Transportation Advisory Board Regular Meeting

Agenda

October 18, 2021 @ 4:00 pm

Virtual Meeting

welcome

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assistance & appeals

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please note

Times are projected and subject to change.

agenda	time

1. **Call to Order**
2. **Consent Agenda**
   a. Approval of the September 20, 2021 Meeting Minutes. — 1 minute
3. **Staff Updates**
   a. Winter Park Police Department — 5 minutes
   b. Transportation Projects — 10 minutes
   c. Bike Five Cities — 5 minutes
   d. FDOT Projects — 5 minutes
4. **Public Comments (for items not on the agenda): Three minutes allowed for each speaker**
5. **Non-Action Items**
   a. Multi-Modal Transportation Impact Fee — 40 minutes
6. **Action Items**
7. **Board Comments**
8. **Adjournment**

Transportation Advisory Board

agenda item

item type Consent Agenda	meeting date October 18, 2021
prepared by Mary Bush	approved by
board approval Completed	
strategic objective	

subject

Approval of the September 20, 2021 Meeting Minutes.

motion / recommendation

background

alternatives / other considerations

fiscal impact

ATTACHMENTS:

TAB - September 20 2021 Draft Minutes.pdf

Transportation Advisory Board Minutes

September 20, 2021 at 04:00 p.m.

Virtual Meeting
Winter Park, Florida

Call to Order

Chairman Alexander Trauger called the virtual meeting to order at 4:02 p.m. Present: Alexander Trauger, Rachel Andre, Katie Reischmann, Mira Lines, Michael Sasse, Jeffrey Osleeb, and Jeffrey Sievers. Also Present: Keep Winter Park Beautiful and Sustainable Board Member Kay Hudson. Staff: Transportation Manager Sarah Walter, Transportation Planner Keith Moore, Engineer I Hongmyung Lim, Director of Communications and Public Engagement Clarissa Howard, Sustainability Planner Vanessa Balta, Sustainability Specialist Agnieszka Tarnawska, Police Sergeant Jeff Marcum, Planning Specialist Aaron Hull, and Recording Secretary Mary Bush.

Consent Agenda

Motion made by Jeffrey Sievers, seconded by Katie Reischmann to approve the August 16, 2021 meeting minutes.

Motion carried unanimously with a 7-0 vote.

Staff Updates

A. Transportation Projects Update

a. Morse Boulevard, Library, and Civic Center - Mr. Moore reported that construction is under way for the pedestrian crossings and reconstruction of the center median on the north and south side of Morse Boulevard. The crossings will be wheelchair accessible crossings and six Rapid Rectangular Flashing Beacons (RRFB) will also be placed in the area. Mr. Moore presented photos of the construction work that has been taking place for the project. He noted that additional RRFB crossings will be placed on Denning Drive and Canton Avenue.

The Board inquired about whether the Morse Boulevard RRFBs were overhead or single post mounted on the median side and outside of the traffic lanes, if there were pavement markings on the multi lane crosswalks, and if lighting was included in the pedestrian crosswalk refuge areas.

b. New York Streetscape Project – Mr. Lim reported that the anticipated start date of phase 1 of the project, which is the upgrading of span wire to mast arm poles at the Fairbanks Avenue and New York Avenue intersection, is October 11, 2021 and the work will take about 4 months to complete. He noted that phase 2 will cover sections from Fairbanks Avenue to Canton Avenue.

c. Killarney Estates Parklet Project – Mr. Lim reported that by the end of September the Electric Utilities department should be installing all of the required electric poles and lighting as well as undergrounding overhead utilities in the project area. After September, the Parks and Recreation department will complete restoration and installation of benches and the addition of any trees that they may see fit for the project area.

d. Multi-Modal Transportation Impact Fee – Mrs. Walter reported that the City is working with Kimley Horn to draft the document showing all of the calculations and the Dual Rational Nexus test behind the fee in order to bring it to the City Commission. The Multi-Modal Transportation Impact Fee is a development fee used as funding for impacts to the City's transportation network by new development and which, in turn, helps improve capacity throughout the City. Mrs. Walter noted that staff is being expeditious with the process so that will align with the reading of the Orange Avenue Overlay District (OAO).

