Land Use Assumptions, Infrastructure Improvements Plan, and Development Fee Report

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City of Somerton, Arizona

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EXECUTIVE SUMMARY

The City of Somerton hired TischlerBise to document land use assumptions, prepare an Infrastructure Improvements Plan (IIP), and update development fees pursuant to Arizona Revised Statutes 9-436.05. Municipalities in Arizona may assess development fees to offset infrastructure costs to a municipality for necessary public services. The development fees must be based on an Infrastructure Improvements Plan and Land Use Assumptions. The IIP for each type of infrastructure is in the middle section of this document and the Land Use Assumptions may be found in Appendix C. The proposed development fees are presented in the first section in Figures 2 and 3, as well as at the end of each IIP section.

Development fees are one-time payments used to construct system improvements needed to accommodate new development. The fee represents future development's proportionate share of infrastructure costs. Development fees may be used for infrastructure improvements or debt service for growth related infrastructure. In contrast to general taxes, development fees may not be used for operations, maintenance, replacement, or correcting existing deficiencies.

This update of the City's Infrastructure Improvements Plan and associated update to its development fees includes the following necessary public services:

- Parks and Recreational Facilities
- Public Safety Facilities (Police and Fire)
- Streets Facilities
- Wastewater Facilities

This plan also includes all necessary elements required to be in full compliance with SB 1525.

ARIZONA DEVELOPMENT FEE ENABLING LEGISLATION

Arizona Revised Statutes 9-463.05 (hereafter referred to as "development fee enabling legislation") governs how development fees are calculated for municipalities in Arizona. During the state legislative session of 2011, Senate Bill 1525 (SB 1525) was introduced which significantly amended the development fee enabling legislation. The changes included:

- Amending existing development fee programs by January 1, 2012.
- Abandoning existing development fee programs by August 1, 2014.
- New development fee program structure revolving around a unified Land Use Assumptions document and Infrastructure Improvements Plan.
- New adoption procedures for the Land Use Assumptions, Infrastructure Improvements Plan, and development fees.
- New definitions, including "necessary public services" which defines what categories and types of infrastructure may be funded with development fees.
- Time limitations in development fee collections and expenditures.
- New requirements for credits, "grandfathering" rules, and refunds.

This update of the City's development fees will be in compliance with all of the new requirements of SB 1525.

Necessary Public Services

Under the new requirements of the development fee enabling legislation, development fees may be only used for construction, acquisition or expansion of public facilities that are necessary public services. "Necessary public service" means any of the following categories of facilities that have a life expectancy of three or more years and that are owned and operated on behalf of the municipality: water, wastewater, storm water, drainage, flood control, library, streets, fire and police, and neighborhood parks and recreation. Additionally, a necessary public service includes any facility that was financed before June 1, 2011 and that meets the following requirements:

1. Development fees were pledged to repay debt service obligations related to the construction of the facility.
2. After August 1, 2014, any development fees collected are used solely for the payment of principal and interest on the portion of the bonds, notes, or other debt service obligations issued before June 1, 2011 to finance construction of the facility.

As of January 1, 2012, the City will no longer be able to assess development fees for Government Administration.

Infrastructure Improvements Plan

Development fees must be calculated pursuant to an Infrastructure Improvements Plan (hereafter referred to as the "IIP"). For each necessary public service that is the subject of a development fee, by law, the infrastructure improvements plan shall include the following seven elements:

- A description of the existing necessary public services in the service area and the cost to update, improve, expand, correct or replace those necessary public services to meet existing needs and usage and stricter safety, efficiency, environmental or regulatory standards, which shall be prepared by qualified professionals licensed on this state, as applicable.
- An analysis of the total capacity, the level of current usage and commitments for usage of capacity of the existing necessary public services, which shall be prepared by qualified professionals licensed in this state, as applicable.
- A description of all or the parts of the necessary public services or facility expansion and their costs necessitated by and attributable to development in the service area based on the approved Land Use Assumptions, including a forecast of the costs of infrastructure, improvements, real property, financing, engineering and architectural services, which shall be prepared by qualified professionals licensed in the state, as applicable.
- A table establishing the specific level or quantity of use, consumption, generation or discharge of a service unit for each category of necessary public services or facility expansions and an equivalency or conversion table establishing the ratio of a service unit to various types of land uses, including residential, commercial and industrial.
- The total number of projected service units necessitated by and attributable to new development in the service area based on the approved Land Use Assumptions and calculated pursuant to generally accepted engineering and planning criteria.
- The projected demand for necessary public services or facility expansions required by new service units for a period not to exceed ten years.
- A forecast of revenues generated by new service units other than development fees, which shall include estimated state-shared revenue, highway users revenue, federal revenue, ad valorem property taxes, construction contracting or similar excise taxes and the capital recovery portion

of utility fees attributable to development based on the approved Land Use Assumptions and a plan to include these contributions in determining the extent of the burden imposed by the development.

Qualified Professionals

The IIP must be developed by qualified professionals using general accepted engineering and planning practices. A qualified professional is defined as "a professional engineer, surveyor, financial analyst or planner providing services within the scope of the person's license, education, or experience." TischlerBise is a fiscal, economic, and planning consulting firm specializing in the cost of growth services. Our services include development fees, fiscal impact analysis, infrastructure financing analyses, user fee/cost of service studies, capital improvement plans, and fiscal software. TischlerBise has prepared over 800 development fee studies over the past 30 years for local governments across the United States.

Conceptual Development Fee Calculation

In contrast to project-level improvements, development fees fund growth-related infrastructure that will benefit multiple development projects, or the entire service area (usually referred to as system improvements). The first step is to determine an appropriate demand indicator for the particular type of infrastructure. The demand indicator measures the number of service units for each unit of development. For example, an appropriate indicator of the demand for parks is population growth and the increase in population can be estimated from the average number of persons per housing unit. The second step in the development fee formula is to determine infrastructure improvement units per service unit, typically called level of service (LOS) standards. In keeping with the park example, a common LOS standard is improved park acres per thousand people. The third step in the development fee formula is the cost of various infrastructure units. To complete the park example, this part of the formula would establish a cost per acre for land acquisition and/ or park improvements.

Evaluation of Credits

Regardless of the methodology, a consideration of "credits" is integral to the development of a legally defensible development fee. There are two types of "credits" that should be addressed in development fee studies and ordinances. The first is a revenue credit due to possible double payment situations, which could occur when other revenues may contribute to the capital costs of infrastructure covered by the development fee. This type of credit is integrated into the fee calculation, thus reducing the fee amount. The second is a site specific credit or developer reimbursement for dedication of land or construction of system improvements. This type of credit is addressed in the administration and implementation of the development fee program. For ease of administration, TischlerBise normally recommends developer reimbursements for system improvements.

DEVELOPMENT FEE REPORT

METHODOLOGY

Development fees for the necessary public services made necessary by new development must be based on the same level of service provided to existing development in the service area. There are three basic methodologies used to calculate development fees. They examine the past, present, and future status of infrastructure. The objective of evaluating these different methodologies is to determine the best measure of the demand created by new development for additional infrastructure capacity.

- **Cost recovery (past)** is used in instances when a community has oversized a facility or asset in anticipation of future development. This methodology is based on the rationale that new development is repaying the community for its share of the remaining unused capacity.
- **Incremental expansion method (present)** documents the current level of service for each type of public facility. The intent is to use revenue collected to expand or provide additional facilities, as needed to accommodate new development, based on the current cost to provide capital improvements.
- **Plan-based method (future)** utilizes a community's capital improvement plan and/or other adopted plans or engineering studies to guide capital improvements needed to serve new development.

Figure 1 summarizes the methods and cost components for each type of infrastructure included in Somerton's IIP and development fee update. When cost recovery is combined with other methods, infrastructure and growth-related debt service is not counted in existing levels of service.

Figure 1: Recommended Calculation Methodologies

Type of Fee	Cost Recovery (past)	Incremental Expansion (present)	Plan-Based (future)
1. Parks		Park Improvements	
2. Public Safety	Public Safety Building Fire Truck		
3. Streets		Arterial Improvements	
4. Wastewater	Wastewater Treatment Plant	Major Lines	

PROPOSED DEVELOPMENT FEES

Proposed non-utility development fees are summarized in Figure 2.

Figure 2: Proposed Non-Utility Development Fees

Proposed Non-Utility Development Fees				
Land Use	**Parks**	**Public Safety**	**Streets**	**Total**
Residential (per Housing Unit)				
Single Unit	$724	$873	$925	**$2,522**
2+ Units	$547	$659	$604	**$1,809**
Nonresidential (per 1000 sq ft of floor area)				
Industrial	$106	$249	$180	**$536**
Commercial	$231	$1,974	$1,287	**$3,493**
Institutional	$113	$713	$515	**$1,341**
Office & Other Services	$384	$773	$557	**$1,714**

Proposed fees for wastewater facilities are summarized in Figure 3. Somerton chose not to present a water development fee because there is adequate capacity to accommodate future development and no cost recovery facilities.

Figure 3: Proposed Utility Development Fees

Proposed Utility Development Fees			
Per Meter	**Water**	**Wastewater**	**Total**
0.75	$0	$3,741	**$3,741**
1.00	$0	$5,967	**$5,967**
1.50	$0	$11,483	**$11,483**
2.00	$0	$18,129	**$18,129**

CURRENT DEVELOPMENT FEES

Current non-utility development fees in Somerton are displayed in Figure 4. Somerton's current fee schedule includes the nonresidential categories of "Retail or Industrial," "Medical Office," "Office – Non Medical," and "Lodging." The Office and Institutional categories presented below both show the "Office – Non Medical" category. The current utility development fees are shown in Figure 5.

Figure 4: Current Non-Utility Development Fees

Current Non-Utility Development Fees					
Land Use	**Admin**	**Parks**	**Public Safety**	**Streets**	**Total (Including Admin)**
Residential (per Housing Unit)					
Single Unit	$42	$170	$590	$302	**$1,104**
2+ Units	$42	$170	$590	$302	**$1,104**
Nonresidential (per 1000 sq ft of floor area)					
Industrial	$6	$23	$239	$570	**$838**
Commercial	$6	$23	$239	$570	**$838**
Institutional	$7	$29	$300	$638	**$974**
Office & Other Services	$7	$29	$300	$638	**$974**

Current fees for water and wastewater are shown in Figure 5.

Figure 5: Current Utility Development Fees

Current Utility Development Fees			
Per Meter	**Water**	**Wastewater**	**Total**
0.75	$2,398	$3,766	**$6,164**
1.00	$5,996	$9,416	**$15,412**
1.50	$11,991	$18,832	**$30,823**
2.00	$19,168	$30,132	**$49,300**

DIFFERENCE BETWEEN PROPOSED AND CURRENT DEVELOPMENT FEES

The difference between the proposed development fees and the current development fees are shown in Figure 6 and Figure 7. Total non-utility fees increase for all development types except industrial.

Figure 6: Difference Between Proposed and Current Non-Utility Development Fees

Increase or Decrease					
Land Use	**Parks**	**Public Safety**	**Streets**	**Total**	**% Change**
Residential (per Housing Unit)					
Single Unit	$554	$283	$623	**$1,418**	128%
2+ Units	$377	$69	$302	**$705**	64%
Nonresidential (per 1000 sq ft of floor area)					
Industrial	$83	$10	($390)	**($302)**	-36%
Commercial	$208	$1,735	$717	**$2,655**	317%
Institutional	$84	$413	($123)	**$367**	38%
Office & Other Services	$355	$473	($81)	**$740**	76%

The differences between proposed and current utility development fees are shown in Figure 7. In contrast to the non-utility fees, utility fees have decreased, making it impossible to know the overall change in total fees without specific information on type of development, building floor area, and water main size.

Figure 7: Difference Between Proposed and Current Utility Development Fees

Increase or Decrease				
Per Meter	**Water**	**Wastewater**	**Total**	**% Change**
0.75	($2,398)	($25)	($2,423)	-39%
1.00	($5,996)	($3,449)	($9,445)	-61%
1.50	($11,991)	($7,349)	($19,340)	-63%
2.00	($19,168)	($12,003)	($31,171)	-63%

PARKS AND RECREATIONAL FACILITIES IIP

ARS 9-463.05 (T)(5)(g) defines the facilities and assets which can be included in the Parks and Recreational Facilities IIP:

> *"Neighborhood parks and recreational facilities on real property up to thirty acres in area, or parks and recreational facilities larger than thirty acres if the facilities provide a direct benefit to the development. Park and recreational facilities do not include vehicles, equipment or that portion of any facility that is used for amusement parks, aquariums, aquatic centers, auditoriums, arenas, arts and cultural facilities, bandstand and orchestra facilities, bathhouses, boathouses, clubhouses, community centers greater than three thousand square feet in floor area, environmental education centers, equestrian facilities, golf course facilities, greenhouses, lakes, museums, theme parks, water reclamation or riparian areas, wetlands, zoo facilities or similar recreational facilities, but may include swimming pools."*

The Parks and Recreational Facilities IIP includes components for parks improvements and the cost of professional services for preparing the Parks and Recreational Facilities IIP and Development Fees. The incremental expansion methodology is used to calculate the Parks and Recreational Facilities IIP.

Service Area

The City of Somerton plans to provide a uniform level-of-service and equal service for parks and recreational facilities throughout the City. As described in Somerton's 2010 General Plan Update, the "parks and recreation facilities work in conjunction to provide recreational opportunities for all citizens and visitors." As a result, the service area for the Parks and Recreational Facilities IIP is citywide.

Proportionate Share

ARS 9-463.05 (B)(3) states that the development fee shall not exceed a proportionate share of the cost of necessary public services needed to accommodate new development. As shown in Figure PR1, TischlerBise recommends daytime population as a reasonable indicator of the potential demand for Parks and Recreational Facilities from residential and nonresidential development. According to the U.S. Census Bureau web application OnTheMap, there were 1,088 inflow commuters, which is the number of persons who have jobs in Somerton but live outside the City. The proportionate share is based on cumulative impact days per year with the number of residents potentially impacting Parks and Recreational Facilities 365 days per year. Inflow commuters potentially impact parks and recreational facilities 250 days per year (5 days per week multiplied by 50 weeks a year).

Figure PR1: Daytime Population in 2011

		Cumulative Impact Days per Year			*Cost Allocation for Parks*	
Residents	**Inflow Commuters**	**Residential***	**Nonresidential****	**Total**	**Residential**	**Nonresidential**
14,528	1,088	5,302,720	272,000	5,574,720	95%	5%

** Days per Year =* ***365***

*** 5 Days per Week x 50 Weeks per Year =* ***250***

Source: Inflow/ Outflow Analysis, OnTheMap web application, U.S. Census Bureau.

