

**THE ECONOMIC, FISCAL AND DEVELOPMENTAL  
IMPACTS OF THE NORTH TEXAS TOLLWAY  
AUTHORITY: A 40-YEAR PERSPECTIVE**

Prepared for North Texas Tollway Authority by

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## **EXECUTIVE SUMMARY**

The Dallas-Fort Worth Metroplex is the second fastest-growing major urbanized region in the nation. With a population approaching 6 million and more than 3 million residents gainfully employed, the region has achieved prominence in information technology, logistics, health care, and many other industries. By the year 2030, the Metroplex's population is projected to expand nearly 63 percent and account for 35 percent of the state's job growth.

In recent decades, most of the Dallas area's population and employment growth has occurred in northern Dallas County and the northern suburbs. Without question, the Dallas North Tollway (DNT) and the President George Bush Turnpike (PGBT) have enabled and encouraged this northward development, a phenomenon that began in the late 1960s when the first section of the DNT was constructed from downtown Dallas to the Lyndon B. Johnson Freeway (LBJ).

The DNT and the PGBT have been among the largest public infrastructure projects undertaken in Dallas during the past fifty years. Adjusted for inflation, and including the DNT extension between SH 121 and US 380, outlays to build the DNT and PGBT will approach \$1.6 billion. Expenditures of this magnitude will have added almost \$2.6 billion to the regional economy while supporting about 25,000 person years of employment. In addition, the annual operations of the North Texas Tollway Authority (NTTA) generate about \$88 million in economy activity while supporting over 1,000 jobs.

But the most significant impacts of the DNT and PGBT have been on the size and pace of residential and commercial development adjacent to the two thoroughfares. Since construction began on the first segment of the DNT in the 1960s, about \$28 billion of valuation has been added to the Dallas, Collin and Denton County tax rolls. These additions currently generate about \$562 million annually for the counties, cities and school districts that abut the DNT and PGBT.

Without ease of mobility, the Dallas-Fort Worth Metroplex would never have become the fifth largest metropolitan area in the country. Though Dallas certainly has its traffic choke points, congestion would be much worse absent the DNT and PGBT. For example, as sections of the Bush Turnpike were opened in the late 1990s and early 2000s, traffic growth on LBJ began to slow. And since 2002, traffic counts on LBJ have actually declined. Future NTTA projects, such as the eastern extension of the PGBT, the Trinity Parkway and the Lewisville Lake Toll Bridge, will further improve mobility—as well as the economic prospects—in the Dallas area.

## **I. Introduction: The Dallas-Fort Worth Economic Dynamo**

The greater Dallas-Fort Worth Metropolitan Area, with a population of nearly six million, is currently the 5<sup>th</sup> largest urban region in the nation (see Table 1). Between 1990 and 2005, the DFW Metroplex grew by almost 46 percent, making it the second fastest-growing major metropolitan area in the U.S. Projections by the U.S. Department of Commerce, as well as the North Central Texas Council of Governments, foresee population continuing to grow at about three percent annually for the next 25 years, at which time the region's population could well approach 10 million (see Table 2).

In tandem with its burgeoning population, DFW has become a major national and international business center. Between 1990 and 2004, the Metroplex recorded a net increase of 707,000 jobs and added employment at a faster pace than any other urban area of the Sunbelt, despite major cutbacks in the technology industries during 2001 to 2003 (see Table 3). Today, the region boasts one of the largest and most diversified economies in the nation and is fortunately endowed with a broad range of fast-growing and competitive industries, especially in the information technology sector. Not only can DFW lay claim to one of the largest concentrations of computer, electronics, and software companies in the world, the region is also a major trade and distribution center for all of North America.

About 3 million persons are gainfully employed in the region at present, a number that should exceed 4.5 million within the next two decades. With 25 percent of Texas' population, the DFW region is projected to account for 35 percent of the state's job growth for the foreseeable future.

A. *The North-South Split*

Within the Metroplex, a separate dynamic has been at work—namely, the inexorable northward march of growth from both Dallas and Fort Worth. What’s more, most of the northern sector’s population gains have occurred along major highway vectors: US 75, the Dallas North Tollway (DNT), Interstates 35E and 35W, and State Highways 114 and 121 to name a few (see Figure 1).

In recent decades, population growth in the northern suburban counties of Collin and Denton has accelerated relative to the rest of the Dallas metropolitan area. Comparing the population gains of Collin and Denton Counties on the north with those of Ellis and Johnson Counties to the south dramatically illustrates this trend (see Table 4). In 1960, the population difference between the northern and southern counties was only about 10,000. But during the ensuing 46 years, Collin and Denton Counties added 1,180,321 residents compared to only 213,085 in Ellis and Johnson Counties. Put differently, the two northern counties have added 5.5 times as many residents as the two southern counties since 1960.

Similarly, the Council of Governments projects the northern counties to grow faster than the southern counties over the next 25 years in both absolute and relative terms (see Table 2). Between 2005 and 2030, Collin County alone is projected to add more than 514,000 new residents, with the fastest growth—more than 150,000—occurring in the City of Frisco. These may well turn out to be underestimates, as the Council of Governments’ projections have historically undershot the mark.

**Table 1****Metro Growth 1990 to 2005**

	<b>Combined Statistical Area</b>	<b>1990 Population</b>	<b>2005 Population</b>	<b>% Change</b>
1	Atlanta-Sandy Springs-Marietta	3,068,975	4,917,717	60.24%
2	Dallas-Fort Worth-Arlington	3,989,294	5,819,475	45.88%
3	Houston-Sugar Land-Baytown	3,767,233	5,280,077	40.16%
4	Miami-Fort Lauderdale-Miami Beach	4,056,228	5,422,200	33.68%
5	Washington-Arlington-Alexandria	4,122,259	5,214,666	26.50%
6	Chicago-Naperville-Joliet	8,182,076	9,443,356	15.42%
7	Los Angeles-Long Beach-Santa Ana	11,273,720	12,923,547	14.63%
8	New York-No. New Jersey-Long Island	16,846,046	18,747,320	11.29%
9	Philadelphia-Camden-Wilmington	5,435,550	5,823,233	7.13%
10	Detroit-Warren-Livonia	4,248,699	4,488,335	5.64%

Source: U.S. Census Bureau

**Table 2****Population Growth and Forecast: DFW, Collin County, Denton County, and Frisco**

	<b>1980</b>	<b>1990</b>	<b>2000</b>	<b>2005</b>	<b>2020</b>	<b>2030</b>	<b>% Change 1980-2005</b>	<b>% Change 2005-2030</b>
DFW	3,017,230	3,989,294	5,161,544	5,819,475	7,892,000	9,479,600	92.9%	62.9%
Collin County	144,576	264,036	492,267	652,498	938,681	1,166,645	351.3	78.8
Denton County	143,126	273,525	428,080	560,200	862,332	1,085,343	291.4	93.7
Frisco	3,499	6,138	34,028	74,150	178,558	227,911	2,019.2	207.4

Source: North Central Texas Council of Governments, U.S. Bureau of Census

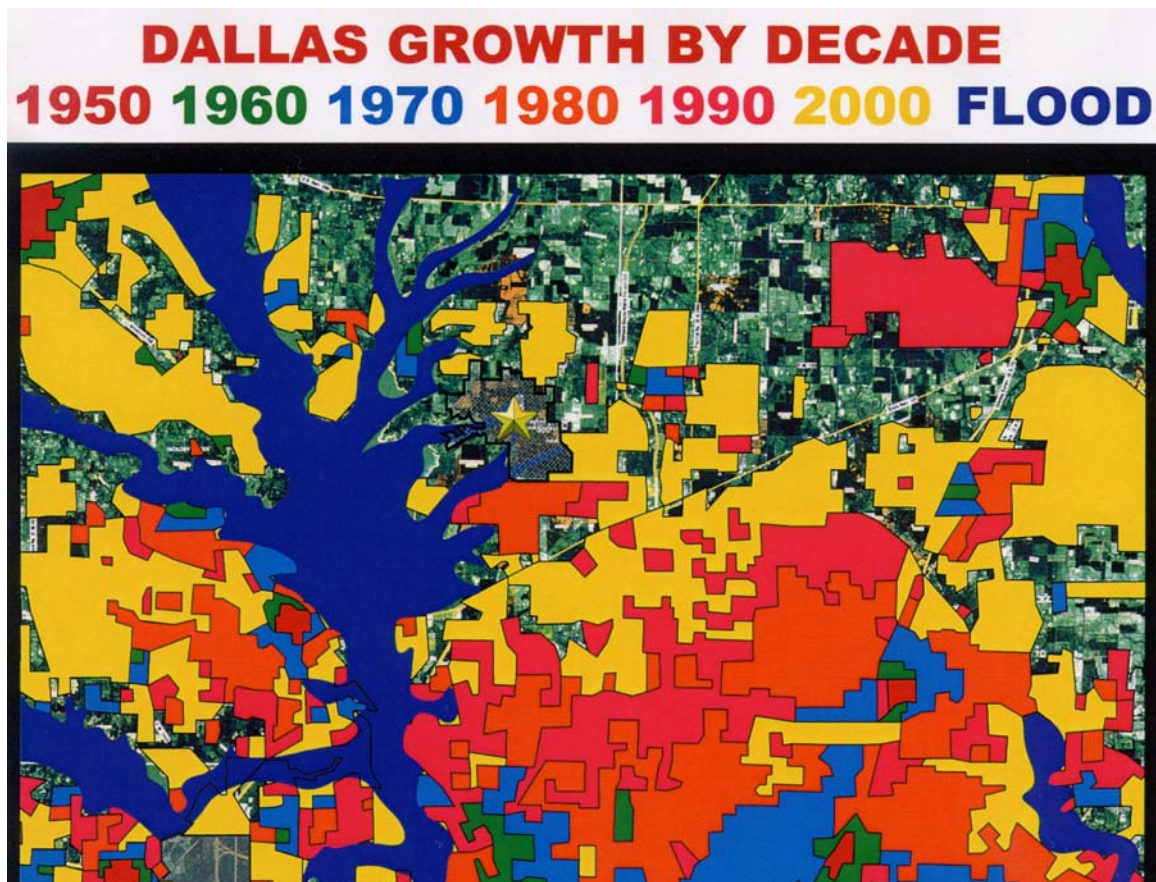
**Table 3**

**Employment Growth 1990-2004**  
(in thousands)

<b>Metro Area</b>	<b>1990 Employment</b>	<b>2004 Employment</b>	<b>Absolute Growth 1990-2004</b>	<b>Growth Rate 1990-2004</b>
Boston-Worcester-Manchester	2,096.3	2,868.2	771.9	36.8%
Los Angeles-Long Beach-Riverside	5,958.6	8,071.2	2,112.6	35.5%
New York-Wayne-White Plains (MD)	3,747.9	5,037.7	1,289.8	34.4%
Dallas-Fort Worth	2,189.5	2,896.5	707.0	32.3%
Houston-Baytown-Huntsville	1,919.1	2,489.4	570.3	29.7%
San Francisco-Oakland-San Jose	2,781.3	3,531.3	750.0	27.0%
Washington-Baltimore-Northern Virginia	3,543.1	4,092.4	549.3	15.5%
Chicago-Naperville-Michigan City	4,039.1	4,538.4	499.3	12.4%
Detroit-Warren-Flint	2,379.4	2,474.4	95.0	4.0%
Philadelphia-Camden-Vineland	2,758.6	2,864.9	106.3	3.9%

Source: U.S. Bureau of Labor Statistics

**Figure 1**



**Table 4**

**Population Growth: Northern vs. Southern Suburbs  
1960 – 2006**

	Collin / Denton	Ellis / Johnson
<b>1960</b>	88,679	<b>78,115</b>
<b>1970</b>	142,553	<b>92,407</b>
<b>1975</b>	205,600	<b>108,700</b>
<b>1980</b>	287,702	<b>127,392</b>
<b>1985</b>	415,326	<b>160,018</b>
<b>1990</b>	537,561	<b>182,332</b>
<b>1995</b>	646,560	<b>196,159</b>
<b>2000</b>	924,651	<b>238,171</b>
<b>2006</b>	1,269,000	<b>291,200</b>
% Change 1960-2006:	1,331%	<b>273%</b>

Sources: U.S. Bureau of the Census and North Central Texas Council of Governments.

*B. The North Texas Tollway Authority: A Major Driver of Northward Development*

The growth of northern Dallas County and the northern suburbs has occurred simultaneously with the highway projects undertaken by the North Texas Tollway Authority (NTTA). This is not a coincidence. Without question, the Dallas North Tollway and the President George Bush Turnpike have enabled and encouraged northward development, a phenomenon that began in the 1960s when the first section of the DNT was built from downtown Dallas to the Lyndon B. Johnson Freeway (LBJ).

A 12-mile extension of the DNT was proposed in 1978, and construction on this new leg began in 1983. By 1994, the extension was completed and carrying traffic all the way to State Highway 121 in Frisco. Construction is now underway to extend the DNT a further 9.6 miles north to U.S. Highway 380.

The history of the President George Bush Turnpike is somewhat different. Originally proposed in the 1960s as an outer loop that would run from Interstate 20 to

Garland, in 1977 TxDOT split the project into two highway segments: The section west of Interstate 635 (LBJ) was designated State Highway 161 while the section from I-35E in Carrollton to State Highway 78 in Garland was designated State Highway 190. Initial construction started in 1987, but the going was slow because of limited TxDOT funding. To accelerate construction, in the early 1990s community leaders proposed turning SH 161 and SH 190 into a toll road. Revenue bonds were sold in 1995, and on May 2, 1996 ground was officially broken on the PGBT. Facilitated by the donation of 103 parcels valued at \$113 million by private and public landowners, within 10 years the turnpike was fully operational between SH 78 in Garland and SH 183 in Irving.

By the traffic count measure, both the DNT and the PGBT have been unqualified successes. From average daily traffic of 40,000 in 1969, the count had risen to 152,000 by 1988 and is more than 1,000,000 today.<sup>1</sup> But more important is the huge impact these two transportation corridors have had on the pattern of development in northern Dallas County and the suburban counties of Collin and Denton. Though casual empiricism can validate these impacts, to date no quantification of the economic and fiscal benefits of the DNT and PGBT has been undertaken.

In what follows, we look at the NTTA as a regional economic generator. First, we examine the impacts from the NTTA's construction spending on the DNT and the PGBT. Second, we quantify the economic and fiscal impacts from the NTTA's recurring operational spending. And third, we look at the value of all the residential and commercial development that has occurred along the DNT and PGBT corridors over the past 30-40 years as well as the annual tax revenues generated by this development.

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<sup>1</sup> The NTTA also operates the Mountain Creek Lake Bridge and the Addison Airport Tunnel, but these account for just over one percent of total traffic volume.

Finally, we discuss how NTTA's projects have helped improve mobility in the North Texas region.

## **II. How Construction of the DNT and the PGBT has Affected the Regional Economy**

The DNT and PGBT have been among the Dallas area's largest public infrastructure investments in the past half century. In historical dollars, the costs of building the DNT between downtown Dallas and SH 121 totaled more than \$163 million (see Table 5). Outlays for constructing the PGBT between SH 78 in Garland and Belt Line Road in Irving exceeded \$840 million. Because construction of these two toll roads occurred over a 40-year span, we have adjusted these outlays to express the costs in current (2005) dollars.<sup>2</sup> *Adjusted for inflation, and including the DNT extension between SH 121 and US 380, scheduled to open in 2007, outlays to build the DNT and PGBT will approach \$1.6 billion.*

**Table 5**

### **Construction Cost of Dallas North Tollway and President George Bush Turnpike**

	<b>Date of Completion</b>	<b>Historical Cost</b>	<b>Index Adjustment</b>	<b>Cost in Current Dollars</b>
<b>Dallas North Tollway</b>				
Downtown to LBJ	1968	\$31,600,000	526%	\$166,216,000
LBJ to SH 121	1994	\$131,650,000	129%	\$169,828,500
SH 121 to US 380	2007	\$264,000,000	n.a.	\$264,000,000
DNT/SH 121 interchange	2007	\$30,998,000	n.a.	\$30,998,000
<b>President George Bush Turnpike</b>				
Midway Rd to Coit Rd	1999	\$131,400,000	118%	\$155,052,000
Coit Road to SH 78	2000	\$89,100,000	118%	\$105,138,000
Midway Road to I-35E	2001	\$201,300,000	122%	\$245,586,000
I-635 to Belt Line Rd	2001	\$84,200,000	122%	\$102,724,000
I-35E to I-635	2005	\$334,500,000	n.a.	\$334,500,000
<b>Grand Total</b>				<b>\$1,574,042,500</b>

Sources: North Texas Tollway Authority and Engineering News-Record (copyright The McGraw Hill Companies, Inc., all rights reserved)

<sup>2</sup> *Engineering News-Record*, a McGraw-Hill publication, calculates a construction cost index (CCI) for Dallas and 19 other cities. We have used the Dallas index to adjust the historical costs to current (2005) dollars. The index level of the year each segment was completed has been used to calculate the current value for that segment.

Projects of this magnitude have significant economic and fiscal impacts. To estimate these impacts, we have utilized the IMPLAN economic input-output model developed by the Minnesota IMPLAN Group. The IMPLAN model provides estimates of total economic activity including direct, indirect, and induced impacts based on the activities of a given entity—namely, the contractors responsible for building the DNT and PGBT. The direct effects would include the activities of the construction firms that hire employees, pay wages, and purchase building materials. In addition, the construction firms will buy office supplies, contract for construction site sanitary services, and engage professional service providers such as accountants and attorneys as a part of their normal business operations.

Indirect effects capture the economic activities of the construction companies' vendors. For example, the accounting firm that provides bookkeeping services to a construction firm buys office supplies, rents space, purchases computer equipment, and hires services for their business needs. Induced effects include the impact of the employees of all of these firms spending a portion of their wages and salaries on goods and services in the local economy.

The IMPLAN model provides impact estimates at the county level or aggregation of counties such as the Dallas Metropolitan Division and adjusts the impact estimates for spending that leaks out of the local economy. For example, the fuel used for construction equipment was not refined in the Dallas area; therefore, little of the estimated purchase value of that fuel is counted as contributing to the local economy.

As shown in Table 6, construction activities for the DNT and PGBT have had a very large economic impact on the Dallas Metropolitan Division<sup>3</sup> area economy. Based on more than \$1.5 billion in spending, in adjusted dollars, *construction of the DNT and PGBT have added almost \$2.6 billion to the regional economy supporting well over 25,000 person years of employment paying in excess of \$1.1 billion in salaries, wages, and benefits.* In addition, property income in the form of rents, royalties, dividends, and corporate profits have been boosted by nearly \$250 million. Local and state taxing jurisdictions have also benefited receiving an estimated \$75.6 million in indirect tax revenues including sales and property taxes, as well as permit and licensing fees.

**Table 6**

**Economic and Fiscal Impacts from Construction of the  
Dallas North Tollway and the President George Bush Turnpike  
Dallas Metropolitan Division**

Description	Impact
Economic Activity	\$ 2,597,092,000
Labor Income*	\$ 1,122,547,000
Employment <sup>#</sup>	25,700
Other Property Income <sup>+</sup>	\$ 248,750,000
Indirect Business Taxes <sup>^</sup>	\$ 75,651,000

\* Salaries, wages, benefits. # Expressed as person-years of employment. + Includes rents, royalties, dividends, and corporate profits. ^ Includes sales taxes, property taxes, permit fee, licensing fees to state and local taxing entities.

<sup>3</sup> The Dallas Metropolitan Division includes Collin, Dallas, Delta, Denton, Ellis, Hunt, Kaufman and Rockwall counties. Even though the tollroad does not enter several of these counties, the impacts of construction activities including procurement, contracted services, and employment affect the entire region.

### **III. The Economic and Fiscal Impacts of NTTA's Ongoing Operations**

The NTTA operates like a business. It hires employees, pays wages, makes purchases in the community and oversees the maintenance and operations of the DNT, the PGBT, the Addison Airport Tunnel, and the Mountain Creek Bridge. According to the NTTA's latest annual report, total operating expenses for 2005—before amortization and depreciation—exceeded \$94 million. Of this total, about two-thirds went for administration, operations and maintenance while the other third represented capital outlays. Since the 2005 capital outlays have been included in the construction impact analysis above, we focus here on the nature and impacts of the NTTA's non-capital spending.

