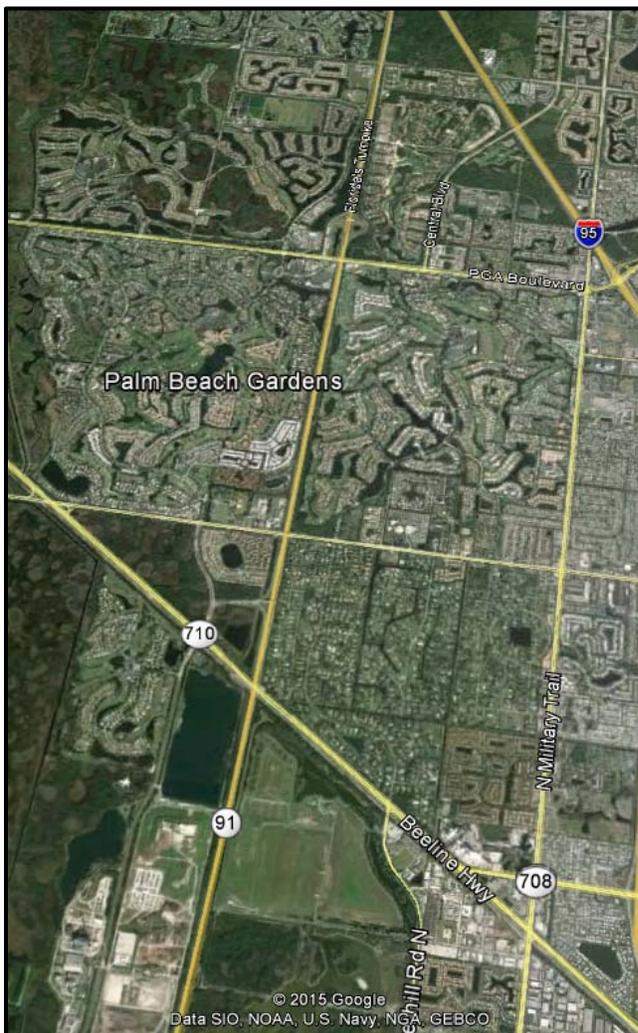


# City of Palm Beach Gardens Impact Fee Study



Final Report  
July 11, 2016



Prepared for:

**City of Palm Beach Gardens**  
10500 N. Military Trail  
Palm Beach Gardens, FL 33410

Prepared by:

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July 11, 2016

Ms. Niki Spencer  
Operations Manager  
City of Palm Beach Gardens  
10500 N. Military Trail  
Palm Beach Gardens, Florida 33410

**Re: City of Palm Beach Gardens Impact Fee Update Study**

Dear Ms. Spencer:

Enclosed is the Final Technical Report of the City of Palm Beach Gardens' Impact Fee Update Study for your review. If you have any questions or comments concerning this report, please do not hesitate to contact me or Nilgün Kamp.

It has been our pleasure to have worked with the City staff on this important project.

Sincerely,



Steven A. Tindale, P.E., AICP  
President

**CITY OF PALM BEACH GARDENS  
IMPACT FEE STUDY**

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## Executive Summary

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The City of Palm Beach Gardens' impact fee program includes fees in the following four service areas:

- Parks & Recreation
- Fire Rescue
- Police Protection
- Transportation

The most recent technical study for these fees was completed in 2011. It is the policy of the City to update impact fee technical studies frequently to ensure the fees are based on most current and localized data.

The City of Palm Beach Gardens has retained Tindale Oliver to prepare an update study to reflect changes to the cost, credit, and demand components since the last technical study. In addition to the four service areas mentioned previously, the City is interested in developing an impact fee program for general public buildings, which is also a part of the analysis contained in this report.

It should be noted that figures included in this study represent the technically calculated level of impact fees that the City could charge; however, the City Council may choose to discount the fees as a policy decision.

An impact fee is a one-time capital charge levied against new development to fund infrastructure capacity consumed by new growth. Impact fee revenues can only be used for capacity expansion projects and not for expenses related to replacement, maintenance or operations. In Florida, legal requirements related to impact fees have primarily been established through case law since the 1980's. Generally speaking, 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 a list of capacity-adding projects included in the

City'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. In 2009, the Act was amended to clarify 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.**

This technical report has been prepared to support legal compliance with existing case law and statutory requirements.

Table ES-1 provides a summary of calculated fees for a set of representative land uses along with a comparison to the current adopted fees. The complete schedules include approximately 40 land uses and are included in the remaining sections of this report.

**Table ES-1  
Summary of Palm Beach Gardens Impact Fees - All Program Areas**

ITE LUC	Land Use	Unit	Parks and Recreation <sup>(1)</sup>			Fire Rescue <sup>(2)</sup>			Police Protection <sup>(3)</sup>		
			Adopted Fee	Full Calculated Fee	Percent Change	Adopted Fee	Full Calculated Fee	Percent Change	Adopted Fee	Full Calculated Fee	Percent Change
<b>Residential</b>											
210	Single Family (detached/attached) 2,000 sf	du	\$3,737	\$3,703	-1%	\$390	\$469	20%	\$511	\$307	-40%
<b>Non-Residential</b>											
110	General Light Industrial	1,000 sf	n/a	n/a	n/a	\$279	\$250	-10%	\$19	\$179	842%
710	Office (50,000 sf)	1,000 sf	n/a	n/a	n/a	\$184	\$510	177%	\$214	\$365	71%
820	Retail (125,000)	1,000 sf	n/a	n/a	n/a	\$214	\$832	289%	\$245	\$596	143%
912	Bank/Savings w/ Drive-In	1,000 sf	n/a	n/a	n/a	\$249	\$825	231%	\$232	\$591	155%
934	Fast Food Rest. w/Drive-Thru	1,000 sf	n/a	n/a	n/a	\$217	\$3,221	1384%	\$245	\$2,307	842%
ITE LUC	Land Use	Unit	Transportation <sup>(4)</sup>			Public Buildings <sup>(5)</sup>			Total (All Fees) <sup>(6)</sup>		
			Adopted Fee	Full Calculated Fee	Percent Change	Adopted Fee	Full Calculated Fee	Percent Change	Adopted Fee	Full Calculated Fee	Percent Change
<b>Residential</b>											
210	Single Family (detached/attached) 2,000 sf	du	\$1,627	\$1,779	9%	n/a	\$208	n/a	\$6,265	\$6,466	3%
<b>Non-Residential</b>											
110	General Light Industrial	1,000 sf	\$375	\$1,135	203%	n/a	\$111	n/a	\$673	\$1,675	149%
710	Office (50,000 sf)	1,000 sf	\$699	\$2,531	262%	n/a	\$226	n/a	\$1,097	\$3,632	231%
820	Retail (125,000)	1,000 sf	\$2,001	\$2,941	47%	n/a	\$369	n/a	\$2,460	\$4,738	93%
912	Bank/Savings w/ Drive-In	1,000 sf	\$3,219	\$6,180	92%	n/a	\$365	n/a	\$3,700	\$7,961	115%
934	Fast Food Rest. w/Drive-Thru	1,000 sf	\$3,740	\$20,811	456%	n/a	\$1,427	n/a	\$4,202	\$27,766	561%

(1) Source: Table II-10

(2) Source: Table III-10

(3) Source: Table IV-10

(4) Source: Table F-1

(5) Source: Table VI-8

(6) Sum of each program area's adopted rate and full calculated rate

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## I. Introduction

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The City of Palm Beach Gardens implemented impact fees in the following four service areas:

- Parks & Recreation
- Fire Rescue
- Police Protection
- Transportation

The most recent technical study for these fees was completed in 2011. It is the policy of the City to update impact fee technical studies frequently to ensure the fees are based on most current and localized data.

The City of Palm Beach Gardens has retained Tindale Oliver to prepare an update study to reflect changes to the cost, credit, and demand components since the last update study. In addition, the City is interested in developing an impact fee program for general public buildings, which is also a part of the analysis contained in this report. It should be noted that figures calculated in this study represent the technically defensible level of impact fees that the City could charge; however, the City Council may choose to discount the fees as a policy decision.

### ***Methodology***

The methodology used to update the City's impact fee program is a consumption-based impact fee methodology, which is used throughout Florida. This methodology was also used in preparing the current adopted impact fees. 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 transportation. In the case of transportation, vehicle-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. In addition, per legal requirements, a credit is subtracted from the total cost to account for the value of future tax contributions of the new development toward any capacity expansion projects through other revenue sources. Contributions used to calculate the credit component include estimates of

future non-impact fee revenues generated by the new development that will be used toward capacity expansion projects. In other words, case law requires that the new development should not be charged twice for the same service.

### ***Legal Standard Overview***

In Florida, legal requirements related to impact fees have primarily been established through case law since the 1980's. Generally speaking, 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 City'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.

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

#### 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 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.

#### Impact Fee vs. Tax

- An impact fee is generally regarded as a regulatory function established as a condition for improving property and is not established for the primary purpose of generating revenue, as are taxes.
- Impact fee expenditures must convey a proportional benefit to the fee payer. This is accomplished through the establishment of benefit districts, 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. The technical report also documents the methodology components for each of the impact fee areas in the following sections, including an evaluation of the inventory, service area and level of service (LOS), cost, credit, and demand components. Information supporting this analysis was obtained from the City and other sources, as indicated.

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## II. Parks & Recreation Impact Fee

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This section discusses the analysis used in the update of the parks and recreation impact fee. Several major elements addressed in this section include:

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

These elements are summarized throughout this section, with the result being the proposed parks and recreation impact fee schedule.

### ***Inventory of Land and Recreation Facilities***

The City of Palm Beach Gardens currently owns and maintains several parks located throughout the City. Of these, the City has an adopted level of service standard for neighborhood and community parks and only these parks are included in the impact fee calculations. Other parks, such as mini parks or eco-oriented parks, are excluded from the impact fee calculations. As shown in Table II-1, the total acreage associated with the parks in the inventory includes approximately 233 community park acres and 37 neighborhood park acres.

### ***Service Area and Population***

The City of Palm Beach Gardens provides parks and recreation facilities and services to all city residents. As such, the service area for the parks included in the impact fee calculations is citywide. To accurately determine demand for services, this impact fee study considers not only the resident or permanent population, but also the seasonal residents and visitors as well. Therefore, the parks and recreation impact fee analysis uses the weighted average seasonal population for all population estimates and projections, unless otherwise noted. Appendix A, Table A-1 provides the weighted average seasonal population estimate for 2015

and the projected weighted seasonal population through 2040 for use in the parks and recreation impact fee analysis.

### ***Level of Service***

Table II-2 presents the parks and recreation facility adopted and the current achieved level of service (LOS). As shown in Table II-2, the achieved LOS for all city-owned and maintained neighborhood and community parks is 5.35 acres per 1,000 permanent residents and 5.01 acres per 1,000 weighted seasonal residents. The value of these parks represents the investment made by the community into the parks infrastructure and the new development is charged at that level. The City's current adopted LOS standard for neighborhood and community parks is 5 acres per 1,000 permanent residents. If the City is interested in maintaining the current, achieved LOS and reflecting this service level in its parks and recreation impact fee, it is necessary for the City to revise the adopted LOS standard accordingly. If the City prefers for the LOS standard to remain at 5 acres per 1,000 residents, impact fee calculations should be revised to reflect this lower service level.

**Table II-1  
Palm Beach Gardens Parks and Recreation Facilities Inventory <sup>(1)</sup>**

Name of the Park/Facility	Total Acreage	Ownership	Class	Baseball/Softball Fields	Basketball Courts	Bicycle Riding (Miles)	Boat / Canoe Launch	Community Center (Square Feet)	Dog Run	Football/Soccer Fields	Freshwater Fishing (Non-Boat) (Feet)	General Play - Multipurpose Court	General Play - Equipped Play Area	Golf Course - 18 Holes (Courses)	Hiking (Miles)	Horseshoe (Pit)
Burns Road Center	15.84	City	C				1	69,015			1,246		1			
Lakeside Center		City	C											8		
City Park	31.75	City	C		4	0.5							1		0.5	
Palm Beach Gardens Tennis Center		City	C					1,624								
Gardens Park Baseball Facility	32.58	City	C	8									2			
Gardens Park Soccer Facility		City	C							9						
Lake Catherine Park	14.79	City	N				1				1,575					
Lake Catherine Sports Complex	14.49	City	C	4				2,712					1			
Lilac Athletic Facility	7.72	City	C	1				940	1				1			
Lilac Park		City	C							1	1,930					
Mirasol Park	15.37	City	C	1	4			2,664		2			2			
Oaks Park	11.79	City	N													
Palm Beach Gardens Golf Course	70.00	City	C					2,700						1		
PGA National Park	36.00	City	C	2	3		1			3	1,771		3			
Plant Drive Park	8.56	City	C	1	4			1,400				2				
Riverside Linear Park	4.08	City	N								2,279					
Riverside Youth Enrichment Center		City	N										3			
Sandhill Crane Park	1.09	City	C				1				335					
South Ilex Circle Neighborhood Park	0.47	City	N								478					
Thompson River Linear Park	5.60	City	N				1				2,543					
Twins Park	0.63	City	N													
<b>Total (City Owned)</b>	<b>270.76</b>			<b>17</b>	<b>15</b>	<b>0.5</b>	<b>5</b>	<b>81,055</b>	<b>1</b>	<b>15</b>	<b>12,157</b>	<b>2</b>	<b>22</b>	<b>1</b>	<b>0.5</b>	<b>5</b>
Summary of Parks & Recreation Facilities	Total Acreage			Baseball/Softball Fields	Basketball Courts	Bicycle Riding (Miles)	Boat / Canoe Launch	Community Center (Square Feet)	Dog Run	Football/Soccer Fields	Freshwater Fishing (Non-Boat) (Feet)	General Play - Multipurpose Court	General Play - Equipped Play Area	Golf Course - 18 Holes (Courses)	Hiking (Miles)	Horseshoe (Pit)
Community	233.40			17	15	0.5	3	81,055	1	15	5,282	2	19	1	0.5	5
Neighborhood	37.36			0	0	0	2	0	0	0	6,875	0	3	0	0	0
<b>TOTAL</b>	<b>270.76</b>			<b>17</b>	<b>15</b>	<b>0.5</b>	<b>5</b>	<b>81,055</b>	<b>1</b>	<b>15</b>	<b>12,157</b>	<b>2</b>	<b>22</b>	<b>1</b>	<b>0.5</b>	<b>5</b>

**Table II-1 (Continued)**  
**Palm Beach Gardens Parks and Recreation Facilities Inventory <sup>(1)</sup>**

Name of the Park/Facility	Total Acreage	Ownership	Class	Multi-Purpose Building (Square Feet)	Nature Study (Miles)	Parking Spaces	Pavilions	Physical Exercise - Urban Jogging/Hiking (Trails)	Picnic (Areas)	Pools	Racquet-Handball Courts	Restroom	Roller Hockey/Skate Rink	Shuffleboard Courts	Tennis Courts – Hard Surface	Volleyball Courts
Burns Road Center	15.84	City	C			84	4	1	3	3						
Lakeside Center		City	C			65	2		3					5		
City Park	31.75	City	C		0.5	16	1	1			6	1			2	
Palm Beach Gardens Tennis Center		City	C	480		64	1		1			1			18	
Gardens Park Baseball Facility	32.58	City	C	2,520		250	3		5			3				
Gardens Park Soccer Facility		City	C			100										
Lake Catherine Park	14.79	City	N			21		1								
Lake Catherine Sports Complex	14.49	City	C			105	2		1							
Lilac Athletic Facility	7.72	City	C				1					1				
Lilac Park		City	C			55	1	1	1							
Mirasol Park	15.37	City	C	1,344		117	2	1	2			1				1
Oaks Park	11.79	City	N			33	1	1	1						2	
Palm Beach Gardens Golf Course	70.00	City	C	12,000		116			1			2				
PGA National Park	36.00	City	C	1,700		110	2		4			3			2	
Plant Drive Park	8.56	City	C			97						1	3			
Riverside Linear Park	4.08	City	N		0.5											
Riverside Youth Enrichment Center		City	N						1							
Sandhill Crane Park	1.09	City	C		0.2	14			4			1				
South Ilex Circle Neighborhood Park	0.47	City	N													
Thompson River Linear Park	5.60	City	N		0.5			1	1							
Twins Park	0.63	City	N													
<b>Total (City Owned)</b>	<b>270.76</b>			<b>18,044</b>	<b>1.7</b>	<b>1,247</b>	<b>20</b>	<b>7</b>	<b>28</b>	<b>3</b>	<b>6</b>	<b>14</b>	<b>3</b>	<b>5</b>	<b>24</b>	<b>1</b>
Summary of Parks & Recreation Facilities	Total Acreage			Multi-Purpose Building (Square Feet)	Nature Study (Miles)	Parking Spaces	Pavilions	Physical Exercise - Urban Jogging/Hiking (Trails)	Picnic (Areas)	Pools	Racquet-Handball Courts	Restroom	Roller Hockey/Skate Rink	Shuffleboard Courts	Tennis Courts – Hard Surface	Volleyball Courts
Community	233.40			18,044	0.7	1,193	19	4	25	3	6	14	3	5	22	1
Neighborhood	37.36			0	1	54	1	3	3	0	0	0	0	0	2	0
<b>TOTAL</b>	<b>270.76</b>			<b>18,044</b>	<b>1.7</b>	<b>1,247</b>	<b>20</b>	<b>7</b>	<b>28</b>	<b>3</b>	<b>6</b>	<b>14</b>	<b>3</b>	<b>5</b>	<b>24</b>	<b>1</b>

(1) Source: City of Palm Beach Gardens

**Table II-2  
Current Level of Service**

Calculation Step	Year 2015	
	Permanent Population	Weighted Seasonal Population
Population <sup>(1)</sup>	50,602	54,011
<b>Community Parks</b>		
Number of Acres <sup>(2)</sup>	233.40	
Achieved LOS <sup>(3)</sup>	4.61	4.32
<b>Neighborhood Parks</b>		
Number of Acres <sup>(2)</sup>	37.36	
Achieved LOS <sup>(3)</sup>	0.74	0.69
<b>All Parks</b>		
<b>Total Number of Acres<sup>(4)</sup></b>	<b>270.76</b>	
<b>Achieved LOS<sup>(3)</sup></b>	<b>5.35</b>	<b>5.01</b>
<b>Adopted LOS Standard<sup>(5)</sup></b>	<b>5.00</b>	<b>4.68</b>

(1) Source: Appendix A, Table A-10 for permanent population and Table A-1 for weighted seasonal population

(2) Source: Table II-1

(3) Source: Acres for each park type (Item 2) divided by 2015 population (Item 1) multiplied by 1,000

(4) Sum of community and neighborhood park acreages

(5) Source: City of Palm Beach Gardens, Recreation and Open Space Level of Service

Table II-3 presents a comparison of the parks and recreation adopted LOS standards of other Florida jurisdictions to the City of Palm Beach Gardens' adopted and achieved LOS. Based on this comparison, the City's achieved LOS and adopted LOS standard are within the range of the standards adopted by other communities.

**Table II-3  
Level of Service Comparison (Adopted)**

<b>Jurisdiction</b>	<b>LOS Standard (Acres per 1,000 Residents)</b>
City of Greenacres <sup>(1)</sup>	1.40
City of Boynton Beach <sup>(2)</sup>	2.50
City of Lake Worth <sup>(3)</sup>	2.50
City of Riviera Beach <sup>(4)</sup>	3.00
City of West Palm Beach <sup>(5)</sup>	4.00
Town of Lake Park <sup>(6)</sup>	5.00
<b>Palm Beach Gardens (Adopted)<sup>(7)</sup></b>	<b>5.00</b>
<b>Palm Beach Gardens (Achieved)<sup>(8)</sup></b>	<b>5.35</b>
Town of Palm Beach <sup>(9)</sup>	6.00
City of Delray Beach <sup>(10)</sup>	6.20
City of Boca Raton <sup>(11)</sup>	8.60
Village of Royal Palm Beach <sup>(12)</sup>	10.00
Village of Wellington <sup>(13)</sup>	10.00
<b>Average (excluding PBG)</b>	<b>5.38</b>

(1) Source: City of Greenacres Comprehensive Plan

(2) Source: City of Boynton Beach Comprehensive Plan

(3) Source: City of Lake Worth Comprehensive Plan

(4) Source: Riviera Beach Comprehensive Plan

(5) Source: City of West Palm Beach, 1.5 regional park acres per 1,000 persons and 2.5 community park acres per 1,000 persons

(6) Source: Town of Lake Park Comprehensive Plan

(7) Source: Table II-2

(8) Source: Table II-2

(9) Source: Town of Palm Beach Comprehensive Plan

(10) Source: City of Delray Beach Comprehensive Plan

(11) Source: City of Boca Raton Comprehensive Plan. 2.33 district park acres per 1,000 population; 1.94 community park acres per 1,000 population; 1.14 neighborhood park acres per 1,000 population; 3.19 nature park acres per 1,000 population.

(12) Source: Village of Royal Palm Beach Comprehensive Plan

(13) Source: Village of Wellington Comprehensive Plan

## ***Cost Component***

The total cost per resident for parks and recreation facilities consists of two components: the cost of purchasing land for each park and the cost of facilities and equipment located at each park.

### Land Cost

As part of the 2011 Impact Fee Study, the City of Palm Beach Gardens retained services of an appraisal firm to estimate its neighborhood and community park land values. This analysis resulted in an average land value of \$153,000 per acre. Based on an analysis that takes into consideration property value increase since 2011 and current land value of the existing parks as reported by the Palm Beach County Property Appraiser as well as an analysis of recent sales of vacant land similar in size and location to Palm Beach Gardens' parks, an average land value of \$170,000 per acre is used in the impact fee calculations. As shown in Table II-4, the total land value of park and recreation facilities in Palm Beach Gardens' amounts to approximately \$46.0 million and \$852 per resident. Appendix B provides further explanation of land value estimates.

### Park Development and Recreational Facility Costs

The second step in calculating the total cost for parks and recreation services in the City of Palm Beach Gardens involves estimating the site development and recreational facility costs. The cost of land for parks and recreation facilities includes more than just the purchase cost of the land. Landscaping/site improvement and utilities/paving costs are also considered. These costs can vary greatly, depending on the type of services offered at each park. In addition, recreational facility costs tend to vary depending on the facility characteristics, size and scope.

Park development and recreational facility costs were estimated by the City staff based on recent/on-going parks development projects. Discussions with the City staff confirmed that the development levels of on-going projects are representative of the facilities and amenities at the existing parks. Based on this analysis, park development cost was estimated at \$300,000 per acre for community parks, \$225,000 per acre for neighborhood parks, \$9.5 million for the City's golf course, and \$750,000 per acre for the Burns Road Community Center.

As shown in Table II-5, the total park facility value is approximately \$74.1 million and \$1,370 per resident.

**Table II-4  
Land Cost per Resident**

Variable/Calculation Step	Park Land Value
<b>Land Value:</b>	
Land Purchase Cost per Acre <sup>(1)</sup>	\$170,000
Total Acres <sup>(2)</sup>	270.76
Total Land Value <sup>(3)</sup>	\$46,029,200
Achieved LOS <sup>(4)</sup>	5.01
<b>Total Land Value per Weighted Resident<sup>(5)</sup></b>	<b>\$851.70</b>

- (1) Source: Appendix B
- (2) Source: Table II-1
- (3) Land purchase cost per acre (Item 1) multiplied by total acres (Item 2)
- (4) Source: Table II-2
- (5) Land purchase cost per acre (Item 1) multiplied by the achieved LOS standard (Item 4) divided by 1,000

**Table II-5  
Facility Value per Resident**

Variable/Calculation Step	Park Type				
	Community Parks	Neighborhood Parks	Golf Course	Community Center	Total/ Weighted Average
Facility Value per Acre <sup>(1)</sup>	\$300,000	\$225,000	\$135,714	\$750,000	\$273,504
Total Acres <sup>(2)</sup>	147.56	37.36	70.00	15.84	270.76
Total Facility Value <sup>(3)</sup>	\$44,268,000	\$8,406,000	\$9,500,000	\$11,880,000	\$74,054,000
Achieved LOS <sup>(4)</sup>					5.01
<b>Total Facility Value per Weighted Resident<sup>(5)</sup></b>					<b>\$1,370.26</b>

- (1) Source: City of Palm Beach Gardens
- (2) Source: Table II-1
- (3) Facility value per acre (Item 1) multiplied by the total acres (Item 2) for each park type
- (4) Source: Table II-2
- (5) Facility value per acre (Item 1) multiplied by the achieved LOS standard (Item 4) divided by 1,000

## ***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 was 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 City of Palm Beach Gardens' parks and recreation program.

### Capital Expansion Expenditures Credit

Between 2011 and 2020, the City of Palm Beach Gardens spent or programmed a total of \$8.6 million for capital expansion of parks. These expenditures were funded with revenues from the General Fund and a special revenue fund for parks. Since the review of these expenditures spanned from FY 2011 through FY 2020, the average annual capital expansion cost is divided by the average population for this same period. As presented in Table II-6, the average annual capital expansion expenditure is \$16 per resident.

The portion of payments funded by ad valorem tax revenues are adjusted to account for the fact that new homes tend to pay higher property taxes per dwelling unit. The adjustment factor is based on the average taxable value of newer homes to that of all homes. With this adjustment, the total capital expansion credit per resident amounts to \$21, which is used in credit calculations for residential land uses.

**Table II-6  
Parks & Recreation Capital Expansion Credit**

Description <sup>(1)</sup>	Funding Source	FY (2011-2015)	FY (2016-2020)	Total (FY 2011-2020)
Parks and Recreation - Capacity Expansion	General Fund	\$4,138,264	\$4,248,100	\$8,386,364
Parks and Recreation - Capacity Expansion	Special Revenue Fund	\$167,573	\$73,900	\$241,473
Total Capital Expansion Expenditures				\$8,627,837
Annual Capital Expansion Expenditures <sup>(2)</sup>				\$862,784
Average Population (FY 2011-2020) <sup>(3)</sup>				54,477
Annual Capital Expansion Expenditure per Person <sup>(4)</sup>				\$15.84
Portion of Capital Expansion Projects Funded with Ad Valorem Tax Revenues <sup>(5)</sup>				61%
Portion Funded with Ad-Valorem Tax Revenues <sup>(6)</sup>				\$9.66
Credit Adjustment Factor for Residential Land Uses <sup>(7)</sup>				1.55
Adjusted Annual Capital Improvement Credit per Person <sup>(8)</sup>				\$14.97
Portion Funded with Sources Other than Ad Valorem Tax Revenues <sup>(9)</sup>				\$6.18
<b>Residential Land Uses: Total Capital Expansion Credit per Resident<sup>(10)</sup></b>				<b>\$21.15</b>

(1) Source: City of Palm Beach Gardens

(2) Average capital expenditures over the ten-year period

(3) Source: Appendix A, Table A-1

(4) Annual capital expansion expenditures (Item 2) divided by the average population (Item 3)

(5) Portion of total capital expansion expenditures funded by ad valorem tax revenue, calculated to reflect 97% of the expenditures are paid from the General Fund and ad valorem tax revenues amount to 62.5% of the General Fund revenues.

(6) Annual capital expansion expenditure per person (Item 4) multiplied by the portion of capital expansion projects funded with ad valorem tax revenues (Item 5)

(7) Adjustment factor to reflect higher ad valorem taxes paid by new homes

(8) Portion funded with ad valorem tax revenues (Item 6) multiplied by the credit adjustment factor (Item 7)

(9) Annual capital expansion expenditures per person (Item 4) less the portion funded with ad-valorem tax revenues (Item 6)

(10) Adjusted capital expansion expenditures per person (Item 8) plus the portion funded with other revenue sources (Item 9)

## Debt Service Credit

Any outstanding bond issues related to the expansion of parks and recreation facilities also will result in a credit to the impact fee. Currently, the City of Palm Beach Gardens is paying for debt service obligations that were used to fund parks and recreation capacity expansion projects.

To calculate the credit of the outstanding loans, the present value of the total remaining payments for each bond issue is calculated and then divided by the average annual population estimated over the remaining life of the bond issue. As presented in table II-7, the resulting credit is \$48 per resident.

Once the debt service credit per resident is calculated, because the City is using ad valorem tax revenues to pay for a portion of the debt service, an adjusted credit figure is calculated. Similar to the capital expansion credit per resident, the debt service credit per resident funded with ad valorem revenues is adjusted to account for the fact that new homes tend to pay higher taxes per dwelling unit. This adjustment factor was estimated based on a comparison of the average taxable value of newer homes to that of all homes. As presented in Table II-7, the adjusted debt service credit per resident is \$65, which is used in the case of residential land uses.

**Table II-7  
Debt Service Credit**

Description <sup>(1)</sup>	Funding Source <sup>(1)</sup>	Present Value of Payments Remaining <sup>(1)</sup>	Avg Annual Population During Remaining Bond Issue Period <sup>(2)</sup>	Credit per Resident <sup>(3)</sup>
Series 2011B, Purchase of 33 acres of park Land and construction of golf course	General Fund	\$2,508,396	56,035	\$44.76
General Obligation Bond, Park Improvements	General Fund	\$200,260	55,692	\$3.60
<b>Total Debt Service Credit per Resident</b>				<b>\$48.36</b>
Portion Funded with Ad Valorem Revenues <sup>(4)</sup>				\$30.23
Credit Adjustment Factor <sup>(5)</sup>				1.55
Adjusted Debt Service Credit per Resident for Portion Funded with Ad Valorem Revenues <sup>(6)</sup>				\$46.86
Portion Funded with Sources Other than Ad Valorem Tax Revenues <sup>(7)</sup>				\$18.13
<b>Total Adjusted Debt Service Credit per Resident<sup>(8)</sup></b>				<b>\$64.99</b>

(1) Source: City of Palm Beach Gardens

(2) Source: Appendix A, Table A-1

(3) Present value of payments remaining (Item 1) divided by average annual population (Item 2)

(4) Portion of debt service paid with ad valorem revenues, which funds approximately 62.5% of the General Fund

(5) Adjustment factor to reflect higher ad valorem taxes paid by new homes

(6) Portion funded with ad valorem revenues multiplied by the credit adjustment factor (Item 5)

(7) Total debt service credit per resident less portion funded with ad valorem revenue (Item 4)

(8) Adjusted debt service credit per resident (Item 6) plus the portion funded with other revenue sources (Item 7)

### Net Parks & Recreation Impact Cost per Resident

The net impact cost per resident is the difference between the Cost Component and the Credit Component. Table II-8 summarizes the calculation of the net impact cost per resident.

**Table II-8  
Net Parks & Recreation Impact Cost per Resident**

Impact Cost / Credit Element	Figure
<b>Impact Cost</b>	
Total Land Value per Resident <sup>(1)</sup>	\$851.70
Facilities and Equipment Value per Resident <sup>(2)</sup>	\$1,370.26
<b>Total Impact Cost per Resident</b>	<b>\$2,221.96</b>
<b>Revenue Credit</b>	
Capital Expansion Credit <sup>(3)</sup> :	
- Residential Land Uses	\$21.15
- Non-Residential Land Uses	\$15.84
Capitalization Rate	3.0%
Capitalization Period (in years)	25
Total Capital Expansion Credit <sup>(4)</sup> :	
- Residential Land Uses	\$368.29
- Non-Residential Land Uses	\$275.82
Total Debt Service Credit <sup>(5)</sup> :	
- Residential Land Uses	\$64.99
- Non-Residential Land Uses	\$48.36
Total Revenue Credit <sup>(6)</sup>	
- Residential Land Uses	\$433.28
- Non-Residential Land Uses	\$324.18
<b>Net Impact Cost</b>	
Net Impact Cost <sup>(7)</sup> :	
- Residential Land Uses	<b>\$1,788.68</b>
- Non-Residential Land Uses	<b>\$1,897.78</b>

(1) Source: Table II-4

(2) Source: Table II-5

(3) Source: Table II-6

(4) Source: The present value of the capital expansion credit per resident (Item 3) at a discount rate of 3.0% with a capitalization period of 25 years

(5) Source: Table II-7

(6) Sum of the total capital expansion credit per resident (Item 4) and debt service credit per resident (Item 5)

(7) Total impact cost per resident less total revenue credit per resident (Item 7)

## Calculated Parks & Recreation Impact Fee Schedule

Table II-9 presents the updated parks and recreation impact fee schedule, based on the net impact cost per resident figures presented in table II-8.

**Table II-9  
Parks & Recreation Impact Fee Schedule**

Land Use	Impact Unit	Residents per Unit <sup>(1)</sup>	Net Cost per Resident <sup>(2)</sup>	Total Impact Fee <sup>(3)</sup>	Current Adopted Fee <sup>(4)</sup>	Percent Change <sup>(5)</sup>
<b>Residential</b>						
Single Family (detached/attached):						
- Less than 1,500 sf	du	1.88	\$1,788.68	<b>\$3,363</b>	\$2,858	18%
- 1,500 to 2,499 sf	du	2.07	\$1,788.68	<b>\$3,703</b>	\$3,267	13%
- 2,500 sf or more	du	2.30	\$1,788.68	<b>\$4,114</b>	\$3,737	10%
Multi-Family (Apartment/Condo):						
- Less than 1,000 sf	du	1.37	\$1,788.68	<b>\$2,450</b>	\$2,858	-14%
- 1,000 sf or more	du	1.70	\$1,788.68	<b>\$3,041</b>	\$3,267	-7%
Mobile Home	du	1.89	\$1,788.68	<b>\$3,381</b>	\$2,858	18%
<b>Transient, Assisted, Group</b>						
Congregate Care Facility	du	0.92	\$1,897.78	<b>\$1,746</b>	N/A	N/A
Assisted Living Facility	bed	0.83	\$1,897.78	<b>\$1,575</b>	N/A	N/A
Nursing Home	1,000 sf	1.57	\$1,897.78	<b>\$2,980</b>	\$1,182	152%
Hotel	room	1.39	\$1,897.78	<b>\$2,638</b>	\$1,139	132%

(1) Source: Appendix A, Tables A-2 for residential uses and Appendix A, Table A-8 for transient, assisted, group uses

(2) Source: Table II-8

(3) Residents per unit (Item 1) for each land use category multiplied by the net cost per resident (Item 2)

(4) Source: City of Palm Beach Gardens Division of Unified Services. For the residential fee comparison, the current adopted fee for the square footage grouping (801-1,399 sf) was used for the single family residences less than 1,500 sf land use, multi-family residences less than 1,000 sf land use, and the mobile home land use; the grouping (1,400-1,999 sf) was used for both the (1,500-2,499 sf) single family residences land use and the 1,000 sf or more multi-family residences land use; and the grouping (2,000-3,599 sf) was used for the 2,500 sf or more single family residences land use.

(5) Percent change from the current adopted fee (Item 4) to the total impact fee (Item 3)

(6) Note: "N/A" indicates either a new land use or a unit change

## Parks & Recreation Impact Fee Schedule Comparison

As part of the work effort in updating the City of Palm Beach Gardens' parks & recreation impact fee schedule, the City's calculated impact fee schedule was compared to the adopted fee schedule and those in similar or nearby jurisdictions. Table II-10 presents this comparison.

**Table II-10  
Parks & Recreation Impact Fee Schedule Comparison**

Land Use	Unit <sup>(1)</sup>	Palm Beach Gardens		City of Riviera Beach <sup>(5)</sup>	Town of Jupiter <sup>(6)</sup>	City of Boca Raton <sup>(7)</sup>	Village of Royal Palm Beach <sup>(8)</sup>	Village of Wellington <sup>(9)</sup>
		Calculated <sup>(3)</sup>	Adopted Fees <sup>(4)</sup>					
Date of Last Update		<b>2015</b>	2011	2004	2006	N/A	N/A	2004
Adoption Percentage		<b>N/A</b>	100%	100%	100%	N/A	N/A	N/A
Population <sup>(2)</sup>		<b>50,067</b>	50,067	33,728	57,263	86,647	36,265	59,136
<b>Residential :</b>								
Single Family (2,000 sf)	du	<b>\$3,703</b>	\$3,737	\$1,290	\$1,105	\$4,570	\$1,303	\$3,925
Multi-Family (1,300 sf)	du	<b>\$3,041</b>	\$2,858	\$944	\$845	\$3,500	\$859	\$3,925
Mobile Home	du	<b>\$3,381</b>	\$2,858	\$944	\$845	\$3,500	\$859	\$3,925

(1) du = dwelling unit

(2) Source: Bureau of Economic and Business Research, University of Florida (2014)

(3) Source: Table II-9

(4) Source: Source: City of Palm Beach Gardens Division of Unified Services; the single family rate for the 800-1,399 sf tier was used as a proxy for multi-family and mobile homes

(5) Source: City of Riviera Beach Planning and Zoning Division

(6) Source: Town of Jupiter Building Department

(7) Source: City of Boca Raton Development Services Department; the single family rate for the 800-1,399 sf tier was used as a proxy for multi-family and mobile homes

(8) Source: Village of Royal Palm Beach Building Department

(9) Source: Village of Wellington; Municode

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### III. Fire Rescue Impact Fee

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This section provides the results of the fire rescue impact fee analysis. Several major elements addressed in this section include:

- Facility Inventory
- Service Area and Population
- Level of Service
- Cost Component
- Credit Calculation
- Net Fire Rescue Impact Cost
- Calculated Fire Rescue Impact Fee Schedule
- Fire Rescue Impact Fee Schedule Comparison

These elements are summarized in the remainder of this section.

#### ***Facility Inventory***

The City of Palm Beach Gardens' Fire Rescue Department provides fire rescue services from 5 stations that are owned by the City. In addition to the stations, the City's Fire Department utilizes a fire training tower and generator room co-located at Fire Station One. In total, Palm Beach Gardens' Fire Rescue facilities include 55,000 square feet and 18 acres associated with fire rescue related services.

Table III-1 presents the fire rescue building and land inventory owned by Palm Beach Gardens. The building value estimates are based on recent/on-going fire station construction cost, insurance values of the existing fire facilities, information from other Florida jurisdictions and industry architects/contractors as well as discussions with City staff. The land value estimates are based on land values of the existing facilities, vacant land sales and values of parcels with similar characteristics. A more detailed explanation of building and land value estimates is included in Appendix B.

