

## US Construction Demographics: Some Relevant Statistics to Consider

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### Purpose

As construction and design leaders plan the directions of their companies, it is useful to have a context of US demographic and economic growth in which to frame the discussion.

This paper summarizes what is happening in the broader markets. The focus is on data regarding population growth, construction spending, and elements of US GDP. All of the raw information is available at [www.census.gov](http://www.census.gov)

Users should keep in mind the strategy keys to long term above average profitability: selecting segments with a good structure for profitability; focusing on strategies and skills within the firm that lead to better performance than competitors; and finally, finding customers who value what you offer.

### Population

Demographically, it's useful to look at which US states are big and which ones are growing. This chart plots the 15 largest states and their growth rates. California is the leader by far in both, with over 30,000,000 people in 2000 and a projected population growth to 2015 of almost 30%, to more than 40,000,000 people. New York is expected to have notably low population growth of about 4% over that 15 year period, starting and ending with about 18 million people.

Many fast growth states are also very small. Some interesting large, fast growth states include Florida, Texas, Georgia, and North Carolina.

*See Exhibit 1 and Table 1.*

### Construction Spending

After identifying areas with population growth, an analysis would also look at US construction spending. This is a good way to identify on a national basis which are the biggest sectors in the market. Generally the states can be expected to correspond to some degree, although clearly states have differing comparative advantages and disadvantages.

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In 2001, private sector construction spending was \$650 billion and public sector (paid for by federal, state, and local government agencies) was \$192 billion, for a total of \$842 billion dollars. This compares to ENR's 2000 estimate of a \$4.2 trillion worldwide market – indicating that the US is about 20% of the global construction market.

In the private sector, single family homes represent about 30% of the market at \$250 billion per year (loosely correlating to 1.5 – 2 million housing starts per year at \$150,000 or so each). Other residential is another 17% or \$139 billion. All other private sector non residential buildings (offices, stores, warehouses, hotels, hospitals, schools) total about \$200 billion, or just under 25% of the US construction market.

*See Exhibit 2 and Table 2.*

Components of Industrial, Office, Commercial

The industrial, office, and commercial market is large. A market strategist might want to know which industries within those markets might be building, based both on size and on growth.

US Gross Domestic Product in the 1997 Economic Census (the most recent available, the next is in 2002) broke out with manufacturing and wholesale trade as the two largest components of the economy. Manufacturing represented \$3.96 trillion of output; wholesale trade \$4.2 trillion. This is on total 1997 GDP of \$17.8 trillion.

*See Exhibit 3 and Table 3*

Within the Segments

Within manufacturing, the top categories were:

Transportation equipment (this would include automobiles, airplanes, ships, trains, etc.)  
Food  
Industrial Machinery  
Chemical and Allied  
Electrical Equipment.

These represent 60% of the sector activity. Presumably these would be the largest buyers of construction services in the manufacturing sector, and an opportunity for a service provider.

*See Table 4*

Within the Service Industries, the top 8 represent 90% of sales. These are

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Health Services  
Business Services  
Engineering, Accounting, Related Services  
Legal Services  
Automotive repair, services, parking  
Hotels, rooming, camps  
Amusement and recreation  
Social services

Some of these take place in specialized facilities who can be presumed to have special space needs (health services, hotels) and other might take place in more generic facilities which are likely more of a commodity.

From a “high design” point of view, note that museums, courthouses, embassies, and similar work with high sensitivity design and relatively low sensitivity to cost, are so small as sectors that they don’t merit their own categories in the statistics.

A key issue in determining which sectors might value design and construction services would be to continue to segment the list, perhaps on a qualitative basis, by sensitivity to “time to revenue” or by sensitivity to a particular service experience based on some other factors such as complexity of the site, complexity of the process, complexity of the team, or complexity of the financing.

