



Collier County Emergency Medical Services Impact Fee Update Study

Final Report
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Prepared for:

**Collier County Capital Projects Planning,
Impact Fees and Program Management Division**
2685 Horseshoe Drive South
Naples, Florida 34104
ph (239) 252-8192

Prepared by:

Benesch
1000 N. Ashley Dr., #400
Tampa, Florida 33602
ph (813) 224-8862
E-mail: nkamp@benesch.com

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Introduction

With a population of over 400,000, Collier County ranks as the 19th most populous county in Florida. The county is continuing to grow and is estimated to add almost 100,000 new residents through 2050. In terms of residential permitting, Collier County ranks 19th out of Florida counties with an average of 4,200 new units per year over the past three years. To address additional infrastructure needs, Collier County implemented an impact fee program for emergency medical services (EMS), which was last updated in 2016. In compliance with impact fee ordinance requirements and to reflect current data, the County retained Benesch to prepare an update study.

This report serves as the technical study to support the calculation of the updated EMS impact fee. All data and support materials used in this analysis are incorporated by reference as set forth in this document.

The figures calculated in this study represent the technically defensible level of impact fee that the County could charge; however, the Board of County Commissioners may choose to discount the fee as a policy decision.

Methodology

In developing the County's EMS impact fee, 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.

A consumption-based impact fee charges new growth the proportionate share of the cost of providing additional infrastructure for use by new growth. Unlike a "needs-based" approach, consumption-based approach ensures that the impact fee is set at a rate that generates revenues sufficient only for new capacity needs and does not generate revenues at a level 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 non-impact fee funding 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 infrastructure.

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. In fact, which it was initially adopted, the Act largely codified requirements and standards common to the practice already.

However, the Legislature has amended the Impact Fee Act numerous times since 2006, significantly affecting the impact fee practice in Florida. For this reason, a summary of the key legislative changes since 2006 is provided:

- **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 Commerce) 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.

- **HB 207 in 2019:** Included the following changes to the Impact Fee Act along with additional clarifying language:
 - Impact fees cannot be collected prior to building permit issuance; and
 - 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 that clause and making 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, and which receives benefit from the improvement or contribution that generated the credits. 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:** Required 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.
- **HB 479 in 2024:** Required interlocal agreements between counties and municipalities when both entities collect a transportation impact fee. Placed limits on timing of impact fee study completion and adoption and data used in the studies.
- **SB 1080 in 2025:** Signed in 2025, this bill disallows the use of the extraordinary circumstances clause unless the local government has increased its fees within the past five years. It requires a unanimous vote of the governing body for fee increases above

the 50-percent limit. Although the bill became effective on October 1, 2025, these two clauses will become effective on January 1, 2026.

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

Impact Fee Definition

- 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 principal 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.

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 the EMS impact fee calculations, including an evaluation of the inventory, service area and demand component, level of service (LOS), cost, credit, and demand components. Information supporting this analysis was obtained from the County and other sources, as indicated.

Inventory

According to information provided by the Collier County Emergency Medical Services Division (CCEMS), the County owns 13 stations used to provide emergency medical services. In addition, the County operates 13 additional stations out of leased buildings. For impact fee calculation purposes, only the owned facilities are included in this study.

Table 1 shows a summary of the CCEMS building inventory included in the impact fee calculations. As presented, the inventory used to calculate impact fees includes a total of 82,600 square feet of building space and 30 acres of land dedicated to EMS related services. The total building and land value is approximately \$43.4 million including \$38.0 million for buildings and \$5.4 million for land.

The building value per square foot is estimated based on recent construction costs, estimates for upcoming construction, insurance values of the existing EMS stations, and discussions with the County. The building value is estimated at \$460 per square foot. Appendix A provides further detail on the building cost estimates.

The land value is estimated at \$180,000 per acre based on an analysis of vacant land value trends since the last study, recent land purchases, and an analysis of vacant land sales and values based on information from the Collier County Property Appraiser.

**Table 1
Building and Land Inventory**

Facility Description	Location	Year Acquired /Built ⁽¹⁾	Square Feet ⁽²⁾	Total Square Feet on Site ⁽³⁾	Total Acres ⁽⁴⁾	Acres per 1,000 sf of Building Space ⁽⁵⁾	Allocated Acres ⁽⁶⁾	Building Value ⁽⁷⁾	Land Value ⁽⁸⁾	Total Building and Land Value ⁽⁹⁾
Station 3/Helicopter Operations ⁽¹⁰⁾	2375 Tower Drive	1994	4,962	N/A	617.44	N/A	2.00	\$2,282,520	\$360,000	\$2,642,520
Station 44	776 Vanderbilt Beach Road	1994	3,260	16,477	3.63	0.220	0.72	\$1,499,600	\$129,600	\$1,629,200
Station 70	4741 Golden Gate Parkway	1994	5,361	76,498	12.91	0.169	0.91	\$2,466,060	\$163,800	\$2,629,860
Station 30	112 South 1st Street	1993	3,500	21,156	7.42	0.351	1.23	\$1,610,000	\$221,400	\$1,831,400
Station 21 ⁽¹¹⁾	11121 East Tamiami Trail	1991	1,195	11,490	1.07	0.093	0.09	\$549,700	\$16,200	\$565,900
Station 42 ⁽¹²⁾	7010 Immokalee Road	1989	2,500	N/A	N/A	N/A	N/A	\$1,150,000	N/A	\$1,150,000
Station 10 ⁽¹³⁾	14756 Immokalee Road	1996	3,571	19,113	85.96	N/A	1.50	\$1,642,660	\$270,000	\$1,912,660
Station 71	95 13th Street SW	2001	4,447	4,447	2.00	0.450	2.00	\$2,045,620	\$360,000	\$2,405,620
Station 24 ⁽¹⁴⁾	2795 Airport Road North	2004	3,177	9,531	1.50	0.157	0.50	\$1,461,420	\$90,000	\$1,551,420
Station 22 ⁽¹⁵⁾	4375 Bayshore Drive	2005	3,579	9,672	0.63	0.065	N/A	\$1,646,340	N/A	\$1,646,340
Station 25	3675 Hacienda Lakes Boulevard	2021	5,500	5,500	1.33	0.242	1.33	\$2,530,000	\$239,400	\$2,769,400
Station 75	4590 Santa Barbara Boulevard	2006	4,985	4,985	1.89	0.379	1.89	\$2,293,100	\$340,200	\$2,633,300
Station 76	790 Logan Boulevard	2016	5,321	5,321	2.41	0.453	2.41	\$2,447,660	\$433,800	\$2,881,460
Emergency Services Complex ⁽¹⁶⁾	8075 Lely Cultural Pkwy	2009	31,239	154,388	20.00	0.130	4.06	\$14,369,940	\$730,800	\$15,100,740
Vacant Land for Station 49 ⁽¹⁷⁾	Heritage Bay Property	2003	N/A	N/A	7.73	N/A	1.50	N/A	\$270,000	\$270,000
Vacant Land for Station 410	16140/16144 Performance Way	2007	N/A	N/A	0.99	N/A	0.99	N/A	\$178,200	\$178,200
Vacant Land for Station 74	Desoto/Golden Gate Boulevard	2019	N/A	N/A	5.46	N/A	5.46	N/A	\$982,800	\$982,800
Vacant Land for future EMS Station	8156 Fiddlers Creek Parkway	2022	N/A	N/A	8.36	N/A	3.43	N/A	\$617,400	\$617,400
Total			82,597				30.02	\$37,994,620	\$5,403,600	\$43,398,220
Building Value per Square Foot⁽¹⁸⁾								\$460		
Land Value per Acre⁽¹⁹⁾									\$180,000	

- 1) Source: Collier County
- 2) Source: Collier County. Square feet includes total area under the roof.
- 3) Source: Collier County. Square feet of buildings on a given parcel.
- 4) Acreage of the parcel where the facility is located. In some cases, this acreage includes other buildings.
- 5) Acres (Item 4) divided by the total square footage on site (Item 3) multiplied by 1,000.
- 6) Acres per 1,000 square feet of building space (Item 5) is multiplied by square feet of the facility (Item 2) divided by 1,000.
- 7) Square footage (Item 2) multiplied by building value per square foot (Item 18).
- 8) Source: Allocated acres (Item 6) multiplied by the land value per acre (Item 19)
- 9) Sum of building value (Item 7) and land value (Item 8).

