THE STATE OF TEXAS §
COUNTY OF BRAZORIA §
CITY OF MANVEL §

NOTICE OF A MEETING
MANVEL CAPITAL IMPROVEMENTS ADVISORY COMMITTEE
May 27, 2026

NOTICE IS HEREBY GIVEN
6:00 P.M.

Pursuant to Chapter 551, Title 5 of the Texas Government Code, the Texas Open Meetings Act, notice is hereby given that the Capital Improvements Advisory Committee will convene a regular meeting at the Manvel City Hall, located at **20031 Hwy 6, Manvel Tx 77578** for the purpose of discussing and if appropriate, take action with respect to the following items:

NOTE: The CIAC of the City of Manvel reserves the right to discuss any items in Closed Session whenever authorized under the Texas Open Meetings Act, Chapter 551, of the Texas Government Code. They may discuss the items on this agenda in any order.

This facility is wheelchair accessible and accessible parking spaces are available. Requests for accommodations or interpreter services must be made 48 hours prior to this meeting. Please contact the City Secretary at 281-489-0630 for further information.

Swearing in of Board Members

Crystal Sarmiento, Place 1
Matt Lawson, Place 4

Regular Session

Call To Order

Roll Call
Crystal Sarmiento, Place 1
Keatha Davenport, Place 2
Jason Hoelscher, Place 3
Matt Lawson, Place 4
Alina Rogers, Place 5

Pledge

Pledge of Allegiance and Texas Pledge: "Honor the Texas flag; I pledge allegiance to thee Texas, one state under God, one and indivisible.

Public Comments: "Comment Card" Required

o Members of the public with business before the board, NOT scheduled on the agenda as a public hearing (that have submitted a public comment card) may have three (3) minutes to address the board. o The board may not participate in any discussion and cannot vote on the subject you present unless it is listed on the agenda as an action item.

Consent Agenda

A. Acceptance of meeting minutes to date.

Regular Agenda

A. Presentation by Bakertilly on the City of Manvel Water and Wastewater Impact Fees Audit Report.

B. Consideration and possible action to forward with favorable recommendation to the City Council;
Water and Wastewater Impact Fees Audit Report as prepared by Bakertilly.

Water and Wastewater Impact Fee Update

A. Receive a presentation on the update to the Land Use Assumptions, Capital Improvements Plans and Impact Fee Calculations for the water and wastewater systems.

B. Discussion and possible action on the updated Land Use Assumptions, Capital Improvements Plans and Impact Fee Calculations for the water and wastewater systems.

Roadway Impact Fee

A. Receive an update and make final comments to the impact fee-eligible Capital Improvement Plans (CIP) for the roadway system.

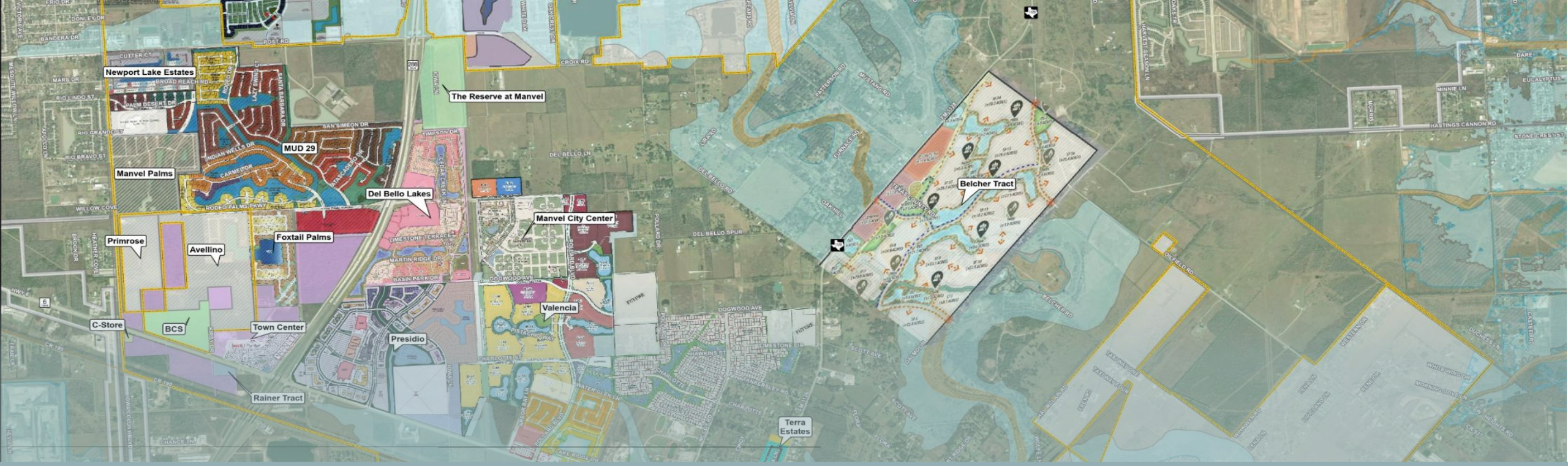
B. Discussion and possible action to amend the Letter of Recommendation to incorporate changes made to the roadway impact fee-eligible CIP.

Adjourn

CERTIFICATION

I, Tammy Bell, City Secretary for the City of Manvel, do hereby certify that the foregoing Agenda of the City of Manvel is true and correct; and that I posted such notice on the bulletin board at the Manvel City Hall. A place convenient and readily accessible to the public on May 20, 2026, in accordance with the Texas Open Meetings Act (Tex. Gov't. Code §551.001 et.seq). Said notice remained posted for at least 3 business days preceding the scheduled day of the meeting.

TAMMY BELL, CITY SECRETARY
CITY OF MANVEL, TEXAS



WATER & WASTEWATER IMPACT FEE

Capital Improvements Advisory Committee

Workshop Presentation | May 27, 2026

FREESE AND NICHOLS

MANVEL CITY ON THE RISE
JUSTICE FAITH

AGENDA

- OVERVIEW & IMPACT FEE BASICS
- LAND USE ASSUMPTIONS
- WATER & WASTEWATER CIPs
- IMPACT FEE ANALYSIS
- PATH FORWARD

WHAT ARE IMPACT FEES?

One-time charge assessed to new development for a portion of costs related to specific capital improvements

Systematic, structured approach to assessment of fees

THE BASIC QUESTION

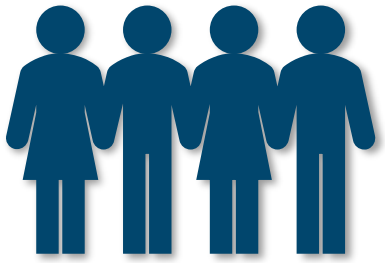
WHO PAYS FOR INFRASTRUCTURE TO SERVE GROWTH?

IMPACT FEES

New development shares the cost

NO IMPACT FEES

Existing and future rate payers pay for all capital projects



IMPACT FEE BACKGROUND

- Governed by Chapter 395 of the Texas Local Government Code (TLGC)
- State law requires impact fees to be updated every 5 years
- Why have impact fees?
  - ✓ Allows cities to **recoup costs** associated with infrastructure needed to serve future development, and **makes growth pay for a share of the growth**
  - ✓ Reduces full cost burden of new facilities on **existing customers**

WHAT IS ELIGIBLE FOR IMPACT FEES?

Components that ***can*** be paid for through an impact fee program:

- ✓Recently constructed improvements with excess capacity to accommodate growth within 10 years
- ✓Construction cost of capital improvements on the 10-Year CIP
- ✓Survey and Engineering fees
- ✓Land acquisition costs, including court awards
- ✓Debt Service of Impact Fee CIP
- ✓Study/Update Costs

Components that ***cannot*** be paid for through an impact fee program:

- × Projects not included in the CIP
- × Repair, operation and maintenance of existing or new facilities
- × Upgrades to serve existing development
- × Administrative costs of operating the program
- × Non-CIP debt service

ROLE OF THE CIAC

A **Capital Improvements Advisory Committee (CIAC)** provides study input and written comments to Council on the land use assumptions, CIP, and impact fee

During Impact Fee Study

- Guide the conduct of the study
- **Provide input on**:
  - ✓ Land Use Assumptions (LUA)
  - ✓ Capital improvement plans (CIPs) for Water and Wastewater
- **Provide written comments** to Council on the recommended impact fees

After Adoption of Impact Fee

- File semiannual reports with respect to progress of the CIP and report to the City Council any perceived inequities in implementing the plan of imposing the impact fee
- Advise the City Council of the need to update or revise the LUA, CIP and Impact Fee

LUA = Land Use Assumption
CIP = Capital Improvements Plan

IMPACT FEE CALCULATION

$$\text{Impact Fee Per ESFC} = \frac{\text{Eligible CIP Cost} - \text{Rate Credit}}{\text{Service Unit Growth}}$$

ESFC = Equivalent Single-Family Connection (connection for a single-family home)

Eligible CIP Cost = 10-year capital cost (2026 - 2036)

Rate Credit = Chapter 395: reduce the eligible CIP cost by performing a credit analysis to determine the portion of utility bill applied to impact fee eligible CIP projects

Service Unit Growth = Derived from land use assumptions for 10-year growth in **ESFCs**

EXISTING IMPACT FEE ORDINANCE

- Existing impact fees adopted in October 2021
- Assessed based on the water meter size

Meter Size	Service Unit Equivalent	Impact Fees		
		Water	Wastewater	Total
3/4"	1.0	$2,441	$7,107	$9,548
1"	1.6	$3,906	$11,371	$15,277
1-1/2"	4.0	$9,766	$28,428	$38,194
2"	6.4	$15,625	$45,484	$61,109
3"	12.8	$31,251	$90,969	$122,220
4"	20.0	$48,830	$142,140	$190,970
6"	40.0	$97,660	$284,280	$381,940
8"	64.0	$156,256	$454,848	$611,104
10"	92.0	$224,618	$653,844	$878,462

Total Water & Wastewater Impact Fee for 3/4" meter = $9,548

IMPACT FEE UPDATE PROCESS

Perform Financial Audit & Hold Public Hearing

Develop 10-Year Land Use Assumptions

Develop 10-Year Impact Fee Capital Improvements Plan

Conduct Impact Fee Calculations and Develop Report

CIAC Workshop: LUA, CIP, and W & WW Impact Fees

Public Hearing and First Reading of Impact Fee Ordinance

Legend

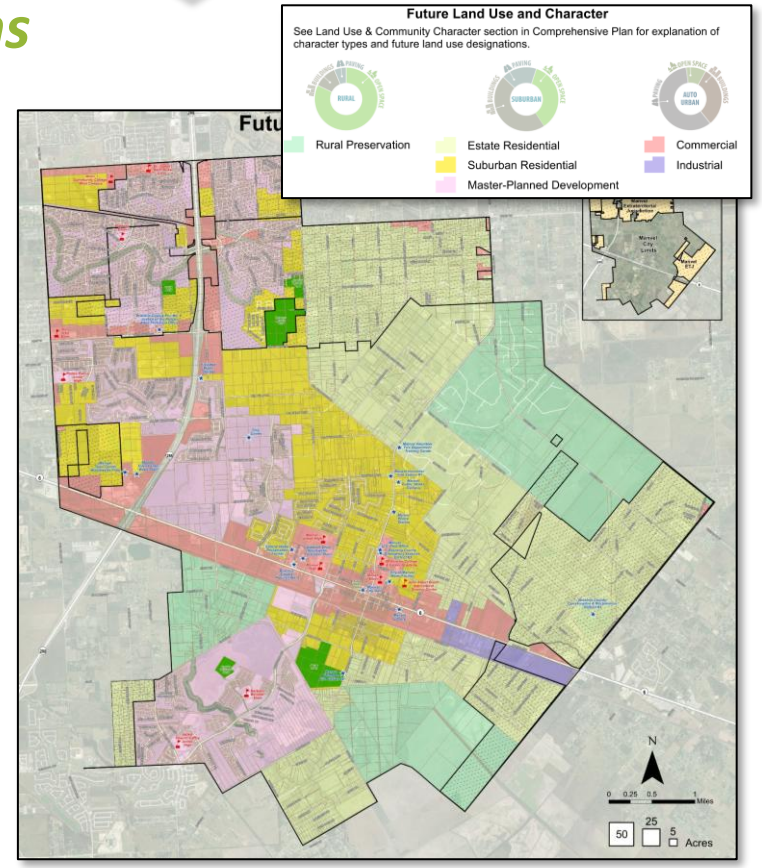
- Council Meeting/Action
- CIAC Meeting
- Study Task

LAND USE ASSUMPTIONS

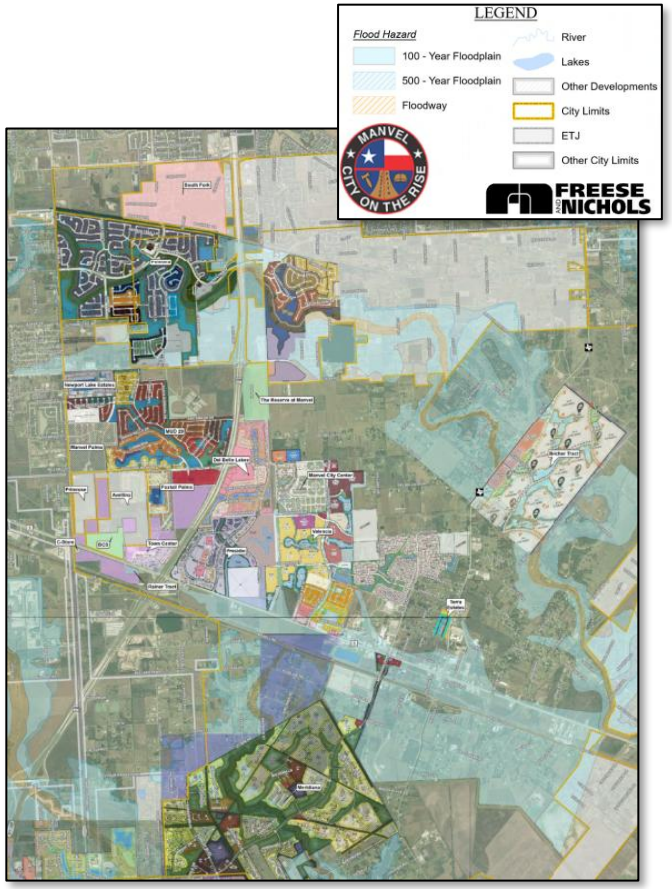
Process to Update Land Use Assumptions

1. Delineate impact fee service area
2. Catalog existing (2026) ESFCs and reservations in the City's water and wastewater service area
3. Project ten-year (2036) growth in ESFCs
4. Calculate 10-year growth in service units for impact fee calculation

Future Land Use Plan



10-Year Anticipated Future Developments



SERVICE UNIT EQUIVALENTS (SUEs)

Meter Size	Safe Maximum Operating Capacity(1) (gpm)	Service Unit Equivalent
3/4"	30	1.0
1"	50	1.6
1-1/2"	100	3.3
2"	160	5.3
3"	500	16.6
4"	1,250	41.6
6"	2,000	66.6
8”	4,000	133.3

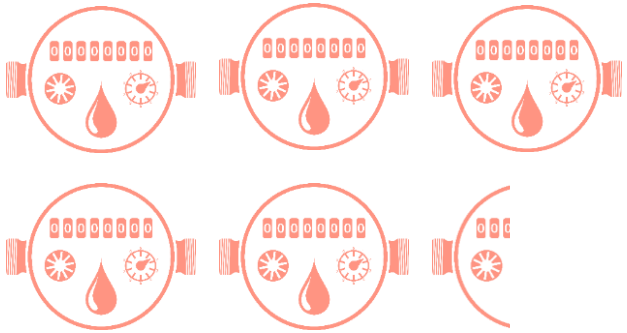
(1) Safe maximum operating capacity for each water meter received from the City.

(2) Equivalent Single Family Connections are rounded down to nearest single decimal point.

2” Water Meter

=

3/4” Water Meters



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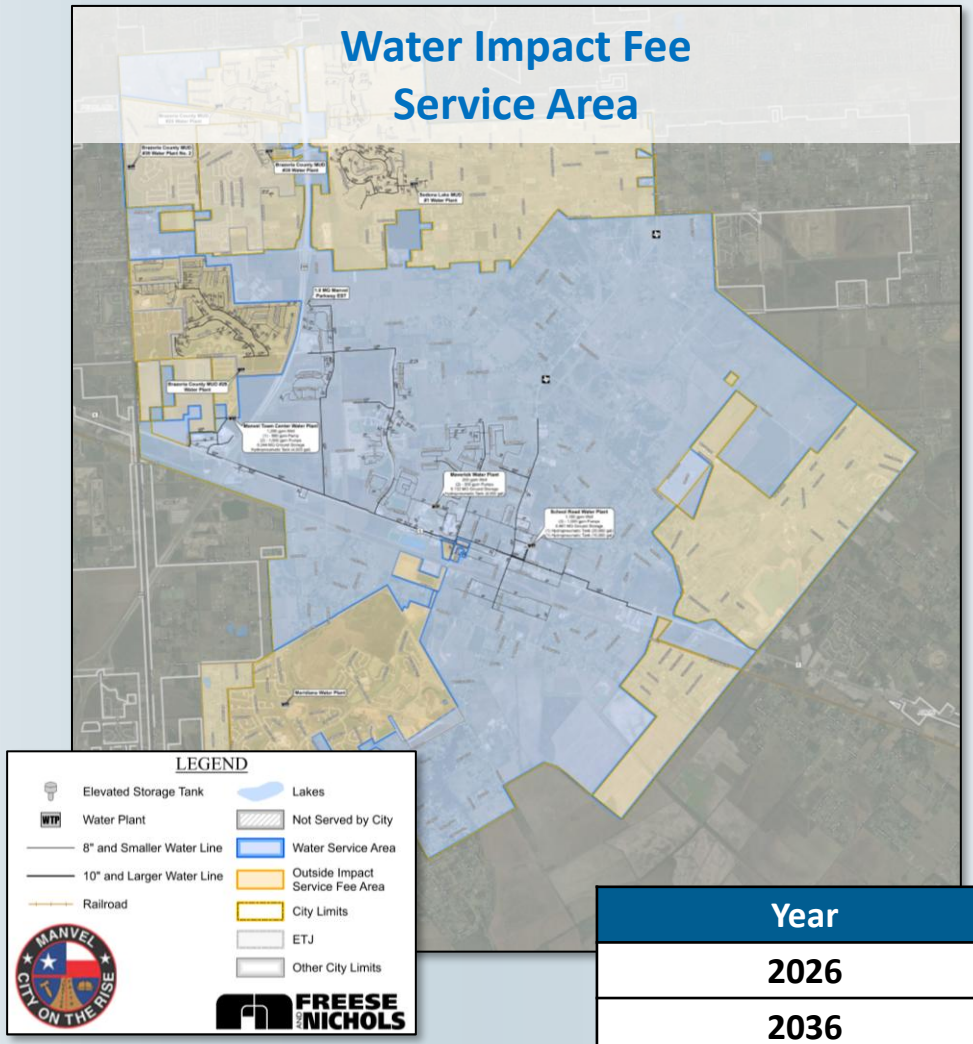
Shopping Center

Single-Family Homes

IMPACT FEE SERVICE AREAS

Water Impact Fee Service Area



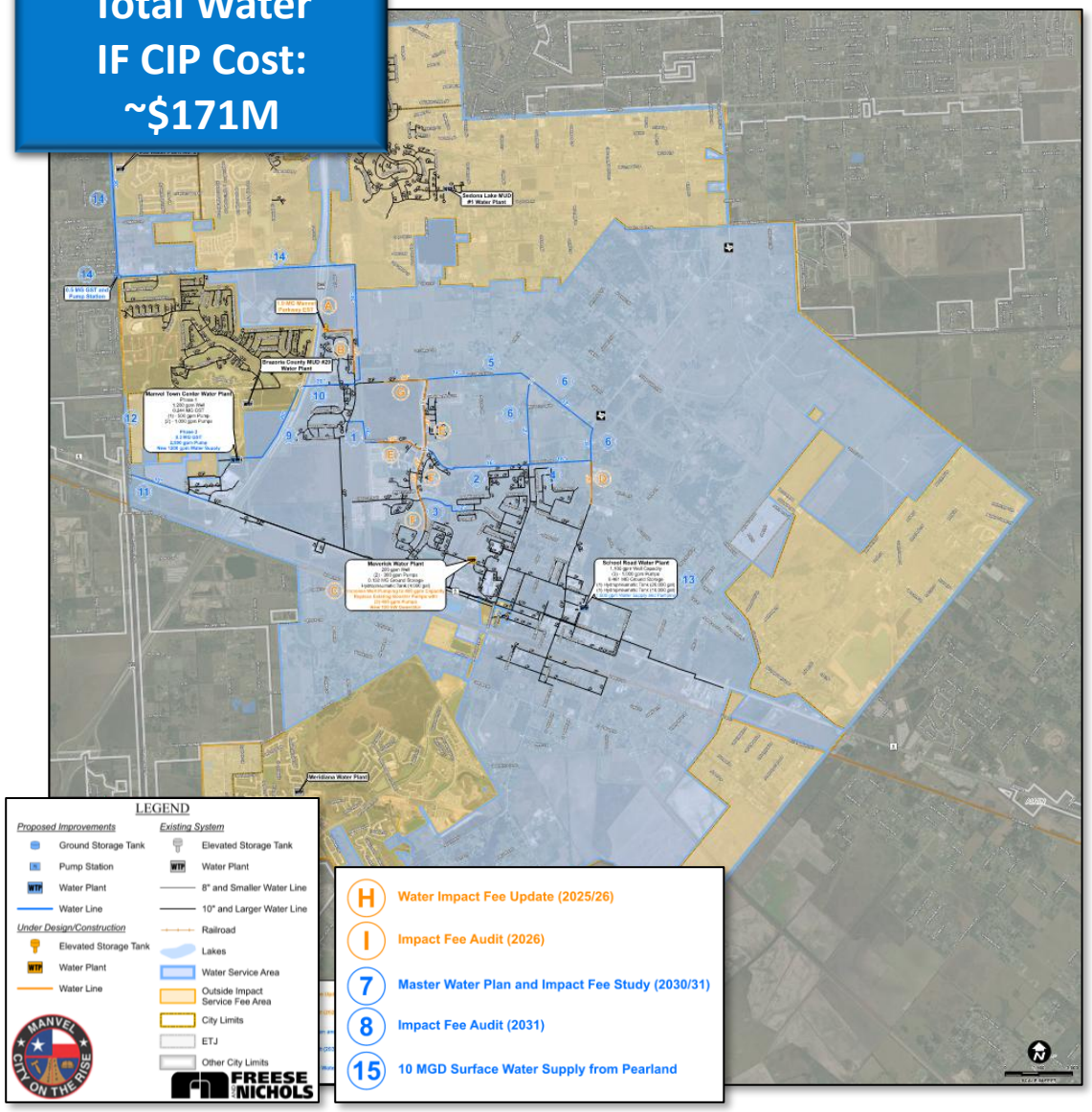
Year	Water ESFCs
2026	4,787
2036	12,084
10-Year Growth in ESFCs	7,297

Wastewater Impact Fee Service Area

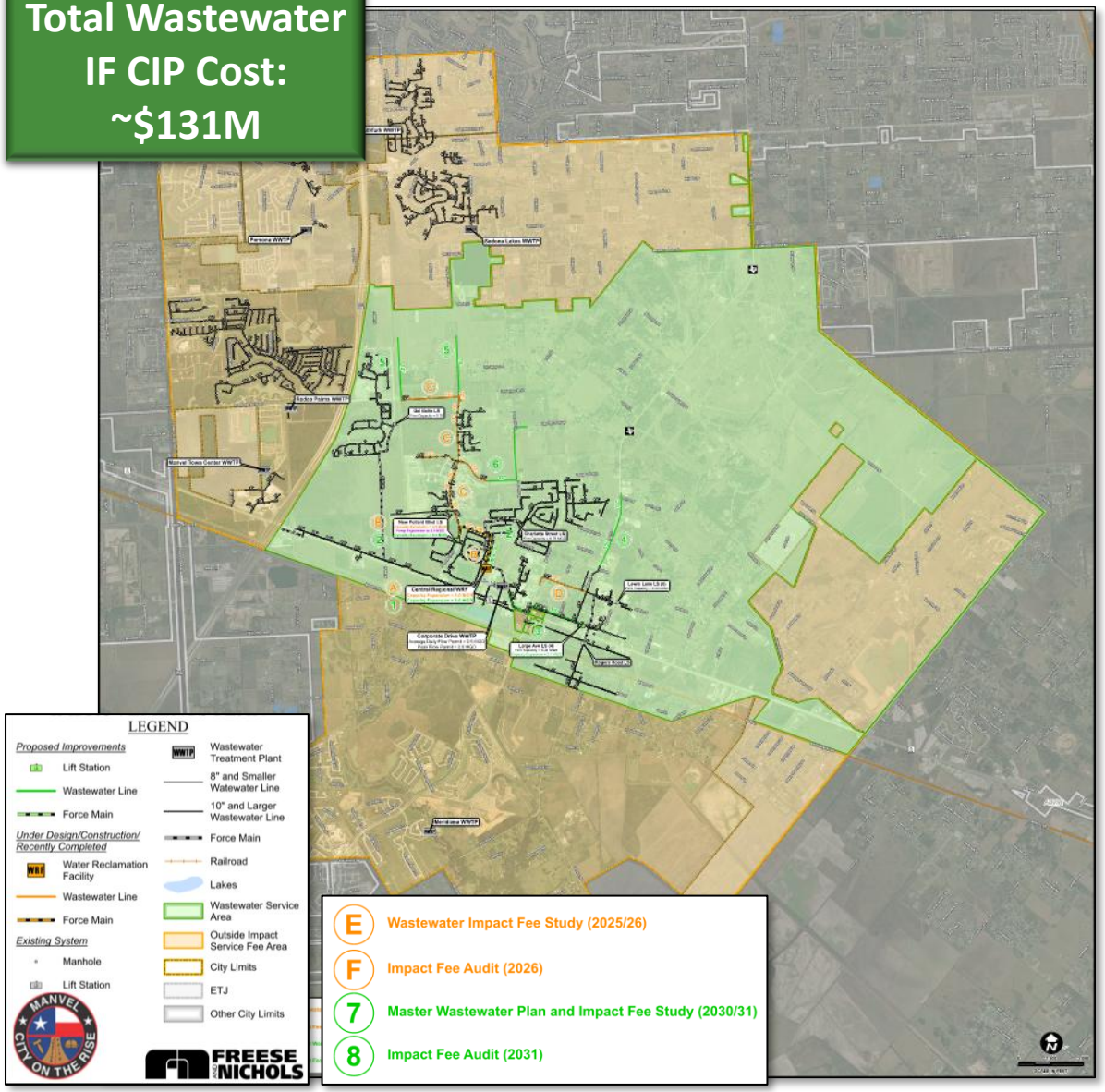
Year	Wastewater ESFCs
2026	4,537
2036	9,751
10-Year Growth in ESFCs	5,214

CAPITAL IMPROVEMENTS PLAN

Total Water
IF CIP Cost:
~$171M



Total Wastewater
IF CIP Cost:
~$131M



WATER CIP

10-Year Utilization x Capital Cost = 10-Year Cost

Project No.		Description of Project	Percent Utilization			10-Year Impact Fee Eligible Cost[1] (2026 Dollars)
			2026	2036	2026 - 2036	
Existing/Under Design	A	Manvel 1 MG EST	35%	82%	47%	$2,706,963
	B	Manvel Parkway Waterline Extension	35%	82%	47%	$215,798
	C	Maverick Plant Improvements	17%	83%	66%	$1,089,000
	D	Masters Line Waterline Extension Phase 3	27%	69%	42%	$135,734
	E	Manvel City Center Interconnect	27%	69%	42%	$553,717
	F	Sowell Interconnect	27%	69%	42%	$663,256
	G	Del Bello interconnect	27%	69%	42%	$150,283
	H	Master Water Plan and Impact Fee Study (2025/26)	50%	100%	50%	$27,356
	I	Impact Fee Audit (2025/26)	0%	100%	100%	$15,750
		Existing/Under Design Water Projects Subtotal				$5,557,857
Proposed Future 10 -Year Projects	1	16" Water Line Interconnect	27%	69%	42%	$806,064
	2	Dogwood Avenue - Phase 1	27%	69%	42%	$1,485,246
	3	12" Charlotte Road Interconnect	27%	69%	42%	$815,094
	4	Dogwood Avenue - Phase 2	27%	69%	42%	$676,326
	5	Del Bello Spur to Del Bello Blvd Loop	27%	69%	42%	$1,050,546
	6	Del Bello and Masters Road Loop	27%	69%	42%	$1,875,258
	7	Master Water Plan and Impact Fee Study (2030/31)	0%	100%	100%	$100,000
	8	Impact Fee Audit (2031)	0%	100%	100%	$15,750
	9	20" Manvel Town Center Discharge Line	27%	69%	42%	$1,774,794
	10	20" Del Bello Boulevard Water Line Upsizing	27%	69%	42%	$767,886
	11	12" Hwy 6 and CR48 Water Line	27%	69%	42%	$1,039,668
	12	Manvel Town Center Expansion	18%	82%	64%	$5,819,648
	13	School Road Plant Improvements	27%	86%	59%	$2,714,590
	14	30" Pearland Supply Transmission Line	0%	9%	9%	$1,948,437
	15	10 MGD of Surface Water Supply from Pearland	0%	9%	9%	$8,979,399
		Proposed Future 10-Year Water Projects Subtotal				$29,868,706
		Total Impact Fee Water Capital Improvement Project Eligible Costs				$35,426,563

(1) The costs shown represent the portion of each project's cost anticipated to serve 10-year growth.

WASTEWATER CIP

10-Year Utilization x Capital Cost = 10-Year Cost

Project No.		Description of Project	Percent Utilization			10-Year Impact Fee Eligible Cost[1] (2026 Dollars)
			2026	2036	2026 - 2036	
Existing/Under Design	A	1.0 MGD Expansion of the Central Regional Wastewater Treatment Plant (Phase 1)	66%	100%	34%	$14,953,710
	B	New 0.9 MGD Pollard Blvd Lift Station and 12-inch Force Main (Phase 1)[2]	71%	100%	29%	$435,661
	C	12/18/30-inch Lines through Valencia Development[2]	0%	78%	78%	$2,770,958
	D	12-inch Gravity Main along McCoy Drive and Lewis Lane	5%	28%	23%	$144,231
	E	Wastewater Impact Fee Study (2025/26)	50%	100%	50%	$27,356
	F	Impact Fee Audit (2026)	0%	100%	100%	$15,750
		Existing/Under Design Wastewater Projects Subtotal				$18,347,666
Proposed Future 10-Year Projects	1	Expansion of the Central Region Wastewater Treatment Plant to 3.0 MGD Capacity (Phase 2)	0%	86%	86%	$49,536,000
	2	6.5 MGD Pollard Blvd Lift Station and 16-inch Parallel Force Main (Phase 2)	4%	72%	68%	$5,257,980
	3	Large Ave Lift Station Expansion to 2.1 MGD Firm Capacity and 10-inch Force Main	21%	96%	75%	$4,357,125
	4	15-inch Gravity Main Along Masters Road	0%	92%	92%	$2,964,047
	5	12/15-inch Central Region Gravity Main	0%	46%	46%	$1,742,206
	6	12-inch Del Bello SPUR Gravity Main	0%	55%	55%	$1,740,849
	7	Master Wastewater Plan and Impact Fee Study (2030/31)	0%	100%	100%	$100,000
	8	Impact Fee Audit (2031)	0%	100%	100%	$15,750
		Proposed Future 10-Year Water Projects Subtotal				$65,713,957
		Total Impact Fee Eligible Wastewater Capital Improvement Project Costs				$84,061,623

(1) The costs shown represent the portion of each project's cost anticipated to serve 10-year growth.

(2) Capital cost reflects City's oversizing share only. Therefore, the percent utilization only considers projected 10-year growth outside of the Valencia development.