Brief discussion ensued regarding the expected time frame of the plan to move through the City Commission. Mrs. Walter noted that the Multi-Modal Transportation Impact Fee topic would be brought back to the Transportation Advisory Board for further review at the next regular Board meeting on October 18, 2021. Chairman Trauger recommended reaching out for more perspective to Mary Moskowitz who is currently working on a mobility fee for Seminole County.

Public Comments (for items not on Agenda)

No one from the public wished to speak. The public hearing was closed.

Non-Action Items

1. Sustainability Action Plan Update

Ms. Balta provided an update to the Sustainability Action Plan (SAP). She mentioned that Kay Hudson, a Board Member of the Keep Winter Park Beautiful and Sustainable Board; Clarissa Howard, the City's Director of Communications and Public Engagement; and Agnieszka Tarnawska, the City's Sustainability Specialist were present for the meeting. Ms. Balta noted that the SAP update from the 2015 version will essentially revise the baseline where necessary to have more complete and accurate data. A new category related to climate resiliency and racial equity actions is included. The update also includes discussion and feedback received from various joint work sessions, follow up discussion with City staff, and public comments from community members. Ms. Balta added that the City had received over 200 responses, mostly from persons who identified as residents of the City and community organizations. The SAP update includes research related to the SAP of the State of Florida and the Southeast to better align with Orlando and Orange County. Ms. Balta indicated that the SAP update would allow for setting long term objectives including building resilience, having a more livable Winter Park, reducing greenhouse emissions related to those produced through transportation, improving our environment for vehicle alternatives such as biking and walking, mixed use of land, establishing benefits related to air quality, creating a more human scale and quiet environment, and providing education to residents, visitors and businesses. Ms. Balta advised that targets will be set and tracked over time and will be aligned with the Transportation Master Plan. She reviewed with the Board a list of actions related to Transportation that would span the next four years to help meet the long term goals of the SAP.

Ms. Balta addressed the Board's inquiries regarding the following:

- consideration for lane repurposing, roundabouts, and speed management,
- a master plan for electric charging stations,
- and plans for an autonomous electric shuttle.
- Discussion ensued with the Board regarding the following:
- whether or not the SAP will come back before the Transportation Advisory Board for action,
- if there had been discussion about any changes to the land development code to make it a mandate for private developers to increase safety and ease of walking and cycling through the site plan process,
- the reason for not taking a proactive approach to the location of electric charging stations,
- identifying locations for electric vehicle charging stations that are strategically important for residents and visitors,
- whether or not the improved transit stop will be mostly a partnership with the Lynx bus service,
- if the City has any jurisdiction as to what residential owners can do regarding tress on their private property,
- if the approach to the performance measures focused on more on outputs rather than outcome because of the necessary data,
- and the transit stop facilities needing improved service.

Ms. Hudson addressed the Board and expressed that the electric vehicle readiness ordinance that was recently passed in the City will increase the availability of charging stations on commercial property and will increase

the overall number of charging stations and availability as time goes by. She noted that it would be great to have more electric transit working through the City and the Transportation Advisory Board can explore it more as they develop their own action plan.

2. Transportation Master Plan

Mrs. Walter provided a brief overview of the Transportation Master Plan. She reviewed the definition of a transportation master plan and presented the preliminary outline to the Board.

