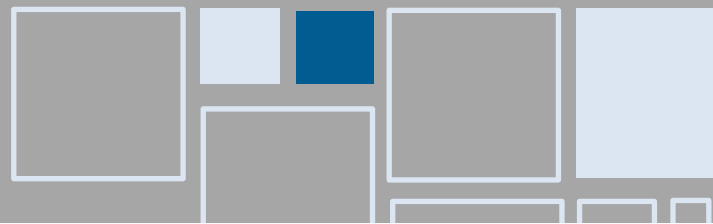




CITY OF FAIR OAKS RANCH

WATER & WASTEWATER IMPACT FEE REPORT



2 0 2 5

PREPARED BY:

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512-617-3100

Water & Wastewater Impact Fee Report

June 2025



6/16/2025

Jessica B. Vassar

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TEXAS REGISTERED
ENGINEERING FIRM
F-2144

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FNI PROJECT #: FA019551

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Appendix B	Wastewater System Project Cost Estimates

ES EXECUTIVE SUMMARY

1.0 BACKGROUND

In September 2024, the City of Fair Oaks Ranch, Texas, authorized Freese and Nichols, Inc. (FNI) to perform an impact fee analysis on the City's water and wastewater systems. The purpose of this report is to document the methodology used in the development and calculation of water and wastewater impact fees for the City of Fair Oaks Ranch. The methodology used herein satisfies the requirements of the Texas Local Government Code Section 395 for the establishment of water and wastewater impact fees.

2.0 LAND USE ASSUMPTIONS

Population and land use are important elements in the analysis of water and wastewater systems. Water demands and wastewater flows depend on the population served by the systems and determines the sizing and location of system infrastructure. A thorough analysis of historical and projected populations, along with future land use, provides the basis for projecting future water demands and wastewater flows. The planning period for this impact fee update is from 2025-2035.

Growth projections were developed using development data provided by City staff. This includes existing connection totals along with projected 2035 connection totals based on land use assumptions adopted in the *Water, Wastewater, and Reuse Master Plan Report*. **Table ES-1** presents the growth projections for the City of Fair Oaks Ranch water and wastewater service areas.

Table ES-1 Growth Projections

Year	Water Connections	Wastewater Connections
2025	3,255	2,004
2035	3,968	2,402

3.0 CAPITAL IMPROVEMENTS PLAN

An impact fee capital improvements plan (CIP) was developed for the City of Fair Oaks Ranch based on the land use assumptions adopted by the City. The recommended improvements will provide the required capacity and reliability to meet projected water demands and wastewater flows through 2035. **Tables ES-2** and **ES-3** display the water demand and wastewater flow projections for the City of Fair Oaks Ranch. Flows are shown in million gallons per day (mgd). These projections were the basis for determining the location and size of the CIP projects.

Table ES-2 Projected Water Demands

Year	Average Day Demand (mgd)	Maximum Day Demand (mgd)	Peak Hour Demand (mgd)
2025	1.63	4.07	8.14
2035	1.98	4.96	9.92

Table ES-3 Projected Wastewater Flows

Year	Average Annual Daily Flow (mgd)	Peak Wet Weather Flow (mgd)
2025	0.32	1.12
2035	0.38	1.35

4.0 IMPACT FEE ANALYSIS

The previous impact fee ordinance was adopted in September 2020. This ordinance set the water impact fee for a single-family meter at \$8,670 and the wastewater impact fee for a single-family meter at \$6,069, for a combined impact fee of \$14,739. As part of this study, the maximum allowable impact fees have been calculated to reflect the updated land use assumptions and capital improvements. For existing or proposed projects, the impact fee is calculated as a percentage of the project cost, based on the portion of the project's capacity required to serve development projected to occur between 2025 and 2035. The total projected cost includes the projected capital improvement cost to serve 10-year development, the projected finance cost for

the capital improvements, and the consultant cost for preparing and updating the Capital Improvement Plan. A 5% interest rate was used to calculate financing costs. **Table ES-4** displays the updated maximum allowable impact fee per service unit for both water and wastewater.

Table ES-4 Maximum Allowable Impact Fees

Service	Maximum Allowable Impact Fee per Service Unit
Water	\$21,013
Wastewater	\$9,943
Total	\$30,956

1.0 BACKGROUND

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

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

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

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

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

In September 2024, the City of Fair Oaks Ranch, Texas (City), authorized Freese and Nichols, Inc. (FNI) to perform an impact fee analysis on the City's water and wastewater systems. The purpose of this report is to document the methodology used in the development and calculation of water and wastewater impact fees for the City of Fair Oaks Ranch. The methodology used herein satisfies the requirements of the Texas Local Government Code Section 395 for the establishment of water and wastewater impact fees. **Table 1-1** provides a list of abbreviations used in this report.

Table 1-1 List of Abbreviations

Abbreviation	Full Nomenclature
AADF	Average Annual Daily Flow
AWWA	American Water Works Association
CIP	Capital Improvements Plan
EST	Elevated Storage Tank
ETJ	Extra-territorial Jurisdiction
FNI	Freese and Nichols, Inc.
GBRA	Guadalupe-Blanco River Authority
gpCd	Gallons per Connection per Day
gpd	Gallons per Day
gpm	Gallons per Minute
GST	Ground Storage Tank
LS	Lift Station
MG	Million Gallons
mgd	Millions of Gallons per Day
PS	Pump Station
SAWS	San Antonio Water System
WWTP	Wastewater Treatment Plant

2.0 LAND USE ASSUMPTIONS

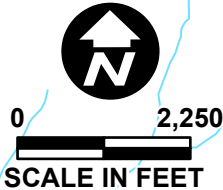
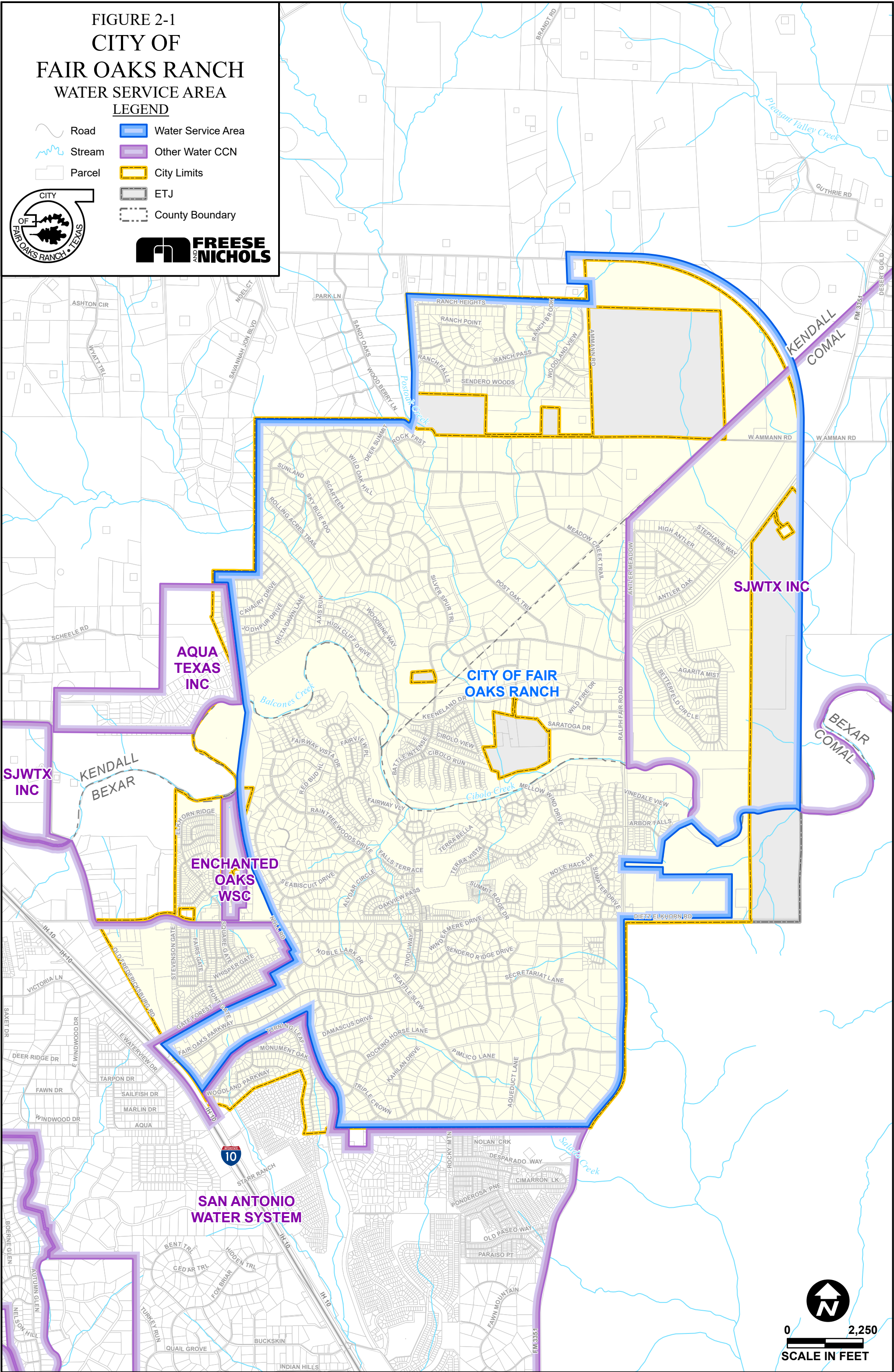
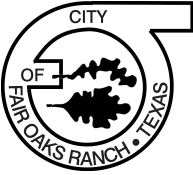
Population and land use are important elements in the analysis of water and wastewater systems. Water demands and wastewater flows depend on the population served by the systems and determines the sizing and location of system infrastructure. A thorough analysis of historical and projected populations,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

2.1 Service Area

The City of Fair Oaks Ranch's water and wastewater services areas are defined separately. The difference between the water and wastewater service areas is due to some portions of the City being served by on-site septic systems. The water service area includes most of the City Limits and extra-territorial jurisdiction (ETJ) with exclusions for areas served by San Antonio Water System (SAWS) or Camp Bullis. The wastewater service area includes a portion within the City Limits, as well as ETJ on the east side of the city. **Figures 2-1** and **2-2** illustrate water and wastewater service areas, respectively.

