

CITY OF MANOR ROADWAY impact fee

# Roadway impact fee background

- Roadway Impact fees are one-time fees.
- They typically are assessed at plat recordation stage of the development process
- They are typically paid at the building permit stage of the development process
- Roadway impact fees are used to recover costs associated with roadway infrastructure that will be needed to serve future development in the City
- Roadway impact fees are governed by Chapter 395 of the Texas Local Government Code;
- Impact fees were established in Texas in 1987 •
- Water, Wastewater, Roadway, and Drainage impact fees allowed in Texas
- Manor already has water and wastewater impact fees

# Service Units - recap

## WHAT IS A SERVICE UNIT?

- ❖ FOR ROADWAY IMPACT FEES THE SERVICE UNIT IS A VEHICLE MILE, NOT LUES
- ❖ IN ORDER TO DETERMINE THE COST PER SERVICE UNIT, THE ESTIMATED GROWTH IN VEHICLE MILES IN EACH SERVICE AREA NEEDS TO BE CALCULATED FOR A TEN-YEAR PERIOD (2023-2033)
- ❖ ALL CURRENTLY DEVELOPED LAND AND ALL DEVELOPABLE LAND WILL BE CATEGORIZED AS EITHER RESIDENTIAL OR NON-RESIDENTIAL.
- ❖ NON-RESIDENTIAL WILL BE BROKEN INTO THREE (3) CATEGORIES:
  - ❖ RETAIL, SERVICE, AND BASIC

# Service areas

- Currently three service areas are proposed for Manor.
- A service area is limited to a maximum six-mile trip length.
- Roadway impact fees differ from water and wastewater fees. Roadway impact fees are required to be used in the service area where the fee is assessed, whereas, for water and wastewater, those fees can be used for citywide projects.

# Existing vehicle miles

Service Area	Residential Vehicle Miles (Existing)				Nonresidential SF (Existing)			Trans. Demand Factor			Nonresidential Vehicle Miles (Existing)				Total Vehicle Miles (Existing)		
	Single Family Units	Trip Rate TDF	Multifamily	Trip Rate TDF	Vehicle Miles	Basic	Service	Retail	Basic	Service	Retail	Basic	Service	Retail	Total		
		0.94		0.51					0.65	1.44	2.24						
1	1519	4.04	1870	2.19	10,232	443,218	1,249,580	457,950	3.9	4.87	4.62	1,729	6,085	2,116	9,930	20,162	
2	1845		0		7,454	0	35,000	0				0	0	162	0	162	7,616
3	1961		0		7,922	0	0	0				0	0	0	0	0	7,922
TOTALS	5325		1870		25,608	443,218	1,284,580	457,950				1,729	6,247	2,116	10,091	35,700	

# Vehicle miles calculations

- ❖ THE VEHICLE MILES FOR RESIDENTIAL ARE CALCULATED BY MULTIPLYING THE TDF FOR EITHER SINGLE-FAMILY OR MULTIFAMILY BY THE NUMBER OF DWELLING UNITS
- ❖ THE NON-RESIDENTIAL VEHICLE MILES WERE CALCULATED BY ESTIMATING THE SQUARE FOOTAGE OF EACH NON-RESIDENTIAL USE AND THEN MULTIPLYING THE TDF BY THE NUMBER OF THOUSAND SQUARE FEET FOR EACH LAND USE.
- ❖ THE RESIDENTIAL AND NON-RESIDENTIAL VEHICLE MILES WERE ADDED TOGETHER TO GET A TOTAL VEHICLE MILES FOR EACH SERVICE AREA.

# Future vehicle miles

10-YEAR GROWTH PROJECTIONS	
SERVICE AREA	VEHICLE-MILES
1	17,621
2	<b>11,997</b>
3	13,500

# Future vehicle miles

Service Area	Residential Vehicle Miles (Future)					Nonresidential SF (Future)			Trans. Demand Factor			Nonresidential Vehicle Miles (Future)				Total Vehicle Miles (Future)
	Single Family Units	Trip Rate TDF	Multifamily	Trip Rate TDF	Vehicle Miles	Basic	Service	Retail	Basic	Service	Retail	Basic	Service	Retail	Total	
		0.94		0.51					0.65	1.44	2.24					
1	1931	4.04	1000	2.19	9,991	351,470	155,144	1,191,220	3.9	4.87	4.62	1,371	756	5,503	7,630	17,621
2	2529		224		10,708	100,000	50,000	142,000				390	244	656	1,290	11,997
3	1961		0		7,922	250,000	300,000	680,000				975	1,461	3,142	5,578	13,500
TOTALS	6421		1224		28,621	701,470	505,144	2,013,220				2,736	2,460	9,301	14,497	43,118