**Table III-1  
Land & Buildings Inventory**

Facility <sup>(1)</sup>	Address <sup>(1)</sup>	Year Built/ Acquired <sup>(1)</sup>	Square Footage <sup>(1)</sup>	Total Acres <sup>(1)</sup>	Building Value <sup>(2)</sup>	Land Value <sup>(3)</sup>	Total Building and Land Value <sup>(4)</sup>
Fire Station 1	4425 Burns Road, PBG FI 33410	1972	19,800	4.01	\$6,435,000	\$601,500	\$7,178,960
Fire Training Tower		n/a	1,972		\$128,180		
Fire Generator Room		n/a	168		\$14,280		
Fire Station 2	11025 Campus Drive, PBG FI 33410	1987	6,351	2.51	\$2,064,075	\$376,500	\$2,440,575
Fire Station 3	5161 Northlake Blvd, PBG FI 33410	2002	9,060	7.67	\$2,944,500	\$1,150,500	\$4,095,000
Fire Station 4	11264 Jog Road, PBG FI 33410	2001	8,512	1.98	\$2,766,400	\$297,000	\$3,063,400
Fire Station 5	3913 Hood Road, PBG FI 33410	2003	8,715	1.92	\$2,832,375	\$288,000	\$3,120,375
<b>Total</b>			<b>54,578</b>	<b>18.09</b>	<b>\$17,184,810</b>	<b>\$2,713,500</b>	<b>\$19,898,310</b>
<b>Building Value per Square Foot<sup>(5)</sup></b>					<b>\$315</b>		
<b>Land Value per Acre<sup>(6)</sup></b>						<b>\$150,000</b>	

(1) Source: City of Palm Beach Gardens

(2) Square footage (Item 1) multiplied by the estimated building value per square foot

(3) Total acres (Item 1) multiplied by the land value per acre (Item 6)

(4) Sum of building value (Item 2) and land value (Item 3)

(5) Total building value divided by total square footage

(6) Source: Appendix B

In addition to land and buildings, Palm Beach Gardens Fire Rescue capital assets include the necessary vehicles and equipment required to perform its services. As presented in Table III-2, the current total value of vehicles and equipment is approximately \$6.9 million for fire rescue services.

**Table III-2  
Vehicle and Equipment Value**

Description <sup>(1)</sup>	Total Units <sup>(1)</sup>	Unit Value <sup>(2)</sup>	Total Value <sup>(1)</sup>
Aerial Truck	2	\$941,637	\$1,883,273
Air/Light Truck	1	\$100,000	\$100,000
Ambulance	7	\$237,980	\$1,665,857
Brush Truck	2	\$63,995	\$127,989
Car	8	\$20,863	\$166,900
Fire Engine	6	\$441,349	\$2,648,095
SUV	9	\$23,322	\$209,900
Truck	3	\$26,081	\$78,243
<b>Total Value</b>			<b>\$6,880,257</b>

(1) Source: City of Palm Beach Gardens

(2) Total value divided by total units

### ***Service Area and Population***

The City of Palm Beach Gardens Fire Rescue Department provides fire rescue services throughout all of Palm Beach Gardens. As such, the proper benefit district is the entire city. In this technical study, the current 2015 weighted and functional population estimates are used. Because simply using weighted population estimates does not fully address all of the benefactors of fire rescue services, the “functional” weekly 24-hour population approach is used to establish a common unit of demand across different land uses. Appendix A provides further insight on the population analysis conducted.

### ***Level of Service***

Although fire departments measure level of service (LOS) in terms of response time, for impact fee calculation purposes, the LOS is measured in terms of stations per 1,000 population. As shown in Table III-3, the City of Palm Beach Gardens’ has 1 fire station per 10,802 residents or 0.093 stations per 1,000 residents.

As mentioned previously, the LOS needs to be measured using the functional population to capture all residents, workers, and visitors that benefit from fire rescue services. In terms of functional population, the City’s LOS is calculated at 0.081 stations per 1,000 functional residents.

**Table III-3  
Level of Service (2015)**

Calculation Step	Year 2015	
	Weighted Seasonal Population	Functional Population
Population <sup>(1)</sup>	54,011	61,749
Number of Stations <sup>(2)</sup>	5	5
Population per Station <sup>(3)</sup>	10,802	12,350
<b>LOS (Stations per 1,000 Population)<sup>(4)</sup></b>	<b>0.093</b>	<b>0.081</b>

- (1) Source: Appendix A, Table A-1 for weighted seasonal population and Appendix A, Table A-7 for functional population
- (2) Source: Table III-1
- (3) Population (Item 1) divided by the number of stations (Item 2)
- (4) Number of stations (Item 2) divided by the population (Item 1) divided by 1,000

Table III-4 presents a comparison of the City of Palm Beach Gardens’ LOS to that of other Florida municipalities that are near Palm Beach Gardens. The LOS comparison is based on permanent population for 2014, as this is the most recent population data available for all jurisdictions. As presented, Palm Beach Gardens has the third highest level of service when compared to nearby or similar sized population jurisdictions.

**Table III-4  
Level of Service Comparison**

<b>Jurisdiction</b>	<b>Service Area Population (2014)<sup>(1)</sup></b>	<b>Number of Stations<sup>(2)</sup></b>	<b>Residents per Station<sup>(3)</sup></b>	<b>LOS (Stations) per 1,000 Residents<sup>(4)</sup></b>
City of Greenacres	38,590	2	19,295	0.052
City of Boynton Beach	71,608	5	14,322	0.070
City of West Palm Beach	104,630	8	13,079	0.076
Village of North Palm Beach	12,182	1	12,182	0.082
City of Boca Raton	86,647	8	10,831	0.092
City of Delray Beach	62,700	6	10,450	0.096
<b>Palm Beach Gardens (Existing)</b>	<b>50,067</b>	<b>5</b>	<b>10,013</b>	<b>0.100</b>
City of Riviera Beach	33,728	4	8,432	0.119
Town of Palm Beach	8,170	3	2,723	0.367

(1) Source: Bureau of Economic and Business Research (BEBR), University of Florida, April 1, 2014 Final Population Estimates

(2) Source: Jurisdictions websites and the U.S. Fire Administration; National Fire Department Census

(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

**Cost Component**

Table III-5 summarizes the total current asset value of land, buildings, and equipment for fire rescue services, including:

- \$17.2 million for buildings;
- \$2.7 million for land; and
- \$6.9 million for vehicles and equipment, for a total asset value of \$26.8 million.

Table III-5 also presents the total impact cost per functional resident for fire rescue services in the City of Palm Beach Gardens. This cost figure is calculated by multiplying the total cost per station by the level of service. As shown, the total cost amounts to \$434 per resident.

**Table III-5  
Total Impact Cost**

Description	Figure	Percent of Total Value <sup>(9)</sup>
Building Value <sup>(1)</sup>	\$17,184,810	64%
Land Value <sup>(2)</sup>	\$2,713,500	10%
Vehicle and Equipment Value <sup>(3)</sup>	\$6,880,257	26%
<b>Total Asset Value<sup>(4)</sup></b>	<b>\$26,778,567</b>	<b>100%</b>
Number of Stations <sup>(5)</sup>	5	
<b>Cost per Station<sup>(6)</sup></b>	<b>\$5,355,713</b>	
LOS (Stations per 1,000 Population) <sup>(7)</sup>	0.081	
<b>Total Impact Cost per Resident<sup>(8)</sup></b>	<b>\$433.81</b>	

(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 and equipment value (Item 3)

(5) Source: Table III-1

(6) Total asset value (Item 4) divided by the number of stations (Item 5)

(7) Source: Table III-3

(8) Cost per station (Item 6) multiplied by the LOS (Item 7) divided by 1,000

(9) Distribution of building, land, and vehicle/equipment values as part of the total asset value

***Credit Component***

To avoid overcharging new development for the fire rescue impact fees, a review of the capital financing program 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 Expenditure Credit

To calculate the capital expansion expenditure credit per functional resident, the historical capital expansion projects and those programmed in the CIP were reviewed. During the time period from 2011 through 2020, the City allocated an average annual non-impact fee funding of \$101,000 toward fire rescue capital facilities. The annual capital expansion expenditures for fire rescue was divided by the average functional residents for the same time period. As shown, in Table III-6 the average capital expansion cost amounts to \$1.62 per functional resident.

Once the capital expansion credit is calculated, because the fire rescue capacity projects were partially funded with ad valorem revenues, an adjustment was made to account for the fact that new homes tend to pay higher taxes per dwelling unit. This adjustment factor was estimated based on a comparison of the average taxable value of new homes to that of all homes. As presented in Table III-6, the adjusted capital expansion credit is \$2.18 per resident, which is used for credit calculations of residential land uses.

### Debt Service Credit

Any outstanding debt service issues related to the expansion of fire rescue facilities, vehicles, and equipment also will result in a credit to the impact fee. Currently, the City of Palm Beach Gardens is paying for debt service on bonds used to fund the construction of the Central Fire Station, expansion of Fire Station 2, and several capital leases that were used for new/additional vehicles.

To calculate the credit of the outstanding loans, the present value of the total remaining payments for each debt issue is calculated and then divided by the average annual functional population estimated over the remaining life of the bond issue. As presented in table III-7, the resulting credit is \$44 per resident.

Once the debt service credit per resident is calculated, because the City is using ad valorem tax revenues to pay for a portion each debt service, an adjusted credit figure is calculated. Similar to the capital expansion credit, the debt service credit per resident funded with ad valorem revenues is adjusted to account for the fact that new homes tend to pay higher taxes per dwelling unit. This adjustment factor was estimated based on a comparison of the average taxable value of newer homes to that of all homes. As presented in Table III-7, the adjusted debt service credit is \$59 per resident, which is used in the calculation of residential impact fees.

**Table III-6  
Fire Rescue Capital Expansion Credit**

Description <sup>(1)</sup>	Funding Source	FY (2011-2015)	FY (2016-2020)	Total (FY 2011-2020)
Fire Rescue - Capacity Expansion	General Fund	\$769,920	\$236,000	\$1,005,920
<b>Annual Capital Expansion Expenditures<sup>(2)</sup></b>				<b>\$100,592</b>
Portion of Capital Expansion Projects Funded with Ad Valorem Tax Revenues <sup>(3)</sup>				62.5%
<b>Credit per Functional Resident</b>				
Average Annual Functional Population (FY 2011-2020) <sup>(4)</sup>				62,282
Annual Capital Expansion Expenditure <sup>(5)</sup>				<b>\$1.62</b>
Portion Funded with Ad Valorem Tax Revenue <sup>(6)</sup>				\$1.01
Portion Funded with Other Sources <sup>(7)</sup>				\$0.61
Credit Adjustment Factor for Residential Land Uses <sup>(8)</sup>				1.55
<b>Residential Land Uses - Adjusted Annual Capital Improvement Credit per Functional Resident<sup>(9)</sup></b>				<b>\$1.57</b>
<b>Residential Land Uses: Total Capital Expansion Credit per Functional Resident<sup>(10)</sup></b>				<b>\$2.18</b>

(1) Source: City of Palm Beach Gardens

(2) Average capital expenditures over the ten-year period

(3) Portion of total capital expansion expenditures funded by ad valorem tax revenue

(4) Source: Appendix A, Table A-7

(5) Annual capital expansion expenditures (Item 2) divided by the average annual functional population (Item 4)

(6) Annual capital expansion expenditure per functional resident (Item 5) multiplied by the portion of capital expansion projects funded with ad valorem tax revenues (Item 3)

(7) Annual capital expansion expenditure per functional resident (Item 5) less the portion funded with ad valorem tax revenue (Item 6)

(8) Adjustment factor to reflect higher ad valorem taxes paid by new homes

(9) Portion funded with ad valorem tax revenue per functional resident (Item 6) multiplied by the credit adjustment factor (Item 8)

(10) Sum of the adjusted capital expansion credit per functional resident (Item 9) and the portion funded with other sources (Item 7)

**Table III-7  
Fire Rescue Debt Service Credit**

Description <sup>(1)</sup>	Funding Source <sup>(1)</sup>	Present Value of Payments Remaining <sup>(1)</sup>	Avg Annual Population During Remaining Bond Issue Period <sup>(2)</sup>	Credit per Resident <sup>(3)</sup>
General Obligation Bond, Portion Associated with the Construction of Central Fire Station Series 2013B; Fire Station 2 Expansion	Ad Valorem Revenue - General Fund	\$801,038	63,672	\$12.58
2007 Pierce Fire Trucks	General Fund	\$63,656	64,427	\$0.99
2012 MedTec Units (Lease #1)	General Fund	\$303,208	63,281	\$4.79
2012 MedTec Units (Lease #2)	General Fund	\$270,177	64,063	\$4.22
2012 Quint Fire Truck	General Fund	\$360,784	63,281	\$5.70
2012 Pierce Pumper	General Fund	\$612,339	65,176	\$9.40
<b>Total Debt Service Credit</b>		\$394,458	65,176	<b>\$6.05</b>
<b>Total Debt Service Credit</b>				<b>\$43.73</b>
Portion funded with Ad Valorem Tax Revenues <sup>(4)</sup>				\$27.33
Adjustment Factor for Residential Land Uses <sup>(5)</sup>				1.55
Adjusted Debt Service Credit for Residential Land Uses <sup>(6)</sup>				<b>\$42.36</b>
Portion Funded with Other Sources <sup>(7)</sup>				<b>\$16.40</b>
<b>Total Debt Service Credit for Residential Land Uses<sup>(8)</sup></b>				<b>\$58.76</b>

- (1) Source: City of Palm Beach Gardens
- (2) Source: Appendix A, Table A-7
- (3) Present value of payments remaining (Item 1) divided by the average annual functional population (Item 2)
- (4) Portion of the total debt service funded with ad valorem tax revenue, which represents 62.5% of General Fund revenues
- (5) Adjustment factor to reflect higher ad valorem taxes paid by new homes
- (6) Portion funded with ad valorem tax revenues (Item 4) multiplied by the credit adjustment factor (Item 5)
- (7) Total debt service credit less the portion funded with ad valorem tax revenues (Item 4)
- (8) Sum of the adjusted debt service credit and the portion funded with other sources (Items 7 and 8)

**Net Fire Rescue Impact Cost**

Table III-8 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 \$337 per functional resident for residential land uses and \$362 per functional resident for non-residential land uses.

**Table III-8  
Net Fire Rescue Impact Cost**

Impact Cost / Credit Element	Per Functional Resident
<b>Impact Cost</b>	
Total Impact Cost <sup>(1)</sup>	<b>\$433.81</b>
<b>Revenue Credit</b>	
Capital Improvement Credit <sup>(2)</sup> :	
- Residential Land Uses	\$2.18
- Non-residential Land Uses	\$1.62
Capitalization Rate	3.00%
Capitalization Period (in years)	25
Total Capital Improvement Credit <sup>(3)</sup>	
- Residential Land Uses	\$37.96
- Non-residential Land Uses	\$28.21
Debt Service Credit <sup>(4)</sup> :	
- Residential Land Uses	\$58.76
- Non-residential Land Uses	\$43.73
Total Revenue Credit <sup>(5)</sup> :	
- Residential Land Uses	\$96.72
- Non-residential Land Uses	\$71.94
<b>Net Impact Cost</b>	
Net Impact Cost <sup>(6)</sup> :	
- Residential Land Uses	<b>\$337.09</b>
- Non-residential Land Uses	<b>\$361.87</b>

(1) Source: Table III-5

(2) Source: Table III-6

(3) Average annual capital improvement credit (Item 2) for a capitalization rate of 3.00% over 25 years

(4) Source: Table III-7

(5) Sum of total capital improvement credit (Item 3) and the debt service credit (Item 4)

(6) Total impact cost (Item 1) less total revenue credit (Item 5)

### ***Calculated Fire Rescue Impact Fee Schedule***

Table III-9 presents the calculated fire rescue impact fee schedule developed for the City of Palm Beach Gardens for both residential and non-residential land uses, based on the net impact cost per functional resident previously shown in Table III-8.

### ***Fire Protection & Rescue Fee Schedule Comparison***

As part of the work effort in updating the City's fire rescue impact fee program, a comparison to impact fee schedules of other Florida municipalities was completed. Table III-10 presents this comparison.

**Table III-9  
Calculated Fire Rescue Impact Fee Schedule**

LUC	Land Use	Impact Unit	Functional Population Coefficient <sup>(1)</sup>	Net Impact Fee per Unit <sup>(2)</sup>	Current Adopted Fee <sup>(3)</sup>	Percent Change <sup>(4)</sup>
<b>Residential:</b>						
210	Single Family (detached/attached):					
	- Less than 1,500 sf	du	1.26	\$424.73	\$298	43%
	- 1,500 to 2,499 sf	du	1.39	\$468.56	\$341	37%
	- 2,500 sf or more	du	1.54	\$519.12	\$390	33%
220/230	Multi-Family (Apartment/Condo):					
	- Less than 1,000 sf	du	0.92	\$310.12	\$298	4%
	- 1,000 sf or more	du	1.14	\$384.28	\$341	13%
240	Mobile Home	du	1.27	\$428.10	\$298	44%
<b>Transient, Assisted, Group:</b>						
253	Congregate Care Facility	du	0.80	\$289.50	N/A	N/A
254	Assisted Living Facility	bed	0.84	\$303.97	N/A	N/A
620	Nursing Home	1,000 sf	1.30	\$470.43	\$1,115	-58%
310	Hotel	room	0.91	\$329.30	\$209	58%
<b>Recreational:</b>						
412	General Recreation	acre	0.20	\$72.37	\$279	-74%
443	Movie Theater	seat	0.10	\$36.19	\$5	624%
491	Racquet/Tennis Club	court	3.16	\$1,143.51	\$184	522%
495	Recreational Community Center	1,000 sf	2.91	\$1,053.04	N/A	N/A
<b>Institutions:</b>						
520	Elementary School (Private)	student	0.06	\$21.71	N/A	N/A
522	Middle School (Private)	student	0.07	\$25.33	N/A	N/A
530	High School (Private)	student	0.08	\$28.95	N/A	N/A
540	University (7,500 or fewer students) (Private)	student	0.10	\$36.19	N/A	N/A
550	University (more than 7,500 students) (Private)	student	0.07	\$25.33	N/A	N/A
560	Church/Synagogue	1,000 sf	0.51	\$184.55	\$184	0%
565	Day Care Center	1,000 sf	0.89	\$322.06	\$217	48%
566	Cemetery	acre	0.12	\$43.42	\$214	-80%
610	Hospital	1,000 sf	1.37	\$495.76	\$395	26%
640	Animal Hospital/Veterinary Clinic	1,000 sf	2.32	\$839.54	\$184	356%
n/a	Funeral Home	1,000 sf	0.55	\$199.03	\$214	-7%
<b>Office:</b>						
710	Office (50,000 sf and less)	1,000 sf	1.41	\$510.24	\$184	177%
	Office (50,001 - 100,000 sf)	1,000 sf	1.19	\$430.63	\$184	134%
	Office (100,001 - 200,000 sf)	1,000 sf	1.01	\$365.49	\$184	99%
	Office (200,001 - 400,000 sf)	1,000 sf	0.85	\$307.59	\$184	67%
	Office (greater than 400,000 sf)	1,000 sf	0.77	\$278.64	\$184	51%
720	Medical Office (less than 10,000 sf)	1,000 sf	1.14	\$412.53	\$184	124%
720	Medical Office (10,000 sf and greater)	1,000 sf	1.66	\$600.70	\$184	227%
<b>Retail:</b>						
820	Retail 50,000 sf and less	1,000 sf	2.45	\$886.58	\$214	314%
	Retail 50,001 - 200,000 sf	1,000 sf	2.30	\$832.30	\$214	289%
	Retail 200,001 - 400,000 sf	1,000 sf	2.34	\$846.78	\$214	296%
	Retail 400,001 - 600,000 sf	1,000 sf	2.44	\$882.96	\$214	313%
	Retail 600,001 - 800,000 sf	1,000 sf	2.55	\$922.77	\$214	331%
	Retail greater than 800,000 sf	1,000 sf	2.42	\$875.73	\$214	309%
841	New/Used Car Sales	1,000 sf	1.47	\$531.95	\$220	142%
853	Convenience Store w/Gas Pumps	1,000 sf	5.83	\$2,109.70	\$214	886%
880	Pharmacy/Drugstore without Drive-Thru	1,000 sf	1.90	\$687.55	\$214	221%
881	Pharmacy/Drugstore with Drive-Thru	1,000 sf	1.99	\$720.12	\$214	237%
890	Furniture Store	1,000 sf	0.23	\$83.23	\$214	-61%
911	Bank/Savings Walk-In	1,000 sf	2.23	\$806.97	\$249	224%
912	Bank/Savings Drive-In	1,000 sf	2.28	\$825.06	\$249	231%
931	Quality Restaurant	1,000 sf	6.82	\$2,467.95	\$217	1037%
932	High-Turnover Restaurant	1,000 sf	6.78	\$2,453.48	\$217	1031%
934	Fast Food Rest. w/Drive-Thru	1,000 sf	8.90	\$3,220.64	\$217	1384%
941	Quick Lube	bay	1.16	\$419.77	\$1,033	-59%
942	Automobile Care Center	1,000 sf	1.50	\$542.81	\$220	147%
944	Gas/Service Station	fuel pos.	1.98	\$716.50	\$172	317%
945	Gas/Service Station with Convenience Market	fuel pos.	1.95	\$705.65	\$172	310%
947	Car Wash	bay	0.87	\$314.83	\$220	43%
<b>Industrial:</b>						
110	General Industrial	1,000 sf	0.69	\$249.69	\$279	-11%
150	Warehousing	1,000 sf	0.28	\$101.32	\$287	-65%
151	Mini-Warehouse	1,000 sf	0.06	\$21.71	\$287	-92%

(1) Source: Appendix A, Table A-8 for residential land uses and Appendix A, Table A-9 for non-residential land uses  
(2) Source: Net impact cost per functional resident from Table III-8 multiplied by the functional population coefficient for each land use  
(3) Source: City of Palm Beach Gardens Division of Unified Services. For the residential fee comparison, the current adopted fee for the square footage grouping (801-1,399 sf) was used for the single family residences less than 1,500 sf land use, multi-family residences less than 1,000 sf land use, and the mobile home land use; the grouping (1,400-1,999 sf) was used for both the (1,500-2,499 sf) single family residences land use and the 1,000 sf or more multi-family residences land use; and the grouping (2,000-3,599 sf) was used for the 2,500 sf or more single family residences land use.  
(4) Percent change between the net impact fee per unit and the current adopted fee (Items 3 and 4)  
Note: "N/A" indicates either a new land use or a unit change

**Table III-10  
Fire Rescue Impact Fee Schedule Comparison**

Land Use	Unit <sup>(1)</sup>	Palm Beach Gardens		City of Riviera Beach <sup>(5)</sup>	Village of Royal Palm Beach <sup>(6)</sup>
		Population Based <sup>(3)</sup>	Adopted Fees <sup>(4)</sup>		
Date of Last Update		2015	2011	2004	N/A
Adoption Percentage		N/A	100%	100%	N/A
Population <sup>(2)</sup>		50,067	50,067	12,004	8,429
<b>Residential :</b>					
Single Family (2,000 sf)	du	\$469	\$390	\$418	\$339
<b>Non-Residential :</b>					
Light Industrial	1,000 sf	\$250	\$279	\$139	\$697
Office (50,000 sq ft)	1,000 sf	\$510	\$184	\$185	\$245
Retail (125,000 sq ft)	1,000 sf	\$832	\$214	\$225	\$366
Bank w/Drive-Thru	1,000 sf	\$825	\$249	\$217	\$367
Fast Food w/Drive-Thru	1,000 sf	\$3,221	\$217	\$225	\$367

(1) du = dwelling unit

(2) Source: Bureau of Economic and Business Research, University of Florida (2014)

(3) Source: Table III-9

(4) Source: Source: City of Palm Beach Gardens Division of Unified Services

(5) Source: City of Riviera Beach Planning and Zoning Division

(6) Source: Village of Royal Palm Beach Building Department

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## IV. Police Protection Impact Fee

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Police protection impact fees are typically used to fund the capital construction and expansion of police service related land, facilities and capital equipment required to support the additional police protection service demand created by new growth. This section of the report presents the results of the police protection impact fee update study for the City of Palm Beach Gardens and will serve as the technical support document for the calculated police protection impact fee schedule.

There are several major elements associated with the development of the police protection impact fee, including:

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

### ***Facility Inventory***

According to the information provided by the Palm Beach Gardens Police Department, the City has 48,100 square feet of police protection facilities and 5.3 acres of land associated with police services. Table IV-1 presents this information.

The City is likely to co-locate future police substations with fire stations. Given this, the building and land unit values used for the fire rescue impact fee are also used for the police protection impact fee calculations. Additional information is provided in Appendix B.

In addition to the land and buildings inventory, the City of Palm Beach Gardens' Police Department also has vehicles and equipment necessary to perform its police protection duties. Table IV-2 summarizes the equipment and vehicle inventory.

**Table IV-1  
Police Protection Buildings and Land Inventory**

Facility <sup>(1)</sup>	Address <sup>(1)</sup>	Year Built/ Acquired <sup>(1)</sup>	Square Footage <sup>(1)</sup>	Total Acres <sup>(1)</sup>	Building Value <sup>(2)</sup>	Land Value <sup>(3)</sup>	Total Building and Land Value <sup>(4)</sup>
Police Station	10500 N Military Trail	N/A	35,500	5.30	\$11,537,500	\$795,000	\$16,414,175
Emergency Operations Center	10500 N Military Trail	N/A	12,559		\$4,081,675		
<b>Total</b>			<b>48,059</b>	<b>5.30</b>	<b>\$15,619,175</b>	<b>\$795,000</b>	<b>\$16,414,175</b>
<b>Building Value per Square Foot<sup>(5)</sup></b>					<b>\$325</b>		
<b>Land Value per Acre<sup>(6)</sup></b>						<b>\$150,000</b>	

- (1) Source: City of Palm Beach Gardens
- (2) Square footage (Item 1) multiplied by the estimated building value per square foot
- (3) Total acres (Item 1) multiplied by the land value per acre (Item 6)
- (4) Sum of building value (Item 2) and land value (Item 3)
- (5) Total building value divided by total square footage
- (6) Source: Appendix B

**Table IV-2  
Vehicle and Equipment Value**

Description <sup>(1)</sup>	Total Units <sup>(1)</sup>	Unit Value <sup>(2)</sup>	Total Value <sup>(1)</sup>
<b>Vehicles</b>			
Police Car	112	\$23,129	\$2,590,500
Police Motorcycle	4	\$9,000	\$36,000
Police SUV	11	\$22,593	\$248,520
Swat Truck	1	\$175,000	\$175,000
Truck	2	\$25,789	\$51,578
Van	5	\$18,177	\$90,886
<b>Total Vehicle Value</b>			<b>\$3,192,484</b>
<b>Equipment</b>			
Mobile Command Post Vehicle	1	\$178,000	\$178,000
Golf Cart, All Terrain Vehicles	3	\$8,667	\$26,000
City Telephone Switch and phones	1	\$177,400	\$177,400
IP Telephone Equipment for Recreation Dept.	1	\$25,000	\$25,000
Harris Radios Mobiles & Portables	302	\$3,625	\$1,094,750
Conventional Radio Receivers	2	\$8,000	\$16,000
Radio Consoles	2	\$44,400	\$88,800
VIP Radio Console	1	\$14,000	\$14,000
Spectrum Analyzer	1	\$9,990	\$9,990
Mobile computer terminals for vehicles and motors	126	\$1,230	\$154,980
Computer software	-	-	\$827,142
Computer infrastructure	-	-	\$175,285
Network infrastructure	-	-	\$356,552
Police Trailers	5	\$7,320	\$36,600
Evidence Shelving	1	\$15,000	\$15,000
Evidence Drying Cabinet	1	\$9,600	\$9,600
Voice Stress Analyzer	1	\$12,600	\$12,600
AFIS Fingerprint System	1	\$125,000	\$125,000
Simrad Night Vision Enhancement for Scopes	2	\$10,000	\$20,000
Helmet-mounted Night Optic System	6	\$3,700	\$22,200
SWAT Entry Vests	16	\$2,400	\$38,400
Less Lethal Sage Weapons	3	\$2,200	\$6,600
Barrett Rifle	1	\$9,220	\$9,220
Remington 700 Sniper Rifles	4	\$1,850	\$7,400
Colt M-4 Assault Rifles	18	\$1,900	\$34,200
AR-15 Rifles	80	\$1,000	\$80,000
Ballistic Shields	5	\$1,750	\$8,750
Swat Ballistic Rifle Shield	1	\$9,800	\$9,800
<b>Total Equipment Value</b>			<b>\$3,579,269</b>
<b>Total Value</b>			<b>\$6,771,753</b>
Number of Officers <sup>(3)</sup>			112
<b>Cost per Officer</b>			<b>\$60,462</b>

(1) Source: City of Palm Beach Gardens

(2) Total value divided by total units

(3) Source: City of Palm Beach Gardens

### **Service Area and Population**

The City of Palm Beach Gardens provides police protection services throughout the entire city. Therefore, the appropriate benefit district is a single citywide district. For impact fee calculations, the current 2015 weighted and functional population estimates are used for the police protection impact fee.

### **Level of Service**

Based on the information provided by the City of Palm Beach Gardens, the 2015 level of service (LOS) is 2.07 sworn officers per 1,000 weighted residents. Table IV-3 presents the calculation of the existing LOS.

While the 2015 LOS is 2.07 officers per 1,000 weighted residents, in order to calculate the police protection impact fee, the LOS needs to be calculated in terms of officers per 1,000 functional residents. Table IV-3 also illustrates the calculation of the current LOS using the total functional residents within the service area. The current LOS of police protection services is 1.81 sworn officers per 1,000 functional residents.

**Table IV-3  
Level of Service (2015)**

Component	Year 2015	
	Weighted Population	Functional Population
Population <sup>(1)</sup>	54,011	61,749
Number of Officers -- Police Protection <sup>(2)</sup>	112	112
Residents per Officer <sup>(3)</sup>	482	551
<b>LOS (officers per 1,000 residents)<sup>(4)</sup></b>	<b>2.07</b>	<b>1.81</b>

(1) Source: Appendix A, Table A-1 for weighted population and Table A-8 for functional population

(2) Source: Table IV-2

(3) Population (Item 1) divided by number of officers (Item 3)

(4) Number of officers (Item 2) divided by the population (Item 1) and multiplied by 1,000

Table IV-4 presents a comparison of the City of Palm Beach Gardens' LOS to that of other Florida municipalities that are nearby Palm Beach Gardens or possess similar population levels. The LOS comparison is based on permanent population for 2014, as this is the most recent population data available for all jurisdictions. As presented, Palm Beach Gardens' LOS is within the range of nearby or similar sized population jurisdictions.

**Table IV-4  
Level of Service Comparison**

<b>Jurisdiction</b>	<b>Service Area Population (2014)<sup>(1)</sup></b>	<b>Number of Officers<sup>(1)</sup></b>	<b>LOS (Officers per 1,000 Residents)<sup>(2)</sup></b>
City of Greenacres	38,590	48	1.24
Town of Jupiter	57,263	119	2.08
<b>City of Palm Beach Gardens</b>	<b>50,067</b>	<b>112</b>	<b>2.24</b>
City of Boca Raton	86,647	196	2.26
City of Boynton Beach	71,608	163	2.28
City of Delray Beach	62,700	155	2.47
Village of North Palm Beach	12,182	33	2.71
City of West Palm Beach	104,630	293	2.80
City of Riviera Beach	33,728	110	3.26
Town of Juno Beach	3,194	16	5.01
Town of Palm Beach	8,170	67	8.20

(1) Source: Florida Department of Law Enforcement Criminal Justice Agency Profile Report, 2014

(2) Permanent population (Item 1) divided by the number of officers (Item 2) and multiplied by 1,000

### ***Cost Component***

The cost component of the police protection impact fee evaluates the cost of capital items, including buildings, land, and vehicles and equipment. Table IV-5 presents this summary of all capital costs, which amounts to approximately \$207,000 per sworn officer.

In addition, Table IV-5 also presents the cost per functional resident for the impact fee analysis. This cost was calculated as the total capital cost of approximately \$207,000 per officer multiplied by the LOS of 1.81 officers per 1,000 functional residents divided by 1,000. As shown, the total impact cost per resident is approximately \$375.

**Table IV-5  
Unit Cost per Functional Resident**

<b>Component</b>	<b>Cost</b>	<b>Percent of Total Value<sup>(8)</sup></b>
Building Value <sup>(1)</sup>	\$15,619,175	67.4%
Land Value <sup>(1)</sup>	\$795,000	3.4%
Vehicle and Equipment Value <sup>(2)</sup>	\$6,771,753	29.2%
<b>Total Asset Value<sup>(3)</sup></b>	<b>\$23,185,928</b>	<b>100.0%</b>
Number of police Officers <sup>(4)</sup>	112	
<b>Total Asset Value per Officer<sup>(5)</sup></b>	<b>\$207,017</b>	
Level-of-Service (Officers/1,000 Func. Residents) <sup>(6)</sup>	1.81	
<b>Total Impact Cost per Functional Resident<sup>(7)</sup></b>	<b>\$374.70</b>	

(1) Source: Table IV-1

(2) Source: Table IV-2

(3) Sum of building, land, and vehicle and equipment value

(4) Source: Table IV-2

(5) Total asset value (Item 3) divided by the number of police officers (Item 4)

(6) Source: Table IV-3

(7) Total asset value per officer (Item 5) multiplied by the LOS (Item 6) divided by 1,000

(8) Distribution of building, land, and vehicle/equipment values as part of the total asset value

***Credit Component***

To avoid overcharging new development for the police protection impact fees, a review of the capital funding program 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 Expenditure Credit

To calculate the capital expansion expenditure credit per functional resident, the historical capital expansion projects and those programmed in the CIP were reviewed. During the time period from 2011 through 2020, the City allocated an average annual non-impact fee funding of \$329,000 toward police protection capital facilities. The annual capital expansion expenditures for police protection services was divided by the average functional residents for the same time period. As shown, in Table IV-6 the average capital expansion cost per functional resident amounts to \$5.28.

Once the capital expansion credit is calculated, because the police protection capacity projects were partially funded with ad valorem revenues, an adjustment was made to account for the fact that new homes tend to pay higher taxes per dwelling unit. This adjustment factor was estimated based on a comparison of the average taxable value of newer homes to that of all homes. As presented in Table IV-6, the adjusted capital expansion credit per resident is \$7.

#### Debt Service Credit

Any outstanding debt service issues related to the expansion of police protection facilities, vehicles, and equipment also will result in a credit to the impact fee. Currently, the City of Palm Beach Gardens is paying for a general obligation bond that was used for capacity expansion of the police station.

To calculate the credit of the outstanding loan, the present value of the total remaining payments for the debt issue is calculated and then divided by the average annual functional population estimated over the remaining life of the bond issue. As presented in Table IV-7, the resulting credit is \$24 per resident.

Once the debt service credit per resident is calculated, because the City is using ad valorem tax revenues to pay for a portion the debt service, an adjusted credit figure is calculated. Similar to the capital expansion credit, the portion of the debt service funded with ad valorem tax revenues is adjusted to account for the fact that new homes tend to pay higher property taxes per dwelling unit. This adjustment factor was estimated based on a comparison of the average taxable value of newer homes to that of all homes. As presented in Table IV-7, the adjusted debt service credit per resident is \$32.

**Table IV-6  
Police Protection Capital Expansion Credit**

Description <sup>(1)</sup>	Funding Source	FY (2011-2015)	FY (2016-2020)	Total (FY 2011-2020)
Police Protection - Capacity Expansion	General Fund	\$1,251,874	\$1,860,910	\$3,112,784
Armored Tactical Vehicle	Law Enforcement Trust Fund	\$175,000	-	\$175,000
Total Capital Expansion Expenditures				\$3,287,784
Annual Capital Expansion Expenditures <sup>(2)</sup>				\$328,778
Average Functional Population (FY 2011-2020) <sup>(3)</sup>				62,282
<b>Annual Capital Expansion Expenditure per Functional Resident<sup>(4)</sup></b>				<b>\$5.28</b>
Portion of Capital Expansion Projects Funded with Ad Valorem Tax Revenues <sup>(5)</sup>				<b>59%</b>
Portion Funded with Ad-Valorem Tax Revenues <sup>(6)</sup>				\$3.12
Credit Adjustment Factor for Residential Land Uses <sup>(7)</sup>				1.55
Residential Land Uses - Adjusted Annual Capital Improvement Credit per Functional Resident <sup>(8)</sup>				\$4.84
Portion Funded with Other Sources <sup>(9)</sup>				\$2.16
<b>Residential Land Uses: Total Capital Expansion Credit per Functional Resident<sup>(10)</sup></b>				<b>\$7.00</b>

(1) Source: City of Palm Beach Gardens

(2) Average capital expenditures over the ten-year period

(3) Source: Appendix A, Table A-7

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

(5) Portion of total capital expansion expenditures funded by ad valorem tax revenues, calculated to reflect 95% of the expenditures are paid from the General Fund, and ad valorem tax revenues amount to 62.5% of the General Fund revenues.

(6) Annual capital expansion expenditure per functional resident (Item 4) multiplied by the portion of capital expansion projects funded with ad valorem tax revenues (Item 5)

(7) Adjustment factor to reflect higher ad valorem taxes paid by new homes

(8) Portion funded with ad valorem tax revenues (Item 6) multiplied by the credit adjustment factor (Item 7)

(9) Capital expansion expenditures per functional resident (Item 4) less portion funded with ad-valorem tax revenues (Item 6)

(10) Adjusted capital expansion expenditures per functional resident (Item 8) plus the portion funded with other revenue sources (Item 9)

**Table IV-7  
Police Protection Capital Expansion Credit**

Description <sup>(1)</sup>	Funding Source <sup>(1)</sup>	Present Value of Payments Remaining <sup>(1)</sup>	Avg Annual Functional Population During Remaining Bond Issue Period <sup>(2)</sup>	Credit per Resident <sup>(3)</sup>
General Obligation Bond, Portion Associated with Construction of Police Station	General Fund	\$1,501,947	63,672	\$23.59
<b>Total Debt Service Credit per Functional Resident</b>				<b>\$23.59</b>
Portion Funded with Ad Valorem Tax Revenues <sup>(4)</sup>				62.5%
Total Debt Service Credit per Functional Resident Paid with Ad Valorem Tax Revenues <sup>(5)</sup>				\$14.74
Adjustment Factor for Residential Land Uses <sup>(6)</sup>				1.55
Adjusted Portion of the Debt Service Credit for Residential Land Uses <sup>(7)</sup>				\$22.85
Portion Funded with Other Sources <sup>(8)</sup>				\$8.85
Total Debt Service Credit for Residential Land Uses <sup>(9)</sup>				<b>\$31.70</b>

(1) Source: City of Palm Beach Gardens

(2) Source: Appendix A, Table A-7

(3) Present value of payments remaining (Item 1) divided by average annual functional population (Item 2)

(4) Portion of total debt service expenditures funded by ad valorem tax revenue

(5) Total debt service credit per functional resident multiplied by the portion funded with ad valorem tax revenues (Item 4)

(6) Adjustment factor to reflect higher ad valorem taxes paid by new homes

(7) Total debt service credit per functional resident paid with ad valorem tax revenues (Item 5) multiplied by the credit adjustment factor (Item 6)

(8) Total debt service credit per functional resident less the portion paid with ad valorem tax revenues (Item 5)

(9) Sum of the adjusted portion of the debt service credit for residential land uses (Item 7) and the portion funded with other sources (Item 8)

**Net Police Protection Impact Cost**

Table IV-8 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 \$221 per functional resident for residential land uses and \$259 per functional resident for non-residential land uses.

