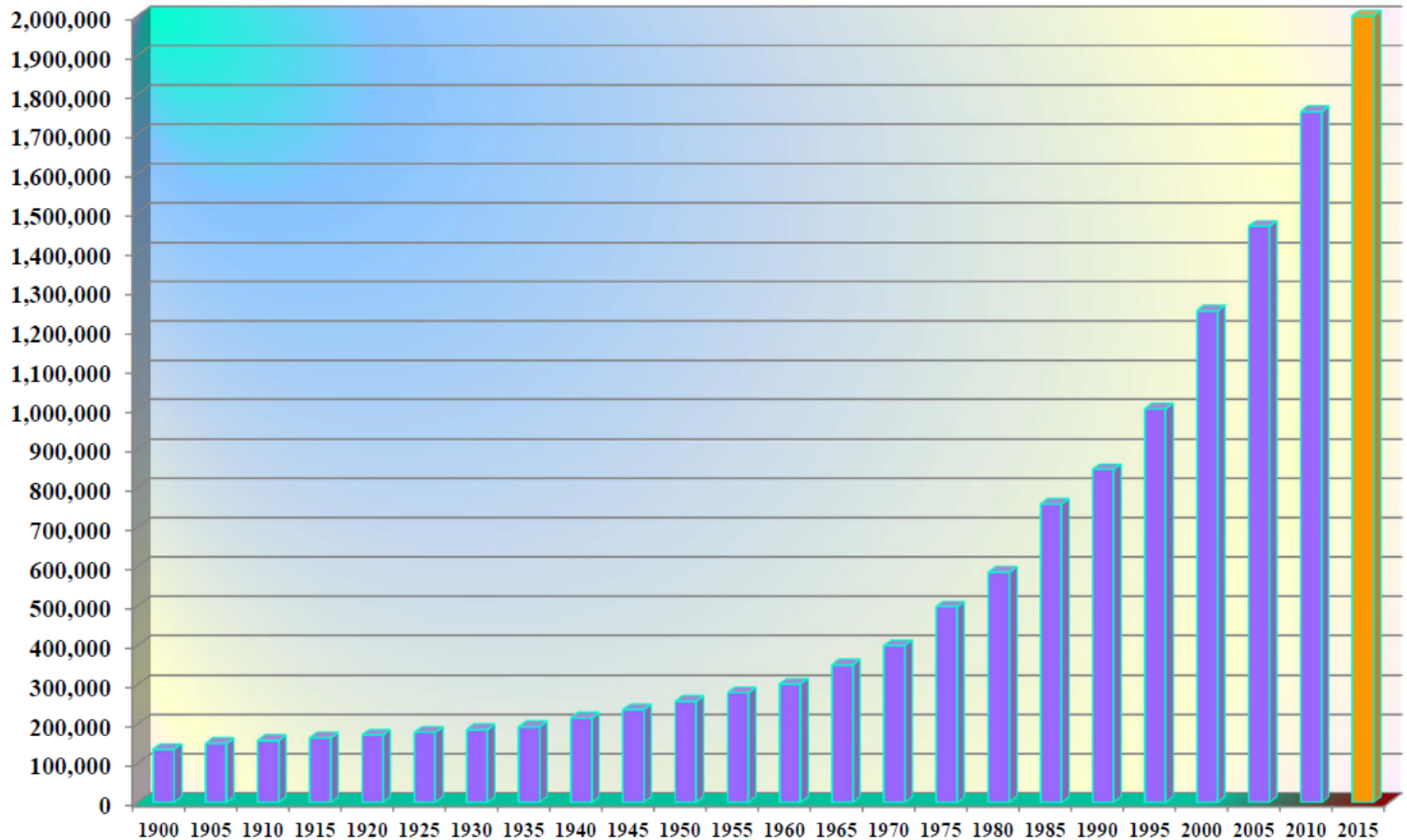


Austin MSA Population History: 1900 to 2015



“The number of microorganisms in a culture will increase exponentially until an essential nutrient is exhausted.”

