

Public Works Development Fee Study

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City of Surprise, Arizona

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Prepared by:

TischlerBise
Fiscal, Economic & Planning Consultants

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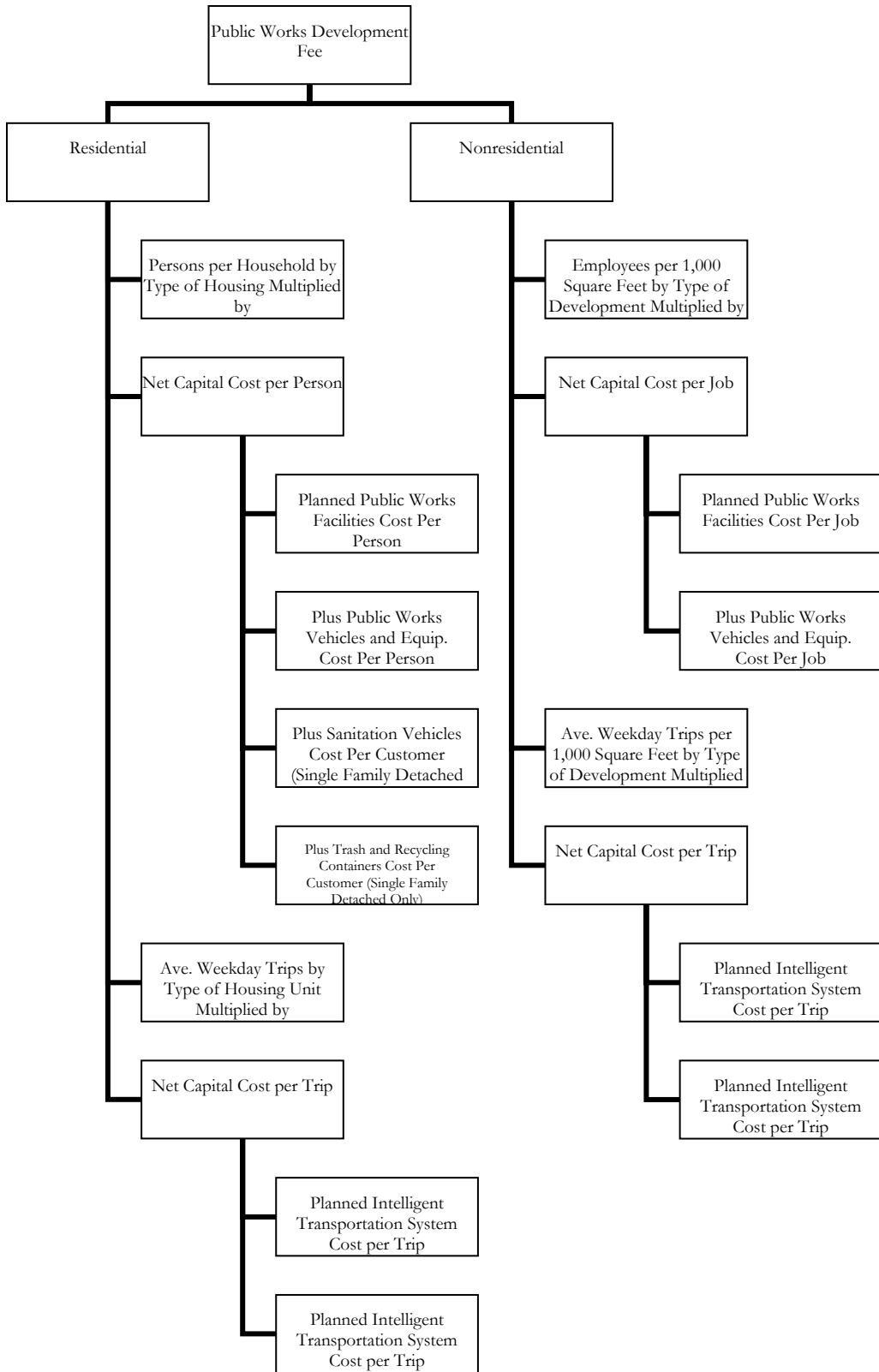
Public Works

METHODOLOGY

The Public Works Development Fee utilizes the plan-based methodology for facilities and the Intelligent Transportation System and the incremental expansion methodology for vehicles. The capital costs associated with Sanitation are applied to single family detached units only as the City provides this service to only these units. An additional \$110.00 is added to the single family detached fee for two 95 gallon trash can per City code.

