

The Impact of the Development Industry on Texas' Economy

Texas Real Estate Councils
Fall 2008



TXP, Inc.
1310 South 1st Street; Suite 105
Austin, Texas 78704
(512) 328-8300 phone
(512) 462-1240 fax
www.txp.com



Overview

In spite of the sharp turn of national events this year, the development segment of Texas' economy continues to have a positive impact on the state's economy. The numbers tell the story – companies in the development sectors have collectively added tens of thousands of positions since early 2000, in the process paying millions of dollars in wages. Meanwhile, the total estimated appraised value of all property in Texas rose to almost \$2 trillion last year, providing the base for tens of millions of dollars in tax revenue for state government, schools, and other local jurisdictions. Clearly, the construction and real estate sectors continue to play a vital role in Texas' economy.

TXP was retained in the fall of 2008 to assist The Real Estate Councils of Texas with evaluating the economic impact of the state's construction and real estate industries. The end result is information that will assist elected officials, business leaders, and other stakeholders in determining the short and long-term economic benefits generated by the development industries.

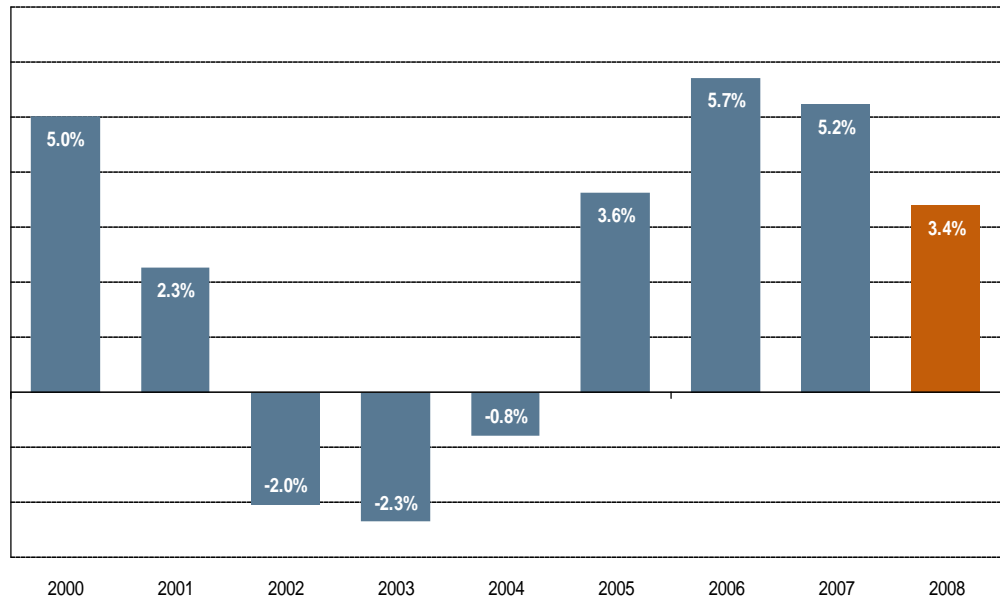
For purposes of this analysis, the development sector is defined as follows:

- Single-Family Housing Construction
- Multi-Family Housing Construction
- Commercial Building Construction
- Industrial Building Construction
- Highway/Street Construction
- Utility Construction
- Additions/Renovations
- Other Construction
- Real Estate