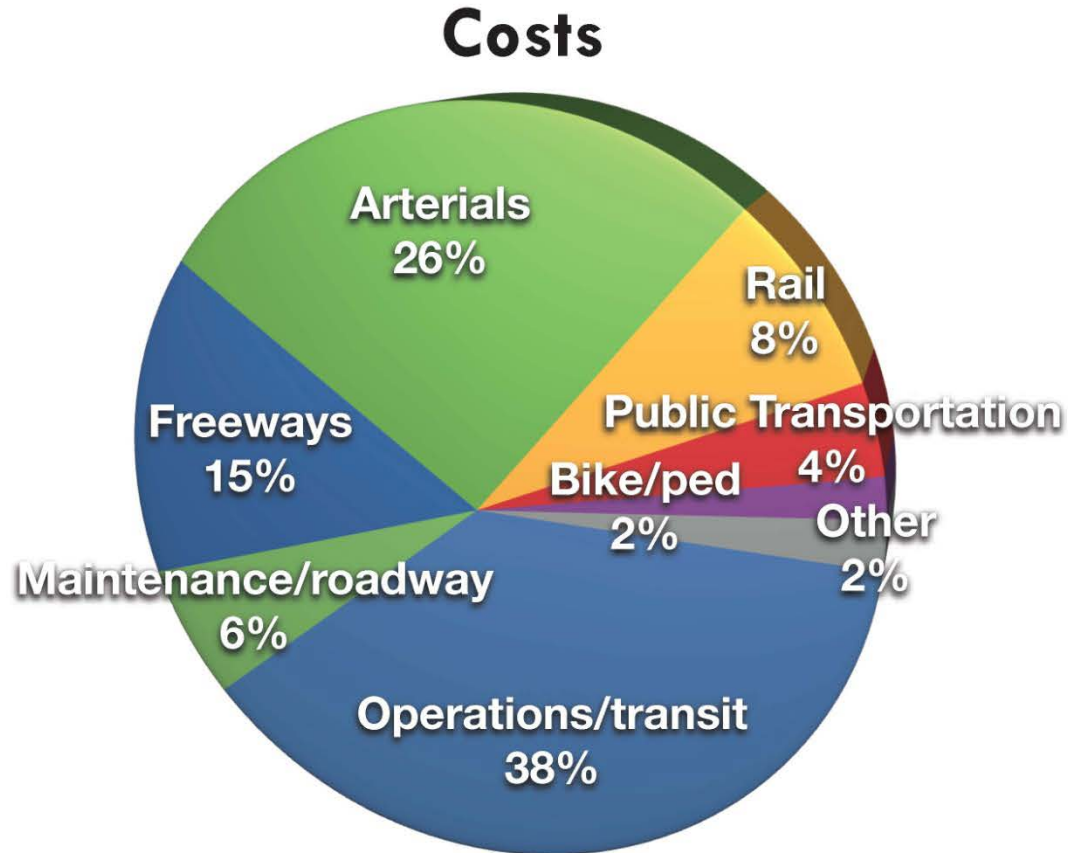


4. Austin, TX

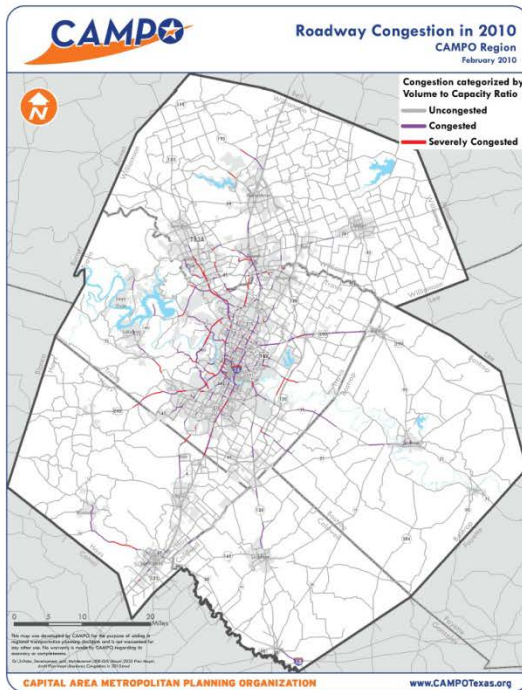
Average time wasted in traffic annually: 41 hours.

COSTS (IN BILLIONS)

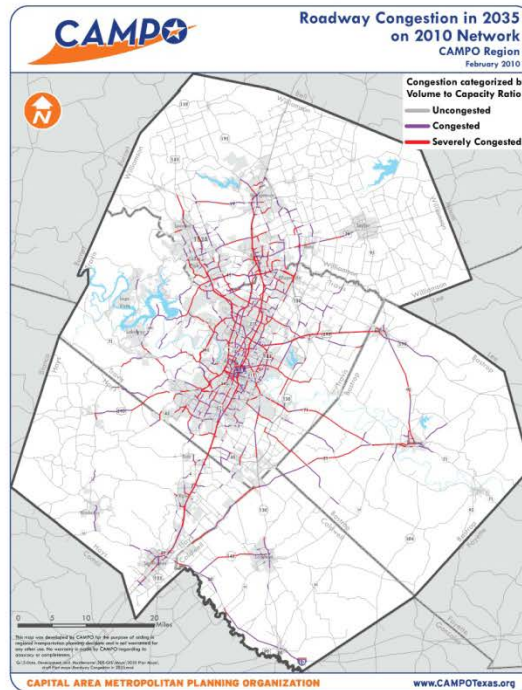
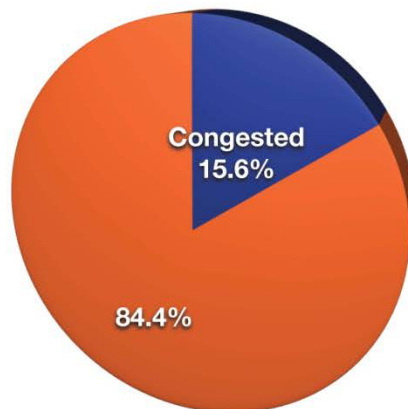
Category	Total
Freeways	\$3.95
Arterials	\$6.93
Rail	\$2.03
Public Transportation	\$0.96
Bicycle and Pedestrian	\$0.44
Other	\$0.55
Operations / Transit	\$10.27
Maintenance / Roadway	\$1.66
	\$26.78



