Innovative approaches
Practical results
Outstanding service

WATER, WASTEWATER & ROADWAY CIP AND IMPACT FEE UPDATE

September 2024

Prepared for:

City of Terrell

Prepared by:

FREESE AND NICHOLS, INC.
12770 Merit Drive, Suite 900
Dallas, Texas 75251
214-217-2200

FNI Project No. TER23280

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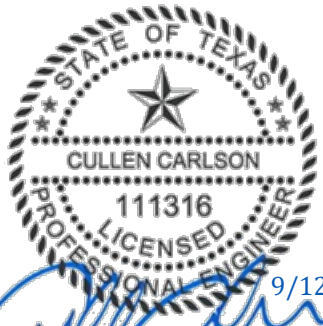
9/12/2024

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



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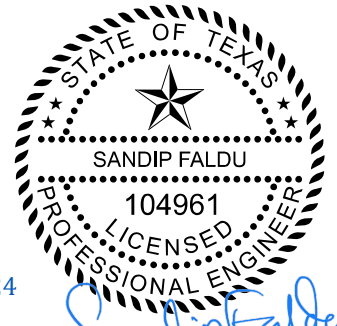

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EXECUTIVE SUMMARY

The purpose of this report is to summarize the methodology used in the development and calculation of water, wastewater, and roadway impact fees for the City of Terrell. The methodology used herein satisfies the requirements of the Texas Local Government Code Section 395 for the establishment of impact fees. Texas Local Government Code Section 395 requires an impact fee analysis before impact fees are set. Section 395 requires that land use assumptions and capital improvement plans be updated at least every five years. The City of Terrell last performed an impact fee analysis update in 2019.

Maximum Allowable Water Impact Fee

The cost of water capital improvements to serve development projected to occur between 2023 and 2033 is $89,103,290. A 3.0% interest rate compounded annually was used to calculate financing costs. The increase in the number of service units due to growth over the next ten years is projected as 10,774 service units. The maximum allowable water impact fee with the credit is $5,557 per service unit. The maximum allowable water impact fee calculation is summarized as follows:

Total Capital Improvement Costs	$89,103,290
Financing Costs	+ $30,644,081
Total Eligible Costs	$119,747,371
Growth in Service Units	10,774

Maximum Water Impact Fee	= Total Eligible Costs / Growth in Service Units
	= $119,747,371 / 10,774
	= $11,114 per Service Unit
Maximum Allowable Water Impact Fee	= Maximum Impact Fee – Credit (50%)
	= $11,114 - $5,557
	= **$5,557 per Service Unit**

Maximum Allowable Wastewater Impact Fee

The cost of wastewater system capital improvements to serve development projected to occur between 2023 and 2033 is $78,407,323. A 3.0% interest rate compounded annually was used to calculate financing costs. The increase in the number of service units due to growth over the next ten years is projected as 10,774 service units. The maximum allowable wastewater impact fee with the credit is $4,890 per service unit. The maximum allowable wastewater impact fee calculation is summarized as follows:

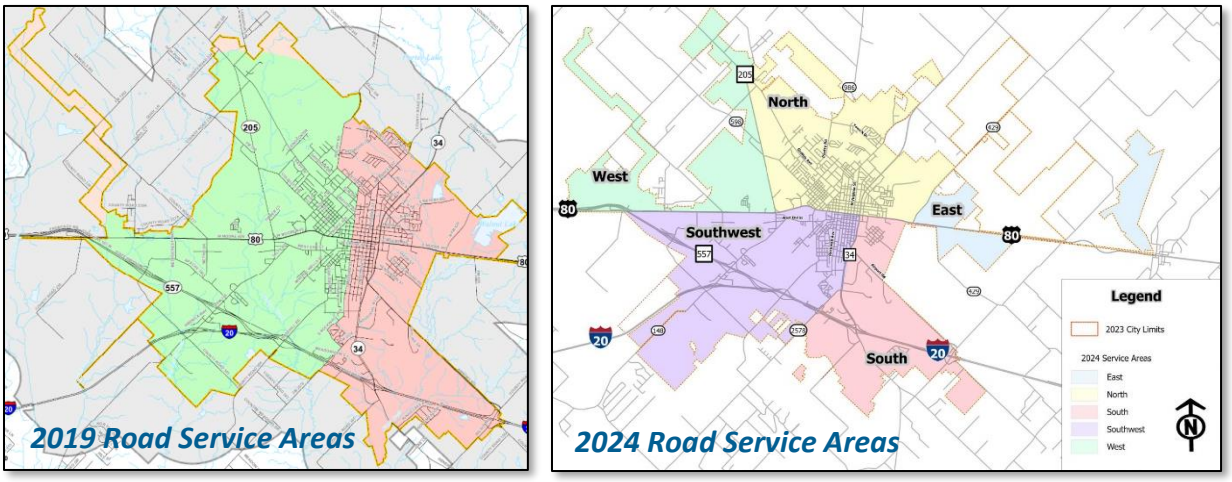
Total Capital Improvement Costs	$78,407,323
Financing Costs	+ $26,965,563
Total Eligible Costs	$105,372,886
Growth in Service Units	10,774

Maximum Wastewater Impact Fee	= Total Eligible Costs / Growth in Service Units
	= $105,372,886 / 10,774
	= $9,780 per Service Unit
Maximum Allowable Wastewater	= Maximum Impact Fee – Credit (50%)
Impact Fee	= $9,780 - $4,890
	= **$4,890 per Service Unit**

Maximum Allowable Roadway Impact Fee

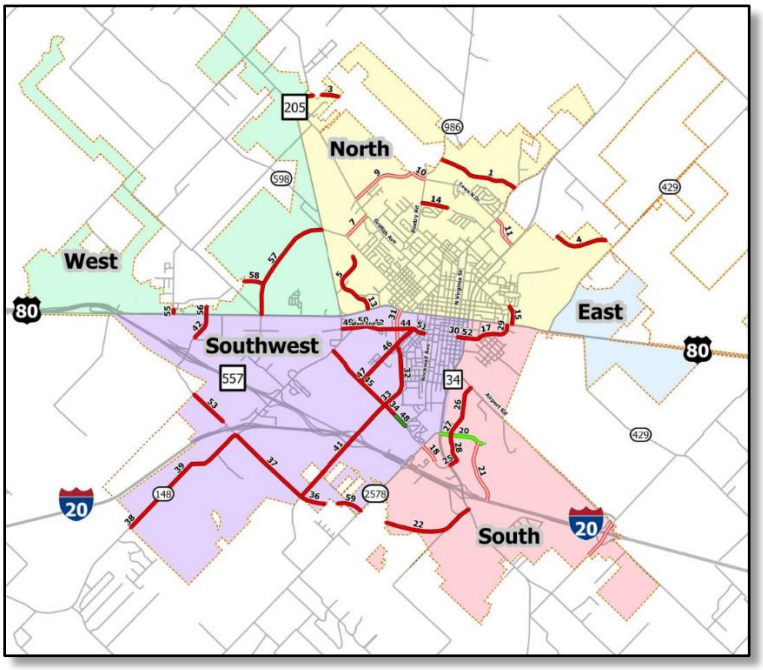
New to the road impact fee program was the reconfiguration of the service area structure of the City. Service areas ensure that road improvements are implemented in the vicinity of where new development is occurring and, per Chapter 395, is limited to six miles within the City limits. Due to growth and annexations of the City since the last programmatic update, the service area structure has been expanded from three to five zones within the City. This reconfiguration not only ensures compliance with state law, but contemplates long-term growth of the City with (voluntary) annexations with its current extra-territorial jurisdictional limits. The previous and reconfigured service area structure is illustrated in **Figure ES-1**.

Figure ES-1. Roadway Service Area Comparison



The roadway impact fee capital improvements plan (IFCIP) consists of 57 project segments situated throughout the five service areas and will serve new development within the City, as defined in the land use assumptions, between 2023 and 2033. IFCIP projects are shown on **Figure ES-2**. The total cost of the defined IFCIP projects is $356.3 million for all service areas spanning the current City limits. With the state mandate of 50% credit to the CIP, the cost of the program is $178.1 million. Per the land use assumptions, the total cost attributable to City-wide 10-year growth is $132.4 million. Cost estimates were prepared for each project using data from recent City bid-tabs and 12-month unit cost averages from the Texas Department of Transportation and includes construction, engineering design, right-of-way acquisition, and debt service.

Figure ES-2. Roadway IFCIP Projects



Based on the land use assumptions, the total forecasted service units of growth over the 10-year planning period is 36,634 vehicle-miles throughout the City. The capacity provided by the road IFCIP is 38,865 vehicle-miles. Based on project cost attributable to growth, which also considers the 50% state mandated credit to the CIP, the maximum cost per service unit ranges from $1,387 in the West Service Area to $4,637 in the Southwest Service Area. The East Service Area contains no IFCIP projects and therefore the cost per service unit is $0. These unit costs reflect the maximum allowable fee per service unit which may be collected by service area. **Table ES-1** summarizes the derivation of the cost per service unit by road service area. As a comparison, the cost per service unit in the 2019 program for the East and West Services Areas were $1,114 and $1,503, respectively.

Table ES-1. Maximum Allowable Road Impact Fee

	North	East	South	Southwest	West
Total Capital Improvement Costs	**$58,928,100**	$0	$49,717,167	$132,074,000	$25,143,700
Financing Costs	**+ $20,266,339**	+ $0	+ $16,215,141	+ $45,514,306	+ $8,647,330
CIP Study Updates	**+ $23,041**	+ $0	+ $25,995	+ $38,659	+ $12,304
Total Costs	**$79,217,480**	$0	$65,632,308	$177,626,966	$33,803,334
Total Costs (with 50% credit)	**$39,608,740**	$0	$32,829,152	$88,813,483	$16,901,667
Cost Attributable to New Growth (credited)	**$27,719,483**	$0	$6,550,883	$83,842,292	$14,250,841
Growth in Service Units (vehicle-miles)	**6,267**	0	2,016	18,079	10,272
Maximum Allowable Roadway Impact Fee (with 50% Credit)	**= $27,719,483/ 6,267 = $4,423 per Service Unit**	= $0/0 **= $0 per Service Unit**	**= $6,550,883/** 2,016 **= $3,249 per Service Unit**	**= $83,842,292/** 18,079 **= $4,637 per Service Unit**	**= $14,250,841/** 10,272 **= $1,387 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 impact fees cannot be used to pay for, 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 February 2023, the City of Terrell (City) authorized Freese and Nichols, Inc. (FNI) to perform an impact fee analysis on the City's water, wastewater, and roadway systems. This report's purpose is to summarize the methodology used in the development and calculation of water, wastewater, and roadway impact fees for the City of Terrell. The methodology used herein satisfies the requirements of the Texas Local Government Code Section 395 for the establishment of water, wastewater, and roadway impact fees.

As part of the impact fee update, FNI conducted three workshops with the City's appointed Capital Improvements Advisory Committee (CIAC). The CIAC's role includes recommending a growth rate for impact fee calculations, reviewing and recommending land use assumptions and Impact Fee CIPs and recommending an impact fee rate to the City Council.

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

Table 1-1. Abbreviations

Abbreviation	Full Nomenclature
CAGR	Compound Annual Average Growth Rate
CCN	Certificate of Convenience and Necessity
CIAC	Capital Improvements Advisory Committee
CIP	Capital Improvements Plan
DA	Divided Arterial
DC	Divided Collector
DU	Dwelling Unit
EST	Elevated Storage Tank
ETJ	Extra-Territorial Jurisdiction
FNI	Freese and Nichols, Inc.
gpcd	Gallons per Capita per Day
gped	Gallons per Employee per Day
gpm	Gallons per Minute
GST	Ground Storage Tank
IFCIP	Impact Fee Capital Improvement Plans
LOS	Level of Service
MG	Million Gallons
MGD	Million Gallons per Day
NCTCOG	North Central Texas Council of Governments
NHTS	National Household Travel Survey
NTMWD	North Texas Municipal Water District
TAC	Texas Administrative Code
TCEQ	Texas Commission on Environmental Quality
UA	Undivided Arterial
UC	Undivided Collector
WWTP	Wastewater Treatment Plant

2.0 LAND USE ASSUMPTIONS

Population and land use are important elements in the analysis of water, wastewater, and roadway 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. Residential population and commercial development projections are also required to size roadway facilities in terms of number of dwelling units (DU) and employment. Land use assumptions for the purpose of roadway impact fees can be found in **Section 4.0** of this report. A thorough analysis of historical and projected populations, along with land use, provides the basis for projecting future water demands and wastewater flows.

2.1 SERVICE AREA

The impact fee service area for the City of Terrell's water and wastewater systems is defined as the City limits plus areas within the extra-territorial jurisdiction (ETJ) as of July 2023. The wastewater service area is identical to the water service area. The water and wastewater service area does not take into consideration areas in other entity's water Certificate of Convenience and Necessity (CCN). Roadway service areas are confined to within City limits and zones no greater than six miles. Because of growth encroaching state mandated limits, the City was reconfigured from its zonal structure of three to five service areas. **Figure 2-1** illustrates the water and wastewater impact fee service area and the anticipated 10-year developments making up the assumed growth in the City. **Figure 4-2**, in **Section 4.2** of this report, illustrates the roadway service area structure.

2.2 HISTORICAL POPULATION

Table 2-1 presents the historical populations for the City of Terrell. The data indicated an average annual growth rate of 2.0% since 2010.

Table 2-1. Historical Population

Year	Population[(1)]	Population Growth	Percentage of Growth
2010	15,816	316	2.0%
2011	16,015	199	1.3%
2012	16,214	199	1.2%
2013	16,413	199	1.2%
2014	16,445	32	0.2%
2015	16,770	325	2.0%
2016	17,030	260	1.6%
2017	17,064	34	0.2%
2018	17,198	134	0.8%
2019	17,332	134	0.8%
2020	17,465	133	0.8%
2021	18,567	1,102	6.3%
2022	20,050	1,483	8.0%
Average		**350**	**2.0%**

[(1)] Population estimates for 2010 and 2020 are based on Census data. Population estimates for 2011 through 2019 are based on information provided by the City of Terrell. The 2021 and 2022 populations are also based on Census data.

2.3 PROJECTED POPULATION AND EMPLOYMENT

Projected populations were developed by the City of Terrell Planning Department based on recent City growth patterns and known developments. The City of Terrell's total population in 2023 within the City limits is estimated as 20,050, and the total combined City limits and ETJ population in 2033 is projected to be 51,571. The overall 10-year population growth is projected to be 31,521. The 10% compound annual average growth rate (CAGR) projected over the next ten years is due to the anticipated addition of 29 new developments within the City limits and ETJ, in addition to continued infill in the downtown area. Population and employment projections for each proposed development are presented in **Table 2-2**. Projected populations for the water and wastewater systems are displayed in **Table 2-3**. Population is separated into population inside existing Terrell City limits and population in Terrell's ETJ.

In order to capture growth related to commercial, retail, office, institutional, and industrial development, existing and 2033 employment estimates were developed based on development data provided by City staff. **Table 2-4** shows the projected number of employees with water and wastewater service. These population and employment numbers were used to establish water demands and wastewater flows, which in turn determined sizing of proposed water and sewer system improvements.

Table 2-2. Proposed Development Population and Employment

Development	City Limits Population	City Limits Employment	ETJ Population	ETJ Employment	Total Population	Total Employment
Arboretum Estates	6,070	0	0	0	6,070	0
Breeden Property	0	0	300	0	300	0
Central Las Lomas	0	0	2,527	0	2,527	0
Creekside Estates	1,050	0	0	0	1,050	0
Crossroads MF Phase 1	570	0	0	0	570	0
Crossroads MF Phase 2	600	0	0	0	600	0
Downtown and Infill	800	250	0	0	800	250
Eastland Park	0	450	0	2,550	0	3,000
Evening Star	225	0	675	0	900	0
First Steps Homes	0	0	1,000	0	1,000	0
Griffith Forest Tract	750	0	0	0	750	0
Hillside Ranch	1,500	0	0	0	1,500	0
Hunters Ridge	153	0	0	0	153	0
Lechner Farm	1,500	0	0	0	1,500	0
Magnolia Estates	123	0	0	0	123	0
Northwest Development	500	0	0	0	500	0
Northspur	4,350	800	0	0	4,350	800
Rose Hill Adult Community	210	0	0	0	210	0
Rose Hill Estates	450	0	0	0	450	0
Samuels Property	75	0	225	0	300	0
Southeast Development	0	0	100	0	100	0
Sun Well 286	0	0	1,200	0	1,200	0
Terrell Assisted Living	132	0	0	0	132	0
Terrell State Hospital	0	300	0	0	0	300
The Cedars at Rose Hill	102	0	0	0	102	0
The Preserve	1,650	0	0	0	1,650	0
The Woodlands	834	0	0	0	834	0
Western Securities	1,250	0	0	0	1,250	0
Westwood	2,000	0	0	0	2,000	0
Whitt Ranch	90	0	510	0	600	0
Total	**24,984**	**1,800**	**6,537**	**2,550**	**31,521**	**4,350**

Table 2-3. Water and Wastewater Service Area Population Projections

Year	Terrell City Limits Population	Terrell ETJ Water Population	Terrell ETJ Wastewater Population	Total Water and Wastewater Service Area Population
2023	20,050	-	-	20,050
2033	45,034	6,537	6,537	51,571

Table 2-4. Water and Wastewater Service Area Employment Projections

Year	Employees	CAGR (%)
2023	16,279	-
2033	20,629	2.4%

FIGURE 2-1
CITY OF TERRELL
PROPOSED DEVELOPMENTS
LEGEND
Road
Railroad
Stream
Lake
Parcel
Water and Wastewater Service Area
City Limit
ETJ
DEVELOPMENTS
Arboretum Estates
Breeden Property
Central Las Lomas
Creekside Estates
Crossroads MF Phase 1
Crossroads MF Phase 2
Eastland Park
Evening Star
First Steps Homes
Griffith Forest Tract
Hillside Ranch
Hunters Ridge
Lechner Farm
Magnolia Estates
Northspur
Northwest Development
Rose Hill Estates
Rose Hill Adult Community
Samuels Property
Southeast Development
Sun Well 286
Terrell Assisted Living
Terrell State Hospital
The Cedars at Rose Hill
The Preserve
The Woodlands
Western
Westwood
Whitt Ranch
Northwest Development
Samuels Property
Breeden Property
Northspur
Evening Star
Whitt Ranch
Sun Well 286
Griffith Forest Tract
Hillside Ranch
First Steps Homes
Terrell Assisted Living
Creekside Estates
Magnolia Estates
Western Securities
Terrell State Hospital
The Cedars at Rose Hill
Rose Hill Adult Community
Crossroads MF Phase 2
Crossroads MF Phase 1
The Preserve
Rose Hill Estates
Westwood
Eastland Park
The Woodlands
Central Las Lomas
Lechner Farm
Hunters Ridge
Southeast Development
Arboretum Estates
Terrell AMERICA
FREESE AND NICHOLS
0
2,800
5,600
SCALE IN FEET

3.0 WATER AND WASTEWATER ANALYSIS

A CIP was developed for the City of Terrell to promote residential and commercial development through access to quality water and wastewater systems. The recommended improvements will provide the required capacity and reliability to meet projected water demands and wastewater flows through 2033. The water and wastewater projects recommended to meet growth in the 10-year period were used in the impact fee analysis.

3.1 EXISTING WATER AND WASTEWATER SYSTEMS

The existing water distribution system currently consists of a network of lines ranging in size from 1-inch to 30-inch, a pump station, ground storage tank, and two elevated storage tanks. The City receives water from the North Texas Municipal Water District (NTMWD) delivery point at the pump station. The City of Terrell operates the distribution system on one pressure plane.

The existing wastewater system has six major basins, five lift stations, and a network of lines ranging from 4-inch to 36-inch in diameter. Due to existing topography, the wastewater collection system generally flows from north to south with the terminal point being the King's Creek Wastewater Treatment Plant (WWTP). A 36-inch interceptor flows along Bachelor Creek on the City's west boundary before being pumped to a 36-inch interceptor following King's Creek on the east side of the City.

3.2 WATER AND WASTEWATER MODEL UPDATE

The water system hydraulic model in InfoWater software by Autodesk was updated by FNI as part of the 2023 Poetry Elevated Storage Tank (EST) siting study to include recently constructed water lines and changes in system operations. Water demands were allocated to the model by spatially joining 2022 billing meter data and projected usage data with model nodes to assign to the appropriate location in the model. The model was also calibrated to existing operating conditions as part of the Poetry EST siting study.

The wastewater model from the 2023 Wastewater Infrastructure Prioritization Phase III analysis, performed by FNI, was utilized as part of this study.

3.3 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. The design criteria used to project

water demands and wastewater flows were developed based on recent historical data. In the future, it is anticipated that residential per capita and employment usage will increase based on the large number of irrigation systems being installed with new development and the type of commercial and industrial developments being proposed, but the increase in irrigation systems is expected to offset conservation measures in place for the future. Therefore, for planning purposes, the residential and employment per capita used for projections is assumed to be constant in the future.

Historical water demands from 2011 through 2022 were provided to FNI by the City for the development of projected water usage rates and peaking factors. **Tables 3-1** and **3-2** illustrate the average and maximum day water demands for these years, respectively. **Table 3-3** presents the design criteria used to develop the projected water demands. Historical water demands for reviewed for the City of Terrell's wholesale customers, and growth rates for the next 10 years were based on recent growth rates for these entities. **Table 3-4** displays the existing and projected water demands by wholesale customer. **Table 3-5** displays the projected water demands for the City including the ETJ and wholesale customers.

Table 3-1. Historical Average Day Water Usage

Year	Population	Total Average Day Demand (MGD)	Wholesale Average Day Demand (MGD)	Terrell Average Day Demand (MGD)	Terrell Average Day Per Capita (gpcd)[1]
2011	16,015	3.85	1.03	2.82	176
2012	16,214	3.44	1.06	2.38	147
2013	16,413	3.39	1.02	2.37	144
2014	16,445	3.18	0.88	2.3	140
2015	16,770	3.36	0.98	2.38	142
2016	17,030	3.17	1.01	2.16	127
2017	17,064	3.30	0.72	2.58	151
2018	17,198	3.30	1.03	2.27	132
2019	17,332	3.44	1.06	2.38	137
2020	17,465	3.31	1.09	2.22	127
2021	18,567	3.33	1.21	2.12	115
2022	20,050	4.08	1.10	2.98	149
Average		**3.4**	**1.0**	**2.4**	**141**
Maximum		**4.1**	**1.2**	**3.0**	**176**

[1]Terrell per capita is equal to Terrell demand divided by City of Terrell population.

Table 3-2. Historical Maximum Day Water Usage

Year	Maximum Day Demand (MGD)[2]	Maximum Day/ Average Day Peaking Factor
2011	7.41	1.9
2012	5.97	1.7
2013	6.62	2.0
2014	6.62	2.1
2015	5.62	1.7
2016	5.08	1.6
2017	8.66[1]	2.6
2018	5.80	1.8
2019	7.08	2.1
2020	5.57	1.7
2021	8.60	2.6
2022	7.25	1.8
Average	**6.51**	**2.0**
Maximum	**8.60**	**2.6**

[1]Main break occurred on peak day, and this data point was excluded from the average and maximum calculations.

[2]Maximum day demand was provided by the City on 9/21/2023

Table 3-3. Water Demand Projections Design Criteria

Average Day Residential Per Capita Usage (gpcd)	Average Day Employment Per Capita Usage (gped)	Retail Maximum Day to Average Day Peaking Factor	Wholesale Maximum Day to Average Day Peaking Factor	Retail Peak Hour to Maximum Day Peaking Factor	Wholesale Peak Hour to Maximum Day Peaking Factor
110	50	2.00	1.80	1.80	1.25

Table 3-4. Existing and Projected Wholesale Water Demands

Wholesale Customer	2023 Average Day Demand (MGD)	2033 Average Day Demand (MGD)	2033 Maximum Day Demand (MGD)	Growth Rate
College Mound WSC	0.37	0.50	0.90	3%
Elmo WSC	0.22	0.24	0.44	1%
High Point SUD	0.19	0.26	0.46	3%
Lawrence WSC	0.06	0.07	0.12	1%
North Kaufman WSC	0.24	0.32	0.58	3%
Poetry WSC	0.27	0.36	0.65	3%
Total	**1.35**	**1.75**	**3.15**	-

Table 3-5. Projected Water Demands

Year	Population	Employment	Retail Average Day Demand (MGD)[1]	Wholesale Average Day Demand (MGD)[2]	Total Average Day Demand (MGD)	Total Maximum Day Demand (MGD)[3]	Total Peak Hour Demand (MGD)[4]
2023	20,050	16,279	3.02	1.35	4.37	8.47	13.91
2033	51,571	20,629	6.70	1.75	8.45	16.56	28.07

[1]Average day demands are based on a residential per capita of 110 gpcd and employment per capita of 50 gped.

[2]Wholesale demands are based on approximately 1-3% growth per year.

[3]Maximum day demands are based on a maximum day to average day peaking factor of 1.8 for wholesale demands and 2.0 for retail demands.

[4]Retail peak hour demands are based on a peak hour to maximum day peaking factor of 1.8. Wholesale peak hour demands are based on a peak hour to maximum day peaking factor of 1.25.

The projected wastewater residential per capita production rate is 95 gallons per capita per day (gpcd) for all planning periods, and the projected wastewater non-residential production rate is 45 gallons per employee per day (gped) for all planning periods. These wastewater production rates represent a percentage of the water demand that is captured by the wastewater collection system for each planning period. Historical wastewater flow data was used in the development of the wastewater residential and non-residential production rates. **Table 3-6** displays the historical average daily wastewater flows for the City of Terrell. The peak wet weather peaking factor for all planning periods is 4.0. The average day flows for all the planning scenarios were multiplied by this factor to calculate the peak wet weather flows. **Table 3-7** presents the projected wastewater flows for the City of Terrell.

Table 3-6. Historical Average Daily Wastewater Flows

Year	Population	Average Daily Flow (MGD)	Average Day Per Capita (gpcd)	Total Rainfall (inches)
2011	16,015	1.16	72	25.6
2012	16,214	1.24	76	31.9
2013	16,413	1.09	66	33.5
2014	16,445	1.41	86	25.0
2015	16,770	2.46	147	60.9
2016	17,030	2.1	123	42.7
2017	17,064	1.99	117	34.4
2018	17,198	2.47	144	44.3
2019	17,332	2.45	141	36.3
2020	17,465	2.21	127	35.5
2021	18,567	2.31	124	37.1
2022	20,050	2.11	105	38.9
Average		**1.92**	**111**	**37.2**

Table 3-7. Projected Wastewater Flows

Year	Population	Employment	Average Daily Flow (MGD)[(1)]	Peak Wet Weather Flow (MGD)[(2)]
2023	20,050	16,279	2.64	10.56
2033	51,571	20,629	5.83	23.32

[(1)]Average daily flows are based on a residential per capita of 95 gpcd and employment per capita of 45 gped
[(2)]Peak wet weather flows are based on a wet weather peaking factor of 4

3.4 TCEQ REQUIREMENTS

The City is required to meet all rules and regulations for public water systems established by the Texas Commission on Environmental Quality (TCEQ) in Title 30 Texas Administrative Code (30 TAC), Chapter 290. These requirements are based on number of connections in each pressure plane. The City operates its water distribution system on one pressure plane presently and will continue to do so in the future. There are currently 8,941 existing connections in the distribution system based on current TCEQ records.

3.4.1 Elevated Storage

The City is required to meet the TCEQ elevated storage capacity requirement of 100 gallons per connection. The City's distribution system currently has 2.5 million gallons (MG) of elevated storage and can serve a total of 25,000 connections. Based on the number of existing connections in the system, the existing elevated storage can serve approximately 16,000 additional connections. A new Poetry EST is

currently under design and is anticipated to have a volume of 2.0 MG. When this tank is in service, the City will have elevated storage capacity to serve a total of 35,000 connections.

3.4.2 Total Storage

The City is required to meet the TCEQ total storage capacity requirement of 200 gallons per connection. The City currently has 3.0 MG of ground storage in addition to the aforementioned 2.5 MG of elevated storage, and can serve a total of 27,500 connections or approximately 18,559 additional connections. The City also has an additional 3.0 MG ground storage tank (GST) under design that is expected to be in service in 2025. When this tank is in service, in addition to the new Poetry EST discussed in **Section 3.4.1**, the City will have capacity to serve a total of 47,500 connections.

3.4.3 Pumping

The City is required to meet the TCEQ service pumping capacity requirements established in 30 TAC §290.45(b)(2)(F) and summarized in **Table 3-8**. **Table 3-9** summarizes the existing pumping facilities. Since the City currently has 405 gallons/connection of elevated storage, two pumps with 0.6 gallons per minute (gpm) per connection is required. The City exceeds the required pumping capacity per connection and can add up to 3,559 connections and maintain 200 gallons of elevated storage per connection. **Table 3-10** presents a summary of the TCEQ minimum requirements for the existing system.

Table 3-8. Service Pumping Capacity Requirements

Elevated Storage Capacity	Service Pumping Capacity Requirement[(1)]
> 200 gallons per connection	Two service pumps with a minimum combined capacity of 0.6 gpm per connection
< 200 gallons per connection	The lesser of (a) or (b):
	(a) Total pumping capacity of 2.0 gpm per connection
	(b) Total pumping capacity of at least 1,000 gpm and the ability to meet peak hourly demands with the largest pump out of service

[(1)]According to 30TAC §290.45(b)(2)(F)

Table 3-9. Pumping Facilities Summary

Pump No.	Rated Capacity (gpm)	Rated Capacity (MGD)	Rated Head (feet)
Existing Pumps			
1	2,800	4.03	241
2	2,800	4.03	241
3	2,800	4.03	241
4	2,800	4.03	241
Existing Total Capacity	**11,200**	**16.12**	-
Existing Firm Capacity	**8,400**	**12.09**	
Pumps Under Design			
5	2,800	4.03	-
6	2,800	4.03	-
Future Total Capacity	**16,800**	**24.18**	-
Future Firm Capacity	**14,000**	**20.15**	

Table 3-10. TCEQ Checklist

Parameter	Requirement	Actual	Meets TCEQ?
Elevated Storage	100 gallons per connection	405 gallons per connection	Yes
Total Storage	200 gallons per connection	892 gallons per connection	Yes
Pump Station	Two pumps with 0.6 gpm per connection	1.82 gpm per connection	Yes

3.5 DESIGN CRITERIA

Freese and Nichols, Inc. worked with the City of Terrell to establish design criteria for future water and wastewater facilities. Criteria were developed for sizing water transmission lines, elevated storage tanks, ground storage tanks and pump stations for the water system, in addition to wastewater gravity mains, force mains, and lift stations.

3.5.1 Wastewater System

Wastewater design criteria are presented in **Table 3-11**.

Table 3-11. Wastewater Improvement Triggers and Design Criteria Summary

Design Criteria	Value
Design Peak Flow	Instantaneous peak flow rate during the 5-year, 6-hour design storm or average daily flow with applied 4.0 peaking factor
Lift Station Improvement Trigger	Lift station improvements are triggered if the projected peak influent flow is greater than the lift station firm capacity
Lift Station Improvement	Lift station firm capacity at least equal to projected peak influent flow
Maximum Gravity Line Full Pipe Velocity	Full pipe flow not greater than 10 fps
Minimum Gravity Line Full Pipe Velocity	Full pipe flow not less than 2 fps
Minimum Force Main Velocity for LS with Two Pumps	3 fps with one pump operating
Minimum Force Main Velocity for LS with Three or More Pumps	2 fps with smallest pump operating, and 5 fps flushing velocity achieved twice daily
Manning's Friction Coefficient (n)	0.013
Maximum Dry Weather Flow to Capacity (q/Q) Ratio	1.00
Maximum Wet Weather Flow to Capacity (q/Q) Ratio Wastewater Collection Pipeline Improvement Trigger	Greater than 1.00 with surcharge depth within 3-feet of manhole rim elevation
Improvement Pipe Diameter	Smallest common diameter to convey projected peak flow at existing or minimum slope without surcharging the pipe

3.5.2 Water System

Hydraulic analysis was performed for the existing and future water systems for several operating conditions: maximum day, peak hour, and maximum day with fire flow. The TCEQ required minimum pressure within a distribution system is 35 psi under normal operating conditions. Headloss and velocity in the pipelines are additional criteria used to analyze the water system. Typically, headloss in water lines should not exceed 4 feet/1000 feet, and velocities should not exceed 7 feet/second.

FNI developed criteria for sizing of storage and pumping capacity for the City. These criteria are typically more stringent than TCEQ requirements and take into consideration many additional factors including operational flexibility, fire protection, emergency reserve, and energy efficiency.

The design criteria recommended to size ground storage tank capacity is to provide adequate storage volume to meet eight hours of maximum day demand. **Figure 3-1** summarizes the recommended ground storage capacity and associated improvements based on the design criteria. The design criteria recommended for elevated storage capacity is based on the greater of twice the peaking volume or the peaking volume plus fire volume of 3,500 gpm for a 3-hour duration. The peaking volume is defined as 35% of peak hour demands for a 3-hour duration. **Figure 3-2** displays the recommended elevated storage capacity and related improvements based on the design criteria.

Figure 3-1. Recommended Ground Storage Capacity

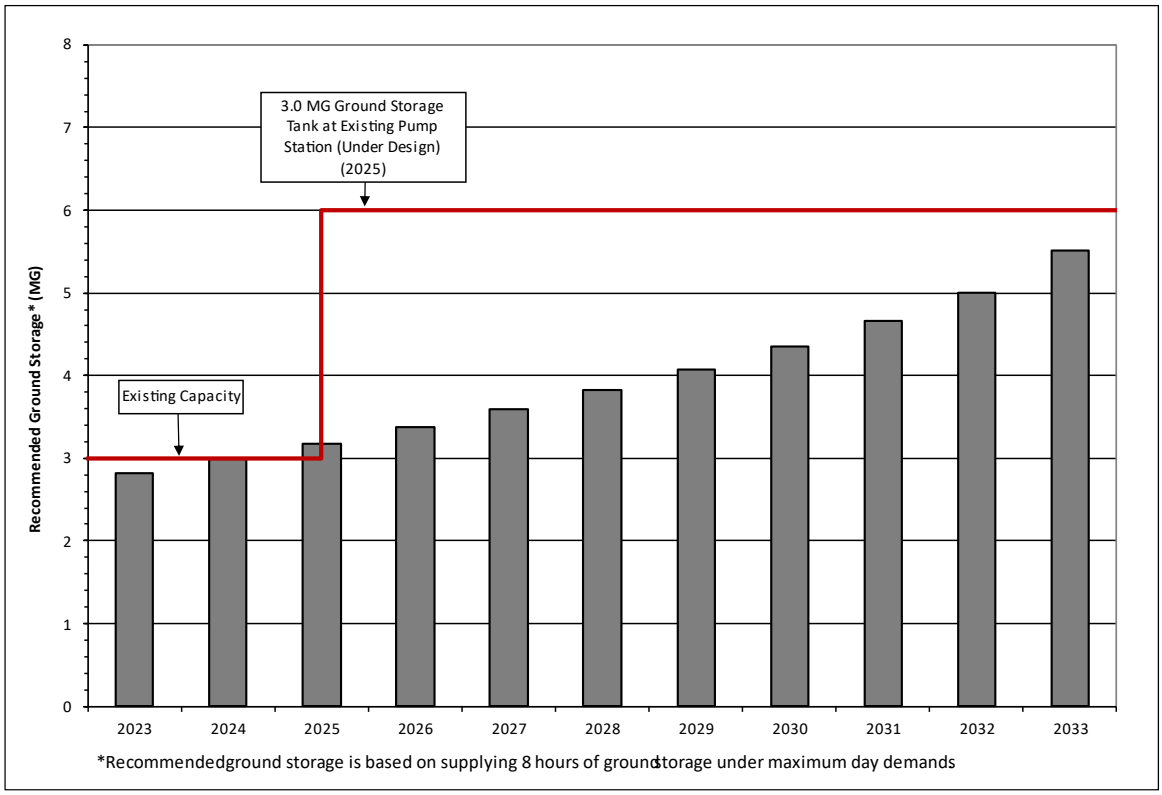
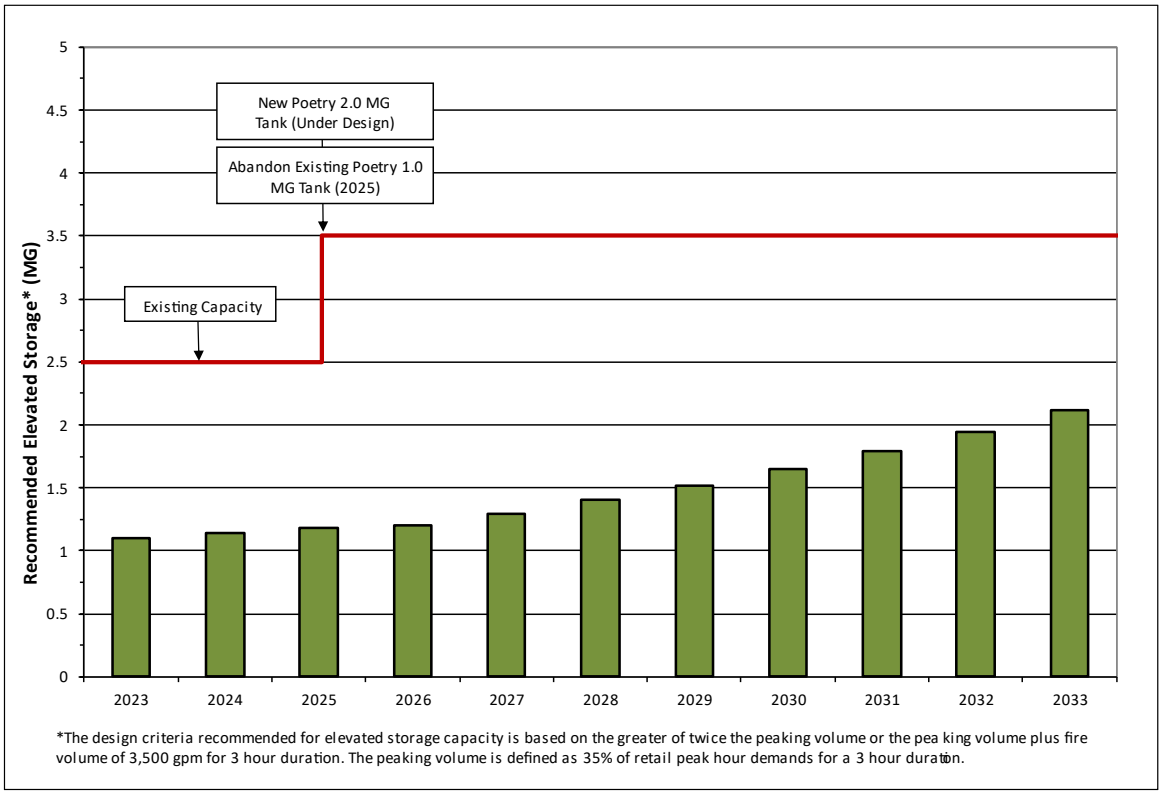


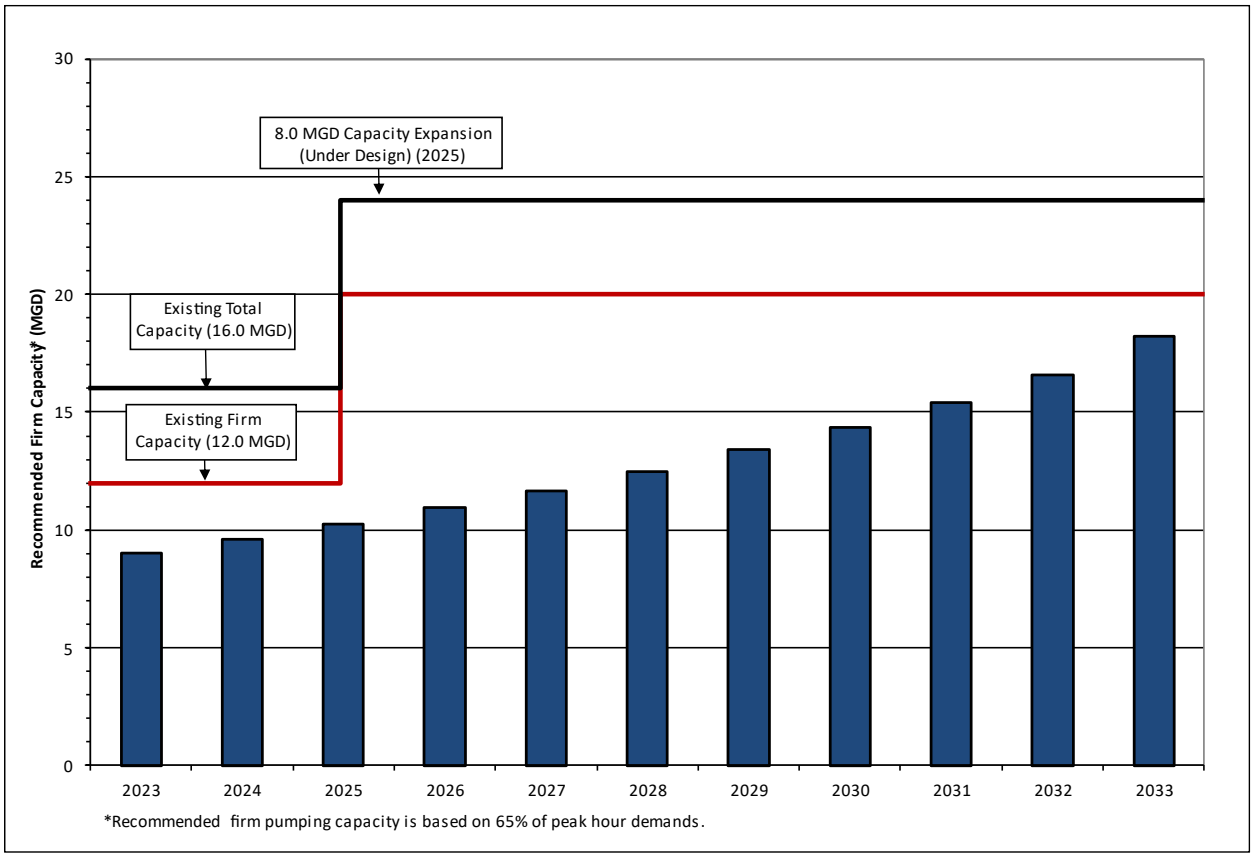
Figure 3-2. Recommended Elevated Storage Capacity



There are four existing pumps at the City of Terrell pump station supplied by NTMWD. Each pump is rated at 4 million gallons per day (MGD) at 241 feet of head, and two existing pumps were installed with variable frequency drives. Therefore, the existing firm capacity of the pump station is 12 MGD, and the total capacity is 16 MGD. Two empty pump slots are available for the next expansion, which is under design and will bring the total capacity of the pump station to 24 MGD with a firm pumping capacity of 20 MGD by adding two additional 4 MGD pumps.

The design criteria recommended for pump station capacity is providing a firm pumping capacity to meet 65% of the peak hour demand. The firm pumping capacity is defined as the total available pumping capacity with the largest pump out of service, and **Figure 3-3** displays the recommended firm pumping capacity. Based on the demand projections, a pump station expansion beyond 20 MGD is not recommended in the next 10 years.

Figure 3-3. Recommended Firm Pumping Capacity



3.6 WATER AND WASTEWATER SYSTEM IMPROVEMENTS

Proposed water and wastewater system projects to serve the system through 2033 were developed as part of this project based on load projections and design criteria. The proposed 10-year water system impact fee CIP is shown on **Figure 3-4**. Proposed 10-year wastewater impact fee CIP is shown on **Figure 3-5**. Detailed cost estimates for the proposed water system and wastewater system projects are included in **Appendix A** and **Appendix B**, respectively.

FIGURE 3-4

CITY OF TERRELL

WATER SYSTEM
IMPACT FEE ELIGIBLE
CAPITAL IMPROVEMENTS PLAN

LEGEND

Existing Impact Fee Eligible Improvement

- Elevated Storage Tank
- Ground Storage Tank
- Pump Station
- Water Line

Proposed Impact Fee Eligible Improvement

- Water Line

Developer-Funded Project

- Water Line

Existing Water System

- Elevated Storage Tank
- Ground Storage Tank
- Pump Station
- NTMWD Delivery Point
- 10" and Smaller Water Line
- 12" and Larger Water Line
- Road
- Railroad
- Stream
- Lake
- Parcel
- City Limit
- ETJ

FREESE AND NICHOLS

Terrell AMERICA

1.0 MG Poetry
Elevated Storage Tank
Overflow Elevation = 695'
New Elevated Storage Tank = 2.0 MG

Pump Station
Firm Pumping Capacity = 20 MGD

NTMWD Delivery Point

Proposed 3 MG
Ground Storage Tank

3 MG Ground Storage Tank

1.5 MG South
Elevated Storage Tank
Overflow Elevation = 695'

Tawakoni Balancing Reservoir
Club Lake
Porter Lake
New Terrell City Lake
Old Terrell City Lake
Tonkersley Lake

0 2,800 5,600
SCALE IN FEET

Created By Freese and Nichols, Inc.
Job No.: TER23280
Location: H:\W_WW_PLANNING\01_DELIVERABLES\04_Impact_Fee_Final_Report\IF_Report_Pro_Project\IF_Report_Pro_Project.aprx
Updated: Monday, June 17, 2024 4:08 PM
User Name: GWT

FIGURE 3-5

CITY OF TERRELL

WASTEWATER SYSTEM IMPACT FEE ELIGIBLE CAPITAL IMPROVEMENTS PLAN

LEGEND

- Proposed Package Wastewater Treatment Plant
- *Proposed Impact Fee Eligible Improvement*
  - Lift Station
  - Wastewater Treatment Plant
  - Wastewater Line
  - Force Main
- *Existing Impact Fee Eligible Improvement*
  - Wastewater Line
  - Force Main
- *Existing System*
  - Manhole
  - Lift Station
  - Wastewater Treatment Plant
- 6" and Smaller Wastewater Line
- 8" and Larger Wastewater Line
- Force Main
- Road
- Railroad
- Stream
- Lake
- Parcel
- City Limit
- ETJ

FREESE AND NICHOLS

Terrell AMERICA

Note: Projects 7-26 sized assuming minimum slope

Proposed Lift Station
Firm Capacity = 0.25 MGD

Metrocrest Lift Station
Existing Capacity = 1.0 MGD

Proposed Wastewater Treatment Plant
Est. Firm Capacity = 1.2 MGD
Decommission

Market Center Lift Station
Firm Capacity = 1.0 MGD
Decommission

Proposed Market Center Lift Station
Firm Capacity = 2.0 MGD

Rose Hill Lift Station
Expanded Capacity = 11.0 MGD

Industrial Blvd Lift Station

Proposed Wastewater Treatment Plant
Capacity = 0.9 MGD
Decommission

Proposed Lift Station
Firm Capacity = 7.75 MGD

Proposed Wastewater Treatment Plant
Capacity = 4.0 MGD

King's Creek WWTP
Existing Capacity = 4.5 MGD

0 2,800 5,600
SCALE IN FEET

Created By Freese and Nichols, Inc.
Job No.: TEP23280
Location: H:\W_WW_PLANNING\01_DELIVERABLES\04_Impact_Fee_Final_Report\IF_Report_Pro_Project\IF_Report_Pro_Project.aprx\Figure_3-5\WW_CIP
Updated: Monday, June 17, 2024 4:05 PM
User Name: 03812

3.7 WATER AND WASTEWATER 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 2023 and 2033. Capacity serving existing development and development projected for more than 10 years in the future cannot be charged to impact fees.

3.7.1 Eligible CIP Costs

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 3-12** and **Table 3-13**. Costs listed for the existing projects are based on actual design and construction costs provided by the City. **Table 3-12** and **Table 3-13** also show 2023 percent utilization as the portion of a project's capacity required to serve existing development. It is not included in the impact fee analysis. The 2033 percent utilization is the portion of the project's capacity that will be required to serve the City of Terrell in 2033. The 2023-2033 percent utilization is the portion of the project's capacity required to serve development from 2023 to 2033. 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 2023 through 2033 is calculated as the total actual cost multiplied by the 2023-2033 percent utilization. Only this portion of the cost is used in the impact fee analysis.

Table 3-12. Water System Impact Fee Eligible Project Summary

Status	Project Number	Project Description	2023 Utilization	2033 Utilization	IF Utilization (Difference)	Total Cost	Impact Fee Eligible Costs
Under Design	A	3.0 MG GST and 8.0 MGD Pump Station Expansion	0%	95%	95%	$ 11,303,000	$ 10,737,850
Under Design	B	Poetry EST Relocation	0%	50%	50%	$ 10,790,000	$ 5,395,000
Existing Eligible	C	20" Water Line Southeast of the Pump Station and North of IH-20	65%	85%	20%	$ 2,800,000	$ 560,000
Existing Eligible	D	20" Water Line in Downtown Area	85%	95%	10%	$ 575,000	$ 57,500
Existing Eligible	E	20" Water Line near South EST	50%	75%	25%	$ 1,700,000	$ 425,000
Under Construction	F	16" and 20" Water Line East of Western Securities Development	0%	23%	23%	$ 3,589,100	$ 822,230
Existing Eligible	G	Impact Fee Study (2023-2024)	0%	100%	100%	$ 49,585	$ 49,585
Proposed	1	20" and 24" Water Line along Terry Creek	0%	75%	75%	$ 17,820,400	$ 13,365,300
Proposed	2	20" Water Line from South EST	0%	100%	100%	$ 11,436,800	$ 11,436,800
Proposed	3	16" Water Line along CR 305	0%	72%	72%	$ 2,750,800	$ 1,979,048
Proposed	4a	16" Water Line along CR 305 from Lechner Property	0%	75%	75%	$ 2,063,100	$ 1,541,594
Proposed	4b	16" Water Line along CR 305 South of 4a	0%	75%	75%	$ 1,704,300	$ 1,273,491
Proposed	5	20" Water Line from CR 305 through Central Las Lomas	0%	23%	23%	$ 7,191,000	$ 1,621,244
Proposed	6	16" Water Line from IH-20 through Central Las Lomas	0%	21%	21%	$ 12,423,500	$ 2,588,229
Proposed	7	16" Water Line from CR 304 to IH-20	0%	44%	44%	$ 7,639,500	$ 3,331,671
Proposed	8	12" and 16" Water Line to Whitt Ranch	0%	44%	44%	$ 7,639,500	$ 3,361,380
Proposed	9	16" and 20" Water Lines near Western Securities Development	0%	38%	38%	$ 8,387,000	$ 3,145,125
Proposed	10	12" and 16" Water Lines near Griffith Forest Tract	0%	59%	59%	$ 5,426,900	$ 3,195,841
Proposed	11	12" and 16" Water Lines near Griffith Forest Tract and Whitt Ranch	0%	79%	79%	$ 5,755,800	$ 4,547,082
Proposed	12	16" Water Line through Hillside Ranch to SH 34	0%	33%	33%	$ 10,674,300	$ 3,498,798
Proposed	13	12" and 16" Water Line along SH 34	0%	25%	25%	$ 8,999,900	$ 2,204,976
Proposed	14	12" Water Line along FM 429	0%	10%	10%	$ 5,696,000	$ 569,600
Proposed	15	16" Water Line from SH 557 to SH 205	0%	56%	56%	$ 19,360,300	$ 10,863,279
Proposed	16	16" Water Line along SH 205	0%	24%	24%	$ 10,480,000	$ 2,532,667
					Total	**$ 176,255,785**	**$ 89,103,290**

Table 3-13. Wastewater System Impact Fee Eligible Project Summary

Status	Project Number	Project Description	2023 Utilization	2033 Utilization	IF Utilization (Difference)	Total Cost	Impact Fee Eligible Costs
Existing Eligible	A	Blanche Street Sewer Improvements	25%	27%	2%	$ 596,848	$ 11,937
Existing Eligible	B	36" Gravity Line	36%	83%	48%	$ 2,200,000	$ 1,047,619
Existing Eligible	C	30" Gravity Line	13%	52%	39%	$ 525,000	$ 205,212
Under Construction	D	8" and 30" Gravity Line	12%	42%	31%	$ 3,740,200	$ 1,145,208
Existing Eligible	E	Impact Fee Study (2023-2024)	0%	100%	100%	$ 49,585	$ 49,585
Proposed	1	Upsize of existing 15- to 24-inch gravity main carrying flow to Kings Creek interceptor	44%	75%	31%	$ 26,240,300	$ 8,200,094
Proposed	2	Expansion of Rose Hill Lift Station to 11 MGD and upsizing existing parallel 10-inch force mains to one 24-inch force main	44%	75%	31%	$ 27,403,400	$ 8,563,563
Proposed	3	Construction of new 2.0 MGD Market Center Lift Station, 10-inch downstream force main, 15-inch gravity main, and decommissioning of existing Market Center Lift Station	20%	80%	60%	$ 18,956,600	$ 11,373,960
Proposed	4	Upsize of existing 15-inch gravity main to 24- and 30-inch gravity main along Bachelor Creek	11%	26%	15%	$ 7,086,300	$ 1,061,791
Proposed	5	Upsize of existing 8- to 10-inch gravity mains between North Rockwall Avenue and Lamar Street to 10- to 12-inch gravity mains	60%	65%	5%	$ 5,911,300	$ 295,565
Proposed	6	Upsize of existing 8-inch gravity main running east from Jerry Drive to Kings Creek Interceptor	65%	90%	25%	$ 1,450,200	$ 362,550
Proposed	7	Construction of new 24-inch gravity main along Kings Creek	0%	25%	25%	$ 3,327,900	$ 823,655
Proposed	8	Construction of new 12 to 15-inch gravity main conveying flow from Hillside Ranch to the Kings Creek Interceptor	0%	49%	49%	$ 4,685,400	$ 2,297,357
Proposed	9	Construction of new 24-inch gravity main conveying flow from Evening Star and Sun Well 286 developments to Project No. 7	0%	20%	20%	$ 13,147,100	$ 2,629,420
Proposed	10	Construction of new 18-inch gravity main conveying flow from the decommissioned Market Center Lift Station along Little Brushy Creek	3%	57%	54%	$ 11,344,100	$ 6,073,611
Proposed	11	Construction of new 12- and 30-inch gravity main conveying flow from Lechner Farm and Hunters Ridge to Little Brushy Creek	0%	69%	69%	$ 9,992,600	$ 6,851,604
Proposed	12	Construction of new 4.0 MGD wastewater treatment plant	0%	7%	7%	$ 179,400,000	$ 12,109,500
Proposed	13	Construction of new 7.75 MGD lift station, downstream 20-inch force main, and 54-inch gravity main to proposed wastewater treatment plant	0%	5%	5%	$ 29,082,300	$ 1,454,115
Proposed	14	Construction of new 12-inch gravity main to convey flow from Whitt Ranch and the Griffith Forest Tract along Bachelor Creek	0%	18%	18%	$ 5,080,100	$ 914,418
Proposed	15	Construction of a new 12-inch gravity main to convey flow from Whitt Ranch along Bachelor Creek	0%	8%	8%	$ 2,003,300	$ 160,264
Proposed	16	Construction of new 42-inch gravity main along Big Brushy Creek to convey flow top proposed wastewater treatment plant	0%	5%	5%	$ 8,961,100	$ 448,055
Proposed	17	Construction of new 36-inch gravity main along Big Brushy Creek	0%	7%	7%	$ 39,181,000	$ 2,798,643
Proposed	18	Construction of new 12-inch gravity main along Big Brushy Creek	0%	16%	16%	$ 6,781,400	$ 1,085,024
Proposed	19	Construction of new 30-inch gravity main along Terry Creek	0%	5%	5%	$ 12,049,700	$ 602,485
Proposed	20	Construction of new 24-inch gravity main along Terry Creek	0%	14%	14%	$ 17,285,200	$ 2,333,502
Proposed	21	Construction of new 12-inch gravity main along Terry Creek	0%	6%	6%	$ 7,657,400	$ 459,444
Proposed	22	Construction of new 12-inch gravity main to convey flow from the Samuels and Breeden Property along Little High Point Creek	0%	11%	11%	$ 4,066,400	$ 447,304
Proposed	23	Construction of new 12-inch gravity main to convey flow from the Breeden and Samuels Properties along Big Brushy Creek	0%	6%	6%	$ 6,470,400	$ 368,813
Proposed	24	Construction of new 12-inch gravity main to convey flow from the Samuels Property along High Point Creek	0%	3%	3%	$ 6,631,900	$ 198,957
Proposed	25	Construction of new 0.25 MGD proposed lift station, 4-inch force main, and downstream 8-inch gravity main	0%	95%	95%	$ 3,185,900	$ 3,026,605
Proposed	26	Construction of new 8-inch gravity main to convey flow from the Northwest Development to 0.25 MGD proposed lift station	0%	42%	42%	$ 2,386,100	$ 1,007,464
					Total	$ 466,879,033	$ 78,407,323

3.7.2 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 Terrell 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. Vendor meter data sheets 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 3-14**.

