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Development Impact Fee Report (Includes Land Use Assumptions and Infrastructure Improvement Plans)

Prepared for:

City of Tucson, Arizona

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EXECUTIVE SUMMARY

The City of Tucson contracted with TischlerBise to document land use assumptions, prepare an Infrastructure Improvements Plan (hereinafter referred to as the "IIP"), and update development impact fees pursuant to Arizona Revised Statutes ("ARS") § 9-436.05 (hereinafter referred to as the "Enabling Legislation"). Municipalities in Arizona may assess development impact fees to offset infrastructure costs to a municipality for necessary public services. The development impact fees must be based on an IIP and Land Use Assumptions. The IIPs for each type of infrastructure are located in each infrastructure type's corresponding section, and the Land Use Assumptions can be found in Appendix A. The proposed development impact fees are displayed in the Development Impact Fee Report chapter.

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

Land Use Assumptions include current demographic estimates and future development projections for both residential and nonresidential development that are used in the IIP and to calculate development impact fees. Demographic data for January 1, 2024, are used to calculate levels of service provided to existing development in the City of Tucson. Development projections are used solely for the purpose of understanding the possible future pace of service demands, development impact fee revenues, and capital expenditures. If development activity accelerates or decelerates from the assumed projections, the demand for facilities and infrastructure as well as development impact fee revenue will follow commensurately.

This update of the City's IIP and associated update to its development impact fees includes the following necessary public services¹:

⁽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,



¹ Per Arizona Revised Statutes § 9-436.05 (SB 1525) (7): "*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. [Note: only categories included in this Development Impact Fee Study are included in this footnote]:

⁽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.

- Parks and Recreational Facilities
- Police Facilities
- Fire Facilities
- Streets Facilities

This plan also includes all necessary elements required to be in full compliance with Arizona Revised Statutes ("ARS") § 9-436.05 (SB 1525).²

ARIZONA DEVELOPMENT FEE ENABLING LEGISLATION

The Enabling Legislation governs how development impact fees are calculated for municipalities in Arizona.

Necessary Public Services

Under the requirements of the Enabling Legislation, development impact fees may only be used for construction, acquisition or expansion of public facilities that are necessary public services. "Necessary public service" means any of the following categories of facilities that have a life expectancy of three or more years and that are owned and operated on behalf of the municipality: water, wastewater, storm water, drainage, flood control, library, streets, fire and police, and neighborhood parks and recreation. Additionally, a necessary public service includes any facility, not included in the aforementioned categories (e.g., general government facilities), that was financed before June 1, 2011, and that meets the following requirements:

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

Infrastructure Improvements Plan

Development impact fees must be calculated pursuant to an IIP. For each necessary public service that is the subject of a development fee, by law, the IIP shall include the following seven elements:

• A description of the existing necessary public services in the service area and the costs to update, improve, expand, correct or replace those necessary public services to meet existing needs and

² The Land Use Assumptions and Infrastructure Improvements Plans included herein have been issued as separate documents to support the adoption process. This report includes these sections (and content) to allow for ease in readability.



lakes, museums, theme parks, water reclamation or riparian areas, wetlands, zoo facilities or similar recreational facilities, but may include swimming pools.

usage and stricter safety, efficiency, environmental or regulatory standards, which shall be prepared by qualified professionals licensed in this state, as applicable.

- An analysis of the total capacity, the level of current usage and commitments for usage of capacity of the existing necessary public services, which shall be prepared by qualified professionals licensed in this state, as applicable.
- A description of all or the parts of the necessary public services or facility expansions and their costs necessitated by and attributable to development in the service area based on the approved Land Use Assumptions, including a forecast of the costs of infrastructure, improvements, real property, financing, engineering and architectural services, which shall be prepared by qualified professionals licensed in this state, as applicable.
- A table establishing the specific level or quantity of use, consumption, generation or discharge of a service unit for each category of necessary public services or facility expansions and an equivalency or conversion table establishing the ratio of a service unit to various types of land uses, including residential, commercial and industrial.
- The total number of projected service units necessitated by and attributable to new development in the service area based on the approved Land Use Assumptions and calculated pursuant to generally accepted engineering and planning criteria.
- The projected demand for necessary public services or facility expansions required by new service units for a period not to exceed 10 years.
- A forecast of revenues generated by new service units other than development impact fees, which shall include estimated state-shared revenue, highway user revenue, federal revenue, ad valorem property taxes, construction contracting or similar excise taxes and the capital recovery portion of utility fees attributable to development based on the approved Land Use Assumptions and a plan to include these contributions in determining the extent of the burden imposed by the development.

Qualified Professionals

The IIP must be developed by qualified professionals using generally accepted engineering and planning practices. A qualified professional is defined as "a professional engineer, surveyor, financial analyst or planner providing services within the scope of the person's license, education, or experience." TischlerBise is a fiscal, economic, and planning consulting firm specializing in the cost of growth services and is licensed to do business in Arizona. Our services include development impact fees, fiscal impact analysis, infrastructure financing analyses, user fee/cost of service studies, capital improvement plans, and fiscal software. TischlerBise has prepared over 1,000 development fee studies over the past 45 years for local governments across the United States.

Conceptual Development Impact Fee Calculation

In contrast to project-level improvements, development impact fees fund growth-related infrastructure that will benefit multiple development projects, or the entire service area (usually referred to as system improvements). The first step is to determine an appropriate demand indicator for the particular type of infrastructure. The demand indicator measures the number of service units for each unit of development. For example, an appropriate indicator of the demand for parks is population growth and the increase in



population can be estimated from the average number of persons per housing unit. The second step in the development fee formula is to determine infrastructure improvement units per service unit, typically called Level of Service standards, sometimes referred to as level of service. In keeping with the park example, a common level of service standard is improved park acres per thousand people. The third step in the development fee formula is the cost of various infrastructure units. To complete the park example, this part of the formula would establish a cost per acre for land acquisition and/or park improvements.

Evaluation of Offsets and Development Impact Fee Credits

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

INTRODUCTION TO DEVELOPMENT FEES

Development fees are one-time payments used to fund capital improvements necessitated by future development. Development fees have been utilized by local governments in various forms for at least fifty years. Development fees do have limitations and should not be regarded as the total solution for infrastructure financing needs. Rather, they should be considered one component of a comprehensive portfolio to ensure adequate provision of public facilities with the goal of maintaining current levels of service in a community. Any community considering facility fees should note the following limitations:

- 1. Fees can only be used to finance capital infrastructure and cannot be used to finance ongoing operations and / or maintenance and rehabilitation costs.
- 2. Fees cannot be deposited in the General Fund. The funds must be accounted for separately in individual accounts and earmarked for the capital expenses for which they were collected.
- 3. Fees cannot be used to correct existing infrastructure deficiencies unless there is a funding plan in place to correct the deficiency for all current residents and businesses in the community.



REQUIRED FINDINGS

There are three reasonable relationship requirements for development fees that are closely related to "rational nexus" or "reasonable relationship" requirements enunciated by a number of state courts. Although the term "dual rational nexus" is often used to characterize the standard by which courts evaluate the validity of development fees under the U. S. Constitution, we prefer a more rigorous formulation that recognizes three elements: "impact or need," "benefit," and "proportionality." The dual rational nexus test explicitly addresses only the first two, although proportionality is reasonably implied, and was specifically mentioned by the U.S. Supreme Court in the Dolan case. The reasonable relationship language of the statute is considered less strict than the rational nexus standard used by many courts. Individual elements of the nexus standard are discussed further in the following paragraphs.

Demonstrating an Impact. All future development in a community creates additional demands on some, or all, public facilities provided by local government. If the supply of facilities is not increased to satisfy that additional demand, the quality or availability of public services for the entire community will deteriorate. Development fees may be used to recover the cost of development-related facilities, but only to the extent that the need for facilities is a consequence of development that is subject to the fees. The Nollan decision reinforced the principle that development exactions may be used only to mitigate conditions created by the developments upon which they are imposed. That principle clearly applies to development fees. In this study, the impact of development on improvement needs is analyzed in terms of quantifiable relationships between various types of development and the demand for specific facilities, based on applicable level-of-service standards.

Demonstrating a <u>Benefit</u>. A sufficient benefit relationship requires that development fee revenues be segregated from other funds and expended only on the facilities for which the fees were charged. Fees must be expended in a timely manner and the facilities funded by the fees must serve the development paying the fees. However, nothing in the U.S. Constitution or the State enabling Act authorizing development fees requires that facilities funded with fee revenues be available exclusively to development paying the fees. In other words, existing development may benefit from these improvements as well.

Procedures for the earmarking and expenditure of fee revenues are typically mandated by the State Enabling Legislation, as are procedures to ensure that the fees are expended expeditiously or refunded. All requirements are intended to ensure that developments benefit from the fees they are required to pay. Thus, an adequate showing of benefit must address procedural as well as substantive issues.

Demonstrating <u>Proportionality</u>. The requirement that exactions be proportional to the impacts of development was clearly stated by the U.S. Supreme Court in the Dolan case (although the relevance of that decision to development fees has been debated) and is logically necessary to establish a proper nexus. Proportionality is established through the procedures used to identify development-related facility costs, and in the methods used to calculate development fees for various types of facilities and categories of development. The demand for facilities is measured in terms of relevant and measurable attributes of development.



DEVELOPMENT FEE REPORT

METHODOLOGY

Development impact fees for the necessary public services made necessary by new development must be based on the same level of service provided to existing development in the service area. There are three basic methodologies used to calculate development impact fees. They examine the past, present, and future status of infrastructure. The objective of evaluating these different methodologies is to determine the best measure of the demand created by new development for additional infrastructure capacity. Each method has advantages and disadvantages in a particular situation and can be used simultaneously for different cost components. Additionally, development impact fees for public services can also include the cost of professional services for preparing IIP's and the related Development Impact Fee Report.

Reduced to its simplest terms, the process of calculating development impact fees involves two main steps: (1) determining the cost of development-related capital improvements and (2) allocating those costs equitably to various types of development. In practice, though, the calculation of development impact fees can become quite complicated because of the many variables involved in defining the relationship between development and the need for facilities within the designated service area. The following paragraphs discuss basic methods for calculating development impact fees and how those methods can be applied.

- **Cost Recovery** (past improvements) The rationale for recoupment, often called cost recovery, is that new development is paying for its share of the useful life and remaining capacity of facilities already built, or land already purchased, from which new growth will benefit. This methodology is often used for utility systems that must provide adequate capacity before new development can take place.
- Incremental Expansion (concurrent improvements) The incremental expansion method documents current level of service standards for each type of public facility, using both quantitative and qualitative measures. This approach assumes there are no existing infrastructure deficiencies or surplus capacity in infrastructure. New development is only paying its proportionate share for growth-related infrastructure. Revenue will be used to expand or provide additional facilities, as needed, to accommodate new development. An incremental expansion cost method is best suited for public facilities that will be expanded in regular increments to keep pace with development.
- **Plan-Based** (future improvements) The plan-based method allocates costs for a specified set of improvements to a specified amount of development. Improvements are typically identified in a long-range facility plan and development potential is identified by a land use plan. There are two basic options for determining the cost per demand unit: (1) total cost of a public facility can be divided by total demand units (average cost), or (2) the growth-share of the public facility cost can be divided by the net increase in demand units over the planning timeframe (marginal cost).



DEVELOPMENT IMPACT FEE COMPONENTS

A summary is provided in Figure 1 showing the methodology for each of the facility and fee study types, as well as the service area and cost allocation method used to develop the IIP and calculate the development impact fees.

Figure 1: Recommended Development Impact Fee Service Areas, Methodologies, and Cost Components

Category	Incremental Expansion (present)	Plan-Based (future)	Service Areas	Cost Allocation
Parks & Recreation	Park Amenities, Park Land Recreation Centers, Greenways	Fee Study	Service Areas	Population, Jobs
Police	Police Stations, Vehicles and Equipment	Fee Study	Citywide	Population, Vehicle Trips
Fire	Fire Stations, Apparatus	Fee Study	Citywide	Population, Vehicle Trips
Streets	Arterial Street Improvements	Multimodal Facilities, Traffic Signal Project, Fee Study	Citywide; Service Areas	Vehicle Miles of Travel

Rounding

A note on rounding: Calculations throughout this report are based on an analysis conducted using Excel software. Most results are discussed in the report using two, three, and four-digit places, which represent rounded figures. However, the analysis itself uses figures carried to their ultimate decimal places; therefore, the sums and products generated in the analysis may not equal the sum or product if the reader replicates the calculation with the factors shown in the report (due to the rounding of figures shown, not in the analysis).

SERVICE AREAS

ARS 9-63.05 defines "service area" as follows:

Any specified area within the boundaries of a municipality in which development will be served by necessary public services or facility expansions and within which a substantial nexus exists between the necessary public services or facility expansions and the development being served as prescribed in the infrastructure improvements plan.

The City of Tucson provides a uniform level of service for its Parks and Recreation, Police, Fire, and Streets Facilities. Facilities benefit residential and nonresidential development across the entire City. For Police and Fire, depending on the number and type of calls, police and fire units can be dispatched from any



station with facilities operating as an integrated network. Therefore, Police and Fire development impact fees are implemented on a Citywide basis.

For Parks and Recreational and Streets, capacity projects for which development impact fees will be collected, are anticipated to be built within the subarea of the City where the fees are collected. Three service areas have been developed based on growth patterns and location of infrastructure.

- For Parks and Recreation, it is recommended that fees be spent in the area collected.
- For Streets, a portion of the fee is based on Citywide capacity needs (i.e., for RTA projects and other citywide capacity needs) and is recommended to be collected and spent Citywide for RTA-identified projects and other citywide transportation improvement projects. The remainder of the fee is for other non-RTA/non-citywide capacity street improvement projects and is recommended to be spent within the Services Area in which it was collected (Service Area A, B, or C).



Figure 2: Streets and Parks and Recreational Facilities Service Area Map



CURRENT DEVELOPMENT IMPACT FEES

Tucson's current residential development impact fees are shown below in Figure 3. Residential development impact fees are assessed per unit based on size of housing unit.

Size of Housing Unit (Sq. Ft.)	Demand Unit	Parks &	Police	Fire	Streets	Full Adopted Fee
		Recreation				Rates
750 or Less	Housing Unit	\$924	\$216	\$146	\$1,412	\$2,698
751 to 1,250	Housing Unit	\$1,488	\$348	\$235	\$2,189	\$4,260
1,251 to 1,750	Housing Unit	\$1,987	\$464	\$314	\$2 <i>,</i> 887	\$5,652
1,751 to 2,250	Housing Unit	\$2,357	\$551	\$372	\$3 <i>,</i> 397	\$6,677
2,251 to 2,750	Housing Unit	\$2,644	\$618	\$418	\$3,798	\$7,478
2,751 to 3,250	Housing Unit	\$2,884	\$674	\$456	\$4,132	\$8,146
3,251 to 3,750	Housing Unit	\$3,088	\$722	\$488	\$4,415	\$8,713
3,751 or More	Housing Unit	\$3,263	\$763	\$516	\$4,661	\$9,203

Source: City of Tucson, "Annual Development Impact Fees Report FY2022/23 (Unaudited), September 25, 2023; Appendix A: Development Impact Fees Schedules (Ordinance 11759 (June 9, 2020), effective July 1, 2021).

https://www.tucsonaz.gov/files/sharedassets/public/v/1/bsd/documents/annual-impact-fee-report/annual-development-impact-fees-report-fy2023.pdf

Tucson's current nonresidential development impact fees are shown below in Figure 4. Nonresidential development impact fees are assessed based on type of land use and are assessed per 1,000 square feet of building area or per hotel room for the hotel land use category.

Туре	ITE Code	Demand Unit	Parks & Recreation	Police	Fire	Streets	Full Adopted Fee Rates
Industrial: Light Industrial	110	1,000 Sq. Ft.	\$144	\$108	\$73	\$1,129	\$1,454
Industrial: Manufacturing	140	1,000 Sq. Ft.	\$141	\$85	\$58	\$895	\$1,179
Industrial: Warehousing	150	1,000 Sq. Ft.	\$30	\$38	\$25	\$395	\$488
Commercial/Retail: General	820	1,000 Sq. Ft.	\$208	\$544	\$367	\$5,822	\$6,941
Commercial/Retail: Free Standing Discount Store	815	1,000 Sq. Ft.	\$191	\$766	\$517	\$8,192	\$9,666
General Office	710	1,000 Sq. Ft.	\$264	\$213	\$143	\$2,218	\$2,838
Institutional: Schools	520	1,000 Sq. Ft.	\$82	\$281	\$190	\$2,934	\$3,487
Institutional: Religious Facilities	560	1,000 Sq. Ft.	\$123	\$100	\$67	\$1,044	\$1,334
Institutional: Medical (Nursing Hm./Asstd Living)	620	1,000 Sq. Ft.	\$202	\$95	\$64	\$997	\$1,358
Institutional: Medical (Clinic, Hospital)	630	1,000 Sq. Ft.	\$366	\$550	\$371	\$5,736	\$7,023
Hotel	310	Room	\$51	\$182	\$123	\$1,953	\$2,309

Figure 4: Current City of Tucson Development Impact Fees - Nonresidential

Source: City of Tucson, "Annual Development Impact Fees Report FY2022/23 (Unaudited), September 25, 2023; Appendix A: Development Impact Fees Schedules (Ordinance 11759 (June 9, 2020), effective July 1, 2021).

 $https://www.tucsonaz.gov/\!\!files/sharedassets/public/v/1/bsd/documents/annual-impact-fee-report/annual-development-impact-fees-report-fy2023.pdf$



PROPOSED DEVELOPMENT IMPACT FEES

The proposed fees are based on a policy-level concept that development impact fees should fund 100 percent of growth-related infrastructure, therefore the fees shown below represent the maximum allowable fees. Tucson may adopt fees that are less than the amounts shown; however, a reduction in development fee revenue will necessitate an increase in other revenues, a decrease in planned capital improvements and/or a decrease in Tucson's level of service standards. All costs in the Development Impact Fee Report are in current dollars with no assumed inflation rate over time. If cost estimates change significantly over time, development impact fees should be recalibrated.

Proposed development impact fees are shown below in Figure 5. The increase or decrease shown is between proposed fees and current fees. Development impact fees for residential development are assessed per dwelling unit, based on the size of unit. Nonresidential development impact fees are assessed per 1,000 square feet of floor area or per room for lodging land uses.

Size of Housing Unit (Sq. Ft.)	Demand Unit	Parks & Recreation	Police	Fire	Streets	Proposed Fee	Current Bates*	Increase /	% Change
750 or Less	Housing Unit	\$1,291	\$276	\$239	\$2,100	\$3,906	\$2,698	\$1,208	45%
751 to 1,250	Housing Unit	\$2,011	\$430	\$373	\$3,208	\$6,022	\$4,260	\$1,762	41%
1,251 to 1,750	Housing Unit	\$2,681	\$573	\$497	\$4,217	\$7,968	\$5,652	\$2,316	41%
1,751 to 2,250	Housing Unit	\$3,166	\$677	\$587	\$4,956	\$9,386	\$6,677	\$2,709	41%
2,251 to 2,750	Housing Unit	\$3,538	\$756	\$657	\$5,536	\$10,487	\$7,478	\$3,009	40%
2,751 to 3,250	Housing Unit	\$3,861	\$825	\$716	\$6,014	\$11,416	\$8,146	\$3,270	40%
3,251 to 3,750	Housing Unit	\$4,122	\$881	\$765	\$6,419	\$12,187	\$8,713	\$3,474	40%
3,751 or More	Housing Unit	\$4,357	\$931	\$809	\$6,772	\$12,869	\$9,203	\$3,666	40%

Figure 5: Proposed Development Impact Fees – Residential

*Source: City of Tucson, "Annual Development Impact Fees Report FY2023/24 (Unaudited), September 28, 2024; Appendix A: Development Impact Fees Schedules (Ordinance 11759 (June 9, 2020), effective July 1, 2021). https://www.tucsonaz.gov/files/sharedassets/public/v/1/bsd/documents/finance-documents/fy24-annual-development-impact-fees-report.pdf

Туре	ITE Code	Demand Unit	Parks & Recreation	Police	Fire	Streets	Proposed Fee	Current Rates*	Increase / (Decrease)	% Change
Industrial: Light Industrial	110	1,000 Sq. Ft.	\$192	\$130	\$113	\$1,545	\$1,980	\$1,454	\$526	36%
Industrial: Manufacturing	140	1,000 Sq. Ft.	\$231	\$127	\$110	\$1,507	\$1,975	\$1,179	\$796	68%
Industrial: Warehousing	150	1,000 Sq. Ft.	\$41	\$45	\$39	\$543	\$668	\$488	\$180	37%
Commercial/Retail: General	820	1,000 Sq. Ft.	\$259	\$654	\$570	\$5,172	\$6,655	\$6,941	(\$286)	-4%
Commercial/Retail: Free Standing Discount Store	815	1,000 Sq. Ft.	\$267	\$953	\$830	\$7,527	\$9,577	\$9,666	(\$89)	-1%
General Office	710	1,000 Sq. Ft.	\$398	\$290	\$253	\$3,442	\$4,383	\$2,838	\$1,545	54%
Institutional: Schools	520	1,000 Sq. Ft.	\$113	\$345	\$301	\$4,091	\$4,850	\$3,487	\$1,363	39%
Institutional: Religious Facilities	560	1,000 Sq. Ft.	\$169	\$122	\$107	\$1,455	\$1,853	\$1,334	\$519	39%
Institutional: Medical (Nursing Hm./Asstd Living)	620	1,000 Sq. Ft.	\$249	\$117	\$102	\$1,390	\$1,858	\$1,358	\$500	37%
Institutional: Medical (Clinic, Hospital)	630	1,000 Sq. Ft.	\$330	\$665	\$579	\$7,879	\$9,453	\$7,023	\$2,430	35%
Hotel	310	Room	\$68	\$224	\$195	\$1,770	\$2,257	\$2,309	(\$52)	-2%

Figure 6: Proposed Development Impact Fees – Nonresidential

*Source: City of Tucson, "Annual Development Impact Fees Report FY2023/24 (Unaudited), September 28, 2024; Appendix A: Development Impact Fees Schedules (Ordinance 11759 (June 9, 2020), effective July 1, 2021). https://www.tucsonaz.gov/files/sharedassets/public/v/1/bsd/documents/finance-documents/fy24-annual-development-impact-fees-report.pdf



PARKS AND RECREATIONAL FACILITIES INFRASTRUCTURE IMPROVEMENT PLAN

ARS § 9-463.05 (T)(7)(g) defines the facilities and assets that can be included in the Parks and Recreational Facilities IIP:

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

The Parks and Recreational Facilities IIP includes components for park amenities, recreational facilities, park land, and the cost of professional services for preparing the Parks and Recreational Facilities IIP and related Development Impact Fee Report. An incremental expansion methodology is used for amenities, recreational facilities, and park land, and a plan-based methodology is used for the Development Impact Fee Report. Fee Report.

It is noted that the parks and recreational facilities included in this study reflect a subset of the City's parks and recreational facilities due to limitations of the Arizona Enabling Legislation. For further information on the City of Tucson Parks and Recreation system, please see <u>City of Tucson Parks and Recreation System</u> <u>Master Plan, Final Report, 10.05.16</u> and various <u>master plans</u> for individual parks.

Service Area

The City of Tucson plans to provide a uniform level of service and equal access to parks and recreational facilities within the City limits therefore the development fee is calculated on a citywide basis but will be expended in the service area in which the development impact fees are collected. Three service areas are used for parks and recreational development fees based on growth patterns and location of infrastructure.





Figure PR1: Parks and Recreational Facilities Service Area Map

Proportionate Share

ARS § 9-463.05 (B)(3) states that the development fee shall not exceed a proportionate share of the cost of necessary public services needed to accommodate new development. TischlerBise recommends daytime population as a reasonable indicator of the potential demand for Parks and Recreational Facilities from residential and nonresidential development.

