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Potential Economic Effects of Converting Portions of US 380 in Collin County to a Limited Access Roadway

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Summary of Study Findings

- The Perryman Group (TPG) was recently asked to estimate the economic and fiscal effects of converting US 380 in Collin County from the Collin-Denton County line to US 75 (the US 380 corridor study area) to a limited access highway.
    - The area has seen tremendous growth in population and the economy, and The Perryman Group's long-term economic forecast for Collin County indicates continued expansion at a rate far outpacing those of the state and nation.
    - Population in the area is projected to increase by almost one million through 2040, a 104.4% increase (a 3.02% annual rate).
    - Congestion, which is already an issue, will become a notable impediment without additional infrastructure, and one scenario being considered to help accommodate the future traffic increases is the expansion of US 380 to a limited access roadway.

- The Perryman Group analyzed potential economic growth and land-use patterns under two scenarios: (1) if US 380 remains in its current structure as primarily a six-lane roadway and (2) the potential situation resulting from US 380 being converted to a limited access roadway. The conversion to a limited access roadway was found to have significant economic and fiscal benefits.
    - Converting to a limited access roadway and the associated reduction in congestion would likely result in a **notable increase in economic indicators** including estimated gains as of 2040 of some **$14.8 billion** in real gross product and almost **75,900** jobs in the study area as well as **160,600** jobs and **$19.4 billion** in real gross product in Collin County as a whole.
    - The total economic benefits stemming from **construction activity** associated with the conversion of US 380 to a limited access roadway include an estimated **$311.156 million** in gross product (in constant 2016 dollars) and **$485.950 million** in gross product (in current dollars at the time of anticipated construction) as well as **3,743** person-years of employment in Collin County. The state of Texas enjoys significant economic benefits from the construction as well.
    - Potential **displacements and relocations** due to the conversion of US 380 to a limited access roadway would lead to some losses in business activity. The Perryman Group estimates these effects to include a **$152.225 million reduction** in gross product (in constant 2016 dollars) and **2,218** lost person-years of employment in Collin County. Texas would also experience a modest negative effect from the potential displacements and relocations as well.

- The limited access roadway would change land use in addition to enhancing economic growth, with a substantially greater relative concentration of office space and less single-family housing. The Perryman Group estimates that **additional development and induced construction** due to the conversion of US 380 through the study area to a limited access roadway would generate total economic benefits of **$19.245 billion** in gross product (in constant 2016 dollars) and **$39.318 billion** in gross product (in current dollars at the time of anticipated construction) as well as **235,887** person-years of employment in Collin County. The induced construction also generates notable economic benefits to the state of Texas.
- Collin County and Texas will enjoy notable **ongoing benefits from the induced activity** associated with the development of the US 380 corridor study area into a limited access roadway. The Perryman Group estimates the annual impact at maturity from this induced activity includes **$14.667 billion** in gross product (in constant 2016 dollars) as well as **160,587** jobs in Collin County as well as **$16.780 billion** in gross product (in constant 2016 dollars) and **180,442** jobs in Texas.

Converting portions of US 380 to a limited access roadway and the associated induced activity will generate a notable increase in tax receipts due to the economic stimulus the new development provides. Economic activity generates tax receipts through numerous channels including increased retail sales; in addition, incremental development will lead to a higher property tax base. The Perryman Group estimates that the annual fiscal benefits (at maturity) of converting portions of US 380 to a limited access roadway include

- $914.5 million for the State of Texas,
- $75.3 million for Collin County,
- $64.4 million for the City of Frisco,
- $96.0 million for Frisco Independent School District,
- $166.9 million for the City of McKinney,
- $185.1 million for the McKinney Independent School District,
- $62.1 million for the City of Prosper,
- $99.6 million for Prosper Independent School District, and
- millions to other counties, cities, and schools in the state.

The results of this study clearly indicate that converting US 380 into a limited access roadway has significant economic benefits compared to a scenario in which US 380 remains as it is today. Given the expectation of strong growth in Collin County, **it is likely that, without the conversion, congestion would be an increasing problem, eroding quality of life for current residents and decreasing the ability of the economy to continue to prosper**.

Introduction and Overview

An efficient traffic system is essential to the economic vitality and future prosperity of any area. This is especially true for regions experiencing rapid growth, because congestion can decrease quality of life and become a problem for business operations. Planning for an efficient traffic system which adequately accommodates future growth must take place well in advance given the time required to develop adequate infrastructure

The Collin County area is among the fastest growing in the United States. The region has seen significant population and employment expansion and is expected to continue its impressive growth in the future (as described below).

In response to the likely future demands on the area roadways and the potential for congestion, county leaders as well as others including the Texas Department of Transportation are evaluating potential actions. One possible solution involves converting portions of US 380 to a limited access roadway.

The construction process would involve a significant, though transitory stimulus to the local economy. However, businesses in the immediate area would see some disruptions. Once in place, a limited access roadway would decrease congestion and lead to changes in land use as compared to a situation in which the current thoroughfare remains in place.

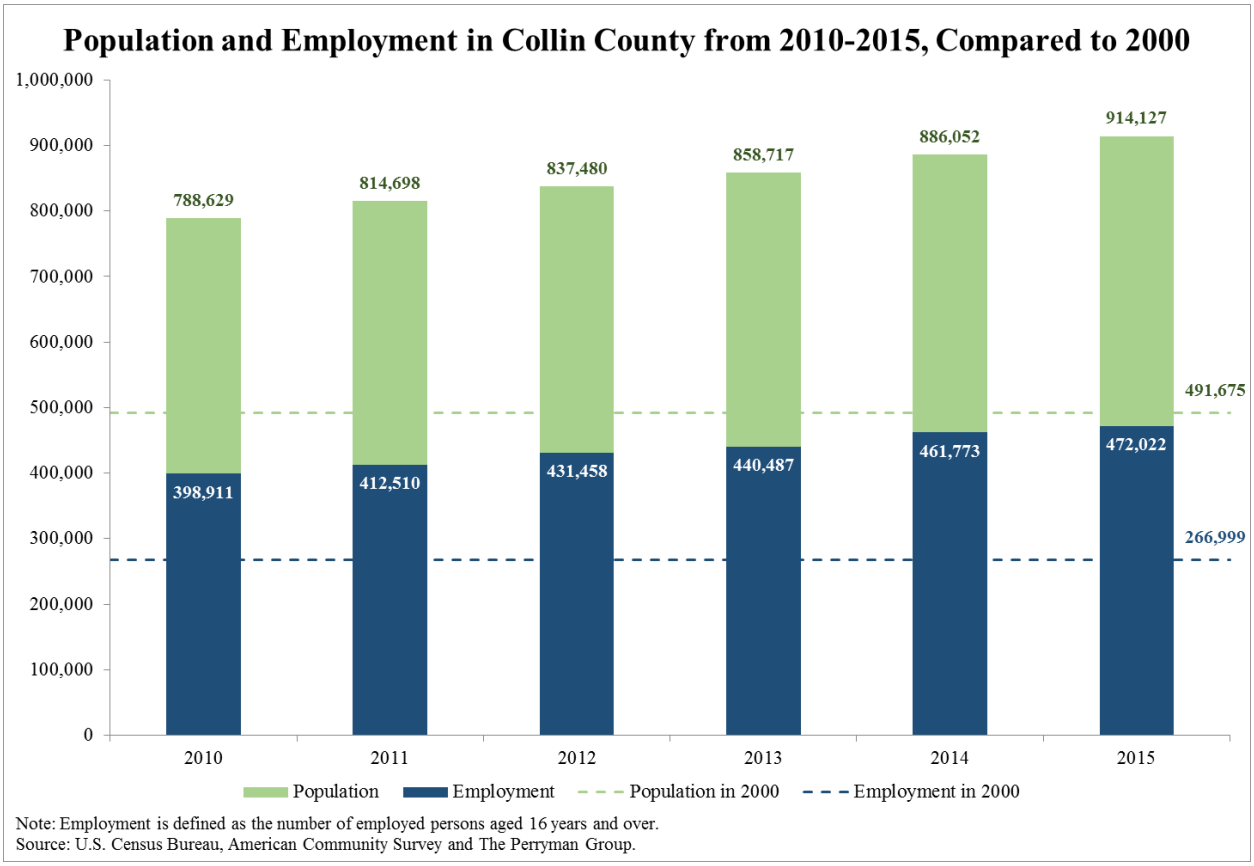
In order to provide a perspective on these costs and benefits, The Perryman Group (TPG) was recently asked to estimate the economic and fiscal effects of converting US 380 in Collin County from the Collin-Denton County line to US 75 (the US 380 corridor study area) to a limited access highway. This report sets forth the findings from the analysis.

Collin County Economic and Population Growth

Much of the need for a more efficient transportation system in Collin County stems from the substantial increase in population and the associated rise in employment, and thus a greater quantity of drivers in the area.

Between 2010 and 2015, Collin County experienced an influx of over 125,000 residents, growing from about 788,600 in 2010 to just over 914,100 in 2015 (a growth rate of nearly 16%).[1] Over the same period, employment in the county rose by approximately 73,000 workers (from about 398,900 to 472,000), a more than an 18% increase.[2]

Compared to 2000, the population in Collin County has risen by about 86% as of 2015, with over 422,000 new residents. This rate of expansion far exceeds that of the United States as a whole, which was just over 14% from 2000 to 2015. Similarly, employment has expanded by almost 77% since 2000, from about 267,000 workers to 472,000 in 2015. For the United States overall, the number of employed persons grew by a total of 16% from 2000 to 2015.

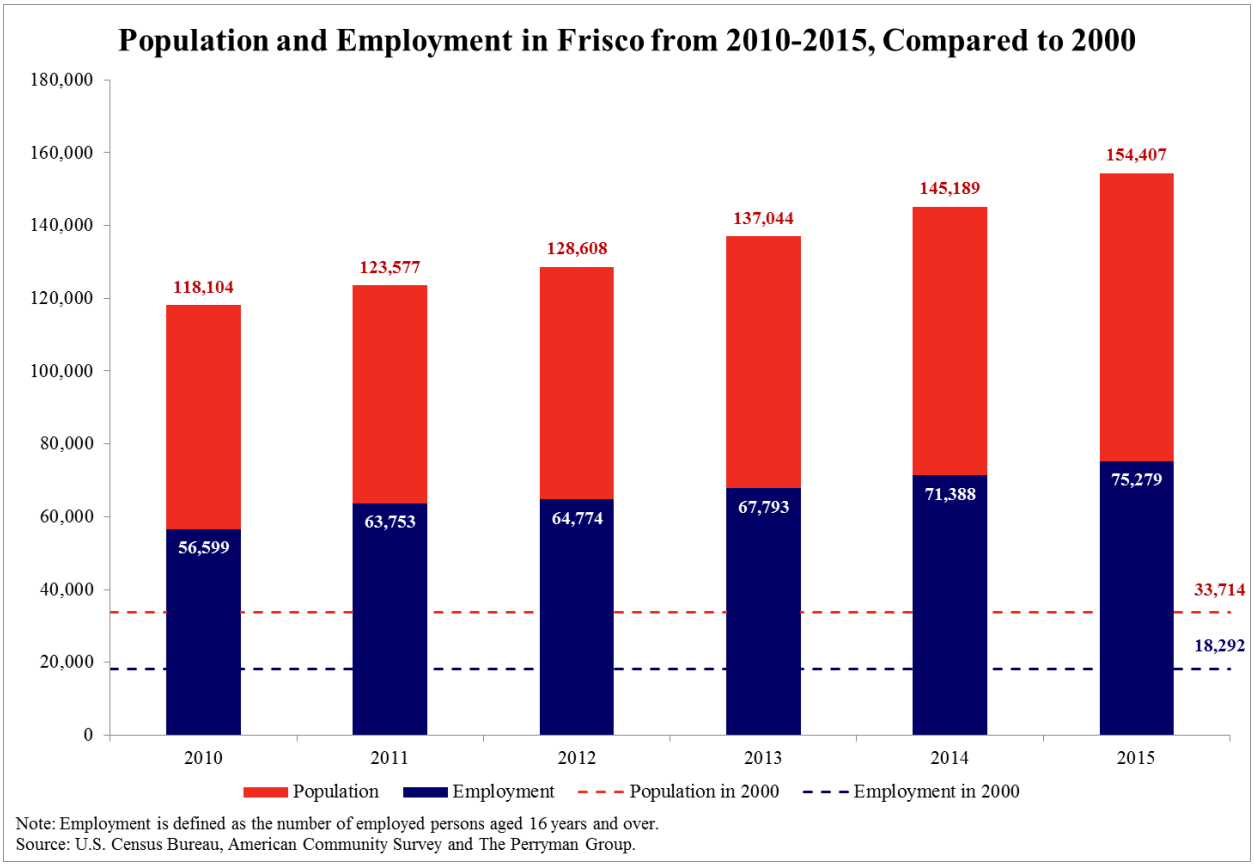


[1]Annual Estimates of the Resident Population April 1, 2010 to July 1, 2015, US Census Bureau Population Division. Note: This is the source for population data for Collin County as well as for Frisco, McKinney and Prosper. The population numbers for 2000 are from the US Census Bureau, Census 2000 Summary File 1 (SF 1).

[2]US Census Bureau, American Community Survey 1-year Estimates from 2010 to 2015. Employment is defined as number of employed persons aged 16 and over. Note: This is the source for employment data for Collin County as well as for Frisco and McKinney. The employment numbers for 2000 are from US Census Bureau, Census 2000 Summary File 3 (SF 3).

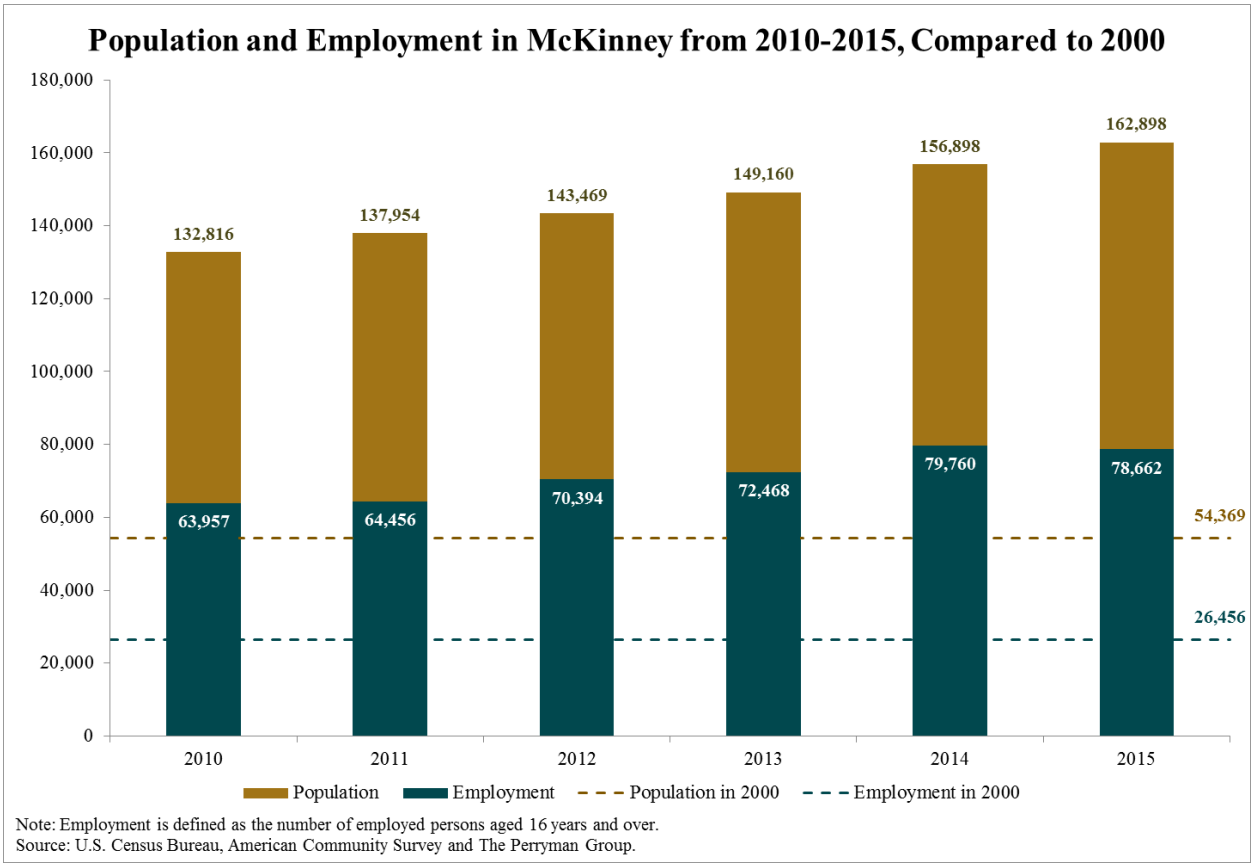
Within Collin County, the cities of Frisco, McKinney, and Prosper which are along US 380 have undergone rapid expansion in the number of inhabitants and employed workers, vastly outpacing the growth rates in the overall county. In fact, **both Frisco and McKinney are ranked among the 10 fastest growing cities in the United States, with Frisco leading the nation.**[3] **While Prosper is as of yet too small to be considered in such rankings, its pace of expansion is even more rapid. It is no exaggeration to say that the area in and around the corridor is the most rapidly expanding segment in the entire country.**

In Frisco, the population rose from about 118,100 in 2010 to 154,400 in 2015, an increase of about 30%. Employment saw a similar increase of about 33%, from about 56,600 in 2010 to almost 75,300 in 2015. The city has over four-and-a-half times the number of people living within its borders now than was the case in 2000, with population jumping from about 33,700 to 154,400 during the period. Similarly, the number of employed has spiked from just under 18,300 in 2000 to almost 75,300 in 2015.



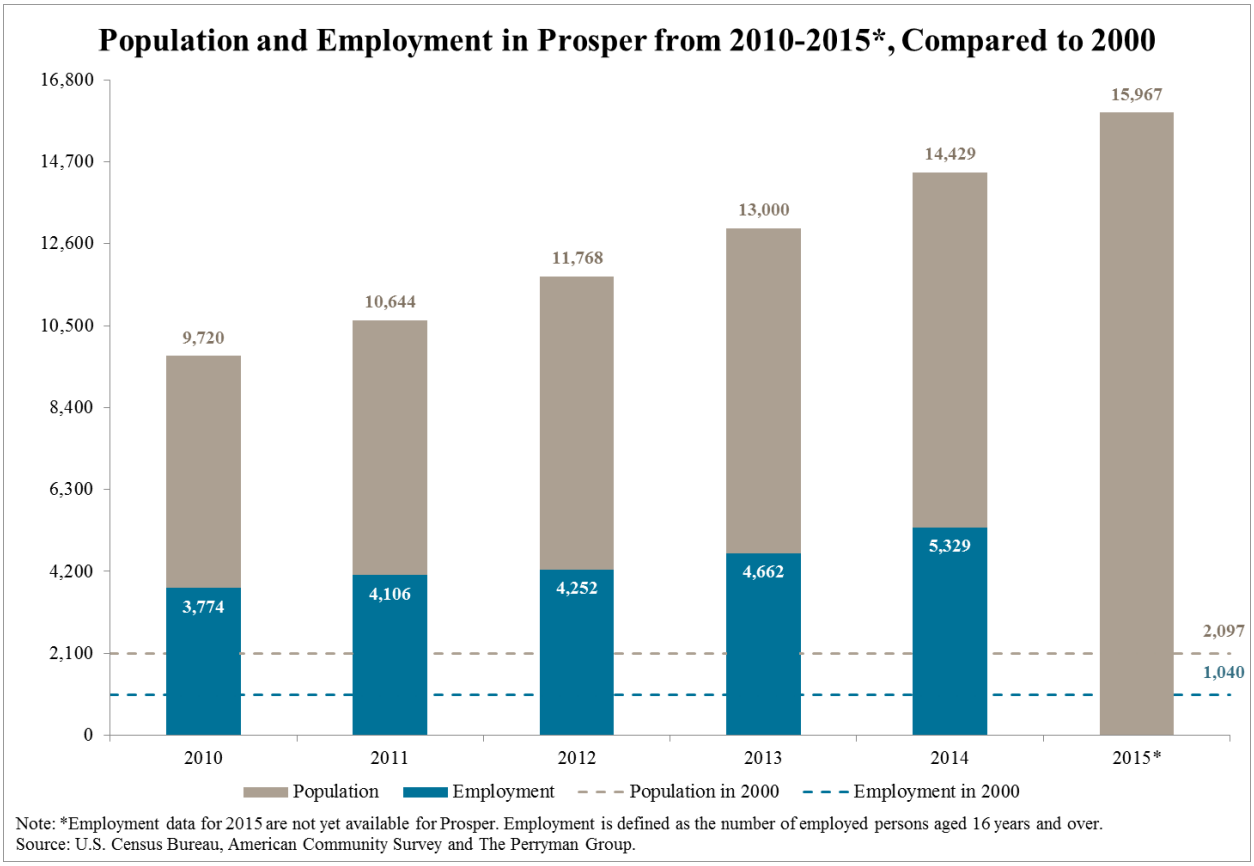
[3] Bernardo, Richie, 2016's Fastest Growing Cities, WalletHub, October 3, 2016, https://wallethub.com/edu/fastest-growing-cities/7010/.

McKinney has also experienced strong growth during the period, with both population and employment rising by almost 23% from 2010 to 2015. Population rose from about 132,800 to 162,900, and employment jumped from about 63,960 to 78,660. Since 2000, the population in McKinney has nearly tripled, from almost 54,400 to 154,400 in 2015. Employment has similarly risen from just under 26,500 in 2000 to almost 78,700 in 2015. McKinney's rapid expansion began somewhat later than that of Frisco, but it lies in a highly significant growth corridor.



Note: Employment is defined as the number of employed persons aged 16 years and over.
Source: U.S. Census Bureau, American Community Survey and The Perryman Group.

Although a smaller population center, Prosper experienced the fastest rate of growth, with the number of inhabitants expanding from 9,720 in 2010 to almost 15,970 in 2015, an increase of more than 64%. The number of employed individuals rose by 41%, from about 3,770 in 2010 to about 5,330 in 2014.[4] Since 2000, the population of the town has swelled from just under 2,100 to almost 16,000 in 2015, an increase of more than seven-and-a-half times. Similarly, Prosper employment in 2014 stood at just over 5,300, compared to slightly above 1,000 in 2000. It should be pointed out that it is not uncommon for cities in the area to become major population centers quite rapidly once the growth process begins. As an example, the population of Frisco was only about 6,100 in 1990.



The past 15 years have seen dramatic expansion in the number of inhabitants of Collin County, with growth concentrated in Frisco, McKinney, and Prosper. Other parts of the county continue

[4] Note the most recent available employment data for Prosper is 2014. Employment data for Prosper were obtained from the US Census Bureau, American Community Survey 5-Year Estimates from 2010 to 2014 and from Census 2000 Summary File 3 (SF 3).

to expand, but are near saturation at this point. With the continued growth expected in the future, the need for an efficient highway system for citizens and businesses is critical. Enhancements must be considered to keep congestion at manageable levels and allow the area to continue to thrive in the future.

Forecast for Collin County

The Perryman Group's long-term economic forecast for Collin County indicates continued expansion at a rate outpacing the state and nation. Population in the area is projected to increase by almost one million through 2040, a 104.4% increase (a 3.02% annual rate). By comparison, TPG's forecasts indicate 42.4% population growth in Texas (1.48% annually), with 18.9% for the United States as a whole (0.78% annually).

Employment growth is likely to lead to almost 513,000 new jobs, reaching a total of just over 928,000 in 2040. Employment gains in Texas through 2040 are forecast to occur at a 1.70 % annual pace, with somewhat slower growth for the United States. Collin County personal income and retail sales are also expected to see strong growth.

Economic Outlook for Collin County
2016 - 2040

Key Indicator	2016 Level	Projected 2040 Level	Projected Growth Rate*	Projected Increase
Real Gross Product*	$56.177 billion	$185.146 billion	5.09%	$128.969 billion
Population	935,947	1.913 million	3.02%	976,994
Wage & Salary Employment	415,102	928,088	3.41%	512,986
Real Personal Income*	$51.706 billion	$153.986 billion	4.65%	$102.280 billion
Real Retail Sales*	$17.485 billion	$64.749 billion	5.61%	$47.264 billion

**Compound Annual Growth Rate, meaning that it reflects changes in the base from which growth is calculated. Real Gross Product and Real Retail Sales are computed in 2009 dollars. Real Personal Income by place of residence, in 2009 dollars. 'Projected Increase' may differ from the difference of the table values due to rounding. See the Appendices for further information.*

Detailed forecast results for Collin County are provided in Appendix D, with projections for the United States and Texas also provided in an accompanying Excel workbook.

Current Land Use in the Study Area

The area of focus for this study is US 380 from the Denton-Collin County line in the western part of Collin County to US 75 to the east. Although there have been improvements and expansion along much of this route from four lanes to six lanes (some with access roads) over the past few years, traffic levels are still extremely high and congestion is expected to continue to worsen in the coming years. Some estimates have indicated the current traffic volume on US 380 of about 35,000 drivers will rise to 60,000 by 2035. Many areas of US 380 already have high traffic congestion, with projections indicating extremely long delays in the future; most of the route would be at the worst service level (F) as defined in the Transportation Research Board's Highway Capacity Manual if current conditions continue.[5] One scenario being considered to help accommodate the future traffic increases is the expansion of US 380 to a limited access roadway (LAR).

The Perryman Group analyzed the economic impact of this expansion, focusing on US 380 from the county line in the west to US 75 in the east. The study area defined by TPG (the "US 380 corridor study area") includes all parcels within a 0.5 mile buffer of US 380 to the north and south as well as property beyond that buffer if a portion of the property is contained within the 0.5 mile buffer. This area is sufficient to explore development possibilities immediately adjacent to the roadway, as well as some collateral development in close proximity.

Based on these criteria, TPG determined the current mix of property types and square footage of the properties using data from the Collin Central Appraisal District. Specifically, TPG used the Collin Central Appraisal District (CCAD) Geographic Information System (GIS) Parcels Shapefile with Appraisal Data to derive all maps, appraisal data, and property types.[6] Relevant parcel areas in square feet were computed using open-source GIS software QGIS 2.18.0 based on the coordinate reference system included in CCAD's data.

[5] "Region Aims for State Road Funds," Community Impact Newspaper, May 4, 2016, https://communityimpact.com/dallas-fort-worth/mckinney/city-county/2016/05/04/region-aims-state-road-funds/ accessed September 9, 2016; US 380 Collin County Feasibility Study, AECOM, August 2016.
[6] http://www.collincad.org/downloads/viewcategory/16-gis-downloads

Estimated Total Current Land Use by Property Type within the US 380 Corridor Study Area*	
Property Type	**Square Footage**
Commercial	24,218,392
Exempt and Miscellaneous	28,403,738
Industrial	14,659,614
Office	1,089,762
Residential (Multi-Family and Condo)	4,045,065
Residential (Single Family)	46,660,191
Rural Land (Agriculture)	194,728,583
Rural Land (Farm Single Family)	697,174
Rural Land (Undeveloped)	44,258,317
Utilities	75,147
Vacant Lots/Tracts (Commercial)	4,458,700
Vacant Lots/Tracts (Residential)	5,526,233

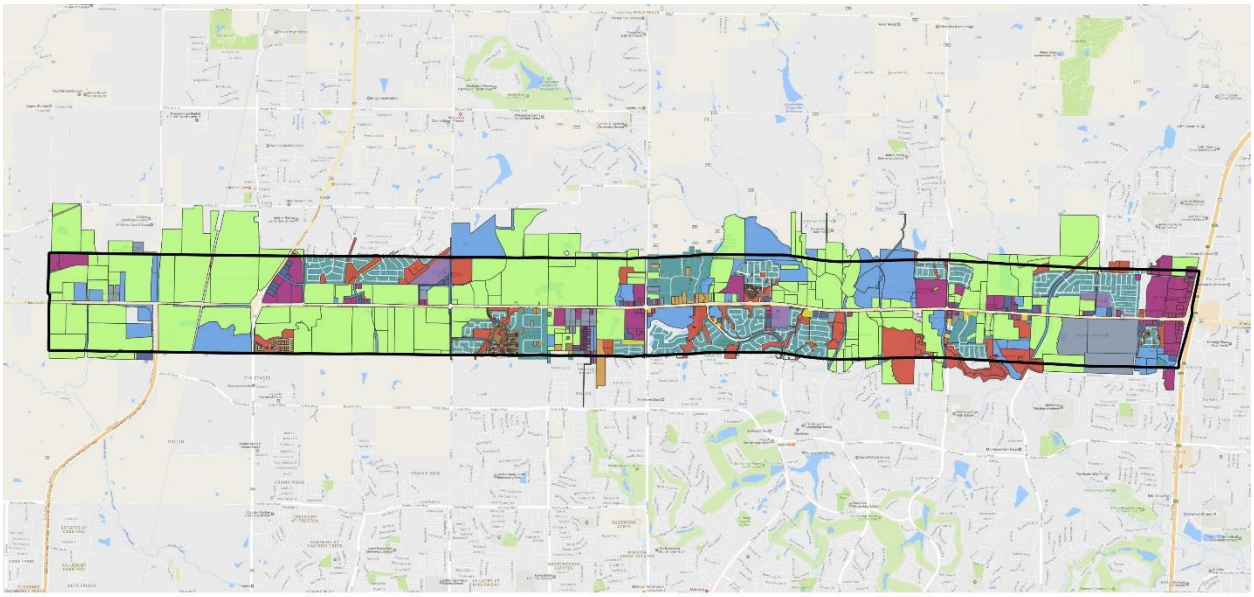
SOURCE: Collin Central Appraisal District, The Perryman Group

*Note: The US 380 corridor study area extends from the Denton-Collin County line to US 75 and includes all property within a 0.5-mile buffer on each side of US 380 and may extend beyond the 0.5-mile buffer if part of the specific parcel is within the 0.5-mile buffer.

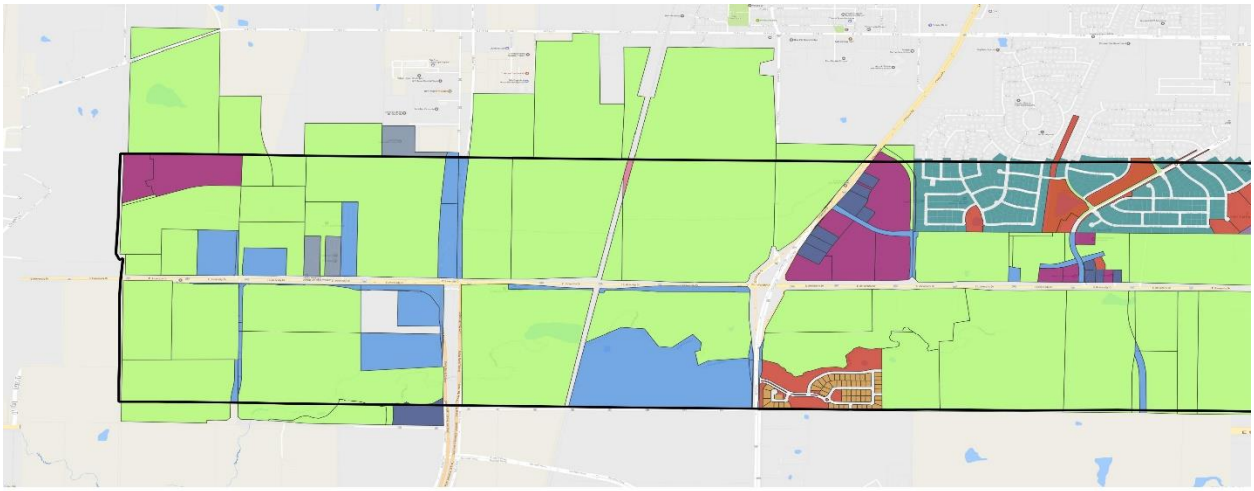
The following map shows a detailed breakout of the relevant area along US 380 by property land use type.

Land Use by Property Type within the US 380 Corridor Study Area

(Denton-Collin County Line to US 75)

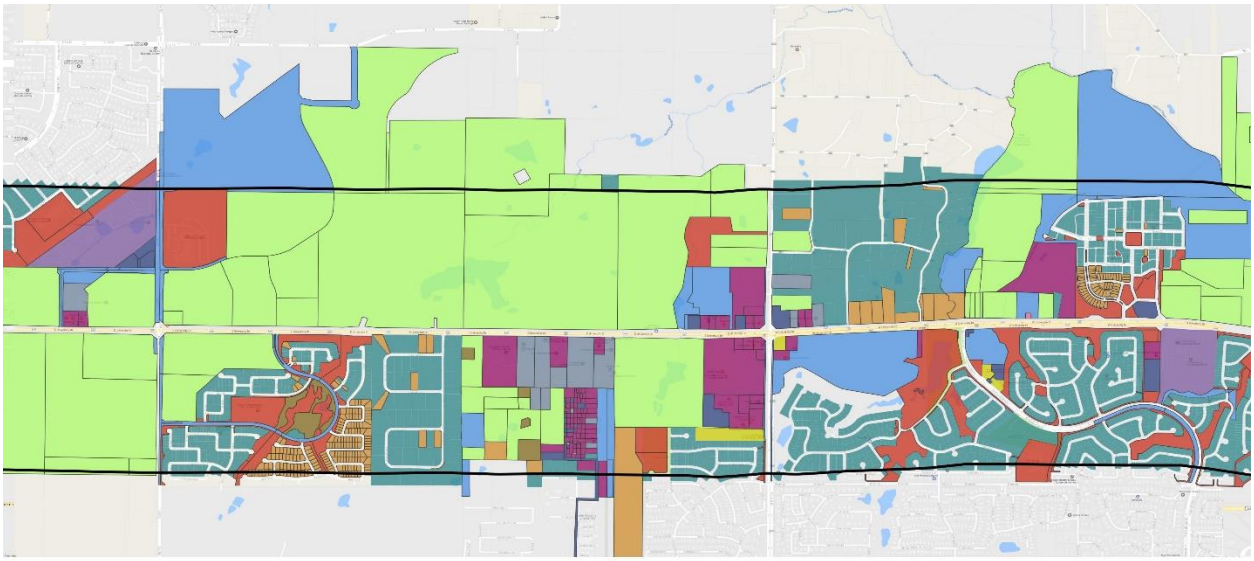


The following maps illustrate the area in more detail moving from west to east.



Legend

- Residential (Single Family)
- Residential (Multi-Family and Condominium)
- Vacant Lots/Tracts (Residential)
- Vacant Lots/Tracts (Commercial)
- Rural Land (Agriculture)
- Rural Land (Farm Single Family)
- Rural Land (Undeveloped)
- Commercial
- Industrial
- Office
- Utilities
- Exempt and Miscellaneous



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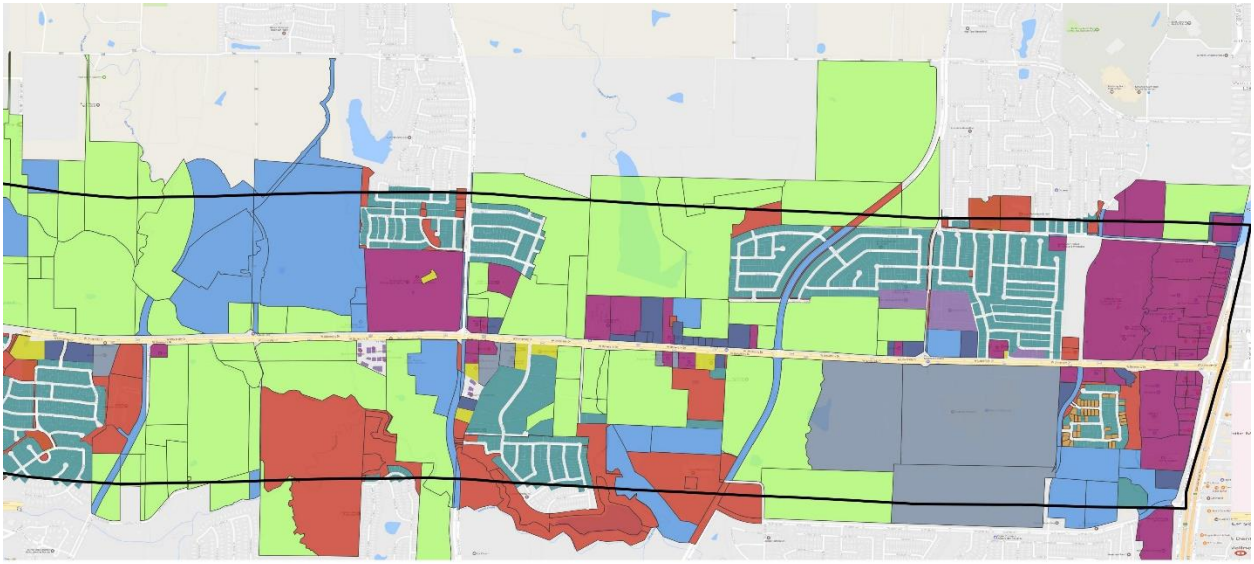

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- Rural Land (Farm Single Family)
- Rural Land (Undeveloped)
- Commercial
- Industrial
- Office
- Utilities
- Exempt and Miscellaneous

Study Approach

The Perryman Group analyzed potential economic growth and land-use patterns under two scenarios: (1) if US 380 remains in its current structure as primarily a six-lane roadway and (2) the potential situation resulting from US 380 being converted to a limited access roadway. The Perryman Group's Texas Econometric Model (described in the Appendices to this report) was utilized in determining baseline projections for the study area and Collin County as well as the potential changes in the area if US 380 is converted.