Typically, in Terrell, single-family residences are served with a 5/8- by 3/4-inch water meter. Larger meters represent multi-family, public, commercial, and industrial water use. The City provided data that included the meter size of each active water meter as of December 2022. **Table 3-15** shows the water and wastewater service units for 2023 and the projected service units for 2033.

Table 3-14. Service Unit Equivalencies

Meter Size	Meter Type	Operating Capacity (gpm)	Service Unit Equivalent
5/8" x 3/4"	iPERL Smart Water Meter	35[(1)]	1.0
1"	iPERL Smart Water Meter	55[(1)]	1.6
1-1/2"	OMNI+ Turbo (T^2) Water Meter	160[(2)]	4.6
2"	OMNI+ Turbo (T^2) Water Meter	200[(2)]	5.7
3"	OMNI+ Turbo (T^2) Water Meter	500[(2)]	14.3
4"	OMNI+ Turbo (T^2) Water Meter	1,000[(2)]	28.6
6"	OMNI+ Turbo (T^2) Water Meter	2,000[(2)]	57.1
8"	OMNI+ Turbo (T^2) Water Meter	3,500[(2)]	100.0
10"	OMNI+ Turbo (T^2) Water Meter	5,500[(2)]	157.1

[(1)]Upper limit of "Normal Water Operating Flow Range" from iPERL Smart Water Meter data sheet

[(2)]"Maximum Continuous Operation" from OMNI+ Turbo (T^2) Water Meter data sheet

Table 3-15. Water and Wastewater Service Units

Meter Size	2023 Meters	2023 Service Units	2033 Meters	2033 Service Units	Growth in Service Units
5x8" x 3/4"	5,434	5,434	13,606	13,606	8,172
1"	327	514	570	896	382
1-1/2"	167	763	237	1,083	320
2"	199	1,137	424	2,423	1,286
3"	18	257	31	443	186
4"	8	229	11	314	86
6"	5	286	11	629	343
8"	2	200	2	200	0
Total	**6,160**	**8,820**	**14,892**	**19,594**	**10,774**

3.7.3 Maximum Impact Fee Calculations

Texas Government Code Section 395 outlines the procedures and requirements for calculating maximum allowable impact fees to recover costs associated with capital improvement projects needed due to growth over a 10-year period. Section 395 also requires a plan that addresses possible duplication of payments for capital improvements. This plan can either provide a credit for the portion of revenues generated by new development that is used for the payment of eligible improvements, including payment of debt, or reduce the total eligible project costs by 50 percent. The City of Terrell has selected to utilize the reduction of the total eligible project costs by 50 percent to determine the maximum allowable impact fees.

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 3.0% interest rate was used to calculate financing costs. **Table 3-16** displays the maximum allowable impact fee for water and wastewater by meter size.

Water Impact Fee:

Total Capital Improvement Costs	$89,103,290
Financing Costs	+ $30,644,081
Total Eligible Costs	$119,747,371
Growth in Service Units	10,774

Maximum Water Impact Fee	= Total Eligible Costs / Growth in Service Units
	= $119,747,371 / 10,774
	= $11,114 per Service Unit
Maximum Allowable Water Impact Fee	= Maximum Impact Fee – Credit (50%)
	= $11,114 - $5,557
	= **$5,557 per Service Unit**

Wastewater Impact Fee:

Total Capital Improvement Costs	$78,407,323
Financing Costs	+ $26,965,563
Total Eligible Costs	$105,372,886
Growth in Service Units	10,774

Maximum Wastewater Impact Fee	= Total Eligible Costs / Growth in Service Units
	= $105,372,886 / 10,774
	= $9,780 per Service Unit
Maximum Allowable Wastewater	= Maximum Impact Fee – Credit (50%)
Impact Fee	= $9,780 - $4,890
	= **$4,890 per Service Unit**

Table 3-16. Maximum Allowable Impact Fees by Meter Size

Meter Size	Meter Type	Service Unit Equivalent	Water Impact Fee[(1)]	Wastewater Impact Fee[(1)]	Water and Wastewater Total Impact Fee[(1)]
5/8" x 3/4"	iPERL Smart Water Meter	1.0	$5,557	$4,890	$10,447
1”	iPERL Smart Water Meter	1.6	$8,891	$7,824	$16,715
1-1/2”	OMNI+ Turbo (T^2) Water Meter	4.6	$25,562	$22,494	$48,056
2”	OMNI+ Turbo (T^2) Water Meter	5.7	$31,675	$27,873	$59,548
3”	OMNI+ Turbo (T^2) Water Meter	14.3	$79,465	$69,927	$149,392
4”	OMNI+ Turbo (T^2) Water Meter	28.6	$158,930	$139,854	$298,784
6”	OMNI+ Turbo (T^2) Water Meter	57.1	$317,305	$279,219	$596,524
8”	OMNI+ Turbo (T^2) Water Meter	100.0	$555,700	$489,000	$1,044,700
10”	OMNI+ Turbo (T^2) Water Meter	157.1	$873,005	$768,219	$1,641,224

[(1)]Based on maximum allowable water and wastewater impact fees

4.0 ROADWAY IMPACT FEE ANALYSIS

4.1 METHODOLOGY

Chapter 395 of the Texas Local Government code prescribes the technical requirements for the update of roadway impact fees. To meet this mandate, the following work tasks were undertaken and described below.

- Roadway service areas were restructured to address annexations that had occurred by the City since the 2019 update. With newly annexed areas, the previous service area structure did not comply with state mandate of six-miles maximum. This revised structure reconfigures the City into five service area (previously three) and can be used to address future programmatic updates.
- Land use assumptions detailing population and employment growth by service area were used as a basis to derive projected growth over the 10-year planning period 2023-2033. Land use assumptions were prepared by the city's Planning Department.
- The vehicle-mile of travel during the PM peak hour was retained as the appropriate service unit for measuring capacity and system utilization for the impact fee calculation. Capacity was based on values developed by the North Central Texas Council of Governments (NCTCOG) for level of service "D" operations.
- A roadway conditions inventory of major roadways within Terrell was conducted to update lane geometrics and segment lengths. New collector and/or arterial streets not previously classified were added to the program database. The existing roadway network was evaluated by service area based on updated traffic volume count information, collected in May 2023, to determine roadway capacity, current utilization, and deficiencies, if present. Traffic count data (PM peak hour directional volume) was collected at ten locations throughout the City as part of this update and supplemented with data from the City from other studies.
- New vehicle-miles of demand (over a 10-year planning period) was calculated for each service area based on net growth of population and employment (service area) supplemented with service unit generation data from the land use equivalency table which was updated for the latest trip rate and trip length data.
- A capital improvements plan was prepared based on projected growth needs, traffic patterns and input from city staff. The impact fee capital improvements plan identifies specific projects, associated limits, roadway sizing and functional class (arterial and collector class facilities) per the official City Thoroughfare Plan, and associated cost for facility implementation. Project costs include construction, engineering, right-of-way acquisition and debt service. Updated costs were prepared for all projects based on recent historic unit costs provided by the City and Freese and Nichols. For recoupment projects, data of actual costs were provided by the city. Costs for study updates are eligible for impact fee recovery and were included in the total project cost. The capital

improvements plan identifies service units of capacity provided, capacity utilized (based on current traffic volume counts) and excess capacity by project and service area.

- To initiate the program update, the capacity provided by the impact fee CIP was evaluated to ensure excess capacity remained in the system for consideration for impact fees. The evaluation revealed all previously identified projects to currently contain sufficient excess capacity and were therefore retained.
- The cost of capacity supplied, cost attributable to new development, and the maximum cost per service unit were calculated for each service area. Per Chapter 395, a credit of 50% was applied to the overall cost of the capital improvements program for use in the cost per service unit calculation.
- Examples for calculating impact fees were prepared based upon specific uses and the land use vehicle-mile equivalency table.

4.2 ROADWAY IMPACT FEE SERVICE AREAS

Service areas are required by State Law to define the area served by the Roadway Capital Improvements. Chapter 395 requires that service areas be defined for impact fees to ensure that facility improvements are located in proximity to areas generating needs. Legislation requires that roadway service areas be limited to a six-mile maximum and must be located within the current City limits. Roadway service areas can be different from other impact fee service areas, which can include water or sewer CCNs (Certificate of Convenience and Necessity) or the ETJ. This difference is primarily due to roadway systems being "open" to both local and regional use as opposed to a defined limit of service that is provided with water and wastewater systems. The result is that new development can only be assessed an impact fee based on the cost of necessary capital improvements within that service area.

The service area structure was amended from the 2019 Impact Fee Update to include recent annexations by the City. This led to the reconfiguration of the zonal structure from three to five service areas. All portions of the revised service area structure fall within the six-mile mandate. **Figure 4-1** illustrates the previous service area structure for the City of Terrell. The updated roadway service areas for the City of Terrell are shown on **Figure 4-2**.

Figure 4-1. 2019 Roadway Impact Fee Service Areas

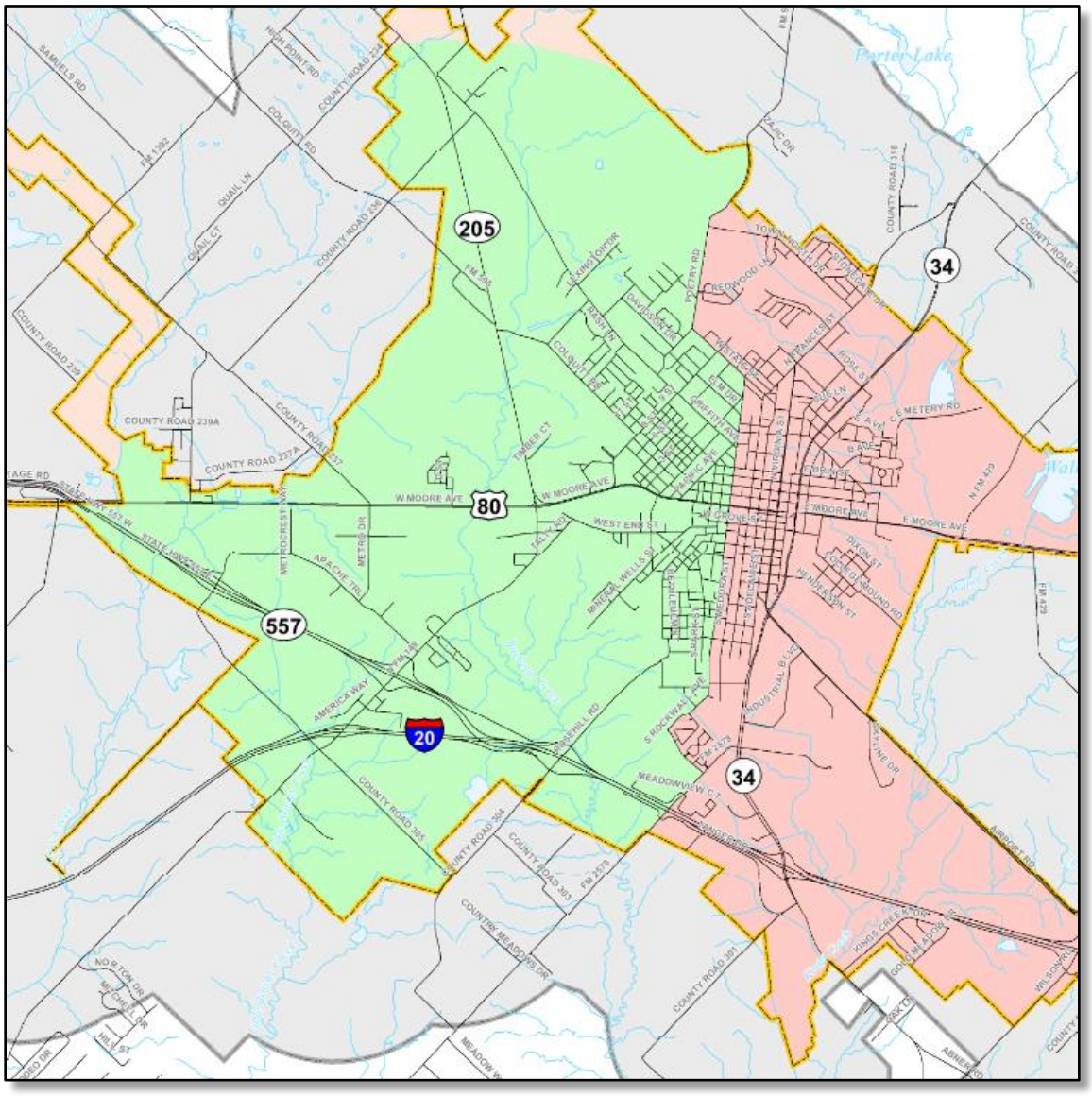
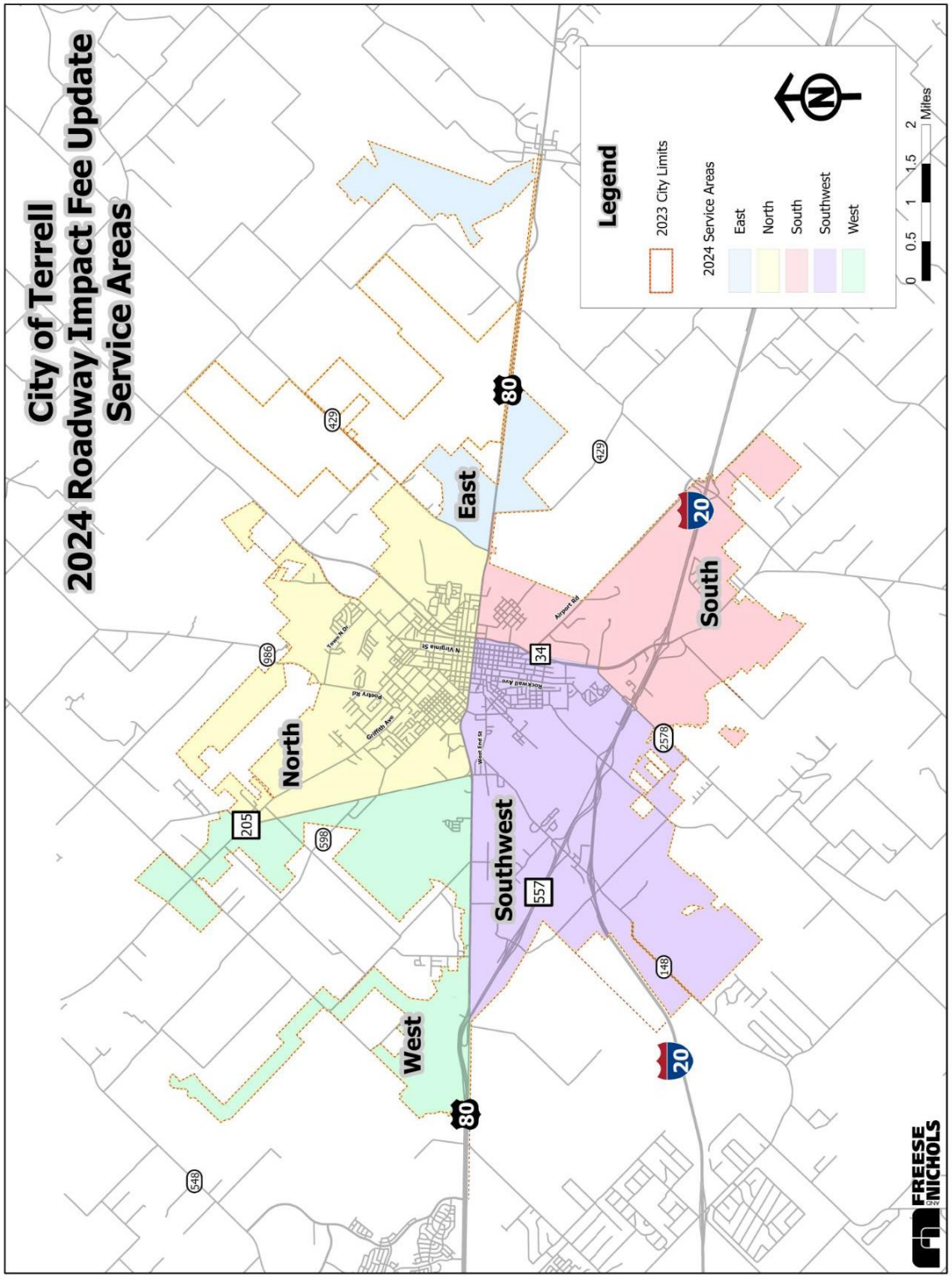


Figure 4-2. Roadway Impact Fee Service Areas



4.3 ROADWAY IMPACT FEES LAND USE ASSUMPTIONS

As described earlier, land use assumptions provide the basis for forecasting travel demands and the development of capital improvements programming to address growth related needs. For the road program, population and employment are examined because of the differences in travel characteristics between residential and non-residential (office, commercial, industrial, etc.) and their disparate impact on the roadway network. Population data presented earlier (refer to **Section 2**) identified a 10-year growth of 24,984 persons between 2023 and 2033 and represents an average annual growth rate of about 8.3 percent. Based on Census data of 2.76 persons per dwelling unit, this rate represents an increase of 9,052 dwelling units over the planning period. Population data was allocated to each service area based on known and planned development activity as presented by city staff. **Table 4-1** details the breakout of population data by service area.

Employment data was obtained from estimates by NCTCOG and information from the city's Planning Department of known and anticipated development. Data by work type – basic, service and retail – was used to estimate service unit generation of non-residential growth within the city. The estimated employment for the City in 2023 and 2033 is 16,277 and 18,103 persons, respectively and represents an average annual growth rate of about 1.07% per year. **Table 4-2** details the breakout of employment data by work component and total by service areas.

Table 4-1. Ten Year Population Projections by Service Area

Year	Population	Service Area Population				
		North	East	South	Southwest	West
2023	20,050	9,962	144	1,511	6,460	1,973
2033	45,034	14,232	144	2,311	20,199	8,148
Total Added	**24,984**	**4,270**	**0**	**800**	**13,739**	**6,175**
Dwelling Units Added	**9,052**	**1,547**	**0**	**290**	**4,978**	**2,237**

Table 4-2. Ten Year Employment Projections by Service Area

Year	Employment	Service Area Population				
		North	East	South	Southwest	West
2023	16,277	6,941	54	3,175	4,946	1,161
2033	18,103	7,291	54	3,425	5,446	1,887
Total Added	**1,826**	**350**	**0**	**250**	**500**	**726**
Basic	*547*	*30*	*0*	*150*	*233*	*134*
Service	*931*	*276*	*0*	*75*	*227*	*353*
Retail	*348*	*44*	*0*	*25*	*40*	*239*

4.4 ROADWAY CAPITAL IMPROVEMENT PLAN

Chapter 395 of the Texas Local Government Code specifies the requirements necessary to prepare an impact fee capital improvements plan. These requirements include:

- A description of the existing capital improvements within the service area and the cost to upgrade, update, improve, expand, or replace the improvements to meet existing needs and usage.
- An analysis of the total capacity, the level of current usage, and commitments for usage of capacity of the existing capital improvements.
- A description of all or the parts of the capital improvements and their costs necessitated by and attributable to new development in the service area based on approved land use assumptions.
- A definitive table establishing the specific level or quantity of use, consumption, generation, or discharge of service unit for each category of capital improvements and an equivalency table establishing the ratio of the service unit to various types of land uses, including residential, commercial, and industrial.
- The total number of projected service units necessitated by and attributable to new development within the service area based on the approved land use assumptions.
- The projected demand for capital improvements required by the new service units forecasted over a 10-year period of time.
- A plan for awarding a credit for the portion of the ad valorem tax generated by new service units during the program period used for the payment of improvements or a credit equal to 50 percent of the total projected cost of implementing the capital improvements plan.

The plan must contain two distinct components: analysis of existing conditions and analysis of projected conditions. To analyze these components, two measures of performance have been established and include both level-of-service and service units.

4.5 ROADWAY LEVEL-OF-SERVICE

Level-of-Service (LOS) is a traffic engineering term that describes operational conditions and performance of the roadway system. Roadway level-of-service is the basic design criterion used in thoroughfare planning. The design level-of-service determines the capacity for which the roadway is intended. Level-of-service is rated from "A" to "F". The higher level of service (A-B) provides better driving conditions but requires higher construction cost. Level of Service "E" is generally considered to be the capacity limit of urban roadways. Level of Service "D" is the design level-of-service selected for the Impact Fee Analysis, which corresponds to the design level of the Thoroughfare Plan for the City of Terrell. **Table 4-3** lists the maximum service volumes for level-of-service "C" as a function of facility type.

Table 4-3. Roadway Facility Vehicle-Mile Service Volume

Roadway Facility	Roadway Type	Service Volume "LOS D" Vehicles per hour per lane-mile of Roadway Facility
Divided Arterials	DA	580
Undivided Arterials	UA	520
Divided Collector	DC	460
Undivided Collectors	UC	420

4.6 ROADWAY IMPACT FEE SERVICE UNITS

An accurate service unit is required to calculate and assess impact fees for new developments. As defined in Chapter 395, "Service unit means a standardized measure of consumption, use, generation, or discharge attributed to an individual unit of development calculated in accordance with generally accepted engineering or planning standards based on historical data and trends applicable to the political subdivision in which the individual unit of development is located during the previous ten years." The service unit is, essentially, a measure of supply and demand.

The service unit must accurately reflect the supply provided by the roadway system. Transportation facilities are designed to accommodate peak hour traffic volumes because the heaviest demand for the roadway capacity occurs during the peak hour. These peak hours typically occur during the morning (AM peak) and evening (PM peak) rush hours as motorist travel to and from work. The impact fee system for the City of Terrell is based on the PM peak hour. The unit of measurement for supply is the service volume provided by a lane-mile (lane-miles) of roadway facility.

The service unit must also reflect the demand that a particular development will place on the transportation system. The impact of the development to the street system is directly related to the trips

generated by development, land-use for which the development is intended, and the average length of each trip on the transportation system.

Service units create a link between supply (roadway projects) and demand (new development). Both supply and demand can be expressed as a combination of the number of vehicles traveling during the peak hour and the distance traveled by these vehicles in miles. Thus, the service unit for roadway impact fees is the vehicle-mile.

4.7 ROADWAY EXISTING CONDITIONS ANALYSIS

An inventory of major roadway facilities was conducted to determine existing conditions throughout Terrell. This analysis determines the capacity provided by the existing roadway system, the demand currently placed on the system, and the existence of any deficiencies on the system. Data for the inventory was obtained from field reconnaissance, traffic volume counts, the City Thoroughfare Plan and city staff.

4.7.1 Existing Traffic Volumes

Existing directional PM peak hour volumes were obtained from automated traffic counts conducted during May 2023 and supplemented with information from the city on recent studies with traffic counts. Automated traffic counts at ten separate locations were collected on major roadways (as identified in the Thoroughfare Plan as arterial or collector status) throughout the City. For segments not counted, estimates were developed based on peaking characteristics of area roadways or data from adjoining roadway counts. Data was compiled for roadway segments throughout the City and entered to the database for use in calculations. A summary of volumes by roadway segment is included in **Appendix D** as part of the existing capital improvements database.

4.7.2 Vehicle-Miles of Existing Capacity (Supply)

An analysis of the total capacity for each service area was performed. For each roadway segment, the existing vehicle-miles of capacity supplied were calculated using the following equation:

Vehicle-Miles of Capacity = Link capacity per peak hour per lane x No. of Lanes x Length of segment (miles)

For example: A 4-lane divided arterial roadway that is 3 miles in length and has a capacity of 580 vehicles per hour per lane:

Vehicle-Miles = 580 vehicles per hour x 4 lanes x 3 miles = 6,960 veh-miles per hour. (Capacity)

A summary of existing capacity for the five service areas is illustrated in **Table 4-4**. It is important to note that the roadway capacity depicted in **Table 4-4** is system-wide for most major roadways and not restricted to those roadways proposed in the impact fee capital improvements plan. For a detailed listing of vehicle-miles of capacity by roadway segment, refer to **Appendix E**.

4.7.3 Vehicle-Miles of Demand

The vehicle-miles of existing demand or the current usage of the facilities for each roadway segment was obtained using the equation below:

Vehicle-Miles of Demand = PM peak hour volume x Length of Roadway (miles)

For example: A 3-mile roadway that carries a PM peak hour volume of 500 vehicles per hour:

Vehicle-Miles = 500 vehicles per hour x 3 miles = 1,500 vehicle-miles per hour. (Demand)

A summary of the existing demand for the service areas is illustrated in **Table 4-4**. A complete detailed listing by roadway segment and service area is provided in **Appendix D**.

Table 4-4. Existing Capacity and Demand

Service Area	Capacity (Supply) (Veh-Miles per Hour)	Demand (Veh-Miles per Hour)
North	22,009	11,990
East	1,513	384
South	6,884	4,491
Southwest	25,541	12,102
West	4,852	5,381
Total	**60,799**	**34,348**

4.7.4 Vehicle-Miles of Existing Excess Capacity or Deficiencies

For each roadway segment, the existing vehicle-miles of excess capacity and/or deficiencies were calculated. Each direction was evaluated to determine if vehicle demands exceeded the available capacity. If demand exceeded capacity in one or both directions, the deficiency is deducted from the supply associated with the impact fee capital improvement plan. A summary of existing excess capacity and/or deficiencies for each service area is illustrated in **Table 4-5**. A complete detailed listing by roadway segment and service area is provided in **Appendix D**.

Table 4-5. Excess Capacity and Deficiencies

Service Area	Excess Capacity (Veh-Miles per Hour)	Deficiencies (Veh-Miles per Hour)
North	11,462	1,443
East	1,129	0
South	2,543	150
Southwest	14,280	841
West	221	750
Total	**29,635**	**3,184**

4.8 PROJECTED CONDITIONS ANALYSIS

Chapter 395 of the Texas Local Government Code requires a description of all capital improvements and their cost attributable to new development within the service area. To determine the cost attributable to new development the following information needs to be calculated or supplied: future land use assumptions, vehicle-miles of new demand, a capital improvement plan, vehicle-miles of new capacity supplied by the capital improvements plan and the costs for the roadway improvements.

The recommended service unit for assessing impact fees of new development on roadway facilities is a combination of the trips generated (vehicles) by the new development during the peak hour and the average trip length (miles) of each trip. The following section describes the methodology used in developing service units for new developments.

4.8.1 Trip Generation

Trip generation rates are used to determine the number of vehicles added to the roadway system as a result of new development. The trip generation rates were developed for the PM peak weekday period. The trip generation rates were established using the Institute of Transportation Engineers *Trip Generation Manual, 11th edition*.

Adjustments to the trip generation rates are necessary to reflect the differences between driveway volumes and the total amount of traffic added to the roadway system. The actual "traffic impact" of the new development is based only on the traffic added to the adjacent roadways. The actual traffic added to the adjacent roadways is determined by adjusting the driveway volumes to account for pass-by trips, diverted trips, and internal trips.

- Pass-by trips – trips attracted to a development from traffic that would otherwise pass-by the site on an adjacent roadway. For example, a stop at a convenience store on the way from the office

to home is a pass-by trip for the convenience store. The trip does not create an additional burden on the street system and therefore should not be double-counted. The burden of this type should be assigned to the office and/or residence.

- Diverted trips – trips that are already on the roadway system and are diverted to the roadway system serving the new development. For example, a trip from home to work along Rose Hill Road would be a diverted trip if the travel path was changed to State Highway 34 for the purpose of stopping at the cleaners. On a system-wide basis, this trip also does not add a significant additional burden to the street system and, therefore, is not considered in assessing impact fees.
- Internal trips – trips that would typically be made in a mixed-use development between two uses within the development, not utilizing a thoroughfare outside the development for that trip. For example, a trip between an office building and a restaurant contained within the same site would be considered and internal trip and does not create any additional burden on the roadway system.

4.8.2 Trip Length

Trip lengths in miles will be used in conjunction with site trip generation to establish the vehicle-miles of travel (the service unit to be used for assessing impact fees). As with trip generation, trip lengths are used in the development of travel forecasting models for use in assessing roadway needs, as well as for assessing impact fees. As previously stated, Chapter 395 of the Texas Local Government Code limits the average trip length to six miles. Each trip has an origin and destination, half of the trip length will be assigned to the origin and half of the trip length will be assigned to the destination. Therefore, the average trip length for a development is half the total trip length, allowing the maximum total trip length under state law to be six miles. The trip length data used in this report was based on the 2022 National Household Travel Survey (NHTS) and geographic information from the City of Terrell estimating trip lengths for major land use categories based on the land use plan.

4.8.3 Projected Growth and Vehicle-Miles of New Demand

Projected vehicle-miles of demand were calculated based on the growth expected to occur during the 10-year planning period and the service unit generation for each of the population and employment data components (basic, service and retail). Separate calculations were performed for each data component and were then aggregated for the service area. Vehicle-miles of demand for population growth were based on dwelling units and vehicle-miles of demand for employment were based on the number of employees and estimates of square footage per employee.

A summary of the vehicle-miles of new demand for each service area is illustrated in **Table 4-6**. A complete detailed listing by service area is provided in **Appendix E**.

Table 4-6. Projected Vehicle-Miles of New Demand

Service Area	Projected Vehicle-Miles of New Demand
North	6,267
East	0
South	2,016
Southwest	18,079
West	10,272
Total	**36,634**

4.8.4 Capital Improvements Plan (CIP)

The capital improvements plan includes roadway improvements by service area that are needed to accommodate growth based on the adopted land use assumptions and vehicle-miles of travel for various types of land uses. The impact fee CIP can only contain roadways included on the City Thoroughfare Plan and classified as arterial or collector status facilities.

At the outset of the update process, capacity provided by the CIP was evaluated to ensure sufficient excess capacity remained in the system for consideration for impact fees. Based on updated traffic volume data collected in May 2023, all existing projects were found to have sufficient remaining capacity and therefore could be retained in the impact fee system.

Projects in the impact fee CIP include both "new" and "recoupment" projects. "Recoupment" projects are those projects recently constructed and still containing excess capacity. Updated cost estimates were prepared for projects in the impact fee program. Updated unit costs were based on historical costs of projects within the city as well data from other recently constructed projects. The following costs were included in the preparation of the 10-year CIP program; construction, surveying, and engineering (13.0% of construction), right-of-way acquisition (typical range $.50-$2.50 and assumed $1.00 per square foot), debt service (3% compounded annually over 10-years) and study update costs (two 5-year updates at $50,000 each). Cost data for recoupment projects was provided by the City. Project recoupment considers only costs incurred by the City. Cost contributions from other sources were excluded from consideration, including expected TxDOT contributions for state facilities.

The updated road CIP consists of 57 project segments spanning four service areas within the City. The East Service Area does not contain any projects as part of this programmatic update. **Table 4-7** lists the roadway impact fee capital improvement projects and associated raw costs and **Figure 4-3** illustrates these projects. The cost of the updated impact fee program is $356 million. When considering the state

mandated credit (50%), the cost of the CIP totals $178 million. A detailed Engineer's Opinion of Probable Construction Cost for each roadway is provided in **Appendix F**.

Table 4-7. 2018 Roadway Impact Fee Capital Improvements Plan

Proj No.	Serv Area	Shared Svc Area	Project Type	Roadway	From	To	Length (mi)	Existing Lanes	Added Lanes	Roadway Costs: Engineering	ROW	Construction	Finance	Total Project Cost
1	North		N	FM 305 / LL Pkwy	N Frances St	Poetry Rd	1.11	0	4	$ 1,400,100	$ 821,400	$ 10,769,800	$ 4,467,921	$ 17,459,221
2	North		N	Town N Drive Ext	N City Limits	0.13 mi N of SH 205	0.20	0	4	$ 253,000	$ 127,100	$ 1,945,900	$ 799,949	$ 3,125,949
3	North		N	Town N Drive Ext	N City Limits	N City Limits	0.26	0	4	$ 329,900	$ 192,200	$ 2,538,000	$ 1,052,419	$ 4,112,519
4	North		N	FM 305 / LL Pkwy	W of FM 429	N City Limits	0.74	0	4	$ 930,000	$ 544,700	$ 7,153,500	$ 2,967,379	$ 11,595,579
5	North		N	Lions Club Lane	S of Colquitt Road	Pool Road	0.83	0	3	$ 647,000	$ 263,100	$ 4,977,200	$ 2,024,739	$ 7,912,039
7	North		N	Lovers Lane	Griffith Avenue	Colquitt Road	0.41	2	1	$ 317,900	$ -	$ 2,445,200	$ 950,275	$ 3,713,375
9	North		N	FM 986 Ext	Griffith Avenue	Town N Drive	0.91	0	2	$ 860,200	$ 383,800	$ 6,616,800	$ 2,703,458	$ 10,564,258
10	North		N	Town N Drive	Poetry Road	FM 986 Ext	0.21	0	2	$ 280,400	$ 110,400	$ 2,157,000	$ 876,230	$ 3,424,030
11	North		N	Town N Drive	Callie Street	Frances Street	0.45	0	2	$ 427,300	$ 189,700	$ 3,286,800	$ 1,342,581	$ 5,246,381
13	North		N	Lions Club Lane	Pool Road	US 80	0.16	2	1	$ 129,000	$ -	$ 992,600	$ 385,737	$ 1,507,337
14	North		N	Creekside Drive	Poetry Rd	9th Street Ext	0.37	0	2	$ 355,200	$ 158,000	$ 2,732,400	$ 1,116,215	$ 4,361,815
15	North		N	2nd Street Ext	US 80	E Brin St	0.27	0	4	$ 417,800	$ 144,900	$ 3,213,600	$ 1,298,731	$ 5,075,031
54	North	W	N	Town N Drive Ext	SH 205	0.13 mi N of SH 205	0.14	0	2	$ 90,450	$ 30,050	$ 695,700	$ 280,705	$ 1,096,905
	Sub-Total Service Area North						**6.07**			**$ 6,438,250**	**$ 2,965,350**	**$ 49,524,500**	**$ 20,266,339**	**$ 79,194,439**
	East		N	No Projects in Service Area			0.00			$ -	$ -	$ -	$ -	$ -
	Sub-Total Service Area East						**0.00**			**$ -**	**$ -**	**$ -**	**$ -**	**$ -**
17	South		N	Rochester Street	274ft S of US 80	SH 34	0.64	0	4	$ 954,000	$ 339,400	$ 7,338,700	$ 2,968,721	$ 11,600,821
18	South		N	Windsor Avenue	Home Depot	FM 2578	0.28	0	2	$ 377,700	$ 148,400	$ 2,905,400	$ 1,180,149	$ 4,611,649
19	South		R	Windsor Avenue	SH 34	Home Depot	0.24	2	2	$ -	$ -	$ 980,099	$ -	$ 980,099
20	South		R	BFS Blvd	Airport	SH 34	0.61	2	2	$ 85,000	$ -	$ 1,203,568	$ -	$ 1,288,568
21	South		N	New Collector	US 80 Frntg	BFS Blvd	0.86	0	2	$ 809,100	$ 361,400	$ 6,224,200	$ 2,543,158	$ 9,937,858
22	South		N	Sage Hill Pkwy	SH 34	City Limits	1.27	0	4	$ 1,605,600	$ 942,300	$ 12,350,700	$ 5,123,873	$ 20,022,473
23	South		N	CR 309 - Wilson	IH 20 Interchange	IH 20 Interchange	0.57	2	2	$ 353,700	$ -	$ 2,721,100	$ 1,057,474	$ 4,132,274
24	South		N	Sage Hill Pkwy	City Limits	FM 2578	0.02	0	4	$ 31,900	$ 17,900	$ 245,300	$ 101,490	$ 396,590
25	South		N	Windsor Ave Ext	Industrial Blvd	SH 34	0.14	0	3	$ 107,500	$ 43,000	$ 826,700	$ 336,075	$ 1,313,275
26	South		N	Industrial Blvd	Industrial Blvd	Airport Rd	0.57	2	1	$ 445,800	$ -	$ 3,429,000	$ 1,332,607	$ 5,207,407
27	South		N	Industrial Blvd	BFS Blvd	Industrial Blvd	0.18	0	3	$ 137,400	$ 55,600	$ 1,056,600	$ 429,758	$ 1,679,358
28	South		N	Industrial Blvd	Windsor Ave Ext	BFS Blvd	0.38	0	3	$ 293,900	$ 119,300	$ 2,260,900	$ 919,667	$ 3,593,767
29	South		N	Rochester Street	US 80	253ft S of US 80	0.05	2	2	$ 72,900	$ 12,700	$ 560,400	$ 222,170	$ 868,170
	Sub-Total Service Area South						**5.80**			**$ 5,274,500**	**$ 2,040,000**	**$ 42,102,667**	**$ 16,215,141**	**$ 65,632,308**
30	Southwest		N	Rochester Street	S Delphine Street	Virginia	0.06	2	2	$ 94,000	$ -	$ 723,400	$ 281,117	$ 1,098,517
31	Southwest		N	Bradshaw	Frazier Street	US 80	0.52	2	2	$ 665,500	$ 164,900	$ 5,119,300	$ 2,046,199	$ 7,995,899
32	Southwest		N	Rose Hill Road	Frazier	500 ft S of Lincoln	0.70	0	4	$ 871,900	$ 442,100	$ 6,707,100	$ 2,758,588	$ 10,779,688
33	Southwest		N	Rose Hill Road	500 ft S of Lincoln	Windsor Ave	0.18	2	2	$ 230,300	$ 58,000	$ 1,771,500	$ 708,399	$ 2,768,199
34	Southwest		N	Windsor Avenue	964ft W of Rockwall	Rose Hill Road	0.20	0	2	$ 275,400	$ 108,100	$ 2,118,800	$ 860,582	$ 3,362,882
36	Southwest		N	Sage Hill Pkwy	FM 2578	FM 304	0.35	0	4	$ 448,100	$ 262,500	$ 3,446,900	$ 1,429,832	$ 5,587,332
37	Southwest		N	Sage Hill Pkwy	FM 304	FM 148	1.23	2	2	$ 1,555,600	$ 260,500	$ 11,966,200	$ 4,739,959	$ 18,522,259
38	Southwest		N	FM 148	City Limits	Outer Loop	0.15	2	2	$ 187,000	$ 30,800	$ 1,438,100	$ 569,491	$ 2,225,391
39	Southwest		N	FM 148	FM 305	City Limits	1.85	2	2	$ 2,324,900	$ 389,800	$ 17,884,100	$ 7,084,265	$ 27,683,065
41	Southwest		N	Rose Hill Road	Windsor Avenue	S of IH 20	1.73	0	2	$ 2,181,800	$ 182,500	$ 16,783,000	$ 6,585,070	$ 25,732,370
42	Southwest		N	FM 35/Las Lomas Pkwy	Apache Trail	US 80	0.38	0	2	$ 390,200	$ 161,700	$ 3,001,900	$ 1,222,210	$ 4,776,010
43	Southwest		N	West End Street	Bradshaw Street	William St Ext	0.37	2	2	$ 534,800	$ 86,800	$ 4,113,500	$ 1,628,478	$ 6,363,578
44	Southwest		N	West End Street	Mineral Wells Street	Bradshaw Street	0.23	2	2	$ 338,500	$ 55,100	$ 2,604,200	$ 1,030,993	$ 4,028,793
45	Southwest		N	Windsor Avenue	Rose Hill Road	FM 148	1.04	0	2	$ 1,396,300	$ 551,300	$ 10,741,000	$ 4,363,817	$ 17,052,417
46	Southwest		N	Mineral Wells Street	West End Street	Windsor Avenue	0.84	2	1	$ 682,900	$ -	$ 5,253,200	$ 2,041,522	$ 7,977,622
47	Southwest		N	Mineral Wells Street	Windsor Avenue	N of Windsor Avenue	0.19	0	3	$ 149,300	$ 60,300	$ 1,148,800	$ 467,176	$ 1,825,576
48B	Southwest		N	Windsor Avenue	1000' West of Rockwall	Rose Hill Road	0.20	2	2	$ -	$ -	$ 2,055,100	$ 798,677	$ 2,853,777
49	Southwest		N	Williams Street	Talty Road	SH 205	0.20	2	2	$ 287,500	$ 62,000	$ 2,211,600	$ 880,804	$ 3,441,904
50	Southwest		N	Williams Street Ext	West End Street	Talty Road	0.21	0	4	$ 308,700	$ 111,500	$ 2,374,500	$ 961,143	$ 3,755,843
51	Southwest		N	West End Street Ext	S Ann Street	West End Street	0.17	0	4	$ 248,700	$ 88,700	$ 1,912,900	$ 773,915	$ 3,024,215
52	Southwest		N	Rochester Street	SH 34	S Delphine Street	0.05	0	4	$ 73,600	$ 15,600	$ 566,500	$ 225,506	$ 881,206
53	Southwest		N	Sage Hill Pkwy	City Limits	W of IH 20	0.56	2	2	$ 709,800	$ 118,500	$ 5,459,800	$ 2,162,581	$ 8,450,681
59	Southwest		N	Sage Hill Pkwy	FM 2578	City Limits	0.34	0	4	$ 433,600	$ 253,400	$ 3,335,500	$ 1,383,404	$ 5,405,904
60	Southwest		N	FM 148	IH 20	Sage Hill Pkwy	0.13	2	2	$ 170,800	$ -	$ 1,313,800	$ 510,578	$ 1,995,178
	Sub-Total Service Area Southwest						**11.89**			**$ 14,559,200**	**$ 3,464,100**	**$ 114,050,700**	**$ 45,514,306**	**$ 177,588,306**
54	West	N	N	Town N Drive Ext	SH 205	0.13 mi N of SH 205	0.14	2	2	$ 90,450	$ 30,050	$ 695,700	$ 280,705	$ 1,096,905
55	West		N	FM 1392	US 80 Frntg	City Limits	0.07	2	2	$ 102,600	$ 14,400	$ 789,300	$ 311,691	$ 1,217,991
56	West		N	FM 305 / LL Pkwy	US 80 Frntg	City Limits	0.12	0	4	$ 147,400	$ 86,200	$ 1,133,900	$ 470,306	$ 1,837,806
57	West		N	Colquitt Road Ext	N of US 80 Frntg	SH 205	1.60	0	4	$ 1,996,800	$ 1,013,000	$ 15,360,300	$ 6,317,778	$ 24,687,878
58	West		N	New Backage Road	City Limits	Colquitt Road Ext	0.28	0	4	$ 407,000	$ 146,200	$ 3,130,400	$ 1,266,850	$ 4,950,450
	Sub-Total Service Area West						**2.20**			**$ 2,744,250**	**$ 1,289,850**	**$ 21,109,600**	**$ 8,647,330**	**$ 33,791,030**
	Totals:						***26.0***			***$ 29,016,200***	***$ 9,759,300***	***$ 226,787,467***	***$ 90,643,117***	***$ 356,206,084***

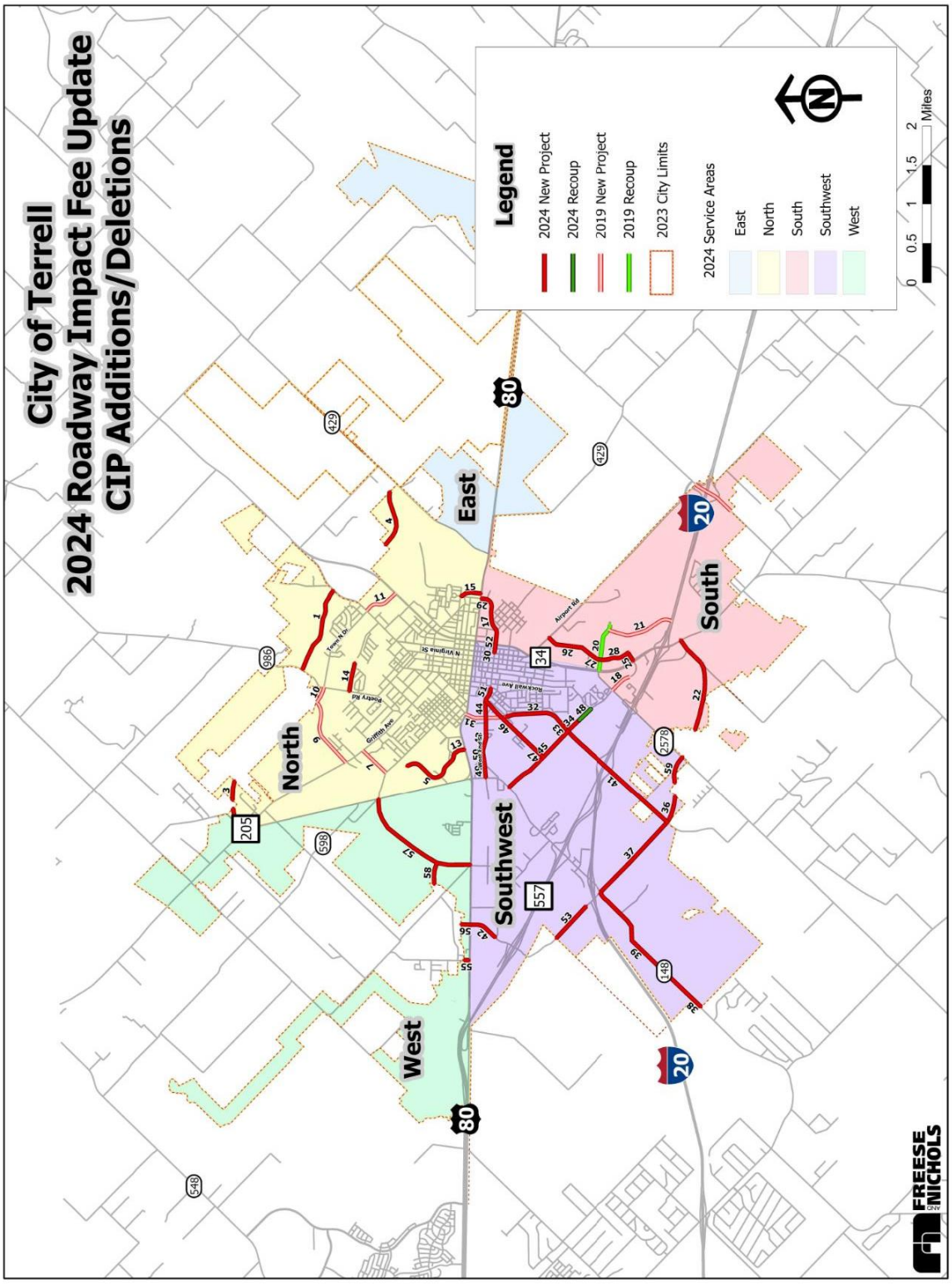
Summary:

Engineering Cost	$29,016,200
Right-of-Way Cost	$9,759,300
Construction Cost	$226,787,467
Finance Cost	$90,643,117
TOTAL NET COST	$356,206,084
Future Impact Fee Update Cost	$100,000
TOTAL IMPLEMENTATION COST	$356,306,084
50% Percent Credit	$178,153,042

Notes:
DA - Divided Arterial
UA - Undivided Arterial
SA - Special Arterial with two-way left turn lane (TWLTL)
DC - Divided collector
UC - Undivided Collector
SC - Special Collector with two-way left turn lane (TWLTL)

Project Type
N - New Project
R - Recoupment Project

Figure 4-3. Roadway Impact Fee Capital Improvements Plan



4.8.5 Projected Vehicle-Miles of New Capacity (Supply)

The vehicle-miles of new capacity supplied for each service area is provided in **Table 4-8**. A complete detailed listing by roadway segment and service area is provided in **Appendix G**.

Table 4-8. Projected Vehicle-Miles of New Capacity (Supply)

Service Area	Vehicle-Miles of New Capacity (Supply)
North	8,955
East	0
South	10,103
Southwest	15,025
West	4,782
Total	**38,865**

4.8.6 Vehicle-Miles of Existing Demand on CIP Roadways

The vehicle-miles of existing demand on CIP roadways is provided in **Table 4-9**. A complete detailed listing by roadway segment and service area is provided in **Appendix G**.

Table 4-9. Vehicle-Miles of Existing Demand on CIP Roadways

Service Area	Vehicle-Miles of Existing Utilization
North	0
East	0
South	65
Southwest	0
West	0
Total	**65**

4.8.7 Maximum Cost per Service Unit

The calculation of the cost per service unit reflects the cost of necessitated capacity provided by the CIP and the associated demand attributable to new growth over the 10-year planning period.

Where net capacity provided by the road IFCIP is greater than the new demand, the cost per service unit is simply the cost of the net capacity divided by the number of service units provided. In this case, only the portion of the CIP necessitated by new development is used in the calculation. If the net capacity supplied is less than projected new demand, then the cost per service unit is calculated by dividing the

total cost of net supply by the portion of new demand attributable and necessary by development. The cost of the CIP that is being provided is essentially distributed over the vehicle-miles of demand generated in the 10-year window.