Examples for high end service providers might be,

“Which customers buy RESULTS and which buy a PROCESS?”  
“Which customers can identify and appreciate the value of ADVICE and KNOWLEDGE as opposed to valuing the vendor’s capacity to be a vessel for RISK?”  
“Which regions have customers favorable to DESIGN BUILD (or to LUMP SUM or to DIFFERENTIATED DESIGN or whatever).

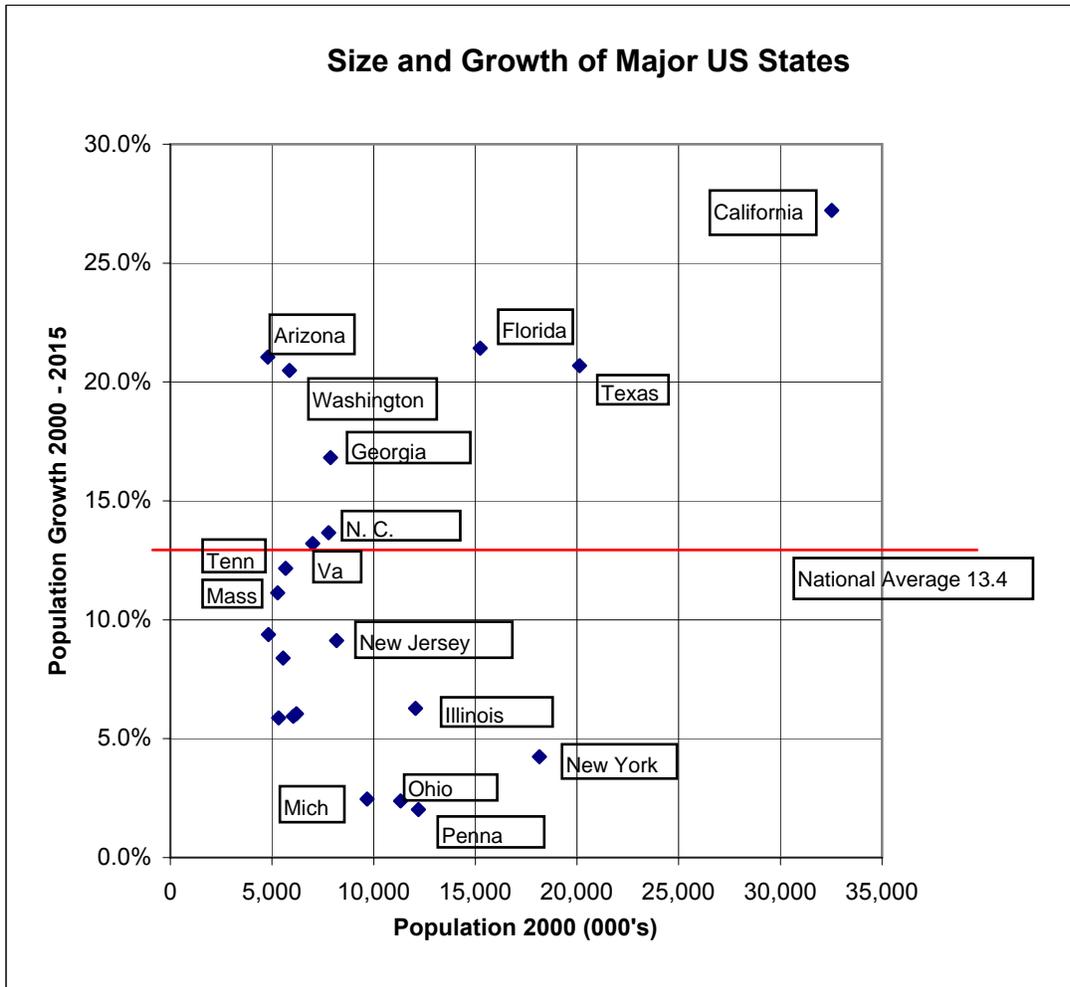
The census site at <http://www.census.gov/epcd/ec97sic/> is particularly useful for finding data by industry or by state. For example, Massachusetts is disproportionately represented by health care, finance, and service industries.