FIGURE 2-1
CITY OF
FAIR OAKS RANCH
WATER SERVICE AREA
LEGEND

-  Road
-  Stream
-  Parcel
-  Water Service Area
-  Other Water CCN
-  City Limits
-  ETJ
-  County Boundary



2.2 Growth Projections

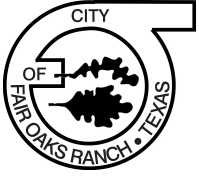
Land use assumptions for the City were based on the City's adopted future land use plan. The location and timing of growth was provided by City staff and assumes a 2% annual growth rate for water connections over the next 10 years. Shapefiles of future land use, timing of development, and overall population projections were provided by the City. A map showing future land use is provided in **Figure 2-3**. **Table 2-1** presents the connection projections for the City of Fair Oaks Ranch water and wastewater service areas.

Table 2-1 Water and Wastewater Growth Projections

Year	Water Connections	Wastewater Connections
2025	3,255	2,004
2035	3,968	2,402

In addition to the total number of connections, it is important to know where the connections will be located to determine the timing and sizing of infrastructure. Future connections were distributed by parcel based on the future land use and known development areas. **Figure 2-4** and **2-5** show the water and wastewater connection projections by parcel, respectively.

FIGURE 2-3
CITY OF
FAIR OAKS RANCH
FUTURE LAND USE
LEGEND



- ## FUTURE LAND USE

-  Civic & Community Facilities
-  Existing Parks and Open Space
-  Existing Residential
-  Logistics
-  Mixed Use Village
-  Neighborhood Commercial
-  Neighborhood Residential
-  Parks and Open Space
-  Rural Residential

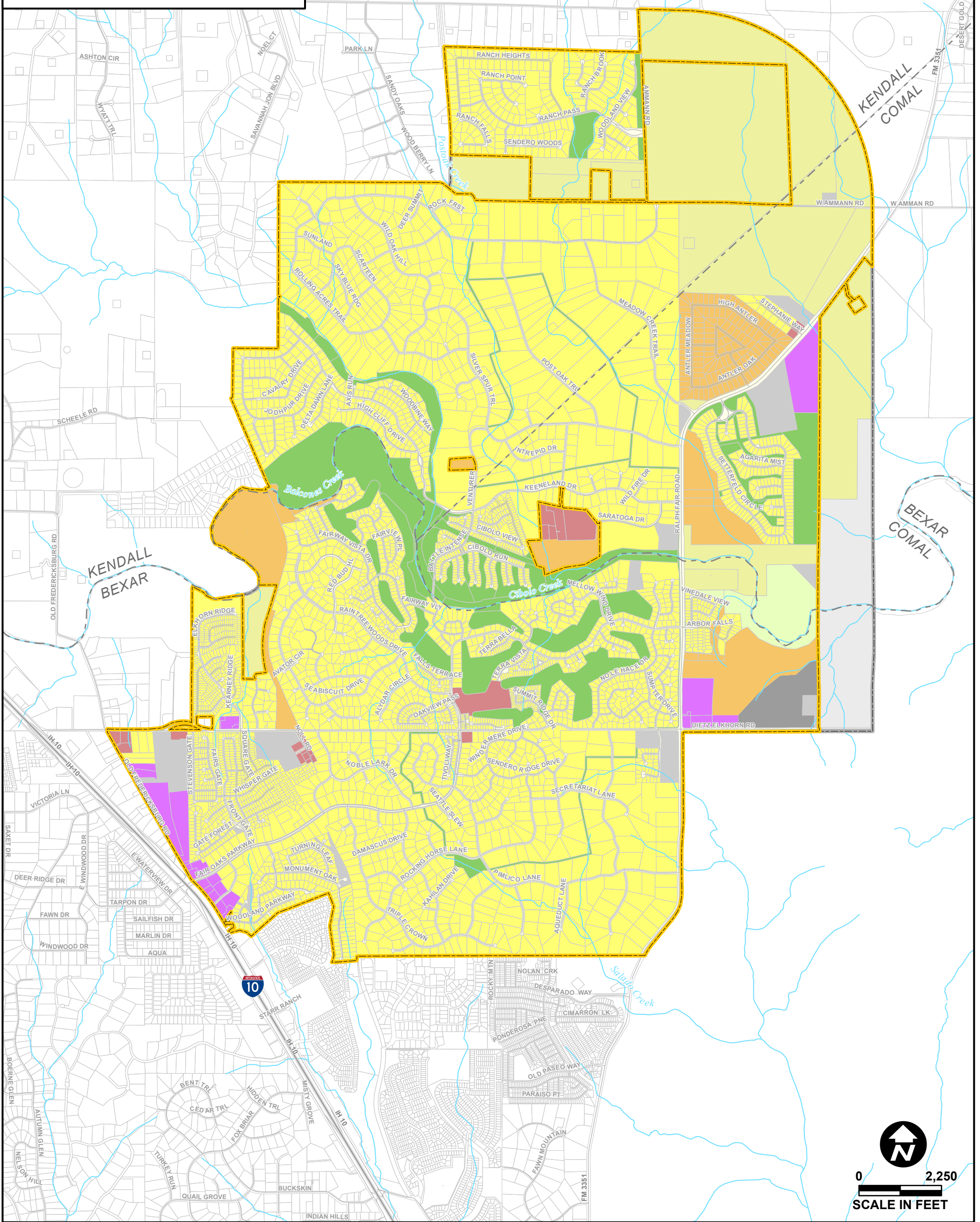


FIGURE 2-5
CITY OF
FAIR OAKS RANCH
WASTEWATER CONNECTIONS
BY PARCEL
LEGEND

Subdivision Unit ID
2025 Connections (2,004)
2035 Connections (2,402)
Buildout Connections (2,483)

- Parcel with Existing Wastewater Connection

Parcel with 10 Year Wastewater Connection

Parcel with Future Wastewater Connection
- Road

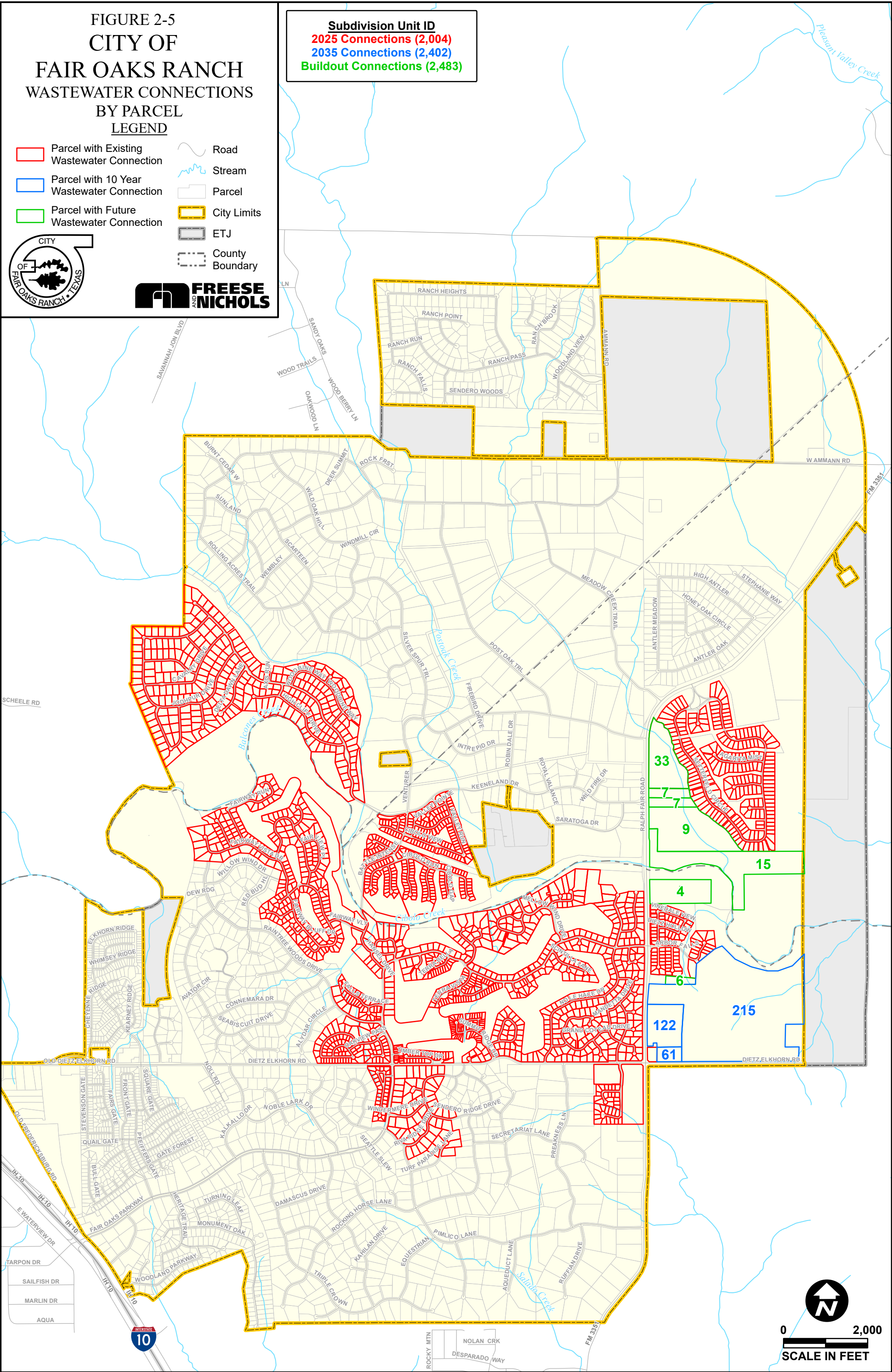
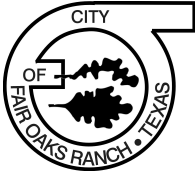
Stream

