644,000.

Floor Laying and other Floor Work

These contractors are engaged in laying, scraping, finishing, or refinishing of parquet and other hardwood flooring. This grouping also includes contractors that install asphalt tile, linoleum, and mastic and resilient flooring. Their employment for 1987 was 1,336, a 3.16 percent increase over the 1982 employment of 1,295.⁷² The

total value of construction in this category for 1987 was \$109,423,000 and the value added for that same year totaled \$54,113,000.⁷³ This represented an increase of 83.83 percent for value added in 1987 over its 1982 level of \$29,437,000.

Water Well Drilling

These contractors are engaged in servicing water well and water well drilling. Their employment for 1987 was 3,272, a 9.44 percent decrease over the 1982 employment of 3,581.⁷⁴ The total value of construction in this category for 1987 was \$168,615,000 and the value added for that same year totaled \$113,792,000.⁷⁵ This represented a decrease of 14.31 percent for value added in 1987 below its 1982 level of \$130,087,000.

Glass and Glazing Work

These contractors are engaged in glass and glazing work in connection with, but not limited to, building construction industry. Their employment for 1987 was 2,755 a 26.61 percent increase over the 1982 employment of 2,176.⁷⁶ The total value of construction in this category for 1987 was \$187,051,000 and the value added for that same year totaled \$99,824,000.⁷⁷ This represented an increase of 29.31 percent for value added in 1987 over its 1982 level of \$77,195,000.

Excavation and Foundation Work

These contractors are engaged in excavation, foundation work, digging, and loading in connection with building, heavy, or civil construction. Their employment for

1987 was 5,316 a 22.32 percent decrease over the 1982 employment of 6,503.⁷⁸ The total value of construction in this category for 1987 was \$390,622,000 and the value added for that same year totaled \$260,320,000.⁷⁹ This represented a decrease of 13.66 percent for value added in 1987 below its 1982 level of \$295,872,000.

Wrecking and Demolition Work

These contractors are primarily engaged in the wrecking and demolition of buildings and other structures, with or without the sale of materials derived from demolishing operations. Their employment for 1987 was 297 a 81.10 percent increase over the 1982 employment of 164.⁸⁰ The total value of construction in this category for 1987 was \$17,856,000 and the value added for that same year totaled \$15,226,000.⁸¹ This represented an increase of 134.61 percent for value added in 1987 over its 1982 level of \$6,490,000.

Special Trade Contractors, Not Else Where Classified

These contractors are primarily engaged in construction work that could not be classified in another specific grouping. This group includes such construction work as core and diamond drilling, scaffolding construction, house moving, fireproofing and waterproofing of buildings and other structures, sandblasting and steam cleaning of building exteriors, and other construction activities.

Their employment for 1987 was 12,289 a 33.93 percent increase over the 1982 employment of 9,315.⁸² The total value of construction in this category for 1987 was \$775,563,000 and the value added for that same year totaled \$426,271,000.⁸³ This represented an increase of 46.06 percent for value added in 1987 over its 1982 level

of \$291,856,000.

XIII. Mobile Homes and Prefabricated Wood Products in Florida

Mobile homes have always been an alternative to constructing a single family home. They are considerably less expensive and therefore are more affordable to persons with lower incomes. The production of mobile homes is much like the construction of single family homes except for the fact that mobile homes are produced in a factory environment. Most of the material used in the production of mobile home is used in the construction of single family homes. These include lumber, roofing materials, interior finishes, heating and air conditioning, and plumbing and electricity. In 1990, 3,614 person were employed in the production of wood buildings and mobile homes. 84

Prefabricate wood products are inputs to the construction industry and are included in forestry production and in total value of construction products. The value added for the prefabricated wood products is the total value of the prefabricated product at the "ready for construction phase" minus the total value of the lumber after harvesting processing. The numerical data for this sector are not readily available in a manner that could be used to draw any conclusive inferences about prefabricated wood products.

Table 3-1

Florida: Building Permits 1990

Type	Dollars (000's)	Percent of Total
Residential	7,296,378	58.30%
Non Residential	2,729,242	21.81%
Additions	2,235,557	17.86%
Public	254,806	2.04%
Total	12,515,983	100.00%

Source: Florida Statistical Abstract 1991, pg. 315

Table 3-2

Florida: Single-family and Multifamily Housing Starts 1970-1991

Year	Single-Family	Multi-family
1970	44,818	70,139
1971	62,707	86,784
1972	78,145	171,191
1973	64,300	203,172
1974	42,335	89,457
1975	45,204	31,047
1976	58,989	35,897
1977	77,737	47,291
1978	90,422	60,519
1979	94,946	70,170
1980	87,219	75,464
1981	66,195	71,689
1982	56,579	43,699
1983	101,830	69,961
1984	100,746	88,502
1985	101,626	89,521
1986	107,238	79,991
1987	115,450	59,753
1988	112,725	56,374
1989	102,486	47,139
1990	85,999	42,938
1991	70,281	18,679

Source: The Florida Outlook, 1st Quarter 1992

Chapter 4

REGIONAL MULTIPLIERS:

CONSTRUCTION'S IMPACT ON THE FLORIDA ECONOMY

Introduction

Economists attempt to predict the future based on economic analysis of data from the past and present. They try to evaluate the significance of certain economic policy in the short term as well as the long term. Economists quantify their predictions in terms of economic output, earnings and employment. The level of economic output is usually expressed in dollars and an example of a measure of economic output would be gross sales. Earnings are analyzed in terms of dollars by examining personal income data. The level of employment is usually defined by the number of people employed. Output, earnings and employment data are all measures of economic activity.

There are several methods utilized by economists to analyze economic activity within a region. A region can be defined as a county, a state, or a country depending on the scope of the study. One of the most popular methods for analyzing economic activity is input-output analysis. One of the reasons for the popularity of input-output models is that they have the unique ability to portray the interrelationships that exist between various economic sectors or industries within a region. For construction, an example of an interrelationship between industries would be the relationship that exist between the new construction industry and the mining industry. Input-output analysis makes it possible to predict how many jobs will be created in mining from an increase in new construction. A major strength of input-output analysis is that the investigator can tailor the level of detail for economic analysis according to his or her needs. The investigator can determine the time period and geographic region to best suit their study.

Input-output models are developed from a series of data collected by economists. These models are very complex with many variables as they attempt to portray the interrelationships that exist among various industries. Fortunately, economists reduce and simplify these models into tables of multipliers that can be used by the layman to predict economic impact. These tables of multipliers can be used to estimate or predict the effects of proposed policy and programs. Most policies and programs are ultimately defined by a dollar cost. The state legislature budgets or allocates a dollar amount to each program. Private investors define their projects in terms of costs or dollars.

The amount of dollars committed to a program or project can be thought of as a final demand change. Final demand changes reflect purchases of goods and services by the government, investors and individuals. Some examples of final demand changes would be; the government spending 10 million dollars to build a new highway, a private investor spending 3 million dollars to build an apartment complex or an individual purchasing a 100,000 dollar house. Economists have made it possible to analyze the effects of these changes in final demand with tables of multipliers that are generated from input-output modeling and analysis. A multiplier is simply a constant used to predict the outcome of some proposed change in final demand.

Many states use some form of the input-output model for economic analysis of proposed projects and programs. A partial list includes Utah, Nebraska, Tennessee, Idaho, Arizona, Washington, Missouri, New Mexico, South Carolina, Oregon, Georgia, and Florida. This study will make use of multiplier tables, sometimes referred to as transaction tables, developed for the State of Florida by the U.S. Department of Commerce's Bureau of Economic Analysis. The modeling system used to develop Florida's multiplier tables was the Regional Input-Output Modeling System (RIMS II).

The Regional Input-Output Modeling System

The Regional Input-Output Modeling System (RIMS) is a tool developed by the United States Department of Commerce at the Bureau of Economic Analysis (BEA) as a technique for analyzing the regional economic impacts of projects and programs. The original Regional Input-Output Modeling System (RIMS), developed in the early 1970's, was recently enhanced by the Bureau of Economic Analysis (BEA) to improve its regional impact prediction capabilities and the latest system is known as RIMS II.

RIMS II is based on an accounting framework called an input-output table. An input-output table shows, for each industry, industrial distributions of inputs purchased and outputs sold. A typical input-output table in RIMS II derives mainly from two data sources: (1) Bureau of Economic Analysis's national input-output table, which shows the input and output structure of more than 500 U.S. industries, and (2) Bureau Economic Analysis's four-digit Standard Industrial Classification (SIC) county wage-and-salary data, which can be used to adjust the national input-output table to show a region's industrial structure and trading patterns. ⁸⁵

The data sources for RIMS II allow economic impacts to be estimated for any region composed of one or more counties and for any industry with a Standard Industry Division or Classification in the national input-output tables.

Standard Industrial Divisions

Currently, there are thirty-nine (39) major Standard Industry Divisions or Classifications (listed below) that are recognized by the Bureau of Economic Analysis for input-output analysis and the formulation of regional multipliers. These thirty-nine major classifications can further be broken down into 531 individual classifications

when a more detailed analysis is desired.

39 Standard Industry Divisions

1. Agriculture
2. Forest & Fish
3. Coal Mining
4. Petroleum & Natural Gas
5. Miscellaneous Mining
6. **New Construction**
7. **Maintenance/Repair Construction**
8. Food/Kindred Products & Tobacco
9. Textile Mill Products
10. Apparel
11. Paper and Allied Products
12. Printing & Publishing
13. Chemicals & Petroleum Refining
14. Rubber & Leather Products
15. Lumber & Wood Products & Furniture
16. Stone, Clay & Glass Products
17. Primary Metal Industries
18. Fabricated Metal Products
19. Machinery, except electrical
20. Electric & Electronic Equipment
21. Motor Vehicles & Equipment
22. Transportation Equipment, except Motor Vehicles
23. Instruments & related products
24. Miscellaneous Manufacturing Industries
25. Transportation
26. Communication
27. Electric, Gas, Water & Sanitary Services
28. Wholesale Trade
29. Retail Trade
30. Finance
31. Insurance
32. Real Estate
33. Hotels & Lodging Places and Amusements
34. Personal Services
35. Business Services
36. Eating & Drinking Places
37. Health Services
38. Miscellaneous Services
39. Households

Regional Output, Earnings, and Employment Multipliers From RIMS II

Output Multipliers

Output Multipliers tell us how every additional dollar increase in final demand for one industry will cause how much increased economic activity in other industries. In simple terms, output multipliers tell us how one dollar spent on a finished product or service in one industry effects or impacts the level of economic activity in other industries within that region. This allows us to predict, by utilizing output multipliers, how much economic activity is generated from increasing final demand by each additional dollar. To further explain and clarify this concept, a portion of a transaction table is shown in Table 4-1. This table of total multipliers, by industry aggregation, is for output in the State of Florida. It can be seen that for every one dollar that is spent on New Construction, a total of \$2.12 of economic activity is generated. The \$2.12 is composed of \$1.00 worth of output for New Construction plus an additional \$1.12 output in other related industries, within the state.

We can see from Table 4-1 that if the Federal Government decided to build a \$1,000,000 Post Office in the state of Florida, it would create \$2,120,700 worth of economic activity. The \$1,000,000 directly spent on the Post Office is the final demand change while the remaining \$1,120,700 would be additional output created in other related industries. In summary, an output multiplier predicts how much economic activity will be generated by increasing final demand.

Table 4-1

State of Florida
Total Multipliers, by Industry Aggregation, for Output
(Specific to Standard Industry Division)

Standard Industry Division	Multiplier	Impact of \$1 Million Change in Final Demand
	Output (\$)	Output (\$)
New Construction	2.1207	2,120,700
Maintenance/Repair Construction	2.0552	2,055,200
Lumber & Wood Products & Furniture	1.8107	1,810,700
Stone, Clay & Glass Products	1.9061	1,906,100
Fabricated Metal Products	1.6357	1,635,700
Electric, Gas, Water & Sanitary Services	1.4017	1,401,700
Finance	1.9020	1,902,000
Insurance	2.2241	2,224,100
Real Estate	1.3990	1,399,000

Source: Obtained from Florida's Department of Commerce, Department of Economic Development located in Tallahassee, Florida

Earnings Multipliers

Earnings multipliers for a given industry in a region show the earnings that the given industry pays, both directly and indirectly, to households employed in regional industries to deliver an additional dollar of output to final demand. People exchange their time and services for earnings or pay. These earnings are a substantial part of each dollar spent on output or final demand. Earnings multipliers tell us how much money or how many dollars will be paid to people in exchange for their time and services necessary to create one more additional dollar of output. For example, Table 4-2 below shows us that the earnings multiplier for new construction in Florida is .7134. This means that \$0.71 will be paid in wages to people directly and indirectly

involved in the creation of each additional dollar of output. A portion of the earnings would be considered direct if the earner was at the actual jobsite on a new construction job placing concrete. A indirect earner would be someone mining the raw materials used to make the concrete that is poured on the job.

Table 4-2

State of Florida
Total Multipliers, by Industry Aggregation, for Earnings
(Specific to Standard Industry Division)

Standard Industry Division	Multiplier	Impact of \$1 Million Change in Final Demand
	Earnings (\$)	Earnings (\$)
New Construction	0.7134	713,400
Maintenance/Repair Construction	0.7958	795,800
Lumber & Wood Products & Furniture	0.4920	492,000
Stone, Clay & Glass Products	0.5483	548,300
Fabricated Metal Products	0.4513	451,300
Electric, Gas, Water & Sanitary Services	0.2471	247,100
Finance	0.5977	597,700
Insurance	0.8165	816,500
Real Estate	0.1612	161,200

Source: Obtained from Florida's Department of Commerce, Department of Economic Development located in Tallahassee, Florida

Again, by looking at Table 4-2, we can predict how much money would be paid in earnings if the Federal Government decided to build a \$1,000,000 Post Office in the state of Florida. It would create \$713,400 worth of earnings or wages to be paid to people directly and indirectly involved in the construction of the new \$1,000,000 Post Office. Earnings multipliers allow us to predict how certain proposed projects or programs will effect personal income for a region.

Employment Multipliers

Employment multipliers work in much the same way as earnings multipliers except that they tell the number of jobs that will be created and they are expressed per each additional million dollars of output. The reason they are expressed per million dollars of output is that the multiplier would be too small for practical use if expressed on a per dollar basis. The employment multiplier allows us to predict how many actual jobs are created by proposed programs or projects. The resulting multipliers include both direct and indirect jobs created. A direct job would be a person actually working on the new construction job, while an indirect job created would be a position in an allied industry such as the mining industry mining aggregate for concrete.

The concept of an employment multiplier will be illustrated with Table 4-3. We go to the table and look at the employment multiplier for new construction and see that 37.6 jobs are created for each additional million dollars of new construction. This means that if \$1,000,000 is spent to build a new Post Office, 37.6 people will have jobs directly and indirectly related to the new construction of the Post Office.

Table 4-3

State of Florida
Total Multipliers, by Industry Aggregation, for Employment
(Specific to Standard Industry Division)

Standard Industry Division	Multiplier	Impact of \$1 Million Change in Final Demand
	Employment # of Jobs per \$1,000,000	Employment (# of Jobs)
New Construction	37.6	37.6
Maintenance/Repair Construction	41.7	41.7
Lumber & Wood Products & Furniture	27.9	27.9
Stone, Clay & Glass Products	27.3	27.3
Fabricated Metal Products	21.8	21.8
Electric, Gas, Water & Sanitary Services	10.3	10.3
Finance	27.6	27.6
Insurance	36.8	36.8
Real Estate	13.5	13.5

Source: Obtained from Florida's Department of Commerce, Department of Economic Development located in Tallahassee, Florida

The Three Levels of RIMS II

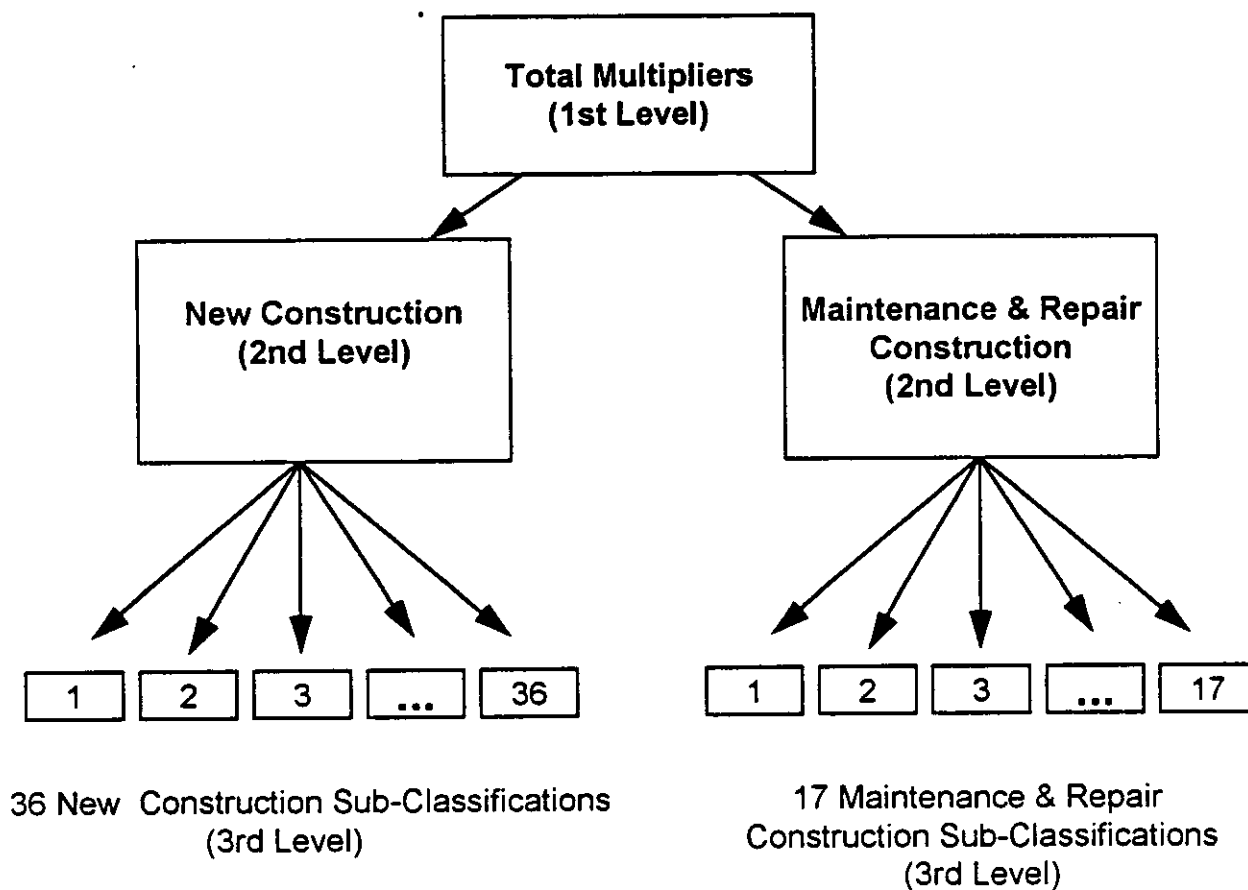
There are three levels of regional multipliers available for investigating changes in final demand under the Regional Input-Output Modeling System (RIMS II). The first level would be the total multipliers by industry aggregation, for output, earnings, and employment. When we look at the total for output multipliers, 2.1207, it is easily recognizable as the total output multiplier for New Construction, previously shown in Table 4-4. Second level multipliers are industry specific and tell the investigator how a change in final demand for one industry effects the other 39 standard industry divisions. The third level multipliers are by industry sub-classification such as "New

residential 1-unit structures" and tell us how each additional dollar spent on a single family homes impacts each of the 39 standard industry divisions.

Chart 4-1 shows the organizational relationship of the three levels of multipliers. It is important to note that the first level, total multipliers, are the result of the totals of the second level multipliers. The second level multipliers are the aggregate of the third level multipliers. This will become more clear as we examine each of the three levels.

Chart 4-1

Organizational Relationship of Multipliers



Total Multipliers

Total multipliers are the broadest and least detailed level of a regional multiplier. This is where the multipliers from Tables 4-1, 4-2, and 4-3 came from in the earlier presented example of the Post Office. Total multipliers are good for comparison purposes of one major industry to another. From Table 4-4, the reader can see that by scanning down the multiplier output column that the Insurance industry has the highest output multiplier at 2.2241. This means that for every dollar change in final demand for the Insurance industry there will a total of \$1.2241 additional output created in the other thirty-eight industries, within the region. The New Construction and Maintenance/Repair Construction industries are the second and third highest with total output multipliers of 2.1207 and 2.0552, respectively.