*See Table 5*

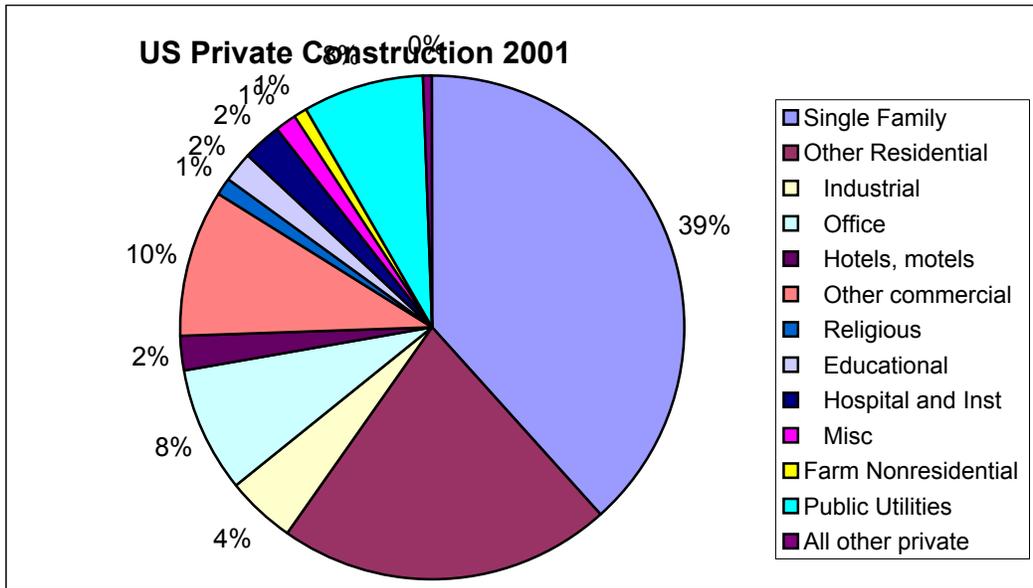
These statistics can be used to help support decisions around services to offer, markets to pursue, geographies to enter, and for students even to ponder careers to pursue.