In addition to examining economic patterns and land-use patterns with and without the roadway conversion, The Perryman Group quantified the economic impacts of construction and a reasonable business disruption scenario during the construction phase. The total economic effect of incremental activity was also measured. This process involved the integration of the Collin County submodel of the US Multi-Regional Impact Assessment System with the econometric projection system. In addition, the fiscal effects on local government entities and the State from developing the LAR were quantified. Summary results are provided in the body of the report, with additional industry-level detail and methodology in the Appendices.

Need for an Efficient Transportation System

The relationship between an efficient and effective transportation system and economic growth is well documented. Numerous studies indicate excessive roadway congestion leads to decreased productivity, increased motivation for companies to invest and expand elsewhere, and elevated production costs, among other detrimental effects.[7] Excessive traffic congestion also provides increased motivation for residents, and thereby workers, to locate elsewhere.

[7] See for example, Kwon, Jaimyoung and Pravin Varaiya, "The Congestion Pie: Delay from Collisions, Potential Ramp Metering Gain, and Excess Demand," Transportation Research Board, January 2005; Batheja, Aman, "Some Worry Traffic Issues Will Stem Texas' Growth," The Texas Tribune, July 9, 2014, http://www.texastribune.org/2014/07/09/traffic-forecasts-worsen-fears-miracle-slowing/; and "Business Costs of Traffic Congestion," Centre for International Economics, August 2006.

Congestion leads to **sluggish growth in productivity** and the negative effects of congestion can impair productivity even in regions outside the immediate area in which it occurs.[8] One study found the productivity loss in the 75 largest US metropolitan areas in 2000 due to 3.6 billion hours of delay was estimated to be $67.5 billion.[9] The Dallas area alone could see a 19% increase in productivity and $64.4 billion in additional tax revenue with a complete reduction in congestion if improvements were appropriately targeted.[10]

Traffic congestion also leads to **higher transportation costs**. For example, one study found a 10% increase in highway congestion can increase logistical costs by $1 billion or more.[11] **Production costs** are another factor in the overall cost of traffic congestion. To combat severe congestion, businesses must employ more drivers and purchase additional vehicles to compensate for the longer travel times, reimburse customers for missed deliveries, and hold more inventory, all of which lead to higher costs and, hence, lower output.[12]

A highly-congested transportation system also impacts **location decisions** of both businesses and individuals. If congestion is too high, firms may relocate or decide not to expand in an area which impacts the area's economic growth potential. One such example is Dell, which some years ago decided to expand in Tennessee instead of at its Round Rock, Texas headquarters in part due to concerns about severe traffic congestion in Central Texas.[13] On a per-household basis, a recent study concluded around $1,700 per year is lost due to the cost of fuel and time lost in traffic.[14]

A certain amount of congestion is expected and unavoidable in larger metropolitan areas due to "peak load" issues. It is not economically rational (and ,in some cases, physically impossible) to devote sufficient public resources to build highways that are congestion free at peak hours and, thus, have substantial excess capacity at other times. However, once traffic congestion becomes excessive and the negative effects of congestion begin to appear, workers begin to demand higher wages or seek employment elsewhere. This pattern can cause a disconnect

[8] Hartgen, David T. and M. Gregory Fields, "Gridlock and Growth: The Effect of Traffic Congestion on Regional Economic Performance," Reason Foundation, 2009.; "Business Costs of Traffic Congestion," Centre for International Economics, August 2006.
[9] Kwon, Jaimyoung and Pravin Varaiya, "The Congestion Pie: Delay from Collisions, Potential Ramp Metering Gain, and Excess Demand," Transportation Research Board, January 2005.
[10] Hartgen, David T. and M. Gregory Fields, "Gridlock and Growth: The Effect of Traffic Congestion on Regional Economic Performance," Reason Foundation, 2009.
[11] Shirley, Chad and Clifford Winston, "Firm Inventory Behavior and the Returns from Highway Infrastructure Investments," *Journal of Urban Economics*, Vol. 55 (2004).
[12] "Business Costs of Traffic Congestion," Centre for International Economics, August 2006.
[13] Batheja, Aman, "Some Worry Traffic Issues Will Stem Texas' Growth," The Texas Tribune, July 9, 2014, http://www.texastribune.org/2014/07/09/traffic-forecasts-worsen-fears-miracle-slowing/.
[14] "The Economist Explains: The Cost of Traffic Jams," The Economist, November 3, 2014, http://www.economist.com/node/21629185/.

between workers and the jobs for which they are best suited.[15] The other effects noted above (such as lost productivity, higher costs, and adverse location decisions) also begin to occur. At this point, traffic on US 380 is already exceeding optimal levels of congestion in many areas, and the situation will materially worsen in the future as economic growth continues in the absence of roadway improvements.

When reducing congestion though conversion to a limited access roadway (reducing the number of intersections and access points), economic benefits occur due to fewer traffic accidents which reduces property damage and personal injury.[16] Highway improvements also lead to economic benefits due to a more efficient movement of goods and materials and by reducing travel time to work and elsewhere.[17]

Traffic congestion leads to higher costs, decreased productivity, and inefficiency, and building and improving roadways to limit congestion alleviates some of these issues. As research indicates, there are significant reasons to focus on limiting congestion on roadways. There is evidence for a positive correlation between increased spending on transportation infrastructure and productivity and output although the precise amount of the benefit necessarily varies by project.[18] Outcomes in a number of geographic areas have demonstrated that investments to improve traffic system efficiency have positive economic results.

[15] Badger, Emily, "How Traffic Congestion Affects Economic Growth," CityLab, October 22, 2013, http://www.citylab.com/commute/2013/10/how-traffic-congestion-impacts-economic-growth/7310/.
[16] US 31 Corridor Economic Impact Analysis, Policy Analytics, LLC, May 20, 2015.
[17] Shirley, Chad and Clifford Winston, "Firm Inventory Behavior and the Returns from Highway Infrastructure Investments," *Journal of Urban Economics*, Vol. 55 (2004).
[18] Weisbrod, Glen, Donald Vary, and George Treyz, "Economic Implications of Congestion," Transportation Research Board – National Research Council, 2001

Economic and Land-Use Effects of Converting US 380 to a Limited Access Roadway

An initial phase of this analysis involved estimating the current (2016) levels of several variables in the county as well as within the US 380 corridor study area. These variables include square footage of building space by property type, employment by property type, and several key economic indicators.

These variables were then projected as of 2040 under a baseline scenario in which US 380 remains as it is today (2040 Baseline). The potential effects of converting US 380 to a limited access roadway through the study area were then incorporated into the simulations (2040 LAR). The year 2040 was used in the analysis because it is considered the year of full development for future development along the corridor associated with it becoming a limited access roadway. Obviously, the development could occur earlier or later depending on numerous factors, but this time frame is consistent with the planning horizon in the recent feasibility study for the limited access roadway and with the currently anticipated timeline if the project is undertaken.

By comparing the results under the two scenarios, the net effect of conversion to a limited access roadway was determined. These results include the impact of changes in traffic congestion under the two scenarios as well as the changes in development patterns associated with the US 380 corridor study area becoming a limited access roadway. In conducting this analysis, TPG relied on several studies of outcomes in other areas as well as TPG's econometric models.[19] Although no other area is perfectly comparable and it is not possible to precisely predict the patterns that will emerge, the Interstate 394 corridor in Minnesota was particularly useful in that (1) it was a project of comparable length passing through three distinct population centers in the developing outskirts of a major metropolitan area and (2) it occurred in a timeframe that permits realistic evaluation of the change in land use patterns. The overall expected development is also affected by the sources of anticipated growth in Collin County.

The previously described Collin County Appraisal District data regarding current land use was used as a starting point for these projections. TPG also reviewed the most recent future land

[19] See for example, Preston, Howard, Mary Gute, and Richard Hill, CH2M Hill, and David Plazak and Chris Albrecht, Center for Transportation Research and Education, Iowa State University, Interstate 394 Business Impact Study Research Summary and Key Findings, Minnesota Department of Transportation, June 2007; PolicyAnalytics, LLC, US 31 Corridor Economic Impact Analysis, May 20, 2015; and US 380 Collin County Feasibility Study, AECOM, August 2016.

use plans of Frisco and Prosper as well as a draft of the updated McKinney future land use plan and adjusted the projections where necessary. In addition, TPG participated in meetings with personnel from the various communities along US 380 and factored in their comments and feedback in the analysis. As a practical matter, of course, these plans are subject to modification based on the growth opportunities that would be made available by a limited access roadway.

While TPG's analysis does not project the future land use of specific individual parcels, the results are generally consistent with the future land use plans of the cities along the route. All three communities anticipate major retail and commercial development along US 380 in the future as well as continued residential growth. Frisco, Prosper, and McKinney also include the development of business parks or corporate campuses and offices along the US 380 corridor.

Effect of US 380 Conversion on Collin County Building Space

The Perryman Group estimates that **the total amount of building space would be significantly higher if US 380 is converted to a limited access roadway**. An additional **25.6 million** square feet of commercial space would be developed in Collin County as of 2040 with a limited access roadway, as well as **21.2 million** square feet of industrial space and **19.0 million** square feet of office space.

Estimated Collin County Total Building Space by Property Type: Baseline and with Conversion of Portions of US 380 to a Limited Access Roadway (LAR)*

	2016	*2040 Baseline*	*2040 LAR*	*Change in Development with LAR versus Baseline*
Property Type				
Commercial	52,561,090	125,205,989	150,853,997	25,648,008
Industrial (including warehouse and utilities,)	49,025,238	89,522,442	110,739,334	21,216,891
Office	66,381,327	154,644,220	173,681,323	19,037,103

SOURCE: The Perryman Group

*Note: The US 380 corridor study area extends from the Denton-Collin County line to US 75 and includes all property within a 0.5-mile buffer on each side of US 380 and may extend beyond the 0.5-mile buffer if part of the specific parcel is within the 0.5-mile buffer. The baseline scenario assumes US 380 remains as it is today. The LAR scenario assumes the US 380 corridor study area is converted to a limited access roadway.

Economic growth in the county would also be enhanced if US 380 is converted to limited access. Real gross product in the county would be an estimated **$19.4 billion** higher in 2040, with personal income levels also significantly higher. Wage and salary employment would be a projected **160,600** higher in the county with a limited access roadway, and retail sales would see notable incremental gains.

Collin County Summary of Key Economic Indicators-Baseline and with Conversion of US 380 Corridor Study Area to a Limited Access Roadway (LAR)* (Dollar Amounts in Billions)				
	2016	*2040 Baseline*	*2040 LAR*	*Increase with LAR versus Baseline*
Key Indicator				
Nominal gross product	$62.545	$338.842	$374.382	$35.540
Real gross product (2009$)	$56.177	$185.146	$204.565	$19.419
Personal income (by place of residence)	$57.497	$286.191	$321.340	$35.149
Real personal income (by place of residence – 2009$)	$51.706	$153.986	$172.898	$18.912
Personal income (by place of work --- 2009$)	$35.660	$181.894	$204.234	$22.340
Real personal income (place of work --- 2009$)	$32.069	$97.869	$109.889	$12.020
Total employment	601,093	1,346,880	1,579,930	233,050
Wage and salary employment	415,102	928,088	1,088,675	160,587
Population	935,947	1,912,942	2,188,771	275,830
Industrial Production Index (2009=100)	154.0	519.7	630.8	111.1
Retail sales	$19.443	$120.339	$135.283	$14.944
Real retail sales (2009$)	$17.485	$64.749	$72.790	$8.041

SOURCE: The Perryman Group

*Note: The US 380 corridor study area extends from the Denton-Collin County line to US 75 and includes all property within a 0.5-mile buffer on each side of US 380 and may extend beyond the 0.5-mile buffer if part of the specific parcel is within the 0.5-mile buffer. The baseline scenario assumes US 380 remains as it is today. The LAR scenario assumes the US 380 corridor study area is converted to a limited access roadway.

It should be noted that, in the absence of the development of the limited access roadway, growth along the study corridor as a portion of the baseline expansion in Collin County is reduced by about 22% from what would occur in the absence of the incremental congestion. This finding is based on a determination of the additional delays based on data in the US 380 Collin County Feasibility study and the corresponding elasticity of economic activity with respect to congestion.[20]

Effect on the US 380 Corridor Study Area

The conversion of US 380 to a limited access roadway would lead to changes in development patterns in the corridor area. A significant increase in office space could be expected, with incremental development as of 2040 of an estimated **11.5 million** square feet. Commercial and industrial square footage would also likely be higher under the limited access roadway scenario, with incremental space of **7.5 million** and **6.7 million** square feet, respectively, as of 2040.

Due to these changes in development patterns, the number of single-family houses along the US 380 corridor study area would decrease slightly under the LAR scenario and houses would be built further from US 380. On the other hand, multi-family residential units in the study area would likely be higher.

The estimated building space by property type for the US 380 corridor study area if it remains as it is today (baseline scenario) and if it is converted to a limited assess roadway (LAR scenario) is illustrated in the following table.

[20] US 380 Collin County Feasibility Study, AECOM, August 2016. This approach is similar to that employed in The Future Economic Costs of Gridlock in 2030, An Assessment of the Direct and Indirect Economic and Environmental Costs of Idling in Road Traffic Congestion to Household in the UK, France, Germany and the USA, Centre for Economic and Business Research, July 2014.,

Estimated US 380 Corridor Total Building Space by Property Type: Baseline and with Conversion of Portions of US 380 to a Limited Access Roadway (LAR)*				
	2016	*2040 Baseline*	*2040 LAR*	*Change in Development with LAR versus Baseline*
Property Type				
Commercial (square feet)	3,518,597	13,218,397	20,736,240	7,517,842
Industrial (including warehouse and utilities, square feet)	2,051,292	7,088,818	13,831,475	6,742,657
Office (square feet)	157,140	649,225	12,194,323	11,545,097
Housing (single-family units)	4,132	17,129	16,678	(451)
Housing (multi-family units)	1,214	5,033	9,818	4,786

SOURCE: The Perryman Group

*Note: The US 380 corridor study area extends from the Denton-Collin County line to US 75 and includes all property within a 0.5-mile buffer on each side of US 380 and may extend beyond the 0.5-mile buffer if part of the specific parcel is within the 0.5-mile buffer. The baseline scenario assumes US 380 remains as it is today. The LAR scenario assumes the US 380 corridor study area is converted to a limited access roadway.

The conversion of US 380 to a limited access roadway could be expected to lead to increased direct employment in the study area compared to the baseline scenario. The Perryman Group estimates that total employment as of 2040 would be more than **76,100** higher. Office employment experiences the largest expected increase, rising by more than **39,300** compared to the baseline scenario.

Estimated US 380 Corridor Study Area Direct Employment by Property Type: Baseline and with Conversion to a Limited Access Roadway (LAR)*

	2016	*2040 Baseline*	*2040 LAR*	*Increase in Employment with LAR versus Baseline*
Property Type				
Commercial	11,214	43,668	70,806	27,138
Industrial (including warehouse and utilities)	3,055	9,626	19,289	9,663
Office	534	2,206	41,553	39,347
Total	**14,804**	**55,500**	**131,647**	**76,147**

SOURCE: The Perryman Group

*Note: The US 380 corridor study area extends from the Denton-Collin County line to US 75 and includes all property within a 0.5-mile buffer on each side of US 380 and may extend beyond the 0.5-mile buffer if part of the specific parcel is within the 0.5-mile buffer. The baseline scenario assumes US 380 remains as it is today. The LAR scenario assumes the US 380 corridor study area is converted to a limited access roadway.

TPG also developed a forecast for the US 380 corridor study area under the various scenarios. The conversion to an LAR and the associated reduction in traffic congestion would lead to increased economic growth in the study area of an estimated **$14.8 billion** in real gross product as of 2040 compared to the baseline scenario. The following table shows the key economic indicators for the US 380 corridor study area in 2016 and for the 2040 Baseline scenario and the 2040 LAR scenario.

US 380 Corridor Study Area Summary of Key Economic Indicators: Baseline and with Conversion of Portions of US 380 to a Limited Access Roadway (LAR)* (Dollar Amounts in Billions)

	2016	*2040 Baseline*	*2040 LAR*	*Increase with LAR versus Baseline*
Key Indicator				
Nominal gross product	$2.029	$24.135	$51.434	$27.298
Real gross product (2009$)	$1.824	$10.519	$25.347	$14.827
Personal income (by place of residence)	$0.788	$7.957	$9.514	$1.556
Real personal income (by place of residence – 2009$)	$0.709	$4.281	$5.119	$0.837
Personal income (by place of work –- 2009$)	$1.157	$12.956	$28.058	$15.102
Real personal income (place of work –- 2009$)	$1.041	$6.971	$15.097	$8.126
Wage and salary employment	14,804	55,500	131,647	76,147

SOURCE: The Perryman Group

*Note: The US 380 corridor study area extends from the Denton-Collin County line to US 75 and includes all property within a 0.5-mile buffer on each side of US 380 and may extend beyond the 0.5-mile buffer if part of the specific parcel is within the 0.5-mile buffer. The baseline scenario assumes US 380 remains as it is today. The LAR scenario assumes the US 380 corridor study area is converted to a limited access roadway.

Economic Impact of Construction and Conversion of US 380

Any economic stimulus (such as a firm location/expansion, construction project, or infrastructure improvement) generates multiplier effects throughout the economy. The Perryman Group developed a dynamic input-output assessment model (the US Multi-Regional Impact Assessment System (USMRIAS), which is described in further detail in the Appendices to this report) about 35 years ago to measure these multiplier effects in order to determine total economic benefits. The model has been consistently maintained and updated and has been used in hundreds of analyses throughout the country for clients ranging from major corporations to government agencies. It has been peer reviewed on multiple occasions.

The initial phase of the effort involves defining the direct stimulus to be measured. With regard to the highway construction, cost estimates were provided by Collin County personnel. For future development, square footage needs and costs per square foot in line with industry and general market patterns in the area were utilized. Data related to usage per square foot and costs were obtained from multiple sources.[21] In all cases, costs were converted to constant (2016) dollars.

The submodel used in the current analysis reflects the specific industrial composition and characteristics of Collin County. Total economic benefits are quantified for key measures of business activity, which are different, common ways of looking at changes in the economy (such as in terms of total spending, output, income, or jobs). These measures are briefly described below and explained in further detail in the Appendices.

- **Total expenditures** (or total spending) measure the dollars changing hands as a result of the economic stimulus.

[21] See for example, Fuller, Stephen S., Economic Impacts of Commercial Real Estate, NAIOP Research Foundation, June 2016; 2007 Buildable Lands Report Employment Density Study, April 2007, https://snohomishcountywa.gov/DocumentCenter/View/7660; Norman Miller and Roger Brown, How Much Space Do We Need?, Commercial Investment Real Estate Magazine, May-June 2013; How Much Does a Construction Project Cost, Brown Wegher Construction, http://www.brownwegher.com/cost-of-construction-chart/; Design Cost Data Building Square Foot Building Square Foot Cost Guide, http://www.dcd.com/guides/dcd_building_square_foot_cost_guide_1305.html; Dalvit, Dean Construction Costs per Square Foot of Community Centers in Major US Cities, EV Studio, January 10, 2010; http://evstudio.com/construction-cost-per-square-foot-of-community-centers-in-major-us-cities/; Dalvit, Dean, Construction Costs per Square Foot for Motels 2012, EV Studio, May 20, 2014, http://evstudio.com/construction-cost-per-square-foot-for-motels-2012/, and Taylor, Heather, Cost of Constructing a Home, NAHB Economics and Housing Policy Group, November 2, 2015, https://www.nahbclassic.org/generic.aspx?genericContentID=248306.

- **Gross product** (or output) is production of goods and services that will come about in each area as a result of the activity. This measure is parallel to the gross domestic product numbers commonly reported by various media outlets and is a subset of total expenditures.
- **Personal income** is dollars that end up in the hands of people in the area; the vast majority of this aggregate derives from the earnings of employees, but payments such as interest and rents are also included.
- **Job gains** are expressed as either (1) person-years of employment for transitory stimuli (such as construction) or cumulative effects over multiple years or (2) permanent jobs for ongoing effects that persist.

TPG quantified the economic effects of the US 380 corridor study area being converted into a limited access roadway. Specifically, the effects quantified include:

- Construction of the Roadway;
- Displacement and Relocation;
- Induced Construction of Office, Commercial, Industrial, and Residential Space; and
- Net Induced Activity at Maturity.

Business activity is a primary driver of tax receipts to taxing authorities, both at the State and local levels, and changes in the economy result in fiscal cost or benefits. The Perryman Group also calculated the net fiscal effects of the US 380 corridor study area being converted into a limited access roadway.

An additional benefit associated with the conversion of the US 380 corridor study area to a limited access roadway is the **reduction in emissions due to decreased traffic congestion**. TPG estimates the savings associated with the reduced emissions will be about **$1.187 million** per year at maturity. This analysis is based on the projected reduction in congestion, its corresponding effect on fuel consumption, and the value of the resulting carbon dioxide emissions.[22]

[22] The reduction in congestion was calculated based on the estimated delays in the relevant segments of US 380 as outlined in US 380 Collin County Feasibility Study, AECOM, August 2016. For a comparable approach, see The Future Economic Costs of Gridlock in 2030, An Assessment of the Direct and Indirect Economic and Environmental Costs of Idling in Road Traffic Congestion to Household in the UK, France, Germany and the USA, Centre for Economic and Business Research, July 2014.,

As noted, monetary values were quantified on a constant basis (in 2016 dollars) to eliminate the effects of inflation, although current dollar estimates are also provided in relevant situations. See the Appendices to this report for additional information regarding the methods used in this analysis.

Construction Effects

The preliminary estimated cost of construction for the conversion of the US 380 corridor study area to a limited access roadway is $542 million including the actual construction and the acquisition of necessary right of way. The Perryman Group measured these effects, which occur over a period of years, both in terms of (1) constant (2016) dollars to eliminate the effects of inflation and (2) current dollars as of the time of construction to approximate actual outlays over time. Obviously, the exact cost cannot be known with certainty at this time and thus direct expenditures and, hence, the spinoff effects will likely be somewhat different than the ultimate values.

The Perryman Group estimates that the total economic benefits stemming from construction activity associated with the conversion of portions of US 380 to a limited access roadway include **$311.156 million** in gross product (in constant 2016 dollars) and **$485.950 million** in gross product (in current dollars at the time of anticipated construction) as well as 3,743 person-years of employment in Collin County.

The Total Anticipated Economic Impact of Construction Activity Associated with Converting Portions of US 380 to a Limited Access Roadway on Business Activity in Collin County* (Monetary Values in Millions of Dollars)

	In constant 2016 dollars	*In current dollars at time of anticipated construction*
ECONOMIC BENEFITS		
Total Expenditures	**$666.654**	**$1,042.719**
Gross Product	**$311.156**	**$485.950**
Personal Income	**$214.320**	**$334.644**
Retail Sales	**$87.027**	**$133.158**
Employment (Person-Years)	**3,743**	**3,743**

SOURCE: The Perryman Group
*Note: The US 380 corridor study area extends from the Denton-Collin County line to US 75 and includes all property within a 0.5-mile buffer on each side of US 380 and may extend beyond the 0.5-mile buffer if part of the specific parcel is within the 0.5-mile buffer.

The Perryman Group estimates that the total economic benefits to Texas stemming from construction activity associated with the development of the US 380 corridor study area as a limited access roadway include **$492.579 million** in gross product (in constant 2016 dollars) and **$769.776 million** in gross product (in current dollars at the time of anticipated construction) as well as 5,705 person-years of employment. The Texas effects include the Collin County effects as well as spillover effects in other parts of the state.

The Total Anticipated Economic Impact of Construction Activity Associated with Conversion of Portions of US 380 to a Limited Access Roadway on Business Activity in Texas* (Monetary Values in Millions of Dollars)

	In constant 2016 dollars	*In current dollars at time of anticipated construction*
ECONOMIC BENEFITS		
Total Expenditures	**$1,098.757**	**$1,720.889**
Gross Product	**$492.579**	**$769.776**
Personal Income	**$330.631**	**$516.462**
Retail Sales	**$125.319**	**$191.800**
Employment (Person-Years)	**5,705**	**5,705**

SOURCE: The Perryman Group
*Note: The US 380 corridor study area extends from the Denton-Collin County line to US 75 and includes all property within a 0.5-mile buffer on each side of US 380 and may extend beyond the 0.5-mile buffer if part of the specific parcel is within the 0.5-mile buffer.

Detailed construction impacts by industry are included in the Appendices.

Displacement and Relocation Effects

The conversion of US 380 through the study area into a limited access roadway will also likely lead to some displacements and relocations of businesses and other entities along the route.

Although concern about this issue is often raised, business displacements are typically not a major issue as long as an access route to the business remains.[23]

The Perryman Group developed a representative scenario to illustrate the impact of the potential displacements and relocations resulting from construction on business activity in Collin County and Texas. This scenario was developed by (1) estimating the number of displaced businesses (or those that could need to be relocated based on the US 380 Collin County Feasibility Study[24]) and review of GIS information to reflect the study area, (2) using information from the CCAD analysis described previously and from the US Census Bureau to determine the typical size of the relevant businesses in the Collin County area,[25] and (3) using the time period of expected service road construction as estimated by Collin County personnel to determine a reasonable scenario for the degree and timing of the displacements. The direct losses were then simulated through the appropriate submodels of the US Multi-Regional Impact Assessment System in order to measure the total effects on business activity. Note that the subsequent analysis of "before and after" conditions reflect net changes in land use patterns and thus captures permanent changes.

[23] Preston, Howard, Mary Gute, and Richard Hill, CH2M Hill, and David Plazak and Chris Albrecht, Center for Transportation Research and Education, Iowa State University, Interstate 394 Business Impact Study Research Summary and Key Findings, Minnesota Department of Transportation, June 2007.
[24] US 380 Collin County Feasibility Study, AECOM, August 2016.
[25] US Census Bureau, County Business Patterns 2014.

TPG estimates the potential displacements during the construction period under this representative scenario would lead to a **$152.225 million reduction** in gross product (in constant 2016 dollars) and **2,218** lost person-years of employment in Collin County. For Texas, these effects are likely to be a **$172.942 million reduction** in gross product and a loss of **2,414** person-years of employment. Note that the Texas effects include the Collin County effects as well as spillover impacts in other parts of the state. Detailed results by industry are provided in Appendix C.

A Representative Scenario Illustrating the Potential Impact of Displacements and Relocations Associated with the Conversion of Portions of US 380 to a Limited Access Roadway on Business Activity in Collin County and Texas* (Monetary Values in Millions of 2016 Dollars)

	Collin County	*Texas*
ECONOMIC COSTS		
Total Expenditures	**($272.991)**	**($326.423)**
Gross Product	**($152.225)**	**($172.942)**
Personal Income	**($90.994)**	**($91.472)**
Retail Sales	**($117.571)**	**($120.137)**
Employment (Person-Years)	**(2,218)**	**(2,414)**

SOURCE: The Perryman Group
*Note: The US 380 corridor study area extends from the Denton-Collin County line to US 75 and includes all property within a 0.5-mile buffer on each side of US 380 and may extend beyond the 0.5-mile buffer if part of the specific parcel is within the 0.5-mile buffer.

Induced Construction Effects

The conversion of US 380 through the study area to a limited access roadway will also lead to additional development and construction of office, industrial, commercial, and residential properties which will develop both along the corridor and elsewhere in the county as a result of increased accessibility. As noted previously, this development scenario is based on the overall growth patterns within the county as well as changes in the intensity and composition of land use patterns in other areas experiencing comparable infrastructure upgrades. As a part of this analysis, an evaluation of real estate absorption in the area was conducted to determine the reasonableness of these findings both in terms of land capacity and potential growth within Collin County. This process is described in more detail in the Appendices to this report.

The Perryman Group estimates that the total economic benefits stemming from this induced construction activity associated with the development of the US 380 corridor assuming a limited access roadway include **$19.245 billion** in gross product (in constant 2016 dollars) and **$39.318 billion** in gross product (in current dollars at the time of anticipated construction) as well as **235,887** person-years of employment in Collin County. The following table illustrates these effects in more detail.

**The Total Anticipated Economic Impact of Induced Construction Activity Resulting from the Conversion of Portions of US 380 to a Limited Access Roadway on Business Activity in Collin County*
(Monetary Values in Billions of Dollars)**

	In constant 2016 dollars	*In current dollars at time of anticipated construction*
ECONOMIC BENEFITS		
Total Expenditures	**$41.000**	**$83.950**
Gross Product	**$19.245**	**$39.318**
Personal Income	**$13.172**	**$26.899**
Retail Sales	**$5.998**	**$12.008**
Employment (Person-Years)	**235,887**	**235,887**

SOURCE: The Perryman Group
*Note: The US 380 corridor study area extends from the Denton-Collin County line to US 75 and includes all property within a 0.5-mile buffer on each side of US 380 and may extend beyond the 0.5-mile buffer if part of the specific parcel is within the 0.5-mile buffer.

The induced construction activity will also have a positive impact on the state of Texas. The Perryman Group estimates that the total economic benefits to Texas stemming from this induced construction activity associated with the development of the US 380 corridor study area as a limited access roadway include **$32.344 billion** in gross product (in constant 2016 dollars) and **$66.157 billion** in gross product (in current dollars at the time of anticipated construction) as well as **383,959** person-years of employment. (Again, these Texas effects include impacts within Collin County as well as spillover to other parts of the state.)

The following table illustrates these results, with additional industry-level detail in the Appendices.

The Total Anticipated Economic Impact of Induced Construction Activity Resulting from the Conversion of Portions of US 380 to a Limited Access Roadway on Business Activity in Texas* (Monetary Values in Billions of Dollars)

	In constant 2016 dollars	*In current dollars at time of anticipated construction*
ECONOMIC BENEFITS		
Total Expenditures	**$70.862**	**$145.358**
Gross Product	**$32.344**	**$66.157**
Personal Income	**$21.675**	**$44.302**
Retail Sales	**$9.190**	**$18.406**
Employment (Person-Years)	**383,959**	**383,959**

SOURCE: The Perryman Group
*Note: The US 380 corridor study area extends from the Denton-Collin County line to US 75 and includes all property within a 0.5-mile buffer on each side of US 380 and may extend beyond the 0.5-mile buffer if part of the specific parcel is within the 0.5-mile buffer.

Annual Impact at Maturity of Induced Activity

The induced activity associated with converting portions of US 380 to a limited access roadway will lead to ongoing benefits to both Collin County and Texas once the development is fully complete. The Perryman Group estimates the incremental annual impact at maturity from this induced activity includes **$14.667 billion** in gross product (in constant 2016 dollars) as well as **160,587** jobs in Collin County. For Texas (including results within Collin County) incremental business activity includes an estimated **$16.780 billion** in gross product (in constant 2016 dollars) and **180,442** jobs.

The Total Anticipated Annual Impact (at Maturity) of Induced Activity Resulting from Converting Portions of US 380 into a Limited Access Roadway on Business Activity in Collin County and Texas*
(Monetary Values in Billions of 2016 Dollars)

	Collin County	*Texas*
ECONOMIC BENEFITS		
Total Expenditures	**$28.824**	**$34.241**
Gross Product	**$14.667**	**$16.780**
Personal Income	**$9.067**	**$10.292**
Retail Sales	**$4.359**	**$4.626**
Employment (Permanent Jobs)	**160,587**	**180,442**

SOURCE: The Perryman Group
*Note: The US 380 corridor study area extends from the Denton-Collin County line to US 75 and includes all property within a 0.5-mile buffer on each side of US 380 and may extend beyond the 0.5-mile buffer if part of the specific parcel is within the 0.5-mile buffer. Results for Texas include gains within Collin County as well as spillover to other parts of the state.

Detailed impacts by industry of the induced activity are included in the Appendices.

Fiscal Effects

Converting US 380 to a limited access roadway through the study area and the associated induced activity will generate a notable increase in tax receipts due to the economic stimulus the new development provides. Economic activity generates tax receipts through numerous channels including increased retail sales; in addition, incremental development will lead to a higher property tax base.

Multiple taxing authorities along the corridor and in Collin County as well across Texas and the State of Texas itself will enjoy these fiscal effects. The Perryman Group estimates that the fiscal benefits associated with the conversion of US 380 to a limited access roadway and associated induced development will be notable. Cities along US380 will see significant gains, as will the State of Texas and Independent School Districts in the study area and beyond. Annual results at maturity are shown in the following table.

The Anticipated Annual Fiscal Effects (at Maturity) Associated with Converting Portions of US 380 into a Limited Access Roadway (LAR)* for the State of Texas and Local Taxing Entities (in Constant 2016 Dollars)	
Taxing Authority	**Estimated Revenue**
State of Texas	$914,490,535
Collin County	$75,256,536
Other Texas Counties	$10,841,786
City of Frisco	$64,440,079
City of McKinney	$166,908,709
City of Prosper	$62,052,776
Other cities in Collin County**	$59,702,226
Other Cities in Texas***	$37,810,348
Frisco Independent School District	$95,985,577
McKinney Independent School District	$185,102,909
Prosper Independent School District	$99,625,821
Other School Districts in Collin County	$79,493,746
Other School Districts in Texas	$53,868,412

SOURCE: The Perryman Group

*Note: The US 380 corridor study area extends from the Denton-Collin County line to US 75 and includes all property within a 0.5-mile buffer on each side of US 380 and may extend beyond the 0.5-mile buffer if part of the specific parcel is within the 0.5-mile buffer.

** Includes sales tax revenue to Dallas Area Rapid Transit Authority.

*** Includes sales tax revenue to other taxing authorities.

Converting US 380 through the study area to a limited access roadway would generate notable fiscal benefits for taxing entities in the local area and beyond, with gains well in excess of the initial investment.

Conclusion

An efficient transportation system is essential to quality of life and economic prosperity. In an area experiencing rapid expansion, planning for future growth is essential. While the construction process can lead to some dislocations, the benefits in terms of increased efficiency and additional desirable development far outweigh these costs.

The Perryman Group analyzed the economic impact of converting US 380 from the Denton-Collin County line to US 75 into a limited access roadway compared to a scenario where US 380 remains a six-lane divided thoroughfare as most of it is today. Converting US 380 to a limited access roadway through the study area was found to have significant economic and fiscal benefits. Converting to a limited access roadway would likely result in a **notable increase in economic indicators** including estimated gains as of 2040 of some **$14.8 billion** in real gross product and almost **76,150** jobs in the study area as well as **160,600** jobs and **$19.4 billion** in real gross product in Collin County as a whole.

- The total economic benefits stemming from **construction activity** associated with the conversion of US 380 to a limited access roadway include an estimated **$311.156 million** in gross product (in constant 2016 dollars) and **$485.950 million** in gross product (in current dollars at the time of anticipated construction) as well as **3,743** person-years of employment in Collin County. The state of Texas enjoys significant economic benefits from the construction as well.
- Potential **displacements and relocations** due to the conversion of US 380 to a limited access roadway would lead to some losses in business activity. The Perryman Group estimates these effects to include a **$152.225 million reduction** in gross product (in constant 2016 dollars) and **2,218** lost person-years of employment in Collin County. Texas would also experience a slight negative effect from the potential displacements and relocations as well.
- The limited access roadway would change land use in addition to enhancing economic growth. The Perryman Group estimates that **additional development and induced construction** due to the conversion of US 380 through the study area to a limited access roadway would generate total economic benefits of **$19.245 billion** in gross product (in constant 2016 dollars) and **$39.318 billion** in gross product (in current dollars at the time of anticipated construction) as well as **235,887** person-years of employment in Collin County. The induced construction also generates notable economic benefits to the state of Texas.

- Collin County and Texas will enjoy notable **ongoing benefits from the induced activity** associated with the development of the US 380 corridor study area into a limited access roadway. The Perryman Group estimates the annual impact at maturity from this induced activity includes **$14.667 billion** in gross product (in constant 2016 dollars) as well as **160,587** jobs in Collin County as well as **$16.780 billion** in gross product (in constant 2016 dollars) and **180,442** jobs in Texas.

Converting US 380 to a limited access roadway through the study area and the associated increases in economic activity will also generate notable fiscal benefits for the State and local taxing authorities along the corridor, in Collin County, and across the state.

The results of this study clearly indicate that converting US 380 into a limited access roadway has significant economic benefits compared to a scenario in which US 380 remains as it is today. Given the expectation of strong growth in Collin County, **it is likely that, without the conversion, congestion would be an increasing problem, eroding quality of life for current residents and decreasing the ability of the economy to continue to prosper**.

APPENDICES

Appendix A: About The Perryman Group

The Perryman Group (TPG) is an economic research and analysis firm based in Waco, Texas. The firm has some35 years of experience in assessing the economic impact of corporate expansions, regulatory changes, real estate developments, public policy initiatives, and myriad other factors affecting business activity. TPG has conducted hundreds of impact analyses for local areas, regions, and states throughout the United States. Impact studies have been performed for hundreds of clients including many of the largest corporations in the world, governmental entities at all levels, educational institutions, major health care systems, utilities, and economic development organizations.

