

TECHNICAL REPORT

Water, Wastewater, and Roadway Impact Fee Report



City of Waco

November 2020

FREESE AND NICHOLS, INC.

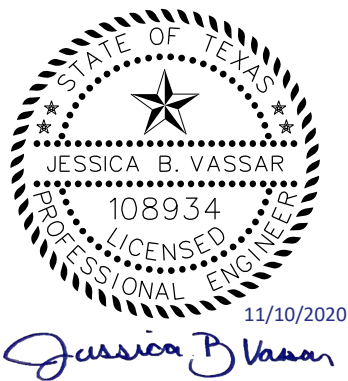
10431 Morado Circle Suite 300

Austin, Texas 78759

(512)-617-3100

Water, Wastewater, and Roadway Impact Fee Report

Prepared for:
City of Waco



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



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

Prepared by:
FREESE AND NICHOLS, INC.
10431 Morado Circle Suite 300
Austin, Texas 78759
(512)-617-3100

FNI Project Number: WAC19122

TABLE OF CONTENTS

Executive Summary	ES-1
1.0 Background	1-1
2.0 Methodology	2-1
3.0 Land Use Assumptions	3-1
3.1 Data Collection Zones and Service Area Maps	3-1
3.1.1 Traffic Analysis Zones (TAZ)	3-1
3.1.2 Service Areas	3-1
3.1.3 Data Format	3-4
3.1.4 Land Use Methodology	3-4
3.2 Base Year Data	3-7
3.2.1 Historical Growth	3-7
3.2.2 Estimated City Limit Population Projections	3-8
3.2.3 Estimated City Limit Population Projections	3-9
3.2.4 Population and Employment Projections in the ETJ	3-10
3.2.5 Building Permit Analysis	3-11
3.2.6 2020 Population and Employment	3-11
3.3 Ten-Year and Twenty-Year Growth Assumptions	3-13
4.0 Water and Wastewater Capital Improvements Plan	4-1
4.1 Existing Water and Wastewater Systems	4-1
4.2 Water Demand and Wastewater Load Projections	4-4
4.2.1 Water Demands	4-4
4.2.2 Wastewater Flows	4-5
4.3 Water and Wastewater System Improvements	4-6
5.0 Roadway Impact Capital Improvements Plan	5-1
5.1 Basis for Roadway Impact Fees	5-1
5.2 Roadway Service Units	5-2
5.2.1 Service Unit Supply	5-2
5.2.2 Service Unit Demand	5-3
5.3 Existing Conditions Analysis	5-3
5.3.1 Existing Volumes	5-4
5.3.2 Vehicle-Miles of Existing Excess Capacity and Deficiencies	5-4
5.4 Growth Projections	5-5

5.4.1	Projected Vehicle-Miles of New Demand	5-7
5.5	Roadway Capital Improvements Plan.....	5-7
5.5.1	Eligible Projects	5-7
5.5.2	Eligible Costs.....	5-8
5.5.3	Impact Fee CIP.....	5-10
5.5.4	Impact Fee CIP Cost.....	5-14
6.0	Impact Fee Analysis.....	6-1
6.1	Water and Wastewater Impact Fee Analysis	6-1
6.1.1	Service Units.....	6-1
6.1.2	Maximum Impact Fee Calculations	6-2
6.2	Roadway Impact Fee Analysis	6-5
6.2.1	Service Units for New Development.....	6-5
6.2.2	Trip Generation	6-5
6.2.3	Service Units of Growth	6-12
6.2.4	Maximum Impact Fee Calculations	6-12

LIST OF TABLES

Table ES-1: Water Impact Fee CIP Projects.....	ES-2
Table ES-2: Wastewater Impact Fee CIP Projects.....	ES-3
Table ES-3: Roadway Impact Fee CIP Projects.....	ES-4
Table ES-4: Maximum Water Impact Fee Calculation	ES-6
Table ES-5: Maximum Wastewater Impact Fee Calculation.....	ES-6
Table ES-6: Maximum Roadway Impact Fee Calculations	ES-6
Table 1-1: Abbreviations.....	1-2
Table 3-1: Population Trend by Decade (City Limits Only)	3-8
Table 3-2: Population Trend in Recent Years (City Limits Only)	3-8
Table 3-3: Population Projection Scenario (City Limits Only)	3-9
Table 3-4: Employment Projection Scenario (City Limits Only).....	3-10
Table 3-5: Summary of Base Year (2020) Population	3-13
Table 3-6: Summary of Base Year (2020) Roadway Population	3-13
Table 3-7: Population and Employment Projections for Roadway Service Area.....	3-14
Table 3-8: Roadway and Water/Wastewater Service Area Growth Projections.....	3-15
Table 3-9: Projected Change in Population and Employment.....	3-15
Table 4-1: Population and Employment by Water Pressure Plane	4-4
Table 4-2: Projected Water Demands	4-5
Table 4-3: Population and Employment by Wastewater Treatment Plant Basin.....	4-6
Table 4-4: Projected Wastewater Flows.....	4-6
Table 4-5: Water Impact Fee CIP Projects	4-8
Table 4-6: Wastewater Impact Fee CIP Projects.....	4-9
Table 5-1: Roadway Facility Vehicle-Mile Lane Capacities	5-4
Table 5-2: Existing Roadway Analysis by Service Area	5-5
Table 5-3: Projected 10-Year Growth Summary Population	5-6
Table 5-4: Projected 10-Year Growth Summary Employment	5-6
Table 5-5: 10-Year Projected Service Units of Demand.....	5-7
Table 5-6: Roadway Impact Fee CIP Listing	5-12
Table 5-7: Capacity and Net Capacity to be Provided by the Proposed CIP.....	5-13
Table 5-8: Projected Demand and Net Capacity Provided by the Proposed CIP.....	5-14
Table 5-9: Roadway Impact Fee Project Cost Summary	5-16
Table 6-1: Service Unit Equivalents	6-2
Table 6-2: Growth in Service Units	6-2
Table 6-3: Maximum Water Impact Fee Calculation	6-4
Table 6-4: Maximum Wastewater Impact Fee Calculation	6-5
Table 6-5: Trip Reduction Estimates (PM Peak Hour)	6-7
Table 6-6: Trip Lengths and Adjustments	6-9
Table 6-7: Land Use Vehicle-Mile Equivalency	6-11
Table 6-8: Maximum Roadway Impact Fee Calculation	6-14

LIST OF FIGURES

Figure 3-1: Water Service Area	3-2
Figure 3-2: Wastewater Service Area	3-2
Figure 3-3: Roadway Service Area	3-3
Figure 3-4: Future Land Use Map	3-5
Figure 3-5: Land Use Assumption Scenarios.....	3-6
Figure 3-6: TAZ Developmental Potential.....	3-7
Figure 3-7: Traffic Analysis Zone Boundaries.....	3-12
Figure 3-8: 2020-2030 Population Change	3-16
Figure 3-9: 2020-2040 Population Change	3-16
Figure 3-10: 2020-2040 Employment Change	3-17
Figure 3-11: 2020-2040 Employment Change	3-17
Figure 4-1: Existing Water Distribution System	4-2
Figure 4-2: Existing Wastewater Collection System	4-3
Figure 4-3: Water Impact Fee Capital Improvements Plan	4-10
Figure 4-4: Wastewater Impact Fee Capital Improvements Plan.....	4-11
Figure 5-1: Roadway Impact Fee Capital Improvements Plan.....	5-1

LIST OF APPENDICES

Appendix A: Population and Employment by TAZ
Appendix B: Water and Wastewater Capital Improvements Plans
Appendix C: Roadway Impact Fee Land Use Definitions
Appendix D: Roadway Existing Conditions Analysis
Appendix E: Roadway Projected 10-year Demands
Appendix F: Roadway Capital Improvements Plan
Appendix G: Roadway Capital Improvement Plan Cost Summary
Appendix H: Roadway Capital Improvement Plan Cost Estimates
Appendix I: Impact Fee Financial Calculations

EXECUTIVE SUMMARY

In January 2019, the City of Waco, Texas, authorized Freese and Nichols, Inc. (FNI) to perform an impact fee analysis on the City's water, wastewater, and roadway systems. The purpose of this report is to summarize the methodology used in the development and calculation of impact fees for the City of Waco. 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.

Land Use Assumptions

Population and land use assumptions are important elements in the analysis of water, wastewater, and roadway systems. To assist in the determination of need and timing of capital improvements to serve future development, a reasonable estimation of future growth is required. Growth and future development projections were formulated based on assumptions pertaining to the type, location, quantity, and timing of various future land uses within the community. These land use assumptions, which include population projections, are the basis for the preparation of impact fee capital improvements plans for water, wastewater, and roadway facilities.

Capital Improvement Plan

Water, wastewater, and roadway impact fee capital improvements plans (CIP) were developed for the City of Waco based on the land use assumptions, input from City staff, and projects from previous studies. The recommended improvements will provide the required capacity to meet projected water demands, wastewater flows, and roadway demand through year 2030. The projects identified are consistent with the Chapter 395 definition of impact fee eligible projects. The water, wastewater, and roadway CIP projects are summarized in **Tables ES-1, ES-2, and ES-3**, respectively.

Table ES-1: Water Impact Fee CIP Projects

Proj. No.	Description of Project
W-1	Riverside to Gholson 30-inch Water Line
W-2	Highway 84 Water Line Improvements
W-3	Spring Valley Water Lines
W-4	Owen Lane 2.0 MG Elevated Storage Tank
W-5	Hillcrest Pump Station Expansion
W-6	16-inch Ritchie Road Water Line
W-7	China Spring Water Line
W-8	McGregor-Waco-Woodway Connection 16" Water Line
W-9	Water Transmission Improvements
W-10	Peach Street 16-inch Water Line
W-11	Elm Street 12-inch Water Line
W-12	Impact Fee Study
W-13	Riverside Water Treatment Plant Expansion
W-14	Riverside Pump Station Expansion
W-15	Downtown Mary Avenue to 5th Street
W-16	Pressure Plane 6 Water Storage
W-17	Chapel Road 24-inch Water Line
W-18	Old McGregor 3.0 MG Ground Storage Tank
W-19	Airport 1.0 MG Ground Storage Tank
W-20	20/24-inch Water Line in Pressure Plane 1
W-21	72-inch Parallel Raw Water Line
W-22	16/24-inch Water Line in Pressure Plane 3
W-23	Low Head Pump Station at Mt. Carmel WTP

Table ES-2: Wastewater Impact Fee CIP Projects

Proj. No.	Description of Project
WW-1	FM 1637 12/15/21/24-inch Wastewater Line
WW-2	China Spring 24-inch Wastewater Line
WW-3	Transfer Lift Station, Force Main, and 66-inch Gravity Line
WW-4	Impact Fee Study
WW-5	Bull Hide Wastewater Treatment Plant Expansion to 3.0 MGD
WW-6	Brazos Basin: Gurley Ave
WW-7	54-inch Wastewater Line at Lake Brazos Park
WW-8	Belmead Interceptor / Lacy Lakeview Interceptor
WW-9	TSTC Lift Station Expansion and Force Main
WW-10	Cloice Creek and Church Road Lift Stations, Force Mains, and 21-inch Gravity Line
WW-11	Highway 84 30-inch Wastewater Line
WW-12	Highway 84 24-inch Wastewater Line
WW-13	China Spring Wastewater Treatment Plant
WW-14	Highway 84 Wastewater Treatment Plant
WW-15	New Quest Wastewater Line
WW-16	24-inch Wastewater Line
WW-17	Bridge 18-inch Wastewater Line

Table ES-3: Roadway Impact Fee CIP Projects

Project Number	Roadway	From	To
Service Area 1			
1	Gholson Rd	Herring Ave	960' S of Herring Ave
2	Gholson Rd	960' S of Herring Ave	Waco Dr
Service Area 2			
3	Lake Shore Dr	Mt Carmel Dr	Koehne Park Dr
4	Valley Mills Dr	Koehne Park Dr	Hillandale Rd
5	Valley Mills Dr	Hillandale Rd	Ridgewood Dr
6	Valley Mills Dr	Ridgewood Dr	Bishop Dr
Service Area 3			
7	Bagby Ave	New Rd	Monte Vista St
8	Bagby Ave	Monte Vista St	Richter Ave
9	Bagby Ave	Richter Ave	Valley Mills Dr
10	S New Rd	Bagby Ave	I-35
11	Garden Dr	Robinson Rd	16th St
12	18th St	La Salle	Gurley Ln
13	16 th	Gurley Ln	Garden Dr
14	12 th	Garden Dr	TX-340
15	University Parks Dr	La Salle Ave	Garden Dr
Service Area 4			
16	Martin Luther King Jr Blvd	BUS 77	SH 484
Service Area 6			
1	Gholson Rd	960' S of Herring Ave	Herring Ave
17	Gholson Rd	Herring Ave	Lakeshore Dr
Service Area 7			
18	North River Crossing	End of bridge	580' NE of Curry Ln
19	North River Crossing	580' NE of Curry Ln	Yankie Rd
20	Flat Rock Rd	Yankie Rd	Tree Lake Rd
21	Flat Rock Rd	Tree Lake Rd	China Spring Rd
22	Yankie Rd	North River Crossing	Flat Rock Rd
23	Tree Lake Dr	China Spring Rd	Flat Rock Rd
24	Wortham Bend	North City Limit	China Spring Rd
Service Area 9			
25	Mars Dr	Hewitt Dr	Texas Central Pkwy
26	Beverly Dr	W Loop 340	4128' NE of Loop 340
27	Beverly Dr	4128' NE of Loop 340	New Road
28	Hewitt Dr	Woodway Dr	Old McGregor Dr
29	Hewitt Dr	Old McGregor Dr	Imperial Dr
30	Hewitt Dr	Imperial Dr	Mars Dr

Project Number	Roadway	From	To
31	Texas Central Pkwy	Railroad	Imperial Dr
10	S New Rd	Bagby Ave	I-35
32	Bagby Ave.	New Road	TX 340
Service Area 10			
33	Warren Rd	City Limit	Ritchie Rd
34	Warren Rd	Ritchie Rd	3700' east of Ritchie Rd
35	Farmiller Rd	1300' south of Chapel Rd	2100' north of Warren Rd
29	Hewitt Dr	Old McGregor Dr	Imperial Dr
30	Hewitt Dr	Imperial Dr	Mars Dr
36	Chapel Rd	Meadow Mountain Dr	Ritchie Rd
37	Ritchie Rd	Panther Way	Warren St
Service Area 11			
38	Val Verde Rd	Fossil Rim Rd	US 84
39	Harris Creek Rd	US 84	Walking Horse Ln
40	Speegleville Rd	Pecan Creek	Oak Rd
41	Speegleville Rd	Oak Rd	US 84
42	Old Lorena Rd	US 84 EBFR	South Bosque River

Impact Fee Analysis

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 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. **Tables ES-4, ES-5, and ES-6** below display a summary of the maximum allowable impact fee calculations for water, wastewater, and roadway, respectively.

Table ES-4: Maximum Water Impact Fee Calculation

Water Impact Fee	
Total Eligible Capital Improvement Costs	\$34,046,711
Recoverable Cost for Impact Fee Planning Period	\$17,023,355
Financing Costs	\$6,531,589
Interest Earnings	(\$541,910)
Total Eligible Impact Fee Costs	\$23,013,034
Growth in Service Units	12,753
Maximum Impact Fee per Service Unit	\$1,804

Table ES-5: Maximum Wastewater Impact Fee Calculation

Wastewater Impact Fee	
Total Eligible Capital Improvement Costs	\$63,734,419
Recoverable Cost for Impact Fee Planning Period	\$31,867,209
Financing Costs	\$15,091,715
Interest Earnings	(\$1,371,302)
Total Eligible Impact Fee Costs	\$45,587,622
Growth in Service Units	12,753
Maximum Impact Fee per Service Unit	\$3,574

Table ES-6: Maximum Roadway Impact Fee Calculations

Service Area:	1	2	3	4	5	6	7	8	9	10	11
Total Project Costs	\$204,914	\$4,355,135	\$16,064,507	\$518,981	\$ -	\$615,707	\$14,769,596	\$ -	\$8,783,276	\$7,002,158	\$10,515,854
Recoverable Cost for Impact Fee Planning Period	\$66,333	\$2,102,651	\$3,604,402	\$109,788	\$ -	\$306,773	\$2,393,745	\$ -	\$4,391,638	\$2,263,085	\$1,588,886
Financing Costs	\$39,657	\$1,265,970	\$2,167,182	\$65,135	\$ -	\$183,836	\$1,435,329	\$ -	\$2,645,980	\$1,362,050	\$953,433
Interest Earnings	\$(3,934)	\$(125,579)	\$(214,975)	\$(6,461)	\$ -	\$(18,236)	\$(142,378)	\$ -	\$(262,470)	\$(135,109)	\$(94,576)
Total Eligible Impact Fee Costs	\$102,056	\$3,243,042	\$5,556,609	\$168,462	\$ -	\$472,373	\$3,686,696	\$ -	\$6,775,149	\$3,490,026	\$2,447,742
Growth in Service Units	15,947	4,650	4,293	650	1,650	2,002	3,879	-	10,967	2,636	2,094
Maximum Assessable Fee	\$6	\$697	\$1,294	\$259	\$ -	\$236	\$950	\$ -	\$618	\$1,324	\$1,169

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 January 2019, the City of Waco authorized Freese and Nichols, Inc. (FNI) to perform an impact fee analysis on the City’s water, wastewater, and roadway systems. The purpose of this report is to present the methodology used in the development and calculation of water, wastewater, and roadway impact fees for the City of Waco. The methodology used herein satisfies the requirements

of the Texas Local Government Code Chapter 395 for the establishment of water, wastewater, and roadway impact fees.

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

Table 1-1: Abbreviations

Abbreviation	Full Nomenclature
AWWA	American Water Works Association
CAGR	compound annual growth rate
CIP	Capital Improvements Plan
ETJ	Extra-territorial Jurisdiction
FNI	Freese and Nichols, Inc.
gpm	gallons per minute
IFCIP	Impact Fee Capital Improvements Plan
I/I	Infiltration and Inflow
ITE	Institute of Transportation Engineers
LOS	Level of Service
LUA	Land Use Assumptions
MGD	Million Gallons per Day
MPO	Metropolitan Planning Organization
SA	Special Arterial
SC	Special Collector
Sf	square foot
TAZ	Traffic Analysis Zone
TWLTL	two-way left turn lane
veh-mi	Vehicle-miles
VMT	Vehicle-miles of travel

2.0 METHODOLOGY

Based upon the growth assumptions and the capital improvements needed to support growth, it is possible to develop an impact fee structure which fairly allocates improvement costs to growth areas in relationship to their impact upon the entire infrastructure system. The data in this report has been formulated using reasonable and generally accepted planning principles for the preparation of impact fee systems in Texas and meets the requirements of the Texas Local Government Code Section 395 for the establishment of impact fees.

For the formulation of the land use assumptions and the capital improvements plans, a series of work tasks were undertaken and are described below.

- A kick-off meeting was held to describe the general methodological approach in the study. Service areas were defined for roadway, water, and wastewater impact fee systems.
- Data from the metropolitan planning organization (MPO) was used as an initial database for this study. Population and employment data for 2010, 2015, and 2040 (MPO projections) by TAZ were collected.
- A compound annual growth rate (CAGR) of 1.2% was recommended for population and employment in the City Limits based on historical growth trends.
- The compound annual growth rates in the ETJ are higher than the City Limits due to the high amount of vacant land within the ETJ. This development potential in the ETJ area results in a 4.9% - 5% CAGR for 2030 and 2040 population projection. In terms of employment, the CAGR for the 2030 projection is 4.06% and the CAGR for the 2040 projection is 5.74%.
- Vehicle-miles of travel (VMT) in the PM peak hour was identified as the service unit of measure for analyses and impact fee calculations.
- A roadway inventory was conducted to document lane geometrics, roadway functional classification, and system capacity. Traffic volume count data were collected in May 2019 to determine roadway utilization and if any capacity deficiencies exist within each impact fee service area. Traffic volume counts were conducted at 30 locations throughout the city.
- Base and 10-year demographics were prepared for the respective service areas for water, wastewater, and roadway.

- Water demands and wastewater flow projections were developed based on the population projections.
- Projected 10-year growth was calculated for service areas based on land use assumptions (projections of population and employment growth) and translated into residential, office, commercial and industrial VMT using service unit equivalencies. Trip rate data was obtained from Trip Generation, Tenth Edition by the Institute of Transportation Engineers, and trip length statistics for Waco were obtained from the Waco MPO travel demand model and the National Household Workplace Survey.
- Water, wastewater, and roadway capital improvements plans were developed.
- The maximum allowable water, wastewater, and roadway impact fees were calculated.

3.0 LAND USE ASSUMPTIONS

3.1 Data Collection Zones and Service Area Maps

3.1.1 Traffic Analysis Zones (TAZ)

Data collection zones used for land use assumptions are based upon small geographic areas known as traffic analysis zones (TAZs). These zones, established by Waco Metropolitan Planning Organization (MPO), serve as the basis for socio-demographic data used in the regional travel forecast model. The TAZs were originally formulated on the basis of homogeneity and traffic generation potential using major arterials, creeks, railroad lines and other physical boundaries for delineation. A total of 322 TAZs have been analyzed for this process.

3.1.2 Service Areas

Chapter 395 requires that service areas be defined for impact fees to ensure that facility improvements are in close proximity to areas generating needs. The water and wastewater service areas were developed using the Extraterritorial Jurisdiction (ETJ). **Figure 3-1** illustrates the water service area for the Waco Impact Fee study, and **Figure 3-2** shows the wastewater service area.

Legislative requirements stipulate that roadway service areas be limited to a 6-mile maximum and must be located within the current city limits. Transportation service areas are different from water and wastewater systems, which can include the city limits and its extra-territorial jurisdiction (ETJ) or other defined service area. This is primarily because roadway systems are "open" to both local and regional (non-city) use as opposed to a defined level of utilization from residents within a water and wastewater system. 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 areas for roadways are illustrated on **Figure 3-3**.

Figure 3-1: Water Service Area

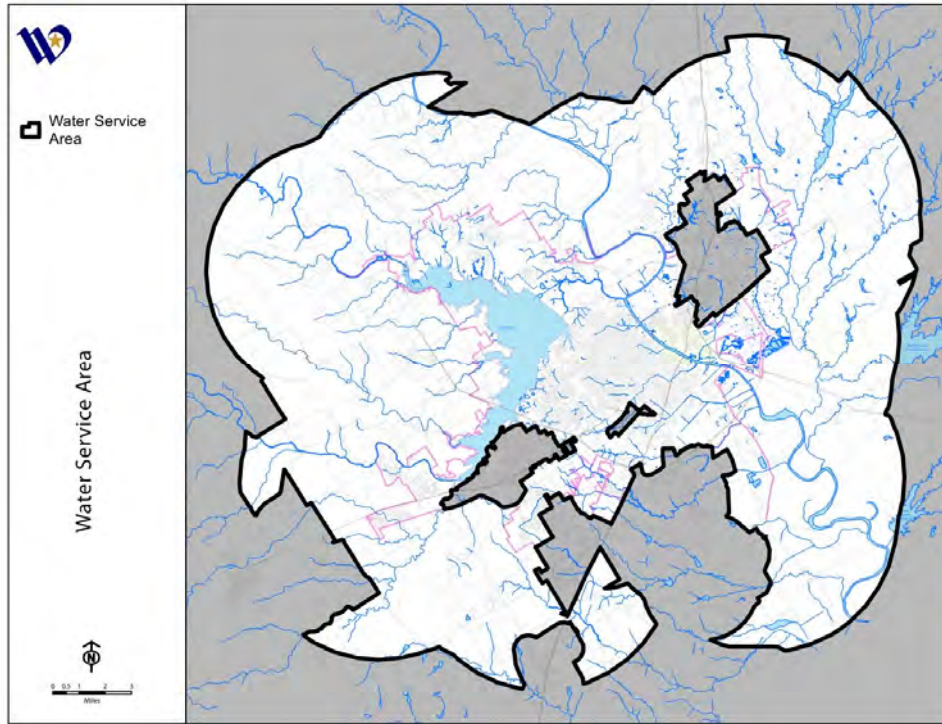


Figure 3-2: Wastewater Service Area

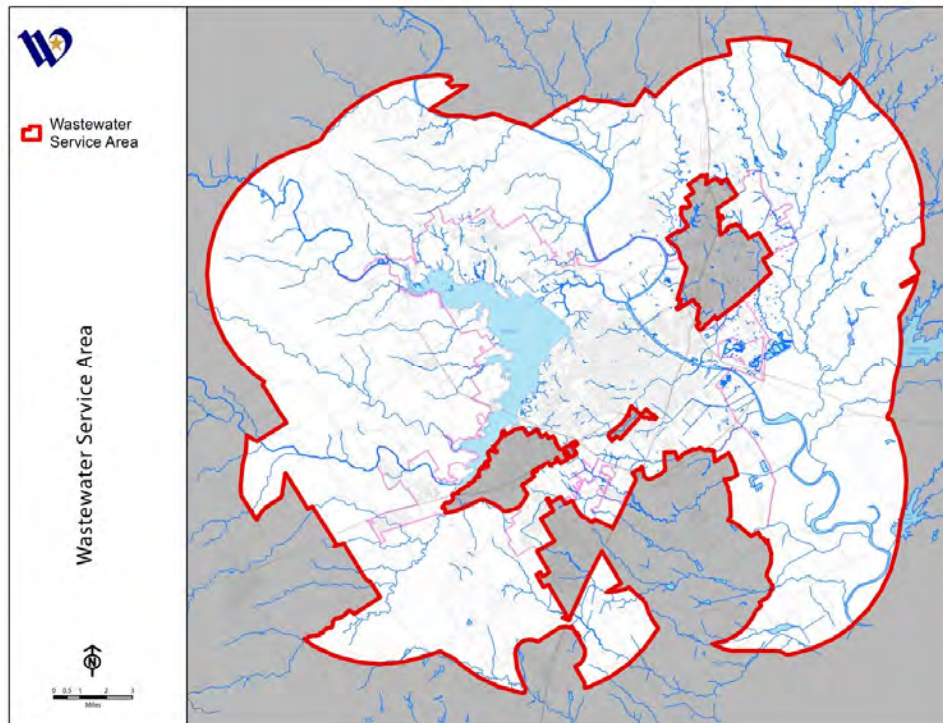
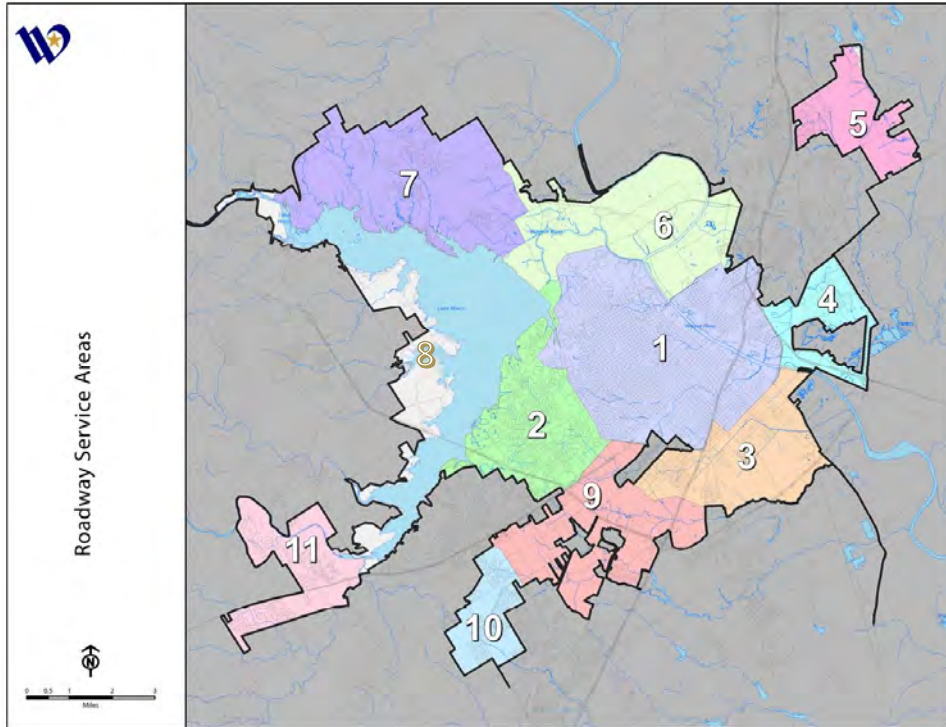


Figure 3-3: Roadway Service Area



3.1.3 Data Format

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

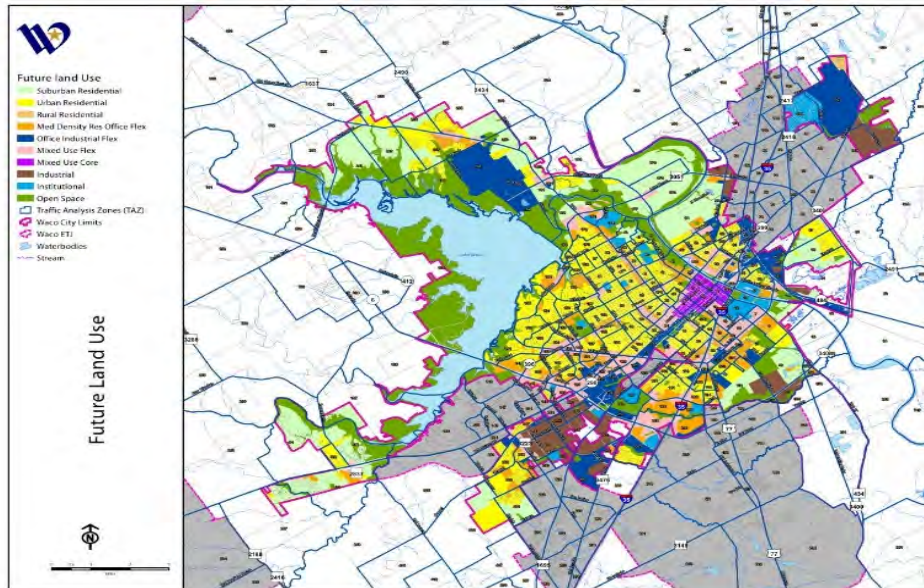
Service Area	Correlates to the City Limits and ETJ.
Traffic Analysis Zone	Geographic areas established by the MPO Traffic Model that are used for data collection purposes and termed TAZs within this report.
Population (2020)	Existing population for the base year (2020).
Population (2030, 2040)	Projected population by service zone for the year 2030 and 2040 (10-year and 20-year growth projections).
Employment (2020-2040)	Current employment population and future employment projections based on historical employment to population ratio.

3.1.4 Land Use Methodology

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

- The character, type, density, and quantity of existing development,
- Anticipated future land use derived from the City's current land use trend, Waco 2040 (the City's Comprehensive Plan presented on **Figure 3-4**)
- Availability of land for future expansion,
- Current and historical growth trends of population and development within the City,
- Location and configuration of vacant land, and
- Known or anticipated development projects as defined by City Staff.

Figure 3-4: Future Land Use Map



A series of work tasks were undertaken in the development of this report and are described below:

Step 1: Scope of the Study and Data Collection

A kick-off meeting was held to discuss the general methodological approach in the study. Data from MPO was used as an initial database for this study. Population and employment data for 2010, 2015, and 2040 (MPO projections) by TAZ were collected. The datasets were joined and examined thoroughly with spatial data using ArcGIS.

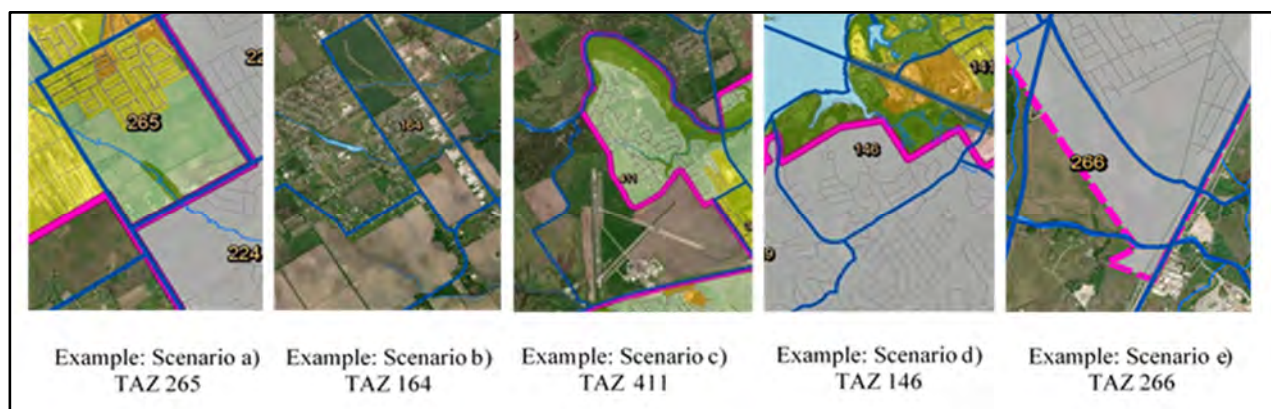
Step 2: Estimation of 2020 Population and Employment

Although TAZs were used as a basis for the data analysis purpose, it is important to note that TAZ boundaries do not follow the City Limits or ETJ in various locations. In order to calculate data for the study area, the base population and employment data for each TAZ were reviewed and adjustments were made where necessary. There were a few different scenarios to consider for the adjustments (also shown on

Figure 3-5):

- a) A TAZ is geographically located completely within the City Limits
- b) A TAZ is geographically located completely within the ETJ
- c) A TAZ is split between City Limits and ETJ
- d) A TAZ is split between the City Limits and another city
- e) A TAZ is split between the ETJ and another city

Figure 3-5: Land Use Assumption Scenarios



With scenario a) and b), the 2015 population and employment estimates were slightly adjusted to reflect 2020 base year estimates, as received from the MPO. However, with scenarios c), d), and e), detailed spatial and geographical analysis of that TAZ were conducted to adjust and estimate 2020 population and employment numbers proportionately. The 2020 total population and employment numbers were calculated by aggregating the numbers of all applicable TAZs.

Step 3: Projection of 2030 and 2040 Population and Employment

Each TAZ was evaluated from the perspective of its current development condition and anticipated future development trends. In general, past growth rates and the anticipated development trends were analyzed. Aerial images were used extensively to gain proper understanding of the future development potential for each TAZ. For example, for a TAZ that is built-out and no redevelopment projects are anticipated for that TAZ, the 2020 numbers remained the same or similar for 2030 and 2040. On the other hand, for a TAZ that was only partially developed or completely vacant, the City's anticipated future land use pattern was analyzed for that area to determine what type of development that TAZ was likely to host by 2030 and 2040. **Figure 3-6** illustrates these examples. Population and employment for 2030 and 2040 were also projected based on that analysis. Where it was anticipated that redevelopment would occur within portions of the study area, adjustments were also made. The 2030 and 2040 total population and employment numbers were calculated by aggregating the numbers for all applicable TAZs.

Figure 3-6: TAZ Developmental Potential



3.2 Base Year Data

This section documents the City’s historical growth trends and data used to derive the 2020 base year population estimate for the City of Waco. This “benchmark” information provides a starting basis of data for the 10-year and 20-year growth assumptions that will be presented within the following section.

3.2.1 Historical Growth

In order to attain an appropriate understanding of the City’s growth pattern, recent and historical population trends were analyzed. Waco has experienced significant population growth since 1970, there were years or decades with significant growth, whereas some years or decades grew in a more moderate manner. The Compound Annual Growth Rate (CAGR) between 1960 and 2010 was 0.49% and the CAGR between 2010 and 2020 was 1.11%, indicating a trend that Waco’s CAGR may increase in the approaching years.

Table 3-1: Population Trend by Decade (City Limits Only)

Year	Population	Population Change	Percent Change	CAGR
1960	97,808	-	-	0.49%
1970	95,326	-2,482	-2.54%	
1980	101,261	5,935	6.23%	
1990	103,590	2,329	2.30%	
2000	113,726	10,136	9.78%	
2010	124,805	11,079	9.74%	

Table 3-2: Population Trend in Recent Years (City Limits Only)

Year	Population	Population Change	Percent Change	CAGR
2010	122,212	-	-	1.11%
2011	123,584	1,372	1.12%	
2012	124,843	1,259	1.02%	
2013	126,406	1,563	1.25%	
2014	127,796	1,390	1.10%	
2015	129,193	1,397	1.09%	
2016	130,659	1,466	1.13%	
2020	131,996	1,337	1.02%	

3.2.2 Estimated City Limit Population Projections

Based on the historical growth trends of Waco, a series of projection alternatives using a 2020 base year population of **140,951** were developed. In order to develop an estimated population projection for 2030 and 2040, multiple compound annual growth rate (CAGR) scenarios in **Table 3-3** were calculated. The recommended CAGR for population projection in this land use assumption process is 1.2%.

Table 3-3: Population Projection Scenario (City Limits Only)

CAGR (%)	1.00%	1.20%	1.25%	1.50%
Year	Population	Population	Population	Population
2020	140,951	140,951	140,951	140,951
2021	142,361	142,642	142,713	143,065
2022	143,784	144,354	144,497	145,211
2023	145,222	146,086	146,303	147,389
2024	146,674	147,839	148,132	149,600
2025	148,141	149,613	149,983	151,844
2026	149,622	151,409	151,858	154,122
2027	151,119	153,226	153,756	156,434
2028	152,630	155,064	155,678	158,780
2029	154,156	156,925	157,624	161,162
2030	155,698	158,808	159,595	163,579
2031	157,255	160,714	161,590	166,033
2032	158,827	162,643	163,610	168,524
2033	160,415	164,594	165,655	171,051
2034	162,020	166,569	167,725	173,617
2035	163,640	168,568	169,822	176,221
2036	165,276	170,591	171,945	178,865
2037	166,929	172,638	174,094	181,548
2038	168,598	174,710	176,270	184,271
2039	170,284	176,806	178,474	187,035
2040	171,987	178,928	180,704	189,841

3.2.3 Estimated City Limit Population Projections

In terms of employment, Waco’s employment has historically been between 45% – 48% of its total population. Applying that ratio and other demographic information available for the MPO, a 2020 base year employment of **67,297** was incorporated in order to serve as a basis for the land use assumption process. In order to develop an estimated employment projection for 2030 and 2040, multiple compound annual growth rate (CAGR) scenarios in **Table 3-4** were calculated. The recommended CAGR for employment projection in this land use assumption process is approximately 1.2%.

Table 3-4: Employment Projection Scenario (City Limits Only)

CAGR (%)	1.00%	1.20%	1.25%	1.50%
Year	Employment	Employment	Employment	Employment
2020	67,297	67,297	67,297	67,297
2021	67,970	68,105	68,138	68,306
2022	68,650	68,922	68,990	69,331
2023	69,336	69,749	69,852	70,371
2024	70,030	70,586	70,725	71,427
2025	70,730	71,433	71,610	72,498
2026	71,437	72,290	72,505	73,585
2027	72,151	73,158	73,411	74,689
2028	72,873	74,035	74,329	75,810
2029	73,602	74,924	75,258	76,947
2030	74,338	75,823	76,198	78,101
2031	75,081	76,733	77,151	79,272
2032	75,832	77,654	78,115	80,462
2033	76,590	78,585	79,092	81,668
2034	77,356	79,529	80,080	82,893
2035	78,130	80,483	81,081	84,137
2036	78,911	81,449	82,095	85,399
2037	79,700	82,426	83,121	86,680
2038	80,497	83,415	84,160	87,980
2039	81,302	84,416	85,212	89,300
2040	82,115	85,429	86,277	90,639

3.2.4 Population and Employment Projections in the ETJ

In the ETJ, the 2020 base population is estimated to be 18,546 and the 2020 base employment is estimated to be 4,372, as indicated in the TAZ analysis. The CAGRs for the 2030 and 2040 projections for the ETJ area are higher than the CAGRs within the City Limits. The primary reason is the high amount of vacant land within the ETJ, as compared to the City Limits. Within the City Limits, many areas are already built-out with little development potential in the future, adding little significant new population and employment to those areas. On the other hand, the majority of the ETJ areas are either partially developed or completely vacant, making those areas ideal to add new population and employment. For example, it is anticipated that one development with 500 residential lots will be added in TAZ 239 alone in near future, which is in the ETJ area.

This development potential in the ETJ area results in a 4.9% - 5% CAGR for 2030 and 2040 population projection. In terms of employment, the CAGR for the 2030 projection is 4.06% and the CAGR for the 2040 projection is 5.74%.

3.2.5 Building Permit Analysis

Analyzing the building permits issued by the City in the recent years is helpful to obtain a perspective about future projection. For example, the City of Waco issued 536 residential building permits in 2018 and 514 residential building permits in 2017. However, the number of building permits issued were less than 400 in the year of 2015. The increase in building permits is also an indicator of upcoming growth and reflects emerging trends for projection purposes. In order to achieve a CAGR of 1.2%, more than 600 dwelling units per year will need to be permitted.

3.2.6 2020 Population and Employment

For the land use assumptions process, 2020 base population and employment data was calculated using data from the Waco MPO. This information provided a breakout of population and employment by TAZ. For assumption purposes, and to be consistent with the population totals, an interpolation of the population and employment numbers was calculated to derive the 2020 population and employment estimates by TAZ. Adjustments were also made based on discussions with City staff. It is important to note that the TAZs do not follow City limits or water and wastewater service areas in some locations, so adjustments were made based on the locations of existing land uses and upon the percentage of each TAZ located within City limits. **Figure 3-7** presents the TAZ boundaries. Since water, wastewater, and roadway have different service areas, three sets of assumptions were used, each tailored to its own service area. **Tables 3-5** and **3-6** summarize the population and employment for 2020.

Figure 3-7: Traffic Analysis Zone Boundaries

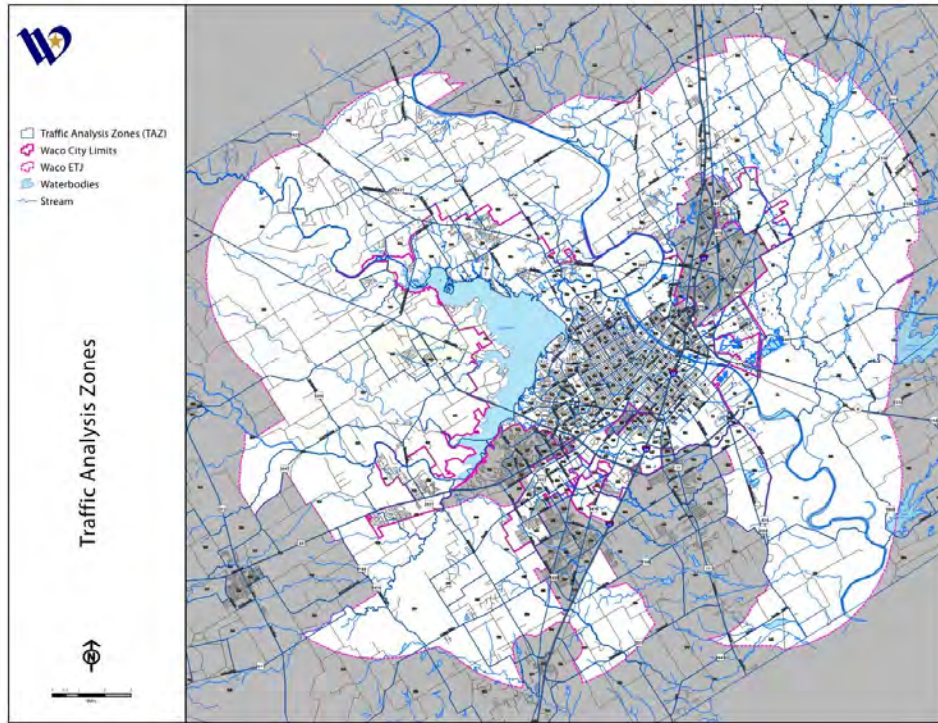


Table 3-5: Summary of Base Year (2020) Population

Service Area	Population
Water	159,497
Wastewater	159,497
Roadway	140,951

Table 3-6: Summary of Base Year (2020) Roadway Population

	Employment	Population
Service Area 1	23,939	76,420
Service Area 2	17,162	19,903
Service Area 3	3,003	14,789
Service Area 4	290	1,224
Service Area 5	1,315	1,304
Service Area 6	1,307	2,911
Service Area 7	956	6,886
Service Area 9	17,862	3,439
Service Area 10	1,261	8,710
Service Area 11	202	5,365
Total	67,297	140,951

3.3 Ten-Year and Twenty-Year Growth Assumptions

Projected growth has been characterized in two forms: population and employment acreage. A series of assumptions were made to arrive at reasonable growth rates for population and employment. For description of the projection methodology, please see **Section 3.1.4**. Generally, the following assumptions were made as a basis from which ten-year and twenty-year projections could be initiated.

- Future land uses will occur based on similar trends of the past and will conform with the anticipated future development and redevelopment opportunities as forecasted in the Comprehensive Plan and other special area plan, and

- The City will be able to finance the necessary improvements to accommodate continued growth.

The roadway population and employment are presented in **Table 3-7**. **Table 3-8** summarizes the population and employment projections for both roadway and water/wastewater from 2020-2040. **Table 3-9** summarizes the change in population and employment by planning year for both roadway and water/wastewater. A full list of population and employment by TAZ is included in **Appendix A**.

Table 3-7: Population and Employment Projections for Roadway Service Area

	Population			Employment		
	2020	2030	2040	2020	2030	2040
Service Area 1	76,420	82,294	87,665	23,939	26,843	30,062
Service Area 2	19,903	21,043	22,373	17,162	18,280	19,277
Service Area 3	14,789	17,063	18,789	3,003	3,460	4,164
Service Area 4	1,224	1,649	2,212	290	330	524
Service Area 5	1,304	1,348	1,455	1,315	1,723	3,438
Service Area 6	2,911	3,905	8,495	1,307	1,561	1,956
Service Area 7	6,886	9,043	10,485	956	1,329	1,756
Service Area 9	3,439	4,982	5,648	17,862	20,345	21,881
Service Area 10	8,710	10,549	12,079	1,261	1,379	1,475
Service Area 11	5,365	6,589	8,157	202	370	456
Total	140,951	158,465	177,358	67,297	75,620	84,989

Table 3-8: Roadway and Water/Wastewater Service Area Growth Projections

	Population			Employment		
	2020	2030	2040	2020	2030	2040
Water and Wastewater Service Area (City Limits and ETJ)	159,497	188,433	226,443	71,669	82,132	98,329
Roadway Service Area (City Limits minus TAZs 163, 166, 401)	140,951	158,465	177,358	67,297	75,620	84,989

Table 3-9: Projected Change in Population and Employment

	Population		Employment	
	2020-2030 Change	2020-2040 Change	2020-2030 Change	2020-2040 Change
Water and Wastewater Service Area (City Limits and ETJ)	28,936	66,946	10,463	26,660
Roadway Service Area (City Limits minus TAZs 163, 166, 401)	17,514	36,407	8,323	17,692

It is important to visually depict the changes projected by the land use assumption process. **Figure 3-8** presents the population change by each TAZ from 2020 to 2030, likewise **Figure 3-9** presents changes in population from 2020 - 2040. These two maps show that all ETJ areas are likely to grow significantly more between 2030 - 2040, whereas only the southwest part of the ETJ will grow significantly the decade between 2020 to 2030. **Figure 3-10** and **3-11**, respectively show the employment change by each TAZ between 2020-2030 timeframe and 2020-2040 timeframe.

Figure 3-8: 2020-2030 Population Change

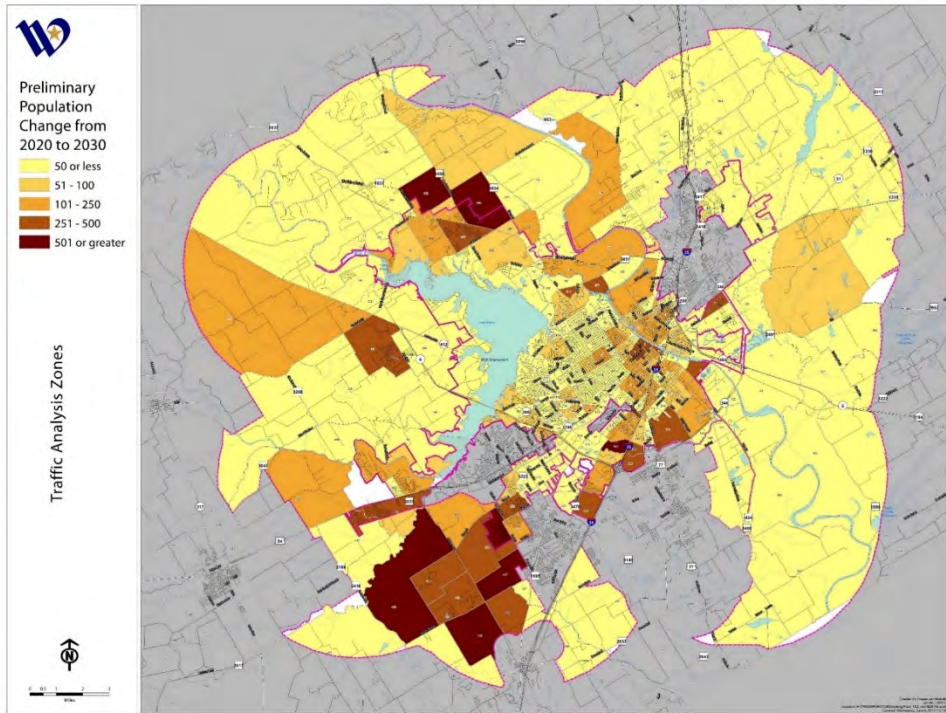


Figure 3-9: 2020-2040 Population Change

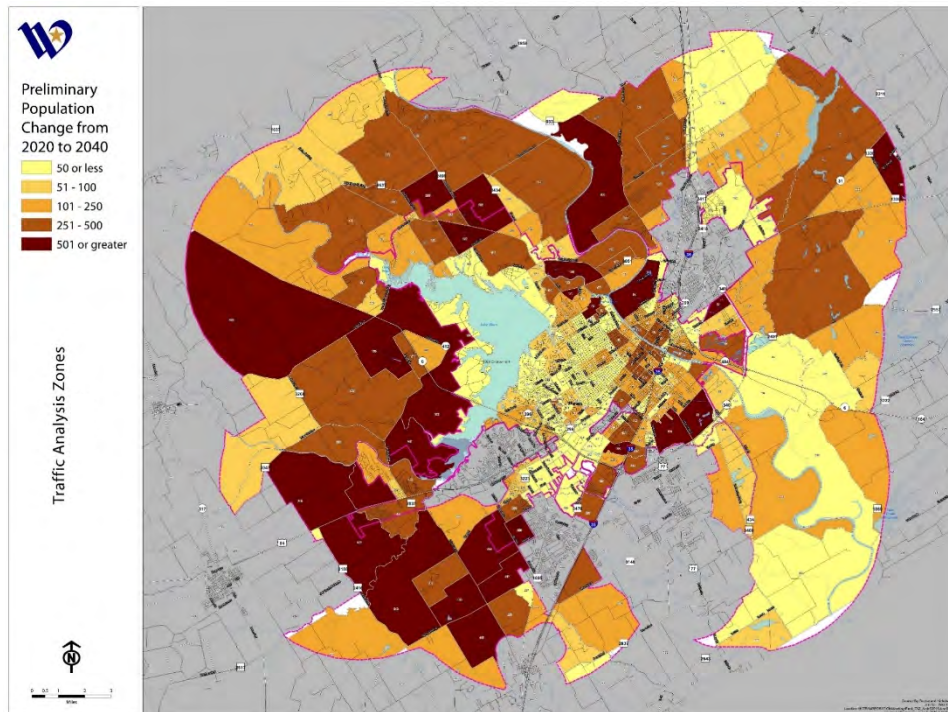


Figure 3-10: 2020-2040 Employment Change

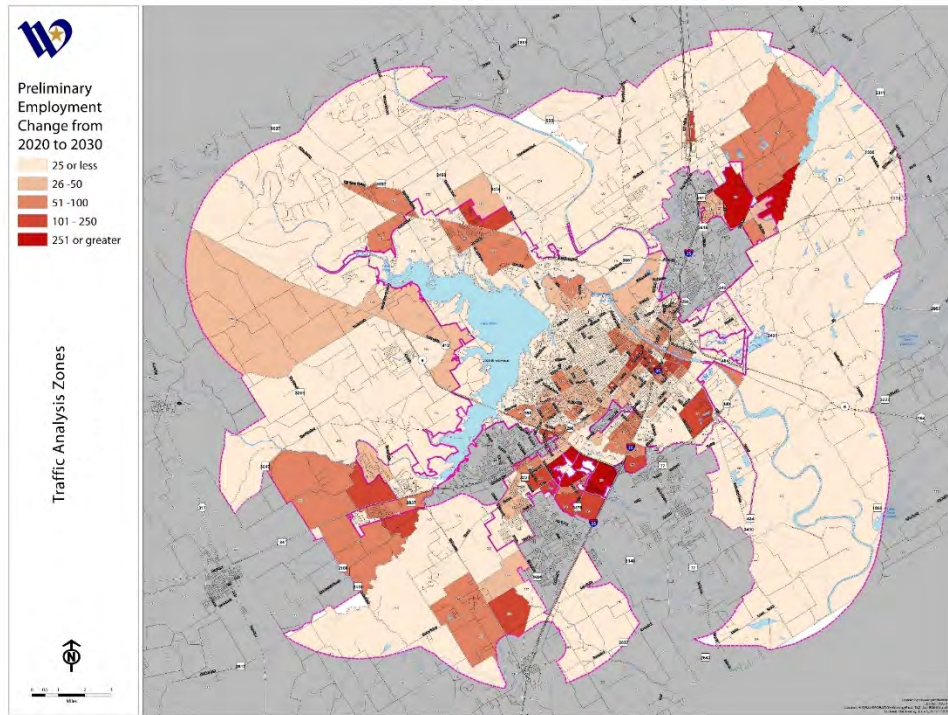
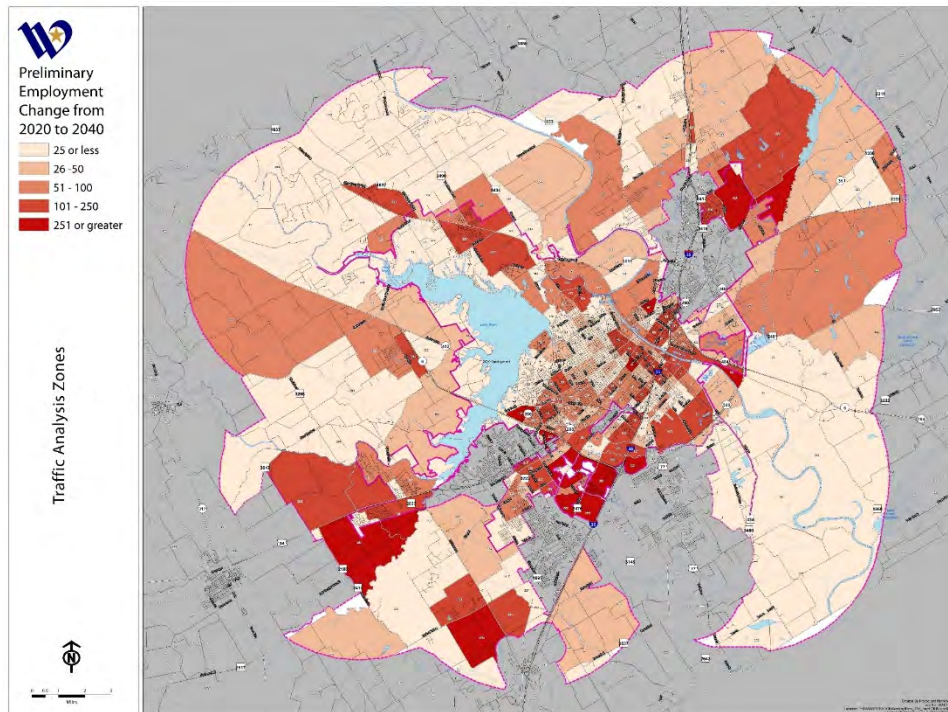


Figure 3-11: 2020-2040 Employment Change



4.0 WATER AND WASTEWATER CAPITAL IMPROVEMENTS PLAN

4.1 Existing Water and Wastewater Systems

The City of Waco's water distribution system includes six pressure planes, two water treatment plants with high service pump stations, six elevated storage tanks, the Airport ground storage tank and pump station, the Gholson ground storage tank and pump station, the Hillcrest ground storage tank and pump station, the Westview ground storage tank and pump station, and the Old McGregor ground storage tank and pump station. The existing water system is shown on **Figure 4-1**.

The City of Waco's wastewater collection system includes two wastewater treatment plants, approximately 4,682,000 linear feet of gravity and force main lines ranging in size from 2-inches to 72-inches, and 73 lift stations. The existing collection system is shown on **Figure 4-2**.

Figure 4-1: Existing Water Distribution System

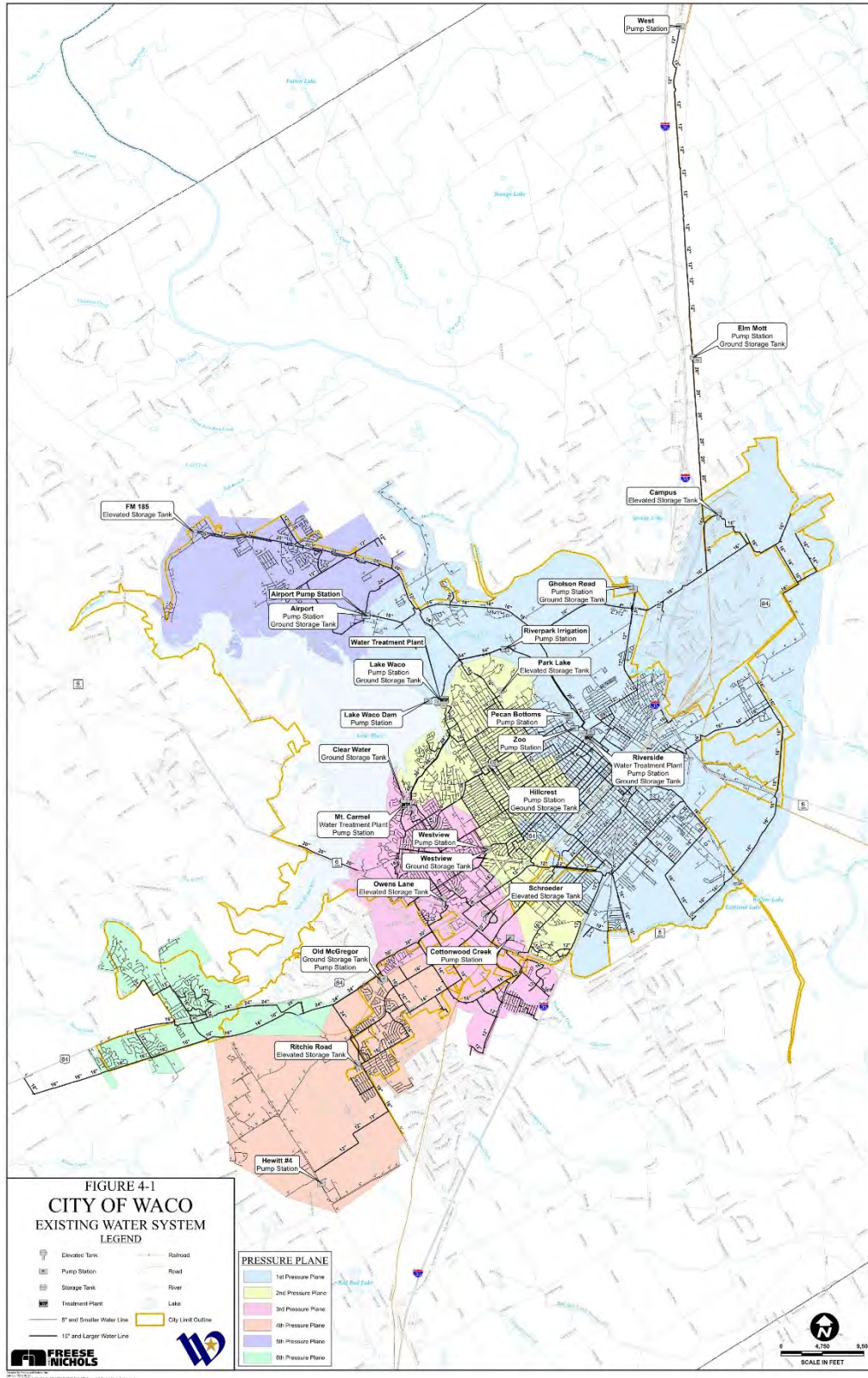
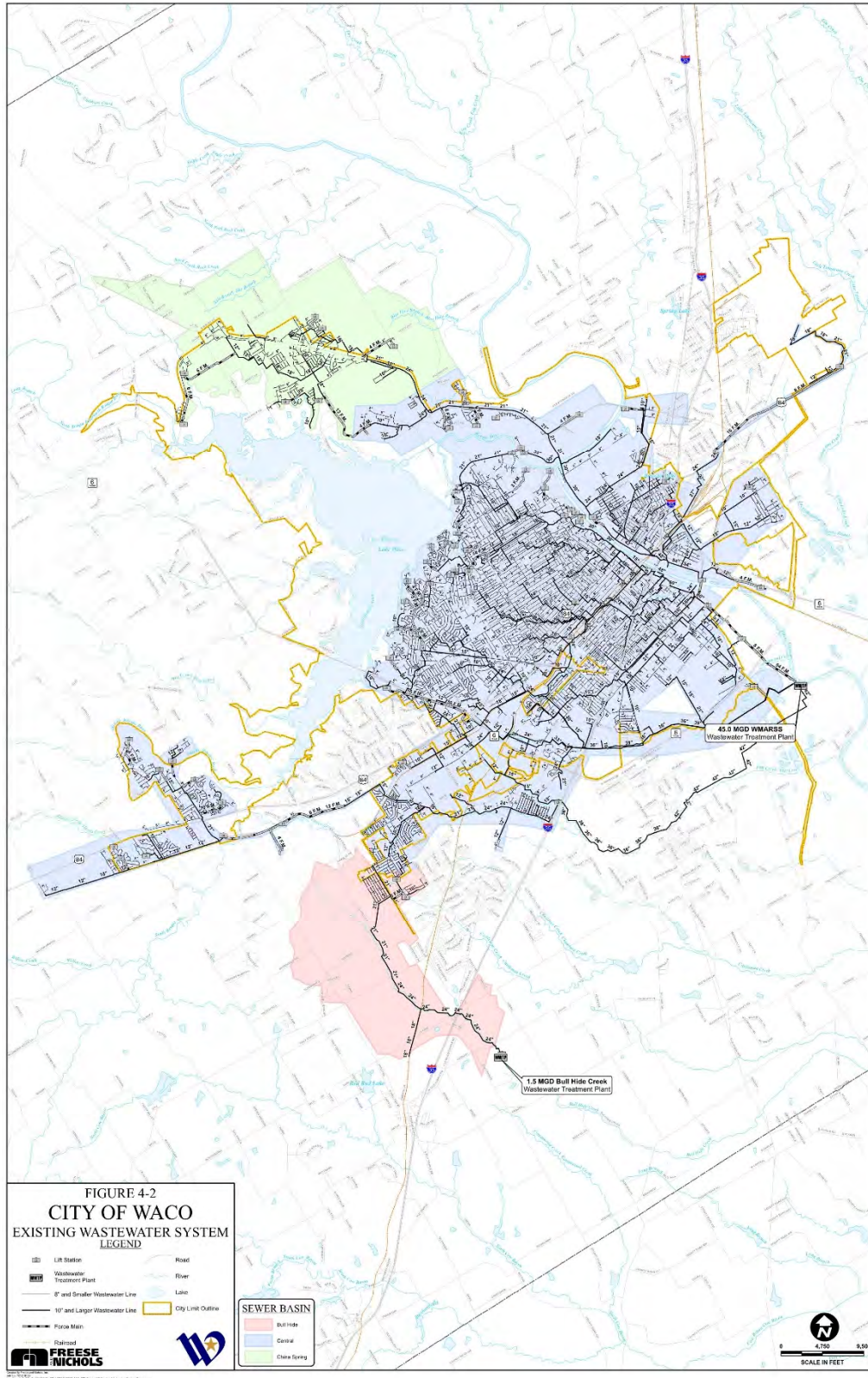


Figure 4-2: Existing Wastewater Collection System



4.2 Water Demand and Wastewater Load Projections

4.2.1 Water Demands

A water utility must be able to supply water at rates that fluctuate over time. Yearly, monthly, daily, and hourly variations in water use occur, with higher use during dry years and in hot months. Also, water use typically follows a diurnal pattern, being low at night and peaking in the early morning and late afternoon. Flow rates most important to the hydraulic design and operation of a water treatment plant and distribution system are average day and maximum day demands. Average day use is the total annual water use divided by the number of days in the year and is typically used in water supply planning. The average day demand is also typically used as a basis for estimating maximum day demands. Maximum day demand is the maximum quantity of water used on any one day of the year. Water supply facilities, such as treatment plants and pump stations, are typically designed based on the maximum day demand. Therefore, estimating future water demands directly impacts the projects needed to serve future growth.

Future water demands were developed by utilizing per-capita usage rates applied to the projected population and employment. A maximum day to average day peaking factor was then used to estimate future maximum day demands. **Table 4-1** presents the population and employment by water pressure plane, and **Table 4-2** presents the resulting projected water demands.

Table 4-1: Population and Employment by Water Pressure Plane

Pressure Plane	2020 Population	2030 Population	2040 Population	2020 Employment	2030 Employment	2040 Employment
1	71,387	81,102	98,827	25,409	29,141	36,835
2	39,301	41,540	43,860	11,523	12,141	12,225
3	18,480	19,970	21,522	23,790	25,862	25,957
4	12,132	17,920	21,615	4,580	5,409	5,822
5	9,998	15,500	20,633	987	1,517	2,006
6	8,199	12,402	19,985	1,007	1,550	2,144
Total	159,497	188,433	226,443	67,297	75,620	84,989

Table 4-2: Projected Water Demands

Planning Year	Pressure Plane	Average Day Residential Demand (MGD) ⁽¹⁾	Average Day Employment Demand (MGD) ⁽²⁾	Top Water Users Average Day Demand (MGD) ⁽³⁾	Total Average Day Water Demand (MGD)	Top Water Users Maximum Day Demand (MGD) ⁽³⁾	Total Maximum Day Water Demand (MGD) ⁽⁴⁾
2020	PP1	9.64	2.92	0.18	12.74	0.29	21.77
	PP2	5.31	1.33	-	6.63	-	11.27
	PP3	2.49	2.74	1.10	6.33	1.39	11.05
	PP4	1.64	0.53	1.72	3.89	2.12	7.01
	PP5	1.35	0.11	-	1.46	-	2.49
	PP6	1.11	0.12	-	1.22	-	2.08
	Total		21.53	7.74	3.00	32.27	3.81
2030	PP1	10.95	3.35	0.18	14.48	0.29	24.73
	PP2	5.61	1.40	-	7.00	-	11.91
	PP3	2.70	2.97	1.10	6.77	1.39	11.80
	PP4	2.42	0.62	1.72	4.77	2.12	8.50
	PP5	2.09	0.17	-	2.27	-	3.85
	PP6	1.67	0.18	-	1.85	-	3.15
	Total		25.44	8.70	3.00	37.14	3.81
2040	PP1	13.34	4.24	0.18	17.76	0.29	30.30
	PP2	5.92	1.41	-	7.33	-	12.46
	PP3	2.91	2.99	1.10	6.99	1.39	12.18
	PP4	2.92	0.67	1.72	5.31	2.12	9.43
	PP5	2.79	0.23	-	3.02	-	5.13
	PP6	2.70	0.25	-	2.94	-	5.01
	Total		30.57	9.77	3.00	43.34	3.81

⁽¹⁾ 135 gallons per person per day was assumed for Residential Demand

⁽²⁾ 115 gallons per employee per day was assumed for Employment Demand

⁽³⁾ Demands assumed from 2015 Water Master Plan

⁽⁴⁾ A maximum day to average day peaking factor of 1.70 was used based the 2015 Water Master Plan

4.2.2 Wastewater Flows

Wastewater flows in a municipal collection system vary by time of day, wastewater discharge source and weather conditions. Average daily flow is defined as the total wastewater flow over a one-year period divided by the number of days in that year. Wastewater treatment plants are typically sized in terms of average daily flow. Peak wastewater flow consists of the peak dry weather flow plus infiltration and inflow (I/I). Infiltration is the seepage of groundwater into the sewer pipe and appurtenances. Inflow is the measurement of storm water runoff that enters the wastewater collection system during wet weather

rain events. I/I is typically expressed in terms of a wet weather peaking factor for the purposes of estimating future wastewater flows. The collection system is sized to convey peak wastewater flows. Therefore, developing future wastewater flows directly impacts the projects needed to serve future growth. **Table 4-3** presents the population and employment by WWTP basin and **Table 4-4** presents the projected wastewater flows for the City of Waco.

Table 4-3: Population and Employment by Wastewater Treatment Plant Basin

Basin	Population			Employment		
	2020	2030	2040	2020	2030	2040
WMARSS	140,228	157,140	180,110	69,369	78,591	92,941
Bull Hide Creek	9,618	16,007	26,868	1,250	1,961	3,159
China Spring	9,650	15,282	19,471	1,064	1,580	2,240
Total	159,496	188,429	226,449	71,683	82,132	98,340

Table 4-4: Projected Wastewater Flows

Planning Year	Major Basin	Residential Average Annual Daily Flow (MGD) ⁽¹⁾	Employment Average Annual Daily Flow (MGD) ⁽²⁾	Total Average Annual Daily Flow (MGD)	Peak Wet Weather Flow (MGD) ⁽³⁾
2020	WMARSS	11.92	4.51	16.43	93.64
	Bull Hide Creek	0.82	0.08	0.90	5.12
	China Spring	0.82	0.07	0.89	5.07
	Total	13.56	4.66	18.22	103.83
2030	WMARSS	13.36	5.11	18.47	105.25
	Bull Hide Creek	1.36	0.13	1.49	8.48
	China Spring	1.30	0.10	1.40	7.99
	Total	16.02	5.34	21.36	121.72
2040	WMARSS	15.31	6.04	21.35	121.70
	Bull Hide Creek	2.28	0.21	2.49	14.19
	China Spring	1.66	0.15	1.80	10.26
	Total	19.25	6.39	25.64	146.15

⁽¹⁾ 85 gallons per person per day was assumed for residential wastewater flows

⁽²⁾ 65 gallons per employee per day was assumed for employment flows

⁽³⁾ A wet weather peaking factor of 5.7 was assumed based on the 2015 Wastewater Collection System Master Plan

4.3 Water and Wastewater System Improvements

Proposed water and wastewater system improvement projects and costs were developed based on input from City staff and projects identified in recent studies conducted by the City, including:

- *Highway 84 Corridor Wastewater Improvements Facility Plan*, July 2019 prepared by CDM Smith
- *Waco Metropolitan Area Regional Sewerage System Large Diameter Interceptor Improvements Report*, February 2013 prepared by Burgess and Niple/Walker Partners
- *Draft China Spring Wastewater Capacity Evaluation*, September 2019 prepared by HDR Engineering, Inc.
- *City of Waco Water Master Plan*, October 2015 prepared by Wallace Group/Freese and Nichols, Inc.
- *Wastewater Collection System Master Plan*, July 2015 prepared by Walker Partners/HDR

The proposed 10-year impact fee eligible water system projects and costs are summarized in **Table 4-5** and shown on **Figure 4-3**. Proposed impact fee eligible wastewater projects and costs are summarized in **Table 4-6** and shown on **Figure 4-4**. **Tables 4-5** and **4-6** show a 2020 percent utilization, which is the portion of a project's capacity that is required to serve existing development. This portion of the project cost is not impact-fee-eligible. The 2030 percent utilization is the portion of the project's capacity that will be required to serve projected growth in the City in 2030. The 2020-2030 percent utilization is the portion of the project's capacity required to serve development from 2020 to 2030. The impact fee eligible cost for each project is calculated as the total capital cost multiplied by the 2020-2030 percent utilization. Only this portion of the cost can be used to calculate maximum allowable impact fees. Full sized maps are provided in **Appendix B**.

Table 4-5: Water Impact Fee CIP Projects

Proj. No.	Description of Project	Percent Utilization			Capital Cost	10-Year (2020-2030)
		2020 ⁽¹⁾	2030	2020-2030		
W-1	Riverside to Gholson 30-inch Water Line	50%	75%	25%	\$12,242,880	\$3,060,720
W-2	Highway 84 Water Line Improvements	30%	60%	30%	\$1,442,652	\$432,796
W-3	Spring Valley Water Lines	10%	80%	70%	\$3,848,268	\$2,693,787
W-4	Owen Lane 2.0 MG Elevated Storage Tank	75%	95%	20%	\$3,858,015	\$771,603
W-5	Hillcrest Pump Station Expansion	90%	95%	5%	\$12,902,096	\$645,105
W-6	16-inch Ritchie Road Water Line	30%	80%	50%	\$787,155	\$393,577
W-7	China Spring Water Line	50%	75%	25%	\$16,199,650	\$4,049,913
W-8	McGregor-Waco-Woodway Connection 16" Water Line	0%	30%	30%	\$1,500,000	\$450,000
W-9	Water Transmission Improvements	5%	15%	10%	\$8,000,000	\$800,000
W-10	Peach Street 16-inch Water Line	25%	60%	35%	\$3,500,000	\$1,225,000
W-11	Elm Street 12-inch Water Line	15%	50%	35%	\$1,800,000	\$630,000
W-12	Impact Fee Study	0%	100%	100%	\$124,073	\$124,073
W-13	Riverside Water Treatment Plant Expansion	40%	60%	20%	\$10,363,510	\$2,072,702
W-14	Riverside Pump Station Expansion	40%	60%	20%	\$11,000,000	\$2,200,000
W-15	Downtown Mary Avenue to 5th Street	30%	60%	30%	\$3,000,000	\$900,000
W-16	Pressure Plane 6 Water Storage	40%	90%	50%	\$5,000,000	\$2,500,000
W-17	Chapel Road 24-inch Water Line	5%	50%	45%	\$5,000,000	\$2,250,000
W-18	Old McGregor 3.0 MG Ground Storage Tank	60%	80%	20%	\$4,500,000	\$900,000
W-19	Airport 1.0 MG Ground Storage Tank	50%	75%	25%	\$2,500,000	\$625,000
W-20	20/24-inch Water Line in Pressure Plane 1	30%	60%	30%	\$14,000,000	\$4,200,000
W-21	72-inch Parallel Raw Water Line	75%	85%	10%	\$8,000,000	\$800,000
W-22	16/24-inch Water Line in Pressure Plane 3	50%	75%	25%	\$7,289,740	\$1,822,435
W-23	Low Head Pump Station at Mt. Carmel WTP	80%	90%	10%	\$5,000,000	\$500,000
TOTAL					\$141,858,038	\$34,046,711

Table 4-6: Wastewater Impact Fee CIP Projects

Proj. No.	Description of Project	Percent Utilization			Capital Cost	10-Year (2020-2030)
		2020 ⁽¹⁾	2030	2020-2030		
WW-1	FM 1637 12/15/21/24-inch Wastewater Line	50%	75%	25%	\$5,773,963	\$1,443,491
WW-2	China Spring 24-inch Wastewater Line	50%	70%	20%	\$14,000,000	\$2,800,000
WW-3	Transfer Lift Station, Force Main, and 66-inch Gravity Line	70%	100%	30%	\$45,500,000	\$13,650,000
WW-4	Impact Fee Study	0%	100%	100%	\$124,073	\$124,073
WW-5	Bull Hide Wastewater Treatment Plant Expansion to 3.0 MGD	30%	50%	20%	\$18,000,000	\$3,600,000
WW-6	Brazos Basin: Gurley Ave	40%	60%	20%	\$7,000,000	\$1,400,000
WW-7	54-inch Wastewater Line at Lake Brazos Park	85%	95%	10%	\$1,000,000	\$100,000
WW-8	Belmead Interceptor / Lacy Lakeview Interceptor	50%	65%	15%	\$16,000,000	\$2,400,000
WW-9	TSTC Lift Station Expansion and Force Main	35%	55%	20%	\$8,000,000	\$1,600,000
WW-10	Cloice Creek and Church Road Lift Stations, Force Mains, and 21-inch Gravity Line	45%	75%	30%	\$10,000,000	\$3,000,000
WW-11	Highway 84 30-inch Wastewater Line	45%	75%	30%	\$6,000,000	\$1,800,000
WW-12	Highway 84 24-inch Wastewater Line	10%	50%	40%	\$4,000,000	\$1,600,000
WW-13	China Spring Wastewater Treatment Plant	50%	95%	45%	\$35,000,000	\$15,750,000
WW-14	Highway 84 Wastewater Treatment Plant	40%	80%	40%	\$35,000,000	\$14,000,000
WW-15	New Quest Wastewater Line	15%	40%	25%	\$600,000	\$150,000
WW-16	24-inch Wastewater Line	50%	70%	20%	\$934,274	\$186,855
WW-17	Bridge 18-inch Wastewater Line	25%	45%	20%	\$650,000	\$130,000
TOTAL					\$207,582,310	\$63,734,419

Figure 4-3: Water Impact Fee Capital Improvements Plan

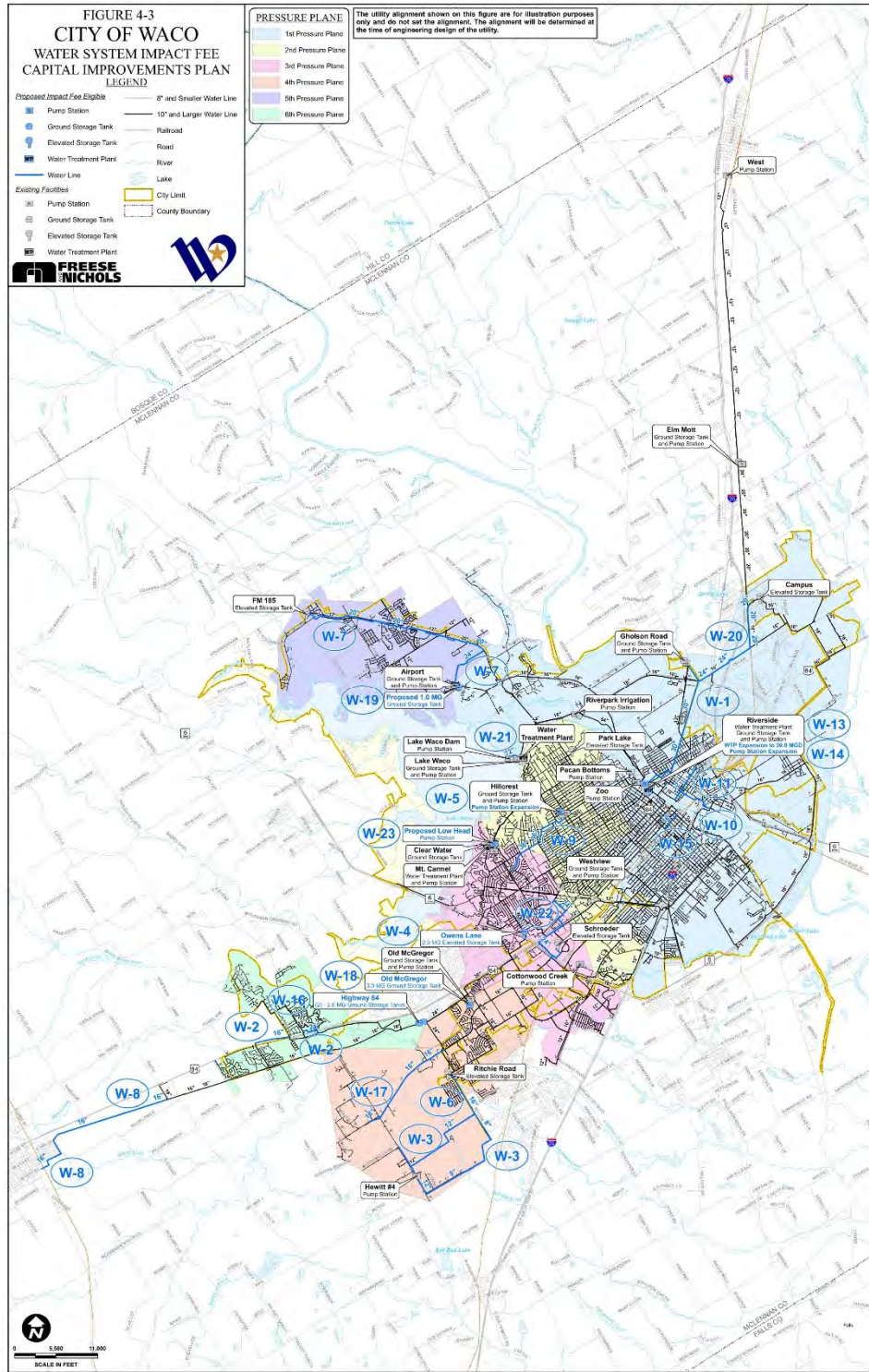
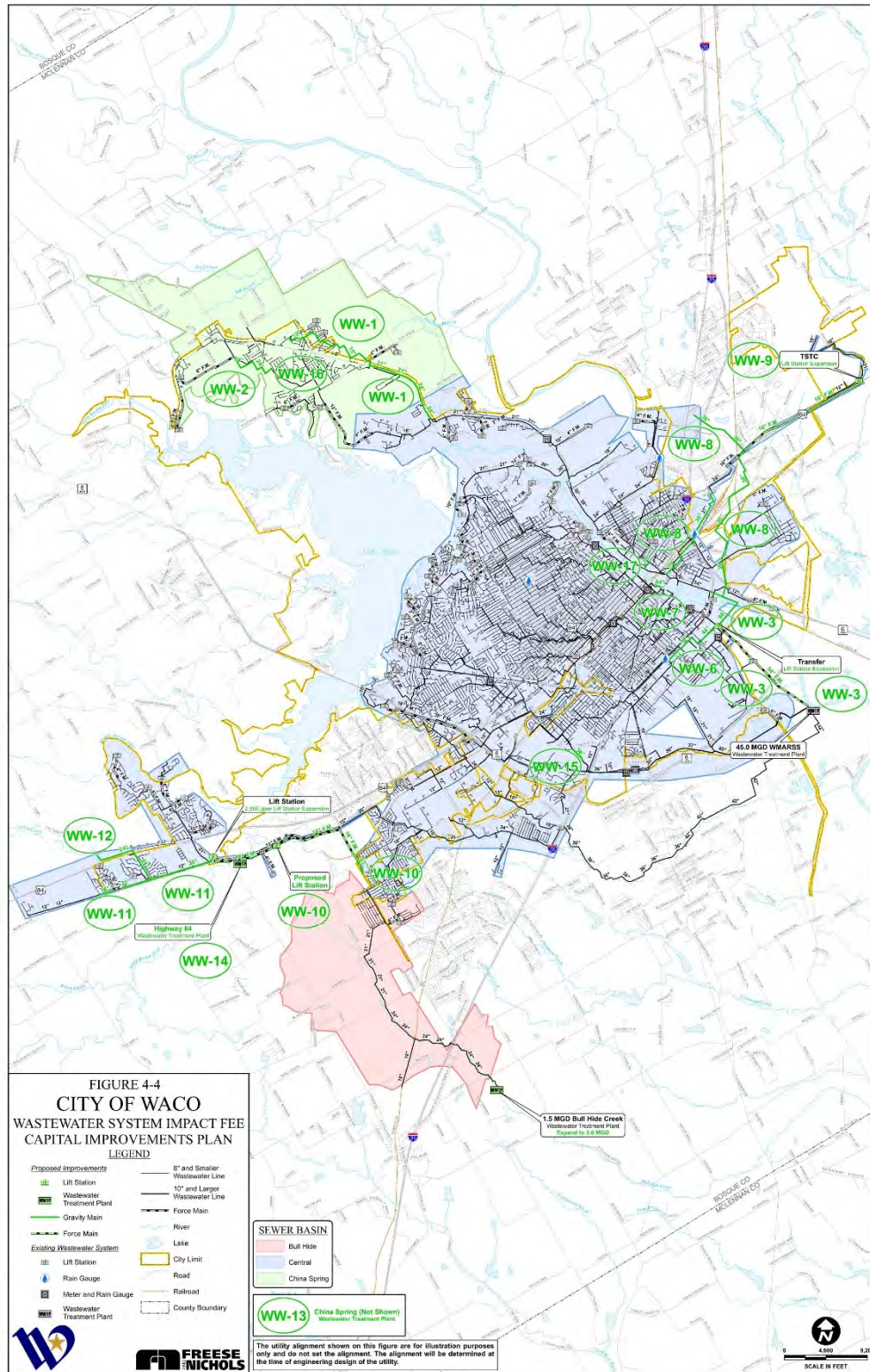


Figure 4-4: Wastewater Impact Fee Capital Improvements Plan

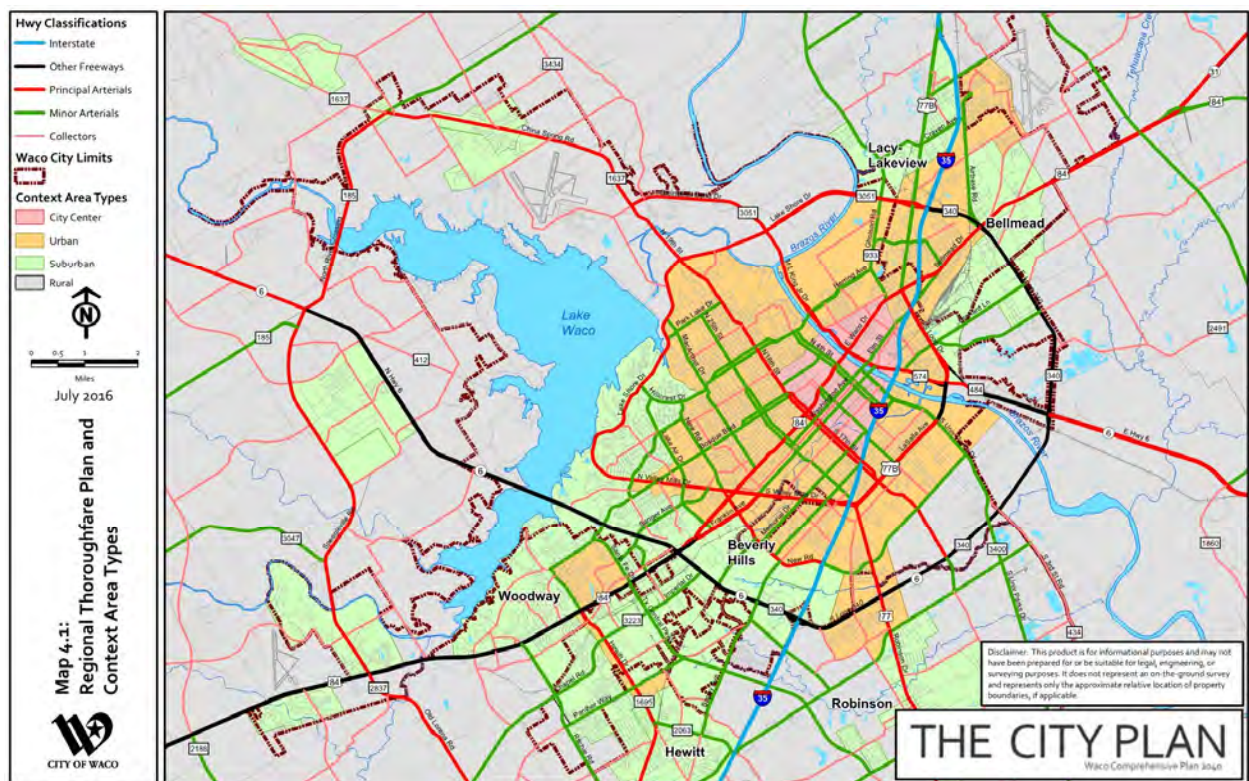


5.0 ROADWAY IMPACT CAPITAL IMPROVEMENTS PLAN

5.1 Basis for Roadway Impact Fees

Legislative mandate (395.001.8) stipulates that roadway facilities, together with all necessary appurtenances, identified in the impact fee capital improvements plan (CIP) be designated as “arterial” or “collector” class streets or roads on an officially adopted roadway plan of the city. The Regional Thoroughfare Plan was obtained from *The City Plan, Waco Comprehensive Plan 2040* adopted September 2016 and is illustrated in **Figure 5-1**. This plan identifies roadways by functional classification and context.