The outline included the following sections:

- Introduction - Transportation Master Plan Organization, Purpose, Safety, and Guidance Documents and Regulations
- Existing Modes of Transportation - Active Transportation, Transit, and Vehicles
- Citizen Requests and Policies - Sidewalk Policy, Speed Management and Traffic Calming Policy, Brick Streets Policy, and Multimodal Impact Fee
- Technology and Emerging Technology - Rectangular Rapid Flashing Beacons, Intelligent Transportation Systems, and GPS Navigation Applications
- Projects - Pedestrian and Bicycles, Transit Improvements, and Roadways

Discussion ensued with the Board regarding the following:

- guidelines for coordination with neighboring towns and cities,
- inclusion of small electric buses that can connect areas of the City and reduce the need for parking,
- the anticipated time-frame for the plan,
- the goal to create a list of potential projects for various areas and their costs,
- including discussion on round-a-bouts and identifying candidate locations,
- and having a priority list in the plan to help in partnering with and tying into projects by the Florida Department of Transportation.

Mrs. Walter noted that language regarding coordinating with neighboring towns and cities could be added to the introduction of the plan and that it may possibly become a 20 year plan. She also noted that if a round-a-bout fits and it is the appropriate solution for a particular issue at a certain intersection, then it can be considered as an option.

Chairman Trauger recommended looking at the matter of electric buses regionally as well as considering the shorter trip circulation. He also recommended that for the Transportation Master Plan there be a focus on constraints and more openness to creative ideas. He suggested that the ADA Transition Plan be included with policy and how the City is investing based on the ADA Public Right-of-Way Plan. He also suggested that transportation security, the decorative bike rack policy, and bicycle way finding be included in the master plan. Chairman Trauger briefly inquired about if the five year paving program was already a very quantitative process based on schedules or a phone call based approach to pavement management and if the Transportation Master Plan would be taken to any other bodies for review and response.

Chairman Trauger requested for the Board to be provided a timeline and schedule for the review of the elements of the master plan.

Ms. Andre requested for the Board to receive updated document copies of the master plan as revisions are made.

Action Items

No Action Items

Board Comments

No Board Comments

Adjournment

Meeting adjourned at 5:30 p.m.

/s/ Mary Bush.

Transportation Advisory Board

agenda item

item type Staff Updates	meeting date October 18, 2021
prepared by Sarah Walter	approved by
board approval Completed	
strategic objective	

subject
Winter Park Police Department

motion / recommendation

background

alternatives / other considerations

fiscal impact

Transportation Advisory Board

agenda item

item type Staff Updates	meeting date October 18, 2021
prepared by Sarah Walter	approved by Bronce Stephenson
board approval Completed	
strategic objective	

subject
Transportation Projects

motion / recommendation

background

alternatives / other considerations

fiscal impact

Transportation Advisory Board

agenda item

item type Staff Updates	meeting date October 18, 2021
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subject
Bike Five Cities

motion / recommendation

background

alternatives / other considerations

fiscal impact

Transportation Advisory Board

agenda item

item type Staff Updates	meeting date October 18, 2021
prepared by Sarah Walter	approved by
board approval	
strategic objective	

subject
FDOT Projects

motion / recommendation

background

alternatives / other considerations

fiscal impact

Transportation Advisory Board

agenda item

item type Non-Action Items	meeting date October 18, 2021
prepared by Sarah Walter	approved by Bronce Stephenson
board approval Completed	
strategic objective	

subject
Multi-Modal Transportation Impact Fee

motion / recommendation

background
The City Commission requested Staff to develop a Multi-Modal Transportation Impact Fee for new development within the City of Winter Park. A Multi-Modal Transportation Impact Fee would require new development to fund infrastructure necessitated by new growth. City Staff retained Kimley-Horn and Associates, Inc. to prepare the Multi-Modal Transportation Impact Fee Report for the City (see attached).

In meeting with Kimley-Horn, it was determined that the City of Winter Park would implement a fee which is similar to the Orange County Multi-Modal Transportation Impact Fee (currently referred to as their Urban Transportation Impact Fee). In the report, Kimley-Horn ensures that the calculation of the impact fee is based on the most recent and localized data by utilizing the most recent data included in the Orange County Transportation Impact Fee Update Study (dated September 11, 2020).