- 10) Portion of acreage used for EMS facilities provided by Collier County.
- 11) Approximately 65% of this property is owned by Greater Naples Fire District. The portion owned by the County (35%) is used for EMS and law enforcement facilities.
- 12) The land is owned by the North Collier Fire District and is not included in the inventory. The County is leasing the building from the North Collier Fire District and paid for the structure. Given the lease term will continue until 2024 and the County is in the process of renewing the lease, the building value is included in the inventory.
- 13) Portion of acreage used for EMS facilities provided by Collier County
- 14) This station is a joint facility shared by the North Collier and Greater Naples Fire Districts and Collier County EMS. The square footage, acreage, and value shown reflect Collier County EMS' share (1/3)
- 15) Greater Naples Fire District owns 63% of the building and the entire acreage. The County owns 37% of the building
- 16) Joint facility shared by County EMS, law enforcement, and emergency management services.
- 17) Portion of acreage that will be used for EMS facilities provided by Collier County
- 18) Source: Appendix A
- 19) Source: Appendix A

In addition to the facilities included in Table 1, the County also leases 26,100 square feet of building space for thirteen additional stations. These leased facilities, which are not included in the impact fee calculations but provide services to County residents, are presented in **Table 2**.

Table 2
Leased EMS Stations

Facility	Address	Total Square Feet ⁽¹⁾
Station 1	835 8th Ave. South, Naples 34102	2,200
Station 50 ⁽²⁾	1280 San Marco Rd., Marco Island 34145	1,200
Station 40	1441 Pine Ridge Rd., Naples 34109	2,500
Station 60	201 Buckner Ave., Everglades City 34139	2,700
Station 23	6055 Collier Blvd., Naples, 34114	2,500
Station 2	977 26th Ave. North, 34103	1,500
Station 43	16325 Vanderbilt Dr., 34110	2,500
Station 90	175 Capri Blvd., Naples 34113	2,500
Station 46	3410 Pine Ridge Rd., 34109	2,500
Station 32	5368 Useppa Drive, Ave Maria 34142	1,148
Station 48	16280 Livingston Road, Naples, FL 34110	895
Station 20	4798 Davis Blvd, Naples, FL 34104	2,000
Station 31	502 East New Market Rd, Immokalee, FL 34142	2,000
Total		26,143

- 1) Source: Collier County
- 2) Station 50 was demolished and was rebuilt. In the interim, the County leased a temporary space at the hospital which was 1,200 square feet.

In addition to the land and buildings inventory, the CCEMS also has the necessary vehicles and equipment to perform its emergency medical services duties. **Table 3** summarizes the inventory of vehicles and equipment. Equipment included in this list follows the County’s definition of capital assets, which includes items that have a minimum value of \$5,000 and five years of useful life. As shown, the total CCEMS vehicle and equipment inventory amounts to approximately \$19.4 million.

Table 3
Vehicle and Equipment Inventory

Description	Units ⁽¹⁾	Unit Value ⁽²⁾	Total Value ⁽³⁾
Vehicles			
ALS Ambulance	42	\$432,200	\$18,152,400
Ford Explorer	12	\$60,000	\$720,000
Ford Escape	2	\$24,000	\$48,000
Econo Van	1	\$30,000	\$30,000
Hazmat Trailer	1	\$29,500	\$29,500
Chevrolet C4500	1	\$63,500	\$63,500
Ford F350	1	\$44,200	\$44,200
Haulmark	1	\$5,500	\$5,500
Subtotal -- Vehicles			\$19,093,100
Equipment			
Mobile MHz Radios 1	2	\$5,300	\$10,600
Mobile MHz Radios 2	6	\$5,100	\$30,600
UHF/VHF/800 MHz Radio Ambulance	45	\$5,400	\$243,000
Subtotal -- Equipment			\$284,200
Total			\$19,377,300

- 1) Source: Collier County
- 2) Source: Collier County
- 3) Units (Item 1) multiplied by unit value (Item 2)

Service Area and Demand Component

Emergency medical services are provided by Collier County in all areas of the county. Therefore, the proper benefit district for the provision of emergency response services is countywide.

The EMS impact fee program requires the use of population data in calculating current levels of service and to be consistent with the population utilized in the County's comprehensive planning and Annual Update and Inventory Report (AUIR) process, this impact fee study considers not only the resident or permanent population of the County, but also the number of seasonal residents and visitors as well. Therefore, for purposes of this technical analysis, the peak season population is used in all population estimates and projections. Peak season population projections were provided by Collier County's Comprehensive Planning Division.

To measure effective population that benefits from emergency medical services, this study also developed functional population figures. 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. Appendix B provides additional details on population estimates.

Level of Service

For impact fee calculation purposes, the current level of service (LOS) is calculated based on stations per peak seasonal and functional resident, as presented in **Table 4**.

It should be noted that two different calculations of the current LOS were provided in the table. One of these calculations includes only the stations owned by the County and is used in the calculation of the impact fee. The other includes stations that are owned and leased, which better reflects the service County residents are receiving. However, because impact fees need to be based on capital investment made by the existing population, the LOS calculations exclude leased stations, which are considered operational expenses. The achieved LOS based on owned stations is 0.000028 per functional resident and is utilized in the calculation of the EMS impact fee.

Table 4
Current Achieved Level of Service

Variable	Year 2024	
	Peak Population	Functional Population
Population ⁽¹⁾	491,779	472,163
Number of Owned Stations ⁽²⁾	13	13
Number of Owned and Leased Stations ⁽³⁾	26	26
Population per Station ⁽⁴⁾	18,915	18,160
Current LOS (All Stations per Resident) ⁽⁵⁾	0.000053	0.000055
Current LOS (Owned Stations per Resident)⁽⁶⁾	0.000026	0.000028

1) Source: Appendix B, Table B-1 for peak population and Table B-7 for functional population

2) Source: Collier County

3) Source: Collier County. Number of owned stations (Item 2) plus the 13 leased stations from Table 2 and Station 76

4) Population (Item 1) divided by number of owned stations and leased stations include Station 76 (Item 3)

5) Number of owned stations and leased stations including Station 76 (Item 3) divided by population (Item 1)

6) Number of owned stations (Item 2) divided by population (Item 1)

Cost Component

Table 5 provides a summary of EMS related capital assets owned by the County. As shown, the total capital asset value associated with EMS amounts to \$62.8 million. However, the County is still paying debt service on a portion of these assets. In addition, it is Collier County’s policy to use impact fee revenues to pay debt service associated with capacity expansion projects. To ensure that new development is not being overcharged for these future payments, the portion of the remaining principal of bonds used to fund EMS capacity expansion projects is subtracted from the total asset value in Table 5. The resulting owned capital asset value is approximately \$58.6 million or \$4.5 million per station.

