

# Infrastructure Improvements Plan and Development Fee Study

Prepared for:

City of Maricopa, Arizona



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## Executive Summary

The City of Maricopa has contracted with TischlerBise to calculate infrastructure improvements plans (IIP) and development fees for the following infrastructure categories:

- Library (City currently collects)
- Parks and Recreation (City currently collects)
- Police (City currently collects)
- Fire (New fee category)
- General Government (City currently collects)
- Transportation (City currently collects)

## DEVELOPMENT FEE REQUIREMENTS

### *U.S. Constitutional Requirements*

Like all land use regulations, development exactions, including development fees, are subject to the Fifth Amendment prohibition on taking of private property for public use without just compensation. Both state and federal courts have recognized the imposition of development fees on development as a legitimate form of land use regulation, provided the fees meet standards intended to protect against regulatory takings. To comply with the Fifth Amendment, development regulations must be shown to substantially advance a legitimate governmental interest. In the case of development fees, that interest is in the protection of public health, safety, and welfare by ensuring that development is not detrimental to the quality of essential public services.

There is little federal case law specifically dealing with development fees, although rulings on other types of exactions (e.g. land dedication requirements) are relevant. In one of the most important exaction cases, the U. S. Supreme Court found that a government agency imposing exactions on development must demonstrate an "essential nexus" between the exaction and the interest being protected (See *Nollan v. California Coastal Commission*, 1987). In a more recent case (*Dolan v. City of Tigard*, OR, 1994), the Court ruled that an exaction also must be "roughly proportional" to the burden created by development. However, the *Dolan* decision appeared to set a higher standard of review for mandatory dedications of land than for monetary exactions such as development fees.

These constitutional requirements of development fees are commonly referred to as "rational nexus" test. The rational nexus test has three elements:

Demand – a particular type of development demands a particular type of infrastructure.

Proportionality – the fees are proportionate to the demand created by development for infrastructure.

Benefit – The payer of the development fee must receive a benefit (i.e. the construction of infrastructure which accommodates their impact on a community's capital facilities and assets).

*State Requirements*

Many of these constitutional requirements are echoed in the state enabling legislation for municipalities to assess development fees. Development fees for municipalities in Arizona are authorized by Arizona Revised Statutes (A.R.S.) 9-463.05.

As of January 1, 2010, development fees for municipalities in Arizona must specifically meet the following requirements:

A. A municipality may assess development fees to offset costs to the municipality associated with providing necessary public services to a development, including the costs of infrastructure, improvements, real property, engineering and architectural services, financing, other capital costs and associated appurtenances, equipment, vehicles, furnishings and other personalty.

B. Development fees assessed by a municipality under this section are subject to the following requirements:

1. Development fees shall result in a beneficial use to the development.

2. Monies received from development fees assessed pursuant to this section shall be placed in a separate fund and accounted for separately and may only be used for the purposes authorized by this section. Monies received from a development fee identified in an infrastructure improvements plan adopted or amended pursuant to subsection D of this section shall be used to provide the same category of necessary public service for which the development fee was assessed for the benefit of the same area, as defined in the infrastructure improvements plan, within which the development fee was assessed. Interest earned on monies in the separate fund shall be credited to the fund.

3. The schedule for payment of fees shall be provided by the municipality. Based on the cost identified in the infrastructure improvements plan, the municipality shall provide a credit toward the payment of a development fee for the required or agreed to dedication of public sites, improvements and other necessary public services included in the infrastructure improvements plan and for which a development fee is assessed, to the extent the public sites, improvements and necessary public services are provided by the developer. The developer of residential dwelling units shall be required to pay development fees when construction permits for the dwelling units are issued, or at a later time if specified in a development agreement pursuant to section 9-500.05. If a development agreement provides for fees to be paid at a time later than the issuance of construction permits, the deferred fees shall be paid no later than fifteen days after the issuance of a certificate of occupancy. The development agreement shall provide for the value of any deferred fees to be supported by appropriate security, including a surety bond, letter of credit or cash bond.

4. The amount of any development fees assessed pursuant to this section must bear a reasonable relationship to the burden imposed on the municipality to provide additional necessary public services to the development. The municipality shall forecast the contribution to be made in the future in cash or by taxes, fees, assessments or other sources of revenue derived from the property owner towards the capital costs of the necessary public service covered by the development fee and shall include these contributions in determining the extent of the burden imposed by the development.

5. If development fees are assessed by a municipality, such fees shall be assessed in a nondiscriminatory manner.

6. In determining and assessing a development fee applying to land in a community facilities district established under title 48, chapter 4, article 6, the municipality shall take into account all public infrastructure provided by the district and capital costs paid by the district for necessary public services and shall not assess a portion of the development fee based on the infrastructure or costs.

C. A municipality shall give at least sixty days advance notice of intention to assess a new or modified development fee and shall release to the public a written report that identifies the methodology for calculating the amount of the development fee, explains the relationship between the development fee and the infrastructure improvements plan, includes documentation that supports the assessment of a new or modified development fee and identifies any index or indices to be used for automatic adjustment of the development fee pursuant to subsection G of this section and the timing of those adjustments. The municipality shall conduct a public hearing on the proposed new or modified development fee at any time after the expiration of the sixty day notice of intention to assess a new or modified development fee and at least thirty days prior to the scheduled date of adoption of the new or modified fee by the governing body. A development fee assessed pursuant to this section shall not be effective until seventy-five days after its formal adoption by the governing body of the municipality. Nothing in this subsection shall affect any development fee adopted prior to July 24, 1982.

D. Before the assessment of a new or modified development fee, the governing body of the municipality shall adopt or amend an infrastructure improvements plan. The municipality shall conduct a public hearing on the infrastructure improvements plan at least thirty days before the adoption or amendment of the plan. The municipality shall release the plan to the public, make available to the public the documents used to prepare the plan and provide public notice at least sixty days before the public hearing, subject to the following:

1. An infrastructure improvements plan may be adopted concurrently with the report required by subsection C of this section, and the municipality may provide for and schedule the notices and hearings required by this subsection together with the notices and hearings required by subsection C of this section.

2. A municipality may amend an infrastructure improvements plan without a public hearing if the amendment addresses only elements of necessary public services that are included in the existing infrastructure improvements plan. The municipality shall provide public notice of those amendments at least fourteen days in advance of their effective date.

E. For each necessary public service that is the subject of a development fee, the infrastructure improvements plan shall:

1. Estimate future necessary public services that will be required as a result of new development in the area, as defined in the infrastructure improvements plan, within which the development fee will be assessed and the basis for the estimate, including a comparison of the necessary public services provided to existing development and the necessary public services to be provided to new development.

2. Forecast the costs of infrastructure, improvements, real property, financing, other capital costs and associated appurtenances, equipment, vehicles, furnishings and other personalty that will be associated with meeting those future needs for necessary public services.

3. Forecast the revenue sources that will be available to fund the necessary public services and estimate the time required to finance and provide the necessary public services.

F. Except for adjustments pursuant to subsection G of this section, a municipality's development fee ordinance shall provide that a new development fee or an increased portion of a modified development fee shall not be assessed against a development for twenty-four months after the date of the municipality's final approval of the development if no material changes are made to the site plan or subdivision plat that was the subject of the final approval. The twenty-four month period shall not be extended by a renewal or amendment of the site plan or the final subdivision plat that was the subject of the final approval. The municipality shall issue, on request, a written statement of the development fee schedule applicable to the development.

G. A municipality may automatically adjust a development fee on an annual basis without a public hearing if the adjustment is based on a nationally recognized index applicable to the cost of the necessary public service that is the subject of the development fee and the adjustment mechanism is identified in the report required by subsection C of this section. The municipality shall provide public notice of those adjustments at least thirty days in advance of their effective date.

H. Each municipality that assesses development fees shall submit an annual report accounting for the collection and use of the fees. The annual report shall include the following:

1. The amount assessed by the municipality for each type of development fee.

2. The balance of each fund maintained for each type of development fee assessed as of the beginning and end of the fiscal year.
  3. The amount of interest or other earnings on the monies in each fund as of the end of the fiscal year.
  4. The amount of development fee monies used to repay:
    - (a) Bonds issued by the municipality to pay the cost of a capital improvement project that is the subject of a development fee assessment.
    - (b) Monies advanced by the municipality from funds other than the funds established for development fees in order to pay the cost of a capital improvement project that is the subject of a development fee assessment.
  5. The amount of development fee monies spent on each capital improvement project that is the subject of a development fee assessment and the physical location of each capital improvement project.
  6. The amount of development fee monies spent for each purpose other than a capital improvement project that is the subject of a development fee assessment.
- I. Within ninety days following the end of each fiscal year, each municipality shall submit a copy of the annual report to the city clerk. Copies shall be made available to the public on request. The annual report may contain financial information that has not been audited.
- J. A municipality that fails to file the report required by this section shall not collect development fees until the report is filed.
- K. Any action to collect a development fee shall be commenced within two years after the obligation to pay the fee accrues.
- L. For the purposes of this section:
1. "Final approval" means:
    - (a) For a nonresidential or multifamily development, the approval of a site plan or, if no site plan is submitted for the development, the approval of a final subdivision plat.
    - (b) For a single family residential development, the approval of a final subdivision plat.
  2. "Infrastructure improvements plan" means one or more written plans that individually or collectively identify each public service 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.

## **CALCULATION METHODOLOGIES**

TischlerBise evaluated several possible methodologies to determine the best measure of the demand created by new development for additional infrastructure capacity. This report documents the appropriate methodology and demand indicators by type of development for each IIP. The report also documents the relationship between the IIP and the development fees. Specific capital costs have been identified using local data and current dollars.

There are three basic methods used to calculate the various components of the City's IIP and development fees. The methodologies can be classified as looking at the past, present, and future capacities of infrastructure. In instances where infrastructure is built in advance of new development and will have excess capacity, the **buy-in methodology** is utilized. Under this methodology, new development is anticipated to repay for the excess capacity via the development fee. The **incremental expansion methodology** is used when a community plans to provide new development the same level-of-service (LOS) that is currently being provided to existing development. The third methodology is called the **plan-based methodology** which is based on existing, adopted plans. Under the plan-based methodology, there are two approaches considered. The *average approach* is used for planned projects that are the result of *both new and existing development*. The planned costs are allocated to both new and existing development which ensures that new growth only pays its share of the costs. The *marginal approach* is used for planned projects that are the result of *only new development*. The planned costs are allocated to the net increase in new development.

## **IIP FORMULATION**

As discussed above, Arizona state law requires the IIP to illustrate three items:

1. Estimate future necessary public services that will be required as a result of new development and basis for the estimate including a comparison of the necessary public services provided to existing development and new development.
2. Forecast the costs of the infrastructure, improvements, real property, financing, other capital costs and associated appurtenances, equipment, vehicles, furnishings and other personalty that will be associated with meeting those future needs for necessary public services and estimate the time required to finance and provide the necessary public services.
3. Forecast the revenue sources that will be available to fund the necessary public services and estimate the time required to finance and provide the necessary public services.

These calculations are repeated for each component of the IIP. For example, a Fire IIP might include components for stations, land for stations, apparatus, and communications equipment. The IIP estimates and forecasts are required for each component.

The first step in formulating the IIP is the “LOS Analysis”. This calculation starts by evaluating the current LOS (units of infrastructure per person and/or job and/or vehicle trip) being provided to existing development. Next, the LOS to be provided to new development is calculated using most appropriate calculation methodology (buy-in, incremental expansion, or plan-based) which best measures the demands created by new development for additional infrastructure capacity. The planned LOS is then multiplied by the projected number of corresponding demand units (persons and/or jobs and/or vehicle trips) to calculate the total amount of infrastructure needed to serve new development.

The second step in formulating the IIP is the “Cost Analysis”. Different calculation methodologies utilize different cost estimates. The buy-in methodology utilizes the original cost of the infrastructure. The incremental expansion methodology utilizes the current cost to replicate facilities and assets. The cost per new demand unit (person and/or job and/or vehicle trip) is calculated by either dividing the total cost of the infrastructure by the number of demand units served or multiplying the planned LOS by the cost per unit of infrastructure. The total cost for infrastructure needed to serve new development is the product of the projected amount of new development times the cost per demand unit.

The final step in formulating the IIP involves forecasting available revenues to fund the necessary public services and the time required to finance the projects. This analysis will vary depending on the calculation methodology used, timing of development fee cash flows, and financing alternatives used by a community in the past and/or in the future.

These calculations are repeated for each component of the IIP. For example, a Fire IIP might include components for stations, land for stations, apparatus, and communications equipment. The IIP forecasts the amount and cost of the infrastructure needed to serve new development for each component.

## **CREDIT FOR FUTURE REVENUES**

Developers may be eligible for site-specific credits or reimbursements only if they provide system improvements that have been included in the IIP and 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.

The development fee enabling legislation includes the following provision:

4. The amount of any development fees assessed pursuant to this section must bear a reasonable relationship to the burden imposed on the municipality to provide additional necessary public services to the development. The municipality shall forecast the contribution to be made in the future in cash or by taxes, fees, assessments or other sources of revenue derived from the property owner towards the capital costs of the necessary public service covered by the development fee and shall include these contributions in determining the extent of the burden imposed by the development. (emphasis added).

The intent of this provision is to avoid potential “double payment” for capital facilities. Double payment occurs when new growth pays for the same capacity twice through the development fee

and another revenue source. The applicability of these credits is discussed further within each IIP and fee category.

## DEVELOPMENT FEE CALCULATIONS

Arizona law requires identification of the methodology for calculating the amount of the development fee and an explanation of the relationship between the development fee and the IIP. The first step in the development fee calculation totals the cost per demand unit for each component of the IIP to determine the total cost per demand unit to provide the complete IIP. The total cost per demand unit is then multiplied by the number of demand units per development unit. These factors include persons per household, jobs per square foot, vehicle trips per housing unit, and vehicle trips per square foot. These factors vary by type of development and measure the demand and proportionality of the demand created by different types of residential and nonresidential development for additional infrastructure. The development fees are calculated on a per unit basis for residential development. For nonresidential development, the majority of development fees are calculated on a per square foot basis, with the exception of certain development types which have a unique characteristic, such as hotels whose development fees are calculated on a per room basis.

## DEVELOPMENT FEE SCHEDULE

Figure 1 provides a schedule of the development fees for the City. The City may adopt fees that are less than the amounts shown. However, a reduction in development fee revenue will necessitate an increase in other revenues, a decrease in planned capital expenditures, and/or a decrease in the planned LOS standards.

**Figure 1: Schedule of Development Fees**

<b>Residential (per unit)</b>	<i>Parks, Recreation, and Trails</i>				<i>General</i>		<b>TOTAL</b>
	<i>Libraries</i>	<i>Fire</i>	<i>Police</i>	<i>Government</i>	<i>Transportation</i>		
Single Family	\$1,610	\$86	\$928	\$127	\$180	\$2,712	<b>\$5,644</b>
Multi-family	\$1,294	\$69	\$745	\$102	\$145	\$1,885	<b>\$4,240</b>
<b>Nonresidential (per square foot/hotel room)</b>							
Commercial / Shopping Center 0-100,000 SF	N/A	N/A	\$3.40	\$1.07	\$0.16	\$4.67	<b>\$9.29</b>
Commercial / Shopping Center 100,001-200,000 SF	N/A	N/A	\$3.05	\$0.96	\$0.14	\$4.19	<b>\$8.33</b>
Office / Institutional (all sizes)	N/A	N/A	\$1.31	\$0.85	\$0.21	\$4.06	<b>\$6.43</b>
Business Park	N/A	N/A	\$1.52	\$0.48	\$0.20	\$2.29	<b>\$4.48</b>
Light Industrial	N/A	N/A	\$0.83	\$0.26	\$0.15	\$1.25	<b>\$2.49</b>
Warehousing	N/A	N/A	\$0.42	\$0.13	\$0.06	\$0.64	<b>\$1.25</b>
Manufacturing	N/A	N/A	\$0.46	\$0.14	\$0.11	\$0.68	<b>\$1.40</b>
Hotel (per room)	N/A	N/A	\$671	\$210	\$28	\$1,009	<b>\$1,918</b>

All costs in the development fee calculations are given in current dollars with no assumed inflation rate over time. If cost estimates change significantly, the fees should be recalculated.

A note on rounding: Calculations throughout this report are based on analysis conducted using Excel software. Results are discussed in the report using one-and two-digit places (in most cases),

which represent rounded figures. However, the analysis itself uses figures carried to their ultimate decimal places; therefore, the sums and products generated in the analysis may not equal the sum or product if the reader replicates the calculation with the factors shown in the report (due to the rounding of figures shown, not due to rounding in the analysis).

## Library

### OVERVIEW

The Library IIP and Development Fees includes planned library facilities. A credit for future payments for General Obligation (G.O.) debt service related to Library infrastructure has been deducted from the development fees.

The types of capital facilities and assets included in the Library IIP and Development Fees are demanded by only residential development. Accordingly, these costs have been allocated to residential development only.

The benefit area for the Library IIP and Development Fees is citywide as the demands for infrastructure, LOS, infrastructure costs, and benefits are uniform throughout the City.

### LIBRARY FACILITIES

#### *LOS Analysis*

The City's current LOS for library facilities is 0.19 square feet person (7,645 square feet/40,811 persons = 0.19 square feet person).

**Figure 2: Current LOS Library Facilities**

	<i>Square Feet</i>
Library	7,645
Current Demand Units Persons	40,811
Current LOS Residential - square feet per person	0.19

The City is planning to construct a new main library to meet the demands of both existing development as well as providing capacity to new development through FY2034. Thus, the plan-based methodology is used to calculate this component of the Library IIP and Development Fee.

This facility will provide the same LOS to both existing and new development through FY2034. The projected population in FY2034 is 176,519 persons of which 40,811 currently reside in the City with new development adding 135,708 persons over the next twenty five years. The LOS for existing development is calculated as follows: (50,000 square feet x 0.23)/40,811 persons in FY2010 = 0.28 square feet per person. The LOS for new development is calculated as follows: (50,000 square feet x 0.77)/135,708 new persons added during FY2010-FY2034 = 0.28 square feet per person.

**Figure 3: Planned Library Facilities LOS for Existing and Future Development**

	<i>Square Feet*</i>	
Main Library	50,000	
Development to be Served		
Existing Persons FY10	40,811	23%
New Persons FY10-FY34	135,708	77%
<b>TOTAL</b>	<b>176,519</b>	<b>100%</b>
LOS for Current Development		
Square Feet per Person		0.28
LOS for New Development		
Square Feet per Person		0.28

\* City of Maricopa Capital Improvements Plan.

*Cost Analysis*

The planned cost of the new main library facility totals \$23,442,265. This includes both construction and financing costs. The City plans for new development to pay its proportionate share of the financing costs via development fees, thus it is appropriate to include these costs.

The planned cost per person is the same for both existing and new development through FY2034. The projected population in FY2034 is 176,519 persons of which 40,811 currently reside in the City with new development adding 135,708 persons over the next twenty five years. The cost per person for existing development is calculated as follows:  $(\$23,442,265 \times 0.23) / 40,811$  persons in FY2010 = \$132.80 per person. The cost per person for new development is calculated as follows:  $(\$23,442,265 \times 0.77) / 135,708$  persons in FY2034 = \$132.80 per person.

**Figure 4: Library Facilities Cost Analysis**

	<i>Cost</i>	
<b>Main Library</b>		
Construction Costs*	\$14,727,816	
Projected Financing Costs	\$8,714,449	
TOTAL	\$23,442,265	
 <b>Development to be Served</b>		
Existing Persons FY10	40,811	23%
New Persons FY10-FY34	135,708	77%
TOTAL	176,519	100%
 <b>Cost for Existing Development</b>		
Per Person		\$132.80
 <b>Cost for New Development</b>		
Per Person		\$132.80
 * City of Maricopa <u>Capital Improvements Plan</u> .		
** City of Maricopa, Arizona Informational Pamphlet and Sample Ballot, November 4, 2008 Special Election.		

*Infrastructure Improvement Plan*

The IIP for library facilities is shown below. The IIP is calculated using the development projections from Appendix A at the back of the report and the LOS and cost figures listed above. Over the next five years, there is a projected increase of 13,597 persons. Based on the planned LOS, this amount of residential development will require approximately 3,851 square feet of facilities. The projected cost of this demanded infrastructure totals \$1,805,691 over the next five years. The projected debt service cost of this project is expected to begin in FY2015.

The City is debt financing its library facilities with a combination of Library Development Fees and Secondary Property Taxes. A credit for future debt service payments is discussed in the next section.

**Figure 5: Library Facilities IIP**

<b>NEW DEVELOPMENT PROJECTIONS</b>							
	<i>Fiscal Year</i>	2010	2011	2012	2013	2014	2015
Population Projections		40,811	43,530	46,250	48,969	51,688	54,408
							<i>5 Year Total</i>
Net Change During Fiscal Year		2,719	2,719	2,719	2,719	2,719	13,597
<b>LIBRARY FACILITIES</b>							
<i>Future Necessary Public Services Required by New Development</i>							
	<i>Fiscal Year</i>	2010	2011	2012	2013	2014	
Planned LOS per Person (Square Feet per Person)		0.28	0.28	0.28	0.28	0.28	
							<i>5 Year Total</i>
Square Footage For New Res. Development		770	770	770	770	770	3,851
<i>Cost Forecast for Infrastructure Associated with Future Necessary Public Services Required by New Development</i>							
Planned Cost per Person		\$132.80	\$132.80	\$132.80	\$132.80	\$132.80	
							<i>5 Year Total</i>
Cost For New Res. Development		\$361,138	\$361,138	\$361,138	\$361,138	\$361,138	\$1,805,691
<i>Planned Library Facilities Projects from CIP</i>							
Library Debt Service		\$0	\$0	\$0	\$0	\$0	\$0
TOTAL		\$0	\$0	\$0	\$0	\$0	\$0
<i>Revenue Forecast and Financing Assumptions for Future Necessary Public Services</i>							
							<i>5 Year Total</i>
Library Development Fees		\$361,138	\$361,138	\$361,138	\$361,138	\$361,138	\$1,805,691
Secondary Property Tax		\$0	\$0	\$0	\$0	\$0	\$0
TOTAL		\$361,138	\$361,138	\$361,138	\$361,138	\$361,138	\$1,805,691

**FUTURE DEBT SERVICE CREDIT FOR LIBRARIES**

In 2008, voters approved the issuance of General Obligation (G.O.) bonds to fund the construction of the main library facility. To avoid potential double payment, a future debt service credit for the projected principal and interest payments is shown in the figure below. Due to the time value of future payments, a net present value adjustment equivalent to the projected true interest cost of the bond issue is used in the calculation of the credit. The credit is calculated to be \$102.74 per capita on a net present value basis.

**Figure 6: Future Debt Service Payment Credit for Libraries**

<i>Fiscal Year</i>	<i>Library - Series 2014*</i>			<i>Residential Share (70.24%)**</i>	<i>Projected Population</i>	<i>Credit per Capita</i>
	<i>Principal</i>	<i>Interest</i>	<i>TOTAL</i>			
2015	\$400,000	\$703,882	\$1,103,882	\$775,395	54,408	\$14.25
2016	\$420,000	\$685,362	\$1,105,362	\$776,434	60,908	\$12.75
2017	\$440,000	\$665,496	\$1,105,496	\$776,529	67,408	\$11.52
2018	\$460,000	\$644,200	\$1,104,200	\$775,618	73,908	\$10.49
2019	\$485,000	\$621,522	\$1,106,522	\$777,249	80,408	\$9.67
2020	\$510,000	\$597,175	\$1,107,175	\$777,708	86,908	\$8.95
2021	\$535,000	\$571,267	\$1,106,267	\$777,070	92,392	\$8.41
2022	\$565,000	\$543,821	\$1,108,821	\$778,864	97,875	\$7.96
2023	\$590,000	\$514,611	\$1,104,611	\$775,907	103,359	\$7.51
2024	\$620,000	\$483,754	\$1,103,754	\$775,305	108,843	\$7.12
2025	\$655,000	\$451,018	\$1,106,018	\$776,895	114,327	\$6.80
2026	\$690,000	\$416,237	\$1,106,237	\$777,049	121,713	\$6.38
2027	\$725,000	\$379,460	\$1,104,460	\$775,801	129,100	\$6.01
2028	\$765,000	\$340,673	\$1,105,673	\$776,653	136,487	\$5.69
2029	\$805,000	\$299,592	\$1,104,592	\$775,894	143,873	\$5.39
2030	\$850,000	\$256,283	\$1,106,283	\$777,081	151,260	\$5.14
2031	\$895,000	\$210,383	\$1,105,383	\$776,449	157,575	\$4.93
2032	\$945,000	\$161,964	\$1,106,964	\$777,560	163,890	\$4.74
2033	\$995,000	\$110,839	\$1,105,839	\$776,769	170,204	\$4.56
2034	\$1,050,000	\$56,910	\$1,106,910	\$777,522	176,519	\$4.40
<b>TOTAL</b>	<b>\$13,400,000</b>	<b>\$8,714,449</b>	<b>\$22,114,449</b>	<b>\$15,533,752</b>		
				<b>Projected True Interest Cost*</b>		<b>5.280%</b>
				<b>Net Present Value</b>		<b>\$102.74</b>

\* City of Maricopa, Arizona Informational Pamphlet and Sample Ballot, November 4, 2008 Special Election.

\*\* Based on secondary assessed valuations for FY2009, Pinal County Assessor's Office.

**LIBRARY DEVELOPMENT FEES**

As shown at the bottom of the figure below, the capital cost per person is \$30.06.

**Figure 7: Library Development Fee Calculation Factors**

	<i>Persons per Household</i>
Single Family Detached	2.86
Multi-family	2.30
	<i>Cost per Person</i>
<i>Cost Summary</i>	
Library Facilities	\$132.80
Less Credit for Future Revenues	(\$102.74)
<b>TOTAL</b>	<b>\$30.06</b>

The schedule of Library Development Fees is shown below. The number of persons per household is multiplied by the capital cost per person to determine the total development fee per type of unit.

**Figure 8: Library Development Fee Schedule**

	<i>TOTAL</i>
Single Family Detached	\$86
Multi-family	\$69

## Parks and Recreation

### OVERVIEW

The Parks and Recreation IIP and Development Fees includes parks, recreation facilities, trails, a portion of administrative facilities, and support vehicles and equipment. A credit for future payments for General Obligation (G.O.) debt service related to parks and recreation infrastructure has been deducted from the development fees.

The types of capital facilities and assets included in the Parks and Recreation IIP and Development Fees are demanded by only residential development. Accordingly, these costs have been allocated to residential development only.

The benefit area for the Parks and Recreation IIP and Development Fees is citywide as the demands for infrastructure, LOS, infrastructure costs, and benefits are uniform throughout the City.

### PARKS

#### *LOS Analysis*

The City currently has 28.8 acres of parkland serving the current population of 40,811 persons. The current LOS for parks is 0.0007 acres per person (28.8 acres/40,811 persons = 0.0007 acres per person).

**Figure 9: Current LOS for Parks**

	Acres
Pacana	28.8
Current Demand Units	
Persons	40,811
Current LOS	
Residential - acres per person	0.0007

The City is planning to construct 70 acres of parks to meet the demands of both existing development as well as providing capacity to new development through FY2025. Thus, the plan-based methodology is used to calculate this component of the Parks and Recreation IIP and Development Fee.

These parks will provide the same LOS to both existing and new development through FY2025. The projected population in FY2025 is 114,327 persons of which 40,811 currently reside in the City with new development adding 73,516 persons over the next fifteen years. The LOS for existing development is calculated as follows:  $(70 \text{ acres} \times 0.36) / 40,811 \text{ persons in FY2010} = 0.0003 \text{ acres per person}$ . The LOS for new development is calculated as follows:  $(70 \text{ acres} \times 0.64) / 73,516 \text{ new persons added during FY2010-FY2025} = 0.0003 \text{ acres per person}$ .

**Figure 10: Planned Parks LOS for Existing and Future Development**

	<i>Acres*</i>	
Sports Complex	40	
Eagle Shadow Park	30	
<b>TOTAL</b>	<b>70</b>	
Development to be Served		
Existing Persons FY10	40,811	36%
New Persons FY10-FY25	73,516	64%
<b>TOTAL</b>	<b>114,327</b>	<b>100%</b>
LOS for Current Development		
Acres per Person		0.0003
LOS for New Development		
Acres per Person		0.0003

\* City of Maricopa Capital Improvements Plan.

*Cost Analysis*

The planned cost of the new parks totals \$48,190,308. This includes both construction and financing costs. The City plans for new development to pay its proportionate share of the financing costs via development fees, thus it is appropriate to include these costs.

The planned cost per person is the same for both existing and new development through FY2025. The projected population in FY2025 is 114,327 persons of which 40,811 currently reside in the City with new development adding 73,516 persons over the next twenty five years. The cost per person for existing development is calculated as follows:  $(\$48,190,308 \times 0.36) / 40,811$  persons in FY2010 = \$421.51 per person. The cost per person for new development is calculated as follows:  $(\$48,190,308 \times 0.64) / 73,516$  persons in FY2025 = \$421.51 per person.

**Figure 11: Parks Cost Analysis**

Sports Complex		<i>Cost</i>
Construction Costs*		\$13,374,310
Projected Financing Costs**		\$12,549,946
Eagle Shadow Park		
Construction Costs*		\$12,296,118
Projected Financing Costs**		\$9,969,934
<b>TOTAL</b>		<b>\$48,190,308</b>
Development to be Served		
Existing Persons FY10	40,811	36%
New Persons FY10-FY25	73,516	64%
<b>TOTAL</b>	<b>114,327</b>	<b>100%</b>
Cost for Existing Development		
Per Person		\$421.51
Cost for New Development		
Per Person		\$421.51

\* City of Maricopa *Capital Improvements Plan*.

