TOWN OF FAIRVIEW, TEXAS LAND USE ASSUMPTIONS, ROADWAY, WATER, & WASTEWATER IMPACT FEE UPDATE

Nov 2021

Prepared for the Town of Fairview

Prepared by:

Kimley-Horn and Associates, Inc.

13455 Noel Road, Two Galleria Office Tower, Suite 700

Dallas, Texas 75240

TBPE Firm Registration Number: F-928

Project Number: 061182006

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Town of Fairview Impact Fees

AS PREPARED FOR THE TOWN OF FAIRVIEW, TEXAS

EXECUTIVE SUMMARY

This document serves as an update to the Town of Fairview's roadway, water, and wastewater impact fees along with updated land use assumptions. Impact fees were developed based on standards set by the Texas Commission on Environmental Quality (TCEQ) and the updated land use assumptions developed by Kimley-Horn, as seen in Chapter 1 of this report. The established fees were determined on a per service unit basis. Service units are defined per utility in each corresponding report. Fees will be charged to new developments to help subsidize identified future infrastructure which will be necessary to serve 10-year (2031) and build-out system needs.

After analysis of the Town's 10-year growth projections and the associated demands, it was determined that the Town will incur 19,563 additional vehicle-miles, 2,783 additional water service units, and 1,359 additional wastewater service units by 2031. Based on these projected units along with recoverable costs calculated from the Town's Capital Improvements Plans, it was determined that the Town may assess a maximum of $549/vehicle-mile, $1,175 per water service unit, and $810 per wastewater unit. A summary of the service units and maximum assessable impact fees can be seen in Table 1 below.

Table 1: Impact Fee Summary

Utility	Base Service Unit	Additional Service Units	Maximum Assessable Fee ($)
Roadway	Vehicle-Mile	19,563	549
Water	5/8" x 3/4" PD Water Meter	2,783	1,175
Wastewater	5/8" x 3/4" PD Water Meter	1,359	810

* PD = Positive Displacement Meter (Typical Residential Meter)

TOWN OF FAIRVIEW, TEXAS
LAND USE ASSUMPTIONS

Nov. 2021

Prepared for the Town of Fairview

Prepared by:

Kimley-Horn and Associates, Inc.

801 Cherry Street, Unit 11, Suite 1300

Fort Worth, TX 76102

Phone 817 335 6511

TBPE Firm Registration Number: F-928

Project Number: 061182002

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Town of Fairview Land Use Assumptions

AS PREPARED FOR THE TOWN OF FAIRVIEW, TEXAS

1.1 INTRODUCTION

In order to assess an impact fee, Land Use Assumptions must be developed to provide the basis for population and employment growth projections within a political subdivision. As defined by Chapter 395 of the Texas Local Government Code, these assumptions include a description of changes in land uses, densities, and population within the service area. In addition, these assumptions are useful in assisting the Town of Fairview in determining the need and timing of transportation improvements to serve future development.

The dwelling units and employment estimates and projections were all compiled in accordance with the following categories:

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

Employment: Square feet of building area based on three (3) different classifications. Each classification has unique trip making characteristics.

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

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

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

1.2 METHODOLOGY

The population and employment growth projections formulated in this report were done so using reasonable and generally accepted planning principles.

The future growth projections and land use assumptions were based upon several development patterns, which are listed below.

- Character, type, density, and quantity of existing development
- Zoning patterns in place
- Land use anticipated (as shown in the Future Land Use Plan)
- Growth trends currently in place
- Location and configuration of vacant land
- Physical holding capacity of Fairview
- Development projects, known or anticipated

The general methodology used in developing the land use assumptions include:

1. Establishing impact fee service areas for roadway, water, and wastewater facilities. (Exhibits 1.1, 1.2, & 1.3)
2. Collection/determination of population and employment data for the base year 2021.
3. Projection of the ten-year (2021-2031) population and employment by Service Area.

Demographics from the Collin County Appraisal District parcel data, the North Central Texas Council of Governments (NCTCOG), and the 2020 Census served as the basis for establishing the year 2021 and ten year (2021-2031) demographic estimates and projections.

1.3 2021 IMPACT FEE STUDY SERVICE AREAS

Roadway Impact Fee Service Areas

According to Chapter 395 of the Local Government Code Service Areas means the area within the corporate boundaries or extraterritorial jurisdiction of the political subdivision to be served by the capital improvement or facilities specified in the Capital Improvement Plan. For roadway facilities, the service area is limited to an area within the corporate boundaries of the political subdivision and shall not exceed six (6) miles. As a result, the Town of Fairview is proposed to be analyzed as one (1) service area for the 2021 Roadway Impact Fee Study, which is approximately five (5) miles in length. The roadway service area is bounded by the corporate limits of the Town of Fairview, as shown in **Exhibit 1.1**.

Water and Wastewater Impact Fee Service Areas

The Water and Wastewater service areas are limited to the areas in which the Town provides Water and Sewer services. Most commonly, this is defined by the Certificate of Convenience and Necessity (CCN) boundary for the respective service being provided. The Water and Wastewater Service Areas are shown in **Exhibits 1.2** and **1.3**, respectively.

Town of Fairview
2021 Impact Fee Study

Exhibit 1.1
Roadway Service Area

Kimley»Horn

Legend

Service Area

0 1,000 2,000 4,000 Feet

N E S W

Town of Fairview
2021 Impact Fee Study
Exhibit 1.2
Water Service Area

Legend

Water Service Area

0 1,000 2,000 4,000 Feet

N W E S

Town of Fairview
2021 Impact Fee Study

Exhibit 1.3
Wastewater Service Area

Kimley»Horn

Legend

Wastewater Service Area

0 1,000 2,000 Feet

N W E S

1.4 LAND USE ASSUMPTIONS SUMMARY

Table 1.1 summarizes the residential and employment 10-year growth projections for the Roadway Service Area. The growth for single family and multi-family development is anticipated to be approximately 180 dwelling units per year within the Town limits. The anticipated growth for non-residential development over the next ten years is approximately 2.1 million square feet.

Table 1.1. Roadway Service Area Land Use Assumptions
Growth Projections (2021-2031)

RESIDENTIAL			NON-RESIDENTIAL		
SINGLE FAMILY (DWELLING UNITS)	MULTI-FAMILY (DWELLING UNITS)	POPULATION (PERSONS)	BASIC (ft^2)	SERVICE (ft^2)	RETAIL (ft^2)
214	1,568	4,808	0	1,617,500	483,000

Table 1.2 summarizes the residential and employment 10-year growth projections for the Water Service Area. Although the Water Service Area boundaries differ slightly from the Roadway Service Area boundaries, the growth projected over the next 10 years is anticipated to occur in common areas that are shared by both service areas. Therefore, the Water Land Use Assumptions are identical to the Roadway Land Use Assumptions.

Table 1.2. Water Service Area Land Use Assumptions
Growth Projections (2021-2031)

RESIDENTIAL			NON-RESIDENTIAL		
SINGLE FAMILY (DWELLING UNITS)	MULTI-FAMILY (DWELLING UNITS)	POPULATION (PERSONS)	BASIC (ft^2)	SERVICE (ft^2)	RETAIL (ft^2)
214	1,568	4,808	0	1,617,500	483,000

Table 1.3 summarizes the residential and employment 10-year growth projections for the Wastewater Service Area. The Wastewater Service Area includes the Town Center, where most of the residential and employment growth is anticipated to occur.

Table 1.3. Wastewater Service Area Land Use Assumptions
Growth Projections (2021-2031)

RESIDENTIAL			NON-RESIDENTIAL		
SINGLE FAMILY (DWELLING UNITS)	MULTI-FAMILY (DWELLING UNITS)	POPULATION (PERSONS)	BASIC (ft^2)	SERVICE (ft^2)	RETAIL (ft^2)
74	1,568	4,460	0	1,605,000	479,000

TOWN OF FAIRVIEW, TEXAS
ROADWAY IMPACT FEE UPDATE

Nov. 2021

Prepared for the Town of Fairview

Prepared by:

Kimley-Horn and Associates, Inc.

801 Cherry Street, Unit 11, Suite 1300

Fort Worth, TX 76102

Phone 817 335 6511

TBPE Firm Registration Number: F-928

Project Number: 061182002

STATE OF TEXAS
PETER C. KELLY
125337
LICENSED
PROFESSIONAL ENGINEER

11/9/2021

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Town of Fairview Roadway Impact Fees

AS PREPARED FOR THE TOWN OF FAIRVIEW, TEXAS

2.1 EXECUTIVE SUMMARY

This study was performed to update the Town of Fairview Roadway Impact Fees. Transportation system analysis is an important tool for facilitating orderly growth of the transportation system and for providing adequate facilities. The implementation of an impact fee is one way to shift a portion of the burden for new facilities onto new development. In other words, it is a manner that helps facilitate growth paying for growth.

The Town of Fairview uses one service area for the purposes of the 2021 Roadway Impact Fee Study. This service area covers the entire corporate boundary of the Town of Fairview. The roadway impact fee funds collected must be spent on projects identified in the Roadway Impact Fee Capital Improvement Program (CIP) within this service area.

Roadway improvements necessary to serve the 10-year (2021-2031) needs were evaluated. Typically, infrastructure improvements are sized beyond the 10-year requirement; however, Texas' impact fee law (Chapter 395) only allows recovery of costs to serve the 10-year planning period. The projected recoverable cost with financing attributed to new growth to construct the infrastructure needed through 2031 is $21,688,057. Minus the existing roadway impact fee fund balance ($195,000), the impact fee eligible cost is $21,493,057.

As required by Chapter 395 the recoverable cost attributed to new growth is reduced by 50% to account for the credit of the use of ad valorem taxes to fund the Roadway Impact Fee CIP.

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

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

Based on the Town's 10-year growth projections and the associated demand (consumption) values, the 10-year service unit growth for the Town of Fairview is 19,563 vehicle-miles.

Based on the additional service units and the recoverable capital improvements plans, the Town can determine the maximum roadway impact fee per vehicle-mile by the following equation:

$$\frac{\text{COST OF CAPACITY ADDED ATTRIBUTABLE TO GROWTH WITH FINANCING}*50\%}{\text{TOTAL VEHICLE-MILES OF NEW DEMAND OVER TEN YEARS}}$$

The resulting maximum roadway impact fee is $549/vehicle-mile.

2.2 INTRODUCTION

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

Chapter 395 mandates that impact fees be reviewed and updated at least every five (5) years. Accordingly, the Town of Fairview has developed its Land Use Assumptions and Roadway Capital Improvement Plan (CIP) with which to update the Town's Roadway Impact Fees. The Town has retained Kimley-Horn and Associates, Inc. to provide professional transportation engineering services for the 2021 Roadway Impact Fee Study. This report includes details of the impact fee calculation methodology in accordance with Chapter 395, the applicable Land Use Assumptions, development of the Roadway Impact Fee CIP, and the refinement of the Land Use Equivalency Table.

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

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

The report also includes a section concerning the Plan for Awarding the Roadway Impact Fee Credit. In the case of the Town of Fairview, the credit calculation was based on awarding a 50% credit. The final section of the report is the Conclusion, which presents the findings of the analysis.

2.3 ROADWAY IMPACT FEE CALCULATION INPUTS

Land Use Assumptions

In order to assess an impact fee, Land Use Assumptions must be developed to provide the basis for population and employment growth projections within a political subdivision. As defined by Chapter 395 of the Texas Local Government Code, these assumptions include a description of changes in land uses, densities, and population within the service area. In addition, these assumptions are useful in assisting the Town of Fairview in determining the need and timing of transportation improvements to serve future development. The methodology of the Land Use Assumptions is presented in greater detail in a separate report titled *Town of Fairview, Texas Land Use Assumptions*.

2021 Roadway Impact Fee Study Service Areas

According to Chapter 395 of the Local Government Code Service Areas means the area within the corporate boundaries or extraterritorial jurisdiction of the political subdivision to be served by the capital improvement or facilities specified in the Capital Improvement Plan. For roadway facilities, the service area is limited to an area within the corporate boundaries of the political subdivision and shall not exceed six (6) miles. As a result, the Town of Fairview is proposed to be analyzed as one (1) service area for the 2021 Roadway Impact Fee Study, which is approximately five (5) miles in length. The service area is bounded by the corporate limits of the Town of Fairview, as shown in **Exhibit 2.1**.

Land Use Assumptions Summary

Table 2.1 summarizes the residential and employment 10-year growth projections. The growth for single family and multi-family development is anticipated to be approximately 180 dwelling units per year within the Town limits. The anticipated growth for non-residential development over the next ten years is approximately 2.1 million square feet.

Table 2.1. Residential and Non-Residential Land Use Assumptions Growth Projections (2021-2031)

RESIDENTIAL			NON-RESIDENTIAL		
SINGLE FAMILY (DWELLING UNITS)	MULTI-FAMILY (DWELLING UNITS)	POPULATION (PERSONS)	BASIC (ft^2)	SERVICE (ft^2)	RETAIL (ft^2)
214	1,568	4,808	0	1,617,500	483,000

Town of Fairview
2021 Impact Fee Study

Exhibit 2.1
Roadway Service Area

Kimley»Horn

Legend

Service Area

0 1,000 2,000 4,000 Feet

N W E S

Capital Improvement Plan

The Town has identified the Town-funded transportation projects needed to accommodate the projected growth within the Town. According to Chapter 395, the Roadway Impact Fee CIP can include the following projects:

- Recently completed projects with excess capacity available to serve new growth;
- Projects currently under construction; and
- Projects identified on the Town's Transportation Plan for improvements.

The Roadway Impact Fee CIP that is proposed for the 2021 Roadway Impact Fee Study is mapped in **Exhibit 2.2**. The Roadway Impact Fee CIP was developed in conjunction with input from Town of Fairview staff and represents those projects that will be needed to accommodate the growth projected in the land use assumptions.

The various roadway classifications describe the purpose and function of each roadway. These roadway classifications are based on the Town of Fairview Transportation Plan – Functional Classification. There are five primary classifications that were used in the 2021 Roadway Impact Fee Study. These classifications are:

- Three Lane Undivided Road;
- Four Lane Undivided Road;
- Four Lane Undivided Mixed-Use Road;
- Five Lane Undivided Mixed-Use Road; and
- Four Lane Divided Road.

CIP Project Summary and Description

Below is a list of the Roadway Impact Fee CIP projects used to develop the Roadway Impact Fee. The estimated projected costs are based on the Transportation Capital Improvements Program (CIP). Estimated Impact Fee Applicable Costs reflect the estimated cost of the CIP project. Conceptual Level Project Cost Project Sheets are provided in **Appendix A**.

1. Frisco Road

   From US 75 NBFR to SH 5

   This project adds a segment of new four lane undivided roadway to realign Frisco road with Country Club Road. This roadway is identified as a four-lane undivided thoroughfare.

   Estimated Impact Fee Applicable Cost: $5,188,000

2-5. Fairview Parkway (1-4)

From Frisco Road to Ridgeview Drive

These projects combined consist of the extension of Fairview Parkway to make it a main thoroughfare through the Town's proposed commercial district. The proposed cross sections vary, including 4 lanes divided, and 4 lanes undivided.

Estimated Impact Fee Applicable Cost: $13,249,000

6. Fairview Parkway (5)

From Ridgeview Drive to 530' North of Fairview Village Road

This project consists of the construction of the southbound lanes to complete the four-lane divided thoroughfare. Excludes 195' completed segment on south end.

Estimated Impact Fee Applicable Cost: $1,504,000

7. Fairview Parkway (6)

From 530' North of Fairview Village Drive to 195' South of Indian Springs Road

This completed project consisted of the construction of a new four-lane divided thoroughfare. Excludes 290' segment that is incomplete.

Actual Impact Fee Applicable Cost: $3,102,993

8. Ridgeview Drive

From US-75 to Fairview Parkway

This consists of reconstruction Ridgeview Drive as a four-lane divided thoroughfare to provide a better connection to US-75 from Fairview Parkway. This project is being built by TxDOT, with a 10% ROW contribution from the Town of Fairview.

Actual Impact Fee Applicable Cost (Town's Contribution): $171,980

9. Stacy Road

From SH 5 to Country Club Road

This completed project consisted of the reconstruction of the existing facility as a 4-lane divided thoroughfare.

Actual Impact Fee Cost (Town's Contribution): $703,919

10. Country Club Road (FM 1378)

From 575' S of Cottonwood Place to 845' S of Stacy Rd

This project consists of the reconstruction of Country Club Road as a 3-lane undivided facility to provide greater safety adjacent to Lovejoy Elementary and Sloan Creek Middle School.

Estimated Impact Fee Cost: $2,936,000

11. Fairview Village Road

From US 75 NBFR to Fairview Parkway

This project consists of the widening of Fairview Village Road from a 2-lane undivided facility to a 3-lane undivided facility.

Estimated Impact Fee Cost: $862,000

The following lists the intersection improvement projects that are included in the 2015 Roadway Impact Fee Study.

I-1 Frisco Road & Fairview Parkway

This project consists of the addition of a traffic signal.

Estimated Total Cost: $300,000

Estimated Impact Fee Cost: $300,000

I-2 SH 5 & Meandering Way

This completed intersection project costs the Town of Fairview $196,943 of which $108,319 (55%) is still attributable to future growth.

Actual Construction Cost: $196,943

Actual Impact Fee Cost: $108,319

I-3 Country Club Rd & Stoddard Rd

This project consists of the addition of a traffic signal.

Estimated Total Cost: $300,000

Estimated Impact Fee Cost: $300,000

I-4 Hart Rd & Country Club Rd

This project consists of the addition of a left-turn lane.

Estimated Total Cost: $400,000

Estimated Impact Fee Cost: $400,000

Legend

2021 Impact Fee CIP

- Completed Impact Fee CIP Projects
- Future Impact Fee CIP Projects
- Other Thoroughfares
- Local Streets
- Project Limits
- Flood Plain
- Service Area

Intersections

- Completed
- Future

Town of Fairview
2021 Impact Fee Study

Exhibit 2.2

Roadway Impact Fee CIP

Kimley»Horn

0 1,000 2,000

Feet

N

W E

S

2.4 METHODOLOGY FOR ROADWAY IMPACT FEES

Service Area

The service area used in the 2021 Roadway Impact Fee Study is shown in the previously referenced **Exhibit 2.1**. Chapter 395 of the Texas Local Government Code specifies that "the service areas are limited to an area within the corporate boundaries of the political subdivision and shall not exceed six (6) miles." Based on the guidance in Chapter 395 and examination of the Town of Fairview, one roadway service area was deemed appropriate. This service area covers the corporate boundary of the Town of Fairview.

Service Units

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

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

Each of the classifications above has different assumed vehicular capacities assigned to them (see **Table 2.2**) based on their roadway characteristics and existing geometry. Freeways are designed to move the most traffic and provide a larger amount of capacity. Existing thoroughfares provide for travel between neighborhoods and commercial areas or serve as routes for thru-traffic. A collector's primary function is to bring traffic from local streets to the thoroughfare streets. Collectors are intended to move less traffic and are designed with lower vehicular capacity than arterial facilities. Local streets are not budgeted for in the Roadway Impact Fee CIP process and in turn impact fees.

The hourly service volumes used in the 2021 Roadway Impact Fee Study are based upon Thoroughfare Capacity Criteria Developed in the Highway Capacity Manual, but have been adjusted to the Town of Fairview Transportation Plan. **Table 2.2** and **Table 2.3** shows the service volumes utilized in this report.

Table 2.2. Level of Use for the Proposed Facilities
(used in Appendix B – Service Units of Supply)

Roadway Type	Description	Hourly Vehicle-Mile Capacity per Lane-Mile of Roadway Facility
3U	Three Lane Undivided Road	650
4U	Four Lane Undivided Road	525
M4U	Four Lane Undivided Mixed-Use Road	650
M5U	Five Lane Undivided Mixed-Use Road	600
4D	Four Lane Divided Road	650

Table 2.3. Level of Use for the Existing Facilities
(used in Appendix C – Existing Roadway Facilities Inventory)

Roadway Type	Description	Hourly Vehicle-Mile Capacity per Lane-Mile of Roadway Facility
2U	Two Lane Undivided Road	425
2D	Two Lane Divided Road	650
2U-H	Two Lane State Highway	650
3U-H	Two Lane State Highway with a Turn Lane	750
4D	Four Lane Divided Road	650
6D	Six Lane Divided Road	650

Cost Per Service Unit

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

The second component of the cost per service unit is the number of service units in each service area. This number is the measure of the growth in transportation demand that is projected to occur in the ten-year period. Chapter 395 requires that Impact Fees be assessed only to pay for growth projected to occur in the Town limits within the next ten years. As noted previously, the units of demand are vehicle-miles of travel.

Cost of the CIP

The costs that may be included in the cost per service unit are all of the implementation costs for the 2021 Roadway Impact Fee Study, as well as project costs for thoroughfare system elements within the Capital Improvement Plan. Chapter 395 of the Texas Local Government Code specifies that the allowable costs are "…including and limited to the:

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

Table 2.4 lists the Roadway Impact Fee CIP projects for the Town of Fairview with conceptual level project cost projections. It should be noted that these tables reflect only conceptual-level opinions or assumptions regarding the portions of future project costs that are potentially recoverable through impact fees. These costs are estimated using various Town of Fairview documents and recent bid tabs of similar

projects in the Town of Fairview. Actual costs of construction are likely to change with time and are dependent on market and economic conditions that cannot be precisely predicted at this time.