Dr. M. Ray Perryman, founder and President of the firm, developed the US Multi-Regional Impact Assessment System (USMRIAS—used in this study) in the early 1980s and has consistently maintained, expanded, and updated it since that time. The model has been used in hundreds of diverse applications and has an excellent reputation for reliability.

The Perryman Group has analyzed the economic and fiscal aspects of a broad range of corporate locations, infrastructure projects, mixed-use real estate developments, and regulatory changes. The firm has completed hundreds of economic impact and market studies for corporations and communities throughout the United States, and is, thus, particularly well equipped for a study of the effect on business activity of infrastructure changes such as converting US 380 into a limited access roadway.

The firm has analyzed major transportation infrastructure including toll roads, port facilities, and airports. Projects include Fort Worth Alliance Airport and recent expansions of the Port of Houston and the Port of Charleston. Major mixed-use real estate developments have also been analyzed on a number of occasions. The Perryman Group has also been preparing regular forecasts and other detailed assessments of economic conditions for Collin County and the surrounding region for some 35 years, as well as numerous impact analyses.

Appendix B: Methods Used

Texas Econometric Model

Overview

The Texas Econometric Model was developed by Dr. M. Ray Perryman, President and CEO of The Perryman Group (TPG), about 35 years ago and has been consistently maintained, expanded, and updated since that time. It is formulated in an internally consistent manner and is designed to permit the integration of relevant global, national, state, and local factors into the projection process. It is the result of more than three decades of continuing research in econometrics, economic theory, statistical methods, and key policy issues and behavioral patterns, as well as intensive, ongoing study of all aspects of the global, US, Texas, and Texas metropolitan area economies. It is extensively used by scores of federal and State governmental entities on an ongoing basis, as well as hundreds of major corporations. It is employed on the current analysis to project future economic and demographic patterns in Collin County under baseline conditions, as well being integrated with the US Multi-Regional Impact Assessment System, the US Multi-Regional Industry-Occupation System, and the US Multi-Regional Real Estate Absorption System to support various aspects of the research.

This section describes the forecasting process in a comprehensive manner, focusing on both the modeling and the supplemental analysis. The overall methodology, while certainly not ensuring perfect foresight, permits an enormous body of relevant information to impact the economic outlook in a systematic manner.

Model Logic and Structure

The Texas Econometric Model revolves around a core system which projects output (real and nominal), income (real and nominal), and employment by industry in a simultaneous manner. For purposes of illustration, it is useful to initially consider the employment functions. Essentially, employment within the system is a derived demand relationship obtained from a neo-Classical production function. The expressions are augmented to include dynamic temporal adjustments to changes in relative factor input costs, output and (implicitly) productivity, and technological progress over time. Thus, the typical equation includes output, the relative real cost of labor and capital, dynamic lag structures, and a technological adjustment parameter. The functional form is logarithmic, thus preserving the theoretical consistency with the neo-Classical formulation.

The income segment of the model is divided into wage and non-wage components. The wage equations, like their employment counterparts, are individually estimated at the 3-digit North American Industry Classification System (NAICS) level of aggregation. Hence, income by place of work is measured for approximately 90 production categories. The wage equations measure real compensation, with the form of the variable structure differing between “basic” and “non-basic.”

The basic industries, comprised primarily of the various components of Mining, Agriculture, and Manufacturing, are export-oriented, i.e., they bring external dollars into the area and form the core of the economy. The production of these sectors typically flows into national and international markets; hence, the labor markets are influenced by conditions in areas beyond the borders of the particular region. Thus, real (inflation-adjusted) wages in the basic industry are expressed as a function of the corresponding national rates, as well as measures of local labor market conditions (the reciprocal of the unemployment rate), dynamic adjustment parameters, and ongoing trends.

The "non-basic" sectors are somewhat different in nature, as the strength of their labor markets is linked to the health of the local export sectors. Consequently, wages in these industries are related to those in the basic segment of the economy. The relationship also includes the local labor market measures contained in the basic wage equations.

Note that compensation rates in the export or "basic" sectors provide a key element of the interaction of the regional economies with national and international market phenomena, while the "non-basic" or local industries are strongly impacted by area production levels. Given the wage and employment equations, multiplicative identities in each industry provide expressions for total compensation; these totals may then be aggregated to determine aggregate wage and salary income. Simple linkage equations are then estimated for the calculation of personal income by place of work.

The non-labor aspects of personal income are modeled at the regional level using straightforward empirical expressions relating to national performance, dynamic responses, and evolving temporal patterns. In some instances (such as dividends, rents, and others) national variables (for example, interest rates) directly enter the forecasting system. These factors have numerous other implicit linkages into the system resulting from their simultaneous interaction with other phenomena in national and international markets which are explicitly included in various expressions.

The output or gross area product expressions are also developed at the 3-digit NAICS level. Regional output for basic industries is linked to national performance in the relevant industries, local and national production in key related sectors, relative area and national labor costs in the industry, dynamic adjustment parameters, and ongoing changes in industrial interrelationships (driven by technological changes in production processes).

Output in the non-basic sectors is modeled as a function of basic production levels, output in related local support industries (if applicable), dynamic temporal adjustments, and ongoing patterns. The inter-industry linkages are obtained from the input-output (impact assessment) system which is part of the overall integrated modeling structure maintained by The Perryman Group. Note that the dominant component of the econometric system involves the simultaneous estimation and projection of output (real and nominal), income (real and nominal), and employment at a disaggregated industrial level. This process, of necessity, also produces projections of regional price deflators by industry. These values are affected by both national pricing patterns and local cost variations and permit changes in prices to impact other aspects of economic behavior. Income is converted from real to nominal terms using Texas

Consumer Price Index, which fluctuates in response to national pricing patterns and unique local phenomena.

Several other components of the model are critical to the forecasting process. The demographic module includes (1) a linkage equation between wage and salary (establishment) employment and household employment, (2) a labor force participation rate function, and (3) a complete population system with endogenous migration. Given household employment, labor force participation (which is a function of economic conditions and evolving patterns of worker preferences), and the working age population, the unemployment rate and level become identities.

The population system uses Census information, fertility rates, and life tables to determine the "natural" changes in population by age group. Migration, the most difficult segment of population dynamics to track, is estimated in relation to relative regional and extra-regional economic conditions over time. Because evolving economic conditions determine migration in the system, population changes are allowed to interact simultaneously with overall economic conditions. Through this process, migration is treated as endogenous to the system, thus allowing population to vary in accordance with relative business performance (particularly employment).

Real retail sales is related to income, interest rates, dynamic adjustments, and patterns in consumer behavior on a store group basis. It is expressed on an inflation-adjusted basis. Inflation at the state level relates to national patterns, indicators of relative economic conditions, and ongoing trends. As noted earlier, prices are endogenous to the system.

A final significant segment of the forecasting system relates to real estate absorption and activity. The short-term demand for various types of property is determined by underlying economic and demographic factors, with short-term adjustments to reflect the current status of the pertinent building cycle. In some instances, this portion of the forecast requires integration with the Multi-Regional Industry-Occupation System which is maintained by The Perryman Group. This system also allows any employment simulation or forecast from the econometric model to be translated into a highly detailed occupational profile.

The overall Texas Econometric Model contains numerous additional specifications, and individual expressions are modified to reflect alternative lag structures, empirical properties of the estimates, simulation requirements, and similar phenomena. Moreover, it is updated on an ongoing basis as new data releases become available. Nonetheless, the above synopsis offers a basic understanding of the overall structure and underlying logic of the system.

Model Simulation and Multi-Regional Structure

The initial phase of the simulation process is the execution of a standard non-linear algorithm for the state system and that of each of the individual sub-areas. The external assumptions are derived from scenarios developed through national and international models and extensive analysis by The Perryman Group. The US model, which follows the basic structure outlined above, was used to some extent in the current analysis to define the demand for domestically produced goods on a per capita basis.

Once the initial simulations are completed, they are merged into a single system with additive constraints and interregional flows. Using information on minimum regional requirements, import needs, export potential, and locations, it becomes possible to balance the various forecasts into a mathematically consistent set of results. This process is, in effect, a disciplining exercise with regard to the individual regional (including metropolitan and rural) systems. By compelling equilibrium across all regions and sectors, the algorithm ensures that the patterns in state activity are reasonable in light of smaller area dynamics and, conversely, that the regional outlooks are within plausible performance levels for the state as a whole.

The iterative simulation process has the additional property of imposing a global convergence criterion across the entire multi-regional system, with balance being achieved simultaneously on both a sectoral and a geographic basis. This approach is particularly critical on non-linear dynamic systems, as independent simulations of individual systems often yield unstable, non-convergent outcomes.

It should be noted that the underlying data for the modeling and simulation process are frequently updated and revised by the various public and private entities compiling them. Whenever those modifications to the database occur, they bring corresponding changes to the structural parameter estimates of the various systems and the solutions to the simulation and forecasting system. The multi-regional version of the Texas Econometric Model is re-estimated and simulated with each such data release, thus providing a constantly evolving and current assessment of state and local business activity.

The Final Forecast

The process described above is followed to produce an initial set of projections. Through the comprehensive multi-regional modeling and simulation process, a systematic analysis is generated which accounts for both historical patterns in economic performance and inter-relationships and best available information on the future course of pertinent external factors. While the best available techniques and data are employed in this effort, they are not capable of directly capturing “street sense,” i.e., the contemporaneous and often non-quantifiable information that can materially affect economic outcomes. In order to provide a comprehensive approach to the prediction of business conditions, it is necessary to compile and assimilate extensive material regarding current events and factors both across the state of Texas and elsewhere.

This critical aspect of the forecasting methodology includes activities such as (1) daily review of hundreds of financial and business publications and electronic information sites; (2) review of major newspapers and online news sources in the state on a daily basis; (3) dozens of hours of direct telephone interviews with key business and political leaders in all parts of the state; (4) face-to-face discussions with representatives of major industry groups; and (5) frequent site visits to the various regions of the state. The insights arising from this “fact finding” are analyzed and evaluated for their effects on the likely course of the future activity.

Another vital information resource stems from the firm’s ongoing interaction with key players in the international, domestic, and state economic scenes. Such activities include visiting with corporate

groups on a regular basis and being regularly involved in the policy process at all levels. The firm is also an active participant in many major corporate relocations, economic development initiatives, and regulatory proceedings.

Once organized, this information is carefully assessed and, when appropriate, independently verified. The impact on specific communities and sectors that is distinct from what is captured by the econometric system is then factored into the forecast analysis. For example, the opening or closing of a major facility, particularly in a relatively small area, can cause a sudden change in business performance that will not be accounted for by either a modeling system based on historical relationships or expected (primarily national and international) factors.

The final step in the forecasting process is the integration of this material into the results in a logical and mathematically consistent manner. In some instances, this task is accomplished through "constant adjustment factors" which augment relevant equations. In other cases, anticipated changes in industrial structure or regulatory parameters are initially simulated within the context of the Multi-Regional Impact Assessment System to estimate their ultimate effects by sector. Those findings are then factored into the simulation as constant adjustments on a distributed temporal basis. Once this scenario is formulated, the extended system is again balanced across regions and sectors through an iterative simulation algorithm analogous to that described in the preceding section.

US Multi-Regional Impact Assessment System

The basic modeling technique employed in this study is known as dynamic input-output analysis. This methodology essentially uses extensive survey data, industry information, and a variety of corroborative source materials to create a matrix describing the various goods and services (known as resources or inputs) required to produce one unit (a dollar's worth) of output for a given sector. Once the base information is compiled, it can be mathematically simulated to generate evaluations of the magnitude of successive rounds of activity involved in the overall production process.

There are two essential steps in conducting an input-output analysis once the system is operational. The first major endeavor is to accurately define the levels of direct activity to be evaluated. In this instance, Collin County personnel provided estimated plans regarding construction timing and costs for the conversion of US 380 to a limited access roadway. While The Perryman Group did not independently verify the accuracy of these projections, they were examined in light of patterns observed in other, similar projects and found to be within a reasonable range. In addition, a real estate absorption analysis was performed based on the baseline economic forecast for Collin County area derived from the Texas Econometric Model and utilizing the US Multi-Regional Real Estate Absorption System to project future demand by property type. The analysis compared the expected property demand by type for US 380 remaining a six-lane roadway as it is today to the situation where US 380 is converted to a limited access roadway. Construction costs for the potential future square footage needs were based on typical industry and general market patterns in the region. The process also involves integrating the projections with the Collin County submodel of the US Multi-Regional Industry Occupation System in order to determine square footage needs based on the likely patterns in the workforce. Summary results from the occupational analysis are provided in Appendix E, with more detail in an accompanying Excel workbook.

The second major phase of this segment of the analysis is the simulation of the input-output system to measure overall economic effects of the projects facilitated by the sales tax for economic development. The present study was conducted within the context of the USMRIAS which was developed and is maintained by The Perryman Group. This model has been used in hundreds of diverse applications across the country and has an excellent reputation for accuracy and credibility. The system used in the current simulations reflects the unique industrial structures and characteristics of Collin County.

The USMRIAS is somewhat similar in format to the Input-Output Model of the United States and the Regional Input-Output Modeling System, both of which are maintained by the US Department of Commerce. The model developed by TPG, however, incorporates several important enhancements and refinements. Specifically, the expanded system includes (1) comprehensive 500-sector coverage for any county, multi-county, or urban region; (2) calculation of both total expenditures and value-added by industry and region; (3) direct estimation of expenditures for multiple basic input choices (expenditures, output, income, or employment); (4) extensive parameter localization; (5) price adjustments for real and nominal assessments by sectors and areas; (6) measurement of the induced impacts associated with payrolls and consumer spending; (7) embedded modules to estimate multi-sectoral direct spending

effects; (8) estimation of retail spending activity by consumers; and (9) comprehensive linkage and integration capabilities with a wide variety of econometric, real estate, occupational, and fiscal impact models. Moreover, the model uses specific local taxing patterns to estimate the fiscal effects of activity on a detailed sectoral basis. The model used for the present investigation has been thoroughly tested for reasonableness and historical reliability.

The impact assessment (input-output) process essentially estimates the amounts of all types of goods and services required to produce one unit (a dollar's worth) of a specific type of output. For purposes of illustrating the nature of the system, it is useful to think of inputs and outputs in dollar (rather than physical) terms. As an example, the construction of a new building will require specific dollar amounts of lumber, glass, concrete, hand tools, architectural services, interior design services, paint, plumbing, and numerous other elements. Each of these suppliers must, in turn, purchase additional dollar amounts of inputs. This process continues through multiple rounds of production, thus generating subsequent increments to business activity. The initial process of building the facility is known as the *direct effect*. The ensuing transactions in the output chain constitute the *indirect effect*.

Another pattern that arises in response to any direct economic activity comes from the payroll dollars received by employees at each stage of the production cycle. As workers are compensated, they use some of their income for taxes, savings, and purchases from external markets. A substantial portion, however, is spent locally on food, clothing, health care services, utilities, housing, recreation, and other items. Typical purchasing patterns in the relevant areas are obtained from the *ACCRA Cost of Living Index*, a privately compiled inter-regional measure which has been widely used for several decades, and the *Consumer Expenditure Survey* of the US Department of Labor. These initial outlays by area residents generate further secondary activity as local providers acquire inputs to meet this consumer demand. These consumer spending impacts are known as the *induced effect*. The USMRIAS is designed to provide realistic, yet conservative, estimates of these phenomena.

Sources for information used in this process include the Bureau of the Census, the Bureau of Labor Statistics, the Regional Economic Information System of the US Department of Commerce, and other public and private sources. The pricing data are compiled from the US Department of Labor and the US Department of Commerce. The verification and testing procedures make use of extensive public and private sources.

Impacts were measured in constant 2016 dollars to eliminate the effects of inflation. Note that totals may not add due to rounding.

The USMRIAS generates estimates of the effect on several measures of business activity. The most comprehensive measure of economic activity used in this study is **Total Expenditures**. This measure incorporates every dollar that changes hands in any transaction. For example, suppose a farmer sells wheat to a miller for $0.50; the miller then sells flour to a baker for $0.75; the baker, in turn, sells bread to a customer for $1.25. The Total Expenditures recorded in this instance would be $2.50, that is, $0.50 + $0.75 + $1.25. This measure is quite broad, but is useful in that (1) it reflects the overall interplay of all

industries in the economy, and (2) some key fiscal variables such as sales taxes are linked to aggregate spending.

A second measure of business activity frequently employed in this analysis is that of **Gross Product**. This indicator represents the regional equivalent of Gross Domestic Product, the most commonly reported statistic regarding national economic performance. In other words, the Gross Product of Texas is the amount of US output that is produced in that state; it is defined as the value of all final goods produced in a given region for a specific period of time. Stated differently, it captures the amount of value-added (gross area product) over intermediate goods and services at each stage of the production process, that is, it eliminates the double counting in the Total Expenditures concept. Using the example above, the Gross Product is $1.25 (the value of the bread) rather than $2.50. Alternatively, it may be viewed as the sum of the value-added by the farmer, $0.50; the miller, $0.25 ($0.75 - $0.50); and the baker, $0.50 ($1.25 - $0.75). The total value-added is, therefore, $1.25, which is equivalent to the final value of the bread. In many industries, the primary component of value-added is the wage and salary payments to employees.

The third gauge of economic activity used in this evaluation is **Personal Income**. As the name implies, Personal Income is simply the income received by individuals, whether in the form of wages, salaries, interest, dividends, proprietors' profits, or other sources. It may thus be viewed as the segment of overall impacts which flows directly to the citizenry.

The fourth measure, **Retail Sales**, represents the component of Total Expenditures which occurs in retail outlets (general merchandise stores, automobile dealers and service stations, building materials stores, food stores, drugstores, restaurants, and so forth). Retail Sales is a commonly used measure of consumer activity.

The final aggregates used are **Permanent Jobs and Person-Years of Employment**. The Person-Years of Employment measure reveals the full-time equivalent jobs generated by an activity. It should be noted that, unlike the dollar values described above, Permanent Jobs is a "stock" rather than a "flow." In other words, if an area produces $1 million in output in 2015 and $1 million in 2016, it is appropriate to say that $2 million was achieved in the 2015-2016 period. If the same area has 100 people working in 2015 and 100 in 2016, it only has 100 Permanent Jobs. When a flow of jobs is measured, such as in a construction project or a cumulative assessment over multiple years, it is appropriate to measure employment in Person-Years (a person working for a year). This concept is distinct from Permanent Jobs, which anticipates that the relevant positions will be maintained on a continuing basis.

The USMRIAS is also linked to a fiscal model, which links the tax payments by industry to the specific rates and structures associated with the relevant State and local governmental authorities.

Texas Multi-Regional Industry-Occupation System

The **Texas Multi-Regional Industry-Occupation System** translates standard data on employment by industry (derived from the Texas Econometric Model or the US Multi-Regional Impact Assessment System) into estimates of occupational categories at a highly-detailed level.

The modeling process begins with the industry-occupation coefficients compiled by the US Department of Labor based on extensive surveys of operating patterns in thousands of firms and other secondary sources. As an example, a typical tire plant of a given size requires machinists, mechanics, plant managers, administrative staff, custodial staff, shipping personnel, and numerous other types of workers. By compiling this information across the entire economy, a matrix is created which allows the data on employment by industry (which is regularly compiled) to be translated into employment by occupation.

The Texas Multi-Regional Industry-Occupation System links this basic structure specifically to the economy of every metropolitan area, region, and county in the US, accounting for productivity and production patterns in each area. It is also regularly updated to reflect evolving patterns. The system can be fully integrated with historical employment data and the projections obtained from the Texas Econometric Model. It can also be linked to results from the US Multi-Regional Impact Assessment System. Thus, the industry-occupation system is a flexible mechanism to allow extensive evaluations of workforce characteristics and patterns. It is highly detailed, providing results for more than 1,000 occupational categories.

In the present study, it was used to develop an occupational profile of Collin County, which was in turn employed in estimating the absorption of various types of space.

US Multi-Regional Real Estate Absorption System

The US Multi-Regional Real Estate Absorption System is a model developed by The Perryman Group which allows such applications as (1) historical characterization of real estate absorption by category (office, industrial, retail, distribution, housing, etc.); (2) projections of future absorption; and (3) measurement of the impact of specific economic activity.

The system is based on the simple notion that economic activity ultimately determines the need for space. Industrial space is needed when production increases; retail space is needed when purchasing expands; office space demands depend on the number of office workers, and housing is required when population expands. Although real estate is subject to cycles, long-term patterns are highly correlated with business activity.

The first step in the process is to obtain the requisite information on employment by industry. This information may be derived from historical data, forecasts, or an impact assessment. In the present instance, it is based on the long-term forecasts for Collin County previously described. This information is then simulated for the relevant area to obtain employment by occupation using the relevant submodel of the US Multi-Regional Industry-Occupation System. The results are then linked to estimates of the square footage requirements for various types of occupations and activities obtained from the National Association of Industry and Office Parks and other primary sources. These estimates are frequently updated to reflect changing patterns in space utilization.

With regard to housing, the system links employment and projected population growth to new housing requirements based on local patterns, as well as allocations to single and multi-family categories. In the present analysis, this system provided baseline levels of square footage and housing units in both 2016 and 2040, as well as those induced by the conversion of a portion of US 380. It was further used as a reasonable check on the results, fully adjusting for the greater density of land use that accompanies urbanization.

Appendix C: Detailed Sectoral Results

US 380 Construction Effects

The Impact of Construction Activity Associated with Converting US 380 through the Study Area to a Limited Access Roadway (LAR) on Business Activity in Collin County* (In constant 2016 Dollars)				
Category	**Total Expenditures** (2016 Dollars)	**Gross Product** (2016 Dollars)	**Personal Income** (2016 Dollars)	**Employment** (Person-Years)
Agriculture	$7,320,266	$2,393,848	$1,613,346	26
Mining	$5,692,695	$1,454,144	$817,274	6
Construction	$231,523,797	$90,921,461	$74,924,947	1,068
Nondurable Manufacturing	$32,195,602	$9,903,136	$5,398,652	92
Durable Manufacturing	$58,635,910	$24,097,237	$14,531,596	228
Transportation and Utilities	$23,666,370	$10,947,005	$6,697,457	83
Information	$9,140,576	$5,610,190	$2,432,786	24
Wholesale Trade	$24,327,962	$16,463,681	$9,493,105	109
Retail Trade (including Restaurants)	$87,027,045	$65,669,574	$38,245,045	1,179
FIRE	$80,474,350	$19,455,161	$7,737,135	84
Business Services	$53,904,277	$33,923,646	$27,673,003	342
Health Services	$18,450,361	$12,919,967	$10,923,952	183
Other Services	$34,295,004	$17,397,039	$13,831,215	320
TOTAL	**$666,654,214**	**$311,156,089**	**$214,319,512**	**3,743**

SOURCE: US Multi-Regional Impact Assessment System, The Perryman Group;
Note: The US 380 corridor study area extends from the Denton-Collin County line to US 75 and includes all property within a 0.5-mile buffer on each side of US 380 and may extend beyond the 0.5-mile buffer if part of the specific parcel is within the 0.5-mile buffer

The Impact of Construction Activity Associated with Converting US 380 through the Study Area to a Limited Access Roadway (LAR) on Business Activity in Collin County* (in Current Dollars at time of anticipated construction)				
Category	**Total Expenditures**	**Gross Product**	**Personal Income**	**Employment** (Person-Years)
Agriculture	$11,534,783	$3,769,702	$2,541,754	26
Mining	$8,435,552	$2,176,900	$1,239,756	6
Construction	$357,768,352	$140,498,824	$115,779,782	1,068
Nondurable Manufacturing	$55,527,927	$16,833,093	$9,132,515	92
Durable Manufacturing	$91,545,126	$37,714,716	$22,740,924	228
Transportation and Utilities	$37,989,033	$17,124,616	$10,402,929	83
Information	$14,265,443	$8,755,477	$3,796,937	24
Wholesale Trade	$39,195,469	$26,525,102	$15,294,610	109
Retail Trade (including Restaurants)	$133,157,851	$100,101,710	$58,231,850	1,179
FIRE	$124,113,890	$30,604,398	$12,371,777	84
Business Services	$86,224,569	$54,263,816	$44,265,370	342
Health Services	$28,591,666	$20,021,472	$16,928,340	183
Other Services	$54,369,123	$27,560,295	$21,917,604	320
TOTAL	**$1,042,718,784**	**$485,950,122**	**$334,644,149**	**3,743**

SOURCE: US Multi-Regional Impact Assessment System, The Perryman Group;
Note: The US 380 corridor study area extends from the Denton-Collin County line to US 75 and includes all property within a 0.5-mile buffer on each side of US 380 and may extend beyond the 0.5-mile buffer if part of the specific parcel is within the 0.5-mile buffer

The Impact of Construction Activity Associated with Converting US 380 through the Study Area to a Limited Access Roadway (LAR) on Business Activity in Texas* (In constant 2016 Dollars)				
Category	**Total Expenditures** (2016 Dollars)	**Gross Product** (2016 Dollars)	**Personal Income** (2016 Dollars)	**Employment** (Person-Years)
Agriculture	$15,568,984	$5,174,859	$3,430,426	55
Mining	$27,071,539	$8,202,238	$4,577,749	38
Construction	$307,244,635	$121,131,795	$99,820,143	1,423
Nondurable Manufacturing	$114,590,166	$28,934,563	$14,888,154	233
Durable Manufacturing	$92,088,214	$37,920,069	$22,892,566	359
Transportation and Utilities	$79,786,986	$35,379,267	$21,401,734	260
Information	$19,097,885	$11,728,260	$5,059,926	48
Wholesale Trade	$38,187,307	$25,842,797	$14,901,187	172
Retail Trade (including Restaurants)	$125,318,153	$94,409,655	$54,955,863	1,699
FIRE	$123,902,767	$30,493,569	$12,250,842	131
Business Services	$72,203,353	$45,379,460	$37,018,011	457
Health Services	$29,150,866	$20,404,932	$17,252,559	289
Other Services	$54,545,874	$27,577,650	$22,181,998	542
TOTAL	**$1,098,756,728**	**$492,579,114**	**$330,631,158**	**5,705**

SOURCE: US Multi-Regional Impact Assessment System, The Perryman Group;
Note: The US 380 corridor study area extends from the Denton-Collin County line to US 75 and includes all property within a 0.5-mile buffer on each side of US 380 and may extend beyond the 0.5-mile buffer if part of the specific parcel is within the 0.5-mile buffer

The Impact of Construction Activity Associated with Converting US 380 through the Study Area to a Limited Access Roadway (LAR) on Business Activity in Texas* (in current dollars at time of anticipated construction)				
Category	**Total Expenditures**	**Gross Product**	**Personal Income**	**Employment** (Person-Years)
Agriculture	$24,518,129	$8,136,388	$5,399,722	55
Mining	$40,533,348	$12,470,358	$7,017,873	38
Construction	$474,778,006	$187,182,153	$154,249,751	1,423
Nondurable Manufacturing	$186,919,165	$47,218,426	$24,288,732	233
Durable Manufacturing	$143,683,628	$59,294,285	$35,793,894	359
Transportation and Utilities	$128,647,597	$55,533,955	$33,331,951	260
Information	$29,804,125	$18,302,833	$7,896,733	48
Wholesale Trade	$61,524,652	$41,636,062	$24,007,724	172
Retail Trade (including Restaurants)	$191,799,968	$143,945,502	$83,694,619	1,699
FIRE	$191,529,326	$48,166,706	$19,693,174	131
Business Services	$115,495,529	$72,588,384	$59,213,521	457
Health Services	$45,173,743	$31,620,574	$26,735,488	289
Other Services	$86,481,921	$43,680,240	$35,139,286	542
TOTAL	**$1,720,889,135**	**$769,775,866**	**$516,462,468**	**5,705**

SOURCE: US Multi-Regional Impact Assessment System, The Perryman Group;
Note: The US 380 corridor study area extends from the Denton-Collin County line to US 75 and includes all property within a 0.5-mile buffer on each side of US 380 and may extend beyond the 0.5-mile buffer if part of the specific parcel is within the 0.5-mile buffer

Effects of Displacements and Relocations

A Representative Scenario Illustrating the Potential Impact of Displacements and Relocations Associated with Converting US 380 through the Study Area to a Limited Access Roadway (LAR) on Business Activity in Collin County*				
Category	Total Expenditures (2016 Dollars)	Gross Product (2016 Dollars)	Personal Income (2016 Dollars)	Employment (Person-Years)
Agriculture	($5,268,117)	($1,317,090)	($877,224)	(14)
Mining	($1,284,729)	($298,580)	($177,462)	(1)
Construction	($4,512,555)	($2,368,489)	($1,951,783)	(28)
Nondurable Manufacturing	($25,209,517)	($7,544,319)	($4,079,760)	(69)
Durable Manufacturing	($5,809,839)	($2,247,163)	($1,448,036)	(20)
Transportation and Utilities	($8,748,608)	($3,670,004)	($2,165,884)	(25)
Information	($4,525,428)	($2,766,031)	($1,207,444)	(12)
Wholesale Trade	($9,417,242)	($6,372,200)	($3,674,266)	(42)
Retail Trade (including Restaurants)	($117,571,242)	($86,056,913)	($49,653,134)	(1,605)
FIRE	($48,955,009)	($14,313,070)	($5,266,868)	(56)
Business Services	($16,862,278)	($10,802,498)	($8,812,071)	(109)
Health Services	($8,841,972)	($6,192,850)	($5,236,112)	(88)
Other Services	($15,984,710)	($8,275,773)	($6,443,570)	(149)
TOTAL	**($272,991,246)**	**($152,224,979)**	**($90,993,613)**	**(2,218)**
SOURCE: US Multi-Regional Impact Assessment System, The Perryman Group Note: The US 380 corridor study area extends from the Denton-Collin County line to US 75 and includes all property within a 0.5-mile buffer on each side of US 380 and may extend beyond the 0.5-mile buffer if part of the specific parcel is within the 0.5-mile buffer.				

A Representative Scenario Illustrating the Potential Impact of Displacements and Relocations Associated with Converting US 380 through the Study Area to a Limited Access Roadway (LAR) on Business Activity in Texas*				
Category	Total Expenditures (2016 Dollars)	Gross Product (2016 Dollars)	Personal Income (2016 Dollars)	Employment (Person-Years)
Agriculture	($8,339,735)	($2,211,740)	($1,355,402)	(23)
Mining	($3,738,490)	($867,702)	($177,462)	(3)
Construction	($5,610,582)	($2,942,278)	($1,951,783)	(35)
Nondurable Manufacturing	($39,164,595)	($11,225,700)	($4,079,760)	(101)
Durable Manufacturing	($7,239,730)	($2,831,213)	($1,448,036)	(26)
Transportation and Utilities	($23,030,927)	($9,176,052)	($2,165,884)	(60)
Information	($7,139,926)	($4,368,539)	($1,207,444)	(18)
Wholesale Trade	($11,195,658)	($7,575,583)	($3,674,266)	(50)
Retail Trade (including Restaurants)	($120,137,154)	($87,935,101)	($49,653,134)	(1,640)
FIRE	($54,827,182)	($16,064,558)	($5,266,868)	(63)
Business Services	($17,205,012)	($11,004,250)	($8,812,071)	(111)
Health Services	($10,220,715)	($7,154,733)	($5,236,112)	(101)
Other Services	($18,573,496)	($9,584,443)	($6,443,570)	(184)
TOTAL	**($326,423,202)**	**($172,941,892)**	**($91,471,791)**	**(2,414)**

SOURCE: US Multi-Regional Impact Assessment System, The Perryman Group
Note: The US 380 corridor study area extends from the Denton-Collin County line to US 75 and includes all property within a 0.5-mile buffer on each side of US 380 and may extend beyond the 0.5-mile buffer if part of the specific parcel is within the 0.5-mile buffer.

Induced Construction Effects of Converting Portions of US 380 to a Limited Access Roadway

The Anticipated Impact of Induced Construction Activity Resulting from Converting US 380 through the Study Area to a Limited Access Roadway (LAR) on Business Activity in Collin County* (In constant 2016 Dollars)				
Category	**Total Expenditures**	**Gross Product**	**Personal Income**	**Employment (Person-Years)**
Agriculture	$418,754,662	$119,732,508	$80,310,859	1,292
Mining	$212,717,666	$51,543,066	$30,083,450	189
Construction	$14,656,826,536	$5,971,839,709	$4,921,167,860	70,143
Nondurable Manufacturing	$1,953,029,855	$615,746,629	$336,059,657	5,797
Durable Manufacturing	$4,198,028,240	$1,589,898,344	$1,012,768,567	16,625
Transportation and Utilities	$1,297,723,649	$577,202,245	$348,625,552	4,216
Information	$554,893,193	$341,509,398	$148,020,158	1,445
Wholesale Trade	$1,836,816,276	$1,242,783,137	$716,599,829	8,258
Retail Trade (including Restaurants)	$5,998,029,282	$4,577,421,781	$2,674,717,092	81,051
FIRE	$4,871,372,671	$1,172,319,590	$467,955,235	5,109
Business Services	$1,886,281,206	$1,172,627,162	$956,563,290	11,809
Health Services	$1,124,608,981	$787,396,819	$665,751,303	11,159
Other Services	$1,990,703,093	$1,024,739,635	$813,610,846	18,795
TOTAL	**$40,999,785,310**	**$19,244,760,023**	**$13,172,233,698**	**235,887**

SOURCE: US Multi-Regional Impact Assessment System, The Perryman Group
Note: The US 380 corridor study area extends from the Denton-Collin County line to US 75 and includes all property within a 0.5-mile buffer on each side of US 380 and may extend beyond the 0.5-mile buffer if part of the specific parcel is within the 0.5-mile buffer.

The Anticipated Impact of Induced Construction Activity Resulting from Converting US 380 through the Study Area to a Limited Access Roadway (LAR) on Business Activity in Collin County* (in current dollars at time of anticipated construction)				
Category	**Total Expenditures**	**Gross Product**	**Personal Income**	**Employment** (Person-Years)
Agriculture	$864,705,759	$247,070,066	$165,830,506	1,292
Mining	$413,093,045	$100,830,166	$59,865,535	189
Construction	$29,692,037,370	$12,097,849,925	$9,969,381,820	70,143
Nondurable Manufacturing	$4,416,063,446	$1,369,389,644	$743,823,970	5,797
Durable Manufacturing	$8,569,516,790	$3,254,340,923	$2,071,403,873	16,625
Transportation and Utilities	$2,746,034,507	$1,188,315,847	$712,072,560	4,216
Information	$1,135,305,699	$698,710,027	$302,859,785	1,445
Wholesale Trade	$3,879,623,839	$2,624,939,221	$1,513,563,341	8,258
Retail Trade (including Restaurants)	$12,008,278,789	$9,132,346,981	$5,330,806,614	81,051
FIRE	$9,848,593,039	$2,417,587,927	$980,764,223	5,109
Business Services	$3,955,560,328	$2,459,016,963	$2,005,927,743	11,809
Health Services	$2,284,703,889	$1,599,639,168	$1,352,509,732	11,159
Other Services	$4,136,953,977	$2,128,062,692	$1,690,074,729	18,795
TOTAL	**$83,950,470,479**	**$39,318,099,550**	**$26,898,884,432**	**235,887**

SOURCE: US Multi-Regional Impact Assessment System, The Perryman Group
Note: The US 380 corridor study area extends from the Denton-Collin County line to US 75 and includes all property within a 0.5-mile buffer on each side of US 380 and may extend beyond the 0.5-mile buffer if part of the specific parcel is within the 0.5-mile buffer.

The Anticipated Impact of Induced Construction Activity Resulting from Converting US 380 through the Study Area to a Limited Access Roadway (LAR) on Business Activity in Texas* (In constant 2016 Dollars)				
Category	**Total Expenditures**	**Gross Product**	**Personal Income**	**Employment** (Person-Years)
Agriculture	$976,091,123	$285,854,063	$187,404,943	2,998
Mining	$966,313,033	$252,722,519	$141,910,983	1,009
Construction	$21,080,718,116	$8,615,175,374	$7,099,441,083	101,190
Nondurable Manufacturing	$6,187,363,925	$1,781,685,405	$928,599,364	15,468
Durable Manufacturing	$7,252,955,534	$2,751,796,652	$1,757,094,936	28,596
Transportation and Utilities	$4,715,430,205	$2,011,906,405	$1,200,843,481	14,235
Information	$1,247,025,308	$768,014,139	$331,245,227	3,162
Wholesale Trade	$3,100,790,800	$2,097,990,649	$1,209,720,095	13,940
Retail Trade (including Restaurants)	$9,189,809,869	$6,997,443,051	$4,086,086,503	124,249
FIRE	$8,068,000,964	$1,980,761,892	$798,233,936	8,531
Business Services	$2,770,959,167	$1,719,768,038	$1,402,890,045	17,319
Health Services	$1,910,542,072	$1,336,977,116	$1,130,426,535	18,947
Other Services	$3,395,574,247	$1,744,186,649	$1,401,256,670	34,314
TOTAL	**$70,861,574,363**	**$32,344,281,952**	**$21,675,153,801**	**383,959**

SOURCE: US Multi-Regional Impact Assessment System, The Perryman Group
Note: The US 380 corridor study area extends from the Denton-Collin County line to US 75 and includes all property within a 0.5-mile buffer on each side of US 380 and may extend beyond the 0.5-mile buffer if part of the specific parcel is within the 0.5-mile buffer.

