Town of Marana

Impact Fee Study

Streets Facilities

Infrastructure Improvements Plan

Public Report

FINAL

As approved by the Marana Town Council, September 20, 2022

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Prepared for

MARANA AZ

CELEBRATING 40 YEARS

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Psomas Project No. 7TMA150123

September 20, 2022

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1. INTRODUCTION

The Town of Marana collects development impact fees to help offset some of the infrastructure costs associated with growth, as many jurisdictions do. In order to continue charging impact fees, the Town must comply with Arizona Revised Statute (ARS) §9-463.05, which includes the preparation of development fee studies, project lists, and fee schedules. Prior to establishing fees, a land use assumptions document and an infrastructure improvement plan (IIP) must be prepared.

This report identifies the infrastructure needs for the street facilities in the Town. The analysis only includes arterials and major collectors, since roadways with lower classifications are generally internal to development and are constructed during the development process. This analysis will be used in the subsequent calculation of impact fee rates. This report is an update of the Streets Facilities IIP approved and adopted by Town Council action in September 2017.

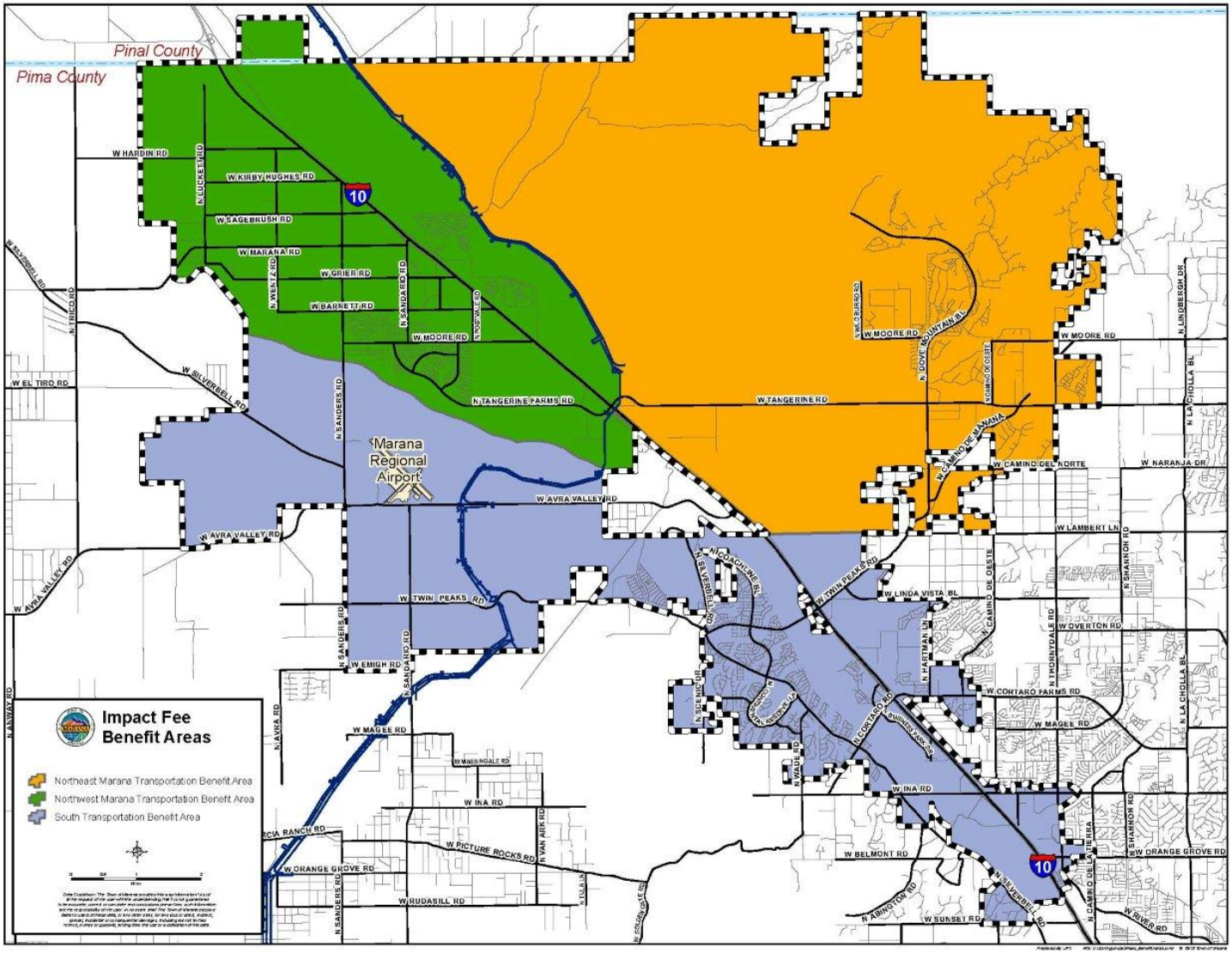
The land uses that are used in this report to evaluate infrastructure needs are documented separately in the Land Use Assumptions report developed by the Town of Marana. The Land Use Assumptions report provides a quantification of expected future development within each of the service areas for which impact fees will be assessed.