Parcel

City Limits

ETJ

County Boundary



3.0 CAPITAL IMPROVEMENTS PLAN

An impact fee capital improvements plan (CIP) was developed for the City of Fair Oaks Ranch based on the land use assumptions presented in the previous section. The recommended improvements will provide the required capacity to meet projected water demands and wastewater flows through 2035 and are based on the CIP adopted by the City in the 2019 *Water, Wastewater, and Reuse Master Plan Report* by FNI.

3.1 Existing Water and Wastewater Systems

The City of Fair Oaks Ranch water system consists of three independent pressure zones, a network of water lines ranging in diameter from 2 inches to 12 inches, seven ground storage tanks (GST), five pump stations (PS), 30 active groundwater wells, and a wholesale supply connection to GBRA's Western Canyon transmission main. The three pressure zones, A, B, and C, represent the north, central, and southern regions of the water system, respectively. **Figure 3-1** presents the existing water system.

The wastewater collection system consists of seven lift stations (LS) and associated force mains, a wastewater treatment plant (WWTP), and a network of gravity mains 4 inches to 16 inches. The City of Fair Oaks Ranch owns and operates one WWTP with a permitted capacity of 0.5 mgd annual average day flow (AADF). **Figure 3-2** presents the existing wastewater system.

FIGURE 3-1
CITY OF FAIR OAKS RANCH
EXISTING WATER SYSTEM
LEGEND

 Well

 Pump Station

 Hydropneumatic Tank

 Ground Storage Tank

 GBRA Western Canyon Line

 8" and Smaller Water Line

 10" and Larger Water Line

 Water Service Area

 Road

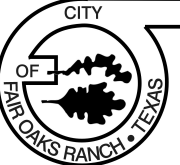
 Stream

 Parcel

 County

 City Limits

 ETJ





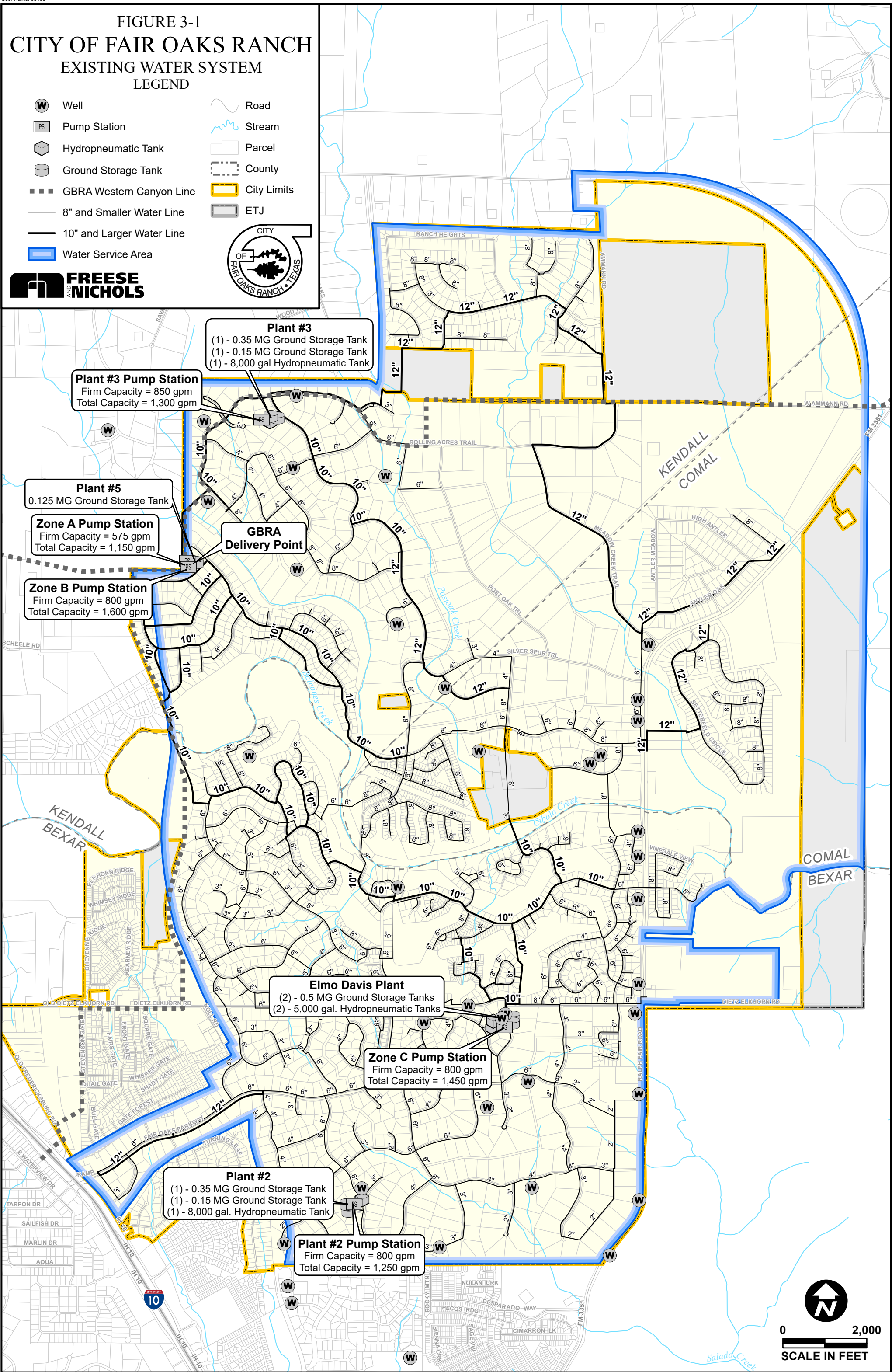


FIGURE 3-2
CITY OF
FAIR OAKS RANCH
EXISTING WASTEWATER SYSTEM
LEGEND

**Lift Station**

**Wastewater Treatment Plant**

**Force Main**

**8" and Smaller Gravity Main**

**10" and Larger Gravity Main**

**Road**

**Stream**

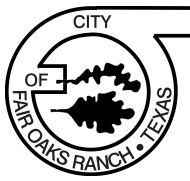
**Parcel**

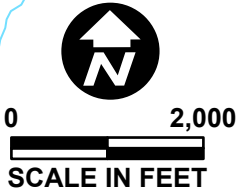
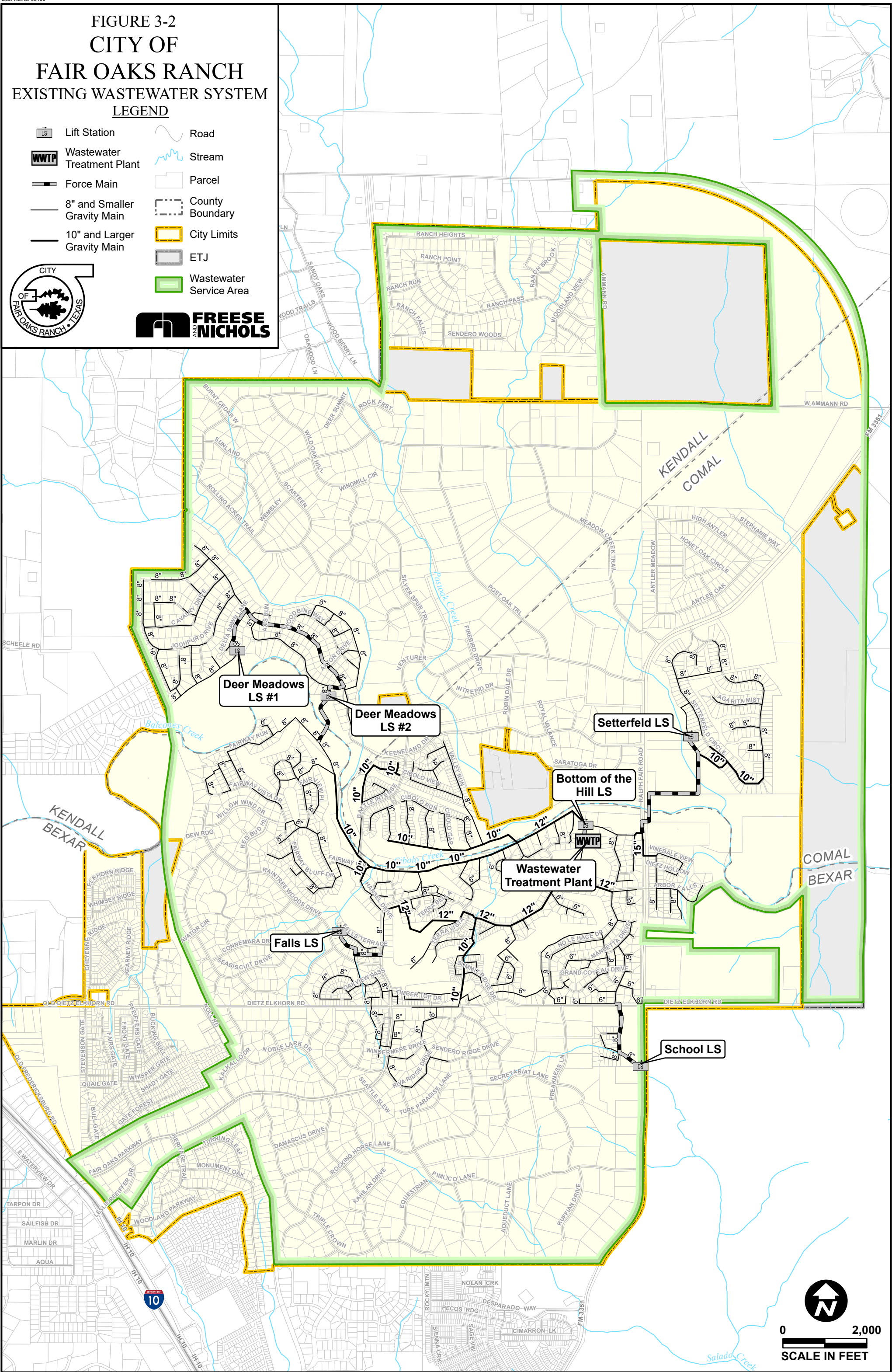
**County Boundary**