As shown in Figure 1, the costs for Public Works facilities and vehicles are allocated on a per capita basis for residential development and on a per employee basis for nonresidential development. For transportation related vehicles and the planned Intelligent Transportation System, costs are allocated on a per trip basis since this is a better demand indicator for these types of assets.

Figure 1: Public Works Development Fee Methodology Chart



PLANNED PUBLIC WORKS FACILITIES

Figure 2 lists the City’s planned Public Works facilities from the CIP. The projects listed at the top of Figure 83 are the result of new residential and nonresidential development only and will provide capacity for the next ten years. The net increase in population and jobs over the next ten years is used to calculate the cost per person and job for these projects. The development fees will be used to fund these projects. The projects shown at the bottom of Figure 2 are the result of both new and existing residential and nonresidential development. Thus the total number of persons and jobs in FY2011 (which includes both new and existing development) is used to calculate the cost per person and job. New growth will pay for its share of these projects via the Public Works Development Fee while existing growth’s share will have to be funded from non-development fee sources.

The planned projects listed under the marginal approach will cost \$127.52 per person and job. This is calculated by dividing the total cost of \$13,800,000 by the projected net increase of 108,219 persons and jobs over the next ten years ($\$13,800,000 / 108,219 \text{ persons} = \$127.52 \text{ per person and job}$). The planned projects listed under the average approach will cost \$27.92 per person and job. This is calculated by dividing the total cost of \$5,111,000 by the projected 183,043 persons and jobs in FY2011 ($\$5,111,000 / 183,043 \text{ persons and jobs} = \$27.92 \text{ per person and job}$).

The total cost per person for the planned Public Works facilities is \$155.44 ($\$127.52 + \$27.92 = \155.44).

Figure 2: Planned Public Works Facilities

MARGINAL APPROACH

<i>Project</i>	<i>FY2007</i>	<i>FY2008</i>	<i>FY2009</i>	<i>FY2010</i>	<i>FY2011</i>	<i>TOTAL</i>
New Public Works Yard (North)	\$2,000,000	\$600,000	\$8,000,000	\$0	\$0	\$10,600,000
New Public Works Yard (West)	\$0	\$0	\$0	\$0	\$3,200,000	\$3,200,000
TOTAL	\$2,000,000	\$600,000	\$8,000,000	\$0	\$3,200,000	\$13,800,000

* City of Surprise, *Capital Improvements Plan FY2007*.

Net Increase in Population and Jobs FY2007-FY2017 108,219

Cost Per Person and Job \$127.52

AVERAGE APPROACH

<i>Project</i>	<i>FY2007</i>	<i>FY2008</i>	<i>FY2009</i>	<i>FY2010</i>	<i>FY2011</i>	<i>TOTAL</i>
Field Operations Center	\$0	\$0	\$0	\$50,000	\$100,000	\$150,000
Westgate Operations/ Administration Building	\$0	\$0	\$0	\$380,000	\$3,860,000	\$4,240,000
Sign Fabrication Shop	\$721,000	\$0	\$0	\$0	\$0	\$721,000
TOTAL	\$721,000	\$0	\$0	\$430,000	\$3,960,000	\$5,111,000

* City of Surprise, *Capital Improvements Plan FY2007*.

Projected Population and Jobs in FY2011 183,043

Cost Per Person and Job \$27.92

TOTAL COST PER PERSON AND JOB FOR PLANNED PUBLIC WORKS FACILITIES \$155.44

PUBLIC WORKS VEHICLES AND EQUIPMENT

Figure 3 lists the City’s current inventory of Public Works vehicles. The 32 vehicles have a total replacement value of \$783,500. To calculate the cost per person and job, the total cost is divided by the current estimate of population and jobs: $\$783,500 / 133,065 \text{ persons and jobs} = \$5.89 \text{ per person and job}$.

