Development Fee Update

Streets Infrastructure Improvements Plan

Public Report

Review Draft

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■ INTRODUCTION

The City of Tucson collects development fees to offset some of the infrastructure costs associated with growth. The City currently charges fees for four public service categories: street facilities, parks and recreational facilities, police and fire. In order to continue assessing and collecting the fees, the City must comply with Arizona Revised Statute ARS §9-463.05, as amended. Consequently, the City is preparing new development fee studies, project lists, fee schedules, and a City ordinance.

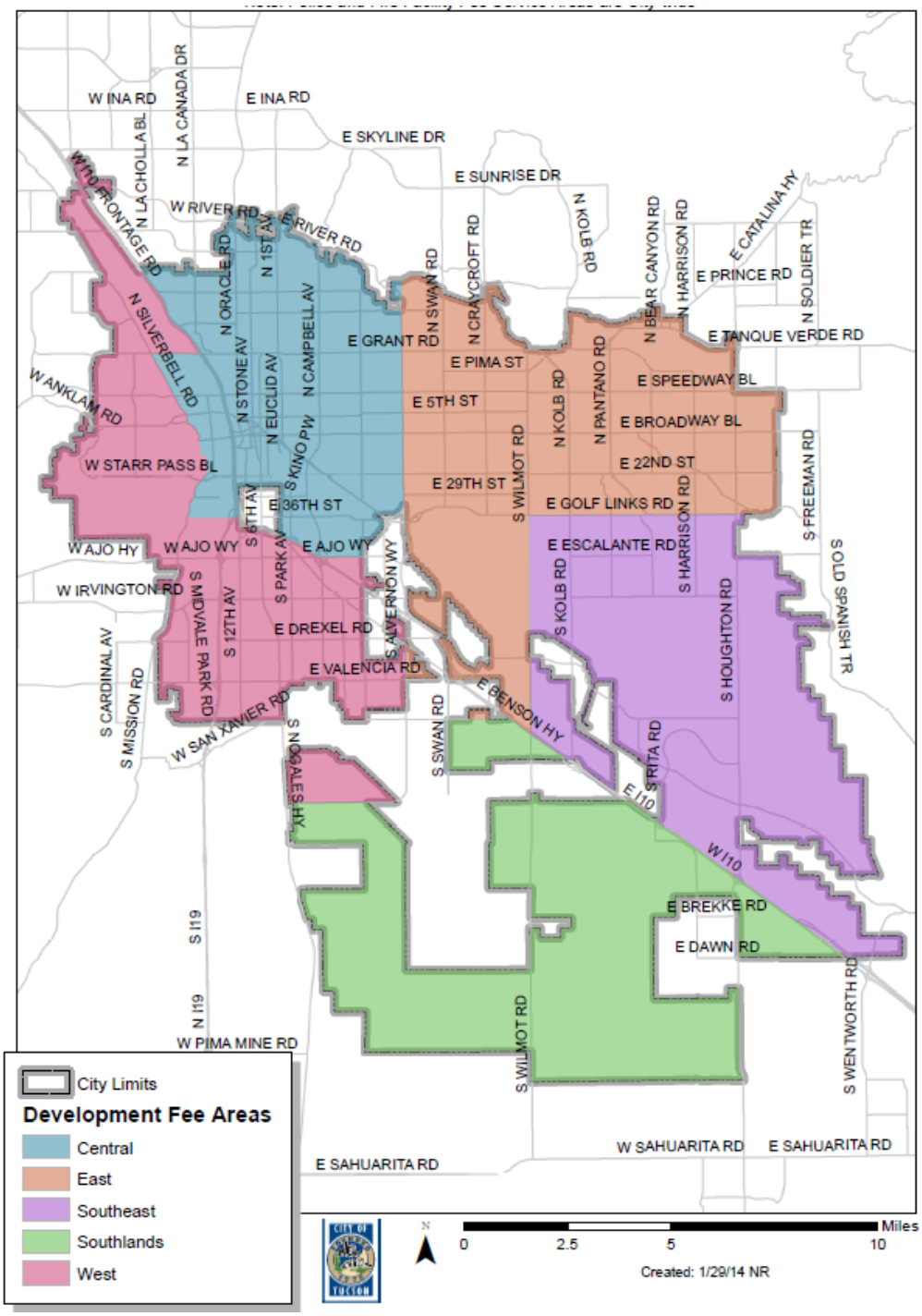
The statute codifies Senate Bill 1525, and includes major changes in development fee assessment procedures and programs. It also provides greater specificity regarding the types of "necessary public services" that can be funded with development fees. Prior to calculating the fees, two studies must be prepared: a land use assumptions report, and an infrastructure improvements plan (IIP) for each fee category. As defined in ARS §9-463.05(T)(5), " 'Infrastructure improvements plan' means a written plan that identifies each necessary public service or facility expansion that is proposed to be the subject of a development fee and otherwise complies with the requirements of this section, and may be the municipality's capital improvements plan."

This report identifies the infrastructure needs for streets facilities, for a 10-year planning horizon. The infrastructure needs were based on the referenced land use assumptions, provided in a companion document. The land use assumptions were used to estimate the amount of new development projected to occur between the time period 2014 - 2024. This report identifies the amount and type of streets infrastructure needed to provide that new development with the same level of street facilities service as is provided to existing development in the City. This report also provides updated development fee calculations for streets infrastructure, which will be finalized in a subsequent streets fee study.

Service Areas

As defined in ARS §9-463.05(T)(9), " 'Service area' means any specified area within the boundaries of a municipality in which development will be served by necessary public services or facility expansions and within which a substantial nexus exists between the necessary public services or facility expansions and the development being served as prescribed in the infrastructure improvements plan." The City will utilize the same service areas currently used, with minor adjustments for recent annexations (see Exhibit 1).