# Vehicle miles

❖ THE TOTAL ESTIMATED VEHICLE MILES TO BE ADDED BETWEEN 2023 AND 2033:

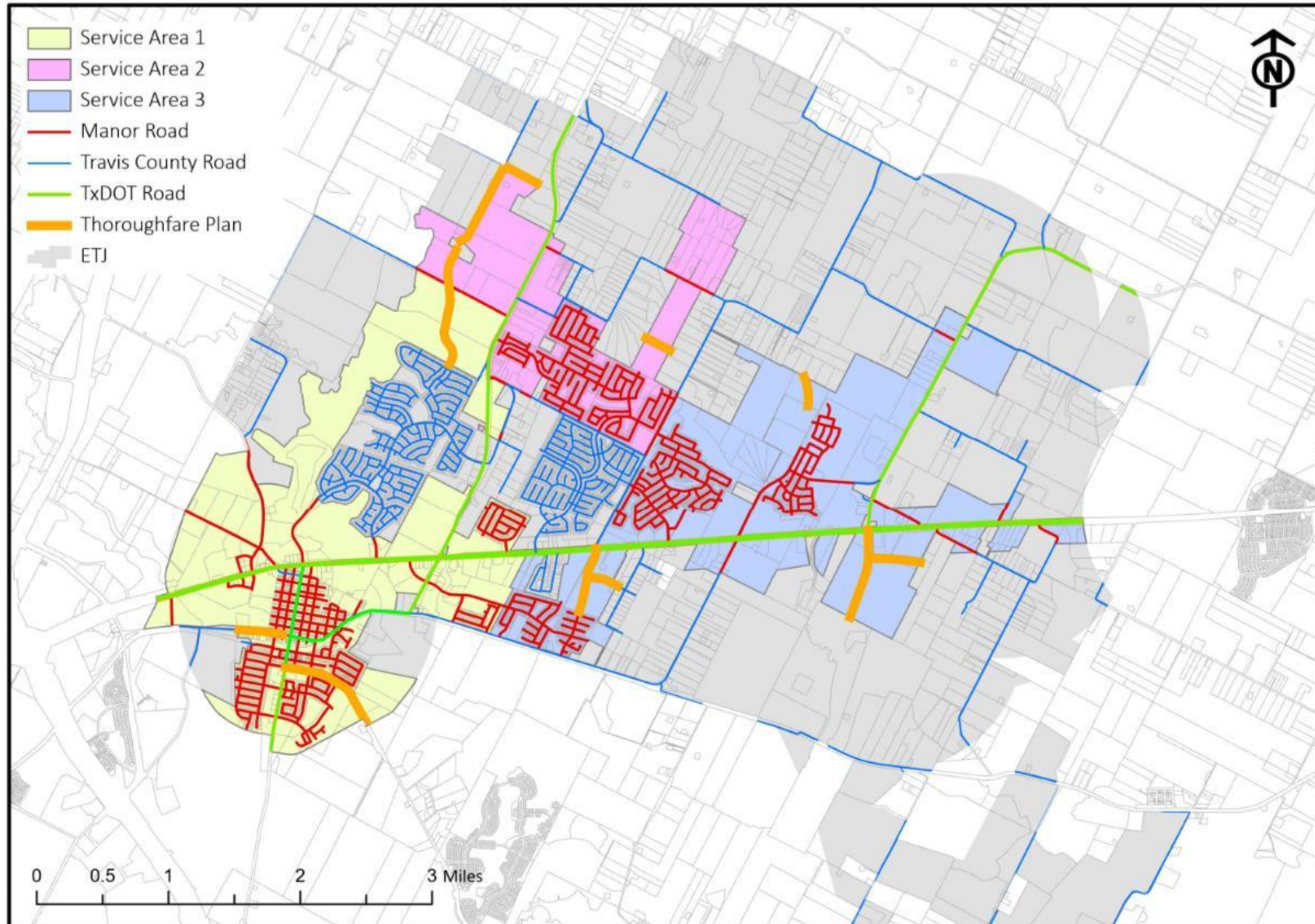
❖ SERVICE AREA 1 = 17,621 MILES