Figure 5-1: Roadway Impact Fee Capital Improvements Plan



With the Regional Thoroughfare Plan serving as the basis for capital improvements planning, the impact fee CIP focuses on capacity enhancing projects and its ability to address ten-year forecasted growth promulgated by the Land Use Assumptions identified in Chapter 3. Data driven analysis and input from the Capital Improvements Advisory Committee and City Staff was considered as part of roadway impact Fee CIP development.

5.2 Roadway Service Units

Service units establish a relationship between roadway projects and demand placed on the street system by development, as well as the ability to calculate and assess impact fees for specific development proposals. As defined in Chapter 395, "service unit means a standardized measure of consumption, use, generation, or discharge attributable to an individual unit of development in accordance with generally accepted engineering or planning standards for a particular category of capital improvements or facility expansions."

To determine the roadway impact fee for a new development, the service unit must accurately identify the impact that the development will have on the major roadway system (i.e., arterial and collector roads) serving the development. This impact is a combination of the number of new trips generated by the development, the peaking characteristics of the land-use(s) within the development, and the length of each new trip on the transportation system.

The service unit must also reflect the capacity, which is provided by the roadway system, and the demand placed on the system during the time in which peak, or design, conditions are present on the system. Transportation facilities are designed and constructed to accommodate volumes expected to occur during the peak hours (design hours). These volumes typically occur during the peak hours as motorists travel to and from work.

The vehicle-mile during the PM peak hour serves as the service unit for impact fees in Waco. This service unit establishes a more precise measure of capacity, utilization and intensity of land development through published trip generation data. It also recognizes legislative requirements with regards to trip length. This service unit has been tested and validated since the inception of impact fee legislation in 1989.

Service units create a link between supply (roadway projects) and demand (development). Both 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.

5.2.1 Service Unit Supply

For roadway capital project improvements, the number of service units provided during the peak hour is simply the product of the capacity of the roadway in one hour and the length of the product. For example:

Given a four-lane divided roadway project with a 600 vehicle per hour per lane capacity and a length of two miles, the number of service units provided is:

$$600 \text{ vehicles per hour per lane} \times 4 \text{ lanes} \times 2 \text{ miles} = 4,800 \text{ vehicles-miles}$$

5.2.2 Service Unit Demand

The demand placed on the system can be expressed in a similar manner. For example, a development generating 100 vehicle trips in the PM peak hour with an average trip length of two miles would generate:

$$100 \text{ vehicle-trips} \times 2 \text{ miles/trip} = 200 \text{ vehicle-miles}$$

Similarly, demand placed on the existing roadway network is calculated in the same manner with a known traffic volume (peak hour roadway counts collected in 2019) on a street and a given segment length.

5.3 Existing Conditions Analysis

An inventory of major roadways that are designated as arterial and/or collector facilities on the Thoroughfare Plan was conducted to determine: 1) capacity provided by the existing roadway system, 2) the demand currently placed on the system, and 3) the potential existence of deficiencies on the system. Any deficiencies found to occur will be carried over in the impact fee calculations (netting out from capacity made available by the CIP). Data for the inventory was obtained from the Thoroughfare Plan, field reconnaissance, and peak hour traffic volume count data.

The roadways were divided into segments based on changes in lane configuration, major intersections, city limits or area development that may influence roadway characteristics. For the assessment of individual segments, lane capacities were assigned to each segment based on roadway functional class and type of cross-section, as listed in **Table 5-1**. Roadway hourly volume capacities are based on general carrying capacity values consistent with the MPO regional travel demand model and reflect level-of-service (LOS) “D” operation, which has been identified as the minimum acceptable peak hour traffic operational condition by the city.

Table 5-1: Roadway Facility Vehicle-Mile Lane Capacities

Roadway Facility Functional Classification	Designation	Hourly Vehicle-mile Capacity per Lane Mile of Roadway Facility
Divided Arterial*	DA or SA	665
Divided Collector*	DC or SC	565
Undivided Arterial	UA	590
Undivided Collector	UC	510
*Facilities with a two-way left turn lane (TWLTL) are considered for this assessment as a divided facility for capacity allocation and marked as Special Arterial (SA) or Special Collector (SC) designation.		

5.3.1 Existing Volumes

Existing directional PM peak hour volumes were obtained from automated traffic counts conducted in May 2019. Automated traffic counts at 30 separate locations were collected on major roadways throughout the city. To minimize the total number of counts, data was collected at locations where traffic volumes would typify link volumes on the major segments within the immediate area. For segments not counted, existing volume count data from the MPO and TxDOT were used or estimates were developed based on data from adjoining roadway counts.

This data was compiled for roadway segments throughout the city and input into 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.

5.3.2 Vehicle-Miles of Existing Excess Capacity and Deficiencies

For each roadway segment, the existing vehicle-miles of excess capacity and/or deficiencies were calculated and are listed in **Table 5-2**. 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 peak hour excess capacity and deficiencies is also shown in the table. Any deficiencies identified under current operations will be carried over to the impact fee calculation. A detailed listing of existing excess capacity and deficiencies by roadway segment is also located in **Appendix D**.

Table 5-2: Existing Roadway Analysis by Service Area

Service Area	Capacity	Demand	Excess Capacity	Existing Deficiencies
1	127,576	55,849	71,905	178
2	45,655	20,952	24,811	107
3	22,504	8,286	14,307	89
4	4,960	1,666	3,295	0
5	2,664	999	1,664	0
6	25,374	13,407	11,973	6
7	10,438	7,597	3,593	752
8	5,281	946	4,335	0
9	34,723	17,441	17,281	0
10	9,245	4,725	4,733	213
11	2,897	771	2,126	0
Total	291,317	132,639	160,023	1,345

5.4 Growth Projections

The projected growth for the roadway service area is represented by the increase in the number of new vehicle-miles of demand generated over the 10-year planning period. The basis for the calculation of new demand is the population and employment projections that were prepared as part of the Waco Land Use Assumptions (LUA) Report for Impact Fees dated June 2019 by Freese and Nichols. Estimates of population and employment were prepared for the years 2020 and 2030.

Population data was provided in terms of the number of dwelling units and persons. Employment data was broken into three classes of employees that include basic, retail, and service, comprising a variety of employment groupings. Basic employment generally encompasses the industrial and manufacturing uses, retail employment includes commercial and retail uses, and service employment generally encompasses government and office uses. A summary of the projected growth is summarized in **Table 5-3** and **5-4**.

Table 5-3: Projected 10-Year Growth Summary Population

Service Area	Population		
	2020	2030	Net Growth
1	76,420	82,294	5,874
2	19,903	21,043	1,140
3	14,789	17,063	2,274
4	1,224	1,649	425
5	1,304	1,348	44
6	2,911	3,905	994
7	6,886	9,043	2,157
8	0	0	0
9	3,439	4,982	1,543
10	8,710	10,549	1,839
11	5,365	6,589	1,224
Total Population	140,951	158,465	17,514

Table 5-4: Projected 10-Year Growth Summary Employment

Service Area	Employment											
	2020				2030				Net Growth			
	Basic	Retail	Service	Total	Basic	Retail	Service	Total	Basic	Retail	Service	Total
1	2,277	7,882	13,780	23,940	2,592	8,690	15,563	26,845	315	808	1,783	2,905
2	1,588	5,430	10,143	17,162	1,649	5,735	10,896	18,280	61	305	753	1,118
3	668	1,159	1,176	3,003	764	1,320	1,375	3,460	96	162	199	457
4	154	5	131	290	162	17	150	330	8	12	19	40
5	410	174	731	1,315	774	180	769	1,723	364	6	38	408
6	910	40	357	1,307	983	64	514	1,561	73	24	157	253
7	458	187	312	956	545	310	473	1,329	87	124	161	373
8	0	0	0	0	0	0	0	0	0	0	0	0
9	8,299	5,137	4,425	17,862	9,772	5,601	4,972	20,345	1,472	464	547	2,483
10	277	430	553	1,261	307	452	620	1,379	30	21	67	117
11	54	57	91	202	141	76	153	370	88	20	61	168
Total Employment	15,095	20,501	31,701	67,297	17,688	22,446	35,486	75,620	2,593	1,945	3,785	8,323

5.4.1 Projected Vehicle-Miles of New Demand

Projected vehicle-miles of demand were calculated based on the net growth expected to occur over the 10-year planning period, and on the associated 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 each service area. Vehicle-miles of demand for population growth were based on dwelling units (residential). Vehicle-miles of demand for employment were based on the number of employees and then converted to square footage of building space using estimates of square footage per employee for industrial, office, and retail uses. The 10-year projected vehicle-miles of demand by service area are summarized in **Table 5-5**. **Appendix E** contains the development of 10-year projected demand.

Table 5-5: 10-Year Projected Service Units of Demand

Service Area	Projected 10-Year Growth (Vehicle-Miles)
1	15,947
2	4,650
3	4,293
4	650
5	1,650
6	2,002
7	3,879
8	0
9	10,967
10	2,636
11	2,094
Total	48,768

5.5 Roadway Capital Improvements Plan

The impact fee CIP is aimed at facilitating anticipated long-term growth in Waco. The CIP, which consists of strictly new capacity additions, were identified as needed to address the anticipated projected growth within the City.

5.5.1 Eligible Projects

Legislative mandate stipulates that the impact fee CIP contain only those roadways classified as *arterial* or *collector* status facilities that are included in the City’s adopted Regional Thoroughfare Plan (see **Figure**

5-1). Impact fee legislation also allows for the recoupment of costs for previously constructed facilities and projects currently under construction, however none were identified as part of the initial impact fee program.

5.5.2 Eligible Costs

In general, those costs associated with the design, right-of-way acquisition, and construction and financing of all items necessary to implement the roadway projects identified in the capital improvement plan are eligible. These estimates are based on roadway sections identified in *The City Plan, Waco Comprehensive Plan 2040*. It is important to note that upon completion of the capital improvements identified in the CIP, the city must recalculate the impact fee using the *actual* costs. If service area costs are less than the impact fee paid by greater than 10 percent, a potential refund may be due. To prevent this situation, conservative (low) estimates of project costs were considered.

Chapter 395.012 identifies roadway costs eligible for impact fee recovery. The law states that:

“An impact fee may be imposed only to pay the cost of constructing capital improvements for facility expansions, including and limited to the construction contract price, surveying and engineering fees, land acquisition costs, including land purchases, court awards and costs, attorney fees, and expert witness fees; and fees actually paid or contracted to be paid to an independent qualified engineer or financial consultant preparing or updating the capital improvement plan who is not an employee of the political subdivision.”

“Projected interest charges and other finance costs may be included in determining the amount of impact fees only if the impact fees are used for the payment of principal and interest on bonds, notes, or other obligations issued by or on behalf of the political subdivision to finance the capital improvements or facility expansions identified in the capital improvement plan and are not used to reimburse bond funds expended for facilities that are not identified in the capital improvement plan.”

The following details the individual cost components of the impact fee CIP.

Construction: Construction costs include those costs which are normally associated with construction, including: paving, dirt work (including sub-grade preparation, embankment fill and excavation), clearing and grubbing, retaining walls or other slope protection measures, and

general drainage items which are necessary in order to build the roadway and allow the roadway to fulfill its vehicle carrying capability. Individual items may include bridges, culverts, inlets and storm sewers, junction boxes, manholes, curbs and/or gutters, and channel linings and other erosion protection appurtenances. Other items included in cost estimates may include sidewalks, traffic control devices at select locations (initial cost only), ancillary adjustments to existing utilities, and minimal sodding/landscaping.

Engineering: These are the costs associated with the design and surveying necessary to construct the roadway. Because the law specifically references fees, it has generally been understood that in-house City design and surveying cannot be included. Only those services that are contracted out can be included and it may be necessary to use outside design and surveying firms to perform the work. For planned projects, a percentage based on typical engineering contracts was used to estimate these fees.

Right-of-Way: Any land acquisition cost estimated to be necessary to construct a roadway can be included in the cost estimate. For planning purposes, only the additional amount of land needed to bring a roadway right-of-way to thoroughfare standard was considered. For example, if a 120' right-of-way for an arterial road was needed and 80' of right-of-way currently existed, only 40' would be considered in the acquisition cost.

The cost for right-of-way may vary based on location of project and will be based on data from the most current County Appraisal District data.

Debt Service: Predicted interest charges and finance costs may be included in determining the amount of impact fees only if the impact fees are used for the payment of principle and interest on bonds, notes, or other obligations issued by the city to finance capital improvements identified in the impact fee CIP. They cannot be used to reimburse bond funds for other facilities.

Previous Assessments: The cost for any previous assessments collected by the City on projects identified on the impact fee CIP must be removed from program consideration. As this is a new impact fee program, there are no previous assessments to consider in the initial calculation.

Study Updates: The fees paid or contracted to be paid to an independent qualified engineer or financial consultant preparing or updating the capital improvement plan who is not an employee of the political subdivision can be included in the impact fees.

Only the cost necessitated by new development is considered for impact fee calculations. For example, if only 60% of the capacity provided by the impact fee CIP is needed over the ten-year window, then only 60% of the cost associated with those facilities will be considered.

5.5.3 Impact Fee CIP

The proposed CIP consists of 42 project segments over nine of the eleven service areas (no projects identified in service areas 5 and 8) and advance the implementation of the Thoroughfare Plan network, as seen on **Figure 5-2**. **Table 5-6** list the roadway capital improvement projects as part of the impact fee program.

Figure 5-2: Roadway Impact Fee Capital Improvements Plan

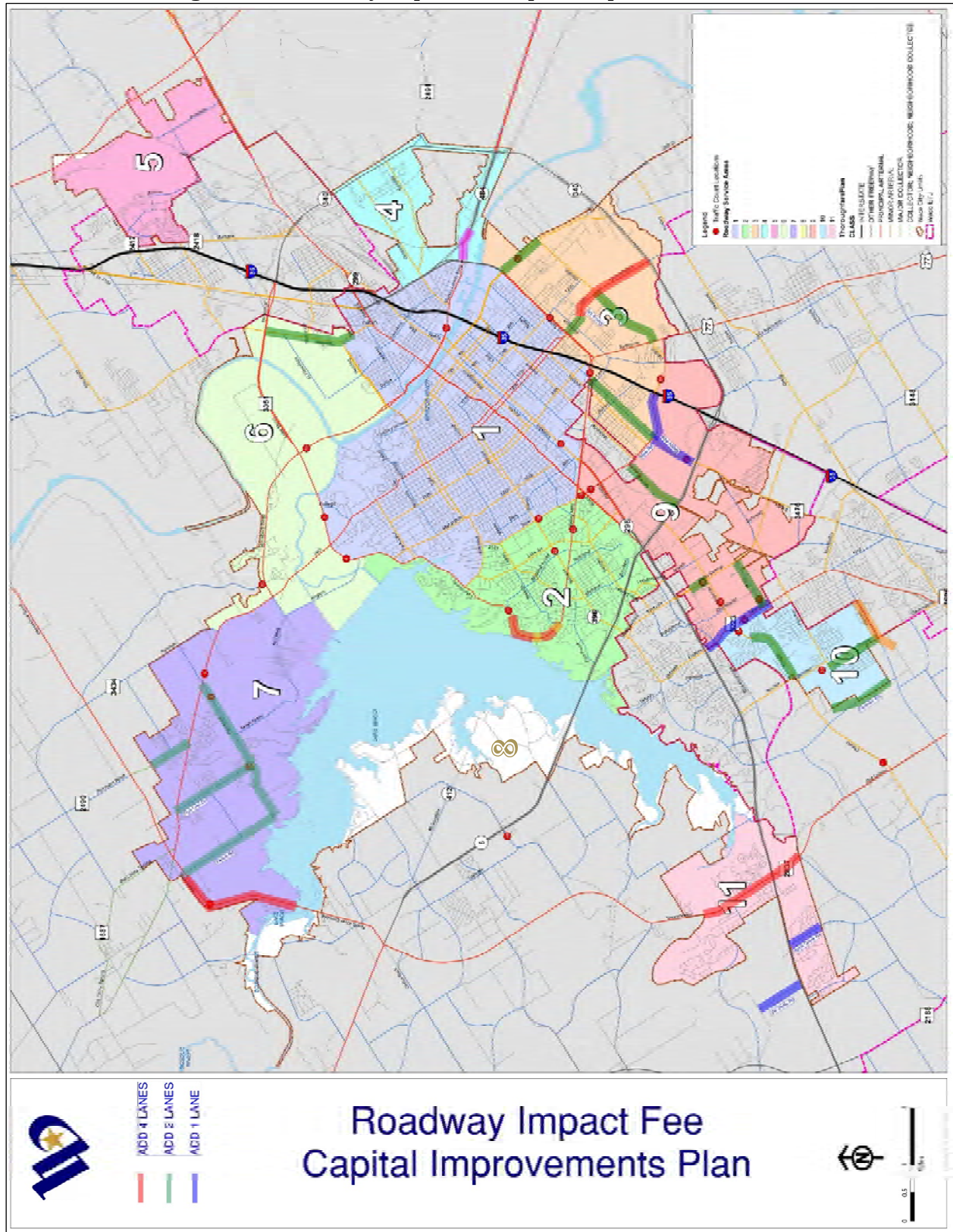


Table 5-6: Roadway Impact Fee CIP Listing

Proj No.	Serv Area	Shared Svc Area	Roadway	From	To	Length (mi)	No. of Lanes	Thoroughfare Section	Type	Pct. in Serv. Area
1	1	6	Gholson Rd	Herring Ave	960' S of Herring Ave	0.18	2	Minor Art-4U Sec	UA	50%
2	1		Gholson Rd	960' S of Herring Ave	Waco Dr	0.33	2	Minor Art-4U Sec	UA	100%
Sub-Total Service Area 1						0.52				
3	2		Lake Shore Dr	Mt Carmel Dr	Koehne Park Dr	0.62	4	Major Art-6D Sec	DA	100%
4	2		Valley Mills Dr	Koehne Park Dr	Hillandale Rd	0.15	4	Major Art-6D Sec	DA	100%
5	2		Valley Mills Dr	Hillandale Rd	Ridgewood Dr	0.26	4	Major Art-6D Sec	DA	100%
6	2		Valley Mills Dr	Ridgewood Dr	Bishop Dr	0.18	3	Major Art-6D Sec	DA	100%
Sub-Total Service Area 2						1.21				
7	3		Bagby Ave	New Rd	Monte Vista St	0.27	2	Minor Art-4D Sec	DA	100%
8	3		Bagby Ave	Monte Vista St	Richter Ave	0.68	2	Minor Art-4D Sec	DA	100%
9	3		Bagby Ave	Richter Ave	Valley Mills Dr	0.59	2	Minor Art-4D Sec	DA	100%
10	3	9	S New Rd	Bagby Ave	I-35	0.80	1	Minor Art-6D Sec	DA	50%
11	3		Garden Dr	Robinson Rd	16th St	1.34	2	Minor Art-4U Sec	UA	100%
12	3		18th St	La Salle	Gurley Ln	0.45	2	Major Art-6D Sec	DA	100%
13	3		16th	Gurley Ln	Garden Dr	0.42	4	Major Art-6D Sec	DA	100%
14	3		12th	Garden Dr	TX-340	1.08	4	Major Art-6D Sec	DA	100%
15	3		University Parks Dr	La Salle Ave	Garden Dr	0.84	2	Minor Art-4D Sec	DA	100%
Sub-Total Service Area 3						6.46				
16	4		Martin Luther King Jr Blvd	BUS 77	SH 484	0.39	6	Major Art-6D Sec	DA	100%
Sub-Total Service Area 4						0.39				
No Projects in Service Area 5										
Sub-Total Service Area 5						0.00				
1	6	1	Gholson Rd	960' S of Herring Ave	Herring Ave	0.18	2	Minor Art-4U Sec	UA	50%
17	6		Gholson Rd	Herring Ave	Lakeshore Dr	1.35	2	Minor Art-4U Sec	UA	100%
Sub-Total Service Area 6						1.53				
18	7		North River Crossing	End of bridge	580' NE of Curry Ln	1.38	4	Major Art-6D Sec	DA	100%
19	7		North River Crossing	580' NE of Curry Ln	Yankie Rd	0.47	4	Major Art-6D Sec	DA	100%
20	7		Flat Rock Rd	Yankie Rd	Tree Lake Rd	1.01	2	Major Col-4U Sec	UC	100%
21	7		Flat Rock Rd	Tree Lake Rd	China Spring Rd	1.66	2	Major Col-4U Sec	UC	100%
22	7		Yankie Rd	North River Crossing	Flat Rock Rd	1.89	2	Major Col-4U Sec	UC	100%
23	7		Tree Lake Dr	China Spring Rd	Flat Rock Rd	1.57	2	Major Col-4U Sec	UC	100%
24	7		Wortham Bend	North City Limit	China Spring Rd	0.82	2	Major Col-4U Sec	UC	100%
Sub-Total Service Area 7						8.80				
No Projects in Service Area 8										
Sub-Total Service Area 8						0.00				
25	9		Mars Dr	Hewitt Dr	Texas Central Pkwy	0.94	2	Minor Art-4U Sec	UA	100%
26	9		Beverly Dr	W Loop 340	4128' NE of Loop 340	0.78	2	Minor Art-4U Sec	UA	100%
27	9	X	Beverly Dr	4128' NE of Loop 340	New Road	0.31	2	Minor Art-4U Sec	UA	50%
28	9	X	Hewitt Dr	Woodway Dr	Old McGregor Dr	0.19	1	Major Art-6D Sec	DA	50%
29	9	10	Hewitt Dr	Old McGregor Dr	Imperial Dr	0.45	1	Major Art-6D Sec	DA	50%
30	9	10	Hewitt Dr	Imperial Dr	Mars Dr	0.62	1	Major Art-6D Sec	DA	50%
31	9		Texas Central Pkwy	Railroad	Imperial Dr	0.34	2	Minor Art-4U Sec	UA	100%
10	9	3	S New Rd	Bagby Ave	I-35	0.80	1	Major Art-6D Sec	UA	50%
32	9		Bagby Ave.	New Road	TX 340	0.83	1	Minor Art-4D Sec* (4U to 4D)	DA	100%
Sub-Total Service Area 9						5.26				
33	10		Warren Rd	City Limit	Ritchie Rd	0.38	3	Minor Col-3S Sec	SC	100%
34	10	X	Warren Rd	Ritchie Rd	3700' east of Ritchie Rd	0.70	2	Minor Col-3S Sec	SC	50%
35	10	X	Farmiller Rd	1300' south of Chapel Rd	2100' north of Warren Rd	1.13	2	Minor Col-3S Sec	SA	50%
29	10	9	Hewitt Dr	Old McGregor Dr	Imperial Dr	0.45	1	Major Art-6D Sec	DA	50%
30	10	9	Hewitt Dr	Imperial Dr	Mars Dr	0.62	1	Major Art-6D Sec	DA	50%
36	10		Chapel Rd	Meadow Mountain Dr	Ritchie Rd	1.15	3	Minor Art-5S Sec	SA	100%
37	10		Ritchie Rd	Panther Way	Warren St	1.01	2	Minor Art-4U Sec	UA	100%
Sub-Total Service Area 10						5.44				
38	11		Val Verde Rd	Fossil Rim Rd	US 84	0.89	2	Minor Col-3S Sec	SC	100%
39	11		Harris Creek Rd	US 84	Walking Horse Ln	0.66	2	Minor Col-3S Sec	SC	100%
40	11		Speegleville Rd	Pecan Creek	Oak Rd	0.54	4	Major Art-6D Sec	DA	100%
41	11		Speegleville Rd	Oak Rd	US 84	0.85	4	Major Art-6D Sec	DA	100%
42	11		Old Lorena Rd	US 84 EBFR	South Bosque River	0.90	4	Major Art-6D Sec	DA	100%
Sub-Total Service Area 11						3.83				

NOTE: DA = DIVIDED ARTERIAL, UA = UNDIVIDED ARTERIAL, SA = SPECIAL ARTERIAL (WITH CENTER DUAL LEFT TURN LANE), SC = SPECIAL COLLECTOR (WITH CENTER DUAL LEFT TURN LANE), RECOUP = RECOUPMENT PROJECT, NEW = NEW PROJECT

The added capacity and net capacity that would be provided by the impact fee CIP is summarized below in **Table 5-7**. Net capacity to be provided by the proposed CIP takes into consideration any deficiencies from the existing conditions analysis described in **Section 5.3**. A detailed listing by project of capacity supplied can be found in **Appendix F**.

Table 5-7: Capacity and Net Capacity to be Provided by the Proposed CIP

Service Area	Capacity Supplied by CIP (veh-mi)	Existing Utilization (veh-mi)	Existing Deficiencies (veh-mi)	Net Capacity Supplied by CIP (veh-mi)
1	502	0	178	324
2	3,105	0	107	2,998
3	9,583	0	89	9,494
4	1,551	0	0	1,551
5	0	0	0	0
6	1,699	0	6	1,693
7	12,014	0	752	11,262
8	0	0	0	0
9	3,826	0	0	3,826
10	4,081	0	212	3,868
11	6,954	0	0	6,954
Total	43,315	0	1,345	41,970

A comparison of net capacity to be provided by the proposed CIP compared to 10-year needs (developed in **Table 5-5**) is listed below in **Table 5-8**. An analysis reveals an adequately matched overall impact fee CIP program to address growth attributable to new development.

The percent attributable to new growth is a direct result of the land use assumptions described earlier in the report. Based on the defined capital improvements plan, in some service areas project growth will exceed the projected capacity supplied. The ultimate net effect is that the cost per service unit will be lower as the cost of the specified CIP (by service area) is spread out over the 10-year growth.

Table 5-8: Projected Demand and Net Capacity Provided by the Proposed CIP

Service Area	Projected 10-Year Growth (Vehicle-Miles)	Net Capacity Supplied by CIP (veh-mi)	Pcnt. of CIP Attributable to New Dev. (10-Yr.)
1	15,947	324	100.0
2	4,650	2,998	100.0
3	4,293	9,494	45.2
4	650	1,551	41.9
5	1,650	0	100.0
6	2,002	1,693	100.0
7	3,879	11,262	34.4
8	0	0	100.0
9	10,967	3,826	100.0
10	2,636	3,868	68.1
11	2,094	6,954	30.1
System Total	48,768	41,970	100.0

5.5.4 Impact Fee CIP Cost

Project costs were developed based on unit cost estimates compiled by Freese and Nichols, Inc. and reviewed by Walker Partners. Individual project costs were developed for engineering, right-of-way, and construction. Project cost estimate worksheets for the roadway impact fee CIP is in **Appendix G**. Each roadway segment uses the Regional Thoroughfare Plan’s defined functional classification to determine the ultimate roadway standard for each project segment. Construction estimates included all appurtenances called for in the City construction standards. Other costs developed for engineering and right-of-way were based on the following:

- Engineering/surveying – 9% of construction costs
- Right-of-way acquisition - \$1.00/square foot

Only the cost for net right-of-way needed to achieve Thoroughfare Standard was included. For projects that are a part of the TxDOT system, city participation was assumed to be 20% of the total construction cost. TxDOT system roads in the impact fee program include:

- Service Area 1 and 6: Gholson Road
- Service Area 3: University Parks Drive
- Service Area 4: Martin Luther King, Jr. Boulevard

- Service Area 7: North River Crossing and Wortham Bend Road
- Service Area 9: Hewitt Drive

Additionally, the cost of future impact fee study updates, as allowable by legislative mandate, were included into the overall system costing. The cost for projects identified in the roadway impact fee CIP program totals \$62.9 million. **Table 5-9** lists the roadway impact fee CIP and individual total costs (construction, engineering, and right-of-way) and by service. Debt service, which is also allowable for inclusion for into the impact fee program is discussed in Chapter 6.

Table 5-9: Roadway Impact Fee Project Cost Summary

Proj No.	Serv Area	Shared Svc Area	Roadway	From	To	Length (mi)	No. of Lanes	Type	Pct. in Serv. Area	Roadway Costs			Study Update Cost	Total Cost
										Engineering	ROW	Construction		
1	1	6	Gholson Rd	Herring Ave	960' S of Herring Ave	0.18	2	UA	50%	\$ 3,250	\$ 1,920	\$ 36,065	\$247	\$41,482
2	1		Gholson Rd	960' S of Herring Ave	Waco Dr	0.33	2	UA	100%	\$ 13,420	\$ -	\$ 149,100	\$912	\$163,432
Sub-Total Service Area 1										\$ 16,670	\$ 1,920	\$ 185,165	\$1,159	\$204,914
3	2		Lake Shore Dr	Mt Carmel Dr	Koehne Park Dr	0.62	4	DA	100%	\$ 198,700	\$ 49,400	\$ 2,208,267	\$3,828	\$2,460,194
4	2		Valley Mills Dr	Koehne Park Dr	Hillandale Rd	0.15	4	DA	100%	\$ 42,000	\$ -	\$ 466,867	\$905	\$509,772
5	2		Valley Mills Dr	Hillandale Rd	Ridgewood Dr	0.26	4	DA	100%	\$ 74,400	\$ -	\$ 826,133	\$1,609	\$902,142
6	2		Valley Mills Dr	Ridgewood Dr	Bishop Dr	0.18	3	DA	100%	\$ 38,300	\$ 18,900	\$ 425,000	\$827	\$483,027
Sub-Total Service Area 2										\$ 353,400	\$ 68,300	\$ 3,926,267	\$7,168	\$4,355,135
7	3		Bagby Ave	New Rd	Monte Vista St	0.27	2	DA	100%	\$ 43,800	\$ -	\$ 486,400	\$831	\$531,031
8	3		Bagby Ave	Monte Vista St	Richter Ave	0.68	2	DA	100%	\$ 121,900	\$ 71,500	\$ 1,354,500	\$2,080	\$1,549,980
9	3		Bagby Ave	Richter Ave	Valley Mills Dr	0.59	2	DA	100%	\$ 93,700	\$ 61,800	\$ 1,041,300	\$1,796	\$1,198,596
10	3	9	S New Rd	Bagby Ave	I-35	0.80	1	DA	50%	\$ 56,850	\$ 42,450	\$ 631,433	\$616	\$731,350
11	3		Garden Dr	Robinson Rd	16th St	1.34	2	UA	100%	\$ 369,500	\$ 566,100	\$ 4,105,600	\$3,650	\$5,044,850
12	3		18th St	La Salle	Gurley Ln	0.45	2	DA	100%	\$ 63,200	\$ 23,600	\$ 702,633	\$1,369	\$790,802
13	3		16th	Gurley Ln	Garden Dr	0.42	4	DA	100%	\$ 119,200	\$ 132,900	\$ 1,323,933	\$2,576	\$1,578,610
14	3		12th	Garden Dr	TX-340	1.08	4	DA	100%	\$ 323,400	\$ 342,100	\$ 3,593,333	\$6,633	\$4,265,466
15	3		University Parks Dr	La Salle Ave	Garden Dr	0.84	2	DA	100%	\$ 30,660	\$ -	\$ 340,590	\$2,572	\$373,822
Sub-Total Service Area 3										\$ 1,222,210	\$ 1,240,450	\$ 13,579,723	\$22,124	\$16,064,507
16	4		Martin Luther King Jr Blvd	BUS 77	SH484	0.39	6	DA	100%	\$ 38,480	\$ 49,280	\$ 427,640	\$3,581	\$518,981
Sub-Total Service Area 4										\$ 38,480	\$ 49,280	\$ 427,640	\$3,581	\$518,981
No Projects in Service Area 5														
Sub-Total Service Area 5										\$ -	\$ -	\$ -	\$0	\$0
17	6	1	Gholson Rd	960' S of Herring Ave	Herring Ave	0.18	2	UA	50%	\$ 3,250	\$ 1,920	\$ 36,065	\$247	\$41,482
17	6		Gholson Rd	Herring Ave	Lakeshore Dr	1.35	2	UA	100%	\$ 47,100	\$ -	\$ 523,450	\$3,675	\$574,225
Sub-Total Service Area 6										\$ 50,350	\$ 1,920	\$ 559,515	\$3,922	\$615,707
18	7		North River Crossing	End of bridge	580' NE of Curry Ln	1.38	4	DA	100%	\$ 77,900	\$ -	\$ 865,800	\$8,475	\$952,175
19	7		North River Crossing	580' NE of Curry Ln	Yankie Rd	0.47	4	DA	100%	\$ 30,300	\$ -	\$ 336,600	\$2,902	\$369,802
20	7		Flat Rock Rd	Yankie Rd	Tree Lake Rd	1.01	2	UC	100%	\$ 174,600	\$ 186,700	\$ 1,940,250	\$2,378	\$2,303,928
21	7		Flat Rock Rd	Tree Lake Rd	China Spring Rd	1.66	2	UC	100%	\$ 277,900	\$ -	\$ 3,087,900	\$3,909	\$3,369,709
22	7		Yankie Rd	North River Crossing	Flat Rock Rd	1.89	2	UC	100%	\$ 317,200	\$ 199,600	\$ 3,524,300	\$4,451	\$4,045,551
23	7		Tree Lake Dr	China Spring Rd	Flat Rock Rd	1.57	2	UC	100%	\$ 263,500	\$ 165,800	\$ 2,927,500	\$3,696	\$3,360,496
24	7		Wortham Bend	North City Limit	China Spring Rd	0.82	2	UC	100%	\$ 30,200	\$ -	\$ 335,810	\$1,925	\$367,935
Sub-Total Service Area 7										\$ 1,171,600	\$ 552,100	\$ 13,018,160	\$27,736	\$14,769,596
No Projects in Service Area 8														
Sub-Total Service Area 8										\$ -	\$ -	\$ -	\$0	\$0
25	9		Mars Dr	Hewitt Dr	Texas Central Pkwy	0.94	2	UA	100%	\$ 210,200	\$ -	\$ 2,335,450	\$2,572	\$2,548,222
26	9		Beverly Dr	W Loop 340	4128' NE of Loop 340	0.78	2	UA	100%	\$ 121,200	\$ -	\$ 1,346,300	\$2,131	\$1,469,631
27	9	X	Beverly Dr	4128' NE of Loop 340	New Road	0.31	2	UA	50%	\$ 22,550	\$ -	\$ 250,500	\$420	\$273,470
28	9	X	Hewitt Dr	Woodway Dr	Old McGregor Dr	0.19	1	DA	50%	\$ 2,650	\$ -	\$ 29,700	\$145	\$32,495
29	9	10	Hewitt Dr	Old McGregor Dr	Imperial Dr	0.45	1	DA	50%	\$ 6,850	\$ -	\$ 76,250	\$342	\$83,442
30	9	10	Hewitt Dr	Imperial Dr	Mars Dr	0.62	1	DA	50%	\$ 8,800	\$ -	\$ 97,700	\$478	\$106,978
31	9		Texas Central Pkwy	Railroad	Imperial Dr	0.34	2	UA	100%	\$ 59,500	\$ -	\$ 661,100	\$928	\$721,528
10	9	3	S New Rd	Bagby Ave	I-35	0.80	1	UA	50%	\$ 56,850	\$ 42,450	\$ 631,433	\$547	\$731,280
32	9		Bagby Ave.	New Road	TX 340	0.83	1	DA	100%	\$ 232,400	\$ -	\$ 2,582,560	\$1,270	\$2,816,230
Sub-Total Service Area 9										\$ 721,000	\$ 42,450	\$ 8,010,993	\$ 8,833	\$ 8,783,276
33	10		Warren Rd	City Limit	Ritchie Rd	0.38	3	SC	100%	\$ 92,300	\$ 100,500	\$ 1,025,400	\$993	\$1,219,193
34	10	X	Warren Rd	Ritchie Rd	3700' east of Ritchie Rd	0.70	2	SC	50%	\$ 29,400	\$ -	\$ 326,550	\$457	\$356,407
35	10	X	Farmiller Rd	1300' south of Chapel Rd	2100' north of Warren Rd	1.13	2	SA	50%	\$ 96,300	\$ 89,500	\$ 1,069,767	\$888	\$1,256,435
29	10	9	Hewitt Dr	Old McGregor Dr	Imperial Dr	0.45	1	DA	50%	\$ 6,850	\$ -	\$ 76,250	\$342	\$83,442
30	10	9	Hewitt Dr	Imperial Dr	Mars Dr	0.62	1	DA	50%	\$ 8,800	\$ -	\$ 97,700	\$478	\$106,978
36	10		Chapel Rd	Meadow Mountain Dr	Ritchie Rd	1.15	3	SA	100%	\$ 151,600	\$ -	\$ 1,684,020	\$3,532	\$1,839,152
37	10		Ritchie Rd	Panther Way	Warren St	1.01	2	UA	100%	\$ 176,500	\$ -	\$ 1,961,300	\$2,752	\$2,140,552
Sub-Total Service Area 10										\$ 561,750	\$ 190,000	\$ 6,240,987	\$9,422	\$7,002,158
38	11		Val Verde Rd	Fossil Rim Rd	US 84	0.89	2	SC	100%	\$ 78,900	\$ -	\$ 877,133	\$1,157	\$957,190
39	11		Harris Creek Rd	US 84	Walking Horse Ln	0.66	2	SC	100%	\$ 58,700	\$ -	\$ 652,400	\$859	\$711,959
40	11		Speegleville Rd	Pecan Creek	Oak Rd	0.54	4	DA	100%	\$ 267,500	\$ 57,500	\$ 2,972,667	\$3,345	\$3,301,012
41	11		Speegleville Rd	Oak Rd	US 84	0.85	4	DA	100%	\$ 221,800	\$ -	\$ 2,464,467	\$5,190	\$2,691,457
42	11		Old Lorena Rd	US 84 EBR	South Bosque River	0.90	4	DA	100%	\$ 235,200	\$ -	\$ 2,613,533	\$5,504	\$2,854,237
Sub-Total Service Area 11										\$ 862,100	\$ 57,500	\$ 9,580,200	\$ 16,054	\$ 10,515,854
Totals:										\$ 4,997,560	\$ 2,203,920	\$ 55,528,650	\$100,000	\$ 62,830,130

NOTE: DA = DIVIDED ARTERIAL, UA = UNDIVIDED ARTERIAL, SA = SPECIAL ARTERIAL (WITH CENTER DUAL LEFT TURN LANE), SC = SPECIAL COLLECTOR (WITH CENTER DUAL LEFT TURN LANE), RECOUP = RECOUPMENT PROJECT, NEW = NEW PROJECT

6.0 IMPACT FEE ANALYSIS

6.1 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 2020 and 2030. Capacity serving existing development and development projected for more than 10 years in the future cannot be charged to impact fees.

6.1.1 Service Units

According to Chapter 395 of the Texas Local Government Code, 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 only connection or a water/wastewater connection for a single-family residence. A wastewater service unit is defined as the service unit equivalent to a water/wastewater 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. American Water Works Association (AWWA) standards C700 and C710 (Displacement Meters) and C701 (Class II Turbine meters), were used to determine the maximum operating capacity, as these meter types represent those in place and stocked by the City. The service unit equivalent for each meter size used by the City is listed in **Table 6-1**.

Typically, in Waco, single-family residences are served with 5/8 x 3/4-inch displacement water meters. 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. **Table 6-2** shows the actual number water meters for 2020 and the projected number of water meters for 2030.

Table 6-1: Service Unit Equivalents

Meter Size	Meter Type	Maximum Flow Rate (gpm) ⁽¹⁾	Service Unit Equivalent
5/8 x 3/4"	Displacement	15	1.00
1"	Displacement	40	2.67
1.5"	Class II Turbine	100	6.67
2"	Class II Turbine	160	10.67
3"	Class II Turbine	350	23.33
4"	Class II Turbine	630	42.00
6"	Class II Turbine	1,400	93.33
8"	Class II Turbine	2,400	160.00
10"	Class II Turbine	3,800	253.33

(1) Maximum flow rate is based on Table 5-3 in AWWA Manual M6.

Table 6-2: Growth in Service Units

Meter Size	2019		2020		Growth in Service Units
	Meters	Service Units	Meters	Service Units	
5/8 x 3/4"	42,697	42,697	50,443	50,443	7,746
1"	2,893	7,715	3,315	8,840	1,125
1.5"	1,355	9,033	1,553	10,353	1,320
2"	521	5,557	597	6,368	811
3"	188	4,387	215	5,017	630
4"	97	4,074	111	4,662	588
6"	31	2,893	35	3,267	373
8"	10	1,600	11	1,760	160
10"	3	760	3	760	0
Total	47,795	78,716	56,283	91,470	12,753

6.1.2 Maximum Impact Fee Calculations

The impact fee determination method employed by NewGen Strategies and Solutions, LLC is developed through a financial based model, which fully recognizes the requirements of Chapter 395, including the recognition of cash and/or debt financing, interest earnings, fund balances, and applicable credits. In developing the components of the financial model, several assumptions must be made, including the following:

- Financing
 - Method of financing (i.e. cash or debt financing)
 - The level of financing (e.g. 100% debt funding)
 - Cost of financing
 - Debt repayment structure
- Timing and Level of Expenditures and Revenues
- Interest Earnings
- Annual Service Unit Growth

The assumptions employed in the maximum assessable impact fee determination provide a reasonable basis for forecasting; however, it must be emphasized that these assumptions may not necessarily reflect actual future conditions. To address this, Chapter 395 requires the monitoring of impact fees through the Impact Fee Advisory Committee and allows for the option to update or revise impact fees to reflect the actual implementation of the impact fee program.

Once the cost of capacity added that is attributable to growth is determined, it must then be decided how the cost will be financed: cash and/or debt. For any previously funded projects, whether partially funded or in full, actual costs of capital have been included. Based on discussions with City staff, unless specific funding has already been determined, it is assumed that the City will debt finance 100% of the future impact fee eligible project costs. For debt financing, the cost of financing is based on the City's Financial Advisor's estimates of future debt costs for bonds issued with 20-year terms. Debt service payments for each future debt issue are assumed to remain constant over the issue's term.

Currently, the exact timing and annual level of cash capital expenditures over the forecast period is indeterminate; therefore, it is assumed that capital expenditures will occur in equal amounts over the 10-year program period. It is also assumed that for debt-financed capital projects, the City will expend debt proceeds over a 3-year timeframe. For the calculation of the maximum assessable impact fee, debt is assumed to be issued in equal amounts for each year. In order to recognize the full amount of debt to be issued for the cost of capacity added that is attributable to growth during the 10-year period, a portion of years 8, 9, and 10 are assumed to be spent in the final 3 years.

Because debt is issued over 20-year terms and impact fees developed herein are to be charged over a 10-year period, sufficient fund balance must be generated to meet the future debt service obligations. There is no existing fund balance at the time because this is a new impact fee. Once collection begins, the generation of fund balances will be available for interest earnings.

Chapter 395 states that interest earnings are funds of the impact fee account and are to be held to the same restrictions as impact fee revenues. Therefore, in order to recognize that interest earnings are used to fund only these specific Water or Wastewater Impact Fee CIP projects, interest earnings are credited against the costs recoverable through impact fees. It should be noted that Chapter 395 does not require the upfront recognition of interest earnings in the impact fee determination; however, in an effort to acknowledge the time value of the impact fee payers’ monies, interest earnings have been credited. Interest is assumed to be earned at an annual rate of 0.35% per City staff.

As with the timing and level of the capital expenditures over the 10-year forecast, the timing and annual level of service unit growth over the 10-year program period is indeterminate at the present time. As such, it is assumed that service unit growth will be consistent over the 10-year forecast.

Chapter 395 requires a plan for awarding either a credit for the portion of ad valorem tax and/or utility service revenues generated by new service units during the program period that are used for payment of improvements that are included in the Water Impact Fee CIP. As an alternative, a credit equal to 50% of the total cost of implementing the Water and Wastewater Impact Fee CIP may be used. The City has elected to calculate a credit that is equal to 50% of the total cost of implementing the Water and Wastewater Impact Fee CIP. **Tables 6-3 and 6-4** display a summary of the maximum allowable impact fee calculations for water and wastewater, respectively. The detailed financial calculations are provided in **Appendix I**.

Table 6-3: Maximum Water Impact Fee Calculation

Water Impact Fee	
Total Eligible Capital Improvement Costs	\$34,046,711
Recoverable Cost for Impact Fee Planning Period	\$17,023,355
Financing Costs	\$6,531,589
Interest Earnings	(\$541,910)
Total Eligible Impact Fee Costs	\$23,013,034
Growth in Service Units	12,753
Maximum Impact Fee per Service Unit	\$1,804

Table 6-4: Maximum Wastewater Impact Fee Calculation

Wastewater Impact Fee	
Total Eligible Capital Improvement Costs	\$63,734,419
Recoverable Cost for Impact Fee Planning Period	\$31,867,209
Financing Costs	\$15,091,715
Interest Earnings	(\$1,371,302)
Total Eligible Impact Fee Costs	\$45,587,622
Growth in Service Units	12,753
Maximum Impact Fee per Service Unit	\$3,574

6.2 Roadway Impact Fee Analysis

The roadway impact fee analysis involves the determination of capacity and the associated cost attributable to 10-year growth from the defined capital improvement plan for each service area. The cost per service unit is calculated by dividing the cost of the CIP necessitated and attributable to new demand (net cost) by the projected service units of growth over the 10-year planning period.

6.2.1 Service Units for New Development

An important objective in the development of the impact fee system is the development of a specific service unit equivalency for individual developments. The vehicle-miles generated by a new development are a function of the trip generation and average trip length characteristics of that development. The following describes the process used to develop the vehicle-equivalency table, which relates land use types and sizes to the resulting vehicle-miles of demand created by that development.

6.2.2 Trip Generation

Trip generation information for the PM peak hour was based on data published in the Tenth Edition of *Trip Generation* by the Institute of Transportation Engineers (ITE). *Trip Generation* is a reference publication that contains travel characteristics of over 100 land uses across the nation and is based on empirical data gathered from over 3,200 studies that were reported to the Institute by public agencies, developers and consulting firms.

Pass-by and Diverted Trips Adjustments

The actual "traffic impact" of a specific site for impact fee purposes is based on the amount of traffic added to the street system. To accurately estimate new trips generated by a new development, adjustments must be made to trip generation rates and equations to account for pass-by and diverted

trips. The added traffic is adjusted so that each development is assigned only for a portion of trips associated with that specific development, reducing the possibility of over-counting by counting only primary trips generated.

Pass-by trips are those trips that are already on a route for a different purpose and simply stop at a development on that route. For example, a stop at a convenience store on the way home from the office is a pass-by trip for the convenience store. A pass-by trip does not create an additional burden on the street system and therefore should not be counted in the assessment of impact fees of a convenience store.

A diverted trip is a similar situation, except that a diversion is made from the regular route to make an interim stop. On a system-wide basis, this trip places a slightly additional burden on the street system but in many cases, this burden is minimal.

Trip generation rates were reduced by the percentages presented in **Table 6-5** to isolate the primary trip purpose. Adjustments were based on studies conducted by ITE and other published studies.

The resulting recommended trip rates are illustrated as part of the Land Use/Vehicle-Mile Equivalency Table illustrated later in this chapter. Rates were developed in lieu of equations to simplify the assessment of impact fees by the City and likewise, the estimation of impact fees by persons who may be required to pay an impact fee in conjunction with a development project.

A local study may also be conducted to confirm rates in Trip Generation or to change rates reflecting local conditions. In such cases, a minimum of three similar sites should be counted. Selected sites should be isolated in nature with driveways that specifically serve the development and no other land uses. The results should be plotted on the scatter diagram of the selected land use contained in Trip Generation for comparison purposes. It is recommended that no change be approved unless the results show a variation of at least fifteen percent across the range of the sample size surveyed.

Table 6-5: Trip Reduction Estimates (PM Peak Hour)

Land Use Category	ITE Code	Development Unit	Trip Gen Rate (PM Peak)	Pass-by Rate (%)	Diverted Rate (%)	Trip Rate w/ Reductions (PM Peak)
RESIDENTIAL						
Single-Family Detached Housing	210	Dwelling Units	0.99	0%	0%	0.99
Multifamily Housing (Low-Rise)	220	Dwelling Units	0.56	0%	0%	0.56
Mid-Rise Residential with 1st-Floor Commercial	231	Dwelling Units	0.36	0%	0%	0.36
Senior Adult Housing - Detached	251	Dwelling Units	0.3	0%	0%	0.30
Assisted Living	254	Beds	0.26	0%	0%	0.26
Continuing Care Retirement Community	255	Dwelling Units	0.16	0%	0%	0.16
OFFICE						
General Office Building	710	1,000 Sq Ft GFA	1.15	0%	0%	1.15
Medical-Dental Office Building	720	1,000 Sq Ft GFA	3.46	0%	0%	3.46
United States Post Office	732	1,000 Sq Ft GFA	11.21	70%	0%	3.36
COMMERCIAL/RETAIL						
Hotel	310	Rooms	0.6	0%	0%	0.60
All Suites Hotel	311	Rooms	0.36	0%	0%	0.36
Miniature Golf Course	431	Holes	0.33	0%	0%	0.33
Golf Driving Range	432	Driving Positions	1.25	0%	0%	1.25
Movie Theater	444	Screens	14.6	0%	0%	14.60
Health/Fitness Club	492	1,000 Sq Ft GFA	3.45	0%	0%	3.45
Hospital	610	1,000 Sq Ft GFA	0.97	0%	0%	0.97
Nursing Home	620	1,000 Sq Ft GFA	0.59	0%	0%	0.59
Free-Standing Emergency Room	650	1,000 Sq Ft GFA	1.52	0%	0%	1.52
Shopping Center	820	1,000 Sq Ft GLA	3.81	34%	26%	1.52
Building Materials and Lumber Store	812	1,000 Sq Ft GFA	2.06	25%	0%	1.55
Free-Standing Discount Store	815	1,000 Sq Ft GFA	4.83	17%	35%	2.32
Hardware/Paint Store	816	1,000 Sq Ft GFA	2.68	26%	28%	1.23
Nursery (Garden Center)	817	1,000 Sq Ft GFA	6.94	25%	0%	5.21
Supermarket	850	1,000 Sq Ft GFA	9.24	36%	38%	2.40
Discount Club	857	1,000 Sq Ft GFA	4.18	30%	0%	2.93
Sporting Goods Superstore	861	1,000 Sq Ft GFA	2.02	40%	0%	1.21
Home Improvement Superstore	862	1,000 Sq Ft GFA	2.33	48%	24%	0.65
Electronic Superstore	863	1,000 Sq Ft GFA	4.26	40%	33%	1.15
Baby Superstore	865	1,000 Sq Ft GFA	1.82	30%	0%	1.27
Department Store	875	1,000 Sq Ft GFA	1.95	30%	0%	1.37
Arts and Crafts Store	879	1,000 Sq Ft GFA	6.21	30%	0%	4.35
Pharmacy/Drugstore w/o Drive-Through Window	880	1,000 Sq Ft GFA	8.51	49%	13%	3.23
Pharmacy/Drugstore w/ Drive-Through Window	881	1,000 Sq Ft GFA	10.29	49%	13%	3.91
Furniture Store	890	1,000 Sq Ft GFA	0.52	53%	31%	0.08
Walk-in Bank	911	1,000 Sq Ft GFA	12.13	47%	26%	3.28
Drive-in Bank	912	Drive-in Lanes	27.15	47%	26%	7.33
Quality Restaurant	931	1,000 Sq Ft GFA	7.8	44%	27%	2.26
High-Turnover (Sit-Down) Restaurant	932	1,000 Sq Ft GFA	9.77	43%	26%	3.03
Fast-Food Restaurant w/ Drive-Through Window	934	1,000 Sq Ft GFA	32.67	50%	23%	8.82
Quick Lubrication Vehicle Shop	941	Service Positions	2.43	0%	0%	2.43
Automobile Parts Service Center	943	1,000 Sq Ft GFA	0.77	0%	0%	0.77
Gasoline/Service Station w/ Convenience Market	945	Fueling Positions	9.24	36%	38%	2.40
Car Wash and Detail Center	949	Wash Stalls	23.04	63%	26%	2.53
INDUSTRIAL						
General Light Industrial	110	1,000 Sq Ft GFA	0.63	0%	0%	0.63
Manufacturing	140	1,000 Sq Ft GFA	0.67	0%	0%	0.67
Warehousing	150	1,000 Sq Ft GFA	0.19	0%	0%	0.19
Mini-Warehouse	151	1,000 Sq Ft GFA	0.17	0%	0%	0.17
INSTITUTIONAL						
Private School (K-8)	534	Students	0.26	0%	0%	0.26
Private School (K-12)	536	Students	0.17	0%	0%	0.17
Charter Elementary School	537	Students	0.14	0%	0%	0.14
Church	560	1,000 Sq Ft GFA	0.49	0%	0%	0.49
Day Care Center	565	Students	0.79	75%	0%	0.20

Trip Length

Trip lengths (in miles) are used in conjunction with site trip generation to estimate vehicle-miles of travel. Trip length data was based on information generated for the Waco MPO travel demand modeling by TxDOT, the National Household Travel Survey, the North Central Texas Council of Governments Workplace Survey, and engineering judgment. Travel characteristics were used to determine average trip lengths for common land use types.

Trip lengths summarized in **Table 6-6** represent the average distance that a vehicle will travel between an origin and destination of which either the origin or destination contains the land-use category identified below. Data compiled represents the best available information on trip lengths for this area.

Localized Trip Adjustment

Identified trip lengths represent the average distance that a vehicle will travel between an origin and destination of which either the origin or destination contains the land-use category identified below. A localization adjustment of was made to these to net out the portion of trip length on the federal highway system since the impact fee system does not include federal facilities in the Chapter 395 legislation. Based on the travel demand model output, an analysis revealed approximately 68% of vehicle-miles for trips were on the local network, with the remaining on the federal highway system.

Origin and Destination Adjustments

The assessment of an individual development's impact fee is based on the premise that each vehicle-trip has an origin and a destination, and that the development end should pay for one-half of the cost necessary to complete each trip. To prevent the potential of double charging, trip lengths were divided by two to reflect half of the vehicle trip associated with development. **Table 6-6** illustrates the adjusted trip length.

Table 6-6: Trip Lengths and Adjustments

Land Use Category	ITE Code	Localized Trip Length (mi)	O-D Adjusted Trip Length (mi)
RESIDENTIAL			
Single-Family Detached Housing	210	6.45	3.23
Multifamily Housing (Low-Rise)	220	6.45	3.23
Multifamily Housing (Mid-Rise)	221	6.45	3.23
Off-Campus Student Apartment	225	1.94	0.97
Mid-Rise Residential with 1st-Floor Commercial	231	5.55	2.77
Senior Adult Housing - Detached	251	5.76	2.88
Assisted Living	254	2.97	1.48
Continuing Care Retirement Community	255	5.76	2.88
OFFICE			
General Office Building	710	8.60	4.30
Medical-Dental Office Building	720	6.97	3.48
COMMERCIAL/RETAIL			
Hotel	310	2.84	1.42
Golf Course	430	3.99	1.99
Miniature Golf Course	431	2.82	1.41
Golf Driving Range	432	2.82	1.41
Movie Theater	444	2.26	1.13
Health/Fitness Club	492	1.41	0.71
Hospital	610	3.55	1.77
Nursing Home	620	3.55	1.77
Clinic	630	3.55	1.77
Shopping Center	820	4.88	2.44
Building Materials and Lumber Store	812	2.44	1.22
Free-Standing Discount Store	815	4.88	2.44
Hardware/Paint Store	816	2.44	1.22
Nursery (Garden Center)	817	2.44	1.22
Supermarket	850	2.16	1.08
Discount Club	857	4.88	2.44
Sporting Goods Superstore	861	4.88	2.44
Home Improvement Superstore	862	4.88	2.44
Electronic Superstore	863	4.88	2.44
Baby Superstore	865	4.88	2.44
Pet Supply Superstore	866	4.88	2.44
Department Store	875	4.88	2.44
Pharmacy/Drugstore w/ Drive-Through Window	881	1.32	0.66
Furniture Store	890	4.88	2.44
Walk-in Bank	911	1.80	0.9
Drive-in Bank	912	1.80	0.9
Quality Restaurant	931	2.57	1.28
High-Turnover (Sit-Down) Restaurant	932	2.66	1.33
Fast-Food Restaurant w/ Drive-Through Window	934	2.42	1.21
Quick Lubrication Vehicle Shop	941	1.96	0.98
Automobile Parts Service Center	943	1.96	0.98
Gasoline/Service Station w/ Convenience Market	945	0.82	0.41
Car Wash and Detail Center	949	1.37	0.69
INDUSTRIAL			
Manufacturing	140	8.60	4.30
Warehousing	150	8.60	4.30
Mini-Warehouse	151	4.34	2.17
INSTITUTIONAL			
Private School (K-8)	534	2.82	1.41
Private School (K-12)	536	2.82	1.41
Charter Elementary School	537	2.82	1.41
Junior/Community College	540	2.88	1.44
University/College	550	3.43	1.71
Church	560	1.70	0.85
Day Care Center	565	1.12	0.56

Service Unit Equivalency Table

The result of combining the trip generation and trip length information is an equivalency table which establishes the service unit rate for various land uses. These service unit rates are based on an appropriate development unit for each land use. For example, a dwelling unit is the basis for residential uses, while 1,000 gross square feet of floor area is the basis for office, commercial, and industrial uses. Other less common land uses use appropriate independent variables.

Separate rates have been established for specific land uses within the broader categories of residential, commercial, industrial, and institutional to reflect the differences between land uses within the categories. However, even with these specific land use types, information is not available for every conceivable land use so limitations do exist. The equivalency table is illustrated in **Table 6-7**.

Table 6-7: Land Use Vehicle-Mile Equivalency

Land Use Category	ITE Code	Development Unit	Trip Rate w/ Reductions (PM Peak)	O-D Adjusted Trip Length (mi)	Service Unit Equivalency
RESIDENTIAL					
Single-Family Detached Housing	210	Dwelling Units	0.99	3.23	3.20
Multifamily Housing (Low-Rise)	220	Dwelling Units	0.56	3.23	1.81
Multifamily Housing (Mid-Rise)	221	Dwelling Units	0.44	3.23	1.42
Off-Campus Student Apartment	225	Bedrooms	0.25	0.97	0.24
Mid-Rise Residential with 1st-Floor Commercial	231	Dwelling Units	0.36	2.77	1.00
Senior Adult Housing - Detached	251	Dwelling Units	0.30	2.88	0.86
Assisted Living	254	Beds	0.26	1.48	0.38
Continuing Care Retirement Community	255	Dwelling Units	0.16	2.88	0.46
OFFICE					
General Office Building	710	1,000 Sq Ft GFA	1.15	4.30	4.95
Medical-Dental Office Building	720	1,000 Sq Ft GFA	3.46	3.48	12.04
United States Post Office	732	1,000 Sq Ft GFA	3.36	2.88	9.68
Research and Development Center	760	1,000 Sq Ft GFA	0.49	4.30	2.11
COMMERCIAL/RETAIL					
Hotel	310	Rooms	0.60	1.42	0.85
All Suites Hotel	311	Rooms	0.36	1.42	0.51
Golf Course	430	Holes	2.91	1.99	5.79
Miniature Golf Course	431	Holes	0.33	1.41	0.47
Golf Driving Range	432	Driving Positions	1.25	1.41	1.76
Multiplex Movie Theater	445	Screens	13.73	1.13	15.51
Health/Fitness Club	492	1,000 Sq Ft GFA	3.45	0.71	2.45
Hospital	610	1,000 Sq Ft GFA	0.97	1.77	1.72
Nursing Home	620	1,000 Sq Ft GFA	0.59	1.77	1.04
Clinic	630	1,000 Sq Ft GFA	3.28	1.77	5.81
Animal Hospital/Veterinary Clinic	640	1,000 Sq Ft GFA	3.53	1.77	6.25
Free-Standing Emergency Room	650	1,000 Sq Ft GFA	1.52	1.77	2.69
Shopping Center	820	1,000 Sq Ft GLA	1.52	2.44	3.71
Building Materials and Lumber Store	812	1,000 Sq Ft GFA	1.55	1.22	1.89
Free-Standing Discount Superstore	813	1,000 Sq Ft GFA	3.12	2.44	7.61
Variety Store	814	1,000 Sq Ft GFA	5.13	2.44	12.52
Free-Standing Discount Store	815	1,000 Sq Ft GFA	2.32	2.44	5.66
Hardware/Paint Store	816	1,000 Sq Ft GFA	1.23	1.22	1.50
Nursery (Garden Center)	817	1,000 Sq Ft GFA	5.21	1.22	6.36
Supermarket	850	1,000 Sq Ft GFA	2.40	1.08	2.59
Convenience Market w/ Gasoline Pumps	853	Fueling Positions	2.53	0.41	1.04
Discount Club	857	1,000 Sq Ft GFA	2.93	2.44	7.15
Sporting Goods Superstore	861	1,000 Sq Ft GFA	1.21	2.44	2.95
Home Improvement Superstore	862	1,000 Sq Ft GFA	0.65	2.44	1.59
Electronic Superstore	863	1,000 Sq Ft GFA	1.15	2.44	2.81
Pet Supply Superstore	866	1,000 Sq Ft GFA	2.49	2.44	6.08
Office Supply Superstore	867	1,000 Sq Ft GFA	1.94	2.44	4.73
Discount Home Furnishing Superstore	869	1,000 Sq Ft GFA	1.57	2.44	3.83
Department Store	875	1,000 Sq Ft GFA	1.37	2.44	3.34
Arts and Crafts Store	879	1,000 Sq Ft GFA	4.35	2.44	10.61
Pharmacy/Drugstore w/o Drive-Through Window	880	1,000 Sq Ft GFA	3.23	0.66	2.13
Pharmacy/Drugstore w/ Drive-Through Window	881	1,000 Sq Ft GFA	3.91	0.66	2.58
Furniture Store	890	1,000 Sq Ft GFA	0.08	2.44	0.20
Walk-in Bank	911	1,000 Sq Ft GFA	3.28	0.9	2.95
Drive-in Bank	912	Drive-in Lanes	7.33	0.9	6.60
Quality Restaurant	931	1,000 Sq Ft GFA	2.26	1.28	2.89
High-Turnover (Sit-Down) Restaurant	932	1,000 Sq Ft GFA	3.03	1.33	4.03
Fast-Food Restaurant w/ Drive-Through Window	934	1,000 Sq Ft GFA	8.82	1.21	10.67
Bread/Donut/Bagel Shop w/o Drive-Through Window	939	1,000 Sq Ft GFA	7.56	0.41	3.10
Quick Lubrication Vehicle Shop	941	Service Positions	2.43	0.98	2.38
Automobile Parts Service Center	943	1,000 Sq Ft GFA	0.77	0.98	0.75
Car Wash and Detail Center	949	Wash Stalls	2.53	0.69	1.75
INDUSTRIAL					
General Light Industrial	110	1,000 Sq Ft GFA	0.63	4.30	2.71
Manufacturing	140	1,000 Sq Ft GFA	0.67	4.30	2.88
Warehousing	150	1,000 Sq Ft GFA	0.19	4.30	0.82
Mini-Warehouse	151	1,000 Sq Ft GFA	0.17	2.17	0.37
High-Cube Fulfillment Center Warehouse	155	1,000 Sq Ft GFA	1.37	4.3	5.89
Data Center	160	1,000 Sq Ft GFA	0.09	4.3	0.39
INSTITUTIONAL					
Private School (K-8)	534	Students	0.26	1.41	0.37
Private School (K-12)	536	Students	0.17	1.41	0.24
Charter Elementary School	537	Students	0.14	1.41	0.20
Junior/Community College	540	Students	0.11	1.44	0.16
University/College	550	Students	0.15	1.71	0.26
Church	560	1,000 Sq Ft GFA	0.49	0.85	0.42
Day Care Center	565	Students	0.20	0.56	0.11

6.2.3 Service Units of Growth

Forecasted service units of growth by service area were calculated based on projected growth as described in the Land Use Assumptions (Chapter 3) and the associated service unit generation for each of the population and employment data components. The 10-year projected vehicle-miles of demand by service area were summarized in **Section 5.4** and detailed in **Appendix E**.

6.2.4 Maximum Impact Fee Calculations

The impact fee determination method employed by NewGen Strategies and Solutions, LLC is developed through a financial based model, which fully recognizes the requirements of Chapter 395, including the recognition of cash and/or debt financing, interest earnings, fund balances, and applicable credits. In developing the components of the financial model, several assumptions must be made, including the following:

- Financing
 - Method of financing (i.e. cash or debt financing)
 - The level of financing (e.g. 100% debt funding)
 - Cost of financing
 - Debt repayment structure
- Timing and Level of Expenditures and Revenues
- Interest Earnings
- Annual Service Unit Growth

The assumptions employed in the maximum assessable impact fee determination provide a reasonable basis for forecasting; however, it must be emphasized that these assumptions may not necessarily reflect actual future conditions. To address this, Chapter 395 requires the monitoring of impact fees through the Impact Fee Advisory Committee and allows for the option to update or revise impact fees to reflect the actual implementation of the impact fee program.

Once the cost of capacity added that is attributable to growth is determined, it must then be decided how the cost will be financed: cash and/or debt. For any previously funded projects, whether partially funded or in full, actual costs of capital have been included. Based on discussions with City staff, unless specific funding has already been determined, it is assumed that the City will debt finance 100% of the future impact fee eligible project costs. For debt financing, the cost of financing is based on the City's Financial

Advisor's estimates of future debt costs for bonds issued with 20-year terms. Debt service payments for each future debt issue are assumed to remain constant over the issue's term.

Currently, the exact timing and annual level of cash capital expenditures over the forecast period is indeterminate; therefore, it is assumed that capital expenditures will occur in equal amounts over the 10-year program period. It is also assumed that for debt-financed capital projects, the City will expend debt proceeds over a 3-year timeframe. For the calculation of the maximum assessable impact fee, debt is assumed to be issued in equal amounts for each year. In order to recognize the full amount of debt to be issued for the cost of capacity added that is attributable to growth during the 10-year period, a portion of years 8, 9, and 10 are assumed to be spent in the final 3 years.

Because debt is issued over 20-year terms and impact fees developed herein are to be charged over a 10-year period, sufficient fund balance must be generated to meet the future debt service obligations. There is no existing fund balance at the time because this is a new impact fee. Once collection begins, the generation of fund balances will be available for interest earnings.

Chapter 395 states that interest earnings are funds of the impact fee account and are to be held to the same restrictions as impact fee revenues. Therefore, in order to recognize that interest earnings are used to fund only these specific Roadway Impact Fee CIP projects, interest earnings are credited against the costs recoverable through impact fees. It should be noted that Chapter 395 does not require the upfront recognition of interest earnings in the impact fee determination; however, in an effort to acknowledge the time value of the impact fee payers' monies, interest earnings have been credited. Interest is assumed to be earned at an annual rate of 0.35% per City staff.

As with the timing and level of the capital expenditures over the 10-year forecast, the timing and annual level of vehicle mile growth over the 10-year program period is indeterminate at the present time. As such, it is assumed that vehicle mile growth will be consistent over the 10-year forecast.

Chapter 395 requires a plan for awarding either a credit for the portion of ad valorem tax revenues generated by new vehicle miles during the program period that are used for payment of improvements that are included in the Roadway Impact Fee CIP. As an alternative, a credit equal to 50% of the total cost of implementing the Roadway Impact Fee CIP may be used. The City has elected to calculate a credit that is equal to 50% of the total cost of implementing the Roadway Impact Fee CIP. The resulting maximum

fee per vehicle mile is summarized in **Table 6-8** below. The detailed financial calculations are provided in **Appendix E**.

Table 6-8: Maximum Roadway Impact Fee Calculation

Service Area:	1	2	3	4	5	6	7	8	9	10	11
Total Project Costs	\$204,914	\$4,355,135	\$16,064,507	\$518,981	\$ -	\$615,707	\$14,769,596	\$ -	\$8,783,276	\$7,002,158	\$10,515,854
Recoverable Cost for Impact Fee Planning Period	\$66,333	\$2,102,651	\$3,604,402	\$109,788	\$ -	\$306,773	\$2,393,745	\$ -	\$4,391,638	\$2,263,085	\$1,588,886
Financing Costs	\$39,657	\$1,265,970	\$2,167,182	\$65,135	\$ -	\$183,836	\$1,435,329	\$ -	\$2,645,980	\$1,362,050	\$953,433
Interest Earnings	\$(3,934)	\$(125,579)	\$(214,975)	\$(6,461)	\$ -	\$(18,236)	\$(142,378)	\$ -	\$(262,470)	\$(135,109)	\$(94,576)
Total Eligible Impact Fee Costs	\$102,056	\$3,243,042	\$5,556,609	\$168,462	\$ -	\$472,373	\$3,686,696	\$ -	\$6,775,149	\$3,490,026	\$2,447,742
Growth in Service Units	15,947	4,650	4,293	650	1,650	2,002	3,879	-	10,967	2,636	2,094
Maximum Assessable Fee	\$6	\$697	\$1,294	\$259	\$ -	\$236	\$950	\$ -	\$618	\$1,324	\$1,169

Appendix A

Population & Employment by TAZ

Appendix A
Population and Employment by TAZ

TAZ	Pop 2020	Pop 2030	Pop 2040	Emp 2020	Emp 2030	Emp 2040	Pop Change 2020-2030	Pop Change 2020-2040	Emp Change 2020 - 2030	Emp Change 2020 - 2040
1	432	685	801	605	700	702	253	369	96	98
2	918	1,193	1,400	2,883	3,034	3,104	275	482	151	221
3	324	497	664	512	625	844	173	340	113	332
4	594	774	918	690	715	728	180	324	25	37
5	324	442	553	1,628	1,781	1,843	118	229	153	216
6	108	276	553	525	552	558	168	445	27	32
7	1,458	1,547	1,604	260	346	407	89	146	85	147
8	2,052	2,155	2,212	112	125	194	103	160	13	82
9	0	424	425	3	7	24	424	425	4	21
10	0	0	0	326	432	485	0	0	107	160
11	0	0	0	70	72	49	0	0	2	-21
12	4,428	4,586	4,667	2,539	2,688	2,769	158	239	149	230
13	1,026	1,105	1,134	465	576	669	79	108	111	204
14	400	497	553	56	96	126	98	153	40	70
15	2,592	2,431	2,112	205	288	369	-161	-480	83	164
16	1,296	1,414	1,493	335	336	291	118	197	1	-44
17	0	0	0	409	451	480	0	0	42	71
18	1,944	2,077	2,135	223	254	276	133	191	31	53
19	923	945	1,388	302	329	369	21	465	27	66
20	1,685	1,823	1,880	172	192	301	138	195	20	129
21	461	506	541	9	10	10	45	80	0	0
22	378	497	608	484	490	485	119	230	6	1
23	471	497	498	279	288	291	26	27	9	12
24	562	608	665	1,070	1,123	1,154	46	103	54	85
25	389	414	442	465	576	689	26	54	111	224
26	378	392	415	70	77	78	14	37	7	8
27	1,323	1,354	1,360	84	101	116	31	37	17	33
28	864	900	910	191	199	204	36	46	8	13
29	1,091	1,116	1,123	28	34	49	25	32	6	21
30	2,214	2,245	2,260	70	77	92	31	46	7	22
31	2,203	2,230	2,240	37	43	44	27	37	6	6
32	1,415	1,448	1,460	698	705	710	33	45	8	13
33	2,128	2,182	2,190	74	96	116	55	62	22	42
34	540	580	585	349	384	398	40	45	35	49
35	2,300	2,403	2,500	84	100	105	103	199	16	21
36	1,501	1,520	1,530	70	86	97	19	29	17	27
37	724	774	820	7	8	8	50	96	0	0
38	518	560	565	65	74	82	42	47	9	17
39	1,944	1,960	1,975	140	148	160	16	31	9	21
40	778	801	807	37	43	53	24	30	6	16
41	1,566	1,601	1,610	195	211	228	35	44	16	33
42	1,944	2,100	2,212	112	192	238	156	268	80	126
43	1,512	1,602	1,659	200	288	359	90	147	88	159
44	572	630	664	23	43	53	57	91	20	30

Appendix A
Population and Employment by TAZ

TAZ	Pop 2020	Pop 2030	Pop 2040	Emp 2020	Emp 2030	Emp 2040	Pop Change 2020-2030	Pop Change 2020-2040	Emp Change 2020 - 2030	Emp Change 2020 - 2040
45	65	72	77	11	19	39	7	13	8	28
46	153	157	664	284	293	301	4	510	9	17
47	243	245	559	0	0	0	2	316	0	0
48	529	538	553	353	350	340	9	24	-3	-14
49	137	222	304	113	142	175	85	167	29	61
50	265	304	332	498	533	543	39	67	35	46
51	0	0	0	19	20	22	0	0	2	4
52	0	0	0	112	122	131	0	0	10	19
53	0	0	0	561	588	605	0	0	28	44
54	1,600	1,730	4,424	268	303	340	130	2,824	35	71
55	591	630	664	89	99	126	39	73	10	37
56	218	277	332	2	5	5	59	113	3	3
57	1,086	1,080	1,051	213	223	534	-5	-35	10	321
58	971	1,055	1,117	68	86	107	84	146	18	38
59	508	619	719	77	87	97	111	211	10	20
60	1,340	1,434	1,499	97	135	184	94	158	38	88
61	732	844	940	132	177	233	112	208	45	101
62	567	710	841	115	162	223	143	273	47	108
63	43	22	0	28	78	213	-21	-43	50	186
64	364	578	785	108	160	233	215	421	52	125
65	121	173	221	61	95	145	51	100	34	85
66	999	1,061	1,106	45	67	97	62	107	22	52
67	0	88	254	30	90	267	88	254	60	237
75	0	0	0	37	47	63	0	0	10	26
77	45	46	46	21	62	179	1	1	41	158
78	0	0	0	30	32	37	0	0	2	7
79	0	0	0	169	200	230	0	0	31	61
87	103	497	664	0	0	10	395	561	0	10
88	0	0	0	47	48	49	0	0	2	2
90	847	884	940	65	82	112	37	93	17	46
91	207	240	442	19	20	49	32	235	2	30
92	27	28	166	93	96	194	1	139	3	101
95	2,916	2,984	2,986	166	188	209	68	70	22	42
96	529	553	619	112	120	126	23	90	8	15
97	1,529	1,597	1,631	112	120	131	68	102	8	19
98	565	787	1,106	60	168	262	222	541	108	201
101	0	0	0	22	30	49	0	0	7	26
110	0	0	0	62	101	160	0	0	38	98
111	8	7	0	279	316	335	-1	-8	37	56
112	972	1,326	1,493	219	240	388	354	521	21	169
113	278	308	332	42	58	68	31	54	16	26
114	757	785	802	56	75	76	27	45	19	20
115	168	173	177	14	16	19	5	8	2	5
116	0	0	0	0	0	0	0	0	0	0

Appendix A
Population and Employment by TAZ

TAZ	Pop 2020	Pop 2030	Pop 2040	Emp 2020	Emp 2030	Emp 2040	Pop Change 2020-2030	Pop Change 2020-2040	Emp Change 2020 - 2030	Emp Change 2020 - 2040
117	160	138	112	985	1,032	1,043	-22	-48	47	58
118	1,527	1,770	1,825	246	327	437	243	298	81	190
119	448	475	498	222	241	243	27	50	19	20
120	1,100	1,150	1,300	185	190	215	50	200	5	30
121	1,863	2,059	2,212	328	389	441	196	349	61	113
122	926	1,437	1,770	284	384	490	511	844	100	206
124	0	0	0	600	620	840	0	0	20	240
125	0	0	0	977	1,032	1,043	0	0	56	66
126	0	111	166	791	830	839	111	166	40	49
127	0	0	0	614	634	640	0	0	20	26
128	0	0	0	1,033	1,078	1,101	0	0	45	68
129	0	0	0	1,322	1,384	1,408	0	0	62	86
130	1,750	1,823	1,880	1,462	1,527	1,562	74	131	65	100
131	906	934	940	534	568	592	28	34	34	58
132	720	782	830	466	504	534	62	109	38	68
133	0	0	0	614	634	640	0	0	20	26
134	1,059	1,095	1,106	653	694	723	36	47	41	70
135	1,848	1,878	1,896	248	278	306	30	48	30	57
136	924	950	970	248	278	306	26	46	30	57
137	1,350	1,403	1,438	461	496	524	53	88	35	63
139	0	0	22	424	485	543	0	22	61	119
140	856	918	929	316	338	341	62	73	22	25
141	548	583	719	1,056	1,151	1,310	36	171	95	254
142	1,881	1,928	1,930	904	968	1,014	47	49	64	110
143	590	650	697	694	744	781	60	107	50	87
144	300	300	315	77	86	97	0	15	9	20
145	60	60	70	100	120	125	0	10	20	25
146	20	100	150	190	201	215	80	130	11	25
150	778	810	830	119	123	124	32	52	4	5
151	1,039	1,066	1,073	1	1	1	27	34	0	0
152	529	547	553	186	192	194	18	24	6	8
153	571	600	610	521	542	621	29	39	22	100
154	648	690	695	800	845	868	42	47	45	68
155	1,199	1,240	1,245	19	24	29	41	46	5	11
156	972	999	1,018	112	115	116	27	46	4	5
157	1,549	1,580	1,595	206	216	228	31	46	10	21
158	2,546	2,565	2,590	70	96	108	19	44	26	38
159	0	0	0	604	677	742	0	0	73	138
160	2,570	2,641	2,654	56	75	100	71	84	19	44
161	933	975	995	214	234	291	41	62	20	77
162	518	556	581	14	16	19	37	62	2	5
163	0	0	0	0	0	0	0	0	0	0
166	0	0	0	0	0	0	0	0	0	0
167	259	351	1,051	4	4	15	92	792	0	11

Appendix A
Population and Employment by TAZ

TAZ	Pop 2020	Pop 2030	Pop 2040	Emp 2020	Emp 2030	Emp 2040	Pop Change 2020-2030	Pop Change 2020-2040	Emp Change 2020 - 2030	Emp Change 2020 - 2040
168	0	0	332	30	82	194	0	332	52	164
169	0	0	387	0	29	97	0	387	29	97
170	41	49	66	7	7	0	8	25	0	-7
171	702	1,063	1,327	428	515	616	361	625	87	188
172	1,863	1,937	2,046	358	384	417	74	183	26	59
173	1,253	1,332	1,383	86	91	97	79	130	6	11
174	215	308	398	1,079	1,123	1,193	93	183	44	114
175	41	242	442	121	140	165	201	401	19	44
176	76	120	300	47	48	49	44	224	2	2
177	0	287	288	37	68	89	287	288	31	52
178	65	166	442	7	30	39	101	378	22	31
179	65	72	77	2	3	3	7	13	1	1
180	864	995	1,383	47	62	126	131	519	15	79
181	53	54	133	28	34	49	1	80	6	21
182	0	0	0	240	259	291	0	0	19	51
183	108	112	133	9	12	15	4	25	2	5
184	459	538	719	349	420	582	79	260	71	233
185	551	564	575	22	23	24	13	24	1	2
192	0	0	0	186	480	2,030	0	0	294	1,844
193	8	8	111	1	1	5	0	103	0	4
208	0	295	332	0	150	291	295	332	150	291
214	0	0	0	14	26	29	0	0	12	15
215	0	0	0	814	854	863	0	0	41	50
216	0	0	0	873	1,390	1,528	0	0	517	654
217	825	864	885	1,082	1,159	1,214	39	60	77	133
218	0	0	0	1,267	1,365	1,455	0	0	98	188
219	0	0	0	1,721	1,882	1,940	0	0	161	220
221	224	309	389	84	86	87	86	166	3	4
222	2,908	3,174	3,373	142	178	218	265	465	35	76
226	540	1,658	2,212	1	4	10	1,118	1,672	3	9
228	283	335	385	1,035	1,040	1,163	52	102	5	128
229	0	0	0	597	869	960	0	0	272	363
230	0	0	0	265	428	526	0	0	163	261
235	446	1,425	1,659	67	211	247	979	1,213	144	180
236	24	66	72	0	0	0	43	48	0	0
237	3,888	4,199	4,424	209	264	310	311	536	55	101
238	513	674	824	18	26	97	161	311	8	79
239	56	221	553	2	14	29	165	497	13	27
240	133	287	288	0	0	0	154	155	0	0
241	54	138	221	0	0	0	84	167	0	0
242	659	801	912	7	9	15	142	254	2	8
247	324	663	1,106	5	5	10	339	782	0	5
252	0	0	0	28	29	29	0	0	1	1
253	0	0	0	651	672	689	0	0	21	38