IMPACT FEE CALCULATION

$$\text{Impact Fee Per ESFC} = \frac{\text{Eligible CIP Cost} - \text{Rate Credit}}{\text{Service Unit Growth}}$$

ESFC = Equivalent Single-Family Connection (connection for a single-family home)

Eligible CIP Cost = 10-year capital cost (2026 - 2036)

Rate Credit = Chapter 395: reduce the eligible CIP cost by performing a credit analysis to determine the portion of utility bill applied to impact fee eligible CIP projects

Service Unit Growth = Derived from land use assumptions for 10-year growth in **ESFCs**

MAX ALLOWABLE IMPACT FEES

2026 Water Impact Fee Calculation	
Total IF Eligible Capital Improvement Costs	$35,426,563
Total Eligible Financing Costs(1)	$5,372,507
Total Eligible Impact Fee Costs	*$40,799,070*
Rate Credit	*$969,860*
Total Eligible Impact Fee Costs with 50% Credit Applied ❶	**$39,829,210**
10-Year Growth in Service Unit Equivalents ❷	**7,297**
Maximum Allowable Water Impact Fee ❶ ÷ ❷	**$5,458**

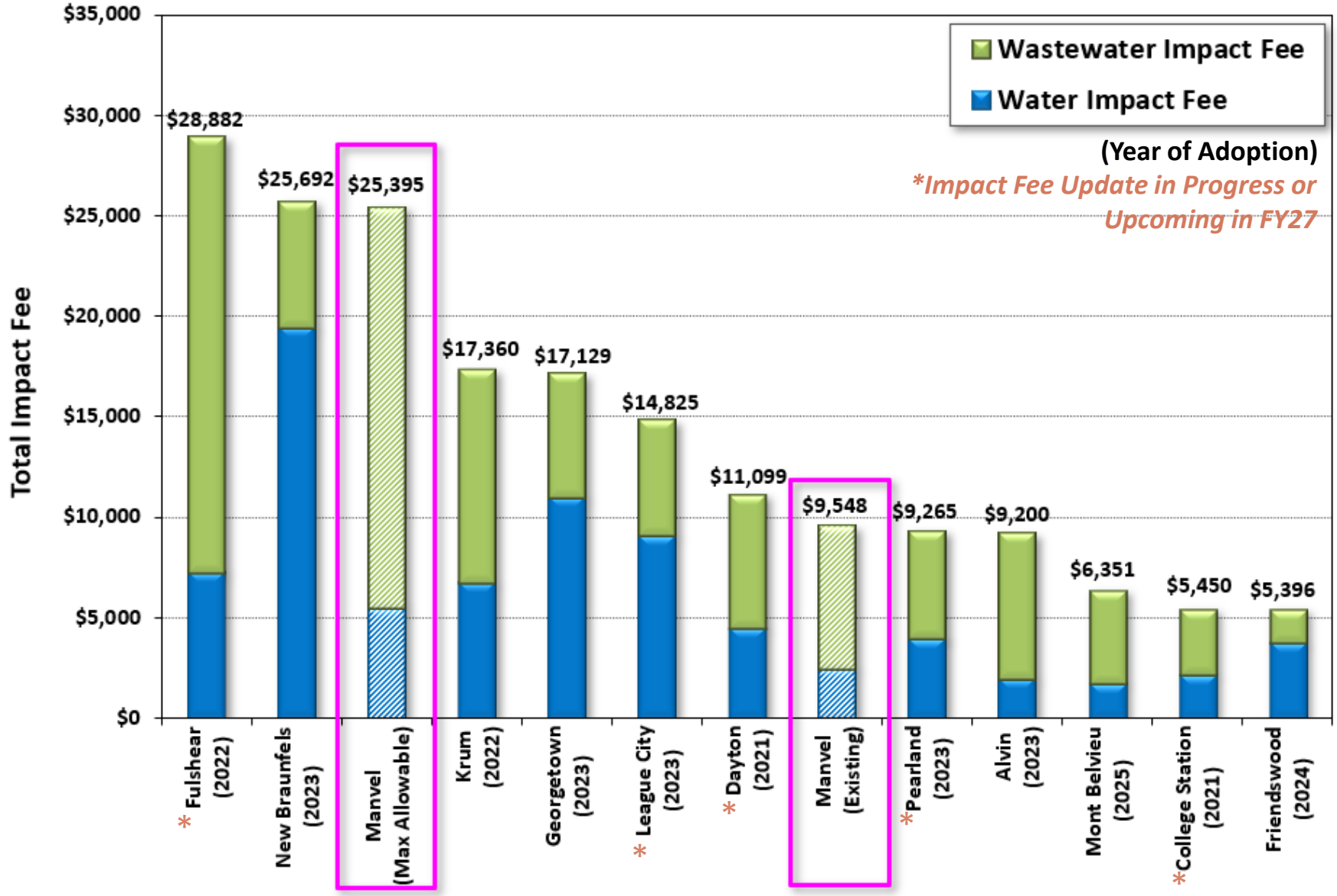
2026 Wastewater Impact Fee Calculation	
Total IF Eligible Capital Improvement Costs	$84,061,623
Total Eligible Financing Costs(1)	$36,235,848
Total Eligible Impact Fee Costs	*$120,297,471*
Rate Credit	*$16,344,752*
Total Eligible Impact Fee Costs with 50% Credit Applied ❶	**$103,952,719**
10-Year Growth in Service Unit Equivalents ❷	**5,214**
Maximum Allowable Wastewater Impact Fee ❶ ÷ ❷	**$19,937**

(1) Financing costs for debt service using 20-year financing and 4% interest

MAX ALLOWABLE IMPACT FEES

Meter Size	Service Unit Equivalents[1]	Maximum Allowable Impact Fees		
		Water	Wastewater	Total
3/4"	1.0	$5,458	$19,937	**$25,395**
1"	1.6	$8,732	$31,899	**$40,631**
1-1/2"	3.3	$18,011	$65,792	**$83,803**
2"	5.3	$28,927	$105,666	**$134,593**
3"	16.6	$90,602	$330,954	**$421,556**
4"	41.6	$227,052	$829,379	**$1,056,431**
6"	66.6	$363,502	$1,327,804	**$1,691,306**
8”	133.3	$727,551	$2,657,602	**$3,385,153**
10”	216.6	$1,182,202	$4,318,354	**$5,500,556**

IMPACT FEE COMPARISON WITH OTHER CITIES



IMPACT FEE UPDATE SCHEDULE

Action Item	Date	Action By
~~Financial Report Available to Public~~	~~1/7/2026~~	~~City Staff, CIAC, FNI~~
CIAC Meeting – Review Land Use Assumptions, W/WW CIP, and W/WW Impact Fees	5/27/2026	City Staff, CIAC, FNI
COUNCIL – Resolution for Public Hearing for Impact Fees	6/1/2026	City Staff, Council
Water & Wastewater Impact Fee Report Available to Public	6/1/2026	City Staff, FNI
Advertise for IF Public Hearing for 30 days *(60 days after Impact Fee Report Available to Public)*	8/2/2026	City Staff, FNI
Financial Audit Public Hearing	By 9/8/2026	City Staff, Council
CIAC Submits Written Comments to Council re: Impact Fees	By 9/1/2026	CIAC
PUBLIC HEARING – W/WW Impact Fees	9/8/2026	City Staff, Council, FNI
COUNCIL – First Reading of the Impact Fee Ordinance Updating Water & Wastewater Impact Fees	9/21/2026	
COUNCIL – Second Reading of the Impact Fee Ordinance Updating Water & Wastewater Impact Fees and Adoption of the Ordinance	10/5/206	

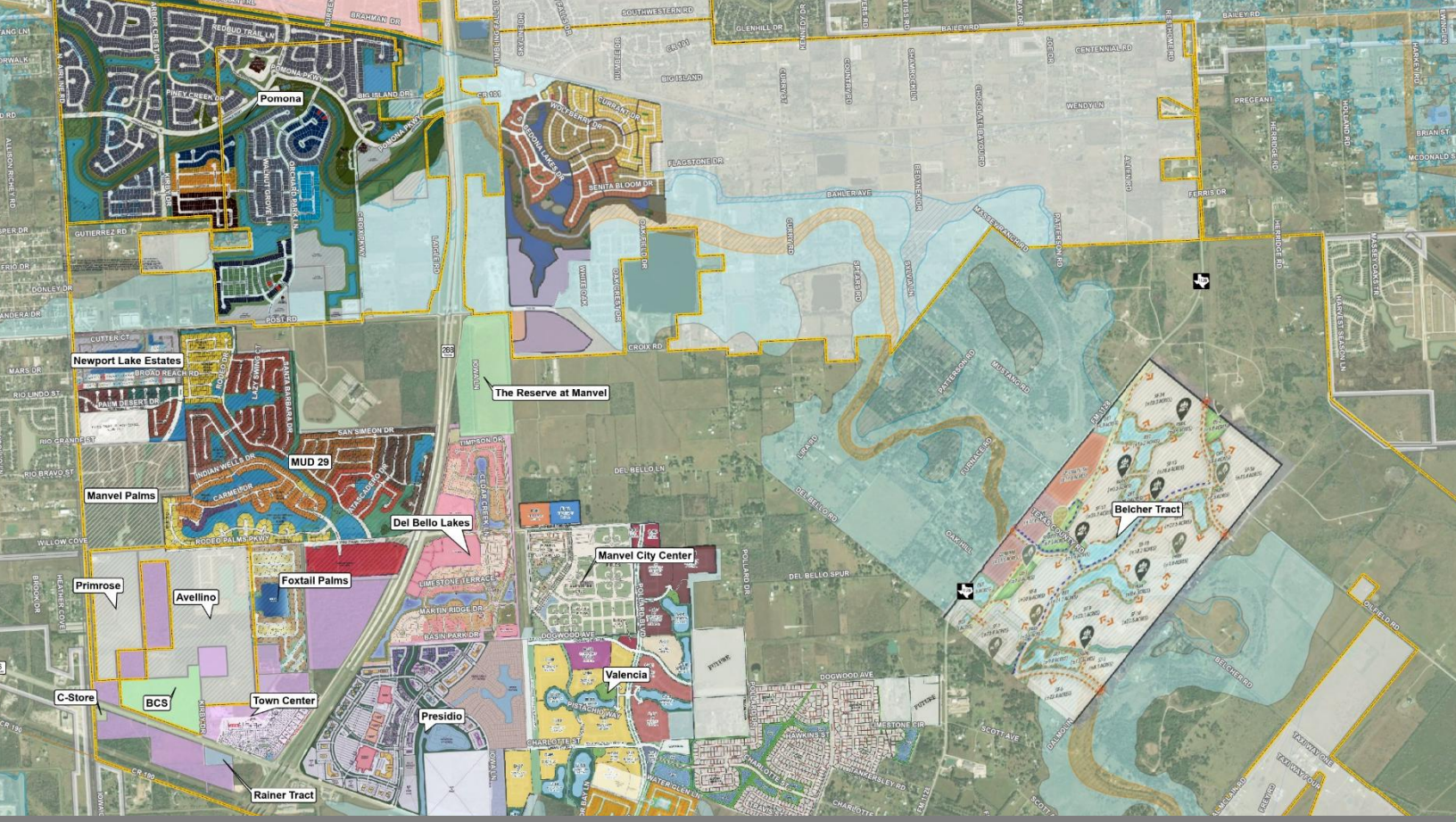
CIAC Meeting/ Action

Council Meeting

Action


Newport Lake Estates
The Reserve at Manvel
MUD 29
Manvel Palms
Del Bello Lakes
Manvel City Center
Belcher Tract
Primrose
Avellino
Foxtail Palms
Valencia
Terra Estates

Thank you!



CITY OF MANVEL

DRAFT 2026 WATER AND WASTEWATER IMPACT FEE UPDATE

PREPARED FOR:

City of Manvel

PREPARED BY:

Freese and Nichols, Inc.
11200 Broadway St., Suite 2320
Pearland, Texas 77584
832-456-4700

Innovative approaches
Practical results
Outstanding service

DRAFT 2026 WATER AND WASTEWATER IMPACT FEE UPDATE

Prepared for:

City of Manvel

DRAFT
THIS DOCUMENT IS RELEASED FOR THE PURPOSE OF INTERIM REVIEW UNDER THE AUTHORITY OF ISHITA RAHMAN, P.E., TEXAS NO. 134745 ON 5/19/2026. IT IS NOT TO BE USED FOR CONSTRUCTION, BIDDING OR PERMIT PURPOSES. FREESE AND NICHOLS, INC. TEXAS REGISTERED ENGINEERING FIRM F- 2144

Prepared by:

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FNI Project No.: MNV25430

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Appendices

1.0 BACKGROUND AND SCOPE

The City of Manvel (City) currently assesses water and wastewater impact fees as per Texas Local Government Code (TLGC) Chapter 395. The City retained Freese and Nichols, Inc. (FNI) to perform an update study for the City's water and wastewater impact fees in 2025. The methodology used herein satisfies the requirements of TLGC Chapter 395 (**Section 1.1**) for the update of water and wastewater impact fees.

1.1 TEXAS LOCAL GOVERNMENT CODE

TLGC Chapter 395 (**Appendix A**) requires an impact fee analysis before impact fees can be created, updated, and assessed. TLGC Chapter 395 defines an impact fee as "a charge or assessment imposed by a political subdivision against new development in order to generate revenue for funding or recouping the costs of capital improvements or facility expansions necessitated by and attributable to the new development." In September 2001, TLGC Chapter 395 was amended creating an updated procedure for implementing impact fees. In 2025, TLGC Chapter 395 was updated per Senate Bill No. 1883 that went into effect September 1, 2025.

TLGC Chapter 395 identifies the following items as impact fee eligible costs:

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

TLGC Chapter 395 also identifies items that impact fees cannot be used to pay for, such as:

- Construction, acquisition, or expansion of public facilities or assets other than those identified on the impact fee CIP
- Repair, operation, or maintenance of existing or new capital improvements

- Upgrading, updating, expanding, or replacing existing capital improvements to serve existing development in order to meet stricter safety, efficiency, environmental, or regulatory standards
- Upgrading, updating, expanding, or replacing existing capital improvements to provide better service to existing development
- Administrative and operating costs of the political subdivision
- Principal payments and interest or other finance charges on bonds or other indebtedness, except as allowed above

As a funding mechanism for capital improvements, impact fees allow cities to recover the costs associated with new facilities or facility expansions in order to serve future development. Statutory requirements mandate that impact fees be based on a specific list of improvements identified in a capital improvements program and only the cost attributed (and necessitated) by new growth over a 10-year period may be considered.

Periodic Updates

According to TLGC §395.052(a) "A political subdivision imposing an impact fee shall update the land use assumptions and capital improvements plan at least every five years..." and according to Senate Bill No. 1883 amendment of TLGC §395.0515, "a political subdivision may not increase the amount of an impact fee for three years from the later of the date the fee was adopted or most recently increased, if applicable." As capital improvement projects in the plan are completed, planned costs are updated with actual costs to reflect the capital expenditure of the program more accurately. Additionally, new capital improvement projects may be added to the impact fee eligible CIP at the time of future periodic updates.

1.2 IMPACT FEE UPDATE

1.2.1 Planning Period

The planning period of this impact fee update for the City of Manvel is the next 10 years starting in 2026 and ending in 2036.

1.2.2 Land Use Assumption

According to TLGC Chapter 395, Impact fee land use assumptions include a description of the service area and projections of changes in land uses, densities, intensities, and population in the service area over the

next 10-year period. The impact fee service area for water and wastewater may include all or part of the land within the City Limits or Extraterritorial Jurisdiction (ETJ). The land use and growth projections were developed for Manvel for the Impact Fee planning period.

1.2.3 Capital Improvements

The City's 2022 Master Water Plan and 2022 Master Wastewater Plan Update projects developed phased, prioritized recommendations for water and wastewater capital improvement plan (CIP) projects for up to a 20-year planning period from the time of the studies. As part of this impact fee update, the impact fee eligible projects were identified from the list of recommended projects in the master plans based on the updated 10-year growth projections. The planning level opinion of probable construction costs (OPCCs) were updated for all impact fee eligible future infrastructure capacity improvements in 2026 dollars. Details on the update process are documented in **Section 3-2**. Ongoing or under design capital projects that will serve growth within the planning period were also included in the impact fee calculation.

1.2.4 Service Units

According to Chapter 395 of the Texas Local Government Code, the maximum impact fee may not exceed the amount determined by dividing the cost of capital improvements required by the total number of service units attributed to new development during the impact fee eligibility period (2026 - 2036).

A water service unit is defined as the service equivalent to a water connection for a single-family residence. The City of Manvel utilizes 3/4-inch meters for single-family connections which would equate to one equivalent single family connection (ESFC). The City bills wastewater services based on the customer's water consumption, as wastewater flows are not directly metered. Therefore, a single wastewater ESFC is defined as the wastewater service provided to a single-family residence. Existing and future water and wastewater service area populations and ESFCs were developed based on City's projected land use and growth information.

Calculation of Service Unit Equivalency

The water meter impact fee assessment method considers developments' impact on the water system by utilizing the safe maximum operating capacity of each meter to calculate service unit equivalency for all water meters larger than 3/4-inch. The service unit equivalency is the ratio of the safe maximum operating capacity for the larger meter to the safe maximum operating capacity of a 3/4-inch meter.

The City of Manvel currently uses Neptune water meters. Each water meter size has a safe maximum operating capacity as defined by the manufacturer. **Table 1-1** shows the safe maximum operating capacities for the water meter sizes utilized by the City of Manvel, and the resulting ESFCs.

Table 1-1: Equivalent Service Unit

Meter Size	Safe Maximum Operating Capacity(1) (gpm)	Equivalent Single Family Connections(2)
3/4"	30	1
1"	50	1.6
1-1/2"	100	3.3
2"	160	5.3
3"	500	16.6
4"	1,250	41.6
6"	2,000	66.6
8"	4,000	133.3
10”	6,500	216.6

(1) Safe operating capacity for each water meter received from the City.
(2) Equivalent Single Family Connections are rounded down to nearest single decimal point.

1.2.5 Impact Fees

This report documents the calculation of the maximum allowable impact fee per equivalent service unit for the City based on the updated land use assumptions and the water and wastewater CIPs from the City. The TLGC §395.014 allows for “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.” This method was utilized for the impact fee calculation.

1.2.6 Capital Improvements Advisory Committee

As part of the impact fee development, FNI will conduct workshops with the City’s appointed Capital Improvements Advisory Committee (CIAC) and the City Council. The CIAC’s role includes reviewing the land use assumptions and impact fee capital improvement plans (CIPs) and providing written comments on the proposed impact fees to the City Council. The City Council sets the impact fees to be collected.

1.3 LIST OF ABBREVIATIONS

The list of abbreviations used in this report are presented in **Table 1-2**.

Table 1-2: List of Abbreviations

Abbreviation	Actual
CIP	Capital Improvements Plan
CIAC	Capital Improvements Advisory Committee
CR	County Road
ESFC	Equivalent Single Family Connection
ETJ	Extraterritorial Jurisdiction
FM	Farm-to-Market; Force Main
FNI	Freese and Nichols, Inc.
gpm	Gallons per Minute
LF	Linear Foot
MG	Million Gallons
MGD	Million Gallons per Day
MUD	Municipal Utility District
OPCC	Opinion of Probable Construction Cost
SH	State Highway
TCEQ	Texas Commission on Environmental Quality
TLGC	Texas Local Government Code
WRF	Water Reclamation Facility
WTP	Water Treatment Plant
WWTP	Wastewater Treatment Plant

2.0 LAND USE ASSUMPTIONS

Population and projected land use are important elements in the analysis of water distribution and wastewater collection systems. In order to identify impact fee eligible water and wastewater capital projects, a reasonable estimation of 10-year growth is required. FNI collected data and input from the City's Development Services and Engineering Departments to develop 10-year growth projections and land use assumptions for this study and incorporated information from the City's 2022 master plans and development plans, where applicable. The growth in population and non-residential acreage was converted into growth in projected equivalent service units, or equivalent single family connections (ESFCs) for the impact fee analysis. An ESFC is defined as the equivalent to a water or wastewater connection for a single-family residence. Following the effort of land use and service units development, FNI utilized the 10-year growth projections to identify eligible CIP projects from the City's ongoing, recently completed, and planned CIP projects for the impact fee analysis.

2.1 IMPACT FEE SERVICE AREA

Water Service Area

The water impact fee service area consists of the existing City limits and portions of the ETJ, excluding existing Municipal Utility Districts (MUDs) that are currently not served by the City. The water service area encompasses approximately 23 square miles and is shown on Figure 2-1.

Wastewater Service Area

The wastewater impact fee service area includes the existing City limits on the east of SH 288 and north of the BNSF railway tracts, excluding existing MUDs that are currently not served by the City. The wastewater service area encompasses approximately 16 square miles and is shown on **Figure 2-2.**

Brazoria County MUD #25 Water Plant

Brazoria County MUD #39 Water Plant No. 2

Brazoria County MUD #39 Water Plant

Sedona Lake MUD #1 Water Plant

1.0 MG Manvel Parkway EST

Brazoria County MUD #29 Water Plant

Manvel Town Center Water Plant
1,200 gpm Well
(1) - 500 gpm Pump
(2) - 1,000 gpm Pumps
0.244 MG Ground Storage
Hydropneumatic Tank (4,000 gal)

Maverick Water Plant
200 gpm Well
(2) - 300 gpm Pumps
0.132 MG Ground Storage
Hydropneumatic Tank (4,000 gal)

School Road Water Plant
1,100 gpm Well
(3) - 1,000 gpm Pumps
0.461 MG Ground Storage
(1) Hydropneumatic Tank (20,000 gal)
(1) Hydropneumatic Tank (10,000 gal)

Meridiana Water Plant

DRAFT FIGURE 2-1

CITY OF MANVEL

2026 WATER AND WASTEWATER IMPACT FEE UPDATE

WATER IMPACT FEE SERVICE AREA

LEGEND

- Elevated Storage Tank
- Water Plant
- 8" and Smaller Water Line
- 10" and Larger Water Line
- Railroad
- Lakes
- Not Served by City
- Water Service Area
- Outside Impact Service Fee Area
- City Limits
- ETJ
- Other City Limits

FREESE AND NICHOLS

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DRAFT FIGURE 2-2

CITY OF MANVEL

2026 WATER AND WASTEWATER IMPACT FEE UPDATE
WASTEWATER IMPACT FEE SERVICE AREA

LEGEND

Under Design/Construction/ Recently Completed

- Water Reclamation Facility (WRF)

Existing Wastewater System

- Manhole
- Lift Station
- Wastewater Treatment Plant (WWTP)
- Force Main
- 8" and Smaller Wastewater Line
- 10" and Larger Wastewater Line
- Railroad
- Lakes
- Not Served by City
- Wastewater Service Area
- Outside Impact Service Fee Area
- City Limits
- ETJ
- Other City Limits

FREESE AND NICHOLS

Southfork WWTP

Pomona WWTP

Sedona Lakes WWTP

Rodeo Palms WWTP

Del Bello LS
Firm Capacity = 0.76 MGD

Manvel Town Center WWTP

New Pollard BLVD LS
Firm Capacity = 0.9 MGD

Charlotte Street LS
Firm Capacity = 0.79 MGD

Central Regional WRF
Average Daily Flow Permit = 1.0 MGD
Peak Flow Permit = 4.0 MGD

Lewis Lane LS

Corporate Drive WWTP
Average Daily Flow Permit = 0.5 MGD
Peak Flow Permit = 2.0 MGD

Large Ave LS
Firm Capacity = 0.44 MGD

Rogers Road LS

Meridiana WWTP

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2.2 LAND USE ASSUMPTIONS UPDATE

To assist the City of Manvel in determining the need and timing of capital improvements to serve future development, a reasonable estimation of future growth is required. These assumptions will become the basis for the preparation of impact fee capital improvement plans for water and wastewater facilities.

FNI worked with City staff to develop growth projections and land use assumptions for the City of Manvel during this study. City staff identified existing and anticipated developments within the City Limits and ETJ. The methodology is described in the following sections.

2.2.1 Review of Historical Population

Historical population within the City limits is summarized in **Table 2-1**. The City's population data shows that between 2020 and 2025, Manvel experienced approximately 17% average annual growth in population.

Table 2-1: Historical City Limits Population

Year	City Limits Population	Annual Growth Rate
2020[1]	9,992	-
2021[2]	12,260	23%
2022[2]	14,773	20%
2023[2]	17,291	17%
2024[3]	19,309	12%
2025[2]	21,582	12%

(1) Population from U.S. Census.
(2) Based projected population from World Population Review website.
(3) US Census Projections.

2.2.2 Calculation of Existing Service Units

The City currently serves customers along Highway 6 between SH 288 and FM 1128 (Masters Road) and nearby areas east of Master Road. The City of Manvel Utility Billing Department provided existing numbers of water meters with meter sizes. According to the data, the City had 2,154 active water meters as of August 2025. Approximately 90% of the meters were residential and ¾-inch in size. Approximately 3% were irrigation meters, and the remaining were commercial. The meter size information from the City was utilized to calculate the existing ESFCs in Manvel based on the equivalent factors presented in **Table 2-2**. Irrigation meters were excluded from this calculation as Manvel does not currently charge impact fees for irrigation meters. For wastewater meter counts, water only connections were removed based on

information from the City's billing department and review of meter locations compared to the City's wastewater infrastructure. **Table 2-2** summarizes the calculated existing ESFCs in the City of Manvel.

Table 2-2: Existing Water and Wastewater ESFCs

Meter Size	ESFC Factor	Water Meter Count[1]	Water ESFC	Wastewater Meter Count[1][2]	Wastewater ESFC[2]
3/4"	1	1,933	1,933	1,774	1,774
1"	1.6	49	78	46	73
1-1/2"	3.3	0	0	0	0
2"	5.3	63	333	53	280
3"	16.6	33	547	31	514
4"	41.6	0	0	0	0
6"	66.6	0	0	0	0
8"	133.3	4	533	4	533
10"	216.6	0	0	0	0
Total			**3,424**		**3,174**

(1) Meter count received from the City in (August 2025). Water meter counts exclude irrigation meters.
(2) Excluding irrigation and water-only (septic) customers.

2.2.3 Projected Growth in Service Units

The magnitude and distribution of the growth in service units will dictate where future water and wastewater infrastructure is required. FNI worked with City staff to develop growth projections and land use assumptions for the City of Manvel for this study. This process is described below.

FNI received future projection information from the City, developers, and existing reports for the anticipated developments shown on **Figure 2-3**. FNI and the City requested projected buildout connections and approximate growth per year from developers of ongoing/proposed developments. Where data was received, that information was used for development of growth projections. For developments where a phasing plan was unavailable, City staff provided direction on development of the growth projections. In addition to the known developments, growth projections were also developed for select areas within the impact fee service area identified as having potential for growth (infill areas) within the 10-year planning period. The data sets and assumptions utilized to develop the population and non-residential acreage projections included:

- Anticipated known developments provided by the City and City's Developers with planned development phasing.
- Latest parcel shapefile.
- Future Land Use Plan (Adopted May 2026)
- Active water meter billing locations from August 2025.
- Population density of 3.04 people per unit based on data from Census website from 2020 to 2025.
- Density assumptions by land use type developed based on review of prior studies and coordination with City staff: 2 units/acre for single-family residential, and 5 units/acre for commercial developments.

Utilizing the data sets listed above and in coordination with City staff, FNI developed projections for the following categories of future growth:

Anticipated Known Developments

City staff identified areas where future residential and non-residential developments are anticipated to occur as well as an expected construction timeline for each development. Where available, the City and developers supplied development-specific information such as number of single-family lots, number of multi-family units, and commercial acreage. The anticipated known developments are shown on **Figure 2-3**.

Infill Growth

Outside of the known anticipated developments discussed above, FNI utilized active August 2025 water meter locations (spatially located by address) and the City's Future Land Use Map (**Appendix D**) to identify potential future developable areas. These areas include currently vacant parcels outside of the anticipated known developments described above that are not within the future WWTP land and primarily not within the 100-year floodplain. FNI utilized input from City staff to identify the general locations of vacant parcels anticipated to develop within the next 10 years, as well as a potential growth rate. These parcels are referred to as *infill* parcels in this report. It is assumed that these infill parcels will develop as 90% residential type and 10% commercial type in the next 10 years with a density of 2 ESFCs/acre.

The growth projections and assumptions for each ongoing and anticipated known development and infill areas for this update are documented in **Appendix E**. **Table 2-3** summarizes the growth in population and ESFCs projected to occur in the water and wastewater impact fee service areas in the next 10 years.

Table 2-3: Water and Wastewater Service Area Population and ESFCs

Year	Water Service Area		Wastewater Service Area	
	Population[1]	ESFCs[2]	Population[1]	ESFCs[2]
2026 (Existing)	7,597	3,424	6,856	3,174
2026[3] (w/ Reservations)	9,827	4,787	9,086	4,537
2036[4]	20,396	12,084	18,439	9,751
10-Year Growth	**10,569**	**7,297**	**9,353**	**5,214**

(1) 2026 water service area population based on projections from Texas Commission on Environmental Quality (TCEQ) Drinking Water Viewer website, accessed on 3/10/2026. Wastewater service area population calculated by subtracting estimated population for water-only customers and existing west of 288 water connections utilizing 3.04 people/household from US Census projections.
(2) 2026 starting ESFCs calculated based on August 2025 billing data.
(3) Including future ESFCs growth reservations for Valencia, Del Bello Lakes, and BCS (Manvel Crossing) developments which would not pay additional impact fees due to existing development agreements.
(4) Projection utilized development specific information and assumptions documented in *Appendix E*.

DRAFT FIGURE 2-3

CITY OF MANVEL

2026 WATER AND WASTEWATER IMPACT FEE UPDATE EXISTING AND ANTICIPATED DEVELOPMENTS

LEGEND

Flood Hazard

- 100 - Year Floodplain
- 500 - Year Floodplain
- Floodway
- River
- Lakes
- Other Developments
- City Limits
- ETJ
- Other City Limits

South Fork
Pomona
Newport Lake Estates
The Reserve at Manvel
MUD 29
Manvel Palms
Del Bello Lakes
Manvel City Center
Foxtail Palms
Primrose
Avellino
C-Store
BCS
Town Center
Presidio
Valencia
Rainer Tract
Terra Estates
Belcher Tract
Meridiana

PEARLAND
ALVIN

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3.0 WATER AND WASTEWATER IMPACT FEE ANALYSIS

3.1 WATER DEMAND AND WASTEWATER FLOW PROJECTIONS

FNI utilized the City's water production and water meter billing data to develop existing and 10-year water demand projections. Future wastewater flow projections were developed utilizing the City's wastewater treatment plant effluent flow data. **Table 3-1** and **Table 3-2** summarize the projected 10-year water demands and wastewater flows, respectively. For this study, the existing demands and flows include projected developments that have reserved capacity in the City's water and wastewater systems via development agreements. The planning criteria utilized for future water demand and wastewater flow projections are from the 2022 Master Water Plan and 2022 Master Wastewater Plan Update reports and are documented in the table footnotes and **Appendix F**. The existing water and wastewater facilities inventory is also included in **Appendix F**.

Table 3-1: Projected Water Demands

Year	Average Daily Demand (MGD)	Maximum Daily Demand[3] (MGD)
2026[1]	1.35	3.24
2036[2]	3.98	9.55

(1) 2026 demands based on latest available (January – July 2025) water production data and reservations per development agreements for existing developments. The existing demand also includes future ESFC growth reservations from Valencia, Del Bello Lakes, and BCS (Manvel Crossing) developments.
(2) Projected 10-year average day water demand calculated utilizing 360 gallons per ESFC per day (gpd/ESFC) based on the 2022 Master Water Plan.
(3) Projected maximum day demand based on the 2022 Master Water Plan maximum day to average day peaking factor of 2.4. For water supply planning, the 2022 Master Water Plan used a 2.0 maximum day to average day peaking factor. **Appendix F** provides a summary of the planning criteria.

Table 3-2: Projected Wastewater Flows

Year	Average Daily Flow (MGD)
2026[1]	1.16
2036[2]	2.80

(1) Average daily flow based on latest available (January - July 2025) wastewater effluent data and per development agreements for existing developments. The existing flows also include future ESFC growth reservations from Valencia, Del Bello Lakes, and BCS (Manvel Crossing) developments.
(2) Projected 10-year average daily flow calculated utilizing 315 gallons per ESFC per day (gpd/ESFC) as documented in the 2022 Master Wastewater Plan Update report. **Appendix F** provides a summary of the planning criteria.