Recent Texas Development Sector Trends

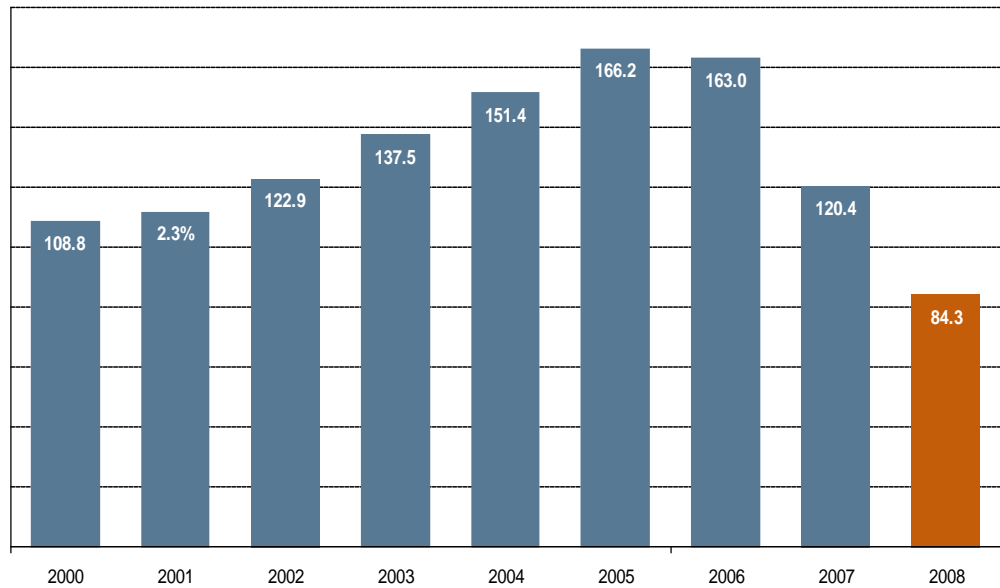
The economic problems facing the nation as a whole and the housing sector in particular have had an impact in Texas, as evidenced in part by the marked slowdown in single-family building permit activity. However, the situation is far brighter here than in other parts of the country. For example, total employment in construction and real estate sectors has continued to grow this year, with and should finish 2008 up over 3 percent from last year, and over 115 thousand jobs from 2000. Median home prices and the number of home sales also have increased during this period, reflecting strong household formation and economic activity. This is especially true when seen against the national backdrop - while Texas is slowing, the state has not felt the full brunt of the economic problems associated with over-building, falling property values, and the financial/credit crisis.

Figure 1 – Annual Growth in Texas Development Sector Employment (000s)



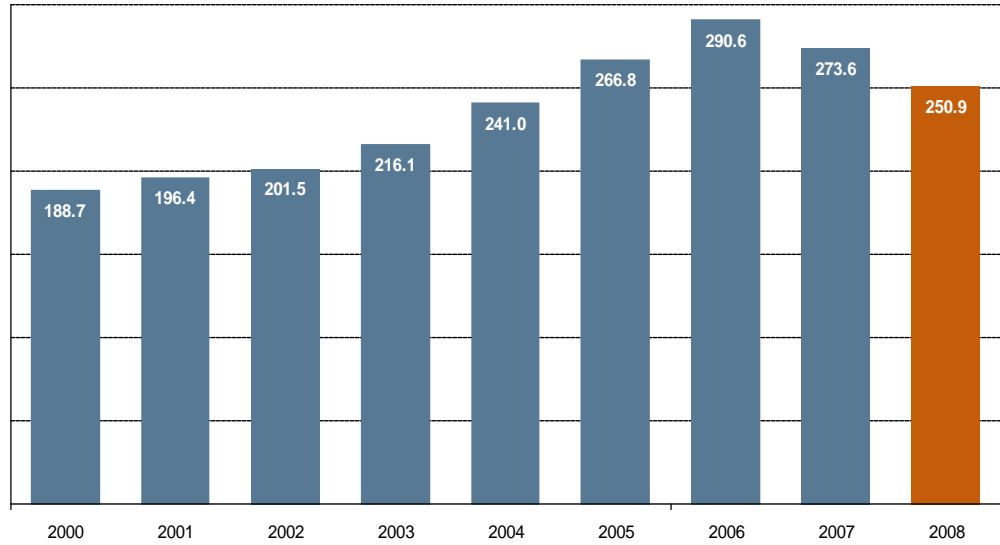
Source: Bureau of Labor Statistics – Current Employment Survey. 2008 Estimated by TXP. Includes both construction and real estate.

Figure 2 - Texas Single-Family Building Permits (000s)



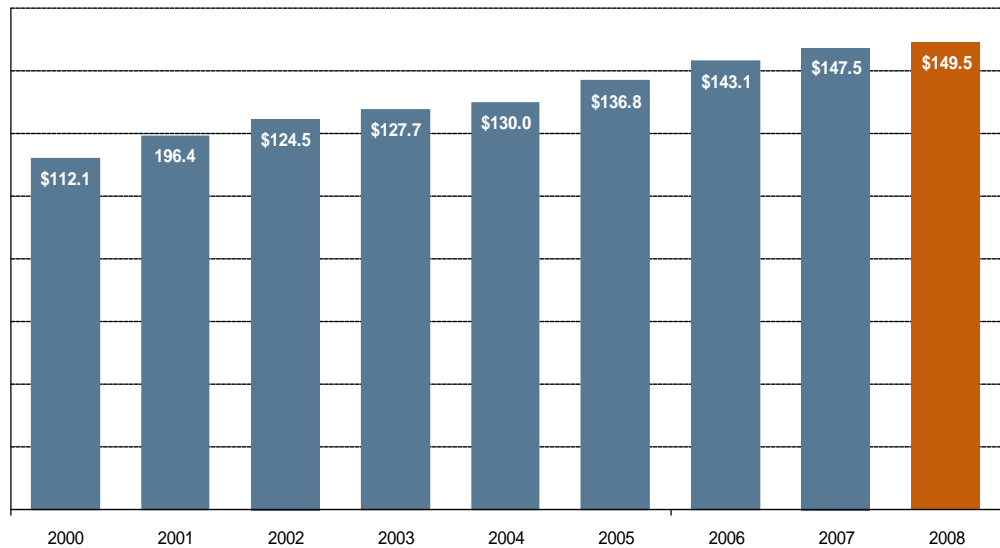
Source: Texas A&M Real Estate Research Center. 2008 Estimated by TXP