Appendix A
Population and Employment by TAZ

TAZ	Pop 2020	Pop 2030	Pop 2040	Emp 2020	Emp 2030	Emp 2040	Pop Change 2020-2030	Pop Change 2020-2040	Emp Change 2020 - 2030	Emp Change 2020 - 2040
255	1,780	1,865	1,880	259	291	315	85	100	32	57
256	779	813	830	530	552	558	35	51	22	28
257	579	610	629	244	263	277	31	50	19	34
258	0	0	0	0	0	0	0	0	0	0
259	0	0	0	380	526	558	0	0	146	177
260	0	0	0	385	438	478	0	0	53	93
261	1,245	1,471	1,668	1,545	1,824	1,964	226	423	279	420
265	1,901	2,120	2,765	2	5	10	220	864	3	8
304	59	61	111	1	53	102	1	51	52	101
320	68	135	199	42	50	58	67	131	8	16
345	1,296	1,340	1,344	884	912	1,023	44	48	29	140
346	0	0	0	75	130	150	0	0	55	75
349	91	129	166	28	45	58	39	75	17	30
350	259	326	387	9	10	15	67	128	0	5
351	16	62	83	20	20	34	46	67	1	14
352	443	470	476	9	14	49	27	33	5	39
353	248	265	265	4	5	5	17	17	1	1
354	138	152	210	2	2	10	14	72	0	8
355	173	193	221	14	14	15	21	48	0	1
356	0	0	0	812	872	917	0	0	60	105
357	0	0	0	198	224	247	0	0	26	49
358	0	0	0	22	30	39	0	0	7	16
359	1,377	1,450	1,465	558	595	635	73	88	37	77
360	648	845	885	2,566	2,730	2,842	197	237	164	276
361	0	0	0	525	567	601	0	0	43	77
362	0	0	0	751	790	815	0	0	40	64
363	616	630	630	9	12	13	14	15	3	3
364	0	127	221	233	221	218	127	221	-12	-14
365	323	413	498	186	192	209	90	175	6	23
366	254	334	465	98	108	131	80	211	11	33
367	0	332	332	381	446	500	332	332	65	118
368	0	0	0	267	279	282	0	0	12	15
371	247	262	277	0	0	0	15	29	0	0
372	28	31	32	0	0	0	3	4	0	0
373	1,053	1,086	1,217	20	21	29	33	164	1	9
374	623	666	830	11	13	39	43	206	2	28
376	994	1,130	1,244	158	173	201	137	251	15	43
377	0	0	0	275	298	315	0	0	22	40
378	367	376	380	33	35	63	8	13	1	30
379	0	346	442	320	382	446	346	442	62	126
380	391	565	774	178	220	276	174	383	42	99
381	32	57	83	0	0	0	25	51	0	0
382	651	678	747	11	12	15	27	95	0	3
401	0	0	0	0	0	0	0	0	0	0

Appendix A
Population and Employment by TAZ

TAZ	Pop 2020	Pop 2030	Pop 2040	Emp 2020	Emp 2030	Emp 2040	Pop Change 2020-2030	Pop Change 2020-2040	Emp Change 2020 - 2030	Emp Change 2020 - 2040
404	167	221	221	152	186	243	54	54	35	91
405	0	0	0	2	14	29	0	0	13	27
406	0	0	0	77	85	92	0	0	8	15
407	40	0	0	65	70	82	-40	-40	5	17
411	1,048	1,216	1,272	47	96	102	168	224	50	55
412	1,579	1,692	1,991	89	109	146	113	412	20	56
413	1,504	1,989	1,991	47	144	170	485	486	98	123
424	0	0	442	1,043	1,125	1,188	0	442	82	145
426	1,481	1,519	1,526	123	146	170	39	46	23	47
427	501	519	525	76	98	121	18	24	22	45
428	0	0	221	549	480	432	0	221	-69	-117
9	0	0	140	0	0	0	0	140	0	0
53	0	100	150	710	710	710	100	150	0	0
79	9	9	500	0	300	500	0	491	300	500
83	121	125	340	0	0	50	4	219	0	50
84	25	30	200	15	15	50	5	175	0	35
88	25	25	75	0	20	50	0	50	20	50
89	149	150	300	20	20	100	1	151	0	80
91	20	20	400	5	5	100	0	380	0	95
92	0	0	0	0	100	300	0	0	100	300
93	0	0	0	0	0	0	0	0	0	0
94	0	0	0	0	0	10	0	0	0	10
99	2	2	100	20	25	60	0	98	5	40
100	0	0	0	0	10	40	0	0	10	40
163	260	261	900	56	82	100	1	640	26	44
164	350	400	800	200	210	350	50	450	10	150
165	1,570	2,000	2,500	350	370	420	430	930	20	70
166	30	30	550	10	10	40	0	520	0	30
167	150	160	950	5	7	50	10	800	2	45
179	50	90	150	55	62	80	40	100	7	25
183	23	25	25	13	15	40	2	2	2	27
186	150	200	350	5	10	70	50	200	5	65
191	0	0	250	15	15	55	0	250	0	40
192	30	30	90	15	15	3,190	0	60	0	3,175
193	300	315	500	45	100	150	15	200	55	105
194	290	320	340	30	30	70	30	50	0	40
195	260	275	300	15	15	50	15	40	0	35
196	750	800	1,200	30	35	55	50	450	5	25
197	530	550	900	50	58	90	20	370	8	40
198	990	1,000	1,450	90	100	150	10	460	10	60
199	905	910	1,200	12	15	15	5	295	3	3
200	90	95	290	27	27	50	5	200	0	23
201	305	310	400	21	21	45	5	95	0	24
202	260	265	365	60	65	80	5	105	5	20

Appendix A
Population and Employment by TAZ

TAZ	Pop 2020	Pop 2030	Pop 2040	Emp 2020	Emp 2030	Emp 2040	Pop Change 2020-2030	Pop Change 2020-2040	Emp Change 2020 - 2030	Emp Change 2020 - 2040
203	80	80	80	6	6	6	0	0	0	0
204	30	40	50	2	5	15	10	20	3	13
205	24	30	90	6	6	10	6	66	0	4
211	0	0	400	0	0	50	0	400	0	50
213	60	75	200	2	5	40	15	140	3	38
216	0	0	0	0	0	0	0	0	0	0
225	30	240	240	4	4	40	210	210	0	36
226	60	450	700	2	2	50	390	640	0	48
227	0	0	30	0	0	5	0	30	0	5
230	0	0	0	100	100	100	0	0	0	0
234	30	40	500	3	5	50	10	470	2	47
235	0	1,500	1,600	0	50	100	1,500	1,600	50	100
236	30	150	150	1	10	10	120	120	9	9
238	0	100	200	0	5	30	100	200	5	30
239	120	1,500	1,700	5	10	30	1,380	1,580	5	25
240	100	115	240	20	75	80	15	140	55	60
243	30	260	600	0	80	120	230	570	80	120
247	12	12	2,000	0	100	300	0	1,988	100	300
248	593	1,400	1,650	5	5	10	807	1,057	0	5
249	30	40	250	0	0	20	10	220	0	20
250	40	400	450	10	150	175	360	410	140	165
259	0	0	0	0	0	0	0	0	0	0
260	0	0	0	0	0	0	0	0	0	0
261	0	0	0	100	100	100	0	0	0	0
262	0	256	375	100	271	435	256	375	171	335
266	0	0	120	0	0	0	0	120	0	0
268	80	85	150	120	120	150	5	70	0	30
269	18	20	60	0	0	2	2	42	0	2
271	45	50	250	1	1	50	5	205	0	49
284	0	0	0	10	12	20	0	0	2	10
286	20	25	120	0	0	15	5	100	0	15
295	75	80	160	0	0	20	5	85	0	20
296	200	400	800	25	70	100	200	600	45	75
298	100	130	430	2	5	10	30	330	3	8
299	200	250	550	2	2	10	50	350	0	8
300	80	100	200	120	122	145	20	120	2	25
301	120	150	300	2	5	15	30	180	3	13
302	100	110	430	2	2	5	10	330	0	3
303	250	260	320	2	3	10	10	70	1	8
304	500	550	850	160	220	275	50	350	60	115
305	300	330	630	20	25	30	30	330	5	10
306	250	275	350	2	4	10	25	100	2	8
307	700	800	1,100	50	55	70	100	400	5	20
308	0	0	100	65	100	110	0	100	35	45

Appendix A
Population and Employment by TAZ

TAZ	Pop 2020	Pop 2030	Pop 2040	Emp 2020	Emp 2030	Emp 2040	Pop Change 2020-2030	Pop Change 2020-2040	Emp Change 2020 - 2030	Emp Change 2020 - 2040
311	24	30	30	0	0	15	6	6	0	15
318	400	410	850	50	55	95	10	450	5	45
319	33	35	120	0	0	0	2	87	0	0
323	180	190	300	20	25	30	10	120	5	10
324	300	400	600	30	35	100	100	300	5	70
327	30	35	50	0	0	10	5	20	0	10
328	20	25	100	0	0	5	5	80	0	5
339	0	0	0	0	0	0	0	0	0	0
342	150	200	330	0	0	5	50	180	0	5
343	40	45	45	0	0	0	5	5	0	0
369	0	0	20	0	0	10	0	20	0	10
370	12	12	65	0	0	15	0	53	0	15
384	140	170	200	20	25	45	30	60	5	25
385	200	220	230	170	250	270	20	30	80	100
391	0	0	0	38	40	45	0	0	2	7
392	425	450	550	75	80	90	25	125	5	15
393	31	31	70	60	75	90	0	39	15	30
394	35	40	75	155	285	390	5	40	130	235
395	350	360	440	100	110	145	10	90	10	45
396	45	45	75	160	170	180	0	30	10	20
397	0	0	0	0	0	0	0	0	0	0
398	0	0	50	0	0	10	0	50	0	10
399	20	20	100	2	2	15	0	80	0	13
401	455	460	800	19	19	40	5	345	0	21
403	300	300	910	120	120	210	0	610	0	90
408	90	90	195	10	10	50	0	105	0	40
411	0	1,900	2,000	130	235	250	1,900	2,000	105	120
413	30	100	300	30	175	330	70	270	145	300
415	430	700	700	10	12	30	270	270	2	20
416	1,200	1,600	1,750	70	160	200	400	550	90	130
417	300	1,200	1,200	55	100	75	900	900	45	20
418	500	1,050	1,100	100	200	355	550	600	100	255
419	0	0	130	0	0	22	0	130	0	22
429	805	1,000	1,350	115	115	200	195	545	0	85
432	50	50	210	10	12	70	0	160	2	60
Total	159,497	188,433	226,443	71,669	82,132	98,329	28,936	66,946	10,463	26,660

Appendix B

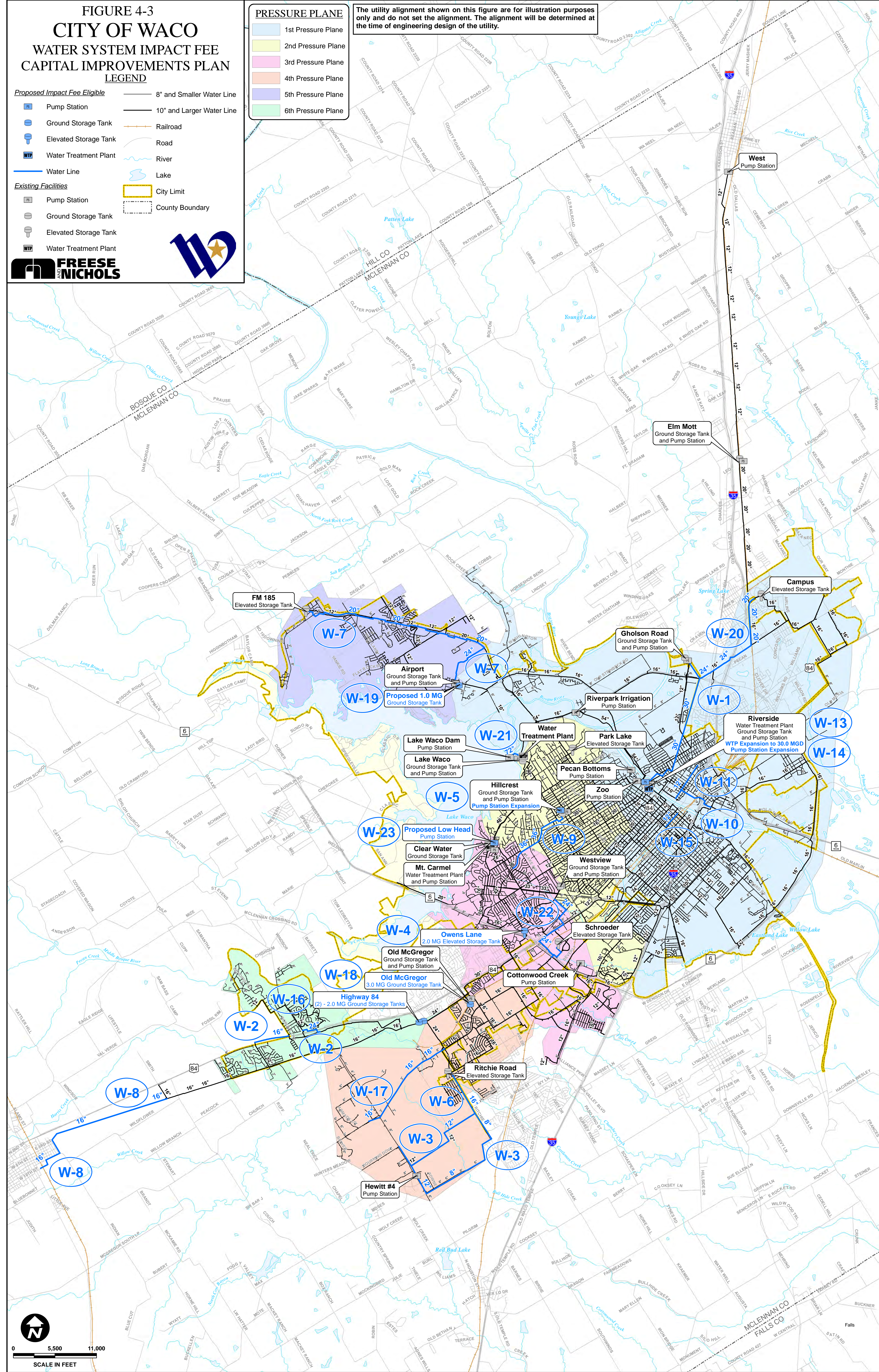
Water and Wastewater Capital Improvements Plans

FIGURE 4-3
CITY OF WACO
WATER SYSTEM IMPACT FEE
CAPITAL IMPROVEMENTS PLAN
LEGEND

- Proposed Impact Fee Eligible**
- Pump Station
 - Ground Storage Tank
 - Elevated Storage Tank
 - Water Treatment Plant
 - Water Line
- Existing Facilities**
- Pump Station
 - Ground Storage Tank
 - Elevated Storage Tank
 - Water Treatment Plant
- Other Symbols**
- 8" and Smaller Water Line
 - 10" and Larger Water Line
 - Railroad
 - Road
 - River
 - Lake
 - City Limit
 - County Boundary

- PRESSURE PLANE**
- 1st Pressure Plane
 - 2nd Pressure Plane
 - 3rd Pressure Plane
 - 4th Pressure Plane
 - 5th Pressure Plane
 - 6th Pressure Plane

The utility alignment shown on this figure are for illustration purposes only and do not set the alignment. The alignment will be determined at the time of engineering design of the utility.



Created by Freese and Nichols, Inc.
 2016-07-20
 Location: WACO, TEXAS
 Project: DELIVERABLES - Impact Fee Report (Figure 4-3) - Water System - CIP
 User Name: G388

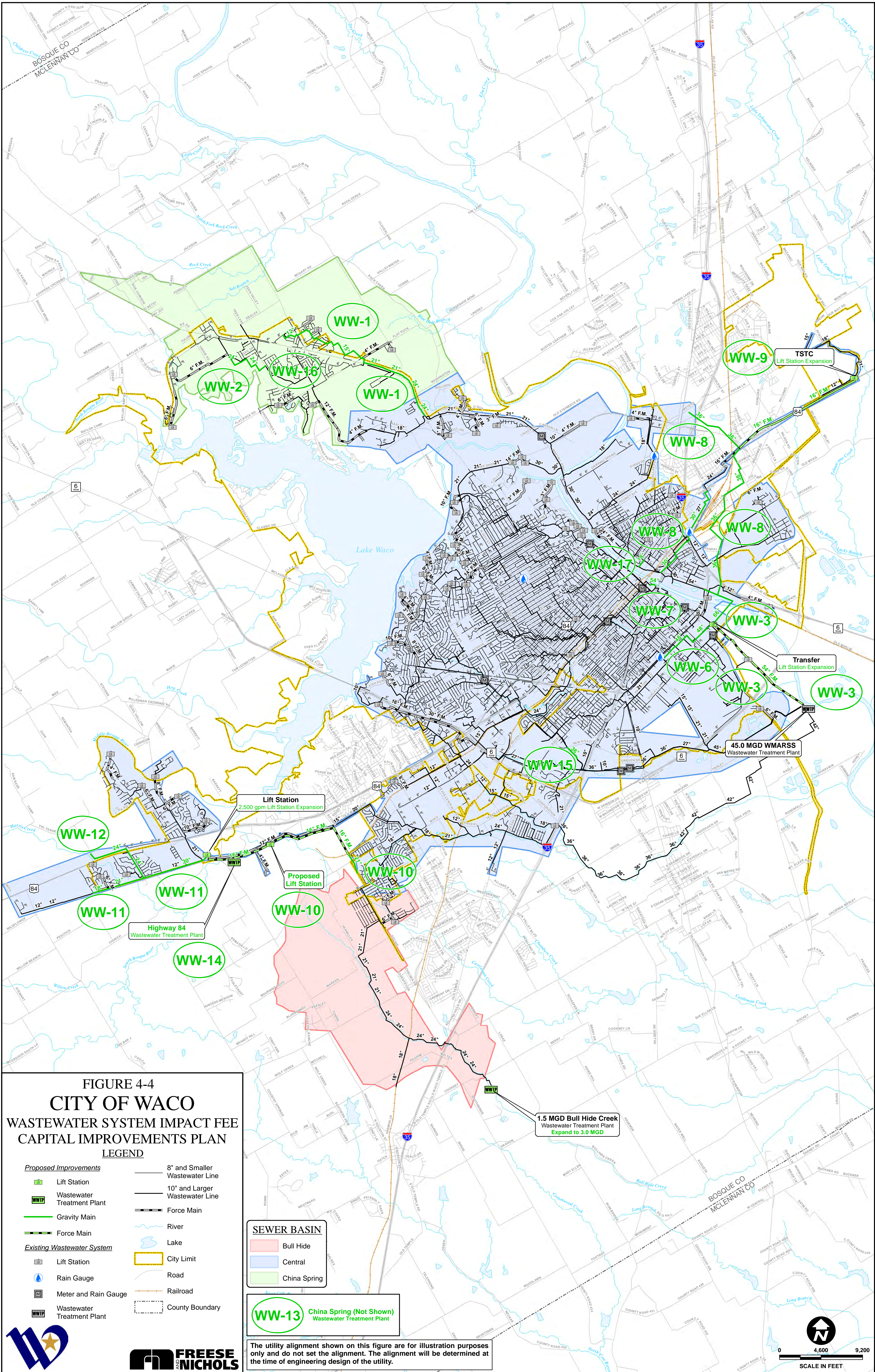


FIGURE 4-4
CITY OF WACO
WASTEWATER SYSTEM IMPACT FEE
CAPITAL IMPROVEMENTS PLAN

LEGEND

- | | |
|-----------------------------------|--------------------------------|
| Proposed Improvements | 8" and Smaller Wastewater Line |
| Lift Station | 10" and Larger Wastewater Line |
| Wastewater Treatment Plant | Force Main |
| Gravity Main | River |
| Force Main | Lake |
| Existing Wastewater System | City Limit |
| Lift Station | Road |
| Rain Gauge | Railroad |
| Meter and Rain Gauge | County Boundary |
| Wastewater Treatment Plant | |

- SEWER BASIN**
- Bull Hide
 - Central
 - China Spring

WW-13 China Spring (Not Shown) Wastewater Treatment Plant

The utility alignment shown on this figure are for illustration purposes only and do not set the alignment. The alignment will be determined at the time of engineering design of the utility.



Appendix C

Roadway Impact Fee Land Use Definitions

Waco Roadway Impact Fee Equivalency Table

Land uses for the roadway impact fee service unit equivalency table have been grouped into the major categories of residential, office, commercial, industrial, and institutional uses. The following is a listing of land uses that apply within each category. The City Engineer's best judgment should be used for any land uses not specified herein.

Residential

Single-Family Detached - Any single-family detached home on an individual lot is included in this category. A typical example of this land use is a home in a suburban subdivision. A range of densities, from low to high, may be comprised within this classification.

Apartment - This land use includes both low-rise ("walk-up" dwellings) and high-rise multi-family apartments. An apartment is defined as a dwelling unit that is located within the same building with three or more dwelling units. Also included in this land use are triplex and quadplex units.

Residential Condominium / Townhouse – Residential condominiums and townhomes are defined as single-family units that have at least one other single-family unit within the same building structure.

Senior Adult Housing - Detached - Senior adult housing consists of detached independent living developments, including retirement communities, age-restricted housing, and active adult communities. These developments may include amenities such as golf courses, swimming pools, 24-hour security, transportation, and common recreational facilities. However, they generally lack centralized dining and on-site health facilities. Detached senior adult housing communities may or may not be gated. Residents in these communities are typically active (requiring little to no medical supervision). The percentage of retired residents varies by development.

Retirement Community - restricted to adults or senior citizens - contain residential units similar to apartments or condominiums, and are usually self-contained villages. They may also contain special services such as medical facilities, dining facilities, and some limited supporting retail facilities.

Continuing Care Retirement Home - A continuing care retirement community (CCRC) is a land use that provides multiple elements of senior adult living. CCRCs combine aspects of independent living with increased care, as lifestyle needs change with time. Housing options may include various combinations of senior adult (detached), senior adult (attached), congregate care, assisted living, and skilled nursing care—aimed at allowing the residents to live in one community as their medical needs change. The communities may also contain special services such as medical, dining, recreational, and some limited, supporting retail facilities. CCRCs are usually self-contained villages.

Office

General Office Building - A general office building houses one or more tenants and is the location where affairs of a business are conducted. The building or buildings may be limited to one tenant, either the owner or lessee, or contain a mixture of tenants including professional services, insurance companies, investment brokers, company headquarters, and services for the tenants such as a bank or savings and loan, a restaurant or cafeteria, and service retail facilities. Also included in this category are other office uses not specified above.

Corporate Headquarters Building - A building that houses corporate headquarters of a company or organization and consists of offices, meeting rooms, space for storage and data processing, a cafeteria and other service functions. Such buildings typically house a single tenant although some sub-area space may be leased out.

Medical-Dental Office - A medical office building is a facility that provides diagnosis and outpatient care but which is unable to provide prolonged in-house medical/surgical care. One or more private physicians generally operate this type of building. Also included in this category are dental facilities with one or more private dentists.

U.S. Post Office – A United States post office is a federal building that contains service windows for mailing packages and letters, post office boxes, offices, sorting and distributing facilities for mail, and vehicle storage areas.

Research and Development Center - A research and development center is a facility or group of facilities devoted almost exclusively to research and development activities. The range of specific types of businesses contained in this land use category varies significantly. Research and development centers may contain offices and light fabrication areas.

Business Park - Business parks consist of a group of one or multi-story buildings served by a common roadway system similar to an office or industrial park. The tenant space is flexible to house a variety of uses. Tenants may be start-up companies or fully matured relatively small companies that require a variety of space. Offices, retail and wholesale sales, restaurants, and recreation, as well as warehousing, manufacturing, light industrial, and scientific research uses are typical within this land use. Other similar uses include research and development centers, office parks, corporate headquarter buildings, single-tenant buildings and other uses not specified above.

Commercial

Hotel – A hotel is a place of lodging that provides sleeping accommodations and supporting facilities such as restaurants, cocktail lounges, meeting and banquet rooms or convention facilities, limited recreational facilities (pool, fitness room), and/or other retail and service shops.

All Suites Hotel – An all suites hotel is a place of lodging that provides sleeping accommodations, a small restaurant and lounge, and small amounts of meeting space. Each suite includes a sitting room and separate bedroom; limited kitchen facilities are provided within the suite.

Movie Theater with Matinee - This land use consists of a movie or live theater and contains audience seating, single or multiple auditoriums, lobby, offices and refreshment stands.

Building Materials and Lumber Store – A building materials and lumber store is a free-standing building that sells hardware, building materials, and lumber. The lumber may be stored in the main building, yard, or storage shed.

Free-Standing Discount Superstore – Discount superstore is similar to a free-standing discount store with the exception that it also contains a full-service grocery department under the same roof that shares entrances and exits with the discount store area. These stores usually offer a variety of customer services, centralized cashiering, and a wide range of products. They typically maintain long store hours 7 days a week. The stores included in this land use are often the only ones on the site, but they can also be found in mutual operation with a related or unrelated garden center and/or service station, or as a part of a shopping center, with or without their own dedicated parking area.

Variety Store – A variety store is a retail store that sells a broad range of inexpensive items often at a single price. These stores are typically referred to as “dollar stores.” Items sold at these stores typically include kitchen supplies, cleaning products, home office supplies, food products, household goods, decorations, and toys. These stores are sometimes stand-alone sites, but they may also be located in small strip shopping centers.

Specialty Retail Center – Small strip shopping centers containing a variety of retail shops that typically specialize in apparel, hard goods, services such as real estate, investment, dance studios, florists, and small restaurants.

Hardware/Paint Store – A hardware/paint store is a free-standing building that sells hardware and paint supplies.

Garden Center (Nursery) – A nursery or garden center is a free-standing building with an outside storage area for planting or landscape stock. The nurseries surveyed primarily serve the general public. Some have large greenhouses and offer landscaping services.

Most have office, storage, and shipping facilities. Nurseries are characterized by seasonal variations in trip characteristics.

Nursery (Wholesale) – A wholesale nursery is a free-standing building with an outside storage area for planting or landscape stock. The nurseries surveyed primarily serve contractors and suppliers. Some have large greenhouses and offer landscaping services. Most have office, storage, and shipping facilities. Nurseries are characterized by seasonal variations in trip characteristics.

Shopping Center - A shopping center is an integrated group of commercial establishments that is planned, developed, owned, and managed as a unit. A shopping center's composition is related to its market area in terms of size, location, and type of store. A shopping center also provides on-site parking facilities sufficient to serve its own parking demands.

Automobile Sales – An automobile sales dealership is typically located along a major street characterized by abundant commercial development. The sale or leasing of new or used cars is the primary business at these facilities; however, automobile services and parts sales may also be available. Some dealerships also include leasing options, truck sales, and servicing.

Auto Parts Sales – An automobile parts sales facility specializes in the sale of automobile parts for maintenance and repair. Items sold at these facilities include spark plugs, oil, batteries, and a wide range of automobile parts. These facilities are not equipped for on-site vehicle repair.

Tire Store – The primary business associated with a tire store is the sale and marketing of tires for automotive vehicles. Services offered by these stores usually include tire installation and repair, as well as other automotive maintenance or repair services and customer assistance. These stores generally do not contain large storage or warehouse areas.

Tire Superstore – A tire superstore is a warehouse-like facility with the primary function of selling and installing tires for automobiles and small trucks. Other services provided may include automotive maintenance functions, such as wheel alignment or shock and brake service, and customer services. A tire display, customer waiting lounge, restroom facilities, staff office space, and significant storage area are also provided. General mechanical repairs and bodywork are usually not conducted at these facilities.

Supermarket – A supermarket is a free-standing retail store selling a complete assortment of food, food preparation and wrapping materials, and household cleaning items. Supermarkets may also contain the following products and services: ATMs, automobile supplies, bakeries, books and magazines, dry cleaning, floral arrangements,

greeting cards, limited-service banks, photo centers, pharmacies, and video rental areas. Some facilities may be open 24 hours a day.

Convenience Market with Gasoline Pumps – This land use includes convenience markets with gasoline pumps where the primary business is the selling of convenience items, not the fueling of motor vehicles. The sites included in this land use category have the following two specific characteristics:

- The gross floor area of the convenience market is at least 2,000 gross square feet
- The number of vehicle fueling positions is less than 10

Discount Club – A discount club is a discount store or warehouse where shoppers pay a membership fee in order to take advantage of discounted prices on a wide variety of items such as food, clothing, tires, and appliances; many items are sold in large quantities or bulk. Some sites may include on-site fueling pumps.

Home Improvement Superstore – A home improvement superstore is a free-standing facility that specializes in the sale of home improvement merchandise. These stores generally offer a variety of customer services and centralized cashiering. Home improvement superstores typically maintain long store hours 7 days a week. Examples of items sold in these stores include lumber, tools, paint, lighting, wallpaper and paneling, kitchen and bathroom fixtures, lawn equipment, and plant and garden accessories. The stores included in this land use are often the only ones on the site, but they can also be found in mutual operation with a related or unrelated garden center. Home improvement superstores are sometimes found as separate parcels within a retail complex, with or without their own dedicated parking. The buildings contained in this land use usually range in size from 50,000 to 200,000 square feet gross floor area. This land use does not include interior design stores.

Electronic Superstore – An electronics superstore is a free-standing facility that specializes in the sale of electronic merchandise. These facilities generally offer a variety of customer services and centralized cashiering. Electronics superstores typically maintain long store hours 7 days a week. Examples of items sold in these stores include televisions, audio and video players and recorders, software, telephones, computers, and general electronic accessories. Major home appliances may also be sold at these facilities. Electronics superstores are sometimes found as separate parcels within a retail complex, with or without their own dedicated parking.

Apparel Store – An apparel store is an individual store specializing in the sale of clothing.

Arts and Crafts Store – An arts and crafts store is a free-standing facility that sells art, framing, wall décor, and seasonal merchandise. These stores may provide in-store arts

and crafts classes. Arts and crafts stores are sometimes found as separate parcels within a retail complex, with or without their own dedicated off-street parking.

Pharmacy with Drive Thru – A pharmacy/drugstore is a retail facility that primarily sells prescription and non-prescription drugs. These facilities may also sell cosmetics, toiletries, medications, stationery, personal care products, limited food products, and general merchandise. The drug stores in this category contain drive-through windows.

Furniture Store – A furniture store is a full-service retail facility that specializes in the sale of furniture and often carpeting. Furniture stores are generally large and may include storage areas. The sites surveyed included both traditional retail furniture stores and warehouse stores with showrooms. Although some home accessories may be sold, furniture stores primarily focus on the sale of pre-assembled furniture. A majority of items sold at these facilities must be ordered for delivery.

Bank with Drive Thru – A bank with drive-thru provides banking facilities for motorists who conduct financial transactions from their vehicles; many also serve patrons who walk into the building. The drive-in lanes may or may not provide automatic teller machines (ATMs).

Quality Restaurant – This land use consists of high quality, full-service eating establishments with a typical duration of stay of at least one hour. Quality restaurants generally do not serve breakfast; some do not serve lunch; all serve dinner. This type of restaurant often requests and sometimes requires reservations and is generally not part of a chain. Patrons commonly wait to be seated, are served by a waiter/waitress, order from menus and pay for meals after they eat. While some of the study sites have lounge or bar facilities (serving alcoholic beverages), they are ancillary to the restaurant.

Restaurant – This land use consists of sit-down, full-service eating establishments with typical duration of stay of approximately one hour. This type of restaurant is usually moderately priced and frequently belongs to a restaurant chain. Generally, these restaurants serve lunch and dinner; they may also be open for breakfast and are sometimes open 24 hours a day. These restaurants typically do not take reservations. Patrons commonly wait to be seated, are served by a waiter/waitress, order from menus and pay for their meal after they eat. Some facilities contained within this land use may also contain a bar area for serving food and alcoholic drinks.

Fast food with Drive Thru – This category includes fast-food restaurants with drive-through windows. This type of restaurant is characterized by a large drive-through clientele, long hours of service (some are open for breakfast, all are open for lunch and dinner, some are open late at night or 24 hours a day) and high turnover rates for eat-in customers. These limited-service eating establishments do not provide table service. Non-drive-through patrons generally order at a cash register and pay before they eat.

Quick Lubrication Vehicle Stop – A quick lubrication vehicle shop is a business where the primary activity is to perform oil change services for vehicles. Other ancillary services provided may include preventative maintenance, such as fluid and filter changes. Automobile repair service is generally not provided.

Automotive Care Center – An automobile care center houses numerous businesses that provide automobile-related services, such as repair and servicing, stereo installation, and seat cover upholstery.

Gas/Service Station with Convenience Market – This land use includes gasoline/service stations with convenience markets where the primary business is the fueling of motor vehicles. These service stations may also have ancillary facilities for servicing and repairing motor vehicles and may have a car wash. Some commonly sold convenience items are newspapers, coffee or other beverages, and snack items that are usually consumed in the car. The sites included in this land use category have the following two specific characteristics:

- The gross floor area of the convenience market is between 2,000 and 3,000 gross square feet
- The number of vehicle fueling positions is at least 10

Industrial

General Light Industrial - Light industrial facilities usually employ fewer than 500 persons and have an emphasis on activities other than manufacturing. Typical light industrial activities include printing plants, material testing laboratories, assemblers of data processing equipment, power stations and warehousing of less than 35,000 square feet; most facilities are freestanding and devoted to a single use.

Industrial Park - Industrial parks are areas containing a number of industrial or related facilities. They are characterized by a mix of manufacturing, service, and warehouse facilities with a wide variation in the proportion of each type of use from one location to another. Many industrial parks contain highly diversified facilities - some with a large number of small businesses and others with one or two dominant industries.

Manufacturing - Manufacturing facilities are sites where the primary activity is the conversion of raw materials or parts into finished products. Size and type of activity may vary from one site to another. In addition to actual production of goods, manufacturing facilities generally also have office, warehouse, research and associated functions.

Mini-warehouse (self-storage) - A mini-warehouse is a building in which a storage unit or vault is rented for the storage of goods. Each unit is physically separated from other units and access is usually provided through an overhead door or other common access point.

Utilities - A utility is a free-standing building that can house office space, a storage area, and electromechanical or industrial equipment that support a local electrical, communication, water supply or control, or sewage treatment utility.

Institutional

Private School (K-8) – A private school (K-8) primarily serves students attending kindergarten through the eighth grade but may also include students beginning with pre-K classes. These schools may also offer extended care and day care. Students may travel a long distance to get to private schools.

Junior/Community College - This land use includes two-year junior colleges or community colleges. A number of two-year institutions have sizable evening programs.

Church - A church is a building in which public worship services are held. A church houses an assembly hall or sanctuary; it may also house meeting rooms, classrooms, and, occasionally, dining, catering, or party facilities.

Day Care Center - A day care center is a facility where care for pre-school age children is provided, normally during the daytime hours. Day care facilities generally include classrooms, offices, eating areas, and playgrounds. Some centers also provide after-school care for older children including after school care.

Source: Trip Generation Manual 10th Edition, Institute of Transportation Engineers
Freese and Nichols, Associates, Inc.

Appendix D

Roadway Existing Conditions 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 SC = special collector (roadway with continuous left turn) SA = special arterial (roadway with continuous left turn)
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.
% 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%.
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: Excess capacity and existing deficiencies are calculated separately for each direction. It is possible to have excess capacity in one direction and an existing deficiency in the other. When both directions have excess capacity or deficiencies, the total for both directions are presented.

Water, Wastewater, and Roadway Impact Fee Report

City of Waco



Waco Roadway Capital Recovery Fee Study Existing Capital Improvements Analysis

Serv Area	Shared Svc Area	Roadway	From	To	Length (mi)	No. of Lanes	Type	Pct. In Serv. Area	Peak Hour Volume			VMT Supply PK Hr Total	VMT Demand PK Hr Total	Excess VMT Capacity	Exist. VMT Deficiency
									A	B	Total				
1	2	Lake Shore Dr	Hillcrest Dr	Park Lake Dr	1.05	5	SA	50%	537	0	537	1,397	564	833	0
1	2	Lake Shore Dr	Park Lake Dr	MacArthur Dr	0.40	5	SA	50%	629	0	629	536	254	283	0
1	2	Lake Shore Dr	MacArthur Dr	550' SE of Airport Rd	0.56	5	SA	50%	700	0	700	741	390	351	0
1	6	Lake Shore Dr	550' SE of Airport Rd	Airport Rd	0.10	5	SA	50%	710	0	710	139	74	65	0
1	6	Lake Shore Dr	Airport Rd	N 19th St	0.60	5	SA	50%	720	0	720	803	435	368	0
1	6	Lake Shore Dr	N 19th St	College Dr	0.65	4	DA	50%	479	0	479	871	314	557	0
1	6	Lake Shore Dr	College Dr	Bosque River	0.27	4	DA	50%	469	0	469	360	127	233	0
1		Park Lake Dr	Lake Shore Dr	MacArthur Dr	0.22	2	UA	100%	100	100	200	263	45	218	0
1		Park Lake Dr	MacArthur Dr	25th St	0.55	3	SA	100%	100	100	200	738	111	627	0
1		Park Lake Dr	25th St	19th St	0.46	3	SA	100%	100	100	200	609	92	518	0
1	2	Hillcrest Dr	Lake Shore Dr	Lake Air Dr	0.31	2	UA	50%	0	400	400	182	123	59	0
1	2	Hillcrest Dr	Lake Air Dr	Glendale Dr	0.53	2	UA	50%	0	400	400	310	210	100	0
1		Hillcrest Dr	Glendale Dr	41st St	0.06	2	UA	100%	400	400	800	68	46	22	0
1		Hillcrest Dr	41st St	Landon Branch Rd	0.34	4	UA	100%	400	400	800	791	268	523	0
1		Hillcrest Dr	Landon Branch Rd	MacArthur Dr	0.20	5	SA	100%	400	400	800	525	158	367	0
1		Hillcrest Dr	MacArthur Dr	31st St	0.21	5	SA	100%	400	400	800	568	171	397	0
1		Lyle/Herring	31st St	25th St	0.47	4	DA	100%	400	400	800	1,249	376	873	0
1		Lyle/Herring	25th St	18th St	0.55	4	DA	100%	400	400	800	1,451	437	1,015	0
1		Lyle/Herring	18th St	12th St	0.42	4	DA	100%	450	450	900	1,107	375	733	0
1		Herring	12th St	4th St	0.41	5	SA	100%	450	450	900	1,086	368	719	0
1		Herring	4th St	Brazos River	0.31	4	DA	100%	450	450	900	813	275	538	0
1	6	Herring	Brazos River	N Martin Luther King Jr. Blvd	0.13	4	DA	50%	450	0	450	178	60	118	0
1	6	Herring	N Martin Luther King Jr. Blvd	J J Flewellen Rd	0.72	4	DA	50%	450	0	450	961	325	636	0
1	6	Herring	J J Flewellen Rd	1035' SW of Gholson Rd	0.49	4	DA	50%	450	0	450	649	219	429	0
1	6	Herring	1035' SW of Gholson Rd	Gholson Rd	0.20	5	SA	50%	450	0	450	261	88	173	0
1		Colcord Ave	18th St	4th St	0.99	2	UA	100%	100	100	200	1,169	198	971	0
1		Bosque Blvd	N New Rd	39th St	0.21	5	SA	100%	804	670	1,474	559	310	249	0
1		Bosque Blvd	39th St	34th St	0.45	5	SA	100%	804	670	1,474	1,206	668	538	0
1		Bosque Blvd	34th St	31st St	0.26	5	SA	100%	804	670	1,474	703	389	313	0
1		Bosque/Homan	31st St	25th St	0.45	4	DA	100%	804	670	1,474	1,185	657	529	0
1		Bosque/Homan	25th St	17th St	0.63	4	DA	100%	804	670	1,474	1,680	931	749	0
1		Waco Dr	Valley Mills Dr	Austin Ave	0.12	4	DA	100%	1,119	1,119	2,238	316	266	50	0
1		Waco Dr	Austin Ave	38th St	0.28	4	DA	100%	1,119	1,119	2,238	735	618	117	0
1		Waco Dr	38th St	25th St	1.03	4	DA	100%	1,115	1,115	2,230	2,740	2,297	443	0
1		Waco Dr	25th St	17th St	0.65	4	DA	100%	1,115	1,115	2,230	1,738	1,457	281	0
1		Waco Dr	17th St	11th St	0.49	4	DA	100%	1,115	1,115	2,230	1,291	1,082	209	0
1		Waco Dr	11th St	4th St	0.54	4	DA	100%	1,199	1,199	2,398	1,430	1,289	141	0
1		Waco Dr	4th St	Martin Luther King Jr. Blvd	0.33	4	DA	100%	1,231	1,091	2,322	880	768	112	0
1		Waco Dr	Martin Luther King Jr. Blvd	Dallas St	0.28	4	DA	100%	1,231	1,091	2,322	745	650	95	0
1		Waco Dr	Dallas St	Garrison St	0.49	6	DA	100%	1,231	1,091	2,322	1,963	1,142	820	0
1		Waco Dr	Garrison St	Clifton St	0.43	6	DA	100%	1,231	1,091	2,322	1,700	989	711	0
1		Waco Dr	Clifton St	BUS 77	0.35	6	DA	100%	756	756	1,512	1,384	524	859	0
1		Waco Dr	BUS 77	I-35	0.36	6	DA	100%	756	756	1,512	1,456	552	904	0
1		Washington Ave	26th St	18th St	0.63	3	SA	100%	100	100	200	840	126	714	0
1		Franklin Ave	Valley Mills Dr	26th St	1.07	5	SA	100%	857	792	1,649	2,846	1,764	1,082	0
1		Franklin Ave	26th St	18th St	0.63	5	SA	100%	857	792	1,649	1,663	1,031	632	0
1		Franklin/Washington	18th St	17th St	0.08	6	DA	100%	857	792	1,649	321	133	188	0
1		Franklin/Washington	17th St	12th St	0.39	6	UA	100%	857	792	1,649	1,393	649	744	0
1		Franklin/Washington	12th St	4th St	0.61	6	UA	100%	857	792	1,649	2,154	1,003	1,151	0
1		Washington Ave	4th St	University Parks Dr	0.24	3	SA	100%	500	500	1,000	318	239	79	0
1		Washington Ave	University Parks Dr	MLK Jr Blvd	0.18	2	UA	100%	500	500	1,000	216	183	33	0
1		Washington Ave	MLK Jr Blvd	Garrison St	0.73	2	UA	100%	500	500	1,000	864	732	132	0
1		Washington Ave	Garrison St	I-35 SBRF	0.38	3	SA	100%	500	500	1,000	509	383	126	0
1		Franklin Ave	4th St	University Parks Dr	0.24	3	SA	100%	857	792	1,649	317	394	0	76
1		Franklin Ave	University Parks Dr	MLK Jr Blvd	0.22	3	SA	100%	857	792	1,649	297	368	0	71
1		Orchard Ln	MLK Jr Blvd	Garrison St	0.30	2	UA	100%	250	250	500	357	151	206	0
1		Orchard Ln	Garrison St	BUS 77	0.40	2	UA	100%	150	150	300	471	120	351	0
1	X	Dutton Ave	Valley Mills Dr	29th St	0.39	4	UA	50%	0	500	500	456	193	263	0
1		Dutton Ave	29th St	26th St	0.25	4	UA	100%	500	500	1,000	582	247	335	0
1		Dutton Ave	26th St	17th St	0.66	4	UA	100%	500	500	1,000	1,547	655	891	0
1		Dutton Ave	17th St	Waco Creek	0.35	2	UA	100%	500	500	1,000	416	352	63	0
1		Dutton Ave	Waco Creek	11th St	0.12	2	UA	100%	500	500	1,000	139	118	21	0
1		Speight Ave	Valley Mills Dr	26th St	0.37	2	UA	100%	500	500	1,000	439	372	67	0
1		Speight Ave	26th St	18th St	0.57	2	UA	100%	500	500	1,000	676	573	103	0
1	2	Valley Mills	N New Rd	Waco Dr	0.21	6	DA	50%	0	821	821	412	169	242	0
1	9	Valley Mills	Waco Dr	Railroad	0.78	6	DA	50%	0	890	890	1,560	696	864	0
1	3	Valley Mills	Bagby Ave	JH Kultgen Expy	0.23	8	DA	50%	0	709	709	622	166	456	0
1	3	La Salle	18th St	12th St	0.46	6	DA	50%	826	0	826	924	382	541	0
1	3	La Salle	12th St	University Parks Dr	1.11	6	DA	50%	736	0	736	2,214	817	1,397	0
1		N 41st St	Hillcrest Dr	Glendale Dr	0.21	4	UA	100%	814	659	1,473	493	308	185	0
1	2	N 41st St	Glendale Dr	Cobbs Dr	0.13	4	UA	50%	814	0	814	154	106	48	0
1	2	N New Rd	Cobbs Dr	Bosque Blvd	0.75	5	SA	50%	814	0	814	991	606	384	0
1	2	N New Rd	Bosque Blvd	Watt Ave	0.70	5	SA	50%	814	0	814	925	566	359	0
1	2	N New Rd	Watt Ave	N Valley Mills Dr	0.13	4	DA	50%	814	0	814	167	102	65	0
1		MacArthur Dr	Lake Shore Dr	Park Lake Dr	0.30	2	UA	100%	500	500	1,000	351	298	54	0
1		MacArthur Dr	Park Lake Dr	McFerrin Ave	0.58	4	UA	100%	500	500	1,000	1,361	577	784	0
1		MacArthur Dr	McFerrin Ave	Hillcrest Dr	0.63	4	UA	100%	500	500	1,000	1,475	625	850	0
1		34th St	Hillcrest Dr	Maple Ave	0.44	2	UA	100%	200	200	400	514	174	340	0
1		34th St	Maple Ave	Bosque Blvd	0.57	2	UA	100%	200	200	400	677	229	447	0
1		34th St	Bosque Blvd	Morrow Ave	0.52	2	UA	100%	200	200	400	616	209	407	0
1		36th St	Morrow Ave	Waco Dr	0.28	2	UA	100%	200	200	400	331	112	219	0
1		25th St	Park Lake Dr	McFerrin Ave	0.58	2	UA	100%	200	200	400	686	233	453	0
1		25th St	McFerrin Ave	Herring Ave	0.54	2	UA	100%	200	200	400	643	218	425	0
1		25th St	Herring Ave	Maple Ave	0.47	4	UA	100%	500	500	1,000	1,117	473	644	0
1		25th/26th	Maple Ave	Bosque Blvd	0.57	6	DA	100%	500	500	1,000	2,290	574	1,716	0
1		25th/26th	Bosque Blvd	Waco Dr	0.64	6	DA	100%	500	500	1,000	2,560	642	1,919	0
1		25th/26th	Waco Dr	Franklin Ave	0.32	6	DA	100%	500	500	1,000	1,286	322	964	0

Water, Wastewater, and Roadway Impact Fee Report

City of Waco



Waco Roadway Capital Recovery Fee Study Existing Capital Improvements Analysis

Serv Area	Shared Svc Area	Roadway	From	To	Length (mi)	No. of Lanes	Type	Pct. In Serv. Area	Peak Hour Volume			VMT Supply Pk Hr Total	VMT Demand Pk Hr Total	Excess VMT Capacity	Exist. VMT Deficiency
									A	B	Total				
1		26th St	Franklin Ave	Clay Ave	0.33	4	UA	100%	500	500	1,000	780	330	449	0
1		26th St	Clay Ave	Dutton Ave	0.36	4	UA	100%	500	500	1,000	849	360	489	0
1		26th St	Dutton Ave	Speight Ave	0.35	4	UA	100%	500	500	1,000	824	349	475	0
1		26th St	Speight Ave	Bagby Ave	0.18	4	UA	100%	500	500	1,000	430	182	248	0
1		N 19th St	Lake Shore Dr	College Dr	0.55	5	SA	100%	702	402	1,104	1,472	611	861	0
1		N 19th St	College Dr	Park Lake Dr	0.59	5	SA	100%	702	402	1,104	1,557	646	911	0
1		N 19th St	Park Lake Dr	215' SE of Vivian Ave	0.25	5	SA	100%	702	402	1,104	672	279	393	0
1		N 19th St	215' SE of Vivian Ave	Wilson Ave	0.20	4	UA	100%	702	402	1,104	470	220	250	0
1		N 18th St	Wilson Ave	Herring Ave	0.70	4	UA	100%	702	402	1,104	1,647	771	877	0
1		N 18th St	Herring Ave	Pine Ave	0.16	4	UA	100%	702	402	1,104	366	171	195	0
1		N 18th St	Pine Ave	Maple Ave	0.32	3	SA	100%	702	402	1,104	419	348	83	12
1		N 18th St	Maple Ave	Colcord Ave	0.33	3	SA	100%	702	402	1,104	440	365	87	12
1		N 18th St	Colcord Ave	Homan Ave	0.18	3	SA	100%	702	402	1,104	242	201	48	7
1		18th/17th	Homan Ave	Waco Dr	0.51	6	DA	100%	702	402	1,104	2,036	563	1,473	0
1		18th/17th	Waco Dr	Washington Ave	0.20	8	DA	100%	811	811	1,622	1,067	325	742	0
1		18th/17th	Washington Ave	Franklin Ave	0.16	8	DA	100%	811	811	1,622	856	261	595	0
1		18th/17th	Franklin Ave	Clay Ave	0.32	8	DA	100%	811	811	1,622	1,711	522	1,189	0
1		18th/17th	Clay Ave	Dutton Ave	0.37	8	DA	100%	639	639	1,278	1,957	470	1,487	0
1		18th/17th	Dutton Ave	I-35	0.37	8	DA	100%	639	639	1,278	1,977	475	1,502	0
1		18th/17th	I-35	Griffin Ave	0.39	6	DA	100%	370	370	740	1,551	288	1,264	0
1		18th St	Griffin Ave	La Salle Ave	0.07	6	DA	100%	370	370	740	272	50	222	0
1		12th St	Waco Dr	Washington Ave	0.31	2	UA	100%	200	200	400	368	125	243	0
1		11th St	Waco Dr	Washington Ave	0.31	2	UA	100%	200	200	400	369	125	244	0
1		11th St	Washington Ave	Franklin Ave	0.16	2	UA	100%	200	200	400	192	65	127	0
1		11th St	Franklin Ave	Clay Ave	0.32	2	UA	100%	200	200	400	381	129	252	0
1		11th St	Clay Ave	Dutton Ave	0.37	2	UA	100%	200	200	400	434	147	287	0
1		11th St	Dutton Ave	Baylor Ave	0.23	4	DA	100%	200	200	400	625	94	531	0
1		11th St	Baylor Ave	Bagby Ave	0.28	2	UA	100%	200	200	400	335	113	221	0
1		11th St	Bagby Ave	La Salle Ave	0.32	2	UA	100%	200	200	400	379	129	251	0
1		5th/4th St	Herring Ave	Colcord Ave	0.68	4	DA	100%	500	500	1,000	1,807	679	1,128	0
1		5th/4th St	Colcord Ave	Waco Dr	0.36	4	DA	100%	500	500	1,000	951	357	593	0
1		5th/4th St	Waco Dr	Washington Ave	0.38	5	SA	100%	500	500	1,000	1,006	378	628	0
1		5th/4th St	Washington Ave	Franklin Ave	0.16	5	SA	100%	500	500	1,000	428	161	267	0
1		5th/4th St	Franklin Ave	I-35	0.61	5	SA	100%	500	500	1,000	1,612	606	1,006	0
1		5th/4th St	I-35	Dutton Ave	0.08	4	DA	100%	500	500	1,000	214	80	134	0
1		Dutton Ave	4th St	University Parks Dr	0.24	4	DA	100%	500	500	1,000	642	241	401	0
1		University Parks Dr	Washington Ave	Franklin Ave	0.17	4	DA	100%	500	500	1,000	441	166	275	0
1		University Parks Dr	Franklin Ave	Jackson Ave	0.24	5	SA	100%	500	500	1,000	635	239	396	0
1		University Parks Dr	Jackson Ave	I-35	0.27	6	DA	100%	500	500	1,000	1,059	266	794	0
1		University Parks Dr	I-35	Dutton Ave	0.16	6	DA	100%	632	632	1,264	657	208	449	0
1		University Parks Dr	Dutton Ave	Bagby Ave	0.59	6	DA	100%	725	659	1,384	2,355	817	1,538	0
1		University Parks Dr	Bagby Ave	La Salle	0.33	6	DA	100%	725	659	1,384	1,322	459	864	0
1		Martin Luther King Jr. Blvd	Herring Ave	Faulkner Ln	0.39	4	DA	100%	606	436	1,042	1,045	409	636	0
1		Martin Luther King Jr. Blvd	Faulkner Ln	Waco Dr	0.64	4	DA	100%	606	436	1,042	1,706	668	1,038	0
1		Martin Luther King Jr. Blvd	Waco Dr	Elm Ave	0.43	4	DA	100%	606	436	1,042	1,152	451	701	0
1		Martin Luther King Jr. Blvd	Elm Ave	Franklin Ave	0.15	4	DA	100%	606	436	1,042	396	155	241	0
1		Martin Luther King Jr. Blvd	Franklin Ave	I-35	0.43	6	DA	100%	606	436	1,042	1,726	451	1,275	0
1		Martin Luther King Jr. Blvd	I-35	Orchard Ln	0.15	4	DA	100%	606	436	1,042	392	154	238	0
1		Martin Luther King Jr. Blvd	Orchard Ln	E 7th St	0.36	5	SA	100%	273	173	446	970	163	808	0
1		Martin Luther King Jr. Blvd	E 7th St	BUS 77	0.44	4	DA	100%	273	173	446	1,181	198	983	0
1		6 Gholson Rd	Herring Ave	960' S of Herring Ave	0.18	2	UA	50%	0	283	283	107	51	56	0
1		Gholson Rd	960' S of Herring Ave	Faulkner Ln	0.33	2	UA	100%	283	283	566	395	190	206	0
1		Clifton St	Faulkner Ln	Waco Dr	0.12	2	UA	100%	283	283	566	144	69	75	0
1		BUS 77	700' NE of Saley Ave	Waco Dr	0.46	6	DA	100%	474	474	948	1,830	435	1,395	0
Sub-Total Service Area 1					56.06							127,576	55,849	71,905	178
2	1	Hillcrest Dr	Lake Shore Dr	Lake Air Dr	0.31	2	UA	50%	0	400	400	182	123	59	0
2	1	Hillcrest Dr	Lake Air Dr	Glendale Dr	0.53	2	UA	50%	0	400	400	310	210	100	0
2		Cobbs Dr	Bosque Blvd	Fish Pond Rd	0.15	4	UA	100%	500	500	1,000	358	152	206	0
2		Cobbs Dr	Fish Pond Rd	N Valley Mills Dr	0.20	4	UA	100%	500	500	1,000	484	205	279	0
2		Cobbs Dr	N Valley Mills Dr	Wooded Acres Dr	0.58	5	SA	100%	500	500	1,000	1,549	582	966	0
2		Cobbs Dr	Wooded Acres Dr	Lake Air Dr	0.46	5	SA	100%	500	500	1,000	1,222	459	762	0
2		Cobbs Dr	Lake Air Dr	41st St	0.51	5	SA	100%	500	500	1,000	1,348	507	841	0
2		Bosque Blvd	325' NE of Southwood Dr	SH 6	0.21	5	SA	100%	690	690	1,380	561	291	270	0
2		Bosque Blvd	SH 6	Ridge Oak Pkwy	0.19	4	UA	100%	690	690	1,380	458	268	190	0
2		Bosque Blvd	Ridge Oak Pkwy	Rambler Dr	0.30	5	SA	100%	690	690	1,380	793	412	382	0
2		Bosque Blvd	Rambler Dr	Cobb Dr	0.29	4	UA	100%	690	690	1,380	676	395	281	0
2		Bosque Blvd	Cobb Dr	N Valley Mills Dr	0.52	4	UA	100%	476	476	952	1,232	497	735	0
2		Bosque Blvd	N Valley Mills Dr	Lake Air Dr	0.55	7	SA	100%	804	670	1,474	2,175	803	1,371	0
2		Bosque Blvd	Lake Air Dr	N New Rd	0.52	7	SA	100%	804	670	1,474	2,070	765	1,305	0
2		Sanger Ave	200' NE or Cranbrook Dr	Londonberry Rd	0.14	2	UA	100%	200	200	400	160	54	106	0
2		Sanger Ave	Londonberry Rd	SH 6	0.19	4	UA	100%	500	500	1,000	440	186	253	0
2		Sanger Ave	SH 6	Melrose Dr	0.24	4	UA	100%	500	500	1,000	570	241	328	0
2		Sanger Ave	Melrose Dr	Richland Dr	0.65	4	UA	100%	500	500	1,000	1,527	647	880	0
2		Sanger Ave	Richland Dr	Lake Air Dr	0.18	4	UA	100%	500	500	1,000	431	183	248	0
2		Sanger Ave	Lake Air Dr	N Valley Mills Dr	0.58	4	UA	100%	500	500	1,000	1,370	581	790	0
2		Londonberry Dr	New Sanger Rd	McGregor Rd	0.50	5	SA	100%	500	500	1,000	1,322	497	825	0
2	1	Lake Shore Dr	550' SE of Airport Rd	Macarthur Dr	0.56	5	SA	50%	700	700	1,400	741	390	351	0
2	1	Lake Shore Dr	Macarthur Dr	Park Lake Dr	0.40	5	SA	50%	629	629	1,258	536	254	283	0
2	1	Lake Shore Dr	Park Lake Dr	Hillcrest Dr	1.05	5	SA	50%	537	537	1,074	1,397	564	833	0
2		Lake Shore Dr	Hillcrest Dr	Wooded Acres Dr	0.84	5	SA	100%	537	384	921	2,246	778	1,469	0

Water, Wastewater, and Roadway Impact Fee Report

City of Waco



Waco Roadway Capital Recovery Fee Study

Existing Capital Improvements Analysis

Serv Area	Shared Svc Area	Roadway	From	To	Length (mi)	No. of Lanes	Type	Pct. in Serv. Area	Peak Hour Volume			VMT Supply Pk Hr Total	VMT Demand Pk Hr Total	Excess VMT Capacity	Exist. VMT Deficiency
									A	B	Total				
2		Lake Shore Dr	Wooded Acres Dr	Mt Carmel Dr	0.18	5	SA	100%	537	384	921	478	165	312	0
2		Lake Shore Dr	Mt Carmel Dr	Koehne Park Dr	0.62	2	UA	100%	537	384	921	735	574	161	0
2		Valley Mills Dr	Koehne Park Dr	Hillandale Rd	0.15	3	SA	100%	600	700	1,300	196	192	10	5
2		Valley Mills Dr	Hillandale Rd	Ridgewood Dr	0.26	2	UA	100%	600	700	1,300	309	341	0	31
2		Valley Mills Dr	Ridgewood Dr	Bishop Dr	0.18	3	SA	100%	700	800	1,500	235	265	0	30
2		Valley Mills Dr	Bishop Dr	Huntington Dr	0.24	3	SA	100%	700	800	1,500	318	359	0	41
2		Valley Mills Dr	Huntington Dr	Cobbs Dr	0.23	5	SA	100%	800	900	1,700	621	397	224	0
2		Valley Mills Dr	Cobbs Dr	Bosque Blvd	0.44	7	SA	100%	800	900	1,700	1,739	741	998	0
2		Valley Mills Dr	Bosque Blvd	Lake Air Dr	0.54	7	SA	100%	1,029	1,149	2,178	2,138	1,167	971	0
2		Valley Mills Dr	Lake Air Dr	Sanger Ave	0.46	7	SA	100%	1,029	1,149	2,178	1,822	995	827	0
2		Valley Mills Dr	Sanger Ave	New Rd	0.30	7	SA	100%	1,029	1,149	2,178	1,178	643	535	0
2	1	Valley Mills Dr	New Rd	Waco Dr	0.21	6	DA	50%	608	0	608	422	129	294	0
2	9	Waco Dr	Franklin Ave	Lake Air Dr	0.25	6	DA	50%	0	764	764	490	188	302	0
2	9	Waco Dr	Lake Air Dr	Valley Mills Dr	0.81	6	DA	50%	0	764	764	1,618	619	998	0
2		Lake Air Dr	Hillcrest	Wilford Dr	0.60	3	SA	100%	500	500	1,000	800	601	198	0
2		Lake Air Dr	Wilford Dr	Cobbs Dr	0.12	4	UA	100%	500	500	1,000	284	120	164	0
2		Lake Air Dr	Cobbs Dr	Bosque Blvd	0.74	5	SA	100%	500	500	1,000	1,972	741	1,231	0
2		Lake Air Dr	Bosque Blvd	N Valley Mills Dr	0.38	5	SA	100%	500	500	1,000	1,010	380	630	0
2		Lake Air Dr	N Valley Mills Dr	Sanger Ave	0.33	5	SA	100%	500	500	1,000	891	335	556	0
2		Lake Air Dr	Sanger Ave	Waco Dr	0.58	5	SA	100%	500	500	1,000	1,532	576	956	0
2	1	N 41st St	Glendale Dr	Cobbs Dr	0.13	4	UA	50%	0	659	659	154	86	68	0
2	1	N New Rd	Cobbs Dr	Bosque Blvd	0.75	5	SA	50%	0	659	659	991	491	500	0
2	1	N New Rd	Bosque Blvd	Watt Ave	0.70	5	SA	50%	0	659	659	925	458	467	0
2	1	N New Rd	Watt Ave	N Valley Mills Dr	0.13	4	DA	50%	0	659	659	167	83	84	0
2		N New Rd	N Valley Mills Dr	N New Rd	0.18	5	SA	100%	814	659	1,473	476	264	212	0
Sub-Total Service Area 2					20.12							45,655	20,952	24,811	107
3		Speight Ave	S New Rd	Richter Ave	0.96	2	UA	100%	200	200	400	1,128	382	745	0
3		Speight Ave	Richter Ave	Valley Mills Dr	0.46	2	UA	100%	200	200	400	548	186	362	0
3	1	Valley Mills	Bagby Ave	JH Kultgen Expy	0.23	8	DA	50%	709	0	709	622	166	456	0
3		Valley Mills	JH Kultgen Expy	Traffic Circle	0.13	4	DA	100%	709	0	709	167	89	78	0
3		La Salle	The Cir	18th St	0.59	6	DA	100%	505	605	1,110	2,373	660	1,713	0
3	1	La Salle	18th St	12th St	0.47	6	DA	50%	826		826	929	385	544	0
3	1	La Salle	12th St	University Parks Dr	1.11	6	DA	50%	736		736	2,214	817	1,397	0
3	9	S New Rd	Memorial Dr	Bagby Ave	0.50	5	SA	50%	0	300	300	660	149	511	0
3	9	S New Rd	Bagby Ave	I-35	0.80	5	SA	50%	0	300	300	1,070	241	828	0
3	9	S New Rd	I-35	Old Robinson Rd	0.54	5	SA	50%	298	298	596	718	161	557	0
3		Garden Dr	Old Robinson Rd	Robinson Rd	0.44	5	SA	100%	363	298	661	1,176	292	884	0
3		Garden Dr	16th St	12th St	0.33	2	UA	100%	363	298	661	390	218	172	0
3		Garden Dr	12th St	University Parks Dr	1.02	2	UA	100%	363	298	661	1,204	674	529	0
3		Robinson	The Cir	Primrose Dr	0.23	5	SA	100%	550	550	1,100	601	249	352	0
3		Robinson	Primrose Dr	Garden Dr	0.87	5	SA	100%	569	569	1,138	2,320	993	1,327	0
3		Robinson	Garden Dr	Brewster St	0.23	5	SA	100%	573	573	1,146	616	265	350	0
3	X	Robinson	Brewster St	Creek (516' S of Darden Dr)	0.23	5	SA	50%	573	0	573	308	133	175	0
3		18th St	La Salle	Primrose Dr	0.18	4	DA	100%	200	200	400	476	72	404	0
3		18th St	Primrose Dr	Gurley Ln	0.27	4	UA	100%	200	200	400	630	107	523	0
3		16th	Gurley Ln	Garden Dr	0.42	2	UA	100%	200	200	400	495	168	327	0
3		12th	Garden Dr	TX-340	1.08	2	UA	100%	200	200	400	1,274	432	842	0
3		University Parks Dr	La Salle Ave	Gurley Ln	0.46	2	UA	100%	707	665	1,372	548	637	0	89
3		University Parks Dr	Gurley Ln	Garden Dr	0.37	2	UA	100%	435	396	831	441	310	130	0
3		University Parks Dr	Garden Dr	3rd St	0.93	2	UA	100%	209	169	378	1,099	352	747	0
3		University Parks Dr	3rd St	TX-340	0.42	2	UA	100%	195	159	354	500	150	350	0
Sub-Total Service Area 3					13.28							22,504	8,286	14,307	89
4		Orchard Ln	US 77 NBFR	Kendall Ln	0.12	2	UA	100%	200	200	400	142	48	94	0
4		Orchard Ln	Kendall Ln	Carl Dr	1.62	2	UA	100%	200	200	400	1,912	648	1,264	0
4		Orchard Ln	Carl Dr	SH 340	0.31	3	SA	100%	200	200	400	414	124	289	0
4		Kendall Ln	Orchard Ln	Railroad	0.41	2	UA	100%	200	200	400	487	165	322	0
4		Kendall Ln	Railroad	SH 340	1.70	2	UA	100%	200	200	400	2,006	680	1,326	0
Sub-Total Service Area 4					4.16							4,960	1,666	3,295	0
5	X	Crest Dr	Railroad	725' NE of Railroad	0.14	4	DA	50%	474		474	183	65	118	0
5	X	Crest Dr	725' NE of Railroad	Avenue C	0.14	5	SA	50%	474		474	191	68	123	0
5	X	Crest Dr	Avenue C	Mazanec Rd	0.84	2	UA	50%	220		220	498	186	312	0
5	X	Air Base Rd	1250' S of Craven Ave	Craven Ave	0.24	2	UA	50%	85		85	140	20	120	0
5	X	Air Base Rd	Craven Ave	Bolling Dr	0.49	4	UA	50%	153		153	582	76	507	0
5	X	US 84	Tirey Rd	Aviation Pkwy	0.52	4	DA	50%	803		803	692	418	274	0
5	X	US 84	Aviation Pkwy	1500' NE of Aviation	0.28	4	DA	50%		588	588	378	167	211	0
Sub-Total Service Area 5					2.66							2,664	999	1,664	0
6		Steinbeck Bend Dr	China Spring Rd	Rock Creek Rd	0.29	2	UA	100%	139	87	226	338	65	273	0
6		Steinbeck Bend Dr	Rock Creek Rd	Lake Shore Dr	2.50	2	UA	100%	408	468	876	2,950	2,190	760	0
6		N Martin Luther King Jr. Blvd	Lake Shore Dr	1050' NW of Herring Ave	1.58	2	UA	100%	481	358	839	1,864	1,326	539	0
6		N Martin Luther King Jr. Blvd	1050' NW of Herring Ave	Herring Ave	0.20	4	DA	100%	501	388	889	529	177	352	0
6	7	China Spring Rd	Pioneer Pkwy	Steinbeck Bend Dr	1.17	2	UA	50%	415	0	415	690	486	205	0
6		N 19th St	N 19th St	Lake Shore Dr	1.39	5	SA	100%	268	528	796	3,697	1,106	2,591	0
6	1	Lake Shore Dr	550' SE of Airport Rd	N 19th St	0.72	5	SA	50%	720	0	720	959	519	440	0
6	1	Lake Shore Dr	N 19th St	College Dr	0.65	4	DA	50%	479	0	479	871	314	557	0
6	1	Lake Shore Dr	College Dr	Bosque River	0.27	4	DA	50%	479	0	479	360	130	230	0
6	1	Lake Shore Dr	Bosque River	N Martin Luther King Jr. Blvd	0.78	4	DA	50%	550	0	550	1,034	428	607	0
6		Lake Shore Dr	N Martin Luther King Jr. Blvd	1200' NW of MLK Blvd	0.23	4	UA	100%	760	786	1,546	536	351	185	0
6		Lake Shore Dr	1200' NW of MLK Blvd	Gholson Rd	2.14	4	DA	100%	1,001	681	1,682	5,692	3,599	2,093	0
6		Lake Shore Dr	Gholson Rd	Railroad ROW	0.30	5	SA	100%	1,350	850	2,200	798	660	144	6

Water, Wastewater, and Roadway Impact Fee Report

City of Waco



Waco Roadway Capital Recovery Fee Study

Existing Capital Improvements Analysis

Serv Area	Shared Svc Area	Roadway	From	To	Length (mi)	No. of Lanes	Type	Pct. In Serv. Area	Peak Hour Volume			VMT Supply Pk Hr Total	VMT Demand Pk Hr Total	Excess VMT Capacity	Exist. VMT Deficiency
									A	B	Total				
6	1	Herring	Brazos River	N Martin Luther King Jr. Blvd	0.13	4	DA	50%	450	0	450	178	60	118	0
6	1	Herring	N Martin Luther King Jr. Blvd	J J Flewellen Rd	0.72	4	DA	50%	450	0	450	961	325	636	0
6	1	Herring	J J Flewellen Rd	1035' SW of Gholson Rd	0.49	4	DA	50%	450	0	450	649	219	429	0
6	1	Herring	1035' SW of Gholson Rd	Gholson Rd	0.20	5	SA	50%	450	0	450	261	88	173	0
6		Montrose	Gholson Rd	Railroad ROW	0.22	2	UA	100%	200	200	400	255	86	169	0
6	1	Gholson Rd	960' S of Herring Ave	Herring Ave	0.18	2	UA	50%	283	0	283	107	51	56	0
6		Gholson Rd	Herring Ave	Montrose St	0.53	2	UA	100%	283	283	566	626	300	326	0
6		Gholson Rd	Montrose St	Lakeshore Dr	0.82	2	UA	100%	311	311	622	966	509	457	0
6		Gholson Rd	Lakeshore Dr	Old Fort Graham Rd	0.40	5	SA	100%	527	527	1,054	1,051	417	635	0
Sub-Total Service Area 6					15.90							25,374	13,407	11,973	6
7		North River Crossing	Beginning of bridge	580' NE of Curry Ln	2.25	2	UA	100%	461	231	692	2,655	1,557	1,098	0
7		North River Crossing	580' NE of Curry Ln	Yankie Rd	0.47	3	SA	100%	696	359	1,055	628	499	145	15
7		North River Crossing	Yankie Rd	900' SW of China Spring Rd	0.16	2	UC	100%	356	178	534	161	84	77	0
7		North River Crossing	900' SW of China Spring Rd	China Spring Rd	0.17	3	SA	100%	356	178	534	227	91	136	0
7		China Spring Rd	Yankie Rd	North River Crossing	0.42	2	UA	100%	138	275	413	494	173	321	0
7		China Spring Rd	North River Crossing	Old China Spring Rd	0.17	3	SA	100%	138	275	413	220	68	151	0
7		China Spring Rd	Old China Spring Rd	Wortham Bend	1.88	2	UA	100%	256	512	768	2,218	1,444	775	0
7		China Spring Rd	Wortham Bend	Flat Rock Rd	1.10	3	SA	100%	365	729	1,094	1,463	1,203	330	70
7		China Spring Rd	Flat Rock Rd	Pioneer Pkwy	0.96	2	UA	100%	522	1,011	1,533	1,132	1,470	65	404
7	6	China Spring Rd	Pioneer Pkwy	Steinbeck Bend Dr	1.17	2	UA	50%	0	815	815	690	954	0	263
7	X	Old China Spring Rd	1350' N of Bb Burt	Bb Burt	0.26	2	UC	50%	50	0	50	130	13	118	0
7		Old China Spring Rd	Bb Burt	China Spring Rd	0.41	2	UC	100%	50	50	100	419	41	378	0
Sub-Total Service Area 7					9.41							10,438	7,597	3,593	752
8		FM 185 (Cedar Rock Pkwy)	Galaxy Rd	SH 6	1.32	2	UA	100%	100	100	200	1,558	264	1,294	0
8		North River Crossing	SH 6	Dosher Ln	0.61	2	UA	100%	100	100	200	720	122	598	0
8		North River Crossing	Dosher Rd	End of Service Area	0.93	2	UA	100%	100	100	200	1,096	186	910	0
8		Sundown Dr	Dosher Rd	N Speegleville Rd	1.87	2	UC	100%	100	100	200	1,907	374	1,533	0
Sub-Total Service Area 8					4.73							5,281	946	4,335	0
9	2	Waco Dr	Franklin Ave	Lake Air Dr	0.25	6	DA	50%	1,420	0	1,420	490	349	141	0
9	2	Waco Dr	Lake Air Dr	Valley Mills Dr	0.81	6	DA	50%	893	0	893	1,618	724	893	0
9		Franklin Ave	US 84	New Rd	0.90	7	SA	100%	730	730	1,460	3,606	1,320	2,287	0
9		Franklin Ave	New Rd	Valley Mills Dr	0.52	7	SA	100%	795	805	1,600	2,080	834	1,246	0
9		Imperial Dr	Hewitt Dr	Texas Central Pkwy	0.94	5	SA	100%	520	924	1,444	2,513	1,364	1,149	0
9		Imperial Dr	Texas Central Pkwy	Jewell Dr	0.39	5	SA	100%	607	842	1,449	1,037	565	472	0
9		Imperial Dr	Jewell Dr	W Loop 340	0.86	5	SA	100%	726	746	1,472	2,284	1,264	1,020	0
9		Beverly Dr	W Loop 340	4128' NE of Loop 340	0.78	2	UA	100%	50	50	100	923	78	844	0
9	X	Beverly Dr	4128' NE of Loop 340	New Road	0.31	2	UA	50%	50	0	50	182	15	167	0
9		Bagby Ave	Flat Creek	Corporation Pkwy	0.91	5	SA	100%	1,150	762	1,912	2,433	1,749	684	0
9		Bagby Ave	Corporation Pkwy	EB Loop 340	0.31	5	SA	100%	1,146	746	1,892	829	589	239	0
9		Bagby Ave	WB Loop 340	New Rd	0.83	4	UA	100%	1,008	608	1,616	1,954	1,338	616	0
9	X	Hewitt Dr	Woodway Dr	Old McGregor Dr	0.19	5	SA	50%	1,116	0	1,116	250	210	40	0
9	10	Hewitt Dr	Old McGregor Dr	Imperial Dr	0.45	5	SA	50%	1,031	0	1,031	594	460	133	0
9	10	Hewitt Dr	Imperial Dr	Mars Dr	0.62	5	SA	50%	1,031	0	1,031	827	641	186	0
9		Texas Central Pkwy	Woodway Dr	Railroad	0.26	5	SA	100%	501	536	1,037	688	268	420	0
9		Texas Central Pkwy	Railroad	Imperial Dr	0.34	2	UA	100%	501	536	1,037	402	354	49	0
9		Texas Central Pkwy	Imperial Dr	Mars Dr	0.60	5	SA	100%	501	536	1,037	1,583	617	966	0
9		Texas Central Pkwy	Mars Dr	Railroad	0.33	4	DA	100%	501	536	1,037	872	340	532	0
9		Texas Central Pkwy	Railroad	Bagby Ave	1.48	4	DC	100%	501	536	1,037	3,345	1,535	1,810	0
9		Lake Air Dr	Waco Dr	Franklin Ave	0.17	4	UA	100%	500	500	1,000	395	167	227	0
9		New Rd	Waco Dr	Franklin Ave	0.32	5	SA	100%	756	764	1,520	843	482	361	0
9		New Rd	Franklin Ave	Lower Railroad	0.33	4	UA	100%	756	764	1,520	784	505	279	0
9	X	New Rd	Beverly Dr	Memorial Dr	0.14	5	SA	50%	0	500	500	184	69	115	0
9	3	New Rd	Memorial Dr	Bagby Ave	0.50	5	SA	50%	0	500	500	660	248	412	0
9	3	New Rd	Bagby Ave	I-35	0.80	5	SA	50%	0	500	500	1,070	402	668	0
9	3	New Rd	I-35	Old Robinson Rd	0.54	5	SA	50%	0	298	298	718	161	557	0
9	1	Valley Mills	Waco Dr	Railroad	0.78	6	DA	50%	1,014	0	1,014	1,560	793	767	0
Sub-Total Service Area 9					15.66							34,723	17,441	17,281	0
10	X	Chapel Rd	1850' W of Ritchie Rd	Ritchie Rd	0.35	2	UA	50%	286	0	286	207	100	107	0
10		Chapel Rd	Ritchie Rd	155' west of Meadow Moun	0.65	2	UA	100%	295	916	1,211	767	788	192	212
10		Chapel Rd	155' W of Meadow Mountain Rd	Hewitt Dr	0.86	5	SA	100%	386	919	1,305	2,285	1,121	1,164	0
10		Panther Way	Ritchie Rd	3700' east of Ritchie Rd	0.70	3	SA	100%	200	200	400	932	280	652	0
10	X	Panther Way	3700' E of Ritchie Rd	900' west of Hewitt Dr	0.62	3	SA	50%	0	200	200	412	124	288	0
10		Ritchie Rd	Railroad	Chapel Rd	0.18	2	UA	100%	173	244	417	216	76	140	0
10		Ritchie Rd	Chapel Rd	Panther Rd	0.64	4	DA	100%	173	244	417	1,714	269	1,446	0
10		Ritchie Rd	Panther Rd	1300' N of Warren St	0.76	2	UA	100%	173	244	417	894	316	578	0
10	X	Hewitt Dr	1300' N of Warren St	Warren St	0.25	2	UA	50%	173	0	173	145	43	103	0
10	9	Hewitt Dr	Woodway Dr	Old McGregor Dr	0.19	5	SA	50%	0	1,216	1,216	250	229	21	0
10	9	Hewitt Dr	Old McGregor Dr	Imperial Dr	0.45	5	SA	50%	0	1,235	1,235	594	551	42	0
10	9	Hewitt Dr	Imperial Dr	Mars Dr	0.62	5	SA	50%	0	1,331	1,331	827	828	0	1
Sub-Total Service Area 10					6.27							9,245	4,725	4,733	213

**Waco Roadway Capital Recovery Fee Study
 Existing Capital Improvements Analysis**

Serv Area	Shared Svc Area	Roadway	From	To	Length (mi)	No. of Lanes	Type	Pct. In Serv. Area	Peak Hour Volume			VMT Supply Pk Hr Total	VMT Demand Pk Hr Total	Excess VMT Capacity	Exist. VMT Deficiency
									A	B	Total				
11	X	Speegleville Rd	1700' N of Pecan Creek	Pecan Creek	0.32	2	UA	50%	157	0	157	190	51	139	0
11		Speegleville Rd	Pecan Creek	Oak Rd	0.54	2	UA	100%	157	157	314	643	171	472	0
11		Speegleville Rd	Oak Rd	US 84 WBFR	0.85	2	UA	100%	157	157	314	1,006	268	739	0
11		Old Lorena Rd	US 84 EBFR	South Bosque River	0.90	2	UA	100%	157	157	314	1,058	281	776	0
Sub-Total Service Area 11					2.62							2,897	771	2,126	0
Total												291,317	132,639	160,023	1,345

Notes:

* denotes deficiencies absorbed through CRF CIP

- 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 10-Year Growth

(Vehicle Miles of New Demand)

Vehicle-Mile Trip Generation by Service Area, Waco Capital Recovery Fee

Based on 2020-2030 Land Use Assumptions dated June 2019

Service Unit Equivalency

Residential	3.20	Service Emp	4.95
Basic Emp	2.71	Retail Emp	3.71

Estimated Residential Growth Vehicle-Mile Trip Generation

Conversion Factor: 2.59 2010 persons/household

Service Area	Added Population	Added Dwelling Units	Vehicle-Miles per DU	Total Vehicle-Miles
1	5,874	2,268	3.20	7,258
2	1,140	440	3.20	1,408
3	2,274	878	3.20	2,810
4	425	164	3.20	525
5	44	17	3.20	54
6	994	384	3.20	1,229
7	2,157	833	3.20	2,666
8	0	0	3.20	0
9	1,543	596	3.20	1,907
10	1,839	710	3.20	2,272
11	1,224	473	3.20	1,514
Total	17,514	6,763		21,643

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
1	315	471,967	2.71	1,279
2	61	91,343	2.71	248
3	96	143,965	2.71	390
4	8	12,329	2.71	33
5	364	545,631	2.71	1,479
6	73	109,076	2.71	296
7	87	131,081	2.71	355
8	0	0	2.71	0
9	1,472	2,208,705	2.71	5,986
10	30	44,384	2.71	120
11	88	131,370	2.71	356
Total	2,593	3,889,852		10,542

Vehicle-Mile Trip Generation by Service Area, Waco Capital Recovery Fee

Based on 2020-2030 Land Use Assumptions dated June 2019

Service Unit Equivalency

Residential	3.20	Service Emp	4.95
Basic Emp	2.71	Retail Emp	3.71

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
1	1,783	891,392	4.95	4,412
2	753	376,481	4.95	1,864
3	199	99,598	4.95	493
4	19	9,563	4.95	47
5	38	18,961	4.95	94
6	157	78,351	4.95	388
7	161	80,686	4.95	399
8	0	0	4.95	0
9	547	273,495	4.95	1,354
10	67	33,364	4.95	165
11	61	30,665	4.95	152
Total	3,785	1,892,557		9,368

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
1	808	808,021	3.71	2,998
2	305	304,552	3.71	1,130
3	162	161,625	3.71	600
4	12	12,195	3.71	45
5	6	6,263	3.71	23
6	24	23,882	3.71	89
7	124	123,841	3.71	459
8	0	0	3.71	0
9	464	463,620	3.71	1,720
10	21	21,163	3.71	79
11	20	19,519	3.71	72
Total	1,945	1,944,679		7,215

Total 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
1	7,258	1,279	4,412	2,998	15,947
2	1,408	248	1,864	1,130	4,650
3	2,810	390	493	600	4,293
4	525	33	47	45	650
5	54	1,479	94	23	1,650
6	1,229	296	388	89	2,002
7	2,665	355	399	459	3,879
8	0	0	0	0	0
9	1,907	5,986	1,354	1,720	10,967
10	2,272	120	165	79	2,636
11	1,514	356	152	72	2,094
Total	21,643	10,542	9,368	7,215	48,768

Appendix F

Roadway Capital Improvements Plan

ROADWAY IMPROVEMENTS 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 SA = special arterial (arterial with continuous left turn) DC = divided collector SC = special collector (collector with continuous left turn) UC = undivided collector
PK-HR VOLUME	The existing volumes of cars on the roadway segment traveling during the afternoon (P.M.) peak hour of travel.
% 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%.
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.