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

Table 2.4. 10-Year Roadway Impact Fee CIP with Conceptual Level Cost Projections

Proj. #	Class	Project	Limits	Length (mi)	% in Servicea Area	Total Project Cost	Cost in Service Area
1	M4U(80)	Frisco Rd	US 75 NBFR to SH 5	0.63	100%	$ 5,188,000	$ 5,188,000
2	4U	Fairview Pkwy (1)	Frisco Rd to Frisco Rd (Future)	0.06	100%	$ 568,000	$ 568,000
3	4D	Fairview Pkwy (2)	Frisco Rd (Future) to 3,890' S of Frisco Rd (Future)	0.74	100%	$ 6,317,000	$ 6,317,000
4	M4U	Fairview Pkwy (3)	3,890' S of Frisco Rd (Future) to 1,955' N of Ridge (Future)	0.05	100%	$ 3,129,000	$ 3,129,000
5	4D	Fairview Pkwy (4)	1,955' N of Ridgeview Dr (Future) to Ridgeview Dr	0.37	100%	$ 3,235,000	$ 3,235,000
6	4D (1/2)	Fairview Pkwy (5)	Ridgeview Dr to 530' N of Fairview Village Rd	0.42	100%	$ 1,504,000	$ 1,504,000
7	4D	Fairview Pkwy (6)	530' N of Fairview Village Rd to 195' S of Indian Springs Rd	0.62	100%	$ 3,102,993	$ 3,102,993
8	4D	Ridgeview Drive	US 75 NBFR to Fairview Pkwy	0.17	100%	$ 171,980	$ 171,980
9	4D	Stacy Rd	SH 5 to Country Club Rd	1.94	100%	$ 703,919	$ 703,919
10	3U	Country Club Rd (FM1378)	575' S of Cottonwood Place to 845' S of Stacy Rd	0.89	100%	$ 2,936,000	$ 2,936,000
11	3U	Fairview Village Rd	US 75 NBFR to Fairview Pkwy	0.26	100%	$ 862,000	$ 862,000
I-1	Intersection	Traffic Signal	Friso Rd & Fairview Pkwy		100%	$ 300,000	$ 300,000
I-2	Intersection	Intersection Improvements	SH-5 & Meandering Way		100%	$ 108,319	$ 108,319
I-3	Intersection	Traffic Signal	Country Club Rd & Stoddard Rd		100%	$ 300,000	$ 300,000
I-4	Intersection	Left-Turn Lane	Hart Rd & Country Club Rd		100%	$ 400,000	$ 400,000
						Service Area Project Cost Subtotal	**$ 28,826,211**
						2021 Roadway Impact Fee Cost Per Service Area	**$ 33,500**
						Total Impact Fee Cost	**$ 28,859,711**

Notes:

a. The planning level cost projections have been developed for Impact Fee calculations only and should not be used for any future Capital Improvement Planning within the Town of Fairview.

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

Service Unit Calculation

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

The growth in vehicle-miles from 2021 to 2031 is based upon projected changes in residential and non-residential growth for the period. In order to determine this growth, baseline estimates of population, basic square feet, service square feet, and retail square feet for 2021 were made along with projections for each of these demographic statistics through 2031 using known development information provided by the Town of Fairview. The *Land Use Assumptions* (see **Table 2.1**) details the growth estimates used for the impact fee determination.

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

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

Building square footage is the most common independent variable for the estimation of non-residential trips in the *Institute of Transportation Engineers' (ITE), Trip Generation Manual, 11th Edition*. This independent variable is more appropriate than the number of employees because building square footage is tied more closely to trip generation and is known at the time of application for any development or development modification that would require the assessment of an impact fee.

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

The *transportation demand factors* are aggregate rates derived from two sources – the *ITE, Trip Generation Manual, 11th Edition,* and the regional Origin-Destination Travel Survey performed by the National Household Travel Survey (NHTS). The *ITE, Trip Generation Manual, 11th Edition,* provides the number of trips that are produced or attracted to the land use for each dwelling unit, square foot of building, or other corresponding unit. For the retail category of land uses, the rate is adjusted to account for the fact that a percentage of retail trips are made by people who would otherwise be traveling past that particular establishment anyway, such as a trip between work and home. These trips are called pass-by trips, and since the travel demand is accounted for in the land use calculations relative to the primary trip, it is necessary to discount the retail rate to avoid double counting trips.

The next component of the *transportation demand factor* accounts for the length of each trip. The average trip length for each category is based on the most recently completed National Household Travel Survey (NHTS) for the Dallas-Fort Worth region.

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

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

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

Variables:

TDF = Transportation Demand Factor;
T = Trip Rate (peak hour trips / unit);
P_b = Pass-By Discount (% of trips);
L_{max} = Maximum Trip Length (miles);
L = Average Trip Length (miles);
OD = Origin-Destination Reduction (50%); and
SA_L = Max Service Area Trip Length (see **Table 5**).

The adjustment made to the average trip length (L) statistic in the computation of the maximum trip length (L_{max}) is the origin-destination reduction (OD). This adjustment is made because the roadway impact fee is charged to both the origin and destination end of the trip. For example, the impact fee methodology will account for a trip from home to work within the Town of Fairview to both residential and non-

residential land uses. To avoid counting these trips as both residential and non-residential trips, a 50% origin-destination (OD) reduction factor is applied. Therefore, only half of the trip length is assessed to each land use.

Table 2.5 shows the derivation of the *Transportation Demand Factor* for residential land uses and the three (3) non-residential land uses. The values utilized for all variables shown in the *Transportation Demand Factor* equation are also shown in the table.

Table 2.5. Transportation Demand Factor

Variable	Single Family Residential	Multi-Family Residential	Basic (General Light Industrial)	Service (General Office)	Retail (Shopping Center)
T	0.94	0.51	0.65	1.30	3.40
P_b	0%	0%	0%	0%	34%
T (with P_b)	0.94	0.51	0.65	1.30	2.24
L (miles)	9.79	9.79	14.65	14.65	5.6
SA_L	5.0	5.0	5.0	5.0	5.0
L_{max} * (miles)	4.9	4.9	5.0	5.0	2.8
TDF	**4.60**	**2.49**	**3.25**	**7.2**	**6.27**

The application of the demographic projections and the *transportation demand factors* are presented in the 10-Year Growth Projections in **Table 2.6**. This table shows the total vehicle-miles by service area for the years 2021-2031. These estimates and projections lead to the Vehicle Miles of Travel for 2021-2031.

Table 2.6. 10-Year Growth Projections

2021 - 2031 Growth Projections[1]

SERVICE AREA	RESIDENTIAL VEHICLE-MILES						NON-RESIDENTIAL SQUARE FEET[4]			TRANS. DEMAND FACTOR[5]			NON-RESIDENTIAL VEHICLE-MILES[9]				TOTAL
	Single Family Dwelling Units	Trip Rate / TDF[2]	VEHICLE MILES[3]	Multi-Family Dwelling Units	Trip Rate / TDF[2]	VEHICLE MILES[3]	BASIC	SERVICE	RETAIL	BASIC[6]	SERVICE[7]	RETAIL[8]	BASIC	SERVICE	RETAIL	TOTAL	VEHICLE MILES[10]
		0.94			*0.51*					*0.65*	*1.44*	*3.40*					
Town	214	4.60	984	1,568	2.49	3,904	0	1,617,500	483,000	3.25	7.20	6.27	0	11,646	3,028	14,674	19,563

VEHICLE-MILES OF INCREASE (2021 - 2031)

SERVICE AREA	VEH-MILES
Town	19,563

Notes:

[1] From Section 2.3

[2] Transportation Demand Factor for each Service Area (from LUVMET) using Single Family Detached Housing and Apartment land use and *trip generation rate*

[3] Calculated by multiplying TDF by the number of dwelling units

[4] From Section 2.3

[5] *Trip generation rate* and Transportation Demand Factors from LUVMET for each land use

[6] 'Basic' corresponds to General Light Industrial land use and *trip generation rate*

[7] 'Service' corresponds to General Office land use and *trip generation rate*

[8] 'Retail' corresponds to Shopping Center land use and *trip generation rate*

[9] Calculated by multiplying Transportation Demand Factor by the number of thousand square feet for each land use

[10] Residential plus non-residential vehicle-mile totals for each Service Area

2.5 IMPACT FEE CALCULATION

Maximum Assessable Roadway Impact Fee Per Service Unit

This section presents the maximum assessable roadway impact fee rate calculated for each service area. The maximum assessable roadway impact fee is the sum of the eligible Roadway Impact Fee CIP costs for the service area divided by the growth in travel attributable to new development projected to occur within the 10-year period. A majority of the components of this calculation have been described and presented in previous sections of this report. The purpose of this section is to document the computation for each service area and to demonstrate that the guidelines provided by Chapter 395 of the Texas Local Government Code have been addressed. **Table 2.7** illustrates the computation of the maximum assessable impact fee computed for each service area. Each row in the table is numbered to simplify explanation of the calculation.

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

Each project identified in the 2021 Roadway Impact Fee CIP will add a certain amount of capacity to the Town's roadway network based on its length and classification. This line displays the total amount added within the service area.

2	*Total Vehicle-Miles of Existing Demand*	A measure of the amount of traffic currently using the roadway facilities upon which capacity is being added. (from **Appendix B** – CIP Service Units of Supply)

A number of facilities identified in the 2021 Roadway Impact Fee CIP have traffic currently utilizing a portion of their existing capacity. This line displays the total amount of capacity along these facilities currently being used by existing traffic.

3	*Total Vehicle-Miles of Existing Deficiencies*	Number of vehicle-miles of travel that are not accommodated by the existing roadway system. (from **Appendix C** – Existing Roadway Facilities Inventory)

4	*Net Amount of Vehicle-Miles of Capacity Added*	A measurement of the amount of vehicle-miles added by the CIP that will not be utilized by existing demand. **(Line 1 – Line 2 – Line 3)**

In order to ensure that existing deficiencies on the Town's roadway network are not recoverable through impact fees, this line is based on the entire roadway network within the service area. Any roadway within the service area that is deficient – even those not identified on the 2021 Roadway Impact Fee CIP – will have these additional trips removed from the calculation

5	*Total Cost of the CIP within the Service Area*	The total cost of the projects within the service area (from **Table 2.4** - 10-Year Roadway Capital Improvement Plan with Conceptual Level Cost Projections)

This line simply identifies the total cost of all of the projects identified in the service area.

6	*Cost of Net Capacity Supplied*	The total CIP cost (**Line 5**) prorated by the ratio of Net Capacity Added (**Line 4**) to Total Capacity Added (**Line 1**). **[(Line 4 / Line 1) * (Line 5)]**

Using the ratio of vehicle-miles added by the 2021 Roadway Impact Fee CIP available to serve future growth to the total vehicle-miles added, the total cost of the 2021 Impact Fee CIP is reduced to the amount available for future growth (i.e., excluding existing usage and deficiencies).

7	*Cost to Meet Existing Needs and Usage*	The difference between the Total Cost of the CIP (**Line 5**) and the Cost of the Net Capacity supplied (**Line 6**). **(Line 5 – Line 6)**

This line is provided for information purposes only – it is to present the portion of the total cost of the 2021 Roadway Impact Fee CIP that is required to meet existing demand.

8	*Total Vehicle-Miles of New Demand over Ten Years*	Based upon the growth projection provided in the *Land Use Assumptions*, an estimate of the number of new vehicle-miles within the service area over the next ten years. (from **Table 2.6**)

This line presents the amount of growth (in vehicle-miles) projected to occur within each service area over the next ten years.

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

In order to ensure that the vehicle-miles added by the 2021 Roadway Impact Fee CIP do not exceed the amount needed to accommodate growth beyond the ten-year window, a comparison of the two values is performed. If the amount of vehicle-miles added by the Roadway Impact Fee CIP exceeds the growth projected to occur in the next ten years, the Roadway Impact Fee CIP cost is reduced accordingly.

11	*Cost of Capacity Added Attributable to New Growth*	The result of multiplying the Cost of Net Capacity Added (**Line 6**) by the Percent of Capacity Added Attributable to New Growth, limited to 100% (**Line 10**).

The value of the total 2021 Roadway Impact Fee CIP project costs (excluding financial costs) that may be recovered through impact fees. This line is determined considering the limitations to impact fees required by the Texas legislature.

Plan for Awarding the Roadway Impact Fee Credit

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

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

The following table summarizes the portions of **Table 2.7** that utilize this credit calculation, based on awarding a 50 percent credit.

Line	Title	Description
12	*Cost of Capacity Added Attributable to Growth and Financing*	Found by multiplying Cost of Capacity Added Attributable to New Growth **(Line 11)** by 25% in order to determine the Financing cost and then adding the Financing cost to the Cost of Capacity Added Attributable to New Growth **(Line 11).** **((Line 11 * 25%) + (Line 11))**
13	*Existing Impact Fee Fund Balance*	Existing Roadway Impact Fee Fund Balance ($195,000)
14	*Cost of Capacity Added Attributable to Growth with Financing and Credit for Ad Valorem Taxes*	A credit equal to 50% of the total projected cost, as per section 395.014 of the Texas Local Government Code. (50% * (**Line 12 – Line 13**)
15	*Maximum Assessable Fee Per Service Unit*	Found by dividing the Recoverable Cost of the CIP attributable to growth **(Line 14)** by the Total Vehicle-Miles of New Demand Over Ten Years **(Line 8). (Line 14 / Line 8)**

Table 2.7. Maximum Assessable Roadway Impact Fee

	SERVICE AREA:	Town
1	TOTAL VEH-MI OF CAPACITY ADDED BY THE CIP (FROM ROADWAY IMPACT FEE CIP SERVICE UNITS OF SUPPLY, **APPENDIX B**)	15,672
2	TOTAL VEH-MI OF EXISTING DEMAND (FROM ROADWAY IMPACT FEE CIP SERVICE UNITS OF SUPPLY, **APPENDIX B**)	6,076
3	TOTAL VEH-MI OF EXISTING DEFICIENCIES (FROM ROADWAY IMPACT FEE CIP EXISTING FACILITIES INVENTORY, **APPENDIX C**)	174
4	NET AMOUNT OF VEH-MI OF CAPACITY ADDED (LINE 1 - LINE 2 - LINE 3)	9,422
5	TOTAL COST OF THE CIP WITHIN SERVICE AREA (FROM **TABLE 2.4**)	$ 28,859,711
6	COST OF NET CAPACITY SUPPLIED (LINE 4 / LINE 1) * (LINE 5)	$ 17,350,446
7	COST TO MEET EXISTING NEEDS AND USAGE (LINE 5 - LINE 6)	$ 11,509,265
8	TOTAL VEH-MI OF NEW DEMAND OVER TEN YEARS **(FROM TABLE 2.6 and Land Use Assumptions)**	19,563
9	PERCENT OF CAPACITY ADDED ATTRIBUTABLE TO GROWTH (LINE 8 / LINE 4)	207.6%
10	IF LINE 8 > LINE 4, REDUCE LINE 9 TO 100%, OTHERWISE NO CHANGE	100.0%
11	COST OF CAPACITY ADDED ATTRIBUTABLE TO GROWTH (LINE 6 * LINE 10)	$ 17,350,446
12	COST OF CAPACITY ADDED ATRRIBUTABLE TO GROWTH AND FINANCING (25%) ((LINE 10 *25%) + LINE 11))	$ 21,688,057
13	EXISTING IMPACT FEE FUND BALANCE ($195,000)	$ 195,000
14	COST OF CAPACITY ADDED ATRRIBUTABLE TO GROWTH WITH FINANCING (LINE 11) AND CREDIT FOR AD VALOREM TAXES (50% OF (LINE 12 - LINE 13))	$ 10,746,528
15	MAX ASSESSABLE FEE PER SERVICE UNIT ($ PER VEH-MI) (LINE 14 / LINE 8)	$ 549

Service Unit Demand Per Unit of Development

The roadway impact fee is determined by multiplying the impact fee rate by the number of service units projected for the proposed development. For this purpose, the Town utilizes the Land Use/Vehicle-Mile Equivalency Table (LUVMET), presented in **Table 2.8**. This table lists the predominant land uses that may occur within the Town of Fairview. For each land use, the development unit that defines the development's magnitude with respect to transportation demand is shown. Although every possible use cannot be anticipated, the majority of uses are found in this table. If the exact use is not listed, one similar in trip-making characteristics can serve as a reasonable proxy. The individual land uses are grouped into categories, such as residential, office, commercial, industrial, and institutional.

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

The source of the trip generation and pass-by statistics is the *ITE Trip Generation Manual, 11th Edition*, the latest edition for trip generation data. This manual utilizes trip generation studies for a variety of land uses throughout the United States, and is the standard used by traffic engineers and transportation planners for traffic impact analysis, site design, and transportation planning.

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

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

Table 2.8 Land Use / Vehicle-Mile Equivalency Table (LUVMET)

Land Use Category	ITE Land Use Code	Development Unit	Trip Gen Rate (PM)	Pass-by Rate	Pass-by Source	Trip Rate	NHTS Trip Length (mi)	Adj. For O-D	Adj. Trip Length (mi)	Max Trip Length (mi)	Veh-Mi Per Dev-Unit
PORT AND TERMINAL											
Truck Terminal	030	1,000 SF GFA	1.87			1.87	14.65	50%	7.33	5.00	9.35
INDUSTRIAL											
General Light Industrial	110	1,000 SF GFA	0.65			0.65	14.65	50%	7.33	5.00	3.25
Industrial Park	130	1,000 SF GFA	0.34			0.34	14.65	50%	7.33	5.00	1.70
Warehousing	150	1,000 SF GFA	0.18			0.18	14.65	50%	7.33	5.00	0.90
Mini-Warehouse	151	1,000 SF GFA	0.15			0.15	14.65	50%	7.33	5.00	0.75
RESIDENTIAL											
Single-Family Detached Housing	210	Dwelling Unit	0.94			0.94	9.79	50%	4.90	4.90	4.60
Multi-Family Housing (Low-Rise)	220	Dwelling Unit	0.51			0.51	9.79	50%	4.90	4.90	2.49
Multi-Family Housing (Mid-Rise)	221	Dwelling Unit	0.39			0.39	9.79	50%	4.90	4.90	1.91
Multi-Family Housing (High-Rise)	222	Dwelling Unit	0.32			0.32	9.79	50%	4.90	4.90	1.56
Residential Condominium/Townhome	220	Dwelling Unit	0.51			0.51	9.79	50%	4.90	4.90	2.49
Senior Adult Housing - Single-Family	251	Dwelling Unit	0.30			0.30	9.79	50%	4.90	4.90	1.47
Senior Adult Housing - Multi-Family	252	Dwelling Unit	0.25			0.25	9.79	50%	4.90	4.90	1.22
Assisted Living	254	Beds	0.24			0.24	9.79	50%	4.90	4.90	1.17
LODGING											
Hotel	310	Room	0.59			0.59	6.43	50%	3.22	3.22	1.89
Motel / Other Lodging Facilities	320	Room	0.36			0.36	6.43	50%	3.22	3.22	1.15
RECREATIONAL											
Golf Driving Range	432	Tee	1.25			1.25	7.86	50%	3.93	3.93	4.91
Golf Course	430	Acre	0.28			0.28	7.86	50%	3.93	3.93	1.10
Recreational Community Center	495	1,000 SF GFA	2.50			2.50	7.86	50%	3.93	3.93	9.82
Ice Skating Rink	465	1,000 SF GFA	1.33			1.33	7.86	50%	3.93	3.93	5.22
Miniature Golf Course	431	Hole	0.33			0.33	7.86	50%	3.93	3.93	1.29
Multiplex Movie Theater	445	Screens	13.96			13.96	7.86	50%	3.93	3.93	54.86
Racquet / Tennis Club	491	Court	3.82			3.82	7.86	50%	3.93	3.93	15.01
INSTITUTIONAL											
Church	560	1,000 SF GFA	0.49			0.49	8.31	50%	4.16	4.16	2.03
Day Care Center	565	1,000 SF GFA	11.12	44%	C	6.23	3.49	50%	1.75	1.75	10.90
Primary/Middle School (1-8)	522	Students	0.15			0.15	3.49	50%	1.75	1.75	0.26
High School (9-12)	525	Students	0.14			0.14	3.49	50%	1.75	1.75	0.24
Junior / Community College	540	Students	0.11			0.11	10.44	50%	5.22	5.00	0.55
University / College	550	Students	0.15			0.15	10.44	50%	5.22	5.00	0.75
MEDICAL											
Clinic	630	1,000 SF GFA	3.69			3.69	9.85	50%	4.93	4.93	18.19
Hospital	610	1,000 SF GFA	0.86			0.86	9.85	50%	4.93	4.93	4.23
Nursing Home	620	Beds	0.14			0.14	9.85	50%	4.93	4.93	0.69
Animal Hospital/Veterinary Clinic	640	1,000 SF GFA	3.53	30%	B	2.47	9.85	50%	4.93	4.93	12.17
OFFICE											
Corporate Headquarters Building	714	1,000 SF GFA	1.30			1.30	14.65	50%	7.33	5.00	6.50
General Office Building	710	1,000 SF GFA	1.44			1.44	14.65	50%	7.33	5.00	7.20
Medical-Dental Office Building	720	1,000 SF GFA	3.93			3.93	9.85	50%	4.93	4.93	19.37
Single Tenant Office Building	715	1,000 SF GFA	1.76			1.76	14.65	50%	7.33	5.00	8.80
Office Park	750	1,000 SF GFA	1.30			1.30	14.65	50%	7.33	5.00	6.50

Key to Sources of Pass-by Rates:

A: ITE Trip Generation Handbook 3rd Edition (September 2017)

B: Estimated by Kimley-Horn based on ITE rates for similar categories

C: 2021 Pass-By Tables for ITETripGen Appendices

Table 2.8 Land Use / Vehicle-Mile Equivalency Table (LUVMET) (Continued)