**Table IV-8  
Police Protection Net Impact Cost**

Impact Cost / Credit Element	Per Functional Resident
<b>Impact Cost</b>	
Total Impact Cost <sup>(1)</sup>	\$374.70
<b>Revenue Credit</b>	
Capital Improvement Credit <sup>(2)</sup> :	
- Residential Land Uses	\$7.00
- Non-Residential Land Uses	\$5.28
Capitalization Rate	3.0%
Capitalization Period (in years)	25
Total Capital Improvement Credit <sup>(3)</sup> :	
- Residential Land Uses	\$121.89
- Non-Residential Land Uses	\$91.94
Total Debt Service Credit <sup>(4)</sup> :	
- Residential Land Uses	\$31.70
- Non-Residential Land Uses	\$23.59
Total Revenue Credit <sup>(5)</sup> :	
- Residential Land Uses	\$153.59
- Non-Residential Land Uses	\$115.53
<b>Net Impact Cost</b>	
Net Impact Cost <sup>(6)</sup> :	
- Residential Land Uses	<b>\$221.11</b>
- Non-Residential Land Uses	<b>\$259.17</b>

(1) Source: Table IV-5

(2) Source: Table IV-6

(3) Average annual capital improvement credit (Item 2) for a capitalization rate of 3% over 25 years

(4) Source: Table IV-7

(5) Sum of total capital improvement credit (Item 3) and total debt service credit (Item 4)

(6) Total impact cost (Item 1) less total revenue credit (Item 5)

### ***Calculated Police Protection Impact Fee Schedule***

Table IV-9 presents the calculated police protection impact fee schedule developed for the City of Palm Beach Gardens for both residential and non-residential land uses, based on the net impact cost per functional resident previously presented in Table IV-8. The table also includes a comparison to the current/adopted fees.

### ***Police Protection Impact Fee Schedule Comparison***

As part of the work effort in updating the City of Palm Beach Gardens' police protection impact fee schedule, the City's calculated impact fee schedule was compared to the adopted fee schedule of those in similar or nearby jurisdictions. Table IV-10 presents this comparison.

**Table IV-9  
Calculated Police Protection Impact Fee Schedule**

	Land Use	Impact Unit	Functional Population Coefficient <sup>(1)</sup>	Net Impact Fee per Unit <sup>(2)</sup>	Current Adopted Fee <sup>(3)</sup>	Percent Change <sup>(4)</sup>
<b>Residential:</b>						
210	Single Family (detached/attached)					
	- Less than 1,500 sf	du	1.26	\$278.60	\$391	-29%
	- 1,500 to 2,499 sf	du	1.39	\$307.34	\$447	-31%
	- 2,500 sf or more	du	1.54	\$340.51	\$511	-33%
220/230	Multi-Family (Apartment/Condo):					
	- Less than 1,000 sf	du	0.92	\$203.42	\$391	-48%
	- 2,000 sf or more	du	1.14	\$252.07	\$447	-44%
240	Mobile Home	du	1.27	\$280.81	\$391	-28%
<b>Transient, Assisted, Group:</b>						
253	Congregate Care Facility	du	0.80	\$207.34	N/A	N/A
254	Assisted Living Facility	bed	0.84	\$217.70	N/A	N/A
620	Nursing Home	1,000 sf	1.30	\$336.92	\$214	57%
310	Hotel	room	0.91	\$235.84	\$232	2%
<b>Recreational:</b>						
412	General Recreation	acre	0.20	\$51.83	\$214	-76%
443	Movie Theater	seat	0.10	\$25.92	\$6	332%
491	Racquet/Tennis Club	court	3.16	\$818.98	\$122	571%
495	Recreational Community Center	1,000 sf	2.91	\$754.18	N/A	N/A
<b>Institutions:</b>						
520	Elementary School (Private)	student	0.06	\$15.55	N/A	N/A
522	Middle School (Private)	student	0.07	\$18.14	N/A	N/A
530	High School (Private)	student	0.08	\$20.73	N/A	N/A
540	University (7,500 or fewer students) (Private)	student	0.10	\$25.92	N/A	N/A
550	University (more than 7,500 students) (Private)	student	0.07	\$18.14	N/A	N/A
560	Church/Synagogue	1,000 sf	0.51	\$132.18	\$214	-38%
565	Day Care Center	1,000 sf	0.89	\$230.66	\$214	8%
566	Cemetery	acre	0.12	\$31.10	\$0	N/A
610	Hospital	1,000 sf	1.37	\$355.06	\$214	66%
640	Animal Hospital/Veterinary Clinic	1,000 sf	2.32	\$601.27	\$214	181%
n/a	Funeral Home	1,000 sf	0.55	\$142.54	\$214	-33%
<b>Office:</b>						
710	Office (50,000 sf and less)	1,000 sf	1.41	\$365.43	\$214	71%
	Office (50,001 - 100,000 sf)	1,000 sf	1.19	\$308.41	\$214	44%
	Office (100,001 - 200,000 sf)	1,000 sf	1.01	\$261.76	\$214	22%
	Office (200,001 - 400,000 sf)	1,000 sf	0.85	\$220.29	\$214	3%
	Office (greater than 400,000 sf)	1,000 sf	0.77	\$199.56	\$214	-7%
720	Medical Office (less than 10,000 sf)	1,000 sf	1.14	\$295.45	\$214	38%
720	Medical Office (10,000 sf and greater)	1,000 sf	1.66	\$430.22	\$214	101%
<b>Retail:</b>						
820	Retail 50,000 sf and less	1,000 sf	2.45	\$634.97	\$245	159%
	Retail 50,001 - 200,000 sf	1,000 sf	2.30	\$596.09	\$245	143%
	Retail 200,001 - 400,000 sf	1,000 sf	2.34	\$606.46	\$245	148%
	Retail 400,001 - 600,000 sf	1,000 sf	2.44	\$632.37	\$245	158%
	Retail 600,001 - 800,000 sf	1,000 sf	2.55	\$660.88	\$245	170%
	Retail greater than 800,000 sf	1,000 sf	2.42	\$627.19	\$245	156%
841	New/Used Car Sales	1,000 sf	1.47	\$380.98	\$245	56%
853	Convenience Store w/Gas Pumps	1,000 sf	5.83	\$1,510.96	\$245	517%
880	Pharmacy/Drugstore without Drive-Thru	1,000 sf	1.90	\$492.42	\$245	101%
881	Pharmacy/Drugstore with Drive-Thru	1,000 sf	1.99	\$515.75	\$245	111%
890	Furniture Store	1,000 sf	0.23	\$59.61	\$245	-76%
911	Bank/Savings Walk-In	1,000 sf	2.23	\$577.95	\$232	149%
912	Bank/Savings Drive-In	1,000 sf	2.28	\$590.91	\$232	155%
931	Quality Restaurant	1,000 sf	6.82	\$1,767.54	\$232	662%
932	High-Turnover Restaurant	1,000 sf	6.78	\$1,757.17	\$245	617%
934	Fast Food Rest. w/Drive-Thru	1,000 sf	8.90	\$2,306.61	\$245	842%
941	Quick Lube	bay	1.16	\$300.64	\$122	146%
942	Automobile Care Center	1,000 sf	1.50	\$388.76	\$245	59%
944	Gas/Service Station	fuel pos.	1.98	\$513.16	\$61	741%
945	Gas/Service Station with Convenience Market	fuel pos.	1.95	\$505.38	\$61	729%
947	Car Wash	bay	0.87	\$225.48	\$122	85%
<b>Industrial:</b>						
110	General Industrial	1,000 sf	0.69	\$178.83	\$19	841%
150	Warehousing	1,000 sf	0.28	\$72.57	\$40	81%
151	Mini-Warehouse	1,000 sf	0.06	\$15.55	\$40	-61%

(1) Source: Appendix A, Table A-8 for residential land uses and Appendix A, Table A-9 for non-residential land uses

(2) Source: Net impact cost per functional resident from Table IV-8 is multiplied by the functional population coefficient for each land use

(3) Source: City of Palm Beach Gardens Division of Unified Services. For the residential fee comparison, the current adopted fee for the square footage grouping (801-1,399 sf) was used for the single family residences less than 1,500 sf land use, multi-family residences less than 1,000 sf land use, and the mobile home land use; the grouping (1,400-1,999 sf) was used for both the (1,500-2,499 sf) single family residences land use and the 1,000 sf or more multi-family residences land use; and the grouping (2,000-3,599 sf) was used for the 2,500 sf or more single family residences land use.

(4) Percent change between the net impact fee per unit and the current adopted fee (Items 3 and 4)

Note: "N/A" indicates either a new land use or a unit change

**Table IV-10  
Police Protection Impact Fee Schedule Comparison**

Land Use	Unit <sup>(1)</sup>	Palm Beach Gardens		City of Riviera Beach <sup>(5)</sup>	Town of Jupiter <sup>(6)</sup>	Town of Juno Beach <sup>(7)</sup>	Village of Royal Palm Beach <sup>(8)</sup>
		Calculated Fees <sup>(3)</sup>	Adopted Fees <sup>(4)</sup>				
Date of Last Update		2015	2011	2004	N/A	N/A	N/A
Adoption Percentage		N/A	100%	100%	N/A	N/A	N/A
Population <sup>(2)</sup>		50,067	50,067	33,728	57,263	3,194	36,265
<b>Residential :</b>							
Single Family (2,000 sf)	du	\$307	\$511	\$116	\$60	\$32	\$43
<b>Non-Residential :</b>							
Light Industrial	1,000 sf	\$179	\$19	\$12	\$12	\$82	\$20
Office (50,000 sq ft)	1,000 sf	\$365	\$214	\$52	\$156	\$82	\$128
Retail (125,000 sq ft)	1,000 sf	\$596	\$245	\$60	\$111	\$82	\$106
Bank w/Drive-Thru	1,000 sf	\$591	\$232	\$60	\$120	\$82	\$110
Fast Food w/Drive-Thru	1,000 sf	\$2,307	\$245	\$60	\$120	\$82	\$110

- (1) du = dwelling unit
- (2) Source: Bureau of Economic and Business Research, University of Florida (2014)
- (3) Source: Table IV-9
- (4) Source: City of Palm Beach Gardens Division of Unified Services
- (5) Source: City of Riviera Beach Planning and Zoning Division
- (6) Source: Town of Jupiter Building Department
- (7) Source: Town of Juno Beach; Municode
- (8) Source: Village of Royal Palm Beach Building Department

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## V. Transportation Impact Fee

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This section of the impact fee report provides the results of the transportation impact fee analysis and consists of the following sections:

- Demand Component
- Cost Component
- Credit Component
- Calculated Transportation Impact Fee Schedule
- Transportation Impact Fee Schedule Comparison

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

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

$$\text{[Demand x Cost]} - \text{Credit} = \text{Fee}$$

The demand for travel placed on the transportation system is expressed in units of VMT (daily vehicle-trip generation rate times the trip length times the percent new trips [of total trips]) for each residential and non-residential land use contained in the impact fee schedule. The trip generation is expressed in average daily rates since new development consumes trips on a daily basis. The demand component is based on trip characteristics studies conducted at different land uses, measuring the impact of each land use on roadway capacity.

The cost of building new capacity typically is expressed in units of dollars per vehicle mile or lane mile of roadway capacity. The credit is an estimate of the current value of future non-impact fee revenues generated by new development that are allocated to transportation capacity expansion construction projects. Thus, the impact fee is an “up front” payment for a portion of the cost of building a lane mile of capacity 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 tax revenues generated by new development. More specifically, the following input variables were used in the fee equation:

*Demand Variables:*

- Trip generation rate
- Trip length
- Percent new trips
- Interstate & toll facility discount factor

*Cost Variables:*

- Cost per lane mile
- Capacity added per lane mile

*Credit Variables:*

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

A review of impact fee variables and corresponding recommendations are presented in the following sub-sections.

## ***Demand Component***

### Travel Demand

The amount of transportation system consumed by a unit of new land development is calculated using the following variables and is measured in terms of the vehicle miles of new travel a unit of development consumes on the existing road system.

- Number of daily trips generated;
- Average length of those trips; and
- Proportion of travel that is new travel, rather than travel that is already traveling on the road system and is captured by new development.

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* report (9<sup>th</sup> edition).

The Florida Studies Database is included in Appendix C. This database was used to determine VMT, which is developed from trip length, percent new trips, and trip rate for most land uses in the fee schedule. The data in the trip characteristics database is based on actual land use studies and was collected throughout Florida using machine traffic counts and site specific land use origin-destination surveys. In addition, trip generation data from the *ITE 9<sup>th</sup> Edition Trip Generation* report was used. In instances where trip generation was available from the *ITE Trip Generation* report and the Florida Studies Database, a blended average calculation was used to increase the sample size.

### Interstate and Toll Facility Discount Factor

This variable is used to recognize that improvements to Interstate highways are funded by the State using earmarked and Federal funds, while toll facility improvements are funded with toll revenues. Typically, impact fees are not used to pay for these improvements, and the portion of new development's travel occurring on the interstate/toll facility system usually is eliminated from the total travel for each land use.

To calculate the interstate and toll (I/T) facility discount factor, the loaded highway network file was generated for the Southeast Regional Planning Model v6.5 (SERPM). A select link analysis was run for all traffic analysis zones located within the City of Palm Beach Gardens in

order to differentiate trips with an origin and/or destination within the city versus trips with no origin or destination within the city.

Currently, the only interstate/toll facilities in Palm Beach Gardens are I-95 and the Florida Turnpike (SR 19). The limited access vehicle miles of travel (Limited Access VMT) for trips with an origin and/or destination within Palm Beach Gardens was calculated for the identified limited access facilities. The total Palm Beach Gardens VMT was calculated for all trips with an origin and/or destination within Palm Beach Gardens for all roads, including limited access roads, located within Palm Beach Gardens.

The I/T discount factor of 33.4 percent was determined by dividing the total Limited Access VMT by the total Palm Beach Gardens VMT, excluding external-to-external trips. By applying this factor to the total Palm Beach Gardens VMT for each land use in the fee schedule, the reduced VMT is then representative of only the roadways which are funded by impact fees. Appendix C, Table C-1 provides further detail on this calculation.

## ***Cost Component***

Construction costs increased significantly in Florida between 2005 and 2007 due to additional construction demand caused by hurricanes, the housing market growth, and other factors. Appreciation in land values also resulted in higher right-of-way (ROW) costs during the same period. In early 2008, costs started to stabilize and between 2008 and 2011 most communities experienced a decrease in construction costs, returning to levels seen before 2005. In 2013/2014, roadway costs started to increase again in Florida. Cost information from the City of Palm Beach Gardens, Palm Beach County, other Florida jurisdictions, and the Florida Department of Transportation (FDOT) was reviewed to develop a unit cost for all phases involved in the construction of one lane-mile of roadway capacity. The findings were also discussed with the City staff to obtain additional input. The following subsections summarize the methodology and findings of the total unit cost analysis for city roads. Appendix D provides the data and other support information utilized in these analyses.

### City Roadway Costs

This section examines the right-of-way (ROW), construction, and other cost components associated with city roads with respect to transportation capacity improvements in the City of Palm Beach Gardens. For this purpose, recent bid data for ongoing projects provided by the City and recent construction bid data from city and county roadway projects throughout Florida were used to identify and provide supporting cost data for roadway improvements. The cost for each roadway capacity project was separated into four phases: design, construction/engineering inspection (CEI), ROW and construction.

#### *Design and CEI*

Design costs for city roads were estimated at seven (7) percent of construction phase costs based on a review of recent local improvements and input from City staff. Additional detail is provided in Appendix D, Table D-1.

CEI costs for city roads were estimated at 7.5 percent of construction phase costs based on input from City staff. This represents the typical cost when CEI costs are contracted out.

#### *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. Given the urban nature of Palm Beach Gardens and high

land values in the city, it is likely that ROW cost will be higher than the state average. However, to provide a conservative estimate and due to the limited local information available, ROW was assessed at the statewide average (40 percent of construction costs) for other jurisdictions in Florida. Additional detail is provided in Appendix D, Table D-2.

### *Construction*

The construction cost for city roads was based on a review of local city improvements and statewide roadway improvements. A review of recent construction cost data for Palm Beach Gardens identified three recent capacity expansion improvements averaging \$1.98 million per lane mile, as shown in Appendix D, Table D-3.

In addition to local improvements, recent bids from multiple communities throughout the state were also reviewed. This review included more than 73 lane miles of urban design roadway improvements from seven cities and calculated an average cost of \$2.21 million per lane mile. Appendix D, Table D-4 provides a detailed description of the projects reviewed.

In addition to city road improvement data, recent county roadway bids from multiple communities throughout the state were also reviewed. It should be noted that the county roadway database only includes urban design (curb & gutter) improvements, which are typically similar to city roads in design and construction costs. This review included more than 330 lane miles of urban design roadway improvements from 18 counties and calculated an average cost of \$2.18 million per lane mile. Appendix D, Table D-5 provides a detailed description of the projects reviewed.

Based on these datasets, the city road construction cost for Palm Beach Gardens was estimated at approximately \$2.2 million per lane mile as shown in Table V-1.

**Table V-1  
Estimated Total Cost per Lane Mile  
for City Roads**

Cost Phase	Cost Per Lane Mile
Design <sup>(1)</sup>	\$154,000
Right-of-Way <sup>(2)</sup>	\$880,000
Construction <sup>(3)</sup>	\$2,200,000
CEI <sup>(4)</sup>	\$165,000
<b>Total Cost</b>	<b>\$3,399,000</b>

- (1) Design is estimated at 7.0% of construction  
(2) ROW is estimated at 40% of construction  
(3) Source: Appendix D, Tables D-3 through D-5  
(4) CEI is estimates at 7.5% of construction  
All figures rounded to nearest \$1,000

Capacity Added per Lane Mile

An additional component of the transportation impact fee equation is the capacity added per lane mile (also known as the maximum service volume added per mile) of roadway constructed. To calculate the vehicle-miles of capacity (VMC) per lane mile of constructed future roadway, an analysis of the Shady Lakes Extension (from PGA Blvd north to 117<sup>th</sup> Court) was conducted. Using the FDOT Quality/Level-of-Service Handbook capacity values, the vehicle miles of capacity was estimated for this segment, as shown in Table V-2. The resulting VMC added per lane mile was calculated at 7,965. This estimate is consistent with the level of VMC added per lane mile observed in other urbanized areas throughout Florida.

**Table V-2  
Weighted Average Vehicle-Miles of Capacity per Lane Mile**

Source	Lane Miles Added <sup>(1)</sup>	Vehicle Miles of Capacity Added <sup>(2)</sup>	VMC Added per Lane Mile <sup>(3)</sup>
Shady Lakes Extension	1.08	8,602	<b>7,965</b>

- (1) Source: Palm Beach Gardens Public Works Department  
(2) Source: Florida Department of Transportation Quality Level-of-Service Handbook. Segment was estimated to be a Class I roadway, LOS D  
(3) Vehicle miles of capacity added (Item 2) divided by lane miles added (Item 1)

Cost per Vehicle-Mile of Capacity Added

The impact fee cost per unit of development is assessed based on the cost per vehicle-mile of capacity. As shown in Tables V-1 and V-2, the cost and capacity for city roads has been calculated based on typical roadway improvements. As shown in Table V-3, the cost per VMC for travel within the City of Palm Beach Gardens is approximately \$427. This average cost per

VMC figure is used in the impact fee calculation to determine the total impact cost per unit of development based on the vehicle-miles of travel consumed. For each vehicle-mile of travel that is added to the road system, approximately \$427 of roadway capacity is consumed.

**Table V-3  
Weighted Average Cost per Vehicle-Mile of Capacity Added**

Source	Cost per Lane Mile <sup>(1)</sup>	Average VMC Added per Lane Mile <sup>(2)</sup>	Cost per VMC <sup>(3)</sup>
City Roads	<b>\$3,399,000</b>	<b>7,965</b>	<b>\$426.74</b>

(1) Source: Table V-1

(2) Source: Table V-2

(3) Cost per lane mile (Item 1) divided by average capacity added per lane mile (Item 2)

It is important to note that capacity projects eligible for impact fee funding include not only new construction and lane additions, but also associated intersection improvements, traffic signalization, and other amenities and technology improvements that allow for additional vehicle capacity.

## ***Credit Component***

### Gasoline Tax Equivalent Credit

The present value of the portion of future non-impact fee revenues (converted to equivalent gasoline taxes) generated by a new development over a 25-year period that is projected to be expended on capacity expansion projects is credited against the cost of the system consumed by travel associated with new development. Because the transportation impact fee calculated for the City uses a “systemwide” approach and new development travels on all roads within the city, credit calculations consider revenues invested by all government entities (City, County, State) into roadway capacity projects.

#### *City*

A review of the City’s historical roadway financing program and the FY 2016-2020 Capital Improvement Program (CIP) showed that roadway capacity expansion projects are primarily funded by impact fees and developed contributions (for which impact fee credits are provided). The City spends the equivalent of 0.1 pennies for debt service payments on the Series 2011B Public Improvement Revenue Refunding Bond. This debt service credit only reflects the portion of the bond allocated to roadway capacity expansion improvements and the portion that is being refunded with general fund revenues.

#### *County*

A review of the County’s historical roadway financing program and the FY 2015-2019 Capital Improvement Program (CIP) shows that roadway projects are primarily funded by a combination of transportation impact fees and fuel taxes. As shown in Table V-4, a total gas tax equivalent revenue credit of 2.0 pennies was calculated for gas tax equivalent expenditures on roadway capacity expansion projects.

#### *State*

State expenditures on state roads were reviewed, and a credit for the capacity expansion portion attributable to state projects was estimated. The equivalent number of pennies allocated to fund state projects was determined from projects spanning a 16-year period (FY 2006 to FY 2021). This period represents past expenditures (from FY 2006 to FY 2015) and projected expenditures (from FY 2016 to 2021) from the latest FDOT Work Program. A list of capacity-adding roadway projects was developed, including lane additions, new road construction, intersection improvements, interchanges, traffic signal projects, and other capacity-expansion improvements. This review (summarized in Appendix E, Table E-4)

indicates that FDOT spending generates an equivalent gas tax credit of 7.0 pennies of gas tax revenue annually.

In summary, the City of Palm Beach Gardens contributes approximately 0.1 equivalent pennies of gas tax, Palm Beach County contributes approximately 2.0 pennies toward roadway capacity expansion projects, and the State spends an average of 7.0 pennies for state roadway projects in Palm Beach County. Therefore, a total of 9.1 pennies of revenue credit are included in the impact fee calculation to recognize the future capital revenue that is expected to be generated by new development from all non-impact fee revenues, as shown in Table V-4.

**Table V-4**  
**Equivalent Pennies of Gas Tax Revenue**

Credit	Equivalent Pennies per Gallon
City Debt Service <sup>(1)</sup>	\$0.001
County Revenues <sup>(2)</sup>	\$0.020
State Revenues <sup>(3)</sup>	\$0.070
<b>Total</b>	<b>\$0.091</b>

(1) Source: Appendix E, Table E-2

(2) Source: Appendix E, Table E-3

(3) Source: Appendix E, Table E-4

Present Worth Variables

*Facility Life*

The roadway 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 3.00 percent was used in the transportation impact fee calculation based on information provided by the City of Palm Beach Gardens.

The 25-year facility life and 3.00 percent interest rate result in a uniform series present worth factor is 17.4131.

### 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.

Appendix E, Table E-8 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.

$$Fuel\ Efficiency = \sum VMT_{RoadwayType} \div \sum \left( \frac{VMT_{VehicleType}}{MPG_{VehicleType}} \right)_{RoadwayType}$$

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 2013*. Based on the calculation completed in Appendix E, Table E-8, the fuel efficiency rate to be used in the updated impact fee equation is 18.40 miles per gallon.

### Effective Days per Year

An effective 365 days per year of operation was assumed 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 funding is adequately credited against the fee.

### ***Calculated Transportation Impact Fee Schedule***

The 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 of new trips)
- Total impact fee cost
- Annual gas tax credit
- Present value of the gas tax credit
- Net transportation impact fee
- Current Palm Beach Gardens impact fee
- Percent difference between the calculated impact fee and the current adopted impact fee

For clarification purposes, the calculation of an impact fee for one land use category is presented. In the following example, the net impact fee is calculated for the single-family residential detached land use category (ITE LUC 210) using information from the impact fee schedule included in Appendix F, Table F-1. For each land use category, the following equations are utilized to calculate the net impact fee:

$$\text{Net Impact Fee} = \text{Total Impact Cost} - \text{Gas Tax Credit}$$

Where:

$$\text{Total Impact Cost} = ([\text{Trip Rate} \times \text{Assessable Trip Length} \times \% \text{ New Trips}] / 2) \times (1 - \text{Interstate \& Toll Facility Disc. Factor}) \times (\text{Cost per Vehicle-Mile of Capacity})$$

$$\text{Gas Tax Credit} = \text{Present Value (Annual Gas Tax), given 3.00\% interest rate \& 25-year facility life}$$

$$\text{Annual Gas/Sales Tax} = ([\text{Trip Rate} \times \text{Total Trip Length} \times \% \text{ New Trips}] / 2) \times (\text{Effective Days per Year} \times \$/\text{Gallon to Capital}) / \text{Fuel Efficiency}$$

It should be noted that the calculated fee represents a system-wide transportation impact fee for City, County, and State roadways within the City of Palm Beach Gardens. To calculate the portion that corresponds to City roads, the County/State portion of the cost should be subtracted from the total fee. The County/State portion was calculated in the 2015 Palm

Beach County Transportation Impact Fee Update Study, with the maximum fee rates being included in Appendix F, Table F-1.

Each of the inputs has been discussed previously in this document; however, for purposes of this example, brief definitions are provided in the following paragraphs, along with the actual inputs used in the calculation of the fee for the single-family detached residential land use category:

- *Trip Rate* = the average daily trip generation rate, in vehicle-trips/day (7.81)
- *Assessable Trip Length* = the average trip length 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 Discount Factor* = discount factor to account for the travel demand occurring on interstate highways and/or toll facilities (33.4%)
- *Cost per Lane Mile* = unit cost to construct one lane mile of roadway, in \$/lane-mile (\$3,399,000)
- *Average 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 (7,965)
- *Cost per Vehicle-Mile of Capacity* = unit of vehicle-miles of capacity consumed per unit of development. Cost per lane mile divided by average capacity added per lane mile ( $\$3,399,000 / 7,965 = \$426.74$ )
- *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 3.00% interest and a 25-year facility life, the uniform series present worth factor is 17.4131
- *Effective Days per Year* = 365 days
- *\$/Gallon to Capital* = the amount of gas tax revenue per gallon of fuel that is used for capital improvements, in \$/gallon (\$0.091)
- *Fuel Efficiency* = average fuel efficiency of vehicles, in vehicle-miles/gallon (18.40)

### Transportation Impact Fee Calculation

Using these inputs, a net impact fee can be calculated for the mid-size single-family residential detached land use category as follows:

$$\text{Total Impact Cost} = ([7.81 * 6.62 * 1.0] / 2) * (1 - 0.334) * (\$3,399,000 / 7,965) = \$7,347$$

$$\begin{aligned} \text{Annual Credit for Gas Tax and Other Sources} &= ([7.81 * 7.12 * 1.0] / 2) * 365 * (\$0.091 / 18.40) \\ &= \$50 \end{aligned}$$

$$\text{Gas Tax Credit} = \$50 * 17.4131 = \$871$$

$$\text{Net Impact Fee (City/County/State)} = \$7,347 - \$871 = \$6,476$$

$$\text{Calculated County/State Portion} = \$4,697$$

$$\text{City of Palm Beach Gardens' Portion} = \$6,476 - \$4,697 = \mathbf{\$1,779}$$

### ***Transportation Impact Fee Comparison***

A comparison of calculated fee schedule to the current adopted fee by land use is presented in Table V-5. The detailed fee schedule that includes the calculations shown above for all land uses is presented in Appendix F, Table F-1.

**Table V-5  
Transportation Impact Fee Schedule Comparison**

Land Use	Unit <sup>(3)</sup>	City of Palm Beach Gardens		City of Riviera Beach <sup>(6)</sup>	Village of Royal Palm Beach <sup>(7)</sup>	Village of Wellington <sup>(8)</sup>
		Calculated <sup>(4)</sup>	Existing <sup>(5)</sup>			
Date of Last Update		<b>2015</b>	2011	2005	-	2004
Assessed Portion of Calculated <sup>(1)</sup>		<b>100%</b>	100%	100%	-	-
Population <sup>(2)</sup>		<b>42,829</b>	42,829	12,004	8,429	123,618
<b>Residential:</b>						
Single Family (2,000 sf)	du	<b>\$1,779</b>	\$1,627	\$1,494	\$1,079	\$1,330
<b>Non-Residential:</b>						
Light Industrial	1,000 sf	<b>\$1,135</b>	\$375	\$374	\$246	\$441
Office (50,000 sq ft)	1,000 sf	<b>\$2,531</b>	\$699	\$841	\$550	\$1,055
Retail (100,000 sq ft)	1,000 sf	<b>\$2,941</b>	\$2,001	\$4,894	\$1,447	\$1,999
Bank w/Drive-Thru	1,000 sf	<b>\$6,180</b>	\$3,219	\$8,201	\$5,322	\$6,303
Fast Food w/Drive-Thru	1,000 sf	<b>\$20,811</b>	\$3,740	\$7,808	\$3,719	\$9,286

(1) Represents the portion of the maximum calculated for each fee that is actually charged. Does not account for moratoriums/suspensions

(2) Source: Bureau of Economic and Business Research, University of Florida; 2014

(3) Du = dwelling unit

(4) Source: Appendix F, Table F-1

(5) Source: City of Palm Beach Gardens Division of Unified Services

(6) Source: City of Riviera Beach Planning and Zoning Division

(7) Source: Village of Royal Palm Beach Building Department

(8) Source: Village of Wellington; Municode; Light Industrial land use is charged "per service position"

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## VI. General Public Facilities Impact Fee

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As part of the impact fee update study, the City of Palm Beach Gardens is interested in developing a public facilities impact fee program. Public facilities impact fees are used to fund the land and capital construction and expansion of public buildings required to support the additional government service demand created by new growth. This section of the report presents the results of the public facilities impact fee study for the City of Palm Beach Gardens and will serve as the technical support document for the calculated public facilities impact fee schedule.

There are several major elements associated with the development of the public facilities impact fee. These include:

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

### ***Facility Inventory***

The public facilities inventory includes City Hall and Public Works facilities as well as other public facilities that are primarily for the provision of essential city services and do not include any of the buildings included in the calculation of other impact fees.

Table VI-1 shows the summary of the public facilities inventory for the City, as well as, the current value of buildings and land. As shown, the City has approximately 53,000 square feet of general public facility space and 15 acres of land associated with public facilities.

The building value of the facilities included in the inventory were estimated based primarily on insurance values and cost information obtained from other jurisdictions. This analysis resulted in an estimated cost of \$200 per square foot for the City hall, \$150 for the public

works office building and EVT building, and \$85 per square foot for maintenance and support buildings.

In addition to building value, land values were estimated for future land purchases. Land value was determined primarily through a review of the value of parcels where the current public facilities are located, as reported by the Palm Beach County Property Appraiser, an analysis of vacant land sales and values of similarly sized parcels in the City of Palm Beach Gardens, consideration for the variation in land values by subarea, and discussions with the City's staff. This analysis resulted in an average land value of \$200,000 per acre. Additional information is included in Appendix B.

**Table VI-1  
Palm Beach Gardens Public Facilities Inventory**

<b>Facility<sup>(1)</sup></b>	<b>Address<sup>(1)</sup></b>	<b>Square Footage<sup>(1)</sup></b>	<b>Total Acres<sup>(1)</sup></b>	<b>Building Value<sup>(2)</sup></b>	<b>Land Value<sup>(3)</sup></b>	<b>Total Building and Land Value<sup>(4)</sup></b>
City Hall	10500 North Military Trail	32,000	12.62	\$6,400,000	\$2,524,000	\$8,924,000
Parks Maintenance Complex <sup>(5)</sup>	10500 North Military Trail	7,044	N/A	\$598,740	N/A	\$598,740
EVT Building	3704 Burns Road	1,700	2.08	\$255,000	\$416,000	\$2,238,500
Maintenance Building	3704 Burns Road	2,800		\$238,000		
Public Works Office Building	3704 Burns Road	7,900		\$1,185,000		
Public Works Storage Buildings	3704 Burns Road	1,700		\$144,500		
<b>Total</b>		<b>53,144</b>	<b>14.70</b>	<b>\$8,821,240</b>	<b>\$2,940,000</b>	<b>\$11,761,240</b>
<b>Building Value per Square Foot<sup>(6)</sup></b>				<b>\$166</b>		
<b>Land Value per Acre<sup>(7)</sup></b>					<b>\$200,000</b>	

- (1) Source: City of Palm Beach Gardens
- (2) Square footage (Item 1) multiplied by the estimated building value per square foot
- (3) Total acres (Item 1) multiplied by the land value per acre (Item 7)
- (4) Sum of building value (Item 2) and land value (Item 3)
- (5) Located in Gardens Park and associated acreage is included as part of the parks impact fee
- (6) Total building value divided by total square footage
- (7) Source: Appendix B

### **Service Area and Population**

The City of Palm Beach Gardens provides general public services throughout the entire city. Therefore, the appropriate benefit district is a single citywide district. For impact fee calculations, the current 2015 weighted and functional population estimates are used for the public facilities impact fee.

### **Level-of-Service**

Based on the information provided by the City, the City of Palm Beach Gardens' achieved level-of-service (LOS) is 0.98 square feet of public buildings per weighted resident. Table VI-2 presents the calculation of the existing LOS as well as the calculation of the existing LOS per functional resident. As shown, the 2015 LOS is 0.86 square feet per functional resident.

**Table VI-2  
Current Level-of-Service**

Component	Year 2015	
	Weighted Population	Functional Population
Population <sup>(1)</sup>	54,011	61,749
Public Buildings Square Footage <sup>(2)</sup>	53,144	53,144
Achieved LOS (Sq. Ft. per Resident) <sup>(3)</sup>	<b>0.98</b>	<b>0.86</b>

(1) Source: Appendix A, Tables A-1 and A-7

(2) Source: Table VI-1

(3) Square footage (Item 2) divided by population (Item 1)

**Cost Component**

The cost component of the study evaluates the cost of capital items, including buildings and land. Table VI-3 provides a summary of all capital costs, which amounts to \$221 per square foot of primary public buildings and \$190 per functional resident.

**Table VI-3  
Public Facilities Total Cost per Functional Resident**

<b>Cost Component</b>	<b>Figure</b>	<b>Percent of Total Value<sup>(8)</sup></b>
Total Building Value <sup>(1)</sup>	\$8,821,240	75.00%
Total Land Value <sup>(2)</sup>	\$2,940,000	25.00%
Total Building and Land Value <sup>(3)</sup>	\$11,761,240	100.00%
Primary Building Square Footage <sup>(4)</sup>	53,144	
Total Building and Land Value per Square Foot <sup>(5)</sup>	\$221.31	
Achieved LOS - Bldg. Sq Ft per Functional Resident <sup>(6)</sup>	0.86	
<b>Total Impact Cost per Functional Resident<sup>(7)</sup></b>	<b>\$190.33</b>	

(1) Source: Table VI-1

(2) Source: Table VI-1

(3) Sum of building value (Item 1) and land value (Item 2)

(4) Source: Table VI-2

(5) Total building and land value (Item 3) divided by primary building square footage (Item 4)

(6) Source: Table VI-2

(7) Building and land value per square foot (Item 5) multiplied by the achieved LOS (Item 6)

(8) Distribution of building and land values as part of the total asset value

**Credit Component**

To avoid overcharging new development for the public facilities impact fees, a review of the capital funding program 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 and land 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 Expenditure Credit

To calculate the capital expansion expenditure credit per functional resident, the capital expansion projects programmed in the CIP were reviewed. The City programmed an average annual non-impact fee funding of \$24,000 towards public facility related capacity expanding projects over the next five years. The annual capital expansion expenditure was divided by the average functional residents for the same time period. As shown in Table VI-4, the average annual capital expansion expenditure per functional resident amounts to \$0.37.

Once the capital expansion credit is calculated, because the public facility capacity projects were partially funded with ad valorem revenues, an adjustment was made to account for the fact that new homes tend to pay higher taxes per dwelling unit. This adjustment factor was estimated based on a comparison of the average taxable value of newer homes to that of all homes. As presented in Table VI-4, the adjusted capital expansion credit per resident is \$0.50.

### Debt Service Credit

Any outstanding debt service issues related to the expansion of public facilities will also result in a credit to the impact fee. Currently, the City of Palm Beach Gardens has an outstanding debt service for a general obligation bond that was used to fund the construction of the City Hall.

To calculate the credit of the outstanding loan, the present value of the total remaining payments for the debt issue is calculated and then divided by the average annual functional population estimated over the remaining life of the bond issue. As presented in Table VI-5, the resulting credit is \$24 per resident.

Once the debt service credit per resident is calculated, because the City is using ad valorem tax revenues to pay for a portion the debt service, an adjusted credit figure is calculated. Similar to the capital expansion credit, the portion of the debt service funded with ad valorem tax revenues is adjusted to account for the fact that new homes tend to pay higher property taxes per dwelling unit. This adjustment factor was estimated based on a comparison of the average taxable value of newer homes to that of all homes. As presented in Table VI-5, the adjusted debt service credit per resident is \$32.