\*\* City of Maricopa, Arizona Informational Pamphlet and Sample Ballot, November 4, 2008 Special Election.

*Infrastructure Improvement Plan*

The IIP for parks is shown below. The IIP is calculated using the development projections from Appendix A at the back of the report and the LOS and cost figures listed above. Over the next five years, there is a projected increase of 13,597 persons. Based on the planned LOS, this amount of residential development will require approximately 4.8 acres of parks. The projected cost of this demanded infrastructure totals \$5,731,230 over the next five years.

The City is debt financing its parks with a combination of Parks Development Fees and Secondary Property Taxes. A credit for future debt service payments is discussed below.

**Figure 12: Parks IIP**

<b>NEW DEVELOPMENT PROJECTIONS</b>							
	<i>Fiscal Year</i>	2010	2011	2012	2013	2014	2015
Population Projections		40,811	43,530	46,250	48,969	51,688	54,408
							<i>5 Year Total</i>
Net Change During Fiscal Year		2,719	2,719	2,719	2,719	2,719	13,597
<b>PARKS</b>							
<i>Future Necessary Public Services Required by New Development</i>							
	<i>Fiscal Year</i>	2010	2011	2012	2013	2014	
Planned LOS per Person (Acres per Person)		0.00035	0.00035	0.00035	0.00035	0.00035	
							<i>5 Year Total</i>
Acres Utilized by New Res. Development		1.0	1.0	1.0	1.0	1.0	4.8
<i>Cost Forecast for Infrastructure Associated with Future Necessary Public Services Required by New Development</i>							
Planned Cost per Person		\$421.51	\$421.51	\$421.51	\$421.51	\$421.51	
							<i>5 Year Total</i>
Cost For New Res. Development		\$1,146,246	\$1,146,246	\$1,146,246	\$1,146,246	\$1,146,246	\$5,731,230
<i>Planned Recreation Facilities Projects from CIP</i>							
Eagle Shadow Park Debt Service		\$0	\$0	\$0	\$1,272,184	\$1,271,504	\$2,543,688
Sports Complex Debt Service		\$1,625,690	\$1,627,565	\$1,626,110	\$1,627,220	\$1,626,200	\$8,132,785
TOTAL		\$1,625,690	\$1,627,565	\$1,626,110	\$2,899,404	\$2,897,704	\$10,676,473
<i>Revenue Forecast and Financing Assumptions for Future Necessary Public Services</i>							
							<i>5 Year Total</i>
Parks and Recreation Development Fees		\$1,146,246	\$1,146,246	\$1,146,246	\$1,146,246	\$1,146,246	\$5,731,230
Secondary Property Tax		\$479,444	\$481,319	\$479,864	\$1,753,158	\$1,751,458	\$4,945,243
TOTAL		\$1,625,690	\$1,627,565	\$1,626,110	\$2,899,404	\$2,897,704	\$10,676,473

**FUTURE DEBT SERVICE CREDIT FOR PARKS**

In 2008, voters approved the issuance of General Obligation (G.O.) bonds to fund the construction of the planned parks. To avoid potential double payment, a future debt service credit for the projected principal and interest payments is shown in the figure below. Due to the time value of future payments, a net present value adjustment equivalent to the projected true interest cost of the bond issue is used in the calculation of the credit. The credit is calculated to be \$301.44 per capita on a net present value basis.

**Figure 13: Future Debt Service Payment Credit for Parks**

Fiscal Year	Sports Complex - Series 2009*			Eagle Shadow Park - Series 2012*			TOTAL	Residential Share (70.24%)**	Projected Population	Credit per Capita
	Principal	Interest	Subtotal	Principal	Interest	Subtotal				
2010	\$625,000	\$1,000,690	\$1,625,690	\$0	\$0	\$0	\$1,625,690	\$1,141,926	40,811	\$27.98
2011	\$650,000	\$977,565	\$1,627,565	\$0	\$0	\$0	\$1,627,565	\$1,143,243	43,530	\$26.26
2012	\$675,000	\$951,110	\$1,626,110	\$0	\$0	\$0	\$1,626,110	\$1,142,221	46,250	\$24.70
2013	\$705,000	\$922,220	\$1,627,220	\$470,000	\$802,184	\$1,272,184	\$2,899,404	\$2,036,615	48,969	\$41.59
2014	\$735,000	\$891,200	\$1,626,200	\$490,000	\$781,504	\$1,271,504	\$2,897,704	\$2,035,421	51,688	\$39.38
2015	\$770,000	\$857,978	\$1,627,978	\$515,000	\$759,356	\$1,274,356	\$2,902,334	\$2,038,673	54,408	\$37.47
2016	\$805,000	\$822,327	\$1,627,327	\$540,000	\$735,511	\$1,275,511	\$2,902,838	\$2,039,027	60,908	\$33.48
2017	\$845,000	\$784,250	\$1,629,250	\$565,000	\$709,969	\$1,274,969	\$2,904,219	\$2,039,997	67,408	\$30.26
2018	\$885,000	\$743,352	\$1,628,352	\$590,000	\$682,623	\$1,272,623	\$2,900,975	\$2,037,719	73,908	\$27.57
2019	\$930,000	\$699,722	\$1,629,722	\$620,000	\$653,536	\$1,273,536	\$2,903,258	\$2,039,322	80,408	\$25.36
2020	\$975,000	\$653,036	\$1,628,036	\$650,000	\$622,412	\$1,272,412	\$2,900,448	\$2,037,349	86,908	\$23.44
2021	\$1,025,000	\$603,506	\$1,628,506	\$685,000	\$589,392	\$1,274,392	\$2,902,898	\$2,039,070	92,392	\$22.07
2022	\$1,075,000	\$550,923	\$1,625,923	\$720,000	\$554,252	\$1,274,252	\$2,900,175	\$2,037,157	97,875	\$20.81
2023	\$1,135,000	\$495,346	\$1,630,346	\$755,000	\$517,028	\$1,272,028	\$2,902,374	\$2,038,701	103,359	\$19.72
2024	\$1,190,000	\$435,985	\$1,625,985	\$795,000	\$477,541	\$1,272,541	\$2,898,526	\$2,035,999	108,843	\$18.71
2025	\$1,255,000	\$373,153	\$1,628,153	\$840,000	\$435,565	\$1,275,565	\$2,903,718	\$2,039,645	114,327	\$17.84
								Projected True Interest Cost*		5.263%
								Net Present Value		\$301.44

\* City of Maricopa, Arizona Informational Pamphlet and Sample Ballot, November 4, 2008 Special Election.

\*\* Based on secondary assessed valuations for FY2009, Pinal County Assessor's Office.

## RECREATION FACILITIES

### LOS Analysis

The City currently has 5,300 square feet of recreation facilities serving the current population of 40,811 persons. The current LOS for recreation facilities is 0.13 square feet per person (5,300 square feet/40,811 persons = 0.13 square feet per person).

**Figure 14: Current LOS for Recreation Facilities**

	<i>Square Feet</i>
Honeycutt Road Meeting Space	3,700
Teen Center	1,600
<b>TOTAL</b>	<b>5,300</b>
Current Demand Units	
Persons	40,811
Current LOS	
Residential - square feet per person	0.13

The City is planning to construct 57,000 square feet of recreation facilities to meet the demands of both existing development as well as providing capacity to new development through FY2015. Thus, the plan-based methodology is used to calculate this component of the Parks and Recreation IIP and Development Fee.

This facility will provide the same LOS to both existing and new development through FY2015. The projected population in FY2015 is 54,408 persons of which 40,811 currently reside in the City with new development adding 13,597 persons over the next five years. The LOS for existing development is calculated as follows:  $(57,000 \text{ square feet} \times 0.75) / 40,811 \text{ persons in FY2010} = 1.05 \text{ square feet per person}$ . The LOS for new development is calculated as follows:  $(57,000 \text{ square feet} \times 0.25) / 13,597 \text{ new persons added during FY2010-FY2015} = 1.05 \text{ square feet per person}$ .

**Figure 15: Planned Recreation Facilities LOS for Existing and Future Development**

		<i>Square Feet*</i>
Recreation Center/Aquatic Center		57,000
Development to be Served		
Existing Persons FY10	40,811	75%
New Persons FY10-FY15	13,597	25%
TOTAL	54,408	100%
LOS for Current Development		
Square Feet per Person		1.05
LOS for New Development		
Square Feet per Person		1.05

\* City of Maricopa Capital Improvements Plan.

### *Cost Analysis*

The planned cost of the new recreation facility totals \$24,940,105. This includes both construction and financing costs. The City plans for new development to pay its proportionate share of the financing costs via development fees, thus it is appropriate to include these costs.

The planned cost per person is the same for both existing and new development through FY2015. The projected population in FY2015 is 54,408 persons of which 40,811 currently reside in the City with new development adding 13,597 persons over the next five years. The cost per person for existing development is calculated as follows:  $(\$24,940,105 \times 0.75) / 40,811 \text{ persons in FY2010} = \$458.39 \text{ per person}$ . The cost per person for new development is calculated as follows:  $(\$24,940,105 \times 0.25) / 13,597 \text{ persons in FY2015} = \$458.39 \text{ per person}$ .

**Figure 16: Recreation Facilities Cost Analysis**

Recreation Center/ Aquatic Center	<i>Cost</i>
Construction Costs*	\$14,338,672
Projected Financing Costs**	\$10,601,433
<b>TOTAL</b>	<b>\$24,940,105</b>

Development to be Served		
Existing Persons FY10	40,811	75%
New Persons FY10-FY15	13,597	25%
<b>TOTAL</b>	<b>54,408</b>	<b>100%</b>

Cost for Existing Development  
Per Person \$458.39

Cost for New Development  
Per Person \$458.39

\* City of Maricopa *Capital Improvements Plan*.

\*\* City of Maricopa, Arizona Informational Pamphlet and Sample Ballot, November 4, 2008 Special Election.

*Infrastructure Improvement Plan*

The IIP for recreation facilities is shown below. The IIP is calculated using the development projections from Appendix A at the back of the report and the LOS and cost figures listed above. Over the next five years, there is a projected increase of 13,597 persons. Based on the planned LOS, this amount of residential development will require approximately 14,245 square feet of facilities. The projected cost of this demanded infrastructure totals \$6,232,655 over the next five years.

The City is debt financing its recreation facilities with a combination of Parks and Recreation Development Fees and Secondary Property Taxes. A credit for future debt service payments is discussed below.

**Figure 17: Recreation Facilities IIP**

<b>NEW DEVELOPMENT PROJECTIONS</b>							
	<i>Fiscal Year</i>	2010	2011	2012	2013	2014	2015
Population Projections		40,811	43,530	46,250	48,969	51,688	54,408
Net Change During Fiscal Year		2,719	2,719	2,719	2,719	2,719	13,597
							<i>5 Year Total</i>
<b>RECREATION FACILITIES</b>							
<i>Future Necessary Public Services Required by New Development</i>							
	<i>Fiscal Year</i>	2010	2011	2012	2013	2014	2015
Planned LOS per Person (Square Feet per Person)		1.05	1.05	1.05	1.05	1.05	
Square Footage For New Res. Development		2,849	2,849	2,849	2,849	2,849	14,245
							<i>5 Year Total</i>
<i>Cost Forecast for Infrastructure Associated with Future Necessary Public Services Required by New Development</i>							
Planned Cost per Person		\$458.39	\$458.39	\$458.39	\$458.39	\$458.39	
Cost For New Res. Development		\$1,246,531	\$1,246,531	\$1,246,531	\$1,246,531	\$1,246,531	\$6,232,655
							<i>5 Year Total</i>
<i>Planned Recreation Facilities Projects from CIP</i>							
Recreation Center/Aquatic Center Debt Service		\$0	\$0	\$1,361,328	\$1,359,500	\$1,361,180	\$4,082,008
TOTAL		\$0	\$0	\$1,361,328	\$1,359,500	\$1,361,180	\$4,082,008
							<i>5 Year Total</i>
<i>Revenue Forecast and Financing Assumptions for Future Necessary Public Services</i>							
Parks and Recreation Development Fees		\$1,246,531	\$1,246,531	\$1,246,531	\$1,246,531	\$1,246,531	\$6,232,655
Secondary Property Tax		\$0	\$0	\$0	\$0	\$0	\$0
TOTAL		\$1,246,531	\$1,246,531	\$1,246,531	\$1,246,531	\$1,246,531	\$6,232,655

**FUTURE DEBT SERVICE CREDIT FOR RECREATION FACILITIES**

In 2008, voters approved the issuance of General Obligation (G.O.) bonds to fund the construction of the planned recreation facility. To avoid potential double payment, a future debt service credit for the projected principal and interest payments is shown in the figure below. Due to the time value of future payments, a net present value adjustment equivalent to the projected true interest cost of the bond issue is used in the calculation of the credit. The credit is calculated to be \$60.88 per capita on a net present value basis.

**Figure 18: Future Debt Service Payment Credit for Recreation Facilities**

<i>Fiscal Year</i>	<i>Recreation/Aquatic Center - Series 2011*</i>			<i>Residential Share (70.24%)**</i>	<i>Projected Population</i>	<i>Credit per Capita</i>
	<i>Principal</i>	<i>Interest</i>	<i>TOTAL</i>			
2010	\$0	\$0	\$0	\$0	40,811	\$0.00
2011	\$0	\$0	\$0	\$0	43,530	\$0.00
2012	\$510,000	\$851,328	\$1,361,328	\$956,231	46,250	\$20.68
2013	\$530,000	\$829,500	\$1,359,500	\$954,947	48,969	\$19.50
2014	\$555,000	\$806,180	\$1,361,180	\$956,128	51,688	\$18.50
2015	\$580,000	\$781,094	\$1,361,094	\$956,067	54,408	\$17.57
<i>Projected True Interest Cost*</i>						5.248%
<i>Net Present Value</i>						\$60.88

\* City of Maricopa, Arizona Informational Pamphlet and Sample Ballot, November 4, 2008 Special Election.

\*\* Based on secondary assessed valuations for FY2009, Pinal County Assessor's Office.

## TRAILS

### *LOS Analysis*

The City currently does not have any trails. The City plans to purchase and develop 191 acres of trails. Based on the City's *Parks, Trails, and Open Space Master Plan*, the planned LOS to be provided to both existing and new development is 0.0028 acres per person. At the planned LOS, the existing population of 40,811 persons will require 114 acres of trails (40,811 persons x 0.0028 acres per person = 114 acres). The remaining 77 acres (191 acres – 114 acres = 77) will provide sufficient capacity to serve an additional 27,403 persons at the same LOS of 0.0028 acres per person (77 acres/0.0028 acres per person = 27,403 persons).

**Figure 19: Planned Trails LOS for Existing and New Development**

	<i>Acres*</i>
Santa Rosa Wash Trail System	191
<b>TOTAL</b>	<b>191</b>
LOS for Existing and New Development Acres per Person**	0.0028
Existing Population	40,811
Planned Acres for Existing Development	114
New Population to be Served	27,403
Planned Acres for New Development	77
* City of Maricopa <u>Capital Improvements Plan</u> .	
** Village Parks LOS Standards, City of Maricopa <u>Parks, Trails, and Open Space Master Plan</u> , J2 Engineering and Design, 2008.	

*Cost Analysis*

The planned cost per person is the same for both existing and new development. The projected population when the planned trails reach their planned capacity of 0.0028 acres per person is 68,214 persons of which 40,811 currently reside in the City with the remaining 27,403 persons coming from new. The cost per person for existing development is calculated as follows:  $(\$2,600,000 \times 0.60) / 40,811$  persons in FY2010 = \$38.12 per person. The cost per person for new development is calculated as follows:  $(\$2,600,000 \times 0.40) / 27,403$  persons = \$38.12 per person.

**Figure 20: Trails Cost Analysis**

	<i>Cost*</i>	
Santa Rosa Wash Trail System	\$2,600,000	
<b>TOTAL</b>	<b>\$2,600,000</b>	
Development to be Served		
Existing Persons	40,811	60%
New Persons	27,403	40%
<b>TOTAL</b>	<b>68,214</b>	<b>100%</b>
Cost for Existing Development Per Person	\$38.12	
Cost for New Development Per Person	\$38.12	
* City of Maricopa <u>Capital Improvements Plan</u> .		

*Infrastructure Improvement Plan*

The IIP for trails is shown below. The IIP is calculated using the development projections from Appendix A at the back of the report and the LOS and cost figures listed above. Over the next five years, there is a projected increase of 13,597 persons. Based on the planned LOS, this amount of residential development will require approximately 38.07 acres of trails. The projected cost of this demanded infrastructure totals \$518,243 over the next five years.

The City's *Capital Improvements Plan* indicates the trail project will be funded on a cash basis with a combination of Capital Reserve Funds and Parks and Recreation Development Fees.

**Figure 21: Trails IIP**

<b>NEW DEVELOPMENT PROJECTIONS</b>							
	<i>Fiscal Year</i>	2010	2011	2012	2013	2014	2015
Population Projections		40,811	43,530	46,250	48,969	51,688	54,408
							<i>5 Year Total</i>
Net Change During Fiscal Year		2,719	2,719	2,719	2,719	2,719	13,597
<b>TRAILS</b>							
<i>Future Necessary Public Services Required by New Development</i>							
	<i>Fiscal Year</i>	2010	2011	2012	2013	2014	
Planned LOS per Person (Acers per Person)		0.0028	0.0028	0.0028	0.0028	0.0028	
							<i>5 Year Total</i>
Miles For New Res. Development		7.61	7.61	7.61	7.61	7.61	38.07
<i>Cost Forecast for Infrastructure Associated with Future Necessary Public Services Required by New Development</i>							
Planned Cost per Person		\$38.12	\$38.12	\$38.12	\$38.12	\$38.12	
							<i>5 Year Total</i>
Cost For New Res. Development		\$103,649	\$103,649	\$103,649	\$103,649	\$103,649	\$518,243
<i>Planned Trails Projects from CIP</i>							
							<i>5 Year Total</i>
Santa Rosa Wash Trail System		\$0	\$0	\$1,200,000	\$450,000	\$950,000	\$2,600,000
TOTAL		\$0	\$0	\$1,200,000	\$450,000	\$950,000	\$2,600,000
<i>Revenue Forecast and Financing Assumptions for Future Necessary Public Services</i>							
							<i>5 Year Total</i>
Parks and Recreation Development Fees		\$103,649	\$103,649	\$103,649	\$103,649	\$103,649	\$518,243
Transfer Capital Reserve		\$0	\$0	\$889,054	\$346,351	\$846,351	\$2,081,757
TOTAL		\$103,649	\$103,649	\$992,703	\$450,000	\$950,000	\$2,600,000

**PARKS AND RECREATION SHARE OF CITY SERVICES COMPLEX**

The City is planning to construct a 50,000 square foot City Services Complex, including 1,491 square feet for parks and recreation administration. This facility is planned to meet the demands of both existing development as well as providing capacity to new development through FY2032. Thus, the plan-based methodology is used to calculate this component of the Parks and Recreation IIP and Development Fee.

This facility will provide the same LOS to both existing and new development through FY2032. The projected population in FY2032 is 163,890 persons of which 40,811 currently reside in the City with new development adding 123,079 persons over the next twenty three years. The LOS for existing development is calculated as follows: (1,491 square feet x 0.25)/40,811 persons in FY2010 = 0.0091 square feet per person. The LOS for new development is calculated as follows:

(1,491 square feet x 0.75)/123,079 new persons added during FY2010-FY2032 = 0.0091 square feet per person.

**Figure 22: Planned Administration Facilities LOS for Existing and Future Development**

		<i>Square Feet*</i>
City Services Complex (Parks and Recreation Portion)		1,491
Proportionate Share		
Residential		100%
Development to be Served		
Residential		
Existing Persons	40,811	25%
New Population FY10-FY32	123,079	75%
TOTAL	163,890	100%
LOS for Current Development		
Square Feet per Person		0.0091
LOS for Planned Development		
Square Feet per Person		0.0091

\* City of Maricopa *Capital Improvements Plan* and TischlerBise analysis of City of *Maricopa Governmental Center: Site Location Analysis*, HDR/Studio Concepts.

*Cost Analysis*

The portion of the planned cost of the new City Services Complex attributable to Parks and Recreation totals \$459,172. The planned cost per person is the same for both existing and new development through FY2032. The projected population in FY2032 is 163,890 persons of which 40,811 currently reside in the City with new development adding 123,079 persons over the next twenty three years. The cost per person for existing development is calculated as follows: (\$459,172 x 0.25)/40,811 persons in FY2010 = \$2.80 per person. The cost per person for new development is calculated as follows: (\$459,172 x 0.75)/ 123,079 additional persons through FY2032 = \$2.80 per person.

**Figure 23: Administration Facilities Cost Analysis**

		<i>Cost*</i>
City Services Complex (Parks and Recreation Portion)		\$459,172
Proportionate Share		
Residential		100%
Residential Development to be Served		
Existing Persons	40,811	25%
New Population FY10-FY32	123,079	75%
TOTAL	163,890	100%
Cost for Existing Development		
Per Person		\$2.80
Cost for New Development		
Per Person		\$2.80

\* City of Maricopa *Capital Improvements Plan*.

*Infrastructure Improvement Plan*

The IIP for the Parks share of the City Services Complex is shown below. The IIP is calculated using the development projections from Appendix A at the back of the report and the LOS and cost figures listed above. Over the next five years, there is a projected increase of 13,597 persons. Based on the planned LOS, this amount of residential development will require approximately 124 square feet of administrative facilities. The projected cost of this demanded infrastructure totals \$38,094 over the next five years.

The City's *Capital Improvements Plan* indicates the City Services Complex project will be funded on a cash basis with a combination of Capital Reserve Funds and Parks and Recreation Development Fees.

**Figure 24: Administration Facilities IIP**

<b>NEW DEVELOPMENT PROJECTIONS</b>							
	<i>Fiscal Year</i>	2010	2011	2012	2013	2014	2015
Population Projections		40,811	43,530	46,250	48,969	51,688	54,408
							<i>5 Year Total</i>
Net Change During Fiscal Year		2,719	2,719	2,719	2,719	2,719	13,597
<b>ADMINISTRATIVE FACILITIES</b>							
<i>Future Necessary Public Services Required by New Development</i>							
	<i>Fiscal Year</i>	2010	2011	2012	2013	2014	
Planned LOS per Person (Square Feet per Person)		0.0091	0.0091	0.0091	0.0091	0.0091	
							<i>5 Year Total</i>
Square Feet For New Res. Development		25	25	25	25	25	124
<i>Cost Forecast for Infrastructure Associated with Future Necessary Public Services Required by New Development</i>							
Planned Cost per Person		\$2.80	\$2.80	\$2.80	\$2.80	\$2.80	
							<i>5 Year Total</i>
Cost For New Res. Development		\$7,619	\$7,619	\$7,619	\$7,619	\$7,619	\$38,094
<i>Planned Projects from CIP</i>							
							<i>5 Year Total</i>
City Services Complex (Parks and Recreation Portion)		\$0	\$0	\$41,743	\$208,715	\$208,715	\$459,172
TOTAL		\$0	\$0	\$41,743	\$208,715	\$208,715	\$459,172
<i>Revenue Forecast and Financing Assumptions for Future Necessary Public Services</i>							
							<i>5 Year Total</i>
Parks and Recreation Development Fees		\$7,619	\$7,619	\$7,619	\$7,619	\$7,619	\$38,094
Transfer from Capital Reserve		\$0	\$0	\$18,886	\$201,096	\$201,096	\$421,078
TOTAL		\$7,619	\$7,619	\$26,505	\$208,715	\$208,715	\$459,172

## SUPPORT VEHICLES AND EQUIPMENT

### *LOS Analysis*

The City currently has a fleet of 13 pieces of support vehicles and equipment for Parks and Recreation serving the current development base of 40,811 persons. The City plans to maintain the current LOS for support vehicles and equipment, so the incremental expansion method is used to calculate this component of the Parks and Recreation IIP and Development Fee.

Based on the size of the current fleet and current development base, the current LOS for support vehicles and equipment is 0.00032 units per person (13 units/ 40,811 persons = 0.00032).

**Figure 25: Support Vehicles LOS**

<i>Vehicles/Equipment</i>	<i>Number of Units*</i>
Stage	1
Ford F150 Truck	1
John Deere Lawn Mower	1
John Deere Gator	1
Toro Sand Pro	1
Mini-mit Dump Trucks	2
Aerator	1
Pressure Washer	1
Paint Sprayers	2
Wall-to-wall Trailer	1
Open Box Trailer	1
<b>TOTAL</b>	<b>13</b>
Current Demand Units	
Population	40,811
Current LOS	
Residential - vehicles/equipment per person	0.00032

\* City of Maricopa, Community Services and Fleet Management.

*Cost Analysis*

The City’s Community Services and Fleet Management estimate the current fleet of support vehicles and equipment to have a replication value of \$159,635, an average of \$12,280 per unit. Based on the current LOS of 0.00032 units per person, and an average cost of \$12,280 per unit, the cost per person is \$3.91 per person ( $\$12,280 \times 0.00032 = \$3.91$  per person).

**Figure 26: Support Vehicles Cost Analysis**

<i>Vehicles/Equipment</i>	<i>Number of Units*</i>	<i>Cost per Unit*</i>	<i>TOTAL</i>
Stage	1	\$100,000	\$100,000
Ford F150 Truck	1	\$17,535	\$17,535
John Deere Lawn Mower	1	\$10,000	\$10,000
John Deere Gator	1	\$7,900	\$7,900
Toro Sand Pro	1	\$6,500	\$6,500
Mini-mit Dump Trucks	2	\$1,000	\$2,000
Aerator	1	\$500	\$500
Pressure Washer	1	\$1,500	\$1,500
Paint Sprayers	2	\$3,600	\$7,200
Wall-to-wall Trailer	1	\$3,200	\$3,200
Open Box Trailer	1	\$3,300	\$3,300
<b>TOTAL</b>	<b>13</b>		<b>\$159,635</b>

Average Cost per Vehicle/Piece of Equip. => \$12,280

Current LOS  
 Residential - vehicles/equipment per person 0.00032

Cost per  
 Person \$3.91

\* City of Maricopa, Community Services and Fleet Management.

*Infrastructure Improvement Plan*

The IIP for support vehicles and equipment is shown below. The IIP is calculated using the development projections from Appendix A at the back of the report and the LOS and cost figures listed above. Over the next five years, there is a projected increase of 13,597 persons. Based on the planned LOS, this amount of residential development will require approximately 4 units. The projected cost of this demanded infrastructure totals \$53,185 over the next five years.

For support vehicles and equipment, the City plans to use only development fees to pay for the new capacity added for new development. Since the incremental expansion methodology has been used to calculate this component, development fees are the only revenue source used to increase the capacity of support vehicles and equipment. The IIP assumes cash financing on a pay-as-you-go (PAYGO) basis.

**Figure 27: Support Vehicles IIP**

<b>NEW DEVELOPMENT PROJECTIONS</b>							
	<i>Fiscal Year</i>	2010	2011	2012	2013	2014	2015
Population Projections		40,811	43,530	46,250	48,969	51,688	54,408
							<i>5 Year Total</i>
Net Change During Fiscal Year		2,719	2,719	2,719	2,719	2,719	13,597
<b>SUPPORT VEHICLES AND EQUIPMENT</b>							
<i>Future Necessary Public Services Required by New Development</i>							
	<i>Fiscal Year</i>	2010	2011	2012	2013	2014	
Current LOS per Person (Units per Person)		0.00032	0.00032	0.00032	0.00032	0.00032	
							<i>5 Year Total</i>
Units For New Res. Development		0.9	0.9	0.9	0.9	0.9	4
<i>Cost Forecast for Infrastructure Associated with Future Necessary Public Services Required by New Development</i>							
Planned Cost per Person		\$3.91	\$3.91	\$3.91	\$3.91	\$3.91	
							<i>5 Year Total</i>
Cost For New Res. Development		\$10,637	\$10,637	\$10,637	\$10,637	\$10,637	\$53,185
<i>Revenue Forecast and Financing Assumptions for Future Necessary Public Services</i>							
							<i>5 Year Total</i>
Parks and Recreation Development Fees		\$10,637	\$10,637	\$10,637	\$10,637	\$10,637	\$53,185
TOTAL		\$10,637	\$10,637	\$10,637	\$10,637	\$10,637	\$53,185

**PARKS AND RECREATION DEVELOPMENT FEES**

As shown at the bottom of the figure below, the capital cost per person is \$562.14.

**Figure 28: Parks and Recreation Development Fee Calculation Factors**

	<i>Persons per Household</i>
Single Family Detached	2.86
Multi-family	2.30
	<i>Cost per Person</i>
<i>Cost Summary</i>	
Parks	\$421.51
Less Credit for Future Revenues	(\$301.44)
Trails	\$38.12
Recreation Facilities	\$458.39
Less Credit for Future Revenues	(\$60.88)
Administration Facilities	\$2.80
Support Vehicles and Equipment	\$3.91
<b>TOTAL</b>	<b>\$562.41</b>

The schedule of proposed Parks and Recreation Development Fees is shown below. For residential land uses, persons per household are multiplied by the capital cost per person for each of the fee components which are then added together to determine the total development fee per unit.