Table 5 also presents the cost per functional resident for the impact fee analysis. This cost is calculated by multiplying the owned capital asset value per station by the current LOS of 0.00028 stations per functional resident. As shown, these calculations result in \$126 per functional resident for all EMS assets considered in the impact fee calculations.

Table 5
Total Impact Cost per Functional Resident

Description	Figure	Percent of Total ⁽¹¹⁾
Total Building Value ⁽¹⁾	\$37,994,620	60.5%
Total Land Value ⁽²⁾	\$5,403,600	8.6%
Total Vehicle and Equipment Value ⁽³⁾	\$19,377,300	30.9%
Total Capital Asset Value⁽⁴⁾	\$62,775,520	100.0%
Less: Portion Not Owned ⁽⁵⁾	\$4,126,165	
Owned Capital Asset Value⁽⁶⁾	\$58,649,355	
Number of Owned Stations ⁽⁷⁾	13	
Owned Capital Asset Value per Station⁽⁸⁾	\$4,511,489	
Current LOS (Owned Stations per Functional Resident) ⁽⁹⁾	0.000028	
Total Impact Cost per Functional Resident⁽¹⁰⁾	\$126.32	

- 1) Source: Table 1
- 2) Source: Table 1
- 3) Source: Table 3
- 4) Sum of building, land, vehicle and equipment values (Items 1, 2, and 3)
- 5) Source: Colier County Office of Management and Budget
- 6) Total capital asset value (Item 4) less the portion not owned (Item 5)
- 7) Source: Collier County
- 8) Owned capital asset value (Item 6) divided by the number of owned stations (Item 7)
- 9) Source: Table 4
- 10) Owned capital asset value per station (Item 8) multiplied by current LOS (Item 9)
- 11) Distribution of total capital asset value (Item 4)

Credit Component

To avoid overcharging new development for the EMS impact fee, a review of the capital financing program for EMS was completed. The purpose of this review was to determine any potential revenue credits that should be considered for revenues generated by new development that could be used for capital facility expansion, land purchase, or vehicle/equipment expansion for the EMS program.

Capital Expansion “Cash” Credit

To calculate the capital expansion credit per functional resident, funding sources used for the past five years and programmed for the next five years were reviewed. Between FY 2018 and FY 2027, the County has allocated an average non-impact fee funding of \$250,500 per year towards EMS capital facilities utilizing grants and land sales proceeds.

The annual capital expansion “cash” expenditures were divided by the average annual functional residents for the same period to calculate the average annual capital expansion “cash” credit per functional resident. As presented in **Table 6**, the result is \$0.55 per functional resident annually.

Collier County has also allocated revenues from the one-percent local government infrastructure surtax for capacity expansion projects. The infrastructure surtax was repealed on December 31, 2023, and the County does not intend to reimplement this funding mechanism. Therefore, this funding source is excluded from the credit calculations.

**Table 6
Capital Expansion "Cash" Credit**

Description	FY 2018 to FY 2022 ⁽¹⁾	FY 2023 to FY 2027 ⁽¹⁾	Total
American Rescue Plan			
Ambulances & SUVs	-	\$1,700,000	\$1,700,000
Subtotal -- American Rescue Plan	-	\$1,700,000	\$1,700,000
GAC Land Sales Trust Fund			
EMS Station 74 - Golden Gate Estates	\$105,000	-	\$105,000
EMS Station 74 - Golden Gate Estates, Ambulance	-	\$700,438	\$700,438
Subtotal -- GAC Land Sales Trust Fund	\$105,000	\$700,438	\$805,438
Total Capital Expansion "Cash" Expenditures			\$2,505,438
Average Annual Capital Expansion "Cash" Expenditures ⁽²⁾			\$250,544
Average Annual Functional Population ⁽³⁾			459,085
Adjusted Annual Capital Expansion "Cash" Expenditures per Functional Resident⁽⁴⁾			\$0.55

1) Source: Collier County

2) Total capital expansion "cash" expenditures divided by 10 to calculate the average annual expenditures

3) Source: Appendix B, Table B-7. Average functional population over the same time period.

4) Average annual capital expansion "cash" expenditures (Item 2) divided by the average annual functional population (Item 3)

Note: Excludes projects funded with Infrastructure Sales Tax since this tax was repealed in December 2023.

Net EMS Impact Cost

Table 7 summarizes the calculation of the net EMS impact cost per functional resident which is the difference between the total impact cost and the capital expansion “cash” credit per functional resident. The resulting net impact cost is \$117 per functional resident.

Table 7
Net Impact Cost per Functional Resident

Variable	Per Functional Resident
Total Impact Cost	
Total Impact Cost per Functional Resident ⁽¹⁾	\$126.32
Total Revenue Credit	
Average Annual Capital Expansion "Cash" Credit per Functional Resident ⁽²⁾	\$0.55
Capitalization Rate	3.70%
Capitalization Period (years)	25
Capital Expansion "Cash" Credit per Functional Resident ⁽³⁾	\$8.87
Net Impact Cost	
Net Impact Cost per Functional Resident⁽⁴⁾	\$117.45

1) Source: Table 5

2) Source: Table 6

3) The present value of the average annual capital expansion “cash” credit per functional resident using an interest rate of 3.7 percent over a capitalization period of 25 years. The capitalization rate estimate was provided by Collier County.

4) Total impact cost per functional resident (Item 1) less capital expansion "cash" credit per functional resident (Item 3)

Calculated EMS Impact Fee Schedule

Table 8 presents the calculated EMS impact fee schedule for both residential and non-residential land uses, based on the net impact cost per functional resident figure presented in Table 7. Net impact cost per functional resident increased by approximately 45 percent since the 2015 study due to changes to cost and credit components. The remaining differences reflect the changes in the demand component since 2015 as well as new land use categories or units.

Table 8 also shows the maximum allowable impact fees consistent with F.S. 163.3180 and the percent change from the current adopted impact fee.