Land Use Category	ITE Land Use Code	Development Unit	Trip Gen Rate (PM)	Pass-by Rate	Pass-by Source	Trip Rate	NHTS Trip Length (mi)	Adj. For O-D	Adj. Trip Length (mi)	Max Trip Length (mi)	Veh-Mi Per Dev-Unit
COMMERCIAL											
Automobile Related											
Automobile Care Center	942	1,000 SF Occ. GLA	3.11	40%	B	1.87	4.45	50%	2.23	2.23	4.17
Automobile Parts Sales	843	1,000 SF GFA	4.90	43%	A	2.79	4.45	50%	2.23	2.23	6.22
Gasoline/Service Station	944	Vehicle Fueling Position	13.91	42%	A	8.07	1.20	50%	0.60	0.60	4.84
Gasoline/Service Station w/ Conv Market	945	Vehicle Fueling Position	18.42	56%	B	8.10	1.20	50%	0.60	0.60	4.86
New and Used Car Sales	841	1,000 SF GFA	3.75	20%	B	3.00	4.45	50%	2.23	2.23	6.69
Quick Lubrication Vehicle Shop	941	Servicing Positions	4.85	40%	B	2.91	4.45	50%	2.23	2.23	6.48
Self-Service Car Wash	947	Wash Stalls	5.54	40%	B	3.32	1.20	50%	0.60	0.60	1.99
Car Wash and Detail Center	949	Wash Stalls	13.60	40%	B	8.16	1.20	50%	0.60	0.60	4.89
Tire Store	848	1,000 SF GFA	3.75	25%	C	2.81	4.45	50%	2.23	2.23	6.26
Dining											
Fast Food Restaurant with Drive-Thru Window	934	1,000 SF GFA	33.03	50%	A	16.52	5.64	50%	2.82	2.82	46.58
Fast Food Restaurant without Drive-Thru Window	933	1,000 SF GFA	33.21	50%	B	16.61	5.64	50%	2.82	2.82	46.84
High Turnover (Sit-Down) Restaurant	932	1,000 SF GFA	9.05	43%	A	5.16	6.07	50%	3.04	3.04	15.68
Fine Dining Restaurant	931	1,000 SF GFA	7.80	44%	A	4.37	6.07	50%	3.04	3.04	13.28
Fast Casual Restaurant	930	1,000 SF GFA	12.55	43%	A	7.15	6.07	50%	3.04	3.04	21.73
Coffee/Donut Shop with Drive-Thru Window	937	1,000 SF GFA	38.99	70%	A	11.70	4.53	50%	2.27	2.27	26.55
Other Retail											
Free-Standing Retail Store	815	1,000 SF GFA	4.86	20%	C	3.89	5.60	50%	2.80	2.80	10.89
Nursery (Garden Center)	817	1,000 SF GFA	6.94	30%	B	4.86	5.60	50%	2.80	2.80	13.60
Home Improvement Superstore	862	1,000 SF GFA	2.29	48%	A	1.19	5.60	50%	2.80	2.80	3.33
Pharmacy/Drugstore	881	1,000 SF GFA	10.25	49%	A	5.23	5.60	50%	2.80	2.80	14.64
Shopping Center	820	1,000 SF GLA	3.40	34%	A	2.24	5.60	50%	2.80	2.80	6.27
Supermarket	850	1,000 SF GFA	8.95	24%	C	6.80	5.60	50%	2.80	2.80	19.04
Toy/Children's Superstore	864	1,000 SF GFA	5.00	30%	B	3.50	5.60	50%	2.80	2.80	9.80
Department Store	875	1,000 SF GFA	1.95	30%	B	1.37	5.60	50%	2.80	2.80	3.83
SERVICES											
Walk-In Bank	911	1,000 SF GFA	12.13	40%	B	7.28	4.45	50%	2.23	2.23	16.23
Drive-In Bank	912	Drive-in Lanes	27.07	47%	A	14.35	4.45	50%	2.23	2.23	32.00
Hair Salon	918	1,000 SF GLA	1.45	30%	B	1.02	4.45	50%	2.23	2.23	2.27

Key to Sources of Pass-by Rates:

A: ITE Trip Generation Handbook 3rd Edition (September 2017)

B: Estimated by Kimley-Horn based on ITE rates for similar categories

C: 2021 Pass-By Tables for ITETripGen Appendices

2.6 SAMPLE CALCULATIONS

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

Example 1:

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

Roadway Impact Fee Calculation Steps – Example 1	
Step 1	**Determine Development Unit and Vehicle-Miles Per Development Unit**
	From Table 8 [Land Use – Vehicle Mile Equivalency Table] Development Type: 1 Dwelling Unit of Single-Family Detached Housing Number of Development Units: 1 Dwelling Unit Veh-Mi Per Development Unit: **4.61 vehicle-miles per development unit**
Step 2	**Determine Maximum Assessable Impact Fee Per Service Unit**
	From Table 7, Line 15 [Maximum Assessable Fee Per Service Unit] Maximum Fee for Town of Fairview: **$549 / vehicle-mile**
Step 3	**Determine Maximum Assessable Impact Fee**
	Impact Fee = # of Development Units * Veh-Mi Per Dev Unit * Max. Fee Per Service Unit Impact Fee = 1 * 4.61 * $549 Maximum Assessable Impact Fee = $2,525.00

Example 2:

- **Development Type – 3,500 sq. ft. High Turnover Sit-Down Restaurant**

Roadway Impact Fee Calculation Steps – Example 2	
Step 1	**Determine Development Unit and Vehicle-Miles Per Development Unit**
	From Table 8 [Land Use – Vehicle Mile Equivalency Table] Development Type: 3,500 square foot High Turnover Sit-Down Restaurant Development Unit: 1,000 square feet of Gross Floor Area Veh-Mi Per Development Unit: **15.68 vehicle-miles per development unit**
Step 2	**Determine Maximum Assessable Impact Fee Per Service Unit**
	From Table 7 Line 15 [Maximum Assessable Fee Per Service Unit] Maximum Fee for Town of Fairview: **$549 / vehicle-mile**
Step 3	**Determine Maximum Assessable Impact Fee**
	Impact Fee = # of Development Units * Veh-Mi Per Dev Unit * Max. Fee Per Service Unit Impact Fee = 3.5 * 15.68 * $549 Maximum Assessable Impact Fee = $30,129.12

2.7 CONCLUSION

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

This report establishes the maximum allowable roadway impact fee that could be assessed by the Town of Fairview is $549 per vehicle-mile.

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

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

APPENDIX A: CONCEPTUAL LEVEL PROJECT COST PROJECTIONS

Town of Fairview

2021 Roadway Impact Fee Update

Conceptual Level Project Cost Projection

Updated: October 29, 2021

Project Information:		**Description:**	**Project No.:** 1
Name:	Frisco Rd	**This project consists of the construction of a new four-lane undivided thoroughfare. A preliminary OPCC previously completed for this segement estimated the roadway impact fee eligible construction total to be $4,472,000.**	
Limits:	US 75 NBFR to SH 5		
Class:	M4U(80)		
Length (lf):	3,350		

Roadway Construction Cost Projection	
Construction Cost TOTAL:	**$ 4,472,000**

Project Cost Summary

Item Description	Notes:	Allowance	Item Cost
Construction Cost TOTAL:			**$ 4,472,000**
Engineering/Survey:		12%	$ 536,700
Inspection and Testing:		4%	$ 178,880
ROW/Easement Acquisition:	Being dedicated by others		$ -
		Impact Fee Project Cost TOTAL:	**$ 5,188,000**

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

Town of Fairview

2021 Roadway Impact Fee Update

Conceptual Level Project Cost Projection

Updated: October 29, 2021

Project Information:		**Description:**	**Project No.:**	**2**
Name:	Fairview Pkwy (1)	**This project consists of the construction of a new four-lane undivided thoroughfare.**		
Limits:	Frisco Rd to Frisco Rd (Future)			
Class:	4U			
Length (lf):	340			

Roadway Construction Cost Projection

Item Description	Quantity	Unit	Unit Price	Item Cost
Unclassified Street Excavation	1,964	cy	$ 12.00	$ 23,573
Moisture Treated Subgrade	1,964	sy	$ 8.00	$ 15,716
12" Lime Stabilization (with Lime @ 90#/sy)	1,964	sy	$ 5.00	$ 9,822
8" Concrete Pavement w/ 6" Curb	1,851	sy	$ 55.00	$ 101,811
Concrete Sidewalk (10' both sides)	6,800	sf	$ 5.00	$ 34,000
			Paving Subtotal:	**$ 184,922**

Major Construction Component Allowances:

	Item Description	Notes:	Allowance *	Item Cost
☐	Traffic Control	New Roadway Alignment	3%	$ -
☑	Pavement Markings/Markers		2%	$ 3,698
☑	Roadway Drainage	Standard System	20%	$ 36,984
☐	Special Drainage Structures	None Anticipated		$ -
☐	Traffic Signals - Permanent	None Anticipated		$ -
☐	Traffic Signals - Temporary	None Anticipated		$ -
☑	Landscaping (Basic)	4" Topsoil, Sod	3%	$ 5,548
☑	Landscaping (Special)	Trees	3%	$ 5,548
☐	Irrigation	None Anticipated		$ -
☑	Illumination		6%	$ 11,095
☐	Water	None Anticipated		$ -
☐	Sewer	None Anticipated		$ -
☐	Walls/Bridges	None Anticipated		$ -
☐	Other:			$ -
	** Allowance based on % of Paving Subtotal*		**Allowance Subtotal:**	**$ 62,874**
			Paving and Allowance Subtotal:	**$ 247,796**
	Construction Contingency:		15%	$ 45,000
	Mobilization:		5%	$ 20,000
	General Site Preparation:		10%	$ 30,000
			Construction Cost TOTAL:	**$ 342,795**

Project Cost Summary

Item Description	Notes:	Allowance	Item Cost
Construction Cost TOTAL:			**$ 342,795**
Engineering/Survey:		12%	$ 41,200
Inspection and Testing:		4%	$ 13,712
ROW/Easement Acquisition:	100' ROW	$5/sf	$ 170,000
		Impact Fee Project Cost TOTAL:	**$ 568,000**

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

The planning level cost projections shall not supersede the Town's Design Criteria and Construction Standards in the Code of Ordinances or the determination of the Town Engineer for a specific project.

Town of Fairview

2021 Roadway Impact Fee Update

Conceptual Level Project Cost Projection

Updated: October 29, 2021

Project Information:	**Description:**	**Project No.:**	**3**

Name: Fairview Pkwy (2)
Limits: Frisco Rd (Future) to 3,890' S of Frisco Rd (Future)
Class: 4D
Length (lf): 3,890

This project consists of the construction of a new four-lane divided thoroughfare.

Roadway Construction Cost Projection

Item Description	Quantity	Unit	Unit Price	Item Cost
Unclassified Street Excavation	28,527	cy	$ 12.00	$ 342,320
Moisture Treated Subgrade	22,476	sy	$ 8.00	$ 179,804
12" Lime Stabilization (with Lime @ 90#/sy)	22,476	sy	$ 5.00	$ 112,378
8" Concrete Pavement w/ 6" Curb	19,882	sy	$ 55.00	$ 1,093,522
Concrete Sidewalk (10' both sides)	77,800	sf	$ 5.00	$ 389,000
			Paving Subtotal:	**$ 2,117,024**

Major Construction Component Allowances:

	Item Description	Notes:	Allowance *	Item Cost
☐	Traffic Control			$ -
☑	Pavement Markings/Markers		2%	$ 42,340
☑	Roadway Drainage	Standard System	20%	$ 423,405
☐	Special Drainage Structures	None Anticipated		$ -
☐	Traffic Signals - Permanent	None Anticipated		$ -
☐	Traffic Signals - Temporary	None Anticipated		$ -
☑	Landscaping (Basic)	4" Topsoil, Sod	3%	$ 63,511
☑	Landscaping (Special)	Trees	3%	$ 63,511
☐	Irrigation	None Anticipated		$ -
☑	Illumination		6%	$ 127,021
☐	Water	None Anticipated		$ -
☐	Sewer	None Anticipated		$ -
☐	Walls/Bridges	None Anticipated		$ -
☐	Other:			$ -
	** Allowance based on % of Paving Subtotal*		**Allowance Subtotal:**	**$ 719,788**
			Paving and Allowance Subtotal:	**$ 2,836,813**
	Construction Contingency:		15%	$ 492,000
	Mobilization:		5%	$ 150,000
	General Site Preparation:		10%	$ 290,000
			Construction Cost TOTAL:	**$ 3,768,813**

Project Cost Summary

Item Description	Notes:	Allowance	Item Cost
Construction Cost TOTAL:			**$ 3,768,813**
Engineering/Survey:		12%	$ 452,300
Inspection and Testing:		4%	$ 150,753
ROW/Easement Acquisition:	100' ROW	$5/sf	$ 1,945,000
		Impact Fee Project Cost TOTAL:	**$ 6,317,000**

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

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Town of Fairview

2021 Roadway Impact Fee Update

Conceptual Level Project Cost Projection

Updated: October 29, 2021

Project Information:		**Description:**	**Project No.:** 4
Name:	Fairview Pkwy (3)	**This project consists of the construction of a four-lane undivided bridge over Sloan Creek with 15' wide pedestrian zones.**	
Limits:	3,890' S of Frisco Rd (Future) to 1,955' N of Ridgeview Dr (Future)		
Class:	M4U		
Length (lf):	270		

Roadway Construction Cost Projection

Item Description	Quantity	Unit	Unit Price	Item Cost
Bridge	24,300	sf	$ 80.00	$ 1,944,000
			Paving Subtotal:	**$ 1,944,000**

Major Construction Component Allowances:

	Item Description	Notes:	Allowance *	Item Cost
☐	Traffic Control	Included in subtotal		$ -
☐	Pavement Markings/Markers	Included in subtotal		$ -
☐	Roadway Drainage	Included in subtotal		$ -
☐	Special Drainage Structures	None Anticipated		$ -
☐	Traffic Signals - Permanent	None Anticipated		$ -
☐	Traffic Signals - Temporary	None Anticipated		$ -
☐	Landscaping (Basic)	None Anticipated		$ -
☐	Landscaping (Special)	None Anticipated		$ -
☐	Irrigation	None Anticipated		$ -
☐	Illumination	Included in subtotal		$ -
☐	Water	None Anticipated		$ -
☐	Sewer	None Anticipated		$ -
☐	Walls/Bridges	None Anticipated		$ -
☐	Other:			$ -
	** Allowance based on % of Paving Subtotal*		**Allowance Subtotal:**	**$ -**
			Paving and Allowance Subtotal:	**$ 1,944,000**
	Construction Contingency:		15%	$ 337,000
	Mobilization:		5%	$ 100,000
	General Site Preparation:		10%	$ 200,000
			Construction Cost TOTAL:	**$ 2,581,000**

Project Cost Summary

Item Description	Notes:	Allowance	Item Cost
Construction Cost TOTAL:			**$ 2,581,000**
Engineering/Survey:		12%	$ 309,800
Inspection and Testing:		4%	$ 103,240
ROW/Easement Acquisition:	100' ROW	$5/sf	$ 135,000
		Impact Fee Project Cost TOTAL:	**$ 3,129,000**

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Town of Fairview

2021 Roadway Impact Fee Update

Conceptual Level Project Cost Projection

Updated: October 29, 2021

Project Information:		**Description:**	**Project No.:**	**5**
Name:	Fairview Pkwy (4)	**This project consists of the construction of a new four-lane divided thoroughfare.**		
Limits:	1,955' N of Ridgeview Dr (Future) to Ridgeview Dr			
Class:	4D			
Length (lf):	1,955			

Roadway Construction Cost Projection

Item Description	Quantity	Unit	Unit Price	Item Cost
Unclassified Street Excavation	14,337	cy	$ 12.00	$ 172,040
Moisture Treated Subgrade	11,296	sy	$ 8.00	$ 90,364
12" Lime Stabilization (with Lime @ 90#/sy)	11,296	sy	$ 5.00	$ 56,478
8" Concrete Pavement w/ 6" Curb	9,992	sy	$ 55.00	$ 549,572
Concrete Sidewalk (8' one side, 12' other side)	39,100	sf	$ 5.00	$ 195,500
			Paving Subtotal:	**$ 1,063,954**

Major Construction Component Allowances:

	Item Description	Notes:	Allowance *	Item Cost
☐	Traffic Control			
☑	Pavement Markings/Markers		2%	$ 21,279
☑	Roadway Drainage	Standard System	20%	$ 212,791
☐	Special Drainage Structures	None Anticipated		$ -
☐	Traffic Signals - Permanent	None Anticipated		$ -
☐	Traffic Signals - Temporary	None Anticipated		$ -
☑	Landscaping (Basic)	4" Topsoil, Sod	3%	$ 31,919
☑	Landscaping (Special)	Trees	3%	$ 31,919
☐	Irrigation	None Anticipated		$ -
☑	Illumination		6%	$ 63,837
☐	Water	None Anticipated		$ -
☐	Sewer	None Anticipated		$ -
☐	Walls/Bridges	None Anticipated		$ -
☐	Other:			$ -
	** Allowance based on % of Paving Subtotal*		**Allowance Subtotal:**	**$ 361,745**
			Paving and Allowance Subtotal:	**$ 1,425,699**
	Construction Contingency:		15%	$ 248,000
	Mobilization:		5%	$ 80,000
	General Site Preparation:		10%	$ 150,000
			Construction Cost TOTAL:	**$ 1,903,699**

Project Cost Summary

Item Description	Notes:	Allowance	Item Cost
Construction Cost TOTAL:			**$ 1,903,699**
Engineering/Survey:		12%	$ 228,500
Inspection and Testing:		4%	$ 76,148
ROW/Easement Acquisition:	117' ROW (assumes 200 lf ROW already acquired)	$5/sf	$ 1,026,675
		Impact Fee Project Cost TOTAL:	**$ 3,235,000**

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

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Town of Fairview

2021 Roadway Impact Fee Update

Conceptual Level Project Cost Projection

Updated: October 29, 2021

Project Information: **Description:** **Project No.:** 6

Name: Fairview Pkwy (5)
Limits: Ridgeview Dr to 530' N of Fairview Village Rd
Class: 4D (1/2)
Length (lf): 2,215

This project consists of the construction of the southbound lanes to complete the four-lane divided thoroughfare. Excludes 195' completed segment on south end.

Roadway Construction Cost Projection

Item Description	Quantity	Unit	Unit Price	Item Cost
Unclassified Street Excavation	8,122	cy	$ 12.00	$ 97,460
Moisture Treated Subgrade	6,399	sy	$ 8.00	$ 51,191
12" Lime Stabilization (with Lime @ 90#/sy)	6,399	sy	$ 5.00	$ 31,994
8" Concrete Pavement w/ 6" Curb	5,661	sy	$ 55.00	$ 311,331
Concrete Sidewalk (8' one side, 12' other side)	44,300	sf	$ 5.00	$ 221,500
			Paving Subtotal:	**$ 713,476**

Major Construction Component Allowances:

	Item Description	Notes:	Allowance *	Item Cost
☑	Traffic Control		3%	$ 21,404
☑	Pavement Markings/Markers		2%	$ 14,270
☑	Roadway Drainage	Standard System	20%	$ 142,695
☐	Special Drainage Structures	None Anticipated		$ -
☐	Traffic Signals - Permanent	None Anticipated		$ -
☐	Traffic Signals - Temporary	None Anticipated		$ -
☑	Landscaping (Basic)	4" Topsoil, Sod	3%	$ 21,404
☑	Landscaping (Special)	Trees	3%	$ 21,404
☐	Irrigation	None Anticipated		$ -
☑	Illumination		6%	$ 42,809
☐	Water	16" Water Line Extension		$ -
☐	Sewer	8" Sanitary Sewer		$ -
☐	Walls/Bridges	None Anticipated		$ -
☐	Other:			$ -
	** Allowance based on % of Paving Subtotal*		**Allowance Subtotal:**	**$ 263,986**
			Paving and Allowance Subtotal:	**$ 977,462**
	Construction Contingency:		15%	$ 169,000
	Mobilization:		5%	$ 50,000
	General Site Preparation:		10%	$ 100,000
			Construction Cost TOTAL:	**$ 1,296,462**

Project Cost Summary

Item Description	Notes:	Allowance	Item Cost
Construction Cost TOTAL:			**$ 1,296,462**
Engineering/Survey:		12%	$ 155,600
Inspection and Testing:		4%	$ 51,858
ROW/Easement Acquisition:	None Anticipated with this phase	n/a	$ -
		Impact Fee Project Cost TOTAL:	**$ 1,504,000**

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

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Town of Fairview

2021 Roadway Impact Fee Update

Conceptual Level Project Cost Projection

Updated: October 29, 2021

Project Information:		**Description:**	**Project No.:**	**7**
Name:	Fairview Pkwy (6)	**This completed project consisted of the construction of a new four-lane divided thoroughfare. Excludes 290' segment that is incomplete.**		
Limits:	530' N of Fairview Village Rd to 195' S of Indian Springs Rd			
Class:	4D			
Length (lf):	3,250			

Roadway Construction Cost Projection	
Impact Fee Project Cost TOTAL:	**$ 3,102,993**

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

Town of Fairview

2021 Roadway Impact Fee Update

Conceptual Level Project Cost Projection

Updated: October 29, 2021

Project Information:		**Description:**	**Project No.:**	**8**
Name:	Ridgeview Drive	**This project consists of the reconstruction construction of the existing facility as a 4 lane divided thoroughfare. The Town of Fairview contributed 10% of the overall cost towards ROW dedication.**		
Limits:	US 75 NBFR to Fairview Pkwy			
Class:	4D			
Length (lf):	900			

Project Cost Summary

Item Description	Notes:	Allowance	Item Cost
Construction Cost TOTAL:	Construction Funded by TxDOT		**$ 1,719,800**
Engineering/Survey:		0%	$ -
Inspection and Testing:		0%	$ -
ROW/Easement Acquisition:	10% Town Contribution	10%	$ 171,980
Impact Fee Project Cost TOTAL (Town Contribution):			**$ 171,980**

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

Town of Fairview

2021 Roadway Impact Fee Update

Conceptual Level Project Cost Projection

Updated: October 29, 2021

Project Information:		**Description:**	**Project No.:**	**9**
Name:	Stacy Rd	**This project consists of the reconstruction of the existing facility to a four lane divided thoroughfare.**		
Limits:	SH 5 to Country Club Rd			
Class:	4D			
Length (lf):	10,265			

Project Cost Summary		
	Impact Fee Project Cost TOTAL:	**$ 703,919**

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

Town of Fairview

2021 Roadway Impact Fee Update

Conceptual Level Project Cost Projection

Updated: October 29, 2021

Project Information:	**Description:**	**Project No.:**	**10**

Name: Country Club Rd (FM1378)
Limits: 575' S of Cottonwood Place to 845' S of Stacy Rd
Class: 3U
Length (lf): 4,720

This project consists of the reconstruction of the existing facility as a 3 lane undivided thoroughfare.

