Transportation, Park and Police Impact Fee Study

for the

Town of Oro Valley, Arizona

duncan | associates

October 2013

PUBLIC REVIEW DRAFT

prepared by

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EXECUTIVE SUMMARY

Duncan Associates has been retained by the Town of Oro Valley to update the Town's development impact fees for transportation, parks and police facilities in compliance with the new State impact fee enabling act. The Town's water impact fees are being updated separately. This report provides all of the analysis required by the new State act prior to the adoption of new or updated impact fees, including land use assumptions, infrastructure improvements plan and impact fee calculations.

Background

In 2011, the legislature passed SB 1525, which was signed by the governor on April 26, 2011. SB 1525 constituted a major overhaul of Arizona's impact fee enabling act for municipalities. Among other things, SB 1525 restricts the types of facilities for which impact fees may be charged and mandates the preparation of land use assumptions and an infrastructure improvements plan.

The last comprehensive update of the Town's impact fees was based on a 2008 study.[1] On January 1, 2012, the Town reduced its park and police fees to remove unauthorized components in compliance with the January 1, 2012 requirements of SB 1525. The current non-utility impact fees that have been effective since January 1, 2012 are summarized in Table 1.

Table 1. Current Non-Utility Impact Fee Schedule

Land Use Type	Unit	Roads	Parks	Police	Total
Single-Family*	Dwelling	$1,933	$555	$296	$2,784
All Other Housing	Dwelling	$1,331	$336	$176	$1,843
Lodging	Room	$556	n/a	$14	$570
Commercial 25,000 sf or less	1,000 sf	$5,533	n/a	$146	$5,679
Commercial, 25,001-50,000 sf	1,000 sf	$4,807	n/a	$126	$4,933
Commercial, 50,001-100,000 sf	1,000 sf	$4,014	n/a	$105	$4,119
Commercial, 100,001-200,000 sf	1,000 sf	$3,436	n/a	$91	$3,527
Commercial, >200,000 sf	1,000 sf	$2,921	n/a	$76	$2,997
Office/Institutional, 25,000 sf or less	1,000 sf	$1,812	n/a	$43	$1,855
Office/Institutional, 25,001-50,000 sf	1,000 sf	$1,547	n/a	$37	$1,584
Office/Institutional, 50,001-100,000 sf	1,000 sf	$1,318	n/a	$32	$1,350
Office/Institutional, 100,000 sf+	1,000 sf	$1,123	n/a	$27	$1,150
Business Park	1,000 sf	$1,260	n/a	$30	$1,290
Light Industrial	1,000 sf	$689	n/a	$16	$705
Manufacturing	1,000 sf	$378	n/a	$9	$387
Warehousing	1,000 sf	$490	n/a	$12	$502

* includes single-family attached
Source: Town of Oro Valley, Development Fee Summary, July 1, 2012.

The Town must now update its fees to be in full compliance with all provisions of the new enabling act by August 1, 2014. Assisting the Town in this endeavor for the non-utility fees is the purpose of this project.

[1] TischlerBise, *Development Fee Study and Infrastructure Improvements Plan prepared for Town of Oro Valley, Arizona*, April 7, 2008.

Summary of Findings

One of the recommendations of this study is to combine some of the current land use categories. Specifically, the current five commercial size categories are recommended to be combined, as well as the current four office/institutional size categories. In addition, business park, light industrial and manufacturing are proposed to be combined into a single industrial category. These consolidations are consistent with available demand data (e.g., higher trip generation size categories also tend to have shorter trip lengths and more pass-by traffic) and will simplify impact fee administration.

The updated transportation, park and police impact fees are summarized in Table 2, along with a comparison to current fees. The combined total of the three non-utility fees would be about 12% higher for residential uses, lower for most retail/commercial uses, and higher for most office and industrial/warehouse uses.

Table 2. Updated and Current Non-Utility Impact Fees

Land Use Type	Unit	Roads	Parks	Police	Total
Updated Fees					
Single-Family Detached	Dwelling	$1,990	$856	$310	$3,156
Multi-Family	Dwelling	$1,231	$599	$215	$2,045
Mobile Home Park	Space	$649	$651	$234	$1,534
Hotel/Motel	Room	$758	$0	$200	$958
Retail/Commercial	1,000 sq ft	$2,412	$0	$447	$2,859
Office	1,000 sq ft	$1,822	$0	$156	$1,978
Industrial	1,000 sq ft	$983	$0	$65	$1,048
Warehouse	1,000 sq ft	$915	$0	$63	$978
Public/Institutional	1,000 sq ft	$1,379	$0	$118	$1,497
Current Fees					
Single-Family Detached	Dwelling	$1,933	$555	$296	$2,784
Multi-Family	Dwelling	$1,331	$336	$176	$1,843
Mobile Home Park	Space	$1,331	$336	$176	$1,843
Hotel/Motel	Room	$556	$0	$14	$570
Retail/Commercial	1,000 sq ft	$3,436	$0	$91	$3,527
Office	1,000 sq ft	$1,318	$0	$32	$1,350
Industrial	1,000 sq ft	$689	$0	$16	$705
Warehouse	1,000 sq ft	$490	$0	$12	$502
Public/Institutional	1,000 sq ft	$1,318	$0	$32	$1,350
Percent Change					
Single-Family Detached	Dwelling	3%	54%	5%	13%
Multi-Family	Dwelling	-8%	78%	22%	11%
Mobile Home Park	Space	-51%	94%	33%	-17%
Hotel/Motel	Room	36%	n/a	1329%	68%
Retail/Commercial	1,000 sq ft	-30%	n/a	391%	-19%
Office	1,000 sq ft	38%	n/a	388%	47%
Industrial	1,000 sq ft	43%	n/a	306%	49%
Warehouse	1,000 sq ft	87%	n/a	425%	95%
Public/Institutional	1,000 sq ft	5%	n/a	269%	11%

Source: Updated fees from Table 21 (transportation), Table 29 (parks), and Table 37 (police); current fees from Table 1 (retail/commercial based on 100,001-200,000 sq. ft., office and institutional based on 50,001-100,000 sq. ft., industrial based on light industrial).

Average annual revenues anticipated over the next ten years, assuming the updated fees are adopted at 100%, are compared to actual revenues in recent years in Table 3.

Table 3. Historical and Projected Annual Impact Fee Revenues

Year	Roads	Parks	Police	Total
FY 07-08	$910,741	n/a	n/a	$910,741
FY 08-09	$316,954	$43,186	$8,206	$368,346
FY 09-10	$341,034	$162,756	$37,044	$540,834
FY 10-11	$263,302	$117,584	$28,061	$408,947
FY 11-12	$238,733	$99,542	$30,618	$368,893
Avg. 2013-2023	$494,909	$109,654	$72,770	$677,333

Source: Historical revenues from Town of Oro Valley Finance Department, March 19, 2013; average annual revenues for 2013-2023 from Table 23 (transportation), Table 31 (parks) and Table 39 (police).

Anticipated impact fee revenues are compared with the costs of planned capital improvements in Table 4. The updated impact fees will cover approximately one-fifth of the Town costs for planned transportation, park and police capital improvements over the next ten years.

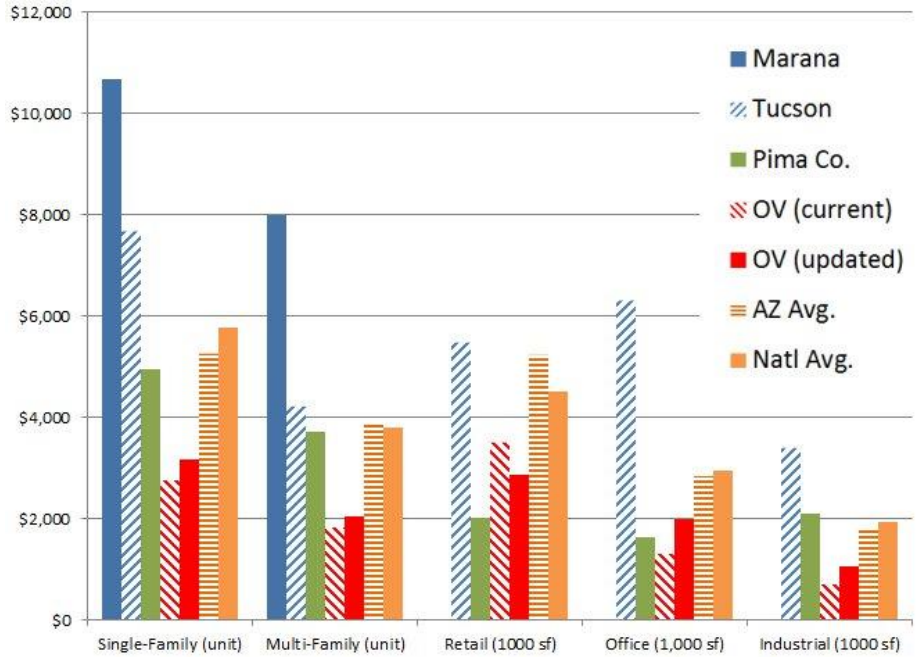
Table 4. Planned Costs and Fee Revenue, 2013-2023

Fee Type	Planned Costs	Potential Revenue	Share of Costs
Transportation	$27,189,600	$4,949,094	18.2%
Parks	$5,025,000	$1,096,536	21.8%
Police	$2,225,000	$727,700	32.7%
Total	$34,439,600	$6,773,330	19.7%

Source: Transportation costs and revenues from Table 24 and Table 23, respectively; parks from Table 32 and Table 31; police from Table 40 and Table 39.

The Town's current and proposed total non-utility fees are compared with those currently charged by Marana, Tucson and Pima County, as well as the Arizona average, in Figure 1. This comparison shows that the Town's current and updated fees are relatively low compared to nearby communities and the state and national averages.

Figure 1. Comparative Total Non-Utility Impact Fees



Source: Duncan Associates survey, May 2013 (national average excludes California)

LEGAL FRAMEWORK

Impact fees are a way for local governments to require new developments to pay a proportionate share of the infrastructure costs they impose on the community. In contrast to traditional "negotiated" developer exactions, impact fees are charges that are assessed on new development using a standard formula based on objective characteristics, such as the number and type of dwelling units constructed. The fees are one-time, up-front charges, with the payment usually made at the time of building permit issuance. Impact fees require each new development project to pay its pro-rata share of the cost of new capital facilities required to serve that development.

Arizona's enabling act for municipalities is codified in Sec. 9-463.05, Arizona Revised Statutes (ARS). In 2011, the legislature passed SB 1525, which was signed by the governor on April 26, 2011. SB 1525 constituted a major overhaul of Arizona's enabling act for municipalities. This section summarizes some of the major provisions of the new state act.

Eligible Facilities

Prior to SB 1525, municipalities could assess impact fees for any "necessary public services" (which was not defined) that constituted "costs to the municipality." SB 1525 amended the statute to limit the types of facilities for which impact fees can be assessed. Authorized facilities for which impact fees can be assessed, after January 1, 2012, are limited to the following defined "necessary public services:"

> *"Necessary public service" means any of the following facilities that have a life expectancy of three or more years and that are owned and operated by or on behalf of the municipality:*
>
> *(a) Water facilities, including the supply, transportation, treatment, purification and distribution of water, and any appurtenances for those facilities.*
>
> *(b) Wastewater facilities, including collection, interception, transportation, treatment and disposal of wastewater, and any appurtenances for those facilities.*
>
> *(c) Storm water, drainage and flood control facilities, including any appurtenances for those facilities.*
>
> *(d) Library facilities of up to ten thousand square feet that provide a direct benefit to development, not including equipment, vehicles or appurtenances.*
>
> *(e) 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.*
>
> *(f) 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 firefighters or officers from more than one station or substation.*

> *(g) 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.*
>
> *(h) Any facility that was financed and that meets all of the requirements prescribed in subsection* R *of this section.* (Sec. 9-463.05.S.5, ARS)

No longer authorized are fees for general government facilities, sanitation facilities, library buildings larger than 10,000 square feet and library books or equipment, fire and police administrative and training facilities and aircraft, parks larger than 30 acres and community centers larger than 3,000 square feet. No changes were made to authorized improvements for road, stormwater drainage, water or wastewater facilities, other than the new requirement that eligible facilities must have a life expectancy of at least three years.

Compliance Deadlines

Municipalities may continue to collect fees for unauthorized facilities after January 1, 2012 if the fees were pledged to retire debt for such facilities prior to June 1, 2011. However, the Town of Oro Valley had not pledged fee revenue in this sense for any of its development impact fees.