Table 4-10 lists the results of the cost per service unit calculation by service area. The actual cost per service unit ranges from $2,774.00 to $9,274.00 in the West and Southwest service areas, respectively. The East Service Area contains no IFCIP projects and therefore the cost per service unit is $0. State legislation requires that a credit for the portion of ad valorem tax revenues generated by improvements over the program period, or a credit equal to 50% of the total projected cost of implementing a roadway impact fee capital improvements program be given. Based on a 50% credit, the maximum allowable cost per service varies from $1,387.00 to $4,637.00 for each service area. As a comparison, the cost per service unit in the 2019 Program varied from $1,114 to $1,503 and the marked increase is primarily a result of the rising cost of materials and labor that have escalated significantly over the past five years. A summary of the cost per service unit calculation by service area is provided in **Appendix I**.

Table 4-10. Calculation of Maximum Impact Fees by Service Area (with State Mandate of 50% Credit)

Line #		North	East	South	Southwest	West
1	Total Veh-Miles of Capacity Added by the CIP	8,955	0	10,103	15,025	4,782
	(Projected Veh-Miles of New Capacity - **Table 4-8**)					
2	Total Veh-Miles of Existing Demand on CIP Roads	0	0	65	0	0
	(Veh-Miles of Existing Demand on CIP Roadways - **Table 4-9**)					
3	Total Veh-Mile of Existing Deficiencies on Existing Roads	1,443	0	150	841	750
	(Excess Capacity and Deficiencies - Table **4-5**)					
4	Net Amount of Veh-Mile Capacity Added	7,512	0	9,888	14,184	4,032
	(Line #1 - Line #2 - Line #3)					
5	Total Cost of CIP (with 50% credit)	$39,608,740	0	$32,829,152	$88,813,483	$16,901,667
	(From Planning Level Cost Estimates - **Appendix F**)					
6	Cost of Net Capacity Supplied	$33,226,226	0	$32,130,521	$83,842,292	$14,250,841
	(Net of Capacity Added/Total of Capacity Added) x CIP Cost or (Line #4 / Line #1) x (Line #5)					
7	Cost to Meet Existing Needs and Usage	$6,382,514	0	$698,631	$4,971,191	$2,650,826
	(Total Cost of CIP-Cost of Net Capacity Supplied) – Line #5 - Line #6					
8	Total Veh-Mile of New Demand Over 10 Years	6,267	0	2,016	18,079	10,272
	(Projected Vehicle-Miles of New Demand - **Table 4-6**)					
9	Percent of Capacity Added Attributed to New Growth	83.4%	0	20.4%	100%	100%
	(Total of New Demand/Net Amount of Capacity Added) – Line #8 / Line #4; Max 100%					
10	Cost of Capacity Added Attributed to New Growth	$27,719,483	0	$6,550,883	$83,842,292	$14,250,841
	(Cost of Net Capacity Supplied x Pct. Attributed to New Growth) - Line #6 x Line#9					
11	Maximum Credited Fee per Service Unit	$4,423	0	$3,249	$4,637	$1,387
	(Cost of Net Capacity Attributed to New Growth / Total Veh-Mile of New Demand) - Line #10/Line #8					

4.8.8 Land Use / Vehicle-Mile Equivalency Table

A land use/vehicle-mile equivalency table establishes the service unit rate for various land uses. This table is a result of combining PM peak hour trip generation rates with average trip length information for various land uses. These rates are based on an appropriate development unit for each land use. For example office, retail, industrial, and institutional are based on development of 1,000 square feet of gross floor area, while single-family and multi-family residential is based on dwelling units. The City of Terrell's Land-Use Vehicle Mile Equivalency Table is made up of seven land uses. These land uses are: Residential-Single Family, Residential-Multi Family, Hotel, Office, Retail/Commercial, Industrial, and Institutional. **Table 4-11** lists the total service units generated for the various land uses.

Table 4-11. Land-Use Vehicle-Mile Equivalency Table

Land Use	Development Unit	Total Service Units (Veh-mi/Dev Unit)
Residential (Single-Family)	Dwelling Unit (DU)	3.22
Residential (Multi-Family)	Dwelling Unit (DU)	1.75
Hotel	Rooms	1.56
Office	1,000 Sq. Ft. GFA	6.60
Retail/Commercial	1,000 Sq. Ft. GFA	5.30
Industrial	1,000 Sq. Ft. GFA	3.11
Institutional	1,000 Sq. Ft. GFA	0.85

Trip rate data was updated from the 2019 Impact Fee Study using the Institute for Transportations Engineers' *Trip Generation Manual, 11th Edition*. Trip length data was also updated as discussed in **Section 4.8.2**. A new hotel category was added to provide more detailed information with the expectation of possible hotel development in the future.

4.9 ROADWAY IMPACT FEE CALCULATION

The calculation of the actual fee charged to development is a two-part process. These parts are:

Part 1: Determine number of service units (vehicle-miles) generated by the development using the land-use vehicle-mile equivalency table.

No. of Development Units x Vehicle-miles (Total Service Units) per development unit = Development's Vehicle-miles

Part 2: Calculate the impact due by new development. This fee based on the cost per service unit for the service area where the development is located.

Development's Vehicle-miles (from Part 1) x Cost per vehicle-mile (from CIP calculation) = Impact Fee due from development

Examples: The following fee would be assessed to new developments located in the West Service Area, which has a credited fee per service unit of $1,387.

Single-Family Dwelling

1 dwelling unit x (3.22 vehicle-miles/1 dwelling unit) = 3.22 vehicle-miles

3.40 Vehicle-miles x $1,387/ vehicle-mile = $4,469.00

50,000 square foot (s.f.) Office Building

50,000 s.f x (6.60 vehicles-miles/1000 s.f. units) = 330.00 vehicle-miles

330.00 vehicle-miles x $1,387/vehicle-mile = $457,710.00

50,000 s.f. Retail Center

50,000 s.f. x (5.30 vehicle-miles/1,000 s.f. units = 265.00 vehicle-miles

265.00 vehicle-miles x $1,387/vehicle-mile = $367,555.00

100,000 s.f. Industrial Development

100,000 s.f. x (3.11 vehicle-miles/1,000 s.f. units = 311.00 vehicle-miles

311.00 vehicle-miles x $1,387/ vehicle-mile = $432,357.00

APPENDIX A
Water System Project Cost Estimates

City of Terrell

Cost Estimate		**Date:**	**May 17, 2024**
Construction Project Number:	**1**	**Phase:**	**Short**
Project Name:	**Construction of new 24- and 20-inch water line along Terry Creek**		

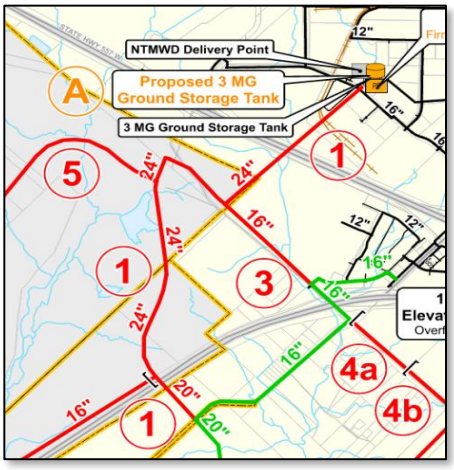
Project Description:

This project includes the construction of a 24-inch water line that begins at the pump station, continues southwest across State Highway 557, then northwest along County Road 305 before turning to the south and terminating before crossing Interstate 20. From northwest of Interstate 20, a 20-inch line continues southeast before terminating at North FM 148.

Project Drivers:

This project will supplement capacity to serve future growth in the south Terrell area.

Vicinity Map



Opinion of Probable Construction Cost

ITEM	DESCRIPTION	QUANTITY	UNIT	UNIT PRICE	TOTAL
1	24" WL & Appurtenances	14,300	LF	$ 600	$ 8,580,000
2	20" WL & Appurtenances	1,700	LF	$ 500	$ 850,000
3	36" Boring and Casing	800	LF	$ 1,800	$ 1,440,000
4	34" Boring and Casing	500	LF	$ 1,700	$ 850,000
5	Concrete Pavement Repair	2,000	LF	$ 100	$ 200,000
				SUBTOTAL:	**$ 11,920,000**
		CONTINGENCY		30%	$ 3,576,000
				SUBTOTAL:	**$ 15,496,000**
		ENG/SURVEY		15%	$ 2,324,400
				SUBTOTAL:	**$ 17,820,400**
				Estimated Project Total:	**$ 17,820,400**

City of Terrell

Cost Estimate | **Date:** May 17, 2024

Construction Project Number: 2 | **Phase:** Short

Project Name: Construction of new 20-inch water line from the 1.5 MG South EST

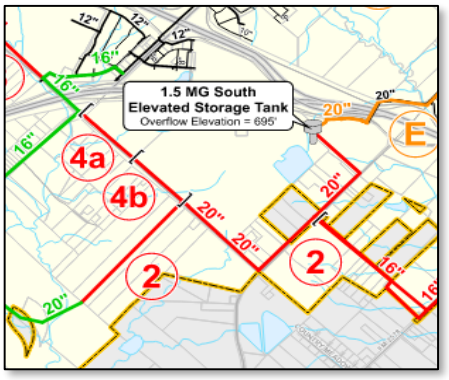
Project Description:

This project includes the construction of a 20-inch water line that begins southwest of County Road 305 where the 20-inch developer-funded line terminates and runs northeast. The line goes southeast along County Road 305, and finally turns northeast along County Road 304 to meet the 1.5 MG South EST.

Project Drivers:

This project connects the existing elevated storage tank to the proposed developments in the southern area of Terrell. This pipeline connection assists with pressure maintenance and providing storage for emergencies (e.g., fire) and peaking.

Vicinity Map



Opinion of Probable Construction Cost

ITEM	DESCRIPTION	QUANTITY	UNIT	UNIT PRICE	TOTAL
1	20" WL & Appurtenances	13,500	LF	$ 500	$ 6,750,000
2	34" Boring and Casing	100	LF	$ 1,700	$ 170,000
3	Concrete Pavement Repair	7,300	LF	$ 100	$ 730,000
				SUBTOTAL:	**$ 7,650,000**
				CONTINGENCY 30%	$ 2,295,000
				SUBTOTAL:	**$ 9,945,000**
				ENG/SURVEY 15%	$ 1,491,800
				SUBTOTAL:	**$ 11,436,800**
				Estimated Project Total:	**$ 11,436,800**

City of Terrell

Cost Estimate — **Date:** May 17, 2024

Construction Project Number: 3 — **Phase:** Short

Project Name: Construction of new 16-inch water line along CR 305

Project Description:

This project includes the construction of a 16-inch water line running northwest from the intersection of County Road 305 and American Way and terminating where it meets the developer-funded 24-inch line.

Project Drivers:

This project connects proposed water lines to an existing water line to create looping and provide additional redundancy and reliability in this area.

Vicinity Map

Opinion of Probable Construction Cost

ITEM	DESCRIPTION	QUANTITY	UNIT	UNIT PRICE	TOTAL
1	16" WL & Appurtenances	3,400	LF	$ 400	$ 1,360,000
2	30" Boring and Casing	100	LF	$ 1,500	$ 150,000
3	Concrete Pavement Repair	3,300	LF	$ 100	$ 330,000
				SUBTOTAL:	**$ 1,840,000**
		CONTINGENCY		30%	$ 552,000
				SUBTOTAL:	**$ 2,392,000**
		ENG/SURVEY		15%	$ 358,800
				SUBTOTAL:	**$ 2,750,800**
				Estimated Project Total:	**$ 2,750,800**

City of Terrell

Cost Estimate		**Date:**	**May 17, 2024**
Construction Project Number:	**4a**	**Phase:**	**Short**
Project Name:	**Construction of new 16-inch water line along CR 305 from Lechner Property**		

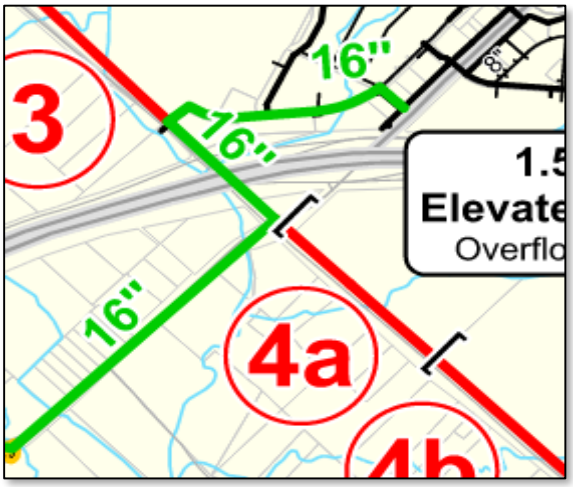
Project Description:

This project includes the construction of a 16-inch water line running northwest along County Road 305 beginning at the southwest corner of the Lechner Property. The proposed water line ties into a 16-inch line under construction at North FM 148.

Project Drivers:

This project connects proposed water lines to create looping and provide additional redundancy and reliability in this area. The proposed project also provides water service to new development along CR 305 just south of North FM 148.

Vicinity Map



Opinion of Probable Construction Cost

ITEM	DESCRIPTION	QUANTITY	UNIT	UNIT PRICE	TOTAL
1	16" WL & Appurtenances	2,200	LF	$ 400	$ 880,000
2	30" Boring and Casing	200	LF	$ 1,500	$ 300,000
3	Concrete Pavement Repair	2,000	LF	$ 100	$ 200,000
				SUBTOTAL:	**$ 1,380,000**
		CONTINGENCY		30%	$ 414,000
				SUBTOTAL:	**$ 1,794,000**
		ENG/SURVEY		15%	$ 269,100
				SUBTOTAL:	**$ 2,063,100**
				Estimated Project Total:	**$ 2,063,100**

City of Terrell

Cost Estimate | **Date:** May 17, 2024

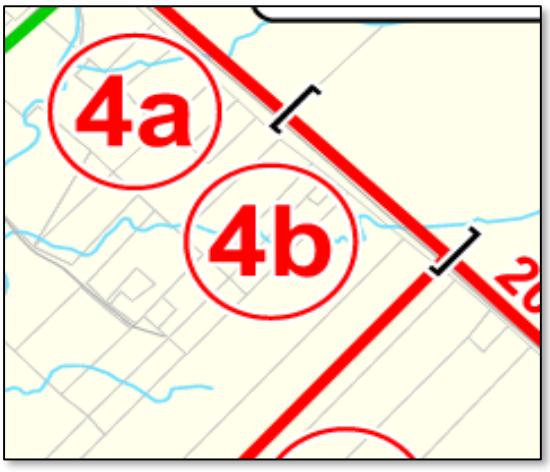
Construction Project Number: 4b | **Phase:** Short

Project Name: Construction of new 16-inch water line along CR 305 south of 4A

Project Description:

This project includes the construction of a 16-inch water line running northwest along County Road 305 between the extents of Project No. 2 and Project No. 4a.

Vicinity Map



Project Drivers:

This project connects proposed water lines to create looping and provide additional redundancy and reliability in this area. The proposed project also provides water service to new development along CR 305 just south of North FM 148.

Opinion of Probable Construction Cost

ITEM	DESCRIPTION	QUANTITY	UNIT	UNIT PRICE	TOTAL
1	16" WL & Appurtenances	2,000	LF	$ 400	$ 800,000
2	30" Boring and Casing	100	LF	$ 1,500	$ 150,000
3	Concrete Pavement Repair	1,900	LF	$ 100	$ 190,000
				SUBTOTAL:	**$ 1,140,000**
				CONTINGENCY 30%	$ 342,000
				SUBTOTAL:	**$ 1,482,000**
				ENG/SURVEY 15%	$ 222,300
				SUBTOTAL:	**$ 1,704,300**
				Estimated Project Total:	**$ 1,704,300**

City of Terrell

Cost Estimate		**Date:**	**May 17, 2024**
Construction Project Number:	**5**	**Phase:**	**Short**
Project Name:	**Construction of new 20-inch water line from CR 305 through Central Las Lomas**		

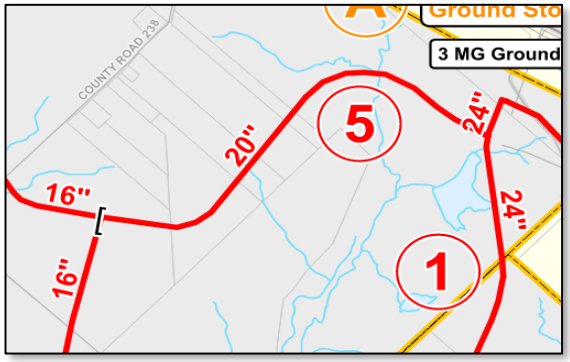
Project Description:

This project includes the construction of a 20-inch water line running west from County Road 305 through Eastland Park and Central Las Lomas developments.

Project Drivers:

This project will supplement capacity to serve future growth in the Central Las Lomas development area.

Vicinity Map



Opinion of Probable Construction Cost

ITEM	DESCRIPTION	QUANTITY	UNIT	UNIT PRICE	TOTAL
1	20" WL & Appurtenances	8,600	LF	$ 500	$ 4,300,000
2	34" Boring and Casing	300	LF	$ 1,700	$ 510,000
				SUBTOTAL:	**$ 4,810,000**
				CONTINGENCY 30%	$ 1,443,000
				SUBTOTAL:	**$ 6,253,000**
				ENG/SURVEY 15%	$ 938,000
				SUBTOTAL:	**$ 7,191,000**
				Estimated Project Total:	**$ 7,191,000**

City of Terrell

Cost Estimate — **Date:** May 17, 2024

Construction Project Number: 6 — **Phase:** Short

Project Name: Construction of new 16-inch water line from Interstate 20 through Central Las Lomas

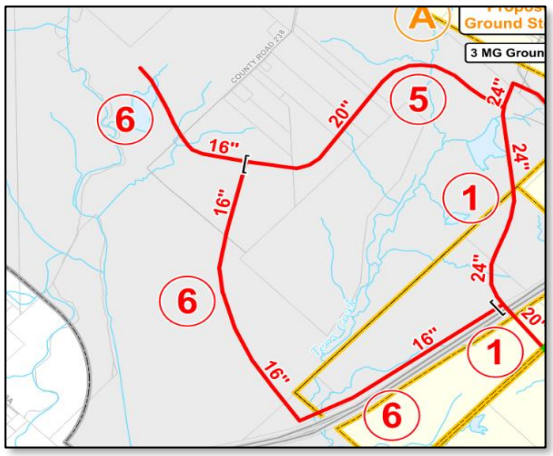
Project Description:

This project includes the construction of a 16-inch water line running southwest along Interstate 20 then turning north through Central Las Lomas. The line meets where Project No. 5 terminates and continues northwest, crossing County Road 238 and terminating within the Central Las Lomas development.

Project Drivers:

This project will provide redundancy and supplement capacity to serve future growth in the Central Las Lomas development area.

Vicinity Map



Opinion of Probable Construction Cost

ITEM	DESCRIPTION	QUANTITY	UNIT	UNIT PRICE	TOTAL
1	16" WL & Appurtenances	18,900	LF	$ 400	$ 7,560,000
2	30" Boring and Casing	500	LF	$ 1,500	$ 750,000
				SUBTOTAL:	**$ 8,310,000**
				CONTINGENCY 30%	$ 2,493,000
				SUBTOTAL:	**$ 10,803,000**
				ENG/SURVEY 15%	$ 1,620,500
				SUBTOTAL:	**$ 12,423,500**
				Estimated Project Total:	**$ 12,423,500**

City of Terrell

Cost Estimate | **Date:** May 17, 2024

Construction Project Number: 7 | **Phase:** Short

Project Name: Construction of new 16-inch water line from CR 304 to Interstate 20

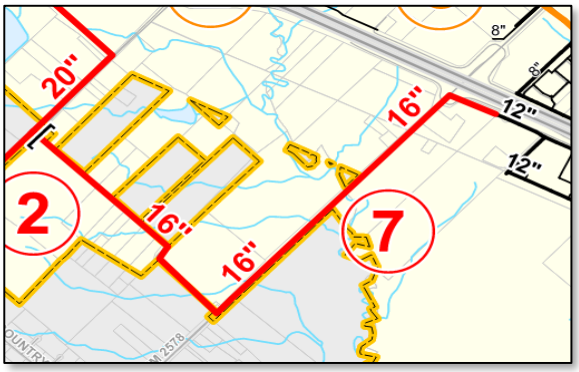
Project Description:

This project includes the construction of a 16-inch water line that connects to the existing system near the intersection of Interstate 20 and FM 2578. The line travels south along FM 2578 before turning northwest along FM 303. The line continues along FM 303 before terminating at FM 304 where it meets Project No. 2.

Project Drivers:

This project will provide redundancy and supplement capacity to serve future growth in the south development area.

Vicinity Map



Opinion of Probable Construction Cost

ITEM	DESCRIPTION	QUANTITY	UNIT	UNIT PRICE	TOTAL
1	16" WL & Appurtenances	10,500	LF	$ 400	$ 4,200,000
2	30" Boring and Casing	300	LF	$ 1,500	$ 450,000
3	Concrete Pavement Repair	4,600	LF	$ 100	$ 460,000
				SUBTOTAL:	**$ 5,110,000**
			CONTINGENCY	30%	$ 1,533,000
				SUBTOTAL:	**$ 6,643,000**
			ENG/SURVEY	15%	$ 996,500
				SUBTOTAL:	**$ 7,639,500**
				Estimated Project Total:	**$ 7,639,500**

City of Terrell

Cost Estimate	**Date: May 17, 2024**
Construction Project Number: 8	**Phase: Short**
Project Name:	**Construction of new 16-inch water line along Griffith Avenue and 12-inch water line to Whitt Ranch**

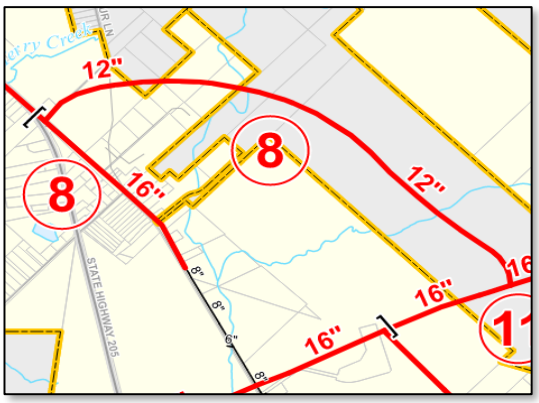
Project Description:

This project includes the construction of a 16-inch line running north along Griffith Avenue and turning into a 12-inch line heading east though Whitt Ranch. The line is planned to tie into proposed Project No. 16 and Project No. 11.

Project Drivers:

This project will supplement capacity to serve future growth in the Whitt Ranch and northwest development area.

Vicinity Map



Opinion of Probable Construction Cost

ITEM	DESCRIPTION	QUANTITY	UNIT	UNIT PRICE	TOTAL
1	16" WL & Appurtenances	4,200	LF	$ 400	$ 1,680,000
2	12" WL & Appurtenances	10,900	LF	$ 300	$ 3,270,000
3	Concrete Pavement Repair	1,600	LF	$ 100	$ 160,000
				SUBTOTAL:	**$ 5,110,000**
		CONTINGENCY		30%	$ 1,533,000
				SUBTOTAL:	**$ 6,643,000**
		ENG/SURVEY		15%	$ 996,500
				SUBTOTAL:	**$ 7,639,500**
				Estimated Project Total:	**$ 7,639,500**

City of Terrell

Cost Estimate **Date: May 17, 2024**

Construction Project Number: 9 **Phase: Short**

Project Name: **Construction of new 20-inch water line along State Highway 205 and a 16-inch water line through Western Securities**

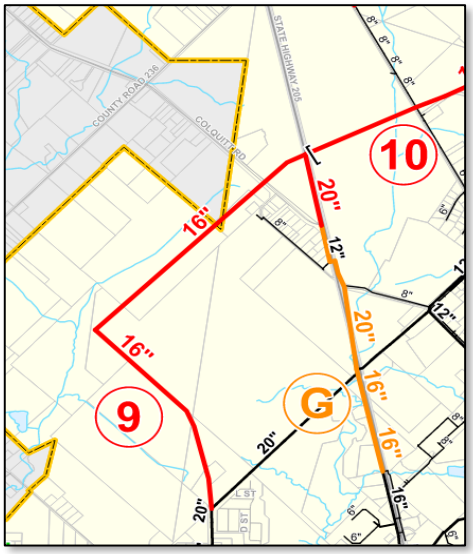
Project Description:

This project includes a 20-inch water line running north along State Highway 205 then turning into a 16-inch line running southwest through the Western Securities development to G Street.

Project Drivers:

This project will supplement capacity to serve future growth in the Western Securities and northwest development area and provide additional supply to the Poetry EST.

Vicinity Map



Opinion of Probable Construction Cost

ITEM	DESCRIPTION	QUANTITY	UNIT	UNIT PRICE	TOTAL
1	20" WL & Appurtenances	1,900	LF	$ 500	$ 950,000
2	16" WL & Appurtenances	11,600	LF	$ 400	$ 4,640,000
3	Concrete Pavement Repair	200	LF	$ 100	$ 20,000
				SUBTOTAL:	**$ 5,610,000**
			CONTINGENCY	30%	$ 1,683,000
				SUBTOTAL:	**$ 7,293,000**
			ENG/SURVEY	15%	$ 1,094,000
				SUBTOTAL:	**$ 8,387,000**
				Estimated Project Total:	**$ 8,387,000**

City of Terrell

Cost Estimate **Date: May 17, 2024**

Construction Project Number: 10 **Phase: Short**

Project Name: **Construction of new 12-inch water line from Meridith Drive and a 16-inch water line to State Highway 205**

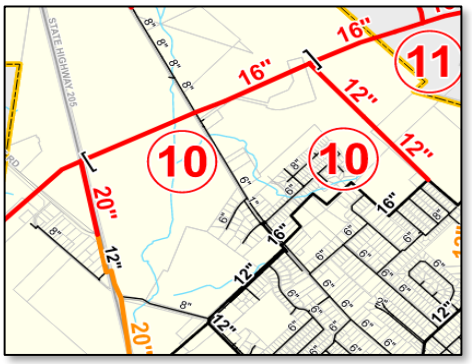
Project Description:

The project includes a 12-inch water line extending north from Meredith Drive and turning southwest through Griffith Forest Tract and terminating at State Highway 205 where it meets Project No. 9.

Project Drivers:

This project will supplement capacity to serve future growth in the Griffith Forest and Whitt Ranch development area and provide additional supply to the Poetry EST.

Vicinity Map



Opinion of Probable Construction Cost

ITEM	DESCRIPTION	QUANTITY	UNIT	UNIT PRICE	TOTAL
1	16" WL & Appurtenances	5,400	LF	$ 400	$ 2,160,000
2	12" WL & Appurtenances	3,700	LF	$ 300	$ 1,110,000
3	30" Boring and Casing	200	LF	$ 1,500	$ 300,000
4	Concrete Pavement Repair	600	LF	$ 100	$ 60,000
				SUBTOTAL:	**$ 3,630,000**
		CONTINGENCY		30%	$ 1,089,000
				SUBTOTAL:	**$ 4,719,000**
		ENG/SURVEY		15%	$ 707,900
				SUBTOTAL:	**$ 5,426,900**
				Estimated Project Total:	**$ 5,426,900**

City of Terrell

Cost Estimate **Date: May 17, 2024**

Construction Project Number: 11 **Phase: Short**

Project Name: **Construction of new 12-inch water line from Town North Drive and a 16-inch water line through Griffith Forest Tract and Whitt Ranch**

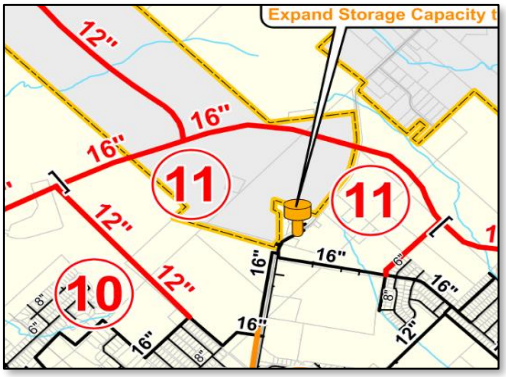
Project Description:

This project includes a 12-inch water line extending north from Town North Drive and turning into a 16-inch water line going west through Griffith Forest Tract and Whitt Ranch before terminating at Project No. 10.

Project Drivers:

This project will supplement capacity to serve future growth in the Whitt Ranch development area and provide additional supply to the Poetry EST.

Vicinity Map



Opinion of Probable Construction Cost

ITEM	DESCRIPTION	QUANTITY	UNIT	UNIT PRICE	TOTAL
1	16" WL & Appurtenances	8,400	LF	$ 400	$ 3,360,000
2	12" WL & Appurtenances	1,600	LF	$ 300	$ 480,000
3	Concrete Pavement Repair	100	LF	$ 100	$ 10,000
				SUBTOTAL:	**$ 3,850,000**
		CONTINGENCY		30%	$ 1,155,000
				SUBTOTAL:	**$ 5,005,000**
		ENG/SURVEY		15%	$ 750,800
				SUBTOTAL:	**$ 5,755,800**
				Estimated Project Total:	**$ 5,755,800**

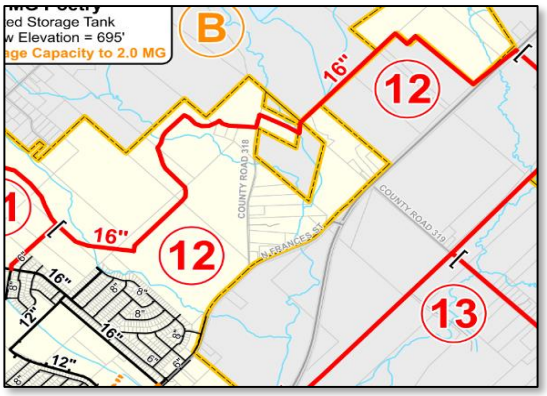
City of Terrell

Cost Estimate		**Date:**	**May 17, 2024**
Construction Project Number:	**12**	**Phase:**	**Short**
Project Name:	**Construction of new 16-inch water line through Hillside Ranch to State Highway 34**		

Project Description:

This project includes a 16-inch water line running southwest along State Highway 34 before turning west then going southwest through Hillside Ranch and terminating at Project No. 11.

Vicinity Map



Project Drivers:

This project will supplement capacity to serve future growth in the Hillside Ranch and Evening Star development area.

Opinion of Probable Construction Cost

ITEM	DESCRIPTION	QUANTITY	UNIT	UNIT PRICE	TOTAL
1	16" WL & Appurtenances	16,700	LF	$ 400	$ 6,680,000
2	30" Boring and Casing	300	LF	$ 1,500	$ 450,000
3	Concrete Pavement Repair	100	LF	$ 100	$ 10,000
				SUBTOTAL:	**$ 7,140,000**
		CONTINGENCY		30%	$ 2,142,000
				SUBTOTAL:	**$ 9,282,000**
		ENG/SURVEY		15%	$ 1,392,300
				SUBTOTAL:	**$ 10,674,300**
				Estimated Project Total:	**$ 10,674,300**

City of Terrell

Cost Estimate		**Date:**	**May 17, 2024**
Construction Project Number:	**13**	**Phase:**	**Short**
Project Name:	**Construction of new 12- and 16-inch water line along State Highway 34**		

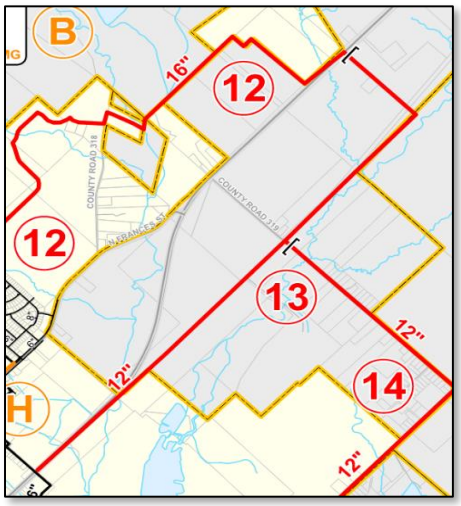
Project Description:

This project includes a 12- and 16-inch water line running northeast along State Highway 34 from Rose Street before turning northwest to meet State Highway 34 and terminating at Project No. 12.

Project Drivers:

This project will supplement capacity to serve future growth in the Sunwell 286 and First Steps Homes development area.

Vicinity Map



Opinion of Probable Construction Cost

ITEM	DESCRIPTION	QUANTITY	UNIT	UNIT PRICE	TOTAL
1	16" WL & Appurtenances	7,200	LF	$ 400	$ 2,880,000
2	12" WL & Appurtenances	8,900	LF	$ 300	$ 2,670,000
3	30" Boring and Casing	300	LF	$ 1,500	$ 450,000
4	Concrete Pavement Repair	200	LF	$ 100	$ 20,000
				SUBTOTAL:	**$ 6,020,000**
		CONTINGENCY		30%	$ 1,806,000
				SUBTOTAL:	**$ 7,826,000**
		ENG/SURVEY		15%	$ 1,173,900
				SUBTOTAL:	**$ 8,999,900**
				Estimated Project Total:	**$ 8,999,900**

City of Terrell

Cost Estimate — **Date:** May 17, 2024

Construction Project Number: 14 — **Phase:** Short

Project Name: Construction of new 12-inch water line along FM 429

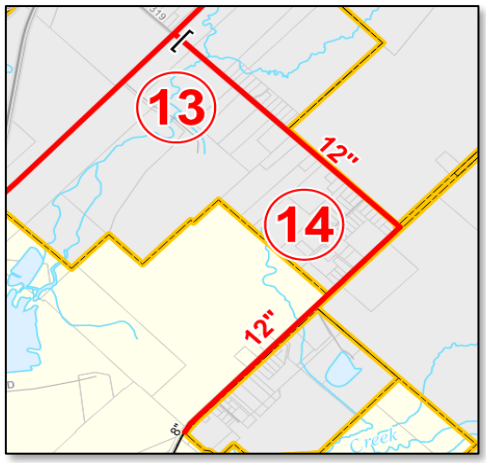
Project Description:

This project consists of a 12-inch water line running north along FM 429 then turning northwest along County Road 319 before terminating at Project No. 13.

Project Drivers:

This project will supplement capacity to serve future growth in the northeast development area and provide redundancy.

Vicinity Map



Opinion of Probable Construction Cost

ITEM	DESCRIPTION	QUANTITY	UNIT	UNIT PRICE	TOTAL
1	12" WL & Appurtenances	11,600	LF	$ 300	$ 3,480,000
2	20" Boring and Casing	300	LF	$ 1,000	$ 300,000
3	Concrete Pavement Repair	300	LF	$ 100	$ 30,000
				SUBTOTAL:	**$ 3,810,000**
				CONTINGENCY 30%	$ 1,143,000
				SUBTOTAL:	**$ 4,953,000**
				ENG/SURVEY 15%	$ 743,000
				SUBTOTAL:	**$ 5,696,000**
				Estimated Project Total:	**$ 5,696,000**

City of Terrell

Cost Estimate | **Date:** May 17, 2024

Construction Project Number: 15 | **Phase:** Short

Project Name: Construction of new 16-inch water line from State Highway 557 to State Highway 205

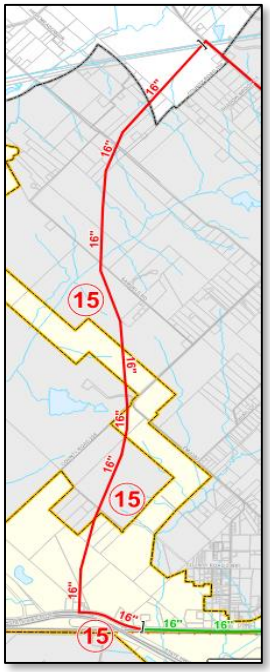
Project Description:

This project consists of a 16-inch water line running west on State Highway 557 then turning north through the Breeden Property and Samuels Property and terminating at State Highway 205.

Project Drivers:

This project will supplement capacity to serve future growth in the Northspur, Breeden Property, and Samuels Property development areas.

Vicinity Map



Opinion of Probable Construction Cost

ITEM	DESCRIPTION	QUANTITY	UNIT	UNIT PRICE	TOTAL
1	16" WL & Appurtenances	30,800	LF	$ 400	$ 12,320,000
2	30" Boring and Casing	400	LF	$ 1,500	$ 600,000
3	Concrete Pavement Repair	300	LF	$ 100	$ 30,000
				SUBTOTAL:	**$ 12,950,000**
			CONTINGENCY	30%	$ 3,885,000
				SUBTOTAL:	**$ 16,835,000**
			ENG/SURVEY	15%	$ 2,525,300
				SUBTOTAL:	**$ 19,360,300**
				Estimated Project Total:	**$ 19,360,300**

City of Terrell

Cost Estimate		**Date:**	**May 17, 2024**
Construction Project Number:	**16**	**Phase:**	**Short**
Project Name:	**Construction of new 16-inch water line along State Highway 205**		

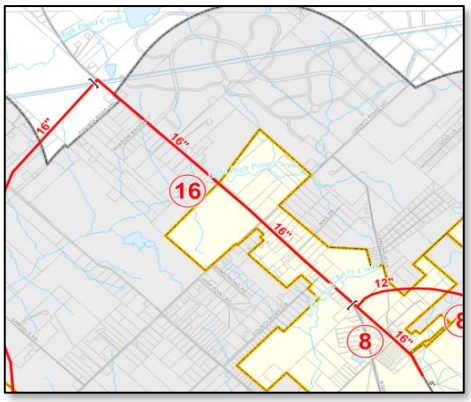
Project Description:

This project includes a 16-inch water line running southeast along State Highway 205 from northwest of CR 250 to Longspur Lane.

Project Drivers:

This project will supplement capacity to serve future growth in the Northspur, Breeden Property, and Samuels Property development areas and provide redundancy.

Vicinity Map



Opinion of Probable Construction Cost

ITEM	DESCRIPTION	QUANTITY	UNIT	UNIT PRICE	TOTAL
1	16" WL & Appurtenances	14,900	LF	$ 400	$ 5,960,000
2	30" Boring and Casing	600	LF	$ 1,500	$ 900,000
3	Concrete Pavement Repair	1,500	LF	$ 100	$ 150,000
				SUBTOTAL:	**$ 7,010,000**
		CONTINGENCY		30%	$ 2,103,000
				SUBTOTAL:	**$ 9,113,000**
		ENG/SURVEY		15%	$ 1,367,000
				SUBTOTAL:	**$ 10,480,000**
				Estimated Project Total:	**$ 10,480,000**

APPENDIX B
Wastewater System Project Cost Estimates

City of Terrell

Capital Improvement Cost Estimate — **Date: May 21, 2024**

Construction Project Number: 1 — **Phase: Short**

Project Name: Upsize of existing 15- to 24-inch gravity main carrying flow to Kings Creek interceptor

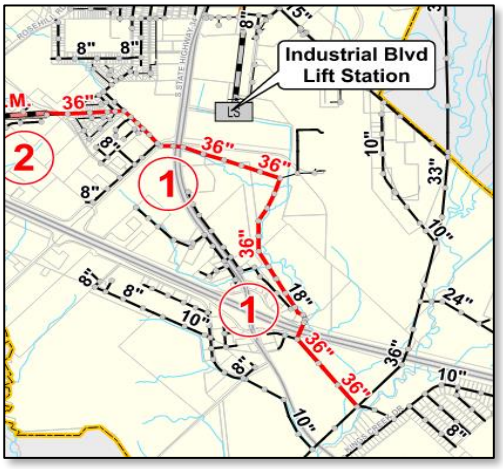
Project Description:

This project includes removing the 15-inch bottleneck downstream of the Rose Hill lift station by upsizing the line to a 36-inch line, and upsizing the downstream 15- to 24-inch gravity mains to 36-inch lines until the connection with the Kings Creek interceptor.

Project Drivers:

The proposed project will address existing capacity deficiencies downstream of the Rose Hill Lift Station and provide additional capacity to convey future flows.

Vicinity Map



Opinion of Probable Construction Cost

ITEM	DESCRIPTION	QUANTITY	UNIT	UNIT PRICE	TOTAL
1	36" Pipe 8- 16 feet deep	13,900	LF	$ 1,080	$ 15,012,000
2	50" Boring and Casing	1,000	LF	$ 2,500	$ 2,500,000
3	Concrete Pavement Repair	400	LF	$ 100	$ 40,000
				SUBTOTAL:	**$ 17,552,000**
			CONTINGENCY	30%	$ 5,265,600
				SUBTOTAL:	**$ 22,817,600**
			ENG/SURVEY	15%	$ 3,422,700
				SUBTOTAL:	**$ 26,240,300**
				Estimated Project Total:	**$ 26,240,300**

City of Terrell

Capital Improvement Cost Estimate — **Date: May 21, 2024**

Construction Project Number: 2 — **Phase: Short**

Project Name: **Expansion of Rose Hill Lift Station to 11 MGD and upsizing existing parallel 10-inch force mains to one 24-inch force main**

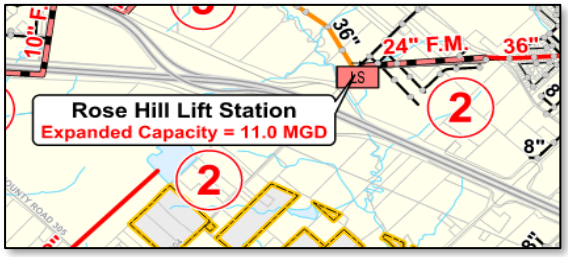
Project Description:

This project includes increasing the Rose Hill Lift Station firm capacity to 11 MGD, and replacing the two 10-inch force mains downstream of the lift station with one 24-inch force main.

Project Drivers:

The proposed project will address existing capacity deficiencies at the Rose Hill Lift Station and provide additional capacity to convey future flows.

Vicinity Map



Opinion of Probable Construction Cost

ITEM	DESCRIPTION	QUANTITY	UNIT	UNIT PRICE	TOTAL
1	Lift Station - New 11.0 MGD	1	LS	$ 16,500,000	$ 16,500,000
2	24" Force Main < 8 feet deep	3,000	LF	$ 600	$ 1,800,000
3	Concrete Pavement Repair	300	LF	$ 100	$ 30,000
				SUBTOTAL:	**$ 18,330,000**
		CONTINGENCY		30%	$ 5,499,000
				SUBTOTAL:	**$ 23,829,000**
		ENG/SURVEY		15%	$ 3,574,400
				SUBTOTAL:	**$ 27,403,400**
				Estimated Project Total:	**$ 27,403,400**

City of Terrell

Capital Improvement Cost Estimate	**Date: May 21, 2024**
Construction Project Number: 3	**Phase: Short**
Project Name:	**Construction of new 2.0 MGD Market Center Lift Station, 10-inch downstream force main, 15-inch gravity main, and decommissioning of existing Market Center Lift Station**

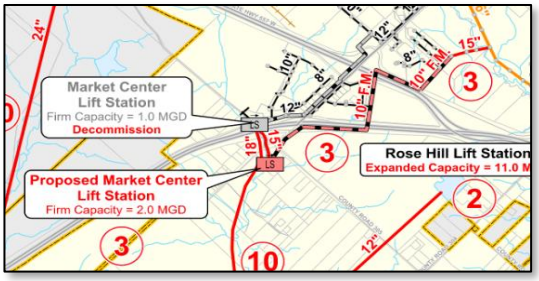
Project Description:

This project includes the construction of a 2.0 MGD proposed Market Center Lift Station and a downstream 10-inch force main flowing northeast. The downstream existing 10-inch line is upsized to an 15-inch gravity main connecting to the force main before intersecting with the 36-inch interceptor. The existing Market Center Lift Station will be decommissioned and a 15-inch gravity main will be constructed to connect the existing decommissioned lift station to the proposed one.

Project Drivers:

The proposed project will address existing capacity deficiencies at the Market Center Lift Station and provide additional capacity to convey future flows.

Vicinity Map



Opinion of Probable Construction Cost

ITEM	DESCRIPTION	QUANTITY	UNIT	UNIT PRICE	TOTAL
1	Decommission Lift Station	1	LS	$ 500,000	$ 500,000
2	Lift Station - New 2.0 MGD	1	LS	$ 7,000,000	$ 7,000,000
3	10" Force Main < 8 feet deep	9,900	LF	$ 250	$ 2,475,000
4	15" Pipe 8- 16 feet deep	3,300	LF	$ 450	$ 1,485,000
5	26" Boring and Casing	200	LF	$ 1,300	$ 260,000
6	18" Boring and Casing	1,000	LF	$ 900	$ 900,000
7	Concrete Pavement Repair	600	LF	$ 100	$ 60,000
				SUBTOTAL:	**$ 12,680,000**
				CONTINGENCY 30%	$ 3,804,000
				SUBTOTAL:	**$ 16,484,000**
				ENG/SURVEY 15%	$ 2,472,600
				SUBTOTAL:	**$ 18,956,600**
				Estimated Project Total:	**$ 18,956,600**

City of Terrell

Capital Improvement Cost Estimate	**Date: May 21, 2024**
Construction Project Number: 4	**Phase: Short**
Project Name:	**Upsize of existing 15-inch gravity main to 24- and 30-inch gravity main along Bachelor Creek**

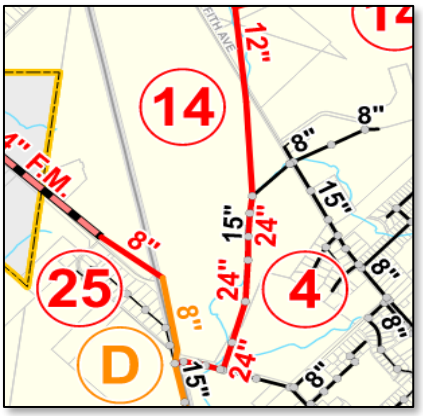
Project Description:

This project includes upsizing the existing 15-inch gravity main running south along Bachelor Creek from north of Griffith Avenue to Colquitt Road to a 24-inch gravity main. From there, the line is upsized to a 30-inch gravity main along Colquitt Road and ties into a 30-inch line under design at State Highway 205.

Project Drivers:

The proposed project will provide additional capacity for future growth in the northern area of the City.

Vicinity Map



Opinion of Probable Construction Cost

ITEM	DESCRIPTION	QUANTITY	UNIT	UNIT PRICE	TOTAL
1	30" Pipe 8- 16 feet deep	900	LF	$ 900	$ 810,000
2	24" Pipe 8- 16 feet deep	3,500	LF	$ 720	$ 2,520,000
3	48" Boring and Casing	500	LF	$ 2,400	$ 1,200,000
4	38" Boring and Casing	100	LF	$ 1,900	$ 190,000
5	Concrete Pavement Repair	200	LF	$ 100	$ 20,000
				SUBTOTAL:	**$ 4,740,000**
				CONTINGENCY 30%	$ 1,422,000
				SUBTOTAL:	**$ 6,162,000**
				ENG/SURVEY 15%	$ 924,300
				SUBTOTAL:	**$ 7,086,300**
				Estimated Project Total:	**$ 7,086,300**

City of Terrell

Capital Improvement Cost Estimate — **Date: May 21, 2024**

Construction Project Number: 5 — **Phase: Short**

Project Name: Upsize of existing 8- to 10-inch gravity mains between North Rockwall Avenue and Lamar Street to 10- to 12-inch gravity mains

Project Description:

This project includes upsizing three sections of existing 8- to 10-inch gravity mains to 10- to 12-inch gravity mains from North Rockwall Avenue to Lamar Street.

Project Drivers:

The proposed project will provide additional capacity in the downtown area of the City.

Vicinity Map

Opinion of Probable Construction Cost

ITEM	DESCRIPTION	QUANTITY	UNIT	UNIT PRICE	TOTAL
1	12" Pipe 8- 16 feet deep	5,400	LF	$ 360	$ 1,944,000
2	10" Pipe 8- 16 feet deep	3,500	LF	$ 300	$ 1,050,000
3	20" Boring and Casing	450	LF	$ 1,000	$ 450,000
4	Concrete Pavement Repair	5,100	LF	$ 100	$ 510,000
				SUBTOTAL:	**$ 3,954,000**
				CONTINGENCY 30%	$ 1,186,200
				SUBTOTAL:	**$ 5,140,200**
				ENG/SURVEY 15%	$ 771,100
				SUBTOTAL:	**$ 5,911,300**
				Estimated Project Total:	**$ 5,911,300**

City of Terrell

Capital Improvement Cost Estimate — **Date: May 21, 2024**

Construction Project Number: 6 — **Phase: Short**

Project Name: Upsize of existing 8-inch gravity main running east from Jerry Drive to Kings Creek Interceptor

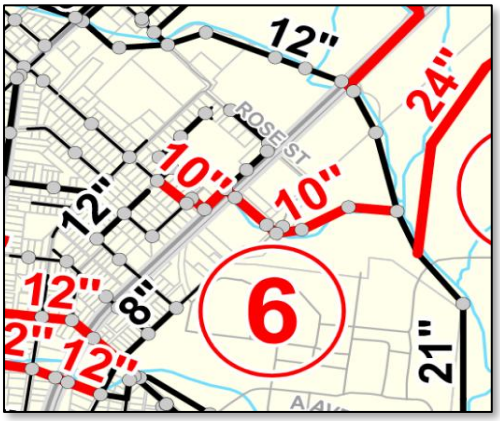
Project Description:

This project includes upsizing the existing 8-inch gravity main running east from Jerry Drive to the Kings Creek Interceptor to a 10-inch gravity main.

Project Drivers:

The proposed project will provide additional capacity in the northeast area of the City.

Vicinity Map



Opinion of Probable Construction Cost

ITEM	DESCRIPTION	QUANTITY	UNIT	UNIT PRICE	TOTAL
1	10" Pipe 8- 16 feet deep	3,000	LF	$ 300	$ 900,000
2	Concrete Pavement Repair	700	LF	$ 100	$ 70,000
				SUBTOTAL:	**$ 970,000**
			CONTINGENCY	30%	$ 291,000
				SUBTOTAL:	**$ 1,261,000**
			ENG/SURVEY	15%	$ 189,200
				SUBTOTAL:	**$ 1,450,200**
				Estimated Project Total:	**$ 1,450,200**

City of Terrell

Capital Improvement Cost Estimate — **Date: May 21, 2024**

Construction Project Number: 7 — **Phase: Short**

Project Name: Construction of new 24-inch gravity main along Kings Creek

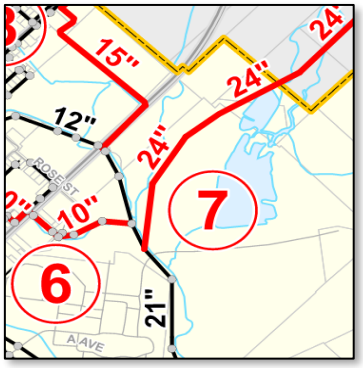
Project Description:

This project includes the construction of a 24-inch gravity main to extend the Kings Creek Interceptor north of the Terrell State Hospital.

Project Drivers:

The proposed project will provide additional capacity for future growth in the northeast area of the City.

Vicinity Map



Opinion of Probable Construction Cost

ITEM	DESCRIPTION	QUANTITY	UNIT	UNIT PRICE	TOTAL
1	24" Pipe 8- 16 feet deep	2,300	LF	$ 720	$ 1,656,000
2	38" Boring and Casing	300	LF	$ 1,900	$ 570,000
				SUBTOTAL:	**$ 2,226,000**
		CONTINGENCY		30%	$ 667,800
				SUBTOTAL:	**$ 2,893,800**
		ENG/SURVEY		15%	$ 434,100
				SUBTOTAL:	**$ 3,327,900**
				Estimated Project Total:	**$ 3,327,900**

City of Terrell

Capital Improvement Cost Estimate — **Date: May 21, 2024**

Construction Project Number: 8 — **Phase: Short**

Project Name: Construction of new 12 to 15-inch gravity main conveying flow from Hillside Ranch to the Kings Creek Interceptor

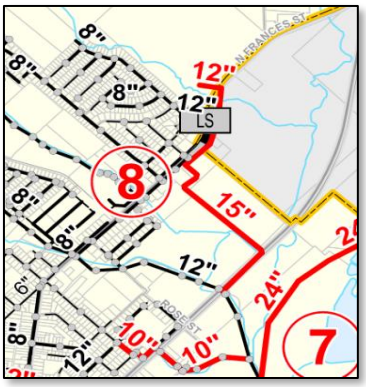
Project Description:

This project includes the construction of a 12-inch gravity main originating at Hillside Ranch northwest of North Frances Street and terminating at Project No. 7.

Project Drivers:

The proposed project will provide additional capacity for future growth in the northeast area of the City.