**City Limits**

**ETJ**

**Wastewater Service Area**





3.2 Water Demand and Wastewater Load Projections

The population and land use data were used to develop future water demands and wastewater flows based on a projected average day per capita use and peaking factors. These projections were the basis for determining the location and size of the CIP projects. The design criteria used to project water demands was developed as part of the 2019 *Water, Wastewater, and Reuse Master Plan Report* by FNI. The water demands used a design residential per connection usage of 500 gallons per connection per day (gpCd), a maximum day to average day peaking factor of 2.50, and a peak hour to maximum day peaking factor of 2.00. Wastewater flows used 160 gpCd for average annual daily flow and a wet weather peaking factor of 3.5 **Table 3-1** presents the projected water demands, and **Table 3-2** presents the projected wastewater flows for the City of Fair Oaks Ranch.

Table 3-1 Projected Water Demands

Year	Average Day Demand (mgd)	Maximum Day Demand (mgd)	Peak Hour Demand (mgd)
2025	1.63	4.07	8.14
2035	1.98	4.96	9.92

Table 3-2 Projected Wastewater Flows

Year	Average Annual Daily Flow (mgd)	Peak Wet Weather Flow (mgd)
2025	0.32	1.12
2035	0.38	1.35

3.3 Water and Wastewater System Improvements

The water and wastewater system improvements were developed as part of the 2019 Water, Wastewater, and Reuse Master Plan adopted by the City. The recommended water and wastewater improvements provide the required capacity to meet projected water demands and wastewater flows. A summary of the costs for each of the projects required for the growth period used in the impact fee analysis for both the water and wastewater systems are shown in **Table 3-4** and **Table 3-5**, respectively. The costs are in 2025 dollars and include an allowance for

engineering, surveying, and contingencies. Detailed cost estimates for the proposed water and wastewater system projects are included in **Appendix A** and **Appendix B**, respectively. The timing and location of future growth were used to determine the utilization of each water and wastewater project. **Tables 3-5** and **3-6** show a current percent utilization as the portion of a project's capacity required to serve existing development. It is not included in the impact fee analysis. The 2035 percent utilization is the portion of the project's capacity that will be required to serve the projected growth in 2035. The portion of a project's total cost that is used to serve development projected to occur from 2025 through 2035 is calculated as the total actual cost multiplied by the percent utilization. Only this portion of the cost can be used in the impact fee analysis. The proposed water system projects are shown on **Figure 3-3**. Proposed wastewater projects are shown on **Figure 3-4**.

Table 3-3 Water System Impact Fee Eligible Projects

	Description of Project	Percent Utilization			Costs Based on 2025 Dollars			
		2025	2035	10-year Utilization	Capital Cost	Financing Cost	Total Project Cost	Impact Fee Eligible Cost
EXISTING ELIGIBLE								
A	12-inch Parallel Along Rolling Acres Trail	40%	48%	8%	\$114,107	\$60,298	\$174,405	\$13,952
B	12-inch Along Meadow Creek Trail	60%	78%	18%	\$24,773	\$13,091	\$37,864	\$6,815
C	12-inch Line Near Meadow Creek Trail and FM 3351	15%	94%	79%	\$936,527	\$494,889	\$1,431,416	\$1,130,819
D	9,000-Gallon Plant #2 Hydropneumatic Tank (Zone C)	93%	100%	7%	\$642,558	\$339,547	\$982,105	\$68,747
E	Impact Fee Study	0%	100%	100%	\$36,000	\$19,023	\$55,023	\$55,023
PROPOSED ELIGIBLE								
1	12-inch Corley Tract Line (Zone B)	20%	94%	74%	\$1,715,600	\$906,575	\$2,622,175	\$1,940,409
2	0.5-MG Plant 5 Ground Storage Tank (Zone A/B)	92%	94%	2%	\$3,300,000	\$1,743,820	\$5,043,820	\$100,876
3	0.5-MG Zone A Elevated Storage Tank (Zone A)	64%	69%	5%	\$8,779,400	\$4,639,300	\$13,418,700	\$670,935
4	400-gpm Plant #5 Zone B Pump Station Expansion (Zone B)	92%	94%	2%	\$646,400	\$341,577	\$987,977	\$19,760
5	50,000 gallon Ground Storage Tank (Zone C)	95%	100%	5%	\$374,300	\$197,791	\$572,091	\$28,605
6	12-inch West Ammann Road Water Line (Zone A)	0%	48%	48%	\$1,203,900	\$636,177	\$1,840,077	\$883,237
7	16-inch Plant #6 Discharge Water Lines (Zone B)	20%	94%	74%	\$3,812,200	\$2,014,482	\$5,826,682	\$4,311,744
8	Pressure Reducing Valve at Rolling Acres Trail and Meadow Creek Trail (Zone B)	0%	94%	94%	\$132,000	\$69,753	\$201,753	\$189,648
9	8-inch Water Line at Dietz Elkhorn Road and Ralph Fair Road (Zone C)	0%	100%	100%	\$481,600	\$254,492	\$736,092	\$736,092
10	Plant #6 and New GBRA Delivery Point (Zone A/B)	20%	78%	58%	\$11,816,700	\$6,244,302	\$18,061,002	\$10,475,381
11	12-inch Northeast Water Lines (Zone A)	0%	48%	48%	\$3,972,800	\$2,099,348	\$6,072,148	\$2,914,631
12	650-gpm Elmo Davis Pump Station Expansion (Zone C)	95%	100%	5%	\$1,050,300	\$555,010	\$1,605,310	\$80,266
13	12-inch Southeastern Water Lines (Zone B)	20%	94%	74%	\$4,093,100	\$2,162,918	\$6,256,018	\$4,629,453
14	12-inch Northeast Water Lines (Zone A)	0%	10%	10%	\$3,160,100	\$1,669,892	\$4,829,992	\$482,999
15	12-inch ETJ Water Line (Zone B)	20%	75%	55%	\$3,707,900	\$1,959,366	\$5,667,266	\$3,116,997
Total Capital Improvements Cost					\$50,000,265	\$26,421,652	\$76,421,917	\$31,856,390

* Utilization in 2025 on Proposed Projects indicates a portion of the project that will be used to address deficiencies within the existing system, and therefore are not eligible for impact fee cost recovery for future growth.

** Financing costs calculated assuming a 5% interest rate over a 20-year term

Table 3-4 Wastewater System Impact Fee Eligible Projects

	Description of Project	Percent Utilization			Costs Based on 2025 Dollars			
		2025	2035	10-year Utilization	Capital Cost	Financing Cost	Total Project Cost	Impact Fee Eligible Cost
EXISTING ELIGIBLE								
A	Impact Fee Study	0%	100%	100%	\$36,000	\$19,023	\$55,023	\$55,023
PROPOSED ELIGIBLE								
1	8-inch Gravity Line and Decommission Falls Lift Station	99%	100%	1%	\$722,400	\$381,738	\$1,104,138	\$11,041
2	Expansion of Wastewater Treatment Plant	0%	100%	100%	\$4,100,000	\$2,166,564	\$6,266,564	\$6,266,564
3	8-inch Gravity Line east of Ralph Fair Road	0%	100%	100%	\$557,100	\$294,388	\$851,488	\$851,488
4	15-inch Gravity Line west of Ralph Fair Road	28%	96%	68%	\$985,000	\$520,504	\$1,505,504	\$1,016,765
Total Capital Improvements Cost					\$6,400,500	\$3,382,218	\$9,782,718	\$8,200,882

* Utilization in 2025 on Proposed Projects indicates a portion of the project that will be used to address deficiencies within the existing system, and therefore are not eligible for impact fee cost recovery for future growth.