According to the U.S. Census Bureau web application OnTheMap, there were 120,353 inflow commuters in 2021, which is the number of persons who work in Tucson but live outside the City. OnTheMap is a web-based mapping and reporting application that shows where workers are employed and where they live. It describes geographic patterns of jobs by their employment locations and residential locations as well as the connections between the two locations. OnTheMap was developed through a unique partnership between the U.S. Census Bureau and its Local Employment Dynamics (LED) partner states. OnTheMap data is used, as shown in Figure PR2, to derive Functional Population shares for Tucson. (The estimated total City population in 2021 is 546,061 and is based on housing unit estimates and persons per housing unit (PPHU) ratios derived from the U.S. Census Bureau. The study uses 2021 data for proportionate share analysis because this the most recent year available for inflow/outflow data; therefore, it is compared to the population estimate for the corresponding year.)



As shown in Figure PR2, the proportionate share is based on cumulative impact hours per year. Tucson residents were allocated 24 hours per day at 365 days per year, for a total of 8,760 impact hours per resident. Inflow commuters were allocated 8 hours per day, 4 days per week, and 50 weeks per year, for a total of 1,600 impact hours per nonresident. Multiplying the respective impact hours by the number of residents and inflow commuters (shown below in 1,000's of hours) yields the total annual impact hours for both residential and nonresidential categories. Residential development's proportionate share of the total impact hours is 96%, while the nonresidential share is 4%.

Figure PR2: Cost Allocation for Parks

		Cumulative Ir	npact Hours per `	Year (in 1,000s)	Cost Allocation		
Tucson Residents	Inflow Commuters	Residential Hours	Nonresidential Hours	Total Hours	Residential	Nonresidential	
546,061	120,353	4,783,494	192,565	4,976,059	96%	4%	
<u></u>							

Residential Hours per Year	8,760	365 days per year x 24 hours per day
Nonresidential Hours per Year	1,600	4 days per week x 50 weeks per year x 8 hours per day

Source: Tucson Residents based on TischlerBise housing unit estimates and persons per housing unit (PPHU) ratios derived from the U.S. Census Bureau. Inflow Commuters from U.S. Census Bureau; S OnTheMap web application, 2021.



RATIO OF SERVICE UNITS TO DEVELOPMENT UNIT

ARS § 9-463.05(E)(4) requires:

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

Figure PR3 displays the demand indicators for residential and nonresidential land uses. For residential development, the table displays the persons per housing unit by unit size. For nonresidential development, the table displays the number of employees per thousand square feet for seven different types of nonresidential development.

Figure PR3: Parks and Recreational Facilities Ratio of Service Unit to Development Unit

Size of Housing Unit (Sq. Ft.)	Demand Unit	Persons per Demand Unit
750 or Less	Housing Unit	1.04
751 to 1,250	Housing Unit	1.62
1,251 to 1,750	Housing Unit	2.16
1,751 to 2,250	Housing Unit	2.55
2,251 to 2,750	Housing Unit	2.85
2,751 to 3,250	Housing Unit	3.11
3,251 to 3,750	Housing Unit	3.32
3,751 or More	Housing Unit	3.51

Residential Service Unit Ratios

Nonresidential Service Unit Ratios

Туре	Demand Unit	Jobs per Demand Unit
Industrial: Light Industrial	1,000 Sq. Ft.	1.57
Industrial: Manufacturing	1,000 Sq. Ft.	1.89
Industrial: Warehousing	1,000 Sq. Ft.	0.34
Commercial/Retail: General	1,000 Sq. Ft.	2.12
Commercial/Retail: Free Standing Discount Store	1,000 Sq. Ft.	2.19
General Office	1,000 Sq. Ft.	3.26
Institutional: Schools	1,000 Sq. Ft.	0.93
Institutional: Religious Facilities	1,000 Sq. Ft.	1.39
Institutional: Medical (Nursing Hm./Asstd Living	1,000 Sq. Ft.	2.04
Institutional: Medical (Clinic, Hospital)	1,000 Sq. Ft.	2.71
Hotel	Room	0.56

Source: See Land Use Assumptions.



ANALYSIS OF CAPACITY, USAGE, AND COSTS OF EXISTING PUBLIC SERVICES

ARS § 9-463.05(E)(1) requires:

"A description of the existing necessary public services in the service area and the costs to upgrade, update, improve, expand, correct or replace those necessary public services to meet existing needs and usage and stricter safety, efficiency, environmental or regulatory standards, which shall be prepared by qualified professionals licensed in this state, as applicable."

ARS § 9-463.05(E)(2) requires:

"An analysis of the total capacity, the level of current usage and commitments for usage of capacity of the existing necessary public services, which shall be prepared by qualified professionals licensed in this state, as applicable."

Park Land – Incremental Expansion

As noted, ARS limits the types of parks and recreational facilities for which development impact fees can be collected. City parks that were included in the inventory include those in the Community Park, Metro Park, Neighborhood Park, and Regional Park classifications, with a limit of up to 30 acres of each park. This is in accordance with ARS § 9-463.05 (T)(7)(g). All other park types were excluded due to the limitations of the State Statute.

Tucson will use development impact fees to expand its inventory of park land. Shown below is a summary of existing park land in Tucson, allowable for development impact fees. The new definition of necessary public services for parks and recreational facilities includes parks or facilities on real property up to 30 acres in area. For parks and facilities larger than 30 acres, the allowable acreage per park is adjusted downward to 30 acres.

Figure PR4: Existing Park Land

Park Land	Category	Total Acres*	Allowable Acres*
Subtotal	Neighborhood	289.9	289.9
Subtotal	Community	420.3	373.7
Subtotal	Metro	1,254.4	420.0
Subtotal	Regional	1,317.3	120.0
Total		3,281.8	1,203.6

* According to the Arizona enabling legislation, parks included in development impact fees are limited by type and size (up to 30 acres) (ARS § 9-436.05 (T)(7)(g)).



Existing Park Land Level of Service and Costs

To allocate the proportionate share of demand for park land to residential and nonresidential development, this analysis uses the percentages shown in Figure PR2. Tucson's existing level of service for residential development is approximately 0.00207 acres per person (1,203.6 acres X 96 percent residential share / 559,102 persons). For nonresidential development, the existing level of service is approximately 0.00020 acres per job (1,203.4 acres X 4 percent nonresidential share / 235,105 jobs).

Figure PR5: Park Land Level of Service

Park Land	Category	Total Acres*	Allowable Acres*
Subtotal	Neighborhood	289.9	289.9
Subtotal	Community	420.3	373.7
Subtotal	Metro	1,254.4	420.0
Subtotal	Regional	1,317.3	120.0
Total		3,281.8	1,203.6

* According to the Arizona enabling legislation, parks included in development impact fees are limited by type and size (up to 30 acres) (ARS § 9-436.05 (T)(7)(g)).

Level of Service (LOS) Standards

Residential Proportionate Share	96%
Nonresidential Proportionate Share	4%
Residents in 2024	559,102
Jobs in 2024	235,105
LOS: Acres per Resident	0.00207
LOS: Acres per Job	0.00020

Cost Analysis

Land Cost per Acre ¹	\$57,935
LOS: Acres per Resident	0.00207
LOS: Acres per Job	0.00020
Cost per Person	\$119.93
Cost per Job	\$11.59

1. City of Tucson Parks and Recreation Department



Current estimated land cost per acre is derived from recent City purchases. The figure below provides further detail as well as the weighted cost per acre.

Date	Property	Price	Acres	Cost/Acre
Oct-23	Barrio Nopal	\$420,000	3.83	\$109,661
Feb-24	1933 Bell	\$170,000	0.43	\$395 <i>,</i> 349
Dec-24	Ridgeside	\$250,000	10.24	\$24 <i>,</i> 416
	Summary	\$840,000	14.50	\$57,935

Figure PR6: Park Land Acquisition Cost

Source: City of Tucson

Park Amenities and Improvements - Incremental Expansion

The inventory summary of Tucson's park amenities is displayed in Figure PR7. Tucson parks have 20,783 amenities, which have a total replacement cost of approximately \$587 million. Dividing the total replacement cost by the total number of amenities yields an average cost per improvement of \$28,259.



Figure PR7: Park Amenities Inventory and Replacement Costs

Amenity	Quantity	Unit Cost	Total Cost
Aquatics - Pool	25	\$4,500,000	\$112,500,000
Aquatics - Splashpad	7	\$900,000	\$6,300,000
Aquatics - Pool Slide	6	\$750,000	\$4,500,000
Baseball/Softball Fields		-	
Adult Baseball Fields, Unlit	4	\$717,158	\$2,868,633
Adult Baseball Fields, Lit	14	\$1,267,158	\$17,740,217
Little League Baseball/Softball Fields, Unlit	44	\$469,000	\$20,636,000
Little League Baseball/Softball Fields, Lit	58	\$880,000	\$51,040,000
Basketball Courts			
Full Courts, Unlit	7	\$161,250	\$1,128,750
Full Courts, Lit	29	\$211,250	\$6,126,250
Full Courts, covered, lit	10	\$562,500	\$5,625,000
Half Courts, Unlit	7	\$96,750	\$677,250
Half Courts, Lit	3	\$126,750	\$380,250
Balling Cage	1 6 8 0	\$31,250	\$500,000
Bike Pack	1,080	\$1,750	\$2,940,000
Bocce Ball	5	\$26,200	\$142,300
Concession Stand	20	\$437 500	\$137,200
Concession stand	6	\$945,800	\$5,674,800
Disc Golf Courses	5	\$105 585	\$527 924
Dog Parks	9	\$500.000	\$4,500,000
Drinking Fountains	491	\$13.000	\$6.383.000
Fitness Equipment	132	\$5,000	\$660,000
Flagpoles	39	\$3,125	\$121,875
Grills	409	\$600	\$245,400
Horseshoe Pits			
Unlit	17	\$3,125	\$53,125
Lit	14	\$13,125	\$183,750
Multi-Purpose Fields:			
Unlit	21	\$490,000	\$10,290,000
Lit	2	\$1,040,000	\$2,080,000
Multiuse Courts	6	\$220,000	\$1,320,000
Parking Spaces	15,023	\$6,250	\$93,893,750
Pickleball Courts	-		
Unlit	3	\$115,000	\$345,000
	18	\$165,000	\$2,970,000
	1,413	\$2,000	\$2,826,000
Play Structures	273	\$220,000	\$60,060,000
Racquetball/Hanuball Courts	15	\$93,750	\$1,406,250
Small	67	\$60,000	\$4,020,000
Medium	111	\$96,250	\$4,020,000
	20	\$132,500	\$2 650 000
Extra Large	4	\$217,600	\$870.400
RC Control-Line Airfields	6	\$410.000	\$2,460,000
Rectangle Fields - Soccer, Football, Rugby	_	+	+_,,
Unlit	11	\$375,000	\$4,125,000
Lit	27	\$925.000	\$24,975,000
Restrooms	81	\$602,590	\$48,809,790
Scoring Tables	37	\$3,750	\$138,750
Shade Structures	168	\$95,000	\$15,960,000
Shuffleboard Courts	5	\$41,250	\$206,250
Skate Parks	6	\$1,500,000	\$9,000,000
Swingsets	96	\$15,000	\$1,440,000
Tennis Courts			
Full court, unlit	6	\$175,000	\$1,050,000
Full court, lit	49	\$225,000	\$11,025,000
Halfcourt, lit	1	\$135,000	\$135,000
Volleyball Courts		-	
Sand	6	\$41,000	\$246,000
Sand, lit	15	\$92,700	\$1,390,500
lurt	7	\$16,250	\$113,750
Walking Paths (lin. ft.)	149,670	\$83.20	\$12,452,544
Grand Total*	20,783	\$28,259	\$587,304,658

* Amenity count excludes linear fee total; total cost includes walking path value.

Source: City of Tucson Parks and Recreation Department



The current residential level of service is 0.03569 amenities per resident, which was obtained by multiplying 20,783 amenities by the residential proportionate share (96%) and dividing this amount by the current population (559,102). Similarly, the nonresidential level of service is 0.00354 units per job (20,783 x 4% / 235,105). Multiplying the average cost per amenity (\$28,259) by the residential and nonresidential levels of service results in a cost per person of \$1,008.56 and \$100.04 per job.

Figure PR8: Park Amenities Level of Service Standards

Amenity	#of	Cost per	Replacement
	Units	Unit	Cost
TOTAL	20,783	\$28,259	\$587,304,658

Level of Service (LOS) Standards

Residential Proportionate Share	96%
Nonresidential Proportionate Share	4%
Residents in 2024	559,102
Jobs in 2024	235,105
LOS: Amenities per Resident	0.03569
LOS: Amenities per Job	0.00354

Cost Analysis

Average Cost per Amenity	\$28,259
LOS: Amenities per Resident	0.03569
LOS: Amenities per Job	0.00354
Cost per Person	\$1,008.56
Cost per Job	\$100.04

Recreational Facilities – Incremental Expansion

As shown in Figure PR9, the City of Tucson has eight recreational facilities, which include things like community centers and other recreational buildings. The facilities total 529,987 square feet and have an average estimated cost per square foot of \$440. However, ARS § 9-463.05 limits the inclusion of community centers to a maximum of 3,000 square feet in floor area. Therefore, the total allowable floor area is capped at 64,800 square feet. This results in a level of service of 0.11126 square feet per person and 0.01102 square feet per job. Multiplying the levels of service by the residential and nonresidential proportionate shares and the cost per square foot (\$440) results in recreational facility costs per service unit of \$48.95 per person and \$4.85 per job.



Figure PR9: Recreational Facilities Inventory Summary and Level of Service Standards

Recreational Facility	Square Feet	Allowable
		Sq. Ft.*
Edith Ball Adaptive Recreation Center	82,600	3,000
Fred Archer Center	27,076	3,000
Armory Park Center	27,000	3,000
Cherry Avenue Center	5,315	3,000
William M. Clements Regional Center	26,000	3,000
William M. Clements Fitness Center	11,702	3,000
Donna R. Liggins Center	37,140	3,000
El Pueblo Adult Ed. Center	12,466	3,000
El Pueblo Activity Center	44,096	3,000
El Pueblo Senior Center	9,195	3,000
El Rio Adult Ed. Center	11,702	3,000
El Rio Center	36,604	3,000
Freedom Park Center	11,000	3,000
Marty Birdman Center	3,400	3,000
Ormsby Center	1,800	1,800
Oury Center	3,838	3,000
Quincie Douglas Center	16,764	3,000
Randolph Center	60,499	3,000
Santa Rosa Center	9,600	3,000
Therapeutic Recreation Center	7,440	3,000
Morris K. Udall Center	75,683	3,000
Carol West Senior Center	9,067	3,000
TOTAL	529,987	64,800

*Arizona's enabling legislation restricts community center floor area to 3,000 square feet.

Level of Service (LOS) Standards

Residential Proportionate Share	96%
Nonresidential Proportionate Share	4%
Residents in 2019	559,102
Jobs in 2019	235,105
LOS: Square Feet per Resident	0.11126
LOS: Square Feet per Job	0.01102

Cost Analysis

440
1126
1102
8.95
4.85



Greenway Facilities - Incremental Expansion

The City of Tucson has 31.18 linear miles of existing greenways and plans for additional expansion of the system. Based on current levels of service, greenway levels of service are 0.000054 linear mile per person and 0.000005 linear mile per job as shown in Figure PR10. Multiplying the levels of service by the residential and nonresidential proportionate shares and the cost per linear mile (\$1,150,800) results in greenway costs per service unit of \$62.14 per person and \$5.75 per job.

Figure PR10: Greenway Facilities Inventory Summary and Level of Service Standards

	LINEAR MILES
Facility	Current
Airport Wash Greenway	0.41
Alamo Wash Greenway	0.00
Anklam Road Path	0.23
Arroyo Chico Greenway	1.53
Atterbury Wash Greenway	1.04
Aviation Parkway / Golf Links / Ironhorse Path	8.60
Drexel Road Path	0.00
El Paso and Southwestern Greenway	0.15
Greasewood Road Path	1.94
Houghton Greenway	10.29
Maclovio Barraza Parkway Path	0.89
Old Spanish Trail Path	4.09
Rodeo Wash Greenway	1.01
Silvercroft Wash Greenway	0.99
Kolb-Irvington Path	0.00
Total	31.18

Source: City of Tucson

Level of Service (LOS) Standards

Residential Proportionate Share	96%
Nonresidential Proportionate Share	4%
Residents	559,102
Jobs	235,105
LOS: Linear Miles per Resident	0.000054
LOS: Linear Miles per Job	0.000005

Cost Analysis

Average Local Cost per Linear Mile	\$1,150,800
LOS: Linear Miles per Resident	0.000054
LOS: Linear Miles per Job	0.000005
Cost per Person	\$62.14
Cost per Job	\$5.75



Current local (non-bond) funded greenway improvement costs are provided in Figure PR11 at \$1,150,800 per linear mile.

Project Name	Length (mi)	Construction Year	Estimated Local (Non-Bond) Cost	Estimated Local (Non- Bond) Cost/ Linear Mile	Bond \$ 407 (GO Bond/property tax)	Bond \$ 411 (Local TPT)	RTA \$ (Regional TPT)	Other Local \$	Estimated Total Cost (2024 \$)
El Paso and Southwestern Greenway	3.31	2025	\$5,602,840	\$1,692,701	\$2,634,065				\$8,236,905
Arroyo Chico Greenway	1.81	2027	\$705,755	\$389,920	\$4,421,245		\$313,000	\$60,000	\$5,500,000
Airport Wash Greenway	0.50	2027	\$198,732	\$397,464	\$551,020				\$749,752
Alamo Wash Greenway	9.00	2027	\$11,366,835	\$1,262,982	\$13,120,474				\$24,487,309
Atterbury Wash Greenway	2.00	2028	\$1,252,556	\$626,278	\$3,172,699				\$4,425,255
Total	16.62		\$19,126,718	\$1,150,825	\$23,899,503	\$0	\$313,000	\$60,000	\$43,399,221
Cost per Linear Mile				\$1,150,825					
Cost per Linear Mile (rounded)				\$1,150,800					

Figure PR11: Greenway Improvement Costs

Source: City of Tucson

Development Impact Fee Report - Plan-Based

The cost to prepare the Parks and Recreational Development Impact Fees and IIP update totals \$23,750. Tucson plans to update its report every five years. Based on this cost, proportionate share, and five-year projections of new development from the Land Use Assumptions document, the cost per person is \$2.01 and the cost per job is \$0.09.

Figure PR12: Development Impact Fee Report Cost Allocation

Necessary Public		Assessed	Proportionate		Cost per				
Service		Against	Share	Demand Units	2024	2029	Change	Demand Unit	
Parks & Recreation	\$23,750	Residential	96%	Population	559,102	570,395	11,293	\$2.01	
		Nonresidential	4%	Jobs	235,105	244,780	9,675	\$0.09	



PROJECTED DEMAND FOR SERVICES AND COSTS

ARS § 9-463.05(E)(5) requires:

"The total number of projected service units necessitated by and attributable to new development in the service area based on the approved land use assumptions and calculated pursuant to generally accepted engineering and planning criteria."

As shown in Figure PR13, the Land Use Assumptions projects an additional 22,646 persons and 19,789 jobs over the next 10 years.

ARS § 9-463.05(E)(6) requires:

"The projected demand for necessary public services or facility expansions required by new service units for a period not to exceed ten years."

These projected service units are multiplied by the current level of service for the IIP components shown in Figure PR10. New development will demand an additional 878 park amenities, 50.8 park land acres, 2,738 square feet of recreational facilities, and 1.32 linear miles of greenways.

The park improvements, park land, and recreational facility square feet totals demanded by new development multiplied by the respective costs projects a total cost of approximately \$30.5 million on new park amenities, land, recreational center space, and greenway improvements to accommodate projected demand, as shown in the bottom of Figure PR13.



Figure PR13: Projected Demand for Parks and Recreational Facilities

		Park Level of Service Standards								
	Level of Service		Demand Unit	Unit Cost						
Residential	0.03569	Park Amonities (Linits)	per Person	\$78.759						
Nonresidential	0.00354	Tark Amenides (Onits)	per Job	720,233						
Residential	0.0020700	Park Land (Acros)	per Person	¢57 025						
Nonresidential	0.0002000	Park Lanu (Acres)	per Job	27,222						
Residential	0.11126	Pac Contors (Sa. Et.)*	per Person	\$440						
Nonresidential	0.01102	Nec Centers (Sq. 1 t.)	per Job	Ş440						
Residential	0.000054	Greenways (Linear	per Person	\$1 150 800						
Nonresidential	0.000005	Mile)	per Job	Ş1,130,800						

Need for Park Amenities & Recreation Facilities									
Year		Population	Jobs	Park Amenities (Units)	Park Land (Acres)	Rec Centers (Sq. Ft.)*	Greenways (Linear Mile)		
Base	2024	559,102	235,105	20,787	1,204	64,797			
Year 1	2025	561,793	237,005	20,889	1,210	65,117	0.15		
Year 2	2026	564,448	238,923	20,991	1,216	65,433	0.15		
Year 3	2027	566,337	240,858	21,065	1,220	65,665	0.11		
Year 4	2028	568,321	242,810	21,143	1,225	65,907	0.12		
Year 5	2029	570,395	244,780	21,224	1,230	66,160	0.12		
Year 6	2030	572,542	246,767	21,308	1,235	66,420	0.13		
Year 7	2031	574,781	248,771	21,395	1,240	66,692	0.13		
Year 8	2032	577,144	250,794	21,486	1,245	66,977	0.14		
Year 9	2033	579,458	252,835	21,576	1,250	67,257	0.14		
Year 10	2034	581,748	254,893	21,665	1,255	67,534	0.13		
Ten	-Year Increase	22,646	19,789	878	50.8	2,738	1.32		
	Gro	wth-Related E	xpenditures	\$24,811,402	\$2,943,098	\$1,204,720	\$1,521,183		

* Arizona's enabling legislation restricts allowable recreation center square footage to 3,000 square feet per facility. Actual 2024 recreation center floor area totals 529,987 square feet.

Based on levels of service and projected growth by service area, the following provides estimated demand for infrastructure by service area.

Need for Parl Recreatio	Park Amenities & Citywide (Net Increase)				Area A			Area B			Area C		
Ye	ear	Amenities	Land	Rec Ctr (SF)	29% Amenities	Land	Rec Ctr (SF)	34% Amenities	Land	Rec Ctr (SF)	37% Amenities	Land	Rec Ctr (SF)
Base	2024												
Year 1	2025	103	6.0	320.3	30	1.7	93	35	2.0	109	38	2.2	119
Year 2	2026	102	5.9	316.6	29	1.7	92	35	2.0	108	38	2.2	117
Year 3	2027	74	4.3	231.5	22	1.2	67	25	1.5	79	27	1.6	86
Year 4	2028	78	4.5	242.3	23	1.3	70	26	1.5	82	29	1.7	90
Year 5	2029	81	4.7	252.4	23	1.4	73	28	1.6	86	30	1.7	93
Year 6	2030	84	4.8	260.8	24	1.4	76	28	1.6	89	31	1.8	96
Year 7	2031	87	5.0	271.1	25	1.5	79	30	1.7	92	32	1.9	100
Year 8	2032	92	5.3	285.2	27	1.5	83	31	1.8	97	34	2.0	106
Year 9	2033	90	5.2	279.9	26	1.5	81	31	1.8	95	33	1.9	104
Year 10	2034	89	5.2	277.6	26	1.5	80	30	1.8	94	33	1.9	103
Ten	-Year Increase	878	50.8	2,738.0	255	14.7	794.0	299	17.3	931.0	325	18.8	1,013.0
Growth-Relate	d Expenditures	\$24,811,402	\$2,943,098	\$1,204,720	\$7,206,045	\$853,498	\$349,360	\$8,449,441	\$1,000,653	\$409,640	\$9,184,175	\$1,088,946	\$445,720
				Subt	otals by Servi	ce Area==>	\$8,408,903			\$9,859,734			\$10,718,841

Figure PR14: Projected Demand for Parks and Recreational Facilities by Service Area



PARKS AND RECREATIONAL FACILITIES IIP

ARS § 9-463.05(E)(3) requires:

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

Potential Parks and Recreational Facilities where development impact fees may be used to accommodate needs due to new development, as projected in the previous section, are shown in Figure PR15. Parks and recreational facility improvements may include but are not limited to the projects listed below in PR15. In addition to the projects identified in the Parks and Recreational Facilities IIP below, the City plans to identify projects that will serve growth as part of its annual budget process and annual capital improvement planning process.