Table 8
Calculated EMS Impact Fee Schedule

LUC	Land Use	Impact Unit	Functional Residents per Unit ⁽¹⁾	Calculated Impact Fee ⁽²⁾	Current Adopted Impact Fee ⁽³⁾	Percent Change ⁽⁴⁾	F.S. 163.31801 Maximum Impact Fee ⁽⁵⁾	Percent Change ⁽⁶⁾
RESIDENTIAL:								
210	Single Family Detached							
	- Less than 4,000 sf	du	1.74	\$204.36	\$142.07	44%	\$204.36	44%
	- 4,000 sf or greater	du	2.15	\$252.52	\$159.33	58%	\$238.99	50%
220-232	Multi-Family	du	0.90	\$105.71	\$67.50	57%	\$101.25	50%
240	Mobile Home	du	1.32	\$155.03	\$113.81	36%	\$155.03	36%
251	Retirement Community - Detached (Single Family)	du	1.07	\$125.67	\$62.01	103%	\$93.01	50%
252	Retirement Community - Attached (Multi-Family)	du	0.54	\$63.42	\$62.01	2%	\$63.42	2%
TRANSIENT, ASSISTED, GROUP:								
310/311	Hotel/All Suites Hotel	room	1.17	\$137.42	\$63.58	116%	\$95.37	50%
320	Motel	room	1.07	\$125.67	\$59.65	111%	\$89.47	50%
254	Assisted Living Facility	du	0.92	\$108.05	\$79.27	36%	\$108.05	36%
620	Nursing Home	1,000 sf	2.37	\$278.36	\$82.41/bed	N/A	N/A	N/A
RECREATION:								
416	Campground/RV Park	site	0.45	\$52.85	\$39.25	35%	\$52.85	35%
420	Marina	boat berth	0.12	\$14.09	\$14.91	-5%	\$14.09	-5%
430	Golf Course	hole	0.80	\$93.96	\$84.77	11%	\$93.96	11%
n/a	Bundled Golf Course	hole	0.24	\$28.19	\$25.42	11%	\$28.19	11%
445	Movie Theater	1,000 sf	3.33	\$391.11	\$469.37/screen	N/A	N/A	N/A
n/a	Dance Studio/Gymnastics	1,000 sf	1.72	\$202.01	\$174.25	16%	\$202.01	16%
INSTITUTIONS:								
520	Elementary School (Private)	student	0.10	\$11.75	\$4.71	149%	\$7.06	50%
522	Middle/Junior High School (Private)	student	0.09	\$10.57	\$5.49	93%	\$8.23	50%
525	High School (Private)	student	0.08	\$9.40	\$6.28	50%	\$9.40	50%
540/550	University/Junior College (7,500 or fewer students) (Private)	student	0.10	\$11.75	\$7.85	50%	\$11.75	50%
	University/Junior College (more than 7,500 students) (Private)	student	0.08	\$9.40	\$5.49	71%	\$8.23	50%
560	Church	1,000 sf	0.42	\$49.33	\$2.35/seat	N/A	N/A	N/A
565	Day Care Center	1,000 sf	0.69	\$81.04	\$3.92/student	N/A	N/A	N/A
MEDICAL:								
610	Hospital	1,000 sf	1.32	\$155.03	\$107.53	44%	\$155.03	44%

Table 8 (continued)
Calculated EMS Impact Fee Schedule

LUC	Land Use	Impact Unit	Functional Residents per Unit ⁽¹⁾	Calculated Impact Fee ⁽²⁾	Current Adopted Impact Fee ⁽³⁾	Percent Change ⁽⁴⁾	F.S. 163.31801 Maximum Impact Fee ⁽⁵⁾	Percent Change ⁽⁶⁾
OFFICE:								
710	General Office	1,000 sf	0.67	\$78.69	\$60.44	30%	\$78.69	30%
720	Medical Office/Clinic 10,000 sq ft or less	1,000 sf	0.99	\$116.28	\$89.48	30%	\$116.28	30%
	Medical Office/Clinic greater than 10,000 sq ft	1,000 sf	1.38	\$162.08	\$130.29	24%	\$162.08	24%
770	Business Park (Flex-Space)	1,000 sf	0.68	\$79.87	\$75.35	6%	\$79.87	6%
RETAIL:								
822	Retail 6,000 sfgla or less	1,000 sfgla	1.97	\$231.38	\$192.30	20%	\$231.38	20%
822	Retail 6,001 to 40,000 sfgla	1,000 sfgla	1.97	\$231.38	\$192.30	20%	\$231.38	20%
821	Retail 40,001 to 150,000 sfgla	1,000 sfgla	2.65	\$311.24	\$192.30	62%	\$288.45	50%
820	Retail greater than 150,000 sfgla	1,000 sfgla	1.85	\$217.28	\$164.04	32%	\$217.28	32%
840/841	New/Used Auto Sales	1,000 sf	1.47	\$172.65	\$115.38	50%	\$172.65	50%
849	Tire Superstore	1,000 sf	1.20	\$140.94	\$105.18/bay	N/A	N/A	N/A
850	Supermarket	1,000 sf	2.27	\$266.61	\$160.90	66%	\$241.35	50%
851	Convenience Market (24 hour)	1,000 sf	5.26	\$617.79	\$429.34	44%	\$617.79	44%
862	Home Improvement Superstore	1,000 sf	1.80	\$211.41	\$142.07	49%	\$211.41	49%
880/881	Pharmacy with & without Drive-Thru	1,000 sf	1.68	\$197.32	\$153.84	28%	\$197.32	28%
890	Furniture Store	1,000 sf	0.41	\$48.15	\$18.84	156%	\$28.26	50%
SERVICES:								
911	Bank/Savings w/out Drive-Thru	1,000 sf	1.08	\$126.85	\$175.03	-28%	\$126.85	-28%
912	Bank/Savings w/Drive-Thru	1,000 sf	1.40	\$164.43	\$178.96	-8%	\$164.43	-8%
930	Fast Casual Restaurant	1,000 sf	7.62	\$894.97	\$698.56	28%	\$894.97	28%
931	Low-Turnover Restaurant	1,000 sf	5.65	\$663.59	\$17.27/seat	N/A	N/A	N/A
932	High-Turnover (Sit-Down) Restaurant	1,000 sf	5.29	\$621.31	\$21.19/seat	N/A	N/A	N/A
934	Fast Food Restaurant w/Drive-Thru	1,000 sf	9.36	\$1,099.33	\$698.56	57%	\$1,047.84	50%
934.1	Fast Food w/Drive-Thru with Two Meals	1,000 sf	8.25	\$968.96	\$698.56	39%	\$968.96	39%
941	Quick Lube	service bay	1.52	\$178.52	\$91.05	96%	\$136.57	50%
944	Gas Station w/Convenience Market <2,000 sq ft	fuel pos.	1.32	\$155.03	\$203.29	-24%	\$155.03	-24%
945	Gas Station w/Convenience Market 2,000 sq ft or more	fuel pos.	1.63	\$191.44	\$203.29	-6%	\$191.44	-6%
947	Self-Service Car Wash	service bay	0.79	\$92.79	\$68.29	36%	\$92.79	36%

Table 8 (continued)
Calculated EMS Impact Fee Schedule

LUC	Land Use	Impact Unit	Functional Residents per Unit ⁽¹⁾	Calculated Impact Fee ⁽²⁾	Current Adopted Impact Fee ⁽³⁾	Percent Change ⁽⁴⁾	F.S. 163.31801 Maximum Impact Fee ⁽⁵⁾	Percent Change ⁽⁶⁾
SERVICES:								
948	Automated Car Wash	1,000 sf	2.65	\$311.24	\$138.14	125%	\$207.21	50%
n/a	Luxury Auto Sales	1,000 sf	1.21	\$142.11	\$80.84	76%	\$121.26	50%
INDUSTRIAL:								
110	General Light Industrial	1,000 sf	0.27	\$31.71	\$54.16	-41%	\$31.71	-41%
140	Manufacturing	1,000 sf	0.45	\$52.85	\$39.25	35%	\$52.85	35%
150	Warehousing	1,000 sf	0.09	\$10.57	\$21.98	-52%	\$10.57	-52%
151	Mini-Warehouse	1,000 sf	0.03	\$3.52	\$4.71	-25%	\$3.52	-25%

- 1) Source: Table B-8 for residential land uses and Table B-9 for non-residential land uses
- 2) Source: Net impact cost per functional resident from Table 7 is multiplied by the functional residents per unit (Item 1) for each land use
- 3) Source: Collier County Capital Project Planning, Impact Fees and Program Management Division
- 4) Percent change from the calculated impact fee (Item 2) to the current adopted impact fee (Item 3)
- 5) Maximum allowable impact fees in compliance with 50 percent increase cap per F.S. 163.31801
- 6) Percent change from the current adopted impact fee (Item 3) to the F.S. 163.31801 maximum allowable impact fee (Item 5)

Impact Fee Schedule Comparison

As part of the work effort in updating Collier County’s EMS impact fee program, a comparison of EMS impact fee schedules was completed for several other Florida counties. **Table 9** presents this comparison.