The breakdown of non-capital spending by the Authority is summarized in Table 7. Administrative costs in 2005 were fairly small, less than \$10 million, while the bulk of the NTTA's spending went for toll collection, customer service and road maintenance. Importantly, the \$57 million spent by the NTTA in 2005 had a multiplier effect as these outlays circulated through the community.

Unlike capital spending, operating expenses do not vary greatly from year-to-year but grow slowly over time as the system expands. Also, unlike capital outlays, operating expenditures are not a one-off occurrence but an ongoing, recurring stream of spending. To estimate the economic, employment and fiscal impacts of NTTA's recurring spending, we have once again utilized the IMPLAN model.

**Table 7**

**North Texas Tollway Authority Actual Expenses**  
Year Ended December 31, 2005 (unaudited)

<b>Operating Expenses</b>	<b>Actual Expenses</b>
Administration:	
Accounting	\$ 265,913
Administration	2,860,373
Community affairs	1,592,545
Finance	1,021,271
Human resources	894,880
Legal	411,043
Procurement services	302,606
Revenue audit	340,192
Shared services	<u>692,536</u>
<i>Administration Subtotal:</i>	<i><u>\$ 8,381,359</u></i>
Operations:	
Command center	1,923,325
Customer service center	8,122,323
Engineering	759,068
Information technologies	6,042,485
Insurance	7,514,726
Maintenance	7,021,412
Toll collection	13,191,483
Toll programs and services	303,249
Utilities	2,118,730
Vault	<u>1,198,723</u>
<i>Operations Subtotal:</i>	<i><u>\$ 48,195,524</u></i>
<b>Total Operating Expenses:</b>	<b>\$ 56,576,883</b>

Sources: North Texas Tollway Authority, 2005 *Comprehensive Annual Financial Report*

Based on our analysis, on-going operations by the North Texas Tollway Authority generate almost \$88 million in annual economic activity in the Dallas region supporting over 1,000 direct, indirect and induced jobs that pay \$36.7 million in salaries, wages and benefits (see Table 8). This activity includes the effects of NTTA purchases and procurement that stays in the Dallas region as well as direct employment for administrators and operations personnel. In addition to the labor income impacts described above, the NTTA creates almost \$4.5 million in property income in the form of

rents, royalties, and corporate profits. State and local taxing jurisdictions receive \$5.7 million in indirect business taxes on activities supported by the NTTA that includes sales and property taxes as well as fees for permits and licenses.

**Table 8**

**Recurring Economic and Fiscal Impacts of  
North Texas Tollway Authority Operations  
On the Dallas Metropolitan Division**

Description	Annual Impact
Economic Activity	\$ 87,777,000
Labor Income*	\$ 36,722,000
Employment <sup>#</sup>	1,053
Other Property Income <sup>+</sup>	\$ 4,481,000
Indirect Business Taxes <sup>^</sup>	\$ 5,740,000

\* Salaries, wages, benefits. # Expressed as person-years of employment. + Includes rents, royalties, dividends, and corporate profits. ^ Includes sales taxes, property taxes, permit fee, licensing fees to state and local taxing entities.

#### **IV. The Impacts of the DNT and PGBT on Residential and Commercial Development**

Simply from casual observation, one can conclude that the Dallas North Tollway and President George Bush Turnpike have enabled, encouraged, and shaped the nature of development in the north Dallas region. Absent these thoroughfares, the northward expansion of the Dallas area would still have occurred—but certainly at a much slower pace.

In Table 4, we documented the dramatic differential between population gains in the northern versus southern suburbs of Dallas. This population and job growth has been accompanied by an explosion of private residential and commercial development, in particular within one mile of the DNT and the PGBT. Tables A-1 to A-4 in Appendix A to this report examine year-by-year additions to tax rolls from new properties adjacent to various segments of the DNT and PGBT as well as the annual revenues realized by local governments and school districts from these additions.<sup>4</sup> These data are summarized in text Tables 9 through 12. Appendix A also includes maps showing the various types of development that have occurred along the DNT and PGBT as well as changes in population and median household income.

As indicated in Table 9, additions to property tax rolls adjacent to the Dallas North Tollway since 1968 approach \$21 billion. This additional tax base currently generates nearly \$413 million annually for cities, counties and school districts located along the DNT (see Table 10). In the case of the President George Bush Turnpike (see Table 11), additions to property tax rolls have totaled about \$7.5 billion since construction began in 1990. These new residential and commercial properties currently

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<sup>4</sup> All valuation data are expressed in current (2005) dollars.

yield about \$149 million in annual tax receipts to adjacent cities, counties and school districts (see Table 12).

**Table 9**

**Dallas North Tollway Property Valuation  
by Section Built since 1968**  
(Property within One Mile of the Dallas North Tollway Only)

<b>Sections</b>	<b>Property Value</b>
Downtown to 635	\$ 7,755,301,890
635 to Briargrove	5,416,897,326
Briargrove to Legacy	6,327,057,387
Legacy to Gaylord	<u>1,344,312,311</u>
<b>Totals</b>	<b>\$ 20,843,568,914</b>

Source: Dallas County Appraisal District, Collin County Appraisal District, and Denton County Appraisal District

**Table 10**

**Dallas North Tollway Property Taxes  
by Year of Construction for 2005, by Section**  
(Property within One Mile of the Dallas North Tollway Only)

<b>Sections</b>	<b>Total Property Taxes for 2005</b>
Downtown to 635	\$ 184,647,848
635 to Briargrove	132,837,607
Briargrove to Legacy	86,158,498
Legacy to Gaylord	<u>8,930,096</u>
<b>Totals</b>	<b>\$ 412,574,049</b>

Source: Dallas County Appraisal District, Collin County Appraisal District, and Denton County Appraisal District

**Table 11**

**Value of Property Within One Mile of  
President George Bush Turnpike, by Segment**

<b>Segment</b>	<b>Total Appraisal Value 2005</b>
1	\$ 3,784,558,734
2	536,050,568
3	1,242,541,530
4	703,310,520
5	<u>1,311,735,340</u>
<b>Total*</b>	<b>\$ 7,578,196,692</b>

\*Total of value all taxable property within one mile of segments of the President George Bush Turnpike built since 1990.

Source: Dallas County Appraisal District, Collin County Appraisal District, and Denton County Appraisal District

**Table 12**

**Total Tax Revenue for 2005  
by Segment of the President George Bush Turnpike**

<b>Segment</b>	<b>Total Revenue</b>
1	\$ 90,467,127
2	14,247,319
3	24,529,944
4	18,533,680
5	<u>1,248,805</u>
<b>Total*</b>	<b>\$ 149,026,876</b>

\*Total of value all taxable property within one mile of segments of the President George Bush Turnpike built since 1990.

Source: Dallas County Appraisal District, Collin County Appraisal District, and Denton County Appraisal District

Plano, Frisco, Grapevine and other northern suburbs have evolved into sizeable employment, as well as residential, centers over the past two decades (see Table 13). Without question, the DNT and PGBT have contributed to the attractiveness of these cities for business development because of the access and connectivity provided by these

thoroughfares to downtown Dallas, D/FW International Airport, and several major state and interstate highways.

**Table 13**

**Employment of Selected D/FW Cities 1990-2005**

<i>City</i>	<i>Employment 1990</i>	<i>Employment 2005</i>	<i>Absolute growth 1990-2005</i>	<i>% Change 1990-2005</i>
<b>Arlington</b>	<b>90,100</b>	<b>155,953</b>	<b>65,853</b>	<b>73.1%</b>
Coppell	6,350	23,215	16,865	265.6
<b>Dallas</b>	809,650	1,110,624	300,974	37.2
Flower Mound	1,550	7,245	5,695	367.4
<b>Fort Worth</b>	330,350	504,441	174,091	52.7
Frisco	2,550	13,867	11,317	443.8
Grapevine	27,100	63,244	36,144	133.4
Keller	950	4,367	3,417	359.7
Lewisville	15,650	46,893	31,243	199.6
McKinney	12,250	33,410	21,160	172.7
North Richland Hills	10,800	25,109	14,309	132.5
Plano	54,450	124,181	69,731	128.1

Source: North Central Texas Council of Governments

Note: NCTCOG's Employment Estimates program monitors nonconstruction job counts by place of work for selected cities.

## **V. Improvements to regional mobility from the DNT and PGBT**

It's difficult to image what traffic congestion in the north Dallas area would look like absent the Dallas North Tollway and the President George Bush Turnpike. At present, the DNT accommodates almost 550,000 vehicles per day. Had the DNT not been built, and the bulk of this traffic routed along North Central Expressway, U.S. 75 would be a parking lot at least 12 hours per day. Either that, or North Central would have been double-decked, creating a tremendous eyesore that would have limited development and depressed property values between downtown and LBJ.

In the case of the more recently opened PGBT, an even stronger case can be made that the NTTA has had a positive impact on regional mobility. Table 14 presents traffic counts at various points along the LBJ Freeway between Carrollton and Richardson. As sections of the Bush Turnpike were opened in the late 1990s and early 2000s, traffic growth on LBJ began to slow. Since 2002, however, *traffic counts on LBJ have actually declined*. And with the opening last year of the segment connecting I-635 in Irving to the PGBT, traffic on LBJ will likely show an even greater dip in 2006.

The eastern extension of the PGBT between State Highway 78 and I-30, scheduled to open in 2010 or 2011, should further ameliorate traffic congestion on both I-30 and LBJ by effectively creating a "shortcut" for traffic heading to the Metroplex from points east and destined for the north Dallas suburbs and DFW International Airport. For commuters to downtown Dallas from Garland, Mesquite, Rowlett and other eastern suburbs, travel times should be less once the eastern extension of the PGBT is open.

**Table 14**

**LBJ Traffic Counts: 1997-2004**

<b>Year</b>	<b>West of 35E</b>	<b>East of 35E</b>	<b>West of Preston</b>	<b>East of Preston</b>	<b>East of 75</b>
1997	132,000	238,000	264,000	273,000	209,000
1998	150,000	265,000	288,000	299,000	236,000
1999	148,000	256,000	281,000	288,000	227,000
2000	155,000	259,000	274,000	284,000	233,000
2001	156,000	265,000	265,000	275,000	230,000
2002	165,000	261,000	280,000	284,000	230,000
2003	172,000	258,000	276,000	278,000	226,000
2004	165,000	226,000	240,000	241,000	203,000

Source: Texas Department of Transportation

Regional mobility will also be enhanced from construction of the planned Lewisville Lake Toll Bridge. The NTTA will build, own and operate this \$166 million bridge in Denton County that is scheduled to open in late 2008 or early 2009. The project will begin at I-35E in Lake Dallas and connect with the Dallas North Tollway through Little Elm and Frisco. East-west mobility through Denton County will be greatly improved by this project, and commutes to Dallas, Fort Worth and points in between will be significantly shortened for residents of fast-growing communities in southern and central Denton County.

## **VI. Conclusion**

Without ease of mobility, the Dallas-Fort Worth Metroplex could never have become the fifth largest metropolitan region in the country with the second-fastest population growth rate and fourth-fastest job growth rate in the nation. Our excellent system of roadways helps to bind the region economically and facilitate the movement of people and product.

Though Dallas suffers from increased traffic congestion in line with most rapidly-growing urban areas, the situation in the Metroplex is not nearly as bad as it is elsewhere. According to the most recent survey from the Texas Transportation Institute (see Table 15), Dallas residents spend an average of 60 hours per year in congested traffic. By comparison, drivers in Los Angeles spend 93 hours annually stuck in traffic while in the nation's capital the average is 69 hours per year.

**Table 15**

**Annual Hours of Delay per Traveler**

Urban Area	2003	2002	1993	1982
Los Angeles-Long Beach-Santa Ana, CA	93	98	113	47
San Francisco-Oakland, CA	72	75	62	30
Washington, DC-VA-MD	69	66	51	21
Atlanta, GA	67	64	38	14
Houston, TX	63	65	38	39
Dallas-Fort Worth-Arlington, TX	60	61	47	13
Chicago, IL-IN	58	55	42	16
Detroit, MI	57	54	77	17
Miami, FL	51	53	39	11
Boston, MA-NH-RI	51	48	38	14
New York-Newark, NY-NJ-CT	49	50	34	18
Phoenix, AZ	49	49	42	18
Philadelphia, PA-NJ-DE-MD	38	40	25	14

Source: Texas Transportation Institute, *The 2005 Urban Mobility Report*

As discussed above, traffic congestion in the Dallas area would be much worse in the absence of the Dallas North Tollway, the President George Bush Turnpike, and other projects operated by the North Texas Tollway Authority. But in addition to facilitating mobility, the operations of the NTTA have sizeable direct and indirect economic impacts. Construction of NTTA projects has pumped more than \$1.5 billion into the regional economy since 1968, generating almost \$2.6 billion of economic activity. Ongoing operations of the NTTA contribute about \$88 million annually to the local economy and support more than 1,000 jobs. Most significantly of all, new commercial and residential development adjacent to the DNT and NTTA has added \$28 billion to property valuations that, in turn, generate about \$562 million in revenues each year for affected cities, counties, and school districts.

## **APPENDIX A**

**Table A-1**  
**Dallas North Tollway Property Valuation within One Mile by Year by Section**

<b>Year Built</b>	<b>Downtown to 635</b>	<b>635 to Briargrove</b>	<b>Briargrove to Legacy</b>	<b>Legacy to Gaylord</b>	<b>Total</b>
1968	\$79,683,970	\$107,772,440	\$0	\$883,436	\$188,339,846
1969	\$107,824,640	\$19,743,830	\$0	\$0	\$127,568,470
1970	\$148,435,280	\$51,360,730	\$0	\$0	\$199,796,010
1971	\$62,282,520	\$49,291,890	\$0	\$0	\$111,574,410
1972	\$88,489,170	\$140,039,950	\$175,227	\$0	\$228,704,347
1973	\$53,574,950	\$107,233,100	\$428,552	\$575,000	\$161,811,602
1974	\$94,076,600	\$33,981,990	\$0	\$0	\$128,058,590
1975	\$72,334,030	\$48,916,060	\$1,808,213	\$0	\$123,058,303
1976	\$52,966,650	\$49,117,060	\$434,783	\$0	\$102,518,493
1977	\$104,023,450	\$143,622,756	\$353,133	\$1,831,843	\$249,831,182
1978	\$192,464,920	\$195,987,910	\$4,726,969	\$3,954,337	\$397,134,136
1979	\$161,764,910	\$419,753,585	\$2,909,952	\$2,488,343	\$586,916,790
1980	\$163,238,970	\$297,979,418	\$4,217,158	\$796,864	\$466,232,410
1981	\$287,278,320	\$541,283,834	\$44,492,684	\$4,065,477	\$877,120,315
1982	\$213,139,470	\$180,019,714	\$29,904,033	\$451,359	\$423,514,576
1983	\$648,443,580	\$239,844,122	\$71,757,429	\$651,543	\$960,696,674
1984	\$204,425,770	\$307,329,917	\$264,927,731	\$1,128,110	\$777,811,528
1985	\$468,125,690	\$258,449,286	\$148,136,348	\$0	\$874,711,324
1986	\$153,713,440	\$94,443,879	\$130,207,516	\$3,859,134	\$382,223,969
1987	\$95,206,140	\$61,117,173	\$81,538,573	\$12,269,264	\$250,131,150
1988	\$62,874,170	\$11,760,910	\$149,053,206	\$6,307,244	\$229,995,530
1989	\$114,066,290	\$24,258,108	\$135,821,135	\$4,815,652	\$278,961,185
1990	\$121,849,510	\$110,393,019	\$253,898,170	\$3,770,288	\$489,910,987
1991	\$75,493,640	\$45,247,116	\$392,563,914	\$168,456,616	\$681,761,286
1992	\$173,562,220	\$102,259,629	\$302,606,151	\$1,645,358	\$580,073,358
1993	\$173,203,960	\$138,444,989	\$355,920,641	\$3,462,867	\$671,032,457
1994	\$161,983,800	\$78,026,886	\$443,635,431	\$3,370,458	\$687,016,575
1995	\$247,997,820	\$235,999,800	\$414,909,639	\$1,258,923	\$900,166,182
1996	\$243,720,820	\$129,690,297	\$435,144,151	\$5,761,332	\$814,316,600
1997	\$416,219,810	\$209,576,860	\$633,381,372	\$14,210,322	\$1,273,388,364
1998	\$413,496,080	\$432,176,680	\$526,625,110	\$71,868,723	\$1,444,166,593
1999	\$533,360,720	\$203,364,233	\$465,973,059	\$328,390,273	\$1,531,088,285
2000	\$312,511,040	\$120,189,144	\$391,226,363	\$283,080,467	\$1,107,007,014
2001	\$323,980,330	\$77,244,671	\$245,695,652	\$161,780,414	\$808,701,067
2002	\$213,379,980	\$38,038,190	\$154,364,348	\$106,752,088	\$512,534,606
2003	\$341,758,300	\$57,656,300	\$181,188,648	\$45,592,478	\$626,195,726
2004	\$237,707,120	\$37,343,220	\$51,844,810	\$81,427,355	\$408,322,505
2005	\$136,643,810	\$17,938,630	\$7,187,286	\$19,406,743	\$181,176,469
<b>Grand Total*</b>	<b>\$7,755,301,890</b>	<b>\$5,416,897,326</b>	<b>\$6,327,057,387</b>	<b>\$1,344,312,311</b>	<b>\$20,843,568,914</b>

\*The grand total reflects all property within one mile of the Dallas North Tollway built since 1968.

Sources: Dallas County Appraisal District, Collin County Appraisal District, and Denton County Appraisal District

**Table A-2**  
**Dallas North Tollway Property Taxes by Year of Construction for 2005, by Section**  
(Property within One Mile of the Dallas North Tollway Only)

<b>Year Built</b>	<b>Downtown to 635</b>	<b>635 to Briargrove</b>	<b>Briargrove to Legacy</b>	<b>Legacy to Gaylord</b>	<b>Totals</b>
1968	\$1,956,611	\$766,626	\$0	\$21,329	\$2,744,566
1969	\$2,797,890	\$553,666	\$0	\$0	\$3,351,556
1970	\$2,550,459	\$1,387,937	\$0	\$0	\$3,938,396
1971	\$1,575,887	\$1,266,488	\$0	\$0	\$2,842,375
1972	\$2,223,869	\$4,073,404	\$4,427	\$0	\$6,301,700
1973	\$1,323,313	\$2,990,137	\$5,898	\$12,522	\$4,331,869
1974	\$2,401,327	\$903,503	\$0	\$0	\$3,304,830
1975	\$1,473,266	\$1,275,564	\$37,481	\$0	\$2,786,311
1976	\$1,099,260	\$1,251,906	\$6,228	\$0	\$2,357,395
1977	\$2,711,266	\$3,754,718	\$7,320	\$28,359	\$6,501,663
1978	\$4,778,973	\$4,724,115	\$39,240	\$48,996	\$9,591,324
1979	\$4,066,321	\$10,944,181	\$54,600	\$60,076	\$15,125,177
1980	\$4,036,248	\$7,281,261	\$45,103	\$16,558	\$11,379,170
1981	\$6,301,392	\$14,439,762	\$821,539	\$77,196	\$21,639,889
1982	\$5,582,541	\$4,677,214	\$481,837	\$0	\$10,741,591
1983	\$18,385,309	\$4,871,224	\$1,066,710	\$15,730	\$24,338,973
1984	\$4,710,914	\$6,809,889	\$2,711,099	\$0	\$14,231,903
1985	\$11,701,865	\$6,317,912	\$2,136,451	\$0	\$20,156,228
1986	\$3,897,635	\$2,393,016	\$1,596,508	\$79,528	\$7,966,686
1987	\$2,309,786	\$1,362,021	\$1,311,300	\$237,854	\$5,220,960
1988	\$1,322,065	\$244,172	\$2,287,640	\$148,996	\$4,002,874
1989	\$2,800,655	\$522,040	\$2,357,461	\$108,794	\$5,788,951
1990	\$2,780,102	\$2,664,424	\$3,849,151	\$90,031	\$9,383,708
1991	\$1,680,444	\$965,753	\$4,030,220	\$133,323	\$6,809,740
1992	\$4,061,150	\$2,474,034	\$4,990,004	\$39,724	\$11,564,912
1993	\$4,172,358	\$3,083,754	\$6,537,526	\$49,543	\$13,843,181
1994	\$3,533,161	\$1,704,304	\$8,206,913	\$40,067	\$13,484,445
1995	\$5,785,852	\$5,981,900	\$6,076,584	\$30,394	\$17,874,731
1996	\$5,738,083	\$3,271,164	\$7,116,377	\$139,097	\$16,264,722
1997	\$9,203,975	\$5,537,750	\$8,522,065	\$33,879	\$23,297,669
1998	\$10,631,949	\$10,804,402	\$6,113,504	\$1,028,848	\$28,578,703
1999	\$9,450,952	\$4,830,050	\$4,880,486	\$885,455	\$20,046,942
2000	\$6,728,100	\$2,659,179	\$3,490,150	\$1,082,004	\$13,959,433
2001	\$7,802,891	\$1,838,580	\$2,786,662	\$2,145,257	\$14,573,390
2002	\$4,973,451	\$1,021,074	\$1,497,254	\$1,333,719	\$8,825,499
2003	\$8,292,004	\$1,573,306	\$3,016,331	\$494,919	\$13,376,560
2004	\$6,398,389	\$1,085,791	\$38,757	\$525,309	\$8,048,246
2005	\$3,408,135	\$531,386	\$35,673	\$22,587	\$3,997,781
<b>Grand Total*</b>	<b>\$184,647,848</b>	<b>\$132,837,607</b>	<b>\$86,158,498</b>	<b>\$8,930,096</b>	<b>\$412,574,049</b>

\*Grand Total is the total of taxes paid in 2005 for buildings completed in 1968 or after.