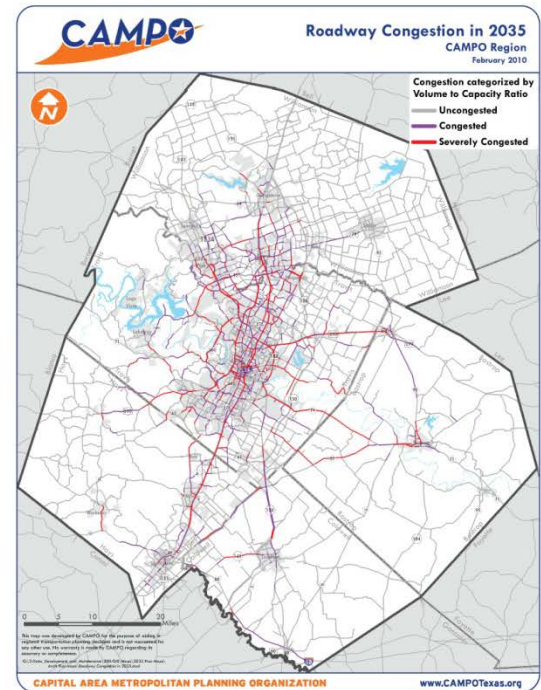
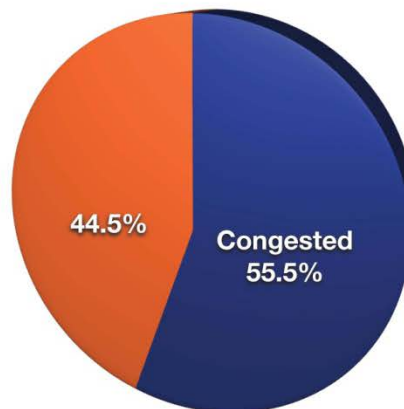
CONGESTION



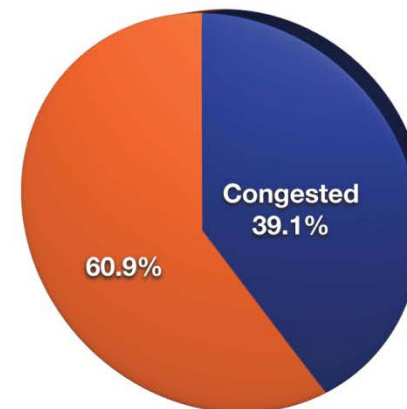
2010



2035 on 2010



2035

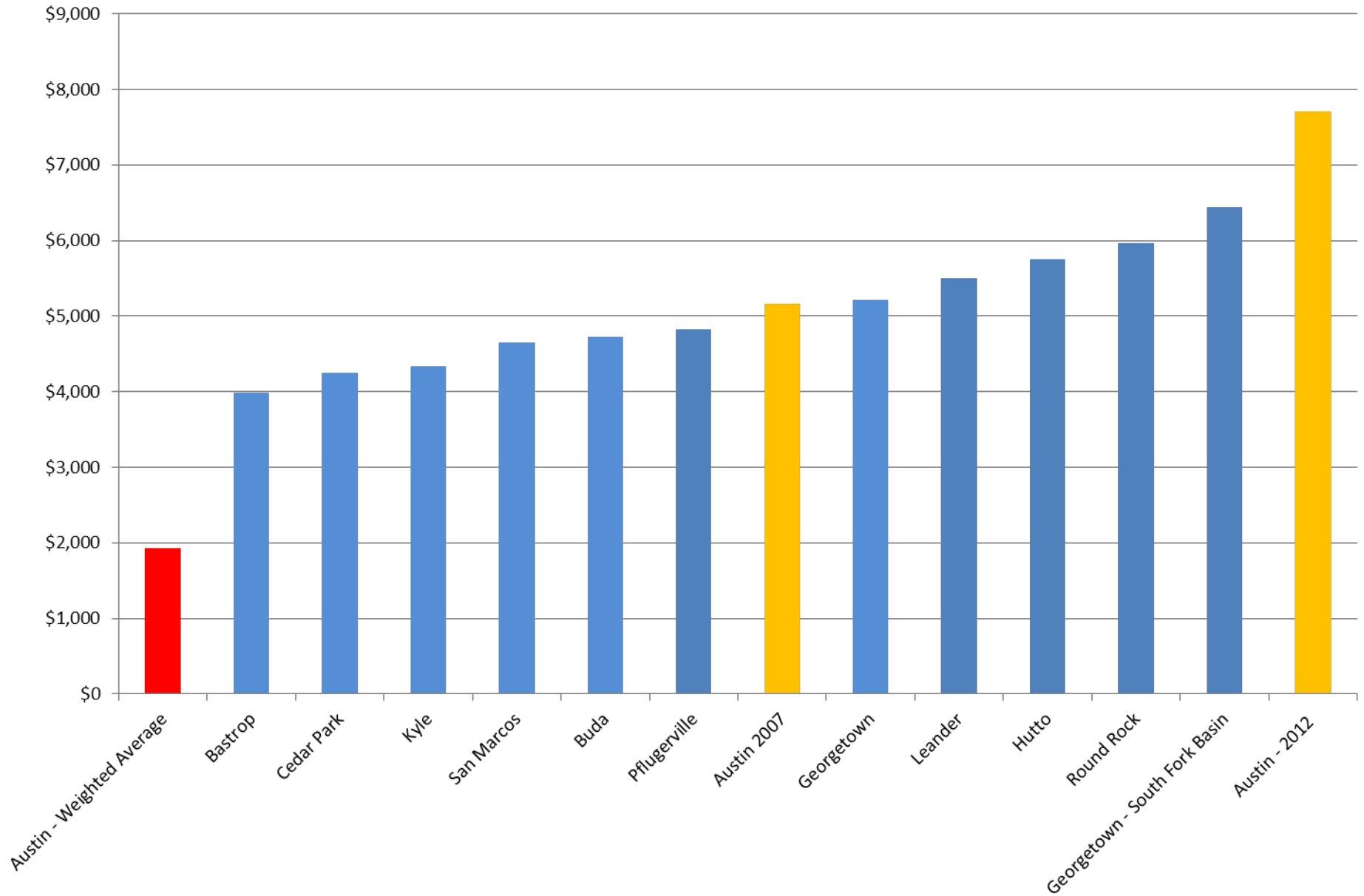


Impact Fees

Future Capacity
Paid by
Future Development

**Texas Law: Water, Wastewater, Drainage, Roads
“necessitated by and attributable to new development”**

Total Water + Wastewater





New Max Allowable Impact Fee - Water	\$ 5,400
Impact Fee Attributable to WTP4	\$ 3,173