**Table VI-4  
Capital Expansion Credit per Functional Resident**

Expenditure <sup>(1)</sup>	FY 2016-20
<b>General Fund:</b>	
City Hall Renovations/Space Analysis	\$120,000
Total Capital Expansion Expenditures	\$120,000
Annual Capital Expansion Expenditures <sup>(2)</sup>	\$24,000
Average Annual Functional Population (FY 2016-2020) <sup>(3)</sup>	64,063
<b>Capital Expansion Expenditures per Functional Resident<sup>(4)</sup></b>	<b>\$0.37</b>
<b>Portion of Capital Expansion Projects Funded with Ad Valorem Tax Revenues<sup>(5)</sup></b>	<b>62.5%</b>
Portion Funded with Ad-Valorem Tax Revenues <sup>(6)</sup>	\$0.23
Residential Land Uses Credit Adjustment Factor <sup>(7)</sup>	1.55
Residential Land Uses: Adjusted Capital Expansion Expenditures per Resident <sup>(8)</sup>	\$0.36
Portion Funded with Other Revenue Sources <sup>(9)</sup>	\$0.14
<b>Residential Land Uses: Total Capital Expansion Credit per Resident<sup>(10)</sup></b>	<b>\$0.50</b>

(1) Source: City of Palm Beach Gardens

(2) Average capital expenditures over the five-year period

(3) Source: Appendix A, Table A-7

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

(5) Portion of total capital expansion expenditures funded by ad valorem tax revenue, which represents 62.5% of General Fund revenues

(6) Capital expansion expenditures per functional resident (Item 4) multiplied by the portion of capital expansion projects funded with ad valorem tax revenues (Item 5)

(7) Adjustment factor to reflect higher ad valorem taxes paid by new homes

(8) Portion funded with ad-valorem tax revenues (Item 6) multiplied by the residential land uses credit adjustment factor (Item 7)

(9) Capital expansion expenditures per functional resident (Item 4) less portion funded with ad-valorem tax revenues (Item 6)

(10) Adjusted capital expansion expenditures per resident (Item 8) plus the portion funded with other revenue sources (Item 9)

**Table VI-5  
Debt Service Credit per Functional Resident**

Description <sup>(1)</sup>	Funding Source <sup>(1)</sup>	Present Value of Payments Remaining <sup>(1)</sup>	Avg. Annual Functional Population During Remaining Bond Issue Period <sup>(2)</sup>	Credit per Resident <sup>(3)</sup>
General Obligation Bond, Portion Associated with the Construction of City Hall	General Fund	\$1,501,947	63,672	<b>\$23.59</b>
Portion funded with Ad Valorem Tax Revenues <sup>(4)</sup>				\$14.74
Adjustment Factor for Residential Land Uses <sup>(5)</sup>				1.55
Adjusted Debt Service Credit for Residential Land Uses <sup>(6)</sup>				\$22.85
Portion Funded with Other Sources <sup>(7)</sup>				\$8.85
<b>Total Debt Service Credit for Residential Land Uses<sup>(8)</sup></b>				<b>\$31.70</b>

(1) Source: City of Palm Beach Gardens

(2) Source: Appendix A, Table A-7

(3) Present value of payments remaining (Item 1) divided by the average annual functional population (Item 2)

(4) Portion of the total debt service funded with ad valorem tax revenue, which represents 62.5% of General Fund revenues

(5) Adjustment factor to reflect higher ad valorem taxes paid by new homes

(6) Portion funded with ad valorem tax revenues (Item 4) multiplied by the credit adjustment factor (Item 5)

(7) Total debt service credit less the portion funded with ad valorem tax revenues (Item 4)

(8) Sum of the adjusted debt service credit and the portion funded with other sources (Items 7 and 8)

***Net Public Facilities Impact Cost***

Table VI-6 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 \$150 per functional resident for residential land uses and \$160 per functional resident for non-residential land uses.

**Table VI-6  
Net Public Facilities Impact Cost per Functional Resident**

Impact Cost / Credit Element	Per Functional Resident
<b>Impact Cost</b>	
Total Impact Cost <sup>(1)</sup>	<b>\$190.33</b>
<b>Revenue Credit</b>	
Capital Improvement Credit <sup>(2)</sup> :	
- Residential Land Uses	\$0.50
- Non-residential Land Uses	\$0.37
Capitalization Rate	3.0%
Capitalization Period (in years)	25
Total Capital Improvement Credit <sup>(3)</sup>	
- Residential Land Uses	\$8.71
- Non-residential Land Uses	\$6.44
Debt Service Credit <sup>(4)</sup> :	
- Residential Land Uses	\$31.70
- Non-residential Land Uses	\$23.59
Total Revenue Credit <sup>(5)</sup> :	
- Residential Land Uses	\$40.41
- Non-residential Land Uses	\$30.03
<b>Net Impact Cost</b>	
Net Impact Cost <sup>(6)</sup> :	
- Residential Land Uses	<b>\$149.92</b>
- Non-residential Land Uses	<b>\$160.30</b>

(1) Source: Table VI-3

(2) Source: Table VI-4

(3) Average annual capital improvement credit (Item 2) for a capitalization rate of 3.00% over 25 years

(4) Source: Table VI-5

(5) Sum of total capital improvement credit (Item 3) and the debt service credit (Item 4)

(6) Total impact cost (Item 1) less total revenue credit (Item 5)

**Calculated Public Facilities Impact Fee Schedule**

Table VI-7 presents the calculated public facilities impact fee schedule developed for the City of Palm Beach Gardens for both residential and non-residential land uses, based on the net impact cost per functional resident previously presented in Table VI-6.

**Table VI-7  
Calculated Public Facilities Impact Fee Schedule**

LUC	Land Use	Impact Unit	Functional Population Coefficient <sup>(1)</sup>	Net Impact Fee per Unit <sup>(2)</sup>
<b>Residential:</b>				
210	Single Family (detached/attached):			
	- Less than 1,500 sf	du	1.26	\$188.90
	- 1,500 to 2,499 sf	du	1.39	\$208.39
	- 2,500 sf or more	du	1.54	\$230.88
220/230	Multi-Family (Apartment/Condo):			
	- Less than 1,000 sf	du	0.92	\$137.93
	- 1,000 sf or more	du	1.14	\$170.91
240	Mobile Home	du	1.27	\$190.40
<b>Transient, Assisted, Group:</b>				
253	Congregate Care Facility	du	0.80	\$128.24
254	Assisted Living Facility	bed	0.84	\$134.65
620	Nursing Home	1,000 sf	1.30	\$208.39
310	Hotel	room	0.91	\$145.87
<b>Recreational:</b>				
412	General Recreation	acre	0.20	\$32.06
443	Movie Theater	seat	0.10	\$16.03
491	Racquet/Tennis Club	court	3.16	\$506.55
495	Recreational Community Center	1,000 sf	2.91	\$466.47
<b>Institutions:</b>				
520	Elementary School (Private)	student	0.06	\$9.62
522	Middle School (Private)	student	0.07	\$11.22
530	High School (Private)	student	0.08	\$12.82
540	University (7,500 or fewer students) (Private)	student	0.10	\$16.03
550	University (more than 7,500 students) (Private)	student	0.07	\$11.22
560	Church/Synagogue	1,000 sf	0.51	\$81.75
565	Day Care Center	1,000 sf	0.89	\$142.67
566	Cemetery	acre	0.12	\$19.24
610	Hospital	1,000 sf	1.37	\$219.61
640	Animal Hospital/Veterinary Clinic	1,000 sf	2.32	\$371.90
n/a	Funeral Home	1,000 sf	0.55	\$88.17
<b>Office:</b>				
710	Office (50,000 sf and less)	1,000 sf	1.41	\$226.02
	Office (50,001 - 100,000 sf)	1,000 sf	1.19	\$190.76
	Office (100,001 - 200,000 sf)	1,000 sf	1.01	\$161.90
	Office (200,001 - 400,000 sf)	1,000 sf	0.85	\$136.26
	Office (greater than 400,000 sf)	1,000 sf	0.77	\$123.43
720	Medical Office (less than 10,000 sf)	1,000 sf	1.14	\$182.74
720	Medical Office (10,000 sf and greater)	1,000 sf	1.66	\$266.10
<b>Retail:</b>				
820	Retail 50,000 sf and less	1,000 sf	2.45	\$392.74
	Retail 50,001 - 200,000 sf	1,000 sf	2.30	\$368.69
	Retail 200,001 - 400,000 sf	1,000 sf	2.34	\$375.10
	Retail 400,001 - 600,000 sf	1,000 sf	2.44	\$391.13
	Retail 600,001 - 800,000 sf	1,000 sf	2.55	\$408.77
	Retail greater than 800,000 sf	1,000 sf	2.42	\$387.93
841	New/Used Car Sales	1,000 sf	1.47	\$235.64
853	Convenience Store w/Gas Pumps	1,000 sf	5.83	\$934.55
880	Pharmacy/Drugstore without Drive-Thru	1,000 sf	1.90	\$304.57
881	Pharmacy/Drugstore with Drive-Thru	1,000 sf	1.99	\$319.00
890	Furniture Store	1,000 sf	0.23	\$36.87
911	Bank/Savings Walk-In	1,000 sf	2.23	\$357.47
912	Bank/Savings Drive-In	1,000 sf	2.28	\$365.48
931	Quality Restaurant	1,000 sf	6.82	\$1,093.25
932	High-Turnover Restaurant	1,000 sf	6.78	\$1,086.83
934	Fast Food Rest. w/Drive-Thru	1,000 sf	8.90	\$1,426.67
941	Quick Lube	bay	1.16	\$185.95
942	Automobile Care Center	1,000 sf	1.50	\$240.45
944	Gas/Service Station	fuel pos.	1.98	\$317.39
945	Gas/Service Station with Convenience Market	fuel pos.	1.95	\$312.59
947	Car Wash	bay	0.87	\$139.46
<b>Industrial:</b>				
110	General Industrial	1,000 sf	0.69	\$110.61
150	Warehousing	1,000 sf	0.28	\$44.88
151	Mini-Warehouse	1,000 sf	0.06	\$9.62

(1) Source: Appendix A, Table A-8 for residential land uses and Appendix A, Table A-9 for non-residential land uses

(2) Source: Net impact cost per functional resident from Table VI-6 multiplied by the functional population coefficient for each land use

**Public Facilities Impact Fee Schedule Comparison**

As part of the work effort in calculating the City of Palm Beach Gardens’ public facilities impact fee schedule, the City’s calculated impact fee schedule was compared to the adopted fee schedule of those in similar or nearby jurisdictions. Table VI-8 presents this comparison.

**Table VI-8  
Public Facilities Impact Fee Schedule Comparison**

Land Use	Unit <sup>(1)</sup>	PBG	City of Riviera Beach <sup>(4)</sup>	Town of Juno Beach <sup>(5)</sup>	Village of Royal Palm Beach <sup>(6)</sup>
		Calculated Fees <sup>(3)</sup>			
Date of Last Update		2015	2004	N/A	N/A
Adoption Percentage		N/A	100%	N/A	N/A
Population <sup>(2)</sup>		50,067	33,728	3,194	36,265
<b>Residential:</b>					
Single Family (2,000 sf)	du	\$208	\$139	\$298	\$83
<b>Non-Residential:</b>					
Light Industrial	1,000 sf	\$111	\$24	\$513	\$13
Office (50,000 sq ft)	1,000 sf	\$226	\$71	\$513	\$63
Retail (125,000 sq ft)	1,000 sf	\$369	\$181	\$513	\$115
Bank w/Drive-Thru	1,000 sf	\$365	\$159	\$513	\$104
Fast Food w/Drive-Thru	1,000 sf	\$1,427	\$184	\$513	\$104

(1) du = dwelling unit

(2) Source: Bureau of Economic and Business Research, University of Florida (2014)

(3) Source: Table VI-7

(4) Source: City of Riviera Beach Planning and Zoning Division

(5) Source: Town of Juno Beach; Municode

(6) Source: Village of Royal Palm Beach Building Department; Smallest retail tier used for Bank and Fast Food

**APPENDIX A**  
**Population – Supplemental Information**

## Population

With the exception of the 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 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, not only the residents, or permanent population of the City, but also the seasonal residents and visitors were considered. Seasonal residents include visitors to hotel and motel facilities, visitors to RV parks, visitors that stay with relatives and friends, and part-time residents, which are defined as living in the City of Palm Beach Gardens 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.

Table A-1 presents the population trend for Palm Beach Gardens. The projections indicate that the current weighted seasonal population of Palm Beach Gardens is approximately 54,000 and is estimated to increase by 26 percent between 2015 and 2040 citywide.

**Table A-1**  
**Weighted Population Trends and Projections**

<b>Year</b>	<b>Weighted Seasonal Population Palm Beach Gardens</b>
2000	37,165
2001	37,665
2002	38,736
2003	41,888
2004	45,083
2005	48,611
2006	51,105
2007	52,489
2008	53,602
2009	53,657
2010	51,672
2011	51,903
2012	52,421
2013	52,821
2014	53,439
<b>2015</b>	<b>54,011</b>
2016	54,675
2017	55,348
2018	56,028
2019	56,717
2020	57,406
2021	58,015
2022	58,629
2023	59,250
2024	59,878
2025	60,514
2026	61,064
2027	61,620
2028	62,181
2029	62,745
2030	63,333
2031	63,826
2032	64,322
2033	64,823
2034	65,327
2035	65,821
2036	66,268
2037	66,719
2038	67,172
2039	67,628
2040	68,086

Source: Appendix A, Table A-10

### ***Apportionment of Demand by Residential Unit Type and Size***

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

- Single Family/Townhouse
- Multi-Family/Accessory Unit
- Mobile Home

Table A-2 presents the number of persons per housing type for the residential categories identified above in Palm Beach Gardens. This analysis includes all housing units, both occupied and vacant.

To address fairness and equity issues between land uses and to be consistent with the City's current fee schedules, the single family land use is tiered based on three categories of square footage: less than 1,500 square feet, 1,500 to 2,499 square feet, and 2,500 square feet or more. In addition to tiering the single family land use, the multi-family land use is tiered based on the following two categories: less than 1,000 square feet and 1,000 square feet or more. To accommodate the tiering of impact fee assessments for the single family and multi-family residential land use categories, an analysis was completed based on housing unit size and persons per housing unit. This analysis utilized national data from the 2013 American Housing Survey (AHS) and data from the 2000 and 2010 U.S. Census Reports to examine this relationship.

The statistics utilized from the 2013 AHS and the 2010 and 2013 U.S. Census include the following definitions of single family, multi-family, and mobile home land uses:

- Single Family/Townhouse – Residential units that are fully detached, semidetached (semi attached, side-by-side), row houses, and townhouses. In the case of attached units, each must be separated from the adjacent unit by a ground-to-roof wall in order to be classified as a single family structure. Also, these units must not share heating/air-conditioning systems or utilities, such as water supply, power supply, or sewage disposal lines.
- Multi-Family/Accessory Unit – Residential buildings containing units built one on top of another and those built side-by-side which do not have a ground-to-roof wall and/or have common facilities (i.e, attic, basement, heating plant, plumbing, etc.)
- A manufactured home is defined as a movable dwelling, 8 feet or more wide and 40 feet or more long, designed to be towed on its own chassis, with transportation gear

integral to the unit when it leaves the factory, and without need of a permanent foundation.

**Table A-2  
Persons per Housing Unit (Citywide)**

Housing Type	Population <sup>(1)</sup>	Housing Units <sup>(2)</sup>	Ratio <sup>(3)</sup>	Residents / Housing Units <sup>(4)</sup>
Single Family (detached/attached)	38,019	18,407		2.07
- Less than 1,500 sf			91%	1.88
- 1,500 to 2,499 sf			100%	2.07
- 2,500 sf or more			111%	2.30
Multi-Family (Apartment/Condo)	13,611	9,126		1.49
- Less than 1,000 sf			92%	1.37
- 1,000 sf or more			114%	1.70
Mobile Home	589	311		1.89
<b>Weighted Average</b>	<b>52,219</b>	<b>27,844</b>		<b>1.88</b>

(1) Source: 2013 American Community Survey (ACS), Table B25033 (adjusted for peak seasonal population)

(2) Source: 2013 American Community Survey (ACS), Table DP04

(3) Ratio of people per housing unit for each tier to the mid-size home, developed based on national PPH data derived from the 2013 American Housing Survey

(4) Population (Item 1) divided by housing units (Item 2)

It is important to note this population-based demand definitions apply all of the fees included in this report, with the exception of transportation impact fee. In the case of transportation impact fee, the demand component is based on vehicle miles of travel and definitions of land use categories are based on those included in the Institute of Transportation Engineers' (ITE) *Trip Generation Handbook*. For example, in the transportation impact fee schedule, townhouses are grouped with multi-family land use category instead of single family.

### ***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 city 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 need 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)<sup>1</sup>. 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 the City of Palm Beach Gardens' functional population, an analysis of the City's population and employment characteristics was conducted. Tables A-3 and A-4 present this analysis for Palm Beach Gardens. Based on this analysis, people in the city, on average, spend 16.1 hours each day at their place of residence. This corresponds to approximately 67 percent of each 24-hour day at their place of residence and the other 33 percent away from home.

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<sup>1</sup> 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-3  
Population & Employment Characteristics**

Item/Calculation Step	Figure
Total workers living in Palm Beach Gardens <sup>(1)</sup>	22,455
Palm Beach Gardens Census Population (2010) <sup>(2)</sup>	48,452
Total workers as a percent of population <sup>(3)</sup>	46.3%
School age population (5-17 years) (2010) <sup>(4)</sup>	5,813
School age population as a percent of population <sup>(5)</sup>	12.0%
Population net of workers and school age population <sup>(6)</sup>	20,184
Other population as a percent of total population <sup>(7)</sup>	41.7%

- (1) Source: Census Transportation Planning Package (CTPP) 2010
- (2) Source: 2010 U.S. Census
- (3) Total workers (Item 1) divided by the census population (Item 2)
- (4) Source: 2010 U.S. Census
- (5) School age population (Item 4) divided by the census population (Item 2)
- (6) Census 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 the census population (Item 2)

**Table A-4  
Residential Coefficient for Functional Population**

Pop. Group	Hours at Residence <sup>(1)</sup>	Percent of Population <sup>(2)</sup>	Effective Hours <sup>(3)</sup>
Workers	13	46.3%	6.0
Students	15	12.0%	1.8
Other	20	41.7%	8.3
Total Hours at Residence <sup>(4)</sup>			16.1
<b>Residential Functional Population Coefficient<sup>(5)</sup></b>			<b>67.1%</b>

- (1) Estimated
- (2) Source: Table A-3
- (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-4 is used in the calculation of the residential coefficient for the 24-hour functional population. These actual calculations are presented in Table A-5.

### 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, now used internationally. This method uses trip generation data from the Institute of Transportation Engineers' (ITE) Trip Generation Manual and Tindale Oliver'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-5 also shows the functional population coefficients for non-residential uses in the City of Palm Beach Gardens. The functional population coefficients in Table A-5 were used to estimate the City's functional population in Table A-7.

**Table A-5  
General Functional Population Coefficients**

Population/ Employment Category	ITE LUC	Employee Hours In- Place <sup>(1)</sup>	Trips per Employee <sup>(2)</sup>	One-Way Trips per Employee <sup>(3)</sup>	Journey-to- Work Occupants per Trip <sup>(4)</sup>	Daily Occupants per Trip <sup>(5)</sup>	Visitors per Employee <sup>(6)</sup>	Visitor Hours per Trip <sup>(1)</sup>	Days per Week <sup>(7)</sup>	Functional Population Coefficient <sup>(8)</sup>
Population									7.00	0.671
Natural Resources	n/a	9.00	3.02	1.51	1.32	1.38	0.09	1.00	7.00	0.379
Construction	110	9.00	3.02	1.51	1.32	1.38	0.09	1.00	5.00	0.271
Manufacturing	140	9.00	2.13	1.07	1.32	1.38	0.06	1.00	5.00	0.270
Transportation, Communication, Utilities	110	9.00	3.02	1.51	1.32	1.38	0.09	1.00	5.00	0.271
Wholesale Trade	150	9.00	3.89	1.95	1.32	1.38	0.12	1.00	5.00	0.271
Retail Trade	820	9.00	52.10	26.05	1.24	1.73	12.76	1.50	7.00	1.173
Finance, Insurance, Real Estate	710	9.00	3.32	1.66	1.24	1.73	0.81	1.00	5.00	0.292
Services <sup>(9)</sup>	n/a	9.00	28.17	14.09	1.24	1.73	6.90	1.00	6.00	0.568
Government <sup>(10)</sup>	730	9.00	11.95	5.98	1.24	1.73	2.93	1.00	7.00	0.497

(1) Assumed

(2) Trips per employee represents all trips divided by the number of employees and is based on Trip Generation 9th Edition (Institute of Transportation Engineers 2012) as follows:

ITE Code 110 at 3.02 weekday trips per employee, page 93.

ITE Code 140 at 2.13 weekday trips per employee, page 164.

ITE Code 150 at 3.89 weekday trips per employee, page 193.

ITE Code 710 at 3.32 weekday trips per employee, page 1252.

ITE Code 730 at 11.95 weekday trips per employee, page 1304.

ITE Code 820 based on blended average of trips by retail center size calculated below, adapted from page 1561.

Trips per retail employee from the following table:

<i>Retail Scale</i>	<i>Assumed Center Size</i>	<i>Trip Rate</i>	<i>Sq Ft per Employee<sup>(11)</sup></i>	<i>Trips per Employee</i>	<i>Share</i>	<i>Weighted Trips</i>
Neighborhood <50k sq.ft.	50	86.56	802	69	40.0%	27.60
Community 50k-250k sq.ft.	250	49.28	975	48	30.0%	14.40
Regional 250k-500k sq.ft.	500	38.66	1,043	40	20.0%	8.00
Super Reg. 500k-1000k sq.ft.	1,000	30.33	676	21	10.0%	2.10
Sum of Weighted Trips/1k sq.ft.						52.10

(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-7 for residential and the equation below to determine the Functional Population Coefficient per Employee for all land-use categories except residential includes the following:

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

(24 Hours per Day x 7 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, 9th 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, 2003

**Table A-6  
Citywide Functional Population – Year 2015**

<b>Population Category</b>	<b>Palm Beach Gardens Baseline Data<sup>(1)</sup></b>	<b>Functional Resident Coefficient<sup>(2)</sup></b>	<b>Functional Population<sup>(3)</sup></b>
2015 Weighted Population	54,011	0.671	36,241
<b>Employment Category</b>			
Natural Resources	63	0.379	24
Construction	1,329	0.271	360
Manufacturing	950	0.270	257
Transportation, Communication, and Utilities	1,002	0.271	272
Wholesale Trade	1,180	0.271	320
Retail Trade	6,065	1.173	7,114
Finance, Insurance, and Real Estate	8,921	0.292	2,605
Services	24,045	0.568	13,658
Government Services	1,806	0.497	898
Total Employment by Category Population <sup>(4)</sup>			25,508
<b>2015 Total Functional Population<sup>(5)</sup></b>			<b>61,749</b>

(1) Source: Table A-1 for population and 2015 Woods & Poole for employment data

(2) Source: Table A-5

(3) The functional population is Palm Beach Gardens 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-7 presents the City’s annual functional population figures from 2000 through 2040, based on the 2015 functional population figures from Table A-6 and the annual population growth rates from the population figures previously presented in Table A-1.

**Table A-7  
Palm Beach Gardens  
Functional Population (2000-2040)**

Year	Functional Population Palm Beach Gardens
2000	42,485
2001	43,059
2002	44,282
2003	47,887
2004	51,541
2005	55,577
2006	58,428
2007	60,011
2008	61,283
2009	61,344
2010	59,074
2011	59,340
2012	59,933
2013	60,388
2014	61,095
<b>2015</b>	<b>61,749</b>
2016	62,509
2017	63,278
2018	64,056
2019	64,844
2020	65,629
2021	66,325
2022	67,028
2023	67,738
2024	68,456
2025	69,182
2026	69,812
2027	70,447
2028	71,088
2029	71,735
2030	72,409
2031	72,974
2032	73,543
2033	74,117
2034	74,695
2035	75,263
2036	75,775
2037	76,290
2038	76,809
2039	77,331
2040	77,857

(1) Source: Table A-6 for 2015. Other years are based on growth rates for Palm Beach Gardens' weighted seasonal population; Table A-1 (Item 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 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 Table A-8. The average number of persons per housing unit in Palm Beach Gardens was calculated for the single family/townhouse, multi-family, and mobile home land uses, based on information obtained from the 2013 American Community Survey and the 2013 American Housing Survey. Besides the residential land uses, Table A-8 also includes transient land uses, such as hotels, and nursing homes/congregate living facilities. Secondary sources, such as the Palm Beach County Tourist Development Council and the Convention and Visitors Bureau and the Florida Department of Elderly Affairs, are used to determine the occupancy rate for hotels, motels, nursing homes, and CLF land uses.

#### *Non-Residential Land Uses*

A similar approach is used to estimate functional residents for non-residential land uses. Table A-9 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 in the tables shows the estimated functional resident coefficients by land use. These coefficients by land use create the demand component for the certain impact fee programs and will be used in the calculation of the cost per unit for each land use category in the select impact fee schedules.

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

Residential Land Use	Impact Unit	ITE LUC <sup>(1)</sup>	Residents/Visitors Per Unit <sup>(2)</sup>	Occupancy Rate <sup>(3)</sup>	Adjusted Residents Per Unit <sup>(4)</sup>	Peak Visitor Hours at Place <sup>(5)</sup>	Workers Per Unit <sup>(6)</sup>	Work Day Hours <sup>(7)</sup>	Days Per Week <sup>(8)</sup>	Work Week Residents Per Unit <sup>(9)</sup>
<b>Residential</b>										
Single Family (detached/attached)										
- Less than 1,500 sf	du	210	1.88	-	-	-	-	-	-	1.26
- 1,500 to 2,499 sf	du	210	2.07	-	-	-	-	-	-	1.39
- 2,500 sf or more	du	210	2.30	-	-	-	-	-	-	1.54
Multi-Family (Apartment/Condo)										
- Less than 1,000 sf	du	220/230	1.37							0.92
- 1,000 sf or more	du	220/230	1.70	-	-	-	-	-	-	1.14
Mobile Home	du	240	1.89	-	-	-	-	-	-	1.27
<b>Transient, Assisted, Group</b>										
Congregate Care Facility	du	253	1.11	83%	0.92	16	0.51	9	7	0.80
Assisted Living Facility	bed	254	1.00	83%	0.83	16	0.76	9	7	0.84
Nursing Home	1,000 sf	620	1.89	83%	1.57	16	0.68	9	7	1.30
Hotel	room	310	2.08	67%	1.39	12	0.57	9	7	0.91
<p>(1) Land use code from the Institute of Transportation Engineers (ITE) Trip Generation Handbook, 9th Edition</p> <p>(2) Estimates for the single family, multi-family, and mobile home land use from Table A-2; estimates for the hotel/motel land use is based on data obtained from Palm Beach County Tourist Development Council and the Convention and Visitors Bureau. One person per bed is assumed for nursing homes/assisted living facilities. 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 2001 National Household Travel Survey, prepared by the US Department of Transportation.</p> <p>(3) Source for hotel/motel occupancy: Palm Beach County Tourist Development Council and the Convention and Visitors Bureau. Average hotel/motel occupancy rate for 2005 through 2013. Source for nursing home/CLF occupancy rate is the Florida Department of Elderly Affairs, Palm Beach County Profile. Average occupancy rate for 2012 and 2013.</p> <p>(4) Residents per unit times occupancy rate</p> <p>(5), (7), (8) Estimated</p> <p>(6) Adapted from ITE Trip Generation Handbook, 9th Edition</p> <p>(9) For residential this is Residents Per Unit times 0.679. For Transient, Assisted, and Group it is:  <math display="block">\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})}</math> </p>										

**Table A-9  
Functional Residents for Non-Residential Land Uses**

ITE LUC <sup>(1)</sup>	Land Use	Impact Unit	Trips Per Unit <sup>(2)</sup>	Trips Per Employee <sup>(3)</sup>	Employees Per Unit <sup>(4)</sup>	One-Way Factor @ 50% <sup>(5)</sup>	Worker Hours <sup>(6)</sup>	Occupants Per Trip <sup>(7)</sup>	Visitors <sup>(8)</sup>	Visitor Hours Per Trip <sup>(9)</sup>	Days Per Week <sup>(10)</sup>	Functional Resident Coefficient <sup>(11)</sup>
<b>RECREATIONAL:</b>												
412	General Recreation	acre	2.28	n/a	0.10	1.14	9	2.39	2.62	1.50	7	0.20
443	Movie Theater	seat	1.76	53.12	0.03	0.88	9	2.39	2.07	1.00	7	0.10
491	Racquet/Tennis Club	court	38.70	45.71	0.85	19.35	9	2.39	45.40	1.50	7	3.16
495	Recreational Community Center	1,000 sf	33.82	27.25	1.24	16.91	9	2.39	39.17	1.50	7	2.91
<b>INSTITUTIONS:</b>												
520	Elementary School (Private)	student	1.29	15.71	0.08	0.65	9	1.11	0.64	2.00	5	0.06
522	Middle School (Private)	student	1.62	16.39	0.10	0.81	9	1.11	0.80	2.00	5	0.07
530	High School (Private)	student	1.71	19.74	0.09	0.86	9	1.11	0.86	2.00	5	0.08
540	University (7,500 or fewer students) (Private)	student	2.00	12.26	0.16	1.00	9	1.11	0.95	2.00	5	0.10
550	University (more than 7,500 students) (Private)	student	1.50	12.26	0.12	0.75	9	1.11	0.71	2.00	5	0.07
560	Church/Synagogue	1,000 sf	9.11	20.64	0.44	4.56	9	1.90	8.22	1.00	7	0.51
565	Day Care Center	1,000 sf	71.88	26.73	2.69	35.94	9	1.11	37.20	0.15	5	0.89
566	Cemetery	acre	4.73	58.09	0.08	2.37	9	1.90	4.42	0.50	7	0.12
610	Hospital	1,000 sf	13.22	4.50	2.94	6.61	9	1.42	6.45	1.00	7	1.37
640	Animal Hospital/Veterinary Clinic	1,000 sf	32.80	n/a	4.05	16.40	9	1.42	19.24	1.00	7	2.32
n/a	Funeral Home	1,000 sf	12.60	n/a	0.44	6.30	9	1.90	11.53	1.00	6	0.55
<b>OFFICE &amp; FINANCIAL:</b>												
710	Office (50,000 sf and less)	1,000 sf	15.50	3.32	4.67	7.75	9	1.28	5.25	1.00	5	1.41
	Office (50,001 - 100,000 sf)	1,000 sf	13.13	3.32	3.95	6.57	9	1.28	4.46	1.00	5	1.19
	Office (100,001 - 200,000 sf)	1,000 sf	11.12	3.32	3.35	5.56	9	1.28	3.77	1.00	5	1.01
	Office (200,001 - 400,000 sf)	1,000 sf	9.41	3.32	2.83	4.71	9	1.28	3.20	1.00	5	0.85
	Office (greater than 400,000 sf)	1,000 sf	8.54	3.32	2.57	4.27	9	1.28	2.90	1.00	5	0.77
720	Medical Office (less than 10,000 sf)	1,000 sf	23.83	8.91	2.67	11.92	9	1.42	14.26	1.00	5	1.14
720	Medical Office (10,000 sf and greater)	1,000 sf	34.72	8.91	3.90	17.36	9	1.42	20.75	1.00	5	1.66

**Table A-9 (continued)**  
**Functional Residents for Non-Residential Land Uses**

ITE LUC <sup>(1)</sup>	Land Use	Impact Unit	Trips Per Unit <sup>(2)</sup>	Trips Per Employee <sup>(3)</sup>	Employees Per Unit <sup>(4)</sup>	One-Way Factor @ 50% <sup>(5)</sup>	Worker Hours <sup>(6)</sup>	Occupants Per Trip <sup>(7)</sup>	Visitors <sup>(8)</sup>	Visitor Hours Per Trip <sup>(9)</sup>	Days Per Week <sup>(10)</sup>	Functional Resident Coefficient <sup>(11)</sup>
<b>RETAIL:</b>												
820	Retail 50,000 sf and less	1,000 sf	86.56	n/a	2.50	43.28	9	1.73	72.37	0.50	7	2.45
	Retail 50,001 - 200,000 sf	1,000 sf	53.28	n/a	2.50	26.64	9	1.73	43.59	0.75	7	2.30
	Retail 200,001 - 400,000 sf	1,000 sf	41.80	n/a	2.50	20.90	9	1.73	33.66	1.00	7	2.34
	Retail 400,001 - 600,000 sf	1,000 sf	36.27	n/a	2.50	18.14	9	1.73	28.88	1.25	7	2.44
	Retail 600,001 - 800,000 sf	1,000 sf	32.80	n/a	2.50	16.40	9	1.73	25.87	1.50	7	2.55
	Retail greater than 800,000 sf	1,000 sf	30.33	n/a	2.50	15.17	9	1.73	23.74	1.50	7	2.42
841	New/Used Car Sales	1,000 sf	28.25	21.14	1.34	14.13	9	1.73	23.10	1.00	7	1.47
853	Convenience Store w/Gas Pumps	1,000 sf	775.14	n/a	2.50	387.57	9	1.52	586.61	0.20	7	5.83
880	Pharmacy/Drugstore without Drive-Thru	1,000 sf	90.06	n/a	2.50	45.03	9	1.52	65.95	0.35	7	1.90
881	Pharmacy/Drugstore with Drive-Thru	1,000 sf	98.28	n/a	2.50	49.14	9	1.52	72.19	0.35	7	1.99
890	Furniture Store	1,000 sf	5.06	12.19	0.42	2.53	9	1.52	3.43	0.50	7	0.23
911	Bank/Savings Walk-In	1,000 sf	121.30	34.69	3.50	60.65	9	1.52	88.69	0.35	6	2.23
912	Bank/Savings Drive-In	1,000 sf	159.34	30.94	5.15	79.67	9	1.52	115.95	0.15	6	2.28
931	Quality Restaurant	1,000 sf	91.10	n/a	9.92	45.55	9	1.85	74.35	1.00	7	6.82
932	High-Turnover Restaurant	1,000 sf	116.60	n/a	9.92	58.30	9	1.85	97.94	0.75	7	6.78
934	Fast Food Rest. w/Drive-Thru	1,000 sf	511.00	n/a	10.90	255.50	9	1.85	461.78	0.25	7	8.90
941	Quick Lube	bay	40.00	n/a	1.50	20.00	9	1.52	28.90	0.50	7	1.16
942	Automobile Care Center	1,000 sf	31.43	n/a	1.50	15.72	9	1.52	22.39	1.00	7	1.50
944	Gas/Service Station	fuel pos.	168.56	n/a	2.50	84.28	9	1.52	125.61	0.20	7	1.98
945	Gas/Service Station with Convenience Market	fuel pos.	162.78	n/a	2.50	81.39	9	1.52	121.21	0.20	7	1.95
947	Car Wash	bay	43.94	n/a	0.50	21.97	9	1.52	32.89	0.50	7	0.87
<b>INDUSTRIAL:</b>												
110	General Industrial	1,000 sf	6.97	3.02	2.31	3.49	9	1.38	2.51	1.00	5	0.69
150	Warehousing	1,000 sf	3.56	3.89	0.92	1.78	9	1.38	1.54	0.75	5	0.28
151	Mini-Warehouse	1,000 sf	2.15	61.90	0.03	1.08	9	1.38	1.46	0.75	7	0.06

Sources:

- (1) Land use code found in the Institute of Transportation Engineers (ITE) Trip Generation Handbook, 9th Edition
- (2) Land uses and trip generation rates consistent with those included in the Transportation Impact Fee Update Study
- (3) Trips per employee from ITE Trip Generation Handbook, 9th 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-10  
Weighted Seasonal Population Projections**

<b>Year</b>	<b>Permanent Population<sup>(1)</sup></b>	<b>Seasonal Population<sup>(2)</sup></b>	<b>Total Weighted Season Pop.<sup>(3)</sup></b>
2000	35,058	2,107	37,165
2001	35,527	2,138	37,665
2002	36,540	2,196	38,736
2003	39,548	2,340	41,888
2004	42,595	2,488	45,083
2005	45,867	2,744	48,611
2006	48,305	2,800	51,105
2007	49,670	2,819	52,489
2008	50,792	2,810	53,602
2009	50,898	2,759	53,657
2010	48,452	3,220	51,672
2011	48,630	3,273	51,903
2012	49,108	3,313	52,421
2013	49,434	3,387	52,821
2014	50,067	3,372	53,439
<b>2015</b>	<b>50,602</b>	<b>3,409</b>	<b>54,011</b>
2016	51,225	3,450	54,675
2017	51,855	3,493	55,348
2018	52,492	3,536	56,028
2019	53,138	3,579	56,717
2020	53,784	3,622	57,406
2021	54,354	3,661	58,015
2022	54,930	3,699	58,629
2023	55,512	3,738	59,250
2024	56,101	3,777	59,878
2025	56,697	3,817	60,514
2026	57,213	3,851	61,064
2027	57,734	3,886	61,620
2028	58,259	3,922	62,181
2029	58,789	3,956	62,745
2030	59,339	3,994	63,333
2031	59,802	4,024	63,826
2032	60,268	4,054	64,322
2033	60,738	4,085	64,823
2034	61,212	4,115	65,327
2035	61,676	4,145	65,821
2036	62,095	4,173	66,268
2037	62,517	4,202	66,719
2038	62,942	4,230	67,172
2039	63,370	4,258	67,628
2040	63,799	4,287	68,086

(1) University of Florida, Bureau of Economic and Business Research, historical estimates and medium projections for 2040. Interim years were interpolated to smooth out annual population growth rates

(2) Source: Census 2000, Palm Beach County, Palm Beach County Tourist Development Council

(3) Sum of permanent population (Item 1) and seasonal population (Item 2)

**APPENDIX B**  
**Building and Land Values**  
**Supplemental Information for**  
**Parks & Recreation, Fire Rescue, Police**  
**Protection, and Public Facilities Impact Fees**

This Appendix provides a summary of building and land value estimates for fire rescue, police protection, parks and recreation, and public facilities impact fees. Information related to cost estimates for transportation is included in Appendix D.

### ***Building Values***

For the fire rescue, police protection and public facilities program areas, the following information was reviewed to estimate building values:

- Recent/on-going construction by the City of Palm Beach Gardens (if any);
- Estimates for any planned facilities;
- Insurance values of existing facilities;
- Data from other jurisdictions for recently completed facilities; and
- Discussions with and estimates provided by the City.

The following paragraphs provide a summary for each program area.

#### **Fire Protection & Rescue**

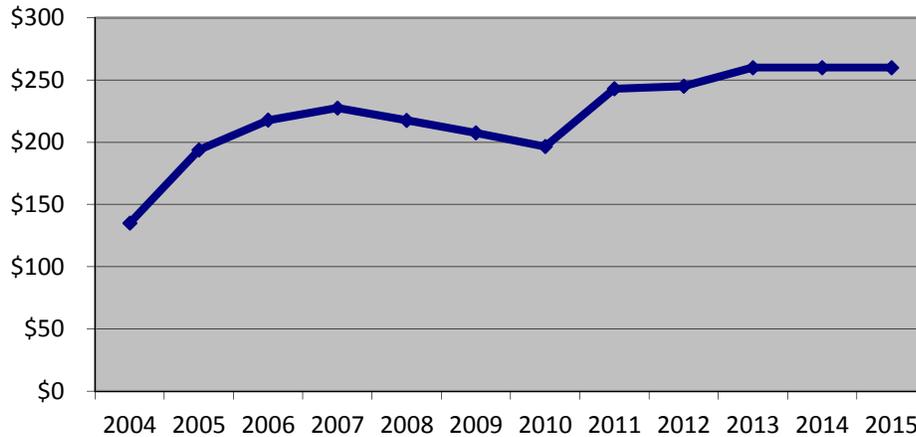
The City of Palm Beach Gardens has not built any new stations over the past five year; however, the City is in the process of renovating and expanding Station 2. This expansion is estimated to cost \$325 per square foot. The City uses a high quality design for its fire stations with appropriate site improvements and landscaping and fire stations are built to serve as hurricane shelters. These design characteristics suggest a higher cost compared to the statewide average.

The average insurance value of fire stations in Palm Beach Gardens is almost \$190 per square foot, including contents, but excluding site preparation and landscaping cost, permits, fees and other similar expenses. It should be noted that insurance values are considered to be a conservative estimate 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.

