Manatee County
Impact Fee Update Study

Final Report
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I. Introduction

Manatee County implemented transportation, parks, public safety and law enforcement impact fees in July 1986 in response to high growth levels. The most recent technical study that is the basis of the current impact fee schedules was completed in 2015 and adopted in 2016. In 2016, the County also adopted a library impact fee. At this time, to comply with the Impact Fee Ordinance requirements and to reflect most recent data, the County is interested in updating impact fee technical studies for its impact fee program.

Manatee County has retained Benesch to prepare an update study to reflect changes to the cost, credit, and demand components since the 2015 study. This report serves as the technical study to support the calculation of updated impact fees. The initial findings of the study were published in a draft report in January 2021 based on data collected through June 2020. Since then, some of the impact fee variables were updated to reflect most recent data.

Methodology

In developing the County's impact fee program, a consumption-based impact fee methodology is utilized, which is commonly used throughout Florida. A consumption-based impact fee charges new development based upon the burden placed on services from each land use (demand). The demand component is measured in terms of population per unit in the case of all impact fee program areas with the exception of multi-modal transportation. In the case of multi-modal transportation, person-miles of travel is used.

A consumption-based impact fee charges new growth the proportionate share of the cost of providing additional infrastructure available for use by new growth. Unlike a "needs-based" approach, the consumption-based approach ensures that the impact fee is set at a rate that does not generate sufficient revenues to correct existing deficiencies. Given this, the County does not need to go through the process of estimating the portion of each capacity expansion project that may be related to existing deficiencies. In addition, per legal requirements, a credit is subtracted from the total cost to account for the value of future tax contributions of new development toward any capacity expansion projects. In other words, case law requires that the new development should not be charged twice for the same service.

Legal Overview

In Florida, legal requirements related to impact fees have primarily been established through case law since the 1980's. Impact fees must comply with the "dual rational nexus" test, which requires that they:

- Be supported by a study demonstrating that the fees are proportionate in amount to the need created by new development paying the fee; and
- Be spent in a manner that directs a proportionate benefit to new development, typically accomplished through establishment of benefit districts (if needed) and a list of capacity-adding projects included in the County's Capital Improvement Plan, Capital Improvement Element, or another planning document/Master Plan.

In 2006, the Florida legislature passed the "Florida Impact Fee Act," which recognized impact fees as "an outgrowth of home rule power of a local government to provide certain services within its jurisdiction." § 163.31801(2), Fla. Stat. The statute – concerned with mostly procedural and methodological limitations – did not expressly allow or disallow any particular public facility type from being funded with impact fees. The Act did specify procedural and methodological prerequisites, such as the requirement of the fee being based on most recent and localized data, a 90-day requirement for fee changes, and other similar requirements, most of which were common to the practice already.

More recent legislation further affected the impact fee framework in Florida, including the following:

- **HB 227 in 2009:** The Florida legislation statutorily clarified that in any action challenging an impact fee, the government has the burden of proving by a preponderance of the evidence that the imposition or amount of the fee meets the requirements of state legal precedent or the Impact Fee Act and that the court may not use a deferential standard.
- **SB 360 in 2009:** Allowed fees to be decreased without the 90-day notice period required to increase the fees and purported to change the standard of legal review associated with impact fees. SB 360 also required the Florida Department of Community Affairs (now the Department of Economic Opportunity) and Florida Department of Transportation (FDOT) to conduct studies on "mobility fees," which were completed in 2010.
- **HB 7207 in 2011:** Required a dollar-for-dollar credit, for purposes of concurrency compliance, for impact fees paid and other concurrency mitigation required.

- **HB 319 in 2013:** Applied mostly to concurrency management authorities, but also encouraged local governments to adopt alternative mobility systems using a series of tools identified in section 163.3180(5)(f), Florida Statutes, including:
    1. Adoption of long-term strategies to facilitate development patterns that support multi-modal solutions, including urban design, and appropriate land use mixes, including intensity and density.
    2. Adoption of an area-wide level of service not dependent on any single road segment function.
    3. Exempting or discounting impacts of locally desired development, such as development in urban areas, redevelopment, job creation, and mixed use on the transportation system.
    4. Assigning secondary priority to vehicle mobility and primary priority to ensuring a safe, comfortable, and attractive pedestrian environment, with convenient interconnection to transit.
    5. Establishing multi-modal level of service standards that rely primarily on non-vehicular modes of transportation where existing or planned community design will provide adequate level of mobility.
    6. Reducing impact fees or local access fees to promote development within urban areas, multi-modal transportation districts, and a balance of mixed-use development in certain areas or districts, or for affordable or workforce housing.

  Also, under HB 319, a mobility fee funding system expressly must comply with the dual rational nexus test applicable to traditional impact fees. Furthermore, any mobility fee revenues collected must be used to implement the local government's plan, which serves as the basis to demonstrate the need for the fee. Finally, under HB 319, an alternative mobility system, that is not mobility fee-based, must not impose upon new development any responsibility for funding an existing transportation deficiency.

- **HB 207 in 2019:** Included the following changes to the Impact Fee Act along with additional clarifying language:
    1. Impact fees cannot be collected prior to building permit issuance; and
    2. Impact fee revenues cannot be used to pay debt service for previously approved projects unless the expenditure is reasonably connected to, or has a rational nexus with, the increased impact generated by the new residential and commercial construction.

- **HB 7103 in 2019:** Addressed multiple issues related to affordable housing/linkage fees, impact fees, and building services fees. In terms of impact fees, the bill required that when local governments increase their impact fees, the outstanding impact fee credits for developer contributions should also be increased. This requirement was to operate prospectively; however, HB 337 that was signed in 2021 deleted this clause and made all outstanding credits eligible for this adjustment. This bill also allowed local governments to waive/reduce impact fees for affordable housing projects without having to offset the associated revenue loss.
- **SB 1066 in 2020:** Added language allowing impact fee credits to be assignable and transferable at any time after establishment from one development or parcel to another that is within the same impact fee zone or impact fee district or that is within an adjoining impact fee zone or district within the same local government jurisdiction. In addition, added language indicating any new/increased impact fee not being applicable to current or pending permit applications submitted prior to the effective date of an ordinance or resolution imposing new/increased fees.
- **HB 1339 in 2020:** Requires reporting of various impact fee related data items within the annual financial audit report submitted to the Department of Financial Services.
- **HB 337 in 2021**: Placed limits on the amount and frequency of fee increases, but also included a clause to exceed these restrictions if the local governments can demonstrate extraordinary circumstances, hold two public workshops discussing these circumstances and the increases are approved by two-thirds of the governing body.

The following paragraphs provide further detail on the generally applicable legal standards applicable here.

<u>Impact Fee Definition</u>

- An impact fee is a one-time capital charge levied against new development.
- An impact fee is designed to cover the portion of the capital costs of infrastructure capacity consumed by new development.
- The principle purpose of an impact fee is to assist in funding the implementation of projects identified in the Capital Improvements Element (CIE) and other capital improvement programs for the respective facility/service categories.
- Examples of impact fee eligible projects include new/additional buildings, vehicles, equipment, sidewalks, bicycle lanes, roadways as well as expansion of existing capital assets. In the case of assets that are currently rented or otherwise not-owned by the County, constructing or buying a similar asset that will be owned by the County is

considered capacity expansion since the rented/leased assets are not included in the capital inventories used to calculate the fees.

Impact Fee vs. Tax

- An impact fee is generally regarded as a regulatory function established based upon the specific benefit to the user related to a given infrastructure type and is not established for the primary purpose of generating revenue for the general benefit of the community, as are taxes.
- Impact fee expenditures must convey a proportional benefit to the fee payer. This is accomplished through the establishment of benefit districts as needed, where fees collected in a benefit district are spent in the same benefit district.
- An impact fee must be tied to a proportional need for new infrastructure capacity created by new development.

This technical report has been prepared to support legal compliance with existing case law and statutory requirements and documents the methodology used for impact fee calculations for each fee in the following sections, including an evaluation of the inventory, service area, level of service (LOS), cost, credit, and demand components. While certain information included in this report, such as capital facility inventories or level of service comparisons, are based on information obtained through June 2020 during the initial impact fee update work, cost, credit and demand components are updated since then to reflect recent changes to these variables.

Land Use Changes/Additions

As part of this update study, the following land uses were revised/added to the Manatee County impact fee schedules to reflect the most recent data on demand variables:

- Residential land use separation and updated tiering – land use was broken out into Single Family Detached, Single Family Attached, Multi-Family, and Mobile Home Park for the transportation impact fee. Residential land use was broken out as Single Family and Multi-Family for other fee areas. Additionally, residential categories were tiered by square footage. Additional detail on the tiering analysis is presented in Appendices A (non-transportation fees) and C (transportation).
- Congregate Care Facility – land use added to the schedule (charged per dwelling unit).
- Community/Shopping Center was broken into three square footage tiers:
    - Less than 40,000 sq ft gross leasable area

    - 40,000 to 150,000 sq ft gross leasable area
    - Greater than 150,000 sq ft gross leasable area
- Gas Station w/Convenience Market – land use added to the schedule (charged per fuel position). This land use was tiered by square footage of the convenience market:
    - Less than 2,000 sq ft
    - 2,000 to 5,499 sq ft
    - 5,500 or more sq ft

II. Public Safety

This section provides the results of the public safety impact fee analysis. Manatee County Government provides EMS services countywide while individual Fire Districts provide fire prevention, suppression and rescue services in their service areas. Several elements addressed in this section include:

- Facility Inventory
- Service Area and Population
- Level of Service
- Cost Component
- Credit Component
- Net Public Safety Impact Cost
- Calculated Public Safety Impact Fee Schedule
- Public Safety Impact Fee Schedule Comparison

These elements are summarized in the remainder of this section.

Facility Inventory

Table II-1 presents the buildings and land inventory associated with the public safety impact fee for Manatee County. Included in the inventory are County-owned EMS stations and other public safety buildings, such as the emergency operations center, beach patrol, animal shelter, and cat shelter. Although the County provides EMS services out of 18 stations, the inventory used for impact fee purposes includes only the six stations that are owned by the County. The remaining 12 stations are leased, and therefore are not included in the inventory. When the County decides to purchase or build a station to replace one of the rented stations, impact fee funding can be used since rented stations were considered operational expenses and not included in the capital inventory.

Cost estimate for buildings is based primarily on recent projects, cost increases observed over the past several years and data from other Florida jurisdictions. This estimate takes into consideration cost associated with fiber optics, utilities, roadways, and other amenities that will be needed for undeveloped properties that are likely to be used for future buildings. Land values are based on a review of recent purchases and cost increases indicated by the Manatee County

Property Appraiser's Office over the past several years, and discussions with the County representatives.

Based on this review and analysis, the building value is estimated at $325 per square foot and the land value is estimated at $160,000 per acre. These unit cost estimates result in a total building and land value of approximately $72 million, of which $64.5 million is for buildings and the remaining $7.5 million is for land. A more detailed explanation of building and land value estimates is included in Appendix B.

Table II-1

Public Safety Buildings and Land Inventory

Description	Address[1]	Year Acquired/ Built[1]	Acres[1]	Square Feet[1]	Total Square Footage on Site[2]	Allocated Acreage[3]	Building Value[4]	Land Value[5]	Total Building and Land Value[6]
EMS Stations									
EMS Station 5	1505 Dam Road, Bradenton	1980	4.96	1,196	7,538	0.79	$388,700	$126,400	$515,100
EMS Station 6[7]	5034 US Highway 301 N, Bradenton	2018	N/A	1,304	4,011	N/A	$423,800	N/A	$423,800
EMS Station 10[8]	2901 59th Street West	2021	N/A	864	N/A	N/A	$280,800	N/A	$280,800
EMS Station 15/17	10311 Malachite Drive, Bradenton	2020	1.25	6,504	6,504	1.25	$2,113,800	$200,000	$2,313,800
EMS Station 16/19	202 6th Avenue East, Bradenton	2018	2.88	3,197	21,663	0.43	$1,039,025	$68,800	$1,107,825
EMS Station 20	11721 69th Street East, Parrish	2020	5.00	3,540	3,540	5.00	$1,150,500	$800,000	$1,950,500
Other Public Safety Buildings									
Emergency Operations Center	2101 47th Terrace E., Bradenton	2007	22.55	104,282	104,282	22.55	$33,891,650	$3,608,000	$37,499,650
Beach Patrol[9]	2651 Gulf Dr S, Bradenton Beach	2012	N/A	10,189	10,189	N/A	$3,311,425	N/A	$3,311,425
Community Paramedicine	202 6th Avenue East, Bradenton	2018	2.88	3,053	21,663	0.40	$992,225	$64,000	$1,056,225
Palmetto Animal Shelter	305 25th St W	1990	1.53	15,590	15,590	1.53	$5,066,750	$244,800	$5,311,550
Bishop Animal Shelter	5718 21st Ave W, Bradenton	2022	14.42	46,005	46,005	14.42	$14,951,625	$2,307,200	$17,258,825
Cat Town (Cat Shelter)	216 6th Ave E, Bradenton, FL 34208	2019	2.88	2,712	21,663	0.36	$881,400	$57,600	$939,000
Total				**198,436**		**46.73**	**$64,491,700**	**$7,476,800**	**$71,968,500**
Building Value per Square Foot[10]							**$325**		
Land Value per Acre[11]								**$160,000**	

1) Source: Manatee County
2) Source: Manatee County Property Appraiser
3) Square feet divided by total square footage on site (Item 2) multiplied by acres
4) Estimated building value per square foot (Item 10) multiplied by square feet
5) Allocated acreage (Item 3) multiplied by the estimated land value per acre (Item 11)
6) Sum of building and land value (Items 4 and 5)
7) Land is owned by the State of Florida and is excluded from the impact fee inventory.
8) Land is owned by the City of Bradenton and is excluded from the impact fee inventory.
9) Station is located at Coquina Beach Park. Acreage is included in the parks and recreation impact fee inventory.
10) Source: Appendix B
11) Source: Appendix B

In addition to land and buildings, the Manatee County public safety impact fee inventory includes the necessary vehicles and equipment required to perform its services. As presented in Table II-2, the total vehicle and equipment value is approximately $27.1 million.

Table II-2

Public Safety Vehicle and Equipment Inventory [1]

Description	Unit Count	Unit Value	Total Value
ALS Transport Units	30	$620,000	$18,600,000
BLS Transport Units	5	$250,000	$1,250,000
ForkLift	1	$95,000	$95,000
Generator	5	$2,500	$12,500
Jet Ski's	2	$18,365	$36,730
Off Road Medical Ambulance	2	$130,000	$260,000
Command Vehicles	3	$127,220	$381,660
Quick Response Vehicles	19	$129,186	$2,454,534
Sedans	2	$25,000	$50,000
Support Pickup	6	$63,000	$378,000
Support SUV's	5	$58,000	$290,000
Support Van	12	$35,000	$420,000
Trailers	10	$20,000	$200,000
Medical Tent Trailers	3	$90,910	$272,730
Raptor Bus	1	$250,000	$250,000
Boat and Motor	2	$75,000	$150,000
John Deere Gator for EMS	3	$16,850	$50,550
John Deere Gator for Beach Patrol	12	$21,431	$257,172
Code Enforcement Pickup	24	$63,000	$1,512,000
Code Enforcement Trailers	6	$13,956	$83,736
Code Enforcement 4 wheelers	10	$14,255	$142,550
TOTAL	**163**		**$27,147,162**

1) Source: Manatee County. Unit value includes equipment associated with each individual vehicle

Service Area and Demand Component

Manatee County provides public safety services throughout all of Manatee County. As such, the proper benefit district is the entire county. In this technical study, the current 2022 weighted and functional population estimates are used. Because simply using weighted (permanent, plus weighted seasonal) population estimates does not fully address all of the benefactors of public

safety services, the "functional" weekly 24-hour population approach is used to establish a common unit of demand across different land uses. Functional population accounts for residents, visitors, and workers traveling in and out of the county throughout the day and calculates the presence of population at the different land uses during the day. Appendix A provides further detail on the population analysis conducted.

Level of Service

Manatee County is served by 18 EMS stations, which results in a current level of service (LOS) of 25,200 weighted seasonal residents per EMS station or 0.040 EMS stations per 1,000 weighted seasonal residents. However, of these 18 stations, 12 are leased. For impact fee calculation purposes, only the County-owned six EMS stations are utilized. As presented, based on the County owned EMS stations, the current LOS is 75,600 weighted seasonal residents per station or 0.013 stations per 1,000 weighted residents.

In terms of functional residents, the County's achieved LOS is 69,100 functional residents per County-owned station or 0.014 stations per 1,000 functional residents.

Table II-3

Current Level of Service (2022)

Variable	Year 2022	
	Weighted Population	Functional Population
Population[(1)]	453,342	414,488
Number of Owned EMS Stations[(2)]	6	6
Population per Station[(3)]	75,557	69,081
LOS (Stations per 1,000 Residents)[(4)]	**0.013**	**0.014**
Owned and Leased EMS Stations[(5)]	18	18
Population per Station[(6)]	25,186	23,027
LOS (Stations per 1,000 Residents)[(7)]	**0.040**	**0.043**

1) Source: Appendix A, Table A-1 for weighted population and Table A-13 for functional population
2) Source: Table II-1. Includes only county owned EMS stations.
3) Population (Item 1) divided by the number of owned stations (Item 2)
4) Number of owned stations (Item 2) divided by the population (Item 1), multiplied by 1,000
5) Source: Manatee County Government. All EMS stations operated by County, including leased stations.
6) Population (Item 1) divided by the total number of EMS stations (Item 5)
7) Owned and leased EMS station (Item 5) divided by the population (Item 1), multiplied by 1,000

Although the LOS is measured in terms of population per station for capital planning purposes, for impact fee calculation purposes, a more appropriate LOS measure is the level of investment or dollar value of capital assets per resident, which reflects the investment made by the community to date. For impact fee calculation purposes, the County's achieved LOS is $187 per resident for public safety infrastructure, which is presented later in this section in Table II-7.

Table II-4 compares the levels of service for other select Florida counties to the level of service of Manatee County. The LOS is displayed in terms of permanent population for 2022 for the service area of all entities.

Table II-4
Level of Service Comparison (2022)

Jurisdiction	Service Area Population (2022)[1]	Number of Stations[2]	Residents per Station[3]	LOS (Stations) per 1,000 Residents)[4]
Pasco County	592,669	23	25,768	0.039
Hillsborough County	1,051,401	43	24,451	0.041
Manatee County[5]	**421,768**	**18**	**23,432**	**0.043**
Lee County	802,178	36	22,283	0.045
Osceola County	281,447	17	16,556	0.060
Collier County	390,912	24	16,288	0.061
Polk County	770,019	50	15,400	0.065
Charlotte County	196,742	15	13,116	0.076
Volusia County	123,519	21	5,882	0.170

1) Source: University of Florida, Bureau of Economic & Business Research (BEBR), April 1, 2022 Final Population Estimates
2) Source: County/department websites
3) Service area population (Item 1) divided by the number of stations (Item 2)
4) Number of stations (Item 2) divided by the service area population (Item 1) divided by 1,000
5) Station count includes owned and leased stations

Cost Component

The cost component of the study evaluates the cost of all capital assets, including buildings, land, vehicles and equipment. Table II-5 provides a summary of all capital costs, amounting to approximately $99.1 million.

In addition, Table II-5 also provides the impact cost per functional resident, which is calculated by multiplying the total asset value per station of $16.5 million by the current LOS (stations per

1,000 functional residents) of 0.014 and dividing by 1,000. As shown, this calculation results in approximately $231 per functional resident.

Table II-5

Total Impact Cost per Functional Resident

Variable	Figure	Percent of Total[9]
Building Value[1]	$64,491,700	65.1%
Land Value[2]	$7,476,800	7.5%
Vehicle & Equipment Value[3]	$27,147,162	27.4%
Total Asset Value[4]	**$99,115,662**	**100.0%**
Number of Owned Stations[5]	6	
Total Asset Value per Station[6]	**$16,519,277**	
Achieved LOS (Stations per 1,000 Functional Residents)[7]	0.014	
Total Impact Cost per Functional Resident[8]	**$231.27**	

1) Source: Table II-1
2) Source: Table II-1
3) Source: Table II-2
4) Sum of building value (Item 1), land value (Item 2), and vehicle/equipment value (Item 3)
5) Source: Table II-1
6) Total asset value (Item 4) divided by the number of owned stations (Item 5)
7) Source: Table II-3
8) Total asset value per station (Item 6) multiplied by the current LOS (Item 7) divided by 1,000
9) Distribution of total asset value

Credit Component

To avoid overcharging new development for the public safety impact fee, a review of the capital funding program for public safety services was completed. The purpose of this review was to determine any potential revenue credits generated by new development that are being used for expansion of capital facilities, land, vehicles, and equipment included in the inventory. It should be noted that the credit component does not include any capital renovation, maintenance, or operations expenses, as these types of expenditures cannot be funded with impact fee revenue.

Capital Expansion "Cash" Credit

To calculate the capital expansion credit per functional resident, funding sources used for historical capacity projects and those programmed in the CIP are reviewed. During the time period from 2018 through 2027, the County has allocated an average annual non-impact fee funding of $1.1 million toward public safety services capital facilities utilizing revenues from the American Rescue Plan Act, General Fund, Infrastructure Sales Tax, and other contributions. The

annual capital expansion expenditures were divided by the average annual functional residents for the same period in order to calculate the average annual capital expansion credit per functional resident. As presented in Table II-6, the result is approximately $3 per functional resident.

Table II-6

Capital Expansion Annual "Cash" Credit

Description[1]	Fiscal Year		Total
	2018-2022	2023-2027	
American Rescue Plan Act			
Lake Manatee EMS Base[2]	-	$1,499,894	**$1,499,894**
Moccasin Wallow Rd EMS Station w Ambulance	-	$2,582,358	**$2,582,358**
North County EMS Base Station[3]	-	$208,950	**$208,950**
Subtotal -- American Rescue Plan Act	**-**	**$4,291,202**	**$4,291,202**
General Fund			
Next Generation 911	$482,742	-	**$482,742**
Relocation of EMS Station 10[4]	$266,649	-	**$266,649**
Community Paramedicine Office	$606,734	-	**$606,734**
Subtotal -- General Fund	**$1,356,125**	**$0**	**$1,356,125**
Infrastructure Sales Tax			
Next Generation 911	$1,555,820	-	**$1,555,820**
Ambulance - Myakka	$357,295	-	**$357,295**
New Animal Shelter	$0	$1,000,000	**$1,000,000**
Subtotal -- Infrastucture Sales Tax	**$1,913,115**	**$1,000,000**	**$2,913,115**
Contributions			
New Animal Shelter	-	$2,000,000	**$2,000,000**
Subtotal -- Contributions	**$0**	**$2,000,000**	**$2,000,000**
Total Capital Expansion Expenditures			**$10,560,442**
Average Annual Capital Expansion Expenditures[5]			**$1,056,044**
Average Functional Population[6]			**415,082**
Capital Expansion Annual "Cash" Credit per Functional Resident[7]			**$2.54**

1) Source: Manatee County and the Manatee County Adopted Capital Improvement Plan (FY 2023 - FY 2027)
2) The expenditure amount shown is 73% of the total expenditures, reflecting the expansion portion of the project.
3) The expenditure amount shown is 21% of the total expenditures, reflecting the expansion portion of the project.
4) The County is currently leasing the land for Station 10 from the City of Bradenton; therefore, the entire project is considered expansionary.
5) Average annual capital expansion expenditures over the 10-year period
6) Source: Table A-15. Average annual functional population over the 10-year period.
7) Average annual capital expansion expenditures (Item 5) divided by average annual functional population (Item 6)

Net Public Safety Impact Cost

Table II-7 summarizes the net impact cost per functional resident, which is the difference between the cost component and the credit component. The resulting net impact cost is $187 per functional resident, which also represents the LOS measure for impact fee calculation purposes.

Table II-7

Net Impact Cost

Variable	Impact Cost	Revenue Credits
Impact Cost		
Total Impact Cost per Functional Resident[1]	**$231.27**	
Impact Credit		
Capital Expansion "Cash" Credit per Functional Resident[2]		$2.54
Capitalization Rate		3.01%
Capitalization Period (in years)		25
Present Value of Capital Expansion "Cash" Credit per Functional Resident[3]		**$44.18**
Net Impact Cost		
Net Impact Cost per Functional Resident[4]	**$187.09**	

1) Source: Table II-5
2) Source: Table II-6
3) Present value of the capital expansion “cash” credit per functional resident at a capitalization rate of 3.01%. The estimated capitalization rate was provided by Manatee County.
4) Total impact cost per functional resident (Item 1) less the present value of capital expansion “cash” credit per functional resident (Item 3)

Calculated Public Safety Impact Fee Schedule

Table II-8 presents the calculated public safety impact fee schedule for Manatee County for both residential and non-residential land uses, based on the net impact cost per functional resident previously presented in Table II-7. Also presented is a comparison to the County’s current adopted fee and percent change from the current fee.

Table II-8

Calculated Public Safety Impact Fee Schedule

ITE LUC	Land Use	Impact Unit	Functional Resident Coefficient[1]	Calculated Impact Fee[2]	Adopted Impact Fee[3]	Percent Change[4]
Residential:						
Single Family Detached:						
210	750 sq ft or less	du	0.98	**$183**	$108	69%
	751 - 1,000 sq ft	du	1.02	**$191**	$108	77%
	1,001 - 1,300 sq ft	du	1.16	**$217**	$167	30%
	1,301 - 1,700 sq ft	du	1.42	**$266**	$230	16%
	1,701 sq ft or more	du	1.75	**$327**	$289	13%
Multi-Family:						
220, 221, 222	750 sq ft or less	du	0.85	**$159**	$108	47%
	751 - 1,000 sq ft	du	0.88	**$165**	$108	53%
	1,001 - 1,300 sq ft	du	1.00	**$187**	$167	12%
	1,301 sq ft or more	du	1.22	**$228**	$230	-1%
240	Mobile Home	du	0.83	**$155**	$167	-7%
Transient, Assisted, Group:						
253	Congregate Care/Assisted Living Facility	du	0.94	**$176**	n/a	n/a
320	Lodging	room	1.04	**$195**	$30	550%
620	Nursing Home	1,000 sf	2.65	**$496**	$159	212%
Non-Residental:						
110	Light Industrial	1,000 sf	0.50	**$94**	$111	-15%
140	Manufacturing	1,000 sf	0.58	**$109**	$111	-2%
150	Warehouse	1,000 sf	0.12	**$22**	$111	-80%
151	Mini-Warehouse	1,000 sf	0.05	**$9**	$111	-92%
565	Day Care Center	1,000 sf	0.81	**$152**	$159	-4%
610	Hospital	1,000 sf	1.31	**$245**	$159	54%
710	Office & Other Services	1,000 sf	0.97	**$181**	$159	14%
822	Commercial/Shopping Center less than 40,000 sflga	1,000 sfgla	2.09	**$391**	$134	192%
821	Commercial/Shopping Center 40,000 to 150,000 sfgla	1,000 sfgla	2.59	**$485**	$134	262%
820	Commercial/Shopping Center greater than 150,000 sfgla	1,000 sfgla	1.42	**$266**	$134	99%
944	Gas Station w/Convenience Store <2,000 sq ft	fuel pos.	1.47	**$275**	n/a	n/a
945	Gas Station w/Convenience Store 2,000 to 5,499 sq ft	fuel pos.	2.31	**$432**	n/a	n/a
	Gas Station w/Convenience Store 5,500+ sq ft	fuel pos.	3.02	**$565**	n/a	n/a

1) Source: Appendix A, Table A-16 for residential and transient, assisted, group land uses and Table A-18 for non-residential land uses
2) Net impact cost per functional resident from Table II-7 multiplied by the functional resident coefficient (Item 1) for each land use
3) Source: Manatee County Administration Department
4) Percent change from the adopted impact fee (Item 3) to the calculated impact fee (Item 2)

n/a – indicates a new land uses added to the fee schedule, which was previously charged using one of the other categories.

Public Safety Impact Fee Schedule Comparison

As part of the work effort in developing the Manatee County public safety impact fee schedule, the County's calculated and adopted impact fee schedules were compared to the adopted fee schedules of other select Florida counties. Table II-9 presents this comparison.

Table II-9

Public Safety Impact Fee Schedule Comparison

Land Use	Unit[2]	Manatee County		Charlotte County[5]	Collier County[6]	Hillsborough County[7]	Lee County[8]	Osceola County[9]	Pasco County[10]	Polk County[11]	Sarasota County[12]	Volusia County[13]
		Calculated[3]	Current Adopted[4]									
Date of Last Update		**2022**	**2015**	2021	2016	2018	2018	2017	2003	2019	2016	2022
Assessed Portion of Calculated[1]		**N/A**	**90%**	100%	100%	100%	100%	100%	100%	100%	100%	100%
Residential:												
Single Family (2,000 sq ft)	du	**$327**	**$289**	$77	$142	$335	$55	$391	$172	$76	$171	$70
Non-Residential:												
Light Industrial	1,000 sf	**$94**	**$111**	$19	$54	$57	$10	$43	$224	$21	$35	$20
Office (50,000 sq ft)	1,000 sf	**$181**	**$159**	$57	$93	$158	$29	$267	$224	$49	$129	$40
Retail (125,000 sq ft)	1,000 sfgla	**$485**	**$134**	$119	$192	$313	$59	$543	$224	$78	$224	$120

1) Represents the portion of the maximum calculated fee for each respective county that is collected. Fee may have been lowered/increased through annual indexing or policy discounts. Does not account for moratorium/suspensions.
2) du = dwelling unit
3) Source: Table II-8
4) Source: Manatee County Administration Department
5) Source: Charlotte County Planning & Zoning Department. EMS impact fee shown. Includes a 2.55% administrative fee.
6) Source: Collier County Capital Project Planning, Impact Fees and Program Management Division. EMS impact fee shown.
7) Source: Hillsborough County Development Services Department. Fire rescue impact fee shown.
8) Source: Lee County Community Development Department. EMS impact fee shown.
9) Source: Osceola County Impact and Mobility Fees Office. Fire rescue impact fee shown.
10) Source: Pasco County Land Development Code, Chapter 1300 Concurrency, Mobility & Impact Fees. Rescue impact fees shown.
11) Source: Polk County Building Division. EMS impact fee shown.
12) Source: Sarasota County Planning and Development Services Department. EMS impact fee shown.
13) Source: Volusia County Growth and Resource Management Department. Fee shown is EMS impact fee.

III. Law Enforcement

This section discusses the analysis used in developing the law enforcement impact fee. Several elements addressed in this section include:

- Facility Inventory
- Service Area and Population
- Level of Service
- Cost Component
- Credit Component
- Net Law Enforcement Impact Cost
- Calculated Law Enforcement Impact Fee Schedule
- Law Enforcement Impact Fee Schedule Comparison

These elements are summarized throughout this section.

Facility Inventory

The facility inventory for the County's law enforcement services includes land, buildings, vehicles and equipment. According to information provided by Manatee County, law enforcement building and land related capital assets include approximately 323,600 square feet of building space and approximately 35 acres of land. Table III-1 presents this information.

Cost estimate for buildings is based primarily on the County estimates and recent cost increases observed. This cost estimate takes into consideration of use of undeveloped property for future buildings, which requires bringing in fiber optics, utilities, roadways, and other amenities. Land values are based primarily on a review of recent appraisals/estimates for upcoming purchases and recent land value increases estimated by the Manatee County Property Appraiser.

Based on this data and analysis, building values are estimated at $400 per square foot and the land value is estimated at $150,000 per acre. These cost estimates result in a total building and land value of approximately $134.7 million, of which $129.4 million is for buildings and the remaining $5.2 million is for land. A more detailed explanation of building and land value estimates is included in Appendix B.

Table III-1
Law Enforcement Building and Land Inventory

Description[1]	Address[2]	Square Footage[2]	Acres[3]	Building Value[4]	Land Value[5]	Total Building and Land Value[6]
MSO District II	407 57th Ave E	25,428	1.71	$10,171,200	$256,500	$10,427,700
Desoto Center - Sheriff's Headquarters	600 301 Blvd W	237,500	25.28	$95,000,000	$3,792,000	$98,792,000
Juvenile Assessment	401 17th Ave W	41,766	5.95	$16,706,400	$892,500	$17,598,900
Offender Work Program	1640 60th Ave Dr E	12,081	0.86	$4,832,400	$129,000	$4,961,400
Sheriffs Office South County	1508 Florida Blvd	6,826	1.03	$2,730,400	$154,500	$2,884,900
Total		**323,601**	**34.83**	**$129,440,400**	**$5,224,500**	**$134,664,900**
Building Value per Square Foot[7]				$400		
Land Value per Acre[8]					$150,000	

1) Source: Manatee County
2) Source: Manatee County
3) Source: Manatee County
4) Estimated building value per square foot (Item 7) multiplied by square footage (Item 2)
5) Acres (Item 3) multiplied by the estimated land value per acre (Item 8)
6) Sum of building and land value (Items 4 and 5)
7) Source: Appendix B
8) Source: Appendix B

In addition to land and buildings, the Manatee County law enforcement impact fee inventory includes the necessary vehicles and equipment required to perform law enforcement services. As presented in Table III-2, the total vehicle and equipment value is approximately $38.8 million.

Table III-2

Law Enforcement Vehicle and Equipment Inventory [(1)]

Description	Unit Count	Unit Value	Total Value
All Terrain Vehicles	30	$11,943	$358,290
Boats	5	$130,270	$651,350
Bomb Squad Truck	1	$353,360	$353,360
Buses	3	$84,311	$252,933
Mobile Command Unit	1	$826,280	$826,280
Helicopters	2	$3,177,680	$6,355,360
Large Trucks	9	$60,571	$545,139
Motorcycles	7	$22,288	$156,016
Pickup Trucks	78	$38,485	$3,001,830
Sedans	368	$27,276	$10,037,568
SUVs	348	$39,267	$13,664,916
SWAT Armored Truck	1	$225,308	$225,308
Tractor/Trailer for Jail	3	$86,053	$258,159
Vans	45	$30,586	$1,376,370
Trailers	75	$10,473	$785,475
Total	**976**		**$38,848,354**

1) Source: Manatee County. Unit value includes equipment associated with vehicles.

Service Area and Demand Component

Manatee County provides law enforcement services to the unincorporated areas of the county. Municipalities within the county have their own police departments. As such, the proper benefit district for law enforcement is the unincorporated county. In this technical study, the current 2022 weighted and functional population estimates are used. Because simply using weighted (permanent plus weighted seasonal) population estimates does not fully address all of the benefactors of law enforcement services, the "functional" weekly 24-hour population approach is used to establish a common unit of demand across different land uses. Functional population accounts for residents, visitors and workers traveling in and out of the county throughout the day and calculates the presence of population at different land uses during the day. Appendix A provides further explanation of the population analysis conducted.

Level of Service

Based on sworn officer counts provided by the Manatee County Sheriff's Office (MCSO), as well as, population estimates produced in Appendix A, the 2022 current level of service (LOS) is calculated at 1.54 sworn officers per 1,000 weighted seasonal residents. Table III-3 presents the calculation of the existing LOS.

While the 2022 LOS is 1.54 sworn officers per 1,000 weighted seasonal residents, to calculate the law enforcement impact fee, the LOS needs to be calculated in terms functional residents. As shown, the current LOS is 1.81 sworn officers per 1,000 functional residents, which is utilized in calculating the law enforcement impact fee for Manatee County.

Table III-3

Current Level of Service (2022)

Variable	Year 2022	
	Weighted Population	Functional Population
Population[(1)]	365,196	312,048
Number of Sworn Officers[(2)]	564	564
LOS (Officers per 1,000 Residents)[(3)]	**1.54**	**1.81**

1) Source: Appendix A, Table A-1 for weighted population and Appendix A, Table A-15 for functional population
2) Source: Manatee County
3) Number of sworn officers (Item 2) divided by population (Item 1), multiplied by 1,000

Although the LOS is measured in terms of officers per population for operational purposes, for impact fee calculation purposes, a more appropriate LOS measure is the level of investment or dollar value of capital assets per resident, which reflects the investment made by the community to date. For impact fee calculation purposes, the County's achieved LOS is $449 per resident for law enforcement infrastructure, which is presented later in this section in Table III-8.

Table III-4 summarizes a LOS comparison between Manatee County and other Florida counties. The LOS is displayed in terms of permanent population for all jurisdictions because a functional population analysis has not been completed for these entities. As presented in this table, Manatee County's LOS is in the mid-range of the communities reviewed.

Table III-4

Level of Service Comparison (2019)

Jurisdiction	Service Area Population (2019)[1]	Number of Officers[2]	LOS (Officers per 1,000 Residents)[3]
Pasco County	484,249	664	1.37
Hillsborough County	988,250	1,403	1.42
Lee County	454,684	773	1.70
Sarasota County	272,616	468	1.72
Manatee County[4]	**309,466**	**564**	**1.82**
Volusia County	234,744	423	1.80
Osceola County	247,878	450	1.82
Collier County	338,436	641	1.89
Polk County	446,778	907	2.03
Charlotte County	161,809	334	2.06
Pinellas County	399,488	946	2.37

1) Source: Florida Department of Law Enforcement (FDLE) Criminal Justice Agency Profile Report, 2019.
2) Source: FDLE Criminal Justice Agency Profile Report, 2019. Number of officers determined by subtracting correctional officers from the reported total officer count.
3) Number of officers (Item 2) divided by the service area population (Item 1) multiplied by 1,000
4) Source: Table III-3

Cost Component

The cost component of the study evaluates the cost of all capital assets, including buildings, land and equipment/vehicles. Table III-5 provides a summary of all capital costs, which amounts to approximately $173.5 million. Given that a portion of the assets were funded through bonds, the remaining principal associated with outstanding debt service that is being paid with impact fee revenues is subtracted from the total asset value. This is to ensure that the new development will not be overcharged for a given infrastructure. The resulting net asset value amounts to $171.4 million or $303,900 per sworn officer.

In addition, Table III-5 also provides the impact cost per functional resident, which is calculated by multiplying the net asset value per sworn officer of $303,900 by the current achieved LOS (sworn officers per 1,000 functional residents) of 1.81 and dividing by 1,000. As shown, this calculation amounts to $550 per functional resident.

Table III-5

Total Impact per Functional Resident

Variable	Figure	Percent of Total[11]
Building Value[1]	$129,440,400	74.6%
Land Value[2]	$5,224,500	3.0%
Vehicle & Equipment Value[3]	$38,848,354	22.4%
Total Asset Value[4]	**$173,513,254**	**100.0%**
Less: Portion Not Owned[5]	$2,087,113	
Net Asset Value[6]	**$171,426,141**	
Number of Sworn Officers[7]	564	
Net Asset Value per Sworn Officer[8]	**$303,947**	
Current LOS (Sworn Officers per 1,000 Functional Residents)[9]	1.81	
Total Impact Cost per Functional Resident[10]	**$550.14**	

1) Source: Table III-1
2) Source: Table III-1
3) Source: Table III-2
4) Sum of building value (Item 1), land value (Item 2), and vehicle/equipment value (Item 3)
5) Source: Manatee County Government; represents the principal associated with the portion of remaining debt service that is being paid with impact fees
6) Total asset value (Item 4) less portion not owned (Item 5)
7) Source: Table III-3
8) Net asset value (Item 6) divided by the number of sworn officers (Item 7)
9) Source: Table III-3
10) Net asset value per sworn officer (Item 8) multiplied by the LOS (Item 9) divided by 1,000
11) Distribution of total asset value

Credit Component

To avoid overcharging new development, a review of the capital funding allocation for law enforcement services is completed. The purpose of this review is to determine any potential revenue generated by future development that is likely to be used for capital facilities, land, vehicle, and equipment expansion of the law enforcement program. Revenue credits are then applied against the total impact cost per functional resident so that new development is not charged twice for capital revenue contributions used to expand the law enforcement program.

Capital Expansion "Cash" Credit

To calculate the capital expansion credit per functional resident, funding sources used for historical capacity projects and those programmed in the CIP are reviewed. Over the next five years, the County has programmed an average annual non-impact fee funding of $1.5 million toward law enforcement capital facilities utilizing revenue from the Infrastructure Sales Tax. The

annual capital expansion expenditures were divided by the average annual functional residents for the same period to calculate the average annual capital expansion credit per functional resident. As presented in Table III-6, the result is $5 per functional resident per year.

Table III-6

Capital Expansion Annual "Cash" Credit

Description[1]	Total (FY 2020-24)
Infrastructure Sales Tax	
MCSO - Fleet Facility[2]	$2,344,125
MCSO - Evidence Building	$5,087,000
Subtotal	**$7,431,125**
Total Capital Expansion Expenditures	**$7,431,125**
Average Annual Capital Expansion Expenditures[3]	**$1,486,225**
Average Annual Functional Population[4]	**307,719**
Capital Expansion Annual "Cash" Credit per Functional Resident[5]	**$4.83**

1) Source: Manatee County
2) The expenditure amount shown is 50% of the total expenditures, reflecting the expansion portion of the project.
3) Average annual capital expenditures over the 5-year period
4) Source: Appendix A, Table A-15. Average annual population over the 5-year period.
5) Average annual capital expansion "cash" expenditures (Item3) divided by average annual population (Item 4)

Debt Service Credit

Any outstanding bond issues related to the law enforcement facilities will result in a credit to the impact fee. Manatee County used bond proceeds for law enforcement facility expansion projects. Table III-7 summarizes the outstanding debt service related to law enforcement capital expansion projects. To calculate the credit of the current debt obligations, the present value of the total remaining payments is calculated and then divided by the average annual functional population estimated over the remaining life of the bond issue. As shown in Table III-7, the resulting credit for law enforcement facilities-related debt is approximately $17 per resident.

Table III-7

Debt Service Credit

Description	Years Remaining[1]	Remaining Law Debt Service (Capacity Expansion)[1]	Present Value of Payments Remaining (Capacity Expansion)[2]	Avg Annual Population During Remaining Bond Issue Period[3]	Credit per Resident[4]
Revenue Refunding and Improvement Bonds, Series 2022	30	$11,861,971	$6,557,743	377,524	$17.37
Total Debt Service Credit per Resident					**$17.37**

1) Source: Manatee County
2) Present value of remaining payments in 2023 dollars
3) Appendix A, Table A-15. Population for years 2046-2052 is based on an estimated 0.7 percent annual growth rate.
4) Present value of payments remaining (Item 2) divided by average annual population (Item 3)

Net Law Enforcement Impact Cost

The net impact cost per resident is the difference between the Cost Component and the Credit Component. Table III-8 summarizes the calculation of the net impact cost that amounts to approximately $449 per resident and represents the LOS measure for impact fee calculation purposes.

Table III-8

Net Impact Cost

Variable	Impact Cost	Revenue Credits
Impact Cost		
Total Impact Cost per Functional Resident[1]	**$550.14**	
Impact Credit		
Capital Expansion Annual "Cash" Credit per Functional Resident[2]		$4.83
Capitalization Rate		3.01%
Capitalization Period (in years)		25
Present Value of Capital Expansion "Cash" Credit per Functional Resident[3]		**$84.01**
Debt Service Credit per Functional Resident[4]		**$17.37**
Total Credit per Functional Resident[5]		**$101.38**
Net Impact Cost		
Net Impact Cost per Functional Resident[6]	**$448.76**	

1) Source: Table III-5
2) Source: Table III-6
3) Present value of the capital expansion credit per functional resident at a capitalization rate of 3.01%. The estimated capitalization rate was provided by Manatee County.
4) Source: Table III-7
5) Sum of present value of capital expansion credit per functional resident (Item 3) and debt service credit per functional resident (Item 4)
6) Total impact cost per functional resident (Item 1) less the total credit per functional resident (Item 5)

Calculated Law Enforcement Impact Fee Schedule

Table III-9 presents the calculated law enforcement impact fee schedule for Manatee County for both residential and non-residential land uses, based on the net impact cost per functional resident previously presented in Table III-8. Also presented is a comparison to the County's current adopted fee and percent change from the current fee, if applicable.

Table III-9

Calculated Law Enforcement Impact Fee Schedule

ITE LUC	Land Use	Impact Unit	Functional Resident Coefficient[1]	Calculated Impact Fee[2]	Adopted Impact Fee[3]	Percent Change[4]
Residential:						
Single Family Detached:						
210	750 sq ft or less	du	1.01	**$453**	$200	127%
	751 - 1,000 sq ft	du	1.05	**$471**	$200	136%
	1,001 - 1,300 sq ft	du	1.18	**$530**	$311	70%
	1,301 - 1,700 sq ft	du	1.46	**$655**	$426	54%
	1,701 sq ft or more	du	1.79	**$803**	$536	50%
Multi-Family:						
220, 221, 222	750 sq ft or less	du	0.98	**$440**	$200	120%
	751 - 1,000 sq ft	du	1.02	**$458**	$200	129%
	1,001 - 1,300 sq ft	du	1.15	**$516**	$311	66%
	1,301 sq ft or more	du	1.41	**$633**	$426	49%
240	Mobile Home	du	0.82	**$368**	$311	18%
Transient, Assisted, Group:						
253	Congregate Care/Assisted Living Facility	du	1.00	**$449**	n/a	n/a
320	Lodging	room	1.04	**$467**	$106	341%
620	Nursing Home	1,000 sf	2.65	**$1,189**	$143	731%
Non-Residental:						
110	Light Industrial	1,000 sf	0.50	**$224**	$131	71%
140	Manufacturing	1,000 sf	0.58	**$260**	$72	261%
150	Warehouse	1,000 sf	0.12	**$54**	$67	-19%
151	Mini-Warehouse	1,000 sf	0.05	**$22**	$47	-53%
565	Day Care Center	1,000 sf	0.81	**$363**	$192	89%
610	Hospital	1,000 sf	1.31	**$588**	$249	136%
710	Office & Other Services	1,000 sf	0.97	**$435**	$208	109%
822	Commercial/Shopping Center less than 40,000 sflga	1,000 sfgla	2.09	**$938**	$532	76%
821	Commercial/Shopping Center 40,000 to 150,000 sfgla	1,000 sfgla	2.59	**$1,162**	$532	118%
820	Commercial/Shopping Center greater than 150,000 sfg	1,000 sfgla	1.42	**$637**	$532	20%
944	Gas Station w/Convenience Store <2,000 sq ft	fuel pos.	1.47	**$660**	n/a	n/a
945	Gas Station w/Convenience Store 2,000 to 5,499 sq ft	fuel pos.	2.31	**$1,037**	n/a	n/a
	Gas Station w/Convenience Store 5,500+ sq ft	fuel pos.	3.02	**$1,355**	n/a	n/a

1) Source: Appendix A, Table A-17 for residential and transient, assisted, group land uses and Table A-18 for non-residential land uses
2) Net impact cost per functional resident from Table III-8 multiplied by the functional resident coefficient (Item 1) for each land use
3) Source: Manatee County
4) Percent change from the adopted impact fee (Item 3) to the calculated impact fee (Item 2)

n/a – indicates a new land uses added to the fee schedule, which was previously charged using one of the other categories.

Law Enforcement Impact Fee Schedule Comparison

As part of the work effort in updating Manatee County's law enforcement impact fee schedule, the County's calculated and adopted impact fees for select land uses were compared to the adopted fee schedules of several Florida counties. Table III-10 presents this comparison.