Figure 3 - Texas Home Sales (000s)



Source: Texas A&M Real Estate Research Center. 2008 Estimated by A&M

Figure 4 - Texas Median Home Price (\$000s)

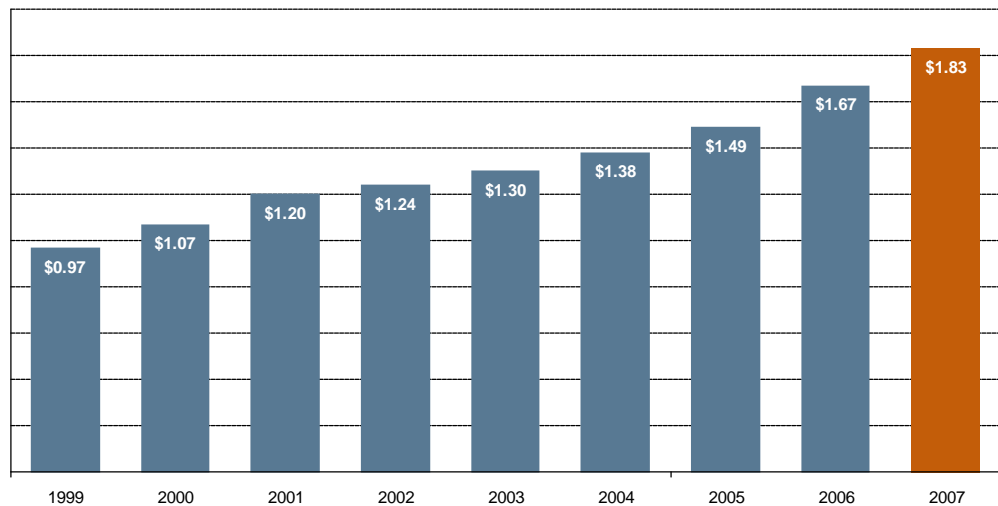


Source: Texas A&M Real Estate Research Center. 2008 Estimated by A&M

Development Sector Impact on Texas

The benefits of the construction and real estate sectors on the Texas economy consist of the day-to-day operations of existing office and industrial properties; purchases from local vendors when building new offices and commercial and residential properties; and the spending of people employed by these businesses. Unlike other industries, however, the output of the construction sector – offices, homes, and buildings – provides a long-term steady stream of revenue for local taxing jurisdictions. Not only do new structures provide immediate tax base, the long-term appreciation of homes and buildings results in increasing revenues for local governments. By way of illustration, Figure 5 details total property value across the state, as reported to the Comptroller's Office, while Figure 6 provides a breakdown of direct development employment by industry segment.

Figure 5 - Texas Property Value (\$Trillions)



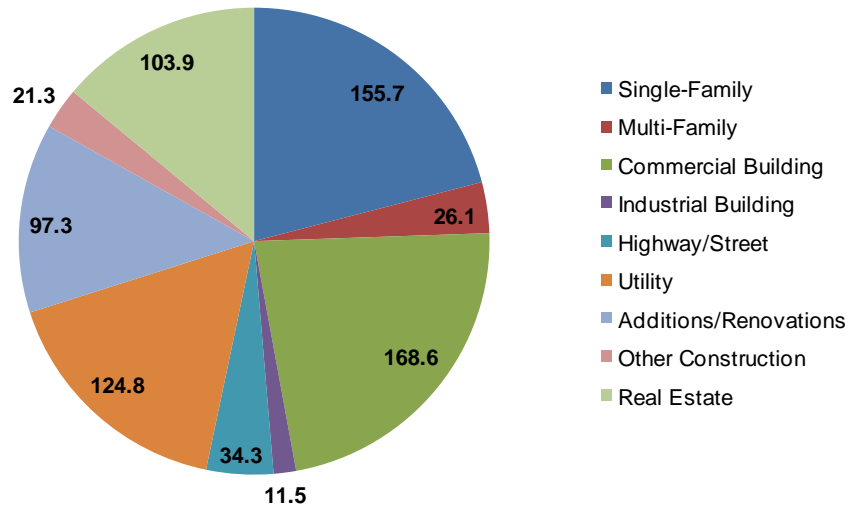
Source: Texas Comptroller's Office, TXP. Note: 15 counties did not report data for 2007 – data for these counties held constant from 2006.