The revenue generated from these fees can be used solely for the purpose of acquisition, expansion and development (including any studies) of the transportation facilities determined to be necessary to serve new development (more detail is provided in the report prepared by Kimley-Horn).

The City Attorney prepared the ordinance for the Multi-Modal Transportation Impact Fee (see attached).

alternatives / other considerations

fiscal impact

ATTACHMENTS:
Multi-Modal Transportation Impact Fee Report

ATTACHMENTS:

City of Winter Park Ordinance adopting Multi-modal Transportation Impact Fee REV 10-6-21.docx

Multi-Modal Transportation Impact Fee

Report

City of Winter Park, Florida

September 2021

Kimley»Horn

CONTENTS

TABLES

APPENDICES

1.0 INTRODUCTION

The City of Winter Park desires to develop and implement a Multi-Modal Transportation Impact Fee Ordinance which will require new development to fund infrastructure necessitated by new growth. Requirements for implementing this fee are described in the Florida Impact Fee Act, FS 163.31801. The City of Winter Park intends to implement a fee which is similar to the Orange County Multi-Modal Transportation Impact Fee (currently referred to as their Urban Transportation Impact Fee).

1.1 LEGAL REQUIREMENTS

The Florida Impact Fee Act identifies the minimum requirements for implementing an impact fee. Many of these requirements will be satisfied by the City of Winter Park, separate from this study. Requirements to be addressed by this study are identified using bold text. Requirements include:

- ***Ensure that the calculation of the impact fee is based on the most recent and localized data***. This will be achieved by using the most recent data included in the Orange County Transportation Impact Fee Update Study, dated September 11, 2020.
- *Provide for accounting and reporting of impact fee collections and expenditures and account for the revenues and expenditures of such impact fee in a separate accounting fund*. This will be accomplished by the City of Winter Park.
- *Limit administrative charges for the collection of impact fees to actual costs*. This will be accomplished by the City of Winter Park.
- *Provide notice at least 90 days before the effective date of an ordinance or resolution imposing a new or increased impact fee. A local government is not required to wait 90 days to decrease, suspend, or eliminate an impact fee. Unless the result is to reduce the total mitigation costs or impact fees imposed on an applicant, new or increased impact fees may not apply to current or pending permit applications submitted before the effective date of a new or increased impact fee*. This will be accomplished by the City of Winter Park.
- *Ensure that collection of the impact fee may not be required to occur earlier than the date of issuance of the building permit for the property that is subject to the fee*. This will be accomplished by the City of Winter Park.
- ***Ensure that the impact fee is proportional and reasonably connected to, or has a rational nexus with, the need for additional capital facilities and the increased impact generated by the new residential or commercial construction***. This will be addressed in this study.
- *Ensure that the impact fee is proportional and reasonably connected to, or has a rational nexus with, the expenditures of the funds collected and the benefits accruing to the new residential or nonresidential construction*. This will be accomplished by the City of Winter Park.
- *Specifically earmark funds collected under the impact fee for use in acquiring, constructing, or improving capital facilities to benefit new users*. This will be accomplished by the City of Winter Park.
- *Ensure that revenues generated by the impact fee are not used, in whole or in part, to pay existing debt or for previously approved projects unless the expenditure is reasonably connected to, or has a rational nexus with, the increased impact generated by the new residential or nonresidential construction*. This will be accomplished by the City of Winter Park.

1.2 STUDY APPROACH

As noted above, the methodology for the Winter Park Multi-Modal Transportation Impact Fee will follow the methodology used by Orange County for their Multi-Modal Transportation Impact Fee. Relevant portions of the 2020 Orange County Transportation Impact Fee are provided in **Appendix A**.

As part of the 2012 Update for Orange County's Transportation Impact Fee, a new and separate multi-modal fee rate was calculated for the more urbanized parts of the county. This new multi-modal fee included costs for bicycle/pedestrian and transit facilities and therefore expanded the types of improvements which can be implemented with the fees.