Table 9
Emergency Medical Services IF Schedule Comparison

Land Use	Unit ⁽²⁾	Collier County			Brevard County ⁽⁶⁾	Charlotte County ⁽⁷⁾	Sarasota County ⁽⁸⁾	Lee County ⁽⁹⁾	Manatee County ⁽¹⁰⁾	Osceola County ⁽¹¹⁾	Polk County ⁽¹²⁾	Pasco County ⁽¹³⁾
		Calculated ⁽³⁾	Maximum ⁽⁴⁾	Current Adopted ⁽⁵⁾								
Date of Last Update		2025	2025	2016	2000	2021	2016	2018	2025	2024	2024	2003
Assessed Portion of Calculated ⁽¹⁾		N/A	N/A	100%	100%	100%	100%	100%	100%	100%	100%	100%
Residential:												
Single Family (2,000 sf)	du	\$204	\$204	\$142	\$39	\$77	\$171	\$55	\$345	\$224	\$153	\$172
Non-Residential:												
Light Industrial	1,000 sf	\$32	\$32	\$54	N/A	\$19	\$35	\$10	\$93	\$10	\$50	\$224
Office (50,000 sq ft)	1,000 sf	\$79	\$79	\$93	\$18	\$57	\$129	\$29	\$197	\$144	\$90	\$224
Retail (125,000 sq ft)	1,000 sf	\$311	\$288	\$192	\$54	\$119	\$224	\$59	\$568	\$183	\$179	\$224

- 1) Represents the portion of the maximum calculated fee for each respective county that is actually charged. 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 8
- 4) Maximum allowable impact fee in compliance with 50 percent increase per F.S. 163.31801
- 5) Source: Collier County Capital Project Planning, Impact Fees and Program Management Division
- 6) Source: Brevard County Planning & Development Department
- 7) Source: Charlotte County Community Development Department, Planning & Zoning
- 8) Source: Sarasota County Planning & Development Services Department
- 9) Source: Lee County Community Development Department, Building & Permitting Services
- 10) Source: Manatee County Development Services Department
- 11) Source: Osceola County Impact and Mobility Fees Office. Fee shown is the EMS portion of the Fire/EMS fee.
- 12) Source: Polk County Building Division
- 13) Source: Pasco County Central Permitting Department

Appendix A
Building and Land Value Analysis -
Supplemental Information

Appendix A – Building and Land Value Analysis

This appendix provides additional data and information on building and land value estimates.

Building Values

In determining the appropriate unit cost for building construction, the following analyses were conducted:

- A review of recently built or planned EMS stations in Collier County;
- Cost trends since the most recent technical study;
- Insurance value of the existing inventory; and
- Discussions with the County.

Collier County built EMS Station 76 in 2017 for a cost of \$326 per square foot. EMS Station 25, built in 2021, had a building cost of \$531 per square foot. The County is planning to build two new EMS stations and one new Fire/EMS station. The cost estimates for these planned stations range from \$353 per square foot to \$628 per square foot. The average cost of the recently constructed stations and planned stations is \$460 per square foot.

During the 2016 impact fee study, the value of stations was estimated at \$300 per square foot. Applying Engineering News Records Building Cost Index for the cost changes between 2016 and 2024 resulted in a unit cost of approximately \$436 per square foot.

The average insurance value of EMS stations in Collier County is \$302 per square foot. It should be noted that insurance values are considered to be a conservative estimate because the value of the foundation and other more permanent parts of the structure tends to be excluded since they would not have to be rebuilt if the structure was damaged or lost.

Given this information, an average building value of \$460 per square foot is used for the current station value.

**Table A-1
Building Cost Estimates**

Description	2016 Cost Estimate ⁽¹⁾	2016 Cost Estimate Indexed ⁽²⁾
2016 Study Cost Estimates Indexed		
Cost Estimate Used in 2016 Study	\$300	\$442
ENR Index (2016-2024) ⁽³⁾		47.46%
Project	Year	Construction Cost per SF
Insurance Values⁽⁴⁾		
Average Building Value per Square Foot	2022	\$302
Recent/Upcoming Construction⁽⁵⁾		
Station 76	2017	\$326
Station 25 - Hacienda Lakes	2021	\$531
Fire and EMS Station 74	2024	\$628
Heritage Bay EMS Station	Upcoming	\$353
Old US 41/North Naples EMS station	Upcoming	\$460
Average		\$460
Used in the Study	2024	\$460

- 1) Source: *Collier County Emergency Medical Services Impact Fee Update Study, October 10, 2016*
- 2) Source: 2016 cost estimate (Item 1) indexed according to the Engineering News Record (ENR) (Item 3)
- 3) Source: Engineering News Record, Building Cost Index
- 4) Source: Collier County
- 5) Source: Collier County

Land Values

To determine land value for future EMS station land purchases, the following data/information was evaluated:

- Cost trends since the most recent technical study;
- Current value of land where EMS stations are located;
- Vacant land sales analysis;
- Vacant land values as reported by the Property Appraiser; and
- Discussions with the County.

The 2016 study estimated land value at \$160,000 per acre. Since then, land values increased by approximately 118 percent, which results in an indexed value of approximately \$349,000 per acre. The value of parcels where existing EMS stations are located ranges from \$29,000 per acre to \$1.3 million per acre with an average of \$280,000 per acre.

Vacant land sales of parcels between 0.5 to 5 acres countywide between 2018 and 2022 averaged \$80,000 per acre. This value was over \$460,000 per acre when commercial vacant land was considered. Similarly, the value of all vacant land of 0.5-acre to 5-acre parcels as estimated by Collier County Property Appraiser averaged \$56,000 per acre. This figure was \$370,000 per acre for commercial vacant land.

It is likely that future EMS stations will be built in the eastern parts of the county. An evaluation of the vacant residential land sales between 2018 and 2022 and commercial land sales for 0.5 to 5-acre parcels in the area east of County Road 951 resulted in an average land value of \$60,000 per acre for residential land uses, and \$370,000 per acre for commercial land uses. Median values for these sales were \$35,000 per acre for residential vacant land and \$365,000 per acre for commercial vacant land. Finally, sales of agricultural parcels resulted in an average value of \$37,000 per acre and a median value of \$16,000 per acre.

Currently, approximately 20 percent of EMS stations are in rural/agricultural areas, 30 percent in residential areas while the remaining 50 percent are in commercial areas. As presented in Table A-2, using a conservative assumption that more of the future purchases will be in residential areas and applying these percentages to the estimated land values by land use results in a combined land value of approximately \$180,000 per acre, which is considered to be a reasonable estimate for impact fee calculation purposes.