1.1. ALLOCATION OF GROWTH WITHIN SERVICE AREAS

A "service area" is defined in ARS §9-463.05 (T)9 as "any specified area within the boundaries of a municipality in which development will be served by necessary public services or facility expansions and within which a substantial nexus exists between the necessary public services of facility expansions and the development being served as prescribed in the infrastructure improvement plan."

The Town of Marana currently has three service areas for streets: Northeast, Northwest, and South. The Town will continue to use the current service areas, which are shown in Figure 1.

Figure 1. Streets Facilities Service Areas



2. NECESSARY PUBLIC SERVICES

2.1. EXISTING NEEDS

For each necessary public service for which impact fees will be used, this document shall include the following:

Per ARS §9-463.05(E)1:

- "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."

Per ARS §9-463.05(E)2:

- "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."

The Town of Marana has identified the roadway projects which will be included in the development fee study as necessary public services. These projects, shown in Table 1, are necessary mainly due to the expected growth which was documented in the Land Use Assumptions report. The projects fall into three primary categories:

- New roadways/intersections
- Widening/improvement of existing roadways or intersections
- Legacy projects – projects already constructed by the Town or a developer with excess capacity to be used by new development (per ARS 9-463.05 (B)(7)(b))

Table 1 includes the total costs for each project, as well as the cost attributable to new development. The costs for each project were derived from various sources (as indicated in the table) and fluctuate depending on the current status of the project (planning/design/construction/completed) and on various site-specific conditions such as drainage, right-of-way and environmental issues. The primary sources of data are:

- Actual costs (debt service or impact fee credits) for legacy projects already constructed by the Town or by developers.
- Project-specific estimates for projects already in the design stage.

Table 1. Necessary Streets Facilities, Existing and Future

	Road Project	Limits		# of Lanes	Length (mi)	Construction Cost		Non-Construction Costs*	Total Capital Cost - New/ Improvements	Legacy Cost	Cost Attributable to Development**	Source / Notes
						Per Lane-Mile	Total					
Northwest	Marana Main Street	Sandario	Grier	2	0.54	$2,100,000	$2,268,000	$986,580	$3,255,000		$3,255,000	Lane mile costs from RTA Bids
	Marana Main Street	Tangerine Farms Rd	Sandario	2	0.35					$873,000	$873,000	Town of Marana / Debt Service
	Tangerine Farms Road	I-10 (Tangerine TI)	Clark Farms	4	4.1					$3,018,397	$3,018,397	Outstanding Impact Fee Credits (built by developer)
	Clark Farms	Riccati Dr	Despain Dr	3	0.7							
	Tangerine Farms Road	Clark Farms	I-10 (Marana TI)	4	1.2	$2,100,000	$10,080,000	$5,896,800	$15,977,000		$7,484,400	Lane mile costs from RTA Bids
	Marana Road Interchange, Phase 1	N/A	N/A	N/A	N/A				$6,753,000		$6,753,000	Town of Marana / prelim estimate
	Clark Farms	Despain Dr	Lon Adams Rd	3	0.5	$2,100,000	$3,150,000	$1,370,250	$4,520,000		$3,365,622	Lane mile costs from RTA Bids
	Clark Farms	Lon Adams Rd	Tangerine Farms Rd	4	2.1	$2,100,000	$17,640,000	$7,673,400	$25,313,000		$11,774,700	Lane mile costs from RTA Bids
	Adonis Road	Grier Rd	Tangerine Rd	2	3.0	$2,100,000	$12,600,000	$8,001,000	$20,601,000		$14,465,963	Lane mile costs from RTA Bids
	Tangerine Road Interchange	N/A	N/A	N/A	N/A				$4,500,000		$4,500,000	Town of Marana / prelim estimate (Cost split with NE)
Northeast	Tangerine Road, Phase 1	Dove Mountain Blvd	Town Limits	4	2.4				$6,189,000		$1,896,029	Town of Marana / Shortfall in impact fees at time of construction
	Tangerine Road, Phase 2	I-10 (Tangerine TI)	Dove Mountain Blvd	4	4.6				$42,537,000		$13,936,211	Town of Marana / Calculated cost based on Phase 1 costs, less RTA and State funding
	Twin Peaks Road	Lambert Ln	Tangerine Rd	4	2.1					$3,642,259	$3,642,259	Town of Marana / Debt Service
	Moore Road	Camino de Oeste	Thornydale Rd	2	1.3					$291,788	$291,788	Town of Marana / Outstanding cost
	Cayton Road	Dove Mountain Blvd	Thornydale Rd	2	1.1	$2,100,000	$4,620,000	$2,009,700	$6,630,000		$6,630,000	Lane mile costs from RTA Bids
	Tangerine Road Interchange	N/A	N/A		N/A				$1,500,000		$1,500,000	Town of Marana / prelim estimate (Cost split with NW)
South	Twin Peaks Interchange	N/A	N/A	N/A	N/A					$3,757,886	$3,757,886	Town of Marana / Debt Service
	Twin Peaks Road	I-10	Lambert Ln	4	1.3							
	Twin Peaks Road/ Rattlesnake Pass	Saguaro Highlands Dr	Silverbell Rd	4	1.5				$18,001,838		$7,506,111	Town of Marana / prelim estimate
	Cortaro Road	I-10	Camino de Oeste	4	1.7				$8,134,735		$2,319,081	Town of Marana / Construction Cost
	Silverbell Road	Ina Rd	Cortaro Rd	4	1.0				$21,068,682		$8,023,017	Town of Marana / Construction Cost
	Ina Road	I-10	Silverbell Rd	4	1.1				$9,000,000		$3,006,062	Town of Marana / Construction Cost
	Silverbell Road	Sunset Rd	Ina Rd	4	3.2				$8,013,159		$2,625,316	Town of Marana / RTA estimates of difference between 3-lane and 4-lane for Marana portion of project