Table 4-4

State of Florida
Total Multipliers, by Industry Aggregation,
for Output, Earnings, and Employment
(Specific to Standard Industry Division)

Standard Industry Division	Multipliers			Impact of \$10 Million Change in Final Demand		
	Output (\$)	Earnings (\$)	Employment # of Jobs per \$1,000,000	Output (\$)	Earnings (\$)	Employment (# of Jobs)
Agriculture	1.9162	0.6501	37.6	19,162,000	6,501,000	376
Forest & Fish	1.7912	0.5608	38.9	17,912,000	5,608,000	389
Coal Mining	1.6031	0.4938	13.8	16,031,000	4,938,000	138
Petroleum & Natural Gas	1.4626	0.2314	12.8	14,626,000	2,314,000	128
Miscellaneous Mining	1.6896	0.4377	19.8	16,896,000	4,377,000	198
New Construction	2.1207	0.7134	37.6	21,207,000	7,134,000	376
Maintenance/Repair Construction	2.0552	0.7958	41.7	20,552,000	7,958,000	417
Food/Kindred Products & Tobacco	1.8721	0.4142	20.8	18,721,000	4,142,000	208
Textile Mill Products	1.7317	0.4314	25.3	17,317,000	4,314,000	253
Apparel	1.6841	0.4956	35.2	16,841,000	4,956,000	352
Paper and Allied Products	1.8355	0.4406	19.0	18,355,000	4,406,000	190
Printing & Publishing	1.9251	0.6257	32.0	19,251,000	6,257,000	320
Chemicals & Petroleum Refining	1.7532	0.3513	15.4	17,532,000	3,513,000	154
Rubber & Leather Products	1.6598	0.4616	24.8	16,598,000	4,616,000	248
Lumber & Wood Products & Furniture	1.8107	0.4920	27.9	18,107,000	4,920,000	279
Stone, Clay & Glass Products	1.9061	0.5483	27.3	19,061,000	5,483,000	273
Primary Metal Industries	1.5774	0.3720	16.9	15,774,000	3,720,000	169
Fabricated Metal Products	1.6357	0.4513	21.8	16,357,000	4,513,000	218
Machinery, except electrical	1.8074	0.5538	23.7	18,074,000	5,538,000	237
Electric & Electronic Equipment	1.9498	0.6687	29.3	19,498,000	6,687,000	293
Motor Vehicles & Equipment	1.4960	0.3400	16.6	14,960,000	3,400,000	166
Transportation Equipment	1.8439	0.6043	24.4	18,439,000	6,043,000	244
Instruments & related products	1.7931	0.5892	28.7	17,931,000	5,892,000	287
Miscellaneous Manufacturing Industries	1.7627	0.5063	30.1	17,627,000	5,063,000	301
Transportation	1.9824	0.7404	35.2	19,824,000	7,404,000	352
Communication	1.5890	0.4556	18.6	15,890,000	4,556,000	186
Electric, Gas, Water & Sanitary Services	1.4017	0.2471	10.3	14,017,000	2,471,000	103
Wholesale Trade	1.8778	0.6773	32.5	18,778,000	6,773,000	325
Retail Trade	1.9307	0.7836	52.2	19,307,000	7,836,000	522
Finance	1.9020	0.5977	27.6	19,020,000	5,977,000	276
Insurance	2.2241	0.8165	36.8	22,241,000	8,165,000	368
Real Estate	1.3990	0.1612	13.5	13,990,000	1,612,000	135
Hotels & Lodging Places and Amusement	1.9287	0.6242	43.8	19,287,000	6,242,000	438
Personal Services	1.8719	0.7391	67.9	18,719,000	7,391,000	679
Business Services	1.9459	0.8386	47.2	19,459,000	8,386,000	472
Eating & Drinking Places	2.0157	0.6074	48.9	20,157,000	6,074,000	489
Health Services	2.0543	0.9259	41.3	20,543,000	9,259,000	413
Miscellaneous Services	2.0334	0.6462	33.3	20,334,000	6,462,000	333
Households	1.1033	0.3511	21.2	11,033,000	3,511,000	212

Source: Obtained from Florida's Department of Commerce, Department of Economic Development located in Tallahassee, FL

Second Level Multipliers

Second level multipliers are industry specific and tell the investigator how a change in final demand for one industry effects the other 39 standard industry divisions. The multipliers for New Construction, by industry, for output, earnings and employment are presented in Table 4-5. These multipliers for New Construction are an example of second level multipliers. From Table 4-5, the reader can see that corresponding to the industry division or classification of Real Estate, the output multiplier is .1170. This tells us that for every additional dollar of New Construction, the Real Estate industry does approximately 11.70 cents of additional business related to the additional dollar spent on New Construction.

When we look at the Earnings multiplier for New Construction, we see that for every dollar of final demand that is created, there will be a resulting 34.46 cents of earnings paid out to people employed through the New Construction industry. There will also be 5.84 cents paid to persons employed by the Business Services Industry. This indicates to us that in order to create an additional dollar of output in New Construction, 5.84 cents of business services will be required. An example of a business service would be an attorney retained by a construction firm to handle the legal aspects created by the one more additional dollar spent on New construction.

The employment multiplier tells us that for every additional \$1,000,000 spent on New Construction, there will be 17.1 jobs created within the New Construction industry.

Table 4-5
State of Florida
Multipliers, by Industry, for Output, Earnings, and Employment
Impacts, by Industry, on Output, Earnings, and Employment
For New Construction

Standard Industry Division	Multipliers			Impact of \$10 Million Change in Final Demand		
	Output (\$)	Earnings (\$)	Employment # of Jobs per \$1,000,000	Output (\$)	Earnings (\$)	Employment (# of Jobs)
Agriculture	0.0121	0.0045	0.3	121,000	45,000	3
Forest & Fish	0.0020	0.0006	0.0	20,000	6,000	0
Coal Mining	0.0000	0.0000	0.0	0	0	0
Petroleum & Natural Gas	0.0001	0.0000	0.0	1,000	0	0
Miscellaneous Mining	0.0088	0.0020	0.1	88,000	20,000	1
New Construction	1.0000	0.3446	17.1	10,000,000	3,446,000	171
Maintenance/Repair Construction	0.0262	0.0121	0.6	262,000	121,000	6
Food/Kindred Products & Tobacco	0.0346	0.0049	0.2	346,000	49,000	2
Textile Mill Products	0.0008	0.0002	0.0	8,000	2,000	0
Apparel	0.0097	0.0027	0.2	97,000	27,000	2
Paper and Allied Products	0.0080	0.0015	0.0	80,000	15,000	0
Printing & Publishing	0.0124	0.0041	0.2	124,000	41,000	2
Chemicals & Petroleum Refining	0.0233	0.0030	0.1	233,000	30,000	1
Rubber & Leather Products	0.0077	0.0020	0.1	77,000	20,000	1
Lumber & Wood Products & Furniture	0.0541	0.0130	0.7	541,000	130,000	7
Stone, Clay & Glass Products	0.0578	0.0152	0.7	578,000	152,000	7
Primary Metal Industries	0.0080	0.0015	0.1	80,000	15,000	1
Fabricated Metal Products	0.0670	0.0168	0.7	670,000	168,000	7
Machinery, except electrical	0.0107	0.0032	0.1	107,000	32,000	1
Electric & Electronic Equipment	0.0142	0.0051	0.2	142,000	51,000	2
Motor Vehicles & Equipment	0.0012	0.0002	0.0	12,000	2,000	0
Transportation Equipment	0.0035	0.0012	0.0	35,000	12,000	0
Instruments & related products	0.0018	0.0006	0.0	18,000	6,000	0
Miscellaneous Manufacturing Industries	0.0038	0.0010	0.1	38,000	10,000	1
Transportation	0.0568	0.0232	1.0	568,000	232,000	10
Communication	0.0268	0.0071	0.2	268,000	71,000	2
Electric, Gas, Water & Sanitary Services	0.0289	0.0032	0.1	289,000	32,000	1
Wholesale Trade	0.0862	0.0337	1.4	862,000	337,000	14
Retail Trade	0.1231	0.0611	4.4	1,231,000	611,000	44
Finance	0.0229	0.0069	0.3	229,000	69,000	3
Insurance	0.0263	0.0105	0.4	263,000	105,000	4
Real Estate	0.1170	0.0047	0.8	1,170,000	47,000	8
Hotels & Lodging Places and Amusement	0.0146	0.0048	0.4	146,000	48,000	4
Personal Services	0.0142	0.0066	0.7	142,000	66,000	7
Business Services	0.1095	0.0584	3.2	1,095,000	584,000	32
Eating & Drinking Places	0.0412	0.0128	1.3	412,000	128,000	13
Health Services	0.0396	0.0234	0.9	396,000	234,000	9
Miscellaneous Services	0.0460	0.0141	0.7	460,000	141,000	7
Households	0.7134	0.0028	0.4	...	28,000	4
Total	2.1207	0.7134	37.6	21,207,000	7,133,000	376

Source: Obtained from Florida's Department of Commerce, Department of Economic Development located in Tallahassee, FL.

The Employment multiplier for Business Services is 3.2 jobs per million dollars of New Construction. This shows us that for every additional million dollars spent on New Construction, there will be 3.2 jobs created in the Business Services division.

The multipliers for Maintenance and Repair Construction, by industry, for output, earnings and employment are presented in Table 4-6. From Table 4-6, the reader can see that corresponding to the industry division or classification of Retail Trade, the output multiplier is .1366. This tells us that for every dollar of Maintenance and Repair Construction, the Retail Trade industry does approximately 13.66 cents of additional business related to the one dollar spent on Maintenance and Repair Construction. The table works the same as in the above example, Except all the multipliers are portraying the relationship of Maintenance and Repair Construction to the 39 standard industry divisions.

Table 4-6

State of Florida
Multipliers, by Industry, for Output, Earnings, and Employment
Impacts, by Industry, on Output, Earnings, and Employment
For Maintenance and Repair Construction

Standard Industry Division	Multipliers			Impact of \$10 Million Change in Final Demand		
	Output (\$)	Earnings (\$)	Employment # of Jobs per \$1,000,000	Output (\$)	Earnings (\$)	Employment (# of Jobs)
Agriculture	0.0178	0.0066	0.4	178,000	66,000	4
Forest & Fish	0.0014	0.0004	0.0	14,000	4,000	0
Coal Mining	0.0000	0.0000	0.0	0	0	0
Petroleum & Natural Gas	0.0001	0.0000	0.0	1,000	0	0
Miscellaneous Mining	0.0145	0.0033	0.1	145,000	33,000	1
New Construction	0.0000	0.0000	0.0	0	0	0
Maintenance/Repair Construction	1.0264	0.4725	23.4	10,264,000	4,725,000	234
Food/Kindred Products & Tobacco	0.0383	0.0054	0.2	383,000	54,000	2
Textile Mill Products	0.0008	0.0002	0.0	8,000	2,000	0
Apparel	0.0109	0.0030	0.2	109,000	30,000	2
Paper and Allied Products	0.0082	0.0016	0.0	82,000	16,000	0
Printing & Publishing	0.0124	0.0041	0.2	124,000	41,000	2
Chemicals & Petroleum Refining	0.0360	0.0047	0.1	360,000	47,000	1
Rubber & Leather Products	0.0118	0.0031	0.2	118,000	31,000	2
Lumber & Wood Products & Furniture	0.0211	0.0050	0.3	211,000	50,000	3
Stone, Clay & Glass Products	0.0375	0.0099	0.5	375,000	99,000	5
Primary Metal Industries	0.0063	0.0012	0.0	63,000	12,000	0
Fabricated Metal Products	0.0604	0.0151	0.6	604,000	151,000	6
Machinery, except electrical	0.0097	0.0029	0.1	97,000	29,000	1
Electric & Electronic Equipment	0.0131	0.0047	0.2	131,000	47,000	2
Motor Vehicles & Equipment	0.0013	0.0002	0.0	13,000	2,000	0
Transportation Equipment	0.0036	0.0012	0.0	36,000	12,000	0
Instruments & related products	0.0020	0.0007	0.0	20,000	7,000	0
Miscellaneous Manufacturing Industries	0.0040	0.0011	0.1	40,000	11,000	1
Transportation	0.0539	0.0220	0.9	539,000	220,000	9
Communication	0.0279	0.0074	0.2	279,000	74,000	2
Electric, Gas, Water & Sanitary Services	0.0307	0.0034	0.1	307,000	34,000	1
Wholesale Trade	0.0825	0.0323	1.3	825,000	323,000	13
Retail Trade	0.1336	0.0663	4.7	1,336,000	663,000	47
Finance	0.0244	0.0074	0.3	244,000	74,000	3
Insurance	0.0243	0.0097	0.4	243,000	97,000	4
Real Estate	0.1267	0.0051	0.9	1,267,000	51,000	9
Hotels & Lodging Places and Amuseme	0.0150	0.0049	0.4	150,000	49,000	4
Personal Services	0.0154	0.0072	0.8	154,000	72,000	8
Business Services	0.0493	0.0263	1.4	493,000	263,000	14
Eating & Drinking Places	0.0437	0.0137	1.4	437,000	137,000	14
Health Services	0.0442	0.0261	1.0	442,000	261,000	10
Miscellaneous Services	0.0460	0.0141	0.7	460,000	141,000	7
Households	0.7958	0.0031	0.5	31,000	5
Total	2.0552	0.7969	41.6	20,552,000	7,969,000	416

Source: Obtained from Florida's Department of Commerce, Department of Economic Development located in Tallahassee, Fl.

Third Level Multipliers

Third level multipliers are those that are very specific to industry segments. New Construction is one of the thirty-nine divisions or classifications and is further broken into more specific sub-classifications such as "New Residential 1-unit structures, nonfarm" and "New Education Buildings." New Construction is composed of 36 such sub-classifications. Maintenance/Repair Construction is also one of the major Standard Industrial Divisions or Classifications and is composed of 17 sub-classifications. A complete listing of the breakdown of the sub-classifications for New Construction and Maintenance/Repair Construction are listed below.

New Construction Sub-classifications (36)

1. New residential 1-unit structures
2. New residential 2-4 unit structures
3. New residential garden apartments
4. New residential high rise apartments
5. New residential additions & alterations 1-unit structures
6. New hotels and motels
7. New dormitories & other group housing
8. New industrial buildings
9. New office buildings
10. New warehouses
11. New garages & service stations
12. New stores and restraints
13. New religious buildings
14. New education buildings
15. New hospitals
16. New residential & other health related facilities
17. New amusement & recreation buildings
18. Other nonfarm buildings
19. New telephone & telegraph facilities
20. New railroads
21. New electric utility facilities
22. New gas utility facilities

23. New petroleum facilities
24. New water supply facilities
25. New sewer system facilities
26. New local transit facilities
27. New highways and streets
28. New farm housing units, additions, & alterations
29. New farm service facilities
30. New petroleum & natural gas well drilling
31. New petroleum, natural gas & solid mineral exploration
32. New access structures for solid mineral development
33. New military facilities
34. New dams and reservoirs
35. Other new conservation & development facilities
36. Other new nonbuilding facilities

Maintenance/Repair Construction (17)

1. Maintenance and repair, residential
2. Maintenance and repair of other nonfarm buildings
3. Maintenance and repair of farm residential buildings
4. Maintenance and repair of farm service facilities
5. Maintenance and repair of telephone & telegraph facilities
6. Maintenance and repair of railroads
7. Maintenance and repair of electric utility facilities
8. Maintenance and repair of gas utility facilities
9. Maintenance and repair of petroleum pipelines
10. Maintenance and repair of water supply facilities
11. Maintenance and repair of sewer facilities
12. Maintenance and repair of local transit facilities
13. Maintenance and repair of military facilities
14. Maintenance and repair of conservation & development facilities
15. Maintenance and repair of highways & streets
16. Maintenance and repair of petroleum & natural gas wells
17. Maintenance and repair of other nonbuilding facilities

Each sub-classification has a corresponding multiplier for output, earnings, and employment. A complete listing is included in Appendix A of this report.

Source of Florida RIMS II Multipliers

These multipliers are for Florida and they were obtained from Geoffrey Coppin, Economic Analyst, at Florida Department of Commerce's Division of Economic Development located in Tallahassee, Florida. They were generated for the state on June 8, 1989. These are the most current multipliers available for Florida. The Bureau of Economic Analysis, at the U.S. Department of Commerce, charges \$1500 to generate each states current multipliers. It is possible to update the multipliers more often, but it has been observed that from year to year the changes are of an inconsequential amount.

Regional Multiplier Applications

Regional multipliers have many applications and are used by a variety of government agencies. The RIMS II multipliers are used by the Department of Defense (DOD) to estimate regional impacts of defense expenditure changes. The multipliers are also used by planners at the Federal, State, and local levels to estimate the regional impacts of proposed projects and programs. Private-sector analyst, consultants, and economic development practitioners use RIMS II to estimate the regional impacts of a variety of projects, ranging from offshore drilling to the construction of transportation facilities.⁸⁶ The Regional Multipliers (RIMS II) are a widely accepted method of estimating economic impact.

Projecting Economic Impact

To get a more detailed and accurate estimate of the impact of a proposed project or program, the sub-classifications of each industry may be used. This means that in order to determine the economic impact of building a new highway, the multipliers from the sub-classification of New highways and streets should be used. These multipliers are an excellent tool for estimating economic impact of projects on a region or state because they portray the interrelationships that are present between industries. They allow an investigator with limited knowledge of economic theory to project the impact of a certain project or program on a region.

Chapter 5

CONCLUSIONS

Conclusion

Florida has experienced almost constant economic growth since 1970. There were a few brief recessions in the past twenty years, but the overall trend is positive. Chapter 1 of this report presents economic data from 1970 to 1990. This data shows that the population of Florida has increased 89.5 percent, gross sales have increased 729.2 percent, non-agricultural employment has increased 151.1 percent, and personal income has risen 790.7 percent in the past two decades. Florida's population is the fourth largest in the nation behind California, New York, and Texas. The majority of Florida's population growth has come from migration. Florida attracts many people for the retirement years and 18.1 percent of the State's population is age 65 or older.

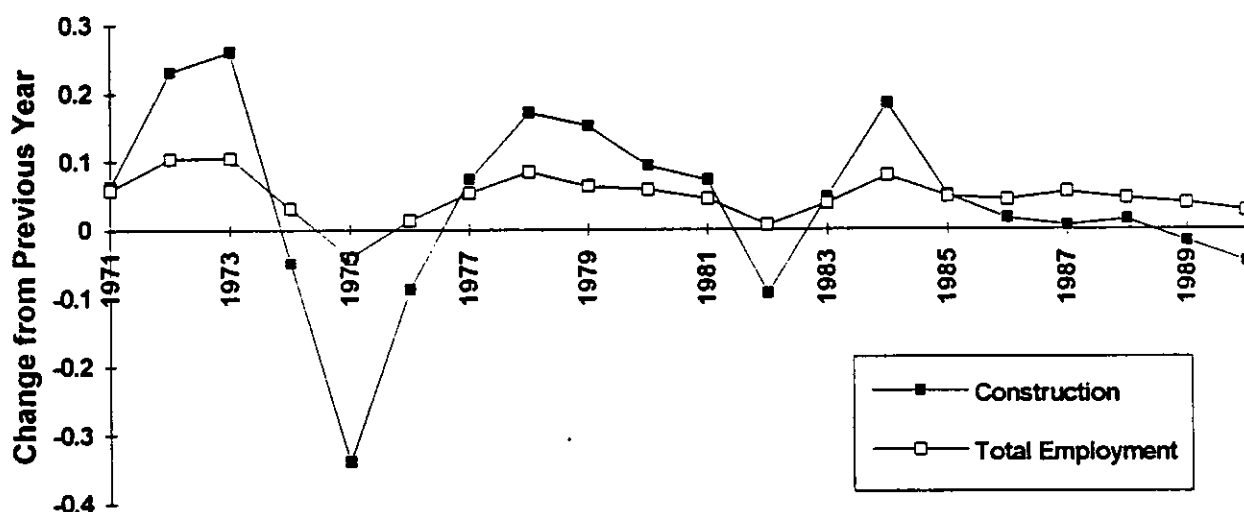
Chapter 2 compares the Construction industry with Florida's other industry divisions. Employment in construction has grown from 175,700 in 1970 to 324,100 in 1990, this is an 84.5 percent increase. Construction employment accounted for 6.1 percent of Florida's total employment in 1990. This is more than double the cumulative employment in Agriculture, forestry, and fisheries. Construction employment is greater than Transportation, communications, and public utilities. Construction employs more people than the Wholesale trade. Construction employment is on par with Government employment, as well as Finance, insurance, and real estate employment. On par is referring to the fact that these industries alternate their positions within the employment standings from year to year. Construction employment is only consistently surpassed by the employment in Services, Retail trade, and Manufacturing.

The Construction industry is the most volatile of Florida's industry divisions.

This is consistent with the fact that, during a period of economic growth, employment in construction goes higher than any other industry division. The converse of this is also true, as the State enters a recessionary period, employment in construction drops off quicker and falls further than the other industry divisions. Figure 5-1 is a graphical representation of the volatility construction experiences in comparison to total employment.