**Waco Roadway Impact Fee Study
Roadway Capital Improvements Plan**

Proj No.	Serv Area	Shared Svc Area	Roadway	From	To	Length (mi)	No. of Lanes	Type	Pct. in Serv. Area	Peak Hour Volume			VMT Supply Pk Hr Total	VMT Demand Pk Hr Total	Excess VMT Capacity	CIP VMT Deficiency
										A	B	Total				
1	1	6	Gholson Rd	Herring Ave	960' S of Herring Ave	0.18	2	UA	50%	0	0	0	107	0	107	0
2	1		Gholson Rd	960' S of Herring Ave	Waco Dr	0.33	2	UA	100%	0	0	0	395	0	395	0
Sub-Total Service Area 1						0.52							502	0	502	0
3	2		Lake Shore Dr	Mt Carmel Dr	Koehne Park Dr	0.62	4	DA	100%	0	0	0	1,658	0	1,658	0
4	2		Valley Mills Dr	Koehne Park Dr	Hillandale Rd	0.15	4	DA	100%	0	0	0	392	0	392	0
5	2		Valley Mills Dr	Hillandale Rd	Ridgewood Dr	0.26	4	DA	100%	0	0	0	697	0	697	0
6	2		Valley Mills Dr	Ridgewood Dr	Bishop Dr	0.18	3	DA	100%	0	0	0	358	0	358	0
Sub-Total Service Area 2						1.21							3,105	0	3,105	0
7	3		Bagby Ave	New Rd	Monte Vista St	0.27	2	DA	100%	0	0	0	360	0	360	0
8	3		Bagby Ave	Monte Vista St	Richter Ave	0.68	2	DA	100%	0	0	0	901	0	901	0
9	3		Bagby Ave	Richter Ave	Valley Mills Dr	0.59	2	DA	100%	0	0	0	778	0	778	0
10	3	9	S New Rd	Bagby Ave	I-35	0.80	1	DA	50%	0	0	0	267	0	267	0
11	3		Garden Dr	Robinson Rd	16th St	1.34	2	UA	100%	0	0	0	1,581	0	1,581	0
12	3		18th St	La Salle	Gurley Ln	0.45	2	DA	100%	0	0	0	593	0	593	0
13	3		16th	Gurley Ln	Garden Dr	0.42	4	DA	100%	0	0	0	1,116	0	1,116	0
14	3		12th	Garden Dr	TX-340	1.08	4	DA	100%	0	0	0	2,873	0	2,873	0
15	3		University Parks Dr	La Salle Ave	Garden Dr	0.84	2	DA	100%	0	0	0	1,114	0	1,114	0
Sub-Total Service Area 3						6.46							9,583	0	9,584	0
16	4		Martin Luther King Jr Blvd	BUS 77	SH 484	0.39	6	DA	100%	0	0	0	1,551	0	1,551	0
Sub-Total Service Area 4						0.39							1,551	0	1,551	0
No Projects in Service Area 5																
Sub-Total Service Area 5						0.00							0	0	0	0
1	6	1	Gholson Rd	960' S of Herring Ave	Herring Ave	0.18	2	UA	50%	0	0	0	107	0	107	0
17	6		Gholson Rd	Herring Ave	Lakeshore Dr	1.35	2	UA	100%	0	0	0	1,592	0	1,592	0
Sub-Total Service Area 6						1.53							1,699	0	1,699	0
18	7		North River Crossing	End of bridge	580' NE of Curry Ln	1.38	4	DA	100%	0	0	0	3,671	0	3,671	0
19	7		North River Crossing	580' NE of Curry Ln	Yankie Rd	0.47	4	DA	100%	0	0	0	1,257	0	1,257	0
20	7		Flat Rock Rd	Yankie Rd	Tree Lake Rd	1.01	2	UC	100%	0	0	0	1,030	0	1,030	0
21	7		Flat Rock Rd	Tree Lake Rd	China Spring Rd	1.66	2	UC	100%	0	0	0	1,693	0	1,693	0
22	7		Yankie Rd	North River Crossing	Flat Rock Rd	1.89	2	UC	100%	0	0	0	1,928	0	1,928	0
23	7		Tree Lake Dr	China Spring Rd	Flat Rock Rd	1.57	2	UC	100%	0	0	0	1,601	0	1,601	0
24	7		Wortham Bend	North City Limit	China Spring Rd	0.82	2	UC	100%	0	0	0	834	0	834	0
Sub-Total Service Area 7						8.80							12,014	0	12,015	0
No Projects in Service Area 8																
Sub-Total Service Area 8						0.00							0	0	0	0



**Waco Roadway Impact Fee Study
Roadway Capital Improvements Plan**

Proj No.	Serv Area	Shared Svc Area	Roadway	From	To	Length (mi)	No. of Lanes		Pct. in Serv. Area	Peak Hour Volume			VMT Supply Pk Hr Total	VMT Demand Pk Hr Total	Excess VMT Capacity	CIP VMT Deficiency
							Type	Type		A	B	Total				
25	9		Mars Dr	Hewitt Dr	Texas Central Pkwy	0.94	2	UA	100%	0	0	0	1,114	0	1,114	0
26	9		Beverly Dr	W Loop 340	4128' NE of Loop 340	0.78	2	UA	100%	0	0	0	923	0	923	0
27	9	X	Beverly Dr	4128' NE of Loop 340	New Road	0.31	2	UA	50%	0		0	182	0	182	0
28	9	X	Hewitt Dr	Woodway Dr	Old McGregor Dr	0.19	1	DA	50%	0		0	63	0	63	0
29	9	10	Hewitt Dr	Old McGregor Dr	Imperial Dr	0.45	1	DA	50%	0		0	148	0	148	0
30	9	10	Hewitt Dr	Imperial Dr	Mars Dr	0.62	1	DA	50%	0		0	207	0	207	0
31	9		Texas Central Pkwy	Railroad	Imperial Dr	0.34	2	UA	100%	0	0	0	402	0	402	0
10	9	3	S New Rd	Bagby Ave	I-35	0.80	1	UA	50%		0	0	237	0	237	0
32	9		Bagby Ave.	New Road	TX 340	0.83	1	DA	100%	0	0	0	550	0	550	0
Sub-Total Service Area 9						5.26							3,826	0	3,826	0
33	10		Warren Rd	City Limit	Ritchie Rd	0.38	3	SC	100%	0	0	0	430	0	430	0
34	10	X	Warren Rd	Ritchie Rd	3700' east of Ritchie Rd	0.70	2	SC	50%		0	0	198	0	198	0
35	10	X	Farmiller Rd	1300' south of Chapel Rd	2100' north of Warren Rd	1.13	2	SA	50%	0		0	376	0	376	0
29	10	9	Hewitt Dr	Old McGregor Dr	Imperial Dr	0.45	1	DA	50%		0	0	148	0	148	0
30	10	9	Hewitt Dr	Imperial Dr	Mars Dr	0.62	1	DA	50%		0	0	207	0	207	0
36	10		Chapel Rd	Meadow Mountain Dr	Ritchie Rd	1.15	3	SA	100%	0	0	0	1,530	0	1,530	0
37	10		Ritchie Rd	Panther Way	Warren St	1.01	2	UA	100%	0	0	0	1,192	0	1,192	0
Sub-Total Service Area 10						5.44							4,081	0	4,080	0
38	11		Val Verde Rd	Fossil Rim Rd	US 84	0.89	2	SC	100%	0	0	0	501	0	501	0
39	11		Harris Creek Rd	US 84	Walking Horse Ln	0.66	2	SC	100%	0	0	0	372	0	372	0
40	11		Speegleville Rd	Pecan Creek	Oak Rd	0.54	4	DA	100%	0	0	0	1,449	0	1,449	0
41	11		Speegleville Rd	Oak Rd	US 84	0.85	4	DA	100%	0	0	0	2,248	0	2,248	0
42	11		Old Lorena Rd	US 84 EBFR	South Bosque River	0.90	4	DA	100%	0	0	0	2,384	0	2,384	0
Sub-Total Service Area 11						3.83							6,954	0	6,953	0
Totals:												43,315	0	43,317	0	

Notes:

- 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 G

Roadway Capital Improvement Plan

Cost Summary



**Waco Roadway Impact Fee Study
Roadway Capital Improvements Plan**

Proj No.	Serv Area	Shared Svc Area	Roadway	From	To	Length (mi)	No. of Lanes	Type	Pct. in Serv. Area	Roadway Costs			Study Update Cost	Total Cost	Project Cost 50% Credit
										Engineering	ROW	Construction			
1	1	6	Gholson Rd	Herring Ave	960' S of Herring Ave	0.18	2	UA	50%	\$ 3,250	\$ 1,920	\$ 36,065	\$247	\$41,482	\$20,741
2	1		Gholson Rd	960' S of Herring Ave	Waco Dr	0.33	2	UA	100%	\$ 13,420	\$ -	\$ 149,100	\$912	\$163,432	\$81,716
Sub-Total Service Area 1						0.52				\$ 16,670	\$ 1,920	\$ 185,165	\$1,159	\$204,914	\$102,457
3	2		Lake Shore Dr	Mt Carmel Dr	Koehne Park Dr	0.62	4	DA	100%	\$ 198,700	\$ 49,400	\$ 2,208,267	\$3,828	\$2,460,194	\$1,230,097
4	2		Valley Mills Dr	Koehne Park Dr	Hillandale Rd	0.15	4	DA	100%	\$ 42,000	\$ -	\$ 466,867	\$905	\$509,772	\$254,886
5	2		Valley Mills Dr	Hillandale Rd	Ridgewood Dr	0.26	4	DA	100%	\$ 74,400	\$ -	\$ 826,133	\$1,609	\$902,142	\$451,071
6	2		Valley Mills Dr	Ridgewood Dr	Bishop Dr	0.18	3	DA	100%	\$ 38,300	\$ 18,900	\$ 425,000	\$827	\$483,027	\$241,513
Sub-Total Service Area 2						1.21				\$ 353,400	\$ 68,300	\$ 3,926,267	\$7,168	\$4,355,135	\$2,177,568
7	3		Bagby Ave	New Rd	Monte Vista St	0.27	2	DA	100%	\$ 43,800	\$ -	\$ 486,400	\$831	\$531,031	\$265,516
8	3		Bagby Ave	Monte Vista St	Richter Ave	0.68	2	DA	100%	\$ 121,900	\$ 71,500	\$ 1,354,500	\$2,080	\$1,549,980	\$774,990
9	3		Bagby Ave	Richter Ave	Valley Mills Dr	0.59	2	DA	100%	\$ 93,700	\$ 61,800	\$ 1,041,300	\$1,796	\$1,198,596	\$599,298
10	3	9	S New Rd	Bagby Ave	I-35	0.80	1	DA	50%	\$ 56,850	\$ 42,450	\$ 631,433	\$616	\$731,350	\$365,675
11	3		Garden Dr	Robinson Rd	16th St	1.34	2	UA	100%	\$ 369,500	\$ 566,100	\$ 4,105,600	\$3,650	\$5,044,850	\$2,522,425
12	3		18th St	La Salle	Gurley Ln	0.45	2	DA	100%	\$ 63,200	\$ 23,600	\$ 702,633	\$1,369	\$790,802	\$395,401
13	3		16th	Gurley Ln	Garden Dr	0.42	4	DA	100%	\$ 119,200	\$ 132,900	\$ 1,323,933	\$2,576	\$1,578,610	\$789,305
14	3		12th	Garden Dr	TX-340	1.08	4	DA	100%	\$ 323,400	\$ 342,100	\$ 3,593,333	\$6,633	\$4,265,466	\$2,132,733
15	3		University Parks Dr	La Salle Ave	Garden Dr	0.84	2	DA	100%	\$ 30,660	\$ -	\$ 340,590	\$2,572	\$373,822	\$186,911
Sub-Total Service Area 3						6.46				\$ 1,222,210	\$ 1,240,450	\$ 13,579,723	\$22,124	\$16,064,507	\$8,032,254
16	4		Martin Luther King Jr Blvd	BUS 77	SH 484	0.39	6	DA	100%	\$ 38,480	\$ 49,280	\$ 427,640	\$3,581	\$518,981	\$259,490
Sub-Total Service Area 4						0.39				\$ 38,480	\$ 49,280	\$ 427,640	\$3,581	\$518,981	\$259,490
No Projects in Service Area 5															
Sub-Total Service Area 5						0.00				\$ -	\$ -	\$ -	\$0	\$0	\$0
1	6	1	Gholson Rd	960' S of Herring Ave	Herring Ave	0.18	2	UA	50%	\$ 3,250	\$ 1,920	\$ 36,065	\$247	\$41,482	\$20,741
17	6		Gholson Rd	Herring Ave	Lakeshore Dr	1.35	2	UA	100%	\$ 47,100	\$ -	\$ 523,450	\$3,675	\$574,225	\$287,113
Sub-Total Service Area 6						1.53				\$ 50,350	\$ 1,920	\$ 559,515	\$3,922	\$615,707	\$307,854
18	7		North River Crossing	End of bridge	580' NE of Curry Ln	1.38	4	DA	100%	\$ 77,900	\$ -	\$ 865,800	\$8,475	\$952,175	\$476,088
19	7		North River Crossing	580' NE of Curry Ln	Yankie Rd	0.47	4	DA	100%	\$ 30,300	\$ -	\$ 336,600	\$2,902	\$369,802	\$184,901
20	7		Flat Rock Rd	Yankie Rd	Tree Lake Rd	1.01	2	UC	100%	\$ 174,600	\$ 186,700	\$ 1,940,250	\$2,378	\$2,303,928	\$1,151,964
21	7		Flat Rock Rd	Tree Lake Rd	China Spring Rd	1.66	2	UC	100%	\$ 277,900	\$ -	\$ 3,087,900	\$3,909	\$3,369,709	\$1,684,854
22	7		Yankie Rd	North River Crossing	Flat Rock Rd	1.89	2	UC	100%	\$ 317,200	\$ 199,600	\$ 3,524,300	\$4,451	\$4,045,551	\$2,022,776
23	7		Tree Lake Dr	China Spring Rd	Flat Rock Rd	1.57	2	UC	100%	\$ 263,500	\$ 165,800	\$ 2,927,500	\$3,696	\$3,360,496	\$1,680,248
24	7		Wortham Bend	North City Limit	China Spring Rd	0.82	2	UC	100%	\$ 30,200	\$ -	\$ 335,810	\$1,925	\$367,935	\$183,968
Sub-Total Service Area 7						8.80				\$ 1,171,600	\$ 552,100	\$ 13,018,160	\$27,736	\$14,769,596	\$7,384,798
No Projects in Service Area 8															
Sub-Total Service Area 8						0.00				\$ -	\$ -	\$ -	\$0	\$0	\$0

**Waco Roadway Impact Fee Study
Roadway Capital Improvements Plan**

Proj No.	Serv Area	Shared Svc Area	Roadway	From	To	Length (mi)	No. of Lanes	Type	Pct. in Serv. Area	Roadway Costs			Study Update	Total Cost
										Engineering	ROW	Construction	Cost	
25	9		Mars Dr	Hewitt Dr	Texas Central Pkwy	0.94	2	UA	100%	\$ 210,200	\$ -	\$ 2,335,450	\$2,572	\$2,548,222
26	9		Beverly Dr	W Loop 340	4128' NE of Loop 340	0.78	2	UA	100%	\$ 121,200	\$ -	\$ 1,346,300	\$2,131	\$1,469,631
27	9	X	Beverly Dr	4128' NE of Loop 340	New Road	0.31	2	UA	50%	\$ 22,550	\$ -	\$ 250,500	\$420	\$273,470
28	9	X	Hewitt Dr	Woodway Dr	Old McGregor Dr	0.19	1	DA	50%	\$ 2,650	\$ -	\$ 29,700	\$145	\$32,495
29	9	10	Hewitt Dr	Old McGregor Dr	Imperial Dr	0.45	1	DA	50%	\$ 6,850	\$ -	\$ 76,250	\$342	\$83,442
30	9	10	Hewitt Dr	Imperial Dr	Mars Dr	0.62	1	DA	50%	\$ 8,800	\$ -	\$ 97,700	\$478	\$106,978
31	9		Texas Central Pkwy	Railroad	Imperial Dr	0.34	2	UA	100%	\$ 59,500	\$ -	\$ 661,100	\$928	\$721,528
10	9	3	S New Rd	Bagby Ave	I-35	0.80	1	UA	50%	\$ 56,850	\$ 42,450	\$ 631,433	\$547	\$731,280
32	9		Bagby Ave.	New Road	TX 340	0.83	1	DA	100%	\$ 232,400	\$ -	\$ 2,582,560	\$1,270	\$2,816,230
Sub-Total Service Area 9						5.26				\$ 721,000	\$ 42,450	\$ 8,010,993	\$ 8,833	\$ 8,783,276
33	10		Warren Rd	City Limit	Ritchie Rd	0.38	3	SC	100%	\$ 92,300	\$ 100,500	\$ 1,025,400	\$993	\$1,219,193
34	10	X	Warren Rd	Ritchie Rd	3700' east of Ritchie Rd	0.70	2	SC	50%	\$ 29,400	\$ -	\$ 326,550	\$457	\$356,407
35	10	X	Farmiller Rd	1300' south of Chapel Rd	2100' north of Warren Rd	1.13	2	SA	50%	\$ 96,300	\$ 89,500	\$ 1,069,767	\$868	\$1,256,435
29	10	9	Hewitt Dr	Old McGregor Dr	Imperial Dr	0.45	1	DA	50%	\$ 6,850	\$ -	\$ 76,250	\$342	\$83,442
30	10	9	Hewitt Dr	Imperial Dr	Mars Dr	0.62	1	DA	50%	\$ 8,800	\$ -	\$ 97,700	\$478	\$106,978
36	10		Chapel Rd	Meadow Mountain Dr	Ritchie Rd	1.15	3	SA	100%	\$ 151,600	\$ -	\$ 1,684,020	\$3,532	\$1,839,152
37	10		Ritchie Rd	Panther Way	Warren St	1.01	2	UA	100%	\$ 176,500	\$ -	\$ 1,961,300	\$2,752	\$2,140,552
Sub-Total Service Area 10						5.44				\$ 561,750	\$ 190,000	\$ 6,240,987	\$9,422	\$7,002,158
38	11		Val Verde Rd	Fossil Rim Rd	US 84	0.89	2	SC	100%	\$ 78,900	\$ -	\$ 877,133	\$1,157	\$957,190
39	11		Harris Creek Rd	US 84	Walking Horse Ln	0.66	2	SC	100%	\$ 58,700	\$ -	\$ 652,400	\$859	\$711,959
40	11		Speegleville Rd	Pecan Creek	Oak Rd	0.54	4	DA	100%	\$ 267,500	\$ 57,500	\$ 2,972,667	\$3,345	\$3,301,012
41	11		Speegleville Rd	Oak Rd	US 84	0.85	4	DA	100%	\$ 221,800	\$ -	\$ 2,464,467	\$5,190	\$2,691,457
42	11		Old Lorena Rd	US 84 EBFR	South Bosque River	0.90	4	DA	100%	\$ 235,200	\$ -	\$ 2,613,533	\$5,504	\$2,854,237
Sub-Total Service Area 11						3.83				\$ 862,100	\$ 57,500	\$ 9,580,200	\$ 16,054	\$ 10,515,854
Totals:										\$ 4,997,560	\$ 2,203,920	\$ 55,528,650	\$100,000	\$ 62,830,130

Summary:	Engineering Cost	\$4,997,560
	Right-of-Way Cost	\$2,203,920
	Construction Cost	\$55,528,650
	TOTAL PROJECT COST	\$62,830,130

Notes:

- 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 H

Roadway Capital Improvement Plan

Cost Estimates

City of Waco **Service Area 1 and 6**
Impact Fee Engineer's Opinion of Probable Construction Cost Estimate

Gholson Rd
Herring Ave to 960' S of Herring Ave

Roadway Information:		
Functional Classification:	Minor Arterial	No. of Lanes: 4
Length (lf):	960	
Ultimate Right-of-Way Width (ft.):	100	
Median Type:	None	
Pavement Width (FOC to FOC):	48	
Description:	Widen existing roadway to thoroughfare standard; TxDOT facility	

Roadway Construction Cost Estimate:				
I. Paving Construction Cost Estimate				
Item No.	Item Description	Quantity	Unit	Item Cost
1	Right of Way Preparation	10	STA	\$ 20,000
2	Remove Existing Pavement	10	STA	\$ 15,000
3	Unclassified Street Excavation	1,900	CY	\$ 15,200
4	8" Lime Stabilized Subgrade	5,800	SY	\$ 23,200
5	Lime for Stabilization (42 lb/SY)	130	TON	\$ 22,100
6	10" Cement Treated Base	5,200	SY	\$ 109,200
7	2" HMAc	370	TON	\$ 40,700
8	Concrete Curb and Gutter	2,000	LF	\$ 50,000
9	4" Concrete Sidewalk and Ramps	11,520	SF	\$ 80,640
10	Hydromulching	38,400	SY	\$ 76,800
Paving Estimate Subtotal:				\$ 452,840
II. Non-Paving Construction Components				
Item No.	Item Description		Pct. Of Paving	Item Cost
11	Pavement Markings & Signage		2%	\$ 9,100
12	Traffic Control		4%	\$ 18,200
13	Erosion Control		3%	\$ 13,600
14	Drainage Improvements (RCP, Inlets, MH, Outfalls)		20%	\$ 90,600
15	Utility Adjustments		5%	\$ 22,700
Other Components Estimate Subtotal:				\$ 154,200
III. Special Construction Components				
Item No.	Item Description	Notes	Allowance	Item Cost
16	Drainage Structures	None	\$ -	\$ -
17	Bridge Structures	None	\$ -	\$ -
18	Traffic Signals	None	\$ -	\$ -
Special Components Estimate Subtotal:				\$ -
I, II, & III Construction Subtotal:				\$ 607,040
Mobilization				\$ 48,600
Contingency				\$ 65,600
Construction Cost Estimate Total:				\$ 721,300

Impact Fee Cost Estimate Summary				
Item Description	Notes		Allowance	Item Cost
Construction	Cost of 2 new lanes only; City		-	\$ 72,130
Engineering/Survey/Testing	participation of 20%		9.0%	\$ 6,500
Right-of-Way Acquisition	Cost per sq. ft.: \$ 1.00		\$ 19,200	\$ 3,840
Impact Fee Project Cost Estimate Total:				\$ 82,470
Estimated Finance Cost (11.9%; i.e. 3% over 10 years)				\$ 9,800

City of Waco **Service Area 1**
Impact Fee Engineer's Opinion of Probable Construction Cost Estimate

Gholson Rd
 960' S of Herring Ave to Waco Dr

Roadway Information:		
Functional Classification:	Minor Arterial	No. of Lanes: 4
Length (lf):	1,768	
Ultimate Right-of-Way Width (ft.):	80	
Median Type:	None	
Pavement Width (FOC to FOC):	48	
Description:	Widen existing roadway to thoroughfare standard; TxDOT facility	

Roadway Construction Cost Estimate:				
I. Paving Construction Cost Estimate				
Item No.	Item Description	Quantity	Unit	Item Cost
1	Right of Way Preparation	18	STA	\$ 36,000
2	Remove Existing Pavement	18	STA	\$ 27,000
3	Unclassified Street Excavation	3,500	CY	\$ 28,000
4	8" Lime Stabilized Subgrade	9,900	SY	\$ 39,600
5	Lime for Stabilization (42 lb/SY)	210	TON	\$ 35,700
6	10" Cement Treated Base	9,500	SY	\$ 199,500
7	2" HMAC	680	TON	\$ 74,800
8	Concrete Curb and Gutter	3,600	LF	\$ 90,000
9	4" Concrete Sidewalk and Ramps	21,220	SF	\$ 148,540
10	Hydromulching	35,400	SY	\$ 70,800
Paving Estimate Subtotal:				\$ 749,940
II. Non-Paving Construction Components				
Item No.	Item Description		Pct. Of Paving	Item Cost
11	Pavement Markings & Signage		2%	\$ 15,000
12	Traffic Control		4%	\$ 30,000
13	Erosion Control		3%	\$ 22,500
14	Drainage Improvements (RCP, Inlets, MH, Outfalls)		20%	\$ 150,000
15	Utility Adjustments		5%	\$ 37,500
Other Components Estimate Subtotal:				\$ 255,000
III. Special Construction Components				
Item No.	Item Description	Notes	Allowance	Item Cost
16	Drainage Structures	None	\$ -	\$ -
17	Bridge Structures	None	\$ -	\$ -
18	Traffic Signals	Add signal @Faulkner Ln	\$ 250,000	\$ 250,000
Special Components Estimate Subtotal:				\$ 250,000
I, II, & III Construction Subtotal:				\$ 1,254,940
			Mobilization	8% \$ 100,400
			Contingency	10% \$ 135,600
Construction Cost Estimate Total:				\$ 1,491,000

Impact Fee Cost Estimate Summary				
Item Description	Notes		Allowance	Item Cost
Construction	Cost of 2 new lanes only; City		-	\$ 149,100
Engineering/Survey/Testing	participation of 20%		9.0%	\$ 13,400
Right-of-Way Acquisition	Cost per sq. ft.:	\$ 1.00	\$ -	\$ -
Impact Fee Project Cost Estimate Total:				\$ 162,500
Estimated Finance Cost (11.9%; i.e. 3% over 10 years)				\$ 19,300

City of Waco **Service Area 2**
Impact Fee Engineer's Opinion of Probable Construction Cost Estimate

Lake Shore Dr
 Mt Carmel Dr to Koehne Park Dr

Roadway Information:		
Functional Classification:	Major Arterial	No. of Lanes: 6
Length (lf):	3,291	
Ultimate Right-of-Way Width (ft.):	120	
Median Type:	Raised	
Pavement Width (FOC to FOC):	72	
Description:	Widen existing 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	33	STA	\$ 2,000.00	\$ 66,000
2	Remove Existing Pavement	33	STA	\$ 1,500.00	\$ 49,500
3	Unclassified Street Excavation	9,700	CY	\$ 8.00	\$ 77,600
4	8" Lime Stabilized Subgrade	27,800	SY	\$ 4.00	\$ 111,200
5	Lime for Stabilization (42 lb/SY)	590	TON	\$ 170.00	\$ 100,300
6	10" Cement Treated Base	26,400	SY	\$ 21.00	\$ 554,400
7	2" HMAC	1,890	TON	\$ 110.00	\$ 207,900
8	Concrete Curb and Gutter	6,600	LF	\$ 25.00	\$ 165,000
9	4" Concrete Sidewalk and Ramps	39,500	SF	\$ 7.00	\$ 276,500
10	Hydromulching	118,500	SY	\$ 2.00	\$ 237,000
Paving Estimate Subtotal:					\$ 1,845,400

II. Non-Paving Construction Components

Item No.	Item Description	Pct. Of Paving	Item Cost
11	Pavement Markings & Signage	2%	\$ 37,000
12	Traffic Control	4%	\$ 73,900
13	Erosion Control	3%	\$ 55,400
14	Drainage Improvements (RCP, Inlets, MH, Outfalls)	20%	\$ 369,100
15	Utility Adjustments	5%	\$ 92,300
Other Components Estimate Subtotal:			\$ 627,700

III. Special Construction Components

Item No.	Item Description	Notes	Allowance	Item Cost
16	Drainage Structures	None	\$ -	\$ -
17	Bridge Structures	None	\$ -	\$ -
18	Traffic Signals	None	\$ -	\$ -
17	Other	Enbankment and guard rail	\$ 315,000	\$ 315,000
Special Components Estimate Subtotal:				\$ 315,000

	I, II, & III Construction Subtotal:	\$	2,788,100
	Mobilization	8%	\$ 223,100
	Contingency	10%	\$ 301,200
Construction Cost Estimate Total:		\$	3,312,400

Impact Fee Cost Estimate Summary

Item Description	Notes	Allowance	Item Cost
Construction	Cost of 4 new lanes only	-	\$ 2,208,267
Engineering/Survey/Testing		9.0%	\$ 198,700
Right-of-Way Acquisition	Cost per sq. ft.: \$ 1.00	\$ 49,400	\$ 49,400
Impact Fee Project Cost Estimate Total:			\$ 2,456,367
Estimated Finance Cost (11.9%; i.e. 3% over 10 years)			\$ 292,300

City of Waco **Service Area 2**
Impact Fee Engineer's Opinion of Probable Construction Cost Estimate

Valley Mills Dr
 Koehne Park Dr to Hillandale Rd

Roadway Information:			
Functional Classification:	Major Arterial	No. of Lanes:	6
Length (lf):	778		
Ultimate Right-of-Way Width (ft.):	120		
Median Type:	Raised		
Pavement Width (FOC to FOC):	72		
Description:	Widen existing 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	\$ 2,000.00	\$ 16,000
2	Remove Existing Pavement	8	STA	\$ 1,500.00	\$ 12,000
3	Unclassified Street Excavation	2,300	CY	\$ 8.00	\$ 18,400
4	8" Lime Stabilized Subgrade	6,600	SY	\$ 4.00	\$ 26,400
5	Lime for Stabilization (42 lb/SY)	140	TON	\$ 170.00	\$ 23,800
6	10" Cement Treated Base	6,300	SY	\$ 21.00	\$ 132,300
7	2" HMAc	450	TON	\$ 110.00	\$ 49,500
8	Concrete Curb and Gutter	1,600	LF	\$ 25.00	\$ 40,000
9	4" Concrete Sidewalk and Ramps	9,340	SF	\$ 7.00	\$ 65,380
10	Hydromulching	28,000	SY	\$ 2.00	\$ 56,000
Paving Estimate Subtotal:					\$ 439,780
II. Non-Paving Construction Components					
Item No.	Item Description		Pct. Of Paving		Item Cost
11	Pavement Markings & Signage		2%	\$	8,800
12	Traffic Control		4%	\$	17,600
13	Erosion Control		3%	\$	13,200
14	Drainage Improvements (RCP, Inlets, MH, Outfalls)		20%	\$	88,000
15	Utility Adjustments		5%	\$	22,000
Other Components Estimate Subtotal:					\$ 149,600
III. Special Construction Components					
Item No.	Item Description	Notes	Allowance		Item Cost
16	Drainage Structures	None	\$ -	\$	-
17	Bridge Structures	None	\$ -	\$	-
18	Traffic Signals	None	\$ -	\$	-
Special Components Estimate Subtotal:					\$ -
I, II, & III Construction Subtotal:					\$ 589,380
Mobilization					8% \$ 47,200
Contingency					10% \$ 63,700
Construction Cost Estimate Total:					\$ 700,300

Impact Fee Cost Estimate Summary					
Item Description	Notes	Allowance		Item Cost	
Construction	Cost of 4 new lanes only	-	\$	466,867	
Engineering/Survey/Testing		9.0%	\$	42,000	
Right-of-Way Acquisition	Cost per sq. ft.: \$ 1.00	\$ -	\$	-	
Impact Fee Project Cost Estimate Total:					\$ 508,867
Estimated Finance Cost (11.9%; i.e. 3% over 10 years)					\$ 60,500

City of Waco **Service Area 2**
Impact Fee Engineer's Opinion of Probable Construction Cost Estimate

Valley Mills Dr
Hillandale Rd to Ridgewood Dr

Roadway Information:		
Functional Classification:	Major Arterial	No. of Lanes: 6
Length (lf):	1,384	
Ultimate Right-of-Way Width (ft.):	120	
Median Type:	Raised	
Pavement Width (FOC to FOC):	72	
Description:	Widen existing 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	\$ 2,000.00	\$ 28,000
2	Remove Existing Pavement	14	STA	\$ 1,500.00	\$ 21,000
3	Unclassified Street Excavation	4,100	CY	\$ 8.00	\$ 32,800
4	8" Lime Stabilized Subgrade	11,700	SY	\$ 4.00	\$ 46,800
5	Lime for Stabilization (42 lb/SY)	250	TON	\$ 170.00	\$ 42,500
6	10" Cement Treated Base	11,100	SY	\$ 21.00	\$ 233,100
7	2" HMAC	800	TON	\$ 110.00	\$ 88,000
8	Concrete Curb and Gutter	2,800	LF	\$ 25.00	\$ 70,000
9	4" Concrete Sidewalk and Ramps	16,610	SF	\$ 7.00	\$ 116,270
10	Hydromulching	49,800	SY	\$ 2.00	\$ 99,600
Paving Estimate Subtotal:					\$ 778,070

II. Non-Paving Construction Components

Item No.	Item Description	Pct. Of Paving	Item Cost
11	Pavement Markings & Signage	2%	\$ 15,600
12	Traffic Control	4%	\$ 31,200
13	Erosion Control	3%	\$ 23,400
14	Drainage Improvements (RCP, Inlets, MH, Outfalls)	20%	\$ 155,700
15	Utility Adjustments	5%	\$ 39,000
Other Components Estimate Subtotal:			\$ 264,900

III. Special Construction Components

Item No.	Item Description	Notes	Allowance	Item Cost
16	Drainage Structures	None	\$ -	\$ -
17	Bridge Structures	None	\$ -	\$ -
18	Traffic Signals	None	\$ -	\$ -
Special Components Estimate Subtotal:				\$ -
I, II, & III Construction Subtotal:				\$ 1,042,970
Mobilization				8% \$ 83,500
Contingency				10% \$ 112,700
Construction Cost Estimate Total:				\$ 1,239,200

Impact Fee Cost Estimate Summary

Item Description	Notes	Allowance	Item Cost
Construction	Cost of 4 new lanes only	-	\$ 826,133
Engineering/Survey/Testing		9.0%	\$ 74,400
Right-of-Way Acquisition	Cost per sq. ft.: \$ 1.00	\$ -	\$ -
Impact Fee Project Cost Estimate Total:			\$ 900,533
Estimated Finance Cost (11.9%; i.e. 3% over 10 years)			\$ 107,100

City of Waco
Impact Fee Engineer's Opinion of Probable Construction Cost Estimate

Valley Mills Dr
 Ridgewood Dr to Bishop Dr

Roadway Information:			
Functional Classification:	Major Arterial	No. of Lanes:	6
Length (lf):	947		
Ultimate Right-of-Way Width (ft.):	120		
Median Type:	Raised		
Pavement Width (FOC to FOC):	72		
Description:	Widen existing 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	\$ 2,000.00	\$ 20,000
2	Remove Existing Pavement	10	STA	\$ 1,500.00	\$ 15,000
3	Unclassified Street Excavation	2,800	CY	\$ 8.00	\$ 22,400
4	8" Lime Stabilized Subgrade	8,000	SY	\$ 4.00	\$ 32,000
5	Lime for Stabilization (42 lb/SY)	170	TON	\$ 170.00	\$ 28,900
6	10" Cement Treated Base	7,600	SY	\$ 21.00	\$ 159,600
7	2" HMAc	550	TON	\$ 110.00	\$ 60,500
8	Concrete Curb and Gutter	1,900	LF	\$ 25.00	\$ 47,500
9	4" Concrete Sidewalk and Ramps	11,370	SF	\$ 7.00	\$ 79,590
10	Hydromulching	34,100	SY	\$ 2.00	\$ 68,200
Paving Estimate Subtotal:					\$ 533,690

II. Non-Paving Construction Components

Item No.	Item Description	Pct. Of Paving	Item Cost
11	Pavement Markings & Signage	2%	\$ 10,700
12	Traffic Control	4%	\$ 21,400
13	Erosion Control	3%	\$ 16,100
14	Drainage Improvements (RCP, Inlets, MH, Outfalls)	20%	\$ 106,800
15	Utility Adjustments	5%	\$ 26,700
Other Components Estimate Subtotal:			\$ 181,700

III. Special Construction Components

Item No.	Item Description	Notes	Allowance	Item Cost
16	Drainage Structures	None	\$ -	\$ -
17	Bridge Structures	None	\$ -	\$ -
18	Traffic Signals	None	\$ -	\$ -
Special Components Estimate Subtotal:				\$ -

I, II, & III Construction Subtotal:				\$ 715,390
Mobilization				8% \$ 57,300
Contingency				10% \$ 77,300
Construction Cost Estimate Total:				\$ 850,000

Impact Fee Cost Estimate Summary

Item Description	Notes	Allowance	Item Cost
Construction	Cost of 3 new lanes only	-	\$ 425,000
Engineering/Survey/Testing		9.0%	\$ 38,300
Right-of-Way Acquisition	Cost per sq. ft.: \$ 1.00	\$ 18,900	\$ 18,900
Impact Fee Project Cost Estimate Total:			\$ 482,200
Estimated Finance Cost (11.9%; i.e. 3% over 10 years)			\$ 57,300

City of Waco **Service Area 3**
Impact Fee Engineer's Opinion of Probable Construction Cost Estimate

Bagby Ave
 New Rd to Monte Vista St

Roadway Information:		
Functional Classification:	Minor Arterial	No. of Lanes: 4
Length (lf):	1,430	
Ultimate Right-of-Way Width (ft.):	80	
Median Type:	Raised	
Pavement Width (FOC to FOC):	48	
Description:	Widen existing roadway to thoroughfare standard	

Roadway Construction Cost Estimate:				
I. Paving Construction Cost Estimate				
Item No.	Item Description	Quantity	Unit	Item Cost
1	Right of Way Preparation	15	STA	\$ 30,000
2	Remove Existing Pavement	15	STA	\$ 22,500
3	Unclassified Street Excavation	2,800	CY	\$ 22,400
4	8" Lime Stabilized Subgrade	8,300	SY	\$ 33,200
5	Lime for Stabilization (42 lb/SY)	180	TON	\$ 30,600
6	10" Cement Treated Base	7,700	SY	\$ 161,700
7	2" HMAC	550	TON	\$ 60,500
8	Concrete Curb and Gutter	2,900	LF	\$ 72,500
9	4" Concrete Sidewalk and Ramps	17,160	SF	\$ 120,120
10	Hydromulching	28,600	SY	\$ 57,200
Paving Estimate Subtotal:				\$ 610,720
II. Non-Paving Construction Components				
Item No.	Item Description		Pct. Of Paving	Item Cost
11	Pavement Markings & Signage		2%	\$ 12,300
12	Traffic Control		4%	\$ 24,500
13	Erosion Control		3%	\$ 18,400
14	Drainage Improvements (RCP, Inlets, MH, Outfalls)		20%	\$ 122,200
15	Utility Adjustments		5%	\$ 30,600
Other Components Estimate Subtotal:				\$ 208,000
III. Special Construction Components				
Item No.	Item Description	Notes	Allowance	Item Cost
16	Drainage Structures	None	\$ -	\$ -
17	Bridge Structures	None	\$ -	\$ -
18	Traffic Signals	None	\$ -	\$ -
Special Components Estimate Subtotal:				\$ -
I, II, & III Construction Subtotal:				\$ 818,720
			Mobilization	8% \$ 65,500
			Contingency	10% \$ 88,500
Construction Cost Estimate Total:				\$ 972,800

Impact Fee Cost Estimate Summary				
Item Description	Notes		Allowance	Item Cost
Construction	Cost of 2 new lanes only		-	\$ 486,400
Engineering/Survey/Testing			9.0%	\$ 43,800
Right-of-Way Acquisition	Cost per sq. ft.:	\$ 1.00	\$ -	\$ -
Impact Fee Project Cost Estimate Total:				\$ 530,200
Estimated Finance Cost (11.9%; i.e. 3% over 10 years)				\$ 63,000

City of Waco **Service Area 3**
Impact Fee Engineer's Opinion of Probable Construction Cost Estimate

Bagby Ave
Monte Vista St to Richter Ave

Roadway Information:		
Functional Classification:	Minor Arterial	No. of Lanes: 4
Length (lf):	3,577	
Ultimate Right-of-Way Width (ft.):	80	
Median Type:	Raised	
Pavement Width (FOC to FOC):	48	
Description:	Widen existing roadway to thoroughfare standard	

Roadway Construction Cost Estimate:				
I. Paving Construction Cost Estimate				
Item No.	Item Description	Quantity	Unit	Item Cost
1	Right of Way Preparation	36	STA	\$ 72,000
2	Remove Existing Pavement	36	STA	\$ 54,000
3	Unclassified Street Excavation	7,000	CY	\$ 56,000
4	8" Lime Stabilized Subgrade	20,700	SY	\$ 82,800
5	Lime for Stabilization (42 lb/SY)	440	TON	\$ 74,800
6	10" Cement Treated Base	19,100	SY	\$ 401,100
7	2" HMAc	1,370	TON	\$ 150,700
8	Concrete Curb and Gutter	7,200	LF	\$ 180,000
9	4" Concrete Sidewalk and Ramps	42,930	SF	\$ 300,510
10	Hydromulching	71,500	SY	\$ 143,000
Paving Estimate Subtotal:				\$ 1,514,910
II. Non-Paving Construction Components				
Item No.	Item Description		Pct. Of Paving	Item Cost
11	Pavement Markings & Signage		2%	\$ 30,300
12	Traffic Control		4%	\$ 60,600
13	Erosion Control		3%	\$ 45,500
14	Drainage Improvements (RCP, Inlets, MH, Outfalls)		20%	\$ 303,000
15	Utility Adjustments		5%	\$ 75,800
Other Components Estimate Subtotal:				\$ 515,200
III. Special Construction Components				
Item No.	Item Description	Notes	Allowance	Item Cost
16	Drainage Structures	None	\$ -	\$ -
17	Bridge Structures	None	\$ -	\$ -
18	Traffic Signals	Add signal @ Richter Ave	\$ 250,000	\$ 250,000
Special Components Estimate Subtotal:				\$ 250,000
I, II, & III Construction Subtotal:				\$ 2,280,110
			Mobilization	8% \$ 182,500
			Contingency	10% \$ 246,300
Construction Cost Estimate Total:				\$ 2,709,000

Impact Fee Cost Estimate Summary				
Item Description	Notes	Allowance	Item Cost	
Construction	Cost of 2 new lanes only	-	\$ 1,354,500	
Engineering/Survey/Testing		9.0%	\$ 121,900	
Right-of-Way Acquisition	Cost per sq. ft.:	\$ 1.00	\$ 71,500	\$ 71,500
Impact Fee Project Cost Estimate Total:				\$ 1,547,900
Estimated Finance Cost (11.9%; i.e. 3% over 10 years)				\$ 184,200

City of Waco
Impact Fee Engineer's Opinion of Probable Construction Cost Estimate

Bagby Ave
 Richter Ave to Valley Mills Dr

Roadway Information:		
Functional Classification:	Minor Arterial	No. of Lanes: 4
Length (lf):	3,090	
Ultimate Right-of-Way Width (ft.):	80	
Median Type:	Raised	
Pavement Width (FOC to FOC):	48	
Description:	Widen existing 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	31	STA	\$ 2,000.00	\$ 62,000
2	Remove Existing Pavement	31	STA	\$ 1,500.00	\$ 46,500
3	Unclassified Street Excavation	6,100	CY	\$ 8.00	\$ 48,800
4	8" Lime Stabilized Subgrade	17,900	SY	\$ 4.00	\$ 71,600
5	Lime for Stabilization (42 lb/SY)	380	TON	\$ 170.00	\$ 64,600
6	10" Cement Treated Base	16,500	SY	\$ 21.00	\$ 346,500
7	2" HMAc	1,180	TON	\$ 110.00	\$ 129,800
8	Concrete Curb and Gutter	6,200	LF	\$ 25.00	\$ 155,000
9	4" Concrete Sidewalk and Ramps	37,080	SF	\$ 7.00	\$ 259,560
10	Hydromulching	61,800	SY	\$ 2.00	\$ 123,600
Paving Estimate Subtotal:					\$ 1,307,960

II. Non-Paving Construction Components

Item No.	Item Description	Pct. Of Paving	Item Cost
11	Pavement Markings & Signage	2%	\$ 26,200
12	Traffic Control	4%	\$ 52,400
13	Erosion Control	3%	\$ 39,300
14	Drainage Improvements (RCP, Inlets, MH, Outfalls)	20%	\$ 261,600
15	Utility Adjustments	5%	\$ 65,400
Other Components Estimate Subtotal:			\$ 444,900

III. Special Construction Components

Item No.	Item Description	Notes	Allowance	Item Cost
16	Drainage Structures	None	\$ -	\$ -
17	Bridge Structures	None	\$ -	\$ -
18	Traffic Signals	None	\$ -	\$ -
Special Components Estimate Subtotal:				\$ -

	I, II, & III Construction Subtotal:	\$ 1,752,860
	Mobilization	8% \$ 140,300
	Contingency	10% \$ 189,400
Construction Cost Estimate Total:		\$ 2,082,600

Impact Fee Cost Estimate Summary

Item Description	Notes	Allowance	Item Cost
Construction	Cost of 2 new lanes only	-	\$ 1,041,300
Engineering/Survey/Testing		9.0%	\$ 93,700
Right-of-Way Acquisition	Cost per sq. ft.: \$ 1.00	\$ 61,800	\$ 61,800
Impact Fee Project Cost Estimate Total:			\$ 1,196,800
Estimated Finance Cost (11.9%; i.e. 3% over 10 years)			\$ 142,400

City of Waco **Service Area 3 and 9**
Impact Fee Engineer's Opinion of Probable Construction Cost Estimate

S New Rd
 Bagby Ave to I 35

Roadway Information:		
Functional Classification:	Minor Arterial	No. of Lanes: 6
Length (lf):	4,247	
Ultimate Right-of-Way Width (ft.):	120	
Median Type:	Raised	
Pavement Width (FOC to FOC):	72	
Description:	Widen existing roadway to thoroughfare standard	

Roadway Construction Cost Estimate:				
I. Paving Construction Cost Estimate				
Item No.	Item Description	Quantity	Unit	Item Cost
1	Right of Way Preparation	43	STA	\$ 86,000
2	Remove Existing Pavement	43	STA	\$ 64,500
3	Unclassified Street Excavation	12,500	CY	\$ 100,000
4	8" Lime Stabilized Subgrade	35,900	SY	\$ 143,600
5	Lime for Stabilization (42 lb/SY)	760	TON	\$ 129,200
6	10" Cement Treated Base	34,000	SY	\$ 714,000
7	2" HMAc	2,430	TON	\$ 267,300
8	Concrete Curb and Gutter	8,500	LF	\$ 212,500
9	4" Concrete Sidewalk and Ramps	50,970	SF	\$ 356,790
10	Hydromulching	152,900	SY	\$ 305,800
Paving Estimate Subtotal:				\$ 2,379,690
II. Non-Paving Construction Components				
Item No.	Item Description		Pct. Of Paving	Item Cost
11	Pavement Markings & Signage		2%	\$ 47,600
12	Traffic Control		4%	\$ 95,200
13	Erosion Control		3%	\$ 71,400
14	Drainage Improvements (RCP, Inlets, MH, Outfalls)		20%	\$ 476,000
15	Utility Adjustments		5%	\$ 119,000
Other Components Estimate Subtotal:				\$ 809,200
III. Special Construction Components				
Item No.	Item Description	Notes	Allowance	Item Cost
16	Drainage Structures	None	\$ -	\$ -
17	Bridge Structures	None	\$ -	\$ -
18	Traffic Signals	None	\$ -	\$ -
Special Components Estimate Subtotal:				\$ -
I, II, & III Construction Subtotal:				\$ 3,188,890
			Mobilization	8% \$ 255,200
			Contingency	10% \$ 344,500
Construction Cost Estimate Total:				\$ 3,788,600

Impact Fee Cost Estimate Summary				
Item Description	Notes		Allowance	Item Cost
Construction	Cost of 2 new lanes only		-	\$ 1,262,867
Engineering/Survey/Testing			9.0%	\$ 113,700
Right-of-Way Acquisition	Cost per sq. ft.:	\$ 1.00	\$ 84,900	\$ 84,900
Impact Fee Project Cost Estimate Total:				\$ 1,461,467
Estimated Finance Cost (11.9%; i.e. 3% over 10 years)				\$ 173,900

City of Waco **Service Area 3**
Impact Fee Engineer's Opinion of Probable Construction Cost Estimate

Garden Dr
 Robinson Rd to 16th St

Roadway Information:		
Functional Classification:	Minor Arterial	No. of Lanes: 2
Length (lf):	7,076	
Ultimate Right-of-Way Width (ft.):	80	
Median Type:	None	
Pavement Width (FOC to FOC):	24	
Description:	New Roadway Construction	

Roadway Construction Cost Estimate:				
I. Paving Construction Cost Estimate				
Item No.	Item Description	Quantity	Unit	Item Cost
1	Right of Way Preparation	71	STA	\$ 142,000
2	Remove Existing Pavement	71	STA	\$ 106,500
3	Unclassified Street Excavation	7,000	CY	\$ 56,000
4	8" Lime Stabilized Subgrade	20,500	SY	\$ 82,000
5	Lime for Stabilization (42 lb/SY)	440	TON	\$ 74,800
6	10" Cement Treated Base	18,900	SY	\$ 396,900
7	2" HMAC	1,350	TON	\$ 148,500
8	Concrete Curb and Gutter	14,200	LF	\$ 355,000
9	4" Concrete Sidewalk and Ramps	84,920	SF	\$ 594,440
10	Hydromulching	311,300	SY	\$ 622,600
Paving Estimate Subtotal:				\$ 2,578,740
II. Non-Paving Construction Components				
Item No.	Item Description		Pct. Of Paving	Item Cost
11	Pavement Markings & Signage		2%	\$ 51,600
12	Traffic Control		4%	\$ 103,200
13	Erosion Control		3%	\$ 77,400
14	Drainage Improvements (RCP, Inlets, MH, Outfalls)		20%	\$ 515,800
15	Utility Adjustments		5%	\$ 129,000
Other Components Estimate Subtotal:				\$ 877,000
III. Special Construction Components				
Item No.	Item Description	Notes	Allowance	Item Cost
16	Drainage Structures	None	\$ -	\$ -
17	Bridge Structures	None	\$ -	\$ -
18	Traffic Signals	None	\$ -	\$ -
Special Components Estimate Subtotal:				\$ -
I, II, & III Construction Subtotal:				\$ 3,455,740
			Mobilization	8% \$ 276,500
			Contingency	10% \$ 373,300
Construction Cost Estimate Total:				\$ 4,105,600

Impact Fee Cost Estimate Summary			
Item Description	Notes	Allowance	Item Cost
Construction		-	\$ 4,105,600
Engineering/Survey/Testing		9.0%	\$ 369,500
Right-of-Way Acquisition	Cost per sq. ft.: \$ 1.00	\$ 566,100	\$ 566,100
Impact Fee Project Cost Estimate Total:			\$ 5,041,200
Estimated Finance Cost (11.9%; i.e. 3% over 10 years)			\$ 599,900

City of Waco
Impact Fee Engineer's Opinion of Probable Construction Cost Estimate

18th Street
La Salle to Gurley Ln

Roadway Information:		
Functional Classification:	Major Arterial	No. of Lanes: 6
Length (lf):	2,355	
Ultimate Right-of-Way Width (ft.):	120	
Median Type:	Raised	
Pavement Width (FOC to FOC):	72	
Description:	Widen existing 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	\$ 2,000.00	\$ 48,000
2	Remove Existing Pavement	24	STA	\$ 1,500.00	\$ 36,000
3	Unclassified Street Excavation	7,000	CY	\$ 8.00	\$ 56,000
4	8" Lime Stabilized Subgrade	19,900	SY	\$ 4.00	\$ 79,600
5	Lime for Stabilization (42 lb/SY)	420	TON	\$ 170.00	\$ 71,400
6	10" Cement Treated Base	18,900	SY	\$ 21.00	\$ 396,900
7	2" HMAc	1,350	TON	\$ 110.00	\$ 148,500
8	Concrete Curb and Gutter	4,800	LF	\$ 25.00	\$ 120,000
9	4" Concrete Sidewalk and Ramps	28,260	SF	\$ 7.00	\$ 197,820
10	Hydromulching	84,800	SY	\$ 2.00	\$ 169,600
Paving Estimate Subtotal:					\$ 1,323,820

II. Non-Paving Construction Components

Item No.	Item Description	Pct. Of Paving	Item Cost
11	Pavement Markings & Signage	2%	\$ 26,500
12	Traffic Control	4%	\$ 53,000
13	Erosion Control	3%	\$ 39,800
14	Drainage Improvements (RCP, Inlets, MH, Outfalls)	20%	\$ 264,800
15	Utility Adjustments	5%	\$ 66,200
Other Components Estimate Subtotal:			\$ 450,300

III. Special Construction Components

Item No.	Item Description	Notes	Allowance	Item Cost
16	Drainage Structures	None	\$ -	\$ -
17	Bridge Structures	None	\$ -	\$ -
18	Traffic Signals	None	\$ -	\$ -
Special Components Estimate Subtotal:				\$ -
I, II, & III Construction Subtotal:				\$ 1,774,120
Mobilization				8% \$ 142,000
Contingency				10% \$ 191,700
Construction Cost Estimate Total:				\$ 2,107,900

Impact Fee Cost Estimate Summary

Item Description	Notes	Allowance	Item Cost
Construction	Cost of 2 new lanes only	-	\$ 702,633
Engineering/Survey/Testing		9.0%	\$ 63,200
Right-of-Way Acquisition	Cost per sq. ft.: \$ 1.00	\$ 23,600	\$ 23,600
Impact Fee Project Cost Estimate Total:			\$ 789,433
Estimated Finance Cost (11.9%; i.e. 3% over 10 years)			\$ 93,900

City of Waco
Impact Fee Engineer's Opinion of Probable Construction Cost Estimate

16th Street
 Gurley Ln to Garden Dr

Roadway Information:		
Functional Classification:	Major Arterial	No. of Lanes: 6
Length (lf):	2,215	
Ultimate Right-of-Way Width (ft.):	120	
Median Type:	Raised	
Pavement Width (FOC to FOC):	72	
Description:	Widen existing roadway to thoroughfare standard	

Roadway Construction Cost Estimate:				
I. Paving Construction Cost Estimate				
Item No.	Item Description	Quantity	Unit	Item Cost
1	Right of Way Preparation	23	STA	\$ 46,000
2	Remove Existing Pavement	23	STA	\$ 34,500
3	Unclassified Street Excavation	6,500	CY	\$ 52,000
4	8" Lime Stabilized Subgrade	18,800	SY	\$ 75,200
5	Lime for Stabilization (42 lb/SY)	400	TON	\$ 68,000
6	10" Cement Treated Base	17,800	SY	\$ 373,800
7	2" HMAc	1,270	TON	\$ 139,700
8	Concrete Curb and Gutter	4,500	LF	\$ 112,500
9	4" Concrete Sidewalk and Ramps	26,580	SF	\$ 186,060
10	Hydromulching	79,700	SY	\$ 159,400
Paving Estimate Subtotal:				\$ 1,247,160
II. Non-Paving Construction Components				
Item No.	Item Description		Pct. Of Paving	Item Cost
11	Pavement Markings & Signage		2%	\$ 25,000
12	Traffic Control		4%	\$ 49,900
13	Erosion Control		3%	\$ 37,500
14	Drainage Improvements (RCP, Inlets, MH, Outfalls)		20%	\$ 249,500
15	Utility Adjustments		5%	\$ 62,400
Other Components Estimate Subtotal:				\$ 424,300
III. Special Construction Components				
Item No.	Item Description	Notes	Allowance	Item Cost
16	Drainage Structures	None	\$ -	\$ -
17	Bridge Structures	None	\$ -	\$ -
18	Traffic Signals	None	\$ -	\$ -
Special Components Estimate Subtotal:				\$ -
I, II, & III Construction Subtotal:				\$ 1,671,460
			Mobilization	8% \$ 133,800
			Contingency	10% \$ 180,600
Construction Cost Estimate Total:				\$ 1,985,900

Impact Fee Cost Estimate Summary				
Item Description	Notes		Allowance	Item Cost
Construction	Cost of 4 new lanes only		-	\$ 1,323,933
Engineering/Survey/Testing			9.0%	\$ 119,200
Right-of-Way Acquisition	Cost per sq. ft.:	\$ 1.00	\$ 132,900	\$ 132,900
Impact Fee Project Cost Estimate Total:				\$ 1,576,033
Estimated Finance Cost (11.9%; i.e. 3% over 10 years)				\$ 187,500

City of Waco **Service Area 3**
Impact Fee Engineer's Opinion of Probable Construction Cost Estimate

12th Street
Garden Dr to TX-340

Roadway Information:		
Functional Classification:	Major Arterial	No. of Lanes: 6
Length (lf):	5,702	
Ultimate Right-of-Way Width (ft.):	120	
Median Type:	Raised	
Pavement Width (FOC to FOC):	72	
Description:	Widen existing 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	58	STA	\$ 2,000.00	\$ 116,000
2	Remove Existing Pavement	58	STA	\$ 1,500.00	\$ 87,000
3	Unclassified Street Excavation	16,800	CY	\$ 8.00	\$ 134,400
4	8" Lime Stabilized Subgrade	48,200	SY	\$ 4.00	\$ 192,800
5	Lime for Stabilization (42 lb/SY)	1,020	TON	\$ 170.00	\$ 173,400
6	10" Cement Treated Base	45,700	SY	\$ 21.00	\$ 959,700
7	2" HMAc	3,260	TON	\$ 110.00	\$ 358,600
8	Concrete Curb and Gutter	11,500	LF	\$ 25.00	\$ 287,500
9	4" Concrete Sidewalk and Ramps	68,430	SF	\$ 7.00	\$ 479,010
10	Hydromulching	205,300	SY	\$ 2.00	\$ 410,600
Paving Estimate Subtotal:					\$ 3,199,010
II. Non-Paving Construction Components					
Item No.	Item Description		Pct. Of Paving		Item Cost
11	Pavement Markings & Signage		2%	\$	64,000
12	Traffic Control		4%	\$	128,000
13	Erosion Control		3%	\$	96,000
14	Drainage Improvements (RCP, Inlets, MH, Outfalls)		20%	\$	639,900
15	Utility Adjustments		5%	\$	160,000
Other Components Estimate Subtotal:					\$ 1,087,900
III. Special Construction Components					
Item No.	Item Description	Notes	Allowance		Item Cost
16	Drainage Structures	None	\$ -	\$	-
17	Bridge Structures	None	\$ -	\$	-
18	Traffic Signals	Add signal @TX-340	\$ 250,000	\$	250,000
Special Components Estimate Subtotal:					\$ 250,000
I, II, & III Construction Subtotal:					\$ 4,536,910
Mobilization					8% \$ 363,000
Contingency					10% \$ 490,000
Construction Cost Estimate Total:					\$ 5,390,000

Impact Fee Cost Estimate Summary					
Item Description	Notes	Allowance		Item Cost	
Construction	Cost of 4 new lanes only	-	\$	3,593,333	
Engineering/Survey/Testing		9.0%	\$	323,400	
Right-of-Way Acquisition	Cost per sq. ft.: \$ 1.00	\$ 342,100	\$	342,100	
Impact Fee Project Cost Estimate Total:					\$ 4,258,833
Estimated Finance Cost (11.9%; i.e. 3% over 10 years)					\$ 506,800

City of Waco **Service Area 3**
Impact Fee Engineer's Opinion of Probable Construction Cost Estimate

University Parks Dr
Garden Dr to TX-340

Roadway Information:		
Functional Classification:	Minor Arterial	No. of Lanes: 4
Length (lf):	4,423	
Ultimate Right-of-Way Width (ft.):	110	
Median Type:	Raised	
Pavement Width (FOC to FOC):	48	
Description:	Widen existing roadway to thoroughfare standard; TxDOT facility	

Roadway Construction Cost Estimate:				
I. Paving Construction Cost Estimate				
Item No.	Item Description	Quantity	Unit	Item Cost
1	Right of Way Preparation	45	STA	\$ 90,000
2	Remove Existing Pavement	45	STA	\$ 67,500
3	Unclassified Street Excavation	8,700	CY	\$ 69,600
4	8" Lime Stabilized Subgrade	25,600	SY	\$ 102,400
5	Lime for Stabilization (42 lb/SY)	540	TON	\$ 91,800
6	10" Cement Treated Base	23,600	SY	\$ 495,600
7	2" HMAc	1,690	TON	\$ 185,900
8	Concrete Curb and Gutter	8,900	LF	\$ 222,500
9	4" Concrete Sidewalk and Ramps	53,080	SF	\$ 371,560
10	Hydromulching	221,200	SY	\$ 442,400
Paving Estimate Subtotal:				\$ 2,139,260
II. Non-Paving Construction Components				
Item No.	Item Description		Pct. Of Paving	Item Cost
11	Pavement Markings & Signage		2%	\$ 42,800
12	Traffic Control		4%	\$ 85,600
13	Erosion Control		3%	\$ 64,200
14	Drainage Improvements (RCP, Inlets, MH, Outfalls)		20%	\$ 427,900
15	Utility Adjustments		5%	\$ 107,000
Other Components Estimate Subtotal:				\$ 727,500
III. Special Construction Components				
Item No.	Item Description	Notes	Allowance	Item Cost
16	Drainage Structures	None	\$ -	\$ -
17	Bridge Structures	None	\$ -	\$ -
18	Traffic Signals	None	\$ -	\$ -
Special Components Estimate Subtotal:				\$ -
I, II, & III Construction Subtotal:				\$ 2,866,760
			Mobilization	8% \$ 229,400
			Contingency	10% \$ 309,700
Construction Cost Estimate Total:				\$ 3,405,900

Impact Fee Cost Estimate Summary				
Item Description	Notes		Allowance	Item Cost
Construction	Cost of 2 new lanes only; City		-	\$ 340,590
Engineering/Survey/Testing	participation of 20%		9.0%	\$ 30,700
Right-of-Way Acquisition	Cost per sq. ft.:	\$ 1.00	\$ -	\$ -
Impact Fee Project Cost Estimate Total:				\$ 371,290
Estimated Finance Cost (11.9%; i.e. 3% over 10 years)				\$ 44,100

City of Waco **Service Area 4**
Impact Fee Engineer's Opinion of Probable Construction Cost Estimate

Martin Luther King Jr Blvd
 BUS 77 to SH 484

Roadway Information:		
Functional Classification:	Major Arterial	No. of Lanes: 6
Length (lf):	2,053	
Ultimate Right-of-Way Width (ft.):	120	
Median Type:	Raised	
Pavement Width (FOC to FOC):	72	
Description:	New Construction; TxDOT facility	

Roadway Construction Cost Estimate:					
I. Paving Construction Cost Estimate					
Item No.	Item Description	Quantity	Unit	Unit Cost	Item Cost
1	Right of Way Preparation	21	STA	\$ 2,000.00	\$ 42,000
2	Remove Existing Pavement	21	STA	\$ 1,500.00	\$ 31,500
3	Unclassified Street Excavation	6,100	CY	\$ 8.00	\$ 48,800
4	8" Lime Stabilized Subgrade	17,400	SY	\$ 4.00	\$ 69,600
5	Lime for Stabilization (42 lb/SY)	370	TON	\$ 170.00	\$ 62,900
6	10" Cement Treated Base	16,500	SY	\$ 21.00	\$ 346,500
7	2" HMAc	1,180	TON	\$ 110.00	\$ 129,800
8	Concrete Curb and Gutter	4,200	LF	\$ 25.00	\$ 105,000
9	4" Concrete Sidewalk and Ramps	24,640	SF	\$ 7.00	\$ 172,480
10	Hydromulching	73,900	SY	\$ 2.00	\$ 147,800
Paving Estimate Subtotal:					\$ 1,156,380
II. Non-Paving Construction Components					
Item No.	Item Description		Pct. Of Paving		Item Cost
11	Pavement Markings & Signage		2%	\$	23,200
12	Traffic Control		4%	\$	46,300
13	Erosion Control		3%	\$	34,700
14	Drainage Improvements (RCP, Inlets, MH, Outfalls)		20%	\$	231,300
15	Utility Adjustments		5%	\$	57,900
Other Components Estimate Subtotal:					\$ 393,400
III. Special Construction Components					
Item No.	Item Description	Notes	Allowance		Item Cost
16	Drainage Structures	None	\$ -	\$	-
17	Bridge Structures	None	\$ -	\$	-
18	Traffic Signals	Add signal @BUS 77	\$ 250,000	\$	250,000
17	Other	Interchange with SH 484	\$ -	\$	-
Special Components Estimate Subtotal:					\$ 250,000
I, II, & III Construction Subtotal:					\$ 1,799,780
Mobilization					8% \$ 144,000
Contingency					10% \$ 194,400
Construction Cost Estimate Total:					\$ 2,138,200

Impact Fee Cost Estimate Summary					
Item Description	Notes	Allowance		Item Cost	
Construction	Cost of 2 new lanes only; City	-	\$	427,640	
Engineering/Survey/Testing	participation of 20%	9.0%	\$	38,500	
Right-of-Way Acquisition (\$1/SF)	Cost per sq. ft.: \$ 1.00	\$ 246,400	\$	49,280	
Impact Fee Project Cost Estimate Total:					\$ 515,420
Estimated Finance Cost (11.9%; i.e. 3% over 10 years)					\$ 61,300

City of Waco **Service Area 6**
Impact Fee Engineer's Opinion of Probable Construction Cost Estimate

Gholson Rd
Herring Ave to Lake Shore Dr

Roadway Information:		
Functional Classification:	Minor Arterial	No. of Lanes: 4
Length (lf):	7,122	
Ultimate Right-of-Way Width (ft.):	100	
Median Type:	None	
Pavement Width (FOC to FOC):	48	
Description:	Widen existing roadway to thoroughfare standard; TxDOT facility	

Roadway Construction Cost Estimate:				
I. Paving Construction Cost Estimate				
Item No.	Item Description	Quantity	Unit	Item Cost
1	Right of Way Preparation	72	STA	\$ 144,000
2	Remove Existing Pavement	72	STA	\$ 108,000
3	Unclassified Street Excavation	14,000	CY	\$ 112,000
4	8" Lime Stabilized Subgrade	39,600	SY	\$ 158,400
5	Lime for Stabilization (42 lb/SY)	840	TON	\$ 142,800
6	10" Cement Treated Base	38,000	SY	\$ 798,000
7	2" HMAC	2,720	TON	\$ 299,200
8	Concrete Curb and Gutter	14,300	LF	\$ 357,500
9	4" Concrete Sidewalk and Ramps	85,470	SF	\$ 598,290
10	Hydromulching	284,900	SY	\$ 569,800
Paving Estimate Subtotal:				\$ 3,287,990
II. Non-Paving Construction Components				
Item No.	Item Description		Pct. Of Paving	Item Cost
11	Pavement Markings & Signage		2%	\$ 65,800
12	Traffic Control		4%	\$ 131,600
13	Erosion Control		3%	\$ 98,700
14	Drainage Improvements (RCP, Inlets, MH, Outfalls)		20%	\$ 657,600
15	Utility Adjustments		5%	\$ 164,400
Other Components Estimate Subtotal:				\$ 1,118,100
III. Special Construction Components				
Item No.	Item Description	Notes	Allowance	Item Cost
16	Drainage Structures	None	\$ -	\$ -
17	Bridge Structures	None	\$ -	\$ -
18	Traffic Signals	None	\$ -	\$ -
Special Components Estimate Subtotal:				\$ -
I, II, & III Construction Subtotal:				\$ 4,406,090
			Mobilization	8% \$ 352,500
			Contingency	10% \$ 475,900
Construction Cost Estimate Total:				\$ 5,234,500

Impact Fee Cost Estimate Summary				
Item Description	Notes		Allowance	Item Cost
Construction	Cost of 2 new lanes only; City		-	\$ 523,450
Engineering/Survey/Testing	participation of 20%		9.0%	\$ 47,100
Right-of-Way Acquisition	Cost per sq. ft.:	\$ 1.00	\$ -	\$ -
Impact Fee Project Cost Estimate Total:				\$ 570,550
Estimated Finance Cost (11.9%; i.e. 3% over 10 years)				\$ 67,800

City of Waco **Service Area 7**
Impact Fee Engineer's Opinion of Probable Construction Cost Estimate

North River Crossing
End of bridge to 580' NE of Curry Ln

Roadway Information:		
Functional Classification:	Minor Arterial	No. of Lanes: 6
Length (lf):	7,286	
Ultimate Right-of-Way Width (ft.):	120	
Median Type:	Raised	
Pavement Width (FOC to FOC):	72	
Description:	Widen existing roadway to thoroughfare standard; TxDOT facility	

Roadway Construction Cost Estimate:				
I. Paving Construction Cost Estimate				
Item No.	Item Description	Quantity	Unit	Item Cost
1	Right of Way Preparation	73	STA	\$ 146,000
2	Remove Existing Pavement	73	STA	\$ 109,500
3	Unclassified Street Excavation	21,400	CY	\$ 171,200
4	8" Lime Stabilized Subgrade	61,600	SY	\$ 246,400
5	Lime for Stabilization (42 lb/SY)	1,300	TON	\$ 221,000
6	10" Cement Treated Base	58,300	SY	\$ 1,224,300
7	2" HMAC	4,170	TON	\$ 458,700
8	Concrete Curb and Gutter	14,600	LF	\$ 365,000
9	4" Concrete Sidewalk and Ramps	87,440	SF	\$ 612,080
10	Hydromulching	262,300	SY	\$ 524,600
Paving Estimate Subtotal:				\$ 4,078,780
II. Non-Paving Construction Components				
Item No.	Item Description		Pct. Of Paving	Item Cost
11	Pavement Markings & Signage		2%	\$ 81,600
12	Traffic Control		4%	\$ 163,200
13	Erosion Control		3%	\$ 122,400
14	Drainage Improvements (RCP, Inlets, MH, Outfalls)		20%	\$ 815,800
15	Utility Adjustments		5%	\$ 204,000
Other Components Estimate Subtotal:				\$ 1,387,000
III. Special Construction Components				
Item No.	Item Description	Notes	Allowance	Item Cost
16	Drainage Structures	None	\$ -	\$ -
17	Bridge Structures	None	\$ -	\$ -
18	Traffic Signals	None	\$ -	\$ -
Special Components Estimate Subtotal:				\$ -
I, II, & III Construction Subtotal:				\$ 5,465,780
			Mobilization	8% \$ 437,300
			Contingency	10% \$ 590,400
Construction Cost Estimate Total:				\$ 6,493,500

Impact Fee Cost Estimate Summary				
Item Description	Notes		Allowance	Item Cost
Construction	Cost of 2 new lanes only; City		-	\$ 865,800
Engineering/Survey/Testing	participation of 20%		9.0%	\$ 77,900
Right-of-Way Acquisition	Cost per sq. ft.:	\$ 1.00	\$ -	\$ -
Impact Fee Project Cost Estimate Total:				\$ 943,700
Estimated Finance Cost (11.9%; i.e. 3% over 10 years)				\$ 112,300

City of Waco **Service Area 7**
Impact Fee Engineer's Opinion of Probable Construction Cost Estimate

North River Crossing
 580' NE of Curry Ln to Yankie Rd

Roadway Information:		
Functional Classification:	Minor Arterial	No. of Lanes: 6
Length (lf):	2,495	
Ultimate Right-of-Way Width (ft.):	120	
Median Type:	Raised	
Pavement Width (FOC to FOC):	72	
Description:	Widen existing roadway to thoroughfare standard; TxDOT facility	

Roadway Construction Cost Estimate:				
I. Paving Construction Cost Estimate				
Item No.	Item Description	Quantity	Unit	Item Cost
1	Right of Way Preparation	25	STA	\$ 50,000
2	Remove Existing Pavement	25	STA	\$ 37,500
3	Unclassified Street Excavation	7,400	CY	\$ 59,200
4	8" Lime Stabilized Subgrade	21,100	SY	\$ 84,400
5	Lime for Stabilization (42 lb/SY)	450	TON	\$ 76,500
6	10" Cement Treated Base	20,000	SY	\$ 420,000
7	2" HMAC	1,430	TON	\$ 157,300
8	Concrete Curb and Gutter	5,000	LF	\$ 125,000
9	4" Concrete Sidewalk and Ramps	29,940	SF	\$ 209,580
10	Hydromulching	89,800	SY	\$ 179,600
Paving Estimate Subtotal:				\$ 1,399,800
II. Non-Paving Construction Components				
Item No.	Item Description		Pct. Of Paving	Item Cost
11	Pavement Markings & Signage		2%	\$ 28,000
12	Traffic Control		4%	\$ 56,000
13	Erosion Control		3%	\$ 42,000
14	Drainage Improvements (RCP, Inlets, MH, Outfalls)		20%	\$ 279,900
15	Utility Adjustments		5%	\$ 70,000
Other Components Estimate Subtotal:				\$ 475,900
III. Special Construction Components				
Item No.	Item Description	Notes	Allowance	Item Cost
16	Drainage Structures	None	\$ -	\$ -
17	Bridge Structures	None	\$ -	\$ -
18	Traffic Signals	Add signal @ Yankie Rd	\$ 250,000	\$ 250,000
Special Components Estimate Subtotal:				\$ 250,000
I, II, & III Construction Subtotal:				\$ 2,124,980
			Mobilization	8% \$ 170,000
			Contingency	10% \$ 229,500
Construction Cost Estimate Total:				\$ 2,524,500

Impact Fee Cost Estimate Summary				
Item Description	Notes	Allowance		Item Cost
Construction	Cost of 2 new lanes only; City	-		\$ 336,600
Engineering/Survey/Testing	participation of 20%	9.0%		\$ 30,300
Right-of-Way Acquisition	Cost per sq. ft.: \$ 1.00	\$ -		\$ -
Impact Fee Project Cost Estimate Total:				\$ 366,900
Estimated Finance Cost (11.9%; i.e. 3% over 10 years)				\$ 43,600

City of Waco
Impact Fee Engineer's Opinion of Probable Construction Cost Estimate

Flat Rock Rd
Yankie Rd to Tree Lake Rd

Roadway Information:		
Functional Classification:	Major Collector	No. of Lanes: 4
Length (lf):	5,333	
Ultimate Right-of-Way Width (ft.):	80	
Median Type:	None	
Pavement Width (FOC to FOC):	48	
Description:	Widen existing roadway to thoroughfare standard	

Roadway Construction Cost Estimate:				
I. Paving Construction Cost Estimate				
Item No.	Item Description	Quantity	Unit	Item Cost
1	Right of Way Preparation	54	STA	\$ 108,000
2	Remove Existing Pavement	54	STA	\$ 81,000
3	Unclassified Street Excavation	10,500	CY	\$ 84,000
4	8" Lime Stabilized Subgrade	29,700	SY	\$ 118,800
5	Lime for Stabilization (42 lb/SY)	630	TON	\$ 107,100
6	10" Cement Treated Base	28,500	SY	\$ 598,500
7	2" HMAc	2,040	TON	\$ 224,400
8	Concrete Curb and Gutter	10,700	LF	\$ 267,500
9	4" Concrete Sidewalk and Ramps	64,000	SF	\$ 448,000
10	Hydromulching	106,700	SY	\$ 213,400
Paving Estimate Subtotal:				\$ 2,250,700
II. Non-Paving Construction Components				
Item No.	Item Description		Pct. Of Paving	Item Cost
11	Pavement Markings & Signage		2%	\$ 45,100
12	Traffic Control		4%	\$ 90,100
13	Erosion Control		3%	\$ 67,600
14	Drainage Improvements (RCP, Inlets, MH, Outfalls)		20%	\$ 450,200
15	Utility Adjustments		5%	\$ 112,600
Other Components Estimate Subtotal:				\$ 765,600
III. Special Construction Components				
Item No.	Item Description	Notes	Allowance	Item Cost
16	Drainage Structures	None	\$ -	\$ -
17	Bridge Structures	None	\$ -	\$ -
18	Traffic Signals	Add signal @ Yankie Rd	\$ 250,000	\$ 250,000
Special Components Estimate Subtotal:				\$ 250,000
I, II, & III Construction Subtotal:				\$ 3,266,300
			Mobilization	8% \$ 261,400
			Contingency	10% \$ 352,800
Construction Cost Estimate Total:				\$ 3,880,500

Impact Fee Cost Estimate Summary				
Item Description	Notes		Allowance	Item Cost
Construction	Cost of 2 new lanes only		-	\$ 1,940,250
Engineering/Survey/Testing			9.0%	\$ 174,600
Right-of-Way Acquisition	Cost per sq. ft.:	\$ 1.00	\$ 186,700	\$ 186,700
Impact Fee Project Cost Estimate Total:				\$ 2,301,550
Estimated Finance Cost (11.9%; i.e. 3% over 10 years)				\$ 273,800

City of Waco
Impact Fee Engineer's Opinion of Probable Construction Cost Estimate

Flat Rock Rd
Tree Lake Rd to China Spring Rd

Roadway Information:		
Functional Classification:	Major Collector	No. of Lanes: 4
Length (lf):	8,765	
Ultimate Right-of-Way Width (ft.):	80	
Median Type:	None	
Pavement Width (FOC to FOC):	48	
Description:	Widen existing roadway to thoroughfare standard	

Roadway Construction Cost Estimate:				
I. Paving Construction Cost Estimate				
Item No.	Item Description	Quantity	Unit	Item Cost
1	Right of Way Preparation	88	STA	\$ 176,000
2	Remove Existing Pavement	88	STA	\$ 132,000
3	Unclassified Street Excavation	17,200	CY	\$ 137,600
4	8" Lime Stabilized Subgrade	48,700	SY	\$ 194,800
5	Lime for Stabilization (42 lb/SY)	1,030	TON	\$ 175,100
6	10" Cement Treated Base	46,800	SY	\$ 982,800
7	2" HMAc	3,340	TON	\$ 367,400
8	Concrete Curb and Gutter	17,600	LF	\$ 440,000
9	4" Concrete Sidewalk and Ramps	105,180	SF	\$ 736,260
10	Hydromulching	175,300	SY	\$ 350,600
Paving Estimate Subtotal:				\$ 3,692,560
II. Non-Paving Construction Components				
Item No.	Item Description		Pct. Of Paving	Item Cost
11	Pavement Markings & Signage		2%	\$ 73,900
12	Traffic Control		4%	\$ 147,800
13	Erosion Control		3%	\$ 110,800
14	Drainage Improvements (RCP, Inlets, MH, Outfalls)		20%	\$ 738,600
15	Utility Adjustments		5%	\$ 184,700
Other Components Estimate Subtotal:				\$ 1,255,800
III. Special Construction Components				
Item No.	Item Description	Notes	Allowance	Item Cost
16	Drainage Structures	None	\$ -	\$ -
17	Bridge Structures	None	\$ -	\$ -
18	Traffic Signals	Add signal @ Tree Lake Rd	\$ 250,000	\$ 250,000
Special Components Estimate Subtotal:				\$ 250,000
I, II, & III Construction Subtotal:				\$ 5,198,360
			Mobilization	8% \$ 415,900
			Contingency	10% \$ 561,500
Construction Cost Estimate Total:				\$ 6,175,800

Impact Fee Cost Estimate Summary			
Item Description	Notes	Allowance	Item Cost
Construction	Cost of 2 new lanes only	-	\$ 3,087,900
Engineering/Survey/Testing		9.0%	\$ 277,900
Right-of-Way Acquisition	Cost per sq. ft.: \$ 1.00	\$ -	\$ -
Impact Fee Project Cost Estimate Total:			\$ 3,365,800
Estimated Finance Cost (11.9%; i.e. 3% over 10 years)			\$ 400,500

City of Waco
Impact Fee Engineer's Opinion of Probable Construction Cost Estimate

Yankie Rd
 North River Crossing to Flat Rock Rd

Roadway Information:		
Functional Classification:	Major Collector	No. of Lanes: 4
Length (lf):	9,979	
Ultimate Right-of-Way Width (ft.):	80	
Median Type:	None	
Pavement Width (FOC to FOC):	48	
Description:	Widen existing 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	100	STA	\$ 2,000.00	\$ 200,000
2	Remove Existing Pavement	100	STA	\$ 1,500.00	\$ 150,000
3	Unclassified Street Excavation	19,600	CY	\$ 8.00	\$ 156,800
4	8" Lime Stabilized Subgrade	55,500	SY	\$ 4.00	\$ 222,000
5	Lime for Stabilization (42 lb/SY)	1,170	TON	\$ 170.00	\$ 198,900
6	10" Cement Treated Base	53,300	SY	\$ 21.00	\$ 1,119,300
7	2" HMAc	3,810	TON	\$ 110.00	\$ 419,100
8	Concrete Curb and Gutter	20,000	LF	\$ 25.00	\$ 500,000
9	4" Concrete Sidewalk and Ramps	119,750	SF	\$ 7.00	\$ 838,250
10	Hydromulching	199,600	SY	\$ 2.00	\$ 399,200
Paving Estimate Subtotal:					\$ 4,203,550
II. Non-Paving Construction Components					
Item No.	Item Description		Pct. Of Paving		Item Cost
11	Pavement Markings & Signage		2%	\$	84,100
12	Traffic Control		4%	\$	168,200
13	Erosion Control		3%	\$	126,200
14	Drainage Improvements (RCP, Inlets, MH, Outfalls)		20%	\$	840,800
15	Utility Adjustments		5%	\$	210,200
Other Components Estimate Subtotal:					\$ 1,429,500
III. Special Construction Components					
Item No.	Item Description	Notes	Allowance		Item Cost
16	Drainage Structures	Major structure 950' N of Flat Rock Rd	\$ 300,000	\$	300,000
17	Bridge Structures	None	\$ -	\$	-
18	Traffic Signals	None	\$ -	\$	-
Special Components Estimate Subtotal:					\$ 300,000
I, II, & III Construction Subtotal:					\$ 5,933,050
Mobilization					8% \$ 474,700
Contingency					10% \$ 640,800
Construction Cost Estimate Total:					\$ 7,048,600

Impact Fee Cost Estimate Summary					
Item Description	Notes	Allowance		Item Cost	
Construction	Cost of 2 new lanes only	-	\$	3,524,300	
Engineering/Survey/Testing		9.0%	\$	317,200	
Right-of-Way Acquisition	Cost per sq. ft.: \$ 1.00	\$ 199,600	\$	199,600	
Impact Fee Project Cost Estimate Total:					\$ 4,041,100
Estimated Finance Cost (11.9%; i.e. 3% over 10 years)					\$ 480,800

City of Waco
Impact Fee Engineer's Opinion of Probable Construction Cost Estimate

Tree Lake Dr
China Spring Rd to Flat Rock Rd

Roadway Information:		
Functional Classification:	Major Collector	No. of Lanes: 4
Length (lf):	8,290	
Ultimate Right-of-Way Width (ft.):	80	
Median Type:	None	
Pavement Width (FOC to FOC):	48	
Description:	Widen existing roadway to thoroughfare standard	

Roadway Construction Cost Estimate:				
I. Paving Construction Cost Estimate				
Item No.	Item Description	Quantity	Unit	Item Cost
1	Right of Way Preparation	83	STA	\$ 166,000
2	Remove Existing Pavement	83	STA	\$ 124,500
3	Unclassified Street Excavation	16,300	CY	\$ 130,400
4	8" Lime Stabilized Subgrade	46,100	SY	\$ 184,400
5	Lime for Stabilization (42 lb/SY)	970	TON	\$ 164,900
6	10" Cement Treated Base	44,300	SY	\$ 930,300
7	2" HMAc	3,160	TON	\$ 347,600
8	Concrete Curb and Gutter	16,600	LF	\$ 415,000
9	4" Concrete Sidewalk and Ramps	99,480	SF	\$ 696,360
10	Hydromulching	165,800	SY	\$ 331,600
Paving Estimate Subtotal:				\$ 3,491,060
II. Non-Paving Construction Components				
Item No.	Item Description		Pct. Of Paving	Item Cost
11	Pavement Markings & Signage		2%	\$ 69,900
12	Traffic Control		4%	\$ 139,700
13	Erosion Control		3%	\$ 104,800
14	Drainage Improvements (RCP, Inlets, MH, Outfalls)		20%	\$ 698,300
15	Utility Adjustments		5%	\$ 174,600
Other Components Estimate Subtotal:				\$ 1,187,300
III. Special Construction Components				
Item No.	Item Description	Notes	Allowance	Item Cost
16	Drainage Structures	None	\$ -	\$ -
17	Bridge Structures	None	\$ -	\$ -
18	Traffic Signals	Add signal @ China Spring Rd	\$ 250,000	\$ 250,000
Special Components Estimate Subtotal:				\$ 250,000
I, II, & III Construction Subtotal:				\$ 4,928,360
			Mobilization	8% \$ 394,300
			Contingency	10% \$ 532,300
Construction Cost Estimate Total:				\$ 5,855,000

Impact Fee Cost Estimate Summary				
Item Description	Notes	Allowance	Item Cost	
Construction	Cost of 2 new lanes only	-	\$ 2,927,500	
Engineering/Survey/Testing		9.0%	\$ 263,500	
Right-of-Way Acquisition	Cost per sq. ft.: \$ 1.00	\$ 165,800	\$ 165,800	
Impact Fee Project Cost Estimate Total:				\$ 3,356,800
Estimated Finance Cost (11.9%; i.e. 3% over 10 years)				\$ 399,400

City of Waco **Service Area 7**
Impact Fee Engineer's Opinion of Probable Construction Cost Estimate

Wortham Bend Rd
North City Limit to China Spring Rd

Roadway Information:		
Functional Classification:	Major Collector	No. of Lanes: 4
Length (lf):	4,319	
Ultimate Right-of-Way Width (ft.):	100	
Median Type:	None	
Pavement Width (FOC to FOC):	48	
Description:	Widen existing roadway to thoroughfare standard; TxDOT facility	

Roadway Construction Cost Estimate:				
I. Paving Construction Cost Estimate				
Item No.	Item Description	Quantity	Unit	Item Cost
1	Right of Way Preparation	44	STA	\$ 88,000
2	Remove Existing Pavement	44	STA	\$ 66,000
3	Unclassified Street Excavation	8,500	CY	\$ 68,000
4	8" Lime Stabilized Subgrade	24,000	SY	\$ 96,000
5	Lime for Stabilization (42 lb/SY)	510	TON	\$ 86,700
6	10" Cement Treated Base	23,100	SY	\$ 485,100
7	2" HMAC	1,650	TON	\$ 181,500
8	Concrete Curb and Gutter	8,700	LF	\$ 217,500
9	4" Concrete Sidewalk and Ramps	51,830	SF	\$ 362,810
10	Hydromulching	172,800	SY	\$ 345,600
Paving Estimate Subtotal:				\$ 1,997,210
II. Non-Paving Construction Components				
Item No.	Item Description		Pct. Of Paving	Item Cost
11	Pavement Markings & Signage		2%	\$ 40,000
12	Traffic Control		4%	\$ 79,900
13	Erosion Control		3%	\$ 60,000
14	Drainage Improvements (RCP, Inlets, MH, Outfalls)		20%	\$ 399,500
15	Utility Adjustments		5%	\$ 99,900
Other Components Estimate Subtotal:				\$ 679,300
III. Special Construction Components				
Item No.	Item Description	Notes	Allowance	Item Cost
16	Drainage Structures	Minor crossing @ 380' N of Money St	\$ 150,000	\$ 150,000
17	Bridge Structures	None	\$ -	\$ -
18	Traffic Signals	None	\$ -	\$ -
Special Components Estimate Subtotal:				\$ 150,000
I, II, & III Construction Subtotal:				\$ 2,826,510
			Mobilization	8% \$ 226,200
			Contingency	10% \$ 305,300
Construction Cost Estimate Total:				\$ 3,358,100

Impact Fee Cost Estimate Summary				
Item Description	Notes		Allowance	Item Cost
Construction	Cost of 2 new lanes only; City		-	\$ 335,810
Engineering/Survey/Testing	participation of 20%		9.0%	\$ 30,200
Right-of-Way Acquisition	Cost per sq. ft.: \$ 1.00		\$ -	\$ -
Impact Fee Project Cost Estimate Total:				\$ 366,010
Estimated Finance Cost (11.9%; i.e. 3% over 10 years)				\$ 43,500

City of Waco
Impact Fee Engineer's Opinion of Probable Construction Cost Estimate