Exhibit 1 Street Facilities Development Fee Service Areas



■ NECESSARY PUBLIC SERVICES – EXISTING NEEDS

ARS §9-463.05(E)(1) indicates that the IIP for each "necessary public service" must include the following: "A description of the existing necessary public services in the service area and the costs to upgrade, update, improve, expand, correct or replace those necessary public services to meet existing needs and usage and stricter safety, efficiency, environmental or regulatory standards, which shall be prepared by qualified professionals licensed in this state, as applicable." Further, ARS §9-463.05(E)(2) requires "An analysis of the total capacity, the level of current usage and commitments for usage of capacity of the existing necessary public services, which shall be prepared by qualified professionals licensed in this state, as applicable."

The City of Tucson and the consulting team identified the "necessary public services" for streets facilities to be included in this IIP. These projects, shown in Exhibit 2, are necessary in part because of expected growth associated with the developments documented in the Land Use Assumptions report.

Due to the ten-year time period required by the statute, the analysis included years 2014 and 2024 conditions. Growth over the ten-year period will require projects adding over 180 new lane-miles of arterial roadway capacity, based on the typical capacities of urban arterials. This includes widening of existing arterials, along with several new corridors in the Southeast Area (see alignments in the Appendix).

Also included are 430 miles of sidewalk capacity expansion, 41 bus pullouts in the bus pullout program (see Appendix for locations), and several intersection capacity improvement projects. The sidewalk capacity expansion program, bus pullout program and intersection capacity projects are anticipated to serve existing plus future development. Half of the sidewalk, bus pullout and intersection capacity project costs were assigned to new development. The remaining half will be funded with other sources. This apportionment is indicated in Exhibit 2.

One of the City's major streets facilities expenditures is to provide local matching funds for the Regional Transportation Authority (RTA) arterial projects. Funding for these projects, including a new half-cent sales tax and the required local match, was committed by the voters of Pima County on May 16, 2006. Use of development fee funds for the local match was assigned through subsequent, project-specific, intergovernmental agreements between the City and the RTA. [1]

Traffic volumes for both 2014 and 2024 are provided in Exhibit 3. In a few cases (Broadway from Camino Seco to Houghton, for example) future volumes are approximately the same or less than current volumes. This is due to the travel demand model reassigning some trips to new and expanded parallel corridors.

[1] See http://www.rtamobility.com/rtaplan.aspx for information on the RTA Plan and its funding commitments.

Exhibit 2 Necessary Street Facilities, Existing and for New Development

	Road Project	Limits		# of Existing Lanes	# of Lanes	Length (mi)/ Units	New capacity lane-miles	Total Project Cost (RTA)	Total Project Cost (Estimated)	Project Cost (Attributed to New Development)	City Contribution	Source	Notes
Central	22nd Street	I-10	Tucson Blvd	4	6	2.6	5.2	$118,532,400			$3,000,000	RTA	Only City Contribution applied to Devel Fee Calc
	Broadway Boulevard	Euclid Ave	Country Club Rd	5	8	1.9	7.6	$74,760,600			$3,000,000	RTA	Only City Contribution applied to Devel Fee Calc
	First Avenue	River Rd	Grant Rd	4	6	3.1	6.2	$79,372,610			$3,000,000	RTA	Only City Contribution applied to Devel Fee Calc
	Grant Road	Oracle Rd	Swan Rd	4	6	5.0	10.0	$175,434,650			$6,000,000	RTA	Only City Contribution applied to Devel Fee Calc
	Sidewalk Expansion Program	170 Miles				170			$85,000,000	$42,500,000		COT Staff	50% Applied to New Development
	Bus Pullout Program	21 Locations*				21			$3,000,000	$1,500,000		COT Staff	50% Applied to New Development
	Intersection Improvements	Various Locations							$5,000,000	$2,500,000		COT Staff	50% Applied to New Development
West	Silverbell Road	Ina Rd	Grant Rd	2	4	7.6	15.2	$61,955,610			$8,000,000	RTA	Only City Contribution applied to Devel Fee Calc
	Sunset Road	Silverbell Rd	I-10/River Rd	N/A	3	0.9	2.7	$39,062,010			$5,000,000	RTA	Only City Contribution applied to Devel Fee Calc
	Sidewalk Expansion Program	110 Miles				110			$55,000,000	$27,500,000		COT Staff	50% Applied to New Development
	Grant Road	Silverbell Rd	I-10	4	6	1.4	2.8		$11,760,000	$3,947,552		COT Staff	Based on ratio of increase in volume to increase in capacity, 34% applied to new development
	Ironwood Hill	Painted Hills	Silverbell Rd	2	4	1.4	2.8		$7,840,000	$2,801,842		COT Staff	Based on ratio of increase in volume to increase in capacity, 36% applied to new development
	Greasewood Road	Ironwood Hill	Starr Pass	2	4	3	6.0		$16,800,000	$7,678,259		COT Staff	Based on ratio of increase in volume to increase in capacity, 46% applied to new development
East	22nd Street	Camino Seco	Old Spanish Tr	2	4	1.2	2.4	$15,144,000			$3,000,000	RTA	Only City Contribution applied to Devel Fee Calc
	22nd Street	Old Spanish Tr	Houghton Rd	2	3	0.8	0.8					RTA	Only City Contribution applied to Devel Fee Calc
	Broadway Boulevard	Camino Seco	Houghton Rd	3	4	2.0	2.0	$16,086,800			$3,000,000	RTA	Only City Contribution applied to Devel Fee Calc
	Houghton Road	Golf Links Rd	Tanque Verde Rd	2	4	4.1	8.2	$62,290,133			$5,676,923	RTA	Cost of Houghton Road project is $197,505,300. This represents proportional cost based on length (4.1 of 13 miles).
	Speedway Boulevard	Camino Seco	Houghton Rd	2	4	2.0	4.0	$18,813,400			$3,000,000	RTA	Only City Contribution applied to Devel Fee Calc
	Valencia Road	Alvernon Wy	Kolb Rd	4	6	4.3	8.6	$51,124,970			$3,000,000	RTA	Only City Contribution applied to Devel Fee Calc
	Sidewalk Expansion Program	150 Miles				150			$75,000,000	$37,500,000		COT Staff	50% Applied to New Development
	Bus Pullout Program	20 Locations*				20			$3,000,000	$1,500,000		COT Staff	50% Applied to New Development
	Speedway/Swan Intersection Improvements	N/A							$5,000,000	$2,500,000		COT Staff	50% Applied to New Development
	Speedway/Craycroft Intersection Improvements								$5,000,000	$2,500,000		COT Staff	50% Applied to New Development
Southeast	Houghton Road	I-10	Old Vail Rd	2	4	1.8	3.6	$135,215,167			$12,323,077	RTA	Cost of Houghton Road project is $197,505,300. This represents proportional cost based on length (8.9 of 13 miles).
	Houghton Road	Old Vail Rd	Golf Links Rd	2	6	7.2	28.8					RTA	
	Valencia Road	Kolb Rd	Houghton Rd	2	6	4.6	18.4	$38,251,000			$5,000,000	RTA	Only City Contribution applied to Devel Fee Calc
	Poorman Road	Houghton Rd	Valencia Rd	2**	4	2	6.7		$12,595,455	$12,595,455		COT Staff	All Applied to New Development
	Val Vista	Valencia Rd	Mary Ann Cleveland Way	N/A	4	4.5	18.0		$29,922,955	$29,922,955		COT Staff	All Applied to New Development
	Valencia Road	Houghton Road	City Limits	N/A	4	2	8.0		$12,303,136		$7,449,447	Designer Cost Est.	Only City Contribution applied to Devel Fee Calc
	Rita Road	Houghton Road	Val Vista	N/A	4	2.5	10.0		$18,722,727	$18,722,727		COT Staff	All Applied to New Development
South Lands	Wilmot Road	I-10	End of Road (1.5 Miles)	2	4	1.5	3.0		$8,400,000	$4,200,000		COT Staff	50% Applied to New Development
						TOTALS	**180.99**	**$886,043,350**	**$354,344,272**	**$197,868,789**	**$70,449,447**		
								Total Project Cost Before reduction to what can be "fee assessed".	**$1,240,387,622**	**New Dev Cost =**	**$268,318,236**		

