

**ORDINANCE NO. 2012-478**

**AN ORDINANCE OF THE CITY OF CEDAR HILL, TEXAS, AMENDING CITY CODE OF ORDINANCES SECTIONS. 18-64 THROUGH 18-66.2, CONCERNING IMPACT FEES; ADOPTING UPDATED LAND USE ASSUMPTIONS; ADOPTING UPDATED CAPITAL IMPROVEMENTS PLANS FOR WATER, WASTEWATER AND ROADWAY FACILITIES; ADOPTING A REVISED LAND USE EQUIVALENCY TABLE; ADOPTING REVISED SCHEDULES 1 AND 2; AMENDING ADMINISTRATIVE PROVISIONS FOR THE IMPACT FEE PROGRAM; PROVIDING FOR CONFLICTS; PROVIDING A SEVERABILITY CLAUSE AND PROVIDING AN EFFECTIVE DATE.**

**WHEREAS**, Chapter 395, Tex. Loc. Gov't Code, provides procedures for updating land use assumptions, capital improvements plans and impact fees, including procedures for determining that no update is required; and

**WHEREAS**, the City of Cedar Hill adopted revised impact fees for water and wastewater facilities in accordance with the statutory procedures for updating such fees, and adopted initial impact fees for roadway facilities, now termed the Cedar Hill Impact Fee Regulations, by Ordinance No. 95-199, as subsequently amended by Ord. Nos. 95-203, 95-211, Ord. No. 98-392, and Ord. No. 2002-123, and further completed its last update of land use assumptions, capital improvements plans and impact fees through adoption of Ord. No. 2007-338; and

**WHEREAS**, the City of Cedar Hill has appointed a Capital Improvements Advisory Committee to advise the City Council concerning 2012 amendments to the land use assumptions, impact fee capital improvements plans and impact fees for water and wastewater facilities and for roadway facilities; and

**WHEREAS**, the City has retained consultants to prepare land use assumptions, impact fee capital improvements plans, impact fees and ordinance provisions in order to meet 2012 update requirements; and

**WHEREAS**, notice has been published, public hearings held and the written recommendations of the Advisory Committee received concerning revised land use assumptions and impact fee capital improvements plans for water and wastewater facilities and for roadway facilities, as prepared by a qualified professional engineer; and

**WHEREAS**, the City Council finds that it is in the best interest of the citizens of the City to adopt revised land use assumptions, impact fee capital improvements plans, and impact fees for water, wastewater and roadway facilities; and

**NOW, THEREFORE, BE IT ORDAINED BY THE CITY COUNCIL OF THE CITY OF CEDAR HILL:**

**SECTION 1. UPDATED LAND USE ASSUMPTIONS**

The land use assumptions for the City of Cedar Hill hereby are updated, as provided for in Section 18-65 of the Cedar Hill Code of Ordinances, by replacing Exhibit 1 of Ord. No. 2007-338 with Exhibit 1 of this amendatory ordinance, which updates the land use assumptions for the City, and which is attached hereto and incorporated herein by reference as if fully set forth.

**SECTION 2. UPDATED CAPITAL IMPROVEMENTS PLANS.**

a. Section 18-66 of the Cedar Hill Code of Ordinances, subsection (b), hereby is amended by replacing Exhibit 2 of Ord. No. 2007-338, being in part the water capital improvements plan, with Exhibit 2 of this amendatory ordinance, in part, which updates the water capital improvements plan for the City, and which is attached hereto and incorporated herein by reference as if fully set forth.

b. Section 18-66.1 of the Cedar Hill Code of Ordinances, subsection (b), hereby is amended by replacing Exhibit 2 of Ord. No. 2007-338, being in part the wastewater capital improvements plan, with Exhibit 2 of this amendatory ordinance, in part, which updates the wastewater capital improvements plan for the City, and which is attached hereto and incorporated herein by reference as if fully set forth.

c. Section 18-66.2 of the Cedar Hill Code of Ordinances, subsection (b), hereby is amended by replacing Exhibit 3 of Ord. No. 2007-338 with Exhibit 3 of this amendatory ordinance, which updates the roadway capital improvements plan for the City, and which is attached hereto and incorporated herein by reference as if fully set forth.

### **SECTION 3. REVISED LAND USE EQUIVALENCY TABLE.**

Section 18-64(g)(1) of the Cedar Hill Code of Ordinances hereby is amended by replacing Exhibit 4 of Ord. No. 2007-338 with Exhibit 4 of this amendatory ordinance, which updates the land use equivalency table for impact fees, and which is attached hereto and incorporated herein by reference as if fully set forth.

### **SECTION 4. UPDATED SCHEDULES 1 AND 2.**

a. Sections 18-64, 18-66, 18-66.1 and 18-66.2 of the Cedar Hill Code of Ordinances hereby are amended by replacing Exhibit 5 of Ord. No. 2007-338, being Schedule 1, with Exhibit 5 of this amendatory ordinance, which updates Schedule 1, setting forth the maximum impact fees per service unit to be assessed against new development for water, wastewater and roadway facilities, and which is attached hereto and incorporated herein by reference as if fully set forth.

b. Sections 18-64, 18-66, 18-66.1 and 18-66.2 of the Cedar Hill Code of Ordinances hereby are amended by replacing Exhibit 6 of Ord. No. 2007-338, being Schedule 2, with Exhibit 6 of this amendatory ordinance, which updates Schedule 2, setting forth the impact fees per service unit to be collected from new development for water, wastewater and roadway facilities, and which is attached hereto and incorporated herein by reference as if fully set forth.

### **SECTION 5. AMENDMENT TO SECTION 18-64**

Section 18-64 of the Cedar Hill Code of Ordinances, subsection (g), entitled "Service unit determination," is hereby amended by adding subsection (2)(g), to read:

(2)(g) For purposes of calculating the number of service units for water or wastewater impact fees attributable to a single family dwelling, both  $\frac{3}{4}$ " water meters and 1" water meters shall be deemed to be one (1) service unit equivalent."

### **SECTION 6. SEVERABILITY**

Ordinance No. 2012-478

The terms and provisions of this ordinance shall be deemed to be severable and if the validity of any section, subsection, sentence, clause or phrase of this ordinance should be declared to be invalid, the same shall not affect the validity of any other section, subsection, sentence, clause or phrase of this ordinance.

**SECTION 7. CONFLICTS**

This ordinance shall be cumulative of all provisions of ordinances and of the Code of Ordinances for the City of Cedar Hill, Texas, as amended, except where the provisions of this ordinance are in direct conflict with the provisions of such ordinances and such Code, in which event conflicting provisions of such ordinances and Code hereby are superseded.

**SECTION 8. EFFECTIVE DATE.**

This ordinance shall take effect on September 25, 2012.

PASSED AND APPROVED by the City Council, the City of Cedar Hill, on this the 28<sup>th</sup> day of August, 2012.



Rob Franke, Mayor  
City of Cedar Hill, Texas

ATTEST:



City Secretary

# City of Cedar Hill

*2012 Land Use Assumptions  
for Water, Wastewater, and  
Roadway Impact Fees*



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Suite 500 LB51  
Dallas, Texas 75202

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## Introduction

### Purpose

Chapter 395 of the Texas Local Government Code prescribes the process by which cities in Texas must formulate development impact fees. The initial process is the establishment of land use assumptions. These land use assumptions, which also include population and employment projections, will become the basis for the preparation of impact fee capital improvement plans for water, wastewater, and roadway facilities.

To assist the City of Cedar Hill in determining the need and timing of capital improvements to serve future development, a reasonable estimation of future growth is required. The purpose of this report is to formulate growth and development projections based upon assumptions pertaining to the type, location, quantity and timing of various future land uses within the community, and to establish and document the methodology used for preparing the growth and land use assumptions.

### Elements of the Land Use Assumptions Report

This report contains the following components:

- I. Methodology:** Explanation of the general methodology used to prepare the land use assumptions.
- II. Data Collection Zones, Service Area Maps, and Data Format:** Explanation of data collection zones (traffic survey zones), and division of the City into impact fee service areas for water, wastewater, and roadway facilities.
- III. Base Year Data:** Information on population, employment, and land use for Cedar Hill as of 2012 for each capital facility service area.
- IV. Ten Year Growth Assumptions:** Population and employment growth assumptions for ten years by impact fee service areas.
- V. Ultimate Population Projection:** Projections which reflect a completely developed condition based upon the City's ultimate "build-out" scenario.
- VI. Summary:** Brief synopsis of the land use assumptions report.

## I. Methodology

Based upon the growth assumptions and the capital improvements needed to support growth, it is possible to develop an impact fee structure which fairly allocates improvement costs to growth areas in relationship to their impact upon the entire infrastructure system. The database and projections in this report have been formulated using reasonable and generally accepted planning principles.

These land use assumptions and future growth projections take into consideration several factors influencing development patterns, including the following:

- The character, type, density, and quantity of existing development
- Existing zoning patterns
- Anticipated future land use (as shown on the City's Future Land Use Plan map)
- Availability of land for future expansion
- Current and historical growth trends within the City
- Location and configuration of vacant land
- Population absorption rates (historical building permits)
- Physical holding capacity of the City
- Known or anticipated development projects as identified by City Staff

Following is the general methodology used for the preparation of this report:

1. Confirm impact fee service areas for water, wastewater, and roadway facilities (see II. Data Collection Zones, Service Area Maps, and Data Format).
2. Collect/determine benchmark data on population, employment, and land use as of 2012 (see III. Base Year Data).
3. Project population and employment growth for ten years by impact fee service area (see IV. Ten Year Growth Assumptions).
4. Project the ultimate population for a fully developed City (see V. Ultimate Population Projection).

More detailed discussion for each of the above is contained within the respective sections.

## II. Data Collection Zones, Service Area Maps, and Data Format

### Data Collection Zones

The data collection zones used for the land use assumptions are based upon small geographic areas known as traffic survey zones (TSZs). A TSZ is a type of data collection zone that was established by the North Central Texas Council of Governments (NCTCOG) for all areas within the region, including areas within the corporate City limits of Cedar Hill. These zones are based upon the areas used by NCTCOG for travel forecast modeling. Within Cedar Hill, TSZs vary in size from about 50 acres to several hundred acres. Traffic survey zones were originally formulated on the basis of homogeneity and traffic generation potential using major arterials, creeks, railroad lines and other physical boundaries for delineation. Traffic survey zone level data generally correlates with the City limits and service areas for impact fee systems. For roadways, TSZ data also generally coincides with service areas; however, some data must be disaggregated between boundaries. Data of the TSZs is available at the NCTCOG office or website (NCTCOG.org). These traffic survey zones are aggregated into different areas to form service areas for roadway impact fees.

### Service Area Maps

**Plate 1: Service Areas for Roadway Impact Fees** shows the four service areas for roadway facilities. All of the roadway service area boundaries encompass several traffic survey zones. Although the capital improvements plan and impact fees will be prepared as a separate document for roadway facilities, the geographic boundaries of the roadway service areas will be as shown on **Plate 1**.

**Plate 2: Service Area for Water and Wastewater Impact Fees** shows the service areas for water and wastewater, which are the existing City limits. Documents containing the capital improvements plan for water and wastewater facilities will also be prepared separately.

**Plate 1: Service Areas for Roadway Impact Fees**

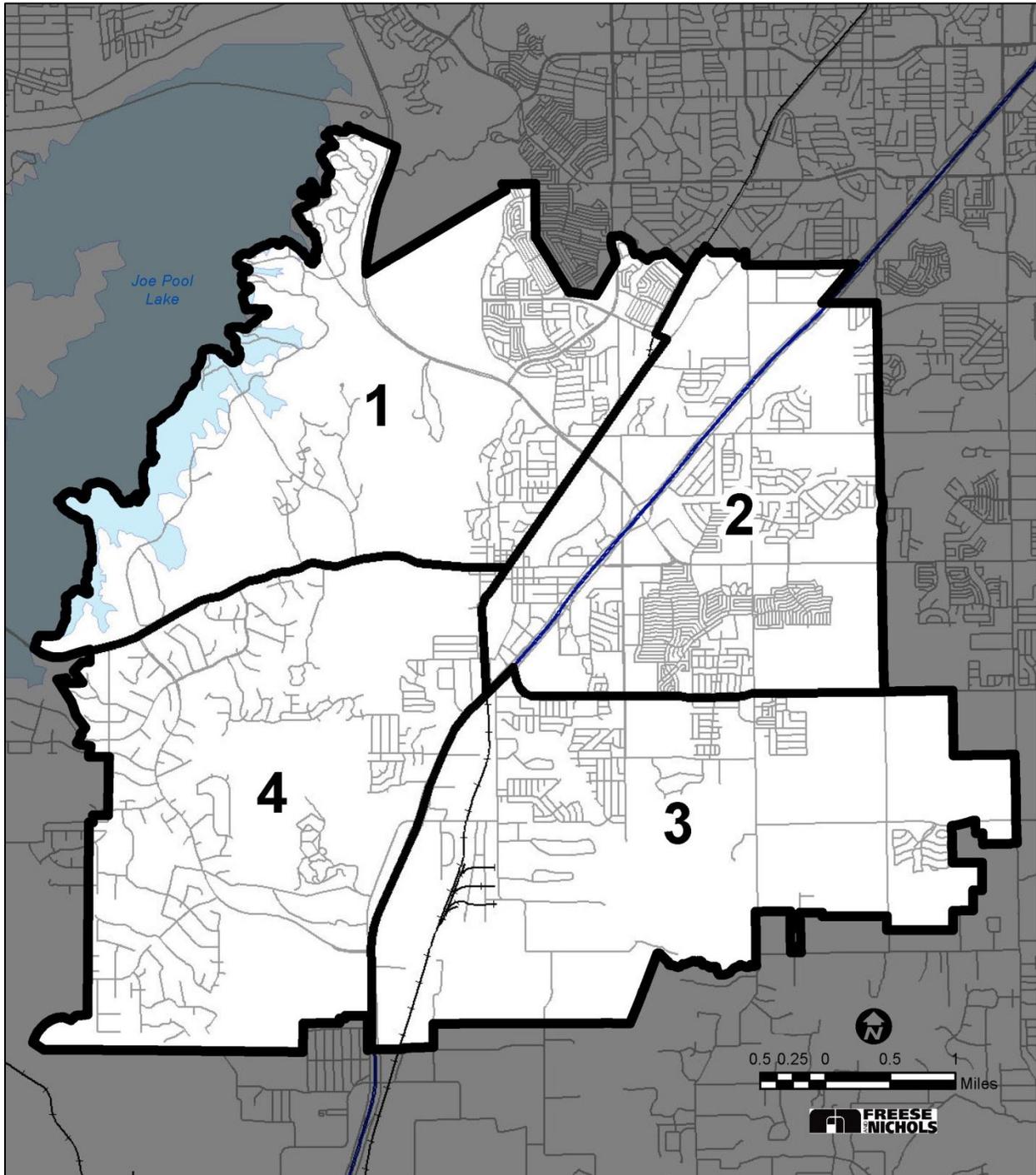
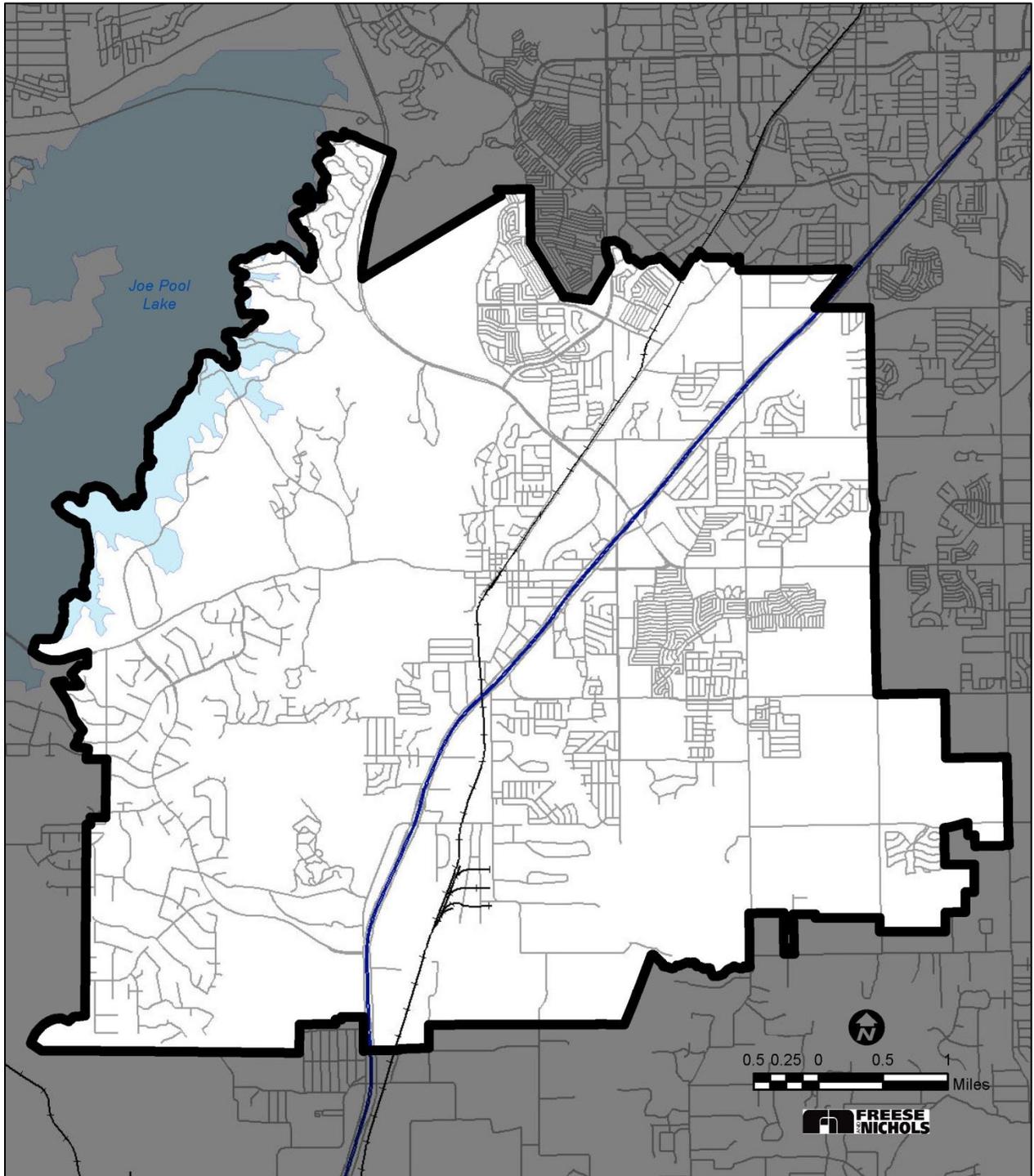


Plate 2: Service Area for Water and Wastewater Impact Fees



## Data Format

The existing data base, as well as the future projections, were formulated according to the following format and categories:

<b>Service Area</b>	Correlates to the proposed water, wastewater, and roadway service areas identified on the attached maps.
<b>Traffic Survey Zone/TSZ</b>	Geographic areas established by the NCTCOG which are used for data collection purposes and termed TSZs within this report.
<b>Housing Units (2012)</b>	All living units including single-family, duplex, multi-family and group quarters. The number of existing housing units has been shown for the base year (January 1, 2012).
<b>Housing Units (2022)</b>	Projected housing units by service zone for January 2022 (ten-year growth projections).
<b>Population (2012)</b>	Existing population for the base year (January 2012).
<b>Population (2022)</b>	Projected population by service zone for the year 2022 (ten-year growth projections).
<b>Employment (2012, 2022)</b>	<p>Employment data is aggregated to three employment sectors and include; Basic, Retail and Service. The following details which North American Industry Classification System (NAICS) codes fall within each of the three sectors.</p> <ul style="list-style-type: none"> <li>▪ <u>Basic</u> (#210000 to #422999) -- Land use activities that produce goods and services such as those that are exported outside the local economy; manufacturing, construction, transportation, wholesale trade, warehousing and other industrial uses.</li> <li>▪ <u>Retail</u> (#440000 to #454390) -- Land use activities which provide for the retail sale of goods that primarily serve households and whose location choice is oriented toward the household sector such as grocery stores, restaurants, etc.</li> <li>▪ <u>Service</u> (#520000 to #928199) -- Land use activities which provide personal and professional services such as financial, insurance, government, and other professional and administrative offices.</li> </ul>

The NCTCOG prepares employment estimates at the TSZ level and therefore, minimal adjustments are needed.

### III. Base Year Data

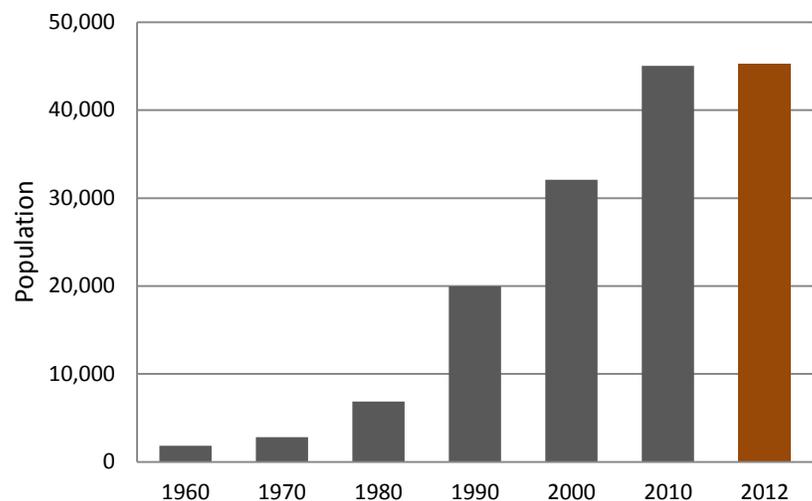
This section documents the City's historical growth trends and data from the base year of January 1, 2012. This "benchmark" information provides a starting basis of data for the ten-year growth assumptions that will be presented within the following section.

#### Population Growth

One method of predicting future growth is looking at past growth. The historical populations for Cedar Hill from 1960 are shown below in **Table 1**:

YEAR	POPULATION
1960	1,848
1970	2,810
1980	6,849
1990	19,976
2000	32,093
2010	45,028
2012 <sup>(1)</sup>	45,280

Source: U.S. Census  
<sup>(1)</sup> Freese and Nichols, Inc. estimate



The 2012 population estimate shown above was derived using the following data:

- 92 building permits issued between April 2010 – December 2011 (provided by the City)
- 94.9% occupancy rate (2010 U.S. Census)
- 2.89 persons per household (2010 U.S. Census)

**92 new homes x 94.9% occupancy x 2.89 persons per household = 252 new residents**

**45,028 residents in 2010 + 252 new residents = 45,280 residents in 2012**

This calculation is supported by the North Central Texas Council of Governments (NCTCOG) April 2011 population estimate of 45,260.

## Existing Land Use

In any evaluation and projection of future land use patterns, a documentation of existing conditions is essential. A documentation of existing land use patterns and population was made from the City's Comprehensive Plan and was used as a base line for future growth projections.

Each land use category was counted and tabulated on a parcel-by-parcel basis and recorded for all areas of the City. **Table 2** shows a summary of existing land uses for the area in Cedar Hill's City limits. Also listed is the percentage of land use relative to the overall City composition, and the associated population density, expressed in terms of acres per 100 persons. Data of existing land use was provided by the City of Cedar Hill's Planning Department.

Land Use Category	Acres	Percent of Total Land	Acres per 100 Persons <sup>(1)</sup>
Single Family	6,011	26.2%	13.3
Two-Family	43	0.2%	0.1
Multiple Family	112	0.5%	0.2
Manufactured Home	8	0.0%	0.0
Retirement Facility	38	0.2%	0.1
<b>Residential Subtotal</b>	<b>6,212</b>	<b>27.1%</b>	<b>13.7</b>
Public/Semi-Public	1,242	5.4%	2.7
Parks and Open Space	2,964	12.9%	6.5
Office	57	0.2%	0.1
Retail	394	1.7%	0.9
Commercial	300	1.3%	0.7
Industrial	247	1.1%	0.5
<b>Nonresidential Subtotal</b>	<b>5,204</b>	<b>22.7%</b>	<b>11.5</b>
<b>Total Developed</b>	<b>11,416</b>	<b>49.8%</b>	<b>25.2</b>
Utilities	900	3.9%	2.0
Vacant/Agricultural	8,565	37.4%	18.9
ROW	2,033	8.9%	4.5
<b>Total Acres within City Limits</b>	<b>22,914</b>	<b>100.0%</b>	<b>50.6</b>

<sup>(1)</sup> Based on a 2012 population of 45,280.

For the purposes of documenting changes in population, land use, density, and intensity, these land use assumptions are principally based on population and employment figures. Appendix “A” shows the existing data base for both traffic survey zones and for each proposed roadway service area. **Table 3** represents a summary of existing population and employment for Cedar Hill as a whole.

Housing Units <sup>(1)</sup>	15,669
Population	45,280
Total Employment	17,814
<i>Basic Employment</i>	<i>3,356</i>
<i>Retail Employment</i>	<i>9,424</i>
<i>Service Employment</i>	<i>5,034</i>
Source: Freese and Nichols, Inc.	
<sup>(1)</sup> Estimated from building permit data, City of Cedar Hill	

## IV. Ten Year Growth Assumptions

Growth is characterized in two forms: population (residential land use) and employment (nonresidential land use). A series of assumptions were made to arrive at reasonable growth rates for population and employment. The following assumptions have been made as a basis from which ten-year projections could be initiated.

- Future land uses will occur as identified on the Future Land Use Plan
- The City will be able to finance the necessary improvements to accommodate growth,
- School facilities will accommodate increases in population, and
- Densities will be as projected in the Comprehensive Plan.

The ten-year projections, or land use assumptions, are based upon the establishment of a reasonable growth rate which is based upon past trends or other considerations. An approximate 1.8 percent average annual growth rate was determined to be a reasonable rate at which Cedar Hill could be expected to grow. The historical average annual growth rate was higher (3.4 percent from 2000 to 2010), but a 1.8 percent rate represents a rate which corresponds more closely with the amount of growth which is expected over the next ten years.

The growth rate was determined through an analysis of historical growth trends, recent growth trends following the economic downturn beginning in 2008, and building permits issued. These projections align with NCTCOG’s population projection for year 2035 of 75,077 residents, using an S-curve indicating a slower growth rate through 2022, followed by more rapid growth through 2035. Based upon this assumption, and upon building permit data, it is projected that a yearly average of about 315 residential dwelling units per year could be constructed over the next ten years. A household size of 2.89 persons per household and an occupancy rate of 94.9 percent were used to calculate the future population. Using a future growth rate of approximately 315 residential building permits per year, a population of approximately 54,000 people was

projected for the ten-year growth period (for the year 2022). This growth would generate a population increase of about 864 persons per year. The following shows the formula that was used to calculate the ten-year growth assumptions:

$315 \text{ dwelling units} * 0.949 \text{ occupancy rate} = 299 \text{ newly occupied dwelling units/year}$
$299 \text{ newly occupied dwelling units/year} * 2.89 \text{ persons per household} = 864 \text{ persons/year}$
$864 \text{ persons/year} * 10 \text{ years} = 8,640 \text{ persons growth over ten years}$
$45,281 \text{ existing 2012 population} + 8,640 \text{ persons growth} = 53,921 \text{ persons (approximately 54,000)}$

This projection, which generally reflects an approximate 1.8 percent average annual growth rate, was determined to be a reasonable rate at which Cedar Hill could be expected to grow over the next ten years.

**Table 4** shows the associated projected land use requirements for a 2022 population of 54,000 persons within the City.

Table 4 PROJECTED TEN-YEAR FUTURE LAND USE REQUIREMENTS – 2022 City of Cedar Hill, Texas			
Land Use Category	2022 Acres	2022 Acres per 100 Persons <sup>(1)</sup>	Additional Acres Needed from 2012
Residential	7,160	13.26	948
Public and Institutional	1,281	2.37	39
Parks and Recreation	2,970	5.50	6
Retail/Mixed Use/ Commercial/Office	858	1.59	107
Industrial	602	1.11	355
Streets/Utilities/ROW	4,860	9.00	1,927
<b>Total Developed</b>	17,731	---	---
<b>Vacant/Undeveloped</b>	5,183	---	---
<b>Total Acreage within City Limits</b>	22,914	42.43	---
Source: Freese and Nichols, Inc. (1) Based on a 2022 population of 54,000.			

Appendices A and B show ten-year growth projections for population and employment by traffic survey zone. **Table 5** and **Table 6** show a summary of the ten-year population and employment projections for Cedar Hill by service area.

Roadway Service Area	2012			2022		
	Housing Units	Occupied Units	Population	Housing Units	Occupied Units	Population
<b>1</b>	3,800	3,606	10,420	4,285	4,066	11,425
<b>2</b>	7,435	7,056	20,393	8,902	8,448	23,738
<b>3</b>	3,349	3,178	9,183	4,177	3,964	11,136
<b>4</b>	1,927	1,829	5,284	2,887	2,740	7,699
<b>Totals</b>	<b>16,511</b>	<b>15,669</b>	<b>45,280</b>	<b>20,251</b>	<b>19,218</b>	<b>53,998</b>

Source: Freese and Nichols, Inc.

Roadway Service Area	Basic Employment		Retail Employment		Service Employment		Total Employment	
	2012	2022	2012	2022	2012	2022	2012	2022
<b>1</b>	81	93	990	1,482	797	1,141	1,868	2,716
<b>2</b>	511	1,503	6,946	8,029	2,737	3,074	10,194	12,606
<b>3</b>	2,094	3,881	383	494	855	1,241	3,332	5,616
<b>4</b>	670	974	1,105	1,749	645	781	2,420	3,504
<b>Totals</b>	<b>3,356</b>	<b>6,452</b>	<b>9,424</b>	<b>11,754</b>	<b>5,034</b>	<b>6,237</b>	<b>17,814</b>	<b>24,443</b>

Source: Freese and Nichols, Inc.

## V. Ultimate Population Projection

An ultimate, or holding capacity, land use and population projection was also estimated, based upon the remaining developable vacant land within Cedar Hill and densities as recommended on the Future Land Use Plan and densities of anticipated development projects. The projected holding capacity of Cedar Hill is estimated to be 85,000 persons. **Table 7** illustrates the associated land use requirements to accommodate this forecasted growth.

Land Use Category	Future Acres per 100 Persons	Acres <sup>(1)</sup> Required for Ultimate Population <sup>(2)</sup>
Low Density Residential	13.64	11,596
Medium Density Residential	0.30	254
High Density Residential	0.09	80
Mixed Use Primarily Residential	---	---
<b>Residential Sub-Total</b>	<b>14.04</b>	<b>11,930</b>
Parks & Open Space	0.80	678
Cedar Hill State Park	2.20	1,870
Public / Semi-Public	1.07	907
Open Space (Private)	1.21	1,025
Overlook Utilization Area	0.43	367
Broadcast Towers & Utilities	0.64	548
<b>Public Sub-Total</b>	<b>6.35</b>	<b>5,395</b>
Old Town Mixed Use	0.26	225
Retail	1.80	1,533
Office	0.44	370
Office Campus	0.72	614
Mixed Use Primarily Non-Residential	0.80	684
Transit Oriented Development	0.20	166
Commercial	---	---
Industrial	0.89	756
<b>Non-Residential Sub-Total</b>	<b>5.11</b>	<b>4,347</b>
Rights-of-Way	1.46	1,242
<b>Total Acreages within City Limits</b>	<b>26.96</b>	<b>22,914</b>
Source: Freese and Nichols, Inc.		
<sup>(1)</sup> Gross acres (does not account for land area utilized for rights-of-way).		
<sup>(2)</sup> Based on an ultimate population of 85,000.		

## VI. Summary

- Cedar Hill presently contains approximately 35.8 square miles within the City limits, of which approximately 62 percent is developed.
- The existing population of Cedar Hill is approximately 45,280 persons, and the existing estimated employment is 17,814 jobs.
- An average annual growth rate of 1.8 percent was used to calculate the Cedar Hill ten-year (2022) growth projections, and 2.2 percent overall through 2035 to reflect NCTCOG's population projection of 75,077.
- The ten-year (2022) growth projection of Cedar Hill is approximately 54,000 persons, and the ten-year employment projection is 24,443 jobs.
- The ultimate population of Cedar Hill is expected to be approximately 85,000 persons.

## Appendices

### Data Format for Appendices “A” and “B”

The land use assumptions database (Appendices “A” and “B”), as well as future projections, were formulated according to the following format and categories:

#### Appendix "A" - Ten-Year Population Projections

Roadway Service Area	Correlates to the roadway service areas identified on <b>Plate 1</b> .
2012 Households	Households represent all occupied dwelling units in 2012.
2012 Population	The 2012 calculated population for each TSZ.
2022 Households	Occupied dwelling units per TSZ in 2022.
2022 Population	The 2022 projected population tabulated for each TSZ and roadway service area.
Traffic Survey Zone (TSZ)	Traffic survey zones previously established by the NCTCOG for data collection purposes, and termed TSZs in this report.

#### Appendix "B" - Ten-Year Employment Projections

Roadway Service Area	Correlates to the roadway service areas identified on <b>Plate 1</b> .
Employment	<p>Employment data is aggregated to three employment sectors and include; Basic, Retail and Service. The following details which North American Industry Classification System (NAICS) codes fall within each of the three sectors.</p> <ul style="list-style-type: none"> <li>▪ <u>Basic</u> (#210000 to #422999) -- Land use activities that produce goods and services such as those that are exported outside the local economy; manufacturing, construction, transportation, wholesale trade, warehousing and other industrial uses.</li> <li>▪ <u>Retail</u> (#440000 to #454390) -- Land use activities which provide for the retail sale of goods that primarily serve households and whose location choice is oriented toward the household sector such as grocery stores, restaurants, etc.</li> <li>▪ <u>Service</u> (#520000 to #928199) -- Land use activities which provide personal and professional services such as financial, insurance, government, and other professional and administrative offices.</li> </ul>

The NCTCOG prepares employment estimates at the TSZ level and therefore, minimal adjustments are needed.

Total Employment

The total of the Basic, Retail and Service employment categories.

## Appendix A: Ten-Year Population Projections

Roadway Service Area	Traffic Survey Zone	2012		2022	
		Households	Population	Households	Population
<b>1</b>	8620	475	1,371	495	1,391
	8660	349	1,009	471	1,324
	8661	2	5	8	22
	8662	1,625	4,696	1,675	4,707
	40208	34	99	65	183
	40333	0	0	8	22
	40644	703	2,032	852	2,394
	41145w	418	1,208	492	1,383
<b>Subtotal</b>		<b>3,606</b>	<b>10,420</b>	<b>4,066</b>	<b>11,425</b>
<b>2</b>	8708	1,282	3,705	1,480	4,159
	8753	660	1,907	684	1,922
	8757	1,084	3,133	1,152	3,237
	8758	530	1,532	646	1,815
	8807n	1,066	3,081	1,100	3,091
	40256	954	2,757	997	2,802
	40645	618	1,786	654	1,838
	40646	167	483	788	2,214
	40647	184	532	209	587
	40714	494	1,428	709	1,992
	41145e	17	49	29	81
	<b>Subtotal</b>		<b>7,056</b>	<b>20,393</b>	<b>8,448</b>
<b>3</b>	8806	1,072	3,098	1,105	3,105
	8807s	387	1,118	415	1,166
	8808	461	1,332	503	1,413
	8809	9	26	257	722
	8830	889	2,569	1,162	3,265
	8831	86	249	97	272
	8832	53	153	62	174
	8833	172	497	297	835
	17007	32	92	33	93
	40715	9	26	19	53
	41049	8	23	14	38
<b>Subtotal</b>		<b>3,178</b>	<b>9,183</b>	<b>3,964</b>	<b>11,136</b>
<b>4</b>	8750	197	569	237	666
	8803	342	988	846	2,377
	8804	814	2,351	892	2,507
	8828	284	821	325	913
	40095	192	555	440	1,236
<b>Subtotal</b>		<b>1,829</b>	<b>5,284</b>	<b>2,740</b>	<b>7,699</b>
<b>Total</b>		<b>15,669</b>	<b>45,280</b>	<b>19,218</b>	<b>53,998</b>

## Appendix B: Ten-Year Employment Projections

Roadway Service Area	Traffic Survey Zone	2012				2022			
		Basic	Retail	Service	Total	Basic	Retail	Service	Total
<b>1</b>	8620	5	10	10	25	10	15	20	45
	8660	0	279	275	554	0	707	593	1,300
	8661	0	45	15	60	0	50	20	70
	8662	0	435	381	816	0	458	382	840
	40208	3	4	2	9	3	4	2	9
	40333	0	0	0	0	0	0	0	0
	40644	73	207	109	389	80	228	109	417
	41145w	0	10	5	15	0	20	15	35
<b>Subtotal</b>		<b>81</b>	<b>990</b>	<b>797</b>	<b>1,868</b>	<b>93</b>	<b>1,482</b>	<b>1,141</b>	<b>2,716</b>
<b>2</b>	8708	147	295	124	566	221	470	165	856
	8753	35	850	250	1,135	35	1,089	276	1,400
	8757	2	474	434	910	2	503	425	929
	8758	0	20	59	79	0	50	75	125
	8807n	45	89	38	172	48	101	37	186
	40256	5	1,886	533	2,424	7	1,970	497	2,474
	40645	113	321	168	602	130	369	176	675
	40646	2	2,307	897	3,206	640	2,657	1,141	4,438
	40647	90	560	174	824	256	467	163	887
	40714	72	144	60	276	164	353	119	636
	41145e	0	0	0	0	0	0	0	0
<b>Subtotal</b>		<b>511</b>	<b>6,946</b>	<b>2,737</b>	<b>10,194</b>	<b>1,503</b>	<b>8,029</b>	<b>3,074</b>	<b>12,606</b>
<b>3</b>	8806	0	5	80	85	0	6	110	116
	8807s	89	179	75	343	96	201	74	372
	8808	0	0	70	70	0	0	80	80
	8809	0	1	0	1	0	1	0	1
	8830	0	10	30	40	0	25	45	70
	8831	25	50	21	96	25	52	19	96
	8832	8	17	7	32	8	17	7	32
	8833	15	31	13	59	17	36	13	66
	17007	29	32	8	69	29	33	6	68
	40715	1,907	35	546	2,488	3,665	75	879	4,618
	41049	21	23	5	49	41	48	8	97
<b>Subtotal</b>		<b>2,094</b>	<b>383</b>	<b>855</b>	<b>3,332</b>	<b>3,881</b>	<b>494</b>	<b>1,241</b>	<b>5,616</b>
<b>4</b>	8750	55	40	125	220	60	50	152	262
	8803	0	0	75	75	0	20	86	106
	8804	556	973	410	1,939	838	1,555	509	2,902
	8828	43	75	32	150	43	78	28	150
	40095	16	17	3	36	33	46	6	84
<b>Subtotal</b>		<b>670</b>	<b>1,105</b>	<b>645</b>	<b>2,420</b>	<b>974</b>	<b>1,749</b>	<b>781</b>	<b>3,504</b>
<b>Total</b>		<b>3,356</b>	<b>9,424</b>	<b>5,034</b>	<b>17,814</b>	<b>6,452</b>	<b>11,754</b>	<b>6,237</b>	<b>24,443</b>

# Population

## Legend



TSZ Boundaries

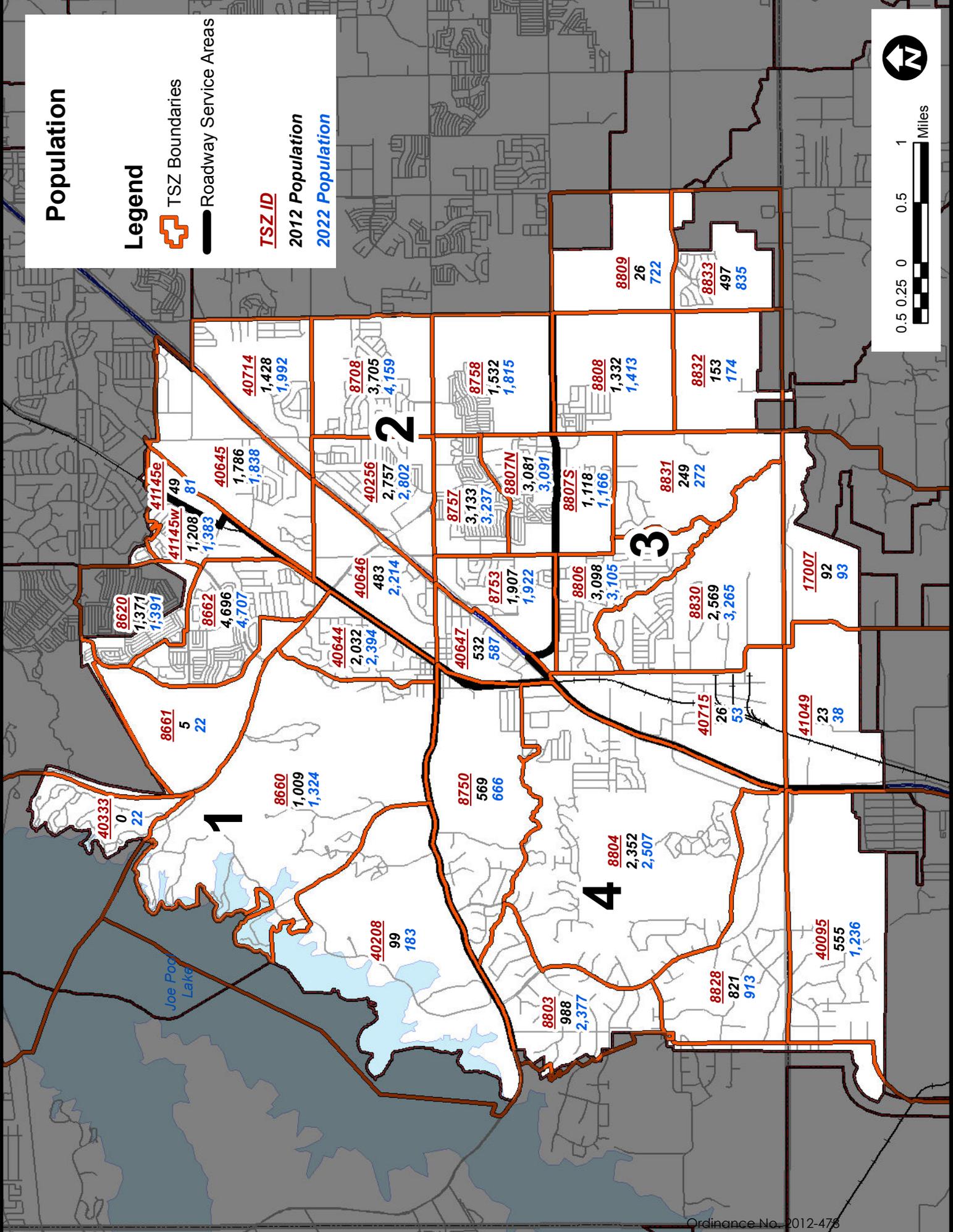


Roadway Service Areas

TSZ ID

2012 Population

2022 Population







# Water & Wastewater Impact Fee Report

## May 2012

Prepared for:

**City of Cedar Hill**



Prepared by:

**FREESE AND NICHOLS, INC.**  
4055 International Plaza, Suite 200  
Fort Worth, Texas 76109  
(817) 735-7300

## Water & Wastewater Impact Fee Report May 2012



FREESE AND NICHOLS, INC.  
TEXAS REGISTERED  
ENGINEERING FIRM  
F-2144

**CITY OF CEDAR HILL**  
285 Uptown Blvd.  
Cedar Hill, TX 75104

**FREESE AND NICHOLS, INC.**  
4055 International Plaza, Suite 200  
Fort Worth, Texas 76109  
FNI Project Number: CDH11411

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## **APPENDICES**

- Appendix A 2012 Land Use Assumptions for Water, Wastewater, and Roadway Impact Fees Report
- Appendix B Water System Project Cost Estimates
- Appendix C Wastewater System Project Cost Estimates

## ES EXECUTIVE SUMMARY

### 1.0 Background

In September 2011, the City of Cedar Hill, Texas, authorized Freese and Nichols, Inc. (FNI) to perform an impact fee analysis on the City’s water and wastewater systems. This study is the required 5-year update to the *2007 Impact Fee Capital Improvement Plan*. The purpose of this report is to address the methodology used in the development and calculation of water and wastewater impact fees for the City of Cedar Hill. The methodology used herein satisfies the requirements of the Texas Local Government Code Section 395 for the establishment of water and wastewater impact fees.

### 2.0 Land Use Assumptions

Population and land use are important elements in the analysis of water and wastewater systems. Water demands and wastewater flows depend on the residential population and commercial development served by the systems and determine the sizing and location of system infrastructure. A thorough analysis of historical and projected populations, along with land use, provides the basis for projecting future water demands and wastewater flows.

Population and employment projections were developed by Freese and Nichols, Inc. in the *2012 Land Use Assumptions for Water, Wastewater, and Roadway Impact Fees Report*. The 10-year population and employment were calculated by traffic survey zones (TSZs) to identify the population distribution throughout the City. **Table ES-1** presents the population and employment projections for the City of Cedar Hill water and wastewater service area.

**Table ES-1 Population and Employment Projections**

<b>Year</b>	<b>Population<sup>(1)</sup></b>	<b>Employment<sup>(1)</sup></b>
2012	45,280	17,814
2022	53,998	24,443

(1) Source: *2012 Land Use Assumptions for Water, Wastewater, and Roadway Impact Fees Report*

### 3.0 Capital Improvements Plan

An impact fee CIP was developed for the City of Cedar Hill based on the land use assumptions. The recommended improvements will provide the required capacity and reliability to meet

projected water demands and wastewater flows through year 2022. **Table ES-2** and **Table ES-3** show the water demand and wastewater load projections for the City of Cedar Hill.

**Table ES-2 Projected Water Demands**

<b>Year</b>	<b>Average Day Demand (mgd)</b>	<b>Maximum Day Demand (mgd)</b>	<b>Peak Hour Demand (mgd)</b>
2012	9.06	16.30	32.60
2022	10.80	19.44	38.88

**Table ES-3 Projected Wastewater Flows**

<b>Year</b>	<b>Average Daily Flow (mgd)</b>	<b>Peak Wet Weather Flow (mgd)</b>
2012	5.43	21.73
2022	6.48	25.92

#### **4.0 Impact Fee Analysis**

The total projected costs include the projected capital improvement costs to serve 10-year development, the projected finance cost for the capital improvements, and the consultant cost for preparing and updating the Capital Improvements Plan. A 4.0% interest rate was used to calculate financing costs.

Water Impact Fee:

Total Capital Improvement Costs	\$21,677,289
Financing Costs	<u>\$7,210,547</u>
Total Eligible Costs	\$28,887,836
Growth in Service Units	4,105

Maximum Calculated Water Impact Fee Per Service Unit Without Credit = Total Eligible Costs/Growth in Service Units  
= \$28,887,836/4,105  
= \$7,037 per Service Unit

Maximum Allowable Water Impact Fee = Maximum Impact Fee – Credit  
= \$7,037 - \$3,519  
= \$3,519 per Service Unit

Wastewater Impact Fee:

Total Capital Improvement Costs	\$7,941,458
Financing Costs	<u>\$2,641,578</u>
Total Eligible Costs	\$10,583,036
Growth in Service Units	4,105

Maximum Calculated Wastewater Impact Fee Per Service Unit Without Credit = Total Eligible Costs/Growth in Service Units  
= \$10,583,036/4,105  
= \$2,578 per Service Unit

Maximum Allowable Wastewater Impact Fee = Maximum Impact Fee – Credit  
= \$2,578 - \$1,289  
= \$1,289 per Service Unit

## 1.0 BACKGROUND

Chapter 395 of the Texas Local Government Code requires an impact fee analysis before impact fees can be created and assessed. Chapter 395 defines an impact fee as “a charge or assessment imposed by a political subdivision against new development in order to generate revenue for funding or recouping the costs of capital improvements or facility expansions necessitated by and attributable to the new development.” In September 2001, Senate Bill 243 amended Chapter 395 thus creating the current procedure for implementing impact fees. Chapter 395 identifies the following items as impact fee eligible costs:

- Construction contract price
- Surveying and engineering fees
- Land acquisition costs
- Fees paid to the consultant preparing or updating the capital improvements plan (CIP)
- Projected interest charges and other finance costs for projects identified in the CIP

Chapter 395 also identifies items that are not impact fee eligible costs, such as:

- Construction, acquisition, or expansion of public facilities or assets other than those identified on the capital improvements plan
- Repair, operation, or maintenance of existing or new capital improvements
- Upgrading, updating, expanding, or replacing existing capital improvements to serve existing development in order to meet stricter safety, efficiency, environmental, or regulatory standards
- Upgrading, updating, expanding, or replacing existing capital improvements to provide better service to existing development
- Administrative and operating costs of the political subdivision

- Principal payments and interest or other finance charges on bonds or other indebtedness, except as allowed above

In September 2011, the City of Cedar Hill, Texas, authorized Freese and Nichols, Inc. (FNI) to perform an impact fee analysis on the City's water and wastewater systems. This study is the required 5-year update to the *2007 Impact Fee Capital Improvement Plan*. The purpose of this report is to address the methodology used in the development and calculation of water and wastewater impact fees for the City of Cedar Hill. The methodology used herein satisfies the requirements of the Texas Local Government Code Section 395 for the establishment of water and wastewater impact fees.

**Table 1-1** provides a list of abbreviations used in this report.

**Table 1-1 List of Abbreviations**

<b>Abbreviation</b>	<b>Full Nomenclature</b>
AWWA	American Water Works
CIP	Capital Improvements Plan
FNI	Freese and Nichols, Inc.
NCTCOG	North Central Texas Council of Government
TSZ	Traffic Survey Zone

## 2.0 LAND USE ASSUMPTIONS

Population and land use are important elements in the analysis of water and wastewater systems. Water demands and wastewater flows depend on the residential population and commercial development served by the systems and determine the sizing and location of system infrastructure. A thorough analysis of historical and projected populations, along with land use, provides the basis for projecting future water demands and wastewater flows.

Population and employment projections were developed by Freese and Nichols, Inc. in the *2012 Land Use Assumptions for Water, Wastewater, and Roadway Impact Fees Report*. A copy of this report is included in **Appendix A**. The 10-year population and employment were calculated by traffic survey zones (TSZs) to identify the population distribution throughout the City. **Table 2-1** presents the population and employment projections for the City of Cedar Hill water and wastewater service area. The population and employment projections by TSZ are shown on **Figure 2-1** and **Figure 2-2**, respectively.

<b>Year</b>	<b>Population<sup>(1)</sup></b>	<b>Employment<sup>(1)</sup></b>
2012	45,280	17,814
2022	53,998	24,443

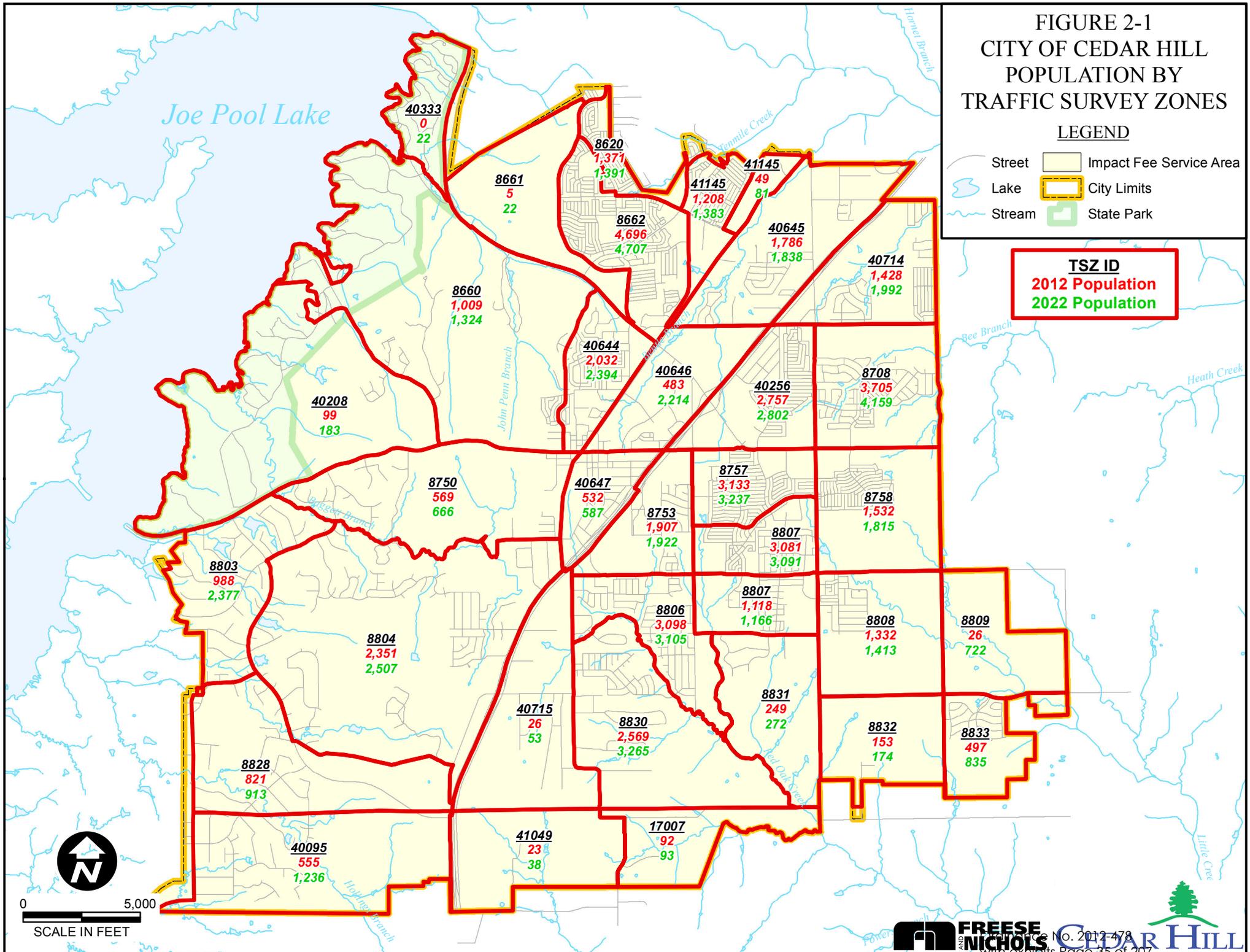
(1) Source: *2012 Land Use Assumptions for Water, Wastewater, and Roadway Impact Fees Report*

**FIGURE 2-1  
CITY OF CEDAR HILL  
POPULATION BY  
TRAFFIC SURVEY ZONES**

**LEGEND**

- Street 
- Lake 
- Stream 
- Impact Fee Service Area 
- City Limits 
- State Park 

**TSZ ID**  
**2012 Population**  
**2022 Population**



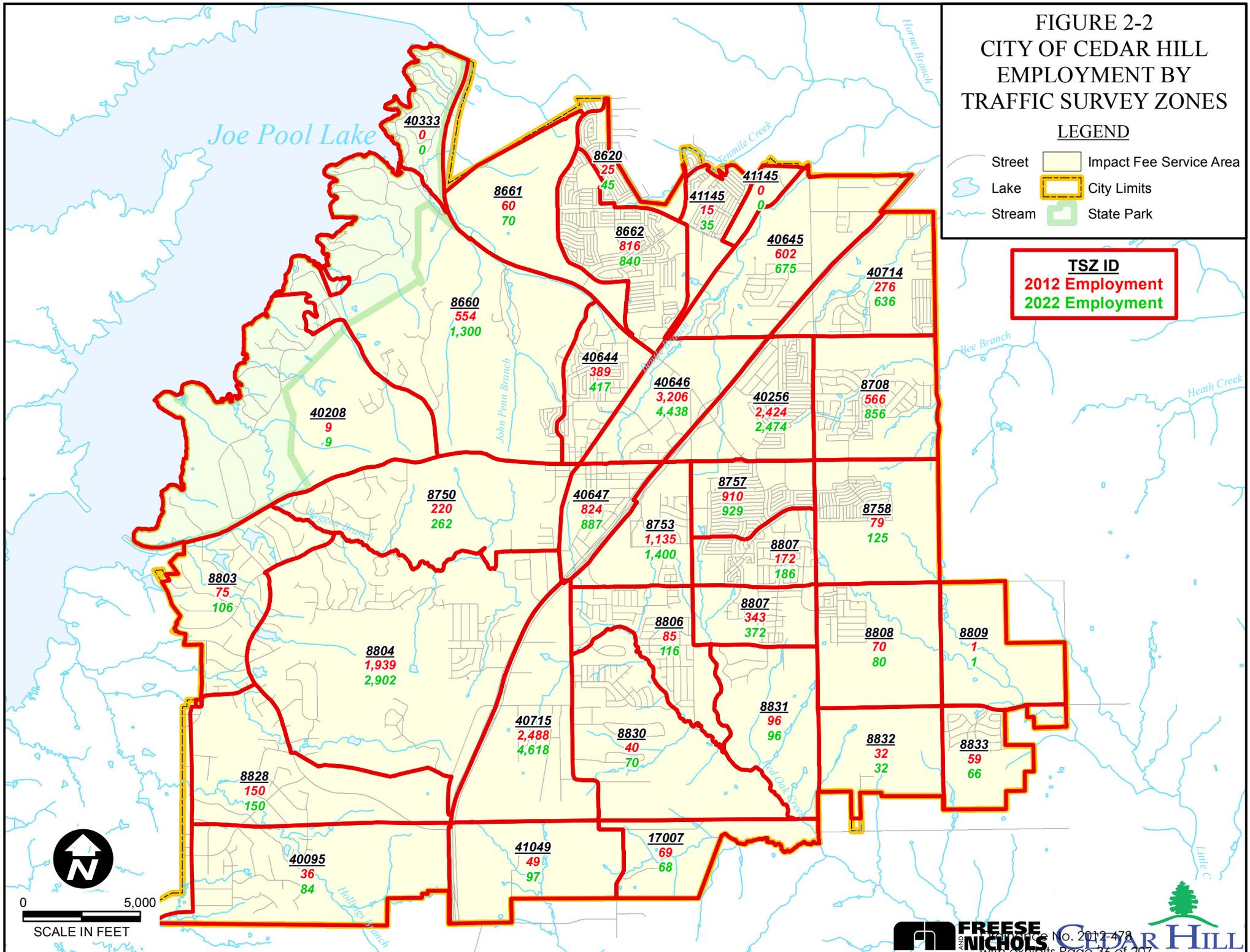
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SCALE IN FEET

**FIGURE 2-2  
CITY OF CEDAR HILL  
EMPLOYMENT BY  
TRAFFIC SURVEY ZONES**

**LEGEND**

- Street 
- Lake 
- Stream 
- Impact Fee Service Area 
- City Limits 
- State Park 

**TSZ ID**  
**2012 Employment**  
**2022 Employment**



0 5,000  
SCALE IN FEET

### 3.0 CAPITAL IMPROVEMENTS PLAN

An impact fee CIP was developed for the City of Cedar Hill based on the land use assumptions presented in the previous section. The recommended improvements will provide the required capacity and reliability to meet projected water demands and wastewater flows through year 2022.

#### 3.1 Water and Wastewater Load Projections

The population and land use data were used to develop future water demands and wastewater flows based on a projected average day per capita use and peaking factors. Recent historical data was reviewed with City staff to select per-capitas and peaking factors. **Table 3-1** shows a summary of the historical water demand and wastewater load data. **Table 3-2** and **Table 3-3** show the water demand and wastewater load projections for the City of Cedar Hill.

**Table 3-1 Historical Water and Wastewater Data**

Year	Population <sup>(1)</sup>	Water				Wastewater	
		Average Day Demand (mgd)	Average Day Per-capita Demand (gpcd)	Maximum Day Demand (mgd)	Maximum Day to Average Day Peaking Factor	Average Daily Flow (mgd)	Average Daily Per-capita Flow (gpcd)
2004	39,859	5.97	150	11.83	1.98	5.33	134
2005	41,800	6.83	163	11.95	1.75	4.14	99
2006	43,050	8.08	188	19.73	2.44	3.73	87
2007	43,950	7.06	161	12.85	1.82	5.04	115
2008	44,900	8.15	181	13.06	1.60	4.20	94
2009	44,964	8.54	190	14.00	1.64	5.07	113
2010	45,028	7.93	176	13.28	1.67	5.15	114
2011	45,260	8.71	192	13.49	1.55	3.26	72
<b>Average</b>			<b>175</b>		<b>1.81</b>		<b>103</b>

(1) Source: North Central Texas Council of Governments

**Table 3-2 Projected Water Demands**

Year	Population	Average Per-capita (gpcd)	Average Day Demand (mgd)	Maximum Day to Average Day Peaking Factor	Maximum Day Demand (mgd)	Peak Hour to Maximum Day Peaking Factor	Peak Hour Demand (mgd)
2012	45,280	200	9.06	1.80	16.30	2.00	32.60
2022	53,998	200	10.80	1.80	19.44	2.00	38.88

**Table 3-3 Projected Wastewater Flows**

Year	Population	Average Per-capita (gpcd)	Average Daily Flow (mgd)	Wet Weather Peaking Factor	Peak Wet Weather Flow (mgd)
2012	45,280	120	5.43	4.00	21.73
2022	53,998	120	6.48	4.00	25.92

### 3.2 Water and Wastewater System Improvements

The existing water and wastewater hydraulic models developed for the *2007 Water and Wastewater Master Plan Update* were updated to include recently completed projects. Water demand and wastewater flow distribution were updated based on geocoded billing data provided by the City. Proposed water and wastewater system projects were developed as part of the ongoing Water and Wastewater Master Plan. The projects were prioritized to address existing system deficiencies and add required capacity to meet projected growth. It is recommended that these projects be constructed generally in the order listed. However, development patterns may make it necessary to construct some projects sooner than anticipated. A summary of the costs for each of the projects required for the 10-year growth period used in the impact fee analysis for both the water and wastewater systems is shown in **Table 3-4** and **Table 3-5**. Costs listed for the existing projects are based on actual design and construction costs provided by the City. Detailed cost estimates for the proposed water and wastewater system projects are included in **Appendix B** and **Appendix C**, respectively. **Tables 3-4** and **3-5** show the 2012 percent utilization as the portion of a project’s capacity required to serve existing development. The portion to serve existing development is not included in the impact fee analysis. The 2022 percent utilization is the portion of the project’s capacity that

will be required to serve the City of Cedar Hill in 2022. The 2012-2022 percent utilization is the portion of the project's capacity required to serve development from 2012 to 2022. The water and wastewater hydraulic models were used to assist in the calculation of project utilization percentages. The portion of a project's total cost that is used to serve development projected to occur from 2012 through 2022 is calculated as the total actual cost multiplied by the 2012-2022 percent utilization. Only this portion of the cost is used in the impact fee analysis. The proposed 10-year water system projects are shown on **Figure 3-1**. Proposed wastewater projects are shown on **Figure 3-2**.

**Table 3-4 Water System Impact Fee Eligible Projects**

No.	Description of Project	Percent Utilization			Cost Based on 2012 Dollars			
		2012*	2022	2012-2022	Capital Cost	Current Development	10-Year (2012-2022)	Beyond 2022
<b>EXISTING PROJECTS</b>								
A	US 67 24-inch water line	25%	40%	15%	\$1,513,430	\$378,358	\$227,015	\$908,058
B	Flameleaf Ground Storage and Pump Improvements	0%	30%	30%	\$5,013,092	\$0	\$1,503,928	\$3,509,164
C	Meadowcrest Pumping Improvements	35%	85%	50%	\$3,250,626	\$1,137,719	\$1,625,313	\$487,594
D	Joe Wilson Phase 3 Water Line	60%	85%	25%	\$1,096,966	\$658,180	\$274,242	\$164,545
E	Pleasant Run Water Line, East of US 67	40%	85%	45%	\$145,108	\$58,043	\$65,299	\$21,766
F	2012 Impact Fee Study	0%	100%	100%	\$67,000	\$0	\$67,000	\$0
<b>Existing Project Sub-total</b>					<b>\$11,086,222</b>	<b>\$2,232,299</b>	<b>\$3,762,795</b>	<b>\$5,091,127</b>
<b>PROPOSED PROJECTS</b>								
1	8-inch water line in Lakeridge	80%	90%	10%	\$69,560	\$55,648	\$6,956	\$6,956
2	Lakeridge Parkway Ground Storage Tank and 12-inch water line	0%	60%	60%	\$2,351,970	\$0	\$1,411,182	\$940,788
3	8/12-inch water lines parallel to Sunset Ridge	20%	30%	10%	\$852,740	\$170,548	\$85,274	\$596,918
4	16/20-inch water line along US 67	35%	70%	35%	\$1,242,650	\$434,928	\$434,928	\$372,795
5	12-inch water lines and PRV near Cedar Hill State Park	40%	50%	10%	\$2,041,300	\$816,520	\$204,130	\$1,020,650
6	16/20-inch water line west of US 67 along Valley View Drive	15%	45%	30%	\$1,170,160	\$175,524	\$351,048	\$643,588
7	16-inch waterline along Wintergreen and Duncanville Road	0%	50%	50%	\$1,881,530	\$0	\$940,765	\$940,765
8	16-inch water line along Duncanville Road	0%	50%	50%	\$2,869,020	\$0	\$1,434,510	\$1,434,510
9	12-inch water line along Belt Line Road west of Duncanville Road	0%	40%	40%	\$873,740	\$0	\$349,496	\$524,244
10	12-inch water line in southwest portion of the City	0%	40%	40%	\$1,367,860	\$0	\$547,144	\$820,716
11	12-inch water line along Mansfield Road	0%	50%	50%	\$1,774,860	\$0	\$887,430	\$887,430
12	Meadowcrest 6.0 MG Ground Storage Tank	50%	85%	35%	\$5,520,000	\$2,760,000	\$1,932,000	\$828,000
13	20-inch water line along Cedar Hill Road	10%	60%	50%	\$2,637,050	\$263,705	\$1,318,525	\$1,054,820
14	20-inch water line east of US 67 at Lake Ridge Drive	0%	60%	60%	\$1,273,610	\$0	\$764,166	\$509,444
15	16-inch water line along Clark Road	30%	80%	50%	\$1,263,290	\$378,987	\$631,645	\$252,658
16	16-inch water line along Texas Plume Road	0%	60%	60%	\$1,150,460	\$0	\$690,276	\$460,184
17	12-inch water line along Wooded Creek Drive	0%	50%	50%	\$1,380,480	\$0	\$690,240	\$690,240
18	12/16-inch water line along Clark Road south of Parkerville	15%	60%	45%	\$2,565,740	\$384,861	\$1,154,583	\$1,026,296
19	12-inch water line east of Weaver Street and south of Shadywood	0%	70%	70%	\$627,740	\$0	\$439,418	\$188,322
20	16-inch water line along Parkerville Road and Joe Wilson Road	20%	70%	50%	\$2,149,800	\$429,960	\$1,074,900	\$644,940
21	12-inch water line along Little Creek Road	30%	75%	45%	\$1,171,740	\$351,522	\$527,283	\$292,935
22	12-inch water line along Bear Creek Road	0%	50%	50%	\$1,941,500	\$0	\$970,750	\$970,750
23	12-inch water line along FM 1382	0%	50%	50%	\$2,135,690	\$0	\$1,067,845	\$1,067,845
<b>Proposed Project Sub-total</b>					<b>\$40,312,490</b>	<b>\$6,222,203</b>	<b>\$17,914,494</b>	<b>\$16,175,794</b>
<b>Total Cost</b>					<b>\$51,398,712</b>	<b>\$8,454,502</b>	<b>\$21,677,289</b>	<b>\$21,266,921</b>

\* Utilization in 2012 on Proposed Projects indicates a portion of the project that will be used to address deficiencies within the existing system, and therefore are not eligible for impact fee cost recovery for future growth.