Mars Dr
Hewitt Dr to Texas Central Pkwy

Roadway Information:		
Functional Classification:	Minor Arterial	No. of Lanes: 4
Length (lf):	4,984	
Ultimate Right-of-Way Width (ft.):	100	
Median Type:	None	
Pavement Width (FOC to FOC):	48	
Description:	Widen existing roadway to thoroughfare standard	

Roadway Construction Cost Estimate:				
I. Paving Construction Cost Estimate				
Item No.	Item Description	Quantity	Unit	Item Cost
1	Right of Way Preparation	50	STA	\$ 2,000.00 \$ 100,000
2	Remove Existing Pavement	50	STA	\$ 1,500.00 \$ 75,000
3	Unclassified Street Excavation	9,800	CY	\$ 8.00 \$ 78,400
4	8" Lime Stabilized Subgrade	27,700	SY	\$ 4.00 \$ 110,800
5	Lime for Stabilization (42 lb/SY)	590	TON	\$ 170.00 \$ 100,300
6	10" Cement Treated Base	26,600	SY	\$ 21.00 \$ 558,600
7	2" HMAC	1,900	TON	\$ 110.00 \$ 209,000
8	Concrete Curb and Gutter	10,000	LF	\$ 25.00 \$ 250,000
9	4" Concrete Sidewalk and Ramps	59,810	SF	\$ 7.00 \$ 418,670
10	Hydromulching	199,400	SY	\$ 2.00 \$ 398,800
Paving Estimate Subtotal:				\$ 2,299,570
II. Non-Paving Construction Components				
Item No.	Item Description		Pct. Of Paving	Item Cost
11	Pavement Markings & Signage		2%	\$ 46,000
12	Traffic Control		4%	\$ 92,000
13	Erosion Control		3%	\$ 69,000
14	Drainage Improvements (RCP, Inlets, MH, Outfalls)		20%	\$ 460,000
15	Utility Adjustments		5%	\$ 115,000
Other Components Estimate Subtotal:				\$ 782,000
III. Special Construction Components				
Item No.	Item Description	Notes	Allowance	Item Cost
16	Drainage Structures	1 Major crossing @ middle of Hewitt&Old	\$ 450,000	\$ 450,000
17	Bridge Structures	None	\$ -	\$ -
18	Traffic Signals	Add signal @Old Hewitt Rd	\$ 250,000	\$ 250,000
17	Other	At grade railroad crossing	\$ 150,000	\$ 150,000
Special Components Estimate Subtotal:				\$ 850,000
I, II, & III Construction Subtotal:				\$ 3,931,570
			Mobilization	8% \$ 314,600
			Contingency	10% \$ 424,700
Construction Cost Estimate Total:				\$ 4,670,900

Impact Fee Cost Estimate Summary				
Item Description	Notes		Allowance	Item Cost
Construction	Cost of 2 new lanes only		-	\$ 2,335,450
Engineering/Survey/Testing			9.0%	\$ 210,200
Right-of-Way Acquisition	Cost per sq. ft.:	\$ 1.00	\$ -	\$ -
Impact Fee Project Cost Estimate Total:				\$ 2,545,650
Estimated Finance Cost (11.9%; i.e. 3% over 10 years)				\$ 302,900

City of Waco **Service Area 9**
Impact Fee Engineer's Opinion of Probable Construction Cost Estimate

Beverly Dr
W Loop 340 to 4128' NE of Loop 340

Roadway Information:		
Functional Classification:	Minor Arterial	No. of Lanes: 4
Length (lf):	4,128	
Ultimate Right-of-Way Width (ft.):	60	
Median Type:	None	
Pavement Width (FOC to FOC):	48	
Description:	Widen existing roadway to thoroughfare standard	

Roadway Construction Cost Estimate:				
I. Paving Construction Cost Estimate				
Item No.	Item Description	Quantity	Unit	Item Cost
1	Right of Way Preparation	42	STA	\$ 84,000
2	Remove Existing Pavement	42	STA	\$ 63,000
3	Unclassified Street Excavation	8,100	CY	\$ 64,800
4	8" Lime Stabilized Subgrade	23,000	SY	\$ 92,000
5	Lime for Stabilization (42 lb/SY)	490	TON	\$ 83,300
6	10" Cement Treated Base	22,100	SY	\$ 464,100
7	2" HMAc	1,580	TON	\$ 173,800
8	Concrete Curb and Gutter	8,300	LF	\$ 207,500
9	4" Concrete Sidewalk and Ramps	49,540	SF	\$ 346,780
10	Hydromulching	0	SY	\$ -
Paving Estimate Subtotal:				\$ 1,579,280
II. Non-Paving Construction Components				
Item No.	Item Description		Pct. Of Paving	Item Cost
11	Pavement Markings & Signage		2%	\$ 31,600
12	Traffic Control		4%	\$ 63,200
13	Erosion Control		3%	\$ 47,400
14	Drainage Improvements (RCP, Inlets, MH, Outfalls)		20%	\$ 315,900
15	Utility Adjustments		5%	\$ 79,000
Other Components Estimate Subtotal:				\$ 537,100
III. Special Construction Components				
Item No.	Item Description	Notes	Allowance	Item Cost
16	Drainage Structures	Minor crossing @850' NE of Loop 340	\$ 150,000	\$ 150,000
17	Bridge Structures	None	\$ -	\$ -
18	Traffic Signals	None	\$ -	\$ -
Special Components Estimate Subtotal:				\$ 150,000
I, II, & III Construction Subtotal:				\$ 2,266,380
			Mobilization	8% \$ 181,400
			Contingency	10% \$ 244,800
Construction Cost Estimate Total:				\$ 2,692,600

Impact Fee Cost Estimate Summary				
Item Description	Notes	Allowance	Item Cost	
Construction	Cost of 2 new lanes only	-	\$ 1,346,300	
Engineering/Survey/Testing		9.0%	\$ 121,200	
Right-of-Way Acquisition	Cost per sq. ft.: \$ 1.00	\$ -	\$ -	
Impact Fee Project Cost Estimate Total:				\$ 1,467,500
Estimated Finance Cost (11.9%; i.e. 3% over 10 years)				\$ 174,600

City of Waco
Impact Fee Engineer's Opinion of Probable Construction Cost Estimate

Beverly Dr
 4128' NE of Loop 340 to New Road

Roadway Information:		
Functional Classification:	Minor Arterial	No. of Lanes: 4
Length (lf):	1,633	
Ultimate Right-of-Way Width (ft.):	60	
Median Type:	None	
Pavement Width (FOC to FOC):	48	
Description:	Widen existing roadway to thoroughfare standard	

Roadway Construction Cost Estimate:				
I. Paving Construction Cost Estimate				
Item No.	Item Description	Quantity	Unit	Item Cost
1	Right of Way Preparation	17	STA	\$ 34,000
2	Remove Existing Pavement	17	STA	\$ 25,500
3	Unclassified Street Excavation	3,200	CY	\$ 25,600
4	8" Lime Stabilized Subgrade	9,100	SY	\$ 36,400
5	Lime for Stabilization (42 lb/SY)	200	TON	\$ 34,000
6	10" Cement Treated Base	8,800	SY	\$ 184,800
7	2" HMAc	630	TON	\$ 69,300
8	Concrete Curb and Gutter	3,300	LF	\$ 82,500
9	4" Concrete Sidewalk and Ramps	19,600	SF	\$ 137,200
10	Hydromulching	0	SY	\$ -
Paving Estimate Subtotal:				\$ 629,300
II. Non-Paving Construction Components				
Item No.	Item Description		Pct. Of Paving	Item Cost
11	Pavement Markings & Signage		2%	\$ 12,600
12	Traffic Control		4%	\$ 25,200
13	Erosion Control		3%	\$ 18,900
14	Drainage Improvements (RCP, Inlets, MH, Outfalls)		20%	\$ 125,900
15	Utility Adjustments		5%	\$ 31,500
Other Components Estimate Subtotal:				\$ 214,100
III. Special Construction Components				
Item No.	Item Description	Notes	Allowance	Item Cost
16	Drainage Structures	None	\$ -	\$ -
17	Bridge Structures	None	\$ -	\$ -
18	Traffic Signals	None	\$ -	\$ -
Special Components Estimate Subtotal:				\$ -
I, II, & III Construction Subtotal:				\$ 843,400
			Mobilization	8% \$ 67,500
			Contingency	10% \$ 91,100
Construction Cost Estimate Total:				\$ 1,002,000

Impact Fee Cost Estimate Summary				
Item Description	Notes		Allowance	Item Cost
Construction	Cost of 2 new lanes only		-	\$ 501,000
Engineering/Survey/Testing			9.0%	\$ 45,100
Right-of-Way Acquisition	Cost per sq. ft.:	\$ 1.00	\$ -	\$ -
Impact Fee Project Cost Estimate Total:				\$ 546,100
Estimated Finance Cost (11.9%; i.e. 3% over 10 years)				\$ 64,900

City of Waco **Service Area 9**
Impact Fee Engineer's Opinion of Probable Construction Cost Estimate

Hewitt Dr
Woodway Dr to Old McGregor Dr

Roadway Information:		
Functional Classification:	Major Arterial	No. of Lanes: 6
Length (lf):	994	
Ultimate Right-of-Way Width (ft.):	120	
Median Type:	Raised	
Pavement Width (FOC to FOC):	72	
Description:	Widen existing roadway to thoroughfare standard; TxDOT facility	

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	\$ 2,000.00	\$ 20,000
2	Remove Existing Pavement	10	STA	\$ 1,500.00	\$ 15,000
3	Unclassified Street Excavation	3,000	CY	\$ 8.00	\$ 24,000
4	8" Lime Stabilized Subgrade	8,400	SY	\$ 4.00	\$ 33,600
5	Lime for Stabilization (42 lb/SY)	180	TON	\$ 170.00	\$ 30,600
6	10" Cement Treated Base	8,000	SY	\$ 21.00	\$ 168,000
7	2" HMAC	570	TON	\$ 110.00	\$ 62,700
8	Concrete Curb and Gutter	2,000	LF	\$ 25.00	\$ 50,000
9	4" Concrete Sidewalk and Ramps	11,930	SF	\$ 7.00	\$ 83,510
10	Hydromulching	35,800	SY	\$ 2.00	\$ 71,600
Paving Estimate Subtotal:					\$ 559,010
II. Non-Paving Construction Components					
Item No.	Item Description		Pct. Of Paving		Item Cost
11	Pavement Markings & Signage		2%	\$	11,200
12	Traffic Control		4%	\$	22,400
13	Erosion Control		3%	\$	16,800
14	Drainage Improvements (RCP, Inlets, MH, Outfalls)		20%	\$	111,900
15	Utility Adjustments		5%	\$	28,000
Other Components Estimate Subtotal:					\$ 190,300
III. Special Construction Components					
Item No.	Item Description	Notes	Allowance		Item Cost
16	Drainage Structures	None	\$ -	\$	-
17	Bridge Structures	None	\$ -	\$	-
18	Traffic Signals	None	\$ -	\$	-
Special Components Estimate Subtotal:					\$ -
I, II, & III Construction Subtotal:					\$ 749,310
				Mobilization	8% \$ 60,000
				Contingency	10% \$ 81,000
Construction Cost Estimate Total:					\$ 890,400

Impact Fee Cost Estimate Summary					
Item Description	Notes	Allowance			Item Cost
Construction	Cost of 2 new lanes only; City	-	\$		59,400
Engineering/Survey/Testing	participation of 20%	9.0%	\$		5,300
Right-of-Way Acquisition	Cost per sq. ft.: \$ 1.00	\$ -	\$		-
Impact Fee Project Cost Estimate Total:					\$ 64,700
Estimated Finance Cost (11.9%; i.e. 3% over 10 years)					\$ 7,600

City of Waco **Service Area 9 and 10**
Impact Fee Engineer's Opinion of Probable Construction Cost Estimate

Hewitt Dr
 Old McGregor Dr to Imperial Dr

Roadway Information:		
Functional Classification:	Major Arterial	No. of Lanes: 6
Length (lf):	2,357	
Ultimate Right-of-Way Width (ft.):	120	
Median Type:	Raised	
Pavement Width (FOC to FOC):	72	
Description:	Widen existing roadway to thoroughfare standard; TxDOT facility	

Roadway Construction Cost Estimate:				
I. Paving Construction Cost Estimate				
Item No.	Item Description	Quantity	Unit	Item Cost
1	Right of Way Preparation	24	STA	\$ 48,000
2	Remove Existing Pavement	24	STA	\$ 36,000
3	Unclassified Street Excavation	7,000	CY	\$ 56,000
4	8" Lime Stabilized Subgrade	20,000	SY	\$ 80,000
5	Lime for Stabilization (42 lb/SY)	420	TON	\$ 71,400
6	10" Cement Treated Base	18,900	SY	\$ 396,900
7	2" HMAc	1,350	TON	\$ 148,500
8	Concrete Curb and Gutter	4,800	LF	\$ 120,000
9	4" Concrete Sidewalk and Ramps	28,290	SF	\$ 198,030
10	Hydromulching	84,900	SY	\$ 169,800
Paving Estimate Subtotal:				\$ 1,324,630
II. Non-Paving Construction Components				
Item No.	Item Description		Pct. Of Paving	Item Cost
11	Pavement Markings & Signage		2%	\$ 26,500
12	Traffic Control		4%	\$ 53,000
13	Erosion Control		3%	\$ 39,800
14	Drainage Improvements (RCP, Inlets, MH, Outfalls)		20%	\$ 265,000
15	Utility Adjustments		5%	\$ 66,300
Other Components Estimate Subtotal:				\$ 450,600
III. Special Construction Components				
Item No.	Item Description	Notes	Allowance	Item Cost
16	Drainage Structures	None	\$ -	\$ -
17	Bridge Structures	None	\$ -	\$ -
18	Traffic Signals	None	\$ -	\$ -
17	Other	At grade Railroad Crossing	\$ 150,000	\$ 150,000
Special Components Estimate Subtotal:				\$ 150,000
I, II, & III Construction Subtotal:				\$ 1,925,230
			Mobilization	8% \$ 154,100
			Contingency	10% \$ 208,000
Construction Cost Estimate Total:				\$ 2,287,400

Impact Fee Cost Estimate Summary				
Item Description	Notes	Allowance	Item Cost	
Construction	Cost of 2 new lanes only; City	-	\$ 152,500	
Engineering/Survey/Testing	participation of 20%	9.0%	\$ 13,700	
Right-of-Way Acquisition	Cost per sq. ft.: \$ 1.00	\$ -	\$ -	
Impact Fee Project Cost Estimate Total:				\$ 166,200
Estimated Finance Cost (11.9%; i.e. 3% over 10 years)				\$ 19,700

City of Waco **Service Area 9 and 10**
Impact Fee Engineer's Opinion of Probable Construction Cost Estimate

Hewitt Dr
Imperial Dr to Mars Dr

Roadway Information:		
Functional Classification:	Major Arterial	No. of Lanes: 6
Length (lf):	3,283	
Ultimate Right-of-Way Width (ft.):	120	
Median Type:	Raised	
Pavement Width (FOC to FOC):	72	
Description:	Widen existing roadway to thoroughfare standard; TxDOT facility	

Roadway Construction Cost Estimate:				
I. Paving Construction Cost Estimate				
Item No.	Item Description	Quantity	Unit	Item Cost
1	Right of Way Preparation	33	STA	\$ 66,000
2	Remove Existing Pavement	33	STA	\$ 49,500
3	Unclassified Street Excavation	9,700	CY	\$ 77,600
4	8" Lime Stabilized Subgrade	27,800	SY	\$ 111,200
5	Lime for Stabilization (42 lb/SY)	590	TON	\$ 100,300
6	10" Cement Treated Base	26,300	SY	\$ 552,300
7	2" HMAc	1,880	TON	\$ 206,800
8	Concrete Curb and Gutter	6,600	LF	\$ 165,000
9	4" Concrete Sidewalk and Ramps	39,400	SF	\$ 275,800
10	Hydromulching	118,200	SY	\$ 236,400
Paving Estimate Subtotal:				\$ 1,840,900
II. Non-Paving Construction Components				
Item No.	Item Description		Pct. Of Paving	Item Cost
11	Pavement Markings & Signage		2%	\$ 36,900
12	Traffic Control		4%	\$ 73,700
13	Erosion Control		3%	\$ 55,300
14	Drainage Improvements (RCP, Inlets, MH, Outfalls)		20%	\$ 368,200
15	Utility Adjustments		5%	\$ 92,100
Other Components Estimate Subtotal:				\$ 626,200
III. Special Construction Components				
Item No.	Item Description	Notes	Allowance	Item Cost
16	Drainage Structures	None	\$ -	\$ -
17	Bridge Structures	None	\$ -	\$ -
18	Traffic Signals	None	\$ -	\$ -
Special Components Estimate Subtotal:				\$ -
I, II, & III Construction Subtotal:				\$ 2,467,100
			Mobilization	8% \$ 197,400
			Contingency	10% \$ 266,500
Construction Cost Estimate Total:				\$ 2,931,000

Impact Fee Cost Estimate Summary				
Item Description	Notes		Allowance	Item Cost
Construction	Cost of 2 new lanes only; City		-	\$ 195,400
Engineering/Survey/Testing	participation of 20%		9.0%	\$ 17,600
Right-of-Way Acquisition	Cost per sq. ft.:	\$ 1.00	\$ -	\$ -
Impact Fee Project Cost Estimate Total:				\$ 213,000
Estimated Finance Cost (11.9%; i.e. 3% over 10 years)				\$ 25,300

City of Waco **Service Area 9**
Impact Fee Engineer's Opinion of Probable Construction Cost Estimate

Texas Central Pkwy
 Railroad to Imperial Dr

Roadway Information:		
Functional Classification:	Minor Arterial	No. of Lanes: 4
Length (lf):	1,800	
Ultimate Right-of-Way Width (ft.):	100	
Median Type:	None	
Pavement Width (FOC to FOC):	48	
Description:	Widen existing roadway to thoroughfare standard	

Roadway Construction Cost Estimate:				
I. Paving Construction Cost Estimate				
Item No.	Item Description	Quantity	Unit	Item Cost
1	Right of Way Preparation	18	STA	\$ 36,000
2	Remove Existing Pavement	18	STA	\$ 27,000
3	Unclassified Street Excavation	3,600	CY	\$ 28,800
4	8" Lime Stabilized Subgrade	10,000	SY	\$ 40,000
5	Lime for Stabilization (42 lb/SY)	210	TON	\$ 35,700
6	10" Cement Treated Base	9,600	SY	\$ 201,600
7	2" HMAc	690	TON	\$ 75,900
8	Concrete Curb and Gutter	3,600	LF	\$ 90,000
9	4" Concrete Sidewalk and Ramps	21,600	SF	\$ 151,200
10	Hydromulching	72,000	SY	\$ 144,000
Paving Estimate Subtotal:				\$ 830,200
II. Non-Paving Construction Components				
Item No.	Item Description		Pct. Of Paving	Item Cost
11	Pavement Markings & Signage		2%	\$ 16,700
12	Traffic Control		4%	\$ 33,300
13	Erosion Control		3%	\$ 25,000
14	Drainage Improvements (RCP, Inlets, MH, Outfalls)		20%	\$ 166,100
15	Utility Adjustments		5%	\$ 41,600
Other Components Estimate Subtotal:				\$ 282,700
III. Special Construction Components				
Item No.	Item Description	Notes	Allowance	Item Cost
16	Drainage Structures	None	\$ -	\$ -
17	Bridge Structures	None	\$ -	\$ -
18	Traffic Signals	None	\$ -	\$ -
Special Components Estimate Subtotal:				\$ -
I, II, & III Construction Subtotal:				\$ 1,112,900
			Mobilization 8%	\$ 89,100
			Contingency 10%	\$ 120,200
Construction Cost Estimate Total:				\$ 1,322,200

Impact Fee Cost Estimate Summary				
Item Description	Notes	Allowance	Item Cost	
Construction	Cost of 2 new lanes only	-	\$ 661,100	
Engineering/Survey/Testing		9.0%	\$ 59,500	
Right-of-Way Acquisition	Cost per sq. ft.: \$ 1.00	\$ -	\$ -	
Impact Fee Project Cost Estimate Total:				\$ 720,600
Estimated Finance Cost (11.9%; i.e. 3% over 10 years)				\$ 85,700

City of Waco
Impact Fee Engineer's Opinion of Probable Construction Cost Estimate

Bagby Ave
 New Rd to TX 340

Roadway Information:		
Functional Classification:	Minor Arterial	No. of Lanes: 4
Length (lf):	4,369	
Ultimate Right-of-Way Width (ft.):	100	
Median Type:	Raised	
Pavement Width (FOC to FOC):	48	
Description:	Widen existing roadway to thoroughfare standard	

Roadway Construction Cost Estimate:				
I. Paving Construction Cost Estimate				
Item No.	Item Description	Quantity	Unit	Item Cost
1	Right of Way Preparation	44	STA	\$ 88,000
2	Remove Existing Pavement	44	STA	\$ 66,000
3	Unclassified Street Excavation	8,600	CY	\$ 68,800
4	8" Lime Stabilized Subgrade	25,300	SY	\$ 101,200
5	Lime for Stabilization (42 lb/SY)	540	TON	\$ 91,800
6	10" Cement Treated Base	23,400	SY	\$ 491,400
7	2" HMAc	1,670	TON	\$ 183,700
8	Concrete Curb and Gutter	8,800	LF	\$ 220,000
9	4" Concrete Sidewalk and Ramps	52,430	SF	\$ 367,010
10	Hydromulching	174,800	SY	\$ 349,600
Paving Estimate Subtotal:				\$ 2,027,510
II. Non-Paving Construction Components				
Item No.	Item Description		Pct. Of Paving	Item Cost
11	Pavement Markings & Signage		2%	\$ 40,600
12	Traffic Control		4%	\$ 81,200
13	Erosion Control		3%	\$ 60,900
14	Drainage Improvements (RCP, Inlets, MH, Outfalls)		20%	\$ 405,600
15	Utility Adjustments		5%	\$ 101,400
Other Components Estimate Subtotal:				\$ 689,700
III. Special Construction Components				
Item No.	Item Description	Notes	Allowance	Item Cost
16	Drainage Structures	None	\$ -	\$ -
17	Bridge Structures	None	\$ -	\$ -
18	Traffic Signals	None	\$ -	\$ -
Special Components Estimate Subtotal:				\$ -
I, II, & III Construction Subtotal:				\$ 2,717,210
			Mobilization 8%	\$ 217,400
			Contingency 10%	\$ 293,500
Construction Cost Estimate Total:				\$ 3,228,200

Impact Fee Cost Estimate Summary			
Item Description	Notes	Allowance	Item Cost
Construction	Cost of 1 new lane only	-	\$ 2,582,560
Engineering/Survey/Testing		9.0%	\$ 232,400
Right-of-Way Acquisition	Cost per sq. ft.: \$ 1.00	\$ -	\$ -
Impact Fee Project Cost Estimate Total:			\$ 2,814,960
Estimated Finance Cost (11.9%; i.e. 3% over 10 years)			\$ 334,900

City of Waco **Service Area 10**
Impact Fee Engineer's Opinion of Probable Construction Cost Estimate

Warren Rd
City Limit to Ritchie Rd

Roadway Information:		
Functional Classification:	Minor Collector	No. of Lanes: 3
Length (lf):	2,010	
Ultimate Right-of-Way Width (ft.):	50	
Median Type:	TWLTL	
Pavement Width (FOC to FOC):	36	
Description:	New Construction	

Roadway Construction Cost Estimate:				
I. Paving Construction Cost Estimate				
Item No.	Item Description	Quantity	Unit	Item Cost
1	Right of Way Preparation	21	STA	\$ 42,000
2	Remove Existing Pavement	21	STA	\$ -
3	Unclassified Street Excavation	3,000	CY	\$ 24,000
4	8" Lime Stabilized Subgrade	8,500	SY	\$ 34,000
5	Lime for Stabilization (42 lb/SY)	180	TON	\$ 30,600
6	10" Cement Treated Base	8,100	SY	\$ 170,100
7	2" HMAc	580	TON	\$ 63,800
8	Concrete Curb and Gutter	4,100	LF	\$ 102,500
9	4" Concrete Sidewalk and Ramps	24,120	SF	\$ 168,840
10	Hydromulching	4,000	SY	\$ 8,000
Paving Estimate Subtotal:				\$ 643,840
II. Non-Paving Construction Components				
Item No.	Item Description		Pct. Of Paving	Item Cost
11	Pavement Markings & Signage		2%	\$ 12,900
12	Traffic Control		4%	\$ 25,800
13	Erosion Control		3%	\$ 19,400
14	Drainage Improvements (RCP, Inlets, MH, Outfalls)		20%	\$ 128,800
15	Utility Adjustments		5%	\$ 32,200
Other Components Estimate Subtotal:				\$ 219,100
III. Special Construction Components				
Item No.	Item Description	Notes	Allowance	Item Cost
16	Drainage Structures	None	\$ -	\$ -
17	Bridge Structures	None	\$ -	\$ -
18	Traffic Signals	None	\$ -	\$ -
Special Components Estimate Subtotal:				\$ -
I, II, & III Construction Subtotal:				\$ 862,940
			Mobilization	8% \$ 69,100
			Contingency	10% \$ 93,300
Construction Cost Estimate Total:				\$ 1,025,400

Impact Fee Cost Estimate Summary			
Item Description	Notes	Allowance	Item Cost
Construction		-	\$ 1,025,400
Engineering/Survey/Testing		9.0%	\$ 92,300
Right-of-Way Acquisition	Cost per sq. ft.: \$ 1.00	\$ 100,500	\$ 100,500
Impact Fee Project Cost Estimate Total:			\$ 1,218,200
Estimated Finance Cost (11.9%; i.e. 3% over 10 years)			\$ 144,900

City of Waco **Service Area 10**
Impact Fee Engineer's Opinion of Probable Construction Cost Estimate

Warren Rd
Ritchie Rd to 3700' east of Ritchie Rd

Roadway Information:		
Functional Classification:	Minor Collector	No. of Lanes: 3
Length (lf):	3,700	
Ultimate Right-of-Way Width (ft.):	50	
Median Type:	TWLTL	
Pavement Width (FOC to FOC):	36	
Description:	Widen existing roadway to thoroughfare standard	

Roadway Construction Cost Estimate:				
I. Paving Construction Cost Estimate				
Item No.	Item Description	Quantity	Unit	Item Cost
1	Right of Way Preparation	37	STA	\$ 74,000
2	Remove Existing Pavement	37	STA	\$ 55,500
3	Unclassified Street Excavation	5,500	CY	\$ 44,000
4	8" Lime Stabilized Subgrade	15,700	SY	\$ 62,800
5	Lime for Stabilization (42 lb/SY)	330	TON	\$ 56,100
6	10" Cement Treated Base	14,800	SY	\$ 310,800
7	2" HMAC	1,060	TON	\$ 116,600
8	Concrete Curb and Gutter	7,400	LF	\$ 185,000
9	4" Concrete Sidewalk and Ramps	44,400	SF	\$ 310,800
10	Hydromulching	7,400	SY	\$ 14,800
Paving Estimate Subtotal:				\$ 1,230,400
II. Non-Paving Construction Components				
Item No.	Item Description		Pct. Of Paving	Item Cost
11	Pavement Markings & Signage		2%	\$ 24,700
12	Traffic Control		4%	\$ 49,300
13	Erosion Control		3%	\$ 37,000
14	Drainage Improvements (RCP, Inlets, MH, Outfalls)		20%	\$ 246,100
15	Utility Adjustments		5%	\$ 61,600
Other Components Estimate Subtotal:				\$ 418,700
III. Special Construction Components				
Item No.	Item Description	Notes	Allowance	Item Cost
16	Drainage Structures	None	\$ -	\$ -
17	Bridge Structures	None	\$ -	\$ -
18	Traffic Signals	None	\$ -	\$ -
Special Components Estimate Subtotal:				\$ -
I, II, & III Construction Subtotal:				\$ 1,649,100
			Mobilization	8% \$ 132,000
			Contingency	10% \$ 178,200
Construction Cost Estimate Total:				\$ 1,959,300

Impact Fee Cost Estimate Summary				
Item Description	Notes	Allowance	Item Cost	
Construction	Cost of 1 new lane only	-	\$	653,100
Engineering/Survey/Testing		9.0%	\$	58,800
Right-of-Way Acquisition	Cost per sq. ft.: \$ 1.00	\$ -	\$	-
Impact Fee Project Cost Estimate Total:				\$ 711,900
Estimated Finance Cost (11.9%; i.e. 3% over 10 years)				\$ 84,700

City of Waco
Impact Fee Engineer's Opinion of Probable Construction Cost Estimate

Farmiller Rd
 1300' south of Chapel Rd to 2100' north of Warren Rd

Roadway Information:		
Functional Classification:	Minor Collector	No. of Lanes: 3
Length (lf):	5,966	
Ultimate Right-of-Way Width (ft.):	60	
Median Type:	TWLTL	
Pavement Width (FOC to FOC):	36	
Description:	Widen existing 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	60	STA	\$ 2,000.00	\$ 120,000
2	Remove Existing Pavement	60	STA	\$ 1,500.00	\$ -
3	Unclassified Street Excavation	8,800	CY	\$ 8.00	\$ 70,400
4	8" Lime Stabilized Subgrade	25,200	SY	\$ 4.00	\$ 100,800
5	Lime for Stabilization (42 lb/SY)	530	TON	\$ 170.00	\$ 90,100
6	10" Cement Treated Base	23,900	SY	\$ 21.00	\$ 501,900
7	2" HMAC	1,710	TON	\$ 110.00	\$ 188,100
8	Concrete Curb and Gutter	12,000	LF	\$ 25.00	\$ 300,000
9	4" Concrete Sidewalk and Ramps	71,600	SF	\$ 7.00	\$ 501,200
10	Hydromulching	71,600	SY	\$ 2.00	\$ 143,200
Paving Estimate Subtotal:					\$ 2,015,700
II. Non-Paving Construction Components					
Item No.	Item Description		Pct. Of Paving		Item Cost
11	Pavement Markings & Signage		2%	\$	40,400
12	Traffic Control		4%	\$	80,700
13	Erosion Control		3%	\$	60,500
14	Drainage Improvements (RCP, Inlets, MH, Outfalls)		20%	\$	403,200
15	Utility Adjustments		5%	\$	100,800
Other Components Estimate Subtotal:					\$ 685,600
III. Special Construction Components					
Item No.	Item Description	Notes	Allowance		Item Cost
16	Drainage Structures	None	\$ -	\$	-
17	Bridge Structures	None	\$ -	\$	-
18	Traffic Signals	None	\$ -	\$	-
Special Components Estimate Subtotal:					\$ -
I, II, & III Construction Subtotal:					\$ 2,701,300
Mobilization					8% \$ 216,200
Contingency					10% \$ 291,800
Construction Cost Estimate Total:					\$ 3,209,300

Impact Fee Cost Estimate Summary					
Item Description	Notes	Allowance		Item Cost	
Construction	Cost of 2 new lanes only	-	\$	2,139,533	
Engineering/Survey/Testing		9.0%	\$	192,600	
Right-of-Way Acquisition	Cost per sq. ft.: \$ 1.00	\$ 179,000	\$	179,000	
Impact Fee Project Cost Estimate Total:					\$ 2,511,133
Estimated Finance Cost (11.9%; i.e. 3% over 10 years)					\$ 298,800

City of Waco
Impact Fee Engineer's Opinion of Probable Construction Cost Estimate

Chapel Rd
Meadow Mountain Dr to Ritchie Rd

Roadway Information:		
Functional Classification:	Minor Arterial	No. of Lanes: 5
Length (lf):	3,600	
Ultimate Right-of-Way Width (ft.):	100	
Median Type:	TWLTL	
Pavement Width (FOC to FOC):	60	
Description:	Widen existing roadway to thoroughfare standard	

Roadway Construction Cost Estimate:				
I. Paving Construction Cost Estimate				
Item No.	Item Description	Quantity	Unit	Item Cost
1	Right of Way Preparation	36	STA	\$ 72,000
2	Remove Existing Pavement	36	STA	\$ 54,000
3	Unclassified Street Excavation	8,800	CY	\$ 70,400
4	8" Lime Stabilized Subgrade	24,800	SY	\$ 99,200
5	Lime for Stabilization (42 lb/SY)	530	TON	\$ 90,100
6	10" Cement Treated Base	24,000	SY	\$ 504,000
7	2" HMAc	1,720	TON	\$ 189,200
8	Concrete Curb and Gutter	7,200	LF	\$ 180,000
9	4" Concrete Sidewalk and Ramps	43,200	SF	\$ 302,400
10	Hydromulching	100,800	SY	\$ 201,600
Paving Estimate Subtotal:				\$ 1,762,900
II. Non-Paving Construction Components				
Item No.	Item Description		Pct. Of Paving	Item Cost
11	Pavement Markings & Signage		2%	\$ 35,300
12	Traffic Control		4%	\$ 70,600
13	Erosion Control		3%	\$ 52,900
14	Drainage Improvements (RCP, Inlets, MH, Outfalls)		20%	\$ 352,600
15	Utility Adjustments		5%	\$ 88,200
Other Components Estimate Subtotal:				\$ 599,600
III. Special Construction Components				
Item No.	Item Description	Notes	Allowance	Item Cost
16	Drainage Structures	None	\$ -	\$ -
17	Bridge Structures	None	\$ -	\$ -
18	Traffic Signals	None	\$ -	\$ -
Special Components Estimate Subtotal:				\$ -
I, II, & III Construction Subtotal:				\$ 2,362,500
			Mobilization	8% \$ 189,000
			Contingency	10% \$ 255,200
Construction Cost Estimate Total:				\$ 2,806,700

Impact Fee Cost Estimate Summary				
Item Description	Notes	Allowance	Item Cost	
Construction	Cost of 3 new lanes only	-	\$ 1,684,020	
Engineering/Survey/Testing		9.0%	\$ 151,600	
Right-of-Way Acquisition	Cost per sq. ft.: \$ 1.00	\$ -	\$ -	
Impact Fee Project Cost Estimate Total:				\$ 1,835,620
Estimated Finance Cost (11.9%; i.e. 3% over 10 years)				\$ 218,400

City of Waco **Service Area 10**
Impact Fee Engineer's Opinion of Probable Construction Cost Estimate

Ritchie Rd
Panther Way to Warren St

Roadway Information:		
Functional Classification:	Minor Arterial	No. of Lanes: 4
Length (lf):	5,333	
Ultimate Right-of-Way Width (ft.):	100	
Median Type:	None	
Pavement Width (FOC to FOC):	48	
Description:	Widen existing 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	54	STA	\$ 2,000.00	\$ 108,000
2	Remove Existing Pavement	54	STA	\$ 1,500.00	\$ 81,000
3	Unclassified Street Excavation	10,500	CY	\$ 8.00	\$ 84,000
4	8" Lime Stabilized Subgrade	29,700	SY	\$ 4.00	\$ 118,800
5	Lime for Stabilization (42 lb/SY)	630	TON	\$ 170.00	\$ 107,100
6	10" Cement Treated Base	28,500	SY	\$ 21.00	\$ 598,500
7	2" HMAc	2,040	TON	\$ 110.00	\$ 224,400
8	Concrete Curb and Gutter	10,700	LF	\$ 25.00	\$ 267,500
9	4" Concrete Sidewalk and Ramps	64,000	SF	\$ 7.00	\$ 448,000
10	Hydromulching	213,300	SY	\$ 2.00	\$ 426,600
Paving Estimate Subtotal:					\$ 2,463,900
II. Non-Paving Construction Components					
Item No.	Item Description		Pct. Of Paving		Item Cost
11	Pavement Markings & Signage		2%	\$	49,300
12	Traffic Control		4%	\$	98,600
13	Erosion Control		3%	\$	74,000
14	Drainage Improvements (RCP, Inlets, MH, Outfalls)		20%	\$	492,800
15	Utility Adjustments		5%	\$	123,200
Other Components Estimate Subtotal:					\$ 837,900
III. Special Construction Components					
Item No.	Item Description	Notes	Allowance		Item Cost
16	Drainage Structures	None	\$ -	\$	-
17	Bridge Structures	None	\$ -	\$	-
18	Traffic Signals	None	\$ -	\$	-
Special Components Estimate Subtotal:					\$ -
I, II, & III Construction Subtotal:					\$ 3,301,800
				Mobilization	8% \$ 264,200
				Contingency	10% \$ 356,600
Construction Cost Estimate Total:					\$ 3,922,600

Impact Fee Cost Estimate Summary				
Item Description	Notes	Allowance		Item Cost
Construction	Cost of 2 new lanes only	-	\$	1,961,300
Engineering/Survey/Testing		9.0%	\$	176,500
Right-of-Way Acquisition	Cost per sq. ft.: \$ 1.00	\$ -	\$	-
Impact Fee Project Cost Estimate Total:				\$ 2,137,800
Estimated Finance Cost (11.9%; i.e. 3% over 10 years)				\$ 254,300

City of Waco
Impact Fee Engineer's Opinion of Probable Construction Cost Estimate

Val Verde Rd
 Fossil Rim Rd to US 84

Roadway Information:		
Functional Classification:	Minor Collector	No. of Lanes: 3
Length (lf):	4,678	
Ultimate Right-of-Way Width (ft.):	60	
Median Type:	TWLTL	
Pavement Width (FOC to FOC):	36	
Description:	Widen existing roadway to thoroughfare standard	

Roadway Construction Cost Estimate:				
I. Paving Construction Cost Estimate				
Item No.	Item Description	Quantity	Unit	Item Cost
1	Right of Way Preparation	47	STA	\$ 94,000
2	Remove Existing Pavement	47	STA	\$ 70,500
3	Unclassified Street Excavation	6,900	CY	\$ 55,200
4	8" Lime Stabilized Subgrade	19,800	SY	\$ 79,200
5	Lime for Stabilization (42 lb/SY)	420	TON	\$ 71,400
6	10" Cement Treated Base	18,800	SY	\$ 394,800
7	2" HMAc	1,340	TON	\$ 147,400
8	Concrete Curb and Gutter	9,400	LF	\$ 235,000
9	4" Concrete Sidewalk and Ramps	56,140	SF	\$ 392,980
10	Hydromulching	56,100	SY	\$ 112,200
Paving Estimate Subtotal:				\$ 1,652,680
II. Non-Paving Construction Components				
Item No.	Item Description		Pct. Of Paving	Item Cost
11	Pavement Markings & Signage		2%	\$ 33,100
12	Traffic Control		4%	\$ 66,200
13	Erosion Control		3%	\$ 49,600
14	Drainage Improvements (RCP, Inlets, MH, Outfalls)		20%	\$ 330,600
15	Utility Adjustments		5%	\$ 82,700
Other Components Estimate Subtotal:				\$ 562,200
III. Special Construction Components				
Item No.	Item Description	Notes	Allowance	Item Cost
16	Drainage Structures	None	\$ -	\$ -
17	Bridge Structures	None	\$ -	\$ -
18	Traffic Signals	None	\$ -	\$ -
Special Components Estimate Subtotal:				\$ -
I, II, & III Construction Subtotal:				\$ 2,214,880
			Mobilization	8% \$ 177,200
			Contingency	10% \$ 239,300
Construction Cost Estimate Total:				\$ 2,631,400

Impact Fee Cost Estimate Summary				
Item Description	Notes		Allowance	Item Cost
Construction	Cost of 1 new lane only		-	\$ 877,133
Engineering/Survey/Testing			9.0%	\$ 78,900
Right-of-Way Acquisition	Cost per sq. ft.:	\$ 1.00	\$ -	\$ -
Impact Fee Project Cost Estimate Total:				\$ 956,033
Estimated Finance Cost (11.9%; i.e. 3% over 10 years)				\$ 113,700

City of Waco **Service Area 11**
Impact Fee Engineer's Opinion of Probable Construction Cost Estimate

Harris Creek Rd
 US 84 to Walking Horse Ln

Roadway Information:		
Functional Classification:	Minor Collector	No. of Lanes: 3
Length (lf):	3,476	
Ultimate Right-of-Way Width (ft.):	60	
Median Type:	TWLTL	
Pavement Width (FOC to FOC):	36	
Description:	Widen existing roadway to thoroughfare standard	

Roadway Construction Cost Estimate:				
I. Paving Construction Cost Estimate				
Item No.	Item Description	Quantity	Unit	Item Cost
1	Right of Way Preparation	35	STA	\$ 70,000
2	Remove Existing Pavement	35	STA	\$ 52,500
3	Unclassified Street Excavation	5,100	CY	\$ 40,800
4	8" Lime Stabilized Subgrade	14,700	SY	\$ 58,800
5	Lime for Stabilization (42 lb/SY)	310	TON	\$ 52,700
6	10" Cement Treated Base	14,000	SY	\$ 294,000
7	2" HMAc	1,000	TON	\$ 110,000
8	Concrete Curb and Gutter	7,000	LF	\$ 175,000
9	4" Concrete Sidewalk and Ramps	41,720	SF	\$ 292,040
10	Hydromulching	41,700	SY	\$ 83,400
Paving Estimate Subtotal:				\$ 1,229,240
II. Non-Paving Construction Components				
Item No.	Item Description		Pct. Of Paving	Item Cost
11	Pavement Markings & Signage		2%	\$ 24,600
12	Traffic Control		4%	\$ 49,200
13	Erosion Control		3%	\$ 36,900
14	Drainage Improvements (RCP, Inlets, MH, Outfalls)		20%	\$ 245,900
15	Utility Adjustments		5%	\$ 61,500
Other Components Estimate Subtotal:				\$ 418,100
III. Special Construction Components				
Item No.	Item Description	Notes	Allowance	Item Cost
16	Drainage Structures	None	\$ -	\$ -
17	Bridge Structures	None	\$ -	\$ -
18	Traffic Signals	None	\$ -	\$ -
Special Components Estimate Subtotal:				\$ -
I, II, & III Construction Subtotal:				\$ 1,647,340
			Mobilization 8%	\$ 131,800
			Contingency 10%	\$ 178,000
Construction Cost Estimate Total:				\$ 1,957,200

Impact Fee Cost Estimate Summary			
Item Description	Notes	Allowance	Item Cost
Construction	Cost of 1 new lane only	-	\$ 652,400
Engineering/Survey/Testing		9.0%	\$ 58,700
Right-of-Way Acquisition	Cost per sq. ft.: \$ 1.00	\$ -	\$ -
Impact Fee Project Cost Estimate Total:			\$ 711,100
Estimated Finance Cost (11.9%; i.e. 3% over 10 years)			\$ 84,600

City of Waco **Service Area 11**
Impact Fee Engineer's Opinion of Probable Construction Cost Estimate

Speegleville Rd
Pecan Creek to Oak Rd

Roadway Information:		
Functional Classification:	Major Arterial	No. of Lanes: 6
Length (lf):	2,876	
Ultimate Right-of-Way Width (ft.):	100	
Median Type:	Raised	
Pavement Width (FOC to FOC):	72	
Description:	Widen existing 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	29	STA	\$ 2,000.00	\$ 58,000	
2	Remove Existing Pavement	29	STA	\$ 1,500.00	\$ 43,500	
3	Unclassified Street Excavation	8,500	CY	\$ 8.00	\$ 68,000	
4	8" Lime Stabilized Subgrade	24,300	SY	\$ 4.00	\$ 97,200	
5	Lime for Stabilization (42 lb/SY)	520	TON	\$ 170.00	\$ 88,400	
6	10" Cement Treated Base	23,100	SY	\$ 21.00	\$ 485,100	
7	2" HMAc	1,650	TON	\$ 110.00	\$ 181,500	
8	Concrete Curb and Gutter	5,800	LF	\$ 25.00	\$ 145,000	
9	4" Concrete Sidewalk and Ramps	34,520	SF	\$ 7.00	\$ 241,640	
10	Hydromulching	46,000	SY	\$ 2.00	\$ 92,000	
Paving Estimate Subtotal:					\$ 1,500,340	
II. Non-Paving Construction Components						
Item No.	Item Description		Pct. Of Paving		Item Cost	
11	Pavement Markings & Signage		2%	\$	30,100	
12	Traffic Control		4%	\$	60,100	
13	Erosion Control		3%	\$	45,100	
14	Drainage Improvements (RCP, Inlets, MH, Outfalls)		20%	\$	300,100	
15	Utility Adjustments		5%	\$	75,100	
Other Components Estimate Subtotal:					\$ 510,500	
III. Special Construction Components						
Item No.	Item Description	Notes	Allowance		Item Cost	
16	Drainage Structures	None	\$ -	\$	-	
17	Bridge Structures	@Pecan Creek	\$ 1,742,400	\$	1,742,400	
18	Traffic Signals	None	\$ -	\$	-	
Special Components Estimate Subtotal:					\$ 1,742,400	
I, II, & III Construction Subtotal:					\$ 3,753,240	
Mobilization					8%	\$ 300,300
Contingency					10%	\$ 405,400
Construction Cost Estimate Total:					\$ 4,459,000	

Impact Fee Cost Estimate Summary					
Item Description	Notes	Allowance		Item Cost	
Construction	Cost of 4 new lanes only	-	\$	2,972,667	
Engineering/Survey/Testing		9.0%	\$	267,500	
Right-of-Way Acquisition	Cost per sq. ft.: \$ 1.00	\$ 57,500	\$	57,500	
Impact Fee Project Cost Estimate Total:					\$ 3,297,667
Estimated Finance Cost (11.9%; i.e. 3% over 10 years)					\$ 392,400

City of Waco **Service Area 11**
Impact Fee Engineer's Opinion of Probable Construction Cost Estimate

Speegleville Rd
Oak Rd to US 84

Roadway Information:		
Functional Classification:	Major Arterial	No. of Lanes: 6
Length (lf):	4,462	
Ultimate Right-of-Way Width (ft.):	100	
Median Type:	Raised	
Pavement Width (FOC to FOC):	72	
Description:	Widen existing roadway to thoroughfare standard	

Roadway Construction Cost Estimate:				
I. Paving Construction Cost Estimate				
Item No.	Item Description	Quantity	Unit	Item Cost
1	Right of Way Preparation	45	STA	\$ 90,000
2	Remove Existing Pavement	45	STA	\$ 67,500
3	Unclassified Street Excavation	13,100	CY	\$ 104,800
4	8" Lime Stabilized Subgrade	37,700	SY	\$ 150,800
5	Lime for Stabilization (42 lb/SY)	800	TON	\$ 136,000
6	10" Cement Treated Base	35,700	SY	\$ 749,700
7	2" HMAc	2,550	TON	\$ 280,500
8	Concrete Curb and Gutter	9,000	LF	\$ 225,000
9	4" Concrete Sidewalk and Ramps	53,550	SF	\$ 374,850
10	Hydromulching	71,400	SY	\$ 142,800
Paving Estimate Subtotal:				\$ 2,321,950
II. Non-Paving Construction Components				
Item No.	Item Description		Pct. Of Paving	Item Cost
11	Pavement Markings & Signage		2%	\$ 46,500
12	Traffic Control		4%	\$ 92,900
13	Erosion Control		3%	\$ 69,700
14	Drainage Improvements (RCP, Inlets, MH, Outfalls)		20%	\$ 464,400
15	Utility Adjustments		5%	\$ 116,100
Other Components Estimate Subtotal:				\$ 789,600
III. Special Construction Components				
Item No.	Item Description	Notes	Allowance	Item Cost
16	Drainage Structures	None	\$ -	\$ -
17	Bridge Structures	None	\$ -	\$ -
18	Traffic Signals	None	\$ -	\$ -
Special Components Estimate Subtotal:				\$ -
I, II, & III Construction Subtotal:				\$ 3,111,550
			Mobilization	8% \$ 249,000
			Contingency	10% \$ 336,100
Construction Cost Estimate Total:				\$ 3,696,700

Impact Fee Cost Estimate Summary				
Item Description	Notes	Allowance	Item Cost	
Construction	Cost of 4 new lanes only	-	\$	2,464,467
Engineering/Survey/Testing		9.0%	\$	221,800
Right-of-Way Acquisition	Cost per sq. ft.: \$ 1.00	\$ -	\$	-
Impact Fee Project Cost Estimate Total:				\$ 2,686,267
Estimated Finance Cost (11.9%; i.e. 3% over 10 years)				\$ 319,600

City of Waco **Service Area 11**
Impact Fee Engineer's Opinion of Probable Construction Cost Estimate

Old Lorena Rd
 US 84 EBFR to South Bosque River

Roadway Information:		
Functional Classification:	Major Arterial	No. of Lanes: 6
Length (lf):	4,732	
Ultimate Right-of-Way Width (ft.):	100	
Median Type:	Raised	
Pavement Width (FOC to FOC):	72	
Description:	Widen existing roadway to thoroughfare standard	

Roadway Construction Cost Estimate:				
I. Paving Construction Cost Estimate				
Item No.	Item Description	Quantity	Unit	Item Cost
1	Right of Way Preparation	48	STA	\$ 96,000
2	Remove Existing Pavement	48	STA	\$ 72,000
3	Unclassified Street Excavation	13,900	CY	\$ 111,200
4	8" Lime Stabilized Subgrade	40,000	SY	\$ 160,000
5	Lime for Stabilization (42 lb/SY)	840	TON	\$ 142,800
6	10" Cement Treated Base	37,900	SY	\$ 795,900
7	2" HMAc	2,710	TON	\$ 298,100
8	Concrete Curb and Gutter	9,500	LF	\$ 237,500
9	4" Concrete Sidewalk and Ramps	56,790	SF	\$ 397,530
10	Hydromulching	75,700	SY	\$ 151,400
Paving Estimate Subtotal:				\$ 2,462,430
II. Non-Paving Construction Components				
Item No.	Item Description		Pct. Of Paving	Item Cost
11	Pavement Markings & Signage		2%	\$ 49,300
12	Traffic Control		4%	\$ 98,500
13	Erosion Control		3%	\$ 73,900
14	Drainage Improvements (RCP, Inlets, MH, Outfalls)		20%	\$ 492,500
15	Utility Adjustments		5%	\$ 123,200
Other Components Estimate Subtotal:				\$ 837,400
III. Special Construction Components				
Item No.	Item Description	Notes	Allowance	Item Cost
16	Drainage Structures	None	\$ -	\$ -
17	Bridge Structures	None	\$ -	\$ -
18	Traffic Signals	None	\$ -	\$ -
Special Components Estimate Subtotal:				\$ -
I, II, & III Construction Subtotal:				\$ 3,299,830
			Mobilization	8% \$ 264,000
			Contingency	10% \$ 356,400
Construction Cost Estimate Total:				\$ 3,920,300

Impact Fee Cost Estimate Summary				
Item Description	Notes	Allowance	Item Cost	
Construction	Cost of 4 new lanes only	-	\$ 2,613,533	
Engineering/Survey/Testing		9.0%	\$ 235,200	
Right-of-Way Acquisition	Cost per sq. ft.: \$ 1.00	\$ -	\$ -	
Impact Fee Project Cost Estimate Total:				\$ 2,848,733
Estimated Finance Cost (11.9%; i.e. 3% over 10 years)				\$ 338,900

Appendix I

Impact Fee Financial Calculations

SUMMARY OF WATER IMPACT FEE DETERMINATION

Water Service Area

Recoverable Impact Fee CIP Costs	\$ 17,023,355	Per Freese & Nichols Impact Fee Study
Financing Cost	6,531,589	See Detail Below
Existing Fund Balance	-	Water Service Area - page 1
Interest Earnings	(541,910)	Water Service Area - page 3
Maximum Recoverable Cost for Impact Fee	\$ 23,013,034	Sum of Above
Equivalent Connections	12,753	Per Freese & Nichols Impact Fee Study
Maximum Assessable Impact Fee	\$ 1,805	Max. Recoverable Cost Divided by Equiv. Conn.

Recoverable Impact Fee CIP Costs:

Represents the portion of capital improvement costs that are eligible for funding through Impact fees after adjusting for the 50% credit. Reference is Freese & Nichols Impact Fee Study. In 2001, the Impact Fee Statute was amended to include either a credit for ad valorem and utility revenues generated by new service units during the ten-year timeframe that are used to fund impact fee eligible projects for which the new service units were charged an impact fee or a credit equal to 50% of the total cost of implementing the impact fee capital improvement plan. The City has elected to use the 50% credit.

Financing Costs:

Represents the interest costs associated with debt financing the new Impact fee project costs. Interest costs are derived from the City's Financial Advisor and the City's existing debt service schedules.

New Annual Debt Service	\$ 8,793,172	Water Service Area - page 2
Existing Annual Debt Service	14,491,312	Water Service Area - page 2
Principal Component (New and Existing Debt)	(16,752,895)	Water Service Area - page 1
Financing Costs	\$ 6,531,589	

Existing Fund Balance:

Represents impact fee revenue collected but not yet expended. Because this impact fee is new, there is no existing fund balance. Reference is page 1 of Water Service Area.

Interest Earnings

Represents the interest earned on cash flows and assumes a 0.35% annual interest rate per the most recent investment portfolio. The Impact Fee Statute states that interest earnings are funds of the Impact Fee account and are held to the same restrictions as Impact fee revenues. Therefore in order to recognize that interest earnings are used to fund capital improvements, interest earnings are credited against the recoverable costs. Reference is the sum of Accumulated Interest on page 3 of Water Service Area.

Maximum Recoverable Cost for Impact Fee:

Represents the sum of Recoverable Impact Fee CIP Costs (after 50% credit) and Financing Costs less Existing Fund Balance and Interest Earnings.

Equivalent Connections:

Represents the growth in equivalent water connections over the ten-year timeframe (i.e. service units). A service unit is a standardized measure of use attributable to an individual unit of development calculated in accordance with generally accepted engineering standards. Reference is Freese & Nichols Impact Fee Study.

Maximum Assessable Impact Fee:

Represents Maximum Recoverable Cost for Impact Fee divided by Equivalent Connections. This is the maximum impact fee that can be assessed by the City.

City of Waco - 2020 Water Impact Fee Study
Capital Improvement Plan for Impact Fees
Impact Fee Calculation Assumptions
Water Service Area

I. General Assumptions

Annual Interest Rate on Deposits ⁽¹⁾	0.35%
Annual Service Unit Growth ⁽²⁾	1,275
Existing Fund Balance ⁽³⁾	-
Portion of Projects Funded by Existing Debt ⁽⁴⁾	\$ 11,267,826
Non-debt Funded Project Cost ⁽⁵⁾	270,460
New Project Cost Funded Through New Debt ⁽⁶⁾	5,485,069
Total Recoverable Project Cost ⁽⁷⁾	\$ 17,023,355

II. New Debt Issues Assumptions

<u>Year</u>	<u>Principal</u> ⁽⁸⁾	<u>Interest</u> ⁽⁹⁾	<u>Term</u>
1	\$ 548,507	3.25%	20
2	548,507	4.00%	20
3	548,507	4.50%	20
4	548,507	5.00%	20
5	548,507	5.50%	20
6	548,507	5.50%	20
7	548,507	5.50%	20
8	548,507	5.50%	20
9	548,507	5.50%	20
10	548,507	5.50%	20
Total	\$ 5,485,069		

III. Capital Expenditure Assumptions

<u>Year</u>	<u>Annual Capital Expenditures</u> ⁽¹⁰⁾
1	\$ 27,046
2	209,882
3	392,717
4	575,553
5	575,553
6	575,553
7	575,553
8	575,553
9	575,553
10	575,553
11	548,507
12	365,671
13	182,836
Total	5,755,529

- (1) Estimated Interest Rate per Staff as of May 2020
- (2) Per Freese & Nichols Impact Fee Study
- (3) There is no existing fund balance because this is a new water impact fee
- (4) Per discussions with City Staff and City files, not applicable
- (5) Per discussions with City Staff and City files, assumes 0% of project costs are non-debt funded
- (6) Per discussions with City Staff and City files, assumes 100% of project costs are new debt funded
- (7) Per Freese & Nichols Impact Fee Study
- (8) Assumes new debt issued in equal annual amounts
- (9) Estimated interest on future debt from City's Financial Advisor May 2020
- (10) Assumes new debt proceeds expended over a 3-year timeframe
 Non-debt funded capital expenditures allocated is equal annual amounts

City of Waco - 2020 Water Impact Fee Study
Capital Improvement Plan for Impact Fees
Debt Service and Expense Summary
Water Service Area

I. New Debt Service Detail

<u>Year</u>	<u>Series 1</u>	<u>Series 2</u>	<u>Series 3</u>	<u>Series 4</u>	<u>Series 5</u>	<u>Series 6</u>	<u>Series 7</u>	<u>Series 8</u>	<u>Series 9</u>	<u>Series 10</u>	<u>Total Annual New Debt Service</u>
1	\$ 37,726	\$ -	\$ -	\$ -	\$ -	\$ -	\$ -	\$ -	\$ -	\$ -	\$ 37,726
2	37,726	40,360	-	-	-	-	-	-	-	-	78,086
3	37,726	40,360	42,167	-	-	-	-	-	-	-	120,253
4	37,726	40,360	42,167	44,014	-	-	-	-	-	-	164,266
5	37,726	40,360	42,167	44,014	45,899	-	-	-	-	-	210,165
6	37,726	40,360	42,167	44,014	45,899	45,899	-	-	-	-	256,064
7	37,726	40,360	42,167	44,014	45,899	45,899	45,899	-	-	-	301,963
8	37,726	40,360	42,167	44,014	45,899	45,899	45,899	45,899	-	-	347,861
9	37,726	40,360	42,167	44,014	45,899	45,899	45,899	45,899	45,899	-	393,760
10	37,726	40,360	42,167	44,014	45,899	45,899	45,899	45,899	45,899	45,899	439,659
11	37,726	40,360	42,167	44,014	45,899	45,899	45,899	45,899	45,899	45,899	439,659
12	37,726	40,360	42,167	44,014	45,899	45,899	45,899	45,899	45,899	45,899	439,659
13	37,726	40,360	42,167	44,014	45,899	45,899	45,899	45,899	45,899	45,899	439,659
14	37,726	40,360	42,167	44,014	45,899	45,899	45,899	45,899	45,899	45,899	439,659
15	37,726	40,360	42,167	44,014	45,899	45,899	45,899	45,899	45,899	45,899	439,659
16	37,726	40,360	42,167	44,014	45,899	45,899	45,899	45,899	45,899	45,899	439,659
17	37,726	40,360	42,167	44,014	45,899	45,899	45,899	45,899	45,899	45,899	439,659
18	37,726	40,360	42,167	44,014	45,899	45,899	45,899	45,899	45,899	45,899	439,659
19	37,726	40,360	42,167	44,014	45,899	45,899	45,899	45,899	45,899	45,899	439,659
20	37,726	40,360	42,167	44,014	45,899	45,899	45,899	45,899	45,899	45,899	439,659
21	-	40,360	42,167	44,014	45,899	45,899	45,899	45,899	45,899	45,899	401,933
22	-	-	42,167	44,014	45,899	45,899	45,899	45,899	45,899	45,899	361,573
23	-	-	-	44,014	45,899	45,899	45,899	45,899	45,899	45,899	319,406
24	-	-	-	-	45,899	45,899	45,899	45,899	45,899	45,899	275,392
25	-	-	-	-	-	45,899	45,899	45,899	45,899	45,899	229,493
26	-	-	-	-	-	-	45,899	45,899	45,899	45,899	183,595
27	-	-	-	-	-	-	-	45,899	45,899	45,899	137,696
28	-	-	-	-	-	-	-	-	45,899	45,899	91,797
29	-	-	-	-	-	-	-	-	-	45,899	45,899
	\$ 754,514	\$ 807,202	\$ 843,342	\$ 880,272	\$ 917,974	\$ 917,974	\$ 917,974	\$ 917,974	\$ 917,974	\$ 917,974	\$ 8,793,172

II. Summary of Annual Expenses

<u>Year</u>	<u>New Annual Debt Service</u> ⁽¹⁾	<u>Annual Capital Expenditures</u> ⁽²⁾	<u>Annual Bond Proceeds</u> ⁽²⁾	<u>Existing Annual Debt Service</u> ⁽³⁾	<u>Total Expense</u>
1	\$ 37,726	\$ 27,046	\$ (548,507)	\$ 708,120	\$ 224,384
2	78,086	209,882	(548,507)	803,377	542,838
3	120,253	392,717	(548,507)	797,619	762,082
4	164,266	575,553	(548,507)	797,135	988,447
5	210,165	575,553	(548,507)	795,920	1,033,131
6	256,064	575,553	(548,507)	795,436	1,078,546
7	301,963	575,553	(548,507)	793,275	1,122,284
8	347,861	575,553	(548,507)	792,911	1,167,818
9	393,760	575,553	(548,507)	791,847	1,212,653
10	439,659	575,553	(548,507)	791,534	1,258,239
11	439,659	548,507	-	789,791	1,777,956
12	439,659	365,671	-	788,831	1,594,161
13	439,659	182,836	-	788,611	1,411,105
14	439,659	-	-	787,834	1,227,493
15	439,659	-	-	778,290	1,217,948
16	439,659	-	-	775,705	1,215,363
17	439,659	-	-	728,594	1,168,253
18	439,659	-	-	523,591	963,250
19	439,659	-	-	387,502	827,160
20	439,659	-	-	199,537	639,195
21	401,933	-	-	75,855	477,788
22	361,573	-	-	-	361,573
23	319,406	-	-	-	319,406
24	275,392	-	-	-	275,392
25	229,493	-	-	-	229,493
26	183,595	-	-	-	183,595
27	137,696	-	-	-	137,696
28	91,797	-	-	-	91,797
29	45,899	-	-	-	45,899
	\$ 8,793,172	\$ 5,755,529	\$ (5,485,069)	\$ 14,491,312	\$ 23,554,945

(1) Water Service Area - page 2 Section I

(2) Water Service Area - page 1 Section III

(3) Eligible debt funded projects as a percent of total principal ties original annual debt service; does not reflect current outstanding balances

City of Waco - 2020 Water Impact Fee Study
 Capital Improvement Plan for Impact Fees
 Revenue Test
 Water Service Area

<u>Year</u>	<u>Impact Fee</u>	<u>Service Units</u>	<u>Impact Fee Revenue</u>	<u>Annual Expenses⁽¹⁾</u>	<u>Sub-Total</u>	<u>Accumulated Interest</u>	<u>Estimated Fund Balance</u>
Initial							\$ -
1	\$ 1,805	1,275	\$ 2,301,303	\$ 224,384	\$ 2,076,919	\$ 3,635	2,080,554
2	1,805	1,275	2,301,303	542,838	1,758,466	10,359	3,849,379
3	1,805	1,275	2,301,303	762,082	1,539,221	16,166	5,404,766
4	1,805	1,275	2,301,303	988,447	1,312,856	21,214	6,738,837
5	1,805	1,275	2,301,303	1,033,131	1,268,173	25,805	8,032,814
6	1,805	1,275	2,301,303	1,078,546	1,222,758	30,255	9,285,827
7	1,805	1,275	2,301,303	1,122,284	1,179,020	34,564	10,499,410
8	1,805	1,275	2,301,303	1,167,818	1,133,485	38,732	11,671,627
9	1,805	1,275	2,301,303	1,212,653	1,088,651	42,756	12,803,034
10	1,805	1,275	2,301,303	1,258,239	1,043,065	46,636	13,892,735
11	-	-	-	1,777,956	(1,777,956)	45,513	12,160,292
12	-	-	-	1,594,161	(1,594,161)	39,771	10,605,902
13	-	-	-	1,411,105	(1,411,105)	34,651	9,229,448
14	-	-	-	1,227,493	(1,227,493)	30,155	8,032,111
15	-	-	-	1,217,948	(1,217,948)	25,981	6,840,143
16	-	-	-	1,215,363	(1,215,363)	21,814	5,646,594
17	-	-	-	1,168,253	(1,168,253)	17,719	4,496,059
18	-	-	-	963,250	(963,250)	14,051	3,546,860
19	-	-	-	827,160	(827,160)	10,966	2,730,667
20	-	-	-	639,195	(639,195)	8,439	2,099,910
21	-	-	-	477,788	(477,788)	6,514	1,628,635
22	-	-	-	361,573	(361,573)	5,067	1,272,130
23	-	-	-	319,406	(319,406)	3,893	956,618
24	-	-	-	275,392	(275,392)	2,866	684,092
25	-	-	-	229,493	(229,493)	1,993	456,591
26	-	-	-	183,595	(183,595)	1,277	274,273
27	-	-	-	137,696	(137,696)	719	137,296
28	-	-	-	91,797	(91,797)	320	45,819
29	-	-	-	45,899	(45,899)	80	-
			\$ 23,013,034	\$ 23,554,945		\$ 541,910	

(1) Water Service Area, Page 2 Section II

City of Waco - 2020 Water Impact Fee Study
 Capital Improvement Plan for Impact Fees
 Impact Fee Calculation
 Water Service Area

Year	Number of Years to End of Period	Future Value Escalation		Annual Service Units		Annual Expense	
		Interest Rate Factor	Recovery Fee Factor	Actual	Escalated	Actual	Escalated
1	29	1.1047	1.0000	1,275	1,409	\$ 224,384	\$ 247,878
2	28	1.1009	1.0000	1,275	1,404	542,838	597,584
3	27	1.0970	1.0000	1,275	1,399	762,082	836,013
4	26	1.0932	1.0000	1,275	1,394	988,447	1,080,556
5	25	1.0894	1.0000	1,275	1,389	1,033,131	1,125,464
6	24	1.0856	1.0000	1,275	1,384	1,078,546	1,170,840
7	23	1.0818	1.0000	1,275	1,380	1,122,284	1,214,072
8	22	1.0780	1.0000	1,275	1,375	1,167,818	1,258,924
9	21	1.0743	1.0000	1,275	1,370	1,212,653	1,302,697
10	20	1.0705	1.0000	1,275	1,365	1,258,239	1,346,953
11	19	1.0668	1.0000	-	-	1,777,956	1,896,676
12	18	1.0631	1.0000	-	-	1,594,161	1,694,677
13	17	1.0593	1.0000	-	-	1,411,105	1,494,847
14	16	1.0557	1.0000	-	-	1,227,493	1,295,803
15	15	1.0520	1.0000	-	-	1,217,948	1,281,243
16	14	1.0483	1.0000	-	-	1,215,363	1,274,064
17	13	1.0446	1.0000	-	-	1,168,253	1,220,407
18	12	1.0410	1.0000	-	-	963,250	1,002,742
19	11	1.0374	1.0000	-	-	827,160	858,070
20	10	1.0338	1.0000	-	-	639,195	660,768
21	9	1.0301	1.0000	-	-	477,788	492,191
22	8	1.0266	1.0000	-	-	361,573	371,173
23	7	1.0230	1.0000	-	-	319,406	326,743
24	6	1.0194	1.0000	-	-	275,392	280,736
25	5	1.0158	1.0000	-	-	229,493	233,131
26	4	1.0123	1.0000	-	-	183,595	185,854
27	3	1.0088	1.0000	-	-	137,696	138,904
28	2	1.0053	1.0000	-	-	91,797	92,280
29	1	1.0018	1.0000	-	-	45,899	45,979
					13,869		\$ 25,027,269

Annual Interest Rate:	0.35%
Present Value of Initial Impact Fee Fund Balance	\$ -
Total Escalated Expense for Entire Period	\$ 25,027,269
Less Future Value of Initial Impact Fee Fund Balance	-
Sub-Total	\$ 25,027,269
Total Escalated Service Units	13,869
Impact Fee for Water Service Area	\$ 1,805

City of Waco - 2020 Water Impact Fee Study
Capital Improvement Plan for Impact Fees
Impact Fee Project Funding
Water Service Area

<u>Impact Fee Project Name ⁽¹⁾</u>	<u>Cost In</u>		<u>Impact Fee</u>		<u>Debt Funded⁽³⁾</u>		<u>Non-Debt Funded ⁽³⁾</u>
	<u>Service Area ⁽¹⁾</u>	<u>Eligible Cost ⁽¹⁾</u>	<u>Recoverable Cost⁽²⁾</u>	<u>Existing</u>	<u>Proposed</u>		
Riverside to Gholson 30-inch Water Line	\$ 12,242,880	\$ 3,060,720	\$ 1,530,360	\$ 1,530,360	\$ -	\$ -	
Highway 84 Water Line Improvements	1,442,652	432,796	216,398	216,398	-	-	
Spring Valley Water Lines	3,848,268	2,693,787	1,346,894	1,346,894	-	-	
Owen Lane 2.0 MG Elevated Storage Tank	3,858,015	771,603	385,802	385,802	-	-	
Hillcrest Pump Station Expansion	12,902,096	645,105	322,552	322,552	-	-	
16-inch Ritchie Road Water Line	787,155	393,577	196,789	175,000	-	21,789	
China Spring Water Line	16,199,650	4,049,913	2,024,956	1,838,321	-	186,635	
McGregor-Waco-Woodway Connection 16" Water Line	1,500,000	450,000	225,000	225,000	-	-	
Water Transmission Improvements (project 8)	8,000,000	800,000	400,000	-	400,000	-	
Peach Street 16-inch Water Line	3,500,000	1,225,000	612,500	612,500	-	-	
Elm Street 12-inch Water Line	1,800,000	630,000	315,000	315,000	-	-	
Riverside Water Treatment Plant Expansion	10,363,510	2,072,702	1,036,351	-	1,036,351	-	
Riverside Pump Station Expansion	11,000,000	2,200,000	1,100,000	1,100,000	-	-	
Downtown Mary Avenue to 5th Street	3,000,000	900,000	450,000	450,000	-	-	
Pressure Plane 6 Water Storage	5,000,000	2,500,000	1,250,000	1,250,000	-	-	
Chapel Road 16-inch Water Line	5,000,000	2,250,000	1,125,000	1,125,000	-	-	
Old McGregor 3.0 MG Ground Storage Tank	4,500,000	900,000	450,000	-	450,000	-	
Airport 1.0 MG Ground Storage Tank	2,500,000	625,000	312,500	-	312,500	-	
20/24-inch Water Line in Pressure Plane 1	14,000,000	4,200,000	2,100,000	375,000	1,725,000	-	
72-inch Parallel Raw Water Line	8,000,000	800,000	400,000	-	400,000	-	
16/24-inch Water Line in Pressure Plane 3	7,289,740	1,822,435	911,218	-	911,218	-	
Low Head Pump Station at Mt. Carmel WTP	5,000,000	500,000	250,000	-	250,000	-	
Water Impact Fee Study	124,073	124,073	62,037	-	-	62,037	
Total	\$ 141,858,038	\$ 34,046,711	\$ 17,023,355	\$ 11,267,826	\$ 5,485,069	\$ 270,460	

(1) Per Freese & Nichols Impact Fee Study

(2) 50% of Eligible Costs

(3) Per discussions with City staff and City files

SUMMARY OF WASTEWATER IMPACT FEE DETERMINATION

Wastewater Service Area

Recoverable Impact Fee CIP Costs	\$ 31,867,209	Per Freese & Nichols Impact Fee Study
Financing Cost	15,091,715	See Detail Below
Existing Fund Balance	-	Wastewater Service Area - page 1
Interest Earnings	(1,371,302)	Wastewater Service Area - page 3
Maximum Recoverable Cost for Impact Fee	\$ 45,587,622	Sum of Above
Equivalent Connections	12,753	Per Freese & Nichols Impact Fee Study
Maximum Assessable Impact Fee	\$ 3,575	Max. Recoverable Cost Divided by Equiv. Conn.

Recoverable Impact Fee CIP Costs:

Represents the portion of capital improvement costs that are eligible for funding through Impact fees after adjusting for the 50% credit. Reference is Freese & Nichols Impact Fee Study. In 2001, the Impact Fee Statute was amended to include either a credit for ad valorem and utility revenues generated by new service units during the ten-year timeframe that are used to fund impact fee eligible projects for which the new service units were charged an impact fee or a credit equal to 50% of the total cost of implementing the impact fee capital improvement plan. The City has elected to use the 50% credit.

Financing Costs:

Represents the interest costs associated with debt financing the new Impact fee project costs. Interest costs are derived from the City's Financial Advisor and the City's existing debt service schedules.

New Annual Debt Service	\$ 30,899,959	Wastewater Service Area - page 2
Existing Annual Debt Service	15,763,501	Wastewater Service Area - page 2
Principal Component (New and Existing Debt)	(31,571,745)	Wastewater Service Area - page 1
Financing Costs	\$ 15,091,715	

Existing Fund Balance:

Represents impact fee revenue collected but not yet expended. Because this impact fee is new, there is no existing fund balance. Reference is page 1 of Wastewater Service Area.

Interest Earnings

Represents the interest earned on cash flows and assumes a 0.35% annual interest rate per the most recent investment portfolio. The Impact Fee Statute states that interest earnings are funds of the Impact Fee account and are held to the same restrictions as Impact fee revenues. Therefore in order to recognize that interest earnings are used to fund capital improvements, interest earnings are credited against the recoverable costs. Reference is the sum of Accumulated Interest on page 3 of Wastewater Service Area.

Maximum Recoverable Cost for Impact Fee:

Represents the sum of Recoverable Impact Fee CIP Costs (after 50% credit) and Financing Costs less Existing Fund Balance and Interest Earnings.

Equivalent Connections:

Represents the growth in equivalent wastewater connections over the ten-year timeframe (i.e. service units). A service unit is a standardized measure of use attributable to an individual unit of development calculated in accordance with generally accepted engineering standards. Reference is Freese & Nichols Impact Fee Study.

Maximum Assessable Impact Fee:

Represents Maximum Recoverable Cost for Impact Fee divided by Equivalent Connections. This is the maximum impact fee that can be assessed by the City.

City of Waco - 2020 Wastewater Impact Fee Study
Capital Improvement Plan for Impact Fees
Impact Fee Calculation Assumptions
Wastewater Service Area

I. General Assumptions

Annual Interest Rate on Deposits ⁽¹⁾	0.35%
Annual Service Unit Growth ⁽²⁾	1,275
Existing Fund Balance ⁽³⁾	-
Portion of Projects Funded by Existing Debt ⁽⁴⁾	\$ 12,296,745
Non-debt Funded New Project Cost ⁽⁵⁾	295,464
New Project Cost Funded Through New Debt ⁽⁶⁾	19,275,000
Total Recoverable Project Cost ⁽⁷⁾	\$ 31,867,209

II. New Debt Issues Assumptions

<u>Year</u>	<u>Principal⁽⁸⁾</u>	<u>Interest⁽⁹⁾</u>	<u>Term</u>
1	\$ 1,927,500	3.25%	20
2	1,927,500	4.00%	20
3	1,927,500	4.50%	20
4	1,927,500	5.00%	20
5	1,927,500	5.50%	20
6	1,927,500	5.50%	20
7	1,927,500	5.50%	20
8	1,927,500	5.50%	20
9	1,927,500	5.50%	20
10	1,927,500	5.50%	20
Total	\$ 19,275,000		

III. Capital Expenditure Assumptions

<u>Year</u>	<u>Annual Capital Expenditures⁽¹⁰⁾</u>
1	\$ 29,546
2	672,046
3	1,314,546
4	1,957,046
5	1,957,046
6	1,957,046
7	1,957,046
8	1,957,046
9	1,957,046
10	1,957,046
11	1,927,500
12	1,285,000
13	642,500
Total	\$ 19,570,464

- (1) Estimated Interest Rate per Staff as of May 2020
- (2) Per Freese & Nichols Impact Fee Study
- (3) There is no existing fund balance because this is a new wastewater impact fee
- (4) Per discussions with City Staff and City files, not applicable
- (5) Per discussions with City Staff and City files, assumes 0% of project costs are non-debt funded
- (6) Per discussions with City Staff and City files, assumes 100% of project costs are new debt funded
- (7) Per Freese & Nichols Impact Fee Study
- (8) Assumes new debt issued in equal annual amounts
- (9) Estimated interest on future debt from City's Financial Advisor May 2020
- (10) Assumes new debt proceeds expended over a 3-year timeframe
 Non-debt funded capital expenditures allocated is equal annual amounts

City of Waco - 2020 Wastewater Impact Fee Study
Capital Improvement Plan for Impact Fees
Debt Service and Expense Summary
Wastewater Service Area

I. New Debt Service Detail

<u>Year</u>	<u>Series 1</u>	<u>Series 2</u>	<u>Series 3</u>	<u>Series 4</u>	<u>Series 5</u>	<u>Series 6</u>	<u>Series 7</u>	<u>Series 8</u>	<u>Series 9</u>	<u>Series 10</u>	<u>Total Annual New Debt Service</u>
1	\$ 132,571	\$ -	\$ -	\$ -	\$ -	\$ -	\$ -	\$ -	\$ -	\$ -	\$ 132,571
2	132,571	141,829	-	-	-	-	-	-	-	-	274,400
3	132,571	141,829	148,179	-	-	-	-	-	-	-	422,579
4	132,571	141,829	148,179	154,668	-	-	-	-	-	-	577,246
5	132,571	141,829	148,179	154,668	161,292	-	-	-	-	-	738,538
6	132,571	141,829	148,179	154,668	161,292	161,292	-	-	-	-	899,830
7	132,571	141,829	148,179	154,668	161,292	161,292	161,292	-	-	-	1,061,122
8	132,571	141,829	148,179	154,668	161,292	161,292	161,292	161,292	-	-	1,222,414
9	132,571	141,829	148,179	154,668	161,292	161,292	161,292	161,292	161,292	-	1,383,706
10	132,571	141,829	148,179	154,668	161,292	161,292	161,292	161,292	161,292	161,292	1,544,998
11	132,571	141,829	148,179	154,668	161,292	161,292	161,292	161,292	161,292	161,292	1,544,998
12	132,571	141,829	148,179	154,668	161,292	161,292	161,292	161,292	161,292	161,292	1,544,998
13	132,571	141,829	148,179	154,668	161,292	161,292	161,292	161,292	161,292	161,292	1,544,998
14	132,571	141,829	148,179	154,668	161,292	161,292	161,292	161,292	161,292	161,292	1,544,998
15	132,571	141,829	148,179	154,668	161,292	161,292	161,292	161,292	161,292	161,292	1,544,998
16	132,571	141,829	148,179	154,668	161,292	161,292	161,292	161,292	161,292	161,292	1,544,998
17	132,571	141,829	148,179	154,668	161,292	161,292	161,292	161,292	161,292	161,292	1,544,998
18	132,571	141,829	148,179	154,668	161,292	161,292	161,292	161,292	161,292	161,292	1,544,998
19	132,571	141,829	148,179	154,668	161,292	161,292	161,292	161,292	161,292	161,292	1,544,998
20	132,571	141,829	148,179	154,668	161,292	161,292	161,292	161,292	161,292	161,292	1,544,998
21	-	141,829	148,179	154,668	161,292	161,292	161,292	161,292	161,292	161,292	1,412,427
22	-	-	148,179	154,668	161,292	161,292	161,292	161,292	161,292	161,292	1,270,598
23	-	-	-	154,668	161,292	161,292	161,292	161,292	161,292	161,292	1,122,419
24	-	-	-	-	161,292	161,292	161,292	161,292	161,292	161,292	967,751
25	-	-	-	-	-	161,292	161,292	161,292	161,292	161,292	806,460
26	-	-	-	-	-	-	161,292	161,292	161,292	161,292	645,168
27	-	-	-	-	-	-	-	161,292	161,292	161,292	483,876
28	-	-	-	-	-	-	-	-	161,292	161,292	322,584
29	-	-	-	-	-	-	-	-	-	161,292	161,292
	\$ 2,651,426	\$ 2,836,576	\$ 2,963,575	\$ 3,093,352	\$ 3,225,838	\$ 3,225,838	\$ 3,225,838	\$ 3,225,838	\$ 3,225,838	\$ 3,225,838	\$ 30,899,959

II. Summary of Annual Expenses

<u>Year</u>	<u>New Annual Debt Service (1)</u>	<u>Annual Capital Expenditures (2)</u>	<u>Annual Bond Proceeds (2)</u>	<u>Existing Annual Debt Service (3)</u>	<u>Total Expense</u>
1	\$ 132,571	\$ 29,546	\$ (1,927,500)	\$ 878,435	\$ (886,948)
2	274,400	672,046	(1,927,500)	878,268	(102,786)
3	422,579	1,314,546	(1,927,500)	878,592	688,217
4	577,246	1,957,046	(1,927,500)	878,297	1,485,090
5	738,538	1,957,046	(1,927,500)	878,452	1,646,537
6	899,830	1,957,046	(1,927,500)	878,469	1,807,846
7	1,061,122	1,957,046	(1,927,500)	878,805	1,969,474
8	1,222,414	1,957,046	(1,927,500)	878,881	2,130,842
9	1,383,706	1,957,046	(1,927,500)	878,007	2,291,260
10	1,544,998	1,957,046	(1,927,500)	879,364	2,453,909
11	1,544,998	1,927,500	-	878,985	4,351,483
12	1,544,998	1,285,000	-	878,995	3,708,993
13	1,544,998	642,500	-	878,425	3,065,923
14	1,544,998	-	-	878,392	2,423,390
15	1,544,998	-	-	878,524	2,423,522
16	1,544,998	-	-	869,186	2,414,184
17	1,544,998	-	-	852,778	2,397,776
18	1,544,998	-	-	340,940	1,885,938
19	1,544,998	-	-	302,419	1,847,417
20	1,544,998	-	-	219,286	1,764,284
21	1,412,427	-	-	-	1,412,427
22	1,270,598	-	-	-	1,270,598
23	1,122,419	-	-	-	1,122,419
24	967,751	-	-	-	967,751
25	806,460	-	-	-	806,460
26	645,168	-	-	-	645,168
27	483,876	-	-	-	483,876
28	322,584	-	-	-	322,584
29	161,292	-	-	-	161,292
	\$ 30,899,959	\$ 19,570,464	\$ (19,275,000)	\$ 15,763,501	\$ 46,958,924

(1) Wastewater Service Area - page 2 Section I

(2) Wastewater Service Area - page 1 Section III

(3) Eligible debt funded projects as a percent of total principal ties original annual debt service; does not reflect current outstanding balances

City of Waco - 2020 Wastewater Impact Fee Study
Capital Improvement Plan for Impact Fees
Revenue Test
Wastewater Service Area

<u>Year</u>	<u>Impact Fee</u>	<u>Service Units</u>	<u>Impact Fee Revenue</u>	<u>Annual Expenses⁽¹⁾</u>	<u>Sub-Total</u>	<u>Accumulated Interest</u>	<u>Estimated Fund Balance</u>
Initial							\$ -
1	\$ 3,575	1,275	\$ 4,558,762	\$ (886,948)	\$ 5,445,710	\$ 9,530	5,455,240
2	3,575	1,275	4,558,762	(102,786)	4,661,548	27,251	10,144,039
3	3,575	1,275	4,558,762	688,217	3,870,545	42,278	14,056,862
4	3,575	1,275	4,558,762	1,485,090	3,073,672	54,578	17,185,111
5	3,575	1,275	4,558,762	1,646,537	2,912,225	65,244	20,162,581
6	3,575	1,275	4,558,762	1,807,846	2,750,917	75,383	22,988,881
7	3,575	1,275	4,558,762	1,969,474	2,589,289	84,992	25,663,162
8	3,575	1,275	4,558,762	2,130,842	2,427,920	94,070	28,185,152
9	3,575	1,275	4,558,762	2,291,260	2,267,503	102,616	30,555,271
10	3,575	1,275	4,558,762	2,453,909	2,104,853	110,627	32,770,751
11	-	-	-	4,351,483	(4,351,483)	107,083	28,526,351
12	-	-	-	3,708,993	(3,708,993)	93,351	24,910,709
13	-	-	-	3,065,923	(3,065,923)	81,822	21,926,608
14	-	-	-	2,423,390	(2,423,390)	72,502	19,575,720
15	-	-	-	2,423,522	(2,423,522)	64,274	17,216,472
16	-	-	-	2,414,184	(2,414,184)	56,033	14,858,321
17	-	-	-	2,397,776	(2,397,776)	47,808	12,508,353
18	-	-	-	1,885,938	(1,885,938)	40,479	10,662,894
19	-	-	-	1,847,417	(1,847,417)	34,087	8,849,564
20	-	-	-	1,764,284	(1,764,284)	27,886	7,113,166
21	-	-	-	1,412,427	(1,412,427)	22,424	5,723,164
22	-	-	-	1,270,598	(1,270,598)	17,808	4,470,374
23	-	-	-	1,122,419	(1,122,419)	13,682	3,361,637
24	-	-	-	967,751	(967,751)	10,072	2,403,957
25	-	-	-	806,460	(806,460)	7,003	1,604,500
26	-	-	-	645,168	(645,168)	4,487	963,819
27	-	-	-	483,876	(483,876)	2,527	482,470
28	-	-	-	322,584	(322,584)	1,124	161,011
29	-	-	-	161,292	(161,292)	281	-
			\$ 45,587,622	\$ 46,958,924		\$ 1,371,302	

(1) Wastewater Service Area, Page 2 Section II

City of Waco - 2020 Wastewater Impact Fee Study
 Capital Improvement Plan for Impact Fees
 Impact Fee Calculation
 Wastewater Service Area

Year	Number of Years to End of Period	Future Value Escalation		Annual Service Units		Annual Expense	
		Interest Rate Factor	Recovery Fee Factor	Actual	Escalated	Actual	Escalated
1	29	1.1047	1.0000	1,275	1,409	\$ (886,948)	\$ (979,814)
2	28	1.1009	1.0000	1,275	1,404	(102,786)	(113,152)
3	27	1.0970	1.0000	1,275	1,399	688,217	754,982
4	26	1.0932	1.0000	1,275	1,394	1,485,090	1,623,479
5	25	1.0894	1.0000	1,275	1,389	1,646,537	1,793,692
6	24	1.0856	1.0000	1,275	1,384	1,807,846	1,962,548
7	23	1.0818	1.0000	1,275	1,380	1,969,474	2,130,550
8	22	1.0780	1.0000	1,275	1,375	2,130,842	2,297,077
9	21	1.0743	1.0000	1,275	1,370	2,291,260	2,461,394
10	20	1.0705	1.0000	1,275	1,365	2,453,909	2,626,926
11	19	1.0668	1.0000	-	-	4,351,483	4,642,046
12	18	1.0631	1.0000	-	-	3,708,993	3,942,855
13	17	1.0593	1.0000	-	-	3,065,923	3,247,870
14	16	1.0557	1.0000	-	-	2,423,390	2,558,252
15	15	1.0520	1.0000	-	-	2,423,522	2,549,468
16	14	1.0483	1.0000	-	-	2,414,184	2,530,788
17	13	1.0446	1.0000	-	-	2,397,776	2,504,820
18	12	1.0410	1.0000	-	-	1,885,938	1,963,260
19	11	1.0374	1.0000	-	-	1,847,417	1,916,453
20	10	1.0338	1.0000	-	-	1,764,284	1,823,829
21	9	1.0301	1.0000	-	-	1,412,427	1,455,004
22	8	1.0266	1.0000	-	-	1,270,598	1,304,335
23	7	1.0230	1.0000	-	-	1,122,419	1,148,203
24	6	1.0194	1.0000	-	-	967,751	986,529
25	5	1.0158	1.0000	-	-	806,460	819,241
26	4	1.0123	1.0000	-	-	645,168	653,107
27	3	1.0088	1.0000	-	-	483,876	488,122
28	2	1.0053	1.0000	-	-	322,584	324,279
29	1	1.0018	1.0000	-	-	161,292	161,574
					13,869		\$ 49,577,716

Annual Interest Rate:	0.35%
Present Value of Initial Impact Fee Fund Balance	\$ -
Total Escalated Expense for Entire Period	\$ 49,577,716
Less Future Value of Initial Impact Fee Fund Balance	-
Sub-Total	\$ 49,577,716
Total Escalated Service Units	13,869
Impact Fee for Wastewater Service Area	\$ 3,575

City of Waco - 2020 Wastewater Impact Fee Study
 Capital Improvement Plan for Impact Fees
 Impact Fee Project Funding
 Wastewater Service Area

<u>Impact Fee Project Name</u> ⁽¹⁾	<u>Cost In</u>	<u>Impact Fee</u>	<u>Impact Fee</u>	<u>Debt Funded</u> ⁽³⁾		<u>Non-Debt</u>
	<u>Service Area</u> ⁽¹⁾	<u>Eligible Cost</u> ⁽¹⁾	<u>Recoverable Cost</u> ⁽²⁾	<u>Existing</u>	<u>Proposed</u>	<u>Funded</u> ⁽³⁾
FM 1637 12/15/21/24-inch Wastewater Line	\$ 5,773,963	\$ 1,443,491	\$ 721,745	\$ 721,745	\$ -	\$ -
China Spring 24-inch Wastewater Line	14,000,000	2,800,000	1,400,000	-	1,400,000	-
Transfer Lift Station, Force Main, and 66-inch Gravity Line	45,500,000	13,650,000	6,825,000	6,825,000	-	-
Bull Hide Wastewater Treatment Plant Expansion to 3.0 MGD	18,000,000	3,600,000	1,800,000	-	1,800,000	-
Brazos Basin: Gurley Ave	7,000,000	1,400,000	700,000	700,000	-	-
54-inch Wastewater Line at Lake Brazos Park	1,000,000	100,000	50,000	50,000	-	-
Belmead Interceptor / Lacy Lakeview Interceptor	16,000,000	2,400,000	1,200,000	-	1,200,000	-
TSTC Lift Station Expansion and Force Main	8,000,000	1,600,000	800,000	800,000	-	-
Cloice Creek and Church Road Lift Stations, Force Mains, and 21-inch Gravity Line	10,000,000	3,000,000	1,500,000	1,500,000	-	-
Highway 84 30-inch Wastewater Line	6,000,000	1,800,000	900,000	900,000	-	-
Highway 84 24-inch Wastewater Line	4,000,000	1,600,000	800,000	800,000	(0)	-
China Spring Wastewater Treatment Plant	35,000,000	15,750,000	7,875,000	-	7,875,000	-
Highway 84 Wastewater Treatment Plant	35,000,000	14,000,000	7,000,000	-	7,000,000	-
New Quest Wastewater Line	600,000	150,000	75,000	-	-	75,000
24-inch Wastewater Line	934,274	186,855	93,427	-	-	93,427
Bridge 18-inch Wastewater Line	650,000	130,000	65,000	-	-	65,000
Impact Fee Study	124,073	124,073	62,037	-	-	62,037
Total	\$ 207,582,310	\$ 63,734,419	\$ 31,867,209	\$ 12,296,745	\$ 19,275,000	\$ 295,464

(1) Per Freese & Nichols Impact Fee Study

(2) 50% of Eligible Costs

(3) Per discussions with City staff and City files

SUMMARY OF ROADWAY IMPACT FEE DETERMINATION

Service Area 1

Recoverable Impact Fee CIP Costs	\$ 66,333	Per Freese & Nichols Impact Fee Study
Financing Costs	39,657	See Detail Below
Interest Earnings	(3,934)	Page 3 of Service Area 1
Maximum Recoverable Cost for Impact Fee	\$ 102,056	Sum of Above
Equivalent Connections	15,947	Per Freese & Nichols Impact Fee Study
Maximum Assessable Impact Fee	\$ 6	

Recoverable Impact Fee CIP Costs:

Represents the portion of capital improvement costs that are eligible for funding through Impact fees after adjusting for the 50% credit. Reference is Freese & Nichols Impact Fee Study. In 2001, the Impact Fee Statute was amended to include either a credit for ad valorem and utility revenues generated by new service units during the ten-year timeframe that are used to fund impact fee eligible projects for which the new service units were charged an impact fee or a credit equal to 50% of the total cost of implementing the impact fee capital improvement plan. The City has elected to use the 50% credit.