Orange County's 2020 Transportation Impact Fee Study updated the Multi-Modal Transportation Impact Fee, which was subsequently referenced as the Urban Transportation Impact Fee. These fees are included in Orange County's current Impact Fee Ordinance, which specifies that revenues from these fees can be used solely for the purpose of acquisition, expansion, and development (including any studies) of the transportation facilities determined to be necessary to serve new development including, but not limited to:

- Design and construction plan preparation
- Right-of-way acquisition
- Construction of new through lanes
- Construction of new turn lanes
- Construction of new bridges
- Construction of new drainage facilities in conjunction with new roadway construction
- Purchase and installation of traffic control devices
- Construction of new curbs, medians, and shoulders
- Conservation area mitigation
- Compensating storage
- Sidewalks (not built as part of construction of a road improvement)
- Transit shelters
- Park and ride lots
- Lighting
- Landscaping
- Pedestrian bridges
- Intelligent Transportation Systems (ITS)
- Other mobility improvements

2.0 METHODOLOGY

The methodology for calculating the Multi-Modal Transportation Impact Fee uses a consumption-based impact fee approach where new development pays the cost of the transportation capacity which it consumes.

Recognizing that as development traffic consumes capacity, they are also paying gas taxes, some of which are used to provide capacity. Therefore, a credit for this is included in the calculation. The basic equation is:

Fee = (Capacity Consumed x Cost of Capacity) – Credit

There are several factors that are used to determine capacity consumed, or demand, including:

- Trip generation rate
- Trip length
- Percent new trips

Similarly, there are several factors that are used to determine the cost of capacity, or cost, including:

- Multi-modal roadway cost per added lane mile
- Multi-modal capacity per lane mile

Credit variables include:

- Gas tax credit
- Fuel efficiency
- Ad Valorem credit

The actual calculation is more complex, but broken down into individual steps below:

Fee = (Capacity Consumed x Cost of Capacity) – Credit

Where:

- **Capacity Consumed** = ([Trip Rate x Assessable Trip Length x % New Trips] / 2) x (1 - Interstate & Toll Facility Discount Factor)
- **Cost of Capacity** = Cost per Added Lane Mile / Average Vehicle-Capacity Added per Lane Mile
- **Credit** = Present Value Gas Tax Credit + Present Value of Ad Valorem Credit, given 4.0% interest rate and a 25-year facility life
- Trip Rate = the average daily trip generation rate for the type of development (land use) proposed, in vehicle-trips/day
- Assessable Trip Length = the average trip length on collector roads or above, for the land use category, in miles (this excludes travel on local neighborhood roads).
- 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

- % New Trips = adjustment factor to account for pass-by trips associated with the proposed land use that are already on the roadway
- Divide by 2 = the total daily miles of travel generated by a particular land use category 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 travel demand occurring on interstate highways and/or toll facilities
- Cost per Added Lane Mile = unit cost to construct one lane mile of roadway, including multi-modal elements, in $/lane-mile.
- Average Vehicle-Capacity Added per Lane Mile = represents the average daily traffic on one travel lane at capacity for one lane mile of roadway, in vehicles/lane-mile/day
- Cost per Vehicle-Mile of Capacity = Cost per added lane mile divided by average capacity added per lane mile
- $Tax/Gallon to Capital = the amount of equivalent gas tax revenue per gallon of fuel that is used for capital improvements, in $/gallon
- Fuel Efficiency = average fuel efficiency of vehicles, in vehicle-miles/gallon
- 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 4.00% interest and a 25-year facility life, the uniform series present worth factor is 15.6221
- Effective Days per Year = 365 days
- Annual Gas Tax Credit = ([Trip Rate x Total Trip Length x % New Trips] / 2) x (Effective Days per Year x $Tax/Gallon to Capital) / Fuel Efficiency
- Ad Valorem Credit = present value of the amount of ad valorem taxes used toward transportation capacity, calculated based on the average property value of each land use

2.1 CAPACITY CONSUMED

The following variables are considered when determining the capacity consumed:

- Trip Rate
- Assessable Trip Length
- Percent New Trips
- Interstate & Toll Facility Discount Factor

These variables are explained below, as well as the values identified in the 2020 Orange County Transportation Impact Fee Update Study, where applicable. The actual values by land use are identified in **Section 3.0** of this report.