Source: Dallas County Appraisal District, Denton County Appraisal District and Collin County Appraisal District

**Table A-3**  
**Value of Property within One Mile of President George Bush Turnpike**  
**By Segment by Year Built**

<b>Year Built</b>	<b>Segment 1</b>	<b>Segment 2</b>	<b>Segment 3</b>	<b>Segment 4</b>	<b>Segment 5</b>	<b>Totals</b>
1990	\$232,447,112	\$7,196,830	\$33,490,890	\$6,622,540	\$67,545,510	\$347,302,882
1991	\$236,203,383	\$10,631,380	\$34,282,230	\$0	\$7,370,100	\$288,487,093
1992	\$253,048,950	\$10,846,150	\$65,522,690	\$13,976,590	\$24,115,210	\$367,509,590
1993	\$267,353,061	\$17,009,930	\$93,750,170	\$31,917,140	\$28,614,700	\$438,645,001
1994	\$271,111,106	\$23,788,690	\$106,412,230	\$78,636,320	\$24,765,510	\$504,713,856
1995	\$412,743,054	\$41,268,100	\$114,788,800	\$116,766,580	\$76,611,320	\$762,177,854
1996	\$325,309,175	\$37,892,070	\$131,007,440	\$74,171,590	\$115,953,970	\$684,334,245
1997	\$453,535,300	\$41,306,270	\$108,137,130	\$86,159,430	\$206,049,670	\$895,187,800
1998	\$299,672,843	\$34,242,030	\$187,401,220	\$68,716,570	\$255,229,460	\$845,262,123
1999	\$394,579,650	\$50,648,906	\$89,696,580	\$73,623,580	\$135,531,370	\$744,080,086
2000	\$225,902,337	\$28,080,348	\$66,987,580	\$58,080,380	\$129,008,670	\$508,059,315
2001	\$235,890,074	\$68,350,654	\$90,271,030	\$56,623,090	\$120,970,100	\$572,104,948
2002	\$58,131,723	\$34,426,950	\$58,958,380	\$12,805,500	\$24,151,060	\$188,473,613
2003	\$48,188,518	\$39,659,710	\$44,060,880	\$8,126,770	\$49,327,900	\$189,363,778
2004	\$35,367,251	\$87,124,910	\$7,206,550	\$16,384,380	\$29,972,960	\$176,056,051
2005	\$35,075,197	\$3,577,640	\$10,567,730	\$700,060	\$16,517,830	\$66,438,457
<b>Grand Total*</b>	<b>\$3,784,558,734</b>	<b>\$536,050,568</b>	<b>\$1,242,541,530</b>	<b>\$703,310,520</b>	<b>\$1,311,735,340</b>	<b>\$7,578,196,692</b>

\*Total of value all taxable property within one mile of segments of the President George Bush Turnpike built since 1990.

Sources: Dallas County Appraisal District, Collin County Appraisal District, and Denton County Appraisal District

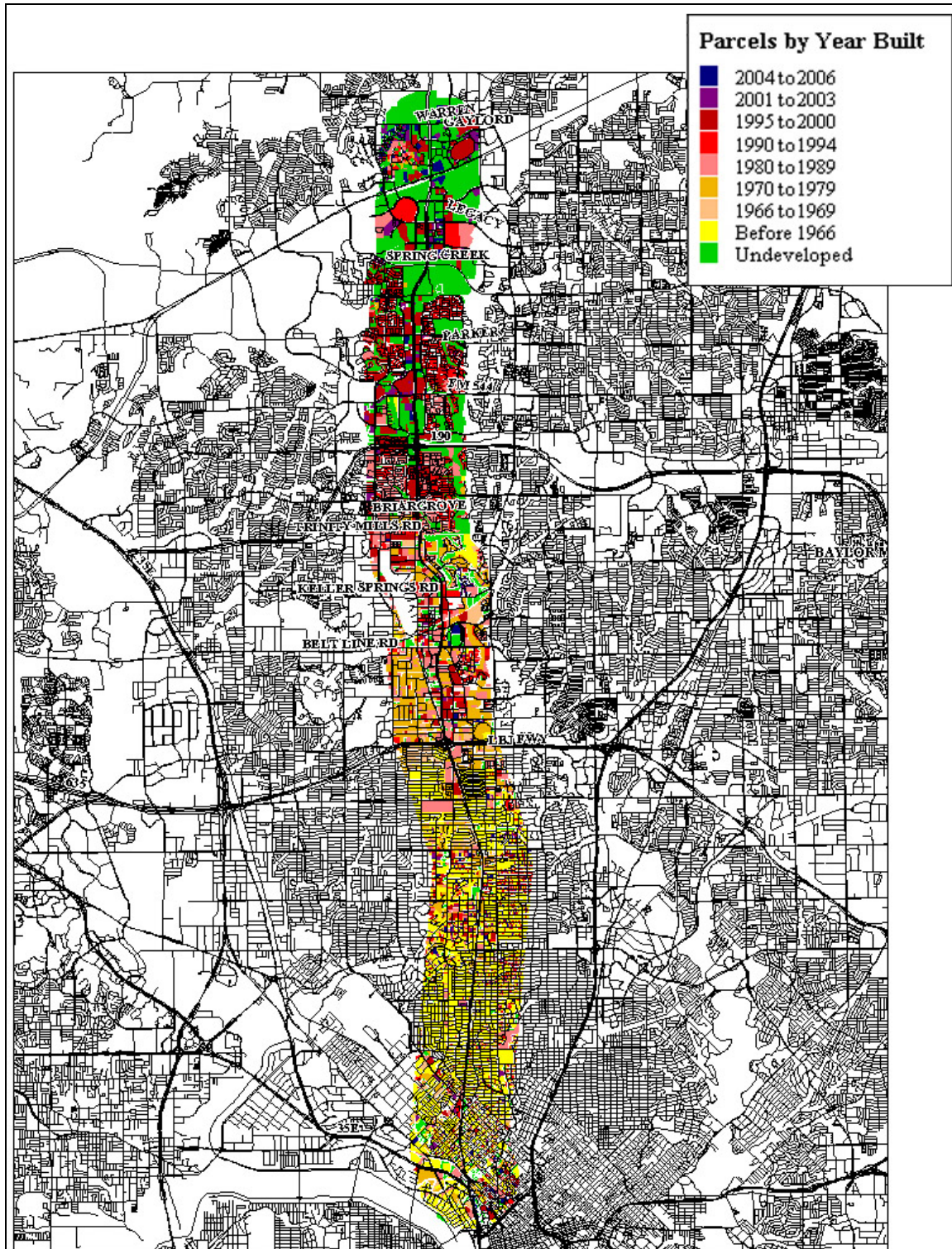
**Table A-4**  
**President George Bush Turnpike Tax Revenues for 2005 by Year of Construction**

<b>Year Built</b>	<b>Segment 1</b>	<b>Segment 2</b>	<b>Segment 3</b>	<b>Segment 4</b>	<b>Segment 5</b>	<b>Totals</b>
1990	\$5,823,265	\$118,503	\$801,912	\$204,746	\$20,908	\$6,969,334
1991	\$6,003,715	\$269,754	\$604,035	\$0	\$0	\$6,877,504
1992	\$6,591,591	\$275,750	\$967,116	\$400,404	\$0	\$8,234,861
1993	\$6,900,516	\$429,335	\$1,763,632	\$695,473	\$0	\$9,788,956
1994	\$6,297,162	\$513,415	\$1,899,975	\$1,932,066	\$0	\$10,642,618
1995	\$10,404,447	\$1,127,398	\$2,810,658	\$3,070,370	\$0	\$17,412,874
1996	\$8,482,824	\$995,980	\$2,811,303	\$1,926,763	\$28,867	\$14,245,737
1997	\$11,835,871	\$1,080,647	\$1,960,767	\$2,372,750	\$55,327	\$17,305,362
1998	\$7,276,908	\$940,797	\$3,569,776	\$1,968,593	\$36,280	\$13,792,353
1999	\$8,989,416	\$1,435,752	\$1,674,814	\$2,057,357	\$20,437	\$14,177,775
2000	\$3,556,707	\$722,682	\$1,340,480	\$1,474,166	\$114,316	\$7,208,352
2001	\$4,645,410	\$1,947,439	\$1,959,077	\$1,367,713	\$744,662	\$10,664,300
2002	\$1,186,931	\$958,358	\$1,107,524	\$308,629	\$63,508	\$3,624,949
2003	\$1,219,823	\$1,093,351	\$851,604	\$242,183	\$147,302	\$3,554,264
2004	\$717,104	\$2,233,554	\$150,224	\$492,395	\$14,480	\$3,607,757
2005	\$535,437	\$104,604	\$257,047	\$20,071	\$2,719	\$919,878
<b>Grand Total*</b>	<b>\$90,467,127</b>	<b>\$14,247,319</b>	<b>\$24,529,944</b>	<b>\$18,533,680</b>	<b>\$1,248,805</b>	<b>\$149,026,876</b>

\*Totals for all taxable property within one mile of the President George Bush Turnpike

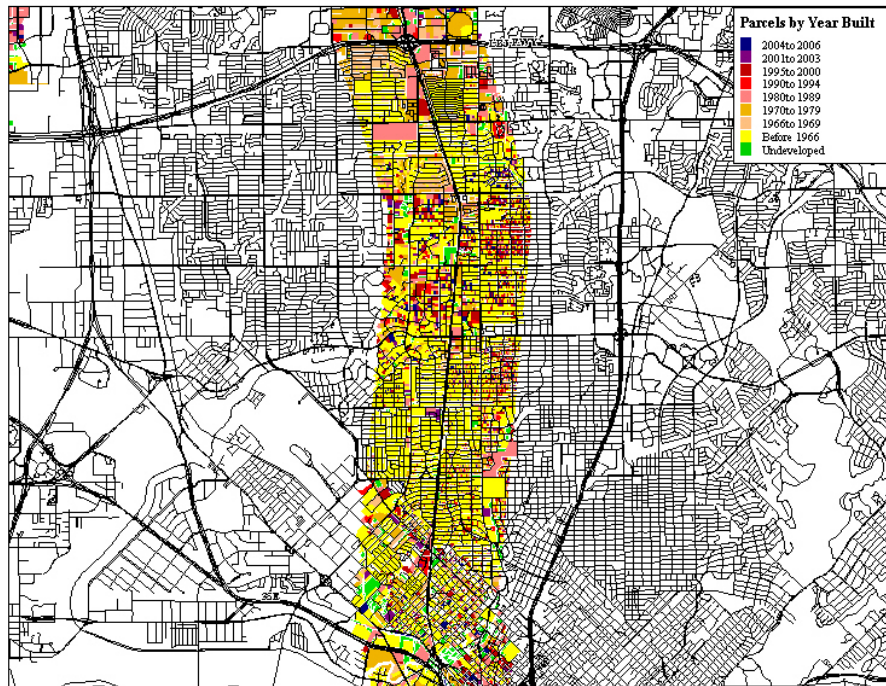
Sources: Dallas County Appraisal District, Collin County Appraisal District, and Denton County Appraisal District

**Figure A-1**  
**Pace of Development of DNT**



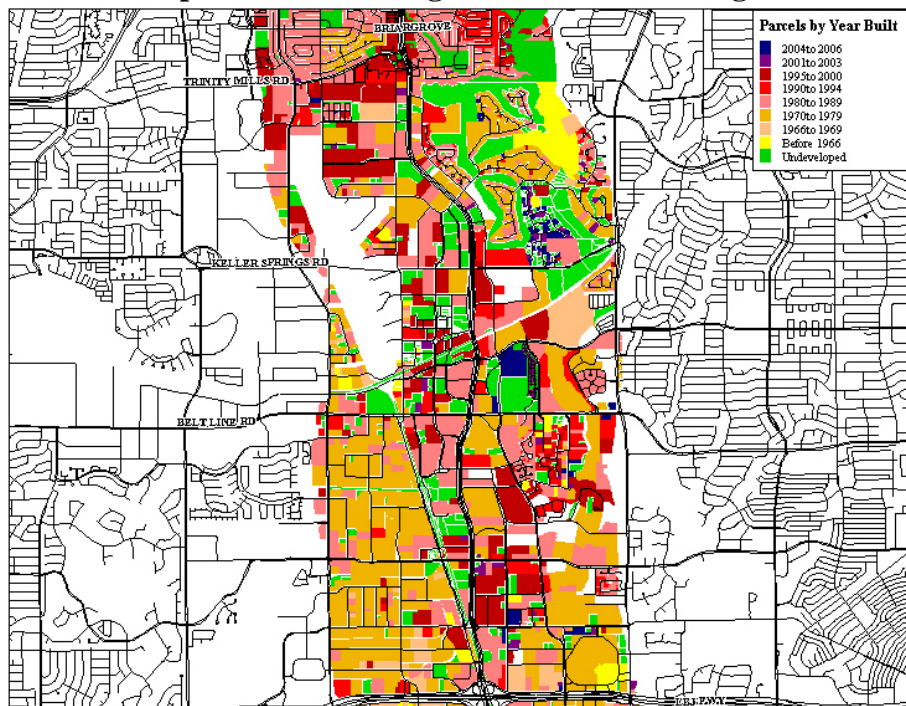
Source: Dallas Central Appraisal District, Collin County Appraisal District, 2006

**Figure A-2**  
**Pace of Development of DNT (Segment 1: Downtown to LBJ)**



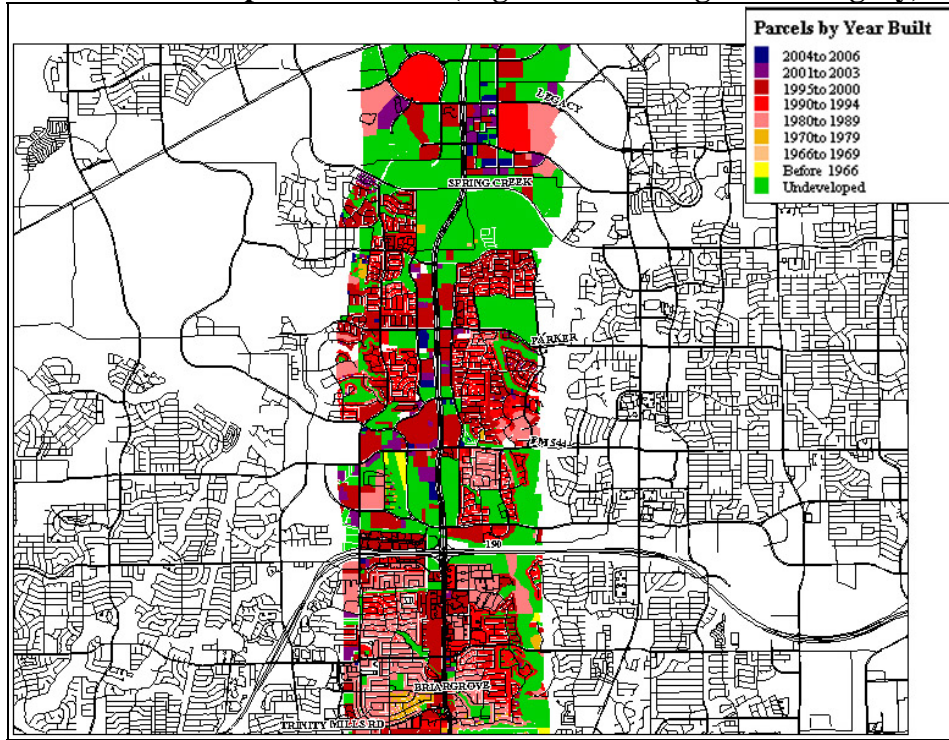
Source: Dallas Central Appraisal District

**Figure A-3**  
**Pace of Development of DNT (Segment 2: LBJ to Briargrove Parkway)**



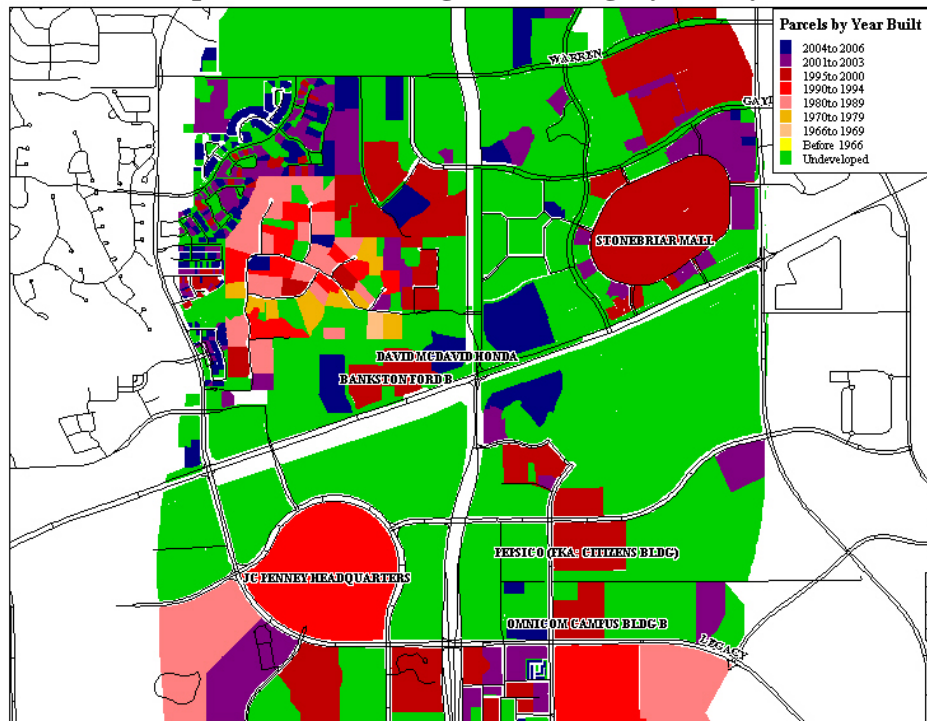
Source: Dallas Central Appraisal District