3.2 WATER AND WASTEWATER IMPACT FEE CIP

The impact fee eligible CIP projects are divided into two categories: **1)** Existing/Under Design Projects and **2)** Proposed Future Projects.

Existing/Under Design Projects

Existing and under design capital improvement projects that have available capacity to serve projected growth within the next 10 years are also considered impact fee eligible. These water and wastewater projects are shown in **orange** on **Figure 3-1** and **3-2**, respectively. City staff provided the costs of the existing/under design projects.

Proposed Future Projects

Proposed future impact fee eligible water projects are shown in **Table 3-3** and in **blue** on **Figure 3-1**. Proposed future impact fee eligible wastewater projects are shown in **Table 3-4** and in **green** on **Figure 3-2**. The City's 2022 Master Water Plan and 2022 Master Wastewater Plan Update reports developed recommendations for future water and wastewater projects, respectively. FNI utilized the updated growth projections to identify the proposed projects from the master plan recommendations to serve growth in the next 10 years. Based on the updated growth projections, proposed sizing for wastewater impact fee CIP projects 1 and 3 were updated. Water line extents were modified for water impact fee CIP projects 1, 2, 3, 5, 6 and 11 as portions of these projects have been constructed, or the connecting project alignment has changed.

The planning level opinions of probable construction costs (OPCCs) were updated for all proposed impact fee eligible improvements in 2026 dollars. For the water CIP projects where the extents were not updated, the planning level costs in the 2022 Master Water Plan were updated with a 3.9% annual inflation rate to 2026 dollars. This inflation rate is based on the Engineering News-Record (ENR) construction cost index values from April 2021 to April 2026. As the project extents were modified for water impact fee CIP projects 1, 2, 3, 5, 6 and 11, FNI developed updated OPCCs for these projects by applying current unit costs based on similar engineering experience. For the wastewater CIP projects, detailed planning level OPCC sheets were included in the 2022 Master Wastewater Plan Update. For the impact fee eligible wastewater projects, these OPCC sheets were updated to 2026 dollars by applying current unit costs based on similar engineering experience. Where OPCCs were updated by FNI as part of this project, OPCCs are classified as an AACE Class 5 Estimate with an accuracy range of -30% to +50%. Costs included in the

OPCCs do not include financing, inflation, individual service connections or subdivision lines, easements, or land acquisition. These costs include an allowance for engineering, surveying, and contingencies as applied in the 2022 master plans. It should be noted that contingencies are costs assigned to the unknowns in the definition of the project. The contingencies are intended to account for construction costs that have not yet been identified due to the project's maturity and should be expected to be fully utilized during construction. The engineering and survey portion of the OPCC accounts for costs projected to be incurred for design, geotechnical, subsurface, environmental engineering, and survey tasks during the design of a project. OPCCs for the future water projects and documentation from the 2022 Master Water Plan, including cost information in 2021 dollars, are included in **Appendix B**. OPCCs for the future wastewater projects are included in **Appendix C**.

Brazoria County MUD #25 Water Plant

Brazoria County MUD #39 Water Plant No. 2

Brazoria County MUD #39 Water Plant

Sedona Lake MUD #1 Water Plant

0.5 MG GST and Pump Station

1.0 MG Manvel Parkway EST

Brazoria County MUD #29 Water Plant

Manvel Town Center Water Plant
Phase 1
1,200 gpm Well
0.244 MG GST
(1) - 500 gpm Pump
(2) - 1,000 gpm Pumps

Phase 2
0.3 MG GST
2,800 gpm Pump
New 1200 gpm Water Supply

Maverick Water Plant
200 gpm Well
(2) - 300 gpm Pumps
0.132 MG Ground Storage
Hydropneumatic Tank (4,000 gal)
Increase Well Pumping to 400 gpm Capacity
Replace Existing Booster Pumps with
(3)-400 gpm Pumps
New 150 kW Generator

School Road Water Plant
1,100 gpm Well Capacity
(3) - 1,000 gpm Pumps
0.461 MG Ground Storage
(1) Hydropneumatic Tank (20,000 gal)
(1) Hydropneumatic Tank (10,000 gal)
1,000 gpm Water Supply and Pumping

Meridiana Water Plant

DRAFT FIGURE 3-1

CITY OF MANVEL

2026 WATER AND WASTEWATER IMPACT FEE UPDATE
WATER IMPACT FEE ELIGIBLE CAPITAL IMPROVEMENTS PLAN

LEGEND

Proposed Improvements
- Ground Storage Tank
- Pump Station
- Water Plant
- Water Line

Under Design/Construction
- Elevated Storage Tank
- Water Plant
- Water Line

Existing System
- Elevated Storage Tank
- Water Plant
- 8" and Smaller Water Line
- 10" and Larger Water Line
- Railroad
- Lakes
- Water Service Area
- Outside Impact Service Fee Area
- City Limits
- ETJ
- Other City Limits

- H — Water Impact Fee Update (2025/26)
- I — Impact Fee Audit (2026)
- 7 — Master Water Plan and Impact Fee Study (2030/31)
- 8 — Impact Fee Audit (2031)
- 15 — 10 MGD Surface Water Supply from Pearland

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DRAFT FIGURE 3-2

CITY OF MANVEL

2026 WATER AND WASTEWATER IMPACT FEE UPDATE

WASTEWATER IMPACT FEE ELIGIBLE CAPITAL IMPROVEMENTS PLAN

LEGEND

Proposed Improvements

- Lift Station
- Wastewater Line
- Force Main

Under Design/Construction/ Recently Completed

- Water Reclamation Facility
- Wastewater Line
- Force Main

Existing System

- Manhole
- Lift Station
- Wastewater Treatment Plant
- 8" and Smaller Watewater Line
- 10" and Larger Wastewater Line
- Force Main
- Railroad
- Lakes
- Wastewater Service Area
- Outside Impact Service Fee Area
- City Limits
- ETJ
- Other City Limits

- E — Wastewater Impact Fee Study (2025/26)
- F — Impact Fee Audit (2026)
- 7 — Master Wastewater Plan and Impact Fee Study (2030/31)
- 8 — Impact Fee Audit (2031)

The project description shown in purple is an intermediate project that will involve expanding the Pollard Blvd LS firm pumping capacity to 2.0 MGD, to match the wet well's existing capacity. This is not included in the impact fee CIP.

Southfork WWTP

Pomona WWTP

Sedona Lakes WWTP

Rodeo Palms WWTP

Manvel Town Center WWTP

Meridiana WWTP

Del Bello LS
Firm Capacity = 0.76

New Pollard Blvd LS
Capacity Expansion = 0.9 MGD
Pump Expansion to 2.0 MGD
Capacity Expansion = 6.5 MGD

Charlotte Street LS
Firm Capacity = 0.79 MGD

Central Regional WRF
Capacity Expansion = 1.0 MGD
Capacity Expansion = 3.0 MGD

Corporate Drive WWTP
Average Daily Flow Permit = 0.5 MGD
Peak Flow Permit = 2.0 MGD

Large Ave LS (4)
Firm Capacity = 0.44 MGD
Capacity Expansion = 2.1 MGD

Lewis Lane LS (6)
Firm Capacity = 0.29 MGD

Rogers Road LS

0 1,500 3,000
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Table 3-3: Water Impact Fee Eligible Capital Improvements Plan Projects

Phase	Project No.	Project Name	Cost[1] (In 2026 Dollars)
Existing/Under Design Projects	A	Manvel 1 MG EST	$5,759,497
	B	Manvel Parkway Waterline Extension	$459,145
	C	Maverick Plant Improvements	$1,650,000
	D	Masters Line Waterline Extension Phase 3	$323,178
	E	Manvel City Center Interconnect	$1,318,374
	F	Sowell Interconnect	$1,579,183
	G	Del Bello interconnect	$357,817
	H	Master Water Plan and Impact Fee Study (2025/26)	$54,712
	I	Impact Fee Audit (2025/26)	$15,750
		Existing/Under Design Water Projects Subtotal	**$11,517,656**
Proposed Future 10 -Year Projects	1	16" Water Line Interconnect	$1,919,200
	2	Dogwood Avenue - Phase 1	$3,536,300
	3	12" Charlotte Road Interconnect	$1,940,700
	4	Dogwood Avenue - Phase 2	$1,610,300
	5	Del Bello Spur to Del Bello Blvd Loop	$2,501,300
	6	Del Bello and Masters Road Loop	$4,464,900
	7	Master Water Plan and Impact Fee Study (2030/31)	$100,000
	8	Impact Fee Audit (2031)	$15,750
	9	20" Manvel Town Center Discharge Line	$4,225,700
	10	20" Del Bello Boulevard Water Line Upsizing	$1,828,300
	11	12" Hwy 6 and CR48 Water Line	$2,475,400
	12	Manvel Town Center Expansion	$9,093,200
	13	School Road Plant Improvements	$4,601,000
	14	30" Pearland Supply Transmission Line	$21,649,300
	15	10 MGD of Surface Water Supply from Pearland	$99,771,100
		Proposed Future 10-Year Water Projects Subtotal	**$159,732,450**
		Total Impact Fee Water Capital Improvement Project Capital Costs	**$171,250,106**

(1) Planning level costs were developed during the 2022 Master Water Plan and were inflated to 2026 dollars by applying a 3.9% annual inflation rate. Costs include engineering and contingency as documented in the 2022 Master Water Plan report. New OPCCs were developed for projects 1, 2, 3, 5, 6 and 11 because the project extent was modified.

The Engineer has no control over the cost of labor, materials, equipment, or the Contractor's methods of determining prices, nor over competitive bidding or market conditions. Opinions of probable costs provided herein are based on the information known to the 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. Additionally, fluctuations in material costs due to tariffs, trade policies, or supply chain disruptions may further impact pricing in ways that are difficult to predict.

Table 3-4: Wastewater Impact Fee Eligible Capital Improvements Plan Projects

Phase	Project No.	Project Name	Cost[1] (In 2026 Dollars)
Existing/Under Design Projects	A	1.0 MGD Expansion of the Central Regional Wastewater Treatment Plant (Phase 1)	$43,981,500
	B	New 0.9 MGD Pollard Blvd Lift Station and 12-inch Force Main (Phase 1)[2]	$1,502,281
	C	12/18/30-inch Lines through Valencia Development[2]	$3,552,511
	D	12-inch Gravity Main along McCoy Drive and Lewis Lane	$615,788
	E	Wastewater Impact Fee Study (2025/26)	$54,712
	F	Impact Fee Audit (2026)	$15,750
		Existing/Under Design Water Projects Subtotal	**$49,722,542**
Proposed Future 10-Year Projects	1	Expansion of the Central Region Wastewater Treatment Plant to 3.0 MGD Capacity (Phase 2)	$57,600,000
	2	6.5 MGD Pollard Blvd Lift Station and 16-inch Parallel Force Main (Phase 2)	$7,511,400
	3	Large Ave Lift Station Expansion to 2.1 MGD Firm Capacity and 10-inch Force Main	$5,809,500
	4	15-inch Gravity Main Along Masters Road	$3,234,500
	5	12/15-inch Central Region Gravity Main	$3,801,800
	6	12-inch Del Bello SPUR Gravity Main	$3,161,700
	7	Master Wastewater Plan and Impact Fee Study (2030/31)	$100,000
	8	Impact Fee Audit (2031)	$15,750
		Proposed Future 10-Year Water Projects Subtotal	**$81,234,650**
		Total Capacity Wastewater CIP Cost	**$130,957,192**

(1) Planning level costs were developed for proposed future projects and include material costs, engineering, and contingency. Additional expenses related to environmental, geotechnical, change order contingency, soft costs, and legal fees are not included.

(2) Capital cost reflects City's oversizing share only

The Engineer has no control over the cost of labor, materials, equipment, or the Contractor's methods of determining prices, nor over competitive bidding or market conditions. Opinions of probable costs provided herein are based on the information known to the 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. Additionally, fluctuations in material costs due to tariffs, trade policies, or supply chain disruptions may further impact pricing in ways that are difficult to predict.

3.3 WATER AND WASTEWATER IMPACT FEE ANALYSIS

The water and wastewater impact fee analyses involve assessing the utilization of existing and proposed projects within the impact fee eligible capital improvement plans (**Section 3.2**) required to serve new development over the next 10-year time period. For these projects, the impact fee is calculated as a percentage of the project cost, based upon the percentage of the project's capacity to serve development projected to occur between 2026 and 2036. The capacity serving existing development and development projected to occur beyond the 10-year period is not impact fee eligible.

FNI assessed the impact fee eligible water and wastewater projects to quantify the portion of the projects that are projected to be utilized within the next 10 years. The 10-year utilization is the percentage of the project cost that is impact fee eligible.

Summaries of the water and wastewater costs for infrastructure to serve the projected 10-year growth are shown in **Table 3-5** and **Table 3-6**, respectively. The percent utilization columns in the tables are defined as follows:

- The **2026 Percent Utilization** is the portion of the project's capacity that serves existing development and is therefore not included in the impact fee eligible cost.
- The **2036 Percent Utilization** is the portion of the project's capacity that is projected to be utilized by 2036.
- The **2026 to 2036 Percent Utilization** is the portion of the project's capacity that is projected to serve the 10-year growth. This percentage is multiplied by the total project cost to calculate the impact fee eligible portion of the project.

The **10-year Impact Fee Eligible Cost** column is the portion of the capital project cost that is utilized in the calculation of the maximum allowable impact fee. The 10-year utilization percentages for eligible projects were calculated considering the served growth and project size/capacity and general design guidelines.

Table 3-5: Cost Allocation for Water Impact Fee Calculation

Project No.		Description of Project	Percent Utilization			10-Year Impact Fee Eligible Cost[1] (2026 Dollars)
			2026	2036	2026 - 2036	
Existing/Under Design	A	Manvel 1 MG EST	35%	82%	47%	$2,706,963
	B	Manvel Parkway Waterline Extension	35%	82%	47%	$215,798
	C	Maverick Plant Improvements	17%	83%	66%	$1,089,000
	D	Masters Line Waterline Extension Phase 3	27%	69%	42%	$135,734
	E	Manvel City Center Interconnect	27%	69%	42%	$553,717
	F	Sowell Interconnect	27%	69%	42%	$663,256
	G	Del Bello interconnect	27%	69%	42%	$150,283
	H	Master Water Plan and Impact Fee Study (2025/26)	50%	100%	50%	$27,356
	I	Impact Fee Audit (2025/26)	0%	100%	100%	$15,750
		Existing/Under Design Water Projects Subtotal				**$5,557,857**
Proposed Future 10-Year Projects	1	16" Water Line Interconnect	27%	69%	42%	$806,064
	2	Dogwood Avenue - Phase 1	27%	69%	42%	$1,485,246
	3	12" Charlotte Road Interconnect	27%	69%	42%	$815,094
	4	Dogwood Avenue - Phase 2	27%	69%	42%	$676,326
	5	Del Bello Spur to Del Bello Blvd Loop	27%	69%	42%	$1,050,546
	6	Del Bello and Masters Road Loop	27%	69%	42%	$1,875,258
	7	Master Water Plan and Impact Fee Study (2030/31)	0%	100%	100%	$100,000
	8	Impact Fee Audit (2031)	0%	100%	100%	$15,750
	9	20" Manvel Town Center Discharge Line	27%	69%	42%	$1,774,794
	10	20" Del Bello Boulevard Water Line Upsizing	27%	69%	42%	$767,886
	11	12" Hwy 6 and CR48 Water Line	27%	69%	42%	$1,039,668
	12	Manvel Town Center Expansion	18%	82%	64%	$5,819,648
	13	School Road Plant Improvements	27%	86%	59%	$2,714,590
	14	30" Pearland Supply Transmission Line	0%	9%	9%	$1,948,437
	15	10 MGD of Surface Water Supply from Pearland	0%	9%	9%	$8,979,399
		Proposed Future 10-Year Water Projects Subtotal				**$29,868,706**
		Total Impact Fee Water Capital Improvement Project Eligible Costs				**$35,426,563**

(1) The costs shown represent the portion of each project's cost anticipated to serve 10-year growth.

Table 3-6: Cost Allocation for Wastewater Impact Fee Calculation

Project No.		Description of Project	Percent Utilization			10-Year Impact Fee Eligible Cost[1] (2026 Dollars)
			2026	2036	2026 - 2036	
Existing/Under Design	A	1.0 MGD Expansion of the Central Regional Wastewater Treatment Plant (Phase 1)	66%	100%	34%	$14,953,710
	B	New 0.9 MGD Pollard Blvd Lift Station and 12-inch Force Main (Phase 1)[2]	71%	100%	29%	$435,661
	C	12/18/30-inch Lines through Valencia Development[2]	0%	78%	78%	$2,770,958
	D	12-inch Gravity Main along McCoy Drive and Lewis Lane	5%	28%	23%	$144,231
	E	Wastewater Impact Fee Study (2025/26)	50%	100%	50%	$27,356
	F	Impact Fee Audit (2026)	0%	100%	100%	$15,750
		Existing/Under Design Wastewater Projects Subtotal				**$18,347,666**
Proposed Future 10-Year Projects	1	Expansion of the Central Region Wastewater Treatment Plant to 3.0 MGD Capacity (Phase 2)	0%	86%	86%	$49,536,000
	2	6.5 MGD Pollard Blvd Lift Station and 16-inch Parallel Force Main (Phase 2)	4%	72%	68%	$5,257,980
	3	Large Ave Lift Station Expansion to 2.1 MGD Firm Capacity and 10-inch Force Main	21%	96%	75%	$4,357,125
	4	15-inch Gravity Main Along Masters Road	0%	92%	92%	$2,964,047
	5	12/15-inch Central Region Gravity Main	0%	46%	46%	$1,742,206
	6	12-inch Del Bello SPUR Gravity Main	0%	55%	55%	$1,740,849
	7	Master Wastewater Plan and Impact Fee Study (2030/31)	0%	100%	100%	$100,000
	8	Impact Fee Audit (2031)	0%	100%	100%	$15,750
		Proposed Future 10-Year Water Projects Subtotal				**$65,713,957**
		Total Impact Fee Eligible Wastewater Capital Improvement Project Costs				**$84,061,623**

(1) The costs shown represent the portion of each project's cost anticipated to serve 10-year growth.
(2) Capital cost reflects City's oversizing share only. Therefore, the percent utilization only considers projected 10-year growth outside of the Valencia development.

3.4 MAXIMUM ALLOWABLE IMPACT FEE CALCULATIONS

TLGC Chapter 395 states that the maximum allowable water and wastewater impact fees may not exceed the amount that is determined by dividing the cost of capital improvements required by the total number of service units (ESFCs) attributed to new development during the 10-year impact fee eligibility period. TLGC 395 provides two options for calculating water and wastewater impact fees. A City may utilize:

- §395.014(a)(7)(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"

- §395.014(a)(7)(B) "in the alternative, a credit equal to 50 percent of the total projected cost of implementing the capital improvements plan."

The City elected to use the rate credit analysis option per §395.014(a)(7)(A).

3.4.1 Debt Service Interest Calculation

Eligible interest included in the impact fee is based on both existing and future financing of impact fee eligible facilities. Existing financing reflects outstanding debt associated with facilities that contain excess capacity available to serve new development, while future financing reflects assumed debt associated with planned capital improvements.

For existing impact fee eligible facilities, interest costs are based on the outstanding debt service schedules for applicable projects. In Manvel's system, this includes the first phase of the Central Regional Wastewater Treatment Plant expansion (Wastewater Project A), for which debt has already been issued. The interest associated with this phase is calculated using the debt service schedule, and the total impact fee eligible interest over the term of the debt is included.

For future impact fee eligible facilities, interest costs are based on assumed debt service schedules agreed on by City staff. These schedules are applied to projects anticipated to be debt-funded, and include the second phase of the Central Regional Wastewater Treatment Plant expansion (Water CIP Project 1), the Water Supply Transmission Line from Pearland (Water CIP Project 14) and 10 MGD Surface Water Supply from Pearland (Water CIP Project 15). The assumed schedules are developed based on 20-year financing

period with 4% interest assumption, and the resulting interest costs are included in the impact fee calculation. The rate credit and debt service is summarized in **Appendix G**.

3.4.2 Rate Credit Calculation

TLGC Chapter 395 prescribes that a utility must provide a credit to account for any portion of ad valorem tax or utility service revenues that would also be reflected in the developed impact fees and paid by new service units in the program period.

The purpose of this credit is to ensure that new development is not charged twice for the portion of capital improvements attributable to that growth, once through the impact fee and then again through water or wastewater rates. The credit may be calculated in a manner consistent with the operation of the impact fee fund, the utility's approach to financing capital improvements, and how those capital improvement costs are reflected in water or wastewater rates.

FNI utilized the projected ESFCs, developed as part of the Land Use Assumptions documented in **Section 2.0**, to determine the pro rata share of the existing debt (interest and principal) attributable to each ESFC on the system for each year of the impact fee period (2026 – 2036). The resulting cost per ESFC was multiplied by the cumulative growth in ESFCs for each year of the impact fee period, resulting in the portion of the existing debt (interest and principal) that future customers would pay for in water/wastewater rates. The same methodology was applied for the future projected debt (interest and principal) for Wastewater CIP Project 1, and Water CIP Projects 14 and 15. Per coordination with the City, it is understood that the City anticipates funding all other proposed future projects using impact fee revenue, and not via water and wastewater rates. Therefore, these projects were not included in the rate credit analysis. This analysis of existing and future debt represents the credit to the impact fees required to avoid "double counting". This credit was subtracted from the total impact fee eligible infrastructure costs. The water and wastewater credit calculations are summarized in **Appendix G**.

3.4.3 Maximum Allowable Water Impact Fees

The total maximum allowable water impact fee calculation is summarized in **Table 3-7.** The total eligible impact fee costs are the portion of the capital improvement costs for water projects that will serve the projected 10-year developments.

Table 3-7: Maximum Allowable Water Impact Fee

Water Impact Fee Calculation	
Total Eligible Impact Fee Costs[1]	*$40,799,070*
Rate Credit[2]	*($969,860)*
Total Eligible Impact Fee Costs with Rate Credit Applied ❶	**$39,829,210**
10-Year Growth in ESFCs ❷	**7,297**
Maximum Allowable Water Impact Fee ❶ ÷ ❷	**$5,458**

(1) Includes financing costs for debt service using 20-year financing and 4% interest (Appendix G).
(2) Rate credit calculation included in Appendix G.

3.4.4 Maximum Allowable Wastewater Impact Fee

The total maximum allowable wastewater impact fee calculation is summarized in **Table 3-8**. The total eligible impact fee costs are the portion of the capital improvement costs for wastewater projects that will serve the projected 10-year developments and include financing costs for debt service.

Table 3-8: Maximum Allowable Wastewater Impact Fee

Wastewater Impact Fee Calculation	
Total Eligible Impact Fee Costs[1]	$120,297,471
Rate Credit[2]	*($16,344,752)*
Total Eligible Impact Fee Costs with Rate Credit Applied ❶	**$103,952,719**
10-Year Growth in ESFCs ❷	**5,214**
Maximum Allowable Wastewater Impact Fee ❶ ÷ ❷	**$19,937**

(1) Includes financing costs for debt service using 20-year financing and 4% interest (Appendix G).
(2) Rate credit calculation included in Appendix G.

3.4.5 Schedule of Maximum Allowable Water and Wastewater Impact Fees

Table 3-9 shows the schedule of maximum allowable water and wastewater impact fees by water meter size, based on the equivalent service units discussed in **Section 1.2.4.**

Table 3-9: Maximum Allowable Water and Wastewater Impact Fees by Meter Size

Meter Size	Equivalent Single Family Connections(1)	Maximum Allowable Impact Fees		
		Water	Wastewater	Total
3/4"	1	$5,458	$19,937	$25,395
1"	1.6	$8,732	$31,899	$40,631
1-1/2"	3.3	$18,011	$65,792	$83,803
2"	5.3	$28,927	$105,666	$134,593
3"	16.6	$90,602	$330,954	$421,556
4"	41.6	$227,052	$829,379	$1,056,431
6"	66.6	$363,502	$1,327,804	$1,691,306
8"	133.3	$727,551	$2,657,602	$3,385,153
10"	216.6	$1,182,202	$4,318,354	$5,500,556

(1) Equivalent Single Family Connections are rounded down to nearest single decimal point.

4.0 IMPACT FEE ADOPTION

4.1 PUBLIC HEARING

The amended Chapter 395 of the Texas Local Government Code requires a public hearing to be held to adopt a revised impact fee. The meeting shall include a discussion of the land use assumptions and capital improvements plan and the proposed ordinance, order, or resolution imposing an impact fee. The required public hearing will be scheduled with a resolution by the City Council. The public hearing date is set by Council and advertised at least 30 days prior to the public hearing. The Water and Wastewater Impact Fee report will be made available to the public at least 60 days before the notice of the public hearing.

The amended Chapter 395 of the Texas Local Government Code also requires a financial audit be performed by a third party for any City imposing an impact fee. The results of this audit must be published 30 days prior to the resolution of the impact fee public hearing. The public hearing for the financial audit must be conducted before the impact fee public hearing. Manvel completed the required financial audit and posted it on the City website beginning February 13, 2026. The public hearing for the financial audit will be completed prior to the water and wastewater impact fee public hearing.

4.2 ORDINANCE

Once the public hearing is held, the political subdivision shall approve or disapprove of the land use assumptions and capital improvements plan and the impact fee within 30 days after the date of the public hearing.

APPENDIX A
Chapter 395, Texas Local Government Code

LOCAL GOVERNMENT CODE

TITLE 12. PLANNING AND DEVELOPMENT

SUBTITLE C. PLANNING AND DEVELOPMENT PROVISIONS APPLYING TO MORE THAN ONE TYPE OF LOCAL GOVERNMENT

CHAPTER 395. FINANCING CAPITAL IMPROVEMENTS REQUIRED BY NEW DEVELOPMENT IN MUNICIPALITIES, COUNTIES, AND CERTAIN OTHER LOCAL GOVERNMENTS

SUBCHAPTER A. GENERAL PROVISIONS

Sec. 395.001. DEFINITIONS. In this chapter:

(1) "Capital improvement" means any of the following facilities that have a life expectancy of three or more years and are owned and operated by or on behalf of a political subdivision:

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

(B) roadway facilities.

(2) "Capital improvements plan" means a plan required by this chapter that identifies capital improvements or facility expansions for which impact fees may be assessed.

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

(4) "Impact fee" means 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. The term includes amortized charges, lump-sum charges, capital recovery fees, contributions in aid of construction, and any other fee that functions as described by this definition. The term does not include:

(A) dedication of land for public parks or

payment in lieu of the dedication to serve park needs;

(B) dedication of rights-of-way or easements or construction or dedication of on-site or off-site water distribution, wastewater collection or drainage facilities, or streets, sidewalks, or curbs if the dedication or construction is required by a valid ordinance and is necessitated by and attributable to the new development;

(C) lot or acreage fees to be placed in trust funds for the purpose of reimbursing developers for oversizing or constructing water or sewer mains or lines; or

(D) other pro rata fees for reimbursement of water or sewer mains or lines extended by the political subdivision.

However, an item included in the capital improvements plan may not be required to be constructed except in accordance with Section 395.019(2), and an owner may not be required to construct or dedicate facilities and to pay impact fees for those facilities.

(5) "Land use assumptions" includes a description of the service area and projections of changes in land uses, densities, intensities, and population in the service area over at least a 10-year period.

(6) "New development" means the subdivision of land; the construction, reconstruction, redevelopment, conversion, structural alteration, relocation, or enlargement of any structure; or any use or extension of the use of land; any of which increases the number of service units.

(7) "Political subdivision" means a municipality, a district or authority created under Article III, Section 52, or Article XVI, Section 59, of the Texas Constitution, or, for the purposes set forth by Section 395.079, certain counties described by that section.

(8) "Roadway facilities" means arterial or collector streets or roads that have been designated on an officially adopted roadway plan of the political subdivision, together with all necessary appurtenances. The term includes the political subdivision's share of costs for roadways and associated improvements designated on the federal or Texas highway system,

including local matching funds and costs related to utility line relocation and the establishment of curbs, gutters, sidewalks, drainage appurtenances, and rights-of-way.

(9) "Service area" means the area within the corporate boundaries or extraterritorial jurisdiction, as determined under Chapter 42, of the political subdivision to be served by the capital improvements or facilities expansions specified in the capital improvements plan, except roadway facilities and storm water, drainage, and flood control facilities. The service area, for the purposes of this chapter, may include all or part of the land within the political subdivision or its extraterritorial jurisdiction, except for roadway facilities and storm water, drainage, and flood control facilities. For roadway facilities, the service area is limited to an area within the corporate boundaries of the political subdivision and shall not exceed six miles. For storm water, drainage, and flood control facilities, the service area may include all or part of the land within the political subdivision or its extraterritorial jurisdiction, but shall not exceed the area actually served by the storm water, drainage, and flood control facilities designated in the capital improvements plan and shall not extend across watershed boundaries.

(10) "Service unit" means a standardized measure of consumption, use, generation, or discharge attributable to an individual unit of development calculated in accordance with generally accepted engineering or planning standards and based on historical data and trends applicable to the political subdivision in which the individual unit of development is located during the previous 10 years.

Added by Acts 1989, 71st Leg., ch. 1, Sec. 82(a), eff. Aug. 28, 1989. Amended by Acts 1989, 71st Leg., ch. 566, Sec. 1(e), eff. Aug. 28, 1989; Acts 2001, 77th Leg., ch. 345, Sec. 1, eff. Sept. 1, 2001.

SUBCHAPTER B. AUTHORIZATION OF IMPACT FEE

Sec. 395.011. AUTHORIZATION OF FEE. (a) Unless otherwise specifically authorized by state law or this chapter, a

governmental entity or political subdivision may not enact or impose an impact fee.

(b) Except as provided by Section 218.204 and Subsection (b-1), political subdivisions may enact or impose impact fees on land within their corporate boundaries or extraterritorial jurisdictions only by complying with this chapter.

(b-1) A political subdivision may not enact or impose an impact fee on land within its extraterritorial jurisdiction for roadway facilities.

(c) A municipality may contract to provide capital improvements, except roadway facilities, to an area outside its corporate boundaries and extraterritorial jurisdiction and may charge an impact fee under the contract, but if an impact fee is charged in that area, the municipality must comply with this chapter.

Added by Acts 1989, 71st Leg., ch. 1, Sec. 82(a), eff. Aug. 28, 1989.

Amended by:

Acts 2025, 89th Leg., R.S., Ch. 778 (S.B. 840), Sec. 3, eff. September 1, 2025.

Acts 2025, 89th Leg., R.S., Ch. 1026 (S.B. 2477), Sec. 2, eff. September 1, 2025.

Sec. 395.012. ITEMS PAYABLE BY FEE. (a) An impact fee may be imposed only to pay the costs of constructing capital improvements or facility expansions, 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 improvements plan who is not an employee of the political subdivision.

(b) Projected interest charges and other finance costs may be included in determining the amount of impact fees only if the

impact fees are used for the payment of principal and interest on bonds, notes, or other obligations issued by or on behalf of the political subdivision to finance the capital improvements or facility expansions identified in the capital improvements plan and are not used to reimburse bond funds expended for facilities that are not identified in the capital improvements plan.

(c) Notwithstanding any other provision of this chapter, the Edwards Underground Water District or a river authority that is authorized elsewhere by state law to charge fees that function as impact fees may use impact fees to pay a staff engineer who prepares or updates a capital improvements plan under this chapter.

(d) A municipality may pledge an impact fee as security for the payment of debt service on a bond, note, or other obligation issued to finance a capital improvement or public facility expansion if:

(1) the improvement or expansion is identified in a capital improvements plan; and

(2) at the time of the pledge, the governing body of the municipality certifies in a written order, ordinance, or resolution that none of the impact fee will be used or expended for an improvement or expansion not identified in the plan.

(e) A certification under Subsection (d)(2) is sufficient evidence that an impact fee pledged will not be used or expended for an improvement or expansion that is not identified in the capital improvements plan.

Added by Acts 1989, 71st Leg., ch. 1, Sec. 82(a), eff. Aug. 28, 1989. Amended by Acts 1995, 74th Leg., ch. 90, Sec. 1, eff. May 16, 1995.