WTP4 = 59% of new water impact fee of \$5,400

Figure 1: Facilities Eligible for Impact Fees by State

State	Roads	Water	Sewer	Storm Water	Parks	Fire	Police	Library	Solid Waste	School
Arizona (cities)	■	■	■	■	■	■	■	■		
Arizona (counties)	■	■	■		■	■	■			
Arkansas (cities)	■	■	■	■	■	■	■	■		
California	■	■	■	■	■	■	■	■	■	■
Colorado	■	■	■	■	■	■	■	■	■	
Florida	■	■	■	■	■	■	■	■	■	■
Georgia	■	■	■	■	■	■	■	■		
Hawaii	■	■	■	■	■	■	■	■	■	■
Idaho	■	■	■	■	■	■	■			
Illinois	■									
Indiana	■	■	■	■	■					
Maine	■	■	■		■	■			■	
Montana	■	■	■	■	*	■	■	*	*	*
Nevada	■	■	■	■	■	■	■			**
New Hampshire	■	■	■	■	■	■	■	■	■	■
New Jersey	■	■	■	■						
New Mexico	■	■	■	■	■	■	■			
Oregon	■	■	■	■	■					***
Pennsylvania	■									
Rhode Island	■	■	■	■	■	■	■	■	■	■
South Carolina	■	■	■	■	■	■	■			
Texas (cities)	■	■	■	■						
Utah	■	■	■	■	■	■	■			
Vermont	■	■	■	■	■	■	■	■	■	■
Virginia****	■									
Washington	■				■	■				■
West Virginia	■	■	■	■	■	■	■			■
Wisconsin (cities)	■	■	■	■	■	■	■	■	■	