Vicinity Map



Opinion of Probable Construction Cost

ITEM	DESCRIPTION	QUANTITY	UNIT	UNIT PRICE	TOTAL
1	15" Pipe 8- 16 feet deep	5,600	LF	$ 450	$ 2,520,000
2	12" Pipe 8- 16 feet deep	400	LF	$ 360	$ 144,000
3	20" Boring and Casing	400	LF	$ 1,000	$ 400,000
4	Concrete Pavement Repair	700	LF	$ 100	$ 70,000
				SUBTOTAL:	**$ 3,134,000**
				CONTINGENCY 30%	$ 940,200
				SUBTOTAL:	**$ 4,074,200**
				ENG/SURVEY 15%	$ 611,200
				SUBTOTAL:	**$ 4,685,400**
				Estimated Project Total:	**$ 4,685,400**

City of Terrell

Capital Improvement Cost Estimate — **Date: May 21, 2024**

Construction Project Number: 9 — **Phase: Short**

Project Name: Construction of new 24-inch gravity main conveying flow from Evening Star and Sun Well 286 developments to Project No. 7

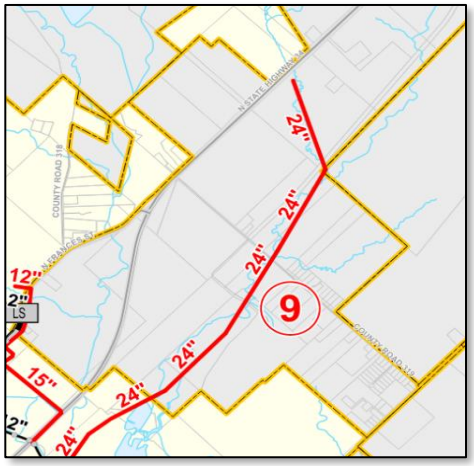
Project Description:

This project includes the construction of a 24-inch beginning at the upstream end of Project No. 7 and terminating at the Sun Well 286 and Evening Star developments.

Project Drivers:

The proposed project will provide additional capacity for future growth in the northeast area of the City.

Vicinity Map



Opinion of Probable Construction Cost

ITEM	DESCRIPTION	QUANTITY	UNIT	UNIT PRICE	TOTAL
1	24" Pipe 8- 16 feet deep	12,200	LF	$ 720	$ 8,784,000
2	Concrete Pavement Repair	100	LF	$ 100	$ 10,000
				SUBTOTAL:	**$ 8,794,000**
				CONTINGENCY 30%	$ 2,638,200
				SUBTOTAL:	**$ 11,432,200**
				ENG/SURVEY 15%	$ 1,714,900
				SUBTOTAL:	**$ 13,147,100**
				Estimated Project Total:	**$ 13,147,100**

City of Terrell

Capital Improvement Cost Estimate — **Date: May 21, 2024**

Construction Project Number: 10 — **Phase: Short**

Project Name: Construction of new 18-inch gravity main conveying flow from the decommissioned Market Center Lift Station along Little Brushy Creek

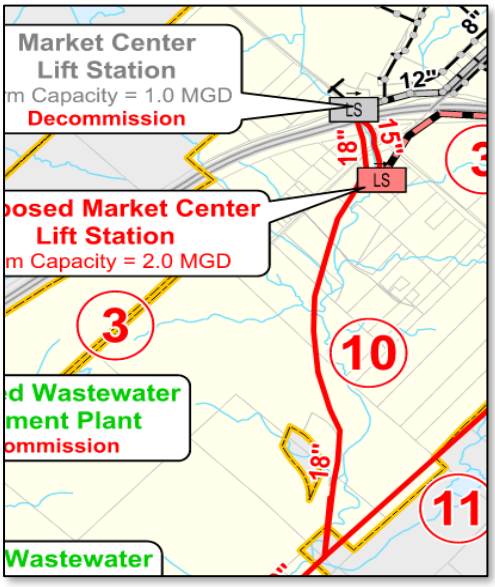
Project Description:

This project includes the construction of a 18-inch gravity main originating at the decommissioned Market Center Lift Station and flowing south from Interstate 20 along Little Brushy Creek.

Project Drivers:

The proposed project will convey flow from the existing Market Center Lift Station service area to the southwest by gravity once the lift station is decommissioned.

Vicinity Map



Opinion of Probable Construction Cost

ITEM	DESCRIPTION	QUANTITY	UNIT	UNIT PRICE	TOTAL
1	18" Pipe 8- 16 feet deep	11,200	LF	$ 540	$ 6,048,000
2	32" Boring and Casing	900	LF	$ 1,600	$ 1,440,000
3	Concrete Pavement Repair	1,000	LF	$ 100	$ 100,000
				SUBTOTAL:	**$ 7,588,000**
			CONTINGENCY	30%	$ 2,276,400
				SUBTOTAL:	**$ 9,864,400**
			ENG/SURVEY	15%	$ 1,479,700
				SUBTOTAL:	**$ 11,344,100**
				Estimated Project Total:	**$ 11,344,100**

City of Terrell

Capital Improvement Cost Estimate — **Date: May 21, 2024**

Construction Project Number: 11 — **Phase: Short**

Project Name: Construction of new 12- and 30-inch gravity main conveying flow from Lechner Farm and Hunters Ridge to Little Brushy Creek

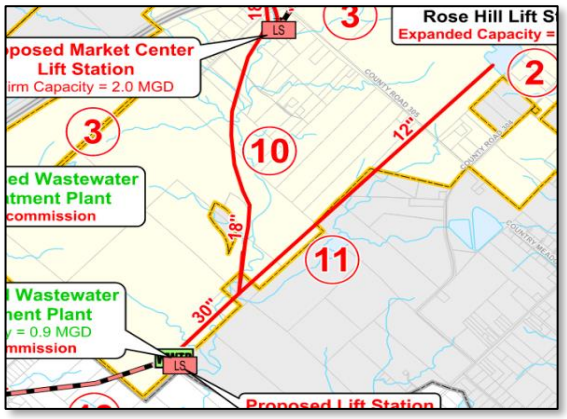
Project Description:

This project includes the construction of a 12- and 30-inch gravity main from Lechner Farm to the southwest corner of Arboretum Estates.

Project Drivers:

The proposed project will provide additional capacity for future growth in the southwest area of the City

Vicinity Map



Opinion of Probable Construction Cost

ITEM	DESCRIPTION	QUANTITY	UNIT	UNIT PRICE	TOTAL
1	30" Pipe 8- 16 feet deep	2,700	LF	$ 900	$ 2,430,000
2	12" Pipe 8- 16 feet deep	9,900	LF	$ 360	$ 3,564,000
3	48" Boring and Casing	200	LF	$ 2,400	$ 480,000
4	20" Boring and Casing	200	LF	$ 1,000	$ 200,000
5	Concrete Pavement Repair	100	LF	$ 100	$ 10,000
				SUBTOTAL:	**$ 6,684,000**
				CONTINGENCY 30%	$ 2,005,200
				SUBTOTAL:	**$ 8,689,200**
				ENG/SURVEY 15%	$ 1,303,400
				SUBTOTAL:	**$ 9,992,600**
				Estimated Project Total:	**$ 9,992,600**

City of Terrell

Capital Improvement Cost Estimate — **Date: May 21, 2024**

Construction Project Number: 12 — **Phase: Short**

Project Name: Construction of new 4.0 MGD wastewater treatment plant

Project Description:

This project includes the construction of a 4.0 MGD wastewater treatment plant southwest of the intersection of FM 148 and FM 987.

Project Drivers:

The proposed project will allow for the expansion of the western Terrell service area, and allow existing package plants at developments to be decommissioned.

Vicinity Map

Opinion of Probable Construction Cost

ITEM	DESCRIPTION	QUANTITY	UNIT	UNIT PRICE	TOTAL
1	Wastewater Treatment Plant - New 4.0 MGD	1	LS	$ 120,000,000	$ 120,000,000
				SUBTOTAL:	**$ 120,000,000**
				CONTINGENCY 30%	$ 36,000,000
				SUBTOTAL:	**$ 156,000,000**
				ENG/SURVEY 15%	$ 23,400,000
				SUBTOTAL:	**$ 179,400,000**
				Estimated Project Total:	**$ 179,400,000**

City of Terrell

Capital Improvement Cost Estimate — **Date: May 21, 2024**

Construction Project Number: 13 — **Phase: Short**

Project Name: **Construction of new 7.75 MGD lift station, downstream 20-inch force main, and 54-inch gravity main to proposed wastewater treatment plant**

Project Description:

This project includes the construction of a 7.75 MGD lift station at the downstream end of Project No. 11, a downstream 20-inch force main, and a 54-inch gravity main flowing south to the proposed wastewater treatment plant

Project Drivers:

The proposed project will extend service to the central area of the City south of Interstate 20.

Vicinity Map

Opinion of Probable Construction Cost

ITEM	DESCRIPTION	QUANTITY	UNIT	UNIT PRICE	TOTAL
1	Lift Station - New 7.75 MGD	1	LS	$ 11,625,000	$ 11,625,000
2	20" Force Main < 8 feet deep	10,900	LF	$ 500	$ 5,450,000
3	54" Pipe 8- 16 feet deep	1,400	LF	$ 1,620	$ 2,268,000
4	Concrete Pavement Repair	1,100	LF	$ 100	$ 110,000
				SUBTOTAL:	**$ 19,453,000**
				CONTINGENCY 30%	$ 5,835,900
				SUBTOTAL:	**$ 25,288,900**
				ENG/SURVEY 15%	$ 3,793,400
				SUBTOTAL:	**$ 29,082,300**
				Estimated Project Total:	**$ 29,082,300**

City of Terrell

Capital Improvement Cost Estimate — **Date: May 21, 2024**

Construction Project Number: 14 — **Phase: Short**

Project Name: Construction of new 12-inch gravity main to convey flow from Whitt Ranch and the Griffith Forest Tract along Bachelor Creek

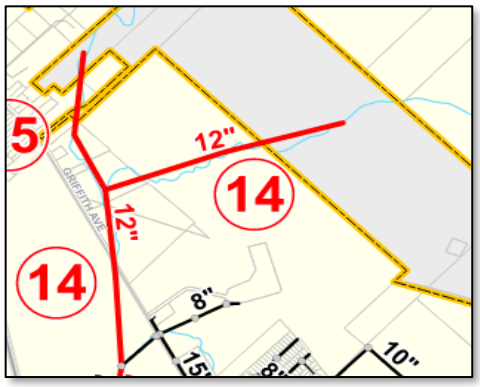
Project Description:

This project includes the construction of a 12-inch gravity main originating in Whitt Ranch and flowing west through the Griffith Forest Tract before turning south and terminating at Project No. 4

Project Drivers:

The proposed project will provide additional capacity for future growth in the northern area of the City.

Vicinity Map



Opinion of Probable Construction Cost

ITEM	DESCRIPTION	QUANTITY	UNIT	UNIT PRICE	TOTAL
1	12" Pipe 8- 16 feet deep	8,300	LF	$ 360	$ 2,988,000
2	20" Boring and Casing	400	LF	$ 1,000	$ 400,000
3	Concrete Pavement Repair	100	LF	$ 100	$ 10,000
				SUBTOTAL:	**$ 3,398,000**
				CONTINGENCY 30%	$ 1,019,400
				SUBTOTAL:	**$ 4,417,400**
				ENG/SURVEY 15%	$ 662,700
				SUBTOTAL:	**$ 5,080,100**
				Estimated Project Total:	**$ 5,080,100**

City of Terrell

Capital Improvement Cost Estimate — **Date: May 21, 2024**

Construction Project Number: 15 — **Phase: Short**

Project Name: Construction of a new 12-inch gravity main to convey flow from Whitt Ranch along Bachelor Creek

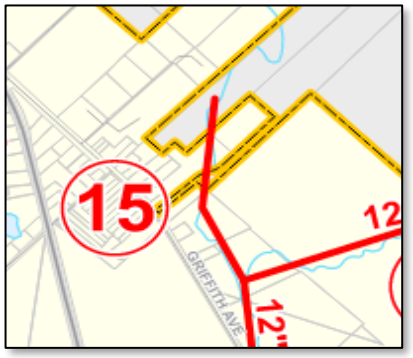
Project Description:

The project includes the construction of a 12-inch gravity main originating in the northwest corner of Whitt Ranch and running south before tying into Project No. 14.

Project Drivers:

The proposed project will provide additional capacity for future growth in the northern area of the City.

Vicinity Map



Opinion of Probable Construction Cost

ITEM	DESCRIPTION	QUANTITY	UNIT	UNIT PRICE	TOTAL
1	12" Pipe 8- 16 feet deep	3,000	LF	$ 360	$ 1,080,000
2	26" Boring and Casing	200	LF	$ 1,300	$ 260,000
				SUBTOTAL:	**$ 1,340,000**
		CONTINGENCY		30%	$ 402,000
				SUBTOTAL:	**$ 1,742,000**
		ENG/SURVEY		15%	$ 261,300
				SUBTOTAL:	**$ 2,003,300**
				Estimated Project Total:	**$ 2,003,300**

City of Terrell

Capital Improvement Cost Estimate — **Date: May 21, 2024**

Construction Project Number: 16 — **Phase: Short**

Project Name: Construction of new 42-inch gravity main along Big Brushy Creek to convey flow top proposed wastewater treatment plant

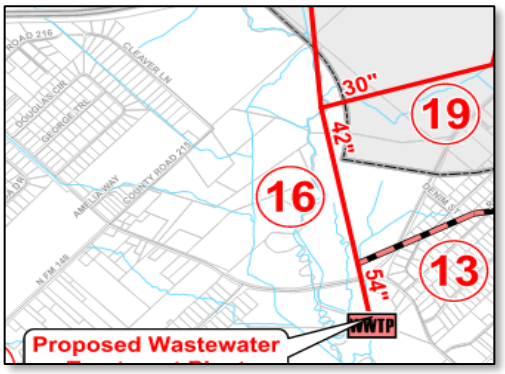
Project Description:

This project includes the construction of a 42-inch gravity main originating south of Interstate 20 and terminating at Project No. 13.

Project Drivers:

The proposed project will extend service in the western Terrell service area.

Vicinity Map



Opinion of Probable Construction Cost

ITEM	DESCRIPTION	QUANTITY	UNIT	UNIT PRICE	TOTAL
1	42" Pipe 8- 16 feet deep	3,900	LF	$ 1,260	$ 4,914,000
2	54" Boring and Casing	400	LF	$ 2,700	$ 1,080,000
				SUBTOTAL:	**$ 5,994,000**
				CONTINGENCY 30%	$ 1,798,200
				SUBTOTAL:	**$ 7,792,200**
				ENG/SURVEY 15%	$ 1,168,900
				SUBTOTAL:	**$ 8,961,100**
				Estimated Project Total:	**$ 8,961,100**

City of Terrell

Capital Improvement Cost Estimate — **Date: May 21, 2024**

Construction Project Number: 17 — **Phase: Short**

Project Name: Construction of new 36-inch gravity main along Big Brushy Creek

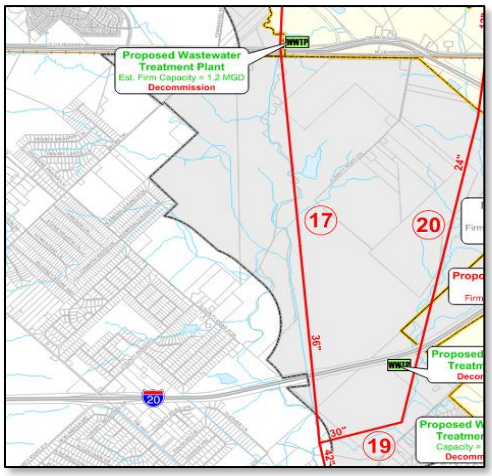
Project Description:

This project includes a 36-inch gravity main originating at State Highway 80 and continuing south before tying into Project No. 16.

Project Drivers:

The proposed project will extend service in the western Terrell service area.

Vicinity Map



Opinion of Probable Construction Cost

ITEM	DESCRIPTION	QUANTITY	UNIT	UNIT PRICE	TOTAL
1	36" Pipe 8- 16 feet deep	20,100	LF	$ 1,080	$ 21,708,000
2	50" Boring and Casing	1,800	LF	$ 2,500	$ 4,500,000
				SUBTOTAL:	**$ 26,208,000**
		CONTINGENCY		30%	$ 7,862,400
				SUBTOTAL:	**$ 34,070,400**
		ENG/SURVEY		15%	$ 5,110,600
				SUBTOTAL:	**$ 39,181,000**
				Estimated Project Total:	**$ 39,181,000**

City of Terrell

Capital Improvement Cost Estimate — **Date: May 21, 2024**

Construction Project Number: 18 — **Phase: Short**

Project Name: Construction of new 12-inch gravity main along Big Brushy Creek

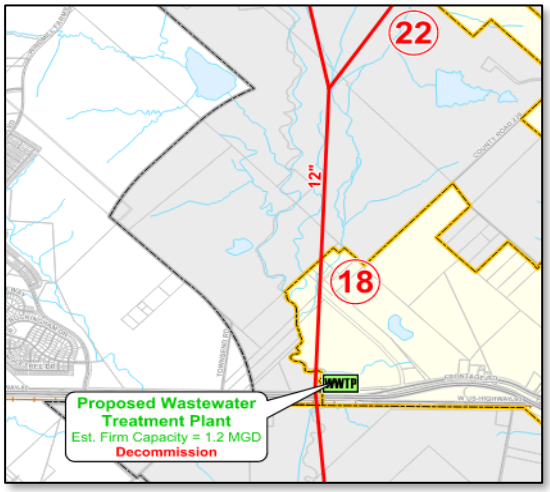
Project Description:

This project includes a 12-inch gravity main originating southwest of the Breeden Property and running south before tying into Project No. 17.

Project Drivers:

The proposed project will extend service in the western Terrell service area.

Vicinity Map



Opinion of Probable Construction Cost

ITEM	DESCRIPTION	QUANTITY	UNIT	UNIT PRICE	TOTAL
1	12" Pipe 8- 16 feet deep	10,100	LF	$ 360	$ 3,636,000
2	20" Boring and Casing	900	LF	$ 1,000	$ 900,000
				SUBTOTAL:	**$ 4,536,000**
			CONTINGENCY	30%	$ 1,360,800
				SUBTOTAL:	**$ 5,896,800**
			ENG/SURVEY	15%	$ 884,600
				SUBTOTAL:	**$ 6,781,400**
				Estimated Project Total:	**$ 6,781,400**

City of Terrell

Capital Improvement Cost Estimate — **Date: May 21, 2024**

Construction Project Number: 19 — **Phase: Short**

Project Name: Construction of new 30-inch gravity main along Terry Creek

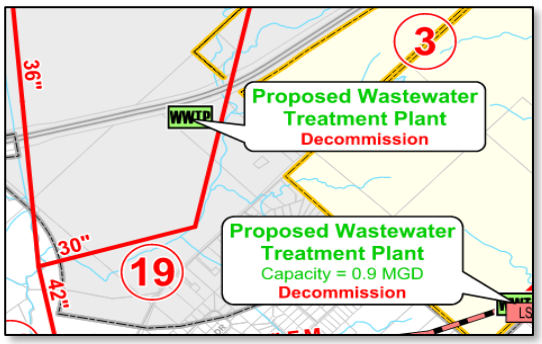
Project Description:

This project includes of a 30-inch gravity main originating at Project No. 16 and traveling northeast along Terry Creek before terminating south of I-20.

Project Drivers:

The proposed project will extend service in the western Terrell service area.

Vicinity Map



Opinion of Probable Construction Cost

ITEM	DESCRIPTION	QUANTITY	UNIT	UNIT PRICE	TOTAL
1	30" Pipe 8- 16 feet deep	7,600	LF	$ 900	$ 6,840,000
2	48" Boring and Casing	500	LF	$ 2,400	$ 1,200,000
3	Concrete Pavement Repair	200	LF	$ 100	$ 20,000
				SUBTOTAL:	**$ 8,060,000**
		CONTINGENCY		30%	$ 2,418,000
				SUBTOTAL:	**$ 10,478,000**
		ENG/SURVEY		15%	$ 1,571,700
				SUBTOTAL:	**$ 12,049,700**
				Estimated Project Total:	**$ 12,049,700**

City of Terrell

Capital Improvement Cost Estimate — **Date: May 21, 2024**

Construction Project Number: 20 — **Phase: Short**

Project Name: Construction of new 24-inch gravity main along Terry Creek

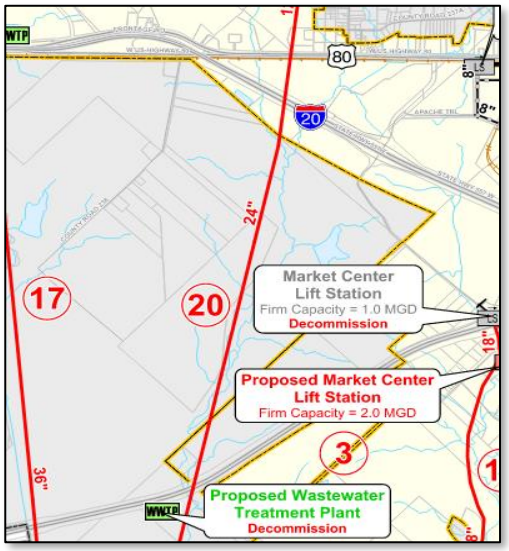
Project Description:

This project includes a 24-inch gravity main originating south of State Highway 557 and running south until terminating at Interstate 20.

Project Drivers:

The proposed project will extend service in the western Terrell service area.

Vicinity Map



Opinion of Probable Construction Cost

ITEM	DESCRIPTION	QUANTITY	UNIT	UNIT PRICE	TOTAL
1	24" Pipe 8- 16 feet deep	12,100	LF	$ 720	$ 8,712,000
2	38" Boring and Casing	1,500	LF	$ 1,900	$ 2,850,000
				SUBTOTAL:	**$ 11,562,000**
			CONTINGENCY	30%	$ 3,468,600
				SUBTOTAL:	**$ 15,030,600**
			ENG/SURVEY	15%	$ 2,254,600
				SUBTOTAL:	**$ 17,285,200**
				Estimated Project Total:	**$ 17,285,200**

City of Terrell

Capital Improvement Cost Estimate	**Date: May 21, 2024**
Construction Project Number: 21	**Phase: Short**
Project Name:	**Construction of new 12-inch gravity main along Terry Creek**

Project Description:

This project includes a 12-inch gravity main originating south of FM 1392 and continuing south before terminating south of State Highway 557 at Project No. 20.

Project Drivers:

The proposed project will extend service in the western Terrell service area.

Vicinity Map

Opinion of Probable Construction Cost

ITEM	DESCRIPTION	QUANTITY	UNIT	UNIT PRICE	TOTAL
1	12" Pipe 8- 16 feet deep	9,700	LF	$ 360	$ 3,492,000
2	20" Boring and Casing	1,600	LF	$ 1,000	$ 1,600,000
3	Concrete Pavement Repair	300	LF	$ 100	$ 30,000
				SUBTOTAL:	**$ 5,122,000**
		CONTINGENCY		30%	$ 1,536,600
				SUBTOTAL:	**$ 6,658,600**
		ENG/SURVEY		15%	$ 998,800
				SUBTOTAL:	**$ 7,657,400**
				Estimated Project Total:	**$ 7,657,400**

City of Terrell

Capital Improvement Cost Estimate — **Date: May 21, 2024**

Construction Project Number: 22 — **Phase: Short**

Project Name: Construction of new 12-inch gravity main to convey flow from the Samuels and Breeden Property along Little High Point Creek

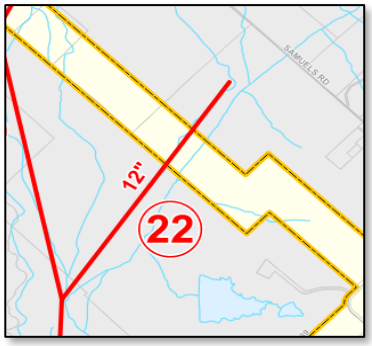
Project Description:

This project includes a 12-inch gravity main originating at Project No. 18, traveling northeast, and terminating south of Samuels Road.

Project Drivers:

The proposed project will extend service in the western Terrell service area.

Vicinity Map



Opinion of Probable Construction Cost

ITEM	DESCRIPTION	QUANTITY	UNIT	UNIT PRICE	TOTAL
1	12" Pipe 8- 16 feet deep	7,000	LF	$ 360	$ 2,520,000
2	20" Boring and Casing	200	LF	$ 1,000	$ 200,000
				SUBTOTAL:	**$ 2,720,000**
				CONTINGENCY 30%	$ 816,000
				SUBTOTAL:	**$ 3,536,000**
				ENG/SURVEY 15%	$ 530,400
				SUBTOTAL:	**$ 4,066,400**
				Estimated Project Total:	**$ 4,066,400**

City of Terrell

Capital Improvement Cost Estimate — **Date: May 21, 2024**

Construction Project Number: 23 — **Phase: Short**

Project Name: Construction of new 12-inch gravity main to convey flow from the Breeden and Samuels Properties along Big Brushy Creek

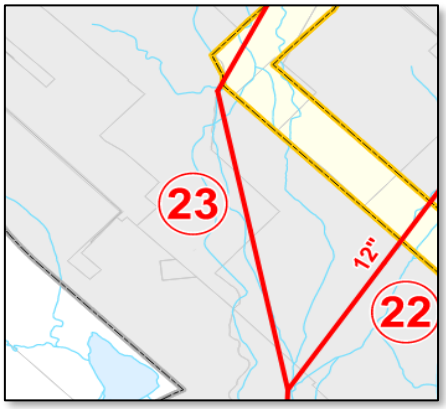
Project Description:

This project includes a 12-inch gravity main originating at the northwestern edge of the border between the Samuels Property and Breeden Property. The line continues south and terminates at Project No. 18.

Project Drivers:

The proposed project will extend service in the western Terrell service area.

Vicinity Map



Opinion of Probable Construction Cost

ITEM	DESCRIPTION	QUANTITY	UNIT	UNIT PRICE	TOTAL
1	12" Pipe 8- 16 feet deep	7,300	LF	$ 360	$ 2,628,000
2	20" Boring and Casing	1,700	LF	$ 1,000	$ 1,700,000
				SUBTOTAL:	**$ 4,328,000**
		CONTINGENCY		30%	$ 1,298,400
				SUBTOTAL:	**$ 5,626,400**
		ENG/SURVEY		15%	$ 844,000
				SUBTOTAL:	**$ 6,470,400**
				Estimated Project Total:	**$ 6,470,400**

City of Terrell

Capital Improvement Cost Estimate — **Date: May 21, 2024**

Construction Project Number: 24 — **Phase: Short**

Project Name: Construction of new 12-inch gravity main to convey flow from the Samuels Property along High Point Creek

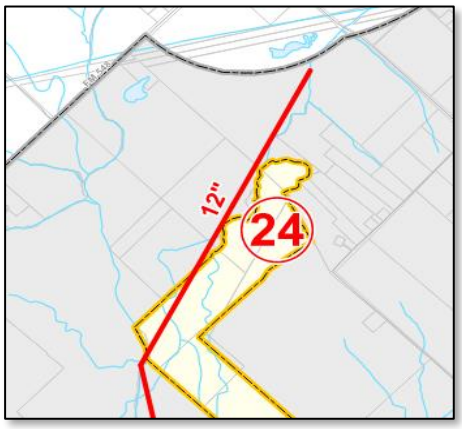
Project Description:

This project includes a 12-inch gravity main that begins southwest of Colquitt Road, continues southwest and terminates at Project No. 22.

Project Drivers:

The proposed project will extend service in the western Terrell service area.

Vicinity Map



Opinion of Probable Construction Cost

ITEM	DESCRIPTION	QUANTITY	UNIT	UNIT PRICE	TOTAL
1	12" Pipe 8- 16 feet deep	7,600	LF	$ 360	$ 2,736,000
2	20" Boring and Casing	1,700	LF	$ 1,000	$ 1,700,000
				SUBTOTAL:	**$ 4,436,000**
		CONTINGENCY		30%	$ 1,330,800
				SUBTOTAL:	**$ 5,766,800**
		ENG/SURVEY		15%	$ 865,100
				SUBTOTAL:	**$ 6,631,900**
				Estimated Project Total:	**$ 6,631,900**

City of Terrell

Capital Improvement Cost Estimate — **Date: May 21, 2024**

Construction Project Number: 25 — **Phase: Short**

Project Name: **Construction of new 0.25 MGD proposed lift station, 4-inch force main, and downstream 8-inch gravity main**

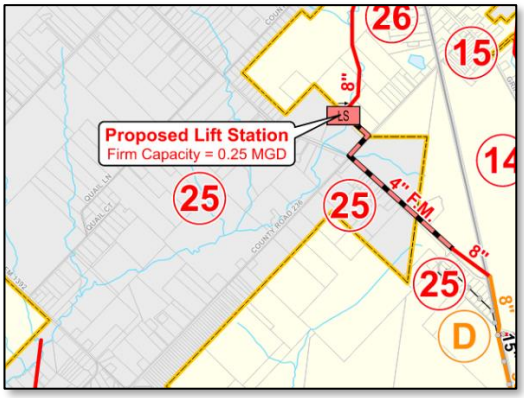
Project Description:

This project consists of a 0.25 MGD proposed lift station northwest of the intersection of County Road 236 and Colquitt Road. There is a 4-inch force main exiting the lift station running south along County Road 236 before turning southeast along Colquitt Road. The force main turns into an 8-inch gravity main continuing along Colquitt Road before tying into an 8-inch line under design at State Highway 205 and Colquitt Road.

Project Drivers:

The proposed project will extend service in the northern area of the City. This project is intended to be decommissioned once the infrastructure necessary to convey flow from this area by gravity to the west is in place.

Vicinity Map



Opinion of Probable Construction Cost

ITEM	DESCRIPTION	QUANTITY	UNIT	UNIT PRICE	TOTAL
1	Lift Station - New 0.25 MGD	1	LS	$ 625,000	$ 625,000
2	4" Force Main < 8 feet deep	5,700	LF	$ 100	$ 570,000
3	8" Pipe 8- 16 feet deep	1,400	LF	$ 240	$ 336,000
4	Concrete Pavement Repair	6,000	LF	$ 100	$ 600,000
				SUBTOTAL:	**$ 2,131,000**
			CONTINGENCY	30%	$ 639,300
				SUBTOTAL:	**$ 2,770,300**
			ENG/SURVEY	15%	$ 415,600
				SUBTOTAL:	**$ 3,185,900**
				Estimated Project Total:	**$ 3,185,900**

City of Terrell

Capital Improvement Cost Estimate — **Date: May 21, 2024**

Construction Project Number: 26 — **Phase: Short**

Project Name: Construction of new 8-inch gravity main to convey flow from the Northwest Development to 0.25 MGD proposed lift station

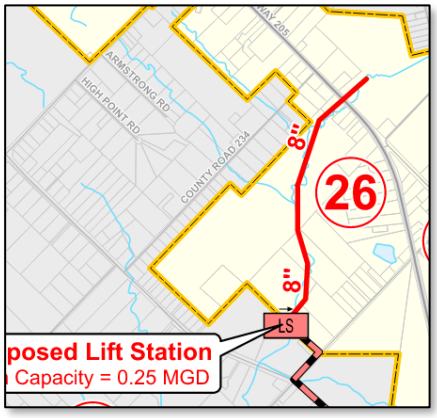
Project Description:

This project includes a 8-inch gravity main originating northeast of State Highway 205 and running southwest to the proposed lift station in Project No. 24.

Project Drivers:

The proposed project will extend service in the northern area of the City.

Vicinity Map



Opinion of Probable Construction Cost

ITEM	DESCRIPTION	QUANTITY	UNIT	UNIT PRICE	TOTAL
1	8" Pipe 8- 16 feet deep	5,900	LF	$ 240	$ 1,416,000
2	16" Boring and Casing	200	LF	$ 800	$ 160,000
3	Concrete Pavement Repair	200	LF	$ 100	$ 20,000
				SUBTOTAL:	**$ 1,596,000**
			CONTINGENCY	30%	$ 478,800
				SUBTOTAL:	**$ 2,074,800**
			ENG/SURVEY	15%	$ 311,300
				SUBTOTAL:	**$ 2,386,100**
				Estimated Project Total:	**$ 2,386,100**

APPENDIX C
Roadway Impact Fee Definitions

Average Trip Length - the average actual travel distance between two points. The average trip length by specific land use varies.

Diverted Trip - similar to pass-by trip, but a diversion is made from the regular route to make an interim stop.

Impact Fee - a charge or assessment imposed by a City against new development to generate revenue for funding or recouping roadway improvements necessitated and attributable to new development.

Maximum Fee Per Service Unit - the highest impact fee that may be collected by the City per vehicle-mile of supply. Calculated by dividing the costs of the capital improvements by the total number of vehicle-miles of demand expected in the 10-year planning period.

Pass-by Trip - a trip made as an intermediate stop on the way from an origin to a primary trip destination. For example, a stop at a convenience store on the way to office from home.

PM Peak Hour - the hour when the highest volume of traffic typically occurs. Data collection (September 2001) revealed the peak hour of travel to be between 5:00 and 6:00 pm for Forney.

PM Peak Hour Traffic Counts - the number of vehicles passing a certain point during the peak hour of travel. Traffic counts are conducted during the PM peak hour because the greatest demand for roadway capacity occurs during this hour.

Primary Trip - a trip made for the specific purpose of reaching a destination; for example, from home to office.

Roadway Demand - the demand placed on the roadway network as a result of development. Determined by multiplying the trip generation of a specific land use by the average trip length.

Roadway Supply (Capacity) - the number of service units provided by a segment of roadway over a period of time. Determined by multiplying the lane capacity by the roadway length.

Service Area - the area within the City boundaries to be served by capital improvements. Criteria for developing the service area structure include: 1) restricted to six-mile limit by Chapter 395 of the Texas Local Government Codes to ensure proximity of roadway improvements to development, 2) conforms to census or forecast model boundaries, 3) projects in CIP as boundaries, 4) effort to match roadway supply with projected demand, or 5) City limit boundaries.

Service Unit - a measure of use or generation attributable to new development for roadway improvements. Also used to measure supply provided by existing and proposed roadway improvements.

Trip - a single, one-direction vehicle movement from an origin to a destination.
Trip Generation - the total trip ends for a land use over a given period of time or the total of all trips entering and exiting a site during that designated time. Used in the development of 10-year traffic demand projections and the equivalency table for Terrell. Based primarily on data prepared by the Institute of Transportation Engineers (ITE).

Vehicle - for impact fee purposes, any motorized appurtenance that carries passengers and/or goods on the roadway system during peak periods of travel.

Vehicle-mile - a unit used to express both supply and demand provided by, and placed on, the roadway system. A combination of a number of vehicles traveling during a given time period and the distance in which these vehicles travel in miles.

APPENDIX D
Existing Roadway Capital Improvements Analysis

Appendix D
Existing Roadway Capital Improvements Analysis

Definitions

LANES	The total number of lanes available for travel in both directions.
TYPE	The type of roadway (used in determining capacity): DA = divided arterial UA = undivided arterial DC = divided collector UC = undivided collector
% IN SERVICE AREA	If the roadway is located on the boundary of the service area (with the City limits running along the centerline of the roadway), then half of the roadway is inventoried in the service area and the other half is not. This value is either 50% or 100%.
PK-HR VOLUME	The existing volume of cars on the roadway segment traveling during the afternoon (P.M.) peak hour of travel. A and B indicate the two directions of travel. Direction A is a northbound or eastbound and direction B is southbound or westbound. If only one half of the roadway is located within the service area (see % in service area), the opposing direction will have no volume in the service area.
VEH-MI SUPPLY TOTAL	The number of total service units (vehicle-miles) supplied within the service area, based on the length and established capacity of the roadway type.
VEH-MI TOTAL DEMAND PK-HR	The total service unit (vehicle-mile) demand created by existing traffic on the roadway segment in the afternoon peak hour.
EXCESS CAPACITY PK-HR VEH-MI	The number of service units supplied but unused by existing traffic in the afternoon peak hour.
EXISTING DEFICIENCIES PK-HR VEH-MI	The number of service units of demand in excess of the service units supplied.

NOTE: Figures presented represent segment totals. Each direction is calculated separately and totaled. It is possible to have excess capacity in one direction and an existing deficiency in the other.

Terrell Roadway Impact Fee Study Update
2024 Existing System Conditions Analysis

Serv Area	Shared Svc Area	Roadway	From	To	Length (mi)	No. of Lanes	Type	PM Peak Hr Cap/Ln	Pct. in Serv. Area	Peak Hour Volume A	B	Total	VMT Supply Pk Hr Total	VMT Demand Pk Hr Total	Excess VMT Capacity	Exist. VMT Deficiency
East		FM 429	US 80	S. City Limits	0.56	2	UA	520	100%	30	30	61	582	34	548	0
East	N	US 80/Moore Ave	E. City Limits	FM 429	0.80	4	DA	580	50%	0	436	436	930	350	580	0
Sub-Total Service Area Southwest					**1.36**								**1,513**	**384**	**1,129**	**0**
North		Lovers Lane	Griffith Avenue	Colquitt Road	0.39	2	UC	420	100%	129	129	258	330	101	229	0
North		Colquitt Road	SH 205	Lovers Lane	0.35	2	UC	420	100%	204	204	408	290	141	149	0
North		Colquitt Road	Lovers Lane	Charles Lane	0.39	2	UC	420	100%	10	10	21	328	8	320	0
North		Colquitt Road	Charles Lane	9th Street	0.47	2	UC	420	100%	269	296	565	396	266	129	0
North		Griffith Avenue	SH 205	Lovers Lane	1.82	2	UC	420	100%	129	129	258	1,529	469	1,060	0
North		Griffith Avenue	Lovers Lane	9th Street	0.86	2	UC	420	100%	204	204	407	722	350	372	0
North		Griffith Avenue	9th Street	N. Rockwall Rd.	0.53	2	UC	420	100%	128	128	256	445	136	310	0
North		FM 986/Poetry Road	State Street	Town Drive North	0.69	4	UA	520	100%	328	319	647	1,435	447	989	0
North		State Street	FM 986	N. Rockwall Rd.	0.47	2	UA	520	100%	0	28	28	244	13	231	0
North		N. Rockwall Rd (FM 987)	State Street	US 80	0.87	4	UA	520	100%	307	338	645	1,799	558	1,241	0
North		9th Street	US 80	Colquitt Road	0.41	2	UC	420	100%	473	473	947	344	388	0	44
North		9th Street	Colquitt Road	Griffith Ave	0.39	2	UC	420	100%	35	23	58	331	23	308	0
North	SW	US 80/Moore Ave	Rockwall St	Viriginia St	0.33	5	SA	580	50%	1,147	0	1,147	378	374	4	0
North	S	US 80/Moore Ave	SH 34	FM 429	1.12	4	DA	580	50%	745	0	745	1,299	835	464	0
North	SW	US 80/Moore Ave	Virginia St	SH 34	0.13	4	DA	580	50%	0	871	871	145	109	36	0
North	E	US 80/Moore Ave	FM 429	E. City Limits	0.80	4	DA	580	50%	468	0	468	930	376	555	0
North		Town North Drive	FM 986/Poetry Road	Brookwood Drive	0.81	2	UC	420	100%	136	136	272	680	220	460	0
North		Town North Drive	Brookwood Drive	SH 34	0.33	2	UC	420	100%	81	81	162	275	53	222	0
North		Virginia Street	Callie St (SH 34)	US 80	0.72	4	UA	520	100%	496	508	1,004	1,502	725	777	0
North		Virginia Street	US 80	High St	0.13	4	DA	580	100%	522	522	1,044	302	136	166	0
North		Virginia Street	High St	Jackson St	0.24	3	SA	580	100%	28	20	48	278	11	267	0
North		Virginia Street	Jackson St	Frances Street	0.62	2	UA	520	100%	21	15	36	645	22	623	0
North		Frances Street	Virginia Street	N. City Limits	0.68	2	UA	520	100%	134	134	267	707	182	526	0
North		SH 34	US 80	N. City Limits	1.48	4	DA	580	100%	478	474	952	3,434	1,409	2,025	0
North	SW	US 80/Moore Ave	SH 205	Rockwall St	1.34	5	SA	580	50%	1,717	0	1,717	1,554	2,301	0	747
North	W	SH 205	US 80	Colquitt Road	1.19	2	UA	520	50%	894	0	894	619	1,064	0	445
North	W	SH 205	Colquitt Road	N. City Limits	2.05	2	UA	520	50%	621	0	621	1,066	1,274	0	208
Sub-Total Service Area North					**3.12**								**22,009**	**11,990**	**11,462**	**1,443**
South		Windsor Avenue	Home Depot	SH 34	0.23	4	DC	460	100%	9	8	17	425	4	421	0
South		Airport Road	SH 34	Industrial Blvd.	0.34	4	UC	420	100%	148	148	296	571	101	471	0
South		CR 309/Wilson	S. City Limits	Airport Road	0.89	2	UA	520	100%	216	216	433	926	385	540	0
South	SW	FM 2578	IH-20 WB Frontage Rd.	Windsor Avenue	0.18	2	UA	520	50%	148	0	148	94	27	67	0
South	SW	FM 2578	Windsor Avenue	SH 34	0.31	2	UA	520	50%	148	0	148	161	46	115	0
South		British Flying Training Schoo	SH 34	Parking Lot	0.42	2	UC	420	100%	0	0	0	353	0	353	0
South		SH 34	IH-20 WB Frontage Rd.	British Flying Training Sch	0.79	4	DA	580	100%	1,238	1,268	2,506	1,833	1,980	0	147
South	SW	SH 34	Airport Rd	US 80	0.71	4	UC	420	50%	693	0	693	596	492	104	0
South	N	US 80/Moore Ave	FM 429	SH 34	1.12	4	DA	580	50%	0	739	739	1,299	827	472	0
South	SW	SH 34	British Flying Training Scho	Airport Rd	0.54	4	DA	580	50%	1,166	0	1,166	626	629	0	3
Sub-Total Service Area East					**5.53**								**6,884**	**4,491**	**2,543**	**150**

Terrell Roadway Impact Fee Study Update
2024 Existing System Conditions Analysis

Serv Area	Shared Svc Area	Roadway	From	To	Length (mi)	No. of Lanes	Type	PM Peak Hr Cap/Ln	Pct. in Serv. Area	Peak Hour Volume A	B	Total	VMT Supply Pk Hr Total	VMT Demand Pk Hr Total	Excess VMT Capacity	Exist. VMT Deficiency
Southwest		CR 305	W. City Limits	CR 304	2.07	2	UA	520	100%	0	0	0	2,153	1	2,152	0
Southwest		Apache Trail	FM 148	Las Lomas Pkwy	1.47	4	UC	420	100%	191	191	382	2,470	562	1,908	0
Southwest		Metro Drive	US 80	Apache Trail	0.64	4	UC	420	100%	113	113	226	1,075	144	931	0
Southwest		Las Lomas Pkwy	EB Spur 557	Apache Trail	0.31	4	UC	420	100%	10	10	20	521	6	515	0
Southwest		Rosehill Road	S. City Limits	Lincoln Lane	0.84	2	UA	520	100%	67	67	133	873	112	761	0
Southwest		FM 148	S. City Limits	IH-20 WB Frontage Rd.	0.63	2	UA	520	100%	359	359	718	655	452	203	0
Southwest		FM 148	IH-20 WB Frontage Rd.	Spur 557	0.56	5	SA	580	100%	392	392	784	1,299	439	860	0
Southwest		FM 148	Spur 557	Bachelor Creek	0.97	5	SA	580	100%	426	426	851	2,250	826	1,425	0
Southwest		FM 148	Bachelor Creek	US 80	0.72	5	SA	580	100%	821	792	1,613	1,670	1,161	509	0
Southwest		S. Rockwall Road	US 80	Rosehill Road	0.91	4	UC	420	100%	307	316	623	1,527	567	960	0
Southwest		Windsor Avenue	S. Rockwall Road	FM 2578	0.37	2	UC	420	100%	63	63	125	311	46	264	0
Southwest	W	US 80/Moore Ave	W. City Limits	SH 205	2.73	4	DA	580	50%	1,027	0	1,027	3,167	2,803	364	0
Southwest	N	US 80/Moore Ave	Rockwall St	SH 205	1.34	5	SA	580	50%	0	1,747	1,747	1,554	2,341	0	787
Southwest		Bradshaw	Mineral Wells	US 80	0.87	2	UA	520	100%	113	113	225	905	196	709	0
Southwest		West End Street	FM 148	Mineral Wells Street	1.03	2	UC	420	100%	84	84	169	865	174	691	0
Southwest		Ann Street	US 80	Emily Street	0.22	2	UC	420	100%	3	3	5	185	1	184	0
Southwest	S	FM 2578	Windsor Avenue	IH-20 WB Frontage Rd.	0.18	2	UA	520	50%	0	148	148	94	27	67	0
Southwest		S. Rockwall Road	Rosehill Road	US 80	0.91	4	UC	420	100%	307	316	623	1,527	567	960	0
Southwest		Rochester Street	S Rockwall Road	S Virginia	0.33	2	UC	420	100%	3	2	5	277	2	275	0
Southwest	N	US 80/Moore Ave	S Virginia	S Rockwall Road	0.33	5	SA	580	50%	0	1,253	1,253	383	414	0	31
Southwest	N	US 80/Moore Ave	SH 34	Virginia St	0.13	4	DA	580	50%	797	0	797	151	104	47	0
Southwest	S	FM 2578	SH 34	Windsor Ave	0.31	2	DA	580	50%	0	148	148	180	46	134	0
Southwest	S	SH 34	US 80	Airport Rd	0.71	4	DA	580	50%	0	651	651	824	463	361	0
Southwest	S	SH 34	Airport Rd	British Flying Training Schc	0.54	4	DA	580	50%	0	1,204	1,204	626	650	0	24
Sub-Total Service Area Southwest					**19.12**								**25,541**	**12,102**	**14,280**	**841**
West	N	SH 205	Colquitt Road	US 80	1.19	2	UA	520	50%	0	976	976	619	1,161	0	543
West	N	SH 205	N. City Limits	Colquitt Road	2.05	2	UA	520	50%	0	621	621	1,066	1,274	0	208
West	SW	US 80/Moore Ave	SH 205	W. City Limits	2.73	4	DA	580	50%	0	1,079	1,079	3,167	2,946	221	0
Sub-Total Service Area West					**5.97**								**4,852**	**5,381**	**221**	**750**
Total													***60,799***	***34,348***	***29,635***	***3,184***

Notes:

DA - Divided Arterial

UA - Undivided Arterial

SA - Special Arterial with two-way left turn lane (TWLTL)

DC - Divided collector

UC - Undivided Collector

SC - Special Collector with two-way left turn lane (TWLTL)

APPENDIX E
Projected Vehicle-Miles of New Demand

Vehicle-Mile Trip Generation by Service Area, Terrell Impact Fee

Based on 2023-2033 Land Use Assumptions dated November 2023

Service Unit Equivalency

Residential	3.22	Service Emp	6.60
Basic Emp	3.11	Retail Emp	5.30

Estimated Residential Growth Vehicle-Mile Trip Generation

Conversion Factor: 2.76 persons/dwelling unit

Service Area	Added Population	Added Dwelling Units	Vehicle-Miles per DU	Total Vehicle-Miles
North	4,270	1,547	3.22	4,981
East	0	0	3.22	0
South	800	290	3.22	934
Southwest	13,739	4,978	3.22	16,029
West	6,175	2,237	3.22	7,203
Total	24,984	9,052		29,147

Estimated Basic Employment Growth Vehicle-Mile Trip Generation

Conversion Factor: 1,500 square feet/employee

Service Area	Added Employees	Total Square Feet	Vehicle-Miles per 1,000 Sq Ft	Total Vehicle-Miles
North	30	45,000	3.11	140
East	0	0	3.11	0
South	150	225,000	3.11	700
Southwest	233	349,500	3.11	1,087
West	134	201,000	3.11	625
Total	547	820,500		2,552

Estimated Service Employment Growth Vehicle-Mile Trip Generation

Conversion Factor: 500 square feet/employee

Service Area	Added Employees	Total Square Feet	Vehicle-Miles per 1,000 Sq Ft	Total Vehicle-Miles
North	276	138,000	6.60	911
East	0	0	6.60	0
South	75	37,500	6.60	248
Southwest	227	113,500	6.60	749
West	353	176,500	6.60	1,165
Total	931	465,500		3,073

Estimated Retail Employment Growth Vehicle-Mile Trip Generation

Conversion Factor: 1,000 square feet/employee

Service Area	Added Employees	Total Square Feet	Vehicle-Miles per 1,000 Sq Ft	Total Vehicle-Miles
North	44	44,000	5.30	233
East	0	0	5.30	0
South	25	25,000	5.30	133
Southwest	40	40,000	5.30	212
West	239	239,000	5.30	1,267
Total	348	348,000		1,845

Total 10-Year Vehicle-Mile Generation Summary

Service Area	Residential Growth Vehicle-Miles	Basic Emp Growth Vehicle-Miles	Service Emp Growth Vehicle-Miles	Retail Emp Growth Vehicle-Miles	**Total Growth Vehicle-Miles**
North	4,981	140	911	233	**6,265**
East	0	0	0	0	**0**
South	934	700	248	133	**2,015**
Southwest	16,029	1,087	749	212	**18,077**
West	7,203	625	1,165	1,267	**10,260**
Total	29,147	2,552	3,073	1,845	**36,617**

APPENDIX F
Roadway Impact Fee Project Cost Estimates

City of Terrell

Impact Fee Engineer's Opinion of Probable Construction Cost Estimate

FM 305 / LL PKWY

N Frances St to Poetry Rd

Roadway Information:			
Functional Classification:	Principal Arterial - Type AA	No. of Lanes:	4
Length (lf):	5,867		
Right-of-Way Width (ft.):	140		
Median Type:	Raised		
Pavement Width (BOC to BOC):	48		
Description:	Construct new roadway to thoroughfare standard		

Roadway Construction Cost Estimate:

I. Paving Construction Cost Estimate

Item No.	Item Description	Quantity	Unit	Unit Cost	Item Cost
1	Right of Way Preparation	59	STA	$ 3,000.00	$ 177,000
2	Unclassified Street Excavation	20,900	CY	$ 30.00	$ 627,000
3	12" Concrete Pavement	31,300	SY	$ 130.00	$ 4,069,000
4	12" Flex Base	33,300	SY	$ 45.00	$ 1,498,500
5	6" Concrete Sidewalk and Ramps	7,830	SY	$ 50.00	$ 391,500
6	Parkway Topsoil and Furnishing	49,500	SY	$ 5.00	$ 247,500
				Paving Estimate Subtotal:	**$ 7,010,500**

II. Non-Paving Construction Components

Item No.	Item Description	Pct. Of Paving	Item Cost
7	Pavement Markings & Signage	2%	$ 140,300
8	Traffic Control	5%	$ 350,600
9	Erosion Control	3%	$ 210,400
10	Drainage Improvements (RCP, Inlets, MH, Outfalls)	15%	$ 1,051,600
11	Landscaping	3%	$ 210,400
12	Illumination	5%	$ 350,600
		Other Components Estimate Subtotal:	**$ 2,313,900**

III. Special Construction Components

Item No.	Item Description	Notes	Allowance	Item Cost
13	Drainage Structures	None	$ -	$ -
14	Bridge Structures	None	$ -	$ -
15	Traffic Signals	None	$ -	$ -
16	Other	None	$ -	$ -
		Special Components Estimate Subtotal:		**$ -**

I, II, & III Construction Subtotal:		$ 9,324,400
Mobilization	5%	$ 466,300
Contingency	10%	$ 979,100
Construction Cost Estimate Total:		**$ 10,769,800**

Impact Fee Cost Estimate Summary

Item Description	Notes	Allowance	Item Cost
Construction		-	$ 10,769,800
Engineering/Survey/Testing		13.0%	$ 1,400,100
Right-of-Way Acquisition	Cost per sq. ft.: $ 1.00	$ 821,400	$ 821,400
	Impact Fee Project Cost Estimate Total:		**$ 12,991,300**

City of Terrell

Impact Fee Engineer's Opinion of Probable Construction Cost Estimate

TOWN N DRIVE EXTENTION

0.13 mi N of SH 205 to N City Limits

Roadway Information:			
Functional Classification:	Principal Arterial - Type A	No. of Lanes:	4
Length (lf):	1,059		
Right-of-Way Width (ft.):	120		
Median Type:	Raised		
Pavement Width (BOC to BOC):	48		
Description:	Construct new roadway to thoroughfare standard		

Roadway Construction Cost Estimate:

I. Paving Construction Cost Estimate

Item No.	Item Description	Quantity	Unit	Unit Cost	Item Cost
1	Right of Way Preparation	11	STA	$ 3,000.00	$ 33,000
2	Unclassified Street Excavation	3,800	CY	$ 30.00	$ 114,000
3	12" Concrete Pavement	5,700	SY	$ 130.00	$ 741,000
4	12" Flex Base	6,100	SY	$ 45.00	$ 274,500
5	6" Concrete Sidewalk and Ramps	1,420	SY	$ 50.00	$ 71,000
6	Parkway Topsoil and Furnishing	6,600	SY	$ 5.00	$ 33,000
				Paving Estimate Subtotal:	**$ 1,266,500**