*See Appendix for list of locations
**Poorman Rd is currently paved from Houghton Road approximately 3,500 feet east.

Exhibit 3 Volume - Capacity Table, 2014 and 2024

	Road Project	Limits		Legacy/New/ Improvement	# of Existing Lanes	# of Lanes	Classification	Speed Limit (mph)	Existing Volume (veh/day)	Existing Capacity (veh/day)	Future Volume (veh/day)	Future Capacity (veh/day)
Central	22nd Street	I-10	Tucson Blvd	Improvement	4	6	Arterial	35	37,894	30,420	42,856	45,810
	Broadway Boulevard	Euclid Ave	Country Club Rd	Improvement	5	8	Arterial	35	38,615	30,420	52,544	61,290
	First Avenue	River Rd	Grant Rd	Improvement	4	6	Arterial	45/40	37,207	35,820	48,141	53,910
	Grant Road	Oracle Rd	Swan Rd	Improvement	4	6	Arterial	40	36,036	35,820	52,002	53,910
	Sidewalk Expansion Program	170 Miles		Improvement	N/A							
	Bus Pullout Program	20 Locations		New								
	Intersection Improvements	Location TBD		Improvement								
West	Silverbell Road	Ina Rd	Grant Rd	Improvement	2	4	Arterial	45	13,042	15,930	22,546	35,820
	Sunset Road	Silverbell Rd	I-10/River Rd	New	N/A	3	Arterial	N/A	N/A	N/A	19,846	16,727
	Sidewalk Expansion Program	110 Miles		Improvement	N/A							
	Grant Road	Silverbell Rd	I-10	Improvement	4	6	Arterial	40	33,030	35,820	39,102	53,910
	Ironwood Hill	Painted Hills	Silverbell Rd	Improvement	2	4	Arterial	40	22,809	15,930	29,918	35,820
	Greasewood Road	Ironwood Hills	Starr Pass	Improvement	2	4	Arterial	35	12,715	13,320	20,530	30,420
East	22nd Street	Camino Seco	Old Spanish Tr	Improvement	2	4	Arterial	40	19,588	15,930	22,942	35,820
	22nd Street	Old Spanish Tr	Houghton Rd	Improvement	2	3	Arterial	40	8,662	15,930	9,177	16,727
	Broadway Boulevard	Camino Seco	Houghton Rd	Improvement	3	4	Arterial	40	31,732	16,727	26,119	35,820
	Speedway Boulevard	Camino Seco	Houghton Rd	Improvement	2	4	Arterial	40	19,136	15,930	21,290	35,820
	Houghton Road	Golf Links Rd	Tanque Verde Rd	Improvement	2	4	Arterial	45	24,546	15,930	41,856	35,820
	Valencia Road	Alvernon Wy	Kolb Rd	Improvement	4	6	Arterial	50	42,849	35,820	63,900	53,910
	Sidewalk Expansion Program	150 Miles		Improvement	N/A							
	Bus Pullout Program	20 Locations		New								
	Speedway/Swan Intersection Improvements	Intersection		Improvement								
	Speedway/Craycroft Intersection Improvements	Intersection		Improvement								
Southeast	Houghton Road	I-10	Old Vail Rd	Improvement	2	4	Arterial	55	15,804	15,930	31,202	35,820
	Houghton Road	Old Vail Rd	Golf Links Rd	Improvement	2	6	Arterial	50	30,106	15,930	58,982	53,910
	Valencia Road	Kolb Rd	Houghton Rd	Improvement	2	6	Arterial	50	21,658	15,930	48,410	53,910
	Poorman Road	Houghton Rd	Valencia Rd	New	2*	4	Arterial	35	N/A	N/A	15,578	30,420
	Val Vista	Valencia Rd	Mary Ann Cleveland Way	New	N/A	4	Arterial	35	N/A	N/A	18,967	30,420
	Valencia Road	Houghton Road	City Limits	New	N/A	4	Arterial	45	N/A	N/A	36,343	35,820
	Rita Road	Houghton Road	Val Vista	New	N/A	4	Arterial	40	N/A	N/A	27,319	35,820
South Lands	Wilmot Road	I-10	End of Road (1.5 Miles)	Improvement	2	4	Arterial	45	7,861	15,930	20,623	35,820

*Poorman Road is a paved two-lane roadway from Houghton Road approximately 3,500 feet east. The remaining section is unpaved.