Figure PR15: Necessary Parks & Recreational Improvements and Expansions

AREA A	AREA B	AREA C			
City-wide Parks Strategic Master Plan	City-wide Parks Strategic Master Plan	City-wide Parks Strategic Master Plan			
Development Impact Fee Study Update	Development Impact Fee Study Update		Development Impact Fee Study Update		
Park Land Acquisition and Master Planning	Park Land Acquisition and Master Plann	ing	Park Land Acquisition and Master Planning		
To be prioritized in areas with greatest residential growth	To be prioritized in areas with greatest re	sidential growth	To be prioritized in areas with greatest residential growth		
Parks Amenities	Parks Amenities		Parks Amenities		
May be added at Parks listed below, or other	May be added at Parks listed below, or o	ther City Parks as needed	May be added at Parks listed below, or other		
City Parks as needed due to growth	due to growth		City Parks as needed due to growth		
Alamo Wash Greenway	Airport Wash Greenway	Ormsby Park	Alamo Wash Greenway		
Alvernon Park	Archer splash pad	Oury Park	Atterbury Wash Greenway		
Armory park	Arroyo Chico Greenway	Pueblo Gardens Park	Case Natural Resource Park		
Arroyo Chico Greenway	Barrio Nopal Park	Rudy Garcia Park	Chuck Ford Lakeside Park		
Christopher Columbus Park	Bonita Park	Claire Weeks Terra del Sol Park			
El Paso Southwestern Greenway	Bravo Park San Juan Park		Escalante Park		
Francisco Elias Esquer Park	Bristol Park	Santa Cruz Park	Fort Lowell Park		
Gene C. Reid Park	David G. Herrera & Ramon Quiroz Park	Santa Rita Park	Freedom Park		
Himmel Park	Desert Shadows Park	Santa Rosa Park	Groves Park I and II		
Iron Horse Park	El Paso Southwestern Greenway	Sarah Ann Miller Park	Harold Bell Wright Park		
Jacinto Park	El Pueblo Park	Sentinel Peak Park	Jesse Owens Park		
Jacobs Park	Estevan Park	Silverlake Park	Lincoln Park		
Juhan Park	James Thomas Park	Sunset Villa Park	Michael Perry Park		
Kah Dang Park	John F. Kennedy Park	Swan Park	Morris K. Udall Park		
La Madera Park	Joaquin Murrieta Park	Vista del Pueblo Park	Palo Verde Park		
Limberlost Family Park	La Mar Park		Purple Heart Park		
Loma Verde	La Mariposa Park		Robert Price Sr. Park		
Mansfield Park	Los Reales Park		Stefan Gollob Park		
McCormick Park	Menlo Park		Todd M. Harris Sports Complex		
Mitchell Park	Mirasol Park		Villa Serena Park		
	Mission Manor Park		Vista del Prado Park		
	Ochoa Park		Vista del Rio Cultural Resource Park		
Recreation Center Facilities	Recreation Center Facilities		Recreation Center Facilities		
To be prioritized in areas with greatest	To be prioritized in areas with greatest re	sidential growth	To be prioritized in areas with greatest		
residential growth			residential growth		



PARKS AND RECREATIONAL FACILITIES DEVELOPMENT FEES

Revenue Credit/Offset

A revenue offset is not necessary for the Parks and Recreational development impact fees because 10year growth costs exceed the amount of revenue that is projected to be generated by development impact fees (as shown in Figure PR17) and fee calculations exclude dedicated funding sources.

Proposed Parks and Recreational Facilities Development Impact Fees

Infrastructure standards and cost factors for Parks and Recreational Facilities, including park amenities, park land, recreational facilities, greenways, and the professional services cost for the IIP and Development Impact Fee Report are summarized at the top of Figure PR16. Updated development impact fees for Parks and Recreational Facilities are shown in the column with green shading.

Proposed updated fees are compared to the City of Tucson's current adopted development impact fees showing dollar amount and percentage differences.



Figure PR16: Proposed Parks and Recreational Facilities Development Impact Fees

Fee Component	Cost per Person	Cost per Job
Park Amenities	\$1,008.56	\$100.04
Park Land	\$119.93	\$11.59
Recreation Facilities	\$48.95	\$4.85
Greenways	\$62.14	\$5.75
Development Fee Report	\$2.01	\$0.09
TOTAL	\$1,241.59	\$122.32

Residential Development (per Housing Unit)							
Size of Housing Unit (Sq. Ft.)	Demand Unit	Persons per Demand Unit	Proposed Fee	Current Fees*	Increase / (Decrease)	% Change	
750 or Less	Housing Unit	1.04	\$1,291	\$924	\$367	40%	
751 to 1,250	Housing Unit	1.62	\$2,011	\$1,488	\$523	35%	
1,251 to 1,750	Housing Unit	2.16	\$2,681	\$1,987	\$694	35%	
1,751 to 2,250	Housing Unit	2.55	\$3,166	\$2,357	\$809	34%	
2,251 to 2,750	Housing Unit	2.85	\$3,538	\$2,644	\$894	34%	
2,751 to 3,250	Housing Unit	3.11	\$3,861	\$2,884	\$977	34%	
3,251 to 3,750	Housing Unit	3.32	\$4,122	\$3,088	\$1,034	33%	
3,751 or More	Housing Unit	3.51	\$4,357	\$3,263	\$1,094	34%	

Nonresidential Development (per Demand Unit)							
Туре	Demand Unit	Jobs per	Proposed	Current	Increase /	% Change	
		Demand Unit	Fee	Fees*	(Decrease)		
Industrial: Light Industrial	1,000 Sq. Ft.	1.57	\$192	\$144	\$48	33%	
Industrial: Manufacturing	1,000 Sq. Ft.	1.89	\$231	\$141	\$90	64%	
Industrial: Warehousing	1,000 Sq. Ft.	0.34	\$41	\$30	\$11	37%	
Commercial/Retail: General	1,000 Sq. Ft.	2.12	\$259	\$208	\$51	25%	
Commercial/Retail: Free Standing Discount Store	1,000 Sq. Ft.	2.19	\$267	\$191	\$76	40%	
General Office	1,000 Sq. Ft.	3.26	\$398	\$264	\$134	51%	
Institutional: Schools	1,000 Sq. Ft.	0.93	\$113	\$82	\$31	38%	
Institutional: Religious Facilities	1,000 Sq. Ft.	1.39	\$169	\$123	\$46	37%	
Institutional: Medical (Nursing Hm./Asstd Living)	1,000 Sq. Ft.	2.04	\$249	\$202	\$47	23%	
Institutional: Medical (Clinic, Hospital)	1,000 Sq. Ft.	2.71	\$330	\$366	(\$36)	-10%	
Hotel	Room	0.56	\$68	\$51	\$17	33%	

*Source: City of Tucson, "Annual Development Impact Fees Report FY2023/24 (Unaudited), September 28, 2024; Appendix A: Development Impact Fees Schedules (Ordinance 11759 (June 9, 2020), effective July 1, 2021). https://www.tucsonaz.gov/files/sharedassets/public/v/1/bsd/documents/financedocuments/fy24-annual-development-impact-fees-report.pdf



FORECAST OF REVENUES

Appendix B contains the forecast of revenues required by Arizona's Enabling Legislation.

Parks and Recreational Facilities Development Impact Fee Revenue

The top of Figure PR17 summarizes estimated growth-related cost of infrastructure in Tucson over the next 10 years (approximately \$30.5 million for Parks and Recreational Facilities). Anticipated development fee revenue is projected at \$28.9 million from Parks and Recreational Facilities development impact fees over the next 10 years if actual development matches the projections as indicated in the Land Use Assumptions (at the average development fee rates shown). This yields a net deficit due to the base population including group quarters population. Projected estimated revenue by Service Area is shown at the bottom of Figure PR17.

Fee Component	Growth Share
Park Amenities	\$24,811,402
Park Land	\$2,943,098
Recreation Facilities	\$1,204,720
Greenways	\$1,521,183
Development Fee Report	\$23,750
Total Expenditures	\$30,504,153

Figure PR17: Projected Parks ar	d Recreational Facilities	Development Impact	Fee Revenue
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		Single Family	Multi-Family	Industrial	Commercial	Institutional	Office & Other
		\$2,942	\$1,998	\$155	\$263	\$215	\$398
		per Unit*	per Unit*	per KSF**	per KSF**	per KSF**	per KSF
Ye	ear	Housing Units	Housing Units	KSF	KSF	KSF	KSF
Base	2024	166,053	85,543	21,853	22,372	99,475	18,655
1	2025	166,707	86,100	22,114	22,500	100,444	18,752
2	2026	167,352	86,649	22,378	22,628	101,423	18,851
3	2027	167,811	87,040	22,645	22,757	102,412	18,950
4	2028	168,294	87,451	22,915	22,886	103,410	19,049
5	2029	168,798	87,880	23,188	23,017	104,418	19,149
6	2030	169,319	88,325	23,465	23,148	105,436	19,250
7	2031	169,863	88,788	23,745	23,280	106,463	19,351
8	2032	170,437	89,277	24,029	23,412	107,501	19,453
9	2033	171,000	89,756	24,315	23,546	108,549	19,555
10	2034	171,556	90,230	24,606	23,680	109,607	19,657
10-ye	ar Increase	5,503	4,688	2,753	1,307	10,132	1,003
Project	ed Revenue	\$16,190,026	\$9,366,222	\$425,752	\$343,813	\$2,180,936	\$399,155

* Average fee based on persons per housing unit by type of unit.

** Average of land uses under respective nonresidential category.

Total Projected Revenue	\$28,905,904
Surplus / (Deficit)	(\$1,598,249)

10-YEAR REVENUE ALLOCATION					
Area A	29.0%	\$8,382,712			
Area B	34.0%	\$9,828,007			
Area C	37.0%	\$10,695,184			
TOTAL	100.0%	\$28,905,904			



POLICE FACILITIES INFRASTRUCTURE IMPROVEMENT PLAN

ARS § 9-463.05 (T)(7)(f) defines the facilities and assets that can be included in the Police Facilities IIP:

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

The Police Facilities IIP and Development Impact Fees includes components for police stations, police vehicles and equipment, and the cost of professional services for preparing the Police Facilities IIP and related Development Impact Fee Report. An incremental expansion methodology is used for police facilities and vehicles and equipment, and a plan-based methodology is used for the Development Impact Fee Report.

Service Area

The City of Tucson's Police Department strives to provide a uniform response time Citywide. The existing Police facilities act as an integrated system which supports the entire City. Depending on the number and type of calls, police units can be dispatched from any station. Therefore, a Citywide service area is recommended for the Police Facilities IIP.

Proportionate Share

ARS § 9-463.05 (B)(3) states that the development fee shall not exceed a proportionate share of the cost of necessary public services needed to accommodate new development. TischlerBise recommends functional population to allocate the cost of police facilities to residential and nonresidential development. Functional population is similar to what the U.S. Census Bureau calls "daytime population," by accounting for people living and working in a jurisdiction, but also considers commuting patterns and time spent at home and at nonresidential locations. OnTheMap is a web-based mapping and reporting application that shows where workers are employed and where they live. It describes geographic patterns of jobs by their employment locations and residential locations as well as the connections between the two locations. OnTheMap was developed through a unique partnership between the U.S. Census Bureau and its Local Employment Dynamics (LED) partner states. OnTheMap data is used, as shown in Figure P1, to derive Functional Population shares for Tucson.

Residents that do not work are assigned 20 hours per day to residential development and 4 hours per day to nonresidential development (annualized averages). Residents that work in Tucson are assigned 14 hours to residential development. Residents that work outside Tucson are assigned 14 hours to residential development. Inflow commuters are assigned 10 hours to nonresidential development. Based on 2021 functional population data for Tucson (latest available), the cost allocation for residential development is 72 percent while nonresidential development accounts for 28 percent of the demand for police facilities.



Figure P1: Police Proportionate Share

Demand Units in 2021			Demand Hours/Day	Person Hours	Proportionate Share	
Reside	ntial					
	Estimated Residents 546,061	D				
	Residents Not Working	344,960		20	6,899,200	
	Resident Workers	201,101	J.			
57%	Worked in City		114,717	14	1,606,038	
43%	Worked Outside City		86,384	14	1,209,376	
			Res	idential Subtotal	9,714,614	72%
Nonres	idential					
	Non-working Residents	344,960		4	1,379,840	
	Jobs Located in City	235,070	7			
49%	Residents Working in City		114,717	10	1,147,170	
51%	Non-Resident Workers (inflow commuters)		120,353	10	1,203,530	
			Nonres	idential Subtotal	3,730,540	28%
				TOTAL	13,445,154	100%

Source: Estimated Residents based on TischlerBise housing unit estimates and persons per housing unit (PPHU) ratios derived from the U.S. Census Bureau (see discussion elsewhere in the Land Use Assumptions). Employment data from the U.S. Census Bureau's OnTheMap web application, 2021.

RATIO OF SERVICE UNITS TO DEVELOPMENT UNITS

ARS § 9-463.05(E)(4) requires:

"A table establishing the specific level or quantity of use, consumption, generation or discharge of a service unit for each category of necessary public services or facility expansions and an equivalency or conversion table establishing the ratio of a service unit to various types of land uses, including residential, commercial/retail, industrial, and office/other services."

Figure P2 displays the ratio of service units to various types of land uses for residential and nonresidential development. The residential development table displays the persons per housing unit for residential units by size of unit.

Nonresidential development impact fees are calculated using vehicle trips as the service unit. TischlerBise recommends using nonresidential vehicle trips as the best demand indicator for police facilities and vehicles. Vehicle trip generation rates (trip generation rates) are used for nonresidential development because vehicle trips are highest for commercial/retail developments, such as shopping centers, and lowest for industrial development. Office and institutional trip rates fall between the other two categories. This ranking of trip rates is consistent with the relative demand for police from nonresidential development. Other possible nonresidential demand indicators, such as employment or floor area, will not accurately reflect the demand for service. For example, if employees per thousand square feet were used as the demand indicator, police development impact fees would be too high for office and


institutional development because offices typically have more employees per 1,000 square feet than retail uses. If floor area were used as the demand indicator, police development impact fees would be too high for industrial development.

Trip generation rates per average weekday are from the reference book Trip Generation published by the Institute of Transportation Engineers (ITE 11th Edition 2021). A vehicle trip end represents a vehicle either entering or exiting a development (as if a traffic counter were placed across a driveway). To calculate development impact fees, trip generation rates require an adjustment factor to avoid double counting each trip at both the origin and destination points. Therefore, the basic trip adjustment factor is 50%.

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

The ratio of service unit to development unit for each type of nonresidential development is calculated by multiplying the ITE trip generation rate by the trip rate adjustment factor to avoid double-counting trips, as discussed above. By way of example, the service unit to development unit ratio for a commercial development is found by multiplying the ITE trip generation rate of 37.01 trips (per 1,000 square feet) by the trip rate adjustment factor of 33%, yielding an adjusted trip rate of 12.21 trips per 1,000 square feet. Therefore, it is reasonable to assume a 100,000 square foot commercial development would generate 1,221 primary destination trips per average weekday.



Figure P2: Police Facilities Ratio of Service Unit to Development Unit

Size of Housing Unit (Sq. Ft.)	Demand Unit	Persons per Demand Unit
750 or Less	Housing Unit	1.04
751 to 1,250	Housing Unit	1.62
1,251 to 1,750	Housing Unit	2.16
1,751 to 2,250	Housing Unit	2.55
2,251 to 2,750	Housing Unit	2.85
2,751 to 3,250	Housing Unit	3.11
3,251 to 3,750	Housing Unit	3.32
3,751 or More	Housing Unit	3.51

Nonresidential Service Unit Ratios

Туре	Demand Unit	Trip Ends per Demand Unit	Trip Rate Adjustment	Adj. Trips per Demand Unit
Industrial: Light Industrial	1,000 sq. ft.	4.87	50%	2.44
Industrial: Manufacturing	1,000 sq. ft.	4.75	50%	2.38
Industrial: Warehousing	1,000 sq. ft.	1.71	50%	0.86
Commercial/Retail: Shopping Center	1,000 sq. ft.	37.01	33%	12.21
Commercial/Retail: Free Standing Discount Store	1,000 sq. ft.	53.87	33%	17.78
General Office	1,000 sq. ft.	10.84	50%	5.42
Institutional: Schools	1,000 sq. ft.	19.52	33%	6.44
Institutional: Religious Facilities	1,000 sq. ft.	6.95	33%	2.29
Institutional: Medical (Nursing Hm./Asstd Living)	1,000 sq. ft.	6.64	33%	2.19
Institutional: Medical (Clinic, Hospital)	1,000 sq. ft.	37.60	33%	12.41
Hotel	Room	8.36	50%	4.18

Source: See Land Use Assumptions.



ANALYSIS OF CAPACITY, USAGE, AND COSTS OF EXISTING PUBLIC SERVICES

ARS § 9-463.05(E)(1) requires:

"A description of the existing necessary public services in the service area and the costs to upgrade, update, improve, expand, correct or replace those necessary public services to meet existing needs and usage and stricter safety, efficiency, environmental or regulatory standards, which shall be prepared by qualified professionals licensed in this state, as applicable."

ARS § 9-463.05(E)(2) requires:

"An analysis of the total capacity, the level of current usage and commitments for usage of capacity of the existing necessary public services, which shall be prepared by qualified professionals licensed in this state, as applicable."

Police Facilities – Incremental Expansion

The Police Department owns and operates a police headquarters, 4 police stations, evidence storage facility (EPIC Station), a crime lab, and an impound facility (located at the ODS Station) totaling 473,544 square feet of floor area.³ The incremental expansion methodology is used to calculate the facility portion of the fee, with new development maintaining the current infrastructure standards.

As shown in Figure P3, the level of service for residential development is 0.6098 square feet per person, which is calculated by multiplying the total floor area (473,544 sq. ft.) by the residential proportionate share (72%) and then dividing by the 2024 total City population (559,102). Similarly, the nonresidential level of service is 0.1241 square feet per vehicle trip and is found by multiplying the total floor area (473,544 sq. ft.) by the nonresidential proportionate share (28%) and then dividing by the average weekday nonresidential vehicle trips in 2024 (1,068,338 vehicle trips).

Figure P3 also shows the estimated replacement cost per square foot for each facility. Based on the cost per square foot assumptions, the average cost per square foot for police facilities is \$287. The costs per person and per vehicle trip are determined by multiplying the residential and nonresidential levels of service (0.6098 square feet per person and 0.1241 square feet per vehicle trip, respectively) by the cost per square foot (\$287). This produces a cost per person of \$175.01 and a cost per vehicle trip of \$35.62.

³ It is noted that current square footage has been adjusted from the previous study to net out the solar array at the Crime Lab.



Figure P3: Police Facilities and Level of Service Standards

Police Facilities	Square Feet	Cost per Sq. Ft.	Total Cost ¹
ODM Station	44,663	\$434	\$19,368,000
ODE Station	22,240	\$196	\$4,363,750
ODW Station	128,628	\$177	\$22,820,000
ODS Station ²	20,750	\$163	\$3,373,000
EPIC Station	70,000	\$279	\$19,534,500
Police HQ	156,336	\$235	\$36,677,250
Crime Lab ³	30,927	\$960	\$29,689,000
Total	473,544	\$287	\$135,825,500

1. Includes building, equipment, and contents value.

2. Includes Impound buiding and carport.

3. Adjusted from previous study to net out solar array square footage.

Source: City of Tucson

Level of Service (LOS) Standards

Population in 2024	559,102
Nonresidential Vehicle Trips in 2024	1,068,338
Residential Share	72%
Nonresidential Share	28%
LOS: Square Feet per Person	0.6098
LOS: Square Feet per Vehicle Trip	0.1241

Cost Analysis

Cost per Square Foot	\$287
LOS: Square Feet per Person	0.6098
LOS: Square Feet per Vehicle Trip	0.1241
Cost per Person	\$175.01
Cost per Vehicle Trip	\$35.62



Police Vehicles and Equipment – Incremental Expansion

The inventory summary of Tucson's police vehicles and equipment is displayed in Figure P4. The Tucson Police Department owns 1,153 units of vehicles and equipment, which have a total replacement cost of almost \$69 million. Dividing the total cost by the total number of units yields an average cost per unit of \$59,739. The current residential level of service is 0.00150 units per resident, which is calculated by multiplying the 1,153 units by the residential proportionate share (72%) and dividing this amount by the current total population (559,102). Similarly, the nonresidential level of service is 0.00030 units per vehicle trip is calculated by multiplying the 1,153 units by the residential vehicle trips in 2024 (1,068,338 vehicle trips).

The costs per person and per vehicle trip are determined by multiplying the residential and nonresidential levels of service (0.00150 units per person and 0.00030 units per vehicle trip, respectively) by the cost per unit (\$59,739).



Figure P4: Police Vehicles and Equipment Inventory and Level of Service Standards

Item	Quantity	Unit Cost	Total Cost
Marked patrol vehicles	410	\$73,477	\$30,125,570
Motorcycles	51	\$35 <i>,</i> 850	\$1,828,350
UTVs	17	\$24,500	\$416,500
Trailers	35	\$8,663	\$303,205
Unmarked cars	261	\$42,000	\$10,962,000
Unmarked trucks	73	\$59,320	\$4,330,360
Unmarked SUVs	142	\$52,791	\$7,496,322
Unmarked Vans	17	\$61,285	\$1,041,845
Marked non-patrol ASB	3	\$73,477	\$220,431
Marked non-patrol Academy	36	\$73,477	\$2,645,172
Marked non-patrol PTU	6	\$102,763	\$616,578
Marked non-patrol DUI	11	\$73,477	\$808,247
Marked non-patrol SRD	26	\$73,477	\$1,910,402
Marked non-patrol SDU	16	\$73,477	\$1,175,632
Marked mini command post	3	\$100,000	\$300,000
Marked vans	15	\$84,785	\$1,271,775
Marked box trucks	7	\$84,785	\$593 <i>,</i> 495
Marked command post	2	\$450,000	\$900,000
Armored SWAT SUV	3	\$120,000	\$360,000
Marked trucks	19	\$82,820	\$1,573,580
Total	1,153	\$59,739	\$68,879,464

Source: City of Tucson

Level of Service (LOS) Standards

Population in 2024	559,102
Nonresidential Vehicle Trips in 2024	1,068,338
Residential Share	72%
Nonresidential Share	28%
LOS: Vehicles & Equip. per Person	0.00150
LOS: Vehicles & Equip. per Vehicle Trip	0.00030

Cost Analysis

Cost per Unit	\$59,739
LOS: Vehicles & Equip. per Person	0.00150
LOS: Vehicles & Equip. per Vehicle Trip	0.00030
Cost per Person	\$89.61
Cost per Vehicle Trip	\$17.92



Development Impact Fee Report - Plan-Based

The cost to prepare the Police Facilities IIP and related Development Impact Fee Report update totals \$14,250. Tucson plans to update its report every five years. Based on this cost, proportionate share, and five-year projections of new residential and nonresidential development from the Land Use Assumptions document, the cost per person is \$0.90 and the cost per nonresidential trip is \$0.08.

Figure P5: Development Impact Fee Report Cost Allocation

Necessary Public	Assessed		Proportionate	Cost Allocation				Cost per	
Service	Cost	Against Share	Demand Units	2024	2029	Change	Demand Unit		
Police	\$14,250	Residential	72%	Population	559,102	570,395	11,293	\$0.90	
		Nonresidential	28%	Vehicle Trips	1,068,338	1,113,984	45,646	\$0.08	

PROJECTED SERVICE UNITS AND PROJECTED DEMAND FOR SERVICES

ARS § 9-463.05(E)(5) requires:

"The total number of projected service units necessitated by and attributable to new development in the service area based on the approved land use assumptions and calculated pursuant to generally accepted engineering and planning criteria."

The Land Use Assumptions projects an additional 22,646 persons and 93,372 nonresidential vehicle trips over the next 10 years, as shown in Figure P6.