Trip Rate

The Multi-Modal Transportation Impact Fee will be applied based on the type of land use proposed. Various types of land uses generate different trip rates. The trip rates for the 2020 Orange County Transportation Impact Fee Update Study are from two sources:

- Trip characteristics studies previously conducted throughout Florida
- The Institute of Transportation Engineers' (ITE) Trip Generation Handbook (10th edition)

Assessable Trip Length

Various types of land uses have different trip lengths. The Assessable Trip Length is the average trip length, by land use, on collector roads or above, expressed in miles. This length was identified for each land use category based on a database of studies conducted in Florida, as well as travel demand models for the Central Florida area. The Orange County Transportation Impact Fee Update Study identified that trip lengths in Orange County are typically longer when compared to other Florida counties. Therefore, residential and office trip lengths were increased by 25 percent, and lodging, recreational, institutional, retail, and industrial trip lengths were increased by five percent.

Percent New Trips

Percent New Trips recognizes that different types of land uses generate different percentages of new trips. Typically, all (100%) trips generated by new residential development are new trips. However, other uses, like retail, attract some trips that are already traveling on the surrounding roadway network. Since these pass-by trips are already on the road, they do not consume additional capacity.

Interstate & Toll Facility Discount Factor

Recognizing that interstate and toll facilities are not funded through impact fees, travel on these facilities are removed from the calculation of the Multi-Modal Transportation Impact Fee. Based on information in the 2020 Orange County Transportation Impact Fee Update Study, an Interstate & Toll Facility Discount Factor of 36.1 percent was used.

2.2 COST OF CAPACITY

The following variables are considered when determining the cost of capacity, which is expressed as cost per vehicle mile of capacity:

- Cost per Added Lane Mile
- Average Vehicle-Capacity Added per Lane Mile
- Cost per Vehicle Mile of Capacity

These variables are explained below, as well as the values identified in the 2020 Orange County Transportation Impact Fee Update Study, where applicable. The actual values by land use are identified in **Section 3.0** of this report.

Cost per Added Lane Mile

The 2020 Orange County Transportation Impact Fee Update Study considered recently completed and ongoing local projects to identify and provide supporting cost data for multi-modal transportation improvements. This included:

- Design Costs
- Right-of-Way Costs
- Construction Costs
- Bicycle and Pedestrian Facility Costs
- Transit Capital Costs
- Construction Engineering and Inspection

Based on this information, it was concluded that the cumulative cost of constructing one multi-modal lane mile is $4,540,000.

Average Vehicle-Capacity Added per Lane Mile

The average vehicle-capacity per lane within an urban area, such as Winter Park, is 9,000 vehicles.

Cost per Vehicle Mile of Capacity

Considering the cost per added lane mile of $4,540,000 and the average vehicle-capacity added per lane mile of 9,000, the Cost per Vehicle mile of Capacity is $504.44 ($4,540,000/9,000).

2.3 CREDIT

The following variables are considered when determining the credit:

- $Tax/Gallon to Capital
- Fuel Efficiency
- Effective Days per Year
- Ad Valorem Credit
- Present Value

These variables are explained below, as well as the values identified in the 2020 Orange County Transportation Impact Fee Update Study, where applicable. The actual values by land use are identified in **Section 3.0** of this report.

