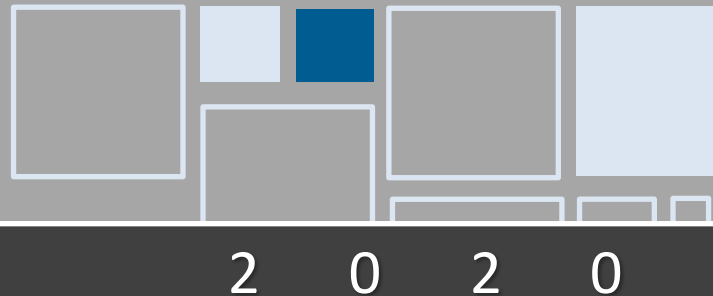




City of Fair Oaks Ranch

WATER & WASTEWATER IMPACT FEE REPORT



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Water & Wastewater Impact Fee Report

March 2020



3/12/2020

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TEXAS REGISTERED
ENGINEERING FIRM
F-2144

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FNI PROJECT #: FA019551

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Appendix A	Connection by Subdivision
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ES EXECUTIVE SUMMARY

1.0 BACKGROUND

In August 2019, 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. It is important to note that the City of Fair Oaks Ranch Comprehensive Plan is projecting buildout to occur in 2030, and the planning period for the impact fees is from 2020-2030.

Growth projections were updated based on data provided by the Water and Wastewater Master Plan which the City of Fair Oaks Ranch adopted in April 2019. The base planning year for the impact fee study was updated to 2020. The 2020 connections are based on data provided by the City. **Table ES-1** presents the growth projections for the City of Fair Oaks Ranch water and wastewater service area.

Table ES-1 Growth Projections

Year	Water Connections	Wastewater Connections
2020	2,996	1,815
2030	4,924	3,512

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 year 2030. **Tables ES-2** and **ES-3** display the water demand and wastewater flow projections for the City of Fair Oaks Ranch. 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)
2020	1.50	3.75	7.49
2030	2.46	6.16	12.31

Table ES-3 Projected Wastewater Flows

Year	Average Annual Daily Flow (mgd)	Peak Wet Weather Flow (mgd)
2020	0.29	1.02
2030	0.56	1.97

4.0 IMPACT FEE ANALYSIS

The previous impact fee ordinance was adopted in December 2014. This ordinance set the water impact fee for a single-family meter at \$5,400 and the wastewater impact fee for a single-family

meter at \$1,550, for a combined impact fee of \$6,950. As part of this study, the maximum allowable impact fees have been calculated to reflect the updated land use assumptions and capital improvements. Therefore, the City may elect to revise the impact fee collection rate and update the 2014 ordinance. 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 2020 and 2030. 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 4.0% interest rate was used to calculate financing costs. **Table ES-4** displays the 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	\$8,670
Wastewater	\$6,069
Total	\$14,739

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 August 2019, 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.

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

Table 1-1 List of Abbreviations

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

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 ETJ with exclusions for areas served by 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

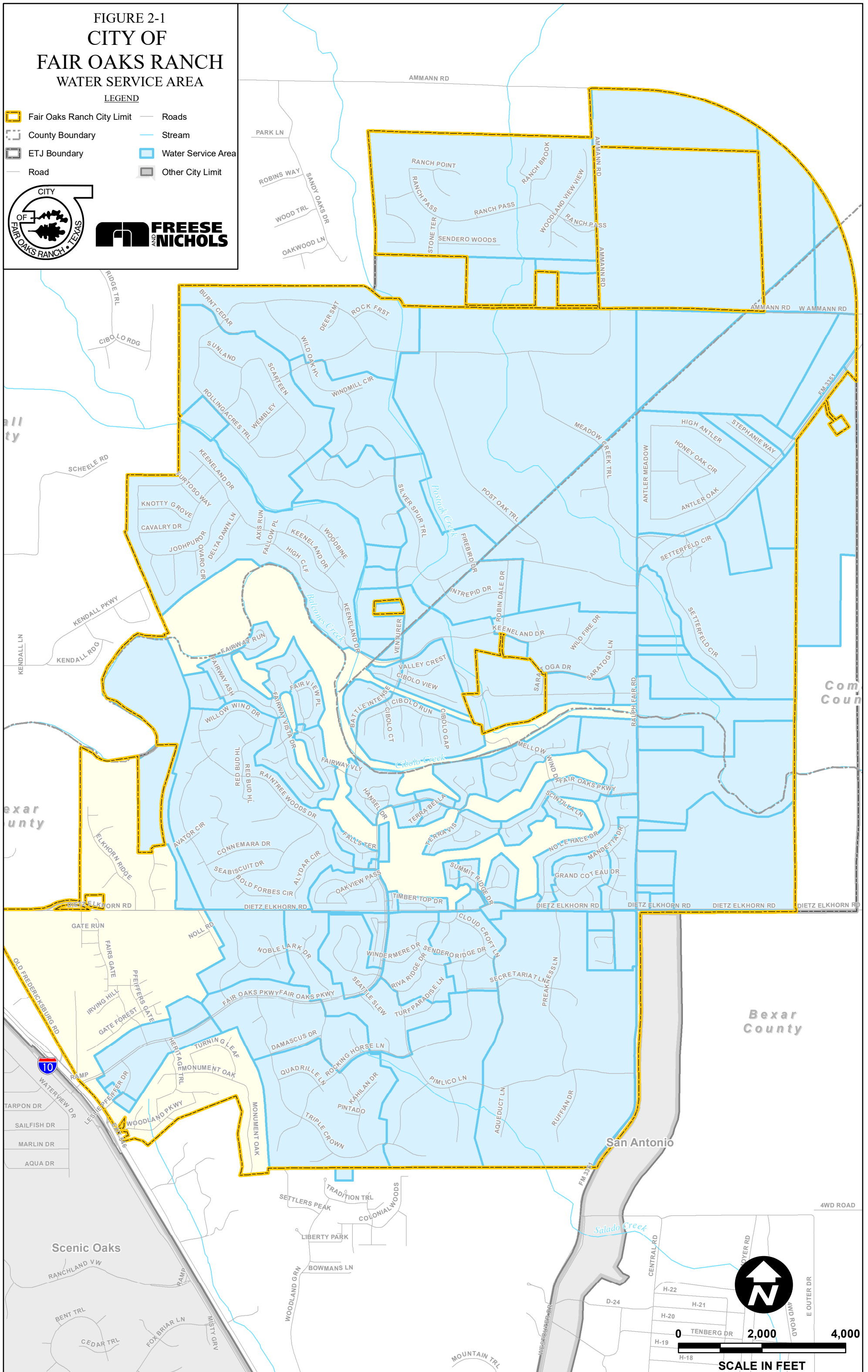
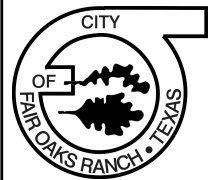
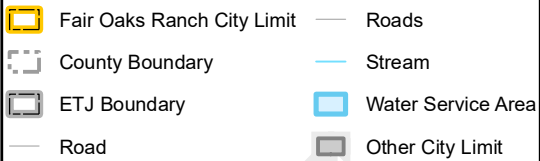
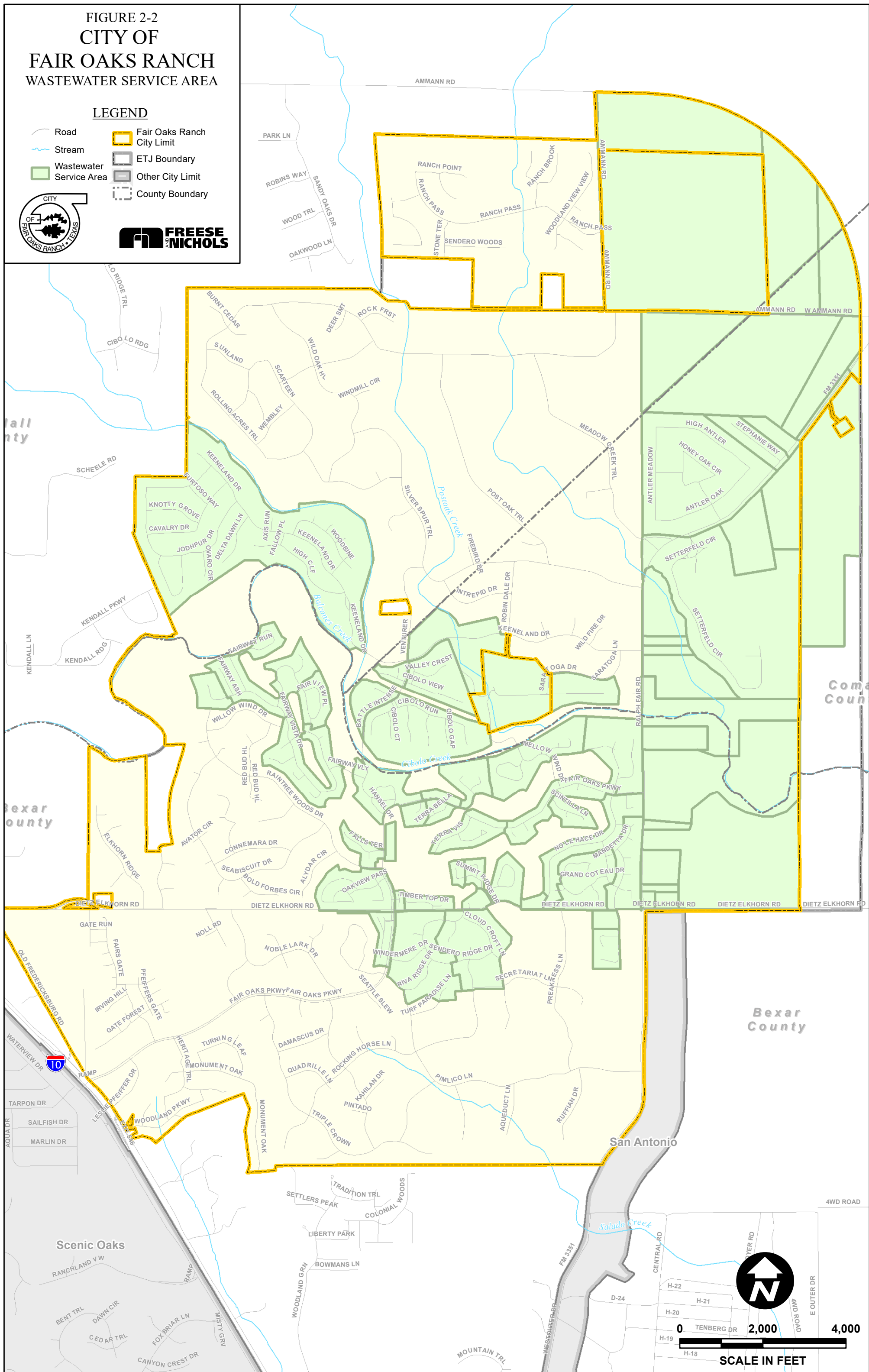


FIGURE 2-2
CITY OF
FAIR OAKS RANCH
WASTEWATER SERVICE AREA

LEGEND

-
- Road
 Stream
 Wastewater Service Area
 Fair Oaks Ranch City Limit
 ETJ Boundary
 Other City Limit
 County Boundary



2.2 Growth Projections

Land use assumption and population projections were developed by Gap Strategies for “The Future of Fair Oaks Ranch, A Comprehensive Plan for the City of Fair Oaks Ranch.” Shapefiles of future land use, timing of development, and overall population projections were provided by Gap Strategies. The Future Land Use Map is provided in **Figure 2-3**. Growth projections were updated based on data provided by the Water and Wastewater Master Plan which the City of Fair Oaks Ranch adopted in April 2019. The base planning year for the impact fee study was updated to 2020. The 2020 connections are based on data provided by the City. The City is projected to be at buildout by 2030, as a result, the 2030 projections represent buildout. **Table 2-3** 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
2020	2,996	1,815
2030	4,924	3,512

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. Planning areas corresponding to subdivision units were provided by the City and used to distribute the future connections. The number of connections for each planning area was based on data provided by the City for existing developments or by data provided by Gap Strategies for future developments. **Figure 2-4** and **2-5** show the water and wastewater connection projections by subdivision unit, respectively. A table summarizing the growth in water and wastewater connections by planning area is provided in **Appendix A**.