Table A-2
Weighted Land Value

Land Use	Distribution ⁽¹⁾	Land Value per Acre ⁽²⁾	Weighted Land Value per Acre ⁽³⁾
Rural/Agricultural	10%	\$35,000	\$3,500
Residential	50%	\$60,000	\$30,000
Commercial	40%	\$370,000	\$148,000
Total			\$181,500
Land Value Used in the Study			\$180,000

- 1) Based on the current distribution, with the assumption that future purchases will be more heavily in residential areas
- 2) Distribution (Item 1) multiplied by land value per acre (Item 2) for each land use
- 3) Based on the weighted land value per acre

Appendix B
Population Estimates – Supplemental Information

Appendix B – Population Estimates

The EMS impact fee program requires the use of population data in calculating current levels of service and to be consistent with the population utilized in the County’s comprehensive planning and Annual Update and Inventory Report (AUIR) process. This impact fee study considers not only the resident or permanent population of the County, but also the number of seasonal residents and visitors as well. Therefore, for purposes of this technical analysis, the peak seasonal population is used in all population estimates and projections. Peak seasonal population projections were provided by Collier County’s Comprehensive Planning Division.

Table B-1 presents the seasonal population trends for Collier County. The projections indicate that the current peak seasonal population of the county is approximately 491,800 and is expected to increase to 582,700 (increase of 90,900) by 2040. The estimated average growth rate is approximately 1 percent per year

Table B-1
Collier County Population Estimates (Countywide)

Year	Countywide	
	Peak Seasonal Population	Percent Change
2010	387,183	-
2011	392,180	1.3%
2012	398,107	1.5%
2013	402,268	1.0%
2014	408,351	1.5%
2015	416,402	2.0%
2016	424,603	2.0%
2017	433,359	2.1%
2018	442,240	2.0%
2019	451,303	2.0%
2020	455,059	0.8%
2021	464,155	2.0%
2022	474,235	2.2%
2023	483,487	2.0%
2024	491,779	1.7%
2025	499,426	1.6%
2026	506,406	1.4%
2027	513,483	1.4%
2028	520,660	1.4%
2029	527,936	1.4%
2030	534,305	1.2%
2031	539,741	1.0%
2032	545,233	1.0%
2033	550,781	1.0%
2034	556,384	1.0%
2035	561,339	0.9%
2036	565,633	0.8%
2037	569,960	0.8%
2038	574,320	0.8%
2039	578,714	0.8%
2040	582,721	0.7%

Source: Collier County Comprehensive Planning Section (population projections dated May 2024)

Apportionment of Demand by Residential Unit Type and Size

The residential land uses to be used for the EMS impact fee calculations include the following:

- Single Family (Detached)
- Multi-Family
- Mobile Home/ RV Park (tied down)
- Retirement Community (detached and attached)

Table B-2 presents the number of residents per housing unit for the residential categories identified above in Collier County. This analysis includes all housing units, both occupied and vacant.

To address fairness and equity issues between land uses, the single family land use is tiered based on two categories of square footage: less than 4,000 square feet and 4,000 square feet and greater. To accommodate the tiering of impact fee assessments for the single family residential land use category, an analysis was completed based on housing unit size and persons per housing unit, comparing nationwide averages to those of Collier County. This analysis utilized national data from the 2021 American Housing Survey (AHS) and data from the 2021 American Community Survey (ACS) to examine this relationship.

**Table B-2
Residents per Housing Unit**

Housing Type	Population ⁽¹⁾	Housing Units ⁽²⁾	Ratio ⁽³⁾	Residents / Housing Units ⁽⁴⁾
Single Family Detached	289,564	112,378		2.58
- Less than 4,000 sf			98%	2.53
- 4,000 sf or greater			121%	3.12
Multi Family	139,405	106,016		1.31
Mobile Home/RV Park (Tied Down)	21,446	11,189		1.92
Retirement Community - Detached (Single Family) ⁽⁵⁾	173,738	112,378		1.55
Retirement Community - Attached (Multi-Family) ⁽⁶⁾	83,643	106,016		0.79

- 1) Source: 2022 ACS 5-Yr Estimates, Table B25033 (owner occupied and renter occupied), adjusted for peak seasonal population.
- 2) Source: 2022 ACS 5-Yr Estimates, Table DP04
- 3) Ratios developed based on national PPH data derived from the 2021 American Housing Survey.
- 4) Population (Item 1) divided by housing units (Item 2). For single family detached tiers, the residents per housing unit is determined by multiplying the weighted average value (2.58) by the ratio developed from the AHS data (Item 3).

- 5) Estimate for retirement community (detached) is based on people per household figures for single 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.
- 6) Estimate for retirement community (attached) is based on people per household figures for 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.

Functional Population

This study uses functional population as the demand component, which distributes the cost associated with the availability of EMS facilities among various land uses based on the density of people at each land use throughout the day. Functional population, as used in the impact fee analysis, is a generally accepted methodology 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 would 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 an estimate of effective population that needs 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). 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 year 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 Collier County functional population, an analysis of the County's population and employment characteristics was conducted. Based on this analysis, it was estimated that people, on average, spend 16.5 hours, or approximately 69 percent, of each 24-hour day at their place of residence and the other 31 percent away from home. This analysis is presented in **Tables B-3 and B-4**.

Table B-3
Population & Employment Characteristics

Item/Calculation Step	Year 2022
Total workers living in Collier County ⁽¹⁾	158,723
Collier County Population ⁽²⁾	380,221
Total workers as a percent of population ⁽³⁾	41.7%
School age population (5-17 years) ⁽⁴⁾	47,459
School age population as a percent of population ⁽⁵⁾	12.5%
Population net of workers and school age population ⁽⁶⁾	174,039
Other population as a percent of total population ⁽⁷⁾	45.8%

1) Source: Census OnTheMap 2022

2) Source: ACS 2022 5-Yr Estimates, Table S01001

3) Total workers (Item 1) divided by population (Item 2)

4) Source: ACS 2022 5-Yr Estimates, Table S01001

5) Total school age population (Item 4) divided by total 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 total population (Item 2)

Table B-4
Residential Coefficient for Functional Population

Pop. Group	Hours at Residence ⁽¹⁾	Percent of Population ⁽²⁾	Effective Hours ⁽³⁾
Workers	13	41.7%	5.4
Students	15	12.5%	1.9
Other	20	45.8%	9.2
Total Hours at Residence ⁽⁴⁾			16.5
Residential Functional Population Coefficient⁽⁵⁾			68.8%

1) Estimated

2) Source: Table B-3

3) Hours at residence (Item 1) multiplied by percent of population (Item 2)

4) Sum of effective hours.

5) Sum of effective hours (Item 4) divided by 24.

The resulting percentage from Table B-4 is used in the calculation of the residential coefficient for the 24-hour functional population. These actual calculations are presented in **Table B-6**.

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 the estimates of functional residents for residential land uses. Nelson and Nicholas originally introduced a method for estimating functional resident population, now used widely¹. This method uses trip generation data from the Institute of Transportation Engineers' (ITE) Trip Generation Manual and Benesch's Trip Characteristics Database, information on 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).

¹ Arthur C. Nelson and James C. Nicholas, "Estimating Functional Population for Facility Planning," Journal of Urban Planning and Development 118(2): 45-58 (1992).

- 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 B-5 shows the functional population coefficients for residential and non-residential uses in Collier County. The functional population coefficients in Table B-5 were used to estimate the County's functional population in **Table B-6**.