Sec. 395.013. ITEMS NOT PAYABLE BY FEE. Impact fees may not be adopted or used to pay for:

(1) construction, acquisition, or expansion of public facilities or assets other than capital improvements or facility expansions identified in the capital improvements plan;

(2) repair, operation, or maintenance of existing or new capital improvements or facility expansions;

(3) upgrading, updating, expanding, or replacing

existing capital improvements to serve existing development in order to meet stricter safety, efficiency, environmental, or regulatory standards;

(4) upgrading, updating, expanding, or replacing existing capital improvements to provide better service to existing development;

(5) administrative and operating costs of the political subdivision, except the Edwards Underground Water District or a river authority that is authorized elsewhere by state law to charge fees that function as impact fees may use impact fees to pay its administrative and operating costs;

(6) principal payments and interest or other finance charges on bonds or other indebtedness, except as allowed by Section 395.012.

Added by Acts 1989, 71st Leg., ch. 1, Sec. 82(a), eff. Aug. 28, 1989.

Sec. 395.014. CAPITAL IMPROVEMENTS PLAN. (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.

(b) The analysis required by Subsection (a)(3) may be prepared on a systemwide basis within the service area for each major category of capital improvement or facility expansion for the designated service area.

(c) The governing body of the political subdivision is responsible for supervising the implementation of the capital improvements plan in a timely manner.

Added by Acts 1989, 71st Leg., ch. 1, Sec. 82(a), eff. Aug. 28, 1989. Amended by Acts 2001, 77th Leg., ch. 345, Sec. 2, eff. Sept. 1, 2001.

Sec. 395.015. MAXIMUM FEE PER SERVICE UNIT. (a) The impact fee per service unit may not exceed the amount determined by subtracting the amount in Section 395.014(a)(7) from the costs of the capital improvements described by Section 395.014(a)(3) and dividing that amount by the total number of projected service units described by Section 395.014(a)(5).

(b) If the number of new service units projected over a reasonable period of time is less than the total number of new service units shown by the approved land use assumptions at full development of the service area, the maximum impact fee per service unit shall be calculated by dividing the costs of the part of the capital improvements necessitated by and attributable to projected new service units described by Section 395.014(a)(6) by the projected new service units described in that section.

Added by Acts 1989, 71st Leg., ch. 1, Sec. 82(a), eff. Aug. 28, 1989. Amended by Acts 2001, 77th Leg., ch. 345, Sec. 3, eff. Sept. 1, 2001.

Sec. 395.016. TIME FOR ASSESSMENT AND COLLECTION OF FEE. (a) This subsection applies only to impact fees adopted and land platted before June 20, 1987. For land that has been platted in accordance with Subchapter A, Chapter 212, or the subdivision or platting procedures of a political subdivision before June 20, 1987, or land on which new development occurs or is proposed without platting, the political subdivision may assess the impact fees at any time during the development approval and building process. Except as provided by Section 395.019, the political subdivision may collect the fees at either the time of recordation of the subdivision plat or connection to the political subdivision's water or sewer system or at the time the political subdivision issues either the building permit or the certificate of occupancy.

(b) This subsection applies only to impact fees adopted before June 20, 1987, and land platted after that date. For new development which is platted in accordance with Subchapter A, Chapter 212, or the subdivision or platting procedures of a political subdivision after June 20, 1987, the political subdivision may assess the impact fees before or at the time of

recordation. Except as provided by Section 395.019, the political subdivision may collect the fees at either the time of recordation of the subdivision plat or connection to the political subdivision's water or sewer system or at the time the political subdivision issues either the building permit or the certificate of occupancy.

(c) This subsection applies only to impact fees adopted after June 20, 1987. For new development which is platted in accordance with Subchapter A, Chapter 212, or the subdivision or platting procedures of a political subdivision before the adoption of an impact fee, an impact fee may not be collected on any service unit for which a valid building permit is issued within one year after the date of adoption of the impact fee.

(d) This subsection applies only to land platted in accordance with Subchapter A, Chapter 212, or the subdivision or platting procedures of a political subdivision after adoption of an impact fee adopted after June 20, 1987. The political subdivision shall assess the impact fees before or at the time of recordation of a subdivision plat or other plat under Subchapter A, Chapter 212, or the subdivision or platting ordinance or procedures of any political subdivision in the official records of the county clerk of the county in which the tract is located. Except as provided by Section 395.019, if the political subdivision has water and wastewater capacity available:

(1) the political subdivision shall collect the fees at the time the political subdivision issues a building permit;

(2) for land platted outside the corporate boundaries of a municipality, the municipality shall collect the fees at the time an application for an individual meter connection to the municipality's water or wastewater system is filed; or

(3) a political subdivision that lacks authority to issue building permits in the area where the impact fee applies shall collect the fees at the time an application is filed for an individual meter connection to the political subdivision's water or wastewater system.

(e) For land on which new development occurs or is proposed to occur without platting, the political subdivision may assess the

impact fees at any time during the development and building process and may collect the fees at either the time of recordation of the subdivision plat or connection to the political subdivision's water or sewer system or at the time the political subdivision issues either the building permit or the certificate of occupancy.

(f) An "assessment" means a determination of the amount of the impact fee in effect on the date or occurrence provided in this section and is the maximum amount that can be charged per service unit of such development. No specific act by the political subdivision is required.

(g) Notwithstanding Subsections (a)-(e) and Section 395.017, the political subdivision may reduce or waive an impact fee for any service unit that would qualify as affordable housing under 42 U.S.C. Section 12745, as amended, once the service unit is constructed. If affordable housing as defined by 42 U.S.C. Section 12745, as amended, is not constructed, the political subdivision may reverse its decision to waive or reduce the impact fee, and the political subdivision may assess an impact fee at any time during the development approval or building process or after the building process if an impact fee was not already assessed.

Added by Acts 1989, 71st Leg., ch. 1, Sec. 82(a), eff. Aug. 28, 1989. Amended by Acts 1997, 75th Leg., ch. 980, Sec. 52, eff. Sept. 1, 1997; Acts 2001, 77th Leg., ch. 345, Sec. 4, eff. Sept. 1, 2001.

Sec. 395.017. ADDITIONAL FEE PROHIBITED; EXCEPTION. After assessment of the impact fees attributable to the new development or execution of an agreement for payment of impact fees, additional impact fees or increases in fees may not be assessed against the tract for any reason unless the number of service units to be developed on the tract increases. In the event of the increase in the number of service units, the impact fees to be imposed are limited to the amount attributable to the additional service units.

Added by Acts 1989, 71st Leg., ch. 1, Sec. 82(a), eff. Aug. 28, 1989.

Sec. 395.018. AGREEMENT WITH OWNER REGARDING PAYMENT. A political subdivision is authorized to enter into an agreement with

the owner of a tract of land for which the plat has been recorded providing for the time and method of payment of the impact fees.
Added by Acts 1989, 71st Leg., ch. 1, Sec. 82(a), eff. Aug. 28, 1989.

Sec. 395.019. COLLECTION OF FEES IF SERVICES NOT AVAILABLE. Except for roadway facilities, impact fees may be assessed but may not be collected in areas where services are not currently available unless:

(1) the collection is made to pay for a capital improvement or facility expansion that has been identified in the capital improvements plan and the political subdivision commits to commence construction within two years, under duly awarded and executed contracts or commitments of staff time covering substantially all of the work required to provide service, and to have the service available within a reasonable period of time considering the type of capital improvement or facility expansion to be constructed, but in no event longer than five years;

(2) the political subdivision agrees that the owner of a new development may construct or finance the capital improvements or facility expansions and agrees that the costs incurred or funds advanced will be credited against the impact fees otherwise due from the new development or agrees to reimburse the owner for such costs from impact fees paid from other new developments that will use such capital improvements or facility expansions, which fees shall be collected and reimbursed to the owner at the time the other new development records its plat; or

(3) an owner voluntarily requests the political subdivision to reserve capacity to serve future development, and the political subdivision and owner enter into a valid written agreement.
Added by Acts 1989, 71st Leg., ch. 1, Sec. 82(a), eff. Aug. 28, 1989.

Sec. 395.020. ENTITLEMENT TO SERVICES. Any new development for which an impact fee has been paid is entitled to the permanent use and benefit of the services for which the fee was exacted and is

entitled to receive immediate service from any existing facilities with actual capacity to serve the new service units, subject to compliance with other valid regulations.

Added by Acts 1989, 71st Leg., ch. 1, Sec. 82(a), eff. Aug. 28, 1989.

Sec. 395.021. AUTHORITY OF POLITICAL SUBDIVISIONS TO SPEND FUNDS TO REDUCE FEES. Political subdivisions may spend funds from any lawful source to pay for all or a part of the capital improvements or facility expansions to reduce the amount of impact fees.

Added by Acts 1989, 71st Leg., ch. 1, Sec. 82(a), eff. Aug. 28, 1989.

Sec. 395.022. AUTHORITY OF POLITICAL SUBDIVISION TO PAY FEES. (a) Political subdivisions and other governmental entities may pay impact fees imposed under this chapter.

(b) A school district is not required to pay impact fees imposed under this chapter unless the board of trustees of the district consents to the payment of the fees by entering a contract with the political subdivision that imposes the fees. The contract may contain terms the board of trustees considers advisable to provide for the payment of the fees.

Added by Acts 1989, 71st Leg., ch. 1, Sec. 82(a), eff. Aug. 28, 1989.

Amended by:

Acts 2007, 80th Leg., R.S., Ch. 250 (S.B. 883), Sec. 1, eff. May 25, 2007.

Sec. 395.023. CREDITS AGAINST ROADWAY FACILITIES FEES. Any construction of, contributions to, or dedications of off-site roadway facilities agreed to or required by a political subdivision as a condition of development approval shall be credited against roadway facilities impact fees otherwise due from the development.

Added by Acts 1989, 71st Leg., ch. 1, Sec. 82(a), eff. Aug. 28, 1989.

Sec. 395.0231. CONSERVATION AND REUSE CREDITS AGAINST WATER AND WASTEWATER FEES. (a) A political subdivision shall provide a credit against water and wastewater impact fees otherwise assessed to a development to a builder or developer for the construction, contribution, or dedication of an eligible facility, system, or product that results in water reuse, conservation, or savings.

(b) A facility, system, or product eligible for a credit under this section includes a facility, system, or product that:

(1) reduces per service unit water consumption, supply requirements, or necessary treatment and distribution infrastructure per service unit;

(2) decreases the need of wastewater collection and treatment facilities per service unit;

(3) diminishes the demand for stormwater and drainage facilities per service unit; or

(4) integrates practices or technologies that achieve water efficiency, reuse, or conservation performance that exceeds standard compliance requirements.

(c) A political subdivision that provides a credit under this section shall establish procedures for:

(1) calculating and applying the credits in a fair and consistent manner; and

(2) reviewing and approving credits under this section.

Added by Acts 2025, 89th Leg., 2nd C.S., Ch. 15 (S.B. 14), Sec. 1, eff. January 1, 2026.

Sec. 395.024. ACCOUNTING FOR FEES AND INTEREST. (a) The order, ordinance, or resolution levying an impact fee must provide that all funds collected through the adoption of an impact fee shall be deposited in interest-bearing accounts clearly identifying the category of capital improvements or facility expansions within the service area for which the fee was adopted.

(b) Interest earned on impact fees is considered funds of the account on which it is earned and is subject to all restrictions placed on use of impact fees under this chapter.

(c) Impact fee funds may be spent only for the purposes for

which the impact fee was imposed as shown by the capital improvements plan and as authorized by this chapter.

(d) The records of the accounts into which impact fees are deposited shall be open for public inspection and copying during ordinary business hours.

Added by Acts 1989, 71st Leg., ch. 1, Sec. 82(a), eff. Aug. 28, 1989.

Sec. 395.025. REFUNDS. (a) On the request of an owner of the property on which an impact fee has been paid, the political subdivision shall refund the impact fee if existing facilities are available and service is denied or the political subdivision has, after collecting the fee when service was not available, failed to commence construction within two years or service is not available within a reasonable period considering the type of capital improvement or facility expansion to be constructed, but in no event later than five years from the date of payment under Section 395.019(1).

(b) Repealed by Acts 2001, 77th Leg., ch. 345, Sec. 9, eff. Sept. 1, 2001.

(c) The political subdivision shall refund any impact fee or part of it that is not spent as authorized by this chapter within 10 years after the date of payment.

(d) Any refund shall bear interest calculated from the date of collection to the date of refund at the statutory rate as set forth in Section 302.002, Finance Code, or its successor statute.

(e) All refunds shall be made to the record owner of the property at the time the refund is paid. However, if the impact fees were paid by another political subdivision or governmental entity, payment shall be made to the political subdivision or governmental entity.

(f) The owner of the property on which an impact fee has been paid or another political subdivision or governmental entity that paid the impact fee has standing to sue for a refund under this section.

Added by Acts 1989, 71st Leg., ch. 1, Sec. 82(a), eff. Aug. 28, 1989. Amended by Acts 1997, 75th Leg., ch. 1396, Sec. 37, eff.

Sept. 1, 1997; Acts 1999, 76th Leg., ch. 62, Sec. 7.82, eff. Sept. 1, 1999; Acts 2001, 77th Leg., ch. 345, Sec. 9, eff. Sept. 1, 2001.

SUBCHAPTER C. PROCEDURES FOR ADOPTION OF IMPACT FEE

Sec. 395.041. COMPLIANCE WITH PROCEDURES REQUIRED. Except as otherwise provided by this chapter, a political subdivision must comply with this subchapter to levy an impact fee.

Added by Acts 1989, 71st Leg., ch. 1, Sec. 82(a), eff. Aug. 28, 1989.

Sec. 395.0411. CAPITAL IMPROVEMENTS PLAN. The political subdivision shall provide for a capital improvements plan to be developed by qualified professionals using generally accepted engineering and planning practices in accordance with Section 395.014.

Added by Acts 2001, 77th Leg., ch. 345, Sec. 5, eff. Sept. 1, 2001.

Sec. 395.042. HEARING ON LAND USE ASSUMPTIONS AND CAPITAL IMPROVEMENTS PLAN. To impose an impact fee, a political subdivision must adopt an order, ordinance, or resolution establishing a public hearing date to consider the land use assumptions and capital improvements plan for the designated service area.

Added by Acts 1989, 71st Leg., ch. 1, Sec. 82(a), eff. Aug. 28, 1989. Amended by Acts 2001, 77th Leg., ch. 345, Sec. 5, eff. Sept. 1, 2001.

Sec. 395.043. INFORMATION ABOUT LAND USE ASSUMPTIONS AND CAPITAL IMPROVEMENTS PLAN AVAILABLE TO PUBLIC. At least 60 days before the date of the first publication of the notice of the hearing on the land use assumptions and capital improvements plan, the political subdivision shall make available to the public its land use assumptions, the time period of the projections, and a description of the capital improvement facilities that may be proposed.

Added by Acts 1989, 71st Leg., ch. 1, Sec. 82(a), eff. Aug. 28,

1989. Amended by Acts 2001, 77th Leg., ch. 345, Sec. 5, eff. Sept. 1, 2001.

Amended by:

Acts 2025, 89th Leg., R.S., Ch. 506 (S.B. 1883), Sec. 1, eff. September 1, 2025.

Sec. 395.044. NOTICE OF HEARING ON LAND USE ASSUMPTIONS AND CAPITAL IMPROVEMENTS PLAN. (a) Before the 30th day before the date of the hearing on the land use assumptions and capital improvements plan, the political subdivision shall send a notice of the hearing by certified mail to any person who has given written notice by certified or registered mail to the municipal secretary or other designated official of the political subdivision requesting notice of the hearing within two years preceding the date of adoption of the order, ordinance, or resolution setting the public hearing.

(b) The political subdivision shall publish notice of the hearing before the 30th day before the date set for the hearing, in one or more newspapers of general circulation in each county in which the political subdivision lies. However, a river authority that is authorized elsewhere by state law to charge fees that function as impact fees may publish the required newspaper notice only in each county in which the service area lies.

(c) The notice must contain:

(1) a headline to read as follows:

"NOTICE OF PUBLIC HEARING ON LAND USE ASSUMPTIONS AND CAPITAL IMPROVEMENTS PLAN RELATING TO POSSIBLE ADOPTION OF IMPACT FEES"

(2) the time, date, and location of the hearing;

(3) a statement that the purpose of the hearing is to consider the land use assumptions and capital improvements plan under which an impact fee may be imposed; and

(4) a statement that any member of the public has the right to appear at the hearing and present evidence for or against the land use assumptions and capital improvements plan.

Added by Acts 1989, 71st Leg., ch. 1, Sec. 82(a), eff. Aug. 28, 1989. Amended by Acts 2001, 77th Leg., ch. 345, Sec. 5, eff. Sept. 1, 2001.

Sec. 395.045. APPROVAL OF LAND USE ASSUMPTIONS AND CAPITAL IMPROVEMENTS PLAN REQUIRED. (a) After the public hearing on the land use assumptions and capital improvements plan, the political subdivision shall determine whether to adopt or reject an ordinance, order, or resolution approving the land use assumptions and capital improvements plan.

(b) The political subdivision, within 30 days after the date of the public hearing, shall approve or disapprove the land use assumptions and capital improvements plan.

(c) An ordinance, order, or resolution approving the land use assumptions and capital improvements plan may not be adopted as an emergency measure.

Added by Acts 1989, 71st Leg., ch. 1, Sec. 82(a), eff. Aug. 28, 1989. Amended by Acts 2001, 77th Leg., ch. 345, Sec. 5, eff. Sept. 1, 2001.

Sec. 395.0455. SYSTEMWIDE LAND USE ASSUMPTIONS. (a) In lieu of adopting land use assumptions for each service area, a political subdivision may, except for storm water, drainage, flood control, and roadway facilities, adopt systemwide land use assumptions, which cover all of the area subject to the jurisdiction of the political subdivision for the purpose of imposing impact fees under this chapter.

(b) Prior to adopting systemwide land use assumptions, a political subdivision shall follow the public notice, hearing, and other requirements for adopting land use assumptions.

(c) After adoption of systemwide land use assumptions, a political subdivision is not required to adopt additional land use assumptions for a service area for water supply, treatment, and distribution facilities or wastewater collection and treatment facilities as a prerequisite to the adoption of a capital improvements plan or impact fee, provided the capital improvements plan and impact fee are consistent with the systemwide land use assumptions.

Added by Acts 1989, 71st Leg., ch. 566, Sec. 1(b), eff. Aug. 28, 1989.

Sec. 395.047. HEARING ON IMPACT FEE. On adoption of the land use assumptions and capital improvements plan, the governing body shall adopt an order or resolution setting a public hearing to discuss the imposition of the impact fee. The public hearing must be held by the governing body of the political subdivision to discuss the proposed ordinance, order, or resolution imposing an impact fee.

Added by Acts 1989, 71st Leg., ch. 1, Sec. 82(a), eff. Aug. 28, 1989. Amended by Acts 2001, 77th Leg., ch. 345, Sec. 5, eff. Sept. 1, 2001.

Sec. 395.049. NOTICE OF HEARING ON IMPACT FEE. (a) Before the 30th day before the date of the hearing on the imposition of an impact fee, the political subdivision shall send a notice of the hearing by certified mail to any person who has given written notice by certified or registered mail to the municipal secretary or other designated official of the political subdivision requesting notice of the hearing within two years preceding the date of adoption of the order or resolution setting the public hearing.

(b) The political subdivision shall publish notice of the hearing before the 30th day before the date set for the hearing, in one or more newspapers of general circulation in each county in which the political subdivision lies. However, a river authority that is authorized elsewhere by state law to charge fees that function as impact fees may publish the required newspaper notice only in each county in which the service area lies.

(c) The notice must contain the following:

(1) a headline to read as follows:

"NOTICE OF PUBLIC HEARING ON ADOPTION OF IMPACT FEES"

(2) the time, date, and location of the hearing;

(3) a statement that the purpose of the hearing is to consider the adoption of an impact fee;

(4) the amount of the proposed impact fee per service unit; and

(5) a statement that any member of the public has the right to appear at the hearing and present evidence for or against the plan and proposed fee.

Added by Acts 1989, 71st Leg., ch. 1, Sec. 82(a), eff. Aug. 28, 1989. Amended by Acts 2001, 77th Leg., ch. 345, Sec. 5, eff. Sept. 1, 2001.

Sec. 395.050. ADVISORY COMMITTEE COMMENTS ON IMPACT FEES. The advisory committee created under Section 395.058 shall file its written comments on the proposed impact fees before the fifth business day before the date of the public hearing on the imposition of the fees.

Added by Acts 1989, 71st Leg., ch. 1, Sec. 82(a), eff. Aug. 28, 1989. Amended by Acts 2001, 77th Leg., ch. 345, Sec. 5, eff. Sept. 1, 2001.

Sec. 395.051. APPROVAL OF IMPACT FEE REQUIRED. (a) The political subdivision, within 30 days after the date of the public hearing on the imposition of an impact fee, shall approve or disapprove the imposition of an impact fee. Approval of the imposition of an impact fee by a political subdivision requires an affirmative vote of two-thirds of the members of the governing body of the political subdivision.

(b) An ordinance, order, or resolution approving the imposition of an impact fee may not be adopted as an emergency measure.

Added by Acts 1989, 71st Leg., ch. 1, Sec. 82(a), eff. Aug. 28, 1989. Amended by Acts 2001, 77th Leg., ch. 345, Sec. 5, eff. Sept. 1, 2001.

Amended by:

Acts 2025, 89th Leg., R.S., Ch. 506 (S.B. 1883), Sec. 2, eff. September 1, 2025.

Sec. 395.0515. LIMITATION ON IMPACT FEE INCREASE. A political subdivision may not increase the amount of an impact fee for three years from the later of the date the fee was adopted or most recently increased, if applicable. Nothing in this section prohibits the political subdivision from implementing an impact fee collection schedule that allows less than the maximum adopted impact fee to be collected or phased in up to the maximum adopted

impact fee for a period not to exceed ten years, as authorized by this chapter.

Added by Acts 2025, 89th Leg., R.S., Ch. 506 (S.B. 1883), Sec. 3, eff. September 1, 2025.

Sec. 395.052. PERIODIC UPDATE OF LAND USE ASSUMPTIONS AND CAPITAL IMPROVEMENTS PLAN REQUIRED. (a) A political subdivision imposing an impact fee shall update the land use assumptions and capital improvements plan at least every five years. The initial five-year period begins on the day the capital improvements plan is adopted.

(b) The political subdivision shall review and evaluate its current land use assumptions and shall cause an update of the capital improvements plan to be prepared in accordance with Subchapter B.

Added by Acts 1989, 71st Leg., ch. 1, Sec. 82(a), eff. Aug. 28, 1989. Amended by Acts 2001, 77th Leg., ch. 345, Sec. 6, eff. Sept. 1, 2001.

Sec. 395.053. HEARING ON UPDATED LAND USE ASSUMPTIONS AND CAPITAL IMPROVEMENTS PLAN. The governing body of the political subdivision shall, within 120 days after the date it receives the update of the land use assumptions and the capital improvements plan, adopt an order setting a public hearing to discuss and review the update and shall determine whether to amend the plan.

Added by Acts 1989, 71st Leg., ch. 1, Sec. 82(a), eff. Aug. 28, 1989.

Amended by:

Acts 2025, 89th Leg., R.S., Ch. 506 (S.B. 1883), Sec. 4, eff. September 1, 2025.

Sec. 395.054. HEARING ON AMENDMENTS TO LAND USE ASSUMPTIONS, CAPITAL IMPROVEMENTS PLAN, OR IMPACT FEE. A public hearing must be held by the governing body of the political subdivision to discuss the proposed ordinance, order, or resolution amending land use assumptions, the capital improvements plan, or the impact fee. At least 60 days before the date of the first

publication of the notice of the hearing on the amendments, the land use assumptions and the capital improvements plan, including the amount of any proposed amended impact fee per service unit, shall be made available to the public.

Added by Acts 1989, 71st Leg., ch. 1, Sec. 82(a), eff. Aug. 28, 1989.

Amended by:

Acts 2025, 89th Leg., R.S., Ch. 506 (S.B. 1883), Sec. 5, eff. September 1, 2025.

Sec. 395.055. NOTICE OF HEARING ON AMENDMENTS TO LAND USE ASSUMPTIONS, CAPITAL IMPROVEMENTS PLAN, OR IMPACT FEE. (a) The notice and hearing procedures prescribed by Sections 395.044(a) and (b) apply to a hearing on the amendment of land use assumptions, a capital improvements plan, or an impact fee.

(b) The notice of a hearing under this section must contain the following:

(1) a headline to read as follows:

"NOTICE OF PUBLIC HEARING ON AMENDMENT OF IMPACT FEES"

(2) the time, date, and location of the hearing;

(3) a statement that the purpose of the hearing is to consider the amendment of land use assumptions and a capital improvements plan and the imposition of an impact fee; and

(4) a statement that any member of the public has the right to appear at the hearing and present evidence for or against the update.

Added by Acts 1989, 71st Leg., ch. 1, Sec. 82(a), eff. Aug. 28, 1989. Amended by Acts 2001, 77th Leg., ch. 345, Sec. 7, eff. Sept. 1, 2001.

Sec. 395.056. ADVISORY COMMITTEE COMMENTS ON AMENDMENTS. The advisory committee created under Section 395.058 shall file its written comments on the proposed amendments to the land use assumptions, capital improvements plan, and impact fee before the fifth business day before the date of the public hearing on the amendments.

Added by Acts 1989, 71st Leg., ch. 1, Sec. 82(a), eff. Aug. 28,

1989.

Sec. 395.057. APPROVAL OF AMENDMENTS REQUIRED. (a) The political subdivision, within 30 days after the date of the public hearing on the amendments, shall approve or disapprove the amendments of the land use assumptions and the capital improvements plan and modification of an impact fee.

(b) An ordinance, order, or resolution approving the amendments to the land use assumptions, the capital improvements plan, and imposition of an impact fee may not be adopted as an emergency measure.

Added by Acts 1989, 71st Leg., ch. 1, Sec. 82(a), eff. Aug. 28, 1989.

Sec. 395.0575. DETERMINATION THAT NO UPDATE OF LAND USE ASSUMPTIONS, CAPITAL IMPROVEMENTS PLAN OR IMPACT FEES IS NEEDED. (a) If, at the time an update under Section 395.052 is required, the governing body determines that no change to the land use assumptions, capital improvements plan, or impact fee is needed, it may, as an alternative to the updating requirements of Sections 395.052-395.057, do the following:

(1) The governing body of the political subdivision shall, upon determining that an update is unnecessary and 60 days before publishing the final notice under this section, send notice of its determination not to update the land use assumptions, capital improvements plan, and impact fee by certified mail to any person who has, within two years preceding the date that the final notice of this matter is to be published, give written notice by certified or registered mail to the municipal secretary or other designated official of the political subdivision requesting notice of hearings related to impact fees. The notice must contain the information in Subsections (b)(2)-(5).

(2) The political subdivision shall publish notice of its determination once a week for three consecutive weeks in one or more newspapers with general circulation in each county in which the political subdivision lies. However, a river authority that is authorized elsewhere by state law to charge fees that function as

impact fees may publish the required newspaper notice only in each county in which the service area lies. The notice of public hearing may not be in the part of the paper in which legal notices and classified ads appear and may not be smaller than one-quarter page of a standard-size or tabloid-size newspaper, and the headline on the notice must be in 18-point or larger type.

(b) The notice must contain the following:

(1) a headline to read as follows:

"NOTICE OF DETERMINATION NOT TO UPDATE
LAND USE ASSUMPTIONS, CAPITAL IMPROVEMENTS
PLAN, OR IMPACT FEES";

(2) a statement that the governing body of the political subdivision has determined that no change to the land use assumptions, capital improvements plan, or impact fee is necessary;

(3) an easily understandable description and a map of the service area in which the updating has been determined to be unnecessary;

(4) a statement that if, within a specified date, which date shall be at least 60 days after publication of the first notice, a person makes a written request to the designated official of the political subdivision requesting that the land use assumptions, capital improvements plan, or impact fee be updated, the governing body must comply with the request by following the requirements of Sections 395.052-395.057; and

(5) a statement identifying the name and mailing address of the official of the political subdivision to whom a request for an update should be sent.

(c) The advisory committee shall file its written comments on the need for updating the land use assumptions, capital improvements plans, and impact fee before the fifth business day before the earliest notice of the government's decision that no update is necessary is mailed or published.

(d) If, by the date specified in Subsection (b)(4), a person requests in writing that the land use assumptions, capital improvements plan, or impact fee be updated, the governing body shall cause an update of the land use assumptions and capital improvements plan to be prepared in accordance with Sections

395.052-395.057.

(e) An ordinance, order, or resolution determining the need for updating land use assumptions, a capital improvements plan, or an impact fee may not be adopted as an emergency measure.

Added by Acts 1989, 71st Leg., ch. 566, Sec. 1(d), eff. Aug. 28, 1989.

Sec. 395.058. ADVISORY COMMITTEE. (a) On or before the date on which the order, ordinance, or resolution is adopted under Section 395.042, the political subdivision shall appoint a capital improvements advisory committee.

(b) The advisory committee is composed of not less than five members who shall be appointed by a majority vote of the governing body of the political subdivision. Not less than 50 percent of the membership of the advisory committee must be representatives of the real estate, development, or building industries who are not employees or officials of a political subdivision or governmental entity. If the impact fee is to be applied in the extraterritorial jurisdiction of the political subdivision, the membership must include a representative from that area.

(c) The advisory committee serves in an advisory capacity and is established to:

(1) advise and assist the political subdivision in adopting land use assumptions;

(2) review the capital improvements plan and file written comments;

(3) monitor and evaluate implementation of the capital improvements plan;

(4) file semiannual reports with respect to the progress of the capital improvements plan and report to the political subdivision any perceived inequities in implementing the plan or imposing the impact fee; and

(5) advise the political subdivision of the need to update or revise the land use assumptions, capital improvements plan, and impact fee.

(d) The political subdivision shall make available to the advisory committee any professional reports with respect to

developing and implementing the capital improvements plan.

(e) The governing body of the political subdivision shall adopt procedural rules for the advisory committee to follow in carrying out its duties.

Added by Acts 1989, 71st Leg., ch. 1, Sec. 82(a), eff. Aug. 28, 1989.

Amended by:

Acts 2025, 89th Leg., R.S., Ch. 506 (S.B. 1883), Sec. 6, eff. September 1, 2025.

Sec. 395.059. INDEPENDENT FINANCIAL AUDIT. (a) Before a political subdivision may increase an existing impact fee or adopt a new impact fee for a service area where an impact fee had previously been adopted, the political subdivision must conduct an independent financial audit in accordance with this section.

(b) An independent financial audit conducted under this section must be performed by an independent auditor who:

(1) is a certified public accountant or public accountant licensed by the Texas State Board of Public Accountancy; and

(2) is not, and has not been during the 12 months preceding the commencement of the audit, under contract to provide any other service to the political subdivision or a related entity of the political subdivision.

(c) An independent financial audit conducted under this section must provide, if applicable, a detailed accounting of:

(1) the amount of funds collected from any impact fee imposed by the political subdivision in the service area;

(2) the amount of interest accumulated under Section 395.025 on impact fees collected by the political subdivision in the service area;

(3) any proposed capital improvements or facility expansions to be financed from an impact fee collected by the political subdivision in the service area that were not constructed, as described by Section 395.025, including the categories of each improvement and expansion;

(4) the amount of funds collected from impact fees by

the political subdivision in the service area that have not been spent;

(5) each impact fee collected by the political subdivision in the service area;

(6) the allocation of each impact fee made to the political subdivision in the service area;

(7) any waived impact fees in the service area under Section 395.016(g);

(8) any requested refunds of impact fees in the service area under Section 395.025;

(9) any impact fees in the service area refunded under Section 395.025; and

(10) any errors or omissions of credits in impact fee calculations for impact fees in the service area.

(d) An independent financial audit conducted under this section must be submitted to the political subdivision and advisory committee described by Section 395.058. Before the political subdivision may increase an existing impact fee or adopt a new impact fee for a service area where an impact fee had previously been adopted, the political subdivision must hold a public hearing on the results of the audit received under this subsection.