** Financing costs calculated assuming a 5% interest rate over a 20-year term.

FIGURE 3-3
CITY OF
FAIR OAKS RANCH
WATER SYSTEM IMPACT FEE
CAPITAL IMPROVEMENTS PLAN
LEGEND

Proposed Impact Fee Eligible

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

Existing Impact Fee Eligible

- Hydropneumatic Tank
- Water Line

Existing Water System

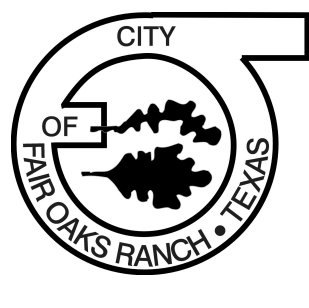
- Well
- Pump Station
- Hydropneumatic Tank
- Ground Storage Tank

- 8" and Smaller Water Line
- 10" and Larger Water Line
- GBRA Western Canyon Line
- Road
- Stream
- Parcel
- City Limits
- ETJ
- County Boundary

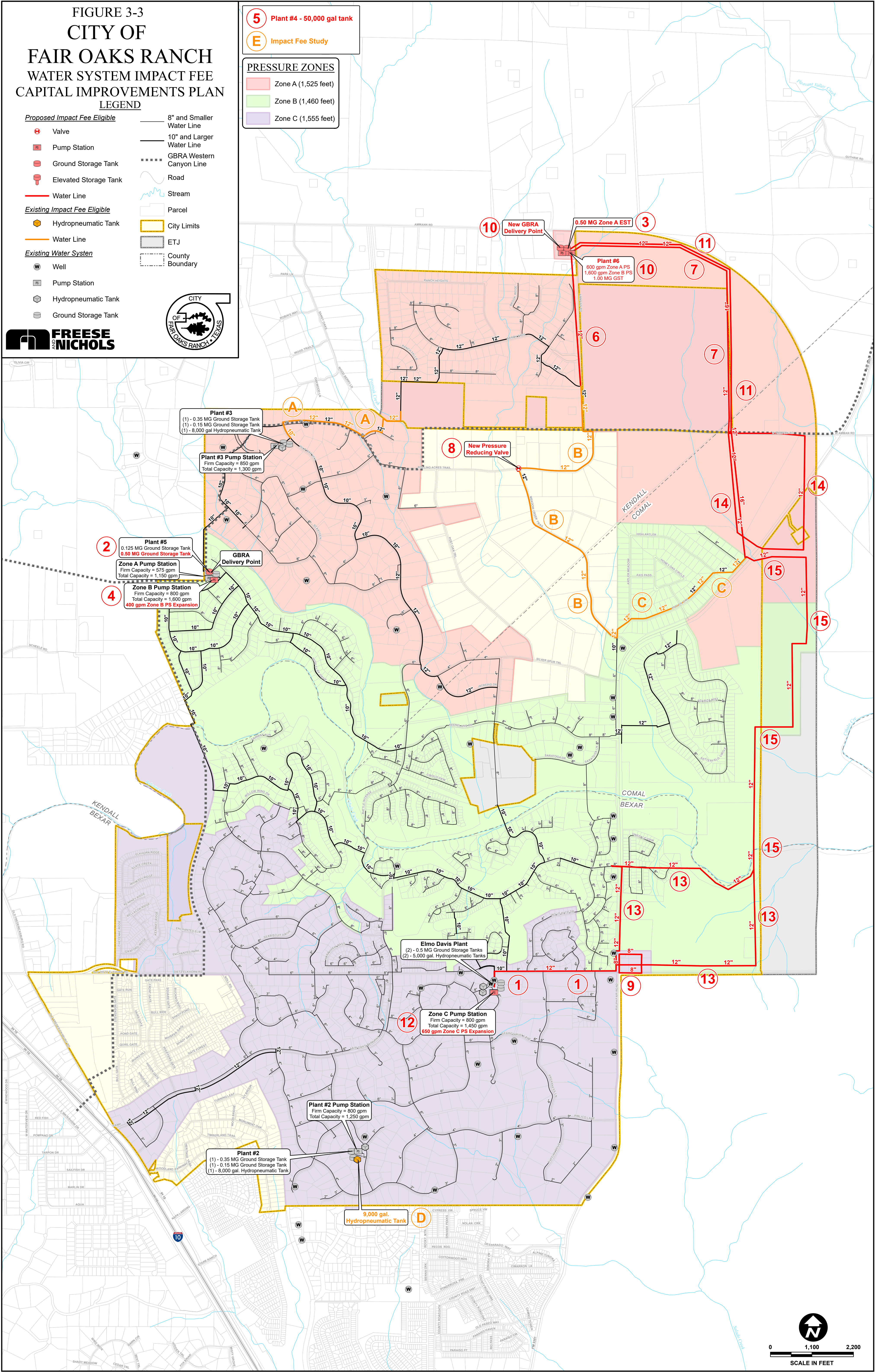
- Plant #4 - 50,000 gal tank
- Impact Fee Study

PRESSURE ZONES

- Zone A (1,525 feet)
- Zone B (1,460 feet)
- Zone C (1,555 feet)



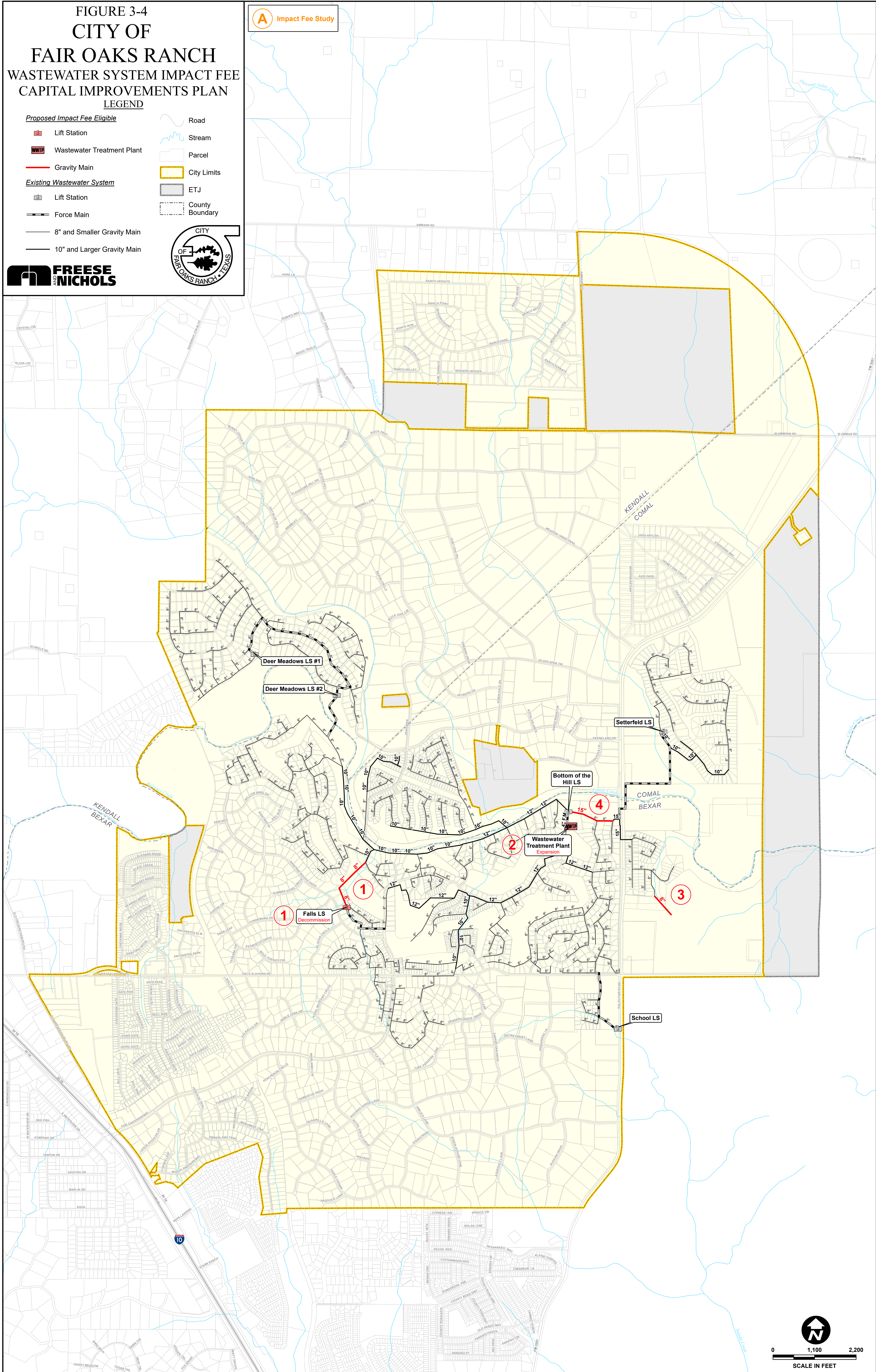
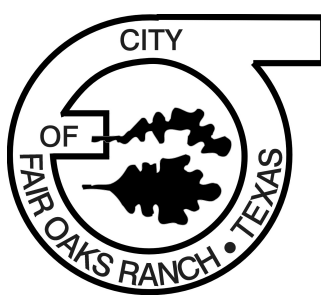
FREESE
NICHOLS



0 1,100 2,200
SCALE IN FEET

A Impact Fee Study

 Lift Station
 Force Main
 8" and Smaller Gravity Main
 10" and Larger Gravity Main



4.0 IMPACT FEE ANALYSIS

The previous impact fee ordinance was adopted in September 2020. This ordinance set the water impact fee for a single-family meter at \$8,670 and the wastewater impact fee for a single-family meter at \$6,069, for a combined impact fee of \$14,739. As part of this study, the maximum allowable impact fees have been calculated to reflect the updated land use assumptions and capital improvements. The impact fee analysis involves determining the utilization of existing and proposed projects required as defined by the capital improvement plan to serve all future development through 2035. For existing or proposed projects, the impact fee is calculated as a percentage of the project cost, based upon the percentage of the project's capacity required to serve development projected to occur between 2025 and 2035. Capacity serving existing development cannot be charged to impact fees. Based upon these updated calculations, the City may elect to revise the impact fee collection rate and update the 2020 ordinance.