Figure 2-3 Future Land Use Map

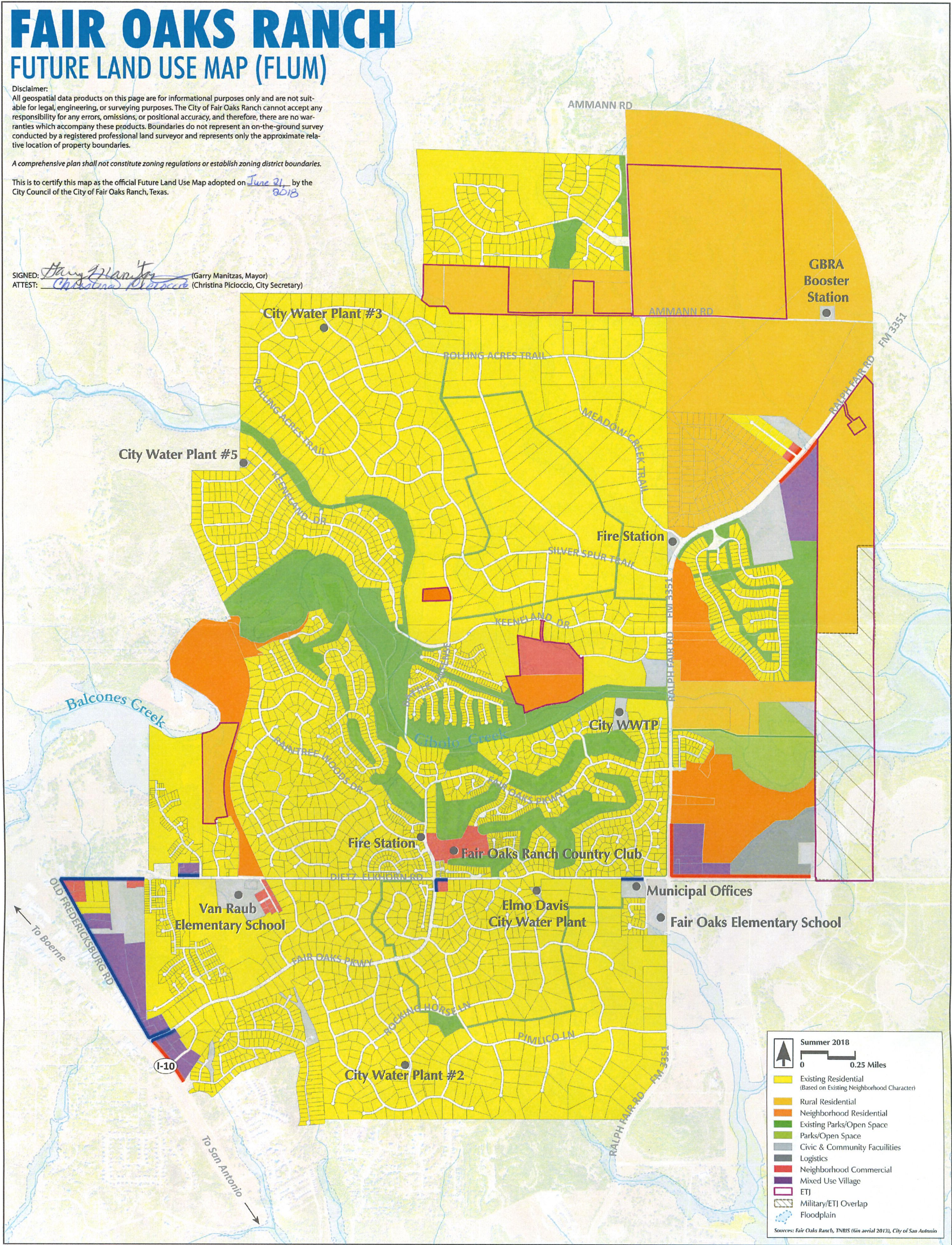


FIGURE 2-4
CITY OF
FAIR OAKS RANCH
WATER CONNECTIONS
BY SUBDIVISION UNIT

SUBDIVISION UNIT ID
2020 Connections (2,996)
2030 Connections (4,924)

- LEGEND
- Planning Area
 - County Boundary
 - Fair Oaks Ranch City Limit
 - ETJ Boundary
 - Other City Limit
 - Road
 - Stream

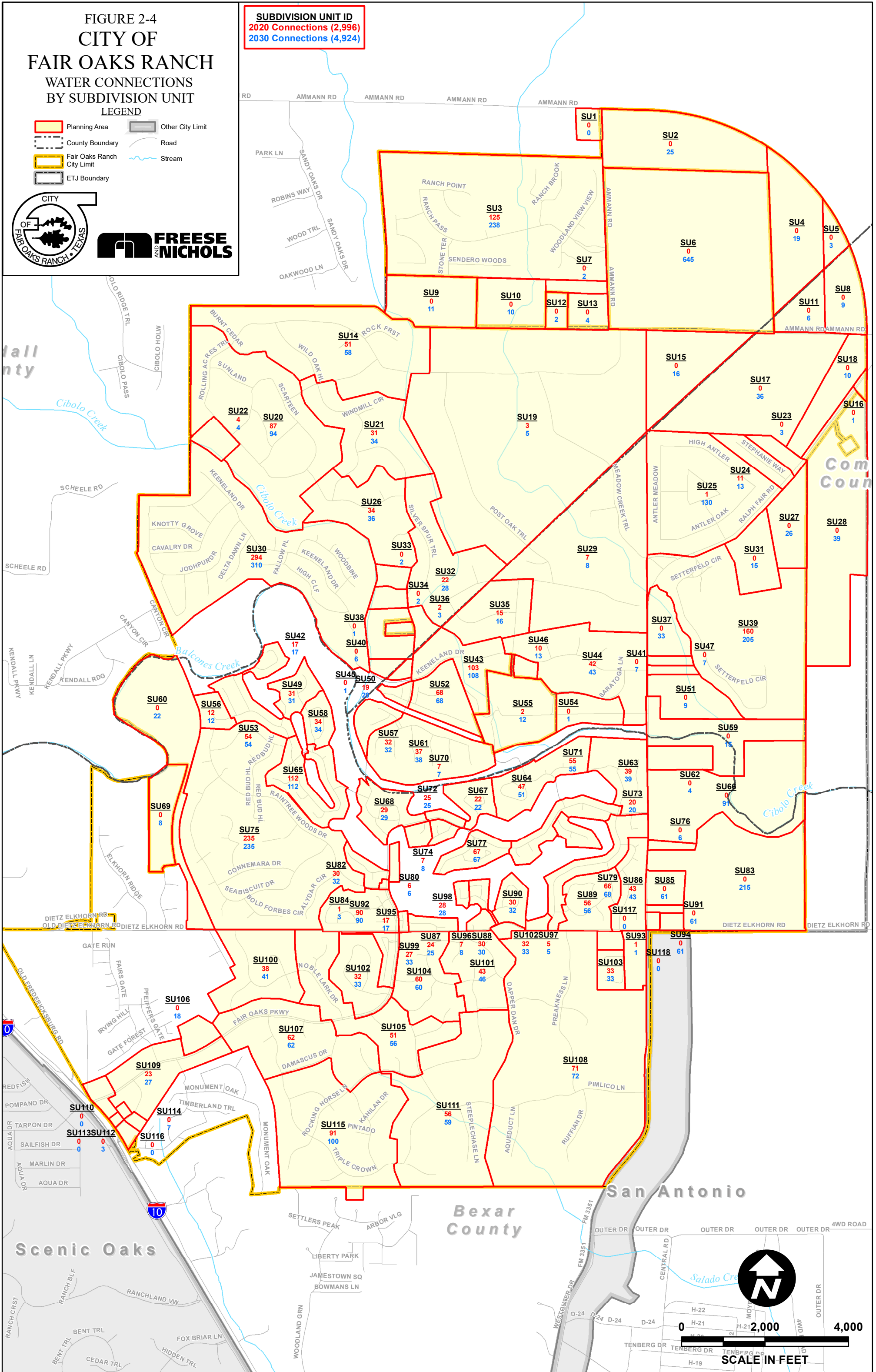
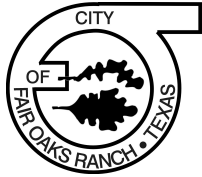


FIGURE 2-5
CITY OF
FAIR OAKS RANCH
WASTEWATER CONNECTIONS
BY SUBDIVISION UNIT

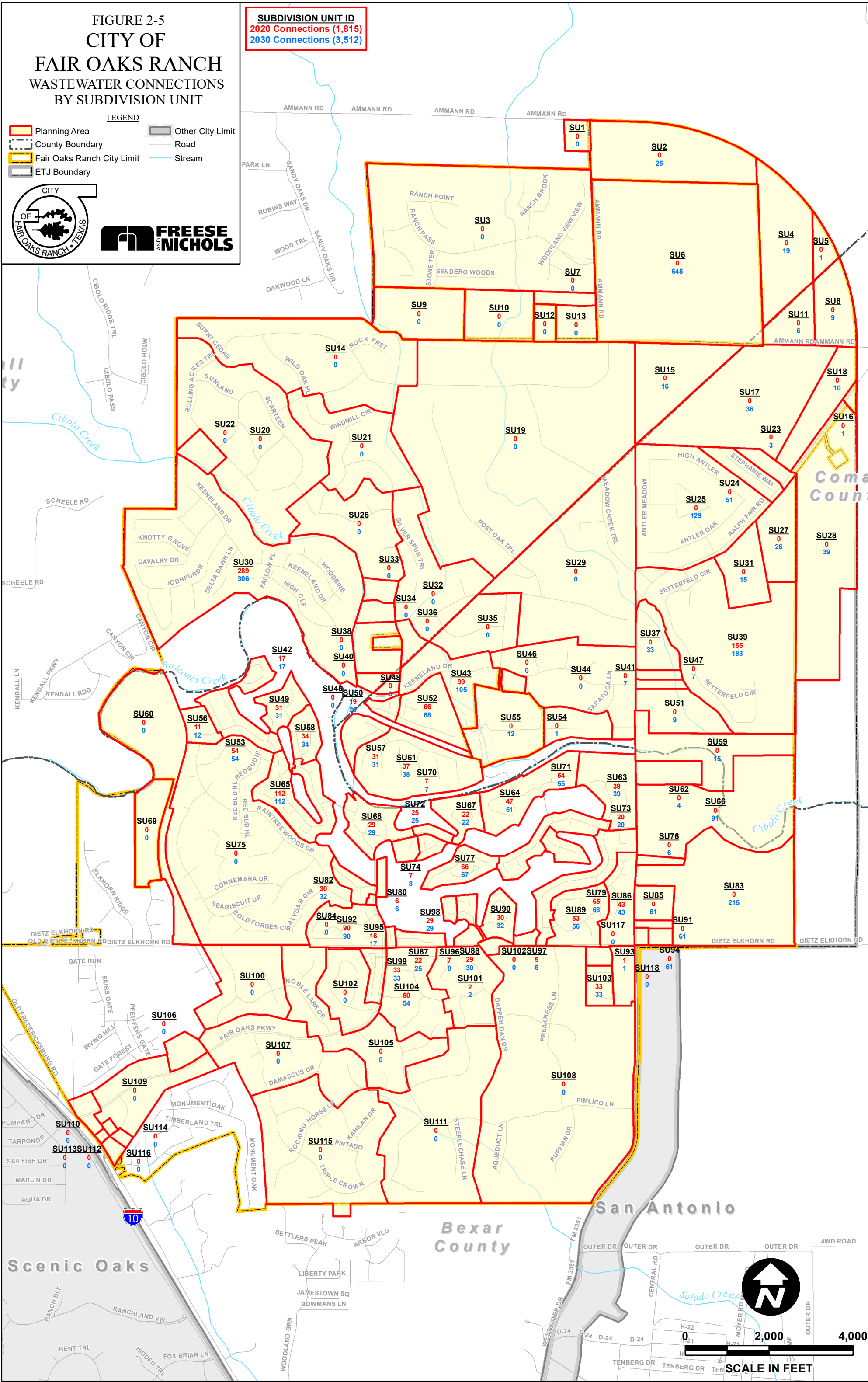
SUBDIVISION UNIT ID
2020 Connections (1,815)
2030 Connections (3,512)

LEGEND

- Planning Area
- County Boundary
- Fair Oaks Ranch City Limit
- ETJ Boundary
- Other City Limit
- Road
- Stream