SB 1525 added numerous new requirements related to how impact fees are calculated. Land use assumptions (growth projections) must be prepared for each service area, covering at least a ten-year period. Many new requirements were added for the infrastructure improvements plan (IIP) and the impact fee analysis. However, compliance with these is not required until August 1, 2014:

> *A development fee that was adopted before January 1, 2012 may continue to be assessed only to the extent that it will be used to provide a necessary public service for which development fees can be assessed pursuant to this section and shall be replaced by a development fee imposed under this section on or before August 1, 2014. (9-463.05K, ARS)*

Significant changes were made to the requirements for adopting updated infrastructure improvements plans and fee schedules. These requirements are effective as of January 1, 2012, but only apply to the updated IIP and impact fee schedules that must be in place by August 1, 2014.

Provisions were also added relating to refunds. However, these provisions only apply to fees collected after August 1, 2014.

Other changes, however, are effective as of January 1, 2012. These include new provisions or amendments related to developer credits, the locking-in of fee schedules for 24 months following development approval, and annual reporting requirements. In addition, the expenditure of impact fees collected after January 1 is restricted to facilities authorized by SB 1525 (and repayment of pledged debt for unauthorized facilities, although this is not an option for Oro Valley).

Service Areas

Service areas are a key requirement for impact fees under SB 1525. A service area is defined as "any specified area within the boundaries of a municipality in which development will be served by necessary public services or facility expansions and within which a substantial nexus exists between the necessary public services or facility expansions and the development being served as prescribed in the infrastructure improvements plan." Land use assumptions (growth projections) and an infrastructure improvements plan (list of capital improvements and impact fee analysis) must be prepared for each service area.

It should be noted that multiple service areas are not mandated by SB 1525. A service area may include all of the area within the Town limits, as long as it can be shown that developments located anywhere within the service area will be served by or benefit from improvements located in the service area.

Service Units

In impact fee analysis, demand for facilities must be expressed in terms of a common unit of measurement, called a "service unit." SB 1525 defines a service unit as "a standardized measure of consumption, use, generation or discharge attributable to an individual unit of development calculated pursuant to generally accepted engineering or planning standards for a particular category of necessary public services or facility expansions." The recommended service units are described in the individual facility sections of this report.

Methodologies

SB 1525 is sometimes misunderstood to dictate a particular methodology for calculating impact fees. Because cities must forecast anticipated growth over a fixed time period and identify improvements over the same time period, some are lead to think that a "plan-based" methodology is required, where the cost per service unit is calculated by dividing planned costs by anticipated new service units. In fact, however, SB 1525 does not dictate this methodology, and most impact fees in the state have not been calculated in this way. The reason is that, to support a plan-based methodology, the list of planned improvements must be developed using a rigorous analysis, such as the modeling used to develop a transportation master plan, in order to establish the required nexus between the anticipated growth and the specific list of improvements required to serve that growth. In many cases, such a master plan is not available.

The principal alternative to the plan-based methodology is "standards-based." The key difference is that the plan-based approach is based on a complex level of service (LOS) standard, such as "every road shall function at LOS D or better," or "the average fire response time shall not exceed three minutes," that requires projecting growth by small areas and using sophisticated modeling or analysis to determine the specific improvements needed to maintain the desired LOS. In contrast, a standards-based approach uses a generalized LOS standard, such as the ratio of park acres to population, which does not require an extensive master planning effort in order to determine the improvements and costs that are attributable to a specific quantity of growth.

There are advantages and disadvantages to the two methodologies. The major advantage of a standards-based methodology is that it is more flexible, since the fees are not dependent on the

specific projects included in the list of improvements, only on the average cost to construct a unit of capacity. Changing the list of planned projects typically does not require recalculation of standards-based impact fees, since a single project is likely to have an insignificant impact on the average cost of capacity added by all of the improvements. This allows the capital plan to change in response to unforeseen development without triggering the need for an impact fee update.

Level of Service (LOS) Standards

SB 1525 does not define the term "level of service" (LOS), nor does it require the formal adoption of LOS standards. It does require, however, that impact fees be based on the same LOS provided to existing development in the service area. This reflects a basic principle of impact fees, which is that new development should not be charged for a higher LOS than existing development. This does not mean that impact fees cannot be based on a higher standard than is currently actually provided to existing development in a service area. If the fees are based on a higher-than-existing LOS, however, there must be a plan to use non-impact fee funds to remedy the existing deficiency.

Land Use Assumptions

An impact fee update must now include the development of land use assumptions (growth projections) for each service area. SB 1525 defines land use assumptions as "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." Since the infrastructure improvements plan (IIP) that must be prepared for each service area must identify improvement needs for a period not to exceed 10 years, a 10-year time-frame would seem to be the most appropriate for both the land use assumptions and the IIP.

Infrastructure Improvements Plan

SB 1525 requires that an infrastructure improvements plan (IIP) be prepared for facility type for each service area. Impact fees may only be collected to pay for improvements identified in the IIP. By implication, impact fees can only be spent on improvements listed in the IIP.

The IIP is often confused with a list of planned capital improvements. While the IIP must include such a list, it must also contain much more analysis. The IIP is basically the impact fee study. To avoid confusion, we suggest referring to the list of improvements that must be included in the IIP as the "capital plan." The consultant proposes to prepare a single, consolidated document that includes land use assumptions, infrastructure improvement plans and impact fee analyses for the Town's transportation, parks and police impact fees.

As noted above, the IIP must identify planned projects over a period of not more than 10 years, and it is suggested that the Town's IIPs and capital plans cover a 10-year period. Of course, the impact fee analysis could cover a longer period, such as to build-out, which may be required if the fees are based on build-out master plans.

The cost of the projects listed in the capital plan will not necessarily determine the impact fee amounts. As described earlier, there are two basic methodologies. Under a plan-based approach, the fee will be determined by the projects listed in the applicable master plan, some but not all of which will be listed in the impact fee capital plan. Under the standards-based approach, the fees will

be based on the existing level of service and the average cost per unit of capacity. Consequently, under the standards-based approach, the impact fee capital plan is primarily a list of improvements that are eligible to be funded with impact fees.

Eligible improvements are those that add capacity to accommodate future growth. Replacing an existing police patrol vehicle or remodeling or repairing an existing building are examples of improvements that do not add capacity. Some projects may be partially eligible. In addition, existing facilities that have outstanding debt that is to be repaid with impact fees should be listed in the capital plan.

Refunds

A common and understandable misinterpretation of SB 1525 is that a municipality may be required to refund fees collected if any improvement listed in the IIP is not completed within the timeframe of the IIP. Section 9-463.05.B.7 provides that collection of impact fees is allowed only to pay for a project that is identified in the IIP, "and the municipality plans to complete construction and have the service available within the time period established in the infrastructure improvements plan, but in no event longer than the time period provided in subsection H, paragraph 3 of this section [i.e., 15 years for water and wastewater, and 10 years for other facilities]." The key terms in this section are "plans to complete" and "have the service available." No community has a crystal ball that allows them to know with certainty how much development is going to occur over a 10-15 year period in the future. While the Town may plan to complete an improvement in this time period in order to serve anticipated growth, if the anticipated growth does not materialize and the need for the improvement is not required to serve the growth that does occur, it is highly unlikely that a court would find that the Town is compelled to refund the fees that it did collect.

The refund provisions in the referenced refund subsection (H) reinforce this interpretation. Section 9-463.05.B.7 directly references only the final paragraph of subsection H (H.3), which simply requires that the impact fees be spent within a certain time period (15 years for water and wastewater, and 10 years for other facilities) from the date they were collected. It is reasonable to conclude that this is the only refund provision that will likely be applicable, as long as the Town does not collect impact fees and deny access to services. However, there is always the possibility that refunds could be required if a construction project comes in significantly lower than its estimated cost.

Offsets

A fundamental principle of impact fees is that new development should not be required to pay twice for the cost of new facilities – once through impact fees and again through other taxes or fees that are used to fund the same facilities. To avoid such potential double-payment, impact fees may be reduced, and such a reduction is referred to as an "offset." Typically, offsets are incorporated into the impact fee calculation, although they can also be addressed through an independent fee study for an individual development project. While this has long been a part of impact fee practice in Arizona, SB 1525 amended the state enabling act to add the following provision (Section 9-463.05.B.12):

> *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.*

The revenue forecast required by Section 9-463.05.B.12 is provided in Appendix C.

In general, offsets are only required for funding that is dedicated for capacity-expanding improvements of the type addressed by the impact fee. A municipality is not required to use general fund revenue to pay for growth-related improvements. If, for example, a municipality decides that the existing level of service on which impact fees are based is insufficient, and opts to use general revenue to raise the level of service for both existing and new development, no offset would be required.

The clearest situation that requires an offset is when there is outstanding debt on the facilities that are providing existing development with the level of service that new development will be expected to pay for through impact fees. In this case, new development will be paying for the facilities that will serve them, while also paying for a portion of the cost of facilities serving existing development through property or other taxes. Consequently, the impact fees should be reduced to avoid this potential double-payment.

Another clear case requiring offsets is when the impact fees have been adopted based on a level of service that is higher than what is currently provided to existing development in the service area. In such a case, the cost of remedying the existing deficiency will almost always be funded by future revenue sources to which new development will contribute. To the extent that this is the case, an offset is required.

As noted above, an offset will generally be warranted when new development will be contributing toward a funding source that is dedicated to fund the same growth-related improvements addressed by the impact fee. Offsets are also often provided for anticipated grant funding that may be available to help fund growth-related improvements, although the uncertainty of such funding and the fact that it is not paid for by property owners make this type of offset discretionary.

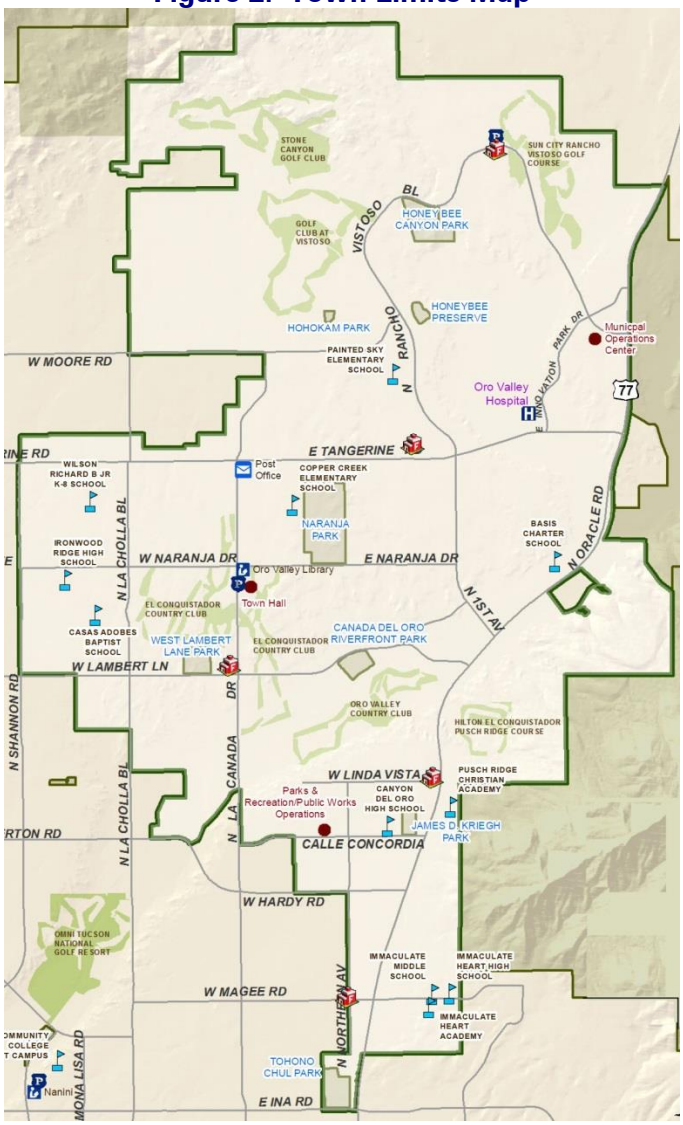
Finally, the new language inserted in the state enabling act by SB 1525, cited above, now requires municipalities to provide offsets for the excess portion of any construction contracting excise tax. Oro Valley has five classifications: Privilege Tax (2%), Hotel/Motel (6%), Construction Contracting (4%), Utilities (4%) and Pre-Existing Contracts (2%). Construction is higher than two of the other four categories, but two is not a majority of four. However, the Town has received a legal opinion that the word "classification" in the statute refers to the "taxable activities" on the Arizona Department of Revenue ("ADOR") chart. This includes all taxable activities, such as bars/restaurants, transportation, commercial lease, amusement, job printing etc. Based on this interpretation, the transaction privilege tax on most of the Oro Valley classifications (taxable activities) is 2%. Consequently, an offset is provided for half of the construction sales tax against the transportation impact fees.