**Figure 29: Parks and Recreation Development Fee Schedule**

	<i>Parks</i>	<i>Trails</i>	<i>Recreation Facilities</i>	<i>Admin. Facilities</i>	<i>Support Vehicles &amp; Equipment</i>	<i>TOTAL</i>
Single Family Detached	\$344	\$109	\$1,138	\$8	\$11	\$1,610
Multi-family	\$276	\$88	\$914	\$6	\$9	\$1,294

## Police

### OVERVIEW

The Police IIP and Development Fees include components for the Police Department's share of the City Services Complex, Police Department's share of the Training Facility, and police vehicles and equipment.

The necessary public services of the Police IIP and Development Fees associated with police functions are allocated to both residential and nonresidential development. Residential demand is measured in terms of population while nonresidential demand is measured using vehicle trips. Nonresidential vehicle trips are used as the best measure of the presence of people at nonresidential land uses.

The benefit area for the Police IIP and Development Fees is citywide as the demands for infrastructure, LOS, infrastructure costs, and benefits are uniform throughout the community.

### PROPORTIONATE SHARE

Calls for service data provided by the Police Department are used to determine the relative demand for service from residential and nonresidential development. As shown below, the proportionate share factor for residential development is 46%, with nonresidential development accounting for 54% of the demand for police infrastructure. Road related calls are omitted because they cannot be allocated to residential or nonresidential development in that a person could be on their way home, or to work, or passing through the City.

**Figure 30: Police Proportionate Share Factors**

Residential	7,011	46%
Nonresidential	8,329	54%
<b>TOTAL</b>	<b>15,340</b>	<b>100%</b>

Source: City of Maricopa Police Department for September 2008 through August 2009. Does not include road related calls for service or calls to unidentifiable addresses.

### POLICE SHARE OF CITY SERVICES COMPLEX

#### *LOS Analysis*

The City currently has 6,258 square feet of Police facilities serving the existing development base of 40,811 persons and 19,982 nonresidential vehicle trips. The current residential LOS is calculated as follows:  $(6,258 \text{ square feet} \times 0.46) / 40,811 \text{ persons} = 0.07 \text{ square feet per person}$ . The current nonresidential LOS is calculated using the same formula using the nonresidential variables. The current nonresidential LOS is 0.17 square feet per nonresidential vehicle trip.

**Figure 31: Current LOS Police Facilities**

	<i>Square Feet</i>
Administration	1,938
Evidence	1,440
Sergeants Trailer	1,440
Patrol Trailer	1,440
<b>TOTAL</b>	<b>6,258</b>
Proportionate Share	
Residential	46%
Nonresidential	54%
Current Demand Units Served	
Residential - Population	40,811
Nonresidential - Vehicle Trips	19,982
Current LOS	
Residential - square feet per person	0.07
Nonresidential - square feet per trip	0.17

The City is planning to construct a 50,000 square foot City Services Complex, including 6,099 square feet for the Police Department. This facility is planned to meet the demands of both existing development as well as providing capacity to new development through FY2032. Thus, the plan-based methodology is used to calculate this component of the Police IIP and Development Fee.

This facility will provide the same LOS to both existing and new development through FY2032. The projected population in FY2032 is 163,890 persons of which 40,811 currently reside in the City with new development adding 123,079 persons over the next twenty three years. The LOS for existing development is calculated as follows:  $((6,099 \text{ square feet} \times 0.46) \times 0.25) / 40,811$  persons in FY2010 = 0.0170 square feet per person. The LOS for new development is calculated as follows:  $((6,099 \text{ square feet} \times 0.46) \times 0.75) / 123,079$  new persons added during FY2010-FY2032 = 0.0170 square feet per person. This calculation is repeated for nonresidential development using the same formula and the variables for existing and new nonresidential development. The planned LOS for existing nonresidential development is 0.0173 square feet per nonresidential vehicle trip. The planned LOS for new nonresidential development is 0.0173 square feet per nonresidential vehicle trip.

**Figure 32: Police Facility Current and Planned LOS Analysis**

		<i>Square Feet*</i>
City Services Complex (Estimated Police Portion)		6,099
Proportionate Share		
Residential		46%
Nonresidential		54%
Development to be Served		
Residential		
Existing Persons	40,811	25%
New Population FY10-FY32	123,079	75%
TOTAL	163,890	100%
Nonresidential		
Existing Trips	19,982	10%
New Trips FY10-FY32	171,565	90%
TOTAL	191,547	100%
LOS for Current Development		
Square Feet per Person		0.0170
Square Feet per Nonresidential Trip		0.0173
LOS for New Development		
Square Feet per Person		0.0170
Square Feet per Nonresidential Trip		0.0173

\* City of Maricopa [Capital Improvements Plan](#) and TischlerBise analysis of City of [Maricopa Governmental Center: Site Location Analysis](#), HDR/Studio Concepts.

*Cost Analysis*

The Police Department’s portion of the planned cost of the new City Services Complex totals \$1,878,431. The planned cost per person is the same for both existing and new development through FY2032. The projected population in FY2032 is 163,890 persons of which 40,811 currently reside in the City with new development adding 123,079 persons over the next twenty three years. The cost per person for existing development is calculated as follows:  $((\$1,878,431 \times 0.46) \times 0.25) / 40,811$  persons in FY2010 = \$5.24 per person. The cost per person for new development is calculated as follows:  $((\$1,878,431 \times 0.46) \times 0.75) / 123,079$  additional persons through FY2032 = \$5.24 per person. This calculation is repeated for nonresidential development using the same formula and the variables for existing and new nonresidential development. The planned cost for existing nonresidential development is \$5.32 per nonresidential vehicle trip. The planned cost for new nonresidential development is \$5.32 per nonresidential vehicle trip.

**Figure 33: Police Share of Public Safety Building Cost Analysis**

		<i>Cost*</i>
City Services Complex (Police Portion)		\$1,878,431
Proportionate Share		
Residential		46%
Nonresidential		54%
Residential Development to be Served		
Existing Persons	40,811	25%
New Population FY10-FY32	123,079	75%
TOTAL	163,890	100%
Nonresidential Development to be Served		
Existing Trips	19,982	10%
New Trips FY10-FY32	171,565	90%
TOTAL	191,547	100%
Cost for Existing Development		
Per Person		\$5.24
Per Nonresidential Trip		\$5.32
Cost for New Development		
Per Person		\$5.24
Per Nonresidential Trip		\$5.32

\* City of Maricopa Capital Improvements Plan.

*Infrastructure Improvement Plan*

The IIP for the Police Department’s share of the City Services Complex is shown below. The IIP is calculated using the development projections from Appendix A at the back of the report and the LOS and cost figures listed above. Over the next five years, there is a projected increase of 13,597 persons and 15,829 nonresidential vehicle trips. Based on the planned LOS, this amount of new residential development will require approximately 231 square feet of facilities, while new nonresidential development will require approximately 274 square feet of facilities. The projected cost of this demanded infrastructure over the next five years totals \$71,225 for new residential development and \$84,284 for new nonresidential development.

The City’s Capital Improvements Plan indicates the City Services Complex project will be funded on a cash basis with a combination of Capital Reserve Funds and Police Development Fees.

**Figure 34: Police Facility IIP**

<b>NEW DEVELOPMENT PROJECTIONS</b>							
	<i>Fiscal Year</i>	2010	2011	2012	2013	2014	2015
Population Projections		40,811	43,530	46,250	48,969	51,688	54,408
Nonresidential Vehicle Trip Projections		19,982	22,785	25,770	28,935	32,283	35,811
							<i>5 Year Total</i>
Net Change Population During Fiscal Year		2,719	2,719	2,719	2,719	2,719	13,597
Net Change Jobs During Fiscal Year		2,803	2,985	3,166	3,347	3,528	15,829

  

<b>CITY COMPLEX (POLICE DEPARTMENT SHARE)</b>							
<i>Future Necessary Public Services Required by New Development</i>							
	<i>Fiscal Year</i>	2010	2011	2012	2013	2014	
Planned LOS per Person (SF per Person)		0.0170	0.0170	0.0170	0.0170	0.0170	
Planned LOS per Nonres. Vehicle Trip (SF per Nonres. Vehicle Trip)		0.0173	0.0173	0.0173	0.0173	0.0173	
							<i>5 Year Total</i>
Square Feet to be Utilized by New Res. Development		46	46	46	46	46	231
Square Feet to be Utilized by New Nonres. Development		48	52	55	58	61	274
<b>TOTAL SQUARE FEET TO BE UTILIZED BY NEW DEVELOPMENT</b>		<b>95</b>	<b>98</b>	<b>101</b>	<b>104</b>	<b>107</b>	<b>505</b>
<i>Cost Forecast for Infrastructure Associated with Future Necessary Public Services Required by New Development</i>							
Planned Cost per Person		\$5.24	\$5.24	\$5.24	\$5.24	\$5.24	
Planned Cost per Nonres. Vehicle Trip		\$5.32	\$5.32	\$5.32	\$5.32	\$5.32	
							<i>5 Year Total</i>
Cost to Serve New Res. Development		\$14,245	\$14,245	\$14,245	\$14,245	\$14,245	\$71,225
Cost to Serve New Nonres. Development		\$14,926	\$15,892	\$16,857	\$17,822	\$18,787	\$84,284
<b>TOTAL COST TO SERVE NEW DEVELOPMENT</b>		<b>\$29,172</b>	<b>\$30,137</b>	<b>\$31,102</b>	<b>\$32,067</b>	<b>\$33,032</b>	<b>\$155,509</b>
<i>Planned Projects from CIP</i>							
							<i>5 Year Total</i>
City Complex (Police Department Share)		\$0	\$0	\$170,766	\$853,832	\$853,832	\$1,878,431
<i>Revenue Forecast and Financing Assumptions for Future Necessary Public Services</i>							
							<i>5 Year Total</i>
Police Development Fees		\$29,172	\$30,137	\$31,102	\$32,067	\$33,032	\$155,509
Transfer from Capital Reserve		\$0	\$0	\$80,356	\$821,765	\$820,800	\$1,722,922
<b>TOTAL</b>		<b>\$0</b>	<b>\$0</b>	<b>\$170,766</b>	<b>\$853,832</b>	<b>\$853,832</b>	<b>\$1,878,431</b>

**POLICE DEPARTMENT SHARE OF TRAINING FACILITY**

*LOS Analysis*

The City currently does not have a public safety training facility. The City is planning to construct a 30 acre public safety training facility, of which the Police Department will utilize 50% or 15 acres. This facility is planned to meet the demands of both existing development as well as providing capacity to new development through FY2035. Thus, the plan-based methodology is used to calculate this component of the Police IIP and Development Fee.

This facility will provide the same LOS to both existing and new development through FY2035. The projected population in FY2035 is 182,834 persons of which 40,811 currently reside in the City with new development adding 142,023 persons over the next twenty five years. The LOS for existing development is calculated as follows:  $((15 \text{ acres} \times 0.46) \times 0.22) / 40,811 \text{ persons in FY2010} = 0.000037 \text{ acres per person}$ . The LOS for new development is calculated as follows:  $((15 \text{ acres} \times 0.46) \times 0.78) / 142,023 \text{ new persons added during FY2010-FY2035} = 0.000037 \text{ acres per person}$ . This calculation is repeated for nonresidential development using the same formula and the variables for existing and new nonresidential development. The planned LOS for existing nonresidential development is 0.000036 acres per nonresidential vehicle trip. The

planned LOS for new nonresidential development is 0.000036 acres per nonresidential vehicle trip.

**Figure 35: Police Share of Training Facility Current and Planned LOS**

	<i>Acres*</i>	
Regional Training Facility (Police share)		15
Proportionate Share		
Residential		46%
Nonresidential		54%
Development to be Served		
Residential		
Existing Persons	40,811	22%
New Population FY10-FY35	142,023	78%
TOTAL	182,834	100%
Nonresidential		
Existing Trips	19,982	9%
New Trips FY10-FY35	203,577	91%
TOTAL	223,559	100%
LOS for Current Development		
Acres per Person		0.000037
Acres per Nonresidential Trip		0.000036
LOS for New Development		
Acres per Person		0.000037
Acres per Nonresidential Trip		0.000036

\* City of Maricopa *Capital Improvements Plan*.

*Cost Analysis*

The Police Department’s portion of the planned cost of the training facility totals \$7,995,000. The planned cost per person is the same for both existing and new development through FY2035. The projected population in FY2035 is 182,834 persons of which 40,811 currently reside in the City with new development adding 142,023 persons over the next twenty five years. The cost per person for existing development is calculated as follows:  $((\$7,995,000 \times 0.46) \times 0.22) / 40,811$  persons in FY2010 = \$19.89 per person. The cost per person for new development is calculated as follows:  $((\$7,995,000 \times 0.46) \times 0.78) / 142,023$  additional persons through FY2035 = \$19.89 per person. This calculation is repeated for nonresidential development using the same formula and the variables for existing and new nonresidential development. The planned cost for existing nonresidential development is \$22.55 per nonresidential vehicle trip. The planned cost for new nonresidential development is \$22.55 per nonresidential vehicle trip.

**Figure 36: Police Share of Training Facility Cost Analysis**

		<i>Cost*</i>
Regional Training Facility (Police share)		\$7,955,000
Proportionate Share		
Residential		46%
Nonresidential		54%
Residential Development to be Served		
Existing Persons	40,811	22%
New Population FY10-FY35	142,023	78%
TOTAL	182,834	100%
Nonresidential Development to be Served		
Existing Trips	19,982	10%
New Trips FY10-FY35	171,565	90%
TOTAL	191,547	100%
Cost for Existing Development		
Per Person		\$19.89
Per Nonresidential Trip		\$22.55
Cost for New Development		
Per Person		\$19.89
Per Nonresidential Trip		\$22.55

\* City of Maricopa Capital Improvements Plan .

*Infrastructure Improvement Plan*

The IIP for the Police Department’s share of the training facility is shown below. The IIP is calculated using the development projections from Appendix A at the back of the report and the LOS and cost figures listed above. Over the next five years, there is a projected increase of 13,597 persons and 15,829 nonresidential vehicle trips. Based on the planned LOS, this amount of new residential development will require approximately 0.5 acres, while new nonresidential development will require approximately 0.6 acres. The projected cost of this demanded infrastructure over the next five years totals \$270,379 for new residential development and \$356,934 for new nonresidential development.

The City’s Capital Improvements Plan indicates the training facility will be funded on a cash basis with Police and Fire Development Fees.

**Figure 37: Police Share of Training Facility IIP**

<b>NEW DEVELOPMENT PROJECTIONS</b>							
	<i>Fiscal Year</i>	2010	2011	2012	2013	2014	2015
Population Projections		40,811	43,530	46,250	48,969	51,688	54,408
Nonresidential Vehicle Trip Projections		19,982	22,785	25,770	28,935	32,283	35,811
							<i>5 Year Total</i>
Net Change Population During Fiscal Year		2,719	2,719	2,719	2,719	2,719	13,597
Net Change Jobs During Fiscal Year		2,803	2,985	3,166	3,347	3,528	15,829
<b>REGIONAL TRAINING CENTER (POLICE DEPARTMENT SHARE)</b>							
<i>Future Necessary Public Services Required by New Development</i>							
	<i>Fiscal Year</i>	2010	2011	2012	2013	2014	
Planned LOS per Person (Acres per Person)		0.000037	0.000037	0.000037	0.000037	0.000037	
Planned LOS per Nonres. Vehicle Trip (Acres per Nonres. Vehicle Trip)		0.000036	0.000036	0.000036	0.000036	0.000036	
							<i>5 Year Total</i>
Acres to be Utilized by New Res. Development		0.1	0.1	0.1	0.1	0.1	0.5
Acres to be Utilized by New Nonres. Development		0.1	0.1	0.1	0.1	0.1	0.6
<b>TOTAL ACREAGE TO BE UTILIZED BY NEW DEVELOPMENT</b>		<b>0.2</b>	<b>0.2</b>	<b>0.2</b>	<b>0.2</b>	<b>0.2</b>	<b>1.1</b>
<i>Cost Forecast for Infrastructure Associated with Future Necessary Public Services Required by New Development</i>							
Planned Cost per Person		\$19.89	\$19.89	\$19.89	\$19.89	\$19.89	
Planned Cost per Nonres. Vehicle Trip		\$22.55	\$22.55	\$22.55	\$22.55	\$22.55	
							<i>5 Year Total</i>
Cost to Serve New Res. Development		\$54,076	\$54,076	\$54,076	\$54,076	\$54,076	\$270,379
Cost to Serve New Nonres. Development		\$63,212	\$67,300	\$71,387	\$75,474	\$79,561	\$356,934
<b>TOTAL COST TO SERVE NEW DEVELOPMENT</b>		<b>\$117,288</b>	<b>\$121,375</b>	<b>\$125,463</b>	<b>\$129,550</b>	<b>\$133,637</b>	<b>\$627,313</b>
<i>Planned Projects from CIP</i>							
							<i>5 Year Total</i>
Regional Training Center (Police Department Share)		\$0	\$0	\$0	\$0	\$7,955,000	\$7,955,000
<i>Revenue Forecast and Financing Assumptions for Future Necessary Public Services</i>							
							<i>5 Year Total</i>
Police Development Fees		\$117,288	\$121,375	\$125,463	\$129,550	\$133,637	\$627,313
<b>TOTAL</b>		<b>\$117,288</b>	<b>\$121,375</b>	<b>\$125,463</b>	<b>\$129,550</b>	<b>\$133,637</b>	<b>\$627,313</b>

## POLICE VEHICLES

### *LOS Analysis*

The City currently has a fleet of 57 police vehicles serving the current development base of 40,811 persons and 19,982 nonresidential vehicle trips. The City plans to maintain the current LOS for police vehicles, so the incremental expansion method is used to calculate this component of the Police IIP and Development Fees.

Based on the size of the current fleet, the proportionate share factors, and current development base, the current residential LOS for vehicles is 0.0006 vehicles per person ((57 vehicles x 0.46)/40,811 persons = 0.0006). This calculation is repeated for nonresidential development resulting in a LOS of 0.0015 vehicles per nonresidential vehicle trip ((57 vehicles x 0.54)/19,982 nonresidential vehicle trips = 0.0015).

**Figure 38: Police Vehicles Current LOS**

<i>Vehicles</i>	<i>Units</i>
Marked Dodge Charger	24
Unmarked Dodge Charger	3
Marked Crown Victoria	11
Unmarked Crown Victoria	2
Marked Ford Expedition	3
Unmarked Ford Expedition	1
Marked Chevrolet Tahoe	6
Unmarked Ford Explorer	1
Unmarked Chevrolet Blazer	1
Marked Kawasaki Motorcycles	3
Marked Honda Motorcycles	2
<b>TOTAL</b>	<b>57</b>
Proportionate Share	
Residential	46%
Nonresidential	54%
Current Demand Units Served	
Residential - Population	40,811
Nonresidential - Vehicle Trips	19,982
Current LOS	
Residential - vehicles per person	0.0006
Nonresidential - vehicles per trip	0.0015

*Cost Analysis*

The City's Police Department estimates the current fleet of police vehicles to have a replication value of \$1,724,000, an average of \$30,246 per unit. Based on the current LOS of 0.0006 units per person and 0.0015 units per nonresidential vehicle trips, and an average cost of \$30,246 per unit, the cost per demand unit is \$19.31 per person (0.0006 vehicles per person x \$30,246 per vehicle) and \$46.85 per nonresidential vehicle trip (0.0015 vehicles per nonresidential vehicle trip x \$30,246 per vehicle).

**Figure 39: Police Vehicles Cost Analysis**

<i>Vehicles</i>	<i>Units</i>	<i>Cost/ Unit*</i>	<i>Total Replication Value</i>
Marked Dodge Charger	24	\$30,000	\$720,000
Unmarked Dodge Charger	3	\$25,000	\$75,000
Marked Crown Victoria	11	\$30,000	\$330,000
Unmarked Crown Victoria	2	\$25,000	\$50,000
Marked Ford Expedition	3	\$40,000	\$120,000
Unmarked Ford Expedition	1	\$35,000	\$35,000
Marked Chevrolet Tahoe	6	\$40,000	\$240,000
Unmarked Ford Explorer	1	\$35,000	\$35,000
Unmarked Chevrolet Blazer	1	\$35,000	\$35,000
Marked Kawasaki Motorcycles	3	\$18,000	\$54,000
Marked Honda Motorcycles	2	\$15,000	\$30,000
<b>TOTAL</b>	<b>57</b>		<b>\$1,724,000</b>

Average Cost per Vehicle => \$30,246

Current LOS

Residential - vehicles per person	0.0006
Nonresidential - vehicles per trip	0.0015

Cost Factor

Average cost per vehicle	\$30,246
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Cost per

Person	\$19.31
Nonresidential Trip	\$46.85

\* City of Maricopa Police Department. Includes all equipment necessary to place the vehicle in service.

*Infrastructure Improvement Plan*

The IIP for police vehicles is shown below. The IIP is calculated using the development projections from Appendix A at the back of the report and the LOS and cost figures listed above. Over the next five years, there is a projected increase of 13,597 persons and 15,829 nonresidential vehicle trips. Based on the planned LOS, this amount of residential development will require approximately 9 vehicles while nonresidential development will require 25 vehicles. The projected cost of this demanded infrastructure totals \$1,004,058 over the next five years.

For police vehicles, the City plans to use only development fees to pay for the new capacity added for new development. Since the incremental expansion methodology has been used to calculate this component, development fees are the only revenue source used to increase the capacity of police vehicles. The IIP assumes cash financing on a pay-as-you-go (PAYGO) basis.

**Figure 40: Police Vehicles IIP**

<b>NEW DEVELOPMENT PROJECTIONS</b>							
	<i>Fiscal Year</i>	<i>2010</i>	<i>2011</i>	<i>2012</i>	<i>2013</i>	<i>2014</i>	<i>2015</i>
Population Projections		40,811	43,530	46,250	48,969	51,688	54,408
Nonresidential Vehicle Trip Projections		19,982	22,785	25,770	28,935	32,283	35,811
							<i>5 Year Total</i>
Net Change Population During Fiscal Year		2,719	2,719	2,719	2,719	2,719	13,597
Net Change Jobs During Fiscal Year		2,803	2,985	3,166	3,347	3,528	15,829
<b>VEHICLES AND EQUIPMENT</b>							
<i>Future Necessary Public Services Required by New Development</i>							
	<i>Fiscal Year</i>	<i>2010</i>	<i>2011</i>	<i>2012</i>	<i>2013</i>	<i>2014</i>	
Current LOS per Person (Vehicles per Person)		0.0006	0.0006	0.0006	0.0006	0.0006	
Current LOS per Nonres. Vehicle Trip (Vehicles per Nonresidential Vehicle Trip)		0.0015	0.0015	0.0015	0.0015	0.0015	
							<i>5 Year Total</i>
Vehicles Demanded by New Res. Development		1.74	1.74	1.74	1.74	1.74	8.68
Vehicles Demanded by New Nonres. Development		4.34	4.62	4.90	5.18	5.46	24.52
<b>TOTAL VEHICLES DEMANDED BY NEW DEVELOPMENT</b>		<b>6.08</b>	<b>6.36</b>	<b>6.64</b>	<b>6.92</b>	<b>7.20</b>	<b>33.20</b>
<i>Cost Forecast for Infrastructure Associated with Future Necessary Public Services Required by New Development</i>							
Planned Cost per Person		\$19.31	\$19.31	\$19.31	\$19.31	\$19.31	
Planned Cost per Nonres. Vehicle Trip		\$46.85	\$46.85	\$46.85	\$46.85	\$46.85	
							<i>5 Year Total</i>
Cost to Serve New Res. Development		\$52,503	\$52,503	\$52,503	\$52,503	\$52,503	\$262,513
Cost to Serve New Nonres. Development		\$131,323	\$139,814	\$148,305	\$156,796	\$165,287	\$741,525
<b>TOTAL COST TO SERVE NEW DEVELOPMENT</b>		<b>\$183,825</b>	<b>\$192,316</b>	<b>\$200,808</b>	<b>\$209,299</b>	<b>\$217,790</b>	<b>\$1,004,038</b>
<i>Revenue Forecast and Financing Assumptions for Future Necessary Public Services</i>							
							<i>5 Year Total</i>
Police Development Fees		\$183,825	\$192,316	\$200,808	\$209,299	\$217,790	\$1,004,038
<b>TOTAL</b>		<b>\$183,825</b>	<b>\$192,316</b>	<b>\$200,808</b>	<b>\$209,299</b>	<b>\$217,790</b>	<b>\$1,004,038</b>

**POLICE DEVELOPMENT FEE**

As shown at the bottom of the figure below, the net capital cost is \$44.43 per person and \$74.72 per nonresidential vehicle trip.

**Figure 41: Police Development Fee Calculation Factors**

**Persons Per Household**

Single Family

2.86

Multi-family

2.30

**Weekday Vehicle Trip Ends per Square Foot/Hotel Room**

Commercial / Shopping Center 0-100,000 SF

0.06791

Commercial / Shopping Center 100,001+ SF

0.05328

Office / Institutional (all sizes)

0.02266

Business Park

0.01276

Light Industrial

0.00697

Warehousing

0.00356

Manufacturing

0.00382

Hotel (per room)

5.63

**Trip Adjustment Factors**

Commercial / Shopping Center 0-100,000 SF

21%

Commercial / Shopping Center 100,001+ SF

24%

All Other Nonresidential Development

50%

**Cost Summary**

Facilities

Per Person

\$5.24

Per Trip

\$5.32

Training Facility

\$19.89

\$22.55

Vehicles

\$19.31

\$46.85

Total Net Capital Cost

\$44.43

\$74.72

For residential land uses, persons per household are multiplied by the capital cost per person (for single family unit:  $2.86 \times \$44.43 = \$127$ ). Nonresidential development fees are calculated by multiplying the number of vehicle trips per square foot or hotel room by the capital cost per trip (for Commercial/Shopping Center with less than 100,000 square feet:  $0.06791 \times 0.21 \times \$74.72 = \$1.07$  per square foot).

Figure 42: Police Development Fee Schedule

<u>Residential</u>	<u>Per Housing Unit</u>
Single Family	\$127
Multi-family	\$102
<u>Nonresidential</u>	<u>Per Square Foot/Hotel Room</u>
Commercial / Shopping Center 0-100,000 SF	\$1.07
Commercial / Shopping Center 100,001+ SF	\$0.96
Office / Institutional (all sizes)	\$0.85
Business Park	\$0.48
Light Industrial	\$0.26
Warehousing	\$0.13
Manufacturing	\$0.14
Hotel (per room)	\$210

## Fire

### OVERVIEW

The Fire IIP and Development Fees include components for fire stations, the Fire Department's share of the City Services Complex, the Fire Department's share of the Training Facility, fire apparatus, and communications equipment. The necessary public services of the Fire IIP and Development Fees associated with fire functions are allocated to both residential and nonresidential development. Residential demand is measured in terms of population while nonresidential demand is measured using vehicle trips. Nonresidential vehicle trips are used as the best measure of the presence of people at nonresidential land uses.

The benefit area for the Fire IIP and Development Fees is citywide as the demands for infrastructure, LOS, infrastructure costs, and benefits are uniform throughout the community.

### PROPORTIONATE SHARE

Calls for service data provided by the Fire Department are used to determine the relative demand for service from residential and nonresidential development. As shown below, the proportionate share factor for residential development is 72%, with nonresidential development accounting for 28% of the demand for fire infrastructure. Road related calls are omitted because they cannot be allocated to residential or nonresidential development in that a person could be on their way home, or to work, or passing through the City.

**Figure 43: Fire Proportionate Share Factors**

Residential	1,744	72%
Nonresidential	680	28%
<b>TOTAL</b>	<b>2,424</b>	<b>100%</b>

Source: City of Maricopa Fire Department for FY2009.  
Does not include road related calls for service or calls to unidentifiable addresses.

### FIRE SHARE OF CITY SERVICES COMPLEX

#### *LOS Analysis*

The City is planning to construct a 50,000 square foot City Services Complex, including 813 square feet for the Fire Department. This facility is planned to meet the demands of both existing development as well as providing capacity to new development through FY2032. Thus, the plan-based methodology is used to calculate this component of the Fire IIP and Development Fee.

This facility will provide the same LOS to both existing and new development through FY2032. The projected population in FY2032 is 163,890 persons of which 40,811 currently reside in the City with new development adding 123,079 persons over the next twenty three years. The LOS

for existing development is calculated as follows:  $((813 \text{ square feet} \times 0.72) \times 0.25) / 40,811$  persons in FY2010 = 0.0036 square feet per person. The LOS for new development is calculated as follows:  $((813 \text{ square feet} \times 0.72) \times 0.75) / 123,079$  new persons added during FY2010-FY2032 = 0.0036 square feet per person. This calculation is repeated for nonresidential development using the same formula and the variables for existing and new nonresidential development. The planned LOS for existing nonresidential development is 0.0012 square feet per nonresidential vehicle trip. The planned LOS for new nonresidential development is 0.0012 square feet per nonresidential vehicle trip.

**Figure 44: Fire Share of Administration Facility Current and Planned LOS Analysis**

		<i>Square Feet*</i>
City Services Complex (Fire Portion)		813
Proportionate Share		
Residential		72%
Nonresidential		28%
Development to be Served		
Residential		
Existing Persons	40,811	25%
New Population FY10-FY32	123,079	75%
TOTAL	163,890	100%
Nonresidential		
Existing Trips	19,982	10%
New Trips FY10-FY32	171,565	90%
TOTAL	191,547	100%
LOS for Current Development		
Square Feet per Person		0.0036
Square Feet per Nonresidential Trip		0.0012
LOS for Planned Development		
Square Feet per Person		0.0036
Square Feet per Nonresidential Trip		0.0012

\* City of Maricopa Capital Improvements Plan and TischlerBise analysis of City of Maricopa Governmental Center: Site Location Analysis, HDR/Studio Concepts.