Roadway Construction Cost Projection

Item Description	Quantity	Unit	Unit Price	Item Cost
Unclassified Street Excavation	22,027	cy	$ 12.00	$ 264,320
HMAC Pvmt, Type D" (1.5" Comp. Depth)	19,929	sy	$ 28.00	$ 558,009
Flexible Base (Complete in Place)	19,929	sy	$ 18.38	$ 366,293
Lime Treated Subgrade (6" Compacted Depth)	19,929	sy	$ 5.00	$ 99,644
One Course Surface Treatment	19,929	sy	$ 5.00	$ 99,644
			Paving Subtotal:	**$ 1,387,911**

Major Construction Component Allowances:

	Item Description	Notes:	Allowance *	Item Cost
☑	Traffic Control		3%	$ 41,637
☑	Pavement Markings/Markers		2%	$ 27,758
☑	Roadway Drainage	Standard System	20%	$ 277,582
☐	Special Drainage Structures	None Anticipated		$ -
☐	Traffic Signals - Permanent	None Anticipated		$ -
☐	Traffic Signals - Temporary	None Anticipated		$ -
☑	Landscaping (Basic)	4" Topsoil, Sod	3%	$ 41,637
☑	Landscaping (Special)	Trees	3%	$ 41,637
☐	Irrigation	None Anticipated		$ -
☑	Illumination		6%	$ 83,275
☐	Water	16" Water Line Extension		$ -
☐	Sewer	8" Sanitary Sewer		$ -
☐	Walls/Bridges	None Anticipated		$ -
☐	Other:			$ -
	** Allowance based on % of Paving Subtotal*		**Allowance Subtotal:**	**$ 513,527**
			Paving and Allowance Subtotal:	**$ 1,901,438**
	Construction Contingency:		15%	$ 330,000
	Mobilization:		5%	$ 100,000
	General Site Preparation:		10%	$ 200,000
			Construction Cost TOTAL:	**$ 2,531,438**

Project Cost Summary

Item Description	Notes:	Allowance	Item Cost
Construction Cost TOTAL:			**$ 2,531,438**
Engineering/Survey:		12%	$ 303,800
Inspection and Testing:		4%	$ 101,258
ROW/Easement Acquisition:	None Anticipated with this phase	n/a	$ -
		Impact Fee Project Cost TOTAL:	**$ 2,936,000**

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Town of Fairview

2021 Roadway Impact Fee Update

Conceptual Level Project Cost Projection

Updated: October 29, 2021

Project Information:		**Description:**	**Project No.:** 11
Name:	Fairview Village Rd	**This project consists of the reconstruction of the existing facility as a 3 lane undivided thoroughfare.**	
Limits:	US 75 NBFR to Fairview Pkwy		
Class:	3U		
Length (lf):	1,380		

Roadway Construction Cost Projection

Item Description	Quantity	Unit	Unit Price	Item Cost
Unclassified Street Excavation	6,440	cy	$ 12.00	$ 77,280
HMAC Pvmt, Type D" (1.5" Comp. Depth)	5,827	sy	$ 28.00	$ 163,147
Flexible Base (Complete in Place)	5,827	sy	$ 18.38	$ 107,094
Lime Treated Subgrade (6" Compacted Depth)	5,827	sy	$ 5.00	$ 29,133
One Course Surface Treatment	5,827	sy	$ 5.00	$ 29,133
			Paving Subtotal:	**$ 405,787**

Major Construction Component Allowances:

	Item Description	Notes:	Allowance *	Item Cost
☑	Traffic Control		3%	$ 12,174
☑	Pavement Markings/Markers		2%	$ 8,116
☑	Roadway Drainage	Standard System	20%	$ 81,157
☐	Special Drainage Structures	None Anticipated		$ -
☐	Traffic Signals - Permanent	None Anticipated		$ -
☐	Traffic Signals - Temporary	None Anticipated		$ -
☑	Landscaping (Basic)	4" Topsoil, Sod	3%	$ 12,174
☑	Landscaping (Special)	Trees	3%	$ 12,174
☐	Irrigation	None Anticipated		$ -
☑	Illumination		6%	$ 24,347
☐	Water	16" Water Line Extension		$ -
☐	Sewer	8" Sanitary Sewer		$ -
☐	Walls/Bridges	None Anticipated		$ -
☐	Other:			$ -
	** Allowance based on % of Paving Subtotal*		**Allowance Subtotal:**	**$ 150,141**
			Paving and Allowance Subtotal:	**$ 555,929**
	Construction Contingency:		15%	$ 97,000
	Mobilization:		5%	$ 30,000
	General Site Preparation:		10%	$ 60,000
			Construction Cost TOTAL:	**$ 742,929**

Project Cost Summary

Item Description	Notes:	Allowance	Item Cost
Construction Cost TOTAL:			**$ 742,929**
Engineering/Survey:		12%	$ 89,200
Inspection and Testing:		4%	$ 29,717
ROW/Easement Acquisition:	None Anticipated with this phase	n/a	$ -
		Impact Fee Project Cost TOTAL:	**$ 862,000**

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APPENDIX B: CIP SERVICE UNITS OF SUPPY

Town of Fairview - 2021 Roadway Impact Fee Update

CIP Service Units of Supply

10/29/2021

Project ID #	ROADWAY	LIMITS	LENGTH (MI)	LANES	IMPACT FEE CLASSIFICATION	PEAK HOUR VOLUME	% IN SERVICE AREA	VEH-MI CAPACITY PK-HR PER LN	VEH-MI SUPPLY PK-HR TOTAL	VEH-MI TOTAL DEMAND PK-HR	EXCESS CAPACITY PK-HR VEH-MI	TOTAL PROJECT COST	PROJECT COST IN SERVICE AREA
1	Frisco Rd	US 75 NBFR to SH 5	0.63	4	M4U(80)	New	100%	525	1332	0	1,332	$ 5,188,000.00	$ 5,188,000
2	Fairview Pkwy (1)	Frisco Rd to Frisco Rd (Future)	0.06	4	4U	New	100%	525	135	0	135	$ 568,000.00	$ 568,000
3	Fairview Pkwy (2)	Frisco Rd (Future) to 3,890' S of Frisco Rd (Future)	0.74	4	4D	New	100%	650	1916	0	1916	$ 6,317,000.00	$ 6,317,000
4	Fairview Pkwy (3)	3,890' S of Frisco Rd (Future) to 1,955' N of Ridgeview Dr (Future)	0.05	4	M4U	New	100%	650	133	0	133	$ 3,129,000.00	$ 3,129,000
5	Fairview Pkwy (4)	1,955' N of Ridgeview Dr (Future) to Ridgeview Dr	0.37	4	4D	New	100%	650	963	0	963	$ 3,235,000.00	$ 3,235,000
6	Fairview Pkwy (5)	Ridgeview Dr to 530' N of Fairview Village Rd	0.42	4	4D (1/2)	352	100%	650	1091	148	943	$ 1,504,000.00	$ 1,504,000
7	Fairview Pkwy (6)	530' N of Fairview Village Rd to 195' S of Indian Springs Rd	0.62	4	4D	352	100%	650	1600	217	1383	$ 3,102,993.00	$ 3,102,993
8	Ridgeview Drive	US 75 NBFR to Fairview Pkwy	0.17	4	4D	352	100%	650	443	60	383	$ 171,980.00	$ 171,980
9	Stacy Rd	SH 5 to Country Club Rd	1.94	4	4D	2,332	100%	650	5055	4534	521	$ 703,919.00	$ 703,919
10	Country Club Rd (FM1378)	575' S of Cottonwood Place to 845' S of Stacy Rd	0.89	4	3U	1,206	100%	650	2324	1078	1246	$ 2,936,000.00	$ 2,936,000
11	Fairview Village Rd	US 75 NBFR to Fairview Pkwy	0.26	4	3U	150	100%	650	680	39	641	$ 862,000.00	$ 862,000
I-1	Traffic Signal	Friso Rd & Fairview Pkwy			Intersection	-	100%	-	-	-	-	$ 300,000.00	$ 300,000
I-2	Intersection Improvements	SH-5 & Meandering Way			Intersection	-	100%	-	-	-	-	$ 108,318.65	$ 108,319
I-3	Traffic Signal	Country Club Rd & Stoddard Rd			Intersection	-	100%	-	-	-	-	$ 300,000.00	$ 300,000
I-4	Left-Turn Lane	Hart Rd & Country Club Rd			Intersection	-	100%	-	-	-	-	$ 400,000.00	$ 400,000
SUBTOTAL									**15,672**	**6,076**	**9,596**		**$ 28,826,211**
											2021 Roadway Impact Fee Cost Per Service Area		**$ 33,500**
											TOTAL COST IN SERVICE AREA		**$28,859,711**

APPENDIX C: EXISTING ROADWAY FACILITIES INVENTORY

Town of Fairview - 2021 Roadway Impact Fee Update

Existing Roadway Facilities Inventory

ROADWAY	FROM	TO	LENGTH (ft)	LENGTH (mi)	EXIST LANES		EXIST LANES	THROUGHFARE CLASS	FUTURE LANES	PM PEAK HOUR VOL		% IN SERVICE AREA	VEH-MI CAPACITY PK-HR PER LN		VEH-MI SUPPLY PK-HR TOTAL		VEH-MI DEMAND PK-HR TOTAL		EXCESS CAPACITY PK-HR VEH-MI		EXISTING DEFICIENCIES PK-HR VEH-MI	
					NB/EB	SB/WB				NB/EB	SB/WB		NB/EB	SB/WB	NB/EB	SB/WB	NB/EB	SB/WB	NB/EB	SB/WB	NB/EB	SB/WB
Country Club Rd (FM1378)	SH 5	785' E of SH 5	785	0.15	1	1	2U	2 Lane Undivided Road	2	349	349	100%	425	425	63	63	52	52	11	11		
Country Club Rd (FM1378)	785' E of SH 5	1,025' E of Nature Place	5,260	1.00	1	1	2U	2 Lane Undivided Road	2	349	349	50%	425	425	212	212	174	174	38	38		
Country Club Rd (FM1378)	1,025' E of Nature Place	Hart Rd	2,320	0.44	1	1	2U	2 Lane Undivided Road	2	349	349	100%	425	425	187	187	153	153	33	33		
Country Club Road	Hart Rd	Old Stacy Rd	7,505	1.42	1	1	2U	2 Lane Undivided Road	2	321	321	100%	425	425	604	604	456	456	148	148		
Country Club Road	Old Stacy Rd	Summer Hill Lane	2,575	0.49	1	1	2U	4 Lane Divided Road	4	603	603	100%	425	425	207	207	294	294	-87	-87	87	87
Meandering Way	SH 5	Creekwood Drive North	5,800	1.10	1	1	2U	2 Lane Undivided Road	2	25	25	100%	425	425	467	467	27	27	439	439		
Meandering Way	Creekwood Drive North	Stacy Rd	3,540	0.67	1	1	2U	2 Lane Undivided Road	2	82	82	100%	425	425	285	285	55	55	230	230		
Fairview Pkwy	Ridgeview Dr	1,110' N of Fairview Village Rd	1,705	0.32	1	1	2U	4 Lane Divided Road	4	176	176	100%	425	425	137	137	57	57	80	80		
Fairview Pkwy	1,110' N' of Fairview Village Rd	935' N of Fairview Village Rd	140	0.03	2	2	4D	4 Lane Divided Road	4	176	176	100%	650	650	34	34	5	5	30	30		
Fairview Pkwy	935' N of Fairview Village Rd	615' N of Fairview Village Rd	270	0.05	1	1	2U	4 Lane Divided Road	4	176	176	100%	425	425	22	22	9	9	13	13		
Fairview Pkwy	615' N of Fairview Village Rd	215' S of Indian Springs Rd	3,225	0.61	2	2	4D	4 Lane Divided Road	4	176	176	100%	650	650	794	794	108	108	687	687		
Stacy Rd	I-75 NBFR	SH 5	4,485	0.85	3	3	6D	6 Lane Divided Road	6	1776	2048	50%	750	750	956	956	754	870	201	86		
Stacy Rd	SH 5	Meandering Way	4,935	0.93	2	2	4D	4 Lane Divided Road	4	1172	1160	50%	650	650	608	608	548	542	60	65		
Stacy Rd	Meandering Way	Oakwood Tr	2,015	0.38	2	2	4D	4 Lane Divided Road	4	628	549	50%	650	650	248	248	120	105	128	143		
Stacy Rd	Oakwood Tr	430' E of Lorraine Ave	1,945	0.37	2	2	4D	4 Lane Divided Road	4	628	549	50%	650	650	239	239	116	101	124	138		
Stacy Rd	430' E of Lorraine Ave	Country Club Rd	1,355	0.26	2	2	4D	4 Lane Divided Road	4	628	549	100%	650	650	334	334	161	141	172	193		
Stacy Rd	Country Club Rd	Stone Hinge Dr	6,805	1.29	1	1	2U	2 Lane Undivided Road	2	99	99	100%	425	425	548	548	128	128	420	420		
Stacy Rd	Stone Hinge Dr	325' W of Orr Road	5,195	0.98	1	1	2U	2 Lane Undivided Road	2	99	99	100%	425	425	418	418	97	97	321	321		
Orr Road	460' S of Stacy Rd	1,945' S of Stacy Rd	1,235	0.23	1	1	2U	2 Lane Undivided Road	2	99	99	100%	425	425	99	99	23	23	76	76		
State Highway 5	Frisco Rd	595' N of Sloan Creek Pkwy	3,875	0.73	1	1	2U-H	4 Lane Divided Road	4	567	567	100%	650	650	477	477	416	416	61	61		
State Highway 5	595' N of Sloan Creek Pkwy	Meandering Way	1,930	0.37	1	1	2U-H	2 Lane Undivided Road	2	530	475	100%	650	650	238	238	194	174	44	64		
State Highway 5	Meandering Way	Bluebird Ln	3,335	0.63	1	1	3U-H	2 Lane Undivided Road	2	521	475	100%	750	750	474	474	329	300	145	174		
State Highway 5	Bluebird Ln	Indian Springs Rd	1,155	0.22	1	1	3U-H	2 Lane Undivided Road	2	596	508	100%	750	750	164	164	130	111	34	53		
State Highway 5	Indian Springs Rd	Stacy Rd	1,105	0.21	1	1	3U-H	4 Lane Divided Road	4	718	718	100%	750	750	157	157	150	150	7	7		
SUBTOTAL			120,520	22.83											7,971	7,971	4,556	4,548	3,415	3,423	87	87
															15,942		9,104		6,838		174	

TOWN OF FAIRVIEW, TEXAS
WATER IMPACT FEE UPDATE

Nov. 2021

Prepared for the Town of Fairview

Prepared by:

Kimley-Horn and Associates, Inc.

13455 Noel Road, Two Galleria Office Tower, Suite 700

Dallas, Texas 75240

TBPE Firm Registration Number: F-928

Project Number: 061182006

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Town of Fairview Water Impact Fee

AS PREPARED FOR THE TOWN OF FAIRVIEW, TEXAS

3.1 EXECUTIVE SUMMARY

This study was performed to update the Town of Fairview's (Town) water system impact fees. Water system analysis and the water system master plan are important tools for facilitating orderly growth of the water system and for providing adequate facilities that promote economic development in the Town. The implementation of an impact fee is a way to shift a portion of the burden of paying for new facilities onto new development.

Elements of the water system, including storage facilities, pumping facilities, and the distribution network itself, were evaluated against industry standards such as the Texas Commission on Environmental Quality (TCEQ) as explained in the Town's 2015 Water Master Plan Update. Population and land use projections were based on the 2021 Land Use Assumptions developed by Kimley-Horn.

Water system improvements necessary to serve 10-year (2031) and build-out system needs were evaluated. Generally, new water infrastructure is designed beyond the 10-year requirements; however, Texas' impact fee law (Chapter 395 of the Local Government Code) only allows recovery of costs to serve the 10-year planning period. A portion of the remaining costs past the 10-year window may be recovered as a result of impact fee updates in the future.

The impact fee law defines a service unit as "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 political subdivision in which the individual unit of development is located during the previous 10 years". For the purpose of this report, the Town defines a service unit as a unit of development that consumes the amount of water requiring a standard 5/8" x 3/4" meter. For developments that require a different size meter, a service unit equivalent has been determined as a multiplier of the 5/8" x 3/4" meter based on its required operating capacity. These service unit equivalency factors and associated maximum assessable impact fees are shown in Table 3.1.

After analysis of the Town's 10-year growth projections and the associated demand values, 2,783 additional service units will need water by the year 2031. Based on these additional service units and recoverable costs calculated from the Town's Capital Improvements Plan, the Town may assess a maximum of $1,175 per service unit. Support and calculations for these results are included in the following report.

Table 3.1: Maximum Assessable Water Impact Fee for Commonly Used Meters

Meter Size*	Maximum Continuous Operating Capacity (GPM)**	Service Unit Equivalent	Maximum Assessable Fee ($)
5/8"x 3/4" PD	10	1	1,175
3/4" PD	15	1.5	1,763
1" PD	25	2.5	2,938
1 1/2" PD	50	5	5,875
2" PD	80	8	9,400
2" Compound	80	8	9,400
2" Turbine	160	16	18,800
3" Compound	175	17.5	20,563
3" Turbine	350	35	41,125
4" Compound	300	30	35,250
4" Turbine	650	65	76,375
6" Compound	675	67.5	79,313
6" Turbine	1,400	140	164,500
8" Compound	900	90	105,750
8" Turbine	2,400	240	282,000
10" Turbine	3,500	350	411,250

* PD = Positive Displacement Meter (Typical Residential Meter)
** Operating capacities obtained from American Water Works (AWWA) C-700, C-701 & C-702

3.2 INTRODUCTION

The Town contracted Kimley-Horn and Associates, Inc. (Kimley-Horn) in January of 2021 to update the existing water impact fee. The most recent water impact fee update was completed by Kimley-Horn in September 2015. The purpose of the report is to satisfy the requirements of the law and provide the Town with an updated impact fee capital improvements plan and associated impact fees.

For convenience and reference, the following is excerpted from Chapter 395 of the Local Government Code.

(a) The political subdivision shall use qualified professionals to prepare the capital improvements plan and to calculate the impact fee. The capital improvements plan must contain specific enumeration of the following items:

(1) a description of the existing capital improvements within the service area and the costs to upgrade, update, improve, expand, or replace the improvements to meet existing needs and usage and stricter safety, efficiency, environmental, or regulatory standards, which shall be prepared by a qualified professional engineer licensed to perform the professional engineering services in this state;

(2) an analysis of the total capacity, the level of current usage, and commitments for usage of capacity of the existing capital improvements, which shall be prepared by a qualified professional engineer licensed to perform the professional engineering services in this state;

(3) a description of all or the parts of the capital improvements or facility expansions and their costs necessitated by and attributable to new development in the service area based on the approved land use assumptions, which shall be prepared by a qualified professional engineer licensed to perform the professional engineering services in this state;

(4) a definitive table establishing the specific level or quantity of use, consumption, generation, or discharge of a service unit for each category of capital improvements or facility expansions and an equivalency or conversion table establishing the ratio of a service unit to various types of land uses, including residential, commercial, and industrial;

(5) the total number of projected service units necessitated by and attributable to new development within the service area based on the approved land use assumptions and calculated in accordance with generally accepted engineering or planning criteria;

(6) the projected demand for capital improvements or facility expansions required by new service units projected over a reasonable period of time, not to exceed 10 years; and

(7) a plan for awarding:

(A) a credit for the portion of ad valorem tax and utility service revenues generated by new service units during the program period that is used for the payment of improvements, including the payment of debt, that are included in the capital improvements plan; or

(B) in the alternative, a credit equal to 50 percent of the total projected cost of implementing the capital improvements plan.

The impact fees are based on recommended capital improvements and the population growth projections outlined in the Town's 2015 Water Master Plan Update. Additionally, Kimley-Horn worked with Town staff to determine future projections and develop updated land use assumptions. The growth projections were then used to project water demands throughout the Town.

The study process involved the following two tasks:

1. IMPACT FEE CAPITAL IMPROVEMENTS PLAN

   This task involved developing cost projections for the capital improvement projects which were identified during the 2015 Master Plan Update to be built in the 10-year planning window. Feedback was also provided by the Town as to which projects had been built since the last update. This task also involved estimating the utilized capacity of the existing and proposed capital improvement projects to determine their 10-year recoverable cost.

2. IMPACT FEE ANALYSIS AND REPORT

   This task included calculating the additional service units and service unit equivalents. These values were then used to determine the impact fee per service unit and the maximum assessable impact fee by meter size.

Water Service Area

The build-out service area boundary for the Town's water system is shown on the enclosed Water System Service Area map (Exhibit 3.1). This area encompasses much of the land within the Town's limits and includes approximately 5,300 acres. Portions of the Town are currently served by Milligan Water Supply Corporation and the City of Allen. These areas are anticipated to be served by these providers at build-out.

Water System Definitions

The following terms are used throughout this report.

Capital Improvements Plan (CIP)

Recommended improvement to the water distribution system based on growth and water demand projections.

Commercial Planned Development District (CPDD)

The portion of the Town located northwest of the Dart tracks which is planned for future commercial development.

Demand (Consumption)

Volume of water used for a given time period, typically measured in million gallons per day (mgd) or gallons per minute (gpm).