Total (New/Improvement Facilities)	$201,993,414	
Total (Legacy Facilities)		$11,583,330
TOTAL (ALL FACILITIES)	**$213,576,744**	

* Includes ROW, environmental mitigation, drainage, design, construction management, financing costs

** See Appendix C for additional detail

- Generalized cost per lane-mile (from similar projects) for projects that have not advanced past the preliminary planning stage.

Based on the 10-year framework required by the ARS, the analysis years include 2023 through 2032. The roadway projects for that period include 70.8 lane-miles of new and improved roadways, three traffic interchanges along Interstate 10 (at Twin Peaks Road, Tangerine Road, and Marana Road), and 50.6 lane-miles of legacy facilities reserved for development. Traffic volumes for each roadway project in 2022 and 2032 are provided in Table 2. The development of the traffic volumes in the table are further discussed in the following section.

2.2. PAG MODELING METHODOLOGY

The Pima Association of Governments (PAG) maintains a travel demand model that estimates the future volumes for the Tucson metropolitan area. A new 2031 model was developed for this study based on employment, population, and facility inputs provided by the project team in collaboration with the Town. Note that the results of this model (and the 2021 model, also provided by PAG) do not represent official PAG forecasts but are instead a special product developed by PAG for the Town of Marana. The model results were further adjusted to better represent 2022 and 2032 conditions considering the considerable growth in the Town in 2021 and early 2022.

The PAG model does not directly include ITE trip generation rates (which are typically used to determine how much traffic a development will generate). Instead, the model develops trip generation based on the characteristics of each Traffic Analysis Zone (TAZ), such as employment and population. Trips are then distributed on the surrounding roadway network based on origins and destinations, trip length, travel time, and available roadway capacity. Employment and population estimates were provided by Psomas based on previous model inputs, official PAG model inputs, and information provided by the Town.

The resulting volumes are shown on Table 2. In some cases, existing and/or future volumes were adjusted beyond what was provided in the PAG models based on recent traffic counts and other available information. In addition, volumes were adjusted to better represent 2022 and 2032 conditions.