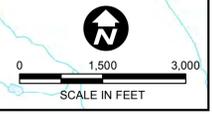
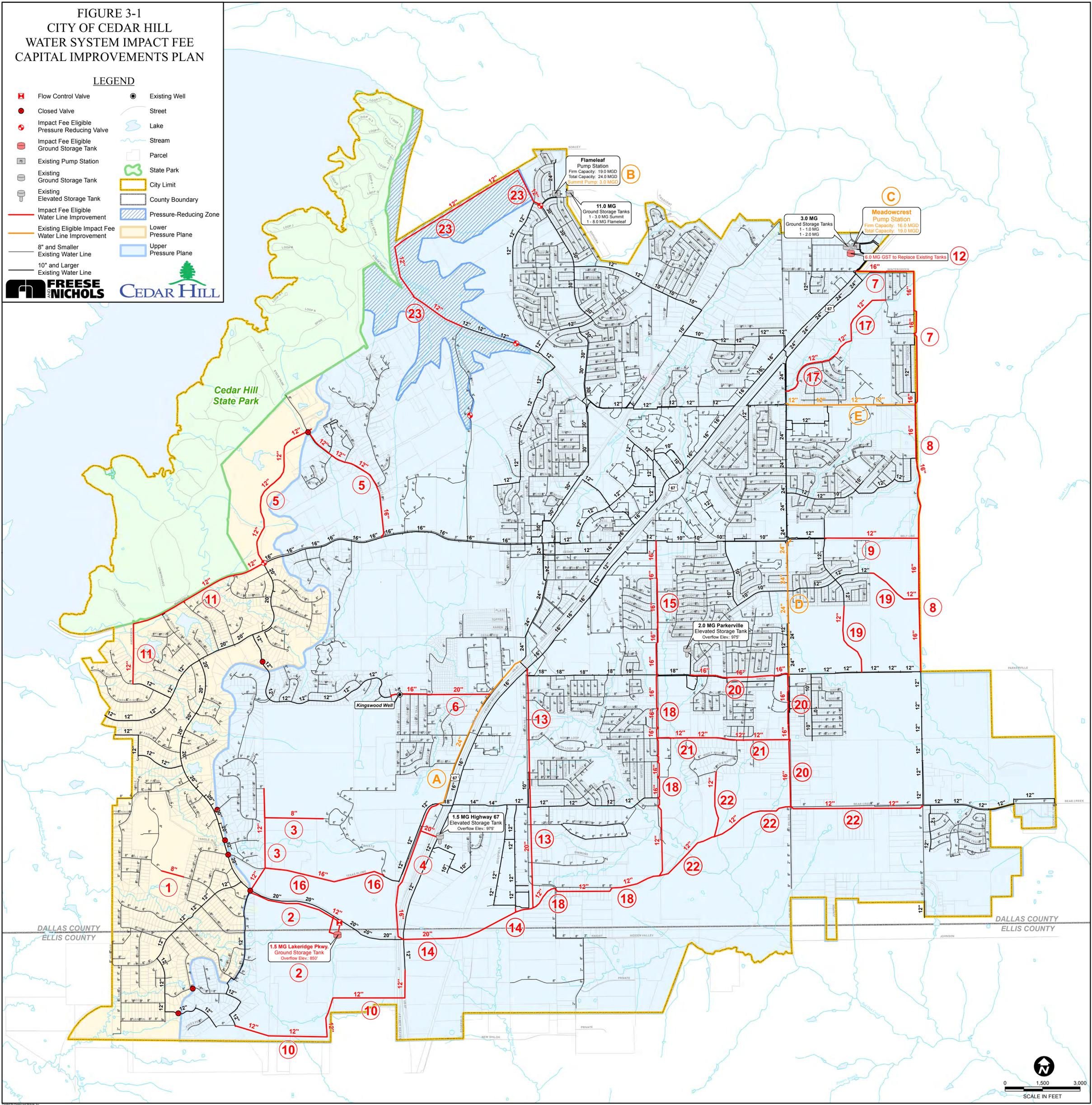
**Table 3-5 Wastewater System Impact Fee Eligible Projects**

No.	Description of Project	Percent Utilization			Cost Based on 2012 Dollars			
		2012*	2022	2012-2022	Capital Cost	Current Development	10-Year (2012-2022)	Beyond 2022
<b>EXISTING PROJECTS</b>								
<b>A</b>	2012 Impact Fee Study	0%	100%	100%	\$67,000	\$0	\$67,000	\$0
<b>Existing Project Sub-total</b>					\$67,000	\$0	\$67,000	\$0
<b>PROPOSED PROJECTS</b>								
<b>1</b>	New 1.0 MG Lift Station in TCS-4 and 10-inch gravity line and 12/10/8-inch gravity line	0%	30%	30%	\$2,489,850	\$0	\$746,955	\$1,742,895
<b>2</b>	8-inch gravity connecting existing gravity lines in TCS-2	0%	30%	30%	\$195,110	\$0	\$58,533	\$136,577
<b>3</b>	12/15/18-inch gravity line in Basin TM-3	55%	70%	15%	\$1,955,400	\$1,075,470	\$293,310	\$586,620
<b>4</b>	Hollings Lift Station Expansion	10%	80%	70%	\$379,500	\$37,950	\$265,650	\$75,900
<b>5</b>	8/10-inch gravity line and decommission Mt. Lebanon Lift Station	10%	50%	40%	\$498,690	\$49,869	\$199,476	\$249,345
<b>6</b>	10/18/21-inch gravity line in RO-1	0%	80%	80%	\$1,787,070	\$0	\$1,429,656	\$357,414
<b>7</b>	Lake Ridge Lift Station I Expansion	0%	50%	50%	\$818,100	\$0	\$409,050	\$409,050
<b>8</b>	Baggett Branch Lift Station Expansion	0%	75%	75%	\$765,880	\$0	\$574,410	\$191,470
<b>9</b>	8/10/12-inch gravity lines in RO-2	0%	40%	40%	\$2,003,660	\$0	\$801,464	\$1,202,196
<b>10</b>	10/12-inch gravity line and decommission High Meadows Lift Station	5%	40%	35%	\$1,038,080	\$51,904	\$363,328	\$622,848
<b>11</b>	10/12-inch Gravity Mains in TM-1	15%	85%	70%	\$883,140	\$132,471	\$618,198	\$132,471
<b>12</b>	24-inch gravity line between RO-3 and RO-2	30%	65%	35%	\$1,027,710	\$308,313	\$359,699	\$359,699
<b>13</b>	10/12/15-inch gravity lines in TM-4 and decommission the Windsor Park Lift Station	40%	85%	45%	\$1,340,260	\$536,104	\$603,117	\$201,039
<b>14</b>	10/12/18-inch gravity lines and Springfield Lift Station decommission	60%	80%	20%	\$2,018,780	\$1,211,268	\$403,756	\$403,756
<b>15</b>	10/15-inch gravity lines and decommission the Highlands Lift Station	70%	90%	20%	\$980,220	\$686,154	\$196,044	\$98,022
<b>16</b>	12-inch gravity line and decommission the American Lift Station	20%	60%	40%	\$895,490	\$179,098	\$358,196	\$358,196
<b>17</b>	10-inch gravity line in the TCN-1 Basin	0%	15%	15%	\$707,360	\$0	\$106,104	\$601,256
<b>18</b>	8/10/12-inch gravity lines in TCS-3 and decommission the Lake Ridge II Lift Station	30%	40%	10%	\$875,120	\$262,536	\$87,512	\$525,072
<b>Proposed Project Sub-total</b>					\$20,659,420	\$4,531,137	\$7,874,458	\$8,253,826
<b>Total Cost</b>					<b>\$20,726,420</b>	<b>\$4,531,137</b>	<b>\$7,941,458</b>	<b>\$8,253,826</b>
* Utilization in 2012 on Proposed Projects indicates a portion of the project that will be used to address deficiencies within the existing system, and therefore are not eligible for impact fee cost recovery for future growth.								

**FIGURE 3-1  
CITY OF CEDAR HILL  
WATER SYSTEM IMPACT FEE  
CAPITAL IMPROVEMENTS PLAN**

**LEGEND**

- Flow Control Valve
- Closed Valve
- Impact Fee Eligible Pressure Reducing Valve
- Impact Fee Eligible Ground Storage Tank
- Existing Pump Station
- Existing Ground Storage Tank
- Existing Elevated Storage Tank
- Impact Fee Eligible Water Line Improvement
- Existing Eligible Impact Fee Water Line Improvement
- 8" and Smaller Existing Water Line
- 10" and Larger Existing Water Line
- Existing Well
- Street
- Lake
- Stream
- Parcel
- State Park
- City Limit
- County Boundary
- Pressure-Reducing Zone
- Lower Pressure Plane
- Upper Pressure Plane



Small text at the bottom left corner containing project details and dates.

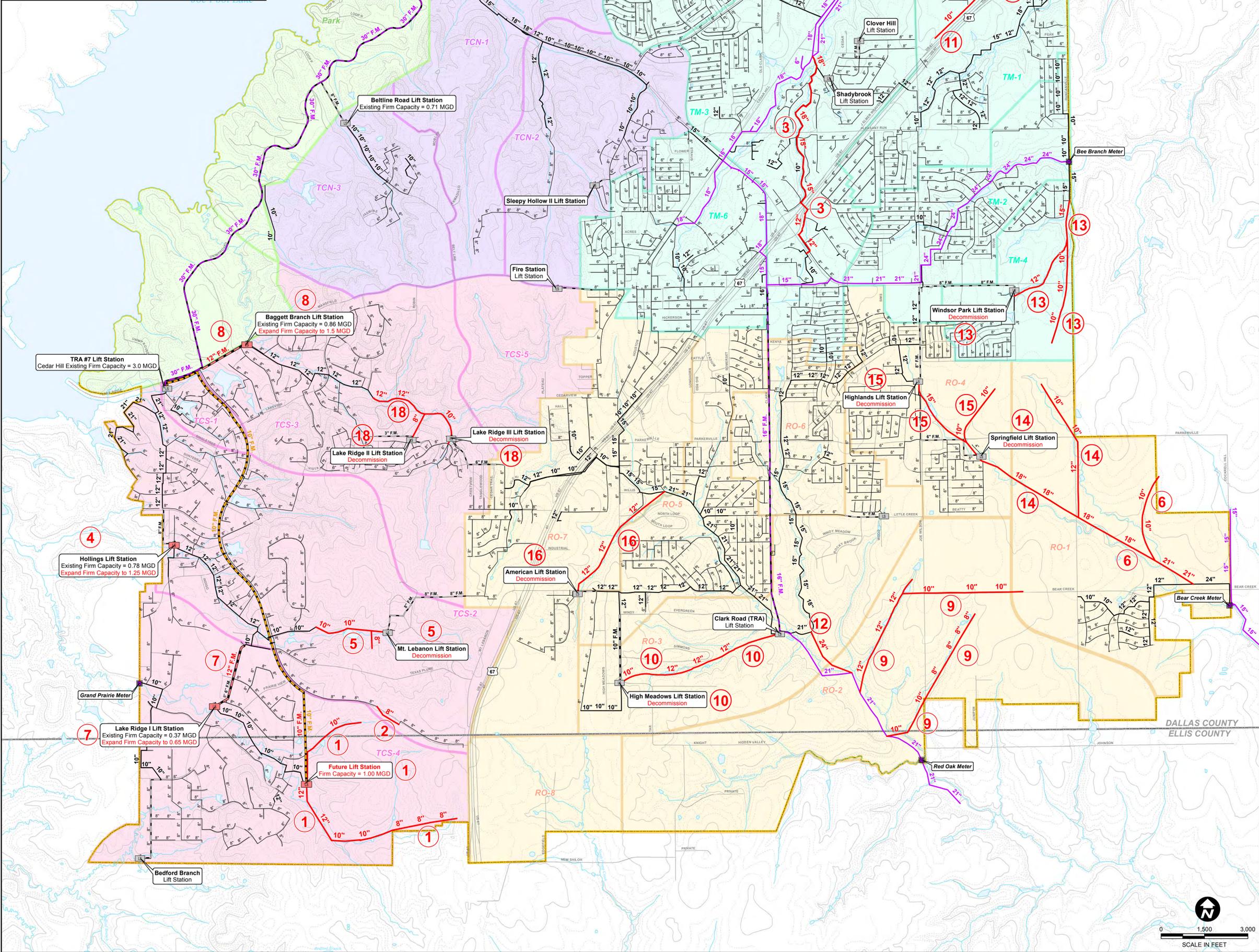
**FIGURE 3-2  
CITY OF CEDAR HILL  
WASTEWATER SYSTEM IMPACT FEE  
CAPITAL IMPROVEMENTS PLAN**

**MAJOR BASINS**

- Cedar Hill State Park
- TRA Central North
- TRA Central South
- TRA Red Oak
- TRA Ten Mile

**LEGEND**

- Impact Fee Eligible Wastewater Improvement Line
- Impact Fee Eligible Force Main
- Existing Force Main Not In Service
- 8" and Smaller Existing Wastewater Line
- 10" and Larger Existing Wastewater Line
- 8" and Smaller Force Main
- 10" and Larger Existing Force Main
- Existing TRA Wastewater Line
- Existing TRA Force Main
- Impact Fee Eligible LS
- Existing TRA Meter
- Existing Lift Station
- Street
- Lake
- Stream
- Index Contour
- Intermediate Contour
- City Limit
- County Boundary



## 4.0 IMPACT FEE ANALYSIS

The impact fee analysis involves determining the utilization of existing and proposed projects required as defined by the capital improvement plan to serve new development over the next 10-year time period. For existing or proposed projects, the impact fee is calculated as a percentage of the project cost, based upon the percentage of the project's capacity required to serve development projected to occur between 2012 and 2022. Capacity serving existing development and development projected for more than 10 years in the future cannot be charged to impact fees.

### 4.1 Service Units

The maximum impact fee may not exceed the amount determined by dividing the cost of capital improvements required by the total number of service units attributed to new development during the impact fee eligibility period. A water service unit is defined as the service equivalent to a water connection for a single-family residence. The City of Cedar Hill does not directly meter wastewater flows and bills for wastewater services based on the customer's water consumption. Therefore, a wastewater service unit is defined as the wastewater service provided to a customer with a water connection for a single-family residence.

The service associated with public, commercial, and industrial connections is converted into service units based upon the capacity of the meter used to provide service. The number of service units required to represent each meter size is based on the safe maximum operating capacity of the appropriate meter type. The City primarily uses displacement meters for sizes 2-inch and smaller. Compound meters are typically used for sizes greater than 2 inches. American Water Works Association (AWWA) standards C700 (Cold Water Meters – Displacement Type, Bronze Main Case) and C702 (Cold Water Meters – Compound Type) were used to determine the safe maximum operating capacity. The service unit equivalent for each meter size used by the City is listed in **Table 4-1**.

**Table 4-1 Service Unit Equivalencies**

Meter Size	Meter Type	Safe Maximum Operating Capacity (gpm) <sup>(1)</sup>	Service Unit Equivalent
3/4"	Displacement	25	1.0
1"	Displacement	40	1.7
1-1/2"	Displacement	50	3.3
2"	Displacement	100	5.3
3"	Compound	320	10.7
4"	Compound	500	16.7
6"	Compound	1,000	33.3
8"	Compound	1,600	53.3
10"	Compound	2,300	76.7

<sup>(1)</sup> Safe maximum operating capacity is based on AWWA standards C700 and C702

Typically, in Cedar Hill, single-family residences are served with 3/4-inch water meters. Larger meters represent public, commercial, and industrial water use. The City provided data that included the meter size of each active water meter as of November 2011. **Table 4-2** shows the water and wastewater service units for 2012 and the projected service units for 2022.

**Table 4-2 Water and Wastewater Service Units**

Meter Size	2012 Connections	2012 Service Units	2022 Connections	2022 Service Units	Growth in Service Units
3/4"	13,926	13,926	16,607	16,607	2,681
1"	1,429	2,429	1,704	2,897	468
1 1/2"	32	106	38	125	19
2"	351	1,860	482	2,555	695
3"	14	150	19	203	53
4"	8	134	11	184	50
6"	2	67	3	100	33
8"	5	267	7	373	106
10"	1	77	1	77	0
<b>Total</b>	<b>15,768</b>	<b>19,016</b>	<b>18,871</b>	<b>23,121</b>	<b>4,105</b>

## 4.2 Maximum Impact Fee Calculations

Chapter 395 of the Texas Local Government Code states that the maximum impact fee may not exceed the amount determined by dividing the cost of capital improvements required by the total number of service units attributed to new development during the impact fee eligibility period less the credit to account for water and wastewater revenues used to finance capital improvement plans.

The total projected costs include the projected capital improvement costs to serve 10-year development, the projected finance cost for the capital improvements, and the consultant cost for preparing and updating the Capital Improvements Plan. A 4.0% interest rate was used to calculate financing costs. A comparison graphs showing impact fees in other cities throughout the Metroplex is presented on **Figure 4-1**.

### Water Impact Fee:

Total Capital Improvement Costs	\$21,677,289
Financing Costs	<u>\$7,210,547</u>
Total Eligible Costs	\$28,887,836
Growth in Service Units	4,105

$$\begin{aligned} \text{Maximum Calculated Water Impact Fee} &= \text{Total Eligible Costs/Growth in Service Units} \\ \text{Per Service Unit Without Credit} &= \$28,887,836/4,105 \\ &= \$7,037 \text{ per Service Unit} \end{aligned}$$

$$\begin{aligned} \text{Maximum Allowable Water Impact Fee} &= \text{Maximum Impact Fee} - \text{Credit} \\ &= \$7,037 - \$3,519 \\ &= \$3,519 \text{ per Service Unit} \end{aligned}$$

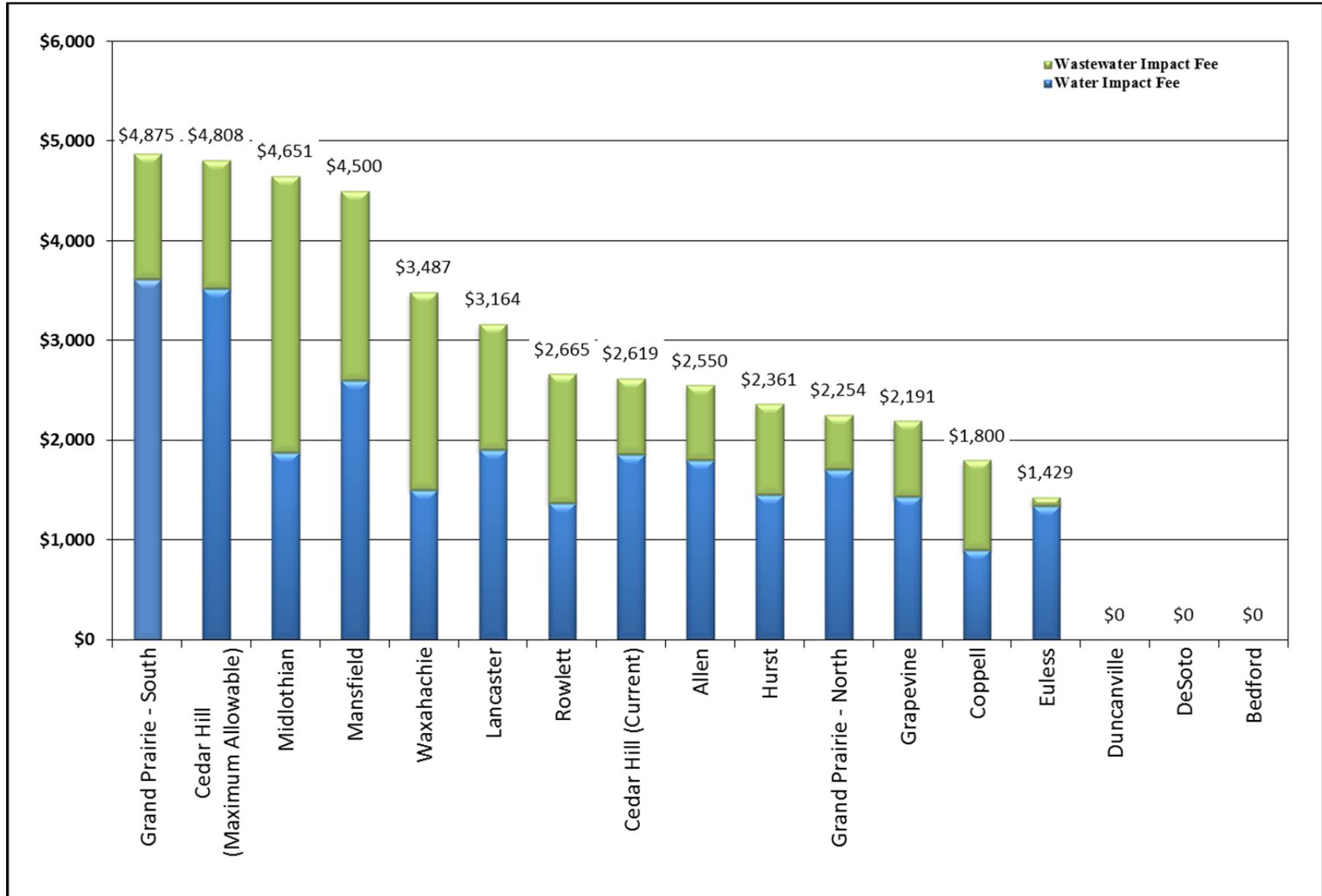
Wastewater Impact Fee:

Total Capital Improvement Costs	\$7,941,458
Financing Costs	<u>\$2,641,578</u>
Total Eligible Costs	\$10,583,036
Growth in Service Units	4,105

Maximum Calculated Wastewater Impact Fee Per Service Unit Without Credit = Total Eligible Costs/Growth in Service Units  
= \$10,583,036/4,105  
= \$2,578 per Service Unit

Maximum Allowable Wastewater Impact Fee = Maximum Impact Fee – Credit  
= \$2,578 - \$1,289  
= \$1,289 per Service Unit

**Figure 4-1 Water and Wastewater Impact Fee per Service Unit Comparison**



# **Appendix A**

## **2012 Land Use Assumptions for Water, Wastewater, and Roadway Impact Fees Report**

*2012 Land Use Assumptions for Water, Wastewater, and Roadway Impact Fees Report* is included as Exhibit 1 in the impact fee ordinance.

# **Appendix B**

## **Water System Project Cost Estimates**





# City of Cedar Hill

## Water System Capital Improvement Plan



### OPINION OF PROBABLE COST

**Project Number** **5**

**Project Description**  
**12-inch water lines and PRV near Cedar Hill State Park**

**Detailed Description**  
 Project 5 is 12-inch water lines and a pressure reducing valve near the state park and along Belt Line Road north of Mansfield Road.

**Purpose**  
 This project will serve future growth and improve system pressures.

ITEM	DESCRIPTION	QUANTITY	UNIT	UNIT PRICE	TOTAL
1	Pressure Reducing Valve	1	EA	\$80,000	80,000
2	12" Pipe	13,600	LF	\$72	979,200
3	Pavement Repair	6,000	LF	\$50	300,000
4	20" Boring and Casing	400	LF	\$300	120,000
SUBTOTAL:					\$1,479,200
CONTINGENCY 20%					\$295,840
SUBTOTAL:					\$1,775,040
ENG/SURVEY 15%					\$266,260
SUBTOTAL:					\$2,041,300

**PROJECT TOTAL** **\$2,041,300**

**Project Number** **6**

**Project Description**  
**16/20-inch water line west of US 67 along Valley View Drive**

**Detailed Description**  
 Project 6 is a 20-inch water line along Valley View Road from US 67 to Tower Drive and a 16-inch water line along Valley View Road from Tower Drive to Lazy Grove Court.

**Purpose**  
 This project will help system pressures and allow for future growth.

ITEM	DESCRIPTION	QUANTITY	UNIT	UNIT PRICE	TOTAL
1	20" Pipe	2,880	LF	\$120	345,600
2	16" Pipe	1,790	LF	\$96	171,840
3	Pavement Repair	4,470	LF	\$50	223,500
4	34" Boring and Casing	200	LF	\$535	107,000
SUBTOTAL:					\$847,940
CONTINGENCY 20%					\$169,590
SUBTOTAL:					\$1,017,530
ENG/SURVEY 15%					\$152,630
SUBTOTAL:					\$1,170,160

**PROJECT TOTAL** **\$1,170,160**



# City of Cedar Hill

## Water System Capital Improvement Plan



### OPINION OF PROBABLE COST

**Project Number** **9**

**Project Description**  
**12-inch water line along Belt Line Road west of Duncanville Road**

**Detailed Description**  
 Project 9 is a 12-inch water line along Belt Line Road between Duncanville Road and Waterford Oaks Drive.

**Purpose**  
 This project will allow for future growth and provide system looping.

ITEM	DESCRIPTION	QUANTITY	UNIT	UNIT PRICE	TOTAL	
1	12" Pipe	4,370	LF	\$72	314,640	
2	Pavement Repair	3,970	LF	\$50	198,500	
3	20" Boring and Casing	400	LF	\$300	120,000	
					SUBTOTAL:	\$633,140
					CONTINGENCY	20% \$126,630
					SUBTOTAL:	\$759,770
					ENG/SURVEY	15% \$113,970
					SUBTOTAL:	\$873,740

**PROJECT TOTAL** **\$873,740**

**Project Number** **10**

**Project Description**  
**12-inch water line in southwest portion of the City**

**Detailed Description**  
 Project 10 is 12-inch water line in the southwest portion of the City along US 67 and between US 67 and Blue Ridge Drive.

**Purpose**  
 This project will allow for future growth and provide system looping.

ITEM	DESCRIPTION	QUANTITY	UNIT	UNIT PRICE	TOTAL	
1	12" Pipe	10,850	LF	\$72	781,200	
2	20" Boring and Casing	700	LF	\$300	210,000	
					SUBTOTAL:	\$991,200
					CONTINGENCY	20% \$198,240
					SUBTOTAL:	\$1,189,440
					ENG/SURVEY	15% \$178,420
					SUBTOTAL:	\$1,367,860

**PROJECT TOTAL** **\$1,367,860**







# City of Cedar Hill

## Water System Capital Improvement Plan



### OPINION OF PROBABLE COST

**Project Number** **17**

**Project Description**

**12-inch water line along Wooded Creek Drive**

**Detailed Description**

**Project 17 is a 12-inch water line along Wooded Creek Drive between Joe Wilson Road and Oxbow Drive.**

**Purpose**

This project will allow for future growth and provides system looping.

ITEM	DESCRIPTION	QUANTITY	UNIT	UNIT PRICE	TOTAL	
1	12" Pipe	6,970	LF	\$72	501,840	
2	Pavement Repair	6,370	LF	\$50	318,500	
3	20" Boring and Casing	600	LF	\$300	180,000	
					SUBTOTAL:	\$1,000,340
				CONTINGENCY 20%	\$200,070	
					SUBTOTAL:	\$1,200,410
				ENG/SURVEY 15%	\$180,070	
					SUBTOTAL:	\$1,380,480

**PROJECT TOTAL** **\$1,380,480**

**Project Number** **18**

**Project Description**

**12/16-inch water line along Clark Road south of Parkerville and along Rocky Acres Road**

**Detailed Description**

**Project 18 is a 12/16-inch water line along Clark Road south of Parkerville and along Rocky Acres Road.**

**Purpose**

This project will allow for future growth and improve system operations.

ITEM	DESCRIPTION	QUANTITY	UNIT	UNIT PRICE	TOTAL	
1	16" Pipe	5,590	LF	\$96	536,640	
2	12" Pipe	8,140	LF	\$72	586,080	
3	Pavement Repair	13,530	LF	\$50	676,500	
4	20" Boring and Casing	200	LF	\$300	60,000	
					SUBTOTAL:	\$1,859,220
				CONTINGENCY 20%	\$371,850	
					SUBTOTAL:	\$2,231,070
				ENG/SURVEY 15%	\$334,670	
					SUBTOTAL:	\$2,565,740

**PROJECT TOTAL** **\$2,565,740**



# City of Cedar Hill

## Water System Capital Improvement Plan



### OPINION OF PROBABLE COST

**Project Number** **21**

**Project Description**

**12-inch water line along Little Creek Road**

**Detailed Description**

**Project 21 is a 12-inch water line along Little Creek Road between Clark Road and Joe Wilson Road.**

**Purpose**

This project will allow for future growth and improve system operations by connecting large diameter lines.

ITEM	DESCRIPTION	QUANTITY	UNIT	UNIT PRICE	TOTAL
1	12" Pipe	6,140	LF	\$72	442,080
2	Pavement Repair	5,740	LF	\$50	287,000
3	20" Boring and Casing	400	LF	\$300	120,000
SUBTOTAL:					\$849,080
CONTINGENCY 20%					\$169,820
SUBTOTAL:					\$1,018,900
ENG/SURVEY 15%					\$152,840
SUBTOTAL:					\$1,171,740

**PROJECT TOTAL** **\$1,171,740**

**Project Number** **22**

**Project Description**

**12-inch water line along Bear Creek Road**

**Detailed Description**

**Project 22 is a 12-inch water line along Bear Creek Road between Clark Road and Duncanville Road and extends the existing line along Rocky Brook south.**

**Purpose**

This project will allow for future growth in the southern portion of the City.

ITEM	DESCRIPTION	QUANTITY	UNIT	UNIT PRICE	TOTAL
1	12" Pipe	15,790	LF	\$72	1,136,880
2	Pavement Repair	600	LF	\$50	30,000
3	20" Boring and Casing	800	LF	\$300	240,000
SUBTOTAL:					\$1,406,880
CONTINGENCY 20%					\$281,380
SUBTOTAL:					\$1,688,260
ENG/SURVEY 15%					\$253,240
SUBTOTAL:					\$1,941,500

**PROJECT TOTAL** **\$1,941,500**

# City of Cedar Hill

## Water System Capital Improvement Plan



### OPINION OF PROBABLE COST

**Project Number**

**23**

**Project Description**

**12-inch water line along FM 1382**

**Detailed Description**

Project 23 is a 12-inch water line and three pressure reducing valves along FM 1382 connecting to existing 12-inch water lines.

**Purpose**

This project will allow for future growth north of the City near the state park.

ITEM	DESCRIPTION	QUANTITY	UNIT	UNIT PRICE	TOTAL
1	12" Pipe	13,300	LF	\$72	957,600
2	Pavement Repair	1,000	LF	\$50	50,000
3	20" Boring and Casing	1,000	LF	\$300	300,000
4	Pressure Reducing Valve	3	EA	\$80,000	240,000

SUBTOTAL:	\$1,547,600
CONTINGENCY 20%	\$309,520
SUBTOTAL:	\$1,857,120
ENG/SURVEY 15%	\$278,570
SUBTOTAL:	\$2,135,690

**PROJECT TOTAL** **\$2,135,690**

# **Appendix C**

## **Wastewater System Project Cost Estimates**

# City of Cedar Hill Wastewater Capital Improvement Plan



## OPINION OF PROBABLE COST

<b>Project Number</b>	<b>1</b>
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**Project Description**  
**New 1.0 MG Lift Station in TCS-4 and 10-inch gravity line and 12/10/8-inch gravity line**

**Detailed Description**  
 Project 1 is a new 1.0 MG lift station in TCS-4 that will allow for future growth. Project 1 also includes gravity lines to serve the new development.

**Purpose**  
 This project will allow for future growth in Basin TCS-4.

ITEM	DESCRIPTION	QUANTITY	UNIT	UNIT PRICE	TOTAL
1	1.0 MGD Lift Station	1	LS	\$500,000	500,000
2	12" Pipe	2,510	LF	\$72	180,720
3	10" Pipe	7,930	LF	\$60	475,800
4	8" Pipe	2,598	LF	\$48	124,710
5	48" Diameter Manhole	33	EA	\$5,000	163,000
6	20" Boring and Casing	1,200	LF	\$300	360,000
<b>SUBTOTAL:</b>					<b>\$1,804,230</b>
<b>CONTINGENCY</b> 20%					<b>\$360,850</b>
<b>SUBTOTAL:</b>					<b>\$2,165,080</b>
<b>ENG/SURVEY</b> 15%					<b>\$324,770</b>
<b>SUBTOTAL:</b>					<b>\$2,489,850</b>

**PROJECT TOTAL** **\$2,489,850**

<b>Project Number</b>	<b>2</b>
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**Project Description**  
**8-inch gravity connecting existing gravity lines in TCS-2**

**Detailed Description**  
 Project 2 is an 8-inch gravity line in TCS-2 that connects existing gravity lines to serve future growth.

**Purpose**  
 This project will allow for future growth and utilize the existing 8-inch line.

ITEM	DESCRIPTION	QUANTITY	UNIT	UNIT PRICE	TOTAL
1	8" Pipe	1,280	LF	\$48	61,440
2	48" Diameter Manhole	3	EA	\$5,000	15,940
3	Pavement Repair	1,280	LF	\$50	64,000
<b>SUBTOTAL:</b>					<b>\$141,380</b>
<b>CONTINGENCY</b> 20%					<b>\$28,280</b>
<b>SUBTOTAL:</b>					<b>\$169,660</b>
<b>ENG/SURVEY</b> 15%					<b>\$25,450</b>
<b>SUBTOTAL:</b>					<b>\$195,110</b>

**PROJECT TOTAL** **\$195,110**

# City of Cedar Hill

## Wastewater Capital Improvement Plan



### OPINION OF PROBABLE COST

**Project Number** **3**

**Project Description**

**12/15/18-inch gravity line in Basin TM-3**

**Detailed Description**

**Project 3 is a 12/15/18-inch gravity line in Basin TM-3.**

**Purpose**

This project will address an existing system deficiency and allow for growth.

ITEM	DESCRIPTION	QUANTITY	UNIT	UNIT PRICE	TOTAL
1	18" Pipe	4,200	LF	\$108	453,600
2	15" Pipe	3,300	LF	\$90	297,000
3	12" Pipe	2,200	LF	\$72	158,400
4	60" Diameter Manhole	19	EA	\$6,000	112,490
5	48" Diameter Manhole	5	EA	\$5,000	27,460
6	Pavement Repair	1,000	LF	\$50	50,000
7	20" Boring and Casing	400	LF	\$300	120,000
8	32" Boring and Casing	400	LF	\$495	198,000
SUBTOTAL:					\$1,416,950
CONTINGENCY 20%					\$283,390
SUBTOTAL:					\$1,700,340
ENG/SURVEY 15%					\$255,060
SUBTOTAL:					\$1,955,400
<b>PROJECT TOTAL</b>					<b>\$1,955,400</b>

**Project Number** **4**

**Project Description**

**Hollings Lift Station Expansion**

**Detailed Description**

**Project 4 expands the Hollings Lift Station from 0.78 MGD to a firm capacity of 1.25 MGD.**

**Purpose**

This project will serve existing customers and allow for future growth.

ITEM	DESCRIPTION	QUANTITY	UNIT	UNIT PRICE	TOTAL
1	0.5 MGD Lift Station Expansion	1	LS	\$275,000	275,000
SUBTOTAL:					\$275,000
CONTINGENCY 20%					\$55,000
SUBTOTAL:					\$330,000
ENG/SURVEY 15%					\$49,500
SUBTOTAL:					\$379,500
<b>PROJECT TOTAL</b>					<b>\$379,500</b>

# City of Cedar Hill Wastewater Capital Improvement Plan



## OPINION OF PROBABLE COST

**Project Number** **5**

**Project Description**  
**8/10-inch gravity line and decommission Mt. Lebanon Lift Station**

**Detailed Description**  
**Project 5 is a 8/10-inch gravity line in TCS-2 and decommissioning the Mt. Lebanon Lift Station.**

**Purpose**  
 This line will allow the Mt. Lebanon Lift Station to be decommissioned and allow for future growth.

ITEM	DESCRIPTION	QUANTITY	UNIT	UNIT PRICE	TOTAL	
1	Lift Station - Decomm	1	LS	\$50,000	50,000	
2	10" Pipe	2,890	LF	\$60	173,400	
3	8" Pipe	690	LF	\$48	33,120	
4	48" Diameter Manhole	9	EA	\$5,000	44,840	
5	20" Boring and Casing	200	LF	\$300	60,000	
					SUBTOTAL:	\$361,360
					CONTINGENCY	20% \$72,280
					SUBTOTAL:	\$433,640
					ENG/SURVEY	15% \$65,050
					SUBTOTAL:	\$498,690

**PROJECT TOTAL** **\$498,690**

**Project Number** **6**

**Project Description**  
**10/18/21-inch gravity line in RO-1**

**Detailed Description**  
**Project 6 is a 10/18/21-inch gravity line in Basin RO-1.**

**Purpose**  
 This project will allow for future growth in Basin RO-1.

ITEM	DESCRIPTION	QUANTITY	UNIT	UNIT PRICE	TOTAL	
1	21" Pipe	1,780	LF	\$126	224,280	
2	18" Pipe	3,480	LF	\$108	375,840	
3	10" Pipe	3,460	LF	\$60	207,600	
4	60" Diameter Manhole	13	EA	\$6,000	78,940	
5	48" Diameter Manhole	9	EA	\$5,000	43,310	
6	34" Boring and Casing	200	LF	\$535	107,000	
7	32" Boring and Casing	400	LF	\$495	198,000	
8	20" Boring and Casing	200	LF	\$300	60,000	
					SUBTOTAL:	\$1,294,970
					CONTINGENCY	20% \$259,000
					SUBTOTAL:	\$1,553,970
					ENG/SURVEY	15% \$233,100
					SUBTOTAL:	\$1,787,070

**PROJECT TOTAL** **\$1,787,070**



# City of Cedar Hill Wastewater Capital Improvement Plan



## OPINION OF PROBABLE COST

<b>Project Number</b>	<b>9</b>
-----------------------	----------

**Project Description**

**8/10/12-inch gravity lines in RO-2**

**Detailed Description**

**Project 9 is 8/10/12-inch gravity lines in Basin RO-2.**

**Purpose**

These lines will allow for future growth in Basin RO-2.

ITEM	DESCRIPTION	QUANTITY	UNIT	UNIT PRICE	TOTAL
1	12" Pipe	4,940	LF	\$72	355,680
2	10" Pipe	7,360	LF	\$60	441,600
3	8" Pipe	2,990	LF	\$48	143,520
4	48" Diameter Manhole	38	EA	\$5,000	191,120
5	Pavement Repair	400	LF	\$50	20,000
6	20" Boring and Casing	1,000	LF	\$300	300,000
SUBTOTAL:					\$1,451,920
CONTINGENCY 20%					\$290,390
SUBTOTAL:					\$1,742,310
ENG/SURVEY 15%					\$261,350
SUBTOTAL:					\$2,003,660

<b>PROJECT TOTAL</b>	<b>\$2,003,660</b>
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<b>Project Number</b>	<b>10</b>
-----------------------	-----------

**Project Description**

**10/12-inch gravity line and decommission High Meadows Lift Station**

**Detailed Description**

**Project 10 is a 10/12-inch gravity line in Basin RO-3 and also decommissions the High Meadows Lift Station.**

**Purpose**

This project will allow for future growth in Basin RO-3 and allow the High Meadows Lift Station to be decommissioned.

ITEM	DESCRIPTION	QUANTITY	UNIT	UNIT PRICE	TOTAL
1	12" Pipe	5,410	LF	\$72	389,520
2	10" Pipe	1,310	LF	\$60	78,600
3	48" Diameter Manhole	17	EA	\$5,000	84,100
4	20" Boring and Casing	500	LF	\$300	150,000
5	Lift Station - Decomm	1	LS	\$50,000	50,000
SUBTOTAL:					\$752,220
CONTINGENCY 20%					\$150,450
SUBTOTAL:					\$902,670
ENG/SURVEY 15%					\$135,410
SUBTOTAL:					\$1,038,080

<b>PROJECT TOTAL</b>	<b>\$1,038,080</b>
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# City of Cedar Hill

## Wastewater Capital Improvement Plan



### OPINION OF PROBABLE COST

**Project Number** **11**

**Project Description**

**10/12-inch gravity lines in TM-1**

**Detailed Description**

**Project 11 is 10/12-inch gravity lines in TM-1.**

**Purpose**

This line will allow for future growth along US 67.

ITEM	DESCRIPTION	QUANTITY	UNIT	UNIT PRICE	TOTAL	
1	12" Pipe	3,600	LF	\$72	259,200	
2	10" Pipe	2,700	LF	\$60	162,000	
3	48" Diameter Manhole	16	EA	\$5,000	78,750	
4	Pavement Repair	400	LF	\$50	20,000	
5	20" Boring and Casing	400	LF	\$300	120,000	
					SUBTOTAL:	\$639,950
					CONTINGENCY	20% \$127,990
					SUBTOTAL:	\$767,940
					ENG/SURVEY	15% \$115,200
					SUBTOTAL:	\$883,140

**PROJECT TOTAL** **\$883,140**

**Project Number** **12**

**Project Description**

**24-inch gravity line between RO-3 and RO-2**

**Detailed Description**

**Project 12 is a 24-inch gravity line between RO-3 and RO-2.**

**Purpose**

This project will allow for future growth in the Red Oak Basin.

ITEM	DESCRIPTION	QUANTITY	UNIT	UNIT PRICE	TOTAL	
1	24" Pipe	2,420	LF	\$144	348,480	
2	60" Diameter Manhole	6	LF	\$6,000	36,230	
3	38" Boring and Casing	600	LF	\$600	360,000	
					SUBTOTAL:	\$744,710
					CONTINGENCY	20% \$148,950
					SUBTOTAL:	\$893,660
					ENG/SURVEY	15% \$134,050
					SUBTOTAL:	\$1,027,710

**PROJECT TOTAL** **\$1,027,710**

# City of Cedar Hill

## Wastewater Capital Improvement Plan



### OPINION OF PROBABLE COST

#### Project Number

**13**

**Project Description**

**10/12/15-inch gravity lines in TM-4 and decommission the Windsor Park Lift Station**

**Detailed Description**

**Project 13 is 10/12/15-inch gravity lines in the TM-4 basin and decommissioning the Windsor Park Lift Station.**

**Purpose**

These lines will allow the Windsor Park Lift Station to be decommissioned and allow for future growth.

ITEM	DESCRIPTION	QUANTITY	UNIT	UNIT PRICE	TOTAL
1	Lift Station - Decomm	1	LS	\$50,000	50,000
2	15" Pipe	1,400	LF	\$90	126,000
3	12" Pipe	3,100	LF	\$72	223,200
4	10" Pipe	4,100	LF	\$60	246,000
5	60" Diameter Manhole	4	EA	\$6,000	21,000
6	48" Diameter Manhole	18	EA	\$5,000	90,000
7	Pavement Repair	700	LF	\$50	35,000
8	20" Boring and Casing	600	LF	\$300	180,000
SUBTOTAL:					\$971,200
CONTINGENCY					20% \$194,240
SUBTOTAL:					\$1,165,440
ENG/SURVEY					15% \$174,820
SUBTOTAL:					\$1,340,260

**PROJECT TOTAL** **\$1,340,260**

#### Project Number

**14**

**Project Description**

**10/12/18-inch gravity lines and Springfield Lift Station decommission**

**Detailed Description**

**Project 14 is 10/12/18-inch gravity lines in RO-1 and RO-4. These lines will allow the Springfield Lift Station to be decommissioned.**

**Purpose**

This project will allow for future growth in RO-1 and RO-4. This project also allows the Springfield Lift Station to be decommissioned.

ITEM	DESCRIPTION	QUANTITY	UNIT	UNIT PRICE	TOTAL
1	Lift Station - Decomm	1	LS	\$50,000	50,000
2	18" Pipe	4,470	LF	\$108	482,760
3	12" Pipe	2,970	LF	\$72	213,840
4	10" Pipe	2,691	LF	\$60	161,460
5	60" Diameter Manhole	11	EA	\$6,000	67,020
6	48" Diameter Manhole	14	EA	\$5,000	70,800
7	32" Boring and Casing	600	LF	\$495	297,000
8	20" Boring and Casing	400	LF	\$300	120,000
SUBTOTAL:					\$1,462,880
CONTINGENCY					20% \$292,580
SUBTOTAL:					\$1,755,460
ENG/SURVEY					15% \$263,320
SUBTOTAL:					\$2,018,780

**PROJECT TOTAL** **\$2,018,780**

# City of Cedar Hill

## Wastewater Capital Improvement Plan



### OPINION OF PROBABLE COST

**Project Number** **15**

**Project Description**

**10/15-inch gravity lines and decommission the Highlands Lift Station**

**Detailed Description**

**Project 15 is 10/15-inch gravity lines in RO-4 Basin and decommissioning the Highlands Lift Station.**

**Purpose**

These lines will allow the Highlands Lift Station to be decommissioned and provide capacity for future growth.

ITEM	DESCRIPTION	QUANTITY	UNIT	UNIT PRICE	TOTAL	
1	Lift Station - Decomm	1	LS	\$50,000	50,000	
2	15" Pipe	3,590	LF	\$90	323,100	
3	10" Pipe	2,530	LF	\$60	151,800	
4	60" Diameter Manhole	9	EA	\$6,000	53,820	
5	48" Diameter Manhole	6	EA	\$5,000	31,580	
6	Pavement Repair	400	LF	\$50	20,000	
7	26" Boring and Casing	200	LF	\$400	80,000	
					SUBTOTAL:	\$710,300
					CONTINGENCY 20%	\$142,060
					SUBTOTAL:	\$852,360
					ENG/SURVEY 15%	\$127,860
					SUBTOTAL:	\$980,220

**PROJECT TOTAL** **\$980,220**

**Project Number** **16**

**Project Description**

**12-inch gravity line and decommission the American Lift Station**

**Detailed Description**

**Project 16 is a 12-inch gravity line in the RO-7 Basin and decommissioning the American Lift Station.**

**Purpose**

This line will allow the American Lift Station to be decommissioned and allow for future growth.

ITEM	DESCRIPTION	QUANTITY	UNIT	UNIT PRICE	TOTAL	
1	Lift Station - Decomm	1	LS	\$50,000	50,000	
2	12" Pipe	5,430	LF	\$72	390,960	
3	48" Diameter Manhole	14	EA	\$5,000	67,940	
4	Pavement Repair	400	LF	\$50	20,000	
5	20" Boring and Casing	400	LF	\$300	120,000	
					SUBTOTAL:	\$648,900
					CONTINGENCY 20%	\$129,780
					SUBTOTAL:	\$778,680
					ENG/SURVEY 15%	\$116,810
					SUBTOTAL:	\$895,490

**PROJECT TOTAL** **\$895,490**

# City of Cedar Hill Wastewater Capital Improvement Plan



## OPINION OF PROBABLE COST

<b>Project Number</b>	<b>17</b>
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**Project Description**  
**10-inch gravity line in the TCN-1 Basin**

**Detailed Description**  
**Project 17 is a 10-inch gravity line in the TCN-1 Basin.**

**Purpose**  
 This line will allow for future growth in the TCN-1 Basin.

ITEM	DESCRIPTION	QUANTITY	UNIT	UNIT PRICE	TOTAL
1	10" Pipe	5,690	LF	\$60	341,400
2	48" Diameter Manhole	14	EA	\$5,000	71,170
3	Pavement Repair	200	LF	\$50	10,000
4	20" Boring and Casing	300	LF	\$300	90,000
SUBTOTAL:					\$512,570
CONTINGENCY 20%					\$102,520
SUBTOTAL:					\$615,090
ENG/SURVEY 15%					\$92,270
SUBTOTAL:					\$707,360

<b>PROJECT TOTAL</b>	<b>\$707,360</b>
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<b>Project Number</b>	<b>18</b>
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**Project Description**  
**8/10/12-inch gravity lines in TCS-3 and decommission the Lake Ridge II Lift Station**

**Detailed Description**  
**Project 18 is 8/10/12-inch gravity lines in the TCS-3 Basin and decommissioning the Lake Ridge II Lift Station.**

**Purpose**  
 These lines will allow the Lake Ridge II Lift Station to be decommissioned and allow for future growth.

ITEM	DESCRIPTION	QUANTITY	UNIT	UNIT PRICE	TOTAL
1	12" Pipe	2,700	LF	\$72	194,400
2	10" Pipe	2,020	LF	\$60	121,200
3	8" Pipe	1,150	LF	\$48	55,200
4	48" Diameter Manhole	15	EA	\$5,000	73,340
5	Pavement Repair	400	LF	\$50	20,000
6	20" Boring and Casing	400	LF	\$300	120,000
7	Lift Station - Decomm	1	LS	\$50,000	50,000
SUBTOTAL:					\$634,140
CONTINGENCY 20%					\$126,830
SUBTOTAL:					\$760,970
ENG/SURVEY 15%					\$114,150
SUBTOTAL:					\$875,120

<b>PROJECT TOTAL</b>	<b>\$875,120</b>
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← W. Belt Line Dr →

August 2012

# CEDAR HILL

# 2012

## Roadway Impact Fee Study



 Kimley-Horn  
and Associates, Inc.

  
**CEDAR HILL**

Ordinance No. 2012-478  
with exhibits Page 74 of 207

# 2012 Roadway Impact Fee Study



**Prepared by:**



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**August 2012**

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## I. EXECUTIVE SUMMARY

This study was performed to update the City of Cedar Hill's Roadway Impact Fees. Transportation system analysis is an important tool for facilitating orderly growth of the transportation system and for providing adequate facilities that promote economic development in the City of Cedar Hill. The implementation of an impact fee is a way to shift a portion of the burden of paying for new facilities onto new development.

Roadway improvements necessary to serve 10-year (2022) and ultimate system needs were evaluated. Typically, infrastructure improvements are sized beyond the 10-year requirements; however, Texas' impact fee law (Chapter 395) only allows recovery of costs to serve the 10-year planning period. For example, the projected cost to construct the infrastructure needed through 2022 is **\$12,255,137** for Service Area 1, **\$27,152,194** for Service Area 2, **\$26,977,712** for Service Area 3, and **\$21,070,674** for Service Area 4. A portion of the remainder can be assessed as the planning window extends beyond 2022 and as the impact fees are updated in the future.

The impact fee law defines a service unit as follows: "Service Unit means a standardized measure of consumption attributable to an individual unit of development calculated in accordance with generally accepted engineering or planning standards and based on historical data and trends applicable to the political subdivision in which the individual unit of development is located during the previous 10 years."

Therefore, the City of Cedar Hill defines a *service unit* as the number of vehicle-miles of travel during the afternoon peak-hour. For each type of development the City of Cedar Hill utilizes the Land Use/Vehicle-Mile Equivalency Table LUVMET to determine the number of service units.

Based on the City's 10-year growth projections and the associated demand (consumption) values, **4,571**, **14,466**, **11,353**, and **7,694** additional vehicle-miles of capacity will be needed by year 2022 for Service Area 1, Service Area 2, Service Area 3, and Service Area 4, respectively. Based on the additional service units and the recoverable capital improvements plans, the City may assess a maximum of **\$1,340** per service unit in Service Area 1, **\$939** per service unit in Service Area 2, **\$1,188** per service unit in Service Area 3, and **\$1,369** per service unit in Service Area 4.



## II. INTRODUCTION

Chapter 395 of the Texas Local Government Code describes the procedure Texas cities must follow in order to create and implement impact fees. Senate Bill 243 (SB 243) amended Chapter 395 in September 2001 to define an Impact Fee as “a charge or assessment imposed by a political subdivision against new development in order to generate revenue for funding or recouping the costs of Capital improvements or facility expansions necessitated by and attributable to the new development.”

Chapter 395 mandates that impact fees be reviewed and updated at least every five (5) years. Accordingly, the City of Cedar Hill has developed its Land Use Assumptions and Roadway Impact Fee Capital Improvement Program (CIP) with which to update the City’s Roadway Impact Fees. The City has retained Kimley-Horn and Associates, Inc. to provide professional transportation engineering services for the development of the roadway impact fee policy. This report includes details of the impact fee calculation methodology in accordance with Chapter 395, the applicable Land Use Assumptions, development of the Roadway Impact Fee CIP, and the refinement of the Land Use Equivalency Table.

This report introduces and references two of the basic inputs to the Roadway Impact Fee: the **Land Use Assumptions** and the **Roadway Impact Fee Capital Improvement Program (CIP)**. Information from these two components is used extensively in the remainder of the report. This report consists of a detailed discussion of the methodology for the computation of impact fees. This discussion - **Methodology for Roadway Impact Fees** and **Impact Fee Calculation** addresses each of the components of the computation and modifications required for the study. The components include:

- Service Areas;
- Service Units;
- Cost Per Service Unit;
- Cost of the CIP;
- Service Unit Calculation;
- Maximum Assessable Impact Fee Per Service Unit; and
- Service Unit Demand Per Unit of Development.

The report also includes a section concerning the **Plan for Awarding the Roadway Impact Fee Credit**. In the case of the City of Cedar Hill, the credit calculation was based on awarding a 50 percent credit.



### III. ROADWAY IMPACT FEE CALCULATION INPUTS

#### A. LAND USE ASSUMPTIONS

In order to assess an impact fee, Land Use Assumptions must be developed to provide the basis for population and employment growth projections within a political subdivision. As defined by Chapter 395 of the Texas Local Government Code, these assumptions include a description of changes in land uses, densities, and population in the service area. In addition, these assumptions are useful in assisting the City of Cedar Hill in determining the need and timing of capital improvements to serve future development. The land use assumptions used for this report were provided in the *City of Cedar Hill 2012 Land Use Assumptions for Water, Wastewater, and Roadway Impact Fees*, completed by Freese and Nichols, Inc.

The residential and non-residential estimates and projections were all compiled in accordance with the following categories:

*Units:* Number of dwelling units, both single and multi-family.

*Population:* Number of people, based on person per dwelling unit factors.

*Employment:* Square feet of building area based on retail, service, and basic land uses. Each classification has unique trip making characteristics.

Retail: Land use activities which provide for the retail sale of goods that primarily serve households and whose location choice is oriented toward the household sector, such as grocery stores and restaurants.

Service: Land use activities which provide personal and professional services such as government and other professional administrative offices.

Basic: Land use activities that produce goods and services such as those that are exported outside of the local economy, such as manufacturing, construction, transportation, wholesale, trade, warehousing, and other industrial uses.

The *City of Cedar Hill 2012 Land Use Assumptions for Water, Wastewater, and Roadway Impact Fees* provided land use assumptions in the units of number of employees. For analysis purposes, a conversion factor was used to correlate the number of employees to square feet of building area. Based on conversations with the City and Freese and Nichols, Inc. it was determined that the following conversion rates should be applied for each non-residential land use:

- Basic Employee: 1,000 square feet;
- Retail Employee: 500 square feet; and
- Service Employee: 350 square feet.

The geographic boundaries of the impact fee service areas for roadway facilities are shown in **Exhibit 1**. The City of Cedar Hill is divided into four (4) service areas. The Service Areas reflect those from the 2007 Roadway Impact Fee Update. For roadway facilities, the service areas are limited to those areas within the current corporate limits. Therefore, areas within the



extraterritorial jurisdiction (ETJ) are excluded from this study. It should be noted that at locations where service area boundaries follow a thoroughfare facility, the proposed boundary is intended to follow the centerline of the roadway. In cases where a service area boundary follows the City Limits, only those portions of the facility within the City Limits are included in the service area.

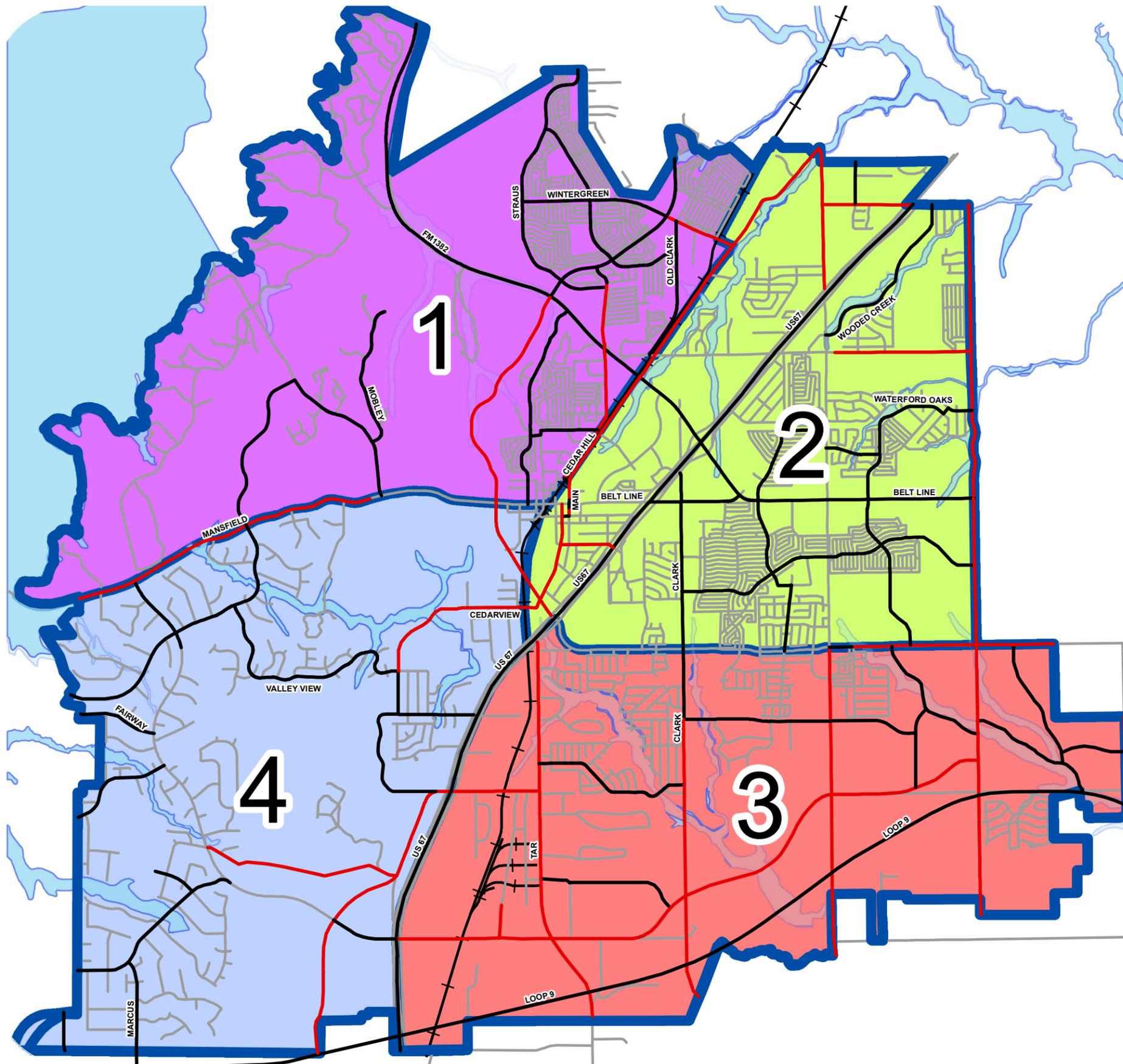
**Table 1A** summarizes the residential and non-residential projections by service area within the City of Cedar Hill for 2012 and 2022 based on employees. **Table 1B** summarizes the same information based on square feet. **Table 1B** will be utilized in the Roadway Impact Fee calculations.

**Table 1A. Residential and Non-Residential Projections for the City of Cedar Hill Based on Employees**

SA	Year	Units	Population	Non-Residential (employees)			
				Basic	Retail	Service	Total
1	2012	3,606	10,420	81	990	797	1,868
	2022	4,066	11,425	93	1,482	1,141	2,716
2	2012	7,056	20,393	511	6,946	2,737	10,194
	2022	8,448	23,738	1,503	8,029	3,074	12,606
3	2012	3,178	9,183	2,094	383	855	3,332
	2022	3,964	11,136	3,881	494	1,241	5,616
4	2012	1,829	5,284	670	1,105	645	2,420
	2022	2,740	7,699	974	1,749	781	3,504
Total 2012		15,669	45,280	3,356	9,424	5,034	17,814
Total 2022		19,218	53,998	6,451	11,754	6,237	24,442

**Table 1B. Residential and Non-Residential Projections for the City of Cedar Hill Based on Square Feet**

SA	Year	Units	Population	Non-Residential (square feet)			
				Basic	Retail	Service	Total
1	2012	3,606	10,420	81,000	495,000	278,950	854,950
	2022	4,066	11,425	93,000	741,000	399,350	1,233,350
2	2012	7,056	20,393	511,000	3,473,000	957,950	4,941,950
	2022	8,448	23,738	1,503,000	4,014,500	1,075,900	6,593,400
3	2012	3,178	9,183	2,094,000	191,500	299,250	2,584,750
	2022	3,964	11,136	3,881,000	247,000	434,350	4,562,350
4	2012	1,829	5,284	670,000	552,500	225,750	1,448,250
	2022	2,740	7,699	974,000	874,500	273,350	2,121,850
Total 2012		15,669	45,280	3,356,000	4,712,000	1,761,900	9,829,900
Total 2022		19,218	53,998	6,451,000	5,877,000	2,182,950	14,510,950



**Legend**

**Service Areas**

- Service Area 1
- Service Area 2
- Service Area 3
- Service Area 4



**CEDAR HILL**

**Exhibit 1:  
Roadway Impact Fee  
Service Area Map**

4,000 2,000 0 4,000



Feet



N



Kimley-Horn  
and Associates, Inc.

**August 2012**

## B. ROADWAY IMPACT FEE CAPITAL IMPROVEMENT PROGRAM

The City has identified the City-funded transportation projects needed to accommodate the projected growth within the City. The Roadway Impact Fee CIP is made up of:

- Recently completed projects with excess capacity available to serve new growth;
- Projects currently under construction; and
- Remaining projects needed to complete the City's Thoroughfare Plan.

The Roadway Impact Fee CIP includes arterial and collector class roadway facilities as well as intersection improvements. All of the arterial facilities are part of the currently adopted Thoroughfare Plan.

The Roadway Impact Fee CIP for the 2012 Impact Fee Study is listed in **Tables 2A, 2B, 2C and 2D** and mapped in **Exhibits 2A, 2B, 2C and 2D**. A citywide exhibit is provided in **Appendix A**. The Roadway Impact Fee CIP Thoroughfare Classification is mapped in **Exhibit 3**. The tables show the length of each project as well as the facility's Thoroughfare Plan classification. The Roadway Impact Fee CIP was developed in conjunction with input from City of Cedar Hill staff and represents those projects that will be needed to accommodate the growth projected in **Table 1B**.