In the final analysis, the economic benefits of the construction and real estate sectors materialize in many forms of increased revenue for government agencies, increased area employment, and growing incomes.

There are also intangible benefits associated with having strong construction and real estate sectors. Oftentimes, developers and realtors act as community liaisons to prospective residents and businesses. When conducting a site selection analysis, for example, many companies prefer not to contact local governments for fear of generating unwanted media exposure. In many cases, real estate professionals are the lifeblood to new commercial projects. These intangible benefits can easily result in increased business activity for the local community, which in turn results in the creation

of even more jobs and income. These benefits are difficult, if not impossible to measure, and no attempt is made here to estimate them.

Figure 6 – 2007 Texas Direct Employment by Development Sector (000s)



Source: Texas Workforce Commission, TXP

Economic Impact Methodology

For this study, TXP has calculated the economic impact of Texas’ development sectors based on annual employment and wage levels. Employment and earnings estimates are based on the most recent four quarters of data available from the Texas Workforce Commission. Total output was estimated using total employment and sales data from the U.S. Census Bureau 2002 Economic Census.

An economy can be measured in a number of ways. Three of the most common are “**Output**,” which describes total economic activity and is equivalent to a firm’s gross sales, “**Employee Earnings**,” which corresponds to wages and benefits, and “**Employment**,” which refers to permanent jobs that have been created in the local economy.

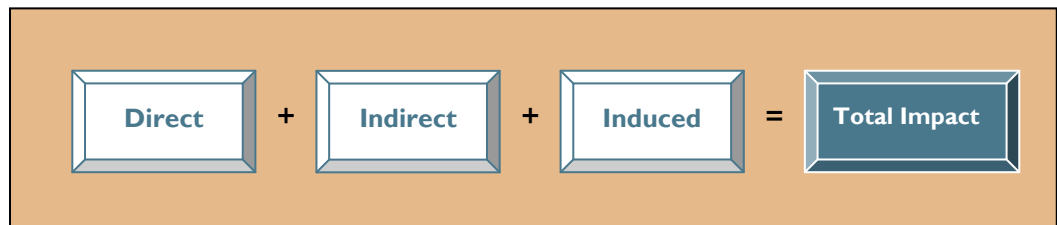
In an input-output analysis of new economic activity, it is useful to distinguish three types of expenditure effects: direct, indirect, and induced.

Direct effects are production changes associated with the immediate effects or final demand changes. The payment made by an out-of-town visitor to a hotel operator is an example of a direct effect, as would be the taxi fare that visitor paid to be transported into town from the airport.

Indirect effects are production changes in backward-linked industries caused by the changing input needs of directly affected industries – typically, additional purchases to produce additional output. Satisfying the demand for an overnight stay will require the hotel operator to purchase additional cleaning supplies and services, for example, and the taxi driver will have to replace the gasoline consumed during the trip from the airport. These downstream purchases affect the economic status of other local merchants and workers.

Induced effects are the changes in regional household spending patterns caused by changes in household income generated from the direct and indirect effects. Both the hotel operator and taxi driver experience increased income from the visitor’s stay, for example, as do the cleaning supplies outlet and the gas station proprietor. Induced effects capture the way in which this increased income is in turn spent by them in the local economy.

Figure 7: The Flow of Economic Impacts



The interdependence between different sectors of the economy is reflected in the concept of a “multiplier.” An output multiplier, for example, divides the total (direct, indirect and induced) effects of an initial spending injection by the value of that injection – i.e., the direct effect. The higher the multiplier, the greater the interdependence among different sectors of the economy. An output multiplier of 1.4, for example, means that for every \$1,000 injected into the economy, another \$400 in output is produced in all other sectors.

Economic Impact

The following tables highlight the 2007 economic impact of the industries that collectively comprise the development sector of the Texas economy.