ARS § 9-463.05(E)(6) requires:

"The projected demand for necessary public services or facility expansions required by new service units for a period not to exceed ten years."

As shown in Figure P6, this new development will demand approximately 25,397 square feet of police facility space and 62 additional units of vehicles and equipment.

The 10-year total of the projected demand for new police facilities and vehicles/equipment is multiplied by the cost to determine the total cost to accommodate the projected demand over the next 10 years. The projected demand for additional police facility floor area and vehicles and equipment will cost approximately \$11 million in total.



	Lev	el of Service		Demand Unit	Unit Cost	
Residential		0.6098	Square Feet	per Person	\$287	
Nonresiden	tial	0.1241	Square reet	per Vehicle Trip	Ş287	
Residential		0.00150	Veh. & Equip.	per Person	\$50 730	
Nonresiden	itial	0.00030	Units	per Vehicle Trip	<i>,,,,,,</i> ,,,,,,,,,,,,,,,,,,,,,,,,,,,,,,	
Ve		Domulation	Nonres.	Facility Square	Vehicles and	
rec	ar	Population	Vehicle Trips	Feet	Equipment	
Base	2024	559,102	1,068,338	473,521	1,159	
Year 1	2025	561,793	1,077,305	476,275	1,166	
Year 2	2026	564,448	1,086,353	479,017	1,173	
Year 3	2027	566,337	1,095,481	481,302	1,178	
Year 4	2028	568,321	1,104,691	483,655	1,184	
Year 5	2029	570,395	1,113,984	486,072	1,190	
Year 6	2030	572,542	1,123,360	488,545	1,196	
Year 7	2031	574,781	1,132,819	491,084	1,202	
Year 8	2032	577,144	1,142,363	493,710	1,208	
Year 9	2033	579 <i>,</i> 458	1,151,993	496,316	1,215	
Year 10	2034	581,748	1,161,709	498,918	1,221	
10-Yea	r Increase	22,646	93,372	25,397	62	TOTAL
		Growth-Related	l Expenditures	\$7,288,939	\$3,703,818	\$10,992,75

Figure P6: Projected Demand for Police Facilities

POLICE FACILITIES IIP

ARS § 9-463.05(E)(3) requires:

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

Potential Police Facilities where development impact fees may be used to accommodate needs due to new development, as projected in the previous section, are shown in Figure P7. Police facility improvements may include but are not limited to the projects listed below in P7. Additional vehicles and equipment will be procured as necessitated by growth. In addition to the projects identified in the Police Facilities IIP (as shown in figure P7), the City plans to identify projects that will serve growth as part of its annual budget process and annual capital improvement planning process.



Figure P7: Necessary Police Improvements and Expansions

CITYWIDE

Facilities

May be the location listed below, or others as needed due to growth

· Northeast Substation: Land acquisition, design, construction, and upfit of new police substation

 \cdot Southeast Substation: Land acquisition, design, and construction of new police substation

 \cdot Southwest Substation: Design, construction, and upfit of existing substation for additional physical space and resource capacity.

Vehicles and Equipment

• New Sworn and Nonsworn Staff Vehicles and Equipment: Addition to City Police fleet and equipment for sworn and nonsworn staff.

POLICE FACILITIES DEVELOPMENT IMPACT FEES

Revenue Offset

A revenue offset is not necessary for the Police Facilities development impact fees because 10-year growth costs exceed the amount of revenue that is projected to be generated by development impact fees according to the Land Use Assumptions, as shown in Figure P9. In addition, dedicated revenues and other funding sources are separate from the portion of the IIP funded from development impact fees.

Proposed Police Facilities Development Impact Fees

Proposed Police development impact fees are shown in Figure P8. Cost factors for police facilities, vehicles and equipment, and professional services are summarized at the top of the figure. The residential development impact fees are calculated by multiplying the \$265.52 cost per person by the service unit ratios (persons per housing unit) for each housing type. Nonresidential development impact fees are calculated by the average weekday vehicle trips per 1,000 square feet ratios and the trip adjustment factors for each development type.

Proposed updated fees are compared to the City of Tucson's current adopted impact fees showing dollar amount and percentage differences.



Figure P8: Proposed Police Facilities Development Impact Fees

Fee Component	Cost per Person	Cost per Vehicle Trip
Facilities	\$175.01	\$35.62
Vehicles & Equipment	\$89.61	\$17.92
Development Fee Report	\$0.90	\$0.08
Total	\$265.52	\$53.62

Residential Development (per Housing Unit)						
Size of Housing Unit (Sq. Ft.)	Demand Unit	Persons per Demand Unit	Proposed Fee	Current Fees*	Increase / (Decrease)	% Change
750 or Less	Housing Unit	1.04	\$276	\$216	\$60	28%
751 to 1,250	Housing Unit	1.62	\$430	\$348	\$82	24%
1,251 to 1,750	Housing Unit	2.16	\$573	\$464	\$109	23%
1,751 to 2,250	Housing Unit	2.55	\$677	\$551	\$126	23%
2,251 to 2,750	Housing Unit	2.85	\$756	\$618	\$138	22%
2,751 to 3,250	Housing Unit	3.11	\$825	\$674	\$151	22%
3,251 to 3,750	Housing Unit	3.32	\$881	\$722	\$159	22%
3,751 or More	Housing Unit	3.51	\$931	\$763	\$168	22%

Nonresidential Development (per Demand Unit)							
Туре	Demand Unit	Trip Ends per Demand Unit	Trip Rate Adjustment	Proposed Fee	Current Fees*	Increase / (Decrease)	% Change
Industrial: Light Industrial	1,000 Sq. Ft.	4.87	50%	\$130	\$108	\$22	20%
Industrial: Manufacturing	1,000 Sq. Ft.	4.75	50%	\$127	\$85	\$42	49%
Industrial: Warehousing	1,000 Sq. Ft.	1.71	50%	\$45	\$38	\$7	18%
Commercial/Retail: General	1,000 Sq. Ft.	37.01	33%	\$654	\$544	\$110	20%
Commercial/Retail: Free Standing Discount Store	1,000 Sq. Ft.	53.87	33%	\$953	\$766	\$187	24%
General Office	1,000 Sq. Ft.	10.84	50%	\$290	\$213	\$77	36%
Institutional: Schools	1,000 Sq. Ft.	19.52	33%	\$345	\$281	\$64	23%
Institutional: Religious Facilities	1,000 Sq. Ft.	6.95	33%	\$122	\$100	\$22	22%
Institutional: Medical (Nursing Hm./Asstd Living)	1,000 Sq. Ft.	6.64	33%	\$117	\$95	\$22	23%
Institutional: Medical (Clinic, Hospital)	1,000 Sq. Ft.	37.60	33%	\$665	\$550	\$115	21%
Hotel	Room	8.36	50%	\$224	\$182	\$42	23%

*Source: City of Tucson, "Annual Development Impact Fees Report FY2023/24 (Unaudited), September 28, 2024; Appendix A: Development Impact Fees Schedules (Ordinance 11759 (June 9, 2020), effective July 1, 2021). https://www.tucsonaz.gov/files/sharedassets/public/v/1/bsd/documents/finance-documents/fy24annual-development-impact-fees-report.pdf



FORECAST OF REVENUES

Appendix B contains the forecast of revenues required by Arizona's Enabling Legislation.

Development Impact Fee Revenues for Police Facilities and Vehicles & Equipment

Revenue projections shown below assume implementation of the proposed Police development impact fees and that development over the next 10 years is consistent with the Land Use Assumptions. To the extent the rate of development either accelerates or slows down, there will be a corresponding change in the development fee revenue. As shown in Figure P9, the 10-year growth costs of police facilities, vehicles and equipment total approximately \$11 million, and approximately \$10.2 million is projected to be collected from development impact fees if actual development matches the projections as indicated in the Land Use Assumptions and at the average development fee rates shown.

Figure P9: Projected Police Development Impact Fee Revenue

Fee Component	Growth Share
Facilities	\$7,288,939
Vehicles & Equipment	\$3,703,818
Development Fee Report	\$14,250
Total Expenditures	\$11,007,007

		Single-Family	Multi-Family	Industrial	Commercial	Institutional	Office & Other
		\$629	\$427	\$101	\$804	\$312	\$290
		per Unit*	per Unit*	per KSF**	per KSF**	per KSF**	per KSF
Ye	ear	Housing Units	Housing Units	KSF	KSF	KSF	KSF
Base	2024	166,053	85,543	21,853	22,372	99,475	18,655
1	2025	166,707	86,100	22,114	22,500	100,444	18,752
2	2026	167,352	86,649	22,378	22,628	101,423	18,851
3	2027	167,811	87,040	22,645	22,757	102,412	18,950
4	2028	168,294	87,451	22,915	22,886	103,410	19,049
5	2029	168,798	87 <i>,</i> 880	23,188	23,017	104,418	19,149
6	2030	169,319	88,325	23,465	23,148	105,436	19,250
7	2031	169,863	88,788	23,745	23,280	106,463	19,351
8	2032	170,437	89,277	24,029	23,412	107,501	19,453
9	2033	171,000	89,756	24,315	23,546	108,549	19,555
10	2034	171,556	90,230	24,606	23,680	109,607	19,657
10-уе	ar Increase	5,503	4,688	2,753	1,307	10,132	1,003
Projecte	ed Revenue	\$3,461,430	\$2,001,776	\$277,135	\$1,050,393	\$3,163,751	\$290,842

* Average fee based on persons per housing unit by type of unit.

** Average of land uses under respective nonresidential category.

Projected Revenue	\$10,245,327
Surplus / (Deficit)	(\$761,680)



FIRE FACILITIES INFRASTRUCTURE IMPROVEMENT PLAN

ARS § 9-463.05 (T)(7)(f) defines the facilities and assets that can be included in the Fire Facilities IIP:

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

The Fire Facilities IIP and Development Impact Fees includes components for fire facilities and the cost of professional services for preparing the Fire Facilities IIP and related Development Impact Fee Report. An incremental expansion methodology is used for fire facilities and apparatus, and a plan-based methodology is used for the Development Impact Fee Report.

Service Area

The City of Tucson's Fire Department strives to provide a uniform response time Citywide, and its fire stations operate as an integrated network. Depending on the number and type of calls, apparatus can be dispatched Citywide from any of the stations. Therefore, a Citywide service area is recommended for the Fire Facilities IIP.

Proportionate Share

ARS § 9-463.05 (B)(3) states that the development fee shall not exceed a proportionate share of the cost of necessary public services needed to accommodate new development. TischlerBise recommends functional population to allocate the cost of fire facilities to residential and nonresidential development. Functional population is similar to what the U.S. Census Bureau calls "daytime population," by accounting for people living and working in a jurisdiction, but also considers commuting patterns and time spent at home and at nonresidential locations. OnTheMap is a web-based mapping and reporting application that shows where workers are employed and where they live. It describes geographic patterns of jobs by their employment locations and residential locations as well as the connections between the two locations. OnTheMap was developed through a unique partnership between the U.S. Census Bureau and its Local Employment Dynamics (LED) partner states. OnTheMap data is used, as shown in Figure F1, to derive Functional Population shares for Tucson.

Residents that do not work are assigned 20 hours per day to residential development and 4 hours per day to nonresidential development (annualized averages). Residents that work in Tucson are assigned 14 hours to residential development. Residents that work outside Tucson are assigned 14 hours to residential development. Inflow commuters are assigned 10 hours to nonresidential development. Based on 2021 functional population data for Tucson (latest available), the cost allocation for residential development is 72 percent while nonresidential development accounts for 28 percent of the demand for fire facilities.



Figure F1: Fire Proportionate Share

	Demand Units in 2021			Demand Hours/Day	Person Hours	Proportionate Share
Reside	ntial					
	Estimated Residents 546,061	D				
	Residents Not Working	344,960		20	6,899,200	
	Resident Workers	201,101	7			
57%	Worked in City		114,717	14	1,606,038	
43%	Worked Outside City		86,384	14	1,209,376	
			Res	idential Subtotal	9,714,614	72%
Nonres	idential					
	Non-working Residents	344,960		4	1,379,840	
	Jobs Located in City	235,070	7			
49%	Residents Working in City		114,717	10	1,147,170	
51%	Non-Resident Workers (inflow commuters)		120,353	10	1,203,530	
			Nonres	idential Subtotal	3,730,540	28%
				TOTAL	13,445,154	100%

Source: Estimated Residents based on TischlerBise housing unit estimates and persons per housing unit (PPHU) ratios derived from the U.S. Census Bureau (see discussion elsewhere in the Land Use Assumptions). Employment data from the U.S. Census Bureau's OnTheMap web application, 2021.

RATIO OF SERVICE UNITS TO DEVELOPMENT UNITS

ARS § 9-463.05(E)(4) requires:

"A table establishing the specific level or quantity of use, consumption, generation or discharge of a service unit for each category of necessary public services or facility expansions and an equivalency or conversion table establishing the ratio of a service unit to various types of land uses, including residential, commercial/retail, industrial, and office/other services."

Figure F2 displays the ratio of service units to various types of land uses for residential and nonresidential development. The residential development table displays the persons per housing unit for residential units by size of unit.

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



square feet than retail uses. If floor area were used as the demand indicator, fire development impact fees would be too high for industrial development.

Trip generation rates per average weekday are from the reference book Trip Generation published by the Institute of Transportation Engineers (ITE 11th Edition 2021). A vehicle trip end represents a vehicle either entering or exiting a development (as if a traffic counter were placed across a driveway). To calculate development impact fees, trip generation rates require an adjustment factor to avoid double counting each trip at both the origin and destination points. Therefore, the basic trip adjustment factor is 50%.

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

The ratio of service unit to development unit for each type of nonresidential development is calculated by multiplying the ITE trip generation rate by the trip rate adjustment factor to avoid double-counting trips, as discussed above. By way of example, the service unit to development unit ratio for a commercial development is found by multiplying the ITE trip generation rate of 37.01 trips (per 1,000 square feet) by the trip rate adjustment factor of 33%, yielding an adjusted trip rate of 12.21 trips per 1,000 square feet. Therefore, it is reasonable to assume a 100,000 square foot commercial development would generate 1,221 primary destination trips per average weekday.



Figure F2: Fire Facilities Ratio of Service Unit to Development Unit

Size of Housing Unit (Sq. Ft.)	Demand Unit	Persons per Demand Unit
750 or Less	Housing Unit	1.04
751 to 1,250	Housing Unit	1.62
1,251 to 1,750	Housing Unit	2.16
1,751 to 2,250	Housing Unit	2.55
2,251 to 2,750	Housing Unit	2.85
2,751 to 3,250	Housing Unit	3.11
3,251 to 3,750	Housing Unit	3.32
3,751 or More	Housing Unit	3.51

Nonresidential Service Unit Ratios

Tupo	Domand Linit	Trip Ends per	Trip Rate	Adj. Trips per
i ype	Demand Onic	Demand Unit	Adjustment	Demand Unit
Industrial: Light Industrial	1,000 sq. ft.	4.87	50%	2.44
Industrial: Manufacturing	1,000 sq. ft.	4.75	50%	2.38
Industrial: Warehousing	1,000 sq. ft.	1.71	50%	0.86
Commercial/Retail: Shopping Center	1,000 sq. ft.	37.01	33%	12.21
Commercial/Retail: Free Standing Discount Store	1,000 sq. ft.	53.87	33%	17.78
General Office	1,000 sq. ft.	10.84	50%	5.42
Institutional: Schools	1,000 sq. ft.	19.52	33%	6.44
Institutional: Religious Facilities	1,000 sq. ft.	6.95	33%	2.29
Institutional: Medical (Nursing Hm./Asstd Living)	1,000 sq. ft.	6.64	33%	2.19
Institutional: Medical (Clinic, Hospital)	1,000 sq. ft.	37.60	33%	12.41
Hotel	Room	8.36	50%	4.18

Source: See Land Use Assumptions.



ANALYSIS OF CAPACITY, USAGE, AND COSTS OF EXISTING PUBLIC SERVICES

ARS § 9-463.05(E) (1) requires:

"A description of the existing necessary public services in the service area and the costs to upgrade, update, improve, expand, correct or replace those necessary public services to meet existing needs and usage and stricter safety, efficiency, environmental or regulatory standards, which shall be prepared by qualified professionals licensed in this state, as applicable."

ARS § 9-463.05(E)(2) requires:

"An analysis of the total capacity, the level of current usage and commitments for usage of capacity of the existing necessary public services, which shall be prepared by qualified professionals licensed in this state, as applicable."

Fire Facilities - Incremental Expansion

The Fire Department operates 22 facilities totaling 285,092 square feet of floor area. The total replacement cost of these facilities combined is approximately \$77 million. Thus, the average replacement cost per square foot is \$269 (\$76.8 million / 285,092 square feet). The incremental expansion methodology is used to calculate the facility portion of the development impact fee, with new development maintaining the current infrastructure standards for allowable fire facilities.

As shown in Figure F3, the level of service for residential development is 0.3654 square feet per person, and the nonresidential level of service is 0.0741 square feet per vehicle trip. This is determined by multiplying the total square footage by the proportionate share factors (72% for residential and 28% for nonresidential) and then dividing the respective totals by the current service units (561,793 persons and 1,077,305 nonresidential vehicle trips). For fire facility levels of service, population and nonresidential vehicle trips are set to 2025 to account for the anticipated completion of Station 14 expansion in 2025. To obtain the costs per person and nonresidential vehicle trip, the level of service standards are multiplied by average cost per square foot (\$269), producing a cost per person of \$98.29 and a cost per vehicle trip of \$19.93.



Figure F3: Fire Facilities Inventory and Level of Service Standards

Fire Facilities	Square Feet	Cost per Sq. Ft.	Total Cost
Fire HQ/Station 1	66,059	\$200	\$13,211,800
Fire 03	3,330	\$166	\$552,780
Fire 04	10,548	\$159	\$1,677,132
Fire 05	8,080	\$323	\$2,606,410
Fire 06	8,850	\$193	\$1,708,050
Fire 07	11,239	\$273	\$3,067,834
Fire 08	13,914	\$621	\$8,646,806
Fire 09	19,250	\$506	\$9,733,958
Fire 10	17,680	\$776	\$13,719,680
Fire 11	3,495	\$171	\$597,645
Fire 12	4,339	\$172	\$746,308
Fire 13	4,616	\$411	\$1,899,289
Fire 14 ¹	13,914	\$707	\$9,837,470
Fire 15	4,711	\$320	\$1,505,452
Fire 16	16,086	\$207	\$3,335,878
Fire 17	10,405	\$215	\$2,232,485
Fire 18	4,379	\$563	\$2,465,893
Fire 19	7,115	\$170	\$1,209,550
Fire 20	11,085	\$218	\$2,416,530
Fire 21	11,085	\$218	\$2,416,530
Fire 22	15,005	\$281	\$4,216,405
Fire 23	n/a		
Fire Maintenance	33,072	\$146	\$4,828,512
Total	298,257	\$311	\$92,632,396

1. Size and cost estimate for rebuilt Station 14 (scheduled for 2025). Source: City of Tucson

Level of Service (LOS) Standards

Population in 2025	561,793
Nonresidential Vehicle Trips in 2025	1,077,305
Residential Share	72%
Nonresidential Share	28%
LOS: Square Feet per Person	0.3822
LOS: Square Feet per Vehicle Trip	0.0775

Cost Analysis

Cost per Square Foot	\$311
LOS: Square Feet per Person	0.3822
LOS: Square Feet per Vehicle Trip	0.0775
Cost per Person	\$118.88
Cost per Vehicle Trip	\$24.11



Fire Apparatus – Incremental Expansion

The inventory summary of Tucson's fire apparatus is displayed in Figure F4. The Tucson Fire Department owns 174 pieces of apparatus, which have a total replacement cost of \$86.0 million. Dividing the total cost by the total number of apparatus yields an average cost per unit of \$494,293. The current residential level of service is 0.00022 apparatus per resident, which was calculated by multiplying 174 units by the residential proportionate share (72%) and dividing by the current population (559,102). Similarly, the nonresidential level of service is 0.00005 units per vehicle trip is calculated by multiplying the 174 units by the nonresidential proportionate share (28%) and dividing by the average weekday nonresidential vehicle trips in 2019 (1,068,338 vehicle trips).

Multiplying the average cost per unit (\$494,293) by the residential and nonresidential levels of service results in a cost per person of \$110.76 and cost per vehicle trip of \$22.54.



Figure F4: Fire Apparatus Inventory and Level of Service Standards

Item	Quantity	Unit Cost	Total Cost
Extended Pickup Truck	13	\$50,000	\$650,000
Fire Engine	43	\$950,826	\$40,885,518
Aerial Ladder	9	\$1,500,000	\$13,500,000
Aerial Ladder Quint	2	\$1,600,000	\$3,200,000
Ambulance	35	\$380,000	\$13,300,000
Lift & Crane Truck	1	\$100,000	\$100,000
Fire Prevention Truck	8	\$35,000	\$280,000
Hazmat Truck with Lift Gate	1	\$74,000	\$74,000
Heavy/Super Duty Truck	2	\$55,000	\$110,000
Emergency Response Truck	23	\$75,000	\$1,725,000
Pickup Truck	5	\$35,000	\$175,000
Hazmat Truck	1	\$850,000	\$850,000
100' Aerial Platform Quint	2	\$1,800,000	\$3,600,000
Pickup Truck with Lift Gate	2	\$75,000	\$150,000
Heavy Rescue Truck	1	\$250,000	\$250,000
Squad Truck	2	\$800,000	\$1,600,000
Flatbed Trailer	1	\$12,500	\$12,500
Box Truck	2	\$350,000	\$700,000
Ladder Tender	4	\$550,000	\$2,200,000
Fire Safety Trailer	1	\$75,000	\$75,000
Brush Truck	1	\$120,000	\$120,000
Hazmat Truck	1	\$400,000	\$400,000
Brush Truck	1	\$105,000	\$105,000
Rehab/Recovery	1	\$400,000	\$400,000
Front-load Dump Truck	1	\$100,000	\$100,000
Water Tender	1	\$250,000	\$250,000
Cargo Van	1	\$20,000	\$20,000
Car Trailer	1	\$5,000	\$5,000
Gator Utility Vehicle	1	\$10,000	\$10,000
Golf Cart	1	\$11,000	\$11,000
Brush Tender	2	\$300,000	\$600,000
Type 3 Engine	1	\$500,000	\$500,000
Magnum Light Tower	2	\$12,000	\$24,000
Small Pickup Truck	1	\$25,000	\$25,000
TOTAL	174	\$494,293	\$86,007,018

Source: City of Tucson

Level of Service (LOS) Standards

Population in 2024	559,102
Nonresidential Vehicle Trips in 2024	1,068,338
Residential Share	72%
Nonresidential Share	28%
LOS: Apparatus per Person	0.00022
LOS: Apparatus per Vehicle Trip	0.00005

Cost Analysis

Cost per Unit	\$494,293
LOS: Apparatus per Person	0.00022
LOS: Apparatus per Vehicle Trip	0.00005
Cost per Person	\$110.76
Cost per Vehicle Trip	\$22.54



Development Impact Fee Report - Plan-Based

The cost to prepare the Fire Facilities IIP and Development Impact Fee Report totals \$14,250. Tucson plans to update its report every five years. Based on this cost, proportionate share, and five-year projections of new residential and nonresidential development from the Land Use Assumptions document, the cost is \$0.90 per person and \$0.08 per nonresidential vehicle trip.

Figure F5: Development Impact Fee Report Cost Allocation

Necessary Public		Assessed	Pronortionate		Costner			
Service	Cost	Against Share	Share	Demand Units	2024	2029	Change	Demand Unit
Fire	\$14,250 Res	Residential	72%	Population	559,102	570,395	11,293	\$0.90
		Nonresidential	28%	Vehicle Trips	1,068,338	1,113,984	45,646	\$0.08

PROJECTED SERVICE UNITS AND PROJECTED DEMAND FOR SERVICES

ARS § 9-463.05(E)(5) requires:

"The total number of projected service units necessitated by and attributable to new development in the service area based on the approved land use assumptions and calculated pursuant to generally accepted engineering and planning criteria."