*Cost Analysis*

The Fire Department’s portion of the planned cost of the new City Services Complex totals \$250,457. The planned cost per person is the same for both existing and new development through FY2032. The projected population in FY2032 is 163,890 persons of which 40,811 currently reside in the City with new development adding 123,079 persons over the next twenty three years. The cost per person for existing development is calculated as follows:  $((\$250,457 \times 0.72) \times 0.25) / 40,811$  persons in FY2010 = \$1.10 per person. The cost per person for new development is calculated as follows:  $((\$250,457 \times 0.72) \times 0.75) / 123,079$  additional persons through FY2032 = \$1.10 per person. This calculation is repeated for nonresidential development using the same formula and the variables for existing and new nonresidential development. The planned cost for existing nonresidential development is \$0.37 per nonresidential vehicle trip. The planned cost for new nonresidential development is \$0.37 per nonresidential vehicle trip.

**Figure 45: Fire Share of Administration Facility Cost Analysis**

	<i>Cost*</i>
City Services Complex (Fire Portion)	\$250,457
Proportionate Share	
Residential	72%
Nonresidential	28%
Residential Development to be Served	
Existing Persons	40,811      25%
New Population FY10-FY32	123,079      75%
<b>TOTAL</b>	<b>163,890      100%</b>
Nonresidential Development to be Served	
Existing Trips	19,982      10%
New Trips FY10-FY32	171,565      90%
<b>TOTAL</b>	<b>191,547      100%</b>
Cost for Existing Development	
Per Person	\$1.10
Per Nonresidential Trip	\$0.37
Cost for New Development	
Per Person	\$1.10
Per Nonresidential Trip	\$0.37

\* City of Maricopa *Capital Improvements Plan*.

*Infrastructure Improvement Plan*

The IIP for the Fire Department’s share of the City Services Complex is shown below. The IIP is calculated using the development projections from Appendix A at the back of the report and the LOS and cost figures listed above. Over the next five years, there is a projected increase of 13,597

persons and 15,829 nonresidential vehicle trips. Based on the planned LOS, this amount of new residential development will require approximately 49 square feet of facilities, while new nonresidential development will require approximately 19 square feet of facilities. The projected cost of this demanded infrastructure over the next five years totals \$14,950 for new residential development and \$5,806 for new nonresidential development.

The City's *Capital Improvements Plan* indicates the City Services Complex project will be funded on a cash basis with a combination of Capital Reserve Funds and Fire Development Fees.

**Figure 46: Fire Share of Administration Facility IIP**

<b>NEW DEVELOPMENT PROJECTIONS</b>							
	<i>Fiscal Year</i>	2010	2011	2012	2013	2014	2015
Population Projections		40,811	43,530	46,250	48,969	51,688	54,408
Nonresidential Vehicle Trip Projections		19,982	22,785	25,770	28,935	32,283	35,811
							<i>5 Year Total</i>
Net Change Population During Fiscal Year		2,719	2,719	2,719	2,719	2,719	13,597
Net Change Jobs During Fiscal Year		2,803	2,985	3,166	3,347	3,528	15,829
<b>CITY COMPLEX (FIRE DEPARTMENT SHARE)</b>							
<i>Future Necessary Public Services Required by New Development</i>							
	<i>Fiscal Year</i>	2010	2011	2012	2013	2014	
Planned LOS per Person (SF per Person)		0.0036	0.0036	0.0036	0.0036	0.0036	
Planned LOS per Nonres. Vehicle Trip (SF per Nonresidential Vehicle Trip)		0.0012	0.0012	0.0012	0.0012	0.0012	
							<i>5 Year Total</i>
Square Feet to be Utilized by New Res. Development		10	10	10	10	10	49
Square Feet to be Utilized by New Nonreses. Development		3	4	4	4	4	19
<b>TOTAL SQUARE FEET TO BE UTILIZED BY NEW DEVELOPMENT</b>		<b>13</b>	<b>13</b>	<b>13</b>	<b>14</b>	<b>14</b>	<b>67</b>
<i>Cost Forecast for Infrastructure Associated with Future Necessary Public Services Required by New Development</i>							
Planned Cost per Person		\$1.10	\$1.10	\$1.10	\$1.10	\$1.10	
Planned Cost per Job		\$0.37	\$0.37	\$0.37	\$0.37	\$0.37	
							<i>5 Year Total</i>
Cost to Serve New Res. Development		\$2,990	\$2,990	\$2,990	\$2,990	\$2,990	\$14,950
Cost to Serve New Nonres. Development		\$1,028	\$1,095	\$1,161	\$1,228	\$1,294	\$5,806
<b>TOTAL COST TO SERVE NEW DEVELOPMENT</b>		<b>\$4,018</b>	<b>\$4,085</b>	<b>\$4,151</b>	<b>\$4,218</b>	<b>\$4,284</b>	<b>\$20,756</b>
<i>Planned Projects from CIP</i>							
Fire Department Share of City Complex		\$0	\$0	\$22,769	\$113,844	\$113,844	\$250,457
<i>Revenue Forecast and Financing Assumptions for Future Necessary Public Services</i>							
							<i>5 Year Total</i>
Fire Development Fees		\$4,018	\$4,085	\$4,151	\$4,218	\$4,284	\$20,756
Transfer from Capital Reserve		\$0	\$0	\$10,515	\$109,627	\$109,560	\$229,702
<b>TOTAL</b>		<b>\$4,018</b>	<b>\$4,085</b>	<b>\$14,666</b>	<b>\$113,844</b>	<b>\$113,844</b>	<b>\$250,457</b>

## FIRE DEPARTMENT SHARE OF TRAINING FACILITY

### *LOS Analysis*

The City currently does not have a public safety training facility. The City is planning to construct a 30 acre public safety training facility, of which the Fire Department will utilize 50% or 15 acres. This facility is planned to meet the demands of both existing development as well as providing capacity to new development through FY2035. Thus, the plan-based methodology is used to calculate this component of the Fire IIP and Development Fee.

This facility will provide the same LOS to both existing and new development through FY2035. The projected population in FY2035 is 182,834 persons of which 40,811 currently reside in the City with new development adding 142,023 persons over the next twenty five years. The LOS for existing development is calculated as follows:  $((15 \text{ acres} \times 0.72) \times 0.22) / 40,811 \text{ persons in FY2010} = 0.000059 \text{ acres per person}$ . The LOS for new development is calculated as follows:  $((15 \text{ acres} \times 0.72) \times 0.78) / 142,023 \text{ new persons added during FY2010-FY2035} = 0.000059 \text{ acres per person}$ . This calculation is repeated for nonresidential development using the same formula and the variables for existing and new nonresidential development. The planned LOS for existing nonresidential development is 0.000019 acres per nonresidential vehicle trip. The planned LOS for new nonresidential development is 0.000019 acres per nonresidential vehicle trip.

**Figure 47: Fire Share of Training Facility Current and Planned LOS**

	<i>Acres*</i>	
Regional Training Facility (Fire share)		15
Proportionate Share		
Residential		72%
Nonresidential		28%
Development to be Served		
Residential		
Existing Persons	40,811	22%
New Population FY10-FY35	142,023	78%
TOTAL	182,834	100%
Nonresidential		
Existing Trips	19,982	9%
New Trips FY10-FY35	203,577	91%
TOTAL	223,559	100%
LOS for Current Development		
Acres per Person		0.000059
Acres per Nonresidential Trip		0.000019
LOS for Planned Development		
Acres per Person		0.000059
Acres per Nonresidential Trip		0.000019

\* City of Maricopa Capital Improvements Plan.

*Cost Analysis*

The Fire Department's portion of the planned cost of the training facility totals \$7,995,000. The planned cost per person is the same for both existing and new development through FY2035. The projected population in FY2035 is 182,834 persons of which 40,811 currently reside in the

City with new development adding 142,023 persons over the next twenty five years. The cost per person for existing development is calculated as follows:  $((\$7,995,000 \times 0.72) \times 0.22) / 40,811$  persons in FY2010 = \$31.30 per person. The cost per person for new development is calculated as follows:  $((\$7,995,000 \times 0.72) \times 0.78) / 142,023$  additional persons through FY2035 = \$31.30 per person. This calculation is repeated for nonresidential development using the same formula and the variables for existing and new nonresidential development. The planned cost for existing nonresidential development is \$11.65 per nonresidential vehicle trip. The planned cost for new nonresidential development is \$11.65 per nonresidential vehicle trip.

**Figure 48: Fire Share of Training Facility Cost Analysis**

		<i>Cost*</i>
Regional Training Facility (Fire share)		\$7,955,000
Proportionate Share		
Residential		72%
Nonresidential		28%
Residential Development to be Served		
Existing Persons	40,811	22%
New Population FY10-FY32	142,023	78%
TOTAL	182,834	100%
Nonresidential Development to be Served		
Existing Trips	19,982	10%
New Trips FY10-FY32	171,565	90%
TOTAL	191,547	100%
Cost for Existing Development		
Per Person		\$31.30
Per Nonresidential Trip		\$11.65
Cost for New Development		
Per Person		\$31.30
Per Nonresidential Trip		\$11.65

\* City of Maricopa Capital Improvements Plan .

*Infrastructure Improvement Plan*

The IIP for the Fire Department’s share of the training facility is shown below. The IIP is calculated using the development projections from Appendix A at the back of the report and the LOS and cost figures listed above. Over the next five years, there is a projected increase of 13,597 persons and 15,829 nonresidential vehicle trips. Based on the planned LOS, this amount of new residential development will require approximately 0.8 acres, while new nonresidential development will require approximately 0.3 acres. The projected cost of this demanded infrastructure over the next five years totals \$425,631 for new residential development and \$184,415 for new nonresidential development.

The City's *Capital Improvements Plan* indicates the training facility will be funded on a cash basis with Police and Fire Development Fees.

**Figure 49: Fire Share of Training Facility IIP**

<b>NEW DEVELOPMENT PROJECTIONS</b>							
	<i>Fiscal Year</i>	2010	2011	2012	2013	2014	2015
Population Projections		40,811	43,530	46,250	48,969	51,688	54,408
Nonresidential Vehicle Trip Projections		19,982	22,785	25,770	28,935	32,283	35,811
						<i>5 Year Total</i>	
Net Change Population During Fiscal Year		2,719	2,719	2,719	2,719	2,719	13,597
Net Change Jobs During Fiscal Year		2,803	2,985	3,166	3,347	3,528	15,829
<b>REGIONAL TRAINING CENTER (FIRE DEPARTMENT SHARE)</b>							
<i>Future Necessary Public Services Required by New Development</i>							
	<i>Fiscal Year</i>	2010	2011	2012	2013	2014	
Planned LOS per Person (Acres per Person)		0.000059	0.000059	0.000059	0.000059	0.000059	
Planned LOS per Nonres. Vehicle Trip (Acres per Nonres. Vehicle Trip)		0.000019	0.000019	0.000019	0.000019	0.000019	
						<i>5 Year Total</i>	
Acres to be Utilized by New Res. Development		0.2	0.2	0.2	0.2	0.2	0.8
Acres to be Utilized by New Nonres. Development		0.1	0.1	0.1	0.1	0.1	0.3
<b>TOTAL ACREAGE TO BE UTILIZED BY NEW DEVELOPMENT</b>		<b>0.2</b>	<b>0.2</b>	<b>0.2</b>	<b>0.2</b>	<b>0.2</b>	<b>1.1</b>
<i>Cost Forecast for Infrastructure Associated with Future Necessary Public Services Required by New Development</i>							
Planned Cost per Person		\$31.30	\$31.30	\$31.30	\$31.30	\$31.30	
Planned Cost per Nonres. Vehicle Trip		\$11.65	\$11.65	\$11.65	\$11.65	\$11.65	
						<i>5 Year Total</i>	
Cost to Serve New Res. Development		\$85,126	\$85,126	\$85,126	\$85,126	\$85,126	\$425,631
Cost to Serve New Nonres. Development		\$32,660	\$34,771	\$36,883	\$38,995	\$41,106	\$184,415
<b>TOTAL COST TO SERVE NEW DEVELOPMENT</b>		<b>\$117,786</b>	<b>\$119,897</b>	<b>\$122,009</b>	<b>\$124,121</b>	<b>\$126,233</b>	<b>\$610,046</b>
<i>Planned Projects from CIP</i>							
						<i>5 Year Total</i>	
Regional Training Center (Fire Department Share)		\$0	\$0	\$0	\$0	\$7,955,000	\$7,955,000
<i>Revenue Forecast and Financing Assumptions for Future Necessary Public Services</i>							
						<i>5 Year Total</i>	
Fire Development Fees		\$117,786	\$119,897	\$122,009	\$124,121	\$126,233	\$610,046
<b>TOTAL</b>		<b>\$117,786</b>	<b>\$119,897</b>	<b>\$122,009</b>	<b>\$124,121</b>	<b>\$126,233</b>	<b>\$610,046</b>

## FIRE STATIONS

### *LOS Analysis*

The City currently has 24,512 square feet of fire stations serving the current development base. The current residential LOS is 0.43 square feet per person. The residential LOS is calculated using the following formula:  $(24,512 \text{ square feet} \times 0.72) / 41,811 \text{ persons} = 0.43 \text{ square feet per person}$ . The current nonresidential LOS is 0.34 square feet per vehicle trip. The nonresidential LOS is calculated using the following formula:  $(24,512 \text{ square feet} \times 0.28) / 19,982 \text{ vehicle trips} = 0.34 \text{ square feet per vehicle trip}$ .

**Figure 50: Fire Stations Current LOS Analysis**

	<i>Square Feet</i>
Station 571	11,325
Station 572	2,600
Station 574	8,001
Station 575	2,586
<b>TOTAL</b>	<b>24,512</b>
Proportionate Share	
Residential	72%
Nonresidential	28%
Current Demand Units Served	
Residential - Population	40,811
Nonresidential - Vehicle Trips	19,982
Current LOS	
Residential - square feet per person	0.43
Nonresidential - square feet per trip	0.34

Station 572 currently encompasses 2,600 square feet. The City is planning to replace and expand Station 572 to a total of 11,037 square feet. The square footage that is being replaced is the result of existing development which the 8,437 square feet of new space is the result of new development. Thus only the expanded square footage and costs are included in the Fire IIP and Development Fee.

To maintain the current LOS of 0.43 square feet per person and 0.34 square feet per nonresidential vehicle, the additional 8,437 square feet of Station 572 will serve an additional 14,047 people and 6,878 nonresidential vehicle trips. The additional number of persons to be served is calculated as follows:  $(8,437 \text{ square feet} \times 0.72) / 0.43 \text{ square feet per person} = 14,047 \text{ persons}$ . The additional number of nonresidential vehicle trips to be served is calculated as follows:  $(8,437 \text{ square feet} \times 0.28) / 0.34 \text{ square feet per nonresidential vehicle trip} = 6,878 \text{ nonresidential vehicle trips}$ .

**Figure 51: Fire Stations Planned LOS Analysis**

	<i>Square Feet*</i>
Station 572**	8,437
Proportionate Share	
Residential	72%
Nonresidential	28%
LOS for Current Development	
Residential - square feet per person	0.43
Nonresidential - square feet per trip	0.34
Additional Development to be Served	
Residential - persons	14,047
Nonresidential - trips	6,878
LOS for New Development	
Residential - square feet per person	0.43
Nonresidential - square feet per trip	0.34

\* City of Maricopa *Capital Improvements Plan*.

\*\* These figures represent only net new square footage and do not include square footage associated with replacement of existing temporary stations.

*Cost Analysis*

The total cost of Station 572 is \$5,000,000. Based on the percentage of existing square footage to new square footage, new development's share of the cost is 76% or \$3,522,488. The cost per person is \$180.42 which is calculated as follows:  $(\$3,522,488 \times 0.72) / 14,047 \text{ persons} = \$180.42$  per person. The cost per nonresidential vehicle trip is \$143.68 which is calculated as follows:  $(\$3,522,488 \times 0.28) / 6,878 \text{ vehicle trips} = \$143.68$  per vehicle trip.

**Figure 52: Fire Stations Cost Analysis**

	<i>Cost*</i>
Station 572**	\$3,522,488
Proportionate Share	
Residential	72%
Nonresidential	28%
Additional Development to be Served	
Residential - persons	14,047
Nonresidential - trips	6,878
Cost per	
Residential - persons	\$180.42
Nonresidential - trips	\$143.68

\* City of Maricopa Capital Improvements Plan.

\*\* These figures represent only the cost of net new square footage and do not include costs associated with replacement of existing temporary stations.

*Infrastructure Improvement Plan*

The IIP for fire stations is shown below. The IIP is calculated using the development projections from Appendix A at the back of the report and the LOS and cost figures listed above. Over the next five years, there is a projected increase of 13,597 persons and 15,829 nonresidential vehicle trips. Based on the planned LOS, this amount of residential development will utilize approximately 5,876 square feet of station facilities while nonresidential development will utilize approximately 5,447 square feet. Over the next five years, the projected cost of this demanded infrastructure totals \$2,453,085 for residential development and \$2,274,247 for nonresidential development.

The City's Capital Improvements Plan indicates the station will be funded on a cash basis with Fire Development Fees and transfers from the Capital Reserve fund.

**Figure 53: Fire Stations IIP**

<b>NEW DEVELOPMENT PROJECTIONS</b>							
	<i>Fiscal Year</i>	2010	2011	2012	2013	2014	2015
Population Projections		40,811	43,530	46,250	48,969	51,688	54,408
Nonresidential Vehicle Trip Projections		19,982	22,785	25,770	28,935	32,283	35,811
							<i>5 Year Total</i>
Net Change Population During Fiscal Year		2,719	2,719	2,719	2,719	2,719	13,597
Net Change Jobs During Fiscal Year		2,803	2,985	3,166	3,347	3,528	15,829

  

<b>FIRE STATIONS</b>							
<i>Future Necessary Public Services Required by New Development</i>							
	<i>Fiscal Year</i>	2010	2011	2012	2013	2014	
Planned LOS per Person (SF per Person)		0.43	0.43	0.43	0.43	0.43	
Planned LOS per Nonres. Vehicle Trip (SF per Nonres. Vehicle Trip)		0.34	0.34	0.34	0.34	0.34	
							<i>5 Year Total</i>
Square Feet to be Utilized by New Res. Development		1,175	1,175	1,175	1,175	1,175	5,876
Square Feet to be Utilized by New Nonres. Development		965	1,027	1,089	1,152	1,214	5,447
<b>TOTAL SQUARE FEET TO BE UTILIZED BY NEW DEVELOPMENT</b>		<b>2,140</b>	<b>2,202</b>	<b>2,265</b>	<b>2,327</b>	<b>2,389</b>	<b>11,323</b>

  

<i>Cost Forecast for Infrastructure Associated with Future Necessary Public Services Required by New Development</i>							
		2010	2011	2012	2013	2014	
Planned Cost per Person		\$180.42	\$180.42	\$180.42	\$180.42	\$180.42	
Planned Cost per Nonres. Vehicle Trip		\$143.68	\$143.68	\$143.68	\$143.68	\$143.68	
							<i>5 Year Total</i>
Cost to Serve New Res. Development		\$490,617	\$490,617	\$490,617	\$490,617	\$490,617	\$2,453,085
Cost to Serve New Nonres. Development		\$402,765	\$428,807	\$454,849	\$480,891	\$506,934	\$2,274,247
<b>TOTAL COST TO SERVE NEW DEVELOPMENT</b>		<b>\$893,382</b>	<b>\$919,424</b>	<b>\$945,466</b>	<b>\$971,508</b>	<b>\$997,550</b>	<b>\$4,727,331</b>

  

<i>Planned Projects from CIP</i>							
		2010	2011	2012	2013	2014	2015
Station 572		\$0	\$0	\$0	\$0	\$5,000,000	\$5,000,000
							<i>5 Year Total</i>

  

<i>Revenue Forecast and Financing Assumptions for Future Necessary Public Services</i>							
		2010	2011	2012	2013	2014	2015
Fire Development Fees		\$893,382	\$919,424	\$945,466	\$971,508	\$997,550	\$4,727,331
Transfer from Capital Reserve		\$0	\$0	\$0	\$0	\$272,669	\$272,669
<b>TOTAL</b>		<b>\$893,382</b>	<b>\$919,424</b>	<b>\$945,466</b>	<b>\$971,508</b>	<b>\$1,270,219</b>	<b>\$5,000,000</b>

**FIRE APPARATUS**

*LOS Analysis*

The City currently has a fleet of 19 pieces of fire apparatus serving the current development base of 41,811 persons and 19,982 nonresidential vehicle trips. The City plans to maintain the current LOS for fire apparatus, so the incremental expansion method is used to calculate this component of the Fire IIP and Development Fee.

Based on the size of the current fleet, the proportionate share factors, and current development base, the current LOS for apparatus is 0.0003 pieces of apparatus per person ((19 vehicles x 0.72)/41,811 persons = 0.0003). This calculation is repeated for nonresidential development resulting in a LOS of 0.0003 vehicles per vehicle trip ((19 vehicles x 0.28)/19,982 vehicle trips = 0.0003).

**Figure 54: Fire Apparatus Current LOS**

<i>Apparatus/Equipment</i>	<i>Units</i>
Engines	6
Ladder Truck	1
Water Tender	1
Ford F250	5
Ford Expedition	2
Chevrolet 2500HD	1
Dodge Charger	1
Brush Truck	1
SCBA Trailer	1
<b>TOTAL</b>	<b>19</b>
Proportionate Share	
Residential	72%
Nonresidential	28%
Current Demand Units Served	
Residential - Population	40,811
Nonresidential - Vehicle Trips	19,982
Current LOS	
Residential - apparatus per person	0.0003
Nonresidential - apparatus per trip	0.0003

*Cost Analysis*

The City’s Fire Department estimates the current fleet of apparatus to have a replication value of \$5,458,000, an average of \$287,263 per unit. Based on the buy-in LOS of 0.0003 units per person and 0.0003 units per vehicle trip, and an average cost of \$287,263 per piece of apparatus, the cost per demand unit is \$96.22 per person (0.0003 units per person x \$287,263 per unit) and \$76.63 per vehicle trip (0.0003 vehicles per vehicle trip x \$287,263 per unit).

**Figure 55: Fire Apparatus Cost Analysis**

<i>Apparatus/Equipment</i>	<i>Units</i>	<i>Cost/ Unit*</i>	<i>Total Replication Value</i>
Engines	6	\$485,000	\$2,910,000
Ladder Truck	1	\$1,300,000	\$1,300,000
Water Tender	1	\$304,000	\$304,000
Ford F250	5	\$90,000	\$450,000
Ford Expedition	2	\$50,000	\$100,000
Chevrolet 2500HD	1	\$35,000	\$35,000
Dodge Charger	1	\$40,000	\$40,000
Brush Truck	1	\$259,000	\$259,000
SCBA Trailer	1	\$60,000	\$60,000
<b>TOTAL</b>	<b>19</b>		<b>\$5,458,000</b>

Average Cost per Piece of Apparatus => \$287,263

Current LOS

Residential - apparatus per person	0.0003
Nonresidential - apparatus per trip	0.0003

Cost Factor

Average cost per piece of apparatus	\$287,263
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Cost per

Person	\$96.22
Nonresidential Trip	\$76.63

\* City of Maricopa Fire Department. Includes all equipment necessary to place the apparatus in service.

*Infrastructure Improvement Plan*

The IIP for fire apparatus is shown below. The IIP is calculated using the development projections from Appendix A at the back of the report and the LOS and cost figures listed above. Over the next five years, there is a projected increase of 13,597 persons and 15,829 nonresidential vehicle trips. Based on the current LOS, this amount of residential development will utilize approximately 4.55 units while nonresidential development will utilize 4.22 units. Over the next five years, the projected cost of this demanded infrastructure totals \$1,308,296 for residential development and \$1,212,917 for nonresidential development.

For fire apparatus, the City plans to use only development fees to pay for the new capacity added for new development. Since the incremental expansion methodology has been used to calculate this component, development fees are the only revenue source used to increase the capacity of fire apparatus. The IIP assumes cash financing on a pay-as-you-go (PAYGO) basis.

**Figure 56: Fire Apparatus IIP**

<b>NEW DEVELOPMENT PROJECTIONS</b>							
	<i>Fiscal Year</i>	2010	2011	2012	2013	2014	2015
Population Projections		40,811	43,530	46,250	48,969	51,688	54,408
Nonresidential Vehicle Trip Projections		19,982	22,785	25,770	28,935	32,283	35,811
							<i>5 Year Total</i>
Net Change Population During Fiscal Year		2,719	2,719	2,719	2,719	2,719	13,597
Net Change Jobs During Fiscal Year		2,803	2,985	3,166	3,347	3,528	15,829

  

<b>FIRE APPARATUS</b>							
<i>Future Necessary Public Services Required by New Development</i>							
	<i>Fiscal Year</i>	2010	2011	2012	2013	2014	
Current LOS per Person (Vehicles per Person)		0.0003	0.0003	0.0003	0.0003	0.0003	
Current LOS per Nonres. Vehicle Trip (Vehicles per Nonresidential Vehicle Trip)		0.0003	0.0003	0.0003	0.0003	0.0003	
							<i>5 Year Total</i>
Vehicles Demanded by New Res. Development		0.91	0.91	0.91	0.91	0.91	4.55
Vehicles Demanded by New Nonreses. Development		0.75	0.80	0.84	0.89	0.94	4.22
<b>TOTAL VEHICLES DEMANDED BY NEW DEVELOPMENT</b>		<b>1.66</b>	<b>1.71</b>	<b>1.76</b>	<b>1.80</b>	<b>1.85</b>	<b>8.78</b>
<i>Cost Forecast for Infrastructure Associated with Future Necessary Public Services Required by New Development</i>							
Planned Cost per Person		\$96.22	\$96.22	\$96.22	\$96.22	\$96.22	
Planned Cost per Nonres. Vehicle Trip		\$76.63	\$76.63	\$76.63	\$76.63	\$76.63	
							<i>5 Year Total</i>
Cost to Serve New Res. Development		\$261,659	\$261,659	\$261,659	\$261,659	\$261,659	\$1,308,296
Cost to Serve New Nonres. Development		\$214,805	\$228,694	\$242,583	\$256,472	\$270,361	\$1,212,917
<b>TOTAL COST TO SERVE NEW DEVELOPMENT</b>		<b>\$476,465</b>	<b>\$490,353</b>	<b>\$504,242</b>	<b>\$518,131</b>	<b>\$532,020</b>	<b>\$2,521,212</b>
<i>Revenue Forecast and Financing Assumptions for Future Necessary Public Services</i>							
							<i>5 Year Total</i>
Fire Development Fees		\$476,465	\$490,353	\$504,242	\$518,131	\$532,020	\$2,521,212
<b>TOTAL</b>		<b>\$476,465</b>	<b>\$490,353</b>	<b>\$504,242</b>	<b>\$518,131</b>	<b>\$532,020</b>	<b>\$2,521,212</b>

## FIRE COMMUNICATIONS EQUIPMENT

### *Cost Analysis*

The City plans to spend \$2,386,000 for communications equipment for the Fire Department to serve both existing and new development. This equipment is expected to provide sufficient capacity through FY2025. The planned cost per person is the same for both existing and new development through FY2025. The projected population in FY2025 is 114,327 persons of which 40,811 currently reside in the City with new development adding 73,516 persons over the next fifteen years. The cost per person for existing development is calculated as follows:  $((\$2,386,000 \times 0.72) \times 0.36) / 40,811$  persons in FY2010 = \$15.02 per person. The cost per person for new development is calculated as follows:  $((\$2,386,000 \times 0.72) \times 0.28) / 73,516$  additional persons through FY2025 = \$15.02 per person. This calculation is repeated for nonresidential development using the same formula and the variables for existing and new nonresidential development. The planned cost for existing nonresidential development is \$5.97 per nonresidential vehicle trip. The planned cost for new nonresidential development is \$5.97 per nonresidential vehicle trip.

**Figure 57: Fire Communications Equipment Cost Analysis**

		<i>Cost*</i>
Records Management System		\$80,000
Electronic Reporting System		\$106,000
Radio Infrastructure (towers and repeaters)		<u>\$2,200,000</u>
<b>TOTAL</b>		<b><u>\$2,386,000</u></b>
Proportionate Share		
Residential		72%
Nonresidential		28%
Residential Development to be Served		
Existing Persons	40,811	36%
New Population FY10-FY25	<u>73,516</u>	<u>64%</u>
<b>TOTAL</b>	<b>114,327</b>	<b>100%</b>
Nonresidential Development to be Served		
Existing Trips	19,982	18%
New Trips FY10-FY25	<u>92,135</u>	<u>82%</u>
<b>TOTAL</b>	<b>112,116</b>	<b>100%</b>
Cost for Existing Development		
Per Person		\$15.02
Per Nonresidential Trip		\$5.97
Cost for New Development		
Per Person		\$15.02
Per Nonresidential Trip		\$5.97

\* City of Maricopa Capital Improvements Plan .

*Infrastructure Improvement Plan*

The IIP for fire communications equipment is shown below. The IIP is calculated using the development projections from Appendix A at the back of the report and the LOS and cost figures listed above. Over the next five years, there is a projected increase of 13,597 persons and 15,829 jobs. Based on the current LOS, this amount of residential development will require approximately \$204,161 of fire communications equipment over the next five years. Nonresidential development will require \$94,500 of fire communications equipment over the next five years.

The City's Capital Improvements Plan indicates these projects will be funded on a cash basis with Fire Development Fees.