SERVICE AREAS

As noted in the Legal Framework section, service areas are a key requirement for impact fees under SB 1525. Land use assumptions (growth projections) and an infrastructure improvements plan (list of capital improvements and impact fee analysis) must be prepared for each service area. Multiple service areas are not mandated by SB 1525, as long as it can be shown that developments located anywhere within the service area will be served by or benefit from improvements anywhere in the service area – which is another way of saying that a "substantial nexus" can be demonstrated.

Oro Valley currently charges non-utility impact fees for transportation, parks and police facilities. The Town currently has a single, town-wide service area for all three fee types. The current Oro Valley town limits are shown in Figure 2 below.

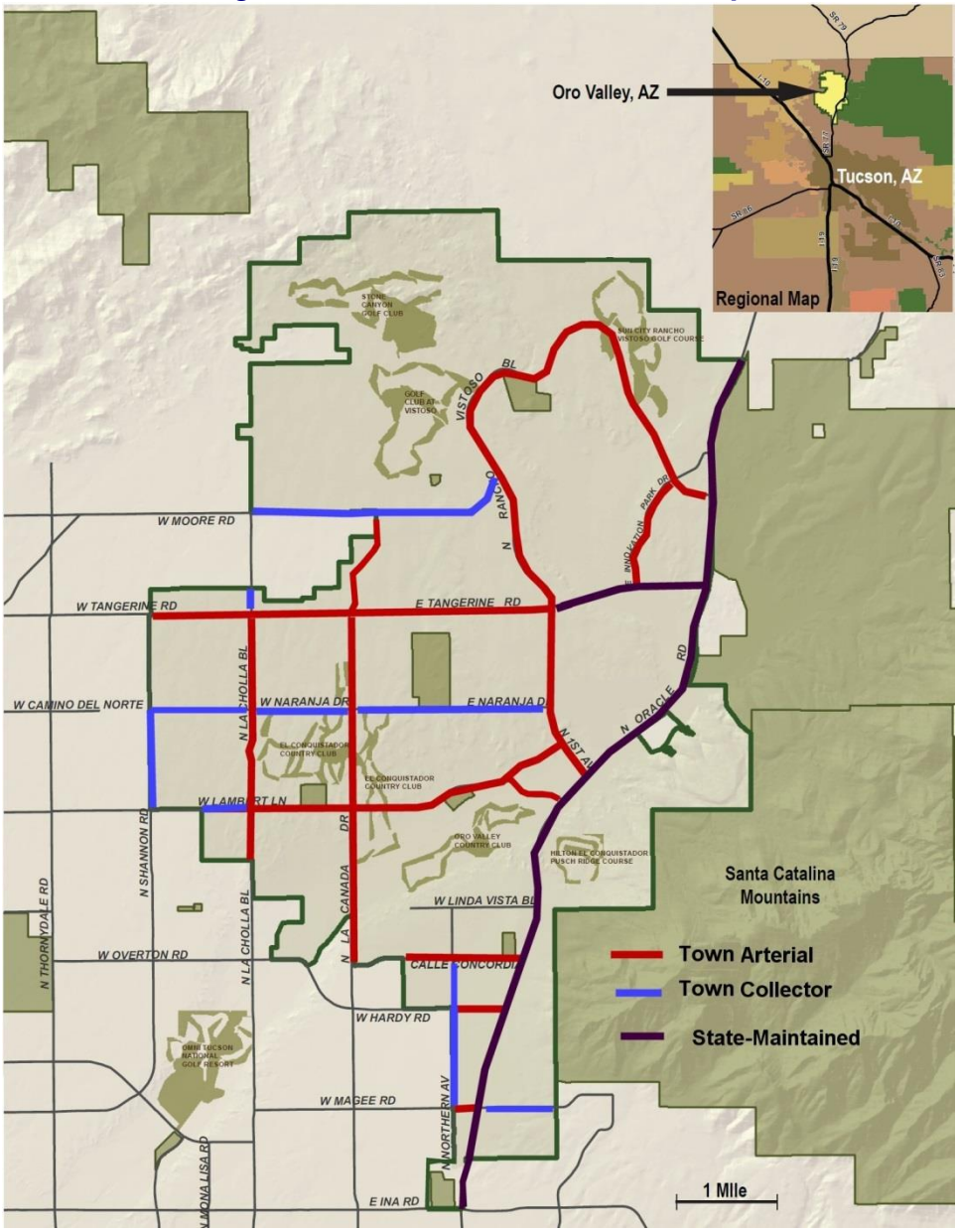
Figure 2. Town Limits Map



Transportation

Transportation planners classify roadways according to function. Local streets primarily function to provide access to adjacent development. Collector roads serve a dual function, providing both access and a way for traffic to get to the arterial. Arterial roadways also provide some access to adjacent properties, but their primary function is to move traffic long distances with a community. The functional classifications of the Town's existing major roadways are shown in Figure 3.

Figure 3. Functional Classification Map



The Town's transportation impact fees are limited to arterials and major collectors. Since these roadway classifications are designed to move traffic throughout the community, a town-wide service area continues to be appropriate.

Parks

SB 1525 authorizes fees for "neighborhood parks," although the term is undefined except for certain restrictions. The most important restriction is that neighborhood parks cannot not exceed 30 acres, unless a "direct benefit" (another undefined term) can be demonstrated.

While the Town's does not have a park master plan, typical standards are that a neighborhood park should be 5-10 acres and have a service area of about a one-half mile radius, while a community park should be 30-80 acres in size and have a service area of about a three-mile radius. The 30-acre park size authorized for impact fees falls somewhere between a neighborhood and community park.

Park impact fee service areas can reasonably be larger than the service area of a single park. Residents do not always use the park closest to them. A park impact fee system where each existing or potential park has its own service area would be unworkable. The entire town limits is roughly the size of two community park areas, and is recommended for the park impact fees.

Police

The current and recommended service area for police impact fees is town-wide. Most police facilities are centralized in the Main Police Station, and police protection is provided throughout the city from roving patrol cars.

LAND USE ASSUMPTIONS

This section presents land use assumptions covering a ten-year period (2013-2023) to serve as the basis for the infrastructure improvements plan and impact fee calculations for the Town of Oro Valley's transportation, park and police impact fees.

SB 1525 requires that land use assumptions be developed for each service area. All of the Town's impact fees will continue to be based on a single town-wide service area.

SB 1525 requires that land use assumptions be developed "pursuant to the general plan." The *Oro Valley General Plan*, adopted in 2005, does not include projections of future population or land use. Consequently, other data sources will be used to develop projections.

The 2010 U.S. Census provides a total count of housing units, but no information on units by housing type. Information on housing type is available from sample data collected by the Census Bureau as part of the annual American Housing Survey. The most recent available data is a weighted 5% sample, which consist of five annual 1% samples taken in 2007 through 2011. These figures are adjusted to match the 2010 total housing count from the 2010 Census. Adding the number of units for which building permits were issued by the Town over the last three years yields an estimate of existing housing units by type for 2013, as shown in Table 5.

Table 5. Existing Housing Units by Type, 2013

	2007-11 ACS	2010 Census	2010-12 Permits	2013 Est.
Single-Family Detached	14,677	15,285	264	15,549
Multi-Family	4,486	4,672	757	5,429
Mobile Home	368	383	0	383
Total Housing Units	19,531	20,340	1,021	21,361

Source: 2007-2011 ACS data is from the U.S. Census Bureau's American Community Survey, based on a 5% sample taken over five years; 2010 total units from 2010 U.S. Census, SF1 100% count data; 2010 units by type based on distribution of units from ACS data; building permits issued in calendar years 2010 through 2012 from Town of Oro Valley Development and Infrastructure Services Department, March 22, 2013 (includes an additional 750 multi-family units per Town, August 20, 2013).

The best available source of information on growth projections for Oro Valley is the small area population, housing and employment estimates and projections prepared by the Pima Association of Governments (PAG). The boundaries of these small areas, called Traffic Analysis Zones (TAZ), coincide very closely with the Town's boundaries, and can be aggregated to the Town limits. Current PAG data sets are available for 2005 estimates and 2040 projections. 2013 estimates for housing and population are based on current housing unit estimates derived in Table 5 above. Employment estimates for 2013 are derived from 2005 PAG employment estimates, which are adjusted upward by the 2005-2013 growth in housing units. 2023 population, housing and employment estimates are based on a straight-line interpolation between 2013 estimates and 2040 PAG projections. The resulting 2013-2023 forecasts are presented in Table 6.

Table 6. Population, Housing and Employment, 2013-2023

	2005	2013	2023	2040
Total Population	39,028	43,070	47,735	55,666
Total Housing Units	18,509	21,361	22,749	25,109
Retail/Commercial Employment	3,367	3,886	4,941	6,736
Office Employment	2,487	2,870	4,083	6,145
Industrial Employment	2,405	2,776	3,042	3,493
Warehouse Employment	130	150	121	71
Public Employment	1,016	1,173	1,787	2,832

Source: 2005 estimates and 2040 projections for Traffic Analysis Zones consistent with Town of Oro Valley town limits from Pima Association of Governments; 2013 housing units from Table 5; 2013 population based on 2013 housing and 2010 ratio of population to housing from 2010 U.S. Census; 2013 employment based on 2005 estimates and 2013 to 2005 housing unit ratio; 2023 population, housing and employment is straight-line interpolation between 2013 and 2040.

The number of employees can be converted to building square footage estimates using the employee density ratios shown in Table 7.

Table 7. Employee Density Ratios

Land Use Type	Sq. Feet/ Employee	Employees/ 1,000 Sq. Ft.
Retail/Commercial	487	2.05
Office	205	4.88
Industrial	460	2.17
Warehouse	1,236	0.81
Public	800	1.25

Source: Sample survey data collected by City of Chandler, Arizona, Economic Development Department, 2005.

Land use assumptions for 2013-2023 are summarized in Table 8 below for population, housing units by type and nonresidential building square footage by land use type.

Table 8. Population, Housing and Nonresidential Sq. Ft., 2013-2023

	2013	2023
Total Population	43,070	47,735
Single-Family Detached Units	15,549	16,578
Multi-Family Units	5,429	5,788
Mobile Home Units	383	383
Total Housing Units	21,361	22,749
Retail/Commercial Sq. Ft. (1,000s)	1,892	2,406
Office Sq. Ft. (1,000s)	588	837
Industrial Sq. Ft. (1,000s)	1,277	1,399
Warehouse Sq. Ft. (1,000s)	185	150
Public Sq. Ft. (1,000s)	938	1,430
Total Nonresidential Sq. Ft. (1,000s)	4,880	6,222

Source: 2013 and 2023 population and total housing units from Table 6; 2013 housing units by type from Table 5; 2023 housing units by type assumes no growth in mobile homes and new units distributed according to 2013 distribution of non-mobile home units; nonresidential square fee based on employment from Table 6 and employee density ratios from Table 7.

TRANSPORTATION

This section updates the Town's transportation impact fees in compliance with the new Arizona impact fee enabling act for municipalities.

There are two basic transportation impact fee methodologies: consumption-based and plan-based. In the standard consumption-based approach, the total cost of a representative set of improvements is divided by the capacity added by those improvements in order to determine an average cost per vehicle-mile of capacity (VMC). This cost per VMC is then multiplied by the vehicle-miles of travel (VMT) generated by a unit of development of a particular land use type to determine the gross impact fee. A variant is the modified consumption-based approach, which uses a system-wide VMC/VMT ratio higher than the 1:1 ratio implicit in the standard approach.

The alternative is the plan-based approach. The key to a defensible plan-based methodology is a well-designed transportation master plan that establishes a strong nexus between anticipated growth over a 10-20 year period and the improvements that will be required to accommodate growth over that planning horizon. The cost per VMT (or per trip) is determined by dividing the cost of the planned improvements by the growth in VMT. The cost per VMT is then multiplied by the vehicle-miles of travel (VMT) generated by a unit of development of a particular land use type to determine the gross impact fee. The level of service standard under the plan-based approach is facility-specific (e.g., "all major road segments and intersections shall function at LOS D or better").

There are advantages and disadvantages to the two methodologies. The consumption-based approach, at least in its standard form, tends to be conservative and generally results in lower impact fees than the plan-based approach. This is because most roadway systems need more than one unit of capacity (VMC) for each unit of travel demand (VMT) in order to function at an acceptable level of service (the modified consumption-based approach addresses this issue and is less conservative). Plan-based fees using a transportation plan that identifies all of the improvements needed to provide acceptable levels of service on all roadways will almost always result in higher fees.