Table III-10

Law Enforcement Impact Fee Schedule Comparison

Land Use	Unit[2]	Manatee County		Charlotte County[5]	Collier County[6]	Polk County[7]	Sarasota County[8]
		Calculated[3]	Current Adopted[4]				
Date of Last Update		2022	2015	2021	2016	2019	2016
Assessed Portion of Calculated[1]		N/A	90%	100%	100%	100%	100%
Residential:							
Single Family (2,000 sq ft)	du	$803	$536	$573	$587	$283	$281
Non-Residential:							
Light Industrial	1,000 sf	$224	$131	$147	$215	$76	$57
Office (50,000 sq ft)	1,000 sf	$435	$208	$427	$372	$181	$211
Retail (125,000 sq ft)	1,000 sfgla	$1,162	$532	$892	$765	$289	$368

1) Represents the portion of the maximum calculated fee for each respective county that is collected. Fee may have been lowered/increased through annual indexing or policy discounts. Does not account for moratorium/suspensions.
2) du = dwelling unit
3) Source: Table III-9
4) Source: Manatee County Administration Department
5) Source: Charlotte County Planning & Zoning Department. Law Enforcement/Correctional Facilities impact fee shown. Fees include 2.55% administrative fee.
6) Source: Collier County Capital Project Planning, Impact Fees, and Program Management Division
7) Source: Polk County Building Division
8) Source: Sarasota County Planning and Development Services Department

IV. Library Facilities

This section discusses the analysis used in developing the library facilities impact fee. Several elements addressed in this section include:

- Facility Inventory
- Service Area and Population
- Level of Service
- Cost Component
- Credit Component
- Net Library Facilities Impact Cost
- Calculated Library Facilities Impact Fee Schedule
- Library Facilities Impact Fee Schedule Comparison

These elements are summarized throughout this section.

Facility Inventory

Manatee County owns and operates six library facilities throughout the county. According to the information provided by Manatee County, the inventory associated with library facilities includes 122,700 square feet of buildings and 17 acres of land.

As shown in Table IV-1, the total value of library facilities is estimated at $57.7 million, of which $55.2 million represents the building value and the remaining $2.5 million is the land value. The building value is estimated at $450 per square foot based primarily on the estimates provided by Manatee County for upcoming construction and recent cost increases observed over the past three years. Land value estimate is based primarily on land cost increases estimated by the Manatee County Property Appraiser and input from the County staff. Land value for library facilities is estimated at $150,000 per acre. Appendix B provides additional information.

Table IV-1

Library Facilities Building and Land Inventory

Description[1]	Address[1]	Year Built/ Acquired[1]	Square Footage[2]	Acres[3]	Building Value[4]	Land Value[5]	Total Building and Land Value[6]
Central	1301 Barcarrota Boulevard West	1978	57,732	2.35	$25,979,400	$352,500	$26,331,900
Braden River	4915 53rd Avenue East	1981	21,161	5.82	$9,522,450	$873,000	$10,395,450
Bayshore/South Manatee	6081 26th Street West	1996	13,044	0.88	$5,869,800	$132,000	$6,001,800
Anna Maria/Island Branch[7]	5701 Marina Drive	1990	8,460	N/A	$3,807,000	N/A	$3,807,000
Palmetto Library	926 6th Street West	1972	6,776	1.06	$3,049,200	$159,000	$3,208,200
Rocky Bluff Library	6750 US Highway 301 North	1999	10,393	4.36	$4,676,850	$654,000	$5,330,850
Discovery Center	321 15th Street West	N/A	5,173	0.29	$2,327,850	$43,500	$2,371,350
Land for Premier Library	Lakewood Ranch Area	2018	N/A	2.00	N/A	$300,000	$300,000
Total			**122,739**	**16.76**	**$55,232,550**	**$2,514,000**	**$57,746,550**
Building Value per Square Foot[8]					$450		
Land Value per Acre[9]						$150,000	

1) Source: Manatee County
2) Source: Manatee County
3) Source: Manatee County
4) Square footage (Item 2) multiplied by the estimated building value per square foot (Item 8)
5) Acres (Item 3) multiplied by the estimated land value per acre (Item 9)
6) Sum of land value and building value (Items 4 and 5)
7) Land is owned by the City of Holmes Beach and is excluded from impact fee calculations
8) Source: Appendix B
9) Source: Appendix B

In addition to buildings and land, the Manatee County Public Library System houses library collections/materials that are owned by the County and are available to the public. Table IV-2 presents the inventory of library materials with an estimated value of $25 million.

Table IV-2

Library Facilities Material Inventory

Description	Number of Units	Total Value[1]
Collection Materials		
Catalogued	528,767	$19,141,365
Digital Resources	156,446	$5,710,279
Periodicals	167	$6,062
Discovery Center Collection	2,634	$95,877
Total Material Count/Value	**688,014**	**$24,953,583**
2022 Weighted Population[2]		**453,342**
Materials per Population[3]		**1.52**

1) Source: Manatee County
2) Source: Appendix A, Table A-1
3) Total material count divided by 2022 weighted population (Item 3)

Service Area and Demand Component

Manatee County provides library facilities and services throughout all of Manatee County. Therefore, the proper benefit district is countywide. Appendix A, Table A-1, provides the estimated population for 2022 and the projected population through 2045. Library facilities impact fees are charged only to residential land uses. As such, the weighted seasonal population per housing unit is used to measure demand from each residential land use, which is presented in Appendix A.

Level of Service

Table IV-3 provides a summary of the current LOS as well as the adopted LOS standards for library buildings and materials in Manatee County. As presented, the County's current LOS is below the adopted LOS standards for both library buildings and materials. Given this, for impact fee calculations, the current LOS is used to ensure new development is not overcharged.

Also included in the following table is a comparison of the current Manatee County LOS, the adopted LOS standard, the LOS of the other Florida counties, and State standards. The comparison includes counties with a population of 100,000 to 750,000 and is based on the information obtained from the Library Directory with Statistics, published by the Department of State, Division of Library and Information Services. State standards are obtained from the Florida Library Association.

Table IV-3

Current Level of Service (2022) & Comparison

Category	2022				Average of Other FL Counties per Capita[5]	FLA Public Library Standards per Capita[6]		
	Square Footage/ Count[1]	Weighted Population[2]	Current Level of Service[3]	Adopted Level of Service[4]		Essential	Enhanced	Exemplary
Library Buildings	122,739	453,342	0.27	0.60	0.42	0.60	0.70	1.00
Library Materials	688,014	453,342	1.52	2.00	1.83	2.00	3.00	4.00

1) Source: Table IV-1 for building square footage and Table IV-2 for count of materials
2) Source: Appendix A, Table A-1
3) Square footage/count (Item 1) divided by population (Item 2)
4) Source: Manatee County Comprehensive Plan, Policy 7.2.1.1 & 7.2.2.1
5) Source: Florida Department of State (Department), Division of Library and Information Services 2019-2020 Public Library Statistics. Includes counties in the service population level of 100,001 to 750,000 as reported by the Department.
6) Source: Florida Library Association Standards for Florida Public Libraries 2004, 2006 Revision - Standard 52 updated April 2013

Although the LOS measures shown in Table IV-3 are appropriate for capital asset planning purposes, for impact fee calculation purposes, a more appropriate LOS measure is the level of investment or dollar value of capital assets per resident, which reflects the investment made by the community to date. For impact fee calculation purposes, the County's achieved LOS is $143 per resident for library infrastructure, which is presented later in this section in Table IV-7.

Cost Component

The cost component of the study evaluates the cost of capital items, including buildings, land, and materials. Table IV-4 provides a summary of all capital costs, which amounts to approximately $82.7 million.

Table IV-4 also presents the cost per resident for the impact fee analysis. This cost is calculated by multiplying the total building and land value per square foot and total material value per unit by the current achieved LOS of 0.27 square feet per resident and 1.52 material units per resident. As shown, these calculations result in $127 per resident for buildings and land, and $55 per resident for materials, totaling approximately $182 per resident for all library assets considered in the impact fee calculations.

Table IV-4

Total Impact Cost per Resident

Variable	Figure	Percent of Total[15]
Total Building Value [1]	$55,232,550	66.8%
Total Land Value[2]	$2,514,000	3.0%
Total Material Value[3]	$24,953,583	30.2%
Total Asset Value[4]	**$82,700,133**	**100.0%**
Building and Land Value		
Total Building and Land Value[5]	$57,746,550	
Total Building Square Footage[6]	122,739	
Total Building and Land Value per Square Foot[7]	$470.48	
Current LOS (Sq. Ft. per Resident)[8]	0.27	
Total Building and Land Cost per Resident[9]	**$127.03**	
Material Value		
Total Material Value	$24,953,583	
Total Count[10]	688,014	
Total Material Value per Unit[11]	$36.27	
Current LOS (Material Count per Resident)[12]	1.52	
Total Material Cost per Resident[13]	**$55.13**	
Total Capital Asset Value		
Total Impact Cost per Resident[14]	**$182.16**	

1) Source: Table IV-1
2) Source: Table IV-1
3) Source: Table IV-2
4) Sum of building value, land value, and material value (Items 1, 2, and 3)
5) Sum of building and land values (Items 1 and 2)
6) Source: Table IV-1
7) Total building and land value (Item 5) divided by building square footage (Item 6)
8) Source: Table IV-3
9) Total building and land value per square foot (Item 7) multiplied by the current level of service (Item 8)
10) Source: Table IV-2
11) Total material value (Item 3) divided by total material count (Item 10)
12) Source: Table IV-3
13) Total material value per unit (Item 11) multiplied by the current level of service (Item 12)
14) Sum of total building and land cost per resident (Item 9) and total material cost per resident (Item 13)
15) Distribution of total asset value

Credit Component

To avoid overcharging new development, a review of funding for library capital expansion projects over the past five years and those programmed for the next five years was completed. The purpose of this review was to determine any potential revenues generated by new development, other than impact fees, that are being used or will be used to fund the expansion of capital facilities, land, and materials for the County's libraries program. As mentioned previously, the credit component does not include any capital renovation, maintenance, or operations expenses, as these types of expenditures do not add capacity and should not be considered for impact fee credit.

Capital Expansion "Cash" Credit

Capital expansion expenditure credits per resident were calculated based on non-impact fee revenue funding for capital expansion projects over the past five years and programmed for the next five years. To calculate the capital expenditure per resident, the average annual capital expansion expenditures are divided by average annual population for the same period. As shown in Table IV-5, the average annual expenditure over this ten-year period amounts to approximately $628,300 or $1.38 per resident per year.

Once the revenue credit per resident is calculated, a credit adjustment is necessary to account for the expenditures being funded through ad valorem tax revenues. This adjustment accounts for the fact that new homes tend to pay higher property taxes compared to older homes due to the "Save Our Homes" assessment cap. This adjustment factor is estimated based on a comparison of the average taxable value of newer homes to that of all homes. As presented, the adjusted revenue credit per population amounts to $2 per year.

Table IV-5

Capital Expansion Annual "Cash" Credit

Description[1]	FY 2018-2027
Infrastructure Sales Tax	
Braden River Library Expansion[2]	$193,645
East County Library	$1,352,600
Subtotal -- Libraries and Community Facilities Fund	**$1,546,245**
General Fund	
East County Library	$324,575
Subtotal -- Building Projects	**$324,575**
Ad Valorem	
East County Library	$4,322,504
Braden River Expansion[2]	$89,846
Subtotal - Library Fund	**$4,412,350**
Total Capital Expansion Expenditures	**$6,283,170**
Average Annual Capital Expansion Expenditures[3]	**$628,317**
Average Annual Population[4]	**453,823**
Capital Expenditure per Resident[5]	**$1.38**
Percentage Funded with Ad Valorem Tax Revenues[6]	74%
Portion Funded with Ad-Valorem Tax Revenues[7]	$1.02
Portion Funded with Other Revenue Sources[8]	$0.36
Residential Land Uses Credit Adjustment Factor[9]	1.20
Adjusted Capital Expansion Annual "Cash" Credit per Resident[10]	**$1.58**

1) Source: Manatee County
2) The expenditure amount shown is 22% of the total expenditures, reflecting the expansion portion of the project.
3) Average annual capital expenditures over the 10-year period
4) Source: Appendix A, Table A-1. Average annual population over the 10-year period.
5) Average annual capital expansion expenditures (Item 3) divided by average annual population (Item 4)
6) Percentage of total capital expansion expenditures funded with ad valorem tax revenue
7) Capital expansion expenditures per resident (Item 5) multiplied by percentage funded with ad-valorem tax revenues (Item 6)
8) Average annual expenditures per resident (Item 5) less portion funded with ad valorem revenues (Item 7)
9) Adjustment factor to reflect higher ad valorem taxes paid by new homes
10) Credit portion funded with ad valorem revenues (Item 7) multiplied by the credit adjustment factor (Item 9) and added to the portion funded with non-ad valorem revenues (Item 8)

Debt Service Credit

Any outstanding bond issues related to the library facilities will result in a credit to the impact fee. Manatee County used bond proceeds for the construction of East County Library. Table IV-6 summarizes the outstanding debt service related to this library capital expansion project. To calculate the credit of the current debt obligations, the present value of the total remaining payments is calculated and then divided by the average annual population estimated over the remaining life of the bond issue. As shown in Table IV-6, the resulting credit for library facilities-related debt is approximately $12 per resident.

Table IV-6

Debt Service Credit

Description	Funding Source	Fiscal Years Remaining[1]	Remaining Libraries Debt Service (Capacity Expansion)[1]	Present Value of Payments Remaining (Capacity Expansion)[2]	Avg Annual Population During Remaining Bond Issue Period[3]	Credit per Resident[4]
Revenue Refunding and Improvement Bonds, Series 2016	General Fund	3	$491,076	$473,249	470,436	$1.01
Revenue Refunding and Improvement Bonds, Series 2022	Infrastructure Sales Tax	30	$10,749,911	$5,942,955	557,047	$10.67
Total Debt Service Credit per Resident						**$11.68**

1) Source: Manatee County
2) Present value of remaining payments in 2023 dollars
3) Appendix A, Table A-1. Population figures for years 2046-2052 are based on an estimate of 0.7 percent annual growth rate.
4) Present value of payments remaining (Item 2) divided by average annual population (Item 3)

Net Library Facilities Impact Cost

The net library facilities impact cost per resident is the difference between the cost component and the credit component. Table IV-7 summarizes the calculation of the net library facilities impact cost per resident. As presented, the net impact cost per resident amounts to approximately $143, which also represents the LOS measure for impact fee calculation purposes.

Table IV-7
Net Impact Cost

Variable	Impact Cost	Revenue Credits
Impact Cost		
Total Impact Cost per Resident[(1)]	**$182.16**	
Impact Credit		
Capital Expansion Annual "Cash" Credit per Resident[(2)]		$1.58
Capitalization Rate		3.01%
Capitalization Period (in years)		25
Present Value of Capital Expansion "Cash" Credit per Resident[(3)]		**$27.48**
Debt Service Credit per Resident[(4)]		**$11.68**
Total Credit per Resident[(5)]		**$39.16**
Net Impact Cost		
Net Impact Cost Per Resident[(6)]	**$143.00**	

1) Source: Table IV-4
2) Source: Table IV-5
3) Present value of the capital expansion “cash” credit per resident at a capitalization rate of 3.01%. The estimated capitalization rate was provided by Manatee County.
4) Source: Table IV-6
5) Sum of present value of capital expansion “cash” credit per resident (Item 3) and debt service credit per resident (Item 4)
6) Total impact cost per resident (Item 1) less the total credit per resident (Item 5)

Calculated Library Facilities Impact Fee Schedule

Table IV-8 presents the calculated library facilities impact fee schedule for Manatee County for residential land uses, based on the net impact cost per resident previously presented in Table IV-7. Also presented is a comparison to the County’s current adopted fee and percent change from the current fee.

Table IV-8

Calculated Library Facilities Impact Fee Schedule

ITE LUC	Land Use	Impact Unit	Residents per Unit[1]	Calculated Impact Fee[2]	Adopted Impact Fee[3]	Percent Change[4]
Residential:						
Single Family Detached:						
210	750 sq ft or less	du	1.43	**$204**	$107	91%
	751 - 1,000 sq ft	du	1.48	**$212**	$107	98%
	1,001 - 1,300 sq ft	du	1.69	**$242**	$167	45%
	1,301 - 1,700 sq ft	du	2.06	**$295**	$228	29%
	1,701 sq ft or more	du	2.54	**$363**	$287	26%
Multi-Family:						
220, 221, 222	750 sq ft or less	du	1.24	**$177**	$107	65%
	751 - 1,000 sq ft	du	1.28	**$183**	$107	71%
	1,001 - 1,300 sq ft	du	1.45	**$207**	$167	24%
	1,301 sq ft or more	du	1.78	**$255**	$228	12%
240	Mobile Home	du	1.20	**$172**	$167	3%

1) Source: Appendix A, Table A-8
2) Total impact cost per resident from Table IV-7 multiplied by residents per unit (Item 1) for each land use
3) Manatee County Administration Department
4) Percent change from adopted impact fee (Item 3) to the calculated impact fee (Item 2)

Library Facilities Impact Fee Schedule Comparison

As part of the work effort in updating Manatee County's library facilities impact fee program, a comparison of the County's calculated and adopted library facilities impact fee schedules to fees schedules of other select Florida counties was completed. Table IV-9 presents this comparison.

Table IV-9

Library Facilities Impact Fee Schedule Comparison

Land Use	Unit[2]	Manatee County		Collier County[5]	Pasco County[6]	Polk County[7]	Sarasota County[8]
		Calculated[3]	Current Adopted[4]				
Date of Last Update		2022	2015	2016	2002	2019	2016
Assessed Portion of Calculated[1]		N/A	90%	100%	100%	100%	100%
Residential:							
Single Family (2,000 sq ft)	du	$363	$287	$336	$145	$169	$683
Multi-Family (1,300 sq ft)	du	$207	$167	$160	$97	$125	$554
Mobile Home (1,300 sq ft)	du	$172	$167	$270	$97	$123	$472

1) Represents the portion of the maximum calculated fee for each respective county that is collected. Fee may have been lowered/increased through annual indexing or policy discounts. Does not account for moratorium/suspensions.
2) du = dwelling unit
3) Source: Table IV-8
4) Source: Manatee County Administration Department
5) Source: Collier County Capital Project Planning, Impact Fees, And Program Management Division
6) Source: Pasco County Land Development Code, Chapter 1300 Concurrency, Mobility & Impact Fees
7) Source: Polk County Building Division
8) Source: Sarasota County Planning and Development Services Department

V. Parks & Recreation Facilities

This section addresses the analysis used in developing the parks and recreation impact fee. Several elements addressed in the section include:

- Land and Recreation Facilities Inventory
- Service Area and Population
- Level of Service
- Cost Component
- Credit Component
- Net Parks and Recreation Facilities Impact Cost
- Calculated Parks and Recreation Facilities Impact Fee Schedule
- Parks and Recreation Facilities Impact Fee Schedule Comparison

These elements are summarized throughout this section.

Park Land and Recreation Facilities Inventory

According to information provided by Manatee County, the County's land and recreation facilities inventory utilized for impact fee purposes includes 65 parks totaling nearly 3,380 acres. The inventory excludes park land that is not owned by the County and parks that are operated by another entity and generate revenue. Table V-1 presents a summary of the inventory included in the parks and recreation facilities impact fee.

Table V-1

Park Land and Recreation Facility Inventory

Facility Description[1]	Address	Acreage	Type	Amphitheater	Boardwalks (sf)	Boat Launch Lanes	Canoe/Kayak Launch	Center: Community/ Recreational (sf)	Concession Stand (sf)	Court: Basketball	Court: Basketball (Lighted)	Court: Bocce	Court: Horseshoe	Court: Pickleball (Lighted)	Court: Racquetball	Court: Shuffleboard (Lighted)	Court: Tennis	Court: Tennis (Lighted)	Court: Volleyball
Alderwood Park	7028 Alderwood Dr	0.51	Local																
Anna Maria Bayfront Park	310 North Bay Boulevard	9.72	Beach																
Bennett Park	400 Cypress Boulevard	184.25	Regional				1												2
Bishop Point	2020 72nd Street Northwest	0.21	Local																
Blackstone Park	2112 14th Avenue West	32.24	Local						4,150						2				
Braden River Conservation	5201 51st St E	17.80	Preserve																
Braden River Park	5201 51st Street East	85.97	District				1		6,375										
Buffalo Creek Park	7550 69th Street East	41.89	District						2,978	1									
Bunker Hill Community Park	35600 State Road 62	75.83	Local				1												
Conservatory Park	8027 Conservatory Drive	55.00	Local																
Coquina Bayside	2651 Gulf Dr S	28.34	Regional			4													
Coquina Beach	2650 Gulf Drive	67.00	Beach																1
Cortez Beach	1506 Gulf Dr S	13.09	Regional																
Country Club East Park	15015 Masters Avenue	14.48	Local																
Crane Park	37655 East State Road 70	27.68	Local																
Creekwood Park	7025 44th Avenue East	25.87	Local																
Devils Elbow Preserve	1455 136th St NE	10.00	Preserve																
East Bradenton Park	1119 13th Street East	7.41	Local								1								
Emerson Point Preserve	5801 17th Street West	240.49	Preserve				1												
Fort Hamer Park	1605 Ft. Hamer Road	7.32	Local			2	1	8,000											
Gateway North Park (Undeveloped)	5431 Buckeye Rd	26.52	Undetermined																
Greenbrook Park	6655 Greenbrook Boulevard	16.22	Local																
Greer Island	Beercan Island - N tip of Longboat Key	20.41	Regional																
GT Bray Park[2]	5502 33rd Avenue Drive West	N/A	District	1				40,632	8,990		3		20	2	8	2		15	
Hidden Harbour Park (Undeveloped)	Ft. Hamer Rd	157.48	District																
Highlands Shores Boat	353 Shore Dr	0.89	Local			1													
Holmes Beach Tennis Courts	6200 Flotilla Drive	0.79	Local															3	
Jiggs Landing	6106 63rd Street East	5.10	Preserve		13,711	1	2		1,455										
John H (JH) Marble Park	3675 53rd Avenue East	6.71	Local					14,950		1		2					2		
JP Miller Tennis Courts	4200 9th Avenue West	0.98	Local															4	
Kingfish Boat Ramp	752 Manatee Ave	7.01	Local			3													
Kinnan Park	7510 Prospect Rd	18.86	Local																
Lake Manatee Boat	19001 E SR 64, Bradenton 34212	1.93	Local																
Lakewood Ranch Park	5350 Lakewood Ranch Boulevard	147.87	District						15,505		6				8			8	
Leffis Key	2351 Gulf Drive South	16.10	Preserve																
Lincoln Park	501 17th Street East	17.37	Local								2								
Manatee Beach Park	4000 State Road 64 and Gulf Drive	15.65	Beach																1
Manatee Palms Park	6510 1st Avenue East	0.74	Local																
McArthur Park	455 McArthur Avenue	3.13	Local																
Myakka Community Park	10060 Wauchula Road	17.72	Local					4,450											
Neal Preserve	12301 Manatee Avenue West	120.00	Preserve		13,501														
Ola Mae Sims Park	11800 Erie Road	2.04	Local							1									1
Palma Sola Botanical	9800 17th Ave NW	9.22	Local																
Palma Sola Causeway	9000 Manatee AVE W	9.95	Beach			1													
Palma Sola Park	7915 40th Avenue West	23.01	Local						3,346										
Palma Sola Scenic Highway	501 Montezuma Drive	0.34	Local																
Palmetto Tennis Courts	1500 West 10th Street	0.70	Local															4	
Perico Preserve	11700 Manatee Avenue West	164.69	Preserve																
Portosueno Park	1206 Alcazar Drive	2.18	Local																
Premier Sports Complex	5895 Post BLVD, Bradenton 34211	161.80	County																
Pride Park	815 63rd Avenue East	12.48	Local								3								2
Riverview Pointe	8250 Desoto Memorial Highway	11.70	Preserve																
Robinson Preserve	1704 99th Street Northwest	651.00	Preserve					1,942											
Rose Park	714 Palma Sola Boulevard	0.07	Local																
Rye Preserve	905 Rye Wilderness Trail	626.27	Preserve																
Senrab Park	7817 Senrab Drive	1.26	Local																
Seville Park	7823 Seville Circle	2.91	Local																
State Road 64 Boat	3020 Manatee Ave E	1.98	Local			2													
Sunny Shores Park	36th Avenue West 117th Street West	1.62	Local																
Sylvan Oaks Park	715th 17th Street East	4.18	Local																
Tara Park	6980 Linger Lodge Rd	6.33	Local																
Ungarelli Preserve	4000 Palma Sola Boulevard	35.01	Preserve																
University Place Community Park	7850 Cooper Creek Boulevard	9.54	Local															2	
Warners Bayou Park/Boat Ramp	5800 Riverview Blvd	2.19	Local			3													
Washington Borrow Pit Park (Undeveloped)	605 39th St E	81.12	Local																
Whitfield Park	7100 12th Street East	10.26	Local							1									

Summary	Count	Acreage		Amphitheater	Boardwalks (sf)	Boat Launch Lanes	Canoe/Kayak Launch	Center: Community/ Recreational (sf)	Concession Stand (sf)	Court: Basketball	Court: Basketball (Lighted)	Court: Bocce	Court: Horseshoe	Court: Pickleball (Lighted)	Court: Racquetball	Court: Shuffleboard (Lighted)	Court: Tennis	Court: Tennis (Lighted)	Court: Volleyball
Beach	4	102.32		0	0	1	0	0	0	0	0	0	0	0	0	0	0	0	2
County	1	161.80		0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0
District	5	433.21		1	0	0	1	40,632	33,848	1	9	0	20	2	16	2	0	23	0
Local	39	510.33		0	0	11	2	27,400	7,496	3	6	2	0	0	2	0	2	13	3
Preserve	11	1,898.16		0	27,212	1	3	1,942	1,455	0	0	0	0	0	0	0	0	0	0
Regional	4	246.09		0	0	4	1	0	0	0	0	0	0	0	0	0	0	0	2
Undetermined	1	26.52		0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0
Total	**65**	**3,378.43**		**1**	**27,212**	**17**	**7**	**69,974**	**42,799**	**4**	**15**	**2**	**20**	**2**	**18**	**2**	**2**	**36**	**7**

Table V-1 (Continued)

Park Land and Recreation Facility Inventory

Facility Description[1]	Address	Acreage	Type	Dock/Fishing Pier (sf)	Dog Park	Field: Baseball	Field: Baseball (Lighted)	Field: Football/ Multi/ Open/ Soccer	Field: Football/ Multi/ Open/ Soccer (Lighted)	Field: Little League/T-Ball	Field: Little League/T-Ball (Lighted)	Field: Softball	Field: Softball (Lighted)	Gazebo	Pavilion	Playground	Pool	Restroom	Skate Park (Lighted)	Splash Pad	Trail - Paved (miles)	Trail - Shell (miles)
Alderwood Park	7028 Alderwood Dr	0.51	Local																			
Anna Maria Bayfront Park	310 North Bay Boulevard	9.72	Beach												14	1		1				
Bennett Park	400 Cypress Boulevard	184.25	Regional					1							1	1		1				1.20
Bishop Point	2020 72nd Street Northwest	0.21	Local																			
Blackstone Park	2112 14th Avenue West	32.24	Local						2		3		3		3	1		2	1			
Braden River Conservation	5201 51st St E	17.80	Preserve																			
Braden River Park	5201 51st Street East	85.97	District				2		3		5					1		1				
Buffalo Creek Park	7550 69th Street East	41.89	District		2		1		3		4				1	1		2			0.75	
Bunker Hill Community Park	35600 State Road 62	75.83	Local			1		2							1	2		1			1.20	
Conservatory Park	8027 Conservatory Drive	55.00	Local	993											2			1			0.82	
Coquina Bayside	2651 Gulf Dr S	28.34	Regional												2			1				0.50
Coquina Beach	2650 Gulf Drive	67.00	Beach												7	2		4			1.39	
Cortez Beach	1506 Gulf Dr S	13.09	Regional																			
Country Club East Park	15015 Masters Avenue	14.48	Local					4							1	1						
Crane Park	37655 East State Road 70	27.68	Local												2	1		1				
Creekwood Park	7025 44th Avenue East	25.87	Local		2				2						3	1		1			0.40	
Devils Elbow Preserve	1455 136th St NE	10.00	Preserve																			
East Bradenton Park	1119 13th Street East	7.41	Local									1			3	1	1	2			0.25	
Emerson Point Preserve	5801 17th Street West	240.49	Preserve												3			1				6.06
Fort Hamer Park	1605 Ft. Hamer Road	7.32	Local												2			1				
Gateway North Park (Undeveloped)	5431 Buckeye Rd	26.52	Undetermined																			
Greenbrook Park	6655 Greenbrook Boulevard	16.22	Local					3							1	1		1				
Greer Island	Beercan Island - N tip of Longboat Key	20.41	Regional																			
GT Bray Park[2]	5502 33rd Avenue Drive West	N/A	District		1		1		5	2	3		4		9	4	2	5	1	1	1.25	
Hidden Harbour Park (Undeveloped)	Ft. Hamer Rd	157.48	District																			
Highlands Shores Boat	353 Shore Dr	0.89	Local																			
Holmes Beach Tennis Courts	6200 Flotilla Drive	0.79	Local												1							
Jiggs Landing	6106 63rd Street East	5.10	Preserve	1,042											2	1		1				
John H (JH) Marble Park	3675 53rd Avenue East	6.71	Local			1									1	1	1	2				
JP Miller Tennis Courts	4200 9th Avenue West	0.98	Local												1							
Kingfish Boat Ramp	752 Manatee Ave	7.01	Local																			
Kinnan Park	7510 Prospect Rd	18.86	Local																			
Lake Manatee Boat	19001 E SR 64, Bradenton 34212	1.93	Local																			
Lakewood Ranch Park	5350 Lakewood Ranch Boulevard	147.87	District				2	5	7	2	4		4		1	2		6				
Leffis Key	2351 Gulf Drive South	16.10	Preserve												1							
Lincoln Park	501 17th Street East	17.37	Local						3						8	1		2		1	0.50	
Manatee Beach Park	4000 State Road 64 and Gulf Drive	15.65	Beach													1		1				
Manatee Palms Park	6510 1st Avenue East	0.74	Local													1						
McArthur Park	455 McArthur Avenue	3.13	Local																			
Myakka Community Park	10060 Wauchula Road	17.72	Local			2		1							1	1		1			0.50	
Neal Preserve	12301 Manatee Avenue West	120.00	Preserve												1							
Ola Mae Sims Park	11800 Erie Road	2.04	Local					1							3	1		1			0.20	
Palma Sola Botanical	9800 17th Ave NW	9.22	Local																			
Palma Sola Causeway	9000 Manatee AVE W	9.95	Beach												9			1				
Palma Sola Park	7915 40th Avenue West	23.01	Local				1		1	1			2		1	1		2				
Palma Sola Scenic Highway	501 Montezuma Drive	0.34	Local																			
Palmetto Tennis Courts	1500 West 10th Street	0.70	Local												1							
Perico Preserve	11700 Manatee Avenue West	164.69	Preserve																			
Portosueno Park	1206 Alcazar Drive	2.18	Local																			
Premier Sports Complex	5895 Post BLVD, Bradenton 34211	161.80	County					19	8									1				
Pride Park	815 63rd Avenue East	12.48	Local			1		1				1		1	5	2		2		1	0.30	
Riverview Pointe	8250 Desoto Memorial Highway	11.70	Preserve																			1.07
Robinson Preserve	1704 99th Street Northwest	651.00	Preserve											2	1	1		3			1.50	5.68
Rose Park	714 Palma Sola Boulevard	0.07	Local	1,067																		
Rye Preserve	905 Rye Wilderness Trail	626.27	Preserve												1	1		1				2.85
Senrab Park	7817 Senrab Drive	1.26	Local					1														
Seville Park	7823 Seville Circle	2.91	Local					1														
State Road 64 Boat	3020 Manatee Ave E	1.98	Local																			
Sunny Shores Park	36th Avenue West 117th Street West	1.62	Local																			
Sylvan Oaks Park	715th 17th Street East	4.18	Local					1							1	1						
Tara Park	6980 Linger Lodge Rd	6.33	Local																			
Ungarelli Preserve	4000 Palma Sola Boulevard	35.01	Preserve												1							0.20
University Place Community Park	7850 Cooper Creek Boulevard	9.54	Local					1							1	1		1				
Warners Bayou Park/Boat Ramp	5800 Riverview Blvd	2.19	Local															1				
Washington Borrow Pit Park (Undeveloped)	605 39th St E	81.12	Local																			
Whitfield Park	7100 12th Street East	10.26	Local					1				1			2	1		1				

Summary	Count	Acreage		Dock/Fishing Pier (sf)	Dog Park	Field: Baseball	Field: Baseball (Lighted)	Field: Football/ Multi/ Open/ Soccer	Field: Football/ Multi/ Open/ Soccer (Lighted)	Field: Little League/T-Ball	Field: Little League/T-Ball (Lighted)	Field: Softball	Field: Softball (Lighted)	Gazebo	Pavilion	Playground	Pool	Restroom	Skate Park (Lighted)	Splash Pad	Trail - Paved (miles)	Trail - Shell (miles)
Beach	4	102.32		0	0	0	0	0	0	0	0	0	0	0	30	4	0	7	0	0	1.39	0.00
County	1	161.80		0	0	0	0	19	8	0	0	0	0	0	0	0	0	1	0	0	0.00	0.00
District	5	433.21		0	3	0	6	5	18	4	16	0	8	0	11	8	2	14	1	1	2.00	0.00
Local	39	510.33		2,060	2	5	1	17	8	1	3	3	5	1	44	19	2	23	1	2	4.17	0.00
Preserve	11	1,898.16		1,042	0	0	0	0	0	0	0	0	0	2	10	3	0	6	0	0	4.51	15.86
Regional	4	246.09		0	0	0	0	1	0	0	0	0	0	0	3	1	0	2	0	0	0.00	1.70
Undetermined	1	26.52		0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0.00	0.00
Total	**65**	**3,378.43**		**3,102**	**5**	**5**	**7**	**42**	**34**	**5**	**19**	**3**	**13**	**3**	**98**	**35**	**4**	**53**	**2**	**3**	**12.07**	**17.56**

1) Source: Manatee County Parks and Natural Resources Department

2) Land is leased from the City of Bradenton and is excluded from impact fee calculations. Facilities are owned, operated, and maintained by Manatee County.

Service Area and Demand Component

Based on a review of the park type definitions included in the County's Comprehensive Plan and amenities included at each park, it was determined service area of all parks included in the impact fee inventory is countywide, except for local parks. Given that use of a countywide service area and population for all parks would result in a more conservative fee, a countywide service area is utilized. Appendix A, Table A-1, provides the estimated population for 2022 and the projected population through 2045. Parks and recreation impact fees are charged only to residential land uses. As such, the weighted seasonal population per housing unit is used to measure demand from each residential land use, which is presented in Appendix A.

Level of Service

The current LOS for all County-owned and maintained parks is presented in Table V-2. To determine the current LOS, the total acreage of each park type is divided by the countywide population for 2022 and multiplied by 1,000. As shown, the total achieved LOS in Manatee County of 7.47 acres per 1,000 weighted seasonal residents, which is utilized in calculating the parks and recreation facilities impact fee.

Table V-2

Current Level of Service (2022)

Park Classification/ Variable	2022 Weighted Population[1]	Park Acreage[2]	Achieved LOS[3]
Manatee County	453,342		
Current Level of Service (Acres per 1,000 Residents)			
Beach		102.32	0.23
County		161.80	0.36
District		433.21	0.96
Local		510.33	1.13
Preserve		1,898.16	4.19
Regional		246.09	0.54
Undetermined		26.52	0.06
Total Park Acreage/LOS - All Parks		**3,378.43**	**7.47**

1) Source: Appendix A, Table A-1
2) Source: Table V-1
3) Park acreage (Item 2) divided by population (Item 1) multiplied by 1,000

Manatee County's current adopted LOS standards included in the Comprehensive Plan use a "parks per population" measure for local, district and regional parks. Given that the Comprehensive Plan language has not been reviewed recently, it may be appropriate to amend it to better reflect the current conditions. In terms of impact fee calculations, the final LOS used in the study is the net investment level per person, as shown in Table V-8 ($1,316 per resident). If the County does not intend to continue to invest at that rate into parks infrastructure, the fee calculations should be revised accordingly.

Table V-3 presents a comparison of the parks and recreation adopted LOS standards of other select Florida counties to Manatee County's current LOS in terms of acreage per population. As shown, the County's current LOS is in the mid-range of the adopted LOS standards of the other counties reviewed.

Table V-3
Level of Service Comparison

Jurisdiction	Adopted LOS Standard (Acres per 1,000 Residents)[1]
Collier County[1]	3.90
Lee County[2]	6.80
Polk County[3]	6.95
Volusia County[4]	7.00
Manatee County[5] (Current Achieved)	**7.47**
Osceola County[6]	10.00
Sarasota County[7]	12.00
Hillsborough County[8]	23.40

1) Source: Collier County 2019 Annual Update & Inventory Report (AUIR); Parks and Recreation Facilities, 1.20 community park acres per 1,000 unincorporated county population and 2.70 regional park acres per 1,000 county population
2) Source: Lee County 2017 Public Facilities Level of Service and Concurrency Report - 6.00 acres of developed regional park land per 1,000 seasonal county population and 0.80 acres of developed community park land per 1,000 permanent population
3) Source: Polk County Comprehensive Plan - Policy 3.502-E2, 6.95 acres per 1,000 persons
4) Source: Volusia County Comprehensive Plan - Recreation and Open Space Element; 2.0 local park acres per 1,000 population and 5.0 district per acres per 1,000 population
5) Source: Table V-2. Represents the sum of acres per 1,000 residents for each park type (local, district, regional, etc.)
6) Source: Osceola County Comprehensive Plan; 2025 standards are 6.0 acres for regional and 4.0 acres for community per 1,000 population
7) Source: Sarasota County Comprehensive Plan, Quality of Life Element - 12.0 acres per 1,000 residents of developable park land
8) Source: Comprehensive Plan for Unincorporated Hillsborough County Florida - Recreation and Open Space: 3.40 local park acres per 1,000 people and 20.0 regional park acres per 1,000 people

Cost Component

The capital cost associated with parks and recreation facilities consists of two components: the cost of recreational facilities located at each park and the cost of purchasing and developing land for each park. The following paragraphs address recreation facility and park land value estimates.

Recreational Facility Value

To estimate current recreational facility value, multiple sources were reviewed to determine the unit cost of each recreational facility type, including recent construction costs, insured values of the facilities, recent cost information obtained for similar facilities from other jurisdictions and discussions with Manatee County representatives.

In addition to the construction cost of recreational facilities, the architectural, engineering and inspection (AE&I) costs associated with developing this infrastructure are also included. The AE&I cost is estimated at 12 percent of the construction cost based on estimates obtained from Manatee County. This percentage is also consistent with information obtained from other jurisdictions.

As shown in Table V-4, the total recreational facility value for all parks is $372.8 million, which equates to an average of nearly $110,400 per acre and $822 per resident.

Table V-4

Recreational Facility Value

Description	Unit	Unit Cost[1]	Inventory Count by Park Type[2]							Total Value by Park Type[3]						
			Beach	County	District	Local	Preserve	Regional	All	Beach	County	District	Local	Preserve	Regional	All
Amphitheater	amphitheater	$212,000	0	0	1	0	0	0	**1**	$0	$0	$212,000	$0	$0	$0	**$212,000**
Boardwalks	sq. ft.	$85	0	0	0	0	27,212	0	**27,212**	$0	$0	$0	$0	$2,313,020	$0	**$2,313,020**
Boat Launch	lane	$1,013,000	1	0	0	11	1	4	**17**	$1,013,000	$0	$0	$11,143,000	$1,013,000	$4,052,000	**$17,221,000**
Canoe/Kayak Launch	launch	$101,000	0	0	1	2	3	1	**7**	$0	$0	$101,000	$202,000	$303,000	$101,000	**$707,000**
Centers																
Community/Recreational	sq. ft.	$420	0	0	40,632	27,400	1,942	0	**69,974**	$0	$0	$17,065,440	$11,508,000	$815,640	$0	**$29,389,080**
Concession Stand	sq. ft.	$750	0	0	33,848	7,496	1,455	0	**42,799**	$0	$0	$25,386,000	$5,622,000	$1,091,250	$0	**$32,099,250**
Courts																
Basketball	court	$243,000	0	0	1	3	0	0	**4**	$0	$0	$243,000	$729,000	$0	$0	**$972,000**
Basketball (Lighted)	court	$297,000	0	0	9	6	0	0	**15**	$0	$0	$2,673,000	$1,782,000	$0	$0	**$4,455,000**
Bocce	court	$14,000	0	0	0	2	0	0	**2**	$0	$0	$0	$28,000	$0	$0	**$28,000**
Horseshoe	court	$14,000	0	0	20	0	0	0	**20**	$0	$0	$280,000	$0	$0	$0	**$280,000**
Pickleball (Lighted)	court	$338,000	0	0	2	0	0	0	**2**	$0	$0	$676,000	$0	$0	$0	**$676,000**
Racquetball	court	$675,000	0	0	16	2	0	0	**18**	$0	$0	$10,800,000	$1,350,000	$0	$0	**$12,150,000**
Shuffleboard (Lighted)	court	$439,000	0	0	2	0	0	0	**2**	$0	$0	$878,000	$0	$0	$0	**$878,000**
Tennis	court	$115,000	0	0	0	2	0	0	**2**	$0	$0	$0	$230,000	$0	$0	**$230,000**
Tennis (Lighted)	court	$297,000	0	0	23	13	0	0	**36**	$0	$0	$6,831,000	$3,861,000	$0	$0	**$10,692,000**
Volleyball	court	$14,000	2	0	0	3	0	2	**7**	$28,000	$0	$0	$42,000	$0	$28,000	**$98,000**
Dock/Fishing Pier	sq. ft.	$115	0	0	0	2,060	1,042	0	**3,102**	$0	$0	$0	$236,900	$119,830	$0	**$356,730**
Dog Park[4]	acre	$94,500	0.0	0.0	6.3	4.2	0.0	0.0	**10.5**	$0	$0	$595,350	$396,900	$0	$0	**$992,250**
Fields																
Baseball	field	$878,000	0	0	0	5	0	0	**5**	$0	$0	$0	$4,390,000	$0	$0	**$4,390,000**
Baseball (Lighted)	field	$1,215,000	0	0	6	1	0	0	**7**	$0	$0	$7,290,000	$1,215,000	$0	$0	**$8,505,000**
Football/ Multi/ Open/ Soccer	field	$675,000	0	19	5	17	0	1	**42**	$0	$12,825,000	$3,375,000	$11,475,000	$0	$675,000	**$28,350,000**
Football/ Multi/ Open/ Soccer (Lighted)	field	$1,013,000	0	8	18	8	0	0	**34**	$0	$8,104,000	$18,234,000	$8,104,000	$0	$0	**$34,442,000**
Little League/T-Ball	field	$675,000	0	0	4	1	0	0	**5**	$0	$0	$2,700,000	$675,000	$0	$0	**$3,375,000**
Little League/T-Ball (Lighted)	field	$1,013,000	0	0	16	3	0	0	**19**	$0	$0	$16,208,000	$3,039,000	$0	$0	**$19,247,000**
Softball	field	$878,000	0	0	0	3	0	0	**3**	$0	$0	$0	$2,634,000	$0	$0	**$2,634,000**
Softball (Lighted)	field	$1,215,000	0	0	8	5	0	0	**13**	$0	$0	$9,720,000	$6,075,000	$0	$0	**$15,795,000**
Gazebo	gazebo	$57,000	0	0	0	1	2	0	**3**	$0	$0	$0	$57,000	$114,000	$0	**$171,000**
Pavilion	pavilion	$74,000	30	0	11	44	10	3	**98**	$2,220,000	$0	$814,000	$3,256,000	$740,000	$222,000	**$7,252,000**
Playground	playground	$386,000	4	0	8	19	3	1	**35**	$1,544,000	$0	$3,088,000	$7,334,000	$1,158,000	$386,000	**$13,510,000**
Pool	pool	$6,500,000	0	0	2	2	0	0	**4**	$0	$0	$13,000,000	$13,000,000	$0	$0	**$26,000,000**
Restroom	restroom	$810,000	7	1	14	23	6	2	**53**	$5,670,000	$810,000	$11,340,000	$18,630,000	$4,860,000	$1,620,000	**$42,930,000**
Skate Park (Lighted)	park	$639,000	0	0	1	1	0	0	**2**	$0	$0	$639,000	$639,000	$0	$0	**$1,278,000**
Splash Pad	pad	$743,000	0	0	1	2	0	0	**3**	$0	$0	$743,000	$1,486,000	$0	$0	**$2,229,000**
Trail - Paved	mile of trail	$325,000	1.39	0.00	2.00	4.17	4.51	0.00	**12.07**	$451,750	$0	$650,000	$1,355,250	$1,465,750	$0	**$3,922,750**
Trail - Shell	mile of trail	$291,000	0.00	0.00	0.00	0.00	15.86	1.70	**17.56**	$0	$0	$0	$0	$4,615,260	$494,700	**$5,109,960**
Recreational Facility Value										**$10,926,750**	**$21,739,000**	**$153,541,790**	**$120,495,050**	**$18,608,750**	**$7,578,700**	**$332,890,040**
Architecture, Engineering, and Inspection @ 12%[5]																**$39,946,805**
Total Recreational Facility Value[6]																**$372,836,845**
Total Number of Acres[7]																**3,378.43**
Total Recreational Facility Value per Acre[8]																**$110,358**
Total Weighted Seasonal Population[9]																**453,342**
Total Recreational Facility Cost per Resident[10]																**$822.42**

1) Source: Appendix B
2) Source: Table V-1
3) Inventory count by park type (Item 2) multiplied by the estimated unit cost (Item 1)
4) Dog park acreage determined by multiplying the total number of dog parks by park type shown in Table V-1 by the average dog park size (2.1 acres, provided by Manatee County).
5) Recreational facility value multiplied by 12% based on information provided by Manatee County
6) Sum of recreational facility value and the architecture, engineering, and inspection cost (Item 5)
7) Source: Table V-1
8) Total recreational facility value (Item 6) divided by total number of acres (Item 7)
9) Source: Appendix A, Table A-1
10) Total recreational facility value (Item 6) divided by the total weighted seasonal population (Item 9)

Land Cost

As part of the initial update analysis, the park land value per acre for the County's park inventory was calculated based recent park land purchases, value of current park land by type, vacant land sales of similar size parcels over the past three years, and value of similar size vacant parcels based on information obtained from the Manatee County Property Appraiser's database, and discussions with Manatee County representatives. This prior analysis was adjusted to reflect recent cost increase through a review of land cost increase estimated by the Manatee County Property Appraiser. This review resulted in an estimated average land value of $70,000 per acre as presented in Table V-5. Appendix B provides further detail regarding the calculation of the land value.

The cost of land for parks and recreation facilities includes more than just the purchase cost of the land. Landscaping, site improvement, and parking costs are also considered. These costs can vary greatly, depending on the type of park. Based on information provided by the County, the estimated cost for landscaping, site preparation, and parking ranged from $5,000 per acre for preserves to $40,000 per acre for all other parks. Based on the current inventory mix of preserve land and all other park land, landscaping, site improvement, and parking costs is estimated at $20,000 per acre.

Total Impact Cost per Resident

Table V-5 presents land and recreation facilities value per resident, which amounts to $1,495 per resident, of which $672 is for land and $823 is for recreational facilities.

Table V-5

Total Impact Cost per Resident

Variable	Figure
Land Value	
Estimated Land Value per Acre:	
Estimated Land Value[(1)]	$70,000
Landscaping, Site Preparation, and Parking Costs[(2)]	$20,000
Total Land Value[(3)]	**$90,000**
Achieved LOS[(4)]	7.47
Total Land Value per Resident[(5)]	**$672.30**
Recreational Facility Value	
Total Recreational Facility Value per Resident[(6)]	**$822.42**
Total Parks and Recreation Facilities Impact Cost per Resident[(7)]	**$1,494.72**

1) Source: Appendix B
2) Based on information provided by Manatee County and by other Florida jurisdictions
3) Sum of estimated value per acre (Item 1) and landscaping, site preparation, and parking costs per acre (Item 2)
4) Source: Table V-2
5) Total land value per acre (Item 3) multiplied by the achieved LOS (Item 4) divided by 1,000
6) Source: Table V-4
7) Sum of total land value per resident (Item 5) and facility and equipment value per resident (Item 6)

Credit Component

To avoid overcharging new development for the capital cost of providing parks and recreation services, a review of the capital funding program for the parks and recreation program was completed. The purpose of this review is to estimate any future revenues generated by new development, other than impact fees, which will be used to fund the expansion of capital facilities and land related to the Manatee County's parks and recreation program. As mentioned previously, the credit component does not include any capital renovation, maintenance, or operations expenses, as these types of expenditures do not add capacity and should not be considered for impact fee credit.