EXISTING FACILITIES

Park Improvements

ARS 9-463.05(E)(1) requires a description of the existing necessary public services and the costs to upgrade or replace these services to meet existing needs and usage. Figure PR2 inventories current improved parks in Somerton that are similar to future improved parks that will be funded from development fees. The City currently has 30.74 acres of improved parks serving 14,879 persons and 1,317 jobs. The cost for an improved acre is $98,000, based on improvements made in San Luis, Arizona, because this cost was not available from the City of Somerton.

The current residential level-of-service for improved parks is 2.0 acres per thousand persons, which is found by multiplying the number of park acres (30.74) by the residential proportionate share (95%), dividing this total by the 2013 population (14,879) and multiplying this by 1,000. The nonresidential level of service is 1.2 acres of improved parks per thousand jobs, which is found by multiplying the number of park acres (30.74) by the nonresidential proportionate share (5%), dividing this total by the number of jobs in 2013 (1,317) and multiplying this by 1,000. Applying this cost per acre of improvements ($98,000) to the levels of service results in a park improvement cost per person of $192.35 and a park cost per job of $114.37.

Figure PR2: Incremental Expansion – Improved Park Acres

Park	*Acres*
Joe Munoz	9.14
Perricone	9.40
Council Ave	10.21
Main Street Ball Park	1.99
Total	**30.74**

Park Improvement Cost per Acre[1]	**$98,000**

1. Improvement cost per Acre in San Luis, Arizona.

Level of Service (LOS) Standards	Residential		Nonresidential	
Proporationate Share	95%		5%	
2013 Service Units	14,879	persons	1,317	jobs
Level of Service	**2.0**	**acres per 1,000 persons**	**1.2**	**acres per 1,000 jobs**
Infrastructure Cost per Service Unit	**$192.35**	**per person**	**$114.37**	**per job**

Excluded Costs

Development fees in Somerton exclude costs of to upgrade, update, improve, expand, correct or replace those necessary public services to meet existing needs and usage and stricter safety, efficiency, environmental or regulatory standards. Parks and Recreational Facilities development fees will only pay for additional park improvements to accommodate new development, based on the same level-of-

service provided to existing residents and jobs. Additionally, Somerton's comprehensive CIP addresses the costs of these items and provides a growth share for projects.

Current Use and Available Capacity

ARS 9-463.05(E)(2) requires an analysis of the total capacity, the level of current usage and commitments for usage of capacity of the existing necessary public services. As established above, the level of service for improved parks is 2.0 acres per thousand persons and 1.2 acres per thousand jobs. This is the level of service the City wishes to maintain using the incremental expansion method for new development. Thus, there is no available capacity for new development based on the current inventory. New development will be served by park improvement capital projects.

INFRASTRUCTURE NEEDS ANALYSIS

Projected Service Units

ARS 9-463.05(E)(5) requires the total number of service units necessitated by and attributable to new development. As shown in Figure PR3 and determined in the Land Use Assumptions, it is estimated there will be 1,885 additional persons and 167 jobs over the next ten years.

Demand for Facility Expansions and Costs

ARS 9-463.05(E)(6) requires the projected demand for necessary public services or facility expansions required by service units for the next ten years. These projected service units (1,885 persons and 167 jobs) are multiplied by the current level-of-service for park improvements (2.0 improved acres per 1,000 persons and 1.2 improved acres per 1,000 jobs). This new development will demand approximately 3.9 additional acres of improved parks.

ARS 9-463.05(E)(3) requires a description the necessary public services and their costs necessitated by and attributable to development including a forecast of the costs. The projected demand for improved park acres (3.9 acres) is multiplied by the total cost per acre of improved parks ($98,000). This results in an approximate 10-year park improvement cost of $381,700.

Figure PR3: Projected Demand for Park Improvements

	Improved Parks	
Res LOS	2.0	acres per 1,000 persons
Nonres LOS	1.2	acres per 1,000 jobs
Cost	$98,000	per improved acre

		Projected Demand		
		Service Units: Persons	*Service Units:* Jobs	Improved Parks (acres)
Base	2013	14,879	1,317	31
1	2014	15,057	1,333	31
2	2015	15,238	1,349	31
3	2016	15,421	1,365	32
4	2017	15,606	1,381	32
5	2018	15,793	1,398	33
6	2019	15,983	1,415	33
7	2020	16,174	1,432	33
8	2021	16,369	1,449	34
9	2022	16,565	1,466	34
10	2023	16,764	1,484	35
Ten-Yr Total		**1,885**	**167**	**3.9**
Cost of Improved Parks				$381,700

Figure PR4 displays necessary park improvement projects to accommodate new growth over the next 10 years, identified in the Somerton Capital Improvement Plan and by City of Somerton Parks and Recreation staff. Somerton plans to construct a ramada in both Council Avenue Park and Joe Munoz Park. Joe Munoz Park will also receive a pond and water features. Perricone Park will construct restrooms to accommodate new development. As listed in the CIP, other improvements will be made to Council Avenue Park, Joe Munoz Park and Perricone Park, besides those listed above, including walking paths, tables, benches, landscaping, trees, lighting, and barbeque grills. These projects total approximately $455,000.

Figure PR4: Necessary Parks and Recreational Facilities Expansions and Improvements

Project	Park	10 Year Cost
Ramada	Council Park	$35,000
Ramada	Joe Munoz Park	$35,000
Pond	Joe Munoz Park	$15,000
Water Feature	Joe Munoz Park	$100,000
Restrooms	Perricone Park	$40,000
Other Improvements (walking paths, tables, benches, landscaping, trees, lighting, and barbeque grills)	Council Avenue Park, Joe Munoz Park, and Perricone Park	$ 230,000
Total		**$455,000**

Source: City of Somerton CIP and Somerton Parks and Recreation Staff.

PROPOSED PARKS AND RECREATIONAL FACILITIES DEVELOPMENT FEES

Infrastructure standards and cost factors for Parks and Recreational Facilities are summarized in the upper portion of Figure PR5. The conversion of infrastructure needs and costs per service unit into a cost per development unit is also shown in table below (as required by ARS 9-463.05(E)(4)). For residential development, average number of persons per housing unit provides the necessary conversion. Nonresidential development uses employees per KSF as the conversion from service unit to development unit. Updated development fees for Parks and Recreational Facilities are shown in the column with green shading. The current fees are shown in yellow shading.

A 2.1% offset for other revenues is recommended to ensure projected development revenue does not exceed the growth-related costs for Parks and Recreational Facilities.

Figure PR5: Proposed Parks and Recreational Facilities Development Fees

Cost Per Person		
Incremental Expansion		
Park Improvements	$192.35	
Professional Services	$6.37	
Revenue Credit	-$4.17	2.1%
Net Cost per Service Unit	**$194.55**	

Residential Development Fees per Housing Unit

Unit Type	*Persons per Housing Unit*	***Proposed Fee***	*Current Fee*	*Increase (Decrease)*	*% Change*
Single Unit	3.72	**$724**	$170	$554	326%
2+ Units	2.81	**$547**	$170	$377	222%

Cost per Job		
Incremental Expansion		
Park Improvements	$114.37	
Professional Services	$3.79	
Revenue Credit	-$2.48	2.1%
Net Cost per Service Unit	**$115.67**	

Nonresidential Development Fees per 1,000 Square Feet of Floor Area

Development Type	*Employees per KSF*	***Proposed Fee***	*Current Fee*	*Increase (Decrease)*	*% Change*
Industrial	0.92	**$106**	$23	$83	363%
Commercial	2.00	**$231**	$23	$208	906%
Institutional	0.98	**$113**	$29	$84	291%
Office & Other Services	3.32	**$384**	$29	$355	1224%

FORECAST OF REVENUES

Appendix A contains the forecast of revenues required by Arizona's enabling legislation (ARS 9-463.05(E)(7)).

Parks and Recreational Facilities Development Fee Revenue

The top of Figure PR6 summarizes the growth related cost of infrastructure in Somerton over the next ten years (approximately $387,833 for Parks and Recreational Facilities.) Somerton should receive approximately $386,300 in Parks and Recreational Facilities development fee revenue over the next ten years, if actual development matches the Land Use Assumptions documented in Appendix C.

Figure PR6: Parks and Recreational Facilities Development Fee Revenue Forecast

Ten-Year Growth-Related Costs for Parks and Recreational Facilities

Park Improvements	$381,700
Professional Services	$6,133
Total	**$387,833**

		Single Unit $724 per housing unit	*2+ Units* $547 per housing unit	*Industrial* $106 per 1000 Sq Ft	*Commercial* $231 per 1,000 Sq Ft	*Institutional* $113 per 1,000 Sq Ft	*Office & Other Services* $384 per 1,000 Sq Ft
	Year	*Hsg Units*	*Hsg Units*	*KSF*	*KSF*	*KSF*	*KSF*
Base	2013	3,492	728	18	48	859	70
1	2014	3,533	737	19	48	870	71
2	2015	3,576	746	19	49	880	72
3	2016	3,619	755	19	49	891	73
4	2017	3,662	764	19	50	901	74
5	2018	3,706	773	20	51	912	75
6	2019	3,751	782	20	51	923	75
7	2020	3,795	792	20	52	934	76
8	2021	3,841	801	20	52	945	77
9	2022	3,887	811	20	53	957	78
10	2023	3,934	820	21	54	968	79
Ten-Yr Increase		*442*	*92*	*3*	*6*	*109*	*9*
Projected Fees =>		**$320,000**	**$50,000**	**$300**	**$1,000**	**$12,000**	**$3,000**
						Total =>	**$386,300**

PUBLIC SAFETY FACILITIES IIP

ARS 9-463.05 (T)(5)(f) defines the facilities and assets which can be included in the Public Safety Facilities IIP:

> *"Fire and police facilities, including all appurtenances, equipment and vehicles. Fire and police facilities do not include a facility or portion of a facility that is used to replace services that were once provided elsewhere in the municipality, vehicles and equipment used to provide administrative services, helicopters or airplanes or a facility that is used for training police and firefighters from more than one station or substation."*

The Public Safety Facilities IIP includes components for the public safety building, ladder truck, and the cost of professional services for preparing the Public Safety Facilities IIP and Development Fees. The cost recovery methodology is used to calculate the IIP for the public safety building and ladder truck. The revenues will be used to pay for debt service payments according to ARS 9-463.05(R).

Service Area

The City's police and fire departments provide service to the entire city. Because the police and fire departments share a building, the Public Safety Facilities IIP includes both police and fire facilities. The service area for the Public Safety Facilities IIP is citywide.

Proportionate Share

ARS 9-463.05 (B)(3) states that the development fee shall not exceed a proportionate share of the cost of necessary public services needed to accommodate new development.

In Somerton, public safety (i.e. police and fire) infrastructure standards, projected needs, and development fees are based both on residential and nonresidential development. As shown in Figure PS1, functional population was used to allocate Public Safety Facilities infrastructure and costs to residential and nonresidential development. Functional population is similar to what the U.S. Census Bureau calls "daytime population" by accounting for people living and working in a jurisdiction. Residents that don't work are assigned 20 hours per day to residential development and four hours per day to nonresidential development. Residents that work in Somerton are assigned 14 hours to residential development and 10 hours to nonresidential development. Residents that work outside Somerton are assigned 14 hours to residential development. Inflow commuters are assigned 10 hours to nonresidential development. Based on 2011 functional population data for Somerton, the cost allocation for residential development is 82% while nonresidential development accounts for 18% of the demand for public safety infrastructure.

Figure PS1: Proportionate Share

		Service Units in 2011		*Demand Hours/Day*	*Person Hours*
Residential					
	Population*	14,528			
83%	Residents Not Working	12,117		20	242,340
17%	Resident Workers**	2,411			
8%	Worked in City**		198	14	2,772
92%	Worked Outside City**		2,213	14	30,982
			Residential Subtotal		276,094
			Residential Share =>		**82%**
Nonresidential					
	Non-Working Residents	12,117		4	48,468
	Jobs Located in City**	1,286			
	Residents Working in City**		198	10	1,980
	Non-Resident Workers (inflow commuters)		1,088	10	10,880
			Nonresidential Subtotal		61,328
			Nonresidential Share =>		**18%**
				TOTAL	337,422

** 2011 count, U.S. Census Bureau.*
*** Inflow/Outflow Analysis, OnTheMap web application, U.S. Census Bureau data for all jobs (without agriculture.)*

The development fee for Public Safety Facilities is calculated on a per capita basis for residential development. Nonresidential development fees are calculated using trips as the service unit. TischlerBise recommends using nonresidential vehicle trips as the best demand indicator for public safety facilities and equipment. Trip generation rates are used for nonresidential development because vehicle trips are highest for commercial developments, such as shopping centers, and lowest for industrial development. Office and institutional trip rates fall between the other two categories. This ranking of trip rates is consistent with the relative demand for Public Safety Facilities from nonresidential development.

GROWTH COST OF DEBT OBLIGATIONS

The existing public services included in the Public Safety Facilities IIP include the Public Safety Building and the Ladder Truck.

Public Safety Building

ARS 9-463.05(E)(1) requires a description of the existing necessary public services and the costs to upgrade or replace these services to meet existing needs and usage. The Public Safety Building houses both police and fire and has 26,800 square feet of floor area. In 2005, a debt obligation of $2,915,848 was issued to pay for the Public Safety Building, with payments beginning in 2007 and ending in 2045. Including interest, the debt obligation requires payments of $5,877,688.93 over the entire 38 year period. As shown in Figure PS2, $4,934,675 in principal and interest remains on the Public Safety Building.

As new development utilizes its proportionate share of the available capacity of the Public Safety Building, the City plans to have new development pay for its share of the remaining debt. Thus, the cost recovery methodology is used, and growth share is based on projected persons and trips at the end of the bond term. This allows for development fees to exclude costs for current development's share of the public service. The growth share of the remaining principal and interest is 32% for both residential and nonresidential development, which represents new growth's share of the total population and trips in 2045.

To calculate the cost per service unit, the remaining debt is divided between residential and nonresidential development using their respective proportionate shares (82% and 18%), and then multiplied by the growth shares (32% for both land uses). Then, these amounts are divided by the projected increase in persons (6,916) and trips (2,538) from 2013-2045 to obtain a cost per person of $185.66 and a cost per trip of $110.93.