The major advantage of a consumption-based methodology is that it is more flexible, since the fees are not dependent on the specific projects included in the list of improvements, only on the average cost to construct a vehicle-mile of capacity. Changing the list of planned projects typically does not require recalculation of consumption-based road impact fees, since a single project is likely to have an insignificant impact on the average cost of capacity added by all of the improvements. This allows the capital plan to change in response to unforeseen development without triggering the need for an impact fee update. This update uses the consumption-based methodology.

Existing Level of Service

As described above, the level of service used in the consumption-based methodology is a system-wide capacity/demand (VMC/VMT) ratio of one. This section demonstrates that the existing level of service exceeds this standard.

An inventory of the existing arterial/major collector road network is summarized in Table 9 below. For each roadway segment, information was gathered on segment length in miles, number of through lanes, and current traffic volumes (annualized average daily trips or AADT). The number

of vehicle-miles of travel (VMT) is the product of segment miles and AADT. The number of vehicle-miles of capacity (VMC) is the product of segment miles and roadway capacity.

Table 9. Existing Major Road Inventory

Street	From	To	Class	Miles	Lns.	AADT	VMT	VMC
1st Ave	Oracle Rd	Lambert Ln	Minor Art	0.414	4	24,340	10,077	10,350
1st Ave	Lambert Ln	Naranja Dr	Minor Art	0.365	4	15,746	5,747	9,125
1st Ave	Naranja Dr	Tangerine Rd	Minor Art	0.997	4	15,746	15,699	24,925
Calle Buena Vista	Calle Concordia	Hardy	Collector	1.000	2	3,533	3,533	10,000
Calle Concordia	Calle Loma Linda	Calle Buena Vista	Minor Art	0.499	2	4,300	2,146	4,990
Calle Concordia	Calle Buena Vista	Overlook	Minor Art	0.708	2	4,300	3,044	7,080
Calle Concordia	Overlook	Hwy 77	Minor Art	0.708	2	4,300	3,044	7,080
Hardy Rd	Calle Loma Linda	Calle Buena Vista	Minor Art	0.501	2	5,384	2,697	5,010
Hardy Rd	Calle Buena Vista	Oracle Rd	Minor Art	0.534	2	5,384	2,875	5,340
Innovation Park	SR -989	Rancho Vistoso	Minor Art	1.248	2	6,000	7,488	12,480
La Canada Dr	Oro Valley TB	Calle Concordia	Minor Art	0.505	4	11,749	5,933	12,625
La Canada Dr	Oro Valley TB	Rancho Sonora	Minor Art	0.647	4	11,750	7,602	16,175
La Canada Dr	Rancho Sonora Dr	Lambert lane	Minor Art	0.414	4	11,750	4,865	10,350
La Canada Dr	Lambert Ln	Naranja Dr	Minor Art	0.997	4	14,658	14,614	24,925
La Canada Dr	Naranja Dr	Tangerine Rd	Minor Art	0.971	4	10,382	10,081	24,275
La Canada Dr	Tangerine Rd	Moore Rd	Minor Art	1.000	4	5,058	5,058	25,000
La Cholla Blvd	0.5 mi. S of Lambert	Lambert Ln	Minor Art	0.500	2	14,246	7,123	5,000
La Cholla Blvd	Lambert Ln	Naranja Dr	Minor Art	1.007	2	10,669	10,744	10,070
La Cholla Blvd	Naranja Dr	Tangerine Rd	Minor Art	0.966	2	9,870	9,534	9,660
La Cholla Blvd	Tangerine Rd	Oro Valley TB	Collector	0.258	2	2,798	722	2,580
Lambert Ln	0.5 mi. E of Shannon	La Cholla Blvd	Collector	0.496	2	7,178	3,560	4,960
Lambert Ln	La Cholla Blvd	Rancho Sonora	Minor Art	0.625	2	9,437	5,898	6,250
Lambert Ln	Rancho Sonora Dr	La Canada Dr	Minor Art	0.369	2	9,437	3,482	3,690
Lambert Ln	La Canada Dr	Highlands Dr	Minor Art	1.290	2	11,938	15,400	12,900
Lambert Ln	Pusch View	1st Ave	Minor Art	1.017	2	11,931	12,134	10,170
Magee Road	Northern Ave	Oracle Rd	Minor Art	0.219	2	14,146	3,098	2,190
Magee Road	Oracle Rd	Town Limits	Collector	0.787	2	1,888	1,486	7,870
Moore Road	La Cholla Blvd	Copper Spring Trl	Collector	1.558	2	3,621	5,642	15,580
Moore Road	Copper Spring Trl	Woodburne Ave.	Collector	0.804	2	3,621	2,911	8,040
Moore Road	Woodburne Ave.	Rancho Vistoso Bd	Collector	0.286	2	3,621	1,036	2,860
Naranja Dr	Shannon Road	La Cholla Blvd	Collector	1.000	2	2,000	2,000	10,000
Naranja Dr	La Cholla Blvd	La Canada Dr	Collector	0.998	2	7,883	7,867	9,980
Naranja Dr	La Canada Dr	1st Ave	Collector	2.020	2	3,977	8,034	20,200
Northern Ave.	Magee Road	Camino Cortaro	Collector	0.496	2	8,440	4,186	4,960
Northern Ave.	Camino Cortaro	Hardy Road	Collector	0.507	2	8,440	4,279	5,070
Pusch View Lane	Lambert Lane	Oracle Road	Minor Art	0.644	4	5,926	3,816	16,098
Rancho Vistoso	Tangerine Rd	Moore Rd	Minor Art	1.466	4	18,566	27,218	36,650
Rancho Vistoso	Moore Rd	Sun City Blvd	Minor Art	2.447	4	3,481	8,518	61,175
Rancho Vistoso	Sun City Blvd	Del webb Blvd	Minor Art	1.117	4	8,209	9,169	27,925
Rancho Vistoso	Del webb Blvd	Innovation Park	Minor Art	0.815	4	12,938	10,544	20,375
Rancho Vistoso	Innovation Park Dr	SR-77	Minor Art	0.414	4	12,932	5,354	10,350
Shannon Rd	Lambert Ln	Naranja	Collector	0.985	2	2,582	2,543	9,850
Tangerine Rd	Shannon Rd	La Cholla Blvd	Prin Art	0.981	2	11,242	11,028	9,810
Tangerine Rd	La Cholla Blvd	La Canada Dr	Prin Art	1.007	2	13,316	13,409	10,070
Tangerine Rd	La Canada Dr	Mandarin Ln	Prin Art	1.580	4	18,640	29,451	39,500
Vistoso Comm Lp	Rancho Vistoso Bd	Oracle Road	Collector	0.444	4	1,538	682	11,094
Total Vehicle-Miles							335,371	614,657

Source: Segment descriptions, miles, lanes and AADT from Town of Oro Valley, March 27, 2013; VMT is product of miles and AADT; VMC is product of miles and 25,000 vehicles per day for 4-lane and 10,000 for 2-lane.

The results of the existing level of service analysis are shown in Table 10. While some individual road segments are operating at a level of service worse than LOS D, the appropriate level of service measurement for a consumption-based road fee is the overall ratio of capacity to demand for the service area. As shown below, existing level of service exceeds the minimum VMC/VMT ratio of one.

Table 10. Existing Transportation Level of Service

Total Vehicle-Miles of Capacity (VMC)	614,657
÷ Total Vehicle-Miles of Travel (VMT)	335,371
Existing VMC/VMT Ratio	1.83

Source: Vehicle-miles of capacity (VMC) and vehicle-miles of travel (VMT) from Table 9.

Service Units

A service unit creates the link between supply (roadway capacity) and demand (traffic generated by new development). An appropriate service unit basis for road impact fees is vehicle-miles of travel (VMT). Vehicle-miles is a combination of the number of vehicles traveling during a given time period and the distance (in miles) that these vehicles travel.

The two time periods most often used in traffic analysis are the 24-hour day (average daily trips or ADT) and the single hour of the day with the highest traffic volume (peak hour trips or PHT). Due to the fact that available traffic counts are in terms of ADT and to be consistent with the Town's current fees, which are based on ADT, daily VMT will be used as the service unit for the transportation impact fees.

Transportation service units are defined in terms of vehicle travel. The travel demand generated by a specific land use is a product of three factors: 1) trip generation, 2) percent primary trips and 3) average trip length.

Trip Generation

Trip generation rates are based on information published in the most recent edition of the Institute of Transportation Engineers' (ITE) Trip Generation manual. Trip generation rates represent trip ends, or driveway crossings at the site of a land use. Thus, a single-one way trip from home to work counts as one trip end for the residence and one trip end for the work place, for a total of two trip ends. To avoid over counting, all trip rates have been divided by two. This places the burden of travel equally between the origin and destination of the trip and eliminates double charging for any particular trip.

Primary Trip Factor

Trip rates must also be adjusted by a "primary trip factor" to exclude pass by and diverted-linked trips. This adjustment is intended to reduce the possibility of over-counting by only including primary trips generated by the development. Pass by trips are those trips that are already on a particular route for a different purpose and simply stop at a development on that route. For example, a stop at a convenience store on the way home from the office is a pass by trip for the convenience store. A pass by trip does not create an additional burden on the street system and therefore should not be counted in the assessment of impact fees. A diverted-linked trip is similar

to a pass by trip, but a diversion is made from the regular route to make an interim stop. The reduction for pass by and diverted-linked trips was drawn from ITE and other published information.

Average Trip Length

In the context of a transportation impact fee based on a consumption-based methodology, it is necessary to determine the average length of a trip on the major roadway system within Oro Valley. The point of departure in developing local trip lengths is to utilize national data. The U.S. Department of Transportation's 2009 National Household Travel Survey identifies average trips lengths for specific trip purposes. However, these trip lengths are unlikely to be representative of travel on the major roadway system in Oro Valley, since the national data includes travel on Federal and State highways, minor collectors and local streets, as well as travel outside any one jurisdiction. An adjustment factor for local trip lengths can be derived by dividing the vehicle-miles of travel (VMT) that is actually observed on the major roadway system by the VMT that would be expected using national average trip lengths and trip generation rates.

The first step is to estimate the total VMT that would be expected to be generated by existing development in Oro Valley based on national travel demand characteristics. This can be accomplished by multiplying existing development in each land use category by the appropriate national trip generation rate, primary trip factor and trip length, and summing for all land use types, as shown in Table 11. The expected VMT is considerably higher than the actual estimated VMT on the Town's major roadway system. This is not surprising, since the major roadway system does not include State roads, minor collectors, local streets or any portion of a trip that occurs outside the Town limits. Consequently, it is necessary to develop an adjustment factor to account for this variation. The local adjustment factor is the ratio of actual to projected VMT on the major roadway system. The national average trip length for each land use type should be multiplied by a local adjustment factor of 0.311.

Table 11. Local Trip Length Adjustment Factor

Land Use Type	ITE Code	Unit	2013 Units	Trip Rate	Primary Trips	Daily Trips	Length (miles)	Daily VMT
Single-Family Detached	210	Dwelling	15,549	4.76	100%	74,013	9.75	721,627
Multi-Family	220	Dwelling	5,429	3.33	100%	18,079	8.62	155,841
Mobile Home Park	240	Space	383	2.50	100%	958	6.03	5,777
Retail/Commercial	820	1,000 sq ft	1,892	21.35	42%	16,966	6.27	106,377
Office	710	1,000 sq ft	588	5.52	80%	2,597	9.61	24,957
Industrial	140	1,000 sq ft	1,277	1.91	100%	2,439	11.98	29,219
Warehouse	150	1,000 sq ft	185	1.78	100%	329	11.98	3,941
Public/Institutional	620	1,000 sq ft	938	3.80	100%	3,564	8.47	30,187
Total Expected VMT								1,077,926
÷ Total Actual VMT								335,371
Ratio of Actual to Expected VMT								0.311

Source: Existing 2013 units from Table 8; trip rates are one-half daily trip ends during a weekday from Institute of Transportation Engineers (ITE), *Trip Generation*, 9th ed., 2012 (commercial based on shopping center, office on general office, industrial on manufacturing, public/institutional on nursing home); primary trip percentage from ITE, *Trip Generation Handbook*, June 2004; daily trips is product of units, trip rate and primary trip percentage; national average trip lengths from Table 12; daily VMT is product of daily trips and average trip length; actual city-wide VMT from Table 9.

National average trip lengths derived from the U.S. Department of Transportation's 2009 National Household Travel Survey are available for a variety of trip types and purposes. These have been

adjusted downward by the local adjustment factor to determine local trip lengths, as shown in Table 12 below.