Figure 5-1

Florida: Employment Changes in Construction and Total Employment (change from previous year)



Source: The Florida Long-Term Economic Forecast 1991

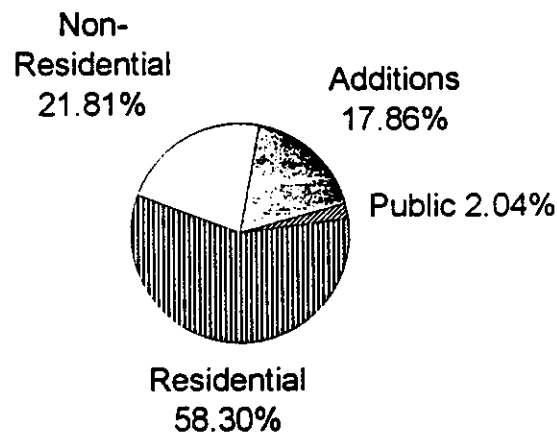
The Construction industry is a major tax contributor to the State. It should be noted that the lumber, builders, and contractors group contributed a total of \$539,670,000 or 6.55 percent of the total sales and use tax for the 1989-1990 fiscal year. Florida has been experiencing a recession for the past few years and the construction industry has not been insulated from it. Since the level of construction is

down, so are the construction industry's tax contributions. In fact, for the 1969-1970 and 1979-1980 fiscal years, the lumber, builders, and contractors group contributed 8.64 percent and 9.29 percent of total sales and use tax, respectively.

Chapter 3 is an explanation of the various construction sub-sectors. Census figures for the various construction sub-sectors are presented for employment and value of construction. The total value of building permits was \$12.52 billion for 1990. Figure 5-2 is a graphical depiction of how total value was spread out over the residential, non-residential, additions, and public sectors of construction.

Figure 5-2

Florida: Total Value of Building Permits 1990



Residential construction accounted for 58.30 percent of the total value of building permits in 1990 and claimed \$7.30 billion of total value. During the past 4 years there has been a substantial reduction in the number of housing starts. In 1987 there were 115,450 single-family housing starts as compared with the 1991 level of 70,281. Multi-family housing starts accounted for 59,753 starts in 1987 and have

fallen all the way to 18,679 starts for 1991.

Chapter 4 presented the Regional Input-Output Modeling System, also known as RIMS II, and explained in detail how the layman could use it to estimate economic impact of proposed projects or programs. The report focused on Total Output multipliers, New Construction multipliers and Maintenance and Repair Construction multipliers. All the multipliers for the 36 sub-sectors of New Construction and the 17 sub-sectors of Maintenance and Repair Construction are contained in Appendix A of this report. They may be used to estimate impact of specific construction projects within Florida. The true impact of the construction industry on Florida's economy as a whole is very profound and this is demonstrated by the fact that the total output multiplier for New Construction is 2.1207, second only to the insurance industry's total output multiplier. This means that for every additional dollar spent on new construction, \$1.1207 of additional economic activity is created. The multipliers were presented to show that every construction project generates additional economic activity in most of the other industry divisions.

This study should be updated when new data becomes available. The next major release of data by the United States Census Bureau concerning the construction industry is scheduled for 1995. The Annual Information from the other sources would be significant enough so that the next recommended update of this report is in 1995.

This report has shown why the Construction industry is such an important part of Florida's economy. When the Construction industry is healthy, so is the rest of the economy.

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Appendix A

Appendix A

FLORIDA
Industry Multipliers for New Construction Industry
for Output, in dollars

Industry	New Residential	New Residential	New Residential	New Residential
	1-unit Structures, nonfarm SIC # 11.0101	2-4 unit Structures, nonfarm SIC # 11.0102	Garden Apartments SIC # 11.0103	High-rise Apartments SIC # 11.0104
Agriculture	0.0110	0.0111	0.0104	0.0103
Forest & Fish	0.0017	0.0014	0.0012	0.0009
Coal Mining	0.0000	0.0000	0.0000	0.0000
Petroleum & Natural Gas	0.0001	0.0001	0.0001	0.0001
Miscellaneous Mining	0.0067	0.0067	0.0059	0.0048
New Construction	1.0000	1.0000	1.0000	1.0000
Maintenance/Repair Construction	0.0223	0.0237	0.0220	0.0213
Food/Kindred Products & Tobacco	0.0328	0.0340	0.0334	0.0313
Textile Mill Products	0.0007	0.0008	0.0007	0.0009
Apparel	0.0090	0.0103	0.0098	0.0102
Paper and Allied Products	0.0081	0.0085	0.0087	0.0085
Printing & Publishing	0.0124	0.0129	0.0126	0.0119
Chemicals & Petroleum Refining	0.0211	0.0234	0.0207	0.0137
Rubber & Leather Products	0.0068	0.0930	0.0138	0.0094
Lumber & Wood Products & Furniture	0.0973	0.0842	0.0891	0.0524
Stone, Clay & Glass Products	0.0668	0.0592	0.0526	0.0562
Primary Metal Industries	0.0053	0.0063	0.0076	0.0098
Fabricated Metal Products	0.0428	0.0425	0.0507	0.1143
Machinery, except electrical	0.0083	0.0970	0.0161	0.0149
Electric & Electronic Equipment	0.0116	0.0127	0.0121	0.0137
Motor Vehicles & Equipment	0.0012	0.0012	0.0013	0.0013
Transportation Equipment, except Motor Vehicles	0.0029	0.0030	0.0030	0.0031
Instruments & related products	0.0016	0.0016	0.0018	0.0021
Miscellaneous Manufacturing Industries	0.0033	0.0036	0.0034	0.0040
Transportation	0.0560	0.0554	0.0530	0.0506
Communication	0.0259	0.0279	0.0279	0.0271
Electric, Gas, Water & Sanitary Services	0.0256	0.0266	0.0262	0.0248
Wholesale Trade	0.9870	0.0949	0.0942	0.0858
Retail Trade	0.1426	0.1526	0.1475	0.1313
Finance	0.0222	0.0230	0.0216	0.0214
Insurance	0.0252	0.0268	0.0265	0.0250
Real Estate	0.1115	0.1160	0.1137	0.1035
Hotels & Lodging Places and Amusements	0.0140	0.0146	0.0143	0.0134
Personal Services	0.0134	0.0141	0.0138	0.0129
Business Services	0.0767	0.0804	0.0727	0.0785
Eating & Drinking Places	0.0393	0.0402	0.0397	0.0422
Health Services	0.0376	0.0391	0.0384	0.0345
Miscellaneous Services	0.0415	0.0436	0.0424	0.0491
Households	0.6771	0.7039	0.6912	0.6217

Appendix A

FLORIDA
Industry Multipliers for New Construction Industry
for Earnings, in dollars

Industry	New Residential 1-unit Structures, nonfarm SIC # 11.0101	New Residential 2-4 unit Structures, nonfarm SIC # 11.0102	New Residential Garden Apartments SIC # 11.0103	New Residential High-rise Apartments SIC # 11.0104
Agriculture	0.0042	0.0042	0.0039	0.0040
Forest & Fish	0.0003	0.0003	0.0003	0.0003
Coal Mining	0.0000	0.0000	0.0000	0.0000
Petroleum & Natural Gas	0.0000	0.0000	0.0000	0.0000
Miscellaneous Mining	0.0019	0.0019	0.0017	0.0014
New Construction	0.3182	0.3361	0.3302	0.2704
Maintenance/Repair Construction	0.0101	0.0108	0.0100	0.0097
Food/Kindred Products & Tobacco	0.0049	0.0051	0.0050	0.0047
Textile Mill Products	0.0001	0.0002	0.0002	0.0002
Apparel	0.0025	0.0029	0.0028	0.0029
Paper and Allied Products	0.0016	0.0017	0.0017	0.0017
Printing & Publishing	0.0040	0.0042	0.0041	0.0039
Chemicals & Petroleum Refining	0.0029	0.0032	0.0028	0.0020
Rubber & Leather Products	0.0017	0.0022	0.0033	0.0023
Lumber & Wood Products & Furniture	0.0231	0.0210	0.0232	0.0130
Stone, Clay & Glass Products	0.0151	0.0140	0.0124	0.0134
Primary Metal Industries	0.0010	0.0012	0.0015	0.0019
Fabricated Metal Products	0.0104	0.0104	0.0122	0.0265
Machinery, except electrical	0.0022	0.0026	0.0041	0.0041
Electric & Electronic Equipment	0.0038	0.0043	0.0040	0.0047
Motor Vehicles & Equipment	0.0002	0.0002	0.0002	0.0002
Transportation Equipment, except Motor Vehicles	0.0009	0.0009	0.0009	0.0010
Instruments & related products	0.0005	0.0006	0.0006	0.0007
Miscellaneous Manufacturing Industries	0.0009	0.0009	0.0009	0.0011
Transportation	0.0246	0.0246	0.0236	0.0224
Communication	0.0068	0.0074	0.0074	0.0072
Electric, Gas, Water & Sanitary Services	0.0028	0.0030	0.0029	0.0028
Wholesale Trade	0.0386	0.0371	0.0368	0.0335
Retail Trade	0.0708	0.0757	0.0732	0.0652
Finance	0.0070	0.0073	0.0068	0.0068
Insurance	0.0091	0.0096	0.0095	0.0090
Real Estate	0.0035	0.0036	0.0035	0.0033
Hotels & Lodging Places and Amusements	0.0047	0.0049	0.0048	0.0045
Personal Services	0.0063	0.0066	0.0065	0.0060
Business Services	0.0400	0.0411	0.0373	0.0388
Eating & Drinking Places	0.0123	0.0126	0.0124	0.0132
Health Services	0.0220	0.0228	0.0224	0.0202
Miscellaneous Services	0.0155	0.0161	0.0157	0.0167
Households	0.0026	0.0027	0.0027	0.0024

Appendix A

FLORIDA
Industry Multipliers for New Construction Industry
for Employment per \$1 Million

Industry	New Residential 1-unit Structures, nonfarm SIC # 11.0101	New Residential 2-4 unit Structures, nonfarm SIC # 11.0102	New Residential Garden Apartments SIC # 11.0103	New Residential High-rise Apartments SIC # 11.0104
Agriculture	0.2	0.2	0.2	0.2
Forest & Fish	0.0	0.0	0.0	0.0
Coal Mining	0.0	0.0	0.0	0.0
Petroleum & Natural Gas	0.0	0.0	0.0	0.0
Miscellaneous Mining	0.1	0.1	0.1	0.1
New Construction	15.7	16.6	16.3	13.4
Maintenance/Repair Construction	0.5	0.5	0.5	0.5
Food/Kindred Products & Tobacco	0.2	0.2	0.2	0.2
Textile Mill Products	0.0	0.0	0.0	0.0
Apparel	0.2	0.2	0.2	0.2
Paper and Allied Products	0.0	0.1	0.1	0.1
Printing & Publishing	0.2	0.2	0.2	0.2
Chemicals & Petroleum Refining	0.1	0.1	0.1	0.1
Rubber & Leather Products	0.1	0.1	0.2	0.1
Lumber & Wood Products & Furniture	1.3	1.2	1.3	0.7
Stone, Clay & Glass Products	0.7	0.6	0.6	0.6
Primary Metal Industries	0.0	0.0	0.1	0.1
Fabricated Metal Products	0.4	0.4	0.5	1.1
Machinery, except electrical	0.1	0.1	0.1	0.1
Electric & Electronic Equipment	0.1	0.2	0.1	0.2
Motor Vehicles & Equipment	0.0	0.0	0.0	0.0
Transportation Equipment, except Motor Vehicles	0.0	0.0	0.0	0.0
Instruments & related products	0.0	0.0	0.0	0.0
Miscellaneous Manufacturing Industries	0.1	0.1	0.1	0.1
Transportation	1.0	1.0	1.0	0.9
Communication	0.2	0.2	0.2	0.2
Electric, Gas, Water & Sanitary Services	0.1	0.1	0.1	0.1
Wholesale Trade	1.6	1.5	1.5	1.4
Retail Trade	5.0	5.4	5.2	4.6
Finance	0.3	0.3	0.3	0.3
Insurance	0.3	0.4	0.4	0.3
Real Estate	0.6	0.6	0.6	0.5
Hotels & Lodging Places and Amusements	0.4	0.4	0.4	0.4
Personal Services	0.7	0.7	0.7	0.7
Business Services	2.2	2.3	2.1	2.1
Eating & Drinking Places	1.3	1.3	1.3	1.4
Health Services	0.8	0.8	0.8	0.7
Miscellaneous Services	0.7	0.8	0.7	0.8
Households	0.4	0.4	0.4	0.4

Appendix A

FLORIDA

Industry Multipliers for New Construction Industry
for Output, in dollars

Industry	New Residential Additions & Alterations SIC # 11.0105	New Hotels & Motels SIC # 11.0106	New Dormitories & Other Group Housing SIC # 11.0107	New industrial Buildings SIC # 11.0201
Agriculture	0.0104	0.0170	0.0098	0.0105
Forest & Fish	0.0014	0.0008	0.0009	0.0008
Coal Mining	0.0000	0.0000	0.0000	0.0000
Petroleum & Natural Gas	0.0001	0.0001	0.0001	0.0001
Miscellaneous Mining	0.0084	0.0086	0.0054	0.0039
New Construction	1.0000	1.0000	1.0000	1.0000
Maintenance/Repair Construction	0.0221	0.0222	0.0227	0.0213
Food/Kindred Products & Tobacco	0.0313	0.0338	0.0347	0.0353
Textile Mill Products	0.0006	0.0009	0.0009	0.0007
Apparel	0.0087	0.0102	0.0102	0.0099
Paper and Allied Products	0.0098	0.0084	0.0082	0.0073
Printing & Publishing	0.0133	0.0123	0.0125	0.0121
Chemicals & Petroleum Refining	0.0336	0.0180	0.0125	0.0106
Rubber & Leather Products	0.0123	0.0121	0.0069	0.0055
Lumber & Wood Products & Furniture	0.1089	0.0374	0.0515	0.0204
Stone, Clay & Glass Products	0.0551	0.0870	0.0578	0.0316
Primary Metal Industries	0.0065	0.0107	0.0129	0.0062
Fabricated Metal Products	0.0585	0.0890	0.1338	0.0981
Machinery, except electrical	0.0065	0.0149	0.0102	0.0138
Electric & Electronic Equipment	0.0137	0.0162	0.0114	0.0160
Motor Vehicles & Equipment	0.0012	0.0013	0.0013	0.0013
Transportation Equipment, except Motor Vehicles	0.0028	0.0010	0.0033	0.0036
Instruments & related products	0.0014	0.0030	0.0023	0.0023
Miscellaneous Manufacturing Industries	0.0036	0.0041	0.0044	0.0035
Transportation	0.0555	0.0506	0.0489	0.0485
Communication	0.0266	0.0275	0.0279	0.0265
Electric, Gas, Water & Sanitary Services	0.0256	0.0260	0.0261	0.0253
Wholesale Trade	0.1002	0.0838	0.0804	0.0786
Retail Trade	0.1639	0.1134	0.1172	0.0181
Finance	0.0208	0.0228	0.0232	0.0233
Insurance	0.0236	0.0262	0.0269	0.0267
Real Estate	0.1091	0.1127	0.1158	0.1177
Hotels & Lodging Places and Amusements	0.0136	0.0149	0.0152	0.0157
Personal Services	0.0131	0.0141	0.0146	0.0146
Business Services	0.0876	0.1116	0.1011	0.0997
Eating & Drinking Places	0.0375	0.0423	0.0420	0.0411
Health Services	0.0357	0.0384	0.0398	0.0408
Miscellaneous Services	0.0411	0.0464	0.0465	0.0453
Households	0.6440	0.6911	0.7162	0.7351

Appendix A

FLORIDA

Industry Multipliers for New Construction Industry
for Earnings, in dollars

Industry	New Residential Additions & Alterations SIC # 11.0105	New Hotels & Motels SIC # 11.0106	New Dormitories & Other Group Housing SIC # 11.0107	New industrial Buildings SIC # 11.0201
Agriculture	0.0039	0.0041	0.0035	0.0038
Forest & Fish	0.0003	0.0003	0.0003	0.0003
Coal Mining	0.0000	0.0000	0.0000	0.0000
Petroleum & Natural Gas	0.0000	0.0000	0.0000	0.0000
Miscellaneous Mining	0.0024	0.0025	0.0015	0.0011
New Construction	0.2619	0.3226	0.3491	0.3971
Maintenance/Repair Construction	0.0101	0.0101	0.0103	0.0096
Food/Kindred Products & Tobacco	0.0047	0.0051	0.0052	0.0053
Textile Mill Products	0.0001	0.0002	0.0002	0.0001
Apparel	0.0024	0.0029	0.0029	0.0028
Paper and Allied Products	0.0019	0.0016	0.0016	0.0014
Printing & Publishing	0.0043	0.0040	0.0040	0.0039
Chemicals & Petroleum Refining	0.0050	0.0024	0.0018	0.0015
Rubber & Leather Products	0.0029	0.0029	0.0017	0.0014
Lumber & Wood Products & Furniture	0.0269	0.0085	0.0116	0.0045
Stone, Clay & Glass Products	0.0125	0.0213	0.0153	0.0077
Primary Metal Industries	0.0010	0.0019	0.0023	0.0012
Fabricated Metal Products	0.0140	0.0221	0.0328	0.0239
Machinery, except electrical	0.0018	0.0040	0.0029	0.0038
Electric & Electronic Equipment	0.0047	0.0052	0.0035	0.0056
Motor Vehicles & Equipment	0.0002	0.0002	0.0002	0.0002
Transportation Equipment, except Motor Vehicles	0.0009	0.0010	0.0010	0.0011
Instruments & related products	0.0005	0.0011	0.0008	0.0008
Miscellaneous Manufacturing Industries	0.0010	0.0011	0.0012	0.0009
Transportation	0.0245	0.0226	0.0219	0.0212
Communication	0.0070	0.0073	0.0074	0.0070
Electric, Gas, Water & Sanitary Services	0.0028	0.0029	0.0029	0.0028
Wholesale Trade	0.0392	0.0327	0.0314	0.0307
Retail Trade	0.0814	0.0563	0.0582	0.0536
Finance	0.0065	0.0072	0.0073	0.0073
Insurance	0.0085	0.0094	0.0097	0.0096
Real Estate	0.0035	0.0035	0.0035	0.0035
Hotels & Lodging Places and Amusements	0.0046	0.0050	0.0051	0.0053
Personal Services	0.0061	0.0066	0.0068	0.0068
Business Services	0.0462	0.0578	0.0523	0.0529
Eating & Drinking Places	0.0117	0.0132	0.0131	0.0128
Health Services	0.0209	0.0224	0.0232	0.0238
Miscellaneous Services	0.0152	0.0168	0.0169	0.0168
Households	0.0025	0.0027	0.0028	0.0029

Appendix A

FLORIDA
Industry Multipliers for New Construction Industry
for Employment per \$1 Million

Industry	New Residential Additions & Alterations SIC # 11.0105	New Hotels & Motels SIC # 11.0106	New Dormitories & Other Group Housing SIC # 11.0107	New Industrial Buildings SIC # 11.0201
Agriculture	0.2	0.2	0.2	0.2
Forest & Fish	0.0	0.0	0.0	0.0
Coal Mining	0.0	0.0	0.0	0.0
Petroleum & Natural Gas	0.0	0.0	0.0	0.0
Miscellaneous Mining	0.1	0.1	0.1	0.1
New Construction	13.0	16.0	17.3	19.7
Maintenance/Repair Construction	0.5	0.5	0.5	0.5
Food/Kindred Products & Tobacco	0.2	0.2	0.2	0.2
Textile Mill Products	0.0	0.0	0.0	0.0
Apparel	0.2	0.2	0.2	0.2
Paper and Allied Products	0.1	0.1	0.1	0.0
Printing & Publishing	0.2	0.2	0.2	0.2
Chemicals & Petroleum Refining	0.2	0.1	0.1	0.0
Rubber & Leather Products	0.2	0.1	0.1	0.1
Lumber & Wood Products & Furniture	1.5	0.5	0.7	0.3
Stone, Clay & Glass Products	0.6	1.0	0.7	0.3
Primary Metal Industries	0.0	0.1	0.1	0.0
Fabricated Metal Products	0.6	0.9	1.4	1.0
Machinery, except electrical	0.1	0.1	0.1	0.1
Electric & Electronic Equipment	0.2	0.2	0.1	0.2
Motor Vehicles & Equipment	0.0	0.0	0.0	0.0
Transportation Equipment, except Motor Vehicles	0.0	0.0	0.0	0.0
Instruments & related products	0.0	0.0	0.0	0.0
Miscellaneous Manufacturing Industries	0.1	0.1	0.1	0.1
Transportation	1.0	0.9	0.9	0.9
Communication	0.2	0.2	0.2	0.2
Electric, Gas, Water & Sanitary Services	0.1	0.1	0.1	0.1
Wholesale Trade	1.6	1.3	1.3	1.2
Retail Trade	5.8	4.0	4.1	3.8
Finance	0.2	0.3	0.3	0.3
Insurance	0.3	0.4	0.4	0.4
Real Estate	0.6	0.6	0.6	0.6
Hotels & Lodging Places and Amusements	0.4	0.4	0.4	0.4
Personal Services	0.7	0.7	0.8	0.8
Business Services	2.5	3.2	2.9	2.9
Eating & Drinking Places	1.2	1.4	1.4	1.3
Health Services	0.8	0.8	0.9	0.9
Miscellaneous Services	0.7	0.8	0.8	0.8
Households	0.4	0.4	0.4	0.4