Figure PS2: Cost Recovery - Public Safety Building

Name of Debt Obligation	*Year of Debt Obligation*	*FY of Final Payment*	*Remaining Principal and Interest*
USDA Loan	2007	2045	$ 4,934,675

	Proportionate Share	Proportionate Cost	Growth Share*	Growth Cost	Increase 2013 - 2038	Cost per Service Unit
Residential (persons)	82%	$4,046,434	32%	$1,283,974	6,916 persons	**$185.66 per person**
Nonresidential (trips)	18%	$888,242	32%	$281,627	2,539 trips	**$110.93 per trip**

*Residential Growth Share (32%) is 1 - (14,879 residents in 2013/ 21,794 residents in 2045).

*Nonresidential Growth Share (32%) is 1 - (5,468 trips in 2013/ 8,007 trips in 2045).

Ladder Truck

ARS 9-463.05(E)(1) requires a description of the existing necessary public services and the costs to upgrade or replace these services to meet existing needs and usage. In 2006, debt was issued to pay for street improvements and a ladder truck. Ladder truck costs make up 13% of the loan. The original principal portion of the debt for the ladder truck in 2006 was $827,450. As shown in Figure PS3, including interest, the remaining debt for the ladder truck portion of the loan totals $920,371.

The cost recovery methodology is also used to calculate the IIP and fee for the Ladder Truck, so the growth share is based on projected persons and trips at the end of the bond term. The growth share of the remaining principal and interest is 14% for both residential and nonresidential development, which represents new growth's share of the total population and trips in 2026.

To calculate the cost per service unit (persons and trips), the remaining debt is divided by residential and nonresidential growth using their respective proportionate shares (82% for residential and 18% for nonresidential). These totals are then multiplied by the growth shares (14% for both development types). Lastly, these amounts are divided by the increase in persons and trips to obtain a cost per service unit. This results in a cost per person of $43.44 and the cost per trip of $25.94.

Figure PS3: Cost Recovery - Ladder Truck

Name of Debt Obligation	*Year of Debt Obligation*	*FY of Final Payment*	*Remaining Principal and Interest*
GADA Loan	2006	2026	$920,371

	Proportionate Share	Proportionate Cost	Growth Share*	Growth Cost	Increase 2013 - 2026	Cost per Service Unit
Residential (persons)	82%	$754,704	14%	$108,410	2,496 persons	**$43.44 per person**
Nonresidential (trips)	18%	$165,667	14%	$23,821	918 trips	**$25.94 per trip**

* Residential Growth Share (14%) is 1 - [(14,879 residents in 2013/ 17,375 residents in 2026).

* Nonresidential Growth Share (14%) is 1 - [(5,468 trips in 2013/ 6,387 trips in 2026).

Forecast of Costs

ARS 9-463.05(E)(3) requires a description the necessary public services and their costs necessitated by and attributable to development including a forecast of the costs. The growth costs shown above represent the costs necessitated by new development. (For the Public Safety Building, the residential growth cost is $1,283,974 and the nonresidential growth cost is $281,550. The Ladder Truck has a residential growth cost of $108,410 and a nonresidential growth cost of $23,803.)

Excluded Costs

Development fees in Somerton exclude the cost to upgrade, update, improve, expand, correct or replace those necessary public services to meet existing needs and usage and stricter safety, efficiency, environmental or regulatory standards. The cost recovery methodology ensures that the cost is only allocated towards necessary public services to meet future needs.

INFRASTRUCTURE NEEDS ANALYSIS

Projected Service Units

ARS 9-463.05(E)(5) requires the total number of service units necessitated by and attributable to new development. As determined in the Land Use Assumptions, it is estimated there will be an additional 1,885 persons and 695 nonresidential trips over the next ten years.

Demand for Facility Expansions and Costs

ARS 9-463.05(E)(6) requires the projected demand for necessary public services or facility expansions required by service units for the next ten years. The new service units for the next ten years will be served by the excess capacity available of the public safety building and the ladder truck.

PROPOSED PUBLIC SAFETY FACILITIES DEVELOPMENT FEES

Ratio of Service Units to Development Units

ARS 9-463.05(E)(4) requires a conversion table establishing the ratio of a service unit to various types of land uses, including residential, commercial and industrial. Figure PS4 displays the ratio of a service unit to various types of land uses for residential and nonresidential development. The residential

development table displays the persons per household unit for single unit and homes with two or more units.

Nonresidential development fees are calculated using trips as the service unit. TischlerBise recommends using nonresidential vehicle trips as the best demand indicator for public safety facilities and equipment. Trip generation rates are used for nonresidential development because vehicle trips are highest for commercial developments, such as shopping centers, and lowest for industrial development. Office and institutional trip rates fall between the other two categories. This ranking of trip rates is consistent with the relative demand for public safety from nonresidential development. Other possible nonresidential demand indicators, such as employment or floor area, will not accurately reflect the demand for service. For example, if employees per thousand square feet were used as the demand indicator, public safety development fees would be too high for office development because offices typically have more employees per 1,000 square feet than retail uses. If floor area were used as the demand indicator, public safety development fees would be too high for industrial development.

Trip generation rates are from the reference book Trip Generation published by the Institute of Transportation Engineers (ITE 9th Edition 2012). 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 development fees, trip generation rates require an adjustment factor to avoid double counting each trip at both the origin and destination points. Therefore, the basic trip adjustment factor is 50%.

For commercial development, the trip adjustment factor is less than 50% because retail development and some services attract vehicles as they pass by on arterial and collector roads. For example, when someone stops at a convenience store on the way home from work, the convenience store is not the primary destination. For the average shopping center, the ITE data indicates that 34% of the vehicles that enter are passing by on their way to some other primary destination. The remaining 66% of attraction trips have the commercial site as their primary destination. Because attraction trips are half of all trips, the trip adjustment factor is 66% multiplied by 50%, or approximately 33% of the trip ends. These factors are shown to derive inbound vehicle trips for each type of nonresidential land use.

Proposed Public Safety Development Fees

The proposed development fees for Public Safety Facilities are shown in Figure PS4. Cost factors for public safety facilities and vehicles that were debt financed are summarized in the upper portion. The development fee is calculated by multiplying the service units per development unit (number of persons per housing unit for residential and inbound vehicle trips per 1,000 square feet for nonresidential) by the total cost per service unit (persons for residential and trips for nonresidential) of each component of the fee. The proposed development fees are shown in dark green and the current fees are highlighted in yellow. A revenue credit is not needed for Public Safety Facilities because the ten-year growth costs exceed the projected revenue from the development fees.

Figure PS4: Proposed Public Safety Facilities Development Fees

Cost Per Person	
Cost Recovery	
Public Safety Building	$185.66
Ladder Truck	$43.44
Professional Services	$5.50
Net Cost Per Service Unit	**$234.60**

Residential Development Fees per Housing Unit

Unit Type	*Persons per Housing Unit*	***Proposed Fee***	*Current Fee*	*Increase (Decrease)*	% Change
Single Unit	3.72	**$873**	$590	$283	48%
2+ Units	2.81	**$659**	$590	$69	12%

Cost Per Trip	
Cost Recovery	
Public Safety Building	$110.93
Ladder Truck	$25.94
Professional Services	$3.22
Net Cost Per Service Unit	**$140.09**

Nonresidential Development Fees per 1,000 Square Feet of Floor Area

Development Type	*Inbound Vehicle Trips per KSF*	***Proposed Fee***	*Current Fee*	*Increase (Decrease)*	% Change
Industrial	1.78	**$249**	$239	$10	4%
Commercial	14.09	**$1,974**	$239	$1,735	726%
Institutional	5.09	**$713**	$300	$413	138%
Office & Other Services	5.52	**$773**	$300	$473	158%

FORECAST OF REVENUES

Appendix A contains the forecast of revenues required by Arizona's enabling legislation.

Development Fee Revenues for Public Safety Facilities

Revenue projections shown below assume implementation of the proposed public safety fees and that development over the next ten years is consistent with the Land Use Assumptions described in Appendix C. To the extent the rate of development either accelerates or slows down, there will be a corresponding change in the development fee revenue. As shown below, the total public safety improvement costs total $599,671 and approximately $545,000 will be collected from development fees.

Figure PS5: Public Safety Facilities Development Fee Revenue Forecast

Ten-Year Growth-Related Costs for Public Safety Facilities

Public Safety Building	$491,881
Ladder Truck	$101,657
Professional Services	$6,133
Total	**$599,671**

		Single Unit	*2+ Units*	*Industrial*	*Commercial*	*Institutional*	*Office & Other Services*
		$873 per housing unit	**$659 per housing unit**	**$249 per 1,000 Sq Ft**	**$1,974 per 1,000 Sq Ft**	**$713 per 1,000 Sq Ft**	**$773 per 1,000 Sq Ft**
	Year	*Hsg Units*	*Hsg Units*	*KSF*	*KSF*	*KSF*	*KSF*
Base	2013	3,492	728	18	48	859	70
1	2014	3,533	737	19	48	870	71
2	2015	3,576	746	19	49	880	72
3	2016	3,619	755	19	49	891	73
4	2017	3,662	764	19	50	901	74
5	2018	3,706	773	20	51	912	75
6	2019	3,751	782	20	51	923	75
7	2020	3,795	792	20	52	934	76
8	2021	3,841	801	20	52	945	77
9	2022	3,887	811	20	53	957	78
10	2023	3,934	820	21	54	968	79
Ten-Yr Increase		*442*	*92*	*3*	*6*	*109*	*9*
Projected Fees =>		**$386,000**	**$61,000**	**$1,000**	**$12,000**	**$78,000**	**$7,000**
						Total =>	**$545,000**

STREET FACILITIES IIP

ARS 9-463.05 (T)(5)(e) defines the facilities and assets which can be included in the Street Facilities IIP:

> *"Street facilities located in the service area, including arterial or collector streets or roads that have been designated on an officially adopted plan of the municipality, traffic signals and rights-of-way and improvements thereon."*

The Street Facilities IIP includes components for arterial street improvements and the cost of professional services for preparing the Street Facilities IIP and Development Fees.

Service Area

Since only arterials streets are included in the Street Facilities IIP and Development Fees and given these characteristics of how the City plans and designs its arterial street network, the service area for the Street Facilities IIP is Citywide.

Proportionate Share

ARS 9-463.05 (B)(3) states that the development fee shall not exceed a proportionate share of the cost of necessary public services needed to provide necessary public services to the development. Trip generation rates and trip adjustment factors are used to determine the proportionate impact of residential, commercial, office, institutional, and industrial land uses on the City's streets network.

EXISTING FACILITIES

Description

ARS 9-463.05(E)(1) requires a description of the existing necessary public services and the costs to upgrade or replace these services to meet existing needs and usage. The existing public services included in the Streets IIP are arterial improvements. Somerton has a total network of 40.73 lane miles, of which 15.39 are minor arterials.

Figure S1: Somerton Street Inventory

Classification	Lane Miles
Principal Arterial	14.45
Minor Artieral	15.39
Collector	10.89
Total	**40.73**

Source: City of Somerton.

An estimated cost per lane mile in Somerton of $1,243,700 is shown in Figure S2, based on the total cost and construction of Somerton Avenue in 2007.

Figure S2: Cost per Lane Mile

Total Cost	$1,327,866
Length	0.6
Lanes	2
Lane Miles	1.2
Cost per Lane Mile	**$1,243,700**

Source: City of Somerton. Total cost of engineering and construction of Somerton Ave in 2007, updated to 2013 using CPI.

Excluded Costs

The development fee does not include the costs of repair, operation or maintenance or the cost to upgrade or replace existing necessary public services in order to meet stricter standards for existing development or to provide a higher level of service for new development. New development will only pay for additional streets improvements, based on the same level-of-service provided to existing residents.

Current Use and Available Capacity

ARS 9-463.05(E)(2) requires an analysis of the total capacity, the level of current usage and commitments for usage of capacity of the existing necessary public services. As established above, there are 15.39 lane miles of arterials. However, these roads are not at full capacity. The level of service to calculate the Development Fees using the incremental expansion methodology assumes that 21% of the arterial lane miles are at full capacity and represents what should be expanded upon to accommodate new development. This results in 3.3 lane miles of minor arterials. New development will be served by arterial improvement capital projects.

Figure S3: Lane Miles at Capacity

Classification	Lane Miles
Minor Artieral	3.3

The daily per-lane capacity of minor arterials in Somerton is 8,500, found in the City of Somerton Small Area Transportation Study.

Figure S4: Daily per-lane Capacity

Functional Classification	Daily Per-Lane Capacity
Minor Arterial	8,500

Source: City of Somerton Small Area Transportation Study.

INFRASTRUCTURE NEEDS ANALYSIS

ARS 9-463.05(E)(5) requires the total number of service units necessitated by and attributable to new development. Somerton will use average weekday miles of travel as the service units for documenting existing infrastructure standards and allocating the cost of future improvements. TischlerBise created an aggregate travel model to convert development units within Somerton to vehicle trips and vehicle miles of travel. Figure S7 summarizes the input variables for the travel model. First, components used to determine the service units, including trip generation rates, adjustments for commuting patterns and pass-by trips, and trip length weighting factors.

Service Units

Customized Trip Generation Rates per Housing Unit

As an alternative to simply using the national average trip generation rate for residential development, the Institute of Transportation Engineers (ITE) publishes regression curve formulas that may be used to derive custom trip rates using local demographic data. Key independent variables needed for the analysis (i.e. vehicles available, housing units, households and persons) are available from American Community Survey 2010 data for Somerton. Customized average weekday trip generation rates by type of home are shown in Figure S5.