Table 12. Average Trip Lengths

Land Use	Trip Type	National Trip Length	Local Adjustment Factor	Local Trip Length
Single-Family Detached	Single-Family	9.75	0.311	3.03
Multi-Family	Multi-Family	8.62	0.311	2.68
Mobile Home	Mobile Home	6.03	0.311	1.88
Retail/Commercial	Shopping	6.27	0.311	1.95
Office	Medical/Dental	9.61	0.311	2.99
Industrial/Warehouse	To or From Work	11.98	0.311	3.73
Public/Institutional	School/Church	8.47	0.311	2.63

Source: National average trip lengths from U.S. Department of Transportation, National Household Travel Survey, 2009; local adjustment factor from Table 11; local trip length is product of national trip length and local adjustment factor.

Service Unit Summary

The result of combining trip generation rates, primary trip factors and localized average trip lengths is a travel demand schedule that establishes the daily VMT during the average weekday on the major roadway system generated by various land use types per unit of development for Oro Valley. The recommended travel demand schedule is presented in Table 13.

Table 13. Transportation Service Unit Multipliers

Land Use Type	ITE Code	Unit	Trip Rate	Primary Trips	Length (miles)	VMT/ Unit
Single-Family Detached	210	Dwelling	4.76	100%	3.03	14.42
Multi-Family	220	Dwelling	3.33	100%	2.68	8.92
Mobile Home Park	240	Space	2.50	100%	1.88	4.70
Hotel/Motel	320	Room	2.82	100%	1.95	5.49
Retail/Commercial	820	1,000 sq ft	21.35	42%	1.95	17.48
Office	710	1,000 sq ft	5.52	80%	2.99	13.20
Industrial	140	1,000 sq ft	1.91	100%	3.73	7.12
Warehouse	150	1,000 sq ft	1.78	100%	3.73	6.63
Public/Institutional	620	1,000 sq ft	3.80	100%	2.63	9.99

Source: Trip rates are one-half daily trip ends during a weekday from Institute of Transportation Engineers (ITE), *Trip Generation*, 9th ed., 2012; retail primary trip percentage from ITE, *Trip Generation Handbook*, June 2004 (office estimated); average trip lengths from Table 12; daily VMT per unit is product of trip rate, primary trip percentage and average trip length.

Transportation service units are expressed in terms of vehicle-miles of travel (VMT). VMT projections for the 2013-2023 planning period are shown in Table 14 below. Note that using existing land uses and the transportation service unit multipliers under-estimates actual town-wide VMT by about three-tenths of a percent. This indicates that the calibration worked well and that the multipliers are slightly conservative in terms of reflecting actual demand.

Table 14. Transportation Service Units, 2013-2023

Land Use Type	Unit	Units 2013	Units 2023	VMT/ Unit	VMT 2013	VMT 2023
Single-Family Detached	Dwelling	15,549	16,578	14.42	224,217	239,055
Multi-Family	Dwelling	5,429	5,788	8.92	48,427	51,629
Mobile Home Park	Space	383	383	4.70	1,800	1,800
Retail/Commercial	1,000 sq ft	1,892	2,406	17.48	33,072	42,057
Office	1,000 sq ft	588	837	13.20	7,762	11,048
Industrial	1,000 sq ft	1,277	1,399	7.12	9,092	9,961
Warehouse	1,000 sq ft	185	150	6.63	1,227	995
Public/Institutional	1,000 sq ft	938	1,430	9.99	9,371	14,286
Total Service Units (VMT)					334,968	370,831

Source: 2013 and 2023 units from Table 8; VMT per unit from Table 13; VMT is product of units and VMT per unit.

Cost per Service Unit

The cost per service unit is derived from the actual cost of one soon-to-be-completed project and three planned major road projects in Oro Valley. The descriptions and costs of these projects are summarized in Table 15. The average cost per new lane-mile added by these projects is $4.29 million.

Table 15. Cost of Planned Major Road Projects

Project Description	Lanes Ex	Lanes Fut	Lanes New	Miles	New Ln-Mi.	Total Cost	Cost per Lane-Mile
Tangerine Rd, Shannon to La Canada	2	4	2	2.0	4.0	$19,896,770	$4,974,193
Naranja Drive, La Cholla to Shannon	2	3	1	1.0	1.0	$4,187,000	$4,187,000
Lambert Lane, La Canada-Rancho Sonora	2	4	2	0.5	1.0	$4,700,000	$4,700,000
Lambert Lane, Pusch View Ln-La Canada	2	4	2	1.6	3.2	$10,700,000	$3,343,750
Total					9.2	$39,483,770	$4,291,714

Source: Town of Oro Valley, April 15, 2013.

To determine the cost per service unit, it is necessary to divide the cost by the capacity added by the improvements. As shown in Table 16, the four projects will add 69,000 vehicle-miles of capacity.

Table 16. Capacity Added by Planned Major Road Projects

Project Description	Daily Capacity (LOS D) Before	After	New	Miles	New VMC
Tangerine Rd, Shannon to La Canada	10,000	25,000	15,000	2.0	30,000
Naranja Drive, La Cholla to Shannon	10,000	17,500	7,500	1.0	7,500
Lambert Lane, La Canada-Rancho Sonora	10,000	25,000	15,000	0.5	7,500
Lambert Lane, Pusch View Ln-La Canada	10,000	25,000	15,000	1.6	24,000
Total Vehicle-Miles of Capacity (VMC) Added					69,000

Source: Project descriptions and miles from Table 15; daily capacities at LOS D assumed; new VMC is product of new capacity and miles.

The cost per service unit is the product of the cost per VMC and the level of service (LOS). The standard consumption-based approach is based on a 1.00 ratio of capacity to demand. Under the standard consumption-based approach, the cost per VMT is the same as the cost per VMC, as shown in Table 17.

Table 17. Transportation Cost per Service Unit

Total Cost of Planned Improvements	$39,483,770
÷ Total Vehicle-Miles of Capacity (VMC) Added	69,000
Average Cost per Vehicle-Mile of Capacity (VMC)	$572
x VMC/VMT Ratio	1.00
Average Cost per Vehicle-Mile of Travel (VMT)	$572

Source: Total cost from Table 15; new VMC added from Table 16; average cost per VMC is ratio of total cost to VMC added.

Net Cost per Service Unit

As noted in the Legal Framework section of this report, impact fees should be reduced (or "offset") in order to account for other types of revenues that will be generated by new development and used to fund capacity-expanding improvements of the same type as those to be funded by the impact fees. Cases in which such an offset is warranted include funding of existing deficiencies, outstanding debt payments on existing facilities, and dedicated revenue sources to fund growth-related improvements.

The transportation impact fees calculated in this report are based on a system-wide level of service that is lower than the existing level of service, so there are no existing deficiencies. The Town has no debt associated with previous capacity-expanding major road system improvements. Other than impact fees, the Town has no dedicated source of revenue to fund growth-related road capacity improvements. Non-local revenues sources, such as Highway User Revenue Funds, are used solely for road maintenance.

The draft FY 2014-2018 Transportation Improvement Program (TIP) shows $15.04 million in regional transportation funding programmed for major road improvements in Oro Valley. While not necessarily generated locally, this funding comes at least partially from motor fuel taxes, some of which will be generated by new development. The amount that is attributable to new development in Oro Valley over the next 25 years equates to a net present value of $166 per daily VMT, as shown in Table 18. This represents an appropriate offset to account for new development's contribution to regional funding for major road improvements in Oro Valley.

Table 18. Transportation Outside Funding Offset per Service Unit

5-Year TIP Capacity Funding for Town Major Roads	$15,037,000
÷ Number of Years	5
Annual TIP Capacity Funding	$3,007,400
÷ Existing Vehicle-Miles of Travel (VMT)	335,371
Annual TIP Capacity Funding per VMT	$8.97
x Present Value Factor, 25 Years	18.47
Outside Funding Offset per VMT	$166

Source: Five-year TIP funding from Pima Association of Governments, 2014-2018 TIP, 5-Year Regional Transportation Improvement Program, March 2013 draft; existing VMT from Table 9; 25-year present value factor based on 2.48% discount rate, which is the average inflation rate over the last ten years, from U.S Bureau of Labor Statistics, Consumer Price Index, All Urban Consumers (average annual change in annual index for 2002-2012).

As noted in the Legal Framework section, SB 1525 requires that an offset be provided for any "excess" construction sales tax, and it has been determined that one-half of the 4% construction sales tax meets the description of an excess tax. Even though the Town's construction sales tax revenues are not earmarked to be used for any specific purpose, SB 1525 apparently requires that an offset be provided against one or more of the Town's impact fees. It has been determined that the offset will be provided against the transportation impact fee. The excess construction sales tax offset is calculated in Table 19.

Table 19. Excess Construction Sales Tax Offset per Service Unit

Average Construction Sales Tax per Single-Family Unit	$7,800
x Percent Excess	50%
Excess Construction Sales Tax per Single-Family Unit	$3,900
÷ Daily VMT per Single-Family Detached Unit	14.42
Excess Construction Sales Tax Offset per VMT	$270

Source: Average tax per single-family unit based on a $300,000 home from Town of Oro Valley Finance Department, March 16, 2013; daily VMT per single-family unit from Table 13.

The net cost per service unit (VMT), after deducting the offsets for outside funding and excess construction sales tax and adding the cost of impact fee updates, is $138 per VMT, as shown in Table 20.

Table 20. Transportation Net Cost per Service Unit

Cost per VMT	$572
– Outside Funding Offset per VMT	-$166
– Excess Construction Sales Tax Offset per VMT	-$270
Impact Fee Study Cost per VMT	$2
Net Cost per VMT	$138

Source: Cost per VMT from Table 17; outside funding offset from Table 18; excess construction sales tax offset from Table 19; study cost from Table 47.

Potential Impact Fees

The maximum transportation impact fees that may be adopted by the Town based on this study is the product of the number of vehicle-miles of travel (VMT) generated by a unit of development and the net cost per VMT calculated above. The resulting fee schedule is presented in Table 21.

Table 21. Transportation Net Cost Schedule

Land Use Type	Unit	VMT/ Unit	Net Cost/ VMT	Net Cost/ Unit
Single-Family Detached	Dwelling	14.42	$138	$1,990
Multi-Family	Dwelling	8.92	$138	$1,231
Mobile Home Park	Space	4.70	$138	$649
Hotel/Motel	Room	5.49	$138	$758
Retail/Commercial	1,000 sq ft	17.48	$138	$2,412
Office	1,000 sq ft	13.20	$138	$1,822
Industrial	1,000 sq ft	7.12	$138	$983
Warehouse	1,000 sq ft	6.63	$138	$915
Public/Institutional	1,000 sq ft	9.99	$138	$1,379

Source: VMT per unit from Table 13; net cost per VMT from Table 20.

The updated transportation impact fees are compared to the Town's current fees in Table 22. Note that the current land use categories differ from the proposed land use categories in that the proposed land use categories (a) separate office and institutional uses, and (b) do not vary commercial, office and institutional fees by the size of the development. The updated fees are higher for single-family, office, industrial/warehouse and larger institutional uses, and lower for multi-family, commercial and smaller institutional uses.

Table 22. Current and Updated Transportation Impact Fees

Current Land Use Type	Unit	Current Fee	Updated Fee	Percent Change
Single-Family	Dwelling	$1,933	$1,990	3%
All Other Housing	Dwelling	$1,331	$1,231	-8%
Lodging	Room	$556	$758	36%
Commercial, 25,000 sf or less	1,000 sq. ft	$5,533	$2,412	-56%
Commercial, 25,001-50,000 sf	1,000 sq. ft	$4,807	$2,412	-50%
Commercial, 50,001-100,000 sf	1,000 sq. ft	$4,014	$2,412	-40%
Commercial, 100,001-200,000 sf	1,000 sq. ft	$3,436	$2,412	-30%
Commercial, >200,000 sf	1,000 sq. ft	$2,921	$2,412	-17%
Office, 25,000 sf or less	1,000 sq. ft	$1,812	$1,822	1%
Office, 25,001-50,000 sf	1,000 sq. ft	$1,547	$1,822	18%
Office, 50,001-100,000 sf	1,000 sq. ft	$1,318	$1,822	38%
Office, 100,000 sf+	1,000 sq. ft	$1,123	$1,822	62%
Institutional, 25,000 sf or less	1,000 sq. ft	$1,812	$1,379	-24%
Institutional, 25,001-50,000 sf	1,000 sq. ft	$1,547	$1,379	-11%
Institutional, 50,001-100,000 sf	1,000 sq. ft	$1,318	$1,379	5%
Institutional, 100,000 sf+	1,000 sq. ft	$1,123	$1,379	23%
Business Park	1,000 sq. ft	$1,260	$983	-22%
Light Industrial	1,000 sq. ft	$689	$983	43%
Manufacturing	1,000 sq. ft	$378	$983	160%
Warehousing	1,000 sq. ft	$490	$915	87%

Source: Current fees from Town of Oro Valley, Development Fee Summary, July 1, 2012; updated fees from Table 21.