Financing Costs:

Represents the interest costs associated with debt financing the new Impact fee project costs. Interest costs are derived from the City's Financial Advisor.

New Annual Debt Service	\$ 105,410	(Page 2 of Service Area 1)
Existing Annual Debt Service	-	(Page 2 of Service Area 1)
Principal Component	(65,754)	(Page 5 of Service Area 1)
Financing Costs	\$ 39,657	

Interest Earnings:

Represents the interest earned on cash flows and assumes a 0.35% annual interest rate per the most recent investment portfolio. The Impact Fee Statute states that interest earnings are funds of the impact fee account and are held to the same restrictions as impact fee revenues. Therefore, in order to recognize that interest earnings are used to fund capital improvements, interest earnings are credited against the recoverable costs. Reference is the sum of Accumulated Interest on page 3 of Service Area 1.

Maximum Recoverable Cost for Impact Fee:

Represents the sum of Recoverable Impact Fee CIP Costs (after 50% credit) plus Financing Costs less Interest Earnings.

Equivalent Connections:

Represents the growth in equivalent vehicle-miles over the ten-year timeframe. A vehicle-mile is a standardized measure of use attributable to an individual unit of development calculated in accordance with generally accepted engineering standards. Reference is Freese & Nichols Impact Fee Study.

Maximum Assessable Impact Fee:

Represents Maximum Recoverable Cost for Impact Fee divided by Equivalent Connections. This is the maximum impact fee that can be assessed by the City.

City of Waco - 2020 Roadway Impact Fee Study
Capital Improvement Plan for Impact Fees
Impact Fee Calculation Assumptions
Service Area 1

I. General Assumptions

Annual Interest Rate on Deposits ⁽¹⁾	0.35%
Annual Vehicle Mile Growth ⁽²⁾	1,595
Existing Fund Balance ⁽³⁾	\$ -
Portion of Projects Funded by Existing Debt ⁽⁴⁾	\$ -
Non-debt Funded Project Cost ⁽⁵⁾	579
New Project Cost Funded Through New Debt ⁽⁶⁾	65,754
Total Recoverable Project Cost ⁽⁷⁾	\$ 66,333

II. New Debt Issues Assumptions

<u>Year</u>	<u>Principal⁽⁸⁾</u>	<u>Interest⁽⁹⁾</u>	<u>Term</u>
1	\$ 6,575	3.25%	20
2	6,575	4.00%	20
3	6,575	4.50%	20
4	6,575	5.00%	20
5	6,575	5.50%	20
6	6,575	5.50%	20
7	6,575	5.50%	20
8	6,575	5.50%	20
9	6,575	5.50%	20
10	6,575	5.50%	20
Total	\$ 65,754		

III. Capital Expenditure Assumptions

<u>Year</u>	<u>Annual Capital Expenditures⁽¹⁰⁾</u>
1	\$ 58
2	2,250
3	4,442
4	6,633
5	6,633
6	6,633
7	6,633
8	6,633
9	6,633
10	6,633
11	6,575
12	4,384
13	2,192
Total	\$ 66,333

- (1) Estimated Interest Rate per Staff as of May 2020
- (2) Per Freese & Nichols Impact Fee Study
- (3) There is no existing fund balance because this is a new roadway impact fee
- (4) Per discussions with City Staff and City files
- (5) This assumes 0% of new project costs funded through sources other than debt, unless specified otherwise
- (6) This assumes 100% of new project costs funded through new debt issues, unless specified otherwise
- (7) Per Freese & Nichols Impact Fee Study
- (8) Assumes new debt issued in equal annual amounts
- (9) Estimated interest on future debt from Financial Advisor as of May 2020
- (10) Assumes new debt proceeds expended over a 3-year timeframe
 Non-debt funded capital expenditures allocated in equal annual amounts

City of Waco - 2020 Roadway Impact Fee Study

Capital Improvement Plan for Impact Fees

Debt Service and Expense Summary

Service Area 1

I. New Debt Service Detail

Year	Series 1	Series 2	Series 3	Series 4	Series 5	Series 6	Series 7	Series 8	Series 9	Series 10	Total Annual New Debt Service
1	\$ 452	\$ -	\$ -	\$ -	\$ -	\$ -	\$ -	\$ -	\$ -	\$ -	\$ 452
2	452	484	-	-	-	-	-	-	-	-	936
3	452	484	505	-	-	-	-	-	-	-	1,442
4	452	484	505	528	-	-	-	-	-	-	1,969
5	452	484	505	528	550	-	-	-	-	-	2,519
6	452	484	505	528	550	550	-	-	-	-	3,070
7	452	484	505	528	550	550	550	-	-	-	3,620
8	452	484	505	528	550	550	550	550	-	-	4,170
9	452	484	505	528	550	550	550	550	550	-	4,720
10	452	484	505	528	550	550	550	550	550	550	5,271
11	452	484	505	528	550	550	550	550	550	550	5,271
12	452	484	505	528	550	550	550	550	550	550	5,271
13	452	484	505	528	550	550	550	550	550	550	5,271
14	452	484	505	528	550	550	550	550	550	550	5,271
15	452	484	505	528	550	550	550	550	550	550	5,271
16	452	484	505	528	550	550	550	550	550	550	5,271
17	452	484	505	528	550	550	550	550	550	550	5,271
18	452	484	505	528	550	550	550	550	550	550	5,271
19	452	484	505	528	550	550	550	550	550	550	5,271
20	452	484	505	528	550	550	550	550	550	550	5,271
21	-	484	505	528	550	550	550	550	550	550	4,818
22	-	-	505	528	550	550	550	550	550	550	4,334
23	-	-	-	528	550	550	550	550	550	550	3,829
24	-	-	-	-	550	550	550	550	550	550	3,301
25	-	-	-	-	-	550	550	550	550	550	2,751
26	-	-	-	-	-	-	550	550	550	550	2,201
27	-	-	-	-	-	-	-	550	550	550	1,651
28	-	-	-	-	-	-	-	-	550	550	1,100
29	-	-	-	-	-	-	-	-	-	550	550
	\$ 9,045	\$ 9,677	\$ 10,110	\$ 10,552	\$ 11,004	\$ 11,004	\$ 11,004	\$ 11,004	\$ 11,004	\$ 11,004	\$ 105,410

II. Summary of Annual Expenses

Year	New Annual Debt Service ⁽¹⁾	Annual Capital Expenditures ⁽²⁾	Annual Bond Proceeds ⁽²⁾	Existing Annual Debt Service ⁽³⁾	Total Expense
1	\$ 452	\$ 58	\$ (6,575)	\$ -	\$ (6,065)
2	936	2,250	(6,575)	-	(3,390)
3	1,442	4,442	(6,575)	-	(692)
4	1,969	6,633	(6,575)	-	2,027
5	2,519	6,633	(6,575)	-	2,577
6	3,070	6,633	(6,575)	-	3,128
7	3,620	6,633	(6,575)	-	3,678
8	4,170	6,633	(6,575)	-	4,228
9	4,720	6,633	(6,575)	-	4,778
10	5,271	6,633	(6,575)	-	5,328
11	5,271	6,575	-	-	11,846
12	5,271	4,384	-	-	9,654
13	5,271	2,192	-	-	7,462
14	5,271	-	-	-	5,271
15	5,271	-	-	-	5,271
16	5,271	-	-	-	5,271
17	5,271	-	-	-	5,271
18	5,271	-	-	-	5,271
19	5,271	-	-	-	5,271
20	5,271	-	-	-	5,271
21	4,818	-	-	-	4,818
22	4,334	-	-	-	4,334
23	3,829	-	-	-	3,829
24	3,301	-	-	-	3,301
25	2,751	-	-	-	2,751
26	2,201	-	-	-	2,201
27	1,651	-	-	-	1,651
28	1,100	-	-	-	1,100
29	550	-	-	-	550
	\$ 105,410	\$ 66,333	\$ (65,754)	\$ -	\$ 105,990

(1) Service Area 1, Page 2 Section I

(2) Service Area 1, Page 1

(3) Eligible debt funded projects as a percent of total principal times original annual debt service; does not reflect current outstanding balances

City of Waco - 2020 Roadway Impact Fee Study
 Capital Improvement Plan for Impact Fees
 Revenue Test
 Service Area 1

<u>Year</u>	<u>Impact Fee</u>	<u>Vehicle Miles</u>	<u>Impact Fee Revenue</u>	<u>Annual Expenses⁽¹⁾</u>	<u>Sub-Total</u>	<u>Accumulated Interest</u>	<u>Estimated Fund Balance</u>
Initial							\$ -
1	\$ 6	1,595	\$ 10,206	\$ (6,065)	\$ 16,271	\$ 28	16,299
2	6	1,595	10,206	(3,390)	13,595	81	29,975
3	6	1,595	10,206	(692)	10,898	124	40,997
4	6	1,595	10,206	2,027	8,178	158	49,333
5	6	1,595	10,206	2,577	7,628	186	57,148
6	6	1,595	10,206	3,128	7,078	212	64,438
7	6	1,595	10,206	3,678	6,528	237	71,203
8	6	1,595	10,206	4,228	5,978	260	77,440
9	6	1,595	10,206	4,778	5,427	281	83,148
10	6	1,595	10,206	5,328	4,877	300	88,325
11	-	-	-	11,846	(11,846)	288	76,767
12	-	-	-	9,654	(9,654)	252	67,365
13	-	-	-	7,462	(7,462)	223	60,125
14	-	-	-	5,271	(5,271)	201	55,056
15	-	-	-	5,271	(5,271)	183	49,969
16	-	-	-	5,271	(5,271)	166	44,864
17	-	-	-	5,271	(5,271)	148	39,741
18	-	-	-	5,271	(5,271)	130	34,601
19	-	-	-	5,271	(5,271)	112	29,442
20	-	-	-	5,271	(5,271)	94	24,265
21	-	-	-	4,818	(4,818)	76	19,524
22	-	-	-	4,334	(4,334)	61	15,250
23	-	-	-	3,829	(3,829)	47	11,468
24	-	-	-	3,301	(3,301)	34	8,201
25	-	-	-	2,751	(2,751)	24	5,473
26	-	-	-	2,201	(2,201)	15	3,288
27	-	-	-	1,651	(1,651)	9	1,646
28	-	-	-	1,100	(1,100)	4	549
29	-	-	-	550	(550)	1	-
			\$ 102,056	\$ 105,990		\$ 3,934	

(1) Service Area 1, Page 2 Section II

City of Waco - 2020 Roadway Impact Fee Study
 Capital Improvement Plan for Impact Fees
 Impact Fee Calculation
 Service Area 1

<u>Year</u>	<u>Number of Years to End of Period</u>	<u>Interest Rate Factor</u>	<u>Impact Fee Factor</u>	<u>Annual Vehicle Miles</u>		<u>Annual Expense</u>	
				<u>Actual</u>	<u>Escalated</u>	<u>Actual</u>	<u>Escalated</u>
1	29	1.1047	1.0000	1,595	1,762	\$ (6,065)	\$ (6,700)
2	28	1.1009	1.0000	1,595	1,756	(3,390)	(3,731)
3	27	1.0970	1.0000	1,595	1,749	(692)	(759)
4	26	1.0932	1.0000	1,595	1,743	2,027	2,216
5	25	1.0894	1.0000	1,595	1,737	2,577	2,808
6	24	1.0856	1.0000	1,595	1,731	3,128	3,395
7	23	1.0818	1.0000	1,595	1,725	3,678	3,979
8	22	1.0780	1.0000	1,595	1,719	4,228	4,558
9	21	1.0743	1.0000	1,595	1,713	4,778	5,133
10	20	1.0705	1.0000	1,595	1,707	5,328	5,704
11	19	1.0668	1.0000	-	-	11,846	12,637
12	18	1.0631	1.0000	-	-	9,654	10,263
13	17	1.0593	1.0000	-	-	7,462	7,905
14	16	1.0557	1.0000	-	-	5,271	5,564
15	15	1.0520	1.0000	-	-	5,271	5,544
16	14	1.0483	1.0000	-	-	5,271	5,525
17	13	1.0446	1.0000	-	-	5,271	5,506
18	12	1.0410	1.0000	-	-	5,271	5,487
19	11	1.0374	1.0000	-	-	5,271	5,467
20	10	1.0338	1.0000	-	-	5,271	5,448
21	9	1.0301	1.0000	-	-	4,818	4,964
22	8	1.0266	1.0000	-	-	4,334	4,450
23	7	1.0230	1.0000	-	-	3,829	3,917
24	6	1.0194	1.0000	-	-	3,301	3,365
25	5	1.0158	1.0000	-	-	2,751	2,795
26	4	1.0123	1.0000	-	-	2,201	2,228
27	3	1.0088	1.0000	-	-	1,651	1,665
28	2	1.0053	1.0000	-	-	1,100	1,106
29	1	1.0018	1.0000	-	-	550	551
					17,343		\$ 110,989

Annual Interest Rate:	0.35%
Value of Initial Impact Fee Fund Balance	\$ -
Total Escalated Expense for Entire Period	\$ 110,989
Less Future Value of Initial Impact Fee Fund Balance	-
Sub-Total	\$ 110,989
Total Escalated Vehicle Miles	17,343
Impact Fee For Service Area 1	\$ 6

City of Waco - 2020 Roadway Impact Fee Study

Capital Improvement Plan for Impact Fees

Impact Fee Project Funding

Service Area 1

<u>Impact Fee Roadway⁽¹⁾</u>	<u>Impact Fee Project No.⁽¹⁾</u>	<u>Cost In Service Area⁽¹⁾</u>	<u>Impact Fee Eligible Cost⁽¹⁾</u>	<u>Impact Fee Recoverable Cost</u>	<u>Debt Funded⁽³⁾ Proposed</u>	<u>Non-Debt Funded⁽³⁾</u>
Gholson Rd (From Herring Ave To 960' S of Herring Ave)	1	\$ 41,235	\$ 26,614	\$ 13,307	\$ 13,307	\$ -
Gholson Rd (From 960' S of Herring Ave To Waco Dr)	2	162,520	104,893	52,447	52,447	-
Impact Fee Study		1,159	1,159	579	-	579
Total		\$ 204,914	\$ 132,666	\$ 66,333	\$ 65,754	\$ 579

(1) Per Freese & Nichols Impact Fee Study

(2) 50% of Eligible Costs

SUMMARY OF ROADWAY IMPACT FEE DETERMINATION

Service Area 2

Recoverable Impact Fee CIP Costs	\$ 2,102,651	Per Freese & Nichols Impact Fee Study
Financing Costs	1,265,970	See Detail Below
Interest Earnings	(125,579)	Page 3 of Service Area 2
Maximum Recoverable Cost for Impact Fee	\$ 3,243,042	Sum of Above
Equivalent Connections	4,650	Per Freese & Nichols Impact Fee Study
Maximum Assessable Impact Fee	\$ 697	

Recoverable Impact Fee CIP Costs:

Represents the portion of capital improvement costs that are eligible for funding through Impact fees after adjusting for the 50% credit. Reference is Freese & Nichols Impact Fee Study. In 2001, the Impact Fee Statute was amended to include either a credit for ad valorem and utility revenues generated by new service units during the ten-year timeframe that are used to fund impact fee eligible projects for which the new service units were charged an impact fee or a credit equal to 50% of the total cost of implementing the impact fee capital improvement plan. The City has elected to use the 50% credit.

Financing Costs:

Represents the interest costs associated with debt financing the new Impact fee project costs. Interest costs are derived from the City's Financial Advisor.

New Annual Debt Service	\$ 3,365,036	(Page 2 of Service Area 2)
Existing Annual Debt Service	-	(Page 2 of Service Area 2)
Principal Component	(2,099,067)	(Page 5 of Service Area 2)
Financing Costs	\$ 1,265,970	

Interest Earnings:

Represents the interest earned on cash flows and assumes a 0.35% annual interest rate per the most recent investment portfolio. The Impact Fee Statute states that interest earnings are funds of the impact fee account and are held to the same restrictions as impact fee revenues. Therefore, in order to recognize that interest earnings are used to fund capital improvements, interest earnings are credited against the recoverable costs. Reference is the sum of Accumulated Interest on page 3 of Service Area 2.

Maximum Recoverable Cost for Impact Fee:

Represents the sum of Recoverable Impact Fee CIP Costs (after 50% credit) plus Financing Costs less Interest Earnings.

Equivalent Connections:

Represents the growth in equivalent vehicle-miles over the ten-year timeframe. A vehicle-mile is a standardized measure of use attributable to an individual unit of development calculated in accordance with generally accepted engineering standards. Reference is Freese & Nichols Impact Fee Study.

Maximum Assessable Impact Fee:

Represents Maximum Recoverable Cost for Impact Fee divided by Equivalent Connections. This is the maximum impact fee that can be assessed by the City.

City of Waco - 2020 Roadway Impact Fee Study
Capital Improvement Plan for Impact Fees
Impact Fee Calculation Assumptions
Service Area 2

I. General Assumptions

Annual Interest Rate on Deposits ⁽¹⁾	0.35%
Annual Vehicle Mile Growth ⁽²⁾	465
Existing Fund Balance ⁽³⁾	\$ -
Portion of Projects Funded by Existing Debt ⁽⁴⁾	\$ -
Non-debt Funded Project Cost ⁽⁵⁾	3,584
New Project Cost Funded Through New Debt ⁽⁶⁾	2,099,067
Total Recoverable Project Cost ⁽⁷⁾	\$ 2,102,651

II. New Debt Issues Assumptions

<u>Year</u>	<u>Principal⁽⁸⁾</u>	<u>Interest⁽⁹⁾</u>	<u>Term</u>
1	\$ 209,907	3.25%	20
2	209,907	4.00%	20
3	209,907	4.50%	20
4	209,907	5.00%	20
5	209,907	5.50%	20
6	209,907	5.50%	20
7	209,907	5.50%	20
8	209,907	5.50%	20
9	209,907	5.50%	20
10	209,907	5.50%	20
Total	\$ 2,099,067		

III. Capital Expenditure Assumptions

<u>Year</u>	<u>Annual Capital Expenditures⁽¹⁰⁾</u>
1	\$ 358
2	70,327
3	140,296
4	210,265
5	210,265
6	210,265
7	210,265
8	210,265
9	210,265
10	210,265
11	209,907
12	139,938
13	69,969
Total	\$ 2,102,651

- (1) Estimated Interest Rate per Staff as of May 2020
- (2) Per Freese & Nichols Impact Fee Study
- (3) There is no existing fund balance because this is a new roadway impact fee
- (4) Per discussions with City Staff and City files
- (5) This assumes 0% of new project costs funded through sources other than debt, unless specified otherwise
- (6) This assumes 100% of new project costs funded through new debt issues, unless specified otherwise
- (7) Per Freese & Nichols Impact Fee Study
- (8) Assumes new debt issued in equal annual amounts
- (9) Estimated interest on future debt from Financial Advisor as of May 2020
- (10) Assumes new debt proceeds expended over a 3-year timeframe
 Non-debt funded capital expenditures allocated in equal annual amounts

City of Waco - 2020 Roadway Impact Fee Study

Capital Improvement Plan for Impact Fees

Debt Service and Expense Summary

Service Area 2

I. New Debt Service Detail

Year	Series 1	Series 2	Series 3	Series 4	Series 5	Series 6	Series 7	Series 8	Series 9	Series 10	Total Annual New Debt Service
1	\$ 14,437	\$ -	\$ -	\$ -	\$ -	\$ -	\$ -	\$ -	\$ -	\$ -	\$ 14,437
2	14,437	15,445	-	-	-	-	-	-	-	-	29,882
3	14,437	15,445	16,137	-	-	-	-	-	-	-	46,019
4	14,437	15,445	16,137	16,843	-	-	-	-	-	-	62,863
5	14,437	15,445	16,137	16,843	17,565	-	-	-	-	-	80,428
6	14,437	15,445	16,137	16,843	17,565	17,565	-	-	-	-	97,992
7	14,437	15,445	16,137	16,843	17,565	17,565	17,565	-	-	-	115,557
8	14,437	15,445	16,137	16,843	17,565	17,565	17,565	17,565	-	-	133,122
9	14,437	15,445	16,137	16,843	17,565	17,565	17,565	17,565	17,565	-	150,687
10	14,437	15,445	16,137	16,843	17,565	17,565	17,565	17,565	17,565	17,565	168,252
11	14,437	15,445	16,137	16,843	17,565	17,565	17,565	17,565	17,565	17,565	168,252
12	14,437	15,445	16,137	16,843	17,565	17,565	17,565	17,565	17,565	17,565	168,252
13	14,437	15,445	16,137	16,843	17,565	17,565	17,565	17,565	17,565	17,565	168,252
14	14,437	15,445	16,137	16,843	17,565	17,565	17,565	17,565	17,565	17,565	168,252
15	14,437	15,445	16,137	16,843	17,565	17,565	17,565	17,565	17,565	17,565	168,252
16	14,437	15,445	16,137	16,843	17,565	17,565	17,565	17,565	17,565	17,565	168,252
17	14,437	15,445	16,137	16,843	17,565	17,565	17,565	17,565	17,565	17,565	168,252
18	14,437	15,445	16,137	16,843	17,565	17,565	17,565	17,565	17,565	17,565	168,252
19	14,437	15,445	16,137	16,843	17,565	17,565	17,565	17,565	17,565	17,565	168,252
20	14,437	15,445	16,137	16,843	17,565	17,565	17,565	17,565	17,565	17,565	168,252
21	-	15,445	16,137	16,843	17,565	17,565	17,565	17,565	17,565	17,565	153,815
22	-	-	16,137	16,843	17,565	17,565	17,565	17,565	17,565	17,565	138,369
23	-	-	-	16,843	17,565	17,565	17,565	17,565	17,565	17,565	122,233
24	-	-	-	-	17,565	17,565	17,565	17,565	17,565	17,565	105,389
25	-	-	-	-	-	17,565	17,565	17,565	17,565	17,565	87,824
26	-	-	-	-	-	-	17,565	17,565	17,565	17,565	70,259
27	-	-	-	-	-	-	-	17,565	17,565	17,565	52,695
28	-	-	-	-	-	-	-	-	17,565	17,565	35,130
29	-	-	-	-	-	-	-	-	-	17,565	17,565
	\$ 288,743	\$ 308,906	\$ 322,736	\$ 336,869	\$ 351,297	\$ 351,297	\$ 351,297	\$ 351,297	\$ 351,297	\$ 351,297	\$ 3,365,036

II. Summary of Annual Expenses

Year	New Annual Debt Service ⁽¹⁾	Annual Capital Expenditures ⁽²⁾	Annual Bond Proceeds ⁽²⁾	Existing Annual Debt Service ⁽³⁾	Total Expense
1	\$ 14,437	\$ 358	\$ (209,907)	\$ -	\$ (195,111)
2	29,882	70,327	(209,907)	-	(109,697)
3	46,019	140,296	(209,907)	-	(23,591)
4	62,863	210,265	(209,907)	-	63,221
5	80,428	210,265	(209,907)	-	80,786
6	97,992	210,265	(209,907)	-	98,351
7	115,557	210,265	(209,907)	-	115,916
8	133,122	210,265	(209,907)	-	133,481
9	150,687	210,265	(209,907)	-	151,045
10	168,252	210,265	(209,907)	-	168,610
11	168,252	209,907	-	-	378,158
12	168,252	139,938	-	-	308,190
13	168,252	69,969	-	-	238,221
14	168,252	-	-	-	168,252
15	168,252	-	-	-	168,252
16	168,252	-	-	-	168,252
17	168,252	-	-	-	168,252
18	168,252	-	-	-	168,252
19	168,252	-	-	-	168,252
20	168,252	-	-	-	168,252
21	153,815	-	-	-	153,815
22	138,369	-	-	-	138,369
23	122,233	-	-	-	122,233
24	105,389	-	-	-	105,389
25	87,824	-	-	-	87,824
26	70,259	-	-	-	70,259
27	52,695	-	-	-	52,695
28	35,130	-	-	-	35,130
29	17,565	-	-	-	17,565
	\$ 3,365,036	\$ 2,102,651	\$ (2,099,067)	\$ -	\$ 3,368,620

(1) Service Area 2, Page 2 Section I

(2) Service Area 2, Page 1

(3) Eligible debt funded projects as a percent of total principal times original annual debt service; does not reflect current outstanding balances

City of Waco - 2020 Roadway Impact Fee Study
 Capital Improvement Plan for Impact Fees
 Revenue Test
 Service Area 2

<u>Year</u>	<u>Impact Fee</u>	<u>Vehicle Miles</u>	<u>Impact Fee Revenue</u>	<u>Annual Expenses⁽¹⁾</u>	<u>Sub-Total</u>	<u>Accumulated Interest</u>	<u>Estimated Fund Balance</u>
Initial							\$ -
1	\$ 697	465	\$ 324,304	\$ (195,111)	\$ 519,415	\$ 909	520,324
2	697	465	324,304	(109,697)	434,001	2,581	956,906
3	697	465	324,304	(23,591)	347,895	3,958	1,308,759
4	697	465	324,304	63,221	261,083	5,038	1,574,880
5	697	465	324,304	80,786	243,518	5,938	1,824,336
6	697	465	324,304	98,351	225,953	6,781	2,057,070
7	697	465	324,304	115,916	208,389	7,564	2,273,023
8	697	465	324,304	133,481	190,824	8,290	2,472,136
9	697	465	324,304	151,045	173,259	8,956	2,654,351
10	697	465	324,304	168,610	155,694	9,563	2,819,608
11	-	-	-	378,158	(378,158)	9,207	2,450,656
12	-	-	-	308,190	(308,190)	8,038	2,150,504
13	-	-	-	238,221	(238,221)	7,110	1,919,394
14	-	-	-	168,252	(168,252)	6,423	1,757,565
15	-	-	-	168,252	(168,252)	5,857	1,595,170
16	-	-	-	168,252	(168,252)	5,289	1,432,207
17	-	-	-	168,252	(168,252)	4,718	1,268,674
18	-	-	-	168,252	(168,252)	4,146	1,104,568
19	-	-	-	168,252	(168,252)	3,572	939,888
20	-	-	-	168,252	(168,252)	2,995	774,631
21	-	-	-	153,815	(153,815)	2,442	623,258
22	-	-	-	138,369	(138,369)	1,939	486,828
23	-	-	-	122,233	(122,233)	1,490	366,086
24	-	-	-	105,389	(105,389)	1,097	261,793
25	-	-	-	87,824	(87,824)	763	174,732
26	-	-	-	70,259	(70,259)	489	104,961
27	-	-	-	52,695	(52,695)	275	52,541
28	-	-	-	35,130	(35,130)	122	17,534
29	-	-	-	17,565	(17,565)	31	-
			\$ 3,243,042	\$ 3,368,620		\$ 125,579	

(1) Service Area 2, Page 2 Section II

City of Waco - 2020 Roadway Impact Fee Study
 Capital Improvement Plan for Impact Fees
 Impact Fee Calculation
 Service Area 2

<u>Year</u>	<u>Number of Years to End of Period</u>	<u>Interest Rate Factor</u>	<u>Impact Fee Factor</u>	<u>Annual Vehicle Miles</u>		<u>Annual Expense</u>	
				<u>Actual</u>	<u>Escalated</u>	<u>Actual</u>	<u>Escalated</u>
1	29	1.1047	1.0000	465	514	\$ (195,111)	\$ (215,540)
2	28	1.1009	1.0000	465	512	(109,697)	(120,760)
3	27	1.0970	1.0000	465	510	(23,591)	(25,880)
4	26	1.0932	1.0000	465	508	63,221	69,112
5	25	1.0894	1.0000	465	507	80,786	88,006
6	24	1.0856	1.0000	465	505	98,351	106,767
7	23	1.0818	1.0000	465	503	115,916	125,396
8	22	1.0780	1.0000	465	501	133,481	143,894
9	21	1.0743	1.0000	465	500	151,045	162,261
10	20	1.0705	1.0000	465	498	168,610	180,498
11	19	1.0668	1.0000	-	-	378,158	403,409
12	18	1.0631	1.0000	-	-	308,190	327,622
13	17	1.0593	1.0000	-	-	238,221	252,358
14	16	1.0557	1.0000	-	-	168,252	177,615
15	15	1.0520	1.0000	-	-	168,252	176,996
16	14	1.0483	1.0000	-	-	168,252	176,378
17	13	1.0446	1.0000	-	-	168,252	175,763
18	12	1.0410	1.0000	-	-	168,252	175,150
19	11	1.0374	1.0000	-	-	168,252	174,539
20	10	1.0338	1.0000	-	-	168,252	173,930
21	9	1.0301	1.0000	-	-	153,815	158,451
22	8	1.0266	1.0000	-	-	138,369	142,043
23	7	1.0230	1.0000	-	-	122,233	125,040
24	6	1.0194	1.0000	-	-	105,389	107,434
25	5	1.0158	1.0000	-	-	87,824	89,216
26	4	1.0123	1.0000	-	-	70,259	71,124
27	3	1.0088	1.0000	-	-	52,695	53,157
28	2	1.0053	1.0000	-	-	35,130	35,314
29	1	1.0018	1.0000	-	-	17,565	17,596
					<u>5,057</u>		<u>\$ 3,526,892</u>

Annual Interest Rate:	0.35%
Value of Initial Impact Fee Fund Balance	\$ -
Total Escalated Expense for Entire Period	\$ 3,526,892
Less Future Value of Initial Impact Fee Fund Balance	-
Sub-Total	<u>\$ 3,526,892</u>
Total Escalated Vehicle Miles	<u>5,057</u>
Impact Fee For Service Area 2	\$ 697

City of Waco - 2020 Roadway Impact Fee Study

Capital Improvement Plan for Impact Fees

Impact Fee Project Funding

Service Area 2

<u>Impact Fee Roadway⁽¹⁾</u>	<u>Impact Fee Project No.⁽¹⁾</u>	<u>Cost In Service Area⁽¹⁾</u>	<u>Impact Fee Eligible Cost⁽¹⁾</u>	<u>Impact Fee Recoverable Cost</u>	<u>Debt Funded⁽³⁾ Proposed</u>	<u>Non-Debt Funded⁽³⁾</u>
Lake Shore Dr (From Mt Carmel Dr To Koehne Park Dr)	3	\$ 2,456,367	\$ 2,371,719	\$ 1,185,859	\$ 1,185,859	\$ -
Valley Mills Dr (From Koehne Park Dr To Hillandale Rd)	4	508,867	491,331	245,665	245,665	-
Valley Mills Dr (From Hillandale Rd To Ridgewood Dr)	5	900,533	869,500	434,750	434,750	-
Valley Mills Dr (From Ridgewood Dr To Bishop Dr)	6	482,200	465,583	232,792	232,792	-
Impact Fee Study		7,168	7,168	3,584	-	3,584
Total		\$ 4,355,135	\$ 4,205,302	\$ 2,102,651	\$ 2,099,067	\$ 3,584

(1) Per Freese & Nichols Impact Fee Study

(2) 50% of Eligible Costs

SUMMARY OF ROADWAY IMPACT FEE DETERMINATION

Service Area 3

Recoverable Impact Fee CIP Costs	\$ 3,604,402	Per Freese & Nichols Impact Fee Study
Financing Costs	2,167,182	See Detail Below
Interest Earnings	(214,975)	Page 3 of Service Area 3
Maximum Recoverable Cost for Impact Fee	\$ 5,556,609	Sum of Above
Equivalent Connections	4,293	Per Freese & Nichols Impact Fee Study
Maximum Assessable Impact Fee	\$ 1,294	

Recoverable Impact Fee CIP Costs:

Represents the portion of capital improvement costs that are eligible for funding through Impact fees after adjusting for the 50% credit. Reference is Freese & Nichols Impact Fee Study. In 2001, the Impact Fee Statute was amended to include either a credit for ad valorem and utility revenues generated by new service units during the ten-year timeframe that are used to fund impact fee eligible projects for which the new service units were charged an impact fee or a credit equal to 50% of the total cost of implementing the impact fee capital improvement plan. The City has elected to use the 50% credit.

Financing Costs:

Represents the interest costs associated with debt financing the new Impact fee project costs. Interest costs are derived from the City's Financial Advisor.

New Annual Debt Service	\$ 5,760,522	(Page 2 of Service Area 3)
Existing Annual Debt Service	-	(Page 2 of Service Area 3)
Principal Component	(3,593,340)	(Page 5 of Service Area 3)
Financing Costs	\$ 2,167,182	

Interest Earnings:

Represents the interest earned on cash flows and assumes a 0.35% annual interest rate per the most recent investment portfolio. The Impact Fee Statute states that interest earnings are funds of the impact fee account and are held to the same restrictions as impact fee revenues. Therefore, in order to recognize that interest earnings are used to fund capital improvements, interest earnings are credited against the recoverable costs. Reference is the sum of Accumulated Interest on page 3 of Service Area 3.

Maximum Recoverable Cost for Impact Fee:

Represents the sum of Recoverable Impact Fee CIP Costs (after 50% credit) plus Financing Costs less Interest Earnings.

Equivalent Connections:

Represents the growth in equivalent vehicle-miles over the ten-year timeframe. A vehicle-mile is a standardized measure of use attributable to an individual unit of development calculated in accordance with generally accepted engineering standards. Reference is Freese & Nichols Impact Fee Study.

Maximum Assessable Impact Fee:

Represents Maximum Recoverable Cost for Impact Fee divided by Equivalent Connections. This is the maximum impact fee that can be assessed by the City.

City of Waco - 2020 Roadway Impact Fee Study
Capital Improvement Plan for Impact Fees
Impact Fee Calculation Assumptions
Service Area 3

I. General Assumptions

Annual Interest Rate on Deposits ⁽¹⁾	0.35%
Annual Vehicle Mile Growth ⁽²⁾	429
Existing Fund Balance ⁽³⁾	\$ -
Portion of Projects Funded by Existing Debt ⁽⁴⁾	\$ -
Non-debt Funded Project Cost ⁽⁵⁾	11,062
New Project Cost Funded Through New Debt ⁽⁶⁾	3,593,340
Total Recoverable Project Cost ⁽⁷⁾	\$ 3,604,402

II. New Debt Issues Assumptions

<u>Year</u>	<u>Principal⁽⁸⁾</u>	<u>Interest⁽⁹⁾</u>	<u>Term</u>
1	\$ 359,334	3.25%	20
2	359,334	4.00%	20
3	359,334	4.50%	20
4	359,334	5.00%	20
5	359,334	5.50%	20
6	359,334	5.50%	20
7	359,334	5.50%	20
8	359,334	5.50%	20
9	359,334	5.50%	20
10	359,334	5.50%	20
Total	\$ 3,593,340		

III. Capital Expenditure Assumptions

<u>Year</u>	<u>Annual Capital Expenditures⁽¹⁰⁾</u>
1	\$ 1,106
2	120,884
3	240,662
4	360,440
5	360,440
6	360,440
7	360,440
8	360,440
9	360,440
10	360,440
11	359,334
12	239,556
13	119,778
Total	\$ 3,604,402

- (1) Estimated Interest Rate per Staff as of May 2020
- (2) Per Freese & Nichols Impact Fee Study
- (3) There is no existing fund balance because this is a new roadway impact fee
- (4) Per discussions with City Staff and City files
- (5) This assumes 0% of new project costs funded through sources other than debt, unless specified otherwise
- (6) This assumes 100% of new project costs funded through new debt issues, unless specified otherwise
- (7) Per Freese & Nichols Impact Fee Study
- (8) Assumes new debt issued in equal annual amounts
- (9) Estimated interest on future debt from Financial Advisor as of May 2020
- (10) Assumes new debt proceeds expended over a 3-year timeframe
 Non-debt funded capital expenditures allocated in equal annual amounts

City of Waco - 2020 Roadway Impact Fee Study

Capital Improvement Plan for Impact Fees

Debt Service and Expense Summary

Service Area 3

I. New Debt Service Detail

Year	Series 1	Series 2	Series 3	Series 4	Series 5	Series 6	Series 7	Series 8	Series 9	Series 10	Total Annual New Debt Service
1	\$ 24,715	\$ -	\$ -	\$ -	\$ -	\$ -	\$ -	\$ -	\$ -	\$ -	\$ 24,715
2	24,715	26,440	-	-	-	-	-	-	-	-	51,155
3	24,715	26,440	27,624	-	-	-	-	-	-	-	78,779
4	24,715	26,440	27,624	28,834	-	-	-	-	-	-	107,613
5	24,715	26,440	27,624	28,834	30,069	-	-	-	-	-	137,682
6	24,715	26,440	27,624	28,834	30,069	30,069	-	-	-	-	167,751
7	24,715	26,440	27,624	28,834	30,069	30,069	30,069	-	-	-	197,820
8	24,715	26,440	27,624	28,834	30,069	30,069	30,069	30,069	-	-	227,888
9	24,715	26,440	27,624	28,834	30,069	30,069	30,069	30,069	30,069	-	257,957
10	24,715	26,440	27,624	28,834	30,069	30,069	30,069	30,069	30,069	30,069	288,026
11	24,715	26,440	27,624	28,834	30,069	30,069	30,069	30,069	30,069	30,069	288,026
12	24,715	26,440	27,624	28,834	30,069	30,069	30,069	30,069	30,069	30,069	288,026
13	24,715	26,440	27,624	28,834	30,069	30,069	30,069	30,069	30,069	30,069	288,026
14	24,715	26,440	27,624	28,834	30,069	30,069	30,069	30,069	30,069	30,069	288,026
15	24,715	26,440	27,624	28,834	30,069	30,069	30,069	30,069	30,069	30,069	288,026
16	24,715	26,440	27,624	28,834	30,069	30,069	30,069	30,069	30,069	30,069	288,026
17	24,715	26,440	27,624	28,834	30,069	30,069	30,069	30,069	30,069	30,069	288,026
18	24,715	26,440	27,624	28,834	30,069	30,069	30,069	30,069	30,069	30,069	288,026
19	24,715	26,440	27,624	28,834	30,069	30,069	30,069	30,069	30,069	30,069	288,026
20	24,715	26,440	27,624	28,834	30,069	30,069	30,069	30,069	30,069	30,069	288,026
21	-	26,440	27,624	28,834	30,069	30,069	30,069	30,069	30,069	30,069	263,311
22	-	-	27,624	28,834	30,069	30,069	30,069	30,069	30,069	30,069	236,871
23	-	-	-	28,834	30,069	30,069	30,069	30,069	30,069	30,069	209,247
24	-	-	-	-	30,069	30,069	30,069	30,069	30,069	30,069	180,413
25	-	-	-	-	-	30,069	30,069	30,069	30,069	30,069	150,344
26	-	-	-	-	-	-	30,069	30,069	30,069	30,069	120,275
27	-	-	-	-	-	-	-	30,069	30,069	30,069	90,206
28	-	-	-	-	-	-	-	-	30,069	30,069	60,138
29	-	-	-	-	-	-	-	-	-	30,069	30,069
	\$ 494,292	\$ 528,808	\$ 552,484	\$ 576,678	\$ 601,377	\$ 601,377	\$ 601,377	\$ 601,377	\$ 601,377	\$ 601,377	\$ 5,760,522

II. Summary of Annual Expenses

Year	New Annual Debt Service ⁽¹⁾	Annual Capital Expenditures ⁽²⁾	Annual Bond Proceeds ⁽²⁾	Existing Annual Debt Service ⁽³⁾	Total Expense
1	\$ 24,715	\$ 1,106	\$ (359,334)	\$ -	\$ (333,513)
2	51,155	120,884	(359,334)	-	(187,295)
3	78,779	240,662	(359,334)	-	(39,893)
4	107,613	360,440	(359,334)	-	108,719
5	137,682	360,440	(359,334)	-	138,788
6	167,751	360,440	(359,334)	-	168,857
7	197,820	360,440	(359,334)	-	198,926
8	227,888	360,440	(359,334)	-	228,995
9	257,957	360,440	(359,334)	-	259,063
10	288,026	360,440	(359,334)	-	289,132
11	288,026	359,334	-	-	647,360
12	288,026	239,556	-	-	527,582
13	288,026	119,778	-	-	407,804
14	288,026	-	-	-	288,026
15	288,026	-	-	-	288,026
16	288,026	-	-	-	288,026
17	288,026	-	-	-	288,026
18	288,026	-	-	-	288,026
19	288,026	-	-	-	288,026
20	288,026	-	-	-	288,026
21	263,311	-	-	-	263,311
22	236,871	-	-	-	236,871
23	209,247	-	-	-	209,247
24	180,413	-	-	-	180,413
25	150,344	-	-	-	150,344
26	120,275	-	-	-	120,275
27	90,206	-	-	-	90,206
28	60,138	-	-	-	60,138
29	30,069	-	-	-	30,069
	\$ 5,760,522	\$ 3,604,402	\$ (3,593,340)	\$ -	\$ 5,771,584

(1) Service Area 3, Page 2 Section I

(2) Service Area 3, Page 1

(3) Eligible debt funded projects as a percent of total principal times original annual debt service; does not reflect current outstanding balances

City of Waco - 2020 Roadway Impact Fee Study
 Capital Improvement Plan for Impact Fees
 Revenue Test
 Service Area 3

<u>Year</u>	<u>Impact Fee</u>	<u>Vehicle Miles</u>	<u>Impact Fee Revenue</u>	<u>Annual Expenses⁽¹⁾</u>	<u>Sub-Total</u>	<u>Accumulated Interest</u>	<u>Estimated Fund Balance</u>
Initial							\$ -
1	\$ 1,294	429	\$ 555,661	\$ (333,513)	\$ 889,174	\$ 1,556	890,730
2	1,294	429	555,661	(187,295)	742,956	4,418	1,638,103
3	1,294	429	555,661	(39,893)	595,553	6,776	2,240,433
4	1,294	429	555,661	108,719	446,942	8,624	2,695,998
5	1,294	429	555,661	138,788	416,873	10,166	3,123,036
6	1,294	429	555,661	168,857	386,804	11,608	3,521,447
7	1,294	429	555,661	198,926	356,735	12,949	3,891,132
8	1,294	429	555,661	228,995	326,666	14,191	4,231,989
9	1,294	429	555,661	259,063	296,597	15,331	4,543,917
10	1,294	429	555,661	289,132	266,529	16,370	4,826,816
11	-	-	-	647,360	(647,360)	15,761	4,195,217
12	-	-	-	527,582	(527,582)	13,760	3,681,395
13	-	-	-	407,804	(407,804)	12,171	3,285,762
14	-	-	-	288,026	(288,026)	10,996	3,008,732
15	-	-	-	288,026	(288,026)	10,027	2,730,732
16	-	-	-	288,026	(288,026)	9,054	2,451,760
17	-	-	-	288,026	(288,026)	8,077	2,171,811
18	-	-	-	288,026	(288,026)	7,097	1,890,882
19	-	-	-	288,026	(288,026)	6,114	1,608,970
20	-	-	-	288,026	(288,026)	5,127	1,326,071
21	-	-	-	263,311	(263,311)	4,180	1,066,940
22	-	-	-	236,871	(236,871)	3,320	833,389
23	-	-	-	209,247	(209,247)	2,551	626,693
24	-	-	-	180,413	(180,413)	1,878	448,158
25	-	-	-	150,344	(150,344)	1,305	299,119
26	-	-	-	120,275	(120,275)	836	179,680
27	-	-	-	90,206	(90,206)	471	89,944
28	-	-	-	60,138	(60,138)	210	30,016
29	-	-	-	30,069	(30,069)	52	-
			\$ 5,556,609	\$ 5,771,584		\$ 214,975	

(1) Service Area 3, Page 2 Section II

City of Waco - 2020 Roadway Impact Fee Study
 Capital Improvement Plan for Impact Fees
 Impact Fee Calculation
 Service Area 3

<u>Year</u>	<u>Number of Years to End of Period</u>	<u>Interest Rate Factor</u>	<u>Impact Fee Factor</u>	<u>Annual Vehicle Miles</u>		<u>Annual Expense</u>	
				<u>Actual</u>	<u>Escalated</u>	<u>Actual</u>	<u>Escalated</u>
1	29	1.1047	1.0000	429	474	\$ (333,513)	\$ (368,433)
2	28	1.1009	1.0000	429	473	(187,295)	(206,184)
3	27	1.0970	1.0000	429	471	(39,893)	(43,763)
4	26	1.0932	1.0000	429	469	108,719	118,850
5	25	1.0894	1.0000	429	468	138,788	151,192
6	24	1.0856	1.0000	429	466	168,857	183,307
7	23	1.0818	1.0000	429	464	198,926	215,195
8	22	1.0780	1.0000	429	463	228,995	246,859
9	21	1.0743	1.0000	429	461	259,063	278,300
10	20	1.0705	1.0000	429	460	289,132	309,518
11	19	1.0668	1.0000	-	-	647,360	690,586
12	18	1.0631	1.0000	-	-	527,582	560,847
13	17	1.0593	1.0000	-	-	407,804	432,005
14	16	1.0557	1.0000	-	-	288,026	304,055
15	15	1.0520	1.0000	-	-	288,026	302,994
16	14	1.0483	1.0000	-	-	288,026	301,938
17	13	1.0446	1.0000	-	-	288,026	300,884
18	12	1.0410	1.0000	-	-	288,026	299,835
19	11	1.0374	1.0000	-	-	288,026	298,789
20	10	1.0338	1.0000	-	-	288,026	297,747
21	9	1.0301	1.0000	-	-	263,311	271,249
22	8	1.0266	1.0000	-	-	236,871	243,160
23	7	1.0230	1.0000	-	-	209,247	214,054
24	6	1.0194	1.0000	-	-	180,413	183,914
25	5	1.0158	1.0000	-	-	150,344	152,727
26	4	1.0123	1.0000	-	-	120,275	121,755
27	3	1.0088	1.0000	-	-	90,206	90,998
28	2	1.0053	1.0000	-	-	60,138	60,454
29	1	1.0018	1.0000	-	-	30,069	30,121
					4,669		\$ 6,042,955

Annual Interest Rate:	0.35%
Value of Initial Impact Fee Fund Balance	\$ -
Total Escalated Expense for Entire Period	\$ 6,042,955
Less Future Value of Initial Impact Fee Fund Balance	-
Sub-Total	\$ 6,042,955
Total Escalated Vehicle Miles	4,669
Impact Fee For Service Area 3	\$ 1,294

City of Waco - 2020 Roadway Impact Fee Study

Capital Improvement Plan for Impact Fees

Impact Fee Project Funding

Service Area 3

<u>Impact Fee Roadway⁽¹⁾</u>	<u>Impact Fee Project No.⁽¹⁾</u>	<u>Cost In Service Area⁽¹⁾</u>	<u>Impact Fee Eligible Cost⁽¹⁾</u>	<u>Impact Fee Recoverable Cost</u>	<u>Debt Funded⁽³⁾ Proposed</u>	<u>Non-Debt Funded⁽³⁾</u>
Bagby Ave (From New Rd To Monte Vista St)	7	\$ 530,200	\$ 237,519	\$ 118,760	\$ 118,760	\$ -
Bagby Ave (From Monte Vista St To Richter Ave)	8	1,547,900	693,429	346,715	346,715	-
Bagby Ave (From Richter Ave To Valley Mills Dr)	9	1,196,800	536,143	268,072	268,072	-
S New Rd (From Bagby Ave To I-35)	10	730,733	327,355	163,677	163,677	-
Garden Dr (From Robinson Rd To 16th St)	11	5,041,200	2,258,361	1,129,180	1,129,180	-
18th St (From La Salle To Gurley Ln)	12	789,433	353,651	176,825	176,825	-
16th (From Gurley Ln To Garden Dr)	13	1,576,033	706,033	353,016	353,016	-
12th (From Garden Dr To TX-340)	14	4,258,833	1,907,876	953,938	953,938	-
University Parks Dr (From La Salle Ave To Garden Dr)	15	371,250	166,313	83,156	83,156	-
Impact Fee Study		22,124	22,124	11,062	-	11,062
Total		\$ 16,064,507	\$ 7,208,804	\$ 3,604,402	\$ 3,593,340	\$ 11,062

(1) Per Freese & Nichols Impact Fee Study

(2) 50% of Eligible Costs

SUMMARY OF ROADWAY IMPACT FEE DETERMINATION

Service Area 4

Recoverable Impact Fee CIP Costs	\$ 109,788	Per Freese & Nichols Impact Fee Study
Financing Costs	65,135	See Detail Below
Interest Earnings	(6,461)	Page 3 of Service Area 4
Maximum Recoverable Cost for Impact Fee	\$ 168,462	Sum of Above
Equivalent Connections	650	Per Freese & Nichols Impact Fee Study
Maximum Assessable Impact Fee	\$ 259	

Recoverable Impact Fee CIP Costs:

Represents the portion of capital improvement costs that are eligible for funding through Impact fees after adjusting for the 50% credit. Reference is Freese & Nichols Impact Fee Study. In 2001, the Impact Fee Statute was amended to include either a credit for ad valorem and utility revenues generated by new service units during the ten-year timeframe that are used to fund impact fee eligible projects for which the new service units were charged an impact fee or a credit equal to 50% of the total cost of implementing the impact fee capital improvement plan. The City has elected to use the 50% credit.

Financing Costs:

Represents the interest costs associated with debt financing the new Impact fee project costs. Interest costs are derived from the City's Financial Advisor.

New Annual Debt Service	\$ 173,133	(Page 2 of Service Area 4)
Existing Annual Debt Service	-	(Page 2 of Service Area 4)
Principal Component	(107,998)	(Page 5 of Service Area 4)
Financing Costs	\$ 65,135	

Interest Earnings:

Represents the interest earned on cash flows and assumes a 0.35% annual interest rate per the most recent investment portfolio. The Impact Fee Statute states that interest earnings are funds of the impact fee account and are held to the same restrictions as impact fee revenues. Therefore, in order to recognize that interest earnings are used to fund capital improvements, interest earnings are credited against the recoverable costs. Reference is the sum of Accumulated Interest on page 3 of Service Area 4.

Maximum Recoverable Cost for Impact Fee:

Represents the sum of Recoverable Impact Fee CIP Costs (after 50% credit) plus Financing Costs less Interest Earnings.

Equivalent Connections:

Represents the growth in equivalent vehicle-miles over the ten-year timeframe. A vehicle-mile is a standardized measure of use attributable to an individual unit of development calculated in accordance with generally accepted engineering standards. Reference is Freese & Nichols Impact Fee Study.

Maximum Assessable Impact Fee:

Represents Maximum Recoverable Cost for Impact Fee divided by Equivalent Connections. This is the maximum impact fee that can be assessed by the City.

City of Waco - 2020 Roadway Impact Fee Study
Capital Improvement Plan for Impact Fees
Impact Fee Calculation Assumptions
Service Area 4

I. General Assumptions

Annual Interest Rate on Deposits ⁽¹⁾	0.35%
Annual Vehicle Mile Growth ⁽²⁾	65
Existing Fund Balance ⁽³⁾	\$ -
Portion of Projects Funded by Existing Debt ⁽⁴⁾	\$ -
Non-debt Funded Project Cost ⁽⁵⁾	1,790
New Project Cost Funded Through New Debt ⁽⁶⁾	107,998
Total Recoverable Project Cost ⁽⁷⁾	\$ 109,788

II. New Debt Issues Assumptions

<u>Year</u>	<u>Principal⁽⁸⁾</u>	<u>Interest⁽⁹⁾</u>	<u>Term</u>
1	\$ 10,800	3.25%	20
2	10,800	4.00%	20
3	10,800	4.50%	20
4	10,800	5.00%	20
5	10,800	5.50%	20
6	10,800	5.50%	20
7	10,800	5.50%	20
8	10,800	5.50%	20
9	10,800	5.50%	20
10	10,800	5.50%	20
Total	\$ 107,998		

III. Capital Expenditure Assumptions

<u>Year</u>	<u>Annual Capital Expenditures⁽¹⁰⁾</u>
1	\$ 179
2	3,779
3	7,379
4	10,979
5	10,979
6	10,979
7	10,979
8	10,979
9	10,979
10	10,979
11	10,800
12	7,200
13	3,600
Total	\$ 109,788

- (1) Estimated Interest Rate per Staff as of May 2020
- (2) Per Freese & Nichols Impact Fee Study
- (3) There is no existing fund balance because this is a new roadway impact fee
- (4) Per discussions with City Staff and City files
- (5) This assumes 0% of new project costs funded through sources other than debt, unless specified otherwise
- (6) This assumes 100% of new project costs funded through new debt issues, unless specified otherwise
- (7) Per Freese & Nichols Impact Fee Study
- (8) Assumes new debt issued in equal annual amounts
- (9) Estimated interest on future debt from Financial Advisor as of May 2020
- (10) Assumes new debt proceeds expended over a 3-year timeframe
 Non-debt funded capital expenditures allocated in equal annual amounts

City of Waco - 2020 Roadway Impact Fee Study

Capital Improvement Plan for Impact Fees

Debt Service and Expense Summary

Service Area 4

I. New Debt Service Detail

Year	Series 1	Series 2	Series 3	Series 4	Series 5	Series 6	Series 7	Series 8	Series 9	Series 10	Total Annual New Debt Service
1	\$ 743	\$ -	\$ -	\$ -	\$ -	\$ -	\$ -	\$ -	\$ -	\$ -	\$ 743
2	743	795	-	-	-	-	-	-	-	-	1,537
3	743	795	830	-	-	-	-	-	-	-	2,368
4	743	795	830	867	-	-	-	-	-	-	3,234
5	743	795	830	867	904	-	-	-	-	-	4,138
6	743	795	830	867	904	904	-	-	-	-	5,042
7	743	795	830	867	904	904	904	-	-	-	5,945
8	743	795	830	867	904	904	904	904	-	-	6,849
9	743	795	830	867	904	904	904	904	904	-	7,753
10	743	795	830	867	904	904	904	904	904	904	8,657
11	743	795	830	867	904	904	904	904	904	904	8,657
12	743	795	830	867	904	904	904	904	904	904	8,657
13	743	795	830	867	904	904	904	904	904	904	8,657
14	743	795	830	867	904	904	904	904	904	904	8,657
15	743	795	830	867	904	904	904	904	904	904	8,657
16	743	795	830	867	904	904	904	904	904	904	8,657
17	743	795	830	867	904	904	904	904	904	904	8,657
18	743	795	830	867	904	904	904	904	904	904	8,657
19	743	795	830	867	904	904	904	904	904	904	8,657
20	743	795	830	867	904	904	904	904	904	904	8,657
21	-	795	830	867	904	904	904	904	904	904	7,914
22	-	-	830	867	904	904	904	904	904	904	7,119
23	-	-	-	867	904	904	904	904	904	904	6,289
24	-	-	-	-	904	904	904	904	904	904	5,422
25	-	-	-	-	-	904	904	904	904	904	4,519
26	-	-	-	-	-	-	904	904	904	904	3,615
27	-	-	-	-	-	-	-	904	904	904	2,711
28	-	-	-	-	-	-	-	-	904	904	1,807
29	-	-	-	-	-	-	-	-	-	904	904
	\$ 14,856	\$ 15,893	\$ 16,605	\$ 17,332	\$ 18,074	\$ 18,074	\$ 18,074	\$ 18,074	\$ 18,074	\$ 18,074	\$ 173,133

II. Summary of Annual Expenses

Year	New Annual Debt Service ⁽¹⁾	Annual Capital Expenditures ⁽²⁾	Annual Bond Proceeds ⁽²⁾	Existing Annual Debt Service ⁽³⁾	Total Expense
1	\$ 743	\$ 179	\$ (10,800)	\$ -	\$ (9,878)
2	1,537	3,779	(10,800)	-	(5,483)
3	2,368	7,379	(10,800)	-	(1,053)
4	3,234	10,979	(10,800)	-	3,413
5	4,138	10,979	(10,800)	-	4,317
6	5,042	10,979	(10,800)	-	5,221
7	5,945	10,979	(10,800)	-	6,125
8	6,849	10,979	(10,800)	-	7,028
9	7,753	10,979	(10,800)	-	7,932
10	8,657	10,979	(10,800)	-	8,836
11	8,657	10,800	-	-	19,456
12	8,657	7,200	-	-	15,857
13	8,657	3,600	-	-	12,257
14	8,657	-	-	-	8,657
15	8,657	-	-	-	8,657
16	8,657	-	-	-	8,657
17	8,657	-	-	-	8,657
18	8,657	-	-	-	8,657
19	8,657	-	-	-	8,657
20	8,657	-	-	-	8,657
21	7,914	-	-	-	7,914
22	7,119	-	-	-	7,119
23	6,289	-	-	-	6,289
24	5,422	-	-	-	5,422
25	4,519	-	-	-	4,519
26	3,615	-	-	-	3,615
27	2,711	-	-	-	2,711
28	1,807	-	-	-	1,807
29	904	-	-	-	904
	\$ 173,133	\$ 109,788	\$ (107,998)	\$ -	\$ 174,923

(1) Service Area 4, Page 2 Section I

(2) Service Area 4, Page 1

(3) Eligible debt funded projects as a percent of total principal times original annual debt service; does not reflect current outstanding balances

City of Waco - 2020 Roadway Impact Fee Study
 Capital Improvement Plan for Impact Fees
 Revenue Test
 Service Area 4

<u>Year</u>	<u>Impact Fee</u>	<u>Vehicle Miles</u>	<u>Impact Fee Revenue</u>	<u>Annual Expenses⁽¹⁾</u>	<u>Sub-Total</u>	<u>Accumulated Interest</u>	<u>Estimated Fund Balance</u>
Initial							\$ -
1	\$ 259	65	\$ 16,846	\$ (9,878)	\$ 26,724	\$ 47	26,771
2	259	65	16,846	(5,483)	22,330	133	49,233
3	259	65	16,846	(1,053)	17,899	204	67,336
4	259	65	16,846	3,413	13,433	259	81,028
5	259	65	16,846	4,317	12,529	306	93,863
6	259	65	16,846	5,221	11,625	349	105,837
7	259	65	16,846	6,125	10,722	389	116,948
8	259	65	16,846	7,028	9,818	427	127,193
9	259	65	16,846	7,932	8,914	461	136,568
10	259	65	16,846	8,836	8,011	492	145,070
11	-	-	-	19,456	(19,456)	474	126,088
12	-	-	-	15,857	(15,857)	414	110,645
13	-	-	-	12,257	(12,257)	366	98,754
14	-	-	-	8,657	(8,657)	330	90,428
15	-	-	-	8,657	(8,657)	301	82,072
16	-	-	-	8,657	(8,657)	272	73,688
17	-	-	-	8,657	(8,657)	243	65,274
18	-	-	-	8,657	(8,657)	213	56,831
19	-	-	-	8,657	(8,657)	184	48,358
20	-	-	-	8,657	(8,657)	154	39,855
21	-	-	-	7,914	(7,914)	126	32,067
22	-	-	-	7,119	(7,119)	100	25,048
23	-	-	-	6,289	(6,289)	77	18,835
24	-	-	-	5,422	(5,422)	56	13,469
25	-	-	-	4,519	(4,519)	39	8,990
26	-	-	-	3,615	(3,615)	25	5,400
27	-	-	-	2,711	(2,711)	14	2,703
28	-	-	-	1,807	(1,807)	6	902
29	-	-	-	904	(904)	2	-
			\$ 168,462	\$ 174,923		\$ 6,461	

(1) Service Area 4, Page 2 Section II

City of Waco - 2020 Roadway Impact Fee Study
 Capital Improvement Plan for Impact Fees
 Impact Fee Calculation
 Service Area 4

Year	Number of Years to End of Period	Interest Rate Factor	Impact Fee Factor	Annual Vehicle Miles		Annual Expense	
				Actual	Escalated	Actual	Escalated
1	29	1.1047	1.0000	65	72	\$ (9,878)	\$ (10,912)
2	28	1.1009	1.0000	65	72	(5,483)	(6,036)
3	27	1.0970	1.0000	65	71	(1,053)	(1,155)
4	26	1.0932	1.0000	65	71	3,413	3,731
5	25	1.0894	1.0000	65	71	4,317	4,703
6	24	1.0856	1.0000	65	71	5,221	5,668
7	23	1.0818	1.0000	65	70	6,125	6,625
8	22	1.0780	1.0000	65	70	7,028	7,577
9	21	1.0743	1.0000	65	70	7,932	8,521
10	20	1.0705	1.0000	65	70	8,836	9,459
11	19	1.0668	1.0000	-	-	19,456	20,756
12	18	1.0631	1.0000	-	-	15,857	16,856
13	17	1.0593	1.0000	-	-	12,257	12,984
14	16	1.0557	1.0000	-	-	8,657	9,138
15	15	1.0520	1.0000	-	-	8,657	9,107
16	14	1.0483	1.0000	-	-	8,657	9,075
17	13	1.0446	1.0000	-	-	8,657	9,043
18	12	1.0410	1.0000	-	-	8,657	9,012
19	11	1.0374	1.0000	-	-	8,657	8,980
20	10	1.0338	1.0000	-	-	8,657	8,949
21	9	1.0301	1.0000	-	-	7,914	8,152
22	8	1.0266	1.0000	-	-	7,119	7,308
23	7	1.0230	1.0000	-	-	6,289	6,433
24	6	1.0194	1.0000	-	-	5,422	5,528
25	5	1.0158	1.0000	-	-	4,519	4,590
26	4	1.0123	1.0000	-	-	3,615	3,659
27	3	1.0088	1.0000	-	-	2,711	2,735
28	2	1.0053	1.0000	-	-	1,807	1,817
29	1	1.0018	1.0000	-	-	904	905
					707		\$ 183,207

Annual Interest Rate:	0.35%
Value of Initial Impact Fee Fund Balance	\$ -
Total Escalated Expense for Entire Period	\$ 183,207
Less Future Value of Initial Impact Fee Fund Balance	-
Sub-Total	\$ 183,207
Total Escalated Vehicle Miles	707
Impact Fee For Service Area 4	\$ 259

City of Waco - 2020 Roadway Impact Fee Study

Capital Improvement Plan for Impact Fees

Impact Fee Project Funding

Service Area 4

<u>Impact Fee Roadway⁽¹⁾</u>	<u>Impact Fee Project No.⁽¹⁾</u>	<u>Cost In Service Area⁽¹⁾</u>	<u>Impact Fee Eligible Cost⁽¹⁾</u>	<u>Impact Fee Recoverable Cost</u>	<u>Debt Funded⁽³⁾ Proposed</u>	<u>Non-Debt Funded⁽³⁾</u>
Martin Luther King Jr Blvd (From BUS 77 To SH 484) Impact Fee Study	16	\$ 515,400	\$ 215,996	\$ 107,998	\$ 107,998	\$ -
		3,581	3,581	1,790	-	1,790
Total		\$ 518,981	\$ 219,577	\$ 109,788	\$ 107,998	\$ 1,790

(1) Per Freese & Nichols Impact Fee Study

(2) 50% of Eligible Costs

SUMMARY OF ROADWAY IMPACT FEE DETERMINATION

Service Area 5

Recoverable Impact Fee CIP Costs	\$ -	Per Freese & Nichols Impact Fee Study
Financing Costs	-	See Detail Below
Interest Earnings	-	Page 3 of Service Area 5
Maximum Recoverable Cost for Impact Fee	\$ -	Sum of Above
Equivalent Connections	1,650	Per Freese & Nichols Impact Fee Study
Maximum Assessable Impact Fee	\$ -	

Recoverable Impact Fee CIP Costs:

Represents the portion of capital improvement costs that are eligible for funding through Impact fees after adjusting for the 50% credit. Reference is Freese & Nichols Impact Fee Study. In 2001, the Impact Fee Statute was amended to include either a credit for ad valorem and utility revenues generated by new service units during the ten-year timeframe that are used to fund impact fee eligible projects for which the new service units were charged an impact fee or a credit equal to 50% of the total cost of implementing the impact fee capital improvement plan. The City has elected to use the 50% credit.

Financing Costs:

Represents the interest costs associated with debt financing the new Impact fee project costs. Interest costs are derived from the City's Financial Advisor.

New Annual Debt Service	\$ -	(Page 2 of Service Area 5)
Existing Annual Debt Service	-	(Page 2 of Service Area 5)
Principal Component	-	(Page 5 of Service Area 5)
Financing Costs	\$ -	

Interest Earnings:

Represents the interest earned on cash flows and assumes a 0.35% annual interest rate per the most recent investment portfolio. The Impact Fee Statute states that interest earnings are funds of the impact fee account and are held to the same restrictions as impact fee revenues. Therefore, in order to recognize that interest earnings are used to fund capital improvements, interest earnings are credited against the recoverable costs. Reference is the sum of Accumulated Interest on page 3 of Service Area 5.

Maximum Recoverable Cost for Impact Fee:

Represents the sum of Recoverable Impact Fee CIP Costs (after 50% credit) plus Financing Costs less Interest Earnings.

Equivalent Connections:

Represents the growth in equivalent vehicle-miles over the ten-year timeframe. A vehicle-mile is a standardized measure of use attributable to an individual unit of development calculated in accordance with generally accepted engineering standards. Reference is Freese & Nichols Impact Fee Study.

Maximum Assessable Impact Fee:

Represents Maximum Recoverable Cost for Impact Fee divided by Equivalent Connections. This is the maximum impact fee that can be assessed by the City.

City of Waco - 2020 Roadway Impact Fee Study
Capital Improvement Plan for Impact Fees
Impact Fee Calculation Assumptions
Service Area 5

I. General Assumptions

Annual Interest Rate on Deposits ⁽¹⁾	0.35%
Annual Vehicle Mile Growth ⁽²⁾	165
Existing Fund Balance ⁽³⁾	\$ -
Portion of Projects Funded by Existing Debt ⁽⁴⁾	\$ -
Non-debt Funded Project Cost ⁽⁵⁾	-
New Project Cost Funded Through New Debt ⁽⁶⁾	-
Total Recoverable Project Cost ⁽⁷⁾	\$ -

II. New Debt Issues Assumptions

<u>Year</u>	<u>Principal⁽⁸⁾</u>	<u>Interest⁽⁹⁾</u>	<u>Term</u>
1	\$ -	3.25%	20
2	-	4.00%	20
3	-	4.50%	20
4	-	5.00%	20
5	-	5.50%	20
6	-	5.50%	20
7	-	5.50%	20
8	-	5.50%	20
9	-	5.50%	20
10	-	5.50%	20
Total	\$ -		

III. Capital Expenditure Assumptions

<u>Year</u>	<u>Annual Capital Expenditures⁽¹⁰⁾</u>
1	\$ -
2	-
3	-
4	-
5	-
6	-
7	-
8	-
9	-
10	-
11	-
12	-
13	-
Total	\$ -

- (1) Estimated Interest Rate per Staff as of May 2020
- (2) Per Freese & Nichols Impact Fee Study
- (3) There is no existing fund balance because this is a new roadway impact fee
- (4) Per discussions with City Staff and City files
- (5) This assumes 0% of new project costs funded through sources other than debt, unless specified otherwise
- (6) This assumes 100% of new project costs funded through new debt issues, unless specified otherwise
- (7) Per Freese & Nichols Impact Fee Study
- (8) Assumes new debt issued in equal annual amounts
- (9) Estimated interest on future debt from Financial Advisor as of May 2020
- (10) Assumes new debt proceeds expended over a 3-year timeframe
 Non-debt funded capital expenditures allocated in equal annual amounts

City of Waco - 2020 Roadway Impact Fee Study

Capital Improvement Plan for Impact Fees

Debt Service and Expense Summary

Service Area 5

I. New Debt Service Detail

<u>Year</u>	<u>Series 1</u>	<u>Series 2</u>	<u>Series 3</u>	<u>Series 4</u>	<u>Series 5</u>	<u>Series 6</u>	<u>Series 7</u>	<u>Series 8</u>	<u>Series 9</u>	<u>Series 10</u>	<u>Total Annual New Debt Service</u>
1	\$ -	\$ -	\$ -	\$ -	\$ -	\$ -	\$ -	\$ -	\$ -	\$ -	\$ -
2	-	-	-	-	-	-	-	-	-	-	-
3	-	-	-	-	-	-	-	-	-	-	-
4	-	-	-	-	-	-	-	-	-	-	-
5	-	-	-	-	-	-	-	-	-	-	-
6	-	-	-	-	-	-	-	-	-	-	-
7	-	-	-	-	-	-	-	-	-	-	-
8	-	-	-	-	-	-	-	-	-	-	-
9	-	-	-	-	-	-	-	-	-	-	-
10	-	-	-	-	-	-	-	-	-	-	-
11	-	-	-	-	-	-	-	-	-	-	-
12	-	-	-	-	-	-	-	-	-	-	-
13	-	-	-	-	-	-	-	-	-	-	-
14	-	-	-	-	-	-	-	-	-	-	-
15	-	-	-	-	-	-	-	-	-	-	-
16	-	-	-	-	-	-	-	-	-	-	-
17	-	-	-	-	-	-	-	-	-	-	-
18	-	-	-	-	-	-	-	-	-	-	-
19	-	-	-	-	-	-	-	-	-	-	-
20	-	-	-	-	-	-	-	-	-	-	-
21	-	-	-	-	-	-	-	-	-	-	-
22	-	-	-	-	-	-	-	-	-	-	-
23	-	-	-	-	-	-	-	-	-	-	-
24	-	-	-	-	-	-	-	-	-	-	-
25	-	-	-	-	-	-	-	-	-	-	-
26	-	-	-	-	-	-	-	-	-	-	-
27	-	-	-	-	-	-	-	-	-	-	-
28	-	-	-	-	-	-	-	-	-	-	-
29	-	-	-	-	-	-	-	-	-	-	-
	\$ -	\$ -	\$ -	\$ -	\$ -	\$ -	\$ -	\$ -	\$ -	\$ -	\$ -

II. Summary of Annual Expenses

<u>Year</u>	<u>New Annual Debt Service⁽¹⁾</u>	<u>Annual Capital Expenditures⁽²⁾</u>	<u>Annual Bond Proceeds⁽²⁾</u>	<u>Existing Annual Debt Service⁽³⁾</u>	<u>Total Expense</u>
1	\$ -	\$ -	\$ -	\$ -	\$ -
2	-	-	-	-	-
3	-	-	-	-	-
4	-	-	-	-	-
5	-	-	-	-	-
6	-	-	-	-	-
7	-	-	-	-	-
8	-	-	-	-	-
9	-	-	-	-	-
10	-	-	-	-	-
11	-	-	-	-	-
12	-	-	-	-	-
13	-	-	-	-	-
14	-	-	-	-	-
15	-	-	-	-	-
16	-	-	-	-	-
17	-	-	-	-	-
18	-	-	-	-	-
19	-	-	-	-	-
20	-	-	-	-	-
21	-	-	-	-	-
22	-	-	-	-	-
23	-	-	-	-	-
24	-	-	-	-	-
25	-	-	-	-	-
26	-	-	-	-	-
27	-	-	-	-	-
28	-	-	-	-	-
29	-	-	-	-	-
	\$ -	\$ -	\$ -	\$ -	\$ -

(1) Service Area 5, Page 2 Section I

(2) Service Area 5, Page 1

(3) Eligible debt funded projects as a percent of total principal times original annual debt service; does not reflect current outstanding balances

City of Waco - 2020 Roadway Impact Fee Study

Capital Improvement Plan for Impact Fees

Revenue Test

Service Area 5

<u>Year</u>	<u>Impact Fee</u>	<u>Vehicle Miles</u>	<u>Impact Fee Revenue</u>	<u>Annual Expenses⁽¹⁾</u>	<u>Sub-Total</u>	<u>Accumulated Interest</u>	<u>Estimated Fund Balance</u>
Initial							\$ -
1	\$ -	165	\$ -	\$ -	\$ -	\$ -	-
2	-	165	-	-	-	-	-
3	-	165	-	-	-	-	-
4	-	165	-	-	-	-	-
5	-	165	-	-	-	-	-
6	-	165	-	-	-	-	-
7	-	165	-	-	-	-	-
8	-	165	-	-	-	-	-
9	-	165	-	-	-	-	-
10	-	165	-	-	-	-	-
11	-	-	-	-	-	-	-
12	-	-	-	-	-	-	-
13	-	-	-	-	-	-	-
14	-	-	-	-	-	-	-
15	-	-	-	-	-	-	-
16	-	-	-	-	-	-	-
17	-	-	-	-	-	-	-
18	-	-	-	-	-	-	-
19	-	-	-	-	-	-	-
20	-	-	-	-	-	-	-
21	-	-	-	-	-	-	-
22	-	-	-	-	-	-	-
23	-	-	-	-	-	-	-
24	-	-	-	-	-	-	-
25	-	-	-	-	-	-	-
26	-	-	-	-	-	-	-
27	-	-	-	-	-	-	-
28	-	-	-	-	-	-	-
29	-	-	-	-	-	-	-
			\$ -	\$ -		\$ -	

(1) Service Area 5, Page 2 Section II

City of Waco - 2020 Roadway Impact Fee Study
 Capital Improvement Plan for Impact Fees
 Impact Fee Calculation
 Service Area 5

<u>Year</u>	<u>Number of Years to End of Period</u>	<u>Interest Rate Factor</u>	<u>Impact Fee Factor</u>	<u>Annual Vehicle Miles</u>		<u>Annual Expense</u>	
				<u>Actual</u>	<u>Escalated</u>	<u>Actual</u>	<u>Escalated</u>
1	29	1.1047	1.0000	165	182	\$ -	\$ -
2	28	1.1009	1.0000	165	182	-	-
3	27	1.0970	1.0000	165	181	-	-
4	26	1.0932	1.0000	165	180	-	-
5	25	1.0894	1.0000	165	180	-	-
6	24	1.0856	1.0000	165	179	-	-
7	23	1.0818	1.0000	165	178	-	-
8	22	1.0780	1.0000	165	178	-	-
9	21	1.0743	1.0000	165	177	-	-
10	20	1.0705	1.0000	165	177	-	-
11	19	1.0668	1.0000	-	-	-	-
12	18	1.0631	1.0000	-	-	-	-
13	17	1.0593	1.0000	-	-	-	-
14	16	1.0557	1.0000	-	-	-	-
15	15	1.0520	1.0000	-	-	-	-
16	14	1.0483	1.0000	-	-	-	-
17	13	1.0446	1.0000	-	-	-	-
18	12	1.0410	1.0000	-	-	-	-
19	11	1.0374	1.0000	-	-	-	-
20	10	1.0338	1.0000	-	-	-	-
21	9	1.0301	1.0000	-	-	-	-
22	8	1.0266	1.0000	-	-	-	-
23	7	1.0230	1.0000	-	-	-	-
24	6	1.0194	1.0000	-	-	-	-
25	5	1.0158	1.0000	-	-	-	-
26	4	1.0123	1.0000	-	-	-	-
27	3	1.0088	1.0000	-	-	-	-
28	2	1.0053	1.0000	-	-	-	-
29	1	1.0018	1.0000	-	-	-	-
					1,794		\$ -

Annual Interest Rate:	0.35%
Value of Initial Impact Fee Fund Balance	\$ -
Total Escalated Expense for Entire Period	\$ -
Less Future Value of Initial Impact Fee Fund Balance	-
Sub-Total	\$ -
Total Escalated Vehicle Miles	1,794
Impact Fee For Service Area 5	\$ -

City of Waco - 2020 Roadway Impact Fee Study

Capital Improvement Plan for Impact Fees

Impact Fee Project Funding

Service Area 5

<u>Impact Fee Roadway⁽¹⁾</u>	<u>Impact Fee Project No.⁽¹⁾</u>	<u>Cost In Service Area⁽¹⁾</u>	<u>Impact Fee Eligible Cost⁽¹⁾</u>	<u>Impact Fee Recoverable Cost</u>	<u>Debt Funded⁽³⁾ Proposed</u>	<u>Non-Debt Funded⁽³⁾</u>
Impact Fee Study		-	\$ -	-	\$ -	-
Total		\$ -	\$ -	-	\$ -	-

(1) Per Freese & Nichols Impact Fee Study

(2) 50% of Eligible Costs

SUMMARY OF ROADWAY IMPACT FEE DETERMINATION

Service Area 6

Recoverable Impact Fee CIP Costs	\$ 306,773	Per Freese & Nichols Impact Fee Study
Financing Costs	183,836	See Detail Below
Interest Earnings	(18,236)	Page 3 of Service Area 6
Maximum Recoverable Cost for Impact Fee	\$ 472,373	Sum of Above
Equivalent Connections	2,002	Per Freese & Nichols Impact Fee Study
Maximum Assessable Impact Fee	\$ 236	

Recoverable Impact Fee CIP Costs:

Represents the portion of capital improvement costs that are eligible for funding through Impact fees after adjusting for the 50% credit. Reference is Freese & Nichols Impact Fee Study. In 2001, the Impact Fee Statute was amended to include either a credit for ad valorem and utility revenues generated by new service units during the ten-year timeframe that are used to fund impact fee eligible projects for which the new service units were charged an impact fee or a credit equal to 50% of the total cost of implementing the impact fee capital improvement plan. The City has elected to use the 50% credit.

Financing Costs:

Represents the interest costs associated with debt financing the new Impact fee project costs. Interest costs are derived from the City's Financial Advisor.

New Annual Debt Service	\$ 488,648	(Page 2 of Service Area 6)
Existing Annual Debt Service	-	(Page 2 of Service Area 6)
Principal Component	(304,812)	(Page 5 of Service Area 6)
Financing Costs	\$ 183,836	

Interest Earnings:

Represents the interest earned on cash flows and assumes a 0.35% annual interest rate per the most recent investment portfolio. The Impact Fee Statute states that interest earnings are funds of the impact fee account and are held to the same restrictions as impact fee revenues. Therefore, in order to recognize that interest earnings are used to fund capital improvements, interest earnings are credited against the recoverable costs. Reference is the sum of Accumulated Interest on page 3 of Service Area 6.

Maximum Recoverable Cost for Impact Fee:

Represents the sum of Recoverable Impact Fee CIP Costs (after 50% credit) plus Financing Costs less Interest Earnings.

Equivalent Connections:

Represents the growth in equivalent vehicle-miles over the ten-year timeframe. A vehicle-mile is a standardized measure of use attributable to an individual unit of development calculated in accordance with generally accepted engineering standards. Reference is Freese & Nichols Impact Fee Study.

Maximum Assessable Impact Fee:

Represents Maximum Recoverable Cost for Impact Fee divided by Equivalent Connections. This is the maximum impact fee that can be assessed by the City.