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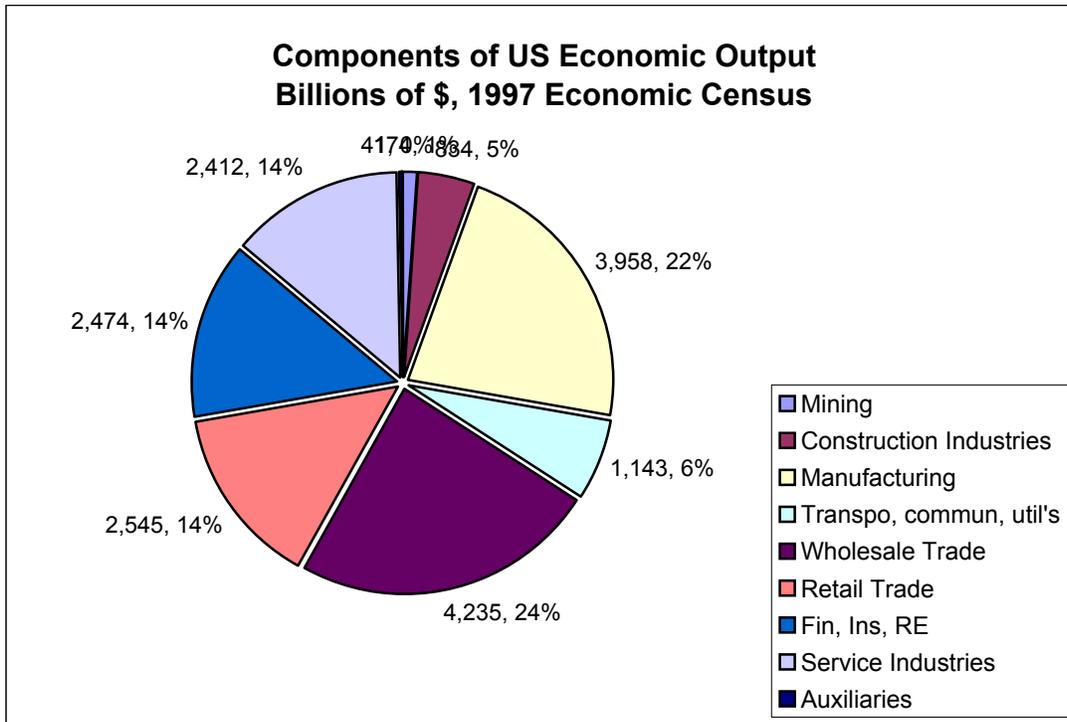
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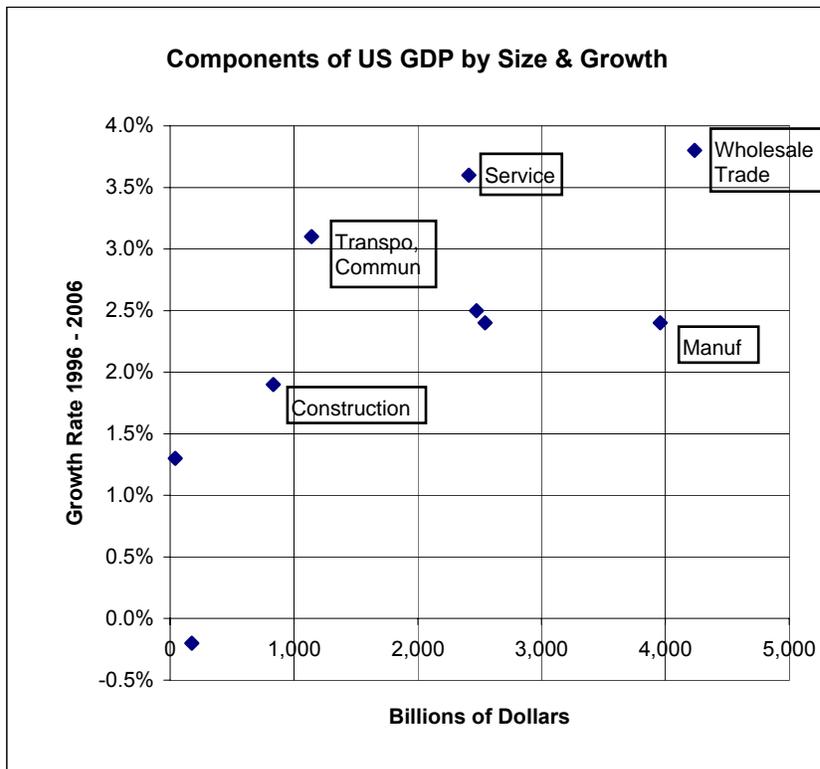
**EXHIBIT 1**



**EXHIBIT 2**



**EXHIBIT 3**



**EXHIBIT 4**

## US Construction Demographics: Relevant Statistics to Consider In Market Planning

Tables

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Census Information and Projections