Capital Plan

Assuming that the updated fees are adopted at 100%, potential transportation impact fee revenue over the next ten years, based on new development anticipated by the land use assumptions, could be as much as $4.9 million, as shown in Table 23. This revenue projection also includes the value of developer-constructed improvements, for which developers are given credit against their transportation impact fees.

Table 23. Potential Transportation Impact Fee Revenue

New Vehicle-Miles of Travel (VMT), 2013-2023	35,863
x Net Cost per Vehicle-Mile of Travel (VMT)	$138
Potential Revenue at 100%, 2013-2023	$4,949,094

Source: New VMT from Table 14; net cost per VMT from Table 20.

Assuming that growth occurs as projected in the land use assumption, the Town plans to complete approximately $27.2 million in growth-related improvement to the major road system over the next ten years, as summarized in Table 24. Anticipated transportation impact fee revenues will cover

approximately 18% of the Town's cost of planned improvements if adopted at 100%. The timing of individual improvements will be dependent on the pace and location of development that actually occurs, and not all of the planned improvements will necessarily be completed in the next ten years. Some portions of the improvements may be constructed by developers in return for credits against their impact fees.

Table 24. Transportation Capital Plan, 2013-2023

Improvement Location	Planned Improvement	Town Cost
Tangerine Rd, Shannon Rd-La Canada Dr	Widen to four lanes, drainage facilities, & landscaping	$1,000,000
La Cholla Blvd, Tangerine Rd-Lambert Ln	Widen to 4 lanes, drainage, landscaping, retaining walls	$800,000
Shannon Rd, Tangerine Rd-Naranja Dr	New three lane road	$4,200,000
Lambert Ln, 0.5 mi. E of Shannon-Rancho Sonora	Widen to four lanes, drainage facilities, & landscaping	$17,280,000
Moore Rd, Yellow Orchard-Mystic View	Construct two lanes of new road (north side)	$1,440,000
Rancho Vistoso & Woodburne Intersection	Traffic Signal	$750,000
Oracle Rd & Rams Field Intersection	Traffic Signal	$750,000
Moore Rd La Cholla Blvd Intersection	Traffic Signal	$900,000
Transportation Fee Update Study Costs (2)	Impact Fee Study	$69,600
Total		$27,189,600

Source: Planned improvements from Town of Oro Valley, July 3, 2013; study cost from Table 47.

PARKS

This section updates the Town's park impact fees in compliance with the new Arizona impact fee enabling act for municipalities.

Service Units

The demand for Town park facilities is generated by people. However, the use of population directly as the service unit would pose some issues, since a community's total population includes people in group quarters (primarily nursing homes), who do not typically generate much demand for public park facilities. A preferable service unit, for the purposes of park impact fees, is the single-family Equivalent Dwelling Unit, or EDU. A single-family detached unit is by definition one park service unit (equivalent dwelling unit or EDU). The numbers of service units associated with other housing types are determined by dividing the average household size by the average household size of a single-family unit. Average household size (the ratio of household population to occupied units) is preferable as the basis of the service unit to persons per unit (the ratio of household population to total units), because it eliminates the volatile factor of occupancy rates. The resulting service unit multipliers are presented in Table 25.

Table 25. Park Service Unit Multipliers

Housing Type	Avg. HH Size	EDUs/ Unit
Single-Family Detached	2.43	1.00
Multi-Family	1.69	0.70
Mobile Home	1.84	0.76

Source: Average household size (AHHS) from Table 43; EDUs per unit is ratio of AHHS to single-family detached AHHS.

The number of service units in Oro Valley can be determined by multiplying the number of housing units by the service unit multipliers for each housing type and summing for all housing types. Existing and projected service units (EDUs) are calculated in Table 26.

Table 26. Park Service Units, 2013-2023

Housing Type	Housing Units	EDUs/ Unit	EDUs
Single-Family Detached	15,549	1.00	15,549
Multi-Family	5,429	0.70	3,800
Mobile Home	383	0.76	291
Total EDUs, 2013	21,361		19,640
Single-Family Detached	16,578	1.00	16,578
Multi-Family	5,788	0.70	4,052
Mobile Home	383	0.76	291
Total EDUs, 2023	22,749		20,921

Source: 2013 and 2023 units from Table 8; EDUs per unit from Table 25.

Cost per Service Unit

SB 1525 limits park impact fees to "neighborhood parks," an undefined term that excludes parks larger than 30 acres in size, unless a larger park can be shown to provide a "direct benefit" to development. SB 1525 also excludes a number of park improvements from being funded with park impact fees, including "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."

In general, impact fees should be based on the current level of service being provided to existing development. The inventory of existing eligible park facilities is provided below. The replacement cost of existing facilities in the park service area can be determined based on current unit costs. The total replacement value of eligible land and facilities is estimated to be about $16 million, as shown in Table 27.

Table 27. Existing Park Facilities

Park Name	Canada del Oro	Jame D. Kriegh	West Lambert Lane	Naranja	Honey Bee Canyon	Total	Unit Cost	Total Cost
Total Acres	30.0	20.0	40.0	213.0	77.0	380.0	n/a	n/a
Eligible Acres	30.0	20.0	30.0	30.0	30.0	140.0	$49,000	$6,860,000
Eligible Developed Acres	30.0	20.0	0.2		8.0	58.2	$68,769	$4,002,356
Restrooms (lighted)	2	2			1	5	$215,000	$1,075,000
Playground (shaded)	1	1				2	$150,000	$300,000
Accessible Playground (shaded)		1				1	$150,000	$150,000
Covered Ramada (lighted)	3	1				4	$90,000	$360,000
Covered Ramada					2	2	$50,000	$100,000
Soccer Fields (lighted)	2					2	$210,000	$420,000
Softball Fields (lighted)	2	2				4	$250,000	$1,000,000
Baseball Fields (lighted)		3				3	$250,000	$750,000
Sand Volleyball	1	1				2	$25,000	$50,000
Horseshoe Pits	2					2	$1,000	$2,000
Concession Stand	1	1				2	$150,000	$300,000
Tennis Court (lighted)	1					1	$140,000	$140,000
Basketball Court (lighted)	1					1	$100,000	$100,000
Performance Stage	1					1	$50,000	$50,000
Walking Path	1					1	$54,400	$43,520
Raquetball Courts (lighted)		4				4	$50,000	$200,000
Dog Park		1				1	$150,000	$150,000
Archery Range (fixed)				1		1	$150,000	$150,000
Archery Range (walk around)				1		1	$75,000	$75,000
Total Replacement Cost								$16,277,876

Source: Town of Oro Valley, March 25, 2013; eligible park acres limited to 30 acres of larger parks.

The existing level of service in the park service area can be expressed in terms of current cost per service unit. Including the cost of impact fee update studies that will be required over the next ten years, the park cost per service unit is $856 per EDU, as shown in Table 28.

Table 28. Existing Park Cost per Service Unit

Total Existing Eligible Park Capital Cost	$16,277,876
÷ Total Existing Park Service Units	19,640
Direct Park Cost per Service Unit	$829
Impact Fee Study Cost per Service Unit	$27
Existing Park Cost per Service Unit	$856

Source: Total park cost from Table 27; existing (2013) EDUs from Table 26; study cost from Table 47.

Net Cost per Service Unit

As noted in the Legal Framework section of this report, impact fees should be reduced (or "offset") in order to account for other types of revenues that will be generated by new development and used to fund capacity-expanding improvements of the same type as those to be funded by the impact fees. Cases in which such an offset is warranted include funding of existing deficiencies, outstanding debt payments on existing facilities, and dedicated revenue sources to fund growth-related improvements.

The park impact fees calculated in this report are based on the existing level of service, so there are no existing deficiencies. There is no outstanding debt for existing park facilities. Other than impact fees, the Town has no dedicated source of revenue to fund growth-related park improvements. The Town has not received any grant funding for park improvements in recent years, and does not anticipate any grants over the next ten years. Consequently, no offsets against the park impact fees are warranted, and the net cost per service unit is the same as the cost per service unit calculated above.

Potential Impact Fees

The maximum park impact fees that may be adopted by the Town based on this study are the product of the number of service units generated by a unit of development and the net cost per service unit calculated above. The resulting fee schedule is presented in Table 29.

Table 29. Park Net Cost Schedule

Housing Type	Unit	EDUs/ Unit	Net Cost/ EDU	Net Cost/ Unit
Single-Family Detached	Dwelling	1.00	$856	$856
Multi-Family	Dwelling	0.70	$856	$599
Mobile Home Park	Space	0.76	$856	$651

Source: EDUs per unit from Table 25; net cost per EDU is cost per EDU from Table 28.

The updated park fees are compared to current fees in Table 30. The updated park fees are significantly higher than the current fees.

Table 30. Current and Updated Park Impact Fees

Current Land Use Type	Unit	Current Fee	Updated Fee	Percent Change
Single-Family Detached	Dwelling	$555	$856	54%
Multi-Family	Dwelling	$336	$599	78%
Mobile Home Park	Space	$336	$651	94%

Source: Current fees from Town of Oro Valley, Development Fee Summary, July 1, 2012; updated fees from Table 29.

Capital Plan

Assuming that the updated fees are adopted at 100%, potential park impact fee revenue over the next ten years, based on new development anticipated by the land use assumptions, could be as much as $1.1 million, as shown in Table 31.

Table 31. Potential Park Impact Fee Revenue, 2013-2023

New Park EDUs, 2013-2023	1,281
x Net Cost per EDU	$856
Potential Revenue, 2013-2023	$1,096,536

Source: New EDUs from Table 26; net cost per EDU is cost per EDU from Table 28.

Assuming that growth occurs as projected in the land use assumption, the Town plans to complete approximately $5 million in growth-related improvement to the park system over the next ten years, as summarized in Table 32. Anticipated park impact fee revenues will cover approximately 22% of the total cost of planned improvements. The timing of individual improvements will be dependent on the pace and location of development that actually occurs, and not all of the planned improvements will necessarily be completed in the next ten years.

Table 32. Park Capital Plan, 2013-2023

Naranja Park Development - 30 acres	$4,000,000
James D. Kriegh Park Expansion	$1,000,000
Impact Fee Update Studies (2)	$34,800
Total	$5,025,000

Source: Planned park improvements, Town of Oro Valley, July 1, 2013; study cost from Table 47.

POLICE

This section updates the Town's police impact fees in compliance with the new Arizona impact fee enabling act for municipalities.

Service Units

Disparate types of development must be translated into a common unit of measurement that reflects the impact of new development on the demand for police facilities. This unit of measurement is called a "service unit." The 2008 study used population as the residential service unit and vehicle trips as the nonresidential service unit, while allocating costs between residential and nonresidential land uses based on call volumes. A problem with relying on call data is that it is unstable over time. This means that fees can go up or down significantly for individual land uses each time the fees are updated.

The most commonly-used alternative to call data in police impact fees is based on a concept called "functional population." Similar to the concept of full-time equivalent employees, functional population represents the number of "full-time equivalent" people present at the site of a land use. Functional population represents the average number of equivalent persons present at the site of a land use for an entire 24-hour day. For residential development, functional population is simply average household size times the percent of time people spend at home. For nonresidential development, functional population is based on a formula that includes square foot per employee ratios, trip generation rates, average vehicle occupancy and average number of hours spent by employees and visitors at a land use. These all tend to be stable characteristics that do not change significantly over short periods of time. Functional population multipliers by land use are calculated in Appendix B.

The number of police service units can be determined by multiplying the amount of existing development by the service unit multipliers for each land use type and summing for the area. Existing and projected service units (functional population) are calculated in Table 33 for the 2013-2023 planning horizon.

Table 33. Police Service Units, 2013-2023

		Units		Func. Pop.	Func. Population	
Land Use Type	Unit	2013	2023	per Unit	2013	2023
Single-Family Detached	Dwelling	15,549	16,578	1.63	25,345	27,022
Multi-Family	Dwelling	5,429	5,788	1.13	6,135	6,540
Mobile Home Park	Space	383	383	1.23	471	471
Retail/Commercial	1,000 sq ft	1,892	2,406	2.35	4,446	5,654
Office	1,000 sq ft	588	837	0.82	482	686
Industrial	1,000 sq ft	1,277	1,399	0.34	434	476
Warehouse	1,000 sq ft	185	150	0.33	61	50
Public/Institutional	1,000 sq ft	938	1,430	0.62	582	887
Total Service Units (VMT)					37,956	41,786

Source: 2013 and 2023 units from Table 8; functional population per unit from Table 44 (residential) and Table 45 (nonresidential) in Appendix B.