Tindale Oliver contacted several jurisdictions to obtain more recent cost information. The bids and estimates received since 2010 ranged from \$200 to \$300 per square foot. The following chart presents the building construction cost trends based on bids, estimates, and

other information obtained during the previous impact fee studies completed by Tindale Oliver. As presented, the variation in station costs is relatively minor, especially since 2011.

**Figure A-1**  
**Average Fire/EMS Station Construction Cost per Square Foot**



Source: Other Florida jurisdictions. It should be noted that although the figures in the chart represent the building construction cost in general, there may be situations where site preparation or other similar costs were included. The chart is included to provide a general understanding of construction cost trends for fire/EMS stations.

Discussion with architects suggested a building construction cost of \$250 per square foot to \$300 per square foot is a reasonable estimate.

Given this information, an average building value of \$325 per square foot is used for the current station value. This figure is representative of the local design characteristics and cost. Table B-1 provides a summary of information considered in determining this figure for station cost.

For the cost of Fire Station 1's Training Tower and the Generator Room, the insurance values of \$65 per square foot and \$85 per square foot for support facilities were used.

**Table B-1  
Fire Protection & Rescue Building Cost**

Source	Year	Cost per Square Foot
Estimated Cost to Renovate/Expand Station 2	2015	\$327
Other Florida Jurisdictions	2011-2015	\$200 to \$300
Insurance Values	2015	\$188
Estimates from Architects/Contractors	2015	\$250 - \$300
<b>Used in the Study</b>		
		<b>\$325</b>

Police Protection

The City of Palm Beach Gardens has one police station and an emergency operations center. The City is planning on building a substation, which is estimated at \$375 per square foot. The current insurance value of the existing buildings is \$210 per square foot. The City plans to build future substations as part of the fire stations. Given this information, a unit value of \$325 per square foot is used for the police stations, which is consistent with the estimated unit cost for fire stations.

Public Buildings

Public buildings tend to include a wide range of building types from office/administrative buildings to maintenance and support facilities with a basic structure. The City has not built any public facilities recently, but is getting ready to conduct a space needs analysis to determine future needs. To estimate the value of the public buildings owned by the City, insurance values of existing buildings were reviewed. As mentioned previously, insurance values are considered to be a conservative estimate. Based on cost figures observed in other jurisdictions, these values are adjusted to reflect the full cost of general public buildings in Palm Beach Gardens. This analysis suggested a unit cost of \$200 per square foot for the City Hall, \$150 per square foot for the Public Works office building and EVT building, and \$85 per square foot for maintenance and support facilities. These estimates resulted in an overall building cost of \$165 per square foot, which is within the range of cost figures observed in other Florida jurisdictions.

Recreational Facilities

For site preparation and recreation facility values in Palm Beach Gardens, estimates were provided by the City based on recent and current on-going projects. The City staff confirmed that these current projects are representative of the type/level of improvements found at the existing parks. As shown in Table II-5 of the report, these estimates were applied to the acreage of each park type.

## ***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)
- Value of current parcels as reported by the Palm Beach County Property Appraiser
- Value of vacant land by size and by land use
- Vacant land sales over the past three years by size and by land use
- Discussions with City representatives

### Fire Protection & Rescue

Typically, fire stations need to be located at or near major intersections and not in residential areas, for better access and minimum disturbance. As such, land value of these facilities tends to be higher. The following information was considered in estimating the land value for fire protection and rescue facilities:

- The average value of parcels where the current stations are located is \$143,000 per acre, as reported by the Palm Beach County Property Appraiser. It is important to note that the Property Appraiser data tends to have a lag especially in terms publicly owned land. Given this, a review of the values of parcels that surround the fire stations is conducted, which resulted in a range of \$215,000 per acre to \$380,000 per acre.
- Vacant land sales of similarly sized parcels over the past three years averaged over \$500,000 per acre.
- Similarly, the value of vacant land reported by the Property Appraiser for commercial parcels average approximately \$375,000 per acre.

Given this information, an average value of \$150,000 per acre is found to be a reasonable, if not conservative estimate for impact fee calculation purposes.

### Police Protection

Given that in the future, police substations are likely to co-locate with fire stations, the same unit value of \$150,000 per acre is used for police protection impact fee also.

## Public Buildings

Although public buildings needs to be located centrally for ease of access, there is some level of flexibility in terms of site selection and they can be located in residential areas. The following information was considered in estimating the land value for general public facilities:

- The average value of parcels where the current facilities are located is \$560,000 per acre, as reported by the Palm Beach County Property Appraiser.
- Vacant land sales of similarly sized parcels over the past three years averaged over \$575,000 per acre.
- Similarly, the value of vacant land reported by the Property Appraiser for residential parcels averages approximately \$570,000 per acre.

Given this information and with a consideration that land values in the western parts of the city tend to be lower, an average value of \$200,000 per acre is found to be a conservative estimate for impact fee calculation purposes.

## Parks

The following information is considered in estimating land values for parks facilities:

- As part of the 2011 Impact Fee Study, the City of Palm Beach Gardens retained services of an appraisal firm to appraise its neighborhood and community park land values. This analysis resulted in average land value of \$153,000 per acre.
- Per Palm Beach County Property Appraiser estimates, the just/market value of all property in the city increased by approximately 15 percent since 2011. Applying this percentage to the land value estimated in the 2011 Appraisal Report would result in a unit cost of \$173,000 per acre.
- Vacant land values and sales suggest land value of approximately \$500,000 or more per acre.
- Given this information, an average land value of \$170,000 per acre is used in the impact fee calculations, which is considered to a conservative estimate.

**APPENDIX C**  
**Transportation Impact Fee – Demand**  
**Component Calculations**

## Transportation Impact Fee: Demand Component

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

### *Interstate & Toll Facility Discount Factor*

Table C-1 presents the interstate and toll facility discount factor used in the calculation of the transportation impact fee. This variable is based on data from the Southeast Regional Planning Model, specifically the 2035 projected vehicle miles of travel, accounting for roadway improvements included in the 2035 Long Range Transportation Plan. It should be noted that discount factor excludes all external-to-external trips, which represent traffic that goes through the City of Palm Beach Gardens, but does not necessarily stop in the city. This traffic is excluded from the analysis since it does not come from development within the county. The I/T discount factor is used to reduce the VMT that the impact fee charges for each land use.

**Table C-1**  
**City of Palm Beach Gardens**  
**Interstate/Toll Facility Discount Factor**

Roadway	VMT (2035)	% VMT
I-95 & FL Turnpike (SR 19)	993,237	33.4%
Other Roads	1,984,552	66.6%
<b>Total (All Roads)</b>	<b>2,977,789</b>	<b>100.0%</b>
<b>Total (Interstate/Toll Roads)</b>	<b>993,237</b>	<b>33.4%</b>

Source: Southeast Regional Planning Model v6.5

### *Single Family Residential Trip Generation Rate Tiering*

As part of this study, the single family residential trip generation rate tiering was updated to reflect a three-tier analysis to ensure equity by the size of a home. To facilitate this, an analysis was completed on the comparative relationship between housing size and household travel behavior. This analysis utilized data from the 2009 National Household Travel Survey (NHTS) and the 2013 American Housing Survey (AHS) to examine overall trip-making characteristics of households in the United States.

Table C-2 presents the existing trip characteristics being utilized in the current adopted impact fee schedule for the single family (detached) land use. The 2009 NHTS database was used to assess average annual household vehicle miles of travel (VMT) for various annual household income levels. In addition, the 2013 AHS database was used to compare median annual family/household incomes with housing unit size. It is important to recognize that the use of the income variable in each of these databases is completed simply to provide a convenient linking mechanism between household VMT from the NHTS and housing unit size from the AHS.

**Table C-2  
Calculated Single Family Trip Characteristics**

Calculated Values Excluding Tiering	Trip Rate	Assessable Trip Length	Daily VMT	Ratio to Mean
Single Family (Detached)	7.81	6.62	51.70	1.00

Source: FL Studies for LUC 210, shown later in this appendix

The results of the NHTS and AHS analyses are included in Tables C-3 and C-4. First, the data shown in Table C-3 indicates that the average income in the U.S. for families/households living in housing units smaller than 1,500 square feet in size (\$44,243) is lower than the overall average income for the U.S. (\$56,993). In Table C-4, annual average household VMT was calculated from the NHTS database for a number of different income levels and ranges related to the resulting AHS income data in Table C-3.

**Table C-3  
Calculated Single Family Trip Characteristics**

2013 AHS Average Income Data by Housing Size	Annual Income <sup>(1)</sup>
Less than 1,500 sf	\$44,243
1,500 to 2,499 sf	\$66,398
2,500 sf or more	\$80,449
Average of All Houses	\$56,993

Source: 2013 American Household Survey

**Table C-4**  
**NHTS VMT Annual VMT by Income Category**

2009 NHTS Travel Data by Annual HH Income	Annual VMT/HH	Days	Daily VMT	Ratio to Mean	Normalized to 1.020
Average of \$44,243	19,856	365	54.40	0.847	0.782
Total (All Homes)	23,455	365	64.26	1.000	
Average of \$66,563	25,397	365	69.58	1.083	1.000
Average of \$80,449	28,461	365	77.98	1.214	1.121

Source: 2009 National Household Travel Survey Database, Federal Highway Administration

To calculate a corresponding trip rate for the new tiers it was necessary to rely on comparative ratios. As an example, consider the \$44,243 annual income category. First, it was determine that the average annual household VMT for this income level is 19,856 miles. This figure was then compared to the overall average annual VMT per household in the U.S. and normalized to the average of the \$56,993 (23,455 miles) category to derive a ratio of 0.782.

Next, the normalized ratio was applied to the daily VMT for the average single family housing unit size (less than 1,500 sf) to generate a daily VMT of 40.43 for the new tier, as shown in Table C-5. This daily VMT figure was then divided by the proposed assessable trip length of 6.62 miles to obtain a typical trip rate of 6.11 trips per day.

**Table C-5**  
**Trip Generation Rate by Single Family Land Use Tier**

Estimation of Trip Rate by Tier	Trip Rate <sup>(1)</sup>	Assessable Trip Length <sup>(2)</sup>	Daily VMT <sup>(3)</sup>	Ratio to Mean <sup>(4)</sup>
<b><i>Single Family (Detached)</i></b>				
Less than 1,500 sf	<b>6.11</b>	6.62	40.43	0.782
1,500 to 2,499 sf	<b>7.81</b>	6.62	51.70	1.000
2,500 sf or larger	<b>8.76</b>	6.62	57.96	1.121

- (1) Daily VMT (Item 3) divided by assessable trip length (Item 2) for each tiered single family land use category
- (2) Source: Table C-2
- (3) Ratio to the mean (Item 4) divided by the total daily VMT for the 1,500 to 2,499 sf tier for each tiered sf single family land use category
- (4) Source: Table C-4

Table C-6 illustrates the impact that the incorporation of the trip generation rate tiers for the single family (detached) land use have on the City’s calculated impact fee schedule.

**Table C-6  
Net Impact Fee by Single Family Land Use Tier**

<b>Impact of Tiering on Fee Schedule</b>	<b>Trip Rate<sup>(1)</sup></b>	<b>Assessable Trip Length</b>	<b>Daily VMT</b>	<b>Net Fee<sup>(2)</sup></b>
<b><i>Single Family (Detached)</i></b>				
Less than 1,500 sf	<b>6.11</b>	6.62	40.43	<b>\$1,398</b>
1,500 to 2,499 sf	<b>7.81</b>	6.62	51.70	<b>\$1,779</b>
2,500 sf or larger	<b>8.76</b>	6.62	57.96	<b>\$2,002</b>

(1) Source: Table C-5, Item 1

(2) Source: Appendix F, Table F-1

***Trip Length Adjustment Factor Analysis***

This variable is used to adjust the average trip length obtained from the Florida Studies Database when the trip lengths in a jurisdiction appear significantly different than the average trip length observed in other jurisdictions.

Using the Southeast Regional Planning Model, the average trip lengths for the City of Palm Beach Gardens were compared to other jurisdictions throughout Florida and it was determined that Palm Beach Gardens trip lengths for residential and non-residential land uses are consistent with the statewide averages.

Based on this analysis, no trip length adjustment factors were applied to the land uses in the City of Palm Beach Gardens transportation impact fee schedule.

Florida Studies Trip Characteristics Database

The Florida Studies Trip Characteristics Database includes over 200 studies on 40 different residential and non-residential land uses collected over the last 25 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 fees and the creation of land use plan category trip characteristics for communities throughout Florida and the U.S.

Tindale Oliver estimates trip generation rates for all land uses in a transportation impact fee schedule using data from studies in the Florida Studies Database and the Institute of Transportation Engineers' (ITE) *Trip Generation* reference report (9<sup>th</sup> edition). In instances, when both ITE *Trip Generation* reference report (9<sup>th</sup> 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, 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. Tindale Oliver 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.

**Mini-Warehouse (ITE LUC 151)**

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	107.0	-	-	-	1.45	-	-	-	-	Orange County
Orange Co, FL	89.6	-	-	-	1.23	-	-	-	-	Orange County
Orange Co, FL	84.7	-	-	-	1.39	-	-	-	-	Orange County
Orange Co, FL	93.0	-	-	-	1.51	-	-	-	-	Orange County
Orange Co, FL	77.0	-	-	-	2.18	-	-	-	-	Orange County
Total Size	451.3		5							
ITE	784.0		14							
Blended total	1,235.3									
<b>Average Trip Length: n/a</b>										
<b>Weighted Average Trip Length: n/a</b>										
Weighted Percent New Trip Average: -										
Weighted Average Trip Generation Rate: 1.53										
ITE Average Trip Generation Rate: 2.50										
<b>Blend of FL Studies and ITE Average Trip Generation Rate: 2.15</b>										

**Single-Family Detached Housing (ITE LUC 210)**

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	N/A	60.18	Sarasota County
Sarasota Co, FL	79	Jun-93	86	86	9.77	-	4.40	N/A	42.99	Sarasota County
Sarasota Co, FL	135	Jun-93	75	75	8.05	-	5.90	N/A	47.50	Sarasota County
Sarasota Co, FL	152	Jun-93	63	63	8.55	-	7.30	N/A	62.42	Sarasota County
Sarasota Co, FL	193	Jun-93	123	123	6.85	-	4.60	N/A	31.51	Sarasota County
Sarasota Co, FL	97	Jun-93	33	33	13.20	-	3.00	N/A	39.60	Sarasota County
Sarasota Co, FL	282	Jun-93	146	146	6.61	-	8.40	N/A	55.52	Sarasota County
Sarasota Co, FL	393	Jun-93	207	207	7.76	-	5.40	N/A	41.90	Sarasota County
Hernando Co, FL	76	May-96	148	148	10.01	9a-6p	4.85	N/A	48.55	Tindale-Oliver & Associates
Hernando Co, FL	128	May-96	205	205	8.17	9a-6p	6.03	N/A	49.27	Tindale-Oliver & Associates
Hernando Co, FL	232	May-96	182	182	7.24	9a-6p	5.04	N/A	36.49	Tindale-Oliver & Associates
Hernando Co, FL	301	May-96	264	264	8.93	9a-6p	3.28	N/A	29.29	Tindale-Oliver & Associates
Charlotte Co, FL	135	Oct-97	230	-	5.30	9a-5p	7.90	N/A	41.87	Tindale-Oliver & Associates
Charlotte Co, FL	142	Oct-97	245	-	5.20	9a-5p	4.10	N/A	21.32	Tindale-Oliver & Associates
Charlotte Co, FL	150	Oct-97	160	-	5.00	9a-5p	10.80	N/A	54.00	Tindale-Oliver & Associates
Charlotte Co, FL	215	Oct-97	158	-	7.60	9a-5p	4.60	N/A	34.96	Tindale-Oliver & Associates
Charlotte Co, FL	257	Oct-97	225	-	7.60	9a-5p	7.40	N/A	56.24	Tindale-Oliver & Associates
Charlotte Co, FL	345	Oct-97	161	-	7.00	9a-5p	6.60	N/A	46.20	Tindale-Oliver & Associates
Charlotte Co, FL	368	Oct-97	152	-	6.60	9a-5p	5.70	N/A	37.62	Tindale-Oliver & Associates
Charlotte Co, FL	383	Oct-97	516	-	8.40	9a-5p	5.00	N/A	42.00	Tindale-Oliver & Associates
Charlotte Co, FL	441	Oct-97	195	-	8.20	9a-5p	4.70	N/A	38.54	Tindale-Oliver & Associates
Charlotte Co, FL	1,169	Oct-97	348	-	6.10	9a-5p	8.00	N/A	48.80	Tindale-Oliver & Associates
Collier Co, FL	90	Dec-99	91	-	12.80	8a-6p	11.40	N/A	145.92	Tindale-Oliver & Associates
Collier Co, FL	400	Dec-99	389	-	7.80	8a-6p	6.40	N/A	49.92	Tindale-Oliver & Associates
Lake Co, FL	49	Apr-02	170	-	6.70	7a-6p	10.20	N/A	68.34	Tindale-Oliver & Associates
Lake Co, FL	52	Apr-02	212	-	10.00	7a-6p	7.60	N/A	76.00	Tindale-Oliver & Associates
Lake Co, FL	126	Apr-02	217	-	8.50	7a-6p	8.30	N/A	70.55	Tindale-Oliver & Associates
Pasco Co, FL	55	Apr-02	133	-	6.80	8a-6p	8.12	N/A	55.22	Tindale-Oliver & Associates
Pasco Co, FL	60	Apr-02	106	-	7.73	8a-6p	8.75	N/A	67.64	Tindale-Oliver & Associates
Pasco Co, FL	70	Apr-02	188	-	7.80	8a-6p	6.03	N/A	47.03	Tindale-Oliver & Associates
Pasco Co, FL	74	Apr-02	188	-	8.18	8a-6p	5.95	N/A	48.67	Tindale-Oliver & Associates
Pasco Co, FL	189	Apr-02	261	-	7.46	8a-6p	8.99	N/A	67.07	Tindale-Oliver & Associates
Marion Co, FL	102	Apr-02	167	-	8.02	7a-6p	5.10	N/A	40.90	Kimley-Horn & Associates
Marion Co, FL	105	Apr-02	169	-	7.23	7a-6p	7.22	N/A	52.20	Kimley-Horn & Associates
Marion Co, FL	124	Apr-02	170	-	6.04	7a-6p	7.29	N/A	44.03	Kimley-Horn & Associates
Marion Co, FL	132	Apr-02	171	-	7.87	7a-6p	7.00	N/A	55.09	Kimley-Horn & Associates
Marion Co, FL	133	Apr-02	209	-	8.04	7a-6p	4.92	N/A	39.56	Kimley-Horn & Associates
Citrus Co, FL	111	Oct-03	273	-	8.66	7a-6p	7.70	N/A	66.68	Tindale-Oliver & Associates
Citrus Co, FL	231	Oct-03	155	-	5.71	7a-6p	4.82	N/A	27.52	Tindale-Oliver & Associates
Citrus Co, FL	306	Oct-03	146	-	8.40	7a-6p	3.94	N/A	33.10	Tindale-Oliver & Associates
Citrus Co, FL	364	Oct-03	345	-	7.20	7a-6p	9.14	N/A	65.81	Tindale-Oliver & Associates
Citrus Co, FL	374	Oct-03	248	-	12.30	7a-6p	6.88	N/A	84.62	Tindale-Oliver & Associates
Lake Co, FL	42	Dec-06	122	-	11.26	-	5.56	N/A	62.61	Tindale-Oliver & Associates
Lake Co, FL	51	Dec-06	346	-	18.22	-	9.46	N/A	172.36	Tindale-Oliver & Associates
Lake Co, FL	59	Dec-06	144	-	12.07	-	10.79	N/A	130.24	Tindale-Oliver & Associates
Lake Co, FL	90	Dec-06	194	-	9.12	-	5.78	N/A	52.71	Tindale-Oliver & Associates
Lake Co, FL	239	Dec-06	385	-	7.58	-	8.93	N/A	67.69	Tindale-Oliver & Associates
Hernando Co, FL	232	Apr-07	516	-	8.02	7a-6p	8.16	N/A	65.44	Tindale-Oliver & Associates
Hernando Co, FL	95	Apr-07	256	-	8.08	7a-6p	5.88	N/A	47.51	Tindale-Oliver & Associates
Hernando Co, FL	90	Apr-07	338	-	7.13	7a-6p	5.86	N/A	41.78	Tindale-Oliver & Associates
Hernando Co, FL	58	Apr-07	153	-	6.16	7a-6p	8.39	N/A	51.68	Tindale-Oliver & Associates
Collier Co, FL	74	Mar-08	503	-	12.81	7a-6p	3.05	N/A	39.07	Tindale-Oliver & Associates
Collier Co, FL	97	Mar-08	512	-	8.78	7a-6p	11.29	N/A	99.13	Tindale-Oliver & Associates
Collier Co, FL	315	Mar-08	1,347	-	6.97	7a-6p	6.55	N/A	45.65	Tindale-Oliver & Associates
Collier Co, FL	42	Mar-08	314	-	9.55	7a-6p	10.98	N/A	104.86	Tindale-Oliver & Associates
Total Size	10,380		55	13,130						
<b>Average Trip Length: 6.83</b>										
<b>Weighted Average Trip Length: 6.62</b>										
Weighted Average Trip Generation Rate: 7.81										
ITE Average Trip Generation Rate: 9.52										

**Multi-Family/Apartment and Residential Condo/Townhouse (ITE LUC 220/230)**

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	N/A	30.06	Sarasota County
Sarasota Co, FL	243	Jun-93	36	36	5.84	-	-	N/A	-	Sarasota County
Marion Co, FL	214	Apr-02	175	175	6.84	-	4.61	N/A	31.53	Kimley-Horn & Associates
Marion Co, FL	240	Apr-02	174	174	6.96	-	3.43	N/A	23.87	Kimley-Horn & Associates
Marion Co, FL	288	Apr-02	175	175	5.66	-	5.55	N/A	31.41	Kimley-Horn & Associates
Marion Co, FL	480	Apr-02	175	175	5.73	-	6.88	N/A	39.42	Kimley-Horn & Associates
Marion Co, FL	500	Apr-02	170	170	5.46	-	5.94	N/A	32.43	Kimley-Horn & Associates
Lake Co, FL	250	Dec-06	135	135	6.71	-	5.33	N/A	35.76	Tindale-Oliver & Associates
Lake Co, FL	157	Dec-06	265	265	13.97	-	2.62	N/A	36.60	Tindale-Oliver & Associates
Lake Co, FL	169	Dec-06	212	-	8.09	-	6.00	N/A	48.54	Tindale-Oliver & Associates
Lake Co, FL	226	Dec-06	301	-	6.74	-	2.17	N/A	14.63	Tindale-Oliver & Associates
Hernando Co, FL	312	Apr-07	456	-	4.09	-	5.95	N/A	24.34	Tindale-Oliver & Associates
Hernando Co, FL	176	Apr-07	332	-	5.38	-	5.24	N/A	28.19	Tindale-Oliver & Associates
Hernando Co, FL	31	May-96	31	31	6.12	9a-6p	4.98	N/A	30.48	Tindale-Oliver & Associates
Hernando Co, FL	128	May-96	128	128	6.47	9a-6p	5.18	N/A	33.51	Tindale-Oliver & Associates
Pasco Co, FL	229	Apr-02	198	198	4.77	9a-6p	-	N/A	-	Tindale-Oliver & Associates
Pasco Co, FL	248	Apr-02	353	353	4.24	9a-6p	3.53	N/A	14.97	Tindale-Oliver & Associates

Total Size	4,103						<b>Average Trip Length:</b>	<b>4.84</b>
Total Size (TL)	3,631						<b>Weighted Average Trip Length:</b>	<b>5.10</b>

Total Size	3,467	13					Weighted Average Trip Generation Rate:	6.31
ITE	18,480	88					ITE Average Trip Generation Rate:	6.65
Blended total	21,947						<b>Blend of FL Studies and ITE Average Trip Generation Rate:</b>	<b>6.60</b>

LUC 230 Studies are highlighted				LUC 230: Condo/Townhouse						
Total Size	636	4					Weighted Average Trip Generation Rate:	4.97		
ITE	10,024	56					ITE Average Trip Generation Rate:	5.81		
Blended total	10,660						<b>Blend of FL Studies and ITE Average Trip Generation Rate:</b>	<b>5.76</b>		
Blended total (220/230)	32,607						<b>Blend of FL Studies and ITE Average Trip Generation Rate (220/230):</b>	<b>6.32</b>		

**Mobile Home Park (ITE LUC 240)**

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	N/A	12.37	Tindale-Oliver & Associates
Marion Co, FL	82	Jul-91	58	58	10.80	24hr.	3.72	N/A	40.18	Tindale-Oliver & Associates
Marion Co, FL	137	Jul-91	22	22	3.10	24hr.	4.88	N/A	15.13	Tindale-Oliver & Associates
Marion Co, FL	188	Apr-02	147	-	3.51	24hr.	5.48	N/A	19.23	Kimley-Horn & Associates
Marion Co, FL	227	Apr-02	173	-	2.76	24hr.	8.80	N/A	24.29	Kimley-Horn & Associates
Sarasota Co, FL	235	Jun-93	100	100	3.51	-	5.10	N/A	17.90	Sarasota County
Marion Co, FL	297	Apr-02	175	-	4.78	24hr.	4.76	N/A	22.75	Kimley-Horn & Associates
Sarasota Co, FL	996	Jun-93	181	181	4.19	-	4.40	N/A	18.44	Sarasota County
Hernando Co, FL	1,892	May-96	425	425	4.13	9a-6p	4.13	N/A	17.06	Tindale-Oliver & Associates

Total Size	4,121	9	1,303				<b>Average Trip Length:</b>	<b>4.84</b>
							<b>Weighted Average Trip Length:</b>	<b>4.60</b>

Weighted Average Trip Generation Rate: 4.17

**Congregate Care Facility (ITE LUC 253)**

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 & Associates
Palm Harbor, FL	200	Oct-89	58	40	-	9am-5pm	3.40	69.0	-	Tindale-Oliver & Associates

Total Size	272	2	83				<b>Average Trip Length:</b>	<b>2.80</b>
ITE	388	2					<b>Weighted Average Trip Length:</b>	<b>3.08</b>

Blended total	660						Weighted Percent New Trip Average:	71.6
	460						Weighted Average Trip Generation Rate:	3.50
							ITE Average Trip Generation Rate:	2.02
							<b>Blend of FL Studies and ITE Average Trip Generation Rate:</b>	<b>2.25</b>

### Hotel (ITE LUC 310)

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 & Associates
Pinellas Co, FL	114	Oct-89	30	14	7.30	12-7p	6.20	47.0	21.27	Tindale-Oliver & Associates
Orange Co, FL	70	-	-	-	1.85	-	-	-	-	Orange County
Orange Co, FL	211	-	-	-	2.23	-	-	-	-	Orange County
Orange Co, FL	112	-	-	-	2.78	-	-	-	-	Orange County
Orange Co, FL	1,495	-	-	-	3.50	-	-	-	-	Orange County
Orange Co, FL	123	-	-	-	3.70	-	-	-	-	Orange County
Orange Co, FL	130	-	-	-	4.29	-	-	-	-	Orange County
Orange Co, FL	1,499	-	-	-	4.69	-	-	-	-	Orange County
Orange Co, FL	190	-	-	-	4.71	-	-	-	-	Orange County
Orange Co, FL	123	-	-	-	4.81	-	-	-	-	Orange County
Orange Co, FL	105	-	-	-	5.25	-	-	-	-	Orange County
Orange Co, FL	120	-	-	-	5.27	-	-	-	-	Orange County
Orange Co, FL	1,584	-	-	-	5.88	-	-	-	-	Orange County
Orange Co, FL	128	-	-	-	6.10	-	-	-	-	Orange County
Orange Co, FL	174	-	-	-	7.03	-	-	-	-	Orange County
Orange Co, FL	144	-	-	-	7.32	-	-	-	-	Orange County
Orange Co, FL	98	-	-	-	7.32	-	-	-	-	Orange County
Orange Co, FL	106	-	-	-	7.34	-	-	-	-	Orange County
Orange Co, FL	100	-	-	-	7.37	-	-	-	-	Orange County
Orange Co, FL	144	-	-	-	7.66	-	-	-	-	Orange County

Total Size	6,944	21	164	<b>Average Trip Length:</b>	<b>6.25</b>
ITE	4,760	10		<b>Weighted Average Trip Length:</b>	<b>6.26</b>
Blended total	11,704			Weighted Percent New Trip Average:	66.3
				Weighted Average Trip Generation Rate:	5.12
				ITE Average Trip Generation Rate:	8.17
				<b>Blend of FL Studies and ITE Average Trip Generation Rate:</b>	<b>6.36</b>

### Movie Theater with Matinee (ITE LUC 444)

Location	Size (Screens)	Date	Total # Interviews	# Trip Length Interviews	Trip Gen Rate	Time Period	Trip Length	Percent New Trips	VMT	Source
Pinellas Co, FL	8	Oct-89	151	116	113.10	2p-8p	2.70	77.0	235.13	Tindale-Oliver & Associates
Pinellas Co, FL	12	Sep-89	122	116	63.40	2p-8p	1.90	95.0	114.44	Tindale-Oliver & Associates

Total Size	20		273	<b>Average Trip Length:</b>	<b>2.30</b>
ITE	10 estimated			<b>Weighted Average Trip Length:</b>	<b>2.22</b>
	30			Weighted Percent New Trip Average:	87.8

### Health Club (ITE LUC 492)

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	33	31	-	-	-	94.0	-	Kimley-Horn & Associates

Total Size			33	<b>Average Trip Length:</b>	<b>n/a</b>
ITE	15	1		Percent New Trip Average:	94.0

### Day Care Center (ITE LUC 565)

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 & Associates
Pinellas Co, FL	10.0	Sep-89	179	134	66.99	7a-6p	2.10	75.0	105.51	Tindale-Oliver & Associates
Tampa, FL	-	Mar-86	28	25	-	-	2.60	89.0	-	Kimley-Horn & Associates

Total Size	15.6	2	301	<b>Average Trip Length:</b>	<b>2.20</b>
ITE	35.0	7		<b>Weighted Average Trip Length:</b>	<b>2.03</b>
Blended total	50.6			Weighted Percent New Trip Average:	73.2
				Weighted Average Trip Generation Rate:	66.99
				ITE Average Trip Generation Rate:	74.06
				<b>Blend of FL Studies and ITE Average Trip Generation Rate:</b>	<b>71.88</b>

### Nursing Home (ITE LUC 620)

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 & Associates

Total Size	120	1	74	<b>Average Trip Length:</b>	<b>2.59</b>
ITE	714	6		<b>Weighted Average Trip Length:</b>	<b>2.59</b>
Blended total	834			Weighted Percent New Trip Average:	89.0

### General Office Building (ITE LUC 710)

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 & Associates
St. Petersburg, FL	262.8	Sep-89	291	274	-	7a-5p	3.40	94.0	-	Tindale-Oliver & Associates

Total Size	742.1	5	736	<b>Average Trip Length:</b>	<b>6.46</b>
ITE	15,522.0	78		<b>Weighted Average Trip Length:</b>	<b>5.15</b>
				Weighted Percent New Trip Average:	92.3

**Medical-Dental Office Building (ITE LUC 720): 10,000 sf or Less**

Site	Size (1,000 sf)	Tues., Jan 11		Wedn., Jan 12		Thur., Jan 13		TOTAL		AVERAGE		AVERAGE (per 1,000 sf)		
		IN	OUT	IN	OUT	IN	OUT	IN	OUT	IN	OUT	IN	OUT	TOTAL
Collier Co, FL - Site 1	2.100	35	35	22	22	13	13	70	70	23.33	23.33	11.11	11.11	22.22
Collier Co, FL - Site 2	3.000	40	40	52	52	53	53	145	145	48.33	48.33	16.11	16.11	32.22
Collier Co, FL - Site 3	2.000	28	28	19	21	24	26	71	75	23.67	25.00	11.84	12.50	24.34
Collier Co, FL - Site 4	1.000	30	30	52	52	57	57	139	139	46.33	46.33	46.33	46.33	92.66
Collier Co, FL - Site 5	3.024	31	32	43	43	24	24	98	99	32.67	33.00	10.80	10.91	21.71
Collier Co, FL - Site 6	1.860	22	24	19	17	11	11	52	52	17.33	17.33	9.32	9.32	18.64
<b>Average</b>												<b>17.59</b>	<b>17.71</b>	<b>35.30</b>
<b>Average (excluding Site 4)</b>												<b>11.84</b>	<b>11.99</b>	<b>23.83</b>

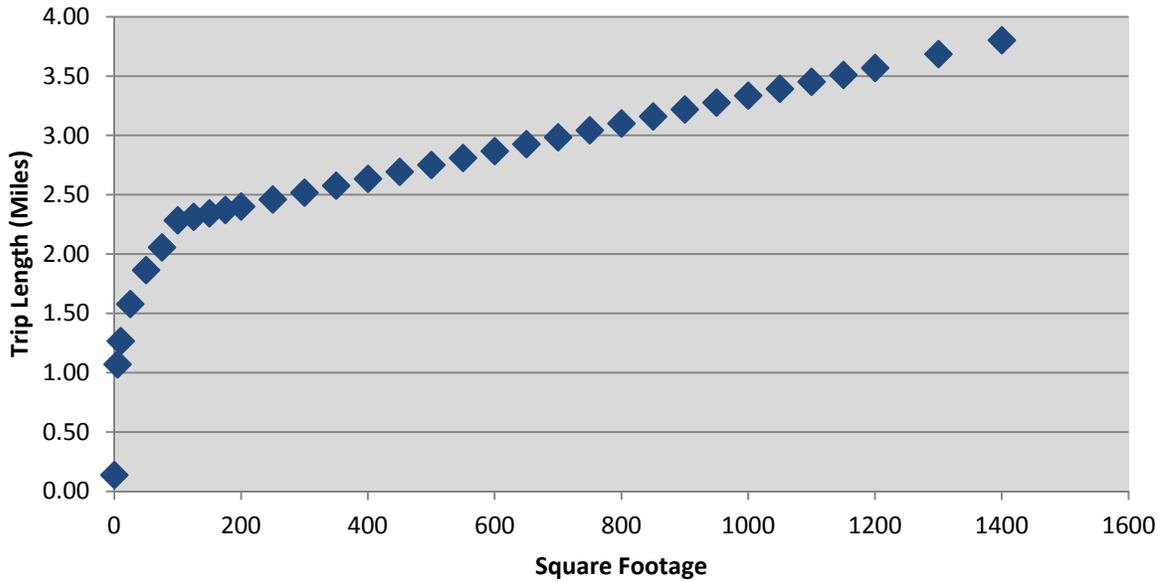
**Medical-Dental Office Building (ITE LUC 720)**

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	33	26	-	-	6.00	79.0	-	Kimley-Horn & Associates	
Palm Harbor, FL	14.6	Oct-89	104	76	33.98	9a-5p	6.30	73.0	156.27	Tindale-Oliver & Associates	
St. Petersburg, FL	-	Nov-89	34	30	57.20	9a-4p	1.20	88.0	-	Tindale-Oliver & Associates	
Hernando Co, FL	58.4	May-96	390	349	28.52	9a-6p	6.47	89.5	165.09	Tindale-Oliver & Associates	
Hernando Co, FL	28.0	May-96	202	189	49.75	9a-6p	6.06	93.8	282.64	Tindale-Oliver & Associates	
Charlotte Co, FL	11.0	Oct-97	-	186	49.50	9a-5p	4.60	92.1	209.67	Tindale-Oliver & Associates	
Charlotte Co, FL	28.0	Oct-97	-	186	31.00	9a-5p	3.60	81.6	91.04	Tindale-Oliver & Associates	
Charlotte Co, FL	30.4	Oct-97	-	324	39.80	9a-5p	3.30	83.5	109.68	Tindale-Oliver & Associates	
Citrus Co, FL	38.9	Oct-03	-	168	32.26	8-6p	6.80	97.1	213.03	Tindale-Oliver & Associates	
Citrus Co, FL	10.0	Nov-03	-	340	40.56	8-630p	6.20	92.4	232.33	Tindale-Oliver & Associates	
Citrus Co, FL	5.3	Dec-03	-	20	29.36	8-5p	5.25	95.2	146.78	Tindale-Oliver & Associates	
Orange Co, FL	50.6	-	-	-	26.72	-	-	-	-	Orange County	
Orange Co, FL	23.5	-	-	-	16.58	-	-	-	-	Orange County	
Total Size	298.6	11	763	<b>Average Trip Length: 5.07</b>							
ITE	450.0	10		<b>Weighted Average Trip Length: 5.55</b>							
Blended total	748.6			Weighted Percent New Trip Average:		88.9					
										Average Trip Generation Rate:	32.59
										ITE Average Trip Generation Rate:	36.13
										<b>Blend of FL Studies and ITE Average Trip Generation Rate:</b>	<b>34.72</b>