The Anticipated Impact of Induced Construction Activity Resulting from Converting US 380 through the Study Area to a Limited Access Roadway (LAR) on Business Activity in Texas* (in current dollars at time of anticipated construction)				
Category	**Total Expenditures**	**Gross Product**	**Personal Income**	**Employment** (Person-Years)
Agriculture	$2,013,313,905	$588,603,624	$386,489,661	2,998
Mining	$1,880,358,273	$497,108,321	$282,649,244	1,009
Construction	$42,705,661,321	$17,452,762,269	$14,382,163,112	101,190
Nondurable Manufacturing	$13,329,012,661	$3,818,963,194	$1,988,805,463	15,468
Durable Manufacturing	$14,805,903,547	$5,630,478,316	$3,593,053,828	28,596
Transportation and Utilities	$10,019,365,578	$4,156,630,719	$2,459,723,403	14,235
Information	$2,551,284,312	$1,571,254,999	$677,711,911	3,162
Wholesale Trade	$6,549,322,359	$4,431,262,202	$2,555,105,255	13,940
Retail Trade (including Restaurants)	$18,405,517,120	$13,965,060,501	$8,146,201,527	124,249
FIRE	$16,348,771,490	$4,101,485,484	$1,681,786,561	8,531
Business Services	$5,810,743,444	$3,606,379,687	$2,941,881,724	17,319
Health Services	$3,881,369,415	$2,716,141,226	$2,296,522,565	18,947
Other Services	$7,056,940,731	$3,621,311,316	$2,909,693,962	34,314
TOTAL	**$145,357,564,158**	**$66,157,441,857**	**$44,301,788,215**	**383,959**

SOURCE: US Multi-Regional Impact Assessment System, The Perryman Group
Note: The US 380 corridor study area extends from the Denton-Collin County line to US 75 and includes all property within a 0.5-mile buffer on each side of US 380 and may extend beyond the 0.5-mile buffer if part of the specific parcel is within the 0.5-mile buffer.

Annual Impact of Induced Activity at Maturity

The Anticipated Annual Impact (at Maturity) of Induced Activity Resulting from Converting US 380 through the Study Area to a Limited Access Roadway (LAR) on Business Activity in Collin County*				
Category	Total Expenditures (2016 Dollars)	Gross Product (2016 Dollars)	Personal Income (2016 Dollars)	Employment (Permanent Jobs)
Agriculture	$330,123,196	$90,993,717	$61,166,560	981
Mining	$205,693,719	$46,951,068	$25,813,471	143
Construction	$839,549,858	$425,827,066	$350,908,043	5,001
Nondurable Manufacturing	$1,864,754,806	$601,028,506	$334,305,244	5,677
Durable Manufacturing	$1,270,065,870	$561,589,314	$355,780,548	4,328
Transportation and Utilities	$1,108,654,737	$451,023,485	$263,268,451	2,997
Information	$1,095,671,919	$678,048,435	$291,282,741	2,726
Wholesale Trade	$1,184,690,487	$801,444,332	$462,119,929	5,324
Retail Trade (including Restaurants)	$4,358,924,498	$3,238,613,614	$1,877,347,452	59,272
FIRE	$8,802,003,363	$2,940,106,034	$1,076,539,295	11,228
Business Services	$4,055,979,607	$2,634,536,339	$2,149,106,579	26,530
Health Services	$1,520,298,882	$1,046,215,818	$884,585,159	14,825
Other Services	$2,187,594,059	$1,150,751,840	$935,150,457	21,555
TOTAL	**$28,824,005,003**	**$14,667,129,568**	**$9,067,373,928**	**160,587**

SOURCE: US Multi-Regional Impact Assessment System, The Perryman Group
Note: The US 380 corridor study area extends from the Denton-Collin County line to US 75 and includes all property within a 0.5-mile buffer on each side of US 380 and may extend beyond the 0.5-mile buffer if part of the specific parcel is within the 0.5-mile buffer.

The Anticipated Annual Impact (at Maturity) of Induced Activity Resulting from Converting US 380 through the Study Area to a Limited Access Roadway (LAR) on Business Activity in Texas*				
Category	Total Expenditures (2016 Dollars)	Gross Product (2016 Dollars)	Personal Income (2016 Dollars)	Employment (Permanent Jobs)
Agriculture	$527,097,265	$150,020,463	$98,858,381	1,579
Mining	$470,758,807	$109,429,061	$59,947,552	354
Construction	$972,086,091	$495,433,964	$408,268,481	5,818
Nondurable Manufacturing	$3,280,474,120	$975,924,001	$520,470,990	8,794
Durable Manufacturing	$1,435,588,368	$629,062,110	$400,223,846	4,933
Transportation and Utilities	$2,533,030,771	$1,008,191,139	$584,027,363	6,560
Information	$1,376,111,374	$850,830,662	$365,128,573	3,402
Wholesale Trade	$1,342,183,337	$907,982,436	$523,550,754	6,032
Retail Trade (including Restaurants)	$4,626,210,938	$3,433,915,778	$1,989,974,001	62,919
FIRE	$9,477,126,393	$3,136,222,765	$1,159,024,961	12,003
Business Services	$4,091,380,833	$2,655,375,446	$2,166,105,949	26,739
Health Services	$1,660,202,493	$1,143,815,375	$967,106,506	16,209
Other Services	$2,449,242,118	$1,283,937,194	$1,049,015,950	25,100
TOTAL	**$34,241,492,910**	**$16,780,140,394**	**$10,291,703,308**	**180,442**

SOURCE: US Multi-Regional Impact Assessment System, The Perryman Group
Note: The US 380 corridor study area extends from the Denton-Collin County line to US 75 and includes all property within a 0.5-mile buffer on each side of US 380 and may extend beyond the0 .5-mile buffer if part of the specific parcel is within the 0.5-mile buffer.

Appendix D: Collin County Forecast

Historical and Projected Values for Key Economic Indicators for Collin County*								
Date	Gross Area Product	Real Gross Product	Personal Income (by place of residence)	Real Personal Income (by place of residence)	Personal Income (by place of work)	Real Personal Income (by place of work)	Total Employment	Wage and Salary Employment
2001	$16,493.996	$19,226.057	$23,377.279	$27,775.552	$11,096.512	$13,184.244	270.2	192.6
2002	$18,525.938	$21,222.687	$23,501.310	$27,687.309	$11,697.834	$13,781.425	284.7	199.5
2003	$20,987.718	$23,467.259	$25,071.449	$28,814.238	$13,065.779	$15,016.303	298.3	211.5
2004	$23,743.226	$25,745.271	$26,882.878	$30,176.412	$14,408.596	$16,173.853	323.6	227.0
2005	$28,706.118	$29,771.922	$31,619.190	$34,302.461	$17,295.639	$18,763.384	361.7	257.3
2006	$31,843.153	$32,403.179	$34,430.482	$36,314.376	$19,510.662	$20,578.205	392.6	280.7
2007	$33,780.814	$33,941.097	$36,805.030	$38,161.002	$21,061.275	$21,837.215	415.5	292.9
2008	$37,797.492	$37,153.227	$39,631.140	$39,564.271	$23,020.463	$22,981.621	441.2	306.2
2009	$36,263.476	$36,263.476	$37,404.196	$37,404.196	$22,303.307	$22,303.307	444.6	301.3
2010	$39,155.650	$38,507.373	$39,829.108	$39,342.315	$23,499.233	$23,212.024	449.2	304.9
2011	$42,430.777	$40,850.276	$44,049.356	$42,152.051	$25,788.990	$24,678.200	471.4	321.0
2012	$46,659.352	$44,357.305	$47,378.511	$44,479.276	$28,944.238	$27,173.052	493.9	338.3
2013	$50,288.794	$47,032.892	$49,047.209	$45,276.459	$30,741.391	$28,377.993	515.8	352.2
2014	$53,451.450	$49,430.985	$52,358.740	$47,408.519	$32,876.063	$29,767.818	535.7	370.0
2015	$56,745.667	$52,427.700	$54,986.689	$49,942.156	$34,396.150	$31,240.613	567.3	391.8
2016	$62,545.408	$56,177.031	$57,496.876	$51,706.307	$35,659.902	$32,068.556	601.1	415.1
2017	$68,043.020	$59,602.342	$61,885.040	$54,657.626	$38,435.149	$33,946.395	625.9	432.2
2018	$73,631.810	$63,083.729	$66,810.709	$57,747.968	$41,705.251	$36,048.016	650.2	448.9
2019	$79,609.640	$66,716.138	$72,103.442	$60,934.320	$45,247.956	$38,238.860	675.0	466.0
2020	$85,963.136	$70,474.684	$77,408.187	$63,968.338	$48,600.521	$40,162.349	700.3	483.5
2021	$92,756.119	$74,400.341	$83,060.122	$67,124.645	$52,175.710	$42,165.554	726.4	501.4
2022	$100,011.734	$78,496.983	$89,077.188	$70,405.449	$55,984.746	$44,249.613	753.1	519.8
2023	$107,753.326	$82,768.092	$95,476.241	$73,811.576	$60,037.208	$46,414.070	780.5	538.6
2024	$116,005.777	$87,217.808	$102,280.410	$77,348.179	$64,349.492	$48,663.434	808.6	558.0
2025	$124,793.868	$91,849.652	$109,511.062	$81,018.304	$68,935.623	$50,999.846	837.3	577.8
2026	$134,143.112	$96,667.169	$117,190.407	$84,824.990	$73,810.232	$53,425.467	866.8	598.1
2027	$144,079.323	$101,673.686	$125,341.384	$88,771.161	$78,988.403	$55,942.356	897.0	618.8
2028	$154,629.093	$106,872.598	$133,987.876	$92,859.779	$84,485.952	$58,552.662	927.8	640.0

Historical and Projected Values for Key Economic Indicators for Collin County*								
Date	Gross Area Product	Real Gross Product	Personal Income (by place of residence)	Real Personal Income (by place of residence)	Personal Income (by place of work)	Real Personal Income (by place of work)	Total Employment	Wage and Salary Employment
2029	$165,818.613	$112,266.660	$143,154.508	$97,093.680	$90,319.159	$61,258.424	959.3	661.7
2030	$177,675.104	$117,858.959	$152,866.758	$101,475.652	$96,504.928	$64,061.675	991.5	683.8
2031	$190,225.335	$123,651.984	$163,150.952	$106,008.413	$103,060.769	$66,964.418	1,024.3	706.4
2032	$203,495.433	$129,647.617	$174,034.147	$110,694.534	$110,004.660	$69,968.537	1,057.7	729.4
2033	$217,512.581	$135,848.120	$185,544.357	$115,536.583	$117,355.342	$73,075.977	1,091.8	752.8
2034	$232,304.111	$142,255.637	$197,710.467	$120,537.048	$125,132.217	$76,288.667	1,126.6	776.7
2035	$247,897.324	$148,872.109	$210,561.974	$125,698.190	$133,355.027	$79,608.322	1,161.9	801.0
2036	$264,319.535	$155,699.299	$224,129.259	$131,022.201	$142,044.211	$83,036.660	1,197.8	825.6
2037	$281,598.074	$162,738.861	$238,443.593	$136,511.209	$151,220.933	$86,575.412	1,234.3	850.7
2038	$299,760.046	$169,992.237	$253,536.776	$142,167.067	$160,906.630	$90,226.057	1,271.3	876.2
2039	$318,832.517	$177,460.757	$269,441.514	$147,991.579	$171,123.515	$93,990.116	1,308.8	901.9
2040	$338,842.374	$185,145.674	$286,191.083	$153,986.310	$181,894.169	$97,868.919	1,346.9	928.1

Historical and Projected Values for Key Economic Indicators for Collin County*							
Date	Population	Gross Product Deflator	Texas Consumer Price Index	Industrial Production Index	Labor Productivity	Retail Sales	Real Retail Sales
2001	534.6	85.8	84.2	57.1	$99,849	N/A	N/A
2002	563.6	87.3	84.9	60.9	$106,382	$7,220.683	$8,506.815
2003	589.4	89.4	87.0	58.3	$110,979	$7,750.027	$8,906.989
2004	617.8	92.2	89.1	67.6	$113,392	$8,379.910	$9,406.568
2005	647.2	96.4	92.2	80.8	$115,721	$9,254.359	$10,039.704
2006	683.9	98.3	94.8	86.6	$115,442	$9,871.311	$10,411.428
2007	714.3	99.5	96.4	89.6	$115,867	$11,287.481	$11,703.335
2008	741.3	101.7	100.2	103.7	$121,323	$11,617.033	$11,597.432
2009	765.8	100.0	100.0	100.0	$120,348	$10,774.035	$10,774.035
2010	788.6	101.7	101.2	112.6	$126,276	$11,723.144	$11,579.863
2011	814.7	103.9	104.5	116.8	$127,255	$13,717.398	$13,126.559
2012	837.5	105.2	106.5	131.8	$131,132	$14,865.246	$13,955.596
2013	858.7	106.9	108.3	144.9	$133,545	$15,609.643	$14,409.574
2014	885.2	108.1	110.4	146.3	$133,590	$17,232.059	$15,602.866
2015	909.5	108.2	110.1	151.0	$133,811	$18,619.708	$16,911.517
2016	935.9	111.3	111.2	154.0	$135,333	$19,442.852	$17,484.743
2017	965.7	114.2	113.2	163.7	$137,904	$21,116.044	$18,649.949
2018	996.6	116.7	115.7	174.3	$140,518	$23,001.555	$19,881.440
2019	1,028.4	119.3	118.3	185.5	$143,161	$25,046.636	$21,166.808
2020	1,059.7	122.0	121.0	196.1	$145,770	$27,133.427	$22,422.437
2021	1,091.9	124.7	123.7	207.1	$148,391	$29,379.173	$23,742.640
2022	1,125.0	127.4	126.5	218.6	$151,023	$31,794.027	$25,129.585
2023	1,159.0	130.2	129.4	230.6	$153,664	$34,387.856	$26,584.853
2024	1,194.1	133.0	132.2	243.1	$156,314	$37,173.699	$28,112.107
2025	1,230.1	135.9	135.2	256.1	$158,972	$40,164.061	$29,714.113
2026	1,267.2	138.8	138.2	269.7	$161,637	$43,372.132	$31,393.702
2027	1,305.4	141.7	141.2	283.7	$164,308	$46,811.768	$33,153.735
2028	1,344.7	144.7	144.3	298.3	$166,986	$50,497.590	$34,997.159

Historical and Projected Values for Key Economic Indicators for Collin County*							
Date	Population	Gross Product Deflator	Texas Consumer Price Index	Industrial Production Index	Labor Productivity	Retail Sales	Real Retail Sales
2029	1,385.1	147.7	147.4	313.4	$169,669	$54,444.938	$36,926.950
2030	1,426.6	150.8	150.6	329.1	$172,358	$58,669.933	$38,946.137
2031	1,469.3	153.8	153.9	345.3	$175,051	$63,189.501	$41,057.797
2032	1,513.3	157.0	157.2	362.1	$177,749	$68,021.353	$43,265.026
2033	1,558.5	160.1	160.6	379.6	$180,450	$73,184.099	$45,570.993
2034	1,605.0	163.3	164.0	397.6	$183,155	$78,697.240	$47,978.912
2035	1,652.8	166.5	167.5	416.3	$185,864	$84,581.099	$50,491.980
2036	1,702.0	169.8	171.1	435.6	$188,578	$90,856.948	$53,113.446
2037	1,752.5	173.0	174.7	455.6	$191,297	$97,547.043	$55,846.603
2038	1,804.5	176.3	178.3	476.2	$194,022	$104,674.507	$58,694.711
2039	1,858.0	179.7	182.1	497.6	$196,753	$112,263.510	$61,661.078
2040	1,912.9	183.0	185.9	519.7	$199,491	$120,339.162	$64,748.990

* GROSS AREA PRODUCT - Millions of Dollars; REAL GROSS AREA PRODUCT - Millions of 2009 Dollars; PERSONAL INCOME (By place of residence and work) - Millions of Dollars; REAL PERSONAL INCOME (By place of residence and work) - Millions of 2009 Dollars; EMPLOYMENT - Thousands of Persons; TEXAS CONSUMER PRICE INDEX - 2009=100; GROSS PRODUCT DEFLATOR - 2009=100; POPULATION - Thousands of Persons; INDUSTRIAL PRODUCTION INDEX - 2009=100; LABOR PRODUCTIVITY – 2009 Dollars per Employee; RETAIL SALES - Millions of Dollars; REAL RETAIL SALES - Millions of 2009 Dollars

Historical and Projected Values for Key Measures of Per Capita Economic Performance For Collin County*						
Date	Per Capital Gross Area Product*	Per Capita Real Gross Product*	Per Capita Personal Income (by place of residence)*	Per Capita Real Personal Income)by place of residence)*	Per Capita Retail Sales*	Per Capita Real Sales*
2001	$30.851	$35.961	$43.725	$51.952	N/A	N/A
2002	$32.873	$37.658	$41.701	$49.129	$12.813	$15.095
2003	$35.609	$39.816	$42.538	$48.888	$13.149	$15.112
2004	$38.432	$41.672	$43.514	$48.845	$13.564	$15.226
2005	$44.355	$46.002	$48.856	$53.002	$14.299	$15.513
2006	$46.559	$47.378	$50.342	$53.096	$14.433	$15.223
2007	$47.290	$47.515	$51.524	$53.422	$15.801	$16.384
2008	$50.991	$50.121	$53.464	$53.374	$15.672	$15.645
2009	$47.354	$47.354	$48.844	$48.844	$14.069	$14.069
2010	$49.654	$48.832	$50.508	$49.891	$14.866	$14.685
2011	$52.079	$50.139	$54.066	$51.737	$16.837	$16.111
2012	$55.714	$52.965	$56.573	$53.111	$17.750	$16.664
2013	$58.563	$54.772	$57.117	$52.726	$18.178	$16.780
2014	$60.381	$55.839	$59.146	$53.554	$19.466	$17.626
2015	$62.389	$57.642	$60.455	$54.909	$20.472	$18.593
2016	$66.826	$60.022	$61.432	$55.245	$20.773	$18.681
2017	$70.461	$61.720	$64.084	$56.600	$21.866	$19.313
2018	$73.882	$63.298	$67.038	$57.944	$23.080	$19.949
2019	$77.409	$64.872	$70.110	$59.250	$24.354	$20.582
2020	$81.121	$66.505	$73.048	$60.365	$25.605	$21.159
2021	$84.952	$68.141	$76.072	$61.477	$26.907	$21.745
2022	$88.902	$69.777	$79.182	$62.584	$28.262	$22.338
2023	$92.968	$71.411	$82.376	$63.684	$29.669	$22.937
2024	$97.151	$73.042	$85.656	$64.777	$31.132	$23.543
2025	$101.447	$74.666	$89.024	$65.861	$32.650	$24.155
2026	$105.855	$76.282	$92.477	$66.937	$34.226	$24.773
2027	$110.372	$77.887	$96.018	$68.003	$35.860	$25.397
2028	$114.994	$79.479	$99.644	$69.058	$37.554	$26.027

Historical and Projected Values for Key Measures of Per Capita Economic Performance For Collin County*						
Date	Per Capital Gross Area Product*	Per Capita Real Gross Product*	Per Capita Personal Income (by place of residence)*	Per Capita Real Personal Income)by place of residence)*	Per Capita Retail Sales*	Per Capita Real Sales*
2029	$119.720	$81.056	$103.356	$70.101	$39.309	$26.661
2030	$124.544	$82.615	$107.154	$71.131	$41.126	$27.300
2031	$129.463	$84.155	$111.037	$72.147	$43.005	$27.943
2032	$134.472	$85.672	$115.003	$73.148	$44.949	$28.590
2033	$139.565	$87.166	$119.053	$74.133	$46.958	$29.240
2034	$144.738	$88.633	$123.184	$75.101	$49.033	$29.893
2035	$149.985	$90.072	$127.396	$76.051	$51.174	$30.549
2036	$155.301	$91.481	$131.687	$76.982	$53.383	$31.207
2037	$160.680	$92.859	$136.056	$77.893	$55.660	$31.866
2038	$166.115	$94.203	$140.500	$78.783	$58.007	$32.526
2039	$171.601	$95.513	$145.018	$79.652	$60.422	$33.187
2040	$177.132	$96.786	$149.608	$80.497	$62.908	$33.848

* PER CAPITA GROSS AREA PRODUCT - Thousands of Dollars; PER CAPITA REAL GROSS AREA PRODUCT - Thousands of 2009 Dollars; PER CAPITA PERSONAL INCOME (By place of residence) - Thousands of Dollars; PER CAPITA REAL PERSONAL INCOME (By place of residence) - Thousands of 2009 Dollars; PER CAPITA RETAIL SALES - Thousands of Dollars; PER CAPITA REAL RETAIL SALES - Thousands of 2009 Dollars

Historical and Projected Values for Nominal Gross Product by Major Industrial Classification for Collin County*								
Date	Agriculture	Mining	Construction	Total Mfg.	Durable Mfg.	Nondurable Mfg.	Trade	Transportation Warehousing and Utilities
2001	$12.856	$309.650	$1,019.458	$2,732.490	$1,680.521	$1,051.969	$2,466.889	$277.681
2002	$21.673	$338.259	$1,117.909	$2,838.248	$1,813.396	$1,024.852	$2,617.712	$300.893
2003	$29.302	$641.424	$1,223.570	$2,487.632	$1,913.605	$574.027	$3,476.940	$353.511
2004	$35.318	$743.916	$1,376.826	$3,113.061	$2,395.818	$717.243	$3,860.459	$356.487
2005	$27.421	$1,068.316	$1,665.029	$4,008.991	$3,274.700	$734.291	$4,548.980	$387.688
2006	$23.051	$1,221.953	$1,916.366	$4,148.946	$3,550.191	$598.755	$4,908.630	$397.571
2007	$25.185	$1,362.966	$2,011.776	$4,100.023	$3,470.568	$629.455	$4,491.452	$387.748
2008	$7.177	$2,342.813	$1,711.995	$4,408.565	$3,803.169	$605.396	$4,803.389	$470.760
2009	($37.888)	$1,101.742	$1,533.561	$4,319.615	$3,551.644	$767.970	$4,635.004	$487.224
2010	$21.476	$1,652.016	$1,527.538	$4,744.282	$3,926.051	$818.231	$5,088.844	$611.464
2011	$25.714	$1,651.498	$1,593.065	$5,556.752	$3,938.102	$1,618.650	$5,487.051	$577.225
2012	$24.779	$1,777.883	$1,898.856	$6,132.517	$4,504.830	$1,627.686	$6,433.618	$615.242
2013	$23.915	$2,168.078	$2,019.084	$6,556.141	$4,966.430	$1,589.711	$6,781.377	$766.397
2014	$20.853	$2,132.766	$2,195.268	$6,537.824	$5,072.988	$1,464.836	$7,201.059	$823.197
2015	$19.023	$1,370.793	$2,432.973	$6,817.318	$5,261.614	$1,555.704	$7,790.615	$880.249
2016	$18.149	$1,473.410	$2,667.761	$7,279.574	$5,612.075	$1,667.498	$8,795.311	$954.251
2017	$18.521	$1,838.101	$2,867.401	$7,811.312	$6,017.990	$1,793.321	$9,579.246	$1,022.998
2018	$19.473	$2,092.245	$3,087.743	$8,366.231	$6,436.150	$1,930.081	$10,355.037	$1,097.355
2019	$20.465	$2,380.435	$3,316.224	$8,952.113	$6,875.583	$2,076.531	$11,174.475	$1,176.217
2020	$21.511	$2,619.173	$3,543.210	$9,569.138	$7,336.661	$2,232.478	$12,016.492	$1,262.142
2021	$22.601	$2,874.409	$3,784.132	$10,225.147	$7,825.098	$2,400.049	$12,911.499	$1,353.227
2022	$23.736	$3,146.312	$4,039.575	$10,922.343	$8,342.248	$2,580.095	$13,861.940	$1,449.678
2023	$24.919	$3,434.632	$4,310.101	$11,663.018	$8,889.543	$2,773.475	$14,870.302	$1,551.701
2024	$26.149	$3,739.735	$4,596.514	$12,449.570	$9,468.433	$2,981.137	$15,939.107	$1,659.500
2025	$27.430	$4,061.490	$4,899.403	$13,284.515	$10,080.435	$3,204.080	$17,070.907	$1,773.273
2026	$28.762	$4,399.590	$5,219.645	$14,170.499	$10,727.110	$3,443.389	$18,268.279	$1,893.212
2027	$30.146	$4,753.591	$5,557.988	$15,110.276	$11,410.110	$3,700.165	$19,533.817	$2,019.510
2028	$31.584	$5,122.881	$5,915.584	$16,106.779	$12,131.157	$3,975.621	$20,870.125	$2,152.343

Historical and Projected Values for Nominal Gross Product by Major Industrial Classification for Collin County*								
Date	Agriculture	Mining	Construction	Total Mfg.	Durable Mfg.	Nondurable Mfg.	Trade	Transportation Warehousing and Utilities
2029	$33.077	$5,506.673	$6,292.928	$17,163.026	$12,891.965	$4,271.061	$22,279.807	$2,291.882
2030	$34.626	$5,904.027	$6,691.149	$18,282.236	$13,694.429	$4,587.807	$23,765.463	$2,438.290
2031	$36.234	$6,314.293	$7,110.323	$19,467.799	$14,540.469	$4,927.330	$25,329.674	$2,591.708
2032	$37.901	$6,735.971	$7,550.415	$20,723.185	$15,432.035	$5,291.150	$26,974.996	$2,752.272
2033	$39.629	$7,167.520	$8,012.149	$22,052.115	$16,371.204	$5,680.911	$28,703.950	$2,920.093
2034	$41.419	$7,607.297	$8,496.241	$23,458.534	$17,360.188	$6,098.346	$30,519.010	$3,095.271
2035	$43.272	$8,053.514	$9,003.397	$24,946.513	$18,401.256	$6,545.257	$32,422.589	$3,277.884
2036	$45.190	$8,504.204	$9,534.315	$26,520.318	$19,496.715	$7,023.603	$34,417.038	$3,468.001
2037	$47.174	$8,957.316	$10,089.679	$28,184.503	$20,649.059	$7,535.444	$36,504.624	$3,665.670
2038	$49.226	$9,410.613	$10,670.159	$29,943.770	$21,860.874	$8,082.896	$38,687.522	$3,870.918
2039	$51.347	$9,861.793	$11,276.410	$31,803.129	$23,134.839	$8,668.289	$40,967.798	$4,083.749
2040	$53.538	$10,308.448	$11,909.071	$33,767.846	$24,473.905	$9,293.941	$43,347.401	$4,304.148

*Millions of Dollars

Historical and Projected Values for Nominal Gross Product by Major Industrial Classification for Collin County*					
Date	Information	Finance, Insurance and Real Estate	Total Services	Government	Total All Industries
2001	$2,042.533	$3,097.127	$3,239.556	$1,295.756	$16,493.996
2002	$2,554.127	$3,712.256	$3,542.948	$1,481.915	$18,525.938
2003	$2,862.594	$4,317.206	$3,940.944	$1,654.594	$20,987.718
2004	$3,300.837	$4,726.447	$4,482.692	$1,747.183	$23,743.226
2005	$4,131.326	$5,458.129	$5,499.608	$1,910.629	$28,706.118
2006	$4,596.051	$5,693.551	$6,861.443	$2,075.590	$31,843.153
2007	$4,996.393	$5,455.936	$8,631.456	$2,317.878	$33,780.814
2008	$6,112.442	$5,947.784	$9,470.959	$2,521.608	$37,797.492
2009	$5,842.016	$6,206.299	$9,441.416	$2,734.487	$36,263.476
2010	$5,069.395	$6,907.526	$10,652.418	$2,880.690	$39,155.650
2011	$4,856.185	$8,098.377	$11,662.816	$2,922.095	$42,430.777
2012	$4,464.087	$9,038.132	$13,155.730	$3,118.510	$46,659.352
2013	$5,076.188	$9,569.084	$14,032.777	$3,295.753	$50,288.794
2014	$5,457.667	$10,321.485	$15,265.563	$3,495.769	$53,451.450
2015	$5,938.597	$11,073.603	$16,739.489	$3,683.006	$56,745.667
2016	$6,362.215	$12,323.534	$18,670.991	$4,000.212	$62,545.408
2017	$6,762.978	$13,357.349	$20,512.124	$4,272.991	$68,043.020
2018	$7,191.995	$14,366.901	$22,511.246	$4,543.585	$73,631.810
2019	$7,641.113	$15,446.291	$24,673.599	$4,828.708	$79,609.640
2020	$8,125.892	$16,667.388	$27,008.026	$5,130.165	$85,963.136
2021	$8,632.902	$17,977.150	$29,527.472	$5,447.580	$92,756.119
2022	$9,162.524	$19,381.199	$32,242.828	$5,781.598	$100,011.734
2023	$9,715.074	$20,885.450	$35,165.254	$6,132.875	$107,753.326
2024	$10,290.849	$22,496.124	$38,306.149	$6,502.079	$116,005.777
2025	$10,890.071	$24,219.767	$41,677.121	$6,889.892	$124,793.868
2026	$11,512.926	$26,063.254	$45,289.943	$7,297.003	$134,143.112
2027	$12,159.557	$28,033.813	$49,156.511	$7,724.115	$144,079.323
2028	$12,830.027	$30,139.035	$53,288.801	$8,171.935	$154,629.093
2029	$13,524.334	$32,386.895	$57,698.810	$8,641.181	$165,818.613

Historical and Projected Values for Nominal Gross Product by Major Industrial Classification for Collin County*					
Date	Information	Finance, Insurance and Real Estate	Total Services	Government	Total All Industries
2030	$14,242.463	$34,785.765	$62,398.506	$9,132.578	$177,675.104
2031	$14,984.269	$37,344.416	$67,399.764	$9,646.854	$190,225.335
2032	$15,749.596	$40,072.053	$72,714.300	$10,184.744	$203,495.433
2033	$16,538.200	$42,978.335	$78,353.606	$10,746.984	$217,512.581
2034	$17,349.749	$46,073.402	$84,328.875	$11,334.313	$232,304.111
2035	$18,183.860	$49,367.900	$90,650.925	$11,947.469	$247,897.324
2036	$19,040.107	$52,873.048	$97,330.123	$12,587.189	$264,319.535
2037	$19,917.953	$56,600.647	$104,376.301	$13,254.207	$281,598.074
2038	$20,816.811	$60,563.108	$111,798.669	$13,949.250	$299,760.046
2039	$21,736.020	$64,773.501	$119,605.729	$14,673.041	$318,832.517
2040	$22,674.850	$69,245.594	$127,805.186	$15,426.293	$338,842.374

*Millions of Dollars

Historical and Projected Values for Real Gross Product by Major Industrial Classification for Collin County*								
Date	Agriculture	Mining	Construction	Total Mfg.	Durable Mfg.	Nondurable Mfg.	Total Trade	Transportation, Warehousing, and Utilities
2001	$13.267	$575.130	$1,577.987	$2,464.579	$1,175.968	$1,288.612	$2,874.081	$332.893
2002	$23.765	$740.998	$1,652.391	$2,477.961	$1,296.846	$1,181.115	$3,056.731	$381.648
2003	$29.000	$880.188	$1,727.927	$2,127.109	$1,455.565	$671.544	$4,059.913	$436.427
2004	$30.103	$826.552	$1,805.517	$2,738.360	$1,875.696	$862.664	$4,414.085	$427.592
2005	$27.365	$840.783	$1,967.082	$3,481.844	$2,627.586	$854.259	$5,105.229	$451.937
2006	$24.019	$922.330	$2,067.943	$3,749.172	$3,068.337	$680.836	$5,343.291	$445.419
2007	$21.149	$955.454	$2,040.273	$3,915.205	$3,215.904	$699.302	$4,799.990	$425.675
2008	$7.105	$1,226.139	$1,736.128	$4,389.659	$3,744.488	$645.171	$5,012.617	$511.736
2009	($37.888)	$1,101.742	$1,533.561	$4,319.615	$3,551.644	$767.970	$4,635.004	$487.224
2010	$19.105	$1,275.185	$1,555.723	$4,775.260	$4,014.618	$760.641	$5,012.168	$604.258
2011	$18.529	$1,117.621	$1,598.952	$5,228.124	$4,138.171	$1,089.953	$5,289.703	$557.390
2012	$17.145	$1,422.313	$1,851.754	$5,786.604	$4,763.787	$1,022.817	$6,027.715	$578.828
2013	$16.056	$1,540.059	$1,902.565	$6,324.500	$5,224.489	$1,100.011	$6,288.624	$696.521
2014	$15.073	$1,588.516	$1,949.138	$6,342.569	$5,292.153	$1,050.415	$6,606.645	$713.958
2015	$22.863	$1,786.011	$2,100.951	$6,428.768	$5,250.369	$1,178.399	$7,079.804	$707.344
2016	$21.338	$1,565.376	$2,234.092	$6,781.060	$5,555.124	$1,225.936	$7,833.186	$753.178
2017	$21.303	$1,688.215	$2,329.256	$7,190.355	$5,910.355	$1,280.000	$8,362.525	$793.243
2018	$21.914	$1,851.313	$2,433.567	$7,610.515	$6,272.397	$1,338.118	$8,862.531	$835.986
2019	$22.535	$2,029.998	$2,536.403	$8,048.065	$6,649.814	$1,398.251	$9,378.086	$880.411
2020	$23.178	$2,153.518	$2,630.526	$8,502.419	$7,042.648	$1,459.771	$9,890.691	$928.276
2021	$23.831	$2,279.601	$2,727.609	$8,979.753	$7,456.062	$1,523.692	$10,424.817	$977.993
2022	$24.494	$2,407.790	$2,827.616	$9,481.059	$7,890.948	$1,590.111	$10,980.943	$1,029.578
2023	$25.167	$2,537.354	$2,930.490	$10,007.360	$8,348.257	$1,659.102	$11,559.532	$1,083.041
2024	$25.850	$2,668.146	$3,036.325	$10,559.697	$8,828.936	$1,730.762	$12,161.028	$1,138.389
2025	$26.543	$2,799.674	$3,145.058	$11,139.161	$9,333.976	$1,805.185	$12,785.855	$1,195.623
2026	$27.244	$2,931.396	$3,256.801	$11,746.876	$9,864.392	$1,882.485	$13,434.413	$1,254.735
2027	$27.955	$3,062.756	$3,371.564	$12,384.011	$10,421.261	$1,962.750	$14,107.078	$1,315.720
2028	$28.675	$3,193.172	$3,489.587	$13,051.804	$11,005.705	$2,046.100	$14,804.198	$1,378.558
2029	$29.403	$3,322.041	$3,610.693	$13,751.485	$11,618.821	$2,132.664	$15,526.093	$1,443.227

Historical and Projected Values for Real Gross Product by Major Industrial Classification for Collin County*								
Date	Agriculture	Mining	Construction	Total Mfg.	Durable Mfg.	Nondurable Mfg.	Total Trade	Transportation, Warehousing, and Utilities
2030	$30.140	$3,448.757	$3,735.071	$14,484.398	$12,261.849	$2,222.549	$16,273.050	$1,509.698
2031	$30.884	$3,572.969	$3,862.307	$15,251.934	$12,936.031	$2,315.903	$17,045.323	$1,577.932
2032	$31.637	$3,693.913	$3,991.963	$16,055.477	$13,642.618	$2,412.859	$17,843.129	$1,647.886
2033	$32.396	$3,810.918	$4,124.030	$16,896.525	$14,382.950	$2,513.575	$18,666.646	$1,719.507
2034	$33.162	$3,923.362	$4,258.490	$17,776.680	$15,158.468	$2,618.212	$19,516.013	$1,792.737
2035	$33.935	$4,030.641	$4,395.316	$18,697.568	$15,970.642	$2,726.926	$20,391.324	$1,867.507
2036	$34.715	$4,132.163	$4,534.475	$19,660.873	$16,820.957	$2,839.916	$21,292.628	$1,943.745
2037	$35.500	$4,227.390	$4,675.926	$20,668.431	$17,711.045	$2,957.386	$22,219.928	$2,021.368
2038	$36.290	$4,315.779	$4,819.621	$21,722.123	$18,642.592	$3,079.531	$23,173.175	$2,100.284
2039	$37.086	$4,396.847	$4,965.506	$22,823.943	$19,617.348	$3,206.596	$24,152.272	$2,180.398
2040	$37.885	$4,470.139	$5,113.520	$23,976.054	$20,637.268	$3,338.786	$25,157.064	$2,261.606