Capital Expansion "Cash" Credit

Capital expansion expenditure credits per resident were calculated based on non-impact fee revenue funding for capital expansion projects over the past five years and programmed over the next five years. To calculate the capital expenditure per resident, the average annual capital

expansion expenditures are divided by average population for the same period. As shown in Table V-6, the average annual expenditure over this ten-year period amounts to approximately $3.2 million and approximately $7 per resident per year.

Once the revenue credit per resident is calculated, a credit adjustment is necessary to account for the expenditures being funded through ad valorem tax revenues. This adjustment accounts for the fact that new homes tend to pay higher property taxes compared to older homes due to the "Save Our Homes" assessment cap. This adjustment factor is estimated based on a comparison of the average taxable value of newer homes to that of all homes. As presented, the adjusted revenue credit per population amounts $8 per year.

Table V-6

Capital Expansion Annual "Cash" Credit

Description[1]	Fiscal Year		Total
	2018-2022	2023-2027	
General Fund			
Lincoln Park Pool	$1,917,986	-	**$1,917,986**
John H. Marble Park - Gymnasium Removal/Replacement[2]	-	$3,816,464	**$3,816,464**
Premier Sports Campus - Locker Rooms	$650,000	-	**$650,000**
Premier Sports Campus Stadium Parking	$200,000	-	**$200,000**
Premier Sports Soccer Multi Purpose Building	$950,000	-	**$950,000**
Premier Sports Complex - Remote Parking - Parks	$252,109	-	**$252,109**
Subtotal --General Fund	**$3,970,095**	**$3,816,464**	**$7,786,559**
Grants, UMSTU, and Miscellaneous Revenues			
Lincoln Park Pool	$1,875,000	-	**$1,875,000**
Washington Park Picnic Shelters-CDBG funded	$40,000		**$40,000**
Washington Park Restrooms	$340,000	-	**$340,000**
Washington Park Site, Civil Infrastructure Improvements	$40,000	-	**$40,000**
Subtotal --Grants, UMSTU, and Miscellaneous Revenues	**$2,295,000**	**-**	**$2,295,000**
Infrastructure Sales Tax			
County Road 675 Soccer Fields	-	$500,000	**$500,000**
East Bradenton Playground Equipment	$200,000	-	**$200,000**
East Bradenton Park Improvements[3]	$90,444	-	**$90,444**
G.T. Bray Bright Outlook Restroom	$280,490	-	**$280,490**
G.T. Bray Recreation Center Playground	-	$509,864	**$509,864**
John H. Marble Park - Facility Retro Fit Phase I	$145,847	-	**$145,847**
John H. Marble Park - Gymnasium Removal/Replacement[2]	$431,501	-	**$431,501**
Lincoln Park Field Restrooms	$18,160	$459,000	**$477,160**
Lincoln Park Improvements - Amenities	$77,130	$380,000	**$457,130**
Lincoln Park Improvements - Bleachers	$20,094	-	**$20,094**
Lincoln Park Improvements - Press Box	$105,617	$1,100,000	**$1,205,617**
Lincoln Park Pool	$2,151,793	-	**$2,151,793**
Peninsula Bay Boat Ramp	-	$2,849,125	**$2,849,125**
Premier Sports Complex - Pickleball/Racket Center	-	$3,185,257	**$3,185,257**
Robinson Preserve Improvements - Pavilions	$212,993	-	**$212,993**
Volunteer/Education Division Pre-Engineered Building	$325,302	-	**$325,302**
Washington Park Phase II	$492,734	-	**$492,734**
Washington Park Phase III	-	$287,500	**$287,500**
Subtotal -- Infrastructure Sales Tax	**$4,552,105**	**$9,270,746**	**$13,822,851**
Parks and Recreation Fund			
Blackstone Softball Concession/Restroom	$949,454	-	**$949,454**
Blackstone Soccer Concession/Restroom	$858,738	-	**$858,738**
G.T. Bray Football Concession/Restroom Building	$1,094,410	-	**$1,094,410**
G.T. Bray Skate Park	$249,968	-	**$249,968**
G.T. Bray Soccer Concession/Restroom Building	$772,093	-	**$772,093**
G.T. Bray Softball Concession/Restroom	$776,206	-	**$776,206**

Table V-6 (Continued)

Capital Expansion Annual "Cash" Credit

Description[1]	Fiscal Year		Total
	2018-2022	2023-2027	
Parks and Recreation Fund			
Blackstone Softball Concession/Restroom	$949,454	-	**$949,454**
Blackstone Soccer Concession/Restroom	$858,738	-	**$858,738**
G.T. Bray Football Concession/Restroom Building	$1,094,410	-	**$1,094,410**
G.T. Bray Skate Park	$249,968	-	**$249,968**
G.T. Bray Soccer Concession/Restroom Building	$772,093	-	**$772,093**
G.T. Bray Softball Concession/Restroom	$776,206	-	**$776,206**
Lakewood Ranch Improvements	-	$300,000	**$300,000**
Robinson Preserve Kayak Storage Units	$361,308	-	**$361,308**
Robinson Preserve Nature Discovery Zone	$1,153,281	-	**$1,153,281**
Robinson Preserve Restrooms	$1,002,651	-	**$1,002,651**
Robinson Preserve Sun/Shade Shelters	$113,987	-	**$113,987**
Warners Bayou Boat Ramp South Parking Lot	$457,183	-	**$457,183**
Subtotal - Parks & Recreation Fund	**$7,789,279**	**$300,000**	**$8,089,279**
Total Capital Expansion Expenditures			**$31,993,689**
Average Annual Capital Expansion Expenditures[4]			**$3,199,369**
Average Annual Population[5]			**453,823**
Capital Expansion Expenditures per Resident[6]			**$7.05**
Percentage Funded with Ad Valorem Tax Revenues[7]			**36%**
Portion Funded with Ad-Valorem Tax Revenues[8]			**$2.54**
Portion Funded with Other Revenue Sources[9]			**$4.51**
Residential Land Uses Credit Adjustment Factor[10]			**1.20**
Adjusted Capital Expansion Annual "Cash" Credit per Resident[11]			**$7.56**

1) Source: Manatee County and Adopted Capital Improvement Plan (FY 2023 - FY 2027)
2) The expenditure amount shown is 75% of the total expenditures, reflecting the expansion portion of the project.
3) The expenditure amount shown is 80% of the total expenditures, reflecting the expansion portion of the project.
4) Total capital expansion expenditures divided by 10 to calculate the average annual expenditures
5) Source: Appendix A, Table A-1
6) Average annual capital expansion expenditures (Item 4) divided by the average annual population (Item 5)
7) Percentage of total capital expansion expenditures funded with ad valorem tax revenue
8) Capital expansion expenditures per resident (Item 6) multiplied by percentage funded with ad-valorem tax revenues (Item 7)
9) Average annual expenditures per resident (Item 6) less portion funded with ad valorem revenues (Item 8)
10) Adjustment factor to reflect higher ad valorem taxes paid by new homes
11) Credit portion funded with ad valorem revenues (Item 8) multiplied by the credit adjustment factor (Item 10) and added to the portion funded with non-ad valorem revenues (Item 9)

Debt Service Credit

Any outstanding bond issues related to the parks facilities will result in a credit to the impact fee. Manatee County used bond proceeds for park expansion projects. Table V-7 summarizes the outstanding debt service related to parks and recreation capital expansion projects. To calculate

the credit of the current debt obligations, the present value of the total remaining payments is calculated and then divided by the average annual population estimated over the remaining life of the bond issue. As shown in Table V-7, the resulting credit for park facilities-related debt is approximately $47 per resident.

Table V-7

Debt Service Credit

Description	Years Remaining[1]	Remaining Park Debt Service (Capacity Expansion)[1]	Present Value of Payments Remaining (Capacity Expansion)[2]	Avg Annual Population During Remaining Bond Issue Period[3]	Credit per Resident[4]
Revenue Refunding and Improvement Bonds, Series 2022	30	$47,818,564	$26,435,907	557,047	$47.46
Total Debt Service Credit per Resident					**$47.46**

1) Source: Manatee County
2) Present value of remaining payments in 2023 dollars
3) Source: Appendix A, Table A-1
4) Present value of payments remaining capacity expansion (Item 2) divided by average annual population during remaining bond issue period (Item 3)

Net Parks & Recreation Facilities Impact Cost

The net impact cost per resident is the difference between the cost and credit components. Table V-8 summarizes the calculation of the net impact cost for the parks and recreational facilities impact fee. As presented, the net impact cost amounts to approximately $1,316 per resident, which also represents the LOS measure for impact fee calculation purposes.

Table V-8

Net Impact Cost

Variable	Impact Cost	Revenue Credits
Impact Cost		
Total Impact Cost per Resident[(1)]	**$1,494.72**	
Impact Credit		
Capital Expansion Annual "Cash" Credit per Resident[(2)]		$7.56
Capitalization Rate		3.01%
Capitalization Period (in years)		25
Present Value of Capital Expansion "Cash" Credit per Resident[(3)]		**$131.50**
Debt Service Credit per Resident[(4)]		**$47.46**
Total Credit per Resident[(5)]		**$178.96**
Net Impact Cost		
Net Impact Cost per Resident[(6)]	**$1,315.76**	

1) Source: Table V-5
2) Source: Table V-6
3) Present value of the capital expansion “cash” credit per resident at a capitalization rate of 3.01%. The estimated capitalization rate was provided by Manatee County.
4) Source: Table V-7
5) Sum of present value of capital expansion “cash” credit per resident (Item 3) and debt service credit per resident (Item 4)
6) Total impact cost per resident (Item 1) less the total credit per resident (Item 5)

Calculated Parks & Recreation Facilities Impact Fee Schedule

Table V-9 presents the calculated parks and recreation facilities impact fee schedule for Manatee County for residential land use categories, based on the net impact cost per resident previously presented in Table V-8. Also presented is a comparison to the County's current adopted fee and percent change from the current fee.

Table V-9

Calculated Parks and Recreation Facilities Impact Fee Schedule

ITE LUC	Land Use	Impact Unit	Residents per Unit[1]	Calculated Impact Fee[2]	Adopted Impact Fee[3]	Percent Change[4]
Residential:						
Single Family Detached:						
210	750 sq ft or less	du	1.43	**$1,882**	$484	289%
	751 - 1,000 sq ft	du	1.48	**$1,947**	$484	302%
	1,001 - 1,300 sq ft	du	1.69	**$2,224**	$752	196%
	1,301 - 1,700 sq ft	du	2.06	**$2,710**	$1,030	163%
	1,701 sq ft or more	du	2.54	**$3,342**	$1,298	157%
Multi-Family:						
220, 221, 222	750 sq ft or less	du	1.24	**$1,632**	$484	237%
	751 - 1,000 sq ft	du	1.28	**$1,684**	$484	248%
	1,001 - 1,300 sq ft	du	1.45	**$1,908**	$752	154%
	1,301 sq ft or more	du	1.78	**$2,342**	$1,030	127%
240	Mobile Home	du	1.20	**$1,579**	$752	110%

1) Source: Appendix A, Table A-8
2) Total impact cost per resident from Table V-8 multiplied by residents per unit (Item 1) for each land use
3) Source: Manatee County
4) Percent change from adopted impact fee (Item 3) to the calculated impact fee (Item 2)

Parks & Recreation Facilities Impact Fee Schedule Comparison

As part of the work effort in updating Manatee County's parks and recreation impact fee schedule, the County's calculated and adopted impact fee schedule was compared to the adopted fee schedules of select Florida counties. Table V-10 presents this comparison.

Table V-10

Parks and Recreation Facilities Impact Fee Schedule Comparison

Land Use	Unit[2]	Manatee County		Charlotte County[5]	Collier County[6]	Hillsborough County[7]	Lee County[8]	Osceola County[9]	Pasco County[10]	Polk County[11]	Sarasota County[12]	Volusia County[13]
		Calculated[3]	Current Adopted[4]									
Date of Last Update		2022	2015	2021	2015	2020	2018	2019	2015	2019	2016	2022
Assessed Portion of Calculated[1]		N/A	90%	100%	100%	65%	53%	100%	56%	100%	100%	100%
Residential:												
Single Family (2,000 sq ft)	du	$3,342	$1,298	$312	$3,628	$2,145	$806	$2,305	$892	$417	$2,719	$1,028
Multi-Family (1,300 sq ft)	du	$1,908	$752	$246	$1,685	$1,710	$610	$1,178	$627	$309	$2,204	$968
Mobile Home (1,300 sq ft)	du	$1,579	$752	$249	$2,862	$1,710	$591	$1,699	$627	$304	$1,880	$968

1) Represents the portion of the maximum calculated fee for each respective county that is collected. Fee may have been lowered/increased through annual indexing or policy discounts. Does not account for moratorium/suspensions.
2) du = dwelling unit
3) Table V-9
4) Source: Manatee County
5) Source: Charlotte County Planning & Zoning Department. Fee shown is the community parks impact fee. County adopted the regional/specialty parks impact fee at 0%.
6) Source: Collier County Capital Project Planning, Impact Fees, And Program Management Division. Fee shown includes community and regional park impact fees.
7) Source: Hillsborough County Development Services Department
8) Source: Lee County Community Development Department. Fee shown is sum of community and regional park impact fees.
9) Source: Osceola County Impact and Mobility Fees Office
10) Source: Pasco County Land Development Code, Chapter 1300 Concurrency, Mobility & Impact Fees
11) Source: Polk County Building Division
12) Source: Sarasota County Planning and Development Services Department
13) Source: Volusia County Growth and Resource Management Department. Fees shown is sum of local and district park impact fees. Local park impact fee is implemented county-wide and district park impact fee is implemented in the unincorporated county.

VI. Multi-Modal Transportation

This section summarizes the analysis used to update Manatee County's multi-modal transportation impact fee schedule and includes the following subsections:

- Demand Component
- Cost Component
- Credit Component
- Fee Variation by Geographic Area
- Calculated Multi-Modal Transportation Impact Fee
- Transportation Impact Fee Comparison

As in the case of the other impact fee program areas, the methodology used for the multi-modal transportation impact fee study follows a consumption-driven approach in which new development is charged based upon the proportion of person-miles of travel (PMT) that each unit of new development is expected to consume of a lane-mile of the transportation network.

Included in this document is the necessary support material used in the calculation of the multi-modal transportation impact fee. The general equation used to compute the impact fee for a given land use is:

[Demand x Cost] – Credit = Fee

The "demand" for travel placed on a transportation system is expressed in units of Person-Miles of Travel (PMT) (daily vehicle-trip generation rate x the trip length (in miles) x the percent new trips [of total trips] x person-trip factor) for each land use contained in the impact fee schedule. Trip generation represents the average daily rates to provide a stable measure of new development's impact. The number of trips tends to vary significantly throughout the day by time of day depending on activity levels; however, overall daily trips tend to be stable.

The "cost" of building new capacity typically is expressed in units of dollars per person-mile of transportation capacity. To provide a conservative estimate, the cost is based on recent transportation costs for county facilities only as opposed to including cost of both county and state facilities.

The "credit" is an estimate of future non-impact fee revenues generated by new development that are allocated to provide transportation capacity expansion. The impact fee is considered to be an "up front" payment for a portion of the cost of a lane-mile of capacity that is directly related to the amount of capacity consumed by each unit of land use contained in the impact fee schedule, that is not paid for by future tax revenues generated by the new development activity over the next 25 years. These credits are required under the supporting case law for the calculation of impact fees where a new development activity must be reasonably assured that they are not paying, or being charged, twice for the same level of service.

The input variables used in the fee equation are as follows:

Demand Variables:

- Trip generation rate
- Trip length
- Percent new trips
- Interstate & toll facility adjustment factor
- Person-trip factor

Cost Variables:

- Cost per person-mile
- Capacity added per lane mile

Credit Variables:

- Equivalent gas tax credit (pennies)
- Present worth
- Fuel efficiency
- Effective days per year

Demand Component

Travel Demand

Travel demand is the amount of a transportation system consumed by a unit of new land development activity. Demand is calculated using the following variables and is measured in terms of the person-miles of new travel (PMT) a unit of development consumes on the existing transportation system.

- Number of daily trips generated (Trip Generation Rate = TGR)
- Average length of those trips (Trip Length = TL)
- Proportion of travel that is new travel, rather than travel that is already traveling on the road system and is captured by new development (Percent New Trips = PNT)

As part of this update, the trip characteristics variables were obtained primarily from two sources: (1) trip characteristics studies previously conducted throughout Florida (Florida Studies Database), and (2) the Institute of Transportation Engineers' (ITE) *Trip Generation Handbook* (11th edition). The Florida Studies Database (included in Appendix C) was used to determine trip length, percent new trips, and the trip generation rate for several land uses.

Interstate & Toll Facility Adjustment Factor

This variable is used to recognize that interstate highway and toll facility improvements are funded by the State (specifically, the Florida Department of Transportation) using earmarked State and Federal funds. Typically, multi-modal transportation impact fees are not used to pay for these improvements and the portion of travel occurring on the interstate/toll facility system is usually eliminated from the total travel for each use.

To calculate the interstate and toll (I/T) facility discount factor, the loaded highway network[1] file was generated for the District 1 Regional Planning Model v2 (D1RPM v2). A select link analysis was conducted for all traffic analysis zones located within Manatee County in order to differentiate trips with an origin and/or destination within the county versus trips with no origin or destination within the county.

Currently, interstate facilities within the study area include Interstate 75 and Interstate 275 (portions of which are tolled). The limited access vehicle-miles of travel (Limited Access VMT) for trips with an origin and/or destination within the County was calculated for the identified limited access facilities. The total VMT was calculated for all trips with an origin and/or destination within the study area for all roads, including limited access facilities.

The I/T adjustment factor of 19.7 percent was determined by dividing the total limited access VMT by the total study area VMT for the 2045 Cost Feasible network. By applying this factor to the VMT for each land use, the reduced VMT is then representative of only the roadways which can be funded by impact fees.

[1] The "loaded highway network" refers to the final travel demand model roadway network with traffic volumes assigned (or loaded) to each model roadway link.

Conversion of Vehicle-Trips to Person-Trips

In the case of the multi-modal fee, it is necessary to estimate travel in units of person-miles. Vehicle-trips were converted to person-trips by applying a vehicle-trip to person-trip conversion factor of 1.48. This value was derived from a review of the D1RPM v2. Given that a large portion of travel occurs via automobile, this approach is found to be reasonable.

Cost Component

County Roadway Cost

This section examines the right-of-way (ROW), construction, and other cost components associated with county roads with respect to transportation capacity expansion improvements in Manatee County. In addition to local data, bid data for recently completed/ongoing projects and recent construction data from roadway projects throughout Florida were used to supplement the cost data for county roadway improvements. The cost for each roadway capacity project was separated into four components: design, right-of-way (ROW), construction, and construction engineering/inspection (CEI).

Design and CEI

Design costs for county roads were estimated at **14 percent** of construction phase costs based on a review of recent local cost data and cost data from jurisdictions throughout Florida. Additional detail is provided in Appendix D, Tables D-1 and D-2.

CEI costs for county roads were estimated at **11 percent** of construction phase costs based on a review of recent local cost data and cost data from jurisdictions throughout Florida. Additional detail is provided in Appendix D, Tables D-7 and D-8.

Right-of-Way

The ROW cost reflects the total cost of the acquisitions along a corridor that were necessary to have sufficient cross-section width to widen an existing road or, in the case of new construction, to build a new road. This factor was determined through a review of the ROW-to-construction cost ratios for recent county improvements in Manatee County. For county roadways, the ROW factors ranged from five (5) to 41 percent with an average of **19 percent**. This factor is lower than ROW-to-construction ratios seen in other jurisdictions throughout Florida, which average approximately 38 percent. Additional detail is provided in Appendix D, Tables D-3 and D-4.

Construction

A review of construction cost data for local county roadway capacity expansion projects included 16 recent and planned improvements provided by Manatee County. The improvements ranged from $1.84 million to $11.00 million per lane mile with a weighted average construction cost of approximately $4.94 million per lane mile. When excluding high outliers (projects with a cost per lane mile greater than $8.00 million), the weighted average cost was re-calculated to $3.95 million per lane mile. Additional detail is provided in Appendix D, Table D-5.

In addition to local data, a review of recently bid projects (from 2013 to 2020) throughout the state of Florida was conducted. As shown in Table D-6, a total of 47 projects from 15 different counties (excluding Manatee County) were identified with a weighted average cost of approximately $3.10 million per lane mile. This sample is limited in reflecting recent cost increases.

Given significant increase in construction costs since the 2019/2020 review, additional research was conducted to document recent cost indices. This review included the following:

- Producer Price Index (PPI) for Highway & Street Construction
- FDOT District 7 Long Range Estimates (LRE)
- National Highway Construction Cost Index

This review focused on the construction cost increases from 2019 to 2022, where many jurisdictions in Florida experienced a significant increase in roadway construction costs. These indices ranged from a 19-percent increase ($3.3 million) to a 54-percent increase ($4.3 million), with an average of approximately **38 percent** ($3.9 million). This average increase is in line with the local construction cost increases observed in Manatee County since 2018/19 and the cost estimates included in the multi-modal impact fee calculations ($2,800,000 * 1.38 ≈ $3.9 million).

Based on this review and discussions with Manatee County Public Works Department, the construction cost for county roads (urban design; curb & gutter) was estimated at **$3.90 million** per lane mile for use in the multi-modal transportation impact fee calculation.

Note that the estimated cost per lane mile pertains to urban design (curb & gutter) county roadway improvements and is based on improvements listed in the Sarasota/Manatee MPO's "Transform 2045" Long Range Transportation Plan (LRTP) and discussions with County representatives which confirmed that future county road improvements will have urban design characteristics.

Table VI-1
Estimated Total Cost per Lane Mile
for County Roads

Cost Type	County Roads
Design[1]	$546,000
Right-of-Way[2]	$741,000
Construction[3]	$3,900,000
CEI[4]	$429,000
Total Cost	**$5,616,000**

1) Design is estimated at 14% of construction costs
2) Right-of-Way is estimated at 19% of construction costs
3) Source: Estimate based on a review of data in Appendix D, Tables D-5 and D-6
4) CEI is estimated at 11% of construction costs

Note: All figures rounded to nearest $000

Person-Miles of Capacity Added per Lane Mile

An additional component of the multi-modal transportation impact fee equation is the capacity added per lane-mile of roadway constructed. The vehicle-miles of capacity (VMC) is an estimate of capacity added per lane mile, for county roadway improvements in the 2045 LRTP. As shown in Table VI-2, each lane mile will add approximately 8,600 VMC. This figure was then converted to person-miles of capacity (PMC) using the person-trip factor (1.48 persons per vehicle) previously discussed, resulting in a weighted average PMC of 12,700 per lane mile.

Table VI-2
Weighted Average Capacity Added per Lane Mile

Source	Lane Mile Added[1]	Vehicle-Miles of Capacity Added[1]	VMC Added per Lane Mile[2]	Vehicle-Trip to Person-Trip Factor[3]	PMC Added per Lane Mile[4]
County Roads	70.30	604,007	8,600	1.48	**12,700**

1) Source: Appendix D, Table D-9
2) Vehicle-miles of capacity added divided by lane miles added
3) Source: Based on a review of the District 1 Regional Planning Model (D1RPM v2)
4) VMC added per lane mile (Item 2) multiplied by the vehicle-trip to person-trip factor (Item 3)

Cost per Person-Mile of Capacity (Roadways)

The transportation cost per unit of development is assessed based on the cost per person-mile of capacity. As shown in Tables VI-1 and VI-2, the cost and capacity for roadways in Manatee County have been calculated based on typical roadway improvements planned to be constructed in the future. As shown in Table VI-3, the cost for travel within the county is approximately **$442**

per PMC.

The cost per PMC figure is used in the multi-modal transportation impact fee calculation to determine the total cost per unit of development based on person-miles of travel consumed. For each person-mile of travel that is added to the roadway system, approximately $442 of transportation capacity is consumed.

Table VI-3

Cost per Person-Mile of Capacity Added (Roadways)

Source	Cost per Lane Mile[1]	Average PMC Added per Lane Mile[2]	Cost per PMC[3]
County Roads	$5,616,000	12,700	**$442.20**

1) Source: Table VI-1
2) Source: Table VI-2
3) Cost per lane mile (Item 1) divided by the average PMC added per lane mile (Item 2)

Bicycle and Pedestrian Facility Costs

Bicycle and pedestrian facilities provide for relatively small quantities of the total vehicle-miles of travel due to the difference in the average distance traveled by a car trip versus pedestrian/bicycle trips. Because of their relatively small role in the urban travel scheme, they do not have a significant effect on evaluating the costs of providing for mobility. However, bike and pedestrian facilities are important and provide a source of travel for those who cannot drive or cannot afford to drive, and they are a standard part of the urban street and sometimes included in rural roadways. Their costs are included in the standard roadway cross-sections for which costs are estimated for safety and mobility reasons. Thus, the costs of these facilities on major roads are included in the multi-modal fee. The multi-modal fee provides funding for only those bike and pedestrian facilities associated with roadways on the classified road system (excluding local/neighborhood roads) and allows for facilities to be added to existing classified roadways or included in the construction of a new classified roadway or lane addition improvement.

Transit Capital Cost per Person-Mile of Travel

A model for transit service and cost was developed to establish both the capital cost per person-mile of capacity and the system operating characteristics in terms of system coverage, hours of service, and headways. The model developed for Manatee County was based on information

from the Manatee County Area Transit (MCAT) Transit Development Plan. Components of the transit capital cost include:

- Vehicle acquisition tied to new routes
- Bus stops, shelters, and benches
- Cost of road network used by transit vehicles

Transit capital costs are computed as the cost of capital features needed to expand the transit system, as follows:

Transit Capital Cost = Bus Infrastructure Cost + Road Capacity Cost

Taking into account the infrastructure costs and the decline in potential vehicle-capacity that comes with adding transit, it was determined that the difference between constructing a lane mile of roadway (for cars only) versus constructing a roadway with transit is not significant. The roadway with transit cost per PMC is approximately three (3) percent higher per lane mile than the cost to simply construct a road without transit amenities. Therefore, for the multimodal fee calculation, the cost per PMC of approximately $442 is representative of the cost to provide transportation capacity for all modes of travel. Additional information regarding the transit capital cost calculation is included in Appendix D, Tables D-10 and D-11.

Credit Component

Capital Improvement Credit

The credit component of the impact fee accounts for the County and State funding sources that are being expended on roadway capacity expansion (excluding impact fee funds). This section summarizes the calculations utilized to develop the credit component of the impact fee. Additional details are provided in Appendix E.

The present value of the portion of non-impact fee revenues generated by new development over a 25-year period (estimated life of a structure as well as when roadways are likely to need significant maintenance/rehabilitation) that is expected to fund capacity expansion projects was credited against the cost and the system consumed by travel associated with new development. In order to provide a connection to the demand component, which is measured in terms of travel, the non-impact fee dollars were converted to a fuel tax equivalency.

City Credit

As shown in Table VI-4, municipalities in Manatee County spend an average of $160,000 per year on multi-modal transportation capacity-expansion projects funded with non-impact fee revenues, which equates to revenues generated from **0.1 pennies** of one-cent per gallon tax on gasoline and diesel fuels. Revenue sources used include sales tax and fuel tax revenues. Additional detail is provided in Appendix E, Table E-2.

County Credit

Manatee County spends an average of $7.0 million per year or the equivalent of **3.8 pennies** on multi-modal transportation capacity-expansion projects funded with non-impact fee revenues, including sales tax and fuel tax. This information is included in Table VI-4 and additional detail is provided in Appendix E, Table E-3.

Manatee County also has outstanding debt service related to transportation capacity expansion projects averaging $5.9 million per year, or approximately **3.2 pennies**. The transportation portion of this bond, the Revenue Refunding & Improvement Bond, Series 2022, will primarily be refunded with non-ad valorem general fund and infrastructure sales tax revenues. Additional detail is provided in Appendix E, Table E-4.

State Credit

As shown in Table VI-4, state expenditures for multi-modal transportation capacity projects in Manatee County were reviewed and a credit for the capacity-expansion portion attributable to state projects was estimated (excluding expenditures on limited access facilities). This review, which included 10 years of historical expenditures, as well as five (5) years of planned expenditures, indicated that FDOT's multi-modal transportation spending averages $26.1 million per year and generates a credit of **14.1 pennies** of equivalent gas tax revenue, annually. The use of a 15-year period for developing a state credit accounts for the volatility in FDOT spending in the county over short time periods. Additional detail is provided in Appendix E, Table E-5.

In summary, for multi-modal transportation, municipalities allocate 0.1 pennies and Manatee County allocates 7.0 pennies, while the State spends an average of 14.1 pennies, annually. A total credit of 21.2 pennies or $39.3 million per year was included in the multi-modal transportation impact fee calculation to recognize the future capital revenues (25 years) that are expected to be generated by new development from all non-impact fee revenue sources. This credit reflects the most recent available data for multi-modal transportation expenditures from City, County and State sources.

Table VI-4

Equivalent Pennies of Gas Tax Revenue

Credit	Average Annual Expenditures	Value per Penny[5]	Equivalent Pennies per Gallon[6]
City Revenues[1]	$160,000	$1,854,132	$0.001
County Revenues[2]	$7,024,450	$1,854,132	$0.038
County Debt[3]	$5,856,848	$1,854,132	$0.032
State Revenues[4]	$26,124,015	$1,854,132	$0.141
Total	**$39,165,313**		**$0.212**

1) Source: Appendix E, Table E-2
2) Source: Appendix E, Table E-3
3) Source: Appendix E, Table E-4
4) Source: Appendix E, Table E-5
5) Source: Appendix E, Table E-1
6) Avg annual expenditures divided by the value per penny (Item 4) divided by 100

Present Worth Variables

Facility Life

The facility life used in the impact fee analysis is 25 years, which represents the reasonable life of a roadway.

Interest Rate

This is the discount rate at which gasoline tax revenues might be bonded. It is used to compute the present value of the gasoline taxes generated by new development. The discount rate of 3.01 percent was used in the multi-modal transportation impact fee calculation based on information provided by the County.

Fuel Efficiency

The fuel efficiency (i.e., the average miles traveled per gallon of fuel consumed) of the fleet of motor vehicles was estimated using the quantity of gasoline consumed by travel associated with a particular land use. This variable is used in the calculation of the credit component of the multi-modal transportation impact fee.

Appendix E, Table E-10 documents the calculation of fuel efficiency value based on the following equation, where "VMT" is vehicle miles of travel and "MPG" is fuel efficiency in terms of miles per gallon.

$$Fuel\ Efficiency = \sum VMT_{Roadway\ Type} \div \sum \left(\frac{VMT_{Vehicle\ Type}}{MPG_{Vehicle\ Type}} \right)_{Roadway\ Type}$$

The methodology uses non-interstate VMT and average fuel efficiency data for passenger vehicles (i.e., passenger cars and other 2-axle, 4-tire vehicles, such as vans, pickups, and SUVs) and large trucks (i.e., single-unit, 2-axle, 6-tire or more trucks and combination trucks) to calculate the total gallons of fuel used by each of these vehicle types.

The combined total VMT for the vehicle types is then divided by the combined total gallons of fuel consumed to calculate, in effect, a "weighted" fuel efficiency value that reflects the existing fleet mix of traffic on non-interstate roadways. The VMT and average fuel efficiency data were obtained from the most recent Federal Highway Administration's *Highway Statistics 2020*. Based on the calculation completed in Appendix E, Table E-10, the fuel efficiency rate to be used in the updated impact fee equation is 19.23 miles per gallon.

Effective Days per Year

An effective 365 days per year of operation was used for all land uses in the proposed fee. However, this will not be the case for all land uses since some uses operate only on weekdays (e.g., office buildings) and/or only seasonally (e.g., schools). The use of 365 days per year, therefore, provides a conservative estimate, ensuring that non-impact fee contributions are adequately credited against the fee.

Fee Variation by Geographic Area

Fee Districts

Currently, Manatee County has four impact fee assessment zones: Northeast, Northwest, Southeast, and Southwest. Each assessment zone has unique fee rates for each land use in the impact fee schedule with the highest rates in the Northeast zone and the lowest rates in the Southwest zone. As part of this update study, a countywide fee schedule is developed.

Calculated Multi-Modal Transportation Impact Fee

Detailed impact fee calculations for each land use are included in Appendix F, which includes the major land use categories and the impact fees for the individual land uses contained in each of the major categories. For each land use, Appendix F illustrates the following:

- Demand component variables (trip rate, trip length, and percent new trips);
- Total multi-modal impact fee cost;
- Annual capital improvement credit;
- Present value of the capital improvements credit;
- Net multi-modal transportation impact fee rates;
- Current adopted Manatee County impact fee rates; and
- Percent difference between the calculated impact fee and the current adopted impact fee.

It should be noted that the net impact fee illustrated in Appendix F is not necessarily a recommended fee, but instead represents the technically calculated impact fee per unit of land use that could be charged in Manatee County.

For clarification purposes, it may be useful to walk through the calculation of an impact fee for one of the land use categories. In the following example, the net impact fee is calculated for the Single Family land use category (2,000 sq ft; Southwest District) using information from the impact fee schedules included in Appendix F. For each land use category, the following equations are utilized to calculate the net impact fee:

Net Impact Fee = Total Impact Cost – Capital Improvement Credit

Where:

Total Impact Cost = ([Trip Rate × Assessable Trip Length × % New Trips] /2) × (1 – Interstate/Toll Facility Adjustment Factor) × (Person-Trip Factor) × (Cost per Person-Mile of Capacity)

Capital Improvement Credit = Present Value (Annual Capital Improvement Credit), given 3.01% interest rate & a 25-year facility life

Annual Capital Improvement Credit = ([Trip Rate × Total Trip Length × % New Trips] / 2) × (Effective Days per Year × $/Gallon to Capital) / Fuel Efficiency

Each of the inputs has been discussed previously in this document; however, for purposes of this example, brief definitions for each input are provided in the following paragraphs, along with the actual inputs used in the calculation of the fee for the Single Family land use category (2,000 sq ft; Urban District):

- *Trip Rate* = the average daily trip generation rate, in vehicle-trips/day (8.26)
- *Assessable Trip Length* = the average trip length on collector roads or above, for the category, in vehicle-miles (6.62)
- *Total Trip Length* = the assessable trip length plus an adjustment factor of half a mile, which is added to the trip length to account for the fact that gas taxes are collected for travel on all roads including local roads (6.62 + 0.50 = 7.12)
- *% New Trips* = adjustment factor to account for trips that are already on the roadway (100%)
- *Divide by 2* = the total daily miles of travel generated by a particular category (i.e., rate*length*% new trips) is divided by two to prevent the double-counting of travel generated between two land use codes since every trip has an origin and a destination
- *Interstate/Toll Facility Adjustment Factor* = adjustment factor to account for travel demand occurring on interstate highways and/or toll facilities (19.7%)
- *Person-Trip Factor* = Converts vehicle-miles of travel to person-miles of travel (1.48)
- *Cost per Lane Mile* = unit cost to construct one lane mile of roadway, in $/lane-mile ($5,616,000)
- *Average Vehicle-Capacity Added per Lane Mile* = represents the average daily traffic on one travel lane at capacity for one lane mile of roadway, in vehicles/lane-mile/day (12,700)
- *Cost per Person-Mile of Capacity* = unit of person-miles of capacity consumed per unit of development. Cost per person-mile divided by average capacity added per lane mile
- *Present Value* = calculation of the present value of a uniform series of cash flows, gas tax payments in this case, given an interest rate, “i,” and a number of periods, “n;” for 3.01% interest and a 25-year facility life, the uniform series present worth factor is 17.3938
- *Effective Days per Year* = 365 days
- *$/Gallon to Capital* = the amount of equivalent gas tax revenue per gallon of fuel that is used for capital improvements, in $/gallon ($0.212)
- *Fuel Efficiency* = average fuel efficiency of vehicles, in vehicle-miles/gallon (19.23)

Multi-Modal Transportation Impact Fee Calculation

Using these inputs, a net impact fee can be calculated for the Residential land use category (2,000 sq ft) as follows:

Single Family (2,000 sq ft) Multi-Modal Transp. Impact Fee Rate (Table F-1):

Total Impact Cost = ([8.26 * 6.62 * 1.0] /2) * (1 - 0.197) * 1.48 * ($5,616,000 /12,700) = **$14,368**

Annual Cap. Improv. Credit = ([8.26 * 7.12 * 1.0] /2) * 365 * ($0.212 /19.23) = $118
Capital Improvement Credit = $118 * 17.3938 = $2,052

Net Multi-Modal Transportation Impact Fee = $14,368 – $2,052 = **$12,316**

Table VI-5 presents the calculated multi-modal impact fee schedules and Table VI-6 presents a comparison of the existing rates and the calculated multi-modal impact fee rates, by district. Note that a major factor in the differences for Single Family and Multi-Family land uses was due to the fact that the current rates are based on a combined "residential" land use category, while this update study breaks out "residential" into several residential categories.

Table VI-5

Manatee County Multi-Modal Transportation Impact Fees

LUC	Land Use	Unit	Calculated Rate
	RESIDENTIAL:		
210	Single Family Detached; 750 sq ft or less	du	$4,714
	Single Family Detached; 751 - 1,000 sq ft	du	$6,732
	Single Family Detached; 1,001 - 1,300 sq ft	du	$8,576
	Single Family Detached; 1,301 - 1,700 sq ft	du	$10,472
	Single Family Detached; 1,701 sq ft or more	du	$12,316
215	Single Family Attached/Townhome; 750 sq ft or less	du	$3,984
	Single Family Attached/Townhome; 751 - 1,000 sq ft	du	$5,705
	Single Family Attached/Townhome; 1,001 - 1,300 sq ft	du	$7,271
	Single Family Attached/Townhome; 1,301 - 1,700 sq ft	du	$8,890
	Single Family Attached/Townhome; 1,701 sq ft or more	du	$10,438
220	Multi-Family; 750 sq ft or less	du	$3,037
	Multi-Family; 751 - 1,000 sq ft	du	$4,345
	Multi-Family; 1,001 - 1,300 sq ft	du	$5,550
	Multi-Family; 1,301 sq ft or more	du	$6,765
240	Mobile Home Park	du	$4,292
253	Congregate Care/Assisted Living Facility	du	$1,149
	NON-RESIDENTIAL:		
110	Light Industrial	1,000 sf	$5,176
140	Manufacturing	1,000 sf	$5,044
150	Warehouse	1,000 sf	$1,816
151	Mini-Warehouse	1,000 sf	$1,048
320	Lodging	room	$2,507
565	Day Care Center	1,000 sf	$16,126
610	Hospital	1,000 sf	$12,526
620	Nursing Home	1,000 sf	$3,445
710	Office & Other Services	1,000 sf	$11,531
822	Commercial/Shopping Center less than 40,000 sflga	1,000 sfgla	$8,355
821	Commercial/Shopping Center 40,000 to 150,000 sfgla	1,000 sfgla	$16,332
820	Commercial/Shopping Center greater than 150,000 sfgla	1,000 sfgla	$17,223
944	Gas Station w/Convenience Store <2,000 sq ft	fuel pos.	$16,430
945	Gas Station w/Convenience Store 2,000 to 5,499 sq ft	fuel pos.	$25,245
	Gas Station w/Convenience Store 5,500+ sq ft	fuel pos.	$33,023

Source: Table F-1

Table VI-6

Manatee County Multi-Modal Transportation Impact Fee Comparison

LUC	Land Use	Unit	Existing[1]				Calculated[2]	Percent Change			
			SOUTHWEST	SOUTHEAST	NORTHWEST	NORTHEAST		SW	SE	NW	NE
	RESIDENTIAL:										
210	Single Family Detached; 750 sq ft or less	du	$1,502	$1,896	$2,458	$2,577	**$4,714**	213.8%	148.6%	91.8%	82.9%
	Single Family Detached; 751 - 1,000 sq ft	du	$1,502	$1,896	$2,458	$2,577	**$6,732**	348.2%	255.1%	173.9%	161.2%
	Single Family Detached; 1,001 - 1,300 sq ft	du	$2,338	$2,951	$3,825	$4,010	**$8,576**	266.8%	190.6%	124.2%	113.9%
	Single Family Detached; 1,301 - 1,700 sq ft	du	$3,187	$4,037	$5,231	$5,483	**$10,472**	228.6%	159.4%	100.2%	91.0%
	Single Family Detached; 1,701 sq ft or more	du	$4,005	$5,072	$6,574	$6,891	**$12,316**	207.5%	142.8%	87.3%	78.7%
215	Single Family Attached/Townhome; 750 sq ft or less	du	$1,502	$1,896	$2,458	$2,577	**$3,984**	165.2%	110.1%	62.1%	54.6%
	Single Family Attached/Townhome; 751 - 1,000 sq ft	du	$1,502	$1,896	$2,458	$2,577	**$5,705**	279.8%	200.9%	132.1%	121.4%
	Single Family Attached/Townhome; 1,001 - 1,300 sq ft	du	$2,338	$2,951	$3,825	$4,010	**$7,271**	211.0%	146.4%	90.1%	81.3%
	Single Family Attached/Townhome; 1,301 - 1,700 sq ft	du	$3,187	$4,037	$5,231	$5,483	**$8,890**	178.9%	120.2%	69.9%	62.1%
	Single Family Attached/Townhome; 1,701 sq ft or more	du	$4,005	$5,072	$6,574	$6,891	**$10,438**	160.6%	105.8%	58.8%	51.5%
220	Multi-Family; 750 sq ft or less	du	$1,502	$1,896	$2,458	$2,577	**$3,037**	102.2%	60.2%	23.6%	17.9%
	Multi-Family; 751 - 1,000 sq ft	du	$1,502	$1,896	$2,458	$2,577	**$4,345**	189.3%	129.2%	76.8%	68.6%
	Multi-Family; 1,001 - 1,300 sq ft	du	$2,338	$2,951	$3,825	$4,010	**$5,550**	137.4%	88.1%	45.1%	38.4%
	Multi-Family; 1,301 sq ft or more	du	$3,187	$4,037	$5,231	$5,483	**$6,765**	112.3%	67.6%	29.3%	23.4%
240	Mobile Home Park	du	n/a	n/a	n/a	n/a	**$4,292**	n/a	n/a	n/a	n/a
253	Congregate Care/Assisted Living Facility	du	n/a	n/a	n/a	n/a	**$1,149**	n/a	n/a	n/a	n/a
	NON-RESIDENTIAL:										
110	Light Industrial	1,000 sf	$2,076	$2,137	$2,768	$2,903	**$5,176**	149.3%	142.2%	87.0%	78.3%
140	Manufacturing	1,000 sf	$1,138	$1,171	$1,517	$1,590	**$5,044**	343.2%	330.7%	232.5%	217.2%
150	Warehouse	1,000 sf	$1,060	$1,091	$1,414	$1,482	**$1,816**	71.3%	66.5%	28.4%	22.5%
151	Mini-Warehouse	1,000 sf	$744	$766	$993	$1,040	**$1,048**	40.9%	36.8%	5.5%	0.8%
320	Lodging	room	$1,678	$1,725	$2,237	$2,345	**$2,507**	49.4%	45.3%	12.1%	6.9%
565	Day Care Center	1,000 sf	$3,034	$3,122	$4,046	$4,241	**$16,126**	431.5%	416.5%	298.6%	280.2%
610	Hospital	1,000 sf	$3,939	$4,053	$5,252	$5,505	**$12,526**	218.0%	209.1%	138.5%	127.5%
620	Nursing Home	1,000 sf	$2,264	$2,330	$3,020	$3,165	**$3,445**	52.2%	47.9%	14.1%	8.8%
710	Office & Other Services	1,000 sf	$3,286	$3,381	$4,382	$4,594	**$11,531**	250.9%	241.1%	163.1%	151.0%
822	Commercial/Shopping Center less than 40,000 sflga	1,000 sfgla	$8,397	$8,640	$11,197	$11,737	**$8,355**	-0.5%	-3.3%	-25.4%	-28.8%
821	Commercial/Shopping Center 40,000 to 150,000 sfgla	1,000 sfgla	$8,397	$8,640	$11,197	$11,737	**$16,332**	94.5%	89.0%	45.9%	39.1%
820	Commercial/Shopping Center greater than 150,000 sfgla	1,000 sfgla	$8,397	$8,640	$11,197	$11,737	**$17,223**	105.1%	99.3%	53.8%	46.7%
944	Gas Station w/Convenience Store <2,000 sq ft	fuel pos.	n/a	n/a	n/a	n/a	**$16,430**	n/a	n/a	n/a	n/a
945	Gas Station w/Convenience Store 2,000 to 5,499 sq ft	fuel pos.	n/a	n/a	n/a	n/a	**$25,245**	n/a	n/a	n/a	n/a
	Gas Station w/Convenience Store 5,500+ sq ft	fuel pos.	n/a	n/a	n/a	n/a	**$33,023**	n/a	n/a	n/a	n/a

1) Source: Manatee County Administration Department
2) Source: Appendix F, Table F-1

Transportation Impact Fee Schedule Comparison

A comparison of calculated fee schedule to the current adopted fee by land use is presented in Table VI-7 for select land uses.

A summary of calculated impact fee rates for all land uses is presented in Appendix F, Tables F-1.

Table VI-7
Transportation Impact Fee Comparison

Land Use	Unit[2]	Manatee County					Sarasota County[5]			Hillsborough County[6]		Pinellas County GENERAL[7]
		Calculated[3]	Existing/Adopted Rates[4]									
			Northeast	Northwest	Southwest	Southeast	Urban Infill	W. of I-75	E. of I-75	RURAL	URBAN	
Date of Last Update	-	**2022**	2015	2015	2015	2015	2022	2022	2022	2020	2020	1990
Assessed Portion of Calculated[1]	-	**N/A**	90%	90%	90%	90%	100%	100%	100%	100%	100%	n/a
Residential:												
Single Family Detached (2,000 sq ft)	du	**$12,316**	$6,891	$6,574	$4,005	$5,072	$1,954	$3,178	$4,370	$13,038	$9,183	$1,679
Non-Residential:												
Light Industrial	1,000 sf	**$5,176**	$2,903	$2,768	$2,076	$2,137	$661	$1,095	$1,637	$5,982	$4,230	$1,414
Office (50,000 sq ft)	1,000 sf	**$11,531**	$4,594	$4,382	$3,286	$3,381	$1,843	$3,054	$4,567	$11,777	$8,336	$2,767
Retail (125,000 sq ft)	1,000 sf	**$16,332**	$11,737	$11,197	$8,397	$8,640	$4,210	$6,572	$8,428	$15,962	$13,562	$3,627

1) Represents that portion of the maximum calculated fee for each respective county that is actually charged. Fees may have been lowered through indexing or policy discounts. Does not account for moratoriums/suspensions
2) du = dwelling unit
3) Source: Appendix F, Table F-1
4) Source: Manatee County Administration Department
5) Source: Sarasota Planning & Development Services Department
6) Source: Hillsborough County Department of Development Services. Rates shown exclude surtax
7) Source: Pinellas County Building Services; General County Fees

Land Use	Unit[2]	Manatee County	Polk County[4]	Charlotte County[5]	Pasco County[6]			Lee County[7]	Collier County[8]	Osceola County[9]		Volusia County[10]
		Calculated[3]			Urban	Suburban	Rural			Urban	Rural	
Date of Last Update	-	**2022**	2019	2021	2021	2021	2021	2018	2019	2020	2020	2022
Assessed Portion of Calculated[1]	-	**N/A**	100%	100%	100%	100%	100%	52.5%	100%	100%	100%	100%
Residential:												
Single Family Detached (2,000 sq ft)	du	**$12,316**	$2,380	$6,289	$6,018	$8,839	$10,107	$5,248	$8,090	$9,999	$15,941	$5,464
Non-Residential:												
Light Industrial	1,000 sf	**$5,176**	$855	$2,783	$0	$0	$0	$1,775	$4,584	$2,274	$2,274	$2,420
Office (50,000 sq ft)	1,000 sf	**$11,531**	$2,356	$5,228	$0	$0	$0	$3,997	$8,605	$6,025	$6,025	$5,400
Retail (125,000 sq ft)	1,000 sf	**$16,332**	$3,536	$7,509	$6,346	$7,932	$9,915	$6,025	$13,774	$25,943	$25,943	$6,320

1) Represents that portion of the maximum calculated fee for each respective county that is actually charged. Fees may have been lowered through indexing or policy discounts. Does not account for moratoriums/suspensions
2) du = dwelling unit
3) Source: Appendix F, Table F-1
4) Source: Polk County Planning and Development
5) Source: Charlotte County Planning & Zoning Department
6) Source: Pasco County Central Planning Department. Note that Pasco County uses other revenue sources to buy-down mobility fee rates for select land uses
7) Source: Lee County Community Development Department. Note that the planned March 2022 phase-in to 55% did not occur. Rates remain at 52.5%
8) Source: Collier County Growth Management Division, Planning and Regulation.
9) Source: Osceola County Community Development Department. Non-mixed use fees are shown. Warehouse rate is shown for light industrial
10) Source: Volusia County Growth and Resource Management Department. Rates effective March 1, 2023

VII. Indexing

In many cases, impact fee rates are reviewed periodically (every three to five years, etc.) as opposed to being updated on an annual basis. If no adjustment to the impact fee schedule is made during this period, a situation can be created where major adjustments to the impact fee schedule likely become necessary due to the time between adjustments. During periods of cost increases, the need for significant adjustments also creates major concerns for the development community. To address this issue, the calculated fees included in this report could be indexed annually for construction, land, and equipment cost increases, as appropriate.