II. Non-Paving Construction Components

Item No.	Item Description	Pct. Of Paving	Item Cost
7	Pavement Markings & Signage	2%	$ 25,400
8	Traffic Control	5%	$ 63,400
9	Erosion Control	3%	$ 38,000
10	Drainage Improvements (RCP, Inlets, MH, Outfalls)	15%	$ 190,000
11	Landscaping	3%	$ 38,000
12	Illumination	5%	$ 63,400
		Other Components Estimate Subtotal:	**$ 418,200**

III. Special Construction Components

Item No.	Item Description	Notes	Allowance	Item Cost
13	Drainage Structures	None	$ -	$ -
14	Bridge Structures	None	$ -	$ -
15	Traffic Signals	None	$ -	$ -
16	Other	None	$ -	$ -
		Special Components Estimate Subtotal:		**$ -**

I, II, & III Construction Subtotal:		$ 1,684,700
Mobilization	5%	$ 84,300
Contingency	10%	$ 176,900
Construction Cost Estimate Total:		**$ 1,945,900**

Impact Fee Cost Estimate Summary

Item Description	Notes	Allowance	Item Cost
Construction		-	$ 1,945,900
Engineering/Survey/Testing		13.0%	$ 253,000
Right-of-Way Acquisition	Cost per sq. ft.: $ 1.00	$ 127,100	$ 127,100
	Impact Fee Project Cost Estimate Total:		**$ 2,326,000**

City of Terrell

Impact Fee Engineer's Opinion of Probable Construction Cost Estimate

TOWN N DRIVE EXTENTION

N City Limits to N City Limits

Roadway Information:			
Functional Classification:	Principal Arterial - Type AA	No. of Lanes:	4
Length (lf):	1,373		
Right-of-Way Width (ft.):	140		
Median Type:	Raised		
Pavement Width (BOC to BOC):	48		
Description:	Construct new roadway to thoroughfare standard		

Roadway Construction Cost Estimate:

I. Paving Construction Cost Estimate

Item No.	Item Description	Quantity	Unit	Unit Cost	Item Cost
1	Right of Way Preparation	14	STA	$ 3,000.00	$ 42,000
2	Unclassified Street Excavation	4,900	CY	$ 30.00	$ 147,000
3	12" Concrete Pavement	7,400	SY	$ 130.00	$ 962,000
4	12" Flex Base	7,800	SY	$ 45.00	$ 351,000
5	6" Concrete Sidewalk and Ramps	1,840	SY	$ 50.00	$ 92,000
6	Parkway Topsoil and Furnishing	11,600	SY	$ 5.00	$ 58,000
				Paving Estimate Subtotal:	**$ 1,652,000**

II. Non-Paving Construction Components

Item No.	Item Description	Pct. Of Paving	Item Cost
7	Pavement Markings & Signage	2%	$ 33,100
8	Traffic Control	5%	$ 82,600
9	Erosion Control	3%	$ 49,600
10	Drainage Improvements (RCP, Inlets, MH, Outfalls)	15%	$ 247,800
11	Landscaping	3%	$ 49,600
12	Illumination	5%	$ 82,600
		Other Components Estimate Subtotal:	**$ 545,300**

III. Special Construction Components

Item No.	Item Description	Notes	Allowance	Item Cost
13	Drainage Structures	None	$ -	$ -
14	Bridge Structures	None	$ -	$ -
15	Traffic Signals	None	$ -	$ -
16	Other	None	$ -	$ -
		Special Components Estimate Subtotal:		**$ -**

I, II, & III Construction Subtotal:		$ 2,197,300
Mobilization	5%	$ 109,900
Contingency	10%	$ 230,800
Construction Cost Estimate Total:		**$ 2,538,000**

Impact Fee Cost Estimate Summary

Item Description	Notes	Allowance	Item Cost
Construction		-	$ 2,538,000
Engineering/Survey/Testing		13.0%	$ 329,900
Right-of-Way Acquisition	Cost per sq. ft.: $ 1.00	$ 192,200	$ 192,200
	Impact Fee Project Cost Estimate Total:		**$ 3,060,100**

City of Terrell

Impact Fee Engineer's Opinion of Probable Construction Cost Estimate

FM 305 / LL PKWY

W of FM 429 to N City Limits

Roadway Information:			
Functional Classification:	Principal Arterial - Type AA	No. of Lanes:	4
Length (lf):	3,891		
Right-of-Way Width (ft.):	140		
Median Type:	Raised		
Pavement Width (BOC to BOC):	48		
Description:	Construct new roadway to thoroughfare standard		

Roadway Construction Cost Estimate:

I. Paving Construction Cost Estimate

Item No.	Item Description	Quantity	Unit	Unit Cost	Item Cost
1	Right of Way Preparation	39	STA	$ 3,000.00	$ 117,000
2	Unclassified Street Excavation	13,900	CY	$ 30.00	$ 417,000
3	12" Concrete Pavement	20,800	SY	$ 130.00	$ 2,704,000
4	12" Flex Base	22,100	SY	$ 45.00	$ 994,500
5	6" Concrete Sidewalk and Ramps	5,190	SY	$ 50.00	$ 259,500
6	Parkway Topsoil and Furnishing	32,900	SY	$ 5.00	$ 164,500
				Paving Estimate Subtotal:	**$ 4,656,500**

II. Non-Paving Construction Components

Item No.	Item Description	Pct. Of Paving	Item Cost
7	Pavement Markings & Signage	2%	$ 93,200
8	Traffic Control	5%	$ 232,900
9	Erosion Control	3%	$ 139,700
10	Drainage Improvements (RCP, Inlets, MH, Outfalls)	15%	$ 698,500
11	Landscaping	3%	$ 139,700
12	Illumination	5%	$ 232,900
		Other Components Estimate Subtotal:	**$ 1,536,900**

III. Special Construction Components

Item No.	Item Description	Notes	Allowance	Item Cost
13	Drainage Structures	None	$ -	$ -
14	Bridge Structures	None	$ -	$ -
15	Traffic Signals	None	$ -	$ -
16	Other	None	$ -	$ -
		Special Components Estimate Subtotal:		**$ -**

I, II, & III Construction Subtotal:		$ 6,193,400
Mobilization	5%	$ 309,700
Contingency	10%	$ 650,400
Construction Cost Estimate Total:		**$ 7,153,500**

Impact Fee Cost Estimate Summary

Item Description	Notes	Allowance	Item Cost
Construction		-	$ 7,153,500
Engineering/Survey/Testing		13.0%	$ 930,000
Right-of-Way Acquisition	Cost per sq. ft.: $ 1.00	$ 544,700	$ 544,700
	Impact Fee Project Cost Estimate Total:		**$ 8,628,200**

City of Terrell

Impact Fee Engineer's Opinion of Probable Construction Cost Estimate

LIONS CLUB LANE

Pool Road to S of Colquitt Road

Roadway Information:			
Functional Classification:	Minor Collector - Type E	No. of Lanes:	3
Length (lf):	4,385		
Right-of-Way Width (ft.):	60		
Median Type:	TWLTL		
Pavement Width (BOC to BOC):	33		
Description:	Construct new roadway to thoroughfare standard		

Roadway Construction Cost Estimate:

I. Paving Construction Cost Estimate

Item No.	Item Description	Quantity	Unit	Unit Cost	Item Cost
1	Right of Way Preparation	44	STA	$ 3,000.00	$ 132,000
2	Unclassified Street Excavation	10,800	CY	$ 30.00	$ 324,000
3	8" Concrete Pavement	16,100	SY	$ 110.00	$ 1,771,000
4	10" Flex Base	17,100	SY	$ 40.00	$ 684,000
5	6" Concrete Sidewalk and Ramps	5,850	SY	$ 50.00	$ 292,500
6	Parkway Topsoil and Furnishing	7,300	SY	$ 5.00	$ 36,500
				Paving Estimate Subtotal:	**$ 3,240,000**

II. Non-Paving Construction Components

Item No.	Item Description	Pct. Of Paving	Item Cost
7	Pavement Markings & Signage	2%	$ 64,800
8	Traffic Control	5%	$ 162,000
9	Erosion Control	3%	$ 97,200
10	Drainage Improvements (RCP, Inlets, MH, Outfalls)	15%	$ 486,000
11	Landscaping	3%	$ 97,200
12	Illumination	5%	$ 162,000
		Other Components Estimate Subtotal:	**$ 1,069,200**

III. Special Construction Components

Item No.	Item Description	Notes	Allowance	Item Cost
13	Drainage Structures	None	$ -	$ -
14	Bridge Structures	None	$ -	$ -
15	Traffic Signals	None	$ -	$ -
16	Other	None	$ -	$ -
		Special Components Estimate Subtotal:	**$**	**-**

I, II, & III Construction Subtotal:		$ 4,309,200
Mobilization	5%	$ 215,500
Contingency	10%	$ 452,500
Construction Cost Estimate Total:		**$ 4,977,200**

Impact Fee Cost Estimate Summary

Item Description	Notes	Allowance	Item Cost
Construction		$ -	$ 4,977,200
Engineering/Survey/Testing		13.0%	$ 647,000
Right-of-Way Acquisition	Cost per sq. ft.: $ 1.00	$ 263,100	$ 263,100
	Impact Fee Project Cost Estimate Total:		**$ 5,887,300**

City of Terrell

Impact Fee Engineer's Opinion of Probable Construction Cost Estimate

LOVERS LANE

Colquitt Rd to Griffith Ave

Roadway Information:			
Functional Classification:	Minor Collector - Type E	No. of Lanes:	3
Length (lf):	2,150		
Right-of-Way Width (ft.):	60		
Median Type:	TWLTL		
Pavement Width (BOC to BOC):	33		
Description:	Widen roadway to thoroughfare standard		

Roadway Construction Cost Estimate:

I. Paving Construction Cost Estimate

Item No.	Item Description	Quantity	Unit	Unit Cost	Item Cost
1	Right of Way Preparation	22	STA	$ 3,000.00	$ 66,000
2	Unclassified Street Excavation	5,300	CY	$ 30.00	$ 159,000
3	8" Concrete Pavement	7,900	SY	$ 110.00	$ 869,000
4	10" Flex Base	8,400	SY	$ 40.00	$ 336,000
5	6" Concrete Sidewalk and Ramps	2,870	SY	$ 50.00	$ 143,500
6	Parkway Topsoil and Furnishing	3,600	SY	$ 5.00	$ 18,000
				Paving Estimate Subtotal:	**$ 1,591,500**

II. Non-Paving Construction Components

Item No.	Item Description	Pct. Of Paving	Item Cost
7	Pavement Markings & Signage	2%	$ 31,900
8	Traffic Control	5%	$ 79,600
9	Erosion Control	3%	$ 47,800
10	Drainage Improvements (RCP, Inlets, MH, Outfalls)	15%	$ 238,800
11	Landscaping	3%	$ 47,800
12	Illumination	5%	$ 79,600
		Other Components Estimate Subtotal:	**$ 525,500**

III. Special Construction Components

Item No.	Item Description	Notes	Allowance	Item Cost
13	Drainage Structures	None	$ -	$ -
14	Bridge Structures	None	$ -	$ -
15	Traffic Signals	None	$ -	$ -
16	Other	None	$ -	$ -
		Special Components Estimate Subtotal:		**$ -**

I, II, & III Construction Subtotal:		$ 2,117,000
Mobilization	5%	$ 105,900
Contingency	10%	$ 222,300
Construction Cost Estimate Total:		**$ 2,445,200**

Impact Fee Cost Estimate Summary

Item Description	Notes	Allowance	Item Cost
Construction		$ -	$ 2,445,200
Engineering/Survey/Testing		13.0%	$ 317,900
Right-of-Way Acquisition	Cost per sq. ft.: $ 1.00	$ -	$ -
	Impact Fee Project Cost Estimate Total:		**$ 2,763,100**

City of Terrell

Impact Fee Engineer's Opinion of Probable Construction Cost Estimate

FM 986 EXTENTION

Town N Drive to Griffith Avenue

Roadway Information:			
Functional Classification:	Major Collector - Type D	No. of Lanes:	2
Length (lf):	4,797		
Right-of-Way Width (ft.):	80		
Median Type:	Raised		
Pavement Width (BOC to BOC):	38		
Description:	Construct new roadway to thoroughfare standard		

Roadway Construction Cost Estimate:

I. Paving Construction Cost Estimate

Item No.	Item Description	Quantity	Unit	Unit Cost	Item Cost
1	Right of Way Preparation	48	STA	$ 3,000.00	$ 144,000
2	Unclassified Street Excavation	13,600	CY	$ 30.00	$ 408,000
3	10" Concrete Pavement	20,300	SY	$ 120.00	$ 2,436,000
4	10" Flex Base	21,900	SY	$ 40.00	$ 876,000
5	6" Concrete Sidewalk and Ramps	7,470	SY	$ 50.00	$ 373,500
6	Parkway Topsoil and Furnishing	13,900	SY	$ 5.00	$ 69,500
				Paving Estimate Subtotal:	**$ 4,307,000**

II. Non-Paving Construction Components

Item No.	Item Description	Pct. Of Paving	Item Cost
7	Pavement Markings & Signage	2%	$ 86,200
8	Traffic Control	5%	$ 215,400
9	Erosion Control	3%	$ 129,300
10	Drainage Improvements (RCP, Inlets, MH, Outfalls)	15%	$ 646,100
11	Landscaping	3%	$ 129,300
12	Illumination	5%	$ 215,400
		Other Components Estimate Subtotal:	**$ 1,421,700**

III. Special Construction Components

Item No.	Item Description	Notes	Allowance	Item Cost
13	Drainage Structures	None	$ -	$ -
14	Bridge Structures	None	$ -	$ -
15	Traffic Signals	None	$ -	$ -
16	Other	None	$ -	$ -
		Special Components Estimate Subtotal:	**$**	**-**

I, II, & III Construction Subtotal:		$ 5,728,700
Mobilization	5%	$ 286,500
Contingency	10%	$ 601,600
Construction Cost Estimate Total:		**$ 6,616,800**

Impact Fee Cost Estimate Summary

Item Description	Notes	Allowance	Item Cost
Construction		$ -	$ 6,616,800
Engineering/Survey/Testing		13.0%	$ 860,200
Right-of-Way Acquisition	Cost per sq. ft.: $ 1.00	$ 383,800	$ 383,800
	Impact Fee Project Cost Estimate Total:		**$ 7,860,800**

City of Terrell

Impact Fee Engineer's Opinion of Probable Construction Cost Estimate

TOWN NORTH DRIVE

FM 986 Ext to Poetry Road

Roadway Information:			
Functional Classification:	Principal Collector - Type C	No. of Lanes:	2
Length (lf):	1,104		
Right-of-Way Width (ft.):	100		
Median Type:	Raised		
Pavement Width (BOC to BOC):	56		
Description:	Construct new roadway to thoroughfare standard		

Roadway Construction Cost Estimate:

I. Paving Construction Cost Estimate

Item No.	Item Description	Quantity	Unit	Unit Cost	Item Cost
1	Right of Way Preparation	11	STA	$ 3,000.00	$ 33,000
2	Unclassified Street Excavation	4,600	CY	$ 30.00	$ 138,000
3	10" Concrete Pavement	6,900	SY	$ 120.00	$ 828,000
4	10" Flex Base	7,300	SY	$ 40.00	$ 292,000
5	6" Concrete Sidewalk and Ramps	1,970	SY	$ 50.00	$ 98,500
6	Parkway Topsoil and Furnishing	2,900	SY	$ 5.00	$ 14,500
				Paving Estimate Subtotal:	**$ 1,404,000**

II. Non-Paving Construction Components

Item No.	Item Description	Pct. Of Paving	Item Cost
7	Pavement Markings & Signage	2%	$ 28,100
8	Traffic Control	5%	$ 70,200
9	Erosion Control	3%	$ 42,200
10	Drainage Improvements (RCP, Inlets, MH, Outfalls)	15%	$ 210,600
11	Landscaping	3%	$ 42,200
12	Illumination	5%	$ 70,200
		Other Components Estimate Subtotal:	**$ 463,500**

III. Special Construction Components

Item No.	Item Description	Notes	Allowance	Item Cost
13	Drainage Structures	None	$ -	$ -
14	Bridge Structures	None	$ -	$ -
15	Traffic Signals	None	$ -	$ -
16	Other	None	$ -	$ -
		Special Components Estimate Subtotal:		**$ -**

I, II, & III Construction Subtotal:		$ 1,867,500
Mobilization	5%	$ 93,400
Contingency	10%	$ 196,100
Construction Cost Estimate Total:		**$ 2,157,000**

Impact Fee Cost Estimate Summary

Item Description	Notes	Allowance	Item Cost
Construction		$ -	$ 2,157,000
Engineering/Survey/Testing		13.0%	$ 280,400
Right-of-Way Acquisition	Cost per sq. ft.: $ 1.00	$ 110,400	$ 110,400
	Impact Fee Project Cost Estimate Total:		**$ 2,547,800**

City of Terrell

Impact Fee Engineer's Opinion of Probable Construction Cost Estimate

TOWN NORTH DRIVE

Frances Street to Callie Street

Roadway Information:			
Functional Classification:	Major Collector - Type D	No. of Lanes:	2
Length (lf):	2,371		
Right-of-Way Width (ft.):	80		
Median Type:	Raised		
Pavement Width (BOC to BOC):	38		
Description:	Construct new roadway to thoroughfare standard		

Roadway Construction Cost Estimate:

I. Paving Construction Cost Estimate

Item No.	Item Description	Quantity	Unit	Unit Cost	Item Cost
1	Right of Way Preparation	24	STA	$ 3,000.00	$ 72,000
2	Unclassified Street Excavation	6,700	CY	$ 30.00	$ 201,000
3	10" Concrete Pavement	10,100	SY	$ 120.00	$ 1,212,000
4	10" Flex Base	10,900	SY	$ 40.00	$ 436,000
5	6" Concrete Sidewalk and Ramps	3,690	SY	$ 50.00	$ 184,500
6	Parkway Topsoil and Furnishing	6,800	SY	$ 5.00	$ 34,000
				Paving Estimate Subtotal:	**$ 2,139,500**

II. Non-Paving Construction Components

Item No.	Item Description	Pct. Of Paving	Item Cost
7	Pavement Markings & Signage	2%	$ 42,800
8	Traffic Control	5%	$ 107,000
9	Erosion Control	3%	$ 64,200
10	Drainage Improvements (RCP, Inlets, MH, Outfalls)	15%	$ 321,000
11	Landscaping	3%	$ 64,200
12	Illumination	5%	$ 107,000
		Other Components Estimate Subtotal:	**$ 706,200**

III. Special Construction Components

Item No.	Item Description	Notes	Allowance	Item Cost
13	Drainage Structures	None	$ -	$ -
14	Bridge Structures	None	$ -	$ -
15	Traffic Signals	None	$ -	$ -
16	Other	None	$ -	$ -
		Special Components Estimate Subtotal:	**$**	**-**

I, II, & III Construction Subtotal:		$ 2,845,700
Mobilization	5%	$ 142,300
Contingency	10%	$ 298,800
Construction Cost Estimate Total:		**$ 3,286,800**

Impact Fee Cost Estimate Summary

Item Description	Notes	Allowance	Item Cost
Construction		$ -	$ 3,286,800
Engineering/Survey/Testing		13.0%	$ 427,300
Right-of-Way Acquisition	Cost per sq. ft.: $ 1.00	$ 189,700	$ 189,700
	Impact Fee Project Cost Estimate Total:		**$ 3,903,800**

City of Terrell

Impact Fee Engineer's Opinion of Probable Construction Cost Estimate

LIONS CLUB LANE

US 80 to Pool Road

Roadway Information:			
Functional Classification:	Minor Collector - Type E	No. of Lanes:	3
Length (lf):	867		
Right-of-Way Width (ft.):	60		
Median Type:	TWLTL		
Pavement Width (BOC to BOC):	33		
Description:	Widen roadway to thoroughfare standard		

Roadway Construction Cost Estimate:

I. Paving Construction Cost Estimate

Item No.	Item Description	Quantity	Unit	Unit Cost	Item Cost
1	Right of Way Preparation	9	STA	$ 3,000.00	$ 27,000
2	Unclassified Street Excavation	2,200	CY	$ 30.00	$ 66,000
3	8" Concrete Pavement	3,200	SY	$ 110.00	$ 352,000
4	10" Flex Base	3,400	SY	$ 40.00	$ 136,000
5	6" Concrete Sidewalk and Ramps	1,160	SY	$ 50.00	$ 58,000
6	Parkway Topsoil and Furnishing	1,400	SY	$ 5.00	$ 7,000
				Paving Estimate Subtotal:	**$ 646,000**

II. Non-Paving Construction Components

Item No.	Item Description	Pct. Of Paving	Item Cost
7	Pavement Markings & Signage	2%	$ 13,000
8	Traffic Control	5%	$ 32,300
9	Erosion Control	3%	$ 19,400
10	Drainage Improvements (RCP, Inlets, MH, Outfalls)	15%	$ 96,900
11	Landscaping	3%	$ 19,400
12	Illumination	5%	$ 32,300
		Other Components Estimate Subtotal:	**$ 213,300**

III. Special Construction Components

Item No.	Item Description	Notes	Allowance	Item Cost
13	Drainage Structures	None	$ -	$ -
14	Bridge Structures	None	$ -	$ -
15	Traffic Signals	None	$ -	$ -
16	Other	None	$ -	$ -
		Special Components Estimate Subtotal:		**$ -**

I, II, & III Construction Subtotal:		$ 859,300
Mobilization	5%	$ 43,000
Contingency	10%	$ 90,300
Construction Cost Estimate Total:		**$ 992,600**

Impact Fee Cost Estimate Summary

Item Description	Notes	Allowance	Item Cost
Construction		$ -	$ 992,600
Engineering/Survey/Testing		13.0%	$ 129,000
Right-of-Way Acquisition	Cost per sq. ft.: $ 1.00	$ -	$ -
	Impact Fee Project Cost Estimate Total:		**$ 1,121,600**

City of Terrell

Impact Fee Engineer's Opinion of Probable Construction Cost Estimate

CREEKSIDE DRIVE

9th Street Extension to Poetry Road

Roadway Information:			
Functional Classification:	Major Collector - Type D	No. of Lanes:	2
Length (lf):	1,975		
Right-of-Way Width (ft.):	80		
Median Type:	Raised		
Pavement Width (BOC to BOC):	38		
Description:	Construct new roadway to thoroughfare standard		

Roadway Construction Cost Estimate:

I. Paving Construction Cost Estimate

Item No.	Item Description	Quantity	Unit	Unit Cost	Item Cost
1	Right of Way Preparation	20	STA	$ 3,000.00	$ 60,000
2	Unclassified Street Excavation	5,600	CY	$ 30.00	$ 168,000
3	10" Concrete Pavement	8,400	SY	$ 120.00	$ 1,008,000
4	10" Flex Base	9,000	SY	$ 40.00	$ 360,000
5	6" Concrete Sidewalk and Ramps	3,080	SY	$ 50.00	$ 154,000
6	Parkway Topsoil and Furnishing	5,700	SY	$ 5.00	$ 28,500
				Paving Estimate Subtotal:	**$ 1,778,500**

II. Non-Paving Construction Components

Item No.	Item Description	Pct. Of Paving	Item Cost
7	Pavement Markings & Signage	2%	$ 35,600
8	Traffic Control	5%	$ 89,000
9	Erosion Control	3%	$ 53,400
10	Drainage Improvements (RCP, Inlets, MH, Outfalls)	15%	$ 266,800
11	Landscaping	3%	$ 53,400
12	Illumination	5%	$ 89,000
		Other Components Estimate Subtotal:	**$ 587,200**

III. Special Construction Components

Item No.	Item Description	Notes	Allowance	Item Cost
13	Drainage Structures	None	$ -	$ -
14	Bridge Structures	None	$ -	$ -
15	Traffic Signals	None	$ -	$ -
16	Other	None	$ -	$ -
		Special Components Estimate Subtotal:		**$ -**

I, II, & III Construction Subtotal:		$ 2,365,700
Mobilization	5%	$ 118,300
Contingency	10%	$ 248,400
Construction Cost Estimate Total:		**$ 2,732,400**

Impact Fee Cost Estimate Summary

Item Description	Notes	Allowance	Item Cost
Construction		$ -	$ 2,732,400
Engineering/Survey/Testing		13.0%	$ 355,200
Right-of-Way Acquisition	Cost per sq. ft.: $ 1.00	$ 158,000	$ 158,000
	Impact Fee Project Cost Estimate Total:		**$ 3,245,600**

City of Terrell

Impact Fee Engineer's Opinion of Probable Construction Cost Estimate

2ND STREET EXTENSION

E Brin Street to US 80

Roadway Information:			
Functional Classification:	Minor Arterial - Type B	No. of Lanes:	4
Length (lf):	1,449		
Right-of-Way Width (ft.):	100		
Median Type:	Raised		
Pavement Width (BOC to BOC):	58		
Description:	Construct new roadway to thoroughfare standard		

Roadway Construction Cost Estimate:

I. Paving Construction Cost Estimate

Item No.	Item Description	Quantity	Unit	Unit Cost	Item Cost
1	Right of Way Preparation	14	STA	$ 3,000.00	$ 42,000
2	Unclassified Street Excavation	6,300	CY	$ 30.00	$ 189,000
3	12" Concrete Pavement	9,400	SY	$ 130.00	$ 1,222,000
4	12" Flex Base	9,900	SY	$ 45.00	$ 445,500
5	6" Concrete Sidewalk and Ramps	1,940	SY	$ 50.00	$ 97,000
6	Parkway Topsoil and Furnishing	4,200	SY	$ 5.00	$ 21,000
				Paving Estimate Subtotal:	**$ 2,016,500**

II. Non-Paving Construction Components

Item No.	Item Description	Pct. Of Paving	Item Cost
7	Pavement Markings & Signage	2%	$ 40,400
8	Traffic Control	5%	$ 100,900
9	Erosion Control	3%	$ 60,500
10	Drainage Improvements (RCP, Inlets, MH, Outfalls)	15%	$ 302,500
11	Landscaping	3%	$ 60,500
12	Illumination	5%	$ 100,900
		Other Components Estimate Subtotal:	**$ 665,700**

III. Special Construction Components

Item No.	Item Description	Notes	Allowance	Item Cost
13	Drainage Structures	None	$ -	$ -
14	Bridge Structures	None	$ -	$ -
15	Traffic Signals	None	$ -	$ -
16	Other	None	$ 100,000	$ 100,000
			Special Components Estimate Subtotal:	**$ 100,000**

I, II, & III Construction Subtotal:		$ 2,782,200
Mobilization	5%	$ 139,200
Contingency	10%	$ 292,200
Construction Cost Estimate Total:		**$ 3,213,600**

Impact Fee Cost Estimate Summary

Item Description	Notes	Allowance	Item Cost
Construction		$ -	$ 3,213,600
Engineering/Survey/Testing		13.0%	$ 417,800
Right-of-Way Acquisition	Cost per sq. ft.: $ 1.00	$ 144,900	$ 144,900
		Impact Fee Project Cost Estimate Total:	**$ 3,776,300**

City of Terrell

Impact Fee Engineer's Opinion of Probable Construction Cost Estimate

ROCHESTER STREET

SH 34 to 274 ft S of US 80

Roadway Information:			
Functional Classification:	Minor Arterial - Type B	No. of Lanes:	4
Length (lf):	3,394		
Right-of-Way Width (ft.):	100		
Median Type:	Raised		
Pavement Width (BOC to BOC):	58		
Description:	Construct new roadway to thoroughfare standard		

Roadway Construction Cost Estimate:

I. Paving Construction Cost Estimate

Item No.	Item Description	Quantity	Unit	Unit Cost	Item Cost
1	Right of Way Preparation	34	STA	$ 3,000.00	$ 102,000
2	Unclassified Street Excavation	14,600	CY	$ 30.00	$ 438,000
3	12" Concrete Pavement	21,900	SY	$ 130.00	$ 2,847,000
4	12" Flex Base	23,100	SY	$ 45.00	$ 1,039,500
5	6" Concrete Sidewalk and Ramps	4,530	SY	$ 50.00	$ 226,500
6	Parkway Topsoil and Furnishing	9,800	SY	$ 5.00	$ 49,000
				Paving Estimate Subtotal:	**$ 4,702,000**

II. Non-Paving Construction Components

Item No.	Item Description	Pct. Of Paving	Item Cost
7	Pavement Markings & Signage	2%	$ 94,100
8	Traffic Control	5%	$ 235,100
9	Erosion Control	3%	$ 141,100
10	Drainage Improvements (RCP, Inlets, MH, Outfalls)	15%	$ 705,300
11	Landscaping	3%	$ 141,100
12	Illumination	5%	$ 235,100
		Other Components Estimate Subtotal:	**$ 1,551,800**

III. Special Construction Components

Item No.	Item Description	Notes	Allowance	Item Cost
13	Drainage Structures	None	$ -	$ -
14	Bridge Structures	None	$ -	$ -
15	Traffic Signals	None	$ -	$ -
16	Other	RR crossing	$ 100,000	$ 100,000
			Special Components Estimate Subtotal:	**$ 100,000**

I, II, & III Construction Subtotal:		$ 6,353,800
Mobilization	5%	$ 317,700
Contingency	10%	$ 667,200
Construction Cost Estimate Total:		**$ 7,338,700**

Impact Fee Cost Estimate Summary

Item Description	Notes	Allowance	Item Cost
Construction		$ -	$ 7,338,700
Engineering/Survey/Testing		13.0%	$ 954,000
Right-of-Way Acquisition	Cost per sq. ft.: $ 1.00	$ 339,400	$ 339,400
	Impact Fee Project Cost Estimate Total:		**$ 8,632,100**

City of Terrell

Impact Fee Engineer's Opinion of Probable Construction Cost Estimate

WINDSOR AVENUE

FM 2578 to Home Depot

Roadway Information:			
Functional Classification:	Principal Collector - Type C	No. of Lanes:	4
Length (lf):	1,484		
Right-of-Way Width (ft.):	100		
Median Type:	Raised		
Pavement Width (BOC to BOC):	56		
Description:	Construct new roadway to thoroughfare standard		

Roadway Construction Cost Estimate:

I. Paving Construction Cost Estimate

Item No.	Item Description	Quantity	Unit	Unit Cost	Item Cost
1	Right of Way Preparation	15	STA	$ 3,000.00	$ 45,000
2	Unclassified Street Excavation	6,200	CY	$ 30.00	$ 186,000
3	10" Concrete Pavement	9,300	SY	$ 120.00	$ 1,116,000
4	10" Flex Base	9,800	SY	$ 40.00	$ 392,000
5	6" Concrete Sidewalk and Ramps	2,640	SY	$ 50.00	$ 132,000
6	Parkway Topsoil and Furnishing	4,000	SY	$ 5.00	$ 20,000
				Paving Estimate Subtotal:	**$ 1,891,000**

II. Non-Paving Construction Components

Item No.	Item Description	Pct. Of Paving	Item Cost
7	Pavement Markings & Signage	2%	$ 37,900
8	Traffic Control	5%	$ 94,600
9	Erosion Control	3%	$ 56,800
10	Drainage Improvements (RCP, Inlets, MH, Outfalls)	15%	$ 283,700
11	Landscaping	3%	$ 56,800
12	Illumination	5%	$ 94,600
	Other Components Estimate Subtotal:		**$ 624,400**

III. Special Construction Components

Item No.	Item Description	Notes	Allowance	Item Cost
13	Drainage Structures	None	$ -	$ -
14	Bridge Structures	None	$ -	$ -
15	Traffic Signals	None	$ -	$ -
16	Other	None	$ -	$ -
		Special Components Estimate Subtotal:		**$ -**

I, II, & III Construction Subtotal:		$ 2,515,400
Mobilization	5%	$ 125,800
Contingency	10%	$ 264,200
Construction Cost Estimate Total:		**$ 2,905,400**

Impact Fee Cost Estimate Summary

Item Description	Notes	Allowance	Item Cost
Construction		$ -	$ 2,905,400
Engineering/Survey/Testing		13.0%	$ 377,700
Right-of-Way Acquisition	Cost per sq. ft.: $ 1.00	$ 148,400	$ 148,400
	Impact Fee Project Cost Estimate Total:		**$ 3,431,500**

City of Terrell

Impact Fee Engineer's Opinion of Probable Construction Cost Estimate

WINDSOR AVENUE

Home Depot to SH 34

Roadway Information:			
Functional Classification:	Principal Collector - Type C	No. of Lanes:	2
Length (lf):	1,258		
Right-of-Way Width (ft.):	100		
Median Type:	Raised		
Pavement Width (BOC to BOC):	56		
Description:	Recoupment for Constructing the Roadway		

Roadway Construction Cost Estimate:

I. Paving Construction Cost Estimate

Item No.	Item Description	Quantity	Unit	Unit Cost	Item Cost
1	Right of Way Preparation	13	STA	$ 3,000.00	$ 39,000
2	Unclassified Street Excavation	5,300	CY	$ 30.00	$ 159,000
3	10" Concrete Pavement	7,900	SY	$ 120.00	$ 948,000
4	10" Flex Base	8,300	SY	$ 40.00	$ 332,000
5	6" Concrete Sidewalk and Ramps	2,240	SY	$ 50.00	$ 112,000
6	Parkway Topsoil and Furnishing	3,400	SY	$ 5.00	$ 17,000
				Paving Estimate Subtotal:	**$ 1,607,000**

II. Non-Paving Construction Components

Item No.	Item Description	Pct. Of Paving	Item Cost
7	Pavement Markings & Signage	2%	$ 32,200
8	Traffic Control	5%	$ 80,400
9	Erosion Control	3%	$ 48,300
10	Drainage Improvements (RCP, Inlets, MH, Outfalls)	15%	$ 241,100
11	Landscaping	3%	$ 48,300
12	Illumination	5%	$ 80,400
		Other Components Estimate Subtotal:	**$ 530,700**

III. Special Construction Components

Item No.	Item Description	Notes	Allowance	Item Cost
13	Drainage Structures	None	$ -	$ -
14	Bridge Structures	None	$ -	$ -
15	Traffic Signals	None	$ -	$ -
16	Other	None	$ -	$ -
		Special Components Estimate Subtotal:		**$ -**

I, II, & III Construction Subtotal:		$ 2,137,700
Mobilization	5%	$ 106,900
Contingency	10%	$ 224,500
Construction Cost Estimate Total:		**$ 2,469,100**

Impact Fee Cost Estimate Summary

Item Description	Notes	Allowance	Item Cost
Construction		$ -	$ 2,469,100
Engineering/Survey/Testing		13.0%	$ 321,000
Right-of-Way Acquisition	Cost per sq. ft.: $ 1.00	$ -	$ -
	Impact Fee Project Cost Estimate Total:		**$ 2,790,100**

City of Terrell

Impact Fee Engineer's Opinion of Probable Construction Cost Estimate

BFS BLOUEVARD

SH 34 to Airport

Roadway Information:			
Functional Classification:	Major Collector - Type D	No. of Lanes:	2
Length (lf):	3,221		
Right-of-Way Width (ft.):	80		
Median Type:	Raised		
Pavement Width (BOC to BOC):	38		
Description:	Recoupment for Constructing the Roadway		

Roadway Construction Cost Estimate:

I. Paving Construction Cost Estimate

Item No.	Item Description	Quantity	Unit	Unit Cost	Item Cost
1	Right of Way Preparation	32	STA	$ 3,000.00	$ 96,000
2	Unclassified Street Excavation	9,100	CY	$ 30.00	$ 273,000
3	10" Concrete Pavement	13,600	SY	$ 120.00	$ 1,632,000
4	10" Flex Base	14,700	SY	$ 40.00	$ 588,000
5	6" Concrete Sidewalk and Ramps	5,020	SY	$ 50.00	$ 251,000
6	Parkway Topsoil and Furnishing	9,300	SY	$ 5.00	$ 46,500
				Paving Estimate Subtotal:	**$ 2,886,500**

II. Non-Paving Construction Components

Item No.	Item Description	Pct. Of Paving	Item Cost
7	Pavement Markings & Signage	2%	$ 57,800
8	Traffic Control	5%	$ 144,400
9	Erosion Control	3%	$ 86,600
10	Drainage Improvements (RCP, Inlets, MH, Outfalls)	15%	$ 433,000
11	Landscaping	3%	$ 86,600
12	Illumination	5%	$ 144,400
		Other Components Estimate Subtotal:	**$ 952,800**

III. Special Construction Components

Item No.	Item Description	Notes	Allowance	Item Cost
13	Drainage Structures	None	$ -	$ -
14	Bridge Structures	None	$ -	$ -
15	Traffic Signals	None	$ -	$ -
16	Other	None	$ -	$ -
		Special Components Estimate Subtotal:		**$ -**

I, II, & III Construction Subtotal:		$ 3,839,300
Mobilization	5%	$ 192,000
Contingency	10%	$ 403,200
Construction Cost Estimate Total:		**$ 4,434,500**

Impact Fee Cost Estimate Summary

Item Description	Notes	Allowance	Item Cost
Construction		$ -	$ 4,434,500
Engineering/Survey/Testing		13.0%	$ 576,500
Right-of-Way Acquisition	Cost per sq. ft.: $ 1.00	$ -	$ -
	Impact Fee Project Cost Estimate Total:		**$ 5,011,000**

City of Terrell

Impact Fee Engineer's Opinion of Probable Construction Cost Estimate

NEW LOLLECTOR

BFS to US 80 Frontage Rd

Roadway Information:			
Functional Classification:	Major Collector - Type D	No. of Lanes:	2
Length (lf):	4,517		
Right-of-Way Width (ft.):	80		
Median Type:	Raised		
Pavement Width (BOC to BOC):	38		
Description:	Construct new roadway to thoroughfare standard		

Roadway Construction Cost Estimate:

I. Paving Construction Cost Estimate

Item No.	Item Description	Quantity	Unit	Unit Cost	Item Cost
1	Right of Way Preparation	45	STA	$ 3,000.00	$ 135,000
2	Unclassified Street Excavation	12,800	CY	$ 30.00	$ 384,000
3	10" Concrete Pavement	19,100	SY	$ 120.00	$ 2,292,000
4	10" Flex Base	20,600	SY	$ 40.00	$ 824,000
5	6" Concrete Sidewalk and Ramps	7,030	SY	$ 50.00	$ 351,500
6	Parkway Topsoil and Furnishing	13,000	SY	$ 5.00	$ 65,000
				Paving Estimate Subtotal:	**$ 4,051,500**

II. Non-Paving Construction Components

Item No.	Item Description	Pct. Of Paving	Item Cost
7	Pavement Markings & Signage	2%	$ 81,100
8	Traffic Control	5%	$ 202,600
9	Erosion Control	3%	$ 121,600
10	Drainage Improvements (RCP, Inlets, MH, Outfalls)	15%	$ 607,800
11	Landscaping	3%	$ 121,600
12	Illumination	5%	$ 202,600
		Other Components Estimate Subtotal:	**$ 1,337,300**

III. Special Construction Components

Item No.	Item Description	Notes	Allowance	Item Cost
13	Drainage Structures	None	$ -	$ -
14	Bridge Structures	None	$ -	$ -
15	Traffic Signals	None	$ -	$ -
16	Other	None	$ -	$ -
		Special Components Estimate Subtotal:	**$**	**-**

I, II, & III Construction Subtotal:		$ 5,388,800
Mobilization	5%	$ 269,500
Contingency	10%	$ 565,900
Construction Cost Estimate Total:		**$ 6,224,200**

Impact Fee Cost Estimate Summary

Item Description	Notes	Allowance	Item Cost
Construction		$ -	$ 6,224,200
Engineering/Survey/Testing		13.0%	$ 809,100
Right-of-Way Acquisition	Cost per sq. ft.: $ 1.00	$ 361,400	$ 361,400
	Impact Fee Project Cost Estimate Total:		**$ 7,394,700**

City of Terrell

Impact Fee Engineer's Opinion of Probable Construction Cost Estimate

SAGE HILL PKWY

City Limits to SH 34

Roadway Information:			
Functional Classification:	Principal Arterial - Type AA	No. of Lanes:	4
Length (lf):	6,731		
Right-of-Way Width (ft.):	140		
Median Type:	Raised		
Pavement Width (BOC to BOC):	48		
Description:	Construct new roadway to thoroughfare standard		

Roadway Construction Cost Estimate:

I. Paving Construction Cost Estimate

Item No.	Item Description	Quantity	Unit	Unit Cost	Item Cost
1	Right of Way Preparation	67	STA	$ 3,000.00	$ 201,000
2	Unclassified Street Excavation	24,000	CY	$ 30.00	$ 720,000
3	12" Concrete Pavement	35,900	SY	$ 130.00	$ 4,667,000
4	12" Flex Base	38,200	SY	$ 45.00	$ 1,719,000
5	6" Concrete Sidewalk and Ramps	8,980	SY	$ 50.00	$ 449,000
6	Parkway Topsoil and Furnishing	56,800	SY	$ 5.00	$ 284,000
				Paving Estimate Subtotal:	**$ 8,040,000**

II. Non-Paving Construction Components

Item No.	Item Description	Pct. Of Paving	Item Cost
7	Pavement Markings & Signage	2%	$ 160,800
8	Traffic Control	5%	$ 402,000
9	Erosion Control	3%	$ 241,200
10	Drainage Improvements (RCP, Inlets, MH, Outfalls)	15%	$ 1,206,000
11	Landscaping	3%	$ 241,200
12	Illumination	5%	$ 402,000
		Other Components Estimate Subtotal:	**$ 2,653,200**

III. Special Construction Components

Item No.	Item Description	Notes	Allowance	Item Cost
13	Drainage Structures	None	$ -	$ -
14	Bridge Structures	None	$ -	$ -
15	Traffic Signals	None	$ -	$ -
16	Other	None	$ -	$ -
		Special Components Estimate Subtotal:		**$ -**

I, II, & III Construction Subtotal:		$ 10,693,200
Mobilization	5%	$ 534,700
Contingency	10%	$ 1,122,800
Construction Cost Estimate Total:		**$ 12,350,700**

Impact Fee Cost Estimate Summary

Item Description	Notes	Allowance	Item Cost
Construction		-	$ 12,350,700
Engineering/Survey/Testing		13.0%	$ 1,605,600
Right-of-Way Acquisition	Cost per sq. ft.: $ 1.00	$ 942,300	$ 942,300
	Impact Fee Project Cost Estimate Total:		**$ 14,898,600**

City of Terrell

Impact Fee Engineer's Opinion of Probable Construction Cost Estimate

CR 309 - WILSON RD

City Limits to IH 20 Interchange

Roadway Information:			
Functional Classification:	Principal Arterial - Type AA	No. of Lanes:	4
Length (lf):	3,011		
Right-of-Way Width (ft.):	140		
Median Type:	Raised		
Pavement Width (BOC to BOC):	48		
Description:	Widen roadway		

Roadway Construction Cost Estimate:

I. Paving Construction Cost Estimate

Item No.	Item Description	Quantity	Unit	Unit Cost	Item Cost
1	Right of Way Preparation	12	STA	$ 3,000.00	$ 36,000
2	Unclassified Street Excavation	4,300	CY	$ 30.00	$ 129,000
3	12" Concrete Pavement	6,500	SY	$ 130.00	$ 845,000
4	12" Flex Base	6,900	SY	$ 45.00	$ 310,500
5	6" Concrete Sidewalk and Ramps	4,020	SY	$ 50.00	$ 201,000
6	Parkway Topsoil and Furnishing	25,400	SY	$ 5.00	$ 127,000
				Paving Estimate Subtotal:	**$ 1,648,500**

II. Non-Paving Construction Components

Item No.	Item Description	Pct. Of Paving	Item Cost
7	Pavement Markings & Signage	2%	$ 33,000
8	Traffic Control	5%	$ 82,500
9	Erosion Control	3%	$ 49,500
10	Drainage Improvements (RCP, Inlets, MH, Outfalls)	15%	$ 247,300
11	Landscaping	3%	$ 49,500
12	Illumination	5%	$ 82,500
	Other Components Estimate Subtotal:		**$ 544,300**

III. Special Construction Components

Item No.	Item Description	Notes	Allowance	Item Cost
13	Drainage Structures	Major Crossing (I-20)	$ 1,215,000	$ 1,215,000
14	Bridge Structures	None	$ -	$ -
15	Traffic Signals	None	$ -	$ -
16	Other	None	$ -	$ -
		Special Components Estimate Subtotal:		**$ 1,215,000**

I, II, & III Construction Subtotal:		$ 3,407,800
Mobilization	5%	$ 170,400
Contingency	10%	$ 357,900
Construction Cost Estimate Total:		**$ 3,936,100**

Impact Fee Cost Estimate Summary

Item Description	Notes	Allowance	Item Cost
Construction	Assumes TxDOT funds bridge	$ (1,215,000)	$ 2,721,100
Engineering/Survey/Testing		13.0%	$ 353,700
Right-of-Way Acquisition	Cost per sq. ft.: $ 1.00	$ -	$ -
	Impact Fee Project Cost Estimate Total:		**$ 3,074,800**

City of Terrell

Impact Fee Engineer's Opinion of Probable Construction Cost Estimate

SAGE HILL PKWY

City Limits to FM 2578

Roadway Information:			
Functional Classification:	Principal Arterial - Type AA	No. of Lanes:	4
Length (lf):	128		
Right-of-Way Width (ft.):	140		
Median Type:	Raised		
Pavement Width (BOC to BOC):	48		
Description:	Construct new roadway to thoroughfare standard		

Roadway Construction Cost Estimate:

I. Paving Construction Cost Estimate

Item No.	Item Description	Quantity	Unit	Unit Cost	Item Cost
1	Right of Way Preparation	1	STA	$ 3,000.00	$ 3,000
2	Unclassified Street Excavation	500	CY	$ 30.00	$ 15,000
3	12" Concrete Pavement	700	SY	$ 130.00	$ 91,000
4	12" Flex Base	800	SY	$ 45.00	$ 36,000
5	6" Concrete Sidewalk and Ramps	180	SY	$ 50.00	$ 9,000
6	Parkway Topsoil and Furnishing	1,100	SY	$ 5.00	$ 5,500
				Paving Estimate Subtotal:	**$ 159,500**

II. Non-Paving Construction Components

Item No.	Item Description	Pct. Of Paving	Item Cost
7	Pavement Markings & Signage	2%	$ 3,200
8	Traffic Control	5%	$ 8,000
9	Erosion Control	3%	$ 4,800
10	Drainage Improvements (RCP, Inlets, MH, Outfalls)	15%	$ 24,000
11	Landscaping	3%	$ 4,800
12	Illumination	5%	$ 8,000
		Other Components Estimate Subtotal:	**$ 52,800**

III. Special Construction Components

Item No.	Item Description	Notes	Allowance	Item Cost
13	Drainage Structures	None	$ -	$ -
14	Bridge Structures	None	$ -	$ -
15	Traffic Signals	None	$ -	$ -
16	Other	None	$ -	$ -
			Special Components Estimate Subtotal:	**$ -**

I, II, & III Construction Subtotal:		$ 212,300
Mobilization	5%	$ 10,700
Contingency	10%	$ 22,300
Construction Cost Estimate Total:		**$ 245,300**

Impact Fee Cost Estimate Summary

Item Description	Notes	Allowance	Item Cost
Construction		-	$ 245,300
Engineering/Survey/Testing		13.0%	$ 31,900
Right-of-Way Acquisition	Cost per sq. ft.: $ 1.00	$ 17,900	$ 17,900
		Impact Fee Project Cost Estimate Total:	**$ 295,100**

City of Terrell

Impact Fee Engineer's Opinion of Probable Construction Cost Estimate

WINDSOR AVENUE EXTENSION

SH 34 to Industrial Blvd

Roadway Information:			
Functional Classification:	Minor Collector - Type E	No. of Lanes:	3
Length (lf):	717		
Right-of-Way Width (ft.):	60		
Median Type:	TWLTL		
Pavement Width (BOC to BOC):	33		
Description:	Construct new roadway to thoroughfare standard		

Roadway Construction Cost Estimate:

I. Paving Construction Cost Estimate

Item No.	Item Description	Quantity	Unit	Unit Cost	Item Cost
1	Right of Way Preparation	7	STA	$ 3,000.00	$ 21,000
2	Unclassified Street Excavation	1,800	CY	$ 30.00	$ 54,000
3	8" Concrete Pavement	2,700	SY	$ 110.00	$ 297,000
4	10" Flex Base	2,800	SY	$ 40.00	$ 112,000
5	6" Concrete Sidewalk and Ramps	960	SY	$ 50.00	$ 48,000
6	Parkway Topsoil and Furnishing	1,200	SY	$ 5.00	$ 6,000
				Paving Estimate Subtotal:	**$ 538,000**

II. Non-Paving Construction Components

Item No.	Item Description	Pct. Of Paving	Item Cost
7	Pavement Markings & Signage	2%	$ 10,800
8	Traffic Control	5%	$ 26,900
9	Erosion Control	3%	$ 16,200
10	Drainage Improvements (RCP, Inlets, MH, Outfalls)	15%	$ 80,700
11	Landscaping	3%	$ 16,200
12	Illumination	5%	$ 26,900
		Other Components Estimate Subtotal:	**$ 177,700**

III. Special Construction Components

Item No.	Item Description	Notes	Allowance	Item Cost
13	Drainage Structures	None	$ -	$ -
14	Bridge Structures	None	$ -	$ -
15	Traffic Signals	None	$ -	$ -
16	Other	None	$ -	$ -
		Special Components Estimate Subtotal:		**$ -**

I, II, & III Construction Subtotal:		$ 715,700
Mobilization	5%	$ 35,800
Contingency	10%	$ 75,200
Construction Cost Estimate Total:		**$ 826,700**

Impact Fee Cost Estimate Summary

Item Description	Notes	Allowance	Item Cost
Construction		$ -	$ 826,700
Engineering/Survey/Testing		13.0%	$ 107,500
Right-of-Way Acquisition	Cost per sq. ft.: $ 1.00	$ 43,000	$ 43,000
	Impact Fee Project Cost Estimate Total:		**$ 977,200**

City of Terrell

Impact Fee Engineer's Opinion of Probable Construction Cost Estimate

INDUSTRIAL BLVD

Airport Rd to Industrial Blvd

Roadway Information:			
Functional Classification:	Minor Collector - Type E	No. of Lanes:	3
Length (lf):	3,024		
Right-of-Way Width (ft.):	60		
Median Type:	TWLTL		
Pavement Width (BOC to BOC):	33		
Description:	Widen roadway to thoroughfare standard		

Roadway Construction Cost Estimate:

I. Paving Construction Cost Estimate

Item No.	Item Description	Quantity	Unit	Unit Cost	Item Cost
1	Right of Way Preparation	30	STA	$ 3,000.00	$ 90,000
2	Unclassified Street Excavation	7,400	CY	$ 30.00	$ 222,000
3	8" Concrete Pavement	11,100	SY	$ 110.00	$ 1,221,000
4	10" Flex Base	11,800	SY	$ 40.00	$ 472,000
5	6" Concrete Sidewalk and Ramps	4,040	SY	$ 50.00	$ 202,000
6	Parkway Topsoil and Furnishing	5,000	SY	$ 5.00	$ 25,000
				Paving Estimate Subtotal:	**$ 2,232,000**

II. Non-Paving Construction Components

Item No.	Item Description	Pct. Of Paving	Item Cost
7	Pavement Markings & Signage	2%	$ 44,700
8	Traffic Control	5%	$ 111,600
9	Erosion Control	3%	$ 67,000
10	Drainage Improvements (RCP, Inlets, MH, Outfalls)	15%	$ 334,800
11	Landscaping	3%	$ 67,000
12	Illumination	5%	$ 111,600
		Other Components Estimate Subtotal:	**$ 736,700**

III. Special Construction Components

Item No.	Item Description	Notes	Allowance	Item Cost
13	Drainage Structures	None	$ -	$ -
14	Bridge Structures	None	$ -	$ -
15	Traffic Signals	None	$ -	$ -
16	Other	None	$ -	$ -
		Special Components Estimate Subtotal:		**$ -**

I, II, & III Construction Subtotal:		$ 2,968,700
Mobilization	5%	$ 148,500
Contingency	10%	$ 311,800
Construction Cost Estimate Total:		**$ 3,429,000**

Impact Fee Cost Estimate Summary

Item Description	Notes	Allowance	Item Cost
Construction		$ -	$ 3,429,000
Engineering/Survey/Testing		13.0%	$ 445,800
Right-of-Way Acquisition	Cost per sq. ft.: $ 1.00	$ -	$ -
	Impact Fee Project Cost Estimate Total:		**$ 3,874,800**