❖ SERVICE AREA 2 = 11,997 MILES

❖ SERVICE AREA 3 = 13,500

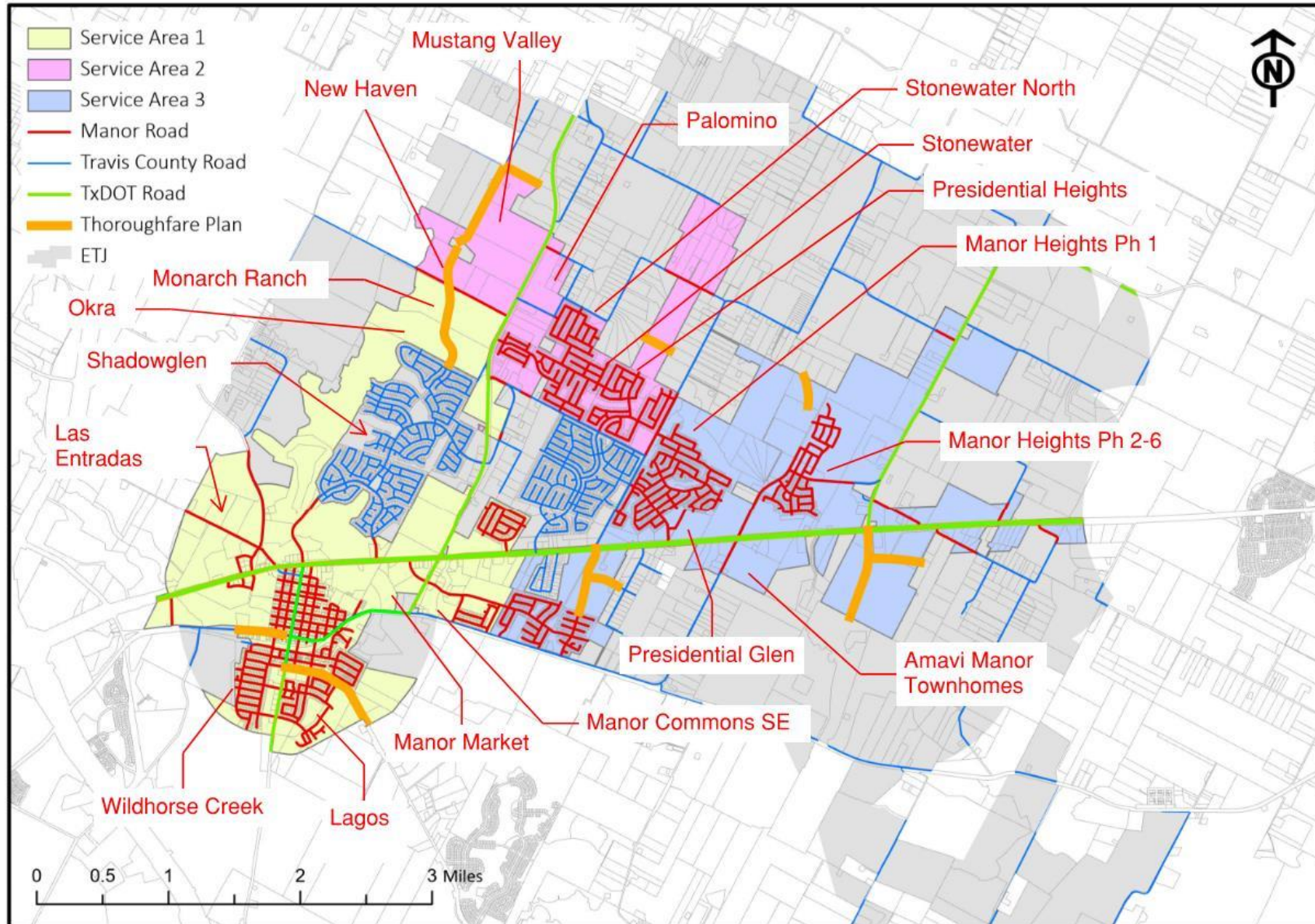
❖ TOTAL MILES ADDED = 43,118 (ALL 3 SERVICE AREAS)