Appendix A

FLORIDA

Industry Multipliers for New Construction Industry
for Output, in dollars

Industry	New Office Buildings SIC # 11.0202	New Warehouses SIC # 11.0203	New Garages & Service Stations SIC # 11.0204	New Stores & Restraunts SIC # 11.0205
Agriculture	0.0110	0.0109	0.0102	0.0109
Forest & Fish	0.0008	0.0010	0.0009	0.0008
Coal Mining	0.0000	0.0000	0.0000	0.0000
Petroleum & Natural Gas	0.0001	0.0001	0.0001	0.0001
Miscellaneous Mining	0.0064	0.0046	0.0064	0.0078
New Construction	1.0000	1.0000	1.0000	1.0000
Maintenance/Repair Construction	0.0220	0.0234	0.0232	0.0223
Food/Kindred Products & Tobacco	0.0348	0.0369	0.0364	0.0347
Textile Mill Products	0.0007	0.0007	0.0007	0.0008
Apparel	0.0097	0.0103	0.0104	0.0099
Paper and Allied Products	0.0088	0.0077	0.0073	0.0082
Printing & Publishing	0.0125	0.0130	0.0130	0.0126
Chemicals & Petroleum Refining	0.0197	0.0104	0.0150	0.0208
Rubber & Leather Products	0.0083	0.0089	0.0051	0.0090
Lumber & Wood Products & Furniture	0.0360	0.0487	0.0324	0.0308
Stone, Clay & Glass Products	0.0482	0.0598	0.0845	0.0572
Primary Metal Industries	0.0088	0.0104	0.0097	0.0091
Fabricated Metal Products	0.1083	0.1494	0.1158	0.1123
Machinery, except electrical	0.0188	0.0095	0.0334	0.0156
Electric & Electronic Equipment	0.0152	0.0238	0.0082	0.0163
Motor Vehicles & Equipment	0.0013	0.0013	0.0014	0.0013
Transportation Equipment, except Motor Vehicles	0.0035	0.0039	0.0035	0.0036
Instruments & related products	0.0023	0.0018	0.0014	0.0028
Miscellaneous Manufacturing Industries	0.0035	0.0036	0.0070	0.0039
Transportation	0.0523	0.0491	0.0498	0.0536
Communication	0.0275	0.0291	0.0291	0.0274
Electric, Gas, Water & Sanitary Services	0.0261	0.0272	0.0270	0.0264
Wholesale Trade	0.0858	0.0786	0.0758	0.0871
Retail Trade	0.1101	0.1179	0.1165	0.1136
Finance	0.0233	0.0245	0.0241	0.0233
Insurance	0.0267	0.0280	0.0278	0.0266
Real Estate	0.1169	0.1232	0.1213	0.1163
Hotels & Lodging Places and Amusements	0.0156	0.0164	0.0161	0.0155
Personal Services	0.0144	0.0153	0.0152	0.0147
Business Services	0.1108	0.1056	0.1245	0.1054
Eating & Drinking Places	0.0418	0.0436	0.0431	0.0415
Health Services	0.0400	0.0426	0.0419	0.0398
Miscellaneous Services	0.0477	0.0481	0.0509	0.0503
Households	0.7199	0.7672	0.7549	0.7162

Appendix A

FLORIDA
Industry Multipliers for New Construction Industry
for Earnings, in dollars

Industry	New Office Buildings SIC # 11.0202	New Warehouses SIC # 11.0203	New Garages & Service Stations SIC # 11.0204	New Stores & Restraunts SIC # 11.0205
Agriculture	0.0041	0.0039	0.0036	0.0041
Forest & Fish	0.0003	0.0003	0.0003	0.0003
Coal Mining	0.0000	0.0000	0.0000	0.0000
Petroleum & Natural Gas	0.0000	0.0000	0.0000	0.0000
Miscellaneous Mining	0.0018	0.0013	0.0019	0.0022
New Construction	0.3560	0.3890	0.3755	0.3490
Maintenance/Repair Construction	0.1000	0.0106	0.0105	0.0101
Food/Kindred Products & Tobacco	0.0052	0.0056	0.0055	0.0052
Textile Mill Products	0.0002	0.0002	0.0002	0.0002
Apparel	0.0027	0.0029	0.0029	0.0028
Paper and Allied Products	0.0018	0.0015	0.0014	0.0016
Printing & Publishing	0.0041	0.0042	0.0042	0.0041
Chemicals & Petroleum Refining	0.0026	0.0015	0.0020	0.0027
Rubber & Leather Products	0.0020	0.0022	0.0013	0.0022
Lumber & Wood Products & Furniture	0.0085	0.0097	0.0071	0.0072
Stone, Clay & Glass Products	0.0118	0.0149	0.0209	0.0140
Primary Metal Industries	0.0016	0.0019	0.0018	0.0016
Fabricated Metal Products	0.0256	0.0334	0.0260	0.0268
Machinery, except electrical	0.0049	0.0026	0.0087	0.0042
Electric & Electronic Equipment	0.0048	0.0088	0.0026	0.0054
Motor Vehicles & Equipment	0.0002	0.0002	0.0002	0.0002
Transportation Equipment, except Motor Vehicles	0.0011	0.0012	0.0011	0.0011
Instruments & related products	0.0008	0.0006	0.0004	0.0010
Miscellaneous Manufacturing Industries	0.0009	0.0009	0.0010	0.0010
Transportation	0.0230	0.0217	0.0221	0.0236
Communication	0.0073	0.0077	0.0077	0.0073
Electric, Gas, Water & Sanitary Services	0.0029	0.0030	0.0030	0.0029
Wholesale Trade	0.0335	0.0307	0.0296	0.0340
Retail Trade	0.0546	0.0585	0.0578	0.0564
Finance	0.0073	0.0077	0.0076	0.0073
Insurance	0.0096	0.0101	0.0100	0.0096
Real Estate	0.0036	0.0037	0.0037	0.0036
Hotels & Lodging Places and Amusements	0.0052	0.0055	0.0054	0.0052
Personal Services	0.0067	0.0071	0.0071	0.0069
Business Services	0.0584	0.0549	0.0626	0.0554
Eating & Drinking Places	0.0131	0.0136	0.0134	0.0130
Health Services	0.0234	0.0249	0.0245	0.0232
Miscellaneous Services	0.0173	0.0177	0.0184	0.0180
Households	0.0028	0.0030	0.0029	0.0028

Appendix A

FLORIDA
Industry Multipliers for New Construction Industry
for Employment per \$1 Million

Industry	New Office Buildings SIC # 11.0202	New Warehouses SIC # 11.0203	New Garages & Service Stations SIC # 11.0204	New Stores & Restraunts SIC # 11.0205
Agriculture	0.2	0.2	0.2	0.2
Forest & Fish	0.0	0.0	0.0	0.0
Coal Mining	0.0	0.0	0.0	0.0
Petroleum & Natural Gas	0.0	0.0	0.0	0.0
Miscellaneous Mining	0.1	0.1	0.1	0.1
New Construction	17.6	19.3	18.6	17.3
Maintenance/Repair Construction	0.5	0.5	0.5	0.5
Food/Kindred Products & Tobacco	0.2	0.2	0.2	0.2
Textile Mill Products	0.0	0.0	0.0	0.0
Apparel	0.2	0.2	0.2	0.2
Paper and Allied Products	0.1	0.0	0.0	0.1
Printing & Publishing	0.2	0.2	2.0	0.2
Chemicals & Petroleum Refining	0.1	0.0	0.1	0.1
Rubber & Leather Products	0.1	0.1	0.1	0.1
Lumber & Wood Products & Furniture	0.5	0.6	0.4	0.4
Stone, Clay & Glass Products	0.5	0.7	1.0	0.6
Primary Metal industries	0.1	0.1	0.1	0.1
Fabricated Metal Products	1.1	1.4	1.1	1.1
Machinery, except electrical	0.2	0.1	0.3	0.1
Electric & Electronic Equipment	0.2	0.3	0.1	0.2
Motor Vehicles & Equipment	0.0	0.0	0.0	0.0
Transportation Equipment, except Motor Vehicles	0.0	0.0	0.0	0.0
Instruments & related products	0.0	0.0	0.0	0.0
Miscellaneous Manufacturing Industries	0.1	0.1	0.1	0.1
Transportation	1.0	0.9	0.9	1.0
Communication	0.2	0.2	0.2	0.2
Electric, Gas, Water & Sanitary Services	0.1	0.1	0.1	0.1
Wholesale Trade	1.4	1.2	1.2	1.4
Retail Trade	3.9	4.2	4.1	4.0
Finance	0.3	0.3	0.3	0.3
Insurance	0.4	0.4	0.4	0.4
Real Estate	0.6	0.6	0.6	0.6
Hotels & Lodging Places and Amusements	0.4	0.4	0.4	0.4
Personal Services	0.7	0.8	0.8	0.8
Business Services	3.2	3.0	3.4	3.0
Eating & Drinking Places	1.4	1.4	1.4	1.3
Health Services	0.9	0.9	0.9	0.9
Miscellaneous Services	0.8	0.8	0.9	0.9
Households	0.4	0.4	0.4	0.4

Appendix A

FLORIDA
 Industry Multipliers for New Construction Industry
 for Output, in dollars

Industry	New	New	New	New
	Religious Buildings SIC # 11.0206	Education Buildings SIC # 11.0207	Hospitals SIC # 11.0231	Residential Institutions & Other Health Related Facilities SIC # 11.0232
Agriculture	0.0115	0.0116	0.0114	0.0124
Forest & Fish	0.0008	0.0008	0.0007	0.0009
Coal Mining	0.0000	0.0000	0.0000	0.0000
Petroleum & Natural Gas	0.0001	0.0001	0.0001	0.0001
Miscellaneous Mining	0.0067	0.0051	0.0063	0.0057
New Construction	1.0000	1.0000	1.0000	1.0000
Maintenance/Repair Construction	0.0234	0.0229	0.0223	0.0229
Food/Kindred Products & Tobacco	0.0370	0.0363	0.0353	0.0368
Textile Mill Products	0.0007	0.0007	0.0008	0.0007
Apparel	0.0107	0.0102	0.0102	0.0104
Paper and Allied Products	0.0076	0.0093	0.0085	0.0085
Printing & Publishing	0.0133	0.0131	0.0126	0.0132
Chemicals & Petroleum Refining	0.0141	0.0231	0.0186	0.0148
Rubber & Leather Products	0.0053	0.0099	0.0104	0.0091
Lumber & Wood Products & Furniture	0.0263	0.0340	0.0190	0.0539
Stone, Clay & Glass Products	0.0852	0.0619	0.0646	0.0700
Primary Metal Industries	0.0080	0.0089	0.0098	0.0097
Fabricated Metal Products	0.0817	0.0998	0.0868	0.0916
Machinery, except electrical	0.0080	0.0110	0.0192	0.0119
Electric & Electronic Equipment	0.0126	0.0183	0.0160	0.0165
Motor Vehicles & Equipment	0.0013	0.0013	0.0013	0.0013
Transportation Equipment, except Motor Vehicles	0.0033	0.0036	0.0035	0.0034
Instruments & related products	0.0027	0.0027	0.0033	0.0024
Miscellaneous Manufacturing Industries	0.0038	0.0036	0.0037	0.0040
Transportation	0.0546	0.0509	0.0521	0.0475
Communication	0.0296	0.0296	0.0289	0.0286
Electric, Gas, Water & Sanitary Services	0.0275	0.0271	0.0266	0.0275
Wholesale Trade	0.0796	0.0830	0.0856	0.0848
Retail Trade	0.1192	0.1127	0.1139	0.1254
Finance	0.0245	0.0240	0.0235	0.0243
Insurance	0.0283	0.0275	0.0269	0.0278
Real Estate	0.1240	0.1222	0.1182	0.1233
Hotels & Lodging Places and Amusements	0.0164	0.0163	0.0157	0.0163
Personal Services	0.0159	0.0152	0.0150	0.0154
Business Services	0.1369	0.1245	0.1105	0.1109
Eating & Drinking Places	0.0433	0.0430	0.0420	0.0432
Health Services	0.0428	0.0418	0.0406	0.0425
Miscellaneous Services	0.0617	0.0477	0.0509	0.0514
Households	0.7707	0.7533	0.7312	0.7658

Appendix A

FLORIDA
Industry Multipliers for New Construction Industry
for Earnings, in dollars

Industry	New Religious Buildings SIC # 11.0206	New Education Buildings SIC # 11.0207	New Hospitals SIC # 11.0231	New Residential Institutions & Other Health Related Facilities SIC # 11.0232
	Agriculture	0.0043	0.0044	0.0043
Forest & Fish	0.0003	0.0003	0.0003	0.0003
Coal Mining	0.0000	0.0000	0.0000	0.0000
Petroleum & Natural Gas	0.0000	0.0000	0.0000	0.0000
Miscellaneous Mining	0.0019	0.0014	0.0020	0.0017
New Construction	0.3873	0.3746	0.3651	0.3865
Maintenance/Repair Construction	0.0106	0.0103	0.0101	0.0103
Food/Kindred Products & Tobacco	0.0056	0.0055	0.0053	0.0055
Textile Mill Products	0.0001	0.0002	0.0002	0.0001
Apparel	0.0030	0.0029	0.0029	0.0029
Paper and Allied Products	0.0014	0.0019	0.0017	0.0016
Printing & Publishing	0.0043	0.0042	0.0041	0.0043
Chemicals & Petroleum Refining	0.0019	0.0030	0.0024	0.0020
Rubber & Leather Products	0.0013	0.0024	0.0025	0.0022
Lumber & Wood Products & Furniture	0.0060	0.0087	0.0047	0.0122
Stone, Clay & Glass Products	0.0224	0.0155	0.0162	0.0174
Primary Metal Industries	0.0015	0.0016	0.0017	0.0017
Fabricated Metal Products	0.0183	0.0244	0.0218	0.0215
Machinery, except electrical	0.0023	0.0030	0.0051	0.0032
Electric & Electronic Equipment	0.0039	0.0063	0.0051	0.0052
Motor Vehicles & Equipment	0.0002	0.0002	0.0002	0.0002
Transportation Equipment, except Motor Vehicles	0.0010	0.0011	0.0011	0.0010
Instruments & related products	0.0009	0.0009	0.0012	0.0008
Miscellaneous Manufacturing Industries	0.0010	0.0009	0.0010	0.0011
Transportation	0.0242	0.0226	0.0231	0.0211
Communication	0.0078	0.0078	0.0076	0.0076
Electric, Gas, Water & Sanitary Services	0.0031	0.0030	0.0029	0.0031
Wholesale Trade	0.0311	0.0325	0.0335	0.0331
Retail Trade	0.0592	0.0559	0.0565	0.0622
Finance	0.0077	0.0075	0.0074	0.0076
Insurance	0.0102	0.0099	0.0097	0.0100
Real Estate	0.0038	0.0037	0.0036	0.0037
Hotels & Lodging Places and Amusements	0.0055	0.0055	0.0053	0.0055
Personal Services	0.0074	0.0071	0.0070	0.0072
Business Services	0.0687	0.0658	0.0578	0.0583
Eating & Drinking Places	0.0135	0.0134	0.0131	0.0135
Health Services	0.0250	0.0244	0.0237	0.0248
Miscellaneous Services	0.0210	0.0176	0.0182	0.0185
Households	0.0030	0.0029	0.0028	0.0030

Appendix A

FLORIDA

Industry Multipliers for New Construction Industry
for Employment per \$1 Million

Industry	New Religious Buildings SIC # 11.0206	New Education Buildings SIC # 11.0207	New Hospitals SIC # 11.0231	New Residential Institutions & Other Health Related Facilities SIC # 11.0232
Agriculture	0.3	0.3	0.3	0.3
Forest & Fish	0.0	0.0	0.0	0.0
Coal Mining	0.0	0.0	0.0	0.0
Petroleum & Natural Gas	0.0	0.0	0.0	0.0
Miscellaneous Mining	0.1	0.1	0.1	0.1
New Construction	19.2	18.5	18.1	19.1
Maintenance/Repair Construction	0.5	0.5	0.5	0.5
Food/Kindred Products & Tobacco	0.2	0.2	0.2	0.2
Textile Mill Products	0.0	0.0	0.0	0.0
Apparel	0.2	0.2	0.2	0.2
Paper and Allied Products	0.0	0.1	0.1	0.1
Printing & Publishing	0.2	0.2	0.2	0.2
Chemicals & Petroleum Refining	0.1	0.1	0.1	0.1
Rubber & Leather Products	0.1	0.1	0.1	0.1
Lumber & Wood Products & Furniture	0.3	0.5	0.3	0.7
Stone, Clay & Glass Products	1.0	0.7	0.7	0.8
Primary Metal Industries	0.1	0.1	0.1	0.1
Fabricated Metal Products	0.8	1.0	0.9	0.9
Machinery, except electrical	0.1	0.1	0.2	0.1
Electric & Electronic Equipment	0.1	0.2	0.2	0.2
Motor Vehicles & Equipment	0.0	0.0	0.0	0.0
Transportation Equipment, except Motor Vehicles	0.0	0.0	0.0	0.0
Instruments & related products	0.0	0.0	0.1	0.0
Miscellaneous Manufacturing Industries	0.1	0.1	0.1	0.1
Transportation	1.0	0.9	1.0	0.9
Communication	0.2	0.2	0.2	0.2
Electric, Gas, Water & Sanitary Services	0.1	0.1	0.1	0.1
Wholesale Trade	1.3	1.3	1.4	1.3
Retail Trade	4.2	4.0	4.0	4.4
Finance	0.3	0.3	0.3	0.3
Insurance	0.4	0.4	0.4	0.4
Real Estate	0.6	0.6	0.6	0.6
Hotels & Lodging Places and Amusements	0.4	0.4	0.4	0.4
Personal Services	0.8	0.8	0.8	0.8
Business Services	3.8	3.6	3.2	3.2
Eating & Drinking Places	1.3	1.4	1.4	1.4
Health Services	0.9	0.9	0.9	0.9
Miscellaneous Services	1.0	0.8	0.9	0.9
Households	0.4	0.4	0.4	0.4

Appendix A

FLORIDA
Industry Multipliers for New Construction Industry
for Output, in dollars

Industry	New Amusement & Recreation Buildings SIC # 11.0241	Other New Nonfarm Buildings SIC # 11.0250	New Telephone & Telegraph Facilities SIC # 11.0301	New Railroads SIC # 11.0302
Agriculture	0.0114	0.0108	0.0108	0.0106
Forest & Fish	0.0008	0.0008	0.0008	0.0011
Coal Mining	0.0000	0.0000	0.0000	0.0000
Petroleum & Natural Gas	0.0001	0.0001	0.0001	0.0001
Miscellaneous Mining	0.0068	0.0064	0.0021	0.0146
New Construction	1.0000	1.0000	1.0000	1.0000
Maintenance/Repair Construction	0.0229	0.0217	0.0198	0.0225
Food/Kindred Products & Tobacco	0.0362	0.0363	0.0357	0.0372
Textile Mill Products	0.0008	0.0008	0.0009	0.0006
Apparel	0.0103	0.0104	0.0099	0.0104
Paper and Allied Products	0.0082	0.0087	0.0063	0.0070
Printing & Publishing	0.0132	0.0132	0.0117	0.0121
Chemicals & Petroleum Refining	0.0155	0.0217	0.0138	0.0101
Rubber & Leather Products	0.0081	0.0072	0.0037	0.0042
Lumber & Wood Products & Furniture	0.0415	0.0344	0.0023	0.0535
Stone, Clay & Glass Products	0.0800	0.0676	0.0241	0.0330
Primary Metal Industries	0.0093	0.0086	0.0419	0.0097
Fabricated Metal Products	0.0891	0.0775	0.0245	0.7350
Machinery, except electrical	0.0152	0.0133	0.0042	0.0610
Electric & Electronic Equipment	0.0139	0.0163	0.0148	0.0334
Motor Vehicles & Equipment	0.0014	0.0014	0.0015	0.0014
Transportation Equipment, except Motor Vehicles	0.0035	0.0034	0.0029	0.0036
Instruments & related products	0.0023	0.0029	0.0017	0.0019
Miscellaneous Manufacturing Industries	0.0037	0.0041	0.0034	0.0039
Transportation	0.0493	0.0505	0.0400	0.0690
Communication	0.0276	0.0284	0.0250	0.0268
Electric, Gas, Water & Sanitary Services	0.0273	0.0273	0.0247	0.0264
Wholesale Trade	0.0812	0.0833	0.0758	0.0726
Retail Trade	0.1218	0.1235	0.0930	0.0989
Finance	0.0240	0.0240	0.0209	0.0245
Insurance	0.0277	0.0276	0.0233	0.0280
Real Estate	0.1213	0.1216	0.1170	0.1228
Hotels & Lodging Places and Amusements	0.0162	0.0162	0.0146	0.0161
Personal Services	0.0153	0.0155	0.0147	0.0157
Business Services	0.1288	0.1244	0.1078	0.0879
Eating & Drinking Places	0.0435	0.0433	0.0408	0.0426
Health Services	0.0415	0.0417	0.0415	0.0433
Miscellaneous Services	0.0527	0.0522	0.0432	0.0497
Households	0.0748	0.7506	0.7481	0.7798

Appendix A

FLORIDA
Industry Multipliers for New Construction Industry
for Earnings, in dollars