The Land Use Assumptions projects an additional 22,646 persons and 93,372 nonresidential vehicle trips over the next 10 years, as shown in Figure F6.

ARS § 9-463.05(E)(6) requires:

"The projected demand for necessary public services or facility expansions required by new service units for a period not to exceed ten years."

As shown in Figure F6, this new development will demand approximately 15,895 square feet of new fire facilities and 9 pieces of additional apparatus.

The 10-year total of the projected demand for fire station facilities is multiplied by the cost to determine the total cost to accommodate the projected demand over the next 10 years. The cost for the additional fire station floor area is approximately \$5 million, and the cost for the additional apparatus is \$4.4 million, for a total capital cost of \$9.4 million.



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Figure F6: Projected Demand for Fire Facilities

		Unit Cost
Square Feet	per Person	¢211
Square Feet	per Vehicle Trip	\$311
	Square Feet	Square Feet per Person per Vehicle Trip

Growth-Related Need for Facilities

Residential	0.00022	Apparatus Units	per Person	\$101 202
Nonresidential	0.00005	0.00005		Ş494,293

	Yeo	ar	Population	Nonres. Vehicle Trips	Station Square Feet	Apparatus
	Base	2024	559,102	1,068,338	296,533	174
	Year 1	2025	561,793	1,077,305	298,257	175
	Year 2	2026	564,448	1,086,353	299,973	176
	Year 3	2027	566,337	1,095,481	301,403	177
	Year 4	2028	568,321	1,104,691	302,876	178
	Year 5	2029	570,395	1,113,984	304,389	179
	Year 6	2030	572,542	1,123,360	305 <i>,</i> 936	180
	Year 7	2031	574,781	1,132,819	307,525	180
	Year 8	2032	577,144	1,142,363	309,168	181
	Year 9	2033	579,458	1,151,993	310,799	182
	Year 10	2034	581,748	1,161,709	312,428	183
	10-Yea	r Increase	22,646	93,372	15,895	9
			Growth-Relate	ed Expenditures	\$4,943,345	\$4,448,637



FIRE FACILITIES IIP

ARS § 9-463.05(E)(3) requires:

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

Potential Fire Facilities where development impact fees may be used to accommodate needs due to new development, as projected in the previous section, are shown in Figure F7. Fire facility improvements may include but are not limited to the projects listed below in F7. Additional apparatus will be procured as necessitated by growth. In addition to the projects identified in the Fire Facilities IIP, the City plans to identify projects that will serve growth as part of its annual budget project and annual capital improvement planning process.

Figure F7: Necessary Fire Improvements and Expansions

CITYWIDE
Facilities
May be the locations listed below, or others as needed due to growth
• New/Expanded Station: Build and Fit-Out (NW area)
• New/Expanded Station: Build and Fit-Out (SE area)
• New/Expanded Station: Build and Fit-Out (Central/South area)
Vehicles and Equipment
May be to serve locations listed below, or others as needed due to growth
• Apparatus and Equipment (NW area)
• Apparatus and Equipment (SE area)
 Apparatus and Equipment (Central/South area)

FIRE FACILITIES DEVELOPMENT IMPACT FEES

Revenue Offset

A revenue offset is not necessary for the Fire Facilities development impact fees because 10-year growth costs exceed the amount of revenue that is projected to be generated by development impact fees according to the Land Use Assumptions, as shown in Figure F9. In addition, dedicated revenues and other funding sources are separate from the portion of the IIP funded from development impact fees.

Proposed Fire Facilities Development Impact Fees

The proposed development impact fees for Fire Facilities are shown in Figure F8. Cost factors for fire facilities, apparatus, and professional services are summarized at the top of the figure. The residential



development impact fees are calculated by multiplying the \$230.54 cost per person by the service unit ratios (persons per housing unit) for each housing unit size. Nonresidential development impact fees are calculated by multiplying the \$46.73 cost per vehicle trip by the average weekday vehicle trips per 1,000 square feet ratios and the trip adjustment factors for each development type.

Proposed updated fees are compared to the City of Tucson's current adopted impact fees showing dollar amount and percentage differences.

Figure F8: Proposed Fire Facilities Development Impact Fees

Fee Component	Cost per Person	Cost per Vehicle Trip
Facilities	\$118.88	\$24.11
Apparatus	\$110.76	\$22.54
Development Fee Report	\$0.90	\$0.08
TOTAL	\$230.54	\$46.73

Residential Development (per Housing Unit)								
Size of Housing Unit (Sq. Ft.)	Demand Unit	Persons per Demand Unit	Proposed Fee	Current Fees*	Increase / (Decrease)	% Change		
750 or Less	Housing Unit	1.04	\$239	\$146	\$93	64%		
751 to 1,250	Housing Unit	1.62	\$373	\$235	\$138	59%		
1,251 to 1,750	Housing Unit	2.16	\$497	\$314	\$183	58%		
1,751 to 2,250	Housing Unit	2.55	\$587	\$372	\$215	58%		
2,251 to 2,750	Housing Unit	2.85	\$657	\$418	\$239	57%		
2,751 to 3,250	Housing Unit	3.11	\$716	\$456	\$260	57%		
3,251 to 3,750	Housing Unit	3.32	\$765	\$488	\$277	57%		
3,751 or More	Housing Unit	3.51	\$809	\$516	\$293	57%		

Nonresidential Development (per Demand Unit)									
Туре	Demand Unit	Trip Ends per Demand Unit	Trip Rate Adjustment	Proposed Fee	Current Fees*	Increase / (Decrease)	% Change		
Industrial: Light Industrial	1,000 Sq. Ft.	4.87	50%	\$113	\$73	\$40	55%		
Industrial: Manufacturing	1,000 Sq. Ft.	4.75	50%	\$110	\$58	\$52	90%		
Industrial: Warehousing	1,000 Sq. Ft.	1.71	50%	\$39	\$25	\$14	56%		
Commercial/Retail: General	1,000 Sq. Ft.	37.01	33%	\$570	\$367	\$203	55%		
Commercial/Retail: Free Standing Discount Store	1,000 Sq. Ft.	53.87	33%	\$830	\$517	\$313	61%		
General Office	1,000 Sq. Ft.	10.84	50%	\$253	\$143	\$110	77%		
Institutional: Schools	1,000 Sq. Ft.	19.52	33%	\$301	\$190	\$111	58%		
Institutional: Religious Facilities	1,000 Sq. Ft.	6.95	33%	\$107	\$67	\$40	60%		
Institutional: Medical (Nursing Hm./Asstd Living)	1,000 Sq. Ft.	6.64	33%	\$102	\$64	\$38	59%		
Institutional: Medical (Clinic, Hospital)	1,000 Sq. Ft.	37.60	33%	\$579	\$371	\$208	56%		
Hotel	Room	8.36	50%	\$195	\$123	\$72	59%		

*Source: City of Tucson, "Annual Development Impact Fees Report FY2023/24 (Unaudited), September 28, 2024; Appendix A: Development Impact Fees Schedules (Ordinance 11759 (June 9, 2020), effective July 1, 2021). https://www.tucsonaz.gov/files/sharedassets/public/v/1/bsd/documents/finance-documents/fy24annual-development-impact-fees-report.pdf



FORECAST OF REVENUES

Appendix B contains the forecast of revenues required by Arizona's Enabling Legislation.

Development Impact Fee Revenues for Fire Facilities

Revenue projections shown below assume implementation of the proposed Fire Facilities development impact fees and that development over the next 10 years is consistent with the Land Use Assumptions. To the extent the rate of development either accelerates or slows down, there will be a corresponding change in the development fee revenue. As shown in Figure F9, the 10-year growth costs of fire improvement costs total \$9.4 million and approximately \$8.9 million is projected from development impact fees, if actual development matches the projections as indicated in the Land Use Assumptions and at the average development fee rates shown.

Figure F9:	Projected	Fire Facilities	Development	Impact Fee	Revenue
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Fee Component	Growth Share
Facilities	\$4,943,345
Apparatus	\$4,448,637
Development Fee Report	\$14,250
Total Expenditures	\$9,406,232

		Single-Family	Multi-Family	Industrial	Commercial	Institutional	Office & Other
		\$546	\$371	\$87	\$700	\$272	\$253
		per Unit*	per Unit*	per KSF**	per KSF**	per KSF**	per KSF
Y	ear	Housing Units	Housing Units	KSF	KSF	KSF	KSF
Base	2024	166,053	85,543	21,853	22,372	99 <i>,</i> 475	18,655
1	2025	166,707	86,100	22,114	22,500	100,444	18,752
2	2026	167,352	86,649	22,378	22,628	101,423	18,851
3	2027	167,811	87,040	22,645	22,757	102,412	18,950
4	2028	168,294	87,451	22,915	22,886	103,410	19,049
5	2029	168,798	87,880	23,188	23,017	104,418	19,149
6	2030	169,319	88,325	23,465	23,148	105,436	19,250
7	2031	169,863	88,788	23,745	23,280	106,463	19,351
8	2032	170,437	89,277	24,029	23,412	107,501	19,453
9	2033	171,000	89,756	24,315	23,546	108,549	19,555
10	2034	171,556	90,230	24,606	23,680	109,607	19,657
10-ye	ear Increase	5,503	4,688	2,753	1,307	10,132	1,003
Project	ed Revenue	\$3,004,675	\$1,739,248	\$240,429	\$915,091	\$2,758,466	\$253,734

* Average fee based on persons per housing unit by type of unit.

** Average of land uses under respective nonresidential category.

Projected Revenue	\$8,911,643
Surplus / (Deficit)	(\$494,589)



STREET AND MULTIMODAL FACILITIES INFRASTRUCTURE IMPROVEMENT PLAN

ARS § 9-463.05 (T)(7)(e) defines the facilities and assets that can be included in the Street Facilities IIP:

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

The Street Facilities IIP includes components for arterial street improvements, traffic signal system expansion, multimodal improvements, and the cost of professional services for preparing the Street Facilities IIP and related Development Impact Fee Report. An incremental expansion methodology is used for arterial street improvements, and a plan-based methodology is used for traffic signal system expansion, multimodal improvements, and the Development Impact Fee Report.

Service Area

For Street facilities, capacity projects for which development impact fees will be collected are anticipated to be built both to serve Citywide and subarea transportation needs. Three Service Areas have been developed based on growth patterns and location of infrastructure (see the figure below). For Streets, a portion of the fee is based on Citywide capacity needs reflected in RTA projects and other Citywide capacity transportation projects and is recommended to be collected and spent Citywide on those projects. The remainder of the fee is recommended to be collected and spent within the respective three Services Areas. Potential projects are identified in this chapter. (As noted above, in addition to the three subareas depicted below, a Citywide service area is recommended.)





Figure S1: Service Area Map

METHODOLOGY

Street Facilities development impact fees use an incremental expansion methodology and allocate capital costs to residential and nonresidential development based on vehicle miles of travel using average weekday vehicle trips and average trip lengths. This methodology allows Tucson to provide additional capacity at the current level of service standard as growth occurs. Development fee revenue collected using this methodology may not be used to replace or rehabilitate existing improvements.

Proportionate Share

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



RATIO OF SERVICE UNITS TO LAND USE

ARS § 9-463.05(E)(4) requires:

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

Service Units

The appropriate service unit for the Street Facilities development impact fees is vehicle miles of travel (VMT). VMT creates the link between supply (roadway capacity) and demand (traffic generated by new development). Components used to determine VMT include: vehicle trip ends (or trip generation rates), adjustments for commuting patterns and pass-by trips, and trip length weighting factors. Each is discussed further in this section.

Figure S2: Summary of Service Units

Development Type	ITE Code	Weekday Vehicle Trip Ends ¹	Dev Unit	Trip Adj	2024 Trips	Avg Trip Length ²
Single Units	210	8.53	HU	58%	817,849	4.39
2+ Units	220	4.13	HU	58%	203,990	4.39
Industrial (KSF)	110	4.87	KSF	50%	53,212	2.83
Commercial (KSF)	820	37.01	KSF	33%	273,242	1.88
Institutional (KSF)	520	19.52	KSF	33%	640,776	2.83
Office & Other (KSF)	710	10.84	KSF	50%	101,108	2.83
				Total	2,090,177	3.47

1. Institute of Transportation Engineers (ITE), <u>Trip Generation</u>, 11th Edition, 2021; TischlerBise analysis.

2. Derived using local traffic counts and <u>U.S. Department of Transportation, Federal Highway Administration, 2022 National</u> <u>Household Transportation Survey</u>.

Trip Generation Rates

For nonresidential development, trip generation rates (i.e., vehicle trip ends) are from the 10th edition of the reference book Trip Generation published by the Institute of Transportation Engineers (ITE) (2021). A vehicle trip end represents a vehicle either entering or exiting a development (as if a traffic counter were placed across a driveway). As an alternative to using the national average trip generation rate for residential development, ITE publishes regression curve formulas that may be used to derive custom trip generation rates using local demographic data. This is explained in more detail in Appendix A: Land Use Assumptions.

Adjustments for Commuting Patterns and Pass-By Trips

To calculate Street Facilities Development Impact Fees, trip generation rates require an adjustment factor to avoid double counting each trip at both the origin and destination points. Therefore, the basic trip adjustment factor is 50%. As discussed further below, the development fee methodology includes



additional adjustments to make the fees proportionate to the infrastructure demand for particular types of development.

Residential development has a larger trip adjustment factor of 58% to account for commuters leaving Tucson for work. According to the 2022 National Household Travel Survey, weekday work trips are typically 36% of production trips (i.e., all out-bound trips, which are 50% of all trips). As shown in Figure S3, the Census Bureau's web application OnTheMap indicates that 43% of resident workers traveled outside the City for work in 2021. In combination, these factors (0.36 X 0.50 X 0.43 = .08) support the additional 8% allocation of trips to residential development (50% + 8% = 58%).

Figure S3: Inflow/Outflow Analysis

Trip Adjustment Factors for Commuters ¹				
Employed Residents	201,101			
Residents Working in Tucson	114,717			
Residents Commuting Out of Tucson	86,384			
Percent Commuting out of Tucson	43%			
All Outbound Trips	50%			
% Weekday Work Trips ²	36%			
Additional Production Trips	8%			

Residential Trip Adjustment Factor

1. U.S. Census Bureau, OnTheMap Application and LEHD Origin-Destination Employment Statistics, 2021.

2. Summary of Travel Trends: 2022 National Household Travel Survey.

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

58%

ANALYSIS OF CAPACITY, USAGE, AND COSTS OF EXISTING PUBLIC SERVICES

ARS § 9-463.05(E)(1) requires:

"A description of the existing necessary public services in the service area and the costs to upgrade, update, improve, expand, correct or replace those necessary public services to meet existing needs and usage and stricter safety, efficiency, environmental or regulatory standards, which shall be prepared by qualified professionals licensed in this state, as applicable."



Street Facilities - Incremental Expansion

The City of Tucson provided an inventory of existing arterial road segments, including segment lengths, lane quantities, and annual average daily traffic (AADT) counts. Multiplying each segment's length by the number of lanes yields the number of lane miles per segment. The City's arterial (major and minor) road network consists of 1,499 lane miles. By multiplying the traffic counts and segment lengths, daily vehicle miles of travel (VMT) is determined. The sum of all arterial road segment's VMT is approximately 7.2 million, meaning Tucson's arterial street network handles an average of just over 7 million daily VMT.

Figure S4 documents the capacity of Tucson's arterial road network. Generally, the City's arterial streets operate at a Level of Service D, and the average number of lanes for arterials is roughly 4 lanes. An urbanized mile segment of a 4-lane arterial street with a Level of Service D should maintain a daily volume of 32,400 vehicles, or 8,100 vehicles per lane mile over a 24 hour period. This means that the total daily lane mile capacity of the City's arterial road network of 1,499 lane miles is approximately 12 million vehicle miles of capacity.

As noted above, current daily volume on Tucson's arterial network is approximately 7.2 million VMT. The resulting Vehicle Miles of Capacity (VMC) to VMT ratio is 1.68 (12 million VMC / 7.2 million VMT). The baseline VMC/VMT ratio for any incremental expansion method is 1.0 (i.e., VMC=VMT), therefore the current ratio of 1.68 exceeds current level of service ensuring that new capacity built with development impact fee funds will be at or below current level of service.

Figure S4: Arterial Road Network Capacity and Usage

VMC/VMT Ratio	1.68
Existing Vehicle Miles of Travel (VMT) on Tucson Arterials^	7,244,643
Total Tucson Vehicle Miles of Capacity (VMC)	12,138,155
Vehicle Miles of Capacity (VMC) per Lane*	8,100
Total Tucson Arterial Vehicle Lane Miles^	1,499

^ Pima Association of Governments (PAG); City of Tucson.

* 2012 FDOT Quality/Level of Service Handbook Tables, (LOS D, Four-Lane Arterial (Class II))

Cost per Vehicle Miles Traveled (VMT) for Street Facilities

Figure S5 contains a list of potential transportation projects which Tucson may construct over the next 10 years. The estimated local costs for these projects are used to determine the cost per lane mile used in the analysis. Total project cost per lane mile considering all funding sources is approximately \$8 million. However, after adjusting for other non-development fee funding sources and growth-related needs, the local cost used in the development fee calculation is a weighted average cost per lane mile of \$1.79 million (rounded).



Facility Name	Lane Miles	Estimated Local Cost (Impact Fee Funded)	\$/In mi	Subtotal Other Funding	Total Cost
22nd Street: Camino Seco to Houghton	10.00	\$3,591,314	\$359,131	\$34,116,000	\$37,707,314
1st Avenue: Grant to River	15.00	\$67,400,000	\$4,493,333	\$74,200,000	\$141,600,000
22nd Street: Kino to Tucson	3.42	\$1,600,000	\$467,836	\$179,600,000	\$181,200,000
Harrison Road Bridge: Golf Links to Irvingto	0.50	\$750,000	\$1,500,000	\$14,250,000	\$15,000,000
Houghton Road: 22nd St to Irvington Rd	25.76	\$17,115,188	\$664,409	\$61,290,000	\$78,405,188
Silverbell Road: Goret to Camino del Cerro	12.50	\$14,316,117	\$1,145,289	\$42,075,000	\$56,391,117
Drexel Road: Midvale to Calle Santa Cruz	1.84	\$18,829,111	\$10,233,213	\$19,000,000	\$37,829,111
Grand Total	69.02	\$123,601,730	\$1,790,810	\$424,531,000	\$548,132,730
Total Growth-Related Fee Projects	69.02	\$123,601,730	\$1,790,810	\$6,150,840	\$7,941,651
Cost per Lane Mile			\$1,790,810		
Cost per Lane Mile (rounded)			\$1,790,800		

Figure S5: Street Facilities Cost Per Lane Mile

Source: City of Tucson

The cost per vehicle mile of capacity (VMC) is calculated based on the average cost per lane mile of \$1.79 million divided by the average lane capacity of 8,100 average daily vehicle trips (per 1 lane mile). This results in a \$221 cost per VMC (rounded). The incremental expansion methodology assumes the ratio of VMC to VMT is 1, therefore the cost per VMT is also \$221.00.

Figure S6: Cost per VMC Factor for Street Facilities: Street Capacity Improvements

Cost per Lane Mile	\$1,790,800
Vehicle Miles of Capacity (VMC) per Lane*	8,100
Cost per VMC	\$221.09
Cost per VMC (rounded)	\$221.00

* 2012 FDOT Quality/Level of Service Handbook Tables, (LOS D, Four-Lane Arterial (Class II))

In addition, the City of Tucson plans to implement a citywide traffic signal upgrade project at a cost of \$4.83million. This project is needed to support new growth by installing advanced video detection systems at intersections in the City that currently do not have that technology. Advanced video detection systems support the capability to run "adaptive signalization" systems capable of adjusting intersection signal timing based on real-time traffic conditions thereby achieving increased intersection capacity. This planned improvement is allocated to projected growth over the next 10 years.



Figure S7: Cost per VMT Factor for Street Facilities: Traffic Signal System Improvements

Traffic Signal Project: City Estimated Cost	\$4,830,000
Total VMT 2034	7,661,461
Cost per VMT	\$0.63

Source: City of Tucson

Multimodal Facilities - Plan-Based

The City of Tucson provides a network of facilities for multimodal transportation and has plans to expand its network. Multimodal transportation facilities are constructed in public street right of ways.

Figure S8 contains a list of planned multimodal improvement projects which Tucson anticipates building over the next 5 years. The estimated local costs for these projects of \$21 million are used to determine the cost per VMT of \$2.86 (\$21,314,008 / projected VMT in 2029 of 7,449,999). Total projected demand in 2029 on Tucson roadways is used to allocate costs to current and future demand, thereby ensuring new growth does not contribute in excess of their demand.

Figure S8: Multimodal Facilities Planned Costs

Project Name	Length (mi)	Construction Year	Estimated Local Cost	Bond \$ 407 (GO Bond/property tax)	Subtotal Other Funding	Estimated Total Cost (2024 \$)
5th Street and 6th Street Pedestrian Safety & Walkability	4	2025	\$2,785,611	\$5,320,640	\$0	\$8,106,251
6th Avenue Protected Bike Lane	2	2026	\$51,933	\$888,067	\$0	\$940,000
36th Street Pedestrian Safety and Walkability	4	2025	\$974,898	\$1,958,426	\$1,335,000	\$4,268,324
12th Avenue Pedestrian Safety and Walkability	4	2026	\$948,222	\$2,127,530	\$2,517,000	\$3,075,752
Glenn Street Pedestrian Safety and Walkability	6	2027	\$409,515	\$9,400,435	\$0	\$9,809,950
Drexel Road Shared-Use Path	2	2027	\$4,121,760	\$1,230,908	\$0	\$5,352,668
Vicksburg Pedestrian Safety and Walkability	2	2026	\$360,210	\$1,608,104	\$0	\$1,968,314
Grande Avenue Pedestrian Safety and Walkability	1	2026	\$50,000	\$200,000	\$0	\$250,000
Kolb-Irvington Shared-Use Path	5	2027	\$8,009,502	\$1,573,555	\$0	\$9,583,057
St. Mary's Road Pedestrian Safety and Walkability	2	2026	\$1,846,551	\$2,200,000	\$0	\$4,046,551
La Cholla Boulevard Protected Bike Lane	4	2026	\$292,130	\$1,617,641	\$0	\$1,909,771
Dodge Boulevard Pedestrian Safety and Walkability	4	2027	\$1,463,676	\$3,375,554	\$0	\$4,839,230
Total			\$21,314,008	\$31,500,860	\$3,852,000	\$54,149,868

Source: City of Tucson

Multimodal Capacity Improvements: Estimated Local Cost (5-Year Plan)	\$21,314,008
Total VMT 2029	7,449,999
Cost per VMT	\$2.86

SERVICE UNITS, DEMAND, AND COST FOR SERVICES

ARS § 9-463.05(E)(2) requires:

"An analysis of the total capacity, the level of current usage and commitments for usage of capacity of the existing necessary public services, which shall be prepared by qualified professionals licensed in this state, as applicable."

TischlerBise created an aggregate travel model to convert development units within Tucson to vehicle trips and vehicle miles of travel. This includes the factors discussed above, as well as average trip length, and is shown in Figure S13.



Vehicle Trips

Figure S9 shows the calculation of vehicle trips generated by existing development. When average weekday vehicle trip ends and trip adjustment percentages (shown in Figure S2) are multiplied by the development unit quantities for Tucson from the Land Use Assumption in Appendix A (housing units and nonresidential KSF), the total number of vehicle trips generated by existing development is determined. As shown in Figure S9, this totals just over 2 million adjusted vehicle trips.

Figure S9: Vehicle Trips

Development Type	ITE Code	Weekday Vehicle Trip Ends ¹	Dev Unit	Trip Adj	2024 Trips
Single Units	210	8.53	HU	58%	817,849
2+ Units	220	4.13	HU	58%	203,990
Industrial (KSF)	110	4.87	KSF	50%	53,212
Commercial (KSF)	820	37.01	KSF	33%	273,242
Institutional (KSF)	520	19.52	KSF	33%	640,776
Office & Other (KSF)	710	10.84	KSF	50%	101,108
				Total	2,090,177

1. Institute of Transportation Engineers (ITE), <u>Trip Generation</u>, 11th Edition, 2021; TischlerBise analysis.

2. Derived using local traffic counts and <u>U.S. Department of Transportation, Federal Highway Administration,</u> 2022 National Household Transportation Survey.