Figure 3: Public Works Vehicles and Equipment LOS Standards

<i>Vehicle</i>	<i># of Units*</i>	<i>Cost/ Unit *</i>	<i>Total</i>
Engineering			
Truck	4	\$17,000	\$68,000
4X4 Truck	2	\$22,000	\$44,000
Facilities Management Operations			
Truck	3	\$25,000	\$75,000
Van	2	\$26,000	\$52,000
Golf Cart	1	\$8,000	\$8,000
Scissors Lift	1	\$25,000	\$25,000
Trailer	2	\$3,500	\$7,000
Single Lift	1	\$2,500	\$2,500
Facilities Management Project Management			
Truck	1	\$22,000	\$22,000
Vehicle Maintenance			
Van	3	\$28,000	\$84,000
Large Sedan	5	\$24,000	\$120,000
Bus	1	\$120,000	\$120,000
Truck	6	\$26,000	\$156,000
TOTAL	32		\$783,500

* Surprise Fleet Management Division.

Current Population and Jobs	133,065
Cost per Person/Job	\$5.89
LOS Vehicles per 1,000 Persons/Jobs	0.24

SANITATION VEHICLES AND EQUIPMENT

Figure 4 lists the City’s current inventory of Sanitation vehicles. The 27 vehicles have a total replacement value of \$4,106,000. The City provides curbside garbage pickup for only residential development in single family detached housing units. To calculate the cost per person, the total cost is divided the current number of residents served: \$4,106,000/27,500 persons served = \$149.31 per person. This cost will be applied to single family detached housing units only.

Figure 4: Sanitation Vehicles & Equipment LOS Standards

<i>Vehicle</i>	<i># of Units*</i>	<i>Cost/ Unit *</i>	<i>Total</i>
Garbage Truck	21	\$180,000	\$3,780,000
1/2 Ton Pickup Truck	2	\$22,000	\$44,000
Swinger Tractor	1	\$40,000	\$40,000
Trailer	1	\$15,000	\$15,000
Rear Loader	1	\$180,000	\$180,000
Panel Truck	1	\$47,000	\$47,000
TOTAL	27		\$4,106,000

* Surprise Fleet Management Division.

Current Number of Residents Served 27,500

Cost per Person \$149.31

LOS Sanitation Vehicles per 1,000 Customers 0.98

TRASH CAN COST PER SINGLE FAMILY DETACHED UNIT

Per City Code 8.04.050 which states: “with respect to new residential construction receiving city collection service the city shall, at the time of collecting the residential development fee, assign a portion of such fee to the cost of providing the refuse collection receptacle upon completion of such construction”; the development fees for single family detached housing units also include a \$110.00 per unit cost for two 95 gallon trash cans (one for refuse, one for recycling).

PLANNED INTELLIGENT TRANSPORTATION SYSTEM

Figure 5 lists the City’s planned Intelligent Transportation System projects from the CIP. The projects listed in Figure 86 are the result of both new and existing residential and nonresidential development and are estimated to provide twenty years of capacity. Thus the total number of citywide vehicle trips in FY2027 (which includes both new and existing development) is used to calculate the cost per trip. New growth will pay for its share of these projects via the Public Works Development Fee while existing growth’s share will have to be funded from non-development fee sources.

The planned projects listed will cost \$11.87 per trip. This is calculated by dividing the total cost of \$12,238,000 by the projected 1,031,102 trips in FY2027 (\$12,238,000/1,031,102 trips = \$11.87 per trip).

Figure 5: Planned Intelligent Transportation System

AVERAGE APPROACH

<i>Project</i>	<i>FY2007</i>	<i>FY2008</i>	<i>FY2009</i>	<i>FY2010</i>	<i>FY2011</i>	<i>TOTAL</i>
Fiber Optics - Citywide	\$418,000	\$250,000	\$1,144,000	\$1,144,000	\$2,002,000	\$4,958,000
Master Computer System	\$400,000	\$0	\$0	\$0	\$0	\$400,000
Signal Upgrade and Re-wire	\$280,000	\$150,000	\$0	\$0	\$0	\$430,000
Upgrade Detectors to Video Detection	\$0	\$200,000	\$0	\$0	\$0	\$200,000
Traffic Signals	\$1,250,000	\$1,250,000	\$1,250,000	\$1,250,000	\$1,250,000	\$6,250,000
TOTAL	\$2,348,000	\$1,850,000	\$2,394,000	\$2,394,000	\$3,252,000	\$12,238,000

* City of Surprise, Capital Improvements Plan FY2007.