Industry	New Amusement & Recreation Buildings SIC # 11.0241	Other New Nonfarm Buildings SIC # 11.0250	New Telephone & Telegraph Facilities SIC # 11.0301	New Railroads SIC # 11.0302
Agriculture	0.0043	0.0046	0.0040	0.0038
Forest & Fish	0.0003	0.0003	0.0003	0.0003
Coal Mining	0.0000	0.0000	0.0000	0.0000
Petroleum & Natural Gas	0.0000	0.0000	0.0000	0.0000
Miscellaneous Mining	0.0020	0.0019	0.0006	0.0042
New Construction	0.3631	0.3726	0.4413	0.4319
Maintenance/Repair Construction	0.0103	0.0097	0.0088	0.0101
Food/Kindred Products & Tobacco	0.0054	0.0055	0.0054	0.0056
Textile Mill Products	0.0002	0.0002	0.0002	0.0001
Apparel	0.0029	0.0029	0.0028	0.0029
Paper and Allied Products	0.0016	0.0017	0.0012	0.0013
Printing & Publishing	0.0043	0.0043	0.0038	0.0039
Chemicals & Petroleum Refining	0.0021	0.0028	0.0018	0.0016
Rubber & Leather Products	0.0020	0.0018	0.0010	0.0011
Lumber & Wood Products & Furniture	0.0100	0.0083	0.0044	0.0094
Stone, Clay & Glass Products	0.0201	0.0168	0.0061	0.0089
Primary Metal Industries	0.0017	0.0016	0.0066	0.0019
Fabricated Metal Products	0.0215	0.0185	0.0060	0.0181
Machinery, except electrical	0.0041	0.0036	0.0012	0.0018
Electric & Electronic Equipment	0.0044	0.0053	0.0046	0.0130
Motor Vehicles & Equipment	0.0002	0.0002	0.0003	0.0002
Transportation Equipment, except Motor Vehicles	0.0011	0.0010	0.0009	0.0011
Instruments & related products	0.0008	0.0010	0.0005	0.0006
Miscellaneous Manufacturing Industries	0.0009	0.0011	0.0009	0.0010
Transportation	0.0218	0.0223	0.0176	0.0304
Communication	0.0073	0.0075	0.0066	0.0071
Electric, Gas, Water & Sanitary Services	0.0030	0.0030	0.0027	0.0029
Wholesale Trade	0.0317	0.0326	0.0296	0.0284
Retail Trade	0.0604	0.0613	0.0462	0.0491
Finance	0.0076	0.0075	0.0065	0.0077
Insurance	0.0100	0.0099	0.0084	0.0101
Real Estate	0.0037	0.0037	0.0034	0.0036
Hotels & Lodging Places and Amusements	0.0054	0.0054	0.0049	0.0054
Personal Services	0.0071	0.0073	0.0069	0.0074
Business Services	0.0667	0.0651	0.0566	0.0450
Eating & Drinking Places	0.0136	0.0135	0.0127	0.0133
Health Services	0.0243	0.0244	0.0243	0.0253
Miscellaneous Services	0.0187	0.0186	0.0164	0.0082
Households	0.0029	0.0029	0.0029	0.0030

Appendix A

FLORIDA
Industry Multipliers for New Construction Industry
for Employment per \$1 Million

Industry	New Amusement & Recreation Buildings SIC # 11.0241	Other New Nonfarm Buildings SIC # 11.0250	New Telephone & Telegraph Facilities SIC # 11.0301	New Railroads SIC # 11.0302
Agriculture	0.3	0.3	0.2	0.2
Forest & Fish	0.0	0.0	0.0	0.0
Coal Mining	0.0	0.0	0.0	0.0
Petroleum & Natural Gas	0.0	0.0	0.0	0.0
Miscellaneous Mining	0.1	0.1	0.0	0.2
New Construction	18.0	18.4	21.8	21.4
Maintenance/Repair Construction	0.5	0.5	0.4	0.5
Food/Kindred Products & Tobacco	0.2	0.2	0.2	0.2
Textile Mill Products	0.0	0.0	0.0	0.0
Apparel	0.2	0.2	0.2	0.2
Paper and Allied Products	0.0	0.1	0.0	0.0
Printing & Publishing	0.2	0.2	0.2	0.2
Chemicals & Petroleum Refining	0.1	0.1	0.1	0.0
Rubber & Leather Products	0.1	0.1	0.0	0.1
Lumber & Wood Products & Furniture	0.6	0.5	0.2	0.5
Stone, Clay & Glass Products	0.9	0.8	0.3	0.4
Primary Metal Industries	0.1	0.1	0.3	0.1
Fabricated Metal Products	0.9	0.8	0.3	0.8
Machinery, except electrical	0.1	0.1	0.0	0.1
Electric & Electronic Equipment	0.2	0.2	0.2	0.5
Motor Vehicles & Equipment	0.0	0.0	0.0	0.0
Transportation Equipment, except Motor Vehicles	0.0	0.0	0.0	0.0
Instruments & related products	0.0	0.0	0.0	0.0
Miscellaneous Manufacturing Industries	0.1	0.1	0.1	0.1
Transportation	0.9	0.9	0.7	1.3
Communication	0.2	0.2	0.2	0.2
Electric, Gas, Water & Sanitary Services	0.1	0.1	0.1	0.1
Wholesale Trade	1.3	1.3	1.2	1.1
Retail Trade	4.3	4.4	3.2	3.5
Finance	0.3	0.3	0.2	0.3
Insurance	0.4	0.4	0.3	0.4
Real Estate	0.6	0.6	0.6	0.6
Hotels & Lodging Places and Amusements	0.4	0.4	0.4	0.4
Personal Services	0.8	0.8	0.8	0.8
Business Services	3.7	3.6	3.1	2.5
Eating & Drinking Places	1.4	1.4	1.3	1.4
Health Services	0.9	0.9	0.9	0.9
Miscellaneous Services	0.9	0.9	0.8	0.9
Households	0.4	0.4	0.4	0.5

Appendix A

FLORIDA
Industry Multipliers for New Construction Industry
for Output, in dollars

Industry	New Electric Utility Facilities SIC # 11.0303	New Gas Utility Facilities SIC # 11.0304	New Petroleum Facilities SIC # 11.0305	New Water Supply Facilities SIC # 11.0306
Agriculture	0.0111	0.0108	0.0112	0.0098
Forest & Fish	0.0009	0.0007	0.0007	0.0007
Coal Mining	0.0000	0.0000	0.0000	0.0000
Petroleum & Natural Gas	0.0001	0.0001	0.0001	0.0001
Miscellaneous Mining	0.0076	0.0055	0.0025	0.0058
New Construction	1.0000	1.0000	1.0000	1.0000
Maintenance/Repair Construction	0.0232	0.0223	0.0215	0.0219
Food/Kindred Products & Tobacco	0.0384	0.0377	0.0367	0.0350
Textile Mill Products	0.0007	0.0007	0.0007	0.0006
Apparel	0.0106	0.0106	0.0107	0.0098
Paper and Allied Products	0.0070	0.0068	0.0066	0.0064
Printing & Publishing	0.0134	0.0140	0.0136	0.0128
Chemicals & Petroleum Refining	0.0112	0.0098	0.0094	0.0086
Rubber & Leather Products	0.0050	0.0041	0.0041	0.0051
Lumber & Wood Products & Furniture	0.0248	0.0047	0.0056	0.0048
Stone, Clay & Glass Products	0.0467	0.0252	0.0189	0.0573
Primary Metal Industries	0.0087	0.0082	0.0086	0.0155
Fabricated Metal Products	0.0986	0.0870	0.0656	0.0745
Machinery, except electrical	0.0068	0.0083	0.0041	0.0063
Electric & Electronic Equipment	0.0194	0.0062	0.0081	0.0056
Motor Vehicles & Equipment	0.0014	0.0014	0.0013	0.0014
Transportation Equipment, except Motor Vehicles	0.0038	0.0037	0.0035	0.0037
Instruments & related products	0.0023	0.0019	0.0018	0.0016
Miscellaneous Manufacturing Industries	0.0036	0.0036	0.0036	0.0034
Transportation	0.0506	0.0540	0.0512	0.0531
Communication	0.0273	0.0285	0.0275	0.0281
Electric, Gas, Water & Sanitary Services	0.0273	0.0264	0.0255	0.0255
Wholesale Trade	0.0769	0.0730	0.0714	0.0685
Retail Trade	0.1078	0.0945	0.0916	0.0879
Finance	0.0241	0.0257	0.0251	0.0244
Insurance	0.0270	0.0284	0.0279	0.0267
Real Estate	0.1286	0.1265	0.1235	0.1178
Hotels & Lodging Places and Amusements	0.0172	0.0181	0.0179	0.0167
Personal Services	0.0160	0.0160	0.0161	0.0150
Business Services	0.1621	0.2424	0.2326	0.2026
Eating & Drinking Places	0.0447	0.0453	0.0432	0.0413
Health Services	0.0445	0.0433	0.0425	0.0404
Miscellaneous Services	0.0492	0.0532	0.0517	0.0531
Households	0.8021	0.7807	0.7649	0.7277

Appendix A

FLORIDA
Industry Multipliers for New Construction Industry
for Earnings, in dollars

Industry	New Electric Utility Facilities SIC # 11.0303	New Gas Utility Facilities SIC # 11.0304	New Petroleum Facilities SIC # 11.0305	New Water Supply Facilities SIC # 11.0306
Agriculture	0.0040	0.0039	0.0041	0.0035
Forest & Fish	0.0003	0.0003	0.0003	0.0002
Coal Mining	0.0000	0.0000	0.0000	0.0000
Petroleum & Natural Gas	0.0000	0.0000	0.0000	0.0000
Miscellaneous Mining	0.0022	0.0016	0.0007	0.0017
New Construction	0.4154	0.3720	0.3753	0.3474
Maintenance/Repair Construction	0.0104	0.0100	0.0096	0.0099
Food/Kindred Products & Tobacco	0.0058	0.0057	0.0055	0.0053
Textile Mill Products	0.0001	0.0002	0.0002	0.0001
Apparel	0.0030	0.0030	0.0030	0.0027
Paper and Allied Products	0.0013	0.0013	0.0012	0.0012
Printing & Publishing	0.0043	0.0045	0.0044	0.0041
Chemicals & Petroleum Refining	0.0016	0.0015	0.0016	0.0012
Rubber & Leather Products	0.0013	0.0011	0.0011	0.0013
Lumber & Wood Products & Furniture	0.0047	0.0012	0.0014	0.0012
Stone, Clay & Glass Products	0.0115	0.0061	0.0050	0.0157
Primary Metal Industries	0.0015	0.0016	0.0018	0.0045
Fabricated Metal Products	0.0254	0.0221	0.0168	0.0187
Machinery, except electrical	0.0020	0.0025	0.0013	0.0019
Electric & Electronic Equipment	0.0059	0.0021	0.0027	0.0017
Motor Vehicles & Equipment	0.0002	0.0002	0.0002	0.0002
Transportation Equipment, except Motor Vehicles	0.0012	0.0012	0.0011	0.0012
Instruments & related products	0.0008	0.0006	0.0006	0.0005
Miscellaneous Manufacturing Industries	0.0009	0.0009	0.0009	0.0009
Transportation	0.0222	0.0234	0.0222	0.0236
Communication	0.0072	0.0075	0.0073	0.0074
Electric, Gas, Water & Sanitary Services	0.0030	0.0029	0.0028	0.0028
Wholesale Trade	0.0300	0.0285	0.0279	0.0268
Retail Trade	0.0535	0.0469	0.0455	0.0436
Finance	0.0075	0.0081	0.0080	0.0078
Insurance	0.0097	0.0102	0.0100	0.0096
Real Estate	0.0039	0.0039	0.0037	0.0036
Hotels & Lodging Places and Amusements	0.0058	0.0062	0.0061	0.0056
Personal Services	0.0075	0.0075	0.0075	0.0070
Business Services	0.0867	0.1305	0.1251	0.1067
Eating & Drinking Places	0.0140	0.0141	0.0135	0.0129
Health Services	0.0260	0.0253	0.0248	0.0236
Miscellaneous Services	0.0183	0.0192	0.0188	0.0188
Households	0.0031	0.0030	0.0030	0.0028

Appendix A

FLORIDA
Industry Multipliers for New Construction Industry
for Employment per \$1 Million

Industry	New Electric Utility Facilities SIC # 11.0303	New Gas Utility Facilities SIC # 11.0304	New Petroleum Facilities SIC # 11.0305	New Water Supply Facilities SIC # 11.0306
Agriculture	0.2	0.2	0.2	0.2
Forest & Fish	0.0	0.0	0.0	0.0
Coal Mining	0.0	0.0	0.0	0.0
Petroleum & Natural Gas	0.0	0.0	0.0	0.0
Miscellaneous Mining	0.1	0.1	0.0	0.1
New Construction	20.6	18.4	18.6	17.2
Maintenance/Repair Construction	0.5	0.5	0.5	0.5
Food/Kindred Products & Tobacco	0.2	0.2	0.2	0.2
Textile Mill Products	0.0	0.0	0.0	0.0
Apparel	0.2	0.2	0.2	0.2
Paper and Allied Products	0.0	0.0	0.0	0.0
Printing & Publishing	0.2	0.2	0.1	0.2
Chemicals & Petroleum Refining	0.0	0.0	0.0	0.0
Rubber & Leather Products	0.1	0.1	0.1	0.1
Lumber & Wood Products & Furniture	0.3	0.1	0.1	0.1
Stone, Clay & Glass Products	0.5	0.3	0.2	0.7
Primary Metal Industries	0.1	0.1	0.1	0.2
Fabricated Metal Products	1.1	0.9	0.7	0.8
Machinery, except electrical	0.1	0.1	0.0	0.1
Electric & Electronic Equipment	0.2	0.1	0.1	0.1
Motor Vehicles & Equipment	0.0	0.0	0.0	0.0
Transportation Equipment, except Motor Vehicles	0.0	0.0	0.0	0.0
Instruments & related products	0.0	0.0	0.0	0.0
Miscellaneous Manufacturing Industries	0.1	0.1	0.1	0.1
Transportation	0.9	1.0	0.9	1.0
Communication	0.2	0.2	0.2	0.2
Electric, Gas, Water & Sanitary Services	0.1	0.1	0.1	0.1
Wholesale Trade	1.2	1.2	1.1	1.1
Retail Trade	3.8	3.3	3.2	3.1
Finance	0.3	0.3	0.3	0.3
Insurance	0.4	0.4	0.4	0.4
Real Estate	0.6	0.6	0.6	0.6
Hotels & Lodging Places and Amusements	0.5	0.5	0.5	0.5
Personal Services	0.8	0.8	0.8	0.8
Business Services	4.8	7.2	6.9	5.9
Eating & Drinking Places	1.5	1.5	1.4	1.3
Health Services	1.0	0.9	0.9	0.9
Miscellaneous Services	0.9	0.9	0.9	0.9
Households	0.5	0.5	0.4	0.4

Appendix A

FLORIDA
Industry Multipliers for New Construction Industry
for Output, in dollars

Industry	New Sewer System Facilities SIC # 11.0307	New Local Transit Facilities SIC # 11.0308	New Highways & Streets SIC # 11.0400	New Farm Housing Units & Additions & Alterations SIC # 11.0501
Agriculture	0.0108	0.0107	0.0162	0.0117
Forest & Fish	0.0007	0.0008	0.0007	0.0013
Coal Mining	0.0000	0.0000	0.0000	0.0000
Petroleum & Natural Gas	0.0001	0.0001	0.0002	0.0001
Miscellaneous Mining	0.0091	0.0142	0.0309	0.0058
New Construction	1.0000	1.0000	1.0000	1.0000
Maintenance/Repair Construction	0.0231	0.0238	0.0243	0.0222
Food/Kindred Products & Tobacco	0.0374	0.0362	0.0357	0.0318
Textile Mill Products	0.0007	0.0007	0.0007	0.0006
Apparel	0.0104	0.0099	0.0099	0.0091
Paper and Allied Products	0.0073	0.0071	0.0074	0.0089
Printing & Publishing	0.0140	0.0135	0.0133	0.0129
Chemicals & Petroleum Refining	0.0150	0.0209	0.0638	0.0254
Rubber & Leather Products	0.0055	0.0040	0.0040	0.0062
Lumber & Wood Products & Furniture	0.0070	0.0188	0.0082	0.1263
Stone, Clay & Glass Products	0.0822	0.1224	0.1031	0.0630
Primary Metal Industries	0.0090	0.0067	0.0065	0.0062
Fabricated Metal Products	0.0598	0.0923	0.0783	0.0652
Machinery, except electrical	0.0414	0.0068	0.0039	0.0067
Electric & Electronic Equipment	0.0076	0.0143	0.0136	0.0083
Motor Vehicles & Equipment	0.0014	0.0014	0.0014	0.0012
Transportation Equipment, except Motor Vehicles	0.0036	0.0035	0.0034	0.0029
Instruments & related products	0.0016	0.0018	0.0014	0.0013
Miscellaneous Manufacturing Industries	0.0037	0.0041	0.0084	0.0035
Transportation	0.0557	0.0691	0.0751	0.0563
Communication	0.0305	0.0295	0.0285	0.0276
Electric, Gas, Water & Sanitary Services	0.0273	0.0274	0.0281	0.0259
Wholesale Trade	0.0830	0.0689	0.0744	0.0957
Retail Trade	0.0941	0.0944	0.0925	0.1568
Finance	0.0258	0.0254	0.0246	0.0199
Insurance	0.0284	0.0282	0.0272	0.0251
Real Estate	0.1258	0.1222	0.1212	0.1101
Hotels & Lodging Places and Amusements	0.0179	0.0172	0.0167	0.0139
Personal Services	0.0159	0.0156	0.0152	0.0136
Business Services	0.2128	0.2000	0.1887	0.0966
Eating & Drinking Places	0.0447	0.0437	0.0428	0.0383
Health Services	0.0430	0.0416	0.0410	0.0364
Miscellaneous Services	0.0536	0.0535	0.0539	0.0450
Households	0.7750	0.7496	0.7384	0.6559

Appendix A

FLORIDA

Industry Multipliers for New Construction Industry
for Earnings, in dollars

Industry	New Sewer System Facilities SIC # 11.0307	New Local Transit Facilities SIC # 11.0308	New Highways & Streets SIC # 11.0400	New Farm Housing Units & Additions & Alterations SIC # 11.0501
Agriculture	0.0039	0.0039	0.0072	0.0047
Forest & Fish	0.0003	0.0003	0.0003	0.0003
Coal Mining	0.0000	0.0000	0.0000	0.0000
Petroleum & Natural Gas	0.0000	0.0000	0.0000	0.0000
Miscellaneous Mining	0.0026	0.0041	0.0091	0.0017
New Construction	0.3567	0.3264	0.3191	0.2709
Maintenance/Repair Construction	0.0104	0.0108	0.0110	0.0101
Food/Kindred Products & Tobacco	0.0056	0.0054	0.0054	0.0048
Textile Mill Products	0.0002	0.0002	0.0001	0.0001
Apparel	0.0029	0.0028	0.0028	0.0025
Paper and Allied Products	0.0014	0.0013	0.0014	0.0018
Printing & Publishing	0.0045	0.0043	0.0043	0.0042
Chemicals & Petroleum Refining	0.0021	0.0027	0.0079	0.0036
Rubber & Leather Products	0.0014	0.0010	0.0010	0.0015
Lumber & Wood Products & Furniture	0.0016	0.0039	0.0019	0.0311
Stone, Clay & Glass Products	0.0234	0.0326	0.0256	0.0149
Primary Metal Industries	0.0022	0.0013	0.0012	0.0010
Fabricated Metal Products	0.0150	0.0232	0.0194	0.0150
Machinery, except electrical	0.0112	0.0020	0.0012	0.0018
Electric & Electronic Equipment	0.0024	0.0048	0.0049	0.0026
Motor Vehicles & Equipment	0.0002	0.0002	0.0002	0.0002
Transportation Equipment, except Motor Vehicles	0.0011	0.0011	0.0011	0.0009
Instruments & related products	0.0005	0.0006	0.0004	0.0004
Miscellaneous Manufacturing Industries	0.0010	0.0011	0.0026	0.0009
Transportation	0.0246	0.0304	0.0328	0.0251
Communication	0.0081	0.0078	0.0076	0.0073
Electric, Gas, Water & Sanitary Services	0.0030	0.0030	0.0031	0.0029
Wholesale Trade	0.0325	0.0269	0.0291	0.0374
Retail Trade	0.0467	0.0468	0.0459	0.0778
Finance	0.0082	0.0080	0.0078	0.0062
Insurance	0.0102	0.0101	0.0098	0.0090
Real Estate	0.0038	0.0037	0.0037	0.0035
Hotels & Lodging Places and Amusements	0.0061	0.0058	0.0056	0.0047
Personal Services	0.0074	0.0073	0.0071	0.0063
Business Services	0.1126	0.1055	0.0985	0.0485
Eating & Drinking Places	0.0140	0.0136	0.0134	0.0119
Health Services	0.0251	0.0243	0.0240	0.0213
Miscellaneous Services	0.0192	0.0191	0.0192	0.0162
Households	0.0030	0.0029	0.0029	0.0025