(e) A political subdivision shall make available to the public on the political subdivision's Internet website an applicable independent financial audit at least 30 days before:

(1) the publication of notice required under Section 395.044; and

(2) the adoption of an order as required under Section 395.053.

(f) A political subdivision may use money collected from an impact fee to conduct an audit required under this section.

Added by Acts 2025, 89th Leg., R.S., Ch. 506 (S.B. 1883), Sec. 7, eff. September 1, 2025.

SUBCHAPTER D. OTHER PROVISIONS

Sec. 395.071. DUTIES TO BE PERFORMED WITHIN TIME LIMITS. If the governing body of the political subdivision does not perform a

duty imposed under this chapter within the prescribed period, a person who has paid an impact fee or an owner of land on which an impact fee has been paid has the right to present a written request to the governing body of the political subdivision stating the nature of the unperformed duty and requesting that it be performed within 60 days after the date of the request. If the governing body of the political subdivision finds that the duty is required under this chapter and is late in being performed, it shall cause the duty to commence within 60 days after the date of the request and continue until completion.

Added by Acts 1989, 71st Leg., ch. 1, Sec. 82(a), eff. Aug. 28, 1989.

Sec. 395.072. RECORDS OF HEARINGS. A record must be made of any public hearing provided for by this chapter. The record shall be maintained and be made available for public inspection by the political subdivision for at least 10 years after the date of the hearing.

Added by Acts 1989, 71st Leg., ch. 1, Sec. 82(a), eff. Aug. 28, 1989.

Sec. 395.073. CUMULATIVE EFFECT OF STATE AND LOCAL RESTRICTIONS. Any state or local restrictions that apply to the imposition of an impact fee in a political subdivision where an impact fee is proposed are cumulative with the restrictions in this chapter.

Added by Acts 1989, 71st Leg., ch. 1, Sec. 82(a), eff. Aug. 28, 1989.

Sec. 395.074. PRIOR IMPACT FEES REPLACED BY FEES UNDER THIS CHAPTER. An impact fee that is in place on June 20, 1987, must be replaced by an impact fee made under this chapter on or before June 20, 1990. However, any political subdivision having an impact fee that has not been replaced under this chapter on or before June 20, 1988, is liable to any party who, after June 20, 1988, pays an impact fee that exceeds the maximum permitted under Subchapter B by more than 10 percent for an amount equal to two times the difference

between the maximum impact fee allowed and the actual impact fee imposed, plus reasonable attorney's fees and court costs.
Added by Acts 1989, 71st Leg., ch. 1, Sec. 82(a), eff. Aug. 28, 1989.

Sec. 395.075. NO EFFECT ON TAXES OR OTHER CHARGES. This chapter does not prohibit, affect, or regulate any tax, fee, charge, or assessment specifically authorized by state law.
Added by Acts 1989, 71st Leg., ch. 1, Sec. 82(a), eff. Aug. 28, 1989.

Sec. 395.076. MORATORIUM ON DEVELOPMENT PROHIBITED. A moratorium may not be placed on new development for the purpose of awaiting the completion of all or any part of the process necessary to develop, adopt, or update land use assumptions, a capital improvements plan, or an impact fee.
Added by Acts 1989, 71st Leg., ch. 1, Sec. 82(a), eff. Aug. 28, 1989. Amended by Acts 2001, 77th Leg., ch. 441, Sec. 2, eff. Sept. 1, 2001.

Sec. 395.077. APPEALS. (a) A person who has exhausted all administrative remedies within the political subdivision and who is aggrieved by a final decision is entitled to trial de novo under this chapter.

(b) A suit to contest an impact fee must be filed within 90 days after the date of adoption of the ordinance, order, or resolution establishing the impact fee.

(c) Except for roadway facilities, a person who has paid an impact fee or an owner of property on which an impact fee has been paid is entitled to specific performance of the services by the political subdivision for which the fee was paid.

(d) This section does not require construction of a specific facility to provide the services.

(e) Any suit must be filed in the county in which the major part of the land area of the political subdivision is located. A successful litigant shall be entitled to recover reasonable attorney's fees and court costs.

(f) The attorney general may bring an action on behalf of a property owner to contest an impact fee or to recover a refund for an impact fee under Section 395.025.

Added by Acts 1989, 71st Leg., ch. 1, Sec. 82(a), eff. Aug. 28, 1989.

Amended by:

Acts 2025, 89th Leg., R.S., Ch. 506 (S.B. 1883), Sec. 8, eff. September 1, 2025.

Sec. 395.079. IMPACT FEE FOR STORM WATER, DRAINAGE, AND FLOOD CONTROL IN POPULOUS COUNTY. (a) Any county that has a population of 3.3 million or more or that borders a county with a population of 3.3 million or more, and any district or authority created under Article XVI, Section 59, of the Texas Constitution within any such county that is authorized to provide storm water, drainage, and flood control facilities, is authorized to impose impact fees to provide storm water, drainage, and flood control improvements necessary to accommodate new development.

(b) The imposition of impact fees authorized by Subsection (a) is exempt from the requirements of Sections 395.025, 395.052-395.057, and 395.074 unless the political subdivision proposes to increase the impact fee.

(c) Any political subdivision described by Subsection (a) is authorized to pledge or otherwise contractually obligate all or part of the impact fees to the payment of principal and interest on bonds, notes, or other obligations issued or incurred by or on behalf of the political subdivision and to the payment of any other contractual obligations.

(d) An impact fee adopted by a political subdivision under Subsection (a) may not be reduced if:

(1) the political subdivision has pledged or otherwise contractually obligated all or part of the impact fees to the payment of principal and interest on bonds, notes, or other obligations issued by or on behalf of the political subdivision; and

(2) the political subdivision agrees in the pledge or contract not to reduce the impact fees during the term of the bonds,

notes, or other contractual obligations.

Added by Acts 1989, 71st Leg., ch. 1, Sec. 82(a), eff. Aug. 28, 1989. Amended by Acts 2001, 77th Leg., ch. 669, Sec. 107, eff. Sept. 1, 2001.

Sec. 395.080. CHAPTER NOT APPLICABLE TO CERTAIN WATER-RELATED SPECIAL DISTRICTS. (a) This chapter does not apply to impact fees, charges, fees, assessments, or contributions:

(1) paid by or charged to a district created under Article XVI, Section 59, of the Texas Constitution to another district created under that constitutional provision if both districts are required by law to obtain approval of their bonds by the Texas Commission on Environmental Quality; or

(2) charged by an entity if the impact fees, charges, fees, assessments, or contributions are approved by the Texas Commission on Environmental Quality.

(b) Any district created under Article XVI, Section 59, or Article III, Section 52, of the Texas Constitution may petition the Texas Commission on Environmental Quality for approval of any proposed impact fees, charges, fees, assessments, or contributions. The commission shall adopt rules for reviewing the petition and may charge the petitioner fees adequate to cover the cost of processing and considering the petition. The rules shall require notice substantially the same as that required by this chapter for the adoption of impact fees and shall afford opportunity for all affected parties to participate.

Added by Acts 1989, 71st Leg., ch. 1, Sec. 82(a), eff. Aug. 28, 1989. Amended by Acts 1995, 74th Leg., ch. 76, Sec. 11.257, eff. Sept. 1, 1995.

Amended by:

Acts 2025, 89th Leg., R.S., Ch. 986 (S.B. 766), Sec. 34, eff. September 1, 2025.

Sec. 395.081. FEES FOR ADJOINING LANDOWNERS IN CERTAIN MUNICIPALITIES. (a) This section applies only to a municipality with a population of 115,000 or less that constitutes more than three-fourths of the population of the county in which the majority

of the area of the municipality is located.

(b) A municipality that has not adopted an impact fee under this chapter that is constructing a capital improvement, including sewer or waterline or drainage or roadway facilities, from the municipality to a development located within or outside the municipality's boundaries, in its discretion, may allow a landowner whose land adjoins the capital improvement or is within a specified distance from the capital improvement, as determined by the governing body of the municipality, to connect to the capital improvement if:

(1) the governing body of the municipality has adopted a finding under Subsection (c); and

(2) the landowner agrees to pay a proportional share of the cost of the capital improvement as determined by the governing body of the municipality and agreed to by the landowner.

(c) Before a municipality may allow a landowner to connect to a capital improvement under Subsection (b), the municipality shall adopt a finding that the municipality will benefit from allowing the landowner to connect to the capital improvement. The finding shall describe the benefit to be received by the municipality.

(d) A determination of the governing body of a municipality, or its officers or employees, under this section is a discretionary function of the municipality and the municipality and its officers or employees are not liable for a determination made under this section.

Added by Acts 1997, 75th Leg., ch. 1150, Sec. 1, eff. June 19, 1997.

Amended by:

Acts 2011, 82nd Leg., R.S., Ch. 1043 (H.B. 3111), Sec. 5, eff. June 17, 2011.

Acts 2011, 82nd Leg., R.S., Ch. 1163 (H.B. 2702), Sec. 100, eff. September 1, 2011.

APPENDIX B
Water Impact Fee Eligible CIP Opinion of Probable Cost (OPCCs)

LEGEND

- Pearland Supply
- Pearland Supply
- 2030 Pearland CIP Pipelines
- 2030 CIP Plants
- Existing Plants

2030 CIP Tanks

- EST
- GST

Existing Tanks

- EST
- GST

2030 CIP Water Lines

- 8"
- 12"
- 16"
- 20"
- Existing Water Lines
- City Limits

0 Miles 1.5

2030 Proposed CIP and Pearland Supply Projects and Escalated OPCC		
CIP No.	Total*	Description
1	$ 2,010,000	12" Hwy 6 Water Line
2	$ 1,490,000	16" Parallel Manvel Town Center Discharge Line
3	$ 3,490,000	20" Manvel Town Center North Discharge Line
4	$ 630,600	Cemetery Road Waterline Loop - Phase 2
5	$ 3,640,000	16" Manvel City Center Interconnect
6	$ 3,620,000	12" Sowell Interconnect
7	$ 1,450,000	12" Dogwood Avenue - Phase 1
8	$ 4,850,000	20" and 16" Masters Road Water Line
9	$ 1,330,000	12" Dogwood Avenue - Phase 2
10	$ 3,990,000	12" Bissell Road Loop - Phase 1
11	$ 2,570,000	12" Bissell Road Loop - Phase 2
12	$ 1,510,000	20" Del Bello Boulevard Water Line Upsize
13	$ 4,510,000	16" Del Bello Interconnect
14	$ 5,240,000	16" and 12" Del Bello and Masters Road Loop
15	$ 1,170,000	Maverick Plant Improvements and 600 gpm pump station expansion
16	$ 5,590,000	Del Bello 1 MG EST (2022)
17	$ 7,510,000	Manvel Town Center Expansion (Wells, 0.4 MG GST & 2,800 gpm Pump Station)
18	$ 3,800,000	School Road Plant Improvements and 1,000 gpm pump station expansion
19	$ 7,120,000	1 MG EST (2029)
P-1	$ 17,880,000	30" Pearland Supply Transmission Line (including 0.5MG GST and Booster PS)
	$ 83,400,600	

*Cost includes 25% contingency and 15% for professional services, except for Del Bello EST (15% cont).
All costs are shown in 2021 dollars and not inflated for future years costs.
Costs have been escalated in light of recent material shortages and cost volatility, except
Del Bello EST (already assumed escalated).
Opinions of Probable Construction Cost are estimated for planning purposes.
HDR cannot guarantee that proposals, bids, or actual construction costs will not vary.

CITY OF MANVEL

2022 MASTER WATER PLAN

2030 CIP PROJECTS AND PEARLAND SUPPLY

PATH: C:\USERS\SMABROUK\DOCUMENTS\MANVEL\SHAPEFILES\MASTERPLANUPDATE\WATER_SUPPLY\MANVEL WATER SYSTEM - 2030 PROJECT MAP.MXD - USER: SMABROUK - DATE: 9/30/2021

LEGEND

- Pearland Supply
- Pearland Supply
- 2030 and 2040 Pearland CIP Pipelines
- Existing and 2030 CIP Plants

2040 CIP Tanks

- EST
- GST

Existing and 2030 CIP Tanks

- EST
- GST

2040 CIP Water Lines

- 12"
- 16"
- 20"
- 30"
- Existing and 2030 CIP Water Lines
- City Limits

0 Miles 1.5

2040 Proposed CIP and Pearland Supply Projects and Escalated OPCC			
CIP No.	Total*		Description
21	$	3,910,000	12" Hwy 6 and CR48 Water Line
22	$	4,330,000	16" Rodeo Palms Parkway
23	$	3,300,000	20" Old Airline Road Water Line
26	$	1,030,000	16" Manvel Parkway Water Line Upsize
P-27	$	4,330,000	16" Pomona Parkway Water Line
P-28	$	2,890,000	16" SH 288 Water Line
29	$	3,230,000	12" County Road 101 Water Line
P-30	$	9,590,000	24" Pearland Supply and 20" Kirby Drive Water Line
P-31	$	5,870,000	16" Northwest Interconnect
32	$	3,260,000	12" Jordan Road Loop - Phase 1
33	$	1,950,000	12" Jordan Road Loop - Phase 2
34	$	3,350,000	12" Bissell Road Loop
35	$	3,230,000	12" Southeast Loop
36	$	4,180,000	12" Cemetery Road Water Line
37	$	3,340,000	12" Markham Road Water Line
38	$	2,490,000	12" Belcher Road Water Line - Phase 1
39	$	4,200,000	12" Belcher Road Water Line - Phase 2
40	$	6,210,000	20" Croix Road Line and 16" CR90 Line
41	$	2,320,000	16" Masters Road Water Line
42	$	3,860,000	12" Patterson Rd Line and 16" Chocolate Bayou Rd Line
43	$	3,590,000	20" Northern System Interconnect
44	$	5,280,000	12" Oil Field Road Water Line
45	$	7,120,000	EST (1 MG)
	$	92,860,000	

*Cost includes 25% contingency and 15% for professional services.
All costs are shown in 2021 dollars and not inflated for future years costs.
Costs have been escalated in light of recent material shortages and cost volatility.
Opinions of Probable Construction Cost are estimated for planning purposes.
HDR cannot guarantee that proposals, bids, or actual construction costs will not vary.

Source: Esri, Maxar, GeoEye, Earthstar Geographics, CNES/Airbus DS, USDA, USGS, AeroGRID, IGN, and the GIS User Community,

CITY OF MANVEL
2022 MASTER WATER PLAN
2040 CIP PROJECTS AND PEARLAND SUPPLY

PATH: C:\USERS\SMABROUK\DOCUMENTS\MANVEL\SHAPEFILES\MASTERPLANUPDATE\WATER_SUPPLY\MANVEL WATER SYSTEM - 2040 PROJECT MAP.MXD - USER: SMABROUK - DATE: 9/30/2021

City of Manvel

Draft Wastewater CIP - Opinion of Probable Construction Cost* **April 29, 2026**

Planning Level Cost in 2026 Dollars

CIP Project Number: 1 **Phase:** Water

Project Name: 16" Water Line Interconnect

Project Description:

This project includes the construction of a new 16-inch water line along Dogwood Avenue to connect the existing water lines on Pollard Boulevard and Del Bello Lakes.

Opinion of Probable Construction Cost

ITEM	DESCRIPTION	QUANTITY	UNIT	UNIT PRICE	TOTAL
1	16" WL & Appurtenances	1,650	LF	$ 400	$ 660,000
2	30" Boring and Casing	500	LF	$ 1,350	$ 675,000
				SUBTOTAL:	**$ 1,335,000**
			CONTINGENCY	25%	$ 333,800
				SUBTOTAL:	**$ 1,668,800**
			ENG/SURVEY	15%	$ 250,400
				SUBTOTAL:	**$ 1,919,200**
				Estimated Project Total:	**$ 1,919,200**

The Engineer has no control over the cost of labor, materials, equipment, or the Contractor's methods of determining prices, nor over competitive bidding or market conditions. Opinions of probable costs provided herein are based on the information known to the 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. Additionally, fluctuations in material costs due to tariffs, trade policies, or supply chain disruptions may further impact pricing in ways that are difficult to predict.

City of Manvel

Draft Wastewater CIP - Opinion of Probable Construction Cost* **April 29, 2026**

Planning Level Cost in 2026 Dollars

CIP Project Number: 2 **Phase:** Water

Project Name: Dogwood Avenue - Phase 1

Project Description:

This project includes the construction of 16-inch water line along Dogwood Avenue from Pollard Boulevard to McCoy Road.

Opinion of Probable Construction Cost

ITEM	DESCRIPTION	QUANTITY	UNIT	UNIT PRICE	TOTAL
1	16" WL & Appurtenances	4,800	LF	$ 400	$ 1,920,000
2	30" Boring and Casing	400	LF	$ 1,350	$ 540,000
				SUBTOTAL:	**$ 2,460,000**
			CONTINGENCY	25%	$ 615,000
				SUBTOTAL:	**$ 3,075,000**
			ENG/SURVEY	15%	$ 461,300
				SUBTOTAL:	**$ 3,536,300**
				Estimated Project Total:	**$ 3,536,300**

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City of Manvel

Draft Wastewater CIP - Opinion of Probable Construction Cost* **April 29, 2026**

Planning Level Cost in 2026 Dollars

CIP Project Number: 3 **Phase:** Water

Project Name: 12" Charlotte Road Interconnect

Project Description:

This project includes the construction of a new 12-inch water line along Charlottle Road to connect the existing water system.

Opinion of Probable Construction Cost

ITEM	DESCRIPTION	QUANTITY	UNIT	UNIT PRICE	TOTAL
1	12" WL & Appurtenances	1,800	LF	$ 300	$ 540,000
2	24" Boring and Casing	750	LF	$ 1,080	$ 810,000
				SUBTOTAL:	**$ 1,350,000**
		CONTINGENCY		25%	$ 337,500
				SUBTOTAL:	**$ 1,687,500**
		ENG/SURVEY		15%	$ 253,200
				SUBTOTAL:	**$ 1,940,700**
				Estimated Project Total:	**$ 1,940,700**

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City of Manvel

Draft Wastewater CIP - Opinion of Probable Construction Cost* **April 29, 2026**

Planning Level Cost in 2026 Dollars

CIP Project Number: 5 **Phase:** Water

Project Name: Del Bello Spur to Del Bello Blvd Loop

Project Description:

This project includes the construction of 12-inch water line along Del Bello Boulevard.

Opinion of Probable Construction Cost

ITEM	DESCRIPTION	QUANTITY	UNIT	UNIT PRICE	TOTAL
1	12" WL & Appurtenances	4,600	LF	$ 300	$ 1,380,000
2	24" Boring and Casing	300	LF	$ 1,080	$ 324,000
3	Pavement Repair	200	LF	$ 180	$ 36,000
				SUBTOTAL:	**$ 1,740,000**
		CONTINGENCY		25%	$ 435,000
				SUBTOTAL:	**$ 2,175,000**
		ENG/SURVEY		15%	$ 326,300
				SUBTOTAL:	**$ 2,501,300**
				Estimated Project Total:	**$ 2,501,300**

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City of Manvel

Draft Wastewater CIP - Opinion of Probable Construction Cost* **April 29, 2026**

Planning Level Cost in 2026 Dollars

CIP Project Number: 6 **Phase:** Water

Project Name: Del Bello and Masters Road Loop

Project Description:

This project includes the construction of 12-inch and 16-inch water line along FM 1128 and north of McCoy Road.

Opinion of Probable Construction Cost

ITEM	DESCRIPTION	QUANTITY	UNIT	UNIT PRICE	TOTAL
1	16" WL & Appurtenances	1,300	LF	$ 400	$ 520,000
2	12" WL & Appurtenances	7,000	LF	$ 300	$ 2,100,000
3	30" Boring and Casing	200	LF	$ 1,350	$ 270,000
4	24" Boring and Casing	200	LF	$ 1,080	$ 216,000
				SUBTOTAL:	**$ 3,106,000**
				CONTINGENCY 25%	$ 776,500
				SUBTOTAL:	**$ 3,882,500**
				ENG/SURVEY 15%	$ 582,400
				SUBTOTAL:	**$ 4,464,900**
				Estimated Project Total:	**$ 4,464,900**

The Engineer has no control over the cost of labor, materials, equipment, or the Contractor's methods of determining prices, nor over competitive bidding or market conditions. Opinions of probable costs provided herein are based on the information known to the 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. Additionally, fluctuations in material costs due to tariffs, trade policies, or supply chain disruptions may further impact pricing in ways that are difficult to predict.

City of Manvel

Draft Wastewater CIP - Opinion of Probable Construction Cost* **April 29, 2026**

Planning Level Cost in 2026 Dollars

CIP Project Number: 7 **Phase:** Water

Project Name: Master Water Plan and Impact Fee Study (2030/31)

Project Description:

This project includes a financial audit of the impact fees as part of the Water Impact Fee Study.

Opinion of Probable Construction Cost

ITEM	DESCRIPTION	QUANTITY	UNIT	UNIT PRICE	TOTAL
1	Master Water Plan and Impact Fee Study	1	LS	$ 100,000	$ 100,000
				SUBTOTAL:	**$ 100,000**
		CONTINGENCY		0%	$ -
				SUBTOTAL:	**$ 100,000**
		ENG/SURVEY		0%	$ -
				SUBTOTAL:	**$ 100,000**
				Estimated Project Total:	**$ 100,000**

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City of Manvel

Draft Wastewater CIP - Opinion of Probable Construction Cost* **April 29, 2026**

Planning Level Cost in 2026 Dollars

CIP Project Number: 8 **Phase:** Water

Project Name: Impact Fee Audit (2031)

Project Description:

This project includes a study to update the City's Master Water Plan and Impact Fee Study.

Opinion of Probable Construction Cost

ITEM	DESCRIPTION	QUANTITY	UNIT	UNIT PRICE	TOTAL
1	Impact Fee Audit	1	EA	$ 15,750	$ 15,750
				SUBTOTAL:	**$ 15,750**
				CONTINGENCY 0%	$ -
				SUBTOTAL:	**$ 15,750**
				ENG/SURVEY 0%	$ -
				SUBTOTAL:	**$ 15,750**
				Estimated Project Total:	**$ 15,750**

The Engineer has no control over the cost of labor, materials, equipment, or the Contractor's methods of determining prices, nor over competitive bidding or market conditions. Opinions of probable costs provided herein are based on the information known to the 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. Additionally, fluctuations in material costs due to tariffs, trade policies, or supply chain disruptions may further impact pricing in ways that are difficult to predict.

City of Manvel

Draft Wastewater CIP - Opinion of Probable Construction Cost* **April 29, 2026**

Planning Level Cost in 2026 Dollars

CIP Project Number: 11 **Phase:** Water

Project Name: 12" Hwy 6 and CR48 Water Line

Project Description:

This project includes the construction of a new 12-inch water line to connect the west service area to the main water system.

Opinion of Probable Construction Cost

ITEM	DESCRIPTION	QUANTITY	UNIT	UNIT PRICE	TOTAL
1	12" WL & Appurtenances	4,300	LF	$ 300	$ 1,290,000
2	24" Boring and Casing	400	LF	$ 1,080	$ 432,000
				SUBTOTAL:	**$ 1,722,000**
		CONTINGENCY		25%	$ 430,500
				SUBTOTAL:	**$ 2,152,500**
		ENG/SURVEY		15%	$ 322,900
				SUBTOTAL:	**$ 2,475,400**
				Estimated Project Total:	**$ 2,475,400**

The Engineer has no control over the cost of labor, materials, equipment, or the Contractor's methods of determining prices, nor over competitive bidding or market conditions. Opinions of probable costs provided herein are based on the information known to the 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. Additionally, fluctuations in material costs due to tariffs, trade policies, or supply chain disruptions may further impact pricing in ways that are difficult to predict.

APPENDIX C
Wastewater Impact Fee Eligible CIP Opinion of Probable Cost (OPCCs)

City of Manvel

DRAFT Wastewater CIP - Opinion of Probable Construction Cost* **April 29, 2026**

Planning Level Cost in 2025 Dollars

CIP Project Number: 1 **Phase:** Wastewater

Project Name: **Expansion of the Central Region Wastewater Treatment Plant to 3.0 MGD Capacity (Phase 2)**

Project Description:

This project includes the construction of 2.0 MGD additional treatment capacity at the Central WWTP and decommissioning of the existing 0.5 MGD package plant. This expansion will result in 2.0 MGD average day flow treatment capacity at the Central WWTP. This WWTP will be expandable to 4.0 MGD by 2033.

Opinion of Probable Construction Cost

ITEM	DESCRIPTION	QUANTITY	UNIT	UNIT PRICE	TOTAL
1	WWTP Expansion to 3.0 MGD	1,500,000	Gallons	$ 32.00	$ 48,000,000
**Unit cost includes 30% contingency*				**SUBTOTAL:**	**$ 48,000,000**
		ENG/SURVEY		20%	$ 9,600,000
				SUBTOTAL:	**$ 57,600,000**
				Estimated Project Total:	**$ 57,600,000**

The Engineer has no control over the cost of labor, materials, equipment, or the Contractor's methods of determining prices, nor over competitive bidding or market conditions. Opinions of probable costs provided herein are based on the information known to the 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. Additionally, fluctuations in material costs due to tariffs, trade policies, or supply chain disruptions may further impact pricing in ways that are difficult to predict.

City of Manvel

DRAFT Wastewater CIP - Opinion of Probable Construction Cost* **April 29, 2026**

Planning Level Cost in 2025 Dollars

CIP Project Number: 2 **Phase:** Wastewater

Project Name: 6.5 MGD Pollard Blvd Lift Station and 16-inch Parallel Force Main (Phase 2)

Project Description:

This project includes the expansion of the Pollard Boulevard Lift Station to a firm capacity of 6.5 MGD, and the construction of a parallel 16-inch force main.

Opinion of Probable Construction Cost

ITEM	DESCRIPTION	QUANTITY	UNIT	UNIT PRICE	TOTAL
1	Wet Well Replacement	1	LS	$ 1,462,000	$ 1,462,000
2	Pumps	1	LS	$ 978,000	$ 978,000
3	Electrical	1	LS	$ 1,104,000	$ 1,104,000
4	Generator	1	LS	$ 495,000	$ 495,000
5	Piping and Valves	1	LS	$ 264,000	$ 264,000
6	16" Force Main < 8 feet deep	1,600	LF	$ 320	$ 512,000
				SUBTOTAL:	**$ 4,815,000**
		CONTINGENCY		30%	$ 1,444,500
				SUBTOTAL:	**$ 6,259,500**
		ENG/SURVEY		20%	$ 1,251,900
				SUBTOTAL:	**$ 7,511,400**
				Estimated Project Total:	**$ 7,511,400**

The Engineer has no control over the cost of labor, materials, equipment, or the Contractor's methods of determining prices, nor over competitive bidding or market conditions. Opinions of probable costs provided herein are based on the information known to the 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. Additionally, fluctuations in material costs due to tariffs, trade policies, or supply chain disruptions may further impact pricing in ways that are difficult to predict.

City of Manvel

DRAFT Wastewater CIP - Opinion of Probable Construction Cost* **April 29, 2026**

Planning Level Cost in 2025 Dollars

CIP Project Number: 3 **Phase:** Wastewater

Project Name: **Large Ave Lift Station Expansion to 2.1 MGD Firm Capacity**

Project Description:

This project includes the expansion of the Large Avenue Lift Station to a firm capacity of 2.1 MGD and the construction of a 10-inch force main.

Opinion of Probable Construction Cost

ITEM	DESCRIPTION	QUANTITY	UNIT	UNIT PRICE	TOTAL
1	Large Ave Wet Well Replacement	1	LS	$ 656,000	$ 656,000
2	Large Ave Pumps	1	LS	$ 608,000	$ 608,000
3	Large Ave Electrical	1	LS	$ 520,950	$ 520,950
4	Large Ave Piping and Valves	1	LS	$ 120,000	$ 120,000
5	10" Force Main < 8 feet deep	4,370	LF	$ 200	$ 874,000
6	Pavement Repair	100	LF	$ 180	$ 18,000
7	20" Boring and Casing	1,030	LF	$ 900	$ 927,000
				SUBTOTAL:	**$ 3,724,000**
		CONTINGENCY		30%	$ 1,117,200
				SUBTOTAL:	**$ 4,841,200**
		ENG/SURVEY		20%	$ 968,300
				SUBTOTAL:	**$ 5,809,500**
				Estimated Project Total:	**$ 5,809,500**

The Engineer has no control over the cost of labor, materials, equipment, or the Contractor's methods of determining prices, nor over competitive bidding or market conditions. Opinions of probable costs provided herein are based on the information known to the 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. Additionally, fluctuations in material costs due to tariffs, trade policies, or supply chain disruptions may further impact pricing in ways that are difficult to predict.

City of Manvel

DRAFT Wastewater CIP - Opinion of Probable Construction Cost* **April 29, 2026**

Planning Level Cost in 2025 Dollars

CIP Project Number: 4 **Phase:** Wastewater

Project Name: **15-inch Gravity Main Along Masters Road**

Project Description:

This project includes the construction of a 15-inch gravity main along Masters Road.

Opinion of Probable Construction Cost

ITEM	DESCRIPTION	QUANTITY	UNIT	UNIT PRICE	TOTAL
1	15" Pipe > 16 feet deep	2,900	LF	$ 315	$ 913,500
2	60" Diameter Manhole (16 - 24 feet deep)	10	EA	$ 26,000	$ 260,000
3	Pavement Repair	100	LF	$ 180	$ 18,000
4	24" Boring and Casing	900	LF	$ 1,080	$ 972,000
				SUBTOTAL:	**$ 2,163,500**
				CONTINGENCY 30%	$ 649,100
				SUBTOTAL:	**$ 2,812,600**
				ENG/SURVEY 15%	$ 421,900
				SUBTOTAL:	**$ 3,234,500**
				Estimated Project Total:	**$ 3,234,500**

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City of Manvel

DRAFT Wastewater CIP - Opinion of Probable Construction Cost* **April 29, 2026**

Planning Level Cost in 2025 Dollars

CIP Project Number: 5 **Phase:** Wastewater

Project Name: 12/15-inch Central Region Gravity Main

Project Description:

This project includes the construction of 12-inch and 15-inch gravity lines north of City Center in the Central Service Area. The newly constructed lines will connect to the existing system.

Opinion of Probable Construction Cost

ITEM	DESCRIPTION	QUANTITY	UNIT	UNIT PRICE	TOTAL
1	12" Pipe 8- 16 feet deep	2,900	LF	$ 228	$ 661,200
2	15" Pipe > 16 feet deep	2,450	LF	$ 315	$ 771,750
3	60" Diameter Manhole (8 - 16 feet deep)	7	EA	$ 22,000	$ 154,000
4	60" Diameter Manhole (16 - 24 feet deep)	7	EA	$ 26,000	$ 182,000
5	24" Boring and Casing	450	LF	$ 1,080	$ 486,000
6	Pavement Repair	100	LF	$ 180	$ 18,000
7	30" Boring and Casing	200	LF	$ 1,350	$ 270,000
				SUBTOTAL:	**$ 2,543,000**
		CONTINGENCY		30%	$ 762,900
				SUBTOTAL:	**$ 3,305,900**
		ENG/SURVEY		15%	$ 495,900
				SUBTOTAL:	**$ 3,801,800**
				Estimated Project Total:	**$ 3,801,800**

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City of Manvel

DRAFT Wastewater CIP - Opinion of Probable Construction Cost* **April 29, 2026**

Planning Level Cost in 2025 Dollars

CIP Project Number: 6 **Phase:** Wastewater

Project Name: 12-inch Del Bello SPUR Gravity Main

Project Description:

This project includes the construction of 12-inch gravity main along Del Bello SPUR in the Central Service Area.