The remainder of this section details the method for developing an index for each of the fee areas in Manatee County. Cost trends and indices over the past five years are used for illustrative purposes, but it is important to update this analysis annually and ensure that recent purchases and construction cost trends indicate a similar trend, as available.

Land Cost

As shown in Table VII-1, between 2017 and 2022, the change in just value of vacant land over the past five years averaged 5.5 percent countywide. This index is used for the land component of each fee. Countywide trend is shown in this section as an example; however, when the indexing calculations are updated, the appropriate service areas should be used.

Table VII-1

Manatee County Property Value Increase

Year	Just Value (Vacant Property)	Percent Change
2017	$1,093,288,547	-
2018	$1,106,897,625	1.2%
2019	$1,138,207,088	2.8%
2020	$1,141,007,890	0.2%
2021	$1,186,659,331	4.0%
2022	$1,415,301,626	19.3%
Average (2017-2022)[1]		**5.5%**

Source: Florida Property Valuations and Tax Databook. Real Property Only

FDOT Project Cost

The Florida Department of Transportation (FDOT) provides projected inflation rates for transportation project costs, which are presented in Table VII-2. These inflation rates were applied to the design, construction, and construction engineering/inspection components of the multi-modal transportation impact fee unit construction cost.

Table VII-2

FDOT Project Cost Inflation Index

Year	Inflation Factor
2022	Base
2023	2.7%
2024	2.8%
2025	2.9%
2026	3.0%
2027	3.1%
Avg.	**2.9%**

Source: FDOT Policy Planning Department, July 2021

Building Construction Cost

For building construction costs, a common index used for indexing purposes is the building cost index provided by Engineering-News Record. Table VII-3 presents the annual construction cost change over the past five years, which average 6.0 percent annually.

Table VII-3

Building Construction Cost Index

Year	Annual Avg Cost Index	Percent Change
2017	5,831	-
2018	6,019	3.2%
2019	6,136	1.9%
2020	6,281	2.4%
2021	6,912	10.0%
2022	7,775	12.5%
Average (2017-2022)		**6.0%**

Source: Engineering News-Record (ENR) historical building cost indices

Equipment Cost

For equipment costs, it is recommended that the Consumer Price Index (CPI) provided by the US Department of Labor, Bureau of Labor Statistics, be used for indexing purposes. Table VII-4 presents the annual CPI cost increase over the last five years, which averages 3.6 percent annually.

Table VII-4
Equipment Cost Index – South Region

Year	Annual Avg Cost Index	Percent Change
2017	150.33	-
2018	153.45	2.1%
2019	155.49	1.3%
2020	157.08	1.0%
2021	165.36	5.3%
2022	179.29	8.4%
Average (2010-2020)		**3.6%**

Source: Bureau of Labor Statistics (BLS), Consumer Price Index (CPI); South Region

Application

The following sub-sections present the calculated indices for each fee area previously presented in this study.

Indexing for the Public Safety Impact Fee Schedule

To index Manatee County's public safety impact fee schedule, a combined index needs to be calculated. Table VII-5 presents the distribution of the County's inventory of land, building, and equipment costs for public safety facilities. The land cost index (Table VII-1), the building construction cost index (Table VII-3), and the equipment cost index (Table VII-4) were then weighted by this distribution to develop the total applicable index for the public safety impact fee. To calculate the indexed impact fee, the impact fees should be increased by 5.3 percent annually. As discussed previously, it is important to update this index annually using the methodology described in this section to reflect most recent cost trends.

Table VII-5

Public Safety Indexing Application

Calculation Step	Distribution of Inventory[1]	Percent of Total Cost[2]	Annual Increase[3]	Index[4]
Land Value	$7,476,800	7.5%	5.5%	0.4%
Building Value	$64,491,700	65.1%	6.0%	3.9%
Vehicle/Equipment Value	$27,147,162	27.4%	3.6%	1.0%
Total Asset Value	**$99,115,662**			
Total Applicable Index[5]				**5.3%**

1) Source: Table II-5
2) Distribution of the land, building, and vehicle/equipment values as part of the total asset value
3) Source: Table VII-1 for land, Table VII-3 for buildings, and Table VII-4 for vehicles/equipment
4) Percent of total cost (Item 2) multiplied by the annual increase (Item 3)
5) Sum of the index components (Item 4) for land, building, and vehicles/equipment

Indexing for the Law Enforcement Impact Fee Schedule

Similar to the public safety impact fees, a combined index was calculated for the law enforcement impact fee schedule. Table VII-6 presents the distribution of the County's inventory of land, building, and vehicle/equipment costs for these facilities. The land cost index (Table VII-1), the building construction cost index (Table VII-3), and the equipment cost index (Table VII-4) were then weighted by this distribution to develop the total applicable index for the law enforcement impact fee. To calculate the indexed impact fee, the impact fees should be increased by 5.5 percent annually.

Table VII-6

Law Enforcement Facility Indexing Application

Calculation Step	Distribution of Inventory[1]	Percent of Total Cost[2]	Annual Increase[3]	Index[4]
Land Value	$5,224,500	3.0%	5.5%	0.2%
Building Value	$129,440,400	74.6%	6.0%	4.5%
Vehicle/Equipment Value	$38,848,354	22.4%	3.6%	0.8%
Total Asset Value	**$173,513,254**			
Total Applicable Index[5]				**5.5%**

1) Source: Tables III-5
2) Distribution of land, building, and vehicle/equipment value as part of the total asset value
3) Source: Table VII-1 for land, Table VII-3 for buildings, and Table VII-4 for vehicles/equipment
4) Percent of total cost (Item 2) multiplied by the annual increase (Item 3)
5) Sum of the index components (Item 4) for land, building, and vehicles/equipment

Indexing for the Library Facilities Impact Fee Schedule

Similar to other program areas, a combined index was calculated for the library facilities impact fee schedule. Table VII-7 presents the distribution of the County's inventory of land, building, and equipment costs for library facilities. The land cost index (Table VII-1), the building construction cost index (Table VII-3), and the equipment cost index (Table VII-4) were then weighted by this distribution to develop the total applicable index for the library facilities impact fee. To calculate the indexed impact fee, the fees should be increased by 5.3 percent annually.

Table VII-7

Library Facilities Indexing Application

Calculation Step	Distribution of Inventory[1]	Percent of Total Cost[2]	Annual Increase[3]	Index[4]
Land Value	$2,514,000	3.0%	5.5%	0.2%
Building Value	$55,232,550	66.8%	6.0%	4.0%
Materials/Equipment Value	$24,953,583	30.2%	3.6%	1.1%
Total Asset Value	**$82,700,133**			
Total Applicable Index[5]				**5.3%**

1) Source: Tables IV-4
2) Distribution of the land, building, and materials/equipment value as part of the total asset value
3) Source: Table VII-1 for land, Table VII-3 for buildings, and Table VII-4 for materials/equipment
4) Percent of total cost (Item 2) for each component multiplied by the annual increase (Item 3)
5) Sum of the index components (Item 4) for land, buildings, and materials/equipment

Indexing for the Parks & Recreation Impact Fee Schedule

Table VII-8 presents the calculation of a combined index for the parks & recreation impact fee schedule. The table includes the distribution of the County's inventory of land, building, and equipment costs for parks & recreation facilities. The land cost index (Table VII-1) and the building cost index (Table VII-3) were then weighted by this distribution to develop the total applicable index for the Parks & Recreation impact fee. To calculate the indexed impact fee, the impact fees should be increased by 5.8 percent annually.

Table VII-8

Parks & Recreation Indexing Application

Calculation Step	Distribution of Inventory[1]	Percent of Total Cost[2]	Annual Increase[3]	Index[4]
Land Value	$304,058,700	44.9%	5.5%	2.5%
Recreational Facilities	$372,836,845	55.1%	6.0%	3.3%
Total Asset Value	**$676,895,545**			
Total Applicable Index[5]				**5.8%**

1) Source: Tables V-4 and V-5
2) Distribution of the land and facility/equipment values as part of the total asset value
3) Source: Table VII-1 for land and Table VII-3 for recreational facilities
4) Percent of total cost (Item 2) multiplied by the annual increase (Item 3)
5) Sum of the index components (Item 4) for land and facilities/equipment

Indexing for the Multi-Modal Transportation Impact Fee Schedule

Similar to other program areas, a combined index was calculated for the multi-modal transportation impact fee schedule. Table VII-9 presents the distribution of the costs from the County's unit construction cost for transportation facilities. The FDOT project cost index (Table VII-2) and the land cost index (Table VII-1) were then weighted by this distribution to develop the total applicable index for the multi-modal transportation impact fee. To calculate the indexed impact fee, the total impact fee should be increased by 3.2 percent annually.

Table VII-9

Multi-Modal Transportation Indexing Application

Calculation Step	Distribution of Phase Costs[1]	Percent of Total Cost[2]	Annual Increase[3]	Index[4]
Design/Construction/CEI	$4,875,000	86.8%	2.9%	2.5%
Right-of-Way	$741,000	13.2%	5.5%	0.7%
Total Unit Construction Cost	**$5,616,000**			
Total Applicable Index[5]				**3.2%**

1) Source: Table VI-1
2) Distribution of design/construction/CEI and ROW as part of the total unit construction cost
3) Source: Table VII-1 for right-of-way and Table VII-2 for design/construction/CEI
4) Percent of total cost (Item 2) for each component multiplied by the annual increase (Item 3)
5) Sum of the index components (Item 4) for design/construction/CEI and right-of-way

Appendix A
Population: Supplemental Information

Appendix A: Population

Except for the multi-modal transportation impact fee, all impact fee programs included in this report require the use of population data in calculating current levels of service, performance standards, and demand and credit calculations. With this in mind, a consistent approach to developing population estimates and projections is an important component of the data compilation process. To accurately determine demand for services, as well as to be consistent with Manatee County's Comprehensive Plan, not only the residents, or permanent population of the County, but also the seasonal residents and visitors were considered. Seasonal residents include visitors and part-time residents, which are defined as living in Manatee County for less than six months each year. Therefore, for purposes of calculating future demand for capital facilities for each impact fee program area, the weighted seasonal population will be used in all population estimates and projections. References to population contained in this report pertain to the weighted seasonal population, unless otherwise noted.

Manatee County provides countywide services for public safety, library facilities, and parks and recreation. Law enforcement services are provided in the unincorporated portions of the County. Given the differences in services areas, population estimates are provided separately for countywide and unincorporated Manatee County.

Table A-1 presents the countywide and unincorporated Manatee County population trend. The projections indicate that the current weighted seasonal population of the County is approximately 453,300 and is estimated to increase to 600,300 (increase of 147,000) by 2045. In the case of unincorporated Manatee County, the current weighted population is estimated to be 365,200 and is estimated to increase to 474,800 (increase of 109,600). Based on these estimates, the projected population growth rate averages 1.2 percent per year between 2022 and 2045.

Table A-1
Weighted Seasonal Population Trends and Projections

Year	Countywide	Unincorporated County
2000	282,531	200,994
2001	289,914	207,654
2002	297,528	214,637
2003	305,667	220,737
2004	314,711	229,008
2005	325,063	236,910
2006	334,339	243,631
2007	340,228	249,910
2008	342,444	252,033
2009	343,585	253,273
2010	343,989	264,107
2011	348,452	267,876
2012	353,942	272,329
2013	359,232	277,113
2014	366,065	282,997
2015	375,877	291,010
2016	385,190	298,623
2017	395,944	308,420
2018	405,335	315,932
2019	415,184	324,708
2020	429,973	343,575
2021	442,058	354,669
2022	**453,342**	**365,196**
2023	461,774	365,232
2024	470,362	372,027
2025	479,172	378,994
2026	486,695	384,945
2027	494,337	390,988
2028	502,098	397,126
2029	509,982	403,362
2030	517,975	409,684
2031	524,139	414,560
2032	530,376	419,493
2033	536,688	424,486
2034	543,076	429,538
2035	549,469	434,593
2036	554,799	438,809
2037	560,180	443,067
2038	565,614	447,364
2039	571,100	451,703
2040	576,663	456,103
2041	581,334	459,797
2042	586,042	463,521
2043	590,789	467,276
2044	595,575	471,060
2045	600,310	474,805

Source: Appendix A, Tables A-19 and A-20

Residential Persons per Housing Unit Tiering

As part of this impact fee update, the current residential square footage tiers were expanded to differentiate smaller homes as well as breakout the combined "residential" category into separate single family and multi-family residential categories. This analysis utilizes average Persons per Housing Unit (PPHU) figures by bedroom size obtained from the 2020 5-year Public Use Microdata Sample (PUMS) and average home size by number of bedrooms reported in the Manatee County Property Appraiser's database to develop a relationship between number of persons in a home and the size of the home. Based on this relationship (PPHU by size of home), the overall average PPHU reported by the American Community Survey (ACS) is adjusted by size of home to reflect this relationship.

PUMS files allow for the use of census sample data collected in Manatee County to create custom tables that are otherwise unavailable. For this analysis, the 2020 PUMS files were utilized, which are the latest data available. The PUMS 5-year estimates incorporate 60 months of data, representing a 1-percent sample of the population for each year. The 5-year sample represents the most recent figures of the PUMS datasets. To isolate the PUMS data specific to Manatee County, all Public Use Microdata Areas (PUMAs) within the County were identified. PUMAs are non-overlapping areas that partition each state into areas containing approximately 100,000 residents. These are the most detailed geographic area available within the PUMS data set. Table A-2 summarizes the PUMS results for Manatee County.

Table A-2

PUMS Results Summary: Residential Structures

Bedrooms	Persons[(1)]	Building (Units)[(1)]	Persons per Housing Unit[(2)]	Adjusted PPHU[(3)]
0-1	1,061	986	1.08	1.15
2	4,794	3,455	1.39	1.48
3	7,182	3,357	2.14	2.28
4+	3,208	1,182	2.71	2.89
Total	**16,245**	**8,980**	**1.81**	**1.93**

1) Source: PUMS 2020 5-yr dataset; PUMAs 8101-8103
2) Persons divided by units
3) Persons per housing unit (Item 2) adjusted to the PPHU for Manatee County calculated using the 2021 ACS 5-yr data (1.93)

Using the Manatee County Property Appraiser's Database, the average square footage per unit by bedroom tier was determined for residential structures, as shown in Table A-3. With these averages determined, the persons per housing unit were graphed per square footage to determine a line of best fit, as shown in Figure A-1.

Table A-3

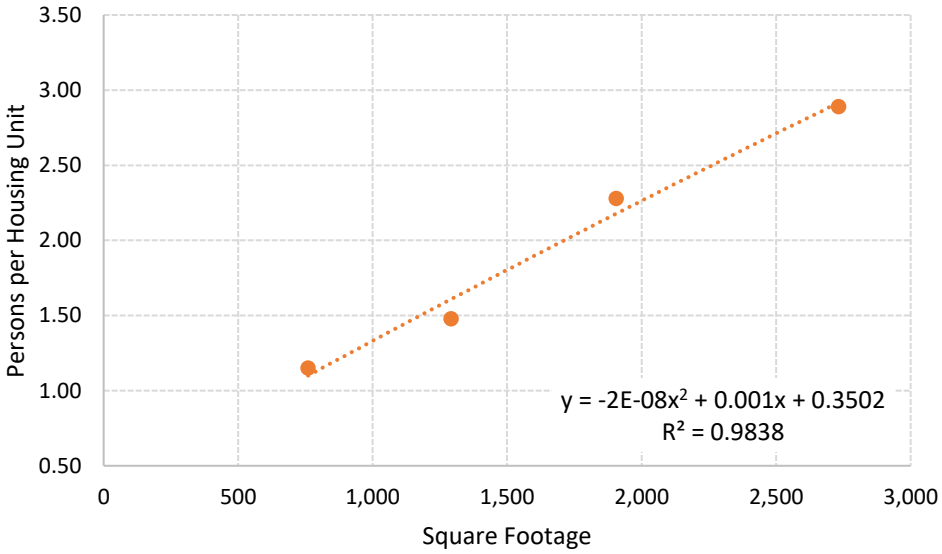
PPHU vs. Bedrooms vs. Square Footage

Bedrooms	Average Unit Size (Sq Ft)[1]	Persons per Housing Unit[2]
0-1	**760**	1.15
2	**1,291**	1.48
3	**1,905**	2.28
4+	**2,732**	2.89
Total	**1,755**	-

1) Source: Manatee County Property Appraiser's Parcel Database
2) Source: Table A-2

Figure A-1

Persons per Housing Unit by Square Footage



Using the resulting best-fit equation (as shown in Figure A-1), the PPHU for various square footage tiers were calculated using the end-point square footage for each tier. Next, the tiers were normalized to the average PPHU (Countywide and Unincorporated) from the ACS for Manatee County, as presented in Table A-4.

Table A-4

Persons per Housing Unit by Square Footage Tier

Tier	Sq Ft Input[1]	Persons per Housing Unit[2]	PPHU Ratio[3]	Adjusted PPHU[4]
Countywide				
750 sq ft or less	750	1.09	44.5%	0.86
751 sq ft to 1,000 sq ft	1,000	1.33	54.3%	1.05
1,001 sq ft to 1,300 sq ft	1,300	1.62	66.1%	1.28
1,301 sq ft to 1,700 sq ft	1,700	1.99	81.2%	1.57
1,701 sq ft or more	2,200	**2.45**	**100.0%**	**1.93**
Unincorporated				
750 sq ft or less	-	-	-	0.92
751 sq ft to 1,000 sq ft	-	-	-	1.12
1,001 sq ft to 1,300 sq ft	-	-	-	1.37
1,301 sq ft to 1,700 sq ft	-	-	-	1.68
1,701 sq ft or more	-	-	-	**2.07**

1) End-point of each square footage tier that is entered into the best-fit equation from Figure A-1
2) Calculated using the square foot inputs (Item 1) and the line of best fit from Figure A-1
3) Ratio of each tier to the 1,701 sq ft or more tier. This tier represents the average size home in Manatee County (1,755 sq ft, as shown in Table A-3)
4) The Countywide PPHU of 1.93 was applied to the average tier (1,701 sq ft or more) and then each tier was adjusted based on the ratios from Item 3. This calculation was replicated for the unincorporated County using an average PPHU of 2.07 (calculated using the 2021 American Community Survey 5-yr data)

The resulting analysis was then compared to a recent student generation rate (SGR) analysis completed by the School Board of Manatee County, specifically in regard to the smaller square footage tiers. As shown in the SGR analysis, all housing tiers were shown to generate students, and therefore the PPHU data for small tiers was adjusted to reflect the presence of students and at least one parent/guardian. In the case of larger tiers, the calculated PPHU values do not conflict with the SGR results and no adjustment was applied. Table A-5 details this adjustment.

Table A-5

Persons per Housing Unit with Student Generation Rate Adjustment

Tier	PPHU[1]	SGR[2]	Adjusted PPHU[3]
Countywide			
750 sq ft or less	0.86	0.09	**1.09**
751 sq ft to 1,000 sq ft	1.05	0.13	**1.13**
1,001 sq ft to 1,300 sq ft	1.28	0.17	**1.28**
1,301 sq ft to 1,700 sq ft	1.57	0.20	**1.57**
1,701 sq ft or more	1.93	0.23	**1.93**
Unincorporated			
750 sq ft or less	0.92	-	**1.17**
751 sq ft to 1,000 sq ft	1.12	-	**1.21**
1,001 sq ft to 1,300 sq ft	1.37	-	**1.37**
1,301 sq ft to 1,700 sq ft	1.68	-	**1.68**
1,701 sq ft or more	2.07	-	**2.07**

1) Source: Table A-4
2) Source: Student generation rates from Manatee County School District's Impact Fee Update Presentation; Tischler Bise, October 2022
3) Adjusted PPHU for 750 sq ft and less and 751 to 1,000 sq ft tier (1 person + SGR). Unincorporated values were calculated using the ratio of adjusted countywide tiers

As a final step, the tiered persons per housing unit calculations were adjusted to differentiate between single family and multi-family land uses. This step brings in the separate PPHU for each land use based on 2021 ACS 5-yr data as well as the average square footage per unit from the Manatee County Property Appraiser's database. Tables A-6 and A-7 detail these calculations.

Table A-6

Persons per Housing Unit: Single Family Land Use

Tier	PPHU[1]	Ratio[2]	Adjusted PPHU[3]
Countywide			
750 sq ft or less	**1.09**	56.5%	**1.33**
751 sq ft to 1,000 sq ft	**1.13**	58.5%	**1.38**
1,001 sq ft to 1,300 sq ft	**1.28**	66.3%	**1.57**
1,301 sq ft to 1,700 sq ft	**1.57**	81.3%	**1.92**
1,701 sq ft or more	**1.93**	-	**2.36**
Unincorporated			
750 sq ft or less	**1.17**	56.5%	**1.38**
751 sq ft to 1,000 sq ft	**1.21**	58.5%	**1.43**
1,001 sq ft to 1,300 sq ft	**1.37**	66.2%	**1.62**
1,301 sq ft to 1,700 sq ft	**1.68**	81.2%	**1.99**
1,701 sq ft or more	**2.07**	-	**2.45**

1) Source: Table A-5
2) Ratio of each square footage tier to the 1,701 sq ft or more tier. For single family land use, the county average home size falls within this tier (2,010 sq ft)
3) Source: 2021 ACS 5-yr estimates for PPHU (Countywide = 2.36, Unincorporated = 2.45). Each tier calculated using the ratio to average (Item 2)

Table A-7

Persons per Housing Unit: Multi-Family Land Use

Tier	PPHU[(1)]	Ratio[(2)]	Adjusted PPHU[(3)]
Countywide			
750 sq ft or less	**1.09**	85.2%	**1.15**
751 sq ft to 1,000 sq ft	**1.13**	88.3%	**1.19**
1,001 sq ft to 1,300 sq ft	**1.28**	-	**1.35**
1,301 sq ft or more	**1.57**	122.7%	**1.66**
Unincorporated			
750 sq ft or less	**1.17**	85.4%	**1.34**
751 sq ft to 1,000 sq ft	**1.21**	88.3%	**1.39**
1,001 sq ft to 1,300 sq ft	**1.37**	-	**1.57**
1,301 sq ft or more	**1.68**	122.6%	**1.93**

1) Source: Table A-5
2) Ratio of each square footage tier to the 1,001 to 1,300 sq footage tier. For multi-family land use, the county average home size falls within this tier (1,188 sq ft)
3) Source: 2021 ACS 5-yr estimates for PPHU (Countywide = 1.35, Unincorporated = 1.57). Each tier calculated using the ratio to average (Item 2)

Apportionment of Demand by Residential Unit Type and Size

Tables A-8 and A-9 present the population per housing unit (PPH) for the residential categories by size for both countywide and unincorporated Manatee County. The tables present the PPH based on weighted seasonal population for separate single family and multi-family residential categories, as opposed to the current combined "residential" category. This analysis includes all housing units, both occupied and vacant.

Table A-8

Population per Housing Unit by Housing Type (Countywide)

Housing Type	Population[1]	Housing Units[2]	Population/ Housing Unit[3]	Weighted Population/ Housing Unit[4]
Single Family (Detached):	288,960	122,490	2.36	-
750 sq ft or less			1.33	**1.43**
751 sq ft to 1,000 sq ft			1.38	**1.48**
1,001 sq ft to 1,300 sq ft			1.57	**1.69**
1,301 sq ft to 1,700 sq ft			1.92	**2.06**
1,701 sq ft or more			2.36	**2.54**
Multi-Family	68,196	50,582	1.35	-
750 sq ft or less			1.15	**1.24**
751 sq ft to 1,000 sq ft			1.19	**1.28**
1,001 sq ft to 1,300 sq ft			1.35	**1.45**
1,301 sq ft or more			1.66	**1.78**
Mobile Home	32,953	29,554	1.12	**1.20**
Congregate Care Facility/Assisted Living Facility[5]	214,170	173,072	1.24	**1.33**

1) Source: 2021 American Community Survey (ACS); 5-Yr. Estimates, Table B25033
2) Source: 2021 American Community Survey (ACS); 5-Yr. Estimates, Table DP04
3) Source: Table A-6 and A-7
4) Population per housing unit (Item 3) adjusted for seasonal population
5) Estimate for congregate care facility is based on people per household figures for single and multi-family homes, adjusted for the residents over 55 years of age based on information obtained from the 2017 National Household Travel Survey, prepared by the US Department of Transportation

Note: Excludes boats, RVs, vans, etc.

Table A-9

Population per Housing Unit by Housing Type (Unincorporated Manatee County)

Housing Type	Population[1]	Housing Units[2]	Population/ Housing Unit[3]	Weighted Population/ Housing Unit[4]
Single Family (Detached):	240,968	98,513	2.45	-
750 sq ft or less			1.38	**1.47**
751 sq ft to 1,000 sq ft			1.43	**1.52**
1,001 sq ft to 1,300 sq ft			1.62	**1.72**
1,301 sq ft to 1,700 sq ft			1.99	**2.12**
1,701 sq ft or more			2.45	**2.60**
Multi-Family	41,770	26,671	1.57	-
750 sq ft or less			1.34	**1.42**
751 sq ft to 1,000 sq ft			1.39	**1.48**
1,001 sq ft to 1,300 sq ft			1.57	**1.67**
1,301 sq ft or more			1.93	**2.05**
Mobile Home	28,414	25,434	1.12	**1.19**
Congregate Care Facility/Assisted Living Facility[5]	169,545	125,184	1.35	**1.44**

1) Source: 2021 American Community Survey (ACS); 5-Yr. Estimates, Table B25033
2) Source: 2021 American Community Survey (ACS); 5-Yr. Estimates, Table DP04
3) Source: Tables A-6 and A-7
4) Population per housing unit (Item 3) adjusted for seasonal population
5) Estimate for congregate care facility is based on people per household figures for single and multi-family homes, adjusted for the residents over 55 years of age based on information obtained from the 2017 National Household Travel Survey, prepared by the US Department of Transportation

Note: Excludes boats, RVs, vans, etc.

Functional Population

Functional population, as used in the impact fee analysis, is a generally accepted methodology for several impact fee areas and is based on the assumption that demand for certain facilities is generally proportional to the presence of people at a land use, including residents, employees, and visitors. It is not enough to simply add resident population to the number of employees, since the service demand characteristics can vary considerably by type of industry.

Functional population is the equivalent number of people occupying space within a community on a 24-hour-day, 7-days-a-week basis. A person living and working in the community will have the functional population coefficient of 1.0. A person living in the community but working elsewhere may spend only 16 hours per day in the community on weekdays and 24 hours per day on weekends for a functional population coefficient of 0.76 (128-hour presence divided by 168 hours in one week). A person commuting into the county to work five days per week would

have a functional population coefficient of 0.30 (50-hour presence divided by 168 hours in one week). Similarly, a person traveling into the community to shop at stores, perhaps averaging 8 hours per week, would have a functional population coefficient of 0.05.

Functional population thus tries to capture the presence of all people within the community, whether residents, workers, or visitors, to arrive at a total estimate of effective population needed to be served.

This form of adjusting population to help measure real facility needs replaces the population approach of merely weighting residents two-thirds and workers one-third (Nelson and Nicholas 1992)[2]. By estimating the functional and weighted population per unit of land use across all major land uses in a community, an estimate of the demand for certain facilities and services in the present and future years can be calculated. The following paragraphs explain how functional population is calculated for residential and non-residential land uses.

Residential Functional Population

Developing the residential component of functional population is simpler than developing the non-residential component. It is generally estimated that people spend one-half to three-fourths of their time at home and the rest of each 24-hour day away from their place of residence. In developing the residential component of Manatee County's functional population, an analysis of the County's population and employment characteristics was conducted. Tables A-10 and A-11 present this analysis for the County. Based on this analysis, Manatee County residents, on average, spend 16.5 hours each day at their place of residence. This corresponds to approximately 69 percent of each 24-hour day at their place of residence and the other 31 percent away from home.

It is important to note that these calculations were reviewed on a countywide basis as well as for unincorporated Manatee County. There was no change between the estimated residential functional population coefficient. As such, the countywide figure is utilized for both service areas.

[2] Arthur C. Nelson and James C. Nicholas, "Estimating Functional Population for Facility Planning," *Journal of Urban Planning and Development* 118(2): 45-58 (1992)

Table A-10

Population & Employment Characteristics

Variable	Figure
Total workers living in Manatee County[1]	143,025
Total Population (2016)[2]	353,411
Total workers as a percent of population[3]	**40.5%**
School age population (5-17 years) (2016)[4]	50,891
School age population as a percent of population[5]	**14.4%**
Population net of workers and school age population[6]	159,495
Other population as a percent of total population[7]	**45.1%**

1) Source: Census Transportation Planning Package (CTPP), 2012-2016
2) Source: ACS 2016 5-Year Estimates, Table S0101
3) Total workers (Item 1) divided by population (Item 2)
4) Source: ACS 2016 5-Year Estimates, Table S0101
5) Total school age population (Item 4) divided by 2016 population (Item 2)
6) Total population (Item 2) less total workers (Item 1) and school age population (Item 4)
7) Population net of workers and school age population (Item 6) divided by 2016 population (Item 2)

Table A-11

Residential Coefficient for 24-Hour Functional Population

Population Group	Hours at Residence[1]	Percent of Population[2]	Effective Hours[3]
Workers	13	40.5%	5.3
Students	15	14.4%	2.2
Other	20	45.1%	9.0
Total Hours at Residence[4]			16.5
Residential Functional Population Coefficient[5]			**68.8%**

1) Estimated
2) Source: Table A-10
3) Hours at residence (Item 1) multiplied by the percent of population (Item 2)
4) Sum of effective hours (Item 3)
5) Sum of effective hours (Item 4) divided by 24

The resulting percentage from Table A-11 is used in the calculation of the residential coefficient for the 24-hour functional population. These actual calculations are presented in Table A-12.

Non-Residential Functional Population

Given the varying characteristics of non-residential land uses, developing the estimates of functional residents for non-residential land uses is more complicated than developing estimated

functional residents for residential land uses. Nelson and Nicholas originally introduced a method for estimating functional resident population, which is now widely used in the industry. This method uses trip generation data from the Institute of Transportation Engineers' (ITE) Trip Generation Manual and Benesch's Trip Characteristics Database, information of passengers per vehicle, workers per vehicle, length of time spent at the land use, and other variables.

Specific calculations include:

- Total one-way trips per employee (ITE trips multiplied by 50 percent to avoid double counting entering and exiting trips as two trips).
- Visitors per impact unit based on occupants per vehicle (trips multiplied by occupants per vehicle less employees).
- Worker hours per week per impact unit (such as nine worker-hours per day multiplied by five days in a work week).
- Visitor hours per week per impact unit (visitors multiplied by number of hours per day times relevant days in a week, such as five for offices and seven for retail shopping).
- Functional population coefficients per employee developed by estimating time spent by employees and visitors at each land use.

Table A-12 shows the functional population coefficients for residential and non-residential uses in Manatee County, which are used to estimate the 2022 functional population for the countywide and unincorporated Manatee County service areas in Tables A-13 and A-14.

Table A-12

General Functional Population Coefficients

Population/Employment Category	ITE LUC	Employee Hours In-Place[1]	Trips per Employee[2]	One-Way Trips per Employee[3]	Journey-to-Work Occupants per Trip[4]	Daily Occupants per Trip[5]	Visitors per Employee[6]	Visitor Hours per Trip[1]	Days per Week[7]	Functional Population Coefficient[8]
Population									7.00	**0.688**
Natural Resources	N/A	9.00	3.10	1.55	1.32	1.38	0.09	1.00	7.00	**0.379**
Construction	110	9.00	3.10	1.55	1.32	1.38	0.09	1.00	5.00	**0.271**
Manufacturing	140	9.00	2.51	1.26	1.32	1.38	0.08	1.00	5.00	**0.270**
Transportation, Communication, Utilities	110	9.00	3.10	1.55	1.32	1.38	0.09	1.00	5.00	**0.271**
Wholesale Trade	150	9.00	5.05	2.53	1.32	1.38	0.15	1.00	5.00	**0.272**
Retail Trade	820	9.00	50.50	25.25	1.24	1.73	12.37	1.50	7.00	**1.148**
Finance, Insurance, Real Estate	710	9.00	3.33	1.67	1.24	1.73	0.82	1.00	5.00	**0.292**
Services[9]	N/A	9.00	20.32	10.16	1.24	1.73	4.98	1.00	6.00	**0.499**
Government[10]	730	9.00	7.45	3.73	1.24	1.73	1.83	1.00	7.00	**0.451**

(1) Estimated

(2) Trips per employee represents all trips divided by the number of employees and is based on Trip Generation 11th Edition (Institute of Transportation Engineers 2021) as follows:

ITE Code 110 at 3.10 weekday trips per employee, Volume 2 - Industrial Land Uses, page 39

ITE Code 140 at 2.51 weekday trips per employee, Volume 2 - Industrial Land Uses, page 76

ITE Code 150 at 5.05 weekday trips per employee, Volume 2 - Industrial Land Uses, page 104

ITE Code 710 at 3.33 weekday trips per employee, Volume 2 Office Land Uses, page 716

ITE Code 730 at 7.45 weekday trips per employee, Volume 2 Office Land Uses, page 795

ITE Code 820 (page 186) based on blended average of trips by retail center size calculated below.

Trips per retail employee from the following table:

Retail Scale	*Trip Rate*	*Sq Ft per Employee*[11]	*Trips per Employee*	*Share*	*Weighted Trips*
Retail (Less than 40k sq. ft.)	54.45	802	44	50.0%	22.00
Retail (40k to 150k sq. ft.)	67.52	975	66	35.0%	23.10
Retail (greater than 150k sq. ft.	37.01	963	36	15.0%	5.40
Sum of Weighted Trips/1k sq.ft.					50.50

(3) Trip per employee (Item 2) multiplied by 0.5.

(4) Journey-to-Work Occupants per Trip from 2001 Nationwide Household Travel Survey (FHWA 2001) as follows:

1.32 occupants per Construction, Manufacturing, TCU, and Wholesale trip

1.24 occupants per Retail Trade, FIRE, and Services trip

(5) Daily Occupants per Trip from 2001 Nationwide Household Travel Survey (FHWA 2001) as follows:

1.38 occupants per Construction, Manufacturing, TCU, and Wholesale trip

1.73 occupants per Retail Trade, FIRE, and Services trip

(6) [Daily occupants per trip (Item 5) multiplied by one-way trips per employee (Item 3)] - [(Journey-to-Work occupants per trip (Item 4) multiplied by one-way trips per employee (Item 3)]

(7) Typical number of days per week that indicated industries provide services and relevant government services are available.

(8) Table A-11 for residential and the equation below to determine the Functional Population Coefficient per Employee for all land-use categories except residential includes the following:

$$\frac{(\text{Days per Week} \times \text{Employee Hours in Place}) + (\text{Visitors per Employee} \times \text{Visitor Hours per Trip} \times \text{Days per Week})}{(24 \text{ Hours per Day} \times 7 \text{ Days per Week})}$$

(9) Trips per employee for the services category is the average trips per employee for the following service related land use categories: quality restaurant, high-turnover restaurant, supermarket, hotel, motel, elementary school, middle school, high school, hospital, medical office, and church. Source for the trips per employee figure from ITE, 11th ed., when available.

(10) Includes Federal Civilian Government, Federal Military Government, and State and Local Government categories.

(11) Square feet per retail employee from the Energy Information Administration from Table B-1 of the Commercial Energy Building Survey, 2003

Table A-13

Countywide Functional Population (2022)

Population Category	Countywide Baseline Data[1]	Functional Resident Coefficient[2]	Functional Population[3]
2022 Weighted Population	453,342	0.688	311,899
Employment Category			
Natural Resources	5,285	0.379	2,003
Construction	15,937	0.271	4,319
Manufacturing	9,396	0.270	2,537
Transportation, Communication, and Utilities	9,604	0.271	2,603
Wholesale Trade	5,103	0.272	1,388
Retail Trade	25,279	1.148	29,020
Finance, Insurance, and Real Estate	24,719	0.292	7,218
Services	94,080	0.499	46,946
Government Services	14,535	0.451	6,555
Total Employment by Category Population[4]			102,589
2022 Total Functional Population[5]			**414,488**

1) Source: Table A-1 for population and 2022 Woods & Poole for employment data
2) Source: Table A-12
3) Functional population is calculated by multiplying the baseline data (Item 1) multiplied by the functional resident coefficient (Item 2)
4) The total employment population by category is the sum of the employment figures from the nine employment categories (e.g., natural resources, construction, etc.)
5) The total functional population is the sum of the residential functional population and the employment functional population

Table A-14

Unincorporated County Functional Population (2022)

Population Category	Unincorporated County Baseline Data[1]	Functional Resident Coefficient[2]	Functional Population[3]
2022 Weighted Population	365,196	0.688	251,255
Employment Category			
Natural Resources	3,981	0.379	1,509
Construction	10,506	0.271	2,847
Manufacturing	6,656	0.270	1,797
Transportation, Communication, and Utilities	7,051	0.271	1,911
Wholesale Trade	3,531	0.272	960
Retail Trade	17,088	1.148	19,617
Finance, Insurance, and Real Estate	13,932	0.292	4,068
Services	51,734	0.499	25,815
Government Services	5,030	0.451	2,269
Total Employment by Category Population[4]			60,793
2022 Total Functional Population[5]			**312,048**

1) Source: Table A-1 for population and 2022 Woods & Poole for employment data
2) Source: Table A-12
3) Functional population is calculated by multiplying the baseline data (Item 1) multiplied by the functional resident coefficient (Item 2)
4) The total employment population by category is the sum of the employment figures from the nine employment categories (e.g., natural resources, construction, etc.)
5) The total functional population is the sum of the residential functional population and the employment functional population

Table A-15 presents the County's annual functional population figures for both countywide and unincorporated Manatee County from 2000 through 2045, based on the 2022 functional population figure from Tables A-13 and A-14, and the annual population growth rates from the population figures previously presented in Table A-1.

Table A-15

Functional Population (2000 - 2045)

Year	Countywide	Unincorporated County
2000	257,781	171,857
2001	264,483	177,528
2002	271,360	183,564
2003	278,687	188,704
2004	287,048	195,686
2005	296,521	202,535
2006	305,120	208,206
2007	310,612	213,619
2008	312,786	215,328
2009	313,724	216,405
2010	314,038	225,710
2011	318,120	228,870
2012	323,210	232,761
2013	328,058	236,951
2014	334,291	241,927
2015	343,317	248,701
2016	351,900	255,167
2017	361,753	263,588
2018	370,435	269,914
2019	379,325	277,472
2020	392,981	293,565
2021	403,984	302,959
2022	**414,488**	**312,048**
2023	422,363	312,048
2024	430,388	317,977
2025	438,565	324,019
2026	445,582	329,203
2027	452,711	334,470
2028	459,954	339,822
2029	467,313	345,259
2030	474,790	350,783
2031	480,487	354,992
2032	486,253	359,252
2033	492,088	363,563
2034	497,993	367,926
2035	503,969	372,341
2036	509,009	376,064
2037	514,099	379,825
2038	519,240	383,623
2039	524,432	387,459
2040	529,676	391,334
2041	533,913	394,465
2042	538,184	397,621
2043	542,489	400,802
2044	546,829	404,008
2045	551,204	407,240

Source: Tables A-13 & A-14 for 2022. Remaining years are based on growth rates of the weighted seasonal population; Table A-1

Functional Residents by Specific Land Use Category

When a wide range of land uses impact services, an estimate of that impact is needed for each land use. This section presents functional population coefficient estimates by residential and non-residential land uses.

Residential and Transient Land Uses

As mentioned previously, different functional population coefficients need to be developed for each impact fee service area to be analyzed. For residential and transient land uses, these coefficients are displayed in Tables A-16 and A-17. The average number of persons per housing unit was calculated for the residential categories by size of home. The analysis is based on information obtained from the 2021 ACS, 2020 PUMS, and Manatee County Property Appraiser database. Besides the residential land uses, Tables A-16 and A-17 also include transient land uses, such as hotels, motels, congregate care facilities (CCF), and nursing homes. Secondary sources, such as Bradenton Area Convention and Visitors Bureau and the Florida Department of Elderly Affairs, are used to determine the occupancy rate for hotels, motels, CCF, and nursing homes.

Non-Residential Land Uses

A similar approach is used to estimate functional residents for non-residential land uses. Table A-18 presents basic assumptions and calculations, such as trips per unit, trips per employee, employees per impact unit, one-way trips per impact unit, worker hours, occupants per vehicle trip, visitors (patrons, etc.) per impact unit, visitor hours per trip, and days per week for non-residential land uses. The final column shows the estimated functional resident coefficients by land use. These coefficients by land use create the demand component for the select impact fee programs and will be used in the calculation of the impact fee per unit for each land use category in the select impact fee schedules.

Table A-16

Functional Residents for Residential and Transient Land Uses – Countywide

Land Use	Impact Unit	ITE LUC[1]	Residents/ Visitors Per Unit[2]	Occupancy Rate[3]	Adjusted Residents Per Unit[4]	Visitor Hours at Place[5]	Workers Per Unit[6]	Work Day Hours[7]	Days Per Week[8]	Functional Residents per Unit[9]
Residential:										
Single Family Detached:										
750 sq ft or less	du	210	1.43	-	-	-	-	-	-	0.98
751 sq ft to 1,000 sq ft	du		1.48	-	-	-	-	-	-	1.02
1,001 sq ft to 1,300 sq ft	du		1.69	-	-	-	-	-	-	1.16
1,301 sq ft to 1,700 sq ft	du		2.06	-	-	-	-	-	-	1.42
1,701 sq ft or more	du		2.54	-	-	-	-	-	-	1.75
Multi-Family:										
750 sq ft or less	du	220, 221, 222	1.24	-	-	-	-	-	-	0.85
751 sq ft to 1,000 sq ft	du		1.28	-	-	-	-	-	-	0.88
1,001 sq ft to 1,300 sq ft	du		1.45	-	-	-	-	-	-	1.00
1,301 sq ft or more	du		1.78	-	-	-	-	-	-	1.22
Mobile Home	du	240	1.20	-	-	-	-	-	-	0.83
Transient, Assisted, Group:										
Congregate Care Facility/Assisted Living Facility	du	253	1.33	82%	1.09	16	0.56	9	7	0.94
Lodging	room	320	2.80	71%	1.99	12	0.13	9	7	1.04
Nursing Home	1,000 sf	620	2.76	82%	2.26	20	2.04	9	7	2.65

(1) Land use code from the Institute of Transportation Engineers (ITE) Trip Generation Handbook, 11th Edition

(2) Estimates for the residential land use is from Table A-8; estimates for the lodging land use is based on data obtained from the Bradenton Area Convention and Visitors Bureau; and the estimate used for nursing home is based on 1 person per bed and an average square footage of 363 per bed in a nursing home, based on information provided in the ITE Trip Generation Handbook, 11th Edition.

(3) Source for lodging occupancy: Bradenton Area Convention and Visitors Bureau. Average hotel/motel occupancy rate for 2018-2019 & 2021. Source for nursing home occupancy rate is the Florida Department of Elder Affairs, Manatee County Profile. Average occupancy rate for 2015-2018 & 2021.