**FREESE
AND
NICHOLS**



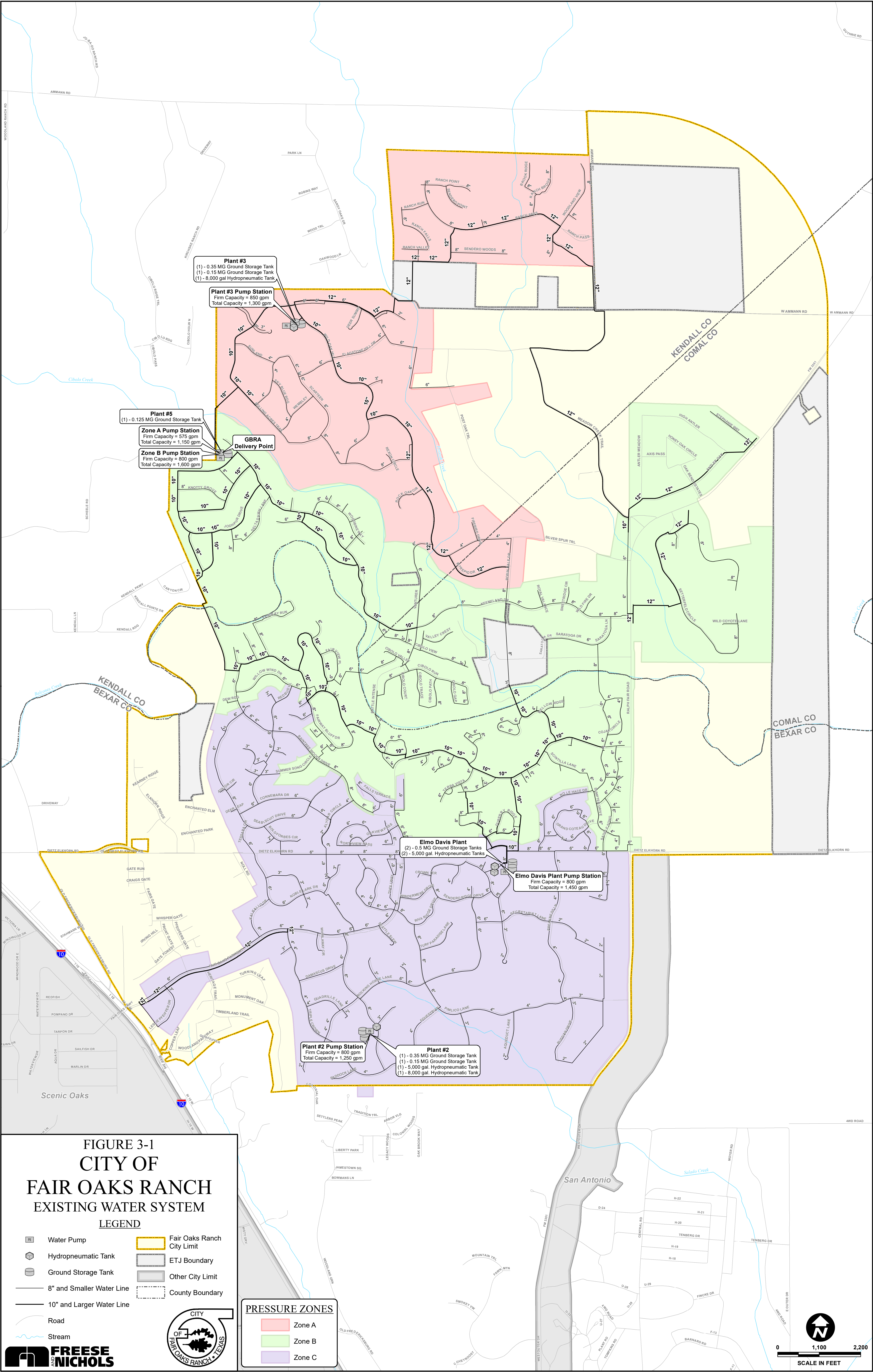
3.0 CAPITAL IMPROVEMENTS PLAN

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 year 2030 and are based on the CIP adopted by the City in the Water, Wastewater, and Reuse Master Plan 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. **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 wastewater treatment plant (WWTP) with a permitted capacity of 0.5 mgd annual average day flow (AADF). **Figure 3-2** presents the existing wastewater system.



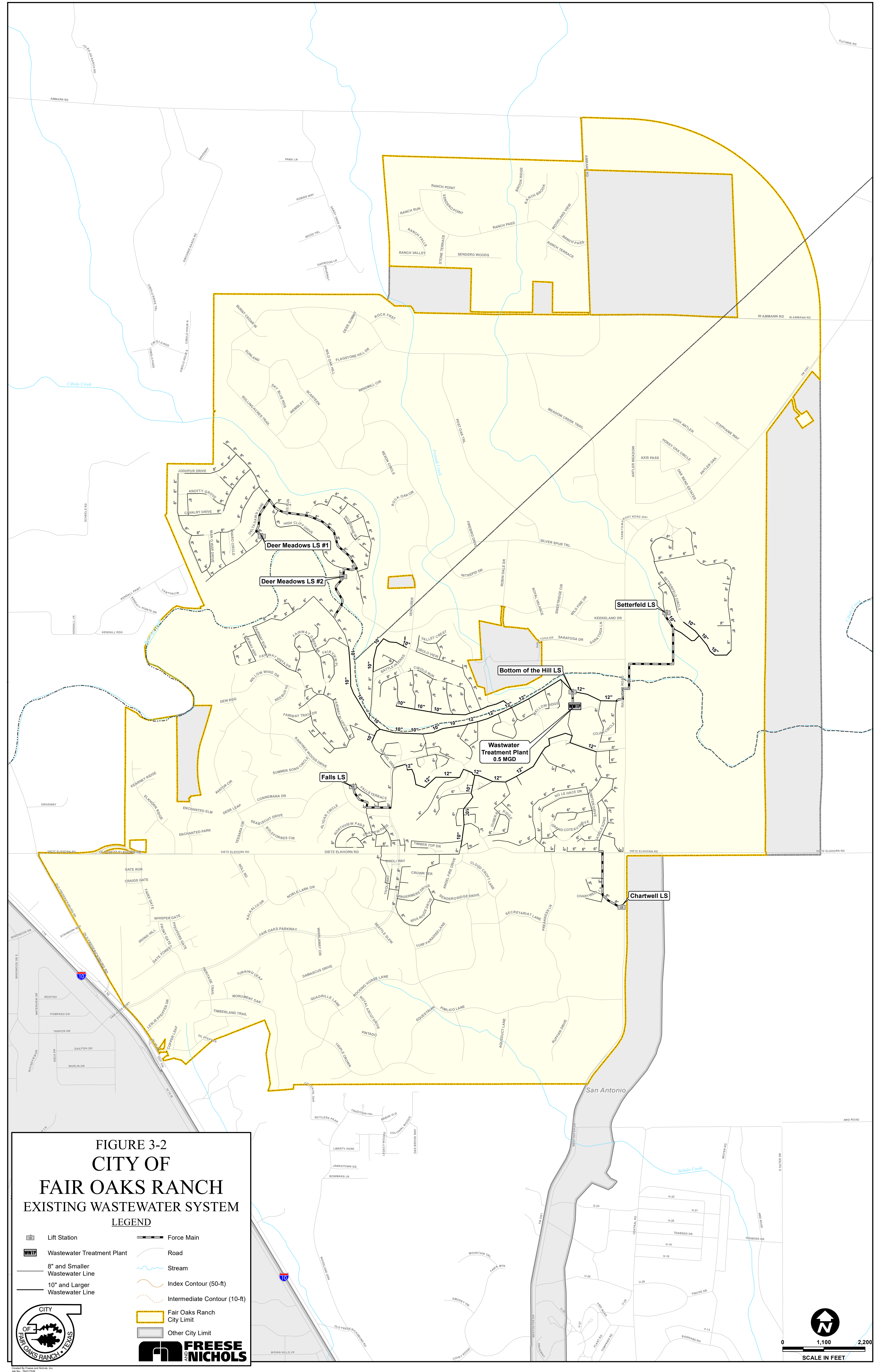


FIGURE 3-2

CITY OF

FAIR OAKS RANCH

EXISTING WASTEWATER SYSTEM

LEGEND

Lift Station

Wastewater Treatment Plant

8" and Smaller Wastewater Line

10" and Larger Wastewater Line

Force Main

Road

Stream

Index Contour (50-ft)

Intermediate Contour (10-ft)

Fair Oaks Ranch City Limit

Other City Limit

FREESE

NICHOLS

Created By Freese and Nichols, Inc.

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2,200

SCALE IN FEET

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 by FNI. **Table 3-3** presents the projected water demands, and **Table 3-4** 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)
2020	1.50	3.75	7.49
2030	2.46	6.16	12.31

Table 3-2 Projected Wastewater Flows

Year	Average Annual Daily Flow (mgd)	Peak Wet Weather Flow (mgd)
2020	0.29	1.02
2030	0.56	1.97

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 3-5** and **Table 3-6**, respectively. The costs are in 2019 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 B** and **Appendix C**, respectively. The hydraulic models developed for the water and wastewater master plan 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 2030 percent utilization is the portion of the project's capacity that will be required to serve the City of Fair Oaks Ranch in 2030. The portion of a project's total cost that is used to serve development projected to occur from 2020 through 2030 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

No.	Description of Project	Percent Utilization			Costs Based on 2020 Dollars	
		2020 ⁽¹⁾	2030	2020 - 2030	Capital Cost	10-Year (2020-2030)
Existing	A 12-inch Parallel Along Rolling Acres Trail	30%	100%	70%	\$114,107	\$79,875
	B 12-inch Along Meadow Creek Trail	40%	100%	60%	\$24,773	\$14,864
	C 12-inch Line Near Meadow Creek Trail and FM 3351	8%	100%	92%	\$936,527	\$861,605
	D Impact Fee Study	0%	100%	100%	\$36,000	\$36,000
Existing Project Sub-total					\$1,111,407	\$992,344
Proposed	1 9,000-Gallon Plant #2 Hydropneumatic Tank (Zone C)	81%	100%	19%	\$246,700	\$46,873
	2 0.5-MG Zone A Elevated Storage Tank (Zone A)	26%	100%	74%	\$3,289,000	\$2,433,860
	3 12-inch West Ammann Road Water Line (Zone A)	26%	100%	74%	\$1,016,600	\$752,284
	4 12-inch Northeast Water Lines (Zone A)	0%	100%	100%	\$1,614,600	\$1,614,600
	5 400-gpm Plant #5 Zone B Pump Station Expansion and 0.5-MG GST (Zone B)	92%	100%	8%	\$2,167,800	\$164,753
	6 650-gpm Elmo Davis Pump Station Expansion (Zone C)	81%	100%	19%	\$971,800	\$184,642
	7 Pressure Reducing Valve at Rolling Acres Trail and Meadow Creek Trail (Zone B)	0%	100%	100%	\$149,500	\$149,500
	8 8-inch Water Line at Dietz Elkhorn Road and Ralph Fair Road (Zone C)	0%	100%	100%	\$287,100	\$287,100
	9 12-inch Southeastern Water Lines (Zone B)	0%	100%	100%	\$2,619,300	\$2,619,300
	10 12/16-inch Plant #6 Discharge Water Lines (Zone A/B)	0%	100%	100%	\$2,822,600	\$2,822,600
	11 Plant #6 and New GBRA Delivery Point (Zone A/B)	0%	100%	100%	\$5,905,300	\$5,905,300
	12 12-inch ETJ Water Line (Zone B)	0%	100%	100%	\$2,559,500	\$2,559,500
	13 0.5-MG Plant #2 Elevated Storage Tank (Zone C)	81%	100%	19%	\$3,289,000	\$624,910
	14 8/12-inch Royal Ascot/Triple Crown/Equestrian Water Line Replacement (Zone C)	90%	100%	10%	\$1,085,400	\$108,540
	15 8-inch Pimlico Lane Water Line Replacement (Zone C)	95%	100%	5%	\$758,000	\$37,900
	16 8-inch Preakness Lane Water Line Replacement (Zone C)	95%	100%	5%	\$991,200	\$49,560
	17 12-inch Triple Crown Road Water Line Replacement (Zone C)	90%	100%	10%	\$1,448,700	\$144,870
	18 8-inch Rolling Acres Trail Water Line (Zone A)	0%	100%	100%	\$649,200	\$649,200
	19 8-inch Post Oak Trail Water Line (Zone A)	0%	100%	100%	\$1,295,500	\$1,295,500
	20 8-inch Silver Spur Trail Water Line (Zone A)	0%	100%	100%	\$677,500	\$677,500
Proposed Project Sub-total					\$33,844,300	\$23,128,292
Total Capital Improvements Cost					\$34,955,707	\$24,120,635