**Figure A-4**  
**Pace of Development of DNT (Segment 3: Briargrove to Legacy)**



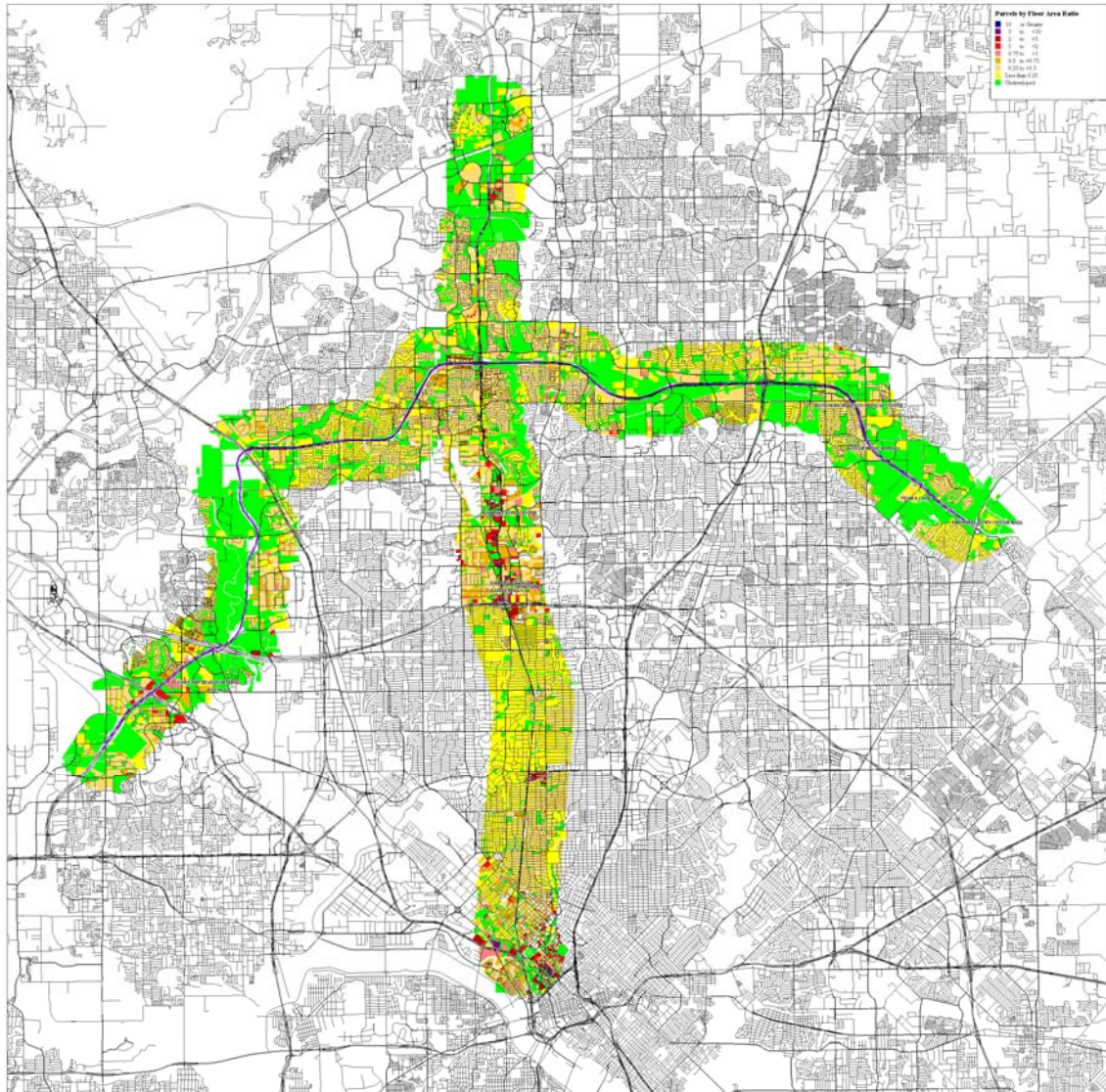
Source: Collin County Appraisal District

**Figure A-5**  
**Pace of Development of DNT (Segment 4: Legacy to Gaylord Parkway)**



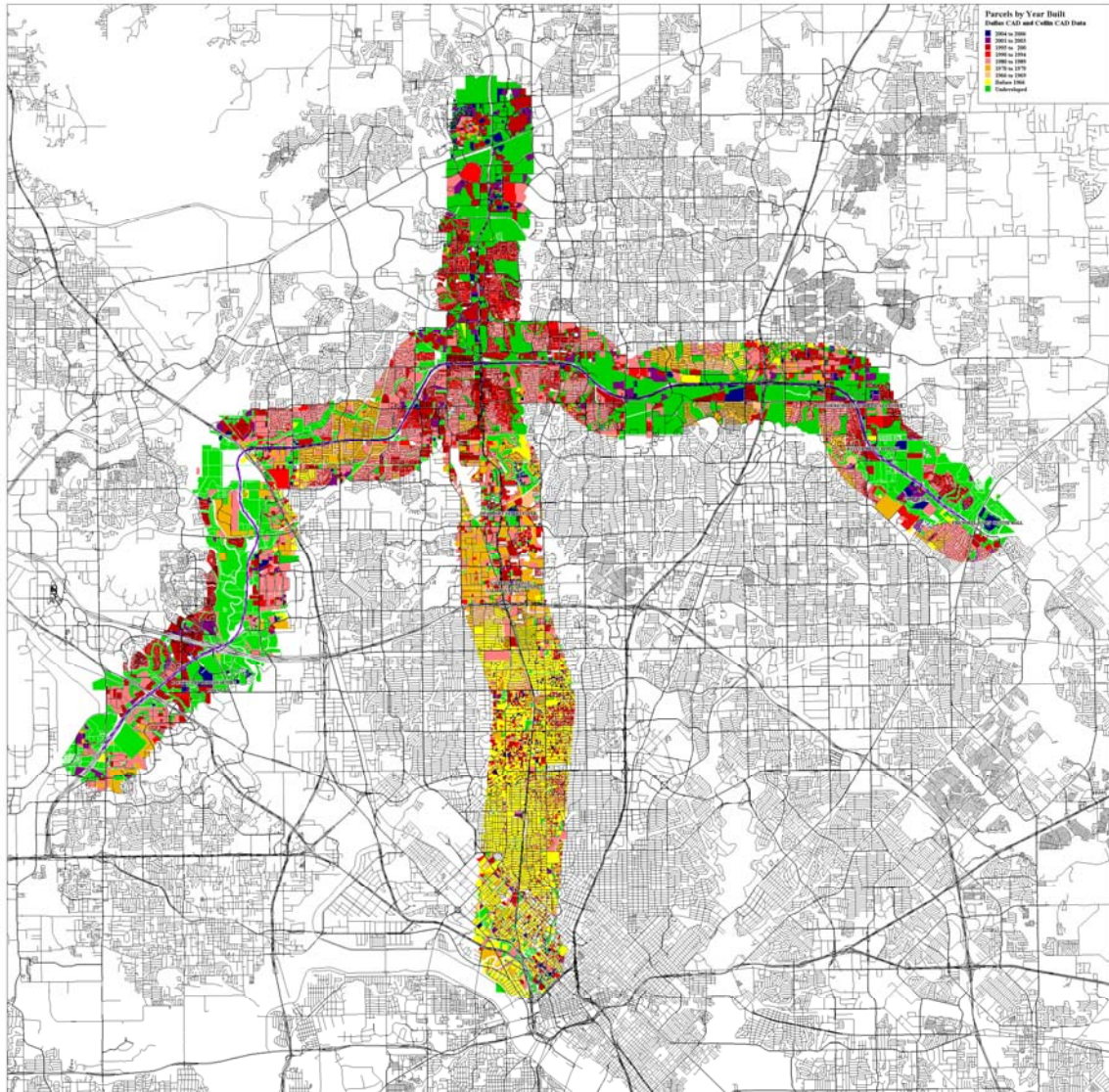
Source: Collin County Appraisal District

**Figure A-6**  
**Pace of Development: DNT & PGBT Parcels by FAR**



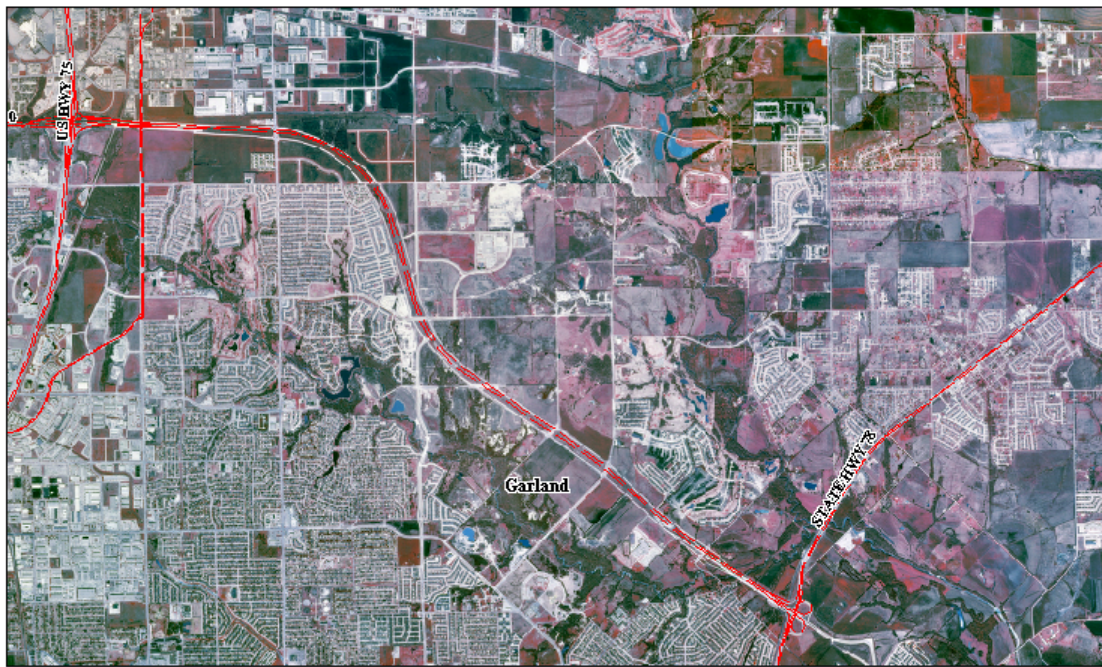
Source: Dallas County Appraisal District; Collin County Appraisal District

**Figure A-7**  
**Pace of Development: DNT & PGBT Parcels by Year Built**

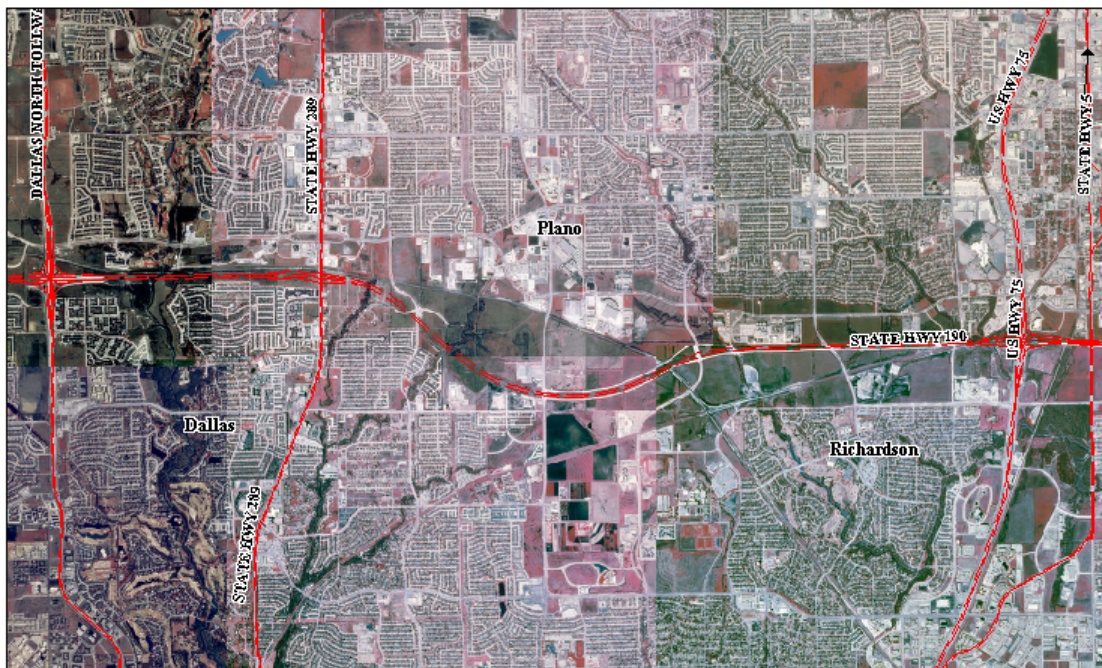


Source: Dallas Central Appraisal District, Collin County Appraisal District

**Figure A-8**  
**PGBT Aerial Photo: 75 to 78**



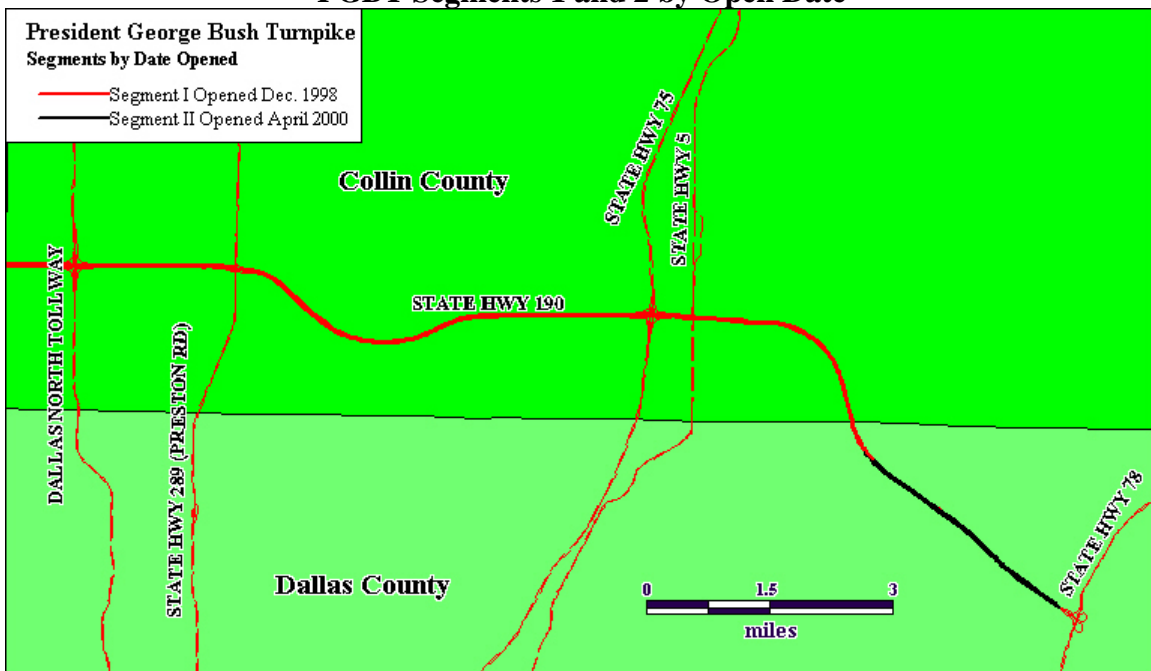
**Figure A-9**  
**PGBT Aerial Photo: DNT to 75**



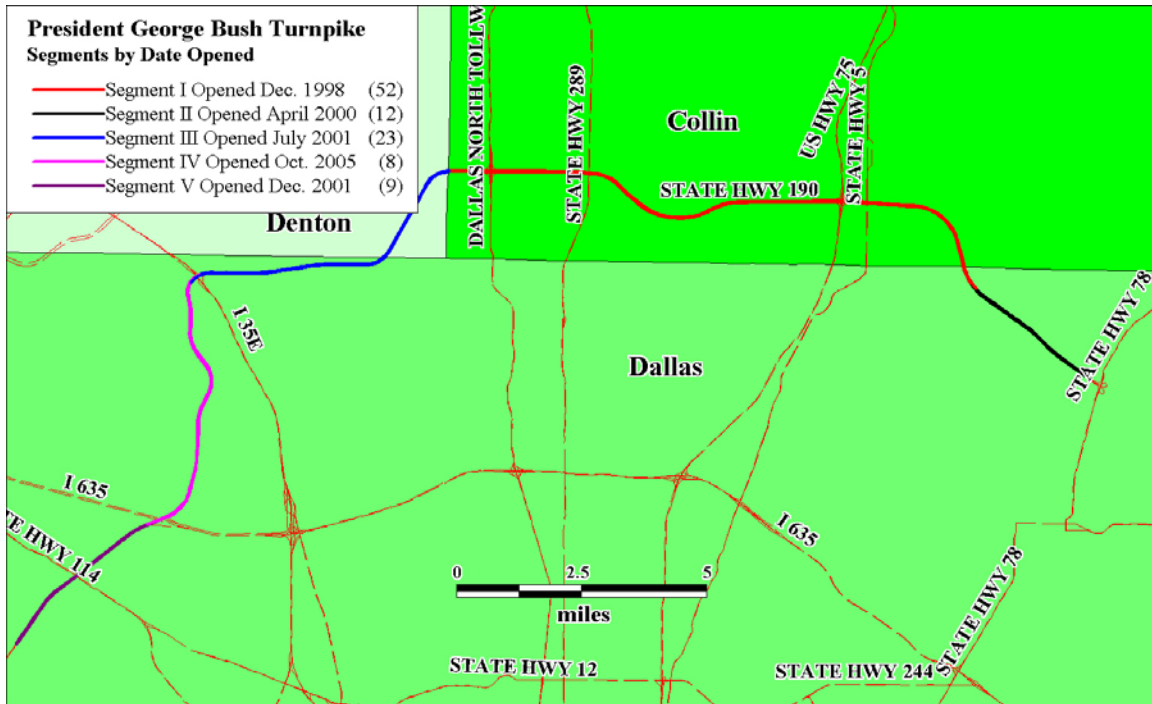
**Figure A-10**  
**PGBT Aerial Photo (Study Area)**



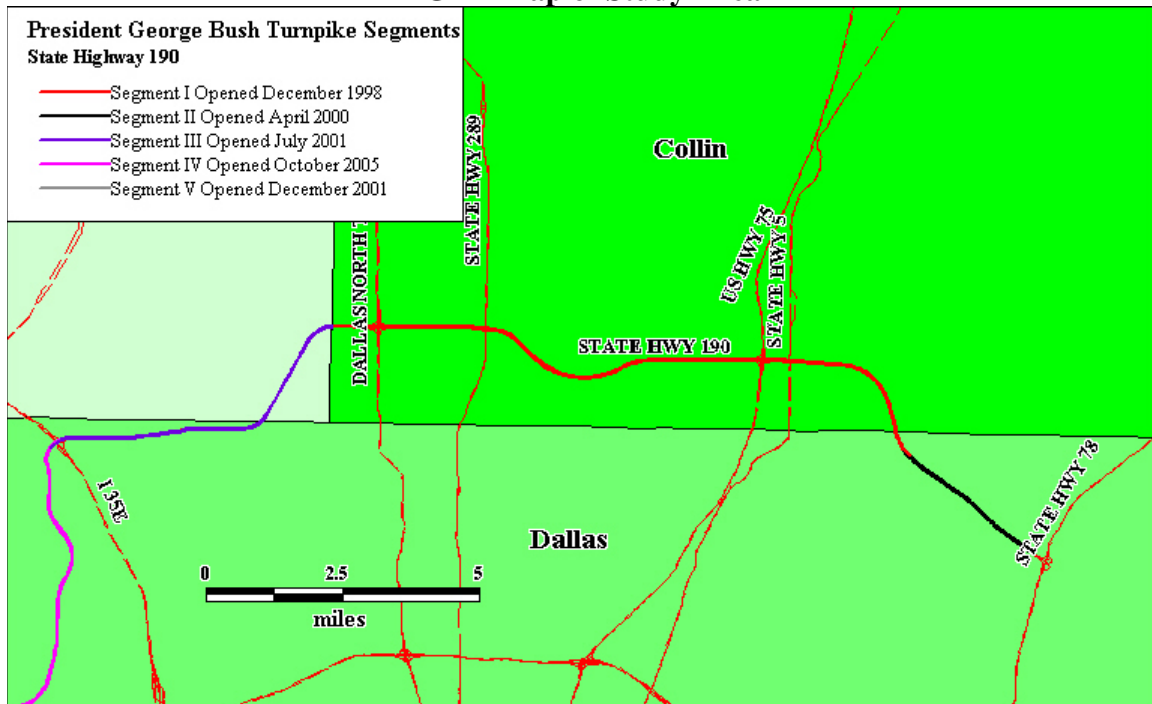
**Figure A-11**  
**PGBT Segments 1 and 2 by Open Date**