(4) Residents per unit times occupancy rate (Item 3)

(5), (7), (8) Estimated

(6) Adapted from ITE Trip Generation Handbook, 11th Edition

(9) For residential this is Residents Per Unit times 0.688. For Transient, Assisted, and Group it is:

$$\frac{[(\text{Adjusted Residents per Unit} \times \text{Hours at Place} \times \text{Days per Week}) + (\text{Workers Per Unit} \times \text{Work Hours Per Day} \times \text{Days per Week})]}{(24 \text{ Hours per Day} \times 7 \text{ Days per Week})}$$

Table A-17

Functional Residents for Residential and Transient Land Uses – Unincorporated County

Residential Land Use	Impact Unit	ITE LUC[1]	Residents/ Visitors Per Unit[2]	Occupancy Rate[3]	Adjusted Residents Per Unit[4]	Visitor Hours at Place[5]	Workers Per Unit[6]	Work Day Hours[7]	Days Per Week[8]	Functional Residents per Unit[9]
Residential:										
Single Family Detached:										
750 sq ft or less	du	210	1.47	-	-	-	-	-	-	1.01
751 sq ft to 1,000 sq ft	du		1.52	-	-	-	-	-	-	1.05
1,001 sq ft to 1,300 sq ft	du		1.72	-	-	-	-	-	-	1.18
1,301 sq ft to 1,700 sq ft	du		2.12	-	-	-	-	-	-	1.46
1,701 sq ft or more	du		2.60	-	-	-	-	-	-	1.79
Multi-Family:										
750 sq ft or less	du	220, 221, 222	1.42	-	-	-	-	-	-	0.98
751 sq ft to 1,000 sq ft	du		1.48	-	-	-	-	-	-	1.02
1,001 sq ft to 1,300 sq ft	du		1.67	-	-	-	-	-	-	1.15
1,301 sq ft or more	du		2.05	-	-	-	-	-	-	1.41
Mobile Home	du	230	1.19	-	-	-	-	-	-	0.82
Transient, Assisted, Group:										
Congregate Care Facility/Assisted Living Facility	du	253	1.44	82%	1.18	16	0.56	9	7	1.00
Lodging	room	320	2.80	71%	1.99	12	0.13	9	7	1.04
Nursing Home	1,000 sf	620	2.76	82%	2.26	20	2.04	9	7	2.65

(1) Land use code from the Institute of Transportation Engineers (ITE) Trip Generation Handbook, 11th Edition

(2) Estimates for the residential land use is from Table A-9; estimates for the lodging land use is based on data obtained from the Bradenton Area Convention and Visitors Bureau; and the estimate used for

(3) Source for lodging occupancy: Bradenton Area Convention and Visitors Bureau. Average hotel/motel occupancy rate for 2018-2019 & 2021. Source for nursing home occupancy rate is the Florida

(4) Residents per unit times occupancy rate (Item 3)

(5), (7), (8) Estimated

(6) Adapted from ITE Trip Generation Handbook, 11th Edition

(9) For residential this is Residents Per Unit times 0.688. For Transient, Assisted, and Group it is:

$$\frac{[(\text{Adjusted Residents per Unit} \times \text{Hours at Place} \times \text{Days per Week}) + (\text{Workers Per Unit} \times \text{Work Hours Per Day} \times \text{Days per Week})]}{(24 \text{ Hours per Day} \times 7 \text{ Days per Week})}$$

Table A-18

Functional Resident Coefficients for Non-Residential Land Uses

ITE LUC[1]	Land Use	Impact Unit	Trips Per Unit[2]	Trips Per Employee[3]	Employees Per Unit[4]	One-Way Factor @ 50%[5]	Worker Hours[6]	Occupants Per Trip[7]	Visitors[8]	Visitor Hours Per Trip[9]	Days Per Week[10]	Functional Resident Coefficient[11]
110	Light Industrial	1,000 sf	4.87	3.10	1.57	2.44	9	1.78	2.77	1.00	5	0.50
140	Manufacturing	1,000 sf	4.75	2.51	1.89	2.38	9	1.78	2.35	1.00	5	0.58
150	Warehouse	1,000 sf	1.71	5.05	0.34	0.86	9	1.78	1.19	0.75	5	0.12
151	Mini-Warehouse	1,000 sf	1.46	61.90	0.02	0.73	9	1.78	1.28	0.75	7	0.05
565	Day Care Center	1,000 sf	49.63	21.38	2.32	24.82	9	1.80	42.36	0.15	5	0.81
610	Hospital	1,000 sf	10.77	3.77	2.86	5.39	9	1.60	5.76	1.00	7	1.31
710	Office & Other Services	1,000 sf	10.84	3.33	3.26	5.42	9	1.23	3.41	1.00	5	0.97
822	Commercial/Shopping Center less than 40,000 sflga	1,000 sfgla	54.45	17.42	3.13	27.23	9	1.73	43.98	0.50	7	2.09
821	Commercial/Shopping Center 40,000 to 150,000 sfgla	1,000 sfgla	67.52	17.42	3.88	33.76	9	1.73	54.52	0.50	7	2.59
820	Commercial/Shopping Center greater than 150,000 sfg	1,000 sfgla	37.01	17.42	2.12	18.51	9	1.73	29.90	0.50	7	1.42
944	Gas Station w/Convenience Store <2,000 sq ft	fuel pos.	172.01	275.78	0.62	86.01	9	1.73	148.18	0.20	7	1.47
945	Gas Station w/Convenience Store 2,000 to 5,499 sq ft	fuel pos.	264.38	241.21	1.10	132.19	9	1.73	227.59	0.20	7	2.31
	Gas Station w/Convenience Store 5,500+ sq ft	fuel pos.	345.75	241.21	1.43	172.88	9	1.73	297.65	0.20	7	3.02

Sources:

(1) Land use code found in the Institute of Transportation Engineers (ITE) Trip Generation Handbook, 11th Edition

(2) Trip generation rates are from the ITE Trip Generation Handbook, 11th Edition and Florida Studies (presented in Appendix C)

(3) Trips per employee from ITE Trip Generation Handbook, 11th Edition, when available

(4) Trips per impact unit divided by trips per person (usually employee). When trips per person are not available, the employees per unit is estimated.

(5) Trips per unit (Item 2) multiplied by 50 percent

(6), (9), (10) Estimated

(7) Nationwide Personal Transportation Survey

(8) [(One-way Trips/Unit X Occupants/Trip) - Employees].

(11) [(Workers X Hours/Day X Days/Week) + (Visitors X Hours/Visit X Days/Week)]/(24 Hours x 7 Days)

Table A-19
Weighted Seasonal Population Projections, Countywide

Year	Permanent Population[1]	Seasonal Population[2]	Total Weighted Season Pop.[3]
2000	264,002	18,529	282,531
2001	270,887	19,027	289,914
2002	278,001	19,527	297,528
2003	285,606	20,061	305,667
2004	294,056	20,655	314,711
2005	303,729	21,334	325,063
2006	312,396	21,943	334,339
2007	317,899	22,329	340,228
2008	319,970	22,474	342,444
2009	321,035	22,550	343,585
2010	322,833	21,156	343,989
2011	326,995	21,457	348,452
2012	332,146	21,796	353,942
2013	337,111	22,121	359,232
2014	343,523	22,542	366,065
2015	352,731	23,146	375,877
2016	361,470	23,720	385,190
2017	371,562	24,382	395,944
2018	380,375	24,960	405,335
2019	389,617	25,567	415,184
2020	399,710	30,263	429,973
2021	411,209	30,849	442,058
2022	**421,768**	**31,574**	**453,342**
2023	429,613	32,161	461,774
2024	437,604	32,758	470,362
2025	445,800	33,372	479,172
2026	452,799	33,896	486,695
2027	459,908	34,429	494,337
2028	467,129	34,969	502,098
2029	474,463	35,519	509,982
2030	481,900	36,075	517,975
2031	487,635	36,504	524,139
2032	493,438	36,938	530,376
2033	499,310	37,378	536,688
2034	505,252	37,824	543,076
2035	511,200	38,269	549,469
2036	516,159	38,640	554,799
2037	521,166	39,014	560,180
2038	526,221	39,393	565,614
2039	531,325	39,775	571,100
2040	536,500	40,163	576,663
2041	540,846	40,488	581,334
2042	545,227	40,815	586,042
2043	549,643	41,146	590,789
2044	554,095	41,480	595,575
2045	558,500	41,810	600,310

1) Source: 2000 through 2022 is the U.S. Census and University of Florida, the Bureau of Economic and Business Research (BEBR). For 2023 through 2045 BEBR, Volume 55, Bulletin 192, February 2022 (Medium-Level Projections). Interim years were interpolated.
2) Source: Seasonal Population based on information provided by the Bradenton Area Convention and Visitors Bureau and information obtained from the U.S. Census. The figures are weighed by 0.42 to account for seasonal residents only residing in the County for a portion of the year (assume 5 months; 5 months divided by 12 months = 0.42)
3) Sum of permanent population (Item 1) and seasonal population (Item 2)

Table A-20

Weighted Seasonal Population Projections, Unincorporated County

Year	Permanent Population[1]	Seasonal Population[2]	Total Weighted Season Pop.[3]
2000	191,074	9,920	200,994
2001	197,435	10,219	207,654
2002	204,074	10,563	214,637
2003	209,874	10,863	220,737
2004	217,738	11,270	229,008
2005	225,251	11,659	236,910
2006	231,641	11,990	243,631
2007	237,611	12,299	249,910
2008	239,630	12,403	252,033
2009	240,809	12,464	253,273
2010	251,773	12,334	264,107
2011	255,407	12,469	267,876
2012	259,653	12,676	272,329
2013	264,214	12,899	277,113
2014	269,824	13,173	282,997
2015	277,464	13,546	291,010
2016	284,723	13,900	298,623
2017	294,064	14,356	308,420
2018	301,226	14,706	315,932
2019	309,594	15,114	324,708
2020	323,057	20,518	343,575
2021	333,769	20,900	354,669
2022	**343,656**	**21,540**	**365,196**
2023	343,690	21,542	365,232
2024	350,083	21,944	372,027
2025	356,640	22,354	378,994
2026	362,239	22,706	384,945
2027	367,926	23,062	390,988
2028	373,703	23,423	397,126
2029	379,570	23,792	403,362
2030	385,520	24,164	409,684
2031	390,108	24,452	414,560
2032	394,750	24,743	419,493
2033	399,448	25,038	424,486
2034	404,202	25,336	429,538
2035	408,960	25,633	434,593
2036	412,927	25,882	438,809
2037	416,933	26,134	443,067
2038	420,977	26,387	447,364
2039	425,060	26,643	451,703
2040	429,200	26,903	456,103
2041	432,677	27,120	459,797
2042	436,182	27,339	463,521
2043	439,714	27,562	467,276
2044	443,276	27,784	471,060
2045	446,800	28,005	474,805

1) Source: 2000 through 2022 is the U.S. Census and University of Florida, the Bureau of Economic and Business Research (BEBR). For 2023 through 2045 BEBR, Volume 53, Bulletin 186, January 2020 (Medium-Level Projections). Interim years were interpolated.
2) Source: Seasonal Population based on information provided by the Bradenton Area Convention and Visitors Bureau and information obtained from the U.S. Census. The figures are weighed by 0.42 to account for seasonal residents only residing in the County for a portion of the year (assume 5 months; 5 months divided by 12 months = 0.42)
3) Sum of permanent population (Item 1) and seasonal population (Item 2)

Appendix B
Building and Land Values:
Supplemental Information

Appendix B: Building and Land Values

This Appendix provides a summary of building and land value estimates for public safety, law enforcement, libraries, and parks and recreation impact fees. Information related to cost estimates for transportation is included in Appendix D.

Building Values

To estimate building and recreational facility value, the following information was reviewed:

- Recent construction by Manatee County, as applicable;
- Cost estimates for future facilities;
- Insurance values of existing facilities;
- Data from other jurisdictions;
- Construction cost indices over the past three years; and
- Discussions with the representatives from Manatee County.

The following paragraphs provide a summary for each service area**.**

Public Safety Buildings

Public safety buildings include EMS stations, Emergency Operations Center, Beach Patrol building and animal shelters. Each type of building has varying costs depending on the design and amenities. As part of the cost estimates the following was considered:

- The County has not built any new public safety buildings over the past five years.
- The insured values of the buildings range from $134 per square foot for the Animal Control Building to $585 per square foot for the Emergency Operations Center (EOC).
- Cost estimates for future stations indexed to 2022 dollars suggest an average cost of $330 per square foot.
- Cost estimates for the new animal shelter suggest an average cost of $490 per square foot.
- Station cost data from other jurisdictions ranged from $250 per square foot to $525 per square foot.

Given this information an average building value of $325 per square foot is used for all buildings. Although constructing a new EOC building would be more costly, given that the County has no plans to build another EOC building, it is valued at the same unit cost as the other buildings.

Law Enforcement Facilities

For law enforcement building cost estimates, the following analysis was used.

- Manatee County did not build any law enforcement facilities over the past five years.
- There was limited insurance information for these buildings.
- The County has plans to build two district offices, an evidence building, and a fleet facility. Cost estimates provided in 2019 for these buildings ranged from $275 per square foot to $350 per square foot for building construction only, and from $360 per square foot to $550 per square foot when costs associated with site work, utilities, design, and parking are added. When indexed for the cost increase since 2019, the building construction costs ranged from $350 per square foot to $445 per square foot, and total costs ranges from $455 per square foot to almost $700 per square foot. These new structures will be built on undeveloped properties, requiring the County to bring utilities, fiber optics, roads, etc. These high costs associated with site preparation increases the cost of these buildings.
- Benesch supplemented the local data with cost estimates utilized in recently completed law enforcement impact fee studies. This analysis reviewed data from studies conducted between 2015 and 2022, which ranged from $200 per square foot to $349 per square foot for building construction cost only.

Given this information, building cost is estimated to cost $400 per square foot for law enforcement facilities.

Libraries

The following analysis was conducted for library cost estimates:

- Manatee County has not built any new libraries over the past five years.
- The insurance values of the existing libraries averaged $271 per square foot. Insurance values tend to be conservative estimates because insurance companies exclude the value of the foundation and other more permanent parts of the structure since they would not have to be rebuilt if the structure was damaged or lost.
- Manatee County has plans to build two new libraries. Cost estimates provided in 2019 for these libraries average $462 per square foot for buildings only and $507 per square foot when site work, parking, design fees, and other similar expenses are added. Since them, the County is estimated a 64% increase in future library costs while the Engineering

News Record index indicates a 27-percent increase nationwide for all construction. As mentioned previously, the County is using undeveloped properties for these buildings, which increases site preparation cost.

- Benesch supplemented the local data with cost estimates utilized in recently completed library impact fee studies. This analysis reviewed data from studies conducted between 2014 and 2021, which ranged from $230 per square foot to $400 per square foot for building construction only.

Given this information, library building cost is estimated at $450 per square foot for impact fee calculation purposes.

Recreational Facilities

Similar to other facilities, recreational facility values are based on the following:

- Construction cost of recently built facilities;
- Recent cost increases;
- Insurance values of existing facilities;
- Facility values obtained from other jurisdictions; and
- Discussions with the County representatives.

The resulting estimates are presented in Table V-4, earlier in this report.

Land Values

For each impact fee program area, land values were determined based on the following analysis, as data available:

- Recent land purchases or appraisals for the related infrastructure (if any);
- Land value of current inventory as reported by the Manatee County Property Appraiser (MCPA);
- Value of vacant land by size and by land use;
- Vacant land sales between 2017 and 2019 by size and by land use;
- Recent land value increases reported by MCPA; and
- Discussions with the County representatives.

Public Safety

The following was considered in estimating the land value for public safety buildings:

- Recent land purchases for Public Safety buildings averaged $160,000 per acre with a range of $87,000 per acre to $519,000 per acre.
- The value of parcels where current public safety buildings are located averages $73,000 per acre, with a range of $47,000 per acre to $251,000 per acre. Property Appraiser land value estimates for governmental entities tend to be on the low end since these properties are not subject to property tax and the values are not always updated to reflect the market conditions.

- Vacant land sales of similarly sized parcels (up to 5 acres) between 2017 and 2019 averaged $132,000 per acre with a median value of $106,000 per acre for all vacant land use types. These prices were higher for commercial properties, with an average of $268,000 per acre and a median value of $196,000 per acre. According to the information provided by MCPA, vacant land values in Manatee County increased by 24 percent since 2019, which would suggest an average value of $164,000 per acre for all vacant land use types.
- Similarly, the value of vacant land reported by the Property Appraiser averaged $80,000 per acre with a median value of $57,000 per acre for all vacant properties. For commercial properties, the average value is estimated at $180,000 per acre with a median value of $150,000 per acre.
- Discussions with the County representatives suggested that future purchases are likely to occur in commercial areas.

Given this information, an average land value of **$160,000 per acre** is determined to be a reasonable estimate for public safety buildings impact fee calculation purposes.

<u>Law Enforcement</u>

The land value estimate for law enforcement facilities is based on the following:

- There are plans to purchase a parcel just east of I-75 where there is high level of activity. The appraised price of this property was $107,000 per acre in 2019 while the asking price is $188,000 per acre. Based on estimates provided by MCPA, land values increased by approximately 24 percent since 2019 for all vacant land and 9 percent for commercial land.
- The value of parcels where current law enforcement buildings are located averages $85,000 per acre, with a range of $37,000 per acre to $167,000 per acre. Property Appraiser land value estimates for governmental entities tend to be on the low end since these properties are not subject to property tax and the values are not always updated to reflect the market conditions.

- Vacant land sales of similarly sized parcels (up to 5 acres) between 2017 and 2019 averaged $132,000 per acre with a median value of $106,000 per acre for all vacant land use types. These prices were higher for commercial properties, with an average of $268,000 per acre and a median value of $196,000 per acre. According to the information provided by MCPA, vacant land values in Manatee County increased by 24 percent for all vacant land since 2019, which would suggest an average value of $164,000 per acre for all vacant land use types.
- Similarly, the value of vacant land reported by the Property Appraiser averaged $80,000 per acre in 2019 with a median value of $57,000 per acre for all vacant properties. For commercial properties, the average value is estimated at $180,000 per acre with a median value of $150,000 per acre in 2019.

Given this information and based on discussions with representatives from Manatee County, an average land value of **$150,000 per acre** is determined to be a reasonable estimate for law enforcement impact fee calculation purposes.

Libraries

The land value estimate for libraries is based on the following:

- Over the past five years, the County allocated a portion of a parks parcel for a future library, and the cost of this parcel was $63,000 per acre.
- Value of land where existing libraries are located averages $254,000 per acre, with a range of $135,000 per acre to $692,000 per acre. When the high end of this range ($692,000 per acre located in the City of Bradenton) is excluded, the average value decreases to $169,000 per acre. As mentioned previously, Property Appraiser land value estimates for governmental entities tend to be on the low end since these properties are not subject to property tax and the values are not always updated to reflect the market conditions.
- Vacant land sales of similarly sized parcels (up to 5 acres) between 2017 and 2019 averaged $132,000 per acre with a median value of $106,000 per acre for all vacant land use types. According to the information provided by MCPA, vacant land values in Manatee County increased by 24 percent for all vacant land since 2019, which would suggest an average value of $164,000 per acre for all vacant land use types.
- Similarly, the value of vacant land reported by the Property Appraiser averaged $80,000 per acre in 2019 with a median value of $57,000 per acre for all vacant properties.

Given this information and based on discussions with representatives from Manatee County, an average land value of **$150,000 per acre** is determined to be a reasonable estimate for library impact fee calculation purposes.

Parks

The park land value estimate is based on the following:

- The County purchased 34 acres of park land (Johnson Preserve) in 2018 for $88,000 per acre.
- The value of parcels where current parks are located averages $42,000 per acre. However, depending on park type, there is a variation in land value. For example, while land value of preserves averages $15,000 per acre, beach access areas average $1.3 million per acre. Property Appraiser land value estimates for governmental entities tend to be on the low end since these properties are not subject to property tax and the values are not always updated to reflect the market conditions.
- Vacant land sales of similarly sized parcels (up to 80 acres) between 2017 and 2019 ranged from $10,000 per acre to $934,000 per acre in unincorporated county for all vacant land use types, with a median price of $69,000 per acre. In the case of coastal parcels, the range was from $13,000 per acre to $860,000 per acre with a median value of $100,000 per acre.
- Similarly, the value of inland vacant land reported by the Property Appraiser ranged from $10,000 per acre to $948,000 per acre with a median value of $37,000 per acre. Coastal property values ranged from $10,000 per acre to $989,000 per acre, with a median value of $56,000 per acre.
- Information provided by MCPA indicates an increase of 24 percent since 2019 for all vacant land. This increase is higher for residential vacant land at 30 percent.

Given this information, an average land value of **$70,000 per acre** is determined to be a reasonable estimate for parks and recreational facilities impact fee calculation purposes.

Appendix C
Multi-Modal Transportation Impact Fee:
Demand Component

Appendix C: MMTIF - Demand Component

This appendix presents the detailed calculations for the demand component of the multi-modal transportation impact fee update.

Interstate & Toll Facility Adjustment Factor

Table C-1 presents the interstate and toll facility adjustment factor used in the calculation of the multi-modal transportation impact fee. This variable is based on data from the District 1 Regional Planning Model (D1RPM) v2 model, specifically the 2045 vehicle-miles of travel. It should be noted that this adjustment factor excludes all external-to-external trips, which represent traffic that goes through the study area, but does not necessarily stop in the study area. This traffic is excluded from the analysis since it does not come from development within the county. The I/T adjustment factor is used to reduce the VMT that the multi-modal transportation impact fee charges for each land use.

Table C-1

Interstate/Toll Facility Adjustment Factor

Roadway	VMT (2045)	% VMT
Interstate/Toll Facilities	1,898,683	19.7%
Other Roads	7,762,344	80.4%
Total (All Roads)	**9,661,027**	**100.0%**
Total (Interstate/Toll Roads)	**1,898,683**	**19.7%**

Source: D1RPM v2, 2045 Cost Feasible Plan

Residential Trip Generation Rate Tiering

As part of this study, the demand component for residential homes was tiered by size to assist the County in its efforts to support affordable/workforce housing. Additionally, the County's current combined "residential" land use category was separated into the following residential categories:

- Single Family Detached
- Single Family Attached/Townhome
- Multi-Family Low-Rise (1-3 floors)
- Multi-Family Mid/High-Rise (4 or more floors)

The tiering analysis uses the American Community Survey (ACS) Public Use Microdata Sample (PUMS) data files as the basis. PUMS files allow for the use of census sample data collected in

Manatee County to create custom tables that are otherwise unavailable. For this analysis, the 2020 PUMS files were utilized, which are the latest data available. The PUMS 5-year estimates incorporate 60 months of data, representing a 1-percent sample of the population for each year. The 5-year sample represents the most recent figures of the PUMS datasets.

To isolate the PUMS data specific to Manatee County, all Public Use Microdata Areas (PUMAs) within the County were identified. PUMAs are non-overlapping areas that partition each state into areas containing approximately 100,000 residents. These are the most detailed geographic area available within the PUMS data set.

Using the PUMAs identified, the number of persons, number of buildings, and number of vehicles were extracted for residential buildings. Additionally, this data is grouped based on the number of bedrooms present in each building. The result of this analysis is a local sample of persons, residential buildings, and vehicles by bedroom count.

Table C-2

PUMS Result Summary: Residential Structures

Bedrooms	Persons	Vehicles	Buildings (Units)	Persons per Housing Unit	Vehicles per Housing Unit
0 to 1	1,061	769	986	1.08	0.78
2	4,794	3,647	3,455	1.39	1.06
3	7,182	5,756	3,357	2.14	1.71
4+	3,208	2,464	1,182	2.71	2.08
Total	**16,245**	**12,636**	**8,980**	**1.81**	**1.41**

Source: PUMS 2020 5-yr dataset; PUMAs 8101-8103

As shown in Table C-2, the persons per housing unit and vehicles per housing unit were calculated for each bedroom tier. With PUMS only representing a sample of the County, a normalization factor was applied to adjust for the entire county. As shown in Table C-3, the Manatee County persons-per-housing-unit (PPHU) was calculated using the 2021 5-year ACS data for Manatee County. A similar analysis is completed for vehicle per housing unit (VPHU) data, resulting in PPHU and VPHU data by bedroom, for Manatee County.

Table C-3

PPHU and VPHU for Manatee County

Item	Manatee County
Persons in Occupied Housing Units	390,734
Units in Structure	202,950
Persons per Housing Unit	**1.93**
Vehicles Available (Owner/Renter Occupied)	263,491
Units in Structure	202,950
Vehicles per Housing Unit	**1.30**

Source: 2021 5-yr ACS Estimates for Tables B25033, B25044, and B25024

Table C-4 illustrates the ratio-based adjustments made to the PUMS data based on the PPHU and VPHU calculated from the ACS data for Manatee County.

Table C-4

PPHU and VPHU Tiers Adjusted for PUMS vs ACS Data

Bedrooms	Persons per Housing Unit[(1)]	Persons per Housing Unit (Adjusted)[(2)]	Vehicles per Housing Unit[(1)]	Vehicles per Housing Unit (Adjusted)[(2)]
0 to 1	1.08	1.15	0.78	0.72
2	1.39	1.48	1.06	0.98
3	2.14	2.28	1.71	1.57
4+	2.71	2.88	2.08	1.92
Total	**1.81**	**1.93**	**1.41**	**1.30**

1) Source: Table C-2
2) Each bedroom tier was based on the ratio of the total PPHU (or total VPHU, Item 2) vs. the total PPHU (or total VPHU) for all of Manatee County (Item 1)

The PPHU and VPHU per bedroom data was then converted to weighted average trip ends per person and per vehicles, respectively, using the ITE 11th Edition National averages. The resulting trip ends per persons and vehicles were then averaged, resulting in average trip ends, per bedroom tier, as shown in Table C-5.

Table C-5

Calculated Trip Ends per Bedroom

Bedrooms	Persons per Housing Unit (Uninc.)[1]	AWVTE per HU Based on Persons[2]	Vehicles per Housing Unit[1]	AWVTE per HU Based on Vehicles[3]	Avg. Weighted Vehicle Trip Ends per Housing Unit[4]
0 to 1	1.15	2.72	0.72	4.09	**3.41**
2	1.48	3.50	0.98	5.57	**4.54**
3	2.28	5.39	1.57	8.92	**7.16**
4+	2.88	6.81	1.92	10.91	**8.86**
ITE 11th Avg Trip Ends[5]		**2.37**	**-**	**5.68**	**-**

AWVTE = Average Weighted Vehicle Trip Ends

1) Source: Table C-4
2) PPHU (Item 1; PPHU) multiplied by the ITE 11th average trip ends per person (Item 5; 2.37)
3) VPHU (Item 1; VPHU) multiplied by the ITE 11th average trip ends per vehicle (Item 5; 5.68)
4) Average of AWVTE based on persons and AWVTE based on vehicles
5) Source: ITE 11th Edition Handbook, average of single family and multi-family land uses

Using the Manatee County Property Appraiser's Database, the average square footage per unit by bedroom tier was determined for residential structures, as shown in Table C-6. With these averages determined, the average trip ends were graphed per square footage to determine a line of best fit, as shown in Figure C-1.

Table C-6

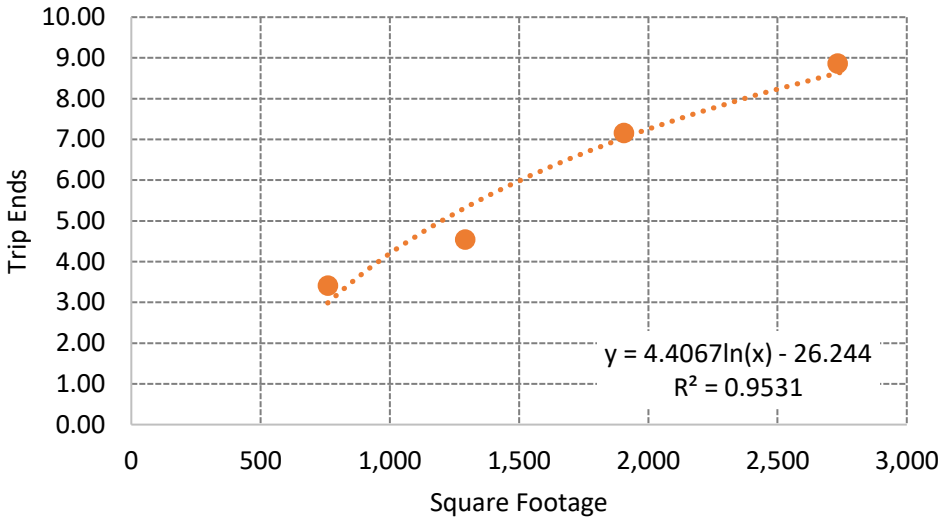
Trip Ends vs. Bedrooms vs. Square Footage

Bedrooms	Average Unit Size (Sq Ft)[1]	Avg. Weighted Vehicle Trip Ends per Housing Unit[2]
0 to 1	**760**	3.41
2	**1,291**	4.54
3	**1,905**	7.16
4+	**2,732**	8.86

1) Source: Manatee County Property Appraiser's Parcel Database
2) Source: Table C-5

Figure C-1

Average Trip Ends per Square Footage



Using the resulting best-fit equation (as shown in Figure C-1), the trip generation rates for various square footage tiers were calculated using the end-point square footage for each tier. Next, the tiers were normalized to the trip generation rate for each different residential land use. As a final adjustment, the resulting trip generation rates were adjusted to account for the differences between the national ITE 11th Edition average trip generation rate and the Florida Studies Trip Characteristics Database average trip generation rates. Tables C-7 through C-10 provide additional detail.

Table C-7

Trip Generation Rates by Tier – Single Family Detached

Tier	Sq Ft Input[(1)]	TGR[(2)]	TGR Adj.[(3)]
750 sq ft or less	750	2.93	**3.16**
751 sq ft to 1,000 sq ft	1,000	4.20	**4.52**
1,001 sq ft to 1,300 sq ft	1,300	5.35	**5.76**
1,301 sq ft to 1,700 sq ft	1,700	6.53	**7.03**
2,000 sq ft	2,000	7.25	**7.81**
1,701 sq ft or more	2,200	7.67	**8.26**
Total	**2,338**	7.94	**-**

1) End-point of each square footage tier that is entered into the best-fit equation from Figure C-1. The "total" value is the average square footage for single family homes from the Manatee County Property Appraiser's Database
2) Calculated using the sq ft inputs (Item 1) and the line of best fit from Figure C-1
3) TGR (Item 2) adjusted from National data to Florida data. The ratio between the calculated TGR for the 2,000 sq ft value (7.25) and the FL studies average TGR (7.81) was applied to all other sq ft tiers. Note that the Florida Studies value of 7.81 is approximately 83% of the ITE 11th TGR of 9.43

Table C-8

Trip Generation Rates by Tier – Single Family Attached/Townhome

Tier	Sq Ft Input[(1)]	TGR[(2)]	Ratio to Total[(3)]	Adjusted TGR[(4)]
750 sq ft or less	750	2.93	44.9%	**2.67**
751 sq ft to 1,000 sq ft	1,000	4.20	64.3%	**3.83**
1,001 sq ft to 1,300 sq ft	1,300	5.35	81.9%	**4.88**
1,301 sq ft to 1,700 sq ft	1,700	6.53	100.0%	**5.96**
1,701 sq ft or more	2,200	7.67	117.5%	**7.00**
Total	**1,700**	6.53	**-**	**5.96**

1) End-point of each square footage tier that is entered into the best-fit equation from Figure C-1. The "total" value is the average square footage for single family attached/townhomes from the Manatee County Property Appraiser's Database
2) Calculated using the sq ft inputs (Item 1) and the line of best fit from Figure C-1
3) Ratio of the TGR for each tier (Item 2) to the total TGR (6.53)
4) The ratio to total (Item 3) multiplied by the total adjusted TGR of 5.96 for each tier. The total TGR of 5.96 was calculated by multiplying the ITE 11th Edition TGR (7.20) by the ratio of Florida-to-National data for Single Family Detached land use (7.81/9.43 = 83%). This adjustment reflects that Florida TGR data for residential uses is lower than national ITE data.

Table C-9

Trip Generation Rates by Tier – Multi-Family

Tier	Sq Ft Input[(1)]	TGR[(2)]	Ratio to Total[(3)]	Adjusted TGR[(4)]
750 sq ft or less	750	2.93	46.5%	**2.60**
751 sq ft to 1,000 sq ft	1,000	4.20	66.7%	**3.72**
1,001 sq ft to 1,300 sq ft	1,300	5.35	84.9%	**4.74**
1,301 sq ft or more	1,700	6.53	103.7%	**5.78**
Total	**1,610**	6.30	-	**5.58**

1) End-point of each square footage tier that is entered into the best-fit equation from Figure C-1. The "total" value is the average square footage for multi-family homes from the Manatee County Property Appraiser's Database
2) Calculated using the sq ft inputs (Item 1) and the line of best fit from Figure C-1
3) Ratio of the TGR for each tier (Item 2) to the total TGR (6.30)
4) The ratio to total (Item 3) multiplied by the total adjusted TGR of 5.58 for each tier. The total TGR of 5.58 was calculated by multiplying the ITE 11th Edition TGR (6.74) by the ratio of Florida-to-National data for Single Family Detached land use (7.81/9.43 = 83%). This adjustment reflects that Florida TGR data for residential uses is lower than national ITE data.

Florida Studies Trip Characteristics Database

The Florida Studies Trip Characteristics Database includes approximately 345 studies on 40 different residential and non-residential land uses collected over the last 30 years. Data from these studies include trip generation, trip length, and percent new trips for each land use. This information has been used in the development of impact/multi-modal/mobility fees and the creation of land use plan category trip characteristics for communities throughout Florida and the U.S.

Benesch estimates trip generation rates for all land uses in an impact fee schedule using data from studies in the Florida Studies Database and the Institute of Transportation Engineers' (ITE) *Trip Generation* reference report (11th edition). In instances, when both ITE *Trip Generation* reference report (11th edition) and Florida Studies trip generation rate (TGR) data are available for a particular land use, the data is typically blended together to increase the sample size and provide a more valid estimate of the average number of trips generated per unit of development. If no Florida Studies data is available, only TGR data from the ITE reference report is used in the fee calculation.

The trip generation rate for each respective land use is calculated using machine counts that record daily traffic into and out of the site studied. The traffic count hoses are set at entrances

to residential subdivisions for the residential land uses and at all access points for non-residential land uses.

The trip length information is obtained through origin-destination surveys that ask respondents where they came from prior to arriving at the site and where they intended to go after leaving the site. The results of these surveys were used to estimate average trip length by land use.
The percent new trip variable is based on assigning each trip collected through the origin-destination survey process a trip type (primary, secondary, diverted, and captured). The percent new trip variable is then calculated as 1 minus the percentage of trips that are captured. Benesch has published an article entitled, *Measuring Travel Characteristics for Transportation Impact Fees*, ITE Journal, April 1991 on the data collecting methodology for trip characteristics studies.

Table C-10

Land Use 151: Mini-Warehouse

Location	Size (1,000 sf)	Date	Total # Interviews	# Trip Length Interviews	Trip Gen Rate	Time Period	Trip Length	Percent New Trips	VMT	Source
Orange Co, FL	89.6	2006	-	-	1.23	-	-	-	-	Orange County
Orange Co, FL	84.7	2006	-	-	1.39	-	-	-	-	Orange County
Orange Co, FL	93.0	2006	-	-	1.51	-	-	-	-	Orange County
Orange Co, FL	107.0	2007	-	-	1.45	-	-	-	-	Orange County
Orange Co, FL	77.0	2009	-	-	2.18	-	-	-	-	Tindale Oliver
Orange Co, FL	93.7	2012	-	-	1.15	-	-	-	-	Tindale Oliver
Total Size	545.0	6					**Average Trip Length:**	**n/a**		
ITE	880.0	16					**Weighted Average Trip Length:**	**n/a**		
Blended total	1,425.0									

Weighted Percent New Trip Average: -

Weighted Average Trip Generation Rate: 1.47

ITE Average Trip Generation Rate: 1.45

Blend of FL Studies and ITE Average Trip Generation Rate: 1.46

Table C-11

Land Use 210: Single Family - Detached

Location	Size / Units	Date	Total # Interviews	# Trip Length Interviews	Trip Gen Rate	Time Period	Trip Length	Percent New Trips	VMT	Source
Sarasota Co, FL	76	Jun-93	70	70	10.03	-	6.00	-	60.18	Sarasota County
Sarasota Co, FL	79	Jun-93	86	86	9.77	-	4.40	-	42.99	Sarasota County
Sarasota Co, FL	135	Jun-93	75	75	8.05	-	5.90	-	47.50	Sarasota County
Sarasota Co, FL	152	Jun-93	63	63	8.55	-	7.30	-	62.42	Sarasota County
Sarasota Co, FL	193	Jun-93	123	123	6.85	-	4.60	-	31.51	Sarasota County
Sarasota Co, FL	97	Jun-93	33	33	13.20	-	3.00	-	39.60	Sarasota County
Sarasota Co, FL	282	Jun-93	146	146	6.61	-	8.40	-	55.52	Sarasota County
Sarasota Co, FL	393	Jun-93	207	207	7.76	-	5.40	-	41.90	Sarasota County
Hernando Co, FL	76	May-96	148	148	10.01	9a-6p	4.85	-	48.55	Tindale Oliver
Hernando Co, FL	128	May-96	205	205	8.17	9a-6p	6.03	-	49.27	Tindale Oliver
Hernando Co, FL	232	May-96	182	182	7.24	9a-6p	5.04	-	36.49	Tindale Oliver
Hernando Co, FL	301	May-96	264	264	8.93	9a-6p	3.28	-	29.29	Tindale Oliver
Charlotte Co, FL	135	Oct-97	230	-	5.30	9a-5p	7.90	-	41.87	Tindale Oliver
Charlotte Co, FL	142	Oct-97	245	-	5.20	9a-5p	4.10	-	21.32	Tindale Oliver
Charlotte Co, FL	150	Oct-97	160	-	5.00	9a-5p	10.80	-	54.00	Tindale Oliver
Charlotte Co, FL	215	Oct-97	158	-	7.60	9a-5p	4.60	-	34.96	Tindale Oliver
Charlotte Co, FL	257	Oct-97	225	-	7.60	9a-5p	7.40	-	56.24	Tindale Oliver
Charlotte Co, FL	345	Oct-97	161	-	7.00	9a-5p	6.60	-	46.20	Tindale Oliver
Charlotte Co, FL	368	Oct-97	152	-	6.60	9a-5p	5.70	-	37.62	Tindale Oliver
Charlotte Co, FL	383	Oct-97	516	-	8.40	9a-5p	5.00	-	42.00	Tindale Oliver
Charlotte Co, FL	441	Oct-97	195	-	8.20	9a-5p	4.70	-	38.54	Tindale Oliver
Charlotte Co, FL	1,169	Oct-97	348	-	6.10	9a-5p	8.00	-	48.80	Tindale Oliver
Collier Co, FL	90	Dec-99	91	-	12.80	8a-6p	11.40	-	145.92	Tindale Oliver
Collier Co, FL	400	Dec-99	389	-	7.80	8a-6p	6.40	-	49.92	Tindale Oliver
Lake Co, FL	49	Apr-02	170	-	6.70	7a-6p	10.20	-	68.34	Tindale Oliver
Lake Co, FL	52	Apr-02	212	-	10.00	7a-6p	7.60	-	76.00	Tindale Oliver
Lake Co, FL	126	Apr-02	217	-	8.50	7a-6p	8.30	-	70.55	Tindale Oliver
Pasco Co, FL	55	Apr-02	133	-	6.80	8a-6p	8.12	-	55.22	Tindale Oliver
Pasco Co, FL	60	Apr-02	106	-	7.73	8a-6p	8.75	-	67.64	Tindale Oliver
Pasco Co, FL	70	Apr-02	188	-	7.80	8a-6p	6.03	-	47.03	Tindale Oliver
Pasco Co, FL	74	Apr-02	188	-	8.18	8a-6p	5.95	-	48.67	Tindale Oliver
Pasco Co, FL	189	Apr-02	261	-	7.46	8a-6p	8.99	-	67.07	Tindale Oliver
Marion Co, FL	102	Apr-02	167	-	8.02	7a-6p	5.10	-	40.90	Kimley-Horn & Associates
Marion Co, FL	105	Apr-02	169	-	7.23	7a-6p	7.22	-	52.20	Kimley-Horn & Associates
Marion Co, FL	124	Apr-02	170	-	6.04	7a-6p	7.29	-	44.03	Kimley-Horn & Associates
Marion Co, FL	132	Apr-02	171	-	7.87	7a-6p	7.00	-	55.09	Kimley-Horn & Associates
Marion Co, FL	133	Apr-02	209	-	8.04	7a-6p	4.92	-	39.56	Kimley-Horn & Associates
Citrus Co, FL	111	Oct-03	273	-	8.66	7a-6p	7.70	-	66.68	Tindale Oliver
Citrus Co, FL	231	Oct-03	155	-	5.71	7a-6p	4.82	-	27.52	Tindale Oliver
Citrus Co, FL	306	Oct-03	146	-	8.40	7a-6p	3.94	-	33.10	Tindale Oliver
Citrus Co, FL	364	Oct-03	345	-	7.20	7a-6p	9.14	-	65.81	Tindale Oliver
Citrus Co, FL	374	Oct-03	248	-	12.30	7a-6p	6.88	-	84.62	Tindale Oliver
Lake Co, FL	42	Dec-06	122	-	11.26	-	5.56	-	62.61	Tindale Oliver
Lake Co, FL	51	Dec-06	346	-	18.22	-	9.46	-	172.36	Tindale Oliver
Lake Co, FL	59	Dec-06	144	-	12.07	-	10.79	-	130.24	Tindale Oliver
Lake Co, FL	90	Dec-06	194	-	9.12	-	5.78	-	52.71	Tindale Oliver
Lake Co, FL	239	Dec-06	385	-	7.58	-	8.93	-	67.69	Tindale Oliver
Hernando Co, FL	232	Apr-07	516	-	8.02	7a-6p	8.16	-	65.44	Tindale Oliver
Hernando Co, FL	95	Apr-07	256	-	8.08	7a-6p	5.88	-	47.51	Tindale Oliver
Hernando Co, FL	90	Apr-07	338	-	7.13	7a-6p	5.86	-	41.78	Tindale Oliver
Hernando Co, FL	58	Apr-07	153	-	6.16	7a-6p	8.39	-	51.68	Tindale Oliver
Collier Co, FL	74	Mar-08	503	-	12.81	7a-6p	3.05	-	39.07	Tindale Oliver
Collier Co, FL	97	Mar-08	512	-	8.78	7a-6p	11.29	-	99.13	Tindale Oliver
Collier Co, FL	315	Mar-08	1,347	-	6.97	7a-6p	6.55	-	45.65	Tindale Oliver
Collier Co, FL	42	Mar-08	314	-	9.55	7a-6p	10.98	-	104.86	Tindale Oliver
Total Size	10,380	55	13,130				**Average Trip Length:**	**6.83**		
							Weighted Average Trip Length:	**6.62**		

Weighted Average Trip Generation Rate: **7.81**

Table C-12

Land Use 220/221/222: Multi-Family (Low-, Mid-, High-Rise)

Location	Size / Units	Date	Total # Interviews	# Trip Length Interviews	Trip Gen Rate	Time Period	Trip Length	Percent New Trips	VMT	Source
Sarasota Co, FL	212	Jun-93	42	42	5.78	-	5.20	-	30.06	Sarasota County
Sarasota Co, FL	243	Jun-93	36	36	5.84	-	-	-	-	Sarasota County
Marion Co, FL	214	Apr-02	175	175	6.84	-	4.61	-	31.53	Kimley-Horn & Associates
Marion Co, FL	240	Apr-02	174	174	6.96	-	3.43	-	23.87	Kimley-Horn & Associates
Marion Co, FL	288	Apr-02	175	175	5.66	-	5.55	-	31.41	Kimley-Horn & Associates
Marion Co, FL	480	Apr-02	175	175	5.73	-	6.88	-	39.42	Kimley-Horn & Associates
Marion Co, FL	500	Apr-02	170	170	5.46	-	5.94	-	32.43	Kimley-Horn & Associates
Lake Co, FL	250	Dec-06	135	135	6.71	-	5.33	-	35.76	Tindale Oliver
Lake Co, FL	157	Dec-06	265	265	13.97	-	2.62	-	36.60	Tindale Oliver
Lake Co, FL	169	Dec-06	212	-	8.09	-	6.00	-	48.54	Tindale Oliver
Lake Co, FL	226	Dec-06	301	-	6.74	-	2.17	-	14.63	Tindale Oliver
Hernando Co, FL	312	Apr-07	456	-	4.09	-	5.95	-	24.34	Tindale Oliver
Hernando Co, FL	176	Apr-07	332	-	5.38	-	5.24	-	28.19	Tindale Oliver
Total Size	3,467	13	2,648				**Average Trip Length:**	**4.91**		
							Weighted Average Trip Length:	**5.21**		

Table C-13

Land Use 240: Mobile Home Park

Location	Size / Units	Date	Total # Interviews	# Trip Length Interviews	Trip Gen Rate	Time Period	Trip Length	Percent New Trips	VMT	Source
Marion Co, FL	67	Jul-91	22	22	5.40	48hrs.	2.29	-	12.37	Tindale Oliver
Marion Co, FL	82	Jul-91	58	58	10.80	24hr.	3.72	-	40.18	Tindale Oliver
Marion Co, FL	137	Jul-91	22	22	3.10	24hr.	4.88	-	15.13	Tindale Oliver
Sarasota Co, FL	996	Jun-93	181	181	4.19	-	4.40	-	18.44	Sarasota County
Sarasota Co, FL	235	Jun-93	100	100	3.51	-	5.10	-	17.90	Sarasota County
Marion Co, FL	188	Apr-02	147	-	3.51	24hr.	5.48	-	19.23	Kimley-Horn & Associates
Marion Co, FL	227	Apr-02	173	-	2.76	24hr.	8.80	-	24.29	Kimley-Horn & Associates
Marion Co, FL	297	Apr-02	175	-	4.78	24hr.	4.76	-	22.75	Kimley-Horn & Associates
Hernando Co, FL	1,892	May-96	425	425	4.13	9a-6p	4.13	-	17.06	Tindale Oliver
Total Size	4,121	9	1,303				**Average Trip Length:**	**4.84**		
							Weighted Average Trip Length:	**4.60**		

Weighted Average Trip Generation Rate: **4.17**

Table C-14

Land Use 253: Assisted Living (Congregate Care Facility)

Location	Size / Units	Date	Total # Interviews	# Trip Length Interviews	Trip Gen Rate	Time Period	Trip Length	Percent New Trips	VMT	Source
Pinellas Park, FL	72	Aug-89	25	19	3.50	9am-5pm	2.20	79.0	7.70	Tindale Oliver
Palm Harbor, FL	200	Oct-89	58	40	-	9am-5pm	3.40	69.0	-	Tindale Oliver
Total Size	272	2	83				**Average Trip Length:**	**2.80**		
ITE	720	4					**Weighted Average Trip Length:**	**3.08**		
Blended total	992						Weighted Percent New Trip Average:	71.6		
	792							Weighted Average Trip Generation Rate:		3.50
								ITE Average Trip Generation Rate:		2.21
								Blend of FL Studies and ITE Average Trip Generation Rate:		**2.33**

Table C-15

Land Use 310: Hotel

Location	Size (Rooms)	Date	Total # Interviews	# Trip Length Interviews	Trip Gen Rate	Time Period	Trip Length	Percent New Trips	VMT	Source
Pinellas Co, FL	174	Aug-89	134	106	12.50	7-11a/3-7p	6.30	79.0	62.21	Tindale Oliver
Pinellas Co, FL	114	Oct-89	30	14	7.30	12-7p	6.20	47.0	21.27	Tindale Oliver
Orange Co, FL	123	1997	-	-	6.32	-	-	-	-	Orange County
Orange Co, FL	120	1997	-	-	5.27	-	-	-	-	Orange County
Orange Co, FL	146	1997	-	-	7.61	-	-	-	-	Orange County
Orange Co, FL	252	1997	-	-	5.63	-	-	-	-	Orange County
Orange Co, FL	172	1997	-	-	6.36	-	-	-	-	Orange County
Orange Co, FL	170	1997	-	-	6.06	-	-	-	-	Orange County
Orange Co, FL	128	1997	-	-	6.10	-	-	-	-	Orange County
Orange Co, FL	200	1997	-	-	4.56	-	-	-	-	Orange County
Orange Co, FL	112	1998	-	-	2.78	-	-	-	-	Orange County
Orange Co, FL	130	1998	-	-	9.12	-	-	-	-	Orange County
Orange Co, FL	106	1998	-	-	7.34	-	-	-	-	Orange County
Orange Co, FL	98	1998	-	-	7.32	-	-	-	-	Orange County
Orange Co, FL	120	1998	-	-	5.57	-	-	-	-	Orange County
Orange Co, FL	70	1999	-	-	1.85	-	-	-	-	Orange County
Orange Co, FL	123	1999	-	-	4.81	-	-	-	-	Orange County
Orange Co, FL	123	1999	-	-	3.70	-	-	-	-	Orange County
Orange Co, FL	211	2000	-	-	2.23	-	-	-	-	Orange County
Orange Co, FL	144	2000	-	-	7.32	-	-	-	-	Orange County
Orange Co, FL	105	2001	-	-	5.25	-	-	-	-	Orange County
Orange Co, FL	891	2005	-	-	5.69	-	-	-	-	Orange County
Orange Co, FL	1,584	2005	-	-	5.88	-	-	-	-	Orange County
Orange Co, FL	210	2006	-	-	4.88	-	-	-	-	Orange County
Orange Co, FL	1,499	2006	-	-	4.69	-	-	-	-	Orange County
Orange Co, FL	144	-	-	-	4.74	-	-	-	-	Orange County
Orange Co, FL	148	-	-	-	7.61	-	-	-	-	Orange County
Orange Co, FL	160	-	-	-	6.19	-	-	-	-	Orange County
Orange Co, FL	130	-	-	-	4.29	-	-	-	-	Orange County
Orange Co, FL	130	-	-	-	3.40	-	-	-	-	Orange County
Orange Co, FL	144	-	-	-	7.66	-	-	-	-	Orange County
Orange Co, FL	100	-	-	-	7.37	-	-	-	-	Orange County
Orange Co, FL	190	-	-	-	4.71	-	-	-	-	Orange County
Orange Co, FL	1,501	2011	-	-	3.50	-	-	-	-	Tindale Oliver
Orange Co, FL	174	2011	-	-	7.03	-	-	-	-	Tindale Oliver
Orange Co, FL	238	2014	-	-	4.05	-	-	-	-	Tindale Oliver
Total Size	10,184	36	164				**Average Trip Length:**	**6.25**		
ITE	1,036	7					**Weighted Average Trip Length:**	**6.26**		
Blended total	11,220						Weighted Percent New Trip Average:	66.3		