4.1 Service Units

According to Chapter 395 of the Texas Local Government code, the maximum impact fee may not exceed the amount determined by dividing the cost of capital improvements required by the total number of service units attributed to new development during the impact fee eligibility period. A water service unit is defined as the service equivalent to a water connection for a single-family residence. The City of Fair Oaks Ranch does not directly meter wastewater flows and bills for wastewater services based on the customer's water consumption. Therefore, a wastewater service unit is defined as the wastewater service provided to a customer with a water connection for a single-family residence.

The service associated with public, commercial, and industrial connections is converted into service units based upon the capacity of the meter used to provide service. The number of service units required to represent each meter size is based on the safe maximum operating capacity of the appropriate meter type. The City primarily uses displacement meters for sizes 2-inch and smaller. Compound meters are used for sizes greater than 2 inches. American Water Works Association (AWWA) Manual M6 (November 2018) was used to determine the safe

maximum operating capacity. The service unit equivalent for each meter size used by the City is listed in **Table 4-1**.

Table 4-1 Service Unit Equivalencies

Meter Size	Type	Maximum Flow (gpm)	Service Unit Equivalents
3/4"	Displacement	25	1.0
1"	Displacement	40	1.6
1 1/2"	Displacement	50	2.0
2"	Compound	160	6.4
3"	Compound	320	12.8
4"	Compound	500	20.0
6"	Compound	1,000	40.0
8"	Compound	1,600	64.0

Typically, in the City of Fair Oaks Ranch, single-family residences are served with 3/4-inch water meters. Larger meters represent public, commercial, and industrial water use. The City provided data that included the meter size of each active water meter as of September 2024. The water and wastewater service units for 2025 and the projected service units for 2035 are presented in **Table 4-2** and **4-3**, respectively.

Table 4-2 Water Service Units

Meter Size	2025			2035			Growth in Service Units
	Number of Meters	Service Unit Equivalent	Service Units	Number of Meters	Service Unit Equivalent	Service Units	
3/4"	2,913	1.0	2,913	3,551	1.0	3,551	638
1"	341	1.6	546	416	1.6	666	120
1 1/2"	0	2.0	0	0	2.0	0	0
2"	0	6.4	0	0	6.4	0	0
3"	1	12.8	13	1	12.8	13	0
4"	0	20.0	0	0	20.0	0	0
6"	0	40.0	0	0	40.0	0	0
8"	0	64.0	0	0	64.0	0	0
Total	3,255	-	3,472	3,968	-	4,230	758

Table 4-3 Wastewater Service Units

Meter Size	2025			2035			Growth in Service Units
	Number of Meters	Service Unit Equivalent	Service Units	Number of Meters	Service Unit Equivalent	Service Units	
3/4"	1,882	1.0	1,882	2,256	1.0	2,256	374
1"	121	1.6	194	145	1.6	232	38
1 1/2"	0	2.0	0	0	2.0	0	0
2"	0	6.4	0	0	6.4	0	0
3"	1	12.8	13	1	12.8	13	0
4"	0	20.0	0	0	20.0	0	0
6"	0	40.0	0	0	40.0	0	0
8"	0	64.0	0	0	64.0	0	0
Total	2,004	-	2,089	2,402	-	2,501	412

4.2 Maximum Impact Fee Calculations

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

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

The total projected costs include the projected capital improvement costs to serve 10-year development through 2035, the projected finance cost for the capital improvements, and the consultant cost for preparing and updating the Capital Improvement Plan. **Tables 4-4 and 4-5**

display a summary of maximum allowable impact fees for water and wastewater, respectively. A comparative chart showing impact fees in other nearby cities is presented on **Figure 4-1**.

Table 4-4 Maximum Allowable Water Impact Fee Calculation

Water Impact Fee	
Total Eligible Impact Fee Costs	\$31,856,390
Growth in Service Units	758
Maximum Water Impact Fee per Service Unit ⁽¹⁾	\$42,027
Impact Fee Credit per Service Unit ⁽²⁾	\$21,013
Maximum Allowable Water Impact Fee ⁽³⁾	\$21,013

(1) Total Eligible Costs divided by the Growth in Service Units.

(2) Credit is 50% of Maximum Water Impact Fee per Service Unit.

(3) Maximum Allowable Water Impact Fee is Maximum Water Impact Fee minus the Impact Fee Credit per Service Unit.

Table 4-5 Maximum Allowable Wastewater Impact Fee Calculation

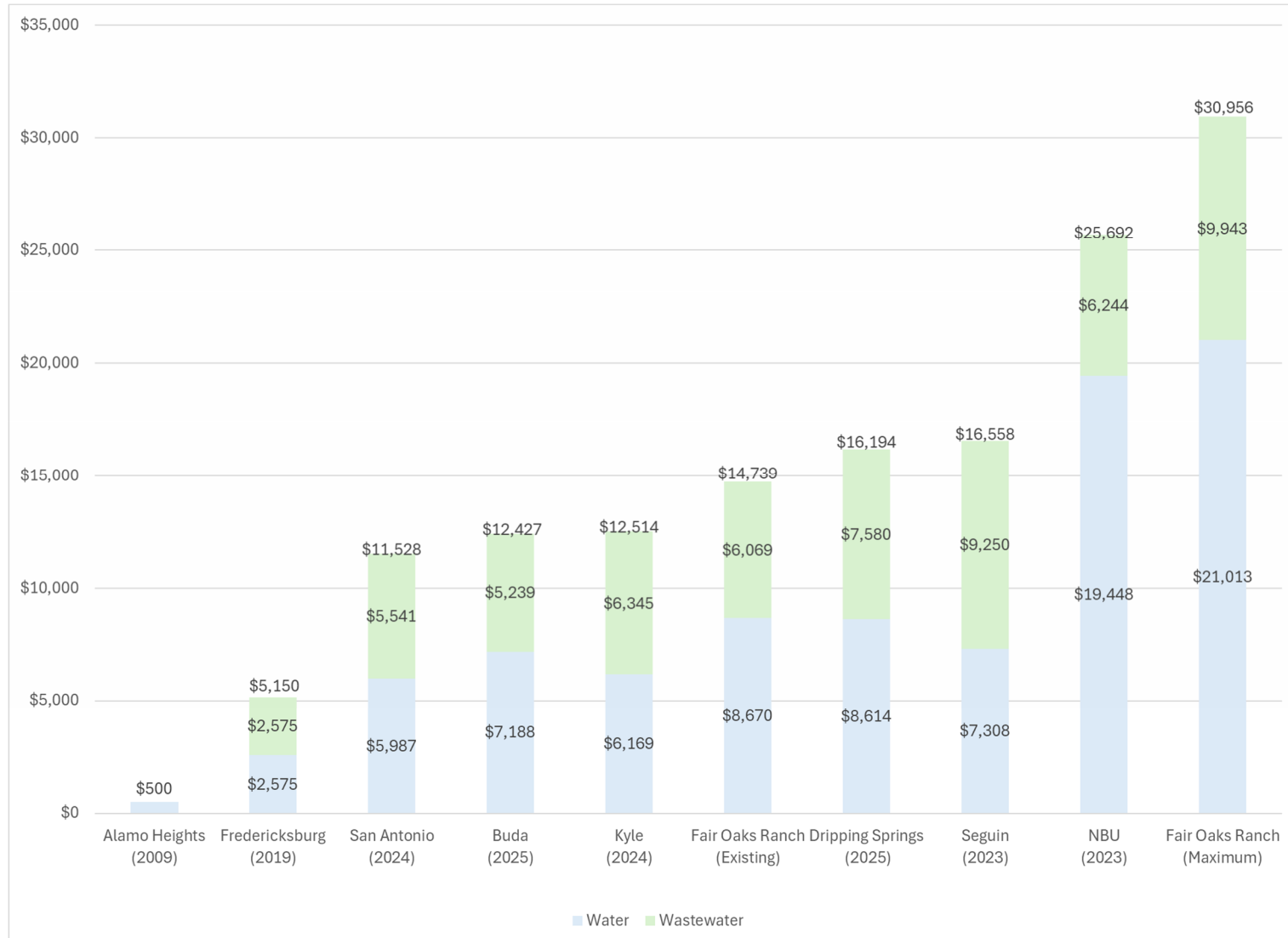
Wastewater Impact Fee	
Total Eligible Impact Fee Costs	\$8,200,882
Growth in Service Units	412
Maximum Water Impact Fee per Service Unit ⁽¹⁾	\$19,886
Impact Fee Credit per Service Unit ⁽²⁾	\$9,943
Maximum Allowable Wastewater Impact Fee ⁽³⁾	\$9,943

(1) Total Eligible Costs divided by the Growth in Service Units.

(2) Credit is 50% of Maximum Wastewater Impact Fee per Service Unit.

(3) Maximum Allowable Wastewater Impact Fee is Maximum Wastewater Impact Fee minus the Impact Fee Credit per Service Unit.

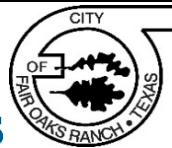
Figure 4-1 Water and Wastewater Impact Fee per Service Unit Comparison



Appendix A

Water System Project Cost Estimates

City of Fair Oaks Ranch



Capital Improvement Cost Estimate

April 2025

Construction Project Number: 1

Phase: 2035

Project Name: **12-inch Corley Tract Line (Zone B)**

Project Description:

This project consists of a new 12-inch water line extended to the Corley Tract.