Necessary public services were estimated by calculating the daily roadway capacity for one lane-mile of a typical arterial roadway. The general daily capacity per lane ranges from 7,000 vehicles per lane per day (vplpd) to 9,000 vplpd, depending on the facility, access control measures, and whether the roadway is within an urban, suburban, or rural setting. Level of service (LOS) D is the performance standard for most urban areas in the U.S. and is the performance standard utilized in this study. LOS D allows limited congestion during peak periods and free-flowing conditions during off-peak periods.

Current Florida Department of Transportation (FDOT) LOS standards[2] suggest that the LOS D criteria be similar to the current per lane service volumes used by the City of Tucson. The FDOT LOS standards are widely applied by planning and transportation departments across the U.S. to estimate planning level capacities for arterial roadways. To establish a consistent performance measure, we recommend and are therefore using a LOS D standard, based on FDOT's 2012 Generalized Service Volumes Tables**.**

■ NECESSARY PUBLIC SERVICES – NEEDS ATTRIBUTABLE TO NEW DEVELOPMENT

ARS §9-463.05(E)(3) requires "A description of all or the parts of the necessary public services or facility expansions and their costs necessitated by and attributable to development in the service area based on the approved land use assumptions, including a forecast of the costs of infrastructure, improvements, real property, financing, engineering and architectural services, which shall be prepared by qualified professionals licensed in this state, as applicable."

Statutes allow development fee funding for street improvements beyond merely widening or extending facilities to provide vehicular capacity. Fundable streets facilities are defined in ARS 9-463.05(T)(7()e) as "[s]treet facilities located in the service area, including arterial or collector streets or roads that have been designated on an officially adopted plan of the municipality, traffic signals and rights-of-way and improvements thereon." This IIP includes funding primarily for additional lane-miles, but also for capacity-enhancing bus pullouts and pedestrian facility expansions in denser areas where additional lane-miles are infeasible.

As indicated in Exhibit 2, there are an estimated 182 lane-miles of roadway widening capacity projects and several intersection improvement capacity projects. Also included are 430 miles of sidewalk expansion and 41 bus pullouts. The cost of the improvements attributable to new development is estimated to be $268,318,236. The cost of preparing the updates every five years, based on the estimated cost of this study, is $90,000 ($45,000 X 2). Therefore the total cost for providing these necessary public streets facilities is $268,398,236 over the ten-year time frame.

[2] Florida DOT is a leader in capacity analysis. Its procedures are used widely, including in eastern Pima County. The procedures rely on the USDOT's Highway Capacity Manual.

■ TRAVEL DEMAND PER SERVICE UNIT – METHODOLOGY

ARS §9-463.05(E)(4) requires "A table establishing the specific level or quantity of use, consumption, generation or discharge of a service unit for each category of necessary public services or facility expansions and an equivalency or conversion table establishing the ratio of a service unit to various types of land uses, including residential, commercial and industrial."

Typical land use categories are used in calculating trip generation for the residential, commercial and other land uses. Each of these land uses has documented trip rate data from the current edition of the Institute of Transportation Engineers' (ITE) *Trip Generation*. The PAG four-step travel demand model also includes trip generation as part of its process, and it applies rates similar to those of ITE. The land uses included in the fee study, and the associated daily trip generation rates, other factors and the calculated Service Units (SUs), are shown in Exhibit 4. The following factors are used to develop the unit demand.

Average Trip Length

The average trip length for a particular land use is based on trip length data from the 2009 National Household Travel Survey (NHTS), the nation's inventory of daily and long-distance travel. The survey includes demographic characteristics of households, people, vehicles, and detailed information on daily and longer-distance travel for all purposes by all modes. NHTS survey data are collected from a sample of U.S. households, and expanded to provide national estimates of trips and miles by travel mode, trip purpose, and a host of household attributes.

ITE Trip Rates

The ITE *Trip Generation* document contains trip rate data per unit of land use measurement for over 170 land uses. The current ITE *Trip Generation* (9th Edition) was produced in 2012. Daily weekday rates have been applied in the demand unit calculations.

Primary Trips

Primary trips are one-way movements to or from a land use that the driver intended to make without consideration to other stops along the way (i.e, the primary purpose of the trip). Drivers may also divert their path from the primary purpose destination to another destination. These diverted trips are called "pass-by" trips if the secondary trip destination is along the arterial network the driver intended to traverse on his/her primary trip; alternatively, a "diverted trip" is one in which the driver diverts from his/her primary destination path to an alternative path. The fee calculation methodology used in this study is based on the primary trip data for each land use, as provided in *Trip Generation.*