**Table 2A. Roadway Impact Fee Capital Improvement Program – Service Area 1**

Service Area	Proj. #	Class	Roadway	Limits	Length (mi)	% In Service Area
SA 1	1-A, 4-A	P6D	Mansfield Rd. (1)	W. City Limits to Lakeridge Pkwy.	0.40	50%
	1-B, 4-B	M4D	Mansfield Rd. (2)	Lakeridge Pkwy. to 430' W. of W. Belt Line Rd.	1.73	50%
	1-C, 4-C	M4D	Belt Line Rd. (Phase IIA)	430' W. of W. Belt Line Rd. to Fire Station	0.74	50%
	1-D, 4-D	M4D	Belt Line Rd. (Phase I)	Fire Station to BNSF RR	0.50	50%
	1-E	M4D	Road A	FM 1382 to Belt Line Rd.	1.61	100%
	1-F	P6D	New Clark Rd.	N. City Limits to 430' N. of Couch Rd.	0.20	50%
	1-G,2-B	M4D	Cedar Hill Rd. (1)	Main St. to Wintergreen Rd.	1.94	50%
	1-H	M4D	Wintergreen Rd. (1)	New Clark Rd. to BNSF RR	0.38	100%
	1-I,2-R	M4D	Wintergreen Rd. (2)	BNSF RR to Cedar Hill Rd.	0.11	50%
	1-J	P6D	Pleasant Run Rd. (1)	FM 1382 to BNSF RR	0.21	100%
	1-K,2-U	P6D	Pleasant Run Rd. (2)	BNSF RR to Cedar Hill Rd.	0.04	100%
	1-L	C4U	Old Strauss Rd.	Wolfe St. to FM 1382	0.45	100%
	1-M	C4U	Strauss Rd.	FM 1382 to Wylie St.	0.97	100%
	I-1		Signal Installation	Mansfield Rd. & Lake Ridge Pkwy.		50%
	I-2		Signal Installation	Mansfield Rd. & Road A		50%
	I-3		Signal Installation	New Clark Rd. & Wintergreen Rd.		100%



**Table 2B. Roadway Impact Fee Capital Improvement Program – Service Area 2**

Service	Proj. #	Class	Roadway	Limits	Length	% In
SA 2	2-A	M4D	Belt Line Rd. (3)	BNSF RR to US 67 SBFR	0.68	100%
	1-G,2-B	M4D	Cedar Hill Rd. (1)	Main St. to Wintergreen Rd.	1.94	50%
	2-C	M4D	Cedar Hill Rd. (2)	Wintergreen Rd. to N. City Limits	0.90	100%
	2-D	M4D	Main St. (1)	150' N of Belt Line Rd. to Wylie St.	0.14	100%
	2-E	M4D	Main St. (2)	130' S of Belt Line Rd. to Cedar St.	0.06	100%
	2-F	M4D	Houston St.	Belt Line Rd. to Tidwell St.	0.68	100%
	2-G	M4U	Cedarview Dr. (1)	BNSF RR to Tidwell	0.13	100%
	2-H	M4D	Uptown Blvd.	FM 1382 to Belt Line Rd.	0.95	100%
	2-I	M4U	Pioneer Tr.	Cedar Hill Rd. to Uptown Blvd.	0.29	100%
	2-J	M4U	S Clark Rd. (1)	FM 1382 to US 67 SBFR	0.31	100%
	2-K	M4D	Joe Wilson Rd. (1)	Cedar Hill Rd. to 490' S of Cedar Hill Rd.	0.09	50%
	2-L	M4D	Joe Wilson Rd. (2)	490' S of Cedar Hill Rd. to US 67 SBFR	0.86	100%
	2-M	M4D	Joe Wilson Rd. (Phase III)	US 67 SBFR to 360' S. of FM 1382	1.46	100%
	2-N	M4D	Joe Wilson Rd. (Phases I&II)	360' S. of FM 1382 to Parkerville Rd.	0.93	100%
	2-O	P6D	Duncanville Rd. (1)	Wintergreen Rd. to Pleasant Run Rd.	1.00	50%
	2-P	M4D	Duncanville Rd. (2)	Pleasant Run Rd. to Belt Line Rd.	1.01	50%
	2-Q	M4D	Duncanville Rd. (3)	Belt Line Rd. to Parkerville Rd.	1.00	50%
	1-I,2-R	M4D	Wintergreen Rd. (2)	BNSF RR to Cedar Hill Rd.	0.11	50%
	2-S	M4D	Wintergreen Rd. (3)	Joe Wilson Rd. to US 67 SBFR	0.61	100%
	2-T	P6D	Wintergreen Rd. (4)	US 67 NBFR to E. City Limits	0.38	100%
	1-K,2-U	P6D	Pleasant Run Rd. (2)	BNSF RR to Cedar Hill Rd.	0.04	50%
	2-V	P6D	Pleasant Run Rd. (3)	Cedar Hill Rd. to US 67 SBFR	0.81	100%
	2-W	P6D	Pleasant Run Rd. (4)	US 67 NBFR to 320' E. of Joe Wilson Rd.	0.41	100%
	2-X	M4D	Pleasant Run Rd. (5)	320' E. of Joe Wilson Rd. to Duncanville Rd.	0.93	100%
	2-Y	M4D	Tidwell St. (1)	Houston St. to US 67 SBFR	0.12	100%
	2-Z	M4D	Tidwell St. (2)	Houston St. to BNSF RR	0.18	100%
	2-AA,3-A	M4D	Tidwell St. / Parkerville Rd.	US 67 NBFR to Joe Wilson Rd.	1.96	50%
	2-BB,3-B	M4D	Parkerville Rd. (1)	Springfield Dr. to Duncanville Rd.	0.85	50%
	2-CC	C4U	Cooper St.	Houston St. to US 67 SBFR	0.37	100%
	I-4		Signal Installation	US 67 & Tidwell St.		75%
	I-5		Signal Installation	Parkerville Rd. & Joe Wilson Rd.		50%
	I-6		Signal Installation	Parkerville Rd. & Duncanville Rd.		25%
I-7		Signal Installation	Pleasant Run Rd. & Duncanville Rd.		50%	
I-8		Signal Installation	Wintergreen Rd. & Duncanville Rd.		25%	
I-9		Signal Installation	US 67 & Joe Wilson Rd.		100%	

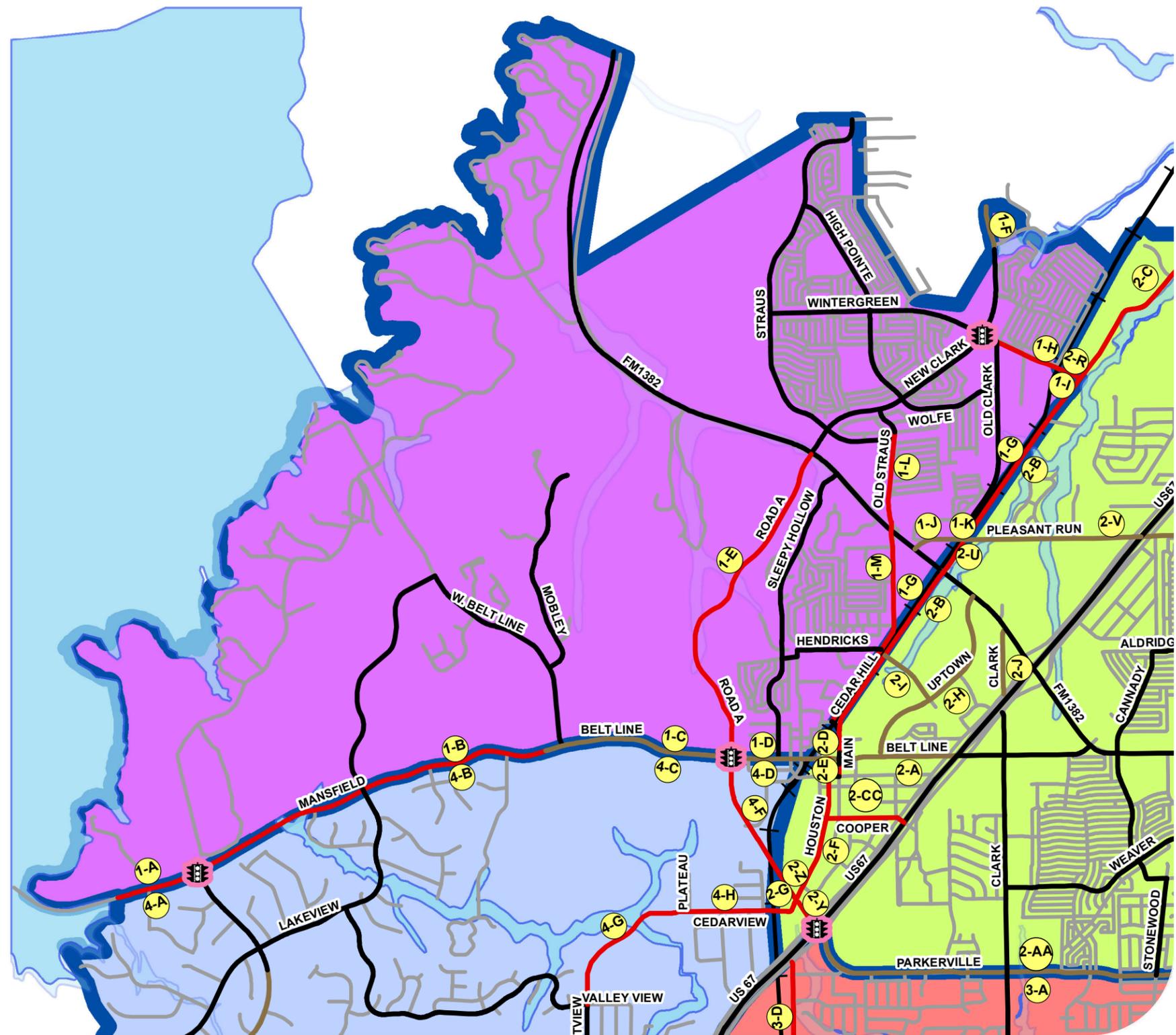


**Table 2C. Roadway Impact Fee Capital Improvement Program – Service Area 3**

Service	Proj. #	Class	Roadway	Limits	Length	% In
SA 3	2-AA,3-A	M4D	Tidwell St. / Parkerville Rd.	US 67 NBFR to Joe Wilson Rd.	1.96	50%
	2-BB,3-B	M4D	Parkerville Rd. (1)	Springfield Dr. to Duncanville Rd.	0.85	50%
	3-C	M4D	Parkerville Rd. (2)	Duncanville Rd. to E. City Limits	0.53	50%
	3-D	M4D	Cedar Hill Rd. S.	US 67 NBFR to Mt. Lebanon Rd.	1.01	100%
	3-E	M4D	Tar Rd. (1)	Mt. Lebanon Rd. to Rocky Acres Rd.	0.60	100%
	3-F	M4D	Tar Rd. (2)	Rocky Acres Rd. to Bear Creek Rd.	0.42	100%
	3-G	P6D	Tar Rd. (3)	Bear Creek Rd. to 425' N. of S. City Limits	0.53	100%
	3-H	P6D	Tar Rd. (4)	425' N. of S. City Limits to S. City Limits	0.08	100%
	3-I	M4D	Clark Rd. S. (1)	Little Creek Rd. to Capricorn Dr.	0.45	100%
	3-J	M4D	Clark Rd. S. (2)	Capricorn Dr. to S. City Limits	1.46	100%
	3-K	M4D	Joe Wilson Rd. (5)	Parkerville Rd. to Bear Creek Rd.	1.00	100%
	3-L	M4D	Joe Wilson Rd. (6)	Bear Creek Rd. to S. City Limits	0.68	100%
	3-M	M4D	Joe Wilson Rd. (7)	S. City Limits to S. City Limits	0.42	50%
	3-N	P6D	Duncanville Rd. (4)	Parkerville Rd. to Bear Creek	0.77	100%
	3-O	M4D	Duncanville Rd. (5)	Bear Creek to S. City Limits	0.95	100%
	3-P	M4D	Duncanville Rd. (6)	S. City Limits to S. City Limits	0.11	50%
	3-Q	M4D	Cockrell Hill Rd.	N. City Limits to S. City Limits	0.68	50%
	3-R	M4U	Mt. Lebanon Rd. (1)	US 67 NBFR to Cedar Hill Rd. S.	0.60	100%
	3-S	M4D	Bear Creek Rd. (1)	US 67 NBFR to Tar Rd.	1.19	100%
	3-T	M4D	Bear Creek Rd. (2)	Tar Rd. to Future Bear Creek Rd. Curve	0.42	100%
	3-U	M4D	Bear Creek Rd. (3)	Future Bear Creek Rd. Curve to Joe Wilson Rd.	1.74	100%
	3-V	M4D	Bear Creek Rd. (4)	Joe Wilson Rd. to 1,915' E. of Joe Wilson Rd.	0.36	100%
	3-W	M4D	Bear Creek Rd. (5)	1,915' E. of Joe Wilson Rd. to Duncanville Rd.	0.69	100%
	3-X	C2U	Edgefield Way.	Future Bear Creek Rd. to 1,185' N. of Future Bear Creek	0.22	100%
	I-5		Signal Installation	Parkerville Rd. & Joe Wilson Rd.		50%
I-6		Signal Installation	Parkerville Rd. & Duncanville Rd.		25%	
I-10		Signal Installation	Clark Rd. & Bear Creek Rd.		100%	
I-11		Signal Installation	Joe Wilson Rd. & Bear Creek Rd.		100%	
I-12		Signal Installation	Duncanville Rd. & Bear Creek Rd.		100%	
I-13		Interchange	Bear Creek Rd. & US 67 Interchange		50%	

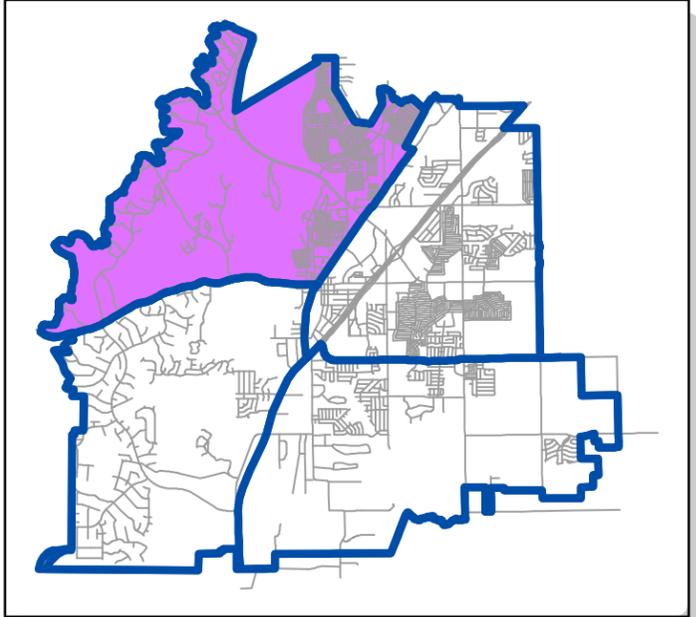
**Table 2D. Roadway Impact Fee Capital Improvement Program – Service Area 4**

Service	Proj. #	Class	Roadway	Limits	Length	% In
SA 4	1-A, 4-A	P6D	Mansfield Rd. (1)	W. City Limits to Lakeridge Pkwy.	0.40	50%
	1-B, 4-B	M4D	Mansfield Rd. (2)	Lakeridge Pkwy. to 430' W. of W. Belt Line Rd.	1.73	50%
	1-C, 4-C	M4D	Belt Line Rd. (Phase IIA)	430' W. of W. Belt Line Rd. to Fire Station	0.74	50%
	1-D, 4-D	M4D	Belt Line Rd. (Phase I)	Fire Station to BNSF RR	0.50	50%
	4-E	M4D	Lake Ridge Pkwy. (1)	575' S. of Lakeview Dr. to Mt. Lebanon Rd.	2.56	100%
	4-F	M4D	Road A (2)	Belt Line Rd. to BNSF RR	0.57	100%
	4-G	M4U	Cedarview Dr. (2)	Valley View Dr. to 320' W. of Plateau St.	0.68	100%
	4-H	M4U	Cedarview Dr. (3)	320' W. of Plateau St. to BNSF RR	0.44	100%
	4-I	M4U	Texas Plume Rd.	Lake Ridge Pkwy. To Mt. Lebanon Rd.	1.35	100%
	4-J	M4U	Mt. Lebanon Rd. (2)	US 67 SBFR to Texas Plume Rd.	0.75	100%
	4-K	M4U	Mt. Lebanon Rd. (3)	Texas Plume Rd. to S. City Limits	1.24	100%
	4-L	M4U	Mt. Lebanon Rd. (4)	S. City Limits to S. City Limits	0.21	50%
	I-1		Signal Installation	Mansfield Rd. & Lake Ridge Pkwy.		50%
	I-2		Signal Installation	Mansfield Rd. & Road A		50%
	I-13		Interchange	Bear Creek Rd. & US 67 Interchange		50%
	I-14		Signal Installation	Lake Ridge Pkwy. & Prairie View Blvd.		100%



### Legend

	RIF Eligible Projects		Service Area 1
	RIF Eligible Completed Projects		Service Area 2
	Other Thoroughfare Facilities		Service Area 3
	Traffic Signal Projects		Service Area 4
	Local Roads		City Limits
	Rail		

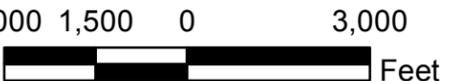




## CEDAR HILL

### Service Area 1

# Capital Improvement Plan



3,000 1,500 0 3,000 Feet

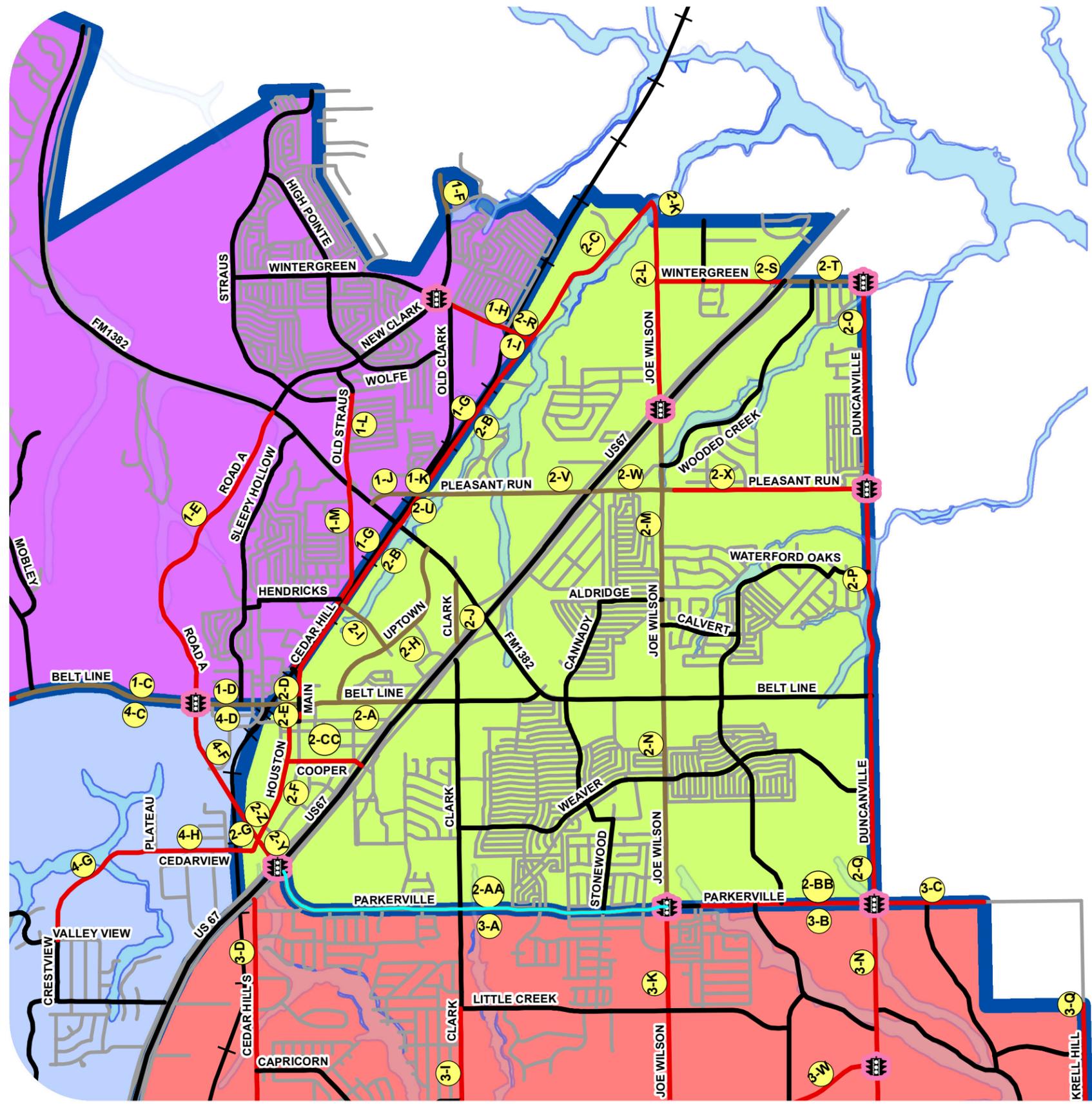


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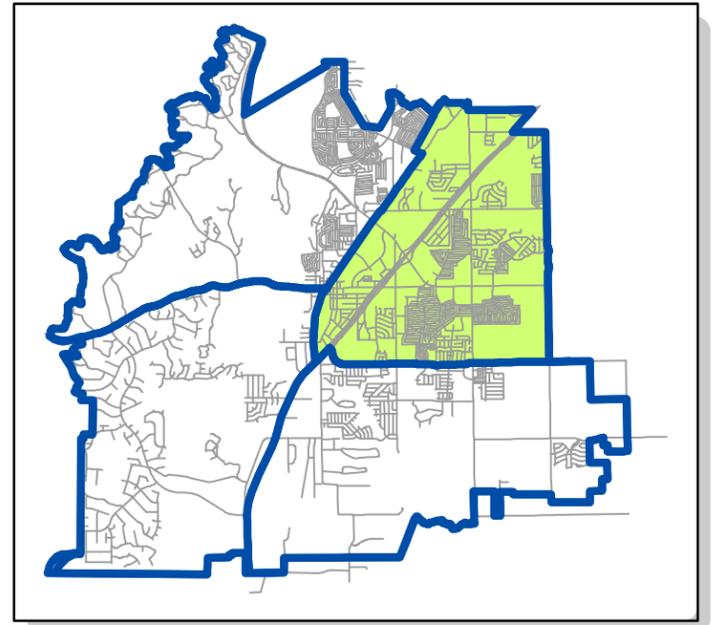
Kimley-Horn and Associates, Inc.

## August 2012



### Legend

	RIF Eligible Projects		Service Area 1
	RIF Eligible Completed Projects		Service Area 2
	Other Thoroughfare Facilities		Service Area 3
	Traffic Signal Projects		Service Area 4
	Local Roads		City Limits
	Rail		

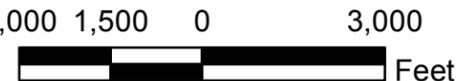




## CEDAR HILL

### Capital Improvement Plan

**Exhibit 2B:**  
**Service Area 2**



3,000 1,500 0 3,000 Feet

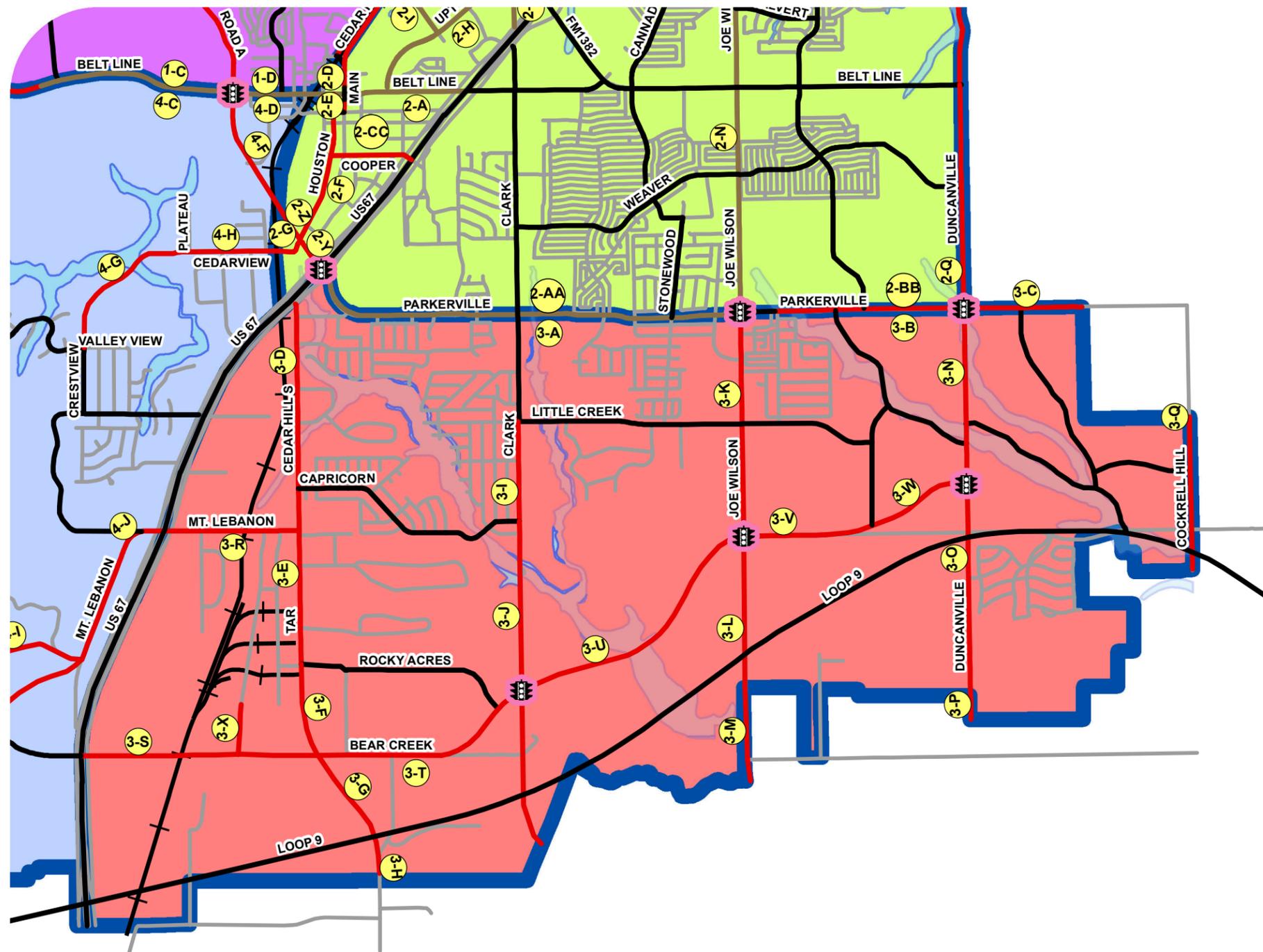


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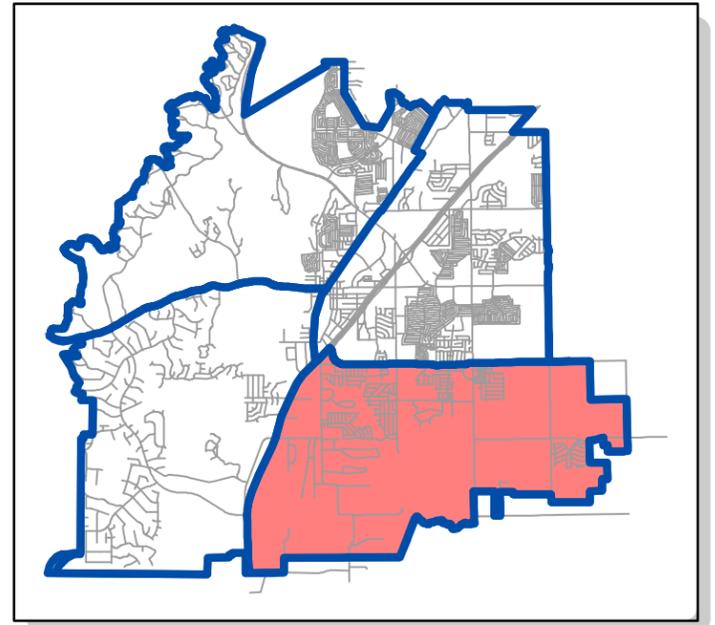
Kimley-Horn and Associates, Inc.

**August 2012**



### Legend

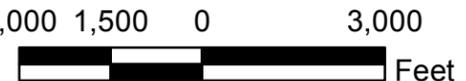
	RIF Eligible Projects		Service Area 1
	RIF Eligible Completed Projects		Service Area 2
	Other Thoroughfare Facilities		Service Area 3
	Traffic Signal Projects		Service Area 4
	Local Roads		City Limits
	Rail		





**CEDAR HILL**

**Exhibit 2C:**  
**Service Area 3**  
**Capital Improvement Plan**



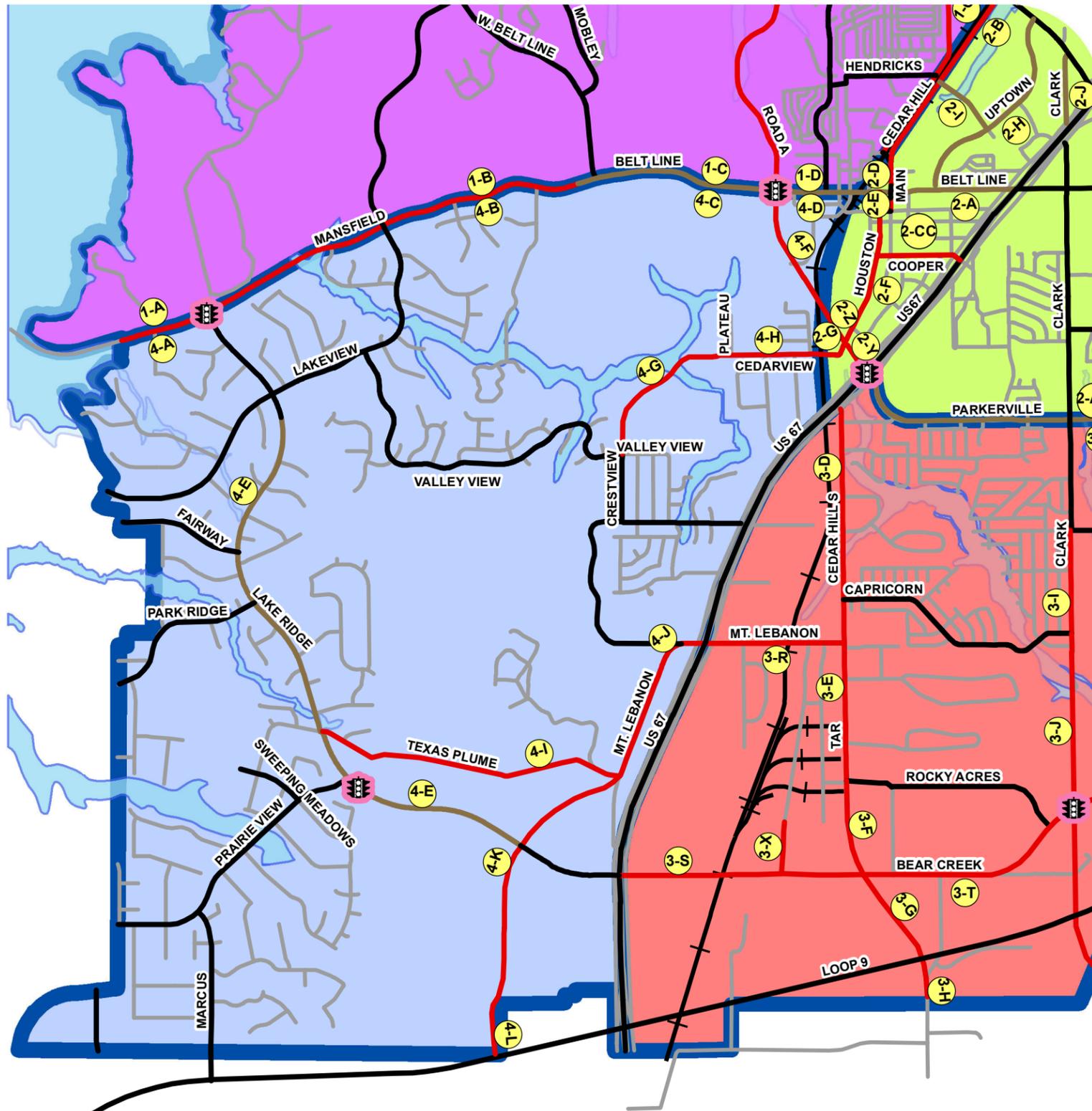
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Feet



Kimley-Horn  
and Associates, Inc.

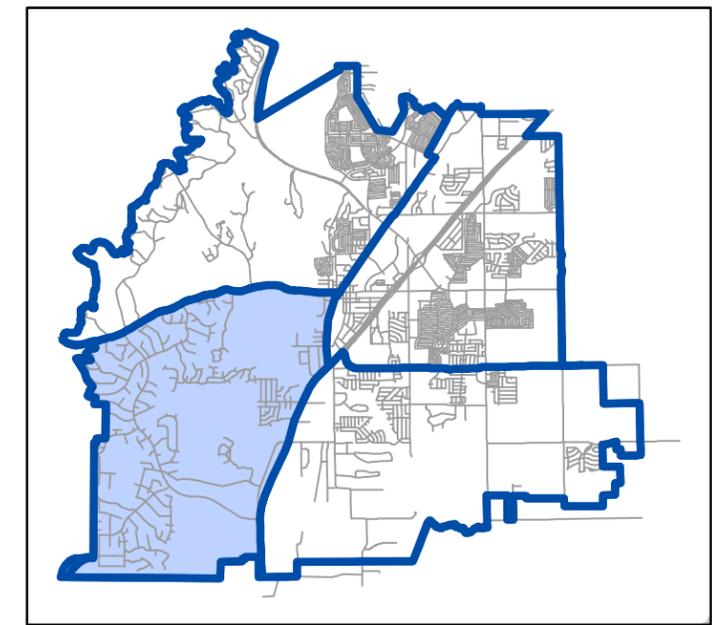


**August 2012**



### Legend

	RIF Eligible Projects		Service Area 1
	RIF Eligible Completed Projects		Service Area 2
	Other Thoroughfare Facilities		Service Area 3
	Traffic Signal Projects		Service Area 4
	Local Roads		City Limits
	Rail		





**CEDAR HILL**

**Exhibit 2D:**  
**Service Area 4**  
**Capital Improvement Plan**



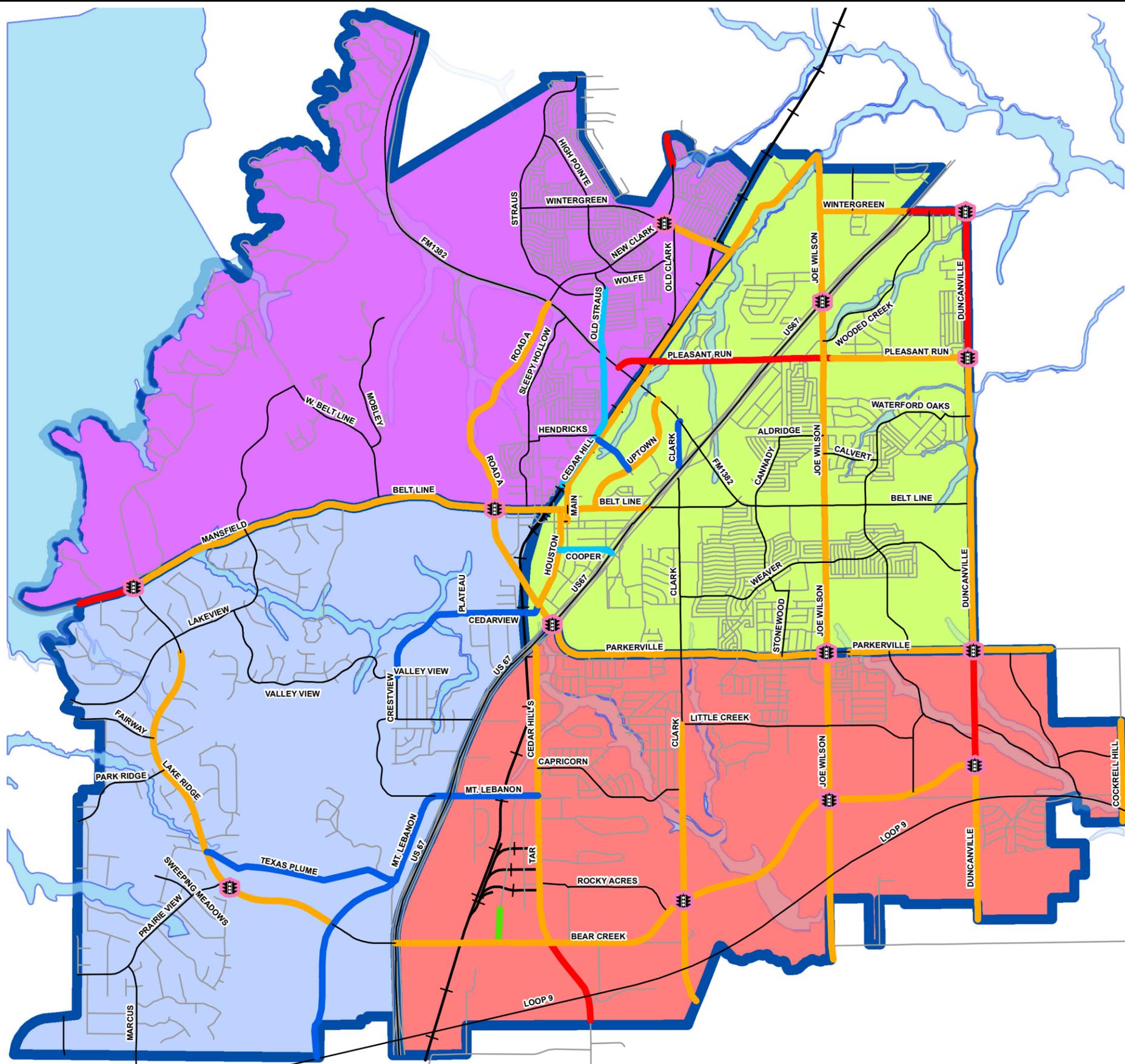
3,000 1,500 0 3,000 Feet



Kimley-Horn  
and Associates, Inc.



**August 2012**



### Legend

Impact Fee CIP Classification	Service Areas
<span style="color: red;">—</span> P6D - Principal Arterial	<span style="background-color: purple; border: 1px solid black; display: inline-block; width: 15px; height: 10px;"></span> Service Area 1
<span style="color: orange;">—</span> M4D - Minor Arterial	<span style="background-color: lightgreen; border: 1px solid black; display: inline-block; width: 15px; height: 10px;"></span> Service Area 2
<span style="color: blue;">—</span> M4U - Major Collector	<span style="background-color: red; border: 1px solid black; display: inline-block; width: 15px; height: 10px;"></span> Service Area 3
<span style="color: lightblue;">—</span> C4U - Minor Collector	<span style="background-color: lightblue; border: 1px solid black; display: inline-block; width: 15px; height: 10px;"></span> Service Area 4
<span style="color: green;">—</span> C2U - Minor Collector	<span style="border: 2px solid blue; display: inline-block; width: 15px; height: 10px;"></span> City Limits
<span style="color: black;">—</span> Other Thoroughfare Facilities	
Traffic Signal Projects	
<span style="color: gray;">—</span> Local Roads	
<span style="color: black;">—</span> Rail	

Note: The Impact Fee CIP Roadway Classification may differ from the City's Thoroughfare Plan.

## Exhibit 3: Citywide Exhibit Roadway CIP for Impact Fees Thoroughfare Classification

4,000 2,000 0 4,000 Feet

N

Kimley-Horn and Associates, Inc.

### August 2012

## IV. METHODOLOGY FOR ROADWAY IMPACT FEES

### A. SERVICE AREAS

The four (4) service areas used in the 2012 Roadway Impact Fee Study are shown in the previously referenced **Exhibit 1**. These service areas cover the entire corporate boundary of the City of Cedar Hill. Chapter 395 of the Texas Local Government Code specifies that “the service area is limited to an area within the corporate boundaries of the political subdivision and shall not exceed six (6) miles.” An inspection of the service areas utilized in the previous roadway impact fee study indicates the number of service areas of four (4) is reasonable because they are approximately four (4) miles in diameter.

### B. SERVICE UNITS

The “service unit” is a measure of consumption or use of the roadway facilities by new development. In other words, it is the measure of supply and demand for roads in the City. For transportation purposes, the service unit is defined as a vehicle-mile. On the supply side, this is a lane-mile of an arterial street. On the demand side, this is a vehicle-trip of one-mile in length. The application of this unit as an estimate of either supply or demand is based on travel during the afternoon peak hour of traffic. This time period is commonly used as the basis for transportation planning and the estimation of trips created by new development.

Another aspect of the service unit is the service volume that is provided (supplied) by a lane-mile of roadway facility. This number, also referred to as capacity, is a function of the facility type, facility configuration, number of lanes, and level of service.

The hourly service volumes used in the Roadway Impact Fee Study are based upon generally accepted thoroughfare capacity criteria. **Tables 3A** and **3B** show the service volumes as a function of the facility type.

**Table 3A. Service Volumes for Proposed Facilities  
(used in Appendix B – CIP Service Units of Supply)**

Roadway Type (MTP Classifications)	Median Configuration	Hourly Vehicle-Mile Capacity per Lane-Mile of Roadway Facility
<b>P6D – Principal Arterial</b>	Divided	700
<b>M4D – Major Arterial</b>	Divided	650
<b>M4U – Major Collector</b>	Undivided	500
<b>C2U – Collector</b>	Undivided	450



**Table 3B. Service Volumes for Existing Facilities**  
(used in Appendix C – Existing Roadway Facilities Inventory)

<b>Roadway Type</b>	<b>Description</b>	<b>Hourly Vehicle-Mile Capacity per Lane-Mile of Roadway Facility</b>
<b>2U-R</b>	Rural Cross-Section (i.e., gravel, dirt, etc.)	150
<b>2U-H</b>	Two lane undivided – Arterial Type	700
<b>2U</b>	Two lane undivided	450
<b>3U</b>	Three lane undivided (TWLTL)	550
<b>4U</b>	Four lane undivided	500
<b>4D</b>	Four lane divided	650
<b>6D</b>	Six lane divided	700

### C. COST PER SERVICE UNIT

A fundamental step in the impact fee process is to establish the cost for each service unit. In the case of the roadway impact fee, this is the cost for each vehicle-mile of travel. This cost per service unit is the cost to construct a roadway (lane-mile) needed to accommodate a vehicle-mile of travel at a level of service corresponding to the City’s standards. The cost per service unit is calculated for each service area based on a specific list of projects within that service area.

The second component of the cost per service unit is the number of service units in each service area. This number is the measure of the growth in transportation demand that is projected to occur in the ten-year period. Chapter 395 requires that Impact Fees be assessed only to pay for growth projected to occur in the city limits within the next ten-years, a concept that will be covered in a later section of this report (see **Section III.E**). As noted earlier, the units of demand are vehicle-miles of travel.

### D. COST OF THE CIP

The costs that may be included in the cost per service unit are all of the implementation costs for the Impact Fee Study, as well as project costs for arterial system elements within the Roadway Impact Fee CIP. Chapter 395 of the Texas Local Government Code specifies that the allowable costs are “...including and limited to the:

1. Construction contract price;
2. Surveying and engineering fees;
3. Land acquisition costs, including land purchases, court awards and costs, attorney’s fees, and expert witness fees; and
4. Fees actually paid or contracted to be paid to an independent qualified engineer or financial consultant preparing or updating the Capital Improvement Plan who is not an employee of the political subdivision.”

The engineer’s opinion of the probable costs of the projects in the Roadway Impact Fee CIP is based, in part, on the calculation of a unit cost of construction. This means that a cost per linear



foot of roadway is calculated based on an average price for the various components of roadway construction. This allows the probable cost to be determined by the type of facility being constructed, the number of lanes, and the length of the project. The costs for location-specific items such as bridges, highway ramps, drainage structures, and any other special components are added to each project as appropriate. In addition, based upon discussions with City of Cedar Hill staff, State, Dallas County, and developer driven projects in which the City has contributed a portion of the total project cost have been included in the Roadway Impact Fee CIP as lump sum costs.

A typical roadway project consists of a number of costs, including the following: construction, design engineering, survey, and right-of way acquisition. While the construction cost component of a project may actually consist of approximately 100 various pay items, a simplified approach was used for developing the conceptual level project costs. Each new project's construction cost was divided into two cost components: roadway construction cost and major construction component allowances. The roadway construction components consist of the following pay items: (1) unclassified street excavation, (2) lime stabilization, (3) concrete pavement, (4) topsoil, (5) concrete driveway, and (6) turn lanes and median openings.

Based on the paving construction cost subtotal, a percentage of this total is calculated to allot for major construction component allowances. These allowances include preparation of ROW, traffic control, pavement markings/markers, roadway drainage, illumination, special drainage structures, minor water and sewer improvements, establishing turf/erosion control and basic landscaping/irrigation. These allowance percentages are also based on historical data. The paving and allowance subtotal is given a fifteen percent (15%) contingency to determine the construction cost total. To determine the total Impact Fee Project Cost, a percentage of the construction cost total is added for engineering, surveying, testing, and mobilization. Right-of-way/easement acquisition was not included in this study.

The construction costs are variable based on the proposed Thoroughfare Plan classification of the roadway. Additional classifications are utilized in cases where a portion of the facility currently exists. The following indication is used for these projects: (1/2) for facilities where half the facility still needs to be constructed.

**Tables 4A, 4B, 4C and 4D** are the Roadway Impact Fee CIP project list for each service area with conceptual level project cost projections. Detailed cost projections and methodology used for each individual project can be seen in **Appendix A, Roadway Impact and Opinion of Probable Cost Worksheets**. It should be noted that these tables reflect only conceptual-level opinions or assumptions regarding the portions of future project costs that are potentially recoverable through impact fees. Actual costs of construction are likely to change with time and are dependent on market and economic conditions that cannot be precisely predicted at this time.

This Roadway Impact Fee CIP establishes the list of projects for which Impact Fees may be utilized. Essentially, it establishes a list of projects for which an impact fee funding program can be established. This is different from a City's construction CIP, which provides a broad list of capital projects for which the City is committed to building. The cost projections utilized in this study should not be utilized for the City's building program or construction CIP.



**Table 4A. – 10-Year Roadway Impact Fee Capital Improvement Program  
with Conceptual Level Project Cost Projections – Service Area 1**

Service Area	Proj. #	Class	Roadway	Limits	Length (mi)	% In Service Area	Total Project Cost	Cost in Service Area
SA 1	1-A, 4-A	P6D	Mansfield Rd. (1)	W. City Limits to Lakeridge Pkwy.	0.4	50%	\$ 3,544,000	\$ 1,772,000
	1-B, 4-B	M4D	Mansfield Rd. (2)	Lakeridge Pkwy. to 430' W. of W. Belt Line Rd.	1.73	50%	\$ 9,860,000	\$ 4,930,000
	1-C, 4-C	M4D	Belt Line Rd. (Phase IIA)	430' W. of W. Belt Line Rd. to Fire Station	0.74	50%	\$ 4,390,769	\$ 2,195,385
	1-D, 4-D	M4D	Belt Line Rd. (Phase I)	Fire Station to BNSF RR	0.5	50%	\$ 2,100,725	\$ 1,050,363
	1-E	M4D	Road A	FM 1382 to Belt Line Rd.	1.61	100%	\$ 9,708,000	\$ 9,708,000
	1-F	P6D	New Clark Rd.	N. City Limits to 430' N. of Couch Rd.	0.2	50%	\$ 472,362	\$ 236,181
	1-G,2-B	M4D	Cedar Hill Rd. (1)	Main St. to Wintergreen Rd.	1.94	50%	\$ 10,244,000	\$ 5,122,000
	1-H	M4D	Wintergreen Rd. (1)	New Clark Rd. to BNSF RR	0.38	100%	\$ 2,020,000	\$ 2,020,000
	1-I,2-R	M4D	Wintergreen Rd. (2)	BNSF RR to Cedar Hill Rd.	0.11	50%	\$ 600,000	\$ 300,000
	1-J	P6D	Pleasant Run Rd. (1)	FM 1382 to BNSF RR	0.21	100%	\$ 4,844,953	\$ 4,844,953
	1-K,2-U	P6D	Pleasant Run Rd. (2)	BNSF RR to Cedar Hill Rd.	0.04	100%	\$ 1,144,632	\$ 1,144,632
	1-L	C4U	Old Strauss Rd.	Wolfe St. to FM 1382	0.45	100%	\$ 1,824,000	\$ 1,824,000
	1-M	C4U	Strauss Rd.	FM 1382 to Wylie St.	0.97	100%	\$ 3,902,000	\$ 3,902,000
	1-1		Signal Installation	Mansfield Rd. & Lake Ridge Pkwy.		50%	\$ 150,000	\$ 75,000
	1-2		Signal Installation	Mansfield Rd. & Road A		50%	\$ 150,000	\$ 75,000
	1-3		Signal Installation	New Clark Rd. & Wintergreen Rd.		100%	\$ 150,000	\$ 150,000
<b>Service Area Project Cost Subtotal</b>							<b>\$ 39,349,513</b>	
<b>2012 Roadway Impact Fee Update Cost Per Service Area</b>							<b>\$ 12,250</b>	
<b>Total Cost in SERVICE AREA 1</b>							<b>\$ 39,361,763</b>	



**Table 4B. – 10-Year Roadway Impact Fee Capital Improvement Program  
with Conceptual Level Project Cost Projections – Service Area 2**

Service Area	Proj. #	Class	Roadway	Limits	Length (mi)	% In Service Area	Total Project Cost	Cost in Service Area
SA 2	2-A	M4D	Belt Line Rd. (3)	BNSF RR to US 67 SBFR	0.68	100%	\$ 2,901,002	\$ 2,901,002
	1-G,2-B	M4D	Cedar Hill Rd. (1)	Main St. to Wintergreen Rd.	1.94	50%	\$ 10,244,000	\$ 5,122,000
	2-C	M4D	Cedar Hill Rd. (2)	Wintergreen Rd. to N. City Limits	0.90	100%	\$ 5,129,000	\$ 5,129,000
	2-D	M4D	Main St. (1)	150' N of Belt Line Rd. to Wylie St.	0.14	100%	\$ 726,000	\$ 726,000
	2-E	M4D	Main St. (2)	130' S of Belt Line Rd. to Cedar St.	0.06	100%	\$ 300,000	\$ 300,000
	2-F	M4D	Houston St.	Belt Line Rd. to Tidwell St.	0.68	100%	\$ 3,594,000	\$ 3,594,000
	2-G	M4U	Cedarview Dr. (1)	BNSF RR to Tidwell	0.13	100%	\$ 576,000	\$ 576,000
	2-H	M4D	Uptown Blvd.	FM 1382 to Belt Line Rd.	0.95	100%	\$ 2,630,057	\$ 2,630,057
	2-I	M4U	Pioneer Tr.	Cedar Hill Rd. to Uptown Blvd.	0.29	100%	\$ 1,362,005	\$ 1,362,005
	2-J	M4U	S Clark Rd. (1)	FM 1382 to US 67 SBFR	0.31	100%	\$ 994,318	\$ 994,318
	2-K	M4D	Joe Wilson Rd. (1)	Cedar Hill Rd. to 490' S of Cedar Hill Rd.	0.09	50%	\$ 490,000	\$ 245,000
	2-L	M4D	Joe Wilson Rd. (2)	490' S of Cedar Hill Rd. to US 67 SBFR	0.86	100%	\$ 4,547,000	\$ 4,547,000
	2-M	M4D	Joe Wilson Rd. (Phase III)	US 67 SBFR to 360' S. of FM 1382	1.46	100%	\$ 4,616,841	\$ 4,616,841
	2-N	M4D	Joe Wilson Rd. (Phases I&II)	360' S. of FM 1382 to Parkerville Rd.	0.93	100%	\$ 2,590,331	\$ 2,590,331
	2-O	P6D	Duncanville Rd. (1)	Wintergreen Rd. to Pleasant Run Rd.	1.00	50%	\$ 7,442,000	\$ 3,721,000
	2-P	M4D	Duncanville Rd. (2)	Pleasant Run Rd. to Belt Line Rd.	1.01	50%	\$ 6,032,000	\$ 3,016,000
	2-Q	M4D	Duncanville Rd. (3)	Belt Line Rd. to Parkerville Rd.	1.00	50%	\$ 5,630,000	\$ 2,815,000
	1-I,2-R	M4D	Wintergreen Rd. (2)	BNSF RR to Cedar Hill Rd.	0.11	50%	\$ 600,000	\$ 300,000
	2-S	M4D	Wintergreen Rd. (3)	Joe Wilson Rd. to US 67 SBFR	0.61	100%	\$ 3,238,000	\$ 3,238,000
	2-T	P6D	Wintergreen Rd. (4)	US 67 NBFR to E. City Limits	0.38	100%	\$ 339,240	\$ 339,240
	1-K,2-U	P6D	Pleasant Run Rd. (2)	BNSF RR to Cedar Hill Rd.	0.04	50%	\$ 1,144,632	\$ 572,316
	2-V	P6D	Pleasant Run Rd. (3)	Cedar Hill Rd. to US 67 SBFR	0.81	100%	\$ 4,008,596	\$ 4,008,596
	2-W	P6D	Pleasant Run Rd. (4)	US 67 NBFR to 320' E. of Joe Wilson Rd.	0.41	100%	\$ 2,144,435	\$ 2,144,435
	2-X	M4D	Pleasant Run Rd. (5)	320' E. of Joe Wilson Rd. to Duncanville Rd.	0.93	100%	\$ 5,248,443	\$ 5,248,443
	2-Y	M4D	Tidwell St. (1)	Houston St. to US 67 SBFR	0.12	100%	\$ 615,000	\$ 615,000
	2-Z	M4D	Tidwell St. (2)	Houston St. to BNSF RR	0.18	100%	\$ 2,718,000	\$ 2,718,000
	2-AA,3-A	M4D	Tidwell St. / Parkerville Rd.	US 67 NBFR to Joe Wilson Rd.	1.96	50%	\$ 6,023,631	\$ 3,011,816
	2-BB,3-B	M4D	Parkerville Rd. (1)	Springfield Dr. to Duncanville Rd.	0.85	50%	\$ 4,830,000	\$ 2,415,000
	2-CC	C4U	Cooper St.	Houston St. to US 67 SBFR	0.37	100%	\$ 1,474,000	\$ 1,474,000
	I-4		Signal Installation	US 67 & Tidwell St.		75%	\$ 300,000	\$ 225,000
	I-5		Signal Installation	Parkerville Rd. & Joe Wilson Rd.		50%	\$ 150,000	\$ 75,000
	I-6		Signal Installation	Parkerville Rd. & Duncanville Rd.		25%	\$ 150,000	\$ 37,500
	I-7		Signal Installation	Pleasant Run Rd. & Duncanville Rd.		50%	\$ 150,000	\$ 75,000
	I-8		Signal Installation	Wintergreen Rd. & Duncanville Rd.		25%	\$ 150,000	\$ 37,500
I-9		Signal Installation	US 67 & Joe Wilson Rd.		100%	\$ 300,000	\$ 300,000	
<b>Service Area Project Cost Subtotal</b>							<b>\$ 71,720,400</b>	
<b>2012 Roadway Impact Fee Update Cost Per Service Area</b>							<b>\$ 12,250</b>	
<b>Total Cost in SERVICE AREA 2</b>							<b>\$ 71,732,650</b>	



**Table 4C. – 10-Year Roadway Impact Fee Capital Improvement Program  
with Conceptual Level Project Cost Projections – Service Area 3**

Service Area	Proj. #	Class	Roadway	Limits	Length (mi)	% In Service Area	Total Project Cost	Cost in Service Area
SA 3	2-AA.3-A	M4D	Tidwell St. / Parkerville Rd.	US 67 NBFR to Joe Wilson Rd.	1.96	50%	\$ 6,023,631	\$ 3,011,816
	2-BB.3-B	M4D	Parkerville Rd. (1)	Springfield Dr. to Duncanville Rd.	0.85	50%	\$ 4,830,000	\$ 2,415,000
	3-C	M4D	Parkerville Rd. (2)	Duncanville Rd. to E. City Limits	0.53	50%	\$ 2,788,000	\$ 1,394,000
	3-D	M4D	Cedar Hill Rd. S.	US 67 NBFR to Mt. Lebanon Rd.	1.01	100%	\$ 5,709,000	\$ 5,709,000
	3-E	M4D	Tar Rd. (1)	Mt. Lebanon Rd. to Rocky Acres Rd.	0.6	100%	\$ 3,149,000	\$ 3,149,000
	3-F	M4D	Tar Rd. (2)	Rocky Acres Rd. to Bear Creek Rd.	0.42	100%	\$ 2,133,000	\$ 2,133,000
	3-G	P6D	Tar Rd. (3)	Bear Creek Rd. to 425' N. of S. City Limits	0.53	100%	\$ 3,674,000	\$ 3,674,000
	3-H	P6D	Tar Rd. (4)	425' N. of S. City Limits to S. City Limits	0.08	100%	\$ 572,000	\$ 572,000
	3-I	M4D	Clark Rd. S. (1)	Little Creek Rd. to Capricorn Dr.	0.45	100%	\$ 2,349,000	\$ 2,349,000
	3-J	M4D	Clark Rd. S. (2)	Capricorn Dr. to S. City Limits	1.46	100%	\$ 7,826,000	\$ 7,826,000
	3-K	M4D	Joe Wilson Rd. (5)	Parkerville Rd. to Bear Creek Rd.	1.00	100%	\$ 5,282,000	\$ 5,282,000
	3-L	M4D	Joe Wilson Rd. (6)	Bear Creek Rd. to S. City Limits	0.68	100%	\$ 3,568,000	\$ 3,568,000
	3-M	M4D	Joe Wilson Rd. (7)	S. City Limits to S. City Limits	0.42	50%	\$ 2,209,000	\$ 1,104,500
	3-N	P6D	Duncanville Rd. (4)	Parkerville Rd. to Bear Creek	0.77	100%	\$ 6,229,000	\$ 6,229,000
	3-O	M4D	Duncanville Rd. (5)	Bear Creek to S. City Limits	0.95	100%	\$ 5,757,000	\$ 5,757,000
	3-P	M4D	Duncanville Rd. (6)	S. City Limits to S. City Limits	0.11	50%	\$ 566,000	\$ 283,000
	3-Q	M4D	Cockrell Hill Rd.	N. City Limits to S. City Limits	0.68	50%	\$ 3,955,000	\$ 1,977,500
	3-R	M4U	Mt. Lebanon Rd. (1)	US 67 NBFR to Cedar Hill Rd. S.	0.6	100%	\$ 2,782,000	\$ 2,782,000
	3-S	M4D	Bear Creek Rd. (1)	US 67 NBFR to Tar Rd.	1.19	100%	\$ 8,985,000	\$ 8,985,000
	3-T	M4D	Bear Creek Rd. (2)	Tar Rd. to Future Bear Creek Rd. Curve	0.42	100%	\$ 2,229,000	\$ 2,229,000
	3-U	M4D	Bear Creek Rd. (3)	Future Bear Creek Rd. Curve to Joe Wilson Rd.	1.74	100%	\$ 9,648,000	\$ 9,648,000
	3-V	M4D	Bear Creek Rd. (4)	Joe Wilson Rd. to 1,915' E. of Joe Wilson Rd.	0.36	100%	\$ 1,914,000	\$ 1,914,000
	3-W	M4D	Bear Creek Rd. (5)	1,915' E. of Joe Wilson Rd. to Duncanville Rd.	0.69	100%	\$ 3,533,000	\$ 3,533,000
	3-X	C2U	Edgefield Way.	Future Bear Creek Rd. to 1,185' N. of Future Bear Creek Rd.	0.22	100%	\$ 829,000	\$ 829,000
	I-5		Signal Installation	Parkerville Rd. & Joe Wilson Rd.		50%	\$ 150,000	\$ 75,000
	I-6		Signal Installation	Parkerville Rd. & Duncanville Rd.		25%	\$ 150,000	\$ 37,500
	I-10		Signal Installation	Clark Rd. & Bear Creek Rd.		100%	\$ 150,000	\$ 150,000
	I-11		Signal Installation	Joe Wilson Rd. & Bear Creek Rd.		100%	\$ 150,000	\$ 150,000
	I-12		Signal Installation	Duncanville Rd. & Bear Creek Rd.		100%	\$ 150,000	\$ 150,000
	I-13		Interchange	Bear Creek Rd. & US 67 Interchange		50%	\$ 12,000,000	\$ 6,000,000
<b>Service Area Project Cost Subtotal</b>							<b>\$ 92,916,316</b>	
<b>2012 Roadway Impact Fee Update Cost Per Service Area</b>							<b>\$ 12,250</b>	
<b>Total Cost in SERVICE AREA 3</b>							<b>\$ 92,928,566</b>	



**Table 4D. – 10-Year Roadway Impact Fee Capital Improvement Program  
with Conceptual Level Project Cost Projections – Service Area 4**

Service Area	Proj. #	Class	Roadway	Limits	Length (mi)	% In Service Area	Total Project Cost	Cost in Service Area
SA 4	1-A, 4-A	P6D	Mansfield Rd. (1)	W. City Limits to Lakeridge Pkwy.	0.4	50%	\$ 3,544,000	\$ 1,772,000
	1-B, 4-B	M4D	Mansfield Rd. (2)	Lakeridge Pkwy. to 430' W. of W. Belt Line Rd.	1.73	50%	\$ 9,860,000	\$ 4,930,000
	1-C, 4-C	M4D	Belt Line Rd. (Phase IIA)	430' W. of W. Belt Line Rd. to Fire Station	0.74	50%	\$ 4,390,769	\$ 2,195,385
	1-D, 4-D	M4D	Belt Line Rd. (Phase I)	Fire Station to BNSF RR	0.5	50%	\$ 2,100,725	\$ 1,050,363
	4-E	M4D	Lake Ridge Pkwy. (1)	575' S. of Lakeview Dr. to Mt. Lebanon Rd.	2.56	100%	\$ 4,500,000	\$ 4,500,000
	4-F	M4D	Road A (2)	Belt Line Rd. to BNSF RR	0.57	100%	\$ 5,073,000	\$ 5,073,000
	4-G	M4U	Cedarview Dr. (2)	Valley View Dr. to 320' W. of Plateau St.	0.68	100%	\$ 3,387,000	\$ 3,387,000
	4-H	M4U	Cedarview Dr. (3)	320' W. of Plateau St. to BNSF RR	0.44	100%	\$ 2,046,000	\$ 2,046,000
	4-I	M4U	Texas Plume Rd.	Lake Ridge Pkwy. To Mt. Lebanon Rd.	1.35	100%	\$ 6,227,000	\$ 6,227,000
	4-J	M4U	Mt. Lebanon Rd. (2)	US 67 SBFR to Texas Plume Rd.	0.75	100%	\$ 3,436,000	\$ 3,436,000
	4-K	M4U	Mt. Lebanon Rd. (3)	Texas Plume Rd. to S. City Limits	1.24	100%	\$ 5,558,000	\$ 5,558,000
	4-L	M4U	Mt. Lebanon Rd. (4)	S. City Limits to S. City Limits	0.21	50%	\$ 956,000	\$ 478,000
	I-1		Signal Installation	Mansfield Rd. & Lake Ridge Pkwy.		50%	\$ 150,000	\$ 75,000
	I-2		Signal Installation	Mansfield Rd. & Road A		50%	\$ 150,000	\$ 75,000
I-13		Interchange	Bear Creek Rd. & US 67 Interchange		50%	\$ 12,000,000	\$ 6,000,000	
I-14		Signal Installation	Lake Ridge Pkwy. & Prairie View Blvd.		100%	\$ 150,000	\$ 150,000	
<b>Service Area Project Cost Subtotal</b>							<b>\$ 46,952,747</b>	
<b>2012 Roadway Impact Fee Update Cost Per Service Area</b>							<b>\$ 12,250</b>	
<b>Total Cost in SERVICE AREA 4</b>							<b>\$ 46,964,997</b>	

**Notes:**

- a. The planning level cost projections have been developed for Impact Fee calculations only and should not be used for any future Roadway Impact Fee Capital Improvement Programs within the City of Cedar Hill.
- b. The planning level cost projections shall not supersede the City's design standards or the determination of the City Engineer for a specific project.
- c. The project cost total within each Service Area may differ from the total shown in the Summary sheets provided in Appendix A to the City due to some projects that are split between multiple service areas.

**E. SERVICE UNIT CALCULATION**

The basic service unit for the computation of the City of Cedar Hill's roadway impact fees is the vehicle-mile of travel during the afternoon peak-hour. To determine the cost per service unit, it is necessary to project the growth in vehicle-miles of travel for the service area for the ten-year period.

The growth in vehicle-miles from 2012 to 2022 is based upon projected changes in residential and non-residential growth for the period. In order to determine this growth, baseline estimates of population, basic square feet, service square feet, and retail square feet for 2012 were made by the City, along with projections for each of these demographic statistics through 2022. **Tables 1A and 1B** detail the growth estimates used for impact fee determination.

The residential and non-residential statistics in the Land Use Assumptions (see **Section III.A**) provide the "independent variables" that are used to calculate the existing (2012) and projected (2022) transportation service units used to establish the roadway impact fee maximum rates within each service area. The roadway demand service units (vehicle-miles) for each service area are the sum of the vehicle-miles "generated" by each category of land use in the service area.

For the purpose of impact fees, all developed and developable land is categorized as either residential or non-residential. For residential land uses, the existing and projected population is converted to dwelling units. The number of dwelling units in each service area is multiplied by a *transportation demand factor* to compute the vehicle-miles of travel that occur during the afternoon peak hour. This factor computes the average amount of demand caused by the



residential land uses in the service area. The *transportation demand factor* is discussed in more detail below.

For non-residential land uses, the process is similar. The Land Use Assumptions provide the existing and projected amount of building square footages for three (3) categories of non-residential land uses– basic, service, and retail. These categories correspond to an aggregation of other specific land use categories based on the North American Industrial Classification System (NAICS).

Building square footage is the most common independent variable for the estimation of non-residential trips in the *Institute of Transportation Engineers (ITE) Trip Generation Manual, 8<sup>th</sup> Edition*. This statistic is more appropriate than the number of employees because building square footage is tied more closely to trip generation and is known at the time of application for any development or development modification that would require the assessment of an impact fee.