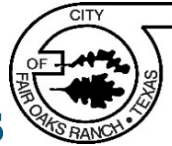
Project Drivers:

This project will serve growth in Zone B.

Opinion of Probable Construction Cost

ITEM	DESCRIPTION	QUANTITY	UNIT	UNIT PRICE	TOTAL
1	12" WL & Appurtenances	5,700	LF	\$ 228	\$ 1,299,600
SUBTOTAL:					\$ 1,299,600
CONTINGENCY				20%	\$ 260,000
SUBTOTAL:					\$ 1,559,600
ENG/SURVEY				10%	\$ 156,000
SUBTOTAL:					\$ 1,715,600
Estimated Project Total:					\$ 1,715,600

City of Fair Oaks Ranch



Capital Improvement Cost Estimate

April 2025

Construction Project Number: 2

Phase: 2035

Project Name: **0.5-MG Zone A Ground Storage Tank (Zone B)**

Project Description:

This project consists of a new 0.5 MG Zone B ground storage tank at Plant 5.

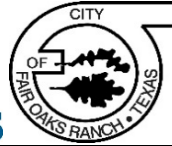
Project Drivers:

This project will provide ground storage capacity in Zone B.

Opinion of Probable Construction Cost

ITEM	DESCRIPTION	QUANTITY	UNIT	UNIT PRICE	TOTAL
1	0.5 MG Ground Storage Tank	1	LS	\$ 2,500,000	\$ 2,500,000
				SUBTOTAL:	\$ 2,500,000
				CONTINGENCY	20%
					\$ 500,000
				SUBTOTAL:	\$ 3,000,000
				ENG/SURVEY	10%
					\$ 300,000
				SUBTOTAL:	\$ 3,300,000
Estimated Project Total:					\$ 3,300,000

City of Fair Oaks Ranch



Capital Improvement Cost Estimate

April 2025

Construction Project Number: 3

Phase: 2035

Project Name: **0.5-MG Zone A Elevated Storage Tank (Zone A)**

Project Description:

This project consists of a new 0.5 MG Zone A elevated storage tank at the north City limit near the Kendall County line.

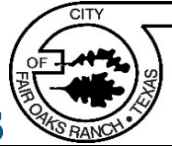
Project Drivers:

This project will provide elevated storage capacity in Zone A.

Opinion of Probable Construction Cost

ITEM	DESCRIPTION	QUANTITY	UNIT	UNIT PRICE	TOTAL
1	0.5 MG Elevated Storage Tank	1	LS	\$ 8,779,378	\$ 8,779,378
				SUBTOTAL:	\$ 8,779,400
				CONTINGENCY	0%
					\$ -
				SUBTOTAL:	\$ 8,779,400
				ENG/SURVEY	0%
					\$ -
				SUBTOTAL:	\$ 8,779,400
Estimated Project Total:					\$ 8,779,400

City of Fair Oaks Ranch



Capital Improvement Cost Estimate

April 2025

Construction Project Number: 4

Phase: 2035

Project Name: **400-gpm Plant #5 Zone B Pump Station Expansion (Zone B)**

Project Description:

This project consists of a 400 gpm expansion at the Plant #5 Zone B Pump Station. This project will increase the firm capacity from 800 gpm to 1,200 gpm.

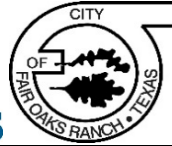
Project Drivers:

This project will provide additional distribution pumping capacity in Zone B.

Opinion of Probable Construction Cost

ITEM	DESCRIPTION	QUANTITY	UNIT	UNIT PRICE	TOTAL
1	Pump Station - Expansion 400 gpm	1	LS	\$ 489,600	\$ 489,600
				SUBTOTAL:	\$ 489,600
				CONTINGENCY	20%
				SUBTOTAL:	\$ 587,600
				ENG/SURVEY	10%
				SUBTOTAL:	\$ 646,400
Estimated Project Total:					\$ 646,400

City of Fair Oaks Ranch



Capital Improvement Cost Estimate

April 2025

Construction Project Number: 5

Phase: 2035

Project Name: **50,000 gallon Ground Storage Tank (Zone C)**

Project Description:

This project consists of a new 50,000 gallon ground storage tank at Plant 4 to serve Zone C.

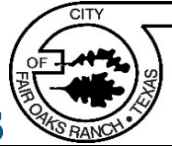
Project Drivers:

The project will provide ground storage in Zone C.

Opinion of Probable Construction Cost

ITEM	DESCRIPTION	QUANTITY	UNIT	UNIT PRICE	TOTAL
1	50,000 gal Ground Storage Tank	1	LS	\$ 283,500	\$ 283,500
				SUBTOTAL:	\$ 283,500
				CONTINGENCY	20%
				SUBTOTAL:	\$ 340,200
				ENG/SURVEY	10%
				SUBTOTAL:	\$ 374,300
Estimated Project Total:					\$ 374,300

City of Fair Oaks Ranch



Capital Improvement Cost Estimate

April 2025

Construction Project Number: 6

Phase: 2035

Project Name: **12-inch West Ammann Road Water Line (Zone A)**

Project Description:

This project consists of a new 12-inch water line that serves the new Elevated Storage Tank in Zone A.

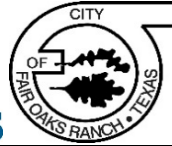
Project Drivers:

This project will serve growth in Zone A.

Opinion of Probable Construction Cost

ITEM	DESCRIPTION	QUANTITY	UNIT	UNIT PRICE	TOTAL
1	12" WL & Appurtenances	4,000	LF	\$ 228	\$ 912,000
		SUBTOTAL:			\$ 912,000
		CONTINGENCY		20%	\$ 182,400
		SUBTOTAL:			\$ 1,094,400
		ENG/SURVEY		10%	\$ 109,500
		SUBTOTAL:			\$ 1,203,900
Estimated Project Total:					\$ 1,203,900

City of Fair Oaks Ranch



Capital Improvement Cost Estimate

April 2025

Construction Project Number: 7

Phase: 2035

Project Name: **16-inch Plant #6 Discharge Water Lines (Zone B)**

Project Description:

This project consists of a new 16-inch water line that serve Zone B.

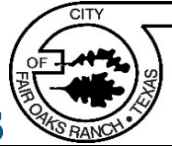
Project Drivers:

This project will serve growth in Zone B.

Opinion of Probable Construction Cost

ITEM	DESCRIPTION	QUANTITY	UNIT	UNIT PRICE	TOTAL
1	16" WL & Appurtenances	9,500	LF	\$ 304	\$ 2,888,000
SUBTOTAL:					\$ 2,888,000
CONTINGENCY				20%	\$ 577,600
SUBTOTAL:					\$ 3,465,600
ENG/SURVEY				10%	\$ 346,600
SUBTOTAL:					\$ 3,812,200
Estimated Project Total:					\$ 3,812,200

City of Fair Oaks Ranch



Capital Improvement Cost Estimate

April 2025

Construction Project Number: 8

Phase: 2035

Project Name: **Pressure Reducing Valve at Rolling Acres Trail and Meadow Creek Trail (Zone B)**

Project Description:

This project consists of a new pressure reducing valve at the intersection of Rolling Acres Trail and Meadow Creek Trail.

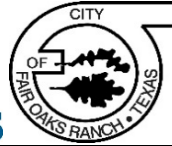
Project Drivers:

This project will provide increased redundancy in Zone B.

Opinion of Probable Construction Cost

ITEM	DESCRIPTION	QUANTITY	UNIT	UNIT PRICE	TOTAL
1	Pressure Reducing Valve Station	1	LS	\$ 100,000	\$ 100,000
				SUBTOTAL:	\$ 100,000
				CONTINGENCY	20%
				SUBTOTAL:	\$ 120,000
				ENG/SURVEY	10%
				SUBTOTAL:	\$ 132,000
Estimated Project Total:					\$ 132,000

City of Fair Oaks Ranch



Capital Improvement Cost Estimate

April 2025

Construction Project Number: 9

Phase: 2035

Project Name: **8-inch Water Line at Dietz Elkhorn Road and Ralph Fair Road (Zone C)**

Project Description:

8-inch Water Line at Dietz Elkhorn Road and Ralph Fair Road (Zone C)

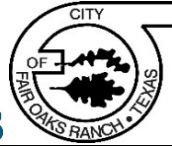
Project Drivers:

This project will provide additional production and distribution capacity in Zones A and B.

Opinion of Probable Construction Cost

ITEM	DESCRIPTION	QUANTITY	UNIT	UNIT PRICE	TOTAL
1	8" WL & Appurtenances	2,400	LF	\$ 152	\$ 364,800
		SUBTOTAL:			\$ 364,800
		CONTINGENCY		20%	\$ 73,000
		SUBTOTAL:			\$ 437,800
		ENG/SURVEY		10%	\$ 43,800
		SUBTOTAL:			\$ 481,600
Estimated Project Total:					\$ 481,600

City of Fair Oaks Ranch



Capital Improvement Cost Estimate

April 2025

Construction Project Number: 10

Phase: 2035

Project Name: **Plant #6 and New GBRA Delivery Point (Zone A/B)**

Project Description:

This project consists of a new Plant #6 at the intersection of West Ammann Road and the Comal County Line. It will include a 600 gpm Zone A Pump Station, a 1,600 gpm Zone B Pump Station, and a 1.0 MG Ground Storage Tank. This project will create a new delivery point from GBRA.