Projected Vehicle Trips FY2027	1,031,102
Cost Per Trip	\$11.87

SUPPORT VEHICLES & EQUIPMENT

Figure 6 lists the City’s current inventory of support vehicles and equipment for transportation. The 54 vehicles and pieces of equipment have a total replacement value of \$3,546,000. To calculate the cost per trip, the total cost is divided the current number vehicles trips in the City: $\$3,546,000 / 375,475 \text{ trips} = \9.44 per trip .

Figure 6: Support Vehicles & Equipment LOS Standards

<i>Vehicle/Equipment</i>	<i># of Units*</i>	<i>Cost/Unit *</i>	<i>Total</i>
Streets			
Large Tractor	2	\$230,000	\$460,000
Small Tractor	2	\$35,000	\$70,000
Dump Truck	6	\$120,000	\$720,000
Street Sweeper	5	\$145,000	\$725,000
Truck	6	\$20,000	\$120,000
Crew Cab Truck	5	\$25,000	\$125,000
Semi Truck	1	\$150,000	\$150,000
Loader	1	\$165,000	\$165,000
Backhoe	2	\$95,000	\$190,000
Trailer	3	\$15,000	\$45,000
Water Truck	2	\$90,000	\$180,000
Trencher	1	\$12,000	\$12,000
Broom	1	\$45,000	\$45,000
Cement Mixer	1	\$5,000	\$5,000
Roller	1	\$75,000	\$75,000
Fork Lift	1	\$20,000	\$20,000
Crack Sealing Machine	1	\$45,000	\$45,000
Traffic Engineering			
Flatbed Truck	3	\$46,000	\$138,000
Large Sedan	2	\$24,000	\$48,000
Truck	8	\$26,000	\$208,000
TOTAL	54		\$3,546,000

* Surprise Fleet Management Division.

Current Vehicle Trips from Development in Surprise	375,475
Cost per Trip	\$9.44
LOS Street Support Vehilces/Equipment per 1,000 Trips	0.14

DEVELOPMENT FEE STUDY

The City should update its development fees every three years to ensure the methodologies, assumptions, and cost factors used in the calculations are still valid and accurate. As we do with many of our Arizona development fee clients, TischlerBise has included the cost of preparing the current Public Works Development Fee in the fee calculations in order to create a source of funding to conduct this regular update. This cost (\$4,700) is allocated to the projected increase in population and jobs over the next three years. This results in a development fee study cost per demand unit of \$0.14 per person and job (\$4,700/32,832 persons and jobs).

PUBLIC WORKS DEVELOPMENT FEE

Figure 7 provides a summary of the costs used to calculate the Public Works Development Fees. Future revenue credits have been considered to avoid potential double payment for capital facilities and no such credit is needed for this fee category. Developers may be eligible for site-specific credits or reimbursements only if they provide system improvements that have been included in the Public Works Development Fee calculation schedule. Specific policies and procedures related to site-specific credits for system improvements are addressed in the ordinance that establishes the City’s fees. Project improvements normally required as part of the development approval process are not eligible for credits against development fees.