The existing and projected Land Use Assumptions for the dwelling units and the square footage of basic, service, and retail land uses provide the basis for the projected increase in vehicle-miles of travel. As noted earlier, a *transportation demand factor* is applied to these values and then summed to calculate the total peak hour vehicle-miles of demand for each service area.

The *transportation demand factors* are aggregate rates derived from two sources – the *ITE Trip Generation Manual, 8<sup>th</sup> Edition* and the regional Origin-Destination Travel Survey performed by North Central Texas Council of Governments (NCTCOG) and the National Household Travel Survey (NHTS). The *ITE Trip Generation Manual, 8<sup>th</sup> Edition* provides the number of trips that are produced or attracted to the land use for each dwelling unit, square foot of building, or other corresponding unit. For the retail category of land uses, the rate is adjusted to account for the fact that a percentage of retail trips are made by people who would otherwise be traveling past that particular establishment anyway, such as a trip between work and home. These trips are called pass-by trips, and since the travel demand is accounted for in the land use calculations relative to the primary trip, it is necessary to discount the retail rate to avoid double counting trips.

The next component of the *transportation demand factor* accounts for the length of each trip. The average trip length for each category is based on the region-wide travel characteristics survey conducted by the NCTCOG and the NHTS.

The computation of the *transportation demand factor* is detailed in the following equation:

$$TDF = T * (1 - P_b) * L_{max}$$

$$\text{where... } L_{max} = \min(L * OD \text{ or } SA_L)$$

Variables:

- TDF = Transportation Demand Factor,
- T = Trip Rate (peak hour trips / unit),
- P<sub>b</sub> = Pass-By Discount (% of trips),
- L<sub>max</sub> = Maximum Trip Length (miles),
- L = Average Trip Length (miles), and
- OD = Origin-Destination Reduction (50%)
- SA<sub>L</sub> = Max Service Area Trip Length (see **Table 5**)



For land uses which are characterized by longer average trip lengths (primarily residential uses), the maximum trip length has been limited to a length based on the nature of the roadway network within the service area, along with consideration of the existing City boundaries. Chapter 395 of the Texas Local Government Code allows for a service area diameter of six (6) miles, however, the service areas within the City of Cedar Hill are more closely approximated with a four (4) mile diameter.

The adjustment made to the average trip length statistic in the computation of the maximum trip length is the origin-destination reduction. This adjustment is made because the roadway impact fee is charged to both the origin and destination end of the trip. For example, the impact fee methodology will account for a trip from home to work within the City of Cedar Hill to both residential and non-residential land uses. To avoid counting these trips as both residential and non-residential trips, a 50% origin-destination (OD) reduction factor is applied. Therefore, only half of the trip length is assessed to each land use.

**Table 5** shows the derivation of the *Transportation Demand Factor* for the residential land uses and the three (3) non-residential land uses. The values utilized for all variables shown in the *transportation demand factor* equation are also shown in the table.

**Table 5. Transportation Demand Factor Calculations**

Variable	Residential	Basic	Service	Retail
<b>T</b>	1.01	0.97	1.49	3.73
<b>P<sub>b</sub></b>	0%	0%	0%	34%
<b>L</b>	17.21	10.02	10.92	6.43
<b>L<sub>max</sub> *</b>	4.00	4.00	4.00	3.22
<b>TDF</b>	<b>4.04</b>	<b>3.88</b>	<b>5.96</b>	<b>7.92</b>

\* L<sub>max</sub> is less than 4 miles for retail land uses; therefore this lower trip length is used for calculating the TDF for non-residential land uses; SA<sub>L</sub> = 4.0 miles

The application of the demographic projections and the *transportation demand factors* are presented in the 10-Year Growth Projections in **Table 6**. This table shows the total vehicle-miles by service area for the years 2012 and 2022. These estimates and projections lead to the vehicle-miles of travel for both 2012 and 2022.



**Table 6. 10-Year Growth Projections**

Year 2012		RESIDENTIAL VEHICLE-MILES		SQUARE FEET <sup>4</sup>			TRANS. DEMAND FACTOR <sup>5</sup>			NON-RESIDENTIAL VEHICLE-MILES <sup>6</sup>			TOTAL
SERVICE AREA	DWELLING UNITS <sup>1</sup>	Trip Rate TDF <sup>2</sup>	VEHICLE MILES <sup>3</sup>	BASIC	SERVICE	RETAIL	BASIC <sup>6</sup>	SERVICE <sup>7</sup>	RETAIL <sup>8</sup>	BASIC	SERVICE	RETAIL	VEHICLE MILES <sup>10</sup>
1	3,606	1.01	14,568	81,000	278,950	495,000	0.97	1.49	3.73	314	1,663	3,921	20,466
2	7,056	4.04	28,506	511,000	957,950	3,473,000	3.88	5.96	7.92	1,983	5,709	27,510	63,708
3	3,178		12,839	2,094,000	299,250	191,500				8,125	1,784	1,517	24,265
4	1,829		7,389	670,000	225,750	552,500				2,600	1,345	4,376	15,710
<b>Totals</b>	<b>15,669</b>		<b>63,303</b>	<b>3,356,000</b>	<b>1,761,900</b>	<b>4,712,000</b>				<b>13,022</b>	<b>10,501</b>	<b>37,324</b>	<b>124,150</b>

Year 2022		RESIDENTIAL VEHICLE-MILES		SQUARE FEET <sup>4</sup>			TRANS. DEMAND FACTOR <sup>5</sup>			NON-RESIDENTIAL VEHICLE-MILES <sup>6</sup>			TOTAL
SERVICE AREA	DWELLING UNITS <sup>1</sup>	Trip Rate TDF <sup>2</sup>	VEHICLE MILES <sup>3</sup>	BASIC	SERVICE	RETAIL	BASIC <sup>6</sup>	SERVICE <sup>7</sup>	RETAIL <sup>8</sup>	BASIC	SERVICE	RETAIL	VEHICLE MILES <sup>10</sup>
1	4,066	1.01	16,427	93,000	399,350	741,000	0.97	1.49	3.73	361	2,380	5,870	25,038
2	8,448	4.04	34,130	1,503,000	1,075,900	4,014,500	3.88	5.96	7.92	5,832	6,412	31,800	78,174
3	3,964		16,015	3,881,000	434,350	247,000				15,058	2,589	1,957	35,619
4	2,740		11,070	974,000	273,350	874,500				3,779	1,629	6,927	23,405
<b>Totals</b>	<b>19,218</b>		<b>77,641</b>	<b>6,451,000</b>	<b>2,182,950</b>	<b>5,877,000</b>				<b>25,030</b>	<b>13,010</b>	<b>46,554</b>	<b>162,235</b>

**VEHICLE-MILES OF INCREASE<sup>11</sup> (2012 - 2022)**

SERVICE AREA	VEH-MILES
1	4,571
2	14,466
3	11,353
4	7,694

**Notes:**

- From City of Cedar Hill 2012 Land Use Assumptions for Water, Wastewater, and Roadway Impact Fees
- Transportation Demand Factor for each Service Area (from LUMMET) using Single Family Detached Housing land use and trip generation rate
- Calculated by multiplying TDF by the number of dwelling units
- From City of Cedar Hill 2012 Land Use Assumptions for Water, Wastewater, and Roadway Impact Fees
- Trip generation rate and Transportation Demand Factors from LUMMET for each land use
- 'Basic' corresponds to General Light Industrial land use and trip generation rate
- 'Service' corresponds to General Office land use and trip generation rate
- 'Retail' corresponds to Shopping Center land use and trip generation rate
- Calculated by multiplying Transportation Demand Factor by the number of thousand square feet for each land use
- Residential plus non-residential vehicle-mile totals for each Service Area
- Total Vehicle-Miles (2012) subtracted from Total Vehicle-Miles (2022)

## V. IMPACT FEE CALCULATIONS

### A. MAXIMUM ASSESSABLE ROADWAY IMPACT FEE PER SERVICE UNIT

This section presents the maximum assessable roadway impact fee rate calculated for each service area. The maximum assessable roadway impact fee is the sum of the eligible Impact Fee CIP costs for the service area divided by the growth in travel attributable to new development projected to occur within the 10-year period. A majority of the components of this calculation have been described and presented in previous sections of this report. The purpose of this section is to document the computation for each service area and to demonstrate that the guidelines provided by Chapter 395 of the Texas Local Government Code have been addressed. **Table 7** illustrates the computation of the maximum assessable impact fee computed for each service area. Each row in the table is numbered to simplify explanation of the calculation.

Line	Title	Description
<b>1</b>	<i>Total Vehicle-Miles of Capacity Added by the CIP</i>	The total number of vehicle-miles added to the service area based on the capacity, length, and number of lanes in each project (from <b>Appendix B – Roadway Impact Fee CIP Service Units of Supply</b> )

Each project identified in the Impact Fee CIP will add a certain amount of capacity to the City's roadway network based on its length and classification. This line displays the total amount added within each service area.

<b>2</b>	<i>Total Vehicle-Miles of Existing Demand</i>	A measure of the amount of traffic currently using the roadway facilities upon which capacity is being added. (from <b>Appendix B – Roadway Impact Fee CIP Service Units of Supply</b> )
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A number of facilities identified in the Impact Fee CIP have traffic currently utilizing a portion of their existing capacity. This line displays the total amount of capacity along these facilities currently be used by existing traffic.

<b>3</b>	<i>Total Vehicle-Miles of Existing Deficiencies</i>	Number of vehicle-miles of travel that are not accommodated by the existing roadway system (from <b>Appendix C – Existing Roadway Facilities Inventory</b> )
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In order to ensure that existing deficiencies on the City's roadway network are not recoverable through impact fees, this line is based on the entire roadway network within the service area. Any roadway within the service area that is deficient – even those not identified on the Impact Fee CIP – will have these additional trips removed from the calculation.

<b>4</b>	<i>Net Amount of Vehicle-Miles of Capacity Added</i>	A measurement of the amount of vehicle-miles added by the CIP that will not be utilized by existing demand ( <b>Line 1 – Line 2 – Line 3</b> )
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This calculation identifies the portion of the Impact Fee CIP (in vehicle-miles) that may be recoverable through the collection of impact fees.



<b>5</b>	<i>Total Cost of the CIP within the Service Area</i>	The total cost of the projects within each service area (from <b>Tables 4A, 4B, 4C and 4D</b> : 10-Year Roadway Impact Fee Capital Improvement Program with Conceptual Level Cost Projections)
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This line simply identifies the total cost of all of the projects identified in each service area.

<b>6</b>	<i>Cost of Net Capacity Supplied</i>	The total CIP cost ( <b>Line 5</b> ) prorated by the ratio of Net Capacity Added ( <b>Line 4</b> ) to Total Capacity Added ( <b>Line 1</b> ). [ <b>(Line 4 / Line 1) * (Line 5)</b> ]
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Using the ratio of vehicle-miles added by the Impact Fee CIP available to serve future growth to the total vehicle-miles added, the total cost of the Impact Fee CIP is reduced to the amount available for future growth (i.e. excluding existing usage and deficiencies).

<b>7</b>	<i>Cost to Meet Existing Needs and Usage</i>	The difference between the Total Cost of the CIP ( <b>Line 5</b> ) and the Cost of the Net Capacity supplied ( <b>Line 6</b> ). ( <b>Line 5 – Line 6</b> )
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This line is provided for information purposes only – it is to present the portion of the total cost of the Impact Fee CIP that is required to meet existing demand.

<b>8</b>	<i>Total Vehicle-Miles of New Demand over Ten Years</i>	Based upon the growth projection provided in the <b>Land Use Assumptions</b> , an estimate of the number of new vehicle-miles within the service area over the next ten years. (from <b>Table 6</b> )
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This line presents the amount of growth (in vehicle-miles) projected to occur within each service area over the next ten years.

<b>9</b>	<i>Percent of Capacity Added Attributable to New Growth</i>	The result of dividing Total Vehicle-Miles of New Demand ( <b>Line 8</b> ) by the Net Amount of Capacity Added ( <b>Line 4</b> ), limited to 100% ( <b>Line 10</b> ). This calculation is required by Chapter 395 to ensure capacity added is attributable to new growth.
<b>10</b>	<i>Chapter 395 Check</i>	

In order to ensure that the vehicle-miles added by the Impact Fee CIP do not exceed the amount needed to accommodate growth beyond the ten-year window, a comparison of the two values is performed. If the amount of vehicle-miles added by the Impact Fee CIP exceeds the growth projected to occur in the next ten years, the Impact Fee CIP cost is reduced accordingly.

<b>11</b>	<i>Cost of Capacity Added Attributable to New Growth</i>	The result of multiplying the Cost of Net Capacity Added ( <b>Line 6</b> ) by the Percent of Capacity Added Attributable to New Growth, limited to 100% ( <b>Line 10</b> ).
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The value of the total Roadway Impact Fee CIP project costs (excluding financial costs) that may be recovered through impact fees. This line is determined considering the limitations to impact fees required by the Texas legislature.



## B. PLAN FOR AWARDING THE ROADWAY IMPACT FEE CREDIT

Chapter 395 of the Texas Local Government Code requires the Roadway Impact Fee Capital Improvement Program for Roadway Impact Fees contain specific enumeration of a plan for awarding the impact fee credit. Section 395.014 of the Code states:

- “(7) A plan for awarding:
- (A) a credit for the portion of ad valorem tax and utility service revenues generated by new service units during the program period that is used for the payment of improvements, including the payment of debt, that are included in the Roadway Impact Fee Capital Improvement Program; or
  - (B) In the alternative, a credit equal to 50 percent of the total projected cost of implementing the Roadway Impact Fee Capital Improvement Program...”

The following table summarizes the portions of **Table 7** that utilize this credit calculation, based on awarding a 50 percent credit.

Line	Title	Description
12	<i>Credit</i>	A credit equal to 50% of the total projected cost, as per section 395.014 of the Texas Local Government Code.
13	<i>Maximum Assessable Fee Per Service Unit</i>	Found by dividing the Recoverable Cost of the CIP attributable to growth ( <b>Line 12</b> ) by the Total Vehicle-Miles of New Demand Over Ten Years ( <b>Line 8</b> ). ( <b>Line 12 / Line 8</b> )



**Table 7. Maximum Assessable Fee Per Service Unit by Service Area**

SERVICE AREA:		1	2	3	4
1	TOTAL VEH-MI OF CAPACITY ADDED BY THE CIP (FROM ROADWAY IMPACT FEE CIP SERVICE UNITS OF SUPPLY, <b>APPENDIX B</b> )	14,660	38,184	39,099	17,124
2	TOTAL VEH-MI OF EXISTING DEMAND (FROM ROADWAY IMPACT FEE CIP SERVICE UNITS OF SUPPLY, <b>APPENDIX B</b> )	5,646	15,694	7,161	2,237
3	TOTAL VEH-MI OF EXISTING DEFICIENCIES (FROM EXISTING ROADWAY FACILITIES INVENTORY, <b>APPENDIX C</b> )	1,158	6,932	1,989	27
4	NET AMOUNT OF VEH-MI OF CAPACITY ADDED (LINE 1 - LINE 2 - LINE 3)	7,856	15,558	29,949	14,860
5	TOTAL COST OF THE CIP WITHIN SERVICE AREA (FROM <b>TABLES 4A, 4B, 4C</b> and <b>4D</b> )	\$ 39,361,763	\$ 71,732,650	\$ 92,928,566	\$ 46,964,997
6	COST OF NET CAPACITY SUPPLIED (LINE 4 / LINE 1) * (LINE 5)	\$ 21,093,179	\$ 29,227,335	\$ 71,181,299	\$ 40,755,656
7	COST TO MEET EXISTING NEEDS AND USAGE (LINE 5 - LINE 6)	\$ 18,268,584	\$ 42,505,315	\$ 21,747,267	\$ 6,209,341
8	TOTAL VEH-MI OF NEW DEMAND OVER TEN YEARS (FROM <b>TABLE 6</b> and <b>Land Use Assumptions</b> )	4,571	14,466	11,353	7,694
9	PERCENT OF CAPACITY ADDED ATTRIBUTABLE TO GROWTH (LINE 8 / LINE 4)	58.1%	92.9%	37.9%	51.7%
10	IF LINE 8 > LINE 4, REDUCE LINE 9 TO 100%, OTHERWISE NO CHANGE	58.1%	92.9%	37.9%	51.7%
11	COST OF CAPACITY ADDED ATTRIBUTABLE TO GROWTH (LINE 6 * LINE 10)	\$ 12,255,137	\$ 27,152,194	\$ 26,977,712	\$ 21,070,674
12	CREDIT (50% OF LINE 11)	\$ 6,127,569	\$ 13,576,097	\$ 13,488,856	\$ 10,535,337
13	MAX ASSESSABLE FEE PER SERVICE UNIT (\$ PER VEH-MI) (LINE 12 / LINE 8)	\$ 1,340	\$ 939	\$ 1,188	\$ 1,369



### C. SERVICE UNIT DEMAND PER UNIT OF DEVELOPMENT

The roadway impact fee is determined by multiplying the impact fee rate by the number of service units projected for the proposed development. For this purpose, the City of Cedar Hill utilizes the Land Use/Vehicle-Mile Equivalency Table (LUVMET), presented in **Table 8**. This table lists the predominant land uses that may occur within the City of Cedar Hill. For each land use, the development unit that defines the development's magnitude with respect to transportation demand is shown. Although every possible use cannot be anticipated, the majority of uses are found in this table. If the exact use is not listed, one similar in trip-making characteristics can serve as a reasonable proxy. The individual land uses are grouped into categories, such as residential, office, commercial, industrial, and institutional.

The trip rates presented for each land use is a fundamental component of the LUVMET. The trip rate is the average number of trips generated during the afternoon peak hour by each land use per development unit. The next column, if applicable to the land use, presents the number of trips to and from certain land uses reduced by pass-by trips, as previously discussed.

The source of the trip generation and pass-by statistics is the *ITE Trip Generation Manual, 8<sup>th</sup> Edition*, the latest edition for trip generation data. This manual utilizes trip generation studies for a variety of land uses throughout the United States, and is the standard used by traffic engineers and transportation planners for traffic impact analysis, site design, and transportation planning.

To convert vehicle trips to vehicle-miles, it is necessary to multiply trips by trip length. The adjusted trip length values are based on the *Regional Origin-Destination Travel Survey* regional Origin-Destination Travel Survey performed by the NCTCOG and the NHTS. The other adjustment to trip length is the 50% origin-destination reduction to avoid double counting of trips. At this stage, another important aspect of the state law is applied – the limit on transportation service unit demand. If the adjusted trip length is above the maximum trip length allowed within the service area, the maximum trip length used for calculation is reduced to the corresponding value. This reduction, as discussed previously, limits the maximum trip length to the approximate size of the service areas.

The remaining column in the LUVMET shows the vehicle-miles per development unit. This number is the product of the trip rate and the maximum trip length. This number, previously referred to as the *Transportation Demand Factor*, is used in the impact fee estimate to compute the number of service units consumed by each land use application. The number of service units is multiplied by the impact fee rate (established by City ordinance) in order to determine the impact fee for a development.



**Table 8. Land Use / Vehicle-Mile Equivalency Table**

Land Use Category	ITE Land Use Code	Development Unit	Trip Gen Rate (PM)	Pass-by Rate	Pass-by Source	Trip Rate	NCTCOG Trip Length (mi)	Adj. For O-D	Adj. Trip Length (mi)	Max Trip Length (mi)	Veh-Mi Per Dev-Unit
<b>PORT AND TERMINAL</b>											
Truck Terminal	030	Acre	6.55			6.55	10.02	50%	5.01	4.00	26.20
<b>INDUSTRIAL</b>											
General Light Industrial	110	1,000 SF GFA	0.97			0.97	10.02	50%	5.01	4.00	3.88
General Heavy Industrial	120	1,000 SF GFA	0.68			0.68	10.02	50%	5.01	4.00	2.72
Industrial Park	130	1,000 SF GFA	0.86			0.86	10.02	50%	5.01	4.00	3.44
Warehousing	150	1,000 SF GFA	0.32			0.32	10.83	50%	5.42	4.00	1.28
Mini-Warehouse	151	1,000 SF GFA	0.26			0.26	10.83	50%	5.42	4.00	1.04
<b>RESIDENTIAL</b>											
Single-Family Detached Housing	210	Dwelling Unit	1.01			1.01	17.21	50%	8.61	4.00	4.04
Apartment/Multi-family	220	Dwelling Unit	0.62			0.62	17.21	50%	8.61	4.00	2.48
Residential Condominium/Townhome	230	Dwelling Unit	0.52			0.52	17.21	50%	8.61	4.00	2.08
Mobile Home Park / Manufactured Housing	240	Dwelling Unit	0.59			0.59	17.21	50%	8.61	4.00	2.36
Senior Adult Housing-Detached	251	Dwelling Unit	0.27			0.27	17.21	50%	8.61	4.00	1.08
Senior Adult Housing-Attached	252	Dwelling Unit	0.16			0.16	17.21	50%	8.61	4.00	0.64
Assisted Living	254	Beds	0.22			0.22	17.21	50%	8.61	4.00	0.88
<b>LODGING</b>											
Hotel	310	Room	0.59			0.59	6.43	50%	3.22	3.22	1.90
Motel / Other Lodging Facilities	320	Room	0.47			0.47	6.43	50%	3.22	3.22	1.51
<b>RECREATIONAL</b>											
Golf Driving Range	432	Tee	1.25			1.25	6.43	50%	3.22	3.22	4.03
Golf Course	430	Acre	0.30			0.30	6.43	50%	3.22	3.22	0.97
Recreational Community Center	495	1,000 SF GFA	1.45			1.45	6.43	50%	3.22	3.22	4.67
Ice Skating Rink	465	1,000 SF GFA	2.36			2.36	6.43	50%	3.22	3.22	7.60
Miniature Golf Course	431	Hole	0.33			0.33	6.43	50%	3.22	3.22	1.06
Multiplex/Movie Theater	445	Screens	13.64			13.64	6.43	50%	3.22	3.22	43.92
Racquet / Tennis Club	491	Court	3.35			3.35	6.43	50%	3.22	3.22	10.79
<b>INSTITUTIONAL</b>											
Church	560	1,000 SF GFA	0.55			0.55	4.20	50%	2.10	2.10	1.16
Day Care Center	565	1,000 SF GFA	12.46	44%	B	6.98	4.20	50%	2.10	2.10	14.66
Primary/Middle School (1-8)	522	Students	0.16			0.16	4.20	50%	2.10	2.10	0.34
High School	530	Students	0.13			0.13	4.20	50%	2.10	2.10	0.27
Junior / Community College	540	Students	0.12			0.12	4.20	50%	2.10	2.10	0.25
University / College	550	Students	0.21			0.21	4.20	50%	2.10	2.10	0.44
<b>MEDICAL</b>											
Clinic	630	1,000 SF GFA	5.18			5.18	7.55	50%	3.78	3.78	19.58
Hospital	610	Beds	1.31			1.31	7.55	50%	3.78	3.78	4.95
Nursing Home	620	Beds	0.22			0.22	7.55	50%	3.78	3.78	0.83
Animal Hospital/Veterinary Clinic	640	1,000 SF GFA	4.72	30%	B	3.30	7.55	50%	3.78	3.78	12.47
<b>OFFICE</b>											
Corporate Headquarters Building	714	1,000 SF GFA	1.40			1.40	10.92	50%	5.46	4.00	5.60
General Office Building	710	1,000 SF GFA	1.49			1.49	10.92	50%	5.46	4.00	5.96
Medical-Dental Office Building	720	1,000 SF GFA	3.46			3.46	10.92	50%	5.46	4.00	13.84
Single Tenant Office Building	715	1,000 SF GFA	1.73			1.73	10.92	50%	5.46	4.00	6.92
Office Park	750	1,000 SF GFA	1.48			1.48	10.92	50%	5.46	4.00	5.92
<b>COMMERCIAL</b>											
<b>Automobile Related</b>											
Automobile Care Center	942	1,000 SF Occ. GLA	3.38	40%	B	2.03	6.43	50%	3.22	3.22	6.54
Automobile Parts Sales	843	1,000 SF GFA	5.98	43%	A	3.41	6.43	50%	3.22	3.22	10.98
Casoline/Service Station	944	Vehicle Fueling Position	13.87	42%	A	8.04	1.20	50%	0.60	0.60	4.82
Casoline/Service Station w/ Conv Market	945	Vehicle Fueling Position	13.38	56%	B	5.89	1.20	50%	0.60	0.60	3.53
Casoline/Service Station w/ Conv Market and C	946	Vehicle Fueling Position	13.94	56%	A	6.13	1.20	50%	0.60	0.60	3.68
New Car Sales	841	1,000 SF GFA	2.59	20%	B	2.07	6.43	50%	3.22	3.22	6.67
Quick Lubrication Vehicle Shop	941	Service Positions	5.19	40%	B	3.11	6.43	50%	3.22	3.22	10.01
Self-Service Car Wash	947	Stall	5.54	40%	B	3.32	1.20	50%	0.60	0.60	1.99
Tire Store	848	1,000 SF GFA	4.15	28%	A	2.99	6.43	50%	3.22	3.22	9.63
<b>Dining</b>											
Fast Food Restaurant with Drive-Thru Window	934	1,000 SF GFA	33.84	50%	A	16.92	4.79	50%	2.40	2.40	40.61
Fast Food Restaurant without Drive-Thru Window	933	1,000 SF GFA	26.15	50%	B	13.08	4.79	50%	2.40	2.40	31.39
High Turnover (Sit-Down) Restaurant	932	1,000 SF GFA	11.15	43%	A	6.36	4.79	50%	2.40	2.40	15.26
Quality Restaurant	931	1,000 SF GFA	7.49	44%	A	4.19	4.79	50%	2.40	2.40	10.06
Coffee/Donut Shop with Drive-Thru Window	937	1,000 SF GFA	42.93	70%	A	12.88	4.79	50%	2.40	2.40	30.91
<b>Other Retail</b>											
Free-Standing Discount Store	815	1,000 SF GFA	5.00	30%	C	3.50	6.43	50%	3.22	3.22	11.27
Nursery (Garden Center)	817	1,000 SF GFA	3.80	30%	B	2.66	6.43	50%	3.22	3.22	8.57
Home Improvement Superstore	862	1,000 SF GFA	2.37	48%	A	1.23	6.43	50%	3.22	3.22	3.96
Pharmacy/Drugstore w/o Drive-Thru Window	880	1,000 SF GFA	8.42	53%	A	3.96	6.43	50%	3.22	3.22	12.75
Pharmacy/Drugstore w/ Drive-Thru Window	881	1,000 SF GFA	10.35	49%	A	5.28	6.43	50%	3.22	3.22	17.00
Shopping Center	820	1,000 SF GLA	3.73	34%	A	2.46	6.43	50%	3.22	3.22	7.92
Supermarket	850	1,000 SF GFA	10.50	36%	A	6.72	6.43	50%	3.22	3.22	21.64
Toy/Children's Superstore	864	1,000 SF GFA	4.99	30%	B	3.49	6.43	50%	3.22	3.22	11.24
Department Store	875	1,000 SF GFA	1.78	30%	B	1.25	6.43	50%	3.22	3.22	4.03
Video Rental Store	896	1,000 SF GFA	13.60	50%	B	6.80	6.43	50%	3.22	3.22	21.90
<b>SERVICES</b>											
Walk-In Bank	911	1,000 SF GFA	12.13	40%	B	7.28	3.39	50%	1.70	1.70	12.38
Drive-In Bank	912	Drive-in Lanes	27.41	47%	A	14.53	3.39	50%	1.70	1.70	24.70
Hair Salon	918	1,000 SF GLA	1.45	30%	B	1.02	3.39	50%	1.70	1.70	1.73

**Key to Sources of Pass-by Rates:**

- A: ITE Trip Generation Handbook 2nd Edition (June 2004)
- B: Estimated by Kimley-Horn based on ITE rates for similar categories
- C: ITE rate adjusted upward by KHA based on logical relationship to other categories



## VI. SAMPLE CALCULATIONS

The following section details two (2) examples of maximum assessable roadway impact fee calculations.

### Example 1:

- **Development Type - One (1) Unit of Single-Family Housing in Service Area 1**

<b>Roadway Impact Fee Calculation Steps – Example 1</b>	
<b>Step 1</b>	<b>Determine Development Unit and Vehicle-Miles Per Development Unit</b>
	<i>From Table 8 [Land Use – Vehicle-mile Equivalency Table]</i> Development Type: 1 Dwelling Unit of Single-Family Detached Housing Number of Development Units: 1 Dwelling Unit Veh-Mi Per Development Unit: 4.04
<b>Step 2</b>	<b>Determine Maximum Assessable Impact Fee Per Service Unit</b>
	<i>From Table 7, Line 13 [Maximum Assessable Fee Per Service Unit]</i> Service Area 1: \$1,340
<b>Step 3</b>	<b>Determine Maximum Assessable Impact Fee</b>
	Impact Fee = # of Development Units * Veh-Mi Per Dev Unit * Max. Fee Per Service Unit
	Impact Fee = 1 * 4.04 * \$1,340  Maximum Assessable Impact Fee = \$5,413.60

### Example 2:

- **Development Type – 125,000 square foot Home Improvement Superstore in Service Area 2**

<b>Roadway Impact Fee Calculation Steps – Example 2</b>	
<b>Step 1</b>	<b>Determine Development Unit and Vehicle-Miles Per Development Unit</b>
	<i>From Table 8 [Land Use – Vehicle-mile Equivalency Table]</i> Development Type: 125,000 square feet of Home Improvement Superstore Development Unit: 1,000 square feet of Gross Floor Area Veh-Mi Per Development Unit: 3.96
<b>Step 2</b>	<b>Determine Maximum Assessable Impact Fee Per Service Unit</b>
	<i>From Table 7, Line 13 [Maximum Assessable Fee Per Service Unit]</i> Service Area 2: \$939
<b>Step 3</b>	<b>Determine Maximum Assessable Impact Fee</b>
	Impact Fee = # of Development Units * Veh-Mi Per Dev Unit * Max. Fee Per Service Unit
	Impact Fee = 125 * 3.96 * \$939  Maximum Assessable Impact Fee = \$464,805.00



## VII. CONCLUSION

The City of Cedar Hill has established a process to implement the assessment and collection of roadway impact fees through the adoption of an impact fee ordinance that is consistent with Chapter 395 of the Texas Local Government Code.

This report establishes the maximum allowable roadway impact fee that could be assessed by the City of Cedar Hill within four (4) service areas. The maximum assessable roadway impact fees calculated in this report are presented below:

SERVICE AREA:		1	2	3	4
13	MAX ASSESSABLE FEE PER SERVICE UNIT (\$ PER VEH-MI) (LINE 12 / LINE 8)	\$ 1,340	\$ 939	\$ 1,188	\$ 1,369

This document serves as a guide to the assessment of roadway impact fees pertaining to future development and the City’s need for roadway improvements to accommodate that growth. Following the public hearing process, the City Council may establish an amount to be assessed (if any) up to the maximum established within this report and update the Roadway Impact Fee Ordinance accordingly.

In conclusion, it is our opinion that the data and methodology used in this study are appropriate and consistent with Chapter 395 of the Texas Local Government Code. Furthermore, the Land Use Assumptions and the proposed Roadway Impact Fee CIP are appropriately incorporated into the process.



## **APPENDICES**

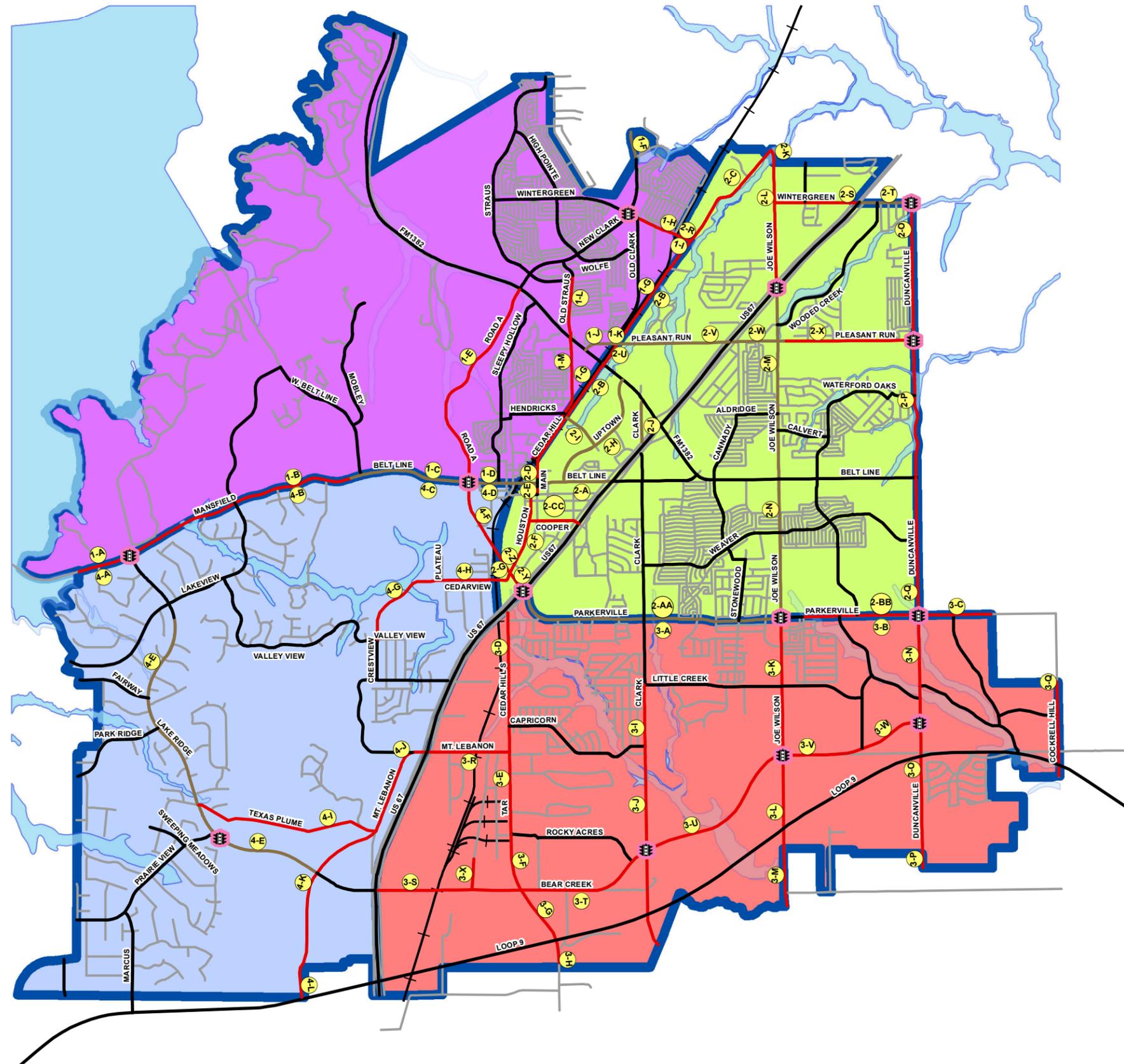
- A. ROADWAY IMPACT FEE CIP AND CONCEPTUAL LEVEL PROJECT COST PROJECTIONS**
- B. ROADWAY IMPACT FEE CIP SERVICE UNITS OF SUPPLY**
- C. EXISTING ROADWAY FACILITIES INVENTORY**



Kimley-Horn  
and Associates, Inc.



## **Appendix A – Roadway Impact Fee CIP and Conceptual Level Project Cost Projections**



### Legend

	RIF Eligible Projects		Service Area 1
	RIF Eligible Completed Projects		Service Area 2
	Other Thoroughfare Facilities		Service Area 3
	Traffic Signal Projects		Service Area 4
	Local Roads		City Limits
	Rail		

**CEDAR HILL**

**Appendix A:  
Citywide Exhibit  
Capital Improvement Plan**

4,000 2,000 0 4,000

Feet

N

Kimley-Horn and Associates, Inc.

**August 2012**

## City of Cedar Hill - 2012 Roadway Impact Fee Update

Capital Improvement Plan for Roadway Impact Fees  
Summary of Conceptual Level Project Cost Projections

### Roadway Improvements - Service Area 1

#	Class	Project	Limits	Project Cost
1-A, 4-A	P6D	Mansfield Rd. (1)	W. City Limits to Lakeridge Pkwy.	\$ 3,544,000
1-B, 4-B	M4D	Mansfield Rd. (2)	Lakeridge Pkwy. to 430' W. of W. Belt Line Rd.	\$ 9,860,000
1-C, 4-C	M4D	Belt Line Rd. (Phase IIA)	430' W. of W. Belt Line Rd. to Fire Station	\$ 4,390,769
1-D, 4-D	M4D	Belt Line Rd. (Phase I)	Fire Station to BNSF RR	\$ 2,100,725
1-E	M4D	Road A	FM 1382 to Belt Line Rd.	\$ 9,708,000
1-F	P6D	New Clark Rd.	N. City Limits to 430' N. of Couch Rd.	\$ 472,362
1-G,2-B	M4D	Cedar Hill Rd. (1)	Main St. to Wintergreen Rd.	\$ 10,244,000
1-H	M4D	Wintergreen Rd. (1)	New Clark Rd. to BNSF RR	\$ 2,020,000
1-I,2-R	M4D	Wintergreen Rd. (2)	BNSF RR to Cedar Hill Rd.	\$ 600,000
1-J	P6D	Pleasant Run Rd. (1)	FM 1382 to BNSF RR	\$ 4,844,953
1-K,2-U	P6D	Pleasant Run Rd. (2)	BNSF RR to Cedar Hill Rd.	\$ 1,144,632
1-L	C4U	Old Strauss Rd.	Wolfe St. to FM 1382	\$ 1,824,000
1-M	C4U	Strauss Rd.	FM 1382 to Wylie St.	\$ 3,902,000
<b>Signal Installation</b>				
I-1		Signal Installation	Mansfield Rd. & Lake Ridge Pkwy.	\$ 150,000
I-2		Signal Installation	Mansfield Rd. & Road A	\$ 150,000
I-3		Signal Installation	New Clark Rd. & Wintergreen Rd.	\$ 150,000
<b>TOTAL</b>				<b>\$ 55,105,441</b>

\*Total may be higher than presented in Table 4.A (10-Year Capital Improvement Plan for Roadway Impact Fees with Conceptual Level Cost Opinions - Service Area 1) because the cost of some projects are shared between multiple jurisdictions.

**NOTE:** The planning level cost projections listed in this appendix have been developed for Impact Fee calculations only and should not be used for any future Capital Improvement Planning within the City of Cedar Hill.

The planning level cost projections shall not supersede the City's design standards contained within the Subdivision Ordinance or the determination of the City Engineer for a specific project.

**City of Cedar Hill**  
**2012 Roadway Impact Fee Update**  
**Conceptual Level Project Cost Projection**

Kimley-Horn and Associates, Inc.  
 updated: 5/16/2012

<b>Project Information:</b>		<b>Description:</b>	<b>Project No.</b>
<b>Name:</b>	Mansfield Rd. (1)	<b>This project consists of the reconstruction of a two-lane undivided facility to a six-lane divided principal arterial. The boundary between SA 1 and SA 4 is on the centerline of Mansfield Rd.</b>	<b>1-A, 4-A</b>
<b>Limits:</b>	W. City Limits to Lakeridge Pkwy.		
<b>Impact Fee Class:</b>	P6D		
<b>Ultimate Class:</b>	Principal Arterial		
<b>Length (lf):</b>	2,095		
<b>Service Area(s):</b>	1, 4		

<b>Roadway Construction Cost Projection</b>					
No.	Item Description	Quantity	Unit	Unit Price	Item Cost
106	Unclassified Street Excavation	8,846	cy	\$ 15.00	\$ 132,683
206	6" Lime Stabilization (with Lime @ 27#/sy)	17,458	sy	\$ 4.00	\$ 69,833
306	10" Concrete Pavement w/ 6" Curb	17,226	sy	\$ 45.00	\$ 775,150
406	4" Topsoil	6,983	sy	\$ 5.00	\$ 34,917
506	5' Concrete Sidewalk	20,950	sf	\$ 4.00	\$ 83,800
606	Turn Lanes and Median Openings	1,515	sy	\$ 50.00	\$ 75,726
<b>Paving Construction Cost Subtotal:</b>					<b>\$ 1,172,109</b>
<b>Major Construction Component Allowances**:</b>					
Item Description	Notes	Allowance	Item Cost		
√ Prep ROW		6%	\$	70,327	
√ Traffic Control	Construction Phase Traffic Control	5%	\$	58,605	
√ Pavement Markings/Markers		3%	\$	35,163	
√ Roadway Drainage	Standard Internal System	30%	\$	351,633	
√ Illumination		6%	\$	70,327	
√ Special Drainage Structures	None Anticipated	0%	\$	500,000	
√ Water	Minor Adjustments	6%	\$	70,327	
√ Sewer	Minor Adjustments	4%	\$	46,884	
√ Establish Turf / Erosion Control		3%	\$	35,163	
√ Basic Landscaping/Irrigation		3%	\$	35,163	
Other:		\$0	\$	-	
<b>**Allowances based on % of Paving Construction Cost Subtotal</b>					<b>Allowance Subtotal: \$ 1,273,592</b>
<b>Paving and Allowance Subtotal:</b>					<b>\$ 2,445,701</b>
<b>Construction Contingency: 15%</b>					<b>\$ 366,855</b>
<b>Construction Cost TOTAL:</b>					<b>\$ 2,813,000</b>

<b>Impact Fee Project Cost Summary</b>			
Item Description	Notes:	Allowance	Item Cost
<b>Construction:</b>		-	\$ 2,813,000
<b>Engineering/Survey/Testing:</b>		20%	\$ 562,600
<b>Mobilization</b>		6%	\$ 168,780
<b>Previous City contribution</b>			
<b>Other</b>			
<b>ROW/Easement Acquisition</b>	Not included		
<b>Impact Fee Project Cost TOTAL:</b>			<b>\$ 3,544,000</b>

**NOTE:** The planning level cost projections listed in this appendix have been developed for Impact Fee calculations only and should not be used for any future Capital Improvement Planning within the City of Cedar Hill.

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**City of Cedar Hill**  
**2012 Roadway Impact Fee Update**  
**Conceptual Level Project Cost Projection**

Kimley-Horn and Associates, Inc.  
 updated: 5/16/2012

<b>Project Information:</b>		<b>Description:</b>	<b>Project No.</b>
<b>Name:</b>	Mansfield Rd. (2)	<b>This project consists of the reconstruction of a two-lane undivided facility to a four-lane divided principal arterial. The boundary between SA 1 and SA 4 is on the centerline of Mansfield Rd.</b>	<b>1-B, 4-B</b>
<b>Limits:</b>	Lakeridge Pkwy. to 430' W. of W. Belt Line Rd.		
<b>Impact Fee Class:</b>	M4D		
<b>Ultimate Class:</b>	Principal Arterial		
<b>Length (lf):</b>	9,140		
<b>Service Area(s):</b>	1, 4		

<b>Roadway Construction Cost Projection</b>					
No.	Item Description	Quantity	Unit	Unit Price	Item Cost
103	Unclassified Street Excavation	26,404	cy	\$ 15.00	\$ 396,067
203	6" Lime Stabilization (with Lime @ 27#/sy)	51,793	sy	\$ 4.00	\$ 207,173
303	8" Concrete Pavement w/ 6" Curb	50,778	sy	\$ 46.00	\$ 2,335,778
403	4" Topsoil	32,498	sy	\$ 5.00	\$ 162,489
503	5' Concrete Sidewalk	91,400	sf	\$ 4.00	\$ 365,600
603	Turn Lanes and Median Openings	6,607	sy	\$ 50.00	\$ 330,373
<b>Paving Construction Cost Subtotal:</b>					<b>\$ 3,797,480</b>
<b>Major Construction Component Allowances**:</b>					
Item Description	Notes	Allowance	Item Cost		
√ Prep ROW		6%	\$	227,849	
√ Traffic Control	Construction Phase Traffic Control	5%	\$	189,874	
√ Pavement Markings/Markers		3%	\$	113,924	
√ Roadway Drainage	Standard Internal System	30%	\$	1,139,244	
√ Illumination		6%	\$	227,849	
√ Special Drainage Structures	None Anticipated	0%	\$	500,000	
√ Water	Minor Adjustments	6%	\$	227,849	
√ Sewer	Minor Adjustments	4%	\$	151,899	
√ Establish Turf / Erosion Control		3%	\$	113,924	
√ Basic Landscaping/Irrigation		3%	\$	113,924	
Other:		\$0	\$	-	
<b>**Allowances based on % of Paving Construction Cost Subtotal</b>					<b>Allowance Subtotal: \$ 3,006,337</b>
<b>Paving and Allowance Subtotal:</b>					<b>\$ 6,803,816</b>
<b>Construction Contingency:</b>					<b>15% \$ 1,020,572</b>
<b>Construction Cost TOTAL:</b>					<b>\$ 7,825,000</b>

<b>Impact Fee Project Cost Summary</b>			
Item Description	Notes:	Allowance	Item Cost
<b>Construction:</b>		-	\$ 7,825,000
<b>Engineering/Survey/Testing:</b>		20%	\$ 1,565,000
<b>Mobilization</b>		6%	\$ 469,500
<b>Previous City contribution</b>			
<b>Other</b>			
<b>ROW/Easement Acquisition</b>	Not included		
<b>Impact Fee Project Cost TOTAL:</b>			<b>\$ 9,860,000</b>

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**City of Cedar Hill**  
**2012 Roadway Impact Fee Update**  
**Conceptual Level Project Cost Projection**

Kimley-Horn and Associates, Inc.  
 updated: 5/16/2012

<b>Project Information:</b>		<b>Description:</b>	<b>Project No.</b>
<b>Name:</b>	Belt Line Rd. (Phase IIA)	<p><b>This project consisted of the reconstruction from a two-lane roadway to a four-lane divided minor arterial. The boundary between SA 1 and SA 4 is on the centerline of Belt Line Rd. This project sheet represents the actual cost that the City of Cedar Hill incurred to construct this project.</b></p>	<b>1-C, 4-C</b>
<b>Limits:</b>	430' W. of W. Belt Line Rd. to Fire Station		
<b>Impact Fee Class:</b>	M4D		
<b>Ultimate Class:</b>	Minor Arterial		
<b>Length (lf):</b>	3,905		
<b>Service Area(s):</b>	1, 4		

<b>Impact Fee Project Cost Summary</b>			
<b>Item Description</b>	<b>Notes:</b>	<b>Allowance</b>	<b>Item Cost</b>
<b>City Contribution to Construction Cost:</b>		-	
<b>Engineering/Survey/Testing</b>			
<b>Other</b>			
<b>Impact Fee Project Cost TOTAL:</b>			<b>\$ 4,390,769</b>

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**City of Cedar Hill**  
**2012 Roadway Impact Fee Update**  
**Conceptual Level Project Cost Projection**

Kimley-Horn and Associates, Inc.  
 updated: 5/16/2012

<b>Project Information:</b>		<b>Description:</b>	<b>Project No.</b>	<b>1-D, 4-D</b>
<b>Name:</b>	Belt Line Rd. (Phase I)	<p><b>This project consisted of the reconstruction from a two-lane roadway to a five-lane undivided roadway. 42% of the project is west of the BNSF RR and the remaining 58% of the project is east of the BSNF RR. This project sheet represents the actual cost that the City of Cedar Hill incurred to construct this project. The total project cost is \$5,001,727. The project cost in Service Area 1 is \$2,100,725.</b></p>		
<b>Limits:</b>	Fire Station to BNSF RR			
<b>Impact Fee Class:</b>	M4D			
<b>Ultimate Class:</b>	Minor Arterial			
<b>Length (lf):</b>	2,620			
<b>Service Area(s):</b>	1, 4			

<b>Impact Fee Project Cost Summary</b>			
<b>Item Description</b>	<b>Notes:</b>	<b>Allowance</b>	<b>Item Cost</b>
<b>City Contribution to Construction Cost:</b>		42%	\$ 2,100,725
<b>Engineering/Survey/Testing</b>			
<b>Other</b>			
<b>Impact Fee Project Cost TOTAL:</b>			<b>\$ 2,100,725</b>

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**City of Cedar Hill**  
**2012 Roadway Impact Fee Update**  
**Conceptual Level Project Cost Projection**

Kimley-Horn and Associates, Inc.  
 updated: 7/3/2012

Project Information:		Description:	Project No.
<b>Name:</b>	Road A	<b>This project consists of the construction of a new four-lane divided minor arterial.</b>	<b>1-E</b>
<b>Limits:</b>	FM 1382 to Belt Line Rd.		
<b>Impact Fee Class:</b>	M4D		
<b>Ultimate Class:</b>	Minor Arterial		
<b>Length (lf):</b>	8,520		
<b>Service Area(s):</b>	1		

Roadway Construction Cost Projection					
No.	Item Description	Quantity	Unit	Unit Price	Item Cost
103	Unclassified Street Excavation	24,613	cy	\$ 15.00	\$ 369,200
203	6" Lime Stabilization (with Lime @ 27#/sy)	48,280	sy	\$ 4.00	\$ 193,120
303	8" Concrete Pavement w/ 6" Curb	47,333	sy	\$ 46.00	\$ 2,177,333
403	4" Topsoil	30,293	sy	\$ 5.00	\$ 151,467
503	5' Concrete Sidewalk	85,200	sf	\$ 4.00	\$ 340,800
603	Turn Lanes and Median Openings	6,159	sy	\$ 50.00	\$ 307,963
<b>Paving Construction Cost Subtotal:</b>					<b>\$ 3,539,883</b>
Major Construction Component Allowances**:					
Item Description	Notes	Allowance	Item Cost		
√ Prep ROW	None Anticipated	6%	\$	212,393	
√ Traffic Control		0%	\$	-	
√ Pavement Markings/Markers	Standard Internal System	3%	\$	106,196	
√ Roadway Drainage		30%	\$	1,061,965	
√ Illumination		6%	\$	212,393	
√ Special Drainage Structures		\$ 500,000	\$	500,000	
√ Water	Minor Adjustments	6%	\$	212,393	
√ Sewer	Minor Adjustments	4%	\$	141,595	
√ Establish Turf / Erosion Control		3%	\$	106,196	
√ Basic Landscaping/Irrigation		3%	\$	106,196	
√ Other:	Additional Excavation Allotment	\$500,000	\$	500,000	
<b>**Allowances based on % of Paving Construction Cost Subtotal</b>					<b>Allowance Subtotal: \$ 3,159,328</b>
<b>Paving and Allowance Subtotal:</b>					<b>\$ 6,699,211</b>
<b>Construction Contingency: 15%</b>					<b>\$ 1,004,882</b>
<b>Construction Cost TOTAL:</b>					<b>\$ 7,705,000</b>

Impact Fee Project Cost Summary			
Item Description	Notes:	Allowance	Item Cost
<b>Construction:</b>		-	\$ 7,705,000
<b>Engineering/Survey/Testing:</b>		20%	\$ 1,541,000
<b>Mobilization</b>		6%	\$ 462,300
<b>Previous City contribution</b>			
<b>Other</b>			
<b>ROW/Easement Acquisition</b>	Not included		
<b>Impact Fee Project Cost TOTAL:</b>			<b>\$ 9,708,000</b>

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**City of Cedar Hill**  
**2012 Roadway Impact Fee Update**  
**Conceptual Level Project Cost Projection**

Kimley-Horn and Associates, Inc.  
 updated: 5/16/2012

<b>Project Information:</b>		<b>Description:</b>	<b>Project No.</b>
<b>Name:</b>	New Clark Rd.	<b>This project was a cost participation between the City and Dallas County. The boundary between SA 1 and the city limits line is on the centerline of New Clark Rd. This project sheet represents the actual cost that the City of Cedar Hill incurred to construct this project.</b>	<b>1-F</b>
<b>Limits:</b>	N. City Limits to 430' N. of Couch Rd.		
<b>Impact Fee Class:</b>	P6D		
<b>Ultimate Class:</b>	Principal Arterial		
<b>Length (lf):</b>	1,070		
<b>Service Area(s):</b>	1 (Half)		

<b>Impact Fee Project Cost Summary</b>			
<b>Item Description</b>	<b>Notes:</b>	<b>Allowance</b>	<b>Item Cost</b>
<b>City Contribution to Construction Cost:</b>	Participation with Dallas County		<b>\$ 472,362</b>
<b>Engineering/Survey/Testing</b>			
<b>Other</b>			
<b>Impact Fee Project Cost TOTAL:</b>			<b>\$ 472,362</b>

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**City of Cedar Hill**  
**2012 Roadway Impact Fee Update**  
**Conceptual Level Project Cost Projection**

Kimley-Horn and Associates, Inc.  
 updated: 5/16/2012

<b>Project Information:</b>		<b>Description:</b>	<b>Project No.</b>
<b>Name:</b>	Cedar Hill Rd. (1)	<b>This project consists of the reconstruction of a two-lane undivided facility to a four-lane divided minor arterial. The boundary between SA 1 and SA 2 is on the centerline of Cedar Hill Rd.</b>	<b>1-G,2-B</b>
<b>Limits:</b>	Main St. to Wintergreen Rd.		
<b>Impact Fee Class:</b>	M4D		
<b>Ultimate Class:</b>	Minor Arterial		
<b>Length (lf):</b>	10,250		
<b>Service Area(s):</b>	1, 2		

<b>Roadway Construction Cost Projection</b>					
No.	Item Description	Quantity	Unit	Unit Price	Item Cost
103	Unclassified Street Excavation	29,611	cy	\$ 15.00	\$ 444,167
203	6" Lime Stabilization (with Lime @ 27#/sy)	58,083	sy	\$ 4.00	\$ 232,333
303	8" Concrete Pavement w/ 6" Curb	56,944	sy	\$ 46.00	\$ 2,619,444
403	4" Topsoil	36,444	sy	\$ 5.00	\$ 182,222
503	5' Concrete Sidewalk	102,500	sf	\$ 4.00	\$ 410,000
603	Turn Lanes and Median Openings	7,410	sy	\$ 50.00	\$ 370,495
<b>Paving Construction Cost Subtotal:</b>					<b>\$ 4,258,661</b>
<b>Major Construction Component Allowances**:</b>					
Item Description	Notes	Allowance	Item Cost		
√ Prep ROW		6%	\$	255,520	
√ Traffic Control	Construction Phase Traffic Control	5%	\$	212,933	
√ Pavement Markings/Markers		3%	\$	127,760	
√ Roadway Drainage	Standard Internal System	30%	\$	1,277,598	
√ Illumination		6%	\$	255,520	
Special Drainage Structures	None Anticipated	0%	\$	-	
√ Water	Minor Adjustments	6%	\$	255,520	
√ Sewer	Minor Adjustments	4%	\$	170,346	
√ Establish Turf / Erosion Control		3%	\$	127,760	
√ Basic Landscaping/Irrigation		3%	\$	127,760	
Other:		\$0	\$	-	
<b>**Allowances based on % of Paving Construction Cost Subtotal</b>					<b>Allowance Subtotal: \$ 2,810,717</b>
<b>Paving and Allowance Subtotal:</b>					<b>\$ 7,069,378</b>
<b>Construction Contingency:</b>					<b>15% \$ 1,060,407</b>
<b>Construction Cost TOTAL:</b>					<b>\$ 8,130,000</b>

<b>Impact Fee Project Cost Summary</b>			
Item Description	Notes:	Allowance	Item Cost
<b>Construction:</b>		-	\$ 8,130,000
<b>Engineering/Survey/Testing:</b>		20%	\$ 1,626,000
<b>Mobilization</b>		6%	\$ 487,800
<b>Previous City contribution</b>			
<b>Other</b>			
<b>ROW/Easement Acquisition</b>	Not included		
<b>Impact Fee Project Cost TOTAL:</b>			<b>\$ 10,244,000</b>

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**City of Cedar Hill**  
**2012 Roadway Impact Fee Update**  
**Conceptual Level Project Cost Projection**

Kimley-Horn and Associates, Inc.  
 updated: 5/16/2012

<b>Project Information:</b>		<b>Description:</b>	<b>Project No.</b>
<b>Name:</b>	Wintergreen Rd. (1)	<b>This project consists of the reconstruction of a two-lane undivided facility to a four-lane divided minor arterial.</b>	<b>1-H</b>
<b>Limits:</b>	New Clark Rd. to BNSF RR		
<b>Impact Fee Class:</b>	M4D		
<b>Ultimate Class:</b>	Minor Arterial		
<b>Length (lf):</b>	2,020		
<b>Service Area(s):</b>	1		

<b>Roadway Construction Cost Projection</b>					
No.	Item Description	Quantity	Unit	Unit Price	Item Cost
103	Unclassified Street Excavation	5,836	cy	\$ 15.00	\$ 87,533
203	6" Lime Stabilization (with Lime @ 27#/sy)	11,447	sy	\$ 4.00	\$ 45,787
303	8" Concrete Pavement w/ 6" Curb	11,222	sy	\$ 46.00	\$ 516,222
403	4" Topsoil	7,182	sy	\$ 5.00	\$ 35,911
503	5' Concrete Sidewalk	20,200	sf	\$ 4.00	\$ 80,800
603	Turn Lanes and Median Openings	1,460	sy	\$ 50.00	\$ 73,015
<b>Paving Construction Cost Subtotal:</b>					<b>\$ 839,268</b>
<b>Major Construction Component Allowances**:</b>					
Item Description	Notes	Allowance	Item Cost		
√ Prep ROW		6%	\$	50,356	
√ Traffic Control	Construction Phase Traffic Control	5%	\$	41,963	
√ Pavement Markings/Markers		3%	\$	25,178	
√ Roadway Drainage	Standard Internal System	30%	\$	251,780	
√ Illumination		6%	\$	50,356	
Special Drainage Structures	None Anticipated	0%	\$	-	
√ Water	Minor Adjustments	6%	\$	50,356	
√ Sewer	Minor Adjustments	4%	\$	33,571	
√ Establish Turf / Erosion Control		3%	\$	25,178	
√ Basic Landscaping/Irrigation		3%	\$	25,178	
Other:		\$0	\$	-	
<b>**Allowances based on % of Paving Construction Cost Subtotal</b>					<b>Allowance Subtotal: \$ 553,917</b>
<b>Paving and Allowance Subtotal:</b>					<b>\$ 1,393,185</b>
<b>Construction Contingency:</b>					<b>15% \$ 208,978</b>
<b>Construction Cost TOTAL:</b>					<b>\$ 1,603,000</b>

<b>Impact Fee Project Cost Summary</b>			
Item Description	Notes:	Allowance	Item Cost
<b>Construction:</b>		-	\$ 1,603,000
<b>Engineering/Survey/Testing:</b>		20%	\$ 320,600
<b>Mobilization</b>		6%	\$ 96,180
<b>Previous City contribution</b>			
<b>Other</b>			
<b>ROW/Easement Acquisition</b>	Not included		
<b>Impact Fee Project Cost TOTAL:</b>			<b>\$ 2,020,000</b>

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**City of Cedar Hill**  
**2012 Roadway Impact Fee Update**  
**Conceptual Level Project Cost Projection**

Kimley-Horn and Associates, Inc.  
 updated: 5/16/2012

Project Information:		Description:	Project No.
<b>Name:</b>	Wintergreen Rd. (2)	<b>This project consists of the reconstruction of a two-lane undivided facility to a four-lane divided minor arterial. The boundary between SA 1 and the SA 2 is on the centerline of Wintergreen Rd.</b>	<b>1-1,2-R</b>
<b>Limits:</b>	BNSF RR to Cedar Hill Rd.		
<b>Impact Fee Class:</b>	M4D		
<b>Ultimate Class:</b>	Minor Arterial		
<b>Length (lf):</b>	600		
<b>Service Area(s):</b>	1, 2		

Roadway Construction Cost Projection					
No.	Item Description	Quantity	Unit	Unit Price	Item Cost
103	Unclassified Street Excavation	1,733	cy	\$ 15.00	\$ 26,000
203	6" Lime Stabilization (with Lime @ 27#/sy)	3,400	sy	\$ 4.00	\$ 13,600
303	8" Concrete Pavement w/ 6" Curb	3,333	sy	\$ 46.00	\$ 153,333
403	4" Topsoil	2,133	sy	\$ 5.00	\$ 10,667
503	5' Concrete Sidewalk	6,000	sf	\$ 4.00	\$ 24,000
603	Turn Lanes and Median Openings	434	sy	\$ 50.00	\$ 21,688
<b>Paving Construction Cost Subtotal:</b>					<b>\$ 249,288</b>
Major Construction Component Allowances**:					
Item Description	Notes	Allowance	Item Cost		
√ Prep ROW		6%	\$	14,957	
√ Traffic Control	Construction Phase Traffic Control	5%	\$	12,464	
√ Pavement Markings/Markers		3%	\$	7,479	
√ Roadway Drainage	Standard Internal System	30%	\$	74,786	
√ Illumination		6%	\$	14,957	
Special Drainage Structures	None Anticipated	0%	\$	-	
√ Water	Minor Adjustments	6%	\$	14,957	
√ Sewer	Minor Adjustments	4%	\$	9,972	
√ Establish Turf / Erosion Control		3%	\$	7,479	
√ Basic Landscaping/Irrigation		3%	\$	7,479	
Other:		\$0	\$	-	
<b>**Allowances based on % of Paving Construction Cost Subtotal</b>					<b>Allowance Subtotal: \$ 164,530</b>
<b>Paving and Allowance Subtotal:</b>					<b>\$ 413,817</b>
<b>Construction Contingency:</b>					<b>15% \$ 62,073</b>
<b>Construction Cost TOTAL:</b>					<b>\$ 476,000</b>

Impact Fee Project Cost Summary			
Item Description	Notes:	Allowance	Item Cost
<b>Construction:</b>		-	\$ 476,000
<b>Engineering/Survey/Testing:</b>		20%	\$ 95,200
<b>Mobilization</b>		6%	\$ 28,560
<b>Previous City contribution</b>			
<b>Other</b>			
<b>ROW/Easement Acquisition</b>	Not included		
<b>Impact Fee Project Cost TOTAL:</b>			<b>\$ 600,000</b>

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**City of Cedar Hill**  
**2012 Roadway Impact Fee Update**  
**Conceptual Level Project Cost Projection**

Kimley-Horn and Associates, Inc.  
 updated: 5/16/2012

<b>Project Information:</b>		<b>Description:</b>	<b>Project No.</b>
<b>Name:</b>	Pleasant Run Rd. (1)	<b>This project, currently under construction, consists of the reconstruction of a two-lane asphalt facility to a six-lane divided principal arterial.</b>	<b>1-J</b>
<b>Limits:</b>	FM 1382 to BNSF RR		
<b>Impact Fee Class:</b>	P6D		
<b>Ultimate Class:</b>	Principal Arterial		
<b>Length (lf):</b>	1,110		
<b>Service Area(s):</b>	1		

<b>Impact Fee Project Cost Summary</b>			
<b>Item Description</b>	<b>Notes:</b>	<b>Allowance</b>	<b>Item Cost</b>
<b>City Contribution to Construction Cost:</b>			
<b>Engineering/Survey/Testing</b>			
<b>Other</b>			
<b>Impact Fee Project Cost TOTAL:</b>			<b>\$ 4,844,953</b>

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The planning level cost projections shall not supersede the City's design standards or the determination of the City Engineer for a specific project.