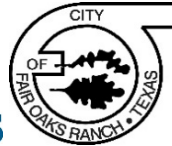
Project Drivers:

This project will provide additional production and distribution capacity in Zones A and B.

Opinion of Probable Construction Cost

ITEM	DESCRIPTION	QUANTITY	UNIT	UNIT PRICE	TOTAL
1	PS - New 600 gpm and 1,600 gpm	1	LS	\$ 4,752,000	\$ 4,752,000
2	1.0 MG Ground Storage Tank	1	LS	\$ 4,000,000	\$ 4,000,000
3	Meter Vault for GBRA Delivery Point	1	LS	\$ 200,000	\$ 200,000
SUBTOTAL:					\$ 8,952,000
	CONTINGENCY			20%	\$ 1,790,400
SUBTOTAL:					\$ 10,742,400
	ENG/SURVEY			10%	\$ 1,074,300
SUBTOTAL:					\$ 11,816,700
Estimated Project Total:					\$ 11,816,700

City of Fair Oaks Ranch



Capital Improvement Cost Estimate

April 2025

Construction Project Number: 11

Phase: 2035

Project Name: **12-inch Northeast Water Lines (Zone A)**

Project Description:

This project consists of a new 12-inch water line northeast of Ammann Road.

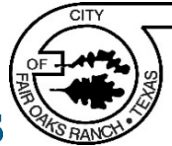
Project Drivers:

This project will provide additional production and distribution capacity in Zone A.

Opinion of Probable Construction Cost

ITEM	DESCRIPTION	QUANTITY	UNIT	UNIT PRICE	TOTAL
1	12" WL & Appurtenances	13,200	LF	\$ 228	\$ 3,009,600
SUBTOTAL:					\$ 3,009,600
CONTINGENCY				20%	\$ 602,000
SUBTOTAL:					\$ 3,611,600
ENG/SURVEY				10%	\$ 361,200
SUBTOTAL:					\$ 3,972,800
Estimated Project Total:					\$ 3,972,800

City of Fair Oaks Ranch



Capital Improvement Cost Estimate

April 2025

Construction Project Number: 12

Phase: 2035

Project Name: **650-gpm Elmo Davis Pump Station Expansion (Zone C)**

Project Description:

This project consists of a 650 gpm expansion at the Elmo Davis Pump Station. This project will increase the firm capacity from 800 gpm to 1,450 gpm.

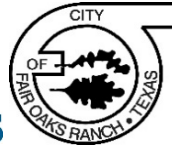
Project Drivers:

This project will provide additional distribution pumping capacity in Zone C.

Opinion of Probable Construction Cost

ITEM	DESCRIPTION	QUANTITY	UNIT	UNIT PRICE	TOTAL
1	Pump Station - Expansion 650 gpm	1	LS	\$ 795,600	\$ 795,600
				SUBTOTAL:	\$ 795,600
				CONTINGENCY	20%
				SUBTOTAL:	\$ 954,800
				ENG/SURVEY	10%
				SUBTOTAL:	\$ 1,050,300
Estimated Project Total:					\$ 1,050,300

City of Fair Oaks Ranch



Capital Improvement Cost Estimate

April 2025

Construction Project Number: 13

Phase: 2035

Project Name: **12-inch Southeastern Water Lines (Zone B)**

Project Description:

This project consists of a new 12-inch looped water line northeast of the intersection of Dietz Elkhorn Road and Ralph Fair Road.

Project Drivers:

This project will serve growth in Zone B.

Opinion of Probable Construction Cost

ITEM	DESCRIPTION	QUANTITY	UNIT	UNIT PRICE	TOTAL
1	12" WL & Appurtenances	13,600	LF	\$ 228	\$ 3,100,800
				SUBTOTAL:	\$ 3,100,800
				CONTINGENCY	20%
					\$ 620,200
				SUBTOTAL:	\$ 3,721,000
				ENG/SURVEY	10%
					\$ 372,100
				SUBTOTAL:	\$ 4,093,100
Estimated Project Total:					\$ 4,093,100

City of Fair Oaks Ranch



Capital Improvement Cost Estimate

April 2025

Construction Project Number: 14

Phase: 2035

Project Name: **12-inch Northeast Water Lines (Zone A)**

Project Description:

This project consists of a new 12-inch water line that flows between the Zone A proposed Elevated Storage Tank and the northeast part of the City.

Project Drivers:

This project will serve growth in Zone A.

Opinion of Probable Construction Cost

ITEM	DESCRIPTION	QUANTITY	UNIT	UNIT PRICE	TOTAL
1	12" WL & Appurtenances	10,500	LF	\$ 228	\$ 2,394,000
		SUBTOTAL:			\$ 2,394,000
		CONTINGENCY		20%	\$ 478,800
		SUBTOTAL:			\$ 2,872,800
		ENG/SURVEY		10%	\$ 287,300
		SUBTOTAL:			\$ 3,160,100
Estimated Project Total:					\$ 3,160,100

City of Fair Oaks Ranch



Capital Improvement Cost Estimate

April 2025

Construction Project Number: 15

Phase: 2035

Project Name: **12-inch ETJ Water Line (Zone B)**

Project Description:

This project consists of a new 12-inch water line that serves the area east of the city limits in Zone B.

Project Drivers:

This project will serve growth in Zone B.

Opinion of Probable Construction Cost

ITEM	DESCRIPTION	QUANTITY	UNIT	UNIT PRICE	TOTAL
1	12" WL & Appurtenances	12,320	LF	\$ 228	\$ 2,808,960
		SUBTOTAL:			\$ 2,809,000
		CONTINGENCY		20%	\$ 561,800
		SUBTOTAL:			\$ 3,370,800
		ENG/SURVEY		10%	\$ 337,100
		SUBTOTAL:			\$ 3,707,900
Estimated Project Total:					\$ 3,707,900

Appendix B

Wastewater System Project Cost Estimates

City of Fair Oaks Ranch



Capital Improvement Cost Estimate

April 2025

Construction Project Number: 1

Phase: 2035

Project Name: **8-inch Gravity Line and Decommission Falls Lift Station**

Project Description:

Decommission the Falls Lift Station and extend an 8-inch gravity line to existing 10-inch line along Battle Intense.

Project Drivers:

This project removes a lift station from service to reduce future maintenance.

Opinion of Probable Construction Cost

ITEM	DESCRIPTION	QUANTITY	UNIT	UNIT PRICE	TOTAL
1	Lift Station - Decomm	1	LS	\$ 250,000	\$ 250,000
2	8" Pipe	1,730	LF	\$ 144	\$ 249,120
3	48" Diameter Manhole	4	EA	\$ 12,000	\$ 48,000
				SUBTOTAL:	\$ 547,200
				CONTINGENCY	20%
				SUBTOTAL:	\$ 656,700
				ENG/SURVEY	10%
				SUBTOTAL:	\$ 722,400
Estimated Project Total:					\$ 722,400

City of Fair Oaks Ranch



Capital Improvement Cost Estimate

April 2025

Construction Project Number: 2

Phase: 2035

Project Name: **Expansion of Wastewater Treatment Plant**

Project Description:

Expand existing WWTP to meet future growth.

Project Drivers:

This project will expand the existing WWTP to meet growth.

Opinion of Probable Construction Cost

ITEM	DESCRIPTION	QUANTITY	UNIT	UNIT PRICE	TOTAL
1	WWTP Expansion	1	EA	\$ 4,100,000	\$ 4,100,000
				SUBTOTAL:	\$ 4,100,000
				CONTINGENCY	0%
					\$ -
				SUBTOTAL:	\$ 4,100,000
				ENG/SURVEY	0%
					\$ -
				SUBTOTAL:	\$ 4,100,000
Estimated Project Total:					\$ 4,100,000

City of Fair Oaks Ranch



Capital Improvement Cost Estimate

April 2025

Construction Project Number: 3

Phase: 2035

Project Name: **8-inch Gravity Line east of Ralph Fair Road**

Project Description:

A new 8-inch gravity line east of Ralph Fair Road.

Project Drivers:

This project will serve new development.

Opinion of Probable Construction Cost

ITEM	DESCRIPTION	QUANTITY	UNIT	UNIT PRICE	TOTAL
1	8" Pipe	2,430	LF	\$ 144	\$ 349,920
2	48" Diameter Manhole	6	EA	\$ 12,000	\$ 72,000
		SUBTOTAL:			\$ 422,000
		CONTINGENCY		20%	\$ 84,400
		SUBTOTAL:			\$ 506,400
		ENG/SURVEY		10%	\$ 50,700
		SUBTOTAL:			\$ 557,100
Estimated Project Total:					\$ 557,100

City of Fair Oaks Ranch



Capital Improvement Cost Estimate

April 2025

Construction Project Number: 4

Phase: 2035

Project Name: **15-inch Gravity Line west of Ralph Fair Road**

Project Description:

A new 15-inch gravity line west of Ralph Fair Road.

Project Drivers:

This project will serve new development.

Opinion of Probable Construction Cost

ITEM	DESCRIPTION	QUANTITY	UNIT	UNIT PRICE	TOTAL
1	15" Pipe	2,430	LF	\$ 270	\$ 656,100
2	60" Diameter Manhole	6	EA	\$ 15,000	\$ 90,000
				SUBTOTAL:	\$ 746,100
				CONTINGENCY	20%
				SUBTOTAL:	\$ 895,400
				ENG/SURVEY	10%
				SUBTOTAL:	\$ 985,000
Estimated Project Total:					\$ 985,000