Table 1 – Summary of Impacts

TOTALS	Output	Labor Income	Employment	State of TX
Direct Impact	\$106,421,910,144	\$34,652,440,064	743,970	\$1,732,622,003
Indirect/Induced Impacts	\$164,211,182,915	\$42,179,437,269	1,006,842	\$2,108,971,863
Total Impact	\$270,633,093,059	\$76,831,877,333	1,750,812	\$3,841,593,867

Table 2 - Detailed Single-Family Housing Construction Impact

Summary	Output	Labor Income	Employment
Direct Impact	\$24,190,427,136	\$7,576,741,376	155,792
Indirect/Induced Impacts	\$44,511,549,722	\$11,103,980,243	271,303
Total Impact	\$68,701,976,858	\$18,680,721,619	427,095
Detailed Total Impacts	Output	Labor Income	Employment
Agriculture, forestry, fishing, and hunting	\$453,152,548	\$54,872,288	3,704
Mining	\$584,794,629	\$107,549,684	1,023
Utilities	\$1,045,541,913	\$164,616,863	1,408
Construction	\$25,556,284,781	\$8,314,249,030	178,235
Manufacturing	\$9,802,271,884	\$1,516,670,032	26,381
Wholesale trade	\$2,615,120,572	\$719,924,414	10,298
Retail trade	\$4,042,930,837	\$1,180,851,631	41,827
Transportation and warehousing	\$2,121,462,768	\$570,671,792	12,251
Information	\$1,779,699,673	\$395,080,471	5,701
Finance and insurance	\$3,668,257,221	\$809,914,966	13,152
Real estate and rental and leasing	\$4,911,262,256	\$285,335,896	7,355
Professional, scientific, and technical services	\$3,534,083,562	\$1,393,756,107	22,948
Management of companies and enterprises	\$460,747,284	\$193,150,453	2,561
Administrative and waste management services	\$1,415,152,372	\$528,968,853	19,819
Educational services	\$473,405,176	\$184,370,887	6,353
Health care and social assistance	\$2,994,857,345	\$1,257,672,834	28,925
Arts, entertainment, and recreation	\$268,347,319	\$94,380,335	4,605
Accommodation and food services	\$1,377,178,694	\$456,537,434	25,112
Other services	\$1,597,426,022	\$452,147,651	15,436
Total Impact	\$68,701,976,858	\$18,680,721,619	427,095

Table 3 - Detailed Multi-Family Housing Construction Impact

Summary	Output	Labor Income	Employment
Direct Impact	\$3,112,916,736	\$1,533,307,776	26,099
Indirect/Induced Impacts	\$5,399,543,945	\$3,276,987,941	34,079
Total Impact	\$8,512,460,681	\$4,810,295,717	60,178
Detailed Total Impacts	Output	Labor Income	Employment
Agriculture, forestry, fishing, and hunting	\$56,147,486	\$21,840,162	522
Mining	\$72,458,487	\$36,172,769	144
Utilities	\$129,546,992	\$82,583,113	198
Construction	\$3,166,529,979	\$1,546,556,483	25,114
Manufacturing	\$1,214,542,256	\$458,984,658	3,717
Wholesale trade	\$324,024,316	\$226,250,430	1,451
Retail trade	\$500,935,946	\$322,142,392	5,893
Transportation and warehousing	\$262,858,061	\$145,373,579	1,726
Information	\$220,512,192	\$132,064,731	803
Finance and insurance	\$454,512,327	\$288,358,391	1,853
Real estate and rental and leasing	\$608,525,821	\$502,323,730	1,036
Professional, scientific, and technical services	\$437,887,652	\$335,109,988	3,233
Management of companies and enterprises	\$57,088,505	\$43,680,324	361
Administrative and waste management services	\$175,343,265	\$138,889,781	2,793
Educational services	\$58,656,870	\$35,831,516	895
Health care and social assistance	\$371,075,281	\$251,161,865	4,076
Arts, entertainment, and recreation	\$33,249,349	\$21,840,162	649
Accommodation and food services	\$170,638,168	\$99,304,487	3,538
Other services	\$197,927,728	\$121,827,155	2,175
Total Impact	\$8,512,460,681	\$4,810,295,717	60,178