Appendix A

FLORIDA
Industry Multipliers for New Construction Industry
for Employment per \$1 Million

Industry	New Sewer System Facilities SIC # 11.0307	New Local Transit Facilities SIC # 11.0308	New Highways & Streets SIC # 11.0400	New Farm Housing Units & Additions & Alterations SIC # 11.0501
Agriculture	0.2	0.2	0.4	0.3
Forest & Fish	0.0	0.0	0.0	0.0
Coal Mining	0.0	0.0	0.0	0.0
Petroleum & Natural Gas	0.0	0.0	0.0	0.0
Miscellaneous Mining	0.1	0.2	0.3	0.1
New Construction	17.7	16.2	15.8	13.4
Maintenance/Repair Construction	0.5	0.5	0.5	0.5
Food/Kindred Products & Tobacco	0.2	0.2	0.2	0.2
Textile Mill Products	0.0	0.0	0.0	0.0
Apparel	0.2	0.2	0.2	0.2
Paper and Allied Products	0.0	0.0	0.0	0.1
Printing & Publishing	0.2	0.2	0.2	0.2
Chemicals & Petroleum Refining	0.1	0.1	0.2	0.1
Rubber & Leather Products	0.1	0.1	0.1	0.1
Lumber & Wood Products & Furniture	0.1	0.2	0.1	1.8
Stone, Clay & Glass Products	1.1	1.5	1.2	0.7
Primary Metal Industries	0.1	0.0	0.0	0.0
Fabricated Metal Products	0.6	1.0	0.8	0.6
Machinery, except electrical	0.4	0.1	0.0	0.1
Electric & Electronic Equipment	0.1	0.2	0.2	0.1
Motor Vehicles & Equipment	0.0	0.0	0.0	0.0
Transportation Equipment, except Motor Vehicles	0.0	0.0	0.0	0.0
Instruments & related products	0.0	0.0	0.0	0.0
Miscellaneous Manufacturing Industries	0.1	0.1	0.2	0.1
Transportation	1.0	1.3	1.4	1.0
Communication	0.2	0.2	0.2	0.2
Electric, Gas, Water & Sanitary Services	0.1	0.1	0.1	0.1
Wholesale Trade	1.3	1.1	1.2	1.5
Retail Trade	3.3	3.3	3.3	5.5
Finance	0.3	0.3	0.3	0.2
Insurance	0.4	0.4	0.4	0.3
Real Estate	0.6	0.6	0.6	0.6
Hotels & Lodging Places and Amusements	0.5	0.5	0.5	0.4
Personal Services	0.8	0.8	0.8	0.7
Business Services	6.2	5.8	5.4	2.7
Eating & Drinking Places	1.5	1.4	1.4	1.2
Health Services	0.9	0.9	0.9	0.8
Miscellaneous Services	0.9	0.9	0.9	0.8
Households	0.4	0.4	0.4	0.4

Appendix A

FLORIDA
Industry Multipliers for New Construction Industry
for Output, in dollars

Industry	New Farm Service Facilities SIC # 11.0502	New Petroleum & Natural Gas Well Drilling SIC # 11.0601	New Petroleum, Natural Gas & Solid Mineral Exploration SIC # 11.0602	New Access Structures for Solid Mineral Development SIC # 11.0603
Agriculture	0.0110	0.0086	0.0117	0.0100
Forest & Fish	0.0011	0.0006	0.0008	0.0009
Coal Mining	0.0000	0.0000	0.0000	0.0000
Petroleum & Natural Gas	0.0001	0.0001	0.0001	0.0001
Miscellaneous Mining	0.0062	0.0025	0.0008	0.0076
New Construction	1.0000	1.0000	1.0000	1.0000
Maintenance/Repair Construction	0.0230	0.0191	0.0213	0.0216
Food/Kindred Products & Tobacco	0.0366	0.0306	0.0424	0.0355
Textile Mill Products	0.0008	0.0006	0.0008	0.0007
Apparel	0.0105	0.0085	0.0124	0.0103
Paper and Allied Products	0.0088	0.0053	0.0068	0.0067
Printing & Publishing	0.0131	0.0105	0.0125	0.0109
Chemicals & Petroleum Refining	0.0196	0.0087	0.0124	0.0151
Rubber & Leather Products	0.0104	0.0034	0.0070	0.0085
Lumber & Wood Products & Furniture	0.0263	0.0041	0.0071	0.0261
Stone, Clay & Glass Products	0.0483	0.0207	0.0075	0.0960
Primary Metal Industries	0.0112	0.0108	0.0028	0.0079
Fabricated Metal Products	0.1014	0.0406	0.0310	0.0590
Machinery, except electrical	0.0045	0.0063	0.0023	0.0064
Electric & Electronic Equipment	0.0098	0.0051	0.0135	0.0141
Motor Vehicles & Equipment	0.0013	0.0012	0.0015	0.0013
Transportation Equipment, except Motor Vehicles	0.0032	0.0029	0.0035	0.0032
Instruments & related products	0.0015	0.0012	0.0015	0.0014
Miscellaneous Manufacturing Industries	0.0036	0.0028	0.0037	0.0035
Transportation	0.0548	0.0751	0.0477	0.0668
Communication	0.0296	0.0241	0.0265	0.0236
Electric, Gas, Water & Sanitary Services	0.0268	0.0212	0.0270	0.0247
Wholesale Trade	0.0820	0.0707	0.0619	0.0656
Retail Trade	0.1262	0.0764	0.1091	0.0970
Finance	0.0241	0.0230	0.0288	0.0198
Insurance	0.0275	0.0615	0.0277	0.0235
Real Estate	0.1221	0.1039	0.1381	0.1138
Hotels & Lodging Places and Amusements	0.0152	0.0128	0.0157	0.0133
Personal Services	0.0154	0.0124	0.0169	0.0144
Business Services	0.1109	0.0969	0.0635	0.0503
Eating & Drinking Places	0.0424	0.0363	0.0470	0.0402
Health Services	0.0423	0.0353	0.0496	0.0413
Miscellaneous Services	0.0512	0.0526	0.0553	0.0446
Households	0.7613	0.6326	0.8938	0.7443

Appendix A

FLORIDA
Industry Multipliers for New Construction Industry
for Earnings, in dollars

Industry	New Farm Service Facilities SIC # 11.0502	New Petroleum & Natural Gas Well Drilling SIC # 11.0601	New Petroleum, Natural Gas & Solid Mineral Exploration SIC # 11.0602	New Access Structures for Solid Mineral Development SIC # 11.0603
Agriculture	0.0044	0.0030	0.0041	0.0035
Forest & Fish	0.0003	0.0002	0.0003	0.0003
Coal Mining	0.0000	0.0000	0.0000	0.0000
Petroleum & Natural Gas	0.0000	0.0000	0.0000	0.0000
Miscellaneous Mining	0.0018	0.0007	0.0002	0.0022
New Construction	0.3962	0.3339	0.6014	0.4383
Maintenance/Repair Construction	0.0104	0.0086	0.0094	0.0097
Food/Kindred Products & Tobacco	0.0055	0.0046	0.0064	0.0053
Textile Mill Products	0.0002	0.0001	0.0002	0.0002
Apparel	0.0029	0.0024	0.0035	0.0029
Paper and Allied Products	0.0017	0.0010	0.0013	0.0012
Printing & Publishing	0.0042	0.0034	0.0040	0.0035
Chemicals & Petroleum Refining	0.0027	0.0013	0.0018	0.0022
Rubber & Leather Products	0.0025	0.0009	0.0017	0.0020
Lumber & Wood Products & Furniture	0.0055	0.0010	0.0017	0.0049
Stone, Clay & Glass Products	0.0114	0.0047	0.0018	0.0248
Primary Metal Industries	0.0020	0.0023	0.0005	0.0014
Fabricated Metal Products	0.0214	0.0104	0.0068	0.0144
Machinery, except electrical	0.0013	0.0018	0.0007	0.0018
Electric & Electronic Equipment	0.0030	0.0017	0.0050	0.0041
Motor Vehicles & Equipment	0.0002	0.0002	0.0002	0.0002
Transportation Equipment, except Motor Vehicles	0.0009	0.0009	0.0011	0.0010
Instruments & related products	0.0005	0.0004	0.0005	0.0004
Miscellaneous Manufacturing Industries	0.0009	0.0007	0.0009	0.0009
Transportation	0.0242	0.0625	0.0203	0.0277
Communication	0.0078	0.0064	0.0070	0.0062
Electric, Gas, Water & Sanitary Services	0.0030	0.0024	0.0030	0.0027
Wholesale Trade	0.0320	0.0276	0.0242	0.0256
Retail Trade	0.0626	0.0379	0.0542	0.0481
Finance	0.0075	0.0074	0.0091	0.0061
Insurance	0.0099	0.0221	0.0100	0.0085
Real Estate	0.0037	0.0032	0.0040	0.0032
Hotels & Lodging Places and Amusements	0.0051	0.0043	0.0052	0.0044
Personal Services	0.0072	0.0058	0.0079	0.0067
Business Services	0.0585	0.0463	0.0279	0.0234
Eating & Drinking Places	0.0132	0.0113	0.0147	0.0125
Health Services	0.0247	0.0207	0.0290	0.0241
Miscellaneous Services	0.0188	0.0178	0.0202	0.0165
Households	0.0030	0.0025	0.0035	0.0029

Appendix A

FLORIDA
Industry Multipliers for New Construction Industry
for Employment per \$1 Million

Industry	New Farm Service Facilities SIC # 11.0502	New Petroleum & Natural Gas Well Drilling SIC # 11.0601	New Petroleum, Natural Gas & Solid Mineral Exploration SIC # 11.0602	New Access Structures for Solid Mineral Development SIC # 11.0603
Agriculture	0.3	0.2	0.2	0.2
Forest & Fish	0.0	0.0	0.0	0.0
Coal Mining	0.0	0.0	0.0	0.0
Petroleum & Natural Gas	0.0	0.0	0.0	0.0
Miscellaneous Mining	0.1	0.0	0.0	0.1
New Construction	19.6	16.5	29.8	21.7
Maintenance/Repair Construction	0.5	0.4	0.5	0.5
Food/Kindred Products & Tobacco	0.2	0.2	0.3	0.2
Textile Mill Products	0.0	0.0	0.0	0.0
Apparel	0.2	0.2	0.3	0.2
Paper and Allied Products	0.1	0.0	0.0	0.0
Printing & Publishing	0.2	0.2	0.2	0.2
Chemicals & Petroleum Refining	0.1	0.0	0.1	0.1
Rubber & Leather Products	0.1	0.0	0.1	0.1
Lumber & Wood Products & Furniture	0.3	0.1	0.1	0.3
Stone, Clay & Glass Products	0.5	0.2	0.1	1.1
Primary Metal Industries	0.1	0.1	0.0	0.1
Fabricated Metal Products	0.9	0.4	0.3	0.6
Machinery, except electrical	0.0	0.1	0.0	0.1
Electric & Electronic Equipment	0.1	0.1	0.2	0.1
Motor Vehicles & Equipment	0.0	0.0	0.0	0.0
Transportation Equipment, except Motor Vehicles	0.0	0.0	0.0	0.0
Instruments & related products	0.0	0.0	0.0	0.0
Miscellaneous Manufacturing Industries	0.1	0.0	0.1	0.1
Transportation	1.0	1.3	0.8	1.1
Communication	0.2	0.2	0.2	0.2
Electric, Gas, Water & Sanitary Services	0.1	0.1	0.1	0.1
Wholesale Trade	1.3	1.1	1.0	1.0
Retail Trade	4.5	2.7	3.9	3.4
Finance	0.3	0.3	0.3	0.2
Insurance	0.4	0.3	0.4	0.3
Real Estate	0.6	0.5	0.7	0.5
Hotels & Lodging Places and Amusements	0.4	0.3	0.4	0.4
Personal Services	0.8	0.6	0.3	0.7
Business Services	3.2	2.5	1.5	1.3
Eating & Drinking Places	1.4	1.2	1.5	1.3
Health Services	0.9	0.8	1.1	0.9
Miscellaneous Services	0.9	0.8	1.0	0.8
Households	0.4	0.4	0.5	0.4

Appendix A

FLORIDA
Industry Multipliers for New Construction Industry
for Output, in dollars

Industry	New Military Facilities SIC # 11.0701	New Dams & Reservoirs SIC # 11.0702	Other New Conservation & Development Facilities SIC # 11.0703	Other New Nonbuilding Facilities SIC # 11.0704
Agriculture	0.0128	0.0114	0.0115	0.0152
Forest & Fish	0.0008	0.0008	0.0010	0.0009
Coal Mining	0.0000	0.0000	0.0000	0.0000
Petroleum & Natural Gas	0.0001	0.0002	0.0001	0.0001
Miscellaneous Mining	0.0126	0.0089	0.0186	0.0193
New Construction	1.0000	1.0000	1.0000	1.0000
Maintenance/Repair Construction	0.0234	0.0244	0.0253	0.0244
Food/Kindred Products & Tobacco	0.0392	0.0410	0.0411	0.0375
Textile Mill Products	0.0009	0.0009	0.0008	0.0007
Apparel	0.0114	0.0126	0.0118	0.0106
Paper and Allied Products	0.0079	0.0073	0.0077	0.0074
Printing & Publishing	0.0132	0.0154	0.0156	0.0139
Chemicals & Petroleum Refining	0.0178	0.0093	0.0105	0.0300
Rubber & Leather Products	0.0066	0.0049	0.0059	0.0056
Lumber & Wood Products & Furniture	0.0171	0.0069	0.0034	0.0260
Stone, Clay & Glass Products	0.0662	0.0416	0.0546	0.0593
Primary Metal Industries	0.0065	0.0043	0.0043	0.0076
Fabricated Metal Products	0.0573	0.0632	0.0498	0.0975
Machinery, except electrical	0.0108	0.0042	0.0036	0.0052
Electric & Electronic Equipment	0.0240	0.0052	0.0050	0.0194
Motor Vehicles & Equipment	0.0015	0.0016	0.0015	0.0014
Transportation Equipment, except Motor Vehicles	0.0038	0.0038	0.0035	0.0037
Instruments & related products	0.0021	0.0018	0.0016	0.0016
Miscellaneous Manufacturing Industries	0.0047	0.0040	0.0040	0.0057
Transportation	0.0609	0.0731	0.0702	0.0705
Communication	0.0264	0.0330	0.0336	0.0309
Electric, Gas, Water & Sanitary Services	0.0279	0.0287	0.0296	0.0279
Wholesale Trade	0.0745	0.0677	0.0673	0.0757
Retail Trade	0.1041	0.1069	0.1048	0.1018
Finance	0.0259	0.0255	0.0258	0.0253
Insurance	0.0292	0.0308	0.0309	0.0288
Real Estate	0.1291	0.1384	0.1393	0.1266
Hotels & Lodging Places and Amusements	0.0172	0.0201	0.0205	0.0179
Personal Services	0.0164	0.0173	0.0173	0.0159
Business Services	0.1193	0.2762	0.2986	0.2001
Eating & Drinking Places	0.0459	0.0484	0.0486	0.0444
Health Services	0.0453	0.0474	0.0474	0.0431
Miscellaneous Services	0.0577	0.0641	0.0624	0.0546
Households	0.8154	0.8539	0.8544	0.7767

Appendix A

FLORIDA
Industry Multipliers for New Construction Industry
for Earnings, in dollars

Industry	New Military Facilities SIC # 11.0701	New Dams & Reservoirs SIC # 11.0702	Other New Conservation & Development Facilities SIC # 11.0703	Other New Nonbuilding Facilities SIC # 11.0704
Agriculture	0.0049	0.0040	0.0041	0.0064
Forest & Fish	0.0003	0.0003	0.0003	0.0003
Coal Mining	0.0000	0.0000	0.0000	0.0000
Petroleum & Natural Gas	0.0000	0.0000	0.0000	0.0000
Miscellaneous Mining	0.0037	0.0026	0.0054	0.0056
New Construction	0.4456	0.4072	0.3879	0.3499
Maintenance/Repair Construction	0.0105	0.0109	0.0114	0.0110
Food/Kindred Products & Tobacco	0.0059	0.0062	0.0062	0.0056
Textile Mill Products	0.0002	0.0002	0.0002	0.0002
Apparel	0.0032	0.0036	0.0033	0.0030
Paper and Allied Products	0.0015	0.0014	0.0015	0.0014
Printing & Publishing	0.0043	0.0049	0.0005	0.0045
Chemicals & Petroleum Refining	0.0025	0.0016	0.0015	0.0038
Rubber & Leather Products	0.0016	0.0012	0.0015	0.0014
Lumber & Wood Products & Furniture	0.0043	0.0017	0.0064	0.0059
Stone, Clay & Glass Products	0.0162	0.0111	0.0140	0.0145
Primary Metal Industries	0.0012	0.0008	0.0008	0.0014
Fabricated Metal Products	0.0149	0.0160	0.0125	0.0232
Machinery, except electrical	0.0030	0.0013	0.0011	0.0016
Electric & Electronic Equipment	0.0090	0.0016	0.0016	0.0073
Motor Vehicles & Equipment	0.0003	0.0003	0.0002	0.0002
Transportation Equipment, except Motor Vehicles	0.0012	0.0012	0.0011	0.0011
Instruments & related products	0.0007	0.0006	0.0005	0.0005
Miscellaneous Manufacturing Industries	0.0012	0.0010	0.0010	0.0017
Transportation	0.0252	0.0294	0.0301	0.0308
Communication	0.0070	0.0087	0.0089	0.0082
Electric, Gas, Water & Sanitary Services	0.0031	0.0032	0.0033	0.0031
Wholesale Trade	0.0291	0.0265	0.0263	0.0296
Retail Trade	0.0517	0.0530	0.0520	0.0505
Finance	0.0081	0.0079	0.0080	0.0080
Insurance	0.0105	0.0111	0.0111	0.0104
Real Estate	0.0038	0.0042	0.0043	0.0039
Hotels & Lodging Places and Amusements	0.0058	0.0068	0.0069	0.0060
Personal Services	0.0077	0.0081	0.0081	0.0074
Business Services	0.0628	0.1465	0.1595	0.1067
Eating & Drinking Places	0.0143	0.0151	0.0152	0.0138
Health Services	0.0265	0.0277	0.0277	0.0252
Miscellaneous Services	0.0204	0.0229	0.0224	0.0197
Households	0.0032	0.0033	0.0033	0.0030

Appendix A

FLORIDA
Industry Multipliers for New Construction Industry
for Employment per \$1 Million

Industry	New Military Facilities SIC # 11.0701	New Dams & Reservoirs SIC # 11.0702	Other New Conservation & Development Facilities SIC # 11.0703	Other New Nonbuilding Facilities SIC # 11.0704
Agriculture	0.3	0.2	0.2	0.4
Forest & Fish	0.0	0.0	0.0	0.0
Coal Mining	0.0	0.0	0.0	0.0
Petroleum & Natural Gas	0.0	0.0	0.0	0.0
Miscellaneous Mining	0.1	0.1	0.2	0.2
New Construction	22.1	20.2	19.2	17.3
Maintenance/Repair Construction	0.5	0.5	0.6	0.5
Food/Kindred Products & Tobacco	0.2	0.3	0.3	0.2
Textile Mill Products	0.0	0.0	0.0	0.0
Apparel	0.3	0.3	0.3	0.2
Paper and Allied Products	0.0	0.0	0.0	0.0
Printing & Publishing	0.2	0.2	0.2	0.2
Chemicals & Petroleum Refining	0.1	0.0	0.0	0.1
Rubber & Leather Products	0.1	0.1	0.1	0.1
Lumber & Wood Products & Furniture	0.2	0.1	0.4	0.3
Stone, Clay & Glass Products	0.7	0.5	0.6	0.7
Primary Metal Industries	0.0	0.0	0.0	0.1
Fabricated Metal Products	0.6	0.7	0.5	1.0
Machinery, except electrical	0.1	0.0	0.0	0.1
Electric & Electronic Equipment	0.3	0.1	0.1	0.3
Motor Vehicles & Equipment	0.0	0.0	0.0	0.0
Transportation Equipment, except Motor Vehicles	0.0	0.0	0.0	0.0
Instruments & related products	0.0	0.0	0.0	0.0
Miscellaneous Manufacturing Industries	0.1	0.1	0.1	0.1
Transportation	1.0	1.2	1.2	1.3
Communication	0.2	0.3	0.3	0.2
Electric, Gas, Water & Sanitary Services	0.1	0.1	0.1	0.1
Wholesale Trade	1.2	1.1	1.1	1.2
Retail Trade	3.7	3.8	3.7	3.6
Finance	0.3	0.3	0.3	0.3
Insurance	0.4	0.4	0.4	0.4
Real Estate	0.6	0.7	0.7	0.7
Hotels & Lodging Places and Amusements	0.5	0.6	0.6	0.5
Personal Services	0.9	0.9	0.9	0.8
Business Services	3.5	8.1	8.8	5.9
Eating & Drinking Places	1.5	1.6	1.6	1.4
Health Services	1.0	1.0	1.0	0.9
Miscellaneous Services	1.0	1.1	1.1	0.9
Households	0.5	0.5	0.5	0.4