Average Trip Length

For the incremental expansion methodology, it is necessary to determine the average trip length on the City's arterial network. To do this, national trip generation rates and average trip lengths from the 2022 National Household Travel Survey are used to determine expected VMT on the City's transportation network. Figure S10 shows average trip lengths from the National Household Travel Survey (2022).⁴

Land Use	National Average Trip Length (miles)
Residential	13.50
Industrial	8.70
Commercial/Retail	5.80
Institutional	8.70
Office and Other	8.70

Figure S10: National Average Trip Lengths

* U.S. Department of Transportation, Federal Highway Administration, 2022 National Household Transportation Survey

⁴ U.S. Department of Transportation, Federal Highway Administration, 2022 National Household Travel Survey.



The national average trip length needs to be adjusted to reflect actual local demand on the City's arterial network. To do this, TischlerBise first determines expected demand (VMT)⁵ on the City's complete transportation network using the above national travel demand characteristics.

Average daily trips from existing development in each land use category are multiplied by the applicable average trip lengths.

Land Use	Average Daily Trips	National Avg Trip Length on All Roads (miles)*	Expected VMT
Single Units	817,849	13.50	11,040,962
2+ Units	203,990	13.50	2,753,865
Industrial	53,212	8.70	462,944
Commercial	273,242	5.80	1,584,804
Institutional	640,776	8.70	5,574,751
Office & Other	101,108	8.70	879,640
Total	2,090,177		22,296,965

Figure S11. Expected VMT in the City of Tucson

* U.S. Department of Transportation, Federal Highway Administration, 2022 National Household Transportation Survey

Because expected VMT reflects anticipated travel demand from City development on the entire roadway system, it is therefore higher than actual VMT on the arterial system in the City. To calibrate demand on the arterial system, expected travel demand is compared to actual VMT obtained from the City of Tucson's street segment database. The ratio between actual and expected VMT provides a local adjustment factor that can be applied to national average trip lengths by type of land use. The local adjustment factor is shown in Figure S12.

Figure S12. Local Trip Length Adjustment Factor

Existing Vehicle Miles of Travel (VMT)^	7,244,643
Expected Local VMT*	22,296,965
Actual to Expected VMT	0.325

^ Pima Association of Governments (PAG); City of Tucson.

* TischlerBise analysis

⁵ VMT = trips x trip length



As shown in Figure S13, national average trips lengths are adjusted to reflect local conditions.

Land Use	National Avg Trip Length on All Roads (miles)*	Local Adj. Factor (for Arterials)	Local Trip Length on Arterials	
Residential	13.50	0.325	4.39	
Industrial	8.70	0.325	2.83	
Commercial/Retail	5.80	0.325	1.88	
Institutional	8.70	0.325	2.83	
Office and Other	8.70	0.325	2.83	

Figure S13. Local Average Trip Lengths by Land Use

Sources: National trip length from 2022 NHTS and TischlerBise; local adjustment from Figure S12.

Using the above factors, VMT per service unit is calculated, shown below in Figure S14.

Development Type	ITE Code	Weekday Vehicle Trip Ends ¹	Trip Adj	Adj Trip Rate	Local Trip Length	VMT per Service Unit
Single Units	210	8.53	58%	4.93	4.39	21.60
2+ Units 220		4.13	58%	2.38	4.39	10.46
Industrial (KSF) 110		4.87	50%	2.44	2.83	6.88
Commercial (KSF)	820	37.01	33%	12.21	1.88	23.02
Institutional (KSF) 520		19.52	33%	6.44	2.83	18.21
Office & Other (KSF)	710	10.84	50%	5.42	2.83	15.32

Figure S14. VMT per Service Unit on Arterial Network

1. Institute of Transportation Engineers (ITE), <u>Trip Generation</u>, 11th Edition, 2021; TischlerBise analysis.



Travel Demand Model

ARS § 9-463.05(E)(5) requires:

"The total number of projected service units necessitated by and attributable to new development in the service area based on the approved land use assumptions and calculated pursuant to generally accepted engineering and planning criteria."

Projected development in Tucson over the next 10 years, and the corresponding need for additional lane miles is shown in Figure S15. Trip generation rates and trip adjustment factors convert project development into average weekday vehicle trips. New development over the next ten years in Tucson is projected to generate 131,654 average weekday vehicle trips.

ARS § 9-463.05(E)(6) requires:

"The projected demand for necessary public services or facility expansions required by new service units for a period not to exceed ten years."

The travel demand model inputs above (Figure S14) are used to derive level of service in Vehicle Miles of Travel and future needs of lane miles. A Vehicle Mile of Travel (VMT) is a measurement unit equal to one vehicle traveling one mile. As shown in Figure S15, based on the increase in VMT (416,818), the City of Tucson would need to construct an additional 51.47 lane miles of arterials to accommodate projected development over the next 10 years. Growth-related costs for systemwide signalization and multimodal improvements are shown as well.



Figure S15: Projected Travel Demand Model

Development Type	ITE Code	Weekday Vehicle Trip Ends ¹	Dev Unit	Trip Adj	2024 Trips	Avg Trip Length ²
Single Units	210	8.53	HU	58%	817,849	4.39
2+ Units	220	4.13	HU	58%	203,990	4.39
Industrial (KSF)	110	4.87	KSF	50%	53,212	2.83
Commercial (KSF)	820	37.01	KSF	33%	273,242	1.88
Institutional (KSF)	520	19.52	KSF	33%	640,776	2.83
Office & Other (KSF)	710	10.84	KSF	50%	101,108	2.83
				Total	2 090 177	3 47

1. Institute of Transportation Engineers (ITE), <u>Trip Generation</u>, 11th Edition, 2021; TischlerBise analysis.

2. Derived using local traffic counts and <u>U.S. Department of Transportation, Federal Highway Administration, 2022 National Household</u> <u>Transportation Survey</u>.

	Vehicle Capacity per Lane Mile		8,100						
	Cost per Lane Mile		\$1,790,800) Multi-year Intervals >>					
		2024	2025	2026	2027	2028	2029	2034	10-Year
		Base	1	2	3	4	5	10	Increase
	Single Family Units	166,053	166,707	167,352	167,811	168,294	168,798	171,556	5,503
ent	Multi-Family Units	85,543	86,100	86,649	87,040	87,451	87,880	90,230	4,688
md	Industrial KSF	21,853	22,114	22,378	22,645	22,915	23,188	24,606	2,753
velc	Commercial KSF	22,372	22,500	22,628	22,757	22,886	23,017	23,680	1,307
De	Institutional KSF	99,475	100,444	101,423	102,412	103,410	104,418	109,607	10,132
	Office & Other KSF	18,655	18,752	18,851	18,950	19,049	19,149	19,657	1,003
>	Single Family Trips	817,849	821,070	824,248	826,509	828,883	831,365	844,953	27,104
e Weekda icle Trips	Multi-Family Trips	203,990	205,318	206,629	207,562	208,541	209,565	215,169	11,179
	Industrial Trips	53,212	53,847	54,490	55,140	55,798	56,464	59,915	6,703
	Commercial Trips	273,242	274,798	276,363	277,937	279,520	281,111	289,208	15,966
rag Veh	Institutional Trips	640,776	647,022	653,328	659,696	666,126	672,619	706,043	65,267
Ave	Office & Other Trips	101,108	101,639	102,172	102,709	103,248	103,790	106,543	5,435
`	Total Vehicle Trips	2,090,177	2,103,694	2,117,230	2,129,553	2,142,116	2,154,914	2,221,831	131,654
VMT	Vehicle Miles of Travel	7,244,643	7,288,481	7,332,271	7,370,603	7,409,854	7,449,999	7,661,461	416,818
	Arterial Lane Miles	1,499	1,504	1,510	1,515	1,519	1,524	1,550	51.47
NEED	Additional Lane Miles		5.41	5.41	4.73	4.85	4.96	5.30	51.47
NEED	Cumulative Lane Miles		5.41	10.82	15.55	20.40	25.36	51.47	51.47
	Growth-Related Road Capacity Cost		\$9,688,228	\$9,688,228	\$8,470,484	\$8,685,380	\$8,882,368	\$9,491,240	\$92,172,476
	Growth-Related Signalization Cost		\$27,618	\$27,588	\$24,149	\$24,728	\$25,291	\$27,031	\$262,595
	Growth-Related Multimodal Coat		\$125,377	\$125,239	\$109,630	\$112,258	\$114,815	\$122,711	\$1,192,099

ARS § 9-463.05(E)(3) requires:

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

Multiplying the increase in number of lane miles (51.47) by the local cost per lane mile from Figure S5 (\$1,790,800) results in a 10-year cost of approximately \$92 million attributed to arterial lane miles along with an additional \$262,595 for signalization, and \$1.2 million in multimodal improvements.


Development Impact Fee Report - Plan-Based

The cost to prepare the Street Facilities IIP and Development Impact Fee Report totals \$42,750. Tucson plans to update its report every five years. Based on this cost, proportionate share, and five-year projections of new residential and nonresidential development from the Land Use Assumptions document, the cost is \$0.20 per average weekday VMT.

Figure S16: Development Impact Fee Report Cost Allocation

Necessary Public Assessed		Assessed	Proportionate	Cost Allocation				Cost per
Service	Cost	Against	Share	Demand Units	2024	2029	Change	Demand Unit
Streets	\$42,750	All Development	100%	Avg Wkdy VMT	7,244,643	7,449,999	205,356	\$0.20



STREET AND MULTIMODAL FACILITIES IIP

Potential Street Facilities Improvements where development impact fees may be used to address capacity needs due to new development—as projected in the previous section—are shown in Figure S17. Street and Multimodal improvements may include but are not limited to the projects listed below in S17. In addition to the Streets Facilities IIP (see Figure S17), the City plans to identify projects that will serve growth as part of its annual budget process and annual capital improvement planning process.

		AREA D	AREAC
Capacity improvements on Streets identified below, or others as needed due to growth 12th Ave: 44th - Drexel 12th Ave: Ajo Way - Drexel Ajo Way: Park Ave - Mission Rd Grant: Santa Rita - Swan Pima St: Alvernon - Swan Speedway: Alvernon - Wilmot Wilmot Rd: I-10 - End of Road (1.5 Miles) Downtown Links: I- 10 to Broadway Other projects based on Mobility Master Plan, development impacts and capacity improvements Traffic signal system project	 Capacity improvements on Streets identified below, or others as needed due to growth Rosemont Boulevard: Speedway - Broadway Stone Ave: Drachman - Wetmore Sunset: Silverbell - I- 10/River Sth Street and 6th Street Pedestrian Safety & Walkability Roger Road Pedestrian Safety & Walkability 6th Avenue Protected Bike Lane Glenn Street Pedestrian Safety and Walkability Fairview Avenue Bicycle Protected Bike Lane Dodge Boulevard Pedestrian Safety and Walkability Other projects based on Mobility Master Plan, development impacts and capacity improvements 	 AREA B Capacity improvements on Streets identified below, or others as needed due to growth Drexel Road: Bridge Over Santa Cruz River Irvington: Mission - I-19 Starr Pass: Shannon - I-10 Swan: Fairy Duster - Valencia 12th Avenue Pedestrian Safety and Walkability 36th Street Pedestrian Safety and Walkability Drexel Road Shared-Use Path Grande Avenue Pedestrian Safety and Walkability St. Mary's Road Pedestrian Safety and Walkability La Cholla Boulevard Protected Bike Lane San Marcos Boulevard Bicycle Boulevard Nebraska St Pedestrian Safety and Walkability Martin Luther King Way and Tucson Marketplace Blvd intersection improvements Country Club Bd: Milbur 	AREA C Capacity improvements on Streets identified below, or others as needed due to growth 22nd: Camino Seco - Houghton Broadway: Pantano Rd Intersection Camino Seco: Wrightstown - Speedway Houghton: Broadway - Tanque Verde Irvington: Camino Seco - Houghton Kolb: Escalante - I- 10 Mary Ann Cleveland: Houghton - City Limits Valencia: Kolb - Houghton Kolb-Irvington Shared-Use Path Mary Ann Cleveland Way Shared-Use Path Vicksburg Pedestrian Safety and Walkability Other projects
based on Mobility Master Plan, development impacts and capacity improvements • Traffic signal system project	 Fairview Avenue Bicycle Protected Bike Lane Dodge Boulevard Pedestrian Safety and Walkability Other projects based on Mobility Master Plan, development impacts and capacity improvements 	 La Cholla Boulevard Protected Bike Lane San Marcos Boulevard Bicycle Boulevard Nebraska St Pedestrian Safety and Walkability Martin Luther King Way and Tucson Marketplace Blvd intersection improvements Country Club Rd: Milbur St. to Michigan St. Other projects based on Mobility Master Plan, development impacts and capacity improvements 	 Valencia: Kolb - Houghton Kolb-Irvington Shared-Use Path Mary Ann Cleveland Way Shared-Use Path Vicksburg Pedestrian Safety and Walkability Other projects based on Mobility Master Plan, development impacts and canacity

Figure S17: Necessary Street and Multimodal Facilities Improvements and Expansions by Service Area



STREET AND MULTIMODAL FACILITIES DEVELOPMENT IMPACT FEES

Revenue Offset

A revenue offset is not necessary for the Street and Multimodal Facilities development impact fees because 10-year growth costs generated by projected development exceed revenues projected to be generated by development impact fees (see Figure S19).

Proposed Street and Multimodal Facilities Development Impact Fees

ARS § 9-463.05(E)(4) requires:

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

Infrastructure standards and cost factors for Street and Multimodal Facilities are summarized in the upper portion of Figure S18. The cost per service unit is \$224.69 per VMT.

The proposed development impact fees for Street and Multimodal Facilities are shown in Figure S18. Cost factor for streets improvements, signalization project, multimodal improvements and professional services are summarized at the top of the figure. Residential development impact fees are expressed by size of unit. Nonresidential development impact fees are expressed per 1,000 square feet (KSF) of floor area and per room for lodging land uses. The Street and Multimodal Facilities development impact fees are calculated by multiplying the \$224.69 net cost per VMT by the VMT per development unit for each land use type.

Proposed updated fees are compared to the City of Tucson's current adopted impact fees showing dollar amount and percentage differences.



Figure S18: Proposed Street and Multimodal Facilities Development Impact Fees

Fee Component	Cost per VMT
Capacity Road Projects	\$221.00
Signalization Project	\$0.63
Multimodal Projects	\$2.86
Development Fee Report	\$0.20
Total	\$224.69

Residential Development (per Housing Unit)							
Size of Housing Unit (Sq. Ft.)	Demand Unit	Avg Wkdy VMT	Proposed Fees	Current Fees*	Increase / (Decrease)	% Change	
750 or Less	Housing Unit	9.35	\$2,100	\$1,412	\$688	49%	
751 to 1,250	Housing Unit	14.28	\$3,208	\$2,189	\$1,019	47%	
1,251 to 1,750	Housing Unit	18.77	\$4,217	\$2,887	\$1,330	46%	
1,751 to 2,250	Housing Unit	22.06	\$4,956	\$3 <i>,</i> 397	\$1,559	46%	
2,251 to 2,750	Housing Unit	24.64	\$5,536	\$3,798	\$1,738	46%	
2,751 to 3,250	Housing Unit	26.77	\$6,014	\$4,132	\$1,882	46%	
3,251 to 3,750	Housing Unit	28.57	\$6,419	\$4,415	\$2,004	45%	
3,751 or More	Housing Unit	30.14	\$6,772	\$4,661	\$2,111	45%	

Nonresidential Development (per Demand Unit)								
Development Type	ITE Code	Demand Unit	Avg Wkdy VMT	Proposed Fees	Current Fees*	Increase / (Decrease)	% Change	
Industrial: Light Industrial	110	1,000 Sq. Ft.	6.88	\$1,545	\$1,129	\$416	37%	
Industrial: Manufacturing	140	1,000 Sq. Ft.	6.71	\$1,507	\$895	\$612	68%	
Industrial: Warehousing	150	1,000 Sq. Ft.	2.42	\$543	\$395	\$148	37%	
Commercial/Retail: General	820	1,000 Sq. Ft.	23.02	\$5,172	\$5,822	(\$650)	-11%	
Commercial/Retail: Free Standing Discount Store	815	1,000 Sq. Ft.	33.50	\$7,527	\$8,192	(\$665)	-8%	
General Office	710	1,000 Sq. Ft.	15.32	\$3,442	\$2,218	\$1,224	55%	
Institutional: Schools	520	1,000 Sq. Ft.	18.21	\$4,091	\$2,934	\$1,157	39%	
Institutional: Religious Facilities	560	1,000 Sq. Ft.	6.48	\$1,455	\$1,044	\$411	39%	
Institutional: Medical (Nursing Hm./Asstd Living)	620	1,000 Sq. Ft.	6.19	\$1,390	\$997	\$393	39%	
Institutional: Medical (Clinic, Hospital)	630	1,000 Sq. Ft.	35.07	\$7,879	\$5,736	\$2,143	37%	
Hotel	310	Room	7.88	\$1,770	\$1,953	(\$183)	-9%	

*Source: City of Tucson, "Annual Development Impact Fees Report FY2023/24 (Unaudited), September 28, 2024; Appendix A: Development Impact Fees Schedules (Ordinance 11759 (June 9, 2020), effective July 1, 2021). https://www.tucsonaz.gov/files/sharedassets/public/v/1/bsd/documents/finance-documents/fy24annual-development-impact-fees-report.pdf

The resulting fee should be assessed by land use type and then allocated to (1) the citywide portion of the Street and Multimodal Development Impact Fee Fund at 21 percent of the fee (reflecting citywide local growth-related costs per the IIP) and (2) remaining portion to the Service Area portion of the fund in which it was collected (Service Area A, B, or C).



Forecast of Revenue

Appendix B contains the forecast of revenues required by Arizona's Enabling Legislation.

Development Impact Fee Revenues for Street and Multimodal Facilities

Projected fee revenue shown in Figure S19 is based on the development projections in the Land Use Assumptions (see Appendix A) and the updated Street and Multimodal Facilities development impact fees (see Figure S18). Expenditures on arterial street improvements are derived from the anticipated need for approximately 51.47 new lane miles over the next 10 years (see Figure S15) at an average local cost of \$1.79 million per lane mile. If development occurs at a faster rate than projected, the demand for infrastructure will increase along with development fee revenue. If development occurs at a slower rate than projected, the demand for infrastructure will decrease and development fee revenue will decrease at a similar rate. Anticipated development fee revenue is projected at approximately \$90.3 million over the next 10 years, while growth-related expenditures are estimated at \$94 million. Revenue allocation by service area is shown at the bottom of the figure reflecting 21 percent of future growth-related needs due to citywide/RTA projects and the remainder by Service Area based on anticipated projected growth in each area.



Figure S19: Projected Street Facilities Development Impact Fee Revenue

Fee Component	Total Local Cost	Growth Share
Capacity Road Projects [^]	\$92,172,476	\$92,172,476
Signalization Project	\$4,830,000	\$262,595
Multimodal Projects	\$21,314,008	\$1,192,099
Development Fee Report	\$42,750	\$42,750
Total Expenditures	\$118,359,234	\$93,669,921

^Incremental-based approach; reflects local growth-share only.

		Single Family	Multi-Family	Industrial	Commercial	Institutional	Office & Other
		\$4,853 per Unit*	\$2,350 per Unit*	\$1,198 per KSF**	\$6,350 per KSF**	\$3,704 per KSF**	\$3,442 per KSF
	Year	Units	Units	KSF	KSF	KSF	KSF
Base	2024	166,053	85,543	21,853	22,372	99 <i>,</i> 475	18,655
Year 1	2025	166,707	86,100	22,114	22,500	100,444	18,752
Year 2	2026	167,352	86,649	22,378	22,628	101,423	18,851
Year 3	2027	167,811	87,040	22,645	22,757	102,412	18,950
Year 4	2028	168,294	87,451	22,915	22,886	103,410	19,049
Year 5	2029	168,798	87,880	23,188	23,017	104,418	19,149
Year 6	2030	169,319	88,325	23,465	23,148	105,436	19,250
Year 7	2031	169,863	88,788	23,745	23,280	106,463	19,351
Year 8	2032	170,437	89,277	24,029	23,412	107,501	19,453
Year 9	2033	171,000	89,756	24,315	23,546	108,549	19,555
Year 10	2034	171,556	90,230	24,606	23,680	109,607	19,657
1	0-Yr Increase	5,503	4,688	2,753	1,307	10,132	1,003
Projec	ted Revenue	\$26,706,389	\$11,016,327	\$3,298,662	\$8,300,526	\$37,526,794	\$3,451,988

* Average fee based on average VMT per housing unit by type of unit.

** Average of land uses under respective nonresidential category.

Total Projected Revenue\$90,300,686Surplus / (Deficit) [Growth Share](\$3,369,235)

10-YEAR REVENUE ALLOCATION		
Citywide Service Area	21.0%	\$18,963,144
Area A	29.0%	\$20,687,887
Area B	34.0%	\$24,254,764
Area C	37.0%	\$26,394,891
TOTAL		\$90,300,686



APPENDIX A: LAND USE ASSUMPTIONS

EXECUTIVE SUMMARY

For municipalities in Arizona, the state enabling legislation requires supporting documentation on land use assumptions, a plan for infrastructure improvements, and development fee calculations. This document contains the land use assumptions for the City of Tucson 2024 development impact fee update. Development impact fees must be updated every five years, making short-range projections the critical time frame. The Infrastructure Improvements Plan (IIP) is limited to 10 years for non-utility fees, thus a long-range "build-out" analysis may not be used to derive development impact fees.

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

"Projections of change in land uses, densities, intensities and population for a specified service area over a period of at least 10 years and pursuant to the General Plan of the municipality."

TischlerBise prepared current demographic estimates and future development projections for both residential and nonresidential development that will be used in the Infrastructure Improvement Plan (IIP) and calculation of the development impact fees. Demographic data for January 1, 2024, are used to calculate levels of service provided to existing development in the City of Tucson. Although long-range projections are necessary for planning infrastructure systems, a shorter time frame of five to 10 years is critical for the development impact fees analysis.

SERVICE AREAS

ARS § 9-63.05 defines "service area" as follows:

"Any specified area within the boundaries of a municipality in which development will be served by necessary public services or facility expansions and within which a substantial nexus exists between the necessary public services or facility expansions and the development being served as prescribed in the infrastructure improvements plan."

The City's current development impact fee program used a citywide service area for Police and Fire fees (see Figure A1) and subarea service areas for Parks and Streets (see Figure A2).

For Parks and Recreational and Streets, capacity projects for which development impact fees are collected, are programmed to be spent within the subarea of the City where the fees are collected. Three service areas are used based on growth patterns and location of infrastructure.

For Streets, a portion of the current fee is based on citywide capacity needs (i.e., for RTA projects and other citywide capacity needs) and is collected and spent citywide for RTA-identified projects and other citywide transportation improvement projects. The remainder of the fee is for other non-RTA/non-citywide capacity street improvement projects and is to be spent within the services area in which it was



collected (Service Area A, B, or C). This approach is anticipated to be reviewed and confirmed in the 2024 update.

Police and fire development impact fees are collected and spent as Citywide fees. Public safety infrastructure and deployment changes over time based on migration patterns and is not necessarily restricted to specific geographic sub-zones.

Figure A1. City of Tucson Current Development Impact Fee Service Area (Police and Fire)

Source: Map Tucson, City of Tucson; TischlerBise downloaded (May 2, 2024)







Figure A2. City of Tucson Current Development Impact Fee Service Area (Parks and Recreational and Streets)

Source: Map Tucson, Impact Fee Areas – 2020; TischlerBise downloaded (May 2, 2024)

Note: A portion of the Streets Facilities Development Impact Fee is also collected and expended on a citywide basis.