City of Terrell

Impact Fee Engineer's Opinion of Probable Construction Cost Estimate

INDUSTRIAL BLVD

Airport Rd to Industrial Blvd

Roadway Information:			
Functional Classification:	Minor Collector - Type E	No. of Lanes:	3
Length (lf):	927		
Right-of-Way Width (ft.):	60		
Median Type:	TWLTL		
Pavement Width (BOC to BOC):	33		
Description:	Construct new roadway to thoroughfare standard		

Roadway Construction Cost Estimate:

I. Paving Construction Cost Estimate

Item No.	Item Description	Quantity	Unit	Unit Cost	Item Cost
1	Right of Way Preparation	9	STA	$ 3,000.00	$ 27,000
2	Unclassified Street Excavation	2,300	CY	$ 30.00	$ 69,000
3	8" Concrete Pavement	3,400	SY	$ 110.00	$ 374,000
4	10" Flex Base	3,700	SY	$ 40.00	$ 148,000
5	6" Concrete Sidewalk and Ramps	1,240	SY	$ 50.00	$ 62,000
6	Parkway Topsoil and Furnishing	1,500	SY	$ 5.00	$ 7,500
				Paving Estimate Subtotal:	**$ 687,500**

II. Non-Paving Construction Components

Item No.	Item Description	Pct. Of Paving	Item Cost
7	Pavement Markings & Signage	2%	$ 13,800
8	Traffic Control	5%	$ 34,400
9	Erosion Control	3%	$ 20,700
10	Drainage Improvements (RCP, Inlets, MH, Outfalls)	15%	$ 103,200
11	Landscaping	3%	$ 20,700
12	Illumination	5%	$ 34,400
		Other Components Estimate Subtotal:	**$ 227,200**

III. Special Construction Components

Item No.	Item Description	Notes	Allowance	Item Cost
13	Drainage Structures	None	$ -	$ -
14	Bridge Structures	None	$ -	$ -
15	Traffic Signals	None	$ -	$ -
16	Other	None	$ -	$ -
		Special Components Estimate Subtotal:		**$ -**

I, II, & III Construction Subtotal:		$ 914,700
Mobilization	5%	$ 45,800
Contingency	10%	$ 96,100
Construction Cost Estimate Total:		**$ 1,056,600**

Impact Fee Cost Estimate Summary

Item Description	Notes	Allowance	Item Cost
Construction		$ -	$ 1,056,600
Engineering/Survey/Testing		13.0%	$ 137,400
Right-of-Way Acquisition	Cost per sq. ft.: $ 1.00	$ 55,600	$ 55,600
	Impact Fee Project Cost Estimate Total:		**$ 1,249,600**

City of Terrell

Impact Fee Engineer's Opinion of Probable Construction Cost Estimate

INDUSTRIAL BLVD

BFS Blvd to Windsor Ave Ext

Roadway Information:			
Functional Classification:	Minor Collector - Type E	No. of Lanes:	3
Length (lf):	1,988		
Right-of-Way Width (ft.):	60		
Median Type:	TWLTL		
Pavement Width (BOC to BOC):	33		
Description:	Construct new roadway to thoroughfare standard		

Roadway Construction Cost Estimate:

I. Paving Construction Cost Estimate

Item No.	Item Description	Quantity	Unit	Unit Cost	Item Cost
1	Right of Way Preparation	20	STA	$ 3,000.00	$ 60,000
2	Unclassified Street Excavation	4,900	CY	$ 30.00	$ 147,000
3	8" Concrete Pavement	7,300	SY	$ 110.00	$ 803,000
4	10" Flex Base	7,800	SY	$ 40.00	$ 312,000
5	6" Concrete Sidewalk and Ramps	2,660	SY	$ 50.00	$ 133,000
6	Parkway Topsoil and Furnishing	3,300	SY	$ 5.00	$ 16,500
				Paving Estimate Subtotal:	**$ 1,471,500**

II. Non-Paving Construction Components

Item No.	Item Description	Pct. Of Paving	Item Cost
7	Pavement Markings & Signage	2%	$ 29,500
8	Traffic Control	5%	$ 73,600
9	Erosion Control	3%	$ 44,200
10	Drainage Improvements (RCP, Inlets, MH, Outfalls)	15%	$ 220,800
11	Landscaping	3%	$ 44,200
12	Illumination	5%	$ 73,600
		Other Components Estimate Subtotal:	**$ 485,900**

III. Special Construction Components

Item No.	Item Description	Notes	Allowance	Item Cost
13	Drainage Structures	None	$ -	$ -
14	Bridge Structures	None	$ -	$ -
15	Traffic Signals	None	$ -	$ -
16	Other	None	$ -	$ -
		Special Components Estimate Subtotal:		**$ -**

I, II, & III Construction Subtotal:		$ 1,957,400
Mobilization	5%	$ 97,900
Contingency	10%	$ 205,600
Construction Cost Estimate Total:		**$ 2,260,900**

Impact Fee Cost Estimate Summary

Item Description	Notes	Allowance	Item Cost
Construction		$ -	$ 2,260,900
Engineering/Survey/Testing		13.0%	$ 293,900
Right-of-Way Acquisition	Cost per sq. ft.: $ 1.00	$ 119,300	$ 119,300
	Impact Fee Project Cost Estimate Total:		**$ 2,674,100**

City of Terrell

Impact Fee Engineer's Opinion of Probable Construction Cost Estimate

ROCHESTER STREET

253 ft S of US 80 to US 80

Roadway Information:			
Functional Classification:	Minor Arterial - Type B	No. of Lanes:	4
Length (lf):	253		
Right-of-Way Width (ft.):	100		
Median Type:	Raised		
Pavement Width (BOC to BOC):	58		
Description:	Widen roadway		

Roadway Construction Cost Estimate:

I. Paving Construction Cost Estimate

Item No.	Item Description	Quantity	Unit	Unit Cost	Item Cost
1	Right of Way Preparation	3	STA	$ 3,000.00	$ 9,000
2	Unclassified Street Excavation	1,100	CY	$ 30.00	$ 33,000
3	12" Concrete Pavement	1,700	SY	$ 130.00	$ 221,000
4	12" Flex Base	1,800	SY	$ 45.00	$ 81,000
5	6" Concrete Sidewalk and Ramps	340	SY	$ 50.00	$ 17,000
6	Parkway Topsoil and Furnishing	700	SY	$ 5.00	$ 3,500
				Paving Estimate Subtotal:	**$ 364,500**

II. Non-Paving Construction Components

Item No.	Item Description	Pct. Of Paving	Item Cost
7	Pavement Markings & Signage	2%	$ 7,300
8	Traffic Control	5%	$ 18,300
9	Erosion Control	3%	$ 11,000
10	Drainage Improvements (RCP, Inlets, MH, Outfalls)	15%	$ 54,700
11	Landscaping	3%	$ 11,000
12	Illumination	5%	$ 18,300
		Other Components Estimate Subtotal:	**$ 120,600**

III. Special Construction Components

Item No.	Item Description	Notes	Allowance	Item Cost
13	Drainage Structures	None	$ -	$ -
14	Bridge Structures	None	$ -	$ -
15	Traffic Signals	None	$ -	$ -
16	Other	None	$ -	$ -
		Special Components Estimate Subtotal:		**$ -**

I, II, & III Construction Subtotal:		$ 485,100
Mobilization	5%	$ 24,300
Contingency	10%	$ 51,000
Construction Cost Estimate Total:		**$ 560,400**

Impact Fee Cost Estimate Summary

Item Description	Notes	Allowance	Item Cost
Construction		$ -	$ 560,400
Engineering/Survey/Testing		13.0%	$ 72,900
Right-of-Way Acquisition	Cost per sq. ft.: $ 1.00	$ 12,700	$ 12,700
	Impact Fee Project Cost Estimate Total:		**$ 646,000**

City of Terrell

Impact Fee Engineer's Opinion of Probable Construction Cost Estimate

ROCHESTER STEREET

Virginia Street t to S Delphine Street

Roadway Information:			
Functional Classification:	Minor Arterial - Type B	No. of Lanes:	4
Length (lf):	329		
Right-of-Way Width (ft.):	100		
Median Type:	Raised		
Pavement Width (BOC to BOC):	58		
Description:	Widen roadway to thoroughfare standard		

Roadway Construction Cost Estimate:

I. Paving Construction Cost Estimate

Item No.	Item Description	Quantity	Unit	Unit Cost	Item Cost
1	Right of Way Preparation	3	STA	$ 3,000.00	$ 9,000
2	Unclassified Street Excavation	1,500	CY	$ 30.00	$ 45,000
3	12" Concrete Pavement	2,200	SY	$ 130.00	$ 286,000
4	12" Flex Base	2,300	SY	$ 45.00	$ 103,500
5	6" Concrete Sidewalk and Ramps	440	SY	$ 50.00	$ 22,000
6	Parkway Topsoil and Furnishing	1,000	SY	$ 5.00	$ 5,000
				Paving Estimate Subtotal:	**$ 470,500**

II. Non-Paving Construction Components

Item No.	Item Description	Pct. Of Paving	Item Cost
7	Pavement Markings & Signage	2%	$ 9,500
8	Traffic Control	5%	$ 23,600
9	Erosion Control	3%	$ 14,200
10	Drainage Improvements (RCP, Inlets, MH, Outfalls)	15%	$ 70,600
11	Landscaping	3%	$ 14,200
12	Illumination	5%	$ 23,600
	Other Components Estimate Subtotal:		**$ 155,700**

III. Special Construction Components

Item No.	Item Description	Notes	Allowance	Item Cost
13	Drainage Structures	None	$ -	$ -
14	Bridge Structures	None	$ -	$ -
15	Traffic Signals	None	$ -	$ -
16	Other	None	$ -	$ -
		Special Components Estimate Subtotal:		**$ -**

I, II, & III Construction Subtotal:		$ 626,200
Mobilization	5%	$ 31,400
Contingency	10%	$ 65,800
Construction Cost Estimate Total:		**$ 723,400**

Impact Fee Cost Estimate Summary

Item Description	Notes	Allowance	Item Cost
Construction		$ -	$ 723,400
Engineering/Survey/Testing		13.0%	$ 94,000
Right-of-Way Acquisition	Cost per sq. ft.: $ 1.00	$ -	$ -
	Impact Fee Project Cost Estimate Total:		**$ 817,400**

City of Terrell

Impact Fee Engineer's Opinion of Probable Construction Cost Estimate

BRADSHAW STREET

US 80 to Frazier Street

Roadway Information:			
Functional Classification:	Major Arterial - Type A	No. of Lanes:	4
Length (lf):	2,749		
Right-of-Way Width (ft.):	120		
Median Type:	Raised		
Pavement Width (BOC to BOC):	48		
Description:	Widen roadway to thoroughfare standard		

Roadway Construction Cost Estimate:

I. Paving Construction Cost Estimate

Item No.	Item Description	Quantity	Unit	Unit Cost	Item Cost
1	Right of Way Preparation	27	STA	$ 3,000.00	$ 81,000
2	Unclassified Street Excavation	9,800	CY	$ 30.00	$ 294,000
3	12" Concrete Pavement	14,700	SY	$ 130.00	$ 1,911,000
4	12" Flex Base	15,600	SY	$ 45.00	$ 702,000
5	6" Concrete Sidewalk and Ramps	3,670	SY	$ 50.00	$ 183,500
6	Parkway Topsoil and Furnishing	17,100	SY	$ 5.00	$ 85,500
				Paving Estimate Subtotal:	**$ 3,257,000**

II. Non-Paving Construction Components

Item No.	Item Description	Pct. Of Paving	Item Cost
7	Pavement Markings & Signage	2%	$ 65,200
8	Traffic Control	5%	$ 162,900
9	Erosion Control	3%	$ 97,800
10	Drainage Improvements (RCP, Inlets, MH, Outfalls)	15%	$ 488,600
11	Landscaping	3%	$ 97,800
12	Illumination	5%	$ 162,900
		Other Components Estimate Subtotal:	**$ 1,075,200**

III. Special Construction Components

Item No.	Item Description	Notes	Allowance	Item Cost
13	Drainage Structures	None	$ -	$ -
14	Bridge Structures	None	$ -	$ -
15	Traffic Signals	None	$ -	$ -
16	Other	RR crossing	$ 100,000	$ 100,000
			Special Components Estimate Subtotal:	**$ 100,000**

I, II, & III Construction Subtotal:		$ 4,432,200
Mobilization	5%	$ 221,700
Contingency	10%	$ 465,400
Construction Cost Estimate Total:		**$ 5,119,300**

Impact Fee Cost Estimate Summary

Item Description	Notes	Allowance	Item Cost
Construction		-	$ 5,119,300
Engineering/Survey/Testing		13.0%	$ 665,500
Right-of-Way Acquisition	Cost per sq. ft.: $ 1.00	$ 164,900	$ 164,900
	Impact Fee Project Cost Estimate Total:		**$ 5,949,700**

City of Terrell

Impact Fee Engineer's Opinion of Probable Construction Cost Estimate

ROSE HILL ROAD

500 ft S of Lincoln Lane to Frazier Street

Roadway Information:			
Functional Classification:	Major Arterial - Type A	No. of Lanes:	4
Length (lf):	3,684		
Right-of-Way Width (ft.):	120		
Median Type:	Raised		
Pavement Width (BOC to BOC):	48		
Description:	Construct new roadway to thoroughfare standard		

Roadway Construction Cost Estimate:

I. Paving Construction Cost Estimate

Item No.	Item Description	Quantity	Unit	Unit Cost	Item Cost
1	Right of Way Preparation	37	STA	$ 3,000.00	$ 111,000
2	Unclassified Street Excavation	13,100	CY	$ 30.00	$ 393,000
3	12" Concrete Pavement	19,700	SY	$ 130.00	$ 2,561,000
4	12" Flex Base	20,900	SY	$ 45.00	$ 940,500
5	6" Concrete Sidewalk and Ramps	4,920	SY	$ 50.00	$ 246,000
6	Parkway Topsoil and Furnishing	22,900	SY	$ 5.00	$ 114,500
				Paving Estimate Subtotal:	**$ 4,366,000**

II. Non-Paving Construction Components

Item No.	Item Description	Pct. Of Paving	Item Cost
7	Pavement Markings & Signage	2%	$ 87,400
8	Traffic Control	5%	$ 218,300
9	Erosion Control	3%	$ 131,000
10	Drainage Improvements (RCP, Inlets, MH, Outfalls)	15%	$ 654,900
11	Landscaping	3%	$ 131,000
12	Illumination	5%	$ 218,300
		Other Components Estimate Subtotal:	**$ 1,440,900**

III. Special Construction Components

Item No.	Item Description	Notes	Allowance	Item Cost
13	Drainage Structures	None	$ -	$ -
14	Bridge Structures	None	$ -	$ -
15	Traffic Signals	None	$ -	$ -
16	Other	None	$ -	$ -
		Special Components Estimate Subtotal:	**$**	**-**

I, II, & III Construction Subtotal:		$ 5,806,900
Mobilization	5%	$ 290,400
Contingency	10%	$ 609,800
Construction Cost Estimate Total:		**$ 6,707,100**

Impact Fee Cost Estimate Summary

Item Description	Notes	Allowance	Item Cost
Construction		$ -	$ 6,707,100
Engineering/Survey/Testing		13.0%	$ 871,900
Right-of-Way Acquisition	Cost per sq. ft.: $ 1.00	$ 442,100	$ 442,100
	Impact Fee Project Cost Estimate Total:		**$ 8,021,100**

City of Terrell

Impact Fee Engineer's Opinion of Probable Construction Cost Estimate

ROSE HILL ROAD

US 80 to Frazier Street

Roadway Information:			
Functional Classification:	Major Arterial - Type A	No. of Lanes:	4
Length (lf):	966		
Right-of-Way Width (ft.):	120		
Median Type:	Raised		
Pavement Width (BOC to BOC):	48		
Description:	Widen roadway to thoroughfare standard		

Roadway Construction Cost Estimate:

I. Paving Construction Cost Estimate

Item No.	Item Description	Quantity	Unit	Unit Cost	Item Cost
1	Right of Way Preparation	10	STA	$ 3,000.00	$ 30,000
2	Unclassified Street Excavation	3,500	CY	$ 30.00	$ 105,000
3	12" Concrete Pavement	5,200	SY	$ 130.00	$ 676,000
4	12" Flex Base	5,500	SY	$ 45.00	$ 247,500
5	6" Concrete Sidewalk and Ramps	1,290	SY	$ 50.00	$ 64,500
6	Parkway Topsoil and Furnishing	6,000	SY	$ 5.00	$ 30,000
				Paving Estimate Subtotal:	**$ 1,153,000**

II. Non-Paving Construction Components

Item No.	Item Description	Pct. Of Paving	Item Cost
7	Pavement Markings & Signage	2%	$ 23,100
8	Traffic Control	5%	$ 57,700
9	Erosion Control	3%	$ 34,600
10	Drainage Improvements (RCP, Inlets, MH, Outfalls)	15%	$ 173,000
11	Landscaping	3%	$ 34,600
12	Illumination	5%	$ 57,700
		Other Components Estimate Subtotal:	**$ 380,700**

III. Special Construction Components

Item No.	Item Description	Notes	Allowance	Item Cost
13	Drainage Structures	None	$ -	$ -
14	Bridge Structures	None	$ -	$ -
15	Traffic Signals	None	$ -	$ -
16	Other	None	$ -	$ -
		Special Components Estimate Subtotal:		**$ -**

I, II, & III Construction Subtotal:		$ 1,533,700
Mobilization	5%	$ 76,700
Contingency	10%	$ 161,100
Construction Cost Estimate Total:		**$ 1,771,500**

Impact Fee Cost Estimate Summary

Item Description	Notes	Allowance	Item Cost
Construction		-	$ 1,771,500
Engineering/Survey/Testing		13.0%	$ 230,300
Right-of-Way Acquisition	Cost per sq. ft.: $ 1.00	$ 58,000	$ 58,000
	Impact Fee Project Cost Estimate Total:		**$ 2,059,800**

City of Terrell

Impact Fee Engineer's Opinion of Probable Construction Cost Estimate

SAGE HILL PKWY

FM 304 to FM 2578

Roadway Information:			
Functional Classification:	Principal Arterial - Type AA	No. of Lanes:	4
Length (lf):	1,875		
Right-of-Way Width (ft.):	140		
Median Type:	Raised		
Pavement Width (BOC to BOC):	48		
Description:	Construct new roadway to thoroughfare standard		

Roadway Construction Cost Estimate:

I. Paving Construction Cost Estimate

Item No.	Item Description	Quantity	Unit	Unit Cost	Item Cost
1	Right of Way Preparation	19	STA	$ 3,000.00	$ 57,000
2	Unclassified Street Excavation	6,700	CY	$ 30.00	$ 201,000
3	12" Concrete Pavement	10,000	SY	$ 130.00	$ 1,300,000
4	12" Flex Base	10,700	SY	$ 45.00	$ 481,500
5	6" Concrete Sidewalk and Ramps	2,500	SY	$ 50.00	$ 125,000
6	Parkway Topsoil and Furnishing	15,800	SY	$ 5.00	$ 79,000
				Paving Estimate Subtotal:	**$ 2,243,500**

II. Non-Paving Construction Components

Item No.	Item Description	Pct. Of Paving	Item Cost
7	Pavement Markings & Signage	2%	$ 44,900
8	Traffic Control	5%	$ 112,200
9	Erosion Control	3%	$ 67,400
10	Drainage Improvements (RCP, Inlets, MH, Outfalls)	15%	$ 336,600
11	Landscaping	3%	$ 67,400
12	Illumination	5%	$ 112,200
		Other Components Estimate Subtotal:	**$ 740,700**

III. Special Construction Components

Item No.	Item Description	Notes	Allowance	Item Cost
13	Drainage Structures	None	$ -	$ -
14	Bridge Structures	None	$ -	$ -
15	Traffic Signals	None	$ -	$ -
16	Other	None	$ -	$ -
		Special Components Estimate Subtotal:		**$ -**

I, II, & III Construction Subtotal:		$ 2,984,200
Mobilization	5%	$ 149,300
Contingency	10%	$ 313,400
Construction Cost Estimate Total:		**$ 3,446,900**

Impact Fee Cost Estimate Summary

Item Description	Notes	Allowance	Item Cost
Construction		-	$ 3,446,900
Engineering/Survey/Testing		13.0%	$ 448,100
Right-of-Way Acquisition	Cost per sq. ft.: $ 1.00	$ 262,500	$ 262,500
	Impact Fee Project Cost Estimate Total:		**$ 4,157,500**

City of Terrell

Impact Fee Engineer's Opinion of Probable Construction Cost Estimate

SAGE HILL PKWY

FM 148 to FM 304

Roadway Information:			
Functional Classification:	Principal Arterial - Type AA	No. of Lanes:	4
Length (lf):	6,513		
Right-of-Way Width (ft.):	140		
Median Type:	Raised		
Pavement Width (BOC to BOC):	48		
Description:	Widen roadway		

Roadway Construction Cost Estimate:

I. Paving Construction Cost Estimate

Item No.	Item Description	Quantity	Unit	Unit Cost	Item Cost
1	Right of Way Preparation	65	STA	$ 3,000.00	$ 195,000
2	Unclassified Street Excavation	23,200	CY	$ 30.00	$ 696,000
3	12" Concrete Pavement	34,800	SY	$ 130.00	$ 4,524,000
4	12" Flex Base	37,000	SY	$ 45.00	$ 1,665,000
5	6" Concrete Sidewalk and Ramps	8,690	SY	$ 50.00	$ 434,500
6	Parkway Topsoil and Furnishing	55,000	SY	$ 5.00	$ 275,000
				Paving Estimate Subtotal:	**$ 7,789,500**

II. Non-Paving Construction Components

Item No.	Item Description	Pct. Of Paving	Item Cost
7	Pavement Markings & Signage	2%	$ 155,800
8	Traffic Control	5%	$ 389,500
9	Erosion Control	3%	$ 233,700
10	Drainage Improvements (RCP, Inlets, MH, Outfalls)	15%	$ 1,168,500
11	Landscaping	3%	$ 233,700
12	Illumination	5%	$ 389,500
		Other Components Estimate Subtotal:	**$ 2,570,700**

III. Special Construction Components

Item No.	Item Description	Notes	Allowance	Item Cost
13	Drainage Structures	None	$ -	$ -
14	Bridge Structures	None	$ -	$ -
15	Traffic Signals	None	$ -	$ -
16	Other	None	$ -	$ -
		Special Components Estimate Subtotal:		**$ -**

I, II, & III Construction Subtotal:		$ 10,360,200
Mobilization	5%	$ 518,100
Contingency	10%	$ 1,087,900
Construction Cost Estimate Total:		**$ 11,966,200**

Impact Fee Cost Estimate Summary

Item Description	Notes	Allowance	Item Cost
Construction		-	$ 11,966,200
Engineering/Survey/Testing		13.0%	$ 1,555,600
Right-of-Way Acquisition	Cost per sq. ft.: $ 1.00	$ 260,500	$ 260,500
	Impact Fee Project Cost Estimate Total:		**$ 13,782,300**

City of Terrell

Impact Fee Engineer's Opinion of Probable Construction Cost Estimate

FM 148

Outer Loop to City Limits

Roadway Information:			
Functional Classification:	Principal Arterial - Type AA	No. of Lanes:	4
Length (lf):	771		
Right-of-Way Width (ft.):	140		
Median Type:	Raised		
Pavement Width (BOC to BOC):	48		
Description:	Widen roadway		

Roadway Construction Cost Estimate:

I. Paving Construction Cost Estimate

Item No.	Item Description	Quantity	Unit	Unit Cost	Item Cost
1	Right of Way Preparation	8	STA	$ 3,000.00	$ 24,000
2	Unclassified Street Excavation	2,800	CY	$ 30.00	$ 84,000
3	12" Concrete Pavement	4,200	SY	$ 130.00	$ 546,000
4	12" Flex Base	4,400	SY	$ 45.00	$ 198,000
5	6" Concrete Sidewalk and Ramps	1,030	SY	$ 50.00	$ 51,500
6	Parkway Topsoil and Furnishing	6,500	SY	$ 5.00	$ 32,500
				Paving Estimate Subtotal:	**$ 936,000**

II. Non-Paving Construction Components

Item No.	Item Description	Pct. Of Paving	Item Cost
7	Pavement Markings & Signage	2%	$ 18,800
8	Traffic Control	5%	$ 46,800
9	Erosion Control	3%	$ 28,100
10	Drainage Improvements (RCP, Inlets, MH, Outfalls)	15%	$ 140,400
11	Landscaping	3%	$ 28,100
12	Illumination	5%	$ 46,800
	Other Components Estimate Subtotal:		**$ 309,000**

III. Special Construction Components

Item No.	Item Description	Notes	Allowance	Item Cost
13	Drainage Structures	None	$ -	$ -
14	Bridge Structures	None	$ -	$ -
15	Traffic Signals	None	$ -	$ -
16	Other	None	$ -	$ -
		Special Components Estimate Subtotal:		**$ -**

I, II, & III Construction Subtotal:		$ 1,245,000
Mobilization	5%	$ 62,300
Contingency	10%	$ 130,800
Construction Cost Estimate Total:		**$ 1,438,100**

Impact Fee Cost Estimate Summary

Item Description	Notes	Allowance	Item Cost
Construction		-	$ 1,438,100
Engineering/Survey/Testing		13.0%	$ 187,000
Right-of-Way Acquisition	Cost per sq. ft.: $ 1.00	$ 30,800	$ 30,800
	Impact Fee Project Cost Estimate Total:		**$ 1,655,900**

City of Terrell

Impact Fee Engineer's Opinion of Probable Construction Cost Estimate

FM 148

City Limits to FM 305

Roadway Information:			
Functional Classification:	Principal Arterial - Type AA	No. of Lanes:	4
Length (lf):	9,744		
Right-of-Way Width (ft.):	140		
Median Type:	Raised		
Pavement Width (BOC to BOC):	48		
Description:	Widen roadway		

Roadway Construction Cost Estimate:

I. Paving Construction Cost Estimate

Item No.	Item Description	Quantity	Unit	Unit Cost	Item Cost
1	Right of Way Preparation	97	STA	$ 3,000.00	$ 291,000
2	Unclassified Street Excavation	34,700	CY	$ 30.00	$ 1,041,000
3	12" Concrete Pavement	52,000	SY	$ 130.00	$ 6,760,000
4	12" Flex Base	55,300	SY	$ 45.00	$ 2,488,500
5	6" Concrete Sidewalk and Ramps	13,000	SY	$ 50.00	$ 650,000
6	Parkway Topsoil and Furnishing	82,300	SY	$ 5.00	$ 411,500
				Paving Estimate Subtotal:	**$ 11,642,000**

II. Non-Paving Construction Components

Item No.	Item Description	Pct. Of Paving	Item Cost
7	Pavement Markings & Signage	2%	$ 232,900
8	Traffic Control	5%	$ 582,100
9	Erosion Control	3%	$ 349,300
10	Drainage Improvements (RCP, Inlets, MH, Outfalls)	15%	$ 1,746,300
11	Landscaping	3%	$ 349,300
12	Illumination	5%	$ 582,100
	Other Components Estimate Subtotal:		**$ 3,842,000**

III. Special Construction Components

Item No.	Item Description	Notes	Allowance	Item Cost
13	Drainage Structures	None	$ -	$ -
14	Bridge Structures	None	$ -	$ -
15	Traffic Signals	None	$ -	$ -
16	Other	None	$ -	$ -
		Special Components Estimate Subtotal:		**$ -**

I, II, & III Construction Subtotal:		$ 15,484,000
Mobilization	5%	$ 774,200
Contingency	10%	$ 1,625,900
Construction Cost Estimate Total:		**$ 17,884,100**

Impact Fee Cost Estimate Summary

Item Description	Notes	Allowance	Item Cost
Construction		-	$ 17,884,100
Engineering/Survey/Testing		13.0%	$ 2,324,900
Right-of-Way Acquisition	Cost per sq. ft.: $ 1.00	$ 389,800	$ 389,800
	Impact Fee Project Cost Estimate Total:		**$ 20,598,800**

City of Terrell

Impact Fee Engineer's Opinion of Probable Construction Cost Estimate

ROSE HILL ROAD

S of IH 20 to Windsor Ave

Roadway Information:			
Functional Classification:	Major Arterial - Type A	No. of Lanes:	4
Length (lf):	9,127		
Right-of-Way Width (ft.):	120		
Median Type:	Raised		
Pavement Width (BOC to BOC):	48		
Description:	Widen roadway to thoroughfare standard		

Roadway Construction Cost Estimate:

I. Paving Construction Cost Estimate

Item No.	Item Description	Quantity	Unit	Unit Cost	Item Cost
1	Right of Way Preparation	91	STA	$ 3,000.00	$ 273,000
2	Unclassified Street Excavation	32,500	CY	$ 30.00	$ 975,000
3	12" Concrete Pavement	48,700	SY	$ 130.00	$ 6,331,000
4	12" Flex Base	51,800	SY	$ 45.00	$ 2,331,000
5	6" Concrete Sidewalk and Ramps	12,170	SY	$ 50.00	$ 608,500
6	Parkway Topsoil and Furnishing	56,800	SY	$ 5.00	$ 284,000
				Paving Estimate Subtotal:	**$ 10,802,500**

II. Non-Paving Construction Components

Item No.	Item Description	Pct. Of Paving	Item Cost
7	Pavement Markings & Signage	2%	$ 216,100
8	Traffic Control	5%	$ 540,200
9	Erosion Control	3%	$ 324,100
10	Drainage Improvements (RCP, Inlets, MH, Outfalls)	15%	$ 1,620,400
11	Landscaping	3%	$ 324,100
12	Illumination	5%	$ 540,200
	Other Components Estimate Subtotal:		**$ 3,565,100**

III. Special Construction Components

Item No.	Item Description	Notes	Allowance	Item Cost
13	Drainage Structures	None	$ -	$ -
14	Bridge Structures	None	$ -	$ -
15	Traffic Signals	None	$ -	$ -
16	Other	IH-20 bridge Widen	$ 1,215,000	$ 1,215,000
		Special Components Estimate Subtotal:		**$ 1,215,000**

I, II, & III Construction Subtotal:		$ 15,582,600
Mobilization	5%	$ 779,200
Contingency	10%	$ 1,636,200
Construction Cost Estimate Total:		**$ 17,998,000**

Impact Fee Cost Estimate Summary

Item Description	Notes	Allowance	Item Cost
Construction	Assumes TxDOT funds bridge	$ (1,215,000)	$ 16,783,000
Engineering/Survey/Testing		13.0%	$ 2,181,800
Right-of-Way Acquisition	Cost per sq. ft.: $ 1.00	$ 182,500	$ 182,500
	Impact Fee Project Cost Estimate Total:		**$ 19,147,300**

City of Terrell

Impact Fee Engineer's Opinion of Probable Construction Cost Estimate

FM 305/LL PKWY

Apache Trail to US 80

Roadway Information:			
Functional Classification:	Major Collector - Type D	No. of Lanes:	2
Length (lf):	2,021		
Right-of-Way Width (ft.):	80		
Median Type:	Raised		
Pavement Width (BOC to BOC):	38		
Description:	Construct new roadway to thoroughfare standard		

Roadway Construction Cost Estimate:

I. Paving Construction Cost Estimate

Item No.	Item Description	Quantity	Unit	Unit Cost	Item Cost
1	Right of Way Preparation	20	STA	$ 3,000.00	$ 60,000
2	Unclassified Street Excavation	5,700	CY	$ 30.00	$ 171,000
3	10" Concrete Pavement	8,600	SY	$ 130.00	$ 1,118,000
4	10" Flex Base	9,300	SY	$ 45.00	$ 418,500
5	6" Concrete Sidewalk and Ramps	3,150	SY	$ 50.00	$ 157,500
6	Parkway Topsoil and Furnishing	5,800	SY	$ 5.00	$ 29,000
				Paving Estimate Subtotal:	**$ 1,954,000**

II. Non-Paving Construction Components

Item No.	Item Description	Pct. Of Paving	Item Cost
7	Pavement Markings & Signage	2%	$ 39,100
8	Traffic Control	5%	$ 97,700
9	Erosion Control	3%	$ 58,700
10	Drainage Improvements (RCP, Inlets, MH, Outfalls)	15%	$ 293,100
11	Landscaping	3%	$ 58,700
12	Illumination	5%	$ 97,700
		Other Components Estimate Subtotal:	**$ 645,000**

III. Special Construction Components

Item No.	Item Description	Notes	Allowance	Item Cost
13	Drainage Structures	None	$ -	$ -
14	Bridge Structures	None	$ -	$ -
15	Traffic Signals	None	$ -	$ -
16	Other	None	$ -	$ -
		Special Components Estimate Subtotal:		**$ -**

I, II, & III Construction Subtotal:		$ 2,599,000
Mobilization	5%	$ 130,000
Contingency	10%	$ 272,900
Construction Cost Estimate Total:		**$ 3,001,900**

Impact Fee Cost Estimate Summary

Item Description	Notes	Allowance	Item Cost
Construction		-	$ 3,001,900
Engineering/Survey/Testing		13.0%	$ 390,200
Right-of-Way Acquisition	Cost per sq. ft.: $ 1.00	$ 161,700	$ 161,700
	Impact Fee Project Cost Estimate Total:		**$ 3,553,800**

City of Terrell

Impact Fee Engineer's Opinion of Probable Construction Cost Estimate

WEST END STREET

Williams Street Ext to Bradshaw Street

Roadway Information:			
Functional Classification:	Minor Arterial - Type B	No. of Lanes:	4
Length (lf):	1,928		
Right-of-Way Width (ft.):	100		
Median Type:	Raised		
Pavement Width (BOC to BOC):	58		
Description:	Widen roadway to thoroughfare standard		

Roadway Construction Cost Estimate:

I. Paving Construction Cost Estimate

Item No.	Item Description	Quantity	Unit	Unit Cost	Item Cost
1	Right of Way Preparation	19	STA	$ 3,000.00	$ 57,000
2	Unclassified Street Excavation	8,300	CY	$ 30.00	$ 249,000
3	12" Concrete Pavement	12,500	SY	$ 130.00	$ 1,625,000
4	12" Flex Base	13,100	SY	$ 45.00	$ 589,500
5	6" Concrete Sidewalk and Ramps	2,580	SY	$ 50.00	$ 129,000
6	Parkway Topsoil and Furnishing	5,600	SY	$ 5.00	$ 28,000
				Paving Estimate Subtotal:	**$ 2,677,500**

II. Non-Paving Construction Components

Item No.	Item Description	Pct. Of Paving	Item Cost
7	Pavement Markings & Signage	2%	$ 53,600
8	Traffic Control	5%	$ 133,900
9	Erosion Control	3%	$ 80,400
10	Drainage Improvements (RCP, Inlets, MH, Outfalls)	15%	$ 401,700
11	Landscaping	3%	$ 80,400
12	Illumination	5%	$ 133,900
		Other Components Estimate Subtotal:	**$ 883,900**

III. Special Construction Components

Item No.	Item Description	Notes	Allowance	Item Cost
13	Drainage Structures	None	$ -	$ -
14	Bridge Structures	None	$ -	$ -
15	Traffic Signals	None	$ -	$ -
16	Other	None	$ -	$ -
		Special Components Estimate Subtotal:		**$ -**

I, II, & III Construction Subtotal:		$ 3,561,400
Mobilization	5%	$ 178,100
Contingency	10%	$ 374,000
Construction Cost Estimate Total:		**$ 4,113,500**

Impact Fee Cost Estimate Summary

Item Description	Notes	Allowance	Item Cost
Construction		$ -	$ 4,113,500
Engineering/Survey/Testing		13.0%	$ 534,800
Right-of-Way Acquisition	Cost per sq. ft.: $ 1.00	$ 86,800	$ 86,800
	Impact Fee Project Cost Estimate Total:		**$ 4,735,100**

City of Terrell

Impact Fee Engineer's Opinion of Probable Construction Cost Estimate

WEST END STREET

Bradshaw Street to Mineral Wells Street

Roadway Information:			
Functional Classification:	Minor Arterial - Type B	No. of Lanes:	4
Length (lf):	1,224		
Right-of-Way Width (ft.):	100		
Median Type:	Raised		
Pavement Width (BOC to BOC):	58		
Description:	Widen roadway to thoroughfare standard		

Roadway Construction Cost Estimate:

I. Paving Construction Cost Estimate

Item No.	Item Description	Quantity	Unit	Unit Cost	Item Cost
1	Right of Way Preparation	12	STA	$ 3,000.00	$ 36,000
2	Unclassified Street Excavation	5,300	CY	$ 30.00	$ 159,000
3	12" Concrete Pavement	7,900	SY	$ 130.00	$ 1,027,000
4	12" Flex Base	8,300	SY	$ 45.00	$ 373,500
5	6" Concrete Sidewalk and Ramps	1,640	SY	$ 50.00	$ 82,000
6	Parkway Topsoil and Furnishing	3,500	SY	$ 5.00	$ 17,500
				Paving Estimate Subtotal:	**$ 1,695,000**

II. Non-Paving Construction Components

Item No.	Item Description	Pct. Of Paving	Item Cost
7	Pavement Markings & Signage	2%	$ 33,900
8	Traffic Control	5%	$ 84,800
9	Erosion Control	3%	$ 50,900
10	Drainage Improvements (RCP, Inlets, MH, Outfalls)	15%	$ 254,300
11	Landscaping	3%	$ 50,900
12	Illumination	5%	$ 84,800
		Other Components Estimate Subtotal:	**$ 559,600**

III. Special Construction Components

Item No.	Item Description	Notes	Allowance	Item Cost
13	Drainage Structures	None	$ -	$ -
14	Bridge Structures	None	$ -	$ -
15	Traffic Signals	None	$ -	$ -
16	Other	None	$ -	$ -
		Special Components Estimate Subtotal:		**$ -**

I, II, & III Construction Subtotal:		$ 2,254,600
Mobilization	5%	$ 112,800
Contingency	10%	$ 236,800
Construction Cost Estimate Total:		**$ 2,604,200**

Impact Fee Cost Estimate Summary

Item Description	Notes	Allowance	Item Cost
Construction		$ -	$ 2,604,200
Engineering/Survey/Testing		13.0%	$ 338,500
Right-of-Way Acquisition	Cost per sq. ft.: $ 1.00	$ 55,100	$ 55,100
	Impact Fee Project Cost Estimate Total:		**$ 2,997,800**

City of Terrell

Impact Fee Engineer's Opinion of Probable Construction Cost Estimate

WINDSOR AVENUE

FM 148 to Rose Hill Road

Roadway Information:			
Functional Classification:	Principal Collector - Type C	No. of Lanes:	2
Length (lf):	5,513		
Right-of-Way Width (ft.):	100		
Median Type:	Raised		
Pavement Width (BOC to BOC):	56		
Description:	Construct new roadway to thoroughfare standard		

Roadway Construction Cost Estimate:

I. Paving Construction Cost Estimate

Item No.	Item Description	Quantity	Unit	Unit Cost	Item Cost
1	Right of Way Preparation	55	STA	$ 3,000.00	$ 165,000
2	Unclassified Street Excavation	22,900	CY	$ 30.00	$ 687,000
3	10" Concrete Pavement	34,400	SY	$ 120.00	$ 4,128,000
4	10" Flex Base	36,200	SY	$ 40.00	$ 1,448,000
5	6" Concrete Sidewalk and Ramps	9,810	SY	$ 50.00	$ 490,500
6	Parkway Topsoil and Furnishing	14,700	SY	$ 5.00	$ 73,500
				Paving Estimate Subtotal:	**$ 6,992,000**

II. Non-Paving Construction Components

Item No.	Item Description	Pct. Of Paving	Item Cost
7	Pavement Markings & Signage	2%	$ 139,900
8	Traffic Control	5%	$ 349,600
9	Erosion Control	3%	$ 209,800
10	Drainage Improvements (RCP, Inlets, MH, Outfalls)	15%	$ 1,048,800
11	Landscaping	3%	$ 209,800
12	Illumination	5%	$ 349,600
		Other Components Estimate Subtotal:	**$ 2,307,500**

III. Special Construction Components

Item No.	Item Description	Notes	Allowance	Item Cost
13	Drainage Structures	None	$ -	$ -
14	Bridge Structures	None	$ -	$ -
15	Traffic Signals	None	$ -	$ -
16	Other	None	$ -	$ -
		Special Components Estimate Subtotal:	**$**	**-**

I, II, & III Construction Subtotal:		$ 9,299,500
Mobilization	5%	$ 465,000
Contingency	10%	$ 976,500
Construction Cost Estimate Total:		**$ 10,741,000**

Impact Fee Cost Estimate Summary

Item Description	Notes	Allowance	Item Cost
Construction		$ -	$ 10,741,000
Engineering/Survey/Testing		13.0%	$ 1,396,300
Right-of-Way Acquisition	Cost per sq. ft.: $ 1.00	$ 551,300	$ 551,300
	Impact Fee Project Cost Estimate Total:		**$ 12,688,600**

City of Terrell

Impact Fee Engineer's Opinion of Probable Construction Cost Estimate

Mineral WELLS STREET

Windsor Avenue to West End Street

Roadway Information:			
Functional Classification:	Minor Collector - Type E	No. of Lanes:	3
Length (lf):	4,416		
Right-of-Way Width (ft.):	60		
Median Type:	TWLTL		
Pavement Width (BOC to BOC):	33		
Description:	Widen roadway to thoroughfare standard		

Roadway Construction Cost Estimate:

I. Paving Construction Cost Estimate

Item No.	Item Description	Quantity	Unit	Unit Cost	Item Cost
1	Right of Way Preparation	44	STA	$ 3,000.00	$ 132,000
2	Unclassified Street Excavation	10,800	CY	$ 30.00	$ 324,000
3	8" Concrete Pavement	16,200	SY	$ 120.00	$ 1,944,000
4	10" Flex Base	17,200	SY	$ 40.00	$ 688,000
5	6" Concrete Sidewalk and Ramps	5,890	SY	$ 50.00	$ 294,500
6	Parkway Topsoil and Furnishing	7,400	SY	$ 5.00	$ 37,000
				Paving Estimate Subtotal:	**$ 3,419,500**

II. Non-Paving Construction Components

Item No.	Item Description	Pct. Of Paving	Item Cost
7	Pavement Markings & Signage	2%	$ 68,400
8	Traffic Control	5%	$ 171,000
9	Erosion Control	3%	$ 102,600
10	Drainage Improvements (RCP, Inlets, MH, Outfalls)	15%	$ 513,000
11	Landscaping	3%	$ 102,600
12	Illumination	5%	$ 171,000
		Other Components Estimate Subtotal:	**$ 1,128,600**

III. Special Construction Components

Item No.	Item Description	Notes	Allowance	Item Cost
13	Drainage Structures	None	$ -	$ -
14	Bridge Structures	None	$ -	$ -
15	Traffic Signals	None	$ -	$ -
16	Other	None	$ -	$ -
		Special Components Estimate Subtotal:	**$**	**-**

I, II, & III Construction Subtotal:		$ 4,548,100
Mobilization	5%	$ 227,500
Contingency	10%	$ 477,600
Construction Cost Estimate Total:		**$ 5,253,200**

Impact Fee Cost Estimate Summary

Item Description	Notes	Allowance	Item Cost
Construction		$ -	$ 5,253,200
Engineering/Survey/Testing		13.0%	$ 682,900
Right-of-Way Acquisition	Cost per sq. ft.: $ 1.00	$ -	$ -
	Impact Fee Project Cost Estimate Total:	**$**	**5,936,100**

City of Terrell

Impact Fee Engineer's Opinion of Probable Construction Cost Estimate

Mineral WELLS STREET

N of Windsor Ave to Windsor Ave

Roadway Information:			
Functional Classification:	Minor Collector - Type E	No. of Lanes:	3
Length (lf):	1,005		
Right-of-Way Width (ft.):	60		
Median Type:	TWLTL		
Pavement Width (BOC to BOC):	33		
Description:	Construct new roadway to thoroughfare standard		

Roadway Construction Cost Estimate:

I. Paving Construction Cost Estimate

Item No.	Item Description	Quantity	Unit	Unit Cost	Item Cost
1	Right of Way Preparation	10	STA	$ 3,000.00	$ 30,000
2	Unclassified Street Excavation	2,500	CY	$ 30.00	$ 75,000
3	8" Concrete Pavement	3,700	SY	$ 110.00	$ 407,000
4	10" Flex Base	4,000	SY	$ 40.00	$ 160,000
5	6" Concrete Sidewalk and Ramps	1,340	SY	$ 50.00	$ 67,000
6	Parkway Topsoil and Furnishing	1,700	SY	$ 5.00	$ 8,500
				Paving Estimate Subtotal:	**$ 747,500**

II. Non-Paving Construction Components

Item No.	Item Description	Pct. Of Paving	Item Cost
7	Pavement Markings & Signage	2%	$ 15,000
8	Traffic Control	5%	$ 37,400
9	Erosion Control	3%	$ 22,500
10	Drainage Improvements (RCP, Inlets, MH, Outfalls)	15%	$ 112,200
11	Landscaping	3%	$ 22,500
12	Illumination	5%	$ 37,400
		Other Components Estimate Subtotal:	**$ 247,000**

III. Special Construction Components

Item No.	Item Description	Notes	Allowance	Item Cost
13	Drainage Structures	None	$ -	$ -
14	Bridge Structures	None	$ -	$ -
15	Traffic Signals	None	$ -	$ -
16	Other	None	$ -	$ -
		Special Components Estimate Subtotal:		**$ -**

I, II, & III Construction Subtotal:		$ 994,500
Mobilization	5%	$ 49,800
Contingency	10%	$ 104,500
Construction Cost Estimate Total:		**$ 1,148,800**

Impact Fee Cost Estimate Summary

Item Description	Notes	Allowance	Item Cost
Construction		$ -	$ 1,148,800
Engineering/Survey/Testing		13.0%	$ 149,300
Right-of-Way Acquisition	Cost per sq. ft.: $ 1.00	$ 60,300	$ 60,300
	Impact Fee Project Cost Estimate Total:		**$ 1,358,400**

City of Terrell

Impact Fee Engineer's Opinion of Probable Construction Cost Estimate

WILLIAMS STREET

SH 205 to Talty Road

Roadway Information:			
Functional Classification:	Minor Arterial - Type B	No. of Lanes:	4
Length (lf):	1,033		
Right-of-Way Width (ft.):	100		
Median Type:	Raised		
Pavement Width (BOC to BOC):	58		
Description:	Widen roadway to thoroughfare standard		

Roadway Construction Cost Estimate:

I. Paving Construction Cost Estimate

Item No.	Item Description	Quantity	Unit	Unit Cost	Item Cost
1	Right of Way Preparation	10	STA	$ 3,000.00	$ 30,000
2	Unclassified Street Excavation	4,500	CY	$ 30.00	$ 135,000
3	12" Concrete Pavement	6,700	SY	$ 130.00	$ 871,000
4	12" Flex Base	7,100	SY	$ 45.00	$ 319,500
5	6" Concrete Sidewalk and Ramps	1,380	SY	$ 50.00	$ 69,000
6	Parkway Topsoil and Furnishing	3,000	SY	$ 5.00	$ 15,000
				Paving Estimate Subtotal:	**$ 1,439,500**

II. Non-Paving Construction Components

Item No.	Item Description	Pct. Of Paving	Item Cost
7	Pavement Markings & Signage	2%	$ 28,800
8	Traffic Control	5%	$ 72,000
9	Erosion Control	3%	$ 43,200
10	Drainage Improvements (RCP, Inlets, MH, Outfalls)	15%	$ 216,000
11	Landscaping	3%	$ 43,200
12	Illumination	5%	$ 72,000
		Other Components Estimate Subtotal:	**$ 475,200**

III. Special Construction Components

Item No.	Item Description	Notes	Allowance	Item Cost
13	Drainage Structures	None	$ -	$ -
14	Bridge Structures	None	$ -	$ -
15	Traffic Signals	None	$ -	$ -
16	Other	None	$ -	$ -
		Special Components Estimate Subtotal:		**$ -**

I, II, & III Construction Subtotal:		$ 1,914,700
Mobilization	5%	$ 95,800
Contingency	10%	$ 201,100
Construction Cost Estimate Total:		**$ 2,211,600**

Impact Fee Cost Estimate Summary

Item Description	Notes	Allowance	Item Cost
Construction		$ -	$ 2,211,600
Engineering/Survey/Testing		13.0%	$ 287,500
Right-of-Way Acquisition	Cost per sq. ft.: $ 1.00	$ 62,000	$ 62,000
	Impact Fee Project Cost Estimate Total:		**$ 2,561,100**

City of Terrell

Impact Fee Engineer's Opinion of Probable Construction Cost Estimate

WILLIAMS STREET EXTENTION

Talty Road to West End Street

Roadway Information:			
Functional Classification:	Minor Arterial - Type B	No. of Lanes:	4
Length (lf):	1,115		
Right-of-Way Width (ft.):	100		
Median Type:	Raised		
Pavement Width (BOC to BOC):	58		
Description:	Construct new roadway to thoroughfare standard		

Roadway Construction Cost Estimate:

I. Paving Construction Cost Estimate

Item No.	Item Description	Quantity	Unit	Unit Cost	Item Cost
1	Right of Way Preparation	11	STA	$ 3,000.00	$ 33,000
2	Unclassified Street Excavation	4,800	CY	$ 30.00	$ 144,000
3	12" Concrete Pavement	7,200	SY	$ 130.00	$ 936,000
4	12" Flex Base	7,600	SY	$ 45.00	$ 342,000
5	6" Concrete Sidewalk and Ramps	1,490	SY	$ 50.00	$ 74,500
6	Parkway Topsoil and Furnishing	3,200	SY	$ 5.00	$ 16,000
				Paving Estimate Subtotal:	**$ 1,545,500**

II. Non-Paving Construction Components

Item No.	Item Description	Pct. Of Paving	Item Cost
7	Pavement Markings & Signage	2%	$ 31,000
8	Traffic Control	5%	$ 77,300
9	Erosion Control	3%	$ 46,400
10	Drainage Improvements (RCP, Inlets, MH, Outfalls)	15%	$ 231,900
11	Landscaping	3%	$ 46,400
12	Illumination	5%	$ 77,300
		Other Components Estimate Subtotal:	**$ 510,300**

III. Special Construction Components

Item No.	Item Description	Notes	Allowance	Item Cost
13	Drainage Structures	None	$ -	$ -
14	Bridge Structures	None	$ -	$ -
15	Traffic Signals	None	$ -	$ -
16	Other	None	$ -	$ -
		Special Components Estimate Subtotal:		**$ -**

I, II, & III Construction Subtotal:		$ 2,055,800
Mobilization	5%	$ 102,800
Contingency	10%	$ 215,900
Construction Cost Estimate Total:		**$ 2,374,500**

Impact Fee Cost Estimate Summary

Item Description	Notes	Allowance	Item Cost
Construction		$ -	$ 2,374,500
Engineering/Survey/Testing		13.0%	$ 308,700
Right-of-Way Acquisition	Cost per sq. ft.: $ 1.00	$ 111,500	$ 111,500
	Impact Fee Project Cost Estimate Total:		**$ 2,794,700**

City of Terrell

Impact Fee Engineer's Opinion of Probable Construction Cost Estimate

WEST END STREET EXTENTION

West End Street to S Ann Street

Roadway Information:			
Functional Classification:	Minor Arterial - Type B	No. of Lanes:	4
Length (lf):	887		
Right-of-Way Width (ft.):	100		
Median Type:	Raised		
Pavement Width (BOC to BOC):	58		
Description:	Construct new roadway to thoroughfare standard		

Roadway Construction Cost Estimate:

I. Paving Construction Cost Estimate

Item No.	Item Description	Quantity	Unit	Unit Cost	Item Cost
1	Right of Way Preparation	9	STA	$ 3,000.00	$ 27,000
2	Unclassified Street Excavation	3,900	CY	$ 30.00	$ 117,000
3	12" Concrete Pavement	5,800	SY	$ 130.00	$ 754,000
4	12" Flex Base	6,100	SY	$ 45.00	$ 274,500
5	6" Concrete Sidewalk and Ramps	1,190	SY	$ 50.00	$ 59,500
6	Parkway Topsoil and Furnishing	2,600	SY	$ 5.00	$ 13,000
				Paving Estimate Subtotal:	**$ 1,245,000**

II. Non-Paving Construction Components

Item No.	Item Description	Pct. Of Paving	Item Cost
7	Pavement Markings & Signage	2%	$ 24,900
8	Traffic Control	5%	$ 62,300
9	Erosion Control	3%	$ 37,400
10	Drainage Improvements (RCP, Inlets, MH, Outfalls)	15%	$ 186,800
11	Landscaping	3%	$ 37,400
12	Illumination	5%	$ 62,300
		Other Components Estimate Subtotal:	**$ 411,100**