*Millions of 2009 Dollars

Historical and Projected Values for Real Gross Product by Major Industrial Classification for Collin County*					
Date	Information	Finance, Insurance, and Estate	Total Services	Government	Total All Industries
2001	$1,955.435	$3,588.194	$4,086.605	$1,757.886	$19,226.057
2002	$2,434.878	$4,155.481	$4,352.851	$1,945.983	$21,222.687
2003	$2,753.278	$4,617.634	$4,743.898	$2,091.886	$23,467.259
2004	$3,211.927	$4,968.005	$5,221.324	$2,101.804	$25,745.271
2005	$3,998.629	$5,488.156	$6,201.140	$2,209.757	$29,771.922
2006	$4,476.772	$5,550.951	$7,520.303	$2,302.978	$32,403.179
2007	$4,954.484	$5,315.489	$9,046.832	$2,466.546	$33,941.097
2008	$6,140.035	$5,794.609	$9,743.077	$2,592.122	$37,153.227
2009	$5,842.016	$6,206.299	$9,441.416	$2,734.487	$36,263.476
2010	$5,113.665	$6,813.651	$10,534.080	$2,804.279	$38,507.373
2011	$4,929.810	$7,886.307	$11,431.217	$2,792.623	$40,850.276
2012	$4,539.197	$8,540.798	$12,664.280	$2,928.671	$44,357.305
2013	$5,133.211	$8,814.696	$13,295.060	$3,021.600	$47,032.892
2014	$5,533.748	$9,268.627	$14,285.211	$3,127.501	$49,430.985
2015	$6,113.045	$9,672.316	$15,300.300	$3,216.298	$52,427.700
2016	$6,515.995	$10,514.473	$16,553.950	$3,404.384	$56,177.031
2017	$6,893.056	$11,133.188	$17,646.569	$3,544.631	$59,602.342
2018	$7,296.711	$11,698.928	$18,797.644	$3,674.620	$63,083.729
2019	$7,718.638	$12,289.313	$20,004.588	$3,808.100	$66,716.138
2020	$8,174.541	$12,957.709	$21,267.785	$3,946.042	$70,474.684
2021	$8,650.859	$13,657.644	$22,590.562	$4,087.672	$74,400.341
2022	$9,148.060	$14,390.201	$23,974.210	$4,233.032	$78,496.983
2023	$9,666.575	$15,156.483	$25,419.932	$4,382.159	$82,768.092
2024	$10,206.835	$15,957.609	$26,928.838	$4,535.090	$87,217.808
2025	$10,769.226	$16,794.722	$28,501.933	$4,691.858	$91,849.652
2026	$11,354.120	$17,668.980	$30,140.110	$4,852.494	$96,667.169
2027	$11,961.876	$18,581.563	$31,844.137	$5,017.026	$101,673.686
2028	$12,592.799	$19,533.673	$33,614.652	$5,185.480	$106,872.598
2029	$13,247.158	$20,526.534	$35,452.149	$5,357.878	$112,266.660

Historical and Projected Values for Real Gross Product by Major Industrial Classification for Collin County*					
Date	Information	Finance, Insurance, and Estate	Total Services	Government	Total All Industries
2030	$13,925.239	$21,561.395	$37,356.970	$5,534.240	$117,858.959
2031	$14,627.229	$22,639.524	$39,329.299	$5,714.581	$123,651.984
2032	$15,353.330	$23,762.220	$41,369.146	$5,898.915	$129,647.617
2033	$16,103.690	$24,930.810	$43,476.346	$6,087.252	$135,848.120
2034	$16,878.398	$26,146.654	$45,650.546	$6,279.596	$142,255.637
2035	$17,677.521	$27,411.149	$47,891.196	$6,475.951	$148,872.109
2036	$18,501.104	$28,725.734	$50,197.547	$6,676.314	$155,699.299
2037	$19,349.110	$30,091.892	$52,568.637	$6,880.681	$162,738.861
2038	$20,221.476	$31,511.159	$55,003.289	$7,089.041	$169,992.237
2039	$21,118.094	$32,985.126	$57,500.106	$7,301.381	$177,460.757
2040	$22,038.811	$34,515.451	$60,057.462	$7,517.683	$185,145.674

*Millions of 2009 Dollars

Historical and Projected Values for Wage and Salary Employment by Major Industrial Classification for Collin County*								
Date	Agriculture	Mining	Construction	Total Mfg.	Durable Mfg.	Nondurable Mfg.	Total Trade	Transportation, Warehousing, and Utilities
2001	0.4	0.6	10.7	21.6	16.3	5.3	37.1	1.5
2002	0.3	0.3	10.3	20.4	14.6	5.8	37.6	2.2
2003	0.3	0.2	10.3	17.3	13.6	3.7	40.6	2.7
2004	0.3	0.3	11.1	18.0	14.3	3.6	44.3	2.6
2005	0.3	0.4	13.0	20.9	17.2	3.6	48.1	2.8
2006	0.3	0.7	14.1	21.1	17.9	3.2	50.7	2.7
2007	0.3	1.0	15.8	22.5	19.3	3.2	49.2	2.7
2008	0.4	1.3	15.6	22.6	19.5	3.0	51.3	3.5
2009	0.4	1.2	13.0	20.4	17.3	3.0	49.8	3.4
2010	0.4	1.2	11.5	20.0	17.1	3.0	50.3	3.0
2011	0.4	1.4	11.8	20.5	17.6	2.9	52.3	2.8
2012	0.4	1.6	13.3	22.0	19.3	2.7	55.5	2.6
2013	0.4	1.5	14.0	22.9	20.2	2.8	56.2	3.2
2014	0.4	0.9	14.9	23.0	20.1	2.9	58.1	3.6
2015	0.4	0.8	16.1	23.4	20.5	2.9	62.0	3.8
2016	0.4	0.7	16.9	23.8	20.8	3.0	67.1	4.0
2017	0.4	0.8	17.4	24.3	21.3	3.0	70.1	4.1
2018	0.4	0.8	18.0	24.8	21.7	3.1	72.7	4.2
2019	0.4	0.9	18.5	25.3	22.1	3.1	75.3	4.3
2020	0.4	0.9	19.0	25.7	22.5	3.2	77.8	4.5
2021	0.4	0.9	19.4	26.2	23.0	3.3	80.4	4.6
2022	0.4	0.9	19.9	26.7	23.4	3.3	83.0	4.8
2023	0.4	1.0	20.4	27.2	23.8	3.4	85.6	4.9
2024	0.4	1.0	20.9	27.7	24.3	3.4	88.3	5.1
2025	0.4	1.0	21.4	28.2	24.7	3.5	91.1	5.2
2026	0.4	1.0	21.9	28.7	25.2	3.6	93.9	5.4
2027	0.5	1.1	22.4	29.2	25.6	3.6	96.8	5.6
2028	0.5	1.1	22.9	29.7	26.1	3.7	99.7	5.7
2029	0.5	1.1	23.5	30.3	26.5	3.7	102.7	5.9

Historical and Projected Values for Wage and Salary Employment by Major Industrial Classification for Collin County*								
Date	Agriculture	Mining	Construction	Total Mfg.	Durable Mfg.	Nondurable Mfg.	Total Trade	Transportation, Warehousing, and Utilities
2030	0.5	1.2	24.0	30.8	27.0	3.8	105.8	6.1
2031	0.5	1.2	24.6	31.3	27.5	3.9	108.9	6.2
2032	0.5	1.2	25.2	31.9	27.9	3.9	112.0	6.4
2033	0.5	1.3	25.7	32.4	28.4	4.0	115.3	6.6
2034	0.5	1.3	26.3	33.0	28.9	4.0	118.5	6.8
2035	0.5	1.3	26.9	33.5	29.4	4.1	121.9	7.0
2036	0.5	1.3	27.5	34.1	29.9	4.2	125.2	7.2
2037	0.5	1.4	28.1	34.6	30.4	4.2	128.7	7.4
2038	0.5	1.4	28.7	35.2	30.9	4.3	132.2	7.6
2039	0.5	1.4	29.4	35.8	31.4	4.4	135.7	7.8
2040	0.5	1.4	30.0	36.4	31.9	4.4	139.3	8.0

*Thousands of Persons

Historical and Projected Values for Wage and Salary Employment by Major Industrial Classification for Collin County*					
Date	Information	Finance, Insurance and Real Estate	Total Services	Government	Total All Industries
2001	14.1	18.0	62.9	25.6	192.6
2002	13.3	20.0	66.7	28.3	199.5
2003	14.3	23.2	71.9	30.6	211.5
2004	14.5	24.6	80.1	31.1	227.0
2005	18.5	28.5	92.2	32.4	257.3
2006	19.6	31.1	105.9	34.5	280.7
2007	20.2	26.5	118.3	36.4	292.9
2008	19.6	26.6	126.1	39.2	306.2
2009	18.1	27.1	126.5	41.4	301.3
2010	16.5	28.3	131.1	42.6	304.9
2011	16.4	32.1	140.0	43.3	321.0
2012	15.8	34.0	149.3	43.8	338.3
2013	15.0	35.0	158.8	45.1	352.2
2014	15.4	36.4	171.2	46.2	370.0
2015	16.2	38.6	182.7	47.8	391.8
2016	16.7	41.2	194.4	50.0	415.1
2017	17.1	42.8	203.8	51.4	432.2
2018	17.6	44.1	213.7	52.7	448.9
2019	18.1	45.5	223.8	53.9	466.0
2020	18.6	47.1	234.3	55.2	483.5
2021	19.1	48.7	245.0	56.5	501.4
2022	19.7	50.4	256.1	57.9	519.8
2023	20.2	52.1	267.6	59.2	538.6
2024	20.8	53.9	279.3	60.6	558.0
2025	21.3	55.7	291.4	62.0	577.8
2026	21.9	57.5	303.8	63.5	598.1
2027	22.5	59.4	316.5	64.9	618.8
2028	23.1	61.3	329.5	66.4	640.0
2029	23.7	63.3	342.9	67.9	661.7

Historical and Projected Values for Wage and Salary Employment by Major Industrial Classification for Collin County*					
Date	Information	Finance, Insurance and Real Estate	Total Services	Government	Total All Industries
2030	24.3	65.3	356.5	69.4	683.8
2031	25.0	67.3	370.5	71.0	706.4
2032	25.6	69.4	384.7	72.5	729.4
2033	26.2	71.5	399.2	74.1	752.8
2034	26.9	73.7	414.0	75.7	776.7
2035	27.5	76.0	429.1	77.4	801.0
2036	28.2	78.2	444.4	79.0	825.6
2037	28.9	80.5	459.9	80.7	850.7
2038	29.6	82.9	475.7	82.4	876.2
2039	30.3	85.3	491.7	84.1	901.9
2040	31.0	87.7	507.9	85.9	928.1

*Thousands of Persons

Historical and Projected Values for Wage and Salary Employment by Detailed Industrial Classification For Collin County*								
Date	Total Agriculture	Farm	Forestry, Fishing, Related Other	Forestry & Logging	Fishing, Hunting, Trapping	Agriculture & Forestry Support	Total Mining	Oil & Gas Extraction
2001	0.385	0.284	0.101	0.027	0.000	0.074	0.565	0.374
2002	0.336	0.241	0.095	0.027	0.000	0.068	0.269	0.141
2003	0.330	0.226	0.104	0.024	0.000	0.080	0.248	0.154
2004	0.317	0.205	0.112	0.023	0.000	0.089	0.300	0.166
2005	0.339	0.222	0.117	0.018	0.001	0.098	0.403	0.219
2006	0.314	0.188	0.126	0.018	0.001	0.107	0.673	0.246
2007	0.344	0.205	0.139	0.028	0.001	0.110	1.009	0.301
2008	0.367	0.215	0.152	0.037	0.001	0.114	1.325	0.577
2009	0.412	0.256	0.156	0.036	0.001	0.119	1.203	0.574
2010	0.398	0.240	0.158	0.035	0.002	0.121	1.230	0.555
2011	0.388	0.241	0.147	0.042	0.000	0.105	1.389	0.565
2012	0.387	0.259	0.128	0.021	0.000	0.107	1.643	0.607
2013	0.389	0.282	0.107	0.000	0.000	0.107	1.505	0.658
2014	0.398	0.279	0.119	0.000	0.000	0.119	0.887	0.526
2015	0.402	0.281	0.121	0.000	0.000	0.121	0.796	0.469
2016	0.406	0.283	0.123	0.000	0.000	0.123	0.693	0.406
2017	0.411	0.286	0.125	0.000	0.000	0.125	0.751	0.437
2018	0.415	0.288	0.127	0.000	0.000	0.127	0.799	0.461
2019	0.419	0.290	0.128	0.000	0.000	0.128	0.851	0.488
2020	0.423	0.293	0.130	0.000	0.000	0.130	0.878	0.501
2021	0.427	0.295	0.132	0.000	0.000	0.132	0.906	0.513
2022	0.431	0.297	0.134	0.000	0.000	0.134	0.934	0.526
2023	0.435	0.299	0.136	0.000	0.000	0.136	0.962	0.538
2024	0.440	0.302	0.138	0.000	0.000	0.138	0.991	0.550
2025	0.443	0.304	0.140	0.000	0.000	0.140	1.019	0.563
2026	0.447	0.306	0.142	0.000	0.000	0.142	1.048	0.575
2027	0.451	0.308	0.144	0.000	0.000	0.144	1.077	0.587
2028	0.455	0.309	0.146	0.000	0.000	0.146	1.106	0.599
2029	0.459	0.311	0.147	0.000	0.000	0.147	1.135	0.610

Historical and Projected Values for Wage and Salary Employment by Detailed Industrial Classification For Collin County*								
Date	Total Agriculture	Farm	Forestry, Fishing, Related Other	Forestry & Logging	Fishing, Hunting, Trapping	Agriculture & Forestry Support	Total Mining	Oil & Gas Extraction
2030	0.462	0.313	0.149	0.000	0.000	0.149	1.164	0.622
2031	0.466	0.315	0.151	0.000	0.000	0.151	1.193	0.633
2032	0.469	0.316	0.153	0.000	0.000	0.153	1.222	0.644
2033	0.473	0.318	0.155	0.000	0.000	0.155	1.251	0.655
2034	0.476	0.320	0.156	0.000	0.000	0.156	1.280	0.666
2035	0.479	0.321	0.158	0.000	0.000	0.158	1.308	0.677
2036	0.482	0.322	0.160	0.000	0.000	0.160	1.337	0.687
2037	0.485	0.324	0.162	0.000	0.000	0.162	1.365	0.697
2038	0.488	0.325	0.163	0.000	0.000	0.163	1.394	0.707
2039	0.491	0.326	0.165	0.000	0.000	0.165	1.421	0.716
2040	0.494	0.327	0.167	0.000	0.000	0.167	1.449	0.725

*Thousands of Persons

Historical and Projected Values for Wage and Salary Employment by Detailed Industrial Classification For Collin County*								
Date	Mining (Except Oil & Gas)	Support Activity for Mining	Utilities	Total Construction	Construction of Buildings	Heavy & Civil Eng. Construction	Specialty Trade Contractors	Total Manufacturing
2001	0.042	0.149	0.293	10.740	2.486	1.518	6.736	21.579
2002	0.020	0.108	0.345	10.299	2.424	1.543	6.332	20.358
2003	0.020	0.074	0.361	10.268	2.325	1.617	6.326	17.280
2004	0.017	0.117	0.306	11.113	2.577	1.675	6.861	17.975
2005	0.006	0.178	0.262	13.033	3.378	2.264	7.391	20.874
2006	0.009	0.418	0.288	14.117	4.048	2.500	7.569	21.056
2007	0.001	0.707	0.280	15.819	4.441	3.064	8.314	22.535
2008	0.001	0.747	0.257	15.579	4.083	3.004	8.492	22.557
2009	0.002	0.627	0.354	12.958	3.183	2.696	7.079	20.369
2010	0.008	0.667	0.354	11.500	2.944	2.387	6.169	20.046
2011	0.007	0.817	0.380	11.768	2.961	2.565	6.242	20.497
2012	0.013	1.023	0.409	13.293	3.131	3.482	6.680	21.986
2013	0.011	0.836	0.783	14.027	3.316	3.177	7.534	22.941
2014	0.012	0.349	0.771	14.900	3.712	3.311	7.877	23.006
2015	0.010	0.317	0.831	16.095	4.078	3.559	8.458	23.449
2016	0.008	0.279	0.870	16.905	4.337	3.725	8.844	23.794
2017	0.009	0.305	0.896	17.410	4.506	3.826	9.078	24.291
2018	0.009	0.328	0.925	17.972	4.678	3.943	9.351	24.783
2019	0.010	0.353	0.953	18.507	4.835	4.056	9.616	25.269
2020	0.010	0.368	0.984	18.965	4.964	4.155	9.847	25.743
2021	0.010	0.383	1.015	19.433	5.088	4.257	10.087	26.223
2022	0.010	0.398	1.046	19.908	5.210	4.363	10.335	26.709
2023	0.010	0.414	1.077	20.393	5.330	4.472	10.591	27.200
2024	0.010	0.430	1.109	20.886	5.449	4.584	10.853	27.697
2025	0.010	0.446	1.140	21.388	5.567	4.698	11.123	28.199
2026	0.010	0.463	1.171	21.899	5.685	4.816	11.398	28.706
2027	0.010	0.479	1.202	22.419	5.803	4.936	11.680	29.219
2028	0.011	0.497	1.233	22.948	5.921	5.059	11.968	29.738

Historical and Projected Values for Wage and Salary Employment by Detailed Industrial Classification For Collin County*								
Date	Mining (Except Oil & Gas)	Support Activity for Mining	Utilities	Total Construction	Construction of Buildings	Heavy & Civil Eng. Construction	Specialty Trade Contractors	Total Manufacturing
2029	0.011	0.514	1.264	23.486	6.040	5.185	12.261	30.261
2030	0.011	0.531	1.294	24.033	6.160	5.313	12.561	30.790
2031	0.011	0.549	1.328	24.589	6.281	5.443	12.866	31.324
2032	0.011	0.567	1.362	25.155	6.402	5.575	13.177	31.864
2033	0.011	0.585	1.395	25.729	6.525	5.710	13.494	32.408
2034	0.011	0.603	1.428	26.313	6.648	5.848	13.817	32.958
2035	0.011	0.621	1.460	26.906	6.773	5.988	14.145	33.512
2036	0.011	0.639	1.492	27.509	6.898	6.131	14.480	34.072
2037	0.011	0.657	1.523	28.121	7.025	6.276	14.820	34.636
2038	0.011	0.676	1.553	28.742	7.152	6.425	15.166	35.205
2039	0.011	0.694	1.582	29.373	7.280	6.576	15.517	35.779
2040	0.011	0.713	1.611	30.013	7.409	6.729	15.875	36.357

*Thousands of Persons

Historical and Projected Values for Wage and Salary Employment by Detailed Industrial Classification for Collin County*								
Date	Durable Goods	Wood Products	NonMetallic Mineral Products	Primary Metal Mfg.	Fabricated Metal Products	Machinery Mfg.	Computer & Electronic Products	Electrical Equipment & Appliance Manufacturing
2001	16.277	0.366	0.694	1.152	1.310	0.882	9.192	0.158
2002	14.593	0.288	0.734	0.965	1.067	0.760	7.912	0.466
2003	13.600	0.241	0.717	0.919	1.204	0.650	7.097	0.341
2004	14.345	0.259	0.690	1.012	1.199	0.537	7.694	0.352
2005	17.243	0.287	0.682	0.938	1.327	0.583	10.208	0.405
2006	17.877	0.313	0.643	1.089	1.374	0.700	10.283	0.368
2007	19.324	0.310	0.615	1.070	1.369	0.806	11.658	0.261
2008	19.511	0.271	0.688	1.201	1.499	0.786	11.566	0.611
2009	17.340	0.248	0.580	1.130	1.223	0.756	10.567	0.559
2010	17.084	0.221	0.372	1.098	1.169	0.713	10.602	0.635
2011	17.590	0.197	0.358	1.098	1.221	0.786	10.656	0.763
2012	19.291	0.153	0.311	1.159	1.286	0.825	12.122	0.888
2013	20.182	0.213	0.356	1.101	1.338	0.825	12.909	0.831
2014	20.132	0.246	0.420	1.188	1.408	0.835	12.587	0.865
2015	20.521	0.251	0.427	1.211	1.431	0.857	12.813	0.888
2016	20.824	0.255	0.432	1.230	1.449	0.876	12.986	0.907
2017	21.261	0.260	0.440	1.256	1.475	0.901	13.241	0.933
2018	21.695	0.266	0.448	1.282	1.501	0.926	13.493	0.959
2019	22.123	0.271	0.455	1.307	1.526	0.951	13.741	0.984
2020	22.541	0.276	0.463	1.332	1.551	0.976	13.983	1.010
2021	22.964	0.282	0.470	1.358	1.576	1.001	14.227	1.036
2022	23.392	0.287	0.477	1.383	1.601	1.027	14.474	1.062
2023	23.826	0.293	0.485	1.409	1.626	1.054	14.723	1.089
2024	24.264	0.298	0.492	1.435	1.651	1.081	14.974	1.117
2025	24.707	0.304	0.500	1.462	1.677	1.108	15.228	1.145
2026	25.154	0.309	0.508	1.489	1.703	1.136	15.485	1.173

Historical and Projected Values for Wage and Salary Employment by Detailed Industrial Classification for Collin County*								
Date	Durable Goods	Wood Products	NonMetallic Mineral Products	Primary Metal Mfg.	Fabricated Metal Products	Machinery Mfg.	Computer & Electronic Products	Electrical Equipment & Appliance Manufacturing
2027	25.607	0.315	0.515	1.516	1.728	1.165	15.744	1.202
2028	26.065	0.321	0.523	1.543	1.754	1.194	16.005	1.232
2029	26.527	0.327	0.531	1.571	1.781	1.224	16.268	1.262
2030	26.994	0.333	0.539	1.599	1.807	1.255	16.534	1.293
2031	27.466	0.339	0.546	1.627	1.833	1.286	16.802	1.324
2032	27.942	0.345	0.554	1.655	1.860	1.317	17.073	1.355
2033	28.423	0.351	0.562	1.684	1.887	1.350	17.345	1.388
2034	28.909	0.357	0.570	1.713	1.914	1.382	17.620	1.420
2035	29.399	0.364	0.578	1.743	1.941	1.416	17.897	1.454
2036	29.893	0.370	0.586	1.772	1.968	1.450	18.175	1.487
2037	30.392	0.376	0.594	1.802	1.995	1.485	18.456	1.522
2038	30.895	0.383	0.603	1.832	2.022	1.520	18.739	1.557
2039	31.403	0.389	0.611	1.862	2.050	1.556	19.024	1.592
2040	31.915	0.396	0.619	1.893	2.077	1.593	19.311	1.628

*Thousands of Persons

Historical and Projected Values for Wage and Salary Employment by Detailed Industrial Classification For Collin County*								
Date	Motor Vehicle Manufacturing	Transportation Equipment, Excl. Vehicles	Furniture & Related Mfg.	Misc. Mfg.	NonDurable Goods	Food Mfg.	Beverage & Tobacco Products	Textile Mills
2001	1.448	0.037	0.578	0.460	5.302	3.982	0.003	0.052
2002	1.320	0.002	0.697	0.382	5.765	4.334	0.003	0.073
2003	1.256	0.004	0.748	0.423	3.680	2.084	0.009	0.075
2004	1.267	0.003	0.915	0.417	3.630	1.990	0.052	0.097
2005	1.266	0.017	1.062	0.468	3.631	1.864	0.087	0.107
2006	1.349	0.009	1.232	0.517	3.179	1.349	0.090	0.108
2007	1.301	0.009	1.345	0.580	3.211	1.358	0.100	0.105
2008	1.114	0.023	1.155	0.597	3.046	1.369	0.094	0.077
2009	0.730	0.036	0.920	0.591	3.029	1.506	0.092	0.071
2010	0.676	0.033	0.924	0.641	2.962	1.610	0.089	0.063
2011	0.771	0.039	0.998	0.703	2.907	1.539	0.091	0.068
2012	0.869	0.044	0.841	0.793	2.695	1.343	0.076	0.074
2013	0.907	0.053	0.828	0.821	2.759	1.303	0.164	0.075
2014	0.936	0.042	0.828	0.777	2.874	1.186	0.201	0.073
2015	0.985	0.043	0.846	0.768	2.928	1.209	0.206	0.074
2016	1.029	0.044	0.861	0.757	2.970	1.226	0.210	0.074
2017	1.079	0.045	0.881	0.752	3.029	1.251	0.215	0.075
2018	1.128	0.046	0.901	0.747	3.088	1.276	0.220	0.076
2019	1.176	0.047	0.921	0.743	3.146	1.300	0.226	0.077
2020	1.222	0.048	0.941	0.740	3.202	1.323	0.231	0.078
2021	1.267	0.049	0.961	0.738	3.259	1.347	0.236	0.079
2022	1.311	0.050	0.981	0.738	3.316	1.371	0.241	0.080
2023	1.353	0.051	1.002	0.741	3.374	1.396	0.247	0.081
2024	1.394	0.052	1.023	0.745	3.433	1.420	0.252	0.082
2025	1.433	0.053	1.044	0.752	3.492	1.445	0.258	0.082
2026	1.469	0.054	1.066	0.762	3.552	1.470	0.264	0.083
2027	1.504	0.056	1.088	0.774	3.612	1.495	0.269	0.084

Historical and Projected Values for Wage and Salary Employment by Detailed Industrial Classification For Collin County*								
Date	Motor Vehicle Manufacturing	Transportation Equipment, Excl. Vehicles	Furniture & Related Mfg.	Misc. Mfg.	NonDurable Goods	Food Mfg.	Beverage & Tobacco Products	Textile Mills
2028	1.535	0.057	1.110	0.790	3.673	1.520	0.275	0.085
2029	1.564	0.058	1.132	0.809	3.734	1.546	0.281	0.086
2030	1.591	0.059	1.155	0.831	3.796	1.571	0.287	0.087
2031	1.614	0.060	1.178	0.856	3.859	1.597	0.293	0.087
2032	1.634	0.062	1.202	0.885	3.922	1.623	0.299	0.088
2033	1.650	0.063	1.225	0.918	3.985	1.650	0.305	0.089
2034	1.663	0.064	1.249	0.955	4.049	1.676	0.311	0.090
2035	1.672	0.065	1.274	0.996	4.114	1.703	0.317	0.091
2036	1.678	0.067	1.298	1.041	4.179	1.730	0.324	0.091
2037	1.680	0.068	1.323	1.091	4.244	1.757	0.330	0.092
2038	1.677	0.069	1.349	1.144	4.310	1.784	0.337	0.093
2039	1.671	0.071	1.374	1.202	4.376	1.811	0.343	0.094
2040	1.661	0.072	1.400	1.265	4.443	1.839	0.350	0.094

*Thousands of Persons

Historical and Projected Values for Wage and Salary Employment by Detailed Industrial Classification for Collin County*								
Date	Textile Product Mills	Apparel Manufacturing	Leather & Allied Products	Paper Manufacturing	Printing & Related Support	Petroleum & Coal Products	Chemical Manufacturing	Plastics & Rubbers Products
2001	0.083	0.062	0.080	0.182	0.306	0.001	0.308	0.243
2002	0.072	0.097	0.083	0.216	0.327	0.000	0.303	0.257
2003	0.067	0.112	0.079	0.141	0.548	0.001	0.308	0.256
2004	0.068	0.112	0.082	0.149	0.504	0.001	0.332	0.243
2005	0.063	0.099	0.085	0.158	0.527	0.001	0.346	0.294
2006	0.079	0.101	0.076	0.164	0.605	0.001	0.316	0.290
2007	0.099	0.082	0.069	0.160	0.584	0.001	0.338	0.315
2008	0.098	0.078	0.013	0.125	0.581	0.002	0.323	0.286
2009	0.081	0.078	0.012	0.119	0.503	0.001	0.321	0.245
2010	0.082	0.081	0.011	0.115	0.459	0.002	0.321	0.129
2011	0.108	0.070	0.011	0.139	0.442	0.010	0.309	0.120
2012	0.107	0.066	0.009	0.143	0.420	0.000	0.329	0.128
2013	0.116	0.050	0.009	0.148	0.418	0.001	0.352	0.123
2014	0.105	0.056	0.008	0.160	0.455	0.006	0.496	0.128
2015	0.107	0.056	0.008	0.161	0.462	0.006	0.508	0.131
2016	0.108	0.056	0.008	0.162	0.467	0.006	0.519	0.133
2017	0.110	0.057	0.008	0.164	0.474	0.006	0.533	0.136
2018	0.112	0.057	0.008	0.166	0.481	0.006	0.546	0.139
2019	0.114	0.057	0.008	0.167	0.488	0.007	0.560	0.142
2020	0.115	0.058	0.008	0.169	0.495	0.007	0.573	0.145
2021	0.117	0.058	0.008	0.170	0.502	0.007	0.587	0.148
2022	0.119	0.058	0.008	0.171	0.508	0.007	0.601	0.151
2023	0.121	0.059	0.008	0.173	0.515	0.007	0.615	0.154
2024	0.123	0.059	0.008	0.174	0.522	0.007	0.629	0.157
2025	0.125	0.059	0.008	0.176	0.528	0.007	0.644	0.161
2026	0.127	0.059	0.008	0.177	0.535	0.007	0.658	0.164
2027	0.129	0.059	0.008	0.178	0.542	0.008	0.673	0.167
2028	0.131	0.060	0.008	0.180	0.548	0.008	0.689	0.170

Historical and Projected Values for Wage and Salary Employment by Detailed Industrial Classification for Collin County*								
Date	Textile Product Mills	Apparel Manufacturing	Leather & Allied Products	Paper Manufacturing	Printing & Related Support	Petroleum & Coal Products	Chemical Manufacturing	Plastics & Rubbers Products
2029	0.133	0.060	0.007	0.181	0.555	0.008	0.704	0.174
2030	0.136	0.060	0.007	0.183	0.561	0.008	0.720	0.177
2031	0.138	0.060	0.007	0.184	0.568	0.008	0.735	0.181
2032	0.140	0.060	0.007	0.185	0.574	0.008	0.751	0.184
2033	0.142	0.060	0.007	0.187	0.581	0.008	0.768	0.188
2034	0.144	0.061	0.007	0.188	0.587	0.009	0.784	0.192
2035	0.147	0.061	0.007	0.189	0.593	0.009	0.801	0.196
2036	0.149	0.061	0.007	0.191	0.600	0.009	0.818	0.199
2037	0.151	0.061	0.007	0.192	0.606	0.009	0.835	0.203
2038	0.154	0.061	0.007	0.193	0.612	0.009	0.852	0.207
2039	0.156	0.061	0.007	0.195	0.618	0.009	0.870	0.211
2040	0.159	0.061	0.007	0.196	0.625	0.010	0.888	0.215

*Thousands of Persons

Historical and Projected Values for Wage and Salary Employment by Detailed Industrial Classification for Collin County*								
Date	Total Trade	Wholesale Trade	Retail Trade	Motor Vehicle & Part Dealers	Furniture & Home Furnishing Stores	Electronics & Appliance Stores	Building Material & Garden Stores	Food & Beverage Stores
2001	37.105	7.032	30.073	3.595	1.184	2.001	2.349	4.426
2002	37.607	6.962	30.645	3.712	1.215	1.913	2.586	4.728
2003	40.601	7.194	33.407	3.780	1.185	1.945	2.261	4.373
2004	44.330	7.816	36.514	4.378	1.271	2.253	2.389	5.202
2005	48.148	9.816	38.332	4.283	1.450	2.331	2.611	5.475
2006	50.723	10.654	40.069	4.454	2.083	2.226	2.707	5.600
2007	49.216	11.404	37.812	4.774	2.360	2.121	2.843	5.294
2008	51.336	11.691	39.645	4.917	2.296	2.093	2.887	6.107
2009	49.832	10.672	39.160	4.411	2.004	1.825	2.812	6.175
2010	50.330	11.009	39.321	4.479	1.814	1.929	2.752	6.918
2011	52.318	11.575	40.743	4.638	1.526	1.908	2.785	7.357
2012	55.501	13.347	42.154	4.884	1.516	1.788	2.812	8.217
2013	56.163	13.773	42.390	5.207	1.586	1.701	2.880	7.313
2014	58.050	14.135	43.915	5.623	1.734	1.794	2.928	7.709
2015	62.003	15.103	46.900	6.006	1.852	1.927	3.132	8.249
2016	67.106	16.352	50.754	6.500	2.004	2.097	3.394	8.943
2017	70.100	17.088	53.012	6.790	2.093	2.202	3.550	9.358
2018	72.718	17.733	54.984	7.043	2.171	2.297	3.687	9.725
2019	75.341	18.380	56.961	7.297	2.249	2.392	3.825	10.093
2020	77.822	18.992	58.830	7.537	2.322	2.484	3.956	10.444
2021	80.359	19.619	60.741	7.783	2.397	2.579	4.091	10.803
2022	82.954	20.260	62.694	8.034	2.474	2.676	4.228	11.171
2023	85.605	20.915	64.690	8.291	2.553	2.776	4.369	11.548
2024	88.313	21.585	66.728	8.553	2.633	2.878	4.513	11.934
2025	91.079	22.269	68.810	8.821	2.715	2.984	4.660	12.328
2026	93.902	22.968	70.933	9.094	2.799	3.092	4.811	12.732

Historical and Projected Values for Wage and Salary Employment by Detailed Industrial Classification for Collin County*								
Date	Total Trade	Wholesale Trade	Retail Trade	Motor Vehicle & Part Dealers	Furniture & Home Furnishing Stores	Electronics & Appliance Stores	Building Material & Garden Stores	Food & Beverage Stores
2027	96.781	23.681	73.100	9.372	2.884	3.203	4.965	13.145
2028	99.718	24.409	75.309	9.657	2.971	3.316	5.122	13.567
2029	102.712	25.152	77.560	9.946	3.059	3.432	5.282	13.998
2030	105.762	25.908	79.854	10.241	3.149	3.552	5.446	14.438
2031	108.869	26.679	82.190	10.542	3.241	3.674	5.613	14.887
2032	112.032	27.465	84.568	10.848	3.334	3.800	5.783	15.346
2033	115.251	28.264	86.987	11.159	3.429	3.928	5.957	15.813
2034	118.526	29.078	89.448	11.476	3.526	4.060	6.134	16.289
2035	121.855	29.906	91.949	11.798	3.624	4.194	6.314	16.775
2036	125.238	30.748	94.490	12.125	3.724	4.331	6.497	17.269
2037	128.675	31.603	97.071	12.458	3.825	4.471	6.684	17.772
2038	132.164	32.472	99.692	12.795	3.927	4.614	6.873	18.285
2039	135.706	33.355	102.351	13.138	4.031	4.760	7.066	18.806
2040	139.299	34.251	105.048	13.485	4.137	4.909	7.262	19.335

*Thousands of Persons

Historical and Projected Values for Wage and Salary Employment by Detailed Industrial Classification for Collin County*								
Date	Health & Personal Care Stores	Gasoline Stations	Clothing & Accessories	Sporting Goods, Hobby, Book, Music	General Merchandise Stores	Misc. Store Retailers	NonStore Retailers	Transportation, Warehousing & Utilities
2001	1.779	1.138	3.211	1.302	6.809	2.166	0.113	1.538
2002	1.802	1.060	3.234	1.307	6.924	2.041	0.123	2.204
2003	1.882	1.093	3.333	1.252	10.228	1.928	0.147	2.714
2004	2.030	1.118	3.837	1.286	10.519	2.025	0.206	2.644
2005	1.671	1.129	4.498	1.266	11.346	2.042	0.230	2.845
2006	1.691	1.071	5.290	1.189	11.496	2.008	0.254	2.688
2007	1.810	1.071	4.761	1.497	8.925	2.029	0.327	2.695
2008	1.902	1.063	4.589	1.878	9.320	2.187	0.406	3.540
2009	1.962	1.095	4.464	1.584	10.276	2.125	0.427	3.440
2010	2.042	1.102	4.569	1.580	9.602	2.100	0.434	3.021
2011	2.156	1.026	4.908	1.583	10.360	2.083	0.413	2.822
2012	2.198	1.064	5.151	1.609	10.370	2.139	0.406	2.577
2013	2.309	1.085	4.877	1.766	11.027	2.258	0.381	3.219
2014	2.509	1.081	4.880	1.717	11.026	2.576	0.338	3.603
2015	2.674	1.155	5.183	1.831	11.773	2.754	0.366	3.815
2016	2.888	1.251	5.579	1.977	12.738	2.983	0.401	3.970
2017	3.010	1.307	5.795	2.062	13.301	3.118	0.425	4.088
2018	3.116	1.356	5.978	2.135	13.793	3.237	0.446	4.213
2019	3.221	1.406	6.159	2.208	14.286	3.357	0.468	4.342
2020	3.320	1.453	6.326	2.276	14.751	3.470	0.490	4.482
2021	3.420	1.501	6.496	2.346	15.227	3.586	0.512	4.626
2022	3.523	1.550	6.668	2.417	15.713	3.705	0.535	4.772
2023	3.627	1.600	6.843	2.489	16.209	3.826	0.559	4.922
2024	3.734	1.651	7.020	2.563	16.715	3.951	0.583	5.076
2025	3.842	1.703	7.199	2.639	17.232	4.078	0.609	5.232
2026	3.952	1.757	7.380	2.715	17.760	4.207	0.635	5.392
2027	4.065	1.811	7.564	2.793	18.297	4.340	0.662	5.556
2028	4.178	1.867	7.750	2.872	18.845	4.475	0.690	5.723