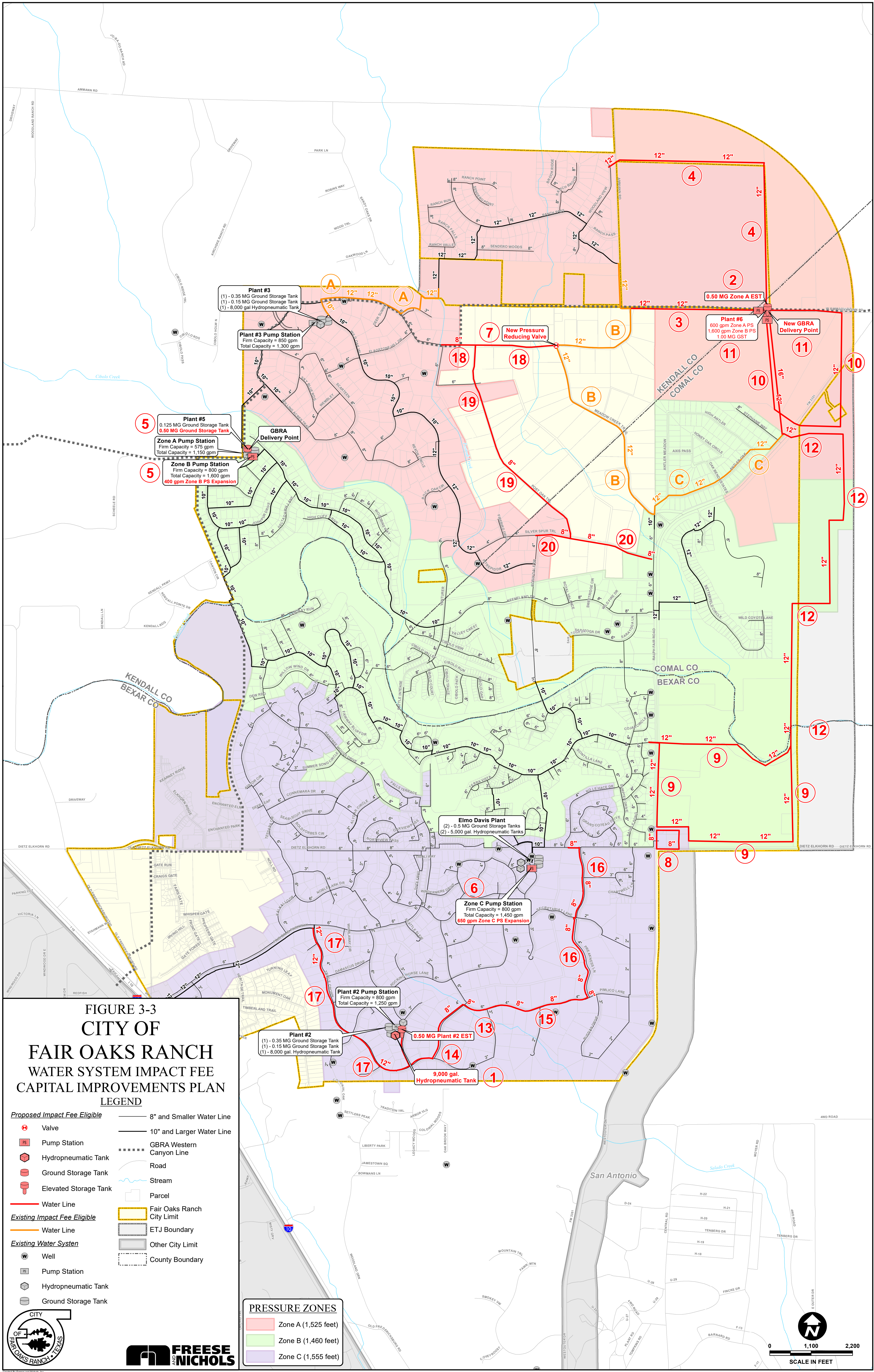
(1) Utilization in 2020 on proposed projects indicates a portion of the project that will be used to address deficiencies within the existing system, and therefore are not eligible for impact fee cost recovery for future growth.

Table 3-4 Wastewater System Impact Fee Eligible Projects

No.		Description of Project	Percent Utilization			Costs Based on 2020 Dollars	
			2020 ⁽¹⁾	2030	2020 - 2030	Capital Cost	10-Year (2020-2030)
Existing	A	Impact Fee Study	0%	100%	100%	\$36,000	\$36,000
	Existing Project Sub-total					\$36,000	\$36,000
Proposed	1	8-inch Gravity Line and Decommission Falls Lift Station	96%	100%	4%	\$550,900	\$19,981
	2 ⁽²⁾	New 0.6 mgd WWTP and Decommission old WWTP	48%	100%	52%	\$13,113,800	\$6,775,463
	3	New Gravity Line from Old WWTP to New WWTP	75%	100%	25%	\$1,830,300	\$457,575
	4	1.6 mgd Lift Station and 12" Force Main to New WWTP	48%	100%	52%	\$3,038,600	\$1,580,072
	5	12/15-inch Gravity Line in the ETJ	0%	100%	100%	\$878,500	\$878,500
	6	12-inch Gravity Line in the ETJ	0%	100%	100%	\$728,900	\$728,900
	7	12-inch Gravity Line in the ETJ	0%	100%	100%	\$511,300	\$511,300
	8	10-inch Gravity Line north of Ralph Fair Road	0%	100%	100%	\$699,700	\$699,700
	9	8/10-inch Gravity Line north of Ralph Fair Road	0%	100%	100%	\$929,600	\$929,600
	10	8-inch Gravity Line north of Dietz Elkhorn Road	0%	100%	100%	\$483,300	\$483,300
	11	8-inch Gravity Line east of Ralph Fair Road	0%	100%	100%	\$358,000	\$358,000
	12	10-inch Gravity Line crossing Cibolo Creek	0%	100%	100%	\$498,700	\$498,700
	13	12-inch Gravity Line to the new WWTP	0%	100%	100%	\$381,300	\$381,300
	14	10-inch Gravity Line and Decommission Setterfeld Lift Station	83%	100%	17%	\$738,600	\$125,562
	Proposed Project Sub-total					\$24,741,500	\$14,427,953
Total Capital Improvements Cost						\$24,777,500	\$14,463,953

(1) Utilization in 2020 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.

(2) This project combines project numbers 2 and 4 from the Water, Wastewater, and Reuse System Master Plan to include decommissioning the existing wastewater treatment plant with the construction of the new wastewater treatment plant. The cost estimate has also been updated from the wastewater master plan.



4.0 IMPACT FEE ANALYSIS

The previous impact fee ordinance was adopted in December 2014. This ordinance set the water impact fee for a single-family meter at \$5,400 and the wastewater impact fee for a single-family meter at \$1,550, for a combined impact fee of \$6,950. As part of this study, the maximum allowable impact fees have been calculated to reflect the updated land use assumptions and capital improvements. Therefore, the City may elect to revise the impact fee collection rate and update the 2014 ordinance. 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 2030. For existing or proposed projects, the impact fee is calculated as a percentage of the project cost, based upon the percentage of the project's capacity required to serve development projected to occur between 2020 and 2030. Capacity serving existing development cannot be charged to impact fees.

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 2019. The water and wastewater service units for 2020 and the projected service units for 2030 are presented in **Table 4-2** and **4-3**, respectively.

Table 4-2 Water Service Units

Meter Size	2020			2030			Growth in Service Units
	Number of Meters	Service Unit Equivalent	Service Units	Number of Meters	Service Unit Equivalent	Service Units	
3/4"	2,656	1.0	2,656	4,366	1.0	4,366	1,710
1"	339	1.6	542	557	1.6	891	349
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	2,996	-	3,211	4,924	-	5,270	2,059

Table 4-3 Wastewater Service Units

Meter Size	2020			2030			Growth in Service Units
	Number of Meters	Service Unit Equivalent	Service Units	Number of Meters	Service Unit Equivalent	Service Units	
3/4"	1,695	1.0	1,695	3,281	1.0	3,281	1,586
1"	119	1.6	190	230	1.6	368	178
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	1,815	-	1,898	3,512	-	3,662	1,764

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 2030, the projected finance cost for the capital improvements, and the consultant cost for preparing and updating the Capital Improvement Plan. A 4.0% interest rate was used to calculate financing costs. **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 are presented on **Figure 4-1**.

Table 4-4 Water Credit Calculation

Water Impact Fee	
Total Eligible Capital Improvement Costs	\$24,120,635
Total Eligible Financing Costs	\$11,583,797
Total Eligible Impact Fee Costs	\$35,704,433
Growth in Service Units	2,059
Maximum Water Impact Fee per Service Unit ⁽¹⁾	\$17,341
Impact Fee Credit per Service Unit ⁽²⁾	\$8,670
Maximum Allowable Water Impact Fee ⁽³⁾	\$8,670

(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 Wastewater Credit Calculation

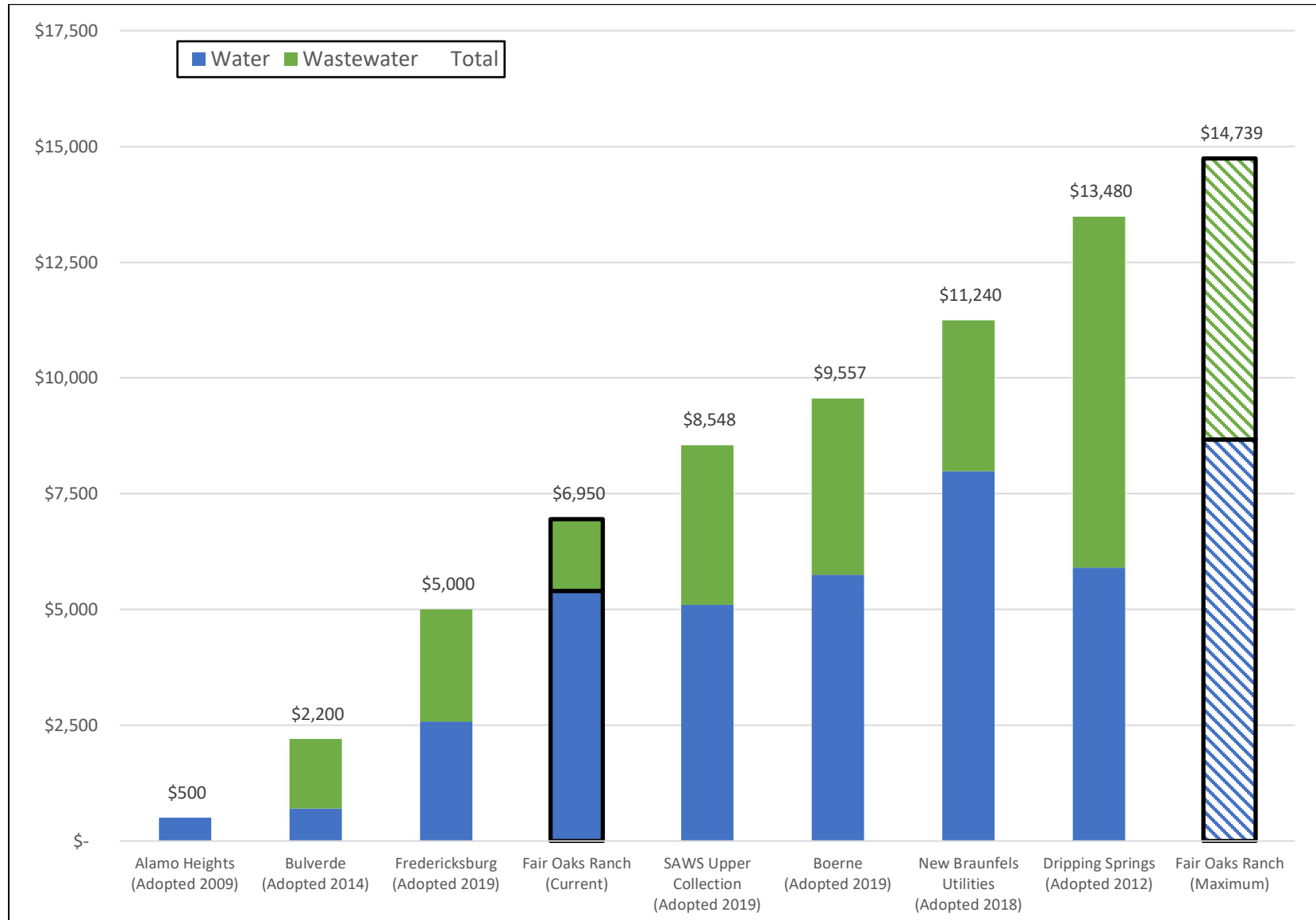
Wastewater Impact Fee	
Total Eligible Capital Improvement Costs	\$14,463,953
Total Eligible Financing Costs	\$6,946,231
Total Eligible Impact Fee Costs	\$21,410,184
Growth in Service Units	1,764
Maximum Water Impact Fee per Service Unit ⁽¹⁾	\$12,137
Impact Fee Credit per Service Unit ⁽²⁾	\$6,069
Maximum Allowable Wastewater Impact Fee ⁽³⁾	\$6,069