Exhibit 4 Estimate of Street Facility Demand per Unit of Land Use

Land Use Category		Unit	% Primary Trips	Average Weekday Trip Rate per Unit	Average Trip Length	% Travel Demand on Tucson Arterial	Vehicle Miles of Travel Demand per Unit	Representative ITE Category	References	Service Units (SU)
Residential										
	Single Family Residential	Dwelling Unit	100%	9.52	9.5	60%	54	210		1.0
	Multi-Family	Dwelling Unit	100%	6.65	9.5	60%	38	220		0.7
	Hotel/Motel	Rooms	100%	5.63	9.7	60%	33	320		0.6
	Congregate Care	Dwelling Unit	100%	2.02	9.7	60%	12	253		0.2
	Single Family Residential (age restricted)	Dwelling Unit	100%	3.68	9.5	60%	21	251		0.4
	Multi-Family (age restricted)	Dwelling Unit	100%	3.44	9.5	70%	23	252		0.4
	Student Housing	Bedroom	100%	2.5	3.0	70%	5		1	0.1
Retail and Services										
	< 3,000 sf	1000 sf	10%	232	6.2	60%	86	820		1.6
	3,001 to 15,000 sf	1000 sf	32%	132	6.2	60%	157	820		2.9
	15,001 to 75,000 sf	1000 sf	58%	75	6.2	60%	162	820		3.0
	75,000 to 200,000 sf	1000 sf	68%	53	6.2	60%	134	820		2.5
	>200,000 sf	1000 sf	76%	39	6.2	60%	110	820		2.0
High Traffic Retail		1000 sf	16%	496.12	6.2	60%	299	853, 934		5.5
Industrial										
	All (except Mini-Storage)	1000 sf	70%	4.01	9.7	60%	16	110, 120, 150		0.3
	Mini Storage	1000 sf	70%	1.50	9.7	70%	7	151	2	0.1
General Office		1000 sf	75%	11.03	13.4	60%	66	710		1.2
Medical Clinic		1000 sf	60%	31.45	10.3	60%	117	630		2.2
Institutional		1000 sf	50%	14.16	9.3	60%	39	520, 530		0.7
Recreation		1000 sf	75%	1.99	15.8	60%	14	435		0.3

References:

1 Independent student housing fee studies, City of Tucson, 2011- 2013
2 Independent mini-storage fee studies, City of Tucson, 2013

Travel Demand on the Arterial System

Only trips on the arterial system are considered in the derivation of the development fee amounts. For most of the categories, 60% of the travel is assumed to occur on City arterials, and the rest is either on local and collector streets, on the freeway, or extraterritorial (i.e., outside the City of Tucson limits). Exceptions include student housing, senior multi-family housing, and mini-storage uses, which will have a higher estimated proportion (70%) of travel within the City.

Vehicle-Miles of Travel (VMT) Per Service Unit

This is the product of the four factors applied in Exhibit 4 and discussed above. The VMT demand per service unit is calculated as follows, using the single-family residential unit as an example: *Multiply the per cent primary trips (1.0 or 100%) times the average weekday trip rate (9.52 per unit) times the average trip length (9.5 miles) times the percent travel made on Tucson arterials (60% or .6), which yields 54.3 which is rounded to 54.* The number 54 is assigned an SU value of 1.0. The vehicle miles of travel for all other land use categories are compared to this value to establish an equivalency in SUs. For example, the VMT per 1000 sf of "Hotel/Motel" is 33. The SU for Hotel/Motel is therefore calculated as 33/54, or 0.6.

■ PROJECTED SERVICE UNITS FOR NEW DEVELOPMENT

ARS§ 9-463.05(E)(5) requires *"The total number of projected service units necessitated by and attributable to new development in the service area based on the approved land use assumptions and calculated pursuant to generally accepted engineering and planning criteria."* Further, ARS 9-463.05(E)(6) requires *"The projected demand for necessary public services or facility expansions required by new service units for a period not to exceed ten years."*

Residential and non-residential growth projections are provided in the Land Use Assumptions report, Exhibits 6 and 11, respectively. These show an additional 30,555 housing units and 38 million square feet of nonresidential floor area by 2024, which is equivalent to a total of 56,924 new service units, as shown in Exhibit 5. The number of service units was obtained by multiplying the amount of new development by the weighting factor, for each land use category. For example, in the Central service area, for office use, multiply 3,188 (1000s square feet) times 1.2 to get 3,826 new service units of office use in the Central area.

Exhibit 5 Estimate of Service Units Through 2024

		SFR	Condo/TH	MFR/APT	Retail	Office	Industrial	*Totals*
Land Development by Service Area (Dwelling Units or 1000s of sf)	Central	2,605	998	3,175	1,380	3,188	571	*11,917*
	West	2,188	645	1,682	553	1,384	10,644	*17,096*
	East	4,012	845	1,030	782	2,433	379	*9,481*
	Southeast	9,378	1,382	2,317	1,770	5,212	8,164	*28,223*
	Southlands	190	58	51	123	663	831	*1,916*
	Totals	*18,373*	*3,928*	*8,255*	*4,608*	*12,880*	*20,589*	*68,633*

	SFR	Condo/TH	MFR/APT	Retail	Office	Industrial
Service Unit Weight Factors , All Areas	1.00	0.70	0.60	2.00	1.20	0.30

		SFR	Condo/TH	MFR/APT	Retail	Office	Industrial	*Totals*
Service Units by Service Area	Central	2,605	699	1,905	2,760	3,826	171	*11,966*
	West	2,188	452	1,009	1,106	1,661	3,193	*9,609*
	East	4,012	592	618	1,564	2,920	114	*9,820*
	Southeast	9,378	967	1,390	3,540	6,254	2,449	*23,978*
	Southlands	190	41	31	246	796	249	*1,553*
	Totals	*18,373*	*2,751*	*4,953*	*9,216*	*15,456*	*6,177*	*56,926*

The current fee schedule for streets (prior to this update) includes a 23% reduction for the Central service area. The 2007 fee studies justified this reduction because "78% of Central Core residents take private motor vehicles to work"[3]. No reductions are currently applied to the other service areas. For this update, we recommend that all service areas be assessed 100% of the fees, because the needs in the dense Central service area are not necessarily less, they are different. For example, the Central city area has an estimated walk score of 70 and a bike score of 85, compared to an overall average of 39 and 64 respectively for the entire City.[4] Therefore, it is appropriate to expand capacity through effective strategies that remove impediments to vehicular travel (bus pullouts, intersection improvements) and support alternative means of travel (bus pullouts and pedestrian capacity expansion).