Historical and Projected Values for Wage and Salary Employment by Detailed Industrial Classification for Collin County*								
Date	Health & Personal Care Stores	Gasoline Stations	Clothing & Accessories	Sporting Goods, Hobby, Book, Music	General Merchandise Stores	Misc. Store Retailers	NonStore Retailers	Transportation, Warehousing & Utilities
2029	4.294	1.923	7.937	2.953	19.403	4.612	0.718	5.893
2030	4.412	1.981	8.127	3.035	19.972	4.753	0.748	6.067
2031	4.531	2.040	8.319	3.118	20.550	4.896	0.778	6.244
2032	4.652	2.100	8.512	3.202	21.138	5.042	0.809	6.425
2033	4.775	2.161	8.707	3.288	21.736	5.191	0.842	6.609
2034	4.900	2.223	8.904	3.374	22.345	5.342	0.875	6.796
2035	5.026	2.286	9.102	3.462	22.962	5.496	0.909	6.987
2036	5.154	2.350	9.302	3.551	23.590	5.653	0.943	7.181
2037	5.283	2.416	9.503	3.642	24.227	5.813	0.979	7.379
2038	5.414	2.482	9.705	3.733	24.873	5.974	1.016	7.580
2039	5.546	2.549	9.909	3.826	25.528	6.139	1.054	7.784
2040	5.680	2.617	10.113	3.919	26.192	6.306	1.092	7.992

*Thousands of Persons

Historical and Projected Values for Wage and Salary Employment by Detailed Industrial Classification for Collin County*								
Date	Transportation & Warehousing	Air Transportation	Rail Transp.	Water Transp.	Truck Transp.	Transit & Ground Passenger	Pipeline Transp.	Scenic & Sightseeing Transp.
2001	1.245	0.003	0.027	0.000	0.530	0.123	0.002	0.002
2002	1.859	0.002	0.030	0.000	0.507	0.780	0.002	0.002
2003	2.353	0.007	0.030	0.000	0.508	0.772	0.002	0.001
2004	2.338	0.027	0.034	0.002	0.538	0.572	0.002	0.002
2005	2.583	0.057	0.034	0.004	0.562	0.684	0.004	0.002
2006	2.400	0.047	0.037	0.004	0.633	0.799	0.003	0.002
2007	2.415	0.046	0.039	0.005	0.710	0.856	0.002	0.002
2008	3.283	0.079	0.042	0.005	0.655	0.847	0.001	0.001
2009	3.086	0.082	0.041	0.000	0.575	0.883	0.000	0.000
2010	2.667	0.068	0.042	0.000	0.430	0.831	0.000	0.000
2011	2.442	0.054	0.046	0.000	0.392	0.709	0.000	0.000
2012	2.168	0.035	0.051	0.000	0.357	0.653	0.000	0.000
2013	2.436	0.028	0.055	0.000	0.594	0.638	0.000	0.000
2014	2.832	0.041	0.058	0.001	0.728	0.682	0.000	0.010
2015	2.984	0.043	0.061	0.001	0.769	0.717	0.000	0.010
2016	3.100	0.045	0.064	0.001	0.801	0.742	0.000	0.011
2017	3.191	0.046	0.066	0.001	0.827	0.762	0.000	0.011
2018	3.289	0.048	0.068	0.001	0.854	0.783	0.000	0.011
2019	3.389	0.050	0.070	0.001	0.882	0.804	0.000	0.012
2020	3.498	0.051	0.072	0.001	0.913	0.828	0.000	0.012
2021	3.611	0.053	0.074	0.001	0.945	0.852	0.000	0.012
2022	3.726	0.055	0.077	0.001	0.978	0.877	0.000	0.012
2023	3.845	0.057	0.079	0.001	1.011	0.902	0.000	0.013
2024	3.967	0.059	0.082	0.001	1.046	0.928	0.000	0.013
2025	4.092	0.061	0.085	0.001	1.082	0.954	0.000	0.013
2026	4.221	0.063	0.087	0.002	1.119	0.981	0.000	0.014
2027	4.353	0.065	0.090	0.002	1.156	1.009	0.000	0.014
2028	4.489	0.067	0.093	0.002	1.195	1.037	0.000	0.014

Historical and Projected Values for Wage and Salary Employment by Detailed Industrial Classification for Collin County*								
Date	Transportation & Warehousing	Air Transportation	Rail Transp.	Water Transp.	Truck Transp.	Transit & Ground Passenger	Pipeline Transp.	Scenic & Sightseeing Transp.
2029	4.629	0.069	0.096	0.002	1.236	1.066	0.000	0.015
2030	4.773	0.071	0.099	0.002	1.277	1.095	0.000	0.015
2031	4.916	0.074	0.102	0.002	1.319	1.125	0.000	0.015
2032	5.063	0.076	0.106	0.002	1.361	1.155	0.000	0.016
2033	5.214	0.078	0.109	0.002	1.405	1.185	0.000	0.016
2034	5.368	0.081	0.112	0.002	1.450	1.217	0.000	0.016
2035	5.527	0.083	0.116	0.002	1.496	1.248	0.000	0.017
2036	5.689	0.086	0.119	0.002	1.544	1.281	0.000	0.017
2037	5.856	0.089	0.123	0.002	1.593	1.314	0.000	0.017
2038	6.027	0.092	0.126	0.002	1.643	1.348	0.000	0.018
2039	6.202	0.094	0.130	0.002	1.695	1.382	0.000	0.018
2040	6.381	0.097	0.134	0.002	1.748	1.417	0.000	0.018

*Thousands of Persons

Historical and Projected Values for Wage and Salary Employment by Detailed Industrial Classification for Collin County*								
Date	Support Activities Transportation	Couriers & Messengers	Warehousing & Storage	Total Information	Publishing Industries, Exc. Internet	Motion Picture & Sounds Recording	Broadcasting Exc. Internet	Telecommunications
2001	0.344	0.169	0.045	14.146	2.201	0.547	0.053	2.552
2002	0.336	0.172	0.028	13.336	1.949	0.431	0.018	2.528
2003	0.481	0.269	0.283	14.292	2.983	0.409	0.024	2.431
2004	0.542	0.281	0.338	14.524	3.046	0.442	0.033	2.914
2005	0.611	0.296	0.329	18.483	3.218	0.491	0.004	5.969
2006	0.554	0.222	0.099	19.636	3.447	0.604	0.003	6.421
2007	0.487	0.232	0.036	20.176	3.212	0.629	0.014	7.553
2008	0.536	0.263	0.854	19.585	3.225	0.643	0.014	7.143
2009	0.510	0.196	0.799	18.085	2.959	0.708	0.009	6.893
2010	0.570	0.189	0.537	16.461	2.968	0.778	0.009	6.086
2011	0.617	0.242	0.382	16.359	2.871	0.854	0.009	5.790
2012	0.569	0.266	0.237	15.779	2.926	0.899	0.019	4.966
2013	0.700	0.268	0.153	15.032	2.961	0.856	0.122	4.454
2014	0.719	0.387	0.206	15.363	2.948	0.935	0.126	4.669
2015	0.756	0.409	0.217	16.154	3.087	0.982	0.133	4.918
2016	0.784	0.426	0.226	16.694	3.177	1.015	0.138	5.093
2017	0.806	0.439	0.233	17.130	3.246	1.040	0.143	5.236
2018	0.829	0.453	0.241	17.598	3.321	1.068	0.147	5.389
2019	0.853	0.468	0.249	18.074	3.397	1.096	0.152	5.546
2020	0.879	0.485	0.258	18.595	3.480	1.126	0.157	5.717
2021	0.905	0.501	0.266	19.125	3.564	1.157	0.162	5.891
2022	0.932	0.518	0.276	19.664	3.649	1.189	0.167	6.069
2023	0.960	0.536	0.285	20.214	3.735	1.221	0.172	6.252
2024	0.989	0.554	0.295	20.773	3.822	1.253	0.178	6.438
2025	1.018	0.573	0.305	21.342	3.910	1.286	0.183	6.627
2026	1.049	0.592	0.315	21.920	3.999	1.319	0.188	6.821

Historical and Projected Values for Wage and Salary Employment by Detailed Industrial Classification for Collin County*								
Date	Support Activities Transportation	Couriers & Messengers	Warehousing & Storage	Total Information	Publishing Industries, Exc. Internet	Motion Picture & Sounds Recording	Broadcasting Exc. Internet	Telecommunications
2027	1.079	0.612	0.326	22.508	4.088	1.353	0.194	7.019
2028	1.111	0.633	0.337	23.106	4.179	1.387	0.200	7.220
2029	1.144	0.654	0.348	23.713	4.270	1.421	0.205	7.425
2030	1.177	0.676	0.360	24.329	4.362	1.456	0.211	7.634
2031	1.210	0.698	0.372	24.954	4.455	1.492	0.217	7.846
2032	1.244	0.720	0.384	25.588	4.548	1.528	0.223	8.061
2033	1.278	0.743	0.397	26.232	4.642	1.564	0.230	8.281
2034	1.314	0.767	0.410	26.884	4.737	1.601	0.236	8.504
2035	1.350	0.791	0.423	27.545	4.832	1.638	0.242	8.731
2036	1.387	0.816	0.437	28.214	4.928	1.675	0.249	8.961
2037	1.425	0.842	0.451	28.892	5.024	1.713	0.255	9.195
2038	1.464	0.868	0.465	29.578	5.120	1.751	0.262	9.434
2039	1.504	0.895	0.480	30.272	5.217	1.789	0.268	9.675
2040	1.544	0.923	0.496	30.973	5.314	1.828	0.275	9.921

*Thousands of Persons

Historical and Projected Values for Wage and Salary Employment by Detailed Industrial Classification for Collin County*								
Date	ISPs, Search Portals, Data Process	Other Information	Total Finance, Insurance, and Real Estate	Total Finance & Insurance	Monetary Authorities Central Bank	Credit Intermediation& Related	Securities, Commodity Investments	Insurance Carriers & Related
2001	8.758	0.035	17.983	10.177	0.000	4.149	0.378	5.646
2002	8.384	0.026	20.037	12.049	0.000	5.986	0.538	5.510
2003	8.389	0.056	23.194	14.927	0.000	8.699	0.661	5.541
2004	8.017	0.072	24.611	16.316	0.000	10.150	0.556	5.570
2005	8.700	0.101	28.501	22.128	0.000	14.771	0.782	6.539
2006	9.091	0.070	31.066	25.478	0.001	17.897	0.882	6.637
2007	8.667	0.101	26.474	21.491	0.001	13.841	1.011	6.633
2008	8.470	0.090	26.630	20.802	0.001	12.664	1.122	7.011
2009	7.414	0.102	27.108	21.775	0.003	13.131	1.142	7.497
2010	6.532	0.088	28.274	22.587	0.003	13.259	1.182	8.140
2011	6.732	0.103	32.126	26.237	0.001	13.636	1.199	11.392
2012	6.876	0.093	33.999	27.827	0.000	14.893	1.224	11.706
2013	6.543	0.096	35.017	28.112	0.000	14.755	1.117	12.239
2014	6.547	0.138	36.393	28.973	0.012	14.236	1.197	13.525
2015	6.885	0.147	38.586	30.691	0.013	14.424	1.315	14.935
2016	7.117	0.154	41.171	32.716	0.014	14.969	1.449	16.279
2017	7.305	0.160	42.786	33.968	0.014	15.402	1.552	16.995
2018	7.506	0.167	44.129	35.002	0.015	15.868	1.645	17.468
2019	7.712	0.173	45.499	36.057	0.015	16.344	1.739	17.952
2020	7.936	0.179	47.090	37.283	0.016	16.897	1.841	18.523
2021	8.165	0.185	48.720	38.540	0.017	17.463	1.943	19.109
2022	8.399	0.192	50.392	39.826	0.017	18.043	2.046	19.712
2023	8.637	0.198	52.104	41.143	0.018	18.637	2.149	20.331
2024	8.879	0.204	53.858	42.490	0.019	19.244	2.251	20.968
2025	9.126	0.209	55.654	43.868	0.019	19.865	2.351	21.624
2026	9.378	0.215	57.492	45.277	0.020	20.499	2.451	22.298

Historical and Projected Values for Wage and Salary Employment by Detailed Industrial Classification for Collin County*								
Date	ISPs, Search Portals, Data Process	Other Information	Total Finance, Insurance, and Real Estate	Total Finance & Insurance	Monetary Authorities Central Bank	Credit Intermediation& Related	Securities, Commodity Investments	Insurance Carriers & Related
2027	9.634	0.220	59.372	46.717	0.021	21.148	2.548	22.992
2028	9.895	0.226	61.295	48.188	0.022	21.810	2.642	23.705
2029	10.160	0.230	63.260	49.690	0.023	22.486	2.733	24.439
2030	10.430	0.235	65.268	51.224	0.023	23.176	2.820	25.195
2031	10.702	0.242	67.319	52.788	0.024	23.880	2.902	25.972
2032	10.979	0.249	69.412	54.384	0.025	24.598	2.980	26.771
2033	11.260	0.255	71.549	56.011	0.026	25.329	3.052	27.594
2034	11.545	0.261	73.729	57.669	0.027	26.075	3.118	28.440
2035	11.835	0.267	75.951	59.357	0.028	26.834	3.177	29.310
2036	12.129	0.272	78.216	61.077	0.029	27.607	3.229	30.204
2037	12.427	0.278	80.524	62.828	0.030	28.393	3.273	31.123
2038	12.729	0.282	82.874	64.609	0.031	29.193	3.309	32.067
2039	13.035	0.287	85.266	66.420	0.032	30.007	3.337	33.037
2040	13.345	0.290	87.700	68.261	0.033	30.833	3.355	34.032

*Thousands of Persons

Historical and Projected Values for Wage and Salary Employment by Detailed Industrial Classification for Collin County*								
Date	Funds, Trusts, & Other Financial Vehicles	Real Estate, Rental, & Leasing	Real Estate	Rental & Leasing Services	Leasers of NonFinancial Intangible	Total Services	Professional & Technical Services	Management of Companies Enterprises
2001	0.004	7.806	1.493	6.268	0.045	62.887	8.444	1.075
2002	0.015	7.988	1.753	6.192	0.043	66.742	9.298	1.063
2003	0.026	8.267	1.930	6.290	0.047	71.940	10.002	1.203
2004	0.040	8.295	2.014	6.241	0.040	80.118	11.488	0.727
2005	0.036	6.373	3.133	3.197	0.043	92.228	14.355	0.810
2006	0.061	5.588	3.256	2.285	0.047	105.880	17.534	3.666
2007	0.005	4.983	3.562	1.377	0.044	118.308	20.683	7.806
2008	0.004	5.828	3.812	1.977	0.039	126.070	23.168	8.480
2009	0.002	5.333	3.482	1.814	0.037	126.500	22.948	8.450
2010	0.003	5.687	3.837	1.827	0.023	131.127	24.164	8.888
2011	0.009	5.889	3.997	1.869	0.023	140.045	26.980	9.230
2012	0.004	6.172	4.092	2.019	0.061	149.295	29.372	8.261
2013	0.001	6.905	4.819	2.002	0.084	158.824	32.145	7.361
2014	0.003	7.420	5.296	2.025	0.099	171.174	35.595	8.514
2015	0.004	7.896	5.637	2.155	0.103	182.674	38.022	9.096
2016	0.005	8.455	6.039	2.307	0.109	194.376	40.495	9.688
2017	0.005	8.818	6.300	2.406	0.112	203.828	42.503	10.170
2018	0.006	9.126	6.523	2.490	0.114	213.661	44.593	10.671
2019	0.006	9.443	6.751	2.576	0.116	223.805	46.752	11.189
2020	0.007	9.806	7.014	2.675	0.118	234.252	48.977	11.723
2021	0.007	10.181	7.284	2.776	0.121	245.026	51.274	12.274
2022	0.008	10.566	7.562	2.881	0.123	256.126	53.642	12.843
2023	0.008	10.961	7.848	2.988	0.126	267.552	56.083	13.429
2024	0.009	11.368	8.142	3.098	0.128	279.303	58.594	14.032
2025	0.009	11.786	8.444	3.212	0.130	291.379	61.178	14.652
2026	0.009	12.215	8.754	3.328	0.133	303.776	63.832	15.290

Historical and Projected Values for Wage and Salary Employment by Detailed Industrial Classification for Collin County*								
Date	Funds, Trusts, & Other Financial Vehicles	Real Estate, Rental, & Leasing	Real Estate	Rental & Leasing Services	Leasers of NonFinancial Intangible	Total Services	Professional & Technical Services	Management of Companies Enterprises
2027	0.009	12.655	9.073	3.447	0.135	316.492	66.557	15.945
2028	0.009	13.107	9.400	3.570	0.137	329.522	69.352	16.616
2029	0.010	13.570	9.735	3.695	0.139	342.863	72.216	17.304
2030	0.010	14.044	10.079	3.824	0.141	356.509	75.147	18.009
2031	0.010	14.531	10.432	3.955	0.143	370.453	78.148	18.729
2032	0.010	15.029	10.793	4.090	0.145	384.689	81.214	19.466
2033	0.009	15.538	11.163	4.228	0.147	399.209	84.344	20.217
2034	0.009	16.060	11.542	4.369	0.149	414.004	87.536	20.984
2035	0.009	16.593	11.929	4.514	0.151	429.064	90.788	21.765
2036	0.009	17.139	12.325	4.661	0.152	444.378	94.098	22.560
2037	0.009	17.696	12.730	4.812	0.154	459.936	97.463	23.369
2038	0.008	18.265	13.144	4.966	0.155	475.725	100.880	24.190
2039	0.008	18.846	13.567	5.123	0.156	491.731	104.347	25.023
2040	0.007	19.439	13.999	5.283	0.157	507.941	107.862	25.868

*Thousands of Persons

Historical and Projected Values for Wage and Salary Employment by Detailed Industrial Classification for Collin County*								
Date	Administrative & Waste Services	Administrative & Support Services	Waste Management & Remediation Services	Educational Services	Health Care & Social Assistance	Ambulatory Health Care Services	Hospitals	Nursing & Residential Care Facilities
2001	9.401	9.268	0.133	1.609	13.203	5.548	3.335	1.684
2002	9.626	9.421	0.205	1.749	14.101	6.000	3.795	1.684
2003	11.207	11.122	0.085	1.629	15.467	6.768	4.035	1.905
2004	13.207	13.122	0.085	1.888	16.799	7.744	4.082	2.039
2005	14.613	14.513	0.100	2.225	18.479	9.098	4.276	1.935
2006	17.049	16.933	0.116	2.785	20.770	10.016	4.932	2.216
2007	18.312	18.154	0.158	2.984	23.095	11.413	5.610	2.072
2008	18.401	18.288	0.113	3.489	25.925	13.366	5.838	2.490
2009	17.019	16.916	0.103	3.672	27.372	14.555	5.991	2.551
2010	17.946	17.470	0.476	4.128	28.450	14.936	6.483	2.910
2011	19.535	19.017	0.518	4.417	30.135	15.132	7.558	3.384
2012	21.627	21.027	0.600	4.796	32.856	16.925	7.648	3.612
2013	23.618	23.108	0.510	4.585	35.816	18.543	7.764	4.148
2014	24.287	23.864	0.423	4.915	39.275	20.572	7.890	4.680
2015	25.906	25.455	0.451	5.259	42.066	22.037	8.467	5.000
2016	27.552	27.072	0.480	5.611	44.923	23.536	9.059	5.327
2017	28.877	28.374	0.503	5.900	47.279	24.773	9.552	5.592
2018	30.254	29.728	0.526	6.201	49.739	26.066	10.068	5.869
2019	31.674	31.123	0.551	6.513	52.288	27.405	10.604	6.154
2020	33.135	32.558	0.576	6.835	54.926	28.791	11.160	6.449
2021	34.639	34.037	0.602	7.168	57.659	30.227	11.738	6.753
2022	36.188	35.559	0.629	7.512	60.487	31.714	12.336	7.066
2023	37.781	37.125	0.656	7.868	63.411	33.251	12.957	7.389
2024	39.417	38.733	0.684	8.234	66.433	34.840	13.600	7.722
2025	41.097	40.384	0.713	8.613	69.552	36.480	14.265	8.065
2026	42.820	42.077	0.743	9.002	72.770	38.172	14.953	8.416
2027	44.585	43.811	0.774	9.403	76.085	39.916	15.663	8.778
2028	46.391	45.587	0.805	9.815	79.498	41.712	16.396	9.149

Historical and Projected Values for Wage and Salary Employment by Detailed Industrial Classification for Collin County*								
Date	Administrative & Waste Services	Administrative & Support Services	Waste Management & Remediation Services	Educational Services	Health Care & Social Assistance	Ambulatory Health Care Services	Hospitals	Nursing & Residential Care Facilities
2029	48.239	47.402	0.836	10.238	83.009	43.559	17.152	9.529
2030	50.126	49.257	0.869	10.673	86.617	45.458	17.931	9.918
2031	52.052	51.150	0.902	11.118	90.321	47.407	18.732	10.316
2032	54.016	53.080	0.936	11.574	94.120	49.407	19.556	10.723
2033	56.016	55.046	0.970	12.041	98.014	51.458	20.402	11.138
2034	58.051	57.046	1.005	12.518	102.001	53.557	21.271	11.562
2035	60.120	59.079	1.040	13.005	106.079	55.705	22.162	11.993
2036	62.220	61.144	1.076	13.502	110.247	57.900	23.075	12.433
2037	64.352	63.239	1.113	14.009	114.502	60.142	24.009	12.880
2038	66.511	65.361	1.150	14.525	118.842	62.429	24.964	13.334
2039	68.697	67.510	1.187	15.050	123.265	64.760	25.940	13.795
2040	70.907	69.682	1.225	15.584	127.767	67.133	26.936	14.262

*Thousands of Persons

Historical and Projected Values for Wage and Salary Employment by Detailed Industrial Classification for Collin County*								
Date	Social Assistance	Arts, Entertainment & Recreation	Performing Arts & Spectator Sports	Museums, History Sites Zoos, Parks	Amusement, Gambling, & Recreation	Accommoda-tion & Food Services	Accommoda-tion	Food Services & Drinking Places
2001	2.636	2.329	0.215	0.038	2.076	16.585	1.109	15.476
2002	2.622	2.449	0.276	0.038	2.135	17.331	1.100	16.231
2003	2.759	2.718	0.405	0.033	2.280	18.156	0.965	17.191
2004	2.934	3.619	0.543	0.029	3.047	20.397	1.215	19.182
2005	3.170	4.905	0.400	0.033	4.472	23.609	1.802	21.807
2006	3.606	5.967	0.249	0.035	5.683	24.229	1.694	22.535
2007	4.000	3.863	0.450	0.042	3.371	26.145	1.917	24.228
2008	4.231	4.130	0.462	0.049	3.619	26.632	1.799	24.833
2009	4.275	4.178	0.439	0.052	3.687	26.772	1.837	24.935
2010	4.121	4.202	0.484	0.057	3.661	27.287	1.858	25.429
2011	4.061	4.539	0.553	0.068	3.918	28.550	1.968	26.582
2012	4.671	4.918	0.730	0.075	4.113	30.040	1.994	28.046
2013	5.361	5.209	0.809	0.074	4.326	32.649	2.552	30.097
2014	6.133	5.451	0.822	0.095	4.534	34.631	2.549	32.082
2015	6.562	5.836	0.880	0.102	4.854	36.815	2.561	34.254
2016	7.001	6.229	0.940	0.109	5.180	39.022	2.575	36.447
2017	7.361	6.552	0.989	0.114	5.449	40.761	2.562	38.199
2018	7.736	6.890	1.040	0.120	5.729	42.561	2.558	40.002
2019	8.125	7.239	1.093	0.126	6.019	44.407	2.564	41.843
2020	8.526	7.601	1.148	0.133	6.320	46.297	2.579	43.718
2021	8.941	7.975	1.205	0.139	6.630	48.236	2.605	45.631
2022	9.371	8.362	1.264	0.146	6.951	50.222	2.642	47.580
2023	9.814	8.762	1.325	0.153	7.283	52.254	2.691	49.564
2024	10.271	9.175	1.388	0.161	7.626	54.332	2.752	51.580
2025	10.743	9.601	1.453	0.168	7.980	56.455	2.827	53.628
2026	11.228	10.040	1.520	0.176	8.344	58.621	2.916	55.705
2027	11.728	10.492	1.589	0.184	8.719	60.829	3.022	57.807
2028	12.242	10.957	1.660	0.192	9.105	63.077	3.145	59.933

Historical and Projected Values for Wage and Salary Employment by Detailed Industrial Classification for Collin County*								
Date	Social Assistance	Arts, Entertainment & Recreation	Performing Arts & Spectator Sports	Museums, History Sites Zoos, Parks	Amusement, Gambling, & Recreation	Accommoda-tion & Food Services	Accommoda-tion	Food Services & Drinking Places
2029	12.769	11.435	1.733	0.200	9.502	65.365	3.287	62.078
2030	13.311	11.926	1.808	0.209	9.909	67.690	3.450	64.240
2031	13.866	12.429	1.885	0.218	10.326	70.052	3.637	66.415
2032	14.435	12.945	1.964	0.227	10.755	72.447	3.849	68.599
2033	15.017	13.474	2.044	0.237	11.193	74.874	4.089	70.785
2034	15.611	14.015	2.127	0.246	11.641	77.330	4.361	72.969
2035	16.219	14.567	2.212	0.256	12.100	79.812	4.668	75.145
2036	16.839	15.132	2.298	0.266	12.567	82.319	5.013	77.306
2037	17.471	15.707	2.386	0.276	13.045	84.848	5.402	79.446
2038	18.115	16.294	2.476	0.287	13.531	87.395	5.838	81.556
2039	18.769	16.891	2.568	0.297	14.026	89.957	6.329	83.629
2040	19.435	17.499	2.661	0.308	14.530	92.533	6.879	85.654

*Thousands of Persons

Historical and Projected Values for Wage and Salary Employment by Detailed Industrial Classification for Collin County*								
Date	Other Services, Exc. Public Administration	Repair & Maintenance	Personal & Laundry Services	Membership Assn. & Organizations	Private Households	Total Government	Total Federal Government	Federal Civilian Government
2001	10.241	1.724	1.823	4.190	2.504	25.623	2.292	0.936
2002	11.125	1.872	1.810	4.654	2.789	28.307	2.420	0.986
2003	11.558	1.901	1.851	4.885	2.921	30.590	2.482	1.002
2004	11.993	1.822	2.137	4.949	3.085	31.115	2.563	1.035
2005	13.232	2.376	2.536	5.135	3.185	32.419	2.569	1.090
2006	13.880	2.459	2.706	5.400	3.315	34.536	2.710	1.157
2007	15.420	2.732	3.294	5.815	3.579	36.356	2.887	1.257
2008	15.845	2.721	3.563	5.903	3.658	39.246	3.114	1.344
2009	16.089	2.960	3.483	5.975	3.671	41.414	3.277	1.445
2010	16.062	3.078	3.397	6.257	3.330	42.560	3.286	1.465
2011	16.659	3.415	3.391	6.245	3.608	43.299	3.080	1.229
2012	17.425	3.515	3.523	6.678	3.709	43.804	3.192	1.300
2013	17.441	3.404	3.707	6.618	3.712	45.070	3.280	1.400
2014	18.506	3.615	3.840	6.879	4.172	46.245	3.442	1.528
2015	19.674	3.851	4.087	7.307	4.429	47.831	3.540	1.627
2016	20.856	4.091	4.338	7.738	4.689	49.987	3.679	1.745
2017	21.787	4.283	4.537	8.076	4.891	51.408	3.762	1.837
2018	22.752	4.482	4.743	8.426	5.101	52.652	3.831	1.920
2019	23.743	4.687	4.956	8.784	5.316	53.917	3.900	2.004
2020	24.759	4.898	5.173	9.151	5.536	55.215	3.971	2.086
2021	25.801	5.115	5.397	9.527	5.762	56.535	4.043	2.168
2022	26.870	5.338	5.627	9.911	5.993	57.877	4.114	2.248
2023	27.965	5.568	5.863	10.305	6.230	59.242	4.186	2.327
2024	29.085	5.803	6.104	10.707	6.471	60.629	4.259	2.403
2025	30.231	6.045	6.351	11.117	6.718	62.038	4.332	2.478
2026	31.402	6.292	6.604	11.535	6.970	63.469	4.405	2.549
2027	32.597	6.546	6.862	11.962	7.227	64.923	4.479	2.618
2028	33.815	6.805	7.126	12.396	7.489	66.400	4.553	2.684
2029	35.057	7.070	7.395	12.837	7.755	67.899	4.628	2.746

Historical and Projected Values for Wage and Salary Employment by Detailed Industrial Classification for Collin County*								
Date	Other Services, Exc. Public Administration	Repair & Maintenance	Personal & Laundry Services	Membership Assn. & Organizations	Private Households	Total Government	Total Federal Government	Federal Civilian Government
2030	36.320	7.341	7.669	13.285	8.026	69.420	4.702	2.804
2031	37.603	7.617	7.947	13.739	8.301	70.964	4.778	2.859
2032	38.907	7.898	8.230	14.200	8.579	72.531	4.854	2.909
2033	40.229	8.184	8.518	14.666	8.862	74.120	4.931	2.955
2034	41.569	8.475	8.810	15.137	9.148	75.731	5.007	2.996
2035	42.927	8.770	9.105	15.614	9.437	77.365	5.084	3.031
2036	44.300	9.071	9.405	16.094	9.730	79.022	5.161	3.062
2037	45.687	9.375	9.708	16.579	10.025	80.700	5.238	3.087
2038	47.088	9.684	10.014	17.067	10.323	82.401	5.316	3.106
2039	48.500	9.996	10.323	17.558	10.623	84.124	5.393	3.119
2040	49.922	10.312	10.634	18.051	10.925	85.869	5.471	3.126

*Thousands of Persons

Historical and Projected Values for Wage and Salary Employment by Detailed Industrial Classification for Collin County*					
Date	Federal Government	State & Local Government	State Government	Local Government	Total All Industries
2001	1.356	23.331	2.903	20.428	192.551
2002	1.434	25.887	3.117	22.770	199.495
2003	1.480	28.108	3.267	24.841	211.457
2004	1.528	28.552	3.304	25.248	227.047
2005	1.479	29.850	3.464	26.386	257.273
2006	1.553	31.826	3.657	28.169	280.689
2007	1.630	33.469	3.860	29.609	292.932
2008	1.770	36.132	4.050	32.082	306.235
2009	1.832	38.137	4.216	33.921	301.321
2010	1.821	39.274	4.569	34.705	304.947
2011	1.851	40.219	5.014	35.205	321.011
2012	1.892	40.612	5.292	35.320	338.264
2013	1.880	41.790	5.560	36.230	352.187
2014	1.914	42.803	5.837	36.966	370.019
2015	1.913	44.291	6.026	38.265	391.805
2016	1.933	46.308	6.295	40.013	415.102
2017	1.925	47.646	6.471	41.175	432.202
2018	1.911	48.821	6.624	42.197	448.938
2019	1.897	50.016	6.780	43.236	466.023
2020	1.885	51.244	6.941	44.303	483.465
2021	1.875	52.492	7.103	45.389	501.380
2022	1.866	53.763	7.269	46.494	519.768
2023	1.860	55.055	7.437	47.619	538.630
2024	1.856	56.370	7.607	48.762	557.965
2025	1.854	57.706	7.781	49.925	577.774
2026	1.856	59.064	7.957	51.107	598.052
2027	1.861	60.444	8.135	52.309	618.799
2028	1.869	61.847	8.316	53.530	640.010
2029	1.882	63.271	8.500	54.771	661.680

Historical and Projected Values for Wage and Salary Employment by Detailed Industrial Classification for Collin County*					
Date	Federal Government	State & Local Government	State Government	Local Government	Total All Industries
2030	1.898	64.718	8.686	56.032	683.804
2031	1.919	66.186	8.875	57.311	706.376
2032	1.945	67.676	9.067	58.610	729.387
2033	1.976	69.189	9.261	59.929	752.830
2034	2.012	70.724	9.457	61.267	776.695
2035	2.053	72.281	9.656	62.625	800.972
2036	2.099	73.860	9.858	64.002	825.649
2037	2.152	75.462	10.062	65.399	850.713
2038	2.210	77.085	10.269	66.816	876.150
2039	2.274	78.731	10.479	68.252	901.947
2040	2.345	80.398	10.690	69.708	928.088

*Thousands of Persons

Appendix E: Collin County Occupational Profile

SOCS Code	Occupation	2016	2040	Growth	Replacement Jobs	Total Demand
00-0000	**Total, all occupations**	**415,102**	**928,088**	**68,363**	**160,463**	**404,747**
11-0000	Management occupations	22,917	51,249	3,800	11,461	24,905
11-1000	Top executives	7,769	17,262	1,267	4,161	8,685
11-1011	Chief executives	812	1,687	99	287	733
11-1021	General and operations managers	6,776	15,271	1,152	3,866	7,884
11-1031	Legislators	182	304	16	67	127
11-2000	Advertising, marketing, promotions, public relations, and sales managers	2,435	5,487	410	1,376	2,825
11-2011	Advertising and promotions managers	110	259	18	83	156
11-2020	Marketing and sales managers	2,124	4,752	356	1,123	2,368
11-2021	Marketing managers	804	1,878	146	444	948
11-2022	Sales managers	1,320	2,874	210	680	1,421
11-2031	Public relations and fundraising managers	202	476	36	163	294
11-3000	Operations specialties managers	6,124	13,822	1,052	2,952	6,554
11-3011	Administrative services managers	922	2,091	155	391	948
11-3021	Computer and information systems managers	1,638	3,920	329	462	1,500
11-3031	Financial managers	2,160	4,825	351	1,142	2,406
11-3051	Industrial production managers	362	637	40	180	306
11-3061	Purchasing managers	232	491	35	116	238
11-3071	Transportation, storage, and distribution managers	206	443	32	98	209
11-3111	Compensation and benefits managers	65	152	12	44	85
11-3121	Human resources managers	420	987	76	288	556
11-3131	Training and development managers	119	277	20	81	156
11-9000	Other management occupations	6,589	14,679	1,071	3,128	6,996
11-9013	Farmers, ranchers, and other agricultural managers	77	92	2	16	23
11-9021	Construction managers	706	1,293	85	181	459
11-9030	Education administrators	878	1,833	128	533	986
11-9031	Education administrators, preschool and childcare center/program	126	318	24	92	186
11-9032	Education administrators, elementary and secondary school	402	802	54	233	424
11-9033	Education administrators, postsecondary	284	579	41	168	306
11-9039	Education administrators, all other	66	134	9	39	71
11-9041	Architectural and engineering managers	793	1,640	114	503	903
11-9051	Food service managers	646	1,546	128	311	717
11-9061	Funeral service managers	27	64	5	14	32
11-9071	Gaming managers	5	14	1	3	8
11-9081	Lodging managers	49	130	2	25	85
11-9111	Medical and health services managers	931	2,399	184	607	1,326
11-9121	Natural sciences managers	174	415	31	86	203
11-9131	Postmasters and mail superintendents	23	30	0	7	11
11-9141	Property, real estate, and community association managers	689	1,646	127	286	741
11-9151	Social and community service managers	315	764	58	202	418
11-9161	Emergency management directors	30	60	4	7	21
11-9199	Managers, all other	1,246	2,753	203	608	1,322
13-0000	Business and financial operations occupations	26,708	61,173	4,671	12,414	28,597
13-1000	Business operations specialists	15,845	36,110	2,761	6,525	16,069
13-1011	Agents and business managers of artists, performers, and athletes	25	68	5	22	43
13-1020	Buyers and purchasing agents	1,260	2,642	190	754	1,406
13-1021	Buyers and purchasing agents, farm products	27	61	5	13	28
13-1022	Wholesale and retail buyers, except farm products	353	808	64	256	470
13-1023	Purchasing agents, except wholesale, retail, and farm products	894	1,801	123	495	924
13-1030	Claims adjusters, appraisers, examiners, and investigators	1,680	3,481	226	862	1,759
13-1031	Claims adjusters, examiners, and investigators	1,583	3,288	216	814	1,660