**Figure 58: Fire Communications Equipment IIP**

<b>NEW DEVELOPMENT PROJECTIONS</b>							
	<i>Fiscal Year</i>	2010	2011	2012	2013	2014	2015
Population Projections		40,811	43,530	46,250	48,969	51,688	54,408
Nonresidential Vehicle Trip Projections		19,982	22,785	25,770	28,935	32,283	35,811
							<i>5 Year Total</i>
Net Change Population During Fiscal Year		2,719	2,719	2,719	2,719	2,719	13,597
Net Change Jobs During Fiscal Year		2,803	2,985	3,166	3,347	3,528	15,829

  

<b>FIRE COMMUNICATIONS EQUIPMENT</b>							
<i>Future Necessary Public Services and Cost Forecast for Infrastructure Required by New Development</i>							
	<i>Fiscal Year</i>	2010	2011	2012	2013	2014	
Planned Cost per Person		\$15.02	\$15.02	\$15.02	\$15.02	\$15.02	
Planned Cost per Nonresidential Vehicle Trip		\$5.97	\$5.97	\$5.97	\$5.97	\$5.97	
							<i>5 Year Total</i>
Cost to Serve New Res. Development		\$40,832	\$40,832	\$40,832	\$40,832	\$40,832	\$204,161
Cost to Serve New Nonres. Development		\$16,736	\$17,818	\$18,900	\$19,982	\$21,064	\$94,500
<b>TOTAL COST TO SERVE NEW DEVELOPMENT</b>		<b>\$57,568</b>	<b>\$58,650</b>	<b>\$59,732</b>	<b>\$60,814</b>	<b>\$61,896</b>	<b>\$298,661</b>
							<i>5 Year Total</i>
<i>Planned Projects from CIP</i>							
Electronic Reporting System		\$0	\$0	\$0	\$0	\$106,000	\$106,000
Records Management System		\$0	\$0	\$0	\$0	\$80,000	\$80,000
Radio Infrastructure (towers and repeaters)		\$0	\$0	\$2,200,000	\$0	\$0	\$2,200,000
<b>TOTAL COST TO SERVE NEW DEVELOPMENT</b>		<b>\$0</b>	<b>\$0</b>	<b>\$2,200,000</b>	<b>\$0</b>	<b>\$186,000</b>	<b>\$2,386,000</b>
							<i>5 Year Total</i>
<i>Revenue Forecast and Financing Assumptions for Future Necessary Public Services</i>							
Fire Development Fees		\$57,568	\$58,650	\$59,732	\$60,814	\$61,896	\$298,661
<b>TOTAL</b>		<b>\$57,568</b>	<b>\$58,650</b>	<b>\$59,732</b>	<b>\$60,814</b>	<b>\$61,896</b>	<b>\$298,661</b>

**FIRE DEVELOPMENT FEES**

As shown at the bottom of the figure below, the net capital cost is \$324.06 per person and \$238.29 per nonresidential vehicle trip.

**Figure 59: Fire Development Fee Calculation Factors**

<b>Persons Per Household</b>		
Single Family	2.86	
Multi-family	2.30	
<b>Weekday Vehicle Trip Ends per Square Foot/Hotel Room</b>		
Commercial / Shopping Center 0-100,000 SF		0.06791
Commercial / Shopping Center 100,001+ SF		0.05328
Office / Institutional (all sizes)		0.01101
Business Park		0.01276
Light Industrial		0.00697
Warehousing		0.00356
Manufacturing		0.00382
Hotel (per room)		5.63
<b>Trip Adjustment Factors</b>		
Commercial / Shopping Center 0-100,000 SF		21%
Commercial / Shopping Center 100,001+SF		24%
All Other Nonresidential Development		50%
<b>Cost Summary</b>		
	<u>Per Person</u>	<u>Per Trip</u>
Administration Facility	\$1.10	\$0.37
Stations	\$180.42	\$143.68
Training Facility	\$31.30	\$11.65
Apparatus and Vehicles	\$96.22	\$76.63
Communications Equipment	\$15.02	\$5.97
Total Net Capital Cost	\$324.06	\$238.29

The Fire Development Fees are shown below. For residential land uses, persons per household are multiplied by the capital cost per person (for single family unit:  $2.86 \times \$324.06 = \$928$ ). Nonresidential development fees are calculated by multiplying the number of vehicle trips per square foot or hotel room by its corresponding adjustment factor and by the capital cost per trip (for Commercial/Shopping Center with less than 100,000 square feet:  $0.06791 \times 0.21 \times \$238.29 = \$3.40$  per square foot).

Figure 60: Fire Development Fee Schedule

<u>Residential</u>	<u>Per Housing Unit</u>
Single Family	\$928
Multi-family	\$745
<u>Nonresidential</u>	<u>Per Square Foot/Hotel Room</u>
Commercial / Shopping Center 0-100,000 SF	\$3.40
Commercial / Shopping Center 100,001-200,000 SF	\$3.05
Office / Institutional (all sizes)	\$1.31
Business Park	\$1.52
Light Industrial	\$0.83
Warehousing	\$0.42
Manufacturing	\$0.46
Hotel (per room)	\$671

## General Government

### OVERVIEW

The General Government IIP and Development Fees includes components for the City Services Complex and vehicles and equipment. The General Government IIP and Development Fees are allocated to both residential and nonresidential development. Residential demand is measured in terms of population while nonresidential demand is measured using jobs. The benefit area for the General Government IIP and Development Fees is citywide as the demands for infrastructure, LOS, infrastructure costs, and benefits are uniform throughout the community.

### GENERAL GOVERNMENT FACILITIES

#### *LOS Analysis*

The City currently has 20,238 square feet of General Government facilities serving the current development base. The current LOS is 0.44 square foot per person and per job. The residential LOS is calculated using the following formula:  $(20,238 \text{ square feet} \times 0.89) / 41,811 \text{ persons} = 0.44 \text{ square feet per person}$ . The nonresidential LOS is calculated using the following formula:  $(20,238 \text{ square feet} \times 0.11) / 5,151 \text{ jobs} = 0.44 \text{ square feet per job}$ .

**Figure 61: General Government Facilities Current LOS Analysis**

	<i>Square Feet</i>	
City Hall	20,238	
<i>Proportionate Share</i>		
Current Demand Units Served		
Residential - Population	40,811	89%
Nonresidential - Jobs	5,151	11%
<b>TOTAL</b>	<b>45,962</b>	<b>100%</b>
<i>Current LOS</i>		
Residential - square feet per person		0.44
Nonresidential - square feet per job		0.44

The City is planning to construct a 50,000 square foot City Services Complex, including 41,597 square feet for General Government functions. This facility is planned to meet the demands of both existing development as well as providing capacity to new development through FY2032. Thus, the plan-based methodology is used to calculate this component of the General Government IIP and Development Fee.

This facility will provide the same LOS to both existing and new development through FY2032. The projected population in FY2032 is 163,890 persons of which 40,811 currently reside in the City with new development adding 123,079 persons over the next twenty three years. The LOS

for existing development is calculated as follows:  $((41,597 \text{ square feet} \times 0.76) \times 0.25) / 40,811$  persons in FY2010 = 0.1941 square feet per person. The LOS for new development is calculated as follows:  $((41,597 \text{ square feet} \times 0.76) \times 0.75) / 123,079$  new persons added during FY2010-FY2032 = 0.1941 square feet per person. This calculation is repeated for nonresidential development using the same formula and the variables for existing and new nonresidential development. The planned LOS for existing nonresidential development is 0.1941 square feet per job. The planned LOS for new nonresidential development is 0.1941 square feet per job.

**Figure 62: Planned LOS for General Government Facilities for Existing and Planned Development**

		<i>Square Feet*</i>
City Services Complex (General Government Portion)		41,597
Proportionate Share at Capacity in FY2032		
Residential - persons	163,890	76%
Nonresidential - jobs	50,366	24%
TOTAL	214,255	100%
Development to be Served		
Residential		
Existing Persons	40,811	25%
New Population FY10-FY32	123,079	75%
TOTAL	163,890	100%
Nonresidential		
Existing Jobs	5,151	10%
New Jobs FY10-FY32	45,215	90%
TOTAL	50,366	100%
LOS for Current Development		
Square Feet per Person		0.1941
Square Feet per Nonresidential Trip		0.1941
LOS for New Development		
Square Feet per Person		0.1941
Square Feet per Nonresidential Trip		0.1941

\* City of Maricopa *Capital Improvements Plan* and TischlerBise analysis of City of *Maricopa Governmental Center: Site Location Analysis*, HDR/Studio Concepts.

*Cost Analysis*

The General Government portion of the planned cost of the new City Services Complex totals \$12,811,940. The planned cost per person is the same for both existing and new development through FY2032. The projected population in FY2032 is 163,890 persons of which 40,811 currently reside in the City with new development adding 123,079 persons over the next twenty three years. The cost per person for existing development is calculated as follows:  $((\$12,811,940 \times 0.76) \times 0.25) / 40,811$  persons in FY2010 = \$59.80 per person. The cost per person for new

development is calculated as follows:  $((\$12,811,940 \times 0.76) \times 0.75) / 123,079$  additional persons through FY2032 = \$59.80 per person. This calculation is repeated for nonresidential development using the same formula and the variables for existing and new nonresidential development. The planned cost for existing nonresidential development is \$59.80 per job. The planned cost for new nonresidential development is \$59.80 per job.

**Figure 63: General Government Facilities Cost Analysis**

		<i>Cost*</i>
City Services Complex (General Government Portion)		\$12,811,940
Proportionate Share		
Residential		76%
Nonresidential		24%
Residential Development to be Served		
Existing Persons	40,811	25%
New Population FY10-FY32	123,079	75%
TOTAL	163,890	100%
Nonresidential Development to be Served		
Existing Jobs	5,151	10%
New Jobs FY10-FY32	45,215	90%
TOTAL	50,366	100%
Cost for Existing Development		
Per Person		\$59.80
Per Job		\$59.80
Cost for New Development		
Per Person		\$59.80
Per Job		\$59.80

\* City of Maricopa *Capital Improvements Plan*.

*Infrastructure Improvement Plan*

The IIP for the General Government share of the City Services Complex is shown below. The IIP is calculated using the development projections from Appendix A at the back of the report and the LOS and cost figures listed above. Over the next five years, there is a projected increase of 13,597 persons and 4,017 jobs. Based on the planned LOS, this amount of new residential development will require approximately 2,640 square feet of facilities, while new nonresidential development will require approximately 780 square feet of facilities. The projected cost of this demanded infrastructure over the next five years totals \$813,053 for new residential development and \$240,189 for new nonresidential development.

The City's *Capital Improvements Plan* indicates the City Services Complex project will be funded on a cash basis with a combination of Capital Reserve Funds and General Government Development Fees.

**Figure 64: General Government Facilities IIP**

<b>NEW DEVELOPMENT PROJECTIONS</b>							
	<i>Fiscal Year</i>	2010	2011	2012	2013	2014	2015
Population Projections		40,811	43,530	46,250	48,969	51,688	54,408
Job Projections		5,151	5,862	6,620	7,423	8,272	9,168
							<i>5 Year Total</i>
Net Change Population During Fiscal Year		2,719	2,719	2,719	2,719	2,719	13,597
Net Change Jobs During Fiscal Year		711	757	803	849	895	4,017

  

<b>CITY COMPLEX (GENERAL GOVERNMENT SHARE)</b>							
<i>Future Necessary Public Services Required by New Development</i>							
	<i>Fiscal Year</i>	2010	2011	2012	2013	2014	
Planned LOS per Person (SF per Person)		0.1941	0.1941	0.1941	0.1941	0.1941	
Planned LOS per Job (SF per Job)		0.1941	0.1941	0.1941	0.1941	0.1941	
							<i>5 Year Total</i>
Square Feet to be Utilized by New Res. Development		528	528	528	528	528	2,640
Square Feet to be Utilized by New Nonreses. Development		138	147	156	165	174	780
<b>TOTAL SQUARE FEET TO BE UTILIZED BY NEW DEVELOPMENT</b>		<b>666</b>	<b>675</b>	<b>684</b>	<b>693</b>	<b>702</b>	<b>3,420</b>
<i>Cost Forecast for Infrastructure Associated with Future Necessary Public Services Required by New Development</i>							
Planned Cost per Person		\$59.80	\$59.80	\$59.80	\$59.80	\$59.80	
Planned Cost per Job		\$59.80	\$59.80	\$59.80	\$59.80	\$59.80	
							<i>5 Year Total</i>
Cost to Serve New Res. Development		\$162,611	\$162,611	\$162,611	\$162,611	\$162,611	\$813,053
Cost to Serve New Nonres. Development		\$42,537	\$45,287	\$48,038	\$50,788	\$53,539	\$240,189
<b>TOTAL COST TO SERVE NEW DEVELOPMENT</b>		<b>\$205,148</b>	<b>\$207,898</b>	<b>\$210,648</b>	<b>\$213,399</b>	<b>\$216,149</b>	<b>\$1,053,242</b>
<i>Planned Projects from CIP</i>							
City Complex (General Gov't Share)		\$0	\$0	\$1,164,722	\$5,823,609	\$5,823,609	\$12,811,940
<i>Revenue Forecast and Financing Assumptions for Future Necessary Public Services</i>							
							<i>5 Year Total</i>
General Government Development Fees		\$205,148	\$207,898	\$210,648	\$213,399	\$216,149	\$1,053,242
Transfer from Capital Reserve		\$0	\$0	\$541,028	\$5,610,210	\$5,607,460	\$11,758,698
<b>TOTAL</b>		<b>\$0</b>	<b>\$0</b>	<b>\$1,164,722</b>	<b>\$5,823,609</b>	<b>\$5,823,609</b>	<b>\$12,811,940</b>

**GENERAL GOVERNMENT VEHICLES**

*LOS Analysis*

The City currently has a fleet of 9 General Government vehicles serving the current development base of 41,811 persons and 5,151 jobs. The City plans to maintain the current LOS for General Government vehicles, so the incremental expansion method is used to calculate this component of the General Government IIP and Development Fee.

Based on the size of the current fleet, the proportionate share factors, and current development base, the current LOS is 0.0002 vehicles per person  $((9 \text{ vehicles} \times 0.89)/41,811 \text{ persons} = 0.0002)$ . This calculation is repeated for nonresidential development resulting in a LOS of 0.0002 vehicles per job  $((9 \text{ vehicles} \times 0.11)/5,151 \text{ jobs} = 0.0002)$ .

**Figure 65: General Government Vehicles Current LOS**

<i>Vehicles</i>	<i>Units*</i>
Development Services	
Ford Ranger Supercab	2
Ford Ranger Supercab	4
Ford F-150 Truck	1
Facilities	
Ford F-150	1
Planning & Zoning	
Ford Truck F-150	1
<b>TOTAL</b>	<b>9</b>
<i>Proportionate Share</i>	
Current Demand Units Served	
Residential - Population	40,811      89%
Nonresidential - Jobs	5,151      11%
<b>TOTAL</b>	<b>45,962      100%</b>
Current LOS	
Residential - vehicles per person	0.0002
Nonresidential - vehicles per job	0.0002

\* City of Maricopa Fleet Management.

*Cost Analysis*

The City's Fleet Services Division estimates the current fleet of General Government vehicles to have a replication value of \$145,185, an average of \$16,132 per unit. Based on the current LOS of 0.0002 units per person and 0.0002 units per job, and an average cost of \$16,132 per unit, the cost per demand unit is \$3.16 per person (0.0002 units per person x \$16,132 per unit) and \$3.16 per job (0.0002 vehicles per nonresidential vehicle trip x \$16,132 per unit).

**Figure 66: General Government Vehicles Cost Analysis**

<i>Vehicles</i>	<i>Units</i>	<i>Cost/ Unit*</i>	<i>Total Replication Value</i>
<b>Development Services</b>			
Ford Ranger Supercab	2	\$13,355	\$26,709
Ford Ranger Supercab	4	\$13,723	\$54,893
Ford F-150 Truck	1	\$17,535	\$17,535
<b>Facilities</b>			
Ford F-150	1	\$28,078	\$28,078
<b>Planning &amp; Zoning</b>			
Ford Truck F-150	1	\$17,970	\$17,970
<b>TOTAL</b>	<b>9</b>		<b>\$145,185</b>
Average Cost per Vehicle =>			\$16,132
<b>Current LOS</b>			
Residential - vehicles per person			0.0002
Nonresidential - vehicles per job			0.0002
<b>Cost Factor</b>			
Average cost per vehicle			\$16,132
<b>Cost per</b>			
Person			\$3.16
Job			\$3.16

\* City of Maricopa Fleet Management.

*Infrastructure Improvement Plan*

The IIP for General Government vehicles is shown below. The IIP is calculated using the development projections from Appendix A at the back of the report and the LOS and cost figures listed above. Over the next five years, there is a projected increase of 13,597 persons and 4,017 jobs. Based on the current LOS, this amount of residential development will utilize approximately 2.66 units while nonresidential development will utilize 0.79 units. The projected cost of this demanded infrastructure totals \$55,638 over the next five years.

For general government vehicles, the City plans to use only development fees to pay for the new capacity added for new development. Since the incremental expansion methodology has been used to calculate this component, development fees are the only revenue source used to increase the capacity of general government vehicles. The IIP assumes cash financing on a pay-as-you-go (PAYGO) basis.

**Figure 67: General Government Vehicles IIP**

<b>NEW DEVELOPMENT PROJECTIONS</b>							
	<i>Fiscal Year</i>	2010	2011	2012	2013	2014	2015
Population Projections		40,811	43,530	46,250	48,969	51,688	54,408
Job Projections		5,151	5,862	6,620	7,423	8,272	9,168
							<i>5 Year Total</i>
Net Change Population During Fiscal Year		2,719	2,719	2,719	2,719	2,719	13,597
Net Change Jobs During Fiscal Year		711	757	803	849	895	4,017
<b>VEHICLES AND EQUIPMENT</b>							
<i>Future Necessary Public Services Required by New Development</i>							
	<i>Fiscal Year</i>	2010	2011	2012	2013	2014	
Current LOS per Person (Vehicles per Person)		0.0002	0.0002	0.0002	0.0002	0.0002	
Current LOS per Job (Vehicles per Job)		0.0002	0.0002	0.0002	0.0002	0.0002	
							<i>5 Year Total</i>
Vehicles Demanded by New Res. Development		0.53	0.53	0.53	0.53	0.53	2.66
Vehicles Demanded by New Nonres. Development		0.14	0.15	0.16	0.17	0.18	0.79
<b>TOTAL VEHICLES DEMANDED BY NEW DEVELOPMENT</b>		<b>0.67</b>	<b>0.68</b>	<b>0.69</b>	<b>0.70</b>	<b>0.71</b>	<b>3.45</b>
<i>Cost Forecast for Infrastructure Associated with Future Necessary Public Services Required by New Development</i>							
Planned Cost per Person		\$3.16	\$3.16	\$3.16	\$3.16	\$3.16	
Planned Cost per Job		\$3.16	\$3.16	\$3.16	\$3.16	\$3.16	
							<i>5 Year Total</i>
Cost to Serve New Res. Development		\$8,590	\$8,590	\$8,590	\$8,590	\$8,590	\$42,950
Cost to Serve New Nonres. Development		\$2,247	\$2,392	\$2,538	\$2,683	\$2,828	\$12,688
<b>TOTAL COST TO SERVE NEW DEVELOPMENT</b>		<b>\$10,837</b>	<b>\$10,982</b>	<b>\$11,128</b>	<b>\$11,273</b>	<b>\$11,418</b>	<b>\$55,638</b>
<i>Revenue Forecast and Financing Assumptions for Future Necessary Public Services</i>							
							<i>5 Year Total</i>
General Government Development Fees		\$10,837	\$10,982	\$11,128	\$11,273	\$11,418	\$55,638
<b>TOTAL</b>		<b>\$10,837</b>	<b>\$10,982</b>	<b>\$11,128</b>	<b>\$11,273</b>	<b>\$11,418</b>	<b>\$55,638</b>

**GENERAL GOVERNMENT DEVELOPMENT FEES**

As shown below, the net capital cost is \$62.96 per person and \$62.96 per job.

**Figure 68: General Government Development Fee Calculation Factors**

<b>Persons Per Household</b>		
Single Family	2.86	
Multi-family	2.30	
<b>Employees per Square Foot/Hotel Room</b>		
Commercial / Shopping Center 0-100,000 SF		0.00250
Commercial / Shopping Center 100,001+ SF		0.00222
Office / Institutional (all sizes)		0.00332
Business Park		0.00316
Light Industrial		0.00231
Warehousing		0.00092
Manufacturing		0.00179
Hotel (per room)		0.44
<b>Cost Summary</b>		
	<u>Per Person</u>	<u>Per Employee</u>
Facilities	\$59.80	\$59.80
Vehicles and Equipment	\$3.16	\$3.16
Total Capital Cost	\$62.96	\$62.96

The General Government Development Fees is shown below. For residential land uses, persons per household are multiplied by the capital cost per person (for single family unit:  $2.86 \times \$62.86 = \$180$ ).

For nonresidential land uses, the number of jobs per square foot is multiplied by the net capital cost per job. For commercial/shopping centers with less than 100,000 square feet:  $0.00250 \times \$62.86 = \$0.16$  per square foot.

**Figure 69: General Government Development Fee Schedule**

<u>Residential</u>	<u>Per Housing Unit</u>
Single Family	\$180
Multi-family	\$145
<u>Nonresidential</u>	<u>Per Square Foot/Hotel Room</u>
Commercial / Shopping Center 0-100,000 SF	\$0.16
Commercial / Shopping Center 100,001+ SF	\$0.14
Office / Institutional (all sizes)	\$0.21
Business Park	\$0.20
Light Industrial	\$0.15
Warehousing	\$0.06
Manufacturing	\$0.11
Hotel (per room)	\$28

## Transportation

### OVERVIEW

The Transportation IIP and Development Fees include components for street improvements (new streets, widening streets, traffic signals, interchanges), transportation related support facilities, and transportation related support vehicles and equipment. The Transportation IIP and Development Fees are allocated to both residential and nonresidential development. Average weekday trip generation rates by type of development are multiplied by the capital cost per vehicle miles of travel (VMT) to yield the Transportation IIP and Development Fees. The methodology includes trip adjustment factors for commuting patterns, pass-by trips, and average trip length variation by type of land use.

The benefit area for the Transportation IIP and Development Fees is citywide as the City plans and operates its transportation infrastructure as an integrated network. Thus the demands for transportation infrastructure, LOS, costs, and benefits are uniform throughout the community.

### TRIP GENERATION RATES

Trip generation rates are from the Institute of Transportation Engineers (ITE) *Trip Generation Manual*. The Transportation Development Fees are based on average weekday vehicle trip ends. A vehicle trip end represents a vehicle either entering or exiting a development (as if a traffic counter were placed across a driveway). To calculate the development fees, trip generation rates are adjusted to avoid double counting each trip at both the origin and destination points. Therefore, the basic trip adjustment factor is 50%. As discussed further below, the development fee methodology includes additional adjustments to make the fees more proportionate to the infrastructure demand for particular types of development.

### TRIP RATE ADJUSTMENTS

Average Weekday Vehicle Trip Ends are from the reference book, *Trip Generation*, published by the Institute of Transportation Engineers (ITE) in 2008. A “trip end” represents a vehicle either entering or exiting a development (as if a traffic counter were placed across a driveway). Trip ends are calculated based on the number of units for residential development and per thousand square feet for nonresidential development. The ITE *Trip Generation* provides estimates, shown in Figure A-4, of the number of trips for each type of unit.

Trip rates are adjusted to avoid over-estimating the number of actual trips because one vehicle trip is counted in the trip rates of both the origination and destination points. A simple factor of 50% has been applied to the residential, institutional/government, office, and goods production categories.

The commercial category has a trip factor of less than 50% due to two characteristics of this land use. First, commercial development attracts vehicles as they pass-by on arterial and collector roads (“pass-by” trips). For example, when someone stops at a convenience store on their way home from work, the convenience store is not their primary destination.

A second adjustment for diverted linked trips is made to the commercial category. Diverted linked trips are trips that are attracted from the traffic volume on roads in the vicinity of commercial development but require a diversion from one road to another road to gain access to the commercial

development. These trips add traffic to streets adjacent to the development, but do not add trips to a community’s transportation network.

Using a 100,000 square foot shopping center as an example, pass-by trips account for 34% of total trips while diverted link trip account for an additional 24% of total trips. The remaining 42% of primary trips (100%-34%-24% = 42%) is adjusted by 50% to avoid over-estimating the number of actual trips because one vehicle trip is counted in the trip rates of both the origination and destination points. The total commercial trip adjustment factor for a 100,000 square foot shopping center is 21% (42% x 50% = 21%). Commercial trip adjustment factors with diverted link adjustments are shown below.

**Figure 70: Shopping Center/Retail Trip Rates and Adjustment Factors**

Floor Area in thousands (KSF)	All Commercial Trips (a)	Comm. Pass-by Trips (b)*	Comm. Diverted-Link Trips (c)**	Primary Comm. Trips (d=(a-(b+c)))	Origin - Destination Adj. Factor (e)***	Commercial Trip Adj Factor (d x e)
10	100%	52%	24%	24%	50%	12%
25	100%	45%	24%	31%	50%	16%
50	100%	39%	24%	37%	50%	19%
100	100%	34%	24%	42%	50%	21%
200	100%	29%	24%	47%	50%	24%
400	100%	23%	24%	53%	50%	27%
800	100%	18%	24%	58%	50%	29%

\* Based on data published by ITE in *Trip Generation Handbook* (2004), the best trendline correlation between pass-by trips and floor area is a logarithmic curve with the equation  $((-7.6967 * \ln(KSF)) + 69.448)$ .

\*\* Based on data published by ITE in *Trip Generation Handbook* (2004).

\*\*\* To account for the origin-destination relationship of a trip, an adjustment factor of 50% is applied to the primary trips to account for only the trip destinations, i.e. the trips attracted to a land use.

### AVERAGE TRIP LENGTH ADJUSTMENT BY LAND USE

The demand for street infrastructure is a function of both the number of vehicle trips and the distance traveled. Multiplying the number of vehicle trips by the average trip length (in miles) yields vehicle miles of travel (VMT). The Transportation Development Fee methodology includes a percentage adjustment to account for trip length variation by type of land use. As documented in Table 6 of the *National Household Travel Survey* (FHWA, 2001), vehicle trips from residential development are approximately 122% of the average trip length. Trips associated with residential development include home-based work trips plus social and recreational purposes. Conversely, shopping trips associated with commercial development are roughly 68% of the average trip length, while other nonresidential development typically accounts for trips that are 75% of the average trip length.

### STREET CONSTRUCTION PROJECTS

The City’s *Regional Transportation Plan Update* identifies 160.70 lane miles of streets to be constructed at a cost of \$113,369,000 over the next ten years.

**Figure 71: Summary of Planned Street Construction Projects**

<i>Existing Lanes</i>	<i>Net New Lanes</i>	<i>Existing Lane Miles</i>	<i>Net New Lane Miles</i>	<i>TOTAL Lane Miles</i>	<i>Lane Miles to be Constructed</i>	<i>TOTAL Cost</i>	<i>Cost to New Development</i>	<i>Cost to Existing Development</i>	<i>New Dev. Share Funded with DIF</i>	<i>Existing Development Share</i>
48.00	92.00	58.24	102.46	160.70	160.70	\$113,369,000	\$81,227,100	\$32,141,900	72%	28%

Source: *Regional Transportation Plan Update*, prepared for the City of Maricopa by Wilson and Company, September 10, 2008 and City of Maricopa staff. See Appendix C for a complete listing of projects.

For the purposes of calculating the Transportation IIP and Development Fees, only the net new lane miles and associated costs are included in the analysis (102.46 lane miles and \$81,227,100 respectively). Improvements to existing streets are assumed to be the result of existing development and must be funded from revenue sources other than development fees.

The *Regional Transportation Plan Update* assumes a citywide LOS E will be provided to both existing and new development on the City’s street network. The capacity of the projects for new development projects is measured in vehicle miles of travel (VMT) on the network of planned streets. Several factors go into this VMT analysis (shown in the figure below):

1. **Projected vehicle trips:** based on projected residential and nonresidential growth in the *Regional Transportation Plan Update*.
2. **Lane miles:** total lane miles of planned projects for new development (102.46 lane miles).
3. **Lane capacity:** Level of service E has been assumed, for which a weighted lane capacity standard of 11,842 vehicles per lane is taken from the *Regional Transportation Plan Update*.
4. **Construction versus Capacity Time Frame:** The City plans its street networks to include additional capacity for future development beyond when the project is completed. In other words, the planned network of streets to built through FY2020 will provide sufficient capacity at LOS E for not only the projected increases in development for the same ten year timeframe, but also for an additional ten years of new development beyond the construction timeframe. The development fees are based on the twenty year capacity life of the planned projects through FY2030.
5. **Average trip length:** Knowing the increase in vehicle trips, planned lane miles, and lane capacity, it is possible to derive the average trip length on the planned street projects from new residential and nonresidential growth. Because the VMT calculations include the same adjustment factors used in the development fee calculations (i.e., residential commuting adjustment, commercial pass-by adjustment and average trip length adjustment by type of land use), the average trip length is determined through a series of iterations using spreadsheet software. As shown below, the average trip length on the planned street projects by new residential and nonresidential development is 3.21 miles.