Appendix A

FLORIDA

Industry Multipliers for Maintenance & Repair Construction Industry
for Output, in dollars

Industry	Maintenance & Repair, Residential SIC # 12.0100	Maintenance & Repair of Other Nonfarm Buildings SIC # 12.0201	Maintenance & Repair of Farm Residential Buildings SIC # 12.0202	Maintenance & Repair of Farm Service Facilities SIC # 12.0203
Agriculture	0.0109	0.0115	0.0115	0.0100
Forest & Fish	0.0009	0.0009	0.0010	0.0011
Coal Mining	0.0000	0.0000	0.0000	0.0000
Petroleum & Natural Gas	0.0001	0.0001	0.0001	0.0001
Miscellaneous Mining	0.0073	0.0050	0.0105	0.0186
New Construction	0.0000	0.0000	0.0000	0.0000
Maintenance/Repair Construction	1.0220	1.0218	1.0206	1.0210
Food/Kindred Products & Tobacco	0.0342	0.0381	0.0323	0.0317
Textile Mill Products	0.0004	0.0007	0.0008	0.0008
Apparel	0.0106	0.0105	0.0093	0.0093
Paper and Allied Products	0.0094	0.0090	0.0088	0.0070
Printing & Publishing	0.0128	0.0128	0.0116	0.0113
Chemicals & Petroleum Refining	0.0515	0.0248	0.0514	0.0323
Rubber & Leather Products	0.0140	0.0138	0.0092	0.0077
Lumber & Wood Products & Furniture	0.0313	0.0179	0.0485	0.0396
Stone, Clay & Glass Products	0.0372	0.0330	0.0467	0.0683
Primary Metal Industries	0.0073	0.0061	0.0068	0.0105
Fabricated Metal Products	0.0734	0.0619	0.0396	0.0627
Machinery, except electrical	0.0132	0.0112	0.0093	0.0047
Electric & Electronic Equipment	0.0103	0.0130	0.0101	0.0176
Motor Vehicles & Equipment	0.0013	0.0014	0.0012	0.0012
Transportation Equipment, except Motor Vehicles	0.0030	0.0033	0.0028	0.0030
Instruments & related products	0.0021	0.0022	0.0015	0.0018
Miscellaneous Manufacturing Industries	0.0039	0.0038	0.0036	0.0036
Transportation	0.0505	0.0463	0.0538	0.0606
Communication	0.0273	0.0288	0.0234	0.0241
Electric, Gas, Water & Sanitary Services	0.0261	0.0273	0.0249	0.0249
Wholesale Trade	0.0970	0.0832	0.0911	0.0862
Retail Trade	0.1606	0.1438	0.1266	0.1192
Finance	0.0234	0.0258	0.0238	0.0197
Insurance	0.0243	0.0264	0.0241	0.0212
Real Estate	0.1157	0.1263	0.1078	0.1063
Hotels & Lodging Places and Amusements	0.0140	0.0149	0.0131	0.0125
Personal Services	0.0140	0.0153	0.0133	0.0131
Business Services	0.0454	0.0444	0.0481	0.0596
Eating & Drinking Places	0.0401	0.0435	0.0384	0.0373
Health Services	0.0393	0.0443	0.0371	0.0364
Miscellaneous Services	0.0418	0.0446	0.0391	0.0519
Households	0.0784	0.7976	0.6677	0.6567

Appendix A

FLORIDA

Industry Multipliers for Maintenance & Repair Construction Industry
for Earnings, in dollars

Industry	Maintenance & Repair, Residential SIC # 12.0100	Maintenance & Repair of Other Nonfarm Buildings SIC # 12.0201	Maintenance & Repair of Farm Residential Buildings SIC # 12.0202	Maintenance & Repair of Farm Service Facilities SIC # 12.0203
Agriculture	0.0041	0.0042	0.0045	0.0037
Forest & Fish	0.0003	0.0003	0.0003	0.0003
Coal Mining	0.0000	0.0000	0.0000	0.0000
Petroleum & Natural Gas	0.0000	0.0000	0.0000	0.0000
Miscellaneous Mining	0.0021	0.0014	0.0030	0.0054
New Construction	0.0000	0.0000	0.0000	0.0000
Maintenance/Repair Construction	0.3751	0.4818	0.3603	0.3399
Food/Kindred Products & Tobacco	0.0051	0.0057	0.0049	0.0048
Textile Mill Products	0.0002	0.0002	0.0002	0.0002
Apparel	0.0029	0.0029	0.0026	0.0026
Paper and Allied Products	0.0019	0.0017	0.0017	0.0013
Printing & Publishing	0.0042	0.0042	0.0038	0.0037
Chemicals & Petroleum Refining	0.0071	0.0035	0.0067	0.0045
Rubber & Leather Products	0.0033	0.0033	0.0023	0.0019
Lumber & Wood Products & Furniture	0.0076	0.0041	0.0114	0.0080
Stone, Clay & Glass Products	0.0087	0.0078	0.0118	0.0172
Primary Metal Industries	0.0012	0.0010	0.0013	0.0021
Fabricated Metal Products	0.0177	0.0153	0.0097	0.0157
Machinery, except electrical	0.0034	0.0029	0.0024	0.0014
Electric & Electronic Equipment	0.0032	0.0042	0.0030	0.0058
Motor Vehicles & Equipment	0.0002	0.0002	0.0002	0.0002
Transportation Equipment, except Motor Vehicles	0.0009	0.0010	0.0009	0.0009
Instruments & related products	0.0007	0.0007	0.0005	0.0006
Miscellaneous Manufacturing Industries	0.0010	0.0010	0.0010	0.0009
Transportation	0.0223	0.0204	0.0239	0.0268
Communication	0.0072	0.0076	0.0062	0.0064
Electric, Gas, Water & Sanitary Services	0.0029	0.0030	0.0028	0.0028
Wholesale Trade	0.0379	0.0325	0.0356	0.0337
Retail Trade	0.0797	0.0714	0.0628	0.0591
Finance	0.0074	0.0082	0.0076	0.0062
Insurance	0.0087	0.0095	0.0087	0.0076
Real Estate	0.0036	0.0037	0.0033	0.0032
Hotels & Lodging Places and Amusements	0.0047	0.0050	0.0044	0.0041
Personal Services	0.0065	0.0072	0.0062	0.0061
Business Services	0.0226	0.0221	0.0227	0.0263
Eating & Drinking Places	0.0125	0.0136	0.0120	0.0117
Health Services	0.0230	0.0259	0.0217	0.0213
Miscellaneous Services	0.0157	0.0170	0.0147	0.0178
Households	0.0027	0.0031	0.0026	0.0025

Appendix A

FLORIDA
Industry Multipliers for Maintenance & Repair Construction Industry
for Employment per \$1 Million

Industry	Maintenance & Repair, Residential SIC # 12.0100	Maintenance & Repair of Other Nonfarm Buildings SIC # 12.0201	Maintenance & Repair of Farm Residential Buildings SIC # 12.0202	Maintenance & Repair of Farm Service Facilities SIC # 12.0203
Agriculture	0.2	0.2	0.3	0.2
Forest & Fish	0.0	0.0	0.0	0.0
Coal Mining	0.0	0.0	0.0	0.0
Petroleum & Natural Gas	0.0	0.0	0.0	0.0
Miscellaneous Mining	0.1	0.1	0.1	0.2
New Construction	0.0	0.0	0.0	0.0
Maintenance/Repair Construction	18.6	23.8	17.8	16.8
Food/Kindred Products & Tobacco	0.2	0.2	0.2	0.2
Textile Mill Products	0.0	0.0	0.0	0.0
Apparel	0.2	0.2	0.2	0.2
Paper and Allied Products	0.1	0.1	0.1	0.0
Printing & Publishing	0.2	0.2	0.2	0.2
Chemicals & Petroleum Refining	0.2	0.1	0.2	0.1
Rubber & Leather Products	0.2	0.2	0.1	0.1
Lumber & Wood Products & Furniture	0.4	0.2	0.7	0.5
Stone, Clay & Glass Products	0.4	0.4	0.5	0.8
Primary Metal Industries	0.0	0.0	0.1	0.1
Fabricated Metal Products	0.8	0.7	0.4	0.7
Machinery, except electrical	0.1	0.1	0.1	0.0
Electric & Electronic Equipment	0.1	0.1	0.1	0.2
Motor Vehicles & Equipment	0.0	0.0	0.0	0.0
Transportation Equipment, except Motor Vehicles	0.0	0.0	0.0	0.0
Instruments & related products	0.0	0.0	0.0	0.0
Miscellaneous Manufacturing Industries	0.1	0.1	0.1	0.1
Transportation	0.9	0.8	1.0	1.1
Communication	0.2	0.2	0.2	0.2
Electric, Gas, Water & Sanitary Services	0.1	0.1	0.1	0.1
Wholesale Trade	1.5	1.3	1.4	1.4
Retail Trade	5.7	5.1	4.5	4.2
Finance	0.3	0.3	0.3	0.2
Insurance	0.3	0.4	0.3	0.3
Real Estate	0.6	0.6	0.5	0.5
Hotels & Lodging Places and Amusements	0.4	0.4	0.4	0.3
Personal Services	0.7	0.8	0.7	0.7
Business Services	1.2	1.2	1.2	1.4
Eating & Drinking Places	1.3	1.4	1.2	1.2
Health Services	0.9	1.0	0.8	0.8
Miscellaneous Services	0.7	0.8	0.7	0.8
Households	0.4	0.5	0.4	0.4

Appendix A

FLORIDA

Industry Multipliers for Maintenance & Repair Construction Industry
for Output, in dollars

Industry	Maintenance & Repair of Telephone & Telegraph Facilities SIC # 12.0204	Maintenance & Repair of Railroads SIC # 12.0205	Maintenance & Repair of Electric Utility Facilities SIC # 12.0206	Maintenance & Repair of Gas Utility Facilities SIC # 12.0207
Agriculture	0.0508	0.0125	0.1024	0.0090
Forest & Fish	0.0010	0.0016	0.0010	0.0006
Coal Mining	0.0000	0.0000	0.0000	0.0000
Petroleum & Natural Gas	0.0001	0.0001	0.0001	0.0001
Miscellaneous Mining	0.0019	0.0117	0.0036	0.0127
New Construction	0.0000	0.0000	0.0000	0.0000
Maintenance/Repair Construction	1.0256	1.0227	1.0243	1.0193
Food/Kindred Products & Tobacco	0.0520	0.0417	0.0417	0.0320
Textile Mill Products	0.0009	0.0007	0.0007	0.0007
Apparel	0.0145	0.0115	0.0116	0.0089
Paper and Allied Products	0.0081	0.0071	0.0071	0.0062
Printing & Publishing	0.0145	0.0123	0.0126	0.0101
Chemicals & Petroleum Refining	0.0123	0.0093	0.0140	0.0417
Rubber & Leather Products	0.0050	0.0040	0.0040	0.0044
Lumber & Wood Products & Furniture	0.0133	0.0461	0.0264	0.0049
Stone, Clay & Glass Products	0.0129	0.0163	0.0192	0.0572
Primary Metal Industries	0.0066	0.0070	0.0096	0.0082
Fabricated Metal Products	0.0176	0.0454	0.0802	0.0891
Machinery, except electrical	0.0026	0.0038	0.0041	0.0049
Electric & Electronic Equipment	0.0087	0.0200	0.0185	0.0084
Motor Vehicles & Equipment	0.0018	0.0014	0.0015	0.0012
Transportation Equipment, except Motor Vehicles	0.0040	0.0036	0.0038	0.0033
Instruments & related products	0.0018	0.0017	0.0021	0.0016
Miscellaneous Manufacturing Industries	0.0045	0.0039	0.0038	0.0030
Transportation	0.0455	0.0553	0.0452	0.0508
Communication	0.0311	0.0247	0.0276	0.0200
Electric, Gas, Water & Sanitary Services	0.0325	0.0278	0.0282	0.0234
Wholesale Trade	0.0662	0.0747	0.0782	0.0902
Retail Trade	0.1301	0.1059	0.1137	0.0800
Finance	0.0276	0.0224	0.0231	0.0194
Insurance	0.0321	0.0254	0.0276	0.0226
Real Estate	0.1661	0.1344	0.1362	0.1037
Hotels & Lodging Places and Amusements	0.0190	0.0154	0.0159	0.0126
Personal Services	0.0207	0.0167	0.0169	0.0132
Business Services	0.0457	0.0582	0.0563	0.0388
Eating & Drinking Places	0.0568	0.0469	0.0465	0.0380
Health Services	0.0613	0.0487	0.0488	0.0369
Miscellaneous Services	0.0578	0.0494	0.0489	0.0425
Households	1.1051	0.8778	0.8799	0.6642

Appendix A

FLORIDA

Industry Multipliers for Maintenance & Repair Construction Industry
for Earnings, in dollars

Industry	Maintenance & Repair of Telephone & Telegraph Facilities SIC # 12.0204	Maintenance & Repair of Railroads SIC # 12.0205	Maintenance & Repair of Electric Utility Facilities SIC # 12.0206	Maintenance & Repair of Gas Utility Facilities SIC # 12.0207
Agriculture	0.0263	0.0045	0.0571	0.0031
Forest & Fish	0.0004	0.0004	0.0003	0.0002
Coal Mining	0.0000	0.0000	0.0000	0.0000
Petroleum & Natural Gas	0.0000	0.0000	0.0000	0.0000
Miscellaneous Mining	0.0005	0.0034	0.0010	0.0037
New Construction	0.0000	0.0000	0.0000	0.0000
Maintenance/Repair Construction	0.7715	0.5738	0.5180	0.3892
Food/Kindred Products & Tobacco	0.0078	0.0063	0.0063	0.0048
Textile Mill Products	0.0002	0.0002	0.0002	0.0002
Apparel	0.0041	0.0032	0.0033	0.0025
Paper and Allied Products	0.0015	0.0013	0.0013	0.0012
Printing & Publishing	0.0047	0.0040	0.0041	0.0033
Chemicals & Petroleum Refining	0.0017	0.0013	0.0019	0.0050
Rubber & Leather Products	0.0013	0.0010	0.0010	0.0011
Lumber & Wood Products & Furniture	0.0028	0.0095	0.0049	0.0012
Stone, Clay & Glass Products	0.0033	0.0041	0.0050	0.0143
Primary Metal Industries	0.0011	0.0014	0.0016	0.0018
Fabricated Metal Products	0.0044	0.0118	0.0206	0.0221
Machinery, except electrical	0.0008	0.0012	0.0012	0.0015
Electric & Electronic Equipment	0.0027	0.0076	0.0060	0.0029
Motor Vehicles & Equipment	0.0003	0.0002	0.0002	0.0002
Transportation Equipment, except Motor Vehicles	0.0012	0.0011	0.0012	0.0011
Instruments & related products	0.0006	0.0005	0.0007	0.0005
Miscellaneous Manufacturing Industries	0.0011	0.0010	0.0010	0.0008
Transportation	0.0201	0.0242	0.0200	0.0222
Communication	0.0082	0.0065	0.0073	0.0053
Electric, Gas, Water & Sanitary Services	0.0036	0.0031	0.0031	0.0026
Wholesale Trade	0.0259	0.0292	0.0306	0.0353
Retail Trade	0.0646	0.0526	0.0564	0.0397
Finance	0.0084	0.0069	0.0071	0.0061
Insurance	0.0115	0.0091	0.0099	0.0081
Real Estate	0.0046	0.0038	0.0039	0.0030
Hotels & Lodging Places and Amusements	0.0063	0.0051	0.0053	0.0042
Personal Services	0.0097	0.0078	0.0079	0.0062
Business Services	0.0235	0.0264	0.0263	0.0192
Eating & Drinking Places	0.0177	0.0146	0.0145	0.0119
Health Services	0.0358	0.0285	0.0285	0.0215
Miscellaneous Services	0.0225	0.0187	0.0186	0.0158
Households	0.0043	0.0034	0.0034	0.0026

Appendix A

FLORIDA
Industry Multipliers for Maintenance & Repair Construction Industry
for Employment per \$1 Million

Industry	Maintenance & Repair of Telephone & Telegraph Facilities SIC # 12.0204	Maintenance & Repair of Railroads SIC # 12.0205	Maintenance & Repair of Electric Utility Facilities SIC # 12.0206	Maintenance & Repair of Gas Utility Facilities SIC # 12.0207
Agriculture	1.5	0.3	3.3	0.2
Forest & Fish	0.0	0.0	0.0	0.0
Coal Mining	0.0	0.0	0.0	0.0
Petroleum & Natural Gas	0.0	0.0	0.0	0.0
Miscellaneous Mining	0.0	0.1	0.0	0.1
New Construction	0.0	0.0	0.0	0.0
Maintenance/Repair Construction	38.2	28.4	25.6	19.3
Food/Kindred Products & Tobacco	0.3	0.3	0.3	0.2
Textile Mill Products	0.0	0.0	0.0	0.0
Apparel	0.3	0.3	0.3	0.2
Paper and Allied Products	0.0	0.0	0.0	0.0
Printing & Publishing	0.2	0.2	0.2	0.2
Chemicals & Petroleum Refining	0.1	0.0	0.1	0.2
Rubber & Leather Products	0.1	0.1	0.1	0.1
Lumber & Wood Products & Furniture	0.2	0.5	0.3	0.1
Stone, Clay & Glass Products	0.2	0.2	0.2	0.7
Primary Metal Industries	0.0	0.1	0.1	0.1
Fabricated Metal Products	0.2	0.5	0.9	0.9
Machinery, except electrical	0.0	0.0	0.0	0.0
Electric & Electronic Equipment	0.1	0.3	0.2	0.1
Motor Vehicles & Equipment	0.0	0.0	0.0	0.0
Transportation Equipment, except Motor Vehicles	0.0	0.0	0.0	0.0
Instruments & related products	0.0	0.0	0.0	0.0
Miscellaneous Manufacturing Industries	0.1	0.1	0.1	0.0
Transportation	0.8	1.0	0.8	0.9
Communication	0.2	0.2	0.2	0.2
Electric, Gas, Water & Sanitary Services	0.1	0.1	0.1	0.1
Wholesale Trade	1.0	1.2	1.2	1.4
Retail Trade	4.6	3.7	4.0	2.8
Finance	0.3	0.3	0.3	0.2
Insurance	0.4	0.3	0.4	0.3
Real Estate	0.8	0.6	0.7	0.5
Hotels & Lodging Places and Amusements	0.5	0.4	0.4	0.3
Personal Services	1.1	0.9	0.9	0.7
Business Services	1.3	1.5	1.4	1.1
Eating & Drinking Places	1.8	1.5	1.5	1.2
Health Services	1.3	1.1	1.1	0.8
Miscellaneous Services	1.1	0.9	0.9	0.8
Households	0.6	0.5	0.5	0.4

Appendix A

FLORIDA

Industry Multipliers for Maintenance & Repair Construction Industry
for Output, in dollars

Industry	Maintenance & Repair of Petroleum Pipelines SIC # 12.0208	Maintenance & Repair of Water Supply Facilities SIC # 12.0209	Maintenance & Repair of Sewer Facilities SIC # 12.0210	Maintenance & Repair of Local Transit Facilities SIC # 12.0211
Agriculture	0.0103	0.0108	0.0133	0.0167
Forest & Fish	0.0007	0.0007	0.0009	0.0008
Coal Mining	0.0000	0.0000	0.0000	0.0000
Petroleum & Natural Gas	0.0001	0.0001	0.0001	0.0001
Miscellaneous Mining	0.0129	0.0191	0.0093	0.0241
New Construction	0.0000	0.0000	0.0000	0.0000
Maintenance/Repair Construction	1.0207	1.0224	1.0246	1.0203
Food/Kindred Products & Tobacco	0.0339	0.0386	0.0458	0.0333
Textile Mill Products	0.0009	0.0008	0.0009	0.0009
Apparel	0.0114	0.0107	0.0130	0.0092
Paper and Allied Products	0.0064	0.0074	0.0077	0.0067
Printing & Publishing	0.0104	0.0118	0.0134	0.0110
Chemicals & Petroleum Refining	0.0237	0.0442	0.0212	0.0329
Rubber & Leather Products	0.0044	0.0138	0.0080	0.0071
Lumber & Wood Products & Furniture	0.0051	0.0059	0.0073	0.0182
Stone, Clay & Glass Products	0.1085	0.0604	0.0512	0.0449
Primary Metal Industries	0.0084	0.0088	0.0033	0.0114
Fabricated Metal Products	0.0706	0.0474	0.0418	0.0631
Machinery, except electrical	0.0051	0.0051	0.0079	0.0058
Electric & Electronic Equipment	0.0055	0.0054	0.0063	0.0326
Motor Vehicles & Equipment	0.0012	0.0014	0.0016	0.0014
Transportation Equipment, except Motor Vehicles	0.0033	0.0035	0.0038	0.0033
Instruments & related products	0.0018	0.0017	0.0018	0.0019
Miscellaneous Manufacturing Industries	0.0031	0.0039	0.0042	0.0039
Transportation	0.0561	0.0622	0.0504	0.0699
Communication	0.0213	0.0259	0.0487	0.0244
Electric, Gas, Water & Sanitary Services	0.0246	0.0278	0.0303	0.0249
Wholesale Trade	0.0830	0.0751	0.0751	0.0853
Retail Trade	0.0827	0.0972	0.1148	0.0890
Finance	0.0201	0.0218	0.0251	0.0193
Insurance	0.0227	0.0248	0.0284	0.0236
Real Estate	0.1081	0.1249	0.1468	0.1089
Hotels & Lodging Places and Amusements	0.0129	0.0145	0.0170	0.0126
Personal Services	0.0149	0.0156	0.0183	0.0140
Business Services	0.0432	0.0618	0.0589	0.0719
Eating & Drinking Places	0.0421	0.0443	0.0516	0.0405
Health Services	0.0386	0.0448	0.0535	0.0381
Miscellaneous Services	0.0396	0.0458	0.0507	0.0440
Households	0.6950	0.8084	0.9642	0.6873