RESIDENTIAL DEVELOPMENT

Current estimates and future projections of residential development are detailed in this section, including population and housing units by type (single family versus multi-family units). Current (2024) estimates of housing units were obtained using annual housing unit permit data provided by Pima Association of Governments (PAG) through the City of Tucson's Planning & Development Services Department along with persons per housing unit derived from the 2022 U.S. Census Bureau American Community Survey 5-year estimates.

Persons per Housing Unit

In 2010, the U.S. Census Bureau transitioned from the traditional long-form questionnaire to the American Community Survey, which is less detailed and has smaller sample sizes. As a result, Census data now has more limitations than before. For example, data on detached housing units are now combined with attached single units (commonly known as townhouses). For development impact fees in Tucson, "single unit" residential includes detached units, townhouses, and duplexes that share a common sidewall but are constructed on an individual parcel of land. The second residential category includes all structures with two or more units on an individual parcel of land.

According to the U.S. Census Bureau, a household is a housing unit that is occupied by year-round residents. Development impact fees often use per capita standards and persons per housing unit, or persons per household, to derive proportionate-share fee amounts. When persons per housing unit are used in the fee calculations, infrastructure standards are derived using year-round population. When persons per household are used in the fee calculations, the development impact fee methodology assumes all housing units will be occupied, thus requiring seasonal or peak population to be used when deriving infrastructure standards.

TischlerBise recommends that development impact fees for residential development in the City of Tucson be imposed according to a number of year-round residents per housing unit. For the development impact fee calculations, TischlerBise used the American Community Survey results shown at the top of Figure A3 to determine the relative number of persons per housing unit, by units in a residential structure, and the housing mix in Tucson. The ratio of persons per housing unit (PPHU) across housing types is 2.12. To project population, the single family and multi-family PPHU ratios of 2.37 and 1.61, respectively, are used. The share of multi-family housing in Tucson is approximately 34 percent. In 2022, approximately 9.4 percent of the housing stock in Tucson was vacant.



Туре	Persons	Households	Persons per Household	Housing Units	Housing Mix	Persons per Housing Unit	Vacancy Rate
Single Unit*	383,536	148,818	2.58	161,741	66%	2.37	8.0%
2+Units**	132,386	71,951	1.84	82,008	34%	1.61	12.3%
Subtotal	515,922	220,769		243,749		2.12	9.4%
Group Quarters	25,111						
TOTAL	541,033			243,749		2.22	

Figure A3. City of Tucson Year-Round Persons per Unit by Type of Housing

Source: U.S. Census Bureau's American Community Survey, 2022 5-Year Estimates,

Tables B25024, B25032, B25033, and B26001.

* Includes detached, attached, duplexes, and mobile homes.

** Includes boat, RV, van, etc.

Household Size by Dwelling Unit Size

Custom tabulations of demographic data by bedroom range can be created from individual survey responses provided by the U.S. Census Bureau, in files known as Public Use Microdata Samples (PUMS). PUMS files are available for areas of roughly 100,000 persons, and the City of Tucson is covered in a series of Public Use Microdata Areas (PUMA).⁶ Figure A4 shows the survey results for the City of Tucson. Unadjusted persons per housing unit, derived from PUMS data, were adjusted downward to match the control totals for the City of Tucson (as documented above in Figure A3).

Bedroom Range	Persons	Units	Unadj. Persons/HU	Adj. Persons/HU*
0-2 bdrm	10,093	6,485	1.56	1.55
3 bdrm	12,665	5,445	2.33	2.32
4 bdrm	7,175	2,371	3.03	3.02
5+ bdrm	1,125	308	3.65	3.63
Totals	31,058	14,609	2.13	2.12

Figure A4. Average Number of Persons by Bedroom Range (All Housing Types)

Source: American Community Survey, Public Use Microdata Sample (2018-2022 5-Year ACS).

* Adjusted multipliers are shown that scale to the average household size from American Community Survey 2018-2022 5-Year data for the City of Tucson.

⁶ Per the U.S. Census Bureau, current PUMA boundaries are based on Census 2020 definitions, while records from 2021 and earlier use boundaries based on Census 2010 definitions. Therefore, multi-year files for 2022 will contain PUMA codes created from both Census 2010 and Census 2020. For the City of Tucson analysis, both 2010 and 2020 PUMA boundaries are used as follows: 2010 PUMAs are 202, 205, 206, 207, 208, and 209; 2020 PUMAs are 1902, 1905, 1906, 1907, 1908, and 1909.



Average Number of Persons by Dwelling Unit Size

Average floor area and number of persons by bedroom range are plotted in Figure A5, with a logarithmic trend line derived from four unit size averages. Using the trend line formula shown in the chart, TischlerBise derived the estimated average number of persons, by dwelling size, using multiple size thresholds. For the purpose of development impact fees, TischlerBise recommends continuing with a minimum fee based on a unit size of 750 square feet and a maximum fee for units 3,751 square feet or larger. Average dwelling sizes by bedroom range in the City was derived from U.S. Census Bureau regional data.

Actual A	Averages per Housi	Persons per Housing Unit by Size		
Bedrooms	Square Feet	Persons	Sq Ft Range	Persons
0-2	1,000	1.55	750 or Less	1.04
3	2,100	2.32	751 to 1,250	1.62
4	2,900	3.02	1,251 to 1,750	2.16
5+	4,200	3.63	1,751 to 2,250	2.55
-			2,251 to 2,750	2.85
			2,751 to 3,250	3.11
			3,251 to 3,750	3.32
			3,751 or More	3.51

Figure A5. Persons by Square Feet of Living Space (All Housing Types)

Average persons per housing unit derived from 2022 ACS PUMS data for the area that includes Tucson. Unit size for 0-2 bedroom is from the 2022 U.S. Census Bureau average for all multi-family units constructed in the Census West region. Unit size for all other bedrooms is from the 2022 U.S. Census Bureau average for single-family units constructed in the Census Mountain division.





Current Residential Estimates

To estimate the current population and number of housing units in the City of Tucson, TischlerBise used building permit data from July 1, 2022, to December 31, 2023, provided by Pima Association of Governments via the City of Tucson's Planning & Development Services department. Population was estimated from new housing units, which was then added to the 2022 estimated City of Tucson population.

Figure A6 shows Tucson's recent housing unit permit totals from July 1, 2022, through December 31, 2023. Population estimates are derived by multiplying persons per housing unit by type of unit from Figure A3 by the estimated number of housing units through December 31, 2023. Estimates are shown below in Figure A6. The growth in population is added to 2022 total estimated population to derive the January 1, 2024, estimate of 559,102.

Figure A6. City of Tucson Residential Permits by Year and Current Population Estimate (2024)

2022 Estimated Population ¹			554,021
Building Permits ²	Single Family	MF	Total
July 1-Dec 31, 2022	371	607	978
Jan 1-June 30, 2023	390	184	574
July 1-Dec 31, 2023	603	357	960
Total	1,364	1,148	2,512
	54%	46%	100%
Persons per Hsg Unit ³	2.37	1.61	
Estimated Population	3,233	1,848	5,081
January 1, 2024, Population Es	559,102		

1. July 1, 2022, Estimate of total population. Source: Pima Association of Governments.

2. Pima Association of Governments (PAG) Building Permit Data (July 1, 2022 - December 31, 2023).

3. U.S. Census Bureau's American Community Survey, 2022 5-Year Estimates.



Residential Projections

To derive 10-year housing unit projections, the City of Tucson and TischlerBise analyzed recent residential building activity along with latest projections for the City from Pima Association of Governments (PAG). Recent projections reflect population growth in the City at less than .5 percent annual growth.

Tucson population projections are shown in Figure A7. Population is projected using annual growth rates from 2022 PAG population projections for the City of Tucson applied to the base year population estimate and continued over 10 years. Projected population in households (i.e., not in group quarters) was derived by netting out the share of the population projected to be in group quarters (4.6 percent). The increase in household population was converted to housing units by dividing by the weighted average household size (2.12). The increase in projected housing units were then allocated to single family or multifamily using the distribution of new units from 2022-23 building permit data (54 percent single family/46 percent multifamily).

Over the next ten years, Tucson is projected to add a total population of just over 22,600 residents and approximately 10,200 housing units.

							Multi Year In	crements>>>	
		2024	2025	2026	2027	2028	2029	2034	10-Year
		Base	1	2	3	4	5	10	Change
Population									
Subtotal Household Population		533,383	535,950	538,484	540,286	542,179	544,157	554,988	21,605
Group Quarters Population ¹	4.6%	25,719	25,842	25,965	26,052	26,143	26,238	26,760	1,042
GRAND TOTAL POPULATION		559,102	561,793	564,448	566,337	568,321	570,395	581,748	22,646
Projected Annual % Growth ²			0.481%	0.473%	0.335%	0.350%	0.365%	0.395%	
Net Increase Per Year			2,691	2,656	1,889	1,984	2,074	2,291	
Housing Units	Projected ³								
Single Family Units	54.0%	166,053	166,707	167,352	167,811	168,294	168,798	171,556	5,503
Multi-Family Units	46.0%	85 <i>,</i> 543	86,100	86,649	87,040	87,451	87 <i>,</i> 880	90,230	4,688
Total Housing Units		251,596	252,807	254,002	254,852	255,745	256,678	261,787	10,191
Single Family Net Increase Per Year			654	645	459	482	504	557	
Multifamily Net Increase Per Year			557	550	391	411	429	474	
Total Net Increase Per Year			1,211	1,195	850	893	933	1,031	

Figure A7. City of Tucson Residential Development Projections

1. Share of total population from U.S. Census ACS 2018-2022 5-Yr Estimates.

2. Projected annual growth rate for City of Tucson from Pima Association of Governments (PAG), 2022 Projections.

3. Unit distribution for new units from 2022-2023 residential permit data.



NONRESIDENTIAL DEVELOPMENT

In addition to data on residential development, the infrastructure improvements plan and development impact fees require data on nonresidential development in Tucson. Current estimates and future projections of nonresidential development are detailed in this section, including jobs and floor area by type. TischlerBise uses the terms "jobs" to refer to employment by place of work.

Nonresidential Floor Area by Type of Development

Current nonresidential square footage is estimated using total square footage of space derived from the previous impact fee study (151.3 million square feet) plus the square feet of new nonresidential square footage permitted from 2019 through December 31, 2023 (11.1 million square feet). This estimate is allocated by industry sector from employment data and square footage analysis (U.S. Census, OnTheMap). Figure A8 provides January 1, 2024, floor area estimates for the City of Tucson, by category of nonresidential development.



Figure A8. City of Tucson Floor Area Estimate

2021 Jobs Summary ¹		
Industrial	34,304	14.59%
Commercial	47,504	20.21%
Institutional	92,513	39.36%
Office & Other	60,749	25.84%
Total	235,070	100.00%

Square Feet per Job²

Industrial	637
Commercial	471
Institutional	1,075
Office & Other	307

2021 Estd. Nonresidential Floor Area Breakdown (1,000 sq. ft.)

Total	162,327	100.00%
Office & Other	18,650	11.49%
Institutional	99,451	61.27%
Commercial	22,374	13.78%
Industrial	21,852	13.46%

2024 (Jan. 1) Total Nonres Floor Area³

162,354,664 Square Feet

Sector	2021 % Allocation	2024 1,000 Sq. Ft.	
Industrial	13.46%	21,853 KSF	
Commercial	13.78%	22,372 KSF	
Institutional	61.27%	99,475 KSF	
Office & Other	11.49%	18,655 KSF	
Total	100.00%	162,355 KSF	

1. U.S. Census Bureau, OnTheMap Application and LEHD Origin-Destination Employment Statistics (Beginning of Quarter Employment, 2nd Quarter of 2002-2021).

2. Trip Generation, Institute of Transportation Engineers, 11th Edition (2021).

3. Development Fee Study estimate for Jan. 1, 2019, plus estimated square footage constructed 2019-2023.



Figure A9 shows jobs per 1,000 square feet and average weekday vehicle trip ends per 1,000 square feet, broken down by nonresidential land use category. Gray shading indicates the four nonresidential development prototypes used by TischlerBise to correlate Tucson's projected job growth with nonresidential floor area growth and vehicle trips generated by development.

The last column in Figure A9 shows the ratio of jobs per 1,000 square feet from the Institute of Transportation Engineers (ITE) *Trip Generation* Manual (2021). These ratios are used to convert projected job figures into projected nonresidential floor areas over the next 10 years.

ITE Code	Land Use / Size	Demand Unit	Wkdy Trip Ends Per 1,000 Sq. Ft.	Wkdy Trip Ends Per Employee	Employees Per Demand Unit	Sq. Ft. Per Emp
110	Light Industrial	1,000 Sq Ft	4.87	3.10	1.57	637
130	Industrial Park	1,000 Sq Ft	3.37	2.91	1.16	864
140	Manufacturing	1,000 Sq Ft	4.75	2.51	1.89	528
150	Warehousing	1,000 Sq Ft	1.71	5.05	0.34	2,953
151	Mini-Warehouse	1,000 Sq Ft	1.45			
254	Assisted Living	bed	2.60	4.24	0.61	na
310	Hotel	room	7.99	14.34	0.56	na
320	Motel	room	3.35	25.17	0.13	na
520	Elementary School	student	2.27	22.50	0.10	na
525	High School	student	1.94	21.95	0.09	na
540	Public/Institutional	1,000 Sq Ft	20.25	14.61	1.39	721
560*	Institutional: Religious	1,000 Sq Ft	7.60	n/a		
565	Day Care	1,000 Sq Ft	47.62	21.38	2.23	448
610	Hospital	1,000 Sq Ft	10.77	3.77	2.86	350
620	Institutional: Medical/Health Facilities	1,000 Sq Ft	6.75	3.31	2.04	490
630	Institutional: Medical (Clinic)	1,000 Sq Ft	37.60	13.90	2.71	370
710	General Office (avg size)	1,000 Sq Ft	10.84	3.33	3.26	307
720	Medical-Dental Office	1,000 Sq Ft	36.00	8.71	4.13	242
730	Government Office	1,000 Sq Ft	22.59	7.45	3.03	330
750	Office Park	1,000 Sq Ft	11.07	3.54	3.13	320
760	Research & Dev Center	1,000 Sq Ft	11.08	3.37	3.29	304
770	Business Park	1,000 Sq Ft	12.44	4.04	3.08	325
820	Shopping Center (avg size)	1,000 Sq Ft	37.01	17.42	2.12	471
815	Free-Standing Discount Store	1,000 Sq Ft	53.87	24.63	2.19	457
520	Institutional: Schools	1,000 Sq Ft	19.52	21.00	0.93	1,075

Figure A9. ITE Employee and Trip Generation Ratios

520	Institutional: Schools	1,000 Sq Ft	19.52	21.00	0.93	1,075
560*	Institutional: Religious	1,000 Sq Ft	7.60	n/a	1.39	721.48
620	Institutional: Medical (Nursing Hm/Asst	1,000 Sq Ft	6.75	3.31	2.04	490
630	Institutional: Medical (Clinic)	1,000 Sq Ft	37.60	13.90	2.71	370
310	Hotel	room	7.99	14.34	0.56	1,795

* Employees per demand unit reflect proxy 540 ITE Code.

Source: <u>Trip Generation</u>, Institute of Transportation Engineers, 11th Edition (2021).



Employment projections (as of 2022) were obtained for Pima County by industry from the Arizona Office of Economic Opportunity. Growth rates by industry are used to project employment in the City and then converted to square feet using the above referenced employees per 1,000 square feet to project nonresidential square footage growth through 2034. Over the next ten years, the City is projected to grow by approximately 15.2 million square feet of nonresidential space and almost 19,800 jobs.

						Multi Year In	crements>>>		
	2024	2025	2026	2027	2028	2029	2034	10-Year	Avg. Annual
_	Base	1	2	3	4	5	10	Change	Growth Rate ^a
Jobs									
Industrial Jobs	34,306	34,715	35,130	35,549	35,973	36,403	38,627	4,321	1.19%
Commercial & Retail Jobs	47,500	47,770	48,043	48,316	48,591	48,868	50,275	2,776	0.57%
Institutional Jobs	92,535	93,437	94,347	95,267	96,195	97,133	101,960	9,425	0.97%
Office & Other Jobs	60,764	61,083	61,404	61,726	62,050	62,376	64,031	3,267	0.53%
Total Jobs	235,105	237,005	238,923	240,858	242,810	244,780	254,893	19,789	
Nonresidential Floor Area (KSF) ^b									
Industrial KSF	21,853	22,114	22,378	22,645	22,915	23,188	24,606	2,753	
Commercial & Retail KSF	22,372	22,500	22,628	22,757	22,886	23,017	23,680	1,307	
Institutional KSF	99,475	100,444	101,423	102,412	103,410	104,418	109,607	10,132	
Office & Other KSF	18,655	18,752	18,851	18,950	19,049	19,149	19,657	1,003	
Total Floor Area (KSF)	162,355	163,810	165,280	166,763	168,261	169,773	177,550	15,195	
Industrial KSF Net Increase Per Year		261	264	267	270	273	290		
Comm & Retail KSF Net Increase Per Year		127	128	129	130	130	134		
Institutional KSF Net Increase Per Year		970	979	989	998	1,008	1,058		
Office & Other KSF Net Increase Per Year		98	98	99	99	100	103		
Total KSF Net Increase Per Year		1,456	1,470	1,483	1,498	1,512	1,585		

Figure A10. City of Tucson Nonresidential Projections

a. Employment Projections for Pima County, Arizona Office of Economic Opportunity, 2022 Projections.

b. Projected employment converted to nonresidential square footage using average square feet per job factors in Figure A11.



VEHICLE TRIP GENERATION BY DWELLING SIZE

For vehicle trip generation rates, the recommended methodology shown at the bottom of Figure A11 shaded in green, reflects an average of trip rates based on persons and vehicles available for all types of households. In Tucson, each household is expected to generate an average of 7.34 Average Weekday Vehicle Trip Ends (AWVTE), compared to the national average of 8.52 trip ends per household.

Figure A11:	Average	Weekday	Vehicle Tri	p Ends by	Bedroom	Range
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Bedroom Range	Persons ¹	Vehicles Available ¹	Housing Units ¹	Housing Mix	Unadjusted PPH	Adjusted PPH ²	Unadjusted VPH	Adjusted VPH ²
0-2	10,093	7,233	6,485	44%	1.56	1.55	1.12	1.01
3	12,665	10,049	5,445	37%	2.33	2.32	1.85	1.67
4	7,175	5,291	2,371	16%	3.03	3.02	2.23	2.02
5+	1,125	787	308	2%	3.65	3.63	2.56	2.32
Total	31,058	23,360	14,609	100%	2.13	2.12	1.60	1.45

National Averages According to ITE

ITE Code	AWVTE Person	AWVTE Per Vehicle	AWVTE per HU	Tucson Housing Mix
210 SFD	2.65	6.36	9.43	66%
220 Apt	3.31	5.10	6.74	34%
Weighted Avg	2.87	5.93	8.52	100%

Persons per Household	Vehicles per Household
3.56	1.48
2.04	1.32
3.04	1.43

Recommended AWVTE per Housing Unit

Bedroom Range	AWVTE per Hhld Based on Persons ³	AWVTE per Hhld Based on Vehicles ⁴	AWVTE per Household ⁵
0-2	4.45	5.99	5.22
3	6.66	9.90	8.28
4	8.67	11.98	10.33
5+	10.42	13.76	12.09
Average	6.08	8.60	7.34

1. American Community Survey, Public Use Microdata Sample for AZ PUMAs area that includes Tucson (2018-2022 5-Year unweighted data).

2. Adjusted multipliers are scaled to make the average PUMS values match control totals for Tucson, based on American Community Survey 2018-2022 5-Year Estimates.

3. Adjusted persons per household multiplied by national weighted average trip rate per person.

4. Adjusted vehicles available per household multiplied by national weighted average trip rate per vehicle.

5. Average trip rates based on persons and vehicles per household.

Bedroom Range	Persons ¹	Vehicles Available ¹	Housing Units1	Housing Mix	Unadjusted PPH	Adjusted PPH ²
0-2	10,093	7,233	6,485	44%	1.56	1.55
3	12,665	10,049	5,445	37%	2.33	2.32
4	7,175	5,291	2,371	16%	3.03	3.02
5+	1,125	787	308	2%	3.65	3.63
Total	31,058	23,360	14,609	100%	2.13	2.12

Source: ITE Trip Generation Manual, 11th Edition, 2021



Vehicle Trip Ends by Dwelling Size

To derive AWVTE by dwelling size, TischlerBise matched trip generation rates and average floor area, by bedroom range, as shown in Figure A12, with a logarithmic trend line derived from 2022 square footage estimates provided by the U.S. Census Bureau (West region). Dwellings with two bedrooms or less average 1,000 square feet of floor area—based on multi-family dwellings constructed in West Census region. Three-bedroom dwellings average 2,100 square feet, four-bedroom dwellings average 2,900 square feet, and dwellings with five or more bedrooms average 4,200 square feet—based on single-family dwellings constructed in Census Mountain region. Using the trend line formula shown in the chart, TischlerBise derived the estimated average weekday vehicle trip ends, by dwelling size, using the size ranges shown.

As shown in the upper-right corner of the table below, the smallest floor area range (750 square feet or less) generates an estimated average of 3.69 trip ends per dwelling. The largest floor area range (3,751 square feet or more) generates an estimated average of 11.90 trip ends per dwelling.



Actual	Averages per Hou	sehold	Fitted-Cur	ve Values	
Bedrooms	Square Feet	Trip Ends	Sq Ft Range	Trip Ends	Square Feet
0-2	1,000	5.22	750 or Less	3.69	750
3	2,100	8.28	751 to 1,250	5.64	1,125
4	2,900	10.33	1,251 to 1,750	7.41	1,625
5+	4,200	12.09	1,751 to 2,250	8.71	2,125
			2,251 to 2,750	9.73	2,625
			2,751 to 3,250	10.57	3,125
			3,251 to 3,750	11.28	3,625
			3,751 or More	11.90	4,125

Figure A12. Vehicle Trip Ends by Dwelling Size

Average weekday vehicle trips per household derived from 2022 ACS PUMS data for the area that includes the City of Tucson. Unit size for 0-2 bedroom is from the 2022 U.S. Census Bureau average for all multi-family units constructed in the Census West region. Unit size for all other bedrooms is from the 2022 U.S. Census Bureau average for single-family units constructed in the Census Mountain division.





FUNCTIONAL POPULATION

For certain infrastructure facilities TischlerBise often uses "functional population" to establish the relative demand for infrastructure from both residential and nonresidential development. As shown in Figure A13, functional population accounts for people living and working in a jurisdiction. Residents who do not work are assigned 20 hours per day to residential development and four hours per day to nonresidential development (annualized averages). Residents who work in Tucson are assigned 14 hours to residential development. Residents who work outside Tucson are assigned 14 hours to residential development. Inflow commuters are assigned 10 hours to nonresidential development. Based on 2021 functional population data, the resulting proportionate share is 72 percent from residential development.

	Demand Units in 2021			Demand Hours/Day	Person Hours	Proportionate Share
Resider	ntial					
	Estimated Residents 546,061	7				
	Residents Not Working	344,960		20	6,899,200	
	Resident Workers	201,101	7			
57%	Worked in City		114,717	14	1,606,038	
43%	Worked Outside City		86,384	14	1,209,376	
			Res	idential Subtotal	9,714,614	72%
Nonres	idential					
	Non-working Residents	344,960		4	1,379,840	
	Jobs Located in City	235,070	$\neg \rangle$			
49%	Residents Working in City		114,717	10	1,147,170	
51%	Non-Resident Workers (inflow commuters)		120,353	10	1,203,530	
			Nonres	idential Subtotal	3,730,540	28%
				-		
				TOTAL	13,445,154	100%

Figure A13. Functional Population

Source: Estimated Residents based on TischlerBise housing unit estimates and persons per housing unit (PPHU) ratios derived from the U.S. Census Bureau (see discussion elsewhere in the Land Use Assumptions). Employment data from the U.S. Census Bureau's OnTheMap web application, 2021.