Table 2. Current and Future Traffic Volumes

	Road Project	Limits		Speed Limit (mph)	Existing Volume (veh/day)[1]	Existing Volume Adjusted[2]	Existing Capacity (veh/day)[3]	Future Volume (veh/day)[4]	Future Volume Adjusted[5]	Future Capacity (veh/day)[6]
Northwest	Marana Main Street	Sandario Rd	Grier Rd	25	0		N/A	1,000	3,000	13,990
	Marana Main Street	Tangerine Farms Rd	Sandario Rd	25	1,000		16,730	300	4,300	16,730
	Tangerine Farms Road	I-10 (Tangerine TI)	Clark Farms	45	13,500		37,610	27,500		37,610
	Clark Farms	Riccati Dr	Despain Dr	40	3,200		17,567	8,700		17,567
	Tangerine Farms Road	Clark Farms	I-10 (Marana TI)	45	0		N/A	10,000		30,620
	Marana Road Interchange, Phase 1	N/A	N/A	N/A	N/A		N/A	N/A		N/A
	Clark Farms	Despain Dr	Lon Adams Rd	35	0		N/A	10,000		14,690
	Clark Farms	Lon Adams Rd	Tangerine Farms Rd	35	0		N/A	9,000		30,620
	Adonis Road	Grier Rd	Tangerine Rd	45	0		N/A	10,000		15,930
	Tangerine Road Interchange	N/A	N/A	N/A	N/A		N/A	N/A		N/A
Northeast	Tangerine Road, Phase 1	Dove Mountain Blvd	Town Limits	50	10,000	15,400	37,610	15,000	20,400	37,610
	Tangerine Road, Phase 2	I-10 (Tangerine TI)	Dove Mountain Blvd	50	8,000		16,730	14,000		37,610
	Twin Peaks Road	Lambert Ln	Tangerine Rd	45	16,000		37,610	23,500		37,610
	Moore Road	Camino De Oeste	Thornydale Rd	30	3,000		13,990	7,000		16,730
	Cayton Road	Dove Mountain Blvd	Thornydale Rd	30	0		N/A	5,400		13,990
	Tangerine Road Interchange	N/A	N/A	N/A	N/A		N/A	N/A		N/A
South	Twin Peaks Interchange	N/A	N/A	N/A	N/A		N/A	N/A		N/A
	Twin Peaks Road	I-10	Lambert Ln	45	18,000	22,000	37,610	29,000	33,000	37,610
	Twin Peaks Road/Rattlesnake Pass	Saguaro Highlands Dr	Silverbell Rd	45	12,500		16,730	16,000	22,700	37,610
	Cortaro Road	I-10	Camino de Oeste	40	25,000		37,610	29,000		37,610
	Silverbell Road	Ina Rd	Cortaro Rd	45	22,000	14,000	37,610	22,500		37,610
	Ina Road	I-10	Silverbell Rd	45	26,000		16,730	22,000	32,300	37,610
	Silverbell Road	Ina Rd	Sunset Rd	45	10,000		16,730	16,000		37,610

[1] From PAG 2021 Travel Demand Model using Marana Land Use Assumptions

[2] Used recent traffic count if significant differences between 2021 PAG Model and recent traffic counts

[3] Based on current road section and FDOT Capacity Tables

[4] From PAG Travel Demand Model using Marana 2031 Land Use Assumptions and regional growth factor

[5] Adjusted to better reflect anticipated volumes based on existing and planned developments

[6] Based on 2032 road section and FDOT Capacity Tables

To estimate the necessary public services, the daily roadway capacity for one lane-mile of arterial roadway was calculated. The general daily capacity for a single lane ranges from 7,000 to 9,000 vehicles per day (vpd), depending on the roadway type, vehicular access control, and whether the roadway is in an urban or a rural area. The Town uses performance criteria based on daily service volumes included in their 2017 *Transportation Impact Analysis* guidelines[1] to evaluate roadway Level of Service (LOS). LOS D is the performance standard for most areas and will be used in this study.

The often-used Florida Department of Transportation (FDOT) standards[2] for LOS D are similar to those used by the Town of Marana. It is recommended that the FDOT standards for LOS D for each roadway type be adopted for this study. The appropriate roadway capacities are shown in Table 2.

2.3. PROJECTED NEEDS

ARS §9-463.05(E)3 requires that this document shall include:

> "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 an 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."

As shown in Table 1, there are approximately 70.8 lane-miles of new roadway attributable to new development, three traffic interchanges along I-10, and 50.6 miles of legacy facilities reserved for development, with an estimated total cost attributable to development of $110,623,843 (see Appendix C). The cost of preparing updates to the impact fee documents twice during the 10-year study period, based on the cost of this study, is $180,000 ($90,000 per update). Therefore, the total cost for providing these necessary public services associated with streets is $110,803,843 during the 10-year time period.

3. TRAVEL DEMAND PER DEMAND UNIT – METHODOLOGY

ARS §9-463.05(E)4 requires that this document shall include:

> "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."