Appendix A

FLORIDA

Industry Multipliers for Maintenance & Repair Construction Industry
for Earnings, in dollars

Industry	Maintenance & Repair of Petroleum Pipelines SIC # 12.0208	Maintenance & Repair of Water Supply Facilities SIC # 12.0209	Maintenance & Repair of Sewer Facilities SIC # 12.0210	Maintenance & Repair of Local Transit Facilities SIC # 12.0211
Agriculture	0.0038	0.0038	0.0048	0.0076
Forest & Fish	0.0002	0.0003	0.0003	0.0002
Coal Mining	0.0000	0.0000	0.0000	0.0000
Petroleum & Natural Gas	0.0000	0.0000	0.0000	0.0000
Miscellaneous Mining	0.0038	0.0056	0.0027	0.0070
New Construction	0.0000	0.0000	0.0000	0.0000
Maintenance/Repair Construction	0.4103	0.5040	0.6433	0.3735
Food/Kindred Products & Tobacco	0.0051	0.0058	0.0069	0.0050
Textile Mill Products	0.0002	0.0002	0.0002	0.0002
Apparel	0.0032	0.0030	0.0036	0.0026
Paper and Allied Products	0.0012	0.0014	0.0014	0.0013
Printing & Publishing	0.0034	0.0038	0.0043	0.0035
Chemicals & Petroleum Refining	0.0032	0.0057	0.0029	0.0044
Rubber & Leather Products	0.0012	0.0033	0.0020	0.0017
Lumber & Wood Products & Furniture	0.0013	0.0015	0.0018	0.0038
Stone, Clay & Glass Products	0.0240	0.0157	0.0125	0.0115
Primary Metal Industries	0.0017	0.0022	0.0006	0.0022
Fabricated Metal Products	0.0174	0.0118	0.0103	0.0161
Machinery, except electrical	0.0016	0.0015	0.0022	0.0017
Electric & Electronic Equipment	0.0017	0.0017	0.0020	0.0120
Motor Vehicles & Equipment	0.0002	0.0002	0.0002	0.0002
Transportation Equipment, except Motor Vehicles	0.0010	0.0011	0.0012	0.0010
Instruments & related products	0.0006	0.0005	0.0006	0.0006
Miscellaneous Manufacturing Industries	0.0008	0.0010	0.0011	0.0011
Transportation	0.0242	0.0273	0.0222	0.0308
Communication	0.0056	0.0069	0.0129	0.0065
Electric, Gas, Water & Sanitary Services	0.0027	0.0031	0.0034	0.0028
Wholesale Trade	0.0324	0.0293	0.0294	0.0333
Retail Trade	0.0411	0.0482	0.0570	0.0442
Finance	0.0063	0.0067	0.0077	0.0060
Insurance	0.0082	0.0089	0.0102	0.0085
Real Estate	0.0031	0.0036	0.0041	0.0032
Hotels & Lodging Places and Amusements	0.0043	0.0048	0.0056	0.0042
Personal Services	0.0070	0.0073	0.0086	0.0065
Business Services	0.0208	0.0274	0.0273	0.0300
Eating & Drinking Places	0.0132	0.0138	0.0161	0.0126
Health Services	0.0225	0.0262	0.0313	0.0223
Miscellaneous Services	0.0150	0.0175	0.0197	0.0163
Households	0.0027	0.0031	0.0037	0.0027

Appendix A

FLORIDA

Industry Multipliers for Maintenance & Repair Construction Industry
for Employment per \$1 Million

Industry	Maintenance & Repair of Petroleum Pipelines SIC # 12.0208	Maintenance & Repair of Water Supply Facilities SIC # 12.0209	Maintenance & Repair of Sewer Facilities SIC # 12.0210	Maintenance & Repair of Local Transit Facilities SIC # 12.0211
Agriculture	0.2	0.2	0.3	0.4
Forest & Fish	0.0	0.0	0.0	0.0
Coal Mining	0.0	0.0	0.0	0.0
Petroleum & Natural Gas	0.0	0.0	0.0	0.0
Miscellaneous Mining	0.1	0.2	0.1	0.3
New Construction	0.0	0.0	0.0	0.0
Maintenance/Repair Construction	20.3	24.9	31.8	18.5
Food/Kindred Products & Tobacco	0.2	0.2	0.3	0.2
Textile Mill Products	0.0	0.0	0.0	0.0
Apparel	0.3	0.2	0.3	0.2
Paper and Allied Products	0.0	0.0	0.0	0.0
Printing & Publishing	0.2	0.2	0.2	0.2
Chemicals & Petroleum Refining	0.1	0.2	0.1	0.1
Rubber & Leather Products	0.1	0.2	0.1	0.1
Lumber & Wood Products & Furniture	0.1	0.1	0.1	0.2
Stone, Clay & Glass Products	1.1	0.7	0.6	0.5
Primary Metal Industries	0.1	0.1	0.0	0.1
Fabricated Metal Products	0.7	0.5	0.4	0.7
Machinery, except electrical	0.1	0.1	0.1	0.1
Electric & Electronic Equipment	0.1	0.1	0.1	0.4
Motor Vehicles & Equipment	0.0	0.0	0.0	0.0
Transportation Equipment, except Motor Vehicles	0.0	0.0	0.0	0.0
Instruments & related products	0.0	0.0	0.0	0.0
Miscellaneous Manufacturing Industries	0.1	0.1	0.1	0.1
Transportation	1.0	1.1	0.9	1.3
Communication	0.2	0.2	0.4	0.2
Electric, Gas, Water & Sanitary Services	0.1	0.1	0.1	0.1
Wholesale Trade	1.3	1.2	1.2	1.3
Retail Trade	2.9	3.4	4.1	3.1
Finance	0.2	0.2	0.3	0.2
Insurance	0.3	0.3	0.4	0.3
Real Estate	0.5	0.6	0.7	0.5
Hotels & Lodging Places and Amusements	0.3	0.4	0.5	0.3
Personal Services	0.8	0.8	1.0	0.7
Business Services	1.1	1.5	1.5	1.7
Eating & Drinking Places	1.4	1.4	1.7	1.3
Health Services	0.8	1.0	1.2	0.8
Miscellaneous Services	0.7	0.8	0.9	0.8
Households	0.4	0.5	0.6	0.4

Appendix A

FLORIDA

Industry Multipliers for Maintenance & Repair Construction Industry
for Output, in dollars

Industry	Maintenance & Repair of Military Facilities SIC # 12.0212	Maintenance & Repair of Conservation & Development Facilities SIC # 12.0213	Maintenance & Repair of Highways & Streets SIC # 12.0214	Maintenance & Repair of Petroleum & Natural Gas Wells SIC # 12.0215
Agriculture	0.0121	0.0095	0.0130	0.0092
Forest & Fish	0.0008	0.0008	0.0009	0.0006
Coal Mining	0.0000	0.0000	0.0000	0.0000
Petroleum & Natural Gas	0.0001	0.0001	0.0001	0.0001
Miscellaneous Mining	0.0372	0.0353	0.0627	0.0042
New Construction	0.0000	0.0000	0.0000	0.0000
Maintenance/Repair Construction	1.0214	1.0266	1.0255	1.0187
Food/Kindred Products & Tobacco	0.0340	0.0337	0.0438	0.0330
Textile Mill Products	0.0008	0.0008	0.0008	0.0006
Apparel	0.0095	0.0103	0.0121	0.0092
Paper and Allied Products	0.0073	0.0069	0.0079	0.0056
Printing & Publishing	0.0111	0.0109	0.0132	0.0097
Chemicals & Petroleum Refining	0.0408	0.0249	0.0506	0.0113
Rubber & Leather Products	0.0111	0.0092	0.0095	0.0066
Lumber & Wood Products & Furniture	0.0203	0.0238	0.0107	0.0066
Stone, Clay & Glass Products	0.0668	0.1184	0.0473	0.0304
Primary Metal Industries	0.0138	0.0090	0.0044	0.0036
Fabricated Metal Products	0.0440	0.0736	0.0486	0.0377
Machinery, except electrical	0.0110	0.0056	0.0034	0.0042
Electric & Electronic Equipment	0.0243	0.0059	0.0097	0.0053
Motor Vehicles & Equipment	0.0013	0.0013	0.0016	0.0012
Transportation Equipment, except Motor Vehicles	0.0033	0.0033	0.0037	0.0028
Instruments & related products	0.0017	0.0018	0.0016	0.0013
Miscellaneous Manufacturing Industries	0.0048	0.0037	0.0060	0.0030
Transportation	0.0670	0.0677	0.0806	0.0385
Communication	0.0220	0.0254	0.0289	0.0196
Electric, Gas, Water & Sanitary Services	0.0263	0.0265	0.0318	0.0228
Wholesale Trade	0.0846	0.0820	0.0698	0.0549
Retail Trade	0.0945	0.0870	0.1097	0.0832
Finance	0.0192	0.0203	0.0249	0.0196
Insurance	0.0217	0.0228	0.0283	0.0217
Real Estate	0.1119	0.1107	0.1436	0.1106
Hotels & Lodging Places and Amusements	0.0129	0.0132	0.0166	0.0133
Personal Services	0.0138	0.0141	0.0177	0.0134
Business Services	0.0519	0.0663	0.0595	0.0383
Eating & Drinking Places	0.0399	0.0400	0.0496	0.0368
Health Services	0.0392	0.0388	0.0511	0.0385
Miscellaneous Services	0.0491	0.0415	0.0535	0.0398
Households	0.7062	0.6995	0.9218	0.6941

Appendix A

FLORIDA

Industry Multipliers for Maintenance & Repair Construction Industry
for Earnings, in dollars

Industry	Maintenance & Repair of Military Facilities SIC # 12.0212	Maintenance & Repair of Conservation & Development Facilities SIC # 12.0213	Maintenance & Repair of Highways & Streets SIC # 12.0214	Maintenance & Repair of Petroleum & Natural Gas Wells SIC # 12.0215
Agriculture	0.0048	0.0034	0.0048	0.0032
Forest & Fish	0.0002	0.0003	0.0003	0.0002
Coal Mining	0.0000	0.0000	0.0000	0.0000
Petroleum & Natural Gas	0.0000	0.0000	0.0000	0.0000
Miscellaneous Mining	0.0109	0.0103	0.0183	0.0012
New Construction	0.0000	0.0000	0.0000	0.0000
Maintenance/Repair Construction	0.3942	0.3802	0.5796	0.4647
Food/Kindred Products & Tobacco	0.0051	0.0051	0.0066	0.0050
Textile Mill Products	0.0002	0.0002	0.0002	0.0001
Apparel	0.0027	0.0029	0.0034	0.0026
Paper and Allied Products	0.0014	0.0013	0.0015	0.0010
Printing & Publishing	0.0036	0.0035	0.0042	0.0031
Chemicals & Petroleum Refining	0.0054	0.0034	0.0062	0.0016
Rubber & Leather Products	0.0027	0.0022	0.0023	0.0016
Lumber & Wood Products & Furniture	0.0046	0.0046	0.0025	0.0016
Stone, Clay & Glass Products	0.0163	0.0295	0.0112	0.0075
Primary Metal Industries	0.0026	0.0020	0.0007	0.0007
Fabricated Metal Products	0.0113	0.0188	0.0113	0.0094
Machinery, except electrical	0.0029	0.0017	0.0010	0.0013
Electric & Electronic Equipment	0.0086	0.0018	0.0033	0.0017
Motor Vehicles & Equipment	0.0002	0.0002	0.0002	0.0002
Transportation Equipment, except Motor Vehicles	0.0011	0.0010	0.0011	0.0009
Instruments & related products	0.0006	0.0006	0.0005	0.0004
Miscellaneous Manufacturing industries	0.0014	0.0010	0.0017	0.0008
Transportation	0.0296	0.0297	0.0354	0.0169
Communication	0.0058	0.0067	0.0076	0.0052
Electric, Gas, Water & Sanitary Services	0.0029	0.0029	0.0035	0.0025
Wholesale Trade	0.0331	0.0321	0.0273	0.0215
Retail Trade	0.0469	0.0432	0.0545	0.0413
Finance	0.0056	0.0063	0.0077	0.0061
Insurance	0.0078	0.0082	0.0102	0.0078
Real Estate	0.0033	0.0033	0.0042	0.0033
Hotels & Lodging Places and Amusements	0.0043	0.0044	0.0055	0.0044
Personal Services	0.0065	0.0066	0.0083	0.0063
Business Services	0.0239	0.0237	0.0274	0.0185
Eating & Drinking Places	0.0125	0.0125	0.0155	0.0115
Health Services	0.0229	0.0227	0.0299	0.0225
Miscellaneous Services	0.0175	0.0156	0.0202	0.0151
Households	0.0027	0.0027	0.0036	0.0027

Appendix A

FLORIDA

Industry Multipliers for Maintenance & Repair Construction Industry
for Employment per \$1 Million

Industry	Maintenance & Repair of Military Facilities SIC # 12.0212	Maintenance & Repair of Conservation & Development Facilities SIC # 12.0213	Maintenance & Repair of Highways & Streets SIC # 12.0214	Maintenance & Repair of Petroleum & Natural Gas Wells SIC # 12.0215
Agriculture	0.3	0.2	0.3	0.2
Forest & Fish	0.0	0.0	0.0	0.0
Coal Mining	0.0	0.0	0.0	0.0
Petroleum & Natural Gas	0.0	0.0	0.0	0.0
Miscellaneous Mining	0.4	0.4	0.7	0.0
New Construction	0.0	0.0	0.0	0.0
Maintenance/Repair Construction	19.5	18.8	28.7	23.0
Food/Kindred Products & Tobacco	0.2	0.2	0.3	0.2
Textile Mill Products	0.0	0.0	0.0	0.0
Apparel	0.2	0.2	0.3	0.2
Paper and Allied Products	0.0	0.0	0.0	0.0
Printing & Publishing	0.2	0.2	0.2	0.1
Chemicals & Petroleum Refining	0.2	0.1	0.2	0.1
Rubber & Leather Products	0.1	0.1	0.1	0.1
Lumber & Wood Products & Furniture	0.3	0.3	0.1	0.1
Stone, Clay & Glass Products	0.7	1.3	0.5	0.3
Primary Metal Industries	0.1	0.1	0.0	0.0
Fabricated Metal Products	0.5	0.8	0.5	0.4
Machinery, except electrical	0.1	0.1	0.0	0.0
Electric & Electronic Equipment	0.3	0.1	0.1	0.1
Motor Vehicles & Equipment	0.0	0.0	0.0	0.0
Transportation Equipment, except Motor Vehicles	0.0	0.0	0.0	0.0
Instruments & related products	0.0	0.0	0.0	0.0
Miscellaneous Manufacturing Industries	0.1	0.1	0.1	0.0
Transportation	1.2	1.2	1.5	0.7
Communication	0.2	0.2	0.2	0.2
Electric, Gas, Water & Sanitary Services	0.1	0.1	0.1	0.1
Wholesale Trade	1.3	1.3	1.1	0.9
Retail Trade	3.3	3.1	3.9	2.9
Finance	0.2	0.2	0.3	0.2
Insurance	0.3	0.3	0.4	0.3
Real Estate	0.6	0.6	0.7	0.6
Hotels & Lodging Places and Amusements	0.3	0.4	0.4	0.4
Personal Services	0.7	0.7	0.9	0.7
Business Services	1.3	1.6	0.2	1.0
Eating & Drinking Places	1.3	1.3	1.6	1.2
Health Services	0.8	0.8	1.1	0.8
Miscellaneous Services	0.8	0.7	1.0	0.7
Households	0.4	0.4	0.5	0.4

Appendix A

FLORIDA
Industry Multipliers for Maintenance & Repair Construction Industry
for Output, in dollars

Industry	Maintenance & Repair of Other Nonbuilding Facilities SIC # 12.0216
Agriculture	0.0135
Forest & Fish	0.0008
Coal Mining	0.0000
Petroleum & Natural Gas	0.0001
Miscellaneous Mining	0.0256
New Construction	0.0000
Maintenance/Repair Construction	1.0226
Food/Kindred Products & Tobacco	0.0349
Textile Mill Products	0.0007
Apparel	0.0099
Paper and Allied Products	0.0075
Printing & Publishing	0.0113
Chemicals & Petroleum Refining	0.0446
Rubber & Leather Products	0.0156
Lumber & Wood Products & Furniture	0.0168
Stone, Clay & Glass Products	0.0741
Primary Metal Industries	0.0109
Fabricated Metal Products	0.0705
Machinery, except electrical	0.0062
Electric & Electronic Equipment	0.0180
Motor Vehicles & Equipment	0.0013
Transportation Equipment, except Motor Vehicles	0.0034
Instruments & related products	0.0016
Miscellaneous Manufacturing Industries	0.0039
Transportation	0.0665
Communication	0.0260
Electric, Gas, Water & Sanitary Services	0.0268
Wholesale Trade	0.0792
Retail Trade	0.0969
Finance	0.0222
Insurance	0.0248
Real Estate	0.1151
Hotels & Lodging Places and Amusements	0.0137
Personal Services	0.0143
Business Services	0.0530
Eating & Drinking Places	0.0403
Health Services	0.0404
Miscellaneous Services	0.0478
Households	0.7287

Appendix A

FLORIDA
Industry Multipliers for Maintenance & Repair Construction Industry
for Earnings, in dollars

Industry	Maintenance & Repair of Other Nonbuilding Facilities SIC # 12.0216
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Agriculture	0.0056
Forest & Fish	0.0003
Coal Mining	0.0000
Petroleum & Natural Gas	0.0000
Miscellaneous Mining	0.0075
New Construction	0.0000
Maintenance/Repair Construction	0.4106
Food/Kindred Products & Tobacco	0.0053
Textile Mill Products	0.0002
Apparel	0.0028
Paper and Allied Products	0.0014
Printing & Publishing	0.0037
Chemicals & Petroleum Refining	0.0056
Rubber & Leather Products	0.0037
Lumber & Wood Products & Furniture	0.0038
Stone, Clay & Glass Products	0.0181
Primary Metal Industries	0.0024
Fabricated Metal Products	0.0172
Machinery, except electrical	0.0019
Electric & Electronic Equipment	0.0065
Motor Vehicles & Equipment	0.0002
Transportation Equipment, except Motor Vehicles	0.0011
Instruments & related products	0.0005
Miscellaneous Manufacturing Industries	0.0010
Transportation	0.0291
Communication	0.0069
Electric, Gas, Water & Sanitary Services	0.0030
Wholesale Trade	0.0310
Retail Trade	0.0481
Finance	0.0070
Insurance	0.0089
Real Estate	0.0034
Hotels & Lodging Places and Amusements	0.0046
Personal Services	0.0067
Business Services	0.0245
Eating & Drinking Places	0.0126
Health Services	0.0236
Miscellaneous Services	0.0174
Households	0.0028

Appendix A

FLORIDA
Industry Multipliers for Maintenance & Repair Construction Industry
for Employment per \$1 Million

Industry	Maintenance & Repair of Other Nonbuilding Facilities SIC # 12.0216
Agriculture	0.3
Forest & Fish	0.0
Coal Mining	0.0
Petroleum & Natural Gas	0.0
Miscellaneous Mining	0.3
New Construction	0.0
Maintenance/Repair Construction	20.3
Food/Kindred Products & Tobacco	0.2
Textile Mill Products	0.0
Apparel	0.2
Paper and Allied Products	0.0
Printing & Publishing	0.2
Chemicals & Petroleum Refining	0.2
Rubber & Leather Products	0.2
Lumber & Wood Products & Furniture	0.2
Stone, Clay & Glass Products	0.8
Primary Metal Industries	0.1
Fabricated Metal Products	0.7
Machinery, except electrical	0.1
Electric & Electronic Equipment	0.2
Motor Vehicles & Equipment	0.0
Transportation Equipment, except Motor Vehicles	0.0
Instruments & related products	0.0
Miscellaneous Manufacturing Industries	0.1
Transportation	1.2
Communication	0.2
Electric, Gas, Water & Sanitary Services	0.1
Wholesale Trade	1.3
Retail Trade	3.4
Finance	0.3
Insurance	0.3
Real Estate	0.6
Hotels & Lodging Places and Amusements	0.4
Personal Services	0.7
Business Services	1.3
Eating & Drinking Places	1.3
Health Services	0.9
Miscellaneous Services	0.8
Households	0.4