Recent research documented in the 2010 *Highway Capacity Manual* includes procedures for assessing the capacities of alternate mode facilities, including pedestrian, bicycle and transit facilities. The Central service area includes many alternate modes facilities, such as bus stops, bus pullouts, sidewalks and bicycle lanes. More of these projects are planned for the area because traditional road widening is infeasible. As indicated earlier, one-half of the costs of these alternate mode capacity improvement projects have been applied to new development. These facilities are included in the proposed projects list used to calculate the development fees for each of the service areas. Based on the above, it is recommended that all benefit areas be assessed 100% of the proposed fees.

■ REVENUE CONSIDERATIONS

ARS §9-463.05(E)(7) requires *"A forecast of revenues generated by new service units other than development fees, which shall include estimated state-shared revenue, highway users revenue, federal revenue, ad valorem property taxes, construction contracting or similar excise taxes and the capital recovery portion of utility fees attributable to development based on the approved land use assumptions, and a plan to include these contributions in determining the extent of the burden imposed by the development as required in subsection B, paragraph 12 of this section."*

The equitable imposition of a streets development fee requires that credits be considered as well as costs. This is because streets facilities are typically funded by multiple sources. To the extent that new development contributes to the various funding sources for new infrastructure, credit must be assigned to avoid over-charging, as new development already contributes its fair share of infrastructure costs through development fees. Exhibit 6 shows existing continuing revenue sources, most of which are not creditable against the streets development fee because they are either not used for capacity expansion, are intermittent and unreliable, or are paid for by others. Similarly, the cost of correcting existing deficiencies cannot be imposed on new development. The City typically mitigates existing deficiencies through use of maintenance bonds, regional funds, and federal grants, all of which are intermittent and unreliable.

[3] Duncan and Associates, Tucson Road and Park Impact Fee Study, June 15, 2004, page 7.
[4] See http://www.walkscore.com/AZ/Tucson

Credit for Other Funding Sources Collected by the City

The City has one continuous revenue source that is creditable as an offset against development fees, the state-shared Highway User Revenue Fund (HURF)[5]. The HURF is dedicated almost exclusively to road repair, with little left for capacity expansion. Tucson received $401,037,621 from fiscal year (FY) 2006 through FY 2013. Of that amount, the City applied an average 3.46% per year to capital and/or capacity projects, as shown in Exhibit 7. The trend is downward, meaning that over time a smaller portion has been allocated to capital projects and a larger portion to maintenance.

For the portion used for capital projects, the credit calculation assumes a 20-year design life, an FY 2015 HURF forecast of $80.28/per capita[6] , and the 3.46% percentage toward capital projects. For a detached single family residence with an average of 2.8 persons, the credited amount is $156, for a condo/attached unit the amount is $106, and for multi-family/apartment/mobile home housing the amount is $94. [7] Exhibit 8 is a summary of HURF credits applied to residential development. The cost of capacity calculation is shown in Exhibit 9, and discussed below. The net fees per service area and land use type are provided in Exhibit 10.

Note that Pima County Bonds, which partially fund some projects within City limits, are paid for with revenues collected from the unincorporated population. [8] These bonds are not being retired using City funds or City HURF, therefore no credit can be provided. The County has several General Obligation bond programs authorized in 1997, 2004, and 2006, none of which include roadway projects. [9]

Similarly, we considered the creditability of the City's certificates of participation (COPs) and prior general obligation (GO) bonds for street purposes. These financing sources rely on the general fund for debt service, but since they are not used specifically for capacity projects, credit is not appropriate.

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[5] Information about the HURF, its collection and distribution is available at https://www.azdot.gov/about/FinancialManagementServices/transportation-funding

[6] Based on projected HURF revenues of $43,121,000 and a population of 537,129.

[7] As an example calculation for a single family residence, the credit is 2.8 persons/home x $80.28 per person x 20 years x 3.46% = $155.55, which is rounded to $156.

[8] For an explanation of why County funds are being spent within the City, see the first footnote in Arizona Auditor General's report at http://www.azauditor.gov/Reports/Counties/Pima/Financial_Audits/County-Wide/Special_Review_1997_Transportation_Bond_Improvement_Plan/Pima_County_1997_Transportation_Bond_Improvement_Plan_Special%20Review.pdf

[9] See http://www.azauditor.gov/Reports/Counties/Pima/Financial_Audits/County-Wide/Specials/Pima_Cty_Gen_Obl_Bd_Programs_Jan_2013.pdf

Exhibit 6 Continuing Revenue Sources

Revenue Source	Current Rate/Formula	Applicability	Used for Street Expansion or Capacity
Municipal Property Tax	$1.43 per $100 net assessed valuation[10]	All Real Property	No
Sales Tax (Transaction Privilege Tax)	2%[11]	Commercial Development	No
Construction Sales Tax (CST)	Tucson does not currently assess a CST.	All Development	No
Tucson HURF	FY 2013 budget amounts/FY 2013 population = state shared revenue per capita	All Road Users and Vehicle Owners	Yes
State Grant Revenues	Undeterminable and Intermittent	Not Applicable	Yes
Federal Grant Revenues	Undeterminable and Intermittent	Not Applicable	Yes
City of Tucson Street Bonds	Include in Municipal property tax rate, above	All Real Property	Maintenance only; not capacity
Pima County 1997 HURF Revenue Bonds[12]	Similar to HURF above; project constrained	Unincorporated Pima County revenues shared with Tucson	Yes, but not using City funding

[10] See http://www.pima.gov/Taxes/A_Tax.html. Includes primary, secondary, and involuntary tort judgments (self-insurance).