Table 4 - Detailed Commercial Building Construction Impact

Summary	Output	Labor Income	Employment
Direct Impact	\$17,342,124,032	\$8,182,025,728	168,586
Indirect/Induced Impacts	\$32,313,889,534	\$8,775,219,926	207,501
Total Impact	\$49,656,013,566	\$16,957,245,654	376,087
Detailed Total Impacts	Output	Labor Income	Employment
Agriculture, forestry, fishing, and hunting	\$327,526,952	\$49,809,792	3,262
Mining	\$422,674,447	\$97,627,193	901
Utilities	\$755,690,677	\$149,429,377	1,240
Construction	\$18,471,422,247	\$7,547,179,713	156,949
Manufacturing	\$7,084,828,820	\$1,376,742,656	23,230
Wholesale trade	\$1,890,141,573	\$653,504,474	9,068
Retail trade	\$2,922,125,937	\$1,071,906,728	36,832
Transportation and warehousing	\$1,533,338,469	\$518,021,839	10,788
Information	\$1,286,320,935	\$358,630,504	5,020
Finance and insurance	\$2,651,321,529	\$735,192,533	11,581
Real estate and rental and leasing	\$3,549,733,448	\$259,010,919	6,477
Professional, scientific, and technical services	\$2,554,344,275	\$1,265,168,722	20,207
Management of companies and enterprises	\$333,016,231	\$175,330,469	2,255
Administrative and waste management services	\$1,022,835,566	\$480,166,397	17,452
Educational services	\$342,165,028	\$167,360,902	5,594
Health care and social assistance	\$2,164,605,500	\$1,141,640,437	25,470
Arts, entertainment, and recreation	\$193,954,508	\$85,672,843	4,055
Accommodation and food services	\$995,389,173	\$414,417,471	22,113
Other services	\$1,154,578,250	\$410,432,688	13,593
Total Impact	\$49,656,013,566	\$16,957,245,654	376,087

Table 5 - Industrial Building Construction Impact

Summary	Output	Labor Income	Employment
Direct Impact	\$1,075,608,704	\$565,588,928	11,488
Indirect/Induced Impacts	\$1,899,209,227	\$517,232,076	12,120
Total Impact	\$2,974,817,931	\$1,082,821,004	23,608
Detailed Total Impacts	Output	Labor Income	Employment
Agriculture, forestry, fishing, and hunting	\$19,621,653	\$3,180,652	205
Mining	\$25,321,798	\$6,234,077	57
Utilities	\$45,272,305	\$9,541,955	78
Construction	\$1,106,595,439	\$481,932,319	9,852
Manufacturing	\$424,441,559	\$87,913,208	1,458
Wholesale trade	\$113,235,571	\$41,730,148	569
Retail trade	\$175,060,219	\$68,447,621	2,312
Transportation and warehousing	\$91,860,027	\$33,078,776	677
Information	\$77,061,574	\$22,900,691	315
Finance and insurance	\$158,836,730	\$46,946,416	727
Real estate and rental and leasing	\$212,659,252	\$16,539,388	407
Professional, scientific, and technical services	\$153,026,967	\$80,788,549	1,268
Management of companies and enterprises	\$19,950,507	\$11,195,893	142
Administrative and waste management services	\$61,276,558	\$30,661,481	1,096
Educational services	\$20,498,598	\$10,686,989	351
Health care and social assistance	\$129,678,297	\$72,900,533	1,599
Arts, entertainment, and recreation	\$11,619,526	\$5,470,721	255
Accommodation and food services	\$59,632,285	\$26,463,021	1,388
Other services	\$69,169,066	\$26,208,569	853
Total Impact	\$2,974,817,931	\$1,082,821,004	23,608

Table 6 - Detailed Highway/Street Construction Impact

Summary	Output	Labor Income	Employment
Direct Impact	\$3,930,229,504	\$1,720,196,736	34,362
Indirect/Induced Impacts	\$7,570,241,530	\$1,833,982,386	40,618
Total Impact	\$11,500,471,034	\$3,554,179,122	74,980
Detailed Total Impacts	Output	Labor Income	Employment
Agriculture, forestry, fishing, and hunting	\$75,856,154	\$10,439,957	650
Mining	\$97,892,579	\$20,462,317	180
Utilities	\$175,020,065	\$31,319,872	247
Construction	\$4,278,032,835	\$1,581,862,356	31,291
Manufacturing	\$1,640,866,086	\$288,560,425	4,631
Wholesale trade	\$437,762,052	\$136,972,242	1,808
Retail trade	\$676,772,505	\$224,667,885	7,343
Transportation and warehousing	\$355,125,460	\$108,575,558	2,151
Information	\$297,915,511	\$75,167,694	1,001
Finance and insurance	\$614,053,450	\$154,093,772	2,309
Real estate and rental and leasing	\$822,128,153	\$54,287,779	1,291
Professional, scientific, and technical services	\$591,593,248	\$265,174,920	4,029
Management of companies and enterprises	\$77,127,486	\$36,748,650	450
Administrative and waste management services	\$236,891,566	\$100,641,190	3,479
Educational services	\$79,246,373	\$35,078,257	1,115
Health care and social assistance	\$501,328,662	\$239,283,825	5,078
Arts, entertainment, and recreation	\$44,920,404	\$17,956,727	808
Accommodation and food services	\$230,534,905	\$86,860,446	4,409
Other services	\$267,403,538	\$86,025,250	2,710
Total Impact	\$11,500,471,034	\$3,554,179,122	74,980