**Shopping Center (ITE LUC 820)**

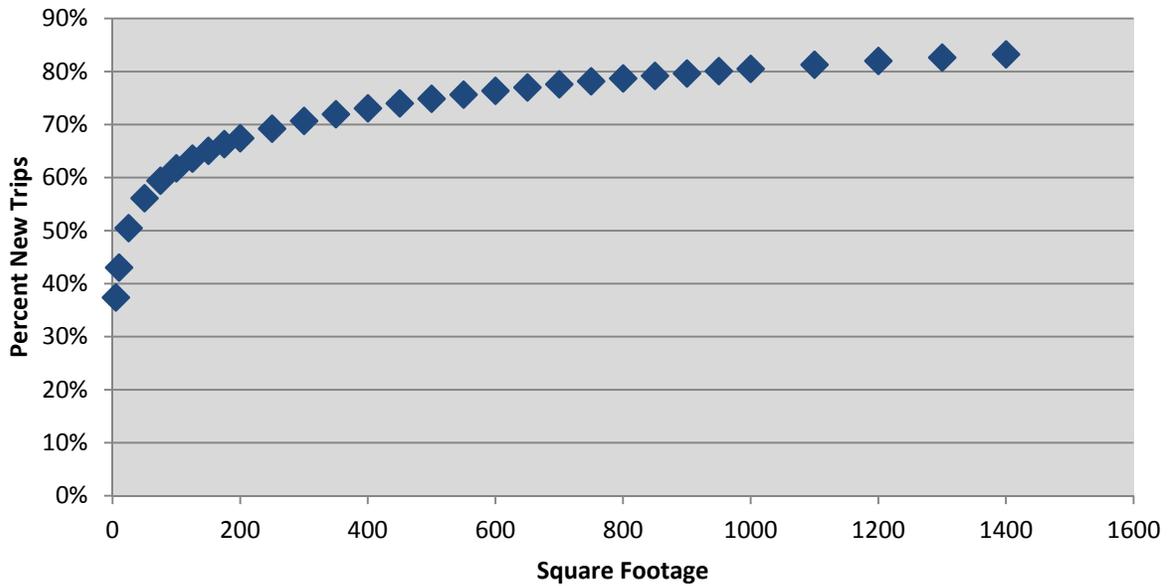
Location	Size (1,000 sf)	Date	Total # Interviews	# Trip Length Interviews	Trip Gen Rate	Time Period	Trip Length	Percent New Trips	VMT	Source
Tampa, FL	-	Mar-86	527	348	-	-	-	66.0	-	Kimley-Horn & Associates
Tampa, FL	-	Mar-86	170	-	-	-	1.70	-	-	Kimley-Horn & Associates
Tampa, FL	-	Mar-86	354	269	-	-	-	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 & Associates
St. Petersburg, FL	132.3	Sep-89	400	368	77.00	10a-7p	1.80	92.0	127.51	Tindale-Oliver & Associates
Largo, FL	425.0	Aug-89	160	120	26.73	10a-6p	2.30	75.0	46.11	Tindale-Oliver & Associates
Dunedin, FL	80.5	Sep-89	276	210	81.48	9a-5p	1.40	76.0	86.69	Tindale-Oliver & Associates
Pineellas Park, FL	696.0	Sep-89	485	388	-	9a-6p	3.20	80.0	-	Tindale-Oliver & Associates
Seminole, FL	425.0	Oct-89	674	586	-	-	-	87.0	-	Tindale-Oliver & Associates
Hillsborough Co, FL	134.0	Jul-91	-	-	-	-	1.30	74.0	-	Tindale-Oliver & Associates
Hillsborough Co, FL	151.0	Jul-91	-	-	-	-	1.30	73.0	-	Tindale-Oliver & Associates
Collier Co, FL	-	Aug-91	68	64	-	-	3.33	94.1	-	Tindale-Oliver & Associates
Collier Co, FL	-	Aug-91	208	154	-	-	2.64	74.0	-	Tindale-Oliver & Associates
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.
Gwinnett Co, GA	99.1	Dec-92	-	-	46.00	-	3.20	70.0	103.04	Street Smarts
Gwinnett Co, GA	314.7	Dec-92	-	-	27.00	-	8.50	84.0	192.78	Street Smarts
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 & Associates
Charlotte Co, FL	88.0	Oct-97	-	-	73.50	9a-5p	1.80	57.1	75.56	Tindale-Oliver & Associates
Charlotte Co, FL	191.9	Oct-97	-	-	72.00	9a-5p	2.40	50.9	87.97	Tindale-Oliver & Associates
Charlotte Co, FL	51.3	Oct-97	-	-	43.00	9a-5p	2.70	51.8	60.08	Tindale-Oliver & Associates
Lake Co, FL	67.8	Apr-01	246	177	102.60	-	3.40	71.2	248.37	Tindale-Oliver & Associates
Lake Co, FL	72.3	Apr-01	444	376	65.30	-	4.50	59.0	173.37	Tindale-Oliver & Associates
Pasco Co, FL	65.6	Apr-02	222	-	145.64	9a-5p	1.46	46.9	99.62	Tindale-Oliver & Associates
Pasco Co, FL	75.8	Apr-02	134	-	38.23	9a-5p	2.36	58.2	52.52	Tindale-Oliver & Associates
Citrus Co, FL	185.0	Oct-03	-	784	55.84	8a-6p	2.40	88.1	118.05	Tindale-Oliver & Associates
Citrus Co, FL	91.3	Nov-03	-	390	54.50	8a-6p	1.60	88.0	76.77	Tindale-Oliver & Associates
Bozeman, MT	104.3	Dec-06	359	359	46.96	-	3.35	49.0	77.08	Tindale-Oliver & Associates
Bozeman, MT	159.9	Dec-06	502	502	56.49	-	1.56	54.0	47.59	Tindale-Oliver & Associates
Bozeman, MT	35.9	Dec-06	329	329	69.30	-	1.39	74.0	71.28	Tindale-Oliver & Associates
Total Size	5,757.5		7,536	<b>Average Trip Length: n/a</b>						
				<b>Weighted Average Trip Length: n/a</b>						

**Figure C-1**  
**Shopping Center (LUC 820) – Florida Curve Trip Length Regression**



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

**Figure C-2**  
**Shopping Center (LUC 820) – Florida Curve Percent New Trips Regression**



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

**New Car Sales (ITE LUC 841)**

Location	Size (1,000 sf)	Date	Total # Interviews	# Trip Length Interviews	Trip Gen Rate	Time Period	Trip Length	Percent New Trips	VMT	Source	
St.Petersburg, FL	43.0	Oct-89	152	120	-	9a-5p	4.70	79.0	-	Tindale-Oliver & Associates	
Clearwater, FL	43.0	Oct-89	136	106	29.40	9a-5p	4.50	78.0	103.19	Tindale-Oliver & Associates	
Orange Co, FL	116.7	-	-	-	22.18	-	-	-	-	Orange County	
Orange Co, FL	99.8	-	-	-	13.45	-	-	-	-	Orange County	
Orange Co, FL	39.1	-	-	-	10.48	-	-	-	-	Orange County	
Orange Co, FL	66.3	-	-	-	28.50	-	-	-	-	Orange County	
Orange Co, FL	46.7	-	-	-	40.34	-	-	-	-	Orange County	
Orange Co, FL	34.4	-	-	-	23.45	-	-	-	-	Orange County	
Orange Co, FL	13.8	-	-	-	35.75	-	-	-	-	Orange County	
Total Size	459.7		8	288							
ITE	570.0		15								
Blended total	1,029.7										
								<b>Average Trip Length:</b>	<b>4.60</b>		
								<b>Weighted Average Trip Length:</b>	<b>4.60</b>		

Weighted Percent New Trip Average: 78.5  
 Average Trip Generation Rate: 23.22  
 ITE Average Trip Generation Rate: 32.30  
**Blend of FL Studies and ITE Average Trip Generation Rate: 28.25**

**Convenience Store w/Gas Pumps (ITE LUC 853)**

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	72	-	-	-	2.00	-	-	Kimley-Horn & Associates	
Marion Co, FL	1.1	Jun-91	77	20	544.80	24hr.	0.89	26.0	126.07	Tindale-Oliver & Associates	
Marion Co, FL	2.1	Jun-91	66	24	997.60	24hr.	1.67	36.4	606.42	Tindale-Oliver & Associates	
Marion Co, FL	4.4	Jun-91	85	25	486.70	48hrs.	1.06	29.4	151.68	Tindale-Oliver & Associates	
Collier Co, FL	-	Aug-91	96	38	-	-	1.19	39.6	-	Tindale-Oliver & Associates	
Collier Co, FL	-	Aug-91	78	16	-	-	1.06	20.5	-	Tindale-Oliver & Associates	
Tampa, FL	2.3	10/13-15/92	239	74	-	24hr.	1.06	31.1	-	Tindale-Oliver & Associates	
Ellenton, FL	3.3	10/20-22/92	124	44	-	24hr.	0.96	35.3	-	Tindale-Oliver & Associates	
Tampa, FL	3.8	11/10-12/92	142	23	-	24hr.	3.13	16.4	-	Tindale-Oliver & Associates	
Marion Co, FL	2.5	Apr-02	87	-	719.79	24hr.	1.62	32.8	322.19	Kimley-Horn & Associates	
Marion Co, FL	2.5	Apr-02	23	-	610.46	24hr.	1.77	11.7	126.61	Kimley-Horn & Associates	
Marion Co, FL	3.0	Apr-02	59	-	606.02	24hr.	0.83	32.6	195.00	Kimley-Horn & Associates	
Total Size	25.1		9	1,148							
ITE	30.0		10								
Blended Total	55.1										
	45.6		15.6								
								<b>Average Trip Length:</b>	<b>1.44</b>		
								<b>Weighted Average Trip Length:</b>	<b>1.51</b>		

Weighted Percent New Trip Average: 27.7  
 Average Trip Generation Rate: 639.68  
 ITE Average Trip Generation Rate: 845.60  
**Blend of FL Studies and ITE Average Trip Generation Rate: 775.14**

**Pharmacy/Drugstore w/Drive-Thru (ITE LUC 881)**

Location	Size (1,000 sf)	Date	Total # Interviews	# Trip Length Interviews	Trip Gen Rate	Time Period	Trip Length	Percent New Trips	VMT	Source	
Pasco Co, FL	11.1	Apr-02	138	38	88.97	-	2.05	27.5	50.23	Tindale-Oliver & Associates	
Pasco Co, FL	12.0	Apr-02	212	90	122.16	-	2.04	42.5	105.79	Tindale-Oliver & Associates	
Pasco Co, FL	15.1	Apr-02	1192	54	97.96	-	2.13	28.1	58.69	Tindale-Oliver & Associates	
Total Size	38.2		3	1,542							
ITE	130.0		10								
Blended total	168.2										
								<b>Average Trip Length:</b>	<b>2.07</b>		
								<b>Weighted Average Trip Length:</b>	<b>2.08</b>		

Weighted Percent New Trip Average: 32.5  
 Average Trip Generation Rate: 103.03  
 ITE Average Trip Generation Rate: 96.91  
**Blend of FL Studies and ITE Average Trip Generation Rate: 98.28**

**Furniture Store (ITE LUC 890)**

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	15.0	7/28-30/92	64	34	-	-	4.63	52.5	-	Tindale-Oliver & Associates	
Tampa, FL	16.9	Jul-92	68	39	-	-	7.38	55.7	-	Tindale-Oliver & Associates	
Total Size	31.9		2	132							
ITE	897.0		13								
								<b>Average Trip Length:</b>	<b>6.01</b>		
								<b>Weighted Average Trip Length:</b>	<b>6.09</b>		

Weighted Percent New Trip Average: 54.2  
 ITE Average Trip Generation Rate: 5.06

**Drive-In Bank (ITE LUC 912)**

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	77	-	-	-	2.40	-	-	Kimley-Horn & Associates
Tampa, FL	-	Mar-86	211	-	-	-	-	54.0	-	Kimley-Horn & Associates
Clearwater, FL	0.4	Aug-89	113	52	-	9a-6p	5.20	46.0	-	Tindale-Oliver & Associates
Largo, FL	2.0	Sep-89	129	94	-	-	1.60	73.0	-	Tindale-Oliver & Associates
Seminole, FL	4.5	Oct-89	-	-	-	-	-	-	-	Tindale-Oliver & Associates
Marion Co, FL	2.3	Jun-91	69	29	-	24hr.	1.33	42.0	-	Tindale-Oliver & Associates
Marion Co, FL	3.1	Jun-91	47	32	-	24hr.	1.75	68.1	-	Tindale-Oliver & Associates
Marion Co, FL	2.5	Jul-91	57	26	-	48hrs.	2.70	45.6	-	Tindale-Oliver & Associates
Collier Co, FL	-	Aug-91	162	96	-	24hr.	0.88	59.3	-	Tindale-Oliver & Associates
Collier Co, FL	-	Aug-91	116	54	-	-	1.58	46.6	-	Tindale-Oliver & Associates
Collier Co, FL	-	Aug-91	142	68	-	-	2.08	47.9	-	Tindale-Oliver & Associates
Hernando Co, FL	5.4	May-96	164	41	-	9a-6p	2.77	24.7	-	Tindale-Oliver & Associates
Marion Co, FL	2.4	Apr-02	70	-	-	24hr.	3.55	54.6	-	Kimley-Horn & Associates
Marion Co, FL	2.7	May-02	50	-	246.66	24hr.	2.66	40.5	265.44	Kimley-Horn & Associates

Total Size	25.2	9	1,407	<b>Average Trip Length:</b>	<b>2.38</b>
ITE	21.0	7		<b>Weighted Average Trip Length:</b>	<b>2.46</b>
Blended total	46.2			Weighted Percent New Trip Average:	46.2
	23.7			Weighted Average Trip Generation Rate:	246.66
				ITE Average Trip Generation Rate:	148.15
				<b>Blend of FL Studies and ITE Average Trip Generation Rate:</b>	<b>159.34</b>

**Quality Restaurant (ITE LUC 931)**

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	76	62	-	-	2.10	-	-	Kimley-Horn & Associates
St. Petersburg, FL	7.5	Oct-89	177	154	-	11a-2p/4-8p	3.50	87.0	-	Tindale-Oliver & Associates
Clearwater, FL	8.0	Oct-89	60	40	110.63	10a-2p/5-9p	2.80	67.0	207.54	Tindale-Oliver & Associates

Total Size	15.5	2	313	<b>Average Trip Length:</b>	<b>2.80</b>
ITE	135.0	15		<b>Weighted Average Trip Length:</b>	<b>3.14</b>
Blended total	150.5			Weighted Percent New Trip Average:	76.7
	143.0			Weighted Average Trip Generation Rate:	110.63
				ITE Average Trip Generation Rate:	89.95
				<b>Blend of FL Studies and ITE Average Trip Generation Rate:</b>	<b>91.10</b>

**High-Turnover Restaurant (ITE LUC 932)**

Location	Size (1,000 sf)	Date	Total # Interviews	# Trip Length Interviews	Trip Gen Rate	Time Period	Trip Length	Percent New Trips	VMT	Source
Hernando Co, FL	6.2	May-96	242	175	187.51	9a-6p	2.76	72.5	375.00	Tindale-Oliver & Associates
Hernando Co, FL	8.2	May-96	154	93	102.71	9a-6p	4.15	60.2	256.43	Tindale-Oliver & Associates
St. Petersburg, FL	5.0	Oct-89	74	68	132.60	1130-7p	2.00	92.0	243.98	Tindale-Oliver & Associates
Kenneth City, FL	5.2	Oct-89	236	176	127.88	4p-730p	2.30	75.0	220.59	Tindale-Oliver & Associates
Pasco Co, FL	5.2	Apr-02	114	88	82.47	9a-6p	3.72	77.2	236.81	Tindale-Oliver & Associates
Pasco Co, FL	5.8	Apr-02	182	102	116.97	9a-6p	3.49	56.0	228.77	Tindale-Oliver & Associates
Orange Co, FL	8.9	-	-	-	52.69	-	-	-	-	Orange County
Orange Co, FL	11.3	-	-	-	62.12	-	-	-	-	Orange County
Orange Co, FL	6.7	-	-	-	82.58	-	-	-	-	Orange County
Orange Co, FL	11.4	-	-	-	91.67	-	-	-	-	Orange County
Orange Co, FL	11.3	-	-	-	95.33	-	-	-	-	Orange County
Orange Co, FL	7.2	-	-	-	98.06	-	-	-	-	Orange County
Orange Co, FL	5.5	-	-	-	100.18	-	-	-	-	Orange County
Orange Co, FL	9.7	-	-	-	105.84	-	-	-	-	Orange County
Orange Co, FL	4.6	-	-	-	129.23	-	-	-	-	Orange County
Orange Co, FL	7.0	-	-	-	126.40	-	-	-	-	Orange County
Orange Co, FL	9.7	-	-	-	132.32	-	-	-	-	Orange County
Orange Co, FL	5.0	-	-	-	135.68	-	-	-	-	Orange County
Orange Co, FL	5.6	-	-	-	145.59	-	-	-	-	Orange County
Orange Co, FL	7.4	-	-	-	147.44	-	-	-	-	Orange County
Orange Co, FL	5.9	-	-	-	147.74	-	-	-	-	Orange County

Total Size	152.8	21	1,102	<b>Average Trip Length:</b>	<b>3.07</b>
ITE	98.0	14		<b>Weighted Average Trip Length:</b>	<b>3.17</b>
Blended total	250.8			Weighted Percent New Trip Average:	70.8
				Weighted Average Trip Generation Rate:	109.84
				ITE Average Trip Generation Rate:	127.15
				<b>Blend of FL Studies and ITE Average Trip Generation Rate:</b>	<b>116.60</b>

**Fast Food Restaurant w/Drive Thru (ITE LUC 934)**

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	61	-	-	-	2.70	-	-	Kimley-Horn & Associates
Tampa, FL	-	Mar-86	306	-	-	-	-	65.0	-	Kimley-Horn & Associates
Pinellas Co, FL	2.20	Aug-89	81	48	502.80	11a-2p	1.70	59.0	504.31	Tindale-Oliver & Associates
Pinellas Co, FL	4.30	Oct-89	456	260	660.40	1 day	2.30	57.0	865.78	Tindale-Oliver & Associates
Tarpon Springs, FL	-	Oct-89	233	114	-	7a-7p	3.60	49.0	-	Tindale-Oliver & Associates
Marion Co, FL	1.60	Jun-91	60	32	962.50	48hrs.	0.91	53.3	466.84	Tindale-Oliver & Associates
Marion Co, FL	4.00	Jun-91	75	46	625.00	48hrs.	1.54	61.3	590.01	Tindale-Oliver & Associates
Collier Co, FL	-	Aug-91	66	44	-	-	1.91	66.7	-	Tindale-Oliver & Associates
Collier Co, FL	-	Aug-91	118	40	-	-	1.17	33.9	-	Tindale-Oliver & Associates
Hernando Co, FL	5.43	May-96	136	82	311.83	9a-6p	1.68	60.2	315.27	Tindale-Oliver & Associates
Hernando Co, FL	3.13	May-96	168	82	547.34	9a-6p	1.59	48.8	425.04	Tindale-Oliver & Associates
Lake Co, FL	2.20	Apr-01	376	252	934.30	-	2.50	74.6	1742.47	Tindale-Oliver & Associates
Lake Co, FL	3.20	Apr-01	171	182	654.90	-	4.10	47.8	-	Tindale-Oliver & Associates
Lake Co, FL	3.80	Apr-01	188	137	353.70	-	3.30	70.8	826.38	Tindale-Oliver & Associates
Pasco Co, FL	2.66	Apr-02	100	46	283.12	9a-6p	5.10	46.0	-	Tindale-Oliver & Associates
Pasco Co, FL	2.96	Apr-02	486	164	515.32	9a-6p	2.72	33.7	472.92	Tindale-Oliver & Associates
Pasco Co, FL	4.42	Apr-02	168	120	759.24	9a-6p	1.89	71.4	1024.99	Tindale-Oliver & Associates
Orange Co, FL	8.93	-	-	-	377.00	-	-	-	-	Orange County

Total Size	48.8	13	4,463	<b>Average Trip Length:</b>	<b>2.42</b>		
ITE	63.0	21		<b>Weighted Average Trip Length:</b>	<b>2.05</b>		
Blended total	111.8			Weighted Percent New Trip Average:	57.9	Weighted Average Trip Generation Rate:	530.19
	34.0					ITE Average Trip Generation Rate:	496.12
						<b>Blend of FL Studies and ITE Average Trip Generation Rate:</b>	<b>511.00</b>

**Automobile Care Center (ITE LUC 942)**

Location	Size (1,000 sf)	Date	Total # Interviews	# Trip Length Interviews	Trip Gen Rate	Time Period	Trip Length	Percent New Trips	VMT	Source
Jacksonville, FL	2.3	2/3-4/90	124	94	-	9a-5p	3.07	76.0	-	Tindale-Oliver & Associates
Jacksonville, FL	2.3	2/3-4/90	110	74	-	9a-5p	2.96	67.0	-	Tindale-Oliver & Associates
Jacksonville, FL	2.4	2/3-4/90	132	87	-	9a-5p	2.32	66.0	-	Tindale-Oliver & Associates
Lakeland, FL	5.2	Mar-90	24	14	-	9a-4p	1.36	59.0	-	Tindale-Oliver & Associates
Largo, FL	5.5	Sep-89	34	30	37.64	9a-5p	2.40	88.0	79.50	Tindale-Oliver & Associates
Orange Co, FL	25.0	Nov-92	41	39	-	2-6p	4.60	-	-	LCE, Inc.
Lakeland, FL	-	Mar-90	54	42	-	9a-4p	2.44	78.0	-	Tindale-Oliver & Associates

Total Size	42.6	6	519	<b>Average Trip Length:</b>	<b>2.74</b>		
ITE	102.0	6		<b>Weighted Average Trip Length:</b>	<b>3.62</b>		
Blended total	144.6			Weighted Percent New Trip Average:	72.2	Weighted Average Trip Generation Rate:	37.64
	107.5					ITE Average Trip Generation Rate:	31.10
						<b>Blend of FL Studies and ITE Average Trip Generation Rate:</b>	<b>31.43</b>

**Service Station (ITE LUC 944)**

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 & Associates
Collier County, FL	-	Aug-91	168	40	-	-	1.01	23.8	-	Tindale-Oliver & Associates

Total Size	0.6	1	238	<b>Average Trip Length:</b>	<b>1.46</b>		
ITE (vfp)	48.0	6		<b>Weighted Average Trip Length:</b>	<b>1.90</b>		
				Weighted Percent New Trip Average:	23.0	ITE Average Trip Generation Rate - per fuel position:	168.56

**Self-Service Car Wash (ITE LUC 947)**

Location	Size (Bays)	Date	Total # Interviews	# Trip Length Interviews	Trip Gen Rate	Time Period	Trip Length	Percent New Trips	VMT	Source
Largo, FL	10	Nov-89	111	84	-	8am-5pm	2.00	76.0	-	Tindale-Oliver & Associates
Clearwater, FL	-	Nov-89	177	108	-	10am-5pm	1.30	61.0	-	Tindale-Oliver & Associates
Collier, FL	11	Dec-09	304	-	30.24	-	2.50	57.0	-	Tindale-Oliver & Associates
Collier, FL	8	Jan-09	186	-	22.75	-	1.96	72.0	-	Tindale-Oliver & Associates

Total Size	29	3	778	<b>Average Trip Length:</b>	<b>1.94</b>		
Total Size (TGR)	19	2		<b>Weighted Average Trip Length:</b>	<b>2.18</b>		
ITE	5	1		Weighted Percent New Trip Average:	67.7	Weighted Average Trip Generation Rate:	27.09
Blended total	24					ITE Average Trip Generation Rate:	108.00
						<b>Blend of FL Studies and ITE Average Trip Generation Rate:</b>	<b>43.94</b>

**APPENDIX D**  
**Transportation Impact Fee – Cost Component**  
**Calculations**

## Transportation Impact Fee: Cost Component

This appendix presents the detailed calculations for the cost component of the transportation impact fee update. Backup data and assumptions are provided for all cost variables including:

- Design & Construction Engineering/Inspection
- Right-of-Way
- Construction
- Roadway Capacity

### Design & CEI

The design cost factor for city roads was estimated as a percentage of the construction cost per lane mile. This factor was determined through a review of the design-to-construction cost ratios from recently completed and bid improvements in the City of Palm Beach Gardens. For local improvements, the design-to-construction ratios ranged from 6.3 percent to 7.3 percent with a weighted average of 7.0 percent. For purposes of this update study, the design cost for city roads was calculated at 7.0 percent of the construction cost per lane mile based on the local data (see Table D-1 for additional information).

The CEI cost factor for city roads was estimated as a percentage of the construction cost per lane mile. Based on discussions with staff, CEI costs may be handled in-house or contracted out with the typical cost being equivalent to 7.5 percent of the construction cost. Therefore, a CEI-to-construction cost factor of 7.5 percent was used for purposes of this impact fee update study.

### 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 construction, build a new road.

The ROW acquisition costs for city roads are typically expensive due to the urban nature of cities and the high property values. Urban areas have dense development and typically lack enough open land to expand existing roadways.

For impact fee purposes, the ROW cost for city roads was estimated as a percentage of the construction cost per lane mile. This factor was determined through a review of the ROW-

to-construction cost ratios for county road unit costs in previously completed impact fee studies throughout Florida. The county roadway acquisition costs are assumed to be comparable to the costs associated with ROW acquisition in the City of Palm Beach Gardens and perhaps on the low-end, resulting in a conservative estimate. For purposes of this update study, the ROW cost was calculated at 40 percent of the construction cost per lane mile (see Table D-2 for additional information).

### Construction

A review of construction cost data for recent local county roadway capacity expansion projects identified three recent improvements/estimates in the City of Palm Beach Gardens. These improvements had a weighted average construction cost of approximately **\$1.98 million** per lane mile, as shown in Table D-3, and include:

- Burns Rd from N. Military Trail to Prosperity Farms Rd
- Kyoto Gardens Dr from Military Trail to A1A
- Shady Lakes Extension from PGA Blvd to 117<sup>th</sup> Court

Due to the small sample size of local improvements, additional projects from other jurisdictions throughout Florida were reviewed. Tables D-4 and D-5 show these additional city and county roadway bid data. The city roadway database includes over 73 lane miles of recent improvements with a weighted average cost per lane miles of \$2.21 million. The county roadway database includes over 330 lane miles of recent improvements with a weighted average cost per land mile of approximately \$2.18 million.

Based on discussions with City staff, roadway construction in Palm Beach Gardens includes extra amenities and features (design and landscaping) that result in a higher cost. Due to the small sample size of local projects and the input from City staff, the construction cost estimates for impact fee purposes was based on a blended total of the local data, statewide city and county road data, resulting in a \$2.20 million construction cost per lane mile.

**Table D-1  
Design-to-Construction Cost Factors**

Description	From	To	Feature	Design Cost	Construction Cost	Design-to-Construction Ratio
Kyoto Gardens Dr	Military Trail	A1A	0 to 4 Lanes	\$195,526	\$3,112,433	6.3%
Shady Lakes Ext.	PGA Blvd	117th Court	0 to 2 Lanes	\$150,000	\$2,062,903	7.3%
<b>Total</b>				<b>\$345,526</b>	<b>\$5,175,336</b>	<b>7.0%</b>

Source: Palm Beach Gardens Public Works Department

**Table D-2  
Right-of-Way Cost Factor for County Roads – Recent Impact Fee Studies**

Year	Jurisdiction	County Roadways (Cost per Lane Mile)		
		ROW	Constr.	ROW Ratio
2006	Collier	\$1,751,790	\$2,558,546	68%
2006	Citrus	\$784,599	\$2,584,099	30%
2006	Highlands	\$468,853	\$1,678,785	28%
2006	Marion	\$1,005,123	\$1,941,244	52%
2007	Pasco	\$814,517	\$3,079,051	26%
2007	Lake	\$599,185	\$2,911,021	21%
2007	Flagler	\$460,000	\$1,740,000	26%
2007	Volusia	\$858,109	\$2,651,778	32%
2008	Hernando	\$650,000	\$2,300,000	28%
2008	Leon	\$1,120,000	\$2,660,000	42%
2008	Sumter	\$802,000	\$2,237,000	36%
2009	Collier	\$1,300,000	\$3,100,000	42%
2009	Polk	\$1,491,000	\$1,590,000	94%
2009	Hillsborough/Tampa	\$1,500,000	\$2,800,000	54%
2010	Collier	\$901,000	\$1,708,000	53%
2011	Sarasota/North Port	\$620,000	\$2,400,000	26%
2012	Osceola	\$1,087,074	\$2,651,400	41%
2012	Orange	\$1,080,000	\$2,400,000	45%
2012	City of Orlando	\$1,080,000	\$2,400,000	45%
2012	City of Sarasota	\$620,000	\$2,400,000	26%
2013	Hernando	\$811,800	\$1,980,000	41%
2013	Charlotte	\$1,034,000	\$2,200,000	47%
2013	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%
<b>Average</b>		<b>\$934,567</b>	<b>\$2,329,084</b>	<b>40%</b>

Source: Recent impact fee studies constructed throughout Florida

**Table D-3  
Construction Cost per Lane Mile – Palm Beach Gardens**

Description	From	To	Bid Year	Feature	Length	Lanes Added	Lane Miles Added	Construction Cost	Construction Cost per Lane Mile
Burns Rd	N. Military Trail	Prosperity Farms Rd	2003*	2 to 4 Lanes	1.80	2	3.60	\$8,621,122	\$2,394,756
Kyoto Gardens Dr	Military Trail	A1A	2007/08	0 to 4 Lanes	0.57	4	2.28	\$3,112,433	\$1,365,102
Shady Lakes Ext.	PGA Blvd	117th Court	Est.	0 to 2 Lanes	0.54	2	1.08	\$2,062,903	\$1,910,095
<b>Total</b>							<b>6.96</b>	<b>\$13,796,458</b>	<b>\$1,982,250</b>

Source: Palm Beach Gardens Public Works Department

\*This improvement was completed in 2003

**Table D-4  
Construction Cost – City Road Improvements from Other Jurisdictions throughout Florida**

City	Description	From	To	Year	Improvement	Length	Lanes Added	Lane Miles Added	Construction	Constr. Cost per Lane Mile
Ocala	Ft King St - Ph. I	SE 25th Ave	SE 36th Ave	-	2 to 3 Lanes	1.10	1	1.10	\$1,982,469	\$1,802,245
Ocala	MLK Ave - Ph. I	NW 10th St (US 27)	NW 22nd St	-	2 to 4 Lanes	1.00	2	2.00	\$4,182,870	\$2,091,435
St. Cloud	Nolte Rd	Canoe Creek Rd	Hickory Tree Rd/CR 15	-	0 to 4 Lanes	3.00	4	12.00	\$18,932,974	\$1,577,748
Kissimmee	MLK Ave - Ph. I	John Young Pkwy	Central Ave	-	0 to 4 Lanes	0.50	4	2.00	\$3,391,000	\$1,695,500
Kissimmee	Lawrence Silas Blvd	Neptune Rd	Oak St	-	0 to 2 Lanes	0.42	2	0.84	\$1,900,000	\$2,261,905
Orlando/Orange	Barack Obama Pkwy Ph. I	N. of Conroy Rd	Metro West Blvd	2010	0 to 4 Lanes	1.50	4	6.00	\$8,691,007	\$1,448,501
North Port	Sumter Blvd - Ph. II	US 41	Heron Creek Blvd	2011	2 to 4 Lanes	1.40	2	2.80	\$14,105,358	\$5,037,628
North Port	Sumter Blvd - Ph. III	Heron Creek Blvd	City Center Blvd	-	2 to 4 Lanes	2.00	2	4.00	\$9,000,000	\$2,250,000
North Port	Toledo Blade Blvd	Cranberry Blvd	Hillsborough Blvd	2007	2 to 4 Lanes	4.50	2	9.00	\$19,509,211	\$2,167,690
North Port	Sumter Blvd	Hansard Ave	City Center Blvd	2011	2 to 4 Lanes	0.36	2	0.72	\$1,928,294	\$2,678,186
North Port	Sumter Blvd	Hansard Ave	Morandi Blvd	-	2 to 4 Lanes	0.50	2	1.00	\$2,400,000	\$2,400,000
North Port	Price Blvd (Preferred Alt.)	Biscayne Dr	Orlando Blvd	-	2 to 4 Lanes	12.68	2	25.36	\$64,327,439	\$2,536,571
Tampa	Cross Creek Blvd	W. Cory Lake Blvd	Morris Bridge Rd	2012	2 to 4 Lanes	2.30	2	4.60	\$6,000,000	\$1,304,348
Casselberry	Winterpark Dr Ph. I	SR 434	7th St	2008	0 to 2 Lanes	1.02	2	2.04	\$5,661,289	\$2,775,142
<b>Total</b>								<b>73.46</b>	<b>\$162,011,911</b>	<b>\$2,205,444</b>

Source: Roadway bids from recent impact fee studies throughout Florida as well as recent bids from the Tindale Oliver Cost Database, with information having been provided by each respective City

**Table D-5  
Construction Cost – County Road Improvements from Other Jurisdictions throughout Florida**

County	District	Description	From	To	Year	Status	Feature	Design	Length	Lanes Added	Lane Miles Added	Construction Cost	Construction Cost per Lane Mile
Orange	5	Clarcona-Ocoee Rd	Hiawasse Rd	Clark	2009	Bid	2 to 4	Urban	2.50	2	5.00	\$10,182,738	\$2,036,548
Orange	5	Woodbury Rd	S. of SR 50	Challenger Pkwy	2009	Bid	2 to 4	Urban	0.65	2	1.30	\$4,088,942	\$3,145,340
Orange	5	Sand Lake Rd	President's Dr	FL Mall	2009	Bid	2 to 4	Urban	1.00	2	2.00	\$6,020,755	\$3,010,378
Orange	5	Taft-Vineland Road Extension	Central Florida Pkwy	John Young Pkwy	2009	Bid	2 to 4	Urban	0.70	2	1.40	\$4,462,535	\$3,187,525
Osceola	5	Narcoossee Rd	US 192	Orange Co. Line	2009	Bid	2 to 4	Urban	7.40	2	14.80	\$47,360,000	\$3,200,000
Osceola	5	Osceola Pkwy (Ph. I)	FL Turnpike	Buenaventura Blvd	2009	Bid	4 to 6	Urban	1.57	2	3.14	\$5,966,000	\$1,900,000
Osceola	5	Poinciana Blvd (Ph. II)	Crescent Lakes	US 17/92	2009	Bid	2 to 4	Urban	2.50	2	5.00	\$16,000,000	\$3,200,000
Osceola	5	Old Lake Wilson Rd (Ph. I)	Livingston Rd	Sinclair Rd	2009	Bid	2 to 4	Urban	2.30	2	4.60	\$14,720,000	\$3,200,000
Hillsborough	7	Race Track Rd (Ph. IV)	Douglas Rd	Hillsborough Ave	2009	Bid	2 to 6	Urban	0.69	4	2.76	\$5,375,855	\$1,947,774
Sarasota	1	Fruitville Rd (Ph. I)	Tatum Rd	Debrecen Rd	2009	Bid	2 to 4	Urban	0.72	2	1.44	\$4,355,796	\$3,024,858
Sarasota	1	Fruitville Rd (Ph. II)	Coburn Rd	Tatum Rd	2009	Bid	2 to 4	Urban	1.26	2	2.52	\$8,557,904	\$3,395,994
Lee	1	Colonial Blvd (CR 884)	I-75	SR 82	2009	Bid	4 to 6	Urban	2.70	2	5.40	\$14,576,393	\$2,699,332
Indian River	4	College Lane Rd	Extension IRSC	66th Ave	2009	Bid	0 to 2	Urban	0.50	2	1.00	\$1,700,000	\$1,700,000
Indian River	4	16th St	66th Ave	74th Ave	2009	Bid	0 to 2	Urban	1.27	2	2.54	\$3,109,321	\$1,224,142
Polk	1	Pine Tree Trail	Ernie Caldwell Blvd	CR 54/Reagan Pkwy	2009	Bid	0 to 2	Urban	1.40	2	2.80	\$3,442,332	\$1,229,404
Polk	1	Lakeland Highlands Rd	Polk Pkwy	CR 540A	2009	Bid	2 to 4	Urban	3.01	2	6.02	\$13,603,672	\$2,259,746
Palm Beach	4	Alt. A1A	S. of Frederick Small Rd	Center St	2009	Bid	4 to 6	Urban	4.40	2	8.80	\$6,364,139	\$723,198
Palm Beach	4	Lyons Rd	Glades Rd	Yamato Rd	2009	Bid	4 to 6	Urban	1.80	2	3.60	\$5,967,464	\$1,657,629
Palm Beach	4	Hypoluxo Rd	Jog Rd	Military Tr	2009	Bid	4 to 6	Urban	2.00	2	4.00	\$4,054,386	\$1,013,597
Palm Beach	4	Lawrence Rd	S. of C. Stanley Weaver Canal	N. of C. Stanley Weaver Canal	2009	Bid	2 to 4	Urban	0.20	2	0.40	\$1,051,680	\$2,629,200
Collier	1	Oil Well Rd (Segment 2)	Immokalee Rd	E. of Everglades Blvd	2009	Bid	2 to 4/6	Urban	5.05	2/4	10.92	\$15,091,068	\$1,381,966
Collier	1	Oil Well Rd (Segment 4A)	W. of Oil Well Grade Rd	W. of Camp Keais Rd	2009	Bid	2 to 6	Urban	4.72	4	18.88	\$15,875,782	\$840,878
Marion	5	CR 200A	US 441	NE 35th St	2009	Bid	2 to 4	Urban	1.73	2	3.46	\$6,451,296	\$1,864,536
Marion	5	NW 44th Ave	US 27	NW 60th St	2009	Bid	2 to 4	Urban	2.63	2	5.26	\$5,910,189	\$1,123,610
Marion	5	SE 31st St	SE 19th Ave	SE 36th Ave	2009	Bid	2 to 4	Urban	1.50	2	4.20	\$5,544,524	\$1,320,125
Marion	5		SE 36th Ave	SR 464	2009	Bid	0 to 4	Urban	0.30	4			
Orange	5	Alafaya Tr	Avalon Park Blvd	Mark Twain Blvd	2010	Bid	2 to 4	Urban	3.83	2	7.66	\$18,918,599	\$2,469,791
Hillsborough	7	Boyette Rd (Ph. III)	Donneymoor Dr	Bell Shoals Rd	2010	Bid	2 to 4	Urban	1.84	2	3.68	\$20,814,450	\$5,656,101
Broward	4	Bailey Rd	NW 64th Ave / SW 81st Ave	SR 7 (US 441)	2010	Bid	2 to 4	Urban	2.00	2	4.00	\$6,330,297	\$1,582,574
Lee	1	Six Mile Cypress Pkwy	Daniels Pkwy	S. of Winkler Rd Ext.	2010	Bid	2 to 4	Urban	3.09	2	6.18	\$6,711,242	\$1,085,961
Charlotte	1	Piper Rd	Henry St	Jones Loop Rd	2010	Bid	2 to 4	Sub-Urb	2.10	2	4.20	\$8,627,803	\$2,054,239
Indian River	4	53rd St	Kings Hwy	Lateral H Canal	2010	Bid	0 to 4	Urban	2.04	4	8.16	\$7,000,000	\$857,843
Indian River	4	53rd St	Lateral H Canal	Indian River Blvd	2010	Bid	0 to 4	Urban	0.50	4	2.00	\$7,605,993	\$3,802,997
Palm Beach	4	45th St	Jog Rd	E. of Haverhill Rd	2010	Bid	2 to 4	Urban	1.50	2	3.00	\$12,423,103	\$4,141,034
Palm Beach	4	Jog Rd	S. of 45th St	N. of 45th St	2010	Bid	0 to 4	Urban	0.50	4	2.00	\$4,960,399	\$2,480,200
Palm Beach	4	Congress Ave	Lantana Rd	Melaluca Ln	2010	Bid	4 to 6	Urban	1.30	2	2.60	\$6,130,698	\$2,357,961
Palm Beach	4	Seminole Pratt Whitney Rd	SR 80	Sycamore Dr	2010	Bid	2 to 4	Urban	4.20	2	8.40	\$9,930,460	\$1,182,198
Palm Beach	4	Seminole Pratt Whitney Rd	S. of M Canal	S. of Orange Blvd	2010	Bid	2 to 4	Urban	1.40	2	2.80	\$2,820,892	\$1,007,461
Citrus	7	CR 486	SR 44	Forest Ridge Blvd	2010	Bid	2 to 4	Urban	6.30	2	12.60	\$26,614,211	\$2,112,239
Brevard	5	Pineda Cswy Extension	I-95	W. of Wickham Rd	2010	Bid	0 to 4	Urban	2.10	4	8.40	\$17,238,865	\$2,052,246
Sarasota	1	North Cattlemen Rd	Richardson Rd	Desoto Rd	2011	Bid	2 to 4	Urban	2.55	2	5.10	\$12,153,584	\$2,383,056
Lee	1	Daniels Pkwy	Chamberlin Pkwy	Gateway Blvd	2011	Bid	4 to 6	Urban	2.05	2	4.10	\$2,906,553	\$708,915
Orange	5	Rouse Rd	SR 50	Corporate Blvd	2011	Bid	2 to 4	Urban	2.60	2	5.20	\$29,380,249	\$5,650,048
Orange	5	CR 535 Seg. A	Magnolia Park Ct	SR 429	2011	Bid	2 to 4	Urban	1.37	2	2.74	\$8,390,570	\$3,062,252
Osceola	5	Goodman Rd	Tri-County	Sand Mine Rd	2011	Bid	0 to 2	Urban	3.53	2	7.06	\$7,060,000	\$1,000,000
Pinellas	1	Bryan Dairy Rd	Starkey Rd (CR 1)	72nd St	2011	Bid	4 to 6	Urban	1.47	2	2.94	\$10,327,383	\$3,512,715
Hernando	7	Elgin Blvd	Mariner Blvd	East 3900'	2011	Bid	2 to 4	Urban	0.74	2	1.48	\$2,684,566	\$1,813,896