Cost per Service Unit

The cost per service unit to provide police protection to new development is based on the existing level of service provided to existing development. The level of service is quantified as the ratio of the replacement cost of existing police capital facilities to existing police service units. The inventory of the Town's existing police facilities is provided in Table 34.

Table 34. Existing Police Facilities

	Building Sq. Feet	Acres
Main Police Station	15,165	1.58
Impound Facility	n/a	0.55
Total	15,165	2.13

Source: Main police station data from Town of Oro Valley, April 10, 2013 and Deutsch Associates, *Town-Wide Space Needs Study, Phase I*, May 16, 2007; impound facility acres from Town Police Department, April 2, 2013..

In addition to land and buildings, police services require vehicles and equipment. The Town's current police vehicles have a total replacement cost, based on current unit costs, of $4.21 million, as summarized in Table 35 on the following page.

Table 35. Existing Police Vehicles

Make	Model	Year	Life	Repl. Cost
Police Department - Field Operations				
Ford	Crown Vic	2007	10	$49,500
Ford	Crown Vic	2007	6	$48,000
Ford	Crown Vic	2007	6	$48,000
Ford	Crown Vic	2007	6	$48,000
Toyota	Tacoma	2007	8	$24,000
Ford	Crown Vic	2007	6	$48,000
Ford	Expedition	2007	6	$48,000
Ford	Crown Vic	2007	6	$48,000
Ford	Crown Vic	2007	6	$48,000
Dodge	Magnum	2007	8	$51,000
Ford	Crown Vic	2005	7	$48,000
Ford	F250 4x4	2006	8	$48,000
Ford	Crown Vic	2008	5	$48,000
Ford	Crown Vic	2008	8	$51,000
Ford	Crown Vic	2008	5	$48,000
Ford	Crown Vic	2008	8	$51,000
Ford	Crown Vic	2008	6	$49,500
Ford	Crown Vic	2008	5	$48,000
Ford	Crown Vic	2008	6	$49,500
Ford	Crown Vic	2008	8	$51,000
Ford	Crown Vic	2008	5	$48,000
Ford	Crown Vic	2008	8	$51,000
Ford	Crown Vic	2008	8	$51,000
Ford	Crown Vic	2008	5	$48,000
Ford	F350 4x4	2008	10	$52,000
Ford	Crown Vic	2008	5	$48,000
Toyota	Camry	2007	7	$27,000
Nissan	Altima	2005	8	$25,500
Toyota	Camry	2006	7	$25,500
Ford	Crown Vic	2009	7	$51,000
Ford	Crown Vic	2009	6	$51,000
Ford	Crown Vic	2009	5	$49,500
Ford	Crown Vic	2009	5	$49,500
Ford	Crown Vic	2009	6	$51,000
Ford	Crown Vic	2009	6	$51,000
Ford	Crown Vic	2009	6	$51,000
Ford	Crown Vic	2009	6	$51,000
Toyota	Camry	2009	8	$32,000
Ford	Expedition	2008	6	$52,000
Ford	Crown Vic	2011	6	$52,500
Ford	Crown Vic	2011	6	$52,500
Ford	Crown Vic	2011	6	$52,500
Nissan	Maxima	2005	10	$31,000
Ford	Crown Vic	2011	6	$52,500
Chevrolet	Silverado	2007	10	$30,000
Chevrolet	Tahoe	2012	6	$55,000
Chevrolet	Tahoe 4x4	2012	6	$57,500
Chevrolet	Tahoe	2012	6	$55,000
Chevrolet	Tahoe	2012	6	$55,000
Chevrolet	Tahoe	2012	6	$55,000
Chevrolet	Tahoe	2012	6	$55,000
Chevrolet	Tahoe	2012	6	$55,000
Toyota	Camry	2012	6	$33,000
Police Department - Motorcycle				
BMW	R1150RT-P	2006	10	$26,000
BMW	R1150RT-P	2006	10	$26,000
BMW	R1200RT-P	2007	10	$27,000
BMW	R1200RT-P	2007	10	$27,000
BMW	R1200RT-P	2007	10	$27,000
BMW	R1150RT-P	2004	9	$25,000
BMW	R1150RT-P	2004	9	$25,000
BMW	R1200RT-P	2009	8	$27,000
BMW	R1200RT-P	2009	8	$27,000
BMW	R1200RT-P	2009	10	$28,000
Police Department - Support Services				
Toyota	Camry	2007	8	$30,000
Ford	Taurus	2004	9	$25,500
Dodge	Van	2007	10	$34,000
Ford	Crown Vic	2005	12	$52,500
Ford	Crown Vic	2005	8	$48,000
Ford	Crown Vic	2005	8	$48,000
Ford	Crown Vic	2006	7	$48,000
Ford	Crown Vic	2006	8	$49,500
Ford	Crown Vic	2006	9	$51,000
Ford	Crown Vic	2006	9	$51,000
Ford	Crown Vic	2006	7	$48,000
Ford	Crown Vic	2006	8	$49,500
Toyota	Camry	2006	10	$31,000
Toyota	Camry	2006	10	$31,000
Ford	E250 Van	2006	8	$34,000
Dodge	Peace Keeper	1986	40	$100,000
Toyota	Camry	2003	13	$31,000
Toyota	Camry	2003	10	$25,500
Nissan	Altima	2004	10	$30,000
Ford	E150 8 Pass	2001	15	$38,000
Ford	E150 8 Pass	2001	15	$38,000
Ford	Motor Home	1999	20	$200,000
Toyota	Camry	2008	7	$31,000
Ford	F250 4x4	2008	10	$53,000
Chevrolet	Silverado	2007	8	$25,000
Ford	Crown Vic	2009	6	$51,000
Chrysler	Chrysler 300	2006	7	$25,500
Pontiac	Van LUX	2003	12	$32,000
Police Department - Courts				
Ford	E250 Cargo	2001	15	$35,000
Police Department - Professional Development				
Dodge	Van	2007	12	$35,000
Total				$4,210,000

Source: Town of Oro Valley Fleet Management Schedule, March 19, 2013.

The replacement cost of existing facilities can be determined based on current unit costs. The total replacement value of existing police land and facilities is estimated to be about $6.9 million, as shown in Table 36. The resulting police cost per service unit is $190 per functional population.

Table 36. Police Cost per Service Unit

	Units	Cost/Unit	Total Cost
Building Square Feet	15,165	$143	$2,166,429
Acres of Land	2.13	$199,367	$424,652
Vehicles	n/a	n/a	$4,210,000
Impound Facility Improvements	n/a	n/a	$84,000
Total Replacement Cost			$6,885,081
– Outstanding Debt on MOC Impound Facility Land			-$106,256
Net Replacement Cost			$6,778,825
÷ Existing Functional Population			37,956
Direct Cost per Functional Population			$181
Study Cost per Functional Population			$9
Total Cost per Functional Population			$190

Source: Building sq. ft. and acres from Table 34; cost per square foot from Town of Oro Valley Police Department, March 14, 2013 based on cost of planned property and evidence facility; cost per acre is actual cost per acre for 2005 MOC land purchase from Town of Oro Valley, March 19, 2013; outstanding debt on police MOC land is ratio of acres for police impound facility from Table 34 to total 23.7 acre purchase times outstanding debt of $4,580,000 prior to July 1, 2013 payment from Town of Oro Valley, March 20, 2013; existing (2013) functional population from Table 33; study cost per service unit from Table 47.

Net Cost per Service Unit

As noted in the Legal Framework section of this report, impact fees should be reduced (or "offset") in order to account for other types of revenues that will be generated by new development and used to fund capacity-expanding improvements of the same type as those to be funded by the impact fees. Cases in which such an offset is warranted include funding of existing deficiencies, outstanding debt payments on existing facilities, and dedicated revenue sources to fund growth-related improvements.

The police impact fees calculated in this report are based on the existing level of service, so there are no existing deficiencies. The Town's only outstanding debt for existing police facilities is the small portion of the Municipal Operations Center land that was purchased with 2006 bonds. The outstanding debt related to that land used for the existing impound facility has already been excluded from the cost per service unit, and no further offset is warranted. Other than impact fees, the Town has no dedicated source of revenue to fund growth-related police improvements. The Town has not received any grant funding for police improvements in recent years, and does not anticipate any grants over the next ten years. Given that no offsets against the police impact fees are required, the net cost per service unit is the same as the cost per service unit calculated above.

Potential Impact Fees

The maximum police impact fees that may be adopted by the Town based on this study is the product of the number of service units generated by a unit of development and the net cost per service unit calculated above. The resulting fee schedule is presented in Table 37.

Table 37. Police Net Cost Schedule

Land Use Type	Unit	Func. Pop./ Unit	Net Cost/ Func. Pop.	Net Cost/ Unit
Single-Family Detached	Dwelling	1.63	$190	$310
Multi-Family	Dwelling	1.13	$190	$215
Mobile Home Park	Space	1.23	$190	$234
Hotel/Motel	Room	1.05	$190	$200
Retail/Commercial	1,000 sq. ft.	2.35	$190	$447
Office	1,000 sq. ft.	0.82	$190	$156
Industrial	1,000 sq. ft.	0.34	$190	$65
Warehouse	1,000 sq. ft.	0.33	$190	$63
Public/Instititional	1,000 sq. ft.	0.62	$190	$118

Source: Functional population per unit from Table 44 and Table 45 in Appendix B; net cost per functional population is cost per functional population from Table 36.

The updated police fees are compared to current fees in Table 38. The updated fees are slightly higher than current fees for residential uses, and are significantly higher for nonresidential uses.

Table 38. Current and Updated Police Impact Fees

Current Land Use Type	Unit	Current Fee	Updated Fee	Percent Change
Single-Family	Dwelling	$296	$310	5%
All Other Housing	Dwelling	$176	$215	22%
Lodging	Room	$14	$200	1329%
Commercial, 25,000 sf or less	1,000 sq. ft.	$146	$447	206%
Commercial, 25,001-50,000 sf	1,000 sq. ft.	$126	$447	255%
Commercial, 50,001-100,000 sf	1,000 sq. ft.	$105	$447	326%
Commercial, 100,001-200,000 sf	1,000 sq. ft.	$91	$447	391%
Commercial, >200,000 sf	1,000 sq. ft.	$76	$447	488%
Office/Institutional, 25,000 sf or less	1,000 sq. ft.	$43	$156	263%
Office/Institutional, 25,001-50,000 sf	1,000 sq. ft.	$37	$156	322%
Office/Institutional, 50,001-100,000 sf	1,000 sq. ft.	$32	$156	388%
Office/Institutional, 100,000 sf+	1,000 sq. ft.	$27	$156	478%
Business Park	1,000 sq. ft.	$30	$156	420%
Light Industrial	1,000 sq. ft.	$16	$65	306%
Manufacturing	1,000 sq. ft.	$9	$65	622%
Warehousing	1,000 sq. ft.	$12	$63	425%

Source: Current fees from Town of Oro Valley, *Development Fee Utilization Report*, FY 2011-2012, September 25, 2012; updated fees from Table 37.

Capital Plan

Assuming that the updated fees are adopted at 100%, potential police impact fee revenue over the next ten years, based on new development anticipated by the land use assumptions, could be as much as $0.7 million, as shown in Table 39.

Table 39. Potential Police Impact Fee Revenue, 2013-2023

New Functional Population, 2013-2023	3,830
x Net Cost per Functional Population	$190
Potential Revenue, 2013-2023	$727,700

Source: New functional population from Table 33; net cost per functional population is total cost per functional population from Table 36.

Assuming that growth occurs as projected in the land use assumption, the Town plans to complete approximately $2.2 million in growth-related police improvements over the next ten years, as summarized in Table 40. Anticipated police impact fee revenues would cover approximately 33% of the total cost of planned improvements. The timing of individual improvements will be dependent on the pace and location of development that actually occurs, and not all of the planned improvements will necessarily be completed in the next ten years. Some of the improvements may be constructed by developers in return for credits against their impact fees.

Table 40. Police Capital Plan, 2013-2023

Property and Evidence Facility	$1,000,000
South Police Substation	$1,200,000
Impact Fee Update Studies (2)	$34,800
Total	$2,225,000

Source: Planned projects and estimated costs from Town Police Department, July 3, 2013; study cost from Table 47.

APPENDIX A: AVERAGE HOUSEHOLD SIZE

A key input into impact fee analysis is the average number of people residing in different types of dwelling units. This statistic, known as average household size, is the ratio of household population to households (which is the same as occupied dwelling units).