Table C-16

Land Use 320: Motel/Lodging

Location	Size (Rooms)	Date	Total # Interviews	# Trip Length Interviews	Trip Gen Rate	Time Period	Trip Length	Percent New Trips	VMT	Source
Pinellas Co, FL	48	Oct-89	46	24	-	10a-2p	2.80	65.0	-	Tindale Oliver
Pinellas Co, FL	54	Oct-89	32	22	-	12p-7p	3.80	69.0	-	Tindale Oliver
Pinellas Co, FL	120	Oct-89	26	22	-	2p-7p	5.20	84.6	-	Tindale Oliver
Total Size	222	3	104				**Average Trip Length:**	**3.93**		
ITE	654	6					**Weighted Average Trip Length:**	**4.34**		
							Weighted Percent New Trip Average:	76.6		

Table C-17

Land Use 565: Day Care Center

Location	Size (1,000 sf)	Date	Total # Interviews	# Trip Length Interviews	Trip Gen Rate	Time Period	Trip Length	Percent New Trips	VMT	Source
Pinellas Co, FL	5.6	Aug-89	94	66	66.99	7a-6p	1.90	70.0	89.10	Tindale Oliver
Pinellas Co, FL	10.0	Sep-89	179	134	66.99	7a-6p	2.10	75.0	105.51	Tindale Oliver
Tampa, FL	-	Mar-86	28	25	-	-	2.60	89.0	-	Kimley-Horn & Associates
Total Size	15.6	3	301				**Average Trip Length:**	**2.20**		
ITE	135.0	27					**Weighted Average Trip Length:**	**2.03**		
Blended total	150.6						Weighted Percent New Trip Average:	73.2		

Weighted Average Trip Generation Rate: 66.99
ITE Average Trip Generation Rate: 47.62
Blend of FL Studies and ITE Average Trip Generation Rate: 49.63

Table C-18

Land Use 620: Nursing Home

Location	Size (Beds)	Date	Total # Interviews	# Trip Length Interviews	Trip Gen Rate	Time Period	Trip Length	Percent New Trips	VMT	Source
Lakeland, FL	120	Mar-90	74	66	2.86	11a-4p	2.59	89.0	6.59	Tindale Oliver
		1	74				**Average Trip Length:**	**2.59**		
							Weighted Average Trip Length:	**2.59**		
							Weighted Percent New Trip Average:	89.0		

Table C-19

Land Use 710: General Office Building

Location	Size (1,000 sf)	Date	Total # Interviews	# Trip Length Interviews	Trip Gen Rate	Time Period	Trip Length	Percent New Trips	VMT	Source
Sarasota Co, FL	14.3	Jun-93	14	14	46.85	-	11.30	-	529.41	Sarasota County
Gwinnett Co, GA	98.0	Dec-92	-	-	4.30	-	5.40	-	-	Street Smarts
Gwinnett Co, GA	180.0	Dec-92	-	-	3.60	-	5.90	-	-	Street Smarts
Pinellas Co, FL	187.0	Oct-89	431	388	18.49	7a-5p	6.30	90.0	104.84	Tindale Oliver
St. Petersburg, FL	262.8	Sep-89	291	274	-	7a-5p	3.40	94.0	-	Tindale Oliver
		5	736				**Average Trip Length:**	**6.46**		
							Weighted Average Trip Length:	**5.15**		
							Weighted Percent New Trip Average:	92.3		

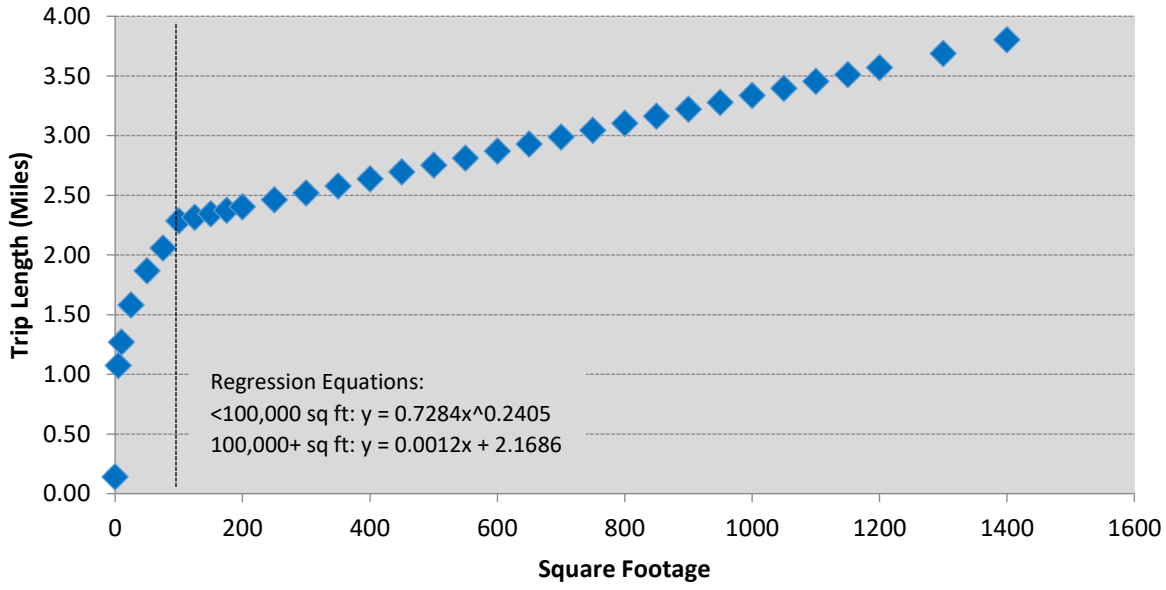
Table C-20

Land Use 820/821/822: Shopping Center/Plaza

Location	Size (1,000 sf)	Date	Total # Interviews	# Trip Length Interviews	Trip Gen Rate	Time Period	Trip Length	Percent New Trips	VMT	Source
Tampa, FL	-	Mar-86	527	348	-	-	-	66.0	-	Kimley-Horn & Associates
Tampa, FL	-	Mar-86	170	-	-	-	1.70	-	-	Kimley-Horn & Associates
Tampa, FL	-	Mar-86	354	269	-	-	-	76.0	-	Kimley-Horn & Associates
Tampa, FL	-	Mar-86	144	-	-	-	2.50	-	-	Kimley-Horn & Associates
St. Petersburg, FL	1,192.0	Aug-89	384	298	-	11a-7p	3.60	78.0	-	Tindale Oliver
St. Petersburg, FL	132.3	Sep-89	400	368	77.00	10a-7p	1.80	92.0	127.51	Tindale Oliver
Largo, FL	425.0	Aug-89	160	120	26.73	10a-6p	2.30	75.0	46.11	Tindale Oliver
Dunedin, FL	80.5	Sep-89	276	210	81.48	9a-5p	1.40	76.0	86.69	Tindale Oliver
Pinellas Park, FL	696.0	Sep-89	485	388	-	9a-6p	3.20	80.0	-	Tindale Oliver
Seminole, FL	425.0	Oct-89	674	586	-	-	-	87.0	-	Tindale Oliver
Hillsborough Co, FL	134.0	Jul-91	-	-	-	-	1.30	74.0	-	Tindale Oliver
Hillsborough Co, FL	151.0	Jul-91	-	-	-	-	1.30	73.0	-	Tindale Oliver
Collier Co, FL	-	Aug-91	68	64	-	-	3.33	94.1	-	Tindale Oliver
Collier Co, FL	-	Aug-91	208	154	-	-	2.64	74.0	-	Tindale Oliver
Sarasota/Bradenton, FL	109.0	Sep-92	300	185	-	12a-6p	-	61.6	-	King Engineering Associates, Inc.
Ocala, FL	133.4	Sep-92	300	192	-	12a-6p	-	64.0	-	King Engineering Associates, Inc.
Sarasota Co, FL	110.0	Jun-93	58	58	122.14	-	3.20	-	-	Sarasota County
Sarasota Co, FL	146.1	Jun-93	65	65	51.53	-	2.80	-	-	Sarasota County
Sarasota Co, FL	157.5	Jun-93	57	57	79.79	-	3.40	-	-	Sarasota County
Sarasota Co, FL	191.0	Jun-93	62	62	66.79	-	5.90	-	-	Sarasota County
Hernando Co, FL	107.8	May-96	608	331	77.60	9a-6p	4.68	54.5	197.85	Tindale Oliver
Charlotte Co, FL	88.0	Oct-97	-	-	73.50	9a-5p	1.80	57.1	75.56	Tindale Oliver
Charlotte Co, FL	191.9	Oct-97	-	-	72.00	9a-5p	2.40	50.9	87.97	Tindale Oliver
Charlotte Co, FL	51.3	Oct-97	-	-	43.00	9a-5p	2.70	51.8	60.08	Tindale Oliver
Lake Co, FL	67.8	Apr-01	246	177	102.60	-	3.40	71.2	248.37	Tindale Oliver
Lake Co, FL	72.3	Apr-01	444	376	65.30	-	4.50	59.0	173.37	Tindale Oliver
Pasco Co, FL	65.6	Apr-02	222	-	145.64	9a-5p	1.46	46.9	99.62	Tindale Oliver
Pasco Co, FL	75.8	Apr-02	134	-	38.23	9a-5p	2.36	58.2	52.52	Tindale Oliver
Citrus Co, FL	185.0	Oct-03	-	784	55.84	8a-6p	2.40	88.1	118.05	Tindale Oliver
Citrus Co, FL	91.3	Nov-03	-	390	54.50	8a-6p	1.60	88.0	76.77	Tindale Oliver
		30	6,346				**Average Trip Length:**	**2.71**		

Figure C-2

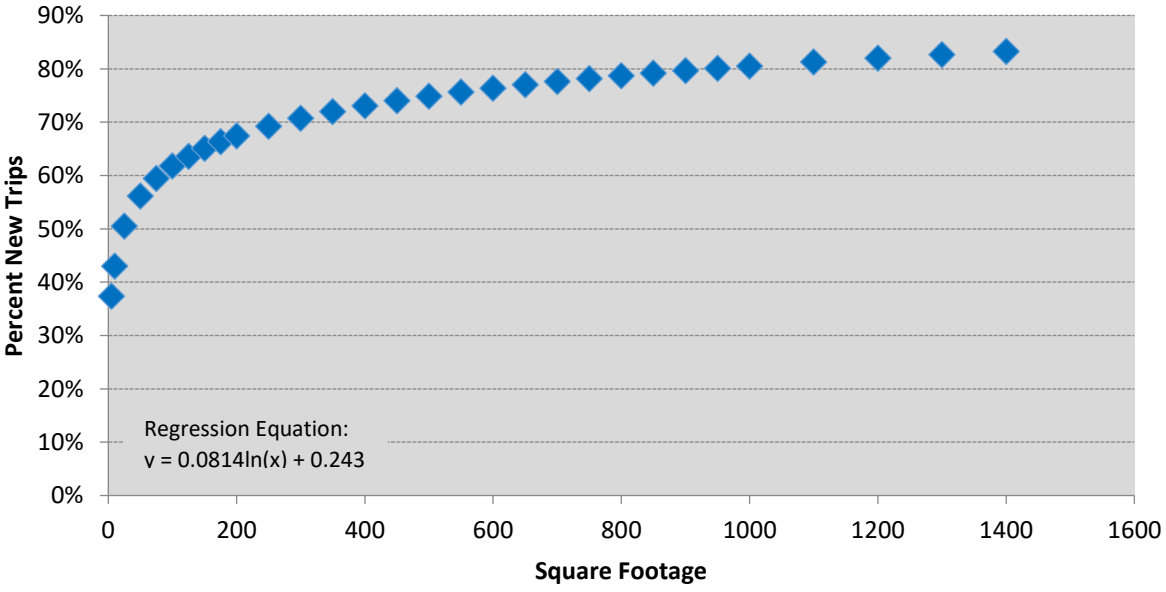
LUC 820: Retail/Shopping Center – Florida Curve Trip Length Regression



Source: Regression analysis based on FL Studies data for LUC 820

Figure C-3

LUC 820: Retail/Shopping Center – Florida Curve Percent New Trips Regression



Source: Regression analysis based on FL Studies data for LUC 820

Table C-21

Land Use 944/945: Convenience Store/Gas Station

Location	Size (1,000 sf)	Date	Total # Interviews	# Trip Length Interviews	Trip Gen Rate	Time Period	Trip Length	Percent New Trips	VMT	Source
Largo, FL	0.6	Nov-89	70	14	-	8am-5pm	1.90	23.0	-	Tindale Oliver
Collier Co, FL	-	Aug-91	168	40	-	-	1.01	23.8	-	Tindale Oliver
Total Size	0.6	2	238			**Average Trip Length:**	**1.46**			
						Weighted Average Trip Length:	**1.90**			
							Weighted Percent New Trip Average:	23.0		

Convenience Store/Gas Station (ITE LUC 945) - Mid-Size Blend

ITE	48	Conv. Store 2,000 to 3,999 sf:		265.12
ITE	5	Conv. Store 4,000 to 5,499 sf:		257.13
	53	**Blend of ITE Average Trip Generation Rates for Convenience Store/Gas Station 2,000 to 5,499 sf:**		**264.38**

Appendix D
Multi-Modal Transportation Impact Fee:
Cost Component

Appendix D: MMTIF - Cost Component

This appendix presents the detailed calculations for the cost component of the multi-modal transportation impact fee update. To provide a conservative approach, cost estimates are based on county road projects only as opposed to both county and state projects. Supporting data and estimates are provided for all cost variables, including:

- Design
- Right-of-Way
- Construction
- Construction Engineering & Inspection
- Roadway Capacity
- Transit Capital Costs

Design

The design cost factor for is estimated as a percentage of the construction cost per lane mile. This factor is determined based on a review of design-to-construction cost ratios from recent projects in Manatee County and from other jurisdictions throughout Florida. For local estimates, the design-to-construction ratios ranged from one (1) percent to 58 percent, with a weighted average of 14 percent (Table D-1). For county roadways throughout Florida, the design factors ranged from six (6) percent to 14 percent with a weighted average of 10 percent (Table D-2). For purposes of this study, the design cost for county roads is estimated at **14 percent** of the construction cost per lane mile.

Table D-1

Design Cost Factor – Manatee County Local Roadway Improvements

Project #	Description	From	To	Feature	Start Constr.	Road Design	Length	Lanes Added	Lane Miles Added	Design	Construction	Design-to-Construction Ratio
Roadway Capacity Expansion												
6045660	44th Ave E	19th St Ct E	30th St E	0 to 4	2016	C&G	0.90	4	3.60	$1,161,657	$11,763,178	10%
6045662	44th Ave E	44th Ave Plaza E	Lakewood Ranch Blvd	0 to 4	2023	C&G	2.50	4	10.00	$2,181,000	$29,809,786	7%
6086960	44th Ave E	45th St E	44th Ave Plaza E	2 to 4	2021	C&G	2.25	2	4.50	$770,000	$49,520,229	2%
6045661	44th Ave E	15th St E	19th St Ct E	2 to 4	2015	C&G	0.45	2	0.90	$325,000	$5,454,438	6%
6108360	59th St W	Cortez Rd	Manatee Ave	2 to 4	2026	C&G	2.30	2	4.60	$3,687,090	$23,420,836	16%
6107860	63rd Ave E	US 301	Tuttle Ave	2 to 4	2025	C&G	1.00	2	2.00	$2,437,690	$9,750,765	25%
6108260	75th St W	20th Ave W	Manatee Ave W	2 to 4	2026	C&G	1.00	2	2.00	$1,587,481	$7,256,738	22%
6094360	Canal Rd	US 301	17th St E	2 to 4	2023	C&G	0.55	2	1.10	$2,898,000	$9,678,403	30%
6108662	Erie Rd	Martha Rd	US 301	2 to 4	2026	C&G	1.05	2	2.10	$1,961,332	$7,845,327	25%
6054765	Ft Hamer Rd	US301	69th St E	0 to 4	2021	C&G	0.75	4	3.00	$4,111,000	$11,637,711	35%
6107560	Lena Rd	44th Ave E	Landfill Rd	0 to 2	2024	C&G	1.20	2	2.40	$2,574,073	$4,408,291	58%
6107660	Lorraine Rd	59th Ave E	SR 64	2 to 4	2026	C&G	2.75	2	5.50	$5,581,309	$22,325,101	25%
6092560	Moccasin Wallow Rd	US 41	Gateway Blvd	2 to 4	2023	C&G	1.95	2	3.90	$2,739,150	$36,014,601	8%
6071261	Moccasin Wallow Rd	W of 115th Ave E	US 301	2 to 4	2023	C&G	1.30	2	2.60	$150,000	$16,647,973	1%
6071262	Moccasin Wallow Rd	E of I-75	W of 115th Ave E	2 to 4	2024	C&G	3.25	2	6.50	$4,331,039	$29,000,000	15%
6107760	U. Manatee River Rd	N of SR 64	Ft Hamer Br	2 to 4	2025	C&G	1.85	2	3.70	$4,942,419	$13,955,122	35%
Total									**58.40**	**$41,438,240**	**$288,488,499**	**14%**

Source: Manatee County Public Works Department

Table D-2

Design Cost Factor for County Roads – Other Florida Counties

Year	County	County Roadways (Cost per Lane Mile)		
		Design	Constr.	Design Ratio
2013	Hernando	$198,000	$1,980,000	10%
2013	Charlotte	$220,000	$2,200,000	10%
2014	Indian River	$159,000	$1,598,000	10%
2015	Collier	$270,000	$2,700,000	10%
2015	Brevard	$242,000	$2,023,000	12%
2015	Sumter	$210,000	$2,100,000	10%
2015	Marion	$167,000	$2,668,000	6%
2015	Palm Beach	$224,000	$1,759,000	13%
2017	St. Lucie	$220,000	$2,200,000	10%
2017	Clay	$239,000	$2,385,000	10%
2019	Collier	$385,000	$3,500,000	11%
2019	Sumter	$315,000	$2,862,000	11%
2020	Indian River	$291,000	$2,647,000	11%
2020	Hillsborough	$484,000	$4,036,000	12%
2020	Hernando	$232,000	$2,108,000	11%
2021	Manatee	$308,000	$2,800,000	11%
2021	Flagler	$258,000	$2,582,000	10%
2022	Lake	$215,000	$2,145,000	10%
2022	Volusia	$188,000	$2,350,000	8%
Average		**$254,000**	**$2,455,000**	**10%**

Source: Each respective County

Right-of-Way

The ROW cost reflects the total cost of the acquisitions along a corridor that was necessary to have sufficient cross-section width to widen an existing road or, in the case of new road construction, build a new road.

For impact fee purposes, the ROW cost for county roads is estimated as a percentage of the construction cost per lane mile. To determine the ROW cost factor, Benesch conducted a review of recent local ROW acquisitions along capacity expansion projects in Manatee County and reviewed ROW-to-construction cost ratios from other counties in Florida. As shown in Table D-3, ROW cost estimates from 14 Manatee County improvements indicated a weighted average ROW-to-construction ratio of approximately 19 percent.

As shown in Table D-4, the ROW-to-construction factor for other jurisdictions in Florida ranged from 10 percent to 60 percent with an average of 38 percent.

Based on a review of these two data sets and discussion with County staff, ROW costs were estimated at approximately **19 percent** of the construction costs.

Table D-3

Right-of-Way Cost Factor – Manatee County Local Roadway Improvements

Project #	Description	From	To	Feature	Start Constr.	Road Design	Length	Lanes Added	Lane Miles Added	ROW	Construction	ROW-to-Construction Ratio
Roadway Capacity Expansion												
6045660	44th Ave E	19th St Ct E	30th St E	0 to 4	2016	C&G	0.90	4	3.60	$3,922,087	$11,763,178	33%
6045662	44th Ave E	44th Ave Plaza E	Lakewood Ranch Blvd	0 to 4	2023	C&G	2.50	4	10.00	$1,480,000	$29,809,786	5%
6086960	44th Ave E	45th St E	44th Ave Plaza E	2 to 4	2021	C&G	2.25	2	4.50	$17,525,234	$49,520,229	35%
6045661	44th Ave E	15th St E	19th St Ct E	2 to 4	2015	C&G	0.45	2	0.90	$2,014,896	$5,454,438	37%
6108360	59th St W	Cortez Rd	Manatee Ave	2 to 4	2026	C&G	2.30	2	4.60	$2,371,300	$23,420,836	10%
6107860	63rd Ave E	US 301	Tuttle Ave	2 to 4	2025	C&G	1.00	2	2.00	$2,046,771	$9,750,765	21%
6108260	75th St W	20th Ave W	Manatee Ave W	2 to 4	2026	C&G	1.00	2	2.00	$2,274,300	$7,256,738	31%
6094360	Canal Rd	US 301	17th St E	2 to 4	2023	C&G	0.55	2	1.10	$1,932,000	$9,678,403	20%
6054765	Ft Hamer Rd	US301	69th St E	0 to 4	2021	C&G	0.75	4	3.00	$4,784,573	$11,637,711	41%
6107560	Lena Rd	44th Ave E	Landfill Rd	0 to 2	2024	C&G	1.20	2	2.40	$507,600	$4,408,291	12%
6107660	Lorraine Rd	59th Ave E	SR 64	2 to 4	2026	C&G	2.75	2	5.50	$5,610,528	$22,325,101	25%
6092560	Moccasin Wallow Rd	US 41	Gateway Blvd	2 to 4	2023	C&G	1.95	2	3.90	$4,049,100	$36,014,601	11%
6071262	Moccasin Wallow Rd	E of I-75	W of 115th Ave E	2 to 4	2024	C&G	3.25	2	6.50	$1,644,192	$29,000,000	6%
6107760	U. Manatee River Rd	N of SR 64	Ft Hamer Br	2 to 4	2025	C&G	1.85	2	3.70	$861,000	$13,955,122	6%
Total									**53.70**	**$51,023,581**	**$263,995,199**	**19%**

Source: Manatee County Public Works Department

Table D-4

Right-of-Way Cost Factor for County Roads – Other Florida Counties

Year	County	County Roadways (Cost per Lane Mile)		
		ROW	Constr.	ROW Ratio
2013	Hernando	$811,800	$1,980,000	41%
2013	Charlotte	$1,034,000	$2,200,000	47%
2014	Indian River	$656,000	$1,598,000	41%
2015	Collier	$863,000	$2,700,000	32%
2015	Brevard	$708,000	$2,023,000	35%
2015	Sumter	$945,000	$2,100,000	45%
2015	Marion	$1,001,000	$1,668,000	60%
2015	Palm Beach	$721,000	$1,759,000	41%
2017	St. Lucie	$990,000	$2,200,000	45%
2017	Clay	$954,000	$2,385,000	40%
2018	Collier	$1,208,000	$3,500,000	35%
2019	Sumter	$1,202,000	$2,862,000	42%
2020	Indian River	$529,000	$2,647,000	20%
2020	Hillsborough	$1,448,000	$2,897,000	50%
2020	Hernando	$844,000	$2,108,000	40%
2021	Manatee	$1,120,000	$2,800,000	40%
2021	Flagler	$258,000	$2,582,000	10%
2022	Lake	$1,073,000	$2,145,000	50%
2022	Volusia	$470,000	$2,350,000	20%
Average		**$886,000**	**$2,342,000**	**38%**

Source: Each respective County

Construction

A review of construction cost data for local county roadway capacity expansion projects included 15 recent improvements provided by Manatee County, as shown in Table D-5. The improvements ranged from $1.84 million to $11.00 million per lane mile with a weighted average construction cost of approximately $4.94 million per lane mile. When excluding high outliers (projects with a cost per lane mile greater than $8.00 million), the weighted average cost was re-calculated to $3.95 million per lane mile.

In addition to local data, a review of recently bid projects (from 2013 to 2020) throughout the state of Florida was conducted. As shown in Table D-6, a total of 47 projects from 15 different counties (excluding Manatee County) were identified with a weighted average cost of approximately $3.10 million per lane mile. Given that this sample does not reflect more recent cost increases, an indexing analysis was conducted. This analysis, detailed on page D-10 of this report, shows that, on average, construction costs have increased approximately 38 percent since 2019. When applied to cost estimates developed for county roads in Manatee County in 2019/20 ($2.8 million), this index calculates a construction cost of approximately $3.9 million per lane mile ($2.8 million *1.38 ≈ $3.9 million).

Based on this review and discussions with Manatee County Public Works Department, the construction cost for county roads (urban design; curb & gutter) was estimated at **$3.90 million** per lane mile for use in the multi-modal transportation impact fee calculation.

Table D-5

Construction Cost – Manatee County Local Roadway Improvements

Project #	Description	From	To	Feature	Start Constr.	Road Design	Length	Lanes Added	Lane Miles Added	Design	ROW	Proj Mgmt (CEI, etc)	Construction	Construction Cost per Lane Mile
Roadway Capacity Expansion														
6045660	44th Ave E	19th St Ct E	30th St E	0 to 4	2016	C&G	0.90	4	3.60	$1,161,657	$3,922,087	$1,952,500	$11,763,178	$3,267,549
6045662	44th Ave E	44th Ave Plaza E	Lakewood Ranch Blvd	0 to 4	2023	C&G	2.50	4	10.00	$2,181,000	$1,480,000	-	$29,809,786	$2,980,979
6086960	44th Ave E	45th St E	44th Ave Plaza E	2 to 4	2021		2.25	2	4.50	$770,000	$17,525,234	$18,027	$49,520,229	$11,004,495
6045661	44th Ave E	15th St E	19th St Ct E	2 to 4	2015	C&G	0.45	2	0.90	$325,000	$2,014,896	$513,547	$5,454,438	$6,060,487
6108360	59th St W	Cortez Rd	Manatee Ave	2 to 4	2026	C&G	2.30	2	4.60	$3,687,090	$2,371,300	$1,850,865	$23,420,836	$5,091,486
6107860	63rd Ave E	US 301	Tuttle Ave	2 to 4	2025	C&G	1.00	2	2.00	$2,437,690	$2,046,771	$1,971,542	$9,750,765	$4,875,383
6108260	75th St W	20th Ave W	Manatee Ave W	2 to 4	2026	C&G	1.00	2	2.00	$1,587,481	$2,274,300	$778,296	$7,256,738	$3,628,369
6094360	Canal Rd	US 301	17th St E	2 to 4	2023		0.55	2	1.10	$2,898,000	$1,932,000	$1,150,000	$9,678,403	$8,798,548
6108662	Erie Rd	Martha Rd	US 301	2 to 4	2026	C&G	1.05	2	2.10	$1,961,332	-	$3,295,038	$7,845,327	$3,735,870
6054765	Ft Hamer Rd	US301	69th St E	0 to 4	2021	C&G	0.75	4	3.00	$4,111,000	$4,784,573	$451,194	$11,637,711	$3,879,237
6107560	Lena Rd	44th Ave E	Landfill Rd	0 to 2	2024	C&G	1.20	2	2.40	$2,574,073	$507,600	$995,985	$4,408,291	$1,836,788
6107660	Lorraine Rd	59th Ave E	SR 64	2 to 4	2026	C&G	2.75	2	5.50	$5,581,309	$5,610,528	$4,578,659	$22,325,101	$4,059,109
6092560	Moccasin Wallow Rd	US 41	Gateway Blvd	2 to 4	2023		1.95	2	3.90	$2,739,150	$4,049,100	$5,272,313	$36,014,601	$9,234,513
6071261	Moccasin Wallow Rd	W of 115th Ave E	US 301	2 to 4	2023	C&G	1.30	2	2.60	$150,000	-	$238,000	$16,647,973	$6,403,067
6071262	Moccasin Wallow Rd	E of I-75	W of 115th Ave E	2 to 4	2024	C&G	3.25	2	6.50	$4,331,039	$1,644,192	-	$29,000,000	$4,461,538
6107760	U. Manatee River Rd	N of SR 64	Ft Hamer Br	2 to 4	2025	C&G	1.85	2	3.70	$4,942,419	$861,000	$2,891,760	$13,955,122	$3,771,655
Total									**58.40**	**$41,438,240**	**$51,023,581**	**$25,957,726**	**$288,488,499**	**$4,939,872**
Total (excluding outliers)									**48.90**				**$193,275,266**	**$3,952,459**

Source: Manatee County Public Works Department

Note: Gray highlight = outlier

Table D-6

Construction Cost for County Roads – Other Florida Counties

County	County Classification	District	Description	From	To	Year	Feature	Design	Length	Lanes Added	Lane Miles Added	Construction Cost	Construction Cost per Lane Mile
URBAN Counties; Curb & Gutter													
Orange	Urban	5	Rouse Rd	Lake Underhill Rd	SR 50	2013	2 to 4	Curb & Gutter	1.55	2	3.10	$7,592,408	$2,449,164
Orange	Urban	5	Lake Underhill Rd	Goldenrod Rd	Chickasaw Tr	2013	2 to 4	Curb & Gutter	0.69	2	1.38	$6,371,855	$4,617,286
Hillsborough	Urban	7	Bruce B. Downs Blvd, Seg. B/C	Palm Springs Blvd	Pebble Creek Dr	2013	4 to 8	Curb & Gutter	3.36	4	13.44	$51,855,535	$3,858,299
Orange	Urban	5	CR 535 Seg. F	Overstreet Rd	Fossick Rd	2014	2 to 4	Curb & Gutter	0.60	2	1.20	$3,263,746	$2,719,788
Hillsborough	Urban	7	Boyette Rd, Ph. III	Donneymoor Dr	Bell Shoals Rd	2014	2 to 4	Curb & Gutter	1.84	2	3.68	$25,720,068	$6,989,149
Orange	Urban	5	International Dr	Westwood Blvd	Westwood Blvd	2015	4 to 6	Curb & Gutter	2.20	2	4.40	$16,775,875	$3,812,699
Orange	Urban	5	Reams Rd	Delmar Ave	Taborfield Ave	2017	2 to 4	Curb & Gutter	0.36	2	0.72	$3,409,584	$4,735,533
Orange	Urban	5	Destination Pkwy 1B/2A	Tradeshow Blvd	Lake Cay	2017	2 to 4	Curb & Gutter	0.78	2	1.56	$6,110,403	$3,916,925
Hillsborough	Urban	7	Bruce B. Downs Blvd, Seg. A	Bearss Ave	Palm Springs Blvd	2017	4 to 8	Curb & Gutter	3.56	4	14.24	$37,155,153	$2,609,210
Hillsborough	Urban	7	Bruce B. Downs Blvd, Seg. D	Pebble Creek Dr	Pasco Co. Line	2018	4 to 8	Curb & Gutter	1.36	4	5.44	$17,755,778	$3,263,930
Palm Beach	Urban	4	Roebuck Rd	Jog Rd	Haverhill Rd	2018	2 to 5	Curb & Gutter	1.03	3	3.10	$5,154,028	$1,662,590
Palm Beach	Urban	4	Lyons Rd	Clint Moore Rd	N of LWDD L-39 Canal	2018	2 to 4	Curb & Gutter	0.70	2	1.40	$3,163,022	$2,259,301
Orange	Urban	5	Holden Ave	John Young Pkwy	Orange Blossom Tr	2019	0/2 to 4	Curb & Gutter	1.24	2/4	3.50	$18,798,771	$5,371,077
Orange	Urban	5	Boggy Creek Rd N	South Access Rd	Wetherbee Rd	2019	2 to 4	Curb & Gutter	1.29	2	2.58	$8,585,774	$3,327,819
Palm Beach	Urban	4	Hood Rd	E. of FL Turnpike	W. of Central Blvd	2019	2 to 4	Curb & Gutter	0.95	2	1.90	$12,686,954	$6,677,344
Palm Beach	Urban	4	Silver Beach Rd	E. of Congress Ave	Old Dixie/Pre. Barack Obama Hwy	2019	2 to 3	Curb & Gutter	0.90	1	0.90	$4,478,355	$4,975,950
Total (2013-2020); Urban Counties ONLY									**Count:**	**16**	**62.54**	**$228,877,309**	**$3,660,000**
SUBURBAN/RURAL Counties; Curb & Gutter													
Brevard	Suburban/Rural	5	Babcock St	S. of Foundation Park Blvd	Malabar Rd	2013	2 to 4	Curb & Gutter	12.40	2	24.80	$56,000,000	$2,258,065
Collier	Suburban/Rural	1	Collier Blvd (CR 951)	Golden Gate Blvd	Green Blvd	2013	4 to 6	Curb & Gutter	2.00	2	4.00	$17,122,640	$4,280,660
Marion	Suburban/Rural	5	SW 110th St	US 41	SW 200th Ave	2013	0 to 2	Curb & Gutter	0.11	2	0.22	$438,765	$1,994,386
Marion	Suburban/Rural	5	NW 35th St	NW 35th Avenue Rd	NW 27th Ave	2013	0 to 4	Curb & Gutter	0.50	4	4.60	$8,616,236	$1,873,095
Marion	Suburban/Rural	5	NW 35th St	NW 27th Ave	US 441	2013	2 to 4	Curb & Gutter	1.30	2			
Sumter	Suburban/Rural	5	C-466A, Ph. III	US 301 N	Powell Rd	2013	2 to 3/4	Curb & Gutter	1.10	2	2.20	$4,283,842	$1,947,201
Collier	Suburban/Rural	1	Golden Gate Blvd	Wilson Blvd	Desoto Blvd	2014	2 to 4	Curb & Gutter	2.40	2	4.80	$16,003,504	$3,334,063
Brevard	Suburban/Rural	5	St. Johns Heritage Pkwy	SE of I-95 Intersection	US 192 (Space Coast Pkwy)	2014	0 to 2	Curb & Gutter	3.11	2	6.22	$16,763,567	$2,695,107
Sarasota	Suburban/Rural	1	Bee Ridge Rd	Mauna Loa Blvd	Iona Rd	2014	2 to 4	Curb & Gutter	2.68	2	5.36	$14,066,523	$2,624,351
St. Lucie	Suburban/Rural	4	W Midway Rd (CR 712)	Selvitz Rd	25th St	2014	2 to 4	Curb & Gutter	1.00	2	2.00	$15,359,926	$7,679,963
Lake	Suburban/Rural	5	N. Hancock Rd Ext.	Old 50	Gatewood Dr	2014	0/2 to 4	Curb & Gutter	1.50	2/4	5.00	$8,185,574	$1,637,115
Polk	Suburban/Rural	1	CR 655 & CR 559A	Pace Rd & N of CR 559A	N. of CR 559A & SR 599	2014	2 to 4	Curb & Gutter	2.60	2	5.20	$10,793,552	$2,075,683
Volusia	Suburban/Rural	5	Howland Blvd	Courtland Blvd	N. of SR 415	2014	2 to 4	Curb & Gutter	2.08	2	4.16	$11,110,480	$2,670,788
Polk	Suburban/Rural	1	Ernie Caldwell Blvd	Pine Tree Tr	US 17/92	2015	0 to 4	Curb & Gutter	2.41	4	9.64	$19,535,391	$2,026,493
Flagler	Suburban/Rural	5	Old Kings Rd Ext.	Forest Grove Dr	Matanzas Woods Pkwy	2015	0 to 4	Curb & Gutter	0.52	4	2.08	$4,831,579	$2,322,875
Volusia	Suburban/Rural	5	LPGA Blvd	Jimmy Ann Dr/Grand Reserve	Derbyshire Rd	2016	2 to 4	Curb & Gutter	0.68	2	1.36	$3,758,279	$2,763,440
St. Lucie	Suburban/Rural	4	W Midway Rd (CR 712)	25th St	US 1	2016	2 to 4	Curb & Gutter	1.60	2	3.20	$31,483,319	$9,838,537
Marion	Suburban/Rural	5	NW/NE 35th St, Ph. 1a	US 441	600' E. of W Anthony Rd	2016	2 to 4	Curb & Gutter	0.30	2	0.60	$1,770,250	$2,950,417
Lake	Suburban/Rural	5	CR 466A, Ph. I	US 27/441	Sunny Ct	2016	2 to 4	Curb & Gutter	0.44	2	0.88	$3,237,561	$3,679,047
Lake	Suburban/Rural	5	CR 466A, Ph. IIIA	Poinsettia Ave	Century Ave	2018	2 to 4	Curb & Gutter	0.42	2	0.84	$3,368,889	$4,010,582
Volusia	Suburban/Rural	5	Williamson Blvd	LPGA Blvd	Strickland Range Rd	2019	2 to 4	Curb & Gutter	0.93	2	1.86	$4,951,165	$2,661,917
Lake	Suburban/Rural	5	North Hancock Rd	CR 561A	Minneola Interchange	2018	0 to 2	Curb & Gutter	1.20	2	2.40	$2,902,256	$1,209,273
Lee	Suburban/Rural	1	Alico Rd	Ben Hill Griffin Pkwy	E. of Airport Haul Rd	2018	2 to 4	Curb & Gutter	1.78	2	3.56	$18,062,562	$5,073,753
Lee	Suburban/Rural	1	Homestead Rd	S. of Sunrise Blvd	N. of Alabama Rd	2018	2 to 4	Curb & Gutter	2.25	2	4.50	$14,041,919	$3,120,426
Lake	Suburban/Rural	5	Citrus Grove Rd, Ph. I	W. of Grassy Lake Rd	Hancock Rd	2019	0 to 4	Curb & Gutter	0.87	4	3.48	$5,751,614	$1,652,763
Lake	Suburban/Rural	5	Education Ave	Grassy Lake Rd	US 27	2019	0 to 2	Curb & Gutter	1.22	2	2.44	$3,324,769	$1,362,610
Hernando	Suburban/Rural	7	Cortez Blvd Frontage Rd @ I-75			2020	0 to 2	Curb & Gutter	0.62	2	1.24	$2,064,688	$1,665,071
Volusia	Suburban/Rural	5	Howland Blvd	Providence Blvd	Elkcam Blvd	2020	2 to 4	Curb & Gutter	2.38	2	4.76	$11,290,456	$2,371,945
Volusia	Suburban/Rural	5	Orange Camp Rd	MLK Blvd	I-4	2020	2 to 4	Curb & Gutter	2.23	2	4.46	$8,741,920	$1,960,072
Volusia	Suburban/Rural	5	10th St	Myrtle Ave	US-1	2020	0/2 to 4	Curb & Gutter	0.47	2/4	1.42	$9,456,399	$6,659,436
Lake	Suburban/Rural	5	Citrus Grove Rd, Ph. III	US 27	Scrub Jay Ln	2020	2 to 4	Curb & Gutter	0.81	2	1.62	$6,434,819	$3,972,110
Total (2013-2020); Suburban/Rural Counties ONLY									**Count:**	**31**	**118.90**	**$333,752,444**	**$2,807,000**
URBAN & SUBURBAN/RURAL Counties; Curb & Gutter													
Total (2013-2020); Urban & Suburban/Rural Counties									**Count:**	**47**	**181.44**	**$562,629,753**	**$3,101,000**

Source: Data obtained from each respective county (Building and Public Works Departments)

Construction Indexing Analysis

In addition to the review of local and statewide roadway construction improvements, several cost indices were reviewed, including:

- Producer Price Index (PPI) for Highway & Street Construction
- FDOT District 7 Long Range Estimates (LRE)
- National Highway Construction Cost Index

This review focused on the construction cost increases from 2019 to 2022, where many jurisdictions in Florida experienced a significant increase in roadway construction costs. These indices ranged from a 19 percent increase ($3.3 million) to a 54 percent increase ($4.3 million), with an average of approximately **38 percent** ($3.9 million). This average increase is in line with the local construction cost increases observed in Manatee County since 2018/19 and the cost estimates included in the multi-modal impact fee calculations ($2,800,000 * 1.38 ≈ $3.9 million).

Construction Engineering/Inspection

<u>County Roadways</u>

The CEI cost factor is estimated as a percentage of the construction cost per lane mile. This factor is determined based on a review of CEI-to-construction cost ratios from recent projects in Manatee County and from other jurisdictions throughout Florida. For local estimates, the CEI-to-construction ratios ranged from less than one (<1) percent to 42 percent, with a weighted average of 11 percent (Table D-7). For county roadways throughout Florida, the CEI factors ranged from three (3) percent to 17 percent with a weighted average of nine (9) percent (Table D-8). For purposes of this study, the CEI cost for county roads is calculated at **11 percent** of the construction cost per lane mile.

Table D-7

CEI Cost Factor – Manatee County Local Roadway Improvements

Project #	Description	From	To	Feature	Start Constr.	Road Design	Length	Lanes Added	Lane Miles Added	CEI	Construction	CEI-to-Construction Ratio
Roadway Capacity Expansion												
6045660	44th Ave E	19th St Ct E	30th St E	0 to 4	2016	C&G	0.90	4	3.60	$1,952,500	$11,763,178	17%
6086960	44th Ave E	45th St E	44th Ave Plaza E	2 to 4	2021	C&G	2.25	2	4.50	$18,027	$49,520,229	0%
6045661	44th Ave E	15th St E	19th St Ct E	2 to 4	2015	C&G	0.45	2	0.90	$513,547	$5,454,438	9%
6108360	59th St W	Cortez Rd	Manatee Ave	2 to 4	2026	C&G	2.30	2	4.60	$1,850,865	$23,420,836	8%
6107860	63rd Ave E	US 301	Tuttle Ave	2 to 4	2025	C&G	1.00	2	2.00	$1,971,542	$9,750,765	20%
6108260	75th St W	20th Ave W	Manatee Ave W	2 to 4	2026	C&G	1.00	2	2.00	$778,296	$7,256,738	11%
6094360	Canal Rd	US 301	17th St E	2 to 4	2023	C&G	0.55	2	1.10	$1,150,000	$9,678,403	12%
6108662	Erie Rd	Martha Rd	US 301	2 to 4	2026	C&G	1.05	2	2.10	$3,295,038	$7,845,327	42%
6054765	Ft Hamer Rd	US301	69th St E	0 to 4	2021	C&G	0.75	4	3.00	$451,194	$11,637,711	4%
6107560	Lena Rd	44th Ave E	Landfill Rd	0 to 2	2024	C&G	1.20	2	2.40	$995,985	$4,408,291	23%
6107660	Lorraine Rd	59th Ave E	SR 64	2 to 4	2026	C&G	2.75	2	5.50	$4,578,659	$22,325,101	21%
6092560	Moccasin Wallow Rd	US 41	Gateway Blvd	2 to 4	2023	C&G	1.95	2	3.90	$5,272,313	$36,014,601	15%
6071261	Moccasin Wallow Rd	W of 115th Ave E	US 301	2 to 4	2023	C&G	1.30	2	2.60	$238,000	$16,647,973	1%
6107760	U. Manatee River Rd	N of SR 64	Ft Hamer Br	2 to 4	2025	C&G	1.85	2	3.70	$2,891,760	$13,955,122	21%
Total									**41.90**	**$25,957,726**	**$229,678,713**	**11%**

Source: Manatee County Public Works Department

Table D-8

CEI Cost Factor for County Roads – Other Florida Counties

Year	County	County Roadways (Cost per Lane Mile)		
		CEI	Constr.	CEI Ratio
2013	Hernando	$178,200	$1,980,000	9%
2013	Charlotte	$220,000	$2,200,000	10%
2014	Indian River	$143,000	$1,598,000	9%
2015	Collier	$270,000	$2,700,000	10%
2015	Brevard	$344,000	$2,023,000	17%
2015	Sumter	$147,000	$2,100,000	7%
2015	Marion	$50,000	$1,668,000	3%
2015	Palm Beach	$108,000	$1,759,000	6%
2017	St. Lucie	$198,000	$2,200,000	9%
2017	Clay	$191,000	$2,385,000	8%
2019	Collier	$315,000	$3,500,000	9%
2019	Sumter	$258,000	$2,862,000	9%
2020	Indian River	$238,000	$2,647,000	9%
2020	Hillsborough	$363,000	$4,036,000	9%
2020	Hernando	$189,000	$2,108,000	9%
2021	Manatee	$252,000	$2,800,000	9%
2021	Flagler	$232,000	$2,582,000	9%
2022	Lake	$172,000	$2,145,000	8%
2022	Volusia	$259,000	$2,350,000	11%
Average		**$217,000**	**$2,402,000**	**9%**

Source: Each respective County

Roadway Capacity

As shown in Table D-9, the average capacity per lane mile is based on the projects in the "Transform 2045" Long Range Transportation Plan's Cost Feasible Plan, including partially funded improvements. This listing of projects reflects the mix of improvements that will yield the vehicle-miles of capacity (VMC) that will be built in Manatee County. The resulting weighted average capacity per lane mile of approximately 8,600 was used in the multi-modal transportation impact fee calculation.

Table D-9

Sarasota/Manatee County MPO's Transform 2045 Long Range Transportation Plan

Jurisdiction	Description	From	To	Improvement	Length	Lanes Added	Lane Miles Added	Initial Capacity	Future Capacity	Added Capacity	Vehicle Miles of Capacity Added
Cost Feasible Plan											
County	44th Ave E Extension	45th St E	E of 44th Ave Plaza E	New Road Construction	2.91	2	5.82	0	15,930	15,930	46,356
County	University Pkwy	Lorraine d	Bourneside Blvd	Widen to 4 Lanes	2.83	2	5.66	15,930	35,820	19,890	56,289
County	University Pkwy	I-75	Lorraine Rd	Widen to 6 Lanes	2.93	2	5.86	35,820	53,910	18,090	53,004
County	Moccasin Wallow Rd	Carter Rd	US 301	Widen to 4 Lanes	3.58	2	7.16	14,580	31,950	17,370	62,185
County	Commerce Connector	US 41	Fort Hamer Rd	New 2-Lane Road	4.57	2	9.14	0	12,780	12,780	58,405
County	Upper Manatee River Rd	SR 64	Fort Hamer Rd	Widen to 4 Lanes	2.10	2	4.20	15,930	35,820	19,890	41,769
County	Fort Hamer Rd	Buckeye Rd	County Line Rd	New 2-Lane Road	1.27	2	2.54	0	12,780	12,780	16,231
County	Upper Manatee River Rd	Fort Hamer Rd	Rye Rd	Widen to 4 Lanes	3.92	2	7.84	15,930	35,820	19,890	77,969
County	University Pkwy	Bourneside Blvd	SR 70	New 4-Lane Road	4.63	4	18.52	0	35,820	35,820	165,847
Partially Funded and Boxed Funded Projects											
County	Buckeye Rd	I-75	Fort Hamer Rd	Widen to 4 Lanes	1.78	2	3.56	12,780	27,360	14,580	25,952
Total:							**70.30**				**604,007**
Lane Addition Improvements:							34.28	**49%**	**(a)**		245,002
New Road Construction:							36.02	**51%**	**(b)**		359,005

Source: Sarasota/Manatee MPO's Transform 2045 LRTP and the Manatee County Transportation Planning Division

Transit Capital Costs

In the case of multi-modal fees, the marginal cost of adding transit infrastructure needs to be considered. This section details the difference in cost per person-mile of capacity between expanding a roadway without transit amenities versus expanding a roadway with transit amenities. This calculation also accounts for the change in roadway PMC that occurs when a bus is on the road.

First, Table D-10 calculates the person-miles of capacity added for each new transit vehicle on the road. This calculation adjusts for the fact that buses have a significantly higher person-capacity than passenger vehicles. This table also identifies transit capital cost variables that will be used to calculate the added capital cost of constructing/expanding a roadway with transit facilities.

Next, Table D-11 combines the roadway VMC and the transit PMC to calculate the marginal change in cost per PMC. First, the roadway characteristics, including cost and capacity, were used to calculate the roadway cost per VMC for a generic 24-mile roadway segment. Then, an adjustment factor was applied to recognize that incorporating transit along a segment of roadway decreases the vehicle-capacity as the bus makes intermittent stops and interrupts the free-flowing traffic. As shown in Table D-11, the bus blockage adjustment factor is much higher for a 2-lane roadway than for a 4-lane roadway. On a 2-lane road, all cars get caught behind the bus during a stop, while on a 4-lane roadway, there is an unobstructed travel lane that cars can use to pass-by or maneuver around the slower transit vehicle. This adjusted VMC was then converted to PMC using the vehicle-miles to person-miles adjustment factor previously discussed in this report. The additional person-capacity from the buses was added to the adjusted roadway PMC. The person-miles of capacity that a transit system would add to the stretch of roadway (Table D-10) mitigates the decrease in vehicle-miles of capacity due to the bus blockage adjustments.