[11] Base rate; other rates apply. See http://www.modelcitytaxcode.org/pdf/CombinedRateSheet.pdf

[12] See - http://webcms.pima.gov/UserFiles/Servers/Server_6/File/Government/Administration/Bonds/Bond%20Projects/CIP.BondUpdate3.13.PROOF7.pdf

Exhibit 7 Percent HURF Spent on Capital Projects

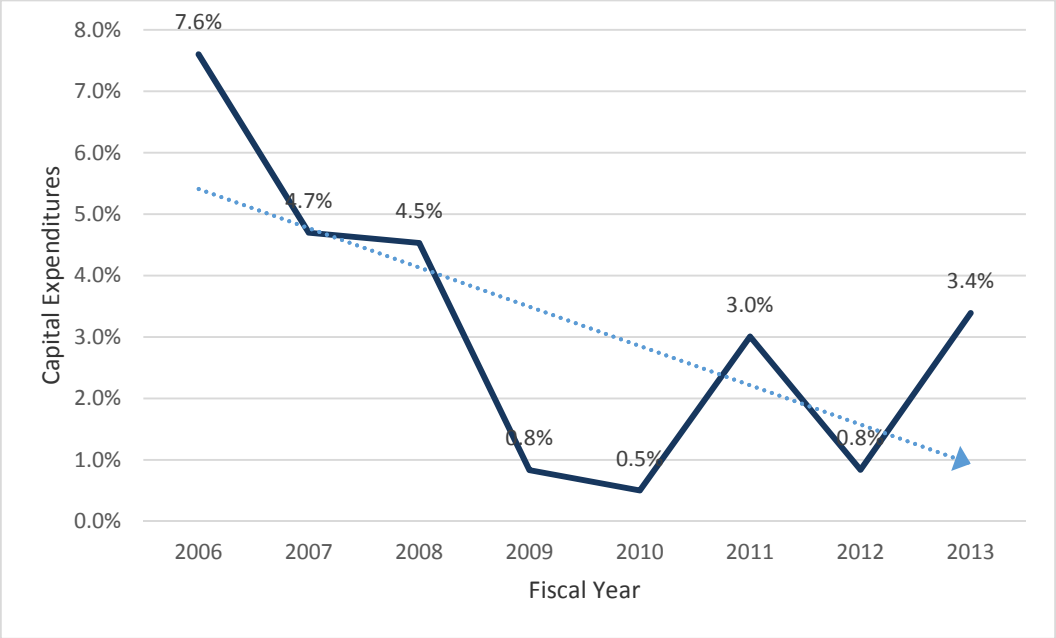

Exhibit 8 Summary of HURF Credit

Revenue Source	Creditable Amount ($156 per Residential SU)	Applicability
Tucson Allocation of State Shared Revenues (HURF)	$156 for a typical Service Unit (i.e., SFR) $106 per condo/attached unit $94 per multi-family/apartment/Mobile Home	All Residential Development

Exhibit 9 Cost of Capacity and Fee Calculation

Cost per Lane Mile of capacity	$1,400,000
Capacity per lane mile	8000 vehicles per day
Cost per VMT	$175
Example, single-family residential use	
Trip Rate	9.52 trips per day
Trip Length	9.5 miles
% Travel on Arterial System	60%
Fee per SU	$9,496
Trips with residential origin/destination	65%
Adjust Fee per SU, residential	$6,173
Less HURF Credit per residential SU	$156
Net Fee per SU (Residential, rounded)	$6,017
Example, retail use	
Service Unit Weight Factor, retail	2.0
Fee per retail, prior to adjustments	$18,992
Trips with nonresidential origin/ destination	35%
Net Fee (Retail, rounded)	$6647

Using a single-family residence as an example, the net fee per service unit is calculated as follows: the capital cost per lane mile ($1,400,000) is divided by the capacity per lane mile in vehicles per day (8,000) to get a cost of $175 per daily vehicle mile of arterial capacity. This number is then multiplied by the percent of primary trips per day (100% or 1), then multiplied by the trip generation rate (9.52 trips per day), then multiplied by the average trip length (9.5 miles), and then multiplied by the percent travel on the arterial/major collector system (60% or .60). The fee per SU obtained is $9,496.

The next-to-final calculation allocates trips to the residential and non-residential sectors, which is split 65%/35%. Without such allocation, there would be a double accounting of travel demand and an over-collection of fees. Therefore, the net adjusted fee for residential development is $9,496 x 0.65 = $6,173. Finally, the HURF credit of $156 is then subtracted to get the net fee per single family residence, which is rounded to $6,017.

The fee for non-residential uses is calculated as follows, using the retail use as an example. The net fee per SU (i.e., for one single-family residential unit) is $9,496. This is multiplied by the service unit weight factor for retail, which is 2.0 (see Exhibit 5), which yields $18,992. This number is then multiplied by the percentage of trips allocated to non-residential uses, which is 35% or 0.35, to yield $6,647 (rounded). Exhibit 10 shows the estimated fees and credits for the various land use categories. Exhibit 10 also shows the City's current fees, for comparison purposes. Exhibit 11 shows the expected revenues over the ten-year period. The expected revenues are obtained by multiplying the development fees times the number of units in each service area. The total estimated revenue is approximately $269 million over the ten-year period, which is almost identical to the estimated $298.4 million in capacity needs identified on page 6 of this report.

Exhibit 10 Estimated Fees and Credits by Land Use Category

	SFR	Condo/TH	MFR/APT	Retail	Office	Industrial
Estimated Fee, W/O Deduction for Credits, per Service Unit	$6,173	$4,321	$3,704	$6,647	$3,988	$997
HURF Credit	$156	$106	$94	$0	$0	$0
Estimated Fee, with Deduction for Credits, per Service Unit	$6,017	$4,215	$3,610	$6,647	$3,988	$997
Estimated Fee, with Deduction for Credits, per Service Unit, Rounded	$6,017	$4,215	$3,610	$6,647	$3,988	$997
Current Fee, per Service Unit	$5,160	$3,870	$2,749	$4,282	$5,087	$2,196

Exhibit 11 Expected Revenue from New Development (10-Year Total)