(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

Connections by Subdivision

Table A-1
Connections by Subdivision

Unit ID	Unit Subdivision	2020 Water Connections	2020 Wastewater Connections	2030 Water Connections	2030 Wastewater Connections
0	Setterfeld Estates	160	155	205	183
1	Unit B1	71	0	72	0
2	Chartwell Subdivision	33	33	33	33
3	Unit B2	56	0	59	0
4	Unit B3	91	0	100	0
5	Parcel 26	0	0	0	0
6	Unit B4	62	0	62	0
7	Unit B6	51	0	56	0
8	Windemere Subdivision Unit 1	43	2	46	2
9	Windemere Subdivision Unit 2	60	50	60	54
10	Unit B7, B8, and B13	32	0	33	0
11	The Fountains	27	33	33	33
12	Oakwood Heights Subdivision	90	90	90	90
13	The Crossing	17	16	17	17
14	Unit M	28	29	28	29
15	Unit V	7	7	8	8
16	Unit H	5	5	5	5
17	Unit N	43	43	43	43
18	Nooners	1	1	1	1
19	Stone Creek Ranch	125	0	238	0
20	Parcel 12	0	0	36	36
21	Unit C	56	53	56	56
22	Unit B	66	65	68	68
23	Unit J	30	30	32	32
24	Unit F1	30	29	30	30
25	Unit F2	24	22	25	25
26	Fire Station	1	0	3	0
27	Unit I	6	6	6	6
28	Unit D1, D2, and D3 (The Gardens)	67	66	67	67
29	Unit L	20	20	20	20
30	Unit D4 and E	55	54	55	55
31	Unit O and O2	39	39	39	39
32	Unit R and S	47	47	51	51
33	Unit Q	22	22	22	22
34	Unit T	7	7	7	7
35	Unit P	25	25	25	25
36	Unit W	29	29	29	29
37	The Falls	30	30	32	32
38	Unit B5	38	0	41	0
39	Blackjack Oaks Subdivision	112	112	112	112
40	Blackjack Oaks Unit A	54	54	54	54
41	Blackjack Estates Unit 1	34	34	34	34
42	Blackjack Estates Unit 2	31	31	31	31

Table A-1
Connections by Subdivision

Unit ID	Unit Subdivision	2020 Water Connections	2020 Wastewater Connections	2030 Water Connections	2030 Wastewater Connections
43	Blackjack Oaks Unit B	17	17	17	17
44	Unit C9	37	37	38	38
45	Unit C12	32	31	32	31
46	Deer Meadow Estates	294	289	310	306
47	Unit C13	19	19	20	20
48	Unit C14	68	66	68	68
49	Fair Co.	2	0	12	12
50	Unit C11	0	0	1	1
51	Unit C3 and C4	42	0	43	0
52	Parcel 18	0	0	9	9
53	Unit C7 and C8	103	99	108	105
54	Parcel 41	0	0	1	0
55	Unit K8	2	0	3	0
56	Parcel 40	0	0	6	0
57	Unit C2	15	0	16	0
58	Unit K4	22	0	28	0
59	Unit K5	34	0	36	0
60	Unit K7	4	0	4	0
61	Unit K2	51	0	58	0
62	Unit K6	87	0	94	0
63	Unit K3	31	0	34	0
64	Unit K1	3	0	5	0
65	The Enclave	11	0	13	51
66	Oak Bend Estates	1	0	130	129
67	Unit C1	7	0	8	0
68	8710 Dietz Elkhorn	0	0	0	0
69	Unit PFE	23	0	27	0
70	Blackjack Oaks Unit C	12	11	12	12
71	Unit P2	7	7	8	8
72	Cibolo Creek Church	0	0	15	15
73	The Reserve	0	0	645	645
74	Minahan	0	0	26	26
75	Unit C5	10	0	13	0
76	First Baptist (FM3351)	0	0	3	3
77	Parcel 22	0	0	215	215
78	Parcel 11	0	0	16	16
79	Parcel 2	0	0	10	0
80	Parcel 6	0	0	25	25
81	Parcel 14	0	0	39	39
82	Parcel 37	0	0	2	0
83	Parcel 38	0	0	2	0
84	Parcel 39	0	0	1	0
85	Parcel 27	0	0	7	0

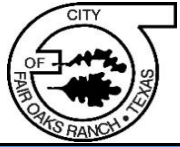
Table A-1
Connections by Subdivision

Unit ID	Unit Subdivision	2020 Water Connections	2020 Wastewater Connections	2030 Water Connections	2030 Wastewater Connections
86	Parcel 29	0	0	3	0
87	Parcel 28	0	0	0	0
88	Parcel 35	0	0	8	0
89	Parcel 36	0	0	22	0
90	Parcel 42	0	0	1	0
91	Parcel 5	0	0	4	0
92	Parcel 1	0	0	11	0
93	Parcel 3	0	0	2	0
94	Parcel 4	0	0	2	0
95	ETJ	0	0	0	0
96	Parcel 15	0	0	33	33
97	Parcel 16	0	0	7	7
98	Parcel 17	0	0	7	7
99	Parcel 7	0	0	19	19
100	Parcel 8	0	0	3	1
101	Parcel 9	0	0	6	6
102	Parcel 10	0	0	9	9
103	Parcel 13	0	0	10	10
104	Parcel 19	0	0	15	15
105	Parcel 20	0	0	4	4
106	Parcel 21	0	0	6	6
107	Parcel 23	0	0	61	61
108	Parcel 24	0	0	61	61
109	Parcel 25	0	0	61	61
110	The Arbors	0	0	91	91
111	ETJ	0	0	1	1
112	ETJ	0	0	0	0
113	City of Fair Oaks Ranch Properties	0	0	0	0
114	Parcel 34	0	0	18	0
115	Raintree Woods Subdivision	235	0	235	0
Total		2,996	1,815	4,924	3,512

Appendix B

Water System Project Cost Estimates

City of Fair Oaks Ranch



Capital Improvement Cost Estimate

January 2020

Construction Project Number: 1

Project Name **9,000-Gallon Plant #2 Hydropneumatic Tank (Zone C)**

Project Description:

This project consists of a new 9,000 gallon hydropneumatic tank at Plant #2.

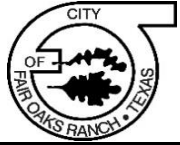
Project Drivers:

This project will allow the City to meet the TCEQ minimum requirements for hydropneumatic storage in Zone C.

Opinion of Probable Construction Cost

ITEM	DESCRIPTION	QUANTITY	UNIT	UNIT PRICE	TOTAL
1	9,000-gallon Hydropneumatic Tank	1	LS	\$ 150,000	\$ 150,000
2	Remove Existing Hydropneumatic Tank	1	LS	\$ 15,000	\$ 15,000
				SUBTOTAL:	\$ 165,000
				CONTINGENCY	30%
					\$ 49,500
				SUBTOTAL:	\$ 214,500
				ENG/SURVEY	15%
					\$ 32,200
				SUBTOTAL:	\$ 246,700
Estimated Project Total:					\$ 246,700

City of Fair Oaks Ranch



Capital Improvement Cost Estimate

January 2020

Construction Project Number:2

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 intersection of West Ammann Road and the Comal 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	\$ 2,200,000	\$ 2,200,000
				SUBTOTAL:	\$ 2,200,000
				CONTINGENCY	30%
					\$ 660,000
				SUBTOTAL:	\$ 2,860,000
				ENG/SURVEY	15%
					\$ 429,000
				SUBTOTAL:	\$ 3,289,000
Estimated Project Total:					\$ 3,289,000

City of Fair Oaks Ranch



Capital Improvement Cost Estimate

January 2020

Construction Project Number: 3

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

Project Description:

This project consists of a new 12-inch water line that flows between the Zone A elevated storage tank described in Project 2 and Rolling Acres Trail, along West Ammann Road.

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	\$ 120	\$ 480,000
2	Water Pavement Repair	4,000	LF	\$ 50	\$ 200,000
SUBTOTAL:					\$ 680,000
CONTINGENCY				30%	\$ 204,000
SUBTOTAL:					\$ 884,000
ENG/SURVEY				15%	\$ 132,600
SUBTOTAL:					\$ 1,016,600
Estimated Project Total:					\$ 1,016,600

City of Fair Oaks Ranch



Capital Improvement Cost Estimate

January 2020

Construction Project Number: 4

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 Elevated Storage Tank mentioned in Project 2 and the Ranch Pass subdivision.

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	9,000	LF	\$ 120	\$ 1,080,000
SUBTOTAL:					\$ 1,080,000
CONTINGENCY				30%	\$ 324,000
SUBTOTAL:					\$ 1,404,000
ENG/SURVEY				15%	\$ 210,600
SUBTOTAL:					\$ 1,614,600
Estimated Project Total:					\$ 1,614,600

City of Fair Oaks Ranch



Capital Improvement Cost Estimate

January 2020

Construction Project Number: 5

Project Name **400-gpm Plant #5 Zone B Pump Station Expansion and 0.5-MG GST (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. This project also includes a new 0.50-MG ground storage tank.

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	\$ 450,000	\$ 450,000
2	0.5 MG Ground Storage Tank	1	LS	\$ 1,000,000	\$ 1,000,000
				SUBTOTAL:	\$ 1,450,000
				CONTINGENCY	30%
					\$ 435,000
				SUBTOTAL:	\$ 1,885,000
				ENG/SURVEY	15%
					\$ 282,800
				SUBTOTAL:	\$ 2,167,800
Estimated Project Total:					\$ 2,167,800

City of Fair Oaks Ranch



Capital Improvement Cost Estimate

January 2020

Construction Project Number: 6

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	\$ 650,000	\$ 650,000
				SUBTOTAL:	\$ 650,000
				CONTINGENCY	30%
					\$ 195,000
				SUBTOTAL:	\$ 845,000
				ENG/SURVEY	15%
					\$ 126,800
				SUBTOTAL:	\$ 971,800
Estimated Project Total:					\$ 971,800

City of Fair Oaks Ranch



Capital Improvement Cost Estimate

January 2020

Construction Project Number: 7

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	30%
					\$ 30,000
				SUBTOTAL:	\$ 130,000
				ENG/SURVEY	15%
					\$ 19,500
				SUBTOTAL:	\$ 149,500
Estimated Project Total:					\$ 149,500

City of Fair Oaks Ranch



Capital Improvement Cost Estimate

January 2020

Construction Project Number: 8

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

Project Description:

This project consists of a new 8-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 C.