**City of Cedar Hill**  
**2012 Roadway Impact Fee Update**  
**Conceptual Level Project Cost Projection**

Kimley-Horn and Associates, Inc.  
 updated: 5/16/2012

<b>Project Information:</b>		<b>Description:</b>	<b>Project No.</b>
<b>Name:</b>	Pleasant Run Rd. (2)	<b>This project, currently under construction, consists of the reconstruction of a two-lane asphalt facility to a six-lane divided principal arterial. The boundary between SA 1 and SA 2 is on the centerline of Pleasant Run Rd.</b>	<b>1-K,2-U</b>
<b>Limits:</b>	BNSF RR to Cedar Hill Rd.		
<b>Impact Fee Class:</b>	P6D		
<b>Ultimate Class:</b>	Principal Arterial		
<b>Length (lf):</b>	185		
<b>Service Area(s):</b>	1, 2		

<b>Impact Fee Project Cost Summary</b>			
<b>Item Description</b>	<b>Notes:</b>	<b>Allowance</b>	<b>Item Cost</b>
<b>City Contribution to Construction Cost:</b>	Pleasant Run Road and Cedar Hill Road	-	
<b>Engineering/Survey/Testing</b>			
<b>Other</b>			
<b>Impact Fee Project Cost TOTAL:</b>			<b>\$ 1,144,632</b>

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**City of Cedar Hill**  
**2012 Roadway Impact Fee Update**  
**Conceptual Level Project Cost Projection**

Kimley-Horn and Associates, Inc.  
 updated: 5/16/2012

<b>Project Information:</b>		<b>Description:</b>	<b>Project No.</b>
<b>Name:</b>	Old Strauss Rd.	<b>This project consists of the reconstruction of a two-lane undivided facility to a four-lane undivided minor collector.</b>	<b>1-L</b>
<b>Limits:</b>	Wolfe St. to FM 1382		
<b>Impact Fee Class:</b>	C4U		
<b>Ultimate Class:</b>	Minor Collector		
<b>Length (lf):</b>	2,400		
<b>Service Area(s):</b>	1		

<b>Roadway Construction Cost Projection</b>					
No.	Item Description	Quantity	Unit	Unit Price	Item Cost
102	Unclassified Street Excavation	5,867	cy	\$ 15.00	\$ 88,000
202	6" Lime Stabilization (with Lime @ 27#/sy)	11,467	sy	\$ 4.00	\$ 45,867
302	8" Concrete Pavement w/ 6" Curb	10,933	sy	\$ 46.00	\$ 502,933
402	4" Topsoil	5,067	sy	\$ 5.00	\$ 25,333
502	5' Concrete Sidewalk	24,000	sf	\$ 4.00	\$ 96,000
602	Turn Lanes and Median Openings	0	sy	\$ 50.00	\$ -
<b>Paving Construction Cost Subtotal:</b>					<b>\$ 758,133</b>
<b>Major Construction Component Allowances**:</b>					
Item Description	Notes	Allowance	Item Cost		
√ Prep ROW		6%	\$	45,488	
√ Traffic Control	Construction Phase Traffic Control	5%	\$	37,907	
√ Pavement Markings/Markers		3%	\$	22,744	
√ Roadway Drainage	Standard Internal System	30%	\$	227,440	
√ Illumination		6%	\$	45,488	
Special Drainage Structures	None Anticipated	0%	\$	-	
√ Water	Minor Adjustments	6%	\$	45,488	
√ Sewer	Minor Adjustments	4%	\$	30,325	
√ Establish Turf / Erosion Control		3%	\$	22,744	
√ Basic Landscaping/Irrigation		3%	\$	22,744	
Other:		\$0	\$	-	
<b>**Allowances based on % of Paving Construction Cost Subtotal</b>					<b>Allowance Subtotal: \$ 500,368</b>
<b>Paving and Allowance Subtotal:</b>					<b>\$ 1,258,501</b>
<b>Construction Contingency:</b>					<b>15% \$ 188,775</b>
<b>Construction Cost TOTAL:</b>					<b>\$ 1,448,000</b>

<b>Impact Fee Project Cost Summary</b>			
Item Description	Notes:	Allowance	Item Cost
<b>Construction:</b>		-	\$ 1,448,000
<b>Engineering/Survey/Testing:</b>		20%	\$ 289,600
<b>Mobilization</b>		6%	\$ 86,880
<b>Previous City contribution</b>			
<b>Other</b>			
<b>ROW/Easement Acquisition</b>	Not included		
<b>Impact Fee Project Cost TOTAL:</b>			<b>\$ 1,824,000</b>

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**City of Cedar Hill**  
**2012 Roadway Impact Fee Update**  
**Conceptual Level Project Cost Projection**

Kimley-Horn and Associates, Inc.  
 updated: 5/16/2012

<b>Project Information:</b>		<b>Description:</b>	<b>Project No.</b>
<b>Name:</b>	Strauss Rd.	<b>This project consists of the reconstruction of a two-lane undivided facility to a four-lane undivided minor collector.</b>	<b>1-M</b>
<b>Limits:</b>	FM 1382 to Wylie St.		
<b>Impact Fee Class:</b>	C4U		
<b>Ultimate Class:</b>	Minor Collector		
<b>Length (lf):</b>	5,135		
<b>Service Area(s):</b>	1		

<b>Roadway Construction Cost Projection</b>					
No.	Item Description	Quantity	Unit	Unit Price	Item Cost
102	Unclassified Street Excavation	12,552	cy	\$ 15.00	\$ 188,283
202	6" Lime Stabilization (with Lime @ 27#/sy)	24,534	sy	\$ 4.00	\$ 98,136
302	8" Concrete Pavement w/ 6" Curb	23,393	sy	\$ 46.00	\$ 1,076,068
402	4" Topsoil	10,841	sy	\$ 5.00	\$ 54,203
502	5' Concrete Sidewalk	51,350	sf	\$ 4.00	\$ 205,400
602	Turn Lanes and Median Openings	0	sy	\$ 50.00	\$ -
<b>Paving Construction Cost Subtotal:</b>					<b>\$ 1,622,089</b>
<b>Major Construction Component Allowances**:</b>					
Item Description	Notes	Allowance	Item Cost		
√ Prep ROW		6%	\$	97,325	
√ Traffic Control	Construction Phase Traffic Control	5%	\$	81,104	
√ Pavement Markings/Markers		3%	\$	48,663	
√ Roadway Drainage	Standard Internal System	30%	\$	486,627	
√ Illumination		6%	\$	97,325	
Special Drainage Structures	None Anticipated	0%	\$	-	
√ Water	Minor Adjustments	6%	\$	97,325	
√ Sewer	Minor Adjustments	4%	\$	64,884	
√ Establish Turf / Erosion Control		3%	\$	48,663	
√ Basic Landscaping/Irrigation		3%	\$	48,663	
Other:		\$0	\$	-	
<b>**Allowances based on % of Paving Construction Cost Subtotal</b>					<b>Allowance Subtotal: \$ 1,070,579</b>
<b>Paving and Allowance Subtotal:</b>					<b>\$ 2,692,668</b>
<b>Construction Contingency:</b>					<b>15% \$ 403,900</b>
<b>Construction Cost TOTAL:</b>					<b>\$ 3,097,000</b>

<b>Impact Fee Project Cost Summary</b>			
Item Description	Notes:	Allowance	Item Cost
<b>Construction:</b>		-	\$ 3,097,000
<b>Engineering/Survey/Testing:</b>		20%	\$ 619,400
<b>Mobilization</b>		6%	\$ 185,820
<b>Previous City contribution</b>			
<b>Other</b>			
<b>ROW/Easement Acquisition</b>	Not included		
<b>Impact Fee Project Cost TOTAL:</b>			<b>\$ 3,902,000</b>

**NOTE:** The planning level cost projections listed in this appendix have been developed for Impact Fee calculations only and should not be used for any future Capital Improvement Planning within the City of Cedar Hill.

The planning level cost projections shall not supersede the City's design standards or the determination of the City Engineer for a specific project.

## City of Cedar Hill - 2012 Roadway Impact Fee Update

Capital Improvements Plan for Roadway Impact Fees  
Summary of Conceptual Level Project Cost Projections

### Roadway Improvements - Service Area 2

#	Class	Project	Limits	Project Cost
2-A	M4D	Belt Line Rd. (3)	BNSF RR to US 67 SBFR	\$ 2,901,002
1-G,2-B	M4D	Cedar Hill Rd. (1)	Main St. to Wintergreen Rd.	\$ 10,244,000
2-C	M4D	Cedar Hill Rd. (2)	Wintergreen Rd. to N. City Limits	\$ 5,129,000
2-D	M4D	Main St. (1)	150' N of Belt Line Rd. to Wylie St.	\$ 726,000
2-E	M4D	Main St. (2)	130' S of Belt Line Rd. to Cedar St.	\$ 300,000
2-F	M4D	Houston St.	Belt Line Rd. to Tidwell St.	\$ 3,594,000
2-G	M4U	Cedarview Dr. (1)	BNSF RR to Tidwell	\$ 576,000
2-H	M4D	Uptown Blvd.	FM 1382 to Belt Line Rd.	\$ 2,630,057
2-I	M4U	Pioneer Tr.	Cedar Hill Rd. to Uptown Blvd.	\$ 1,362,005
2-J	M4U	S Clark Rd. (1)	FM 1382 to US 67 SBFR	\$ 994,318
2-K	M4D	Joe Wilson Rd. (1)	Cedar Hill Rd. to 490' S of Cedar Hill Rd.	\$ 490,000
2-L	M4D	Joe Wilson Rd. (2)	490' S of Cedar Hill Rd. to US 67 SBFR	\$ 4,547,000
2-M	M4D	Joe Wilson Rd. (Phase III)	US 67 SBFR to 360' S. of FM 1382	\$ 4,616,841
2-N	M4D	Joe Wilson Rd. (Phases I&II)	360' S. of FM 1382 to Parkerville Rd.	\$ 2,590,331
2-O	P6D	Duncanville Rd. (1)	Wintergreen Rd. to Pleasant Run Rd.	\$ 7,442,000
2-P	M4D	Duncanville Rd. (2)	Pleasant Run Rd. to Belt Line Rd.	\$ 6,032,000
2-Q	M4D	Duncanville Rd. (3)	Belt Line Rd. to Parkerville Rd.	\$ 5,630,000
1-I,2-R	M4D	Wintergreen Rd. (2)	BNSF RR to Cedar Hill Rd.	\$ 600,000
2-S	M4D	Wintergreen Rd. (3)	Joe Wilson Rd. to US 67 SBFR	\$ 3,238,000
2-T	P6D	Wintergreen Rd. (4)	US 67 NBFR to E. City Limits	\$ 339,240
1-K,2-U	P6D	Pleasant Run Rd. (2)	BNSF RR to Cedar Hill Rd.	\$ 1,144,632
2-V	P6D	Pleasant Run Rd. (3)	Cedar Hill Rd. to US 67 SBFR	\$ 4,008,596
2-W	P6D	Pleasant Run Rd. (4)	US 67 NBFR to 320' E. of Joe Wilson Rd.	\$ 2,144,435
2-X	M4D	Pleasant Run Rd. (5)	320' E. of Joe Wilson Rd. to Duncanville Rd.	\$ 5,248,443
2-Y	M4D	Tidwell St. (1)	Houston St. to US 67 SBFR	\$ 615,000
2-Z	M4D	Tidwell St. (2)	Houston St. to BNSF RR	\$ 2,718,000
2-AA,3-A	M4D	Tidwell St. / Parkerville Rd.	US 67 NBFR to Joe Wilson Rd.	\$ 6,023,631
2-BB,3-B	M4D	Parkerville Rd. (1)	Springfield Dr. to Duncanville Rd.	\$ 4,830,000
2-CC	C4U	Cooper St.	Houston St. to US 67 SBFR	\$ 1,474,000
<b>Signal Installation</b>				
I-4		Signal Installation	US 67 & Tidwell St.	\$ 300,000
I-5		Signal Installation	Parkerville Rd. & Joe Wilson Rd.	\$ 150,000
I-6		Signal Installation	Parkerville Rd. & Duncanville Rd.	\$ 150,000
I-7		Signal Installation	Pleasant Run Rd. & Duncanville Rd.	\$ 150,000
I-8		Signal Installation	Wintergreen Rd. & Duncanville Rd.	\$ 150,000
I-9		Signal Installation	US 67 & Joe Wilson Rd.	\$ 300,000
<b>TOTAL</b>				<b>\$ 93,388,531</b>

\*Total may be higher than presented in Table 4.B (10-Year Capital Improvement Plan for Roadway Impact Fees with Conceptual Level Cost Opinions - Service Area 2) because the cost of some projects are shared between multiple jurisdictions.

**NOTE:** The planning level cost projections listed in this appendix have been developed for Impact Fee calculations only and should not be used for any future Capital Improvement Planning within the City of Cedar Hill.

The planning level cost projections shall not supersede the City's design standards contained within the Subdivision Ordinance or the determination of the City Engineer for a specific project.

**City of Cedar Hill**  
**2012 Roadway Impact Fee Update**  
**Conceptual Level Project Cost Projection**

Kimley-Horn and Associates, Inc.  
 updated: 5/16/2012

<b>Project Information:</b>		<b>Description:</b>	<b>Project No.</b>
<b>Name:</b>	Belt Line Rd. (3)	<b>This project consisted of the reconstruction from a two-lane roadway to a five-lane undivided roadway. 42% of the project is west of the BNSF RR and the remaining 58% of the project is east of the BSNF RR. This project sheet represents the actual cost that the City of Cedar Hill incurred to construct this project. The total project cost is \$5,001,727. The project cost in Service Area 2 is \$2,901,002.</b>	<b>2-A</b>
<b>Limits:</b>	BNSF RR to US 67 SBFR		
<b>Impact Fee Class:</b>	M4D		
<b>Ultimate Class:</b>	Minor Arterial		
<b>Length (lf):</b>	3,595		
<b>Service Area(s):</b>	2		

<b>Impact Fee Project Cost Summary</b>			
<b>Item Description</b>	<b>Notes:</b>	<b>Allowance</b>	<b>Item Cost</b>
<b>City Contribution to Construction Cost:</b>	Based on 2007 Actual Bid + Contingency	58%	<b>\$ 2,901,002</b>
<b>Engineering/Survey/Testing</b>			
<b>Other</b>			
<b>Impact Fee Project Cost TOTAL:</b>			<b>\$ 2,901,002</b>

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**City of Cedar Hill**  
**2012 Roadway Impact Fee Update**  
**Conceptual Level Project Cost Projection**

Kimley-Horn and Associates, Inc.  
 updated: 5/16/2012

Project Information:		Description:	Project No.
<b>Name:</b>	Cedar Hill Rd. (1)	<b>This project consists of the reconstruction of a two-lane undivided facility to a four-lane divided minor arterial. The boundary between SA 1 and SA 2 is on the centerline of Cedar Hill Rd.</b>	<b>1-G,2-B</b>
<b>Limits:</b>	Main St. to Wintergreen Rd.		
<b>Impact Fee Class:</b>	M4D		
<b>Ultimate Class:</b>	Minor Arterial		
<b>Length (lf):</b>	10,250		
<b>Service Area(s):</b>	1, 2		

Roadway Construction Cost Projection					
No.	Item Description	Quantity	Unit	Unit Price	Item Cost
103	Unclassified Street Excavation	29,611	cy	\$ 15.00	\$ 444,167
203	6" Lime Stabilization (with Lime @ 27#/sy)	58,083	sy	\$ 4.00	\$ 232,333
303	8" Concrete Pavement w/ 6" Curb	56,944	sy	\$ 46.00	\$ 2,619,444
403	4" Topsoil	36,444	sy	\$ 5.00	\$ 182,222
503	5' Concrete Sidewalk	102,500	sf	\$ 4.00	\$ 410,000
603	Turn Lanes and Median Openings	7,410	sy	\$ 50.00	\$ 370,495
<b>Paving Construction Cost Subtotal:</b>					<b>\$ 4,258,661</b>
Major Construction Component Allowances**:					
Item Description	Notes	Allowance	Item Cost		
√ Prep ROW		6%	\$	255,520	
√ Traffic Control	Construction Phase Traffic Control	5%	\$	212,933	
√ Pavement Markings/Markers		3%	\$	127,760	
√ Roadway Drainage	Standard Internal System	30%	\$	1,277,598	
√ Illumination		6%	\$	255,520	
Special Drainage Structures	None Anticipated	0%	\$	-	
√ Water	Minor Adjustments	6%	\$	255,520	
√ Sewer	Minor Adjustments	4%	\$	170,346	
√ Establish Turf / Erosion Control		3%	\$	127,760	
√ Basic Landscaping/Irrigation		3%	\$	127,760	
Other:		\$0	\$	-	
<b>**Allowances based on % of Paving Construction Cost Subtotal</b>					<b>Allowance Subtotal: \$ 2,810,717</b>
<b>Paving and Allowance Subtotal:</b>					<b>\$ 7,069,378</b>
<b>Construction Contingency:</b>					<b>15% \$ 1,060,407</b>
<b>Construction Cost TOTAL:</b>					<b>\$ 8,130,000</b>

Impact Fee Project Cost Summary			
Item Description	Notes:	Allowance	Item Cost
<b>Construction:</b>		-	\$ 8,130,000
<b>Engineering/Survey/Testing:</b>		20%	\$ 1,626,000
<b>Mobilization</b>		6%	\$ 487,800
<b>Previous City contribution</b>			
<b>Other</b>			
<b>ROW/Easement Acquisition</b>	Not included		
<b>Impact Fee Project Cost TOTAL:</b>			<b>\$ 10,244,000</b>

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**City of Cedar Hill**  
**2012 Roadway Impact Fee Update**  
**Conceptual Level Project Cost Projection**

Kimley-Horn and Associates, Inc.  
 updated: 5/16/2012

<b>Project Information:</b>		<b>Description:</b>	<b>Project No.</b>
<b>Name:</b>	Cedar Hill Rd. (2)	<b>This project consists of the reconstruction of a two-lane undivided facility to a four-lane divided minor arterial.</b>	<b>2-C</b>
<b>Limits:</b>	Wintergreen Rd. to N. City Limits		
<b>Impact Fee Class:</b>	M4D		
<b>Ultimate Class:</b>	Minor Arterial		
<b>Length (lf):</b>	4,770		
<b>Service Area(s):</b>	2		

<b>Roadway Construction Cost Projection</b>					
No.	Item Description	Quantity	Unit	Unit Price	Item Cost
103	Unclassified Street Excavation	13,780	cy	\$ 15.00	\$ 206,700
203	6" Lime Stabilization (with Lime @ 27#/sy)	27,030	sy	\$ 4.00	\$ 108,120
303	8" Concrete Pavement w/ 6" Curb	26,500	sy	\$ 46.00	\$ 1,219,000
403	4" Topsoil	16,960	sy	\$ 5.00	\$ 84,800
503	5' Concrete Sidewalk	47,700	sf	\$ 4.00	\$ 190,800
603	Turn Lanes and Median Openings	3,448	sy	\$ 50.00	\$ 172,416
<b>Paving Construction Cost Subtotal:</b>					<b>\$ 1,981,836</b>
<b>Major Construction Component Allowances**:</b>					
Item Description	Notes	Allowance	Item Cost		
√ Prep ROW		6%	\$	118,910	
√ Traffic Control	Construction Phase Traffic Control	5%	\$	99,092	
√ Pavement Markings/Markers		3%	\$	59,455	
√ Roadway Drainage	Standard Internal System	30%	\$	594,551	
√ Illumination		6%	\$	118,910	
√ Special Drainage Structures	None Anticipated	0%	\$	250,000	
√ Water	Minor Adjustments	6%	\$	118,910	
√ Sewer	Minor Adjustments	4%	\$	79,273	
√ Establish Turf / Erosion Control		3%	\$	59,455	
√ Basic Landscaping/Irrigation		3%	\$	59,455	
Other:		\$0	\$	-	
<b>**Allowances based on % of Paving Construction Cost Subtotal</b>					<b>Allowance Subtotal: \$ 1,558,012</b>
<b>Paving and Allowance Subtotal:</b>					<b>\$ 3,539,847</b>
<b>Construction Contingency:</b>					<b>15% \$ 530,977</b>
<b>Construction Cost TOTAL:</b>					<b>\$ 4,071,000</b>

<b>Impact Fee Project Cost Summary</b>			
Item Description	Notes:	Allowance	Item Cost
<b>Construction:</b>		-	\$ 4,071,000
<b>Engineering/Survey/Testing:</b>		20%	\$ 814,200
<b>Mobilization</b>		6%	\$ 244,260
<b>Previous City contribution</b>			
<b>Other</b>			
<b>ROW/Easement Acquisition</b>	Not included		
<b>Impact Fee Project Cost TOTAL:</b>			<b>\$ 5,129,000</b>

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**City of Cedar Hill**  
**2012 Roadway Impact Fee Update**  
**Conceptual Level Project Cost Projection**

Kimley-Horn and Associates, Inc.  
 updated: 5/16/2012

<b>Project Information:</b>		<b>Description:</b>	<b>Project No.</b>	<b>2-D</b>
<b>Name:</b>	Main St. (1)	<b>This project consists of the reconstruction of a two-lane undivided facility to a four-lane divided minor arterial.</b>		
<b>Limits:</b>	150' N of Belt Line Rd. to Wylie St.			
<b>Impact Fee Class:</b>	M4D			
<b>Ultimate Class:</b>	Minor Arterial			
<b>Length (lf):</b>	725			
<b>Service Area(s):</b>	2			

<b>Roadway Construction Cost Projection</b>					
No.	Item Description	Quantity	Unit	Unit Price	Item Cost
103	Unclassified Street Excavation	2,094	cy	\$ 15.00	\$ 31,417
203	6" Lime Stabilization (with Lime @ 27#/sy)	4,108	sy	\$ 4.00	\$ 16,433
303	8" Concrete Pavement w/ 6" Curb	4,028	sy	\$ 46.00	\$ 185,278
403	4" Topsoil	2,578	sy	\$ 5.00	\$ 12,889
503	5' Concrete Sidewalk	7,250	sf	\$ 4.00	\$ 29,000
603	Turn Lanes and Median Openings	524	sy	\$ 50.00	\$ 26,206
<b>Paving Construction Cost Subtotal:</b>					<b>\$ 301,222</b>
<b>Major Construction Component Allowances**:</b>					
Item Description	Notes	Allowance	Item Cost		
√ Prep ROW		6%	\$	18,073	
√ Traffic Control	Construction Phase Traffic Control	5%	\$	15,061	
√ Pavement Markings/Markers		3%	\$	9,037	
√ Roadway Drainage	Standard Internal System	30%	\$	90,367	
√ Illumination		6%	\$	18,073	
Special Drainage Structures	None Anticipated	0%	\$	-	
√ Water	Minor Adjustments	6%	\$	18,073	
√ Sewer	Minor Adjustments	4%	\$	12,049	
√ Establish Turf / Erosion Control		3%	\$	9,037	
√ Basic Landscaping/Irrigation		3%	\$	9,037	
Other:		\$0	\$	-	
<b>**Allowances based on % of Paving Construction Cost Subtotal</b>					<b>Allowance Subtotal: \$ 198,807</b>
<b>Paving and Allowance Subtotal:</b>					<b>\$ 500,029</b>
<b>Construction Contingency:</b>					<b>15% \$ 75,004</b>
<b>Construction Cost TOTAL:</b>					<b>\$ 576,000</b>

<b>Impact Fee Project Cost Summary</b>			
Item Description	Notes:	Allowance	Item Cost
<b>Construction:</b>		-	\$ 576,000
<b>Engineering/Survey/Testing:</b>		20%	\$ 115,200
<b>Mobilization</b>		6%	\$ 34,560
<b>Previous City contribution</b>			
<b>Other</b>			
<b>ROW/Easement Acquisition</b>	Not included		
<b>Impact Fee Project Cost TOTAL:</b>			<b>\$ 726,000</b>

**NOTE:** The planning level cost projections listed in this appendix have been developed for Impact Fee calculations only and should not be used for any future Capital Improvement Planning within the City of Cedar Hill.

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**City of Cedar Hill**  
**2012 Roadway Impact Fee Update**  
**Conceptual Level Project Cost Projection**

Kimley-Horn and Associates, Inc.  
 updated: 5/16/2012

<b>Project Information:</b>		<b>Description:</b>	<b>Project No.</b>	<b>2-E</b>
<b>Name:</b>	Main St. (2)	<b>This project consists of the reconstruction of a two-lane undivided facility to a four-lane divided minor arterial.</b>		
<b>Limits:</b>	130' S of Belt Line Rd. to Cedar St.			
<b>Impact Fee Class:</b>	M4D			
<b>Ultimate Class:</b>	Minor Arterial			
<b>Length (lf):</b>	300			
<b>Service Area(s):</b>	2			

<b>Roadway Construction Cost Projection</b>					
<b>No.</b>	<b>Item Description</b>	<b>Quantity</b>	<b>Unit</b>	<b>Unit Price</b>	<b>Item Cost</b>
103	Unclassified Street Excavation	867	cy	\$ 15.00	\$ 13,000
203	6" Lime Stabilization (with Lime @ 27#/sy)	1,700	sy	\$ 4.00	\$ 6,800
303	8" Concrete Pavement w/ 6" Curb	1,667	sy	\$ 46.00	\$ 76,667
403	4" Topsoil	1,067	sy	\$ 5.00	\$ 5,333
503	5' Concrete Sidewalk	3,000	sf	\$ 4.00	\$ 12,000
603	Turn Lanes and Median Openings	217	sy	\$ 50.00	\$ 10,844
<b>Paving Construction Cost Subtotal:</b>					<b>\$ 124,644</b>
<b>Major Construction Component Allowances**:</b>					
<b>Item Description</b>	<b>Notes</b>	<b>Allowance</b>	<b>Item Cost</b>		
√ Prep ROW		6%	\$	7,479	
√ Traffic Control	Construction Phase Traffic Control	5%	\$	6,232	
√ Pavement Markings/Markers		3%	\$	3,739	
√ Roadway Drainage	Standard Internal System	30%	\$	37,393	
√ Illumination		6%	\$	7,479	
Special Drainage Structures	None Anticipated	0%	\$	-	
√ Water	Minor Adjustments	6%	\$	7,479	
√ Sewer	Minor Adjustments	4%	\$	4,986	
√ Establish Turf / Erosion Control		3%	\$	3,739	
√ Basic Landscaping/Irrigation		3%	\$	3,739	
Other:		\$0	\$	-	
<b>**Allowances based on % of Paving Construction Cost Subtotal</b>					<b>Allowance Subtotal: \$ 82,265</b>
<b>Paving and Allowance Subtotal:</b>					<b>\$ 206,909</b>
<b>Construction Contingency:</b>					<b>15% \$ 31,036</b>
<b>Construction Cost TOTAL:</b>					<b>\$ 238,000</b>

<b>Impact Fee Project Cost Summary</b>			
<b>Item Description</b>	<b>Notes:</b>	<b>Allowance</b>	<b>Item Cost</b>
<b>Construction:</b>		-	\$ 238,000
<b>Engineering/Survey/Testing:</b>		20%	\$ 47,600
<b>Mobilization</b>		6%	\$ 14,280
<b>Previous City contribution</b>			
<b>Other</b>			
<b>ROW/Easement Acquisition</b>	Not included		
<b>Impact Fee Project Cost TOTAL:</b>			<b>\$ 300,000</b>

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**City of Cedar Hill**  
**2012 Roadway Impact Fee Update**  
**Conceptual Level Project Cost Projection**

Kimley-Horn and Associates, Inc.  
 updated: 5/16/2012

<b>Project Information:</b>		<b>Description:</b>	<b>Project No.</b>	<b>2-F</b>
<b>Name:</b>	Houston St.	<b>This project consists of the reconstruction of a two-lane undivided facility to a four-lane divided minor arterial.</b>		
<b>Limits:</b>	Belt Line Rd. to Tidwell St.			
<b>Impact Fee Class:</b>	M4D			
<b>Ultimate Class:</b>	Minor Arterial			
<b>Length (lf):</b>	3,595			
<b>Service Area(s):</b>	2			

<b>Roadway Construction Cost Projection</b>					
<b>No.</b>	<b>Item Description</b>	<b>Quantity</b>	<b>Unit</b>	<b>Unit Price</b>	<b>Item Cost</b>
103	Unclassified Street Excavation	10,386	cy	\$ 15.00	\$ 155,783
203	6" Lime Stabilization (with Lime @ 27#/sy)	20,372	sy	\$ 4.00	\$ 81,487
303	8" Concrete Pavement w/ 6" Curb	19,972	sy	\$ 46.00	\$ 918,722
403	4" Topsoil	12,782	sy	\$ 5.00	\$ 63,911
503	5' Concrete Sidewalk	35,950	sf	\$ 4.00	\$ 143,800
603	Turn Lanes and Median Openings	2,599	sy	\$ 50.00	\$ 129,944
<b>Paving Construction Cost Subtotal:</b>					<b>\$ 1,493,648</b>
<b>Major Construction Component Allowances**:</b>					
<b>Item Description</b>	<b>Notes</b>	<b>Allowance</b>	<b>Item Cost</b>		
√ Prep ROW		6%	\$	89,619	
√ Traffic Control	Construction Phase Traffic Control	5%	\$	74,682	
√ Pavement Markings/Markers		3%	\$	44,809	
√ Roadway Drainage	Standard Internal System	30%	\$	448,094	
√ Illumination		6%	\$	89,619	
Special Drainage Structures	None Anticipated	0%	\$	-	
√ Water	Minor Adjustments	6%	\$	89,619	
√ Sewer	Minor Adjustments	4%	\$	59,746	
√ Establish Turf / Erosion Control		3%	\$	44,809	
√ Basic Landscaping/Irrigation		3%	\$	44,809	
Other:		\$0	\$	-	
<b>**Allowances based on % of Paving Construction Cost Subtotal</b>					<b>Allowance Subtotal: \$ 985,807</b>
<b>Paving and Allowance Subtotal:</b>					<b>\$ 2,479,455</b>
<b>Construction Contingency:</b>					<b>15% \$ 371,918</b>
<b>Construction Cost TOTAL:</b>					<b>\$ 2,852,000</b>

<b>Impact Fee Project Cost Summary</b>			
<b>Item Description</b>	<b>Notes:</b>	<b>Allowance</b>	<b>Item Cost</b>
<b>Construction:</b>		-	\$ 2,852,000
<b>Engineering/Survey/Testing:</b>		20%	\$ 570,400
<b>Mobilization</b>		6%	\$ 171,120
<b>Previous City contribution</b>			
<b>Other</b>			
<b>ROW/Easement Acquisition</b>	Not included		
<b>Impact Fee Project Cost TOTAL:</b>			<b>\$ 3,594,000</b>

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**City of Cedar Hill**  
**2012 Roadway Impact Fee Update**  
**Conceptual Level Project Cost Projection**

Kimley-Horn and Associates, Inc.  
 updated: 5/16/2012

<b>Project Information:</b>		<b>Description:</b>	<b>Project No.</b>	<b>2-G</b>
<b>Name:</b>	Cedarview Dr. (1)	<b>This project consists of the reconstruction of a two-lane undivided facility to a four-lane undivided major collector.</b>		
<b>Limits:</b>	BNSF RR to Tidwell			
<b>Impact Fee Class:</b>	M4U			
<b>Ultimate Class:</b>	Major Collector			
<b>Length (lf):</b>	660			
<b>Service Area(s):</b>	2			

<b>Roadway Construction Cost Projection</b>					
No.	Item Description	Quantity	Unit	Unit Price	Item Cost
105	Unclassified Street Excavation	1,907	cy	\$ 15.00	\$ 28,600
205	6" Lime Stabilization (with Lime @ 27#/sy)	3,740	sy	\$ 4.00	\$ 14,960
305	8" Concrete Pavement w/ 6" Curb	3,593	sy	\$ 46.00	\$ 165,293
405	4" Topsoil	807	sy	\$ 5.00	\$ 4,033
505	5' Concrete Sidewalk	6,600	sf	\$ 4.00	\$ 26,400
605	Turn Lanes and Median Openings	0	sy	\$ 50.00	\$ -
<b>Paving Construction Cost Subtotal:</b>					<b>\$ 239,287</b>
<b>Major Construction Component Allowances**:</b>					
Item Description	Notes	Allowance	Item Cost		
√ Prep ROW		6%	\$	14,357	
√ Traffic Control	Construction Phase Traffic Control	5%	\$	11,964	
√ Pavement Markings/Markers		3%	\$	7,179	
√ Roadway Drainage	Standard Internal System	30%	\$	71,786	
√ Illumination		6%	\$	14,357	
Special Drainage Structures	None Anticipated	0%	\$	-	
√ Water	Minor Adjustments	6%	\$	14,357	
√ Sewer	Minor Adjustments	4%	\$	9,571	
√ Establish Turf / Erosion Control		3%	\$	7,179	
√ Basic Landscaping/Irrigation		3%	\$	7,179	
Other:		\$0	\$	-	
<b>**Allowances based on % of Paving Construction Cost Subtotal</b>					<b>Allowance Subtotal: \$ 157,929</b>
<b>Paving and Allowance Subtotal:</b>					<b>\$ 397,216</b>
<b>Construction Contingency:</b>					<b>15% \$ 59,582</b>
<b>Construction Cost TOTAL:</b>					<b>\$ 457,000</b>

<b>Impact Fee Project Cost Summary</b>			
Item Description	Notes:	Allowance	Item Cost
<b>Construction:</b>		-	\$ 457,000
<b>Engineering/Survey/Testing:</b>		20%	\$ 91,400
<b>Mobilization</b>		6%	\$ 27,420
<b>Previous City contribution</b>			
<b>Other</b>			
<b>ROW/Easement Acquisition</b>	Not included		
<b>Impact Fee Project Cost TOTAL:</b>			<b>\$ 576,000</b>

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**City of Cedar Hill**  
**2012 Roadway Impact Fee Update**  
**Conceptual Level Project Cost Projection**

Kimley-Horn and Associates, Inc.  
 updated: 5/16/2012

<b>Project Information:</b>		<b>Description:</b>	<b>Project No.</b>
<b>Name:</b>	Uptown Blvd.	<b>This project consisted of the construction of a four-lane divided principal arterial. This project sheet represents the actual cost that the City of Cedar Hill incurred to construct this project.</b>	<b>2-H</b>
<b>Limits:</b>	FM 1382 to Belt Line Rd.		
<b>Impact Fee Class:</b>	M4D		
<b>Ultimate Class:</b>	Principal Arterial		
<b>Length (lf):</b>	4,995		
<b>Service Area(s):</b>	2		

<b>Impact Fee Project Cost Summary</b>			
<b>Item Description</b>	<b>Notes:</b>	<b>Allowance</b>	<b>Item Cost</b>
<b>City Contribution to Construction Cost:</b>		-	
<b>Engineering/Survey/Testing</b>			
<b>Other</b>			
<b>Impact Fee Project Cost TOTAL:</b>			<b>\$ 2,630,057</b>

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**City of Cedar Hill**  
**2012 Roadway Impact Fee Update**  
**Conceptual Level Project Cost Projection**

Kimley-Horn and Associates, Inc.  
 updated: 5/16/2012

<b>Project Information:</b>		<b>Description:</b>	<b>Project No.</b>
<b>Name:</b>	Pioneer Tr.	<b>This completed project consisted of the construction of a four-lane undivided major collector. This project sheet represents the actual cost that the City of Cedar Hill incurred to construct this project.</b>	<b>2-1</b>
<b>Limits:</b>	Cedar Hill Rd. to Uptown Blvd.		
<b>Impact Fee Class:</b>	M4U		
<b>Ultimate Class:</b>	Major Collector		
<b>Length (lf):</b>	1,550		
<b>Service Area(s):</b>	2		

<b>Impact Fee Project Cost Summary</b>			
<b>Item Description</b>	<b>Notes:</b>	<b>Allowance</b>	<b>Item Cost</b>
<b>City Contribution to Construction Cost:</b>		-	
<b>Engineering/Survey/Testing</b>			
<b>Other</b>			
<b>Impact Fee Project Cost TOTAL:</b>			<b>\$ 1,362,005</b>

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**City of Cedar Hill**  
**2012 Roadway Impact Fee Update**  
**Conceptual Level Project Cost Projection**

Kimley-Horn and Associates, Inc.  
 updated: 5/16/2012

<b>Project Information:</b>		<b>Description:</b>	<b>Project No.</b>
<b>Name:</b>	S Clark Rd. (1)	<b>This completed project consisted of the construction of a four-lane undivided major collector. This project sheet represents the actual cost that the City of Cedar Hill incurred to construct this project.</b>	<b>2-J</b>
<b>Limits:</b>	FM 1382 to US 67 SBFR		
<b>Impact Fee Class:</b>	M4U		
<b>Ultimate Class:</b>	Major Collector		
<b>Length (lf):</b>	1,615		
<b>Service Area(s):</b>	2		

<b>Impact Fee Project Cost Summary</b>			
<b>Item Description</b>	<b>Notes:</b>	<b>Allowance</b>	<b>Item Cost</b>
<b>City Contribution to Construction Cost:</b>		-	
<b>Engineering/Survey/Testing</b>			
<b>Other</b>			
<b>Impact Fee Project Cost TOTAL:</b>			<b>\$ 994,318</b>

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**City of Cedar Hill**  
**2012 Roadway Impact Fee Update**  
**Conceptual Level Project Cost Projection**

Kimley-Horn and Associates, Inc.  
 updated: 5/16/2012

Project Information:		Description:	Project No.
<b>Name:</b>	Joe Wilson Rd. (1)	<b>This project consists of the reconstruction of a two-lane undivided facility to a four-lane divided minor arterial. The boundary between SA 2 and the City of Duncanville is on the centerline of Joe Wilson Rd.</b>	<b>2-K</b>
<b>Limits:</b>	Cedar Hill Rd. to 490' S of Cedar Hill Rd.		
<b>Impact Fee Class:</b>	M4D		
<b>Ultimate Class:</b>	Minor Arterial		
<b>Length (lf):</b>	490		
<b>Service Area(s):</b>	2 (Half)		

Roadway Construction Cost Projection					
No.	Item Description	Quantity	Unit	Unit Price	Item Cost
103	Unclassified Street Excavation	1,416	cy	\$ 15.00	\$ 21,233
203	6" Lime Stabilization (with Lime @ 27#/sy)	2,777	sy	\$ 4.00	\$ 11,107
303	8" Concrete Pavement w/ 6" Curb	2,722	sy	\$ 46.00	\$ 125,222
403	4" Topsoil	1,742	sy	\$ 5.00	\$ 8,711
503	5' Concrete Sidewalk	4,900	sf	\$ 4.00	\$ 19,600
603	Turn Lanes and Median Openings	354	sy	\$ 50.00	\$ 17,711
<b>Paving Construction Cost Subtotal:</b>					<b>\$ 203,585</b>
Major Construction Component Allowances**:					
Item Description	Notes	Allowance	Item Cost		
√ Prep ROW		6%	\$	12,215	
√ Traffic Control	Construction Phase Traffic Control	5%	\$	10,179	
√ Pavement Markings/Markers		3%	\$	6,108	
√ Roadway Drainage	Standard Internal System	30%	\$	61,075	
√ Illumination		6%	\$	12,215	
Special Drainage Structures	None Anticipated	0%	\$	-	
√ Water	Minor Adjustments	6%	\$	12,215	
√ Sewer	Minor Adjustments	4%	\$	8,143	
√ Establish Turf / Erosion Control		3%	\$	6,108	
√ Basic Landscaping/Irrigation		3%	\$	6,108	
Other:		\$0	\$	-	
<b>Allowance Subtotal:</b>					<b>\$ 134,366</b>
<b>Paving and Allowance Subtotal:</b>					<b>\$ 337,951</b>
<b>Construction Contingency:</b>					<b>15% \$ 50,693</b>
<b>Construction Cost TOTAL:</b>					<b>\$ 389,000</b>

Impact Fee Project Cost Summary			
Item Description	Notes:	Allowance	Item Cost
<b>Construction:</b>		-	\$ 389,000
<b>Engineering/Survey/Testing:</b>		20%	\$ 77,800
<b>Mobilization</b>		6%	\$ 23,340
<b>Previous City contribution</b>			
<b>Other</b>			
<b>ROW/Easement Acquisition</b>	Not included		
<b>Impact Fee Project Cost TOTAL:</b>			<b>\$ 490,000</b>

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**City of Cedar Hill**  
**2012 Roadway Impact Fee Update**  
**Conceptual Level Project Cost Projection**

Kimley-Horn and Associates, Inc.  
 updated: 5/16/2012

<b>Project Information:</b>		<b>Description:</b>	<b>Project No.</b>
<b>Name:</b>	Joe Wilson Rd. (2)	<b>This project consists of the reconstruction of a two-lane undivided facility to a four-lane divided minor arterial.</b>	<b>2-L</b>
<b>Limits:</b>	490' S of Cedar Hill Rd. to US 67 SBFR		
<b>Impact Fee Class:</b>	M4D		
<b>Ultimate Class:</b>	Minor Arterial		
<b>Length (lf):</b>	4,550		
<b>Service Area(s):</b>	2		

<b>Roadway Construction Cost Projection</b>					
No.	Item Description	Quantity	Unit	Unit Price	Item Cost
103	Unclassified Street Excavation	13,144	cy	\$ 15.00	\$ 197,167
203	6" Lime Stabilization (with Lime @ 27#/sy)	25,783	sy	\$ 4.00	\$ 103,133
303	8" Concrete Pavement w/ 6" Curb	25,278	sy	\$ 46.00	\$ 1,162,778
403	4" Topsoil	16,178	sy	\$ 5.00	\$ 80,889
503	5' Concrete Sidewalk	45,500	sf	\$ 4.00	\$ 182,000
603	Turn Lanes and Median Openings	3,289	sy	\$ 50.00	\$ 164,464
<b>Paving Construction Cost Subtotal:</b>					<b>\$ 1,890,430</b>
<b>Major Construction Component Allowances**:</b>					
Item Description	Notes	Allowance	Item Cost		
√ Prep ROW		6%	\$	113,426	
√ Traffic Control	Construction Phase Traffic Control	5%	\$	94,522	
√ Pavement Markings/Markers		3%	\$	56,713	
√ Roadway Drainage	Standard Internal System	30%	\$	567,129	
√ Illumination		6%	\$	113,426	
Special Drainage Structures	None Anticipated	0%	\$	-	
√ Water	Minor Adjustments	6%	\$	113,426	
√ Sewer	Minor Adjustments	4%	\$	75,617	
√ Establish Turf / Erosion Control		3%	\$	56,713	
√ Basic Landscaping/Irrigation		3%	\$	56,713	
Other:		\$0	\$	-	
<b>**Allowances based on % of Paving Construction Cost Subtotal</b>					<b>Allowance Subtotal: \$ 1,247,684</b>
<b>Paving and Allowance Subtotal:</b>					<b>\$ 3,138,114</b>
<b>Construction Contingency:</b>					<b>15% \$ 470,717</b>
<b>Construction Cost TOTAL:</b>					<b>\$ 3,609,000</b>

<b>Impact Fee Project Cost Summary</b>			
Item Description	Notes:	Allowance	Item Cost
<b>Construction:</b>		-	\$ 3,609,000
<b>Engineering/Survey/Testing:</b>		20%	\$ 721,800
<b>Mobilization</b>		6%	\$ 216,540
<b>Previous City contribution</b>			
<b>Other</b>			
<b>ROW/Easement Acquisition</b>	Not included		
<b>Impact Fee Project Cost TOTAL:</b>			<b>\$ 4,547,000</b>

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**City of Cedar Hill**  
**2012 Roadway Impact Fee Update**  
**Conceptual Level Project Cost Projection**

Kimley-Horn and Associates, Inc.  
 updated: 5/16/2012

<b>Project Information:</b>		<b>Description:</b>	<b>Project No.</b>	<b>2-M</b>
<b>Name:</b>	Joe Wilson Rd. (Phase III)	<b>This project was a cost participation project with Dallas County. This project consisted of the reconstruction from a two-lane asphalt facility to a four-lane divided principal arterial. This project sheet represents the actual cost that the City of Cedar Hill incurred to construct this project.</b>		
<b>Limits:</b>	US 67 SBFR to 360' S. of FM 1382			
<b>Impact Fee Class:</b>	M4D			
<b>Ultimate Class:</b>	Principal Arterial			
<b>Length (lf):</b>	7,690			
<b>Service Area(s):</b>	2			

<b>Impact Fee Project Cost Summary</b>			
<b>Item Description</b>	<b>Notes:</b>	<b>Allowance</b>	<b>Item Cost</b>
City Contribution to Construction Cost: Engineering/Survey/Testing Other		-	\$ 4,616,841
<b>Impact Fee Project Cost TOTAL:</b>			<b>\$ 4,616,841</b>

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**City of Cedar Hill**  
**2012 Roadway Impact Fee Update**  
**Conceptual Level Project Cost Projection**

Kimley-Horn and Associates, Inc.  
 updated: 5/16/2012

<b>Project Information:</b>		<b>Description:</b>	<b>Project No.</b>
<b>Name:</b>	Joe Wilson Rd. (Phases I&II)	<b>This project was a cost participation project with Dallas County. This project consisted of the reconstruction of a two-lane asphalt facility to a four-lane divided roadway. This project sheet represents the actual cost that the City of Cedar Hill incurred to construct this project.</b>	<b>2-N</b>
<b>Limits:</b>	360' S. of FM 1382 to Parkerville Rd.		
<b>Impact Fee Class:</b>	M4D		
<b>Ultimate Class:</b>	Principal Arterial		
<b>Length (lf):</b>	4,930		
<b>Service Area(s):</b>	2		

<b>Impact Fee Project Cost Summary</b>			
<b>Item Description</b>	<b>Notes:</b>	<b>Allowance</b>	<b>Item Cost</b>
<b>City Contribution to Construction Cost:</b>		-	\$ 2,590,331
<b>Engineering/Survey/Testing</b>			
<b>Other</b>			
<b>Impact Fee Project Cost TOTAL:</b>			<b>\$ 2,590,331</b>

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**City of Cedar Hill**  
**2012 Roadway Impact Fee Update**  
**Conceptual Level Project Cost Projection**

Kimley-Horn and Associates, Inc.  
 updated: 5/16/2012

Project Information:		Description:	Project No.
<b>Name:</b>	Duncanville Rd. (1)	<b>This project consists of the reconstruction of a two-lane undivided facility to a six-lane divided principal arterial. The boundary between SA 2 and the City of DeSoto is on the centerline of Duncanville Rd.</b>	<b>2-0</b>
<b>Limits:</b>	Wintergreen Rd. to Pleasant Run Rd.		
<b>Impact Fee Class:</b>	P6D		
<b>Ultimate Class:</b>	Principal Arterial		
<b>Length (lf):</b>	5,260		
<b>Service Area(s):</b>	2 (Half)		

Roadway Construction Cost Projection					
No.	Item Description	Quantity	Unit	Unit Price	Item Cost
106	Unclassified Street Excavation	22,209	cy	\$ 15.00	\$ 333,133
206	6" Lime Stabilization (with Lime @ 27#/sy)	43,833	sy	\$ 4.00	\$ 175,333
306	10" Concrete Pavement w/ 6" Curb	43,249	sy	\$ 45.00	\$ 1,946,200
406	4" Topsoil	17,533	sy	\$ 5.00	\$ 87,667
506	5' Concrete Sidewalk	52,600	sf	\$ 4.00	\$ 210,400
606	Turn Lanes and Median Openings	3,803	sy	\$ 50.00	\$ 190,127
<b>Paving Construction Cost Subtotal:</b>					<b>\$ 2,942,860</b>
Major Construction Component Allowances**:					
Item Description	Notes	Allowance	Item Cost		
√ Prep ROW		6%	\$	176,572	
√ Traffic Control	Construction Phase Traffic Control	5%	\$	147,143	
√ Pavement Markings/Markers		3%	\$	88,286	
√ Roadway Drainage	Standard Internal System	30%	\$	882,858	
√ Illumination		6%	\$	176,572	
√ Special Drainage Structures	None Anticipated	0%	\$	250,000	
√ Water	Minor Adjustments	6%	\$	176,572	
√ Sewer	Minor Adjustments	4%	\$	117,714	
√ Establish Turf / Erosion Control		3%	\$	88,286	
√ Basic Landscaping/Irrigation		3%	\$	88,286	
Other:		\$0	\$	-	
<b>**Allowances based on % of Paving Construction Cost Subtotal</b>					<b>Allowance Subtotal: \$ 2,192,288</b>
<b>Paving and Allowance Subtotal:</b>					<b>\$ 5,135,148</b>
<b>Construction Contingency:</b>					<b>15% \$ 770,272</b>
<b>Construction Cost TOTAL:</b>					<b>\$ 5,906,000</b>

Impact Fee Project Cost Summary			
Item Description	Notes:	Allowance	Item Cost
<b>Construction:</b>		-	\$ 5,906,000
<b>Engineering/Survey/Testing:</b>		20%	\$ 1,181,200
<b>Mobilization</b>		6%	\$ 354,360
<b>Previous City contribution</b>			
<b>Other</b>			
<b>ROW/Easement Acquisition</b>	Not included		
<b>Impact Fee Project Cost TOTAL:</b>			<b>\$ 7,442,000</b>

**NOTE:** The planning level cost projections listed in this appendix have been developed for Impact Fee calculations only and should not be used for any future Capital Improvement Planning within the City of Cedar Hill.

The planning level cost projections shall not supersede the City's design standards or the determination of the City Engineer for a specific project.

**City of Cedar Hill**  
**2012 Roadway Impact Fee Update**  
**Conceptual Level Project Cost Projection**

Kimley-Horn and Associates, Inc.  
 updated: 5/16/2012

Project Information:		Description:	Project No.
<b>Name:</b>	Duncanville Rd. (2)	<b>This project consists of the reconstruction of a two-lane undivided facility to a four-lane divided principal arterial. The boundary between SA 2 and the City of DeSoto is on the centerline of Duncanville Rd.</b>	<b>2-P</b>
<b>Limits:</b>	Pleasant Run Rd. to Belt Line Rd.		
<b>Impact Fee Class:</b>	M4D		
<b>Ultimate Class:</b>	Principal Arterial		
<b>Length (lf):</b>	5,310		
<b>Service Area(s):</b>	2 (Half)		

Roadway Construction Cost Projection					
No.	Item Description	Quantity	Unit	Unit Price	Item Cost
103	Unclassified Street Excavation	15,340	cy	\$ 15.00	\$ 230,100
203	6" Lime Stabilization (with Lime @ 27#/sy)	30,090	sy	\$ 4.00	\$ 120,360
303	8" Concrete Pavement w/ 6" Curb	29,500	sy	\$ 46.00	\$ 1,357,000
403	4" Topsoil	18,880	sy	\$ 5.00	\$ 94,400
503	5' Concrete Sidewalk	53,100	sf	\$ 4.00	\$ 212,400
603	Turn Lanes and Median Openings	3,839	sy	\$ 50.00	\$ 191,934
<b>Paving Construction Cost Subtotal:</b>					<b>\$ 2,206,194</b>
Major Construction Component Allowances**:					
Item Description	Notes	Allowance	Item Cost		
√ Prep ROW		6%	\$	132,372	
√ Traffic Control	Construction Phase Traffic Control	5%	\$	110,310	
√ Pavement Markings/Markers		3%	\$	66,186	
√ Roadway Drainage	Standard Internal System	30%	\$	661,858	
√ Illumination		6%	\$	132,372	
√ Special Drainage Structures	None Anticipated	0%	\$	500,000	
√ Water	Minor Adjustments	6%	\$	132,372	
√ Sewer	Minor Adjustments	4%	\$	88,248	
√ Establish Turf / Erosion Control		3%	\$	66,186	
√ Basic Landscaping/Irrigation		3%	\$	66,186	
Other:		\$0	\$	-	
<b>**Allowances based on % of Paving Construction Cost Subtotal</b>					<b>Allowance Subtotal: \$ 1,956,088</b>
<b>Paving and Allowance Subtotal:</b>					<b>\$ 4,162,283</b>
<b>Construction Contingency:</b>					<b>15% \$ 624,342</b>
<b>Construction Cost TOTAL:</b>					<b>\$ 4,787,000</b>

Impact Fee Project Cost Summary			
Item Description	Notes:	Allowance	Item Cost
<b>Construction:</b>		-	\$ 4,787,000
<b>Engineering/Survey/Testing:</b>		20%	\$ 957,400
<b>Mobilization</b>		6%	\$ 287,220
<b>Previous City contribution</b>			
<b>Other</b>			
<b>ROW/Easement Acquisition</b>	Not included		
<b>Impact Fee Project Cost TOTAL:</b>			<b>\$ 6,032,000</b>

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**City of Cedar Hill**  
**2012 Roadway Impact Fee Update**  
**Conceptual Level Project Cost Projection**

Kimley-Horn and Associates, Inc.  
 updated: 5/16/2012

<b>Project Information:</b>		<b>Description:</b>	<b>Project No.</b>
<b>Name:</b>	Duncanville Rd. (3)	<b>This project consists of the reconstruction of a two-lane undivided facility to a four-lane divided principal arterial. The boundary between SA 2 and the City of DeSoto is on the centerline of Duncanville Rd.</b>	<b>2-Q</b>
<b>Limits:</b>	Belt Line Rd. to Parkerville Rd.		
<b>Impact Fee Class:</b>	M4D		
<b>Ultimate Class:</b>	Principal Arterial		
<b>Length (lf):</b>	5,270		
<b>Service Area(s):</b>	2 (Half)		

<b>Roadway Construction Cost Projection</b>					
No.	Item Description	Quantity	Unit	Unit Price	Item Cost
103	Unclassified Street Excavation	15,224	cy	\$ 15.00	\$ 228,367
203	6" Lime Stabilization (with Lime @ 27#/sy)	29,863	sy	\$ 4.00	\$ 119,453
303	8" Concrete Pavement w/ 6" Curb	29,278	sy	\$ 46.00	\$ 1,346,778
403	4" Topsoil	18,738	sy	\$ 5.00	\$ 93,689
503	5' Concrete Sidewalk	52,700	sf	\$ 4.00	\$ 210,800
603	Turn Lanes and Median Openings	3,810	sy	\$ 50.00	\$ 190,489
<b>Paving Construction Cost Subtotal:</b>					<b>\$ 2,189,575</b>
<b>Major Construction Component Allowances**:</b>					
Item Description	Notes	Allowance	Item Cost		
√ Prep ROW		6%	\$	131,375	
√ Traffic Control	Construction Phase Traffic Control	5%	\$	109,479	
√ Pavement Markings/Markers		3%	\$	65,687	
√ Roadway Drainage	Standard Internal System	30%	\$	656,873	
√ Illumination		6%	\$	131,375	
√ Special Drainage Structures	None Anticipated	0%	\$	250,000	
√ Water	Minor Adjustments	6%	\$	131,375	
√ Sewer	Minor Adjustments	4%	\$	87,583	
√ Establish Turf / Erosion Control		3%	\$	65,687	
√ Basic Landscaping/Irrigation		3%	\$	65,687	
Other:		\$0	\$	-	
<b>**Allowances based on % of Paving Construction Cost Subtotal</b>					<b>Allowance Subtotal: \$ 1,695,120</b>
<b>Paving and Allowance Subtotal:</b>					<b>\$ 3,884,695</b>
<b>Construction Contingency:</b>					<b>15% \$ 582,704</b>
<b>Construction Cost TOTAL:</b>					<b>\$ 4,468,000</b>

<b>Impact Fee Project Cost Summary</b>			
Item Description	Notes:	Allowance	Item Cost
<b>Construction:</b>		-	\$ 4,468,000
<b>Engineering/Survey/Testing:</b>		20%	\$ 893,600
<b>Mobilization</b>		6%	\$ 268,080
<b>Previous City contribution</b>			
<b>Other</b>			
<b>ROW/Easement Acquisition</b>	Not included		
<b>Impact Fee Project Cost TOTAL:</b>			<b>\$ 5,630,000</b>

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**City of Cedar Hill**  
**2012 Roadway Impact Fee Update**  
**Conceptual Level Project Cost Projection**

Kimley-Horn and Associates, Inc.  
 updated: 5/16/2012

<b>Project Information:</b>		<b>Description:</b>	<b>Project No.</b>
<b>Name:</b>	Wintergreen Rd. (2)	<b>This project consists of the reconstruction of a two-lane undivided facility to a four-lane divided minor arterial. The boundary between SA 1 and the SA 2 is on the centerline of Wintergreen Rd.</b>	<b>1-1,2-R</b>
<b>Limits:</b>	BNSF RR to Cedar Hill Rd.		
<b>Impact Fee Class:</b>	M4D		
<b>Ultimate Class:</b>	Minor Arterial		
<b>Length (lf):</b>	600		
<b>Service Area(s):</b>	1, 2		

<b>Roadway Construction Cost Projection</b>					
No.	Item Description	Quantity	Unit	Unit Price	Item Cost
103	Unclassified Street Excavation	1,733	cy	\$ 15.00	\$ 26,000
203	6" Lime Stabilization (with Lime @ 27#/sy)	3,400	sy	\$ 4.00	\$ 13,600
303	8" Concrete Pavement w/ 6" Curb	3,333	sy	\$ 46.00	\$ 153,333
403	4" Topsoil	2,133	sy	\$ 5.00	\$ 10,667
503	5' Concrete Sidewalk	6,000	sf	\$ 4.00	\$ 24,000
603	Turn Lanes and Median Openings	434	sy	\$ 50.00	\$ 21,688
<b>Paving Construction Cost Subtotal:</b>					<b>\$ 249,288</b>
<b>Major Construction Component Allowances**:</b>					
Item Description	Notes	Allowance	Item Cost		
√ Prep ROW		6%	\$	14,957	
√ Traffic Control	Construction Phase Traffic Control	5%	\$	12,464	
√ Pavement Markings/Markers		3%	\$	7,479	
√ Roadway Drainage	Standard Internal System	30%	\$	74,786	
√ Illumination		6%	\$	14,957	
Special Drainage Structures	None Anticipated	0%	\$	-	
√ Water	Minor Adjustments	6%	\$	14,957	
√ Sewer	Minor Adjustments	4%	\$	9,972	
√ Establish Turf / Erosion Control		3%	\$	7,479	
√ Basic Landscaping/Irrigation		3%	\$	7,479	
Other:		\$0	\$	-	
<b>**Allowances based on % of Paving Construction Cost Subtotal</b>					<b>Allowance Subtotal: \$ 164,530</b>
<b>Paving and Allowance Subtotal:</b>					<b>\$ 413,817</b>
<b>Construction Contingency:</b>					<b>15% \$ 62,073</b>
<b>Construction Cost TOTAL:</b>					<b>\$ 476,000</b>

<b>Impact Fee Project Cost Summary</b>			
Item Description	Notes:	Allowance	Item Cost
<b>Construction:</b>		-	\$ 476,000
<b>Engineering/Survey/Testing:</b>		20%	\$ 95,200
<b>Mobilization</b>		6%	\$ 28,560
<b>Previous City contribution</b>			
<b>Other</b>			
<b>ROW/Easement Acquisition</b>	Not included		
<b>Impact Fee Project Cost TOTAL:</b>			<b>\$ 600,000</b>

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**City of Cedar Hill**  
**2012 Roadway Impact Fee Update**  
**Conceptual Level Project Cost Projection**

Kimley-Horn and Associates, Inc.  
 updated: 5/16/2012

<b>Project Information:</b>		<b>Description:</b>	<b>Project No.</b>
<b>Name:</b>	Wintergreen Rd. (3)	<b>This project consists of the reconstruction of a two-lane undivided facility to a four-lane divided minor arterial.</b>	<b>2-S</b>
<b>Limits:</b>	Joe Wilson Rd. to US 67 SBFR		
<b>Impact Fee Class:</b>	M4D		
<b>Ultimate Class:</b>	Minor Arterial		
<b>Length (lf):</b>	3,240		
<b>Service Area(s):</b>	2		

<b>Roadway Construction Cost Projection</b>					
No.	Item Description	Quantity	Unit	Unit Price	Item Cost
103	Unclassified Street Excavation	9,360	cy	\$ 15.00	\$ 140,400
203	6" Lime Stabilization (with Lime @ 27#/sy)	18,360	sy	\$ 4.00	\$ 73,440
303	8" Concrete Pavement w/ 6" Curb	18,000	sy	\$ 46.00	\$ 828,000
403	4" Topsoil	11,520	sy	\$ 5.00	\$ 57,600
503	5' Concrete Sidewalk	32,400	sf	\$ 4.00	\$ 129,600
603	Turn Lanes and Median Openings	2,342	sy	\$ 50.00	\$ 117,113
<b>Paving Construction Cost Subtotal:</b>					<b>\$ 1,346,153</b>
<b>Major Construction Component Allowances**:</b>					
Item Description	Notes	Allowance	Item Cost		
√ Prep ROW		6%	\$	80,769	
√ Traffic Control	Construction Phase Traffic Control	5%	\$	67,308	
√ Pavement Markings/Markers		3%	\$	40,385	
√ Roadway Drainage	Standard Internal System	30%	\$	403,846	
√ Illumination		6%	\$	80,769	
Special Drainage Structures	None Anticipated	0%	\$	-	
√ Water	Minor Adjustments	6%	\$	80,769	
√ Sewer	Minor Adjustments	4%	\$	53,846	
√ Establish Turf / Erosion Control		3%	\$	40,385	
√ Basic Landscaping/Irrigation		3%	\$	40,385	
Other:		\$0	\$	-	
<b>**Allowances based on % of Paving Construction Cost Subtotal</b>					<b>Allowance Subtotal: \$ 888,461</b>
<b>Paving and Allowance Subtotal:</b>					<b>\$ 2,234,613</b>
<b>Construction Contingency:</b>					<b>15% \$ 335,192</b>
<b>Construction Cost TOTAL:</b>					<b>\$ 2,570,000</b>

<b>Impact Fee Project Cost Summary</b>			
Item Description	Notes:	Allowance	Item Cost
<b>Construction:</b>		-	\$ 2,570,000
<b>Engineering/Survey/Testing:</b>		20%	\$ 514,000
<b>Mobilization</b>		6%	\$ 154,200
<b>Previous City contribution</b>			
<b>Other</b>			
<b>ROW/Easement Acquisition</b>	Not included		
<b>Impact Fee Project Cost TOTAL:</b>			<b>\$ 3,238,000</b>

**NOTE:** The planning level cost projections listed in this appendix have been developed for Impact Fee calculations only and should not be used for any future Capital Improvement Planning within the City of Cedar Hill.

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**City of Cedar Hill**  
**2012 Roadway Impact Fee Update**  
**Conceptual Level Project Cost Projection**

Kimley-Horn and Associates, Inc.  
 updated: 5/16/2012

<b>Project Information:</b>		<b>Description:</b>	<b>Project No.</b>
<b>Name:</b>	Wintergreen Rd. (4)	<b>This project consisted of the reconstruction of a two-lane asphalt facility to a six-lane divided principal arterial. This project sheet represents the actual cost that the City of Cedar Hill contributed to the City of Duncanville to construct this project.</b>	<b>2-T</b>
<b>Limits:</b>	US 67 NBFR to E. City Limits		
<b>Impact Fee Class:</b>	P6D		
<b>Ultimate Class:</b>	Principal Arterial		
<b>Length (lf):</b>	1,995		
<b>Service Area(s):</b>	2		

<b>Impact Fee Project Cost Summary</b>			
<b>Item Description</b>	<b>Notes:</b>	<b>Allowance</b>	<b>Item Cost</b>
<b>City Contribution to Construction Cost:</b>		-	\$ 339,240
<b>Engineering/Survey/Testing</b>			
<b>Other</b>	Existing Alignment		
<b>Impact Fee Project Cost TOTAL:</b>			<b>\$ 339,240</b>

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**City of Cedar Hill**  
**2012 Roadway Impact Fee Update**  
**Conceptual Level Project Cost Projection**

Kimley-Horn and Associates, Inc.  
 updated: 5/16/2012

<b>Project Information:</b>		<b>Description:</b>	<b>Project No.</b>
<b>Name:</b>	Pleasant Run Rd. (2)	<b>This project, currently under construction, consists of the reconstruction of a two-lane asphalt facility to a six-lane divided principal arterial. The boundary between SA 1 and SA 2 is on the centerline of Pleasant Run Rd.</b>	<b>1-K,2-U</b>
<b>Limits:</b>	BNSF RR to Cedar Hill Rd.		
<b>Impact Fee Class:</b>	P6D		
<b>Ultimate Class:</b>	Principal Arterial		
<b>Length (lf):</b>	185		
<b>Service Area(s):</b>	1, 2		

<b>Impact Fee Project Cost Summary</b>			
<b>Item Description</b>	<b>Notes:</b>	<b>Allowance</b>	<b>Item Cost</b>
<b>City Contribution to Construction Cost:</b>	Pleasant Run Road and Cedar Hill Road	-	
<b>Engineering/Survey/Testing</b>			
<b>Other</b>			
<b>Impact Fee Project Cost TOTAL:</b>			<b>\$ 1,144,632</b>

**NOTE:** The planning level cost projections listed in this appendix have been developed for Impact Fee calculations only and should not be used for any future Capital Improvement Planning within the City of Cedar Hill.

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**City of Cedar Hill**  
**2012 Roadway Impact Fee Update**  
**Conceptual Level Project Cost Projection**

Kimley-Horn and Associates, Inc.  
 updated: 5/16/2012

<b>Project Information:</b>		<b>Description:</b>	<b>Project No.</b>
<b>Name:</b>	Pleasant Run Rd. (3)	<b>This project, portions of which are currently under construction - and another portion that was previously completed, consists of the reconstruction of a two-lane asphalt facility to a six-lane divided principal arterial.</b>	<b>2-V</b>
<b>Limits:</b>	Cedar Hill Rd. to US 67 SBFR		
<b>Impact Fee Class:</b>	P6D		
<b>Ultimate Class:</b>	Principal Arterial		
<b>Length (lf):</b>	4,300		
<b>Service Area(s):</b>	2		

<b>Impact Fee Project Cost Summary</b>			
<b>Item Description</b>	<b>Notes:</b>	<b>Allowance</b>	<b>Item Cost</b>
<b>City Contribution to Construction Cost:</b>		-	
<b>Engineering/Survey/Testing</b>			
<b>Other</b>			
<b>Impact Fee Project Cost TOTAL:</b>			<b>\$ 4,008,596</b>

**NOTE:** The planning level cost projections listed in this appendix have been developed for Impact Fee calculations only and should not be used for any future Capital Improvement Planning within the City of Cedar Hill.

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**City of Cedar Hill**  
**2012 Roadway Impact Fee Update**  
**Conceptual Level Project Cost Projection**

Kimley-Horn and Associates, Inc.  
 updated: 5/16/2012

<b>Project Information:</b>		<b>Description:</b>	<b>Project No.</b>	<b>2-W</b>
<b>Name:</b>	Pleasant Run Rd. (4)	<b>This project consisted of the reconstruction of a two-lane asphalt facility to a six-lane divided principal arterial. This project sheet represents the actual cost that the City of Cedar Hill incurred to construct this project.</b>		
<b>Limits:</b>	US 67 NBFR to 320' E. of Joe Wilson Rd.			
<b>Impact Fee Class:</b>	P6D			
<b>Ultimate Class:</b>	Principal Arterial			
<b>Length (lf):</b>	2,185			
<b>Service Area(s):</b>	2			

<b>Impact Fee Project Cost Summary</b>			
<b>Item Description</b>	<b>Notes:</b>	<b>Allowance</b>	<b>Item Cost</b>
<b>City Contribution to Construction Cost:</b>		-	\$ 2,144,435
<b>Engineering/Survey/Testing</b>			
<b>Other</b>			
<b>Impact Fee Project Cost TOTAL:</b>			<b>\$ 2,144,435</b>

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**City of Cedar Hill**  
**2012 Roadway Impact Fee Update**  
**Conceptual Level Project Cost Projection**

Kimley-Horn and Associates, Inc.  
 updated: 5/16/2012

<b>Project Information:</b>		<b>Description:</b>	<b>Project No.</b>
<b>Name:</b>	Pleasant Run Rd. (5)	<b>This project consisted of the reconstruction from a two-lane roadway to a four-lane divided principal arterial. This project sheet represents the lowest bid for the construction of this project.</b>	<b>2-X</b>
<b>Limits:</b>	320' E. of Joe Wilson Rd. to Duncanville Rd.		
<b>Impact Fee Class:</b>	M4D		
<b>Ultimate Class:</b>	Principal Arterial		
<b>Length (lf):</b>	4,895		
<b>Service Area(s):</b>	2		

<b>Impact Fee Project Cost Summary</b>			
<b>Item Description</b>	<b>Notes:</b>	<b>Allowance</b>	<b>Item Cost</b>
<b>City Contribution to Construction Cost:</b>		-	
<b>Engineering/Survey/Testing</b>			
<b>Other</b>			
<b>Impact Fee Project Cost TOTAL:</b>			<b>\$ 5,248,443</b>

**NOTE:** The planning level cost projections listed in this appendix have been developed for Impact Fee calculations only and should not be used for any future Capital Improvement Planning within the City of Cedar Hill.