Town staff provided a list of land uses which will be used in calculating the trip generation for future development projects. Each of these land uses has documented trip rates in the *ITE Trip Generation Manual*[3]. There have been some minor changes in the land uses since the adoption of the 2017 IIP to better fit Town policies and projected development. Table 3 shows the estimated roadway demand per unit of land use, and a description of the factors is included in the following sections.

3.1. AVERAGE TRIP LENGTH

The average trip length shown in Table 3 is based on trip length data from the Table 5 of the 2017 National Household Travel Survey[4] (NHTS). The survey data is collected from a sample of U.S. households and is expanded to provide national estimates of trips and travel distance by travel mode, trip purpose, and a number of household characteristics. The trip length for primary trips to high-traffic retail locations (such as gas stations and fast-food restaurants) was estimated to be half of the general retail trip length.

3.2. ITE TRIP GENERATION RATES

The ITE *Trip Generation Manual* contains trip generation rates for a wide variety of land uses by unit of land use measurement (i.e. per residential unit for residential developments, per 1,000 square feet for commercial, etc.). The 10th Edition, published in 2017, was referenced for this work. The PM peak hour rates were applied in the demand unit calculations. The PM peak hour rates were used because that period is typically the busiest period of the day and is generally what drives the need for additional capacity.

Table 3. Estimate of Streets Facility Demand per Unit of Land Use

Land Use Category	Unit	% Primary Trips	Average PM Peak Hour Trip Rate per Unit	Average Trip Length (mi)	% Travel Demand on Marana Arterial Network	Vehicle Miles of Travel Demand per Unit	Representative ITE Category	EDUs
Residential								
Single Family Residential	Dwelling Unit	100%	0.99	10.7	48%	5.1	210	1.0
Multi-Family	Dwelling Unit	100%	0.56	10.7	48%	2.9	220	0.6
Hotel/Motel	Rooms	100%	0.49	10.7	48%	2.5	310, 320	0.5
Congregate Care	Dwelling Unit	100%	0.18	10.7	48%	0.9	253	0.2
Single Family Residential (age restricted)	Dwelling Unit	100%	0.30	10.7	60%	1.9	251	0.4
Multi-Family (age restricted)	Dwelling Unit	100%	0.26	10.7	60%	1.7	252	0.3
Retail and Services								
< 15,000 sf	1000 sf	19%	8.90	7.1	40%	4.8	820	0.9
> 15,000 sf	1000 sf	66%	3.81	7.1	40%	7.1	820	1.4
High Traffic Retail	1000 sf	23%	29.14	3.6	40%	9.5	853, 912, 930, 934	1.9
Industrial	1000 sf	70%	0.72	10.7	40%	2.2	110, 151, 155	0.4
Office	1000 sf	75%	1.15	11.5	40%	4.0	710	0.8
Medical Facility	1000 sf	60%	2.13	10.7	40%	5.5	610, 630	1.1
Institutional	1000 sf	50%	1.17	6.4	40%	1.5	520, 530	0.3
Recreation	1000 sf	34%	1.16	10.4	40%	1.6	411, 495	0.3

3.3. PRIMARY TRIPS

Primary trips are trips to and from a specified land use which a driver intended to make without making other stops along the way. Drivers may also choose to divert from their originally intended path to make a secondary stop or may choose to make a stop along their original path. These trips are called diverted trips and pass-by trips, respectively. The calculations for determining impact fees are based solely on primary trips, so diverted trip and pass-by trip data in the ITE *Trip Generation Manual* was used to determine what percentage of trips are primary trips for each land use, with two exceptions. The manual does not include pass-by trip information for recreational uses such as a gym or rec center, so it was assumed that those uses would have a travel pattern similar to a gas station where many users stop by between home and work/school/etc. For the school uses, the primary trip percentage was estimated based on previous experience and is consistent with the percentage used in the *Pima County Street Facilities Infrastructure Improvements Plan*[5].

3.4. TRAVEL DEMAND ON THE ARTERIAL AND MAJOR COLLECTOR ROAD NETWORK

As previously discussed, only trips on the arterial and major collector roadways are considered in the development of impact fees. A general assumption, matching that in the 2017 IIP, is that 80% of travel occurs on the arterial/major collector system for most land use types. As the Town has grown, it is assumed that 60% of all residential trips are on Town roadways. For most of the other land uses, half of the generated trips will occur on Town roadways, while the other half will occur outside Town limits or on non-town roadways (such as I-10). Trips generated by age restricted residential developments are expected to include a higher percentage on Town roadways.