Figure S5: Residential Trip Generation Rates by Type of Housing

		Households (2)			*Vehicles per*
	Vehicles Available (1)	*Single Unit per Structure*	*2+ Units per Structure*	*Total*	*Household by Tenure*
Owner-occupied	5,589	2,716	104	2,820	1.98
Renter-occupied	1,458	569	734	1,303	1.12
TOTAL	7,047	3,285	838	4,123	1.71
Housing Units (6) =>		3,659	1,012	4,671	

Units per Structure	*Persons (3)*	*Trip Ends (4)*	*Vehicles Available*	*Trip Ends (5)*	*Average Trip Ends*	*Trip Ends per Housing Unit*
Single Units	10,947	28,378	6,020	34,790	31,584	8.63
2+ Units	2,283	7,858	1,027	4,342	6,100	6.03
TOTAL	13,230	36,235	7,047	39,132	37,684	8.07

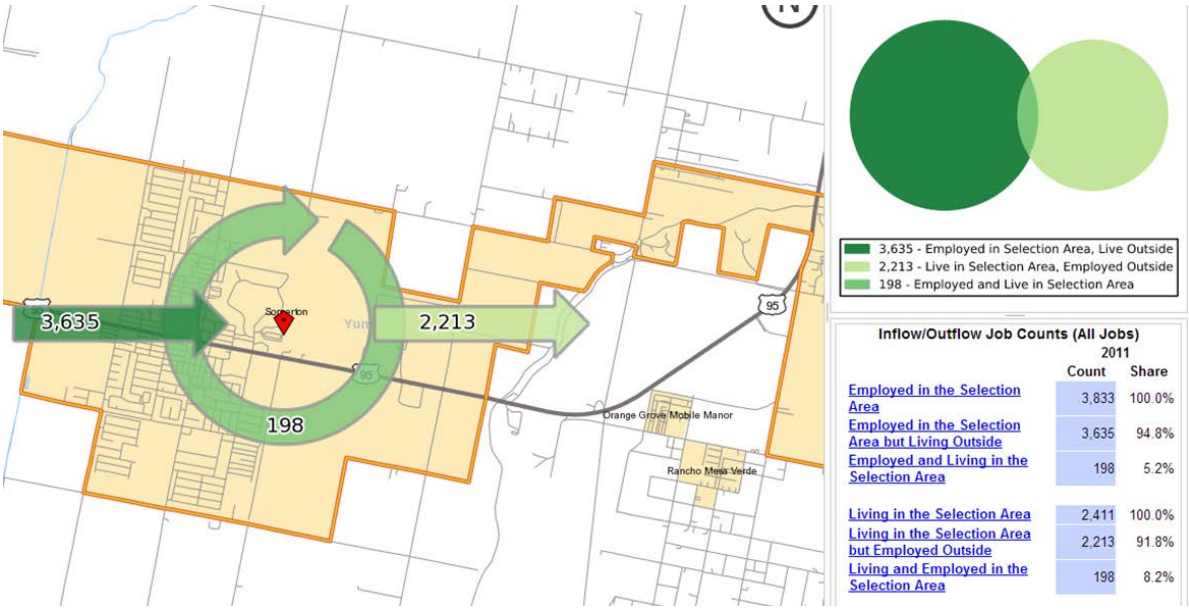
1. Vehicles available by tenure from Table B25046, American Community Survey, 2006-2010.
2. Households by tenure and units in structure from Table B25032, American Community Survey, 2006-2010.
3. Persons by units in structure from Table B25033, American Community Survey, 2006-2010.
4. Vehicle trips ends based on persons using formulas from Trip Generation (ITE 2008). For single unit housing (ITE 210), the fitted curve equation is EXP(0.91*LN(persons)+1.52). To approximate the average population of the ITE studies, persons were divided by 20 and the equation result multiplied by 20. For 2+ unit housing (ITE 220), the fitted curve equation is (3.47*persons)-64.48.
5. Vehicle trip ends based on vehicles available using formulas from Trip Generation (ITE 2008). For single unit housing (ITE 210), the fitted curve equation is EXP(0.99*LN(vehicles)+1.81). To approximate the average number of vehicles in the ITE studies, vehicles available were divided by 23 and the equation result multiplied by 23. For 2+ unit housing (ITE 220), the fitted curve equation is (3.94*vehicles)+293.58.
6. Housing units from Table B25024, American Community Survey, 2006-2010.

To calculate Street Facilities Development Fees, trip generation rates require an adjustment factor 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 proportionate to the infrastructure demand for particular types of development.

Adjustments for Commuting Patterns and Pass-By Trips

Residential development has a larger trip adjustment factor of 64% to account for commuters leaving Somerton for work. According to the 2009 National Household Travel Survey, weekday work trips are typically 31% of production trips (i.e., all out-bound trips, which are 50% of all trip ends). As shown in Figure S6 the Census Bureau's web application OnTheMap indicates that 92% of resident workers traveled outside the city for work in 2011. In combination, these factors (0.31 X 0.50 X 0.92 = .14) support the additional 14% allocation of trips to residential development.

Figure S6: OnTheMap Inflow/ Outflow Analysis



For commercial development, the trip adjustment factor is less than 50% because retail development and some services attract vehicles as they pass by on arterial and collector roads. For example, when someone stops at a convenience store on the way home from work, the convenience store is not the primary destination. For the average shopping center, the ITE data indicates that 34% of the vehicles that enter are passing by on their way to some other primary destination. The remaining 66% of attraction trips have the commercial site as their primary destination. Because attraction trips are half of all trips, the trip adjustment factor is 66% multiplied by 50%, or approximately 33% of the trip ends. These factors are shown to derive inbound vehicle trips for each type of nonresidential land use.

Trip Length Weighting Factor by Type of Land Use

The Street Facilities Development Fees methodology includes a percentage adjustment, or weighting factor, to account for trip length variation by type of land use. As documented in Table 6 of the 2009

National Household Travel Survey, vehicle trips from residential development are approximately 121% of the average trip length. The residential trip length adjustment factor includes data on home-base work trips, social, and recreational purposes. Conversely, shopping trips associated with commercial development are roughly 66% of the average trip length while other nonresidential development typically accounts for trips that are 73% of the average for all trips.

Average Trip Length

With 15.39 lane miles of system improvements and a lane capacity standard of 8,500 vehicles per lane, the development fee road network has approximately 130,814 vehicle miles of capacity (ie, 8,500 vehicles per lane traveling the entire 15.39 miles) and an unweighted average trip length of approximately 5.45 miles. However, the total lane miles and average trip length was reduced because not all arterial roads in Somerton are at full capacity. 21% of the minor arterial network is used to calculate the fees, resulting in 3.3 lane miles and a weighted-average trip length to be approximately 0.92 miles.

Figure S7: Travel Demand Model Inputs

Dev Type	Weekday VTE	Dev Unit	Trip Adj	Trip Length Wt Factor
Single Unit	8.63	HU	64%	121%
2+ Units	6.03	HU	64%	121%
Industrial	3.56	KSF	50%	73%
Commercial	42.70	KSF	33%	66%
Institutional	15.43	KSF	33%	73%
Office & Other Services	11.03	KSF	50%	73%

Avg Trip Length (miles)	**0.92**
Capacity Per Lane	**8,500**
Cost per Lane-Mile	**$1,243,700**

Projected development in Somerton over the next 10 years is shown in Figure S8. Trip generation rates and trip adjustment factors convert project development into average weekday vehicle trips. A typical vehicle trip, such as a person leaving their home and traveling to work, generally begins on a local street that connects to a collector street, which connects to an arterial road and eventually to a state or interstate highway. The progression of travel up and down the functional classification chain limits the average trip length determination, for the purpose of development fees, to the following question, "What is the average vehicle trip length on development fee system improvements (i.e., major roads listed in the CIP)?"

As shown in Figure S8, new development in Somerton will demand 3,491 trips.

Demand for Facility Expansions and Costs

ARS 9-463.05(E)(6) requires the projected demand for necessary public services or facility expansions required by service units for the next ten years. The travel demand model inputs above are used to derive level of service in Vehicle Miles of Travel and future needs of lane miles and improved

intersections. A Vehicle Mile of Travel (VMT) is a measurement unit equal to one vehicle traveling one mile. In the aggregate, VMT is the product of vehicle trips multiplied by the average trip length[1].

As shown below, existing infrastructure standards using the average trip length of 0.92 miles in Somerton are 1.2 lane-miles of arterials per 10,000 VMT. To maintain the existing infrastructure standards, Somerton needs an additional 0.42 lane miles of arterials accommodate projected development over the next ten years.

ARS 9-463.05(E)(3) requires a description the necessary public services and their costs necessitated by and attributable to development including a forecast of the costs. Using the cost factor determined above ($1,243,700 per lane mile), the total cost of system improvements is estimated to be approximately $520,000 over ten years, as shown in Figure S8.

Figure S8: Projected Travel Demand and Arterial Costs

	2013	2014	2015	2016	2017	2018	2023	10-Year
	Base	1	2	3	4	5	10	Increase
Single Units	3,492	3,533	3,576	3,619	3,662	3,706	3,934	**442**
2+ Units	728	737	746	755	764	773	820	**92**
Industrial KSF	18	19	19	19	19	20	21	**3**
Commercial KSF	48	48	49	49	50	51	54	**6**
Institutional KSF	859	870	880	891	901	912	968	**109**
Office & Other Services KSF	70	71	72	73	74	75	79	**9**
Single Unit Trips	19,286	19,514	19,752	19,990	20,227	20,469	21,726	**2,440**
2+ Unit Trips	2,810	2,844	2,878	2,913	2,948	2,983	3,166	**356**
Industrial Trips	32	34	34	34	34	36	37	**5**
Commercial Trips	676	676	690	690	705	719	761	**85**
Institutional Trips	4374	4430	4481	4537	4588	4644	4929	**555**
Office & Other Services Trips	386	392	397	403	408	414	436	**50**
Total Vehicle Trips	**27,565**	**27,890**	**28,232**	**28,566**	**28,909**	**29,264**	**31,055**	**3,491**
Vehicle Miles of Travel (VMT)	**28,226**	**28,560**	**28,910**	**29,254**	**29,604**	**29,964**	**31,800**	**3,574**
Lane Miles	**3.3**	**3.4**	**3.4**	**3.4**	**3.5**	**3.5**	**3.7**	**0.42**
Annual Lane Miles		**0.04**	**0.04**	**0.04**	**0.04**	**0.04**	**0.04**	
Lane Miles per 10,000 VMT	**1.2**	**1.2**	**1.2**	**1.2**	**1.2**	**1.2**	**1.2**	
Annual Cost (millions)		**$0.05**	**$0.05**	**$0.05**	**$0.05**	**$0.05**	**$0.06**	**$0.52**

Somerton plans to spend approximately $523,000 on 0.42 lane miles of arterial improvements and expansions over the next 10 years.

[1] Typical VMT calculations for development-specific traffic studies, along with most transportation models of an entire urban area, are derived from traffic counts on particular road segments multiplied by the length of that road segment. For the purpose of development fees, VMT calculations are based on attraction (inbound) trips to development located in the service area, with the trip lengths calibrated to the road network considered to be system improvements. This refinement eliminates pass-through or external- external trips, and travel on roads that are not system improvements (e.g. interstate highways).

Figure S9 displays street improvement projects that Somerton is planning for the next ten years. Street Facilities development fee revenue will fund a portion of the projects listed below, depending on where development occurs. The City plans to widen Cesar Chavez by one lane, with the approximate cost of $500,000. The City also plans to fund a traffic signal and build multi-use pathways along Cesar Chavez Avenue and Somerton Avenue, which will improve the sidewalk network of these roads. The City also plans to purchase right of way along Somerton Avenue for improvements but the cost of this is unknown at this point.

Figure S9: Necessary Streets Improvements and Expansions

Project	10-Yr Cost
Widening of Cesar Chavez Avenue (addition of one lane for left turns)	**$300,000**
Traffic Signal on the intersection of Cesar Chavez Avenue and Main Street	**$500,000**
Multi Use Pathways along Cesar Chavez Avenue and Somerton Avenue	**$79,074**
Total	**$879,074**

PROPOSED STREET FACILITIES DEVELOPMENT FEES

The proposed Streets Facilities Development Fees are shown in the figure below. Attraction trips by type of development are multiplied by the capacity cost per average length vehicle trip to yield the Street Facilities Development fees. Given a cost factor of $1,243,700 per lane mile, which is shared by 8,500 vehicles on an average weekday, the capital cost is $146.32 per VMT.

ARS 9-463.05(E)(4) requires a conversion table establishing the ratio of a service unit to various types of land uses, including residential, commercial and industrial. Figure S10 displays the ratio of a service unit to various types of land uses for residential and nonresidential development, which includes weekday vehicle trip ends and their respective adjustment and weighting factors.

A 1.9% offset for other revenues is recommended to ensure projected development revenue does not exceed the growth-related costs for street facilities. Projected development fee revenue is discussed in the next section.

The input variables discussed above yield the proposed Development Fees shown in the lower section of Figure S10. For example, the Streets Facilities Development Fees for a Single Unit house is 8.63 x 64% x 121% x 0.92 x ($146.32+7.06-$2.91) = $925 per unit. Fees for nonresidential development are listed per 1,000 square feet of floor area.

Figure S10: Proposed Streets Facilities Development Fees

Infrastructure Standards		
Average Miles per Vehicle Trip	0.92	
Syst. Improvements Cost per Ln Mile	$1,243,700	
Lane Capacity (vehicles per day)	8,500	
Incremental Cost per VMT	$146.32	
Cost per VMT of Professional Services	$7.06	
Revenue Credit	($2.91)	1.9%

Residential Development Fees per Housing Unit

Development Type	Weekday Vehicle Trip Ends	Trip Rate Adjustment Factors	Trip Length Weighting Factors	**Proposed Street Fee**	Current Fee	*Increase / (Decrease)*	% Change
Single Unit	8.63	64%	121%	**$925**	$302	$623	206%
2+ Units	6.03	64%	121%	**$604**	$302	$302	100%

Nonresidential Development Fees per 1,000 Square Feet of Floor Area

Development Type	Weekday Vehicle Trip Ends	Trip Rate Adjustment Factors	Trip Length Weighting Factors	**Proposed Street Fee**	Current Fee	*Increase / (Decrease)*	% Change
Industrial	3.56	50%	73%	**$180**	$570	($390)	-68%
Commercial	42.70	33%	66%	**$1,287**	$570	$717	126%
Institutional	15.43	33%	73%	**$515**	$638	($123)	-19%
Office and Other Services	11.03	50%	73%	**$557**	$638	($81)	-13%

FORECAST OF REVENUES

Appendix A contains the required forecast of revenues required by Arizona's enabling legislation.

Development Fee Revenue for Street Facilities

Revenue projections shown below assume implementation of the proposed street facilities fees and that development over the next ten years is consistent with the Land Use Assumptions described in Appendix C. To the extent the rate of development either accelerates or slows down, there will be a corresponding change in the impact fee revenue.