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**City of Cedar Hill**  
**2012 Roadway Impact Fee Update**  
**Conceptual Level Project Cost Projection**

Kimley-Horn and Associates, Inc.  
 updated: 5/16/2012

<b>Project Information:</b>		<b>Description:</b>	<b>Project No.</b>	<b>2-Y</b>
<b>Name:</b>	Tidwell St. (1)	<b>This project consists of the reconstruction of a two-lane undivided facility to a four-lane divided minor arterial.</b>		
<b>Limits:</b>	Houston St. to US 67 SBFR			
<b>Impact Fee Class:</b>	M4D			
<b>Ultimate Class:</b>	Minor Arterial			
<b>Length (lf):</b>	615			
<b>Service Area(s):</b>	2			

<b>Roadway Construction Cost Projection</b>					
No.	Item Description	Quantity	Unit	Unit Price	Item Cost
103	Unclassified Street Excavation	1,777	cy	\$ 15.00	\$ 26,650
203	6" Lime Stabilization (with Lime @ 27#/sy)	3,485	sy	\$ 4.00	\$ 13,940
303	8" Concrete Pavement w/ 6" Curb	3,417	sy	\$ 46.00	\$ 157,167
403	4" Topsoil	2,187	sy	\$ 5.00	\$ 10,933
503	5' Concrete Sidewalk	6,150	sf	\$ 4.00	\$ 24,600
603	Turn Lanes and Median Openings	445	sy	\$ 50.00	\$ 22,230
<b>Paving Construction Cost Subtotal:</b>					<b>\$ 255,520</b>
<b>Major Construction Component Allowances**:</b>					
Item Description	Notes	Allowance	Item Cost		
√ Prep ROW		6%	\$	15,331	
√ Traffic Control	Construction Phase Traffic Control	5%	\$	12,776	
√ Pavement Markings/Markers		3%	\$	7,666	
√ Roadway Drainage	Standard Internal System	30%	\$	76,656	
√ Illumination		6%	\$	15,331	
Special Drainage Structures	None Anticipated	0%	\$	-	
√ Water	Minor Adjustments	6%	\$	15,331	
√ Sewer	Minor Adjustments	4%	\$	10,221	
√ Establish Turf / Erosion Control		3%	\$	7,666	
√ Basic Landscaping/Irrigation		3%	\$	7,666	
Other:		\$0	\$	-	
<b>**Allowances based on % of Paving Construction Cost Subtotal</b>					<b>Allowance Subtotal: \$ 168,643</b>
<b>Paving and Allowance Subtotal:</b>					<b>\$ 424,163</b>
<b>Construction Contingency:</b>					<b>15% \$ 63,624</b>
<b>Construction Cost TOTAL:</b>					<b>\$ 488,000</b>

<b>Impact Fee Project Cost Summary</b>			
Item Description	Notes:	Allowance	Item Cost
<b>Construction:</b>		-	\$ 488,000
<b>Engineering/Survey/Testing:</b>		20%	\$ 97,600
<b>Mobilization</b>		6%	\$ 29,280
<b>Previous City contribution</b>			
<b>Other</b>			
<b>ROW/Easement Acquisition</b>	Not included		
<b>Impact Fee Project Cost TOTAL:</b>			<b>\$ 615,000</b>

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**City of Cedar Hill**  
**2012 Roadway Impact Fee Update**  
**Conceptual Level Project Cost Projection**

Kimley-Horn and Associates, Inc.  
 updated: 7/3/2012

Project Information:		Description:	Project No.
<b>Name:</b>	Tidwell St. (2)	<b>This project consists of the construction of a new four-lane divided minor arterial.</b>	<b>2-Z</b>
<b>Limits:</b>	Houston St. to BNSF RR		
<b>Impact Fee Class:</b>	M4D		
<b>Ultimate Class:</b>	Minor Arterial		
<b>Length (lf):</b>	935		
<b>Service Area(s):</b>	2		

Roadway Construction Cost Projection					
No.	Item Description	Quantity	Unit	Unit Price	Item Cost
103	Unclassified Street Excavation	2,701	cy	\$ 15.00	\$ 40,517
203	6" Lime Stabilization (with Lime @ 27#/sy)	5,298	sy	\$ 4.00	\$ 21,193
303	8" Concrete Pavement w/ 6" Curb	5,194	sy	\$ 46.00	\$ 238,944
403	4" Topsoil	3,324	sy	\$ 5.00	\$ 16,622
503	5' Concrete Sidewalk	9,350	sf	\$ 4.00	\$ 37,400
603	Turn Lanes and Median Openings	676	sy	\$ 50.00	\$ 33,796
<b>Paving Construction Cost Subtotal:</b>					<b>\$ 388,473</b>
Major Construction Component Allowances**:					
Item Description	Notes	Allowance	Item Cost		
√ Prep ROW	None Anticipated	6%	\$	23,308	
Traffic Control		0%	\$	-	
√ Pavement Markings/Markers	Standard Internal System	3%	\$	11,654	
√ Roadway Drainage		30%	\$	116,542	
√ Illumination		6%	\$	23,308	
Special Drainage Structures		0%	\$	-	
√ Water	Minor Adjustments	6%	\$	23,308	
√ Sewer	Minor Adjustments	4%	\$	15,539	
√ Establish Turf / Erosion Control		3%	\$	11,654	
√ Basic Landscaping/Irrigation		3%	\$	11,654	
√ Other:	Railroad Crossing (50%)		\$1,250,000	\$	1,250,000
<b>**Allowances based on % of Paving Construction Cost Subtotal</b>					<b>Allowance Subtotal: \$ 1,486,969</b>
<b>Paving and Allowance Subtotal:</b>					<b>\$ 1,875,442</b>
<b>Construction Contingency: 15%</b>					<b>\$ 281,316</b>
<b>Construction Cost TOTAL:</b>					<b>\$ 2,157,000</b>

Impact Fee Project Cost Summary			
Item Description	Notes:	Allowance	Item Cost
<b>Construction:</b>		-	\$ 2,157,000
<b>Engineering/Survey/Testing:</b>		20%	\$ 431,400
<b>Mobilization</b>		6%	\$ 129,420
<b>Previous City contribution</b>			
<b>Other</b>			
<b>ROW/Easement Acquisition</b>	Not included		
<b>Impact Fee Project Cost TOTAL:</b>			<b>\$ 2,718,000</b>

**NOTE:** The planning level cost projections listed in this appendix have been developed for Impact Fee calculations only and should not be used for any future Capital Improvement Planning within the City of Cedar Hill.

The planning level cost projections shall not supersede the City's design standards or the determination of the City Engineer for a specific project.

**City of Cedar Hill**  
**2012 Roadway Impact Fee Update**  
**Conceptual Level Project Cost Projection**

Kimley-Horn and Associates, Inc.  
 updated: 5/16/2012

<b>Project Information:</b>		<b>Description:</b>	<b>Project No.</b>
<b>Name:</b>	Tidwell St. / Parkerville Rd.	<p><b>This project consisted of the reconstruction of a two-lane undivided facility to a four-lane divided minor arterial. This project is composed of two completed projects. The first project was Tidwell Street from US 67 NBFR to Joe Wilson Rd. (\$3,082,646). The second project was Parkerville Rd. from Tidwell St. to Highland Dr. (2,940,985) The boundary between SA 2 and SA 3 is on the centerline of Tidwell St. This project sheet represents the actual cost that the City of Cedar Hill incurred to construct this project</b></p>	<b>2-AA,3-A</b>
<b>Limits:</b>	US 67 NBFR to Joe Wilson Rd.		
<b>Impact Fee Class:</b>	M4D		
<b>Ultimate Class:</b>	Minor Arterial		
<b>Length (lf):</b>	10,365		
<b>Service Area(s):</b>	2, 3		

<b>Impact Fee Project Cost Summary</b>			
<b>Item Description</b>	<b>Notes:</b>	<b>Allowance</b>	<b>Item Cost</b>
<b>City Contribution to Construction Cost:</b>		-	\$ 6,023,631
<b>Engineering/Survey/Testing</b>			
<b>Other</b>			
<b>Impact Fee Project Cost TOTAL:</b>			<b>\$ 6,023,631</b>

**NOTE:** The planning level cost projections listed in this appendix have been developed for Impact Fee calculations only and should not be used for any future Capital Improvement Planning within the City of Cedar Hill.

The planning level cost projections shall not supersede the City's design standards or the determination of the City Engineer for a specific project.

**City of Cedar Hill**  
**2012 Roadway Impact Fee Update**  
**Conceptual Level Project Cost Projection**

Kimley-Horn and Associates, Inc.  
 updated: 5/16/2012

Project Information:		Description:	Project No. 2-BB,3-B
<b>Name:</b>	Parkerville Rd. (1)	<b>This project consists of the reconstruction of a two-lane undivided facility to a four-lane divided minor arterial. The boundary between SA 2 and SA 3 is on the centerline of Parkerville Rd.</b>	
<b>Limits:</b>	Springfield Dr. to Duncanville Rd.		
<b>Impact Fee Class:</b>	M4D		
<b>Ultimate Class:</b>	Minor Arterial		
<b>Length (lf):</b>	4,470		
<b>Service Area(s):</b>	2, 3		

Roadway Construction Cost Projection					
No.	Item Description	Quantity	Unit	Unit Price	Item Cost
103	Unclassified Street Excavation	12,913	cy	\$ 15.00	\$ 193,700
203	6" Lime Stabilization (with Lime @ 27#/sy)	25,330	sy	\$ 4.00	\$ 101,320
303	8" Concrete Pavement w/ 6" Curb	24,833	sy	\$ 46.00	\$ 1,142,333
403	4" Topsoil	15,893	sy	\$ 5.00	\$ 79,467
503	5' Concrete Sidewalk	44,700	sf	\$ 4.00	\$ 178,800
603	Turn Lanes and Median Openings	3,231	sy	\$ 50.00	\$ 161,572
<b>Paving Construction Cost Subtotal:</b>					<b>\$ 1,857,192</b>
Major Construction Component Allowances**:					
Item Description	Notes	Allowance	Item Cost		
√ Prep ROW		6%	\$	111,432	
√ Traffic Control	Construction Phase Traffic Control	5%	\$	92,860	
√ Pavement Markings/Markers		3%	\$	55,716	
√ Roadway Drainage	Standard Internal System	30%	\$	557,158	
√ Illumination		6%	\$	111,432	
√ Special Drainage Structures	None Anticipated	0%	\$	250,000	
√ Water	Minor Adjustments	6%	\$	111,432	
√ Sewer	Minor Adjustments	4%	\$	74,288	
√ Establish Turf / Erosion Control		3%	\$	55,716	
√ Basic Landscaping/Irrigation		3%	\$	55,716	
Other:		\$0	\$	-	
<b>**Allowances based on % of Paving Construction Cost Subtotal</b>					<b>Allowance Subtotal: \$ 1,475,747</b>
<b>Paving and Allowance Subtotal:</b>					<b>\$ 3,332,939</b>
<b>Construction Contingency: 15%</b>					<b>\$ 499,941</b>
<b>Construction Cost TOTAL:</b>					<b>\$ 3,833,000</b>

Impact Fee Project Cost Summary			
Item Description	Notes:	Allowance	Item Cost
<b>Construction:</b>		-	\$ 3,833,000
<b>Engineering/Survey/Testing:</b>		20%	\$ 766,600
<b>Mobilization</b>		6%	\$ 229,980
<b>Previous City contribution</b>			
<b>Other</b>			
<b>ROW/Easement Acquisition</b>	Not included		
<b>Impact Fee Project Cost TOTAL:</b>			<b>\$ 4,830,000</b>

**NOTE:** The planning level cost projections listed in this appendix have been developed for Impact Fee calculations only and should not be used for any future Capital Improvement Planning within the City of Cedar Hill.

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**City of Cedar Hill**  
**2012 Roadway Impact Fee Update**  
**Conceptual Level Project Cost Projection**

Kimley-Horn and Associates, Inc.  
 updated: 5/16/2012

<b>Project Information:</b>		<b>Description:</b>	<b>Project No.</b>
<b>Name:</b>	Cooper St.	<b>This project consists of the reconstruction of a two-lane undivided facility to two-lane undivided minor collector. The boundary between SA 2 and SA 3 is on the centerline of Parkerville Rd.</b>	<b>2-CC</b>
<b>Limits:</b>	Houston St. to US 67 SBFR		
<b>Impact Fee Class:</b>	C4U		
<b>Ultimate Class:</b>	Minor Collector		
<b>Length (lf):</b>	1,940		
<b>Service Area(s):</b>	2		

<b>Roadway Construction Cost Projection</b>					
No.	Item Description	Quantity	Unit	Unit Price	Item Cost
102	Unclassified Street Excavation	4,742	cy	\$ 15.00	\$ 71,133
202	6" Lime Stabilization (with Lime @ 27#/sy)	9,269	sy	\$ 4.00	\$ 37,076
302	8" Concrete Pavement w/ 6" Curb	8,838	sy	\$ 46.00	\$ 406,538
402	4" Topsoil	4,096	sy	\$ 5.00	\$ 20,478
502	5' Concrete Sidewalk	19,400	sf	\$ 4.00	\$ 77,600
602	Turn Lanes and Median Openings	0	sy	\$ 50.00	\$ -
<b>Paving Construction Cost Subtotal:</b>					<b>\$ 612,824</b>
<b>Major Construction Component Allowances**:</b>					
Item Description	Notes	Allowance	Item Cost		
√ Prep ROW		6%	\$	36,769	
√ Traffic Control	Construction Phase Traffic Control	5%	\$	30,641	
√ Pavement Markings/Markers		3%	\$	18,385	
√ Roadway Drainage	Standard Internal System	30%	\$	183,847	
√ Illumination		6%	\$	36,769	
Special Drainage Structures	None Anticipated	0%	\$	-	
√ Water	Minor Adjustments	6%	\$	36,769	
√ Sewer	Minor Adjustments	4%	\$	24,513	
√ Establish Turf / Erosion Control		3%	\$	18,385	
√ Basic Landscaping/Irrigation		3%	\$	18,385	
Other:		\$0	\$	-	
<b>**Allowances based on % of Paving Construction Cost Subtotal</b>					<b>Allowance Subtotal: \$ 404,464</b>
<b>Paving and Allowance Subtotal:</b>					<b>\$ 1,017,289</b>
<b>Construction Contingency: 15%</b>					<b>\$ 152,593</b>
<b>Construction Cost TOTAL:</b>					<b>\$ 1,170,000</b>

<b>Impact Fee Project Cost Summary</b>			
Item Description	Notes:	Allowance	Item Cost
<b>Construction:</b>		-	\$ 1,170,000
<b>Engineering/Survey/Testing:</b>		20%	\$ 234,000
<b>Mobilization</b>		6%	\$ 70,200
<b>Previous City contribution</b>			
<b>Other</b>			
<b>ROW/Easement Acquisition</b>	Not included		
<b>Impact Fee Project Cost TOTAL:</b>			<b>\$ 1,474,000</b>

**NOTE:** The planning level cost projections listed in this appendix have been developed for Impact Fee calculations only and should not be used for any future Capital Improvement Planning within the City of Cedar Hill.

The planning level cost projections shall not supersede the City's design standards or the determination of the City Engineer for a specific project.

## City of Cedar Hill - 2012 Roadway Impact Fee Update

Capital Improvement Plan for Roadway Impact Fees  
Summary of Conceptual Level Project Cost Projections

### Roadway Improvements - Service Area 3

#	Class	Project	Limits	Project Cost
2-AA,3-A	M4D	Tidwell St. / Parkerville Rd.	US 67 NBFR to Joe Wilson Rd.	\$ 6,023,631
2-BB,3-B	M4D	Parkerville Rd. (1)	Springfield Dr. to Duncanville Rd.	\$ 4,830,000
3-C	M4D	Parkerville Rd. (2)	Duncanville Rd. to E. City Limits	\$ 2,788,000
3-D	M4D	Cedar Hill Rd. S.	US 67 NBFR to Mt. Lebanon Rd.	\$ 5,709,000
3-E	M4D	Tar Rd. (1)	Mt. Lebanon Rd. to Rocky Acres Rd.	\$ 3,149,000
3-F	M4D	Tar Rd. (2)	Rocky Acres Rd. to Bear Creek Rd.	\$ 2,133,000
3-G	P6D	Tar Rd. (3)	Bear Creek Rd. to 425' N. of S. City Limits	\$ 3,674,000
3-H	P6D	Tar Rd. (4)	425' N. of S. City Limits to S. City Limits	\$ 572,000
3-I	M4D	Clark Rd. S. (1)	Little Creek Rd. to Capricorn Dr.	\$ 2,349,000
3-J	M4D	Clark Rd. S. (2)	Capricorn Dr. to S. City Limits	\$ 7,826,000
3-K	M4D	Joe Wilson Rd. (5)	Parkerville Rd. to Bear Creek Rd.	\$ 5,282,000
3-L	M4D	Joe Wilson Rd. (6)	Bear Creek Rd. to S. City Limits	\$ 3,568,000
3-M	M4D	Joe Wilson Rd. (7)	S. City Limits to S. City Limits	\$ 2,209,000
3-N	P6D	Duncanville Rd. (4)	Parkerville Rd. to Bear Creek	\$ 6,229,000
3-O	M4D	Duncanville Rd. (5)	Bear Creek to S. City Limits	\$ 5,757,000
3-P	M4D	Duncanville Rd. (6)	S. City Limits to S. City Limits	\$ 566,000
3-Q	M4D	Cockrell Hill Rd.	N. City Limits to S. City Limits	\$ 3,955,000
3-R	M4U	Mt. Lebanon Rd. (1)	US 67 NBFR to Cedar Hill Rd. S.	\$ 2,782,000
3-S	M4D	Bear Creek Rd. (1)	US 67 NBFR to Tar Rd.	\$ 8,985,000
3-T	M4D	Bear Creek Rd. (2)	Tar Rd. to Future Bear Creek Rd. Curve	\$ 2,229,000
3-U	M4D	Bear Creek Rd. (3)	Future Bear Creek Rd. Curve to Joe Wilson Rd.	\$ 9,648,000
3-V	M4D	Bear Creek Rd. (4)	Joe Wilson Rd. to 1,915' E. of Joe Wilson Rd.	\$ 1,914,000
3-W	M4D	Bear Creek Rd. (5)	1,915' E. of Joe Wilson Rd. to Duncanville Rd.	\$ 3,533,000
3-X	C2U	Edgefield Way.	Future Bear Creek Rd. to 1,185' N. of Future Bear Creek Rd.	\$ 829,000
<b>Signal Installation</b>				
I-5		Signal Installation	Parkerville Rd. & Joe Wilson Rd.	\$ 150,000
I-6		Signal Installation	Parkerville Rd. & Duncanville Rd.	\$ 150,000
I-10		Signal Installation	Clark Rd. & Bear Creek Rd.	\$ 150,000
I-11		Signal Installation	Joe Wilson Rd. & Bear Creek Rd.	\$ 150,000
I-12		Signal Installation	Duncanville Rd. & Bear Creek Rd.	\$ 150,000
I-13		Interchange	Bear Creek Rd. & US 67 Interchange	\$ 12,000,000
<b>TOTAL</b>				<b>\$ 109,289,631</b>

\*Total may be higher than presented in Table 4.C (10-Year Capital Improvement Plan for Roadway Impact Fees with Conceptual Level Cost Opinions - Service Area 3) because the cost of some projects are shared between multiple jurisdictions.

**NOTE:** The planning level cost projections listed in this appendix have been developed for Impact Fee calculations only and should not be used for any future Capital Improvement Planning within the City of Cedar Hill.

The planning level cost projections shall not supersede the City's design standards contained within the Subdivision Ordinance or the determination of the City Engineer for a specific project.

**City of Cedar Hill**  
**2012 Roadway Impact Fee Update**  
**Conceptual Level Project Cost Projection**

Kimley-Horn and Associates, Inc.  
 updated: 5/16/2012

<b>Project Information:</b>		<b>Description:</b>	<b>Project No.</b>
<b>Name:</b>	Tidwell St. / Parkerville Rd.	<b>This project consisted of the reconstruction of a two-lane undivided facility to a four-lane divided minor arterial. This project is composed of two completed projects. The first project was Tidwell Street from US 67 NBFR to Joe Wilson Rd. (\$3,082,646). The second project was Parkerville Rd. from Tidwell St. to Highland Dr. (2,940,985) The boundary between SA 2 and SA 3 is on the centerline of Tidwell St. This project sheet represents the actual cost that the City of Cedar Hill incurred to construct this project</b>	<b>2-AA,3-A</b>
<b>Limits:</b>	US 67 NBFR to Joe Wilson Rd.		
<b>Impact Fee Class:</b>	M4D		
<b>Ultimate Class:</b>	Minor Arterial		
<b>Length (lf):</b>	10,365		
<b>Service Area(s):</b>	2, 3		

<b>Impact Fee Project Cost Summary</b>			
<b>Item Description</b>	<b>Notes:</b>	<b>Allowance</b>	<b>Item Cost</b>
<b>City Contribution to Construction Cost:</b>		-	\$ 6,023,631
<b>Engineering/Survey/Testing</b>			
<b>Other</b>			
<b>Impact Fee Project Cost TOTAL:</b>			<b>\$ 6,023,631</b>

**NOTE:** The planning level cost projections listed in this appendix have been developed for Impact Fee calculations only and should not be used for any future Capital Improvement Planning within the City of Cedar Hill.

The planning level cost projections shall not supersede the City's design standards or the determination of the City Engineer for a specific project.

**City of Cedar Hill**  
**2012 Roadway Impact Fee Update**  
**Conceptual Level Project Cost Projection**

Kimley-Horn and Associates, Inc.  
 updated: 5/16/2012

Project Information:		Description:	Project No. 2-BB,3-B
<b>Name:</b>	Parkerville Rd. (1)	<b>This project consists of the reconstruction of a two-lane undivided facility to a four-lane divided minor arterial. The boundary between SA 2 and SA 3 is on the centerline of Parkerville Rd.</b>	
<b>Limits:</b>	Springfield Dr. to Duncanville Rd.		
<b>Impact Fee Class:</b>	M4D		
<b>Ultimate Class:</b>	Minor Arterial		
<b>Length (lf):</b>	4,470		
<b>Service Area(s):</b>	2, 3		

Roadway Construction Cost Projection					
No.	Item Description	Quantity	Unit	Unit Price	Item Cost
103	Unclassified Street Excavation	12,913	cy	\$ 15.00	\$ 193,700
203	6" Lime Stabilization (with Lime @ 27#/sy)	25,330	sy	\$ 4.00	\$ 101,320
303	8" Concrete Pavement w/ 6" Curb	24,833	sy	\$ 46.00	\$ 1,142,333
403	4" Topsoil	15,893	sy	\$ 5.00	\$ 79,467
503	5' Concrete Sidewalk	44,700	sf	\$ 4.00	\$ 178,800
603	Turn Lanes and Median Openings	3,231	sy	\$ 50.00	\$ 161,572
<b>Paving Construction Cost Subtotal:</b>					<b>\$ 1,857,192</b>
Major Construction Component Allowances**:					
Item Description	Notes	Allowance	Item Cost		
√ Prep ROW		6%	\$	111,432	
√ Traffic Control	Construction Phase Traffic Control	5%	\$	92,860	
√ Pavement Markings/Markers		3%	\$	55,716	
√ Roadway Drainage	Standard Internal System	30%	\$	557,158	
√ Illumination		6%	\$	111,432	
√ Special Drainage Structures	None Anticipated	0%	\$	250,000	
√ Water	Minor Adjustments	6%	\$	111,432	
√ Sewer	Minor Adjustments	4%	\$	74,288	
√ Establish Turf / Erosion Control		3%	\$	55,716	
√ Basic Landscaping/Irrigation		3%	\$	55,716	
Other:		\$0	\$	-	
<b>**Allowances based on % of Paving Construction Cost Subtotal</b>					<b>Allowance Subtotal: \$ 1,475,747</b>
<b>Paving and Allowance Subtotal:</b>					<b>\$ 3,332,939</b>
<b>Construction Contingency: 15%</b>					<b>\$ 499,941</b>
<b>Construction Cost TOTAL:</b>					<b>\$ 3,833,000</b>

Impact Fee Project Cost Summary			
Item Description	Notes:	Allowance	Item Cost
<b>Construction:</b>		-	\$ 3,833,000
<b>Engineering/Survey/Testing:</b>		20%	\$ 766,600
<b>Mobilization</b>		6%	\$ 229,980
<b>Previous City contribution</b>			
<b>Other</b>			
<b>ROW/Easement Acquisition</b>	Not included		
<b>Impact Fee Project Cost TOTAL:</b>			<b>\$ 4,830,000</b>

**NOTE:** The planning level cost projections listed in this appendix have been developed for Impact Fee calculations only and should not be used for any future Capital Improvement Planning within the City of Cedar Hill.

The planning level cost projections shall not supersede the City's design standards or the determination of the City Engineer for a specific project.

**City of Cedar Hill**  
**2012 Roadway Impact Fee Update**  
**Conceptual Level Project Cost Projection**

Kimley-Horn and Associates, Inc.  
 updated: 5/16/2012

<b>Project Information:</b>		<b>Description:</b>	<b>Project No.</b>
<b>Name:</b>	Parkerville Rd. (2)	<b>This project consists of the reconstruction of a two-lane undivided facility to a four-lane divided minor arterial. The boundary between SA 3 and the City of DeSoto is on the centerline of Parkerville Rd.</b>	<b>3-C</b>
<b>Limits:</b>	Duncanville Rd. to E. City Limits		
<b>Impact Fee Class:</b>	M4D		
<b>Ultimate Class:</b>	Minor Arterial		
<b>Length (lf):</b>	2,790		
<b>Service Area(s):</b>	3 (Half)		

<b>Roadway Construction Cost Projection</b>					
No.	Item Description	Quantity	Unit	Unit Price	Item Cost
103	Unclassified Street Excavation	8,060	cy	\$ 15.00	\$ 120,900
203	6" Lime Stabilization (with Lime @ 27#/sy)	15,810	sy	\$ 4.00	\$ 63,240
303	8" Concrete Pavement w/ 6" Curb	15,500	sy	\$ 46.00	\$ 713,000
403	4" Topsoil	9,920	sy	\$ 5.00	\$ 49,600
503	5' Concrete Sidewalk	27,900	sf	\$ 4.00	\$ 111,600
603	Turn Lanes and Median Openings	2,017	sy	\$ 50.00	\$ 100,847
<b>Paving Construction Cost Subtotal:</b>					<b>\$ 1,159,187</b>
<b>Major Construction Component Allowances**:</b>					
Item Description	Notes	Allowance	Item Cost		
√ Prep ROW		6%	\$	69,551	
√ Traffic Control	Construction Phase Traffic Control	5%	\$	57,959	
√ Pavement Markings/Markers		3%	\$	34,776	
√ Roadway Drainage	Standard Internal System	30%	\$	347,756	
√ Illumination		6%	\$	69,551	
Special Drainage Structures	None Anticipated	0%	\$	-	
√ Water	Minor Adjustments	6%	\$	69,551	
√ Sewer	Minor Adjustments	4%	\$	46,367	
√ Establish Turf / Erosion Control		3%	\$	34,776	
√ Basic Landscaping/Irrigation		3%	\$	34,776	
Other:		\$0	\$	-	
<b>**Allowances based on % of Paving Construction Cost Subtotal</b>					<b>Allowance Subtotal: \$ 765,063</b>
<b>Paving and Allowance Subtotal:</b>					<b>\$ 1,924,250</b>
<b>Construction Contingency:</b>					<b>15% \$ 288,638</b>
<b>Construction Cost TOTAL:</b>					<b>\$ 2,213,000</b>

<b>Impact Fee Project Cost Summary</b>			
Item Description	Notes:	Allowance	Item Cost
<b>Construction:</b>		-	\$ 2,213,000
<b>Engineering/Survey/Testing:</b>		20%	\$ 442,600
<b>Mobilization</b>		6%	\$ 132,780
<b>Previous City contribution</b>			
<b>Other</b>			
<b>ROW/Easement Acquisition</b>	Not included		
<b>Impact Fee Project Cost TOTAL:</b>			<b>\$ 2,788,000</b>

**NOTE:** The planning level cost projections listed in this appendix have been developed for Impact Fee calculations only and should not be used for any future Capital Improvement Planning within the City of Cedar Hill.

The planning level cost projections shall not supersede the City's design standards or the determination of the City Engineer for a specific project.

**City of Cedar Hill**  
**2012 Roadway Impact Fee Update**  
**Conceptual Level Project Cost Projection**

Kimley-Horn and Associates, Inc.  
 updated: 5/16/2012

<b>Project Information:</b>		<b>Description:</b>	<b>Project No.</b>	<b>3-D</b>
<b>Name:</b>	Cedar Hill Rd. S.	<b>This project consists of the reconstruction of a two-lane undivided facility to a four-lane divided minor arterial.</b>		
<b>Limits:</b>	US 67 NBFR to Mt. Lebanon Rd.			
<b>Impact Fee Class:</b>	M4D			
<b>Ultimate Class:</b>	Minor Arterial			
<b>Length (lf):</b>	5,350			
<b>Service Area(s):</b>	3			

<b>Roadway Construction Cost Projection</b>					
No.	Item Description	Quantity	Unit	Unit Price	Item Cost
103	Unclassified Street Excavation	15,456	cy	\$ 15.00	\$ 231,833
203	6" Lime Stabilization (with Lime @ 27#/sy)	30,317	sy	\$ 4.00	\$ 121,267
303	8" Concrete Pavement w/ 6" Curb	29,722	sy	\$ 46.00	\$ 1,367,222
403	4" Topsoil	19,022	sy	\$ 5.00	\$ 95,111
503	5' Concrete Sidewalk	53,500	sf	\$ 4.00	\$ 214,000
603	Turn Lanes and Median Openings	3,868	sy	\$ 50.00	\$ 193,380
<b>Paving Construction Cost Subtotal:</b>					<b>\$ 2,222,814</b>
<b>Major Construction Component Allowances**:</b>					
Item Description	Notes	Allowance	Item Cost		
√ Prep ROW		6%	\$	133,369	
√ Traffic Control	Construction Phase Traffic Control	5%	\$	111,141	
√ Pavement Markings/Markers		3%	\$	66,684	
√ Roadway Drainage	Standard Internal System	30%	\$	666,844	
√ Illumination		6%	\$	133,369	
√ Special Drainage Structures	None Anticipated	0%	\$	250,000	
√ Water	Minor Adjustments	6%	\$	133,369	
√ Sewer	Minor Adjustments	4%	\$	88,913	
√ Establish Turf / Erosion Control		3%	\$	66,684	
√ Basic Landscaping/Irrigation		3%	\$	66,684	
Other:		\$0	\$	-	
<b>**Allowances based on % of Paving Construction Cost Subtotal</b>					<b>Allowance Subtotal: \$ 1,717,057</b>
<b>Paving and Allowance Subtotal:</b>					<b>\$ 3,939,870</b>
<b>Construction Contingency: 15%</b>					<b>\$ 590,981</b>
<b>Construction Cost TOTAL:</b>					<b>\$ 4,531,000</b>

<b>Impact Fee Project Cost Summary</b>			
Item Description	Notes:	Allowance	Item Cost
<b>Construction:</b>		-	\$ 4,531,000
<b>Engineering/Survey/Testing:</b>		20%	\$ 906,200
<b>Mobilization</b>		6%	\$ 271,860
<b>Previous City contribution</b>			
<b>Other</b>			
<b>ROW/Easement Acquisition</b>	Not included		
<b>Impact Fee Project Cost TOTAL:</b>			<b>\$ 5,709,000</b>

**NOTE:** The planning level cost projections listed in this appendix have been developed for Impact Fee calculations only and should not be used for any future Capital Improvement Planning within the City of Cedar Hill.

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**City of Cedar Hill**  
**2012 Roadway Impact Fee Update**  
**Conceptual Level Project Cost Projection**

Kimley-Horn and Associates, Inc.  
 updated: 5/16/2012

<b>Project Information:</b>		<b>Description:</b>	<b>Project No.</b>	<b>3-E</b>
<b>Name:</b>	Tar Rd. (1)	<b>This project consists of the reconstruction of a two-lane undivided facility to a four-lane divided minor arterial.</b>		
<b>Limits:</b>	Mt. Lebanon Rd. to Rocky Acres Rd.			
<b>Impact Fee Class:</b>	M4D			
<b>Ultimate Class:</b>	Minor Arterial			
<b>Length (lf):</b>	3,150			
<b>Service Area(s):</b>	3			

<b>Roadway Construction Cost Projection</b>					
No.	Item Description	Quantity	Unit	Unit Price	Item Cost
103	Unclassified Street Excavation	9,100	cy	\$ 15.00	\$ 136,500
203	6" Lime Stabilization (with Lime @ 27#/sy)	17,850	sy	\$ 4.00	\$ 71,400
303	8" Concrete Pavement w/ 6" Curb	17,500	sy	\$ 46.00	\$ 805,000
403	4" Topsoil	11,200	sy	\$ 5.00	\$ 56,000
503	5' Concrete Sidewalk	31,500	sf	\$ 4.00	\$ 126,000
603	Turn Lanes and Median Openings	2,277	sy	\$ 50.00	\$ 113,859
<b>Paving Construction Cost Subtotal:</b>					<b>\$ 1,308,759</b>
<b>Major Construction Component Allowances**:</b>					
Item Description	Notes	Allowance	Item Cost		
√ Prep ROW		6%	\$	78,526	
√ Traffic Control	Construction Phase Traffic Control	5%	\$	65,438	
√ Pavement Markings/Markers		3%	\$	39,263	
√ Roadway Drainage	Standard Internal System	30%	\$	392,628	
√ Illumination		6%	\$	78,526	
Special Drainage Structures	None Anticipated	0%	\$	-	
√ Water	Minor Adjustments	6%	\$	78,526	
√ Sewer	Minor Adjustments	4%	\$	52,350	
√ Establish Turf / Erosion Control		3%	\$	39,263	
√ Basic Landscaping/Irrigation		3%	\$	39,263	
Other:		\$0	\$	-	
<b>**Allowances based on % of Paving Construction Cost Subtotal</b>					<b>Allowance Subtotal: \$ 863,781</b>
<b>Paving and Allowance Subtotal:</b>					<b>\$ 2,172,541</b>
<b>Construction Contingency:</b>					<b>15% \$ 325,881</b>
<b>Construction Cost TOTAL:</b>					<b>\$ 2,499,000</b>

<b>Impact Fee Project Cost Summary</b>			
Item Description	Notes:	Allowance	Item Cost
<b>Construction:</b>		-	\$ 2,499,000
<b>Engineering/Survey/Testing:</b>		20%	\$ 499,800
<b>Mobilization</b>		6%	\$ 149,940
<b>Previous City contribution</b>			
<b>Other</b>			
<b>ROW/Easement Acquisition</b>	Not included		
<b>Impact Fee Project Cost TOTAL:</b>			<b>\$ 3,149,000</b>

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**City of Cedar Hill**  
**2012 Roadway Impact Fee Update**  
**Conceptual Level Project Cost Projection**

Kimley-Horn and Associates, Inc.  
 updated: 5/16/2012

<b>Project Information:</b>		<b>Description:</b>	<b>Project No.</b>	<b>3-F</b>
<b>Name:</b>	Tar Rd. (2)	<b>This project consists of the construction of a new four-lane divided minor arterial.</b>		
<b>Limits:</b>	Rocky Acres Rd. to Bear Creek Rd.			
<b>Impact Fee Class:</b>	M4D			
<b>Ultimate Class:</b>	Minor Arterial			
<b>Length (lf):</b>	2,200			
<b>Service Area(s):</b>	3			

<b>Roadway Construction Cost Projection</b>					
<b>No.</b>	<b>Item Description</b>	<b>Quantity</b>	<b>Unit</b>	<b>Unit Price</b>	<b>Item Cost</b>
103	Unclassified Street Excavation	6,356	cy	\$ 15.00	\$ 95,333
203	6" Lime Stabilization (with Lime @ 27#/sy)	12,467	sy	\$ 4.00	\$ 49,867
303	8" Concrete Pavement w/ 6" Curb	12,222	sy	\$ 46.00	\$ 562,222
403	4" Topsoil	7,822	sy	\$ 5.00	\$ 39,111
503	5' Concrete Sidewalk	22,000	sf	\$ 4.00	\$ 88,000
603	Turn Lanes and Median Openings	1,590	sy	\$ 50.00	\$ 79,521
<b>Paving Construction Cost Subtotal:</b>					<b>\$ 914,054</b>
<b>Major Construction Component Allowances**:</b>					
<b>Item Description</b>	<b>Notes</b>	<b>Allowance</b>	<b>Item Cost</b>		
√ Prep ROW	None Anticipated	6%	\$	54,843	
Traffic Control		0%	\$	-	
√ Pavement Markings/Markers	Standard Internal System	3%	\$	27,422	
√ Roadway Drainage		30%	\$	274,216	
√ Illumination		6%	\$	54,843	
Special Drainage Structures		0%	\$	-	
√ Water	Minor Adjustments	6%	\$	54,843	
√ Sewer	Minor Adjustments	4%	\$	36,562	
√ Establish Turf / Erosion Control		3%	\$	27,422	
√ Basic Landscaping/Irrigation		3%	\$	27,422	
Other:		\$0	\$	-	
<b>**Allowances based on % of Paving Construction Cost Subtotal</b>					<b>Allowance Subtotal: \$ 557,573</b>
<b>Paving and Allowance Subtotal:</b>					<b>\$ 1,471,627</b>
<b>Construction Contingency:</b>					<b>15% \$ 220,744</b>
<b>Construction Cost TOTAL:</b>					<b>\$ 1,693,000</b>

<b>Impact Fee Project Cost Summary</b>			
<b>Item Description</b>	<b>Notes:</b>	<b>Allowance</b>	<b>Item Cost</b>
<b>Construction:</b>		-	\$ 1,693,000
<b>Engineering/Survey/Testing:</b>		20%	\$ 338,600
<b>Mobilization</b>		6%	\$ 101,580
<b>Previous City contribution</b>			
<b>Other</b>			
<b>ROW/Easement Acquisition</b>	Not included		
<b>Impact Fee Project Cost TOTAL:</b>			<b>\$ 2,133,000</b>

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**City of Cedar Hill**  
**2012 Roadway Impact Fee Update**  
**Conceptual Level Project Cost Projection**

Kimley-Horn and Associates, Inc.  
 updated: 5/16/2012

Project Information:		Description:	Project No.
<b>Name:</b>	Tar Rd. (3)	<b>This project consists of the construction of a new six-lane divided principal arterial.</b>	<b>3-G</b>
<b>Limits:</b>	Bear Creek Rd. to 425' N. of S. City Limits		
<b>Impact Fee Class:</b>	P6D		
<b>Ultimate Class:</b>	Principal Arterial		
<b>Length (lf):</b>	2,815		
<b>Service Area(s):</b>	3		

Roadway Construction Cost Projection						
No.	Item Description	Quantity	Unit	Unit Price	Item Cost	
106	Unclassified Street Excavation	11,886	cy	\$ 15.00	\$ 178,283	
206	6" Lime Stabilization (with Lime @ 27#/sy)	23,458	sy	\$ 4.00	\$ 93,833	
306	10" Concrete Pavement w/ 6" Curb	23,146	sy	\$ 45.00	\$ 1,041,550	
406	4" Topsoil	9,383	sy	\$ 5.00	\$ 46,917	
506	5' Concrete Sidewalk	28,150	sf	\$ 4.00	\$ 112,600	
606	Turn Lanes and Median Openings	2,035	sy	\$ 50.00	\$ 101,751	
<b>Paving Construction Cost Subtotal:</b>					<b>\$ 1,574,934</b>	
Major Construction Component Allowances**:						
Item Description	Notes	Allowance	Item Cost			
√ Prep ROW	None Anticipated	6%	\$	94,496		
Traffic Control		0%	\$	-		
√ Pavement Markings/Markers	Standard Internal System	3%	\$	47,248		
√ Roadway Drainage		30%	\$	472,480		
√ Illumination		6%	\$	94,496		
Special Drainage Structures		0%	\$	-		
√ Water	Minor Adjustments	6%	\$	94,496		
√ Sewer	Minor Adjustments	4%	\$	62,997		
√ Establish Turf / Erosion Control		3%	\$	47,248		
√ Basic Landscaping/Irrigation		3%	\$	47,248		
Other:		\$0	\$	-		
<b>**Allowances based on % of Paving Construction Cost Subtotal</b>					<b>Allowance Subtotal:</b>	<b>\$ 960,710</b>
<b>Paving and Allowance Subtotal:</b>					<b>\$ 2,535,644</b>	
<b>Construction Contingency:</b>					<b>15%</b>	<b>\$ 380,347</b>
<b>Construction Cost TOTAL:</b>					<b>\$ 2,916,000</b>	

Impact Fee Project Cost Summary			
Item Description	Notes:	Allowance	Item Cost
<b>Construction:</b>		-	\$ 2,916,000
<b>Engineering/Survey/Testing:</b>		20%	\$ 583,200
<b>Mobilization</b>		6%	\$ 174,960
<b>Previous City contribution</b>			
<b>Other</b>			
<b>ROW/Easement Acquisition</b>	Not included		
<b>Impact Fee Project Cost TOTAL:</b>			<b>\$ 3,674,000</b>

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**City of Cedar Hill**  
**2012 Roadway Impact Fee Update**  
**Conceptual Level Project Cost Projection**

Kimley-Horn and Associates, Inc.  
 updated: 5/16/2012

Project Information:		Description:	Project No.
<b>Name:</b>	Tar Rd. (4)	<b>This project consists of the reconstruction of a two-lane undivided facility to a six-lane divided principal arterial.</b>	<b>3-H</b>
<b>Limits:</b>	425' N. of S. City Limits to S. City Limits		
<b>Impact Fee Class:</b>	P6D		
<b>Ultimate Class:</b>	Principal Arterial		
<b>Length (lf):</b>	425		
<b>Service Area(s):</b>	3		

Roadway Construction Cost Projection					
No.	Item Description	Quantity	Unit	Unit Price	Item Cost
106	Unclassified Street Excavation	1,794	cy	\$ 15.00	\$ 26,917
206	6" Lime Stabilization (with Lime @ 27#/sy)	3,542	sy	\$ 4.00	\$ 14,167
306	10" Concrete Pavement w/ 6" Curb	3,494	sy	\$ 45.00	\$ 157,250
406	4" Topsoil	1,417	sy	\$ 5.00	\$ 7,083
506	5' Concrete Sidewalk	4,250	sf	\$ 4.00	\$ 17,000
606	Turn Lanes and Median Openings	307	sy	\$ 50.00	\$ 15,362
<b>Paving Construction Cost Subtotal:</b>					<b>\$ 237,779</b>
Major Construction Component Allowances**:					
Item Description	Notes	Allowance	Item Cost		
√ Prep ROW		6%	\$	14,267	
√ Traffic Control	Construction Phase Traffic Control	5%	\$	11,889	
√ Pavement Markings/Markers		3%	\$	7,133	
√ Roadway Drainage	Standard Internal System	30%	\$	71,334	
√ Illumination		6%	\$	14,267	
Special Drainage Structures	None Anticipated	0%	\$	-	
√ Water	Minor Adjustments	6%	\$	14,267	
√ Sewer	Minor Adjustments	4%	\$	9,511	
√ Establish Turf / Erosion Control		3%	\$	7,133	
√ Basic Landscaping/Irrigation		3%	\$	7,133	
Other:		\$0	\$	-	
<b>**Allowances based on % of Paving Construction Cost Subtotal</b>					<b>Allowance Subtotal: \$ 156,934</b>
<b>Paving and Allowance Subtotal:</b>					<b>\$ 394,713</b>
<b>Construction Contingency:</b>					<b>15% \$ 59,207</b>
<b>Construction Cost TOTAL:</b>					<b>\$ 454,000</b>

Impact Fee Project Cost Summary			
Item Description	Notes:	Allowance	Item Cost
<b>Construction:</b>		-	\$ 454,000
<b>Engineering/Survey/Testing:</b>		20%	\$ 90,800
<b>Mobilization</b>		6%	\$ 27,240
<b>Previous City contribution</b>			
<b>Other</b>			
<b>ROW/Easement Acquisition</b>	Not included		
<b>Impact Fee Project Cost TOTAL:</b>			<b>\$ 572,000</b>

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**City of Cedar Hill**  
**2012 Roadway Impact Fee Update**  
**Conceptual Level Project Cost Projection**

Kimley-Horn and Associates, Inc.  
 updated: 5/16/2012

<b>Project Information:</b>		<b>Description:</b>	<b>Project No.</b>	<b>3-I</b>
<b>Name:</b>	Clark Rd. S. (1)	<b>This project consists of the reconstruction of a two-lane undivided facility to a four-lane divided principal arterial.</b>		
<b>Limits:</b>	Little Creek Rd. to Capricorn Dr.			
<b>Impact Fee Class:</b>	M4D			
<b>Ultimate Class:</b>	Principal Arterial			
<b>Length (lf):</b>	2,350			
<b>Service Area(s):</b>	3			

<b>Roadway Construction Cost Projection</b>					
No.	Item Description	Quantity	Unit	Unit Price	Item Cost
103	Unclassified Street Excavation	6,789	cy	\$ 15.00	\$ 101,833
203	6" Lime Stabilization (with Lime @ 27#/sy)	13,317	sy	\$ 4.00	\$ 53,267
303	8" Concrete Pavement w/ 6" Curb	13,056	sy	\$ 46.00	\$ 600,556
403	4" Topsoil	8,356	sy	\$ 5.00	\$ 41,778
503	5' Concrete Sidewalk	23,500	sf	\$ 4.00	\$ 94,000
603	Turn Lanes and Median Openings	1,699	sy	\$ 50.00	\$ 84,943
<b>Paving Construction Cost Subtotal:</b>					<b>\$ 976,376</b>
<b>Major Construction Component Allowances**:</b>					
Item Description	Notes	Allowance	Item Cost		
√ Prep ROW		6%	\$	58,583	
√ Traffic Control	Construction Phase Traffic Control	5%	\$	48,819	
√ Pavement Markings/Markers		3%	\$	29,291	
√ Roadway Drainage	Standard Internal System	30%	\$	292,913	
√ Illumination		6%	\$	58,583	
Special Drainage Structures	None Anticipated	0%	\$	-	
√ Water	Minor Adjustments	6%	\$	58,583	
√ Sewer	Minor Adjustments	4%	\$	39,055	
√ Establish Turf / Erosion Control		3%	\$	29,291	
√ Basic Landscaping/Irrigation		3%	\$	29,291	
Other:		\$0	\$	-	
<b>**Allowances based on % of Paving Construction Cost Subtotal</b>					<b>Allowance Subtotal: \$ 644,408</b>
<b>Paving and Allowance Subtotal:</b>					<b>\$ 1,620,784</b>
<b>Construction Contingency:</b>					<b>15% \$ 243,118</b>
<b>Construction Cost TOTAL:</b>					<b>\$ 1,864,000</b>

<b>Impact Fee Project Cost Summary</b>			
Item Description	Notes:	Allowance	Item Cost
<b>Construction:</b>		-	\$ 1,864,000
<b>Engineering/Survey/Testing:</b>		20%	\$ 372,800
<b>Mobilization</b>		6%	\$ 111,840
<b>Previous City contribution</b>			
<b>Other</b>			
<b>ROW/Easement Acquisition</b>	Not included		
<b>Impact Fee Project Cost TOTAL:</b>			<b>\$ 2,349,000</b>

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**City of Cedar Hill**  
**2012 Roadway Impact Fee Update**  
**Conceptual Level Project Cost Projection**

Kimley-Horn and Associates, Inc.  
 updated: 5/16/2012

<b>Project Information:</b>		<b>Description:</b>	<b>Project No.</b>
<b>Name:</b>	Clark Rd. S. (2)	<b>This project consists of the construction of a new four-lane divided principal arterial. 865' will be the reconstruction of a two-lane asphalt facility into a four-lane divided principal arterial.</b>	<b>3-J</b>
<b>Limits:</b>	Capricorn Dr. to S. City Limits		
<b>Impact Fee Class:</b>	M4D		
<b>Ultimate Class:</b>	Principal Arterial		
<b>Length (lf):</b>	7,700		
<b>Service Area(s):</b>	3		

<b>Roadway Construction Cost Projection</b>					
No.	Item Description	Quantity	Unit	Unit Price	Item Cost
103	Unclassified Street Excavation	22,244	cy	\$ 15.00	\$ 333,667
203	6" Lime Stabilization (with Lime @ 27#/sy)	43,633	sy	\$ 4.00	\$ 174,533
303	8" Concrete Pavement w/ 6" Curb	42,778	sy	\$ 46.00	\$ 1,967,778
403	4" Topsoil	27,378	sy	\$ 5.00	\$ 136,889
503	5' Concrete Sidewalk	77,000	sf	\$ 4.00	\$ 308,000
603	Turn Lanes and Median Openings	5,566	sy	\$ 50.00	\$ 278,323
<b>Paving Construction Cost Subtotal:</b>					<b>\$ 3,199,190</b>
<b>Major Construction Component Allowances**:</b>					
Item Description	Notes	Allowance	Item Cost		
√ Prep ROW	None Anticipated	6%	\$	191,951	
Traffic Control		0%	\$	-	
√ Pavement Markings/Markers	Standard Internal System	3%	\$	95,976	
√ Roadway Drainage		30%	\$	959,757	
√ Illumination		6%	\$	191,951	
√ Special Drainage Structures		0%	\$	250,000	
√ Water	Minor Adjustments	6%	\$	191,951	
√ Sewer	Minor Adjustments	4%	\$	127,968	
√ Establish Turf / Erosion Control		3%	\$	95,976	
√ Basic Landscaping/Irrigation		3%	\$	95,976	
Other:		\$0	\$	-	
<b>**Allowances based on % of Paving Construction Cost Subtotal</b>					<b>Allowance Subtotal: \$ 2,201,506</b>
<b>Paving and Allowance Subtotal:</b>					<b>\$ 5,400,695</b>
<b>Construction Contingency:</b>					<b>15% \$ 810,104</b>
<b>Construction Cost TOTAL:</b>					<b>\$ 6,211,000</b>

<b>Impact Fee Project Cost Summary</b>			
Item Description	Notes:	Allowance	Item Cost
<b>Construction:</b>		-	\$ 6,211,000
<b>Engineering/Survey/Testing:</b>		20%	\$ 1,242,200
<b>Mobilization</b>		6%	\$ 372,660
<b>Previous City contribution</b>			
<b>Other</b>			
<b>ROW/Easement Acquisition</b>	Not included		
<b>Impact Fee Project Cost TOTAL:</b>			<b>\$ 7,826,000</b>

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**City of Cedar Hill**  
**2012 Roadway Impact Fee Update**  
**Conceptual Level Project Cost Projection**

Kimley-Horn and Associates, Inc.  
 updated: 5/16/2012

Project Information:		Description:	Project No.
<b>Name:</b>	Joe Wilson Rd. (5)	<b>This project consists of the reconstruction of a two-lane undivided facility to a four-lane divided principal arterial.</b>	<b>3-K</b>
<b>Limits:</b>	Parkerville Rd. to Bear Creek Rd.		
<b>Impact Fee Class:</b>	M4D		
<b>Ultimate Class:</b>	Principal Arterial		
<b>Length (lf):</b>	5,285		
<b>Service Area(s):</b>	3		

Roadway Construction Cost Projection					
No.	Item Description	Quantity	Unit	Unit Price	Item Cost
103	Unclassified Street Excavation	15,268	cy	\$ 15.00	\$ 229,017
203	6" Lime Stabilization (with Lime @ 27#/sy)	29,948	sy	\$ 4.00	\$ 119,793
303	8" Concrete Pavement w/ 6" Curb	29,361	sy	\$ 46.00	\$ 1,350,611
403	4" Topsoil	18,791	sy	\$ 5.00	\$ 93,956
503	5' Concrete Sidewalk	52,850	sf	\$ 4.00	\$ 211,400
603	Turn Lanes and Median Openings	3,821	sy	\$ 50.00	\$ 191,031
<b>Paving Construction Cost Subtotal:</b>					<b>\$ 2,195,807</b>
Major Construction Component Allowances**:					
Item Description	Notes	Allowance	Item Cost		
√ Prep ROW		6%	\$	131,748	
√ Traffic Control	Construction Phase Traffic Control	5%	\$	109,790	
√ Pavement Markings/Markers		3%	\$	65,874	
√ Roadway Drainage	Standard Internal System	30%	\$	658,742	
√ Illumination		6%	\$	131,748	
Special Drainage Structures	None Anticipated	0%	\$	-	
√ Water	Minor Adjustments	6%	\$	131,748	
√ Sewer	Minor Adjustments	4%	\$	87,832	
√ Establish Turf / Erosion Control		3%	\$	65,874	
√ Basic Landscaping/Irrigation		3%	\$	65,874	
Other:		\$0	\$	-	
<b>**Allowances based on % of Paving Construction Cost Subtotal</b>					<b>Allowance Subtotal: \$ 1,449,233</b>
<b>Paving and Allowance Subtotal:</b>					<b>\$ 3,645,040</b>
<b>Construction Contingency:</b>					<b>15% \$ 546,756</b>
<b>Construction Cost TOTAL:</b>					<b>\$ 4,192,000</b>

Impact Fee Project Cost Summary			
Item Description	Notes:	Allowance	Item Cost
<b>Construction:</b>		-	\$ 4,192,000
<b>Engineering/Survey/Testing:</b>		20%	\$ 838,400
<b>Mobilization</b>		6%	\$ 251,520
<b>Previous City contribution</b>			
<b>Other</b>			
<b>ROW/Easement Acquisition</b>	Not included		
<b>Impact Fee Project Cost TOTAL:</b>			<b>\$ 5,282,000</b>

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**City of Cedar Hill**  
**2012 Roadway Impact Fee Update**  
**Conceptual Level Project Cost Projection**

Kimley-Horn and Associates, Inc.  
 updated: 5/16/2012

<b>Project Information:</b>		<b>Description:</b>	<b>Project No.</b>
<b>Name:</b>	Joe Wilson Rd. (6)	<b>This project consists of the reconstruction of a two-lane undivided facility to a four-lane divided principal arterial.</b>	<b>3-L</b>
<b>Limits:</b>	Bear Creek Rd. to S. City Limits		
<b>Impact Fee Class:</b>	M4D		
<b>Ultimate Class:</b>	Principal Arterial		
<b>Length (lf):</b>	3,570		
<b>Service Area(s):</b>	3		

<b>Roadway Construction Cost Projection</b>					
No.	Item Description	Quantity	Unit	Unit Price	Item Cost
103	Unclassified Street Excavation	10,313	cy	\$ 15.00	\$ 154,700
203	6" Lime Stabilization (with Lime @ 27#/sy)	20,230	sy	\$ 4.00	\$ 80,920
303	8" Concrete Pavement w/ 6" Curb	19,833	sy	\$ 46.00	\$ 912,333
403	4" Topsoil	12,693	sy	\$ 5.00	\$ 63,467
503	5' Concrete Sidewalk	35,700	sf	\$ 4.00	\$ 142,800
603	Turn Lanes and Median Openings	2,581	sy	\$ 50.00	\$ 129,041
<b>Paving Construction Cost Subtotal:</b>					<b>\$ 1,483,261</b>
<b>Major Construction Component Allowances**:</b>					
Item Description	Notes	Allowance	Item Cost		
√ Prep ROW		6%	\$	88,996	
√ Traffic Control	Construction Phase Traffic Control	5%	\$	74,163	
√ Pavement Markings/Markers		3%	\$	44,498	
√ Roadway Drainage	Standard Internal System	30%	\$	444,978	
√ Illumination		6%	\$	88,996	
Special Drainage Structures	None Anticipated	0%	\$	-	
√ Water	Minor Adjustments	6%	\$	88,996	
√ Sewer	Minor Adjustments	4%	\$	59,330	
√ Establish Turf / Erosion Control		3%	\$	44,498	
√ Basic Landscaping/Irrigation		3%	\$	44,498	
Other:		\$0	\$	-	
<b>**Allowances based on % of Paving Construction Cost Subtotal</b>					<b>Allowance Subtotal: \$ 978,952</b>
<b>Paving and Allowance Subtotal:</b>					<b>\$ 2,462,213</b>
<b>Construction Contingency:</b>					<b>15% \$ 369,332</b>
<b>Construction Cost TOTAL:</b>					<b>\$ 2,832,000</b>

<b>Impact Fee Project Cost Summary</b>			
Item Description	Notes:	Allowance	Item Cost
<b>Construction:</b>		-	\$ 2,832,000
<b>Engineering/Survey/Testing:</b>		20%	\$ 566,400
<b>Mobilization</b>		6%	\$ 169,920
<b>Previous City contribution</b>			
<b>Other</b>			
<b>ROW/Easement Acquisition</b>	Not included		
<b>Impact Fee Project Cost TOTAL:</b>			<b>\$ 3,568,000</b>

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**City of Cedar Hill**  
**2012 Roadway Impact Fee Update**  
**Conceptual Level Project Cost Projection**

Kimley-Horn and Associates, Inc.  
 updated: 5/16/2012

<b>Project Information:</b>		<b>Description:</b>	<b>Project No.</b>
<b>Name:</b>	Joe Wilson Rd. (7)	<b>This project consists of the reconstruction of a two-lane undivided facility to a four-lane divided principal arterial. The boundary between SA 3 and the City of Ovilla is on the centerline of Joe Wilson Rd.</b>	<b>3-M</b>
<b>Limits:</b>	S. City Limits to S. City Limits		
<b>Impact Fee Class:</b>	M4D		
<b>Ultimate Class:</b>	Principal Arterial		
<b>Length (lf):</b>	2,210		
<b>Service Area(s):</b>	3 (Half)		

<b>Roadway Construction Cost Projection</b>					
No.	Item Description	Quantity	Unit	Unit Price	Item Cost
103	Unclassified Street Excavation	6,384	cy	\$ 15.00	\$ 95,767
203	6" Lime Stabilization (with Lime @ 27#/sy)	12,523	sy	\$ 4.00	\$ 50,093
303	8" Concrete Pavement w/ 6" Curb	12,278	sy	\$ 46.00	\$ 564,778
403	4" Topsoil	7,858	sy	\$ 5.00	\$ 39,289
503	5' Concrete Sidewalk	22,100	sf	\$ 4.00	\$ 88,400
603	Turn Lanes and Median Openings	1,598	sy	\$ 50.00	\$ 79,882
<b>Paving Construction Cost Subtotal:</b>					<b>\$ 918,209</b>
<b>Major Construction Component Allowances**:</b>					
Item Description	Notes	Allowance	Item Cost		
√ Prep ROW		6%	\$	55,093	
√ Traffic Control	Construction Phase Traffic Control	5%	\$	45,910	
√ Pavement Markings/Markers		3%	\$	27,546	
√ Roadway Drainage	Standard Internal System	30%	\$	275,463	
√ Illumination		6%	\$	55,093	
Special Drainage Structures	None Anticipated	0%	\$	-	
√ Water	Minor Adjustments	6%	\$	55,093	
√ Sewer	Minor Adjustments	4%	\$	36,728	
√ Establish Turf / Erosion Control		3%	\$	27,546	
√ Basic Landscaping/Irrigation		3%	\$	27,546	
Other:		\$0	\$	-	
<b>**Allowances based on % of Paving Construction Cost Subtotal</b>					<b>Allowance Subtotal: \$ 606,018</b>
<b>Paving and Allowance Subtotal:</b>					<b>\$ 1,524,227</b>
<b>Construction Contingency:</b>					<b>15% \$ 228,634</b>
<b>Construction Cost TOTAL:</b>					<b>\$ 1,753,000</b>

<b>Impact Fee Project Cost Summary</b>			
Item Description	Notes:	Allowance	Item Cost
<b>Construction:</b>		-	\$ 1,753,000
<b>Engineering/Survey/Testing:</b>		20%	\$ 350,600
<b>Mobilization</b>		6%	\$ 105,180
<b>Previous City contribution</b>			
<b>Other</b>			
<b>ROW/Easement Acquisition</b>	Not included		
<b>Impact Fee Project Cost TOTAL:</b>			<b>\$ 2,209,000</b>

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**City of Cedar Hill**  
**2012 Roadway Impact Fee Update**  
**Conceptual Level Project Cost Projection**

Kimley-Horn and Associates, Inc.  
 updated: 5/16/2012

<b>Project Information:</b>		<b>Description:</b>	<b>Project No.</b>
<b>Name:</b>	Duncanville Rd. (4)	<b>This project consists of the reconstruction of a two-lane undivided facility to a six-lane divided principal arterial.</b>	<b>3-N</b>
<b>Limits:</b>	Parkerville Rd. to Bear Creek		
<b>Impact Fee Class:</b>	P6D		
<b>Ultimate Class:</b>	Principal Arterial		
<b>Length (lf):</b>	4,090		
<b>Service Area(s):</b>	3		

<b>Roadway Construction Cost Projection</b>					
No.	Item Description	Quantity	Unit	Unit Price	Item Cost
106	Unclassified Street Excavation	17,269	cy	\$ 15.00	\$ 259,033
206	6" Lime Stabilization (with Lime @ 27#/sy)	34,083	sy	\$ 4.00	\$ 136,333
306	10" Concrete Pavement w/ 6" Curb	33,629	sy	\$ 45.00	\$ 1,513,300
406	4" Topsoil	13,633	sy	\$ 5.00	\$ 68,167
506	5' Concrete Sidewalk	40,900	sf	\$ 4.00	\$ 163,600
606	Turn Lanes and Median Openings	2,957	sy	\$ 50.00	\$ 147,836
<b>Paving Construction Cost Subtotal:</b>					<b>\$ 2,288,270</b>
<b>Major Construction Component Allowances**:</b>					
Item Description	Notes	Allowance	Item Cost		
√ Prep ROW		6%	\$	137,296	
√ Traffic Control	Construction Phase Traffic Control	5%	\$	114,413	
√ Pavement Markings/Markers		3%	\$	68,648	
√ Roadway Drainage	Standard Internal System	30%	\$	686,481	
√ Illumination		6%	\$	137,296	
√ Special Drainage Structures	None Anticipated	0%	\$	500,000	
√ Water	Minor Adjustments	6%	\$	137,296	
√ Sewer	Minor Adjustments	4%	\$	91,531	
√ Establish Turf / Erosion Control		3%	\$	68,648	
√ Basic Landscaping/Irrigation		3%	\$	68,648	
Other:		\$0	\$	-	
<b>**Allowances based on % of Paving Construction Cost Subtotal</b>					<b>Allowance Subtotal: \$ 2,010,258</b>
<b>Paving and Allowance Subtotal:</b>					<b>\$ 4,298,528</b>
<b>Construction Contingency:</b>					<b>15% \$ 644,779</b>
<b>Construction Cost TOTAL:</b>					<b>\$ 4,944,000</b>

<b>Impact Fee Project Cost Summary</b>			
Item Description	Notes:	Allowance	Item Cost
<b>Construction:</b>		-	\$ 4,944,000
<b>Engineering/Survey/Testing:</b>		20%	\$ 988,800
<b>Mobilization</b>		6%	\$ 296,640
<b>Previous City contribution</b>			
<b>Other</b>			
<b>ROW/Easement Acquisition</b>	Not included		
<b>Impact Fee Project Cost TOTAL:</b>			<b>\$ 6,229,000</b>

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**City of Cedar Hill**  
**2012 Roadway Impact Fee Update**  
**Conceptual Level Project Cost Projection**

Kimley-Horn and Associates, Inc.  
 updated: 5/16/2012

<b>Project Information:</b>		<b>Description:</b>	<b>Project No.</b>
<b>Name:</b>	Duncanville Rd. (5)	<b>This project consists of the reconstruction of a two-lane undivided facility to a four-lane divided principal arterial.</b>	<b>3-0</b>
<b>Limits:</b>	Bear Creek to S. City Limits		
<b>Impact Fee Class:</b>	M4D		
<b>Ultimate Class:</b>	Principal Arterial		
<b>Length (lf):</b>	5,035		
<b>Service Area(s):</b>	3		