SOCS Code	Occupation	2016	2040	Growth	Replacement Jobs	Total Demand
13-1032	Insurance appraisers, auto damage	97	193	10	47	98
13-1041	Compliance officers	771	1,645	120	231	640
13-1051	Cost estimators	575	1,127	82	321	575
13-1070	Human resources workers	1,769	4,021	283	979	2,074
13-1071	Human resources specialists	1,558	3,574	256	870	1,847
13-1075	Labor relations specialists	212	447	27	109	227
13-1081	Logisticians	377	827	63	115	323
13-1111	Management analysts	2,557	6,338	525	879	2,633
13-1121	Meeting, convention, and event planners	249	615	48	73	249
13-1131	Fundraisers	178	431	35	60	177
13-1141	Compensation, benefits, and job analysis specialists	317	708	50	172	361
13-1151	Training and development specialists	896	2,075	157	505	1,065
13-1161	Market research analysts and marketing specialists	2,010	5,057	443	602	1,984
13-1199	Business operations specialists, all other	3,179	7,074	533	843	2,671
13-2000	Financial specialists	10,863	25,063	1,910	6,004	12,643
13-2011	Accountants and auditors	4,828	11,865	950	3,167	6,479
13-2021	Appraisers and assessors of real estate	231	513	39	83	214
13-2031	Budget analysts	175	365	26	91	179
13-2041	Credit analysts	353	776	55	336	536
13-2050	Financial analysts and advisors	2,335	5,075	373	1,121	2,369
13-2051	Financial analysts	1,077	2,450	192	504	1,129
13-2052	Personal financial advisors	618	1,462	142	367	688
13-2053	Insurance underwriters	639	1,162	39	219	522
13-2061	Financial examiners	141	315	26	78	155
13-2070	Credit counselors and loan officers	1,807	3,963	290	659	1,659
13-2071	Credit counselors	111	280	24	46	123
13-2072	Loan officers	1,699	3,689	266	613	1,539
13-2080	Tax examiners, collectors and preparers, and revenue agents	482	1,069	68	341	637
13-2081	Tax examiners and collectors, and revenue agents	136	223	13	91	131
13-2082	Tax preparers	347	846	55	211	468
13-2099	Financial specialists, all other	509	1,123	83	114	400
15-0000	Computer and mathematical occupations	19,237	45,160	3,664	6,648	18,560
15-1100	Computer occupations	18,574	43,411	3,492	6,306	17,747
15-1111	Computer and information research scientists	95	220	18	28	85
15-1120	Computer and information analysts	3,279	8,217	736	1,057	3,263
15-1121	Computer systems analysts	2,853	7,143	639	920	2,836
15-1122	Information security analysts	426	1,075	96	139	429
15-1130	Software developers and programmers	7,998	18,431	1,464	3,004	7,816
15-1131	Computer programmers	1,408	2,801	131	690	1,446
15-1132	Software developers, applications	3,660	8,865	775	1,267	3,592
15-1133	Software developers, systems software	2,304	5,156	407	736	2,038
15-1134	Web developers	626	1,609	151	207	638
15-1140	Database and systems administrators and network architects	2,942	6,773	517	980	2,781
15-1141	Database administrators	556	1,302	105	281	624
15-1142	Network and computer systems administrators	1,635	3,744	279	481	1,482
15-1143	Computer network architects	751	1,728	132	222	680
15-1150	Computer support specialists	3,548	8,208	639	1,056	3,226
15-1151	Computer user support specialists	2,611	6,149	490	791	2,432
15-1152	Computer network support specialists	938	2,060	149	265	794
15-1199	Computer occupations, all other	724	1,584	119	204	604
15-2000	Mathematical science occupations	663	1,750	172	345	816
15-2011	Actuaries	148	353	30	105	200
15-2021	Mathematicians	8	22	2	4	10
15-2031	Operations research analysts	388	1,049	107	187	469
15-2041	Statisticians	113	311	32	55	139
15-2090	Miscellaneous mathematical science occupations	7	16	1	3	7
15-2091	Mathematical technicians	3	5	0	1	2
15-2099	Mathematical science occupations, all other	5	13	1	2	6

SOCS Code	Occupation	2016	2040	Growth	Replacement Jobs	Total Demand
17-0000	Architecture and engineering occupations	9,785	20,704	1,469	5,072	10,249
17-1000	Architects, surveyors, and cartographers	714	1,772	128	368	891
17-1010	Architects, except naval	487	1,231	91	202	570
17-1011	Architects, except landscape and naval	412	1,047	78	172	486
17-1012	Landscape architects	75	184	13	30	84
17-1020	Surveyors, cartographers, and photogrammetrists	227	540	38	168	323
17-1021	Cartographers and photogrammetrists	48	132	13	41	78
17-1022	Surveyors	179	407	24	126	244
17-2000	Engineers	6,267	13,258	980	3,578	6,826
17-2011	Aerospace engineers	217	460	33	131	244
17-2021	Agricultural engineers	6	15	1	3	7
17-2031	Biomedical engineers	73	172	16	45	89
17-2041	Chemical engineers	87	205	16	56	113
17-2051	Civil engineers	1,040	2,490	189	735	1,431
17-2061	Computer hardware engineers	584	1,085	71	223	453
17-2070	Electrical and electronics engineers	1,645	3,204	216	706	1,433
17-2071	Electrical engineers	873	1,740	119	383	789
17-2072	Electronics engineers, except computer	776	1,472	97	325	648
17-2081	Environmental engineers	198	516	44	146	293
17-2110	Industrial engineers, including health and safety	861	1,660	125	487	838
17-2111	Health and safety engineers, except mining safety engineers and inspectors	73	154	11	45	83
17-2112	Industrial engineers	795	1,518	115	445	761
17-2121	Marine engineers and naval architects	21	55	4	14	30
17-2131	Materials engineers	87	173	12	61	101
17-2141	Mechanical engineers	900	2,005	154	635	1,149
17-2151	Mining and geological engineers, including mining safety engineers	19	47	4	12	26
17-2161	Nuclear engineers	42	92	6	24	49
17-2171	Petroleum engineers	71	158	16	43	80
17-2199	Engineers, all other	417	922	71	185	418
17-3000	Drafters, engineering technicians, and mapping technicians	2,802	5,669	360	1,118	2,523
17-3010	Drafters	744	1,631	99	193	647
17-3011	Architectural and civil drafters	393	896	53	106	370
17-3012	Electrical and electronics drafters	135	289	21	35	108
17-3013	Mechanical drafters	171	345	20	41	130
17-3019	Drafters, all other	45	99	6	12	39
17-3020	Engineering technicians, except drafters	1,881	3,650	243	892	1,723
17-3021	Aerospace engineering and operations technicians	50	102	7	25	50
17-3022	Civil engineering technicians	265	594	41	145	307
17-3023	Electrical and electronics engineering technicians	784	1,431	91	350	650
17-3024	Electro-mechanical technicians	74	133	9	33	60
17-3025	Environmental engineering technicians	69	174	14	42	92
17-3026	Industrial engineering technicians	279	466	29	114	197
17-3027	Mechanical engineering technicians	178	373	26	91	183
17-3029	Engineering technicians, except drafters, all other	182	375	26	91	183
17-3031	Surveying and mapping technicians	202	428	22	49	171
19-0000	Life, physical, and social science occupations	3,420	8,010	607	2,272	4,464
19-1000	Life scientists	850	1,996	148	625	1,179
19-1010	Agricultural and food scientists	91	215	16	74	134
19-1011	Animal scientists	7	16	1	6	10
19-1012	Food scientists and technologists	31	73	5	26	46
19-1013	Soil and plant scientists	51	120	9	41	75
19-1020	Biological scientists	300	698	52	186	377
19-1021	Biochemists and biophysicists	110	280	22	75	157
19-1022	Microbiologists	56	131	9	35	71
19-1023	Zoologists and wildlife biologists	51	112	8	30	58
19-1029	Biological scientists, all other	82	175	13	47	90
19-1030	Conservation scientists and foresters	72	146	12	63	95

SOCS Code	Occupation	2016	2040	Growth	Replacement Jobs	Total Demand
19-1031	Conservation scientists	47	94	7	41	61
19-1032	Foresters	25	52	4	22	34
19-1040	Medical scientists	359	875	64	271	525
19-1041	Epidemiologists	16	33	2	10	19
19-1042	Medical scientists, except epidemiologists	343	841	61	260	506
19-1099	Life scientists, all other	28	63	5	20	36
19-2000	Physical scientists	864	2,079	167	510	1,079
19-2010	Astronomers and physicists	61	148	12	28	69
19-2011	Astronomers	5	10	1	2	5
19-2012	Physicists	56	138	11	26	64
19-2021	Atmospheric and space scientists	34	85	7	16	40
19-2030	Chemists and materials scientists	262	626	48	137	310
19-2031	Chemists	238	572	45	126	284
19-2032	Materials scientists	25	54	4	12	27
19-2040	Environmental scientists and geoscientists	443	1,085	90	334	632
19-2041	Environmental scientists and specialists, including health	310	757	62	233	440
19-2042	Geoscientists, except hydrologists and geographers	111	275	24	85	160
19-2043	Hydrologists	22	53	4	17	31
19-2099	Physical scientists, all other	63	134	9	13	46
19-3000	Social scientists and related workers	682	1,556	113	297	718
19-3011	Economists	62	145	11	39	79
19-3022	Survey researchers	68	178	14	21	74
19-3030	Psychologists	286	683	51	146	338
19-3031	Clinical, counseling, and school psychologists	258	619	46	133	309
19-3032	Industrial-organizational psychologists	4	9	1	2	4
19-3039	Psychologists, all other	25	55	4	12	26
19-3041	Sociologists	8	17	1	2	7
19-3051	Urban and regional planners	126	253	17	47	106
19-3090	Miscellaneous social scientists and related workers	132	281	19	34	105
19-3091	Anthropologists and archeologists	27	68	5	8	28
19-3092	Geographers	3	6	0	1	2
19-3093	Historians	9	19	1	2	7
19-3094	Political scientists	14	31	2	4	11
19-3099	Social scientists and related workers, all other	78	157	10	19	56
19-4000	Life, physical, and social science technicians	1,022	2,376	179	858	1,505
19-4011	Agricultural and food science technicians	52	113	8	37	66
19-4021	Biological technicians	218	513	37	143	287
19-4031	Chemical technicians	176	425	32	126	247
19-4041	Geological and petroleum technicians	38	94	8	35	60
19-4051	Nuclear technicians	12	25	2	10	16
19-4061	Social science research assistants	103	242	17	101	171
19-4090	Miscellaneous life, physical, and social science technicians	423	963	75	404	657
19-4091	Environmental science and protection technicians, including health	128	318	25	134	224
19-4092	Forensic science technicians	43	94	9	39	59
19-4093	Forest and conservation technicians	56	95	6	40	57
19-4099	Life, physical, and social science technicians, all other	194	452	34	190	313
21-0000	Community and social service occupations	5,895	13,942	1,058	3,025	6,867
21-1000	Counselors, social workers, and other community and social service specialists	4,765	11,252	840	2,417	5,545
21-1010	Counselors	1,445	3,476	260	727	1,712
21-1011	Substance abuse and behavioral disorder counselors	228	603	48	127	308
21-1012	Educational, guidance, school, and vocational counselors	478	1,003	71	210	459
21-1013	Marriage and family therapists	81	203	15	43	103

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21-1014	Mental health counselors	329	868	67	181	445
21-1015	Rehabilitation counselors	253	620	45	130	311
21-1019	Counselors, all other	75	177	13	37	86
21-1020	Social workers	1,601	3,768	281	908	1,953
21-1021	Child, family, and school social workers	703	1,515	105	365	757
21-1022	Healthcare social workers	425	1,126	91	271	608
21-1023	Mental health and substance abuse social workers	313	802	62	193	432
21-1029	Social workers, all other	160	325	23	78	156
21-1090	Miscellaneous community and social service specialists	1,719	4,007	299	786	1,883
21-1091	Health educators	169	409	32	80	195
21-1092	Probation officers and correctional treatment specialists	238	420	27	82	165
21-1093	Social and human service assistants	906	2,226	169	437	1,076
21-1094	Community health workers	146	369	29	72	179
21-1099	Community and social service specialists, all other	258	576	43	113	264
21-2000	Religious workers	1,130	2,691	218	610	1,326
21-2011	Clergy	643	1,537	124	330	741
21-2021	Directors, religious activities and education	342	808	65	218	431
21-2099	Religious workers, all other	145	345	28	61	153
23-0000	Legal occupations	4,429	10,571	765	1,813	4,819
23-1000	Lawyers, judges, and related workers	2,755	6,576	481	968	2,830
23-1010	Lawyers and judicial law clerks	2,619	6,328	466	932	2,741
23-1011	Lawyers	2,586	6,275	463	917	2,716
23-1012	Judicial law clerks	33	53	2	11	22
23-1020	Judges, magistrates, and other judicial workers	136	249	16	36	89
23-1021	Administrative law judges, adjudicators, and hearing officers	32	53	3	8	17
23-1022	Arbitrators, mediators, and conciliators	26	62	5	9	26
23-1023	Judges, magistrate judges, and magistrates	79	134	8	19	45
23-2000	Legal support workers	1,674	3,994	284	878	2,022
23-2011	Paralegals and legal assistants	1,214	3,035	227	667	1,556
23-2090	Miscellaneous legal support workers	459	958	57	210	465
23-2091	Court reporters	54	104	7	23	47
23-2093	Title examiners, abstractors, and searchers	273	576	32	126	287
23-2099	Legal support workers, all other	132	276	19	61	130
25-0000	Education, training, and library occupations	16,119	33,568	2,380	7,150	15,374
25-1000	Postsecondary teachers	3,204	6,661	504	1,178	2,759
25-1011	Business teachers, postsecondary	181	368	26	65	152
25-1020	Math and computer teachers, postsecondary	183	384	30	68	158
25-1021	Computer science teachers, postsecondary	74	149	11	27	62
25-1022	Mathematical science teachers, postsecondary	109	234	19	41	97
25-1030	Engineering and architecture teachers, postsecondary	94	196	15	35	81
25-1031	Architecture teachers, postsecondary	15	31	2	6	13
25-1032	Engineering teachers, postsecondary	79	165	13	29	68
25-1040	Life sciences teachers, postsecondary	135	285	22	50	118
25-1041	Agricultural sciences teachers, postsecondary	20	41	3	7	17
25-1042	Biological science teachers, postsecondary	110	235	19	42	97
25-1043	Forestry and conservation science teachers, postsecondary	4	8	0	1	3
25-1050	Physical sciences teachers, postsecondary	110	230	18	41	95
25-1051	Atmospheric, earth, marine, and space sciences teachers, postsecondary	22	45	3	8	19
25-1052	Chemistry teachers, postsecondary	46	97	8	17	40
25-1053	Environmental science teachers, postsecondary	11	23	2	4	10
25-1054	Physics teachers, postsecondary	30	64	5	11	27
25-1060	Social sciences teachers, postsecondary	247	518	41	92	214
25-1061	Anthropology and archeology teachers, postsecondary	13	26	2	5	11

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25-1062	Area, ethnic, and cultural studies teachers, postsecondary	20	42	3	7	17
25-1063	Economics teachers, postsecondary	29	60	4	11	25
25-1064	Geography teachers, postsecondary	9	19	1	3	8
25-1065	Political science teachers, postsecondary	37	75	5	13	31
25-1066	Psychology teachers, postsecondary	81	173	14	31	72
25-1067	Sociology teachers, postsecondary	36	76	6	14	31
25-1069	Social sciences teachers, postsecondary, all other	22	48	4	8	20
25-1070	Health teachers, postsecondary	494	1,091	94	193	456
25-1071	Health specialties teachers, postsecondary	372	821	70	145	343
25-1072	Nursing instructors and teachers, postsecondary	122	270	23	48	113
25-1080	Education and library science teachers, postsecondary	138	280	20	50	116
25-1081	Education teachers, postsecondary	128	261	19	46	108
25-1082	Library science teachers, postsecondary	9	19	1	3	8
25-1110	Law, criminal justice, and social work teachers, postsecondary	90	198	17	35	82
25-1111	Criminal justice and law enforcement teachers, postsecondary	30	67	6	12	28
25-1112	Law teachers, postsecondary	37	81	7	14	33
25-1113	Social work teachers, postsecondary	24	49	4	9	20
25-1120	Arts, communications, and humanities teachers, postsecondary	586	1,206	89	214	499
25-1121	Art, drama, and music teachers, postsecondary	206	424	31	75	175
25-1122	Communications teachers, postsecondary	61	125	9	22	52
25-1123	English language and literature teachers, postsecondary	155	317	23	56	131
25-1124	Foreign language and literature teachers, postsecondary	63	131	10	23	54
25-1125	History teachers, postsecondary	50	102	7	18	42
25-1126	Philosophy and religion teachers, postsecondary	52	108	8	19	44
25-1190	Miscellaneous postsecondary teachers	942	1,898	132	336	784
25-1191	Graduate teaching assistants	269	537	36	95	222
25-1192	Home economics teachers, postsecondary	7	12	0	2	5
25-1193	Recreation and fitness studies teachers, postsecondary	38	77	6	14	32
25-1194	Vocational education teachers, postsecondary	236	472	32	84	196
25-1199	Postsecondary teachers, all other	395	806	58	143	333
25-2000	Preschool, primary, secondary, and special education school teachers	7,222	14,920	1,017	3,457	7,139
25-2010	Preschool and kindergarten teachers	1,207	2,904	216	850	1,671
25-2011	Preschool teachers, except special education	938	2,358	179	690	1,380
25-2012	Kindergarten teachers, except special education	273	555	37	162	297
25-2020	Elementary and middle school teachers	3,422	6,839	458	1,512	3,138
25-2021	Elementary school teachers, except special education	2,327	4,651	311	1,029	2,134
25-2022	Middle school teachers, except special and career/technical education	1,072	2,140	143	473	982
25-2023	Career/technical education teachers, middle school	23	46	3	10	21
25-2030	Secondary school teachers	1,746	3,452	227	819	1,635
25-2031	Secondary school teachers, except special and career/technical education	1,612	3,198	212	759	1,515
25-2032	Career/technical education teachers, secondary school	134	254	14	60	120
25-2050	Special education teachers	847	1,725	117	325	744
25-2051	Special education teachers, preschool	49	114	8	21	53
25-2052	Special education teachers, kindergarten and elementary school	341	692	47	130	298
25-2053	Special education teachers, middle school	157	313	21	59	133
25-2054	Special education teachers, secondary school	228	454	30	86	193

SOCS Code	Occupation	2016	2040	Growth	Replacement Jobs	Total Demand
25-2059	Special education teachers, all other	72	153	11	29	67
25-3000	Other teachers and instructors	2,366	5,122	388	965	2,242
25-3011	Adult basic and secondary education and literacy teachers and instructors	127	265	19	50	115
25-3021	Self-enrichment education teachers	605	1,464	130	276	657
25-3099	Teachers and instructors, all other	1,632	3,390	238	639	1,470
25-4000	Librarians, curators, and archivists	600	1,126	71	347	597
25-4010	Archivists, curators, and museum technicians	43	92	7	29	52
25-4011	Archivists	12	26	2	8	15
25-4012	Curators	16	35	3	11	20
25-4013	Museum technicians and conservators	14	31	2	10	17
25-4021	Librarians	313	584	36	109	240
25-4031	Library technicians	249	458	30	219	315
25-9000	Other education, training, and library occupations	2,726	5,736	401	1,216	2,650
25-9011	Audio-visual and multimedia collections specialists	16	33	2	3	11
25-9021	Farm and home management advisors	22	48	4	4	16
25-9031	Instructional coordinators	272	567	40	55	195
25-9041	Teacher assistants	2,203	4,654	324	1,116	2,287
25-9099	Education, training, and library workers, all other	212	433	31	42	145
27-0000	Arts, design, entertainment, sports, and media occupations	5,669	12,702	898	3,110	6,507
27-1000	Art and design workers	1,834	4,112	287	927	2,041
27-1010	Artists and related workers	293	676	50	126	309
27-1011	Art directors	133	310	22	58	145
27-1012	Craft artists	11	25	2	5	12
27-1013	Fine artists, including painters, sculptors, and illustrators	28	66	5	12	30
27-1014	Multimedia artists and animators	103	234	18	44	104
27-1019	Artists and related workers, all other	15	33	3	6	15
27-1020	Designers	1,534	3,423	237	814	1,742
27-1021	Commercial and industrial designers	86	202	15	48	104
27-1022	Fashion designers	48	114	10	27	58
27-1023	Floral designers	149	302	20	72	147
27-1024	Graphic designers	716	1,610	108	383	826
27-1025	Interior designers	190	455	33	108	238
27-1026	Merchandise displayers and window trimmers	302	638	44	152	315
27-1027	Set and exhibit designers	24	57	4	14	30
27-1029	Designers, all other	22	53	4	13	27
27-2000	Entertainers and performers, sports and related workers	1,393	3,220	243	1,041	1,907
27-2010	Actors, producers, and directors	363	805	61	280	485
27-2011	Actors	149	329	24	130	215
27-2012	Producers and directors	208	464	37	149	266
27-2020	Athletes, coaches, umpires, and related workers	559	1,291	94	436	791
27-2021	Athletes and sports competitors	29	81	6	27	53
27-2022	Coaches and scouts	481	1,098	79	371	669
27-2023	Umpires, referees, and other sports officials	49	112	8	38	68
27-2030	Dancers and choreographers	36	90	7	29	55
27-2031	Dancers	26	69	5	22	43
27-2032	Choreographers	10	21	1	7	12
27-2040	Musicians, singers, and related workers	405	966	76	280	542
27-2041	Music directors and composers	143	331	26	96	183
27-2042	Musicians and singers	263	639	51	185	361
27-2099	Entertainers and performers, sports and related workers, all other	29	63	4	20	37
27-3000	Media and communication workers	1,879	4,151	288	853	1,946
27-3010	Announcers	37	81	5	23	45
27-3011	Radio and television announcers	19	35	2	10	19
27-3012	Public address system and other announcers	19	47	4	13	27
27-3020	News analysts, reporters and correspondents	122	177	1	57	91

SOCS Code	Occupation	2016	2040	Growth	Replacement Jobs	Total Demand
27-3021	Broadcast news analysts	3	4	0	1	2
27-3022	Reporters and correspondents	119	173	2	56	89
27-3031	Public relations specialists	742	1,750	131	209	693
27-3040	Writers and editors	742	1,506	91	381	756
27-3041	Editors	361	641	27	232	378
27-3042	Technical writers	226	527	42	121	260
27-3043	Writers and authors	157	344	23	58	150
27-3090	Miscellaneous media and communication workers	236	637	60	102	280
27-3091	Interpreters and translators	165	486	49	77	218
27-3099	Media and communication workers, all other	68	148	11	23	60
27-4000	Media and communication equipment workers	562	1,217	80	235	558
27-4010	Broadcast and sound engineering technicians and radio operators	239	547	42	104	249
27-4011	Audio and video equipment technicians	174	417	33	79	194
27-4012	Broadcast technicians	28	56	4	11	24
27-4013	Radio operators	2	3	0	1	1
27-4014	Sound engineering technicians	36	76	6	15	33
27-4021	Photographers	184	394	19	96	211
27-4030	Television, video, and motion picture camera operators and editors	100	209	16	19	67
27-4031	Camera operators, television, video, and motion picture	37	72	4	6	24
27-4032	Film and video editors	63	136	12	12	43
27-4099	Media and communication equipment workers, all other	38	66	3	13	27
29-0000	Healthcare practitioners and technical occupations	23,210	59,528	4,557	13,092	30,893
29-1000	Health diagnosing and treating practitioners	14,130	36,603	2,824	8,637	19,640
29-1011	Chiropractors	104	268	17	48	134
29-1020	Dentists	398	1,021	66	208	535
29-1021	Dentists, general	342	878	56	179	460
29-1022	Oral and maxillofacial surgeons	18	46	3	10	25
29-1023	Orthodontists	22	56	4	12	30
29-1024	Prosthodontists	2	5	0	1	3
29-1029	Dentists, all other specialists	15	35	2	7	17
29-1031	Dietitians and nutritionists	171	430	34	32	156
29-1041	Optometrists	111	299	23	107	200
29-1051	Pharmacists	857	1,830	131	427	896
29-1060	Physicians and surgeons	1,980	4,965	328	1,337	2,881
29-1061	Anesthesiologists	102	269	19	73	159
29-1062	Family and general practitioners	401	969	56	261	566
29-1063	Internists, general	157	379	22	102	221
29-1064	Obstetricians and gynecologists	73	187	12	51	110
29-1065	Pediatricians, general	102	247	14	67	145
29-1066	Psychiatrists	78	194	13	52	111
29-1067	Surgeons	137	358	25	97	210
29-1069	Physicians and surgeons, all other	935	2,377	169	640	1,367
29-1071	Physician assistants	295	834	68	187	450
29-1081	Podiatrists	29	72	4	14	37
29-1120	Therapists	1,569	4,413	371	1,031	2,397
29-1122	Occupational therapists	315	871	73	169	435
29-1123	Physical therapists	635	1,851	160	496	1,076
29-1124	Radiation therapists	48	125	9	29	67
29-1125	Recreational therapists	43	105	8	24	54
29-1126	Respiratory therapists	331	846	66	199	449
29-1127	Speech-language pathologists	304	796	66	201	434
29-1128	Exercise physiologists	18	42	3	4	17
29-1129	Therapists, all other	35	93	7	9	38
29-1131	Veterinarians	294	758	57	116	345
29-1141	Registered nurses	7,658	19,871	1,573	4,689	10,599
29-1151	Nurse anesthetists	118	307	22	72	169

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29-1161	Nurse midwives	17	45	3	10	24
29-1171	Nurse practitioners	403	1,169	101	275	640
29-1181	Audiologists	39	106	9	25	57
29-1199	Health diagnosing and treating practitioners, all other	86	214	17	50	111
29-2000	Health technologists and technicians	8,687	22,002	1,662	4,248	10,794
29-2010	Clinical laboratory technologists and technicians	973	2,525	189	603	1,372
29-2011	Medical and clinical laboratory technologists	476	1,222	91	292	662
29-2012	Medical and clinical laboratory technicians	497	1,303	98	311	710
29-2021	Dental hygienists	688	1,768	113	290	859
29-2030	Diagnostic related technologists and technicians	1,061	2,716	197	513	1,342
29-2031	Cardiovascular technologists and technicians	148	406	35	76	199
29-2032	Diagnostic medical sonographers	184	513	43	97	255
29-2033	Nuclear medicine technologists	58	136	8	26	67
29-2034	Radiologic technologists	571	1,410	94	266	697
29-2035	Magnetic resonance imaging technologists	99	249	17	47	123
29-2041	Emergency medical technicians and paramedics	795	2,023	158	331	924
29-2050	Health practitioner support technologists and technicians	2,227	5,355	426	530	2,016
29-2051	Dietetic technicians	67	164	12	16	64
29-2052	Pharmacy technicians	1,109	2,432	200	241	844
29-2053	Psychiatric technicians	166	380	26	38	145
29-2054	Respiratory therapy technicians	28	54	2	6	22
29-2055	Surgical technologists	291	757	57	75	305
29-2056	Veterinary technologists and technicians	451	1,253	107	125	503
29-2057	Ophthalmic medical technicians	127	339	24	34	142
29-2061	Licensed practical and licensed vocational nurses	1,788	4,612	340	1,313	2,716
29-2071	Medical records and health information technicians	573	1,484	112	332	781
29-2081	Opticians, dispensing	251	629	53	167	345
29-2090	Miscellaneous health technologists and technicians	330	889	73	88	358
29-2091	Orthotists and prosthetists	18	44	4	4	17
29-2092	Hearing aid specialists	19	48	4	5	17
29-2099	Health technologists and technicians, all other	293	798	65	79	324
29-9000	Other healthcare practitioners and technical occupations	392	922	71	184	437
29-9010	Occupational health and safety specialists and technicians	204	440	33	88	198
29-9011	Occupational health and safety specialists	165	354	26	71	159
29-9012	Occupational health and safety technicians	38	86	7	17	39
29-9090	Miscellaneous health practitioners and technical workers	186	478	38	96	237
29-9091	Athletic trainers	64	170	14	34	85
29-9092	Genetic counselors	7	20	2	4	10
29-9099	Healthcare practitioners and technical workers, all other	115	288	22	57	142
31-0000	Healthcare support occupations	11,114	30,197	2,385	6,634	15,969
31-1000	Nursing, psychiatric, and home health aides	5,862	16,241	1,352	3,668	8,641
31-1011	Home health aides	2,392	7,323	668	1,654	3,967
31-1013	Psychiatric aides	177	395	26	89	198
31-1014	Nursing assistants	3,180	8,239	637	1,861	4,326
31-1015	Orderlies	132	330	25	75	172
31-2000	Occupational therapy and physical therapist assistants and aides	528	1,592	143	460	962
31-2010	Occupational therapy assistants and aides	121	368	34	106	222
31-2011	Occupational therapy assistants	96	297	28	86	180
31-2012	Occupational therapy aides	25	71	6	21	43
31-2020	Physical therapist assistants and aides	406	1,223	109	354	740
31-2021	Physical therapist assistants	246	745	67	216	451
31-2022	Physical therapist aides	160	478	42	139	290
31-9000	Other healthcare support occupations	4,729	12,376	891	2,497	6,361

SOCS Code	Occupation	2016	2040	Growth	Replacement Jobs	Total Demand
31-9011	Massage therapists	276	809	74	60	308
31-9090	Miscellaneous healthcare support occupations	4,463	11,588	818	2,521	6,142
31-9091	Dental assistants	1,089	2,793	179	690	1,586
31-9092	Medical assistants	1,966	5,261	380	1,097	2,767
31-9093	Medical equipment preparers	148	381	29	79	194
31-9094	Medical transcriptionists	192	432	22	90	222
31-9095	Pharmacy aides	122	249	17	52	113
31-9096	Veterinary assistants and laboratory animal caretakers	329	849	64	177	432
31-9097	Phlebotomists	362	991	78	207	517
31-9099	Healthcare support workers, all other	256	633	48	132	315
33-0000	Protective service occupations	9,727	19,659	1,343	4,627	9,333
33-1000	Supervisors of protective service workers	824	1,555	104	540	879
33-1010	First-line supervisors of law enforcement workers	434	765	49	257	407
33-1011	First-line supervisors of correctional officers	118	212	14	61	104
33-1012	First-line supervisors of police and detectives	316	553	35	197	305
33-1021	First-line supervisors of fire fighting and prevention workers	199	353	23	167	237
33-1099	First-line supervisors of protective service workers, all other	197	454	33	116	240
33-2000	Fire fighting and prevention workers	1,071	1,917	125	556	942
33-2011	Firefighters	1,030	1,843	120	535	906
33-2020	Fire inspectors	41	74	5	21	37
33-2021	Fire inspectors and investigators	37	66	4	19	33
33-2022	Forest fire inspectors and prevention specialists	4	8	1	2	4
33-3000	Law enforcement workers	3,591	6,354	411	1,915	3,168
33-3010	Bailiffs, correctional officers, and jailers	1,216	2,196	146	604	1,047
33-3011	Bailiffs	51	89	6	25	42
33-3012	Correctional officers and jailers	1,165	2,107	141	579	1,005
33-3021	Detectives and criminal investigators	264	450	29	109	191
33-3031	Fish and game wardens	14	23	1	7	11
33-3041	Parking enforcement workers	26	37	0	11	18
33-3050	Police officers	2,072	3,649	234	1,203	1,919
33-3051	Police and sheriff's patrol officers	2,063	3,633	233	1,198	1,911
33-3052	Transit and railroad police	9	16	1	5	8
33-9000	Other protective service workers	4,234	9,816	703	1,435	4,156
33-9011	Animal control workers	45	81	5	18	35
33-9021	Private detectives and investigators	95	231	18	61	126
33-9030	Security guards and gaming surveillance officers	3,345	8,080	584	1,137	3,462
33-9031	Gaming surveillance officers and gaming investigators	18	41	2	6	19
33-9032	Security guards	3,327	8,040	583	1,131	3,444
33-9090	Miscellaneous protective service workers	796	1,559	106	230	588
33-9091	Crossing guards	207	396	27	71	159
33-9092	Lifeguards, ski patrol, and other recreational protective service workers	428	994	72	140	416
33-9093	Transportation security screeners	65	103	7	15	30
33-9099	Protective service workers, all other	269	554	39	78	212
35-0000	Food preparation and serving related occupations	39,312	92,670	7,615	34,391	58,321
35-1000	Supervisors of food preparation and serving workers	3,167	7,663	665	2,135	4,111
35-1011	Chefs and head cooks	377	921	76	138	388
35-1012	First-line supervisors of food preparation and serving workers	2,791	6,747	590	2,004	3,732
35-2000	Cooks and food preparation workers	9,597	22,286	1,775	5,982	11,746
35-2010	Cooks	6,979	16,181	1,272	4,281	8,477
35-2011	Cooks, fast food	1,702	3,319	165	878	1,711
35-2012	Cooks, institution and cafeteria	901	2,080	149	550	1,119
35-2013	Cooks, private household	33	74	5	19	39
35-2014	Cooks, restaurant	3,713	9,344	863	2,472	4,889
35-2015	Cooks, short order	572	1,228	80	325	644

SOCS Code	Occupation	2016	2040	Growth	Replacement Jobs	Total Demand
35-2019	Cooks, all other	57	134	10	35	72
35-2021	Food preparation workers	2,616	6,101	503	1,699	3,268
35-3000	Food and beverage serving workers	22,349	53,124	4,467	21,257	34,911
35-3011	Bartenders	1,867	4,608	401	1,732	2,945
35-3020	Fast food and counter workers	11,879	28,541	2,528	10,272	17,457
35-3021	Combined food preparation and serving workers, including fast food	10,388	25,093	2,250	8,109	14,412
35-3022	Counter attendants, cafeteria, food concession, and coffee shop	1,490	3,447	278	2,073	2,955
35-3031	Waiters and waitresses	8,009	18,493	1,429	8,898	13,711
35-3041	Food servers, nonrestaurant	593	1,482	108	364	805
35-9000	Other food preparation and serving related workers	4,199	9,596	709	5,114	7,650
35-9011	Dining room and cafeteria attendants and bartender helpers	1,251	2,970	230	1,484	2,291
35-9021	Dishwashers	1,576	3,412	220	1,475	2,374
35-9031	Hosts and hostesses, restaurant, lounge, and coffee shop	1,240	2,896	235	2,055	2,798
35-9099	Food preparation and serving related workers, all other	132	317	25	158	245
37-0000	Building and grounds cleaning and maintenance occupations	14,496	34,797	2,466	7,053	17,193
37-1000	Supervisors of building and grounds cleaning and maintenance workers	765	1,852	128	299	850
37-1011	First-line supervisors of housekeeping and janitorial workers	447	1,075	70	170	497
37-1012	First-line supervisors of landscaping, lawn service, and groundskeeping workers	318	777	58	130	353
37-2000	Building cleaning and pest control workers	10,707	25,571	1,787	5,485	12,959
37-2010	Building cleaning workers	10,306	24,545	1,713	5,247	12,410
37-2011	Janitors and cleaners, except maids and housekeeping cleaners	6,353	14,918	1,094	2,963	7,113
37-2012	Maids and housekeeping cleaners	4,081	10,010	650	2,388	5,525
37-2019	Building cleaning workers, all other	47	112	8	22	54
37-2021	Pest control workers	223	526	34	132	285
37-3000	Grounds maintenance workers	3,024	7,374	550	1,330	3,445
37-3011	Landscaping and groundskeeping workers	2,771	6,781	507	1,223	3,173
37-3012	Pesticide handlers, sprayers, and applicators, vegetation	72	160	11	29	71
37-3013	Tree trimmers and pruners	125	304	23	55	141
37-3019	Grounds maintenance workers, all other	56	129	9	23	59
39-0000	Personal care and service occupations	14,067	36,448	2,918	7,717	18,433
39-1000	Supervisors of personal care and service workers	490	1,231	91	254	621
39-1010	First-line supervisors of gaming workers	45	112	4	37	79
39-1011	Gaming supervisors	35	88	3	29	62
39-1012	Slot supervisors	10	24	1	8	17
39-1021	First-line supervisors of personal service workers	441	1,106	85	209	531
39-2000	Animal care and service workers	588	1,471	124	338	747
39-2011	Animal trainers	36	81	6	29	50
39-2021	Nonfarm animal caretakers	552	1,390	117	286	674
39-3000	Entertainment attendants and related workers	1,428	3,603	253	1,574	2,678
39-3010	Gaming services workers	174	457	22	122	290
39-3011	Gaming dealers	139	365	17	97	233
39-3012	Gaming and sports book writers and runners	27	71	5	19	41
39-3019	Gaming service workers, all other	18	45	2	12	28
39-3021	Motion picture projectionists	15	21	0	9	13
39-3031	Ushers, lobby attendants, and ticket takers	280	644	44	406	585
39-3090	Miscellaneous entertainment attendants and related workers	957	2,478	187	1,038	1,790
39-3091	Amusement and recreation attendants	883	2,288	173	959	1,652
39-3092	Costume attendants	15	38	3	16	27
39-3093	Locker room, coatroom, and dressing room	54	134	9	56	97