Opinion of Probable Construction Cost

ITEM	DESCRIPTION	QUANTITY	UNIT	UNIT PRICE	TOTAL
1	8" WL & Appurtenances	2,400	LF	\$ 80	\$ 192,000
SUBTOTAL:					\$ 192,000
CONTINGENCY				30%	\$ 57,600
SUBTOTAL:					\$ 249,600
ENG/SURVEY				15%	\$ 37,500
SUBTOTAL:					\$ 287,100
Estimated Project Total:					\$ 287,100

City of Fair Oaks Ranch



Capital Improvement Cost Estimate

January 2020

Construction Project Number: 9

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	14,600	LF	\$ 120	\$ 1,752,000
SUBTOTAL:					\$ 1,752,000
CONTINGENCY				30%	\$ 525,600
SUBTOTAL:					\$ 2,277,600
ENG/SURVEY				15%	\$ 341,700
SUBTOTAL:					\$ 2,619,300
Estimated Project Total:					\$ 2,619,300

City of Fair Oaks Ranch



Capital Improvement Cost Estimate

January 2020

Construction Project Number: 10

Project Name **12/16-inch Plant #6 Discharge Water Lines (Zone A/B)**

Project Description:

This project consists of a new 12-inch water line loop south of Plant #6 that serves Zone A and new 16-inch water lines 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	12" WL & Appurtenances	10,800	LF	\$ 120	\$ 1,296,000
2	16" WL & Appurtenances	3,700	LF	\$ 160	\$ 592,000
SUBTOTAL:					\$ 1,888,000
CONTINGENCY				30%	\$ 566,400
SUBTOTAL:					\$ 2,454,400
ENG/SURVEY				15%	\$ 368,200
SUBTOTAL:					\$ 2,822,600
Estimated Project Total:					\$ 2,822,600

City of Fair Oaks Ranch



Capital Improvement Cost Estimate

January 2020

Construction Project Number: 11

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 1.75 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	\$ 2,500,000	\$ 2,500,000
2	1.0 MG Ground Storage Tank	1	LS	\$ 1,250,000	\$ 1,250,000
3	Meter Vault for GBRA Delivery Point	1	LS	\$ 200,000	\$ 200,000
				SUBTOTAL:	\$ 3,950,000
				CONTINGENCY	30%
					\$ 1,185,000
				SUBTOTAL:	\$ 5,135,000
				ENG/SURVEY	15%
					\$ 770,300
				SUBTOTAL:	\$ 5,905,300
Estimated Project Total:					\$ 5,905,300

City of Fair Oaks Ranch



Capital Improvement Cost Estimate

January 2020

Construction Project Number: 12

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	12,600	LF	\$ 120	\$ 1,512,000
2	20" Boring and Casing	500	LF	\$ 400	\$ 200,000
SUBTOTAL:					\$ 1,712,000
CONTINGENCY				30%	\$ 513,600
SUBTOTAL:					\$ 2,225,600
ENG/SURVEY				15%	\$ 333,900
SUBTOTAL:					\$ 2,559,500
Estimated Project Total:					\$ 2,559,500

City of Fair Oaks Ranch



Capital Improvement Cost Estimate

January 2020

Construction Project Number:13

Project Name **0.5-MG Plant #2 Elevated Storage Tank (Zone C)**

Project Description:

This project consists of a new 0.5 MG elevated storage tank at Plant #2.

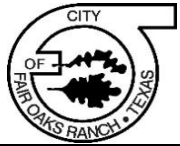
Project Drivers:

This project will provide elevated storage capacity in Zone C.

Opinion of Probable Construction Cost

ITEM	DESCRIPTION	QUANTITY	UNIT	UNIT PRICE	TOTAL
1	0.5 MG Elevated Storage Tank	1	LS	\$ 2,200,000	\$ 2,200,000
				SUBTOTAL:	\$ 2,200,000
				CONTINGENCY	30%
					\$ 660,000
				SUBTOTAL:	\$ 2,860,000
				ENG/SURVEY	15%
					\$ 429,000
				SUBTOTAL:	\$ 3,289,000
Estimated Project Total:					\$ 3,289,000

City of Fair Oaks Ranch



Capital Improvement Cost Estimate

January 2020

Construction Project Number: 14

Project Name **8/12-inch Royal Ascot/Triple Crown/Equestrian Water Line Replacement (Zone C)**

Project Description:

This project replaces the existing 4 and 6-inch water lines along Royal Ascot Drive, Triple Crown Road, and Equestrian Road with 8 and 12-inch water lines.

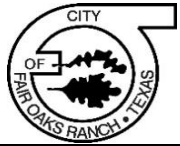
Project Drivers:

This project will provide increased fire flow capacity in Zone C.

Opinion of Probable Construction Cost

ITEM	DESCRIPTION	QUANTITY	UNIT	UNIT PRICE	TOTAL
1	8" WL & Appurtenances	2,800	LF	\$ 80	\$ 224,000
2	12" WL & Appurtenances	1,100	LF	\$ 120	\$ 132,000
3	16" Boring and Casing	500	LF	\$ 350	\$ 175,000
4	Water Pavement Repair	3,900	LF	\$ 50	\$ 195,000
SUBTOTAL:					\$ 726,000
CONTINGENCY				30%	\$ 217,800
SUBTOTAL:					\$ 943,800
ENG/SURVEY				15%	\$ 141,600
SUBTOTAL:					\$ 1,085,400
Estimated Project Total:					\$ 1,085,400

City of Fair Oaks Ranch



Capital Improvement Cost Estimate

January 2020

Construction Project Number: 15

Project Name **8-inch Pimlico Lane Water Line Replacement (Zone C)**

Project Description:

This project replaces the existing 4 and 6-inch water lines along Pimlico Lane with 8-inch water lines.

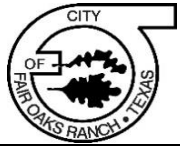
Project Drivers:

This project will provide increased fire flow capacity in Zone C.

Opinion of Probable Construction Cost

ITEM	DESCRIPTION	QUANTITY	UNIT	UNIT PRICE	TOTAL
1	8" WL & Appurtenances	3,900	LF	\$ 80	\$ 312,000
2	Water Pavement Repair	3,900	LF	\$ 50	\$ 195,000
				SUBTOTAL:	\$ 507,000
				CONTINGENCY	30%
					\$ 152,100
				SUBTOTAL:	\$ 659,100
				ENG/SURVEY	15%
					\$ 98,900
				SUBTOTAL:	\$ 758,000
Estimated Project Total:					\$ 758,000

City of Fair Oaks Ranch



Capital Improvement Cost Estimate

January 2020

Construction Project Number: 16

Project Name **8-inch Preakness Lane Water Line Replacement (Zone C)**

Project Description:

This project replaces the existing 4 and 6-inch water lines along Preakness Lane and Dietz Elkhorn Road with 8-inch water lines.

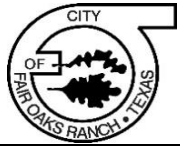
Project Drivers:

This project will provide increased fire flow capacity in Zone C.

Opinion of Probable Construction Cost

ITEM	DESCRIPTION	QUANTITY	UNIT	UNIT PRICE	TOTAL
1	8" WL & Appurtenances	5,100	LF	\$ 80	\$ 408,000
2	Water Pavement Repair	5,100	LF	\$ 50	\$ 255,000
				SUBTOTAL:	\$ 663,000
				CONTINGENCY	30%
				SUBTOTAL:	\$ 861,900
				ENG/SURVEY	15%
				SUBTOTAL:	\$ 991,200
Estimated Project Total:					\$ 991,200

City of Fair Oaks Ranch



Capital Improvement Cost Estimate

January 2020

Construction Project Number: 17

Project Name **12-inch Triple Crown Road Water Line Replacement (Zone C)**

Project Description:

This project replaces the existing 4-inch water lines along Triple Crown Road with 12-inch water lines.

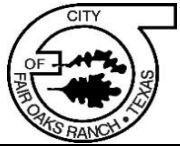
Project Drivers:

This project will provide increased fire flow capacity in Zone C.

Opinion of Probable Construction Cost

ITEM	DESCRIPTION	QUANTITY	UNIT	UNIT PRICE	TOTAL
1	12" WL & Appurtenances	5,700	LF	\$ 120	\$ 684,000
2	Water Pavement Repair	5,700	LF	\$ 50	\$ 285,000
SUBTOTAL:					\$ 969,000
CONTINGENCY				30%	\$ 290,700
SUBTOTAL:					\$ 1,259,700
ENG/SURVEY				15%	\$ 189,000
SUBTOTAL:					\$ 1,448,700
Estimated Project Total:					\$ 1,448,700

City of Fair Oaks Ranch



Capital Improvement Cost Estimate

January 2020

Construction Project Number: 18

Project Name **8-inch Rolling Acres Trail Water Line (Zone A)**

Project Description:

This project consists of a 8-inch water line along Rolling Acres Trail from the existing 6-inch water line near Post Oak Creek to the existing 12-inch water line at Meadow Creek Trail.

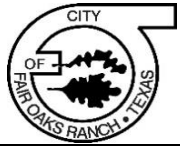
Project Drivers:

This project will serve growth and improve fire flow in Zone A.

Opinion of Probable Construction Cost

ITEM	DESCRIPTION	QUANTITY	UNIT	UNIT PRICE	TOTAL
1	8" WL & Appurtenances	3,340	LF	\$ 80	\$ 267,168
2	Water Pavement Repair	3,340	LF	\$ 50	\$ 167,000
SUBTOTAL:					\$ 434,200
CONTINGENCY				30%	\$ 130,300
SUBTOTAL:					\$ 564,500
ENG/SURVEY				15%	\$ 84,700
SUBTOTAL:					\$ 649,200
Estimated Project Total:					\$ 649,200

City of Fair Oaks Ranch



Capital Improvement Cost Estimate

January 2020

Construction Project Number: 19

Project Name **8-inch Post Oak Trail Water Line (Zone A)**

Project Description:

This project consists of an 8-inch water line along Post Oak Trail from the proposed water line in Project 18 along Rolling Acres Trail to Silver Spur Trail.

Project Drivers:

This project will serve growth and improve fire flow in Zone A.

Opinion of Probable Construction Cost

ITEM	DESCRIPTION	QUANTITY	UNIT	UNIT PRICE	TOTAL
1	8" WL & Appurtenances	6,665	LF	\$ 80	\$ 533,192
2	Water Pavement Repair	6,665	LF	\$ 50	\$ 333,250
SUBTOTAL:					\$ 866,500
CONTINGENCY				30%	\$ 260,000
SUBTOTAL:					\$ 1,126,500
ENG/SURVEY				15%	\$ 169,000
SUBTOTAL:					\$ 1,295,500
Estimated Project Total:					\$ 1,295,500

City of Fair Oaks Ranch



Capital Improvement Cost Estimate

January 2020

Construction Project Number: 20

Project Name **8-inch Silver Spur Trail Water Line (Zone A)**

Project Description:

This project consists of an 8-inch water line along Silver Spur Trail from the existing 4-inch water line at Robin Dale Drive to the existing 6-inch Zone B water line along Ralph Fair Road. This line must be closed west of the connection to the Zone B water line on Ralph Fair Road.

Project Drivers:

This project will serve growth and improve fire flow in Zone A.

Opinion of Probable Construction Cost

ITEM	DESCRIPTION	QUANTITY	UNIT	UNIT PRICE	TOTAL
1	8" WL & Appurtenances	3,485	LF	\$ 80	\$ 278,784
2	Water Pavement Repair	3,485	LF	\$ 50	\$ 174,250
SUBTOTAL:					\$ 453,100
CONTINGENCY				30%	\$ 136,000
SUBTOTAL:					\$ 589,100
ENG/SURVEY				15%	\$ 88,400
SUBTOTAL:					\$ 677,500
Estimated Project Total:					\$ 677,500

Appendix C

Wastewater System Project Cost Estimates

City of Fair Oaks Ranch



Capital Improvement Cost Estimate

January 2020

Construction Project Number: 1

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	\$ 200,000	\$ 200,000
2	8" Pipe	1,730	LF	\$ 80	\$ 138,400
3	48" Diameter Manhole	4	EA	\$ 7,500	\$ 30,000
				SUBTOTAL:	\$ 368,400
				CONTINGENCY	30%
					\$ 110,600
				SUBTOTAL:	\$ 479,000
				ENG/SURVEY	15%
					\$ 71,900
				SUBTOTAL:	\$ 550,900
Estimated Project Total:					\$ 550,900

City of Fair Oaks Ranch



Capital Improvement Cost Estimate

January 2020

Construction Project Number: 2

Project Name: **New Wastewater Treatment Plant and Decommission Old WWTP**

Project Description:

New 0.6 MGD Wastewater Treatment Plant and Decommission Existing WWTP.

Project Drivers:

This project will build a new WWTP to allow for future growth. This project will also decommission the existing WWTP site to allow the site to be used for other purposes.