**Figure 72: Street Capacity Analysis**

<b>INPUT VARIABLES</b>		<b>Street Capacity Needs Analysis</b>						
		<i>Maricopa, Arizona</i>						
		<i>5 Year Increments</i>						
		2010	2015	2020	2025	2030	2031	
		<b>DEMAND DATA</b>						
Single Family Weekday VTE per Unit	9.57	SINGLE FAMILY	16,940	22,261	34,873	45,513	59,845	62,296
Retail Weekday VTE/KSF	86.56	RETAIL KSF	937	1,629	3,209	4,829	7,038	7,449
Office Weekday VTE/KSF	22.66	OFFICE/INSTITUTIONAL KSF	247	547	1,265	2,224	3,871	4,178
Industrial Flex Weekday VTE/KSF	6.97	IND/FLEX KSF	510	810	1,424	2,154	3,038	3,167
Residential Trip Adj Factor	50%	DETACHED TRIPS	81,058	106,518	166,866	217,779	286,359	298,085
Retail Trip Adj Factor	19%	RETAIL TRIPS	15,407	26,788	52,770	79,413	115,756	122,503
Other Nonres Trip Adj Factor	50%	OFFICE/INSTITUTIONAL TRIPS	2,797	6,199	14,336	25,196	43,864	47,336
City Arterial Trips	100%	IND/FLEX TRIPS	1,778	2,824	4,962	7,507	10,586	11,038
City Arterial Avg Miles/Trip	3.21	CITY ARTERIAL TRIPS	101,040	142,329	238,934	329,895	456,565	478,961
Residential Trip Length	122%	VMT FROM RESIDENTIAL DEVELOPMENT	317,471	417,187	653,546	852,952	1,121,551	1,167,476
Retail Trip Length	68%	VMT FROM NONRESIDENTIAL DEVELOPMENT	44,649	80,203	161,662	252,101	383,799	407,975
Other Nonresidential Trip Length	75%	TOTAL VMT FROM EXISTING AND NEW DEVELOPMENT	362,119	497,390	815,207	1,105,053	1,505,350	1,575,451
Ave. Arterial Capacity Per Lane *	11,842							
		ANNUAL INC. VMT FROM NEW RESIDENTIAL DEV.	20,610	47,272	39,881	53,720	45,925	
		ANNUAL INC. VMT FROM NEW NONRESIDENTIAL DEV.	6,297	14,334	16,507	24,249	24,176	
		TOTAL ANNUAL INC. VMT FROM NEW DEVELOPMENT	26,906	61,606	56,388	77,969	70,101	
		ANNUAL LANE MILES FOR NEW RESIDENTIAL DEV.	1.74	3.99	3.37	4.54	3.88	
		ANNUAL LANE MILES FOR NEW NONRESIDENTIAL DEV.	0.53	1.21	1.39	2.05	2.04	
		TOTAL ANNUAL LANE MILES FOR NEW DEVELOPMENT	2.27	5.20	4.76	6.58	5.92	
		CUMULATIVE LANE MILES FOR NEW DEVELOPMENT	2.27	16.63	43.02	69.32	102.46	

\* Weighted Ave. of LOS E.

### **COST PER VMT FOR STREET IMPROVEMENT PROJECTS**

The total cost of the planned street projects for new development is \$81,227,100. The cost per VMT is calculated by dividing the total cost of the projects by the net increase in VMT's from new development over the next twenty years (from the above figure) which is the projected capacity lifetime of these projects. The calculation is as follows:  $(\$81,227,100 / (1,575,451 \text{ VMT's in FY2030} - 362,119 \text{ VMT's in FY2010} = 1,213,331 \text{ net new VMT's})) = \$66.95 \text{ per VMT.}$

**Figure 73: Planned Street Improvements Cost per VMT**

	<i>Lane Miles</i>	<i>Cost</i>
New Development's Share of Planned Street Improvements	102.46	\$81,227,100
Net Increase in VMT's FY2010 - FY2030 from New Development		1,213,331
Cost per VMT		\$66.95

### **TRAFFIC SIGNALS PROJECTS**

The City's *Regional Transportation Plan Update* identifies 30 traffic signals to be built as result of new development at a cost of \$8,450,000 over the next ten years.

**Figure 74: Planned Traffic Signal Projects**

	<b>Number</b>	<b>Cost</b>
Planned Traffic Signals	30	\$8,450,000

Source: *Regional Transportation Plan Update*, prepared for the City of Maricopa by Wilson and Company, September 10, 2008 and City of Maricopa staff. See Appendix C for a complete list of projects.

**COST PER VMT FOR TRAFFIC SIGNAL PROJECTS**

Since the planned traffic signals are a component of the planned network of street improvements previously identified, the same capacity lifetime and VMT factors are used to calculate the cost per VMT for the planned traffic signals. The calculation is as follows:  $((\$8,450,000 / (1,575,451 \text{ VMT's in FY2030} - 362,119 \text{ VMT's in FY2010}) = 1,213,331 \text{ net new VMT's}) = \$6.96 \text{ per VMT}$ .

**Figure 75: Planned Traffic Signal Cost per VMT**

	<b>Number</b>	<b>Cost</b>
Planned Traffic Signals	30	\$8,450,000
Net Increase in VMT's FY2010 - FY2030 from New Development		1,213,331
Cost per VMT		\$6.96

**GRADE SEPARATION PROJECTS**

The City's *Regional Transportation Plan Update* identifies a grade separation at White and Parker to be built as result of new development at a cost of \$61,600,000 over the next ten years.

**Figure 76: Planned Interchange Projects**

Grade Separation White and Parker	\$61,600,000
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Source: *Regional Transportation Plan Update*, prepared for the City of Maricopa by Wilson and Company, September 10, 2008 and City of Maricopa staff.

**COST PER VMT FOR GRADE SEPARATION PROJECTS**

Since the planned grade separation is a component of the planned network of street improvements previously identified, the same capacity lifetime and VMT factors are used to calculate the cost per VMT for the planned interchange improvement. The calculation is as follows:  $((\$61,600,000 / (1,575,451 \text{ VMT's in FY2030} - 362,119 \text{ VMT's in FY2010}) = 1,213,331 \text{ net new VMT's}) = \$50.77 \text{ per VMT}$ .

**Figure 77: Planned Interchange Cost per VMT**

Grade Separation White and Parker	\$61,600,000
Net Increase in VMT's FY2010 - FY2030 from New Development	1,213,331
Cost per VMT	\$50.77

**BRIDGE PROJECTS**

The City's *Regional Transportation Plan Update* identifies 28 lanes of bridges to be constructed at a cost of \$20,000,000 over the next ten years.

**Figure 78: Summary Planned Bridge Projects**

<i>Existing Lanes</i>	<i>Net New Lanes</i>	<i>TOTAL Cost</i>	<i>Cost to New Development</i>	<i>Cost to Existing Development</i>	<i>New Dev. Share Funded with DIF</i>	<i>Existing Development Share</i>
8.00	20.00	\$20,000,000	\$16,333,333	\$3,666,667	82%	18%

Source: *Regional Transportation Plan Update*, prepared for the City of Maricopa by Wilson and Company, September 10, 2008 and City of Maricopa staff.

For the purposes of calculating the Transportation IIP and Development Fees, only the net new lanes and associated costs are included in the analysis (20 lanes and \$16,333,333 respectively). Improvements to existing bridge lanes are assumed to be the result of existing development and must be funded from revenue sources other than development fees.

**COST PER VMT FOR BRIDGE PROJECTS**

Since the planned bridge projects are a component of the planned network of street improvements previously identified, the same capacity lifetime and VMT factors are used to calculate the cost per VMT for the planned interchange improvement. The calculation is as follows:  $((\$16,333,333 / (1,575,451 \text{ VMT's in FY2030} - 362,119 \text{ VMT's in FY2010}) = 1,213,331 \text{ net new VMT's}) = \$13.46 \text{ per VMT}$ .

**Figure 79: Planned Bridge per VMT**

	<b>Lanes</b>	<b>Cost</b>
New Development Share of Planned Bridges	20.00	\$16,333,333
Net Increase in VMT's FY2010 - FY2030 from New Development		1,213,331
Cost per VMT		\$13.46

## STREET IMPROVEMENTS INFRASTRUCTURE IMPROVEMENT PLAN

The IIP for the planned street improvements is shown below. The IIP is calculated using the development projections from Appendix A at the back of the report and the LOS and cost figures listed above. Over the next five years, there is a projected increase of 25,460 trips associated with residential development, 11,381 trips associated with commercial development, and 4,448 trips associated with office/industrial development. Over the next five years, this amount of new residential development will require approximately \$13,774,892 of street improvements. Commercial development will require \$3,725,854 of street improvements while office/industrial development will require \$1,594,213 of street improvements.

The City's *Capital Improvements Plan* indicates the planned street projects will be funded on a cash basis with Transportation Development Fees.

**Figure 80: Street Improvements IIP**

NEW DEVELOPMENT PROJECTIONS							
	<i>Fiscal Year</i>	2010	2011	2012	2013	2014	2015
Residential Vehicle Trip Projections		81,058	86,320	91,369	96,419	101,468	106,518
Commercial Vehicle Trip Projections		15,407	17,422	19,568	21,845	24,251	26,788
Office/Industrial Vehicle Trip Projections		4,575	5,363	6,201	7,091	8,031	9,023
Nonresidential Vehicle Trip Projections		19,982	22,785	25,770	28,935	32,283	35,811
							<i>5 Year Total</i>
Net Change Residential Trips During Fiscal Year		5,262	5,049	5,049	5,049	5,049	25,460
Net Change Commercial Trips During Fiscal Year		2,016	2,146	2,276	2,407	2,537	11,381
Net Change Office/Industrial Trips During Fiscal Year		788	839	890	941	991	4,448
<b>STREET IMPROVEMENTS</b>							
<i>Future Necessary Public Services and Cost Forecast Associated with New Development</i>							
Planned Cost per Residential Trip		\$541.04	\$541.04	\$541.04	\$541.04	\$541.04	
Planned Cost per Commercial Trip		\$327.37	\$327.37	\$327.37	\$327.37	\$327.37	
Planned Cost per Office/Industrial Trip		\$358.41	\$358.41	\$358.41	\$358.41	\$358.41	
							<i>5 Year Total</i>
Cost to Serve New Residential Development		\$2,847,027	\$2,731,966	\$2,731,966	\$2,731,966	\$2,731,966	\$13,774,892
Cost to Serve New Commercial Development		\$659,842	\$702,507	\$745,171	\$787,835	\$830,499	\$3,725,854
Cost to Serve New Office/Industrial Development		\$282,332	\$300,588	\$318,843	\$337,098	\$355,353	\$1,594,213
<b>TOTAL COST TO SERVE NEW DEVELOPMENT</b>		<b>\$3,789,202</b>	<b>\$3,735,060</b>	<b>\$3,795,980</b>	<b>\$3,856,899</b>	<b>\$3,917,818</b>	<b>\$19,094,959</b>
<i>Planned Projects from CIP</i>							
							<i>5 Year Total</i>
Planned Street Improvements (annualized)		\$5,668,450	\$5,668,450	\$5,668,450	\$5,668,450	\$5,668,450	\$28,342,250
Planned Bridge Improvements (annualized)		\$816,667	\$816,667	\$816,667	\$816,667	\$816,667	\$4,083,333
Planned Traffic Signal Improvements (annualized)		\$422,500	\$422,500	\$422,500	\$422,500	\$422,500	\$2,112,500
Planned Interchange Improvements (annualized)		\$3,080,000	\$3,080,000	\$3,080,000	\$3,080,000	\$3,080,000	\$15,400,000
<b>TOTAL</b>		<b>\$9,987,617</b>	<b>\$9,987,617</b>	<b>\$9,987,617</b>	<b>\$9,987,617</b>	<b>\$9,987,617</b>	<b>\$49,938,083</b>
<i>Revenue Forecast and Financing Assumptions for Future Necessary Public Services</i>							
							<i>5 Year Total</i>
Transportation Development Fees		\$3,789,202	\$3,735,060	\$3,795,980	\$3,856,899	\$3,917,818	\$19,094,959

## SUPPORT FACILITIES

### *LOS Analysis*

The City currently has 1,150 square feet of transportation-related support facilities serving the current development base of 81,058 residential vehicle trips and 19,982 nonresidential vehicle trips.

**Figure 81: Current Support Facilities LOS**

	<i>Square Feet</i>	
Public Works	1,150	
		<i>Proportionate Share</i>
Current Demand Units Served		
Residential - trips	81,058	80%
Nonresidential - trips	19,982	20%
TOTAL	101,040	100%
Current LOS		
Residential - square feet per trip		0.01
Nonresidential - square feet per trip		0.01

The City is planning to construct a 20,000 square foot Maintenance Building. This facility is planned to meet the demands of both existing development as well as providing capacity to new development through FY2032. Thus, the plan-based is methodology is used to calculate this component of the Transportation IIP and Development Fee.

This facility will provide the same LOS to both existing and new development through FY2032. Projected residential vehicle trips in FY2032 is 309,810 of which 81,058 are from existing development in the City with new residential development adding 228,753 trips over the next twenty three years. The LOS for existing development is calculated as follows:  $((20,000 \text{ square feet} \times 0.62) \times 0.26) / 81,058 \text{ trips in FY2010} = 0.04 \text{ square feet per trip}$ . The LOS for new development is calculated as follows:  $((20,000 \text{ square feet} \times 0.62) \times 0.74) / 228,753 \text{ new trips added during FY2010-FY2032} = 0.04 \text{ square feet per trip}$ . This calculation is repeated for nonresidential development using the same formula and the variables for existing and new nonresidential development. The planned LOS for existing nonresidential development is 0.04 square feet per trip. The planned LOS for new nonresidential development is 0.04 square feet per trip.

**Figure 82: Planned LOS for Support Facilities for Existing and Planned Development**

		<i>Square Feet*</i>
Public Works Maintenance Building		20,000
Proportionate Share at Capacity in FY2032		
Residential - trips	309,810	62%
Nonresidential - trips	191,547	38%
<b>TOTAL</b>	<b>501,358</b>	<b>100%</b>
Development to be Served		
Residential		
Existing Trips	81,058	26%
New Trips FY10-FY32	228,753	74%
<b>TOTAL</b>	<b>309,810</b>	<b>100%</b>
Nonresidential		
Existing Trips	19,982	10%
New Trips FY10-FY32	171,565	90%
<b>TOTAL</b>	<b>191,547</b>	<b>100%</b>
LOS for Current Development		
Square Feet per Person		0.04
Square Feet per Nonresidential Trip		0.04
LOS for New Development		
Square Feet per Person		0.04
Square Feet per Nonresidential Trip		0.04

\* City of Maricopa *Capital Improvements Plan*.

*Cost Analysis*

The planned cost of the new maintenance facility totals \$3,000,000. The planned cost per trip is the same for both existing and new development through FY2032. Projected residential vehicle trips in FY2032 is 309,810 of which 81,058 are from existing development in the City with new residential development adding 228,753 trips over the next twenty three years. The cost per person for existing development is calculated as follows:  $((\$3,000,000 \times 0.62) \times 0.26) / 81,058$  trips in FY2010 = \$5.98 per trip. The cost per person for new development is calculated as follows:  $((\$3,000,000 \times 0.62) \times 0.74) / 228,753$  additional trips through FY2032 = \$5.98 per trip. This calculation is repeated for nonresidential development using the same formula and the variables for existing and new nonresidential development. The planned cost for existing nonresidential development is \$5.98 per trip. The planned cost for new nonresidential development is \$5.98 per trip.

**Figure 83: Support Facilities Cost Analysis**

		<i>Cost*</i>
Public Works Maintenance Building		\$3,000,000
Proportionate Share		
Residential		62%
Nonresidential		38%
Residential Development to be Served		
Existing Trips	81,058	26%
New Trips FY10-FY32	228,753	74%
TOTAL	309,810	100%
Nonresidential Development to be Served		
Existing Trips	19,982	10%
New Trips FY10-FY32	171,565	90%
TOTAL	191,547	100%
Cost for Existing Development		
Per Residential Trip		\$5.98
Per Nonresidential Trip		\$5.98
Cost for New Development		
Per Residential Trip		\$5.98
Per Nonresidential Trip		\$5.98

\* City of Maricopa Capital Improvements Plan .

*Infrastructure Improvement Plan*

The IIP for the maintenance facility is shown below. The IIP is calculated using the development projections from Appendix A at the back of the report and the LOS and cost figures listed above. . Over the next five years, there is a projected increase of 25,460 trips associated with residential development, 11,381 trips associated with commercial development, and 4,448 trips associated with office/industrial development. Based on the planned LOS, this amount of new residential development will require approximately 1,015 square feet of facilities, while new nonresidential development will require approximately 631 square feet of facilities. The projected cost of this demanded infrastructure over the next five years totals \$152,346 for new residential development and \$94,717 for new nonresidential development.

The City's Capital Improvements Plan indicates the maintenance facility project will be funded on a cash basis with a combination of County Road Tax and Transportation Development Fees.

**Figure 84: Support Facilities IIP**

<b>NEW DEVELOPMENT PROJECTIONS</b>							
	<i>Fiscal Year</i>	2010	2011	2012	2013	2014	2015
Residential Vehicle Trip Projections		81,058	86,320	91,369	96,419	101,468	106,518
Commercial Vehicle Trip Projections		15,407	17,422	19,568	21,845	24,251	26,788
Office/Industrial Vehicle Trip Projections		4,575	5,363	6,201	7,091	8,031	9,023
Nonresidential Vehicle Trip Projections		19,982	22,785	25,770	28,935	32,283	35,811
							<i>5 Year Total</i>
Net Change Residential Trips During Fiscal Year		5,262	5,049	5,049	5,049	5,049	25,460
Net Change Commercial Trips During Fiscal Year		2,016	2,146	2,276	2,407	2,537	11,381
Net Change Office/Industrial Trips During Fiscal Year		788	839	890	941	991	4,448
<b>SUPPORT FACILITIES</b>							
<i>Future Necessary Public Services Required by New Development</i>							
	<i>Fiscal Year</i>	2010	2011	2012	2013	2014	
Planned LOS per Res. Vehicle Trip (SF per Ttip)		0.04	0.04	0.04	0.04	0.04	
Planned LOS per Nonres. Vehicle Trip (SF per Nonres. Vehicle Trip)		0.04	0.04	0.04	0.04	0.04	
							<i>5 Year Total</i>
SF to be Utilized by New Res. Development		209.9	201.4	201.4	201.4	201.4	1,015.6
SF to be Utilized by New Nonreses. Development		111.8	119.1	126.3	133.5	140.8	631.4
<b>TOTAL SQUARE FEET TO BE UTILIZED BY NEW DEVELOPMENT</b>		<b>321.7</b>	<b>320.5</b>	<b>327.7</b>	<b>335.0</b>	<b>342.2</b>	<b>1,647.1</b>
<i>Cost Forecast for Infrastructure Associated with Future Necessary Public Services Required by New Development</i>							
Planned Cost per Res. Vehicle Trip		\$5.98	\$5.98	\$5.98	\$5.98	\$5.98	
Planned Cost per Nonres. Vehicle Trip		\$5.98	\$5.98	\$5.98	\$5.98	\$5.98	
							<i>5 Year Total</i>
Cost to Serve New Res. Development		\$31,487	\$30,215	\$30,215	\$30,215	\$30,215	\$152,346
Cost to Serve New Nonres. Development		\$16,774	\$17,859	\$18,943	\$20,028	\$21,113	\$94,717
<b>TOTAL COST TO SERVE NEW DEVELOPMENT</b>		<b>\$48,262</b>	<b>\$48,074</b>	<b>\$49,158</b>	<b>\$50,243</b>	<b>\$51,327</b>	<b>\$247,064</b>
<i>Planned Projects from CIP</i>							
Regional Training Center (Police Department Share)		\$0	\$510,000	\$2,490,000	\$0	\$0	<i>5 Year Total</i> \$3,000,000
<i>Revenue Forecast and Financing Assumptions for Future Necessary Public Services</i>							
							<i>5 Year Total</i>
Transportation Development Fees		\$48,262	\$48,074	\$49,158	\$50,243	\$51,327	\$247,064
County Road Taxes		\$0	\$413,665	\$2,339,272	\$0	\$0	\$2,752,936
<b>TOTAL</b>		<b>\$0</b>	<b>\$510,000</b>	<b>\$2,490,000</b>	<b>\$0</b>	<b>\$0</b>	<b>\$3,000,000</b>

**SUPPORT VEHICLES AND EQUIPMENT**

*LOS Analysis*

The City currently has a fleet of 36 vehicles and equipment supporting its transportation efforts. The City plans to maintain the current LOS for support vehicles and equipment, so the incremental expansion method is used to calculate this component of the Transportation IIP and Development Fee.

Based on the size of the current fleet, the proportionate share factors, and current development base, the current LOS is 0.0004 vehicles per residential trip ((36 vehicles x 0.80)/81,058 residential vehicle trips = 0.0004). This calculation is repeated for nonresidential development resulting in a LOS of 0.0004 vehicles per nonresidential vehicle trip ((36 vehicles x 0.20)/19,982 nonresidential vehicle trips = 0.0004).

**Figure 85: Support Vehicles and Equipment Current LOS**

<i>Vehicle/Equipment</i>	<i>Units*</i>
Half Ton Pickup Truck	1
Half Ton Pickup Truck	1
Half Ton 4x4 Pickup Truck	1
Half Ton 4x4 Pickup Truck	1
Three Quarter Ton Crew Cab	1
Three Quarter Ton Pickup Truck	1
Five Yard Dump Truck	1
Two Yard Dump Truck	1
Ton and Half Bucket Truck	1
Water Truck 2000 Gal	1
Water Truck 4600 Gal	1
Street Sweeper	1
Street Sweeper	1
Skip Loader	1
Tractor/Mower (100 hp)	1
Tractor/Mower (40 hp)	1
Motor Grader	1
Motor Grader	1
Golf Cart	1
VMS Board	2
Mobile Traffic Signal	4
Light Tower	2
Aircompressor w/ Trailer	1
Brush Chipper	1
Enclosed Trailer	1
Tilt Trailer (8x18)	1
Dump Trailer	1
Spray Trailer	1
Sign Trailer (8x12)	1
Wall Trailer (7x18)	1
Flat Bed Trailer (10x25)	1
<b>TOTAL</b>	<b>36</b>

	<i>Proportionate Share</i>
Current Demand Units Served	
Residential - trips	81,058      80%
Nonresidential - trips	19,982      20%
<b>TOTAL</b>	<b>101,040      100%</b>

Current LOS	
Residential - vehicles/equipment per trip	0.0004
Nonresidential - vehicles/equipment per trip	0.0004

\* City of Maricopa Fleet Management.

*Cost Analysis*

The City's Fleet Management Division estimates the current fleet of support vehicles and equipment to have a replication value of \$2,003,000, an average of \$55,639 per unit. Based on the current LOS of 0.0004 units per residential vehicle trip and 0.0004 units per nonresidential vehicle trip, and an average cost of \$55,639 per unit, the cost per demand unit is \$19.82 per residential vehicle trip (0.0004 units per residential vehicle trip x \$55,639 per unit) and \$19.82 per nonresidential vehicle trip (0.0004 vehicles per nonresidential vehicle trip x \$55,639 per unit).

**Figure 86: Support Vehicles and Equipment Cost Analysis**

<i>Vehicle/Equipment</i>	<i>Units</i>	<i>Cost/ Unit*</i>	<i>Total Replication Value</i>
Half Ton Pickup Truck	1	\$27,500	\$27,500
Half Ton Pickup Truck	1	\$27,500	\$27,500
Half Ton 4x4 Pickup Truck	1	\$33,000	\$33,000
Half Ton 4x4 Pickup Truck	1	\$33,000	\$33,000
Three Quarter Ton Crew Cab	1	\$27,500	\$27,500
Three Quarter Ton Pickup Truck	1	\$27,500	\$27,500
Five Yard Dump Truck	1	\$82,000	\$82,000
Two Yard Dump Truck	1	\$60,000	\$60,000
Ton and Half Bucket Truck	1	\$81,000	\$81,000
Water Truck 2000 Gal	1	\$86,000	\$86,000
Water Truck 4600 Gal	1	\$105,000	\$105,000
Street Sweeper	1	\$180,000	\$180,000
Street Sweeper	1	\$180,000	\$180,000
Skip Loader	1	\$80,000	\$80,000
Tractor/Mower (100 hp)	1	\$95,000	\$95,000
Tractor/Mower (40 hp)	1	\$45,000	\$45,000
Motor Grader	1	\$250,000	\$250,000
Motor Grader	1	\$250,000	\$250,000
Golf Cart	1	\$8,000	\$8,000
VMS Board	2	\$25,000	\$50,000
Mobile Traffic Signal	4	\$40,000	\$160,000
Light Tower	2	\$8,500	\$17,000
Aircompressor w/ Trailer	1	\$13,000	\$13,000
Brush Chipper	1	\$35,000	\$35,000
Enclosed Trailer	1	\$7,000	\$7,000
Tilt Trailer (8x18)	1	\$7,000	\$7,000
Dump Trailer	1	\$5,000	\$5,000
Spray Trailer	1	\$5,000	\$5,000
Sign Trailer (8x12)	1	\$7,000	\$7,000
Wall Trailer (7x18)	1	\$7,000	\$7,000
Flat Bed Trailer (10x25)	1	\$12,000	\$12,000
<b>TOTAL</b>	<b>36</b>		<b>\$2,003,000</b>

Average Cost per Vehicle/Piece of Equipment => \$55,639

Current LOS

Residential - vehicles/equipment per trip	0.0004
Nonresidential - vehicles/equipment per trip	0.0004

Cost Factor

Average cost per vehicle/equipment	\$55,639
------------------------------------	----------

Cost per

Residential Trip	\$19.82
Nonresidential Trip	\$19.82

\* City of Maricopa Fleet Management.

*Infrastructure Improvement Plan*

The IIP for Transportation support vehicles and equipment is shown below. The IIP is calculated using the development projections from Appendix A at the back of the report and the LOS and cost figures listed above. Over the next five years, there is a projected increase of 25,460 trips associated with residential development, 11,381 trips associated with commercial development, and 4,448 trips associated with office/industrial development. Based on the current LOS, this amount of residential development will utilize approximately 9.07 units while nonresidential development will utilize 5.64 units. The projected cost of this demanded infrastructure totals \$818,510 over the next five years.

For support vehicles and equipment vehicles, the City plans to use only development fees to pay for the new capacity added for new development. Since the incremental expansion methodology has been used to calculate this component, development fees are the only revenue source used to increase the capacity of these vehicles and equipment. The IIP assumes cash financing on a pay-as-you-go (PAYGO) basis.

**Figure 87: Support Vehicles and Equipment IIP**

<b>NEW DEVELOPMENT PROJECTIONS</b>							
	<i>Fiscal Year</i>	2010	2011	2012	2013	2014	2015
Residential Vehicle Trip Projections		81,058	86,320	91,369	96,419	101,468	106,518
Commercial Vehicle Trip Projections		15,407	17,422	19,568	21,845	24,251	26,788
Office/Industrial Vehicle Trip Projections		4,575	5,363	6,201	7,091	8,031	9,023
Nonresidential Vehicle Trip Projections		19,982	22,785	25,770	28,935	32,283	35,811
							<i>5 Year Total</i>
Net Change Residential Trips During Fiscal Year		5,262	5,049	5,049	5,049	5,049	25,460
Net Change Commercial Trips During Fiscal Year		2,016	2,146	2,276	2,407	2,537	11,381
Net Change Office/Industrial Trips During Fiscal Year		788	839	890	941	991	4,448

  

<b>SUPPORT VEHICLES AND EQUIPMENT</b>							
<i>Future Necessary Public Services Required by New Development</i>							
	<i>Fiscal Year</i>	2010	2011	2012	2013	2014	
Current LOS per Res. Vehicle Trip (Vehicles per Person)		0.0004	0.0004	0.0004	0.0004	0.0004	
Current LOS per Nonres. Vehicle Trip (Vehicles per Nonresidential Vehicle Trip)		0.0004	0.0004	0.0004	0.0004	0.0004	
							<i>5 Year Total</i>
Vehicles Demanded by New Res. Development		1.87	1.80	1.80	1.80	1.80	9.07
Vehicles Demanded by New Nonres. Development		1.00	1.06	1.13	1.19	1.26	5.64
<b>TOTAL VEHICLES DEMANDED BY NEW DEVELOPMENT</b>		<b>2.87</b>	<b>2.86</b>	<b>2.93</b>	<b>2.99</b>	<b>3.06</b>	<b>14.71</b>
<i>Cost Forecast for Infrastructure Associated with Future Necessary Public Services Required by New Development</i>							
Planned Cost per Person		\$19.82	\$19.82	\$19.82	\$19.82	\$19.82	
Planned Cost per Nonres. Vehicle Trip		\$19.82	\$19.82	\$19.82	\$19.82	\$19.82	
							<i>5 Year Total</i>
Cost to Serve New Res. Development		\$104,316	\$100,100	\$100,100	\$100,100	\$100,100	\$504,716
Cost to Serve New Nonres. Development		\$55,572	\$59,166	\$62,759	\$66,352	\$69,945	\$313,794
<b>TOTAL COST TO SERVE NEW DEVELOPMENT</b>		<b>\$159,888</b>	<b>\$159,266</b>	<b>\$162,859</b>	<b>\$166,452</b>	<b>\$170,045</b>	<b>\$818,510</b>
<i>Revenue Forecast and Financing Assumptions for Future Necessary Public Services</i>							
							<i>5 Year Total</i>
Transportation Development Fees		\$159,888	\$159,266	\$162,859	\$166,452	\$170,045	\$818,510

**TRANSPORTATION DEVELOPMENT FEES**

Capital cost for the average length trip is shown at the bottom of the below figure. For the planned street improvements, the cost for the average trip length is calculated by multiplying the average trip length multiplied by the trip length adjustment factor and the capital cost per vehicle mile of travel. For example, the capital cost for planned street improvements demanded by residential development

is 3.21 miles x 1.22 x \$138.14, or \$541.04 per trip. This is repeated for commercial and other nonresidential land uses.