<b>Roadway Construction Cost Projection</b>					
No.	Item Description	Quantity	Unit	Unit Price	Item Cost
103	Unclassified Street Excavation	14,546	cy	\$ 15.00	\$ 218,183
203	6" Lime Stabilization (with Lime @ 27#/sy)	28,532	sy	\$ 4.00	\$ 114,127
303	8" Concrete Pavement w/ 6" Curb	27,972	sy	\$ 46.00	\$ 1,286,722
403	4" Topsoil	17,902	sy	\$ 5.00	\$ 89,511
503	5' Concrete Sidewalk	50,350	sf	\$ 4.00	\$ 201,400
603	Turn Lanes and Median Openings	3,640	sy	\$ 50.00	\$ 181,994
<b>Paving Construction Cost Subtotal:</b>					<b>\$ 2,091,938</b>
<b>Major Construction Component Allowances**:</b>					
Item Description	Notes	Allowance	Item Cost		
√ Prep ROW		6%	\$	125,516	
√ Traffic Control	Construction Phase Traffic Control	5%	\$	104,597	
√ Pavement Markings/Markers		3%	\$	62,758	
√ Roadway Drainage	Standard Internal System	30%	\$	627,581	
√ Illumination		6%	\$	125,516	
√ Special Drainage Structures	None Anticipated	0%	\$	500,000	
√ Water	Minor Adjustments	6%	\$	125,516	
√ Sewer	Minor Adjustments	4%	\$	83,678	
√ Establish Turf / Erosion Control		3%	\$	62,758	
√ Basic Landscaping/Irrigation		3%	\$	62,758	
Other:		\$0	\$	-	
<b>**Allowances based on % of Paving Construction Cost Subtotal</b>					<b>Allowance Subtotal: \$ 1,880,679</b>
<b>Paving and Allowance Subtotal:</b>					<b>\$ 3,972,616</b>
<b>Construction Contingency: 15%</b>					<b>\$ 595,892</b>
<b>Construction Cost TOTAL:</b>					<b>\$ 4,569,000</b>

<b>Impact Fee Project Cost Summary</b>			
Item Description	Notes:	Allowance	Item Cost
<b>Construction:</b>		-	\$ 4,569,000
<b>Engineering/Survey/Testing:</b>		20%	\$ 913,800
<b>Mobilization</b>		6%	\$ 274,140
<b>Previous City contribution</b>			
<b>Other</b>			
<b>ROW/Easement Acquisition</b>	Not included		
<b>Impact Fee Project Cost TOTAL:</b>			<b>\$ 5,757,000</b>

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**City of Cedar Hill**  
**2012 Roadway Impact Fee Update**  
**Conceptual Level Project Cost Projection**

Kimley-Horn and Associates, Inc.  
 updated: 5/16/2012

Project Information:		Description:	Project No.
<b>Name:</b>	Duncanville Rd. (6)	<b>This project consists of the reconstruction of a two-lane undivided facility to a four-lane divided principal arterial. The boundary between SA 3 and the City of Ovilla is on the centerline of Duncanville Rd.</b>	<b>3-P</b>
<b>Limits:</b>	S. City Limits to S. City Limits		
<b>Impact Fee Class:</b>	M4D		
<b>Ultimate Class:</b>	Principal Arterial		
<b>Length (lf):</b>	565		
<b>Service Area(s):</b>	3 (Half)		

Roadway Construction Cost Projection					
No.	Item Description	Quantity	Unit	Unit Price	Item Cost
103	Unclassified Street Excavation	1,632	cy	\$ 15.00	\$ 24,483
203	6" Lime Stabilization (with Lime @ 27#/sy)	3,202	sy	\$ 4.00	\$ 12,807
303	8" Concrete Pavement w/ 6" Curb	3,139	sy	\$ 46.00	\$ 144,389
403	4" Topsoil	2,009	sy	\$ 5.00	\$ 10,044
503	5' Concrete Sidewalk	5,650	sf	\$ 4.00	\$ 22,600
603	Turn Lanes and Median Openings	408	sy	\$ 50.00	\$ 20,422
<b>Paving Construction Cost Subtotal:</b>					<b>\$ 234,746</b>
Major Construction Component Allowances**:					
Item Description	Notes	Allowance	Item Cost		
√ Prep ROW		6%	\$	14,085	
√ Traffic Control	Construction Phase Traffic Control	5%	\$	11,737	
√ Pavement Markings/Markers		3%	\$	7,042	
√ Roadway Drainage	Standard Internal System	30%	\$	70,424	
√ Illumination		6%	\$	14,085	
Special Drainage Structures	None Anticipated	0%	\$	-	
√ Water	Minor Adjustments	6%	\$	14,085	
√ Sewer	Minor Adjustments	4%	\$	9,390	
√ Establish Turf / Erosion Control		3%	\$	7,042	
√ Basic Landscaping/Irrigation		3%	\$	7,042	
Other:		\$0	\$	-	
<b>**Allowances based on % of Paving Construction Cost Subtotal</b>					<b>Allowance Subtotal: \$ 154,932</b>
<b>Paving and Allowance Subtotal:</b>					<b>\$ 389,678</b>
<b>Construction Contingency:</b>					<b>15% \$ 58,452</b>
<b>Construction Cost TOTAL:</b>					<b>\$ 449,000</b>

Impact Fee Project Cost Summary			
Item Description	Notes:	Allowance	Item Cost
<b>Construction:</b>		-	\$ 449,000
<b>Engineering/Survey/Testing:</b>		20%	\$ 89,800
<b>Mobilization</b>		6%	\$ 26,940
<b>Previous City contribution</b>			
<b>Other</b>			
<b>ROW/Easement Acquisition</b>	Not included		
<b>Impact Fee Project Cost TOTAL:</b>			<b>\$ 566,000</b>

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**City of Cedar Hill**  
**2012 Roadway Impact Fee Update**  
**Conceptual Level Project Cost Projection**

Kimley-Horn and Associates, Inc.  
 updated: 5/16/2012

<b>Project Information:</b>		<b>Description:</b>	<b>Project No.</b>
<b>Name:</b>	Cockrell Hill Rd.	<b>This project consists of the reconstruction of a two-lane undivided facility to a four-lane divided principal arterial. The boundary between SA 3 and the City of Ovilla is on the centerline of Cockrell Hill Rd.</b>	<b>3-Q</b>
<b>Limits:</b>	N. City Limits to S. City Limits		
<b>Impact Fee Class:</b>	M4D		
<b>Ultimate Class:</b>	Principal Arterial		
<b>Length (lf):</b>	3,595		
<b>Service Area(s):</b>	3 (Half)		

<b>Roadway Construction Cost Projection</b>					
No.	Item Description	Quantity	Unit	Unit Price	Item Cost
103	Unclassified Street Excavation	10,386	cy	\$ 15.00	\$ 155,783
203	6" Lime Stabilization (with Lime @ 27#/sy)	20,372	sy	\$ 4.00	\$ 81,487
303	8" Concrete Pavement w/ 6" Curb	19,972	sy	\$ 46.00	\$ 918,722
403	4" Topsoil	12,782	sy	\$ 5.00	\$ 63,911
503	5' Concrete Sidewalk	35,950	sf	\$ 4.00	\$ 143,800
603	Turn Lanes and Median Openings	2,599	sy	\$ 50.00	\$ 129,944
<b>Paving Construction Cost Subtotal:</b>					<b>\$ 1,493,648</b>
<b>Major Construction Component Allowances**:</b>					
Item Description	Notes	Allowance	Item Cost		
√ Prep ROW		6%	\$	89,619	
√ Traffic Control	Construction Phase Traffic Control	5%	\$	74,682	
√ Pavement Markings/Markers		3%	\$	44,809	
√ Roadway Drainage	Standard Internal System	30%	\$	448,094	
√ Illumination		6%	\$	89,619	
√ Special Drainage Structures	None Anticipated	0%	\$	250,000	
√ Water	Minor Adjustments	6%	\$	89,619	
√ Sewer	Minor Adjustments	4%	\$	59,746	
√ Establish Turf / Erosion Control		3%	\$	44,809	
√ Basic Landscaping/Irrigation		3%	\$	44,809	
Other:		\$0	\$	-	
<b>**Allowances based on % of Paving Construction Cost Subtotal</b>					<b>Allowance Subtotal: \$ 1,235,807</b>
<b>Paving and Allowance Subtotal:</b>					<b>\$ 2,729,455</b>
<b>Construction Contingency:</b>					<b>15% \$ 409,418</b>
<b>Construction Cost TOTAL:</b>					<b>\$ 3,139,000</b>

<b>Impact Fee Project Cost Summary</b>			
Item Description	Notes:	Allowance	Item Cost
<b>Construction:</b>		-	\$ 3,139,000
<b>Engineering/Survey/Testing:</b>		20%	\$ 627,800
<b>Mobilization</b>		6%	\$ 188,340
<b>Previous City contribution</b>			
<b>Other</b>			
<b>ROW/Easement Acquisition</b>	Not included		
<b>Impact Fee Project Cost TOTAL:</b>			<b>\$ 3,955,000</b>

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**City of Cedar Hill**  
**2012 Roadway Impact Fee Update**  
**Conceptual Level Project Cost Projection**

Kimley-Horn and Associates, Inc.  
 updated: 5/16/2012

<b>Project Information:</b>		<b>Description:</b>	<b>Project No.</b>	<b>3-R</b>
<b>Name:</b>	Mt. Lebanon Rd. (1)	<b>This project consists of the reconstruction of a two-lane undivided facility to a four-lane undivided major collector.</b>		
<b>Limits:</b>	US 67 NBFR to Cedar Hill Rd. S.			
<b>Impact Fee Class:</b>	M4U			
<b>Ultimate Class:</b>	Major Collector			
<b>Length (lf):</b>	3,190			
<b>Service Area(s):</b>	3			

<b>Roadway Construction Cost Projection</b>					
No.	Item Description	Quantity	Unit	Unit Price	Item Cost
105	Unclassified Street Excavation	9,216	cy	\$ 15.00	\$ 138,233
205	6" Lime Stabilization (with Lime @ 27#/sy)	18,077	sy	\$ 4.00	\$ 72,307
305	8" Concrete Pavement w/ 6" Curb	17,368	sy	\$ 46.00	\$ 798,918
405	4" Topsoil	3,899	sy	\$ 5.00	\$ 19,494
505	5' Concrete Sidewalk	31,900	sf	\$ 4.00	\$ 127,600
605	Turn Lanes and Median Openings	0	sy	\$ 50.00	\$ -
<b>Paving Construction Cost Subtotal:</b>					<b>\$ 1,156,552</b>
<b>Major Construction Component Allowances**:</b>					
Item Description	Notes	Allowance	Item Cost		
√ Prep ROW		6%	\$	69,393	
√ Traffic Control	Construction Phase Traffic Control	5%	\$	57,828	
√ Pavement Markings/Markers		3%	\$	34,697	
√ Roadway Drainage	Standard Internal System	30%	\$	346,966	
√ Illumination		6%	\$	69,393	
Special Drainage Structures	None Anticipated	0%	\$	-	
√ Water	Minor Adjustments	6%	\$	69,393	
√ Sewer	Minor Adjustments	4%	\$	46,262	
√ Establish Turf / Erosion Control		3%	\$	34,697	
√ Basic Landscaping/Irrigation		3%	\$	34,697	
Other:		\$0	\$	-	
<b>**Allowances based on % of Paving Construction Cost Subtotal</b>					<b>Allowance Subtotal: \$ 763,324</b>
<b>Paving and Allowance Subtotal:</b>					<b>\$ 1,919,877</b>
<b>Construction Contingency:</b>					<b>15% \$ 287,982</b>
<b>Construction Cost TOTAL:</b>					<b>\$ 2,208,000</b>

<b>Impact Fee Project Cost Summary</b>			
Item Description	Notes:	Allowance	Item Cost
<b>Construction:</b>		-	\$ 2,208,000
<b>Engineering/Survey/Testing:</b>		20%	\$ 441,600
<b>Mobilization</b>		6%	\$ 132,480
<b>Previous City contribution</b>			
<b>Other</b>			
<b>ROW/Easement Acquisition</b>	Not included		
<b>Impact Fee Project Cost TOTAL:</b>			<b>\$ 2,782,000</b>

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**City of Cedar Hill**  
**2012 Roadway Impact Fee Update**  
**Conceptual Level Project Cost Projection**

Kimley-Horn and Associates, Inc.  
 updated: 5/16/2012

<b>Project Information:</b>		<b>Description:</b>	<b>Project No.</b>
<b>Name:</b>	Bear Creek Rd. (1)	<b>This project consists of the construction of a new four-lane divided principal arterial.</b>	<b>3-S</b>
<b>Limits:</b>	US 67 NBFR to Tar Rd.		
<b>Impact Fee Class:</b>	M4D		
<b>Ultimate Class:</b>	Principal Arterial		
<b>Length (lf):</b>	6,280		
<b>Service Area(s):</b>	3		

<b>Roadway Construction Cost Projection</b>					
No.	Item Description	Quantity	Unit	Unit Price	Item Cost
103	Unclassified Street Excavation	18,142	cy	\$ 15.00	\$ 272,133
203	6" Lime Stabilization (with Lime @ 27#/sy)	35,587	sy	\$ 4.00	\$ 142,347
303	8" Concrete Pavement w/ 6" Curb	34,889	sy	\$ 46.00	\$ 1,604,889
403	4" Topsoil	22,329	sy	\$ 5.00	\$ 111,644
503	5' Concrete Sidewalk	62,800	sf	\$ 4.00	\$ 251,200
603	Turn Lanes and Median Openings	4,540	sy	\$ 50.00	\$ 226,996
<b>Paving Construction Cost Subtotal:</b>					<b>\$ 2,609,209</b>
<b>Major Construction Component Allowances**:</b>					
Item Description	Notes	Allowance	Item Cost		
√ Prep ROW	None Anticipated	6%	\$ 156,553		
√ Traffic Control		0%	\$ -		
√ Pavement Markings/Markers	Standard Internal System	3%	\$ 78,276		
√ Roadway Drainage		30%	\$ 782,763		
√ Illumination		6%	\$ 156,553		
√ Special Drainage Structures		0%	\$ -		
√ Water	Minor Adjustments	6%	\$ 156,553		
√ Sewer	Minor Adjustments	4%	\$ 104,368		
√ Establish Turf / Erosion Control		3%	\$ 78,276		
√ Basic Landscaping/Irrigation		3%	\$ 78,276		
√ Other:	Grade Separated RR Crossing	\$2,000,000	\$ 2,000,000		
<b>**Allowances based on % of Paving Construction Cost Subtotal</b>					<b>Allowance Subtotal: \$ 3,591,618</b>
<b>Paving and Allowance Subtotal:</b>					<b>\$ 6,200,827</b>
<b>Construction Contingency:</b>					<b>15% \$ 930,124</b>
<b>Construction Cost TOTAL:</b>					<b>\$ 7,131,000</b>

<b>Impact Fee Project Cost Summary</b>			
Item Description	Notes:	Allowance	Item Cost
<b>Construction:</b>		-	\$ 7,131,000
<b>Engineering/Survey/Testing:</b>		20%	\$ 1,426,200
<b>Mobilization</b>		6%	\$ 427,860
<b>Previous City contribution</b>			
<b>Other</b>			
<b>ROW/Easement Acquisition</b>	Not included		
<b>Impact Fee Project Cost TOTAL:</b>			<b>\$ 8,985,000</b>

**NOTE:** The planning level cost projections listed in this appendix have been developed for Impact Fee calculations only and should not be used for any future Capital Improvement Planning within the City of Cedar Hill.

The planning level cost projections shall not supersede the City's design standards or the determination of the City Engineer for a specific project.

**City of Cedar Hill**  
**2012 Roadway Impact Fee Update**  
**Conceptual Level Project Cost Projection**

Kimley-Horn and Associates, Inc.  
 updated: 5/16/2012

Project Information:		Description:	Project No.
<b>Name:</b>	Bear Creek Rd. (2)	<b>This project consists of the reconstruction of a two-lane undivided facility to a four-lane divided principal arterial.</b>	<b>3-T</b>
<b>Limits:</b>	Tar Rd. to Future Bear Creek Rd. Curve		
<b>Impact Fee Class:</b>	M4D		
<b>Ultimate Class:</b>	Principal Arterial		
<b>Length (lf):</b>	2,230		
<b>Service Area(s):</b>	3		

Roadway Construction Cost Projection					
No.	Item Description	Quantity	Unit	Unit Price	Item Cost
103	Unclassified Street Excavation	6,442	cy	\$ 15.00	\$ 96,633
203	6" Lime Stabilization (with Lime @ 27#/sy)	12,637	sy	\$ 4.00	\$ 50,547
303	8" Concrete Pavement w/ 6" Curb	12,389	sy	\$ 46.00	\$ 569,889
403	4" Topsoil	7,929	sy	\$ 5.00	\$ 39,644
503	5' Concrete Sidewalk	22,300	sf	\$ 4.00	\$ 89,200
603	Turn Lanes and Median Openings	1,612	sy	\$ 50.00	\$ 80,605
<b>Paving Construction Cost Subtotal:</b>					<b>\$ 926,519</b>
Major Construction Component Allowances**:					
Item Description	Notes	Allowance	Item Cost		
√ Prep ROW		6%	\$	55,591	
√ Traffic Control	Construction Phase Traffic Control	5%	\$	46,326	
√ Pavement Markings/Markers		3%	\$	27,796	
√ Roadway Drainage	Standard Internal System	30%	\$	277,956	
√ Illumination		6%	\$	55,591	
Special Drainage Structures	None Anticipated	0%	\$	-	
√ Water	Minor Adjustments	6%	\$	55,591	
√ Sewer	Minor Adjustments	4%	\$	37,061	
√ Establish Turf / Erosion Control		3%	\$	27,796	
√ Basic Landscaping/Irrigation		3%	\$	27,796	
Other:		\$0	\$	-	
<b>**Allowances based on % of Paving Construction Cost Subtotal</b>					<b>Allowance Subtotal: \$ 611,502</b>
<b>Paving and Allowance Subtotal:</b>					<b>\$ 1,538,021</b>
<b>Construction Contingency:</b>					<b>15% \$ 230,703</b>
<b>Construction Cost TOTAL:</b>					<b>\$ 1,769,000</b>

Impact Fee Project Cost Summary			
Item Description	Notes:	Allowance	Item Cost
<b>Construction:</b>		-	\$ 1,769,000
<b>Engineering/Survey/Testing:</b>		20%	\$ 353,800
<b>Mobilization</b>		6%	\$ 106,140
<b>Previous City contribution</b>			
<b>Other</b>			
<b>ROW/Easement Acquisition</b>	Not included		
<b>Impact Fee Project Cost TOTAL:</b>			<b>\$ 2,229,000</b>

**NOTE:** The planning level cost projections listed in this appendix have been developed for Impact Fee calculations only and should not be used for any future Capital Improvement Planning within the City of Cedar Hill.

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**City of Cedar Hill**  
**2012 Roadway Impact Fee Update**  
**Conceptual Level Project Cost Projection**

Kimley-Horn and Associates, Inc.  
 updated: 5/16/2012

Project Information:		Description:	Project No.
<b>Name:</b>	Bear Creek Rd. (3)	<b>This project consists of the construction of a new four-lane divided principal arterial.</b>	<b>3-U</b>
<b>Limits:</b>	Future Bear Creek Rd. Curve to Joe Wilson Rd.		
<b>Impact Fee Class:</b>	M4D		
<b>Ultimate Class:</b>	Principal Arterial		
<b>Length (lf):</b>	9,205		
<b>Service Area(s):</b>	3		

Roadway Construction Cost Projection					
No.	Item Description	Quantity	Unit	Unit Price	Item Cost
103	Unclassified Street Excavation	26,592	cy	\$ 15.00	\$ 398,883
203	6" Lime Stabilization (with Lime @ 27#/sy)	52,162	sy	\$ 4.00	\$ 208,647
303	8" Concrete Pavement w/ 6" Curb	51,139	sy	\$ 46.00	\$ 2,352,389
403	4" Topsoil	32,729	sy	\$ 5.00	\$ 163,644
503	5' Concrete Sidewalk	92,050	sf	\$ 4.00	\$ 368,200
603	Turn Lanes and Median Openings	6,654	sy	\$ 50.00	\$ 332,722
<b>Paving Construction Cost Subtotal:</b>					<b>\$ 3,824,486</b>
Major Construction Component Allowances**:					
Item Description	Notes	Allowance	Item Cost		
√ Prep ROW	None Anticipated	6%	\$	229,469	
Traffic Control		0%	\$	-	
√ Pavement Markings/Markers	Standard Internal System	3%	\$	114,735	
√ Roadway Drainage		30%	\$	1,147,346	
√ Illumination		6%	\$	229,469	
√ Special Drainage Structures		0%	\$	500,000	
√ Water	Minor Adjustments	6%	\$	229,469	
√ Sewer	Minor Adjustments	4%	\$	152,979	
√ Establish Turf / Erosion Control		3%	\$	114,735	
√ Basic Landscaping/Irrigation		3%	\$	114,735	
Other:		\$0	\$	-	
<b>**Allowances based on % of Paving Construction Cost Subtotal</b>					<b>Allowance Subtotal: \$ 2,832,936</b>
<b>Paving and Allowance Subtotal:</b>					<b>\$ 6,657,422</b>
<b>Construction Contingency:</b>					<b>15% \$ 998,613</b>
<b>Construction Cost TOTAL:</b>					<b>\$ 7,657,000</b>

Impact Fee Project Cost Summary			
Item Description	Notes:	Allowance	Item Cost
<b>Construction:</b>		-	\$ 7,657,000
<b>Engineering/Survey/Testing:</b>		20%	\$ 1,531,400
<b>Mobilization</b>		6%	\$ 459,420
<b>Previous City contribution</b>			
<b>Other</b>			
<b>ROW/Easement Acquisition</b>	Not included		
<b>Impact Fee Project Cost TOTAL:</b>			<b>\$ 9,648,000</b>

**NOTE:** The planning level cost projections listed in this appendix have been developed for Impact Fee calculations only and should not be used for any future Capital Improvement Planning within the City of Cedar Hill.

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**City of Cedar Hill**  
**2012 Roadway Impact Fee Update**  
**Conceptual Level Project Cost Projection**

Kimley-Horn and Associates, Inc.  
 updated: 5/16/2012

Project Information:		Description:	Project No.
<b>Name:</b>	Bear Creek Rd. (4)	<b>This project consists of the reconstruction of a two-lane undivided facility to a four-lane divided principal arterial.</b>	<b>3-V</b>
<b>Limits:</b>	Joe Wilson Rd. to 1,915' E. of Joe Wilson Rd.		
<b>Impact Fee Class:</b>	M4D		
<b>Ultimate Class:</b>	Principal Arterial		
<b>Length (lf):</b>	1,915		
<b>Service Area(s):</b>	3		

Roadway Construction Cost Projection					
No.	Item Description	Quantity	Unit	Unit Price	Item Cost
103	Unclassified Street Excavation	5,532	cy	\$ 15.00	\$ 82,983
203	6" Lime Stabilization (with Lime @ 27#/sy)	10,852	sy	\$ 4.00	\$ 43,407
303	8" Concrete Pavement w/ 6" Curb	10,639	sy	\$ 46.00	\$ 489,389
403	4" Topsoil	6,809	sy	\$ 5.00	\$ 34,044
503	5' Concrete Sidewalk	19,150	sf	\$ 4.00	\$ 76,600
603	Turn Lanes and Median Openings	1,384	sy	\$ 50.00	\$ 69,219
<b>Paving Construction Cost Subtotal:</b>					<b>\$ 795,643</b>
Major Construction Component Allowances**:					
Item Description	Notes	Allowance	Item Cost		
√ Prep ROW		6%	\$ 47,739		
√ Traffic Control	Construction Phase Traffic Control	5%	\$ 39,782		
√ Pavement Markings/Markers		3%	\$ 23,869		
√ Roadway Drainage	Standard Internal System	30%	\$ 238,693		
√ Illumination		6%	\$ 47,739		
Special Drainage Structures	None Anticipated	0%	\$ -		
√ Water	Minor Adjustments	6%	\$ 47,739		
√ Sewer	Minor Adjustments	4%	\$ 31,826		
√ Establish Turf / Erosion Control		3%	\$ 23,869		
√ Basic Landscaping/Irrigation		3%	\$ 23,869		
Other:		\$0	\$ -		
<b>**Allowances based on % of Paving Construction Cost Subtotal</b>					<b>Allowance Subtotal: \$ 525,124</b>
<b>Paving and Allowance Subtotal:</b>					<b>\$ 1,320,767</b>
<b>Construction Contingency:</b>					<b>15% \$ 198,115</b>
<b>Construction Cost TOTAL:</b>					<b>\$ 1,519,000</b>

Impact Fee Project Cost Summary			
Item Description	Notes:	Allowance	Item Cost
<b>Construction:</b>		-	\$ 1,519,000
<b>Engineering/Survey/Testing:</b>		20%	\$ 303,800
<b>Mobilization</b>		6%	\$ 91,140
<b>Previous City contribution</b>			
<b>Other</b>			
<b>ROW/Easement Acquisition</b>	Not included		
<b>Impact Fee Project Cost TOTAL:</b>			<b>\$ 1,914,000</b>

**NOTE:** The planning level cost projections listed in this appendix have been developed for Impact Fee calculations only and should not be used for any future Capital Improvement Planning within the City of Cedar Hill.

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**City of Cedar Hill**  
**2012 Roadway Impact Fee Update**  
**Conceptual Level Project Cost Projection**

Kimley-Horn and Associates, Inc.  
 updated: 5/16/2012

Project Information:		Description:	Project No.
<b>Name:</b>	Bear Creek Rd. (5)	<b>This project consists of the construction of a new four-lane divided principal arterial.</b>	<b>3-W</b>
<b>Limits:</b>	1,915' E. of Joe Wilson Rd. to Duncanville Rd.		
<b>Impact Fee Class:</b>	M4D		
<b>Ultimate Class:</b>	Principal Arterial		
<b>Length (lf):</b>	3,645		
<b>Service Area(s):</b>	3		

Roadway Construction Cost Projection					
No.	Item Description	Quantity	Unit	Unit Price	Item Cost
103	Unclassified Street Excavation	10,530	cy	\$ 15.00	\$ 157,950
203	6" Lime Stabilization (with Lime @ 27#/sy)	20,655	sy	\$ 4.00	\$ 82,620
303	8" Concrete Pavement w/ 6" Curb	20,250	sy	\$ 46.00	\$ 931,500
403	4" Topsoil	12,960	sy	\$ 5.00	\$ 64,800
503	5' Concrete Sidewalk	36,450	sf	\$ 4.00	\$ 145,800
603	Turn Lanes and Median Openings	2,635	sy	\$ 50.00	\$ 131,752
<b>Paving Construction Cost Subtotal:</b>					<b>\$ 1,514,422</b>
Major Construction Component Allowances**:					
Item Description	Notes	Allowance	Item Cost		
√ Prep ROW	None Anticipated	6%	\$	90,865	
Traffic Control		0%	\$	-	
√ Pavement Markings/Markers	Standard Internal System	3%	\$	45,433	
√ Roadway Drainage		30%	\$	454,326	
√ Illumination		6%	\$	90,865	
Special Drainage Structures		0%	\$	-	
√ Water	Minor Adjustments	6%	\$	90,865	
√ Sewer	Minor Adjustments	4%	\$	60,577	
√ Establish Turf / Erosion Control		3%	\$	45,433	
√ Basic Landscaping/Irrigation		3%	\$	45,433	
Other:		\$0	\$	-	
<b>**Allowances based on % of Paving Construction Cost Subtotal</b>					<b>Allowance Subtotal: \$ 923,797</b>
<b>Paving and Allowance Subtotal:</b>					<b>\$ 2,438,219</b>
<b>Construction Contingency:</b>					<b>15% \$ 365,733</b>
<b>Construction Cost TOTAL:</b>					<b>\$ 2,804,000</b>

Impact Fee Project Cost Summary			
Item Description	Notes:	Allowance	Item Cost
<b>Construction:</b>		-	\$ 2,804,000
<b>Engineering/Survey/Testing:</b>		20%	\$ 560,800
<b>Mobilization</b>		6%	\$ 168,240
<b>Previous City contribution</b>			
<b>Other</b>			
<b>ROW/Easement Acquisition</b>	Not included		
<b>Impact Fee Project Cost TOTAL:</b>			<b>\$ 3,533,000</b>

**NOTE:** The planning level cost projections listed in this appendix have been developed for Impact Fee calculations only and should not be used for any future Capital Improvement Planning within the City of Cedar Hill.

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**City of Cedar Hill**  
**2012 Roadway Impact Fee Update**  
**Conceptual Level Project Cost Projection**

Kimley-Horn and Associates, Inc.  
 updated: 5/16/2012

<b>Project Information:</b>		<b>Description:</b>	<b>Project No.</b>	<b>3-X</b>
<b>Name:</b>	Edgefield Way.			<b>This project consists of the construction of a new two-lane undivided minor collector.</b>
<b>Limits:</b>	Future Bear Creek Rd. to 1,185' N. of Future Bear Creek Rd.			
<b>Impact Fee Class:</b>	C2U			
<b>Ultimate Class:</b>	Minor Collector			
<b>Length (lf):</b>	1,185			
<b>Service Area(s):</b>	3			

<b>Roadway Construction Cost Projection</b>					
<b>No.</b>	<b>Item Description</b>	<b>Quantity</b>	<b>Unit</b>	<b>Unit Price</b>	<b>Item Cost</b>
101	Unclassified Street Excavation	2,765	cy	\$ 15.00	\$ 41,475
201	6" Lime Stabilization (with Lime @ 27#/sy)	5,398	sy	\$ 4.00	\$ 21,593
301	8" Concrete Pavement w/ 6" Curb	5,135	sy	\$ 46.00	\$ 236,210
401	4" Topsoil	1,712	sy	\$ 5.00	\$ 8,558
501	5' Concrete Sidewalk	11,850	sf	\$ 4.00	\$ 47,400
601	Turn Lanes and Median Openings	0	sy	\$ 50.00	\$ -
<b>Paving Construction Cost Subtotal:</b>					<b>\$ 355,237</b>
<b>Major Construction Component Allowances**:</b>					
<b>Item Description</b>	<b>Notes</b>	<b>Allowance</b>	<b>Item Cost</b>		
√ Prep ROW		6%	\$	21,314	
√ Traffic Control	None Anticipated	0%	\$	-	
√ Pavement Markings/Markers		3%	\$	10,657	
√ Roadway Drainage	Standard Internal System	30%	\$	106,571	
√ Illumination		6%	\$	21,314	
√ Special Drainage Structures	None Anticipated	0%	\$	-	
√ Water	Minor Adjustments	6%	\$	21,314	
√ Sewer	Minor Adjustments	4%	\$	14,209	
√ Establish Turf / Erosion Control		3%	\$	10,657	
√ Basic Landscaping/Irrigation		3%	\$	10,657	
Other:		\$0	\$	-	
<b>**Allowances based on % of Paving Construction Cost Subtotal</b>					<b>Allowance Subtotal: \$ 216,694</b>
<b>Paving and Allowance Subtotal:</b>					<b>\$ 571,931</b>
<b>Construction Contingency:</b>					<b>15% \$ 85,790</b>
<b>Construction Cost TOTAL:</b>					<b>\$ 658,000</b>

<b>Impact Fee Project Cost Summary</b>			
<b>Item Description</b>	<b>Notes:</b>	<b>Allowance</b>	<b>Item Cost</b>
<b>Construction:</b>		-	\$ 658,000
<b>Engineering/Survey/Testing:</b>		20%	\$ 131,600
<b>Mobilization</b>		6%	\$ 39,480
<b>Previous City contribution</b>			
<b>Other</b>			
<b>ROW/Easement Acquisition</b>	Not included		
<b>Impact Fee Project Cost TOTAL:</b>			<b>\$ 829,000</b>

**NOTE:** The planning level cost projections listed in this appendix have been developed for Impact Fee calculations only and should not be used for any future Capital Improvement Planning within the City of Cedar Hill.

The planning level cost projections shall not supersede the City's design standards or the determination of the City Engineer for a specific project.

## City of Cedar Hill - 2012 Roadway Impact Fee Update

Capital Improvement Plan for Roadway Impact Fees  
Summary of Conceptual Level Project Cost Projections

### Roadway Improvements - Service Area 4

#	Class	Project	Limits	Project Cost
1-A, 4-A	P6D	Mansfield Rd. (1)	W. City Limits to Lakeridge Pkwy.	\$ 3,544,000
1-B, 4-B	M4D	Mansfield Rd. (2)	Lakeridge Pkwy. to 430' W. of W. Belt Line Rd.	\$ 9,860,000
1-C, 4-C	M4D	Belt Line Rd. (Phase IIA)	430' W. of W. Belt Line Rd. to Fire Station	\$ 4,390,769
1-D, 4-D	M4D	Belt Line Rd. (Phase I)	Fire Station to BNSF RR	\$ 2,100,725
4-E	M4D	Lake Ridge Pkwy. (1)	575' S. of Lakeview Dr. to Mt. Lebanon Rd.	\$ 4,500,000
4-F	M4D	Road A (2)	Belt Line Rd. to BNSF RR	\$ 5,073,000
4-G	M4U	Cedarview Dr. (2)	Valley View Dr. to 320' W. of Plateau St.	\$ 3,387,000
4-H	M4U	Cedarview Dr. (3)	320' W. of Plateau St. to BNSF RR	\$ 2,046,000
4-I	M4U	Texas Plume Rd.	Lake Ridge Pkwy. To Mt. Lebanon Rd.	\$ 6,227,000
4-J	M4U	Mt. Lebanon Rd. (2)	US 67 SBFR to Texas Plume Rd.	\$ 3,436,000
4-K	M4U	Mt. Lebanon Rd. (3)	Texas Plume Rd. to S. City Limits	\$ 5,558,000
4-L	M4U	Mt. Lebanon Rd. (4)	S. City Limits to S. City Limits	\$ 956,000
<b>Signal Installation</b>				
I-1		Signal Installation	Mansfield Rd. & Lake Ridge Pkwy.	\$ 150,000
I-2		Signal Installation	Mansfield Rd. & Road A	\$ 150,000
I-13		Interchange	Bear Creek Rd. & US 67 Interchange	\$ 12,000,000
I-14		Signal Installation	Lake Ridge Pkwy. & Prairie View Blvd.	\$ 150,000
<b>TOTAL</b>				<b>\$ 63,528,494</b>

\*Total may be higher than presented in Table 4.D (10-Year Capital Improvement Plan for Roadway Impact Fees with Conceptual Level Cost Opinions - Service Area 4) because the cost of some projects are shared between multiple jurisdictions.

**NOTE:** The planning level cost projections listed in this appendix have been developed for Impact Fee calculations only and should not be used for any future Capital Improvement Planning within the City of Cedar Hill.

The planning level cost projections shall not supersede the City's design standards contained within the Subdivision Ordinance or the determination of the City Engineer for a specific project.

**City of Cedar Hill**  
**2012 Roadway Impact Fee Update**  
**Conceptual Level Project Cost Projection**

Kimley-Horn and Associates, Inc.  
 updated: 5/16/2012

<b>Project Information:</b>		<b>Description:</b>	<b>Project No.</b>
<b>Name:</b>	Mansfield Rd. (1)	<b>This project consists of the reconstruction of a two-lane undivided facility to a six-lane divided principal arterial. The boundary between SA 1 and SA 4 is on the centerline of Mansfield Rd.</b>	<b>1-A, 4-A</b>
<b>Limits:</b>	W. City Limits to Lakeridge Pkwy.		
<b>Impact Fee Class:</b>	P6D		
<b>Ultimate Class:</b>	Principal Arterial		
<b>Length (lf):</b>	2,095		
<b>Service Area(s):</b>	1, 4		

<b>Roadway Construction Cost Projection</b>					
No.	Item Description	Quantity	Unit	Unit Price	Item Cost
106	Unclassified Street Excavation	8,846	cy	\$ 15.00	\$ 132,683
206	6" Lime Stabilization (with Lime @ 27#/sy)	17,458	sy	\$ 4.00	\$ 69,833
306	10" Concrete Pavement w/ 6" Curb	17,226	sy	\$ 45.00	\$ 775,150
406	4" Topsoil	6,983	sy	\$ 5.00	\$ 34,917
506	5' Concrete Sidewalk	20,950	sf	\$ 4.00	\$ 83,800
606	Turn Lanes and Median Openings	1,515	sy	\$ 50.00	\$ 75,726
<b>Paving Construction Cost Subtotal:</b>					<b>\$ 1,172,109</b>
<b>Major Construction Component Allowances**:</b>					
Item Description	Notes	Allowance	Item Cost		
√ Prep ROW		6%	\$	70,327	
√ Traffic Control	Construction Phase Traffic Control	5%	\$	58,605	
√ Pavement Markings/Markers		3%	\$	35,163	
√ Roadway Drainage	Standard Internal System	30%	\$	351,633	
√ Illumination		6%	\$	70,327	
√ Special Drainage Structures	None Anticipated	0%	\$	500,000	
√ Water	Minor Adjustments	6%	\$	70,327	
√ Sewer	Minor Adjustments	4%	\$	46,884	
√ Establish Turf / Erosion Control		3%	\$	35,163	
√ Basic Landscaping/Irrigation		3%	\$	35,163	
Other:		\$0	\$	-	
<b>**Allowances based on % of Paving Construction Cost Subtotal</b>					<b>Allowance Subtotal: \$ 1,273,592</b>
<b>Paving and Allowance Subtotal:</b>					<b>\$ 2,445,701</b>
<b>Construction Contingency: 15%</b>					<b>\$ 366,855</b>
<b>Construction Cost TOTAL:</b>					<b>\$ 2,813,000</b>

<b>Impact Fee Project Cost Summary</b>			
Item Description	Notes:	Allowance	Item Cost
<b>Construction:</b>		-	\$ 2,813,000
<b>Engineering/Survey/Testing:</b>		20%	\$ 562,600
<b>Mobilization</b>		6%	\$ 168,780
<b>Previous City contribution</b>			
<b>Other</b>			
<b>ROW/Easement Acquisition</b>	Not included		
<b>Impact Fee Project Cost TOTAL:</b>			<b>\$ 3,544,000</b>

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**City of Cedar Hill**  
**2012 Roadway Impact Fee Update**  
**Conceptual Level Project Cost Projection**

Kimley-Horn and Associates, Inc.  
 updated: 5/16/2012

<b>Project Information:</b>		<b>Description:</b>	<b>Project No.</b>
<b>Name:</b>	Mansfield Rd. (2)	<b>This project consists of the reconstruction of a two-lane undivided facility to a four-lane divided principal arterial. The boundary between SA 1 and SA 4 is on the centerline of Mansfield Rd.</b>	<b>1-B, 4-B</b>
<b>Limits:</b>	Lakeridge Pkwy. to 430' W. of W. Belt Line Rd.		
<b>Impact Fee Class:</b>	M4D		
<b>Ultimate Class:</b>	Principal Arterial		
<b>Length (lf):</b>	9,140		
<b>Service Area(s):</b>	1, 4		

<b>Roadway Construction Cost Projection</b>					
No.	Item Description	Quantity	Unit	Unit Price	Item Cost
103	Unclassified Street Excavation	26,404	cy	\$ 15.00	\$ 396,067
203	6" Lime Stabilization (with Lime @ 27#/sy)	51,793	sy	\$ 4.00	\$ 207,173
303	8" Concrete Pavement w/ 6" Curb	50,778	sy	\$ 46.00	\$ 2,335,778
403	4" Topsoil	32,498	sy	\$ 5.00	\$ 162,489
503	5' Concrete Sidewalk	91,400	sf	\$ 4.00	\$ 365,600
603	Turn Lanes and Median Openings	6,607	sy	\$ 50.00	\$ 330,373
<b>Paving Construction Cost Subtotal:</b>					<b>\$ 3,797,480</b>
<b>Major Construction Component Allowances**:</b>					
Item Description	Notes	Allowance	Item Cost		
√ Prep ROW		6%	\$	227,849	
√ Traffic Control	Construction Phase Traffic Control	5%	\$	189,874	
√ Pavement Markings/Markers		3%	\$	113,924	
√ Roadway Drainage	Standard Internal System	30%	\$	1,139,244	
√ Illumination		6%	\$	227,849	
√ Special Drainage Structures	None Anticipated	0%	\$	500,000	
√ Water	Minor Adjustments	6%	\$	227,849	
√ Sewer	Minor Adjustments	4%	\$	151,899	
√ Establish Turf / Erosion Control		3%	\$	113,924	
√ Basic Landscaping/Irrigation		3%	\$	113,924	
Other:		\$0	\$	-	
<b>**Allowances based on % of Paving Construction Cost Subtotal</b>					<b>Allowance Subtotal: \$ 3,006,337</b>
<b>Paving and Allowance Subtotal:</b>					<b>\$ 6,803,816</b>
<b>Construction Contingency: 15%</b>					<b>\$ 1,020,572</b>
<b>Construction Cost TOTAL:</b>					<b>\$ 7,825,000</b>

<b>Impact Fee Project Cost Summary</b>			
Item Description	Notes:	Allowance	Item Cost
<b>Construction:</b>		-	\$ 7,825,000
<b>Engineering/Survey/Testing:</b>		20%	\$ 1,565,000
<b>Mobilization</b>		6%	\$ 469,500
<b>Previous City contribution</b>			
<b>Other</b>			
<b>ROW/Easement Acquisition</b>	Not included		
<b>Impact Fee Project Cost TOTAL:</b>			<b>\$ 9,860,000</b>

**NOTE:** The planning level cost projections listed in this appendix have been developed for Impact Fee calculations only and should not be used for any future Capital Improvement Planning within the City of Cedar Hill.

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**City of Cedar Hill**  
**2012 Roadway Impact Fee Update**  
**Conceptual Level Project Cost Projection**

Kimley-Horn and Associates, Inc.  
 updated: 5/16/2012

<b>Project Information:</b>		<b>Description:</b>	<b>Project No.</b>
<b>Name:</b>	Belt Line Rd. (Phase IIA)	<p><b>This project consisted of the reconstruction from a two-lane roadway to a four-lane divided minor arterial. The boundary between SA 1 and SA 4 is on the centerline of Belt Line Rd. This project sheet represents the actual cost that the City of Cedar Hill incurred to construct this project.</b></p>	<b>1-C, 4-C</b>
<b>Limits:</b>	430' W. of W. Belt Line Rd. to Fire Station		
<b>Impact Fee Class:</b>	M4D		
<b>Ultimate Class:</b>	Minor Arterial		
<b>Length (lf):</b>	3,905		
<b>Service Area(s):</b>	1, 4		

<b>Impact Fee Project Cost Summary</b>			
<b>Item Description</b>	<b>Notes:</b>	<b>Allowance</b>	<b>Item Cost</b>
<b>City Contribution to Construction Cost:</b>		-	
<b>Engineering/Survey/Testing</b>			
<b>Other</b>			
<b>Impact Fee Project Cost TOTAL:</b>			<b>\$ 4,390,769</b>

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**City of Cedar Hill**  
**2012 Roadway Impact Fee Update**  
**Conceptual Level Project Cost Projection**

Kimley-Horn and Associates, Inc.  
 updated: 5/16/2012

<b>Project Information:</b>		<b>Description:</b>	<b>Project No.</b>	<b>1-D, 4-D</b>
<b>Name:</b>	Belt Line Rd. (Phase I)	<p><b>This project consisted of the reconstruction from a two-lane roadway to a five-lane undivided roadway. 42% of the project is west of the BNSF RR and the remaining 58% of the project is east of the BSNF RR. This project sheet represents the actual cost that the City of Cedar Hill incurred to construct this project. The total project cost is \$5,001,727. The project cost in Service Area 1 is \$2,100,725.</b></p>		
<b>Limits:</b>	Fire Station to BNSF RR			
<b>Impact Fee Class:</b>	M4D			
<b>Ultimate Class:</b>	Minor Arterial			
<b>Length (lf):</b>	2,620			
<b>Service Area(s):</b>	1, 4			

<b>Impact Fee Project Cost Summary</b>			
<b>Item Description</b>	<b>Notes:</b>	<b>Allowance</b>	<b>Item Cost</b>
<b>City Contribution to Construction Cost:</b>		42%	\$ 2,100,725
<b>Engineering/Survey/Testing</b>			
<b>Other</b>			
<b>Impact Fee Project Cost TOTAL:</b>			<b>\$ 2,100,725</b>

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**City of Cedar Hill**  
**2012 Roadway Impact Fee Update**  
**Conceptual Level Project Cost Projection**

Kimley-Horn and Associates, Inc.  
 updated: 5/16/2012

<b>Project Information:</b>		<b>Description:</b>	<b>Project No.</b>
<b>Name:</b>	Lake Ridge Pkwy. (1)	<b>This completed project consisted of the construction of the additional two-lanes needed for the four-lane divided principal arterial. This project sheet represents the estimated cost that the City of Cedar Hill incurred to construct this project</b>	<b>4-E</b>
<b>Limits:</b>	575' S. of Lakeview Dr. to Mt. Lebanon Rd.		
<b>Impact Fee Class:</b>	M4D		
<b>Ultimate Class:</b>	Principal Arterial		
<b>Length (lf):</b>	13,525		
<b>Service Area(s):</b>	4		

<b>Impact Fee Project Cost Summary</b>			
<b>Item Description</b>	<b>Notes:</b>	<b>Allowance</b>	<b>Item Cost</b>
<b>City Contribution to Construction Cost:</b>		-	\$ 4,500,000
<b>Engineering/Survey/Testing</b>			
<b>Other</b>			
<b>Impact Fee Project Cost TOTAL:</b>			<b>\$ 4,500,000</b>

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**City of Cedar Hill**  
**2012 Roadway Impact Fee Update**  
**Conceptual Level Project Cost Projection**

Kimley-Horn and Associates, Inc.  
 updated: 7/3/2012

<b>Project Information:</b>		<b>Description:</b>	<b>Project No.</b>
<b>Name:</b>	Road A (2)	<b>This project consists of the construction of a new four-lane divided minor arterial.</b>	<b>4-F</b>
<b>Limits:</b>	Belt Line Rd. to BNSF RR		
<b>Impact Fee Class:</b>	M4D		
<b>Ultimate Class:</b>	Minor Arterial		
<b>Length (lf):</b>	2,990		
<b>Service Area(s):</b>	4		

<b>Roadway Construction Cost Projection</b>					
No.	Item Description	Quantity	Unit	Unit Price	Item Cost
103	Unclassified Street Excavation	8,638	cy	\$ 15.00	\$ 129,567
203	6" Lime Stabilization (with Lime @ 27#/sy)	16,943	sy	\$ 4.00	\$ 67,773
303	8" Concrete Pavement w/ 6" Curb	16,611	sy	\$ 46.00	\$ 764,111
403	4" Topsoil	10,631	sy	\$ 5.00	\$ 53,156
503	5' Concrete Sidewalk	29,900	sf	\$ 4.00	\$ 119,600
603	Turn Lanes and Median Openings	2,162	sy	\$ 50.00	\$ 108,076
<b>Paving Construction Cost Subtotal:</b>					<b>\$ 1,242,283</b>
<b>Major Construction Component Allowances**:</b>					
Item Description	Notes	Allowance	Item Cost		
√ Prep ROW	None Anticipated	6%	\$	74,537	
√ Traffic Control		0%	\$	-	
√ Pavement Markings/Markers	Standard Internal System	3%	\$	37,268	
√ Roadway Drainage		30%	\$	372,685	
√ Illumination		6%	\$	74,537	
√ Special Drainage Structures		0%	\$	250,000	
√ Water	Minor Adjustments	6%	\$	74,537	
√ Sewer	Minor Adjustments	4%	\$	49,691	
√ Establish Turf / Erosion Control		3%	\$	37,268	
√ Basic Landscaping/Irrigation		3%	\$	37,268	
√ Other:	Railroad Crossing (50%)		\$1,250,000	\$	1,250,000
<b>**Allowances based on % of Paving Construction Cost Subtotal</b>					<b>Allowance Subtotal: \$ 2,257,792</b>
<b>Paving and Allowance Subtotal:</b>					<b>\$ 3,500,075</b>
<b>Construction Contingency: 15%</b>					<b>\$ 525,011</b>
<b>Construction Cost TOTAL:</b>					<b>\$ 4,026,000</b>

<b>Impact Fee Project Cost Summary</b>			
Item Description	Notes:	Allowance	Item Cost
<b>Construction:</b>		-	\$ 4,026,000
<b>Engineering/Survey/Testing:</b>		20%	\$ 805,200
<b>Mobilization</b>		6%	\$ 241,560
<b>Previous City contribution</b>			
<b>Other</b>			
<b>ROW/Easement Acquisition</b>	Not included		
<b>Impact Fee Project Cost TOTAL:</b>			<b>\$ 5,073,000</b>

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**City of Cedar Hill**  
**2012 Roadway Impact Fee Update**  
**Conceptual Level Project Cost Projection**

Kimley-Horn and Associates, Inc.  
 updated: 5/16/2012

<b>Project Information:</b>		<b>Description:</b>	<b>Project No.</b>	<b>4-G</b>
<b>Name:</b>	Cedarview Dr. (2)	<b>This project consists of the construction of a new four-lane undivided major collector.</b>		
<b>Limits:</b>	Valley View Dr. to 320' W. of Plateau St.			
<b>Impact Fee Class:</b>	M4U			
<b>Ultimate Class:</b>	Major Collector			
<b>Length (lf):</b>	3,575			
<b>Service Area(s):</b>	4			

<b>Roadway Construction Cost Projection</b>					
No.	Item Description	Quantity	Unit	Unit Price	Item Cost
105	Unclassified Street Excavation	10,328	cy	\$ 15.00	\$ 154,917
205	6" Lime Stabilization (with Lime @ 27#/sy)	20,258	sy	\$ 4.00	\$ 81,033
305	8" Concrete Pavement w/ 6" Curb	19,464	sy	\$ 46.00	\$ 895,339
405	4" Topsoil	4,369	sy	\$ 5.00	\$ 21,847
505	5' Concrete Sidewalk	35,750	sf	\$ 4.00	\$ 143,000
605	Turn Lanes and Median Openings	0	sy	\$ 50.00	\$ -
<b>Paving Construction Cost Subtotal:</b>					<b>\$ 1,296,136</b>
<b>Major Construction Component Allowances**:</b>					
Item Description	Notes	Allowance	Item Cost		
√ Prep ROW	None Anticipated	6%	\$	77,768	
Traffic Control		0%	\$	-	
√ Pavement Markings/Markers	Standard Internal System	3%	\$	38,884	
√ Roadway Drainage		30%	\$	388,841	
√ Illumination		6%	\$	77,768	
√ Special Drainage Structures		0%	\$	250,000	
√ Water	Minor Adjustments	6%	\$	77,768	
√ Sewer	Minor Adjustments	4%	\$	51,845	
√ Establish Turf / Erosion Control		3%	\$	38,884	
√ Basic Landscaping/Irrigation		3%	\$	38,884	
Other:		\$0	\$	-	
<b>**Allowances based on % of Paving Construction Cost Subtotal</b>					<b>Allowance Subtotal: \$ 1,040,643</b>
<b>Paving and Allowance Subtotal:</b>					<b>\$ 2,336,779</b>
<b>Construction Contingency:</b>					<b>15% \$ 350,517</b>
<b>Construction Cost TOTAL:</b>					<b>\$ 2,688,000</b>

<b>Impact Fee Project Cost Summary</b>			
Item Description	Notes:	Allowance	Item Cost
<b>Construction:</b>		-	\$ 2,688,000
<b>Engineering/Survey/Testing:</b>		20%	\$ 537,600
<b>Mobilization</b>		6%	\$ 161,280
<b>Previous City contribution</b>			
<b>Other</b>			
<b>ROW/Easement Acquisition</b>	Not included		
<b>Impact Fee Project Cost TOTAL:</b>			<b>\$ 3,387,000</b>

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**City of Cedar Hill**  
**2012 Roadway Impact Fee Update**  
**Conceptual Level Project Cost Projection**

Kimley-Horn and Associates, Inc.  
 updated: 5/16/2012

<b>Project Information:</b>		<b>Description:</b>	<b>Project No.</b>	<b>4-H</b>
<b>Name:</b>	Cedarview Dr. (3)	<b>This project consists of the reconstruction of a two-lane undivided facility to a four-lane undivided major collector.</b>		
<b>Limits:</b>	320' W. of Plateau St. to BNSF RR			
<b>Impact Fee Class:</b>	M4U			
<b>Ultimate Class:</b>	Major Collector			
<b>Length (lf):</b>	2,345			
<b>Service Area(s):</b>	4			

<b>Roadway Construction Cost Projection</b>					
No.	Item Description	Quantity	Unit	Unit Price	Item Cost
105	Unclassified Street Excavation	6,774	cy	\$ 15.00	\$ 101,617
205	6" Lime Stabilization (with Lime @ 27#/sy)	13,288	sy	\$ 4.00	\$ 53,153
305	8" Concrete Pavement w/ 6" Curb	12,767	sy	\$ 46.00	\$ 587,292
405	4" Topsoil	2,866	sy	\$ 5.00	\$ 14,331
505	5' Concrete Sidewalk	23,450	sf	\$ 4.00	\$ 93,800
605	Turn Lanes and Median Openings	0	sy	\$ 50.00	\$ -
<b>Paving Construction Cost Subtotal:</b>					<b>\$ 850,193</b>
<b>Major Construction Component Allowances**:</b>					
Item Description	Notes	Allowance	Item Cost		
√ Prep ROW		6%	\$	51,012	
√ Traffic Control	Construction Phase Traffic Control	5%	\$	42,510	
√ Pavement Markings/Markers		3%	\$	25,506	
√ Roadway Drainage	Standard Internal System	30%	\$	255,058	
√ Illumination		6%	\$	51,012	
Special Drainage Structures	None Anticipated	0%	\$	-	
√ Water	Minor Adjustments	6%	\$	51,012	
√ Sewer	Minor Adjustments	4%	\$	34,008	
√ Establish Turf / Erosion Control		3%	\$	25,506	
√ Basic Landscaping/Irrigation		3%	\$	25,506	
Other:		\$0	\$	-	
<b>**Allowances based on % of Paving Construction Cost Subtotal</b>					<b>Allowance Subtotal: \$ 561,127</b>
<b>Paving and Allowance Subtotal:</b>					<b>\$ 1,411,320</b>
<b>Construction Contingency:</b>					<b>15% \$ 211,698</b>
<b>Construction Cost TOTAL:</b>					<b>\$ 1,624,000</b>

<b>Impact Fee Project Cost Summary</b>			
Item Description	Notes:	Allowance	Item Cost
<b>Construction:</b>		-	\$ 1,624,000
<b>Engineering/Survey/Testing:</b>		20%	\$ 324,800
<b>Mobilization</b>		6%	\$ 97,440
<b>Previous City contribution</b>			
<b>Other</b>			
<b>ROW/Easement Acquisition</b>	Not included		
<b>Impact Fee Project Cost TOTAL:</b>			<b>\$ 2,046,000</b>

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**City of Cedar Hill**  
**2012 Roadway Impact Fee Update**  
**Conceptual Level Project Cost Projection**

Kimley-Horn and Associates, Inc.  
 updated: 5/16/2012

<b>Project Information:</b>		<b>Description:</b>	<b>Project No.</b>
<b>Name:</b>	Texas Plume Rd.	<b>This project consists of the reconstruction of a two-lane undivided facility to a four-lane undivided major collector.</b>	<b>4-I</b>
<b>Limits:</b>	Lake Ridge Pkwy. To Mt. Lebanon Rd.		
<b>Impact Fee Class:</b>	M4U		
<b>Ultimate Class:</b>	Major Collector		
<b>Length (lf):</b>	7,140		
<b>Service Area(s):</b>	4		

<b>Roadway Construction Cost Projection</b>					
No.	Item Description	Quantity	Unit	Unit Price	Item Cost
105	Unclassified Street Excavation	20,627	cy	\$ 15.00	\$ 309,400
205	6" Lime Stabilization (with Lime @ 27#/sy)	40,460	sy	\$ 4.00	\$ 161,840
305	8" Concrete Pavement w/ 6" Curb	38,873	sy	\$ 46.00	\$ 1,788,173
405	4" Topsoil	8,727	sy	\$ 5.00	\$ 43,633
505	5' Concrete Sidewalk	71,400	sf	\$ 4.00	\$ 285,600
605	Turn Lanes and Median Openings	0	sy	\$ 50.00	\$ -
<b>Paving Construction Cost Subtotal:</b>					<b>\$ 2,588,647</b>
<b>Major Construction Component Allowances**:</b>					
Item Description	Notes	Allowance	Item Cost		
√ Prep ROW		6%	\$	155,319	
√ Traffic Control	Construction Phase Traffic Control	5%	\$	129,432	
√ Pavement Markings/Markers		3%	\$	77,659	
√ Roadway Drainage	Standard Internal System	30%	\$	776,594	
√ Illumination		6%	\$	155,319	
Special Drainage Structures	None Anticipated	0%	\$	-	
√ Water	Minor Adjustments	6%	\$	155,319	
√ Sewer	Minor Adjustments	4%	\$	103,546	
√ Establish Turf / Erosion Control		3%	\$	77,659	
√ Basic Landscaping/Irrigation		3%	\$	77,659	
Other:		\$0	\$	-	
<b>**Allowances based on % of Paving Construction Cost Subtotal</b>					<b>Allowance Subtotal: \$ 1,708,507</b>
<b>Paving and Allowance Subtotal:</b>					<b>\$ 4,297,153</b>
<b>Construction Contingency:</b>					<b>15% \$ 644,573</b>
<b>Construction Cost TOTAL:</b>					<b>\$ 4,942,000</b>

<b>Impact Fee Project Cost Summary</b>			
Item Description	Notes:	Allowance	Item Cost
<b>Construction:</b>		-	\$ 4,942,000
<b>Engineering/Survey/Testing:</b>		20%	\$ 988,400
<b>Mobilization</b>		6%	\$ 296,520
<b>Previous City contribution</b>			
<b>Other</b>			
<b>ROW/Easement Acquisition</b>	Not included		
<b>Impact Fee Project Cost TOTAL:</b>			<b>\$ 6,227,000</b>

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**City of Cedar Hill**  
**2012 Roadway Impact Fee Update**  
**Conceptual Level Project Cost Projection**

Kimley-Horn and Associates, Inc.  
 updated: 5/16/2012

<b>Project Information:</b>		<b>Description:</b>	<b>Project No.</b>
<b>Name:</b>	Mt. Lebanon Rd. (2)	<b>This project consists of the reconstruction of a two-lane undivided facility to a four-lane undivided major collector.</b>	<b>4-J</b>
<b>Limits:</b>	US 67 SBFR to Texas Plume Rd.		
<b>Impact Fee Class:</b>	M4U		
<b>Ultimate Class:</b>	Major Collector		
<b>Length (lf):</b>	3,940		
<b>Service Area(s):</b>	4		

<b>Roadway Construction Cost Projection</b>					
No.	Item Description	Quantity	Unit	Unit Price	Item Cost
105	Unclassified Street Excavation	11,382	cy	\$ 15.00	\$ 170,733
205	6" Lime Stabilization (with Lime @ 27#/sy)	22,327	sy	\$ 4.00	\$ 89,307
305	8" Concrete Pavement w/ 6" Curb	21,451	sy	\$ 46.00	\$ 986,751
405	4" Topsoil	4,816	sy	\$ 5.00	\$ 24,078
505	5' Concrete Sidewalk	39,400	sf	\$ 4.00	\$ 157,600
605	Turn Lanes and Median Openings	0	sy	\$ 50.00	\$ -
<b>Paving Construction Cost Subtotal:</b>					<b>\$ 1,428,469</b>
<b>Major Construction Component Allowances**:</b>					
Item Description	Notes	Allowance	Item Cost		
√ Prep ROW		6%	\$	85,708	
√ Traffic Control	Construction Phase Traffic Control	5%	\$	71,423	
√ Pavement Markings/Markers		3%	\$	42,854	
√ Roadway Drainage	Standard Internal System	30%	\$	428,541	
√ Illumination		6%	\$	85,708	
Special Drainage Structures	None Anticipated	0%	\$	-	
√ Water	Minor Adjustments	6%	\$	85,708	
√ Sewer	Minor Adjustments	4%	\$	57,139	
√ Establish Turf / Erosion Control		3%	\$	42,854	
√ Basic Landscaping/Irrigation		3%	\$	42,854	
Other:		\$0	\$	-	
<b>**Allowances based on % of Paving Construction Cost Subtotal</b>					<b>Allowance Subtotal: \$ 942,789</b>
<b>Paving and Allowance Subtotal:</b>					<b>\$ 2,371,258</b>
<b>Construction Contingency:</b>					<b>15% \$ 355,689</b>
<b>Construction Cost TOTAL:</b>					<b>\$ 2,727,000</b>

<b>Impact Fee Project Cost Summary</b>			
Item Description	Notes:	Allowance	Item Cost
<b>Construction:</b>		-	\$ 2,727,000
<b>Engineering/Survey/Testing:</b>		20%	\$ 545,400
<b>Mobilization</b>		6%	\$ 163,620
<b>Previous City contribution</b>			
<b>Other</b>			
<b>ROW/Easement Acquisition</b>	Not included		
<b>Impact Fee Project Cost TOTAL:</b>			<b>\$ 3,436,000</b>

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**City of Cedar Hill**  
**2012 Roadway Impact Fee Update**  
**Conceptual Level Project Cost Projection**

Kimley-Horn and Associates, Inc.  
 updated: 5/16/2012

<b>Project Information:</b>		<b>Description:</b>	<b>Project No.</b>	<b>4-K</b>
<b>Name:</b>	Mt. Lebanon Rd. (3)	<b>This project consists of the construction of a new four-lane undivided major collector.</b>		
<b>Limits:</b>	Texas Plume Rd. to S. City Limits			
<b>Impact Fee Class:</b>	M4U			
<b>Ultimate Class:</b>	Major Collector			
<b>Length (lf):</b>	6,570			
<b>Service Area(s):</b>	4			

<b>Roadway Construction Cost Projection</b>					
No.	Item Description	Quantity	Unit	Unit Price	Item Cost
105	Unclassified Street Excavation	18,980	cy	\$ 15.00	\$ 284,700
205	6" Lime Stabilization (with Lime @ 27#/sy)	37,230	sy	\$ 4.00	\$ 148,920
305	8" Concrete Pavement w/ 6" Curb	35,770	sy	\$ 46.00	\$ 1,645,420
405	4" Topsoil	8,030	sy	\$ 5.00	\$ 40,150
505	5' Concrete Sidewalk	65,700	sf	\$ 4.00	\$ 262,800
605	Turn Lanes and Median Openings	0	sy	\$ 50.00	\$ -
<b>Paving Construction Cost Subtotal:</b>					<b>\$ 2,381,990</b>
<b>Major Construction Component Allowances**:</b>					
Item Description	Notes	Allowance	Item Cost		
√ Prep ROW	None Anticipated	6%	\$	142,919	
Traffic Control		0%	\$	-	
√ Pavement Markings/Markers	Standard Internal System	3%	\$	71,460	
√ Roadway Drainage		30%	\$	714,597	
√ Illumination		6%	\$	142,919	
Special Drainage Structures		0%	\$	-	
√ Water	Minor Adjustments	6%	\$	142,919	
√ Sewer	Minor Adjustments	4%	\$	95,280	
√ Establish Turf / Erosion Control		3%	\$	71,460	
√ Basic Landscaping/Irrigation		3%	\$	71,460	
Other:		\$0	\$	-	
<b>**Allowances based on % of Paving Construction Cost Subtotal</b>					<b>Allowance Subtotal: \$ 1,453,014</b>
<b>Paving and Allowance Subtotal:</b>					<b>\$ 3,835,004</b>
<b>Construction Contingency:</b>					<b>15% \$ 575,251</b>
<b>Construction Cost TOTAL:</b>					<b>\$ 4,411,000</b>

<b>Impact Fee Project Cost Summary</b>			
Item Description	Notes:	Allowance	Item Cost
<b>Construction:</b>		-	\$ 4,411,000
<b>Engineering/Survey/Testing:</b>		20%	\$ 882,200
<b>Mobilization</b>		6%	\$ 264,660
<b>Previous City contribution</b>			
<b>Other</b>			
<b>ROW/Easement Acquisition</b>	Not included		
<b>Impact Fee Project Cost TOTAL:</b>			<b>\$ 5,558,000</b>

**NOTE:** The planning level cost projections listed in this appendix have been developed for Impact Fee calculations only and should not be used for any future Capital Improvement Planning within the City of Cedar Hill.

The planning level cost projections shall not supersede the City's design standards or the determination of the City Engineer for a specific project.