Opinion of Probable Construction Cost

ITEM	DESCRIPTION	QUANTITY	UNIT	UNIT PRICE	TOTAL
1	12" Pipe 8- 16 feet deep	2,204	LF	$ 228	$ 502,398
2	60" Diameter Manhole (8 - 16 feet deep)	8	EA	$ 22,000	$ 176,000
3	12" Pipe > 16 feet deep	1,430	LF	$ 252	$ 360,360
4	60" Diameter Manhole (16 - 24 feet deep)	4	EA	$ 26,000	$ 104,000
5	24" Boring and Casing	850	LF	$ 1,080	$ 918,000
6	Pavement Repair	300	LF	$ 180	$ 54,000
				SUBTOTAL:	**$ 2,114,800**
			CONTINGENCY	30%	$ 634,500
				SUBTOTAL:	**$ 2,749,300**
			ENG/SURVEY	15%	$ 412,400
				SUBTOTAL:	**$ 3,161,700**
				Estimated Project Total:	**$ 3,161,700**

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City of Manvel

DRAFT Wastewater CIP - Opinion of Probable Construction Cost* **April 29, 2026**

Planning Level Cost in 2025 Dollars

CIP Project Number: 7 **Phase:** Wastewater

Project Name:	**Master Wastewater Plan and Impact Fee Study (2030/31)**

Project Description:

This project includes a study to update the City's Master Wastewater Plan and Impact Fees.

Opinion of Probable Construction Cost

ITEM	DESCRIPTION	QUANTITY	UNIT	UNIT PRICE	TOTAL
1	Master Plan and Impact Fee Study	1	EA	$ 100,000	$ 100,000
				SUBTOTAL:	**$ 100,000**
				CONTINGENCY 0%	$ -
				SUBTOTAL:	**$ 100,000**
				ENG/SURVEY 0%	$ -
				SUBTOTAL:	**$ 100,000**
				Estimated Project Total:	**$ 100,000**

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City of Manvel

DRAFT Wastewater CIP - Opinion of Probable Construction Cost* **April 29, 2026**

Planning Level Cost in 2025 Dollars

CIP Project Number: 8 **Phase:** Wastewater

Project Name: Impact Fee Audit (2031)

Project Description:

This project includes a financial audit of the impact fees as part of the Wastewater Impact Fee Study.

Opinion of Probable Construction Cost

ITEM	DESCRIPTION	QUANTITY	UNIT	UNIT PRICE	TOTAL
1	Impact Fee Audit	1	EA	$ 15,750	$ 15,750
				SUBTOTAL:	**$ 15,750**
		CONTINGENCY		0%	$ -
				SUBTOTAL:	**$ 15,750**
		ENG/SURVEY		0%	$ -
				SUBTOTAL:	**$ 15,750**
				Estimated Project Total:	**$ 15,750**

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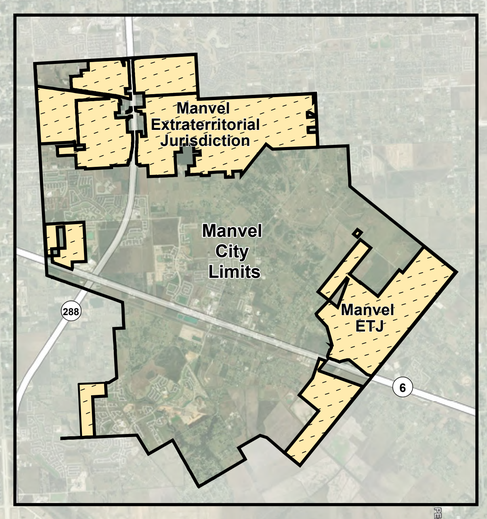
APPENDIX D
Future Land Use Map

Manvel, TX
Future Land Use and Character

Adopted May 4, 2026



Legend

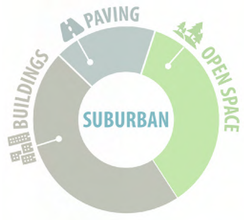
- Manvel City Limits
- Manvel Extraterritorial Jurisdiction
- Parcel Boundary
- Public Facility
- School
- Park

NOTE: A comprehensive plan shall not constitute zoning regulations or establish zoning district boundaries.

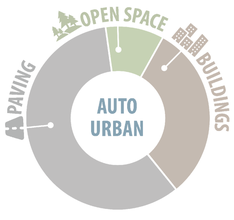
Future Land Use and Character

See Land Use & Community Character section in Comprehensive Plan for explanation of character types and future land use designations.

- Rural Preservation



- Estate Residential
- Suburban Residential
- Master-Planned Development



- Commercial
- Industrial

APPENDIX E
Projected Growth by Development

Development (Separated by Location)		Impact Fee Service Area		ESFC Growth 2026-2036	Notes on Projected ESFCs and Growth Rate
		Water	Wastewater		
Central	**Valencia**[1]	✓	✓	1,015	Received yearly ESFC counts from Developer.
	Del Bello Lakes[1]	✓	✓	148	Received yearly ESFC counts from Developer.
	The Reserve at Manvel	✓	✓	375	Acreage from development website as accessed in September 2025. Assumed 5 ESFC/acre and completed by 2036.
	Presidio	✓	✓	1,073	Projections assuming development starts in 2027, and 50% buildout by 2036. Assuming commercial development does not start until all residential is built-out.
	Manvel City Center	✓	✓	1,490	Calculated ESFC based on available concept plans.
	City Central	✓	✓	1,100	Applied 2.0 ESFCs/acre for all land (including currently developed) in the Central Basin not in a currently identified development, in the 100-year floodplain, on the selected WWTP parcels, or in the ETJ. Utilized assumption of 50 ESFCs/year through 2030 and 150 ESFCs/year through buildout. By 2036, the area will not be built-out.
West	**Town Center**	✓		1,650	Received from developer.
	C-Store	✓		8	Assumed commercial density of 5 ESFC/acre starting in 2031 and completed by 2036.
	BCS (Manvel Crossing)[1]	✓		200	Assumed commercial density of 5 ESFC/acre starting in 2026 and completed by 2036.
	Rainer Tract	✓		25	Assumed commercial density of 5 ESFC/acre starting in 2031 and completed by 2036.
	City West Infill	✓		100	Applied 2.0 ESFCs/acre for infill area in the West Basin not in a currently identified development, in the floodplain, or in the ETJ. Assuming that the City will not serve the west service area wastewater until after 2036.
East	**Belcher Tract**	✓	✓	876	Used developer plan from 3/16/2026 Council Meeting. Assumed 80% of single family acreage would be developed at 2 ESFCs/acre and 20% would be developed at 1 ESFC/acre. Assumed commercial density of 5 ESFC/acre.
	City East Infill	✓	✓	300	Applied 2.0 ESFCs/acre for infill area in the East Basin not in a currently identified development, in the floodplain, or in the ETJ. It is assumed that 50 ESFCs will be added per year starting in 2031. By 2036, this area will not be built-out.
South	**City South Infill**	✓		300	Applied 2.0 ESFCs/acre for infill area in the South Basin not in a currently identified development, in the floodplain, on the selected WWTP parcels, or in the ETJ. It is assumed that 50 ESFCs will be added per year starting in 2031. By 2036, this area will not be built-out.

(1) Valencia, Del Bello Lakes, and BCS (Manvel Crossing) will not pay additional impact fees due to existing development agreements. BCS (Manvel Crossing) development flows are expected to be served at the Central Regional WRF.

APPENDIX F
Water and Wastewater Existing Facilities Inventory

Existing Water Facilities

Type	Name	Location	Capacity
Water Supply	School Road Well	7151 1/2 School Road	1,100 gpm
	Maverick Well	Manvel High School	200 gpm
	MTC Well	Manvel Town Center	1,200 gpm
Booster Pump Station	School Road	7151 1/2 School Road	(3) 1,000 gpm pumps
	Maverick	Manvel High School	(2) 300 gpm pumps
	MTC	Manvel Town Center	(2) 1000 gpm pumps (1) 500 gpm pump
Ground Storage	School Road #1	7151 1/2 School Road	211,000 gallons
	School Road #2		125,000 gallons
	School Road #3		125,000 gallons
	Maverick #1	Manvel High School	66,000 gallons
	Maverick #2		66,000 gallons
	MTC	Manvel Town Center	244,000 gallons
Elevated Storage	Manvel Parkway	Manvel Parkway and Highway 288	1,000,000 gallons

Existing Wastewater Facilities

Type	Name	Location	Capacity
Wastewater Treatment Plant	Corporate Drive	Corporate Drive and Morris Avenue	0.5 MGD

Planning Criteria from 2022 Master Plans

Type	Category	Criteria
Water	Average Day Demand (ADD)	360 gpd/ESFC
	Maximum Day Demand for Supply Planning (MDD-S)	ADD X 2.0
	Maximum Day Demand (MDD) *(for use other than supply planning)*	ADD x 2.4
	Peak Hour Demand (PH)	MDD x 1.25
Wastewater	Average Daily Flow (ADF)	315 gpd/ESFC
	Peak Wet Weather Flow	ADF x 4.0

APPENDIX G
Rate Credit and Debt Service Calculations

Table G-1: Water Credit Analysis Summary

Year	FY2027	FY2028	FY2029	FY2030	FY2031	FY2032	FY2033	FY2034	FY2035	FY2036
Water Impact Fee Eligible Interest + Principal for 10-Year Period[1]	$0	$0	$0	$0	$0	$0	$0	$0	$815,017	$815,017
Total ESFCs Each Year	5,511	6,242	6,972	7,702	8,433	9,163	9,893	10,623	11,354	12,084
Cost per ESFC	$0	$0	$0	$0	$0	$0	$0	$0	$72	$68
Cumulative New ESFCs in 10-Year Period[2]	730	1,461	2,191	2,921	3,652	4,382	5,112	5,842	6,573	7,303
Portion Paid by Growth in 10-Year Period	$0	$0	$0	$0	$0	$0	$0	$0	$473,256	$496,604
Total Credit	**$969,860**									

(1) Includes cost for Projects 14 and 15.
(2) Assuming linear growth of ESFCs between existing and 10-year projections.

Table G-2: Wastewater Credit Analysis Summary

Year	FY2027	FY2028	FY2029	FY2030	FY2031	FY2032	FY2033	FY2034	FY2035	FY2036
Wastewater Impact Fee Eligible Interest + Principal for 10-Year Period[1]	$4,424,111	$4,536,481	$4,536,719	$4,536,345	$4,536,685	$4,536,345	$4,536,651	$4,536,209	$4,536,345	$4,536,991
Total ESFCs Each Year	5,058	5,580	6,101	6,623	7,144	7,665	8,187	8,708	9,230	9,751
Cost per ESFC	$875	$814	$744	$685	$636	$592	$555	$521	$492	$466
Cumulative New ESFCs in 10-Year Period[2]	521	1,043	1,564	2,086	2,607	3,128	3,650	4,171	4,693	5,214
Portion Paid by Growth in 10-Year Period	$455,875	$849,002	$1,163,616	$1,428,910	$1,658,052	$1,851,776	$2,025,750	$2,173,091	$2,308,956	$2,429,724
Total Credit	**$16,344,752**									

(1) Includes costs for Projects A and 1.
(2) Assuming linear growth of ESFCs between existing and 10-year projections.

Appendix G

Water Total/Yearly Costs - Proposed Debt

Year/Total	Total	2035	2036	2037	2038	2039	2040
Project 14 Period/Total		1	2	3	4	5	6
14 Principal	**$21,649,300**	$727,021	$756,102	$786,346	$817,800	$850,512	$884,533
14 Interest	**$10,210,568**	$865,972	$836,891	$806,647	$775,193	$742,481	$708,461
14 Debt Service	**$31,859,868**	$1,592,993	$1,592,993	$1,592,993	$1,592,993	$1,592,993	$1,592,993
14 2027 - 2036 Principal	**$1,948,437**	$65,432	$68,049	$70,771	$73,602	$76,546	$79,608
14 2027 - 2036 Interest	**$918,951**	$77,937	$75,320	$72,598	$69,767	$66,823	$63,761
14 2027 - 2036 Debt Service	**$2,867,388**	$143,369	$143,369	$143,369	$143,369	$143,369	$143,369
Total SUEs		11,354	12,084				
Cost per SUE		$12.63	$11.86				
Cumulative New SUEs		6,573	7,303				
14 Credit	**$169,643**	$82,997	$86,646				

Year/Total	Total	2035	2036	2037	2038	2039	2040
Project 15 Period/Total		1	2	3	4	5	6
15 Principal	**$99,771,100**	$3,350,488	$3,484,508	$3,623,888	$3,768,844	$3,919,597	$4,076,381
15 Interest	**$47,055,543**	$3,990,844	$3,856,824	$3,717,444	$3,572,489	$3,421,735	$3,264,951
15 Debt Service	**$146,826,643**	$7,341,332	$7,341,332	$7,341,332	$7,341,332	$7,341,332	$7,341,332
15 2027 - 2036 Principal	**$8,979,399**	$301,544	$313,606	$326,150	$339,196	$352,764	$366,874
15 2027 - 2036 Interest	**$4,234,999**	$359,176	$347,114	$334,570	$321,524	$307,956	$293,846
15 2027 - 2036 Debt Service	**$13,214,398**	$660,720	$660,720	$660,720	$660,720	$660,720	$660,720
Total SUEs		11,354	12,084				
Cost per SUE		$58.19	$54.68				
Cumulative New SUEs		6,573	7,303				
15 Credit	**$781,801**	$382,493	$399,308				

(1) Assuming debt service payments for Projects 14 and 15 starting in 2035.

Appendix G
Water Total/Yearly Costs - Proposed Debt

Year/Total	2041	2042	2043	2044	2045	2046	2047
Project 14 Period/Total	7	8	9	10	11	12	13
14 Principal	$919,914	$956,711	$994,979	$1,034,778	$1,076,169	$1,119,216	$1,163,985
14 Interest	$673,079	$636,283	$598,014	$558,215	$516,824	$473,777	$429,009
14 Debt Service	$1,592,993	$1,592,993	$1,592,993	$1,592,993	$1,592,993	$1,592,993	$1,592,993
14 2027 - 2036 Principal	$82,792	$86,104	$89,548	$93,130	$96,855	$100,729	$104,759
14 2027 - 2036 Interest	$60,577	$57,265	$53,821	$50,239	$46,514	$42,640	$38,611
14 2027 - 2036 Debt Service	$143,369	$143,369	$143,369	$143,369	$143,369	$143,369	$143,369
Total SUEs							
Cost per SUE							
Cumulative New SUEs							
14 Credit							

Year/Total	2041	2042	2043	2044	2045	2046	2047
Project 15 Period/Total	7	8	9	10	11	12	13
15 Principal	$4,239,436	$4,409,014	$4,585,374	$4,768,789	$4,959,541	$5,157,923	$5,364,240
15 Interest	$3,101,896	$2,932,318	$2,755,958	$2,572,543	$2,381,791	$2,183,410	$1,977,093
15 Debt Service	$7,341,332	$7,341,332	$7,341,332	$7,341,332	$7,341,332	$7,341,332	$7,341,332
15 2027 - 2036 Principal	$381,549	$396,811	$412,684	$429,191	$446,359	$464,213	$482,782
15 2027 - 2036 Interest	$279,171	$263,909	$248,036	$231,529	$214,361	$196,507	$177,938
15 2027 - 2036 Debt Service	$660,720	$660,720	$660,720	$660,720	$660,720	$660,720	$660,720
Total SUEs							
Cost per SUE							
Cumulative New SUEs							
15 Credit							

(1) Assuming debt service payments for Projects 14 and 15 starting in 2035.

Appendix G

Water Total/Yearly Costs - Proposed Debt

Year/Total	2048	2049	2050	2051	2052	2053	2054
Project 14 Period/Total	14	15	16	17	18	19	20
14 Principal	$1,210,544	$1,258,966	$1,309,324	$1,361,697	$1,416,165	$1,472,812	$1,531,724
14 Interest	$382,449	$334,028	$283,669	$231,296	$176,828	$120,181	$61,269
14 Debt Service	$1,592,993	$1,592,993	$1,592,993	$1,592,993	$1,592,993	$1,592,993	$1,592,993
14 2027 - 2036 Principal	$108,949	$113,307	$117,839	$122,553	$127,455	$132,553	$137,855
14 2027 - 2036 Interest	$34,420	$30,062	$25,530	$20,817	$15,915	$10,816	$5,514
14 2027 - 2036 Debt Service	$143,369	$143,369	$143,369	$143,369	$143,369	$143,369	$143,369
Total SUEs							
Cost per SUE							
Cumulative New SUEs							
14 Credit							

Year/Total	2048	2049	2050	2051	2052	2053	2054
Project 15 Period/Total	14	15	16	17	18	19	20
15 Principal	$5,578,809	$5,801,961	$6,034,040	$6,275,402	$6,526,418	$6,787,474	$7,058,973
15 Interest	$1,762,523	$1,539,371	$1,307,292	$1,065,931	$814,915	$553,858	$282,359
15 Debt Service	$7,341,332	$7,341,332	$7,341,332	$7,341,332	$7,341,332	$7,341,332	$7,341,332
15 2027 - 2036 Principal	$502,093	$522,177	$543,064	$564,786	$587,378	$610,873	$635,308
15 2027 - 2036 Interest	$158,627	$138,543	$117,656	$95,934	$73,342	$49,847	$25,412
15 2027 - 2036 Debt Service	$660,720	$660,720	$660,720	$660,720	$660,720	$660,720	$660,720
Total SUEs							
Cost per SUE							
Cumulative New SUEs							
15 Credit							

(1) Assuming debt service payments for Projects 14 and 15 starting in 2035.

Appendix G

Wastewater Total/Yearly Costs - Existing Debt

Project A Year/Total	Total	2027	2028	2029	2030	2031	2032
Principal	**$45,170,000**	$415,000	$860,000	$905,000	$950,000	$1,000,000	$1,050,000
Interest	**$43,104,500**	$2,248,125	$2,216,250	$2,172,125	$2,125,750	$2,077,000	$2,025,750
Debt Service	**$88,274,500**	$2,663,125	$3,076,250	$3,077,125	$3,075,750	$3,077,000	$3,075,750
A Principal	**$36,136,000**	$332,000	$688,000	$724,000	$760,000	$800,000	$840,000
A Interest	**$34,483,600**	$1,798,500	$1,773,000	$1,737,700	$1,700,600	$1,661,600	$1,620,600
A Debt Service	**$70,619,600**	$2,130,500	$2,461,000	$2,461,700	$2,460,600	$2,461,600	$2,460,600
A 2027 - 2036 Principal	**$12,286,240**	$112,880	$233,920	$246,160	$258,400	$272,000	$285,600
A 2027 - 2036 Interest	**$11,724,424**	$611,490	$602,820	$590,818	$578,204	$564,944	$551,004
A 2027 - 2036 Debt Service	**$24,010,664**	$724,370	$836,740	$836,978	$836,604	$836,944	$836,604
Total SUEs		5,058	5,580	6,101	6,623	7,144	7,665
Cost per SUE		$143.20	$149.96	$137.18	$126.33	$117.15	$109.14
Cumulative New SUEs		521	1,043	1,564	2,086	2,607	3,128
A Credit	**$3,002,758**	$74,665	$156,377	$214,581	$263,465	$305,419	$341,434

Appendix G

Wastewater Total/Yearly Costs - Existing Debt

Project A Year/Total	2033	2034	2035	2036
Principal	$1,105,000	$1,160,000	$1,220,000	$1,285,000
Interest	$1,971,875	$1,915,250	$1,855,750	$1,793,125
Debt Service	$3,076,875	$3,075,250	$3,075,750	$3,078,125
A Principal	$884,000	$928,000	$976,000	$1,028,000
A Interest	$1,577,500	$1,532,200	$1,484,600	$1,434,500
A Debt Service	$2,461,500	$2,460,200	$2,460,600	$2,462,500
A 2027 - 2036 Principal	$300,560	$315,520	$331,840	$349,520
A 2027 - 2036 Interest	$536,350	$520,948	$504,764	$487,730
A 2027 - 2036 Debt Service	$836,910	$836,468	$836,604	$837,250
Total SUEs	8,187	8,708	9,230	9,751
Cost per SUE	$102.23	$96.06	$90.64	$85.86
Cumulative New SUEs	3,650	4,171	4,693	5,214
A Credit	$373,107	$400,666	$425,354	$447,690

Appendix G

Wastewater Total/Yearly Costs - Proposed Debt

Year/Total	Total	2027	2028	2029	2030	2031	2032
Project 1 Period/Total		1	2	3	4	5	6
1 Principal	**$57,600,000**	$1,934,309	$2,011,681	$2,092,148	$2,175,834	$2,262,868	$2,353,382
1 Interest	**$27,166,176**	$2,304,000	$2,226,628	$2,146,160	$2,062,474	$1,975,441	$1,884,926
1 Debt Service	**$84,766,176**	$4,238,309	$4,238,309	$4,238,309	$4,238,309	$4,238,309	$4,238,309
1 2027 - 2036 Principal	**$49,536,000**	$1,663,506	$1,730,046	$1,799,248	$1,871,218	$1,946,066	$2,023,909
1 2027 - 2036 Interest	**$23,362,912**	$1,981,440	$1,914,900	$1,845,698	$1,773,728	$1,698,879	$1,621,037
1 2027 - 2036 Debt Service	**$72,898,912**	$3,644,946	$3,644,946	$3,644,946	$3,644,946	$3,644,946	$3,644,946
Total SUEs		5,058	5,580	6,101	6,623	7,144	7,665
Cost per SUE		$720.57	$653.24	$597.41	$550.38	$510.21	$475.51
Cumulative New SUEs		521	1,043	1,564	2,086	2,607	3,128
1 Credit	**$13,130,038**	$375,707	$681,198	$934,476	$1,147,872	$1,330,119	$1,487,574

(1) Assuming debt service payments for Project 1 starting in 2027.

Appendix G

Wastewater Total/Yearly Costs - Proposed Debt

Year/Total	2033	2034	2035	2036	2037	2038	2039
Project 1 Period/Total	7	8	9	10	11	12	13
1 Principal	$2,447,518	$2,545,418	$2,647,235	$2,753,125	$2,863,250	$2,977,780	$3,096,891
1 Interest	$1,790,791	$1,692,890	$1,591,074	$1,485,184	$1,375,059	$1,260,529	$1,141,418
1 Debt Service	$4,238,309	$4,238,309	$4,238,309	$4,238,309	$4,238,309	$4,238,309	$4,238,309
1 2027 - 2036 Principal	$2,104,865	$2,189,060	$2,276,622	$2,367,687	$2,462,395	$2,560,890	$2,663,326
1 2027 - 2036 Interest	$1,540,080	$1,455,886	$1,368,323	$1,277,258	$1,182,551	$1,084,055	$981,620
1 2027 - 2036 Debt Service	$3,644,946	$3,644,946	$3,644,946	$3,644,946	$3,644,946	$3,644,946	$3,644,946
Total SUEs	8,187	8,708	9,230	9,751			
Cost per SUE	$445.22	$418.56	$394.92	$373.80			
Cumulative New SUEs	3,650	4,171	4,693	5,214			
1 Credit	$1,624,972	$1,745,917	$1,853,198	$1,949,005			

(1) Assuming debt service payments for Project 1 starting in 2027.

Appendix G

Wastewater Total/Yearly Costs - Proposed Debt

Year/Total	2040	2041	2042	2043	2044	2045	2046
Project 1 Period/Total	14	15	16	17	18	19	20
1 Principal	$3,220,766	$3,349,597	$3,483,581	$3,622,924	$3,767,841	$3,918,555	$4,075,297
1 Interest	$1,017,542	$888,712	$754,728	$615,385	$470,468	$319,754	$163,012
1 Debt Service	$4,238,309	$4,238,309	$4,238,309	$4,238,309	$4,238,309	$4,238,309	$4,238,309
1 2027 - 2036 Principal	$2,769,859	$2,880,653	$2,995,880	$3,115,715	$3,240,343	$3,369,957	$3,504,755
1 2027 - 2036 Interest	$875,087	$764,292	$649,066	$529,231	$404,602	$274,988	$140,190
1 2027 - 2036 Debt Service	$3,644,946	$3,644,946	$3,644,946	$3,644,946	$3,644,946	$3,644,946	$3,644,946
Total SUEs							
Cost per SUE							
Cumulative New SUEs							
1 Credit							

(1) Assuming debt service payments for Project 1 starting in 2027.

APPENDIX H
Water and Wastewater Impact Fee Administrative Items

The following list include the City of Manvel Administrative Items in regards to the Water and Wastewater Impact Fees:

1. Chapter 395 of the Texas Local Government Code required impact fees to be assessed when a plat is filed and collected during the building permit process.
2. Impact fees will not be assessed for parks or temporary construction trailers.
3. Additional meters obtained by houses or businesses for the sole purpose of lawn irrigation or for a fire line will not pay water or wastewater impact fees.
4. The water meter will be sized for developments based on industry standards by an Engineer or Architect.
5. Water and wastewater impact fees will not be charged for governmental facilities or church uses. Public school facilities are likewise exempt unless the school district's board of trustees elects to enter into a voluntary agreement to pay impact fees, as permitted by Chapter 395 of the Texas Local Government Code.
6. Replacement of an existing water meter will trigger additional impact fees only when the new meter has a greater capacity than the original. Any fee assessed will be limited to the added service units resulting from the increased meter size.
7. For residences currently served by a private well and/or septic system that later gain access to public water and/or wastewater service:
    a. Connection to City utilities within the first year after service installation will not require payment of impact fees.
    b. Connections made during the second year after service availability will be subject to fifty percent (50%) of the applicable impact fee.
    c. Connections occurring more than two years after service availability will be assessed the full applicable impact fee at the time of connection.
8. Impact fees apply only to system capacity and do not include tapping or metering charges. All applicable tap and meter fees remain in effect and are not waived by these regulations.

LAND USE ASSUMPTIONS & CAPITAL IMPROVEMENT PLAN REPORT FOR ROADWAY IMPACT FEES

January 2026
Amended April 30, 2026

Prepared for:

THE CITY OF MANVEL
TEXAS — INC. 1960

Prepared by:

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

FNI Project Number: MNV25505

LAND USE ASSUMPTIONS & CAPITAL IMPROVEMENT PLAN REPORT FOR ROADWAY IMPACT FEES

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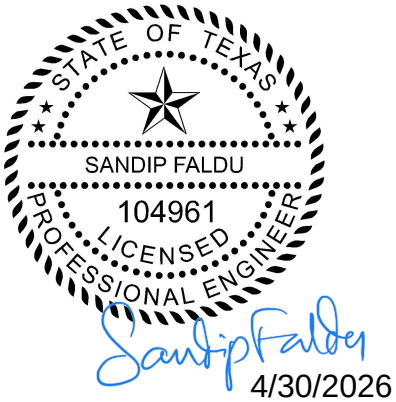


FREESE AND NICHOLS, INC.
TEXAS REGISTERED
ENGINEERING FIRM
F-2144

TABLE OF CONTENTS

List of Abbreviations

Abbreviation	Full Nomenclature
CIP	Capital Improvement Plan
CAGR	Compound Annual Growth Rate
FNI	Freese and Nichols, Inc.
H-GAC	Houston-Galveston Area Council
ITE	Institute for Transportation Engineers
LUA	Land Use Assumptions
NAICS	North American Industry Classification System
City	City of Manvel
TLGC	Texas Local Government Code
TAZ	Traffic Analysis Zone
Veh-Mi	Vehicle-Miles, the service unit for roadway fees

EXECUTIVE SUMMARY

The Land Use Assumptions and Capital Improvement Plan (CIP) Report establishes the analytical foundation for roadway impact fees in the City of Manvel, Texas, in accordance with Chapter 395 of the Texas Local Government Code (TLGC). The report defines projected growth, identifies service areas, and outlines the roadway improvements necessary to accommodate development through a ten-year planning horizon to 2035. The findings provide the technical basis for determining equitable roadway impact fees that allocate infrastructure costs proportionally to new development.

Purpose and Methodology

The study develops 10-year land use assumptions (2025–2035) and corresponding capital improvements to guide infrastructure planning. Using data from the U.S. Census Bureau, the Houston-Galveston Area Council (H-GAC), water and sewer master plan projections, and local land use plans, Freese and Nichols established compound annual growth rates (CAGR) between 8% and 9% that were used to forecast population and employment to 2035.

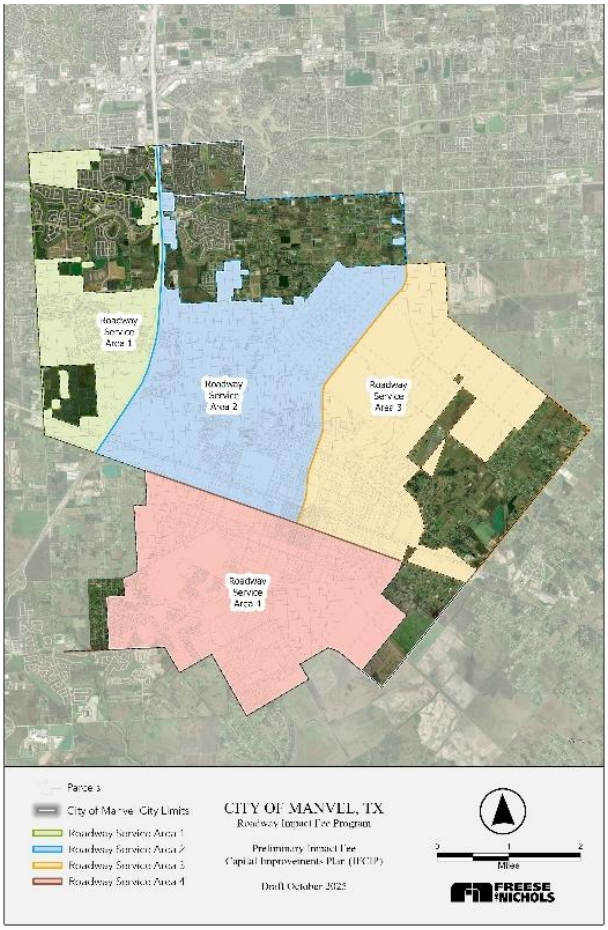
Roadway demand was quantified in vehicle-miles of travel (veh-mi), the standard service unit for roadway impact fee calculations. Existing and projected traffic volumes, roadway capacity, and system deficiencies were evaluated to ensure that planned improvements meet long-term service requirements.

Land Use Assumptions (Growth Projections)

The City's population is projected to grow from approximately 20,050 in 2025 to 47,300 by 2035, while employment is expected to increase from 12,490 to 27,930 over the same period. These population and employment projections—8.9% and 8.4% compound annual growth, respectively—reflect the continuation of moderate residential expansion and commercial development consistent with the City's Comprehensive Plan.

Roadway Service Area

State law mandates the identification of service areas to ensure monies collected from new development pay for improvements within the vicinity that they serve. Service areas may not be larger than six miles and must be within the current city limits. Four service areas have been established for the City of Manvel.



Roadway System Analysis

An inventory of arterial and collector roadways identified existing capacity, current utilization, and potential deficiencies. The total system provides approximately **82,257** veh-mi of existing capacity, with **35,728** veh-mi of existing demand and negligible deficiencies. Projected 10-year growth is expected to generate an additional **81,854** veh-mi of travel demand, largely driven by residential, retail industry, and service industry growth.

Capital Improvement Plan

The proposed Roadway Impact Fee-Eligible CIP includes **73** eligible new projects encompassing approximately **51,349** veh-mi of new capacity, which aim to address current capacity needs within the existing City limits. In service areas 1, 2, and 4, **100%** of the total CIP capacity is directly attributable to growth anticipated over the next decade. In service area 3, 96% of the CIP capacity is attributable to future growth. **Table ES-1** lists the roadway eligible CIP projects for the Impact Fee program.