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### TABLE 1

1. Where will the people be?

<u>State</u>	<u>July, 2000</u>	<u>Change</u>	<u>July, 2015</u>
California	32,521	27.2%	41,373
Texas	20,119	20.7%	24,280
New York	18,146	4.2%	18,916
Florida	15,233	21.4%	18,497
Pennsylvania	12,202	2.0%	12,449
Illinois	12,051	6.3%	12,808
Ohio	11,319	2.4%	11,588
Michigan	9,679	2.5%	9,917
New Jersey	8,178	9.1%	8,924
Georgia	7,875	16.8%	9,200
North Carolina	7,777	13.7%	8,840
Virginia	6,997	13.2%	7,921
Maryland	6,199	6.0%	6,574
Indiana	6,045	5.9%	6,404
Washington	5,858	20.5%	7,058
Tennessee	5,675	12.2%	6,365
Missouri	5,540	8.4%	6,005
Wisconsin	5,326	5.9%	5,639
Massachusetts	5,275	11.1%	5,862
Minnesota	4,830	9.4%	5,283
Arizona	4,798	21.1%	5,808
All Other	<u>63,663</u>	<u>14.0%</u>	<u>72,557</u>
Total US	275,306	13.4%	312,268

Source: US Census [www.census.gov](http://www.census.gov)

**TABLE 2**

2. What business are we in? (Billions of \$)	<u>2001</u>	<u>Percent</u>	<u>Rank</u>
Total Construction	842,539	100.00%	
Private Construction	650,030		
Single Family	249,096	29.56%	1
Other Residential	139,619	16.57%	2
Nonresidential buildings	201,094		
Industrial	29,046	3.45%	10
Office	52,020	6.17%	6
Hotels, motels	14,421	1.71%	
Other commercial	60,297	7.16%	3
Religious	8,310	0.99%	
Educational	12,629	1.50%	
Hospital and Inst	15,114	1.79%	
Misc	9,259	1.10%	
Farm Nonresidential	6,134	0.73%	
Public Utilities	51,114	6.07%	7
All other private	2,983	0.35%	
Public Construction	192,509		
Buildings	96,967		
Educational	55,752	6.62%	4
Hospital	4,053	0.48%	
Other	37,162	4.41%	9
Highways and Streets	54,026	6.41%	5
Other Public Non Building	41,516	4.93%	8

Annual Value of Construction put in place in  
the United States (billions of \$)

Source: US Census [www.census.gov](http://www.census.gov) - Feb 2002

**TABLE 3**

## 3. Selling to whom?

## Components of US GDP

	Sales Rate of Change		
	1997	1996 -2006	% of total
	(billions \$)		
Mining	174	-0.2%	0.98%
Construction Industries	834	1.9%	4.68%
Manufacturing	3,958	2.4%	22.22%
Transpo, commun, util's	1,143	3.1%	6.42%
Wholesale Trade	4,235	3.8%	23.77%
Retail Trade	2,545	2.4%	14.28%
Fin, Ins, RE	2,474	2.5%	13.89%
Service Industries	2,412	3.6%	13.54%
Auxiliaries	<u>41</u>	1.3%	<u>0.23%</u>
	17,816		100.00%

Source 1: US Census, 1997 Economic Census

Source 2: Bureau of Labor Statistics Nov 1997

**TABLE 4**

<u>Manufacturing top 6:</u>	1997 millions	
Transportation Equipment	515,881	13.03%
Food and kindred products	480,839	12.15%
Industrial Machinery and Equipment	407,393	10.29%
Chemicals and allied products	400,074	10.11%
Electronic and Elect Equipment	348,559	8.81%
Fabricated Metal Products	<u>231,704</u>	<u>5.85%</u>
	2,384,450	
All other Manufacturing	<u>1,573,550</u>	<u>39.76%</u>
Total	3,958,000	100.00%
 <u>Wholesale Trade:</u>		
Automobiles and other motor vehicles	428,356	10.11%
Computers, peripherals, parts, supplies	239,604	5.66%
Electronic Parts & Equip, Other	217,146	5.13%
Drugs, drug proprietaries, druggist sun	203,147	4.80%
Other groceries and related products	186,758	4.41%
Petroleum bulk stations and terminals	181,554	4.29%
Groceries, general line	146,689	3.46%
Metals service centers and offices	135,695	3.20%
Industrial machinery & equipment	<u>131,684</u>	<u>3.11%</u>
	1,870,633	44.17%
All other wholesale trade	<u>2,364,367</u>	<u>55.83%</u>
Total	4,235,000	100.00%