# Manor Road Impact Fee Map



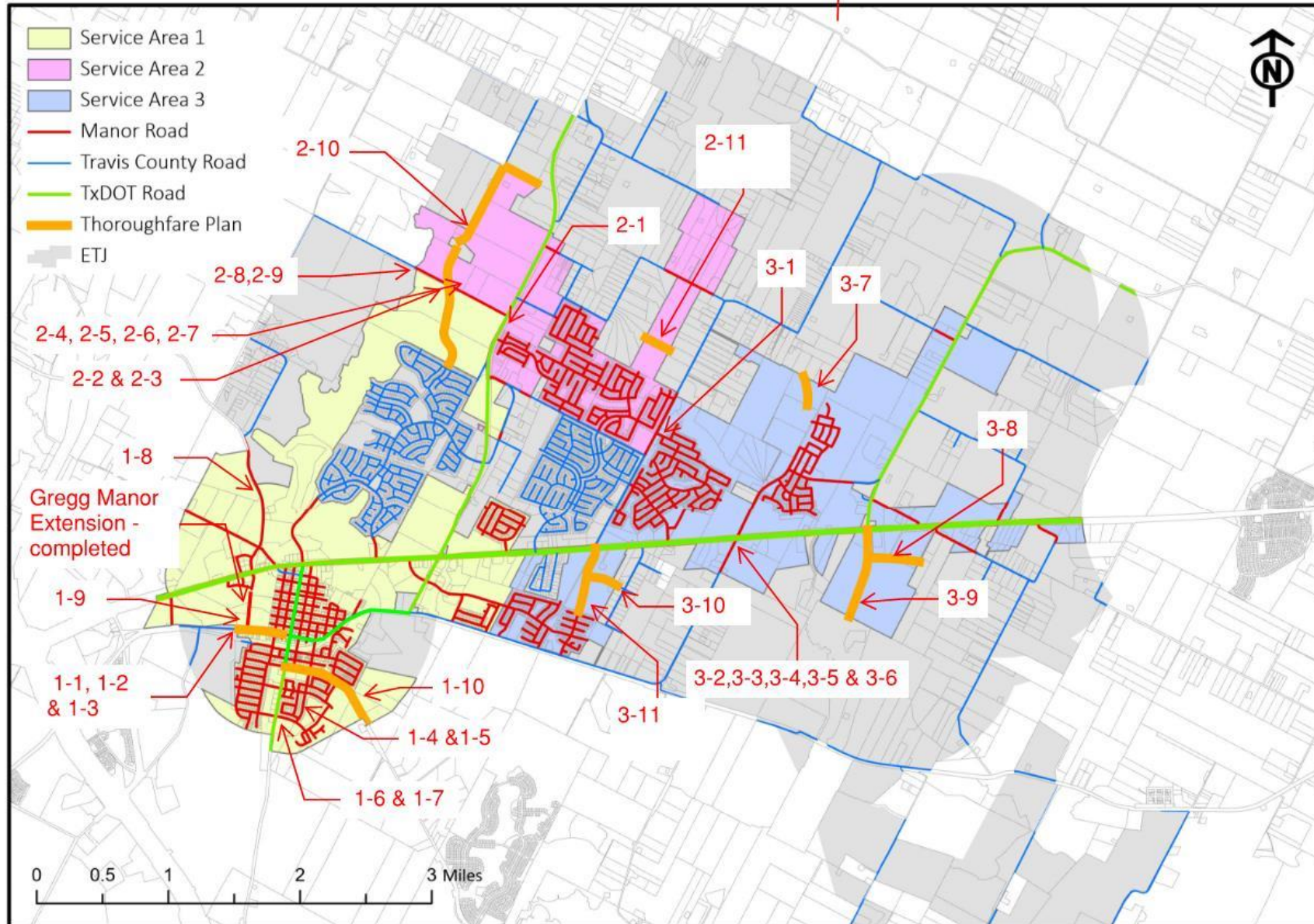
# Manor Road Impact Fee Map

## Subdivision Locations



# Manor Road Impact Fee Map

## Project Locations



Capital Improvement Projects for Roadway Impact Fees - Service Area 1							
Service Area	Proj. #	Roadway	Project	% in Service Area	Estimated Cost for Portion in Service Area	Project Source (TIA/Thoroughfare Plan)	Notes
1	1-1	West Parsons	Construction of a left turn lane on eastbound approach	100%	\$500,000.00	Las Entradas	
	1-2	West Parsons	Construction of right turn lane on the westbound approach	100%	\$500,000.00	Las Entradas	
	1-3	West Parsons/Gregg Manor	Installation of a traffic signal	100%	\$650,000.00	Las Entradas	
	1-4	LaPoyner/Lexington	NB left turn lane - 100 ft storage & 100 ft of taper	100%	\$200,000.00	Wildhorse Commercial	
	1-5	LaPoyner/ Lexington EB	Restripe approach providing exclusive left and through-righter turn lanes	100%	\$10,000.00	Wildhorse Commercial	
	1-6	Murchison @ FM 973 EB	Restripe approach providing exclusive left and through-righter turn lanes	100%	\$10,000.00	Wildhorse Commercial	
	1-7	Murchison @ FM 973 NB	NB left turn lane - 100 ft storage & 100 ft of taper	100%	\$200,000.00	Wildhorse Commercial	
	1-8	Gregg Manor Road	Expansion to Major Arterial	100%	\$7,000,000.00	Thoroughfare Plan	
	1-9	West Parsons	Expansion to Major Arterial	100%	\$4,000,000.00	Thoroughfare Plan	
	1-10	Blake Manor/Brenham	Expansion to Major Arterial	100%	\$5,500,000.00	Thoroughfare Plan	
	1-11	FM 973/Gregg Lane	Westbound through-receiving lane - 850 feet	40%	\$120,000.00	Thoroughfare Plan	60% in Service Area 2 (2-1)
	1-12	Gregg Ln between FM 973 and driveway 3	Expand roadway cross section	40%	\$680,000.00	Thoroughfare Plan	60% in Service Area 2(2-2)
	1-13	Driveway 3 and Gregg Ln	Add EB right turn bay	40%	\$60,000.00	Thoroughfare Plan	60% in Service Area 2 (2-3)
	1-14	Gregg Ln at Roadway 1	Install 425' eastbound left turn lane	40%	\$58,000.00	Thoroughfare Plan	60% in Service Area 2 (2-4)
	1-15	Gregg Ln at Roadway 1	Install 235' westbound right turn lane	40%	\$58,000.00	Thoroughfare Plan	60% in Service Area 2 (2-5)