Table ES- 1: Impact Fee-Eligible Roadway CIP Projects

Map Ref	ID	Roadway	From	To	Length (mi)	Existing Lanes	Added Lanes
Service Area 1							
88	1-CR48	CR-48	SH-6	S City Limit	0.27	2	2
67	1-KBY-1	Kirby Dr (A)	City Limits	City Limits	0.06	0	4
66	1-KBY-2	Kirby Dr (B)	CR-58	City Limits	0.26	0	4
Service Area 2							
56	2-CHB	Chocolate Bayou Rd	Lira Rd	FM 1128	0.94	2	2
138	2-OMR-1	Old Massey Ranch (CR-100)	330' E of Old Chocolate Bayou Rd (CR-89)	Patterson Rd	0.67	2	2
111	2-OMR-2	Old Massey Ranch (CR-100)	Patterson Rd	Masters Rd (FM 1128)	0.33	0	4
73	2-CRX-1	Croix Rd (CR-58)	Oak Crest Pkwy	1035' E of Oak Crest Pkwy	0.20	2	2
72	2-CRX-2	Croix Rd (CR-58)	1035' E of Oak Crest Pkwy	Del Bello Rd	0.28	2	2
102	2-DBB-1	Del Bello Blvd EXT A	Pollard Blvd	Pollard Drive	0.45	0	4
103	2-DBB-2	Del Bello Blvd	Pollard Drive	Del Bello Blvd EXT B	0.12	2	2
51	2-DBB-3	Del Bello Blvd EXT B	Del Bello Blvd	Del Bello Rd (CR-90)	0.19	0	4
107	2-DBR-1	Del Bello Rd (CR-90)	Croix Rd (CR-58)	Lira Rd	0.73	2	2
120	2-DBR-2	Del Bello Rd (CR-90)	Lira Rd	Patterson Rd	0.32	2	2
30	2-DBR-3	Del Bello Rd (CR-90)	Patterson Rd	Masters Rd (FM 1128)	0.65	2	2
54	2-LWS	Lewis Ln	Mccoy Rd	Masters Rd (FM 1128)	0.50	2	2
109	2-LIRA-1	Lira Rd	Del Bello Blvd	Lira Rd EXT	0.55	2	2
108	2-LIRA-2	Lira Rd EXT	Lira Rd	City Limit	0.59	0	4
110	2-LIRA-3	Lira Rd	Old Chocolate Bayou	N City Limit	0.22	2	2
40	2-MCC-1	Mccoy Rd	Charlotte St	SH 6	0.68	2	2
26	2-MSTR-1	Masters Rd (FM 1128)	Bailey Ave (CR-101)	Old Massey Ranch (CR-100)	1.00	2	2
27	2-MSTR-2	Masters Rd (FM 1128)	Old Massey Ranch (CR-100)	Oilfield Rd	0.26	2	2
28	2-MSTR-3	Masters Rd (FM 1128)	Oilfield Rd	Chocolate Bayou Rd	1.04	2	2
29	2-MSTR-4	Masters Rd (FM 1128)	Chocolate Bayou Rd	Dogwood Ave	1.08	2	2
39	2-MSTR-5	Masters Rd (FM 1128)	Dogwood Ave	Charlotte St	0.76	2	2
38	2-MSTR-6	Masters Rd (FM 1128)	Charlotte St	SH 6	0.69	2	2
84	2-MSTR-7	Masters Rd (FM 1128)	SH-6	Railroad	0.23	2	2
106	2-NEW-1	New Road 2A	Croix Rd (CR-58)	Del Bello Blvd	0.78	0	4

Table ES- 1 continued from previous page.

Map Ref	ID	Roadway	From	To	Length (mi)	Existing Lanes	Added Lanes
Service Area 3							
117	3-BELC-1	Belcher Rd	Masters Rd (FM 1128)	50 W of Hal McLain	1.56	2	2
70	3-BELC-2	Belcher Rd	900' E of Frey Rd	2250' W of City Limit	0.25	0	4
90	3-BELC-3	Belcher Rd	2250' W of City Limit	W City Limit	0.42	0	4
93	3-CEM-1	Cemetery Rd	Scott Ave	Lewis Ln	0.34	2	2
33	3-CEM-2	Cemetery Rd	Lewis Ln	SH 6	0.58	2	2
104	3-CR99-1	CR-99	170' S of Heights Rd	Oilfield Rd	0.26	2	2
62	3-CR99-2	CR-99	Oilfield Rd	Belcher Rd	0.62	2	2
63	3-CR99-3	CR-99	Belcher Rd	Lewis Ln	0.79	2	2
64	3-CR99-4	CR-99	Lewis Ln	SH-6	0.45	2	2
61	3-CR99-5	CR-99	SH-6	Alvin-Manvel Rd	0.31	2	2
55	3-LEW	Lewis Ln	Masters Rd (FM 1128)	Cemetery Rd	0.60	2	2
27	3-MSTR-1	Masters Rd (FM 1128)	Old Massey Ranch (CR-100)	Oilfield Rd	0.26	2	2
28	3-MSTR-2	Masters Rd (FM 1128)	Oilfield Rd	Chocolate Bayou Rd	1.04	2	2
29	3-MSTR-3	Masters Rd (FM 1128)	Chocolate Bayou Rd	Dogwood Ave	1.08	2	2
39	3-MSTR-4	Masters Rd (FM 1128)	Dogwood Ave	Charlotte St	0.76	2	2
38	3-MSTR-5	Masters Rd (FM 1128)	Charlotte St	SH 6	0.69	2	2
84	3-MSTR-6	Masters Rd (FM 1128)	SH-6	Railroad	0.23	2	2
69	3-NEW-1	New Road 3A	Oilfield Rd	Belcher Rd	0.62	0	4
71	3-NEW-2	New Road 3B	Bissel Rd	City Limit	0.25	0	4
113	3-NEW-3	New Road 3C	SH 6	Bissel Rd	0.25	0	4
112	3-OMR	Old Massey Ranch (CR-100)	Masters Rd (FM 1128)	635' W of Holland Rd	0.54	2	2

Table ES- 1 continued from previous page.

Map Ref	ID	Roadway	From	To	Length (mi)	Existing Lanes	Added Lanes
Service Area 4							
44	4-BIS-1	Bissell Rd	Meridiana Pkwy	Masters Rd	0.56	2	2
83	4-BIS-2	Bissell Rd	Masters Rd	E City Limit	1.57	2	2
131	4-IOWA	Iowa Ln	Bissel St	Bullard Pkwy	0.27	2	2
46	4-JOR-1	Jordan St	Meridiana Pkwy	Masters Rd	0.58	2	1
60	4-JOR-2	Jordan St	Masters Rd	Jordan St EXT A	1.15	2	1
135	4-JOR-3	Jordan St EXT A	Jordan St	New Road 4G	0.32	0	3
123	4-JOR-4	Jordan St EXT B	New Road 4G	E City Limits	0.47	0	3
57	4-MSTR-1	Masters Rd (CR-67)	Railroad	Jordan St	0.81	2	2
49	4-MSTR-2	Masters Rd (CR-67)	Jordan St	New Road 4C	1.00	2	2
91	4-MSTR-3	Masters Rd (CR-67)	New Road 4C	Uzzell Rd	0.11	2	2
50	4-MSTR-4	Masters Rd (CR-67)	Uzzell Rd	Hanselman Rd	1.00	2	2
124	4-MSTR-5	Masters Rd (CR-67)	Hanselman Rd	Cumulus Dr	0.18	2	2
125	4-MSTR-6	Masters Rd (CR-67)	Cumulus Dr	1760' S of Cumulus Dr	0.34	2	2
122	4-NEW-1	New Road 4A	Bissel Rd	Jordan St	0.43	0	4
133	4-NEW-2	New Road 4B	Jordan St	New Road 4C	0.54	0	4
114	4-NEW-3	New Road 4C	Masters Rd (FM 1128)	New Road 4D	0.56	0	4
115	4-NEW-4	New Road 4D	New Road 4C	E City Limit	0.66	0	4
137	4-NEW-5	New Road 4E	Jordan St EXT A	New Road 4D	1.06	0	4
134	4-NEW-6	New Road 4F	New Road 4D	Uzzell Rd	0.44	0	4
121	4-NEW-7	New Road 4G	Alvin-Manvel Rd	Jordan St EXT A	0.54	0	4
127	4-NEW-8	New Road 4H	Alvin-Manvel Rd	Jordan St EXT B	0.84	0	4
128	4-NEW-9	New Road 4I	Jordan St EXT B	New Road 4J	1.00	0	4
129	4-NEW-10	New Road 4J	E City Limit	New Road 4I	0.37	0	4
59	4-UZZ-1	Uzzell Rd	Masters Rd	New Road 4F	0.75	2	2
136	4-UZZ-2	Uzzell Rd EXT	New Road 4F	1315' W of Kings Dr	0.25	0	4

Conclusion

The Impact Fee Land Use Assumptions and CIP Report provides a transparent, data-driven framework for managing transportation infrastructure growth in the City of Manvel. By aligning population and employment forecasts with targeted roadway investments, the City can maintain mobility standards and equitably distribute infrastructure costs through its roadway impact fee program.

1.0 PURPOSE

Codified in Chapter 395 of the Texas Local Government Code (TLGC), the legislation authorizes cities to collect a one-time fee from new developments to finance new construction or expansion of capital improvements such as roads, water and wastewater treatment and distribution facilities, and drainage facilities. The law stipulates that all fees collected from new development must not exceed the maximum amount calculated by the methodology described therein. The law further contains specific requirements for program development, administration, fee assessment, and collection.

An initial step in the process of developing impact fee programs is the establishment of land use assumptions and a capital improvement plan (CIP) to address growth and development for a 10-year planning period (TLGC Section 395.001(5)). The land use assumptions, which include population and employment projections, will serve as the basis for preparing impact fee capital improvement plans for roadway facilities. This report details the development of land use assumptions and the impact fee CIPs and contains the following components:

1. **Methodology**
2. **Land Use Assumptions**
   - *Service Area Structure* – Description of benefit area to be served by capacity enhancement infrastructure projects from the impact fee program. Explanation of data collection zones (traffic analysis zones), and the division of the City of Manvel (City) into impact fee service areas for roadway facilities.
   - *Base Year Data* – Historical population trends for Manvel and information on population, non-residential acreage, employment, and existing land use for each service area.
   - *Growth Projections* – Population and employment growth assumptions for 10 years by service area.
3. **Eligible Capital Improvements Plan**
   - *Existing Conditions Analysis* – Analysis of the existing roadway system, including carrying capacity, current utilization, and deficiencies.
   - *Roadway System Improvements* – Identified eligible capital improvements to address demand for roads.

Impact Fee Quick Facts

One-time charge assessed to new development for a portion of costs related to a specific capital improvement program

A clear and equitable **funding mechanism** for implementing infrastructure necessary to accommodate ***new development***

Facilitates "**growth paying for growth**"

Alleviates burden of new facilities on existing tax base (allows cities to recoup a portion of cost of providing improvements)

Provides a **systematic**, **structured** approach to assessment of fees

Credits for developer contributions toward impact fees

2.0 METHODOLOGY

Based upon the growth assumptions and the capital improvements needed to support growth, it is possible to develop an impact fee structure that fairly allocates improvement costs to growth areas in relation to their impact upon the entire infrastructure system. The data in this report has been formulated using reasonable and generally accepted planning principles for the preparation of impact fee systems in Texas and meets the requirements of the TLGC Section 395 for the establishment of impact fees. For the formulation of the land use assumptions and the capital improvements plans, a series of work tasks were undertaken and are described below.

- A kick-off meeting was held to describe the general methodological approach in the study.
- Service area structure was defined for the roadway impact fee system.
- Current and historical population and employment data were gathered from the U.S. Census Bureau American Community Survey (ACS), the Houston-Galveston Area Council (H-GAC), the City future land use plan, and input from City staff. These served as a basis for future growth.
- A compound annual growth rate (CAGR) of 8.96% was recommended for 10-year population growth in the roadway service area (City Limits).
- A CAGR of 8.38% was recommended for 10-year employment growth in the roadway service area (City Limits).
- Vehicle-miles of travel in the evening peak hour was identified as the service unit of measure for analyses and roadway impact fee calculations.
- A roadway inventory was conducted to document lane geometrics, roadway functional classification, and system capacity. Traffic volume count data were collected in October 2025 to determine roadway utilization and if any capacity deficiencies exist within each impact fee service area.
- Base and 10-year demographics were prepared for each roadway service area.
- Projected 10-year growth was calculated for the roadway service areas based on land use assumptions (projections of population and employment growth) and translated into residential, office, commercial and industrial travel using service unit equivalencies. Trip rate data was obtained from *Trip Generation, Twelfth Edition* by the Institute of Transportation Engineers (ITE), and trip length statistics for Manvel were obtained from the National Household Workplace Survey, H-GAC, and from nearby municipalities.
- Roadway eligible capital improvements plan were defined within the city limits.

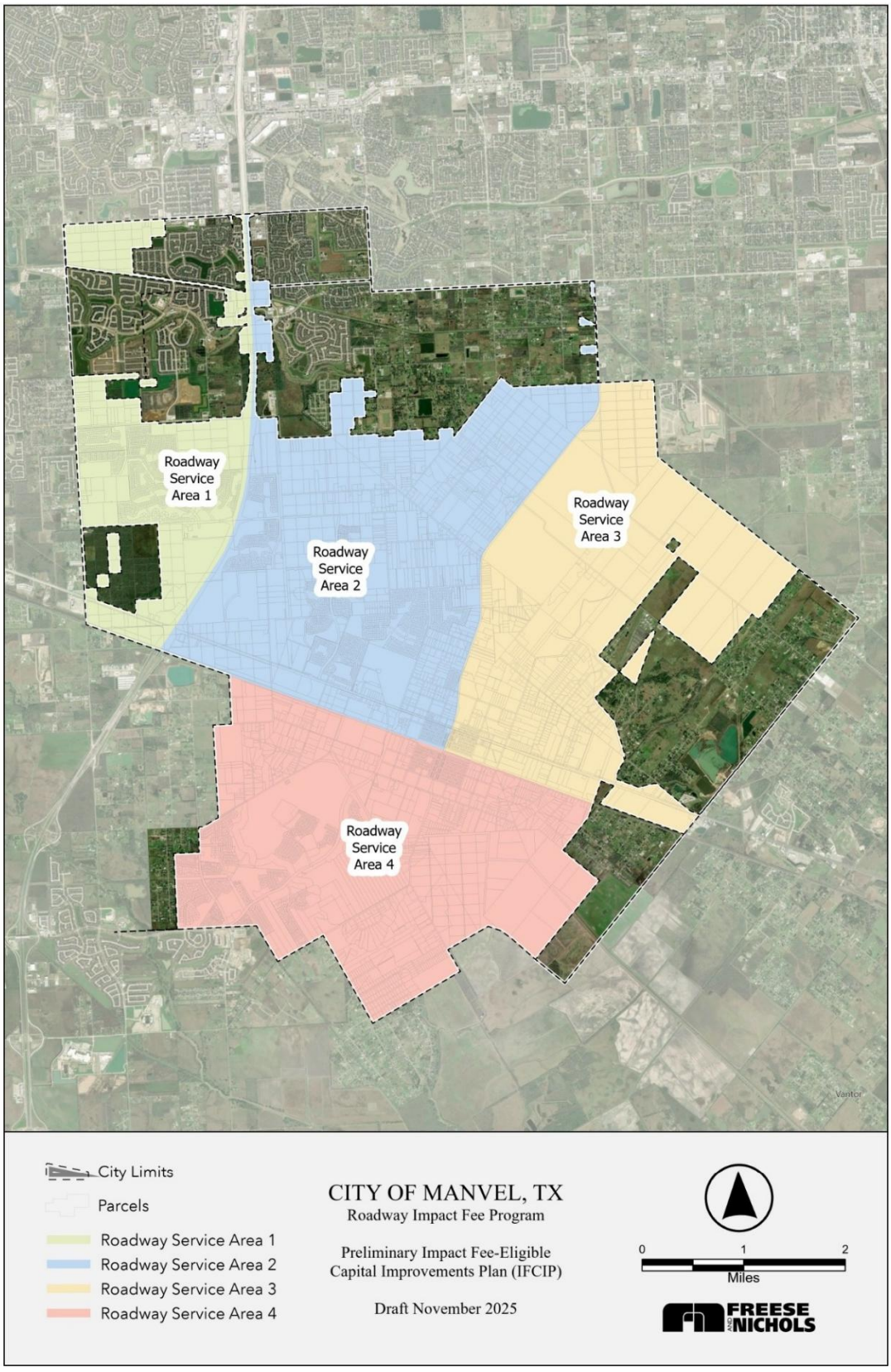
3.0 LAND USE ASSUMPTIONS

3.1 Data Collection Zones and Service Area Maps

3.1.1 Service Areas

TLGC Chapter 395 requires that service areas be defined for impact fees to ensure that facility improvements are located in close proximity to areas generating needs. Legislative requirements stipulate that roadway service areas be limited to a six-mile maximum and must be located within the current City Limits. Roadway service areas are different from water and wastewater systems, which can include the City Limits and its ETJ or other defined service area. This is primarily because roadway systems are "open" to both local and regional (non-City) use as opposed to a defined level of utilization from residents within a water and wastewater system. The City of Manvel was divided into four service areas to consider program expansion as the city grows. The service areas are illustrated in **Figure 3-1**.

Figure 3-1: City of Manvel Roadway Service Areas



3.1.2 Land Use Assumption Methodology

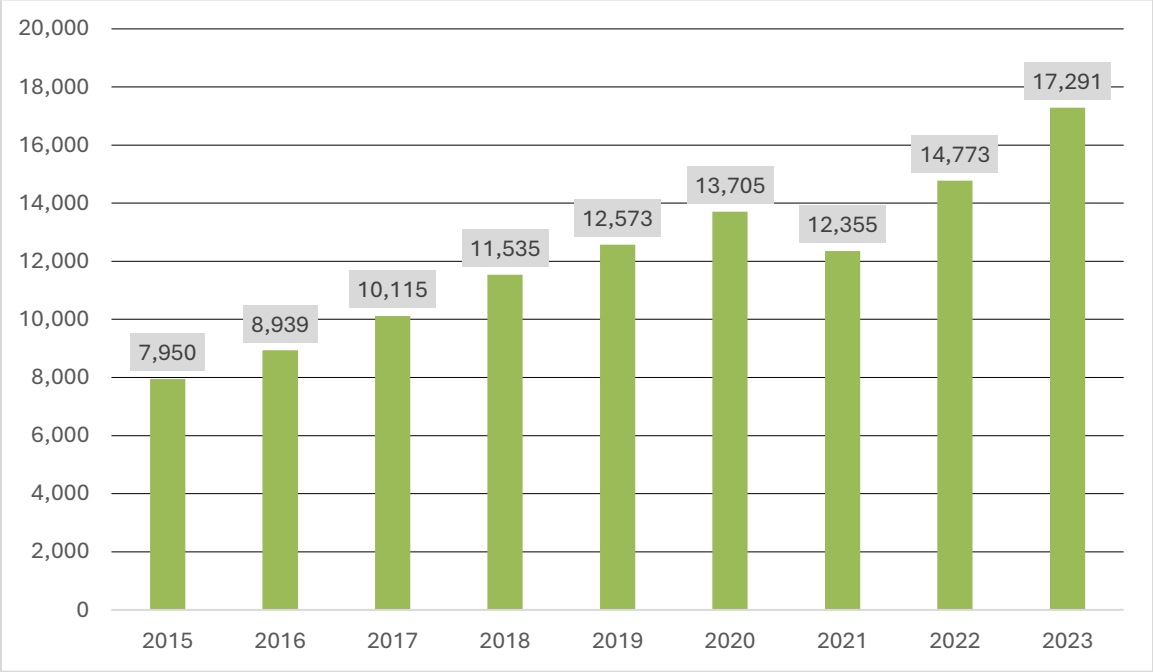
The land use assumptions and future growth projections take into consideration several factors influencing development patterns, including the following:

- The character, type, density, and quantity of existing development
- Availability of land for future expansion
- Current and historical growth trends of population and development within the City
- Location and configuration of vacant land
- Known or anticipated development projects as defined by City staff

3.2 Historical Growth

Based on data collected from H-GAC and ACS historic data, the City experienced a compound annual population growth rate of approximately 10.2% from 2015 to 2023. Historical population growth is shown in **Table 3-1.**

Table 3-1: Historical Population Growth
(American Community Survey)



3.3 Population and Employment Projections

For the land use assumptions process, the existing population and employment projections were calculated using US Census, ACS, H-GAC, and City data. FNI prepared a projections database to determine population and employment 10-year forecasts with input from City staff. A series of assumptions were made to arrive at reasonable growth rates for population and employment.

3.3.1 Population

Generally, the following assumption served as the basis for initiating 10-year projections:

> *Future land uses will occur based on similar trends of the past and will conform with the anticipated future development and redevelopment opportunities as forecasted in the Manvel Comprehensive Plan and other special area plans.*

Population growth for the whole City was projected using the sources listed above, and subsequently assigned to each service area using information regarding known future developments and development trends, availability of current residentially zoned land within the City, and data from H-GAC's regional travel demand model allocated geographically by Traffic Survey Zone (TSZ). Based on these sources, a CAGR of approximately 8.96% aligns with residential growth expectations within the City of Manvel. This will result in a total population increase of approximately 27,250 persons over 10 years. The roadway population projections are presented in **Table 3-2**.

Table 3-2: Roadway Service Area Population Projections

Total Population				
Service Area	**2025**	**2035**	**Total Net Growth**	**Compound Annual Growth Rate**
1	8,357	12,230	3,873	
2	6,390	14,102	7,712	
3	1,362	9,598	8,236	
4	3,941	11,370	7,429	
Total	**20,050**	**47,300**	**27,250**	**8.96%**

3.3.2 Employment

Employment for each service area was broken down into basic, retail, and service uses as defined by the North American Industry Classification System (NAICS) code. Each of these employment types generate unique types of demand for roadway usage, hence the breakdown. **Basic Employment** includes land use activities that produce goods and services exported outside the local economy, such as manufacturing, construction, transportation, wholesale trade, warehousing, and other industrial uses. **Retail Employment** includes land use activities that provide for the retail sale of goods that primarily serve households and whose location choice is oriented to the household sector, such as grocery stores, restaurants, and shopping centers.

Service Employment includes land use activities that provide personal and professional services such as financial, insurance, government, and other professional administrative offices.

TAZ data and ACS data was used to project employment within the roadway service area. Based on known development trends, Census data, and TAZ data, a CAGR of approximately 8.38% aligns with employment expectations within the City of Manvel. This will result in a total employment increase of approximately 15,440 jobs over 10 years. **Table 3-3** and **Table 3-4** show the projected employment.

Table 3-3: Projected Employment/Non-residential Growth by Type

Employment by Type								
Service Area	2025				2035			
	Basic	Service	Retail	Total	Basic	Service	Retail	Total
1	70	371	645	1,086	76	687	1,014	1,777
2	170	2,714	2,980	5,864	274	4,659	3,195	8,128
3	240	426	245	911	240	751	316	1,307
4	480	3,199	950	4,629	480	13,353	2,885	16,718
Total	960	6,710	4,820	**12,490**	1,070	19,450	7,410	**27,930**

Table 3-4: Projected Total Employment Growth

Total Employment				
Service Area	2025	2035	Net Growth	Compound Annual Growth Rate
1	1,086	1,777	691	
2	5,864	8,128	2,264	
3	911	1,307	396	
4	4,629	16,718	12,089	
Total	**12,490**	**27,930**	**15,440**	**8.38%**

4.0 ELIGIBLE CAPITAL IMPROVEMENT PLANS

The roadway impact fee CIP was developed for the City to provide infrastructure based on forecast growth assumptions. The eligible existing and future improvements were designed to provide the required capacity to meet roadway demands through the next 10 years and are sized to 20-year conditions. The roadway projects required to meet growth in the 10-year period were used in the impact fee analysis and calculation. Impact fee eligible projects are rooted in the official City of Manvel Thoroughfare Plan.

4.1 Roadway Systems

An inventory of the collector and arterial roadway facilities within the City Limits was conducted to determine existing conditions throughout the City. This analysis determined the capacity provided by the existing roadway system, the demand currently placed on the system, and the potential existence of deficiencies on the roadway system. Updated data for the inventory was obtained from traffic volume counts and field reconnaissance of current roadway sections.

The roadways were divided into segments based on volume changes, major intersections, service area boundaries, and capacity changes. The length, number of lanes, cross-section, and peak hour volume data were obtained for each roadway segment. Lane capacities were assigned to each segment based on its functional street classification, the associated roadway lane capacities, and the existing number of lanes. Lane capacities used in all analyses are shown in **Table 4-1**.

Table 4-1: Roadway Facility Vehicle-Mile Lane Capacities

Roadway Type	Capacity (vehicles per hour per lane)
UC - Undivided Collector	510
DC - Divided Collector	565
SC – Special Collector, includes two-way left turn lane (TWLTL)	565
UA - Undivided Arterial	590
DA - Divided Arterial	665
SA – Special Arterial, includes two-way left turn lane (TWLTL)	665

4.1.1 Existing Roadway Volumes

Existing directional peak hour volumes were obtained from automated traffic counts on major roadways (as identified in the Thoroughfare Plan as arterial or collector status) throughout the City in October 2025. To minimize the total number of counts, data was collected in at locations where traffic volumes would typically represent link volumes on the major segments within the immediate area. For segments not counted, existing volumes were used, or estimates were developed based on data from adjoining roadway counts. Data was compiled for roadway segments throughout the

City and entered into the database for use in calculations. The unit for many of these calculations is vehicle-miles (veh-mi), and the existing roadway capacity analysis is shown in **Table 4-2.**

Table 4-2: Existing Roadway Capacity Analysis

Shared Service Area	Roadway	From	To	% in Serv. Area	Length (mi)	Lanes	Type	PM Peak Hr Lane Capacity	Peak Hour Volumes			Supply (veh-mi)	Demand (veh-mi)	Excess Capacity (veh-mi)	Existing Deficiency (veh-mi)
									A	B	Total				
Service Area 1															
-	Bailey Rd (CR101)	Bailey Ave (City Limits)	E City Limits	100%	0.28	4	UA	590	905	928	**1,833**	661	513	148	0
-	Croix Rd (CR 58)	Almeda School Rd (CR 48)	460' East of Rodeo Dr (City Limit)	100%	0.82	4	DA	665	720	800	**1,520**	2,181	1,246	935	0
-	Croix Rd (CR 58)	Croix Pkwy (CR 84; City Limit)	Laigle Rd (CR 85)	100%	0.34	4	DA	665	655	999	**1,654**	904	562	342	0
-	Almeda School Rd (CR 48)	Magnolia Pkwy (CR 59)	90' South of Mustang Bayou (City Limits)	100%	0.42	4	DA	665	600	700	**1,300**	1,117	546	571	0
-	Almeda School Rd (CR 48)	4610 CR 48 (City Limit)	Croix Rd (CR 58)	100%	0.51	4	DA	665	611	746	**1,357**	1,357	692	665	0
-	Old Airline Rd (CR 48)	Croix Rd (CR 58)	Rio Lindo St/Palm Desert Dr	100%	0.28	4	DA	665	611	746	**1,357**	745	380	365	0
-	Old Airline Rd (CR 48)	Rio Lindo St/Palm Desert Dr	SH 6	100%	1.40	4	DA	665	518	718	**1,236**	3,724	1,730	1,994	0
-	Iowa Colony Rd (CR 48)	SH 6	Entrance to 16400 SH 6	50%	0.06	4	UA	590	0	268	**268**	71	16	55	0
-	Iowa Colony Rd (CR 48)	Entrance to 16400 SH 6	S City Limits	50%	0.21	2	UA	590	0	268	**268**	124	56	68	0
-	Rodeo Dr	Croix Rd (CR 58)	Palm Desert Dr	100%	0.34	2	UC	510	100	130	**230**	347	78	269	0
-	Rodeo Dr	Palm Desert Dr	Oakland Park Dr	100%	0.14	2	UC	510	100	130	**230**	143	32	111	0
-	Rodeo Dr	Oakland Park Dr	Atascadero Dr	100%	0.71	2	UC	510	137	174	**311**	724	221	503	0
-	Rodeo Dr	Atascadero Dr	Rodeo Palms Pkwy	100%	0.12	4	DC	565	137	174	**311**	271	37	234	0
-	Rodeo Palms Pkwy	Rodeo Palms Blvd	Rodeo Dr	100%	0.14	4	DA	665	137	137	**342**	372	38	334	0
-	Rodeo Palms Pkwy	Rodeo Dr	SH 288	100%	0.19	4	DA	665	170	140	**310**	505	59	447	0
-	Kirby Dr	Broad Reach Rd	End of Road	100%	0.31	4	DA	665	45	37	**82**	825	25	799	0
-	SH 6	Old Airline Rd (CR 48)	Kirby Dr	100%	0.52	6	DA	665	1,467	1,734	**3,201**	2,075	1,665	410	0
-	SH 6	Kirby Dr	SH-288	100%	0.37	6	DA	665	1,467	1,734	**3,201**	1,476	1,184	292	0
												17,622	**9,083**	**8,539**	**0**
Service Area 2															
-	Croix Rd (CR 58)	SH 288	City Limit	100%	0.12	2	DA	665	258	224	**482**	160	58	102	0
-	Bailey Rd (CR101)	SH 288	E City Limits	100%	0.17	4	UA	590	928	905	**1,833**	401	312	90	0
-	Old Chocolate Bayou Rd	Patterson Rd	Masters Rd (FM 1128)	100%	0.63	2	UC	510	18	25	**43**	643	27	616	0
-	Patterson Rd	4824 Patterson Rd	Old Chocolate Bayou Rd (CR 89)	100%	0.38	2	UA	590	254	169	**34**	448	161	288	0
-	Patterson Rd	Old Chocolate Bayou Rd (CR 89)	Del Bello Rd (CR 90)	100%	0.81	2	UA	590	13	21	**34**	956	28	928	0
-	Del Bello Rd (CR 90)	Criox Rd CR-58)	Patterson Rd	100%	1.05	2	UA	590	254	169	**423**	1,239	444	795	0
-	Del Bello Rd (CR 90)	Patterson Rd	Masters Rd (FM 1128)	100%	0.65	2	UA	590	254	169	**423**	767	275	492	0
-	Del Bello Blvd	SH 288	Manvel Pkwy	100%	0.39	4	DA	665	86	110	**196**	1,037	76	961	0
-	Del Bello Blvd	Manvel Pkwy	Pollard Blvd	100%	0.59	2	UA	590	26	30	**56**	696	33	663	0
-	Del Bello Blvd	6105 Del Bello Blvd	6403 Del Bello Blvd	100%	0.10	2	UA	590	5	12	**17**	118	2	116	0
-	Manvel Pkwy	Del Bello Blvd	Lake View Dr	100%	0.35	2	UA	590	28	12	**40**	413	14	399	0
-	Manvel Pkwy	Del Bello Blvd	Autumn Breeze Dr	100%	0.19	2	UA	590	19	36	**55**	224	10	214	0
-	Pollard Blvd	SH 6	Charlotte St	100%	0.68	4	DA	665	79	109	**188**	1,809	128	1,681	0
-	Pollard Blvd	Charlotte St	450' South of Del Bello Blvd	100%	0.94	2	UA	590	60	50	**188**	1,109	103	1,006	0
-	Pollard Blvd	450' South of Del Bello Blvd	Del Bello Blvd	100%	0.09	4	DA	665	60	28	**88**	239	8	231	0
-	Dogwood Ave	Pollard Dr	McCoy Rd	100%	0.39	2	UC	510	1	3	**4**	398	2	396	0
-	Dogwood Ave	McCoy Rd	Masters Rd (FM 1128)	100%	0.51	2	UC	510	15	40	**55**	520	28	492	0

Table 4-2 continued from previous page.