4. PROJECTED SERVICE UNITS FOR NEW DEVELOPMENT

ARS §9-463.05(E)5 requires that this document shall include:

> "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."

In addition, ARS §9-463.05(E)6 requires that this document shall include:

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

The land use assumptions estimate that growth between 2023 and 2032 will include 13,942 new residential units (single family and multi-family combined) and 439 acres of non-residential development, estimated to include 3.8 million square feet of non-residential building area. The calculation assumes a non-residential floor area ratio (FAR) of 0.2.

5. REVENUE CONSIDERATIONS

Considering revenue, ARS §9-463.05(E)7 states that the IIP should include:

> "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."

In order to provide an equitable obligation of transportation impact fees, both costs and credits must be considered. New development must be given credit for contributions to the various forms of funding which may be used for roadway improvements, such as the contribution of a development impact fee. Other sources of roadway infrastructure funding which can be identified as coming from a new development must be considered as credits for that development.

Further, the costs associated with correcting existing deficiencies cannot be placed as a burden on new development. Any money spent from common improvement funds to address a deficiency must consider credits to new development for which the improvement is associated. At this time, the only continuing revenue source which may be considered as credits to new development is the construction sales tax.

The Town currently has a 4.0% construction sales tax. The construction sales tax is nominally collected at the rate of 65% of the contract value, which is the presumptive proportion of the contract related to taxable building materials. The 4% rate includes the Town's base rate of 2% plus an additional 2% specific to contracting activities.

For example, a typical new 2,000-square-foot single family home would have an estimated construction cost of $325,912[6], and a related construction tax of $7,951.68. However, only half of the tax is creditable against the development fee, so the credit is $3,975.84, which is rounded up to $3,976.

The calculation methodology and complete table of construction sales tax credits by impact fee category are included in Appendix B of this report.

Note that the construction sales tax credit will be split between the streets facilities fee and the park fee in the development of the fee studies for the two infrastructure categories, as shown in Appendix B.

The Town utilizes its HURF/VLT allocation solely for maintenance. Therefore, no credit will be provided for HURF/VLT funds. In addition, the Town does not have a property tax, and other state and federal revenues are undeterminable and intermittent. Therefore, the construction sales tax credit is the only source of credits considered in this study.

6. REFERENCES

[1] *Transportation Impact Analysis.* Town of Marana, November 2017.

[2] *Florida Quality and Level of Service Tables.* Florida Department of Transportation, 2020.

[3] *Trip Generation, 10th Edition*. Institute of Transportation Engineers (ITE). Washington, D.C., 2017.

[4] *Summary of Travel Trends, 2009 National Household Travel Survey*. Federal Highway Administration, July 2018. https://nhts.ornl.gov/assets/2017_nhts_summary_travel_trends.pdf, accessed August 2022.

[5] *Street Facilities Infrastructure Improvements Plan, Final Public Report.* Pima County, January 2020.

[6] *Building Valuation Data – February 2022.* International Code Council, https://www.iccsafe.org/products-and-services/i-codes/code-development-process/building-valuation-data/, accessed March 2022.

Appendix A
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Appendix B

Methodology for Construction Sales Tax Credit

1. Assuming typical building materials for each representative impact fee category, construction costs were determined using the International Code Council cost valuation tables.
2. The construction sales tax is based on a state formula[1] which includes the Town construction sales tax (4%), the total tax rate for the area (10.1% in Pima County[2]), and a percentage of the actual construction cost (65%)
    a. First, the formula includes a calculation of a tax factor on the overall tax burden:

        (65% x 10.1%) / (1 + (65% x 10.1%)) = 0.0616056

    b. Next, the formula multiplies this factor by the portion of the total sales tax that is the Town's to determine an adjusted sales tax rate

        0.0616056 x (4% / 10.1%) = 2.4398%
3. State law requires that all tax revenue received above the Town's normal sales tax be credited against the development impact fees. For the Town, the normal sales tax is 2%, compared to the overall construction sales tax of 4%. Therefore, 50% of the construction sales tax should be applied as a credit against the impact fees.
4. For impact fee categories which are unit based, representative building sizes were used to develop estimated construction costs and associated taxes. The following average square footages include residential living areas and additional accompanying areas.
    a. Single family residence (general and age-restricted) – 2,000 sq ft of living space, 400 sq ft garage
    b. Multi-family residence (general and age-restricted) – 1,115 sq ft total space per unit (rental)
    c. Hotel/motel – 550 sq ft of total space per unit (room)
    d. Congregate care – 350 sq ft of total space per unit (bed)
5. All other impact fees categories use 1,000 sq ft of construction for the construction tax credit, related directly to the impact fee burden, which is also calculated based on 1,000 sq ft.