Next, the capital cost of transit infrastructure was added to the capital cost of the roadway expansion for both new road construction (0 to 2 lanes) and lane addition (2 to 4 lanes). With the transit infrastructure included, the updated cost per PMC was calculated, which now reflects the total cost of building a new road with transit or expanding a roadway and adding transit amenities. When compared to the cost per PMC for simply building/expanding a roadway without transit, the added cost of transit is between two (2) percent and four (4) percent.

As a final step, the increased costs were then weighted by the lane mile distribution of new road construction and lane addition improvements in the Sarasota/Manatee MPO's Transform 2045 Long Range Transportation Plan. As shown, the plan calls for an almost even number of new road construction and lane addition improvements through 2045. When the marginal cost of transit is included and weighted by this ratio, the resulting percent change is approximately 2.71 percent. Essentially, adding transit does not have a significant effect on the cost per person-mile of capacity for new road construction and lane addition improvements.

As it is currently structured, the transit model detailed in Tables D-10 and D-11 assumes that transit-miles and road-miles will be added to the system at the same rate. If the County builds more transit-miles, this will increase the bus traffic on existing roads, adding more stops, higher stop frequency, and creating additional bus blockage. As a result, the capital cost per person-mile for a roadway with transit would increase in relation to the ratio of added transit-miles vs. roadway-miles. For example, if the transit-mile investment was double that of roadway construction/expansion, the 2.71 percent change calculated in Table D-11 would increase to approximately 5.42 percent. The annual construction figures for transit-miles and road-miles should be tracked by the County and adjusted for in subsequent multi-modal fee update studies.

Table D-10

Multi-Modal Cost per Person-Mile of Capacity

Input	Local Transit
Transit Person-Miles of Capacity Calculation	
Vehicle Capacity[1]	42
Number of Vehicles (20% fleet margin)[2]	2
Service Span (hours)[3]	13
Cycles/Hour (aka Peak Vehicles)[4]	1.00
Cycles per Day[5]	13
Headway Time (minutes)[6]	60
Speed (mph)[7]	15
Round Trip Length (miles)[8]	24.0
Cycle Time (minutes)[9]	96
Total Person-Miles of Capacity[10]	13,104
Load Factor/System Capacity[11]	30%
Adjusted Person-Miles of Capacity[12]	**3,931**
Capital Cost Variables	
Stops per Mile (w/o Shelter)[13]	3
Shelters per Mile[14]	1
Vehicle Cost[15]	$500,000
Simple Bus Stop[16]	$7,000
Sheltered Bus Stop[17]	$9,500

Source:

1) Source: Local transit is assumed to have 30 seats with a 40 percent standing room capacity equivalent

2) Cycle time (Item 9) divided by headway time (Item 6) increased by 20 percent to accommodate the required fleet margin

3) Source: Assumption based on current MCAT routes

4) Headway time (Item 6) divided by 60

5) Service span (Item 3) multiplied by the cycles/hour (Item 4)

6) Source: Assumption based on current MCAT routes

7) Source: Urban Integrated National Transit Database (UrbaniNTD). 6-yr average

8) Source: Average trip length of current MCAT routes

9) Round trip length (Item 8) divided by speed (Item 7) multiplied by 60

10) Vehicle capacity (Item 1) multiplied by the cycles per day (Item 5) multiplied by the round trip length (Item 8)

11) Source: Optimistic assumption based on future goals

12) Total person-miles of capacity (Item 10) multiplied by the load factor (Item 11)

13) Source: Model assumes 3 bench stops per mile

14) Source: Model assumes 1 shelter stop per mile

15) Source: 2018 Manatee Connect Transit Development Plan (Regular Bus)

16) Source: 2014 MCAT Transit Development Plan (New Bench Stop)

17) Source: 2014 MCAT Transit Development Plan (New Shelter Stop)

Table D-11

Multi-Modal Fee: Transit Component Model

Item	New Road Construction		Lane Addtions		
	Roadway	Transit	Roadway	Transit	
Roadway Characteristics:					**Source:**
Roadway Cost per Mile[(1)]	$11,232,000		$11,232,000		1) Source: Table VI-1, adjusted to cost "per mile"
Roadway Segment Length (miles)[(2)]	24.0		24.0		2) Source: Average length of MCAT route
Roadway Segment Cost[(3)]	$269,568,000	**PMC**	$269,568,000	**PMC**	3) Roadway cost per mile (Item 1) multiplied by the roadway segment length (Item 2)
Average Capacity Added (per mile)[(4)]	17,200	25,456	17,200	25,456	4) Source: Table VI-2, adjusted to capacity "per mile"
VMC/PMC Added (entire segment)[(5)]	412,800	610,944	412,800	610,944	5) Roadway segment length (Item 2) multiplied by the average capacity added (Item 4) for both VMC and PMC
Roadway Cost per VMC/PMC[(6)]	$653.02	**$441.23**	$653.02	**$441.23**	6) Roadway segment cost (Item 3) divided by the VMC/PMC added (Item 5) individually
Transit Capacity:					
Adjustment for Bus Blockage[(7)]	3.2%	-	1.6%	-	7) Source: 2010 Highway Capacity Manual, Equation 18-9
VMC/PMC Added (transit deduction)[(8)]	13,210	19,551	6,605	9,775	8) VMC added (Item 5) multiplied by the adjustment for bus blockage (Item 7). For PMC, multiply the VMC by 1.48 persons per vehicle
VMC/PMC Added (less transit deduction)[(9)]	399,590	591,393	406,195	601,169	9) VMC/PMC added (entire segment) (Item 5) less the VMC/PMC added (transit deduction) (Item 8) for VMC and PMC individually
PMC Added (transit addition ONLY)[(10)]		3,931		3,931	10) Source: Table D-10, Adjusted Person-Miles of Capacity (Item 12)
Net PMC Added (transit effect included)[(11)]		595,324		605,100	11) PMC added (less transit deduction) (Item 9) plus the PMC added (transit addition ONLY) (Item 10)
Road/Transit Cost per PMC (Road Capital)[(12)]		$452.81		$445.49	12) Road segment cost (Item 3) divided by the net PMC added (transit effect included) (Item 11)
Transit Infrastructure:					
Buses Needed[(13)]	2	$1,000,000	2	$1,000,000	13) Number of vehicles (see Table D-10, Item 2) multiplied by the vehicle cost (see Table D-10, Item 15)
Stops per mile (both sides of street)[(14)]	3	$1,008,000	3	$1,008,000	14) Stops per mile (3) multiplied by the roadway segment length (Item 2) multiplied by the cost per stop (Table D-10, Item 16)
Shelters per mile (both sides of street)[(15)]	1	$456,000	1	$456,000	15) Shelters per mile (1) multiplied by the roadway segment length (Item 2) multiplied by the cost per shelter (Table D-10, Item 17)
Total infrastructure[(16)]		$2,464,000		$2,464,000	16) Sum of buses needed (Item 13), stops needed (Item 14), and shelters needed (Item 15)
Multi-Modal Cost per PMC:					
Road/Transit Cost per PMC[(17)]		**$456.95**		**$449.57**	17) Sum of the roadway segment cost (Item 3) and the total transit infrastructure cost (Item 16) divided by the net PMC added (Item 11)
Percent Change[(18)]		**3.56%**		**1.89%**	18) Percent difference between the road/transit cost per PMC (Item 17) and the Roadway cost per PMC (Item 6)
Weighted Multi-Modal Cost per PMC:					
Lane Mile Distribution[(19)]		49%		51%	19) Source: Table D-9, Items (a) and (b)
Weighted Roadway Cost per PMC[(20)]		$216.20		$225.03	20) Roadway cost per PMC (Item 6) multiplied by the lane mile distribution (Item 19)
Weighted Road/Transit Cost per PMC[(21)]		$223.90		$229.28	21) Road/Transit cost per PMC (Item 17) multiplied by the lane mile distribution (Item 19)
Weighted Average Multi-Modal Cost per PMC:					
Weighted Average Roadway Cost per PMC (new road construction and lane additions)[(22)]				$441.23	22) Sum of the weighted roadway cost per PMC (Item 20) for new road construction and lane additions
Weighted Average Road/Transit Cost per PMC (new road construction and lane additions)[(23)]				$453.18	23) Sum of the weighted road/transit cost per PMC (Item 21) for new road construction and lane additions
Percent Change[(24)]				**2.71%**	24) Percent difference between the weighted average road/transit cost per PMC (Item 23) and the weighted average roadway cost per PMC (Item 22)

Appendix E
Multi-Modal Transportation Impact Fee:
Credit Component

Appendix E: MMTIF - Credit Component

This appendix presents the detailed calculations for the credit component. Local fuel taxes that are collected in Manatee County are listed below, along with a few pertinent characteristics of each.

1. **Constitutional Fuel Tax (2¢/gallon)**
   - Tax applies to every net gallon of motor and diesel fuel sold within a county. Collected in accordance with Article XII, Section 9 (c) of the Florida Constitution.
   - The State allocated 80 percent of this tax to Counties after first withholding amounts pledged for debt service on bonds issued pursuant to provisions of the State Constitution for road and bridge purposes.
   - The 20 percent surplus can be used to support the road construction program within the county.
   - Counties are not required to share the proceeds of this tax with their municipalities.

2. **County Fuel Tax (1¢/gallon)**
   - Tax applies to every net gallon of motor and diesel fuel sold within a county.
   - Primary purpose of these funds is to help reduce a County's reliance on ad valorem taxes.
   - Proceeds are to be used for transportation-related expenses, including the reduction of bond indebtedness incurred for transportation purposes. Authorized uses include acquisition of rights-of-way; the construction, reconstruction, operation, maintenance, and repair of transportation facilities, roads, bridges, bicycle paths, and pedestrian pathways; or the reduction of bond indebtedness incurred for transportation purposes.
   - Counties are not required to share the proceeds of this tax with their municipalities.

3. **Ninth-Cent Fuel Tax (1¢/gallon)**
   - Tax applies to every net gallon of motor and diesel fuel sold within a county.
   - Proceeds may be used to fund transportation expenditures.
   - To accommodate statewide equalization, this tax is automatically levied on diesel fuel in every county, regardless of whether a County is levying the tax on motor fuel at all.
   - Counties are not required to share the proceeds of this tax with their municipalities.

4. **1st Local Option Tax (up to 6¢/gallon)**
   - Tax applies to every net gallon of motor and diesel fuel sold within a county.

- Proceeds may be used to fund transportation expenditures.
- To accommodate statewide equalization, all six cents are automatically levied on diesel fuel in every county, regardless of whether a county is levying the tax on motor fuel at all or at the maximum rate.
- Proceeds are distributed to a county and its municipalities according to a mutually agreed upon distribution ratio, or by using a formula contained in the Florida Statutes.

5. 2nd Local Option Tax (up to 5¢/gallon)

- Tax applies to every net gallon of motor fuel sold within a county.
- Proceeds may be used to fund transportation expenditures needed to meet requirements of the capital improvements element of an adopted Local Government Comprehensive Plan.
- Proceeds are distributed to a county and its municipalities according to a mutually agreed upon distribution ratio, or by using a formula contained in the Florida Statutes.

Each year, the Florida Legislature's Office of Economic and Demographic Research (EDR) produces the *Local Government Financial Information Handbook*, which details the estimated local government revenues for the upcoming fiscal year. Included in this document are the estimated distributions of the various fuel tax revenues for each county in the state. The 2022-23 data represent projected fuel tax distributions to Manatee County for the current fiscal year. Table E-1 shows the distribution per penny for each of the fuel levies, and then the calculation of the weighted average for the value of a penny of fuel tax. The weighting procedure takes into account the differing amount of revenues generated for the various types of fuel taxes. It is estimated that approximately $1.85 million of annual revenue will be generated for the County from one penny of fuel tax in Manatee County. For use in the impact fee calculation, the fuel tax revenue data is used to calculate the value per penny (per gallon of fuel) that is used to estimate the "equivalent pennies" of other revenue sources used to fund transportation.

Revenues from other sources, such as infrastructure sales tax, grants, etc. are converted to gas tax equivalent using this dollar value as a conversion factor. This conversion is needed to be able to relate associate funding to travel by each land use.

Table E-1

Estimated Fuel Tax Distribution Allocated to Capital Programs for Manatee County & Municipalities, FY 2022-23[1]

Tax	Amount of Levy per Gallon	Total Distribution	Distribution per Penny
Constitutional Fuel Tax	$0.02	$3,957,554	$1,978,777
County Fuel Tax	$0.01	$1,744,204	$1,744,204
9th Cent Fuel Tax	$0.01	$2,085,056	$2,085,056
1st Local Option (1-6 cents)	$0.06	$11,638,030	$1,939,672
2nd Local Option (1-5 cents)	$0.05	$8,387,142	$1,677,428
Total	**$0.15**	**$27,811,986**	
Weighted Average per Penny[2]			**$1,854,132**

1) Source: Florida Legislature's Office of Economic and Demographic Research, http://edr.state.fl.us/content/local-government/reports/ --
2) The weighted average distribution per penny is calculated by taking the sum of the total distribution and dividing that value by the sum of the total levies per gallon (multiplied by 100)

Capital Expansion Credit

A revenue credit for the annual expenditures on roadway capacity-expansion projects in Manatee County is presented below. The components of the credit are as follows:

- City capital project funding
- County capital project funding
- State capital project funding

The annual expenditures from each revenue source are converted to equivalent fuel tax pennies to be able to create a connection between travel by each land use and non-impact fee revenue contributions.

City Capital Project Funding

A review of the Capital Improvement Plans and budget documents for municipalities in Manatee County identified minor expenditures for capacity expansion. These improvements included:

- City of Bradenton: 3rd Ave East Extension (Sales Tax funding)
- City of Longboat Key: Roundabouts (Fuel Tax funding)

As shown in Table E-2, a total capital improvement credit of 0.1 pennies was given for multi-modal transportation capacity expansion projects funded with non-impact fee revenues.

Table E-2
City Fuel Tax Equivalent Pennies

Source	Cost of Projects	Number of Years	Annual Average	Revenue from 1 Penny[3]	Equivalent Pennies[4]
City of Bradenton (FY 2021 Budget)[1]	$100,000	1	$100,000	$1,854,132	$0.001
Long Boat Key Roundabout (FY 2022-2026)[2]	$300,000	5	$60,000	$1,854,132	$0.000
Total			**$160,000**		**$0.001**

1) Source: City of Bradenton FY 2021 Adopted Budget Book
2) Source: Town of Longboat Key FY 2022 Adopted Budget
3) Source: Table E-1
4) Cost of projects divided by number of years divided by revenue from 1 penny (Item 3) divided by 100

County Capital Project Funding

A review of Manatee County's 5-year planned expenditures shows that multi-modal transportation projects are primarily being funded by infrastructure sales tax and fuel tax revenues. As shown in Table E-3, a total fuel tax equivalent revenue credit of 3.8 pennies was given for multi-modal transportation capacity-expansion projects funded with non-impact fee revenues.

Table E-3
County Fuel Tax Equivalent Pennies

Source	Cost of Projects	Number of Years	Annual Average	Revenue from 1 Penny[2]	Equivalent Pennies[3]
Projected CIP Expenditures (FY 2023-2027)[1]	$35,122,252	5	$7,024,450	$1,854,132	$0.038
Total	**$35,122,252**	**5**	**$7,024,450**	**$1,854,132**	**$0.038**

1) Source: Table E-6
2) Source: Table E-1
3) Cost of projects divided by number of years divided by revenue from 1 penny (Item 2) divided by 100

Additional County credit is given for outstanding debt service on capacity expansion improvements. The Revenue Refunding & Improvement Bond, Series 2022 contributes a large amount of non-ad valorem general fund and infrastructure sales tax revenues to a variety of transportation improvements (e.g. intersection & road improvements, lane additions, etc.).

Table E-4
County Debt Service Equivalent Pennies

Source	Cost of Projects	Number of Years	Annual Average	Revenue from 1 Penny[2]	Equivalent Pennies[3]
Rev Refunding & Improv. Bond, Series 2022[1]	$175,705,428	30	$5,856,848	$1,854,132	$0.032
Total	**$175,705,428**	**30**	**$5,856,848**	**$1,854,132**	**$0.032**

1) Source: Table E-7
2) Source: Table E-1
3) Cost of projects divided by number of years divided by revenue from 1 penny (Item 2) divided by 100

State Capital Project Funding

In the calculation of the equivalent pennies of fuel tax from the State, funding on multi-modal transportation capacity-expansion projects spanning a 15-year period (from FY 2010 to FY 2019 and from FY 2023 to FY 2027) were reviewed[3]. This included capacity expansion projects such as lane additions, new road construction, intersection improvements, interchanges, traffic signal projects, sidewalks, bike lanes, transit, and other capacity-addition projects. The use of a 15-year period, for purposes of developing a state credit for roadway capacity expansion projects, results in a stable credit, as it accounts for the volatility in FDOT spending in the county over short periods of time.

The total cost of the multi-modal transportation capacity-expansion projects for the "historical" periods and the "future" period:

- FY 2010-2014 work plan equates to 0.99 pennies
- FY 2015-2019 work plan equates to 10.9 pennies
- FY 2023-2027 work plan equates to 21.5 pennies

The combined weighted average over the 15-year period of state expenditure for capacity-expansion roadway projects results in a total of 14.1 equivalent pennies. Table E-5 documents this calculation. The specific projects that were used in the equivalent penny calculations are summarized in Tables E-8 and E-9.

Table E-5

State Fuel Tax Equivalent Pennies

Source	Cost of Projects	Number of Years	Annual Average	Revenue from 1 Penny[4]	Equivalent Pennies[5]
Projected Work Program (FY 2023-2027)[1]	$199,670,123	5	$39,934,025	$1,854,132	$0.215
Historical Work Program (FY 2015-2019)[2]	$100,593,325	5	$20,118,665	$1,854,132	$0.109
Historical Work Program (FY 2010-2014)[3]	$91,596,772	5	$18,319,354	$1,854,132	$0.099
Total	**$391,860,220**	**15**	**$26,124,015**	**$1,854,132**	**$0.141**

1) Source: Table E-9
2) Source: Table E-8
3) Source: Table E-8
4) Source: Table E-1
5) Cost of projects divided by number of years divided by revenue from 1 penny (Item 2) divided by 100

[3] Up-to-date data for FY 2020 through FY 2022 was unable from FDOT, so these years were excluded from the analysis.

Table E-6

Manatee County – Adopted Capital Improvement Plan, FY 2023-2027

ID	Project Title	Improvement	FY 2023	FY 2024	FY 2025	FY 2026	FY 2027	Total
Intersections								
6112460	43rd St W at Manatee Ave	Intersection Improvement	$1,889,696	$0	$0	$0	$0	**$1,889,696**
TR01872	53rd Ave W at 26th Ave W	Add Turn Lane(s)	$0	$0	$0	$847,250	$0	**$847,250**
TR01739	63rd Ave E at 9th St E	Add Turn Lane(s)	$0	$0	$245,000	$735,000	$0	**$980,000**
6092660	Ellenton-Gillette Rd and Mendoza Rd (37th St E)	Mast Arm Installation	$0	$732,435	$0	$0	$0	**$732,435**
Road Improvements								
6104860	51st Ave E from US 301 to 17th St E	Lane Addition	$1,573,684	$0	$0	$0	$0	**$1,573,684**
6108460	75th St W from Cortez Rd to Manatee Ave	Rebase/Resurface	$4,000,000	$0	$0	$0	$0	**$4,000,000**
6094360	Canal Rd from US 301 to US 41	Lane Addition	$12,687,125	$0	$0	$0	$0	**$12,687,125**
6107560	Lena Rd from S of 44th Ave E to Landfill Rd	New Road Construction	$607,600	$1,892,400	$0	$0	$0	**$2,500,000**
6107660	Lorraine Rd from SR 64 to 59th Ave E	Lane Addition	$5,618,528	$0	$381,472	$0	$0	**$6,000,000**
6107760	Upper Manatee River Rd - N of SR 64 to Ft Hamer Bridge	Lane Addition	$1,061,000	$439,000	$0	$0	$0	**$1,500,000**
Sidewalks								
TR01519	1st Ave W from 63rd St NW to 59th St W	New Sidewalk	$26,250	$148,750	$0	$0	$0	**$175,000**
TR01530	39th Ave W from 63rd St W to 59th St W	New Sidewalk	$0	$15,450	$87,550	$0	$0	**$103,000**
TR01468	42nd Ave W from 63rd St W to 59th St W	New Sidewalk	$0	$15,450	$87,550	$0	$0	**$103,000**
5400036	54th Ct E from 74th Place E to Woodlawn Cir W	New Sidewalk	$9,450	$53,550	$0	$0	$0	**$63,000**
TR01470	59th St W from Manatee Ave W to 6th Ave NW	New Sidewalk	$0	$0	$58,950	$334,050	$0	**$393,000**
5400038	5th Ave NW from 71st St NW to 75th St NW	New Sidewalk	$110,543	$0	$0	$0	$0	**$110,543**
TR01554	61st Ave E from 1st St E to 5th St E	New Sidewalk	$0	$18,000	$102,000	$0	$0	**$120,000**
5400039	67th St W from Manatee Ave W to 5th Ave NW	New Sidewalk	$210,690	$0	$0	$0	$0	**$210,690**
5400037	7th Ave NW from 75th St NW to 71st St NW	New Sidewalk	$72,250	$0	$0	$0	$0	**$72,250**
5400040	83rd St NW from 13th Ave Dr NW to 17th Ave NW	New Sidewalk	$73,916	$0	$0	$0	$0	**$73,916**
TR01564	Cape Vista Dr from Cortez Rd to 38th Ave W	New Sidewalk	$0	$25,650	$145,350	$0	$0	**$171,000**
TR01565	Case Ave from Cornell Rd to Tulane Rd	New Sidewalk	$2,700	$15,300	$0	$0	$0	**$18,000**
TR01541	Whitefield Ave from 15th ST E to 9th Ave E	New Sidewalk	$30,000	$170,000	$0	$0	$0	**$200,000**
TR01747	Wilmerling Ave (65th Ave E) from 5th St E to End of Rd	New Sidewalk	$0	$0	$22,950	$130,050	$0	**$153,000**
ITS								
6106761	ITS - Fiber 15th St E Segment 2A 63rd Ave E to 60th Ave Dr E	Align ITS with FDOT	$0	$0	$111,407	$0	$0	**$111,407**
6106861	ITS - Fiber 15th St E Segment 2B 60th Ave Dr to 56th Ave Dr E	Align ITS with FDOT	$0	$252,448	$0	$0	$0	**$252,448**
6106762	ITS - Fiber 15th St E Segment 2C 56th Ave DR E to 52nd Ave E	Align ITS with FDOT	$81,808	$0	$0	$0	$0	**$81,808**
TOTAL			**$28,055,240**	**$3,778,433**	**$1,242,229**	**$2,046,350**	**$0**	**$35,122,252**

Source: Manatee County Adopted Capital Improvement Plan, FY 2023-2027

Table E-7

Debt Service Fund 221 – Revenue Refunding & Improvement Bond, Series 2022

Year	Principal	Interest Rate	Interest Payment	Total Payment	Impact Fee Portion	Total Less Impact Fees
2023	$5,280,000	5.000%	$10,901,479	$16,181,479	$2,088,185	$14,093,294
2024	$5,750,000	5.000%	$10,145,900	$15,895,900	$2,088,737	$13,807,163
2025	$6,040,000	5.000%	$9,858,400	$15,898,400	$2,089,627	$13,808,773
2026	$6,650,000	5.000%	$9,556,400	$16,206,400	$2,090,072	$14,116,328
2027	$6,950,000	5.000%	$9,223,900	$16,173,900	$2,089,923	$14,083,977
2028	$6,985,000	5.000%	$8,876,400	$15,861,400	$2,089,034	$13,772,366
2029	$7,460,000	5.000%	$8,527,150	$15,987,150	$2,087,254	$13,899,896
2030	$9,950,000	5.000%	$8,154,150	$18,104,150	$2,087,403	$16,016,747
2031	$10,365,000	5.000%	$7,656,650	$18,021,650	$2,089,182	$15,932,468
2032	$6,405,000	5.000%	$7,138,400	$13,543,400	$2,089,330	$11,454,070
2033	$3,165,000	5.250%	$6,818,150	$9,983,150	$0	$9,983,150
2034	$4,440,000	5.250%	$6,651,988	$11,091,988	$0	$11,091,988
2035	$4,675,000	5.250%	$6,418,888	$11,093,888	$0	$11,093,888
2036	$4,915,000	5.250%	$6,173,450	$11,088,450	$0	$11,088,450
2037	$5,175,000	5.250%	$5,915,413	$11,090,413	$0	$11,090,413
2038	$5,445,000	5.000%	$5,643,725	$11,088,725	$0	$11,088,725
2039	$5,715,000	5.000%	$5,371,475	$11,086,475	$0	$11,086,475
2040	$6,005,000	5.000%	$5,085,725	$11,090,725	$0	$11,090,725
2041	$6,305,000	5.250%	$4,785,475	$11,090,475	$0	$11,090,475
2042	$6,640,000	4.000%	$4,454,463	$11,094,463	$0	$11,094,463
2043	$6,900,000	4.000%	$4,188,863	$11,088,863	$0	$11,088,863
2044	$7,175,000	5.250%	$3,912,863	$11,087,863	$0	$11,087,863
2045	$7,550,000	5.250%	$3,536,175	$11,086,175	$0	$11,086,175
2046	$7,950,000	5.250%	$3,139,800	$11,089,800	$0	$11,089,800
2047	$8,370,000	5.250%	$2,722,425	$11,092,425	$0	$11,092,425
2048	$8,810,000	4.000%	$2,283,000	$11,093,000	$0	$11,093,000
2049	$9,165,000	4.000%	$1,930,600	$11,095,600	$0	$11,095,600
2050	$12,525,000	4.000%	$1,564,000	$14,089,000	$0	$14,089,000
2051	$13,025,000	4.000%	$1,063,000	$14,088,000	$0	$14,088,000
2052	$13,550,000	4.000%	$542,000	$14,092,000	$0	$14,092,000
Totals	**$219,335,000**	**4.850%**	**$172,240,304**	**$391,575,304**	**$20,888,746**	**$370,686,557**
Total Remaining (2023-2052); excluding Impact Fees						**$370,686,557**
Years Remaining (2023-2052)						**30**
Portion for Transportation Capacity					**47.4%**	**$175,705,428**

Source: Manatee County Financial Management Department

Table E-8

Florida Department of Transportation, District 1 – Manatee County Work Program FY 2010 to FY 2019

ID	Description	Wkmx Description	2010	2011	2012	2013	2014	2015	2016	2017	2018	2019	Total
196022-3	SR 64 FROM E OF LENA ROAD TO LAKEWOOD RANCH BLVD	ADD LANES & RECONSTRUCT	$1,123,508	$72,960	$0	$0	$0	$0	$0	$0	$0	$0	**$1,196,468**
196022-5	SR 64 @ RYE ROAD	ROUNDABOUT	$0	$0	$0	$0	$0	$0	$1,174,081	$107,862	$5,720,032	$206,922	**$7,208,897**
196022-6	SR 64 AT LORRAINE ROAD	INTERSECTION IMPROVEMENT	$0	$0	$0	$0	$0	$0	$47,388	$9,524	$7,141	$1,068,918	**$1,132,971**
196022-7	SR 64 AT GREYHAWK BOULEVARD INTERSECTION IMPROVEMENTS	INTERSECTION IMPROVEMENT	$0	$0	$0	$0	$0	$0	$0	$0	$5,775	$1,137,647	**$1,143,422**
196091-1	US 41 (CORTEZ ROAD) AT US 41 BUSINESS AND AT 44TH AVENUE EAST	ADD LANES & RECONSTRUCT	$62,321	$45,578	$34,416	$0	$0	$0	$0	$0	$0	$0	**$142,315**
196114-3	SR 45 (US 41/TAMIAMI TRAIL) AT PINEY POINT RD AND DOCK ST (PORT MANATEE)	INTERSECTION IMPROVEMENT	$0	$0	$5,097	$672,247	$156,659	$9,319,999	$486,472	$421,452	$0	$0	**$11,061,926**
196121-1	SR 70 FROM W OF I-75 TO LAKEWOOD RANCH BLVD	ADD LANES & RECONSTRUCT	$0	$0	$0	$42,294	$0	$0	$0	$0	$0	$0	**$42,294**
207271-1	MANATEE CO. TD COMMISSION TRIP AND EQUIPMENT GRANT	TD COMMISSION - CAPITAL	$413,194	$417,910	$428,560	$0	$0	$0	$0	$0	$0	$0	**$1,259,664**
207271-2	MANATEE CO. LCB ASSISTANCE COMMISSION TD	TD COMMISSION - CAPITAL	$23,380	$23,488	$23,496	$0	$0	$0	$0	$0	$0	$0	**$70,364**
207271-3	MANATEE VOLUNTARY DOLLAR COMMISSION TD	TD COMMISSION - CAPITAL	$305	$364	$214	$0	$0	$0	$0	$0	$0	$0	**$883**
404599-2	MANATEE COUNTY MCAT FTA SECTION 5309	CAPITAL FOR FIXED ROUTE	$0	$15,948,237	$0	$0	$0	$0	$0	$0	$0	$0	**$15,948,237**
410148-1	MANATEE COUNTY FTA SECTION 5307 CAPITAL ASSISTANCE	CAPITAL FOR FIXED ROUTE	$1,100,000	$3,676,568	$0	$7,290,149	$2,843,935	$3,002,710	$3,307,531	$3,434,752	$3,498,891	$3,624,727	**$31,779,263**
410895-1	MANATEE COUNTY AREA TRANSIT - OPERATING ASSISTANCE - CORRIDOR	URBAN CORRIDOR IMPROVEMENTS	$535,000	$696,394	$379,603	$749,830	$288,336	$478,775	$484,220	$756,831	$729,074	$813,451	**$5,911,514**
412673-1	MANATEE COUNTY TRAFFIC SIGNALS REIMBURSEMENT	TRAFFIC SIGNALS	$123,905	$130,987	$134,937	$141,766	$145,995	$159,526	$292,751	$435,827	$453,672	$476,819	**$2,496,185**
413639-1	BRADENTON TRAFFIC SIGNALS REIMBURSEMENT	TRAFFIC SIGNALS	$53,678	$55,281	$56,946	$58,653	$60,403	$62,807	$123,120	$185,604	$190,926	$197,608	**$1,045,026**
413640-1	HOLMES BEACH TRAFFIC SIGNALS REIMBURSEMENT	TRAFFIC SIGNALS	$2,333	$2,404	$2,475	$2,550	$2,626	$2,705	$6,080	$13,700	$14,042	$14,468	**$63,383**
413642-1	PALMETTO TRAFFIC SIGNALS REIMBURSEMENT	TRAFFIC SIGNALS	$16,336	$17,480	$18,006	$18,546	$19,100	$20,115	$32,832	$49,631	$50,876	$52,952	**$295,874**
414099-1	SR 789 AT VARIOUS LOCATIONS	ADD RIGHT TURN LANE(S)	$526	$0	$0	$0	$0	$0	$0	$0	$0	$0	**$526**
414506-2	SR 70 FROM LORRAINE RD TO CR 675/WATERBURY ROAD	PD&E/EMO STUDY	$0	$0	$0	$0	$0	$0	$12,483	$5,328,180	$39,110	$93,558	**$5,473,331**
415227-1	MANATEE CO RFP DEVEL FOR AUTOMATED TRAFFIC CONTROL SYSTEM	PRELIMINARY ENGINEERING	$0	$0	$0	$13,718	$0	$0	$0	$0	$0	$0	**$13,718**
416119-1	AUTOMATED TRAFFIC MANAGEMENT SYSTEM	TRAFFIC CONTROL DEVICES/SYSTEM	$252,776	$948,678	$29,258	$17,510	$0	$0	$0	$0	$0	$0	**$1,248,222**
416120-1	SR 64 FR W OF CARLTON ARMS BLVD TO I-75	ADD LANES & RECONSTRUCT	$646,268	$429,201	$13,948,816	$160,238	$285,420	$20,610	$106	$164	$0	$0	**$15,490,823**
416236-1	BRADENTON SIDEWALKS TO SCHOOLS	SIDEWALK	$30,000	$0	$0	$0	$0	$0	$0	$0	$0	$0	**$30,000**
417607-1	SR 64 (MANATEE AVE) AT 67TH STREET WEST	INTERSECTION IMPROVEMENT	$10,191	$0	$0	$0	$0	$0	$0	$0	$0	$0	**$10,191**
420875-1	HABEN BOULEVARD AT 12TH AVENUE EAST	ROUNDABOUT	$0	$366,459	$0	$0	$0	$0	$0	$0	$0	$0	**$366,459**
420876-1	10TH STREET WEST AT 14TH AVENUE WEST	ADD TURN LANE(S)	$449,055	$0	$0	$0	$0	$0	$0	$0	$0	$0	**$449,055**
420878-1	US 41 BUSINESS AT 8TH AVE, 9TH AVE, AND 17TH AVENUE	TRAFFIC SIGNAL UPDATE	$449,750	$13,497	$73	$0	$0	$0	$0	$0	$0	$0	**$463,320**
422603-1	US 301 FROM ERIE ROAD TO CR 675 (RUTLAND ROAD)	ADD LANES & RECONSTRUCT	$269,969	$0	$0	$0	$0	$0	$0	$0	$0	$0	**$269,969**
422652-1	US 41 BUS AT 12TH AVENUE WEST	TRAFFIC SIGNAL UPDATE	$145,431	$2,944	$0	$0	$0	$0	$0	$0	$0	$0	**$148,375**
422654-1	SR 70 (15TH ST E) AT 9TH AVENUE EAST AND 7TH AVENUE EAST	TRAFFIC SIGNAL UPDATE	$200,655	$10,723	$0	$0	$0	$0	$0	$0	$0	$0	**$211,378**
422724-1	PORT MANATEE CONNECTOR FROM US 41 TO I-75	PD&E/EMO STUDY	$59,631	$121,569	$2,379,493	$44,580	$8,386	$860	$798	$0	$0	$0	**$2,615,317**
422759-1	DOWNTOWN MOBILITY STUDY	CORRIDOR/SUBAREA PLANNING	$301,334	$0	$0	$0	$0	$0	$0	$0	$0	$0	**$301,334**
423665-1	10TH STREET WEST AT 10TH AVENUE WEST	ADD LEFT TURN LANE(S)	$0	$244,482	$0	$0	$0	$0	$0	$0	$0	$0	**$244,482**
424436-1	SR 64 (MANATEE AVE) FROM SR 789 TO EAST OF SR 64 BRIDGE	PD&E/EMO STUDY	$713	$466	$344	$0	$0	$0	$9,686	$176	$0	$0	**$11,385**
424813-1	US 301 AT COLONY COVE DRIVE	INTERSECTION IMPROVEMENT	$39,100	$84,030	$0	$0	$0	$0	$0	$0	$0	$0	**$123,130**
425134-1	US 301 AT 13TH AVENUE	TRAFFIC OPS IMPROVEMENT	$56,308	$5,672	$0	$0	$0	$0	$0	$0	$0	$0	**$61,980**
425530-1	SR 684 (CORTEZ ROAD) AT 43RD STREET WEST	TRAFFIC SIGNAL UPDATE	$0	$286,710	$0	$0	$0	$0	$0	$0	$0	$0	**$286,710**
425531-1	SR 684 (CORTEZ ROAD) AT 26TH STREET WEST	TRAFFIC SIGNAL UPDATE	$0	$504	$396,016	$0	$0	$0	$0	$0	$0	$0	**$396,520**
425532-1	SR 684 (CORTEZ ROAD) AT 59TH STREET WEST	TRAFFIC SIGNAL UPDATE	$0	$0	$274,091	$0	$0	$0	$0	$0	$0	$0	**$274,091**
425894-1	MANATEE COUNTY MCAT	PARK AND RIDE LOTS	$102,750	$0	$0	$0	$0	$0	$0	$0	$0	$0	**$102,750**
426021-1	MANATEE COUNTY TRAFFIC SIGNAL RETIMING	TRAFFIC CONTROL DEVICES/SYSTEM	$1,215,029	$0	$0	$0	$0	$0	$0	$0	$0	$0	**$1,215,029**
426635-1	MANATEE COUNTY ATMS PHASE II	TMC SOFTWARE & SYSTEM INTEGRAT	$6,011,235	$44,571	$45,349	$2,119	$1,094	$0	$0	$0	$0	$0	**$6,104,368**
426647-1	21ST AVENUE WEST FROM 26TH STREET WEST TO 27TH STREET WEST	SIDEWALK	$11,312	$0	$0	$0	$0	$0	$0	$0	$0	$0	**$11,312**
426648-1	27TH STREET WEST FROM 23RD AVENUE WEST TO 22ND AVENUE WEST	SIDEWALK	$23,861	$0	$0	$0	$0	$0	$0	$0	$0	$0	**$23,861**
426651-1	23RD AVENUE WEST FROM 26TH STREET WEST TO 27TH STREET WEST	SIDEWALK	$7,544	$0	$0	$0	$0	$0	$0	$0	$0	$0	**$7,544**
426652-1	21ST AVENUE WEST FROM 30TH STREET WEST TO 34TH STREET WEST	SIDEWALK	$56,084	$0	$0	$0	$0	$0	$0	$0	$0	$0	**$56,084**
426654-1	85TH STREET FROM GULF DRIVE TO MARINA DRIVE	SIDEWALK	$19,046	$0	$0	$0	$0	$0	$0	$0	$0	$0	**$19,046**
426657-1	PALM DRIVE FROM 66TH STREET TO 85TH STREET	SIDEWALK	$12,473	$0	$0	$0	$0	$0	$0	$0	$0	$0	**$12,473**
426659-1	GULF DRIVE FROM 57TH STREET TO 84TH STREET	SIDEWALK	$11,718	$0	$0	$0	$0	$0	$0	$0	$0	$0	**$11,718**
426660-1	HOLMES BOULEVARD FROM 54TH STREET TO 66TH STREET	SIDEWALK	$27,851	$0	$0	$0	$0	$0	$0	$0	$0	$0	**$27,851**
426663-1	GULF FRONT PARK FROM PALM AVENUE TO WILLOW AVENUE	SIDEWALK	$20,434	$0	$0	$0	$0	$0	$0	$0	$0	$0	**$20,434**
426666-1	NORTH BAY BOULEVARD FROM HIBISCUS ROAD TO NORTH SHORE DRIVE	SIDEWALK	$49,059	$0	$0	$0	$0	$0	$0	$0	$0	$0	**$49,059**
426667-1	GULF DRIVE FROM SPRING AVENUE TO PINE AVENUE	SIDEWALK	$8,305	$0	$0	$0	$0	$0	$0	$0	$0	$0	**$8,305**
426734-1	SR 789 CORRIDOR FROM SOUTH OF 2ND TO S OF SR 684 (CORTEZ RD)	SIDEWALK	$331,759	$0	$0	$0	$0	$0	$0	$0	$0	$0	**$331,759**
426922-1	GULF FRONT PARK SIDE WALK EXTENSION FROM MAPLE AVE TO OAK AVE	SIDEWALK	$8,122	$0	$0	$0	$0	$0	$0	$0	$0	$0	**$8,122**
427193-1	SR 789 (GULF DRIVE) FROM 2ND STREET NORTH TO SR 684 (CORTEZ RD)	SIDEWALK	$80,528	$0	$0	$0	$0	$0	$0	$0	$0	$0	**$80,528**
427297-1	SR 70 AT LOCKWOOD RIDGE ROAD	INTERSECTION IMPROVEMENT	$0	$104,041	$53,492	$634,778	$7,008	$0	$0	$0	$0	$0	**$799,319**

Table E-8 (continued)

Florida Department of Transportation, District 1 – Manatee County Work Program FY 2010 to FY 2019

ID	Description	Wkmx Description	2010	2011	2012	2013	2014	2015	2016	2017	2018	2019	Total
427298-1	US 41 AT SR 70 (53RD AVENUE W)	TRAFFIC SIGNAL UPDATE	$51	$110,482	$82,799	$119,603	$422,478	$78,481	$30,756	$19	$0	$0	**$844,669**
427307-1	US 41 (SR 45) AT 57TH AVENUE WEST	INTERSECTION IMPROVEMENT	$102	$78,158	$67,578	$1,539	$375,101	$4,858	$2,878	$0	$0	$0	**$530,214**
427790-1	ITS DEVICES ELECTRIC	OTHER ITS	$0	$0	$0	$0	$0	$5,384	$14,509	$13,704	$13,995	$15,119	**$62,711**
427951-1	SR 684 (CORTEZ ROAD) AT 5TH STREET WEST	ADD TURN LANE(S)	$0	$0	$221,748	$0	$0	$0	$0	$0	$0	$0	**$221,748**
427995-1	SR 43 (US 301) FROM CR 675 TO MOCCASIN WALLOW RD	ADD LANES & RECONSTRUCT	$0	$1,939,329	$442,824	$86,680	$1,011,287	$7,584,710	$499,358	$95,385	$74,440	$0	**$11,734,013**
428122-1	MANATEE COUNTY AT ORANGE RIDGE BULLOCK ELEMENTARY	SIDEWALK	$224,737	$27,138	$0	$0	$0	$0	$0	$0	$0	$0	**$251,875**
428262-1	MANATEE COUNTY SCHOOLS BICYCLE EQUIPMENT	PURCHASE VEHICLES/EQUIPMENT	$10,516	$24,378	$0	$0	$0	$0	$0	$0	$0	$0	**$34,894**
428910-1	SR 64 (MANATEE AVE) FROM GULF DRIVE TO SR 789 (EAST BAY DR)	SIDEWALK	$0	$63,449	$28,266	$0	$0	$0	$0	$0	$0	$0	**$91,715**
428911-1	SR 789 FROM 31ST STREET TO SOUTH OF SR 64	SIDEWALK	$0	$78,053	$4,754	$0	$0	$0	$0	$0	$0	$0	**$82,807**
429496-1	US 41/SR 45 AT 69TH AVENUE W	TRAFFIC SIGNAL UPDATE	$0	$56	$119,941	$53,261	$427,941	$6,205	$27,160	$0	$0	$0	**$634,564**
429499-1	SR 70 FROM 26TH AVE EAST TO 24TH AVE EAST	SIDEWALK	$0	$10,581	$86,590	$12,698	$2,264	$219	$0	$0	$0	$0	**$112,352**
429499-2	SR 70 FROM 26TH AVE EAST TO 24TH AVE EAST	SIDEWALK	$0	$1,096	$0	$0	$29,004	$246,600	$1,607	$0	$0	$0	**$278,307**
429503-1	US 41 / SR 45 AT 60TH AVE W	TRAFFIC SIGNAL UPDATE	$0	$0	$99,917	$65,719	$577,059	$122,853	$2,342	$0	$0	$0	**$867,890**
429504-1	US 41 / SR 45 AT BAYSHORE PKWY	TRAFFIC SIGNAL UPDATE	$0	$0	$33,027	$67,245	$28,556	$615,736	$47,772	$8,054	$0	$0	**$800,390**
429526-1	US 41 / SR 45 AT SR 684 (CORTEZ RD)	INTERSECTION IMPROVEMENT	$0	$10,491	$109,848	$2,092,473	$72,641	$110,110	$0	$0	$0	$0	**$2,395,563**
429866-1	14TH AVENUE WEST AT 17TH STREET WEST	INTERSECTION IMPROVEMENT	$0	$0	$0	$0	$0	$0	$472,170	$0	$122	$96	**$472,388**
429867-1	SR 684 AT 86TH STREET WEST	TRAFFIC SIGNAL UPDATE	$0	$0	$0	$0	$391,998	$75	$201	$38	$0	$0	**$392,312**
429871-1	57TH ST E AT SR 64	INTERSECTION IMPROVEMENT	$0	$0	$0	$0	$0	$0	$274,923	$38	$0	$0	**$274,961**
429873-1	US 41 / US 301 AT HABEN BLVD	TRAFFIC SIGNAL UPDATE	$0	$0	$0	$237,664	$726	$0	$51	$0	$0	$0	**$238,441**
430057-1	MANATEE COUNTY TRAFFIC SIGNAL RETIMING - PHASE II	TRAFFIC CONTROL DEVICES/SYSTEM	$0	$864,956	$0	$0	$0	$0	$0	$0	$0	$0	**$864,956**
430142-1	US 41 MAST ARM REPAIRS	TRAFFIC SIGNAL UPDATE	$0	$4,072	$0	$0	$0	$0	$0	$0	$0	$0	**$4,072**
430204-1	SR 684 FROM SR 789 (GULF DRIVE) TO 123RD STREET WEST	PD&E/EMO STUDY	$0	$0	$0	$1,518,720	$46,479	$71,255	$541,912	$147,916	$187,464	$29,952	**$2,543,698**
430847-1	MANATEE SARASOTA TMC ACCOUSTICAL PANELS	TRAFFIC MANAGEMENT CENTERS	$0	$0	$43,724	$0	$0	$0	$0	$0	$0	$0	**$43,724**
430861-1	SR 64 AT 66TH STREET COURT E	INTERSECTION IMPROVEMENT	$0	$17,041	$208	$49,987	$2,635	$407,893	$20,924	$0	$0	$0	**$498,688**
430920-1	PALMETTO ELEMENTARY SRTS SAFETY SIDEWALKS	SIDEWALK	$0	$0	$28,610	$39,838	$187,799	$0	$0	$0	$0	$0	**$256,247**
430930-1	SR 62 AT CR 39	INTERSECTION IMPROVEMENT	$0	$0	$11,055	$74,441	$718,815	$9,260	$0	$0	$0	$0	**$813,571**
431019-1	SR 70 AT LAKEWOOD RANCH BLVD	TRAFFIC SIGNAL UPDATE	$0	$0	$0	$0	$420,872	$2,807	$65	$0	$0	$0	**$423,744**
431020-1	CR 789 (GULF DRIVE) AT MARINA DRIVE	TRAFFIC SIGNAL UPDATE	$0	$0	$0	$0	$138,239	$1,591	$66	$0	$0	$0	**$139,896**
431350-1	15TH STREET EAST FROM TALLEVAST ROAD TO US 41	PD&E/EMO STUDY	$0	$0	$0	$1,000,452	$450,708	$40,270	$64,009	$7,323	$0	$0	**$1,562,762**
431350-2	15TH ST E/301 BLVD E FROM TALLEVAST RD TO US 41	ADD LANES & RECONSTRUCT	$0	$0	$0	$0	$0	$0	$5,264,214	$16,315	$10,604	$1,053,769	**$6,344,902**
432208-1	MANATEE COUNTY JPA MISCELLANEOUS SIGNAL WORK	TRAFFIC CONTROL DEVICES/SYSTEM	$0	$0	$65,436	$99,291	$0	$0	$0	$0	$0	$0	**$164,727**
432522-1	44TH AVE EAST 1ST STREET EAST 15TH STREET EAST	ADD LANES & RECONSTRUCT	$0	$0	$0	$1,530,150	$0	$0	$0	$0	$0	$0	**$1,530,150**
432661-1	SR 45 (US 41) AT MOCCASIN WALLOW ROAD	TRAFFIC SIGNALS	$0	$0	$0	$1,182,796	$108,643	$22,372	$0	$0	$0	$0	**$1,313,811**
432863-1	MANATEE COUNTY AREA TRANSIT (MCAT) CAPITAL IMPROVEMENT	CAPITAL FOR FIXED ROUTE	$0	$0	$0	$217,178	$0	$0	$0	$0	$0	$0	**$217,178**
433142-1	10TH AVENUE FROM RIVERSIDE DRIVE TO 17TH STREET	PD&E/EMO STUDY	$0	$0	$0	$0	$0	$0	$0	$1,003,261	$8,094	$6,653	**$1,018,008**
433213-1	MORGAN JOHNSON ROAD FROM RIVERSIDE TERRACE TO SR 64	SIDEWALK	$0	$0	$0	$0	$0	$0	$131,422	$58,907	$3,271	$7,174	**$200,774**
433213-2	MORGAN JOHNSON FROM 18TH AVENUE EAST TO 13TH AVENUE EAST	SIDEWALK	$0	$0	$0	$0	$0	$0	$0	$0	$0	$493,839	**$493,839**
433369-1	US 301 AT 25TH DRIVE EAST	INTERSECTION IMPROVEMENT	$0	$0	$0	$88	$77,980	$267,905	$20,944	$0	$0	$0	**$366,917**
433372-1	SR 70 FROM 6TH STREET EAST TO 9TH STREET EAST	INTERSECTION IMPROVEMENT	$0	$0	$0	$0	$80,307	$431,207	$20,126	$2,913	$0	$0	**$534,553**
433547-1	US 41 BUSINESS AT 3RD AVENUE WEST	ADD RIGHT TURN LANE(S)	$0	$0	$0	$0	$0	$0	$183,942	$11,467	$4,717	$0	**$200,126**
433547-2	3RD AVENUE WEST AT US 41 BUSINESS	ADD RIGHT TURN LANE(S)	$0	$0	$0	$0	$0	$0	$0	$0	$248,062	$16,562	**$264,624**
433549-1	US 41 AT US 301 (10TH STREET E) IN PALMETTO	SIDEWALK	$0	$0	$0	$0	$0	$43,029	$1,424	$0	$0	$0	**$44,453**
433592-1	US 41 FROM 69TH AVE (BAY DRIVE) TO CORTEZ ROAD	SIDEWALK	$0	$0	$0	$0	$0	$0	$639,686	$964,519	$174,034	$1,464,531	**$3,242,770**
433593-1	US 41 BUSINESS FROM GREEN BRIDGE TO RIVERSIDE DRIVE	BIKE LANE/SIDEWALK	$0	$0	$0	$0	$38,954	$219,809	$1,237,029	$97,533	$0	$0	**$1,593,325**
434019-1	PORT MANATEE COMMERCE CENTER ILC (PALMETTO)	INTERMODAL HUB CAPACITY	$0	$0	$0	$175,000	$75,000	$0	$0	$0	$0	$0	**$250,000**
434451-1	CENTRAL MANATEE NETWORK ALTERNATIVES ANALYSIS	CORRIDOR/SUBAREA PLANNING	$0	$0	$0	$0	$1,626,708	$48	$79	$0	$0	$0	**$1,626,835**
434451-2	CENTRAL MANATEE NETWORK ALTERNATIVES ANALYSIS PHASES II AND III	CORRIDOR/SUBAREA PLANNING	$0	$0	$0	$0	$0	$0	$0	$1,493,452	$460,943	$19,620	**$1,974,015**
434505-1	US 301 AT SR 70	INTERSECTION IMPROVEMENT	$0	$0	$0	$0	$0	$26,875	$143,466	$724,890	$46,031	$13,869	**$955,131**
434517-2	MANATEE CO./SAR-BRADENTON UZA FTA SECTION 5339 CAPITAL ASSISTANCE	CAPITAL FOR FIXED ROUTE	$0	$0	$0	$0	$404,136	$408,943	$416,326	$389,591	$399,487	$547,277	**$2,565,760**
434943-1	SR 789 FROM 27TH ST TO SR 64	SIDEWALK	$0	$0	$0	$0	$202,485	$476,997	$63,999	$2,639	$0	$0	**$746,120**
435090-1	SR 70 (15TH STREET E) AT 9TH AVE E	ROUNDABOUT	$0	$0	$0	$0	$0	$330,824	$371,408	$630,824	$2,959,216	$91,793	**$4,384,065**
435113-1	63RD AVE E AT 33RD STREET E	ADD LEFT TURN LANE(S)	$0	$0	$0	$0	$0	$251,426	$17,369	$1,468	$0	$0	**$270,263**
435120-1	ELLENTON GILLETTE RD AT 69TH ST E	ADD LEFT TURN LANE(S)	$0	$0	$0	$0	$0	$215,041	$14,068	$835,280	$108,604	$1,770	**$1,174,763**
435136-1	SR 64 FROM MARTINIQUE DR TO EAST OF 107TH CT WEST	BIKE LANE/SIDEWALK	$0	$0	$0	$0	$0	$0	$16,116	$43,657	$606,394	$16,811	**$682,978**
435286-1	US 301 AT ERIE RD/OLD TAMPA HWY	ADD LEFT TURN LANE(S)	$0	$0	$0	$0	$0	$0	$0	$6,953	$224,552	$734,404	**$965,909**
435369-1	MOCCASIN WALLOW ROAD AT US 41	ADD TURN LANE(S)	$0	$0	$0	$0	$0	$269,203	$10,768	$61,812	$10,680	$401,059	**$753,522**
435770-1	PORT MANATEE MASTER PLAN UPDATE	PTO STUDIES	$0	$0	$0	$0	$149,526	$0	$0	$0	$0	$0	**$149,526**