**Table B-5
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	4.02	2.01	1.32	1.38	0.12	1.00	7.00	0.380
Construction	110	9.00	4.02	2.01	1.32	1.38	0.12	1.00	5.00	0.271
Manufacturing	140	9.00	2.67	1.34	1.32	1.38	0.08	1.00	5.00	0.270
Transportation, Communication, Utilities	110	9.00	4.02	2.01	1.32	1.38	0.12	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	56.10	28.05	1.24	1.73	13.74	1.50	7.00	1.234
Finance, Insurance, Real Estate	710	9.00	3.44	1.72	1.24	1.73	0.84	1.00	5.00	0.293
Services ⁽⁹⁾	N/A	9.00	20.34	10.17	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 12th Edition (Institute of Transportation Engineers 2025) as follows:
 ITE Code 110 at 4.02 weekday trips per employee, General Urban/Suburban and Rural (Land Uses 000-399), page 59
 ITE Code 140 at 2.67 weekday trips per employee, General Urban/Suburban and Rural (Land Uses 000-399), page 93
 ITE Code 150 at 5.05 weekday trips per employee, General Urban/Suburban and Rural (Land Uses 000-399), page 119
 ITE Code 710 at 3.44 weekday trips per employee, General Urban/Suburban and Rural (Land Uses 400-799), page 683
 ITE Code 730 at 7.45 weekday trips per employee, General Urban/Suburban and Rural (Land Uses 400-799), page 751
 ITE Code 820 (Volume 5, page 90) based on blended average of trips by retail center size calculated below.
 Trips per retail employee from the following table:

<i>Retail Scale</i>	<i>Trip Rate</i>	<i>Sq Ft per Employee⁽¹¹⁾</i>	<i>Trips per Employee</i>	<i>Share</i>	<i>Weighted Trips</i>
Retail (Less than 40k sq. ft.)	54.45	890	48	50.0%	24.00
Retail (40k to 150k sq. ft.)	65.38	1,152	75	35.0%	26.25
Retail (greater than 150k sq. ft.)	36.39	1,070	39	15.0%	5.85
Sum of Weighted Trips/1k sq.ft.					56.10

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

(4) Journey-to-Work Occupants per Trip from 2001 National 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 National 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-8 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, 12th ed., when available, or else derived from the square feet per employee for the appropriate land use category from the Energy Information Administration from Table B-1 of the Commercial Energy Building Survey, 2003.

(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, 2018

**Table B-6
Functional Population (Countywide)**

Population Category	Collier County Baseline Data⁽¹⁾	Functional Resident Coefficient⁽²⁾	Functional Population⁽³⁾
2024 Peak Season Population	491,779	0.688	338,344
Employment Category			
Natural Resources	4,976	0.380	1,891
Construction	25,122	0.271	6,808
Manufacturing	6,231	0.270	1,682
Transportation, Communication, and Utilities	11,285	0.271	3,058
Wholesale Trade	6,543	0.272	1,780
Retail Trade	26,390	1.234	32,565
Finance, Insurance, and Real Estate	55,404	0.293	16,233
Services	126,779	0.499	63,263
Government Services	14,498	0.451	6,539
Total Employment by Category Population ⁽⁴⁾			133,819
2024 Total Functional Population⁽⁵⁾			472,163

- 1) Source: Table B-1 for population and 2025 Woods & Poole for employment data (2024 estimate)
- 2) Source: Table B-4
- 3) The functional population is Collier 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 B-7 presents the County’s annual functional population figures from 2010 through 2040, based on the 2024 functional population figure from Table B-6 and the annual population growth rates from the population figures previously presented in Table B-1.

**Table B-7
Collier County Functional Population (2010-2040)**

Year	Functional Population
2010	371,738
2011	376,536
2012	382,227
2013	386,222
2014	392,062
2015	399,792
2016	407,666
2017	416,073
2018	424,600
2019	433,302
2020	436,908
2021	445,641
2022	455,319
2023	464,202
2024	472,163
2025	479,505
2026	486,207
2027	493,002
2028	499,893
2029	506,879
2030	512,994
2031	518,213
2032	523,486
2033	528,813
2034	534,193
2035	538,950
2036	543,073
2037	547,227
2038	551,413
2039	555,632
2040	559,479

Source: Table B-6 for the 2024 functional population figure and Table B-1 for annual growth rates

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 estimates by residential and non-residential land uses.

Residential and Transient Land Uses

As mentioned previously, functional population estimates by land use need to be developed for each impact fee service area to be analyzed. For residential and transient land uses, these coefficients are displayed in **Table B-8**. The transient land uses include hotel/all suites hotel, motel, assisted living facility and nursing home. Secondary sources, such as Smith Travel Research (STR), Collier County Convention and Visitors Bureau, and the Florida Department of Elderly Affairs, are used to determine the occupancy rate for these land uses.

Non-Residential Land Uses

A similar approach is used to estimate functional residents for non-residential land uses. **Table B-9** reports 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 in the tables shows the estimated functional residents per unit by land use. These coefficients by land use serve as the demand component for the EMS impact fee program and are used in the calculation of the EMS impact fee schedule.

**Table B-8
Functional Residents for Residential and Transient Land Uses**

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										
- Less than 4,000 sf	du	210	2.53	-	-	-	-	-	-	1.74
- 4,000 sf or greater	du	210	3.12	-	-	-	-	-	-	2.15
Multi-Family	du	220-232	1.31	-	-	-	-	-	-	0.90
Mobile Home	du	240	1.92	-	-	-	-	-	-	1.32
Retirement Community - Detached (Single Family)	du	251	1.55	-	-	-	-	-	-	1.07
Retirement Community - Attached (Multi-Family)	du	252	0.79	-	-	-	-	-	-	0.54
TRANSIENT/ASSISTED, GROUP										
Hotel/All Suites Hotel	room	310/311	2.80	73%	2.04	12	0.41	9	7	1.17
Motel	room	320	2.80	73%	2.04	12	0.13	9	7	1.07
Assisted Living Facility	du	254	1.18	70%	0.82	20	0.62	9	7	0.92
Nursing Home	1,000 sf	620	2.76	70%	1.93	20	2.04	9	7	2.37
<p>(1) Land use code from the Institute of Transportation Engineers (ITE) Trip Generation Handbook, 12th Edition (2) Estimates for the residential land uses, retirement community (detached), retirement community (attached) from Table B-2; estimate for hotel/motel from Collier County Overnight Visitor Economic Impact Report 2021. Estimate for assisted living facility is based on people per household figures for single family 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. 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 hotel/motel occupancy: Collier County Convention and Visitors Bureau Annual Reports and Smith Travel Research (STR). Average occupancy rate for 2016 through 2021, excluding 2020. Source for nursing home/ALF occupancy rate is the Florida Department of Elderly Affairs Collier County Profile and the Agency for Health Care Administration. Average occupancy rate for 2021 through 2022. (4) Residents/visitors per unit (Item 2) times occupancy rate (Item 3) (5), (7), (8) Estimated (6) Adapted from ITE Trip Generation Handbook, 12th Edition (9) For residential land uses, calculated as residents per unit times the functional population coefficient (0.688 from Table B-5). For transient, assisted, and group land uses, calculated as $\frac{[(\text{Adjusted Residents per Unit} \times \text{Hours at Place} \times \text{Days per Week}) + (\text{Workers Per Unit} \times \text{Work Hours Per Day} \times \text{Days per Week})]}{(24 \text{ Hours per Day} \times 7 \text{ Days per Week})}$ </p>										