EST

Elevated Storage Tank

gpd

Gallons per day

GST

Ground Storage Tank

NTMWD

North Texas Municipal Water District

3.3 DESIGN CRITERIA

Water Transmission Lines

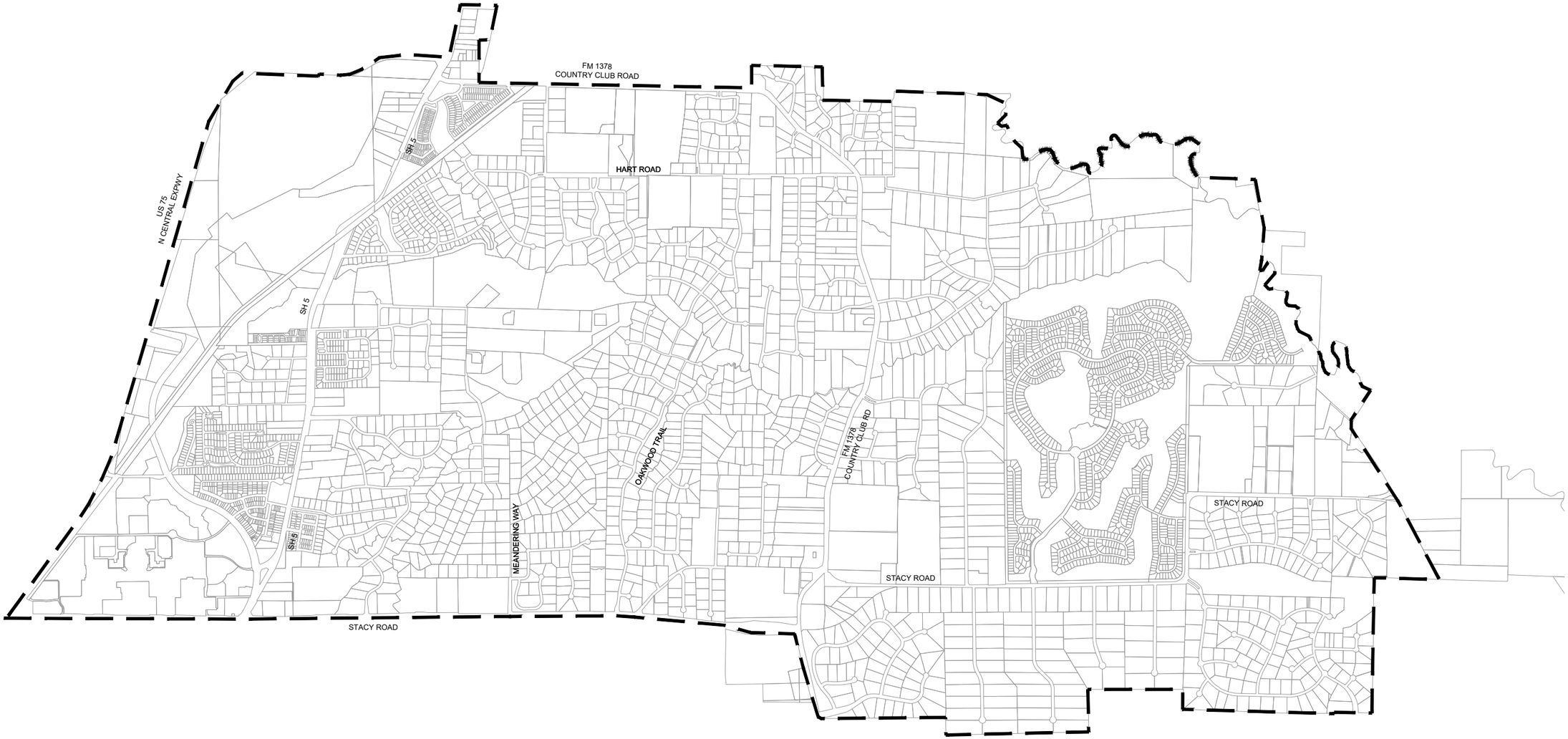
Water transmission lines shall be sized to maintain the following pressure requirements:

- Peak hour demand with a minimum pressure of 35 psi;
- Peak day demand plus fire flow with a minimum pressure of 20 psi.

LEGEND

WATER SERVICE AREA

EXISTING PARCELS



TOWN OF FAIRVIEW TEXAS

NORTH

GRAPHIC SCALE IN FEET
0 500 1000 2000

WATER SYSTEM SERVICE AREA

TOWN OF FAIRVIEW, TEXAS

Kimley»Horn

DESIGN	DRAWN	DATE	SCALE	EXHIBIT
LMB	AMP	OCTOBER 2021	1" = 2,000'	3.1

Storage Tanks

The Texas Commission on Environmental Quality (TCEQ) has established criteria for ground and elevated water storage. These criteria address volume and height requirements only. The layout of the distribution system, location of the storage facilities, and the interaction with the high service pumps and booster pumps affect the amount of storage necessary for the most efficient and reliable operation of the system.

1. Ground Storage

   Ground storage serves two functions:

   - Equalization for differing feed rates between water supply and pumping output to the system; and
   - Emergency capacity in the event of temporary loss of water supply.

   Generally, ground storage facilities are located at water supply points or at each pump station within the water distribution system. Suggested storage capacities are established based on several criteria including specific requirements of the TCEQ. These criteria are detailed later in this section. Although ground and elevated storage facilities perform separate functions within the system, both are aimed at decreasing the impact of demand fluctuations. Their capacities are established based on knowledge of how demand varies seasonally and daily.

2. Elevated Storage

   Elevated storage serves three purposes:

   - Functionally, elevated storage equalizes the pumping rate to compensate for daily variations in demand and to maintain a fairly constant pumping rate (usually referred to as operational storage), or a pumping rate that conforms to the requirements of the electrical rate structure.
   - Provides pressure maintenance and protection against surges created by instantaneous demand, such as fire flow and main breaks, and instantaneous change in supply, such as pumps turning on and off.
   - Maintains a reserve capacity for fire protection and pressure maintenance in case of power failure to one or more pump stations. Sufficient storage should be maintained to provide four hours of fire flow demand during a loss of power to the pump station.

   Suggested storage capacities are established by the TCEQ. Adequate operational storage is established by determining the required volume to equalize the daily fluctuations in flow during the maximum day demand, plus the reserve volume required for fire protection.

   The minimum requirements for storage, according to Chapter 290 of the Texas Administrative Code, are as follows:

   - Total Storage: equal to 200 gallons per connection.
   - Elevated Storage: equal to 100 gallons per connection; or
   - Elevated Storage: equal to 200 gallons per connection for a firm pumping capacity reduction from 2.0 gallons per minute (gpm) per connection to 0.6 gpm

Pump Stations

Pumping capacities must provide the maximum day demand or the peak hour demand required by the water system of the suggested capacities established by the TCEQ. Pumping capacity should supply the maximum demand with sufficient redundancy to allow for the largest pump at the pump station to be out of service. This is known as firm pumping capacity.

Each pump station or pressure plane must have two or more pumps that have a total capacity of 2.0 gpm per connection or have a total capacity of at least 1,000 gpm and the ability to meet peak hour demand with the largest pump out of service, whichever is less. If the system provides elevated storage capacity of 200 gallons per connection, two service pumps with a minimum combined capacity of 0.6 gpm per connection are required.

Water Demand

The criteria used for projecting the water demands for the water system were derived from the 2015 Water System Master Plan.

3.4 EXISTING WATER DISTRIBUTION SYSTEM

Water Supply

The Existing Water Distribution System map (Exhibit 3.2) shows the Town's two existing NTMWD delivery points. Fairview No. 1 is located on the west side of Country Club Road (F.M. 1378) between Stone Creek Drive and Lucas Lane and supplies water to the F.M. 1378 Pump Station.

Fairview No. 2 is located on the northwest corner of Stacy Road and State Highway 5 (SH 5) and supplies water to the SH 5 Pump Station.

Pump Stations

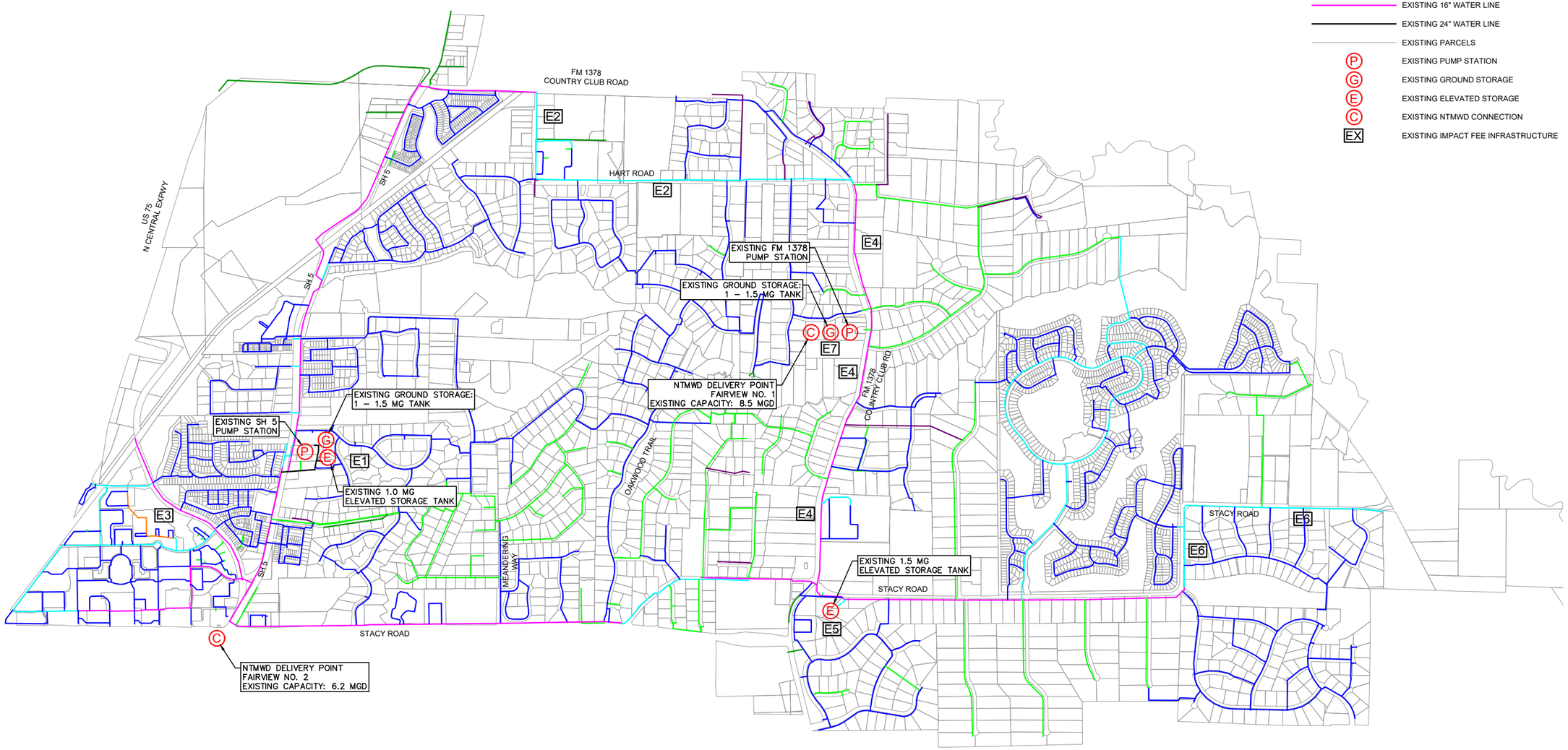
The Town has two pump stations. The F.M. 1378 Pump Station is located at the NTMWD Fairview No. 1 delivery point. The S.H. 5 Pump Station is located on the east side of SH 5 between Lakeridge Drive and Bluebird Lane and supplied by the NTMWD Fairview No. 2 delivery point. Both pump stations currently utilizes three pumps with space for a fourth pump.

Ground Storage Tanks

The Town has a total of 3.0 million gallons of ground storage capacity. A 1.5 million gallon tank provides storage at the F.M. 1378 Pump Station and another 1.5 million gallon tank provides storage at the S.H. 5 Pump Station.

Elevated Storage Tanks

The Town has two elevated storage tanks with a combined storage of 2.5 million gallons. A 1.0 million gallon elevated storage tank is located at the S.H. 5 Pump Station and 1.5 million gallon elevated storage tank is located on Stacy Road near Fire Station No. 2.



LEGEND

- EXISTING 2" WATER LINE
- EXISTING 4" WATER LINE
- EXISTING 6" WATER LINE
- EXISTING 8" WATER LINE
- EXISTING 10" WATER LINE
- EXISTING 12" WATER LINE
- EXISTING 16" WATER LINE
- EXISTING 24" WATER LINE
- EXISTING PARCELS
- (P) EXISTING PUMP STATION
- (G) EXISTING GROUND STORAGE
- (E) EXISTING ELEVATED STORAGE
- (C) EXISTING NTMWD CONNECTION
- [EX] EXISTING IMPACT FEE INFRASTRUCTURE

TOWN OF FAIRVIEW TEXAS

NORTH

GRAPHIC SCALE IN FEET
0 500 1000 2000

EXISTING WATER DISTRIBUTION SYSTEM

TOWN OF FAIRVIEW, TEXAS

Kimley»Horn

DESIGN	DRAWN	DATE	SCALE	EXHIBIT
LMB	AMP	OCTOBER 2021	1" = 2,000'	3.2

Infrastructure Eligible for Impact Fees

There is some existing Town water system infrastructure which has additional capacity to serve future growth within the Town's service area, as identified in the 2015 Water Master Plan Update. A portion of the cost of this infrastructure is eligible for recoverable cost in the updated impact fee. Table 3.2 shows the recoverable cost of the projects that were determined to be eligible for impact fee consideration. The recoverable cost is calculated by multiplying the 2021-2031 capacity utilization percentage by the total project cost. Project costs shown were provided by the Town.

Table 3.2: Project Costs for Infrastructure Eligible for Impact Fees

Project No.	Existing Improvement Description	2021 Capacity (% Utilization)	2031 Capacity (% Utilization)	2021 - 2031 Capacity (% Utilization)	Total Project Cost*	2031 Projected Recoverable Cost*
E1	SH 5 1.0 MG Elevated Storage Tank	42%	71%	29%	$ 1,065,047	$ 308,864
E2	F.M. 1378/Stoddard/Hart 12-Inch and 16-Inch Water Lines	60%	80%	20%	$ 412,366	$ 82,473
E3	Fairview Parkway 16-Inch Water Line	50%	75%	25%	$ 331,027	$ 82,757
E4	F.M. 1378 16-Inch Water Line	60%	80%	20%	$ 915,957	$ 182,420
E5	Stacy Road 1.5 MG Elevated Storage Tank	40%	70%	30%	$ 2,198,252	$ 659,476
E6	Stacy Road 12-Inch Water Line	84%	92%	8%	$ 250,000	$ 20,000
E7	FM 1378 Pump Station & 1.5 MG Ground Storage Tank	25%	63%	38%	$ 6,037,970	$ 2,294,429
	TOTAL				$ 11,210,619	$ 3,630,418

* Does not include financing costs.

3.5 WATER IMPACT FEE CAPITAL IMPROVEMENTS PLAN

The 2015 Water Master Plan Update identified a list of projects that will be required to supply water to the Town's customers in the future. Since that time, the FM 1378 Pump Station and FM 1378 MG Ground Storage Tank No. 1 have been constructed and are included in table 3.2 above. Three (3) additional future projects from the 2015 Master Plan were identified as being eligible for cost recovery through impact fees over the next 10 years. These impact fee capital improvement projects are summarized in Table 3.3 and illustrated in Exhibit 3.3. A summary of the opinions of probable costs are included in Appendix A.

Table 3.3: Estimated Project Costs for Proposed Capital Improvement Projects

Project No.	Proposed Improvement Description	2021 Capacity (% Utilization)	2031 Capacity (% Utilization)	2021 - 2031 Capacity (% Utilization)	Total Project Cost*	2031 Projected Recoverable Cost*
P1	Fairview Parkway 16-Inch Water Line	0%	50%	50%	$ 2,611,925	$ 1,305,963
P2	IH 75 Service Road 12-Inch Water Line	0%	50%	50%	$ 2,256,375	$ 1,128,188
P3	Frisco Road 12-Inch Water Line	0%	50%	50%	$ 888,875	$ 444,438
	TOTAL				$ 5,757,175	$ 2,878,588

* Includes 20-year simple interest loan @ 3.5% APR.

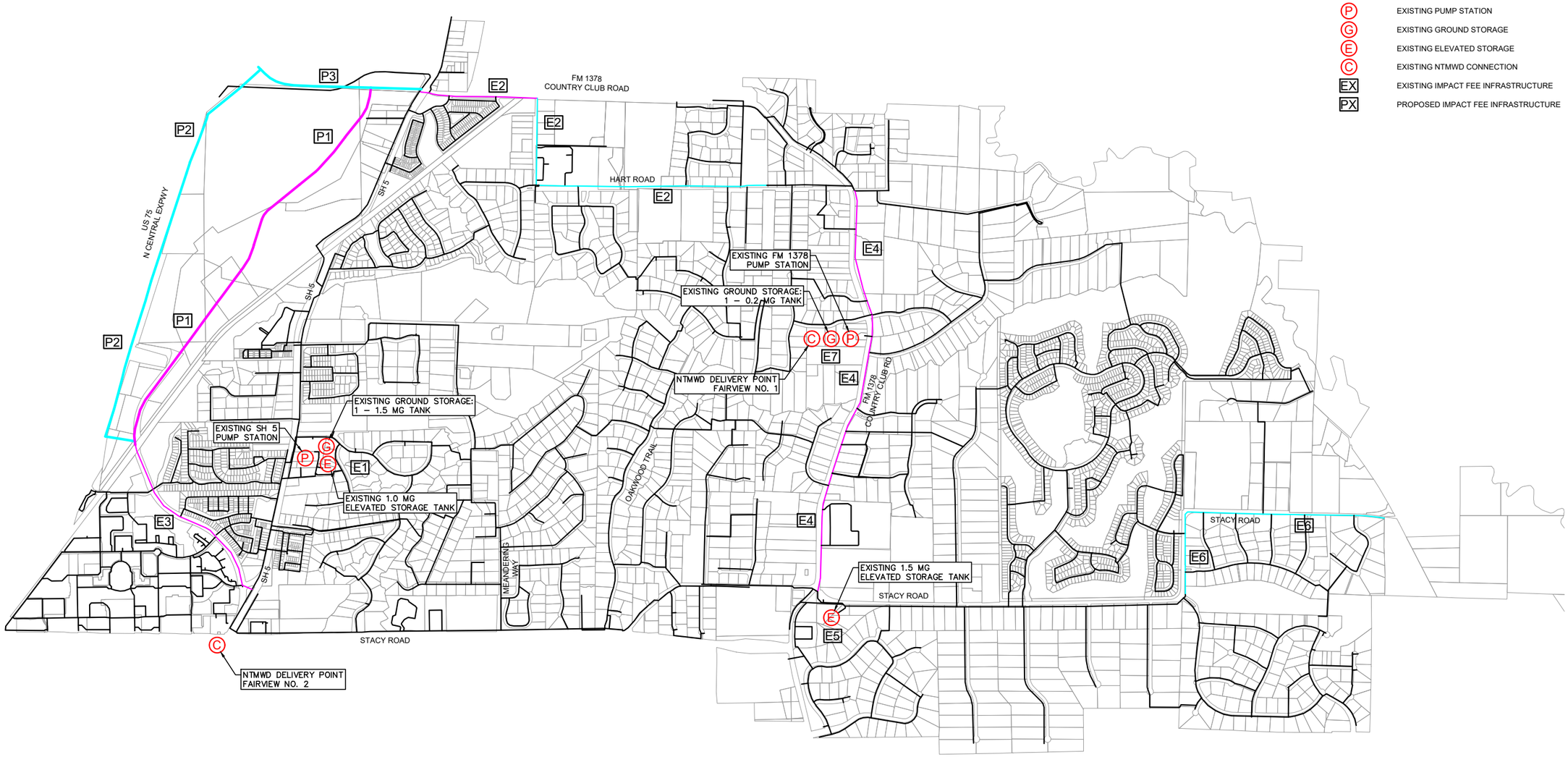
Project Descriptions

1. Fairview Parkway 16-Inch Water Line
   Approximately 7,960 LF of 16-inch water line is proposed along the future Fairview Parkway extension, from the abandoned railroad crossing northeast to Frisco Road. This line will form the backbone of the future CPDD, providing water to the northwest portion of the Town.

   Project Cost $2,611,925
   Recoverable Cost $1,305,963

LEGEND

- EXISTING WATER LINE
- EXISTING 12" IMPACT FEE WATER LINE
- EXISTING 16" IMPACT FEE WATER LINE
- PROPOSED 12" IMPACT FEE WATER LINE
- PROPOSED 16" IMPACT FEE WATER LINE
- EXISTING PARCELS
- (P) EXISTING PUMP STATION
- (G) EXISTING GROUND STORAGE
- (E) EXISTING ELEVATED STORAGE
- (C) EXISTING NTMWD CONNECTION
- EX EXISTING IMPACT FEE INFRASTRUCTURE
- PX PROPOSED IMPACT FEE INFRASTRUCTURE



GRAPHIC SCALE IN FEET
0 500 1000 2000

NORTH

WATER SYSTEM IMPACT FEE INFRASTRUCTURE

TOWN OF FAIRVIEW, TEXAS

Kimley»Horn

DESIGN	DRAWN	DATE	SCALE	EXHIBIT
LMB	AMP	OCTOBER 2021	1" = 2,000'	3.3

Project Descriptions

2. IH 75 Service Road 12-Inch Water Line
   Approximately 7,890 LF of 12-inch water line is proposed along the IH 75 service road, from Fairview Parkway to Frisco Road. This water line will help loop the system and provide water to future development in the CPDD.

Project Cost	$2,256,375
Recoverable Cost	$1,128,188

3. Frisco Road 12-Inch Water Line
   Approximately 3,100 LF of 12-inch water line is proposed along Frisco Road, from SH 5 to the IH 75 service road. This water line will also help loop the system and provide water to future development in the CPDD.

Project Cost	$888,875
Recoverable Cost	$444,438

3.6 WATER IMPACT FEE CALCULATION

In accordance with Chapter 395 of the *Local Government Code*, the Town defines a service unit based on historical water usage over the last 10 years as compared to the estimated residential units. The residential unit is the development type that typically uses a 5/8" x 3/4" meter. The measure of the consumption per service unit is based on a 5/8" x 3/4" meter and the data shown in Table 3.4.

Table 3.4: Service Unit Consumption Calculation

Year	Population	Service Units (2.51 People/Unit)	Water Usage Average Day Demand (MGD)	Consumption per Service Unit (GPD)
2011	7,270	2,896	2.55	880
2012	7,390	2,944	2.26	768
2013	8,020	3,195	2.00	626
2014	8,310	3,311	1.92	581
2015	8,420	3,355	2.07	616
2016	8,490	3,382	1.98	586
2017	9,110	3,629	2.11	581
2018	9,520	3,793	2.28	602
2019	9,610	3,829	2.18	568
2020	10,372	4,132	2.28	552
10-Year Average Consumption per Service Unit:				636

* Population Numbers Per NCTCOG Historic Population Data and 2020 Census Data

* Annual NTMWD Supply Per Fairview Historical Data Provided by Town in August 2021

Additional Service Unit and Water Impact Fee Calculation

According to the Town's 10-year growth projections and corresponding water demand projections, water service will be required for an additional 2,783 service units. The calculation is summarized below:

- A service unit, which is a unit of development that consumes approximately 636 GPD, is a typical residential connection that uses a 5/8" x 3/4" meter. Table 3.5 details the future water demand projections and how it effects the service units projected for the next 10 years.