Costs for support facilities and support vehicles and equipment are added to the costs for planned street improvements.

**Figure 88: Transportation Development Fee Calculation Factors**

	<i>Residential</i>	<i>Commercial/ Shopping Center</i>	<i>All Other Nonresidential</i>
<b>Vehicle Trips Per Unit</b>			
Single Family	9.57		
Multi-family	6.65		
<b>Weekday Vehicle Trip Ends per Square Foot/Hotel Room</b>			
Commercial / Shopping Center 0-100,000 SF		0.06791	
Commercial / Shopping Center 100,001+ SF		0.05328	
Office / Institutional (all sizes)			0.02266
Business Park			0.01276
Light Industrial			0.00697
Warehousing			0.00356
Manufacturing			0.00382
Hotel (per room)			5.63
<b>Trip Adjustment Factors</b>			
Residential Trip Adjustment Factors	50%		
Commercial / Shopping Center 0-100,000 SF		21%	
Commercial / Shopping Center 100,001+ SF		24%	
All Other Nonresidential Development			50%
<b>Cost Summary</b>			
<i>Street Improvements (Streets, Grade Separations, Bridges, Signals)</i>			
Average Trip Length (miles)	3.21	3.21	3.21
Average Trip Length Adjustment	122%	68%	75%
Capital Cost Per VMT			
Street Improvements	\$66.95	\$66.95	\$66.95
Traffic Signals	\$6.96	\$6.96	\$6.96
Interchange Improvements	\$50.77	\$50.77	\$50.77
Bridges	\$13.46	\$13.46	\$13.46
TOTAL	\$138.14	\$138.14	\$138.14
<b>Street Improvements Capital Cost per Ave. Length Trip</b>	<b>\$541.04</b>	<b>\$301.56</b>	<b>\$332.61</b>
<b>Street Support Facilities Cost Per Trip</b>	<b>\$5.98</b>	<b>\$5.98</b>	<b>\$5.98</b>
<b>Street Support Vehicle/Equip Cost Per Trip</b>	<b>\$19.82</b>	<b>\$19.82</b>	<b>\$19.82</b>
<b>Net Capital Cost Per Trip</b>	<b>\$566.85</b>	<b>\$327.37</b>	<b>\$358.41</b>

The input variables listed above are used to derive the development fees shown in the figure below. The development fees are the product of the trip generation rates multiplied by the trip adjustment factors multiplied by the net capital cost per trip. For example, the development fee for a single-family detached house is  $9.57 \times 0.50 \times \$568.85 = \$2,712$  per unit.

**Figure 89: Transportation Development Fee Schedule**

	<i>Residential</i>	<i>Commercial/ Shopping Center</i>	<i>All Other Nonresidential</i>
<u>Residential (per housing unit)</u>			
Single Family	\$2,712		
Multi-family	\$1,885		
<u>Nonresidential (per square foot/hotel room)</u>			
Commercial / Shopping Center 0-100,000 SF		\$4.67	
Commercial / Shopping Center 100,001+ SF		\$4.19	
Office / Institutional (all sizes)			\$4.06
Business Park			\$2.29
Light Industrial			\$1.25
Warehousing			\$0.64
Manufacturing			\$0.68
Hotel (per room)			\$1,009

## Implementation and Administration

As specified in the Development Fees Act, there are certain accounting requirements that must be met by the City. Monies received shall be placed in a separate fund and accounted for separately and may only be used for the purposes authorized by A.R.S. 9-463.05. Interest earned on monies in the separate fund shall be credited to the fund.

Pursuant to A.R.S. 9-463.05, the City will prepare an annual report that will keep government and private sector leaders informed of the performance of development fees. The report will contain basic information such as the revenue generated by each type of public facility. At the time of the annual report, suggested improvements can be acted upon and necessary updates incorporated in the adopted ordinance.

All costs in the development fee calculations are given in current dollars with no assumed inflation rate over time. Necessary cost adjustments can be made as part of the recommended annual evaluation and update of development fees. TischlerBise recommends using the Engineering News Record *Construction Cost Index*. This index could be applied against the calculated development fee. If cost estimates change significantly the City should redo the fee calculations.

Residential development categories are based on data from the 2000 U.S. Census Summary File 3 for Maricopa. Specifically:

***Single Family Detached*** – units in structure: 1-detached, owner and renter occupied.

***Multi-Family*** – units in structure: 1-attached, 2, 3 - 4, 5 – 9, 10 – 19, 20 – 49, 50 or more, owner and renter occupied.

Nonresidential development categories are based on land use classifications from the book *Trip Generation* (ITE, 2008). A summary description of each development category is provided below.

***Shopping Center*** (820) – A shopping center is an integrated group of commercial establishments that is planned, developed, owned and managed as a unit. A shopping center provides on-site parking facilities sufficient to serve its own parking demands. Shopping centers may contain non-merchandizing facilities, such as office buildings, movie theaters, restaurants, post offices, banks, health clubs and recreational facilities. In addition to the integrated unit of shops in one building or enclosed around a mall, many shopping centers include out-parcels. For smaller centers without an enclosed mall or peripheral buildings, the Gross Leasable Area (GLA) may be the same as the Gross Floor Area (GFA) of the building.

***General Office*** (710) – A general office building houses multiple tenants including, but not limited to, professional services, insurance companies, investment brokers and tenant services such as banking, restaurants and service retail facilities. In the development fees study, this category is used as a proxy for institutional uses that may have more specific land use codes.

***Business Park*** (770) – Business parks consist of a group of flex-type buildings served by a common roadway system. The tenant space lends itself to a variety of uses, with the rear side of the building usually served by a garage door. The tenant

space includes a variety of uses with an average mix of 20 to 30 percent office/commercial and 70 to 80 percent industrial/warehousing.

***Light Industrial*** (110) – Light industrial facilities usually employ fewer than 500 persons and have an emphasis on activities other than manufacturing. Typical light industrial activities include, but are not limited to printing plants, material-testing laboratories and assembling of data processing equipment.

***Warehousing*** (150) – Warehouses are primarily devoted to the storage of materials.

***Manufacturing*** (140) – In manufacturing facilities, the primary activity is the conversion of raw materials or parts into finished products.

***Hotel (320)*** - A place of lodging that provides sleeping accommodations and often a restaurant. They offer free on-site parking and provide little or no meeting space and few (if any) supporting facilities.

For development types not shown above, staff may use the most appropriate rates from the ITE manual or rates from approved local transportation studies or observed data.

## Appendix A – Demographic Estimates and Development Projections

TischlerBise has prepared documentation on current demographic *estimates* and development *projections* for both residential and nonresidential development that will be used in the infrastructure improvement plan (IIP) and development fee study. The demographic data estimates are used in calculating current levels-of-service (LOS) being provided to existing development by the current infrastructure in the City. The development *projections* are used for calculating the LOS to be provided to future development by planned capital projects or existing infrastructure that was oversized in anticipation of new development. The development projections are also used in forecasting the amount and cost of infrastructure required by new development that will be documented in the IIP.

### **CURRENT ESTIMATES OF HOUSING UNITS, HOUSEHOLDS AND POPULATION**

The City's Development Services Department estimates there were 16,940 housing units in Maricopa as of July 1, 2009. Housing units are comprised of residences that are both occupied and vacant. Global Water (the City's water provider) estimates the City's current vacancy rate to be 10%. The current number of occupied housing units (households) is calculated by the 10% vacancy rate to the current estimate of housing units. The current number of households is estimated to be 15,286 ( $16,940 \times (1-0.10) = 15,286$ ).

The July 1, 2009 population estimate from the Central Arizona Association of Governments (CAAG) is 40,811 persons.

**Figure A-1: July 1, 2009 Estimates of Housing Units, Households, and Population**

Single Family Units*	16,940
Estimated Vacancy Rate**	10%
Single Family Households	15,286
Population Estimate***	40,811

\* City of Maricopa, Development Services Department.

\*\* Estimate from Global Water.

\*\*\*CAAG Pinal Sub-County projections.

### **PROJECTIONS OF HOUSING UNITS, HOUSEHOLDS, AND POPULATION**

CAAG is currently completing a countywide analysis of development projections. TischlerBise's analysis of the population projections for Maricopa from the *CAAG Pinal Projections Study* yields the annual population growth percentages shown at the top of the figure below.

To calculate the number of households (occupied housing units), the population projections are divided by the number of persons per household (2.86) from the 2005 Special Census.

The number of housing units (occupied and vacant structures) is calculated by applying the 10% vacancy rates from Global Water to the projected number of households.

**Figure A-2: Projections of Housing Units, Households, and Population FY2010 to FY2030**

	During Fiscal Year =>	2010	2011	2012	2013	2014	5 Year Increments			
							2015	2020	2025	2030
Annual Growth Percentage*		6.66%	6.25%	5.88%	5.55%	5.26%	11.95%	6.31%	6.46%	4.17%
	Start of Fiscal Year =>	2010	2011	2012	2013	2014	5 Year Increments			
POPULATION PROJECTIONS		40,811	43,530	46,250	48,969	51,688	54,408	86,908	114,327	151,260
Persons per Household**			2.86	2.86	2.86	2.86	2.86	2.86	2.86	2.86
HOUSEHOLD PROJECTIONS		15,286	16,236	17,185	18,135	19,085	20,035	31,385	40,962	53,861
Projected Vacancy Rate***			10.0%	10.0%	10.0%	10.0%	10.0%	10.0%	10.0%	10.0%
HOUSING UNIT PROJECTIONS		16,940	18,040	19,095	20,150	21,206	22,261	34,873	45,513	59,845

\* TischlerBise analysis of "Most Likely" scenario from *CAAG Pinal Projections Study*, Applied Economics, October 2, 2009.  
 \*\* Persons Per Household for All Types of Housing (Special Census 2005)  
 \*\*\* Global Water.

## SQUARE FOOTAGE AND EMPLOYMENT ESTIMATES

TischlerBise estimates there is a total of 1,693,934 square feet of nonresidential development in the City as of July 1, 2009. The City's previous development fee study estimated 1,100,000 square feet of nonresidential development on July 1, 2005. Based on City permit data, 593,934 square feet of nonresidential development have been added during the last four fiscal years resulting in a total of 1,693,934 square feet on July 1, 2009 (1,100,000 + 593,934 = 1,693,934). The figure below provides a breakdown of this total by retail, office/institutional and industrial flex development.

**Figure A-3: July 1, 2009 Nonresidential Square Footage Estimates**

	Square Footage		
	July 1, 2005 Square Feet*	Added July 1, 2005 to July 1, 2009**	July 1, 2009 Square Feet
Retail	467,000	469,791	936,791
Office/Institutional	188,000	58,823	246,823
Industrial Flex	445,000	65,320	510,320
<b>TOTAL</b>	<b>1,100,000</b>	<b>593,934</b>	<b>1,693,934</b>

\* TischlerBise, *Development Fee Study for City of Maricopa*, 2005.  
 \*\* City of Maricopa building permit data.

The City's previous development fee study estimated a total of 3,394 jobs in Maricopa on July 1, 2005. Employee density figures from the Institute of Transportation Engineers (ITE) *Trip Generation Manual* (shown in the figure below) are used convert the amount and type of nonresidential development built in the City during the last four fiscal years into number of jobs.

**Figure A-4: Floor Area per Employee and Nonresidential Trip Rates**

ITE Code	Land Use / Size	Demand Unit	Wkdy Trip Ends Per Dmd Unit*	Wkdy Trip Ends Per Employee*	Emp Per Dmd Unit**	Sq Ft Per Emp
<b>Commercial / Shopping Center***</b>						
820	10K gross leasable area	1,000 Sq Ft	152.03	na	3.33	300
820	25K gross leasable area	1,000 Sq Ft	110.32	na	3.33	300
820	50K gross leasable area	1,000 Sq Ft	86.56	na	2.86	350
820	100K gross leasable area	1,000 Sq Ft	67.91	na	2.50	400
820	200K gross leasable area	1,000 Sq Ft	53.28	na	2.22	450
820	400K gross leasable area	1,000 Sq Ft	41.80	na	2.00	500
857	Discount Club	1,000 Sq Ft	41.80	32.21	1.30	771
<b>General Office****</b>						
710	10K gross floor area	1,000 Sq Ft	22.66	5.06	4.48	223
710	25K gross floor area	1,000 Sq Ft	18.35	4.43	4.14	241
710	50K gross floor area	1,000 Sq Ft	15.65	4.00	3.91	256
710	100K gross floor area	1,000 Sq Ft	13.34	3.61	3.70	271
710	200K gross floor area	1,000 Sq Ft	11.37	3.26	3.49	287
710	Average	1,000 Sq Ft	11.01	3.32	3.32	302
<b>Other Nonresidential</b>						
770	Business Park*****	1,000 Sq Ft	12.76	4.04	3.16	317
760	Research & Dev Center	1,000 Sq Ft	8.11	2.77	2.93	342
730	Government Office Building	1,000 Sq Ft	68.93	11.95	5.77	173
610	Hospital	1,000 Sq Ft	16.50	5.20	3.17	315
565	Day Care	student	4.48	28.13	0.16	na
550	University/College	student	2.38	9.13	0.26	na
530	High School	student	1.71	19.74	0.09	na
520	Elementary School	student	1.29	15.71	0.08	na
520	Elementary School	1,000 Sq Ft	15.43	15.71	0.98	1,018
320	Lodging	room	5.63	12.81	0.44	na
150	Warehousing	1,000 Sq Ft	3.56	3.89	0.92	1,093
140	Manufacturing	1,000 Sq Ft	3.82	2.13	1.79	558
110	Light Industrial	1,000 Sq Ft	6.97	3.02	2.31	433

\* *Trip Generation*, Institute of Transportation Engineers, 2008.

\*\* Employees per demand unit calculated from trip rates, except for Shopping Center data, which are derived from *Development Handbook* and *Dollars and Cents of Shopping Centers*, published by the Urban Land Institute.

\*\*\* Based on data published by ITE in *Trip Generation Handbook* (2004), the best correlation between floor area and trips is a trendline with the equation  $((0.65 * \text{LN}(\text{KSF})) + 5.83)$ .

\*\*\*\* Based on data published by ITE in *Trip Generation Handbook* (2004), the best correlation between floor area and trips is a trendline with the equation  $((0.77 * \text{LN}(\text{KSF})) + 3.65)$ .

\*\*\*\*\* According to ITE, a Business Park is a group of flex-type buildings served by a common roadway system. The tenant space includes a variety of uses with an average mix of 20-30% office/commercial and 70-80% industrial/warehousing.

The 593,934 square feet of nonresidential square footage added during the last four fiscal years have resulted in the addition of approximately 1,757 jobs. When added to the 3,394 jobs previously

estimated within the City, the July 1, 2009 employment estimate is 5,151 jobs (3,394 + 1,757 = 5,151).

**Figure A-5: July 1, 2009 Employment Estimates**

	<i>Estimated Jobs</i>		
	<i>July 1, 2005 Jobs*</i>	<i>Added July 1, 2005 to July 1, 2009**</i>	<i>July 1, 2009 Jobs</i>
Retail	1,335	1,342	2,677
Office/Institutional	1,032	264	1,296
Industrial Flex	1,027	151	1,178
<b>TOTAL</b>	<b>3,394</b>	<b>1,757</b>	<b>5,151</b>

\* TischlerBise, *Development Fee Study for City of Maricopa*, 2005.

\*\* Square footage added between July 1, 2005 to July 1, 2009 divided by square square feet per job factors from ITE *Trip Generation Manual*.

## NONRESIDENTIAL SQUARE FOOTAGE AND EMPLOYMENT PROJECTIONS

The current ratio of jobs to population in the City is 0.126 (5,131 jobs/40,811 persons = 0.126). The *CAAG Pinal Projections Study* projects a jobs to population ratio of 0.295 in FY2030. To project the total number of jobs, TischlerBise adjusts the current ratio of 0.126 uniformly over the next twenty years to the projected 0.295 ratio in FY2030. This ratio is multiplied by the population projections from Figure 2 to project the total number of jobs. The resulting projection of total jobs is shown in the figure below.

**Figure A- 6: Total Employment Projections FY2010-FY2030**

<i>Start of Fiscal Year =&gt;</i>	<i>5 Year Increments</i>									
	2010	2011	2012	2013	2014	2015	2020	2025	2030	
<b>PROJECTED POPULATION</b>	40,811	43,530	46,250	48,969	51,688	54,408	86,908	114,327	151,260	
Projected Jobs to Population Ratio*	0.126	0.135	0.143	0.152	0.160	0.168	0.211	0.253	<b>0.295</b>	
<b>PROJECTED TOTAL JOBS</b>	5,151	5,862	6,620	7,423	8,272	9,168	18,319	28,932	44,675	
NEW JOBS ADDED ANNUALLY	711	757	803	849	895	1,610	1,937	2,899	2,845	

\* TischlerBise analysis of "Most Likely" scenario from *CAAG Pinal Projections Study*, Applied Economics, October 2, 2009.

Because the infrastructure improvements plans and development fees must be proportionate, TischlerBise further refines the projected number of total jobs into the categories of retail, office/institutional and industrial flex. TischlerBise's analysis of the *CAAG Pinal Projections Study* yields the following distribution of new jobs by type:

**Figure A-7: Employment by Type of Development Assumptions FY2010 – FY2030**

<i>Added During Fiscal Year =&gt;</i>	<i>5 Year Increments</i>									
	2010	2011	2012	2013	2014	2015	2020	2025	2030	
Retail Distribution	49%	49%	49%	49%	49%	49%	44%	40%	41%	
Office/Institutional Distribution	34%	34%	34%	34%	34%	35%	40%	47%	48%	
Industrial Flex Distribution	17%	17%	17%	17%	17%	15%	16%	13%	11%	
<b>TOTAL</b>	<b>100%</b>	<b>100%</b>	<b>100%</b>	<b>100%</b>	<b>100%</b>	<b>100%</b>	<b>100%</b>	<b>100%</b>	<b>100%</b>	

\* TischlerBise analysis of "Most Likely" scenario from *CAAG Pinal Projections Study*, Applied Economics, October 2, 2009.

The distribution percentages from Figure 7 are applied to the new jobs added annually listed at the bottom of Figure 6. This projected number of jobs by type of development is added to the current estimated number of jobs by type. These projections are shown below.

**Figure A-8: Employment by Type of Development Projections FY2010-FY2030**

NEW JOBS		5 Year Increments									
	Added During Fiscal Year =>	2010	2011	2012	2013	2014	2015	2020	2025	2030	
Retail		350	373	395	418	441	794	845	1,163	1,172	
Office/Institutional		238	254	269	285	300	567	785	1,360	1,374	
Industrial Flex		123	131	139	147	154	249	308	376	299	
<b>TOTAL NEW JOBS</b>		<b>711</b>	<b>757</b>	<b>803</b>	<b>849</b>	<b>895</b>	<b>1,610</b>	<b>1,937</b>	<b>2,899</b>	<b>2,845</b>	

  

TOTAL JOBS BY TYPE		5 Year Increments									
	Start of Fiscal Year =>	2010	2011	2012	2013	2014	2015	2020	2025	2030	
Retail		2,677	3,027	3,400	3,796	4,214	4,654	9,168	13,797	20,110	
Office/Institutional		1,296	1,534	1,788	2,057	2,342	2,642	5,863	10,161	17,550	
Industrial Flex		1,178	1,301	1,431	1,570	1,716	1,871	3,288	4,974	7,015	
<b>TOTAL JOBS</b>		<b>5,151</b>	<b>5,862</b>	<b>6,620</b>	<b>7,423</b>	<b>8,272</b>	<b>9,168</b>	<b>18,319</b>	<b>28,932</b>	<b>44,675</b>	

The projected number of jobs by type added annually is converted to nonresidential development square footage by type using the employee density conversion factors from Figure 4. This is shown at the top of Figure 9 below. The projected amount of nonresidential square footage by type of development is added to the current estimate of nonresidential square footage by type of development to project the total amount of nonresidential square footage by type of development. This is shown at the bottom of the figure below.

**Figure A- 9: Nonresidential Square Footage Projections FY2010-FY2030**

NEW NONRESIDENTIAL SQUARE FOOTAGE BY TYPE		5 Year Increments									
	Added During Fiscal Year =>	2010	2011	2012	2013	2014	2015	2020	2025	2030	
	Square Feet/ Job*										
Retail	350	122,554	130,479	138,403	146,327	154,251	277,998	295,685	406,888	410,233	
Office/Institutional	223	53,182	56,621	60,059	63,498	66,937	126,378	174,959	303,369	306,474	
Industrial Flex	433	53,134	56,570	60,005	63,441	66,877	107,963	133,299	162,679	129,484	
<b>TOTAL NEW NONRESIDENTIAL SQUARE FOOTAGE</b>		<b>228,871</b>	<b>243,669</b>	<b>258,468</b>	<b>273,266</b>	<b>288,064</b>	<b>512,338</b>	<b>603,943</b>	<b>872,936</b>	<b>846,191</b>	

  

TOTAL NONRESIDENTIAL SQUARE FOOTAGE BY TYPE		5 Year Increments									
	Start of Fiscal Year =>	2010	2011	2012	2013	2014	2015	2020	2025	2030	
Retail		936,791	1,059,345	1,189,824	1,328,227	1,474,553	1,628,804	3,208,587	4,828,579	7,038,397	
Office/Institutional		246,823	300,005	356,626	416,685	480,183	547,120	1,265,289	2,223,853	3,871,455	
Industrial Flex		510,320	563,454	620,024	680,030	743,471	810,347	1,423,870	2,154,185	3,037,697	
<b>TOTAL NONRESIDENTIAL SQUARE FOOTAGE</b>		<b>1,693,934</b>	<b>1,922,805</b>	<b>2,166,474</b>	<b>2,424,941</b>	<b>2,698,207</b>	<b>2,986,272</b>	<b>5,897,745</b>	<b>9,206,617</b>	<b>13,947,548</b>	

\* *Trip Generation Manual*, Institute of Transportation Engineers, 2008.

## AVERAGE WEEKDAY VEHICLE TRIP END ESTIMATES

Average Weekday Vehicle Trip Ends are from the reference book, *Trip Generation Manual*, published by the Institute of Transportation Engineers in 2008. A “trip end” represents a vehicle either entering or exiting a development (as if a traffic counter were placed across a driveway). Trip ends are calculated based on the number of units for residential development and per thousand square feet for nonresidential development.

Trip rates are adjusted to avoid over-estimating the number of actual trips because one vehicle trip is counted in the trip rates of both the origination and destination points. A simple factor of 50% has been applied to the residential, retail, office/institutional and industrial flex categories.

The retail category has a trip factor of less than 50% due to two characteristics of this land use. First, commercial development attracts vehicles as they pass-by on arterial and collector roads (“pass-by” trips). For example, when someone stops at a convenience store on their way home from work, the convenience store is not their primary destination.

A second adjustment for diverted linked trips is made to the commercial category. Diverted linked trips are trips that are attracted from the traffic volume on roads in the vicinity of commercial development but require a diversion from one road to another road to gain access to the commercial development. These trips add traffic to streets adjacent to the development, but do not add trips to a community’s transportation network.

Using a 100,000 square foot shopping center as an example, pass-by trips account for 34% of total trips while diverted link trip account for an additional 24% of total trips. The remaining 42% of primary trips (100%-34%-24% = 42%) is adjusted by 50% to avoid over-estimating the number of actual trips because one vehicle trip is counted in the trip rates of both the origination and destination points. The total commercial trip adjustment factor for a 100,000 square foot shopping center is 21% (42% x 50% = 21%).

Figure 10 summarizes the commercial trip adjustments for pass-by trips and diverted linked trips.

**Figure A-10: Trip Rate Adjustment Factors for ITE Land Use Code 820 (Shopping Centers)**

Floor Area in thousands (KSF)	All Commercial Trips (a)	Comm. Pass-by Trips (b)*	Comm. Diverted-Link Trips (c)**	Primary Comm. Trips (d=(a-(b+c)))	Origin - Destination Adj. Factor (e)***	Commercial Trip Adj Factor (d x e)
10	100%	52%	24%	24%	50%	12%
25	100%	45%	24%	31%	50%	16%
50	100%	39%	24%	37%	50%	19%
100	100%	34%	24%	42%	50%	21%
200	100%	29%	24%	47%	50%	24%
400	100%	23%	24%	53%	50%	27%
800	100%	18%	24%	58%	50%	29%

\* Based on data published by ITE in *Trip Generation Handbook* (2004), the best trendline correlation between pass-by trips and floor area is a logarithmic curve with the equation  $(-7.6967 * \ln(\text{KSF}) + 69.448)$ .

\*\* Based on data published by ITE in *Trip Generation Handbook* (2004).

\*\*\* To account for the origin-destination relationship of a trip, an adjustment factor of 50% is applied to the primary trips to account for only the trip destinations, i.e. the trips attracted to a land use.

TischlerBise has taken these trip end estimates and adjustment factors to calculate the average weekday trip ends for each category of residential and nonresidential development.

**Figure A-11: Average Weekday Trip End Estimates from Development in Maricopa**

**Residential Vehicle Trip Ends on an Average Weekday**

<i>Residential Units</i>	Assumptions				
Single Family Detached	16,940				
<b>Average Weekday Vehicle Trip Ends per Unit**</b>					
Single Family Detached	<table border="1" style="width: 100%; border-collapse: collapse;"> <thead> <tr> <th style="width: 50%;">Trip Rate</th> <th style="width: 50%;">Trip Factor</th> </tr> </thead> <tbody> <tr> <td style="text-align: center;">9.57</td> <td style="text-align: center;">50%</td> </tr> </tbody> </table>	Trip Rate	Trip Factor	9.57	50%
Trip Rate	Trip Factor				
9.57	50%				
<b>Residential Vehicle Trip Ends of an Average Weekday</b>					
Single Family Detached	81,058				
<b>Total Residential Trip Ends</b>	<b>81,058</b>				

**Nonresidential Vehicle Trips Ends on an Average Weekday**

<i>Nonresidential Gross Floor Area (1,000 sq. ft.)*</i>	Assumptions								
Retail	937								
Office/Institutional	247								
Industrial Flex	510								
<b>Average Weekday Vehicle Trips Ends per 1,000 Sq. Ft.**</b>									
Retail	<table border="1" style="width: 100%; border-collapse: collapse;"> <thead> <tr> <th style="width: 50%;">Trip Rate</th> <th style="width: 50%;">Trip Factor</th> </tr> </thead> <tbody> <tr> <td style="text-align: center;">86.56</td> <td style="text-align: center;">19%</td> </tr> <tr> <td style="text-align: center;">22.66</td> <td style="text-align: center;">50%</td> </tr> <tr> <td style="text-align: center;">6.97</td> <td style="text-align: center;">50%</td> </tr> </tbody> </table>	Trip Rate	Trip Factor	86.56	19%	22.66	50%	6.97	50%
Trip Rate	Trip Factor								
86.56	19%								
22.66	50%								
6.97	50%								
Office/Institutional									
Industrial Flex									
<b>Nonresidential Vehicle Trip Ends on an Average Weekday</b>									
Retail	15,407								
Office/Institutional	2,797								
Industrial Flex	1,778								
<b>Total Nonresidential Trip Ends</b>	<b>19,982</b>								
<b>TOTAL TRIP ENDS</b>	<b>101,040</b>								

\*Floor area estimates were derived using sq. ft. per employee factors from ULI and ITE

\*\*Trip rates are from the Institute of Transportation Engineers(ITE) *Trip Generation Manual*, 2008.

**SUMMARY OF DEVELOPMENT PROJECTIONS FY2010-FY2030**

Annual demographic and development projections for residential and nonresidential development in the City are summarized in Figure 12 below.

**Figure A-12: Summary Development Projections FY2010-FY2030**

Start of Fiscal Year =>	2010	2011	2012	2013	2014	5 Year Increments				
						2015	2020	2025	2030	
POPULATION	40,811	43,530	46,250	48,969	51,688	54,408	86,908	114,327	151,260	
HOUSING UNITS	16,940	18,040	19,095	20,150	21,206	22,261	34,873	45,513	59,845	
JOBS	5,151	5,862	6,620	7,423	8,272	9,168	18,319	28,932	44,675	
JOBS:POPULATION RATIO	0.126	0.135	0.143	0.152	0.160	0.168	0.211	0.253	0.295	
NONRESIDENTIAL SQUARE FOOTAGE (1,000's)	1,694	1,923	2,166	2,425	2,698	2,986	5,898	9,207	13,948	
VEHICLE TRIPS	101,040	109,105	117,139	125,354	133,751	142,329	238,934	329,895	456,565	
NONRESIDENTIAL VEHICLE TRIPS	19,982	22,785	25,770	28,935	32,283	35,811	72,068	112,116	170,206	
<i>Nonresidential SF (1,000's)</i>										
Retail	937	1,059	1,190	1,328	1,475	1,629	3,209	4,829	7,038	
Office/Institutional	247	300	357	417	480	547	1,265	2,224	3,871	
Industrial Flex	510	563	620	680	743	810	1,424	2,154	3,038	
<i>Jobs</i>										
Retail	2,677	3,027	3,400	3,796	4,214	4,654	9,168	13,797	20,110	
Office/Institutional	1,296	1,534	1,788	2,057	2,342	2,642	5,863	10,161	17,550	
Industrial Flex	1,178	1,301	1,431	1,570	1,716	1,871	3,288	4,974	7,015	
<i>Trips</i>										
Single Family Detached	81,058	86,320	91,369	96,419	101,468	106,518	166,866	217,779	286,359	
Retail	15,407	17,422	19,568	21,845	24,251	26,788	52,770	79,413	115,756	
Office/Institutional	2,797	3,399	4,041	4,721	5,440	6,199	14,336	25,196	43,864	
Industrial Flex	1,778	1,964	2,161	2,370	2,591	2,824	4,962	7,507	10,586	

## Appendix B – Cash Flow Analysis

This cash flow analysis is based on the IIP's, development fees, and methodologies plus the demographic and development projections in Appendix A. FY2010 (beginning July 1, 2009) is the first projection year.