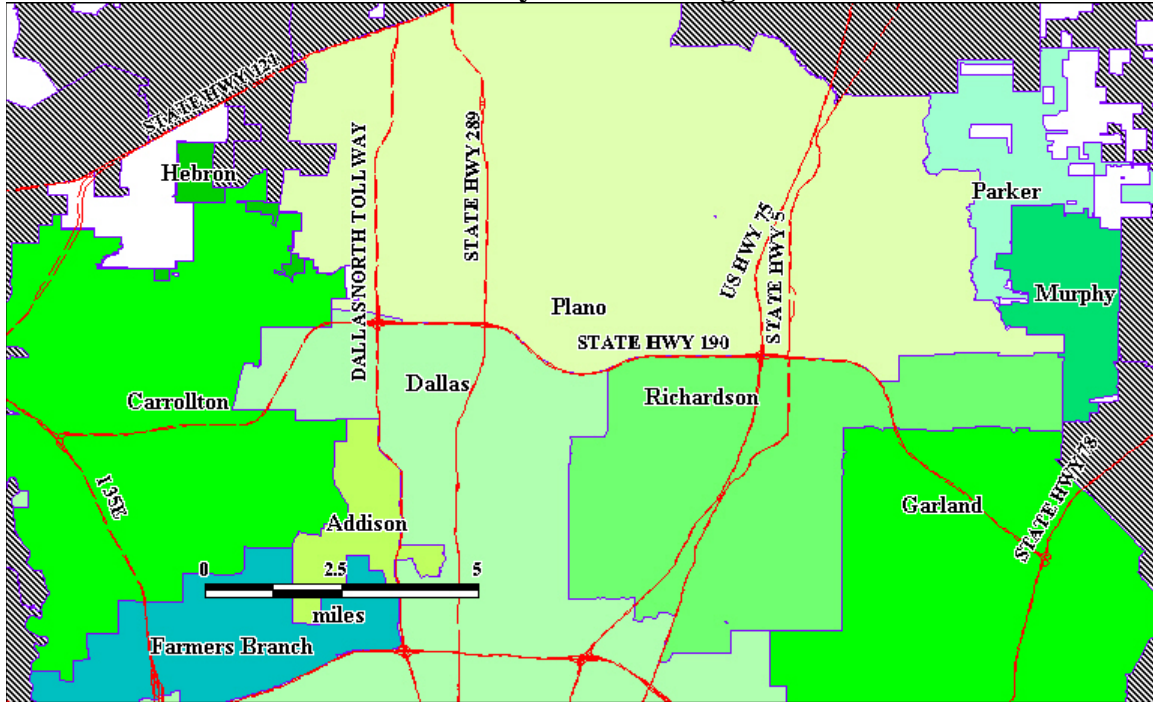
**Figure A-12**  
**PGBT All Segments By Open Date**



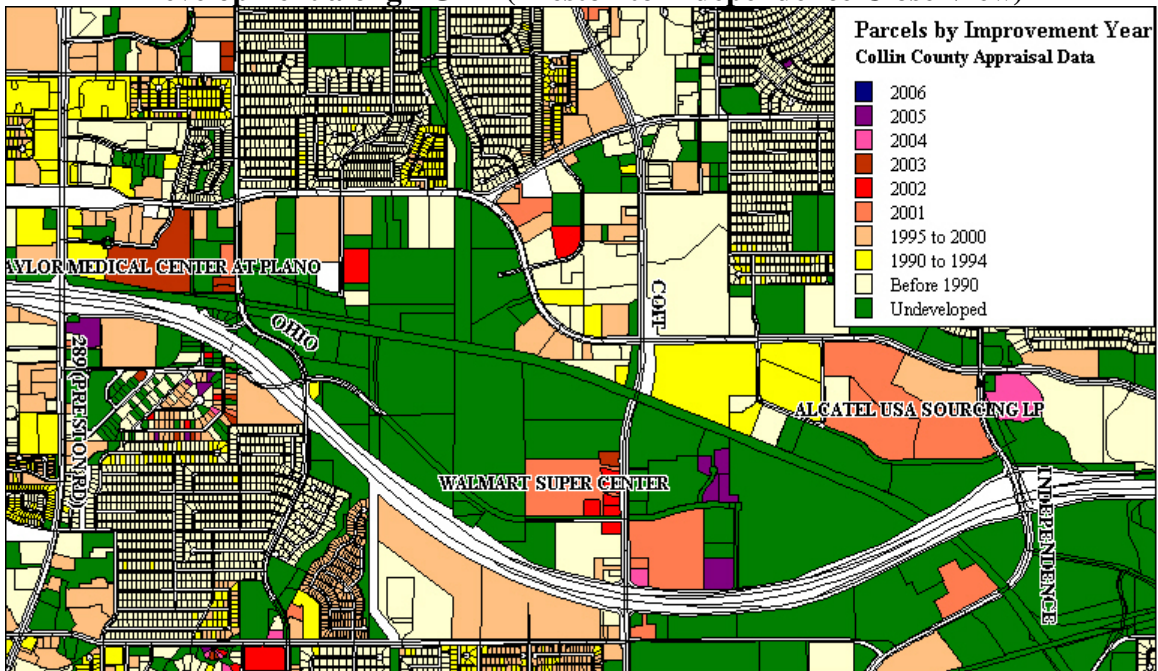
**Figure A-13**  
**PGBT Map of Study Area**



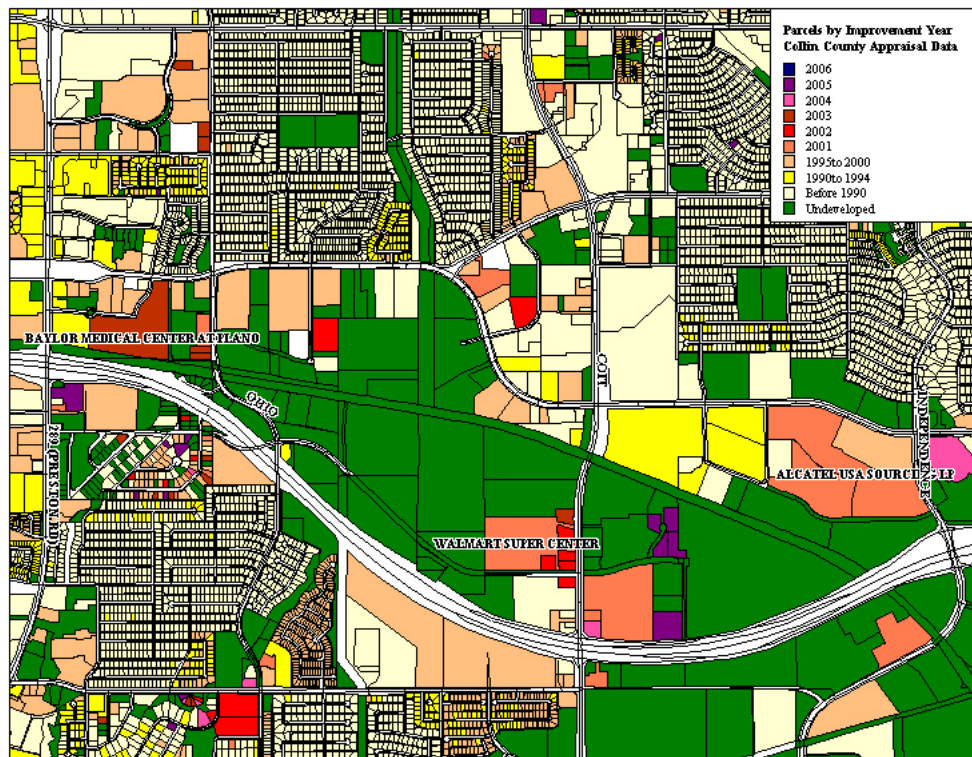
**Figure A-14**  
**PGBT: Study Area Showing Cities**



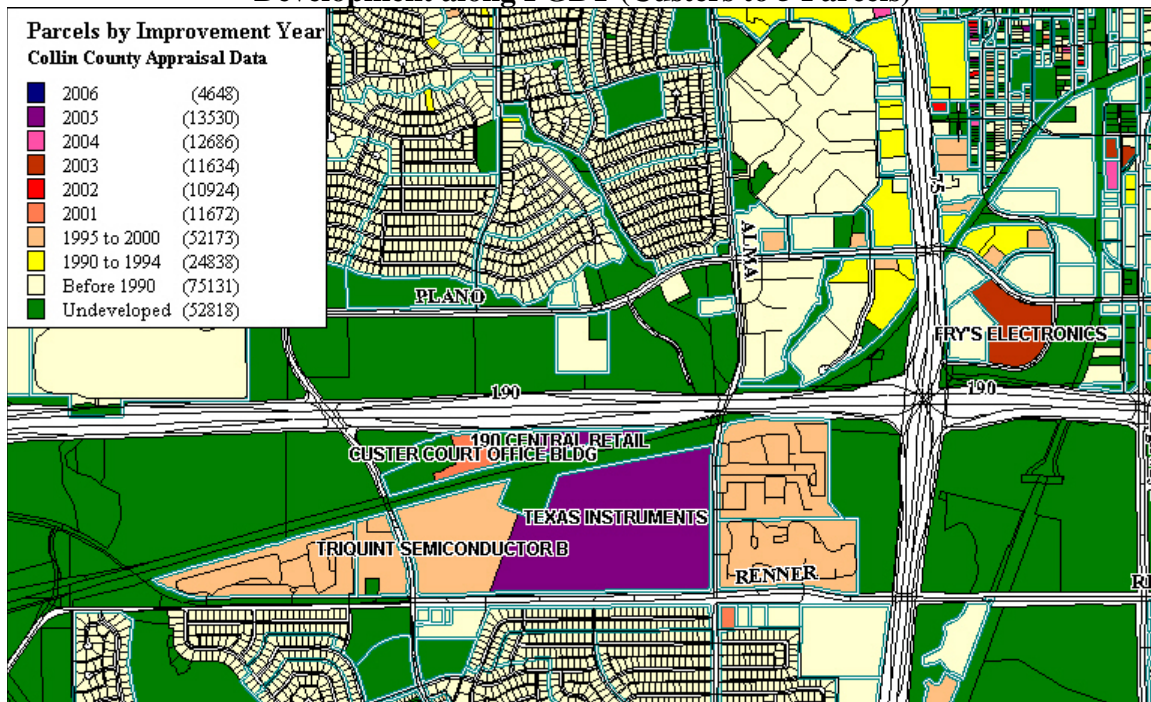
**Figure A-15**  
**Development along PGBT (Preston to Independence Close View)**



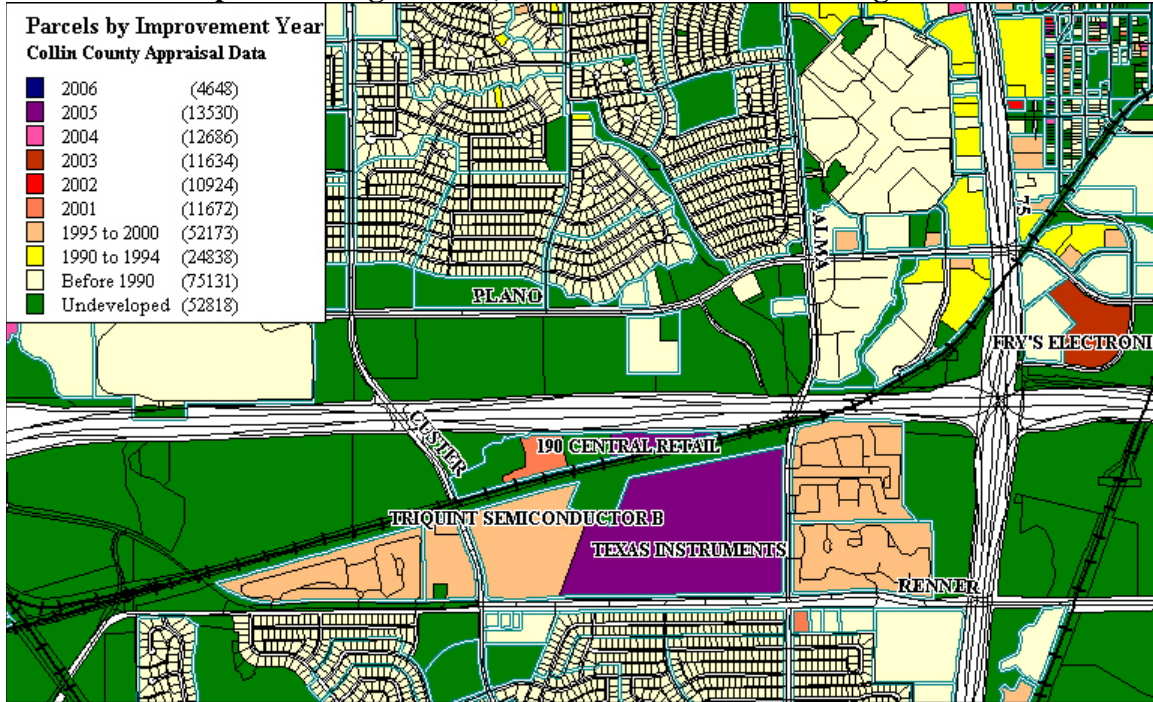
**Figure A-16**  
**Development along PGBT (Preston to Independence Wider View)**



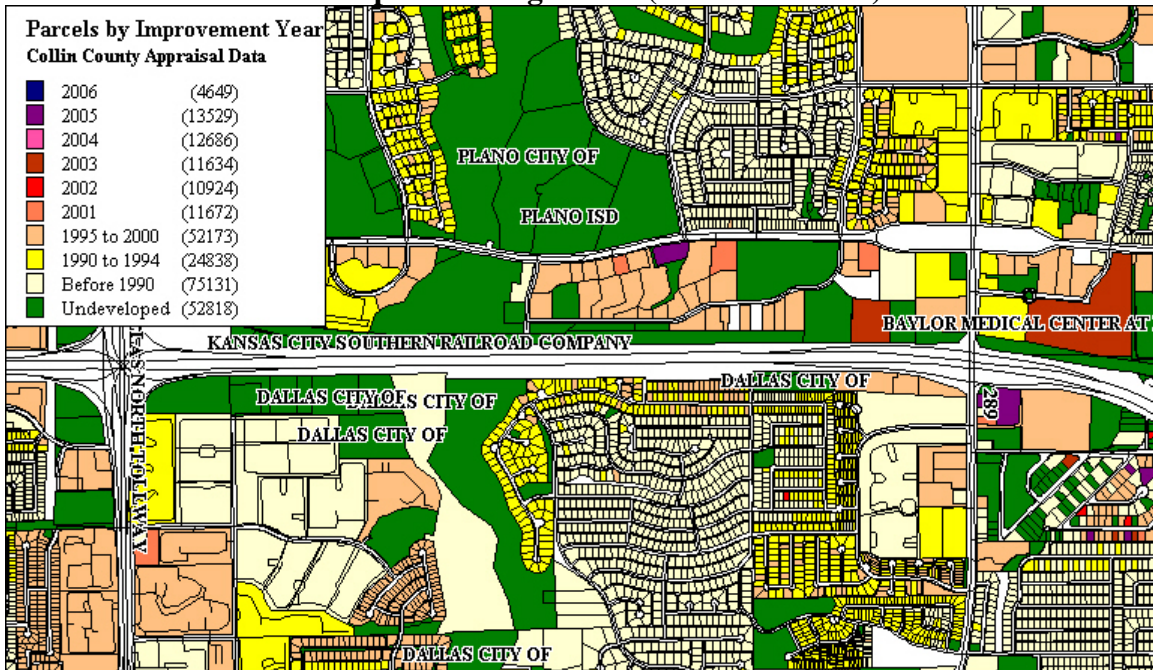
**Figure A-17**  
**Development along PGBT (Clusters to 5 Parcels)**



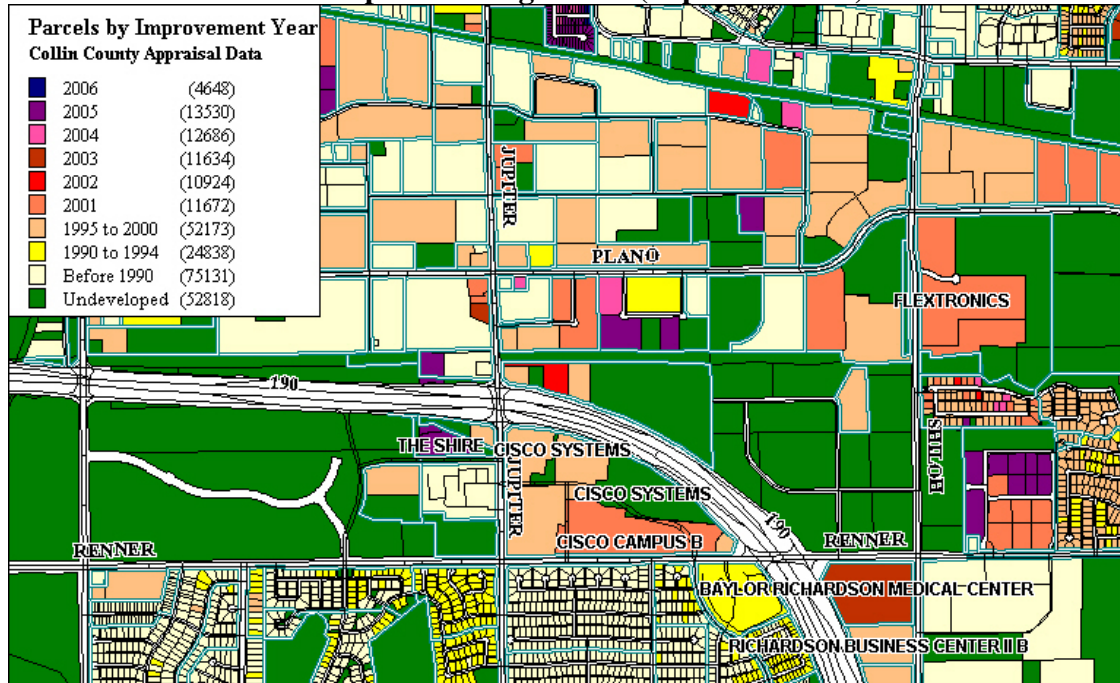
**Figure A-18**  
**Development along PGBT (Custers to 5 Parcels showing Railroads)**