Shared Service Area	Roadway	From	To	% in Serv. Area	Length (mi)	Lanes	Type	PM Peak Hr Lane Capacity	Peak Hour Volumes			Supply (veh-mi)	Demand (veh-mi)	Excess Capacity (veh-mi)	Existing Deficiency (veh-mi)
									A	B	Total				
-	Charlotte St	Livingston Dr	McCoy Rd	100%	0.46	2	DC	565	57	85	**9**	520	65	454	0
-	Charlotte St	McCoy Rd	Masters Rd (FM 1128)	100%	0.46	2	UC	510	30	50	**80**	469	37	432	0
-	McCoy Rd	Dogwood Ave	Tankersley Rd	100%	0.40	2	DA	665	125	147	**168**	532	109	423	0
-	McCoy Rd	Tankersley Rd	Charlotte St	100%	0.17	2	DA	665	135	157	**292**	226	50	176	0
-	McCoy Rd	Charlotte St	Lewis Ln	100%	0.34	2	DA	665	160	184	**344**	452	117	335	0
-	McCoy Rd	Lewis Ln	SH 6	100%	0.34	3	SA	665	187	207	**394**	452	134	318	0
-	McCoy Rd	SH 6	Rodgers Rd	100%	0.09	4	DA	665	382	448	**399**	239	75	165	0
3	Masters (FM 1128)	Old Massey Ranch Rd (CR 90)	Oilfield Rd (CR 98)	50%	0.26	2	UA	590	0	610	**610**	153	159	0	5
3	Masters (FM 1128)	Oilfield Rd (CR 98)	Old Chocolate Bayou Rd (CR 89)	50%	1.04	2	UA	590	0	574	**574**	614	597	17	0
3	Masters (FM 1128)	Old Chocolate Bayou Rd (CR 89)	Del Bello Rd (CR 90)	50%	0.81	2	UA	590	0	576	**576**	478	467	11	0
3	Masters (FM 1128)	Del Bello Rd (CR 90)	Dogwood Ave	50%	0.27	2	UA	590	0	660	**660**	159	178	0	19
3	Masters (FM 1128)	Dogwood Ave	Charlotte St	50%	0.76	2	UA	590	0	670	**22**	448	509	0	61
3	Masters (FM 1128)	Charlotte St	Lewis Ln	50%	0.34	2	UA	590	0	685	**685**	201	233	0	32
3	Masters (FM 1128)	Lewis Ln	SH 6	50%	0.35	2	UA	590	0	698	**698**	207	244	0	38
3	Masters (FM 1128)	SH 6	Bissell Rd	50%	0.27	2	UA	590	0	363	**363**	159	98	61	0
-	Lewis Ln	McCoy Rd	Masters (FM 1128)	100%	0.50	2	UA	590	60	70	**130**	590	65	525	0
-	SH 6	McCoy Rd	Masters (FM 1128)	100%	0.55	6	DA	665	1,658	1,705	**3,363**	2,195	1,850	345	0
-	SH 6	SH-288	Pollard Blvd	100%	1.19	6	DA	665	1,796	1,725	**3,521**	4,748	4,190	558	0
-	Meridiana Pkwy	SH-6	Bissel Rd	100%	0.25	4	DA	665	382	448	**830**	665	208	458	0
												24,685	**11,091**	**13,749**	**155**
Service Area 3															
2	Masters (FM 1128)	Old Massey Rnch Rd (CR 90)	Oilfield Rd (CR 98)	50%	0.26	2	UA	590	529	0	**529**	153	138	16	0
2	Masters (FM 1128)	Oilfield Rd (CR 98)	Old Chocolate Bayou Rd (CR 89)	50%	1.04	2	UA	590	442	0	**22**	614	460	154	0
2	Masters (FM 1128)	Old Chocolate Bayou Rd (CR 89)	Del Bello Rd (CR 90)	50%	0.81	2	UA	590	460	0	**1,016**	478	373	105	0
2	Masters (FM 1128)	Del Bello Rd (CR 90)	Dogwood Ave	50%	0.27	2	UA	590	470	0	**470**	159	127	32	0
2	Masters (FM 1128)	Dogwood Ave	Charlotte St	50%	0.76	2	UA	590	505	0	**505**	448	384	65	0
2	Masters (FM 1128)	Charlotte St	Lewis Ln	50%	0.34	2	UA	590	528	0	**528**	201	180	21	0
2	Masters (FM 1128)	Lewis Ln	SH 6	50%	0.35	2	UA	590	573	0	**1,271**	207	201	6	0
-	Oilfield Rd (CR 98)	Masters (FM 1128)	E. City Limits	100%	3.53	2	UA	590	13	14	**27**	4,165	95	4,070	0
-	Belcher Rd (CR 397)	Masters (FM 1128)	E. City Limits	100%	0.29	2	UA	590	15	25	**40**	342	12	331	0
-	Cemetery Rd	Scott Ave	Lewis Ln	100%	0.58	2	UA	590	20	22	**42**	684	24	660	0
-	Cemetery Rd	Lewis Ln	SH 6	100%	0.34	2	UA	590	30	32	**62**	401	21	380	0
-	Lewis Ln	Masters (FM 1128)	Cemetery Rd	100%	0.60	2	UA	590	40	50	**90**	708	54	654	0
-	SH 6	Masters (FM 1128)	Cemetery Rd	100%	0.55	6	DA	665	1,887	1,665	**3,552**	2,195	1,954	241	0
-	SH 6	Cemetery Rd	Pearland Sites Rd (E. City Limits)	100%	2.03	6	DA	665	1,903	1,643	**3,546**	8,100	7,198	901	0
-	Pearland Sites Rd.	SH-6	Bissel Rd (CR-190)	100%	0.26	2	UA	590	57	85	**142**	307	37	270	0
												19,162	**11,256**	**7,906**	**0**

Table 4-2 continued from previous page.

Shared Service Area	Roadway	From	To	% in Serv. Area	Length (mi)	Lanes	Type	PM Peak Hr Lane Capacity	Peak Hour Volumes			Supply (veh-mi)	Demand (veh-mi)	Excess Capacity (veh-mi)	Existing Deficiency (veh-mi)
									A	B	Total				
Service Area 4															
-	Bissell Rd (CR-190)	Under Meridiana Pkwy	Masters (CR 67)	100%	0.56	2	UA	590	17	17	**34**	661	19	642	0
-	Bissell Rd (CR-190)	Masters (CR 67)	E. City Limits	100%	1.56	2	UA	590	98	73	**171**	1,841	267	1,574	0
-	Jordan St (CR 90)	Kirchner Rd	Meridiana Pkwy	100%	0.86	2	UC	510	35	33	**117**	877	58	819	0
-	Jordan St (CR 90)	Meridiana Pkwy	Masters (CR 67)	100%	0.59	2	UC	510	38	27	**65**	602	38	563	0
-	Jordan St (CR 90)	Masters (CR 67)	8030 Jordan St	100%	0.86	2	UC	510	36	16	**52**	877	45	832	0
-	Clark Rd (CR 90)	W. City Limits	Kirchner Rd	100%	1.40	2	DA	665	56	48	**104**	1,862	146	1,716	0
-	Meridiana Pkwy	Bissel Rd	Jordan St	100%	0.25	4	DA	665	382	448	**830**	665	208	458	0
-	Meridiana Pkwy	Jordan St	Sora Dr/Cumulus Dr	100%	1.49	4	DA	665	369	406	**775**	3,963	1,155	2,809	0
-	Meridiana Pkwy	Sora Dr/Cumulus Dr	Pursley Blvd	100%	0.71	4	DA	665	341	365	**706**	1,889	501	1,387	0
-	Meridiana Pkwy	Pursley Blvd	S. City Limits	100%	0.04	4	DA	665	422	345	**767**	106	31	76	0
-	Cumulus Rd	Meridiana Pkwy	Masters (CR 67)	100%	0.67	2	UC	510	50	50	**100**	683	67	616	0
-	Masters (CR 67)	Bissell Rd	Jordan St	100%	0.41	2	UA	590	215	347	**562**	484	230	253	0
-	Masters (CR 67)	Jordan St	Uzzelle Rd	100%	0.92	2	UA	590	182	246	**428**	1,086	394	692	0
-	Masters (CR 67)	Uzzelle Rd	Hanselman Rd	100%	1.00	2	UA	590	159	255	**414**	1,180	414	766	0
-	Masters (CR 67)	Hanselman Rd	Cumulus Dr	50%	0.17	2	UA	590	0	215	**215**	100	37	64	0
-	Masters (CR 67)	Cumulus Dr	W. City Limits	50%	0.33	2	UA	590	0	205	**205**	195	68	127	0
-	Uzzelle Rd	Masters (CR 67)	Kings Dr	100%	0.75	2	UC	510	49	15	**64**	765	48	717	0
-	Pursley Blvd	W. City Limits	Montane Grove Dr	100%	0.17	2	UA	590	250	175	**425**	201	72	128	0
-	Pursley Blvd	Montane Grove Dr	Meridiana Pkwy	100%	0.85	4	DA	665	250	175	**425**	2,261	361	1,900	0
												20,298	**4,158**	**16,140**	**0**
												81,767	**35,588**	**46,334**	**155**

4.1.2 Vehicle-Miles of Existing Capacity

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

Vehicle-Miles of Capacity = Link capacity per peak hour per lane x Number lanes x Segment length

A summary of the current capacity available on the roadway system is shown in **Table 4-3**. It is important to note that the roadway capacity depicted in **Table 4-3** is system-wide for most major roadways and not restricted to those roadways proposed in the impact fee CIP. Directional calculations of capacity were performed separately.

4.1.3 Vehicle-Miles of Existing Demand

The level of current usage in terms of vehicle-miles was calculated for each roadway segment. The vehicle-miles of existing demand were calculated by the following equation:

Vehicle-Miles of Demand = Peak hour volume x Segment length

Table 4-2 also lists total vehicle-miles of demand. For each roadway segment, the existing vehicle-miles of excess capacity and/or deficiencies were calculated. Each direction was evaluated to determine if vehicle demands exceeded the available capacity. If demand exceeded capacity in one or both directions, the deficiency was deducted from the supply associated with the impact fee CIP. A summary of existing capacity, demand, excess capacity, and deficiencies by roadway service area is shown in **Table 4-3.**

Table 4-3: Roadway Existing Vehicle-Miles of Capacity, Demand, Excess Capacity, and Deficiencies

Service Area	Capacity (veh-mi)	Demand (veh-mi)	Excess Capacity (veh-mi)	Deficiencies (veh-mi)
1	17,622	9,083	8,539	0
2	24,685	11,091	13,749	155
3	19,162	11,256	7,906	0
4	20,298	4,158	16,140	0
Total	**81,767**	**35,588**	**46,334**	**155**

4.2 Roadway Demand Projections

The projected growth for the transportation service area is represented by the increase in the number of new vehicle-miles generated over the 10-year planning period. The basis for calculating new demand was the population and employment projections outlined in previous sections. Employment data was provided in terms of the number of jobs.

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

Information extracted from the regional travel demand model provides information on average trip lengths for four general types of land uses. These trip lengths, in conjunction with trip rate data published in ITE *Trip Generation, 12th Edition*, were converted into service unit equivalencies by specific land use type. Other information used to tailor data to the City of Manvel included an evaluation of trip lengths in adjacent cities and a comparison to average trip length values from the H-GAC travel demand model. These equivalencies are:

- 3.91 vehicle-miles per dwelling unit for residential.
- 2.32 vehicle-miles per thousand square feet for basic employment.
- 5.71 vehicle-miles per thousand square feet for service employment.
- 3.97 vehicle-miles per thousand square feet of retail employment.

Table 4-4 lists the projected vehicle-miles of demand over the 10-year planning period for the City.

Table 4-4: 10-Year Projected Vehicle-Miles of New Demand

Service Area	A Additional Population	B Persons per Dwelling Unit	C = A / B Added Dwelling Units	D Vehicle-Miles per Dwelling Unit	E = C x D Total Vehicle-Miles
Estimated **Residential** Growth Vehicle-Mile Trip Generation					
1	3,873	2.89	1,340	3.91	5,239
2	7,712		2,669		10,436
3	8,236		2,850		11,144
4	7,429		2,571		10,053
Total	**27,250**		**9,430**		**36,872**

Service Area	A Additional Employees	B Square Feet per Employee	C = A x B Added Square Feet	D Vehicle-Miles per 1,000 Square Feet	E = C/1,000 x D Total Vehicle-Miles
Estimated **Basic Employment** Growth Vehicle-Mile Trip Generation					
1	6	1,500	9,000	2.32	21
2	104		156,000		362
3	0		0		0
4	0		0		0
Total	**110**		**165,000**		**383**
Estimated **Service Employment** Growth Vehicle-Mile Trip Generation					
1	316	500	158,000	5.71	902
2	1,945		972,500		5,553
3	325		162,500		928
4	10,154		5,077,000		28,990
Total	**12,740**		**6,370,000**		**36,373**
Estimated **Retail Employment** Growth Vehicle-Mile Trip Generation					
1	369	800	295,200	3.97	1,172
2	215		172,000		683
3	71		56,800		225
4	1,935		1,548,000		6,146
Total	**2,590**		**2,072,000**		**8,226**

Service Area	Residential Growth Vehicle-Miles	Basic Emp Growth Vehicle-Miles	Service Emp Growth Vehicle-Miles	Retail Emp Growth Vehicle-Miles	Total Growth Vehicle-Miles
1	5,239	21	902	1,172	**7,334**
2	10,436	362	5,553	683	**17,034**
3	11,144	0	928	225	**12,297**
4	10,053	0	28,990	6,146	**45,189**
Total	**36,872**	**383**	**36,373**	**8,226**	**81,854**

4.3 Roadway System Improvements

4.3.1 Eligible Improvements

The roadway impact fee CIP aims to address the long-term growth expected for the City, provide the ability to credit development-driven road improvements against assessed impact fees, and reduce program amendment needs to incorporate eligible facilities not in the impact fee program. To this end, most arterial and collector roads on the Thoroughfare Plan were initially incorporated into the impact fee program, with adjustments made to remove developer-implemented improvements (information per City staff). The approach of all remaining roadways satisfies recently adopted legislation regarding "funded" roads through the impact fee program.

Legislative mandate stipulates that the impact fee CIP contain only those roadways classified as *arterial* or *collector* status facilities that are included in the City's adopted Thoroughfare Plan. Impact fee legislation also allows for the recoupment of costs for previously constructed facilities as well as projects currently under construction. City staff stated that there would be no recoupment projects; only new roadway projects would be included in the impact fee program.

4.3.2 Impact Fee CIP

The impact fee CIP includes 73 project segments that advance the implementation of the Thoroughfare Plan network. Projects identified include only new lanes added to achieve Thoroughfare Plan standards, and, thus, only new capacity is provided by the CIP. For example, if two lanes of a future four-lane arterial exist, the two new lanes of added capacity are incorporated into the program. The capacity provided and the net capacity provided by the proposed CIP are summarized in **Table 4-5**. Net capacity provided by the proposed CIP takes into consideration current traffic on those roadways and any deficiencies in the network from the existing conditions analysis described in Section 4.1 Roadway Systems. A detailed listing by project of the capacity supplied can be found in **Table 4-7**.

Table 4-5: Capacity and Net Capacity Provided by the Proposed CIP

Service Area	A	B	C = A – B	D	E = C – D
	Capacity Supplied by CIP (veh-mi)	Existing Utilization on IFCIP-Eligible Network (veh-mi)	Excess Capacity (veh-mi)	Existing Deficiencies (veh-mi)	Net Capacity Supplied by CIP (veh-mi)
1	1,032	0	1,032	0	1,032
2	15,871	0	15,871	155	15,716
3	12,862	0	12,862	0	12,862
4	21,584	0	21,584	0	21,584
Total	**51,349**	**0**	**51,349**	**155**	**51,194**

A comparison of net capacity provided by the proposed CIP relative to 10-year needs is listed in **Table 4-6**. The percent attributable to new growth is a direct result of the land use assumptions described earlier in the report. Based on the land use assumptions, **100%** of the capacity provided by the CIP, on average citywide, is expected to be consumed by 10-year growth.

Table 4-6: Capacity and Net Capacity Provided by the Proposed CIP

	E	F	E / F (Max 100%)
Service Area	Net Capacity Supplied by CIP (veh-mi)	Projected 10-Year Growth (veh-mi)	Percent Of CIP Attributable to New Dev. (10-Yr.)
1	1,032	7,334	100%
2	15,716	17,034	100%
3	12,862	12,297	96%
4	21,584	45,189	100%
Total	**51,194**	**81,854**	**100%**

Table 4-7 lists the corresponding proposed CIP projects, and **Figure 4-1** illustrates the eligible roadway CIP.

Table 4-7: Roadway System Eligible CIP Projects

							A		B		C	D = A x B x C	E	F = D - E
Map Ref #	ID	Shared Service Area	Roadway	From	To	% in Service Area	Length (mi)	Existing Lanes	Eligible Improvement (added lanes)	Type	Lane Capacity	New Capacity Provided	Existing Utilization	Net Capacity Provided (veh-mi)
Service Area 1														
88	1-CR48	X	CR-48	SH-6	S City Limit	**50%**	0.27	2	2	DA	665	180	0	180
67	1-KBY-1	-	Kirby Dr (A)	City Limits	City Limits	**100%**	0.06	0	4	DA	665	160	0	160
66	1-KBY-2	-	Kirby Dr (B)	CR-58	City Limits	**100%**	0.26	0	4	DA	665	692	0	692
							0.59					**1,032**		**1,032**
Service Area 2														
56	2-CHB		Chocolate Bayou Rd	Lira Rd	FM 1128	**100%**	0.94	2	2	UA	590	1,109	0	1,109
138	2-OMR-1	X	Old Massey Ranch (CR-100)	330' E of Old Chocolate Bayou Rd (CR-89)	Patterson Rd	**50%**	0.67	2	2	DA	665	446	0	446
111	2-OMR-2	X	Old Massey Ranch (CR-100)	Patterson Rd	Masters Rd (FM 1128)	**50%**	0.33	0	4	DA	665	439	0	439
73	2-CRX-1		Croix Rd (CR-58)	Oak Crest Pkwy	1035' E of Oak Crest Pkwy	**100%**	0.20	2	2	DA	665	266	0	266
72	2-CRX-2	X	Croix Rd (CR-58)	1035' E of Oak Crest Pkwy	Del Bello Rd	**50%**	0.28	2	2	DA	665	186	0	186
102	2-DBB-1		Del Bello Blvd EXT A	Pollard Blvd	Pollard Drive	**100%**	0.45	0	4	DA	665	1,197	0	1,197
103	2-DBB-2		Del Bello Blvd	Pollard Drive	Del Bello Blvd EXT B	**100%**	0.12	2	2	DA	665	160	0	160
51	2-DBB-3		Del Bello Blvd EXT B	Del Bello Blvd	Del Bello Rd (CR-90)	**100%**	0.19	0	4	DA	665	505	0	505
107	2-DBR-1		Del Bello Rd (CR-90)	Croix Rd (CR-58)	Lira Rd	**100%**	0.73	2	2	DA	665	971	0	971
120	2-DBR-2		Del Bello Rd (CR-90)	Lira Rd	Patterson Rd	**100%**	0.32	2	2	DA	665	426	0	426
30	2-DBR-3		Del Bello Rd (CR-90)	Patterson Rd	Masters Rd (FM 1128)	**100%**	0.65	2	2	DA	665	865	0	865
54	2-LWS		Lewis Ln	Mccoy Rd	Masters Rd (FM 1128)	**100%**	0.50	2	2	UC	510	510	0	510
109	2-LIRA-1		Lira Rd	Del Bello Blvd	Lira Rd EXT	**100%**	0.55	2	2	DA	665	732	0	732
108	2-LIRA-2		Lira Rd EXT	Lira Rd	City Limit	**100%**	0.59	0	4	DA	665	1,569	0	1,569
110	2-LIRA-3	X	Lira Rd	Old Chocolate Bayou	N City Limit	**50%**	0.22	2	2	DA	665	146	0	146
40	2-MCC-1		Mccoy Rd	Charlotte St	SH 6	**100%**	0.68	2	2	DA	665	904	0	904
26	2-MSTR-1	X	Masters Rd (FM 1128)	Bailey Ave (CR-101)	Old Massey Ranch (CR-100)	**50%**	1.00	2	2	DA	665	665	0	665
27	2-MSTR-2	3	Masters Rd (FM 1128)	Old Massey Ranch (CR-100)	Oilfield Rd	**50%**	0.26	2	2	DA	665	173	0	173
28	2-MSTR-3	3	Masters Rd (FM 1128)	Oilfield Rd	Chocolate Bayou Rd	**50%**	1.04	2	2	DA	665	692	0	692
29	2-MSTR-4	3	Masters Rd (FM 1128)	Chocolate Bayou Rd	Dogwood Ave	**50%**	1.08	2	2	DA	665	718	0	718
39	2-MSTR-5	3	Masters Rd (FM 1128)	Dogwood Ave	Charlotte St	**50%**	0.76	2	2	DA	665	505	0	505
38	2-MSTR-6	3	Masters Rd (FM 1128)	Charlotte St	SH 6	**50%**	0.69	2	2	DA	665	459	0	459
84	2-MSTR-7	3	Masters Rd (FM 1128)	SH-6	Railroad	**50%**	0.23	2	2	DA	665	153	0	153
106	2-NEW-1		New Road 2A	Croix Rd (CR-58)	Del Bello Blvd	**100%**	0.78	0	4	DA	665	2,075	0	2,075
							13.26					**15,871**		**15,871**

Table 4-7 continued from previous page

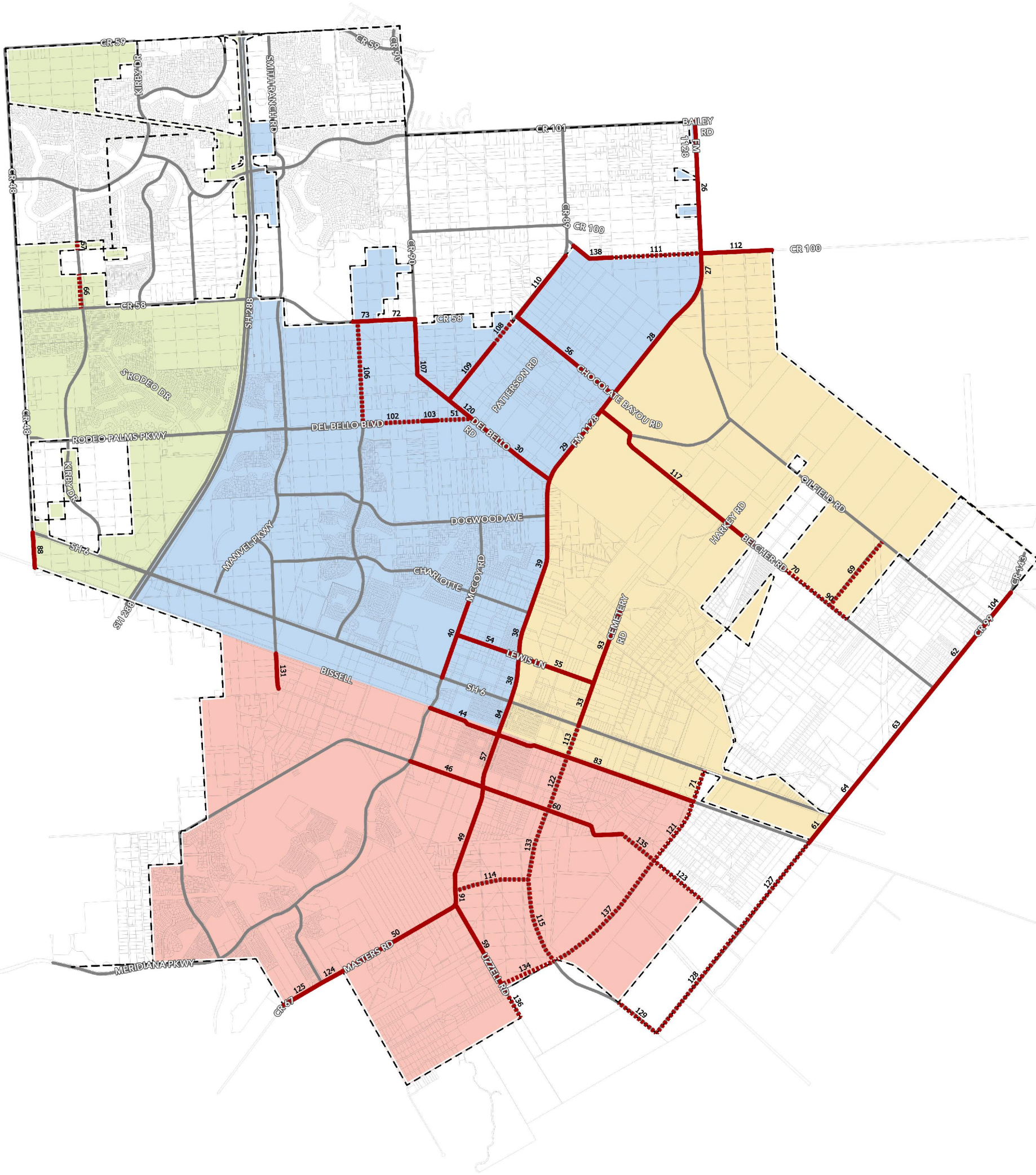
							A		B		C	D = A x B x C	E	F = D - E
Map Ref #	ID	Shared Service Area	Roadway	From	To	% in Service Area	Length (mi)	Existing Lanes	Eligible Improvement (added lanes)	Type	Lane Capacity	New Capacity Provided	Existing Utilization	Net Capacity Provided (veh-mi)
Service Area 3														
117	3-BELC-1		Belcher Rd	Masters Rd (FM 1128)	50' W of Hal McLain	**100%**	1.56	2	2	DA	665	2,075	0	2,075
70	3-BELC-2	X	Belcher Rd	900' E of Frey Rd	2250' W of City Limit	**100%**	0.25	0	4	DA	665	665	0	665
90	3-BELC-3	X	Belcher Rd	2250' W of City Limit	W City Limit	**50%**	0.42	0	4	DA	665	559	0	559
93	3-CEM-1		Cemetery Rd	Scott Ave	Lewis Ln	**100%**	0.34	2	2	UC	510	347	0	347
33	3-CEM-2		Cemetery Rd	Lewis Ln	SH 6	**100%**	0.58	2	2	UC	510	592	0	592
104	3-CR99-1	X	CR-99	170' S of Heights Rd	Oilfield Rd	**50%**	0.26	2	2	DA	665	173	0	173
62	3-CR99-2	X	CR-99	Oilfield Rd	Belcher Rd	**50%**	0.62	2	2	DA	665	412	0	412
63	3-CR99-3	X	CR-99	Belcher Rd	Lewis Ln	**50%**	0.79	2	2	DA	665	525	0	525
64	3-CR99-4	X	CR-99	Lewis Ln	SH-6	**50%**	0.45	2	2	DA	665	299	0	299
61	3-CR99-5	X	CR-99	SH-6	Alvin-Manvel Rd	**50%**	0.31	2	2	DA	665	206	0	206
55	3-LEW		Lewis Ln	Masters Rd (FM 1128)	Cemetery Rd	**100%**	0.60	2	2	UC	510	612	0	612
27	3-MSTR-1	2	Masters Rd (FM 1128)	Old Massey Ranch (CR-100)	Oilfield Rd	**50%**	0.26	2	2	DA	665	173	0	173
28	3-MSTR-2	2	Masters Rd (FM 1128)	Oilfield Rd	Chocolate Bayou Rd	**50%**	1.04	2	2	DA	665	692	0	692
29	3-MSTR-3	2	Masters Rd (FM 1128)	Chocolate Bayou Rd	Dogwood Ave	**50%**	1.08	2	2	DA	665	718	0	718
39	3-MSTR-4	2	Masters Rd (FM 1128)	Dogwood Ave	Charlotte St	**50%**	0.76	2	2	DA	665	505	0	505
38	3-MSTR-5	2	Masters Rd (FM 1128)	Charlotte St	SH 6	**50%**	0.69	2	2	DA	665	459	0	459
84	3-MSTR-6	2	Masters Rd (FM 1128)	SH-6	Railroad	**50%**	0.23	2	2	DA	665	153	0	153
69	3-NEW-1		New Road 3A	Oilfield Rd	Belcher Rd	**100%**	0.62	0	4	DA	665	1,649	0	1,649
71	3-NEW-2		New Road 3B	Bissel Rd	City Limit	**100%**	0.25	0	4	DA	665	665	0	665
113	3-NEW-3		New Road 3C	SH 6	Bissel Rd	**100%**	0.25	0	4	DA	665	665	0	665
112	3-OMR		Old Massey Ranch (CR-100)	Masters Rd (FM 1128)	635' W of Holland Rd	**100%**	0.54	2	2	DA	665	718	0	718
							10.82					**12,862**		**12,862**

Table 4-7 continued from previous page

							A		B		C	D = A x B x C	E	F = D - E
Map Ref #	ID	Shared Service Area	Roadway	From	To	% in Service Area	Length (mi)	Existing Lanes	Eligible Improvement (added lanes)	Type	Lane Capacity	New Capacity Provided	Existing Utilization	Net Capacity Provided (veh-mi)
Service Area 4														
44	4-BIS-1		Bissell Rd	Meridiana Pkwy	Masters Rd	**100%**	0.56	2	2	UA	590	661	0	661
83	4-BIS-2		Bissell Rd	Masters Rd	E City Limit	**100%**	1.57	2	2	UA	590	1,853	0	1,853
131	4-IOWA		Iowa Ln	Bissel St	Bullard Pkwy	**100%**	0.27	2	2	UC	510	275	0	275
46	4-JOR-1		Jordan St	Meridiana Pkwy	Masters Rd	**100%**	0.58	2	1	SC*	55	87	0	87
60	4-JOR-2		Jordan St	Masters Rd	Jordan St EXT A	**100%**	1.15	2	1	SC*	55	173	0	173
135	4-JOR-3		Jordan St EXT A	Jordan St	New Road 4G	**100%**	0.32	0	3	SC	565	362	0	362
123	4-JOR-4	X	Jordan St EXT B	New Road 4G	E City Limits	**50%**	0.47	0	3	SC	565	266	0	266
57	4-MSTR-1		Masters Rd (CR-67)	Railroad	Jordan St	**100%**	0.81	2	2	DA	665	1,077	0	1,077
49	4-MSTR-2		Masters Rd (CR-67)	Jordan St	New Road 4C	**100%**	1.00	2	2	DA	665	1,330	0	1,330
91	4-MSTR-3		Masters Rd (CR-67)	New Road 4C	Uzzell Rd	**100%**	0.11	2	2	DA	665	146	0	146
50	4-MSTR-4		Masters Rd (CR-67)	Uzzell Rd	Hanselman Rd	**100%**	1.00	2	2	DA	665	1,330	0	1,330
124	4-MSTR-5	X	Masters Rd (CR-67)	Hanselman Rd	Cumulus Dr	**50%**	0.18	2	2	DA	665	120	0	120
125	4-MSTR-6	X	Masters Rd (CR-67)	Cumulus Dr	1760' S of Cumulus Dr	**50%**	0.34	2	2	DA	665	226	0	226
122	4-NEW-1		New Road 4A	Bissel Rd	Jordan St	**100%**	0.43	0	4	DA	665	1,144	0	1,144
133	4-NEW-2		New Road 4B	Jordan St	New Road 4C	**100%**	0.54	0	4	DA	665	1,436	0	1,436
114	4-NEW-3		New Road 4C	Masters Rd (FM 1128)	New Road 4D	**100%**	0.56	0	4	UA	590	1,322	0	1,322
115	4-NEW-4		New Road 4D	New Road 4C	E City Limit	**100%**	0.66	0	4	DA	665	1,756	0	1,756
137	4-NEW-5		New Road 4E	Jordan St EXT A	New Road 4D	**100%**	1.06	0	4	UA	590	2,502	0	2,502
134	4-NEW-6		New Road 4F	New Road 4D	Uzzell Rd	**100%**	0.44	0	4	UA	590	1,038	0	1,038
121	4-NEW-7	X	New Road 4G	Alvin-Manvel Rd	Jordan St EXT A	**50%**	0.54	0	4	UA	590	637	0	637
127	4-NEW-8	X	New Road 4H	Alvin-Manvel Rd	Jordan St EXT B	**50%**	0.84	0	4	UA	590	991	0	991
128	4-NEW-9	X	New Road 4I	Jordan St EXT B	New Road 4J	**50%**	1.00	0	4	UA	590	1,180	0	1,180
129	4-NEW-10	X	New Road 4J	E City Limit	New Road 4I	**50%**	0.37	0	4	DA	665	492	0	492
59	4-UZZ-1		Uzzell Rd	Masters Rd	New Road 4F	**100%**	0.75	2	2	UA	590	885	0	885
136	4-UZZ-2	X	Uzzell Rd EXT	New Road 4F	1315' W of Kings Dr	**50%**	0.25	0	4	UA	590	295	0	295
							15.80					**21,584**	**0**	**21,584**
											Total	**51,349**	**0**	**51,349**

**For roadways with one added TWLTL, the TWLTL capacity is added to each existing through lane.*

Figure 4-1: Roadway System Impact Fee Eligible Projects



Planned
Planned Expansion
Manvel Thoroughfare Plan
Parcels
Roadway Service Area 1
Roadway Service Area 2
Roadway Service Area 3
Roadway Service Area 4

CITY OF MANVEL, TX
Roadway Impact Fee Program

Preliminary Impact Fee-Eligible
Capital Improvements Plan (IFCIP)

Draft April 2026

0 1 2
Miles

FREESE AND NICHOLS