Table 3.5: 10-Year Additional Service Units Calculation

Year	Average Day Demand (MGD)	Service Unit Demand (GPD)	Service Units
2021	3.42	636	5,377
2031	5.19	636	8,161
10-Year Additional Service Units			2,783

* Projected Water Usage Source: 2021 Land Use Assumptions

Impact fee law allows for a credit calculation to credit back the development community based on the utility revenues or ad valorem taxes that are allocated for paying a portion of future capital improvements. The intent of this credit is to prevent the Town from double-charging development for future capital improvements via impact fees and utility rates. If the Town chooses not to do a financial analysis to determine the credit value, they are required by law to reduce the recoverable cost by 50 percent. The Town has decided to forgo the financial analysis and reduce the recoverable cost by 50 percent. The maximum recoverable cost for impact fee is shown in Table 3.6.

Table 3.6: Recoverable Cost Breakdown

Water System Facility	Total Project Cost	2031 Recoverable Cost
Existing Bond Projects	$ 11,210,619	$ 3,630,418
Proposed Capital Improvement Projects	$ 5,757,175	$ 2,878,588
Planning Expenses	$ 33,500	$ 33,500
Totals	$ 17,001,294	$ 6,542,506

The impact fee per service unit is calculated as follows:

- Assessable Cost = 50% of Recoverable Cost = $6,542,506 * 0.50 = $3,271,253
- Impact fee per service unit = $\frac{\text{Assessable Cost}}{\text{Additional service units}}$
- Impact fee per service unit = $\frac{\$3,271,253}{2,783} = \$1,175$

Therefore, the maximum assessable impact fee per service unit is $1,175.

For developments that require a different size meter, a service unit equivalent has been determined as a multiplier of the 5/8" x 3/4" meter based on its required operating capacity. The maximum impact fee that could be assessed for other meter sizes is based on the values shown in Table 3.7.

Table 3.7: Service Unit Equivalency Table for Commonly Used Meters

Meter Size*	Maximum Continuous Operating Capacity (GPM)**	Service Unit Equivalent	Maximum Assessable Fee ($)
5/8"x 3/4" PD	10	1	1,175
3/4" PD	15	1.5	1,763
1" PD	25	2.5	2,938
1 1/2" PD	50	5	5,875
2" PD	80	8	9,400
2" Compound	80	8	9,400
2" Turbine	160	16	18,800
3" Compound	175	17.5	20,563
3" Turbine	350	35	41,125
4" Compound	300	30	35,250
4" Turbine	650	65	76,375
6" Compound	675	67.5	79,313
6" Turbine	1,400	140	164,500
8" Compound	900	90	105,750
8" Turbine	2,400	240	282,000
10" Turbine	3,500	350	411,250

* PD = Positive Displacement Meter (Typical Residential Meter)
** Operating capacities obtained from American Water Works (AWWA) C-700, C-701 & C-702

APPENDIX A: Impact Fee Projects Opinion of Probable Cost

Kimley-Horn & Associates, Inc. **Opinion of Probable Construction Cost**

Client:	**Town of Fairview**	**Date:**	**10/26/2021**
Project:	**2021 Water System Impact Fee**	**Prepared By:**	**LMB**
KHA No:	**061182006**	**Checked By:**	**MAS**

Title:	**Water Impact Fee**	**Sheet:**	**1**

Item No.	Item Description	Item Cost
1	Fairview Parkway 16-Inch Water Line	$2,611,925
2	IH 75 Service Road 12-Inch Water Line	$2,256,375
3	Frisco Road 12-Inch Water Line	$888,875
	Basis for Cost Projection:	**Total:** **$5,757,175**

- [x] No Design Completed
- [ ] Preliminary Design
- [ ] Final Design

Note: the Engineer has no control over the cost of labor, materials, equipment, or over the Contractor's methods of determining prices or over competitive bidding or market conditions. Opinions of probable costs provided herein are based on the information known to Engineer at this time and represent only the Engineer's judgment as a design professional familiar with the construction industry. The Engineer cannot and does not guarantee that proposals, bids, or actual construction costs will not vary from its opinions of probable costs.

Kimley-Horn and Associates, Inc. **Opinion of Probable Construction Cost**

Client:	**Town of Fairview**	**Date:**	**10/26/2021**
Project:	**2021 Water System Impact Fee**	**Prepared By:**	**LMB**
KHA No.:	**061182006**	**Checked By:**	**MAS**

Title:	**Fairview Parkway 16-Inch Water Line**	**Sheet:**	**2**

Item No.	Item Description	Quantity	Unit	Unit Price	Item Cost
1	Mobilization	1	LS	$20,000.00	$20,000
2	16" Water Line By Open Cut	7,960	LF	$120.00	$955,200
3	16" Water Line By Bore and 30" Steel Casing	40	LF	$600.00	$24,000
4	16" Butterfly Valve (1 per 1,000 lf of pipe)	8	EA	$8,500.00	$68,000
5	Fire Hydrant Assembly (1 per 300 lf of pipe)	27	EA	$5,000.00	$135,000
6	Trench Safety	7,960	LF	$2.00	$15,920
7	Seed, Fertilizer and Erosion Control	7,960	LF	$15.00	$119,400
8	Connect to Existing Water Line	1	EA	$3,500.00	$3,500
		Subtotal:			$1,321,020
		Contingency (%,+/-):		25	$338,980
		Eng/Survey Fees (%,+/-):		15	$250,000
		Capital Cost Total			**$1,910,000**
		Debt Service			$701,925
		Total			**$2,611,925**

- [x] No Design Completed
- [ ] Preliminary Design
- [ ] Final Design

Note: the Engineer has no control over the cost of labor, materials, equipment, or over the Contractor's methods of determining prices or over competitive bidding or market conditions. Opinions of probable costs provided herein are based on the information known to Engineer at this time and represent only the Engineer's judgment as a design professional familiar with the construction industry. The Engineer cannot and does not guarantee that proposals, bids, or actual construction costs will not vary from its opinions of probable costs.

Kimley-Horn and Associates, Inc. **Opinion of Probable Construction Cost**

Client:	**Town of Fairview**	**Date:**	**10/26/2021**
Project:	**2021 Water System Impact Fee**	**Prepared By:**	**LMB**
KHA No.:	**061182006**	**Checked By:**	**MAS**

Title:	**IH 75 Service Road 12-Inch Water Line**	**Sheet:**	**3**

Item No.	Item Description	Quantity	Unit	Unit Price	Item Cost
1	Mobilization	1	LS	$20,000.00	$20,000
2	12" Water Line By Open Cut	7,890	LF	$100.00	$789,000
3	12" Water Line By Bore and 24" Steel Casing	90	LF	$550.00	$49,500
4	12" Gate Valve (1 per 1,000 lf of pipe)	8	EA	$3,500.00	$28,000
5	Fire Hydrant Assembly (1 per 300 lf of pipe)	27	EA	$5,000.00	$135,000
6	Trench Safety	7,890	LF	$2.00	$15,780
7	Seed, Fertilizer and Erosion Control	7,890	LF	$15.00	$118,350
8	Connect to Existing Water Line	1	EA	$3,500.00	$3,500
		Subtotal:			$1,139,130
		Contingency (%,+/-):		25	$290,870
		Eng/Survey Fees (%,+/-):		15	$220,000
		Capital Cost Total			**$1,650,000**
		Debt Service			$606,375
		Total			**$2,256,375**

- [x] No Design Completed
- [ ] Preliminary Design
- [ ] Final Design

Note: the Engineer has no control over the cost of labor, materials, equipment, or over the Contractor's methods of determining prices or over competitive bidding or market conditions. Opinions of probable costs provided herein are based on the information known to Engineer at this time and represent only the Engineer's judgment as a design professional familiar with the construction industry. The Engineer cannot and does not guarantee that proposals, bids, or actual construction costs will not vary from its opinions of probable costs.

Kimley-Horn and Associates, Inc. **Opinion of Probable Construction Cost**

Client:	**Town of Fairview**	**Date:**	**10/26/2021**
Project:	**2021 Water System Impact Fee**	**Prepared By:**	**LMB**
KHA No.:	**061182006**	**Checked By:**	**MAS**

Title:	**Frisco Road 12-Inch Water Line**	**Sheet:**	**4**

Item No.	Item Description	Quantity	Unit	Unit Price	Item Cost
1	Mobilization	1	LS	$10,000.00	$10,000
2	12" Water Line By Open Cut	3,200	LF	$100.00	$320,000
3	12" Gate Valve (1 per 1,000 lf of pipe)	3	EA	$3,500.00	$10,500
4	Fire Hydrant Assembly (1 per 300 lf of pipe)	11	EA	$5,000.00	$55,000
5	Trench Safety	3,200	LF	$2.00	$6,400
6	Seed, Fertilizer and Erosion Control	3,200	LF	$15.00	$48,000
7	Connect to Existing Water Line	1	EA	$3,500.00	$3,500
		Subtotal:			$443,400
		Contingency (%,+/-):		25	$116,600
		Eng/Survey Fees (%,+/-):		15	$90,000
		Capital Cost Total			**$650,000**
		Debt Service			$238,875
		Total			**$888,875**

- [x] Preliminary Design
- [ ] Final Design

Note: the Engineer has no control over the cost of labor, materials, equipment, or over the Contractor's methods of determining prices or over competitive bidding or market conditions. Opinions of probable costs provided herein are based on the information known to Engineer at this time and represent only the Engineer's judgment as a design professional familiar with the construction industry. The Engineer cannot and does not guarantee that proposals, bids, or actual construction costs will not vary from its opinions of probable costs.

APPENDIX B: Sample Calculations

Example of Financing Calculations

Year	Beginning Principal Balance	Principal Payment	Interest Payment	Total Payment	Ending Principal Balance
1	$ 1,910,000.00	$ 95,500.00	$ 66,850.00	$ 162,350.00	$ 1,814,500.00
2	$ 1,814,500.00	$ 95,500.00	$ 63,507.50	$ 159,007.50	$ 1,719,000.00
3	$ 1,719,000.00	$ 95,500.00	$ 60,165.00	$ 155,665.00	$ 1,623,500.00
4	$ 1,623,500.00	$ 95,500.00	$ 56,822.50	$ 152,322.50	$ 1,528,000.00
5	$ 1,528,000.00	$ 95,500.00	$ 53,480.00	$ 148,980.00	$ 1,432,500.00
6	$ 1,432,500.00	$ 95,500.00	$ 50,137.50	$ 145,637.50	$ 1,337,000.00
7	$ 1,337,000.00	$ 95,500.00	$ 46,795.00	$ 142,295.00	$ 1,241,500.00
8	$ 1,241,500.00	$ 95,500.00	$ 43,452.50	$ 138,952.50	$ 1,146,000.00
9	$ 1,146,000.00	$ 95,500.00	$ 40,110.00	$ 135,610.00	$ 1,050,500.00
10	$ 1,050,500.00	$ 95,500.00	$ 36,767.50	$ 132,267.50	$ 955,000.00
11	$ 955,000.00	$ 95,500.00	$ 33,425.00	$ 128,925.00	$ 859,500.00
12	$ 859,500.00	$ 95,500.00	$ 30,082.50	$ 125,582.50	$ 764,000.00
13	$ 764,000.00	$ 95,500.00	$ 26,740.00	$ 122,240.00	$ 668,500.00
14	$ 668,500.00	$ 95,500.00	$ 23,397.50	$ 118,897.50	$ 573,000.00
15	$ 573,000.00	$ 95,500.00	$ 20,055.00	$ 115,555.00	$ 477,500.00
16	$ 477,500.00	$ 95,500.00	$ 16,712.50	$ 112,212.50	$ 382,000.00
17	$ 382,000.00	$ 95,500.00	$ 13,370.00	$ 108,870.00	$ 286,500.00
18	$ 286,500.00	$ 95,500.00	$ 10,027.50	$ 105,527.50	$ 191,000.00
19	$ 191,000.00	$ 95,500.00	$ 6,685.00	$ 102,185.00	$ 95,500.00
20	$ 95,500.00	$ 95,500.00	$ 3,342.50	$ 98,842.50	$ -

20-Yr. Interest = $ 701,925.00

TOWN OF FAIRVIEW, TEXAS WASTEWATER IMPACT FEE UPDATE

Nov. 2021

Prepared for the Town of Fairview

Prepared by:

Kimley-Horn and Associates, Inc.

13455 Noel Road, Two Galleria Office Tower, Suite 700

Dallas, Texas 75240

TBPE Firm Registration Number: F-928

Project Number: 061182006

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Town of Fairview Wastewater Impact Fee

AS PREPARED FOR THE TOWN OF FAIRVIEW, TEXAS

4.1 EXECUTIVE SUMMARY

This study was performed to update the Town of Fairview's (Town) wastewater system impact fees. Wastewater system analysis and the wastewater system master plan are important tools for facilitating orderly growth of the wastewater system and for providing adequate facilities that promote economic development in the Town. The implementation of an impact fee is a way to shift a portion of the burden of paying for new facilities onto new development.

Elements of the wastewater system, including lift stations, force mains, and the gravity collection system were evaluated against industry standards such as the Texas Commission on Environmental Quality (TCEQ) as explained in the Town's 2015 Wastewater Master Plan Update. Population and land use projections were based on the 2021 Land Use Assumptions developed by Kimley-Horn in addition to historic development counts provided by the Town.

Wastewater system improvements necessary to serve 10-year (2031) and build-out system needs were evaluated. Generally, new wastewater infrastructure is designed beyond the 10-year requirements; however, Texas' impact fee law (Chapter 395 of the *Local Government Code*) only allows recovery of costs to serve the 10-year planning period. A portion of the remaining costs past the 10-year window may be recovered as a result of impact fee updates in the future.

The impact fee law defines a service unit as "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 political subdivision in which the individual unit of development is located during the previous 10 years." For the purpose of this report, the Town defines a service unit as a unit of development that consumes the amount of water requiring a standard 5/8" x 3/4" meter. For developments that require a different size meter, a service unit equivalent has been determined as a multiplier of the 5/8" x 3/4" meter based on its required operating capacity. These service unit equivalency factors and associated maximum assessable impact fees are shown in Table 4.1.

After analysis of the Town's 10-year growth projections and the associated flow values, 1,359 additional service units will need wastewater service by the year 2031. Based on these additional service units and recoverable costs calculated from the Town's Capital Improvements Plan, the Town may assess a maximum of $810 per service unit. Support and calculations for these results are included in the following report.

Table 4.1: Maximum Assessable Wastewater Impact Fee for Commonly Used Meters

Meter Size*	Maximum Continuous Operating Capacity (GPM)**	Service Unit Equivalent	Maximum Assessable Fee ($)
5/8"x 3/4" PD	10	1	810
3/4" PD	15	1.5	1,215
1" PD	25	2.5	2,025
1 1/2" PD	50	5	4,050
2" PD	80	8	6,480
2" Compound	80	8	6,480
2" Turbine	160	16	12,960
3" Compound	175	17.5	14,175
3" Turbine	350	35	28,350
4" Compound	300	30	24,300
4" Turbine	650	65	52,650
6" Compound	675	67.5	54,675
6" Turbine	1,400	140	113,400
8" Compound	900	90	72,900
8" Turbine	2,400	240	194,400
10" Turbine	3,500	350	283,500

* PD = Positive Displacement Meter (Typical Residential Meter)
** Operating capacities obtained from American Water Works (AWWA) C-700, C-701 & C-702

4.2 INTRODUCTION

The Town contracted Kimley-Horn and Associates, Inc. (Kimley-Horn) in January of 2021 to update the existing wastewater impact fee. The most recent wastewater impact fee update was completed by Kimley-Horn in September 2015. The purpose of the report is to satisfy the requirements of the law and provide the Town with an updated impact fee capital improvements plan and associated impact fees.

For convenience and reference, the following is excerpted from Chapter 395 of the Local Government Code.

(a) The political subdivision shall use qualified professionals to prepare the capital improvements plan and to calculate the impact fee. The capital improvements plan must contain specific enumeration of the following items:

(1) a description of the existing capital improvements within the service area and the costs to upgrade, update, improve, expand, or replace the improvements to meet existing needs and usage and stricter safety, efficiency, environmental, or regulatory standards, which shall be prepared by a qualified professional engineer licensed to perform the professional engineering services in this state;

(2) an analysis of the total capacity, the level of current usage, and commitments for usage of capacity of the existing capital improvements, which shall be prepared by a qualified professional engineer licensed to perform the professional engineering services in this state;

(3) a description of all or the parts of the capital improvements or facility expansions and their costs necessitated by and attributable to new development in the service area based on the approved land use assumptions, which shall be prepared by a qualified professional engineer licensed to perform the professional engineering services in this state;

(4) a definitive table establishing the specific level or quantity of use, consumption, generation, or discharge of a service unit for each category of capital improvements or facility expansions and an equivalency or conversion table establishing the ratio of a service unit to various types of land uses, including residential, commercial, and industrial;

(5) the total number of projected service units necessitated by and attributable to new development within the service area based on the approved land use assumptions and calculated in accordance with generally accepted engineering or planning criteria;

(6) the projected demand for capital improvements or facility expansions required by new service units projected over a reasonable period of time, not to exceed 10 years; and

(7) a plan for awarding:

(A) a credit for the portion of ad valorem tax and utility service revenues generated by new service units during the program period that is used for the payment of improvements, including the payment of debt, that are included in the capital improvements plan; or

(B) in the alternative, a credit equal to 50 percent of the total projected cost of implementing the capital improvements plan.

The impact fees are based on recommended capital improvements and the population growth projections outlined in the Town's 2015 Wastewater Master Plan Update and 2021 Land Use Assumptions.

The study process involved the following two tasks:

1. IMPACT FEE CAPITAL IMPROVEMENTS PLAN

   This task involved developing cost projections for the capital improvement projects that were identified during the 2015 master plan update to be built in the 10-year planning window. It also involved estimating the utilized capacity of the existing and proposed capital improvement projects to determine their 10-year recoverable cost.

2. IMPACT FEE ANALYSIS AND REPORT

   This task included calculating the additional service units and service unit equivalents. These values were then used to determine the impact fee per service unit and the maximum assessable impact fee by meter size.

Wastewater Service Area

The build-out service area boundary for the Town's wastewater system is shown on the enclosed Wastewater System Service Area map (Exhibit 4.1). The wastewater service area for the Town of Fairview is bounded by Highway 75 (Sam Johnson Highway) on the west, Puster Elementary School, Sloan Creek Parkway and Plumwood Way on the east, Frisco Road and Country Club Road on the north, and Stacy Road on the south. This area encompasses approximately 1,250 acres in the western portion of the Town known as the Commercial Planned Development District (CPDD) as well as an additional 38.5 acre tract in the City of Allen.

Wastewater System Definitions

The following terms are used throughout this report.

Average Daily Flow

The average daily flow a given wastewater system experiences over a year.

Capital Improvements Plan (CIP)

Recommended improvement to the wastewater collection system based on growth and future flow projections.

Commercial Planned Development District (CPDD)

The currently undeveloped portion of the Town located northwest of the Dart tracks which is plotted for future commercial development.

GPD

Gallons per day

GPM

Gallons per minute

LS

Lift Station

MGD

Million gallons per day

NTMWD

North Texas Municipal Water District

Peak Flow

The maximum wastewater flow that a given wastewater system is anticipated to experience at a given time.

Peaking Factor

The factor applied to the average daily flow to estimate peak flow.

LEGEND

WASTEWATER SERVICE AREA

EXISTING PARCELS

TOWN OF FAIRVIEW TEXAS

NORTH

GRAPHIC SCALE IN FEET
0 500 1000 2000

WASTEWATER SYSTEM SERVICE AREA

TOWN OF FAIRVIEW, TEXAS

Kimley»Horn

DESIGN	DRAWN	DATE	SCALE	EXHIBIT
LMB	AMP	OCTOBER 2021	1" = 2,000'	4.1

4.3 EXISTING WASTEWATER COLLECTION SYSTEM

Wastewater Collection

The Existing Wastewater Collection System map (Exhibit 4.2) shows the Town's existing wastewater infrastructure including gravity sewers, lift stations, the existing force main, and the NTMWD metering station.

Gravity Sewer Lines

The Town of Fairview has existing gravity sewer lines ranging in size from 8-inch to 24-inch which can be utilized to support future development within the Town. The Town also owns an existing 24-inch interceptor which flows from the existing NTMWD metering station to NTMWD through the City of Allen. Based on results of the hydraulic modelling during the 2015 Master Plan, the existing gravity sewer lines were determined to have adequate capacity to convey future flows when the service area is fully developed. Additional gravity sewer lines will need to be installed to extend the existing wastewater collection system to the new developments.

Lift Station & Force Main

The existing and build-out wastewater service area is served by a lift station located at the end of Sloan Creek Parkway in the northeast section of the service area. The lift station conveys flow through a 14-inch force main to the NTMWD meter station located at the southwest corner of the Town.

To further increase the Town's wastewater flow capacity, NTMWD, Fairview, and Allen are partnering on the new regional Sloan Creek Lift Station to be located within the Town limits. This new station will have a maximum capacity of 10 MGD with 2.5 MGD allocated to the Town of Fairview and the additional capacity allocated to Allen.