III. Special Construction Components

Item No.	Item Description	Notes	Allowance	Item Cost
13	Drainage Structures	None	$ -	$ -
14	Bridge Structures	None	$ -	$ -
15	Traffic Signals	None	$ -	$ -
16	Other	None	$ -	$ -
		Special Components Estimate Subtotal:		**$ -**

I, II, & III Construction Subtotal:		$ 1,656,100
Mobilization	5%	$ 82,900
Contingency	10%	$ 173,900
Construction Cost Estimate Total:		**$ 1,912,900**

Impact Fee Cost Estimate Summary

Item Description	Notes	Allowance	Item Cost
Construction		$ -	$ 1,912,900
Engineering/Survey/Testing		13.0%	$ 248,700
Right-of-Way Acquisition	Cost per sq. ft.: $ 1.00	$ 88,700	$ 88,700
	Impact Fee Project Cost Estimate Total:		**$ 2,250,300**

City of Terrell

Impact Fee Engineer's Opinion of Probable Construction Cost Estimate

ROCHESTER STEREET

S Delphine Street to SH 34

Roadway Information:			
Functional Classification:	Minor Arterial - Type B	No. of Lanes:	4
Length (lf):	260		
Right-of-Way Width (ft.):	100		
Median Type:	Raised		
Pavement Width (BOC to BOC):	58		
Description:	Construct new roadway to thoroughfare standard		

Roadway Construction Cost Estimate:

I. Paving Construction Cost Estimate

Item No.	Item Description	Quantity	Unit	Unit Cost	Item Cost
1	Right of Way Preparation	3	STA	$ 3,000.00	$ 9,000
2	Unclassified Street Excavation	1,200	CY	$ 30.00	$ 36,000
3	12" Concrete Pavement	1,700	SY	$ 130.00	$ 221,000
4	12" Flex Base	1,800	SY	$ 45.00	$ 81,000
5	6" Concrete Sidewalk and Ramps	350	SY	$ 50.00	$ 17,500
6	Parkway Topsoil and Furnishing	800	SY	$ 5.00	$ 4,000
				Paving Estimate Subtotal:	**$ 368,500**

II. Non-Paving Construction Components

Item No.	Item Description	Pct. Of Paving	Item Cost
7	Pavement Markings & Signage	2%	$ 7,400
8	Traffic Control	5%	$ 18,500
9	Erosion Control	3%	$ 11,100
10	Drainage Improvements (RCP, Inlets, MH, Outfalls)	15%	$ 55,300
11	Landscaping	3%	$ 11,100
12	Illumination	5%	$ 18,500
	Other Components Estimate Subtotal:		**$ 121,900**

III. Special Construction Components

Item No.	Item Description	Notes	Allowance	Item Cost
13	Drainage Structures	None	$ -	$ -
14	Bridge Structures	None	$ -	$ -
15	Traffic Signals	None	$ -	$ -
16	Other	None	$ -	$ -
	Special Components Estimate Subtotal:			**$ -**

I, II, & III Construction Subtotal:		$ 490,400
Mobilization	5%	$ 24,600
Contingency	10%	$ 51,500
Construction Cost Estimate Total:		**$ 566,500**

Impact Fee Cost Estimate Summary

Item Description	Notes	Allowance	Item Cost
Construction		$ -	$ 566,500
Engineering/Survey/Testing		13.0%	$ 73,600
Right-of-Way Acquisition	Cost per sq. ft.: $ 1.00	$ 15,600	$ 15,600
	Impact Fee Project Cost Estimate Total:		**$ 655,700**

City of Terrell

Impact Fee Engineer's Opinion of Probable Construction Cost Estimate

SAGE HILL PKWY

W of IH 20 to City Limits

Roadway Information:			
Functional Classification:	Principal Arterial - Type AA	No. of Lanes:	4
Length (lf):	2,963		
Right-of-Way Width (ft.):	140		
Median Type:	Raised		
Pavement Width (BOC to BOC):	48		
Description:	Widen roadway		

Roadway Construction Cost Estimate:

I. Paving Construction Cost Estimate

Item No.	Item Description	Quantity	Unit	Unit Cost	Item Cost
1	Right of Way Preparation	30	STA	$ 3,000.00	$ 90,000
2	Unclassified Street Excavation	10,600	CY	$ 30.00	$ 318,000
3	12" Concrete Pavement	15,900	SY	$ 130.00	$ 2,067,000
4	12" Flex Base	16,800	SY	$ 45.00	$ 756,000
5	6" Concrete Sidewalk and Ramps	3,960	SY	$ 50.00	$ 198,000
6	Parkway Topsoil and Furnishing	25,000	SY	$ 5.00	$ 125,000
				Paving Estimate Subtotal:	**$ 3,554,000**

II. Non-Paving Construction Components

Item No.	Item Description	Pct. Of Paving	Item Cost
7	Pavement Markings & Signage	2%	$ 71,100
8	Traffic Control	5%	$ 177,700
9	Erosion Control	3%	$ 106,700
10	Drainage Improvements (RCP, Inlets, MH, Outfalls)	15%	$ 533,100
11	Landscaping	3%	$ 106,700
12	Illumination	5%	$ 177,700
	Other Components Estimate Subtotal:		**$ 1,173,000**

III. Special Construction Components

Item No.	Item Description	Notes	Allowance	Item Cost
13	Drainage Structures	None	$ -	$ -
14	Bridge Structures	None	$ -	$ -
15	Traffic Signals	None	$ -	$ -
16	Other	None	$ -	$ -
		Special Components Estimate Subtotal:		**$ -**

I, II, & III Construction Subtotal:		$ 4,727,000
Mobilization	5%	$ 236,400
Contingency	10%	$ 496,400
Construction Cost Estimate Total:		**$ 5,459,800**

Impact Fee Cost Estimate Summary

Item Description	Notes	Allowance	Item Cost
Construction		-	$ 5,459,800
Engineering/Survey/Testing		13.0%	$ 709,800
Right-of-Way Acquisition	Cost per sq. ft.: $ 1.00	$ 118,500	$ 118,500
	Impact Fee Project Cost Estimate Total:		**$ 6,288,100**

City of Terrell

Impact Fee Engineer's Opinion of Probable Construction Cost Estimate

TOWN N DRIVE EXTENTION

0.13 mi N of SH 205 to SH 205

Roadway Information:			
Functional Classification:	Principal Arterial - Type A	No. of Lanes:	4
Length (lf):	751		
Right-of-Way Width (ft.):	120		
Median Type:	Raised		
Pavement Width (BOC to BOC):	48		
Description:	Widen roadway to thoroughfare standard		

Roadway Construction Cost Estimate:

I. Paving Construction Cost Estimate

Item No.	Item Description	Quantity	Unit	Unit Cost	Item Cost
1	Right of Way Preparation	8	STA	$ 3,000.00	$ 24,000
2	Unclassified Street Excavation	2,700	CY	$ 30.00	$ 81,000
3	12" Concrete Pavement	4,100	SY	$ 130.00	$ 533,000
4	12" Flex Base	4,300	SY	$ 45.00	$ 193,500
5	6" Concrete Sidewalk and Ramps	1,010	SY	$ 50.00	$ 50,500
6	Parkway Topsoil and Furnishing	4,700	SY	$ 5.00	$ 23,500
				Paving Estimate Subtotal:	**$ 905,500**

II. Non-Paving Construction Components

Item No.	Item Description	Pct. Of Paving	Item Cost
7	Pavement Markings & Signage	2%	$ 18,200
8	Traffic Control	5%	$ 45,300
9	Erosion Control	3%	$ 27,200
10	Drainage Improvements (RCP, Inlets, MH, Outfalls)	15%	$ 135,900
11	Landscaping	3%	$ 27,200
12	Illumination	5%	$ 45,300
		Other Components Estimate Subtotal:	**$ 299,100**

III. Special Construction Components

Item No.	Item Description	Notes	Allowance	Item Cost
13	Drainage Structures	None	$ -	$ -
14	Bridge Structures	None	$ -	$ -
15	Traffic Signals	None	$ -	$ -
16	Other	None	$ -	$ -
		Special Components Estimate Subtotal:		**$ -**

I, II, & III Construction Subtotal:		$ 1,204,600
Mobilization	5%	$ 60,300
Contingency	10%	$ 126,500
Construction Cost Estimate Total:		**$ 1,391,400**

Impact Fee Cost Estimate Summary

Item Description	Notes	Allowance	Item Cost
Construction		-	$ 1,391,400
Engineering/Survey/Testing		13.0%	$ 180,900
Right-of-Way Acquisition	Cost per sq. ft.: $ 1.00	$ 60,100	$ 60,100
	Impact Fee Project Cost Estimate Total:		**$ 1,632,400**

City of Terrell

Impact Fee Engineer's Opinion of Probable Construction Cost Estimate

FM 1392

City Limits to US 80 Frontage Rd

Roadway Information:			
Functional Classification:	Minor Arterial - Type B	No. of Lanes:	4
Length (lf):	360		
Right-of-Way Width (ft.):	100		
Median Type:	Raised		
Pavement Width (BOC to BOC):	58		
Description:	Widen roadway to thoroughfare standard		

Roadway Construction Cost Estimate:

I. Paving Construction Cost Estimate

Item No.	Item Description	Quantity	Unit	Unit Cost	Item Cost
1	Right of Way Preparation	4	STA	$ 3,000.00	$ 12,000
2	Unclassified Street Excavation	1,600	CY	$ 30.00	$ 48,000
3	12" Concrete Pavement	2,400	SY	$ 130.00	$ 312,000
4	12" Flex Base	2,500	SY	$ 45.00	$ 112,500
5	6" Concrete Sidewalk and Ramps	480	SY	$ 50.00	$ 24,000
6	Parkway Topsoil and Furnishing	1,000	SY	$ 5.00	$ 5,000
				Paving Estimate Subtotal:	**$ 513,500**

II. Non-Paving Construction Components

Item No.	Item Description	Pct. Of Paving	Item Cost
7	Pavement Markings & Signage	2%	$ 10,300
8	Traffic Control	5%	$ 25,700
9	Erosion Control	3%	$ 15,500
10	Drainage Improvements (RCP, Inlets, MH, Outfalls)	15%	$ 77,100
11	Landscaping	3%	$ 15,500
12	Illumination	5%	$ 25,700
		Other Components Estimate Subtotal:	**$ 169,800**

III. Special Construction Components

Item No.	Item Description	Notes	Allowance	Item Cost
13	Drainage Structures	None	$ -	$ -
14	Bridge Structures	None	$ -	$ -
15	Traffic Signals	None	$ -	$ -
16	Other	None	$ -	$ -
		Special Components Estimate Subtotal:		**$ -**

I, II, & III Construction Subtotal:		$ 683,300
Mobilization	5%	$ 34,200
Contingency	10%	$ 71,800
Construction Cost Estimate Total:		**$ 789,300**

Impact Fee Cost Estimate Summary

Item Description	Notes	Allowance	Item Cost
Construction		$ -	$ 789,300
Engineering/Survey/Testing		13.0%	$ 102,600
Right-of-Way Acquisition	Cost per sq. ft.: $ 1.00	$ 14,400	$ 14,400
	Impact Fee Project Cost Estimate Total:		**$ 906,300**

City of Terrell

Impact Fee Engineer's Opinion of Probable Construction Cost Estimate

FM 305 / LL PKWY

City Limits to US 80 Frontage Rd

Roadway Information:			
Functional Classification:	Principal Arterial - Type AA	No. of Lanes:	4
Length (lf):	616		
Right-of-Way Width (ft.):	140		
Median Type:	Raised		
Pavement Width (BOC to BOC):	48		
Description:	Construct new roadway to thoroughfare standard		

Roadway Construction Cost Estimate:

I. Paving Construction Cost Estimate

Item No.	Item Description	Quantity	Unit	Unit Cost	Item Cost
1	Right of Way Preparation	6	STA	$ 3,000.00	$ 18,000
2	Unclassified Street Excavation	2,200	CY	$ 30.00	$ 66,000
3	12" Concrete Pavement	3,300	SY	$ 130.00	$ 429,000
4	12" Flex Base	3,500	SY	$ 45.00	$ 157,500
5	6" Concrete Sidewalk and Ramps	830	SY	$ 50.00	$ 41,500
6	Parkway Topsoil and Furnishing	5,200	SY	$ 5.00	$ 26,000
				Paving Estimate Subtotal:	**$ 738,000**

II. Non-Paving Construction Components

Item No.	Item Description	Pct. Of Paving	Item Cost
7	Pavement Markings & Signage	2%	$ 14,800
8	Traffic Control	5%	$ 36,900
9	Erosion Control	3%	$ 22,200
10	Drainage Improvements (RCP, Inlets, MH, Outfalls)	15%	$ 110,700
11	Landscaping	3%	$ 22,200
12	Illumination	5%	$ 36,900
	Other Components Estimate Subtotal:		**$ 243,700**

III. Special Construction Components

Item No.	Item Description	Notes	Allowance	Item Cost
13	Drainage Structures	None	$ -	$ -
14	Bridge Structures	None	$ -	$ -
15	Traffic Signals	None	$ -	$ -
16	Other	None	$ -	$ -
		Special Components Estimate Subtotal:		**$ -**

I, II, & III Construction Subtotal:		$ 981,700
Mobilization	5%	$ 49,100
Contingency	10%	$ 103,100
Construction Cost Estimate Total:		**$ 1,133,900**

Impact Fee Cost Estimate Summary

Item Description	Notes	Allowance	Item Cost
Construction		-	$ 1,133,900
Engineering/Survey/Testing		13.0%	$ 147,400
Right-of-Way Acquisition	Cost per sq. ft.: $ 1.00	$ 86,200	$ 86,200
	Impact Fee Project Cost Estimate Total:		**$ 1,367,500**

City of Terrell

Impact Fee Engineer's Opinion of Probable Construction Cost Estimate

COLQUITT ROAD EXTENTION

SH 205 to N of US 80 frontage Rd

Roadway Information:			
Functional Classification:	Major Arterial - Type A	No. of Lanes:	4
Length (lf):	8,442		
Right-of-Way Width (ft.):	120		
Median Type:	Raised		
Pavement Width (BOC to BOC):	48		
Description:	Construct new roadway to thoroughfare standard		

Roadway Construction Cost Estimate:

I. Paving Construction Cost Estimate

Item No.	Item Description	Quantity	Unit	Unit Cost	Item Cost
1	Right of Way Preparation	84	STA	$ 3,000.00	$ 252,000
2	Unclassified Street Excavation	30,100	CY	$ 30.00	$ 903,000
3	12" Concrete Pavement	45,100	SY	$ 130.00	$ 5,863,000
4	12" Flex Base	47,900	SY	$ 45.00	$ 2,155,500
5	6" Concrete Sidewalk and Ramps	11,260	SY	$ 50.00	$ 563,000
6	Parkway Topsoil and Furnishing	52,500	SY	$ 5.00	$ 262,500
				Paving Estimate Subtotal:	**$ 9,999,000**

II. Non-Paving Construction Components

Item No.	Item Description	Pct. Of Paving	Item Cost
7	Pavement Markings & Signage	2%	$ 200,000
8	Traffic Control	5%	$ 500,000
9	Erosion Control	3%	$ 300,000
10	Drainage Improvements (RCP, Inlets, MH, Outfalls)	15%	$ 1,499,900
11	Landscaping	3%	$ 300,000
12	Illumination	5%	$ 500,000
	Other Components Estimate Subtotal:		**$ 3,299,900**

III. Special Construction Components

Item No.	Item Description	Notes	Allowance	Item Cost
13	Drainage Structures	None	$ -	$ -
14	Bridge Structures	None	$ -	$ -
15	Traffic Signals	None	$ -	$ -
16	Other	None	$ -	$ -
		Special Components Estimate Subtotal:		**$ -**

I, II, & III Construction Subtotal:		$ 13,298,900
Mobilization	5%	$ 665,000
Contingency	10%	$ 1,396,400
Construction Cost Estimate Total:		**$ 15,360,300**

Impact Fee Cost Estimate Summary

Item Description	Notes	Allowance	Item Cost
Construction		$ -	$ 15,360,300
Engineering/Survey/Testing		13.0%	$ 1,996,800
Right-of-Way Acquisition	Cost per sq. ft.: $ 1.00	$ 1,013,000	$ 1,013,000
	Impact Fee Project Cost Estimate Total:		**$ 18,370,100**

City of Terrell

Impact Fee Engineer's Opinion of Probable Construction Cost Estimate

NEW BACKAGE ROAD

Colquitt Road Extension to City Limits

Roadway Information:			
Functional Classification:	Minor Arterial - Type B	No. of Lanes:	4
Length (lf):	1,462		
Right-of-Way Width (ft.):	100		
Median Type:	Raised		
Pavement Width (BOC to BOC):	58		
Description:	Construct new roadway to thoroughfare standard		

Roadway Construction Cost Estimate:

I. Paving Construction Cost Estimate

Item No.	Item Description	Quantity	Unit	Unit Cost	Item Cost
1	Right of Way Preparation	15	STA	$ 3,000.00	$ 45,000
2	Unclassified Street Excavation	6,300	CY	$ 30.00	$ 189,000
3	12" Concrete Pavement	9,500	SY	$ 130.00	$ 1,235,000
4	12" Flex Base	10,000	SY	$ 45.00	$ 450,000
5	6" Concrete Sidewalk and Ramps	1,950	SY	$ 50.00	$ 97,500
6	Parkway Topsoil and Furnishing	4,200	SY	$ 5.00	$ 21,000
				Paving Estimate Subtotal:	**$ 2,037,500**

II. Non-Paving Construction Components

Item No.	Item Description	Pct. Of Paving	Item Cost
7	Pavement Markings & Signage	2%	$ 40,800
8	Traffic Control	5%	$ 101,900
9	Erosion Control	3%	$ 61,200
10	Drainage Improvements (RCP, Inlets, MH, Outfalls)	15%	$ 305,700
11	Landscaping	3%	$ 61,200
12	Illumination	5%	$ 101,900
		Other Components Estimate Subtotal:	**$ 672,700**

III. Special Construction Components

Item No.	Item Description	Notes	Allowance	Item Cost
13	Drainage Structures	None	$ -	$ -
14	Bridge Structures	None	$ -	$ -
15	Traffic Signals	None	$ -	$ -
16	Other	None	$ -	$ -
		Special Components Estimate Subtotal:		**$ -**

I, II, & III Construction Subtotal:		$ 2,710,200
Mobilization	5%	$ 135,600
Contingency	10%	$ 284,600
Construction Cost Estimate Total:		**$ 3,130,400**

Impact Fee Cost Estimate Summary

Item Description	Notes	Allowance	Item Cost
Construction		$ -	$ 3,130,400
Engineering/Survey/Testing		13.0%	$ 407,000
Right-of-Way Acquisition	Cost per sq. ft.: $ 1.00	$ 146,200	$ 146,200
	Impact Fee Project Cost Estimate Total:		**$ 3,683,600**

City of Terrell

Impact Fee Engineer's Opinion of Probable Construction Cost Estimate

SAGE HILL PKWY

City Limits to FM 2578

Roadway Information:			
Functional Classification:	Principal Arterial - Type AA	No. of Lanes:	4
Length (lf):	1,810		
Right-of-Way Width (ft.):	140		
Median Type:	Raised		
Pavement Width (BOC to BOC):	48		
Description:	Construct new roadway to thoroughfare standard		

Roadway Construction Cost Estimate:

I. Paving Construction Cost Estimate

Item No.	Item Description	Quantity	Unit	Unit Cost	Item Cost
1	Right of Way Preparation	18	STA	$ 3,000.00	$ 54,000
2	Unclassified Street Excavation	6,500	CY	$ 30.00	$ 195,000
3	12" Concrete Pavement	9,700	SY	$ 130.00	$ 1,261,000
4	12" Flex Base	10,300	SY	$ 45.00	$ 463,500
5	6" Concrete Sidewalk and Ramps	2,420	SY	$ 50.00	$ 121,000
6	Parkway Topsoil and Furnishing	15,300	SY	$ 5.00	$ 76,500
				Paving Estimate Subtotal:	**$ 2,171,000**

II. Non-Paving Construction Components

Item No.	Item Description	Pct. Of Paving	Item Cost
7	Pavement Markings & Signage	2%	$ 43,500
8	Traffic Control	5%	$ 108,600
9	Erosion Control	3%	$ 65,200
10	Drainage Improvements (RCP, Inlets, MH, Outfalls)	15%	$ 325,700
11	Landscaping	3%	$ 65,200
12	Illumination	5%	$ 108,600
		Other Components Estimate Subtotal:	**$ 716,800**

III. Special Construction Components

Item No.	Item Description	Notes	Allowance	Item Cost
13	Drainage Structures	None	$ -	$ -
14	Bridge Structures	None	$ -	$ -
15	Traffic Signals	None	$ -	$ -
16	Other	None	$ -	$ -
		Special Components Estimate Subtotal:		**$ -**

I, II, & III Construction Subtotal:		$ 2,887,800
Mobilization	5%	$ 144,400
Contingency	10%	$ 303,300
Construction Cost Estimate Total:		**$ 3,335,500**

Impact Fee Cost Estimate Summary

Item Description	Notes	Allowance	Item Cost
Construction		-	$ 3,335,500
Engineering/Survey/Testing		13.0%	$ 433,600
Right-of-Way Acquisition	Cost per sq. ft.: $ 1.00	$ 253,400	$ 253,400
	Impact Fee Project Cost Estimate Total:		**$ 4,022,500**

APPENDIX G
Roadway Improvement Plan Projects

Appendix G
Roadway Improvement Plan Projects

Definitions

LANES	The total number of lanes in both directions available for travel.
TYPE	The type of roadway (used in determining capacity): DA = divided arterial UA = undivided arterial DC = divided collector UC = undivided collector
% IN SERVICE AREA	If the roadway is located on the boundary of the service area (with the City limits running along the centerline of the roadway), then half of the roadway is inventoried in the service area and the other half is not. This value is either 50% or 100%.
PK-HR VOLUME	The existing volumes of cars on the roadway segment traveling during the afternoon (P.M.) peak hour of travel.
VEH-MI SUPPLY TOTAL	The number of total service units (vehicle-miles) supplied within the segment/service area, based on the length and established capacity of the roadway type.
VEH-MI DEMAND TOTAL	The total service unit (vehicle-mile) demand created by existing traffic on the roadway segment in the afternoon peak hour.
VEH-MI EXCESS CAPACITY TOTAL	The number of service units supplied but unused by existing traffic in the afternoon peak hour.
VEH-MI DEFICIENCY	The deficiency in service units during the afternoon peak hour when demand exceeds capacity supplied by the CIP.
PROJECT STATUS	Identification of project as “new” or “recoupment”.

Terrell Roadway Impact Fee Study Update
Roadway Capital Improvements Plan

Proj No.	Serv Area	Shared Svc Area	Project Type	Roadway	From	To	Length (mi)	No. of Lanes	Type	Lane Capacity	Pct. in Serv. Area	Peak Hour Volume A	B	Total	VMT Supply Pk Hr Total	VMT Demand Pk Hr Total	Excess VMT Capacity	CIP VMT Deficiency
1	W		N	Windsor Avenue	Rosehill Road	Rockwall Street	0.41	4	DC	375	100%	0	0	0	610	0	610	0
2	W		N	Windsor Avenue	Rockwall Street	FM 2578	0.37	2	DC	375	100%	0	0	0	280	0	280	0
3	W		N	Bradshaw Street	Moore Avenue	Frazier Street	0.52	4	DA	470	100%	87	63	150	983	78	905	0
4	W		N	Bradshaw Street	Frazier Street	Rosehill Road	0.68	4	DA	470	100%	0	0	0	1,275	0	1,275	0
5	W		N	Rosehill Road	500' W. of Lincoln Ln	S. City Limits	1.04	6	DA	470	100%	33	31	64	2,932	66	2,866	0
6	W		N	West End Street	FM 148	Bradshaw Street	0.76	2	UA	425	100%	81	58	139	649	106	543	0
7	W		N	West End Street	Bradshaw Street	Ann Street	0.40	2	UA	425	100%	81	58	139	337	55	282	0
8	W		N	Colquitt Road	SH 205	Lovers Lane	0.34	2	UA	425	100%	116	161	277	291	95	196	0
9	W		N	Lovers Lane	Colquitt Road	Griffith Avenue	0.41	3	SC	375	100%	108	93	201	305	82	223	0
10	W		N	Griffith Avenue	Carl Lee Circle	Lovers Lane	0.27	2	UC	340	100%	138	156	294	181	78	103	0
11	W		N	New Collector	Griffith Avenue	Town N Extension	0.90	2	DC	375	100%	0	0	0	674	0	674	0
12	W		N	Town North Drive	New Collector	FM 986/Poetry Road	0.22	2	DC	375	100%	0	0	0	167	0	167	0
13	W		N	Las Lomas Parkway	N. City Limits	Apache Trail	0.47	4	DA	470	100%	0	0	0	881	0	881	0
14	W		N	SH 205	Moore Avenue	Colquitt Road	1.17	4	DA	470	100%	608	577	1185	2,204	1,389	815	0
15	W		N	Lions Club Lane Ext	Ex. Lions Club Lane	SH 205	0.42	3	SC	375	100%	0	0	0	315	0	315	0
Sub-Total Service Area West							**8.38**								**12,084**	**1,949**	**10,135**	**0**
16	E		N	Windsor Avenue	FM 2578	Home Depot	0.28	4	DC	375	100%	0	**0**	0	413	0	413	0
17	E		R	Windsor Avenue	Home Depot	SH 34	0.23	4	DC	375	100%	83	70	153	345	35	310	0
18	E		N	Town North Drive	Frances Street (SH 34)	Callie St (SH 34)	0.45	2	DC	375	100%	0	0	0	341	0	341	0
19	E		R	SH 34	Virginia St. (SH 34)	US 80	0.76	4	DA	470	100%	528	321	849	1,429	645	784	0
20	E		R	SH 34	US 80	N. City Limits	1.48	4	DA	470	100%	528	321	849	2,782	1,256	1,526	0
21	E		R	British Flying School Blvd	SH 34	Airport	0.42	2	DC	375	100%	5	5	10	316	4	312	0
22	E		N	Rochester Street	Virginia St. (SH 34)	US 80	0.80	2	UA	425	100%	24	20	44	676	35	641	0
23	E		N	FM 429 (realignment)	US 80	Ex. FM 429 (N)	0.60	2	UA	425	100%	0	0	0	509	0	509	0
24	E		N	CR 309/Wilson Rd	@IH-20 Interchange		0.57	4	DA	470	100%	68	68	136	1,072	78	994	0
25	E		N	New Collector	British Flying School Blvd	IH-20 Frontage Road	0.83	2	DC	375	100%	0	0	0	626	0	626	0
Sub-Total Service Area East							**6.42**								**8,509**	**2,053**	**6,455**	**0**
Sub-Total Service Area Brushy Creek							**0.00**								**0**	**0**	**0**	**0**
Totals:															***20,593***	***4,002***	***16,590***	***0***

APPENDIX H
Roadway Improvement Plan Cost Analysis

Appendix H
Roadway Improvement Plan Cost Analysis

Definitions

LANES	The total number of lanes in both directions available for travel.
TYPE	The type of roadway (used in determining capacity): DA = divided arterial UA = undivided arterial DC = divided collector UC = undivided collector
% IN SERVICE AREA	If the roadway is located on the boundary of the service area (with the City limits running along the centerline of the roadway), then half of the roadway is inventoried in the service area and the other half is not. This value is either 50% or 100%.
TOTAL PROJECT COST	The estimated cost (in dollars) of the entire segment of the proposed improvement.
STUDY UPDATE COST	The portion of the study update cost allocated to the proposed improvement. The allocated cost is based on capacity supplied by a proposed improvement relative to the entire CIP program.
SERVICE AREA TOTAL COST	The estimated cost (in dollars) of the portion of the proposed roadway improvement within the service area.
PROJECT STATUS	Identification of project as “new” or “recoupment”.

Terrell Roadway Impact Fee Study Update
2024 Roadway Capital Improvements Plan

Proj No.	Serv Area	Shared Svc Area	Project Type	Roadway	From	To	Length (mi)	Added Lanes	Roadway Costs				Total Project Cost	Study Update Cost	Serv Area Total Cost	Project Cost 50% Credit
									Engineering	ROW	Construction	Finance				
1	North		N	FM 305 / LL Pkwy	N Frances St	Poetry Rd	1.11	4	$ 1,400,100	$ 821,400	$ 10,769,800	$ 4,467,921	$ 17,459,221	$6,633	$17,465,854	$8,732,927
2	North		N	Town N Drive Ext	N City Limits	0.13 mi N of SH 205	0.20	4	$ 253,000	$ 127,100	$ 1,945,900	$ 799,949	$ 3,125,949	$1,196	$3,127,146	$1,563,573
3	North		N	Town N Drive Ext	N City Limits	N City Limits	0.26	4	$ 329,900	$ 192,200	$ 2,538,000	$ 1,052,419	$ 4,112,519	$1,552	$4,114,070	$2,057,035
4	North		N	FM 305 / LL Pkwy	W of FM 429	N City Limits	0.74	4	$ 930,000	$ 544,700	$ 7,153,500	$ 2,967,379	$ 11,595,579	$4,400	$11,599,979	$5,799,990
5	North		N	Lions Club Lane	S of Colquitt Road	Pool Road	0.83	3	$ 647,000	$ 263,100	$ 4,977,200	$ 2,024,739	$ 7,912,039	$1,966	$7,914,005	$3,957,002
7	North		N	Lovers Lane	Griffith Avenue	Colquitt Road	0.41	1	$ 317,900	$ -	$ 2,445,200	$ 950,275	$ 3,713,375	$607	$3,713,983	$1,856,991
9	North		N	FM 986 Ext	Griffith Avenue	Town N Drive	0.91	2	$ 860,200	$ 383,800	$ 6,616,800	$ 2,703,458	$ 10,564,258	$2,151	$10,566,409	$5,283,204
10	North		N	Town N Drive	Poetry Road	FM 986 Ext	0.21	2	$ 280,400	$ 110,400	$ 2,157,000	$ 876,230	$ 3,424,030	$494	$3,424,524	$1,712,262
11	North		N	Town N Drive	Callie Street	Frances Street	0.45	2	$ 427,300	$ 189,700	$ 3,286,800	$ 1,342,581	$ 5,246,381	$1,063	$5,247,443	$2,623,722
13	North		N	Lions Club Lane	Pool Road	US 80	0.16	1	$ 129,000	$ -	$ 992,600	$ 385,737	$ 1,507,337	$244	$1,507,581	$753,791
14	North		N	Creekside Drive	Poetry Rd	9th Street Ext	0.37	2	$ 355,200	$ 158,000	$ 2,732,400	$ 1,116,215	$ 4,361,815	$885	$4,362,700	$2,181,350
15	North		N	2nd Street Ext	US 80	E Brin St	0.27	4	$ 417,800	$ 144,900	$ 3,213,600	$ 1,298,731	$ 5,075,031	$1,639	$5,076,670	$2,538,335
54	North	W	N	Town N Drive Ext	SH 205	0.13 mi N of SH 205	0.14	2	$ 90,450	$ 30,050	$ 695,700	$ 280,705	$ 1,096,905	$211	$1,097,116	$548,558
	Sub-Total Service Area North						**6.07**		**$ 6,438,250**	**$ 2,965,350**	**$ 49,524,500**	**$ 20,266,339**	**$ 79,194,439**	**$ 23,041**	**$ 79,217,480**	**$ 39,608,740**
	East		N	No Projects in Service Area			0.00		$ -	$ -	$ -	$ -	$ -	$0	$0	$0
	Sub-Total Service Area East						**0.00**		**$ -**	**$ -**	**$ -**	**$ -**	**$ -**	**$0**	**$0**	**$0**
17	South		N	Rochester Street	274ft S of US 80	SH 34	0.64	4	$ 954,000	$ 339,400	$ 7,338,700	$ 2,968,721	$ 11,600,821	$3,836	$11,604,657	$5,802,328
18	South		N	Windsor Avenue	Home Depot	FM 2578	0.28	2	$ 377,700	$ 148,400	$ 2,905,400	$ 1,180,149	$ 4,611,649	$664	$4,612,313	$2,306,156
19	South		R	Windsor Avenue	SH 34	Home Depot	0.24	2	$ -	$ -	$ 980,099	$ -	$ 980,099	$563	$980,662	$490,331
20	South		R	BFS Blvd	Airport	SH 34	0.61	2	$ 85,000	$ -	$ 1,203,568	$ -	$ 1,288,568	$1,443	$1,290,011	$645,006
21	South		N	New Collector	US 80 Frntg	BFS Blvd	0.86	2	$ 809,100	$ 361,400	$ 6,224,200	$ 2,543,158	$ 9,937,858	$2,025	$9,939,883	$4,969,942
22	South		N	Sage Hill Pkwy	SH 34	City Limits	1.27	4	$ 1,605,600	$ 942,300	$ 12,350,700	$ 5,123,873	$ 20,022,473	$7,608	$20,030,081	$10,015,040
23	South		N	CR 309 - Wilson	IH 20 Interchange	IH 20 Interchange	0.57	2	$ 353,700	$ -	$ 2,721,100	$ 1,057,474	$ 4,132,274	$1,701	$4,133,975	$2,066,987
24	South		N	Sage Hill Pkwy	City Limits	FM 2578	0.02	4	$ 31,900	$ 17,900	$ 245,300	$ 101,490	$ 396,590	$144	$396,734	$198,367
25	South		N	Windsor Ave Ext	Industrial Blvd	SH 34	0.14	3	$ 107,500	$ 43,000	$ 826,700	$ 336,075	$ 1,313,275	$1,214	$1,314,490	$657,245
26	South		N	Industrial Blvd	Industrial Blvd	Airport Rd	0.57	1	$ 445,800	$ -	$ 3,429,000	$ 1,332,607	$ 5,207,407	$1,708	$5,209,116	$2,604,558
27	South		N	Industrial Blvd	BFS Blvd	Industrial Blvd	0.18	3	$ 137,400	$ 55,600	$ 1,056,600	$ 429,758	$ 1,679,358	$1,572	$1,680,930	$840,465
28	South		N	Industrial Blvd	Windsor Ave Ext	BFS Blvd	0.38	3	$ 293,900	$ 119,300	$ 2,260,900	$ 919,667	$ 3,593,767	$3,371	$3,597,137	$1,798,569
29	South		N	Rochester Street	US 80	253ft S of US 80	0.05	2	$ 72,900	$ 12,700	$ 560,400	$ 222,170	$ 868,170	$144	$868,314	$434,157
	Sub-Total Service Area South						**5.80**		**$ 5,274,500**	**$ 2,040,000**	**$ 42,102,667**	**$ 16,215,141**	**$ 65,632,308**	**$25,995**	**$65,658,304**	**$32,829,152**

Terrell Roadway Impact Fee Study Update
2024 Roadway Capital Improvements Plan

Proj No.	Serv Area	Shared Svc Area	Project Type	Roadway	From	To	Length (mi)	Added Lanes	Roadway Costs: Engineering	ROW	Construction	Finance	Total Project Cost	Study Update Cost	Serv Area Total Cost	Project Cost 50% Credit
30	Southwest		N	Rochester Street	S Delphine Street	Virginia	0.06	2	$ 94,000	$ -	$ 723,400	$ 281,117	$ 1,098,517	$185	$1,098,703	$549,351
31	Southwest		N	Bradshaw	Frazier Street	US 80	0.52	2	$ 665,500	$ 164,900	$ 5,119,300	$ 2,046,199	$ 7,995,899	$1,554	$7,997,453	$3,998,727
32	Southwest		N	Rose Hill Road	Frazier	500 ft S of Lincoln	0.70	4	$ 871,900	$ 442,100	$ 6,707,100	$ 2,758,588	$ 10,779,688	$4,163	$10,783,851	$5,391,925
33	Southwest		N	Rose Hill Road	500 ft S of Lincoln	Windsor Ave	0.18	2	$ 230,300	$ 58,000	$ 1,771,500	$ 708,399	$ 2,768,199	$545	$2,768,744	$1,384,372
34	Southwest		N	Windsor Avenue	964ft W of Rockwall	Rose Hill Road	0.20	2	$ 275,400	$ 108,100	$ 2,118,800	$ 860,582	$ 3,362,882	$484	$3,363,366	$1,681,683
36	Southwest		N	Sage Hill Pkwy	FM 2578	FM 304	0.35	4	$ 448,100	$ 262,500	$ 3,446,900	$ 1,429,832	$ 5,587,332	$2,118	$5,589,450	$2,794,725
37	Southwest		N	Sage Hill Pkwy	FM 304	FM 148	1.23	2	$ 1,555,600	$ 260,500	$ 11,966,200	$ 4,739,959	$ 18,522,259	$3,682	$18,525,941	$9,262,970
38	Southwest		N	FM 148	City Limits	Outer Loop	0.15	2	$ 187,000	$ 30,800	$ 1,438,100	$ 569,491	$ 2,225,391	$435	$2,225,826	$1,112,913
39	Southwest		N	FM 148	FM 305	City Limits	1.85	2	$ 2,324,900	$ 389,800	$ 17,884,100	$ 7,084,265	$ 27,683,065	$5,509	$27,688,574	$13,844,287
41	Southwest		N	Rose Hill Road	Windsor Avenue	S of IH 20	1.73	2	$ 2,181,800	$ 182,500	$ 16,783,000	$ 6,585,070	$ 25,732,370	$5,159	$25,737,529	$12,868,764
42	Southwest		N	FM 35/Las Lomas Pkwy	Apache Trail	US 80	0.38	2	$ 390,200	$ 161,700	$ 3,001,900	$ 1,222,210	$ 4,776,010	$1,142	$4,777,152	$2,388,576
43	Southwest		N	West End Street	Bradshaw Street	William St Ext	0.37	2	$ 534,800	$ 86,800	$ 4,113,500	$ 1,628,478	$ 6,363,578	$1,091	$6,364,669	$3,182,335
44	Southwest		N	West End Street	Mineral Wells Street	Bradshaw Street	0.23	2	$ 338,500	$ 55,100	$ 2,604,200	$ 1,030,993	$ 4,028,793	$692	$4,029,485	$2,014,742
45	Southwest		N	Windsor Avenue	Rose Hill Road	FM 148	1.04	2	$ 1,396,300	$ 551,300	$ 10,741,000	$ 4,363,817	$ 17,052,417	$2,473	$17,054,890	$8,527,445
46	Southwest		N	Mineral Wells Street	West End Street	Windsor Avenue	0.84	1	$ 682,900	$ -	$ 5,253,200	$ 2,041,522	$ 7,977,622	$1,248	$7,978,870	$3,989,435
47	Southwest		N	Mineral Wells Street	Windsor Avenue	N of Windsor Avenue	0.19	3	$ 149,300	$ 60,300	$ 1,148,800	$ 467,176	$ 1,825,576	$450	$1,826,026	$913,013
48B	Southwest		N	Windsor Avenue	1000' W. of Rockwall	Rose Hill Road	0.20	2	$ -	$ -	$ 2,055,100	$ 798,677	$ 2,853,777	$468	$2,854,245	$1,427,123
49	Southwest		N	Williams Street	Talty Road	SH 205	0.20	2	$ 287,500	$ 62,000	$ 2,211,600	$ 880,804	$ 3,441,904	$584	$3,442,488	$1,721,244
50	Southwest		N	Williams Street Ext	West End Street	Talty Road	0.21	4	$ 308,700	$ 111,500	$ 2,374,500	$ 961,143	$ 3,755,843	$1,261	$3,757,104	$1,878,552
51	Southwest		N	West End Street Ext	S Ann Street	West End Street	0.17	4	$ 248,700	$ 88,700	$ 1,912,900	$ 773,915	$ 3,024,215	$1,003	$3,025,219	$1,512,609
52	Southwest		N	Rochester Street	SH 34	S Delphine Street	0.05	4	$ 73,600	$ 15,600	$ 566,500	$ 225,506	$ 881,206	$293	$881,499	$440,750
53	Southwest		N	Sage Hill Pkwy	City Limits	W of IH 20	0.56	2	$ 709,800	$ 118,500	$ 5,459,800	$ 2,162,581	$ 8,450,681	$1,675	$8,452,356	$4,226,178
59	Southwest		N	Sage Hill Pkwy	FM 2578	City Limits	0.34	4	$ 433,600	$ 253,400	$ 3,335,500	$ 1,383,404	$ 5,405,904	$2,046	$5,407,949	$2,703,975
60	Southwest		N	FM 148	IH 20	Sage Hill Pkwy	0.13	2	$ 170,800	$ -	$ 1,313,800	$ 510,578	$ 1,995,178	$399	$1,995,577	$997,789
Sub-Total Service Area Southwest							**11.89**		**$ 14,559,200**	**$ 3,464,100**	**$ 114,050,700**	**$ 45,514,306**	**$ 177,588,306**	**$38,659**	**$177,626,966**	**$88,813,483**
54	West	N	N	Town N Drive Ext	SH 205	0.13 mi N of SH 205	0.14	2	$ 90,450	$ 30,050	$ 695,700	$ 280,705	$ 1,096,905	$211	$1,097,116	$548,558
55	West		N	FM 1392	US 80 Fmtg	City Limits	0.07	2	$ 102,600	$ 14,400	$ 789,300	$ 311,691	$ 1,217,991	$203	$1,218,195	$609,097
56	West		N	FM 305 / LL Pkwy	US 80 Fmtg	City Limits	0.12	4	$ 147,400	$ 86,200	$ 1,133,900	$ 470,306	$ 1,837,806	$695	$1,838,500	$919,250
57	West		N	Colquitt Road Ext	N of US 80 Frntg	SH 205	1.60	4	$ 1,996,800	$ 1,013,000	$ 15,360,300	$ 6,317,778	$ 24,687,878	$9,543	$24,697,422	$12,348,711
58	West		N	New Backage Road	City Limits	Colquitt Road Ext	0.28	4	$ 407,000	$ 146,200	$ 3,130,400	$ 1,266,850	$ 4,950,450	$1,652	$4,952,102	$2,476,051
Sub-Total Service Area West							**2.20**		**$ 2,744,250**	**$ 1,289,850**	**$ 21,109,600**	**$ 8,647,330**	**$ 33,791,030**	**$ 12,304**	**$ 33,803,334**	**$ 16,901,667**
Totals:							***26.0***		***$ 29,016,200***	***$ 9,759,300***	***$ 226,787,467***	***$ 90,643,117***	***$ 356,206,084***	***$100,000***	***356,306,084***	***178,153,042***

Summary:

Engineering Cost	$29,016,200
Right-of-Way Cost	$9,759,300
Construction Cost	$226,787,467
Finance Cost	$90,643,117
TOTAL NET COST	$356,206,084
Future Impact Fee Update Cost	$100,000
TOTAL IMPLEMENTATION COST	$356,306,084
50% Percent Credit	$178,153,042

Notes:
DA - Divided Arterial
UA - Undivided Arterial
SA - Special Arterial with two-way left turn lane (TWLTL)
DC - Divided collector
UC - Undivided Collector
SC - Special Collector with two-way left turn lane (TWLTL)

Project Type
N - New Project
R - Recoupment Project

FREESE AND NICHOLS

APPENDIX I
Roadway Impact Fee Service Area Summary

Terrell Roadway Impact Fee Study Update
2023 Roadway Service Area Analysis Summary

	A	B	C	D	E	F	G	H	I	J	K	L	M
				A - B - C		E x (50%)	F x (D / A)	F - G		I / D	G x J	K / I	L / (50%)
Service Area	Capacity Supplied by CIP	Existing Utilization	Existing Deficiencies	Net Capacity Supplied by CIP	Total Project Cost of CIP	Credited Project Cost of CIP	Cost of Net Capacity	Cost to Meet Existing Utilization	Projected New Development (10-Yr Demand)	Percent of CIP Attributable to New Dev.	Credited Cost Attributable to New Dev.	Credited Cost per Service Unit (Maximum Allowable)	Actual Cost per Service Unit
	(veh-mi)	(veh-mi)	(veh-mi)	(veh-mi)	(Full Cost)	(50% Credit)	(50% Credit)	(50% Credit)	(veh-miles)		(50% Credit)	(50% Credit)	(Full Cost)
North	8,955	0	1,443	7,512	$79,217,480	$39,608,740	$33,226,226	$6,382,514	6,265	83.4	$27,710,637	$4,423.00	$8,846.00
East	0	0	0	0	$0	$0	$0	$0	0	100.0	$0	$0.00	$0.00
South	10,103	65	150	9,888	$65,658,304	$32,829,152	$32,130,521	$698,631	2,015	20.4	$6,547,633	$3,249.00	$6,498.00
Southwest	15,025	0	841	14,184	$177,626,966	$88,813,483	$83,842,292	$4,971,191	18,077	100.0	$83,842,292	$4,638.00	$9,276.00
West	4,782	0	750	4,032	$33,803,334	$16,901,667	$14,250,841	$2,650,826	10,260	100.0	$14,250,841	$1,388.00	$2,776.00
Totals	38,865	65	3,184	35,616	$356,306,084	$178,153,042	$163,259,970	$14,703,161	36,617	100.0	$132,351,404	$2,034.00	$4,069.00
												Weighted Average	

APPENDIX J
Impact Fee Ordinance

ORDINANCE NO. 3048

AN ORDINANCE, AMENDING THE CODE OF ORDINANCES OF THE CITY OF TERRELL, TEXAS, CHAPTER 14 - IMPACT FEES; REPEALING AND REPLACING IN THEIR ENTIRETY ORDINANCES 2217, 2263, 2400, 2597, AND 2767; IMPOSING AN IMPACT FEE ON NEW DEVELOPMENT FOR PROVIDING WATER AND WASTEWATER FACILITIES NECESSITATED BY SUCH DEVELOPMENT; PROVIDING ROADWAY IMPROVEMENTS TO SUPPORT NEW DEVELOPMENT; ADOPTING UPDATED LAND USE ASSUMPTIONS, SERVICE AREA BOUNDARIES, AND CAPITAL IMPROVEMENTS PLANS; AND APPROVING REVISED ASSESSMENT AND COLLECTION SCHEDULES FOR WATER, WASTEWATER AND ROADWAY IMPACT FEES; PROVIDING DEFINITIONS; PROVIDING FOR USE OF PROCEEDS FROM SUCH ACCOUNTS; PROVIDING FOR APPEALS, RELIEF PROCEDURES AND EXEMPTIONS; PROVIDING FOR CREDITS; PROVIDING FOR UPDATES TO PLANS AND REVISION OF FEES; PROVIDING FOR SEVERABILITY; AND PROVIDING AN EFFECTIVE DATE.

WHEREAS, the City Council of the City of Terrell, Texas previously has approved Land Use Assumptions and Capital Improvements Plans and adopted water, wastewater and roadway impact fees by Ordinances 2217, 2263, 2400, 2597, and 2767 adopted on April 6, 2004, April 19, 2005, April 7, 2009, April 1, 2014, and April 2, 2019 respectively; and September 4, 2024

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

WHEREAS, the City Council finds that in all things the City has complied with Chapter 395 of the Texas Local Government Code in the notice, adoption, promulgation and methodology necessary to adopt impact fees; and

WHEREAS, the City has retained consultants to prepare and/or update land use assumptions, capital improvements plans, and impact fees water, wastewater and roadway facilities; and

WHEREAS, the Capital Improvements Advisory Committee has made its recommendations to the City Council regarding Land Use Assumptions, Capital Improvements Plan and the imposition of Impact Fees for Roadways, Water and Wastewater facilities to update and replace Schedule 1 (Capital Improvement Costs) and Schedule 2 rates for collecting impact fees previously adopted by Ordinances 2217, 2263, 2400, 2597 and 2767; adopted on April 6, 2004, April 19, 2005, April 7, 2009, April 1, 2014, and April 2, 2019 respectively; and September 4, 2024

WHEREAS, the adoption of impact fees and the periodic updates and amendments to the adopted Ordinance are intended to ensure the availability of adequate water, wastewater and roadway facilities in order to serve new development consistent with the policies in the City's Comprehensive Plan and development regulations; and

WHEREAS, to the extent that such new development places demands upon the public infrastructure, finding that those demands should be satisfied by partially shifting responsibility for financing the provision of such facilities from the public at large to the development actually creating the demands for them; and

WHEREAS, the City Council, after careful consideration of the matter, hereby finds and declares that impact fees imposed upon residential and nonresidential development to finance specified major public facilities in designated service areas, the demand for which is created by such development, are in the best interest of the general welfare of the City and its residents, are equitable, and do not impose an unfair burden on such development;

WHEREAS, this Ordinance is intended to and satisfies the statutory requirements for adoption of land use assumptions, capital improvements plans and impact fees; and

NOW THEREFORE BE IT ORDAINED BY THE CITY COUNCIL OF THE CITY OF TERRELL, TEXAS:

ARTICLE I.
General Provisions

SECTION 1.

Short Title.
This Chapter shall be known and cited as the Terrell Impact Fee Regulations.

SECTION 2.

Purpose.
This Chapter is intended to ensure the provision of adequate public facilities to serve new development in the City by requiring each new development to pay its share of the cost of such improvements necessitated by and attributed to such new development.

SECTION 3.

Authority.
This Chapter is adopted pursuant to Texas Local Government Code Chapter 395 and the City Charter. The provisions of this Chapter shall not be construed to limit the power of the City to utilize other methods authorized under State law, or pursuant to other City powers to accomplish the purposes set forth herein, either in substitution, resolution, or otherwise to implement and administer this Chapter.

SECTION 4.

Definitions.

For the purposes of this Chapter the following words and phrases shall have the meanings respectively ascribed to them by this section:

Assessment –The determination of the amount of the maximum impact fee per service unit which can be imposed on new development pursuant to this Ordinance.

Building Permit –Written permission issued by the City for the construction, repair, alteration or addition to a structure.

Capital Improvements Advisory Committee (Advisory Committee) –Advisory committee, appointed by the City Council, to regularly review and update the Capital Improvement plan in accordance with the requirements of Chapter 395.

Capital Improvement Plan (CIP) –The plan or plans which identify water, wastewater, and roadway capital improvements or facility expansions pursuant to which impact fees may be assessed. The Capital Improvement Plan may be composed of a separate Water and Wastewater Capital Improvement Plan and a Roadway Capital Improvement Plan.

City –City of Terrell.

City Council (Council) – Governing body of the City of Terrell.

Credit –The amount of the reduction of an impact assessment for fees, payments or charges for the same type of capital improvements for which the fee has been assessed.

Commercial Development – For the purposes of this Ordinance, all development which is not single-family residential.

Existing Development – Development not otherwise defined as new development.

Facility Expansion – The expansion of the capacity of an existing facility, which serves the same function as an otherwise necessary new capital improvement in order that the existing facility may serve new development. Facility expansion does not include repair, maintenance, or modernization to better serve existing development.

Final Plat – The map, drawing or chart meeting the requirements of the City's Subdivision Ordinance on which is provided a subdivider's plan of a subdivision, and which has received approval by the City through the Planning and Zoning Commission, Zoning Board of Adjustments or City Council, and which is recorded with the office of the County Clerk.

Growth Related Cost – Capital construction cost of service related to providing additional service units to new development, either from excess capacity in existing facilities, from facility expansions or from new capital facilities.

Impact Fees – Fee for water, wastewater and roadway facilities to be imposed upon new development, in order to generate revenue to fund or recoup the costs of capital improvements or facility expansion necessitated by and attributable to such new development. Impact fees do not include dedication of land for public parks or payment in lieu of the dedication to serve park needs; dedication of right-of-way or easements, or construction or dedication of site-related water distribution or wastewater collection facilities or internal roadways required by other ordinances of the City Code.

Land Use Assumptions – Description of the service area and projections of changes in land uses, densities, intensities, and population therein over at least a 10-year period, adopted by the City, as may be amended from time to time, upon which capital improvement plans are based.

Land Use Equivalency Table – A table converting the demands for capital improvements generated by various land uses to numbers of service units, as may be amended from time to time, which table is attached hereto and incorporated by reference herein as Exhibit 1.

New Development – The subdivision of land; or the construction, reconstruction, redevelopment, conversion, structural alteration, relocation, or enlargement of any structure; or any use or extension of the use of land; any of which increases the number of service units for water; wastewater or roadway services, or requires the purchase of a new water or wastewater tap. New development includes the purchase of a water tap resulting from the conversion of an individual well to the City's water utility and includes the purchase of a wastewater tap resulting from the conversion of an individual septic or other individual waste disposal system to the City's wastewater utility. An individual new single family home on an individual vacant single-family lot platted prior to April 6, 2000 with an existing roadway, existing water line, and existing sewer line in an adjacent easement or right of way fronting the platted lot should not be considered new development.

Offset – The amount of the reduction of an impact fee designed to fairly reflect the value of system-related facilities, pursuant to rules herein established or administrative guidelines, provided and funded by a developer pursuant to the City's subdivision regulations or requirements.