**City of Cedar Hill**  
**2012 Roadway Impact Fee Update**  
**Conceptual Level Project Cost Projection**

Kimley-Horn and Associates, Inc.  
 updated: 5/16/2012

<b>Project Information:</b>		<b>Description:</b>	<b>Project No.</b>
<b>Name:</b>	Mt. Lebanon Rd. (4)	<b>This project consists of the construction of a new four-lane undivided major collector. The boundary between SA 4 and the city limits line is on the centerline of Mt. Lebanon Rd.</b>	<b>4-L</b>
<b>Limits:</b>	S. City Limits to S. City Limits		
<b>Impact Fee Class:</b>	M4U		
<b>Ultimate Class:</b>	Major Collector		
<b>Length (lf):</b>	1,130		
<b>Service Area(s):</b>	4 (Half)		

<b>Roadway Construction Cost Projection</b>					
No.	Item Description	Quantity	Unit	Unit Price	Item Cost
105	Unclassified Street Excavation	3,264	cy	\$ 15.00	\$ 48,967
205	6" Lime Stabilization (with Lime @ 27#/sy)	6,403	sy	\$ 4.00	\$ 25,613
305	8" Concrete Pavement w/ 6" Curb	6,152	sy	\$ 46.00	\$ 283,002
405	4" Topsoil	1,381	sy	\$ 5.00	\$ 6,906
505	5' Concrete Sidewalk	11,300	sf	\$ 4.00	\$ 45,200
605	Turn Lanes and Median Openings	0	sy	\$ 50.00	\$ -
<b>Paving Construction Cost Subtotal:</b>					<b>\$ 409,688</b>
<b>Major Construction Component Allowances**:</b>					
Item Description	Notes	Allowance	Item Cost		
√ Prep ROW	None Anticipated	6%	\$	24,581	
Traffic Control		0%	\$	-	
√ Pavement Markings/Markers	Standard Internal System	3%	\$	12,291	
√ Roadway Drainage		30%	\$	122,906	
√ Illumination		6%	\$	24,581	
Special Drainage Structures		0%	\$	-	
√ Water	Minor Adjustments	6%	\$	24,581	
√ Sewer	Minor Adjustments	4%	\$	16,388	
√ Establish Turf / Erosion Control		3%	\$	12,291	
√ Basic Landscaping/Irrigation		3%	\$	12,291	
Other:		\$0	\$	-	
<b>**Allowances based on % of Paving Construction Cost Subtotal</b>					<b>Allowance Subtotal: \$ 249,910</b>
<b>Paving and Allowance Subtotal:</b>					<b>\$ 659,597</b>
<b>Construction Contingency:</b>					<b>15% \$ 98,940</b>
<b>Construction Cost TOTAL:</b>					<b>\$ 759,000</b>

<b>Impact Fee Project Cost Summary</b>			
Item Description	Notes:	Allowance	Item Cost
<b>Construction:</b>		-	\$ 759,000
<b>Engineering/Survey/Testing:</b>		20%	\$ 151,800
<b>Mobilization</b>		6%	\$ 45,540
<b>Previous City contribution</b>			
<b>Other</b>			
<b>ROW/Easement Acquisition</b>	Not included		
<b>Impact Fee Project Cost TOTAL:</b>			<b>\$ 956,000</b>

**NOTE:** The planning level cost projections listed in this appendix have been developed for Impact Fee calculations only and should not be used for any future Capital Improvement Planning within the City of Cedar Hill.

The planning level cost projections shall not supersede the City's design standards or the determination of the City Engineer for a specific project.



Kimley-Horn  
and Associates, Inc.



## **Appendix B – Roadway Impact Fee CIP Service Units of Supply**

**City of Cedar Hill - 2012 Roadway Impact Fee Update**

**CIP Service Units of Supply**

5/16/2012

**Service Area 1**

Project ID #	ROADWAY	LIMITS	LENGTH (MI)	LANES	IMPACT FEE CLASSIFICATION	PEAK HOUR VOLUME	% IN SERVICE AREA	VEH-MI CAPACITY PK-HR PER LN	VEH-MI SUPPLY PK-HR TOTAL	VEH-MI TOTAL DEMAND PK-HR	EXCESS CAPACITY VEH-MI	TOTAL PROJECT COST	TOTAL PROJECT COST IN SERVICE AREA
1-A, 4-A	Mansfield Rd. (1)	W. City Limits to Lakeridge Pkwy.	0.40	4	P6D	663	50%	700	560	133	427	\$ 3,544,000	\$ 1,772,000
1-B, 4-B	Mansfield Rd. (2)	Lakeridge Pkwy. to 430' W. of W. Belt Line Rd.	1.73	4	M4D	663	50%	650	2249	573	1676	\$ 9,860,000.00	\$ 4,930,000.00
1-C, 4-C	Belt Line Rd. (Phase IIA)	430' W. of W. Belt Line Rd. to Fire Station	0.74	4	M4D	663	50%	650	962	245	717	\$ 4,390,769	\$ 2,195,385
1-D, 4-D	Belt Line Rd. (Phase I)	Fire Station to BNSF RR	0.50	4	M4D	123	50%	650	650	31	619	\$ 2,100,725	\$ 1,050,363
1-E	Road A	FM 1382 to Belt Line Rd.	1.61	4	M4D		100%	650	4,186	0	4,186	\$ 8,259,000	\$ 8,259,000
1-F	New Clark Rd.	N. City Limits to 430' N. of Couch Rd.	0.20	4	P6D	998	50%	700	280	100	180	\$ 472,362	\$ 236,181
1-G, 2-B	Cedar Hill Rd. (1)	Main St. to Wintergreen Rd.	1.94	4	M4D	3,436	50%	650	2,522	3,333	-811	\$ 10,244,000	\$ 5,122,000
1-H	Wintergreen Rd. (1)	New Clark Rd. to BNSF RR	0.38	4	M4D	685	100%	650	988	260	728	\$ 2,020,000	\$ 2,020,000
1-I, 2-R	Wintergreen Rd. (2)	BNSF RR to Cedar Hill Rd.	0.11	4	M4D	685	50%	650	143	38	105	\$ 600,000	\$ 300,000
1-J	Pleasant Run Rd. (1)	FM 1382 to BNSF RR	0.21	4	P6D	1,263	100%	700	588	265	323	\$ 4,844,953	\$ 4,844,953
1-K, 2-U	Pleasant Run Rd. (2)	BNSF RR to Cedar Hill Rd.	0.04	4	P6D	1,263	100%	700	112	51	61	\$ 1,144,632	\$ 1,144,632
1-L	Old Strauss Rd.	Wolfe St. to FM 1382	0.45	2	C4U	645	100%	500	450	290	160	\$ 1,824,000	\$ 1,824,000
1-M	Strauss Rd.	FM 1382 to Wylie St.	0.97	2	C4U	337	100%	500	970	327	643	\$ 3,902,000	\$ 3,902,000
1-1	Signal Installation	Mansfield Rd. & Lake Ridge Pkwy.					50%					\$ 150,000	\$ 75,000
1-2	Signal Installation	Mansfield Rd. & Road A					50%					\$ 150,000	\$ 75,000
1-3	Signal Installation	New Clark Rd. & Wintergreen Rd.					100%					\$ 150,000	\$ 150,000
<b>SUBTOTAL</b>									<b>14,660</b>	<b>5,646</b>	<b>9,014</b>	<b>\$ 53,656,441</b>	<b>\$ 37,900,513</b>

2012 Roadway Impact Fee Update Cost Per Service Area \$ 12,250

**TOTAL COST IN SERVICE AREA 1 \$ 37,912,763**

City of Cedar Hill - 2012 Roadway Impact Fee Update

CIP Service Units of Supply

Service Area 2

5/16/2012

Project ID #	ROADWAY	LIMITS	LENGTH (MI)	LANES	IMPACT FEE CLASSIFICATION	PEAK HOUR VOLUME	% IN SERVICE AREA	VEH-MI CAPACITY PK-HR PER LN	VEH-MI SUPPLY PK-HR TOTAL	VEH-MI TOTAL DEMAND PK-HR	EXCESS CAPACITY PK-HR VEH-MI	TOTAL PROJECT COST	TOTAL PROJECT COST IN SERVICE AREA
2-A	Belt Line Rd. (3)	BNSF RR to US 67 SBFR	0.68	4	M4D	123	100%	650	1,768	84	1,684	\$ 2,901,002	\$ 2,901,002
1-G,2-B	Cedar Hill Rd. (1)	Main St. to Wintergreen Rd.	1.94	4	M4D	3,436	50%	650	2,522	3,333	-811	\$ 10,244,000	\$ 5,122,000
2-C	Cedar Hill Rd. (2)	Wintergreen Rd. to N. City Limits	0.90	4	M4D	411	100%	650	2,340	370	1,970	\$ 5,129,000	\$ 5,129,000
2-D	Main St. (1)	150' N of Belt Line Rd. to Wylie St.	0.14	4	M4D	436	100%	650	364	61	303	\$ 726,000	\$ 726,000
2-E	Main St. (2)	130' S of Belt Line Rd. to Cedar St.	0.06	4	M4D	436	100%	650	156	26	130	\$ 300,000	\$ 300,000
2-F	Houston St.	Belt Line Rd. to Tidwell St.	0.68	4	M4D	274	100%	650	1,768	186	1,582	\$ 3,594,000	\$ 3,594,000
2-G	Cedarview Dr. (1)	BNSF RR to Tidwell	0.13	2	M4U	842	100%	500	130	109	21	\$ 576,000	\$ 576,000
2-H	Uptown Blvd.	FM 1382 to Belt Line Rd.	0.95	4	M4D	1,534	100%	650	2,470	1,457	1,013	\$ 2,630,057	\$ 2,630,057
2-I	Pioneer Tr.	Cedar Hill Rd. to Uptown Blvd.	0.29	2	M4U	144	100%	500	290	42	248	\$ 1,362,005	\$ 1,362,005
2-J	S Clark Rd. (1)	FM 1382 to US 67 SBFR	0.31	2	M4U	40	100%	500	310	12	298	\$ 994,318	\$ 994,318
2-K	Joe Wilson Rd. (1)	Cedar Hill Rd. to 490' S of Cedar Hill Rd.	0.09	4	M4D	522	50%	650	117	23	94	\$ 490,000	\$ 245,000
2-L	Joe Wilson Rd. (2)	490' S of Cedar Hill Rd. to US 67 SBFR	0.86	4	M4D	522	100%	650	2,236	449	1,787	\$ 4,547,000	\$ 4,547,000
2-M	Joe Wilson Rd. (Phase III)	US 67 SBFR to 360' S. of FM 1382	1.46	4	M4D	738	100%	650	3,796	1,077	2,719	\$ 4,616,841	\$ 4,616,841
2-N	Joe Wilson Rd. (Phases I&II)	360' S. of FM 1382 to Parkerville Rd.	0.93	4	M4D	678	100%	650	2,418	630	1,788	\$ 2,590,331	\$ 2,590,331
2-O	Duncanville Rd. (1)	Wintergreen Rd. to Pleasant Run Rd.	1.00	4	P6D	963	50%	700	1,400	482	918	\$ 7,442,000	\$ 3,721,000
2-P	Duncanville Rd. (2)	Pleasant Run Rd. to Belt Line Rd.	1.01	4	M4D	328	50%	650	1,313	166	1,147	\$ 6,032,000	\$ 3,016,000
2-Q	Duncanville Rd. (3)	Belt Line Rd. to Parkerville Rd.	1.00	4	M4D	214	50%	650	1,300	107	1,193	\$ 5,630,000	\$ 2,815,000
1-1,2-R	Wintergreen Rd. (2)	BNSF RR to Cedar Hill Rd.	0.11	4	M4D	685	50%	650	143	38	105	\$ 600,000	\$ 300,000
2-S	Wintergreen Rd. (3)	Joe Wilson Rd. to US 67 SBFR	0.61	4	M4D	215	100%	650	1,586	131	1,455	\$ 3,238,000	\$ 3,238,000
2-T	Wintergreen Rd. (4)	US 67 NBFR to E. City Limits	0.38	4	P6D	512	100%	700	1,064	194	870	\$ 339,240	\$ 339,240
1-K,2-U	Pleasant Run Rd. (2)	BNSF RR to Cedar Hill Rd.	0.04	4	P6D	1,263	50%	700	56	25	31	\$ 1,144,632	\$ 572,316
2-V	Pleasant Run Rd. (3)	Cedar Hill Rd. to US 67 SBFR	0.81	4	P6D	1,316	100%	700	2,268	1,066	1,202	\$ 4,008,596	\$ 4,008,596
2-W	Pleasant Run Rd. (4)	US 67 NBFR to 320' E. of Joe Wilson Rd.	0.41	4	P6D	1,040	100%	700	1,148	426	722	\$ 2,144,435	\$ 2,144,435
2-X	Pleasant Run Rd. (5)	320' E. of Joe Wilson Rd. to Duncanville Rd.	0.93	4	M4D	736	100%	650	2,418	684	1,734	\$ 5,248,443	\$ 5,248,443
2-Y	Tidwell St. (1)	Houston St. to US 67 SBFR	0.12	4	M4D	3,171	100%	650	312	381	-69	\$ 615,000	\$ 615,000
2-Z	Tidwell St. (2)	Houston St. to BNSF RR	0.18	4	M4D	3,171	100%	650	468	571	-103	\$ 907,000	\$ 907,000
2-AA,3-A	Tidwell St. / Parkerville Rd.	US 67 NBFR to Joe Wilson Rd.	1.96	4	M4D	3,171	50%	650	2,548	3,108	-560	\$ 6,023,631	\$ 3,011,816
2-BB,3-B	Parkerville Rd. (1)	Springfield Dr. to Duncanville Rd.	0.85	4	M4D	958	50%	650	1,105	407	698	\$ 4,830,000	\$ 2,415,000
2-CC	Cooper St.	Houston St. to US 67 SBFR	0.37	2	C4U	132	100%	500	370	49	321	\$ 1,474,000	\$ 1,474,000
I-4	Signal Installation	US 67 & Tidwell St.					75%					\$ 300,000	\$ 225,000
I-5	Signal Installation	Parkerville Rd. & Joe Wilson Rd.					50%					\$ 150,000	\$ 75,000
I-6	Signal Installation	Parkerville Rd. & Duncanville Rd.					25%					\$ 150,000	\$ 37,500
I-7	Signal Installation	Pleasant Run Rd. & Duncanville Rd.					50%					\$ 150,000	\$ 75,000
I-8	Signal Installation	Wintergreen Rd. & Duncanville Rd.					25%					\$ 150,000	\$ 37,500
I-9	Signal Installation	US 67 & Joe Wilson Rd.					100%					\$ 300,000	\$ 300,000
<b>SUBTOTAL</b>									<b>38,184</b>	<b>15,694</b>	<b>22,490</b>	<b>\$ 91,577,531</b>	<b>\$ 69,909,400</b>

2012 Roadway Impact Fee Update Cost Per Service Area \$ 12,250

TOTAL COST IN SERVICE AREA 2 \$ 69,921,650

**City of Cedar Hill - 2012 Roadway Impact Fee Update**

**CIP Service Units of Supply**

**Service Area 3**

5/16/2012

Project ID #	ROADWAY	LIMITS	LENGTH (MI)	LANES	IMPACT FEE CLASSIFICATION	PEAK HOUR VOLUME	% IN SERVICE AREA	VEH-MI CAPACITY PK-HR PER LN	VEH-MI SUPPLY PK-HR TOTAL	VEH-MI TOTAL DEMAND PK-HR	EXCESS CAPACITY PK-HR VEH-MI	TOTAL PROJECT COST	TOTAL PROJECT COST IN SERVICE AREA
2-AA,3-A	Tidwell St. / Parkerville Rd.	US 67 NBFR to Joe Wilson Rd.	1.96	4	M4D	3,171	50%	650	2,548	3,108	-560	\$ 6,023,631	\$ 3,011,816
2-BB,3-B	Parkerville Rd. (1)	Springfield Dr. to Duncanville Rd.	0.85	4	M4D	132	50%	650	1,105	56	1,049	\$ 4,830,000	\$ 2,415,000
3-C	Parkerville Rd. (2)	Duncanville Rd. to E. City Limits	0.53	4	M4D	958	50%	650	689	254	435	\$ 2,788,000	\$ 1,394,000
3-D	Cedar Hill Rd. S.	US 67 NBFR to Mt. Lebanon Rd.	1.01	4	M4D	304	100%	650	2,626	307	2,319	\$ 5,709,000	\$ 5,709,000
3-E	Tar Rd. (1)	Mt. Lebanon Rd. to Rocky Acres Rd.	0.60	4	M4D	79	100%	650	1,560	47	1,513	\$ 3,149,000	\$ 3,149,000
3-F	Tar Rd. (2)	Rocky Acres Rd. to Bear Creek Rd.	0.42	4	M4D	79	100%	650	1,092	33	1,059	\$ 2,133,000	\$ 2,133,000
3-G	Tar Rd. (3)	Bear Creek Rd. to 425' N. of S. City Limits	0.53	4	P6D	35	100%	700	1,484	18	1,466	\$ 3,674,000	\$ 3,674,000
3-H	Tar Rd. (4)	425' N. of S. City Limits to S. City Limits	0.08	4	P6D	79	100%	700	224	6	218	\$ 572,000	\$ 572,000
3-I	Clark Rd. S. (1)	Little Creek Rd. to Capricorn Dr.	0.45	4	M4D	4,091	100%	650	1,170	1,841	-671	\$ 2,349,000	\$ 2,349,000
3-J	Clark Rd. S. (2)	Capricorn Dr. to S. City Limits	1.46	4	M4D	190	100%	650	3,796	277	3,519	\$ 7,826,000	\$ 7,826,000
3-K	Joe Wilson Rd. (5)	Parkerville Rd. to Bear Creek Rd.	1.00	4	M4D	450	100%	650	2,600	450	2,150	\$ 5,282,000	\$ 5,282,000
3-L	Joe Wilson Rd. (6)	Bear Creek Rd. to S. City Limits	0.68	4	M4D	236	100%	650	1,768	160	1,608	\$ 3,568,000	\$ 3,568,000
3-M	Joe Wilson Rd. (7)	S. City Limits to S. City Limits	0.42	4	M4D	236	50%	650	546	50	496	\$ 2,209,000	\$ 1,104,500
3-N	Duncanville Rd. (4)	Parkerville Rd. to Bear Creek	0.77	4	P6D	163	100%	700	2,156	125	2,031	\$ 6,229,000	\$ 6,229,000
3-O	Duncanville Rd. (5)	Bear Creek to S. City Limits	0.95	4	M4D	40	100%	650	2,470	38	2,432	\$ 5,757,000	\$ 5,757,000
3-P	Duncanville Rd. (6)	S. City Limits to S. City Limits	0.11	4	M4D	163	50%	650	143	9	134	\$ 566,000	\$ 283,000
3-Q	Cockrell Hill Rd.	N. City Limits to S. City Limits	0.68	4	M4D	40	50%	650	884	14	870	\$ 3,955,000	\$ 1,977,500
3-R	Mt. Lebanon Rd. (1)	US 67 NBFR to Cedar Hill Rd. S.	0.60	2	M4U	221	100%	500	600	132	468	\$ 2,782,000	\$ 2,782,000
3-S	Bear Creek Rd. (1)	US 67 NBFR to Tar Rd.	1.19	4	M4D		100%	650	3,094	0	3,094	\$ 8,985,000	\$ 8,985,000
3-T	Bear Creek Rd. (2)	Tar Rd. to Future Bear Creek Rd. Curve	0.42	4	M4D	40	100%	650	1,092	17	1,075	\$ 2,229,000	\$ 2,229,000
3-U	Bear Creek Rd. (3)	Future Bear Creek Rd. Curve to Joe Wilson Rd.	1.74	4	M4D		100%	650	4,524	0	4,524	\$ 9,648,000	\$ 9,648,000
3-V	Bear Creek Rd. (4)	Joe Wilson Rd. to 1,915' E. of Joe Wilson Rd.	0.36	4	M4D	209	100%	650	936	75	861	\$ 1,914,000	\$ 1,914,000
3-W	Bear Creek Rd. (5)	1,915' E. of Joe Wilson Rd. to Duncanville Rd.	0.69	4	M4D	209	100%	650	1,794	144	1,650	\$ 3,533,000	\$ 3,533,000
3-X	Edgefield Way	Future Bear Creek Rd. to 1,185' N. of Future Bear Creek Rd.	0.22	2	C2U		100%	450	198	0	198	\$ 829,000	\$ 829,000
I-5	Signal Installation	Parkerville Rd. & Joe Wilson Rd.					50%					\$ 150,000	\$ 75,000
I-6	Signal Installation	Parkerville Rd. & Duncanville Rd.					25%					\$ 150,000	\$ 37,500
I-10	Signal Installation	Clark Rd. & Bear Creek Rd.					100%					\$ 150,000	\$ 150,000
I-11	Signal Installation	Joe Wilson Rd. & Bear Creek Rd.					100%					\$ 150,000	\$ 150,000
I-12	Signal Installation	Duncanville Rd. & Bear Creek Rd.					100%					\$ 150,000	\$ 150,000
I-13	Interchange	Bear Creek Rd. & US 67 Interchange					50%					\$ 12,000,000	\$ 6,000,000
<b>SUBTOTAL</b>									<b>39,099</b>	<b>7,161</b>	<b>31,938</b>	<b>\$ 109,289,631</b>	<b>\$ 92,916,316</b>

2012 Roadway Impact Fee Update Cost Per Service Area \$ 12,250

**TOTAL COST IN SERVICE AREA 3 \$ 92,928,566**

**City of Cedar Hill - 2012 Roadway Impact Fee Update**

**CIP Service Units of Supply**

5/16/2012

**Service Area 4**

Project ID #	ROADWAY	LIMITS	LENGTH (MI)	LANES	IMPACT FEE CLASSIFICATION	PEAK HOUR VOLUME	% IN SERVICE AREA	VEH-MI CAPACITY PK-HR PER LN	VEH-MI SUPPLY PK-HR TOTAL	VEH-MI TOTAL DEMAND PK-HR	EXCESS CAPACITY PK-HR VEH-MI	TOTAL PROJECT COST	TOTAL PROJECT COST IN SERVICE AREA
1-A, 4-A	Mansfield Rd. (1)	W. City Limits to Lakeridge Pkwy.	0.40	4	P6D	663	50%	700	560	133	427	\$ 3,544,000	\$ 1,772,000
1-B, 4-B	Mansfield Rd. (2)	Lakeridge Pkwy. to 430' W. of W. Belt Line Rd.	1.73	4	M4D	663	50%	650	2,249	573	1,676	\$ 9,860,000	\$ 4,930,000
1-C, 4-C	Belt Line Rd. (Phase IIA)	430' W. of W. Belt Line Rd. to Fire Station	0.74	4	M4D	663	50%	650	962	245	717	\$ 4,390,769	\$ 2,195,385
1-D, 4-D	Belt Line Rd. (Phase I)	Fire Station to BNSF RR	0.50	4	M4D	123	50%	650	650	31	619	\$ 2,100,725	\$ 1,050,363
4-E	Lake Ridge Pkwy. (1)	575' S. of Lakeview Dr. to Mt. Lebanon Rd.	2.56	4	M4D	234	100%	650	6,656	598	6,058	\$ 4,500,000	\$ 4,500,000
4-F	Road A (2)	Belt Line Rd. to BNSF RR	0.57	4	M4D		100%	650	1,482	0	1,482	\$ 3,261,000	\$ 3,261,000
4-G	Cedarview Dr. (2)	Valley View Dr. to 320' W. of Plateau St.	0.68	2	M4U		100%	500	680	0	680	\$ 3,387,000	\$ 3,387,000
4-H	Cedarview Dr. (3)	320' W. of Plateau St. to BNSF RR	0.44	2	M4U	842	100%	500	440	370	70	\$ 2,046,000	\$ 2,046,000
4-I	Texas Plume Rd.	Lake Ridge Pkwy. To Mt. Lebanon Rd.	1.35	2	M4U	130	100%	500	1,350	176	1,174	\$ 6,227,000	\$ 6,227,000
4-J	Mt. Lebanon Rd. (2)	US 67 SBFR to Texas Plume Rd.	0.75	2	M4U	147	100%	500	750	111	639	\$ 3,436,000	\$ 3,436,000
4-K	Mt. Lebanon Rd. (3)	Texas Plume Rd. to S. City Limits	1.24	2	M4U		100%	500	1,240	0	1,240	\$ 5,558,000	\$ 5,558,000
4-L	Mt. Lebanon Rd. (4)	S. City Limits to S. City Limits	0.21	2	M4U		50%	500	105	0	105	\$ 956,000	\$ 478,000
I-1	Signal Installation	Mansfield Rd. & Lake Ridge Pkwy.					50%					\$ 150,000	\$ 75,000
I-2	Signal Installation	Mansfield Rd. & Road A					50%					\$ 150,000	\$ 75,000
I-13	Interchange	Bear Creek Rd. & US 67 Interchange					50%					\$ 12,000,000	\$ 6,000,000
I-14	Signal Installation	Lake Ridge Pkwy. & Prairie View Blvd.					100%					\$ 150,000	\$ 150,000
<b>SUBTOTAL</b>									<b>17,124</b>	<b>2,237</b>	<b>14,887</b>	<b>\$ 61,716,494</b>	<b>\$ 45,140,747</b>

2012 Roadway Impact Fee Update Cost Per Service Area \$ 12,250  
**TOTAL COST IN SERVICE AREA 4 \$ 45,152,997**



Kimley-Horn  
and Associates, Inc.



## **Appendix C – Existing Roadway Facilities Inventory**

**City of Cedar Hill - 2012 Roadway Impact Fee Update**  
**Existing Roadway Facilities Inventory**

**Service Area 1**

4/17/2012

ROADWAY	FROM	TO	LENGTH (ft)	LENGTH (mi)	EXIST LANES		EXIST LANES	CLASS	FUTURE LANES	PM PEAK HOUR VOL		% IN SERVICE AREA	VEH-MI CAPACITY PK-HR PER LN		VEH-MI SUPPLY PK-HR TOTAL		VEH-MI DEMAND PK-HR TOTAL		EXCESS CAPACITY PK-HR VEH-MI		EXISTING DEFICIENCIES PK-HR VEH-MI			
					NB/EB	SB/WB				NB/EB	SB/WB		NB/EB	SB/WB	NB/EB	SB/WB	NB/EB	SB/WB	NB/EB	SB/WB	NB/EB	SB/WB	NB/EB	SB/WB
Straus Rd.	N. City Limits	Wintergreen Rd. W.	5,655	1.07	1	1	2U	IV	2U/4U	25	25	100%	450	450	482	482	26	26	456	456				
Straus Rd.	Wintergreen Rd. W.	Old Straus Rd.	5,165	0.98	2	2	4U	IV	2U/4U	135	135	100%	500	500	978	978	132	132	846	846				
High Pointe Ln.	Straus Rd.	Old Clark Rd.	8,055	1.53	1	1	2U	IV	2U/4U	146	146	100%	450	450	687	687	223	223	463	463				
Wintergreen Rd. W.	Straus Rd.	Clark Rd. N.	5,290	1.00	2	2	4D	II	4D	137	240	100%	650	650	1,302	1,302	137	240	1,165	1,062				
Wintergreen Rd. E.	Clark Rd. N.	AT & AF RR	2,020	0.38	1	1	2U	II	4D	408	277	100%	450	450	172	172	156	106	16	66				
Wintergreen Rd. E.	AT & AF RR	Cedar Hill Rd. N.	600	0.11	1	1	2U	II	4D	408	277	50%	450	450	26	26	23	16	2	10				
Clark Rd. N.	N. City Limits	95' N. of Crouch Ln.	1,360	0.26	3	3	6D	I	4D/6D	499	499	100%	700	700	541	541	128	128	412	412				
Clark Rd. N.	95' N. of Crouch Ln.	Wintergreen Rd. E.	1,850	0.35	2	2	4D	I	4D/6D	499	499	100%	650	650	455	455	175	175	281	281				
Clark Rd. N.	Wintergreen Rd. E.	FM 1382	5,220	0.99	2	2	4D	I	4D/6D	507	507	100%	650	650	1,285	1,285	501	501	784	784				
Pleasant Run Rd.	Straus Rd.	AT & AF RR	1,590	0.30	2	2	4D	I	4D/6D	652	611	100%	650	650	391	391	196	184	195	207				
Pleasant Run Rd.	AT & AF RR	Cedar Hill Rd. N.	100	0.02	2	2	4D	I	4D/6D	652	611	50%	650	650	12	12	6	6	6	7				
Old Straus Rd.	Old Clark Rd.	N-S Straus Rd.	3,180	0.60	1	1	2U	IV	2U/4U	297	348	100%	450	450	271	271	179	210	92	61				
Straus Rd.	FM 1382	Wylie St.	5,050	0.96	1	1	2U	IV	2U/4U	169	169	100%	450	450	430	430	161	161	269	269				
Cedar Hill Rd. N.	Wintergreen Rd. E.	Pleasant Run Rd.	4,820	0.91	1	1	2U	II	4D	1,646	1,790	50%	450	450	205	205	751	817	-546	-612	546	612		
Old Clark Rd.	Wintergreen Rd. E.	Pleasant Run Rd.	5,100	0.97	1	1	2U	IV	2U/4U	20	20	100%	450	450	435	435	19	19	415	415				
Mansfield Rd.	W. City Limits	320' E. of W. City Limits	320	0.06	2	2	4D	I	4D/6D	332	332	50%	650	650	39	39	10	10	29	29				
Mansfield Rd.	320' E. of W. City Limits	400' W. of Belt Line Rd.	10,920	2.07	1	1	2U	I	4D/6D	332	332	50%	450	450	465	465	343	343	122	122				
Mansfield Rd./Belt Line Rd.	400' W. of Belt Line Rd.	Fire Station	3,905	0.74	2	2	4D	II	4D	332	332	50%	650	650	481	481	123	123	358	358				
Belt Line Rd.	Fire Station	AT & AF RR (Transition from 5U to 4U)	2,625	0.50	2	2	5UH	II	4D	62	62	50%	700	700	348	348	15	15	333	333				
Belt Line Rd.	Future Rd.	Mansfield Rd.	5,625	1.07	1	1	2U	IV	2U/4U	62	62	100%	450	450	479	479	66	66	414	414				
Sleepy Hollow Dr.	FM 1382	Jorgenson Rd.	4,910	0.93	1	1	2U	IV	2U/4U	105	105	100%	450	450	418	418	98	98	321	321				
Meadow Ridge Dr.	Jorgenson Rd.	Belt Line Rd. W.	2,635	0.50	1	1	2U	IV	2U/4U	20	20	100%	450	450	225	225	10	10	215	215				
Mobley Rd.	Dead End	Belt Line Rd.	5,300	1.00	1	1	2U	IV	2U/4U	20	20	100%	450	450	452	452	20	20	432	432				
FM 1382	N. City Limits	Clark Rd. N.	13,440	2.55	2	2	4D	I	4D/6D	550	550	100%	650	650	3,309	3,309	1,400	1,400	1,909	1,909				
FM 1382	Sleepy Hollow Dr.	AT & AF RR	4,170	0.79	2	2	4D	I	4D/6D	666	666	100%	650	650	1,027	1,027	526	526	501	501				
Hendricks St./Roberts Rd.	Sleepy Hollow Dr.	Straus Rd.	2,580	0.49	1	1	2U	IV	2U/4U	20	20	100%	450	450	220	220	10	10	210	210				
Wylie St.	Straus Rd.	AT & AF RR	70	0.01	1	1	2U	IV	2U/4U	20	20	100%	450	450	6	6	0	0	6	6				
High Pointe Cir.	High Pointe Ln.	Dead End	135	0.03	1	1	2U	IV	2U/4U	20	20	100%	450	450	12	12	1	1	11	11				
Wooded Creek Dr.	Joe Wilson Rd.	Dead End	2,755	0.52	1	1	2U	IV	2U/4U	20	20	100%	450	450	235	235	10	10	224	224				
<b>SUBTOTAL</b>			<b>114,445</b>	<b>21.68</b>												<b>15,389</b>	<b>15,389</b>	<b>5,448</b>	<b>5,577</b>	<b>9,942</b>	<b>9,812</b>	<b>546</b>	<b>612</b>	
																<b>30,779</b>		<b>11,024</b>		<b>19,754</b>		<b>1,158</b>		

**City of Cedar Hill - 2012 Roadway Impact Fee Update**  
**Existing Roadway Facilities Inventory**

**Service Area 2**

4/17/2012

ROADWAY	FROM	TO	LENGTH (ft)	LENGTH (mi)	EXIST LANES		EXIST LANES	CLASS	FUTURE LANES	PM PEAK HOUR VOL		% IN SERVICE AREA	VEH-MI CAPACITY PK-HR PER LN		VEH-MI SUPPLY PK-HR TOTAL		VEH-MI DEMAND PK-HR TOTAL		EXCESS CAPACITY PK-HR VEH-MI		EXISTING DEFICIENCIES PK-HR VEH-MI							
					NB/EB	SB/WB				NB/EB	SB/WB		NB/EB	SB/WB	NB/EB	SB/WB	NB/EB	SB/WB	NB/EB	SB/WB	NB/EB	SB/WB	NB/EB	SB/WB	NB/EB	SB/WB	NB/EB	SB/WB
Wintergreen Rd. E.	AT & AF RR	Cedar Hill Rd. N.	600	0.11	1	1	2U	II	4D	408	277	50%	450	450	26	26	23	16	2	10								
Wintergreen Rd. E.	Joe Wilson Rd.	US 67	3,235	0.61	1	1	2U	II	4D	112	103	100%	450	450	276	276	69	63	207	213								
Wintergreen Rd. E.	US 67	Duncanville Rd.	1,995	0.38	3	3	6D	I	4D/6D	256	256	100%	700	700	793	793	97	97	697	697								
Pleasant Run Rd.	AT & AF RR	Cedar Hill Rd. N.	100	0.02	2	2	4D	I	4D/6D	652	611	50%	650	650	12	12	6	6	6	7								
Pleasant Run Rd.	Cedar Hill Rd. N.	Balfour Dr.	1,885	0.36	3	3	6D	I	4D/6D	687	629	100%	700	700	750	750	245	225	504	525								
Pleasant Run Rd.	Balfour Dr.	US 67	2,410	0.46	3	3	6D	I	4D/6D	687	629	100%	700	700	959	959	314	287	645	671								
Pleasant Run Rd.	US 67	Joe Wilson Rd.	1,585	0.30	3	3	6D	I	4D/6D	520	520	100%	700	700	630	630	156	156	474	474								
Pleasant Run Rd.	Joe Wilson Rd.	315' E. of Joe Wilson Rd.	600	0.11	2	2	4D	I	4D/6D	520	520	100%	650	650	148	148	59	59	89	89								
Pleasant Run Rd.	315' E. of Joe Wilson Rd.	E. City Limits	4,895	0.93	1	1	2U	I	4D/6D	368	368	100%	450	450	417	417	341	341	76	76								
Cedar Hill Rd. N.	N. City Limits	Wintergreen Rd. E.	4,840	0.92	1	1	2U	II	4D	174	237	100%	450	450	413	413	160	217	253	195								
Cedar Hill Rd. N.	Wintergreen Rd. E.	Pleasant Run Rd.	4,820	0.91	1	1	2U	II	4D	174	237	50%	450	450	205	205	79	108	126	97								
Cedar Hill Rd. N.	Pleasant Run Rd. W.	Wylie St.	5,600	1.06	1	1	2U	II	4D	142	142	100%	450	450	477	477	151	151	327	327								
Main St. N.	Wylie St.	90' N. of Belt Line Rd.	545	0.10	2	2	4U	II	4D	218	218	100%	500	500	103	103	23	23	81	81								
Main St. N.	90' N. of Belt Line Rd.	90' S. of Belt Line Rd.	280	0.05	2	2	4U	II	4D	218	218	100%	500	500	53	53	12	12	41	41								
Main St. N.	90' S. of Belt Line Rd.	Cedar St.	300	0.06	1	1	2U	II	4D	218	218	100%	450	450	26	26	12	12	13	13								
Cedar St.	Houston St.	Main St.	255	0.05	1	1	2U	II	4D	20	20	100%	450	450	22	22	1	1	21	21								
Joe Wilson Rd.	N. City Limits	US 67	4,800	0.91	1	1	2U	II	4D	261	261	100%	450	450	409	409	237	237	172	172								
Joe Wilson Rd.	US 67	360' S. of Belt Line Rd.	7,690	1.46	2	2	4D	I	4D/6D	369	369	100%	650	650	1,893	1,893	537	537	1,356	1,356								
Joe Wilson Rd.	360' S. of Belt Line Rd.	Parkerville Rd.	4,930	0.93	2	2	4D	I	4D/6D	339	339	100%	650	650	1,214	1,214	316	316	897	897								
Waterford Oaks Dr.	Dead End	Germany Dr.	4,895	0.93	1	1	2U	IV	2U/4U	50	50	100%	450	450	417	417	46	46	371	371								
Waterford Oaks Dr.	Germany Dr.	Belt Line Rd.	825	0.16	2	2	4D	IV	2U/4U	50	50	100%	650	650	203	203	8	8	195	195								
Waterford Oaks Dr.	Belt Line Rd.	Shadywood Dr.	2,905	0.55	1	1	2U	IV	2U/4U	121	121	100%	450	450	248	248	66	66	181	181								
Duncanville Rd. N.	Wintergreen Rd. E.	Pleasant Run Rd.	5,255	1.00	1	1	2U	I	4D/6D	482	482	50%	450	450	224	224	240	240	-16	-16	16	16						
Duncanville Rd. N.	Pleasant Run Rd. W.	Belt Line Rd.	5,310	1.01	1	1	2U	I	4D/6D	131	197	100%	450	450	453	453	132	198	321	254								
Duncanville Rd. N.	Belt Line Rd.	Parkerville Rd.	5,270	1.00	1	1	2U	I	4D/6D	107	107	100%	450	450	449	449	107	107	342	342								
Belt Line Rd.	AT & AF RR	US 67 (5U with some 4U)	3,600	0.68	2	2	4D	II	4D	801	801	100%	650	650	886	886	546	546	340	340								
Belt Line Rd.	US 67	FM 1382	3,330	0.63	2	2	4D	I	4D/6D	269	269	100%	650	650	820	820	170	170	650	650								
Houston St.	Belt Line Rd.	Tidwell St.	3,660	0.69	1	1	2U	II	4D	152	122	100%	450	450	312	312	105	85	207	227								
Tidwell St.	Houston St.	US 67	865	0.16	1	1	2U	II	4D	1,452	1,719	100%	450	450	74	74	238	282	-164	-208	164	208						
Tidwell St.	US 67	Parkerville Rd.	890	0.17	1	1	2U	II	4D	1,452	1,719	50%	450	450	38	38	122	145	-84	-107	84	107						
Parkerville Rd.	Tidwell St.	Highland St.	6,430	1.22	2	2	4D	II	4D	254	222	50%	650	650	792	792	155	135	637	656								
Parkerville Rd.	Highland St.	Joe Wilson Rd.	3,240	0.61	2	2	4D	II	4D	231	189	50%	650	650	399	399	71	58	328	341								
Parkerville Rd.	Joe Wilson Rd.	815' E. of Joe Wilson Rd.	815	0.15	1	1	2U	II	4D	476	482	50%	450	450	35	35	37	37	-2	-2	2	2						
Parkerville Rd.	850' E. of Joe Wilson Rd.	1840' E. of Joe Wilson Rd.	1,025	0.19	1	1	2U	II	4D	476	482	50%	450	450	44	44	46	47	-3	-3	3	3						
Parkerville Rd.	1840' E. of Joe Wilson Rd.	Duncanville Rd.	3,440	0.65	1	1	2U	II	4D	476	482	50%	450	450	147	147	155	157	-8	-10	8	10						
FM 1382	AT & AF RR	US 67	3,357	0.64	3	3	6D	I	4D/6D	1,787	1,352	100%	700	700	1,335	1,335	1,136	860	199	476								
FM 1382	US 67	Joe Wilson Rd.	5,540	1.05	2	2	6D	I	4D/6D	1,170	1,170	100%	700	700	1,469	1,469	1,228	1,228	241	241								
FM 1382	Joe Wilson Rd.	E. City Limits	5,305	1.00	2	2	4D	I	4D/6D	1,170	1,170	100%	650	650	1,306	1,306	1,176	1,176	130	130								
Weaver St.	Clark Rd.	Joe Wilson Rd.	5,695	1.08	1	1	2U	IV	2U/4U	53	53	100%	450	450	485	485	57	57	428	428								
Weaver St.	Joe Wilson Rd.	465' E. of Lakeside	3,445	0.65	1	1	2U	IV	2U/4U	20	20	100%	450	450	294	294	13	13	281	281								
Cannady Dr.	Lowe St.	Belt Line Rd.	2,680	0.51	1	1	2U	IV	2U/4U	20	20	100%	450	450	228	228	10	10	218	218								
Cannady Dr.	Belt Line Rd.	Stonewood Dr.	3,705	0.70	1	1	2U	IV	2U/4U	20	20	100%	450	450	316	316	14	14	302	302								
Stonewood Dr.	Cannady Cir.	Parkerville Rd.	2,375	0.45	1	1	2U	IV	2U/4U	20	20	100%	450	450	202	202	9	9	193	193								
Clark Rd. N.	FM 1382	US 67	1,615	0.31	2	2	4U	III	4U	20	20	100%	500	500	306	306	6	6	300	300								
Clark Rd. S.	US 67	Parkerville Rd.	6,315	1.20	2	2	4D	I	4D/6D	6,567	328	100%	650	650	1,555	1,555	7,854	393	-2,299	1,162	6,299							
Cooper St.	Houston St.	US 67	1,940	0.37	1	1	2U	IV	2U/4U	69	63	100%	450	450	165	165	25	23	140	142								
Uptown Blvd.	FM 1382	Belt Line Rd.	5,115	0.97	2	2	4D	I	4D/6D	793	741	100%	650	650	1,259	1,259	768	718	491	542								
Pioneer Tr.	Cedar Hill Rd.	Uptown Blvd.	1,550	0.29	2	2	4D	II	4D	72	72	100%	650	650	382	382	21	21	360	360								
Birshire Ln.	W. of Essex Dr.	Duncanville Rd.	950	0.18	1	1	2U	IV	2U/4U	20	20	100%	450	450	81	81	4	4	77	77								
Softwood Dr.	N. City Limits	Wintergreen Rd. E.	1,510	0.29	1	1	2U	IV	2U/4U	29	29	100%	450	450	129	129	8	8	120	120								
Calvert	Joe Wilson Rd.	Waterford Oaks Dr.	1,965	0.37	1	1	2U	IV	2U/4U	20	20	100%	450	450	167	167	7	7	160	160								
Cedarview Dr.	AT & AF RR	Tidwell St.	730	0.14	1	1	2U	III	4U	520	322	100%	450	450	62	62	72	45	-10	18	10							
Lowe St.	Cannady Dr.	Joe Wilson Rd.	1,595	0.30	1	1	2U	IV	2U/4U	20	20	100%	450	450	136	136	6	6	130	130								
Wylie St.	AT & AF RR	Cedar Hill Rd. N.	225	0.04	1	2	2U	IV	2U/4U	20	20	100%	450	450	19	38	1	1	18	38								
<b>SUBTOTAL</b>			<b>158,732</b>	<b>30.06</b>												<b>24,262</b>	<b>24,281</b>	<b>17,498</b>	<b>9,788</b>	<b>6,764</b>	<b>14,492</b>	<b>6,586</b>	<b>346</b>					
																<b>48,543</b>		<b>27,287</b>		<b>21,256</b>		<b>6,932</b>						

**City of Cedar Hill - 2012 Roadway Impact Fee Update**  
**Existing Roadway Facilities Inventory**

**Service Area 3**

4/17/2012

ROADWAY	FROM	TO	LENGTH (ft)	LENGTH (mi)	EXIST LANES		EXIST LANES	CLASS	FUTURE LANES	PM PEAK HOUR VOL		% IN SERVICE AREA	VEH-MI CAPACITY PK-HR PER LN		VEH-MI SUPPLY PK-HR TOTAL		VEH-MI DEMAND PK-HR TOTAL		EXCESS CAPACITY PK-HR VEH-MI		EXISTING DEFICIENCIES PK-HR VEH-MI			
					NB/EB	SB/WB				NB/EB	SB/WB		NB/EB	SB/WB	NB/EB	SB/WB	NB/EB	SB/WB	NB/EB	SB/WB	NB/EB	SB/WB	NB/EB	SB/WB
Tidwell St.	US 67	Parkerville Rd.	890	0.17	1	1	2U	II	4D	254	222	50%	450	450	38	38	21	19	17	19				
Parkerville Rd.	Tidwell St.	Highland St.	6,430	1.22	2	2	4D	II	4D	254	222	50%	650	650	792	792	155	135	637	656				
Parkerville Rd.	Highland St.	Joe Wilson Rd.	3,240	0.61	2	2	4D	II	4D	151	155	50%	650	650	399	399	46	48	353	351				
Parkerville Rd.	Joe Wilson Rd.	815' E. of Joe Wilson Rd.	815	0.15	1	1	2U	II	4D	37	37	50%	450	450	35	35	3	3	32	32				
Parkerville Rd.	815' E. of Joe Wilson Rd.	1840' E. of Joe Wilson Rd.	1,025	0.19	1	1	2U	II	4D	37	37	50%	450	450	44	44	4	4	40	40				
Parkerville Rd.	1840' E. of Joe Wilson Rd.	Duncanville Rd.	3,440	0.65	1	1	2U	II	4D	476	482	50%	450	450	147	147	155	157	-8	-10	8	10		
Parkerville Rd.	Duncanville Rd.	E. City Limits	2,790	0.53	1	1	2U	II	4D	476	482	100%	450	450	238	238	252	255	-14	-17	14	17		
Cedar Hill Rd. S.	US 67	Mt. Lebanon Rd.	5,345	1.01	1	1	2U	II	4D	152	152	100%	450	450	456	456	154	154	302	302				
Tar Rd.	Mt. Lebanon Rd.	Independence Way	3,160	0.60	1	1	2U	II	4D	40	40	100%	450	450	269	269	24	24	246	246				
Tar Rd.	Independence Way	S. City Limits	6,765	1.28	1	1	2U	II	4D	17	17	100%	450	450	577	577	22	22	554	554				
Clark Rd. S.	Parkerville Rd.	Little Creek Rd.	6,765	1.28	2	2	4D	I	4D/6D	184	184	100%	650	650	1,666	1,666	236	236	1,430	1,430				
Clark Rd. S.	Little Creek Rd.	570' S. of Saturn Rd.	3,210	0.61	1	1	2U	I	4D/6D	1,388	2,703	100%	450	450	274	274	844	1,643	-570	-1,370	570	1,370		
Little Creek Rd.	Clark Rd. S.	Joe Wilson Rd.	5,270	1.00	1	1	2U	IV	2U/4U	95	95	100%	450	450	449	449	95	95	354	354				
Mt. Lebanon Rd.	US 67	Cedar Hill Rd. S.	3,190	0.60	1	1	2U	III	4U	110	110	100%	450	450	272	272	67	67	205	205				
Joe Wilson Rd.	Parkerville Rd.	Bear Creek Rd.	5,280	1.00	1	1	2U	I	4D/6D	172	278	100%	450	450	450	450	172	278	278	172				
Joe Wilson Rd.	Bear Creek Rd.	S. City Limits	3,570	0.68	1	1	2U	I	4D/6D	118	118	100%	450	450	304	304	80	80	225	225				
Duncanville Rd.	Parkerville Rd.	S. City Limits	9,685	1.83	1	1	2U	I	4D/6D	81	81	100%	450	450	825	825	149	149	676	676				
Cockrell Hill Rd.	N. City Limits	S. City Limits	3,590	0.68	1	1	2U	I	4D/6D	20	20	100%	450	450	306	306	14	14	292	292				
Rocky Acres	Tar Rd.	Dead End	2,250	0.43	1	1	2U	IV	2U/4U	20	20	100%	450	450	192	192	9	9	183	183				
Bear Creek Rd.	Tar Rd.	Future Bear Creek Rd. Curve	2,230	0.42	1	1	2U	II	4D	20	20	100%	450	450	190	190	8	8	182	182				
Bear Creek Rd.	Joe Wilson Rd.	Duncanville Rd.	5,290	1.00	1	1	2U	IV	2U/4U	98	111	100%	450	450	451	451	98	111	353	340				
Capricorn St.	Cedar Hill Rd. S.	Clark Rd. S.	5,820	1.10	1	1	2U	IV	2U/4U	20	20	100%	450	450	496	496	22	22	474	474				
Stonewood Dr.	Parkerville Rd.	Little Creek Rd.	2,510	0.48	1	1	2U	IV	2U/4U	20	20	100%	450	450	214	214	10	10	204	204				
<b>SUBTOTAL</b>			<b>92,560</b>	<b>17.53</b>											<b>9,081</b>	<b>9,081</b>	<b>2,638</b>	<b>3,540</b>	<b>6,443</b>	<b>5,541</b>	<b>592</b>	<b>1,397</b>		
															<b>18,162</b>	<b>6,178</b>	<b>11,984</b>	<b>1,989</b>						

**City of Cedar Hill - 2012 Roadway Impact Fee Update  
Existing Roadway Facilities Inventory**

4/17/2012

**Service Area 4**

ROADWAY	FROM	TO	LENGTH (ft)	LENGTH (mi)	EXIST LANES		EXIST LANES	CLASS	FUTURE LANES	PM PEAK HOUR VOL		% IN SERVICE AREA	VEH-MI CAPACITY PK-HR PER LN		VEH-MI SUPPLY PK-HR TOTAL		VEH-MI DEMAND PK-HR TOTAL		EXCESS CAPACITY PK-HR VEH-MI		EXISTING DEFICIENCIES PK-HR VEH-MI			
					NB/EB	SB/WB				NB/EB	SB/WB		NB/EB	SB/WB	NB/EB	SB/WB	NB/EB	SB/WB	NB/EB	SB/WB	NB/EB	SB/WB	NB/EB	SB/WB
Mansfield Rd.	W. City Limits	320' E. of W. City Limits	320	0.06	1	1	4D	I	4D/6D	20	20	50%	650	650	20	20	1	1	19	19				
Mansfield Rd.	320' E. of W. City Limits	400' W. of Belt Line Rd.	10,920	2.07	1	1	2U	I	4D/6D	332	332	50%	450	450	465	465	343	343	122	122				
Mansfield Rd. /Belt Line Rd.	400' W. of Belt Line Rd.	Fire Station	3,905	0.74	2	2	4D	II	4D	426	736	50%	650	650	481	481	158	272	323	209				
Belt Line Rd.	Fire Station	AT & AF RR (Transition from 5U to 4U)	2,635	0.50	2	2	5UH	II	4D	426	736	50%	700	700	349	349	106	184	243	166				
Lake Ridge Pkwy.	Mansfield Rd.	575' S. of Lakeview Dr.	2,965	0.56	2	2	4D	I	4D/6D	106	106	100%	650	650	730	730	60	60	670	670				
Lake Ridge Pkwy.	575' S. of Lakeview Dr.	Texas Plume	7,955	1.51	2	2	4D	I	4D/6D	117	117	100%	650	650	1,959	1,959	176	176	1,783	1,783				
Lake Ridge Pkwy.	Texas Plume	Future Mt. Lebanon Rd.	6,440	1.22	2	2	4D	I	4D/6D	89	89	100%	650	650	1,586	1,586	108	108	1,478	1,478				
Lake Ridge Pkwy.	Future Mt. Lebanon Rd.	US 67	1,555	0.29	2	2	4D	I	4D/6D	46	46	100%	650	650	383	383	14	14	369	369				
Lakeview Dr.	Mansfield Rd.	Lake Ridge Pkwy.	5,820	1.10	2	2	4D	II	4D	47	47	100%	650	650	1,433	1,433	52	52	1,381	1,381				
Lakeview Dr.	Lake Ridge Pkwy.	W. City Limits	4,930	0.93	1	1	2U	IV	2U/4U	41	65	100%	450	450	420	420	38	61	382	359				
Mt. Lebanon Rd.	US 67	Texas Plume	3,940	0.75	1	1	2U	III	4U	74	74	100%	450	450	336	336	55	55	281	281				
Texas Plume	Lake Ridge Pkwy.	Mt. Lebanon Rd.	7,140	1.35	1	1	2U	III	4U	65	65	100%	450	450	609	609	88	88	521	521				
Prairie View Blvd.	W. City Limits	Lake Ridge Pkwy.	6,885	1.30	2	2	4D	I	4D/6D	33	83	100%	650	650	1,695	1,695	43	108	1,652	1,587				
Sweeping Meadows Ln.	1545' N. of Prairie View Blvd.	Prairie View Blvd.	1,545	0.29	1	1	2U	IV	2U/4U	20	20	100%	450	450	132	132	6	6	126	126				
Bentwater Pkwy.	W. City Limits	Lake Ridge Pkwy.	2,825	0.54	1	1	2U	IV	2U/4U	20	20	100%	450	450	241	241	11	11	230	230				
Park Ridge	1875' W. of Lake Ridge Pkwy.	Lake Ridge Pkwy.	1,875	0.36	1	1	2U	IV	2U/4U	20	20	100%	450	450	160	160	7	7	153	153				
Valley View Dr.	Lake Ridge Pkwy.	Crestview Dr.	9,030	1.71	1	1	2U	IV	2U/4U	44	44	100%	450	450	770	770	75	75	695	695				
Cedar View Dr.	Dead End	AT & AF RR	2,055	0.39	1	1	2U	III	4U	520	322	100%	450	450	175	175	202	125	27	50	27			
Crestview Dr.	Valley View Dr.	Kingswood Dr.	1,515	0.29	1	1	2U	IV	2U/4U	20	20	100%	450	450	129	129	6	6	123	123				
Kingswood Dr.	Crestview Dr.	US 67	2,710	0.51	1	1	2U	IV	2U/4U	106	106	100%	450	450	231	231	55	55	176	176				
Marcus Ln.	Park Ridge	Dead End	2,595	0.49	1	1	2U	IV	2U/4U	20	20	100%	450	450	221	221	10	10	211	211				
<b>SUBTOTAL</b>			<b>89,560</b>	<b>16.96</b>												<b>12,523</b>	<b>12,523</b>	<b>1,612</b>	<b>1,814</b>	<b>10,911</b>	<b>10,709</b>	<b>27</b>	<b>0</b>	
																<b>25,046</b>		<b>3,426</b>		<b>21,620</b>		<b>27</b>		

# EQUIVALENCY TABLES

## Exhibit 4

### WATER AND WASTEWATER

Table 4-1 Service Unit Equivalencies

Meter Size	Meter Type	Safe Maximum Operating Capacity (gpm) <sup>(1)</sup>	Service Unit Equivalent
3/4"	Displacement	25	1.0
1"	Displacement	40	1.7
1-1/2"	Displacement	50	3.3
2"	Displacement	100	5.3
3"	Compound	320	10.7
4"	Compound	500	16.7
6"	Compound	1,000	33.3
8"	Compound	1,600	53.3
10"	Compound	2,300	76.7

<sup>(1)</sup> Safe maximum operating capacity is based on AWWA standards C700 and C702



**Table 8. Land Use / Vehicle-Mile Equivalency Table**

Land Use Category	ITE Land Use Code	Development Unit	Trip Gen Rate (PM)	Pass-by Rate	Pass-by Source	Trip Rate	NCTCOG Trip Length (mi)	Adj. For O-D	Adj. Trip Length (mi)	Max Trip Length (mi)	Veh-Mi Per Dev-Unit
<b>PORT AND TERMINAL</b>											
Truck Terminal	030	Acre	6.55			6.55	10.02	50%	5.01	4.00	26.20
<b>INDUSTRIAL</b>											
General Light Industrial	110	1,000 SF GFA	0.97			0.97	10.02	50%	5.01	4.00	3.88
General Heavy Industrial	120	1,000 SF GFA	0.68			0.68	10.02	50%	5.01	4.00	2.72
Industrial Park	130	1,000 SF GFA	0.86			0.86	10.02	50%	5.01	4.00	3.44
Warehousing	150	1,000 SF GFA	0.32			0.32	10.83	50%	5.42	4.00	1.28
Mini-Warehouse	151	1,000 SF GFA	0.26			0.26	10.83	50%	5.42	4.00	1.04
<b>RESIDENTIAL</b>											
Single-Family Detached Housing	210	Dwelling Unit	1.01			1.01	17.21	50%	8.61	4.00	4.04
Apartment/Multi-family	220	Dwelling Unit	0.62			0.62	17.21	50%	8.61	4.00	2.48
Residential Condominium/Townhome	230	Dwelling Unit	0.52			0.52	17.21	50%	8.61	4.00	2.08
Mobile Home Park / Manufactured Housing	240	Dwelling Unit	0.59			0.59	17.21	50%	8.61	4.00	2.36
Senior Adult Housing-Detached	251	Dwelling Unit	0.27			0.27	17.21	50%	8.61	4.00	1.08
Senior Adult Housing-Attached	252	Dwelling Unit	0.16			0.16	17.21	50%	8.61	4.00	0.64
Assisted Living	254	Beds	0.22			0.22	17.21	50%	8.61	4.00	0.88
<b>LODGING</b>											
Hotel	310	Room	0.59			0.59	6.43	50%	3.22	3.22	1.90
Motel / Other Lodging Facilities	320	Room	0.47			0.47	6.43	50%	3.22	3.22	1.51
<b>RECREATIONAL</b>											
Golf Driving Range	432	Tee	1.25			1.25	6.43	50%	3.22	3.22	4.03
Golf Course	430	Acre	0.30			0.30	6.43	50%	3.22	3.22	0.97
Recreational Community Center	495	1,000 SF GFA	1.45			1.45	6.43	50%	3.22	3.22	4.67
Ice Skating Rink	465	1,000 SF GFA	2.36			2.36	6.43	50%	3.22	3.22	7.60
Miniature Golf Course	431	Hole	0.33			0.33	6.43	50%	3.22	3.22	1.06
Multiplex/Movie Theater	445	Screens	13.64			13.64	6.43	50%	3.22	3.22	43.92
Racquet / Tennis Club	491	Court	3.35			3.35	6.43	50%	3.22	3.22	10.79
<b>INSTITUTIONAL</b>											
Church	560	1,000 SF GFA	0.55			0.55	4.20	50%	2.10	2.10	1.16
Day Care Center	565	1,000 SF GFA	12.46	44%	B	6.98	4.20	50%	2.10	2.10	14.66
Primary/Middle School (1-8)	522	Students	0.16			0.16	4.20	50%	2.10	2.10	0.34
High School	530	Students	0.13			0.13	4.20	50%	2.10	2.10	0.27
Junior / Community College	540	Students	0.12			0.12	4.20	50%	2.10	2.10	0.25
University / College	550	Students	0.21			0.21	4.20	50%	2.10	2.10	0.44
<b>MEDICAL</b>											
Clinic	630	1,000 SF GFA	5.18			5.18	7.55	50%	3.78	3.78	19.58
Hospital	610	Beds	1.31			1.31	7.55	50%	3.78	3.78	4.95
Nursing Home	620	Beds	0.22			0.22	7.55	50%	3.78	3.78	0.83
Animal Hospital/Veterinary Clinic	640	1,000 SF GFA	4.72	30%	B	3.30	7.55	50%	3.78	3.78	12.47
<b>OFFICE</b>											
Corporate Headquarters Building	714	1,000 SF GFA	1.40			1.40	10.92	50%	5.46	4.00	5.60
General Office Building	710	1,000 SF GFA	1.49			1.49	10.92	50%	5.46	4.00	5.96
Medical-Dental Office Building	720	1,000 SF GFA	3.46			3.46	10.92	50%	5.46	4.00	13.84
Single Tenant Office Building	715	1,000 SF GFA	1.73			1.73	10.92	50%	5.46	4.00	6.92
Office Park	750	1,000 SF GFA	1.48			1.48	10.92	50%	5.46	4.00	5.92
<b>COMMERCIAL</b>											
<b>Automobile Related</b>											
Automobile Care Center	942	1,000 SF Occ. GLA	3.38	40%	B	2.03	6.43	50%	3.22	3.22	6.54
Automobile Parts Sales	843	1,000 SF GFA	5.98	43%	A	3.41	6.43	50%	3.22	3.22	10.98
Casoline/Service Station	944	Vehicle Fueling Position	13.87	42%	A	8.04	1.20	50%	0.60	0.60	4.82
Casoline/Service Station w/ Conv Market	945	Vehicle Fueling Position	13.38	56%	B	5.89	1.20	50%	0.60	0.60	3.53
Casoline/Service Station w/ Conv Market and C	946	Vehicle Fueling Position	13.94	56%	A	6.13	1.20	50%	0.60	0.60	3.68
New Car Sales	841	1,000 SF GFA	2.59	20%	B	2.07	6.43	50%	3.22	3.22	6.67
Quick Lubrication Vehicle Shop	941	Service Positions	5.19	40%	B	3.11	6.43	50%	3.22	3.22	10.01
Self-Service Car Wash	947	Stall	5.54	40%	B	3.32	1.20	50%	0.60	0.60	1.99
Tire Store	848	1,000 SF GFA	4.15	28%	A	2.99	6.43	50%	3.22	3.22	9.63
<b>Dining</b>											
Fast Food Restaurant with Drive-Thru Window	934	1,000 SF GFA	33.84	50%	A	16.92	4.79	50%	2.40	2.40	40.61
Fast Food Restaurant without Drive-Thru Window	933	1,000 SF GFA	26.15	50%	B	13.08	4.79	50%	2.40	2.40	31.39
High Turnover (Sit-Down) Restaurant	932	1,000 SF GFA	11.15	43%	A	6.36	4.79	50%	2.40	2.40	15.26
Quality Restaurant	931	1,000 SF GFA	7.49	44%	A	4.19	4.79	50%	2.40	2.40	10.06
Coffee/Donut Shop with Drive-Thru Window	937	1,000 SF GFA	42.93	70%	A	12.88	4.79	50%	2.40	2.40	30.91
<b>Other Retail</b>											
Free-Standing Discount Store	815	1,000 SF GFA	5.00	30%	C	3.50	6.43	50%	3.22	3.22	11.27
Nursery (Garden Center)	817	1,000 SF GFA	3.80	30%	B	2.66	6.43	50%	3.22	3.22	8.57
Home Improvement Superstore	862	1,000 SF GFA	2.37	48%	A	1.23	6.43	50%	3.22	3.22	3.96
Pharmacy/Drugstore w/o Drive-Thru Window	880	1,000 SF GFA	8.42	53%	A	3.96	6.43	50%	3.22	3.22	12.75
Pharmacy/Drugstore w/ Drive-Thru Window	881	1,000 SF GFA	10.35	49%	A	5.28	6.43	50%	3.22	3.22	17.00
Shopping Center	820	1,000 SF GLA	3.73	34%	A	2.46	6.43	50%	3.22	3.22	7.92
Supermarket	850	1,000 SF GFA	10.50	36%	A	6.72	6.43	50%	3.22	3.22	21.64
Toy/Children's Superstore	864	1,000 SF GFA	4.99	30%	B	3.49	6.43	50%	3.22	3.22	11.24
Department Store	875	1,000 SF GFA	1.78	30%	B	1.25	6.43	50%	3.22	3.22	4.03
Video Rental Store	896	1,000 SF GFA	13.60	50%	B	6.80	6.43	50%	3.22	3.22	21.90
<b>SERVICES</b>											
Walk-In Bank	911	1,000 SF GFA	12.13	40%	B	7.28	3.39	50%	1.70	1.70	12.38
Drive-In Bank	912	Drive-in Lanes	27.41	47%	A	14.53	3.39	50%	1.70	1.70	24.70
Hair Salon	918	1,000 SF GLA	1.45	30%	B	1.02	3.39	50%	1.70	1.70	1.73

**Key to Sources of Pass-by Rates:**

- A: ITE Trip Generation Handbook 2nd Edition (June 2004)
- B: Estimated by Kimley-Horn based on ITE rates for similar categories
- C: ITE rate adjusted upward by KHA based on logical relationship to other categories

**EXHIBIT 5**  
**Maximum Impact Fee per Service Unit**

*City of Cedar Hill*

**SCHEDULE 1**

**MAXIMUM JUSTIFIED  
IMPACT FEES PER SERVICE UNIT FOR  
WATER, WASTEWATER AND ROADWAY FACILITIES**

	LAND PLATTED PRIOR TO 6/20/87	LAND PLATTED OR REPLATTED BETWEEN 6/21/87 AND 5/22/90	LAND PLATTED OR REPLATTED BETWEEN 5/23/90 AND 2/1/95	LAND PLATTED OR REPLATTED BETWEEN 2/2/95 AND 10/13/98	LAND PLATTED OR REPLATTED BETWEEN 10/13/98 AND 9/24/02	LAND PLATTED OR REPLATTED BETWEEN 9/24/02 AND 9/25/07	LAND PLATTED OR REPLATTED BETWEEN 9/25/07 AND 8/28/12	LAND PLATTED OR REPLATTED AFTER 8/28/12
<b>WATER</b> per SFLUE	\$ 3,574	\$ 675	\$ 1,053	\$ 3,574	\$ 3,574	\$ 4,102	\$ 2,916	\$ 3,519
<b>WASTEWATER</b> per SFLUE	\$ 2,553	\$ 843	\$ 447	\$ 2,553	\$ 2,553	\$ 3,086	\$ 1,258	\$ 1,289
<b>ROADWAY</b> per VEHICLE-MILE								
SVC AREA 1	\$ 1,204	\$ 1,204	\$ 1,204	\$ 1,204	\$ 1,204	\$ 2,366	\$ 1,016	\$ 1,291
SVC AREA 2	\$ 943	\$ 943	\$ 943	\$ 943	\$ 943	\$ 2,151	\$ 984	\$ 915
SVC AREA 3	\$ 914	\$ 914	\$ 914	\$ 914	\$ 914	\$ 2,170	\$ 1,037	\$ 1,188
SVC AREA 4	\$ 992	\$ 992	\$ 992	\$ 992	\$ 992	\$ 1,670	\$ 814	\$ 1,316
SVC AREA 5	\$ 830	\$ 830	\$ 830	\$ 830	\$ 830			
SVC AREA 6	\$ 946	\$ 946	\$ 946	\$ 946	\$ 946			
SVC AREA 7	\$ 888	\$ 888	\$ 888	\$ 888	\$ 888			
SVC AREA 8	\$ 830	\$ 830	\$ 830	\$ 830	\$ 830			
SVC AREA 9	NA	NA	NA	NA	\$ 830			

# EXHIBIT 6

## Maximum Impact Fee per Service Unit to be Collected

*City of Cedar Hill*

### **SCHEDULE 2**

#### **IMPACT FEE COLLECTION SCHEDULE PER SERVICE UNIT FOR WATER, WASTEWATER AND ROADWAY FACILITIES**

	Impact Fee Rate per Service Unit
<b>WATER</b>	
per SFLUE	<b>\$ 2,555</b>
<b>WASTEWATER</b>	
per SFLUE	<b>\$ 945</b>
<b>ROADWAY</b>	
per Vehicle-Mile	
SVC AREA 1	<b>\$ 577</b>
SVC AREA 2	<b>\$ 577</b>
SVC AREA 3	<b>\$ 577</b>
SVC AREA 4	<b>\$ 577</b>