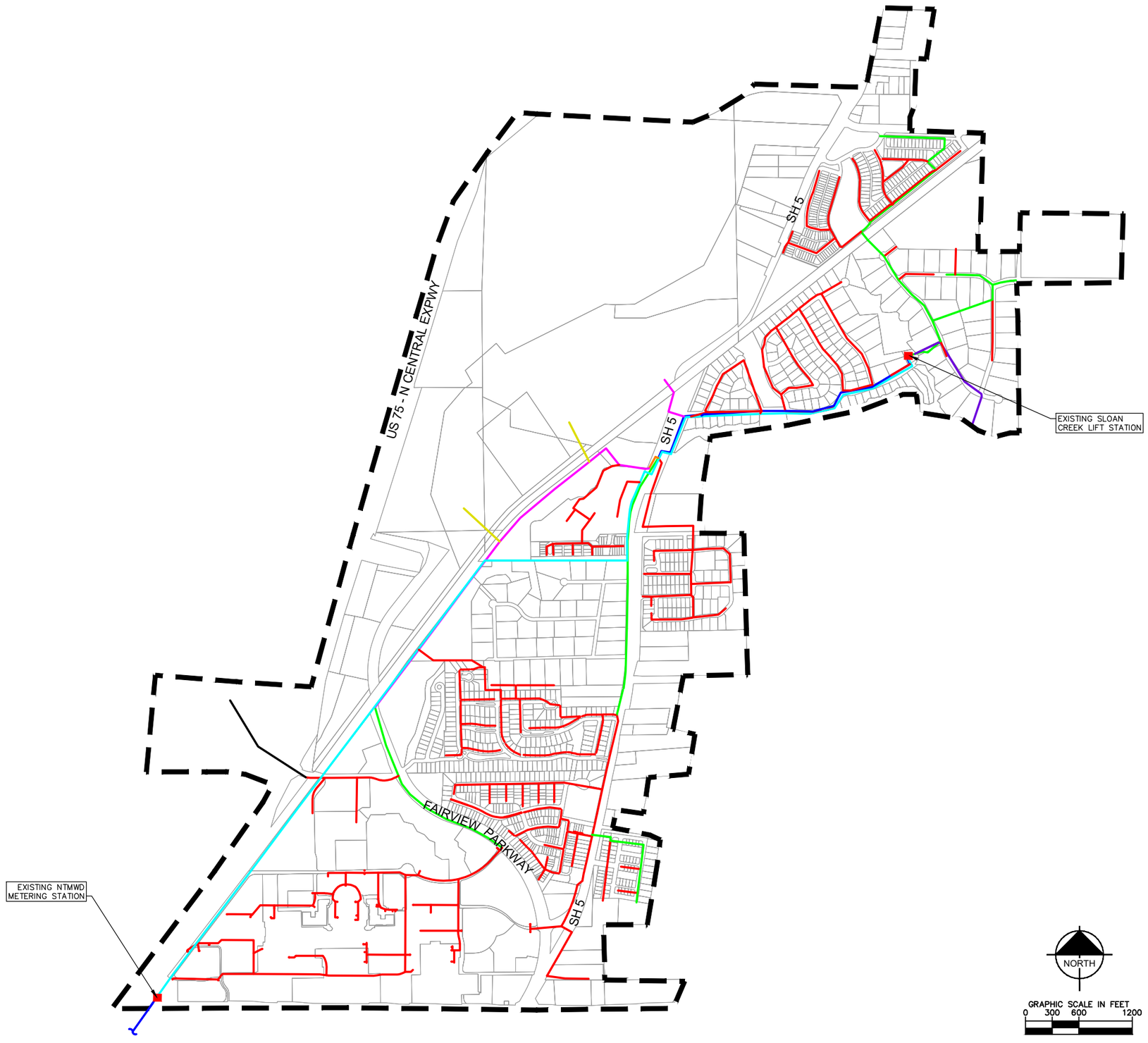
Infrastructure Eligible for Impact Fees

There is some existing Town wastewater system infrastructure which has additional capacity to serve future growth within the Town's service area. A portion of the cost of this infrastructure is eligible for recoverable cost in the updated impact fee. Table 4.2 shows the recoverable cost of the projects that were determined to be eligible for impact fee consideration. The recoverable cost is calculated by multiplying the 2021-2031 capacity utilization percentage by the total project cost.

Table 4.2: Project Costs for Infrastructure Eligible for Impact Fees

Project No.	Existing Improvement Description	2021 Capacity (% Utilization)	2031 Capacity (% Utilization)	2021 - 2031 Capacity (% Utilization)	Total Project Cost*	2031 Projected Recoverable Cost*
1E	24" Interceptor from Sloan Creek to the Sloan Creek LS	70%	85%	15%	$ 500,000	$ 75,000.00
2E	12" Interceptor from SH 5 to DART tracks	30%	65%	35%	$ 133,919	$ 46,871.65
3E	24" Offsite Sewer Main to NTMWD	64%	82%	18%	$ 701,674	$ 126,301
	TOTAL				$1,335,593	$ 248,173

* Does not include financing costs.



LEGEND

- WASTEWATER SERVICE AREA
- EXISTING 8" WASTEWATER LINE
- EXISTING 10" WASTEWATER LINE
- EXISTING 12" WASTEWATER LINE
- EXISTING 15" WASTEWATER LINE
- EXISTING 16" WASTEWATER LINE
- EXISTING 24" WASTEWATER LINE
- EXISTING 14" FORCE MAIN
- EXISTING 16" FORCE MAIN
- EXISTING CITY OF ALLEN WASTEWATER LINE
- EXISTING PARCELS

NORTH

GRAPHIC SCALE IN FEET
0 300 600 1200

TOWN OF FAIRVIEW TEXAS

EXISTING WASTEWATER COLLECTION SYSTEM

TOWN OF FAIRVIEW, TEXAS

Kimley»Horn

DESIGN	DRAWN	DATE	SCALE	EXHIBIT
LMB	AMP	OCTOBER 2021	1" = 1,200'	4.2

4.4 WASTEWATER IMPACT FEE CAPITAL IMPROVEMENTS PLAN

The 2015 Wastewater Master Plan Update identified a list of projects that would be required to supply wastewater service to the Town's wastewater service area in the future. Since that time, improvements have been made to the Sloan Creek Lift Station which included the installation of a third pump to the existing station (project excluded from current impact fee eligibility since capacity improvements upgraded the station to meet existing needs, not future development). Additionally, the Town is working with North Texas Municipal Water District (NTMWD) and the City of Allen for the installation of a new regional lift station and force main to be located within the Town. This new station removes the need for the parallel Sloan Creek force main previously identified in the 2015 Master Plan and Impact Fee Update reports. Both the Regional Lift Station as well as the previously identified SH 5 12" Interceptor projects were determined eligible for recoverable cost through impact fee over the next 10 years. These impact fee capital improvement projects are summarized in Table 4.3 and illustrated in Exhibit 4.3. A summary of the opinions of probable costs are included in Appendix A.

Table 4.3: Estimated Project Costs for Proposed Capital Improvement Projects

Project No.	Proposed Improvement Description	2021 Capacity (% Utilization)	2031 Capacity (% Utilization)	2021 - 2031 Capacity (% Utilization)	Estimated Total Project Cost*	2031 Projected Recoverable Cost*
1P	SH 5 12" Interceptor	0%	50%	50%	$ 218,800	$ 109,400
2P	Regional Sloan Creek Lift Station	0%	50%	50%	$ 3,623,353	$ 1,811,677
	TOTAL				$ 3,842,153	$ 1,921,077

* Includes 20-year simple interest loan @ 3.5% APR.

Project Descriptions

1. SH 5 12" Interceptor – Engineering Design in 2022, Construct in 2023
   Approximately 600 LF of proposed 12-inch wastewater line flowing southwest parallel with the DART tracks to the existing 12-inch line flowing under the tracks.

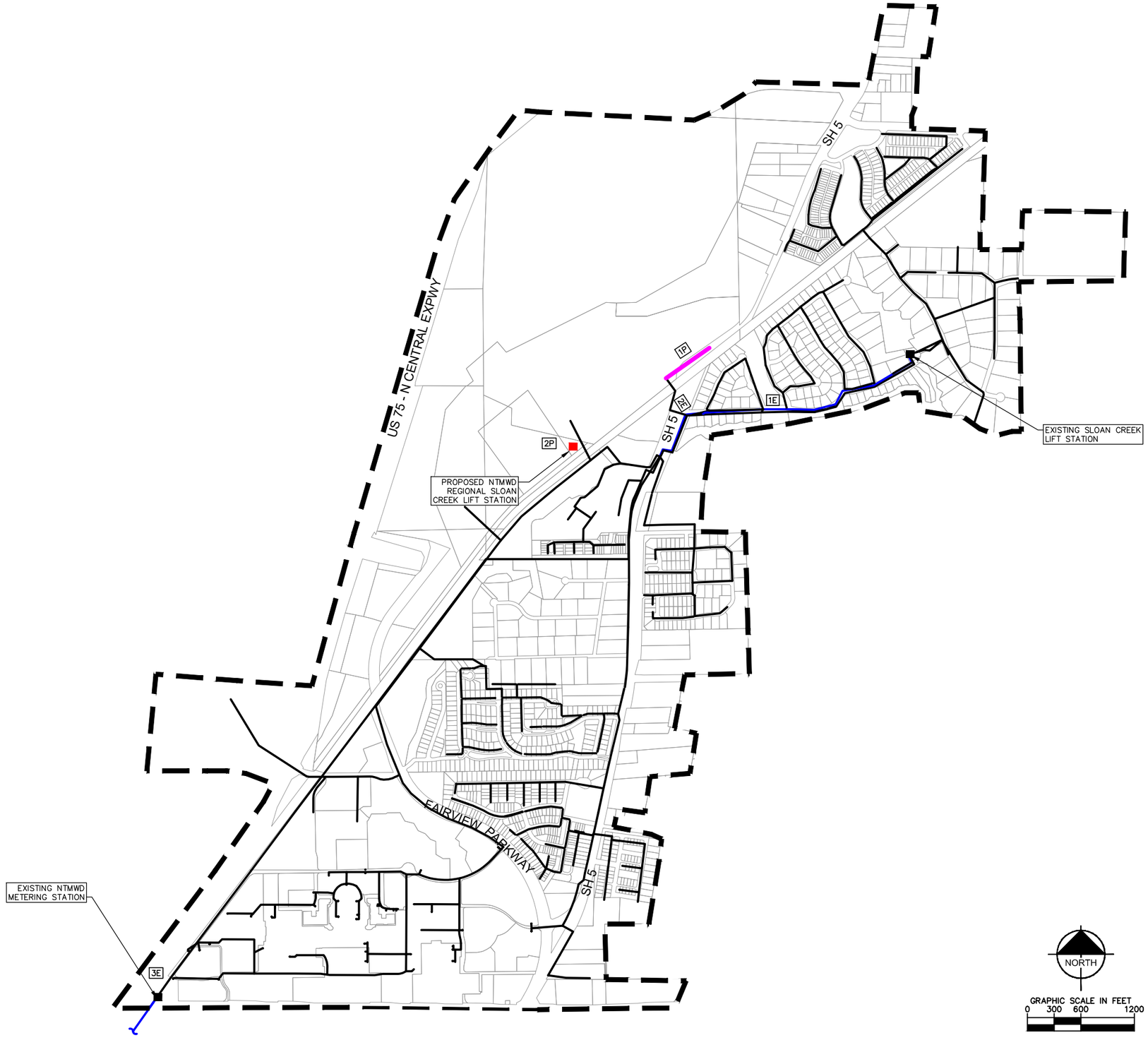
   Project Cost $218,800
   Recoverable Cost $109,400

2. Regional Sloan Creek Lift Station – Engineering Design in 2021, Construct in 2022
   Proposed regional lift station and force main system to be designed and constructed by NTMWD with cost participation from the City of Allen and the Town. Projected cost shown represents only Town of Fairview's required contribution as previously determined with all three entities which equates to 25% of the Lift Station Construction Cost.

   Project Cost $3,623,353
   Recoverable Cost $1,811,677

LEGEND

- WASTEWATER SERVICE AREA
- EXISTING WASTEWATER LINE
- EXISTING 12" WASTEWATER LINE
- EXISTING 24" WASTEWATER LINE
- EXISTING PARCELS
- PROPOSED 12" WASTEWATER LINE



NORTH

GRAPHIC SCALE IN FEET
0 300 600 1200

TOWN OF FAIRVIEW TEXAS

WASTEWATER SYSTEM IMPACT FEE INFRASTRUCTURE

TOWN OF FAIRVIEW, TEXAS

Kimley»Horn

DESIGN	DRAWN	DATE	SCALE	EXHIBIT
LMB	AMP	OCTOBER 2021	1" = 1,200'	4.3

4.5 WASTEWATER IMPACT FEE CALCULATION

In accordance with Chapter 395 of the *Local Government Code*, the Town defines a service unit based on historical wastewater flow over the last 10 years as compared to the estimated residential units. The residential unit is the development type that typically uses a 5/8" x 3/4" meter. The measure of the flow per service unit is based on a 5/8" x 3/4" meter and the data shown in Table 4.4.

Table 4.4: Service Unit Flow Calculation

Year	Population	Service Units (2.51 People/Unit)	Average Day Flow (MGD)	Service Unit Flow (GPD)
2011	2,056	819	0.39	473
2012	2,949	1,175	0.44	373
2013	3,045	1,213	0.49	406
2014	3,055	1,217	0.49	399
2015	3,730	1,486	0.66	445
2016	4,229	1,685	0.50	299
2017	4,340	1,729	0.50	289
2018	4,418	1,760	0.85	482
2019	4,578	1,824	0.79	432
2020	4,807	1,915	0.58	303
10-Year Average Flow per Service Unit:				390

- Wastewater Flow Source: Town of Fairview Wastewater Monitoring Station Data
- Population Density Source: Town of Fairview Historical Development by Year

Additional Service Unit and Wastewater Impact Fee Calculation

According to the Town's 10-year growth projections and corresponding wastewater flow projections, wastewater service will be required for an additional 1,359 service units. The calculation is summarized below:

- A service unit, which is a unit of development that consumes approximately 390 GPD, is a typical residential connection that uses a 5/8" x 3/4" meter. Table 4.5 details the future wastewater flow projections and how it effects the service units projected for the next 10 years.

Table 4.5: 10-Year Additional Service Units Calculation

Year	Average Day Flow (MGD)	Service Unit Flow (GPD)	Service Units
2021	0.72	390	1,846
2031	1.25	390	3,205
10-Year Additional Service Units			1,359

* Projected Wastewater Flow Source: 2021 Land Use Assumptions

Impact fee law allows for a credit calculation to credit back the development community based on the utility revenues or ad valorem taxes that are allocated for paying a portion of future capital improvements. The intent of this credit is to prevent the Town from double-charging development for future capital improvements via impact fees and utility rates. If the Town chooses not to do a financial analysis to determine the credit value, they are required by law to reduce the recoverable cost by 50 percent. The Town has decided to forgo the financial analysis and reduce the recoverable cost by 50 percent. The maximum recoverable cost for impact fee is shown in Table 4.6.

Table 4.6: Recoverable Cost Breakdown

Wastewater System Facility	Total Project Cost	2031 Recoverable Cost
Existing Bond Projects	$ 1,335,593	$ 248,173
Proposed Capital Improvement Projects	$ 3,842,153	$ 1,921,077
Planning Expenses	$ 33,500	$ 33,500
Totals	$ 5,211,246	$ 2,202,749

The impact fee per service unit is calculated as follows:

- Assessable Cost = 50% of Recoverable Cost = $2,202,749 * 0.5 = 1,101,374
- Impact fee per service unit = $\frac{\text{Assessable Cost}}{\text{Additional service units}}$
- Impact fee per service unit = $\frac{\$1,101,374}{1,359}$ = $810

Therefore, the maximum assessable impact fee per service unit is $810.

For developments that require a different size meter, a service unit equivalent has been determined as a multiplier of the 5/8" x 3/4" meter based on its required operating capacity. The maximum impact fee that could be assessed for other meter sizes is based on the values shown in Table 4.7.

Table 4.7: Service Unit Equivalency Table for Commonly Used Meters

Meter Size*	Maximum Continuous Operating Capacity (GPM)**	Service Unit Equivalent	Maximum Assessable Fee ($)
5/8"x 3/4" PD	10	1	810
3/4" PD	15	1.5	1,215
1" PD	25	2.5	2,025
1 1/2" PD	50	5	4,050
2" PD	80	8	6,480
2" Compound	80	8	6,480
2" Turbine	160	16	12,960
3" Compound	175	17.5	14,175
3" Turbine	350	35	28,350
4" Compound	300	30	24,300
4" Turbine	650	65	52,650
6" Compound	675	67.5	54,675
6" Turbine	1,400	140	113,400
8" Compound	900	90	72,900
8" Turbine	2,400	240	194,400
10" Turbine	3,500	350	283,500

* PD = Positive Displacement Meter (Typical Residential Meter)
** Operating capacities obtained from American Water Works (AWWA) C-700, C-701 & C-702

APPENDIX A: Impact Fee Projects Opinion of Probable Cost

Kimley-Horn & Associates, Inc. **Opinion of Probable Construction Cost**

Client:	**Town of Fairview**	**Date:**	**11/8/2021**
Project:	**2021 Wastewater System Impact Fee**	**Prepared By:**	**LMB**
KHA No:	**061182006**	**Checked By:**	**MAS**

Title:	**Wastewater Impact Fee**	**Sheet:**	**1**

Item No.	Item Description	Item Cost
1	SH 5 12" Interceptor	$218,800
2	NTMWD Regional Sloan Creek Lift Station	$3,623,353
	Total:	**$3,842,153**

Basis for Cost Projection:

- [x] No Design Completed
- [ ] Preliminary Design
- [ ] Final Design

Note: the Engineer has no control over the cost of labor, materials, equipment, or over the Contractor's methods of determining prices or over competitive bidding or market conditions. Opinions of probable costs provided herein are based on the information known to Engineer at this time and represent only the Engineer's judgment as a design professional familiar with the construction industry. The Engineer cannot and does not guarantee that proposals, bids, or actual construction costs will not vary from its opinions of probable costs.

Kimley-Horn and Associates, Inc. **Opinion of Probable Construction Cost**

Client:	**Town of Fairview**	**Date:**	**11/8/2021**
Project:	**2021 Wastewater System Impact Fee**	**Prepared By:**	**LMB**
KHA No.:	**061182006**	**Checked By:**	**MAS**

Title:	**SH 5 12" Interceptor**	**Sheet:**	**2**

Item No.	Item Description	Quantity	Unit	Unit Price	Item Cost
1	Mobilization	1	LS	$15,000.00	$15,000
2	12" PVC Wastewater Line by Open Cut	600	LF	$110.00	$66,000
3	Install New Precast Concrete Manholes	2	EA	$7,500.00	$15,000
4	Trench Safety	600	LF	$2.00	$1,200
5	Vacuum Testing of Sanitary Sewer Manholes	2	EA	$200.00	$400
6	Post Construction TV Inspection	600	LF	$2.00	$1,200
7	Seeding, Fertilizer, & Erosion Control	600	LF	$15.00	$9,000
		Subtotal:			$107,800
		Contingency (%,+/-):		25	$27,200
		Eng/Survey Fees (%,+/-):		15	$25,000
		Capital Cost Total			**$160,000**
		Debt Service			$58,800
		Total			**$218,800**

Basis for Cost Projection:

- ☒ No Design Completed
- ☐ Preliminary Design
- ☐ Final Design

Note: the Engineer has no control over the cost of labor, materials, equipment, or over the Contractor's methods of determining prices or over competitive bidding or market conditions. Opinions of probable costs provided herein are based on the information known to Engineer at this time and represent only the Engineer's judgment as a design professional familiar with the construction industry. The Engineer cannot and does not guarantee that proposals, bids, or actual construction costs will not vary from its opinions of probable costs.

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Client:	**Town of Fairview**	**Date:**	**11/8/2021**
Project:	**2021 Wastewater System Impact Fee**	**Prepared By:**	**LMB**
KHA No.:	**061182006**	**Checked By:**	**MAS**

Title:	**NTMWD Regional Sloan Creek Lift Station**	**Sheet:**	**3**

Item No.	Item Description	Quantity	Unit	Unit Price	Item Cost
1	Town Cost Participation (25% of Lift Station Cost) - Per Bid Estimate	1	LS	$2,648,581	$2,648,581
		Subtotal:			$2,648,581
		Contingency (%,+/-):			$1,419
		Eng/Survey Fees (%,+/-):			$0
		Capital Cost Total			**$2,650,000**
		Debt Service			$973,353
		Total			**$3,623,353**

Basis for Cost Projection:

- [x] No Design Completed
- [ ] Preliminary Design
- [ ] Final Design

Note: the Engineer has no control over the cost of labor, materials, equipment, or over the Contractor's methods of determining prices or over competitive bidding or market conditions. Opinions of probable costs provided herein are based on the information known to Engineer at this time and represent only the Engineer's judgment as a design professional familiar with the construction industry. The Engineer cannot and does not guarantee that proposals, bids, or actual construction costs will not vary from its opinions of probable costs.