Plat – The meaning given in the City's subdivision regulations and any action of the Planning and Zoning Commission, Zoning Board of Adjustments or City Council which is recorded with the County Clerk. Plat includes replat.

Property Owner – Any person, corporation, legal entity or agent thereof having a legal or equitable interest in the land for which an impact fee becomes due. Property owner also includes the developer of the new development.

Recoupment – The imposition of an impact fee to reimburse the City for capital improvements which the City has constructed.

Residential Development – A lot developed for use and occupancy as a residence or residences, according to the City's Zoning Ordinance and Subdivision Ordinance as adopted or amended.

Roadway – Any freeway, expressway, principal or minor arterial or collector roadways designated in the City's adopted Thoroughfare Plan, as may be amended from time to time. Roadway also includes any roadway designated as a numbered highway on the official federal or Texas highway system, to the extent that the City incurs capital improvement costs for such facility.

Roadway Facility – Improvement for providing roadway service including, but not limited to, pavement, right-of-way, intersection improvements, drainage and traffic control devices. Roadway facility excludes roadways which are constructed by developers, the costs of which are reimbursed from charges paid by subsequent users of the facilities. Roadway facilities also exclude dedication of right-of-way or easements or construction or dedication of off-site roadways required by valid ordinances of the City of Terrell, Texas and necessitated and attributable to the new development.

Roadway Facility Expansion – Expansion of the capacity of any existing roadway improvement for the purpose of serving new development, not including repair, maintenance, modernization, or expansion of the existing roadway facility to serve existing development.

Roadway Improvement Plan – Portion of the CIP, as may be amended from time to time, which identifies the roadway facilities or roadway expansions and their associated cost which are necessitated by and which are attributable to new development, and which are to be financed in whole or in part through the imposition of roadway impact fees pursuant to this Ordinance.

Service Area – An area defined in this Ordinance within the corporate boundaries of the City for roadway facilities or with the corporate boundaries or extraterritorial jurisdiction of the City or other areas served in the City for water and wastewater facilities to be served by the capital improvements or facility expansions specified in the Capital Improvement Plan applicable to the service area.

Service Unit – Standardized measure of consumption, use, generation, or discharge attributable to an individual unit of development calculated in accordance with generally accepted engineering or planning standards for a particular category of capital improvements or facility expansions. Service units for water and wastewater impact fees are expressed in Service Unit Equivalents (SUE's). Service units for roadway impact fees are expressed in vehicle miles.

Service Unit Equivalent (SUE) – Basis for establishing equivalency among and within various customer classes and land uses. The table of equivalencies for water, wastewater, and roadway are included in Exhibit 1.

Site-related Facility - Improvement or facility which is for the primary use or benefit of a new development and/or which is for the primary purpose of safe and adequate provision of water, wastewater or roadway facilities to serve the new development, and which is not included in the impact fees capital improvements plan and for which the developer or property owner is solely responsible under subdivision or other applicable regulations.

Tap Purchase – The filing with the City of a written application of water or wastewater service and the acceptance of applicable fees by the City. The term "tap purchase" shall not be applicable to a meter purchased for and exclusively dedicated to fire protection.

Wastewater Facility – A wastewater interceptor or main, lift station, treatment facility or other facility included within and comprising an integral component of the City's collection and transmission system for wastewater. Wastewater facility includes land, easements or structures associated with such facilities. Wastewater facility excludes a site-related facility.

Wastewater Facility Expansion – Expansion of the capacity of any existing wastewater facility for the purpose of serving new development, not including the repair, maintenance, modernization or expansion of an existing wastewater facility to serve existing development.

Wastewater Improvement Plan – Portion of the Capital Improvement Plan, as may be amended from time to time, which identifies the wastewater facilities or wastewater expansions and their associated cost which are necessitated by and which are attributed to new development, and for a period not to exceed ten (10) years, and which are to be financed in whole or in part through the imposition of wastewater impact fees pursuant to this Ordinance.

Water Facility – A water main, pump station, storage tank or other facility included within and comprising an integral component of the City's water storage or distribution system. Water facility includes land, easements or structures associated with such facilities. Water facility excludes on site-related facilities or that portion of a water line or main which is constructed by a developer, the costs of which are reimbursed from charges paid by subsequent users of the facilities.

Water Facility Expansion – Expansion of the capacity of any existing water facility for the purpose of serving new development and not including the repair, maintenance, modernization or expansion of an existing water facility to serve existing development.

Water Improvement Plan – Portion of the Capital Improvement Plan, as may be amended from time to time, which identifies the water facilities or water expansions and their associated cost which are necessitated by and which are attributable to new development, and for a period not to exceed ten (10) years, and which are to be financed in whole or in part through the imposition of water impact fees pursuant to this Ordinance.

Water Meter – A device for measuring the flow of water to a development, whether for domestic or for irrigation purposes.

Vehicle Mile – A unit used to express both supply and demand provided by and placed on the roadway system. A combination of a number of vehicles traveling during a given time period and the distance in which these vehicles travel in miles; for supply, it is the capacity provided by facility type over a given segment distance.

SECTION 5.

Applicability of Impact Fees.

The provisions of this Ordinance apply to all development within the corporate boundaries of the City and its extraterritorial jurisdiction which lie within the service area for each category of capital improvement.

SECTION 6.

Impact Fees as Conditions of Development Approval.

No development related application shall be approved within the City without assessment of applicable impact fees pursuant to this Ordinance, and no water and wastewater tap shall be installed and no building permit shall be issued unless the applicant has paid the applicable impact fees imposed by and calculated hereunder.

SECTION 7.

Establishment of Water and Wastewater Service Areas and Roadway Service Areas.

A) There are hereby established Service Areas for Water and Wastewater Impact Fees as depicted on Exhibits 2 attached to this Ordinance.

B) There are hereby established Service Areas for Roadway Impact Fees as depicted on Exhibit 3 attached to this Ordinance.

C) The service areas shall be established consistent with any facility service area defined in the Capital Improvement Plan ("CIP") for each utility or facility. Additions or revisions to the service areas may be approved by the City Council consistent with the procedure set forth in Chapter 395.

SECTION 8.

Impact fees per service unit.

A) The maximum impact fee per service unit for each service area shall be established by category of capital improvement as set forth in Schedule 1.

B) The amount of the impact fees to be assessed by water meter size or by vehicle mile shall be as set forth in Schedule 1, attached hereto and made a part of this Ordinance

by reference. Impact fees may be amended from time to time utilizing the amendment procedure set forth in Section 18.

C) The City may vary the rates of collection or amount of impact fees per service unit among or within service districts in order to reasonably further goals and policies affecting the adequacy of system facilities serving new development, or other regulatory purposes affecting the type, quality, intensity, economic development potential or development timing of land uses within such service districts.

D) The maximum impact fee per service unit for system facilities, as may be amended from time to time, hereby is declared to be an approximate and appropriate measure of the impacts generated by a new unit of development on the City's system facilities. To the extent that the impact fee charged against a new development, as may be amended from time to time, is less than the maximum impact fee per service unit, such difference hereby is declared to be founded on policies unrelated to measurement of the impacts of the new development on the City's system facilities. The maximum impact fee rate may be used in evaluating any claim by a property owner that the dedication or construction of a capital improvement imposed as a condition of development approval pursuant to the City's subdivision or development regulations is disproportionate to the impacts created by the development on the City's system facilities.

SECTION 9.

Service unit determination.

A) The number of service units for a new development shall be determined by using the land use equivalency table, attached hereto and incorporated herein by reference as Exhibit 1.

B) In determining the number of water and wastewater service units, the following rules shall apply:

1) Each new freestanding building requires a new water meter, except as provided in subsection (2).

2) Where a site with a continuous 12 month history of documented City of Terrell water usage history at any time in the five (5) previous years is demolished and reconstructed with a building of the same or smaller square footage, no new service units will be attributed to such redevelopment, provided that the water meter is of the same size as the development previously occupying the site. If the meter size is increased, the number of new service units will be based upon the increase in capacity of the meter.

3) Existing buildings or land uses with a continuous 12 month history of documented City of Terrell water usage history at any time in the five (5) previous years may be expanded using existing meter service and no service

units will be attributed to such development if the water meter size remains the same. Otherwise, the number of service units will be based upon the capacity of the meter.

4) In determining the number of service units for wastewater impact fees, no service units will be attributed to irrigation meters.

5) If a new development does not require water or wastewater service, no service units will be attributable to the development.

6) For purposes of determining water impact fees, no service units will be attributable to an increase in the size of a water meter installed solely to provide capacity for sprinkler systems for fire safety.

7) Required meter size shall be determined by the City, based upon the proposed land use and meter sizing established by the normal operating flow in the meter specifications.

C) In determining the number of roadway service units, the following rules shall apply:

1) For residential structures, the number of units on the site shall be multiplied by the number of vehicle-miles per dwelling unit in Exhibit 1 to compute the total service units attributed to the site.

2) For business uses, the gross floor area (GFA) of a proposed structure divided by 1,000 shall be multiplied by the number of vehicle-miles per development unit for the proposed land use in Exhibit 1 to compute the total service units attributed to the site.

3) Where a site is redeveloped, no new service units will be attributed to the site provided that there is no increase in GFA and the proposed land use falls within the same category as the prior use. If the GFA is increased or if the proposed land use is in a different category, then the number of service units attributed to the site will be as computed for the change in impact.

SECTION 10.

Assessment of Impact Fees.

A) Assessment of the impact fee for any new development shall be at the time of final plat approval or upon approval of a building permit for property already platted for either new development, redevelopment resulting in an increase in service units, when possible (see G below) and shall be based upon the maximum impact fees per service unit then in effect, as set forth in Schedule 1. Assessment of the maximum impact fee for any new development shall be made as follows:

1) For land which is platted at the time of application for a building permit or utility connection, or for a new development which received final plat approval prior to the effective date of this Ordinance, and for which no replatting is necessary pursuant to the City's subdivision regulations prior to development, assessment of impact fees shall occur at the time application is made for the building permit or utility connection, whichever first occurs, and shall be at the rates set forth in Schedule 2.

2) For a new development which is submitted for approval pursuant to the City's subdivision regulations on or after the effective date of this Ordinance, or for which replatting results in an increase in the number of service units after such date, assessment of impact fees shall be at the time established for the project by the City Engineer at plat approval, building permit application, grading permit approval, water connection approval, building permit approval or utility connection on construction phasing requirements as determined by the City Engineer, but in no case later than payable in full prior to building permit approval and shall be at the rates set forth in Schedule 1.

B) Following assessment of the impact fee pursuant to subsection A, the amount of the impact fee assessment per service unit for that development cannot be increased, unless the owner proposes to change the approved development by the submission of a new application for final plat approval or other development application that results in approval of additional service units, in which case a new assessment shall occur at the Schedule 1 rate then in effect for such additional service units.

C) Following the vacating of any plat or submittal of any replat, a new assessment must be made in accordance with the provisions set forth herein.

D) Approval of an amended plat pursuant to Texas Local Government Code, Section 212.016 and the City's subdivision regulations is not subject to reassessment for any impact fee.

E) For a development which received final plat approval prior to adoption of impact fees by the City, or for which no plat approval is required, assessment of impact

fees shall be at the time of application for permit of service in the amount set forth herein.

F) After a development has been assessed impact fees under this Ordinance, no new impact fee shall be assessed against that development unless:

1) The final plat lapses or expires or a new application for final plat approval is submitted on the property; or

2) The number of service units to be developed on the property increases.

G) For business developments where building gross floor area is not known at the time of final plat approval, assessment of impact fees shall occur upon application for building permit.

SECTION 11.

Computation and Collection of Impact Fees.

A) Impact fees shall be collected at the time consistent with Section 10.

B) The impact fees to be paid and collected shall be at the rates listed in Schedule 2.

C) The City shall compute the impact fees for the new development in the following manner:

1) The amount of each impact fee shall be determined by multiplying the number of service units generated by the new development by the impact fee per service unit for the service area using Schedule 2. The number of service units shall be determined by using the land equivalency table (Exhibit 1).

2) The amount of each impact fee shall be reduced by any allowable offsets or credits for that category of capital improvements.

3) The total amount of the impact fees for the new development shall be calculated and attached to the development application or request for connection as a condition of approval.

D) The amount of each impact fee for a new development shall not exceed an amount computed by multiplying the fee assessed per service unit pursuant to Section 8 by the number of service units generated by the development.

E) If the building permit for which an impact fee has been paid has expired, and the same applicant files a new application for an identical development prior to August 30, 2028, the impact fees shall be computed using Schedule 2 then in effect, with credits for previous payment of fees being applied against the new fees due.

F) Whenever the property owner proposes to increase the number of service units for a development, the additional impact fees collected for such new service units shall be determined by using Exhibit 1 then in effect, and such additional fee shall be collected at the time prescribed by this section.

SECTION 12.

Credits Against Impact Fees.

A) A property owner who constructs an area-related facility pursuant to an improvements agreement approved by the City following adoption of this Ordinance may be charged reduced impact fees due for the property for that category of capital improvement by the value of such improvement, as determined in Subsection (C). The credit shall be associated with the plat of the property that is to be served by the capital improvement constructed.

B) The improvements agreement required by subsection (A) may provide for participation by the City in the costs of the capital improvement to be constructed by the property owner, as provided in the City's subdivision regulations. The amount of any credit shall be calculated as no greater than the developer's actual costs minus the amount of the City's direct and indirect costs necessary to deliver the project, for example: design fees, property acquisition, inspection, materials testing, contributions to construction and similar.

C) The amount of a credit shall be determined pursuant to rules established in this Section or pursuant to administrative guidelines promulgated by the City. A credit against impact fees is limited to that portion of the cost of an area-related facility attributable to new development within the service area and does not include that portion of the cost of the equivalent to the cost of a standard or minimum size facility.

   The unit costs used to calculate offsets and credits shall not exceed those assumed for the capital improvements included in the impact fees capital improvements plan for the category of facility for which the impact fee is imposed, nor shall the amount of the offset or credit exceed the actual costs of constructing a capital improvement. For roadway facilities, the costs of any roadway improvement not included within the roadway improvements plan or the Master Thoroughfare Plan are not eligible for offsets or credits.

D) A credit associated with a plat shall be applied to reduce an impact fee at the time of final plat approval for developments. For all other developments, the credit shall be applied to reduce an impact fee at the time of application for the first building permit or at the time of application for the first utility connection for the property and, thereafter, to all subsequently issued building permits or utility connections, until the credit or offset is exhausted.

E) Offsets or credits created after the effective date of an Ordinance establishing an impact fee for a particular category of capital improvement shall expire within 10 years from the date the offset or credit was created. Offsets or credits arising prior to such effective date shall expire ten years from such effective date. Credits for construction of improvements shall be deemed created when the improvements are completed and the City has accepted the facility, or in the case of improvements constructed and

accepted prior to the effective date of the Ordinance establishing the impact fee for a particular category of capital improvements, on such effective date.

SECTION 13.

Establishment of Accounts.

A) The City's Finance Department shall establish an account to which interest is allocated for each service area for each category of capital facility for which an Impact Fee is imposed pursuant to this Ordinance. Each impact fee collected within the service area shall be deposited in such account.

B) Interest earned on the account into which the impact fees are deposited shall be considered funds of the account, and shall be used solely for the purposes authorized in Section 14.

C) The City's Finance Department shall establish adequate financial and accounting controls to ensure that impact fees disbursed from the account are utilized solely for the purposes authorized in Section 14. Disbursement of funds shall be authorized by the City at such times as are reasonably necessary to carry out the purposes and intent of this Ordinance; provided, however, that any fee paid shall be expended within a reasonable period of time, but not to exceed ten (10) years from the date the fee is deposited into the account.

D) The City's Finance Department shall maintain and keep financial records for impact fees, which shall show the source and disbursement of all fees collected in or expended from each service area. The records of the account into which impact fees are deposited shall be open for public inspection and copying during ordinary business hours. The City may establish a fee for copying services.

E) The Finance Department shall maintain and keep adequate financial records for said account which shall show the source and disbursement of all funds placed in or expended from such account.

SECTION 14.

Use of Proceeds of Impact Fee Accounts.

A) The impact fees collected for each service area pursuant to this article may be used to finance or to recoup the costs of any capital improvements or facility expansion identified in the applicable capital improvements plan for the service area, including but not limited to the construction contract price, surveying and engineering fees, land acquisition costs (including land purchases, court awards and costs, attorney's fees and expert witness fees). Impact fees may also be used to pay the principal sum and interest and other finance costs on bonds, notes or other obligations issued by or on behalf of the City to finance such capital improvements or facility expansion.

B) Impact fees collected pursuant to this Ordinance shall not be used to pay for any of the following expenses:

1) Construction, acquisition or expansion of capital improvements or assets other than those identified in the applicable capital improvements plan;

2) Repair, operation, or maintenance of existing or new capital improvements or facility expansion;

3) Upgrade, expansion or replacement of existing capital improvements to serve existing development in order to meet stricter safety, efficiency, environmental or regulatory standards;

4) Upgrade, expansion or replacement of existing capital improvements to provide better service to existing development; provided, however, that impact fees may be used to pay the cost of upgrading, expanding, or replacing existing capital improvements in order to meet the need for new capital improvements generated by new development; or

5) Administrative and operating cost of the City.

SECTION 15.

Appeals.

A) The property owner or applicant for new development may appeal the following administrative decisions to the Planning and Zoning Commission, which at its discretion may deny, or City Council.

    1) The applicability of an impact fee to the development;

    2) The amount of the impact fee due;

    3) The denial of or the amount of a credit:

    4) The amount of the impact fee assessment versus the benefit received by the new development; or

    5) The amount of refund due, if any.

B) The burden of proof shall be on the appellant to demonstrate that the amount of the fee or the amount of the offset or credit was not calculated according to the applicable schedule of impact fees or the guidelines established for determining offsets or credit.

C) The appellant must file a written notice of appeal with the City within thirty (30) days following the decision. If the notice of appeal is accompanied by a payment or other security satisfactory to the City Manager in an amount equal to the original determination of the impact fee due, the development application may be processed while appeal is pending.

SECTION 16.

Refunds.

A) Upon written application, any impact fee or portion thereof collected pursuant to these regulations, which has not been expended within the service area within ten (10) years from the date of payment, shall be refunded to the record owner of the property for which the impact fee was paid or, if the impact fee was paid by another governmental entity, to such governmental entity, together with the interest calculated from the date of the collection to the date of refund at the statutory rate as set forth in Chapter 1.03, Title 79, Revised Statutes (Chapter 5069-1.03, Vernon's Texas Civil Statutes) or its successor statute. The application for refund pursuant to this section shall be submitted within sixty (60) days after the expiration of the ten-year period for expenditure of the fee. An impact fee shall be considered expended on a first-in, first-out basis,

B) An impact fee collected pursuant to these regulations shall also be considered expended if the total expenditures for capital improvements or facility expansion authorized in Section 14 within the service area within ten (10) years following the date of payment exceeds the total fees collected within the service area for such improvements or expansions during such period.

SECTION 17.

Rebates.

A) If a tract of land for which an impact fee has been paid is replatted, resulting in a reduction in the number of service units for water and wastewater facilities, and the new impact fee to be collected is less than that paid, the City shall rebate the difference, provided that water meters to serve the development have not been installed.

B) If the building permit for a new development for which an impact fee has been paid has expired, no tap purchases for that category of capital improvements have been made to the development (for water and wastewater facilities), and a modified or new application has not been filed within six (6) months of such expiration, the City shall, upon written application, rebate the amount of the impact fee to the record owner of the property for which the impact fee was paid. If no application for rebate pursuant to this subsection has been filed within this period, no rebate shall become due.

SECTION 18.

Updates to Plans and Revision of Fees.

The City shall update its land use assumptions and capital improvements plans at least every five (5) years commencing from the date of adoption of such plans, and shall recalculate the impact fees based thereon in accordance with the procedures set forth in Texas Local Government Code, Chapter 395, or in any successor statute. At the discretion of the Council, the fee structure in Schedule 2 may be updated or amended without revising land use assumptions and capital improvements plans as deemed necessary, not to exceed the maximum amounts as set forth in Schedule 1. Public notice and hearing is required to amend Schedule 2 in accordance with the procedure for amending impact fees set forth in Texas Local Gov't Code, Ch. 395, or in any successor statute.

SECTION 19.

Relief Procedures.

A) Any person who has paid an impact fee or an owner of land upon which an impact fee has been paid may petition the City Council to determine whether any duty required by this Ordinance has not been performed within the time so prescribed. The petition shall be in writing and shall state the nature of the unperformed duty and request that the duty be performed within sixty (60) days of the request. City Council directs the City Secretary to convey the initial hearing on such appeal to the Planning and Zoning Commission for the purposes of providing a recommendation to the City Council on the matter. If the City Council determines that the duty is required pursuant to the Ordinance and is late in being performed, it shall cause the duty to commence within sixty (60) days of the date of the request and to continue until completion. This subsection is not applicable to matters which may be appealed pursuant to Section 15.

B) The City Council may grant a variance from any requirement of this Ordinance, upon written request by a developer or owner of property subject to the Ordinance, following a public hearing, and only upon finding that a strict application of such requirement would, when regarded as a whole, result in confiscation of the property.

C) If the City Council grants a variance to the amount of the impact fee due for a new development under this section, it may cause to be appropriated from other City funds the amount of the reduction in the impact fee to the account for the service area in which the property is located.

SECTION 20.

Exemptions.

A) Pursuant to Tex. Loc. Gov't Code section 395.022, as amended, a school district is not required to pay impact fees imposed under this Ordinance unless the board of trustees of the district consents to the payment of the fees by entering a contract with the City imposing the fees.

B) Any building permit application which was duly accepted for filing prior to the adoption of this Ordinance and which was subsequently granted after its adoption shall pay impact fees according to the schedule in Ordinance 2767 or in accordance with any prior executed Developer's Agreement..

ARTICLE II.
Water Facilities Impact Fees

SECTION 21.

Water Service Area.

A) There is hereby established a water service area, constituting land within the City limits and within the City's extraterritorial jurisdiction, as depicted on Exhibit 2 attached hereto and incorporated herein by reference.

B) The boundaries of the water service area may be amended from time to time, or new water benefit areas may be delineated, pursuant to the procedures in Section 18, or shall expand automatically in the case of annexation

SECTION 22.

Water Improvements Plan.

A) The Water Improvements Plan for the City Of Terrell, Texas, is hereby adopted as depicted on Exhibit 4, attached hereto and incorporated herein by reference.

B) The Water Improvements Plan may be amended from time to time, pursuant to the procedures in Section 18.

SECTION 23.

Water Facilities Impact Fee.

A) The maximum impact fees per service unit for water facilities are hereby adopted and incorporated in Schedule 1 attached hereto and made a part hereof by reference.

B) The impact fees per service unit for water facilities, which are to be paid by each new development, are hereby adopted and incorporated in Schedule 2 attached hereto and made a part hereto by reference.

C) The impact fees per service unit for water facilities may be amended from time to time, pursuant to the procedures in Section 18.

D) Water Impact Fees shall be applicable exclusively only to all new development.

ARTICLE III.
Wastewater Facilities Impact Fees

SECTION 24.

Wastewater Service Area.

A) There is hereby established a wastewater service area, constituting land within the City limits and within the City's extraterritorial jurisdiction, as depicted on Exhibit 2 attached hereto and incorporated herein by reference.

B) The boundaries of the wastewater service area may be amended from time to time, or new wastewater benefit areas may be delineated, pursuant to the procedures in Section 18 or shall expand automatically in the case of annexation.

SECTION 25.

Wastewater Improvements Plan.

A) The Wastewater Improvements Plan for the City Of Terrell, Texas, is hereby adopted as depicted on Exhibit 5, attached hereto and incorporated herein by reference.

B) The Wastewater Improvements Plan may be amended from time to time, pursuant to the procedures in Section 18.

SECTION 26.

Wastewater Facilities Impact Fee.

A) The maximum impact fees per service unit for wastewater facilities are hereby adopted and incorporated in Schedule 1 attached hereto and made a part hereof by reference.

B) The impact fees per service unit for wastewater facilities, which are to be paid by each new development, are hereby adopted and incorporated in Schedule 2 attached hereto and made a part hereto by reference.

C) The impact fees per service unit for wastewater facilities may be amended from time to time, pursuant to the procedures in Section 18.

D) Wastewater impact fees shall be applicable to all development regardless if it is new development or otherwise.

ARTICLE IV.
Roadway Impact Fees

SECTION 27.

Roadway Service Areas.

A) There are hereby established five (5) roadway service areas, constituting land within the City limits as depicted on Exhibit 3 attached hereto and incorporated herein by reference.

B) The boundaries of the roadway service area may be amended from time to time, or new roadway benefit areas may be delineated, pursuant to the procedures in Section 18 or shall expand automatically in the case of annexation.

SECTION 28.

Roadway Improvements Plan.

A) The Roadway Improvements Plan for the City Of Terrell, Texas, is hereby adopted as depicted by Exhibit 6, attached hereto and incorporated herein by reference.

B) The Roadway Improvements Plan may be amended from time to time, pursuant to the procedures in Section 18.

SECTION 29.

Roadway Facilities Impact Fee.

A) The maximum impact fees per service unit for roadway facilities are hereby adopted and incorporated in Schedule 1 attached hereto and made a part hereof by reference.

B) The impact fees per service unit for roadway facilities, which are to be paid by each new development, are hereby adopted and incorporated in Schedule 2 attached hereto and made a part hereto by reference.

C) The impact fees per service unit for roadway facilities may be amended from time to time, pursuant to the procedures in Section 18.

D) Roadway impact fees shall be applicable exclusively only to all new development.

ARTICLE V.

It is hereby declared to be the intention of the City Council that the sections, paragraphs, sentences, clauses, and phrases of this Ordinance are severable and, if any phrase, clause, sentence, paragraph, or section of this Ordinance shall be declared unconstitutional by the valid judgment or decree of any court of competent jurisdiction, such unconstitutionally shall not affect any of the remaining phrases, clauses, sentences, paragraphs, and sections of this Ordinance, since the same would have been enacted by the City Council without the incorporation in this Ordinance of any such unconstitutional phrase, clause, sentence, paragraph, or section.

ARTICLE VI.

This Ordinance will take effect immediately from and after its passage and the publication of the caption, as the law in such cases provides.

PASSED AND APPROVED ON THIS THE 27th DAY OF AUGUST, 2024.

PASSED AND ADOPTED ON THIS THE 3rd DAY OF SEPTEMBER, 2024.

E. RICK CARMONA, MAYOR

ATTEST:

DAWN STEIL, CITY SECRETARY

APPROVED AS TO FORM:

MARY GAYLE RAMSEY, CITY ATTORNEY

Impact Fees

EXHIBIT 1

LAND USE OR SERVICE UNIT EQUIVALENCY

WATER AND WASTEWATER

Meter Size	Service Unit Equivalents
5/8" x 3/4"	1.0
1”	1.6
1 1/2”	4.6
2” (Turbine)	5.7
3” (Turbine)	14.3
4” (Turbine)	28.6
6” (Turbine)	57.1
8” (Turbine)	100.0
10” (Turbine)	157.1

ROADWAYS

Land Use	Development Unit	Total Service Units (Veh-mi/Dev Unit)
Residential-Single Family	Dwelling Unit (D.U.)	3.22
Multi- Family	Dwelling Unit (D.U.)	1.75
Hotel	Rooms	1.56
Office	1,000 GFA* (up to 10,000)	6.60
Retail/Commercial	1,000 GFA* (up to 100,000 sq ft)	5.30
Industrial	1,000 GFA* (up to 250,000 sq ft)	3.11
Institutional	1,000 GFA* (up to 20,000 sq ft)	0.85

*GFA = Gross Floor Area – Cap

EXHIBIT 2
City Limit and ETJ

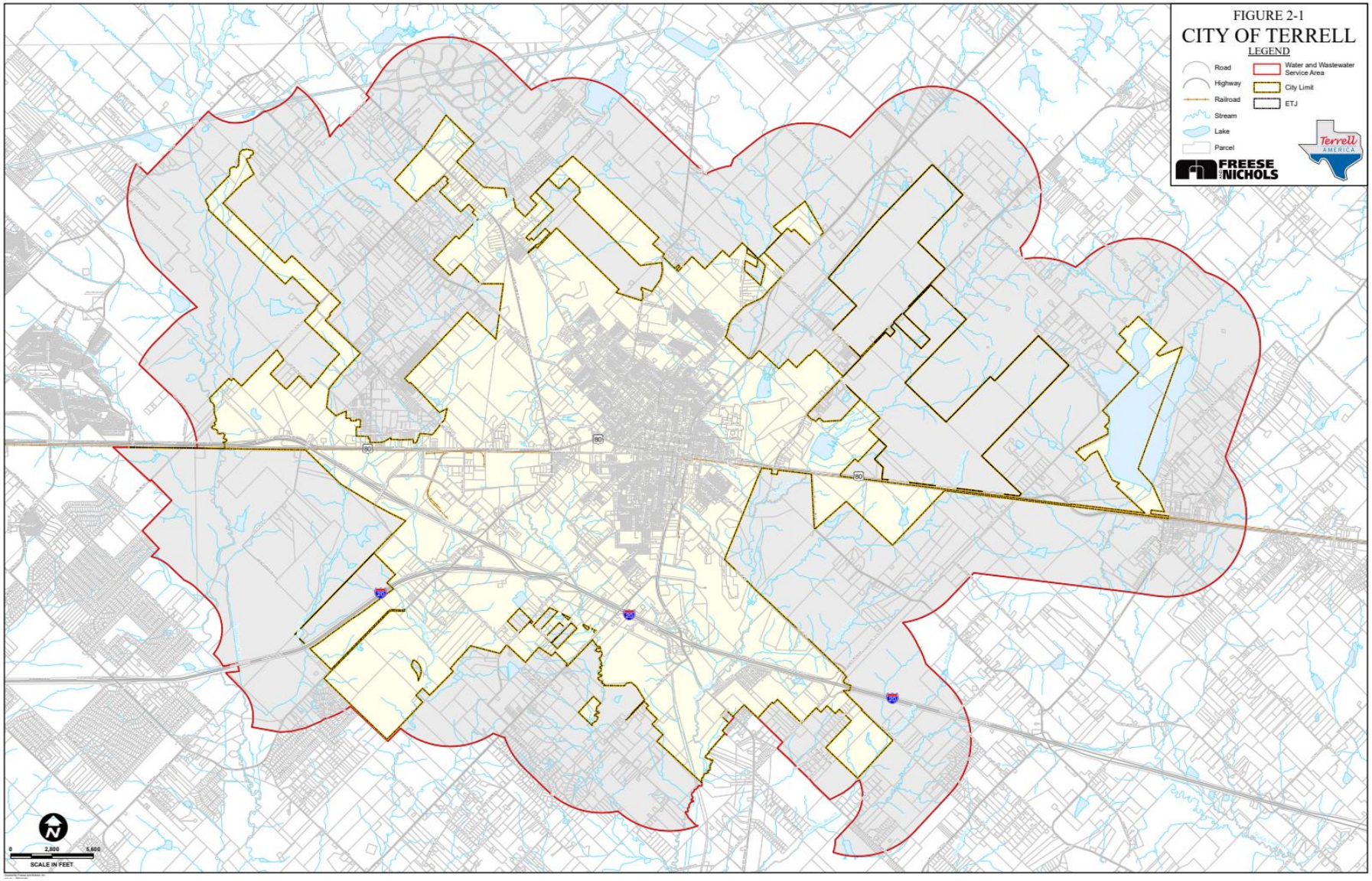


EXHIBIT 3

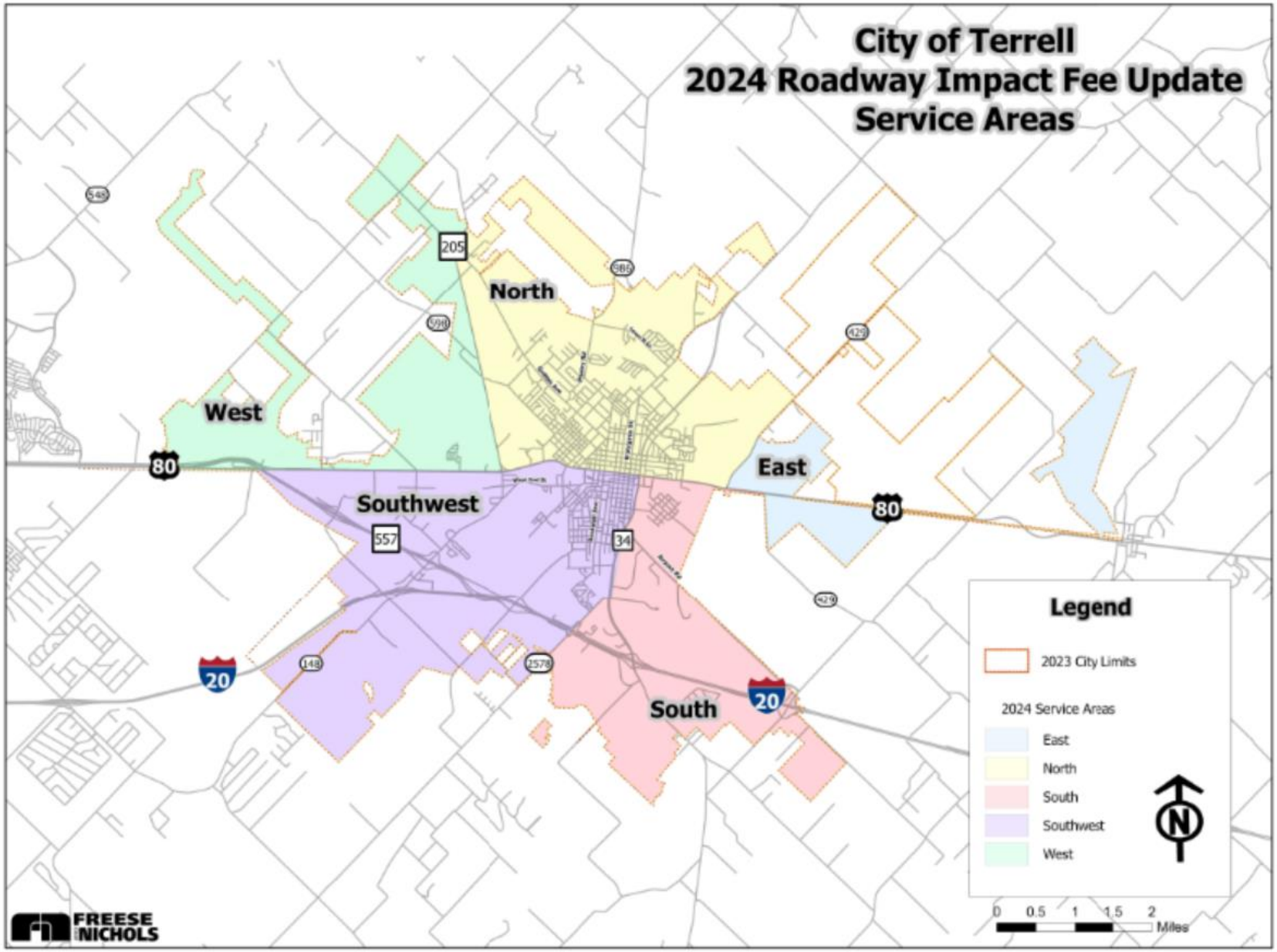

City of Terrell
2024 Roadway Impact Fee Update
Service Areas
North
West
East
Southwest
South
205
80
557
34
20
148
2578
Legend
2023 City Limits
2024 Service Areas
East
North
South
Southwest
West
0 0.5 1 1.5 2
Miles
FREESE NICHOLS

EXHIBIT 4

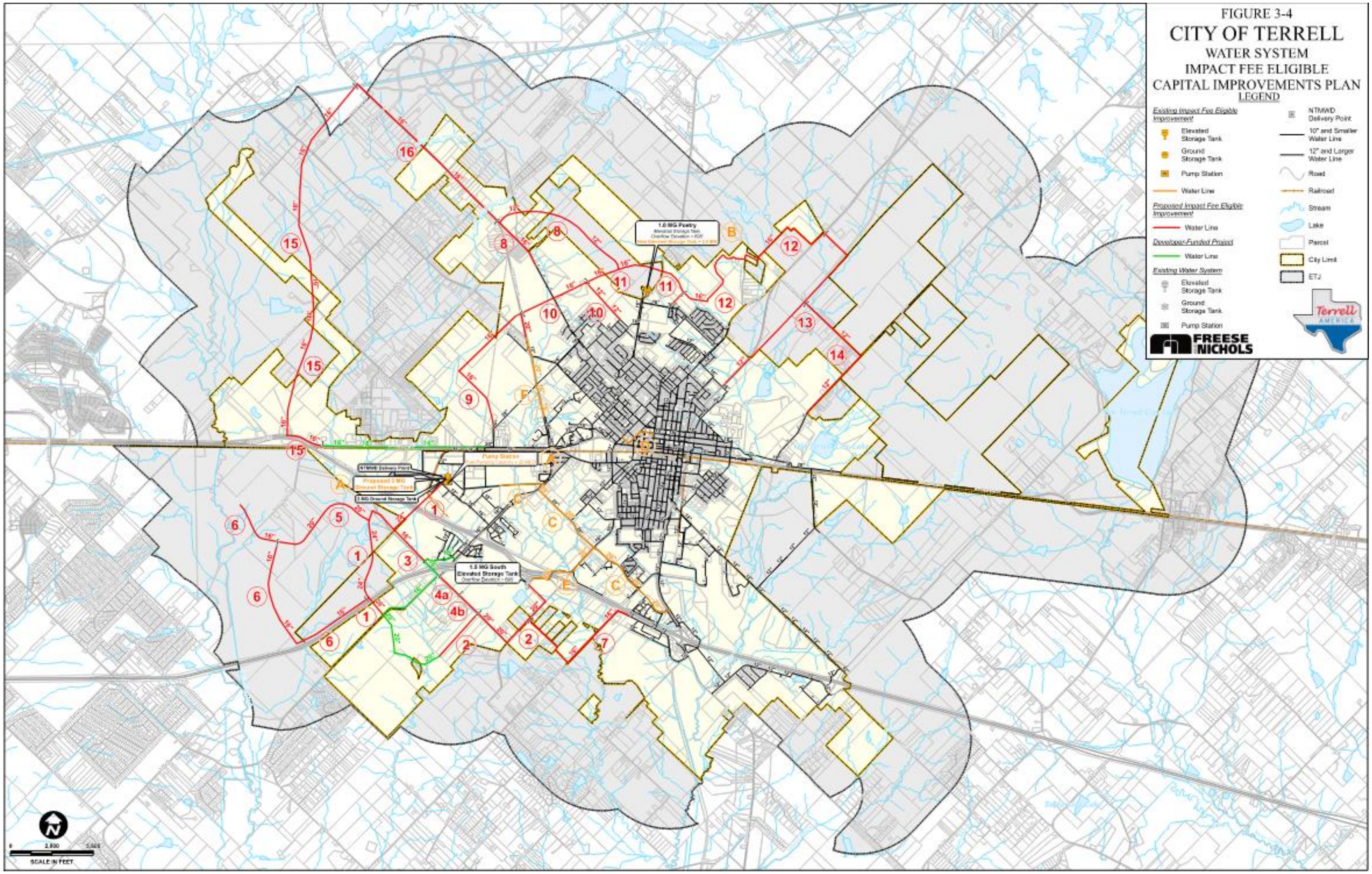


FIGURE 3-4
CITY OF TERRELL
WATER SYSTEM
IMPACT FEE ELIGIBLE
CAPITAL IMPROVEMENTS PLAN
LEGEND
Existing Impact Fee Eligible Improvement
Elevated Storage Tank
Ground Storage Tank
Pump Station
Water Line
Proposed Impact Fee Eligible Improvement
Water Line
Developer-Funded Project
Water Line
Existing Water System
Elevated Storage Tank
Ground Storage Tank
Pump Station
NTMWD Delivery Point
10" and Smaller Water Line
12" and Larger Water Line
Road
Railroad
Stream
Lake
Parcel
City Limit
ETJ
Terrell AMERICA
FREESE NICHOLS
1.0 MG Poetry
1.5 MG South Elevated Storage Tank
Proposed 3 MG Ground Storage Tank
NTMWD Delivery Point
Pump Station
SCALE IN FEET

EXHIBIT 5

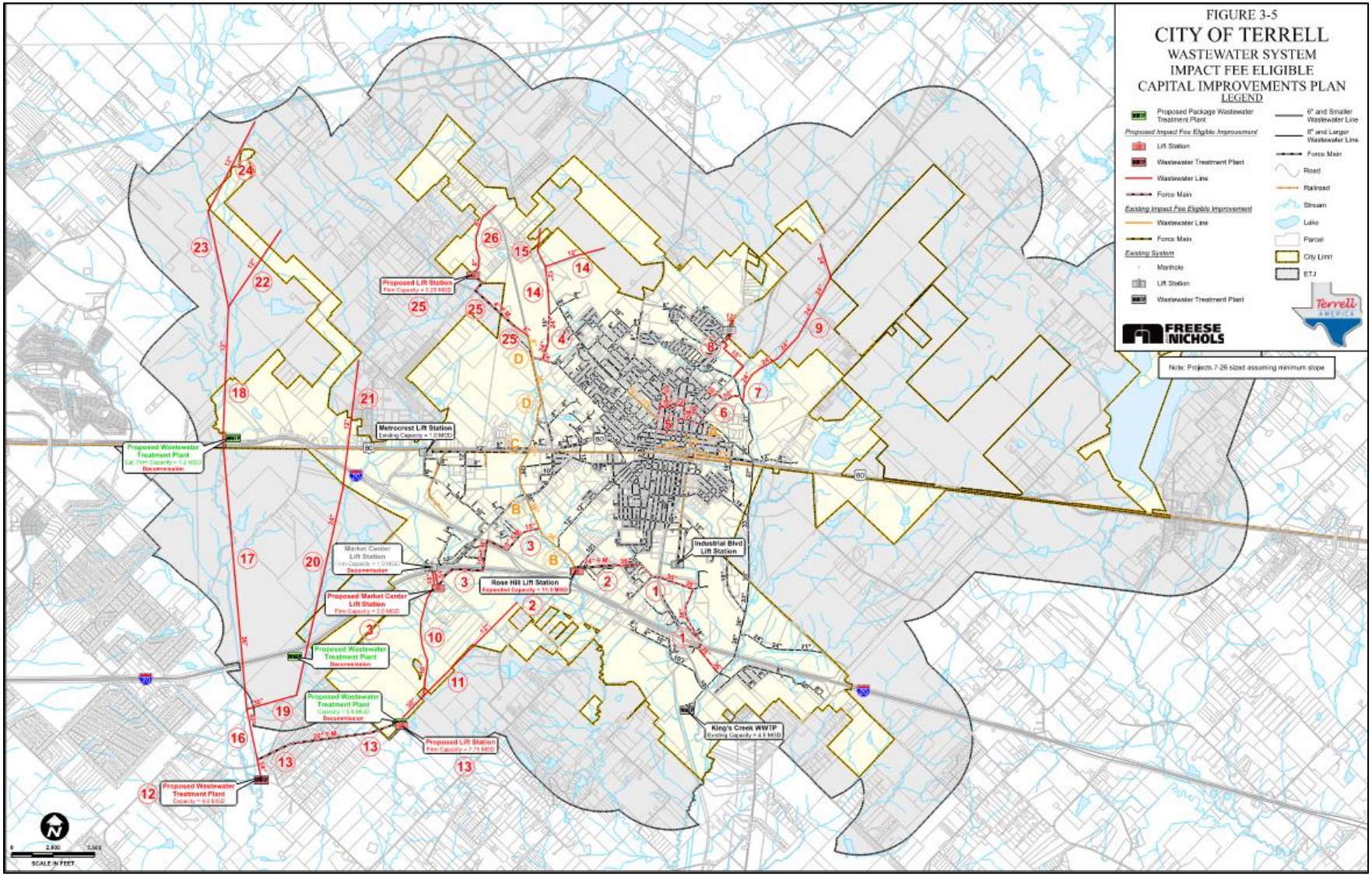
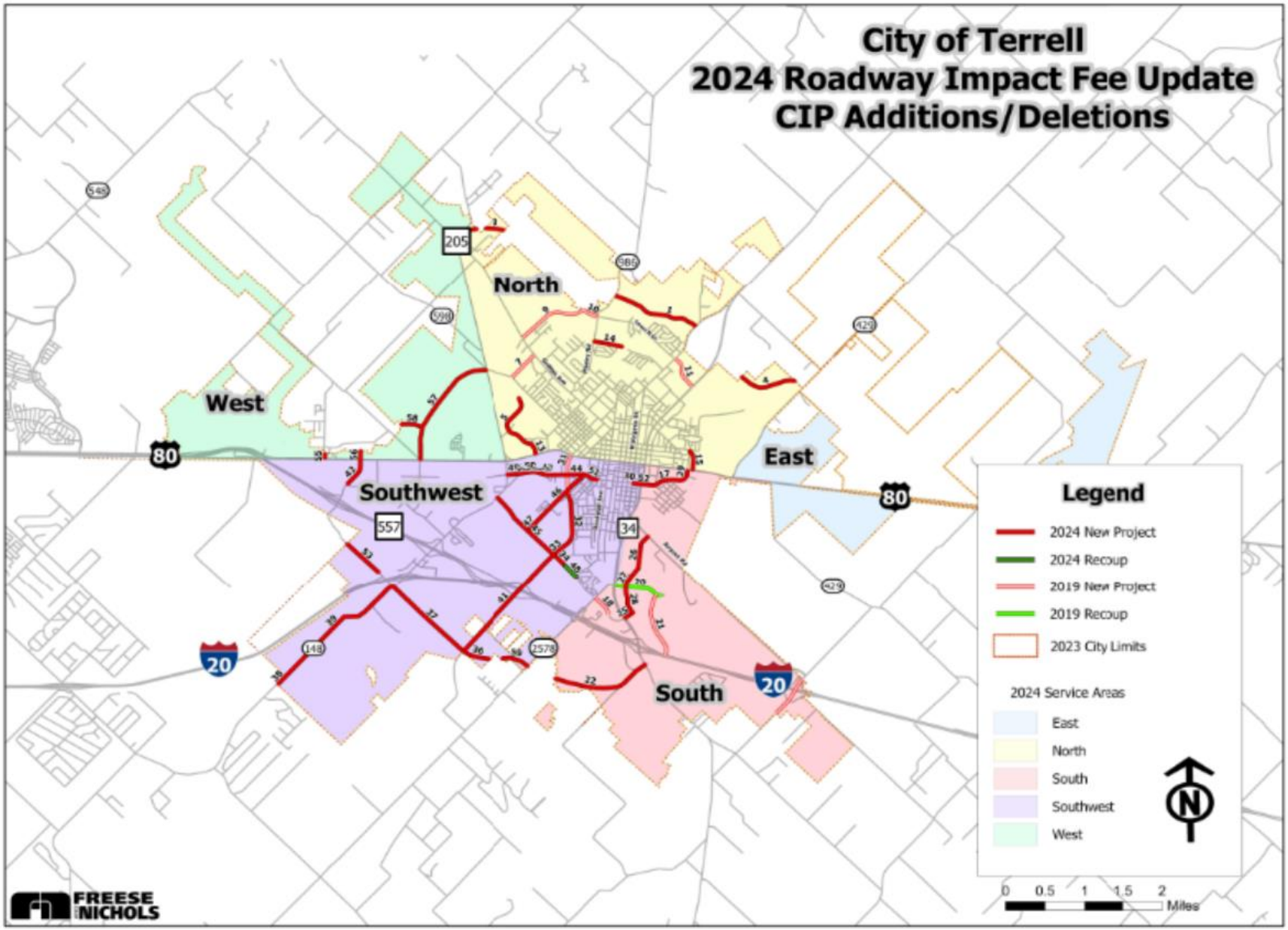


FIGURE 3-5
CITY OF TERRELL
WASTEWATER SYSTEM
IMPACT FEE ELIGIBLE
CAPITAL IMPROVEMENTS PLAN
LEGEND
Proposed Package Wastewater Treatment Plant
Proposed Impact Fee Eligible Improvement
Lift Station
Wastewater Treatment Plant
Wastewater Line
Force Main
Existing Impact Fee Eligible Improvement
Wastewater Line
Force Main
Existing System
Manhole
Lift Station
Wastewater Treatment Plant
6" and Smaller Wastewater Line
8" and Larger Wastewater Line
Force Main
Road
Railroad
Stream
Lake
Parcel
City Limit
ETJ
FREESE NICHOLS
Note: Projects 7-26 sized assuming minimum slope
Proposed LIft Station
Metrocrest Lift Station
Proposed Wastewater Treatment Plant
Market Center Lift Station
Proposed Market Center Lift Station
Rose Hill Lift Station
Industrial Blvd Lift Station
King's Creek WWTP
SCALE IN FEET

EXHIBIT 6


City of Terrell
2024 Roadway Impact Fee Update
CIP Additions/Deletions
North
West
East
Southwest
South
80
20
205
557
34
148
2578
Legend
2024 New Project
2024 Recoup
2019 New Project
2019 Recoup
2023 City Limits
2024 Service Areas
East
North
South
Southwest
West
0 0.5 1 1.5 2
Miles
FREESE NICHOLS

SCHEDULE 1

Page 1 of 4

Water Impact Fee Summary

Total Eligible Capital Improvement Costs	$89,103,290
Financing Costs	$30,644,081
Total Eligible Costs	**$119,747,371**
50% Credit	**$59,873,685**
Ten Year Growth in SUEs	**10,774**
Base Maximum Calculated Water Impact Fee Per Service Unit With 50% Credit	**$5,557**

Sewer Impact Fee Summary

Total Eligible Capital Improvement Costs	$78,407,323
Financing Costs	$26,965,563
Total Eligible Costs	**$105,372,886**
50% Credit	**$52,686,443**
Ten Year Growth in SUEs	**10,774**
Base Maximum Calculated Sanitary Sewer Impact Fee Per Service Unit With 50% Credit	**$4,890**

SCHEDULE 1 (cont)

Roadway Impact Fee Summary

West Service Area

Proposed Capital Improvement Costs	$25,143,700
Financing Costs	$8,647,330
CIP Study and Updates	$12,304
Total Costs	$33,803,334
Total Costs (with 50% credit)	**$16,901,667**
Cost Attributable to New Development	**$14,250,841**
Total 10-year Projected Growth in Service Units (veh-mi)	**10,272**
Base Maximum Calculated Roadway Impact Fee Per Service Unit with 50% Credit	**$1,387**

East Service Area

Proposed Capital Improvement Costs	$0
Financing Costs	$0
CIP Study and Updates	$0
Total Costs	$0
Total Eligible Costs (with 50% credit)	**$0**
Cost Attributable to New Development	**$0**
Total 10-year Projected Growth in Service Units (veh-mi)	**0**
Base Maximum Calculated Roadway Impact Fee Per Service Unit with 50% Credit	**$0**

SCHEDULE 1 (cont)

North Service Area

Proposed Capital Improvement Costs	$58,928,100
Financing Costs	$20,266,339
CIP Study and Updates	$23,041
Total Costs	$79,217,480
Total Costs (with 50% credit)	**$39,608,740**
Cost Attributable to New Development	**$27,719,483**
Total 10-year Projected Growth in Service Units (veh-mi)	**6,267**
Base Maximum Calculated Roadway Impact Fee Per Service Unit with 50% Credit	**$4,423**

South Service Area

Proposed Capital Improvement Costs	$49,717,167
Financing Costs	$16,215,141
CIP Study and Updates	$25,995
Total Costs	$65,632,308
Total Costs (with 50% credit)	**$32,829,152**
Cost Attributable to New Development	**$6,550,883**
Total 10-year Projected Growth in Service Units (veh-mi)	**2,016**
Base Maximum Calculated Roadway Impact Fee Per Service Unit with 50% Credit	**$3,249**

SCHEDULE 1 (cont)

Southwest Service Area

Proposed Capital Improvement Costs	$132,074,000
Financing Costs	$45,514,306
CIP Study and Updates	$38,659
Total Costs	$177,626,966
Total Costs (with 50% credit)	**$88,813,483**
Cost Attributable to New Development	**$83,842,292**
Total 10-year Projected Growth in Service Units (veh-mi)	**18,079**
Base Maximum Calculated Roadway Impact Fee Per Service Unit with 50% Credit	**$4,637**

Schedule 2
Impact Fees
City of Terrell
August 27, 2024

Per Service Unit

Effective Date	August 31, 2024 – August 30, 2028
Water Service Unit	$5,557
Wastewater Service Unit	$4,890
Roadway Service Unit	$1,387

1. Infill Lots – Only pay Wastewater Impact Fee
2. The roadway impact fee is applicable for development within the North, South, Southwest and West Service Areas; The roadway impact fee is $0 for development within the East Service Area.