**Table D-5 (continued)**  
**Construction Cost – County Road Improvements from Other Jurisdictions throughout Florida**

County	District	Description	From	To	Year	Status	Feature	Design	Length	Lanes Added	Lane Miles Added	Construction Cost	Construction Cost per Lane Mile	
Hernando	7	Sunshine Grove Rd	SR 50	Ken Austin Pkwy	2011	Bid	2 to 4	Urban	2.10	2	4.20	\$4,646,801	\$1,106,381	
Palm Beach	4	Lyons Rd	N. of West Atlantic Ave	S. of Boynotno Beach Blvd	2011	Bid	0 to 2	Urban	3.20	2	6.40	\$5,329,359	\$832,712	
Charlotte	1	Burnt Store Rd (Ph. I)	US 41	Notre Dame Blvd	2011	Bid	2 to 4	Urban	2.40	2	4.80	\$13,512,394	\$2,815,082	
Indian River	4	Oslo Rd Ph. II	43rd Ave	27th Ave	2011	Bid	2 to 4D	Urban	1.20	3	3.60	\$4,531,822	\$1,258,839	
Indian River	4	Oslo Rd Ph. III	43rd Ave	58th Ave	2012	Bid	2 to 4	Urban	1.15	2	2.30	\$3,812,202	\$1,657,479	
Indian River	4	66th Ave	SR 60	49th St	2012	Bid	2 to 4	Urban	3.05	2	6.10	\$20,773,389	\$3,405,474	
Polk	1	Kathleen Rd (CR35A) Ph. II	Galloway Rd	Duff Rd	2012	Bid	2 to 4	Urban	3.00	2	6.00	\$17,813,685	\$2,968,948	
Polk	1	Bartow Northern Connector Ph. I	US 98	US 17	2012	Bid	0 to 4	Urban	2.00	4	8.00	\$11,255,736	\$1,406,967	
Volusia	5	Tymber Creek Rd	SR 40	Peruvian Ln	2012	Bid	2 to 4	Urban	0.75	2	1.50	\$5,276,057	\$3,517,371	
Palm Beach	4	Jog Rd	N. of SR 710	N. of Florida's Turnpike	2012	Bid	0 to 4	Urban	0.70	4	2.80	\$3,413,874	\$1,219,241	
Palm Beach	4	West Atlantic Ave	W. of Lyons Rd	Starkey Rd	2012	Bid	2 to 4	Urban	0.80	2	1.60	\$8,818,727	\$5,511,704	
Palm Beach	4	60th St N & SR 7 Ext.	E. of Royal Palm Beach Blvd	SR 7	2012	Bid	0 to 2	Urban	1.50	2	3.00	\$3,821,404	\$1,273,801	
Brevard	5	Babcock St	S. of Foundation Park Blvd	Malabar Rd	2013	Bid	2 to 4	Urban	12.40	2	24.80	\$56,000,000	\$2,258,065	
Collier	1	Collier Blvd (CR 951)	Golden Gate Blvd	Green Blvd	2013	Bid	4 to 6	Urban	2.74	2	5.48	\$23,295,924	\$4,251,081	
Marion	5	SW 110th St	US 41	SW 200th Ave	2013	Bid	0 to 2	Urban	0.11	2	0.22	\$438,765	\$1,994,386	
Marion	5	NW 35th St	NW 35th Avenue Rd	NW 27th Ave	2013	Bid	0 to 4	Urban	0.50	4	4.60	\$8,616,236	\$1,873,095	
Marion	5	NW 35th St	NW 27th Ave	US 441	2013	Bid	2 to 4	Urban	1.30	2				
Sumter	5	C-466A, Ph. III	US 301 N	Powell Rd	2013	Bid	2 to 3/4	Urban	1.10	2	2.20	\$4,283,842	\$1,947,201	
Collier	1	Golden Gate Blvd	Wilson Blvd	Desoto Blvd	2014	Bid	2 to 4	Urban	5.71	2	11.42	\$51,402,161	\$4,501,065	
Brevard	5	St. Johns Heritage Pkwy	SE of I-95 Intersection	US 192 (Space Coast Pkwy)	2014	Bid	0 to 2	Sub-Urb	3.11	2	6.22	\$16,763,567	\$2,695,107	
<b>Total</b>										<b>Count:</b>	<b>65</b>	<b>330.78</b>	<b>\$722,668,633</b>	<b>\$2,184,741</b>

Source: Roadway bids from recent impact fee studies throughout Florida as well as recent bids from the Tindale Oliver Cost Database, with information having been provided by each respective County

### ***Roadway Capacity***

The average roadway capacity used in the impact fee calculation was based on the Florida Department of Transportation's Quality/Level-of-Service Handbook Tables. Using these tables, the roadway capacity for a Class I State Signalized Arterial (LOS D) was utilized. This state roadway capacity value was then reduced by 10 percent to correspond with non-state roadway capacities. This adjustment resulted in a value of 7,965 vehicle-miles of capacity (VMC) added per lane mile. This capacity figure corresponds to roadways with up to two signalized intersections per mile and a posted speed of 40 mph or more, representing a conservative approach to the VMC added. Additionally, this estimated capacity is comparable to capacity levels observed in other recent transportation impact fees for cities in Florida.

**APPENDIX E**  
**Transportation Impact Fee –Credit Component**  
**Calculations**

## **Transportation Impact Fee: Credit Component**

This appendix presents the detailed calculations for the credit component. The transportation impact fee calculation included in this report represents a system-wide fee that accounts for travel on city, county, and state roads. Therefore, the credit component of the fee calculation also considers city, county, and state revenues available for capacity expansion. Currently, in addition to the capital support that ultimately results from State fuel tax revenues, the City of Palm Beach Gardens and Palm Beach County also receive financial benefit from several other funding sources. Of these, County fuel taxes that are collected in Palm Beach County (including the City of Palm Beach Gardens) 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 on every net gallon of motor 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

### 3. 1<sup>st</sup> 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

### 4. 2<sup>nd</sup> Local Option Tax (up to 5¢/gallon)

- Tax applies to every net gallon of motor and diesel 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 scheme, 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 various fuel tax revenues for each county in the state. The 2014-15 data represent projected fuel tax distributions to Palm Beach County for the current fiscal year. In the table, the fuel tax revenue data are used to calculate the value per penny (per gallon of fuel) that should be used to estimate the “equivalent pennies” of other revenue sources. 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 gas tax revenues. The weighted average figure of approximately \$5.32 million estimates the annual revenue that one penny of gas tax generates in Palm Beach County.

**Table E-1**  
**Estimated Fuel Tax Distribution Allocated to Capital Programs for**  
**Palm Beach County & Municipalities, FY 2014-15<sup>(1)</sup>**

<b>Tax</b>	<b>Amount of Levy per Gallon</b>	<b>Total Distribution</b>	<b>Distribution Per Penny</b>
Constitutional Fuel Tax	\$0.02	\$11,386,553	\$5,693,277
County Fuel Tax	\$0.01	\$5,018,743	\$5,018,743
9th Cent Fuel Tax	\$0.01	\$5,866,198	\$5,866,198
1st Local Option (1-6 cents)	\$0.06	\$33,007,582	\$5,501,264
2nd Local Option (1-5 cents)	\$0.05	\$24,586,127	\$4,917,225
<b>Total</b>	<b>\$0.15</b>	<b>\$79,865,203</b>	
<b>Weighted Average per Penny<sup>(1)</sup></b>			<b>\$5,324,347</b>

(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).

### ***Gas Tax Credit***

A revenue credit for the annual gas tax equivalent expenditures on roadway capacity expansion projects for the City of Palm Beach Gardens is presented below. The three components of the credit are as follows:

- City gas tax equivalent pennies
- County gas tax equivalent pennies
- State gas tax equivalent pennies

### City Gas Tax Equivalent Pennies

A review of the City's FY 2016-2020 Capital Improvement Program (CIP) indicates that a roadway capacity expansion improvements are funded with impact fees or are developer funded. However, as shown in Table E-2, the City funding equates to 0.1 pennies of credit for debt service payments on the Public Improvement Revenue Bond, Series 2011B. These bond proceeds provided funding for intersection improvements and roadway expansion projects. This credit only reflects the portion of the bond that is being repaid with General Fund revenues.

**Table E-2  
City Debt Service Equivalent Pennies**

Source	Cost of Projects	Number of Years	Revenue from 1 Penny <sup>(2)</sup>	Equivalent Pennies <sup>(3)</sup>
Series 2011B Public Improvement Bond <sup>(1)</sup>	\$1,402,181	5	\$5,324,347	\$0.001
<b>Total</b>	<b>\$1,402,181</b>	<b>5</b>	<b>\$5,324,347</b>	<b>\$0.001</b>

(1) Source: Table E-5

(2) Source: Table E-1

(3) Cost of projects divided by number of years divided by revenue from 1 penny (Item 3) divided by 100

County Gas Tax Equivalent Pennies

A review of the County’s historical roadway financing program and the Capital Improvement Program (CIP) for FY 2015-2019 indicates that a combination of transportation impact fees, fuel tax bonds, and fuel tax revenues are used to fund roadway capacity expansion projects. As shown in Table E-3, Palm Beach County receives a credit of 2.0 pennies for the portion of non-impact fee revenues dedicated to capacity expansion projects such as new road construction, lane additions, and intersection improvements.

**Table E-3  
Equivalent Penny Calculation for County Portion**

Source	Cost of Projects	Number of Years	Revenue from 1 Penny <sup>(3)</sup>	Equivalent Pennies <sup>(4)</sup>
Projected CIP Expenditures (FY 2015-2019) <sup>(1)</sup>	\$93,349,000	5	\$5,324,347	\$0.035
Historical County Expenditures (FY 2008-2014) <sup>(2)</sup>	\$36,774,000	7	\$5,324,347	\$0.010
<b>Total</b>	<b>\$130,123,000</b>	<b>12</b>	<b>\$5,324,347</b>	<b>\$0.020</b>

(4) Source: Table E-6

(5) Source: Table E-6

(6) Source: Table E-1

(7) Cost of projects divided by number of years divided by revenue from 1 penny (Item 3) divided by 100

State Gas Tax Expenditures

In the calculation of the equivalent pennies of gas tax from the State funded capacity expansion, projects for the 16-year period (from FY 2006 to FY 2021) were reviewed. For calculation purposes, the 16-year period was broken into three increments; two historical (FY 2006-2010 and FY 2011-2015) and one future (FY 2016-2021). Information on historical projects’ funding and the future year estimates was obtained from the latest FDOT Work Program. The use of a 16-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 capacity expansion projects for the 10-year “historical” period and projected in the six-year “future” time period are as follows:

- FY 2006-2010 work plan equates to 5.8 pennies
- FY 2011-2015 work plan equates to 4.6 pennies
- FY 2016-2021 work plan equates to 10.0 pennies

The combined weighted average over the 16-year period of state expenditure for capacity-adding roadway projects results in a total of 7.0 pennies. Table E-4 documents this calculation. The specific projects that were used in the equivalent penny calculations are summarized in Table E-7.

**Table E-4**  
**Equivalent Penny Calculation for State Portion**

Source	Cost of Projects	Number of Years	Revenue from 1 Penny <sup>(4)</sup>	Equivalent Pennies <sup>(5)</sup>
Future Work Program (FY 2016-2021) <sup>(1)</sup>	\$319,865,008	6	\$5,324,347	\$0.100
Historical Work Program (FY 2011-2015) <sup>(2)</sup>	\$122,763,195	5	\$5,324,347	\$0.046
Historical Work Program (FY 2006-2010) <sup>(3)</sup>	<u>\$154,205,740</u>	<u>5</u>	\$5,324,347	\$0.058
<b>Total</b>	<b>\$596,833,943</b>	<b>16</b>	<b>\$5,324,347</b>	<b>\$0.070</b>

(1) Source: Table E-7

(2) Source: Table E-7

(3) Source: Table E-7

(4) Source: Table E-1

(5) Cost of projects divided by number of years divided by revenue from 1 penny (Item 4) divided by 100

**Table E-5**  
**City Debt Service – Public Improvement Revenue Bond, Series 2011B**

Period Ending	Principal	Interest	Debt Service	Portion to Transportation	Transportation Debt Payment	General Fund Portion	Transportation Debt Payment
5/1/2012	\$1,175,000	\$107,672.92	\$1,282,672.92	51.76%	\$663,954.44	29%	\$192,546.79
5/1/2013	\$1,265,000	\$248,427.50	\$1,513,427.50	51.93%	\$785,985.15	29%	\$227,935.69
5/2/2014	\$1,280,000	\$233,880.00	\$1,513,880.00	63.84%	\$966,473.97	29%	\$280,277.45
5/2/2015	\$1,295,000	\$216,600.00	\$1,511,600.00	63.81%	\$964,490.31	29%	\$279,702.19
5/1/2016	\$1,325,000	\$193,290.00	\$1,518,290.00	63.92%	\$970,460.02	29%	\$281,433.41
5/1/2017	\$1,355,000	\$165,465.00	\$1,520,465.00	64.02%	\$973,468.75	29%	\$282,305.94
5/2/2018	\$1,380,000	\$131,590.00	\$1,511,590.00	63.80%	\$964,402.98	29%	\$279,676.86
5/2/2019	\$1,420,000	\$93,640.00	\$1,513,640.00	63.79%	\$965,619.14	29%	\$280,029.55
5/1/2020	<u>\$1,460,000</u>	<u>\$48,910.00</u>	<u>\$1,508,910.00</u>	<u>63.70%</u>	<u>\$961,155.00</u>	<u>29%</u>	<u>\$278,734.95</u>
<b>Totals</b>	<b>\$11,955,000</b>	<b>\$1,439,475.42</b>	<b>\$13,394,475.42</b>	<b>61.18%</b>	<b>\$8,216,009.76</b>	<b>29%</b>	<b>\$2,382,642.83</b>
<b>Payments Remaining (2016-2020)</b>							<b>\$1,402,181</b>
<b>Number of Years of Remaining Payments</b>							<b>5</b>

Source: Palm Beach Gardens Public Works Department

**Table E-6  
Historical and Future Capital Improvement Expenditures for Palm Beach County, FY 2008 to FY 2019**

Unit #	Description	Project Title	FY 2008-14	FY 2015	FY 2016	FY 2017	FY 2018	FY 2019	Total
-	Expansion Improvements	Countywide	\$36,774,000	\$0	\$0	\$0	\$0	\$0	\$36,774,000
1369	New Road Construction (0 to 2 Lanes)	Congress Ave from N. of Northlake Blvd to Alternate A1A	-	\$0	\$1,360,000	\$0	\$2,500,000	\$0	\$3,860,000
-	Intersection Improvements	Countywide	-	\$870,000	\$723,000	\$1,223,000	\$1,223,000	\$0	\$4,039,000
0670	Lane Addition	Jog Rd from Roebuck Rd to S. of 45th St	-	\$0	\$0	\$0	\$30,000,000	\$0	\$30,000,000
1348	Intersection Improvements	Northlake Blvd and Military Trail	-	\$0	\$0	\$350,000	\$0	\$0	\$350,000
0924	Recording Fees - Countywide	Funding for the expenses incurred in ROW acquisitions	-	\$20,000	\$20,000	\$20,000	\$20,000	\$20,000	\$100,000
-	Reserve for Plans and Alignment	Funding for design, study, and mitigation costs for projects in the program	-	\$200,000	\$200,000	\$200,000	\$200,000	\$200,000	\$1,000,000
-	Reserves for Right-of-Way	Funding for ROW acquisition costs for projects included in the program	-	\$200,000	\$200,000	\$200,000	\$200,000	\$200,000	\$1,000,000
1157	Lane Addition	Roebuck Rd from SR 7 to Jog Rd	-	\$0	\$0	\$0	\$50,000,000	\$0	\$50,000,000
-	Traffic Signals	Countywide	-	\$600,000	\$600,000	\$600,000	\$600,000	\$600,000	\$3,000,000
<b>Total</b>			<b>\$36,774,000</b>	<b>\$1,890,000</b>	<b>\$3,103,000</b>	<b>\$2,593,000</b>	<b>\$84,743,000</b>	<b>\$1,020,000</b>	<b>\$130,123,000</b>

Source: Palm Beach County Financial Management & Budget Department and the Palm Beach County FY 2015-2019 Capital Improvement Program

**Table E-7  
Historical and Future FDOT Capital Improvement Expenditures for Palm Beach County, FY 2006 to FY 2021**

ITEM NO #	WORK TYPE	PROJECT DESCRIPTION	FY 2006	FY 2007	FY 2008	FY 2009	FY 2010	FY 2011	FY 2012	FY 2013	FY 2014	FY 2015	FY 2016	FY 2017	FY 2018	FY 2019	FY 2020	FY 2021	Total
228987-1	ADD LANES & RECONSTRUCT	SR-80/SOUTHERN BLVD FROM W. OF CONGRESS AVE TO W. OF SR-9/I-95	\$106,906	\$307,792	\$0	\$0	\$0	\$0	\$0	\$0	\$0	\$0	\$0	\$0	\$0	\$0	\$0	\$0	\$414,698
229092-1	ADD LANES & RECONSTRUCT	SR-7/US-441 FROM N OF SR-808/GLADES TO W. ATLANTIC/SR-806	\$45,000	\$0	\$0	\$0	\$0	\$0	\$0	\$0	\$0	\$0	\$0	\$0	\$0	\$0	\$0	\$0	\$45,000
229183-1	ADD LANES & RECONSTRUCT	SR-7/US-441 FROM SR-806/W ATLANTIC AV TO N OF SR-804/BOYNTON	\$0	\$0	\$0	\$12,125	\$0	\$0	\$0	\$0	\$0	\$0	\$0	\$0	\$0	\$0	\$0	\$0	\$12,125
229253-2	TRAFFIC CONTROL DEVICES/SYSTEM	PALM BEACH COUNTY COMPUTER SIGNAL OPERATIONS	\$399,999	\$400,000	\$400,000	\$345,014	\$282,490	\$0	\$0	\$0	\$0	\$0	\$0	\$0	\$0	\$0	\$0	\$0	\$1,827,503
229253-3	TRAFFIC CONTROL DEVICES/SYSTEM	PALM BEACH COUNTY COMPUTER SIGNAL OPERATIONS	\$0	\$0	\$0	\$0	\$0	\$500,000	\$500,000	\$500,000	\$500,000	\$500,000	\$0	\$0	\$0	\$0	\$0	\$0	\$2,500,000
229497-1	ADD LANES & RECONSTRUCT	SR-80/SOUTHERN BLVD. FROM E. OF FOREST HILL BV TO W. OF SR-7	\$1,007,993	\$39,099	\$229,080	\$1,484	\$192	\$0	\$0	\$0	\$0	\$0	\$0	\$0	\$0	\$0	\$0	\$0	\$1,277,848
229498-1	ADD LANES & RECONSTRUCT	SR-80/SOUTHERN BLVD. FROM W. OF SR-7 TO W. OF TURNPIKE	\$2,053,508	\$4,345,942	\$3,179,622	\$1,664,097	\$1,184,739	\$2,081	\$0	\$0	\$0	\$0	\$0	\$0	\$0	\$0	\$0	\$0	\$12,429,989
229499-1	ADD LANES & RECONSTRUCT	SR-80/SOUTHERN BLVD. FROM W. OF TURNPIKE TO W. OF HAVERHILL	\$2,430,019	\$991,728	\$71,753	\$0	\$0	\$0	\$0	\$0	\$0	\$0	\$0	\$0	\$0	\$0	\$0	\$0	\$3,493,500
229567-2	ADD LANES & RECONSTRUCT	SR-806/ATLANTIC AVE FROM W. OF TURNPIKE TO E. OF JOG ROAD	\$0	\$0	\$1,309	\$2,112	\$183	\$322,594	\$2,498	\$0	\$0	\$0	\$0	\$0	\$0	\$0	\$0	\$0	\$328,696
229587-1	ADD LANES & RECONSTRUCT	SR-809/MILITARY TR FROM S. OF 45 TH STREET TO S. OF 708/BLUE HERON	\$71,321	\$1,032	\$10,106	\$0	\$0	\$0	\$0	\$0	\$0	\$0	\$0	\$0	\$0	\$0	\$0	\$0	\$82,459
229587-2	ADD LANES & RECONSTRUCT	SR-809/MILITARY TR FROM SR-704/OKEECHOBEE BV TO S OF 45 TH STREET	\$1,071,424	\$326,977	\$1,030,821	\$114,262	\$300,760	\$0	\$0	\$0	\$0	\$0	\$0	\$0	\$0	\$0	\$0	\$0	\$2,844,244
229587-9	ADD LANES & RECONSTRUCT	SR-809/MILITARY TR SOUND WALL REPLACEMENT	\$0	\$0	\$0	\$65,282	\$42,510	\$0	\$0	\$0	\$0	\$0	\$0	\$0	\$0	\$0	\$0	\$0	\$107,792
229648-1	ADD LANES & RECONSTRUCT	SR-708/BLUE HERON FROM W OF MILITARY TR TO W OF I-95	\$145,802	\$51,589	\$0	\$0	\$0	\$0	\$0	\$0	\$0	\$0	\$0	\$0	\$0	\$0	\$0	\$0	\$197,391
229658-1	PD&E/EMO STUDY	SR-806/ATLANTIC AVE FROM SR-7 TO E. OF TURNPIKE	\$5,598	\$0	\$0	\$0	\$0	\$0	\$0	\$0	\$0	\$0	\$0	\$0	\$0	\$0	\$0	\$0	\$5,598
229658-2	ADD LANES & RECONSTRUCT	SR-806/ATLANTIC AVE FROM E. OF STARKEY RD TO TURNPIKE ENTRANCE	\$2,004,560	\$1,484,916	\$1,615,696	\$90,873	\$0	\$0	\$0	\$0	\$0	\$0	\$0	\$0	\$0	\$0	\$0	\$0	\$5,196,045
229658-3	ADD LANES & RECONSTRUCT	SR-806/ATLANTIC AVE FROM W. OF LYONS RD TO STARKEY RD	\$9,831	\$2,515	\$3,707,257	\$3,010	\$2,448	\$5,030	\$27,899	\$17,997	\$146,597	\$0	\$0	\$0	\$0	\$0	\$0	\$0	\$3,922,584
229658-4	ADD LANES & RECONSTRUCT	SR-806/ATLANTIC AVE FROM SR-7/US-441 TO WEST OF LYONS ROAD	\$0	\$0	\$0	\$0	\$0	\$0	\$0	\$0	\$0	\$0	\$12,000	\$1,710,000	\$0	\$0	\$0	\$0	\$1,722,000
229664-2	NEW ROAD CONSTRUCTION	SR-7 FROM SR-704/OKEECHOBEE BLVD TO NORTHLAKE BLVD	\$49,339	\$48,949	\$48,364	\$43,562	\$1,738,842	\$2,870,746	\$354,226	\$125,008	\$364,133	\$322,837	\$2,548,333	\$0	\$0	\$0	\$0	\$0	\$8,514,339
229664-3	NEW ROAD CONSTRUCTION	SR-7 FROM 60TH STREET TO NORTH LAKE BLVD.	\$0	\$0	\$0	\$0	\$0	\$0	\$0	\$0	\$246,633	\$491,107	\$86,302	\$50,671,896	\$423,025	\$126,876	\$3,078,489	\$371,436	\$55,495,764
229664-4	NEW ROAD CONSTRUCTION	SR-7 FROM SR-704/OKEECHOBEE BLVD TO 60TH STREET	\$0	\$0	\$0	\$0	\$0	\$0	\$0	\$0	\$0	\$0	\$18,018,100	\$0	\$0	\$0	\$0	\$0	\$18,018,100
229713-1	INTERCHANGE (MAJOR)	SR-80/SOUTHERN BLVD. INTERCH/STAGE 2 @ SR-807/CONGRESS AVE	\$147	\$0	\$0	\$0	\$0	\$0	\$0	\$0	\$0	\$0	\$0	\$0	\$0	\$0	\$0	\$0	\$147
229755-1	ADD TURN LANE(S)	SR-704/OKEECHOBEE BL FROM W. OF CLEARLAKE BRDG TO AUSTRAL AVE/TAMARIND	\$0	\$91,780	\$1,183,255	\$1,539,405	\$2,078,867	\$0	\$1,949	\$119,385	\$0	\$0	\$0	\$0	\$0	\$0	\$0	\$0	\$5,014,641
229765-1	TRAFFIC CONTROL DEVICES/SYSTEM	PALM BEACH CO/JPA INSTALL TRAFFIC DEVICES W/PLM BCH CO	\$10,467	\$10,969	\$900	\$0	\$0	\$0	\$0	\$0	\$0	\$0	\$0	\$0	\$0	\$0	\$0	\$0	\$22,336
229765-2	TRAFFIC CONTROL DEVICES/SYSTEM	PALM BEACH CO/JPA INSTALL TRAFFIC DEVICES	\$0	\$0	\$510,571	\$376,270	\$77,972	\$9,510	\$13,294	\$6,661	\$234	\$0	\$0	\$0	\$0	\$0	\$0	\$0	\$994,512
229771-1	INTERCHANGE (NEW)	SR-786/PGA BLVD @ SR-811 /FEC RR W OF I-95 TO FAIRCHILD	\$402,939	\$800,881	\$737,711	\$141,749	\$180,277	\$2,056	\$524	\$77,272	\$2,232,266	\$1,066,176	\$12,022	\$0	\$0	\$0	\$0	\$0	\$5,653,873
229797-1	ADD LANES & RECONSTRUCT	SR-80/SOUTHERN BLVD FROM WEST OF HAVERHILL TO W OF CONGRESS AVE	\$1,101,614	\$2,295,928	\$784,237	\$900,994	\$10,202	\$405,393	\$0	\$0	\$0	\$0	\$0	\$0	\$0	\$0	\$0	\$0	\$5,498,368
229841-1	PD&E/EMO STUDY	WESTERN BROW/PBC X FROM BROWARD/PALM BCH C/L TO GLADES RD	\$3,780	\$97,560	\$503	\$0	\$0	\$0	\$0	\$0	\$0	\$0	\$0	\$0	\$0	\$0	\$0	\$0	\$101,843
229842-1	TRAFFIC CONTROL DEVICES/SYSTEM	BOCA SIGNAL SYSTEM ENHANCE TRAFFIC SYS & OPERATIONS	\$81,000	\$85,000	\$88,950	\$0	\$0	\$0	\$0	\$0	\$0	\$0	\$0	\$0	\$0	\$0	\$0	\$0	\$254,950
229842-2	TRAFFIC CONTROL DEVICES/SYSTEM	BOCA SIGNAL SYSTEM ENHANCE TRAFFIC SYSTEM & OPERATIONS	\$0	\$0	\$0	\$94,000	\$98,000	\$103,000	\$0	\$0	\$0	\$0	\$0	\$0	\$0	\$0	\$0	\$0	\$295,000
229842-3	TRAFFIC CONTROL DEVICES/SYSTEM	BOCA SIGNAL SYSTEM TRAFFIC SIGNAL EQUIPMENT UPGRADES	\$0	\$0	\$0	\$0	\$0	\$0	\$150,076	\$150,015	\$0	\$0	\$0	\$0	\$0	\$0	\$0	\$0	\$300,091
229892-1	ADD LANES & RECONSTRUCT	SR-807/CONGRESS AVE FROM LANTANA RD TO 6 AVE S	\$18,545	\$6,344	\$1,524	\$0	\$0	\$0	\$0	\$0	\$0	\$0	\$0	\$0	\$0	\$0	\$0	\$0	\$26,413
229892-2	ADD LANES & RECONSTRUCT	CR-807/CONGRESS AVE FROM LANTANA RD TO S. OF MALALEUCA LANE	\$0	\$0	\$0	\$208	\$5,465,709	\$2,222	\$689	\$0	\$0	\$0	\$0	\$0	\$0	\$0	\$0	\$0	\$5,468,828
229895-1	NEW ROAD CONSTRUCTION	SR-710/BEEELINE HWY FROM DIXIE HWY TO SR-5/US-1/RIVIERA BCH	\$0	\$0	\$0	\$0	\$0	\$0	\$81	\$0	\$0	\$0	\$0	\$0	\$0	\$0	\$0	\$0	\$81
229895-2	PD&E/EMO STUDY	SR-710(PORT OF PBC) CONNECTION TO SR-5/US-1	\$0	\$0	\$819,973	\$26,888	\$26,396	\$32,907	\$28,256	\$0	\$0	\$0	\$0	\$0	\$0	\$0	\$0	\$0	\$934,420
229896-1	ADD LANES & RECONSTRUCT	SR-710/BEEELINE HWY FROM WEST OF AUSTRALIAN AVE TO OLD DIXIE HWY	\$7,010,136	\$1,728,532	\$2,872,037	\$1,917,058	\$543,781	\$442,663	\$3,955,413	\$8,402,313	\$5,963,331	\$597,865	\$21,339,461	\$292,906	\$882,022	\$371,232	\$863,059	\$0	\$57,181,809
229897-1	ADD LANES & RECONSTRUCT	SR-710/BEEELINE HWY FROM MILITARY TRAIL TO W. OF CONGRESS AVE	\$138,348	\$24,165,428	\$374,439	\$424,390	\$167,091	\$0	\$0	\$0	\$0	\$16,255	\$0	\$0	\$0	\$0	\$0	\$0	\$25,285,951
229897-2	ADD LANES & RECONSTRUCT	SR-710/BEEELINE HWY FROM W. OF CONGRESS AVE TO W. OF AUSTRALIAN AVE	\$57,240	\$4,363,635	\$4,324,002	\$988,901	\$2,055,494	\$7,596,265	\$14,492,373	\$850,081	\$140,849	\$2,416	\$12,204	\$0	\$0	\$0	\$0	\$0	\$34,883,460
230337-2	RIGHT OF WAY ACTIVITIES	R/W REVENUE FROM LEASES PALM BCH	\$0	\$0	\$0	\$4	\$0	\$0	\$0	\$0	\$0	\$0	\$707	\$0	\$0	\$0	\$0	\$0	\$711
231276-1	ADD LANES & RECONSTRUCT	SR-811/DIXIE HWY FROM BROW/PALM BCH CO LINE TO SW 18 ST/BOCA	\$12,847	\$71,761	\$808,574	\$9,136	\$2,529,406	\$86,327	\$14,532	\$22,107	\$0	\$0	\$0	\$0	\$0	\$0	\$0	\$0	\$3,554,690
233166-2	INTERSECTION IMPROVEMENT	SR-808/GLADES ROAD FROM SR-7 TO SR-5/US-1	\$0	\$0	\$0	\$0	\$0	\$2,704,529	\$37,418	\$19,747	\$25,127	\$1,334,319	\$109,705	\$3,392,655	\$0	\$0	\$0	\$0	\$7,623,500
403605-2	TRAFFIC SIGNALS	SR-804/BOYNTON BCH @ OLD BOYNTON RD	\$0	\$0	\$179,741	\$0	\$0	\$0	\$0	\$0	\$0	\$0	\$0	\$0	\$0	\$0	\$0	\$0	\$179,741
404739-1	TRAFFIC SIGNALS	PALM BCH JPA SIGNAL MAINTENANCE & OP ON SHS	\$695,746	\$734,718	\$770,392	\$780,937	\$806,246	\$0	\$0	\$0	\$0	\$0	\$0	\$0	\$0	\$0	\$0	\$0	\$3,788,039
404838-1	TRAFFIC CONTROL DEVICES/SYSTEM	PALM BEACH COUNTY REGIONAL ATIS PROJECT (DADE/BROWARD/PALM BCH)	\$175,000	\$175,000	\$175,000	\$47,563	\$0	\$0	\$0	\$0	\$0	\$0	\$0	\$0	\$0	\$0	\$0	\$0	\$572,563
405786-1	PRELIMINARY ENGINEERING	SR-5/WPB CORE AREA TRAFFIC CALMING DOWNTOWN WPB	\$1,500,000	\$0	\$0	\$0	\$0	\$0	\$0	\$0	\$0	\$0	\$0	\$0	\$0	\$0	\$0	\$0	\$1,500,000
408198-2	TRAFFIC CONTROL DEVICES/SYSTEM	BOCA RATON ATMS IMPLEMENTATION OF MASTER PLAN	\$250,000	\$1,127,756	\$0	\$0	\$0	\$0	\$0	\$0	\$0	\$0	\$0	\$0	\$0	\$0	\$0	\$0	\$1,377,756
408198-3	TRAFFIC CONTROL DEVICES/SYSTEM	BOCA RATON ATMS ELECTRONIC COUNTER	\$0	\$0	\$0	\$0	\$0	\$0	\$312,084	\$0	\$0	\$0	\$0	\$0	\$0	\$0	\$0	\$0	\$312,084
409701-1	ADD LANES & RECONSTRUCT	SR-704/OKEECHOBEE BL FROM SR-7/US-441 TO FL TURNPIKE	\$1,054	\$13,808,225	\$152	\$0	\$0	\$0	\$0	\$0	\$0	\$0	\$0	\$0	\$0	\$0	\$0	\$0	\$13,809,431

**Table E-7 (continued)**  
**Historical and Future FDOT Capital Improvement Expenditures for Palm Beach County, FY 2006 to FY 2021**