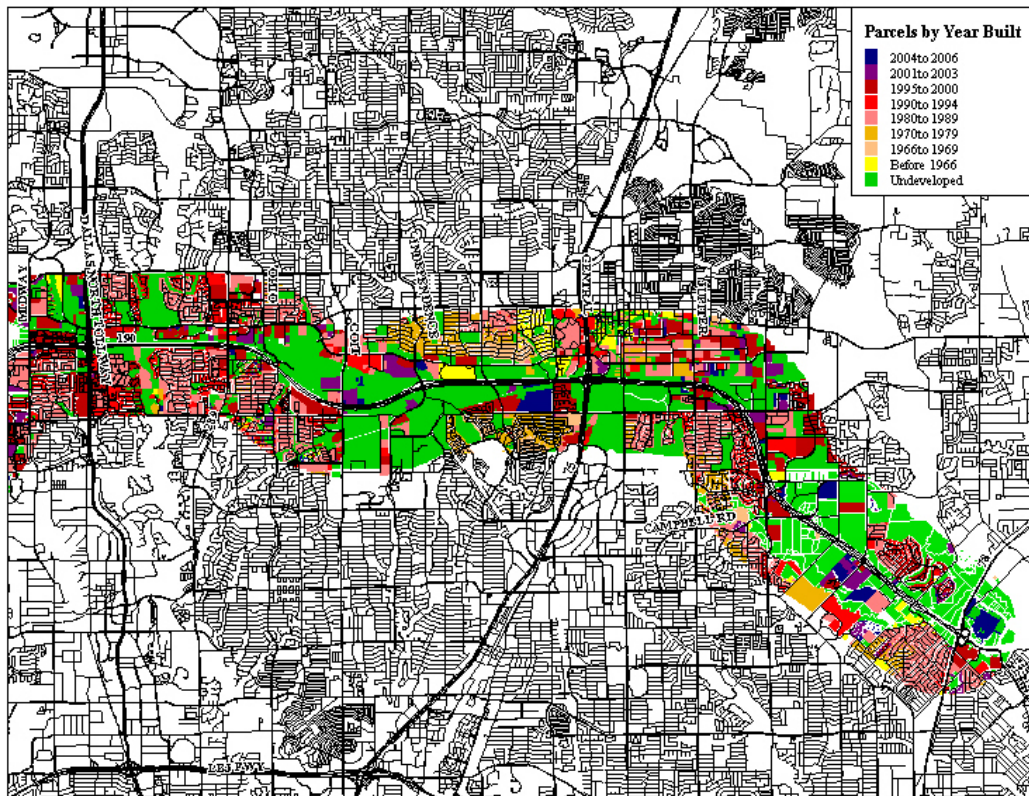
**Figure A-19**  
**Development along PGBT (DNT to Preston)**



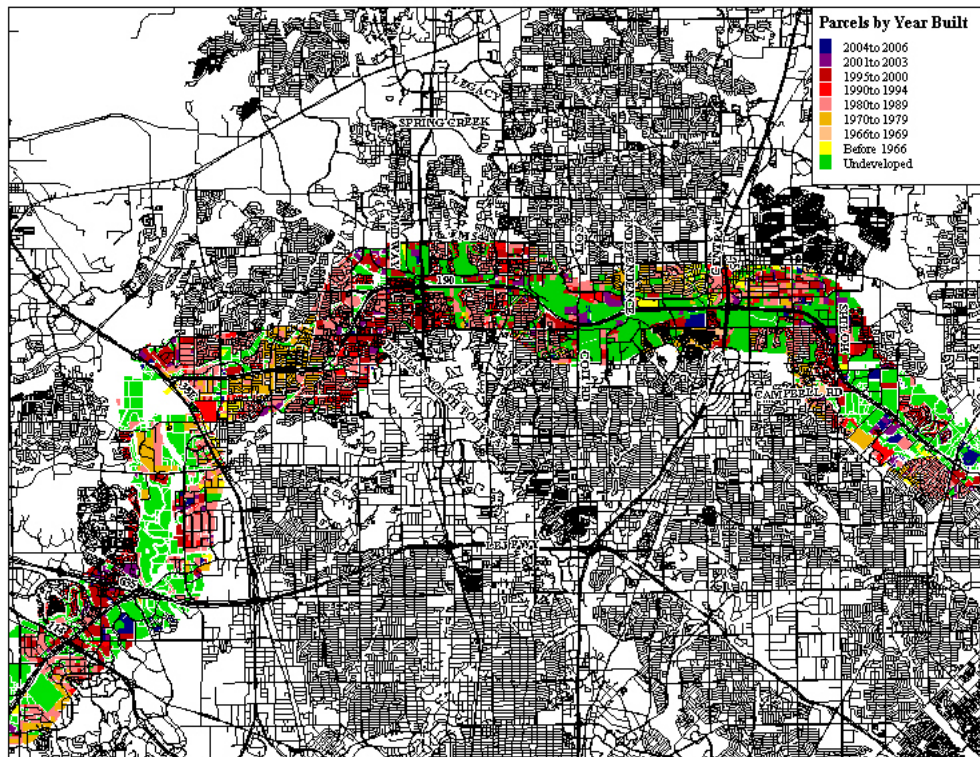
**Figure A-20**  
**Development along PGBT (Jupiter Parcels)**



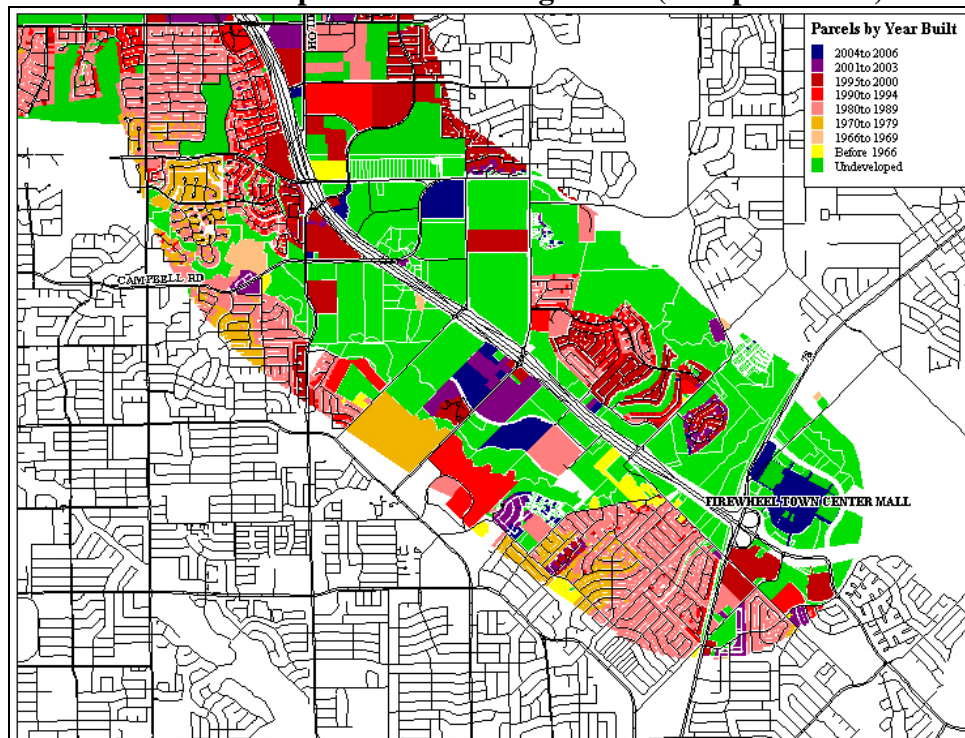
**Figure A-21**  
**Pace of Development: PGBT Segments 1 and 2 by Year Built**



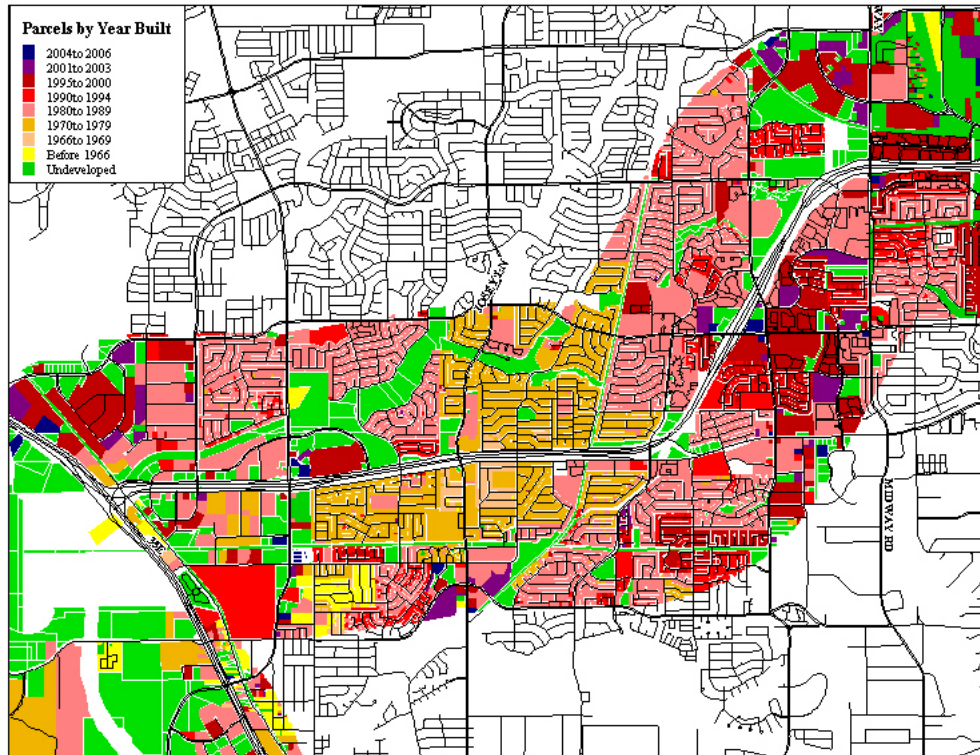
**Figure A-22**  
**Pace of Development: PGBT All Segments by Year Built**



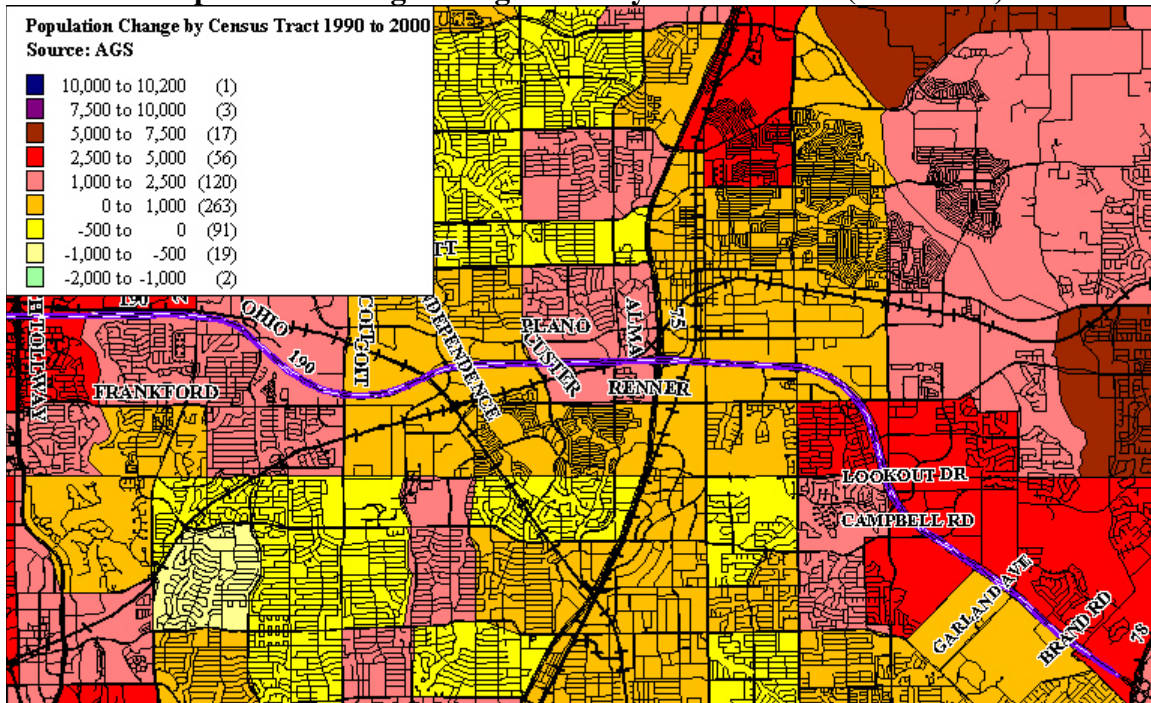
**Figure A-23**  
**Pace of Development: PGBT Segment 2 (Campbell to 78)**



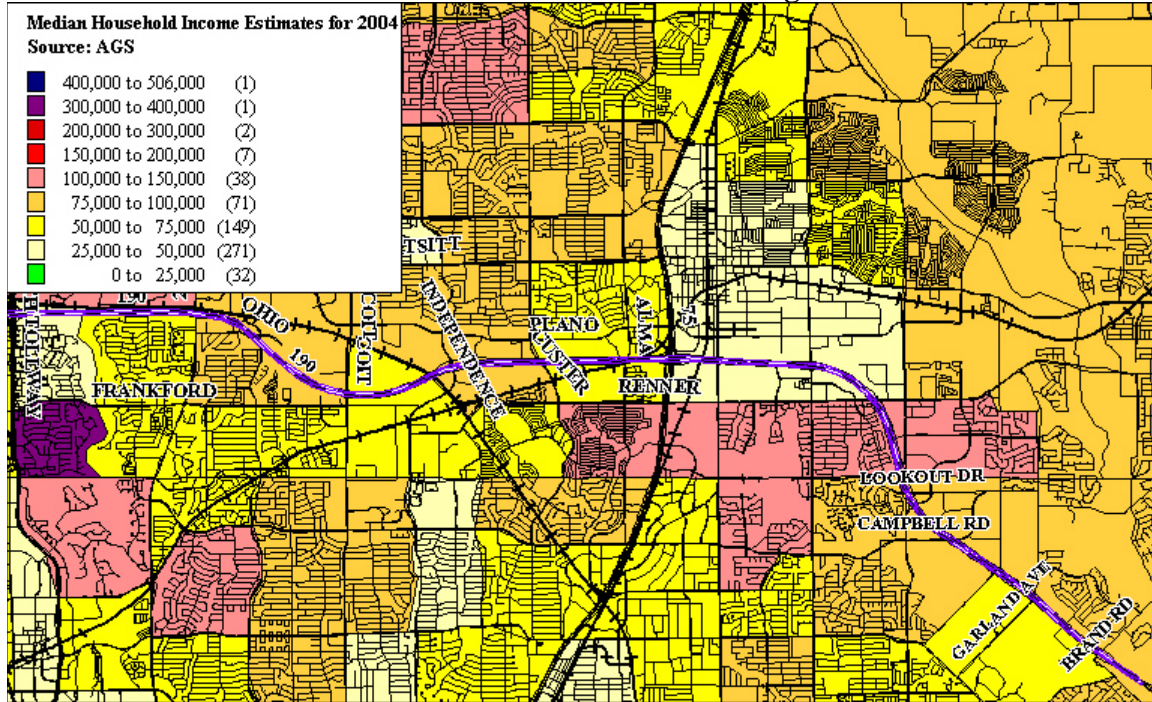
**Figure A-24**  
**Pace of Development: PGBT Segment 3 (Midway Road to 35)**



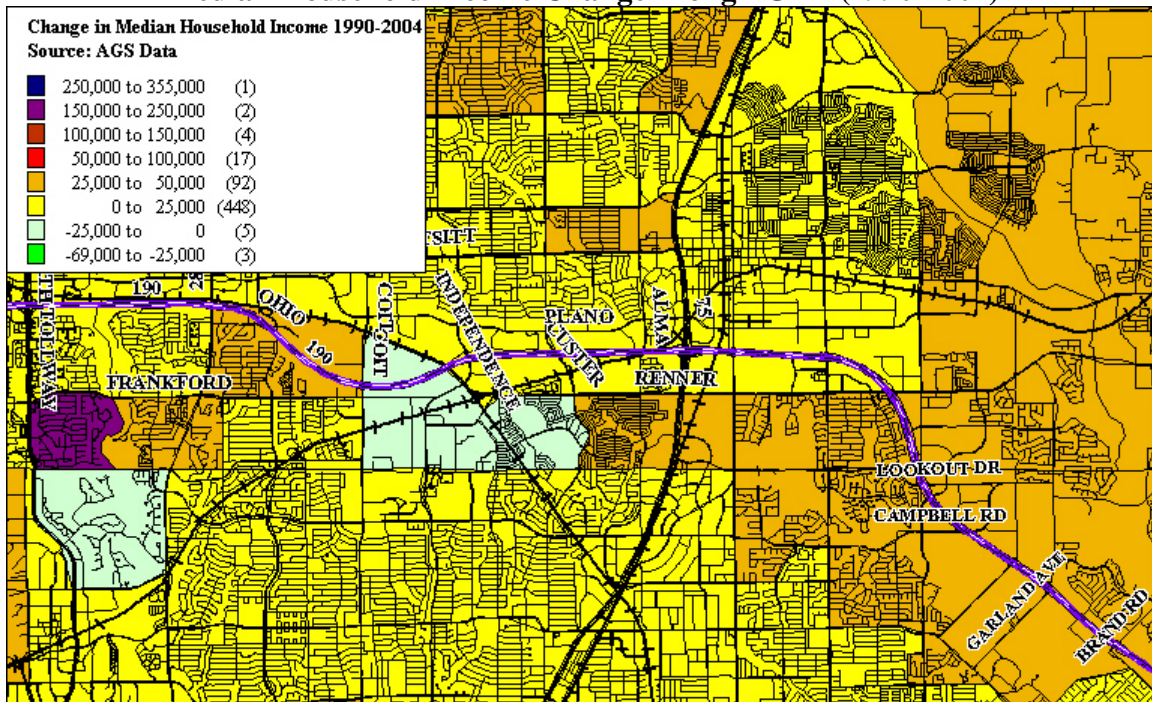
**Figure A-25**  
**Population Change Along PGBT by Census Tract (1990-2000)**



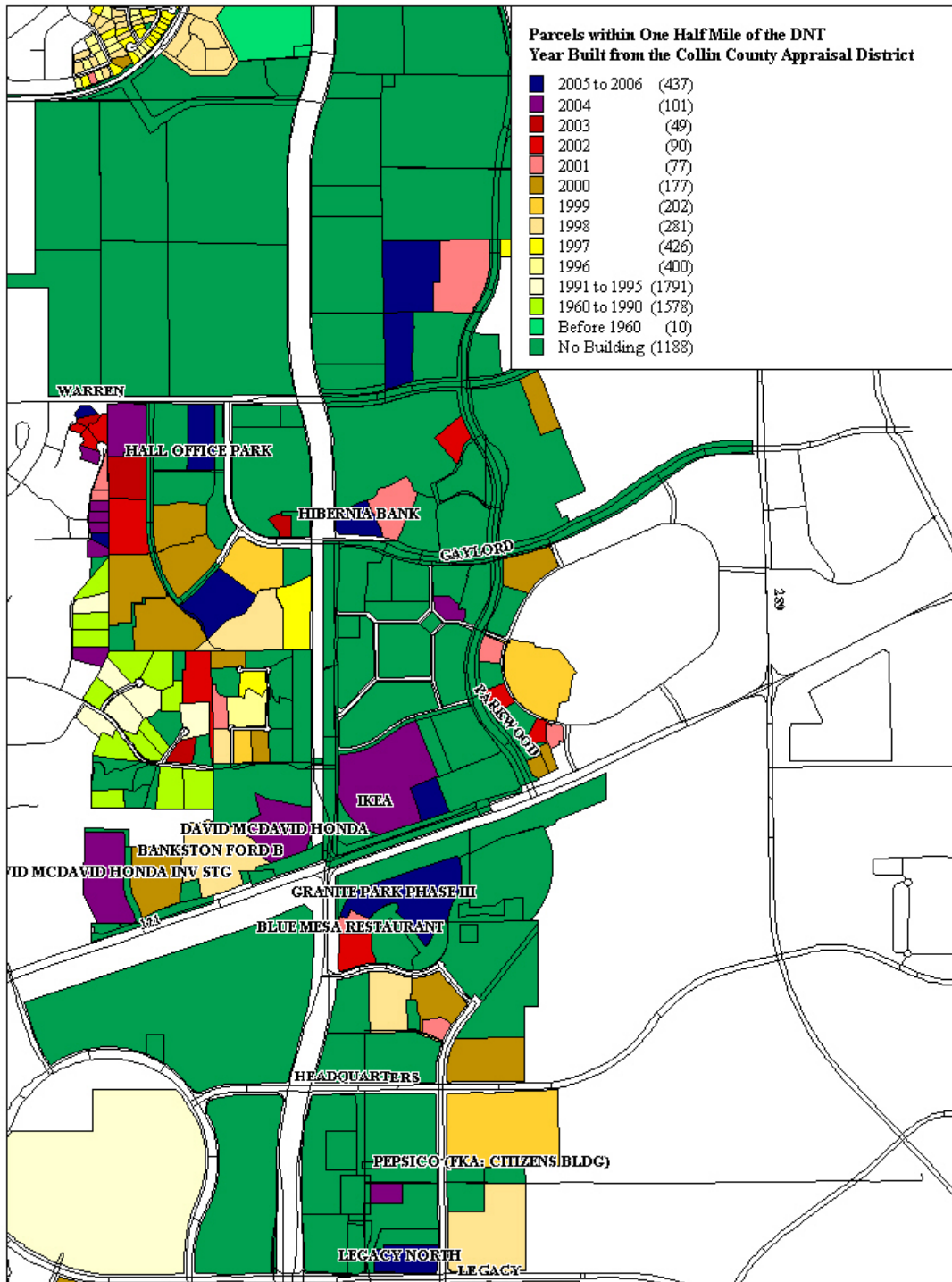
**Figure A-26**  
**2004 Median Household Income Along PGBT**