Opinion of Probable Construction Cost

ITEM	DESCRIPTION	QUANTITY	UNIT	UNIT PRICE	TOTAL
1	0.6 MGD WWTP	1	EA	\$ 7,070,000	\$ 7,070,000
2	WWTP - Decomm	1	EA	\$ 1,000,000	\$ 1,000,000
SUBTOTAL:					\$ 8,070,000
	CONTINGENCY		30%		\$ 2,421,000
SUBTOTAL:					\$ 10,491,000
	ENG/SURVEY		25%		\$ 2,622,800
SUBTOTAL:					\$ 13,113,800
Estimated Project Total:					\$ 13,113,800

City of Fair Oaks Ranch



Capital Improvement Cost Estimate

January 2020

Construction Project Number: 3

Project Name: **New Gravity Line from Old WWTP to New WWTP**

Project Description:

A new 12/15/18-inch gravity line from the existing WWTP to the proposed lift station to the new WWTP.

Project Drivers:

This line will carry existing flows to the new WWTP and serve growth in the future.

Opinion of Probable Construction Cost

ITEM	DESCRIPTION	QUANTITY	UNIT	UNIT PRICE	TOTAL
1	12" Pipe	2,690	LF	\$ 150	\$ 403,500
2	15" Pipe	2,640	LF	\$ 160	\$ 422,400
3	18" Pipe	1,320	LF	\$ 190	\$ 250,800
4	48" Diameter Manhole	7	EA	\$ 7,500	\$ 52,500
5	60" Diameter Manhole	10	EA	\$ 8,500	\$ 85,000
6	Sewer Pavement Repair	200	LF	\$ 50	\$ 10,000
SUBTOTAL:					\$ 1,224,200
CONTINGENCY				30%	\$ 367,300
SUBTOTAL:					\$ 1,591,500
ENG/SURVEY				15%	\$ 238,800
SUBTOTAL:					\$ 1,830,300
Estimated Project Total:					\$ 1,830,300

City of Fair Oaks Ranch



Capital Improvement Cost Estimate

January 2020

Construction Project Number: 4

Project Name: **1.6 MGD and 12" Force Main to New WWTP**

Project Description:

1.6 MGD Lift Station with a 12-inch force main to the new WWTP.

Project Drivers:

This line will carry existing flows to the new WWTP and serve growth in the future.

Opinion of Probable Construction Cost

ITEM	DESCRIPTION	QUANTITY	UNIT	UNIT PRICE	TOTAL
1	1.6 MGD Lift Station	1	EA	\$ 1,800,000	\$ 1,800,000
2	12" Force Main	1,270	LF	\$ 120	\$ 152,400
3	20" Boring and Casing	200	LF	\$ 400	\$ 80,000
SUBTOTAL:					\$ 2,032,400
CONTINGENCY				30%	\$ 609,800
SUBTOTAL:					\$ 2,642,200
ENG/SURVEY				15%	\$ 396,400
SUBTOTAL:					\$ 3,038,600
Estimated Project Total:					\$ 3,038,600

City of Fair Oaks Ranch



Capital Improvement Cost Estimate

January 2020

Construction Project Number: 5

Project Name: **12/15-inch Gravity Line in the ETJ**

Project Description:

A new 12/15-inch gravity line in the ETJ.

Project Drivers:

This project will serve new development.

Opinion of Probable Construction Cost

ITEM	DESCRIPTION	QUANTITY	UNIT	UNIT PRICE	TOTAL
1	12" Pipe	530	LF	\$ 150	\$ 79,500
2	15" Pipe	2,710	LF	\$ 160	\$ 433,600
3	48" Diameter Manhole	2	EA	\$ 7,500	\$ 15,000
4	60" Diameter Manhole	7	EA	\$ 8,500	\$ 59,500
SUBTOTAL:					\$ 587,600
CONTINGENCY				30%	\$ 176,300
SUBTOTAL:					\$ 763,900
ENG/SURVEY				15%	\$ 114,600
SUBTOTAL:					\$ 878,500
Estimated Project Total:					\$ 878,500

City of Fair Oaks Ranch



Capital Improvement Cost Estimate

January 2020

Construction Project Number: 6

Project Name: **12-inch Gravity Line in the ETJ**

Project Description:

A new 12-inch gravity line in the ETJ.

Project Drivers:

This project will serve new development.

Opinion of Probable Construction Cost

ITEM	DESCRIPTION	QUANTITY	UNIT	UNIT PRICE	TOTAL
1	12" Pipe	2,900	LF	\$ 150	\$ 435,000
2	48" Diameter Manhole	7	EA	\$ 7,500	\$ 52,500
SUBTOTAL:					\$ 487,500
CONTINGENCY				30%	\$ 146,300
SUBTOTAL:					\$ 633,800
ENG/SURVEY				15%	\$ 95,100
SUBTOTAL:					\$ 728,900
Estimated Project Total:					\$ 728,900

City of Fair Oaks Ranch



Capital Improvement Cost Estimate

January 2020

Construction Project Number: 7

Project Name: **12-inch Gravity Line in the ETJ**

Project Description:

A new 12-inch gravity line in the ETJ.

Project Drivers:

This project will serve new development.

Opinion of Probable Construction Cost

ITEM	DESCRIPTION	QUANTITY	UNIT	UNIT PRICE	TOTAL
1	12" Pipe	2,030	LF	\$ 150	\$ 304,500
2	48" Diameter Manhole	5	EA	\$ 7,500	\$ 37,500
SUBTOTAL:					\$ 342,000
CONTINGENCY				30%	\$ 102,600
SUBTOTAL:					\$ 444,600
ENG/SURVEY				15%	\$ 66,700
SUBTOTAL:					\$ 511,300
Estimated Project Total:					\$ 511,300

City of Fair Oaks Ranch



Capital Improvement Cost Estimate

January 2020

Construction Project Number: 8

Project Name: **10-inch Gravity Line north of Ralph Fair Road**

Project Description:

A new 10-inch gravity line north 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	10" Pipe	3,830	LF	\$ 100	\$ 383,000
2	48" Diameter Manhole	10	EA	\$ 7,500	\$ 75,000
3	Sewer Pavement Repair	200	LF	\$ 50	\$ 10,000
SUBTOTAL:					\$ 468,000
CONTINGENCY				30%	\$ 140,400
SUBTOTAL:					\$ 608,400
ENG/SURVEY				15%	\$ 91,300
SUBTOTAL:					\$ 699,700
Estimated Project Total:					\$ 699,700

City of Fair Oaks Ranch



Capital Improvement Cost Estimate

January 2020

Construction Project Number: 9

Project Name: **8/10-inch Gravity Line north of Ralph Fair Road**

Project Description:

A new 8/10-inch gravity line north 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	10" Pipe	1,200	LF	\$ 100	\$ 120,000
2	8" Pipe	4,740	LF	\$ 80	\$ 379,200
3	48" Diameter Manhole	15	EA	\$ 7,500	\$ 112,500
4	Sewer Pavement Repair	200	LF	\$ 50	\$ 10,000
SUBTOTAL:					\$ 621,700
CONTINGENCY				30%	\$ 186,600
SUBTOTAL:					\$ 808,300
ENG/SURVEY				15%	\$ 121,300
SUBTOTAL:					\$ 929,600
Estimated Project Total:					\$ 929,600

City of Fair Oaks Ranch



Capital Improvement Cost Estimate

January 2020

Construction Project Number: 10

Project Name: **8-inch Gravity Line north of Dietz Elkhorn Road**

Project Description:

A new 8-inch gravity line north of Dietz Elkhorn Road.

Project Drivers:

This project will serve new development.

Opinion of Probable Construction Cost

ITEM	DESCRIPTION	QUANTITY	UNIT	UNIT PRICE	TOTAL
1	8" Pipe	3,290	LF	\$ 80	\$ 263,200
2	48" Diameter Manhole	8	EA	\$ 7,500	\$ 60,000
SUBTOTAL:					\$ 323,200
CONTINGENCY				30%	\$ 97,000
SUBTOTAL:					\$ 420,200
ENG/SURVEY				15%	\$ 63,100
SUBTOTAL:					\$ 483,300
Estimated Project Total:					\$ 483,300

City of Fair Oaks Ranch



Capital Improvement Cost Estimate

January 2020

Construction Project Number: 11

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	\$ 80	\$ 194,400
2	48" Diameter Manhole	6	EA	\$ 7,500	\$ 45,000
SUBTOTAL:					\$ 239,400
CONTINGENCY				30%	\$ 71,900
SUBTOTAL:					\$ 311,300
ENG/SURVEY				15%	\$ 46,700
SUBTOTAL:					\$ 358,000
Estimated Project Total:					\$ 358,000

City of Fair Oaks Ranch



Capital Improvement Cost Estimate

January 2020

Construction Project Number: 12

Project Name: **10-inch Gravity Line crossing Cibolo Creek**

Project Description:

A new 10-inch gravity line from the ETJ crossing Cibolo Creek and connecting to the existing gravity line.

Project Drivers:

This project will serve new development.

Opinion of Probable Construction Cost

ITEM	DESCRIPTION	QUANTITY	UNIT	UNIT PRICE	TOTAL
1	10" Pipe	2,060	LF	\$ 100	\$ 206,000
2	48" Diameter Manhole	5	EA	\$ 7,500	\$ 37,500
3	Sewer Pavement Repair	200	LF	\$ 50	\$ 10,000
4	20" Boring and Casing	200	LF	\$ 400	\$ 80,000
SUBTOTAL:					\$ 333,500
CONTINGENCY				30%	\$ 100,100
SUBTOTAL:					\$ 433,600
ENG/SURVEY				15%	\$ 65,100
SUBTOTAL:					\$ 498,700
Estimated Project Total:					\$ 498,700

City of Fair Oaks Ranch



Capital Improvement Cost Estimate

January 2020

Construction Project Number: 13

Project Name: **12-inch Gravity Line to the new WWTP**

Project Description:

A new 12-inch gravity line north of the new WWTP.

Project Drivers:

This project will serve new development.

Opinion of Probable Construction Cost

ITEM	DESCRIPTION	QUANTITY	UNIT	UNIT PRICE	TOTAL
1	12" Pipe	1,500	LF	\$ 150	\$ 225,000
2	48" Diameter Manhole	4	EA	\$ 7,500	\$ 30,000
SUBTOTAL:					\$ 255,000
CONTINGENCY				30%	\$ 76,500
SUBTOTAL:					\$ 331,500
ENG/SURVEY				15%	\$ 49,800
SUBTOTAL:					\$ 381,300
Estimated Project Total:					\$ 381,300

City of Fair Oaks Ranch



Capital Improvement Cost Estimate

January 2020

Construction Project Number: 14

Project Name: **10-inch Gravity Line and Decommission Setterfeld Lift Station**

Project Description:

A new 10-inch gravity line will convey flow from the Setterfeld Lift Station and allow it to be decommissioned.

Project Drivers:

This project will eliminate a lift station.

Opinion of Probable Construction Cost

ITEM	DESCRIPTION	QUANTITY	UNIT	UNIT PRICE	TOTAL
1	10" Pipe	2,490	LF	\$ 100	\$ 249,000
2	48" Diameter Manhole	6	EA	\$ 7,500	\$ 45,000
3	Lift Station - Decomm	1	LS	\$ 200,000	\$ 200,000
SUBTOTAL:					\$ 494,000
CONTINGENCY				30%	\$ 148,200
SUBTOTAL:					\$ 642,200
ENG/SURVEY				15%	\$ 96,400
SUBTOTAL:					\$ 738,600
Estimated Project Total:					\$ 738,600

Appendix D

Impact Fee Ordinance

ORDINANCE 2020-04

AN ORDINANCE OF THE CITY OF FAIR OAKS RANCH, TEXAS, AMENDING THE FAIR OAKS RANCH CODE OF ORDINANCES CHAPTER 13 UTILITIES, ARTICLE 13.08 WATER AND WASTEWATER IMPACT FEES, DIVISION 1, SECTIONS 13.08.004 DEFINITIONS AND 13.08.008 FEES PER SERVICE UNIT; DIVISION 2, SECTIONS 13.08.042 LAND USE ASSUMPTIONS PLAN AND 13.08.043 (a) WATER IMPROVEMENTS PLAN; DIVISION 3. SECTIONS 13.08.072 LAND USE ASSUMPTIONS PLAN AND 13.08.073(a) WASTEWATER IMPROVEMENTS PLAN; AND APPENDIX A FEE SCHEDULE, ARTICLES A7.000(c) WASTEWATER IMPACT FEE AND A9.000(w) WATER IMPACT FEE

WHEREAS, the City of Fair Oaks Ranch, Texas, is responsible for and committed to the provision of public facilities and services (including water and wastewater service) at levels necessary to cure any existing public service deficiencies in already developed areas; and

WHEREAS, such facilities and service levels shall be provided by the City of Fair Oaks Ranch utilizing funds allocated in the capital budget and capital improvements programming processes and relying upon the funding sources indicated therein; and

WHEREAS, new residential and nonresidential development causes and imposes increased and excessive demands upon Fair Oaks Ranch Water and Wastewater Utilities public facilities and services that would not otherwise occur; and

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

WHEREAS, the amount of the impact fee to be imposed shall be determined by the cost of the additional public facilities needed to support such development, which public facilities shall be identified in a Capital Improvements Plan, and

WHEREAS, in accordance to Texas Local Government Code Chapter 395, Ordinance No. 2014-18, adopted on December 18, 2014 established Impact Fees for water and wastewater; and,

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

WHEREAS, the City has completed a review and update of the Land Use Assumptions Plan, the Capital Improvements Plan for water and wastewater facilities, and the Impact Fees in accordance with the procedures set forth in Texas Local Government Code Chapter 395; and,

WHEREAS, on January 16, 2020 the CIAC presented its recommendation to City Council to adopt the maximum recommended Impact Fees and on February 20, 2020 a Public Hearing was held as set forth in LGC 395, Chapter 395.054; and,

WHEREAS, the City Council finds that in all things the City has complied with said statute in the notice, adoption of, promulgation, and methodology necessary to amend Impact Fees.