ITEM NO #	WORK TYPE	PROJECT DESCRIPTION	FY 2006	FY 2007	FY 2008	FY 2009	FY 2010	FY 2011	FY 2012	FY 2013	FY 2014	FY 2015	FY 2016	FY 2017	FY 2018	FY 2019	FY 2020	FY 2021	Total
409820-1	URBAN CORRIDOR IMPROVEMENTS	US-1 CORRIDOR FROM LAKE WORTH ROAD TO PGA BLVD	\$0	\$0	\$910,190	\$0	\$0	\$0	\$0	\$0	\$0	\$0	\$0	\$0	\$0	\$0	\$0	\$0	\$910,190
411073-1	PRELIM ENG FOR FUTURE CAPACITY	SR-80/MOBILITY 2000 FROM E. OF FOREST HILL BV TO W. OF CONGRESS AVE.	\$206,912	\$0	\$0	\$0	\$0	\$0	\$0	\$0	\$0	\$0	\$0	\$0	\$0	\$0	\$0	\$0	\$206,912
412489-4	TRAFFIC CONTROL DEVICES/SYSTEM	ITS EQUIPMENT FOR TRAFFIC MANAGEMENT SYSTEM OPTICOM SYSTEM	\$0	\$0	\$0	\$0	\$0	\$0	\$0	\$79,288	\$336	\$0	\$0	\$0	\$0	\$0	\$0	\$0	\$79,624
412489-5	TRAFFIC CONTROL DEVICES/SYSTEM	ITS EQUIPMENT TRAFFIC MANAGEMENT SYSTEM OPTICOM	\$0	\$0	\$0	\$0	\$0	\$0	\$0	\$0	\$15,972	\$0	\$0	\$0	\$0	\$0	\$0	\$0	\$15,972
412489-6	TRAFFIC CONTROL DEVICES/SYSTEM	ITS EQUIPMENT TRAFFIC MANAGEMENT SYSTEM OPTICOM	\$0	\$0	\$0	\$0	\$0	\$0	\$0	\$0	\$19,000	\$0	\$0	\$0	\$0	\$0	\$0	\$0	\$19,000
412489-7	ATMS - ARTERIAL TRAFFIC MGMT	SR-704/OKEECHOBEE BLVD. FROM TAMARIND AVE TO N. FLAGLER DRIVE	\$0	\$0	\$0	\$0	\$0	\$0	\$0	\$0	\$28,500	\$0	\$0	\$0	\$0	\$0	\$0	\$0	\$28,500
412489-8	TRAFFIC CONTROL DEVICES/SYSTEM	SR-A1A @ FLAGLER DRIVE	\$0	\$0	\$0	\$0	\$0	\$0	\$0	\$0	\$0	\$15,972	\$0	\$0	\$0	\$0	\$0	\$0	\$15,972
413841-1	ADD TURN LANE(S)	SR-806/ATLANTIC AVE FROM VIA FLORA TO E. OF CONGRESS AVE	\$12,314	\$81,284	\$732,888	\$84,135	\$115,212	\$139,959	\$88	\$0	\$0	\$0	\$0	\$0	\$0	\$0	\$0	\$0	\$1,165,880
415493-1	TRAFFIC SIGNALS	SR-786/PGA BLVD FROM KEW GARDENS DRIVE TO SR-5/US-1	\$3,217	\$44,703	\$0	\$0	\$0	\$0	\$0	\$0	\$0	\$0	\$0	\$0	\$0	\$0	\$0	\$0	\$47,920
416525-1	TRAFFIC CONTROL DEVICES/SYSTEM	PBC ATMS/DG #3 CAMERAS & 11 DMS SIGNS	\$638,083	\$0	\$0	\$0	\$0	\$0	\$0	\$0	\$0	\$0	\$0	\$0	\$0	\$0	\$0	\$0	\$638,083
416525-2	TRAFFIC CONTROL DEVICES/SYSTEM	PALM BEACH COUNTY ATMS DESIGN GROUP 3	\$0	\$0	\$0	\$0	\$0	\$2,843,271	\$49,329	\$6,108	\$3,650	\$0	\$6,914	\$0	\$0	\$0	\$0	\$0	\$2,909,272
416526-1	PD&E/EMO STUDY	SR-5/US-1 FROM S. GLADES RD TO N. OF YAMATO RD (BOCA)	\$50	\$2,550	\$91	\$6,890	\$1,102,335	\$20,780	\$48,911	\$3,779	\$0	\$0	\$0	\$0	\$0	\$0	\$0	\$0	\$1,185,386
417062-2	ADD TURN LANE(S)	SR-708/BLUE HERON BL @ CONGRESS AVE PHASE II	\$0	\$0	\$495,888	\$307,909	\$2,653,667	\$129,620	\$219,684	\$614,638	\$57,600	\$53	\$142,607	\$0	\$0	\$0	\$0	\$0	\$4,621,666
417737-1	TRAFFIC MANAGEMENT CENTERS	PALM BCH ITS ITS FACILITY-OPERATIONS	\$0	\$0	\$0	\$29,415	\$67,296	\$57,183	\$39,250	\$55,014	\$5,643	\$0	\$0	\$0	\$0	\$0	\$0	\$0	\$253,801
417737-2	ITS COMMUNICATION SYSTEM	PALM BEACH TMC STAFFING	\$0	\$0	\$0	\$0	\$0	\$557,277	\$1,053,262	\$1,053,262	\$0	\$0	\$0	\$0	\$0	\$0	\$0	\$0	\$2,663,801
419251-1	ADD LANES & RECONSTRUCT	SR-710/BELINE HWY FROM NORTHLAKE BLVD TO SR-708/BLUE HERON BLVD	\$0	\$0	\$0	\$0	\$0	\$0	\$0	\$0	\$0	\$3,770,031	\$30,898	\$0	\$864,705	\$1,023,538	\$100,060,599	\$0	\$105,749,771
419345-1	PD&E/EMO STUDY	SR-80 FROM CR-880 TO FOREST HILL BLVD	\$0	\$0	\$0	\$33,495	\$1,259,166	\$63,075	\$33,165	\$53	\$0	\$0	\$0	\$0	\$0	\$0	\$0	\$0	\$1,388,954
419345-2	ADD LANES & REHABILITATE PVMNT	SR-80 FROM W OF LION COUNTRY SAFARI RD TO FOREST HILL/CRESTWOOD BLVD.	\$0	\$0	\$0	\$0	\$0	\$0	\$2,359,560	\$32,338	\$644,247	\$852,495	\$1,596,185	\$2,638,899	\$48,347,304	\$698,559	\$0	\$0	\$57,169,587
419348-1	PD&E/EMO STUDY	SR-710 FROM PBC/MARTIN CO /LINE TO CONGRESS AVE	\$7,716,973	\$32,985	\$41,969	\$37,342	\$22,624	\$81,479	\$925	\$15,566	\$4,532	\$152,374	\$47,387	\$0	\$0	\$0	\$0	\$0	\$8,154,156
420356-1	INTERSECTION (NEW)	CONGRESS AVE @ INTERMODAL CENTER DELRAY	\$0	\$0	\$45,188	\$3,862	\$464,594	\$167	\$0	\$0	\$0	\$0	\$0	\$0	\$0	\$0	\$0	\$0	\$513,811
421785-1	ADD TURN LANE(S)	SR-807/CONGRESS AVE @ SR-882 FOREST HILL BLVD INTERSECTION IMPROVEMENT	\$0	\$37,158	\$0	\$0	\$0	\$0	\$0	\$0	\$0	\$0	\$0	\$0	\$0	\$0	\$0	\$0	\$37,158
421786-1	NEW ROAD CONSTRUCTION	LYONS ROAD FROM SR-804/BOYNTON BH BL TO SR-806/ATLANTIC AVE	\$0	\$753,192	\$0	\$0	\$2,477,813	\$0	\$0	\$0	\$0	\$0	\$0	\$0	\$0	\$0	\$0	\$0	\$3,231,005
422769-2	NEW ROAD CONSTRUCTION	JOG ROAD @ 45TH STREET	\$0	\$0	\$2,220,015	\$0	\$0	\$0	\$0	\$0	\$0	\$0	\$0	\$0	\$0	\$0	\$0	\$0	\$2,220,015
422837-1	RIGHT OF WAY ACTIVITIES	SR-15/FEC CORRIDOR DEMOLITION OF A STRUCTURE IN CANAL POINT	\$0	\$0	\$7,188	\$0	\$0	\$0	\$0	\$0	\$0	\$0	\$0	\$0	\$0	\$0	\$0	\$0	\$7,188
423983-1	ADD LANES & RECONSTRUCT	HYPOLUXO RD FROM JOG ROAD TO MILITARY TRAIL	\$0	\$0	\$1,875,370	\$0	\$0	\$0	\$0	\$0	\$0	\$0	\$0	\$0	\$0	\$0	\$0	\$0	\$1,875,370
425960-1	TRAFFIC CONTROL DEVICES/SYSTEM	PALM BEACH COUNTY PUSH-BUTTON CONTRACT FOR SIGNALIZATION	\$0	\$0	\$0	\$0	\$0	\$122,084	\$42,660	\$11,391	\$0	\$0	\$0	\$0	\$0	\$0	\$0	\$0	\$176,135
425960-2	TRAFFIC CONTROL DEVICES/SYSTEM	PALM BEACH COUNTY PUSH-BUTTON CONTRACT FOR SIGNALIZATION	\$0	\$0	\$0	\$0	\$0	\$0	\$0	\$567,457	\$88,057	\$54,878	\$802	\$0	\$0	\$0	\$0	\$0	\$711,194
425960-3	TRAFFIC CONTROL DEVICES/SYSTEM	PALM BEACH COUNTY PUSH-BUTTON CONTRACT FOR SIGNALIZATION	\$0	\$0	\$0	\$0	\$0	\$0	\$0	\$0	\$0	\$1,218,718	\$71,664	\$0	\$0	\$0	\$0	\$0	\$1,290,382
425960-4	TRAFFIC CONTROL DEVICES/SYSTEM	PALM BEACH COUNTY PUSH-BUTTON CONTRACT FOR SIGNALIZATION	\$0	\$0	\$0	\$0	\$0	\$0	\$0	\$0	\$0	\$0	\$0	\$1,193,033	\$0	\$0	\$0	\$0	\$1,193,033
425960-5	TRAFFIC CONTROL DEVICES/SYSTEM	PALM BEACH COUNTY PUSH-BUTTON CONTRACT FOR SIGNALIZATION	\$0	\$0	\$0	\$0	\$0	\$0	\$0	\$0	\$0	\$0	\$0	\$0	\$0	\$1,128,314	\$0	\$0	\$1,128,314
425960-6	TRAFFIC CONTROL DEVICES/SYSTEM	PALM BEACH COUNTY PUSH-BUTTON CONTRACT FOR SIGNALIZATION	\$0	\$0	\$0	\$0	\$0	\$0	\$0	\$0	\$0	\$0	\$0	\$0	\$0	\$0	\$0	\$1,186,581	\$1,186,581
427802-1	TRAFFIC SIGNALS	PALM BEACH CNTY JPA SIGNAL MAINTENANCE & OPS ON SHS	\$0	\$0	\$0	\$0	\$0	\$766,173	\$793,417	\$822,085	\$849,955	\$892,558	\$0	\$0	\$0	\$0	\$0	\$0	\$4,124,188
427802-2	TRAFFIC SIGNALS	CITY OF BOCA RATON SIGNAL MAINTENANCE & OPS ON SHS	\$0	\$0	\$0	\$0	\$0	\$76,247	\$78,545	\$80,901	\$81,882	\$0	\$0	\$0	\$0	\$0	\$0	\$0	\$317,575
427802-3	TRAFFIC SIGNALS	PALM BEACH COUNTY SIGNAL MAINTENANCE & OPERATIONS ON STATE HWY SYSTEM	\$0	\$0	\$0	\$0	\$0	\$0	\$0	\$0	\$0	\$0	\$1,562,256	\$2,285,642	\$2,354,212	\$2,424,838	\$2,497,583	\$0	\$11,124,531
427802-4	TRAFFIC SIGNALS	CITY OF BOCA RATON SIGNAL MAINTENANCE & OPERATIONS ON STATE HWY SYSTEM	\$0	\$0	\$0	\$0	\$0	\$0	\$0	\$0	\$0	\$86,465	\$0	\$0	\$0	\$0	\$0	\$0	\$86,465
427802-5	TRAFFIC SIGNALS	CITY OF BOCA RATON SIGNAL MAINTENANCE & OPS ON STATE HWY SYSTEM	\$0	\$0	\$0	\$0	\$0	\$0	\$0	\$0	\$0	\$0	\$144,400	\$212,597	\$218,975	\$225,545	\$232,311	\$239,280	\$1,273,108
428451-1	ITS COMMUNICATION SYSTEM	SR-25/US-27 FROM BROWARD/PB CO LINE TO NORTH OF SOUTH BAY	\$0	\$0	\$0	\$0	\$146,660	\$4,551	\$3,128,636	\$956	\$18,248	\$0	\$0	\$0	\$0	\$0	\$0	\$0	\$3,299,011
428468-2	PRELIMINARY ENGINEERING	PALM BEACH COUNTY MASTER DEWATERING PERMIT W/SFWM	\$0	\$0	\$0	\$0	\$4,000	\$0	\$0	\$0	\$0	\$0	\$0	\$0	\$0	\$0	\$0	\$0	\$4,000
429738-1	INTERSECTION IMPROVEMENT	SR-805/DIXIE HWY @ 12TH AVENUE SOUTH SAFETY PROJECT	\$0	\$0	\$0	\$0	\$0	\$0	\$153,538	\$48,225	\$7,716	\$713,876	\$93,421	\$0	\$0	\$0	\$0	\$0	\$1,016,776
430608-2	TRAFFIC SIGNALS	SR-882/FOREST HILL BOULEVARD AT 16TH PLACE SOUTH	\$0	\$0	\$0	\$0	\$0	\$0	\$0	\$0	\$0	\$0	\$0	\$84,730	\$0	\$461,974	\$0	\$0	\$546,704
431645-1	ADD TURN LANE(S)	SR-809/MILITARY TRAIL AT NORTHLAKE BLVD	\$0	\$0	\$0	\$0	\$0	\$0	\$0	\$100,000	\$0	\$0	\$0	\$350,000	\$0	\$0	\$0	\$0	\$450,000
431803-1	TRAFFIC SIGNALS	PALM BEACH COUNTY INSTALL PIVOTAL HANGERS ON TRAFFIC SIGNALS	\$0	\$0	\$0	\$0	\$0	\$0	\$0	\$1,395,621	\$30,445	\$0	\$0	\$0	\$0	\$0	\$0	\$0	\$1,426,066
432704-1	ADD LANES & RECONSTRUCT	SR-710/BELINE HWY FROM W. OF INDIANTOWN RD TO W. OF PRATT WHITNEY	\$0	\$0	\$0	\$0	\$0	\$0	\$0	\$71,085	\$21,452,712	\$320,470	\$22,536	\$0	\$0	\$0	\$0	\$0	\$21,866,803
432706-1	ADD LANES & RECONSTRUCT	SR-710/BELINE HWY FROM PALM BEACH/MARTIN CL TO W. OF INDIANTOWN RD.	\$0	\$0	\$0	\$0	\$0	\$0	\$0	\$7,938,812	\$1,305,456	\$4,929	\$0	\$0	\$0	\$0	\$0	\$0	\$9,249,197
432883-1	ATMS - ARTERIAL TRAFFIC MGMT	PALM BEACH COUNTY ADAPTIVE TRAFFIC CONTROL SYSTEM - NORTHLAKE	\$0	\$0	\$0	\$0	\$0	\$0	\$0	\$94,113	\$1,175,033	\$13,407	\$35,259	\$0	\$0	\$0	\$0	\$0	\$1,317,812
432883-2	ATMS - ARTERIAL TRAFFIC MGMT	ADAPTIVE TRAFFIC CONTROL SYSTEM - SR-786/PGA BLVD.	\$0	\$0	\$0	\$0	\$0	\$0	\$0	\$0	\$0	\$0	\$354,523	\$1,705,790	\$0	\$0	\$0	\$0	\$2,060,313
432883-3	ATMS - ARTERIAL TRAFFIC MGMT	INDIANTOWN ROAD FROM ISLAND WAY TO SR-5/US-1	\$0	\$0	\$0	\$0	\$0	\$0	\$0	\$0	\$0	\$0	\$0	\$520,000	\$0	\$3,401,590	\$0	\$0	\$3,921,590
433064-1	NEW ROAD CONSTRUCTION	CONGRESS AVE EXT. FROM NORTHLAKE BLVD TO ALTERNATE A1A	\$0	\$0	\$0	\$0	\$0	\$0	\$0	\$0	\$250,000	\$0	\$2,880,000	\$0	\$0	\$0	\$0	\$0	\$3,130,000
433947-1	ATMS - ARTERIAL TRAFFIC MGMT	SR-704/OKEECHOBEE BL FROM TAMARIND AVENUE TO FLAGLER DRIVE	\$0	\$0	\$0	\$0	\$0	\$0	\$0	\$31,631	\$1,121,449	\$54,074	\$11,119	\$0	\$0	\$0	\$0	\$0	\$1,218,273
434002-1	TRAFFIC OPS IMPROVEMENT	SR-704/OKEECHOBEE BL WB ON RAMP TO SR-9/1-95	\$0	\$0	\$0	\$0	\$0	\$0	\$0	\$89,584	\$282,327	\$82,155	\$0	\$0	\$0	\$0	\$0	\$0	\$454,066
434006-1	TRAFFIC OPS IMPROVEMENT	SR-808/GLADES RD FROM WB ON RAMP TO SB SR-9/1-95	\$0	\$0	\$0	\$0	\$0	\$0	\$0	\$73,258	\$269,388	\$83,345	\$0	\$0	\$0	\$0	\$0	\$0	\$425,991
435122-1	ADD LEFT TURN LANE(S)	SR-882/FOREST HILL BLVD. AT KIRK ROAD	\$0	\$0	\$0	\$0	\$0	\$0	\$0	\$0	\$0	\$251,096	\$1,634,734	\$0	\$0	\$0	\$0	\$0	\$1,885,830
435144-1	INTERSECTION IMPROVEMENT	SR-708/BLUE HERON FR. 200FT W. OF AVENUE "S" TO 200FT E. OF AVENUE "S"	\$0	\$0	\$0	\$0	\$0	\$0	\$0	\$0	\$277,388	\$113,304	\$245,261	\$924,535	\$263,428	\$51,274	\$0	\$0	\$1,875,190
435158-1	INTERSECTION IMPROVEMENT	SR-80/SOUTHERN BLVD AT SANSBURY WAY/LYONS RD.	\$0	\$0	\$0	\$0	\$0	\$0	\$0	\$0	\$0	\$810,409	\$24,446	\$40,000	\$5,116,932	\$0	\$0	\$0	\$5,991,787
435386-1	INTERSECTION IMPROVEMENT	US-27/SR-25 INTERSECTION WITH SR-80	\$0	\$0	\$0	\$0	\$0	\$0	\$0	\$0	\$80,953	\$107,159	\$785,108	\$0	\$0	\$0	\$0	\$0	\$973,220
436302-1	ADD TURN LANE(S)	SR-80/SOUTHERN BLVD. FROM PIKE ROAD TO E. OF NB TURNPIKE RAMPS	\$0	\$0	\$0	\$0	\$0	\$0	\$0	\$0	\$0	\$0	\$230,000	\$0	\$0	\$0	\$1,394,237	\$0	\$1,624,237
436307-1	INTERSECTION IMPROVEMENT	SR-80/SOUTHERN BLVD AT FOREST HILL BLVD	\$0	\$0	\$0	\$0	\$0	\$0	\$0	\$0	\$0	\$0	\$600,000	\$50,000	\$0	\$0	\$4,780,996	\$0	\$5,430,996
436318-1	ATMS - ARTERIAL TRAFFIC MGMT	SR-808/GLADES ROAD FROM BOCA RIO RD TO CORPORATE WAY	\$0	\$0	\$0	\$0	\$0	\$0	\$0	\$0	\$0	\$0	\$160,000	\$0	\$0	\$0	\$0	\$0	\$160,000
436318-2	ATMS - ARTERIAL TRAFFIC MGMT	SR-808/GLADES ROAD FROM BOCA RIO RD TO CORPORATE WAY RD	\$0	\$0	\$0	\$0	\$0	\$0	\$0	\$0	\$0	\$0	\$132,100	\$0	\$0	\$0	\$0	\$0	\$132,100
436897-1	ATMS - ARTERIAL TRAFFIC MGMT																		

**Table E-8  
Average Motor Vehicle Fuel Efficiency – Excluding Interstate Travel**

Travel			
Vehicle Miles of Travel (VMT) @			
	21.6	6.4	
Other Arterial Rural	307,851,000,000	46,140,000,000	353,991,000,000
Other Rural	313,445,000,000	30,367,000,000	343,812,000,000
Other Urban	1,436,559,000,000	86,263,000,000	1,522,822,000,000
<b>Total</b>	<b>2,057,855,000,000</b>	<b>162,770,000,000</b>	<b>2,220,625,000,000</b>

Percent VMT	
@ 21.6 mpg	@ 6.4 mpg
87%	13%
91%	9%
94%	6%
<b>93%</b>	<b>7%</b>

Fuel Consumed			
	Gallons @ 21.6 mpg	Gallons @ 6.4 mpg	
Other Arterial Rural	14,252,361,111	7,209,375,000	21,461,736,111
Other Rural	14,511,342,593	4,744,843,750	19,256,186,343
Other Urban	66,507,361,111	13,478,593,750	79,985,954,861
<b>Total</b>	<b>95,271,064,815</b>	<b>25,432,812,500</b>	<b>120,703,877,315</b>

Total Mileage and Fuel	
<b>2,220,625</b>	miles (millions)
<b>120,704</b>	gallons (millions)
<b>18.40</b>	mpg

Source: U.S. Department of Transportation, Federal Highway Administration, *Highway Statistics 2013*, Section V, Table VM-1  
 Annual Vehicle Distance Traveled in Miles and Related Data - 2013 by Highway Category and Vehicle Type  
<http://www.fhwa.dot.gov/policyinformation/statistics.cfm>

Source: See Table E-9

**Table E-9  
Annual Vehicle Distance Traveled in Miles and Related Data (2013) - By Highway Category and Vehicle Type<sup>1/</sup>**

Published January 2015											TABLE VM-1
YEAR	ITEM	LIGHT DUTY VEHICLES SHORT WB <sup>(2)</sup>	MOTOR-CYCLES	BUSES	LIGHT DUTY VEHICLES LONG WB <sup>(2)</sup>	SINGLE-UNIT TRUCKS <sup>(3)</sup>	COMBINATION TRUCKS	SUBTOTALS		ALL MOTOR VEHICLES	
								ALL LIGHT VEHICLES <sup>(2)</sup>	SINGLE-UNIT 2-AXLE 6-TIRE OR MORE AND COMBINATION TRUCKS		
2013	Motor-Vehicle Travel: (millions of vehicle-miles)										
2013	Interstate Rural	132,342	1,240	1,513	41,931	9,255	48,022	<b>174,273</b>	<b>57,277</b>	234,303	
2013	Other Arterial Rural	222,632	2,692	2,079	85,220	16,673	29,467	<b>307,851</b>	<b>46,140</b>	358,762	
2013	Other Rural	222,564	2,960	2,075	90,881	17,217	13,150	<b>313,445</b>	<b>30,367</b>	348,846	
2013	All Rural	577,538	6,891	5,667	218,032	43,144	90,640	795,569	133,784	941,912	
2013	Interstate Urban	359,386	2,550	2,144	86,257	15,510	39,462	<b>445,643</b>	<b>54,971</b>	505,309	
2013	Other Urban	1,137,534	10,925	7,356	299,024	47,929	38,334	<b>1,436,559</b>	<b>86,263</b>	1,541,102	
2013	All Urban	1,496,920	13,475	9,500	385,282	63,438	77,796	1,882,202	141,234	2,046,411	
2013	Total Rural and Urban <sup>(5)</sup>	2,074,458	20,366	15,167	603,313	106,582	168,436	2,677,771	275,018	2,988,323	
2013	Number of motor vehicles registered <sup>(2)</sup>	184,497,490	8,404,687	864,549	51,512,740	8,126,007	2,471,349	236,010,230	10,597,356	255,876,822	
2013	Average miles traveled per vehicle	11,244	2,423	17,543	11,712	13,116	68,155	11,346	25,952	11,679	
2013	Person-miles of travel <sup>(4)</sup> (millions)	2,882,221	21,937	321,544	805,997	106,582	168,436	3,688,218	275,018	4,306,717	
2013	Fuel consumed (thousand gallons)	88,611,046	467,716	2,116,657	35,158,673	14,501,958	28,794,905	123,769,719	43,296,864	169,650,956	
2013	Average fuel consumption per vehicle (gallons)	480	56	2,448	683	1,785	11,651	524	4,086	663	
2013	Average miles traveled per gallon of fuel consumed	23.4	43.5	7.2	17.2	7.3	5.8	<b>21.6</b>	<b>6.4</b>	17.6	

(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. Starting with the 2009 VM-1, an enhanced methodology was used to provide timely indicators on both travel and travel behavior changes.

(2) Light Duty Vehicles Short WB - passenger cars, light trucks, vans and sport utility vehicles with a wheelbase (WB) 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

(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) Vehicle occupancy is estimated by the FHWA from the 2009 National Household Travel Survey (NHTS); For single unit truck and heavy trucks, 1 motor vehicle mile travelled = 1 person-mile traveled.

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

**APPENDIX F**  
**Calculated Transportation Impact Fee Schedule**

## **Transportation Impact Fee Schedule**

This appendix presents the detailed impact fee calculations for each land use in the City of Palm Beach Gardens' transportation impact fee schedule.

**Table F-1  
Calculated Transportation Impact Fee Schedule**

Gasoline Tax		City Revenues:		Unit Construction Cost:		Interstate/Toll Facility Adjustment Factor:												
\$ per Gallon to Capital: \$0.091		\$0.001		\$3,399,000		33.4%												
Facility Life (Years): 25		County Revenues: \$0.020		Capacity per Lane Mile: 7,965		Cost per VMC: \$426.74												
Interest Rate: 3.00%		State Revenues: \$0.070		Fuel Efficiency: 18.40 mpg														
				Effective Days per Year: 365														
ITE LUC	Land Use	Unit	Trip Rate	Trip Rate Source	Assessable Trip Length	Total Trip Length	Trip Length Source	% New Trips	% New Trips Source	Net VMT <sup>(1)</sup>	Total Impact Cost	Annual Gas Tax	Gas Tax Credit	Net Impact Fee (System-wide)	Palm Beach County Portion <sup>(2)</sup>	Net Impact Fee (City Portion) <sup>(3)</sup>	Current Impact Fee	% Change
<b>RESIDENTIAL:</b>																		
210	Single Family (detached) Less than 1,500 sf	du	6.23	FL Studies (NHTS, AHS, Census)	6.62	7.12	FL Studies	100%	N/A	13.73	\$5,861	\$40	\$697	\$5,164	\$3,671	\$1,493	\$1,235	21%
	Single Family (detached) 1,500-2,499 sf	du	7.81	FL Studies (NHTS, AHS, Census)	6.62	7.12	FL Studies	100%	N/A	17.22	\$7,347	\$50	\$871	\$6,476	\$4,697	\$1,779	\$1,414	26%
	Single Family (detached) 2,500 sf or more	du	8.88	FL Studies (NHTS, AHS, Census)	6.62	7.12	FL Studies	100%	N/A	19.58	\$8,354	\$57	\$993	\$7,361	\$5,264	\$2,097	\$1,627	29%
220/230	Multi-Family (Apartment/Condo/Townhouse)	du	6.32	Blend ITE 9th & FL Studies (LUC 220/230)	5.10	5.60	FL Studies (LUC 220/230)	100%	N/A	10.73	\$4,580	\$32	\$557	\$4,023	\$2,916	\$1,107	\$1,235	-10%
240	Mobile Home Park	du	4.17	FL Studies	4.60	5.10	FL Studies	100%	N/A	6.39	\$2,726	\$19	\$331	\$2,395	\$1,733	\$662	\$1,235	-46%
253	Congregate Care Facility	du	2.25	FL Studies	3.08	3.58	FL Studies	72%	FL Studies	1.66	\$709	\$5	\$87	\$622	\$446	\$176	-	n/a
254	Assisted Living Facility	bed	2.66	ITE 9th Edition	3.08	3.58	Same as LUC 253 (Appendix C)	72%	Same as LUC 253 (Appendix C)	1.96	\$838	\$6	\$104	\$734	\$525	\$209	-	n/a
620	Nursing Home	1,000 sf	7.60	ITE 9th Edition	2.59	3.09	FL Studies	89%	FL Studies	5.83	\$2,490	\$19	\$331	\$2,159	\$1,557	\$602	\$178	238%
<b>TRANSIENT, ASSISTED, GROUP:</b>																		
310	Hotel	room	6.36	Blend ITE 9th & FL Studies	6.26	6.76	FL Studies	66%	FL Studies	8.75	\$3,734	\$26	\$453	\$3,281	\$2,385	\$896	\$471	90%
<b>RECREATIONAL:</b>																		
412	General Recreation	acre	2.28	ITE 9th Edition	5.11	5.61	FL Studies (Pinellas County)	90%	FL Studies (Pinellas County)	3.49	\$1,490	\$10	\$174	\$1,316	\$944	\$372	\$504	-26%
443	Movie Theater	seat	1.76	ITE 9th Edition	2.22	2.72	Same as LUC 444 (Appendix C)	88%	Same as LUC 444 (Appendix C)	1.14	\$489	\$4	\$70	\$419	\$297	\$122	\$97	26%
491	Racquet/Tennis Club	court	38.70	ITE 9th Edition	5.15	5.65	Same as LUC 710	94%	Same as LUC 492 (Appendix C)	62.39	\$26,623	\$186	\$3,239	\$23,384	\$16,942	\$6,442	\$2,260	185%
495	Recreational Community Center	1,000 sf	33.82	ITE 9th Edition	5.11	5.61	Same as LUC 412	90%	Same as LUC 412	51.79	\$22,103	\$154	\$2,682	\$19,421	\$14,053	\$5,368	-	n/a
<b>INSTITUTIONS:</b>																		
520	Elementary School (Private)	student	1.29	ITE 9th Edition	4.30	4.80	FL Studies (Pinellas County)	80%	FL Studies (Pinellas County)	1.48	\$631	\$4	\$70	\$561	\$403	\$158	-	n/a
522	Middle School (Private)	student	1.62	ITE 9th Edition	4.30	4.80	FL Studies (Pinellas County)	90%	FL Studies (Pinellas County)	2.09	\$891	\$6	\$104	\$787	\$565	\$222	-	n/a
530	High School (Private)	student	1.71	ITE 9th Edition	4.30	4.80	FL Studies (Pinellas County)	90%	FL Studies (Pinellas County)	2.20	\$940	\$7	\$122	\$818	\$601	\$217	-	n/a
540	University (7,500 or fewer students) (Private)	student	2.00	ITE Regression Analysis	6.62	7.12	Same as LUC 210	90%	FL Studies (Pinellas County)	3.97	\$1,693	\$12	\$209	\$1,484	\$1,080	\$404	-	n/a
550	University (more than 7,500 students) (Private)	student	1.50	ITE Regression Analysis	6.62	7.12	Same as LUC 210	90%	FL Studies (Pinellas County)	2.98	\$1,270	\$9	\$157	\$1,113	\$814	\$299	-	n/a
560	Church/Synagogue	1,000 sf	9.11	ITE 9th Edition	3.90	4.40	FL Studies (Pinellas County)	90%	FL Studies (Pinellas County)	10.65	\$4,544	\$33	\$575	\$3,969	\$2,872	\$1,097	\$503	118%

**Table F-1 (continued)**  
**Calculated Transportation Impact Fee Schedule**

ITE LUC	Land Use	Unit	Trip Rate	Trip Rate Source	Assessable Trip Length	Total Trip Length	Trip Length Source	% New Trips	% New Trips Source	Net VMT <sup>(1)</sup>	Total Impact Cost	Annual Gas Tax	Gas Tax Credit	Net Impact Fee (System-wide)	Palm Beach County Portion <sup>(2)</sup>	Net Impact Fee (City Portion) <sup>(3)</sup>	Current Impact Fee	% Change	
<b>INSTITUTIONS:</b>																			
565	Day Care Center	1,000 sf	71.88	Blend ITE 9th & FL Studies	2.03	2.53	FL Studies	73%	FL Studies	35.47	\$15,137	\$120	\$2,090	\$13,047	\$9,407	\$3,640	\$2,324	57%	
566	Cemetery	acre	4.73	ITE 9th Edition	6.62	7.12	Same as LUC 210	95%	Estimated	9.91	\$4,227	\$29	\$505	\$3,722	\$2,703	\$1,019	\$148	589%	
610	Hospital	1,000 sf	13.22	ITE 9th Edition	6.62	7.12	Same as LUC 210	77%	FL Studies (Pinellas County)	22.44	\$9,576	\$65	\$1,132	\$8,444	\$6,110	\$2,334	\$879	166%	
640	Animal Hospital/Veterinary Clinic	1,000 sf	32.80	FL Studies (Pinellas County)	1.90	2.40	FL Studies (Pinellas County)	70%	FL Studies (Pinellas County)	14.53	\$6,199	\$50	\$871	\$5,328	\$3,841	\$1,487	\$958	55%	
n/a	Funeral Home	1,000 sf	12.60	Palm Beach County Impact Fee Study	2.00	2.50	Palm Beach County Impact Fee Study	50%	Palm Beach County Impact Fee Study	4.20	\$1,791	\$14	\$244	\$1,547	\$1,119	\$428	\$375	14%	
<b>OFFICE &amp; FINANCIAL:</b>																			
710	Office (50,000 sf and less) <sup>(4)</sup>	1,000 sf	15.50	ITE 9th equation	5.15	5.65	FL Studies	92%	FL Studies	24.46	\$10,436	\$73	\$1,271	\$9,165	\$6,634	\$2,531	\$699	262%	
	Office (50,001 - 100,000 sf) <sup>(4)</sup>	1,000 sf	13.13	ITE 9th equation	5.15	5.65	FL Studies	92%	FL Studies	20.72	\$8,840	\$62	\$1,080	\$7,760	\$5,628	\$2,132	\$780	173%	
	Office (100,001 - 200,000 sf) <sup>(4)</sup>	1,000 sf	11.12	ITE 9th equation	5.15	5.65	FL Studies	92%	FL Studies	17.54	\$7,487	\$52	\$905	\$6,582	\$4,768	\$1,814	\$666	172%	
	Office (200,001 - 400,000 sf) <sup>(4)</sup>	1,000 sf	9.41	ITE 9th equation	5.15	5.65	FL Studies	92%	FL Studies	14.85	\$6,336	\$44	\$766	\$5,570	\$4,026	\$1,544	\$602	157%	
	Office (greater than 400,000 sf) <sup>(4)</sup>	1,000 sf	8.54	ITE 9th equation	5.15	5.65	FL Studies	92%	FL Studies	13.47	\$5,750	\$40	\$697	\$5,053	\$3,656	\$1,397	\$464	201%	
720	Medical Office (less than 10,000 sf)	1,000 sf	23.83	FL Studies	5.55	6.05	FL Studies	89%	FL Studies	39.20	\$16,727	\$116	\$2,020	\$14,707	\$10,660	\$4,047	\$1,900	113%	
	Medical Office (10,000 sf and greater)	1,000 sf	34.72	Blend ITE 9th & FL Studies	5.55	6.05	FL Studies	89%	FL Studies	57.11	\$24,371	\$169	\$2,943	\$21,428	\$15,529	\$5,899	\$1,900	211%	
<b>RETAIL:</b>																			
820	Retail (50,000 sf and less) <sup>(4)</sup>	1,000 sf	86.56	ITE 9th equation	1.87	2.37	FL Curve	56%	FL Curve	30.18	\$12,881	\$104	\$1,811	\$11,070	\$7,975	\$3,095	\$2,178	42%	
	Retail (50,001 - 200,000 sf) <sup>(4)</sup>	1,000 sf	53.28	ITE 9th equation	2.40	2.90	FL Curve	67%	FL Curve	28.53	\$12,175	\$93	\$1,619	\$10,556	\$7,615	\$2,941	\$2,115	39%	
	Retail (200,001 - 400,000 sf) <sup>(4)</sup>	1,000 sf	41.80	ITE 9th equation	2.64	3.14	FL Curve	73%	FL Curve	26.83	\$11,448	\$86	\$1,498	\$9,950	\$7,173	\$2,777	\$1,845	51%	
	Retail (400,001 - 600,000 sf) <sup>(4)</sup>	1,000 sf	36.27	ITE 9th equation	2.87	3.37	FL Curve	76%	FL Curve	26.34	\$11,242	\$84	\$1,463	\$9,779	\$7,069	\$2,710	\$1,707	59%	
	Retail (600,001 - 800,000 sf) <sup>(4)</sup>	1,000 sf	32.80	ITE 9th equation	3.10	3.60	FL Curve	79%	FL Curve	26.75	\$11,415	\$84	\$1,463	\$9,952	\$7,181	\$2,771	\$1,625	71%	
	Retail (greater than 800,000 sf) <sup>(4)</sup>	1,000 sf	30.33	ITE 9th equation	3.34	3.84	FL Curve	81%	FL Curve	27.32	\$11,660	\$85	\$1,480	\$10,180	\$7,364	\$2,816	\$1,578	79%	
841	New/Used Car Sales	1,000 sf	28.25	Blend ITE 9th & FL Studies	4.60	5.10	FL Studies	79%	FL Studies	34.19	\$14,589	\$103	\$1,794	\$12,795	\$9,265	\$3,530	\$1,657	113%	
853	Convenience Store w/Gas Pumps	1,000 sf	775.14	Blend ITE 9th & FL Studies	1.51	2.01	FL Studies	28%	FL Studies	109.13	\$46,572	\$394	\$6,861	\$39,711	\$28,539	\$11,172	\$6,503	72%	
880	Pharmacy/Drugstore without Drive-Thru	1,000 sf	90.06	ITE 9th Edition	2.08	2.58	Same as LUC 881	32%	Same as LUC 881	19.96	\$8,518	\$67	\$1,167	\$7,351	\$5,304	\$2,047	\$2,584	-21%	

**Table F-1 (continued)  
Calculated Transportation Impact Fee Schedule**

ITE LUC	Land Use	Unit	Trip Rate	Trip Rate Source	Assessable Trip Length	Total Trip Length	Trip Length Source	% New Trips	% New Trips Source	Net VMT <sup>(1)</sup>	Total Impact Cost	Annual Gas Tax	Gas Tax Credit	Net Impact Fee (System-wide)	Palm Beach County Portion <sup>(2)</sup>	Net Impact Fee (City Portion) <sup>(3)</sup>	Current Impact Fee	% Change	
<b>RETAIL:</b>																			
881	Pharmacy/Drugstore with Drive-Thru	1,000 sf	98.28	Blend ITE 9th & FL Studies	2.08	2.58	FL Studies	32%	FL Studies	21.78	\$9,296	\$73	\$1,271	\$8,025	\$5,637	\$2,388	\$2,584	-8%	
890	Furniture Store	1,000 sf	5.06	ITE 9th Edition	6.09	6.59	FL Studies	54%	FL Studies	5.54	\$2,365	\$16	\$279	\$2,086	\$1,514	\$572	\$164	249%	
911	Bank/Savings Walk-In	1,000 sf	121.30	ITE 9th Edition	2.46	2.96	Same as LUC 912	46%	Same as LUC 912	45.71	\$19,506	\$149	\$2,595	\$16,911	\$12,200	\$4,711	\$3,219	46%	
912	Bank/Savings Drive-In	1,000 sf	159.34	Blend ITE 9th & FL Studies	2.46	2.96	FL Studies	46%	FL Studies	60.04	\$25,623	\$196	\$3,413	\$22,210	\$16,030	\$6,180	\$3,219	92%	
931	Quality Restaurant	1,000 sf	91.10	Blend ITE 9th & FL Studies	3.14	3.64	FL Studies	77%	FL Studies	73.35	\$31,300	\$230	\$4,005	\$27,295	\$19,714	\$7,581	\$3,968	91%	
932	High-Turnover Restaurant	1,000 sf	116.60	Blend ITE 9th & FL Studies	3.17	3.67	FL Studies	71%	FL Studies	87.39	\$37,293	\$274	\$4,771	\$32,522	\$23,501	\$9,021	\$7,283	24%	
934	Fast Food Restaurant with Drive-Thru	1,000 sf	511.00	Blend ITE 9th & FL Studies	2.05	2.55	FL Studies	58%	FL Studies	202.32	\$86,340	\$682	\$11,876	\$74,464	\$53,653	\$20,811	\$3,740	456%	
941	Quick Lube	bay	40.00	ITE 9th Edition	3.62	4.12	Same as LUC 942	72%	Same as LUC 942	34.72	\$14,815	\$107	\$1,863	\$12,952	\$9,367	\$3,585	\$1,170	206%	
942	Automobile Care Center	1,000 sf	31.43	Blend ITE 9th & FL Studies	3.62	4.12	FL Studies	72%	FL Studies	27.28	\$11,641	\$84	\$1,463	\$10,178	\$7,350	\$2,828	\$356	694%	
944	Gas/Service Station	fuel pos.	168.56	ITE 9th Edition	1.90	2.40	FL Studies	23%	FL Studies	24.53	\$10,468	\$84	\$1,463	\$9,005	\$6,492	\$2,513	\$1,478	70%	
945	Gas/Service Station with Convenience Market	fuel pos.	162.78	ITE 9th Edition	1.90	2.40	Same as LUC 944	23%	Same as LUC 944	23.69	\$10,109	\$81	\$1,410	\$8,699	\$6,257	\$2,442	\$1,478	65%	
947	Car Wash	bay	43.94	Blend ITE 9th & FL Studies	2.18	2.68	FL Studies	68%	FL Studies	21.69	\$9,256	\$72	\$1,254	\$8,002	\$5,771	\$2,231	\$2,439	-9%	
<b>INDUSTRIAL:</b>																			
110	General Light Industrial	1,000 sf	6.97	ITE 9th Edition	5.15	5.65	Same as LUC 710	92%	Same as LUC 710	11.00	\$4,693	\$33	\$575	\$4,118	\$2,983	\$1,135	\$375	203%	
150	Warehousing	1,000 sf	3.56	ITE 9th Edition	5.15	5.65	Same as LUC 710	92%	Same as LUC 710	5.62	\$2,397	\$17	\$296	\$2,101	\$1,521	\$580	\$197	194%	
151	Mini-Warehouse	1,000 sf	2.15	Blend ITE 9th & FL Studies	3.10	3.60	FL Studies (Pinellas County)	92%	Same as LUC 710	2.04	\$871	\$6	\$104	\$767	\$550	\$217	\$130	67%	

(1) Source: 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) Source: Palm Beach County Impact Fee Update Study, DRAFT Report, July 2015; Tindale Oliver

(3) Net Impact Fee (System-wide) minus the Palm Beach County Portion (Item 2)

(4) The trip generation rate recommended for office and retail use an end-point regression value

Note: For the residential fee comparison, the current adopted fee for the square footage grouping (801-1,399 sf) was used for the Single Family less than 1,500 sf, Mobile Home, and Multi-Family. The square footage grouping (1,400-1,999 sf) was used to compare the (1,500 to 2,500 sf) impact fee and (2,000-3,599 sf) was used to compare the greater than 2,500 sf impact fee.