Figure S11: Street Facilities Development Fee Revenue Forecast

Ten-Year Growth-Related Costs for Street Facilities

Arterial Improvements	$523,000
Professional Services	$12,267
Total	**$535,267**

		Single Unit	*2+ Units*	*Industrial*	*Commercial*	*Institutional*	*Office & Other Services*
		$925 per housing unit	**$604 per housing unit**	**$180 per 1,000 Sq Ft**	**$1,287 per 1,000 Sq Ft**	**$515 per 1,000 Sq Ft**	**$557 per 1,000 Sq Ft**
	Year	*Hsg Units*	*Hsg Units*	*KSF*	*KSF*	*KSF*	*KSF*
Base	2013	3,492	728	18	48	859	70
1	2014	3,533	737	19	48	870	71
2	2015	3,576	746	19	49	880	72
3	2016	3,619	755	19	49	891	73
4	2017	3,662	764	19	50	901	74
5	2018	3,706	773	20	51	912	75
6	2019	3,751	782	20	51	923	75
7	2020	3,795	792	20	52	934	76
8	2021	3,841	801	20	52	945	77
9	2022	3,887	811	20	53	957	78
10	2023	3,934	820	21	54	968	79
Ten-Yr Increase		*442*	*92*	*3*	*6*	*109*	*9*
Projected Revenue =>		**$409,000**	**$56,000**	**$500**	**$8,000**	**$56,000**	**$5,000**
						Total Projected Revenues (rounded) =>	**$534,500**

WASTEWATER FACILITIES IIP

ARS 9-463.05 (T)(f)(b) defines wastewater facilities as "Wastewater facilities, including collection, interception, transportation, treatment, and disposal of wastewater, and any appurtenances for those facilities." The Wastewater Facilities IIP includes cost recovery for components with surplus capacity and incremental expansion for major wastewater lines. The revenues from the cost recovery component will be used to pay for debt service payments according to ARS 9-463.05(R).

Service Area

The service area for the Wastewater Facilities IIP is Citywide, and includes cost recovery of the wastewater treatment plant.

Proportionate Share

ARS 9-463.05 (B)(3) states that the development fee shall not exceed a proportionate share of the cost of necessary public services needed to provide necessary public services to the development.

The Wastewater Facilities IIP and development fees are assessed on both residential and nonresidential development as both types of development create a burden for additional wastewater facilities. Customers by land use are used to determine the proportionate share of this burden. In 2012, approximately 98% of wastewater customers in Somerton were residents, accounting for 96% of the average day demand. Approximately 2% were nonresidential customers, accounting for 4% of the average day demand.

WASTEWATER CONNECTIONS AND FLOW

Level of service for wastewater is based on average day gallons per connection per day. The current level-of-service for residential development for wastewater service is 224 gallons per connection per day. For nonresidential connections, wastewater demand averages 358 gallons per day. In 2012, each nonresidential wastewater connection averaged 17 jobs. The projected increase in jobs drives the demand for wastewater capacity from nonresidential development.

Figure WW1: Wastewater Level of Service

	Avg Gallons per Day[1]	% of Usage Total[2]	2012 Connections
Residential	723,170	96.42%	3,226
Nonresidential	26,830	3.58%	75
TOTAL	750,000		3,301

Level of Service (LOS) Standards	*Residential*
Average Residential Gallons per Day	723,170
2012 Residential Connections	3,226
LOS: Gallons per Connection	***224***

Source: City of Somerton.
1. Average Gallons per Day based on City of Somerton average daily wastewater treatment of .75 MGD.
2. Residential and nonresdential based on portion of water usage for each land use from January - March 2013.

Level of Service (LOS) Standards	*Nonresidential*
Average Nonresidential Gallons Per Day	26,830
2012 Nonresidential Connections	75
LOS: Gallons per Connection	***358***

Projected Service Units

ARS 9-463.05(E)(5) requires the total number of service units necessitated by and attributable to new development. Based on Somerton's Land Use Assumptions it is projected there will be a 10 year increase of 413 residential connections and 10 nonresidential connections, as shown in Figure WW2. The increase in wastewater customers will demand a total of .096 MGD over the next ten years, with a total projected need of .855 million gallons per day of wastewater capacity by 2023.

Figure WW2: Projected Wastewater Customers and Usage

				Connections			Service Units: MGD		
	Year	Housing Units	Jobs	Residential Connections	Nonres. Connections	Total	Residential Res MGD	Nonresidential Nonres MGD	Total
Base	2013	4,220	1,317	3,265	76	3,341	0.732	0.027	0.759
1	2014	4,270	1,333	3,303	77	3,380	0.741	0.027	0.768
2	2015	4,322	1,349	3,344	78	3,421	0.750	0.028	0.777
3	2016	4,374	1,365	3,384	79	3,462	0.759	0.028	0.787
4	2017	4,426	1,381	3,424	80	3,504	0.768	0.028	0.796
5	2018	4,479	1,398	3,465	81	3,546	0.777	0.029	0.806
6	2019	4,533	1,415	3,507	82	3,588	0.786	0.029	0.815
7	2020	4,587	1,432	3,549	83	3,631	0.795	0.030	0.825
8	2021	4,642	1,449	3,591	83	3,675	0.805	0.030	0.835
9	2022	4,698	1,466	3,634	85	3,719	0.815	0.030	0.845
10	2023	4,754	1,484	3,678	86	3,763	0.824	0.031	0.855
10-Yr Increase		**534**	**167**	**413**	**10**	**423**	**0.093**	**0.003**	**0.096**

COST RECOVERY OF WASTEWATER TREATMENT PLANT

Description

ARS 9-463.05(E)(1) requires a description of the existing necessary public services and the costs to upgrade or replace these services to meet existing needs and usage. Somerton is currently paying off four different debt obligations on the Wastewater Treatment Plant. Two are for the original financing of the plant which will be paid off in 2025 and 2023. Two are for the expansion of the plant, which will be paid off in 2029 and 2050. Including principal and interest, the remaining payments for the four debt obligations total $11,253,771.

To determine a cost per gallon, a growth share was calculated for each obligation, which represents new development's projected share of total gallon usage for the remainder of the debt schedule. The growth cost for each schedule is divided by the gallon increase over the period of time to determine a growth cost per additional gallon. In total, the four debt obligations amount to a cost of $14.82 per gallon of capacity.

Figure WW3: Cost Recovery of Wastewater Treatment Plant

Year Debt Issued or Refinanced	*Name of Debt Obligation*	*FY of Final Payment*	*Remaining Principal and Interest for WW Plant*	*Growth Share**	*Growth Cost*	*Gallon Increase*	*Growth Cost per Additional Gallon*
2006	US Bank WW Plant	*2025*	$1,127,317	15.4%	$173,596	116,933	$1.48
2004	WIFA WW Plant	*2023*	$3,274,709	12.7%	$415,070	96,267	$4.31
2010	WIFA WW Expansion	*2029*	$2,320,909	21.0%	$488,014	159,611	$3.06
2011	US Bank WW Expansion	*2050*	$4,530,836	55.5%	$2,513,787	421,103	$5.97
Total			**$11,253,771**		**$3,590,467**		**$14.82**

*US Bank WW Plant Growth Share (15.4%) is (.88 gallons in 2025/ .76 gallons in 2013) - 1.
*WIFA WW Plant Growth Share (12.7%) is (.86 gallons in 2023/ .76 gallons in 2013) - 1.
*WIFA WW Expansion Growth Share (21.0%) is (.92 gallons in 2029/ .76 gallons in 2013) - 1.
*US Bank WW Expansion Growth Share (58.5%) is (1.18 gallons in 2050/ .76 gallons in 2013) - 1.

Excluded Costs

Development fees in Somerton exclude the cost to upgrade, update, improve, expand, correct or replace those necessary public services to meet existing needs and usage and stricter safety, efficiency, environmental or regulatory standards. The cost recovery methodology ensures that the cost is only allocated towards necessary public services to meet future needs.

Current Use and Available Capacity

ARS 9-463.05(E)(2) requires an analysis of the total capacity, the level of current usage and commitments for usage of capacity of the existing necessary public services. The City currently has a wastewater treatment plant with a total capacity of 1.8 MGD. The current average day flow to the plant

is .75 million gallons per day (MGD). There is 1.05 MDG remaining in capacity at the wastewater treatment plant.

Figure WW4: Wastewater Treatment Plant Capacity

Facility	*Current Flow (MGD)*	*Total Capacity (MGD)*	*Remainder (MGD)*
Wastewater Treatment Plant	0.75	1.8	1.05

Source: City of Somerton.

Demand for Facility Expansions and Costs

ARS 9-463.05(E)(6) requires the projected demand for necessary public services or facility expansions required by service units for the next ten years. The new service units for the next ten years will be served by the excess capacity available of the Wastewater Treatment Plant. As demonstrated by the projected wastewater usage (Figure WW2), the 2023 usage is expected to be 0.855 MGD. There is more than enough current capacity to serve this demand, so no facility expansions are needed.

ARS 9-463.05(E)(3) requires a description the necessary public services and their costs necessitated by and attributable to development including a forecast of the costs. The costs necessitated by new development are the growth costs shown in Figure WW3, which total $3,590,467.

MAJOR LINES

Description

ARS 9-463.05(E)(1) requires a description of the existing necessary public services and the costs to upgrade or replace these services to meet existing needs and usage. Figure WW5 inventories major wastewater lines in Somerton 10” and over. The City currently has 17,292 linear feet of major wastewater lines serving the current number of customers (3,341). The cost per linear foot is $69, provided by City of Somerton public works staff.

The current level-of-service for major wastewater lines is 5.2 linear feet per customer. This is found by dividing the linear feet of major lines (17,292) by 2013 wastewater customers (3,341). Applying the cost per linear foot of major lines ($69) to the level of service results in a wastewater line cost per customer of $359.

Figure WW5: Wastewater Major Lines – Incremental Expansion

Wastewater Major Lines Diameter Size	*Linear Feet*
10"	12,470
12"	4,822
Total	**17,292**

Level of Service (LOS) Standards	
Linear Feet of Mains 10" and Above	17,292
2013 Wastewater Customers	3,341
LOS: Linear feet per Customer	***5.2***
Estimated Cost per Linear Foot	$69
Wastewater Major Line Cost per Customer	***$359***

Source: City of Somerton Wastewater Master Plan and City of Somerton Public Works staff.

Excluded Costs

Development fees in Somerton exclude costs of to upgrade, update, improve, expand, correct or replace those necessary public services to meet existing needs and usage and stricter safety, efficiency, environmental or regulatory standards. The major line component will only pay for additional linear feet to accommodate new development, based on the same level-of-service provided to existing customers.

Current Use and Available Capacity

ARS 9-463.05(E)(2) requires an analysis of the total capacity, the level of current usage and commitments for usage of capacity of the existing necessary public services. As established above, the level of service is 5.2 linear feet per customer. This is the level of service the City wishes to maintain using the incremental expansion method for new development. Thus, there is no available capacity for new development based on the current inventory. New development will be served by future wastewater major line projects.

Projected Service Units

ARS 9-463.05(E)(5) requires the total number of service units necessitated by and attributable to new development. As shown in Figure WW2, determined using the Land Use Assumptions, it is estimated there will be 423 additional wastewater customers over the next ten years.

Demand for Facility Expansions and Costs

ARS 9-463.05(E)(6) requires the projected demand for necessary public services or facility expansions required by service units for the next ten years. These projected service units (423 customers) are multiplied by the current level-of-service for wastewater improvements (5.2 linear feet per customer). This new development will demand approximately 2,188 additional linear feet of wastewater mains.

ARS 9-463.05(E)(3) requires a description the necessary public services and their costs necessitated by and attributable to development including a forecast of the costs. The projected demand for improved wastewater mains (2,188 linear feet) is multiplied by the total cost per linear foot of wastewater mains ($69). This results in a 10-year wastewater main improvement cost of $152,000.

Figure WW6: Projected Demand for Wastewater Mains

	Major Lines	
LOS	5.2	linear feet per customer
Cost	$69	per linear foot

		Projected Demand	
		Service Unit: Customers	Major Lines (Linear Feet)
Base	2013	3,341	17,292
1	2014	3,380	17,497
2	2015	3,421	17,710
3	2016	3,462	17,923
4	2017	3,504	18,136
5	2018	3,546	18,353
6	2019	3,588	18,575
7	2020	3,631	18,796
8	2021	3,675	19,021
9	2022	3,719	19,251
10	2023	3,763	19,480
Ten-Yr Total		**423**	**2,188**
Cost of Major Lines			$152,000

PROPOSED WASTEWATER FACILITIES DEVELOPMENT FEES

The proposed development fees for Wastewater Facilities are shown in Figure WW7. The development fee is derived from the average daily wastewater flow per residential unit (224), multiplied by the cost per gallon of capacity ($14.82). Also, each new customer pays the average cost for incremental expansion of wastewater mains ($359) plus the cost of professional services for preparing the IIP and development fee ($59.26.) The conversion of infrastructure needs and costs per service unit into a cost per development unit is also shown in table below (as required by ARS 9-463.05(E)(4)). A revenue credit is not needed for Wastewater Facilities because the ten-year growth costs exceed the projected revenue from the development fees.

Figure WW7: Proposed Wastewater Facilities Development Fees

	Standards:
Demand Indicators	
ERU Gallons per Average Day	224
Cost Factors per Gallon of Capacity	
Cost Recovery - Plant and Expansion	$14.82
Cost Factors per Customer	
Incremental Expansion Cost of Wastewater Mains per Customer	$359.00
Professional Services	$59.26

Maximum Supportable Wastewater Facilities Charge	
Residential	
Residential (per dwelling unit)	**$3,741**

Nonresidential (per meter)						
Meter Size (inches)		*Capacity Ratio* [1]	**Per Meter**	**Current Fees**	**Difference**	**% Change**
0.75	Displacement	1.00	**$3,741**	$3,766	($25)	-1%
1.00	Displacement	1.67	**$5,967**	$9,416	($3,449)	-37%
1.50	Displacement	3.33	**$11,483**	$18,832	($7,349)	-39%
2.00	Compound	5.33	**$18,129**	$30,132	($12,003)	-40%

1. AWWA. (2012). M6 Water Meters–Selection, Installation, Testing and Maintenance, Fifth Edition.

FORECAST OF REVENUES

Appendix A provides the forecast of revenues required by Arizona's enabling legislation.

Development Fee Revenue

Revenue projections shown below assume implementation of the proposed Wastewater Facilities fees and that development over the next ten years is consistent with the Land Use Assumptions described in Appendix C. To the extent the rate of development either accelerates or slows down, there will be a corresponding change in the development fee revenue. Over the next ten years, Somerton has identified a need for approximately $1,708,468 in growth-related wastewater costs, including four debt obligations on the wastewater treatment plant, $152,000 in major wastewater lines, and the cost of professional services. As shown at the bottom of Figure WW8, development fee revenues are projected to be approximately $1,660,000.