$Tax/Gallon to Capital

Each gallon of gas purchased includes taxes, a portion of which are used for expansion of the transportation system (i.e., capital improvements). After considering all sources, the 2020 Orange County Transportation Impact Fee Update Study determined that $0.197 per gallon of gas is used for capital improvements.

Fuel Efficiency

Since the above gas tax credit is based on the trip lengths associated with various uses, the fuel efficiency is necessary to convert the tax per gallon into tax per mile credit. The 2020 Orange County Transportation Impact Fee Update Study determined that the fuel efficiency is 18.92 miles per gallon.

Effective Days per Year

Orange County assumed that travel for all land uses is 365 effective days per year. While this is higher than for some land uses, it was considered conservative because it may provide some land uses a slightly higher credit.

Ad Valorem Credit

Recognizing that Orange County uses a portion of Ad Valorem Tax revenues for roadway capacity expansion improvements and multi-modal improvements, a credit was identified for each land use. The present value for the Ad Valorem Credit for each land use is identified in **Section 3.0**. Calculations of the Ad Valorem Tax revenues are provided in Appendix D of **Appendix A**.

Present Value

The 2020 Orange County Transportation Impact Fee Update Study used a present value calculation to identify the present value of future tax credits. A facility life of 25 years was assumed, along with 365 days per year for the gas tax credit. The interest rate was assumed to be 4.0%, based on information provided by Orange County. This translates to a uniform series present worth factor of 15.6221.

3.0 CALCULATED MULTI-MODAL TRANSPORTATION IMPACT FEE

Using the methodology described in Section 2.0, the Multi-Modal Transportation Impact Fee was calculated for various land use categories, as identified in **Table 3-1**.

An example impact fee rate calculation for a 40,000 square foot gross leasable area (sfgla) retail store, ITE Land Use Code (LUC) 820, is provided below.

Fee = (Capacity Consumed x Cost of Capacity) – Credit

Where:

- **Capacity Consumed** = ([Trip Rate x Assessable Trip Length x % New Trips] / 2) x (1-Interstate & Toll Facility Discount Factor)
- **Cost of Capacity** = Cost per Added Lane Mile / Average Vehicle-Capacity Added per Lane Mile
- **Credit** = Present Value Annual Gas Tax Credit + Present Value Ad Valorem Credit, given 4.0% interest rate and a 25-year facility life

The individual variables for ITE LUC 210 are identified below:

- Trip Rate = the average daily trip generation rate for the type of development (land use) proposed, in vehicle-trips/day (75.05 per 1,000 sfgla)
- Assessable Trip Length = the average trip length on collector roads or above, for the land use category, in miles (1.96) (this excludes travel on local neighborhood roads).
- 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 (1.96 + 0.50 = 2.46)
- % New Trips = adjustment factor to account for trips associated with the proposed land use that are already on the roadway (56%)
- Divide by 2 = the total daily miles of travel generated by a particular land use 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 travel demand occurring on interstate highways and/or toll facilities (36.1%)
- Cost per Added Lane Mile = unit cost to construct one lane mile of roadway, including multi-modal elements, in $/lane-mile ($4,540,000)
- Average Vehicle-Capacity Added per Lane Mile = represents the average daily traffic on one travel lane at capacity for one lane mile of roadway, in vehicles/lane-mile/day (9,000)
- Cost per Vehicle-Mile of Capacity = Cost per added lane mile divided by average capacity added per lane mile ($4,540,000 / 9,000 = $504.44)
- $Tax/Gallon to Capital = the amount of equivalent gas tax revenue per gallon of fuel that is used for capital improvements, in $/gallon ($0.197)
- Fuel Efficiency = average fuel efficiency of vehicles, in vehicle-miles/gallon (18.92)