[1] Formula is provided by the Arizona Department of Revenue (https://www.azdor.gov)
[2] Total tax rate is 5.6% for the state + 4% for Marana construction + 0.5% for the RTA = 10.1%

Construction Sales Tax Credit by Impact Fee Category

Impact Fee Category	ICC Building Group	ICC Construction Type	ICC Cost per sq ft	Average	Typical sq ft	Construction Cost	Total Construction sales tax	Creditable Construction Sales Tax	Credit Amount for Parks Fee	Credit Amount for Streets Fee
Single Family Residence	R3 - residential one and two family	5b	$150.87	$150.87	2,000	$325,912.00	$7,951.68	$3,976.00	$500.00	$3,476.00
	U - utility (garage)	5b	$60.43	$60.43	400					
Multi-Family Residence	R2 - residential multi-family	5b	$139.06	$139.06	1,115	$155,051.90	$3,783.00	$1,892.00	$500.00	$1,392.00
Single Family Residential (age restricted)	R3 - residential one and two family	5b	$150.87	$150.87	2,000	$325,912.00	$7,951.68	$3,976.00	$500.00	$3,476.00
	U - utility (garage)	5b	$60.43	$60.43	400					
Multi-Family (age restricted)	N/A	5b	$139.06	$139.06	1,115	$155,051.90	$3,783.00	$1,892.00	$500.00	$1,392.00
Hotel/Motel	R1 - residential hotels	5b	$178.00	$178.00	550	$97,900.00	$2,388.59	$1,195.00	$100.00	$1,095.00
Congregate Care	I2 - institutional, nursing homes	3a	$354.29	$267.77	355	$95,058.35	$2,319.26	$1,160.00	$100.00	$1,060.00
	R4 - care/assisted living	5a	$181.25							
Retail Services	M - mercantile	3b	$137.88	$137.88	1,000	$137,880.00	$3,364.03	$1,683.00	$100.00	$1,583.00
High Traffic Retail	B - business	3b	$187.36	$187.36	1,000	$187,360.00	$4,571.26	$2,286.00	$100.00	$2,186.00
Industrial	B - business	3b	$187.36	$187.36	1,000	$187,360.00	$4,571.26	$2,286.00	$100.00	$2,186.00
Office	B - business	3b	$187.36	$187.36	1,000	$187,360.00	$4,571.26	$2,286.00	$100.00	$2,186.00
Medical	I2 - institutional, hospitals	1b	$392.40	$392.40	1,000	$392,400.00	$9,573.88	$4,787.00	$100.00	$4,687.00
Institutional	A3 - assembly, churches	3b	$234.07	$210.47	1,000	$210,466.67	$5,135.02	$2,568.00	$100.00	$2,468.00
	E - educational	3b	$205.54							
	A3 - assembly, libraries, museums, community halls, general	3b	$191.79							
Recreation	A3 - museums, libraries	3b	$191.79	$191.79	1,000	$191,790.00	$4,679.34	$2,340.00	$100.00	$2,240.00