	SFR	Condo/TH	MFR/APT	Retail	Office	Industrial	Total
Central	$ 15,674,285	$ 2,946,285	$ 6,877,050	$ 18,345,720	$ 15,258,088	$ 170,487	$ 59,271,915
West	$ 13,165,196	$ 1,905,180	$ 3,642,490	$ 7,351,582	$ 6,624,068	$ 3,183,421	$ 35,871,937
East	$ 24,140,204	$ 2,495,280	$ 2,230,980	$ 10,395,908	$ 11,644,960	$ 113,658	$ 51,020,990
Southeast	$ 56,427,426	$ 4,075,905	$ 5,017,900	$ 23,530,380	$ 24,940,952	$ 2,441,653	$ 116,434,216
Southlands	$ 1,143,230	$ 172,815	$ 111,910	$ 1,635,162	$ 3,174,448	$ 248,253	$ 6,485,818
Total	$ 110,550,341	$ 11,595,465	$ 17,880,330	$ 61,258,752	$ 61,642,516	$ 6,157,472	$ 269,084,876

Appendices

A - List of Preparers

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B - Panel on Street Infrastructure

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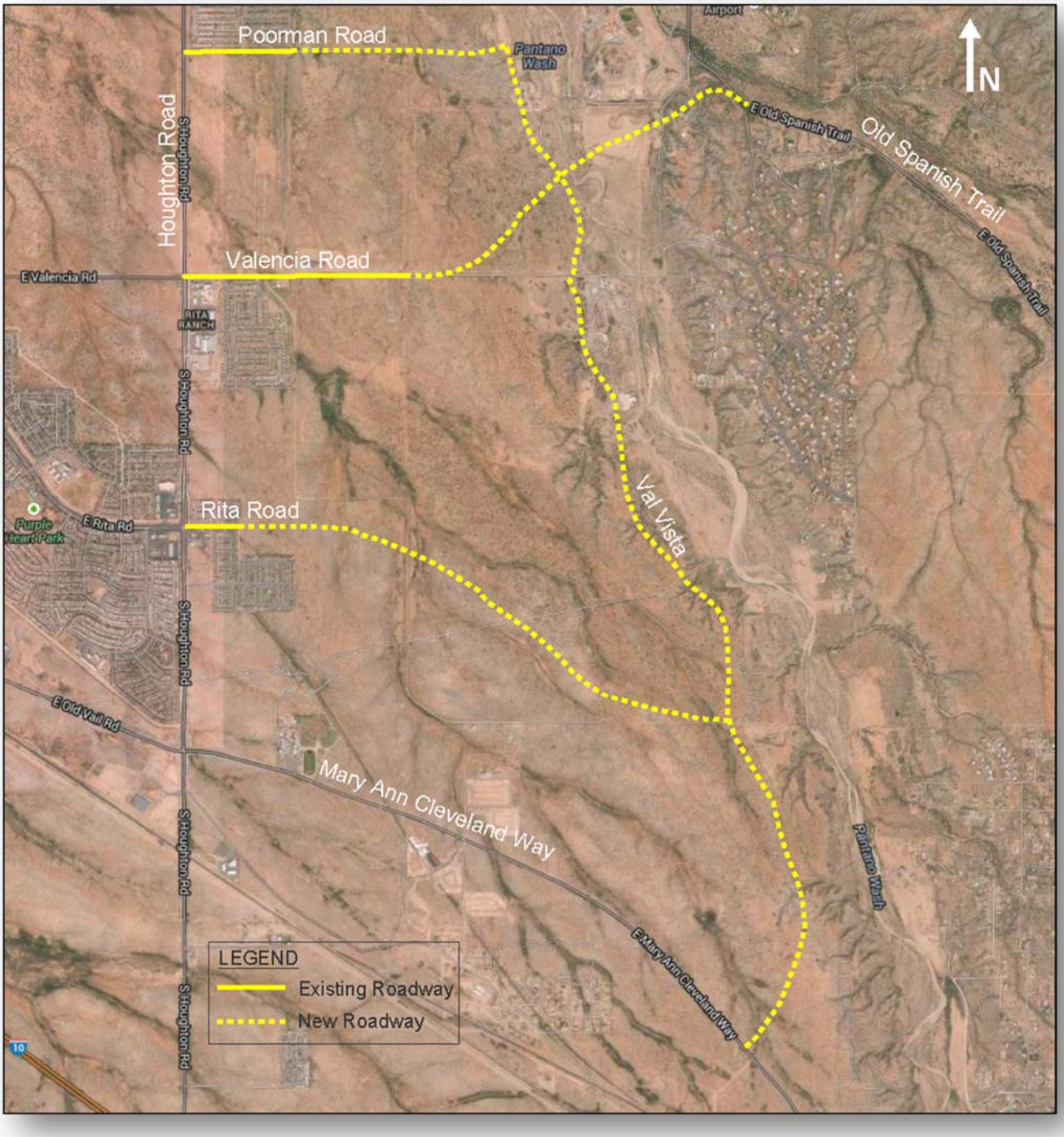
Andrew McGovern, P.E., Administrator, TDOT
Roy Cuaron, Finance Manager, TDOT
Lynne Birkinbine, Manager, Office of Integrated Planning
Joanne Hershenhorn, Project Coordinator, Office of Integrated Planning

C - Proposed Bus Pullout Locations (Preliminary, 41 Pullouts)

		Direction of Travel			
		Northbound	*Southbound*	*Eastbound*	*Westbound*
CENTRAL SERVICE AREA	Stone at Glenn	X	X		
	Stone at Ft. Lowell	X	X		
	Stone at Prince	X	X		
	Stone at Roger	X	X		
	Campbell at Glenn		X		X
	Prince at First Ave			X	X
	6th Street at Tucson Blvd			X	X
	Euclid at Broadway	X			
	Euclid at Speedway	X	X		
	Speedway at Grande			X	X
	Pima at Country Club			X	X
EAST SERVICE AREA	5th Street at Craycroft				X
	29th at Swan			X	X
	5th Street at Swan	X	X	X	X
	5th Street at Wilmot	X			X
	Pima at Craycroft			X	X
	Pima at Swan			X	X
	Pima at Alvernon			X	X
	Grant at Beverly			X	X
	Golf Links at Pantano Road			X	X
	Tanque Verde at Sabino Canyon			X	

D - New Arterial Alignments (Southeast Service Area)