**Table B-9
Functional Residents 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 Residents per Unit ⁽¹¹⁾
RECREATION:												
416	Campground/RV Park	site	1.04	n/a	1.20	0.52	9	1.64	0.00	1.50	7	0.45
420	Marina	boat berth	2.41	20.52	0.12	1.21	9	1.64	1.86	1.00	7	0.12
430	Golf Course	hole	30.38	20.52	1.48	15.19	9	1.64	23.43	0.25	7	0.80
n/a	Bundled Golf Course ⁽¹²⁾	hole	9.11	20.52	0.44	4.56	9	1.64	7.04	0.25	7	0.24
445	Movie Theater	1,000 sf	82.30	53.12	1.55	41.15	9	1.64	65.94	1.00	7	3.33
n/a	Dance Studio/Gymnastics	1,000 sf	21.33	n/a	2.00	10.67	9	1.64	15.50	1.50	7	1.72
INSTITUTIONS:												
520	Elementary School (Private)	student	2.27	22.50	0.10	1.14	9	1.11	1.17	2.00	5	0.10
522	Middle/Junior High School (Private)	student	2.09	23.41	0.09	1.05	9	1.11	1.08	2.00	5	0.09
525	High School (Private)	student	1.94	21.95	0.09	0.97	9	1.11	0.99	2.00	5	0.08
540/550	University/Junior College (7,500 or fewer students) (Private)	student	2.00	11.75	0.17	1.00	9	1.11	0.94	2.00	5	0.10
	University/Junior College (more than 7,500 students) (Private)	student	1.50	11.75	0.13	0.75	9	1.11	0.70	2.00	5	0.08
560	Church	1,000 sf	6.78	20.64	0.33	3.39	9	2.16	6.99	1.00	7	0.42
565	Day Care Center	1,000 sf	42.89	19.30	2.22	21.45	9	1.11	21.59	0.15	5	0.69
MEDICAL:												
610	Hospital	1,000 sf	10.70	3.57	3.00	5.35	9	1.44	4.70	1.00	7	1.32
OFFICE:												
710	General Office	1,000 sf	7.83	3.44	2.28	3.92	9	1.09	1.99	1.00	5	0.67
720	Medical Office/Clinic 10,000 sq ft or less	1,000 sf	23.83	11.78	2.02	11.92	9	1.44	15.14	1.00	5	0.99
	Medical Office/Clinic greater than 10,000 sq ft	1,000 sf	33.13	11.78	2.81	16.57	9	1.44	21.05	1.00	5	1.38
770	Business Park (Flex-Space)	1,000 sf	11.75	5.42	2.17	5.88	9	1.09	4.24	0.75	5	0.68
RETAIL:												
822	Retail 6,000 sfgla or less	1,000 sfgla	54.45	17.42	3.13	27.23	9	1.52	38.26	0.50	7	1.97
822	Retail 6,001 to 40,000 sfgla	1,000 sfgla	54.45	17.42	3.13	27.23	9	1.52	38.26	0.50	7	1.97
821	Retail 40,001 to 150,000 sfgla	1,000 sfgla	65.38	17.42	3.75	32.69	9	1.52	45.94	0.65	7	2.65
820	Retail greater than 150,000 sfgla	1,000 sfgla	36.39	17.42	2.09	18.20	9	1.52	25.57	1.00	7	1.85
840/841	New/Used Auto Sales	1,000 sf	24.58	11.84	2.08	12.29	9	1.52	16.60	1.00	7	1.47
849	Tire Superstore	1,000 sf	20.37	n/a	1.65	10.19	9	1.52	13.84	1.00	7	1.20
850	Supermarket	1,000 sf	93.03	41.17	2.26	46.52	9	1.52	68.45	0.50	7	2.27
851	Convenience Market (24 hour)	1,000 sf	670.85	243.38	2.76	335.43	9	1.52	507.09	0.20	7	5.26
862	Home Improvement Superstore	1,000 sf	30.65	n/a	2.50	15.33	9	1.52	20.80	1.00	7	1.80
880/881	Pharmacy with & without Drive-Thru	1,000 sf	103.23	69.17	1.49	51.62	9	1.52	76.97	0.35	7	1.68
890	Furniture Store	1,000 sf	6.22	6.98	0.89	3.11	9	1.52	3.84	0.50	7	0.41
SERVICES:												
911	Bank/Savings w/out Drive-Thru	1,000 sf	57.02	32.73	1.74	28.51	9	1.52	41.60	0.35	6	1.08
912	Bank/Savings w/Drive-Thru	1,000 sf	102.09	32.73	3.12	51.05	9	1.52	74.48	0.15	6	1.40

Table B-9 (continued)
Functional Residents 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 Residents per Unit ⁽¹¹⁾
SERVICES:												
930	Fast Casual Restaurant	1,000 sf	225.89	21.26	10.63	112.95	9	2.30	249.16	0.35	7	7.62
931	Low-Turnover Restaurant	1,000 sf	84.91	17.90	4.74	42.46	9	2.30	92.92	1.00	7	5.65
932	High-Turnover (Sit-Down) Restaurant	1,000 sf	101.53	21.26	4.78	50.77	9	2.30	111.99	0.75	7	5.29
934	Fast Food Restaurant w/Drive-Thru	1,000 sf	463.96	44.52	10.42	231.98	9	2.30	523.13	0.25	7	9.36
934.1	Fast Food w/Drive-Thru with Two Meals	1,000 sf	409.25	44.52	9.19	204.63	9	2.30	461.46	0.25	7	8.25
941	Quick Lube	service bay	40.00	16.00	2.50	20.00	9	1.52	27.90	0.50	7	1.52
944	Gas Station w/Convenience Market <2,000 sq ft	fuel pos.	172.01	275.78	0.62	86.01	9	1.52	130.12	0.20	7	1.32
945	Gas Station w/Convenience Market 2,000 sq ft or more	fuel pos.	207.44	241.21	0.86	103.72	9	1.52	156.79	0.20	7	1.63
947	Self-Service Car Wash	service bay	38.89	n/a	0.50	19.45	9	1.52	29.06	0.50	7	0.79
948	Automated Car Wash	1,000 sf	253.51	n/a	1.75	126.76	9	1.52	190.93	0.25	7	2.65
n/a	Luxury Auto Sales	1,000 sf	16.30	n/a	2.08	8.15	9	1.52	10.31	1.00	7	1.21
INDUSTRIAL:												
110	General Light Industrial	1,000 sf	3.60	4.02	0.90	1.80	9	1.08	1.04	1.00	5	0.27
140	Manufacturing	1,000 sf	4.27	2.67	1.60	2.14	9	1.08	0.71	1.00	5	0.45
150	Warehousing	1,000 sf	1.48	5.05	0.29	0.74	9	1.08	0.51	0.75	5	0.09
151	Mini-Warehouse	1,000 sf	1.37	61.90	0.02	0.69	9	1.08	0.73	0.75	7	0.03

Sources:

- 1) Land use code found in the Institute of Transportation Engineers (ITE) Trip Generation Handbook, 12th Edition
- 2) Land uses and trip generation rates consistent with those included in the 2025 Transportation Impact Fee Update Study
- 3) Trips per employee from ITE Trip Generation Handbook, 12th Edition, when available
- 4) Trips per unit (Item 2) 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) Estimated
- 7) Source: 2022 National Household Travel Survey (FHWA 2022)
- 8) [(One-way Trips/Unit X Occupants/Trip) - Employees]
- 9) Estimated
- 10) Estimated
- 11) [(Workers X Hours/Day X Days/Week) + (Visitors X Hours/Visit X Days/Week)]/(24 Hours x 7 Days)
- 12) The trip generation rate for "bundled golf course" is assessed at 30 percent of the trip generation rate for the "golf course" land use (LUC 430)