SUMMARY OF GROWTH INDICATORS

Development projections for the City are summarized in Figure A14. These projections will be used to project development impact fee revenue and to indicate the anticipated need for growth-related infrastructure. However, development impact fee methodologies are designed to reduce sensitivity to development projections in the determination of proportionate-share fee amounts. If actual development is slower than projected, development fee revenues will decline, but so will the need for growth-related infrastructure. In contrast, if development is faster than anticipated, the City will receive an increase in development fee revenue but will also need to accelerate capital improvements to keep pace with growth.

_						Multi Year In	crements>>>		
	2024	2025	2026	2027	2028	2029	2034	10-Year	Avg. Annual
	Base	1	2	3	4	5	10	Change	Growth Rate ^a
Population									
Subtotal Household Population	533,383	535,950	538,484	540,286	542,179	544,157	554,988	21,605	
Group Quarters Population ¹	25,719	25,842	25,965	26,052	26,143	26,238	26,760	1,042	
GRAND TOTAL POPULATION	559,102	561,793	564,448	566,337	568,321	570,395	581,748	22,646	
Projected Annual % Growth ²		0.481%	0.473%	0.335%	0.350%	0.365%	0.395%		
Net Increase Per Year		2,691	2,656	1,889	1,984	2,074	2,291		
Housing Units									
Single Family Units	166,053	166,707	167,352	167,811	168,294	168,798	171,556	5,503	
Multi-Family Units	85,543	86,100	86,649	87,040	87,451	87,880	90,230	4,688	
Total Housing Units	251,596	252,807	254,002	254,852	255,745	256,678	261,787	10,191	
Single Family Net Increase Per Year		654	645	459	482	504	557		
Multifamily Net Increase Per Year		557	550	391	411	429	474		
Total Net Increase Per Year		1,211	1,195	850	893	933	1,031		
Jobs									
Industrial Jobs	34,306	34,715	35,130	35,549	35,973	36,403	38,627	4,321	1.19%
Commercial & Retail Jobs	47,500	47,770	48,043	48,316	48,591	48,868	50,275	2,776	0.57%
Institutional Jobs	92,535	93,437	94,347	95,267	96,195	97,133	101,960	9,425	0.97%
Office & Other Jobs	60,764	61,083	61,404	61,726	62,050	62,376	64,031	3,267	0.53%
Total Jobs	235,105	237,005	238,923	240,858	242,810	244,780	254,893	19,789	
Nonresidential Floor Area (KSF) ^b									
Industrial KSF	21,853	22,114	22,378	22,645	22,915	23,188	24,606	2,753	
Commercial & Retail KSF	22,372	22,500	22,628	22,757	22,886	23,017	23,680	1,307	
Institutional KSF	99 <i>,</i> 475	100,444	101,423	102,412	103,410	104,418	109,607	10,132	
Office & Other KSF	18,655	18,752	18,851	18,950	19,049	19,149	19,657	1,003	
Total Floor Area (KSF)	162,355	163,810	165,280	166,763	168,261	169,773	177,550	15,195	
Industrial KSF Net Increase Per Year		261	264	267	270	273	290		
Comm & Retail KSF Net Increase Per Year		127	128	129	130	130	134		
Institutional KSF Net Increase Per Year		970	979	989	998	1,008	1,058		
Office & Other KSF Net Increase Per Year		98	98	99	99	100	103		
Total KSF Net Increase Per Year		1,456	1,470	1,483	1,498	1,512	1,585		

Figure A14. Summary of City of Tucson Projections

1. Share of total population from U.S. Census ACS 2018-2022 5-Yr Estimates.

2. Projected annual growth rate for City of Tucson from Pima Association of Governments (PAG), 2022 Projections.

3. Unit distribution for new units from 2022-2023 residential permit data.

a. Employment Projections for Pima County, Arizona Office of Economic Opportunity, 2022 Projections.

b. Projected employment converted to nonresidential square footage using average square feet per job factors in Figure A11.



APPENDIX B: FORECAST OF REVENUES OTHER THAN FEES

ARS § 9-463.05(E)(7) requires:

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

ARS § 9-463.05(B)(12) states,

"The municipality shall forecast the contribution to be made in the future in cash or by taxes, fees, assessments or other sources of revenue derived from the property owner towards the capital costs of the necessary public service covered by the development fee and shall include these contributions in determining the extent of the burden imposed by the development. Beginning August 1, 2014, for purposes of calculating the required offset to development fees pursuant to this subsection, if a municipality imposes a construction contracting or similar excise tax rate in excess of the percentage amount of the transaction privilege tax rate imposed on the majority of other transaction privilege tax classifications, the entire excess portion of the construction contracting or similar excise tax shall be treated as a contribution to the capital costs of necessary public services provided to development for which development fees are assessed, unless the excess portion was already taken into account for such purpose pursuant to this subsection."

REVENUE PROJECTIONS

Tucson does not have a higher-than-normal construction excise tax rate; therefore, the required offset described above is not applicable. Shown in Figure B1, Tucson provided the required forecast of non-development fee revenue from identified sources that can be attributed to future development over a period of five years. Tucson directs the revenues shown below to non-development fee eligible capital needs including maintenance, repair, and replacement.

General Fund Revenues	2025	2026		2027	2028	2029	2030	2031	2032	2033		2034	2035
Property Taxes	\$ 18,279,4	20 \$ 18,645,	008 \$	19,017,909	\$ 19,398,267	\$ 19,786,232	\$ 20,181,957	\$ 20,585,596	\$ 20,997,308	\$ 21,417,254	\$	21,845,599	\$ 22,282,511
Business Privilege Tax	328,937,1	24 330,055,	280	341,607,214	353,563,467	365,938,188	378,746,025	392,002,136	405,722,210	419,922,488		434,619,775	449,831,467
Other Taxes	74,076,4	06 75,096,	546	76,974,062	78,898,413	80,870,874	82,892,645	84,964,961	87,089,086	89,266,313		91,497,970	93,785,420
State Shared Sales Tax	84,124,3	70 85,895,	382	88,472,244	91,126,411	93,860,203	96,676,009	99,576,290	102,563,578	105,640,486		108,809,700	112,073,991
State Shared Income Tax	116,413,0	23 105,664,	068	110,530,029	116,230,730	122,477,443	122,477,444	122,477,445	122,477,446	122,477,447		122,477,448	122,477,449
State Shared Auto Lieu	28,554,1	29,541,	571	30,280,110	31,037,113	31,813,041	32,608,367	33,423,576	34,259,166	35,115,645		35,993,536	36,893,374
License and Permits	36,315,5	30 33,648,	585	33,985,172	34,325,024	34,668,274	35,014,957	35,365,106	35,718,757	36,075,945		36,436,705	36,801,072
Fines, Forfeitures & Penalties	5,167,2	28 5,167,	228	5,193,064	5,219,029	5,245,124	5,271,350	5,297,707	5,324,195	5,350,816		5,377,570	5,404,458
Charges for Services	58,829,3	63,375,	15	64,959,492	66,583,480	68,248,067	69,954,268	71,703,125	73,495,703	75,333,096		77,216,423	79,146,834
Use of Money & Property	12,270,1	50 4,270,	60	4,270,160	4,270,160	4,270,160	4,270,160	4,270,160	4,270,160	4,270,160		4,270,160	4,270,160
All Other Revenues Combined	17,916,1	70 14,124,	913	14,336,786	14,551,838	14,770,116	14,991,667	15,216,542	15,444,790	15,676,462		15,911,609	16,150,283
Total Revenues	\$ 780,883,0)9 \$ 765,484,	955 \$	789,626,242	\$ 815,203,932	\$ 841,947,722	\$ 863,084,850	\$ 884,882,644	\$ 907,362,400	\$ 930,546,111	s	954,456,496	\$ 979,117,019

Figure B1: Non-Development Impact Fee Revenue Projections

Source: City of Tucson



APPENDIX C: PROFESSIONAL SERVICES

As stated in ARS § 9-463.05(A):

"a municipality may assess development fees to offset costs to the municipality associated with providing necessary public services to a development, including the costs of infrastructure, improvements, real property, engineering and architectural services, financing and professional services required for the preparation or revision of a development fee pursuant to this section, including the relevant portion of the infrastructure improvements plan."

Because development impact fees must be updated at least every five years, the cost of professional services is allocated to the projected increase in service units over five years (see Figure C1). Qualified professionals must develop the IIP, using generally accepted engineering and planning practices.

As stated in ARS § 9-463.05(T)(8):

"Qualified Professional means a professional engineer, surveyor, financial analyst or planner providing services within the scope of the person's license, education or experience."

Figure C1: Cost of Professional Services

Necessary Public		Assessed	Proportionate			Cost per		
Service	Cost	Against	Share	Demand Units	2024	2029	Change	Demand Unit
Parks & Recreation	\$23,750	Residential	96%	Population	559,102	570,395	11,293	\$2.01
Faiks & Recleation	Ş23,730	Nonresidential	4%	Jobs	235,105	244,780	9,675	\$0.09
Dolico	¢14.2E0	Residential	72%	Population	559,102	570,395	11,293	\$0.90
1 Olice	Ş1 4 ,230	Nonresidential	28%	Vehicle Trips	1,068,338	1,113,984	45,646	\$0.08
Eiro	¢14.250	Residential	72%	Population	559,102	570,395	11,293	\$0.90
The	Ş14,230	Nonresidential	28%	Vehicle Trips	1,068,338	1,113,984	45,646	\$0.08
Streets	\$42,750	All Development	100%	Avg Wkdy VMT	7,244,643	7,449,999	205,356	\$0.20
		•						
TOTAL	\$95,000							



APPENDIX D: IMPLEMENTATION AND ADMINISTRATION

ACCOUNTING REQUIREMENTS

As specified in ARS § 9-463.05, there are certain accounting requirements that must be met by the City:

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

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

TOOLS FOR REDUCING FEES

Relocating a Business

There is no development fee charge for relocating into an existing building if the intensity of use does not increase. For example, a commercial use is more intense than an office or industrial use and would require payment of development impact fees. (City of Tucson's City Code, Chapter 23A, Article III. Development Impact Fee Regulations, Section 81.A.3.)

Credit Agreement / Development Agreement

Eligibility for development impact fee credits is based on the eligibility of an infrastructure project (which must be identified in the IIP). Developers who wish to privately construct an infrastructure project may apply for impact fee credits through a credit agreement with the city. The developer and city staff may work together to add the proposed infrastructure project to the IIP during the Capital Improvement Plan (CIP) Annual Review (every year) or the CIP every five years. Once a project is identified in the CIP, CIP Annual Review, and therefore the IIP, a credit agreement can be made.

Another way that privately constructed infrastructure projects may receive development impact fee credits is through a development agreement, which does not require capital facility identification on the IIP.

For more information, see the City of Tucson's City Code, Chapter 23A, Article III. Development Impact Fee Regulations, Section 82 and Section 83.



Demolition Credit

ARS § 9-463.05 specifies that development impact fees may only be charged for an increase of use (demonstrated by increased development service units). Therefore, the City of Tucson provides a Demolition Credit. For whatever amount of building space is demolished on a site, the developer receives a fee credit totaling that same size to be used toward new construction on the same site. In order to qualify for the Demolition Credit, the applicant must have received a demolition permit (legally required for any demolition activity) within five years prior to application. (City of Tucson's City Code, Chapter 23A, Article III. Development Impact Fee Regulations, Section 81.B.3.)

The City of Tucson has a number of incentives and requirements regarding demolition of historic structures in order to encourage restoration and adaptive reuse of historic structures. The Historic Preservation Zones require review and approval prior to demolition or relocation of a historic structure. Additionally, demolition permits for buildings 50 or more years old must include architectural documentation to provide a permanent record of buildings of historical significance before their loss.

The Grant Road Investment District (GRID), Sunshine Mile District (SMD), and Main Gate District (MGD) Urban Overlay Districts and the Infill Incentive District (IID) prevent projects that propose demolition of a historic property (designated as a City Historic Landmark, or listed or eligible to be listed in the National or Arizona Register of Historic Places, individually or as a contributing property) from being eligible for the IID, SMD, GRID, and MGD benefits, with exceptions. The GRID, SMD, and the MGD Urban Overlay Districts encourage historic preservation by offering additional uses compatible with restoration of historic properties and/or incorporation of historic buildings into a redevelopment of these properties.

Special Fee Determination

Any development may apply for a Special Fee Determination with the Planning and Development Services Department. Special Fee Determinations are used if a land use is not listed in the categories or if a development's impact on parks and recreation, police, fire, and streets facilities is anticipated to be different than the designated fee schedule. These have commonly been used in the City's most dense areas that have many multimodal options. For more information, see the City of Tucson's City Code, Chapter 23A, Article III. Development Impact Fee Regulations, Section 81.D.

Mixed Use Incentive

The Mixed Use Incentive offers reduced Streets Facilities Development Impact Fees. The purpose of the incentive is to encourage development that increases commuting by transit, bicycle, and walking. This incentive applies to development that meets the criteria below, which will result in fewer vehicle trips and less demand on the street facilities system.

This approach furthers the City's policy goal of incentivizing transit-oriented development and mixed use development along major transit corridors in the City. Transit-oriented development includes a mix of commercial, residential, office and entertainment centered around or located near a transit station. Dense, walkable, mixed-use development near transit attracts people and adds to vibrant, connected communities. Successful TOD depends on access and density around the transit station. For more



information, see the City of Tucson's City Code, Chapter 23A, Article III. Development Impact Fee Regulations, Section 81.F.

Category A: Transit Access (required)

A.1. Development must be located close to transit.

Standard: Within ¼ mile walking distance to a transit stop.

Category B: Residential Proximity (one of two required)

- B.1. Development must contain a mix of uses, including both residential and nonresidential.
 - Standard: Minimum ratio of 1 dwelling unit per 500 sq. ft. of nonresidential development.
- B.2. Development must be located close to high-density residential.
 - Standard: Minimum of 2,000 units within ½ mile of development boundary.

Category C: Multimodal Options (one of two required)

C.1. Development must be located close to planned or constructed publicly-designated bicycle boulevard or multi-use path.

Standard: Within ¼ mile walking distance.

C.2. Development must provide additional bicycle parking spaces, bicycle share facilities and car share facilities.

Standards: Bicycle parking at 3 times standard rate, and bicycle circulation connection to the building and bicycle parking from every public street, and car share spaces available at no charge to car share provider at the following rates:

Number of Residential Units	Number of Required Carshare Spaces					
0-24	0					
25-99	1					
100+	2, plus 1 for every 100 dwelling units over 100					
Number of Parking Spaces for Nonresidential Uses	Number of Required Carshare Spaces					
0-49	0					
50-99	1					
100	2, plus 1 for every 100 parking spaces over 100					

Meeting the established criteria would make the development eligible for a reduction of the Streets Facilities Development Impact Fees. Methodologies exist to calculate reduced trips based on the specific land uses on a case-by-case basis. However, in lieu of requiring separate, unique analyses for each development, the City of Tucson could apply a blanket reduction of 15 percent to reflect the potential mix of uses and internal trip capture rate. This reduction would result in the following revised fee schedule:



Figure D1: Proposed Streets Facilities Development Impact Fee Schedule with Reduction for Internal Trip Capture

Fee Component	Cost per VMT
Capacity Road Projects	\$221.00
Signalization Project	\$3.92
Multimodal Projects	\$2.86
Development Fee Report	\$0.20
Total	\$227.98

		15%									
Residential Development (per Housing Unit)											
Size of Housing Unit (Sq. Ft.)	Demand Unit	Avg Wkdy VMT	Proposed Fees	Current Fees*	Increase / (Decrease)	% Change					
750 or Less	Housing Unit	7.95	\$1,811	\$1,412	\$399	28%					
751 to 1,250	Housing Unit	12.14	\$2,767	\$2,189	\$578	26%					
1,251 to 1,750	Housing Unit	15.95	\$3,637	\$2,887	\$750	26%					
1,751 to 2,250	Housing Unit	18.75	\$4,274	\$3,397	\$877	26%					
2,251 to 2,750	Housing Unit	20.94	\$4,774	\$3,798	\$976	26%					
2,751 to 3,250	Housing Unit	22.75	\$5,187	\$4,132	\$1,055	26%					
3,251 to 3,750	Housing Unit	24.28	\$5,536	\$4,415	\$1,121	25%					
3,751 or More	Housing Unit	25.62	\$5,840	\$4,661	\$1,179	25%					

N	Nonresidential Development (per Demand Unit)													
Development Type	ITE Code	Demand Unit	Avg Wkdy VMT	Proposed Fees	Current Fees*	Increase / (Decrease)	% Change							
Industrial: Light Industrial	110	1,000 Sq. Ft.	5.85	\$1,333	\$1,129	\$204	18%							
Industrial: Manufacturing	140	1,000 Sq. Ft.	5.70	\$1,300	\$895	\$405	45%							
Industrial: Warehousing	150	1,000 Sq. Ft.	2.06	\$468	\$395	\$73	18%							
Commercial/Retail: General	820	1,000 Sq. Ft.	19.57	\$4,460	\$5,822	(\$1,362)	-23%							
Commercial/Retail: Free Standing Discount Store	815	1,000 Sq. Ft.	28.48	\$6,491	\$8,192	(\$1,701)	-21%							
General Office	710	1,000 Sq. Ft.	13.02	\$2,968	\$2,218	\$750	34%							
Institutional: Schools	520	1,000 Sq. Ft.	15.48	\$3,528	\$2,934	\$594	20%							
Institutional: Religious Facilities	560	1,000 Sq. Ft.	5.51	\$1,255	\$1,044	\$211	20%							
Institutional: Medical (Nursing Hm./Asstd Living)	620	1,000 Sq. Ft.	5.26	\$1,199	\$997	\$202	20%							
Institutional: Medical (Clinic, Hospital)	630	1,000 Sq. Ft.	29.81	\$6,795	\$5,736	\$1,059	18%							
Hotel	310	Room	6.70	\$1,527	\$1,953	(\$426)	-22%							

*Source: City of Tucson, "Annual Development Impact Fees Report FY2023/24 (Unaudited), September 28, 2024; Appendix A: Development Impact Fees Schedules (Ordinance 11759 (June 9, 2020), effective July 1, 2021). https://www.tucsonaz.gov/files/sharedassets/public/v/1/bsd/documents/financedocuments/fy24-annual-development-impact-fees-report.pdf

ADDING CAPITAL FACILITIES TO THE IIP AND CIP

As part of the City's development impact fee program, an adopted IIP is required. The IIP includes specific growth-related projects and broad categories of projects that can be constructed with impact fees. The goal of including broad categories is to be flexible and responsive to infrastructure as needs arise, and compliant with State Statutes.

Planning for capital improvements begins with long-range planning that takes a 20-year view of City needs. For instance, *Plan Tucson* identifies anticipated growth areas within the City. The next step is a 5-year Capital Improvement Plan (CIP) which determines capital needs and begins to identify potential funding sources. The CIP is then reviewed each year as part of the City's annual budget process. During the City's annual budget process, necessary infrastructure projects are identified, evaluated and



programmed for construction. Impact fees and impact fee eligible projects are identified as part of the required impact fee update process every 5 years. These projects are then nested into the City's CIP and reviewed as part of the annual budget.

A developer may work with City staff to propose the addition of a capital facility to the IIP and CIP.

RESIDENTIAL DEVELOPMENT DEFINITIONS

As discussed below, residential development categories are based on data from the U.S. Census Bureau, American Community Survey. Tucson will collect development impact fees from all new residential units, including mobile homes. Development impact fees will be assessed by size of the dwelling unit (gross floor area) and include the following categories of residential development:

Single Unit: includes Single-Family and Mobile Home

Single-Family: includes fully detached, semi-detached (semi-attached, side-by-side), row houses, and townhouses. In the case of attached units, each must be separated from the adjacent unit by a ground-to-roof wall in order to be classified as a single-family structure. Also, these units must not share heating/air-conditioning systems or utilities.

Mobile Home: includes both occupied and vacant mobile homes, to which no permanent rooms have been added. Mobile homes used only for business purposes or for extra sleeping space and mobile homes for sale on a dealer's lot, at the factory, or in storage are not counted in the housing inventory.

2+ Unit: includes Multi-Family and All Other Types

Multi-Family: includes residential buildings containing units built one on top of another and those built side-by-side which do not have a ground-to-roof wall and/or have common facilities (i.e., attic, basement, heating plant, plumbing, etc.).

All Other Types: includes boats, RVs, vans, etc., occupied as a housing unit or units that do not fit into the other categories. Recreational vehicles, boats, vans, railroad cars, and the like are included only if they are occupied as a current place of residence.

NONRESIDENTIAL DEVELOPMENT DEFINITIONS

The proposed general nonresidential development categories (defined below) can be used for all new development. Nonresidential development categories represent general groups of land uses that share similar average weekday vehicle trip generation rates and employment densities (i.e., jobs per thousand square feet of floor area).

Industrial: Light Industrial: A light industrial facility is a free-standing facility devoted to a single use. The facility has an emphasis on activities other than manufacturing and typically has minimal office space. Typical light industrial activities include printing, material testing, and assembly of data processing equipment.



Industrial: Warehousing: A warehouse is primarily devoted to the storage of materials, but it may also include office and maintenance areas (ex. Amazon Fulfillment Center).

Industrial: Manufacturing: A manufacturing facility is an area where the primary activity is the conversion of raw materials or parts into finished products. Size and type of activity may vary substantially from one facility to another. In addition to the actual production of goods, manufacturing facilities generally also have office, warehouse, research, and associated functions (e.g., Raytheon Company).

Commercial/Retail: General: Commercial/Retail: General includes general retail as well as shopping center type establishments, which are an integrated group of commercial establishments that is planned, developed, owned, and managed as a unit. General retail/shopping center composition is related to its market area in terms of size, location, and type of store. General retail/shopping center also provides onsite parking facilities sufficient to serve its own parking demands. This category includes outparcels (peripheral buildings or pads located on the perimeter of the center adjacent to the streets and major access points). These buildings are typically drive-in banks, retail stores, or restaurants.

Commercial/Retail: Free Standing Discount Store: A discount store is similar to a free-standing discount superstore. It is also similar to a department store described in Land Use 875 with the exception that it generally offers centralized cashiering and sells products that are advertised at discount prices. Discount stores offer a variety of customer services and typically maintain long store hours seven days a week. The stores included in this land use are often the only ones on the site, but they can also be found in mutual operation with a related or unrelated garden center and/or service station. Free-standing discount stores are also sometimes found as separate parcels within a retail complex, with or without their own dedicated parking (e.g., Costco, Walmart).

Office / Other Services: A general office building houses multiple tenants; it is a location where affairs of businesses, commercial or industrial organizations, or professional persons or firms are conducted. An office building or buildings may contain a mixture of tenants including professional services, insurance companies, investment brokers, and tenant services, such as a bank or savings and loan institution, a restaurant, or cafeteria and service retail facilities.

Institutional: Schools: This land use consists of schools where bus service is usually provided to students living beyond a specified distance from the school. Both public and private schools are included.

Institutional: Religious Facilities: Proxy land use is a church. A church is a building in which public worship services are held. A church houses an assembly hall or sanctuary; it may also house meeting rooms, classrooms, and, occasionally, dining, catering, or party facilities. Synagogue and mosque are related uses.

Institutional: Medical (Nursing Home/Assisted Living): Nursing home is the proxy land use. A nursing home is any facility whose primary function is to provide care for persons who are unable to care for themselves. Skilled nurses and nursing aides are present 24 hours a day at these sites. Nursing homes are occupied by residents who do little or no driving; traffic is primarily generated by employees, visitors, and deliveries. Assisted living and continuing care retirement community are related uses.

Institutional: Medical (Clinic, Hospital): A clinic is any facility that provides limited diagnostic and outpatient care but is unable to provide prolonged in-house medical and surgical care. Clinics commonly have lab facilities, supporting pharmacies, and a wide range of services (compared to the medical office,



which may only have specialized or individual physicians). Hospital, free-standing emergency room, and medical-dental office building are related uses.

Hotel: A hotel is a place of lodging that provides sleeping accommodations and supporting facilities such as restaurants, cocktail lounges, meeting and banquet rooms or convention facilities, limited recreational facilities (pool, fitness room), and/or other retail and service shops. All suites hotel, business hotel, motel, and resort hotel are related uses.