Figure WW8: Wastewater Facilities Development Fee Revenue Forecast

Ten-Year Growth-Related Costs for Wastewater Facilities

Growth Related WW Debt	$1,544,202
Wastewater Major Lines	$152,000
Professional Services	$12,267
Total	**$1,708,468**

	Year	***Residential*** **$3,741** **per connection**	***Nonresidential*** **$11,483** **per 1.5" connection**
		Connections	*Connections*
Base	2013	3,265	76
1	2014	3,303	77
2	2015	3,344	78
3	2016	3,384	79
4	2017	3,424	80
5	2018	3,465	81
6	2019	3,507	82
7	2020	3,549	83
8	2021	3,591	83
9	2022	3,634	85
10	2023	3,678	86
Ten-Yr Increase		*413*	*10*
	Projected Fees =>	**$1,550,000**	**$110,000**
	Total Projected Revenues (rounded) =>		**$1,660,000**

APPENDIX A: FORECAST OF REVENUES OTHER THAN FEES

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

ARA 9-463.05.B.12 states, "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. Beginning August 1, 2014, for purposes of calculating the required offset to development fees pursuant to this subsection, if a municipality imposes a construction contracting or similar excise tax rate in excess of the percentage amount of the transaction privilege tax rate imposed on the majority of other transaction privilege tax classifications, the entire excess portion of the construction contracting or similar excise tax shall be treated as a contribution to the capital costs of necessary public services provided to development for which development fees are assessed, unless the excess portion was already taken into account for such purpose pursuant to this subsection."

Somerton does not have a higher than normal construction excise tax rate, so the required offset described above is not applicable. The required forecast of non-development fee revenue that might be used for growth-related capital costs is shown in Figure A1. General Fund revenues are highlighted in light purple. Highway user taxes are highlighted in green and the balance of the Water and Sewer Funds are highlighted in light blue. The forecast of revenues was derived from a linear regression analysis. Historical revenue data for the past ten years, obtained from the City of Somerton 10 Year Revenue Expense Interactive Financial Report, the FY13 Budget, and the FY14 Budget, were correlated to the growth in population and jobs in Somerton. Projected population plus jobs, from the Land Use Assumptions, is the independent variable that drives each revenue forecast.

Figure A1: Five-Year Revenue Projections

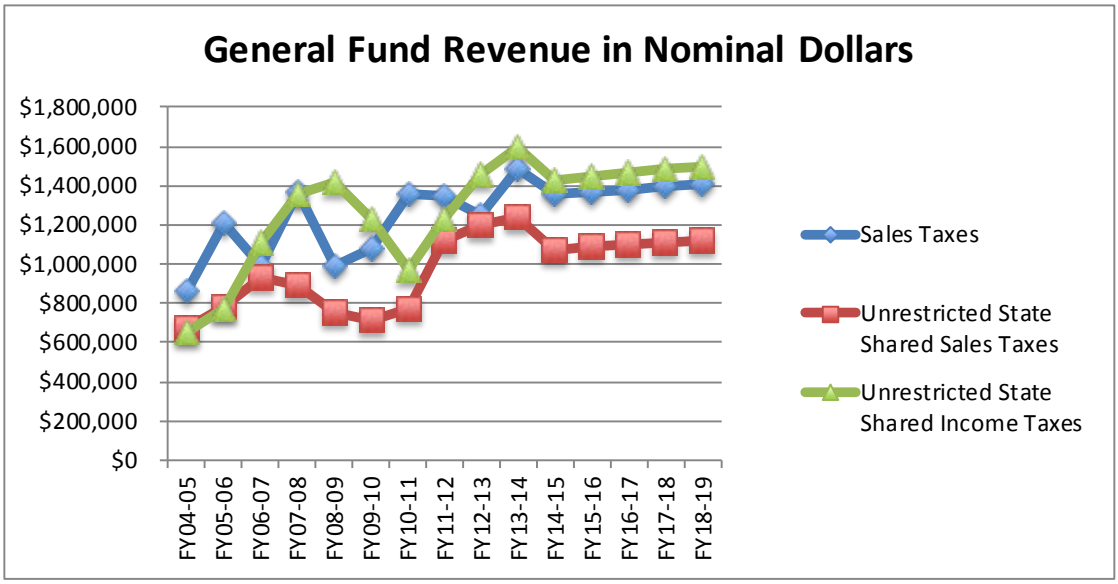
	FY13-14	***FY14-15***	***FY15-16***	***FY16-17***	***FY17-18***	***FY18-19***
Sales Taxes	$1,488,461	$1,358,772	$1,369,780	$1,380,920	$1,392,193	$1,403,602
Unrestricted State Shared Sales Taxes	$1,234,505	$1,073,884	$1,085,003	$1,096,256	$1,107,643	$1,119,167
Unrestricted State Shared Income Taxes	$1,593,928	$1,431,312	$1,448,146	$1,465,181	$1,482,422	$1,499,869
Total General Fund Revenues	**$4,316,894**	**$3,863,968**	**$3,902,929**	**$3,942,357**	**$3,982,258**	**$4,022,638**

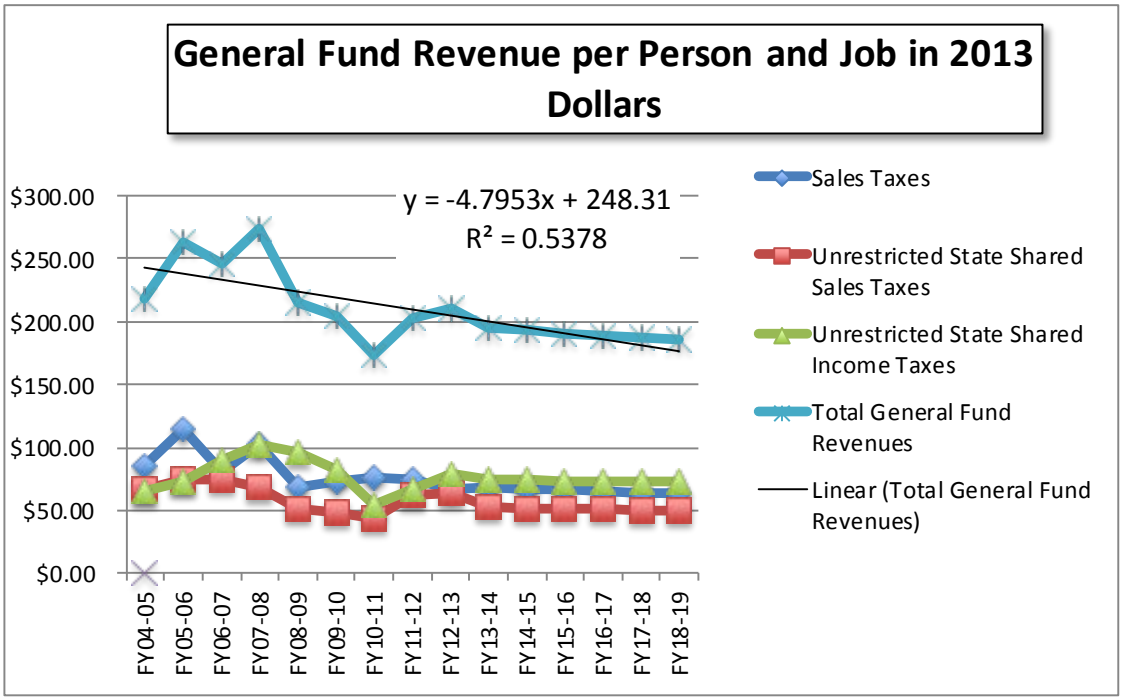
	FY13-14	*FY14-15*	*FY15-16*	*FY16-17*	*FY17-18*	*FY18-19*
Highway User Taxes	$982,000	$891,303	$895,108	$898,960	$902,858	$906,802

Water Enterprise Balance	$667,840	$738,389	$809,784	$882,035	$955,154	$1,029,150
Sewer Enterprise Balance	$776,668	$838,203	$900,476	$963,496	$1,027,273	$1,091,814

The graph at the top of Figure A2 gives the impression that General Fund revenues are expected to slightly increase over the next five years. When nominal dollars are converted to constant 2013 dollars, to account for inflation, and then divided by persons plus jobs in Somerton, to "normalize" the amounts for population and job growth, the results are somewhat different. As shown in the lower portion of Figure A2, projected revenues in constant 2013 dollars are projected to decline relative to population and job growth. In other words, there is no General Fund fiscal surplus available for growth-related capital improvements.

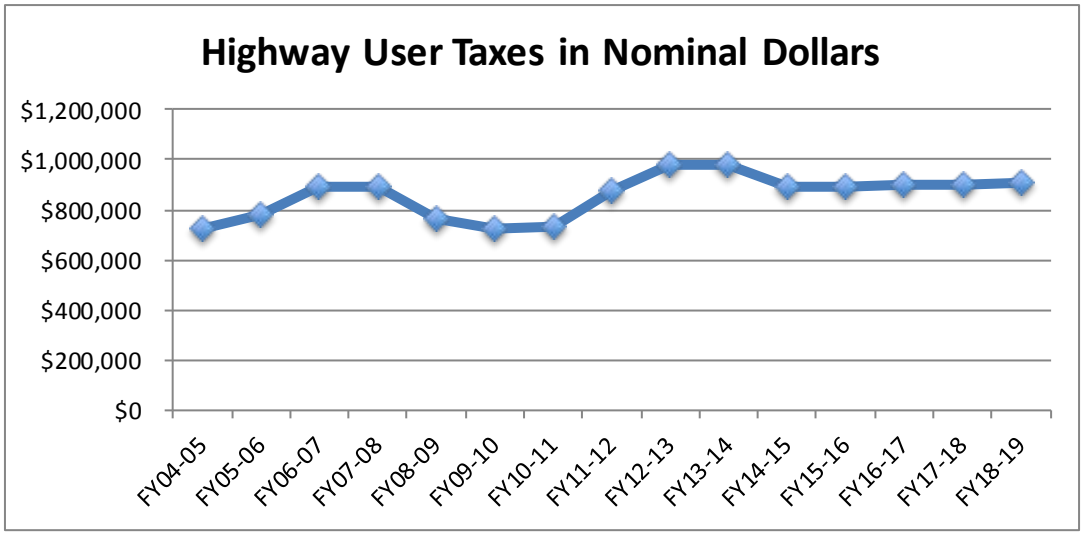
Figure A2: Graph of General Fund Revenues

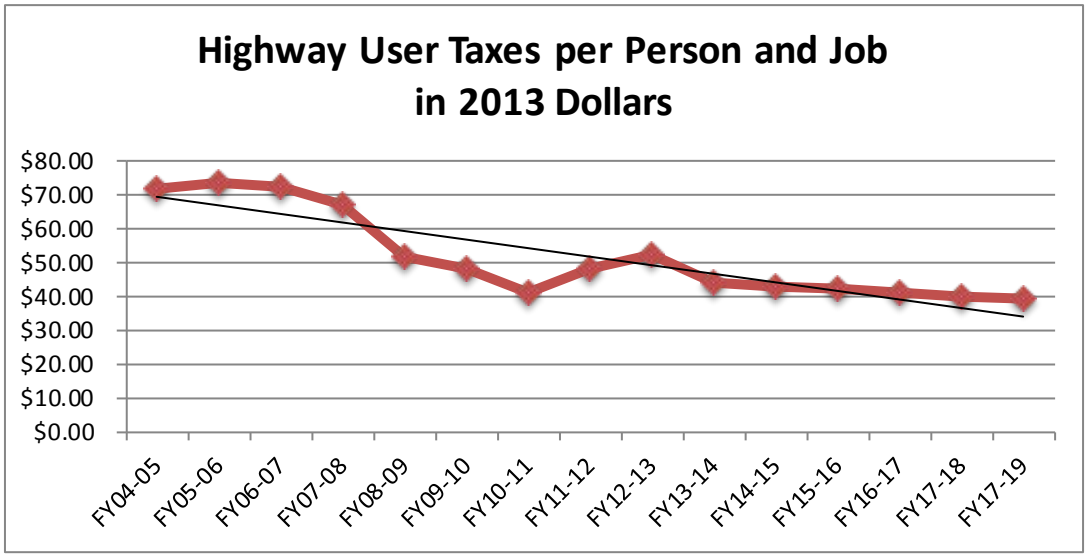




The methodology described above was also applied to Highway User Tax revenue, with the results graphed in Figure A3.

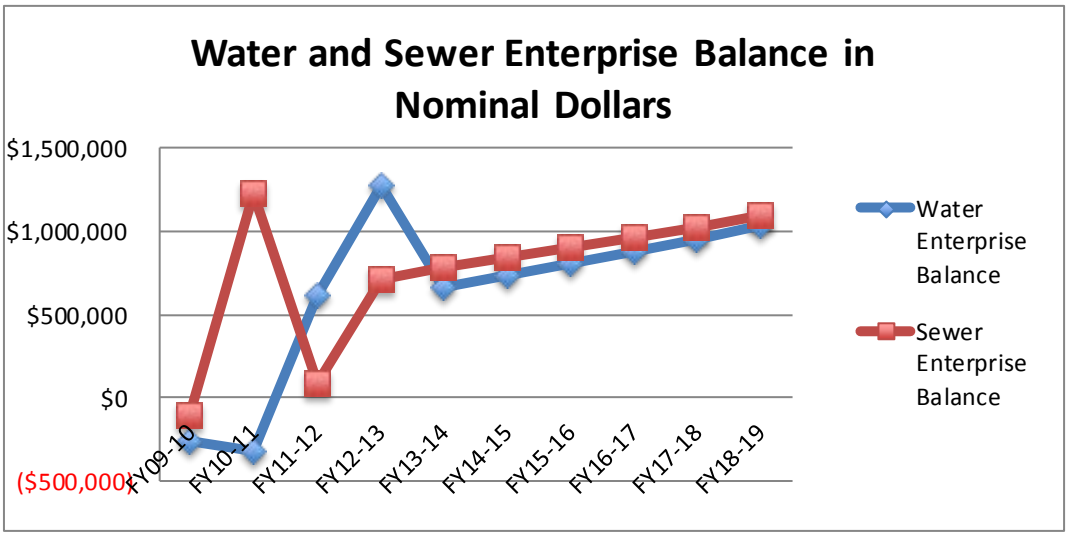
Figure A3: Graph of Highway User Fund Revenue

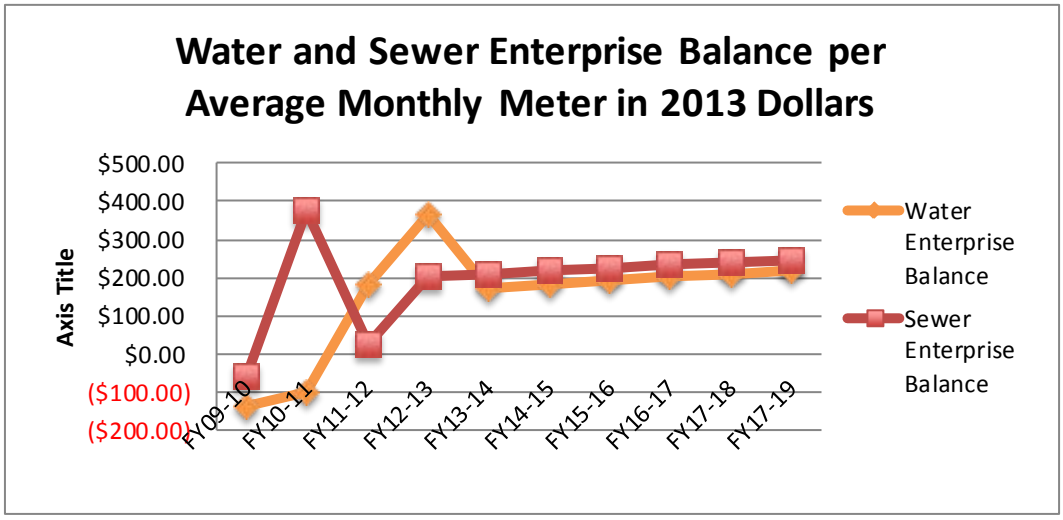




Lastly, the top of Figure A4 displays the history and projected balances of the Water and Sewer Enterprise Funds nominal dollars. The bottom part of Figure A4 shows the Balance per Average Monthly Meter in 2013 dollars, which shows both funds projected to rise per average monthly meter.