SOCS Code	Occupation	2016	2040	Growth	Replacement Jobs	Total Demand
	attendants					
39-3099	Entertainment attendants and related workers, all other	12	30	2	13	22
39-4000	Funeral service workers	199	473	35	104	236
39-4011	Embalmers	11	24	1	5	12
39-4021	Funeral attendants	109	252	17	55	125
39-4031	Morticians, undertakers, and funeral directors	79	196	16	44	98
39-5000	Personal appearance workers	1,586	3,970	328	839	1,945
39-5010	Barbers, hairdressers, hairstylists and cosmetologists	1,093	2,765	233	694	1,464
39-5011	Barbers	43	110	9	21	51
39-5012	Hairdressers, hairstylists, and cosmetologists	1,049	2,655	224	683	1,422
39-5090	Miscellaneous personal appearance workers	425	1,079	90	84	388
39-5091	Makeup artists, theatrical and performance	6	13	1	1	4
39-5092	Manicurists and pedicurists	253	645	54	51	231
39-5093	Shampooers	53	135	11	11	49
39-5094	Skincare specialists	120	307	25	24	113
39-6000	Baggage porters, bellhops, and concierges	140	351	17	71	199
39-6011	Baggage porters and bellhops	67	166	6	33	98
39-6012	Concierges	78	196	12	40	105
39-7000	Tour and travel guides	76	185	13	73	128
39-7011	Tour guides and escorts	68	164	11	64	113
39-7012	Travel guides	9	21	1	8	14
39-9000	Other personal care and service workers	9,555	25,156	2,058	4,462	11,876
39-9011	Childcare workers	2,930	7,104	544	2,096	4,086
39-9021	Personal care aides	4,551	12,978	1,126	1,049	5,027
39-9030	Recreation and fitness workers	1,698	4,181	323	771	1,962
39-9031	Fitness trainers and aerobics instructors	790	2,118	167	391	1,037
39-9032	Recreation workers	925	2,113	157	389	959
39-9041	Residential advisors	198	491	36	150	294
39-9099	Personal care and service workers, all other	177	400	28	90	200
41-0000	Sales and related occupations	49,675	105,718	8,055	31,235	57,371
41-1000	Supervisors of sales workers	4,992	10,525	815	2,103	4,663
41-1011	First-line supervisors of retail sales workers	4,053	8,475	664	1,894	3,928
41-1012	First-line supervisors of non-retail sales workers	943	2,059	151	237	766
41-2000	Retail sales workers	29,143	61,105	4,729	22,564	37,336
41-2010	Cashiers	10,118	21,151	1,544	8,999	14,227
41-2011	Cashiers	10,101	21,111	1,543	8,982	14,195
41-2012	Gaming change persons and booth cashiers	31	74	3	32	57
41-2020	Counter and rental clerks and parts salespersons	2,403	5,346	389	1,276	2,695
41-2021	Counter and rental clerks	1,629	3,724	265	922	1,944
41-2022	Parts salespersons	774	1,623	124	360	757
41-2031	Retail salespersons	16,621	34,608	2,797	11,995	20,120
41-3000	Sales representatives, services	7,878	17,570	1,279	3,917	8,539
41-3011	Advertising sales agents	550	1,181	70	350	671
41-3021	Insurance sales agents	2,624	5,638	402	1,481	2,944
41-3031	Securities, commodities, and financial services sales agents	1,176	2,535	196	437	1,026
41-3041	Travel agents	207	451	23	70	203
41-3099	Sales representatives, services, all other	3,323	7,768	588	1,655	3,771
41-4000	Sales representatives, wholesale and manufacturing	5,077	10,793	848	2,220	4,849
41-4011	Sales representatives, wholesale and manufacturing, technical and scientific products	1,237	2,637	202	543	1,190
41-4012	Sales representatives, wholesale and manufacturing, except technical and scientific products	3,841	8,157	646	1,678	3,661
41-9000	Other sales and related workers	2,585	5,724	384	802	2,354
41-9010	Models, demonstrators, and product promoters	308	744	58	220	429
41-9011	Demonstrators and product promoters	294	719	56	213	417
41-9012	Models	14	25	1	7	12
41-9020	Real estate brokers and sales agents	773	1,685	105	118	579
41-9021	Real estate brokers	154	335	20	24	116

SOCS Code	Occupation	2016	2040	Growth	Replacement Jobs	Total Demand
41-9022	Real estate sales agents	618	1,347	85	94	462
41-9031	Sales engineers	321	675	50	175	339
41-9041	Telemarketers	827	1,830	109	338	853
41-9090	Miscellaneous sales and related workers	356	792	62	90	293
41-9091	Door-to-door sales workers, news and street vendors, and related workers	22	35	1	3	11
41-9099	Sales and related workers, all other	335	756	61	106	300
43-0000	Office and administrative support occupations	74,655	160,811	10,352	32,614	75,603
43-1000	Supervisors of office and administrative support workers	5,264	11,817	849	1,785	4,947
43-1011	First-line supervisors of office and administrative support workers	5,264	11,817	849	1,785	4,947
43-2000	Communications equipment operators	362	570	-10	76	239
43-2011	Switchboard operators, including answering service	328	523	-8	62	213
43-2021	Telephone operators	27	33	-3	8	17
43-2099	Communications equipment operators, all other	7	15	1	3	7
43-3000	Financial clerks	12,352	25,367	1,334	4,816	11,641
43-3011	Bill and account collectors	1,373	2,892	152	706	1,509
43-3021	Billing and posting clerks	1,760	4,345	318	908	2,184
43-3031	Bookkeeping, accounting, and auditing clerks	5,358	10,619	502	1,041	3,886
43-3041	Gaming cage workers	26	68	4	13	37
43-3051	Payroll and timekeeping clerks	504	1,064	61	285	574
43-3061	Procurement clerks	184	352	18	122	209
43-3071	Tellers	2,973	5,644	250	2,208	3,612
43-3099	Financial clerks, all other	174	385	29	104	201
43-4000	Information and record clerks	19,899	44,745	3,110	10,904	23,097
43-4011	Brokerage clerks	139	296	25	72	133
43-4021	Correspondence clerks	38	68	2	19	37
43-4031	Court, municipal, and license clerks	397	701	45	42	181
43-4041	Credit authorizers, checkers, and clerks	216	432	22	36	147
43-4051	Customer service representatives	10,523	23,969	1,822	5,903	12,242
43-4061	Eligibility interviewers, government programs	316	565	37	62	175
43-4071	File clerks	570	1,164	55	234	558
43-4081	Hotel, motel, and resort desk clerks	351	946	8	490	947
43-4111	Interviewers, except eligibility and loan	649	1,566	107	357	818
43-4121	Library assistants, clerical	275	502	33	155	260
43-4131	Loan interviewers and clerks	1,195	2,625	190	404	1,072
43-4141	New accounts clerks	298	565	24	138	279
43-4151	Order clerks	550	1,084	62	294	565
43-4161	Human resources assistants, except payroll and timekeeping	411	850	49	96	322
43-4171	Receptionists and information clerks	3,394	8,188	544	2,207	4,648
43-4181	Reservation and transportation ticket agents and travel clerks	138	314	17	39	136
43-4199	Information and record clerks, all other	439	910	66	234	453
43-5000	Material recording, scheduling, dispatching, and distributing workers	10,410	21,113	1,460	5,625	10,742
43-5011	Cargo and freight agents	94	207	15	67	121
43-5021	Couriers and messengers	231	541	36	68	224
43-5030	Dispatchers	670	1,303	79	325	636
43-5031	Police, fire, and ambulance dispatchers	314	542	25	135	252
43-5032	Dispatchers, except police, fire, and ambulance	385	815	56	204	411
43-5041	Meter readers, utilities	94	154	4	28	62
43-5050	Postal service workers	637	820	4	134	249
43-5051	Postal service clerks	92	121	1	15	31
43-5052	Postal service mail carriers	393	516	7	100	172
43-5053	Postal service mail sorters, processors, and processing machine operators	152	183	-4	21	47
43-5061	Production, planning, and expediting clerks	898	1,870	131	507	966
43-5071	Shipping, receiving, and traffic clerks	1,617	3,203	204	695	1,474

SOCS Code	Occupation	2016	2040	Growth	Replacement Jobs	Total Demand
43-5081	Stock clerks and order fillers	6,001	12,653	961	4,016	7,131
43-5111	Weighers, measurers, checkers, and samplers, recordkeeping	167	363	25	107	203
43-6000	Secretaries and administrative assistants	12,302	27,327	1,746	2,881	10,463
43-6011	Executive secretaries and executive administrative assistants	2,431	4,929	259	520	1,828
43-6012	Legal secretaries	970	2,205	125	232	886
43-6013	Medical secretaries	1,710	4,532	328	478	1,904
43-6014	Secretaries and administrative assistants, except legal, medical, and executive	7,247	15,793	1,042	1,665	5,895
43-9000	Other office and administrative support workers	14,068	29,877	1,863	6,321	14,270
43-9011	Computer operators	298	506	9	38	166
43-9020	Data entry and information processing workers	1,162	2,270	105	227	821
43-9021	Data entry keyers	929	1,884	97	240	742
43-9022	Word processors and typists	233	384	8	13	105
43-9031	Desktop publishers	44	71	1	19	36
43-9041	Insurance claims and policy processing clerks	1,766	3,721	245	932	1,907
43-9051	Mail clerks and mail machine operators, except postal service	402	735	20	150	348
43-9061	Office clerks, general	9,264	20,265	1,347	4,370	9,813
43-9071	Office machine operators, except computer	348	622	18	141	301
43-9081	Proofreaders and copy markers	38	76	4	15	34
43-9111	Statistical assistants	56	102	4	41	67
43-9199	Office and administrative support workers, all other	689	1,510	111	406	794
45-0000	Farming, fishing, and forestry occupations	508	829	43	213	367
45-1000	Supervisors of farming, fishing, and forestry workers	26	41	1	10	18
45-1011	First-line supervisors of farming, fishing, and forestry workers	26	41	1	10	18
45-2000	Agricultural workers	454	734	38	190	325
45-2011	Agricultural inspectors	26	49	3	12	23
45-2021	Animal breeders	2	3	0	1	1
45-2041	Graders and sorters, agricultural products	55	91	5	15	33
45-2090	Miscellaneous agricultural workers	368	584	29	156	259
45-2091	Agricultural equipment operators	40	70	5	19	32
45-2092	Farmworkers and laborers, crop, nursery, and greenhouse	237	357	15	95	155
45-2093	Farmworkers, farm, ranch, and aquacultural animals	81	138	8	37	63
45-2099	Agricultural workers, all other	12	23	1	6	12
45-3000	Fishing and hunting workers	0	1	0	0	0
45-4000	Forest, conservation, and logging workers	28	52	4	12	23
45-4011	Forest and conservation workers	17	33	2	8	15
45-4020	Logging workers	10	20	1	5	9
45-4021	Fallers	2	4	0	1	2
45-4022	Logging equipment operators	6	11	1	3	4
45-4023	Log graders and scalers	2	3	0	1	1
45-4029	Logging workers, all other	1	1	0	0	0
47-0000	Construction and extraction occupations	13,775	25,608	1,834	4,024	9,414
47-1000	Supervisors of construction and extraction workers	1,372	2,499	181	198	707
47-1011	First-line supervisors of construction trades and extraction workers	1,372	2,499	181	198	707
47-2000	Construction trades workers	10,458	19,304	1,368	2,999	7,031
47-2011	Boilermakers	34	61	4	10	23
47-2020	Brickmasons, blockmasons, and stonemasons	167	323	27	27	93
47-2021	Brickmasons and blockmasons	141	271	23	23	78
47-2022	Stonemasons	27	52	4	4	15
47-2031	Carpenters	1,787	3,195	235	367	997
47-2040	Carpet, floor, and tile installers and finishers	185	339	21	48	121
47-2041	Carpet installers	73	131	7	18	48
47-2042	Floor layers, except carpet, wood, and hard tiles	26	52	4	7	19

SOCS Code	Occupation	2016	2040	Growth	Replacement Jobs	Total Demand
47-2043	Floor sanders and finishers	10	17	1	2	6
47-2044	Tile and marble setters	74	131	8	18	46
47-2050	Cement masons, concrete finishers, and terrazzo workers	406	732	50	89	239
47-2051	Cement masons and concrete finishers	399	719	49	88	235
47-2053	Terrazzo workers and finishers	7	12	1	1	4
47-2061	Construction laborers	2,607	4,954	379	988	2,034
47-2070	Construction equipment operators	1,152	2,072	131	366	800
47-2071	Paving, surfacing, and tamping equipment operators	167	289	16	69	129
47-2072	Pile-driver operators	12	21	1	3	8
47-2073	Operating engineers and other construction equipment operators	973	1,763	113	294	665
47-2080	Drywall installers, ceiling tile installers, and tapers	247	422	23	26	112
47-2081	Drywall and ceiling tile installers	207	354	20	22	94
47-2082	Tapers	40	68	4	4	18
47-2111	Electricians	1,308	2,512	188	383	923
47-2121	Glaziers	103	186	11	27	68
47-2130	Insulation workers	124	226	15	76	124
47-2131	Insulation workers, floor, ceiling, and wall	56	98	5	33	53
47-2132	Insulation workers, mechanical	67	128	10	43	70
47-2140	Painters and paperhangers	534	995	65	158	377
47-2141	Painters, construction and maintenance	522	971	63	155	367
47-2142	Paperhangers	12	24	1	4	10
47-2150	Pipelayers, plumbers, pipefitters, and steamfitters	1,049	1,933	132	255	663
47-2151	Pipelayers	139	247	15	32	84
47-2152	Plumbers, pipefitters, and steamfitters	909	1,686	117	223	579
47-2161	Plasterers and stucco masons	50	89	5	4	22
47-2171	Reinforcing iron and rebar workers	48	92	8	14	33
47-2181	Roofers	222	408	28	62	148
47-2211	Sheet metal workers	261	461	29	99	193
47-2221	Structural iron and steel workers	161	277	16	46	102
47-2231	Solar photovoltaic installers	12	25	2	4	9
47-3000	Helpers, construction trades	568	1,042	75	131	345
47-3011	Helpers--brickmasons, blockmasons, stonemasons, and tile and marble setters	55	106	9	14	35
47-3012	Helpers--carpenters	111	195	15	24	61
47-3013	Helpers--electricians	166	314	24	40	106
47-3014	Helpers--painters, paperhangers, plasterers, and stucco masons	27	49	3	6	16
47-3015	Helpers--pipelayers, plumbers, pipefitters, and steamfitters	132	238	16	30	80
47-3016	Helpers--roofers	26	48	3	6	16
47-3019	Helpers, construction trades, all other	49	88	6	11	30
47-4000	Other construction and related workers	1,088	2,152	150	523	1,019
47-4011	Construction and building inspectors	334	743	55	207	401
47-4021	Elevator installers and repairers	46	85	6	13	31
47-4031	Fence erectors	49	89	5	17	37
47-4041	Hazardous materials removal workers	63	149	12	33	74
47-4051	Highway maintenance workers	434	761	48	203	352
47-4061	Rail-track laying and maintenance equipment operators	24	47	4	11	21
47-4071	Septic tank servicers and sewer pipe cleaners	52	114	9	28	56
47-4090	Miscellaneous construction and related workers	82	158	11	24	59
47-4091	Segmental pavers	2	4	0	1	1
47-4099	Construction and related workers, all other	80	154	11	24	58
47-5000	Extraction workers	288	608	60	149	289
47-5010	Derrick, rotary drill, and service unit operators, oil, gas, and mining	104	230	27	79	131
47-5011	Derrick operators, oil and gas	19	42	5	14	23

SOCS Code	Occupation	2016	2040	Growth	Replacement Jobs	Total Demand
47-5012	Rotary drill operators, oil and gas	24	55	7	19	31
47-5013	Service unit operators, oil, gas, and mining	59	128	14	44	73
47-5021	Earth drillers, except oil and gas	49	97	7	22	44
47-5031	Explosives workers, ordnance handling experts, and blasters	12	27	2	5	12
47-5040	Mining machine operators	2	5	0	1	2
47-5041	Continuous mining machine operators	1	2	0	0	1
47-5042	Mine cutting and channeling machine operators	0	1	0	0	0
47-5049	Mining machine operators, all other	0	1	0	0	0
47-5051	Rock splitters, quarry	1	1	0	0	0
47-5061	Roof bolters, mining	0	0	0	0	0
47-5071	Roustabouts, oil and gas	87	180	18	35	76
47-5081	Helpers--extraction workers	26	56	5	7	20
47-5099	Extraction workers, all other	5	13	1	2	5
49-0000	Installation, maintenance, and repair occupations	14,544	31,450	2,304	7,303	15,320
49-1000	Supervisors of installation, maintenance, and repair workers	1,217	2,614	192	522	1,181
49-1011	First-line supervisors of mechanics, installers, and repairers	1,217	2,614	192	522	1,181
49-2000	Electrical and electronic equipment mechanics, installers, and repairers	2,155	4,445	303	691	1,781
49-2011	Computer, automated teller, and office machine repairers	372	840	62	162	388
49-2020	Radio and telecommunications equipment installers and repairers	1,125	2,231	145	202	725
49-2021	Radio, cellular, and tower equipment installers and repairs	61	129	10	11	42
49-2022	Telecommunications equipment installers and repairers, except line installers	1,068	2,111	136	190	684
49-2090	Miscellaneous electrical and electronic equipment mechanics, installers, and repairers	657	1,372	96	270	610
49-2091	Avionics technicians	28	56	4	10	21
49-2092	Electric motor, power tool, and related repairers	46	99	7	27	53
49-2093	Electrical and electronics installers and repairers, transportation equipment	24	48	4	8	19
49-2094	Electrical and electronics repairers, commercial and industrial equipment	200	377	26	65	146
49-2095	Electrical and electronics repairers, powerhouse, substation, and relay	46	91	7	16	36
49-2096	Electronic equipment installers and repairers, motor vehicles	34	43	-3	8	19
49-2097	Electronic home entertainment equipment installers and repairers	94	208	15	30	84
49-2098	Security and fire alarm systems installers	184	448	36	111	234
49-3000	Vehicle and mobile equipment mechanics, installers, and repairers	4,249	9,406	718	2,302	4,727
49-3011	Aircraft mechanics and service technicians	130	263	19	63	123
49-3020	Automotive technicians and repairers	2,566	5,778	434	1,494	3,023
49-3021	Automotive body and related repairers	458	1,108	88	255	560
49-3022	Automotive glass installers and repairers	52	130	10	17	54
49-3023	Automotive service technicians and mechanics	2,055	4,541	336	1,216	2,402
49-3031	Bus and truck mechanics and diesel engine specialists	529	1,213	107	208	511
49-3040	Heavy vehicle and mobile equipment service technicians and mechanics	431	889	65	210	425
49-3041	Farm equipment mechanics and service technicians	96	204	16	48	98
49-3042	Mobile heavy equipment mechanics, except engines	319	651	47	154	311
49-3043	Rail car repairers	16	31	2	7	14
49-3050	Small engine mechanics	205	458	34	93	215

SOCS Code	Occupation	2016	2040	Growth	Replacement Jobs	Total Demand
49-3051	Motorboat mechanics and service technicians	63	141	10	28	66
49-3052	Motorcycle mechanics	52	110	8	22	49
49-3053	Outdoor power equipment and other small engine mechanics	90	208	16	42	99
49-3090	Miscellaneous vehicle and mobile equipment mechanics, installers, and repairers	411	846	61	288	494
49-3091	Bicycle repairers	34	71	6	24	41
49-3092	Recreational vehicle service technicians	37	76	5	26	45
49-3093	Tire repairers and changers	341	698	50	238	408
49-9000	Other installation, maintenance, and repair occupations	7,045	15,214	1,107	3,742	7,632
49-9010	Control and valve installers and repairers	130	253	18	100	156
49-9011	Mechanical door repairers	42	79	5	31	49
49-9012	Control and valve installers and repairers, except mechanical door	89	174	13	69	107
49-9021	Heating, air conditioning, and refrigeration mechanics and installers	627	1,233	91	188	466
49-9031	Home appliance repairers	115	265	19	71	145
49-9040	Industrial machinery installation, repair, and maintenance workers	823	1,783	171	419	810
49-9041	Industrial machinery mechanics	610	1,378	137	357	669
49-9043	Maintenance workers, machinery	150	304	26	49	114
49-9044	Millwrights	83	164	15	33	66
49-9045	Refractory materials repairers, except brickmasons	4	7	1	2	3
49-9050	Line installers and repairers	832	1,585	104	461	813
49-9051	Electrical power-line installers and repairers	306	617	53	246	376
49-9052	Telecommunications line installers and repairers	526	969	51	177	399
49-9060	Precision instrument and equipment repairers	203	448	32	80	199
49-9061	Camera and photographic equipment repairers	9	19	1	4	9
49-9062	Medical equipment repairers	135	312	23	56	141
49-9063	Musical instrument repairers and tuners	22	43	3	7	18
49-9064	Watch repairers	7	12	0	2	5
49-9069	Precision instrument and equipment repairers, all other	30	63	5	11	27
49-9071	Maintenance and repair workers, general	3,658	8,198	582	2,148	4,366
49-9081	Wind turbine service technicians	13	48	8	8	19
49-9090	Miscellaneous installation, maintenance, and repair workers	885	1,923	137	449	950
49-9091	Coin, vending, and amusement machine servicers and repairers	56	127	8	17	55
49-9092	Commercial divers	6	14	2	2	5
49-9093	Fabric menders, except garment	0	0	0	0	0
49-9094	Locksmiths and safe repairers	50	98	3	50	78
49-9095	Manufactured building and mobile home installers	9	11	0	3	5
49-9096	Riggers	39	80	6	21	39
49-9097	Signal and track switch repairers	7	13	1	2	5
49-9098	Helpers--installation, maintenance, and repair workers	342	752	57	243	435
49-9099	Installation, maintenance, and repair workers, all other	391	857	63	131	353
51-0000	Production occupations	17,350	32,795	2,158	7,328	14,539
51-1000	Supervisors of production workers	1,141	2,048	131	324	743
51-1011	First-line supervisors of production and operating workers	1,141	2,048	131	324	743
51-2000	Assemblers and fabricators	4,708	8,805	606	1,748	3,597
51-2011	Aircraft structure, surfaces, rigging, and systems assemblers	42	69	6	14	22
51-2020	Electrical, electronics, and electromechanical assemblers	1,731	2,779	163	342	806

SOCS Code	Occupation	2016	2040	Growth	Replacement Jobs	Total Demand
51-2021	Coil winders, tapers, and finishers	68	110	7	13	32
51-2022	Electrical and electronic equipment assemblers	1,459	2,368	140	291	695
51-2023	Electromechanical equipment assemblers	230	371	22	46	109
51-2031	Engine and other machine assemblers	40	79	6	16	32
51-2041	Structural metal fabricators and fitters	103	177	11	29	63
51-2090	Miscellaneous assemblers and fabricators	2,773	5,648	416	1,213	2,522
51-2091	Fiberglass laminators and fabricators	13	25	2	5	9
51-2092	Team assemblers	2,200	4,356	314	935	1,913
51-2093	Timing device assemblers and adjusters	7	11	1	3	4
51-2099	Assemblers and fabricators, all other	566	1,288	101	277	612
51-3000	Food processing workers	1,341	2,737	209	565	1,201
51-3011	Bakers	442	978	82	214	454
51-3020	Butchers and other meat, poultry, and fish processing workers	646	1,292	96	255	554
51-3021	Butchers and meat cutters	397	864	70	171	387
51-3022	Meat, poultry, and fish cutters and trimmers	196	362	25	72	148
51-3023	Slaughterers and meat packers	81	134	8	26	50
51-3090	Miscellaneous food processing workers	251	466	32	98	195
51-3091	Food and tobacco roasting, baking, and drying machine operators and tenders	26	50	4	10	21
51-3092	Food batchmakers	145	265	18	57	111
51-3093	Food cooking machine operators and tenders	51	98	7	20	41
51-3099	Food processing workers, all other	40	76	5	16	32
51-4000	Metal workers and plastic workers	3,093	5,334	315	1,294	2,333
51-4010	Computer control programmers and operators	293	544	54	165	253
51-4011	Computer-controlled machine tool operators, metal and plastic	256	470	47	143	217
51-4012	Computer numerically controlled machine tool programmers, metal and plastic	37	73	7	22	35
51-4020	Forming machine setters, operators, and tenders, metal and plastic	172	245	6	60	100
51-4021	Extruding and drawing machine setters, operators, and tenders, metal and plastic	85	117	1	29	49
51-4022	Forging machine setters, operators, and tenders, metal and plastic	23	32	0	8	13
51-4023	Rolling machine setters, operators, and tenders, metal and plastic	66	103	5	25	42
51-4030	Machine tool cutting setters, operators, and tenders, metal and plastic	497	734	12	152	294
51-4031	Cutting, punching, and press machine setters, operators, and tenders, metal and plastic	306	474	10	60	158
51-4032	Drilling and boring machine tool setters, operators, and tenders, metal and plastic	22	31	1	5	11
51-4033	Grinding, lapping, polishing, and buffing machine tool setters, operators, and tenders, metal and plastic	91	123	0	51	72
51-4034	Lathe and turning machine tool setters, operators, and tenders, metal and plastic	50	68	0	17	28
51-4035	Milling and planing machine setters, operators, and tenders, metal and plastic	27	39	1	7	13
51-4041	Machinists	696	1,380	117	399	685
51-4050	Metal furnace operators, tenders, pourers, and casters	88	131	6	42	63
51-4051	Metal-refining furnace operators and tenders	60	95	6	30	45
51-4052	Pourers and casters, metal	28	36	0	11	17
51-4060	Model makers and patternmakers, metal and plastic	17	26	0	5	10
51-4061	Model makers, metal and plastic	12	20	0	3	8
51-4062	Patternmakers, metal and plastic	6	7	0	1	3
51-4070	Molders and molding machine setters, operators, and tenders, metal and plastic	188	262	0	39	89
51-4071	Foundry mold and coremakers	28	35	0	5	11
51-4072	Molding, coremaking, and casting machine	160	227	1	34	78

SOCS Code	Occupation	2016	2040	Growth	Replacement Jobs	Total Demand
	setters, operators, and tenders, metal and plastic					
51-4081	Multiple machine tool setters, operators, and tenders, metal and plastic	133	230	15	40	83
51-4111	Tool and die makers	92	143	6	7	32
51-4120	Welding, soldering, and brazing workers	742	1,378	94	395	683
51-4121	Welders, cutters, solderers, and brazers	676	1,279	91	367	637
51-4122	Welding, soldering, and brazing machine setters, operators, and tenders	66	99	3	28	46
51-4190	Miscellaneous metal workers and plastic workers	175	262	5	54	104
51-4191	Heat treating equipment setters, operators, and tenders, metal and plastic	28	37	0	7	12
51-4192	Layout workers, metal and plastic	12	16	1	3	5
51-4193	Plating and coating machine setters, operators, and tenders, metal and plastic	72	94	0	23	37
51-4194	Tool grinders, filers, and sharpeners	16	26	1	6	12
51-4199	Metal workers and plastic workers, all other	48	88	3	15	37
51-5100	Printing workers	440	746	35	113	266
51-5111	Prepress technicians and workers	74	117	2	18	43
51-5112	Printing press operators	293	511	26	77	185
51-5113	Print binding and finishing workers	72	118	6	18	38
51-6000	Textile, apparel, and furnishings workers	1,080	2,285	136	349	969
51-6011	Laundry and dry-cleaning workers	512	1,195	72	172	534
51-6021	Pressers, textile, garment, and related materials	155	348	23	82	178
51-6031	Sewing machine operators	158	276	15	17	75
51-6040	Shoe and leather workers	10	21	1	3	8
51-6041	Shoe and leather workers and repairers	9	20	1	3	9
51-6042	Shoe machine operators and tenders	1	1	0	0	0
51-6050	Tailors, dressmakers, and sewers	69	133	7	44	77
51-6051	Sewers, hand	11	20	1	7	11
51-6052	Tailors, dressmakers, and custom sewers	58	113	6	38	66
51-6060	Textile machine setters, operators, and tenders	58	86	4	13	26
51-6061	Textile bleaching and dyeing machine operators and tenders	8	10	0	1	2
51-6062	Textile cutting machine setters, operators, and tenders	15	24	1	4	8
51-6063	Textile knitting and weaving machine setters, operators, and tenders	16	21	1	4	6
51-6064	Textile winding, twisting, and drawing out machine setters, operators, and tenders	20	30	1	5	9
51-6090	Miscellaneous textile, apparel, and furnishings workers	117	226	14	41	93
51-6091	Extruding and forming machine setters, operators, and tenders, synthetic and glass fibers	12	18	1	2	5
51-6092	Fabric and apparel patternmakers	6	12	1	1	4
51-6093	Upholsterers	70	134	8	34	65
51-6099	Textile, apparel, and furnishings workers, all other	27	60	4	6	22
51-7000	Woodworkers	383	668	44	109	237
51-7011	Cabinetmakers and bench carpenters	194	342	24	28	92
51-7021	Furniture finishers	38	70	4	12	27
51-7030	Model makers and patternmakers, wood	3	6	0	1	3
51-7031	Model makers, wood	1	2	0	0	1
51-7032	Patternmakers, wood	1	1	0	0	1
51-7040	Woodworking machine setters, operators, and tenders	138	230	14	50	93
51-7041	Sawing machine setters, operators, and tenders, wood	47	79	5	22	37
51-7042	Woodworking machine setters, operators, and tenders, except sawing	93	157	9	27	57
51-7099	Woodworkers, all other	9	18	1	4	8
51-8000	Plant and system operators	613	1,148	79	361	604
51-8010	Power plant operators, distributors, and dispatchers	113	215	15	74	119

SOCS Code	Occupation	2016	2040	Growth	Replacement Jobs	Total Demand
51-8011	Nuclear power reactor operators	14	28	2	10	16
51-8012	Power distributors and dispatchers	24	49	4	17	28
51-8013	Power plant operators	75	138	9	47	75
51-8021	Stationary engineers and boiler operators	81	168	12	46	88
51-8031	Water and wastewater treatment plant and system operators	342	620	42	157	282
51-8090	Miscellaneous plant and system operators	76	142	10	53	84
51-8091	Chemical plant and system operators	26	45	3	17	26
51-8092	Gas plant operators	20	37	3	14	21
51-8093	Petroleum pump system operators, refinery operators, and gaugers	29	57	6	22	33
51-8099	Plant and system operators, all other	18	33	2	13	20
51-9000	Other production occupations	4,551	9,023	603	2,409	4,533
51-9010	Chemical processing machine setters, operators, and tenders	102	183	11	58	95
51-9011	Chemical equipment operators and tenders	54	95	5	30	49
51-9012	Separating, filtering, clarifying, precipitating, and still machine setters, operators, and tenders	48	90	6	28	48
51-9020	Crushing, grinding, polishing, mixing, and blending workers	181	302	17	65	122
51-9021	Crushing, grinding, and polishing machine setters, operators, and tenders	36	61	3	13	26
51-9022	Grinding and polishing workers, hand	42	65	3	14	26
51-9023	Mixing and blending machine setters, operators, and tenders	108	189	12	41	78
51-9030	Cutting workers	71	116	6	23	45
51-9031	Cutters and trimmers, hand	12	20	1	4	8
51-9032	Cutting and slicing machine setters, operators, and tenders	59	96	5	19	37
51-9041	Extruding, forming, pressing, and compacting machine setters, operators, and tenders	54	82	3	29	44
51-9051	Furnace, kiln, oven, drier, and kettle operators and tenders	23	34	2	9	14
51-9061	Inspectors, testers, sorters, samplers, and weighers	1,213	2,394	168	602	1,147
51-9071	Jewelers and precious stone and metal workers	70	126	6	20	49
51-9080	Medical, dental, and ophthalmic laboratory technicians	162	351	21	85	188
51-9081	Dental laboratory technicians	60	128	5	31	73
51-9082	Medical appliance technicians	37	74	5	18	37
51-9083	Ophthalmic laboratory technicians	65	147	11	36	77
51-9111	Packaging and filling machine operators and tenders	591	1,275	95	455	774
51-9120	Painting workers	264	537	39	101	226
51-9121	Coating, painting, and spraying machine setters, operators, and tenders	110	183	11	34	67
51-9122	Painters, transportation equipment	126	297	24	56	134
51-9123	Painting, coating, and decorating workers	35	71	5	13	31
51-9141	Semiconductor processors	278	428	25	88	151
51-9151	Photographic process workers and processing machine operators	109	160	-3	31	72
51-9190	Miscellaneous production workers	1,435	3,036	212	813	1,575
51-9191	Adhesive bonding machine operators and tenders	12	19	1	5	8
51-9192	Cleaning, washing, and metal pickling equipment operators and tenders	18	29	2	8	13
51-9193	Cooling and freezing equipment operators and tenders	7	12	1	2	5
51-9194	Etchers and engravers	19	36	2	9	17
51-9195	Molders, shapers, and casters, except metal and plastic	43	70	4	24	37
51-9196	Paper goods machine setters, operators, and tenders	64	98	5	14	30
51-9197	Tire builders	5	9	0	2	4

SOCS Code	Occupation	2016	2040	Growth	Replacement Jobs	Total Demand
51-9198	Helpers--production workers	820	1,701	112	555	980
51-9199	Production workers, all other	496	1,134	88	232	530
53-0000	Transportation and material moving occupations	18,489	40,499	3,021	9,875	20,256
53-1000	Supervisors of transportation and material moving workers	688	1,472	107	472	844
53-1011	Aircraft cargo handling supervisors	4	8	1	3	4
53-1021	First-line supervisors of helpers, laborers, and material movers, hand	327	711	52	228	410
53-1031	First-line supervisors of transportation and material-moving machine and vehicle operators	357	752	54	241	428
53-2000	Air transportation workers	122	251	17	57	118
53-2010	Aircraft pilots and flight engineers	60	137	10	33	71
53-2011	Airline pilots, copilots, and flight engineers	16	33	2	8	16
53-2012	Commercial pilots	53	125	9	31	65
53-2020	Air traffic controllers and airfield operations specialists	41	69	5	21	33
53-2021	Air traffic controllers	33	53	3	16	24
53-2022	Airfield operations specialists	10	20	2	6	11
53-2031	Flight attendants	0	1	0	0	1
53-3000	Motor vehicle operators	7,118	15,106	1,095	2,522	6,288
53-3011	Ambulance drivers and attendants, except emergency medical technicians	63	172	14	29	81
53-3020	Bus drivers	1,338	2,602	171	342	937
53-3021	Bus drivers, transit and intercity	414	777	51	102	271
53-3022	Bus drivers, school or special client	924	1,825	120	240	667
53-3030	Driver/sales workers and truck drivers	4,994	10,710	795	1,822	4,504
53-3031	Driver/sales workers	1,166	2,604	209	443	1,092
53-3032	Heavy and tractor-trailer truck drivers	2,144	4,513	324	768	1,893
53-3033	Light truck or delivery services drivers	1,835	3,933	286	669	1,668
53-3041	Taxi drivers and chauffeurs	420	938	63	177	434
53-3099	Motor vehicle operators, all other	151	341	28	105	192
53-4000	Rail transportation workers	83	157	10	61	96
53-4010	Locomotive engineers and operators	15	31	2	12	20
53-4011	Locomotive engineers	12	25	2	10	16
53-4012	Locomotive firers	0	0	0	0	0
53-4013	Rail yard engineers, dinkey operators, and hostlers	3	5	0	2	3
53-4021	Railroad brake, signal, and switch operators	8	16	1	6	10
53-4031	Railroad conductors and yardmasters	22	42	3	16	26
53-4041	Subway and streetcar operators	34	61	4	23	35
53-4099	Rail transportation workers, all other	4	7	1	3	4
53-5000	Water transportation workers	66	136	9	44	77
53-5011	Sailors and marine oilers	23	46	3	12	23
53-5020	Ship and boat captains and operators	36	77	5	30	49
53-5021	Captains, mates, and pilots of water vessels	31	65	5	25	42
53-5022	Motorboat operators	5	11	1	4	7
53-5031	Ship engineers	7	13	1	3	6
53-6000	Other transportation workers	868	2,010	154	918	1,461
53-6011	Bridge and lock tenders	6	11	1	6	8
53-6021	Parking lot attendants	414	985	72	548	827
53-6031	Automotive and watercraft service attendants	312	744	63	296	494
53-6041	Traffic technicians	21	43	3	22	32
53-6051	Transportation inspectors	42	83	6	21	40
53-6061	Transportation attendants, except flight attendants	22	43	3	8	18
53-6099	Transportation workers, all other	48	100	7	51	76
53-7000	Material moving workers	9,552	21,384	1,630	6,144	11,720
53-7011	Conveyor operators and tenders	47	96	7	28	50
53-7021	Crane and tower operators	96	178	13	62	99
53-7030	Dredge, excavating, and loading machine operators	57	109	8	13	37
53-7031	Dredge operators	3	6	0	1	2

SOCS Code	Occupation	2016	2040	Growth	Replacement Jobs	Total Demand
53-7032	Excavating and loading machine and dragline operators	57	109	8	13	37
53-7033	Loading machine operators, underground mining	0	0	0	0	0
53-7041	Hoist and winch operators	4	8	1	2	4
53-7051	Industrial truck and tractor operators	898	1,943	147	484	972
53-7060	Laborers and material movers, hand	8,166	18,449	1,408	5,427	10,285
53-7061	Cleaners of vehicles and equipment	968	2,299	186	801	1,421
53-7062	Laborers and freight, stock, and material movers, hand	5,485	12,462	958	3,709	7,001
53-7063	Machine feeders and offbearers	140	240	13	53	100
53-7064	Packers and packagers, hand	1,584	3,467	251	922	1,825
53-7070	Pumping station operators	41	80	9	41	57
53-7071	Gas compressor and gas pumping station operators	4	8	1	4	6
53-7072	Pump operators, except wellhead pumpers	16	33	3	17	24
53-7073	Wellhead pumpers	20	38	5	19	26
53-7081	Refuse and recyclable material collectors	247	520	38	131	257
53-7111	Mine shuttle car operators	0	0	0	0	0
53-7121	Tank car, truck, and ship loaders	13	27	2	8	15
53-7199	Material moving workers, all other	29	60	4	19	34