Appendix C

Assessed Costs by Project and Service Area

	Road Project	Limits		Project Type	# of Lanes	Classification	Volume Before Improvements	Existing Volume (veh/day)	Existing Capacity (veh/day)	Future Volume (veh/day)	Future Capacity (veh/day)	Traffic from Development	% of Capacity used by development	Total Improvement Costs	Cost of New Two-Lane Roadway	Outstanding Impact Fee Credits / Debt Service	Cost of Vehicular Improv (80%)	Cost of bike/ped improv (20%)	Cost Attributable to Develoment = (Vehicular Cost * % Capacity used) + 100% of ped/bike improvements
Northwest	Marana Main Street	Sandario Rd	Grier Rd	New	2	Collector	0	0	N/A	3,000	13,990	3,000	21%	$ 3,255,000					$ 3,255,000
	Marana Main Street	Tangerine Farms Rd	Sandario Rd	Legacy	2	Collector	0	1,000	16,730	4,300	16,730	3,300	20%			$ 873,000			$ 873,000
	Tangerine Farms Road	I-10 (Tangerine TI)	Clark Farms	Legacy	4	Arterial	0	13,500	37,610	27,500	37,610	14,000	37%			$ 3,018,397			$ 3,018,397
	Clark Farms	Riccati Dr	Despain Dr	Legacy	3	Collector	0	3,200	17,567	8,700	17,567	5,500	31%						
	Tangerine Farms Road	Clark Farms	I-10 (Marana TI)	New	4	Arterial	0	0	N/A	10,000	30,620	10,000	33%	$ 15,977,000	$ 7,484,400				$ 7,484,400
	Marana Road Interchange, Phase 1	N/A	N/A	Interchange Reconstruct	N/A	N/A	N/A	N/A	N/A	N/A	N/A	N/A	100%	$ 6,753,000					$ 6,753,000
	Clark Farms	Despain Dr	Lon Adams Rd	New	3	Collector	0	0	N/A	10,000	14,690	10,000	68%	$ 4,520,000			$ 3,616,000	$ 904,000	$ 3,365,622
	Clark Farms	Lon Adams Rd	Tangerine Farms Rd	New	4	Collector	0	0	N/A	9,000	30,620	9,000	29%	$ 25,313,000	$ 11,774,700				$ 11,774,700
	Adonis Road	Grier Rd	Tangerine Rd	New	2	Collector	0	0	N/A	10,000	15,930	10,000	63%	$ 20,601,000			$ 16,480,800	$ 4,120,200	$ 14,465,963
	Tangerine Road Interchange	N/A	N/A	Interchange Reconstruct	N/A	N/A	N/A	N/A	N/A	N/A	N/A	N/A	100%	$ 4,500,000					$ 4,500,000
Northeast	Tangerine Road, Phase 1	Dove Mountain Blvd	Town Limits	Completed Capacity	4	Arterial	14,444	15,400	37,610	20,400	37,610	5,000	13%	$ 6,189,000			$ 4,951,200	$ 1,237,800	$ 1,896,029
	Tangerine Road, Phase 2	I-10 (Tangerine TI)	Dove Mountain Blvd	Improvement	4	Arterial	N/A	8,000	16,730	14,000	37,610	6,000	16%	$ 42,537,000			$ 34,029,600	$ 8,507,400	$ 13,936,211
	Twin Peaks Road	Lambert Ln	Tangerine Rd	Completed Capacity	4	Arterial	0	16,000	37,610	23,500	37,610	23,500	62%			$ 3,642,259			$ 3,642,259
	Moore Road	Camino De Oeste	Thornydale Rd	Completed Capacity	2	Collector	0	3,000	13,990	7,000	16,730	7,000	42%			$ 291,788			$ 291,788
	Cayton Road	Dove Mountain Blvd	Thornydale Rd	New	2	Collector	0	0	N/A	5,400	13,990	5,400	39%	$ 6,630,000					$ 6,630,000
	Tangerine Road Interchange	N/A	N/A	Interchange Reconstruct	N/A	N/A	N/A	N/A	N/A	N/A	N/A	N/A	100%	$ 1,500,000					$ 1,500,000
South	Twin Peaks Interchange	N/A	N/A	Legacy	N/A	N/A	N/A	N/A	N/A	N/A	N/A	N/A	100%			$ 3,757,886			$ 3,757,886
	Twin Peaks Road	I-10	Lambert Ln	Legacy	4	Arterial	0	22,000	37,610	33,000	37,610	11,000	29%						
	Twin Peaks Road/ Rattlesnake Pass	Saguaro Highlands Dr	Silverbell Rd	Expansion	4	Collector	N/A	12,500	16,730	22,700	37,610	10,200	27%	$ 18,001,838			$ 14,401,470	$ 3,600,368	$ 7,506,111
	Cortaro Road	I-10	Camino de Oeste	Completed Capacity	4	Arterial	23,000	25,000	37,610	29,000	37,610	4,000	11%	$ 8,134,735			$ 6,507,788	$ 1,626,947	$ 2,319,081
	Silverbell Road	Ina Rd	Cortaro Rd	Completed Capacity	4	Arterial	9,800	14,000	37,610	22,500	37,610	8,500	23%	$ 21,068,682			$ 16,854,946	$ 4,213,736	$ 8,023,017
	Ina Road	I-10	Silverbell Rd	Completed Capacity	4	Arterial	12,848	26,000	16,730	32,300	37,610	6,300	17%	$ 9,000,000			$ 7,200,000	$ 1,800,000	$ 3,006,062
	Silverbell Road	Ina Rd	Sunset Rd	Expansion	4	Arterial	N/A	10,000	16,730	16,000	37,610	6,000	16%	$ 8,013,159			$ 6,410,527	$ 1,602,632	$ 2,625,316