Table 7 - Utility Construction Impact

Summary	Output	Labor Income	Employment
Direct Impact	\$15,719,000,064	\$6,190,393,856	124,748
Indirect/Induced Impacts	\$28,165,167,183	\$7,188,904,867	162,240
Total Impact	\$43,884,167,247	\$13,379,298,723	286,988
Detailed Total Impacts	Output	Labor Income	Employment
Agriculture, forestry, fishing, and hunting	\$289,456,332	\$39,300,020	2,489
Mining	\$373,544,205	\$77,028,039	687
Utilities	\$667,851,760	\$117,900,059	946
Construction	\$16,324,366,879	\$5,954,738,992	119,766
Manufacturing	\$6,261,312,388	\$1,086,252,546	17,727
Wholesale trade	\$1,670,437,938	\$515,616,259	6,920
Retail trade	\$2,582,467,945	\$845,736,425	28,106
Transportation and warehousing	\$1,355,108,415	\$408,720,205	8,232
Information	\$1,136,803,360	\$282,960,142	3,831
Finance and insurance	\$2,343,140,922	\$580,068,291	8,838
Real estate and rental and leasing	\$3,137,124,492	\$204,360,103	4,942
Professional, scientific, and technical services	\$2,257,435,975	\$998,220,502	15,420
Management of companies and enterprises	\$294,307,555	\$138,336,070	1,721
Administrative and waste management services	\$903,944,635	\$378,852,190	13,318
Educational services	\$302,392,928	\$132,048,066	4,269
Health care and social assistance	\$1,912,999,110	\$900,756,453	19,436
Arts, entertainment, and recreation	\$171,409,895	\$67,596,034	3,094
Accommodation and food services	\$879,688,517	\$326,976,164	16,874
Other services	\$1,020,373,997	\$323,832,163	10,373
Total Impact	\$43,884,167,247	\$13,379,298,723	286,988

Table 8 – Detailed Additions/Renovations Impact

Summary	Output	Labor Income	Employment
Direct Impact	\$18,227,988,480	\$4,661,753,856	97,327
Indirect/Induced Impacts	\$29,307,281,565	\$6,712,718,676	164,804
Total Impact	\$47,535,270,045	\$11,374,472,532	262,131
Detailed Total Impacts	Output	Labor Income	Employment
Agriculture, forestry, fishing, and hunting	\$313,538,704	\$33,411,093	2,273
Mining	\$404,622,573	\$65,485,742	628
Utilities	\$723,416,115	\$100,233,279	864
Construction	\$17,682,531,915	\$5,062,448,825	109,392
Manufacturing	\$6,782,245,030	\$923,482,613	16,191
Wholesale trade	\$1,809,416,094	\$438,353,541	6,320
Retail trade	\$2,797,325,752	\$719,006,723	25,671
Transportation and warehousing	\$1,467,851,584	\$347,475,368	7,519
Information	\$1,231,383,847	\$240,559,870	3,499
Finance and insurance	\$2,538,087,048	\$493,147,734	8,072
Real estate and rental and leasing	\$3,398,128,966	\$173,737,684	4,514
Professional, scientific, and technical services	\$2,445,251,565	\$848,641,764	14,084
Management of companies and enterprises	\$318,793,542	\$117,607,048	1,572
Administrative and waste management services	\$979,151,594	\$322,082,937	12,164
Educational services	\$327,551,607	\$112,261,273	3,899
Health care and social assistance	\$2,072,158,024	\$765,782,254	17,753
Arts, entertainment, and recreation	\$185,670,964	\$57,467,080	2,826
Accommodation and food services	\$952,877,401	\$277,980,295	15,413
Other services	\$1,105,267,720	\$275,307,407	9,474
Total Impact	\$47,535,270,045	\$11,374,472,532	262,131