	1-16	Gregg Lane at Roadway 2	Install 425' eastbound left turn lane	40%	\$58,000.00	Thoroughfare Plan	60% in Service Area 2 (2-6)
	1-17	Gregg Lane at Commercial Driveway 1	Install 415' westbound right turn lane	40%	\$58,000.00	Thoroughfare Plan	60% in Service Area 2 (2-7)
	1-18	Gregg Lane	Widen to 1-34E from Roadway 1 to FM 973	40%	\$378,000.00	Thoroughfare Plan	60% in Service Area 2 (2-8)
	1-19	Gregg Lane	Expansion to Minor Arterial	40%	\$2,400,000.00	Thoroughfare Plan	60% in Service Area 2 (2-9)
	1-20	Cameron Road	Expansion to Major Arterial	40%	\$3,200,000.00	Thoroughfare Plan	60% in Service Area 2 (2-10)
				Total Cost	\$25,640,000.00		

Capital Improvement Projects for Roadway Impact Fees - Service Area 2							
Service Area	Proj. #	Roadway	Project	% in Service Area	Estimated Cost for Portion in Service Area	Project Source (TIA/Thoroughfare Plan)	Notes
2	2-1	FM 973/Gregg Lane	Westbound through-receiving lane - 850 feet	60%	\$180,000.00	Palomino	40% in Service Area 1
	2-2	Gregg Ln between FM 973 and driveway 3	Expand roadway cross section	60%	\$1,020,000.00	Monarch Ranch	40% in Service Area 1
	2-3	Driveway 3 and Gregg Ln	Add EB right turn bay	60%	\$90,000.00	Monarch Ranch	40% in Service Area 1
	2-4	Gregg Ln at Roadway 1	Install 425' eastbound left turn lane	60%	\$87,000.00	New Haven	40% in Service Area 1
	2-5	Gregg Ln at Roadway 1	Install 235' westbound right turn lane	60%	\$87,000.00	New Haven	40% in Service Area 1
	2-6	Gregg Lane at Roadway 2	Install 425' eastbound left turn lane	60%	\$87,000.00	New Haven	40% in Service Area 1
	2-7	Gregg Lane at Commercial Driveway 1	Install 415' westbound right turn lane	60%	\$87,000.00	New Haven	40% in Service Area 1
	2-8	Gregg Lane	Widen to 1-34E from Roadway 1 to FM 973	60%	\$567,000.00	New Haven	40% in Service Area 1
	2-9	Gregg Lane	Expansion to Minor Arterial	60%	\$6,000,000.00	Thoroughfare Plan	40% in Service Area 1
	2-10	Cameron Road	Expansion to Major Arterial	60%	\$3,600,000.00	Thoroughfare Plan	40% in Service Area 1
	2-11	Johnson Road	Exension - Minor Arterial	100%	\$600,000.00	Thoroughfare Plan	
				Total Cost	\$12,405,000.00		