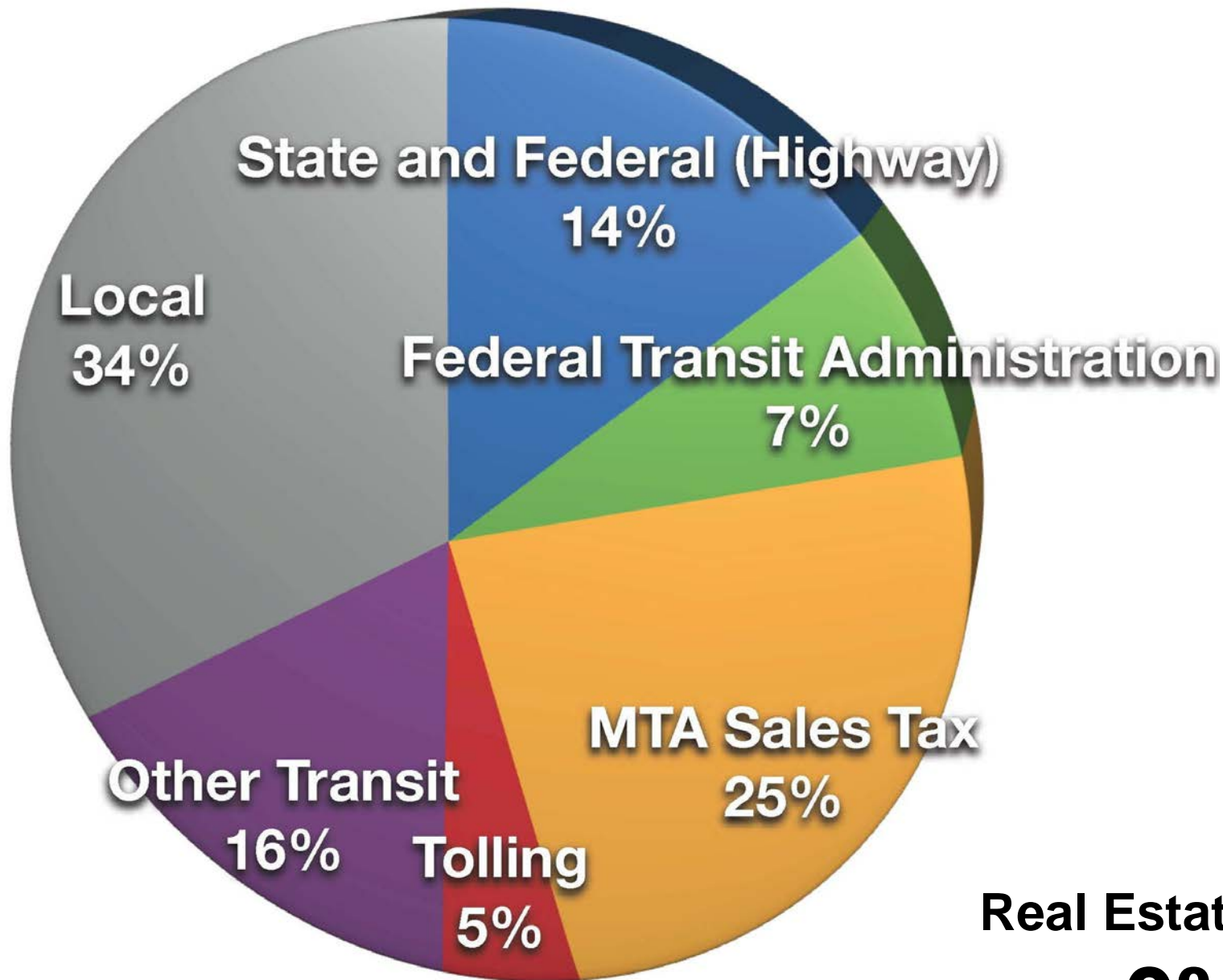
NATIONAL IMPACT FEE SURVEY: 2012¹

Table 1. Average Fees by Land Use and Facility Type, 2012

Facility Type	Single-Family (Unit)	Multi-Family (Unit)	Retail (1,000 sf)	Office (1,000 sf)	Industrial (1,000 sf)
Roads	\$3,228	\$2,202	\$5,685	\$3,430	\$2,076
Water	\$3,863	\$1,440	\$690	\$629	\$656
Wastewater	\$3,725	\$1,771	\$741	\$690	\$765
Drainage	\$1,476	\$790	\$1,013	\$868	\$983
Parks	\$2,774	\$2,086	**	**	**
Library	\$402	\$305	**	**	**
Fire	\$512	\$376	\$402	\$358	\$248
Police	\$372	\$295	\$401	\$260	\$180
General Government	\$1,699	\$1,285	\$618	\$607	\$385
Schools	\$4,677	\$2,494	**	**	**
Total Non-Utility*	\$8,111	\$5,359	\$6,174	\$4,172	\$2,763
Total*	\$11,583	\$6,718	\$6,347	\$4,483	\$3,190

National Average: \$3,228

Austin: \$ 0



Revenues

**Real Estate Industry
pays 0%**

Road impact fees were passed by:

Fort Worth Mayor Mike Moncrief and City Council



Full support from:

Greater Fort Worth Builders Association

Associated General Contractors

AIA

Greater Fort Worth Real Estate Council who stated,

“Solving the traffic congestion puzzle will take sacrifice from all of us. Our profession has to be part of the solution. We support the proposed impact fee. We don’t want Fort Worth to become where the west begins and mobility ends.”

Fort Worth Transportation Impact Fee Schedule

Collection Amount Schedule (Excluding credits and discounts)

Land Use Category	ITE Land Use Code	Development Unit	Schedule 2: Collection Rates per Development Unit			
			A, B, C, D, E, F, G, L, M, N, O, S, T, U, X, Y, Z	AA	W	H, I, J, K, P, Q, R, V
Industrial: General Light Industrial	110	1,000 SF GFA	\$1,215	\$309	\$594	\$0
Industrial: Industrial Park	130	1,000 SF GFA	\$1,067	\$272	\$522	\$0
Residential: Single-Family Detached Housing	210	Dwelling Unit	\$2,000	\$382	\$733	\$0
Residential: Apartment / Multi-Family	220	Dwelling Unit	\$1,228	\$243	\$450	\$0
Office: General Office Building	710	1,000 SF GFA	\$2,015	\$513	\$985	\$0
Office: Office / Business Park	750	1,000 SF GFA	\$2,027	\$516	\$991	\$0
Dining: Restaurant with Drive-Through	934	1,000 SF GFA	\$10,268	\$2,613	\$5,019	\$0
Other Retail: Free-Standing Retail Store	815	1,000 SF GFA	\$2,817	\$717	\$1,377	\$0
Other Retail: Shopping Center	820	1,000 SF GFA	\$1,973	\$502	\$964	\$0
Services: Bank (Drive In)	912	1,000 SF GFA	\$10,172	\$2,589	\$4,972	\$0