Figure A4: Graph of Water and Sewer Enterprise Balances





APPENDIX B: COST OF PROFESSIONAL SERVICES

As stated in Arizona's development fee enabling legislation, "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 and professional services required for the preparation or revision of a development fee pursuant to this section, including the relevant portion of the infrastructure improvements plan" (see 9-463.05.A). Because development fees must be updated at least every five years, the cost of professional services is allocated to the projected increase in service units, over five years (see Figure B1). Qualified professionals must develop the IIP, using generally accepted engineering and planning practices. A qualified professional is defined as "a professional engineer, surveyor, financial analyst or planner providing services within the scope of the person's license, education or experience".

Figure B1: Professional Services Costs

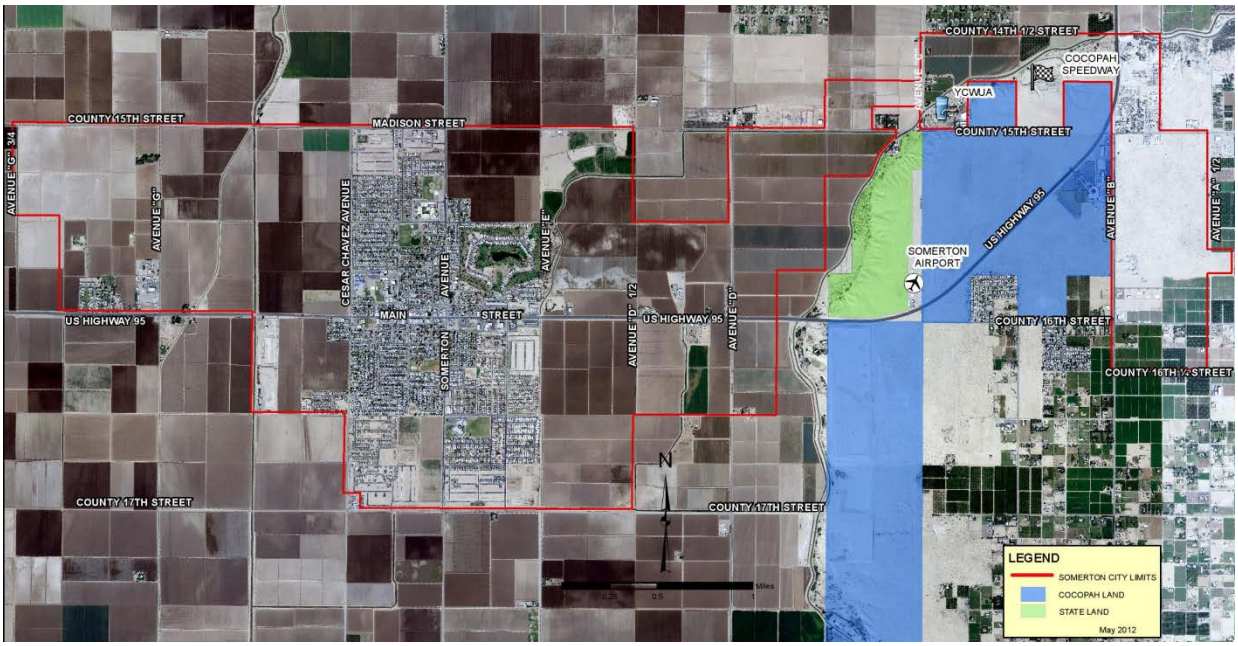
Necessary Public Service	Cost	Assessed Against	Proportionate Share	Units	FY2013	FY2018	Change	Cost per Service Unit
Parks and Recreation	$6,133	Residential	95%	Population	14,879	15,793	914	$6.37
		Nonresidential	5%	Jobs	1,317	1,398	81	$3.79
Public Safety	$6,133	Residential	82%	Population	14,879	15,793	914	$5.50
		Nonresidential	18%	Nonres Trips	5,468	5,812	343	$3.22
Streets	$12,267	All Development	100%	VMT	28,226	29,964	1,737	$7.06
Wastewater	$12,267	All Development	100%	Customers	3,339	3,546	207	$59.26
Total	**$36,800**							

APPENDIX C: LAND USE ASSUMPTIONS

Service Area

The estimates and projections of residential and nonresidential development in this Land Use Assumptions document are for areas within the boundaries of the City of Somerton. The map below illustrates the area within the City's boundaries.

Figure C1: Map of City of Somerton Service Area



Summary of Growth Indicators

Arizona Revised Statutes (ARS) 9-463.05 (T)(6) requires the preparation of a Land Use Assumptions document which shows:

> *"projections of changes in land uses, densities, intensities and population for a specified service area over a period of at least ten years and pursuant to the General Plan of the municipality."*

TischlerBise has prepared this Land Use Assumptions document which details current demographic ***estimates*** and future development ***projections*** for both residential and nonresidential development that will be used in the infrastructure improvement plan (IIP) and calculation of the development fees. The development projections are used for calculating the level of service (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 cash flow analysis.

Development fee methodologies are designed to reduce sensitivity to accurate development projections in the determination of the proportionate-share fee amounts. If actual development is slower than projected, development fee revenues will also decline, but so will the need for growth-related infrastructure. In contrast, if development is faster than anticipated, the City will receive an increase in

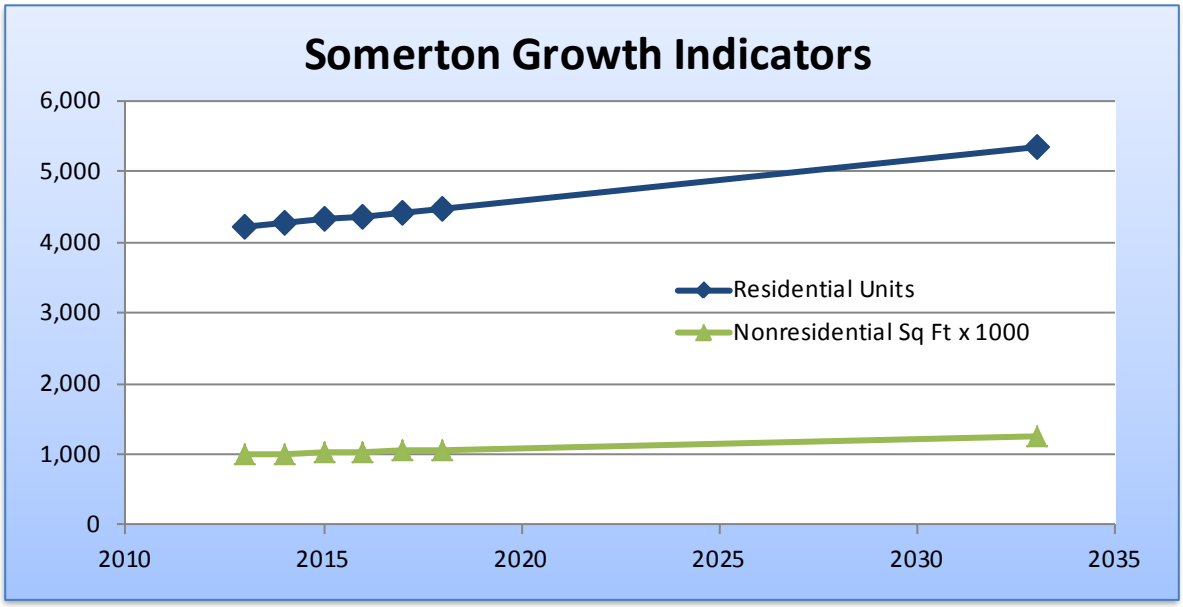
development fee revenue, but will also need to accelerate the capital improvements program to keep pace with development.

Development projections and growth rates are summarized in Figure C2. Somerton specific base data for the demographic analysis and development projections include 2010 Census calculations of population and housing units and American Community Survey tables. The projected increase in housing units is based on a growth rate of 1.2%, projected by City of Somerton staff. Projected population was converted to housing units using the 2010 average of 3.53 year-round residents per housing unit. The Arizona Revised Statutes (ARS) 9-463.05 requires that "a municipality shall update the land use assumptions and infrastructure improvements plan at least every five years." Therefore, the development fee study did not vary the persons per housing unit ratio over time, nor assume any change to the residential vacancy rate in Somerton.

For nonresidential development, the development fee study assumes a compound annual growth rate of 1.2% to align with development projections of City of Somerton staff. Projected jobs within Somerton were converted to nonresidential floor area using average square-feet-per-employee multipliers provided by the Institute of Transportation Engineers.

Figure C2: Development Projections and Growth Rates

	Year							2013 to 2018 Average Annual	
	2013	*2014*	*2015*	*2016*	*2017*	*2018*	*2033*	*Increase*	*Compound Growth Rate*
Residential Units	4,220	4,270	4,322	4,374	4,426	4,479	5,357	52	1.2%
Nonresidential Sq Ft x 1000	995	1,008	1,020	1,032	1,044	1,058	1,263	13	1.2%



RESIDENTIAL DEVELOPMENT

Current estimates and future projections of residential development are detailed in this section, including housing units by type and population.

Current Estimates of Residential Development

The 2010 Census did not obtain detailed information using a "long-form" questionnaire. Instead, the U.S. Census Bureau has switched to a continuous monthly mailing of surveys, known as the American Community Survey (ACS) which is limited by sample-size constraints in areas with relatively few residents. For cities like Somerton, data on detached housing units are now combined with attached single units (commonly known as townhouses). One way to address this limitation is to derive fees by housing unit size, as discussed further below, is to address this ACS data limitation. Because townhouses and mobile homes generally have less floor area than detached units, fees by housing would ensure proportionality and facilitate construction of affordable units.

According to the U.S. Census bureau, a household is a housing unit that is occupied by year-round residents. Impact fees often use per capita standards and persons per housing unit or persons per household to derive proportionate-share fee amounts. When persons per housing unit are used in the fee calculations, infrastructure standards are derived using year-round population. When persons per household are used in the fee calculations, the development fee methodology assumes all housing units will be occupied, thus requiring seasonal or peak population to be used when deriving infrastructure standards. TischlerBise recommends that development fees for residential development in the City of Somerton be imposed according to the number of year-round residents per housing unit. As shown in the bottom of Figure C3, Census data indicates that Somerton had 4,052 housing units in 2010. Dwellings with a single unit per structure (detached, attached, and mobile homes) averaged 3.72 persons per housing unit. Dwellings in structures with multiple units averaged 2.81 year-round residents per unit.

Figure C3: Person per Housing Unit by Type of Housing Unit

2008 Summary by Type of Housing from American Community Survey

Units in Structure	*Renter & Owner*				
	Persons	*House-holds*	*Persons per Household*	*Housing Units*	***Persons per Housing Unit***
Single Unit*	10,947	3,285	3.33	3,659	*2.99*
2+ Units	2,283	838	2.72	1012	*2.26*
TOTAL	13,230	4,123	3.21	4,671	*2.83*

**Single-family includes detached, attached, and mobile homes.*
Source: Tables B25024, B25032, and B25033.
2006-2010 American Community Survey, U.S. Census Bureau.

2010 Census

Single Unit*	11,822	3,020	3.91	3,174	***3.72***
2+ Units	2,465	771	3.20	878	***2.81***
Subtotal	14,287	3,791	3.77		
Group Quarters	0				
TOTAL	14,287			4,052	***3.53***

** Single unit includes detached, attached, and mobile homes.*
Source: Totals from Summary File 1, U.S. Census Bureau.

Recent residential construction

From 2000-2010, Somerton has increased by an average of 209 housing units per year. The chart at the bottom of Figure C4 indicates the estimated number of housing units added by decade in Somerton. Housing units per decade saw a large increase during the 2000's, with most of the growth during the first half of the decade.

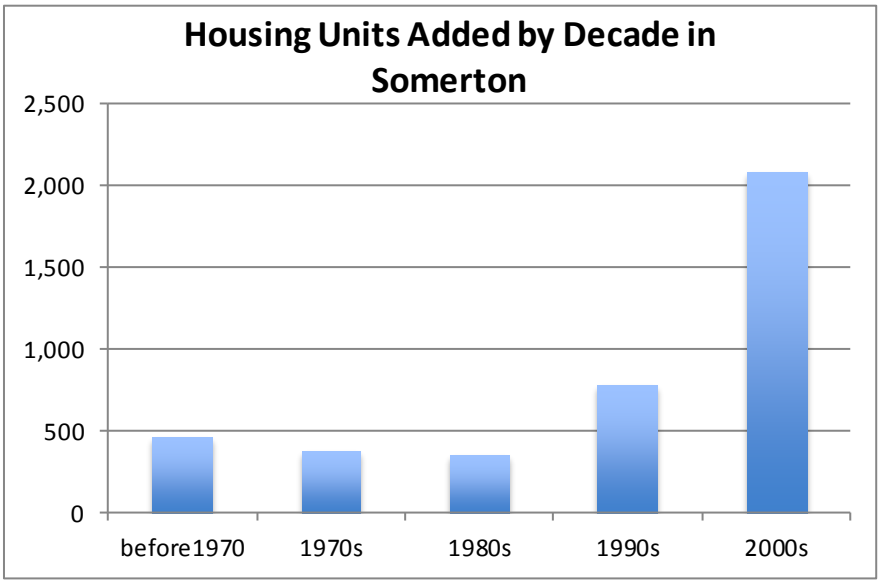
Figure C4: Housing Units by Decade

Somerton, Arizona

Census 2010 Population*	14,287
Census 2010 Housing Units*	4,052
Total Housing Units in 2000	1,967
New Housing Units	2,085

From 2000 to 2010, Somerton added an average of 209 housing units per year.