Retail Trade:

Motor Vehicle Dealers	518,971	20.98%
Grocery stores	397,254	16.06%
Department Stores	259,920	10.51%
Gasoline service stations	170,660	6.90%
Lumber and Other Bldg Mat'l Dealers	103,414	4.18%
Drug Stores	98,630	3.99%
Catolog and Mail Order Houses	<u>64,312</u>	<u>2.60%</u>
	1,613,161	65.20%
All other Retail Trade	<u>860,839</u>	<u>34.80%</u>
Total	<u>2,474,000</u>	100.00%

Service Industries top 8:

Health Services	809,962	33.58%
Business Services	528,515	21.91%
Engineering, Acctg, related	317,382	13.16%
Legal Services	124,012	5.14%
Automotive repair, svcs, parking	99,574	4.13%
Hotels, rooming, camps	98,300	4.08%
Amusement and Recreation	95,361	3.95%
Social Services	<u>94,575</u>	3.92%
	2,167,681	
All other Services	<u>244,319</u>	10.13%
	2,412,000	100.00%

**TABLE 5****Massachusetts, 1997 US Economic Census, Millions of \$\$**

		<u>Category</u>	<u>Detail MA</u>	<u>Detail Cat</u>	<u>Sales Rank in MA</u>
Total	411,688	100.00%	100.0%		
Mining	153	0.04%			
Construction Industries	11,548	2.81%			
Special Trade Contr's	5,097		1.2%	44%	
Building Construction	4,215		1.0%	36%	
Heavy & Non Building	2,236		0.5%	19%	
Manufacturing	82,603	20.06%			
Electronic & Other Elec	14,926		3.6%	18%	3
Instruments & Related	11,424		2.8%	14%	8
Industrial Machinery & Eq	9,008		2.2%	11%	
Food and Kindred	5,681		1.4%	7%	
Fabricated Metal	5,343		1.3%	6%	
Chemicals and Allied	5,161		1.3%	6%	
Rubber and Misc Plastics	4,381		1.1%	5%	
Paper and Allied	4,236		1.0%	5%	
All other	22,443		5.5%	27%	
Transportation, Communication, Utilitie	26,876	6.53%			
Wholesale Trade	116,391	28.27%			
Electrical Goods	14,172		3.4%	12%	5
Automobiles and Other	11,821		2.9%	10%	7
Other electr parts & eq	9,758		2.4%	8%	12
Other Groceries & Reltd	7,728		1.9%	7%	
Apparel, piece gds, notions	6,996		1.7%	6%	
Machinery, Equip, Suppli	6,205		1.5%	5%	
Footwear	4,738		1.2%	4%	
Drugs, Drug Props, Sund	4,238		1.0%	4%	
Paper & Paper Products	4,095		1.0%	4%	
Petroleum & Products	4,045		1.0%	3%	
All other	42,595		10.3%	37%	
Retail Trade	62,533	15.19%			
Misc Retail	12,001		2.9%	19%	6
Food Stores	10,835		2.6%	17%	10
Eating & Drinking Places	6,850		1.7%	11%	
General Merch Stores	5,892		1.4%	9%	
All other	26,955		6.5%	43%	
Financial, Ins, Real Est Industries (199	67,243	16.33%			
Insurance Carriers	34,847		8.5%	52%	1
Commercial Banks	10,537		2.6%	16%	11
Security Broker Dealer	4,014		1.0%	6%	
Real Estate	3,382		0.8%	5%	
All other	14,463		3.5%	22%	
Service Industries (1992 data)	55,889	13.58%			
Health Services	18,386		4.5%	33%	2
Engr Acctg Resrch Mgmt	14,705		3.6%	26%	4
Business Services	11,425		2.8%	20%	9
Legal Services	3,296		0.8%	6%	
All other incl education	8,077		2.0%	14%	