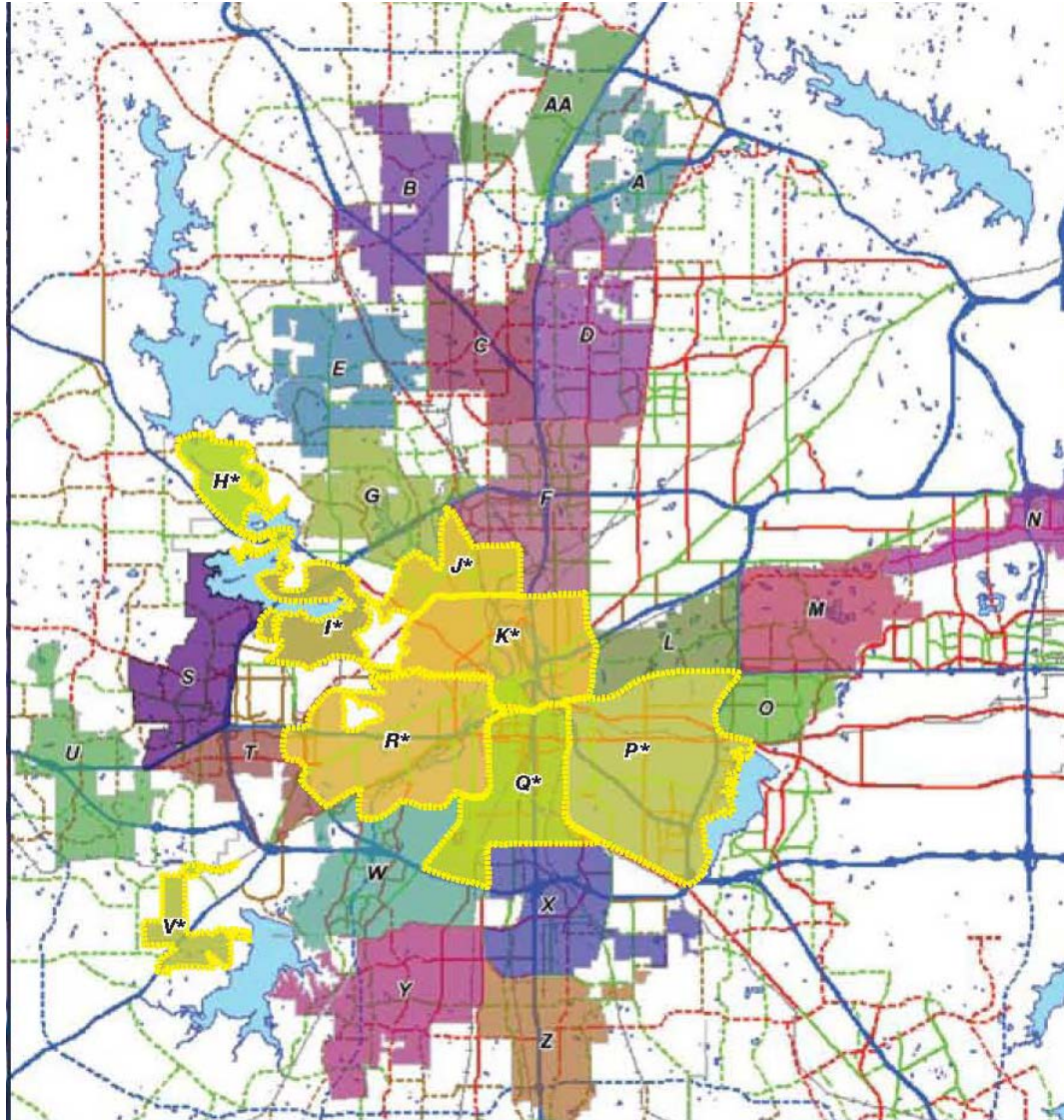
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**“necessitated by and
attributable to new
development”.**

Fort Worth divided into 27 areas of 6 mile radius



City of Fort Worth - 2006 Transportation Impact Fee Study

Capital Improvement Plan for Transportation Impact Fees

Appendix A - Summary of Conceptual Level Project Cost Projections

Roadway/Intersection Improvements - Service Area A

#	Class	Project	Limits	Cost
A-1	P6D	N. Beach St. (1)	Litsey Rd. to 1830' S. of Future Eagle	\$ 7,605,000
A-2	P6D	N. Beach St. (2)	Keller Haslet to SH 170	\$ 1,219,000
A-3, D-29	P6D	N. Beach St. (3)	SH 170 to Timberland	\$ 7,037,000
A-4	MA4D	Park Vista Blvd. (1)	800' S. of Henrietta Creek to SH 170	\$ 3,789,000
A-5	MA4D	Independence Pkwy. (1)	Litsey Rd. to Henrietta Creek	\$ 5,907,000
A-6	MA4D (1/2)	Independence Pkwy. (2)	Henrietta Creek to 255' N. of SH 170	\$ 1,595,000
A-7	P6D (1/3)	Cleveland Gibbs Rd.	N. City Limits (3670' S. of SH 114) to Litsey Rd.	\$ 3,607,000
A-8	P6D	Litsey Rd. (1)	190' E. of Elizabethtown to Cleveland Gibbs	\$ 3,215,000
A-9	MA4D	Litsey Rd. (2)	Cleveland Gibbs to 500' W. of Independence	\$ 5,530,000
A-10	MA4D	Litsey Rd. (3)	IH-35W to Future N. Beach St.	\$ 1,727,000
A-11	MA4D	Eagle Pkwy. (1)	Od Denton Rd. to 950' E. of Future Beach	\$ 2,678,000
A-12	MA4D	Eagle Pkwy. (2)	W. City Limits to Future Park Vista	\$ 2,859,000
A-13	MA4D	Henrietta Creek Rd.	700' E. of Future Park Vista to Independence	\$ 1,569,000
A-14	MA4D (1/2)	Westport Pkwy. (2)	IH-35W NBFR to 740' East of IH-35W NBFR	\$ 748,000
A-15	MA4D	Westport Pkwy. (3)	740' East of IH-35W NBFR to Future N. Beach St.	\$ 5,447,000
A-16	MA4D	Westport Pkwy. (4)	805' E. of Future N. Beach St. to Haslet/Roanoke	\$ 2,269,000
A-17	MA4D	Westport Pkwy. (5)	770' E. of Haslet-Roanoke to SH 170 WBFR	\$ 2,208,000
A-18	MA4D	Westport Pkwy. (6)	SH 170 EBFR to 150' W. of Park Vista Blvd.	\$ 2,390,000
A-19	MA4D (1/2)	Westport Pkwy. (7)	165' E. of Park Vista to 1,450' W. of Independence	\$ 1,102,000
A-20, D-19	MA4D	Timberland Blvd. (1)	N. Beach St. to Cottageville Ln.	\$ 959,000
A-21, D-20	MA4D (1/2)	Timberland Blvd. (2)	Cottageville Ln. to 440' E. of Lillybrook Ln.	\$ 533,000
A-22	MA4D	Timberland Blvd. (3)	60' E. of Park Vista to E. City Limits	\$ 2,032,000

TOTAL \$ 66,025,000

*Total may be higher than presented in Table 4 (10-Year Capital Improvement Plan for Transportation Impact Fees with Conceptual Level Cost Options) because the cost of some projects are shared between service areas.