** U.S. Census Bureau SF1.*



Source for 1990s and earlier is Table B25034, American Community Survey (2006-2010) scaled to equal total housing units in 2000.

POPULATION FORECAST

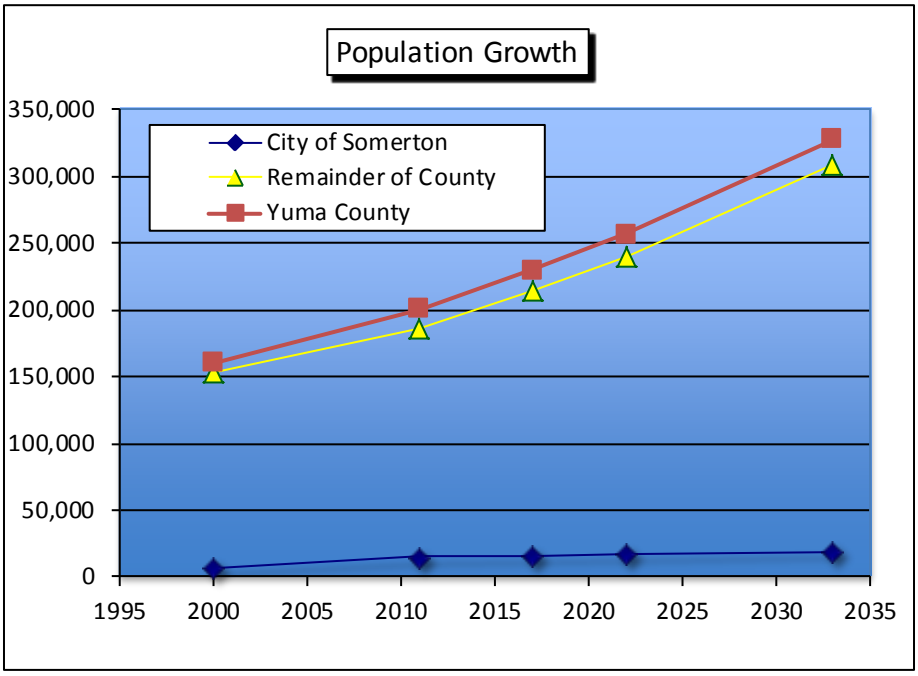
To provide context for population and job growth in Somerton, TischlerBise prepared comparisons to Yuma County projections. Yuma Metropolitan Planning Organization (YMPO) 2033 Transportation Plan expects 327,948 persons in Yuma County by 2033. Figure C5 indicates the City's share of countywide population increased from 2000 to 2011, but is expected to decline from 2011 to 2033. The City population projection to 2033 is based on an exponential growth formula of 1.2%, provided by the City of Somerton. An exponential growth formula was derived to calculate the population for 2017 and 2022 for the County.

The City's 2010 General Plan Update lists the medium scenario population projection for 2030 to be 24,122 residents. This is higher than the projected growth rate. However, the primary objective is to obtain the growth rate to produce population projections up to 2018, and current City of Somerton staff believe a 1.2% growth rate aligns more closely with current projections.

Figure C5: City of Somerton Population Share

	2000	*2011*	*2017*	*2022*	*2033*
Yuma County	160,026	200,870	229,602	256,661	327,948
City of Somerton	7,266	14,528	15,606	16,565	18,888
Remainder of County	152,760	186,342	213,996	240,096	309,060
City Share	4.5%	7.2%	6.8%	6.5%	5.8%

Sources: Somerton and Yuma County 2000-2011 from U.S. Census Bureau. Yuma County 2033 from Table II-12, YMPO 2033 Regional Transportation Plan. Somerton's projection assumes a growth rate of 1.2%, provided by City of Somerton staff. An exponential growth formula derived 2017 and 2022 population for the County .



NON-RESIDENTIAL DEVELOPMENT

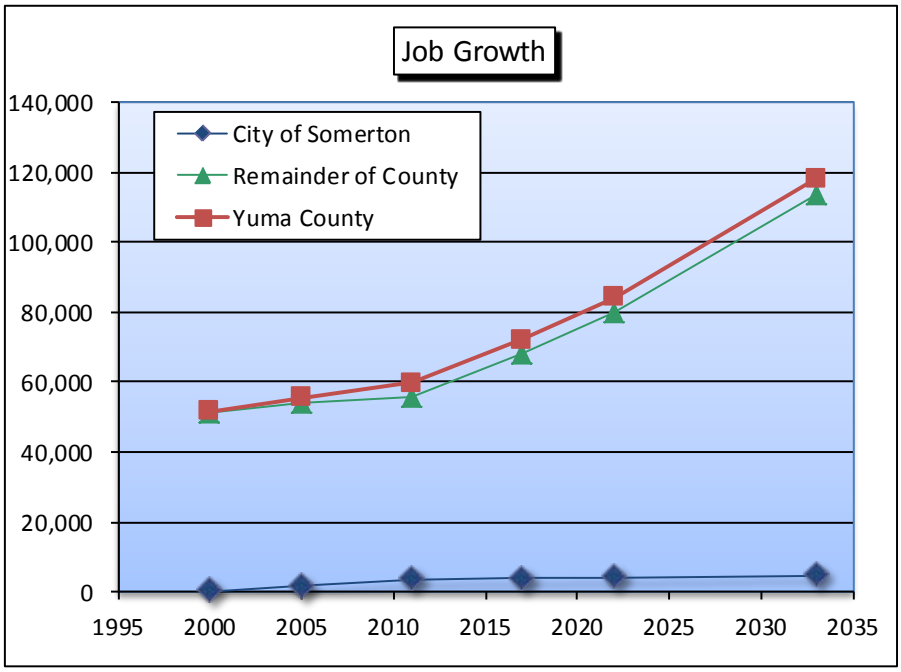
Jobs Forecast

In addition to data on residential development, the calculation of development fees requires data on nonresidential development. TischlerBise uses the term "jobs" to refer to employment by place of work. Similar to the population share evaluation discussed above, countywide jobs are shown in Figure C6 along with the City of Somerton share. Yuma County and City of Somerton jobs in 2000 are from the Census Transportation Package (CTPP). County and City data for 2005 and 2010 are from OnTheMap, the U.S. Census Bureau's web application. OnTheMap estimates journey-to-work jobs used to analyze commuting patterns. Countywide jobs in 2033 are from Table II-13 of the Yuma Metropolitan Planning Organization 2033 Regional Transportation Plan. An exponential growth rate was derived to calculate job projections for 2017 and 2022. City projections assume a growth rate of 1.2%.

Figure C6: City of Somerton Job Share

	2000	*2005*	*2011*	*2017*	*2022*	*2033*
Yuma County	51,565	55,715	59,803	72,023	84,094	118,252
City of Somerton	610	1,805	3,833	4,117	4,370	4,983
Remainder of County	50,955	53,910	55,970	67,906	79,724	113,269
City Share	1.2%	3.2%	6.4%	5.7%	5.2%	4.2%

Sources: 2000 Yuma County and City of Somerton are from the Census Transportation Planning Package (CTPP). County and City data for all jobs 2005-2011 from OnTheMap, U.S. Census Bureau web application. County 2033 projections from Table II-13, 2033 Regional Transportation Plan, Yuma MPO. An exponential growth formula derived 2017 and 2022 job projections for both the County and City. Somerton's projection assumes a growth rate of 1.2%, provided by City of Somerton staff.



Jobs by Type of Nonresidential Development

Figure C7 indicates the City's 2011 job estimate and nonresidential floor area, estimated using square feet per employee multipliers from the Institute of Transportation Engineers (ITE 2012), except for agricultural and industrial. It is assumed that agricultural jobs do not have any nonresidential square footage due to the nature of this work. Total square footage of industrial development was provided by the City of Somerton, and 127 square feet per job was found by dividing the provided floor area (17,957) by the number of industrial jobs (141). The prototype for Commercial is an average-size shopping center. Institutional is an elementary school. For Office and Other Services, the development prototype is an average-sized office. General land use types are based on two-digit industry sectors, with the percentage distribution of jobs by type of development from U.S. Census Bureau's OnTheMap web application.

Agriculture jobs will not be included in the jobs total used in the IIP and Development Fees. This is because these jobs do not yield any nonresidential square footage, which is what nonresidential fees are based on. The total number of jobs in 2011 without agriculture is 1,286.

Figure C7: Jobs and Floor Area Estimate

Job Type	*2011 Jobs (1)*		*Sq Ft per Job (2)*	*Floor Area*
Agriculture	2,547	66%	0	0
Industrial	141	4%	127	17,957
Commercial (3)	93	2%	500	47,000
Institutional (4)	824	21%	1,018	839,000
Office and Other Services (5)	228	6%	301	69,000
Total	**3,833**	**100%**		**972,957**

(1) OnTheMap web application, U.S. Census Bureau.
(2) Trip Generation, Institute of Transportation Engineers, 2012, except for Industrial/ Agricultural. For this category, total floor area was provided by City of Somerton, and sq ft per job was derived.
(3) Retail, Food and Accomodation Services.
(4) Education and Public Administration.
(5) Major sectors are Health Care, Administration & Support (office jobs), and Professional/Scientific/Technical Services.

In Figure C8, gray shading indicates the nonresidential development prototypes used by TischlerBise to estimate commercial, institutional and office and all other services floor area in Somerton. In the IIP and Development Fee Study, warehousing is the prototype nonresidential multiplier to convert service units to development units and calculate the development fees. This prototype is highlighted in gray as well.

Figure C8: Employee and Building Area Ratios

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*
Commercial / Shopping Center						
820	**Shopping Center (avg size)**	**1,000 Sq Ft**	**42.70**	**na**	**2.00**	**500**
General Office						
710	**General Office (avg size)**	**1,000 Sq Ft**	**11.03**	**3.32**	**3.32**	**301**
Other Nonresidential						
770	Business Park***	1,000 Sq Ft	12.44	4.04	3.08	325
760	Research & Dev Center	1,000 Sq Ft	8.11	2.77	2.93	342
610	Hospital	1,000 Sq Ft	13.22	4.50	2.94	340
565	Day Care	student	4.38	26.73	0.16	na
550	University/College	student	1.71	8.96	0.19	na
540	Community College	student	1.23	15.55	0.08	na
530	High School	1,000 Sq Ft	12.89	19.74	0.65	1,531
520	**Elementary School**	**1,000 Sq Ft**	**15.43**	**15.71**	**0.98**	**1,018**
254	Assisted Living	bed	2.66	3.93	0.68	na
620	Nursing Home	1,000 Sq Ft	7.60	3.26	2.33	429
320	Motel	room	5.63	12.81	0.44	na
110	Light Industrial	1,000 Sq Ft	6.97	3.02	2.31	433
130	Industrial Park	1,000 Sq Ft	6.83	3.34	2.04	489
140	Manufacturing	1,000 Sq Ft	3.82	2.13	1.79	558
150	**Warehousing**	**1,000 Sq Ft**	**3.56**	**3.89**	**0.92**	**1,093**

* Trip Generation, Institute of Transportation Engineers, 9th Edition (2012).

** 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.

*** 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.

DETAILED DEVELOPMENT PROJECTIONS

Demographic data shown in Figure C9 provides key inputs for updating development fees in the City of Somerton. Cumulative data are shown at the top and projected annual increases by type of development are shown at the bottom of the table. The jobs without agriculture assume the same growth rate (1.2%) as total jobs. As discussed earlier, TischlerBise recommends the use of persons per housing unit to derive impact fees. Therefore, vacancy rates and number of households are not essential to the demographic analysis.

Figure C9: Annual Demographic Data

	2011	2012	2013	2014	2015	2016	2017	2018	2023	2033
			Base Yr	1	2	3	4	5	10	20
Year-Round Population	14,528	14,702	14,879	15,057	15,238	15,421	15,606	15,793	16,764	18,888
Jobs	3,833	3,879	3,926	3,973	4,020	4,069	4,117	4,167	4,423	4,983
Jobs w/o Agriculture	1,286	1,301	1,317	1,333	1,349	1,365	1,381	1,398	1,484	1,672
Housing Units	4,120	4,170	4,220	4,270	4,322	4,374	4,426	4,479	4,754	5,357
Single Unit	*3,409*	*3,450*	*3,492*	*3,533*	*3,576*	*3,619*	*3,662*	*3,706*	*3,934*	*4,433*
2+ Units	*711*	*720*	*728*	*737*	*746*	*755*	*764*	*773*	*820*	*924*
Jobs to Housing Ratio	0.93	0.93	0.30	0.31	0.31	0.31	0.31	0.31	0.31	0.31
Persons per Hsg Unit	3.53	3.53	3.53	3.53	3.53	3.53	3.53	3.53	3.53	3.53
Nonres Sq Ft in thousands (KSF)										
Industrial	18	18	18	19	19	19	19	20	21	23
Commercial	47	47	48	48	49	49	50	51	54	60
Institutional	839	849	859	870	880	891	901	912	968	1,091
Office and Other Services	69	69	70	71	72	73	74	75	79	89
Total	973	983	995	1,008	1,020	1,032	1,044	1,058	1,122	1,263
Avg Sq Ft Per Job	254	253	774	756	756	756	756	757	756	756
Annual Increase			12-13	13-14	14-15	15-16	16-17	17-18	22-23	***2013-33 Avg Anl***
Population			176	179	181	183	185	187	199	191
Jobs w/o Agriculture			16	16	16	16	16	17	18	18
Housing Units			50	50	52	52	52	53	56	54
Industrial KSF			0	1	0	0	0	1	1	0.3
Commercial KSF			1	0	1	0	1	1	1	1
Institutional KSF			10	11	10	11	10	11	11	11
Office and Other Services KSF			1	1	1	1	1	1	1	1
			12	13	12	12	12	14	14	13