Capital Improvement Projects for Roadway Impact Fees - Service Area 3							
Service Area	Proj. #	Roadway	Project	% in Service Area	Estimated Cost for Portion in Service Area	Project Source (TIA/Thoroughfare Plan)	Notes
3	3-1	Bois D'arc	Expand roadway by 4' - City Portion	100%	\$700,000.00	Minimax	
	3-2	Old Kimbro Road (SB)	Add 375 LF and 100' Taper SBR Lane	100%	\$125,000.00	Manor Heights	
	3-3	Old Kimbro Road	Install 700' EB Right turn Lane (550' deceleration lane with 150' taper)	100%	\$280,000.00	Amavi	
	3-4	Old Kimbro Road	Extend the existing left turn lane by an additional 750' and a new 150' taper (constructed with residential - 1st Phase)	100%	\$360,000.00	Amavi	
	3-5	Old Kimbro Road	Install 300' NB right turn lane (250' storage + 50' taper)	100%	\$120,000.00	Amavi	
	3-6	Old Kimbro Road	Expansion to Major Arterial	100%	\$8,000,000.00	Thoroughfare Plan	
	3-7	Old Kimbro	Major Arterial	100%	\$750,000.00	Thoroughfare Plan	
	3-8	Voelker Extension	Minor Arterial	100%	\$700,000.00	Thoroughfare Plan	
	3-9	FM 1100 Extension	Minor Arterial	100%	\$1,000,000.00	Thoroughfare Plan	
	3-10	Viking Jack	Street extension - minor arterial	100%	\$750,000.00	Thoroughfare Plan	
	3-11	Bois D'arc Extension	Minor Arterial	100%	\$2,000,000.00	Thoroughfare Plan	
				Total Cost	\$14,785,000.00		

# Roadway impact for each service area

- The maximum impact fee allowable in each of the three service areas is calculated by dividing the Roadway Impact Fee CIP Attributable to Growth by the number of vehicle-miles in the corresponding Service Area.
- This calculation is performed for each service area individually; each service area has a stand-alone Roadway Impact Fee CIP and 10-year growth projection.



# Roadway impact fees per service area

- CALCULATIONS = SERVICE AREA IMPROVEMENT COSTS/NUMBER OF VEHICLE MILES ADDED
- SERVICE AREA 1 =  $\$25,640,000/17621 = \$1455.08$  per vehicle mile
- SERVICE AREA 2 =  $\$12,405,000/11997 = \$1034.01$  per vehicle mile
- SERVICE AREA 3 =  $\$14,785,000/13500 = \$1095.19$  per vehicle mile

# Roadway impact fees per service area

- SERVICE AREA 1- Max Impact fee: \$1455.08 per vehicle mile
- SERVICE AREA 1 – 50% Impact fee: \$727.54 per vehicle mile
  
- SERVICE AREA 2 – Max Impact fee: \$1034.01 per vehicle mile
- SERVICE AREA 2 – 50% Impact fee: \$517.01per vehicle mile
  
- SERVICE AREA 3 - Max Impact fee: \$1095.19 per vehicle mile
- SERVICE AREA 3 – 50% Impact fee: \$547.60 per vehicle mile

# CALCULATION OF ROADWAY IMPACT FEES

- The calculation of roadway impact fees for new development involves a two-step process. Step one is the calculation of the total number of service units that will be generated by the development. Step two is the calculation of the impact fee due by the new development.

*Step 1:* Determine number of service units (vehicle-miles) generated by the development using the equivalency table.

$$\begin{array}{ccccccc} \text{No. of Development} & & \times & & \text{Vehicle-miles} & = & \text{Development's} \\ \text{Units} & & & & \text{per development unit} & & \text{Vehicle-miles} \end{array}$$

*Step 2:* Calculate the impact fee based on the fee per service unit for the service area where the development is located.

$$\begin{array}{ccccccc} \text{Development's} & & \times & & \text{Fee per} & = & \text{Impact Fee due} \\ \text{Vehicle-miles} & & & & \text{vehicle-mile} & & \text{from Development} \end{array}$$

# CALCULATION EXAMPLES

- SERVICE AREA 1 HAS A MAXIMUM COST PER VEHICLE MILE OF \$1455.08

## Single-Family Dwelling:

500 dwelling units x 4.3 vehicle-miles/dwelling unit = 2150 vehicle-miles  
2150 vehicle-miles x \$1455.08/vehicle-mile = \$3,128,422

## 20,000 square foot (s.f.) Office Building:

20 (1,000 s.f. units) x 3.9 vehicle-miles/1,000 s.f. units = 78 vehicle-miles  
78 vehicle-miles x \$1455.08 /vehicle-mile = \$113,496.24