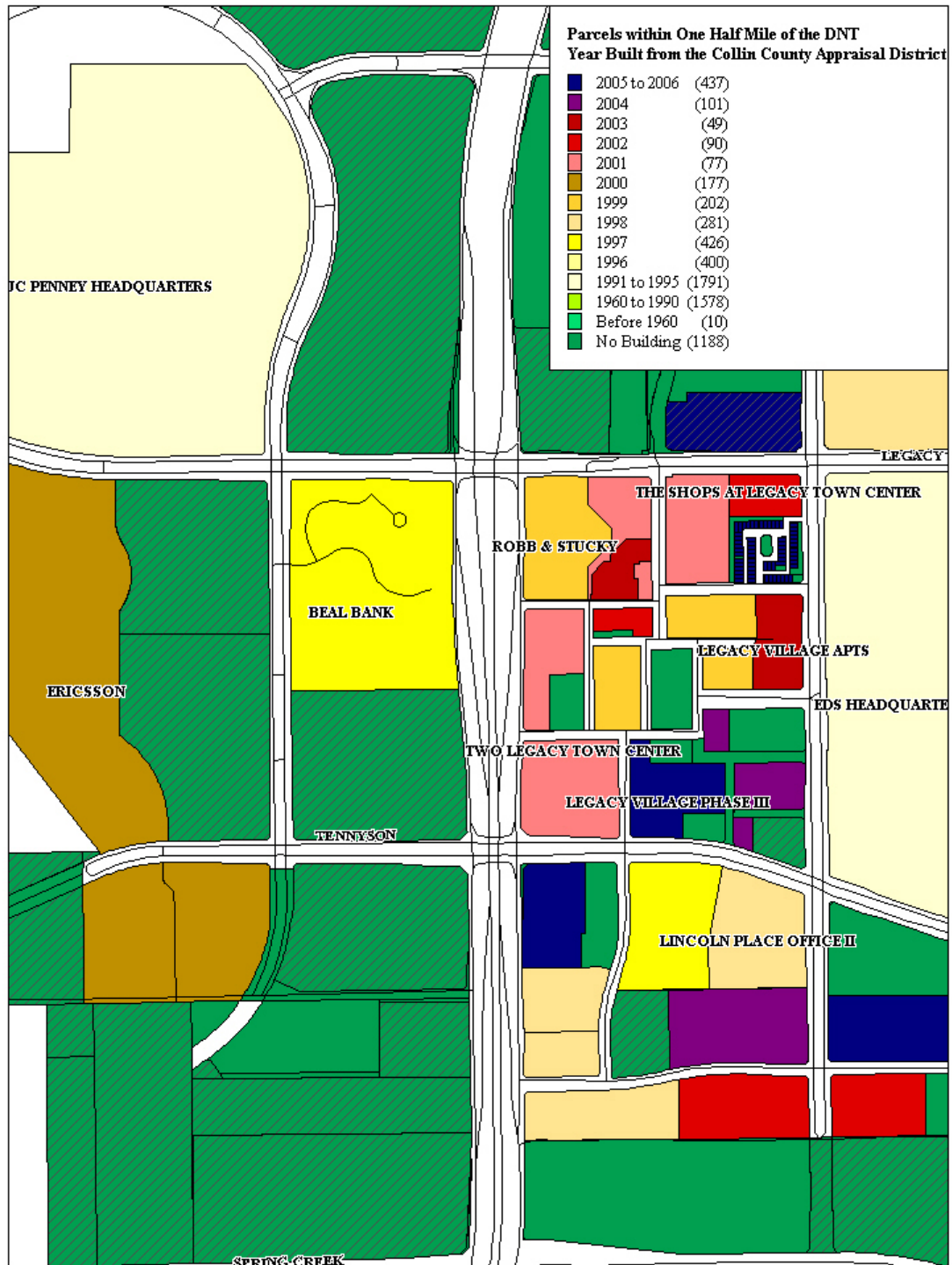
**Figure A-27**  
**Median Household Income Change Along PGBT (1990-2004)**



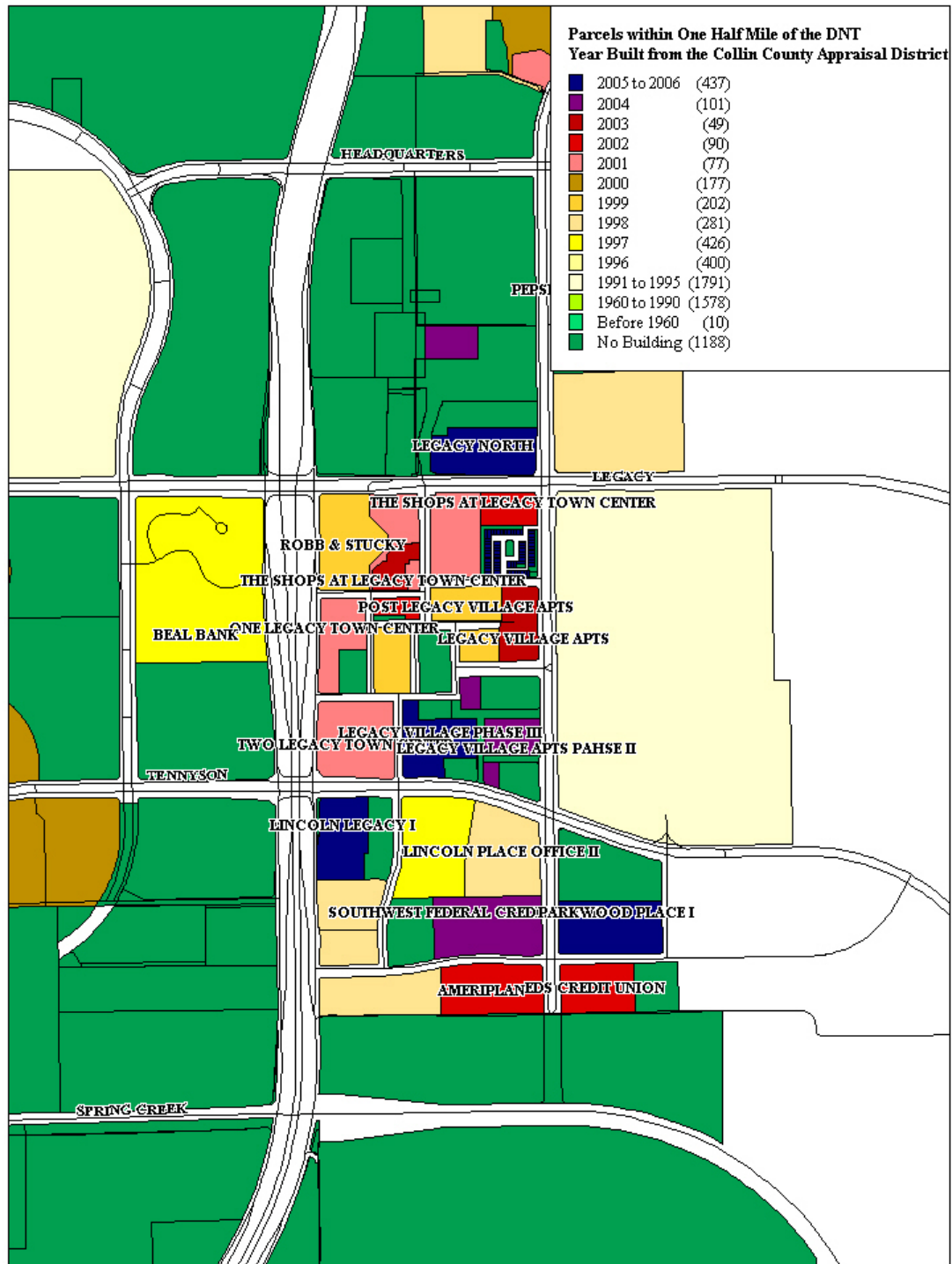
**Figure A-28**  
**Cluster DNT and 121**



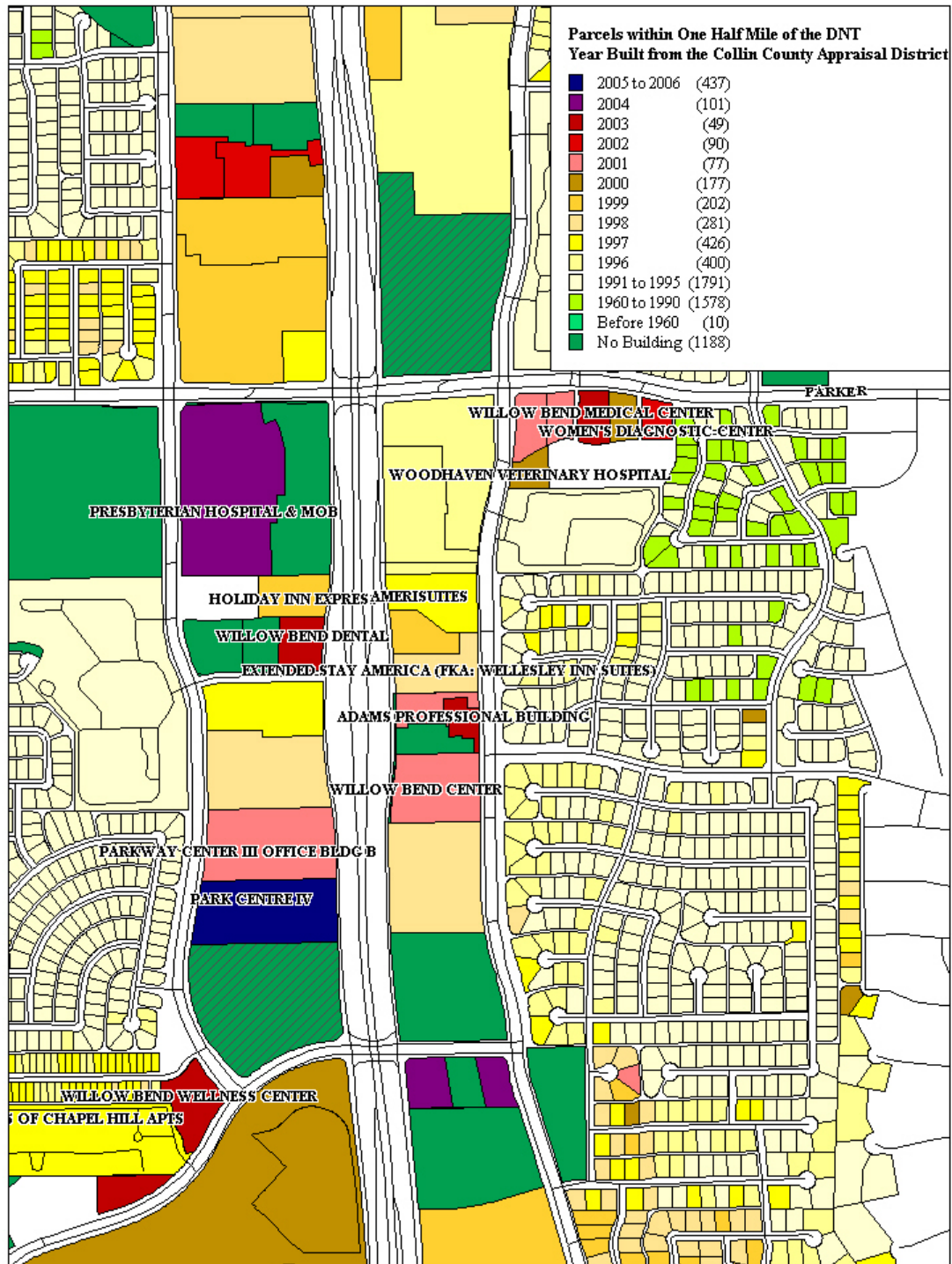
**Figure A-29**  
**Development at DNT and Legacy (showing Agriculture Land)**



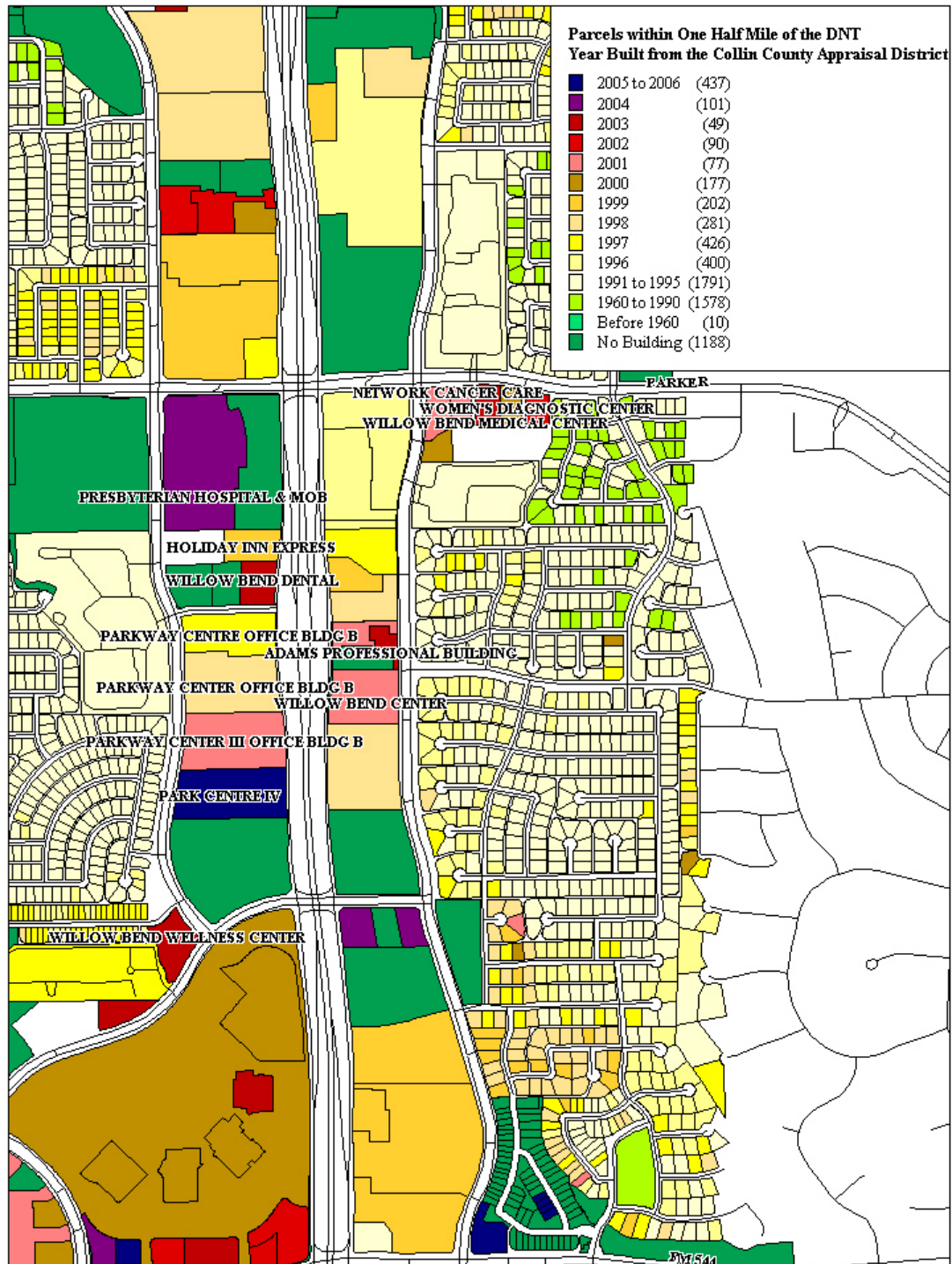
**Figure A-30**  
**Development at DNT and Legacy**



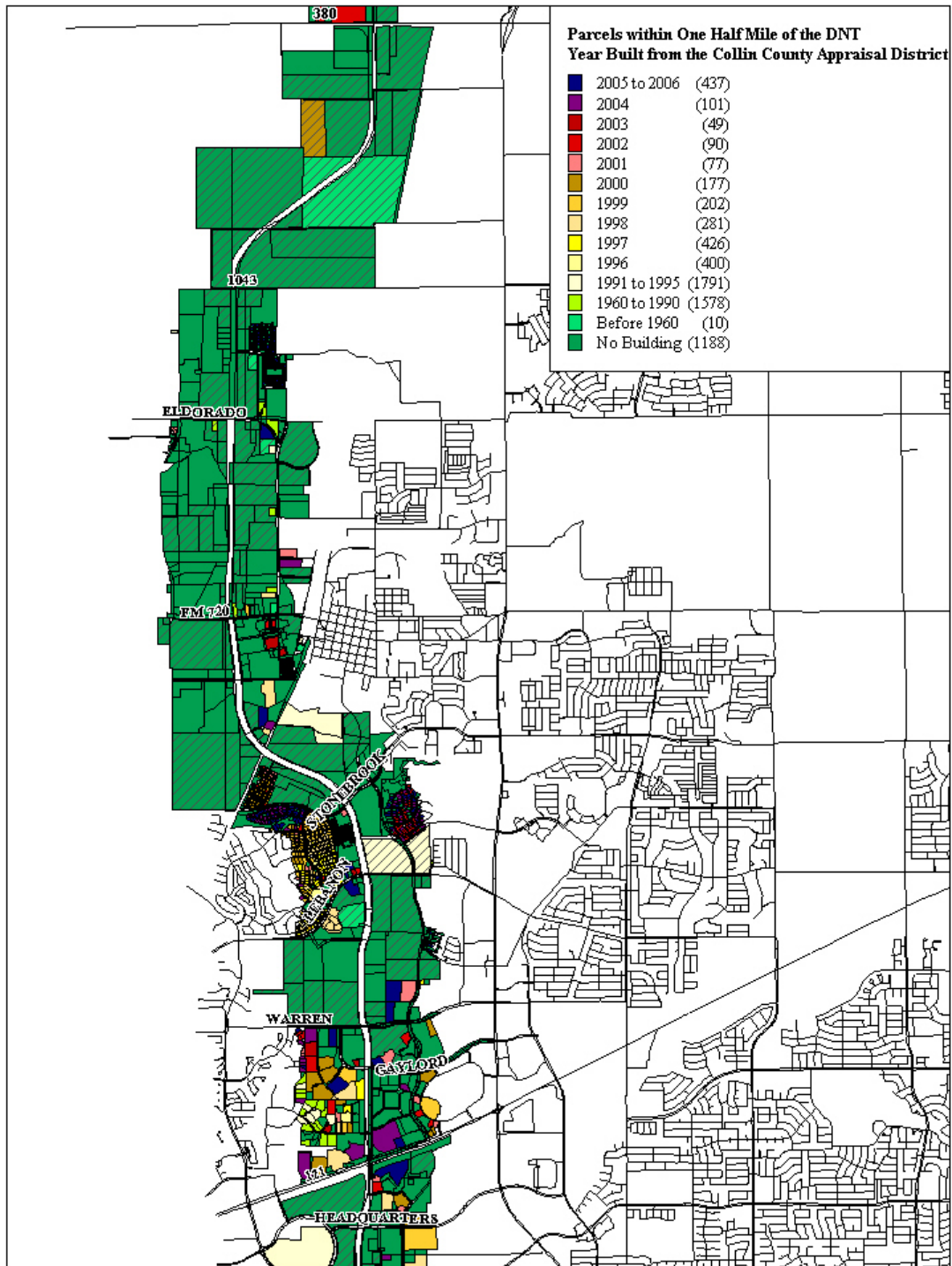
**Figure A-31**  
**Development at DNT and Parker (showing Agriculture Land)**