NOTE: These cost projections listed in this appendix have been developed for Impact Fee calculations only and should not be used for any future Capital Improvement Planning within the City of Fort Worth.

City of Fort Worth
2006 Transportation Impact Fee Study
Conceptual Level Project Cost Projection

Kimley-Horn and Associates, Inc.

updated: 12/13/2007

Project Information:		Description:	Project No.	A-1
Name:	N. Beach St. (1)	This project consists of the construction of a new six-lane divided principal arterial.		
Limits:	Litsey Rd. to 1830' S. of Future Eagle			
Costing Class:	P&D			
Ultimate Class:	Principal Arterial			
Length (lf):	5,895			
Service Area(s):	A			

Roadway Construction Cost Projection					
No.	Item Description	Quantity	Unit	Unit Price	Item Cost
106	Unclassified Street Excavation	36,025	cy	\$ 6.00	\$ 216,150
206	6" Lime Stabilization (with Lime @ 32#/sy)	55,020	sy	\$ 5.00	\$ 275,100
306	8" Concrete Pavement	52,400	sy	\$ 32.00	\$ 1,676,800
406	4" Topsoil	28,165	sy	\$ 3.75	\$ 105,619
506	4' Concrete Sidewalk	47,160	sf	\$ 3.75	\$ 176,850
601	Turn Lanes and Median Openings	4,262	sy	\$ 41.00	\$ 174,725
Paving Construction Cost Subtotal:					\$ 2,625,244
Major Construction Component Allowances:					
Item Description		Notes		Allowance	Item Cost
√	Prep ROW			5%	\$ 131,262
	Traffic Control	None Anticipated		0%	\$ -
√	Pavement Markings/Markers			5%	\$ 131,262
√	Roadway Drainage	Minor Adjustments		35%	\$ 918,835
	Special Drainage Structures	None Anticipated		0%	\$ -
√	Water	Minor Adjustments		5%	\$ 131,262
√	Sewer	Minor Adjustments		5%	\$ 131,262
√	Landscaping (Basic)	Sodding and Erosion Control		2%	\$ 52,505
√	Illumination	Standard Illumination System		6%	\$ 157,515
√	Traffic Signalization	Assume Signal per Half Mile		\$125,000	\$ 250,000
	Other:			\$0	\$ -
Allowance Subtotal:					\$ 1,903,904
Paving and Allowance Subtotal:					\$ 4,529,148
Construction Contingency:					15% \$ 679,372
Construction Cost TOTAL:					\$ 5,209,000

Impact Fee Project Cost Summary			
Item Description	Notes:	Allowance	Item Cost
Construction:		-	\$ 5,209,000
Engineering/Survey/Testing:		20%	\$ 1,041,800
Mobilization		6%	\$ 312,540
ROW/Easement Acquisition:	New Roadway Alignment	20%	\$ 1,041,800
Impact Fee Non-Recoverable Costs			
Impact Fee Project Cost TOTAL:			\$ 7,605,000

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

V. IMPACT FEE CALCULATION

A. MAXIMUM ASSESSABLE IMPACT FEE PER SERVICE UNIT

This section presents the maximum assessable impact fee rate calculated for each service area. The maximum assessable impact fee is the sum of the eligible Impact Fee CIP costs for the service area divided by the growth in travel attributable to new development projected to occur within the 10-year period. A majority of the components of this calculation have been described and presented in previous sections of this report. The purpose of this section is to document the computation for each service area and to demonstrate that the guidelines provided by Chapter 395 of the Texas Local Government Code have been addressed. Table 7 illustrates the computation of the maximum assessable impact fee computed for each service area. Each row in the table is numbered to simplify explanation of the calculation.

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

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

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

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

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

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

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

This calculation identifies the portion of the Impact Fee CIP (in vehicle-miles) that may be recoverable through the collection of impact fees.

B. PLAN FOR AWARDING THE TRANSPORTATION IMPACT FEE CREDIT

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

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

The plan is summarized, as prepared by R.W. Beck, Inc., in **Appendix D** and **E**, Plan for Awarding the Transportation Impact Fee Credit. The following table summarizes the portions of **Table 7** that utilize this credit calculation.

Line	Title	Description
12	<i>Financing Costs</i>	(from Appendix D – Plan for Awarding the Transportation Impact Fee Credit)
13	<i>Interest Earnings</i>	(from Appendix D – Plan for Awarding the Transportation Impact Fee Credit)
14	<i>Cost of the CIP and Financing Attributable to New Growth</i>	The sum of the Cost of Capacity Added Attributable to New Growth, Financing Costs, and Interest Earnings. (Line 11 + Line 12 + Line 13)
15	<i>Pre-Credit Maximum Fee Per Service Unit</i>	Found by dividing the Cost of the CIP and Financing Attributable to New Growth (Line 14) by the Total Vehicle-Miles of New Demand Over Ten Years (Line 8). (Line 14 / Line 8)
16	<i>Credit for Ad Valorem Taxes</i>	A credit for the portion of ad valorem taxes projected to be generated by the new service units, as per Section 395.014 of the Local Government Code. (from Appendix D – Plan for Awarding the Transportation Impact Fee Credit)
17	<i>Recoverable Cost of CIP and Financing</i>	The difference between the Cost of the CIP and Financing Attributable to New Growth (Line 14) and the Credit for Ad Valorem Taxes (Line 16). (Line 14 + Line 16)
18	<i>Maximum Assessable Fee Per Service Unit</i>	Found by dividing the Recoverable Cost of the CIP and Financing (Line 17) by the Total Vehicle-Miles of New Demand Over Ten Years (Line 8). (Line 17 / Line 8)