# CALCULATION EXAMPLES

- SERVICE AREA 1 - 50% FEE PER VEHICLE MILE OF \$727.54

## Single-Family Dwelling:

500 dwelling units x 4.3 vehicle-miles/dwelling unit = 2150 vehicle-miles

2150 vehicle-miles x \$727.54/vehicle-mile = \$1,564,211

## 20,000 square foot (s.f.) Office Building:

20 (1,000 s.f. units) x 3.9 vehicle-miles/1,000 s.f. units = 78 vehicle-miles

78 vehicle-miles x \$727.54 /vehicle-mile = \$56,748.12

# CALCULATION EXAMPLES

## 50,000 s.f. Retail Center – Maximum Fee:

50 (1,000 s.f. units) x 3.9 vehicle-miles/1,000 s.f. units = 195 vehicle-miles

195 vehicle-miles x \$1455.08 /vehicle-mile = \$283,740.60

## 100,000 s.f. Industrial Development – Maximum Fee:

100 (1,000 s.f. units) x 3.8 vehicle-miles/1,000 s.f. units = 380 vehicle-miles

380 vehicle-miles x \$1455.08 /vehicle-mile = \$552,930.40

# CALCULATION EXAMPLES

## 50,000 s.f. Retail Center – 50% Fee:

50 (1,000 s.f. units) x 3.9 vehicle-miles/1,000 s.f. units = 195 vehicle-miles

195 vehicle-miles x \$727.54 /vehicle-mile = \$141,870.30

## 100,000 s.f. Industrial Development – 50% Fee:

100 (1,000 s.f. units) x 3.8 vehicle-miles/1,000 s.f. units = 380 vehicle-miles

380 vehicle-miles x \$727.54 /vehicle-mile = \$276,465.20

# CALCULATION EXAMPLES

- SERVICE AREA 2 - MAXIMUM COST PER VEHICLE MILE OF \$ 1034.01

- Single-Family Dwelling:

500 dwelling units x 4.3 vehicle-miles/dwelling unit = 2150 vehicle-miles

2150 vehicle-miles x \$1034.01 /vehicle-mile = \$2,223,121.50

20,000 square foot (s.f.) Office Building:

20 (1,000 s.f. units) x 3.9 vehicle-miles/1,000 s.f. units = 78 vehicle-miles

78 vehicle-miles x \$1034.01/vehicle-mile = \$80,652.78



# CALCULATION EXAMPLES

- SERVICE AREA 2 - 50% FEE PER VEHICLE MILE OF \$517.01

- Single-Family Dwelling:

500 dwelling units x 4.3 vehicle-miles/dwelling unit = 2150 vehicle-miles

2150 vehicle-miles x \$517.01 /vehicle-mile = \$1,111,571.50

20,000 square foot (s.f.) Office Building:

20 (1,000 s.f. units) x 3.9 vehicle-miles/1,000 s.f. units = 78 vehicle-miles

78 vehicle-miles x \$517.01/vehicle-mile = \$40,326.78

# CALCULATION EXAMPLES

## 50,000 s.f. Retail Center –MAXIMUM FEE:

50 (1,000 s.f. units) x 3.9 vehicle-miles/1,000 s.f. units = 195 vehicle-miles

195 vehicle-miles x \$1034.01 /vehicle-mile = \$201,631.95

## 100,000 s.f. Industrial Development – MAXIMUM FEE:

100 (1,000 s.f. units) x 3.8 vehicle-miles/1,000 s.f. units = 380 vehicle-miles

380 vehicle-miles x \$1034.01 /vehicle-mile = \$392,923.80

# CALCULATION EXAMPLES

50,000 s.f. Retail Center – 50% FEE:

50 (1,000 s.f. units) x 3.9 vehicle-miles/1,000 s.f. units = 195 vehicle-miles

195 vehicle-miles x \$517.01/vehicle-mile = \$100,815.98

100,000 s.f. Industrial Development – 50% FEE:

100 (1,000 s.f. units) x 3.8 vehicle-miles/1,000 s.f. units = 380 vehicle-miles

380 vehicle-miles x \$517.01 /vehicle-mile = \$196,463.80

# CALCULATION EXAMPLES

- SERVICE AREA 3 HAS A MAXIMUM FEE OF \$ 1095.19

- Single-Family Dwelling:

500 dwelling units x 4.3 vehicle-miles/dwelling unit = 2150 vehicle-miles

2150 vehicle-miles x \$1095.19 /vehicle-mile = \$2,354,658.50

20,000 square foot (s.f.) Office Building:

20 (1,000 s.f. units) x 3.9 vehicle-miles/1,000 s.f. units = 78 vehicle-miles

78 vehicle-miles x \$1095.19 /vehicle-mile = \$85,424.82

# CALCULATION EXAMPLES

- SERVICE AREA 3 50% FEE OF \$ 547.60

- Single-Family Dwelling:

500 dwelling units x 4.3 vehicle-miles/dwelling unit = 2150 vehicle-miles

2150 vehicle-miles x \$547.60 /vehicle-mile = \$1,177,340.00

20,000 square foot (s.f.) Office Building:

20 (1,000 s.f. units) x 3.9 vehicle-miles/1,000 s.f. units = 78 vehicle-miles

78 vehicle-miles x \$547.60 /vehicle-mile = \$42,712.80

# CALCULATION EXAMPLES

## 50,000 s.f. Retail Center – MAX FEE:

50 (1,000 s.f. units) x 3.9 vehicle-miles/1,000 s.f. units = 195 vehicle-miles

195 vehicle-miles x \$1095.19 /vehicle-mile = \$213,562.05

## 100,000 s.f. Industrial Development – MAX FEE:

100 (1,000 s.f. units) x 3.8 vehicle-miles/1,000 s.f. units = 380 vehicle-miles

380 vehicle-miles x \$1095.19 /vehicle-mile = \$416,172.20

# CALCULATION EXAMPLES

50,000 s.f. Retail Center – 50% FEE:

50 (1,000 s.f. units) x 3.9 vehicle-miles/1,000 s.f. units = 195 vehicle-miles

195 vehicle-miles x \$547.60 /vehicle-mile = \$106,782.00

100,000 s.f. Industrial Development – 50% FEE:

100 (1,000 s.f. units) x 3.8 vehicle-miles/1,000 s.f. units = 380 vehicle-miles

380 vehicle-miles x \$547.60 /vehicle-mile = \$208,088.00

# Roadway improvements fees

We want to be sure that what is used is:

- Equitable - equal development should pay an equal fee
- Flexible; funds collected need to be used to add capacity to the system, not sit in a bank or in a location where they aren't needed
- Legal; compliant with Texas Codes
- Consistent with the City's overall goals and objectives for growth – Comprehensive Plan
- Improve existing infrastructure to address traffic issues/concerns



# Maximum assessable impact fee determination - financing

- An impact fee determination method using financing would need to be developed by a subcontractor for GBA.
- This option would require additional Advisory Committee meetings.
- NewGen Strategies and Solutions, LLC has developed a financial-based model, which fully recognizes the requirements of Chapter 395, including the recognition of cash and/or debt financing, interest earnings, fund balances, and applicable credits associated with the use of ad valorem taxes for other Central Texas cities.

# Maximum assessable impact fee determination – financial BASED MODEL

- In developing the components of the financial model to be used to set maximum roadway impact fee amounts, the model would need to include the recognition of cash and/or debt financing, interest earnings, fund balances, and applicable credits associated with the use of ad valorem taxes.

# Financial model impact fees

- In order to develop impact fees using the components of the financial model several assumptions must be made, including the following:
  - Financing
  - Timing and Level of Expenditures and Revenues
  - Interest Earnings
  - Annual Vehicle Mile Growth
  - Portion of Ad Valorem Tax Revenue Used to Fund Impact Fee Roadway Improvements

# financing

- The following would be needed to use a Financing Method:
  - Financing (i.e. cash or debt financing)
  - The level of financing (e.g. 100% debt)
  - Cost of financing
  - Debt repayment structure

# financing

- Once the cost of capacity added that is attributable to growth is determined, it must then be decided how the cost will be financed: cash and/or debt.
- For any previously funded projects, whether partially funded or in full, actual costs of capital should be included. It is assumed that the City will debt finance 100% of the future project costs.
- For debt financing, the cost of financing is typically a 20-year term.

# financing

- Because debt is typically issued over 20-year terms and roadway impact fees developed herein are over a 10-year period, sufficient fund balance must be generated to meet the future debt service obligations. Because of the generation of the fund balance, excess monies will be available for interest earnings. The interest-earned funds can only be used for projects listed in the CIP.

# Chapter 395

- Chapter 395 requires a plan for awarding either a credit for the portion of ad valorem tax and/or utility service revenues generated by new vehicle miles during the program period that are used for payment of improvements that are included in the Roadway Impact Fee CIP.
- As an alternative, a credit equal to 50% of the total cost of implementing the Roadway Impact Fee CIP may be used.
- This will require an additional study to be conducted as well as additional Advisory Committee meetings to take place.