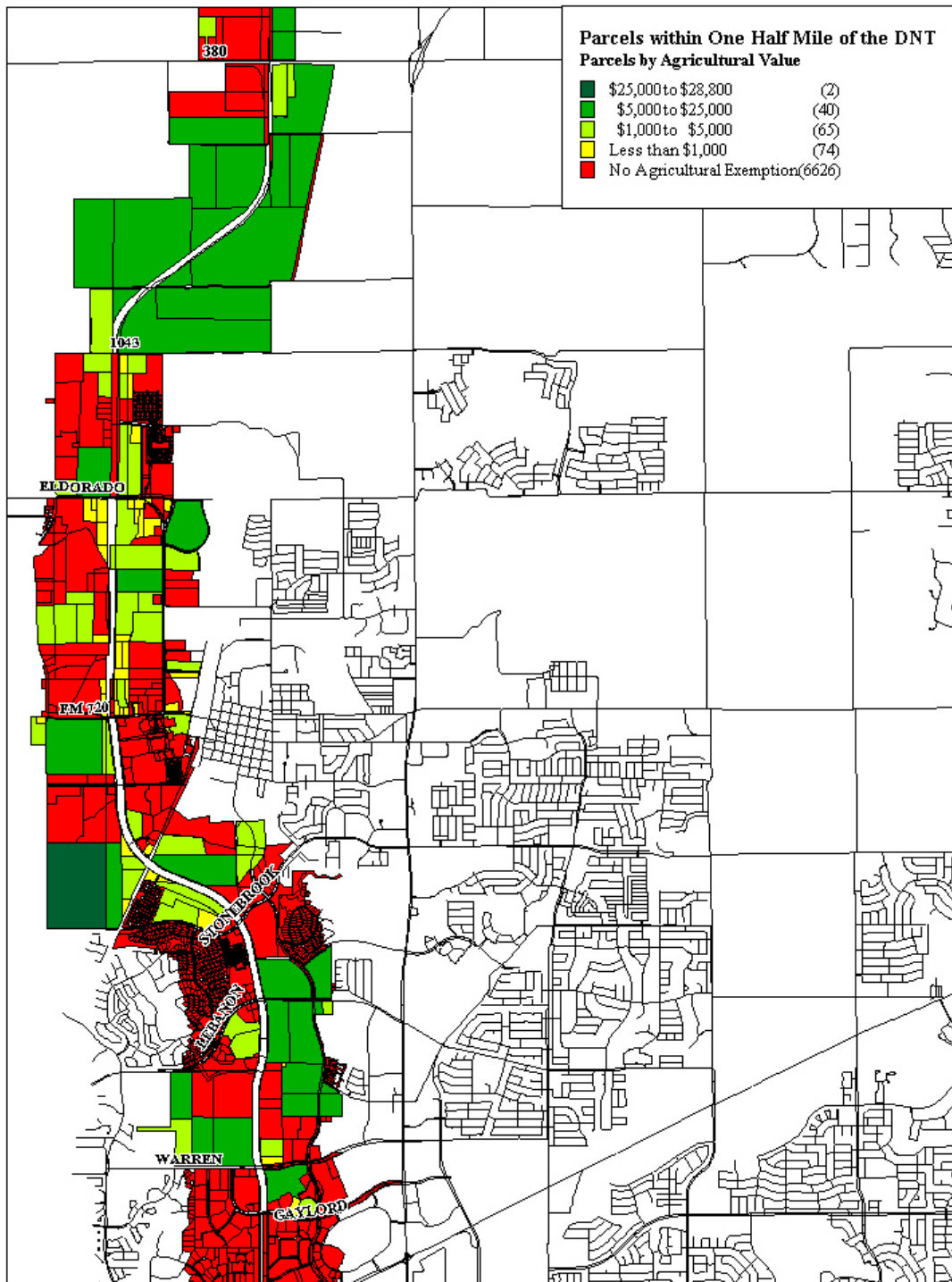
**Figure A-32**  
**Development at DNT and Parker**



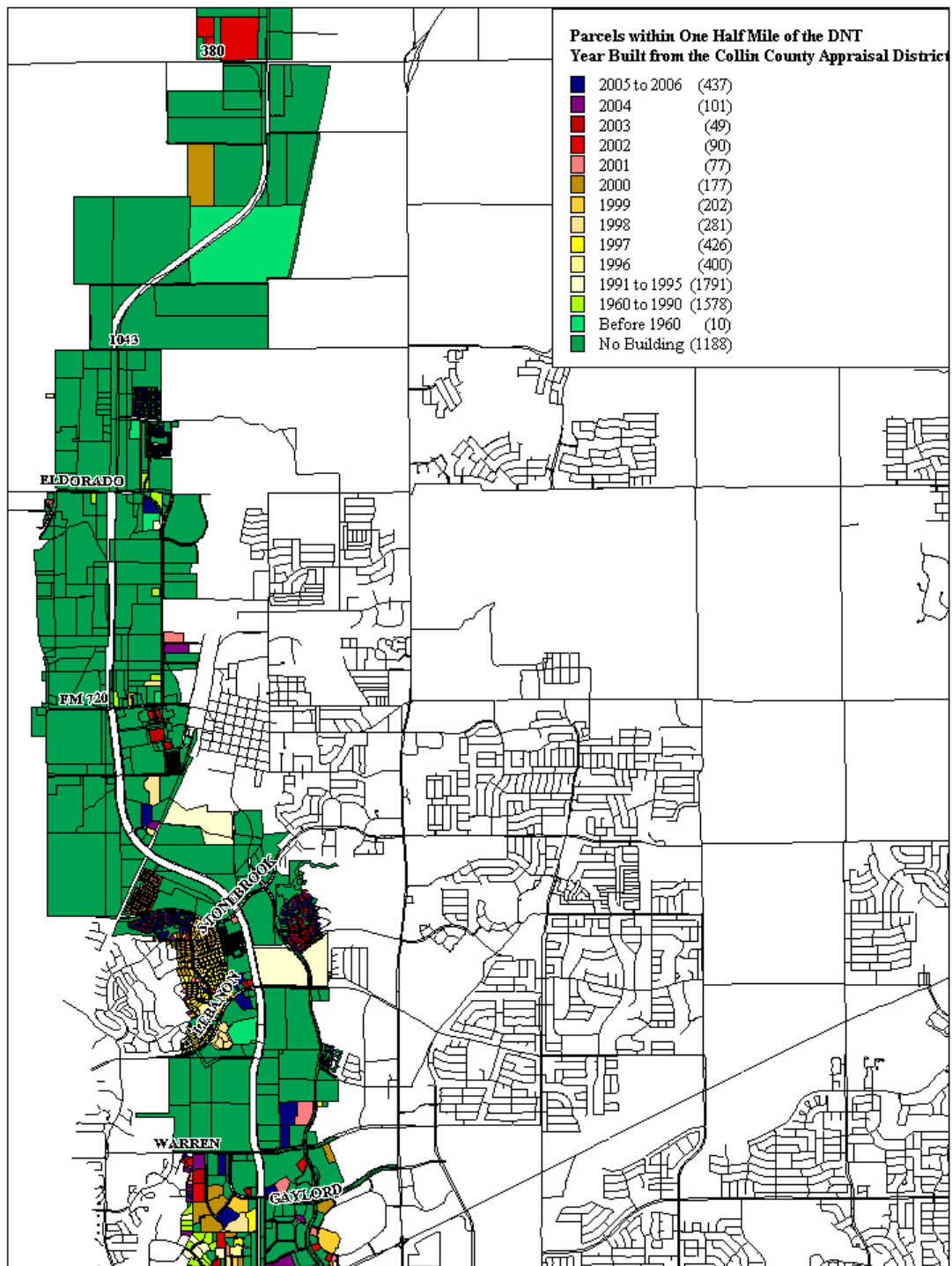
**Figure A-33**  
**Development Along DNT in Frisco (By Year and Agriculture Land)**



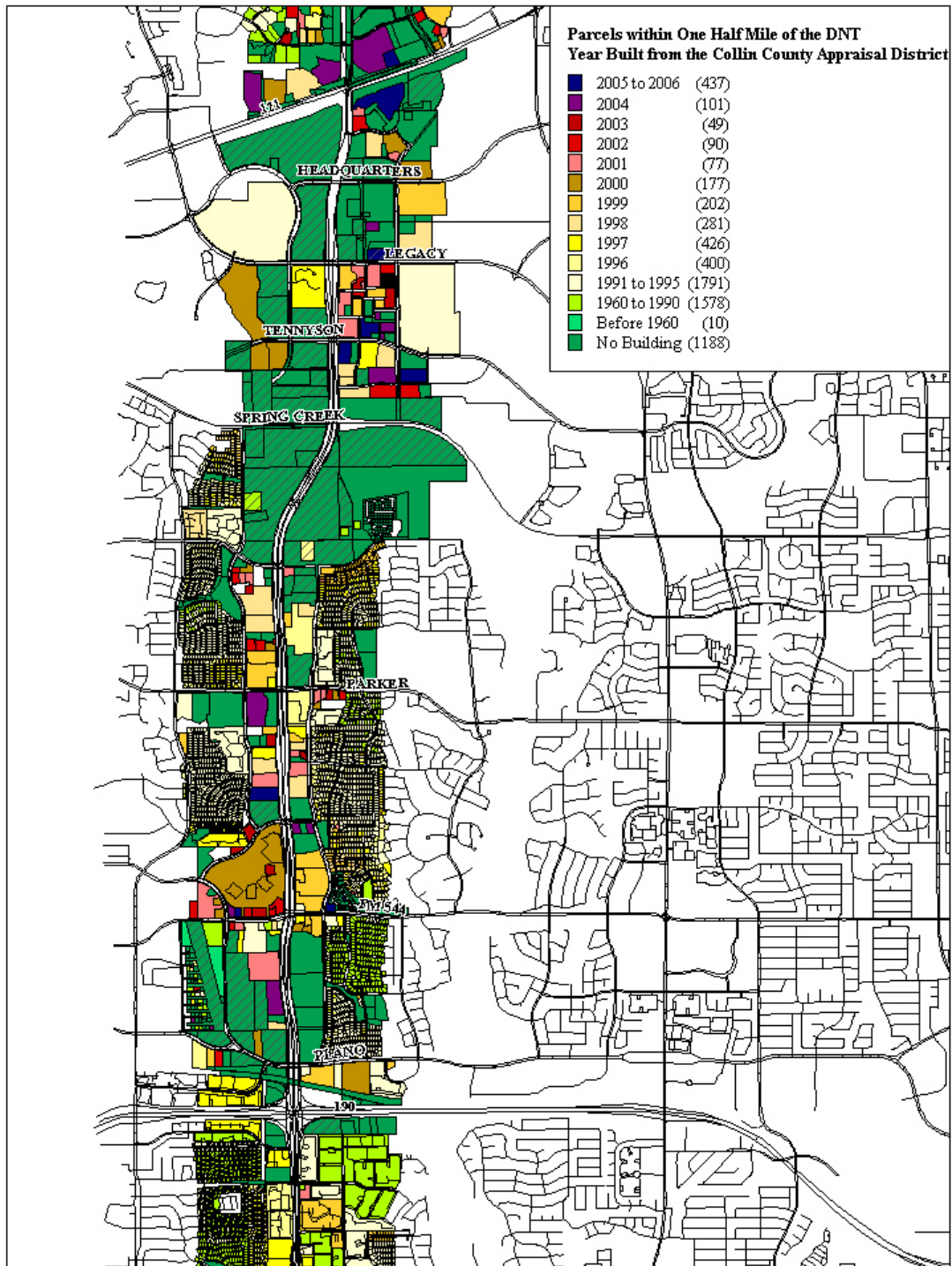
**Figure A-34**  
**Development Along DNT in Frisco (by Agricultural Value)**



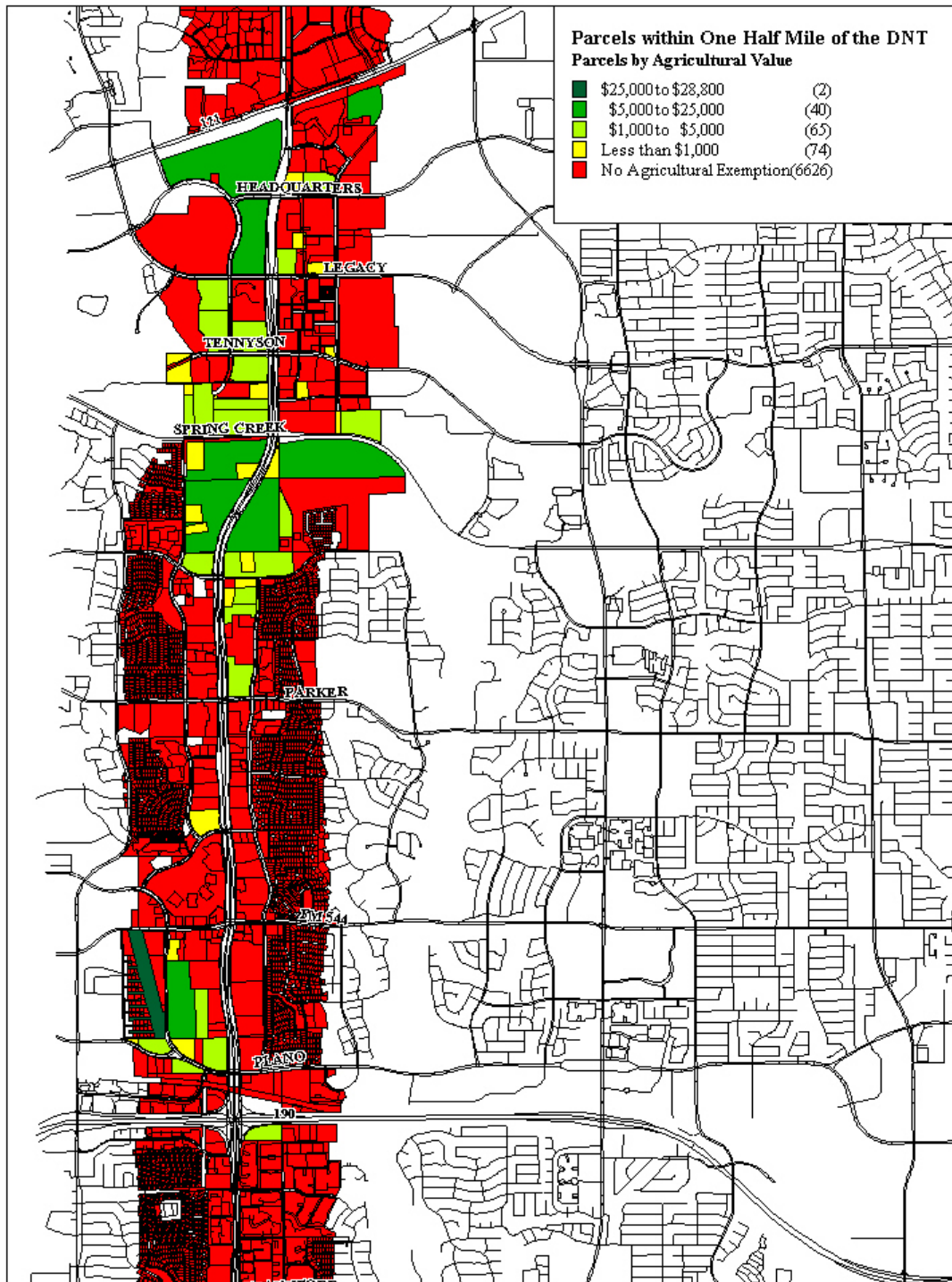
**Figure A-35**  
**Development Along DNT in Frisco**



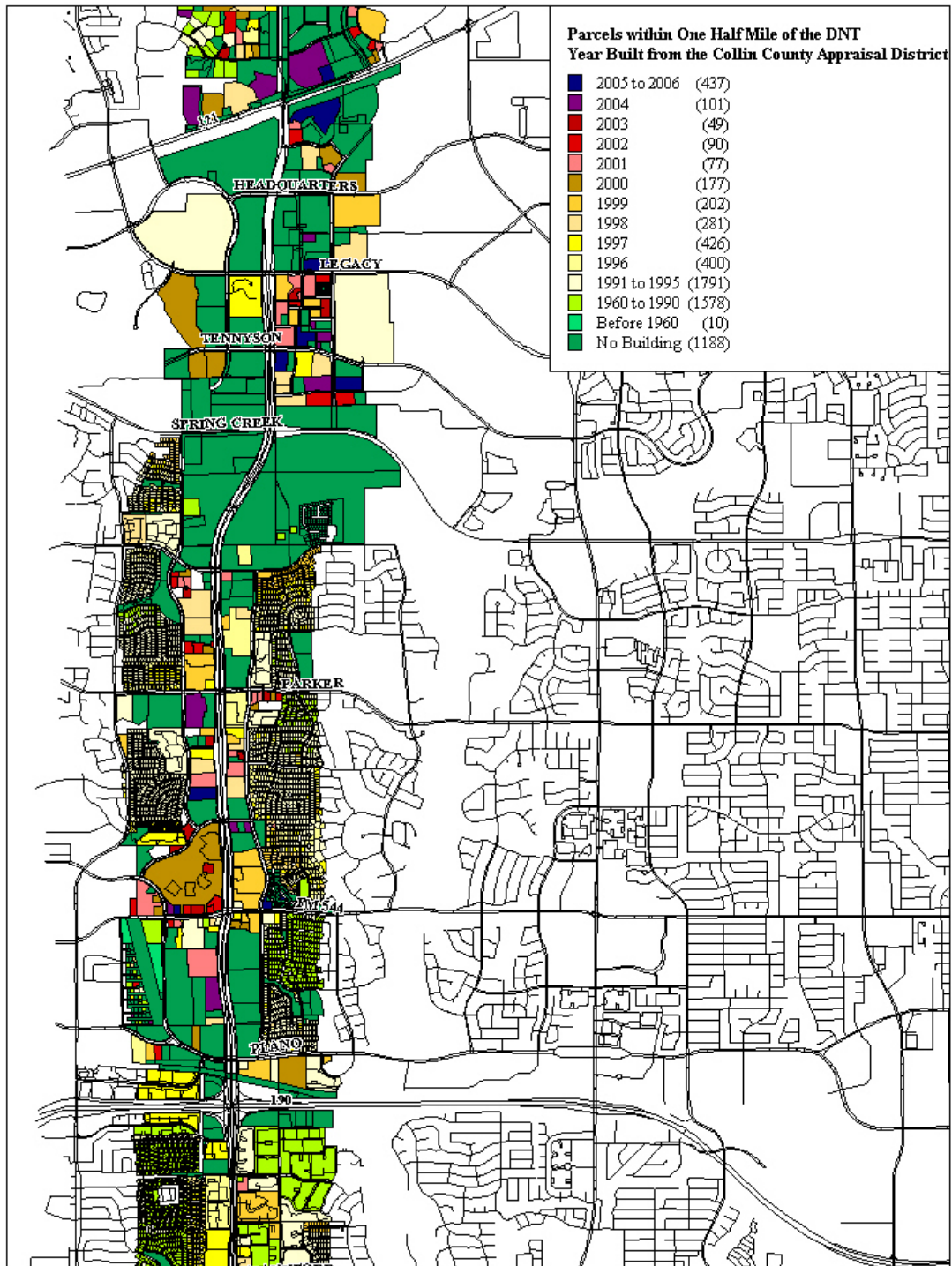
**Figure A-36**  
**Development Along DNT in Plano (By Year and Agriculture Land)**



**Figure A-37**  
**Development Along DNT in Plano (By Agricultural Value)**



**Figure A-38**  
**Development Along DNT in Plano**



**Figure A-39**  
**Development Along PGBT (DNT to Preston)**