NOW, THEREFORE, BE IT ORDAINED BY THE CITY COUNCIL OF THE CITY OF FAIR OAKS RANCH, TEXAS, THAT:

Part 1. The Code of Ordinances of the City of Fair Oaks Ranch shall be amended as set forth in the attached Exhibit A.

PART 2. That the recitals contain in the preamble hereto are hereby found to be true and such recitals are hereby made a part of this Ordinance for all purposes and are adopted as a part of the judgment and findings of the Council.

PART 3. It is hereby declared to be the intention of the City Council that the phrases, clauses, sentences, paragraphs, and sections of this ordinance be severable, and, if any phrase, clause, sentence, paragraph, or section of this ordinance shall be declared invalid by judgment or decree of any court of competent jurisdiction, such invalidity shall not affect any of the remaining phrases, clauses, sentences, paragraphs, or sections of this ordinance and the remainder of this ordinance shall be enforced as written.

PART 4. That it is officially found, determined and declared that the meeting at which this Ordinance is adopted was open to the public and public notice of the time, place, and subject matter of the public business to be considered at such meeting, including this ordinance, was given, all as required by Chapter 551, as amended, Texas Government Code.

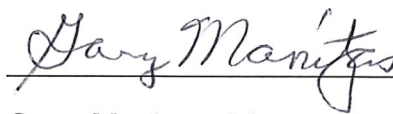
PART 5. This ordinance shall take effect immediately from and after its second reading, passage and publication as may be required by governing law.

PART 6. The repeal or amendment of any ordinance or part of ordinances effectuated by the enactment of this ordinance shall not be construed as abandoning any action now pending under or by virtue of such ordinance or as discontinuing, abating, modifying, or altering any penalty accruing or to accrue or as affecting any rights of the City of Fair Oaks Ranch under any section or provisions of any ordinances in effect at the time of passage of this ordinance.

PART 7. The provisions of this ordinance shall be cumulative of all ordinances not repealed by this ordinance and ordinances governing or regulating the same subject matter as that covered herein.

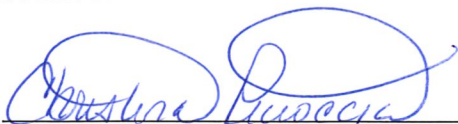
PASSED on first reading this 20th day of February, 2020.

PASSED, APPROVED and ADOPTED on the second reading this 5th day of March, 2020.



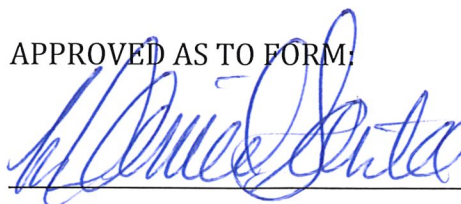
Garry Manitzas, Mayor

ATTEST:



Christina Picioccio, City Secretary

APPROVED AS TO FORM:



Denton Navarro Rocha Bernal & Zech, P.C.,
City Attorney

Exhibit A

A. Chapter 13; Article 13.08; Division 1 of the Code of Ordinances of the City of Fair Oaks Ranch is hereby amended as follows:

Sec. 13.08.004 Definitions

Living unit equivalent (LUE). Basis for establishing equivalency among and within various customer classes based upon the relationship of the continuous duty maximum flow rate in gallons per minute for a water meter of a given size and type compared to the continuous duty maximum flow rate in gallons per minute for a 3/4" diameter simple water meter, using American Water Works Association C700-C703 *Manual M6 (November 2018)* standards. ~~For purposes of this article, 5/8" water meters are considered to equal one (1) LUE. LUEs for various water meter sizes are shown on table 1 in section 13.08.008.~~

Sec. 13.08.008 Fees per service unit

~~Unless changed by subsequent ordinance~~ The Impact Fees per Living Unit Equivalent (LUE) for water and wastewater shall be *assessed according to the following tables: six thousand, nine hundred and fifty dollars (\$6,950.00) broken down as follows: five thousand, four hundred dollars (\$5,400.00) for water facilities, and one thousand, five hundred fifty dollars (\$1,550.00) for wastewater facilities.* All subsequent Impact Fees are as follows:

Ordinance 2020-04 Impact Fees Effective March 5, 2020				
Meter Size	LUE Equivalent	Maximum Water Impact Fee	Maximum Wastewater Impact Fee	Combined Maximum Impact Fee
3/4" Displacement	1.0	\$8,670.33	\$6,068.64	\$14,738.97
1" Displacement	1.6	\$13,872.53	\$9,709.82	\$23,582.35
1 1/2" Displacement	2.0	\$17,340.66	\$12,137.28	\$29,477.94
2" Compound	6.4	\$55,490.11	\$38,839.30	\$94,329.41
3" Compound	12.8	\$110,980.22	\$77,678.59	\$188,658.82
4" Compound	20.0	\$173,406.60	\$121,372.80	\$294,779.40
6" Compound	40.0	\$346,813.20	\$242,745.60	\$589,558.80
8" Compound	64.0	\$554,901.12	\$388,392.96	\$943,294.08
Safe maximum operation capacity is based on AWWA Manual M6 (November 2018)				

Ordinance 2014-18 Impact Fees Effective December 19, 2014				
Meter Size	LUE Equivalent	Maximum Water Impact Fee	Maximum Wastewater Impact Fee	Combined Maximum Impact Fee
3/4" Displacement	1.00	\$5,400.00	\$1,550.00	\$6,950.00
1" Displacement	1.67	\$9,018.00	\$2,588.50	\$11,606.50
1 1/2" Displacement	3.33	\$17,982.00	\$5,161.50	\$23,143.50
2"	5.33	\$28,782.00	\$8,261.50	\$37,043.50
3" Compound	10.70	\$57,780.00	\$16,585.00	\$74,365.00
3" Turbine	11.70	\$63,180.00	\$18,135.00	\$81,315.00
4" Compound	16.70	\$90,180.00	\$25,885.00	\$116,065.00
4" Turbine	20.00	\$108,000.00	\$31,000.00	\$139,000.00
6" Compound	33.30	\$179,820.00	\$51,615.00	\$231,435.00
6" Turbine	41.70	\$225,180.00	\$64,635.00	\$289,815.00
8" Compound	53.30	\$287,820.00	\$82,615.00	\$370,435.00
8" Turbine	60.00	\$324,000.00	\$93,000.00	\$417,000.00
Safe maximum operating capacity is based on AWWA Standards C700 and C702				

Ordinance 145.0 Impact Fees Effective January 15, 2004				
Meter Size	LUE Equivalent	Maximum Water Impact Fee	Maximum Wastewater Impact Fee	Combined Maximum Impact Fee
3/4" Displacement	1	\$1,669.58	\$1,006.95	\$2,676.53
1" Displacement	1.67	\$2,788.20	\$1,681.61	\$4,469.81
1 1/2" Displacement	3.33	\$5,559.70	\$3,353.14	\$8,912.84
2" Displacement	5.42	\$9,049.12	\$5,457.67	\$14,506.79
2" Compound	5.42	\$9,049.12	\$5,457.67	\$14,506.79
3" Compound	10.63	\$17,747.64	\$10,703.88	\$28,451.51
3" Turbine	11.67	\$19,484.00	\$11,751.11	\$31,235.11
4" Compound	16.67	\$27,831.90	\$16,785.86	\$44,617.76
4" Turbine	17.50	\$29,217.65	\$17,621.63	\$46,839.28
6" Compound	33.33	\$55,647.10	\$33,561.64	\$89,208.74
6" Turbine	45.83	\$76,516.85	\$46,148.52	\$122,665.37
8" Compound	54.17	\$90,441.15	\$54,546.48	\$144,987.63
8" Turbine	66.67	\$111,310.90	\$67,133.36	\$178,444.26
Safe maximum operating capacity is based on AWWA Manual M22 (1975 T-5.6,5.7,5.8)				

Ordinance 131.0 Wastewater Impact Fees Effective June 1, 1999 Ordinance 134.0 Water Impact Fees Effective December 7, 1999				
Meter Size	LUE Equivalent	Maximum Water Impact Fee	Maximum Wastewater Impact Fee	Combined Maximum Impact Fee
3/4"	1	\$960.00	\$1,028.00	\$1,988.00
1"	2.5	\$2,399.00	\$1,028.00	\$3,427.00
1 1/2"	4.998	\$4,798.00	\$1,028.00	\$5,826.00
2"	7.996	\$7,676.00	\$1,028.00	\$8,704.00
3"	17.4906	\$16,791.00	\$1,028.00	\$17,819.00
Safe maximum operating capacity recommended by AWWA				

B. Chapter 13; Article 13.08; Division 2; of the Code of Ordinances of the City of Fair Oaks Ranch is hereby amended as follows:

Sec. 13.08.042 Land Use Assumptions Plan

The land use assumptions plan for the city for water facilities prepared by the city utility board and approved by the utility board ~~City Council on October 14, 2003~~ *June 21, 2018*, is hereby adopted and incorporated herein by reference.

Sec. 13.08.043 Water improvements plan

(a) The water improvements plan for the city for impact fee calculation purposes, prepared by Freese and Nichols, Inc. and dated ~~August 2014~~ *January 2020* is hereby adopted, incorporated herein by reference and filed in the ~~Public Works Director's office~~ *City Secretary's office*.

C. Chapter 13; Article 13.08; Division 3; of the Code of Ordinances of the City of Fair Oaks Ranch is hereby amended as follows:

Sec. 13.08.072 Land Use Assumptions Plan

The land use assumptions plan for the city for wastewater facilities prepared by the city utility board and approved by the utility board ~~City Council on October 14, 2003~~ *June 21, 2018*, is hereby adopted and incorporated herein by reference.

Sec. 13.08.073 Wastewater improvements plan

(a) The wastewater improvements plan for the city for impact fee calculation purposes, prepared by Freese and Nichols, Inc. and dated ~~August 2014~~ *January 2020* is hereby adopted, incorporated herein by reference and filed in the ~~Public Works Director's office~~ *City Secretary's office*.

D. Appendix A Fee Schedule; Article A7.000(c) Wastewater Impact Fees is hereby amended as follows:

~~(1) Final plat approval between Dec 7, 1999-Jan 15, 2004: \$1,028.00.~~

~~(2) Final plat approval between Jan 16, 2004-Dec 13, 2014: \$1,006.95.~~

~~(3) Plat recordation between Dec 14, 2014-current: \$1,550.00.~~

Assessed in accordance to applicable ordinances as found in the Fair Oaks Ranch Code of Ordinances Chapter 13; Article 13.08; Division 1; Section 13.08.008, Fees Per Service Unit.

E. Appendix A Fee Schedule; Article A9.000 (w) Water Impact Fees is hereby amended as follows:

~~(1) — Final plat approval between Dec 7, 1999–Jan 15, 2004: \$960.00.~~

~~(2) — Final plat approval between Jan 16, 2004–Dec 13, 2014: \$1,668.58.~~

~~(3) — Plat recordation between Dec 14, 2014–current: \$5,400.00.~~

Assessed in accordance to applicable ordinances as found in the Fair Oaks Ranch Code of Ordinances Chapter 13; Article 13.08; Division 1; Section 13.08.008, Fees Per Service Unit.