Table 9 - Other Construction Impact

Summary	Output	Labor Income	Employment
Direct Impact	\$2,135,249,920	\$1,068,955,200	21,723
Indirect/Induced Impacts	\$4,059,984,793	\$1,114,541,011	25,914
Total Impact	\$6,195,234,713	\$2,183,496,211	47,637
Detailed Total Impacts	Output	Labor Income	Employment
Agriculture, forestry, fishing, and hunting	\$40,863,255	\$6,413,748	413
Mining	\$52,734,145	\$12,570,945	114
Utilities	\$94,282,259	\$19,241,243	157
Construction	\$2,304,550,609	\$971,811,027	19,880
Manufacturing	\$883,924,711	\$177,275,982	2,942
Wholesale trade	\$235,819,790	\$84,148,368	1,149
Retail trade	\$364,573,286	\$138,023,847	4,665
Transportation and warehousing	\$191,303,953	\$66,702,974	1,366
Information	\$160,485,297	\$46,178,982	636
Finance and insurance	\$330,786,908	\$94,666,914	1,467
Real estate and rental and leasing	\$442,875,501	\$33,351,487	820
Professional, scientific, and technical services	\$318,687,732	\$162,909,187	2,560
Management of companies and enterprises	\$41,548,114	\$22,576,391	286
Administrative and waste management services	\$127,612,064	\$61,828,526	2,211
Educational services	\$42,689,546	\$21,550,192	709
Health care and social assistance	\$270,062,741	\$147,003,094	3,226
Arts, entertainment, and recreation	\$24,198,352	\$11,031,646	514
Accommodation and food services	\$124,187,769	\$53,362,379	2,801
Other services	\$144,048,681	\$52,849,280	1,722
Total Impact	\$6,195,234,713	\$2,183,496,211	47,637

Table 10 – Detailed Real Estate Impact

Summary	Output	Labor Income	Employment
Direct Impact	\$20,688,365,568	\$3,428,951,040	103,845
Indirect/Induced Impacts	\$10,984,315,418	\$3,528,182,207	88,263
Total Impact	\$31,672,680,986	\$6,957,133,247	192,108
Detailed Total Impacts	Output	Labor Income	Employment
Agriculture, forestry, fishing, and hunting	\$208,910,380	\$20,435,710	1,666
Mining	\$269,599,429	\$40,053,992	460
Utilities	\$482,011,101	\$61,307,131	633
Construction	\$11,781,845,182	\$3,096,418,839	80,171
Manufacturing	\$4,518,999,955	\$564,843,035	11,866
Wholesale trade	\$1,205,611,300	\$268,116,520	4,632
Retail trade	\$1,863,854,062	\$439,776,488	18,814
Transportation and warehousing	\$978,027,366	\$212,531,388	5,511
Information	\$820,469,258	\$147,137,115	2,564
Finance and insurance	\$1,691,123,692	\$301,631,085	5,916
Real estate and rental and leasing	\$2,264,168,366	\$106,265,694	3,308
Professional, scientific, and technical services	\$1,629,267,546	\$519,067,044	10,322
Management of companies and enterprises	\$212,411,671	\$71,933,701	1,152
Administrative and waste management services	\$652,407,277	\$197,000,248	8,915
Educational services	\$218,247,157	\$68,663,987	2,858
Health care and social assistance	\$1,380,675,864	\$468,386,482	13,011
Arts, entertainment, and recreation	\$123,712,292	\$35,149,422	2,071
Accommodation and food services	\$634,900,820	\$170,025,110	11,295
Other services	\$736,438,267	\$168,390,254	6,943
Total Impact	\$31,672,680,986	\$6,957,133,247	192,108

Conclusions

The impact of the development industries on Texas approaches that of any other segment of the state's economy, as these sectors collectively accounted for over \$270.6 billion in total economic activity, \$76.8 billion in total labor income, 1.75 million total jobs, and \$3.8 billion in state tax revenue during 2007. To put these figures in context, total high-tech employment in Texas last year was approximately 485,000 (not including the ripple effects), meaning that the development sector had a direct jobs footprint that was almost twice as large. Beyond the measurable economic impacts, development has been a sector of the economy where above-average wages can be earned by those without higher education, one of the few remaining in the modern economy. In addition, Texas-based development sector firms serve a broader than local market, as evidenced by companies such as Fluor, Centex, and H.B. Zachry. Taken together, it seems clear that the development industries continue to make a significant contribution to the Texas economy.



Legal Disclaimer

Texas Perspectives Inc. reserves the right to make changes, corrections and/or improvements at any time and without notice. In addition, Texas Perspectives Inc. disclaims any and all liability for damages incurred directly or indirectly as a result of errors, omissions or discrepancies.

Any statements involving matters of opinion or estimates, whether or not so expressly stated, are set forth as such and not as representations of fact, and no representation is made that such opinions or estimates will be realized. The information and expressions of opinion contained herein are subject to change without notice, and shall not, under any circumstances, create any implications that there has been no change or updates.