City of Waco - 2020 Roadway Impact Fee Study
Capital Improvement Plan for Impact Fees
Impact Fee Calculation Assumptions
Service Area 6

I. General Assumptions

Annual Interest Rate on Deposits ⁽¹⁾	0.35%
Annual Vehicle Mile Growth ⁽²⁾	200
Existing Fund Balance ⁽³⁾	\$ -
Portion of Projects Funded by Existing Debt ⁽⁴⁾	\$ -
Non-debt Funded Project Cost ⁽⁵⁾	1,961
New Project Cost Funded Through New Debt ⁽⁶⁾	304,812
Total Recoverable Project Cost ⁽⁷⁾	\$ 306,773

II. New Debt Issues Assumptions

<u>Year</u>	<u>Principal⁽⁸⁾</u>	<u>Interest⁽⁹⁾</u>	<u>Term</u>
1	\$ 30,481	3.25%	20
2	30,481	4.00%	20
3	30,481	4.50%	20
4	30,481	5.00%	20
5	30,481	5.50%	20
6	30,481	5.50%	20
7	30,481	5.50%	20
8	30,481	5.50%	20
9	30,481	5.50%	20
10	30,481	5.50%	20
Total	\$ 304,812		

III. Capital Expenditure Assumptions

<u>Year</u>	<u>Annual Capital Expenditures⁽¹⁰⁾</u>
1	\$ 196
2	10,357
3	20,517
4	30,677
5	30,677
6	30,677
7	30,677
8	30,677
9	30,677
10	30,677
11	30,481
12	20,321
13	10,160
Total	\$ 306,773

- (1) Estimated Interest Rate per Staff as of May 2020
- (2) Per Freese & Nichols Impact Fee Study
- (3) There is no existing fund balance because this is a new roadway impact fee
- (4) Per discussions with City Staff and City files
- (5) This assumes 0% of new project costs funded through sources other than debt, unless specified otherwise
- (6) This assumes 100% of new project costs funded through new debt issues, unless specified otherwise
- (7) Per Freese & Nichols Impact Fee Study
- (8) Assumes new debt issued in equal annual amounts
- (9) Estimated interest on future debt from Financial Advisor as of May 2020
- (10) Assumes new debt proceeds expended over a 3-year timeframe
 Non-debt funded capital expenditures allocated in equal annual amounts

City of Waco - 2020 Roadway Impact Fee Study

Capital Improvement Plan for Impact Fees

Debt Service and Expense Summary

Service Area 6

I. New Debt Service Detail

Year	Series 1	Series 2	Series 3	Series 4	Series 5	Series 6	Series 7	Series 8	Series 9	Series 10	Total Annual New Debt Service
1	\$ 2,096	\$ -	\$ -	\$ -	\$ -	\$ -	\$ -	\$ -	\$ -	\$ -	\$ 2,096
2	2,096	2,243	-	-	-	-	-	-	-	-	4,339
3	2,096	2,243	2,343	-	-	-	-	-	-	-	6,683
4	2,096	2,243	2,343	2,446	-	-	-	-	-	-	9,128
5	2,096	2,243	2,343	2,446	2,551	-	-	-	-	-	11,679
6	2,096	2,243	2,343	2,446	2,551	2,551	-	-	-	-	14,230
7	2,096	2,243	2,343	2,446	2,551	2,551	2,551	-	-	-	16,780
8	2,096	2,243	2,343	2,446	2,551	2,551	2,551	2,551	-	-	19,331
9	2,096	2,243	2,343	2,446	2,551	2,551	2,551	2,551	2,551	-	21,882
10	2,096	2,243	2,343	2,446	2,551	2,551	2,551	2,551	2,551	2,551	24,432
11	2,096	2,243	2,343	2,446	2,551	2,551	2,551	2,551	2,551	2,551	24,432
12	2,096	2,243	2,343	2,446	2,551	2,551	2,551	2,551	2,551	2,551	24,432
13	2,096	2,243	2,343	2,446	2,551	2,551	2,551	2,551	2,551	2,551	24,432
14	2,096	2,243	2,343	2,446	2,551	2,551	2,551	2,551	2,551	2,551	24,432
15	2,096	2,243	2,343	2,446	2,551	2,551	2,551	2,551	2,551	2,551	24,432
16	2,096	2,243	2,343	2,446	2,551	2,551	2,551	2,551	2,551	2,551	24,432
17	2,096	2,243	2,343	2,446	2,551	2,551	2,551	2,551	2,551	2,551	24,432
18	2,096	2,243	2,343	2,446	2,551	2,551	2,551	2,551	2,551	2,551	24,432
19	2,096	2,243	2,343	2,446	2,551	2,551	2,551	2,551	2,551	2,551	24,432
20	2,096	2,243	2,343	2,446	2,551	2,551	2,551	2,551	2,551	2,551	24,432
21	-	2,243	2,343	2,446	2,551	2,551	2,551	2,551	2,551	2,551	22,336
22	-	-	2,343	2,446	2,551	2,551	2,551	2,551	2,551	2,551	20,093
23	-	-	-	2,446	2,551	2,551	2,551	2,551	2,551	2,551	17,750
24	-	-	-	-	2,551	2,551	2,551	2,551	2,551	2,551	15,304
25	-	-	-	-	-	2,551	2,551	2,551	2,551	2,551	12,753
26	-	-	-	-	-	-	2,551	2,551	2,551	2,551	10,203
27	-	-	-	-	-	-	-	2,551	2,551	2,551	7,652
28	-	-	-	-	-	-	-	-	2,551	2,551	5,101
29	-	-	-	-	-	-	-	-	-	2,551	2,551
	\$ 41,929	\$ 44,857	\$ 46,866	\$ 48,918	\$ 51,013	\$ 51,013	\$ 51,013	\$ 51,013	\$ 51,013	\$ 51,013	\$ 488,648

II. Summary of Annual Expenses

Year	New Annual Debt Service ⁽¹⁾	Annual Capital Expenditures ⁽²⁾	Annual Bond Proceeds ⁽²⁾	Existing Annual Debt Service ⁽³⁾	Total Expense
1	\$ 2,096	\$ 196	\$ (30,481)	\$ -	\$ (28,189)
2	4,339	10,357	(30,481)	-	(15,785)
3	6,683	20,517	(30,481)	-	(3,282)
4	9,128	30,677	(30,481)	-	9,325
5	11,679	30,677	(30,481)	-	11,875
6	14,230	30,677	(30,481)	-	14,426
7	16,780	30,677	(30,481)	-	16,977
8	19,331	30,677	(30,481)	-	19,527
9	21,882	30,677	(30,481)	-	22,078
10	24,432	30,677	(30,481)	-	24,629
11	24,432	30,481	-	-	54,914
12	24,432	20,321	-	-	44,753
13	24,432	10,160	-	-	34,593
14	24,432	-	-	-	24,432
15	24,432	-	-	-	24,432
16	24,432	-	-	-	24,432
17	24,432	-	-	-	24,432
18	24,432	-	-	-	24,432
19	24,432	-	-	-	24,432
20	24,432	-	-	-	24,432
21	22,336	-	-	-	22,336
22	20,093	-	-	-	20,093
23	17,750	-	-	-	17,750
24	15,304	-	-	-	15,304
25	12,753	-	-	-	12,753
26	10,203	-	-	-	10,203
27	7,652	-	-	-	7,652
28	5,101	-	-	-	5,101
29	2,551	-	-	-	2,551
	\$ 488,648	\$ 306,773	\$ (304,812)	\$ -	\$ 490,609

(1) Service Area 6, Page 2 Section 1

(2) Service Area 6, Page 1

(3) Eligible debt funded projects as a percent of total principal times original annual debt service; does not reflect current outstanding balances

City of Waco - 2020 Roadway Impact Fee Study

Capital Improvement Plan for Impact Fees

Revenue Test

Service Area 6

<u>Year</u>	<u>Impact Fee</u>	<u>Vehicle Miles</u>	<u>Impact Fee Revenue</u>	<u>Annual Expenses⁽¹⁾</u>	<u>Sub-Total</u>	<u>Accumulated Interest</u>	<u>Estimated Fund Balance</u>
Initial							\$ -
1	\$ 236	200	\$ 47,237	\$ (28,189)	\$ 75,426	\$ 132	75,558
2	236	200	47,237	(15,785)	63,023	375	138,955
3	236	200	47,237	(3,282)	50,519	575	190,049
4	236	200	47,237	9,325	37,913	732	228,693
5	236	200	47,237	11,875	35,362	862	264,918
6	236	200	47,237	14,426	32,811	985	298,714
7	236	200	47,237	16,977	30,261	1,098	330,073
8	236	200	47,237	19,527	27,710	1,204	358,987
9	236	200	47,237	22,078	25,159	1,300	385,447
10	236	200	47,237	24,629	22,609	1,389	409,444
11	-	-	-	54,914	(54,914)	1,337	355,868
12	-	-	-	44,753	(44,753)	1,167	312,282
13	-	-	-	34,593	(34,593)	1,032	278,721
14	-	-	-	24,432	(24,432)	933	255,222
15	-	-	-	24,432	(24,432)	851	231,640
16	-	-	-	24,432	(24,432)	768	207,975
17	-	-	-	24,432	(24,432)	685	184,228
18	-	-	-	24,432	(24,432)	602	160,398
19	-	-	-	24,432	(24,432)	519	136,484
20	-	-	-	24,432	(24,432)	435	112,487
21	-	-	-	22,336	(22,336)	355	90,505
22	-	-	-	20,093	(20,093)	282	70,694
23	-	-	-	17,750	(17,750)	216	53,160
24	-	-	-	15,304	(15,304)	159	38,016
25	-	-	-	12,753	(12,753)	111	25,373
26	-	-	-	10,203	(10,203)	71	15,242
27	-	-	-	7,652	(7,652)	40	7,630
28	-	-	-	5,101	(5,101)	18	2,546
29	-	-	-	2,551	(2,551)	4	-
			\$ 472,373	\$ 490,609		\$ 18,236	

(1) Service Area 6, Page 2 Section II

City of Waco - 2020 Roadway Impact Fee Study
 Capital Improvement Plan for Impact Fees
 Impact Fee Calculation
 Service Area 6

<u>Year</u>	<u>Number of Years to End of Period</u>	<u>Interest Rate Factor</u>	<u>Impact Fee Factor</u>	<u>Annual Vehicle Miles</u>		<u>Annual Expense</u>	
				<u>Actual</u>	<u>Escalated</u>	<u>Actual</u>	<u>Escalated</u>
1	29	1.1047	1.0000	200	221	\$ (28,189)	\$ (31,140)
2	28	1.1009	1.0000	200	220	(15,785)	(17,377)
3	27	1.0970	1.0000	200	220	(3,282)	(3,600)
4	26	1.0932	1.0000	200	219	9,325	10,194
5	25	1.0894	1.0000	200	218	11,875	12,937
6	24	1.0856	1.0000	200	217	14,426	15,660
7	23	1.0818	1.0000	200	217	16,977	18,365
8	22	1.0780	1.0000	200	216	19,527	21,051
9	21	1.0743	1.0000	200	215	22,078	23,717
10	20	1.0705	1.0000	200	214	24,629	26,365
11	19	1.0668	1.0000	-	-	54,914	58,580
12	18	1.0631	1.0000	-	-	44,753	47,575
13	17	1.0593	1.0000	-	-	34,593	36,646
14	16	1.0557	1.0000	-	-	24,432	25,792
15	15	1.0520	1.0000	-	-	24,432	25,702
16	14	1.0483	1.0000	-	-	24,432	25,612
17	13	1.0446	1.0000	-	-	24,432	25,523
18	12	1.0410	1.0000	-	-	24,432	25,434
19	11	1.0374	1.0000	-	-	24,432	25,345
20	10	1.0338	1.0000	-	-	24,432	25,257
21	9	1.0301	1.0000	-	-	22,336	23,009
22	8	1.0266	1.0000	-	-	20,093	20,627
23	7	1.0230	1.0000	-	-	17,750	18,158
24	6	1.0194	1.0000	-	-	15,304	15,601
25	5	1.0158	1.0000	-	-	12,753	12,955
26	4	1.0123	1.0000	-	-	10,203	10,328
27	3	1.0088	1.0000	-	-	7,652	7,719
28	2	1.0053	1.0000	-	-	5,101	5,128
29	1	1.0018	1.0000	-	-	2,551	2,555
					2,177		\$ 513,718

Annual Interest Rate:	0.35%
Value of Initial Impact Fee Fund Balance	\$ -
Total Escalated Expense for Entire Period	\$ 513,718
Less Future Value of Initial Impact Fee Fund Balance	-
Sub-Total	\$ 513,718
Total Escalated Vehicle Miles	2,177
Impact Fee For Service Area 6	\$ 236

City of Waco - 2020 Roadway Impact Fee Study

Capital Improvement Plan for Impact Fees

Impact Fee Project Funding

Service Area 6

<u>Impact Fee Roadway⁽¹⁾</u>	<u>Impact Fee Project No.⁽¹⁾</u>	<u>Cost In Service Area⁽¹⁾</u>	<u>Impact Fee Eligible Cost⁽¹⁾</u>	<u>Impact Fee Recoverable Cost</u>	<u>Debt Funded⁽³⁾ Proposed</u>	<u>Non-Debt Funded⁽³⁾</u>
Gholson Rd (From 960' S of Herring Ave To Herring Ave)	1	\$ 41,235	\$ 41,089	\$ 20,545	\$ 20,545	\$ -
Gholson Rd (From Herring Ave To Lakeshore Dr)	17	570,550	568,535	284,268	284,268	-
Impact Fee Study		3,922	3,922	1,961	-	1,961
Total		\$ 615,707	\$ 613,547	\$ 306,773	\$ 304,812	\$ 1,961

(1) Per Freese & Nichols Impact Fee Study

(2) 50% of Eligible Costs

SUMMARY OF ROADWAY IMPACT FEE DETERMINATION

Service Area 7

Recoverable Impact Fee CIP Costs	\$ 2,393,745	Per Freese & Nichols Impact Fee Study
Financing Costs	1,435,329	See Detail Below
Interest Earnings	(142,378)	Page 3 of Service Area 7
Maximum Recoverable Cost for Impact Fee	\$ 3,686,696	Sum of Above
Equivalent Connections	3,879	Per Freese & Nichols Impact Fee Study
Maximum Assessable Impact Fee	\$ 950	

Recoverable Impact Fee CIP Costs:

Represents the portion of capital improvement costs that are eligible for funding through Impact fees after adjusting for the 50% credit. Reference is Freese & Nichols Impact Fee Study. In 2001, the Impact Fee Statute was amended to include either a credit for ad valorem and utility revenues generated by new service units during the ten-year timeframe that are used to fund impact fee eligible projects for which the new service units were charged an impact fee or a credit equal to 50% of the total cost of implementing the impact fee capital improvement plan. The City has elected to use the 50% credit.

Financing Costs:

Represents the interest costs associated with debt financing the new Impact fee project costs. Interest costs are derived from the City's Financial Advisor.

New Annual Debt Service	\$ 3,815,206	(Page 2 of Service Area 7)
Existing Annual Debt Service	-	(Page 2 of Service Area 7)
Principal Component	<u>(2,379,877)</u>	(Page 5 of Service Area 7)
Financing Costs	\$ 1,435,329	

Interest Earnings:

Represents the interest earned on cash flows and assumes a 0.35% annual interest rate per the most recent investment portfolio. The Impact Fee Statute states that interest earnings are funds of the impact fee account and are held to the same restrictions as impact fee revenues. Therefore, in order to recognize that interest earnings are used to fund capital improvements, interest earnings are credited against the recoverable costs. Reference is the sum of Accumulated Interest on page 3 of Service Area 7.

Maximum Recoverable Cost for Impact Fee:

Represents the sum of Recoverable Impact Fee CIP Costs (after 50% credit) plus Financing Costs less Interest Earnings.

Equivalent Connections:

Represents the growth in equivalent vehicle-miles over the ten-year timeframe. A vehicle-mile is a standardized measure of use attributable to an individual unit of development calculated in accordance with generally accepted engineering standards. Reference is Freese & Nichols Impact Fee Study.

Maximum Assessable Impact Fee:

Represents Maximum Recoverable Cost for Impact Fee divided by Equivalent Connections. This is the maximum impact fee that can be assessed by the City.

City of Waco - 2020 Roadway Impact Fee Study
Capital Improvement Plan for Impact Fees
Impact Fee Calculation Assumptions
Service Area 7

I. General Assumptions

Annual Interest Rate on Deposits ⁽¹⁾	0.35%
Annual Vehicle Mile Growth ⁽²⁾	388
Existing Fund Balance ⁽³⁾	\$ -
Portion of Projects Funded by Existing Debt ⁽⁴⁾	\$ -
Non-debt Funded Project Cost ⁽⁵⁾	13,868
New Project Cost Funded Through New Debt ⁽⁶⁾	2,379,877
Total Recoverable Project Cost ⁽⁷⁾	\$ 2,393,745

II. New Debt Issues Assumptions

<u>Year</u>	<u>Principal⁽⁸⁾</u>	<u>Interest⁽⁹⁾</u>	<u>Term</u>
1	\$ 237,988	3.25%	20
2	237,988	4.00%	20
3	237,988	4.50%	20
4	237,988	5.00%	20
5	237,988	5.50%	20
6	237,988	5.50%	20
7	237,988	5.50%	20
8	237,988	5.50%	20
9	237,988	5.50%	20
10	237,988	5.50%	20
Total	\$ 2,379,877		

III. Capital Expenditure Assumptions

<u>Year</u>	<u>Annual Capital Expenditures⁽¹⁰⁾</u>
1	\$ 1,387
2	80,716
3	160,045
4	239,374
5	239,374
6	239,374
7	239,374
8	239,374
9	239,374
10	239,374
11	237,988
12	158,658
13	79,329
Total	\$ 2,393,745

- (1) Estimated Interest Rate per Staff as of May 2020
- (2) Per Freese & Nichols Impact Fee Study
- (3) There is no existing fund balance because this is a new roadway impact fee
- (4) Per discussions with City Staff and City files
- (5) This assumes 0% of new project costs funded through sources other than debt, unless specified otherwise
- (6) This assumes 100% of new project costs funded through new debt issues, unless specified otherwise
- (7) Per Freese & Nichols Impact Fee Study
- (8) Assumes new debt issued in equal annual amounts
- (9) Estimated interest on future debt from Financial Advisor as of May 2020
- (10) Assumes new debt proceeds expended over a 3-year timeframe
 Non-debt funded capital expenditures allocated in equal annual amounts

City of Waco - 2020 Roadway Impact Fee Study

Capital Improvement Plan for Impact Fees

Debt Service and Expense Summary

Service Area 7

I. New Debt Service Detail

Year	Series 1	Series 2	Series 3	Series 4	Series 5	Series 6	Series 7	Series 8	Series 9	Series 10	Total Annual New Debt Service
1	\$ 16,369	\$ -	\$ -	\$ -	\$ -	\$ -	\$ -	\$ -	\$ -	\$ -	\$ 16,369
2	16,369	17,512	-	-	-	-	-	-	-	-	33,880
3	16,369	17,512	18,296	-	-	-	-	-	-	-	52,176
4	16,369	17,512	18,296	19,097	-	-	-	-	-	-	71,272
5	16,369	17,512	18,296	19,097	19,915	-	-	-	-	-	91,187
6	16,369	17,512	18,296	19,097	19,915	19,915	-	-	-	-	111,102
7	16,369	17,512	18,296	19,097	19,915	19,915	19,915	-	-	-	131,016
8	16,369	17,512	18,296	19,097	19,915	19,915	19,915	19,915	-	-	150,931
9	16,369	17,512	18,296	19,097	19,915	19,915	19,915	19,915	19,915	-	170,846
10	16,369	17,512	18,296	19,097	19,915	19,915	19,915	19,915	19,915	19,915	190,760
11	16,369	17,512	18,296	19,097	19,915	19,915	19,915	19,915	19,915	19,915	190,760
12	16,369	17,512	18,296	19,097	19,915	19,915	19,915	19,915	19,915	19,915	190,760
13	16,369	17,512	18,296	19,097	19,915	19,915	19,915	19,915	19,915	19,915	190,760
14	16,369	17,512	18,296	19,097	19,915	19,915	19,915	19,915	19,915	19,915	190,760
15	16,369	17,512	18,296	19,097	19,915	19,915	19,915	19,915	19,915	19,915	190,760
16	16,369	17,512	18,296	19,097	19,915	19,915	19,915	19,915	19,915	19,915	190,760
17	16,369	17,512	18,296	19,097	19,915	19,915	19,915	19,915	19,915	19,915	190,760
18	16,369	17,512	18,296	19,097	19,915	19,915	19,915	19,915	19,915	19,915	190,760
19	16,369	17,512	18,296	19,097	19,915	19,915	19,915	19,915	19,915	19,915	190,760
20	16,369	17,512	18,296	19,097	19,915	19,915	19,915	19,915	19,915	19,915	190,760
21	-	17,512	18,296	19,097	19,915	19,915	19,915	19,915	19,915	19,915	174,392
22	-	-	18,296	19,097	19,915	19,915	19,915	19,915	19,915	19,915	156,880
23	-	-	-	19,097	19,915	19,915	19,915	19,915	19,915	19,915	138,585
24	-	-	-	-	19,915	19,915	19,915	19,915	19,915	19,915	119,488
25	-	-	-	-	-	19,915	19,915	19,915	19,915	19,915	99,573
26	-	-	-	-	-	-	19,915	19,915	19,915	19,915	79,659
27	-	-	-	-	-	-	-	19,915	19,915	19,915	59,744
28	-	-	-	-	-	-	-	-	19,915	19,915	39,829
29	-	-	-	-	-	-	-	-	-	19,915	19,915
	\$ 327,371	\$ 350,231	\$ 365,911	\$ 381,935	\$ 398,293	\$ 398,293	\$ 398,293	\$ 398,293	\$ 398,293	\$ 398,293	\$ 3,815,206

II. Summary of Annual Expenses

Year	New Annual Debt Service ⁽¹⁾	Annual Capital Expenditures ⁽²⁾	Annual Bond Proceeds ⁽²⁾	Existing Annual Debt Service ⁽³⁾	Total Expense
1	\$ 16,369	\$ 1,387	\$ (237,988)	\$ -	\$ (220,232)
2	33,880	80,716	(237,988)	-	(123,392)
3	52,176	160,045	(237,988)	-	(25,767)
4	71,272	239,374	(237,988)	-	72,659
5	91,187	239,374	(237,988)	-	92,574
6	111,102	239,374	(237,988)	-	112,489
7	131,016	239,374	(237,988)	-	132,403
8	150,931	239,374	(237,988)	-	152,318
9	170,846	239,374	(237,988)	-	172,232
10	190,760	239,374	(237,988)	-	192,147
11	190,760	237,988	-	-	428,748
12	190,760	158,658	-	-	349,419
13	190,760	79,329	-	-	270,090
14	190,760	-	-	-	190,760
15	190,760	-	-	-	190,760
16	190,760	-	-	-	190,760
17	190,760	-	-	-	190,760
18	190,760	-	-	-	190,760
19	190,760	-	-	-	190,760
20	190,760	-	-	-	190,760
21	174,392	-	-	-	174,392
22	156,880	-	-	-	156,880
23	138,585	-	-	-	138,585
24	119,488	-	-	-	119,488
25	99,573	-	-	-	99,573
26	79,659	-	-	-	79,659
27	59,744	-	-	-	59,744
28	39,829	-	-	-	39,829
29	19,915	-	-	-	19,915
	\$ 3,815,206	\$ 2,393,745	\$ (2,379,877)	\$ -	\$ 3,829,074

(1) Service Area 7, Page 2 Section 1

(2) Service Area 7, Page 1

(3) Eligible debt funded projects as a percent of total principal times original annual debt service; does not reflect current outstanding balances

City of Waco - 2020 Roadway Impact Fee Study
 Capital Improvement Plan for Impact Fees
 Revenue Test
 Service Area 7

<u>Year</u>	<u>Impact Fee</u>	<u>Vehicle Miles</u>	<u>Impact Fee Revenue</u>	<u>Annual Expenses⁽¹⁾</u>	<u>Sub-Total</u>	<u>Accumulated Interest</u>	<u>Estimated Fund Balance</u>
Initial							\$ -
1	\$ 950	388	\$ 368,670	\$ (220,232)	\$ 588,902	\$ 1,031	589,932
2	950	388	368,670	(123,392)	492,061	2,926	1,084,919
3	950	388	368,670	(25,767)	394,436	4,487	1,483,843
4	950	388	368,670	72,659	296,010	5,711	1,785,565
5	950	388	368,670	92,574	276,096	6,733	2,068,393
6	950	388	368,670	112,489	256,181	7,688	2,332,262
7	950	388	368,670	132,403	236,266	8,576	2,577,105
8	950	388	368,670	152,318	216,352	9,398	2,802,855
9	950	388	368,670	172,232	196,437	10,154	3,009,446
10	950	388	368,670	192,147	176,522	10,842	3,196,810
11	-	-	-	428,748	(428,748)	10,439	2,778,501
12	-	-	-	349,419	(349,419)	9,113	2,438,196
13	-	-	-	270,090	(270,090)	8,061	2,176,167
14	-	-	-	190,760	(190,760)	7,283	1,992,690
15	-	-	-	190,760	(190,760)	6,641	1,808,570
16	-	-	-	190,760	(190,760)	5,996	1,623,806
17	-	-	-	190,760	(190,760)	5,349	1,438,395
18	-	-	-	190,760	(190,760)	4,701	1,252,335
19	-	-	-	190,760	(190,760)	4,049	1,065,624
20	-	-	-	190,760	(190,760)	3,396	878,260
21	-	-	-	174,392	(174,392)	2,769	706,637
22	-	-	-	156,880	(156,880)	2,199	551,955
23	-	-	-	138,585	(138,585)	1,689	415,060
24	-	-	-	119,488	(119,488)	1,244	296,816
25	-	-	-	99,573	(99,573)	865	198,107
26	-	-	-	79,659	(79,659)	554	119,002
27	-	-	-	59,744	(59,744)	312	59,570
28	-	-	-	39,829	(39,829)	139	19,880
29	-	-	-	19,915	(19,915)	35	-
			\$ 3,686,696	\$ 3,829,074		\$ 142,378	

(1) Service Area 7, Page 2 Section II

City of Waco - 2020 Roadway Impact Fee Study
 Capital Improvement Plan for Impact Fees
 Impact Fee Calculation
 Service Area 7

Year	Number of Years to End of Period	Interest Rate Factor	Impact Fee Factor	Annual Vehicle Miles		Annual Expense	
				Actual	Escalated	Actual	Escalated
1	29	1.1047	1.0000	388	429	\$ (220,232)	\$ (243,292)
2	28	1.1009	1.0000	388	427	(123,392)	(135,836)
3	27	1.0970	1.0000	388	426	(25,767)	(28,266)
4	26	1.0932	1.0000	388	424	72,659	79,430
5	25	1.0894	1.0000	388	423	92,574	100,847
6	24	1.0856	1.0000	388	421	112,489	122,114
7	23	1.0818	1.0000	388	420	132,403	143,232
8	22	1.0780	1.0000	388	418	152,318	164,201
9	21	1.0743	1.0000	388	417	172,232	185,021
10	20	1.0705	1.0000	388	415	192,147	205,695
11	19	1.0668	1.0000	-	-	428,748	457,377
12	18	1.0631	1.0000	-	-	349,419	371,450
13	17	1.0593	1.0000	-	-	270,090	286,118
14	16	1.0557	1.0000	-	-	190,760	201,376
15	15	1.0520	1.0000	-	-	190,760	200,674
16	14	1.0483	1.0000	-	-	190,760	199,974
17	13	1.0446	1.0000	-	-	190,760	199,276
18	12	1.0410	1.0000	-	-	190,760	198,581
19	11	1.0374	1.0000	-	-	190,760	197,889
20	10	1.0338	1.0000	-	-	190,760	197,199
21	9	1.0301	1.0000	-	-	174,392	179,649
22	8	1.0266	1.0000	-	-	156,880	161,046
23	7	1.0230	1.0000	-	-	138,585	141,768
24	6	1.0194	1.0000	-	-	119,488	121,806
25	5	1.0158	1.0000	-	-	99,573	101,151
26	4	1.0123	1.0000	-	-	79,659	80,639
27	3	1.0088	1.0000	-	-	59,744	60,268
28	2	1.0053	1.0000	-	-	39,829	40,039
29	1	1.0018	1.0000	-	-	19,915	19,949
					4,219		\$ 4,009,377

Annual Interest Rate:	0.35%
Value of Initial Impact Fee Fund Balance	\$ -
Total Escalated Expense for Entire Period	\$ 4,009,377
Less Future Value of Initial Impact Fee Fund Balance	-
Sub-Total	\$ 4,009,377
Total Escalated Vehicle Miles	4,219
Impact Fee For Service Area 7	\$ 950

City of Waco - 2020 Roadway Impact Fee Study

Capital Improvement Plan for Impact Fees

Impact Fee Project Funding

Service Area 7

<u>Impact Fee Roadway⁽¹⁾</u>	<u>Impact Fee Project No.⁽¹⁾</u>	<u>Cost In Service Area⁽¹⁾</u>	<u>Impact Fee Eligible Cost⁽¹⁾</u>	<u>Impact Fee Recoverable Cost</u>	<u>Debt Funded⁽³⁾ Proposed</u>	<u>Non-Debt Funded⁽³⁾</u>
North River Crossing (From End of bridge To 580' NE of Cu	18	\$ 943,700	\$ 304,696	\$ 152,348	\$ 152,348	\$ -
North River Crossing (From 580' NE of Curry Ln To Yankee	19	366,900	118,462	59,231	59,231	-
Flat Rock Rd (From Yankee Rd To Tree Lake Rd)	20	2,301,550	743,109	371,555	371,555	-
Flat Rock Rd (From Tree Lake Rd To China Spring Rd)	21	3,365,800	1,086,727	543,364	543,364	-
Yankie Rd (From North River Crossing To Flat Rock Rd)	22	4,041,100	1,304,763	652,382	652,382	-
Tree Lake Dr (From China Spring Rd To Flat Rock Rd)	23	3,356,800	1,083,821	541,911	541,911	-
Wortham Bend (From North City Limit To China Spring Rd)	24	366,010	118,175	59,087	59,087	-
Impact Fee Study		27,736	27,736	13,868	-	13,868
Total		\$ 14,769,596	\$ 4,787,490	\$ 2,393,745	\$ 2,379,877	\$ 13,868

(1) Per Freese & Nichols Impact Fee Study

(2) 50% of Eligible Costs

SUMMARY OF ROADWAY IMPACT FEE DETERMINATION

Service Area 8

Recoverable Impact Fee CIP Costs	\$	-	Per Freese & Nichols Impact Fee Study
Financing Costs		-	See Detail Below
Interest Earnings		-	Page 3 of Service Area 8
Maximum Recoverable Cost for Impact Fee	\$	-	Sum of Above
Equivalent Connections		-	Per Freese & Nichols Impact Fee Study
Maximum Assessable Impact Fee	\$	-	

Recoverable Impact Fee CIP Costs:

Represents the portion of capital improvement costs that are eligible for funding through Impact fees after adjusting for the 50% credit. Reference is Freese & Nichols Impact Fee Study. In 2001, the Impact Fee Statute was amended to include either a credit for ad valorem and utility revenues generated by new service units during the ten-year timeframe that are used to fund impact fee eligible projects for which the new service units were charged an impact fee or a credit equal to 50% of the total cost of implementing the impact fee capital improvement plan. The City has elected to use the 50% credit.

Financing Costs:

Represents the interest costs associated with debt financing the new Impact fee project costs. Interest costs are derived from the City's Financial Advisor.

New Annual Debt Service	\$	-	(Page 2 of Service Area 8)
Existing Annual Debt Service		-	(Page 2 of Service Area 8)
Principal Component		-	(Page 5 of Service Area 8)
Financing Costs	\$	-	

Interest Earnings:

Represents the interest earned on cash flows and assumes a 0.35% annual interest rate per the most recent investment portfolio. The Impact Fee Statute states that interest earnings are funds of the impact fee account and are held to the same restrictions as impact fee revenues. Therefore, in order to recognize that interest earnings are used to fund capital improvements, interest earnings are credited against the recoverable costs. Reference is the sum of Accumulated Interest on page 3 of Service Area 8.

Maximum Recoverable Cost for Impact Fee:

Represents the sum of Recoverable Impact Fee CIP Costs (after 50% credit) plus Financing Costs less Interest Earnings.

Equivalent Connections:

Represents the growth in equivalent vehicle-miles over the ten-year timeframe. A vehicle-mile is a standardized measure of use attributable to an individual unit of development calculated in accordance with generally accepted engineering standards. Reference is Freese & Nichols Impact Fee Study.

Maximum Assessable Impact Fee:

Represents Maximum Recoverable Cost for Impact Fee divided by Equivalent Connections. This is the maximum impact fee that can be assessed by the City.

City of Waco - 2020 Roadway Impact Fee Study
Capital Improvement Plan for Impact Fees
Impact Fee Calculation Assumptions
Service Area 8

I. General Assumptions

Annual Interest Rate on Deposits ⁽¹⁾	0.35%
Annual Vehicle Mile Growth ⁽²⁾	-
Existing Fund Balance ⁽³⁾	\$ -
Portion of Projects Funded by Existing Debt ⁽⁴⁾	\$ -
Non-debt Funded Project Cost ⁽⁵⁾	-
New Project Cost Funded Through New Debt ⁽⁶⁾	-
Total Recoverable Project Cost ⁽⁷⁾	\$ -

II. New Debt Issues Assumptions

<u>Year</u>	<u>Principal⁽⁸⁾</u>	<u>Interest⁽⁹⁾</u>	<u>Term</u>
1	\$ -	3.25%	20
2	-	4.00%	20
3	-	4.50%	20
4	-	5.00%	20
5	-	5.50%	20
6	-	5.50%	20
7	-	5.50%	20
8	-	5.50%	20
9	-	5.50%	20
10	-	5.50%	20
Total	\$ -		

III. Capital Expenditure Assumptions

<u>Year</u>	<u>Annual Capital Expenditures⁽¹⁰⁾</u>
1	\$ -
2	-
3	-
4	-
5	-
6	-
7	-
8	-
9	-
10	-
11	-
12	-
13	-
Total	\$ -

- (1) Estimated Interest Rate per Staff as of May 2020
- (2) Per Freese & Nichols Impact Fee Study
- (3) There is no existing fund balance because this is a new roadway impact fee
- (4) Per discussions with City Staff and City files
- (5) This assumes 0% of new project costs funded through sources other than debt, unless specified otherwise
- (6) This assumes 100% of new project costs funded through new debt issues, unless specified otherwise
- (7) Per Freese & Nichols Impact Fee Study
- (8) Assumes new debt issued in equal annual amounts
- (9) Estimated interest on future debt from Financial Advisor as of May 2020
- (10) Assumes new debt proceeds expended over a 3-year timeframe
 Non-debt funded capital expenditures allocated in equal annual amounts

City of Waco - 2020 Roadway Impact Fee Study

Capital Improvement Plan for Impact Fees

Debt Service and Expense Summary

Service Area 8

I. New Debt Service Detail

<u>Year</u>	<u>Series 1</u>	<u>Series 2</u>	<u>Series 3</u>	<u>Series 4</u>	<u>Series 5</u>	<u>Series 6</u>	<u>Series 7</u>	<u>Series 8</u>	<u>Series 9</u>	<u>Series 10</u>	<u>Total Annual New Debt Service</u>
1	\$ -	\$ -	\$ -	\$ -	\$ -	\$ -	\$ -	\$ -	\$ -	\$ -	\$ -
2	-	-	-	-	-	-	-	-	-	-	-
3	-	-	-	-	-	-	-	-	-	-	-
4	-	-	-	-	-	-	-	-	-	-	-
5	-	-	-	-	-	-	-	-	-	-	-
6	-	-	-	-	-	-	-	-	-	-	-
7	-	-	-	-	-	-	-	-	-	-	-
8	-	-	-	-	-	-	-	-	-	-	-
9	-	-	-	-	-	-	-	-	-	-	-
10	-	-	-	-	-	-	-	-	-	-	-
11	-	-	-	-	-	-	-	-	-	-	-
12	-	-	-	-	-	-	-	-	-	-	-
13	-	-	-	-	-	-	-	-	-	-	-
14	-	-	-	-	-	-	-	-	-	-	-
15	-	-	-	-	-	-	-	-	-	-	-
16	-	-	-	-	-	-	-	-	-	-	-
17	-	-	-	-	-	-	-	-	-	-	-
18	-	-	-	-	-	-	-	-	-	-	-
19	-	-	-	-	-	-	-	-	-	-	-
20	-	-	-	-	-	-	-	-	-	-	-
21	-	-	-	-	-	-	-	-	-	-	-
22	-	-	-	-	-	-	-	-	-	-	-
23	-	-	-	-	-	-	-	-	-	-	-
24	-	-	-	-	-	-	-	-	-	-	-
25	-	-	-	-	-	-	-	-	-	-	-
26	-	-	-	-	-	-	-	-	-	-	-
27	-	-	-	-	-	-	-	-	-	-	-
28	-	-	-	-	-	-	-	-	-	-	-
29	-	-	-	-	-	-	-	-	-	-	-
	\$ -	\$ -	\$ -	\$ -	\$ -	\$ -	\$ -	\$ -	\$ -	\$ -	\$ -

II. Summary of Annual Expenses

<u>Year</u>	<u>New Annual Debt Service⁽¹⁾</u>	<u>Annual Capital Expenditures⁽²⁾</u>	<u>Annual Bond Proceeds⁽²⁾</u>	<u>Existing Annual Debt Service⁽³⁾</u>	<u>Total Expense</u>
1	\$ -	\$ -	\$ -	\$ -	\$ -
2	-	-	-	-	-
3	-	-	-	-	-
4	-	-	-	-	-
5	-	-	-	-	-
6	-	-	-	-	-
7	-	-	-	-	-
8	-	-	-	-	-
9	-	-	-	-	-
10	-	-	-	-	-
11	-	-	-	-	-
12	-	-	-	-	-
13	-	-	-	-	-
14	-	-	-	-	-
15	-	-	-	-	-
16	-	-	-	-	-
17	-	-	-	-	-
18	-	-	-	-	-
19	-	-	-	-	-
20	-	-	-	-	-
21	-	-	-	-	-
22	-	-	-	-	-
23	-	-	-	-	-
24	-	-	-	-	-
25	-	-	-	-	-
26	-	-	-	-	-
27	-	-	-	-	-
28	-	-	-	-	-
29	-	-	-	-	-
	\$ -	\$ -	\$ -	\$ -	\$ -

(1) Service Area 8, Page 2 Section I

(2) Service Area 8, Page 1

(3) Eligible debt funded projects as a percent of total principal times original annual debt service; does not reflect current outstanding balances

City of Waco - 2020 Roadway Impact Fee Study

Capital Improvement Plan for Impact Fees

Revenue Test

Service Area 8

<u>Year</u>	<u>Impact Fee</u>	<u>Vehicle Miles</u>	<u>Impact Fee Revenue</u>	<u>Annual Expenses⁽¹⁾</u>	<u>Sub-Total</u>	<u>Accumulated Interest</u>	<u>Estimated Fund Balance</u>
Initial							\$ -
1	\$ -	-	\$ -	\$ -	\$ -	\$ -	-
2	-	-	-	-	-	-	-
3	-	-	-	-	-	-	-
4	-	-	-	-	-	-	-
5	-	-	-	-	-	-	-
6	-	-	-	-	-	-	-
7	-	-	-	-	-	-	-
8	-	-	-	-	-	-	-
9	-	-	-	-	-	-	-
10	-	-	-	-	-	-	-
11	-	-	-	-	-	-	-
12	-	-	-	-	-	-	-
13	-	-	-	-	-	-	-
14	-	-	-	-	-	-	-
15	-	-	-	-	-	-	-
16	-	-	-	-	-	-	-
17	-	-	-	-	-	-	-
18	-	-	-	-	-	-	-
19	-	-	-	-	-	-	-
20	-	-	-	-	-	-	-
21	-	-	-	-	-	-	-
22	-	-	-	-	-	-	-
23	-	-	-	-	-	-	-
24	-	-	-	-	-	-	-
25	-	-	-	-	-	-	-
26	-	-	-	-	-	-	-
27	-	-	-	-	-	-	-
28	-	-	-	-	-	-	-
29	-	-	-	-	-	-	-
			\$ -	\$ -		\$ -	

(1) Service Area 8, Page 2 Section II

City of Waco - 2020 Roadway Impact Fee Study
 Capital Improvement Plan for Impact Fees
 Impact Fee Calculation
 Service Area 8

<u>Year</u>	<u>Number of Years to End of Period</u>	<u>Interest Rate Factor</u>	<u>Impact Fee Factor</u>	<u>Annual Vehicle Miles</u>		<u>Annual Expense</u>	
				<u>Actual</u>	<u>Escalated</u>	<u>Actual</u>	<u>Escalated</u>
1	29	1.1047	1.0000	-	-	\$ -	\$ -
2	28	1.1009	1.0000	-	-	-	-
3	27	1.0970	1.0000	-	-	-	-
4	26	1.0932	1.0000	-	-	-	-
5	25	1.0894	1.0000	-	-	-	-
6	24	1.0856	1.0000	-	-	-	-
7	23	1.0818	1.0000	-	-	-	-
8	22	1.0780	1.0000	-	-	-	-
9	21	1.0743	1.0000	-	-	-	-
10	20	1.0705	1.0000	-	-	-	-
11	19	1.0668	1.0000	-	-	-	-
12	18	1.0631	1.0000	-	-	-	-
13	17	1.0593	1.0000	-	-	-	-
14	16	1.0557	1.0000	-	-	-	-
15	15	1.0520	1.0000	-	-	-	-
16	14	1.0483	1.0000	-	-	-	-
17	13	1.0446	1.0000	-	-	-	-
18	12	1.0410	1.0000	-	-	-	-
19	11	1.0374	1.0000	-	-	-	-
20	10	1.0338	1.0000	-	-	-	-
21	9	1.0301	1.0000	-	-	-	-
22	8	1.0266	1.0000	-	-	-	-
23	7	1.0230	1.0000	-	-	-	-
24	6	1.0194	1.0000	-	-	-	-
25	5	1.0158	1.0000	-	-	-	-
26	4	1.0123	1.0000	-	-	-	-
27	3	1.0088	1.0000	-	-	-	-
28	2	1.0053	1.0000	-	-	-	-
29	1	1.0018	1.0000	-	-	-	-
					-		\$ -

Annual Interest Rate:	0.35%
Value of Initial Impact Fee Fund Balance	\$ -
Total Escalated Expense for Entire Period	\$ -
Less Future Value of Initial Impact Fee Fund Balance	-
Sub-Total	\$ -
Total Escalated Vehicle Miles	-
Impact Fee For Service Area 8	\$ -

City of Waco - 2020 Roadway Impact Fee Study

Capital Improvement Plan for Impact Fees

Impact Fee Project Funding

Service Area 8

<u>Impact Fee Roadway⁽¹⁾</u>	<u>Impact Fee Project No.⁽¹⁾</u>	<u>Cost In Service Area⁽¹⁾</u>	<u>Impact Fee Eligible Cost⁽¹⁾</u>	<u>Impact Fee Recoverable Cost</u>	<u>Debt Funded⁽³⁾ Proposed</u>	<u>Non-Debt Funded⁽³⁾</u>
Impact Fee Study			\$ -	\$ -	\$ -	\$ -
Total		\$ -	\$ -	\$ -	\$ -	\$ -

(1) Per Freese & Nichols Impact Fee Study

(2) 50% of Eligible Costs

SUMMARY OF ROADWAY IMPACT FEE DETERMINATION

Service Area 9

Recoverable Impact Fee CIP Costs	\$ 4,391,638	Per Freese & Nichols Impact Fee Study
Financing Costs	2,645,980	See Detail Below
Interest Earnings	(262,470)	Page 3 of Service Area 9
Maximum Recoverable Cost for Impact Fee	\$ 6,775,149	Sum of Above
Equivalent Connections	10,967	Per Freese & Nichols Impact Fee Study
Maximum Assessable Impact Fee	\$ 618	

Recoverable Impact Fee CIP Costs:

Represents the portion of capital improvement costs that are eligible for funding through Impact fees after adjusting for the 50% credit. Reference is Freese & Nichols Impact Fee Study. In 2001, the Impact Fee Statute was amended to include either a credit for ad valorem and utility revenues generated by new service units during the ten-year timeframe that are used to fund impact fee eligible projects for which the new service units were charged an impact fee or a credit equal to 50% of the total cost of implementing the impact fee capital improvement plan. The City has elected to use the 50% credit.

Financing Costs:

Represents the interest costs associated with debt financing the new Impact fee project costs. Interest costs are derived from the City's Financial Advisor.

New Annual Debt Service	\$ 7,033,202	(Page 2 of Service Area 9)
Existing Annual Debt Service	-	(Page 2 of Service Area 9)
Principal Component	(4,387,222)	(Page 5 of Service Area 9)
Financing Costs	\$ 2,645,980	

Interest Earnings:

Represents the interest earned on cash flows and assumes a 0.35% annual interest rate per the most recent investment portfolio. The Impact Fee Statute states that interest earnings are funds of the impact fee account and are held to the same restrictions as impact fee revenues. Therefore, in order to recognize that interest earnings are used to fund capital improvements, interest earnings are credited against the recoverable costs. Reference is the sum of Accumulated Interest on page 3 of Service Area 9.

Maximum Recoverable Cost for Impact Fee:

Represents the sum of Recoverable Impact Fee CIP Costs (after 50% credit) plus Financing Costs less Interest Earnings.

Equivalent Connections:

Represents the growth in equivalent vehicle-miles over the ten-year timeframe. A vehicle-mile is a standardized measure of use attributable to an individual unit of development calculated in accordance with generally accepted engineering standards. Reference is Freese & Nichols Impact Fee Study.

Maximum Assessable Impact Fee:

Represents Maximum Recoverable Cost for Impact Fee divided by Equivalent Connections. This is the maximum impact fee that can be assessed by the City.

City of Waco - 2020 Roadway Impact Fee Study
Capital Improvement Plan for Impact Fees
Impact Fee Calculation Assumptions
Service Area 9

I. General Assumptions

Annual Interest Rate on Deposits ⁽¹⁾	0.35%
Annual Vehicle Mile Growth ⁽²⁾	1,097
Existing Fund Balance ⁽³⁾	\$ -
Portion of Projects Funded by Existing Debt ⁽⁴⁾	\$ -
Non-debt Funded Project Cost ⁽⁵⁾	4,416
New Project Cost Funded Through New Debt ⁽⁶⁾	4,387,222
Total Recoverable Project Cost ⁽⁷⁾	\$ 4,391,638

II. New Debt Issues Assumptions

<u>Year</u>	<u>Principal⁽⁸⁾</u>	<u>Interest⁽⁹⁾</u>	<u>Term</u>
1	\$ 438,722	3.25%	20
2	438,722	4.00%	20
3	438,722	4.50%	20
4	438,722	5.00%	20
5	438,722	5.50%	20
6	438,722	5.50%	20
7	438,722	5.50%	20
8	438,722	5.50%	20
9	438,722	5.50%	20
10	438,722	5.50%	20
Total	\$ 4,387,222		

III. Capital Expenditure Assumptions

<u>Year</u>	<u>Annual Capital Expenditures⁽¹⁰⁾</u>
1	\$ 442
2	146,682
3	292,923
4	439,164
5	439,164
6	439,164
7	439,164
8	439,164
9	439,164
10	439,164
11	438,722
12	292,481
13	146,241
Total	\$ 4,391,638

- (1) Estimated Interest Rate per Staff as of May 2020
- (2) Per Freese & Nichols Impact Fee Study
- (3) There is no existing fund balance because this is a new roadway impact fee
- (4) Per discussions with City Staff and City files
- (5) This assumes 0% of new project costs funded through sources other than debt, unless specified otherwise
- (6) This assumes 100% of new project costs funded through new debt issues, unless specified otherwise
- (7) Per Freese & Nichols Impact Fee Study
- (8) Assumes new debt issued in equal annual amounts
- (9) Estimated interest on future debt from Financial Advisor as of May 2020
- (10) Assumes new debt proceeds expended over a 3-year timeframe
 Non-debt funded capital expenditures allocated in equal annual amounts

City of Waco - 2020 Roadway Impact Fee Study

Capital Improvement Plan for Impact Fees

Debt Service and Expense Summary

Service Area 9

I. New Debt Service Detail

Year	Series 1	Series 2	Series 3	Series 4	Series 5	Series 6	Series 7	Series 8	Series 9	Series 10	Total Annual New Debt Service
1	\$ 30,175	\$ -	\$ -	\$ -	\$ -	\$ -	\$ -	\$ -	\$ -	\$ -	\$ 30,175
2	30,175	32,282	-	-	-	-	-	-	-	-	62,457
3	30,175	32,282	33,727	-	-	-	-	-	-	-	96,184
4	30,175	32,282	33,727	35,204	-	-	-	-	-	-	131,388
5	30,175	32,282	33,727	35,204	36,712	-	-	-	-	-	168,100
6	30,175	32,282	33,727	35,204	36,712	36,712	-	-	-	-	204,812
7	30,175	32,282	33,727	35,204	36,712	36,712	36,712	-	-	-	241,524
8	30,175	32,282	33,727	35,204	36,712	36,712	36,712	36,712	-	-	278,236
9	30,175	32,282	33,727	35,204	36,712	36,712	36,712	36,712	36,712	-	314,948
10	30,175	32,282	33,727	35,204	36,712	36,712	36,712	36,712	36,712	36,712	351,660
11	30,175	32,282	33,727	35,204	36,712	36,712	36,712	36,712	36,712	36,712	351,660
12	30,175	32,282	33,727	35,204	36,712	36,712	36,712	36,712	36,712	36,712	351,660
13	30,175	32,282	33,727	35,204	36,712	36,712	36,712	36,712	36,712	36,712	351,660
14	30,175	32,282	33,727	35,204	36,712	36,712	36,712	36,712	36,712	36,712	351,660
15	30,175	32,282	33,727	35,204	36,712	36,712	36,712	36,712	36,712	36,712	351,660
16	30,175	32,282	33,727	35,204	36,712	36,712	36,712	36,712	36,712	36,712	351,660
17	30,175	32,282	33,727	35,204	36,712	36,712	36,712	36,712	36,712	36,712	351,660
18	30,175	32,282	33,727	35,204	36,712	36,712	36,712	36,712	36,712	36,712	351,660
19	30,175	32,282	33,727	35,204	36,712	36,712	36,712	36,712	36,712	36,712	351,660
20	30,175	32,282	33,727	35,204	36,712	36,712	36,712	36,712	36,712	36,712	351,660
21	-	32,282	33,727	35,204	36,712	36,712	36,712	36,712	36,712	36,712	321,485
22	-	-	33,727	35,204	36,712	36,712	36,712	36,712	36,712	36,712	289,203
23	-	-	-	35,204	36,712	36,712	36,712	36,712	36,712	36,712	255,476
24	-	-	-	-	36,712	36,712	36,712	36,712	36,712	36,712	220,272
25	-	-	-	-	-	36,712	36,712	36,712	36,712	36,712	183,560
26	-	-	-	-	-	-	36,712	36,712	36,712	36,712	146,848
27	-	-	-	-	-	-	-	36,712	36,712	36,712	110,136
28	-	-	-	-	-	-	-	-	36,712	36,712	73,424
29	-	-	-	-	-	-	-	-	-	36,712	36,712
	\$ 603,496	\$ 645,639	\$ 674,545	\$ 704,084	\$ 734,240	\$ 734,240	\$ 734,240	\$ 734,240	\$ 734,240	\$ 734,240	\$ 7,033,202

II. Summary of Annual Expenses

Year	New Annual Debt Service ⁽¹⁾	Annual Capital Expenditures ⁽²⁾	Annual Bond Proceeds ⁽²⁾	Existing Annual Debt Service ⁽³⁾	Total Expense
1	\$ 30,175	\$ 442	\$ (438,722)	\$ -	\$ (408,106)
2	62,457	146,682	(438,722)	-	(229,583)
3	96,184	292,923	(438,722)	-	(49,615)
4	131,388	439,164	(438,722)	-	131,830
5	168,100	439,164	(438,722)	-	168,542
6	204,812	439,164	(438,722)	-	205,254
7	241,524	439,164	(438,722)	-	241,966
8	278,236	439,164	(438,722)	-	278,678
9	314,948	439,164	(438,722)	-	315,390
10	351,660	439,164	(438,722)	-	352,102
11	351,660	438,722	-	-	790,382
12	351,660	292,481	-	-	644,142
13	351,660	146,241	-	-	497,901
14	351,660	-	-	-	351,660
15	351,660	-	-	-	351,660
16	351,660	-	-	-	351,660
17	351,660	-	-	-	351,660
18	351,660	-	-	-	351,660
19	351,660	-	-	-	351,660
20	351,660	-	-	-	351,660
21	321,485	-	-	-	321,485
22	289,203	-	-	-	289,203
23	255,476	-	-	-	255,476
24	220,272	-	-	-	220,272
25	183,560	-	-	-	183,560
26	146,848	-	-	-	146,848
27	110,136	-	-	-	110,136
28	73,424	-	-	-	73,424
29	36,712	-	-	-	36,712
	\$ 7,033,202	\$ 4,391,638	\$ (4,387,222)	\$ -	\$ 7,037,618

(1) Service Area 9, Page 2 Section 1

(2) Service Area 9, Page 1

(3) Eligible debt funded projects as a percent of total principal times original annual debt service; does not reflect current outstanding balances

City of Waco - 2020 Roadway Impact Fee Study
 Capital Improvement Plan for Impact Fees
 Revenue Test
 Service Area 9

<u>Year</u>	<u>Impact Fee</u>	<u>Vehicle Miles</u>	<u>Impact Fee Revenue</u>	<u>Annual Expenses⁽¹⁾</u>	<u>Sub-Total</u>	<u>Accumulated Interest</u>	<u>Estimated Fund Balance</u>
Initial							\$ -
1	\$ 618	1,097	\$ 677,515	\$ (408,106)	\$ 1,085,621	\$ 1,900	1,087,520
2	618	1,097	677,515	(229,583)	907,098	5,394	2,000,012
3	618	1,097	677,515	(49,615)	727,130	8,273	2,735,415
4	618	1,097	677,515	131,830	545,685	10,529	3,291,628
5	618	1,097	677,515	168,542	508,973	12,411	3,813,013
6	618	1,097	677,515	205,254	472,261	14,172	4,299,446
7	618	1,097	677,515	241,966	435,549	15,810	4,750,805
8	618	1,097	677,515	278,678	398,837	17,326	5,166,968
9	618	1,097	677,515	315,390	362,125	18,718	5,547,811
10	618	1,097	677,515	352,102	325,413	19,987	5,893,211
11	-	-	-	790,382	(790,382)	19,243	5,122,072
12	-	-	-	644,142	(644,142)	16,800	4,494,731
13	-	-	-	497,901	(497,901)	14,860	4,011,690
14	-	-	-	351,660	(351,660)	13,426	3,673,455
15	-	-	-	351,660	(351,660)	12,242	3,334,037
16	-	-	-	351,660	(351,660)	11,054	2,993,431
17	-	-	-	351,660	(351,660)	9,862	2,651,632
18	-	-	-	351,660	(351,660)	8,665	2,308,637
19	-	-	-	351,660	(351,660)	7,465	1,964,442
20	-	-	-	351,660	(351,660)	6,260	1,619,042
21	-	-	-	321,485	(321,485)	5,104	1,302,661
22	-	-	-	289,203	(289,203)	4,053	1,017,511
23	-	-	-	255,476	(255,476)	3,114	765,149
24	-	-	-	220,272	(220,272)	2,293	547,170
25	-	-	-	183,560	(183,560)	1,594	365,204
26	-	-	-	146,848	(146,848)	1,021	219,377
27	-	-	-	110,136	(110,136)	575	109,816
28	-	-	-	73,424	(73,424)	256	36,648
29	-	-	-	36,712	(36,712)	64	-
			\$ 6,775,149	\$ 7,037,618		\$ 262,470	

(1) Service Area 9, Page 2 Section II

City of Waco - 2020 Roadway Impact Fee Study
 Capital Improvement Plan for Impact Fees
 Impact Fee Calculation
 Service Area 9

Year	Number of Years to End of Period	Interest Rate Factor	Impact Fee Factor	Annual Vehicle Miles		Annual Expense	
				Actual	Escalated	Actual	Escalated
1	29	1.1047	1.0000	1,097	1,212	\$ (408,106)	\$ (450,836)
2	28	1.1009	1.0000	1,097	1,207	(229,583)	(252,737)
3	27	1.0970	1.0000	1,097	1,203	(49,615)	(54,428)
4	26	1.0932	1.0000	1,097	1,199	131,830	144,114
5	25	1.0894	1.0000	1,097	1,195	168,542	183,605
6	24	1.0856	1.0000	1,097	1,191	205,254	222,818
7	23	1.0818	1.0000	1,097	1,186	241,966	261,755
8	22	1.0780	1.0000	1,097	1,182	278,678	300,418
9	21	1.0743	1.0000	1,097	1,178	315,390	338,809
10	20	1.0705	1.0000	1,097	1,174	352,102	376,927
11	19	1.0668	1.0000	-	-	790,382	843,159
12	18	1.0631	1.0000	-	-	644,142	684,756
13	17	1.0593	1.0000	-	-	497,901	527,449
14	16	1.0557	1.0000	-	-	351,660	371,230
15	15	1.0520	1.0000	-	-	351,660	369,935
16	14	1.0483	1.0000	-	-	351,660	368,645
17	13	1.0446	1.0000	-	-	351,660	367,359
18	12	1.0410	1.0000	-	-	351,660	366,078
19	11	1.0374	1.0000	-	-	351,660	364,801
20	10	1.0338	1.0000	-	-	351,660	363,529
21	9	1.0301	1.0000	-	-	321,485	331,176
22	8	1.0266	1.0000	-	-	289,203	296,882
23	7	1.0230	1.0000	-	-	255,476	261,345
24	6	1.0194	1.0000	-	-	220,272	224,546
25	5	1.0158	1.0000	-	-	183,560	186,469
26	4	1.0123	1.0000	-	-	146,848	148,655
27	3	1.0088	1.0000	-	-	110,136	111,102
28	2	1.0053	1.0000	-	-	73,424	73,810
29	1	1.0018	1.0000	-	-	36,712	36,776
					11,927		\$ 7,368,149

Annual Interest Rate:	0.35%
Value of Initial Impact Fee Fund Balance	\$ -
Total Escalated Expense for Entire Period	\$ 7,368,149
Less Future Value of Initial Impact Fee Fund Balance	-
Sub-Total	\$ 7,368,149
Total Escalated Vehicle Miles	11,927
Impact Fee For Service Area 9	\$ 618

City of Waco - 2020 Roadway Impact Fee Study

Capital Improvement Plan for Impact Fees

Impact Fee Project Funding

Service Area 9

<u>Impact Fee Roadway⁽¹⁾</u>	<u>Impact Fee Project No.⁽¹⁾</u>	<u>Cost In Service Area⁽¹⁾</u>	<u>Impact Fee Eligible Cost⁽¹⁾</u>	<u>Impact Fee Recoverable Cost</u>	<u>Debt Funded⁽³⁾ Proposed</u>	<u>Non-Debt Funded⁽³⁾</u>
Mars Dr (From Hewitt Dr To Texas Central Pkwy)	25	\$ 2,545,650	\$ 2,545,650	\$ 1,272,825	\$ 1,272,825	\$ -
Beverly Dr (From W Loop 340 To 4128' NE of Loop 340)	26	1,467,500	1,467,500	733,750	733,750	-
Beverly Dr (From 4128' NE of Loop 340 To New Road)	27	273,050	273,050	136,525	136,525	-
Hewitt Dr (From Woodway Dr To Old McGregor Dr)	28	32,350	32,350	16,175	16,175	-
Hewitt Dr (From Old McGregor Dr To Imperial Dr)	29	83,100	83,100	41,550	41,550	-
Hewitt Dr (From Imperial Dr To Mars Dr)	30	106,500	106,500	53,250	53,250	-
Texas Central Pkwy (From Railroad To Imperial Dr)	31	720,600	720,600	360,300	360,300	-
S New Rd (From Bagby Ave To I-35)	10	730,733	730,733	365,367	365,367	-
Bagby Ave. (From New Road To TX 340)	32	2,814,960	2,814,960	1,407,480	1,407,480	-
Impact Fee Study		8,833	8,833	4,416	-	4,416
Total		\$ 8,783,276	\$ 8,783,276	\$ 4,391,638	\$ 4,387,222	\$ 4,416

(1) Per Freese & Nichols Impact Fee Study

(2) 50% of Eligible Costs

SUMMARY OF ROADWAY IMPACT FEE DETERMINATION

Service Area 10

Recoverable Impact Fee CIP Costs	\$ 2,263,085	Per Freese & Nichols Impact Fee Study
Financing Costs	1,362,050	See Detail Below
Interest Earnings	(135,109)	Page 3 of Service Area 10
Maximum Recoverable Cost for Impact Fee	\$ 3,490,026	Sum of Above
Equivalent Connections	2,636	Per Freese & Nichols Impact Fee Study
Maximum Assessable Impact Fee	\$ 1,324	

Recoverable Impact Fee CIP Costs:

Represents the portion of capital improvement costs that are eligible for funding through Impact fees after adjusting for the 50% credit. Reference is Freese & Nichols Impact Fee Study. In 2001, the Impact Fee Statute was amended to include either a credit for ad valorem and utility revenues generated by new service units during the ten-year timeframe that are used to fund impact fee eligible projects for which the new service units were charged an impact fee or a credit equal to 50% of the total cost of implementing the impact fee capital improvement plan. The City has elected to use the 50% credit.

Financing Costs:

Represents the interest costs associated with debt financing the new Impact fee project costs. Interest costs are derived from the City's Financial Advisor.

New Annual Debt Service	\$ 3,620,425	(Page 2 of Service Area 10)
Existing Annual Debt Service	-	(Page 2 of Service Area 10)
Principal Component	<u>(2,258,375)</u>	(Page 5 of Service Area 10)
Financing Costs	\$ 1,362,050	

Interest Earnings:

Represents the interest earned on cash flows and assumes a 0.35% annual interest rate per the most recent investment portfolio. The Impact Fee Statute states that interest earnings are funds of the impact fee account and are held to the same restrictions as impact fee revenues. Therefore, in order to recognize that interest earnings are used to fund capital improvements, interest earnings are credited against the recoverable costs. Reference is the sum of Accumulated Interest on page 3 of Service Area 10.

Maximum Recoverable Cost for Impact Fee:

Represents the sum of Recoverable Impact Fee CIP Costs (after 50% credit) plus Financing Costs less Interest Earnings.

Equivalent Connections:

Represents the growth in equivalent vehicle-miles over the ten-year timeframe. A vehicle-mile is a standardized measure of use attributable to an individual unit of development calculated in accordance with generally accepted engineering standards. Reference is Freese & Nichols Impact Fee Study.

Maximum Assessable Impact Fee:

Represents Maximum Recoverable Cost for Impact Fee divided by Equivalent Connections. This is the maximum impact fee that can be assessed by the City.

City of Waco - 2020 Roadway Impact Fee Study
Capital Improvement Plan for Impact Fees
Impact Fee Calculation Assumptions
Service Area 10

I. General Assumptions

Annual Interest Rate on Deposits ⁽¹⁾	0.35%
Annual Vehicle Mile Growth ⁽²⁾	264
Existing Fund Balance ⁽³⁾	\$ -
Portion of Projects Funded by Existing Debt ⁽⁴⁾	\$ -
Non-debt Funded Project Cost ⁽⁵⁾	4,711
New Project Cost Funded Through New Debt ⁽⁶⁾	2,258,375
Total Recoverable Project Cost ⁽⁷⁾	\$ 2,263,085

II. New Debt Issues Assumptions

<u>Year</u>	<u>Principal⁽⁸⁾</u>	<u>Interest⁽⁹⁾</u>	<u>Term</u>
1	\$ 225,837	3.25%	20
2	225,837	4.00%	20
3	225,837	4.50%	20
4	225,837	5.00%	20
5	225,837	5.50%	20
6	225,837	5.50%	20
7	225,837	5.50%	20
8	225,837	5.50%	20
9	225,837	5.50%	20
10	225,837	5.50%	20
Total	\$ 2,258,375		

III. Capital Expenditure Assumptions

<u>Year</u>	<u>Annual Capital Expenditures⁽¹⁰⁾</u>
1	\$ 471
2	75,750
3	151,029
4	226,309
5	226,309
6	226,309
7	226,309
8	226,309
9	226,309
10	226,309
11	225,837
12	150,558
13	75,279
Total	\$ 2,263,085

- (1) Estimated Interest Rate per Staff as of May 2020
- (2) Per Freese & Nichols Impact Fee Study
- (3) There is no existing fund balance because this is a new roadway impact fee
- (4) Per discussions with City Staff and City files
- (5) This assumes 0% of new project costs funded through sources other than debt, unless specified otherwise
- (6) This assumes 100% of new project costs funded through new debt issues, unless specified otherwise
- (7) Per Freese & Nichols Impact Fee Study
- (8) Assumes new debt issued in equal annual amounts
- (9) Estimated interest on future debt from Financial Advisor as of May 2020
- (10) Assumes new debt proceeds expended over a 3-year timeframe
 Non-debt funded capital expenditures allocated in equal annual amounts

City of Waco - 2020 Roadway Impact Fee Study

Capital Improvement Plan for Impact Fees

Debt Service and Expense Summary

Service Area 10

I. New Debt Service Detail

Year	Series 1	Series 2	Series 3	Series 4	Series 5	Series 6	Series 7	Series 8	Series 9	Series 10	Total Annual New Debt Service
1	\$ 15,533	\$ -	\$ -	\$ -	\$ -	\$ -	\$ -	\$ -	\$ -	\$ -	\$ 15,533
2	15,533	16,618	-	-	-	-	-	-	-	-	32,150
3	15,533	16,618	17,362	-	-	-	-	-	-	-	49,512
4	15,533	16,618	17,362	18,122	-	-	-	-	-	-	67,634
5	15,533	16,618	17,362	18,122	18,898	-	-	-	-	-	86,532
6	15,533	16,618	17,362	18,122	18,898	18,898	-	-	-	-	105,430
7	15,533	16,618	17,362	18,122	18,898	18,898	18,898	-	-	-	124,327
8	15,533	16,618	17,362	18,122	18,898	18,898	18,898	18,898	-	-	143,225
9	15,533	16,618	17,362	18,122	18,898	18,898	18,898	18,898	18,898	-	162,123
10	15,533	16,618	17,362	18,122	18,898	18,898	18,898	18,898	18,898	18,898	181,021
11	15,533	16,618	17,362	18,122	18,898	18,898	18,898	18,898	18,898	18,898	181,021
12	15,533	16,618	17,362	18,122	18,898	18,898	18,898	18,898	18,898	18,898	181,021
13	15,533	16,618	17,362	18,122	18,898	18,898	18,898	18,898	18,898	18,898	181,021
14	15,533	16,618	17,362	18,122	18,898	18,898	18,898	18,898	18,898	18,898	181,021
15	15,533	16,618	17,362	18,122	18,898	18,898	18,898	18,898	18,898	18,898	181,021
16	15,533	16,618	17,362	18,122	18,898	18,898	18,898	18,898	18,898	18,898	181,021
17	15,533	16,618	17,362	18,122	18,898	18,898	18,898	18,898	18,898	18,898	181,021
18	15,533	16,618	17,362	18,122	18,898	18,898	18,898	18,898	18,898	18,898	181,021
19	15,533	16,618	17,362	18,122	18,898	18,898	18,898	18,898	18,898	18,898	181,021
20	15,533	16,618	17,362	18,122	18,898	18,898	18,898	18,898	18,898	18,898	181,021
21	-	16,618	17,362	18,122	18,898	18,898	18,898	18,898	18,898	18,898	165,488
22	-	-	17,362	18,122	18,898	18,898	18,898	18,898	18,898	18,898	148,871
23	-	-	-	18,122	18,898	18,898	18,898	18,898	18,898	18,898	131,509
24	-	-	-	-	18,898	18,898	18,898	18,898	18,898	18,898	113,388
25	-	-	-	-	-	18,898	18,898	18,898	18,898	18,898	94,490
26	-	-	-	-	-	-	18,898	18,898	18,898	18,898	75,592
27	-	-	-	-	-	-	-	18,898	18,898	18,898	56,694
28	-	-	-	-	-	-	-	-	18,898	18,898	37,796
29	-	-	-	-	-	-	-	-	-	18,898	18,898
	\$ 310,657	\$ 332,350	\$ 347,230	\$ 362,436	\$ 377,959	\$ 377,959	\$ 377,959	\$ 377,959	\$ 377,959	\$ 377,959	\$ 3,620,425

II. Summary of Annual Expenses

Year	New Annual Debt Service ⁽¹⁾	Annual Capital Expenditures ⁽²⁾	Annual Bond Proceeds ⁽²⁾	Existing Annual Debt Service ⁽³⁾	Total Expense
1	\$ 15,533	\$ 471	\$ (225,837)	\$ -	\$ (209,834)
2	32,150	75,750	(225,837)	-	(117,937)
3	49,512	151,029	(225,837)	-	(25,296)
4	67,634	226,309	(225,837)	-	68,105
5	86,532	226,309	(225,837)	-	87,003
6	105,430	226,309	(225,837)	-	105,901
7	124,327	226,309	(225,837)	-	124,799
8	143,225	226,309	(225,837)	-	143,696
9	162,123	226,309	(225,837)	-	162,594
10	181,021	226,309	(225,837)	-	181,492
11	181,021	225,837	-	-	406,859
12	181,021	150,558	-	-	331,580
13	181,021	75,279	-	-	256,300
14	181,021	-	-	-	181,021
15	181,021	-	-	-	181,021
16	181,021	-	-	-	181,021
17	181,021	-	-	-	181,021
18	181,021	-	-	-	181,021
19	181,021	-	-	-	181,021
20	181,021	-	-	-	181,021
21	165,488	-	-	-	165,488
22	148,871	-	-	-	148,871
23	131,509	-	-	-	131,509
24	113,388	-	-	-	113,388
25	94,490	-	-	-	94,490
26	75,592	-	-	-	75,592
27	56,694	-	-	-	56,694
28	37,796	-	-	-	37,796
29	18,898	-	-	-	18,898
	\$ 3,620,425	\$ 2,263,085	\$ (2,258,375)	\$ -	\$ 3,625,135

(1) Service Area 10, Page 2 Section I

(2) Service Area 10, Page 1

(3) Eligible debt funded projects as a percent of total principal times original annual debt service; does not reflect current outstanding balances

City of Waco - 2020 Roadway Impact Fee Study
 Capital Improvement Plan for Impact Fees
 Revenue Test
 Service Area 10

<u>Year</u>	<u>Impact Fee</u>	<u>Vehicle Miles</u>	<u>Impact Fee Revenue</u>	<u>Annual Expenses⁽¹⁾</u>	<u>Sub-Total</u>	<u>Accumulated Interest</u>	<u>Estimated Fund Balance</u>
Initial							\$ -
1	\$ 1,324	264	\$ 349,003	\$ (209,834)	\$ 558,836	\$ 978	559,814
2	1,324	264	349,003	(117,937)	466,939	2,776	1,029,530
3	1,324	264	349,003	(25,296)	374,299	4,258	1,408,087
4	1,324	264	349,003	68,105	280,898	5,420	1,694,405
5	1,324	264	349,003	87,003	262,000	6,389	1,962,794
6	1,324	264	349,003	105,901	243,102	7,295	2,213,191
7	1,324	264	349,003	124,799	224,204	8,139	2,445,534
8	1,324	264	349,003	143,696	205,306	8,919	2,659,758
9	1,324	264	349,003	162,594	186,408	9,635	2,855,802
10	1,324	264	349,003	181,492	167,510	10,288	3,033,601
11	-	-	-	406,859	(406,859)	9,906	2,636,648
12	-	-	-	331,580	(331,580)	8,648	2,313,716
13	-	-	-	256,300	(256,300)	7,649	2,065,065
14	-	-	-	181,021	(181,021)	6,911	1,890,955
15	-	-	-	181,021	(181,021)	6,302	1,716,235
16	-	-	-	181,021	(181,021)	5,690	1,540,904
17	-	-	-	181,021	(181,021)	5,076	1,364,959
18	-	-	-	181,021	(181,021)	4,461	1,188,399
19	-	-	-	181,021	(181,021)	3,843	1,011,220
20	-	-	-	181,021	(181,021)	3,222	833,421
21	-	-	-	165,488	(165,488)	2,627	670,560
22	-	-	-	148,871	(148,871)	2,086	523,776
23	-	-	-	131,509	(131,509)	1,603	393,870
24	-	-	-	113,388	(113,388)	1,180	281,662
25	-	-	-	94,490	(94,490)	820	187,993
26	-	-	-	75,592	(75,592)	526	112,927
27	-	-	-	56,694	(56,694)	296	56,529
28	-	-	-	37,796	(37,796)	132	18,865
29	-	-	-	18,898	(18,898)	33	-
			\$ 3,490,026	\$ 3,625,135		\$ 135,109	

(1) Service Area 10, Page 2 Section II

City of Waco - 2020 Roadway Impact Fee Study
 Capital Improvement Plan for Impact Fees
 Impact Fee Calculation
 Service Area 10

Year	Number of Years to End of Period	Interest Rate Factor	Impact Fee Factor	Annual Vehicle Miles		Annual Expense	
				Actual	Escalated	Actual	Escalated
1	29	1.1047	1.0000	264	291	\$ (209,834)	\$ (231,804)
2	28	1.1009	1.0000	264	290	(117,937)	(129,831)
3	27	1.0970	1.0000	264	289	(25,296)	(27,750)
4	26	1.0932	1.0000	264	288	68,105	74,451
5	25	1.0894	1.0000	264	287	87,003	94,778
6	24	1.0856	1.0000	264	286	105,901	114,963
7	23	1.0818	1.0000	264	285	124,799	135,005
8	22	1.0780	1.0000	264	284	143,696	154,907
9	21	1.0743	1.0000	264	283	162,594	174,668
10	20	1.0705	1.0000	264	282	181,492	194,289
11	19	1.0668	1.0000	-	-	406,859	434,026
12	18	1.0631	1.0000	-	-	331,580	352,486
13	17	1.0593	1.0000	-	-	256,300	271,511
14	16	1.0557	1.0000	-	-	181,021	191,095
15	15	1.0520	1.0000	-	-	181,021	190,429
16	14	1.0483	1.0000	-	-	181,021	189,764
17	13	1.0446	1.0000	-	-	181,021	189,103
18	12	1.0410	1.0000	-	-	181,021	188,443
19	11	1.0374	1.0000	-	-	181,021	187,786
20	10	1.0338	1.0000	-	-	181,021	187,131
21	9	1.0301	1.0000	-	-	165,488	170,477
22	8	1.0266	1.0000	-	-	148,871	152,824
23	7	1.0230	1.0000	-	-	131,509	134,530
24	6	1.0194	1.0000	-	-	113,388	115,588
25	5	1.0158	1.0000	-	-	94,490	95,987
26	4	1.0123	1.0000	-	-	75,592	76,522
27	3	1.0088	1.0000	-	-	56,694	57,191
28	2	1.0053	1.0000	-	-	37,796	37,995
29	1	1.0018	1.0000	-	-	18,898	18,931
					2,867		\$ 3,795,493

Annual Interest Rate:	0.35%
Value of Initial Impact Fee Fund Balance	\$ -
Total Escalated Expense for Entire Period	\$ 3,795,493
Less Future Value of Initial Impact Fee Fund Balance	-
Sub-Total	\$ 3,795,493
Total Escalated Vehicle Miles	2,867
Impact Fee For Service Area 10	\$ 1,324

City of Waco - 2020 Roadway Impact Fee Study

Capital Improvement Plan for Impact Fees

Impact Fee Project Funding

Service Area 10

<u>Impact Fee Roadway⁽¹⁾</u>	<u>Impact Fee Project No.⁽¹⁾</u>	<u>Cost In Service Area⁽¹⁾</u>	<u>Impact Fee Eligible Cost⁽¹⁾</u>	<u>Impact Fee Recoverable Cost</u>	<u>Debt Funded⁽³⁾ Proposed</u>	<u>Non-Debt Funded⁽³⁾</u>
Warren Rd (From City Limit To Ritchie Rd)	33	\$ 1,218,200	\$ 786,860	\$ 393,430	\$ 393,430	\$ -
Warren Rd (From Ritchie Rd To 3700' east of Ritchie Rd)	34	355,950	229,915	114,958	114,958	-
Farmiller Rd (From 1300' south of Chapel Rd To 2100' north)	35	1,255,567	810,996	405,498	405,498	-
Hewitt Dr (From Old McGregor Dr To Imperial Dr)	29	83,100	53,676	26,838	26,838	-
Hewitt Dr (From Imperial Dr To Mars Dr)	30	106,500	68,790	34,395	34,395	-
Chapel Rd (From Meadow Mountain Dr To Ritchie Rd)	36	1,835,620	1,185,664	592,832	592,832	-
Ritchie Rd (From Panther Way To Warren St)	37	2,137,800	1,380,848	690,424	690,424	-
Impact Fee Study		9,422	9,422	4,711	-	4,711
Total		\$ 7,002,158	\$ 4,526,171	\$ 2,263,085	\$ 2,258,375	\$ 4,711

(1) Per Freese & Nichols Impact Fee Study

(2) 50% of Eligible Costs

SUMMARY OF ROADWAY IMPACT FEE DETERMINATION

Service Area 11

Recoverable Impact Fee CIP Costs	\$ 1,588,886	Per Freese & Nichols Impact Fee Study
Financing Costs	953,433	See Detail Below
Interest Earnings	(94,576)	Page 3 of Service Area 11
Maximum Recoverable Cost for Impact Fee	\$ 2,447,742	Sum of Above
Equivalent Connections	2,094	Per Freese & Nichols Impact Fee Study
Maximum Assessable Impact Fee	\$ 1,169	

Recoverable Impact Fee CIP Costs:

Represents the portion of capital improvement costs that are eligible for funding through Impact fees after adjusting for the 50% credit. Reference is Freese & Nichols Impact Fee Study. In 2001, the Impact Fee Statute was amended to include either a credit for ad valorem and utility revenues generated by new service units during the ten-year timeframe that are used to fund impact fee eligible projects for which the new service units were charged an impact fee or a credit equal to 50% of the total cost of implementing the impact fee capital improvement plan. The City has elected to use the 50% credit.

Financing Costs:

Represents the interest costs associated with debt financing the new Impact fee project costs. Interest costs are derived from the City's Financial Advisor.

New Annual Debt Service	\$ 2,534,291	(Page 2 of Service Area 11)
Existing Annual Debt Service	-	(Page 2 of Service Area 11)
Principal Component	(1,580,859)	(Page 5 of Service Area 11)
Financing Costs	\$ 953,433	

Interest Earnings:

Represents the interest earned on cash flows and assumes a 0.35% annual interest rate per the most recent investment portfolio. The Impact Fee Statute states that interest earnings are funds of the impact fee account and are held to the same restrictions as impact fee revenues. Therefore, in order to recognize that interest earnings are used to fund capital improvements, interest earnings are credited against the recoverable costs. Reference is the sum of Accumulated Interest on page 3 of Service Area 11.

Maximum Recoverable Cost for Impact Fee:

Represents the sum of Recoverable Impact Fee CIP Costs (after 50% credit) plus Financing Costs less Interest Earnings.

Equivalent Connections:

Represents the growth in equivalent vehicle-miles over the ten-year timeframe. A vehicle-mile is a standardized measure of use attributable to an individual unit of development calculated in accordance with generally accepted engineering standards. Reference is Freese & Nichols Impact Fee Study.

Maximum Assessable Impact Fee:

Represents Maximum Recoverable Cost for Impact Fee divided by Equivalent Connections. This is the maximum impact fee that can be assessed by the City.