Fort Worth Transportation Impact Fee Schedule

Collection Amount Schedule (Excluding credits and discounts)

Land Use Category	ITE Land Use Code	Development Unit	Schedule 2: Collection Rates per Development Unit			
			A, B, C, D, E, F, G, L, M, N, O, S, T, U, X, Y, Z	AA	W	H, I, J, K, P, Q, R, V
Industrial: General Light Industrial	110	1,000 SF GFA	\$1,215	\$309	\$594	\$0
Industrial: Industrial Park	130	1,000 SF GFA	\$1,067	\$272	\$522	\$0
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Services: Bank (Drive In)	912	1,000 SF GFA	\$10,172	\$2,589	\$4,972	\$0

Comprehensive list of land uses and collection amounts available at www.fortworthgov.org/impactfees.



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Cost of Infrastructure to Serve New Residential Development in Austin, Texas – 2014



FINAL DRAFT
June 9, 2014

For Brian Rodgers

By Eben Fodor

FODOR & ASSOCIATES LLC

Community
Planning Consulting

Eugene, OR
www.FodorandAssociates.com

Table 2-10

Summary of Methods Used to Assess Road Costs Associated with New Housing in Austin, 2014

Method Used	Roadway Costs per New Housing Unit	Funding Entity
Long-Range Planning Estimate (CAMPO)	\$14,577	All Governments
Local Portion of Long-Range Plng (estimate) ¹	\$3,207	City of Austin
Level of Service (LOS) Method	\$42,634	All Governments
Actual Expenditure Method: Road Bonds	\$3,136	City of Austin
Actual Expenditure Method: CIP Spending	\$6,217	City of Austin

¹ This is a rough approximation based on 22% local share report in previous CAMPO 2030 Plan.

In terms of actual spending by the City of Austin, the last two methods provide the most reasonable estimates. Road bonds are the primary source of funding for new roads, however, since other funding sources are also used, the figure of \$3,136 may be low. The CIP spending method reflects all revenues sources the City uses to pay for new roads, and therefore the figure of \$6,217 reflects more of the actual costs. Both of these methods required making assumptions regarding the allocation of capital costs for road projects between capacity-increasing improvements and system maintenance.

Table 2-11

Five-Year Road Cost for New Housing

Cost Estimate	Cost per New Housing Unit	Number Housing Units Added 2009-13	Total 5-Year Cost
Low Cost Estimate ¹	\$3,136	27,651	\$86,700,986
High Cost Estimate ²	\$6,217	27,651	\$171,902,545

1 Based on actual road bond spending.

2 Based on actual Capital Improvement Plan spending.



Roadway Impact Fees

Construction Cost Recuperation

In 2007 the City of New Braunfels adopted impact fees to offset the cost of new road construction. The Impact Fee Study is updated every 5 years.

RESIDENTIAL		
Apartment Multi-family	220	Dwelling Unit
Assisted Living	254	Beds
Congregate Care Facility	253	Dwelling Units
Mobile Home Park / Manufactured Housing	240	Dwelling Unit
Residential Condominium/Townhome/Duplex	230	Dwelling Unit
Senior Adult Housing-Attached	252	Dwelling Unit
Senior Adult Housing-Detached	251	Dwelling Unit
Single-Family Detached Housing	210	Dwelling Unit
Timeshare	265	Dwelling Units

\$ 393	\$ 129	\$ 1,151	\$ 1,151	\$ 1,151	\$ 1,151
\$ 139	\$ 45	\$ 409	\$ 409	\$ 409	\$ 409
\$ 107	\$ 45	\$ 387	\$ 409	\$ 409	\$ 409
\$ 374	\$ 123	\$ 1,095	\$ 1,095	\$ 1,095	\$ 1,095
\$ 330	\$ 108	\$ 965	\$ 965	\$ 965	\$ 965
\$ 158	\$ 108	\$ 570	\$ 965	\$ 965	\$ 965
\$ 171	\$ 209	\$ 615	\$ 1,875	\$ 1,875	\$ 1,826
\$ 635	\$ 209	\$ 1,875	\$ 1,875	\$ 1,875	\$ 1,875
\$ 501	\$ 108	\$ 965	\$ 965	\$ 965	\$ 965



Residential road impact fee

Duplex	\$1,260.00 (both units)
Multi-family	\$504.00 per dwelling unit
Retirement housing	\$189.00 per dwelling unit
Single-family dwelling	\$819.00



Roadway Impact Fees

Applicable Fees in Enterprise & Empowerment Zones are charged 50% of the posted rates.

Residential Single Family (1 LUE Equivalency)	\$ 480.32
Residential Multi-Family (0.61 LUE Equivalency)	\$ 293.00
Retail/Commercial (1000/Sq Ft = 1.73 LUE Equivalency)	\$ 830.95
Industrial (1000/Sq Ft = 1.01 LUE Equivalency)	\$ 485.12
Prison (1000/Sq Ft = 2.40 LUE Equivalency)	\$ 1,152.77

In 2007, Taylor adopted roadway impact fees under the requirements of Chapter 395 of the Texas Local Government Code. ([Ordinance 2007-10](#)). The Code requires that the City update its fee program at least every five years.

The End