Table E-8 (continued)

Florida Department of Transportation, District 1 – Manatee County Work Program FY 2010 to FY 2019

ID	Description	Wkmx Description	2010	2011	2012	2013	2014	2015	2016	2017	2018	2019	Total
435834-1	UNIVERSITY PARKWAY FROM LAKEWOOD RANCH TO SARASOTA AIRPORT ENTRANCE	TRAFFIC OPS IMPROVEMENT	$0	$0	$0	$0	$0	$160,340	$0	$0	$0	$0	**$160,340**
436509-1	US 41 BUSINESS (9TH STREET WEST) FROM 3RD AVENUE TO MANATEE AVE (SR 64)	ADD RIGHT TURN LANE(S)	$0	$0	$0	$0	$0	$0	$342,794	$31,430	$884,827	$24,134	**$1,283,185**
436514-1	CITY OF BRADENTON SIDEWALKS TO SCHOOLS VARIOUS LOCATIONS	SIDEWALK	$0	$0	$0	$0	$0	$877,209	$94	$0	$0	$0	**$877,303**
436546-1	SR 70 FROM US 41 TO 540' EAST OF US 41	INTERSECTION IMPROVEMENT	$0	$0	$0	$0	$0	$0	$51,456	$16,080	$163,785	$0	**$231,321**
436551-2	SR 684 FROM EAST OF 123RD ST WEST TO EAST OF 119TH ST WEST	INTERSECTION IMPROVEMENT	$0	$0	$0	$0	$0	$0	$0	$1,588	$41,496	$3,212,350	**$3,255,434**
436802-1	ATMS BLUETOOTH SYSTEM AT VARIOUS LOCATIONS THROUGHOUT THE COUNTY	ATMS - ARTERIAL TRAFFIC MGMT	$0	$0	$0	$0	$0	$0	$473,368	$1,747	$0	$0	**$475,115**
436924-1	SR 70 @ 30TH STREET EAST	INTERSECTION IMPROVEMENT	$0	$0	$0	$0	$0	$0	$0	$0	$0	$467	**$467**
436954-1	ATMS PROJECT TRAVELER INFORMATION WEBSITE FOR THE RTMC	ATMS - ARTERIAL TRAFFIC MGMT	$0	$0	$0	$0	$0	$0	$300,000	$72	$11,990	$0	**$312,062**
436982-1	51ST STREET WEST AT 53RD AVENUE WEST	ADD TURN LANE(S)	$0	$0	$0	$0	$0	$0	$0	$0	$205,821	$3,843	**$209,664**
436983-1	BLACKSTONE PARK AT 14TH AVE W, 23RD ST W & BUSINESS 41 (VALENCIA DR)	SIDEWALK	$0	$0	$0	$0	$0	$0	$163,458	$3,263	$398,244	$22,907	**$587,872**
436986-1	SR 789/GULF OF MEXICO DR FROM BROADWAY ST TO LONGBOAT PASS BRIDGE	SIDEWALK	$0	$0	$0	$0	$0	$220	$169,350	$25,961	$0	$0	**$195,531**
437106-1	MANATEE/SARASOTA TMC OPS FUND COUNTY WIDE	OTHER ITS	$0	$0	$0	$0	$0	$0	$0	$286,000	$429,000	$429,000	**$1,144,000**
437145-1	SR 684 (CORTEZ ROAD) AT 43RD STREET WEST	ADD TURN LANE(S)	$0	$0	$0	$0	$0	$0	$0	$32,942	$240,317	$1,277	**$274,536**
438086-1	13TH AVENUE WEST AT US 301/US 41	ADD RIGHT TURN LANE(S)	$0	$0	$0	$0	$0	$0	$0	$0	$157,460	$1,680	**$159,140**
438870-1	MANATEE COUNTY SR 70 ASCT	ATMS - ARTERIAL TRAFFIC MGMT	$0	$0	$0	$0	$0	$0	$210,000	$644,700	$57	$42	**$854,799**
440324-1	ATMS FROM NORTHERN PART OF MANATEE COUNTY AT VARIOUS LOCATIONS	ATMS - ARTERIAL TRAFFIC MGMT	$0	$0	$0	$0	$0	$0	$0	$0	$800,045	$514	**$800,559**
440411-1	SARASOTA/MANATEE BARRIER ISLAND STUDY	TRAFFIC ENGINEERING STUDY	$0	$0	$0	$0	$0	$0	$0	$943,752	$1,065	$150,337	**$1,095,154**
440682-1	ELLENTON GILLETTE RD AT MENDOZA RD	TRAFFIC SIGNALS	$0	$0	$0	$0	$0	$0	$0	$0	$91,135	$1,738	**$92,873**
441032-1	SUNPASS TOLL PLAZA	ADD LANES & RECONSTRUCT	$0	$0	$0	$0	$0	$0	$0	$75,653	$0	$0	**$75,653**
442118-1	SR 45/USB 41 AT 26TH STREET	INTERSECTION IMPROVEMENT	$0	$0	$0	$0	$0	$0	$0	$0	$1,975	$157,925	**$159,900**
444049-1	US 41 FROM 63RD AVE W TO 53RD AVE W	TRAFFIC OPS IMPROVEMENT	$0	$0	$0	$0	$0	$0	$0	$0	$0	$264,201	**$264,201**
444429-1	SR 62 AT US 301 - REALIGNMENT STUDY	PD&E/EMO STUDY	$0	$0	$0	$0	$0	$0	$0	$0	$0	$208	**$208**
Total			**$14,598,183**	**$26,980,478**	**$19,657,007**	**$18,473,801**	**$11,887,303**	**$26,377,862**	**$18,241,157**	**$19,424,849**	**$19,677,466**	**$16,871,991**	**$192,190,097**
Total (5-year subtotals)						**Subtotal (2011-2014):**	**$91,596,772**				**Subtotal (2015-2019):**	**$100,593,325**	**$192,190,097**

Source: Florida Department of Transportation, District 1

Table E-9

Florida Department of Transportation, District 1 – Manatee County Work Program FY 2023 to FY 2027

ID	Description	Wkmx Description	2023	2024	2025	2026	2027	Total
4101481	Manatee County FTA Section 5307 Capital Assitance	Capital for Fixed-Route	$4,456,434	$4,902,077	$5,392,285	$5,931,513	$6,443,230	**$27,125,539**
4108951	Manatee County Area Transit - Operating Assistance - Corridor	Urban Corridor Improvements	$346,184	$346,184	$346,184	$346,184	$0	**$1,384,736**
4345172	Manatee Co./Sar-Bradenton UZA FTA Section 5309 Capital Assistance	Capital for Fixed-Route	$614,644	$676,108	$743,719	$818,091	$741,286	**$3,593,848**
4487161	Manatee County Area Transit - Operating Assistance - Pilot Project	Urban Corridor Improvements	$525,100	$525,100	$0	$0	$0	**$1,050,200**
4331422	10th Ave from Riverside Drive to 17th Street	Urban Corridor Improvements	$80,000	$0	$0	$0	$0	**$80,000**
4331421	10th Ave from Riverside Drive to 17th Street	PD&E/EMO Study	$774	$0	$0	$0	$0	**$774**
4313503	15th St E / 301 Blvd E from S of 56th Ave Dr E to S of 51st Ave E	Add Lanes & Reconstruct	$3,149,219	$7,282,897	$0	$0	$0	**$10,432,116**
4313504	15th St E / 301 Blvd E from S of 59th Ave Dr E to S of 56th Ave Dr E	Add Lanes & Reconstruct	$377,129	$1,038,183	$6,684,114	$0	$0	**$8,099,426**
4313505	15th St E / 301 Blvd E from S of 63rd Ave S of 59th Ave E	Add Lanes & Reconstruct	$433,024	$2,504,623	$0	$9,315,169	$0	**$12,252,816**
4313502	15th St E / 301 Blvd E from Tallevast Rd to US 41	Add Lanes & Reconstruct	$1,550	$0	$0	$0	$0	**$1,550**
4448074	3rd St W from 9th Ave to Manatee Ave	Traffic Ops Improvement	$1,893,636	$0	$0		$0	**$1,893,636**
4351132	63rd Ave E at 33rd Street E	Add Left Turn Lanes	$1,001,000	$0	$0	$0	$0	**$1,001,000**
4403241	ATMs from Northern part of Manatee County at various locations	ATMS - Arterial Traffic Mgmt	$1,001,008	$0	$0	$0	$0	**$1,001,008**
4466811	Barrier Island Complete Streets Improvements	PD&E/EMO Study	$0	$0	$1,251,000	$0	$0	**$1,251,000**
4448431	Bradenton-Palmetto Connector	PD&E/EMO Study	$1,322	$0	$0	$0	$0	**$1,322**
4136391	City of Brandenton TSMCA	Traffic Control Devices/System	$241,203	$261,873	$269,729	$283,215	$0	**$1,056,020**
4126421	City of Palmetto TSMCA	Traffic Control Devices/System	$60,571	$90,206	$92,912	$97,558	$0	**$341,247**
4404401	Ellenton Gillette Rd (CR 683) from Memphis Rd to Mendoza Rd	Sidewalk	$72,355	$0	$0	$0	$0	**$72,355**
4473002	Manatee County - Moccasin Wallow Road Expansion Segment 2	New Road Construction	$7,500,000	$0	$0	$0	$0	**$7,500,000**
4126731	Manatee County TSMCA	Traffic Control Devices/System	$617,334	$642,324	$661,593	$694,673	$375,214	**$2,991,138**
4414791	Manatee Elementary	Sidewalk	$735,100	$0	$0	$0	$0	**$735,100**
4442731	Manatee High School - Strts	Sidewalk	$703	$0	$0	$0	$0	**$703**
4371061	Manatee/Sarasota TMC OPS Fund County Wide	Other ITS	$858,000	$429,000	$429,000	$429,000	$0	**$2,145,000**
4448571	Palmetto Trails Network Plan	PD&E/EMO Study	$1,579	$0	$0	$0	$0	**$1,579**
4464501	Piney Point from US 41 to Reeder Rd	PD&E/EMO Study	$48,519	$0	$0	$0	$0	**$48,519**
4494831	Prine Elementry School - Safe Routes to School	Sidewalk	$0	$0	$0	$0	$402,000	**$402,000**
4497201	Signal and PED Facility Installations on US 41 at I-275	Intersection Improvement	$97,972	$0	$0	$0	$0	**$97,972**
4389921	Southern Parkway West from 43rd Street West to 26th Street West	Sidewalk	$0	$1,002,252	$0	$0	$0	**$1,002,252**
4453081	SR 43 (US 301) at SR 62	Add Lanes & Reconstruct	$4,318	$0	$0	$0	$0	**$4,318**
4335921	SR 45 (US 41) from 69th Ave (Bay Drive) to Cortez Road	Sidewalk	$878,397	$0	$0	$0	$0	**$878,397**
4335924	SR 45 (US 41) from 69th Ave (Bay Drive) to Cortez Road	Sidewalk	$4,376,518	$0	$0	$0	$0	**$4,376,518**
1960226	SR 64 at Lorraine Road	Intersection Improvement	$551,657	$4,689,974	$0	$0	$0	**$5,241,631**
4442101	SR 683 (US 301) at 51st Avenue East	Intersection Improvement	$1,924,669	$0	$0	$0	$0	**$1,924,669**
4442111	SR 683 (US 301) at 63rd Ave E	Intersection Improvement	$2,594,618	$0	$0	$0	$0	**$2,594,618**
4406881	SR 684 (Cortez Rd) from 86th/Palma Sola Blvd to Cape Vista Dr	Add Left Turn Lane(s)	$61,286	$0	$0	$0	$0	**$61,286**
4371451	SR 684 (Cortez Rd) at 43rd Street West	Add Turn Lanes	$3,779	$0	$0	$0	$0	**$3,779**
4365512	SR 684 from East of 123rd St West to East of 119th St West	Intersection Improvement	$51,027	$0	$0	$0	$0	**$51,027**
4302041	SR 684 from SR 789 (Gulf Drive) to 123rd Street West	PD&E/EMO Study	$4,068	$0	$0	$0	$0	**$4,068**
4145062	SR 70 from Lorraine Rd to CR 675/Waterbury Road	PD&E/EMO Study	$16,164,477	$0	$0	$0	$0	**$16,164,477**
4145067	SR 70 from Lorraine Road to Bournside Blvd	Add Lanes & Reconstruct	$78,522,137	$0	$0	$0	$0	**$78,522,137**
4366761	SR 789 (Longboat Key) from North Shore Rd to Coquina Park ENT	PD&E/EMO Study	$1,398	$0	$0	$0	$0	**$1,398**
4448071	Traffic Operations Improvements in Downtown Bradenton	Traffic Ops Improvement	$8,353	$0	$0	$0	$0	**$8,353**
4448073	US 41 Business from 4th Ave W to 6th Ave W	Traffic Ops Improvement	$527,790	$0	$0	$0	$0	**$527,790**
4440491	US 41 from 63rd Ave W to 53rd Ave W	Traffic Ops Improvement	$5,794	$0	$0	$0	$0	**$5,794**
4448072	US 41 from 10th Ave to Manatee Ave E	Traffic Ops Improvement	$2,130,547	$0	$0	$0	$0	**$2,130,547**
4466851	US 41 Upgrade ATSPM Compatibility Design-Build	Traffic Control Devices/System	$101,000	$1,505,460	$0	$0	$0	**$1,606,460**
Total			**$132,026,193**	**$25,896,261**	**$15,870,536**	**$17,915,403**	**$7,961,730**	**$199,670,123**

Source: Florida Department of Transportation, District 1

Table E-7

Average Motor Fuel Efficiency – Excluding Interstate Travel

Travel Vehicle Miles of Travel (VMT) @			
	22.9	**6.7**	
Other Arterial Rural	300,298,000,000	48,193,000,000	348,491,000,000
Other Rural	286,073,000,000	28,427,000,000	314,500,000,000
Other Urban	1,395,300,000,000	93,212,000,000	1,488,512,000,000
Total	***1,981,671,000,000***	***169,832,000,000***	***2,151,503,000,000***

Percent VMT

@ 22.9 mpg	@ 6.7 mpg
86%	14%
91%	9%
94%	6%
92%	**8%**

Fuel Consumed			
	Gallons @ 22.9 mpg	Gallons @ 6.7 mpg	
Other Arterial Rural	13,113,449,782	7,192,985,075	20,306,434,857
Other Rural	12,492,270,742	4,242,835,821	16,735,106,563
Other Urban	60,930,131,004	13,912,238,806	74,842,369,810
Total	***86,535,851,528***	***25,348,059,702***	***111,883,911,230***

Total Mileage and Fuel	
2,151,503	**miles (millions)**
111,884	**gallons (millions)**
19.23	**mpg**

Source: U.S. Department of Transportation, Federal Highway Administration, *Highway Statistics 2020*, Section V, Table VM-1
Annual Vehicle Distance Traveled in Miles and Related Data - 2020 by Highway Category and Vehicle Type
http://www.fhwa.dot.gov/policyinformation/statistics.cfm

Table E-8

Annual Vehicle Distance Traveled in Miles and Related Data (2020) – By Highway Category and Vehicle Type[1/]

Revised: December 2021 **TABLE VM-1**

YEAR	ITEM	LIGHT DUTY VEHICLES SHORT WB[(2)]	MOTOR-CYCLES	BUSES	LIGHT DUTY VEHICLES LONG WB[(2)]	SINGLE-UNIT TRUCKS[(3)]	COMBINATION TRUCKS	SUBTOTALS		ALL MOTOR VEHICLES
								ALL LIGHT VEHICLES[(2)]	SINGLE-UNIT 2-AXLE 6-TIRE OR MORE AND COMBINATION TRUCKS	
	Motor-Vehicle Travel (millions of vehicle-miles):									
2020	Interstate Rural	123,042	961	1,383	44,587	10,075	51,770	**167,629**	**61,845**	231,818
2020	Other Arterial Rural	207,498	2,205	2,056	92,800	17,686	30,507	**300,298**	**48,193**	352,752
2020	Other Rural	192,895	2,711	1,747	93,178	16,386	12,041	**286,073**	**28,427**	318,957
2020	All Rural	523,434	5,877	5,186	230,565	44,147	94,318	754,000	138,465	903,527
2020	Interstate Urban	317,721	2,787	2,728	101,725	23,450	47,014	**419,446**	**70,464**	495,425
2020	Other Urban	1,055,394	8,968	7,190	339,906	57,282	35,929	**1,395,300**	**93,212**	1,504,669
2020	All Urban	1,373,115	11,755	9,918	441,630	80,733	82,943	1,814,746	163,676	2,000,095
2020	Total Rural and Urban[(5)]	1,896,549	17,632	15,104	672,196	124,880	177,261	2,568,745	302,141	2,903,622
2020	Number of motor vehicles registered[(2)]	193,921,800	8,317,363	1,006,469	59,199,428	10,500,105	2,979,277	253,121,228	13,479,382	275,924,442
2020	Average miles traveled per vehicle	9,780	2,120	15,007	11,355	11,893	59,498	10,148	22,415	10,523
2020	Person-miles of travel (millions)[(4)]	3,161,448	21,237	320,202	1,142,850	124,880	177,261	4,304,298	302,141	4,947,878
2020	Fuel consumed (thousand gallons)	74,932,021	400,937	2,053,899	36,998,124	16,377,768	28,421,740	111,930,145	44,799,508	159,184,488
2020	Average fuel consumption per vehicle (gallons)	386	48	2,041	625	1,560	9,540	442	3,324	577
2020	Average miles traveled per gallon of fuel consumed	25.3	44.0	7.4	18.2	7.6	6.2	**22.9**	**6.7**	18.2

(1) The FHWA estimates national trends by using State reported Highway Performance and Monitoring System (HPMS) data, fuel consumption data (MF-21 and MF-27), vehicle registration data (MV-1, MV-9, and MV-10), other data such as the R.L. Polk vehicle data, and a host of modeling techniques.

(2) Light Duty Vehicles Short WB - passenger cars, light trucks, vans and sport utility vehicles with a wheelbase (WM) equal to or less than 121 inches. Light Duty Vehicles Long WB - large passenger cars, vans, pickup trucks, and sport/utility vehicles with wheelbases (WB) larger than 121 inches. All Light Duty Vehicles - passenger cars, light trucks, vans and sport utility vehicles regardless of wheelbase.

(3) Single-Unit - single frame trucks that have 2-Axles and at least 6 tires or a gross vehicle weight rating exceeding 10,000 lbs.

(4) For 2020 and 2019, the vehicle occupancy is estimated by the FHWA from the 2017 National Household Travel Survey (NHTS) and the annual R.L. Polk Vehicle registration data; For single unit truck and heavy trucks, 1 motor vehicle mile traveled = 1 person-mile traveled.

(5) VMT data are based on the latest HPMS data available; it may not match previous published results.

Appendix F
Multi-Modal Transportation Impact Fee:
Calculated Impact Fee Schedules

Appendix F: MMTIF - Calculated Impact Fee Schedules

This Appendix presents the detailed impact fee calculations for each land use in the Manatee County multi-modal transportation impact fee schedule.

- Table F-1: Calculated MMTIF Rates
- Table F-2: Comparison of calculated rates to current rates

Table F-1

Calculated Multi-Modal Transportation Impact Fee Schedule

	Equivalent Gasoline Tax						Unit Cost per Lane Mile:	$5,616,000					Interstate/Toll Facility Adjustment Factor:	19.7%	
	$$ per gallon to capital:	$0.212		City Revenues:	$0.001		Average PMC per Lane Mile:	12,700					Cost per PMC:	$442.20	$442.20
	Facility life (years):	25		County Revenues:	$0.070		Fuel Efficiency:	19.23 mpg							
	Interest rate:	3.01%		State Revenues:	$0.141		Effectivedays per year:	365							

ITE LUC	Land Use	Unit	Trip Rate	Trip Rate Source	Assessable Trip Length	Total Trip Length	Trip Length Source	Percent New Trips	% New Trips Source	Net VMT[1]	Person-Trip Factor	Net PMT	Total Multi-Modal Cost	Annual Capital Improvement Tax	Capital Improvement Credit	Net Multi-Modal Impact Fee
	RESIDENTIAL:															
210	Single Family Detached; 750 sq ft or less	du	3.16	Tiering Analysis (Appendix C)	6.62	7.12	FL Studies	100%	n/a	8.40	1.48	12.43	$5,497	$45	$783	**$4,714**
	Single Family Detached; 751 - 1,000 sq ft	du	4.52	Tiering Analysis (Appendix C)	6.62	7.12	FL Studies	100%	n/a	12.01	1.48	17.77	$7,863	$65	$1,131	**$6,732**
	Single Family Detached; 1,001 - 1,300 sq ft	du	5.76	Tiering Analysis (Appendix C)	6.62	7.12	FL Studies	100%	n/a	15.31	1.48	22.66	$10,020	$83	$1,444	**$8,576**
	Single Family Detached; 1,301 - 1,700 sq ft	du	7.03	Tiering Analysis (Appendix C)	6.62	7.12	FL Studies	100%	n/a	18.69	1.48	27.66	$12,229	$101	$1,757	**$10,472**
	Single Family Detached; 1,701 sq ft or more	du	8.26	Tiering Analysis (Appendix C)	6.62	7.12	FL Studies	100%	n/a	21.95	1.48	32.49	$14,368	$118	$2,052	**$12,316**
215	Single Family Attached/Townhome; 750 sq ft or less	du	2.67	Tiering Analysis (Appendix C)	6.62	7.12	Same as LUC 210	100%	n/a	7.10	1.48	10.51	$4,645	$38	$661	**$3,984**
	Single Family Attached/Townhome; 751 - 1,000 sq ft	du	3.83	Tiering Analysis (Appendix C)	6.62	7.12	Same as LUC 210	100%	n/a	10.18	1.48	15.07	$6,662	$55	$957	**$5,705**
	Single Family Attached/Townhome; 1,001 - 1,300 sq ft	du	4.88	Tiering Analysis (Appendix C)	6.62	7.12	Same as LUC 210	100%	n/a	12.97	1.48	19.20	$8,489	$70	$1,218	**$7,271**
	Single Family Attached/Townhome; 1,301 - 1,700 sq ft	du	5.96	Tiering Analysis (Appendix C)	6.62	7.12	Same as LUC 210	100%	n/a	15.84	1.48	23.44	$10,368	$85	$1,478	**$8,890**
	Single Family Attached/Townhome; 1,701 sq ft or more	du	7.00	Tiering Analysis (Appendix C)	6.62	7.12	Same as LUC 210	100%	n/a	18.61	1.48	27.54	$12,177	$100	$1,739	**$10,438**
220	Multi-Family; 750 sq ft or less	du	2.60	Tiering Analysis (Appendix C)	5.21	5.71	FL Studies	100%	n/a	5.44	1.48	8.05	$3,559	$30	$522	**$3,037**
	Multi-Family; 751 - 1,000 sq ft	du	3.72	Tiering Analysis (Appendix C)	5.21	5.71	FL Studies	100%	n/a	7.78	1.48	11.51	$5,093	$43	$748	**$4,345**
	Multi-Family; 1,001 - 1,300 sq ft	du	4.74	Tiering Analysis (Appendix C)	5.21	5.71	FL Studies	100%	n/a	9.92	1.48	14.68	$6,489	$54	$939	**$5,550**
	Multi-Family; 1,301 sq ft or more	du	5.78	Tiering Analysis (Appendix C)	5.21	5.71	FL Studies	100%	n/a	12.09	1.48	17.89	$7,913	$66	$1,148	**$6,765**
240	Mobile Home Park	du	4.17	FL Studies	4.60	5.10	FL Studies	100%	n/a	7.70	1.48	11.40	$5,040	$43	$748	**$4,292**
253	Congregate Care/Assisted Living Facility	du	2.33	Blend ITE 11th & FL Studies	3.08	3.58	FL Studies	72%	FL Studies	2.07	1.48	3.06	$1,358	$12	$209	**$1,149**
	NON-RESIDENTIAL:															
110	Light Industrial	1,000 sf	4.87	ITE 11th Edition	5.15	5.65	Same as LUC 710	92%	Same as LUC 710	9.26	1.48	13.70	$6,063	$51	$887	**$5,176**
140	Manufacturing	1,000 sf	4.75	ITE 11th Edition	5.15	5.65	Same as LUC 710	92%	Same as LUC 710	9.04	1.48	13.38	$5,914	$50	$870	**$5,044**
150	Warehouse	1,000 sf	1.71	ITE 11th Edition	5.15	5.65	Same as LUC 710	92%	Same as LUC 710	3.25	1.48	4.81	$2,129	$18	$313	**$1,816**
151	Mini-Warehouse	1,000 sf	1.46	Blend ITE 11th & FL Studies	3.51	4.01	Average of LUC 710 & Fig. C-2 (50k sq ft)	92%	Same as LUC 710	1.89	1.48	2.80	$1,239	$11	$191	**$1,048**

Table F-1 (continued)

Calculated Multi-Modal Transportation Impact Fee Schedule

ITE LUC	Land Use	Unit	Trip Rate	Trip Rate Source	Assessable Trip Length	Total Trip Length	Trip Length Source	Percent New Trips	% New Trips Source	Net VMT[1]	Person-Trip Factor	Net PMT	Total Multi-Modal Cost	Annual Capital Improvement Tax	Capital Improvement Credit	Net Multi-Modal Impact Fee
	NON-RESIDENTIAL:															
320	Lodging	room	3.35	ITE 11th Edition	4.34	4.84	FL Studies	77%	FL Studies	4.49	1.48	6.65	$2,942	$25	$435	**$2,507**
565	Day Care Center	1,000 sf	49.63	Blend ITE 11th & FL Studies	2.03	2.53	FL Studies	73%	FL Studies	29.53	1.48	43.70	$19,326	$184	$3,200	**$16,126**
610	Hospital	1,000 sf	10.77	ITE 11th Edition	6.62	7.12	Same as LUC 210	78%	Midpoint of LUC 310 & LUC 720 (App. C)	22.33	1.48	33.05	$14,613	$120	$2,087	**$12,526**
620	Nursing Home	1,000 sf	6.75	ITE 11th Edition	2.59	3.09	FL Studies	89%	FL Studies	6.25	1.48	9.25	$4,089	$37	$644	**$3,445**
710	Office & Other Services	1,000 sf	10.84	ITE 11th Edition	5.15	5.65	FL Studies	92%	FL Studies	20.62	1.48	30.52	$13,496	$113	$1,965	**$11,531**
822	Commercial/Shopping Center less than 40,000 sflga	1,000 sfgla	54.45	ITE 11th Edition	1.48	1.98	Appendix C: Fig. C-2 (19k sfgla)	48%	Appendix C: Fig. C-3 (19k sfgla)	15.53	1.48	22.98	$10,164	$104	$1,809	**$8,355**
821	Commercial/Shopping Center 40,000 to 150,000 sfgla	1,000 sfgla	67.52	ITE 11th Edition	1.94	2.44	Appendix C: Fig. C-2 (59k sfgla)	57%	Appendix C: Fig. C-3 (59k sfgla)	29.98	1.48	44.37	$19,619	$189	$3,287	**$16,332**
820	Commercial/Shopping Center greater than 150,000 sfgla	1,000 sfgla	37.01	ITE 11th Edition	2.80	3.30	Appendix C: Fig. C-2 (538k sfgla)	75%	Appendix C: Fig. C-3 (538k sfgla)	31.20	1.48	46.18	$20,423	$184	$3,200	**$17,223**
944	Gas Station w/Convenience Store <2,000 sq ft	fuel pos.	172.01	ITE 11th Edition	1.90	2.40	FL Studies (LUC 944/945)	23%	FL Studies (LUC 944/945)	30.18	1.48	44.67	$19,752	$191	$3,322	**$16,430**
945	Gas Station w/Convenience Store 2,000 to 5,499 sq ft	fuel pos.	264.38	ITE 11th Edition (Adjusted)[2]	1.90	2.40	FL Studies (LUC 944/945)	23%	FL Studies (LUC 944/945)	46.39	1.48	68.66	$30,359	$294	$5,114	**$25,245**
	Gas Station w/Convenience Store 5,500+ sq ft	fuel pos.	345.75	ITE 11th Edition	1.90	2.40	FL Studies (LUC 944/945)	23%	FL Studies (LUC 944/945)	60.66	1.48	89.78	$39,702	$384	$6,679	**$33,023**

1) Net VMT calculated as ((Trip Generation Rate* Trip Length* % New Trips)*(1-Interstate/Toll Facility Adjustment Factor)/2). This reflects the unit of vehicle miles of capacity consumed per unit of development and is multiplied by the cost per vehicle
2) Due to only slight variation, the trip generation rates for LUC 945 2,000 to 3,999 sq ft and 4,000 to 5,499 sq ft were combined into a weighted average trip generation rate for a single land use tier of 2,000 to 5,499 sq ft

Table F-2

Manatee County Multi-Modal Transportation Impact Fee Comparison

LUC	Land Use	Unit	Existing[1]				Calculated[2]	Percent Change			
			SOUTHWEST	SOUTHEAST	NORTHWEST	NORTHEAST		SW	SE	NW	NE
	RESIDENTIAL:										
210	Single Family Detached; 750 sq ft or less	du	$1,502	$1,896	$2,458	$2,577	**$4,714**	213.8%	148.6%	91.8%	82.9%
	Single Family Detached; 751 - 1,000 sq ft	du	$1,502	$1,896	$2,458	$2,577	**$6,732**	348.2%	255.1%	173.9%	161.2%
	Single Family Detached; 1,001 - 1,300 sq ft	du	$2,338	$2,951	$3,825	$4,010	**$8,576**	266.8%	190.6%	124.2%	113.9%
	Single Family Detached; 1,301 - 1,700 sq ft	du	$3,187	$4,037	$5,231	$5,483	**$10,472**	228.6%	159.4%	100.2%	91.0%
	Single Family Detached; 1,701 sq ft or more	du	$4,005	$5,072	$6,574	$6,891	**$12,316**	207.5%	142.8%	87.3%	78.7%
215	Single Family Attached/Townhome; 750 sq ft or less	du	$1,502	$1,896	$2,458	$2,577	**$3,984**	165.2%	110.1%	62.1%	54.6%
	Single Family Attached/Townhome; 751 - 1,000 sq ft	du	$1,502	$1,896	$2,458	$2,577	**$5,705**	279.8%	200.9%	132.1%	121.4%
	Single Family Attached/Townhome; 1,001 - 1,300 sq ft	du	$2,338	$2,951	$3,825	$4,010	**$7,271**	211.0%	146.4%	90.1%	81.3%
	Single Family Attached/Townhome; 1,301 - 1,700 sq ft	du	$3,187	$4,037	$5,231	$5,483	**$8,890**	178.9%	120.2%	69.9%	62.1%
	Single Family Attached/Townhome; 1,701 sq ft or more	du	$4,005	$5,072	$6,574	$6,891	**$10,438**	160.6%	105.8%	58.8%	51.5%
220	Multi-Family; 750 sq ft or less	du	$1,502	$1,896	$2,458	$2,577	**$3,037**	102.2%	60.2%	23.6%	17.9%
	Multi-Family; 751 - 1,000 sq ft	du	$1,502	$1,896	$2,458	$2,577	**$4,345**	189.3%	129.2%	76.8%	68.6%
	Multi-Family; 1,001 - 1,300 sq ft	du	$2,338	$2,951	$3,825	$4,010	**$5,550**	137.4%	88.1%	45.1%	38.4%
	Multi-Family; 1,301 sq ft or more	du	$3,187	$4,037	$5,231	$5,483	**$6,765**	112.3%	67.6%	29.3%	23.4%
240	Mobile Home Park	du	n/a	n/a	n/a	n/a	**$4,292**	n/a	n/a	n/a	n/a
253	Congregate Care/Assisted Living Facility	du	n/a	n/a	n/a	n/a	**$1,149**	n/a	n/a	n/a	n/a
	NON-RESIDENTIAL:										
110	Light Industrial	1,000 sf	$2,076	$2,137	$2,768	$2,903	**$5,176**	149.3%	142.2%	87.0%	78.3%
140	Manufacturing	1,000 sf	$1,138	$1,171	$1,517	$1,590	**$5,044**	343.2%	330.7%	232.5%	217.2%
150	Warehouse	1,000 sf	$1,060	$1,091	$1,414	$1,482	**$1,816**	71.3%	66.5%	28.4%	22.5%
151	Mini-Warehouse	1,000 sf	$744	$766	$993	$1,040	**$1,048**	40.9%	36.8%	5.5%	0.8%
320	Lodging	room	$1,678	$1,725	$2,237	$2,345	**$2,507**	49.4%	45.3%	12.1%	6.9%
565	Day Care Center	1,000 sf	$3,034	$3,122	$4,046	$4,241	**$16,126**	431.5%	416.5%	298.6%	280.2%
610	Hospital	1,000 sf	$3,939	$4,053	$5,252	$5,505	**$12,526**	218.0%	209.1%	138.5%	127.5%
620	Nursing Home	1,000 sf	$2,264	$2,330	$3,020	$3,165	**$3,445**	52.2%	47.9%	14.1%	8.8%
710	Office & Other Services	1,000 sf	$3,286	$3,381	$4,382	$4,594	**$11,531**	250.9%	241.1%	163.1%	151.0%
822	Commercial/Shopping Center less than 40,000 sflga	1,000 sfgla	$8,397	$8,640	$11,197	$11,737	**$8,355**	-0.5%	-3.3%	-25.4%	-28.8%
821	Commercial/Shopping Center 40,000 to 150,000 sfgla	1,000 sfgla	$8,397	$8,640	$11,197	$11,737	**$16,332**	94.5%	89.0%	45.9%	39.1%
820	Commercial/Shopping Center greater than 150,000 sfgla	1,000 sfgla	$8,397	$8,640	$11,197	$11,737	**$17,223**	105.1%	99.3%	53.8%	46.7%
944	Gas Station w/Convenience Store <2,000 sq ft	fuel pos.	n/a	n/a	n/a	n/a	**$16,430**	n/a	n/a	n/a	n/a
945	Gas Station w/Convenience Store 2,000 to 5,499 sq ft	fuel pos.	n/a	n/a	n/a	n/a	**$25,245**	n/a	n/a	n/a	n/a
	Gas Station w/Convenience Store 5,500+ sq ft	fuel pos.	n/a	n/a	n/a	n/a	**$33,023**	n/a	n/a	n/a	n/a

1) Source: Manatee County Administration Department
2) Source: Appendix F, Table F-1

Appendix G
Administrative Fee

Appendix G: Administrative Fee

The Florida Impact Fee Act (section 163.31801(3)(c), Florida Statutes) allows local governments to collect an administrative fee related to impact fee administration at actual cost. To determine this cost, Manatee County's expenses related to administering the impact fee program in relation to impact fee revenues generated were reviewed. As shown in Table G-1, over the past three years, the County's administrative expense to impact fee revenue ratio ranged from 0.8 percent to 1.1 percent, with an average of 1.0 percent. This percentage is applied to the fee schedule as shown in Tables G-2 and G-3 to determine the administrative surcharge.

Table G-1

Manatee County Impact Fee Administration Expenses vs. Impact Fee Revenues

Variable	FY 2020	FY 2021	FY 2022	Total / Weighted Average[4]
Impact Fee Administration Cost[1]	$610,066	$608,624	$854,883	**$2,073,573**
Impact Fee Revenues[1]	$54,535,214	$72,054,216	$76,806,074	**$203,395,504**
Cost Percentage[3]	1.1%	0.8%	1.1%	**1.0%**

1) Source: Manatee County
2) Impact fee administrative cost divided by impact fee revenues
3) Average of the three years

Table G-2

Impact Fee Schedule with Administrative Surcharge MMTIF

LUC	Land Use	Unit	Educational Facilities[1]	Transportation[2]	Parks & Recreation[3]	Law Enforcement[4]	Public Safety[5]	Libraries[6]	Subtotal Fee	Admin Surcharge[7]	Total Fee
	RESIDENTIAL:										
210	Single Family Detached; 750 sq ft or less	du	$6,127	$4,714	$1,882	$453	$183	$204	**$13,563**	$136	**$13,699**
	Single Family Detached; 751 - 1,000 sq ft	du	$6,127	$6,732	$1,947	$471	$191	$212	**$15,680**	$157	**$15,837**
	Single Family Detached; 1,001 - 1,300 sq ft	du	$6,127	$8,576	$2,224	$530	$217	$242	**$17,916**	$179	**$18,095**
	Single Family Detached; 1,301 - 1,700 sq ft	du	$6,127	$10,472	$2,710	$655	$266	$295	**$20,525**	$205	**$20,730**
	Single Family Detached; 1,701 or more	du	$6,127	$12,316	$3,342	$803	$327	$363	**$23,278**	$233	**$23,511**
215	Single Family Attached/Townhome; 750 sq ft or less	du	$6,471	$3,984	$1,882	$453	$183	$204	**$13,177**	$132	**$13,309**
	Single Family Attached/Townhome; 751 - 1,000 sq ft	du	$6,471	$5,705	$1,947	$471	$191	$212	**$14,997**	$150	**$15,147**
	Single Family Attached/Townhome; 1,001 - 1,300 sq ft	du	$6,471	$7,271	$2,224	$530	$217	$242	**$16,955**	$170	**$17,125**
	Single Family Attached/Townhome; 1,301 - 1,700 sq ft	du	$6,471	$8,890	$2,710	$655	$266	$295	**$19,287**	$193	**$19,480**
	Single Family Attached/Townhome; 1,701 or more sq ft	du	$6,471	$10,438	$3,342	$803	$327	$363	**$21,744**	$217	**$21,961**
220	Multi-Familys; 750 sq ft or less	du	$3,502	$3,037	$1,632	$440	$159	$177	**$8,947**	$89	**$9,036**
	Multi-Family; 751 - 1,000 sq ft	du	$3,502	$4,345	$1,684	$458	$165	$183	**$10,337**	$103	**$10,440**
	Multi-Family; 1,001 - 1,300 sq ft	du	$3,502	$5,550	$1,908	$516	$187	$207	**$11,870**	$119	**$11,989**
	Multi-Family; 1,301 or more	du	$3,502	$6,765	$2,342	$633	$228	$255	**$13,725**	$137	**$13,862**
240	Mobile Home Park (MMTIF)/Mobile Home (non-transportation)	du	$1,971	$4,292	$1,579	$368	$155	$172	**$8,537**	$85	**$8,622**
253	Congregate Care/Assisted Living Facility	du	-	$1,149	-	$449	$176	-	**$1,774**	$18	**$1,792**
	NON-RESIDENTIAL:										
110	Light Industrial	1,000 sf	-	$5,176	-	$224	$94	-	**$5,494**	$55	**$5,549**
140	Manufacturing	1,000 sf	-	$5,044	-	$260	$109	-	**$5,413**	$54	**$5,467**
150	Warehouse	1,000 sf	-	$1,816	-	$54	$22	-	**$1,892**	$19	**$1,911**
151	Mini-Warehouse	1,000 sf	-	$1,048	-	$22	$9	-	**$1,079**	$11	**$1,090**
320	Lodging	room	-	$2,507	-	$467	$195	-	**$3,169**	$32	**$3,201**
565	Day Care Center	1,000 sf	-	$16,126	-	$363	$152	-	**$16,641**	$166	**$16,807**
610	Hospital	1,000 sf	-	$12,526	-	$588	$245	-	**$13,359**	$134	**$13,493**
620	Nursing Home	1,000 sf	-	$3,445	-	$1,189	$496	-	**$5,130**	$51	**$5,181**
710	Office & Other Services	1,000 sf	-	$11,531	-	$435	$181	-	**$12,147**	$121	**$12,268**
822	Commercial/Shopping Center less than 40,000 sflga	1,000 sfgla	-	$8,355	-	$938	$391	-	**$9,684**	$97	**$9,781**
821	Commercial/Shopping Center 40,000 to 150,000 sfgla	1,000 sfgla	-	$16,332	-	$1,162	$485	-	**$17,979**	$180	**$18,159**
820	Commercial/Shopping Center greater than 150,000 sfgla	1,000 sfgla	-	$17,223	-	$637	$266	-	**$18,126**	$181	**$18,307**
944	Gas Station w/Convenience Store <2,000 sq ft	fuel pos.	-	$16,430	-	$660	$275	-	**$17,365**	$174	**$17,539**
945	Gas Station w/Convenience Store 2,000 to 5,499 sq ft	fuel pos.	-	$25,245	-	$1,037	$432	-	**$26,714**	$267	**$26,981**
	Gas Station w/Convenience Store 5,500+ sq ft	fuel pos.	-	$33,023	-	$1,355	$565	-	**$34,943**	$349	**$35,292**

1) Source: Manatee County
2) Source: Table F-1
3) Source: Table V-9
4) Source: Table III-9
5) Source: Table II-8
6) Source: Table IV-8
7) Source: Total of all fee areas multiplied by the administrative fee percentage (1.0%) presented in Table G-1

Administrative Surcharge Comparison

A comparison of administrative surcharges for Manatee County and other communities in Florida is presented in Table G-4 for select land uses.

Table G-4

Administrative Surcharge Comparison

Land Use	Unit[1]	Manatee County		Charlotte County[4]	Indian River County [5]	Lake County [6]	Lee County [7]	Martin County[8]	Osceola County [9]
		Calculated[2]	Current Adopted[3]						
Residential:									
Single Family (2,000 sq ft)	du	$233	$134	$194	$193	$100 per permit	$293	$120	$73
Multi Family (1,300 sq ft)	du	$119	$77	$130	$125	$100 per permit	$193	$120	$73
Non-Residential:									
Light Industrial	1,000 sf	$55	$56	$77	$40	$100 per permit	$58	$33	$33 per permit
Office (50,000 sq ft)	1,000 sf	$121	$80	$152	$79	$100 per permit	$133	$43	$33 per permit
Retail (125,000 sq ft)	1,000 sfgla	$180	$68	$233	$126	$100 per permit	$207	$102	$33 per permit

1) Du = dwelling unit
2) Source: Table G-2
3) Source: Manatee County Administration
4) Source: Charlotte County Impact Fee Planning and Zoning. Administrative fee is calculated at 2.55% of the adopted fees. Unincorporated county fees are shown.
5) Source: Indian River County Community Development. Fees shown is for unincorporated Indian River County. Unincorporated County administrative fee is 2%. The City of Fellsmere, Town of Orchid, City of Sebastian, City of Vero Beach, and Town of Indian River Shores charge a county administrative fee of 1% and a city administrative fee of 2%.
6) Source: Lake County Planning and Zoning Office. Administrative fee is 3% of the impact fee due, with a cap of $100 for all land uses except for Active Adult Community, which is capped at $36 to $67 per permit, depending on the fee district.
7) Source: Lee County Community Development. Administrative fee of 3% is collected on all impact fee assessments.
8) Source: Martin County Growth Management Department. Administrative fee is 1.5% and is assessed on roads, public buildings, law, fire rescue, parks, conservation/open space, and libraries.
9) Source: Osceola County Impact and Mobility Fees Office