Figure 7: Public Works Development Fee Cost Summary

	<i>Persons Per Household</i>	<i>Jobs</i>	<i>Trips</i>	
<i>Residential</i>				
Single Family Detached	2.53		9.57	
Single Family Attached; Multi-family, 1-9 Units In Structure		2.36	6.72	
Multi-family, 10 Or More Units in Structure		1.87	6.72	
All Other Housing Types		2.24	4.99	
<i>Nonresidential</i>				
Com / Shop Ctr 25,000 SF or less		3.33	110.32	
Com / Shop Ctr 25,001-50,000 SF		2.86	86.56	
Com / Shop Ctr 50,001-100,000 SF		2.50	67.91	
Com / Shop Ctr 100,001-200,000 SF		2.22	53.28	
Com / Shop Ctr over 200,000 SF		2.00	41.80	
Office / Inst 10,000 SF or less		4.48	22.66	
Office / Inst 10,001-25,000 SF		4.15	18.35	
Office / Inst 25,001-50,000 SF		3.91	15.65	
Office / Inst 50,001-100,000 SF		3.69	13.34	
Office / Inst over 100,000 SF		3.35	11.37	
Business Park		3.16	12.76	
Light Industrial		2.31	6.97	
Warehousing		1.28	4.96	
Manufacturing		1.79	3.82	
Hotel (per room)		0.44	5.63	
<i>Trip Adjustment Factors</i>				
Residential			50%	
Com / Shop Ctr 25,000 SF or less			28%	
Com / Shop Ctr 25,001-50,000 SF			31%	
Com / Shop Ctr 50,001-100,000 SF			33%	
Com / Shop Ctr 100,001-200,000 SF			36%	
Com / Shop Ctr over 200,000 SF			39%	
All Other Nonresidential			50%	
<i>Cost Summary</i>	<u>Per Person</u>	<u>Per Person</u>	<u>Per Employee</u>	<u>Per Trip</u>
Planned Public Works Buildings (Average Approach)	\$27.92	\$27.92	\$19.00	\$0.00
Planned Public Works Buildings (Marginal Approach)	\$127.52	\$127.52	\$127.52	\$0.00
Public Works Vehicles & Equipment	\$5.89	\$5.89	\$5.89	\$0.00
Sanitation Vehicles & Equipment	\$149.31	\$0.00	\$0.00	\$0.00
Street Vehicles & Equipment	\$0.00	\$0.00	\$0.00	\$9.44
Planned Intelligent Transportation System (Average Approach)	\$0.00	\$0.00	\$0.00	\$11.87
Development Fee Study	\$0.14	\$0.14	\$0.14	\$0.00
Total Capital Cost per Person/Job	\$310.78	\$161.47	\$152.55	\$21.31
Two 95 Gallon Trash Cans (per unit per City ordinance)	\$110.00	\$0.00	\$0.00	\$0.00

Figure 8 contains a schedule of Public Works Development Fees for Surprise. For single family detached housing units, the \$998 fee per unit is calculated by first multiplying the net capital cost per person by the persons per household ($\$310.78 \times 2.53 = \786). The trash and recycling container cost of \$110 per unit then added, which results in \$896 per unit ($\$786 + \$110 = \896). Transportation related assets are then added to the total by multiplying the trip generation rate by the corresponding trip adjustment factor by the net capital cost per trip ($9.57 \times .50 \times \$21.31 = \102). The \$102 is added to \$896 for the total \$998 per single

family detached Public Works Development Fee. Fees for other residential units are calculated using the same formula with the exception of not including the sanitation costs.

Nonresidential fees are calculated by multiplying the cost per job by the various employment densities for nonresidential land uses. Added to this is the cost for street related assets which are calculated by multiplying the trip generation rates by the corresponding trip adjustment factor by the net capital cost per trip.

Figure 8: Public Works Development Fee Schedule

<i>Development Fees</i>	
<u>Residential</u>	<u>Per Housing Unit</u>
Single Family Detached	\$998
Single Family Attached; Multi-family, 1-9 Units In Structure	\$452
Multi-family, 10 Or More Units in Structure	\$342
All Other Housing Types	\$414
<u>Nonresidential</u>	<u>Per 1,000 Sq Ft</u>
Commercial / Shopping Center 25,000 SF or less	\$1,165
Commercial / Shopping Center 25,001-50,000 SF	\$1,008
Commercial / Shopping Center 50,001-100,000 SF	\$859
Commercial / Shopping Center 100,001-200,000 SF	\$747
Commercial / Shopping Center over 200,000 SF	\$652
Office / Institutional 10,000 SF or less	\$924
Office / Institutional 10,001-25,000 SF	\$829
Office / Institutional 25,001-50,000 SF	\$763
Office / Institutional 50,001-100,000 SF	\$704
Office / Institutional over 100,000 SF	\$632
Business Park	\$618
Light Industrial	\$426
Warehousing	\$248
Manufacturing	\$314
Hotel (per room)	\$127