The most reliable data on average household size comes from the decennial census counts. Unfortunately, these 100%-count data are only available for all housing units, with no distinction by housing type. Overall, there was a 4.6% decline in Oro Valley between the 2000 and 2010 census in the average size of a household (ratio of household population to occupied units), as shown in Table 41.

Table 41. Average Household Size, 2000 and 2010

	Household Population	Occupied Units	Avg. HH Size
2010 Census	40,943	17,804	2.30
2000 Census	29,541	12,249	2.41
AHHS Ratio: 2010/2000			0.954

Source: 2000 and 2010 U.S. Census for Oro Valley, AZ, SF1 data (100% counts).

The 2000 census provided data on average household size by housing type for a 1-in-6 sample (about 17%). Those data are shown in Table 42. Household population and occupied units are weighted estimates designed to approximate the 100% counts.

Table 42. Average Household Size by Housing Type, 2000

Housing Type	Household Population	Occupied Units	Avg. HH Size
Single-Family Detached	25,025	9,814	2.55
Multi-Family	4,064	2,298	1.77
Mobile Home	435	225	1.93
Total	29,524	12,337	2.39

Source: 2000 U.S. Census for Oro Valley, AZ, SF3 data (1-in-6 sample)

An estimate of current average household size by housing type starts with the data from the 2000 census. The average household sizes from the 2000 census are adjusted downward for all housing types by the overall decline, as shown in Table 43.

Table 43. Current Average Household Size by Housing Type

Housing Type	2000 AHHS	2010/2000 Ratio	2010 AHHS
Single-Family Detached	2.55	0.954	2.43
Multi-Family	1.77	0.954	1.69
Mobile Home	1.93	0.954	1.84

Source: 2000 average household size (AHHS) by housing type from Table 42; 2010/2000 ratio from Table 41; 2010 AHHS by housing type is product of 2000 AHHS and ratio.

APPENDIX B: FUNCTIONAL POPULATION

The two most common methodologies used in calculating public safety service units and impact fees are the "calls-for-service" approach and the "functional population" approach. This update utilizes the "functional population" approach to calculate and assess the police impact fees. This approach is a generally-accepted methodology for these impact fee types and is based on the observation that demand for public safety facilities tends to be proportional to the presence of people at a particular site.

Functional population is analogous to the concept of "full-time equivalent" employees. It represents the number of "full-time equivalent" people present at the site of a land use, and it is used for the purpose of determining the impact of a particular development on the need for facilities. For residential development, functional population is simply average household size times the percent of time people spend at home. For nonresidential development, functional population is based on a formula that factors in trip generation rates, average vehicle occupancy, employee density and average number of hours spent by employees and visitors at a land use.

Residential Functional Population

For residential land uses, the impact of a dwelling unit on the need for police capital facilities is generally proportional to the number of persons residing in the dwelling unit. This can be measured for different housing types in terms of either average household size (average number of persons per occupied dwelling unit) or persons per unit (average number of persons per dwelling unit, including vacant as well as occupied units). In this analysis, average household size is used to develop the functional population multipliers, as it avoids the need to make assumptions about occupancy rates.

Determining residential functional population multipliers is considerably simpler than the nonresidential component. It is estimated that people, on average, spend 16 hours, or 67 percent, of each 24-hour day at their place of residence and the other 33 percent away from home. A similar approach is used for the hotel/motel category. The functional population per unit for these uses is shown in Table 44.

Table 44. Functional Population per Unit for Residential Uses

Housing Type	Unit	Average HH Size	Occupancy Factor	Func. Pop. per Unit
Single-Family Detached	Dwelling	2.43	0.67	1.63
Multi-Family	Dwelling	1.69	0.67	1.13
Mobile Home	Dwelling	1.84	0.67	1.23
Hotel/Motel	Room	1.57	0.67	1.05

Source: Average household size for dwelling units from Table 43; hotel/motel room occupancy based on one-half of average vehicle occupancy on vacation trips from U.S. Department of Transportation, National Household Travel Survey, 2009.

Nonresidential Functional Population

The functional population methodology for nonresidential land uses is based on trip generation data utilized in developing the transportation demand schedule prepared for the updated transportation impact fees. Functional population per 1,000 square feet is derived by dividing the total number of

hours spent by employees and visitors during a weekday by 24 hours. Employees are estimated to spend 8 hours per day at their place of employment, and visitors are estimated to spend one hour per visit. The formula used to derive the nonresidential functional population estimates is summarized in Figure 4.

Figure 4. Nonresidential Functional Population Formula

FUNCPOP/UNIT = (employee hours/1000 sf + visitor hours/1000 sf) ÷ 24 hours/day

Where:

Employee hours/1000 sf = employees/1000 sf x 8 hours/day

Visitor hours/1000 sf = visitors/1000 sf x 1 hour/visit

Visitors/1000 sf = weekday ADT/1000 sf x avg. vehicle occupancy – employees/1000 sf

Weekday ADT/1000 sf = one-way avg. daily trips (total trip ends ÷ 2)

Using this formula and information on trip generation rates, vehicle occupancy rates from the National Household Travel Survey and other sources and assumptions, nonresidential functional population estimates per 1,000 square feet of gross floor area are calculated in Table 45.

Table 45. Functional Population per Unit for Nonresidential Uses

Land Use	Unit	Trip Rate	Persons/ Trip	Employee/ Unit	Visitors/ Unit	Func. Pop./ Unit
Retail/Commercial	1,000 sq. ft.	21.47	1.96	2.04	40.04	2.35
Office	1,000 sq. ft.	5.51	1.24	1.82	5.01	0.82
Industrial	1,000 sq. ft.	1.91	1.24	0.82	1.55	0.34
Warehouse	1,000 sq. ft.	1.78	1.24	0.82	1.39	0.33
Public/Institutional	1,000 sq. ft.	3.79	1.86	1.11	5.94	0.62

Source: Trip rates from Table 13; persons/trip is average vehicle occupancy from Federal Highway Administration, Nationwide Household Travel Survey, 2009; employees/unit from Table 7; visitors/unit is trips times persons/trip minus employees/unit; functional population/unit calculated based on formula in Figure 4.

APPENDIX C: REVENUE FORECAST

SB 1525 requires that the infrastructure improvements plan include (Section 9-463.05.E.7):

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

The total revenues from these sources that can be attributed to new development over the next ten years are summarized in Table 46. However, most of this revenue will be used for ongoing operations and maintenance purposes.

Only revenue generated by new development that is dedicated to growth-related capital improvements needs to be considered in determining the extent of the burden imposed by new development. As discussed in greater detail in the Legal Framework section, offsets against impact fees are warranted in the following cases: (a) new development will be paying taxes or fees used to retire debt on existing facilities serving existing development; (b) new development will be paying taxes or fees used to fund an existing deficiency, (c) new development will be paying taxes or fees that are dedicated to be used for growth-related improvements, or (d) excess construction sales tax.

The analyses provided in the legal framework, transportation, parks and police sections of this report have identified that the only need for offsets is against the transportation impact fees for future Federal and State funding for major road improvements and excess construction sales tax. The reasons for this conclusion are, in the order listed above, as follows.

(a) The Town has no debt for past capacity-expanding transportation or park facilities. The only Town debt for police facilities is for the portion of the Municipal Operations Center that is used for the new police impound facility. That debt has been excluded from the value of existing police facilities on which the existing level of service and the impact fees are based; consequently, no additional offsets for future contributions from new development to retire that debt are warranted.

(b) The transportation, parks and police impact fees are all calculated on the basis of the existing, system-wide level of service (actually, a lower level of service in the case of transportation impact fees). Consequently, there are no existing deficiencies, and no offsets for deficiencies are warranted.

(c) The only funding the Town has that is dedicated to capacity-expanding capital improvements is future regional funding for major road improvements. An offset against the transportation impact fees is provided for anticipated future regional funding.

(d) The Town appears to assess an excess construction sales tax as defined by State law, and the offset is provided against the transportation impact fee.

Revenues that will be generated by new development and dedicated for eligible capital improvements are identified in Table 46.

Table 46. Revenue Attributable to New Development, 2013-2023

	FY 2014	FY 2015	FY 2016	FY 2017	FY 2018
Local Sales Tax	$1,096,969	$1,231,211	$1,358,745	$1,490,825	$1,623,419
Licenses & Permits	$15,819	$35,468	$44,929	$56,419	$64,464
State & Federal Grants	$22,097	$39,419	$65,679	$87,949	$110,447
State Shared Revenues	$102,311	$211,659	$329,397	$446,438	$567,336
Other Intergovernmental	$318	$629	$934	$1,232	$1,524
Charges for Services	$15,289	$30,290	$44,964	$59,337	$73,417
Fines	$2,013	$3,983	$5,912	$7,802	$9,653
Interest Income	$660	$1,363	$2,063	$2,777	$3,505
Miscellaneous	$1,208	$2,411	$3,578	$4,722	$5,843
Bed Tax General Fund Alloc.	$1,960	$3,878	$5,757	$7,597	$9,399
Total Growth Revenues	$1,258,644	$1,560,311	$1,861,958	$2,165,098	$2,469,007
State/Federal Highway Funds	$22,097	$39,419	$65,679	$87,949	$110,447
Excess Construction Sales Tax	$968,220	$968,220	$968,220	$968,220	$968,220
Total Dedicated Growth Revenues	$990,317	$1,007,639	$1,033,899	$1,056,169	$1,078,667

	FY 2019	FY 2020	FY 2021	FY 2022	FY 2023	Total
Local Sales Tax	$1,106,623	$1,245,753	$1,385,654	$1,526,368	$1,667,939	$13,733,506
Licenses & Permits	$70,718	$75,430	$78,822	$81,088	$82,404	$605,561
State & Federal Grants	$133,165	$156,112	$179,296	$202,725	$226,425	$1,223,314
State Shared Revenues	$692,206	$821,183	$954,405	$1,092,015	$1,234,250	$6,451,200
Other Intergovernmental	$1,811	$2,091	$2,367	$2,636	$2,901	$16,443
Charges for Services	$87,215	$100,737	$113,993	$126,990	$139,746	$791,978
Fines	$11,468	$13,246	$14,989	$16,698	$18,375	$104,139
Interest Income	$4,247	$5,003	$5,775	$6,562	$7,365	$39,320
Miscellaneous	$6,941	$8,017	$9,072	$10,106	$11,122	$63,020
Bed Tax General Fund Alloc.	$11,166	$12,897	$14,594	$16,258	$17,891	$101,397
Total Growth Revenues	$2,125,560	$2,440,469	$2,758,967	$3,081,446	$3,408,418	$23,129,878
State/Federal Highway Funds	$133,165	$156,112	$179,296	$202,725	$226,425	$1,223,314
Excess Construction Sales Tax	$968,220	$968,220	$968,220	$968,220	$968,220	$9,682,200
Total Dedicated Growth Revenues	$1,101,385	$1,124,332	$1,147,516	$1,170,945	$1,194,645	$10,905,514

Source: Based on FY 2014-FY 2018 revenue forecasts from Town of Oro Valley Finance Department, April 24, 2013, with revenue forecasts for FY 2019-FY 2023 based on FY 2017-FY 2018 revenue growth; total growth revenues based on growth share of total transportation service units from Table 14 (assuming linear growth in VMT between 2013 and 2023); sales tax based on annual growth in transportation service units and construction sales tax per service unit estimated at $270 per VMT; excess construction sales tax based on annual growth in transportation service units and excess construction sales tax per service unit from Table 19.

APPENDIX D: UPDATE STUDY COST

According to State law, impact fees may be used to pay for the costs of "professional services required for the preparation or revision of a development fee" (Sec. 9-463.05.A, ARS). This impact fee study cost the Town $69,600 for the update of the transportation, park and police impact fees. Since SB 1525 requires impact fees to be updated every five years, two additional studies will be required over the next ten years. Dividing the 10-year cost of the required update studies for each facility by the new EDUs projected over the next ten years results in the following study costs per service unit.

Table 47. Update Study Cost per Service Unit

Type of Fee	Share	Cost/ Update	Updates Required	10-Year Cost	New Service Units	Cost per Serv. Unit
Transportation	50%	$34,800	2	$69,600	35,863	$2
Park	25%	$17,400	2	$34,800	1,281	$27
Police	25%	$17,400	2	$34,800	3,830	$9
Total	100%	$69,600		$139,200	na	na

Source: Shares estimated by Duncan Associates; total update cost is actual cost of this impact fee study update; other update costs based on shares; updates required based on State law requirement that fees be updated at least every five years; new service units from Table 14 (transportation), Table 26 (parks) and Table 33 (police); cost per service unit is 10-year cost times new service units.