APPENDIX B: Project Spreadsheets

Example of Financing Calculations

Year	Beginning Principal Balance	Principal Payment	Interest Payment	Total Payment	Ending Principal Balance
1	$ 160,000	$ 8,000	$ 5,600	$ 13,600	$ 152,000
2	$ 152,000	$ 8,000	$ 5,320	$ 13,320	$ 144,000
3	$ 144,000	$ 8,000	$ 5,040	$ 13,040	$ 136,000
4	$ 136,000	$ 8,000	$ 4,760	$ 12,760	$ 128,000
5	$ 128,000	$ 8,000	$ 4,480	$ 12,480	$ 120,000
6	$ 120,000	$ 8,000	$ 4,200	$ 12,200	$ 112,000
7	$ 112,000	$ 8,000	$ 3,920	$ 11,920	$ 104,000
8	$ 104,000	$ 8,000	$ 3,640	$ 11,640	$ 96,000
9	$ 96,000	$ 8,000	$ 3,360	$ 11,360	$ 88,000
10	$ 88,000	$ 8,000	$ 3,080	$ 11,080	$ 80,000
11	$ 80,000	$ 8,000	$ 2,800	$ 10,800	$ 72,000
12	$ 72,000	$ 8,000	$ 2,520	$ 10,520	$ 64,000
13	$ 64,000	$ 8,000	$ 2,240	$ 10,240	$ 56,000
14	$ 56,000	$ 8,000	$ 1,960	$ 9,960	$ 48,000
15	$ 48,000	$ 8,000	$ 1,680	$ 9,680	$ 40,000
16	$ 40,000	$ 8,000	$ 1,400	$ 9,400	$ 32,000
17	$ 32,000	$ 8,000	$ 1,120	$ 9,120	$ 24,000
18	$ 24,000	$ 8,000	$ 840	$ 8,840	$ 16,000
19	$ 16,000	$ 8,000	$ 560	$ 8,560	$ 8,000
20	$ 8,000	$ 8,000	$ 280	$ 8,280	$ -

20-Yr. Interest @ 5% = $ 58,800

Fairview Impact Fees Roadway, Water and Wastewater

December 2021

Kimley»Horn

Agenda

- Impact Fee Basics
- Impact Fee Components & Calculations
  - Land Use Assumptions
  - Roadway, Water, & Wastewater
- Receive Comments

Impact Fee Basics

- **What Are They**
  - One-time fee assessed to recover infrastructure costs required to serve new development
  - Governed by Chapter 395 of the Texas LGC
  - Required to be updated every 5 years
- **Impact fees benefits**
  - Provides an additional funding tool for infrastructure systems
  - Provides for the orderly growth of the community
  - Shifts a portion of costs for future infrastructure from existing residents

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Impact Fee Basics

- **What Costs Are Recoverable?**
  - Construction, Planning, Surveying, and Engineering
  - Land Acquisition and Associated Costs
  - Capital Imp. Planning and/or Financial Consulting
  - Projected Interest and Finance Costs
  - Local Share for State and Federal Roadways

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Impact Fee Basics

- **What Costs Are Non-Recoverable?**
  - Capital Improvements NOT Identified in the CIP
  - Operations and Maintenance Costs
  - Improvements to Remedy Existing Deficiencies
  - Administrative and Operational Costs of the Town

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Impact Fee Basics

- **“Maximum Assessable” Impact Fee**
  - Engineer Provides Maximum Allowable
  - Council Establishes Actual
    - Can be less than or equal to Maximum Assessable

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Impact Fee Basics: Maximum Impact Fee Determination

$$\text{Maximum Impact Fee Per Unit} = \frac{\text{Cost of the Impact CIP Needed to Serve Growth (\$)}}{\text{New Service Units}}$$

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Impact Fee Components

Impact Fee Components

- Land Use Assumptions
- Service Unit Calculations
- Capital Improvement Plans

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Impact Fee Components
Land Use Assumptions

- Land Use Assumptions
  - Establishes Infrastructure Demands
- Consistent with Future Land Use Plan
- **10-Year Growth**
- Different for Water, Wastewater, and Roadway due to various Service Areas

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Impact Fee Components
Land Use Assumptions

- **Summary of Growth Projections (Town Limits)**

	Residential Population	Dwelling Units	Commercial Land Uses		
			Basic	Retail	Service
			Building SF	Building SF	Building SF
2021	10,372	4,266	44,878	1,319,245	611,317
2031	15,180	6,048	44,878	1,802,460	2,228,871
Growth 2021-2031	*4,808*	*1,782*	*-*	*483,215*	*1,617,554*
Build-Out	17,025	6,783	44,878	2,285,674	3,846,425

- **Projections adjusted for Water and Wastewater service areas**

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Impact Fee Components
Service Units

- **Chapter 395 “Service unit” definition**
  - Standardized measure of consumption attributable to an individual unit of development calculated in accordance with generally accepted engineering or planning standards and based on historical data and trends applicable to the political subdivision in which the individual unit of development is located during the previous 10 years
- **Roadway utilizes vehicle miles - One vehicle to travel one mile**
- **Water and wastewater utilize standard water meter (5/8” x 3/4” Meter)**
  - Standard water meter equates to one (1) service unit, all larger meters are some equivalent number of service units based on meter capacity

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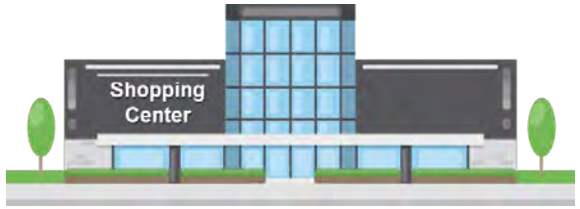
Impact Fee Components
Service Units - Roadway

Trips	0.94 Vehicles (PM Peak) *(ITE Trip Generation)*
X Trip Length	4.90 Miles* **Based on DFW metroplex data from the National Household Travel Survey*
Vehicle-Miles	4.60 Vehicle-Miles

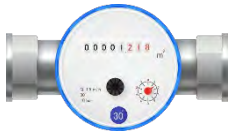


Shopping Center
(1,000 sq. ft.)

Trips	3.40 Vehicles (PM Peak) *(ITE Trip Generation)*
Reduction for Pass-by Trips	34% *(ITE Trip Generation Handbook)* 2.24 Vehicles (PM Peak)
X Trip Length	2.80 Miles (Service Area Length)* **NHTS trip length*
Vehicle-Miles	6.27 Vehicle-Miles

Impact Fee Components
Service Units – Utilities

5/8” x 3/4”



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2”

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Impact Fee Components
Service Units - Utilities

2”

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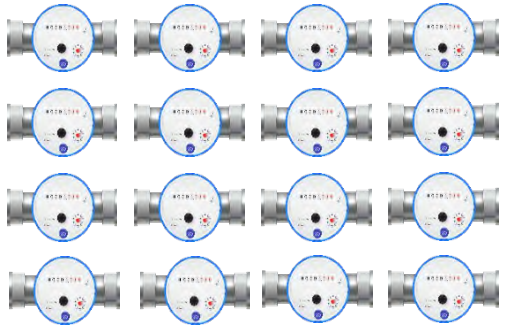

5/8” x 3/4”

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Impact Fee Components
Capital Improvement Plans

- **Impact Fee CIP**
  - Projects required within the 10-year planning window
  - Only Projects required for future growth
  - May include previously completed projects with surplus capacity
- **Town Adopted CIP**
  - Includes projects which may not be for growth
    - (e.g. rehab projects, current deficiencies)
  - Does not include previously completed projects

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Roadway Impact Fees

Impact Fee Components
Service Areas

- Area to be served by Impact Fee CIP
- Roadway Service Areas are limited to six (6) miles by state law – Only City Limits
- Money collected in each Service Area must be spent on Impact Fee Capital Improvement Projects in that Service Area

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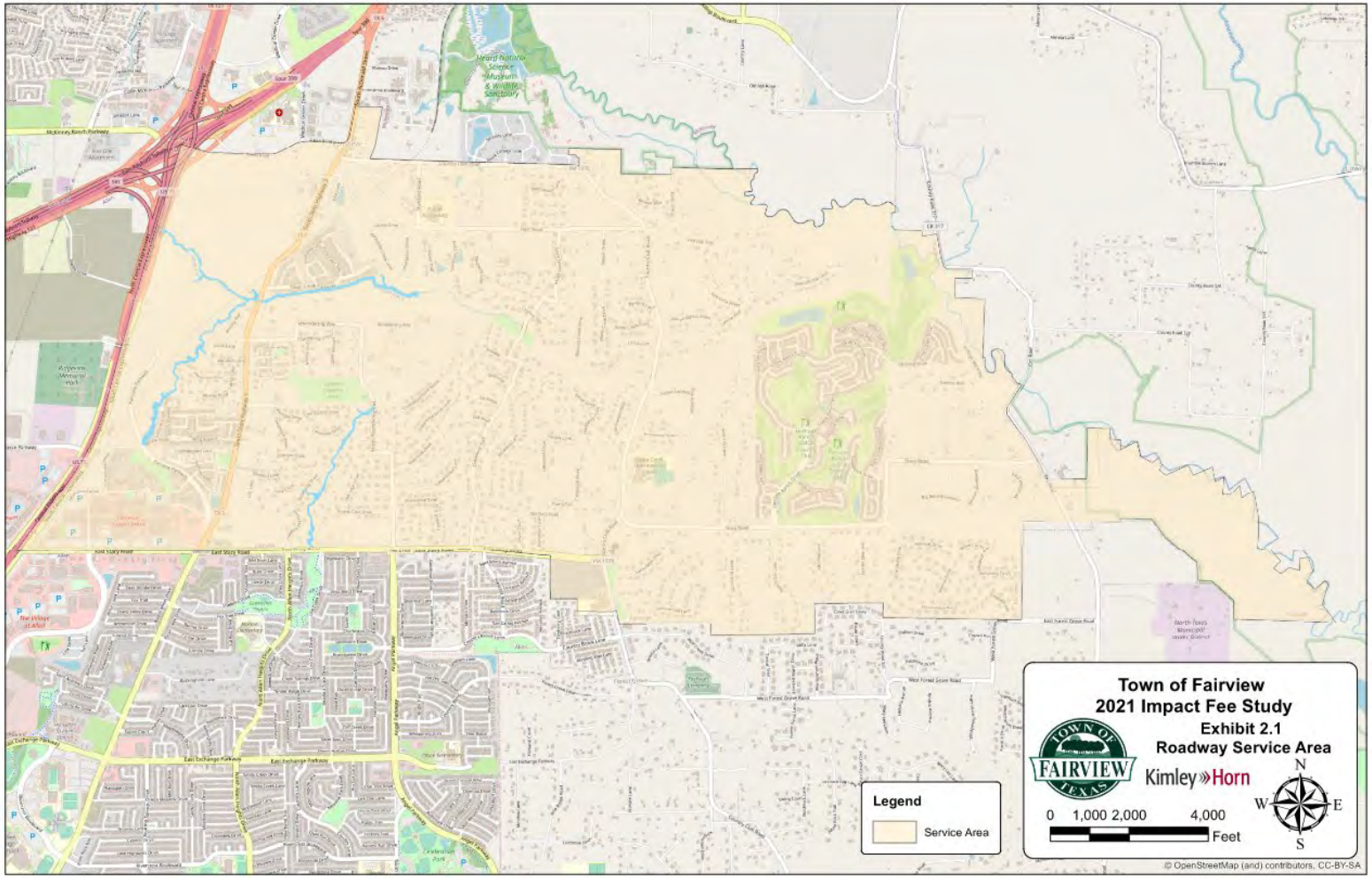
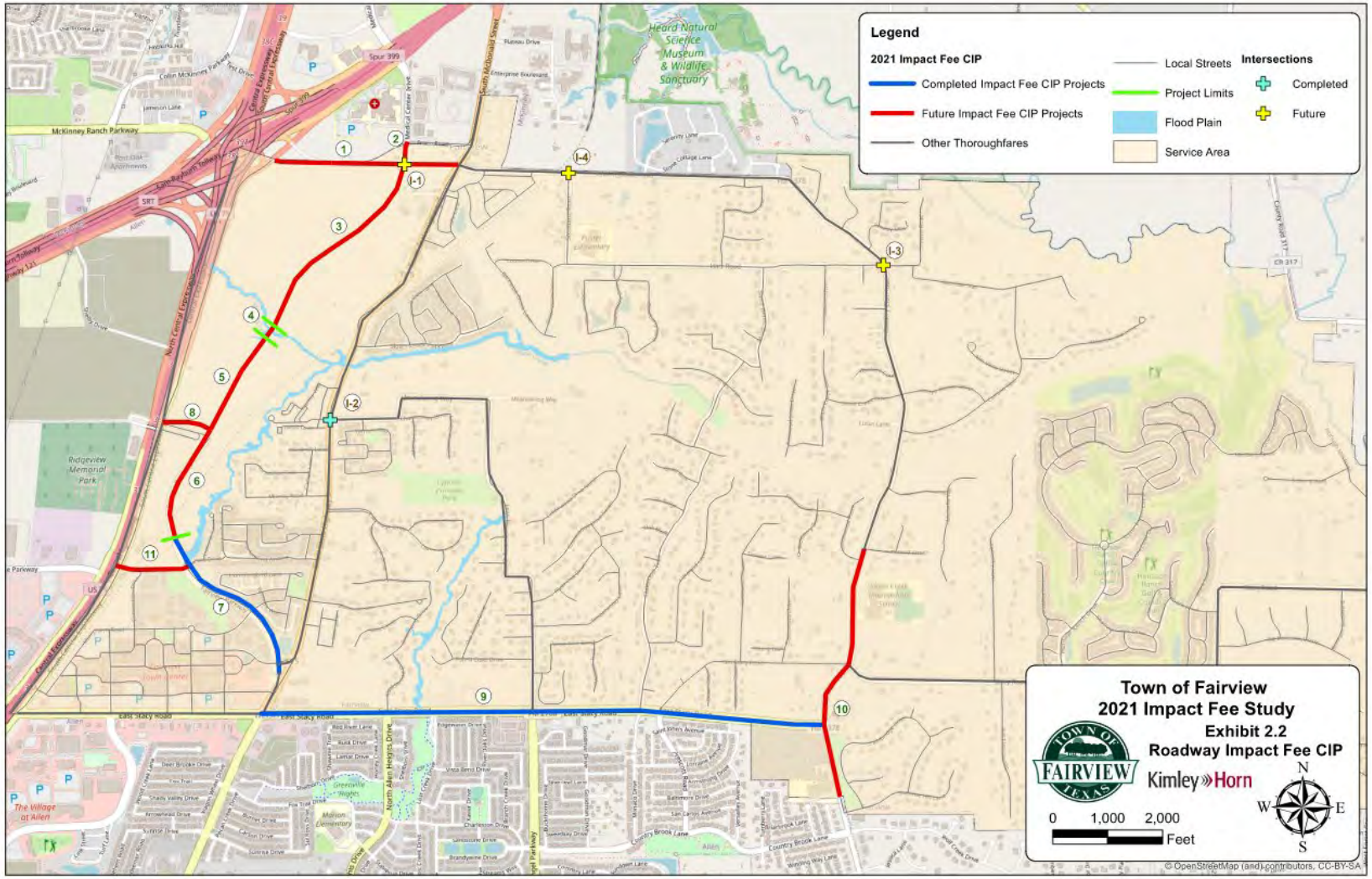
Impact Fee Components
Roadway Service Areas



Roadway Impact Fee CIP



Impact Fee Components
Roadway Impact Fee CIP

Recoverable Impact Fee CIP Costs w/ Debt Service	$21,493,057
50 Percent Reduction (Per Ch. 395 Code)	$10,746,528
Maximum Recoverable Cost of Impact Fee	$10,746,528
10-Yr Growth (Service Units)	19,563

$$\text{Impact fee per service unit} = \frac{\text{10-year recoverable costs}}{\text{10-year additional service units}}$$

$$\text{Impact fee per service unit} = \frac{\$10,746,528}{19,563}$$

Maximum assessable impact fee per service unit = **$549**

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Water and Wastewater Impact Fees

Impact Fee Components
Service Areas

- Area to be served by Impact Fee CIP
- Water and Wastewater Service Areas are within the existing ETJ

Impact Fee Components
Water Service Area

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Impact Fee Components
Wastewater Service Area

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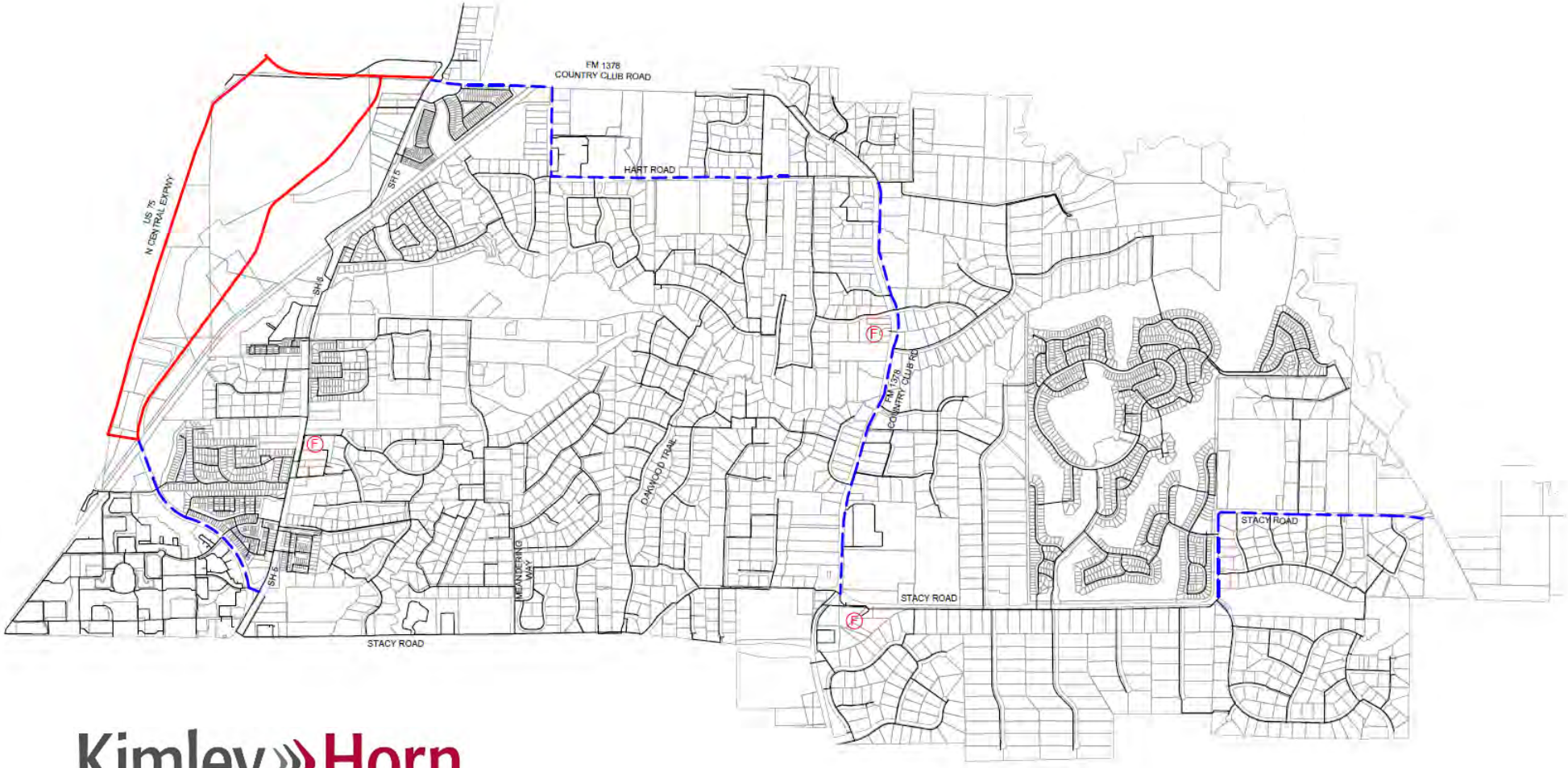
Impact Fee Components
Water Impact Fee CIP



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2021 Study Results
Water Impact Fee

Recoverable Impact Fee CIP Costs w/ Debt Service	$6,542,506
50 Percent Reduction (Per Ch. 395 Code)	$3,271,253
Maximum Recoverable Cost of Impact Fee	**$3,271,553**
10-Yr Growth (Service Units)	2,783

Impact fee per service unit = $\frac{\text{10-year recoverable costs}}{\text{10-year additional service units}}$

Impact fee per service unit = $\frac{\$3,271,553}{2,783}$

Maximum assessable impact fee per service unit = **$1,175**

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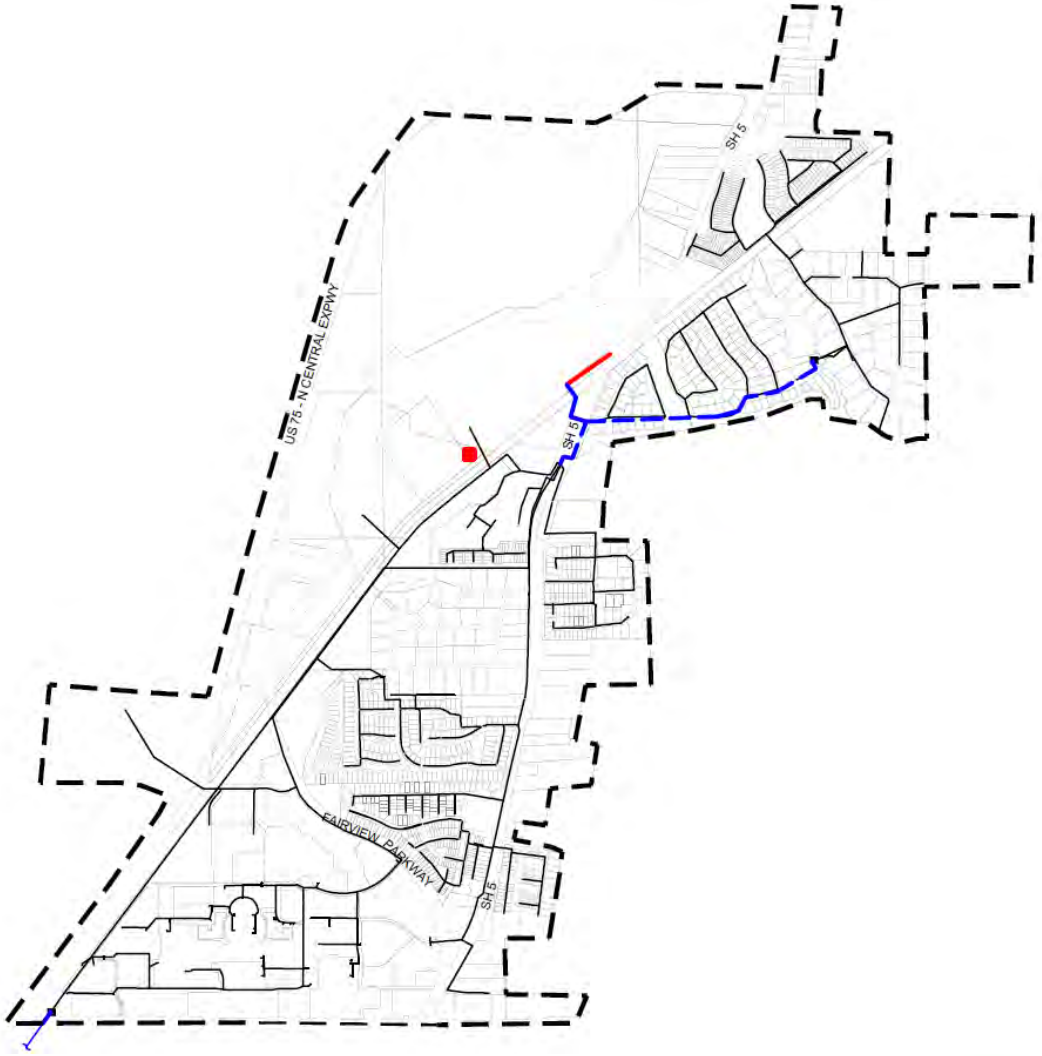
Impact Fee Components
Wastewater Impact Fee CIP



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2021 Study Results
Wastewater Impact Fee

Recoverable Impact Fee CIP Costs w/ Debt Service	$2,202,749
50 Percent Reduction (Per Ch. 395 Code)	$1,101,374
Maximum Recoverable Cost of Impact Fee	**$1,101,374**
10-Yr Growth (Service Units)	1,359

Impact fee per service unit = $\frac{\text{10-year recoverable costs}}{\text{10-year additional service units}}$

Impact fee per service unit = $\frac{\$1,101,374}{1,359}$

Maximum assessable impact fee per service unit = **$810**

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Agenda

- **Next Steps**
  - CIAC Comments & Questions
  - Council Impact Fee Update Public Hearing – January 4, 2022

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QUESTIONS?