This cash flow analysis is based on several assumptions:

- 100% of all future residential and nonresidential development will pay 100% of the proposed development fees.
- Future development will occur at the pace and magnitude outlined in the demographic and development projects in Appendix A of the development fee report.

To the extent these assumptions change, the cash flow analysis will change correspondingly. Also, the cash flow analysis is based on the proposed fees and LOS over a five year time frame. The City updates its development fees on a regular basis and thus, it is likely the fee amounts, LOS, and methodologies will change over the course of the cash flow analysis.

## LIBRARY CASH FLOW ANALYSIS

The cash flow summary below indicates total development fee revenues of \$1.8 million over the next five years. The City is planning to debt finance the construction of the main library with the debt service payments beginning in FY2015.

**Figure B-1: Projected Five Year Library Development Fee Cash Flow Analysis**

LIBRARY	Fiscal Year =>	2010	2011	2012	2013	2014	TOTAL	Ave Annual
<b>DEVELOPMENT FEE REVENUES</b>								
Residential Development		\$361,138	\$361,138	\$361,138	\$361,138	\$361,138	\$1,805,691	\$361,138
<b>TOTAL REVENUE</b>		<b>\$361,138</b>	<b>\$361,138</b>	<b>\$361,138</b>	<b>\$361,138</b>	<b>\$361,138</b>	<b>\$1,805,691</b>	<b>\$361,138</b>
<b>CAPITAL COSTS</b>								
Libraries Debt Service		\$0	\$0	\$0	\$0	\$0	\$0	\$0
<b>TOTAL EXPENDITURES</b>		<b>\$0</b>	<b>\$0</b>	<b>\$0</b>	<b>\$0</b>	<b>\$0</b>	<b>\$0</b>	<b>\$0</b>
<b>Annual Surplus/(Deficit)</b>		<b>\$361,138</b>	<b>\$361,138</b>	<b>\$361,138</b>	<b>\$361,138</b>	<b>\$361,138</b>		
<b>Cumulative Surplus/(Deficit)</b>		<b>\$361,138</b>	<b>\$722,276</b>	<b>\$1,083,415</b>	<b>\$1,444,553</b>	<b>\$1,805,691</b>		

**PARKS AND RECREATION CASH FLOW ANALYSIS**

The cash flow summary below indicates total revenues of \$12.6 million over the next five years. The deficits shown at the bottom of the table are the result of the planned projects providing capacity to both new and existing development. New development's proportionate share of these expenditures will be funded with development fees, but the City will have to use non-development fee revenues to fund existing development's share of these planned expenditures. The deficits are also the result of the credit for future debt service payments on General Obligation (G.O.) bonds to be used to fund parks and recreation projects.

**Figure B-2: Projected Five Year Parks and Recreation Development Fee Cash Flow Analysis**

<b>PARKS AND RECREATION</b>								<i>Ave</i>
	<i>Fiscal Year =&gt;</i>	<i>2010</i>	<i>2011</i>	<i>2012</i>	<i>2013</i>	<i>2014</i>	<i>TOTAL</i>	<i>Annual</i>
<b>DEVELOPMENT FEE REVENUES</b>								
Residential Development		\$2,514,681	\$2,514,681	\$2,514,681	\$2,514,681	\$2,514,681	\$12,573,407	\$2,514,681
<b>TOTAL REVENUE</b>		<b>\$2,514,681</b>	<b>\$2,514,681</b>	<b>\$2,514,681</b>	<b>\$2,514,681</b>	<b>\$2,514,681</b>	<b>\$12,573,407</b>	<b>\$2,514,681</b>
<b>CAPITAL COSTS</b>								
Recreation Center/Aquatic Debt Service		\$0	\$0	\$1,361,328	\$1,359,500	\$1,361,180	\$4,082,008	\$816,402
Parks Debt Service		\$1,625,690	\$1,627,565	\$1,626,110	\$2,899,404	\$2,897,704	\$10,676,473	\$2,135,295
Trails CIP		\$0	\$0	\$1,200,000	\$450,000	\$950,000	\$2,600,000	\$520,000
Parks and Recreation Portion of City Services Complex		\$0	\$0	\$41,743	\$208,715	\$208,715	\$459,172	\$91,834
Support Vehicles and Equipment		\$10,637	\$10,637	\$10,637	\$10,637	\$10,637	\$53,185	\$10,637
<b>TOTAL EXPENDITURES</b>		<b>\$1,636,327</b>	<b>\$1,638,202</b>	<b>\$4,239,818</b>	<b>\$4,928,255</b>	<b>\$5,428,235</b>	<b>\$17,870,838</b>	<b>\$3,574,168</b>
<b>Annual Surplus/(Deficit)</b>		<b>\$878,354</b>	<b>\$876,479</b>	<b>(\$1,725,136)</b>	<b>(\$2,413,574)</b>	<b>(\$2,913,554)</b>		
<b>Cumulative Surplus/(Deficit)</b>		<b>\$878,354</b>	<b>\$1,754,834</b>	<b>\$29,697</b>	<b>(\$2,383,877)</b>	<b>(\$5,297,431)</b>		

## POLICE CASH FLOW ANALYSIS

The table shows the cash flow analysis for the Police Development Fees over the next five years. The City could collect a total of \$1.8 million.

The deficits shown at the bottom of the table are the result of the planned LOS for the Police Department's share of the City Services Complex and the planned public safety training facility providing capacity to both new and existing development for several years into the future. New development's proportionate share of these expenditures will be funded with development fees, but the City will have to use non-development fee revenues to fund existing development's share of these planned expenditures. Also, given the long capacity life of these projects, future development fees beyond the five year period shown below may be used to repay the City for its investment in these facilities.

**Figure B-3: Projected Five Year Police Development Fee Cash Flow Analysis**

<b>POLICE</b>								Ave
	Fiscal Year =>	2010	2011	2012	2013	2014	TOTAL	Annual
<b>DEVELOPMENT FEE REVENUES</b>								
Residential Development		\$120,823	\$120,823	\$120,823	\$120,823	\$120,823	\$604,117	\$120,823
Nonresidential Development		\$209,462	\$223,005	\$236,549	\$250,092	\$263,635	\$1,182,743	\$236,549
<b>TOTAL REVENUE</b>		<b>\$330,285</b>	<b>\$343,829</b>	<b>\$357,372</b>	<b>\$370,915</b>	<b>\$384,459</b>	<b>\$1,786,860</b>	<b>\$357,372</b>
<b>CAPITAL COSTS</b>								
Police Share of City Services Complex		\$0	\$0	\$170,766	\$853,832	\$853,832	\$1,878,431	\$375,686
Police Share of Training Facility		\$0	\$0	\$0	\$0	\$7,955,000	\$7,955,000	\$1,591,000
Police Vehicles		\$183,825	\$192,316	\$200,808	\$209,299	\$217,790	\$1,004,038	\$200,808
<b>TOTAL EXPENDITURES</b>		<b>\$183,825</b>	<b>\$192,316</b>	<b>\$371,574</b>	<b>\$1,063,131</b>	<b>\$9,026,622</b>	<b>\$10,837,468</b>	<b>\$2,167,494</b>
<b>Annual Surplus/(Deficit)</b>		<b>\$146,460</b>	<b>\$151,512</b>	<b>(\$14,202)</b>	<b>(\$692,215)</b>	<b>(\$8,642,163)</b>		
<b>Cumulative Surplus/(Deficit)</b>		<b>\$146,460</b>	<b>\$297,972</b>	<b>\$283,770</b>	<b>(\$408,445)</b>	<b>(\$9,050,608)</b>		

## FIRE CASH FLOW ANALYSIS

The table shows the cash flow analysis for the Fire Development Fees over the next five years. The City could collect a total of \$8.2 million.

The deficits shown at the bottom of the table are the result of the planned LOS for the Fire Department's share of the City Services Complex and the planned public safety training facility providing capacity to both new and existing development for several years into the future. New development's proportionate share of these expenditures will be funded with development fees, but the City will have to use non-development fee revenues to fund existing development's share of these planned expenditures. Also, given the long capacity life of these projects, future development fees beyond the five year period shown below may be used to repay the City for its investment in these facilities.

**Figure B-4: Projected Five Year Fire Development Fee Cash Flow Analysis**

<b>FIRE</b>								<i>Ave</i>
	<i>Fiscal Year =&gt;</i>	<i>2010</i>	<i>2011</i>	<i>2012</i>	<i>2013</i>	<i>2014</i>	<i>TOTAL</i>	<i>Annual</i>
<b>DEVELOPMENT FEE REVENUES</b>								
Residential Development		\$881,224	\$881,224	\$881,224	\$881,224	\$881,224	\$4,406,121	\$881,224
Nonresidential Development		\$667,994	\$711,186	\$754,377	\$797,568	\$840,760	\$3,771,885	\$754,377
<b>TOTAL REVENUE</b>		<b>\$1,549,219</b>	<b>\$1,592,410</b>	<b>\$1,635,601</b>	<b>\$1,678,793</b>	<b>\$1,721,984</b>	<b>\$8,178,006</b>	<b>\$1,635,601</b>
<b>CAPITAL COSTS</b>								
Fire Stations CIP		\$0	\$0	\$0	\$0	\$5,000,000	\$5,000,000	\$1,000,000
Fire Share of City Services Complex		\$0	\$0	\$22,769	\$113,844	\$113,844	\$250,457	\$50,091
Fire Share of Training Facility		\$0	\$0	\$0	\$0	\$7,955,000	\$7,955,000	\$1,591,000
Apparatus and Equipment		\$476,465	\$490,353	\$504,242	\$518,131	\$532,020	\$2,521,212	\$504,242
Communications Equipment CIP		\$0	\$0	\$2,200,000	\$0	\$186,000	\$2,386,000	\$477,200
<b>TOTAL EXPENDITURES</b>		<b>\$476,465</b>	<b>\$490,353</b>	<b>\$2,727,011</b>	<b>\$631,976</b>	<b>\$13,786,865</b>	<b>\$18,112,670</b>	<b>\$3,622,534</b>
<b>Annual Surplus/(Deficit)</b>		<b>\$1,072,754</b>	<b>\$1,102,056</b>	<b>(\$1,091,410)</b>	<b>\$1,046,817</b>	<b>(\$12,064,881)</b>		
<b>Cumulative Surplus/(Deficit)</b>		<b>\$1,072,754</b>	<b>\$2,174,810</b>	<b>\$1,083,400</b>	<b>\$2,130,217</b>	<b>(\$9,934,663)</b>		

**GENERAL GOVERNMENT CASH FLOW ANALYSIS**

The cash flow summary below indicates total revenues of \$1.1 million over the next five years. The deficits shown at the bottom of the table are the result of the planned City Services Complex providing capacity to both new and existing development. New development’s proportionate share of these expenditures will be funded with development fees, but the City will have to use non-development fee revenues to fund existing development’s share of these planned expenditures. Also, given the long capacity life of these projects, future development fees beyond the five year period shown below may be used to repay the City for its investment in these facilities.

**Figure B-5: Projected Five Year General Government Development Fee Cash Flow Analysis**

<b>GENERAL GOVERNMENT</b>								<i>Ave</i>
<i>Fiscal Year =&gt;</i>	<i>2010</i>	<i>2011</i>	<i>2012</i>	<i>2013</i>	<i>2014</i>	<i>TOTAL</i>		<i>Annual</i>
<b>DEVELOPMENT FEE REVENUES</b>								
Residential Development	\$171,201	\$171,201	\$171,201	\$171,201	\$171,201	\$856,003		\$171,201
Nonresidential Development	\$44,784	\$47,680	\$50,575	\$53,471	\$56,367	\$252,877		\$50,575
<b>TOTAL REVENUE</b>	<b>\$215,985</b>	<b>\$218,880</b>	<b>\$221,776</b>	<b>\$224,672</b>	<b>\$227,567</b>	<b>\$1,108,880</b>		<b>\$221,776</b>
<b>CAPITAL COSTS</b>								
General Government Share of City Services Complex	\$0	\$0	\$1,164,722	\$5,823,609	\$5,823,609	\$12,811,940		\$2,562,388
Vehicles and Equipment	\$10,837	\$10,982	\$11,128	\$11,273	\$11,418	\$55,638		\$11,128
<b>TOTAL EXPENDITURES</b>	<b>\$10,837</b>	<b>\$10,982</b>	<b>\$1,175,849</b>	<b>\$5,834,882</b>	<b>\$5,835,027</b>	<b>\$12,867,578</b>		<b>\$2,573,516</b>
<b>Annual Surplus/(Deficit)</b>	<b>\$205,148</b>	<b>\$207,898</b>	<b>(\$954,073)</b>	<b>(\$5,610,210)</b>	<b>(\$5,607,460)</b>			
<b>Cumulative Surplus/(Deficit)</b>	<b>\$205,148</b>	<b>\$413,046</b>	<b>(\$541,028)</b>	<b>(\$6,151,238)</b>	<b>(\$11,758,698)</b>			

## TRANSPORTATION CASH FLOW ANALYSIS

The City could collect a total of \$20.2 million of Transportation Development Fees over the next five years.

The deficits shown at the bottom of the table are the result of the planned LOS for the planned street improvements providing capacity to new development for several years into the future. Future development fees beyond the five year period shown below may be used to repay the City for its investment in these projects.

**Figure B-6: Projected Five Year Transportation Development Fee Cash Flow Analysis**

<b>TRANSPORTATION</b>								<i>Ave</i>
	<i>Fiscal Year =&gt;</i>	2010	2011	2012	2013	2014	TOTAL	<i>Annual</i>
<b>DEVELOPMENT FEE REVENUES</b>								
Residential Development Fees		\$2,982,831	\$2,862,281	\$2,862,281	\$2,862,281	\$2,862,281	\$14,431,954	\$2,886,391
Nonresidential Development Fees		\$1,014,521	\$1,080,119	\$1,145,716	\$1,211,313	\$1,276,910	\$5,728,579	\$1,145,716
<b>TOTAL REVENUE</b>		<b>\$3,997,352</b>	<b>\$3,942,400</b>	<b>\$4,007,997</b>	<b>\$4,073,594</b>	<b>\$4,139,191</b>	<b>\$20,160,533</b>	<b>\$4,032,107</b>
<b>CAPITAL COSTS</b>								
Planned Street Improvements		\$9,987,617	\$9,987,617	\$9,987,617	\$9,987,617	\$9,987,617	\$49,938,083	\$9,987,617
Support Facilities		\$0	\$510,000	\$2,490,000	\$0	\$0	\$3,000,000	\$600,000
Support Vehicles and Equipment		\$159,888	\$159,266	\$162,859	\$166,452	\$170,045	\$818,510	\$163,702
<b>TOTAL EXPENDITURES</b>		<b>\$10,147,505</b>	<b>\$10,656,882</b>	<b>\$12,640,476</b>	<b>\$10,154,069</b>	<b>\$10,157,662</b>	<b>\$53,756,594</b>	<b>\$10,751,319</b>
<b>Annual Surplus/(Deficit)</b>		<b>(\$6,150,153)</b>	<b>(\$6,714,483)</b>	<b>(\$8,632,479)</b>	<b>(\$6,080,475)</b>	<b>(\$6,018,471)</b>		
<b>Cumulative Surplus/(Deficit)</b>		<b>(\$6,150,153)</b>	<b>(\$12,864,636)</b>	<b>(\$21,497,115)</b>	<b>(\$27,577,589)</b>	<b>(\$33,596,060)</b>		

Appendix C – Planned Street Improvements

STREET IMPROVEMENTS

Street Name	Segment	Segment Length	Existing Lanes	Net New Lanes	Existing Lane Miles	Net New Lane Miles	TOTAL Lane Miles	Lane Miles to be Constructed	TOTAL Cost	Cost to New Development	Cost to Existing Development	New Dev. Share Funded with DIF	Amount to include in DIF
Farrell Rd (Extension)	Porter Rd - MCG Highway	0.90	0	2	0.00	1.80	1.80	1.80	\$1,980,000	\$1,980,000	\$0	100%	\$1,980,000
Farrell Rd	SR-347 - Porter Rd	2.25	2	2	4.50	4.50	9.00	9.00	\$4,950,000	\$2,475,000	\$2,475,000	100%	\$2,475,000
Maricopa/CG Hwy	White & Parker Rd - Anderson Rd	4.50	2	2	9.00	9.00	18.00	18.00	\$9,900,000	\$4,950,000	\$4,950,000	100%	\$4,950,000
Anderson Rd	Peters and Nail Rd - Steen Rd	1.04	0	2	0.00	2.08	2.08	2.08	\$1,726,400	\$1,726,400	\$0	100%	\$1,726,400
Anderson Rd	Steen Rd - Farrell Rd	1.02	0	2	0.00	2.04	2.04	2.04	\$1,693,200	\$1,693,200	\$0	100%	\$1,693,200
Anderson Rd	Farrell Rd - Bowlin Rd	1.03	0	2	0.00	2.06	2.06	2.06	\$1,709,800	\$1,709,800	\$0	100%	\$1,709,800
Anderson Rd	Bowlin Rd - Honeycutt Rd	0.50	0	2	0.00	1.00	1.00	1.00	\$830,000	\$830,000	\$0	100%	\$830,000
Murphy Rd	Peters and Nail Rd - Steen Rd	1.04	2	2	2.08	2.08	4.16	4.16	\$3,452,800	\$1,726,400	\$1,726,400	100%	\$1,726,400
Murphy Rd	Steen Rd - Farrell Rd	1.02	2	2	2.04	4.08	6.12	6.12	\$5,079,600	\$2,539,800	\$2,539,800	100%	\$2,539,800
Murphy Rd	Farrell Rd - Bowlin Rd	1.03	2	2	2.06	4.12	6.18	6.18	\$5,129,400	\$2,564,700	\$2,564,700	100%	\$2,564,700
Murphy Rd	Bowlin Rd - Honeycutt Rd	0.50	2	2	1.00	1.00	2.00	2.00	\$1,660,000	\$830,000	\$830,000	100%	\$830,000
Peters and Nail Rd	Murphy Rd - Anderson Rd	1.00	0	2	0.00	2.00	2.00	2.00	\$1,660,000	\$1,660,000	\$0	100%	\$1,660,000
Peters and Nail Rd	MCG Highway - Murphy Rd	0.60	0	2	0.00	1.20	1.20	1.20	\$996,000	\$996,000	\$0	100%	\$996,000
Peters and Nail Rd	Hartman Rd - MCG Highway	0.48	0	2	0.00	0.96	0.96	0.96	\$796,800	\$796,800	\$0	100%	\$796,800
Peters and Nail Rd	Fuqua Rd - Hartman Rd	1.00	0	2	0.00	2.00	2.00	2.00	\$1,660,000	\$1,660,000	\$0	100%	\$1,660,000
Peters and Nail Rd	White and Parker Rd - Fuqua Rd	1.00	0	2	0.00	2.00	2.00	2.00	\$1,660,000	\$1,660,000	\$0	100%	\$1,660,000
Peters and Nail Rd	Smith Rd - White and Parker Rd	2.00	2	2	4.00	4.00	8.00	8.00	\$6,640,000	\$3,320,000	\$3,320,000	100%	\$3,320,000
Porter Rd	Someret - Honeycutt Rd	0.33	2	2	0.66	1.32	1.98	1.98	\$1,643,400	\$1,643,400	\$0	100%	\$1,643,400
White&Parker Road	Peters and Nail Rd - MCG Highway	1.80	2	2	3.60	3.60	7.20	7.20	\$5,976,000	\$2,988,000	\$2,988,000	100%	\$2,988,000
White&Parker Road	MCG Highway - Farrell Rd	0.23	2	2	0.46	0.46	0.92	0.92	\$763,600	\$381,800	\$381,800	100%	\$381,800
White&Parker Road	Farrell Rd - Bowlin Rd	1.00	2	2	2.00	2.00	4.00	4.00	\$1,660,000	\$1,660,000	\$0	100%	\$1,660,000
White&Parker Road	Bowlin Rd - Honeycutt Rd	1.00	2	2	2.00	2.00	4.00	4.00	\$1,660,000	\$1,660,000	\$0	100%	\$1,660,000
White&Parker Road	Honeycutt Rd - Smith Enke Rd	1.00	2	2	2.00	2.00	4.00	4.00	\$1,660,000	\$1,660,000	\$0	100%	\$1,660,000
Hartman Rd	Peters and Nail Rd - MCG Highway	0.25	0	2	0.00	0.50	0.50	0.50	\$415,000	\$415,000	\$0	100%	\$415,000
Hartman Rd	MCG Highway - LaBrea Rd	0.23	0	2	0.00	0.46	0.46	0.46	\$381,800	\$381,800	\$0	100%	\$381,800
Hartman Rd	LaBrea Rd - Steen Rd	0.45	0	2	0.00	0.90	0.90	0.90	\$747,000	\$747,000	\$0	100%	\$747,000
Hartman Rd	Steen Rd - Farrell Rd	1.03	0	2	0.00	2.06	2.06	2.06	\$1,709,800	\$1,709,800	\$0	100%	\$1,709,800
Hartman Rd	Farrell Rd - Sorrento Blvd	0.45	2	2	0.90	0.90	1.80	1.80	\$1,494,000	\$1,494,000	\$0	100%	\$1,494,000
Hartman Rd	Sorrento Blvd - Bowlin Rd	0.50	0	2	1.00	1.00	2.00	2.00	\$1,660,000	\$1,660,000	\$0	100%	\$1,660,000
Hartman Rd	Bowlin Rd - Honeycutt Rd	1.00	2	2	2.00	2.00	4.00	4.00	\$3,320,000	\$1,660,000	\$1,660,000	100%	\$1,660,000
Peters and Nail Rd	Anderson - City Limits	0.40	0	2	0.00	0.80	0.80	0.80	\$664,000	\$664,000	\$0	100%	\$664,000
Farrell Rd	White&Parker - Hartman Rd	2.10	0	2	0.00	4.20	4.20	4.20	\$3,486,000	\$3,486,000	\$0	100%	\$3,486,000
Bowlin Rd	Porter - White&Parker Rd	1.00	2	2	2.00	2.00	4.00	4.00	\$1,660,000	\$1,660,000	\$0	100%	\$1,660,000
Bowlin Rd	White&Parker - Hartman Rd	2.00	0	2	0.00	4.00	4.00	4.00	\$3,320,000	\$3,320,000	\$0	100%	\$3,320,000
Bowlin Rd	Hartman - Murphy Rd	1.00	0	2	0.00	2.00	2.00	2.00	\$1,660,000	\$1,660,000	\$0	100%	\$1,660,000
Bowlin Rd	Murphy Rd - Anderson Rd	1.00	0	2	0.00	2.00	2.00	2.00	\$1,660,000	\$1,660,000	\$0	100%	\$1,660,000
Honeycutt Rd	SR-347 - Plainview Drive	0.27	2	2	0.54	0.54	1.08	1.08	\$896,400	\$448,200	\$448,200	100%	\$448,200
Honeycutt Rd	Porter - White&Parker Rd	1.00	2	2	2.00	2.00	4.00	4.00	\$3,320,000	\$1,660,000	\$1,660,000	100%	\$1,660,000
Honeycutt Rd	White&Parker - Hartman Rd	2.00	2	2	4.00	4.00	8.00	8.00	\$6,640,000	\$3,320,000	\$3,320,000	100%	\$3,320,000
Smith Enke Rd	SR-347 - Province Pky	1.20	4	2	4.80	2.40	7.20	7.20	\$1,992,000	\$1,992,000	\$0	100%	\$1,992,000
Smith Enke Rd	Province - Porter Rd	0.80	2	2	1.60	1.60	3.20	3.20	\$2,656,000	\$1,328,000	\$1,328,000	100%	\$1,328,000
Bowlin Rd	SR-347 - Karsten Dr	0.70	2	2	1.40	1.40	2.80	2.80	\$1,050,000	\$1,050,000	\$0	100%	\$1,050,000
Farrell Rd	Hartman Rd - Anderson Rd	2.00	0	2	0.00	4.00	4.00	4.00	\$3,000,000	\$3,000,000	\$0	100%	\$3,000,000
Garvey Rd	SR-347 - Green Road	1.30	2	2	2.60	2.60	5.20	5.20	\$3,900,000	\$1,950,000	\$1,950,000	100%	\$1,950,000
Steen Rd	Hartman Rd - Murphy Rd	0.98	0	2	0.00	1.96	1.96	1.96	\$1,470,000	\$1,470,000	\$0	100%	\$1,470,000
Steen Rd	MCG Hwy - Hartman Rd	0.92	0	2	0.00	1.84	1.84	1.84	\$1,380,000	\$1,380,000	\$0	100%	\$1,380,000
TOTAL			48.00	92.00	58.24	102.46	160.70	160.70	\$1,133,369,000	\$81,227,100	\$32,141,900		\$81,227,100

Source: *Regional Transportation Plan Update*, prepared for the City of Maricopa by Wilson and Company, September 10, 2008 and City of Maricopa staff.

## TRAFFIC SIGNALS

North/South Corridor	East/West Corridor	Existing or New Development?	Cost*	% Allocated to New Development	Cost Allocated to New Dev.
Porter Road	Smith-Enke Road	New	\$250,000	100%	\$250,000
Porter Road	Somerset Drive	New	\$300,000	100%	\$300,000
Porter Road	Farrell Road	New	\$300,000	100%	\$300,000
Porter Road	Steen Road	New	\$250,000	100%	\$250,000
White & Parker Road	Smith-Enke Road	New	\$300,000	100%	\$300,000
White & Parker Road	Honeycutt Road	New	\$300,000	100%	\$300,000
White & Parker Road	Bowlin Road	New	\$300,000	100%	\$300,000
White & Parker Road	Farrell Road	New	\$250,000	100%	\$250,000
White & Parker Road	Steen Road	New	\$300,000	100%	\$300,000
White & Parker Road	Peters & Nall Road	New	\$300,000	100%	\$300,000
Honeycutt Road	Glenwild Drive	New	\$300,000	100%	\$300,000
Farrell Road	SR 347	New	\$300,000	100%	\$300,000
Steen Road	SR 347	New	\$300,000	100%	\$300,000
Green Road	SR 238	New	\$300,000	100%	\$300,000
White Road	SR238	New	\$250,000	100%	\$250,000
Ralston Road	SR 238	New	\$300,000	100%	\$300,000
Hartman Road	Honeycutt Road	New	\$300,000	100%	\$300,000
Hartman Road	Bowlin Road	New	\$300,000	100%	\$300,000
Hartman Road	Farrell Road	New	\$300,000	100%	\$300,000
Hartman Road	Steen Road	New	\$300,000	100%	\$300,000
Hartman Road	Maricopa-Casa Grande Highway	New	\$300,000	100%	\$300,000
Hartman Road	Peters & Nall Road	New	\$300,000	100%	\$300,000
Murphy Road	Honeycutt Road	New	\$300,000	100%	\$300,000
Murphy Road	Bowlin Road	New	\$300,000	100%	\$300,000
Murphy Road	Farrell Road	New	\$300,000	100%	\$300,000
Murphy Road	Steen Road	New	\$300,000	100%	\$300,000
Murphy Road	Maricopa-Casa Grande Highway	New	\$300,000	100%	\$300,000
Anderson Road	Steen Road	New	\$250,000	100%	\$250,000
Anderson Road	Peters & Nall Road	New	\$300,000	100%	\$300,000

**SIGNAL TOTAL** \$8,450,000

Source: *Regional Transportation Plan Update*, prepared for the City of Maricopa by Wilson and Company, September 10, 2008 and City of Maricopa staff.

\* Includes ITS components. Does not include pre-emption for emergency equipment.

## BRIDGES

### Santa Cruz Wash Bridges

Location	Existing or New Development?	Existing Number of Lanes	Net New Lanes	TOTAL # of lanes	TOTAL Cost	% Allocated to New Development	Cost Allocated to New Dev.
Honeycutt Rd	Existing and New	2	2	4	\$2,000,000	50%	\$1,000,000
Bowlin Rd	New	0	4	4	\$4,000,000	100%	\$4,000,000
Farrell Rd	New	0	4	4	\$4,000,000	100%	\$4,000,000

### Santa Rosa Wash Bridges

Location	Existing or New Development?	Existing Number of Lanes	Net New Lanes	TOTAL # of lanes	TOTAL Cost	% Allocated to New Development	Cost Allocated to New Dev.
Smith Enke Rd	Existing and New	4	2	6	\$2,000,000	33%	\$666,667
Maricopa/Casa Grande Hwy	Existing and New	2	4	6	\$4,000,000	67%	\$2,666,667
Farrell Rd Realignment	New	0	4	4	\$4,000,000	100%	\$4,000,000

**BRIDGE TOTAL** 8 20 28 \$20,000,000 \$16,333,333

Source: *Regional Transportation Plan Update*, prepared for the City of Maricopa by Wilson and Company, September 10, 2008 and City of Maricopa staff.