City of Waco - 2020 Roadway Impact Fee Study
Capital Improvement Plan for Impact Fees
Impact Fee Calculation Assumptions
Service Area 11

I. General Assumptions

Annual Interest Rate on Deposits ⁽¹⁾	0.35%
Annual Vehicle Mile Growth ⁽²⁾	209
Existing Fund Balance ⁽³⁾	\$ -
Portion of Projects Funded by Existing Debt ⁽⁴⁾	\$ -
Non-debt Funded Project Cost ⁽⁵⁾	8,027
New Project Cost Funded Through New Debt ⁽⁶⁾	1,580,859
Total Recoverable Project Cost ⁽⁷⁾	\$ 1,588,886

II. New Debt Issues Assumptions

<u>Year</u>	<u>Principal⁽⁸⁾</u>	<u>Interest⁽⁹⁾</u>	<u>Term</u>
1	\$ 158,086	3.25%	20
2	158,086	4.00%	20
3	158,086	4.50%	20
4	158,086	5.00%	20
5	158,086	5.50%	20
6	158,086	5.50%	20
7	158,086	5.50%	20
8	158,086	5.50%	20
9	158,086	5.50%	20
10	158,086	5.50%	20
Total	\$ 1,580,859		

III. Capital Expenditure Assumptions

<u>Year</u>	<u>Annual Capital Expenditures⁽¹⁰⁾</u>
1	\$ 803
2	53,498
3	106,193
4	158,889
5	158,889
6	158,889
7	158,889
8	158,889
9	158,889
10	158,889
11	158,086
12	105,391
13	52,695
Total	\$ 1,588,886

- (1) Estimated Interest Rate per Staff as of May 2020
- (2) Per Freese & Nichols Impact Fee Study
- (3) There is no existing fund balance because this is a new roadway impact fee
- (4) Per discussions with City Staff and City files
- (5) This assumes 0% of new project costs funded through sources other than debt, unless specified otherwise
- (6) This assumes 100% of new project costs funded through new debt issues, unless specified otherwise
- (7) Per Freese & Nichols Impact Fee Study
- (8) Assumes new debt issued in equal annual amounts
- (9) Estimated interest on future debt from Financial Advisor as of May 2020
- (10) Assumes new debt proceeds expended over a 3-year timeframe
 Non-debt funded capital expenditures allocated in equal annual amounts

City of Waco - 2020 Roadway Impact Fee Study

Capital Improvement Plan for Impact Fees

Debt Service and Expense Summary

Service Area 11

I. New Debt Service Detail

Year	Series 1	Series 2	Series 3	Series 4	Series 5	Series 6	Series 7	Series 8	Series 9	Series 10	Total Annual New Debt Service
1	\$ 10,873	\$ -	\$ -	\$ -	\$ -	\$ -	\$ -	\$ -	\$ -	\$ -	\$ 10,873
2	10,873	11,632	-	-	-	-	-	-	-	-	22,505
3	10,873	11,632	12,153	-	-	-	-	-	-	-	34,658
4	10,873	11,632	12,153	12,685	-	-	-	-	-	-	47,343
5	10,873	11,632	12,153	12,685	13,229	-	-	-	-	-	60,572
6	10,873	11,632	12,153	12,685	13,229	13,229	-	-	-	-	73,800
7	10,873	11,632	12,153	12,685	13,229	13,229	13,229	-	-	-	87,029
8	10,873	11,632	12,153	12,685	13,229	13,229	13,229	13,229	-	-	100,258
9	10,873	11,632	12,153	12,685	13,229	13,229	13,229	13,229	13,229	-	113,486
10	10,873	11,632	12,153	12,685	13,229	13,229	13,229	13,229	13,229	13,229	126,715
11	10,873	11,632	12,153	12,685	13,229	13,229	13,229	13,229	13,229	13,229	126,715
12	10,873	11,632	12,153	12,685	13,229	13,229	13,229	13,229	13,229	13,229	126,715
13	10,873	11,632	12,153	12,685	13,229	13,229	13,229	13,229	13,229	13,229	126,715
14	10,873	11,632	12,153	12,685	13,229	13,229	13,229	13,229	13,229	13,229	126,715
15	10,873	11,632	12,153	12,685	13,229	13,229	13,229	13,229	13,229	13,229	126,715
16	10,873	11,632	12,153	12,685	13,229	13,229	13,229	13,229	13,229	13,229	126,715
17	10,873	11,632	12,153	12,685	13,229	13,229	13,229	13,229	13,229	13,229	126,715
18	10,873	11,632	12,153	12,685	13,229	13,229	13,229	13,229	13,229	13,229	126,715
19	10,873	11,632	12,153	12,685	13,229	13,229	13,229	13,229	13,229	13,229	126,715
20	10,873	11,632	12,153	12,685	13,229	13,229	13,229	13,229	13,229	13,229	126,715
21	-	11,632	12,153	12,685	13,229	13,229	13,229	13,229	13,229	13,229	115,842
22	-	-	12,153	12,685	13,229	13,229	13,229	13,229	13,229	13,229	104,209
23	-	-	-	12,685	13,229	13,229	13,229	13,229	13,229	13,229	92,056
24	-	-	-	-	13,229	13,229	13,229	13,229	13,229	13,229	79,371
25	-	-	-	-	-	13,229	13,229	13,229	13,229	13,229	66,143
26	-	-	-	-	-	-	13,229	13,229	13,229	13,229	52,914
27	-	-	-	-	-	-	-	13,229	13,229	13,229	39,686
28	-	-	-	-	-	-	-	-	13,229	13,229	26,457
29	-	-	-	-	-	-	-	-	-	13,229	13,229
	\$ 217,459	\$ 232,645	\$ 243,061	\$ 253,704	\$ 264,570	\$ 264,570	\$ 264,570	\$ 264,570	\$ 264,570	\$ 264,570	\$ 2,534,291

II. Summary of Annual Expenses

Year	New Annual Debt Service ⁽¹⁾	Annual Capital Expenditures ⁽²⁾	Annual Bond Proceeds ⁽²⁾	Existing Annual Debt Service ⁽³⁾	Total Expense
1	\$ 10,873	\$ 803	\$ (158,086)	\$ -	\$ (146,410)
2	22,505	53,498	(158,086)	-	(82,083)
3	34,658	106,193	(158,086)	-	(17,234)
4	47,343	158,889	(158,086)	-	48,146
5	60,572	158,889	(158,086)	-	61,375
6	73,800	158,889	(158,086)	-	74,603
7	87,029	158,889	(158,086)	-	87,832
8	100,258	158,889	(158,086)	-	101,060
9	113,486	158,889	(158,086)	-	114,289
10	126,715	158,889	(158,086)	-	127,517
11	126,715	158,086	-	-	284,800
12	126,715	105,391	-	-	232,105
13	126,715	52,695	-	-	179,410
14	126,715	-	-	-	126,715
15	126,715	-	-	-	126,715
16	126,715	-	-	-	126,715
17	126,715	-	-	-	126,715
18	126,715	-	-	-	126,715
19	126,715	-	-	-	126,715
20	126,715	-	-	-	126,715
21	115,842	-	-	-	115,842
22	104,209	-	-	-	104,209
23	92,056	-	-	-	92,056
24	79,371	-	-	-	79,371
25	66,143	-	-	-	66,143
26	52,914	-	-	-	52,914
27	39,686	-	-	-	39,686
28	26,457	-	-	-	26,457
29	13,229	-	-	-	13,229
	\$ 2,534,291	\$ 1,588,886	\$ (1,580,859)	\$ -	\$ 2,542,319

(1) Service Area 11, Page 2 Section I

(2) Service Area 11, Page 1

(3) Eligible debt funded projects as a percent of total principal times original annual debt service; does not reflect current outstanding balances

City of Waco - 2020 Roadway Impact Fee Study
 Capital Improvement Plan for Impact Fees
 Revenue Test
 Service Area 11

<u>Year</u>	<u>Impact Fee</u>	<u>Vehicle Miles</u>	<u>Impact Fee Revenue</u>	<u>Annual Expenses⁽¹⁾</u>	<u>Sub-Total</u>	<u>Accumulated Interest</u>	<u>Estimated Fund Balance</u>
Initial							\$ -
1	\$ 1,169	209	\$ 244,774	\$ (146,410)	\$ 391,184	\$ 685	391,869
2	1,169	209	244,774	(82,083)	326,857	1,944	720,669
3	1,169	209	244,774	(17,234)	262,009	2,981	985,659
4	1,169	209	244,774	48,146	196,628	3,794	1,186,081
5	1,169	209	244,774	61,375	183,400	4,472	1,373,952
6	1,169	209	244,774	74,603	170,171	5,107	1,549,230
7	1,169	209	244,774	87,832	156,942	5,697	1,711,870
8	1,169	209	244,774	101,060	143,714	6,243	1,861,827
9	1,169	209	244,774	114,289	130,485	6,745	1,999,057
10	1,169	209	244,774	127,517	117,257	7,202	2,123,516
11	-	-	-	284,800	(284,800)	6,934	1,845,649
12	-	-	-	232,105	(232,105)	6,054	1,619,598
13	-	-	-	179,410	(179,410)	5,355	1,445,542
14	-	-	-	126,715	(126,715)	4,838	1,323,665
15	-	-	-	126,715	(126,715)	4,411	1,201,362
16	-	-	-	126,715	(126,715)	3,983	1,078,630
17	-	-	-	126,715	(126,715)	3,553	955,469
18	-	-	-	126,715	(126,715)	3,122	831,877
19	-	-	-	126,715	(126,715)	2,690	707,852
20	-	-	-	126,715	(126,715)	2,256	583,394
21	-	-	-	115,842	(115,842)	1,839	469,391
22	-	-	-	104,209	(104,209)	1,461	366,642
23	-	-	-	92,056	(92,056)	1,122	275,708
24	-	-	-	79,371	(79,371)	826	197,163
25	-	-	-	66,143	(66,143)	574	131,595
26	-	-	-	52,914	(52,914)	368	79,049
27	-	-	-	39,686	(39,686)	207	39,570
28	-	-	-	26,457	(26,457)	92	13,205
29	-	-	-	13,229	(13,229)	23	-
			\$ 2,447,742	\$ 2,542,319		\$ 94,576	

(1) Service Area 11, Page 2 Section II

City of Waco - 2020 Roadway Impact Fee Study
 Capital Improvement Plan for Impact Fees
 Impact Fee Calculation
 Service Area 11

<u>Year</u>	<u>Number of Years to End of Period</u>	<u>Interest Rate Factor</u>	<u>Impact Fee Factor</u>	<u>Annual Vehicle Miles</u>		<u>Annual Expense</u>	
				<u>Actual</u>	<u>Escalated</u>	<u>Actual</u>	<u>Escalated</u>
1	29	1.1047	1.0000	209	231	\$ (146,410)	\$ (161,740)
2	28	1.1009	1.0000	209	231	(82,083)	(90,361)
3	27	1.0970	1.0000	209	230	(17,234)	(18,906)
4	26	1.0932	1.0000	209	229	48,146	52,633
5	25	1.0894	1.0000	209	228	61,375	66,860
6	24	1.0856	1.0000	209	227	74,603	80,987
7	23	1.0818	1.0000	209	227	87,832	95,015
8	22	1.0780	1.0000	209	226	101,060	108,944
9	21	1.0743	1.0000	209	225	114,289	122,775
10	20	1.0705	1.0000	209	224	127,517	136,508
11	19	1.0668	1.0000	-	-	284,800	303,817
12	18	1.0631	1.0000	-	-	232,105	246,740
13	17	1.0593	1.0000	-	-	179,410	190,057
14	16	1.0557	1.0000	-	-	126,715	133,766
15	15	1.0520	1.0000	-	-	126,715	133,300
16	14	1.0483	1.0000	-	-	126,715	132,835
17	13	1.0446	1.0000	-	-	126,715	132,371
18	12	1.0410	1.0000	-	-	126,715	131,910
19	11	1.0374	1.0000	-	-	126,715	131,450
20	10	1.0338	1.0000	-	-	126,715	130,991
21	9	1.0301	1.0000	-	-	115,842	119,334
22	8	1.0266	1.0000	-	-	104,209	106,976
23	7	1.0230	1.0000	-	-	92,056	94,171
24	6	1.0194	1.0000	-	-	79,371	80,911
25	5	1.0158	1.0000	-	-	66,143	67,191
26	4	1.0123	1.0000	-	-	52,914	53,565
27	3	1.0088	1.0000	-	-	39,686	40,034
28	2	1.0053	1.0000	-	-	26,457	26,596
29	1	1.0018	1.0000	-	-	13,229	13,252
					2,277		\$ 2,661,983

Annual Interest Rate:	0.35%
Value of Initial Impact Fee Fund Balance	\$ -
Total Escalated Expense for Entire Period	\$ 2,661,983
Less Future Value of Initial Impact Fee Fund Balance	-
Sub-Total	\$ 2,661,983
Total Escalated Vehicle Miles	2,277
Impact Fee For Service Area 11	\$ 1,169

City of Waco - 2020 Roadway Impact Fee Study

Capital Improvement Plan for Impact Fees

Impact Fee Project Funding

Service Area 11

<u>Impact Fee Roadway⁽¹⁾</u>	<u>Impact Fee Project No.⁽¹⁾</u>	<u>Cost In Service Area⁽¹⁾</u>	<u>Impact Fee Eligible Cost⁽¹⁾</u>	<u>Impact Fee Recoverable Cost⁽²⁾</u>	<u>Debt Funded Proposed</u>	<u>Non-Debt Funded</u>
Val Verde Rd (From Fossil Rim Rd To US 84)	38	\$ 956,033	\$ 287,882	\$ 143,941	\$ 143,941	\$ -
Harris Creek Rd (From US 84 To Walking Horse Ln)	39	711,100	214,128	107,064	107,064	-
Speegleville Rd (From Pecan Creek To Oak Rd)	40	3,297,667	992,999	496,499	496,499	-
Speegleville Rd (From Oak Rd To US 84)	41	2,686,267	808,893	404,447	404,447	-
Old Lorena Rd (From US 84 EBFR To South Bosque River)	42	2,848,733	857,815	428,908	428,908	-
Impact Fee Study		16,054	16,054	8,027	-	8,027
Total		\$ 10,515,854	\$ 3,177,772	\$ 1,588,886	\$ 1,580,859	\$ 8,027

(1) Per Freese & Nichols Impact Fee Study

(2) 50% of Eligible Costs

Appendix J

Impact Fee Ordinance

ORDINANCE 2020-793

AN ORDINANCE OF THE CITY OF WACO, TEXAS, AMENDING THE CODE OF ORDINANCES OF THE CITY OF WACO, TEXAS, BY ADDING APPENDIX C ENTITLED “IMPACT FEES”; PROVIDING FOR DEFINITIONS; ESTABLISHING ROADWAY IMPACT FEES WITHIN THE CITY LIMITS, AND WATER AND WASTEWATER IMPACT FEES IN THE CITY AND ITS EXTRATERRITORIAL JURISDICTION SERVICE AREA; PROVIDING FOR ASSESSMENT OF SAID IMPACT FEES; PROVIDING FOR THE GENERAL ADMINISTRATION OF SAID IMPACT FEES; PROVIDING FOR THE ACCOUNTING OF THE COLLECTED FEES; PROVIDING FOR WAIVERS OF IMPACT FEES; PROVIDING FOR A FEE REFUND; PROVIDING FOR AN APPEAL PROCEDURE; ESTABLISHING AN EFFECTIVE DATE OF JUNE 1, 2021; REPEALING ALL ORDINANCES OR PARTS OF ORDINANCES IN CONFLICT HEREWITH; PROVIDING FOR PENALTIES; PROVIDING A SEVERABILITY CLAUSE; AND FINDING AND DETERMINING THAT THE MEETING AT WHICH THIS ORDINANCE IS PASSED IS OPEN TO THE PUBLIC AS REQUIRED BY LAW.

WHEREAS, Chapter 395 of the Texas Local Government Code (the “Statute”) authorizes and provides the requirements for political subdivisions to impose impact fees on new developments in order to generate funding or recoup the costs of capital improvements or facility expansion necessitated by and attributable to the new development; and

WHEREAS, the Statute requires the City to conduct an impact fee study to determine the feasibility of adopting impact fees and the study includes development of the City’s Land Use Assumptions (LUA) and Capital Improvements Plan (CIP) Report and the calculation of the maximum allowable impact fees; and

WHEREAS, on December 18, 2018, City Council approved a consulting contract with Freese and Nichols, Inc., to perform an impact fee study for Water, Wastewater, and Roadways and to develop the LUA and CIP Report; and

WHEREAS, in July 2019, pursuant to sec. 395.058 of the Statute, the City appointed the Capital Improvement Advisory Committee, which is composed of the Plan Commission and four members of the development community, to assist Freese and Nichols in adopting land use assumptions and reviewing the capital improvements plan; and

WHEREAS, after notice of a public hearing was given as required by the Statute, the City Council held a public hearing on March 17, 2020, and on April 7, 2020, by Resolution No. 2020-237, approved the land use assumptions and capital improvements plan; and

WHEREAS, the City Council held a public hearing on October 6, 2020, to consider the imposition of impact fees, and the Capital Improvement Advisory Committee of the City of Waco filed its written comments on the proposed impact fees before the fifth business day of the date of said public hearing; and

WHEREAS, the City Council finds that the City has fully complied with the Statute in adopting and imposing the impact fees in this ordinance; and

WHEREAS, the City Council finds it to be in the best interest of the citizens of the City of Waco to adopt and approve the impact fees and related administrative processes described herein,

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

Section 1. That the recitals stated above are hereby adopted and approved and incorporated into the body of this ordinance as fully set forth herein, and the impact fees set forth in this ordinance are hereby approved.

Section 2. That the Code of Ordinances of the City of Waco, Texas, shall be amended by adding "APPENDIX C IMPACT FEES", which shall read as follows:

APPENDIX C. IMPACT FEES

Part I. General Provisions

1.1 Purpose

This Chapter is intended to assure the provision of adequate public facilities to serve new development in the City by requiring each such development to pay its share of the costs of such improvements necessitated by and attributable to such new development.

1.2 Definitions

Terms defined herein are specific to this Chapter and shall not be construed as conflicting with similar terms in other parts of the Municipal Code.

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

Capital improvement means any of the following facilities with a life expectancy of three or more years and owned or operated by or on behalf of the City:

- (1) water supply, treatment and distribution facilities; wastewater collection and treatment facilities; and storm water, drainage and flood control facilities; whether or not they are located within the service area; and
- (2) roadway facilities.

Capital improvements plan means a plan approved by the City Council that identifies capital improvements or facility expansions for which impact fees may be assessed.

City means the City of Waco, Texas.

City core and traditional commercial corridors means a geographic location that encompasses the Image Waco master plan area and some additional area within Sanger Heights, University neighborhood and commercial corridors, as depicted in the map attached as “Map Exhibit 2,” which have been collectively selected by the City Council to receive special consideration in order to encourage economic development.

City Council means the City Council of the City of Waco, Texas.

City Manager means the City Manager of the City of Waco, Texas, or his or her designee.

Change of Use means a new development involving a change in use or occupancy of any existing structure, with the exception of shell structures never previously occupied, that has the effect of increasing the number of service units beyond those attributable to the immediately preceding use, which requires the issuance of a new permit and which may include, but is not limited to, the reconstruction, redevelopment, conversion, structural alteration or enlargement of any structure.

Director means the Director of the Development Services Department of the City of Waco, Texas, or his or her designee.

Effective date means June 1, 2021.

Extraterritorial jurisdiction (ETJ) means the extraterritorial range of the City's authority outside corporate limits of the City.

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

Fee Phasing means upon adoption of this ordinance, developments with an approved preliminary plat or final plat will be assessed an impact fee according to the following schedule:

- (1) June 2021: twenty (20) percent of maximum fee of impact fee after application of credits
- (2) June 2022: forty (40) percent of maximum fee of impact fee after application of credits
- (3) June 2023: sixty (60) percent of maximum fee of impact fee after application of credits
- (4) June 2024: eighty (80) percent of maximum fee of impact fee after application of credits
- (5) June 2024: one hundred (100) percent of maximum fee of impact fee after application of credits

Final Plat means the map of a subdivision (and any required accompanying material) which is presented to the City Plan Commission, the City Council or authorized City staff for approval, and which, if approved, is recorded in the Official Public Records of McLennan County.

Impact fee means a charge or assessment imposed as set forth in this Chapter against new development. The term does not include:

- (1) dedication of land for public parks or payment in lieu of the dedication to serve park needs;
- (2) dedication of rights-of-way or easements, or construction or dedication of on-site or off-site water distribution, wastewater collection or drainage facilities, or streets, sidewalks or curbs if the dedication or construction is required by a valid ordinance and is necessitated by and attributable to the new development;
- (3) lot or acreage fees to be placed in trust funds for the purpose of reimbursing developers for oversizing or constructing water or sewer mains or lines; or
- (4) other pro rata fees for reimbursement of water or sewer mains or lines extended by the City.

Land use assumptions means a description of the service area and projections of changes in land uses, densities, intensities and population in the service area over at least a ten (10) year period and approved by the City Council.

New development means the subdivision of land; 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 has the effect of increasing the requirements for capital improvements or facility expansions, measured by the number of service units to be generated by such activity, and which requires either the approval of a plat pursuant to the City's subdivision regulations, the issuance of a building permit or connection to the city's water or wastewater system, and which has not been exempted from these regulations by provisions herein or attached hereto. Installation of a larger water meter will constitute new development.

Owner means an owner of real property who is subject to this Chapter, or an agent, employee or representative thereof who is authorized to act on the real property owner's behalf or a person who has paid an impact fee under this Chapter.

Preliminary plat means the preliminary maps and plans approved by Plan Commission and City Council which indicate the proposed layout of the subdivision.

Roadway facilities means arterial or collector streets or roads which have been designated on an officially adopted thoroughfare plan of the City, together with all necessary appurtenances. The term includes the City's share of costs for roadways and associated improvements designated on the federal or Texas highway system, including, but not limited to, local matching funds and costs related to utility line relocation and the establishment of curbs, gutters, sidewalks, drainage appurtenances, and rights-of-way.

School District means a geographic area that contains public or private institutions for the teaching of students. This includes colleges and universities.

Service area means:

- (1) for purposes of water (Map Exhibit 3) and wastewater (Map Exhibit 4), the area within the corporate boundaries of the City and ETJ to be served by the capital improvements or facilities expansions specified in the capital improvements plan; and
- (2) for purposes of roadways (Map Exhibit 5), an area within the corporate boundaries of the City that does not exceed six miles within which roadway impact fees for capital improvements will be collected for new development, and within which fees so collected will be expended for those capital improvements identified in the capital improvements plan to be located therein. The roadway service areas are more fully described in the Study.

Service unit means a 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 and based on historical data and trends applicable to the City during the previous ten (10) years. The service units for purposes of roadways, water, and wastewater are more fully described in the Study.

Site-related facility means an 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 roadway, water or wastewater facilities to serve the new development, and which is not included in the capital improvements plan and for which the owner is solely responsible under subdivision or other applicable regulations or which is located at least partially on the plat which is being considered for impact fee assessment. This term includes that portion of an off-site water or wastewater main, equivalent to a standard size water or wastewater main, which is necessary to connect any new development with the City's water or wastewater system, the cost of which has not been included in the City's impact fee capital improvements plan.

Study means, collectively, the roadway impact fee study and the water and wastewater impact fee study performed by Freese and Nichols, Inc., on file in the City's Development Services Department.

System-related facility means a capital improvement or facility expansion which is designated in the capital improvements plan and which is not a site-related facility. This term may include a capital improvement which is located off-site or within or on the perimeter of the development site.

Wastewater facility means a wastewater interceptor or main, lift station or other facility or improvement used for providing wastewater collection and treatment included within the City's collection system for wastewater. This term includes, but is not limited to, land, easements or structures associated with such facilities. This term excludes a site-related facility.

Water facility means a water interceptor or main, pump station, storage tank or other facility or improvement used for providing water supply, treatment and distribution service included within the City's water storage or distribution system. This term includes, but is not limited to, land, easements or structures associated with such facilities. This term excludes site-related facilities.

1.3 Study Adopted

The Study is hereby approved and adopted for all purposes consistent with this Chapter.

1.4 Applicability

The provisions of this Chapter apply to all new development within the corporate boundaries of the City for roadway fees and within the boundaries of the City and its extraterritorial jurisdiction for water and wastewater fees.

Part II. Impact Fees

2.1 Impact Fees Adopted

- (A) A pre-credit water impact fee of \$1,804.00 per service unit shall be assessed and charged against new development in the service area as set forth in Table 1.

For final plats approved before the effective date and final plats recorded on or after the effective date:

Table 1

Water Meter Size	Service Unit Equivalents	Maximum Assessed Impact Fee	Maximum Impact Fee after Application of General Credit (see Section 2.4 A)
5/8"	1.0	\$1,804.00	\$1,000.00
1"	2.67	\$4,817.00	\$2,670.00
1.5"	6.67	\$12,033.00	\$6,670.00
2"	10.67	\$19,249.00	\$10,670.00
3"	23.3	\$42,087.00	\$23,330.00
4"	42.00	\$75,768.00	\$42,000.00
6"	93.33	\$168,367.00	\$93,330.00
8"	160	\$288,640.00	\$160,000.00
10"	253.33	\$457,007.00	\$253,330.00

- (B) A pre-credit wastewater impact fee of \$3,574.00 per service unit shall be assessed and charged against new development in the service area as set forth in Table 2.

For final plats approved before the effective date and final plats recorded on or after the effective date:

Table 2

Water Meter Size	Service Unit Equivalents	Maximum Assessed Impact Fee	Maximum Impact Fee after Application of General Credit (see Section 2.4 A)
5/8"	1.0	\$3,574.00	\$2,000.00
1"	2.67	\$9,543.00	\$5,340.00
1.5"	6.67	\$23,839.00	\$13,340.00
2"	10.67	\$38,135.00	\$21,340.00
3"	23.3	\$83,381.00	\$46,660.00
4"	42.00	\$150,108.00	\$84,000.00
6"	93.33	\$333,561.00	\$186,660.00
8"	160	\$571,840.00	\$320,000.00
10"	253.33	\$905,401.00	\$506,660.00

- (C) A pre-credit roadway impact fee of:
- (1) \$6.00 per service unit in Service Area 1;
 - (2) \$697.00 per service unit in Service Area 2;
 - (3) \$1,294.00 per service unit in Service Area 3;
 - (4) \$259.00 per service unit in Service Area 4;
 - (5) \$0.00 per service unit in Service Area 5;
 - (6) \$236.00 per service unit in Service Area 6;
 - (7) \$950.00 per service unit in Service Area 7;
 - (8) \$0.00 per service unit in Service Area 8;
 - (9) \$618.00 per service unit in Service Area 9;
 - (10) \$1,324.00 per service unit in Service Area 10; and
 - (11) \$1,169.00 per service unit in Service Area 11,

shall be assessed as shown in Table 3 and charged against new development in such service areas as set forth in Table 4.

For final plats approved before the effective date and for final plats recorded on or after the effective date:

Table 3 – Roadway Maximum Assessed Impact Fee

Land Use Category	Roadway Maximum Assessed Impact Fee										
	Service Area 1	Service Area 2	Service Area 3	Service Area 4	Service Area 5	Service Area 6	Service Area 7	Service Area 8	Service Area 9	Service Area 10	Service Area 11
Industrial											
General Light Industrial	\$16.26	\$1,888.87	\$3,506.74	\$701.89	\$0.00	\$639.56	\$2,574.50	\$0.00	\$1,674.78	\$3,588.04	\$3,167.99
Manufacturing	\$17.28	\$2,007.36	\$3,726.72	\$745.92	\$0.00	\$679.68	\$2,736.00	\$0.00	\$1,779.84	\$3,813.12	\$3,366.72
Warehousing	\$4.92	\$571.54	\$1,061.08	\$212.38	\$0.00	\$193.52	\$779.00	\$0.00	\$506.76	\$1,085.68	\$958.58
Mini-Warehouse	\$2.22	\$257.89	\$478.78	\$95.83	\$0.00	\$87.32	\$351.50	\$0.00	\$228.66	\$489.88	\$432.53
High-Cube Fulfillment Center											
Warehouse	\$35.34	\$4,105.33	\$7,621.66	\$1,525.51	\$0.00	\$1,390.04	\$5,595.50	\$0.00	\$3,640.02	\$7,798.36	\$6,885.41
Data Center	\$2.34	\$271.83	\$504.66	\$101.01	\$0.00	\$92.04	\$370.50	\$0.00	\$241.02	\$516.36	\$455.91
Residential											
Single-Family Detached Housing	\$19.20	\$2,230.40	\$4,140.80	\$828.80	\$0.00	\$755.20	\$3,040.00	\$0.00	\$1,977.60	\$4,236.80	\$3,740.80
Multifamily Housing (Low-Rise)	\$10.86	\$1,261.57	\$2,342.14	\$468.79	\$0.00	\$427.16	\$1,719.50	\$0.00	\$1,118.58	\$2,396.44	\$2,115.89
Multifamily Housing (Mid-Rise)	\$8.52	\$989.74	\$1,837.48	\$367.78	\$0.00	\$335.12	\$1,349.00	\$0.00	\$877.56	\$1,880.08	\$1,659.98
Off-Campus Student Apartment	\$1.44	\$167.28	\$310.56	\$62.16	\$0.00	\$56.64	\$228.00	\$0.00	\$148.32	\$317.76	\$280.56
Mid-Rise Residential with 1st-Floor Commercial	\$6.00	\$697.00	\$1,294.00	\$259.00	\$0.00	\$236.00	\$950.00	\$0.00	\$618.00	\$1,324.00	\$1,169.00
Senior Adult Housing - Detached	\$5.16	\$599.42	\$1,112.84	\$222.74	\$0.00	\$202.96	\$817.00	\$0.00	\$531.48	\$1,138.64	\$1,005.34
Assisted Living	\$2.28	\$264.86	\$491.72	\$98.42	\$0.00	\$89.68	\$361.00	\$0.00	\$234.84	\$503.12	\$444.22
Continuing Care Retirement Community	\$2.76	\$320.62	\$595.24	\$119.14	\$0.00	\$108.56	\$437.00	\$0.00	\$284.28	\$609.04	\$537.74
Lodging											
Hotel	\$5.10	\$592.45	\$1,099.90	\$220.15	\$0.00	\$200.60	\$807.50	\$0.00	\$525.30	\$1,125.40	\$993.65
All Suites Hotel	\$3.06	\$355.47	\$659.94	\$132.09	\$0.00	\$120.36	\$484.50	\$0.00	\$315.18	\$675.24	\$596.19
Recreational											
Golf Course	\$34.74	\$4,035.63	\$7,492.26	\$1,499.61	\$0.00	\$1,366.44	\$5,500.50	\$0.00	\$3,578.22	\$7,665.96	\$6,768.51
Miniature Golf Course	\$2.82	\$327.59	\$608.18	\$121.73	\$0.00	\$110.92	\$446.50	\$0.00	\$290.46	\$622.28	\$549.43
Golf Driving Range	\$10.56	\$1,226.72	\$2,277.44	\$455.84	\$0.00	\$415.36	\$1,672.00	\$0.00	\$1,087.68	\$2,330.24	\$2,057.44
Multiplex Movie Theater	\$93.06	\$10,810.47	\$20,069.94	\$4,017.09	\$0.00	\$3,660.36	\$14,734.50	\$0.00	\$9,585.18	\$20,535.24	\$18,131.19
Health/Fitness Club	\$14.70	\$1,707.65	\$3,170.30	\$634.55	\$0.00	\$578.20	\$2,327.50	\$0.00	\$1,514.10	\$3,243.80	\$2,864.05
Institutional											
Private School (K-8)	\$2.22	\$257.89	\$478.78	\$95.83	\$0.00	\$87.32	\$351.50	\$0.00	\$228.66	\$489.88	\$432.53
Private School (K-12)	\$1.44	\$167.28	\$310.56	\$62.16	\$0.00	\$56.64	\$228.00	\$0.00	\$148.32	\$317.76	\$280.56
Charter Elementary School	\$1.20	\$139.40	\$258.80	\$51.80	\$0.00	\$47.20	\$190.00	\$0.00	\$123.60	\$264.80	\$233.80
Junior/Community College	\$0.96	\$111.52	\$207.04	\$41.44	\$0.00	\$37.76	\$152.00	\$0.00	\$98.88	\$211.84	\$187.04
University/College	\$1.56	\$181.22	\$336.44	\$67.34	\$0.00	\$61.36	\$247.00	\$0.00	\$160.68	\$344.24	\$303.94
Church	\$2.52	\$292.74	\$543.48	\$108.78	\$0.00	\$99.12	\$399.00	\$0.00	\$259.56	\$556.08	\$490.98
Day Care Center	\$0.66	\$76.67	\$142.34	\$28.49	\$0.00	\$25.96	\$104.50	\$0.00	\$67.98	\$145.64	\$128.59
Medical											
Hospital	\$10.32	\$1,198.84	\$2,225.68	\$445.48	\$0.00	\$405.92	\$1,634.00	\$0.00	\$1,062.96	\$2,277.28	\$2,010.68
Nursing Home	\$6.24	\$724.88	\$1,345.76	\$269.36	\$0.00	\$245.44	\$988.00	\$0.00	\$642.72	\$1,376.96	\$1,215.76
Clinic	\$34.86	\$4,049.57	\$7,518.14	\$1,504.79	\$0.00	\$1,371.16	\$5,519.50	\$0.00	\$3,590.58	\$7,692.44	\$6,791.89
Animal Hospital/Veterinary Clinic	\$37.50	\$4,356.25	\$8,087.50	\$1,618.75	\$0.00	\$1,475.00	\$5,937.50	\$0.00	\$3,862.50	\$8,275.00	\$7,306.25
Free-Standing Emergency Room	\$16.14	\$1,874.93	\$3,480.86	\$696.71	\$0.00	\$634.84	\$2,555.50	\$0.00	\$1,662.42	\$3,561.56	\$3,144.61
Office											
General Office Building	\$29.70	\$3,450.15	\$6,405.30	\$1,282.05	\$0.00	\$1,168.20	\$4,702.50	\$0.00	\$3,059.10	\$6,553.80	\$5,786.55
Medical-Dental Office Building	\$72.24	\$8,391.88	\$15,579.76	\$3,118.36	\$0.00	\$2,841.44	\$11,438.00	\$0.00	\$7,440.72	\$15,940.96	\$14,074.76
United States Post Office	\$58.08	\$6,746.96	\$12,525.92	\$2,507.12	\$0.00	\$2,284.48	\$9,196.00	\$0.00	\$5,982.24	\$12,816.32	\$11,315.92
Research and Development Center	\$12.66	\$1,470.67	\$2,730.34	\$546.49	\$0.00	\$497.96	\$2,004.50	\$0.00	\$1,303.98	\$2,793.64	\$2,466.59
Automotive											
Quick Lubrication Vehicle Shop	\$14.28	\$1,658.86	\$3,079.72	\$616.42	\$0.00	\$561.68	\$2,261.00	\$0.00	\$1,470.84	\$3,151.12	\$2,782.22
Automobile Parts Service Center	\$4.50	\$522.75	\$970.50	\$194.25	\$0.00	\$177.00	\$712.50	\$0.00	\$463.50	\$993.00	\$876.75
Car Wash and Detail Center	\$10.50	\$1,219.75	\$2,264.50	\$453.25	\$0.00	\$413.00	\$1,662.50	\$0.00	\$1,081.50	\$2,317.00	\$2,045.75

Table 3 (cont.) – Roadway Maximum Assessed Impact Fee

Land Use Category	Roadway Maximum Assessed Impact Fee										
	Service Area 1	Service Area 2	Service Area 3	Service Area 4	Service Area 5	Service Area 6	Service Area 7	Service Area 8	Service Area 9	Service Area 10	Service Area 11
Dining											
Quality Restaurant	\$17.34	\$2,014.33	\$3,739.66	\$748.51	\$0.00	\$682.04	\$2,745.50	\$0.00	\$1,786.02	\$3,826.36	\$3,378.41
High-Turnover (Sit-Down) Restaurant	\$24.18	\$2,808.91	\$5,214.82	\$1,043.77	\$0.00	\$951.08	\$3,828.50	\$0.00	\$2,490.54	\$5,335.72	\$4,711.07
Fast-Food Restaurant w/ Drive-Through Window	\$64.02	\$7,436.99	\$13,806.98	\$2,763.53	\$0.00	\$2,518.12	\$10,136.50	\$0.00	\$6,594.06	\$14,127.08	\$12,473.23
Bread/Donut/Bagel Shop w/o Drive-Through Window	\$18.60	\$2,160.70	\$4,011.40	\$802.90	\$0.00	\$731.60	\$2,945.00	\$0.00	\$1,915.80	\$4,104.40	\$3,623.90
Other Retail											
Shopping Center	\$22.26	\$2,585.87	\$4,800.74	\$960.89	\$0.00	\$875.56	\$3,524.50	\$0.00	\$2,292.78	\$4,912.04	\$4,336.99
Building Materials and Lumber Store	\$11.34	\$1,317.33	\$2,445.66	\$489.51	\$0.00	\$446.04	\$1,795.50	\$0.00	\$1,168.02	\$2,502.36	\$2,209.41
Free-Standing Discount Superstore	\$45.66	\$5,304.17	\$9,847.34	\$1,970.99	\$0.00	\$1,795.96	\$7,229.50	\$0.00	\$4,702.98	\$10,075.64	\$8,896.09
Variety Store	\$75.12	\$8,726.44	\$16,200.88	\$3,242.68	\$0.00	\$2,954.72	\$11,894.00	\$0.00	\$7,737.36	\$16,576.48	\$14,635.88
Free-Standing Discount Store	\$33.96	\$3,945.02	\$7,324.04	\$1,465.94	\$0.00	\$1,335.76	\$5,377.00	\$0.00	\$3,497.88	\$7,493.84	\$6,616.54
Hardware/Paint Store	\$9.00	\$1,045.50	\$1,941.00	\$388.50	\$0.00	\$354.00	\$1,425.00	\$0.00	\$927.00	\$1,986.00	\$1,753.50
Nursery (Garden Center)	\$38.16	\$4,432.92	\$8,229.84	\$1,647.24	\$0.00	\$1,500.96	\$6,042.00	\$0.00	\$3,930.48	\$8,420.64	\$7,434.84
Supermarket	\$15.54	\$1,805.23	\$3,351.46	\$670.81	\$0.00	\$611.24	\$2,460.50	\$0.00	\$1,600.62	\$3,429.16	\$3,027.71
Convenience Market w/ Gasoline Pumps	\$6.24	\$724.88	\$1,345.76	\$269.36	\$0.00	\$245.44	\$988.00	\$0.00	\$642.72	\$1,376.96	\$1,215.76
Discount Club	\$42.90	\$4,983.55	\$9,252.10	\$1,851.85	\$0.00	\$1,687.40	\$6,792.50	\$0.00	\$4,418.70	\$9,466.60	\$8,358.35
Sporting Goods Superstore	\$17.70	\$2,056.15	\$3,817.30	\$764.05	\$0.00	\$696.20	\$2,802.50	\$0.00	\$1,823.10	\$3,905.80	\$3,448.55
Home Improvement Superstore	\$9.54	\$1,108.23	\$2,057.46	\$411.81	\$0.00	\$375.24	\$1,510.50	\$0.00	\$982.62	\$2,105.16	\$1,858.71
Electronic Superstore	\$16.86	\$1,958.57	\$3,636.14	\$727.79	\$0.00	\$663.16	\$2,669.50	\$0.00	\$1,736.58	\$3,720.44	\$3,284.89
Pet Supply Superstore	\$36.48	\$4,237.76	\$7,867.52	\$1,574.72	\$0.00	\$1,434.88	\$5,776.00	\$0.00	\$3,757.44	\$8,049.92	\$7,107.52
Office Supply Superstore	\$28.38	\$3,296.81	\$6,120.62	\$1,225.07	\$0.00	\$1,116.28	\$4,493.50	\$0.00	\$2,923.14	\$6,262.52	\$5,529.37
Discount Home Furnishing Superstore	\$22.98	\$2,669.51	\$4,956.02	\$991.97	\$0.00	\$903.88	\$3,638.50	\$0.00	\$2,366.94	\$5,070.92	\$4,477.27
Department Store	\$20.04	\$2,327.98	\$4,321.96	\$865.06	\$0.00	\$788.24	\$3,173.00	\$0.00	\$2,064.12	\$4,422.16	\$3,904.46
Arts and Crafts Store	\$63.66	\$7,395.17	\$13,729.34	\$2,747.99	\$0.00	\$2,503.96	\$10,079.50	\$0.00	\$6,556.98	\$14,047.64	\$12,403.09
Pharmacy/Drugstore w/o Drive-Through Window	\$12.78	\$1,484.61	\$2,756.22	\$551.67	\$0.00	\$502.68	\$2,023.50	\$0.00	\$1,316.34	\$2,820.12	\$2,489.97
Pharmacy/Drugstore w/ Drive-Through Window	\$15.48	\$1,798.26	\$3,338.52	\$668.22	\$0.00	\$608.88	\$2,451.00	\$0.00	\$1,594.44	\$3,415.92	\$3,016.02
Furniture Store	\$1.20	\$139.40	\$258.80	\$51.80	\$0.00	\$47.20	\$190.00	\$0.00	\$123.60	\$264.80	\$233.80
Services											
Walk-in Bank	\$17.70	\$2,056.15	\$3,817.30	\$764.05	\$0.00	\$696.20	\$2,802.50	\$0.00	\$1,823.10	\$3,905.80	\$3,448.55
Drive-in Bank	\$39.60	\$4,600.20	\$8,540.40	\$1,709.40	\$0.00	\$1,557.60	\$6,270.00	\$0.00	\$4,078.80	\$8,738.40	\$7,715.40

Table 4 – Roadway Maximum Impact Fee after Application of General Credit

Land Use Category	Roadway Maximum Impact Fee after Application of General Credit										
	Service Area 1	Service Area 2	Service Area 3	Service Area 4	Service Area 5	Service Area 6	Service Area 7	Service Area 8	Service Area 9	Service Area 10	Service Area 11
Industrial											
General Light Industrial	\$16.26	\$1,270.31	\$1,270.31	\$701.89	\$0.00	\$639.56	\$1,270.31	\$0.00	\$1,270.31	\$1,270.31	\$1,270.31
Manufacturing	\$17.28	\$1,350.00	\$1,350.00	\$745.92	\$0.00	\$679.68	\$1,350.00	\$0.00	\$1,350.00	\$1,350.00	\$1,350.00
Warehousing	\$4.92	\$384.38	\$384.38	\$212.38	\$0.00	\$193.52	\$384.38	\$0.00	\$384.38	\$384.38	\$384.38
Mini-Warehouse	\$2.22	\$173.44	\$173.44	\$95.83	\$0.00	\$87.32	\$173.44	\$0.00	\$173.44	\$173.44	\$173.44
High-Cube Fulfillment Center Warehouse	\$35.34	\$2,760.94	\$2,760.94	\$1,525.51	\$0.00	\$1,390.04	\$2,760.94	\$0.00	\$2,760.94	\$2,760.94	\$2,760.94
Data Center	\$2.34	\$182.81	\$182.81	\$101.01	\$0.00	\$92.04	\$182.81	\$0.00	\$182.81	\$182.81	\$182.81
Residential											
Single-Family Detached Housing	\$19.20	\$1,500.00	\$1,500.00	\$828.80	\$0.00	\$755.20	\$1,500.00	\$0.00	\$1,500.00	\$1,500.00	\$1,500.00
Multifamily Housing (Low-Rise)	\$10.86	\$848.44	\$848.44	\$468.79	\$0.00	\$427.16	\$848.44	\$0.00	\$848.44	\$848.44	\$848.44
Multifamily Housing (Mid-Rise)	\$8.52	\$665.63	\$665.63	\$367.78	\$0.00	\$335.12	\$665.63	\$0.00	\$665.63	\$665.63	\$665.63
Off-Campus Student Apartment	\$1.44	\$112.50	\$112.50	\$62.16	\$0.00	\$56.64	\$112.50	\$0.00	\$112.50	\$112.50	\$112.50
Mid-Rise Residential with 1st-Floor Commercial	\$6.00	\$468.75	\$468.75	\$259.00	\$0.00	\$236.00	\$468.75	\$0.00	\$468.75	\$468.75	\$468.75
Senior Adult Housing - Detached	\$5.16	\$403.13	\$403.13	\$222.74	\$0.00	\$202.96	\$403.13	\$0.00	\$403.13	\$403.13	\$403.13
Assisted Living	\$2.28	\$178.13	\$178.13	\$98.42	\$0.00	\$89.68	\$178.13	\$0.00	\$178.13	\$178.13	\$178.13
Continuing Care Retirement Community	\$2.76	\$215.63	\$215.63	\$119.14	\$0.00	\$108.56	\$215.63	\$0.00	\$215.63	\$215.63	\$215.63
Lodging											
Hotel	\$5.10	\$398.44	\$398.44	\$220.15	\$0.00	\$200.60	\$398.44	\$0.00	\$398.44	\$398.44	\$398.44
All Suites Hotel	\$3.06	\$239.06	\$239.06	\$132.09	\$0.00	\$120.36	\$239.06	\$0.00	\$239.06	\$239.06	\$239.06
Recreational											
Golf Course	\$34.74	\$2,714.06	\$2,714.06	\$1,499.61	\$0.00	\$1,366.44	\$2,714.06	\$0.00	\$2,714.06	\$2,714.06	\$2,714.06
Miniature Golf Course	\$2.82	\$220.31	\$220.31	\$121.73	\$0.00	\$110.92	\$220.31	\$0.00	\$220.31	\$220.31	\$220.31
Golf Driving Range	\$10.56	\$825.00	\$825.00	\$455.84	\$0.00	\$415.36	\$825.00	\$0.00	\$825.00	\$825.00	\$825.00
Multiplex Movie Theater	\$93.06	\$7,270.31	\$7,270.31	\$4,017.09	\$0.00	\$3,660.36	\$7,270.31	\$0.00	\$7,270.31	\$7,270.31	\$7,270.31
Health/Fitness Club	\$14.70	\$1,148.44	\$1,148.44	\$634.55	\$0.00	\$578.20	\$1,148.44	\$0.00	\$1,148.44	\$1,148.44	\$1,148.44
Institutional											
Private School (K-8)	\$2.22	\$173.44	\$173.44	\$95.83	\$0.00	\$87.32	\$173.44	\$0.00	\$173.44	\$173.44	\$173.44
Private School (K-12)	\$1.44	\$112.50	\$112.50	\$62.16	\$0.00	\$56.64	\$112.50	\$0.00	\$112.50	\$112.50	\$112.50
Charter Elementary School	\$1.20	\$93.75	\$93.75	\$51.80	\$0.00	\$47.20	\$93.75	\$0.00	\$93.75	\$93.75	\$93.75
Junior/Community College	\$0.96	\$75.00	\$75.00	\$41.44	\$0.00	\$37.76	\$75.00	\$0.00	\$75.00	\$75.00	\$75.00
University/College	\$1.56	\$121.88	\$121.88	\$67.34	\$0.00	\$61.36	\$121.88	\$0.00	\$121.88	\$121.88	\$121.88
Church	\$2.52	\$196.88	\$196.88	\$108.78	\$0.00	\$99.12	\$196.88	\$0.00	\$196.88	\$196.88	\$196.88
Day Care Center	\$0.66	\$51.56	\$51.56	\$28.49	\$0.00	\$25.96	\$51.56	\$0.00	\$51.56	\$51.56	\$51.56
Medical											
Hospital	\$10.32	\$806.25	\$806.25	\$445.48	\$0.00	\$405.92	\$806.25	\$0.00	\$806.25	\$806.25	\$806.25
Nursing Home	\$6.24	\$487.50	\$487.50	\$269.36	\$0.00	\$245.44	\$487.50	\$0.00	\$487.50	\$487.50	\$487.50
Clinic	\$34.86	\$2,723.44	\$2,723.44	\$1,504.79	\$0.00	\$1,371.16	\$2,723.44	\$0.00	\$2,723.44	\$2,723.44	\$2,723.44
Animal Hospital/Veterinary Clinic	\$37.50	\$2,929.69	\$2,929.69	\$1,618.75	\$0.00	\$1,475.00	\$2,929.69	\$0.00	\$2,929.69	\$2,929.69	\$2,929.69
Free-Standing Emergency Room	\$16.14	\$1,260.94	\$1,260.94	\$696.71	\$0.00	\$634.84	\$1,260.94	\$0.00	\$1,260.94	\$1,260.94	\$1,260.94
Office											
General Office Building	\$29.70	\$2,320.31	\$2,320.31	\$1,282.05	\$0.00	\$1,168.20	\$2,320.31	\$0.00	\$2,320.31	\$2,320.31	\$2,320.31
Medical-Dental Office Building	\$72.24	\$5,643.75	\$5,643.75	\$3,118.36	\$0.00	\$2,841.44	\$5,643.75	\$0.00	\$5,643.75	\$5,643.75	\$5,643.75
United States Post Office	\$58.08	\$4,537.50	\$4,537.50	\$2,507.12	\$0.00	\$2,284.48	\$4,537.50	\$0.00	\$4,537.50	\$4,537.50	\$4,537.50
Research and Development Center	\$12.66	\$989.06	\$989.06	\$546.49	\$0.00	\$497.96	\$989.06	\$0.00	\$989.06	\$989.06	\$989.06
Automotive											
Quick Lubrication Vehicle Shop	\$14.28	\$1,115.63	\$1,115.63	\$616.42	\$0.00	\$561.68	\$1,115.63	\$0.00	\$1,115.63	\$1,115.63	\$1,115.63
Automobile Parts Service Center	\$4.50	\$351.56	\$351.56	\$194.25	\$0.00	\$177.00	\$351.56	\$0.00	\$351.56	\$351.56	\$351.56
Car Wash and Detail Center	\$10.50	\$820.31	\$820.31	\$453.25	\$0.00	\$413.00	\$820.31	\$0.00	\$820.31	\$820.31	\$820.31

Table 4 (cont.)– Roadway Maximum Impact Fee after Application of General Credit

Land Use Category	Roadway Maximum Impact Fee after Application of General Credit										
	Service Area 1	Service Area 2	Service Area 3	Service Area 4	Service Area 5	Service Area 6	Service Area 7	Service Area 8	Service Area 9	Service Area 10	Service Area 11
Dining											
Quality Restaurant	\$17.34	\$1,354.69	\$1,354.69	\$748.51	\$0.00	\$682.04	\$1,354.69	\$0.00	\$1,354.69	\$1,354.69	\$1,354.69
High-Turnover (Sit-Down) Restaurant	\$24.18	\$1,889.06	\$1,889.06	\$1,043.77	\$0.00	\$951.08	\$1,889.06	\$0.00	\$1,889.06	\$1,889.06	\$1,889.06
Fast-Food Restaurant w/ Drive-Through Window	\$64.02	\$5,001.56	\$5,001.56	\$2,763.53	\$0.00	\$2,518.12	\$5,001.56	\$0.00	\$5,001.56	\$5,001.56	\$5,001.56
Bread/Donut/Bagel Shop w/o Drive-Through Window	\$18.60	\$1,453.13	\$1,453.13	\$802.90	\$0.00	\$731.60	\$1,453.13	\$0.00	\$1,453.13	\$1,453.13	\$1,453.13
Other Retail											
Shopping Center	\$22.26	\$1,739.06	\$1,739.06	\$960.89	\$0.00	\$875.56	\$1,739.06	\$0.00	\$1,739.06	\$1,739.06	\$1,739.06
Building Materials and Lumber Store	\$11.34	\$885.94	\$885.94	\$489.51	\$0.00	\$446.04	\$885.94	\$0.00	\$885.94	\$885.94	\$885.94
Free-Standing Discount Superstore	\$45.66	\$3,567.19	\$3,567.19	\$1,970.99	\$0.00	\$1,795.96	\$3,567.19	\$0.00	\$3,567.19	\$3,567.19	\$3,567.19
Variety Store	\$75.12	\$5,868.75	\$5,868.75	\$3,242.68	\$0.00	\$2,954.72	\$5,868.75	\$0.00	\$5,868.75	\$5,868.75	\$5,868.75
Free-Standing Discount Store	\$33.96	\$2,653.13	\$2,653.13	\$1,465.94	\$0.00	\$1,335.76	\$2,653.13	\$0.00	\$2,653.13	\$2,653.13	\$2,653.13
Hardware/Paint Store	\$9.00	\$703.13	\$703.13	\$388.50	\$0.00	\$354.00	\$703.13	\$0.00	\$703.13	\$703.13	\$703.13
Nursery (Garden Center)	\$38.16	\$2,981.25	\$2,981.25	\$1,647.24	\$0.00	\$1,500.96	\$2,981.25	\$0.00	\$2,981.25	\$2,981.25	\$2,981.25
Supermarket	\$15.54	\$1,214.06	\$1,214.06	\$670.81	\$0.00	\$611.24	\$1,214.06	\$0.00	\$1,214.06	\$1,214.06	\$1,214.06
Convenience Market w/ Gasoline Pumps	\$6.24	\$487.50	\$487.50	\$269.36	\$0.00	\$245.44	\$487.50	\$0.00	\$487.50	\$487.50	\$487.50
Discount Club	\$42.90	\$3,351.56	\$3,351.56	\$1,851.85	\$0.00	\$1,687.40	\$3,351.56	\$0.00	\$3,351.56	\$3,351.56	\$3,351.56
Sporting Goods Superstore	\$17.70	\$1,382.81	\$1,382.81	\$764.05	\$0.00	\$696.20	\$1,382.81	\$0.00	\$1,382.81	\$1,382.81	\$1,382.81
Home Improvement Superstore	\$9.54	\$745.31	\$745.31	\$411.81	\$0.00	\$375.24	\$745.31	\$0.00	\$745.31	\$745.31	\$745.31
Electronic Superstore	\$16.86	\$1,317.19	\$1,317.19	\$727.79	\$0.00	\$663.16	\$1,317.19	\$0.00	\$1,317.19	\$1,317.19	\$1,317.19
Pet Supply Superstore	\$36.48	\$2,850.00	\$2,850.00	\$1,574.72	\$0.00	\$1,434.88	\$2,850.00	\$0.00	\$2,850.00	\$2,850.00	\$2,850.00
Office Supply Superstore	\$28.38	\$2,217.19	\$2,217.19	\$1,225.07	\$0.00	\$1,116.28	\$2,217.19	\$0.00	\$2,217.19	\$2,217.19	\$2,217.19
Discount Home Furnishing Superstore	\$22.98	\$1,795.31	\$1,795.31	\$991.97	\$0.00	\$903.88	\$1,795.31	\$0.00	\$1,795.31	\$1,795.31	\$1,795.31
Department Store	\$20.04	\$1,565.63	\$1,565.63	\$865.06	\$0.00	\$788.24	\$1,565.63	\$0.00	\$1,565.63	\$1,565.63	\$1,565.63
Arts and Crafts Store	\$63.66	\$4,973.44	\$4,973.44	\$2,747.99	\$0.00	\$2,503.96	\$4,973.44	\$0.00	\$4,973.44	\$4,973.44	\$4,973.44
Pharmacy/Drugstore w/o Drive-Through Window	\$12.78	\$998.44	\$998.44	\$551.67	\$0.00	\$502.68	\$998.44	\$0.00	\$998.44	\$998.44	\$998.44
Pharmacy/Drugstore w/ Drive-Through Window	\$15.48	\$1,209.38	\$1,209.38	\$668.22	\$0.00	\$608.88	\$1,209.38	\$0.00	\$1,209.38	\$1,209.38	\$1,209.38
Furniture Store	\$1.20	\$93.75	\$93.75	\$51.80	\$0.00	\$47.20	\$93.75	\$0.00	\$93.75	\$93.75	\$93.75
Services											
Walk-in Bank	\$17.70	\$1,382.81	\$1,382.81	\$764.05	\$0.00	\$696.20	\$1,382.81	\$0.00	\$1,382.81	\$1,382.81	\$1,382.81
Drive-in Bank	\$39.60	\$3,093.75	\$3,093.75	\$1,709.40	\$0.00	\$1,557.60	\$3,093.75	\$0.00	\$3,093.75	\$3,093.75	\$3,093.75

2.2 Assessment of Impact Fees as a Condition of Development

No final plat for new development shall be released for recordation, and no building permit and/or plumbing permit shall be issued, without the assessment of applicable impact fees pursuant to this Chapter. Except as otherwise provided in this Chapter, no building permit and/or plumbing permit shall be issued until the owner has paid the applicable impact fees or a contract for payment of the applicable impact fees has been approved by the City and executed by the parties.

2.3 Assessment of Impact Fees

- (A) Assessment of the impact fees for any new development shall be based on the applicable impact fees per service unit and any fee phasing in effect at the time of assessment. No specific act by the City is required to assess impact fees.
- (B) For a new development which has received final plat approval before the effective date, assessment of impact fees shall occur on the effective date.

- (C) For a new development which has received final plat approval on or after the effective date, assessment of impact fees shall occur at the time of recordation of the final plat.
- (D) After assessment of the impact fees attributable to a new development or execution of an agreement for payment of impact fees, additional impact fees or increases in fees may not be assessed against the tract unless the number of service units to be developed on the tract increases through a change of use. In the event of the increase in the number of service units, the impact fees to be imposed are limited to the amount attributable to the additional service units.
- (E) A school district is not required to pay impact fees imposed under this article 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.

2.4 Credits Against Impact Fees

- (A) *General credit.* The City shall apply against assessed impact fees a credit equal to a variable percentage of the total projected cost of implementing the capital improvements plan based on the type of impact fee. The maximum impact fees after application of this credit are identified in Section 2.1 (Tables 1 and 2). This general credit only applies to developments in the corporate limits of the City and not to those in the ETJ.
- (B) *Roadway credit.* Any construction of, contributions to, or dedications of roadway facilities that are system-related facilities and are agreed to or required by the City as a condition of development approval shall be credited against assessed roadway impact fees. To the extent that a credit under this subsection exceeds the roadway impact fees for service units attributable to an owner's new development, the credit shall be applied against the roadway impact fees for service units attributable to each other new development of the owner located on a tract of land that was contained in the same preliminary plat of the new development for which the credit was granted.
- (C) *Water credit.* Any construction of, contributions to or dedications of water facilities that are system-related facilities and agreed to or required by the City as a condition of development approval shall be credited against assessed water impact fees. To the extent that a credit under this subsection exceeds the water impact fees for service units attributable to an owner's new development, the credit shall be applied against the water impact fees for service units attributable to each other new development of the owner that is located on a tract of land that was contained in the same preliminary plat of the new development for which the credit was granted.
- (D) *Wastewater credit.* Any construction of, contributions to or dedications of wastewater facilities that are system-related facilities and that are agreed to or required by the City as a condition of development approval shall be credited against assessed wastewater impact fees. To the extent that a credit under this subsection exceeds the wastewater impact fees for service units attributable to an owner's new development, the credit shall be applied against the wastewater impact fees for service units attributable to each other new development of the owner that is located on a tract of land that was contained in the same preliminary plat of the new development for which the credit was granted.
- (E) *Traditional commercial corridor and city core credit.* Non-residential (includes multi-

family residential) will be credited by an additional fifty (50) percent of the general credit fee. (See Map Exhibit 2)

- (F) *Credit by agreement.* The City and the owner of a new development may agree in writing that the owner may construct or finance system-related facilities and that the costs incurred or funds advanced will be credited against the impact fees otherwise due from the new development. The City Manager is authorized to negotiate and execute such an agreement.
- (G) *No credit for rights-of-way or easements.* Rights-of-way and easements are not included in the Study, and no credit shall be granted for the dedication of rights-of-way or easements. Rights-of-way and easements are dedicated as required by the ordinances of the City, necessitated by and attributable to a new development and do not exceed the amount required for infrastructure improvements that are roughly proportionate to the new development.

2.5 Collection of Impact Fees

- (A) Impact fees shall be collected at the time of issuance of a building permit.
- (B) For a new development that received final plat approval before the effective date:

Impact fees may not be collected on any service unit for which a valid building permit is issued within two years after the effective date; provided, however, such a service unit shall be subject to the collection of impact fees upon the submission of a subsequent application for a building permit if the subsequent application is not submitted and approved within two years after the effective date.

2.6 Rebates

If the building permit has expired for a new development for which a roadway impact fee has been paid, and a modified or new application has not been filed within six 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 section has been filed within this period, no rebate shall become due.

2.7 Waivers

- (A) Impact fees will be waived for single-family residential dwellings located in the residential infill area (See Map Exhibit 1).
- (B) Impact fees will be waived for affordable housing (inside City limits only) subject to the following criteria:
 - (1) New development must include at least twenty-five (25) percent affordable housing units and an additional twenty-five (25) percent of units must either be affordable or workplace housing units. Affordable units and workplace units are defined as:
 - i. Affordable rentals units reserved for households earning at or below eighty

- (80) percent of the Area Median Income (AMI) for the Waco metropolitan area using Housing and Urban Development (HUD) and/or Texas Department of Housing and Community Affairs (TDHCA) income limits as applicable. To qualify under this waiver, rents charged for affordable units shall not exceed thirty (30) percent of the household's gross monthly income.
- ii. Workforce rental units reserved for households earning between eighty (80) and one hundred twenty (120) percent of the Area Median Income (AMI) for the Waco metropolitan area using HUD and/or TDHCA income limits as applicable. To qualify under this waiver, rents charged for affordable units shall not exceed thirty (30) percent of the household's gross monthly income.
 - iii. For-sale units reserved for households earning at or below one hundred twenty (120) percent of the Area Median Income (AMI) for the Waco metropolitan area using HUD and/or TDHCA income limits as applicable. To qualify under this waiver, homes sold must be the owner's primary residence.
- (C) Roadway Impact Fees will be waived for manufacturing, distribution, warehouse, logistics, assembly, processing, fabrication, value added processing, aviation/aerospace, research and development, advanced technology, information technology, information and data centers, corporate and regional offices, and similar facilities.
- (D) Impact fees will be waived for existing business expansion or relocation subject to meeting all the following criteria:
- (1) The existing business is located within the city limits of Waco.
 - (2) Business has been operating within the city limits of Waco for a period of at least 2 years.
 - (3) The expansion or relocation of the business is for the purpose of increasing production/ business capacity.
 - (4) The business is a manufacturing, distribution, warehouse, logistics, assembly, processing, fabrication, value added processing, aviation/aerospace, research and development, advanced technology, information technology, information and data centers, corporate and regional offices, or similar facilities.
 - (5) Documentation is provided verifying the total number of jobs and compensation per comparable positions at the new location is equal to or greater than the number of jobs and compensation per comparable positions at the original location.
- (E) Roadway impact fees will be waived if the total water and wastewater impact fees exceeds seventy-five thousand (\$75,000.00) dollars.
- (F) Impact fees will be waived for developments that have been approved for impact fee waivers by City Council through the City Abatement Policy and/or a program under Chapter 380 of the Statute.
- (G) Impact fees will be waived for the remaining lots in residential development that received final plat approval or final plat recordation before the effective date and at least eighty (80) percent of the lots have been issued building permits.

2.8 Impact Fee Cap

- (A) The total impact fee for water, wastewater, and roadway will be capped at seventy-five thousand (\$75,000.00) dollars if the total water and wastewater impact fees does not exceed seventy-five thousand (\$75,000.00) dollars.

2.9 Accounting for Fees and Interest

- (A) *Deposit of funds.* The City shall deposit all funds collected through the adoption of an impact fee in interest-bearing accounts clearly identifying the category of capital improvements or facility expansions within the service area for which the fee was adopted.
- (B) *Interest.* Interest earned on impact fees is considered funds of the account on which it is earned and is subject to all restrictions placed on use of impact fees under Chapter 395 of the Statute.
- (C) *Expenditure of funds.* The City shall establish adequate financial and accounting controls to ensure that impact fees disbursed from the account are utilized for the purposes for which the impact fee was imposed as shown by the capital improvements plan and as authorized by Chapter 395 of the Statute.
- (D) The City shall maintain and keep financial records for impact fees, which shall show the source and disbursement of all fees collected in or expended within 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.

Part III. Appeals

3.1 Appeal Procedure; Remedies

- (A) *Decisions subject to appeal.* An owner may, in accordance with this Section, appeal the following decisions:
 - (1) The applicability of an impact fee to the owner's new development;
 - (2) The amount of an impact fee due;
 - (3) The availability of, the application of, or the amount of a credit against an impact fee due;
 - (4) The amount of an impact fee due in proportion to the benefit of the services for which the impact fee was assessed that are received by the new development; or
 - (5) The amount of any refund due.
- (B) *Notice of appeal.* Within thirty (30) days following the decision being appealed, the owner shall submit to the City Manager a written notice of appeal, by certified mail, return receipt requested or by e-mail, that states the basis for the appeal with particularity. Submitted means delivered to the City Secretary's Office of the City of Waco or certified mail postmarked within thirty (30) days of receipt of the decision. To the extent the owner relies on any studies or other documents as evidence that the owner is entitled to relief, the owner shall submit such studies and documents with the notice of appeal. If the notice of appeal is accompanied by cash or a letter of credit issued by a financial institution that

has an office for presentment located in Waco, Texas, in an amount equal to the original determination of the impact fee due, the building permit and/or plumbing permit associated with the matter being appealed may be issued while the appeal is pending.

- (C) *Burden of proof.* The burden of proof shall be on the owner to demonstrate that the owner is entitled to relief.
- (D) *Resolution of appeal by the City Manager.*
- (1) Within ten (10) days of receipt of the notice of appeal, the City Manager shall issue a written decision granting relief, granting partial relief or denying relief and shall send the decision to the owner by certified mail, return receipt requested or by e-mail if the owner's e-mail address is provided on the notice of appeal or the building permit application that gave rise to the matter being appealed. The City Manager's written decision shall ask the owner to respond in writing within ten (10) days of the date of the written decision, by certified mail, return receipt requested or by e-mail, regarding whether the owner agrees or disagrees with the City Manager's decision.
 - (2) Upon issuing the written decision, the City Manager shall refer the appeal to the City Council for a hearing. The owner shall be provided written notice of the date, time and location of the hearing.
 - (3) If prior to the City Council hearing the owner agrees in writing with the City Manager's written decision:
 - i. the appeal shall be considered resolved;
 - ii. the City Manager's referral of the notice of appeal to the City Council for a hearing shall be withdrawn;
 - iii. to the extent that the City Manager's decision grants relief or partial relief to the owner, the City Manager shall ensure that the owner receives such relief or partial relief; and
 - iv. to the extent that the City Manager's decision requires the owner to pay an impact fee, the owner shall promptly pay the impact fee. The owner's failure to pay the impact fee within five business days after agreeing with the City Manager's decision shall serve as authority for the City to present the letter of credit to the financial institution for performance with no other or further notice or contact with the owner.
- (E) *Consideration of appeal by City Council.*
- (1) If the owner disagrees in writing with the City Manager's written decision or otherwise fails to agree in writing with the City Manager's written decision, the City Council shall hold a public hearing to consider the appeal and shall act on the appeal within sixty (60) days of the City Manager's receipt of the notice of appeal.
 - (2) The City Council shall act on the appeal by granting relief, granting partial relief or denying relief.
 - (3) To the extent that the City Council grants relief or partial relief to the owner, the City Manager shall ensure that the owner receives such relief or partial relief.
 - (4) To the extent that the City Council's action on the appeal requires the owner to

pay an impact fee, the owner shall promptly pay the impact fee. The owner's failure to pay the impact fee within five business days after the date of the City Council's action on the appeal shall serve as authority for the City to present the letter of credit to the financial institution for performance with no other or further notice or contact with the owner.

- (5) The City Council's action on the appeal shall constitute the City's final decision on the matter appealed.

(F) *Costs.* An owner shall bear all costs of the owner's appeal under this Section.

3.2. Other Relief; Variance; Waiver

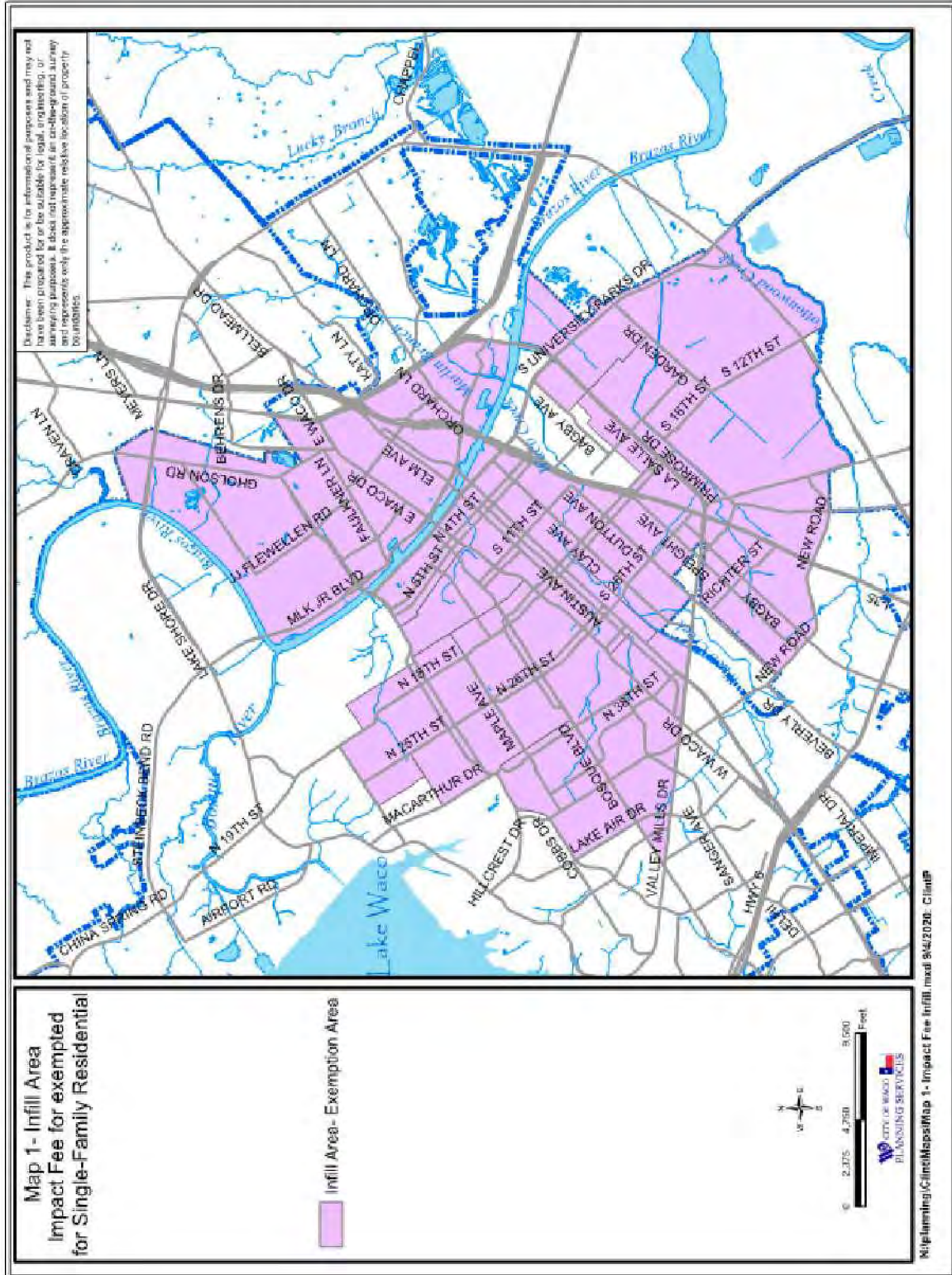
(A) *Failure to perform a duty.*

(1) A person who has paid an impact fee or an owner of land on which an impact fee has been paid may submit to the City Manager a written request for the City Council to determine whether the City has failed to perform a duty imposed under Chapter 395 of the Statute within the prescribed period. The written request must state the nature of the unperformed duty and request that it be performed within sixty (60) days after the date of the request.

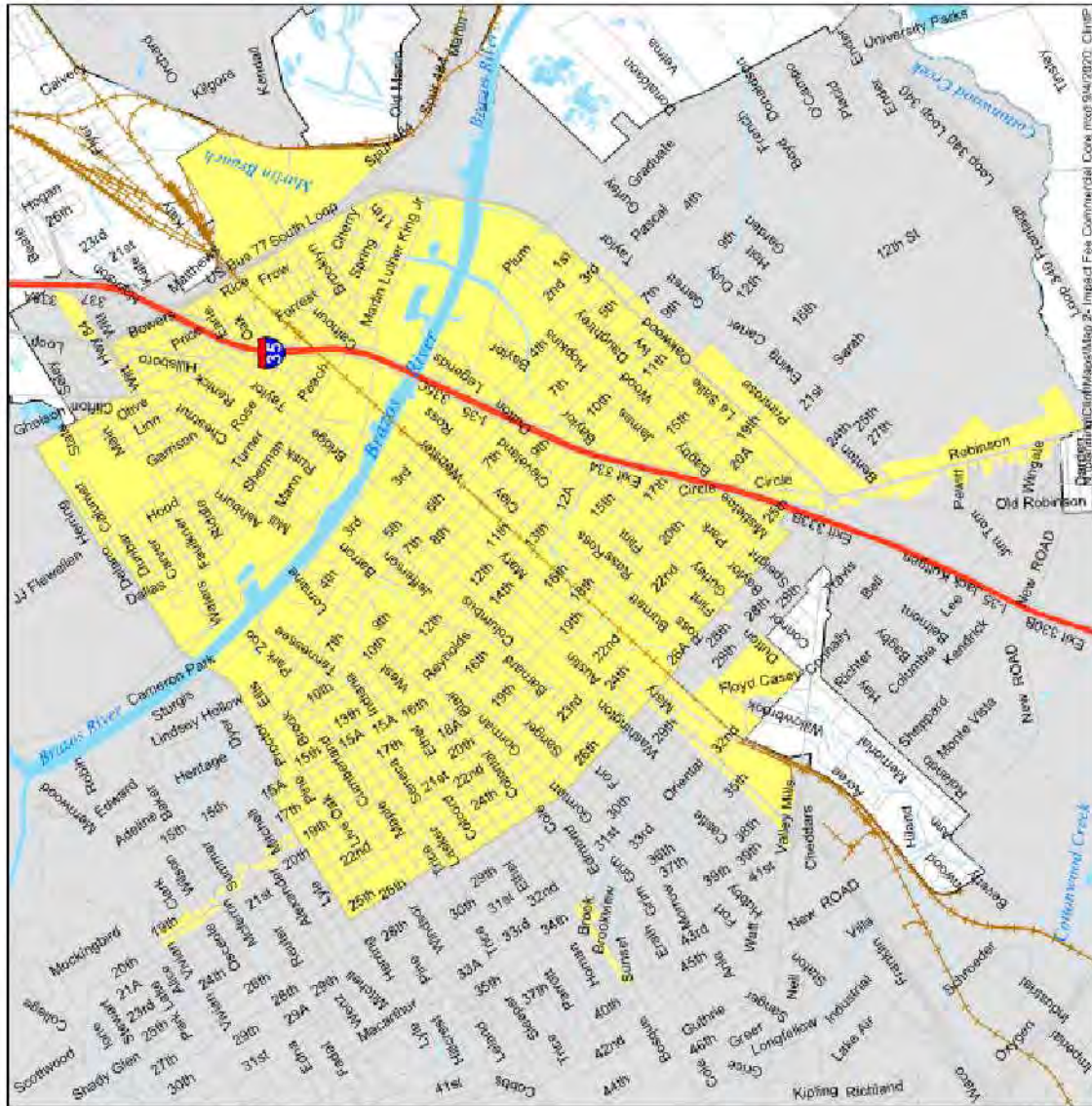
(2) The City Council shall consider the request, and if the City Council finds that the duty is required under Chapter 395 of the Statute and is late in being performed, it shall cause the duty to commence within sixty (60) days after the date of the request and continue until completion.

(B) *Variance or waiver.* The City Council may grant a variance or waiver from any requirement of this Chapter, upon written request by an owner, following a public hearing, and only upon finding that a strict application of such requirement would, when regarded as a whole, result in confiscation or an unconstitutional taking of the property.

Map Exhibit 1 – Waco Infill Areas




Map Exhibit 2 - City Core and Traditional Commercial Corridors





Map 2- Traditional Commercial Corridor and Core Area Impact Fee reduced by 50% for Non-Residential Uses

Traditional Corridor & Core Area

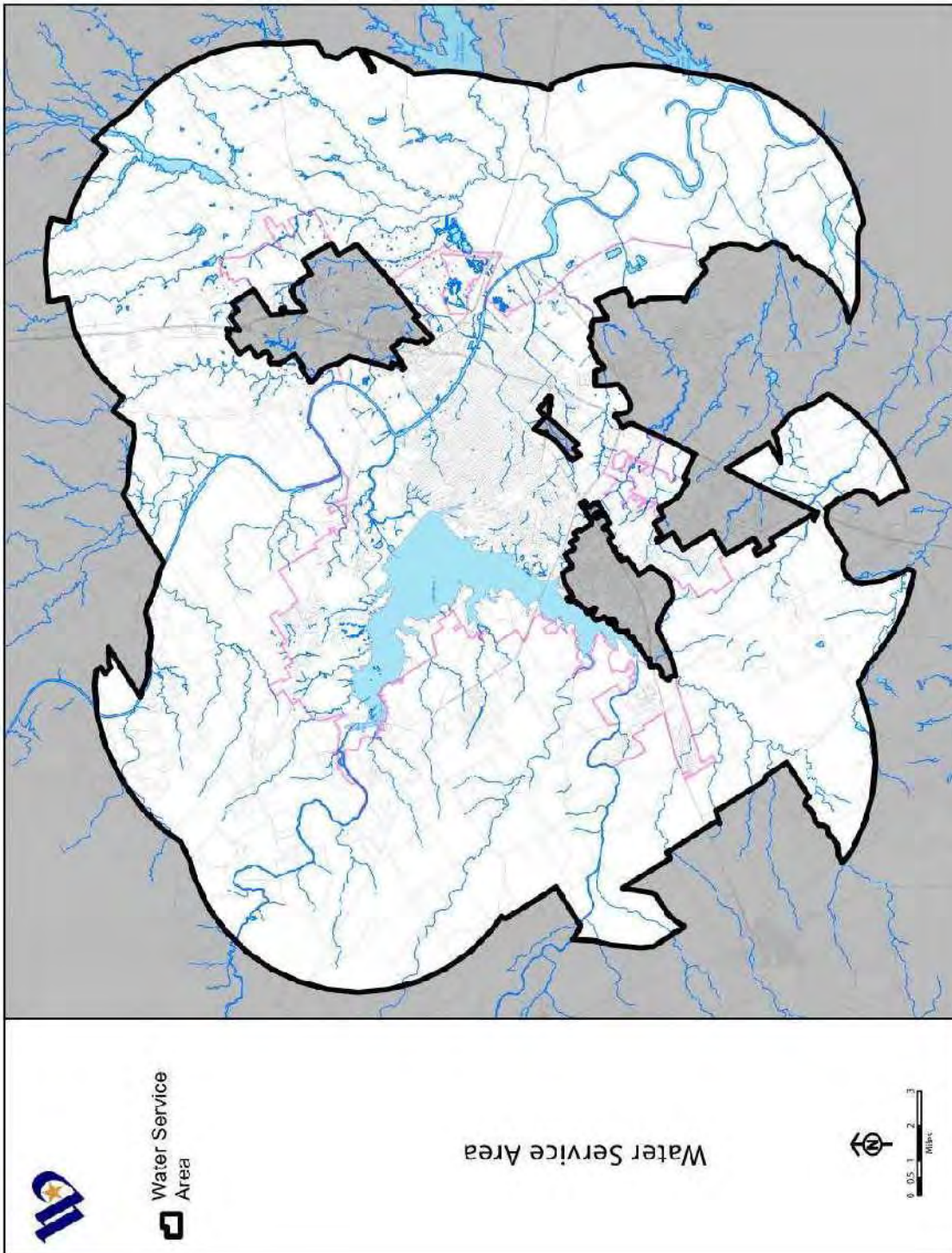
Waco City Limits



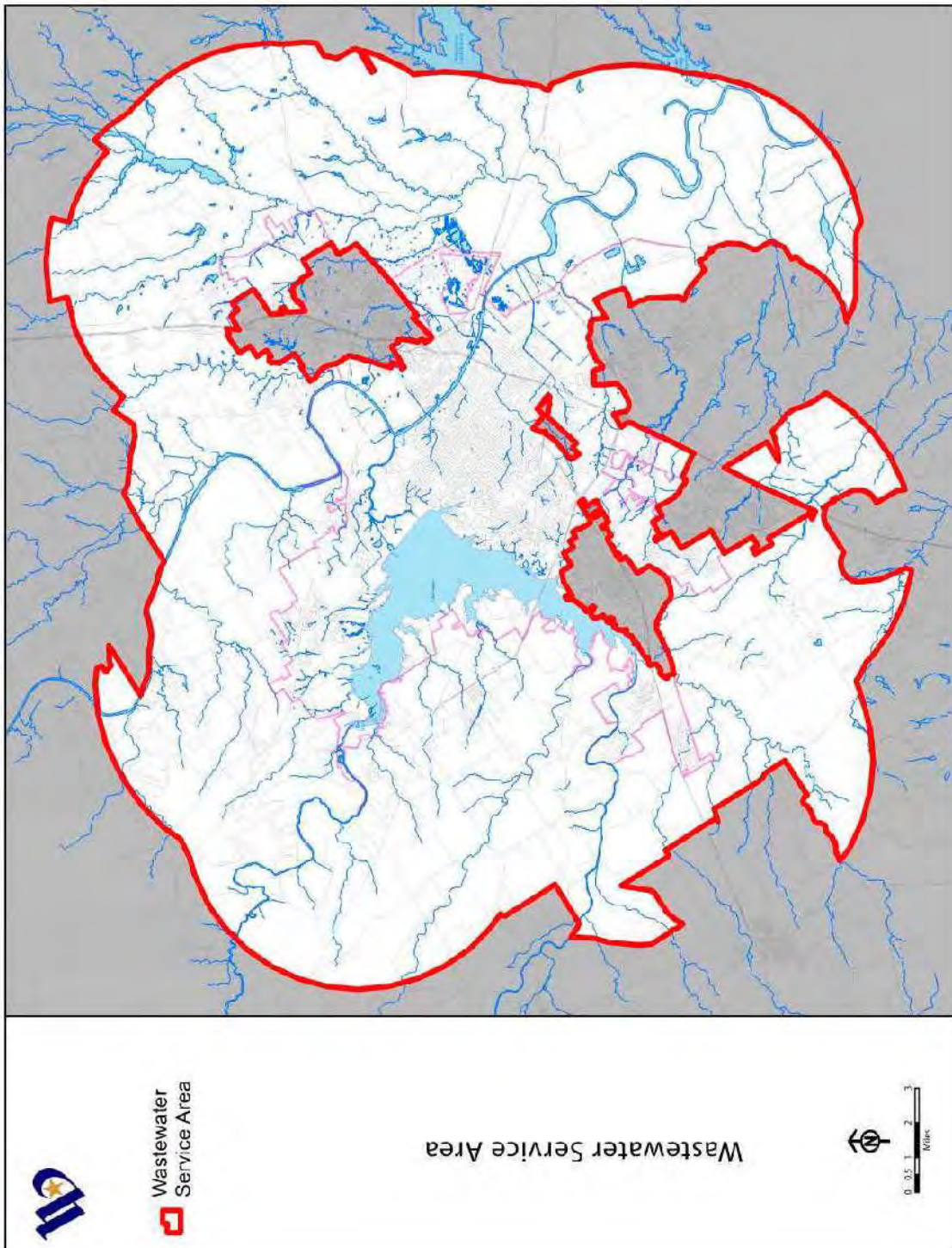




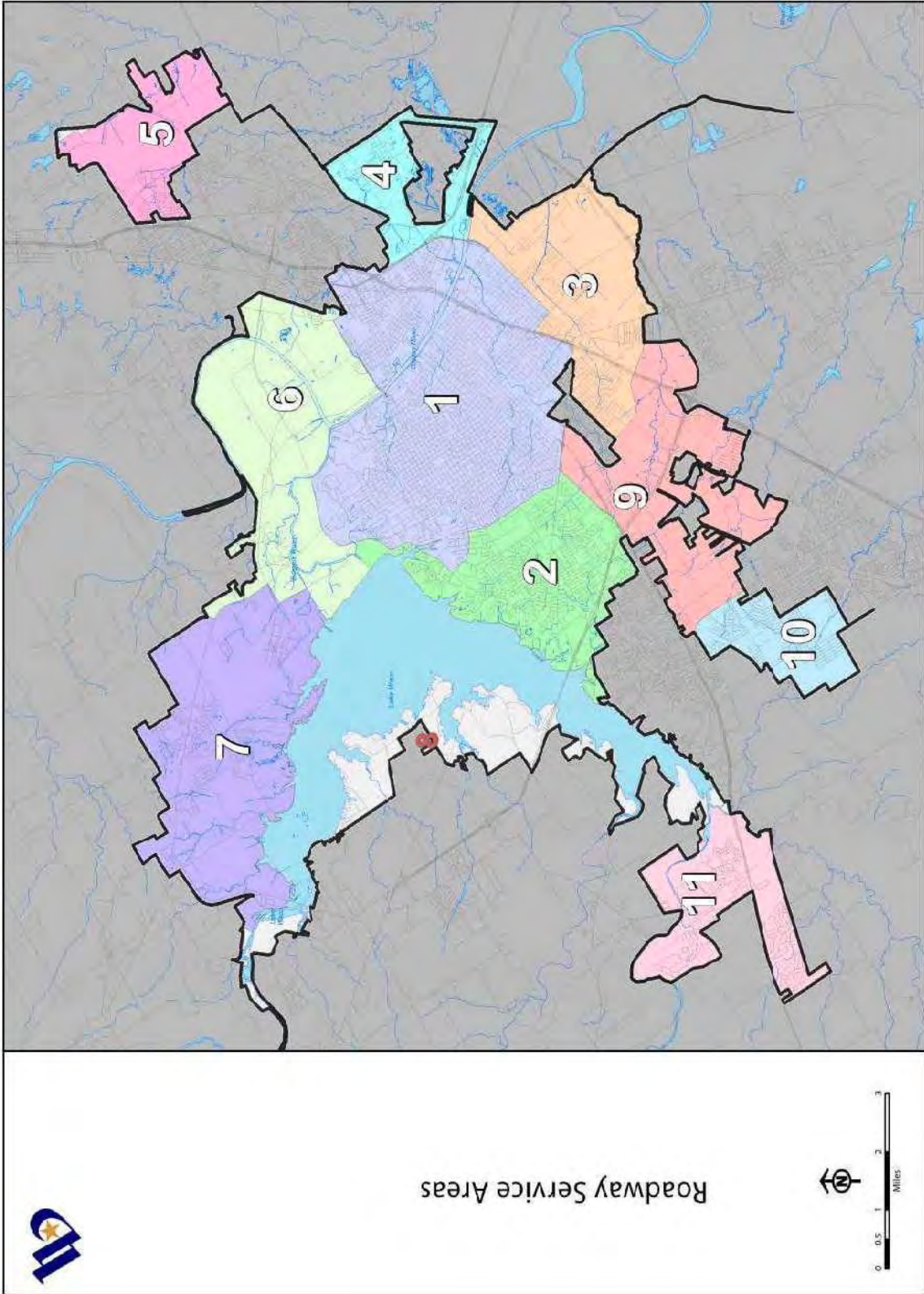
Map Exhibit 3 – Water Service Area



Map Exhibit 4 – Wastewater Service Area



Map Exhibit 5 – Roadway Service Areas



Section 3. That all ordinances or parts of ordinances in conflict with the provisions of this ordinance are hereby repealed.

Section 4. That the terms and provisions of this ordinance shall be deemed to be severable and that if any section, subsection, sentence, clause, or phrase of this ordinance shall be declared to be invalid or unconstitutional, the same shall not affect the validity of any other section, subsection, sentence, clause, or phrase of this ordinance and the remainder of such ordinance shall continue in full force and effect the same as if such invalid or unconstitutional provision had never been a part hereof.

Section 5. That it is the intention of the City Council and is hereby ordained that the provisions of this ordinance shall become and be a part of the Code of Ordinances of the City of Waco, Texas, and that sections of this ordinance may be renumbered or relettered to accomplish such intention.

Section 6. That a violation of this ordinance shall be a Class C misdemeanor and the penalty for violating this ordinance shall be as provided for in Sec. 1-14 of the Code of Ordinances of the City of Waco, Texas, which shall be a fine of not less than \$1.00 and no more than \$500.00, and each day a violation exists shall be a separate offense.

Section 7. That it is hereby officially found and determined that the meeting at which this ordinance is passed is open to the public and that public notice of the time, place and purpose of said meeting was given as required by law.

PASSED AND APPROVED:

First Reading: this 20th day of October, 2020.

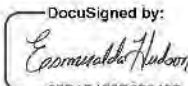
Second Reading: this 3rd day of November, 2020.

DocuSigned by:

3D8EC9F6473F4D7...

Kyle Deaver, Mayor
City of Waco, Texas

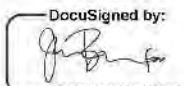
ATTEST:

DocuSigned by:

37E1F459E032458...

Esmeralda Hudson, City Secretary



APPROVED AS TO FORM & LEGALITY:

DocuSigned by:

4032876BC2064D3...

Jennifer Richie, City Attorney