- 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 4.00% interest and a 25-year facility life, the uniform series present worth factor is 15.6221
- Effective Days per Year = 365 days
- Annual Gas Tax Credit = ([Trip Rate x Total Trip Length x % New Trips] / 2) x (Effective Days per Year x $Tax/Gallon to Capital) / Fuel Efficiency ([75.05 * 2.46 * 0.56] /2) * 365 * ($0.197 /18.92) = $196
- Ad Valorem Credit = present value of the amount of ad valorem taxes used toward transportation capacity, calculated based on the average property value of each land use ($163.00)

Thus, the calculation of the fee is:

- **Capacity Consumed** = ([Trip Rate x Assessable Trip Length x % New Trips] / 2) x (1 - Interstate & Toll Facility Discount Factor)

  ([75.05 * 1.96 * 0.56] /2) * (1 - 0.361) = 26.319

- **Cost of Capacity** = Cost per Added Lane Mile / Average Vehicle-Capacity Added per Lane Mile

  ($4,540,000 / 9,000) = $504.44

- **Credit** = Present Value Annual Gas Tax Credit + Present Value Ad Valorem Credit, given 4.0% interest rate and a 25-year facility life

  ($196 * 15.6221) + $163 = $3,225

- **Fee = (Capacity Consumed x Cost of Capacity) – Credit**

  (26.319 x $504.44) - $3,225 = $10,051 per 1,000 sfgla

The total Multi-Modal Transportation Impact Fee for a 40,000 sfgla retail store would be:

40,000 / 1,000 * $10,051 = $402,040

Table 3-1: Calculation of Winter Park Multi-Modal Transportation Impact Fee

Variable Factors and Fee Calculations. See Non-Variable Factors at end of table.

ITE LUC	Land Use	Unit	Trip Rate	Assess-able Trip Length	Total Trip Length	% New Trips	Capacity Con-sumed	Cost of Capacity	Annual Gas Tax Credit	Ad Valorem Credit	Credit	Fee
	Residential											
210	Single Family (Detached): ≤ 1,200 sf	DU	6.15	8.28	8.78	100	16.27	$504.44	$103	$173	$1,782	$6,425
210	Single Family (Detached): 1,201-2,000 sf	DU	7.81	8.28	8.78	100	20.66	$504.44	$130	$173	$2,204	$8,218
210	Single Family (Detached): 2,001-3,500 sf	DU	9.63	8.28	8.78	100	25.48	$504.44	$161	$173	$2,688	$10,163
210	Single Family (Detached): > 3,500 sf	DU	10.07	8.28	8.78	100	26.64	$504.44	$168	$173	$2,798	$10,640
220	Multi-Family Housing/Townhouse (Low-Rise, 1-2 floors)	DU	7.32	6.38	6.88	100	14.92	$504.44	$96	$90	$1,590	$5,937
221	Multi-Family Housing (Mid-Rise, 3-10 floors)	DU	5.44	6.38	6.88	100	11.09	$504.44	$71	$90	$1,199	$4,395
222	Multi-Family Housing (High-Rise, > 10 floors)	DU	4.45	6.38	6.88	100	9.07	$504.44	$58	$90	$996	$3,580
225	Student Housing (Adjacent to Campus)	Bedroom	3.15	3.19	3.69	100	3.21	$504.44	$22	$30	$374	$1,246
225	Student Housing (Over 1/2 mile from Campus)	Bedroom	3.97	4.79	5.29	100	6.08	$504.44	$40	$30	$655	$2,410
231	Mid-Rise Residential w/ first floor Commercial	DU	3.44	6.38	6.88	100	7.01	$504.44	$45	$90	$793	$2,744
232	High-Rise Residential w/ first floor Commercial	DU	2.01	6.38	6.88	100	4.10	$504.44	$26	$90	$496	$1,571
240	Mobile Home Park	DU	4.17	5.75	6.25	100	7.66	$504.44	$50	$29	$810	$3,054
251	Senior Adult Housing - Detached (Retirement Community/Age-Restricted Single Family)	DU	3.5	6.78	7.28	100	7.58	$504.44	$48	$100	$850	$2,975
252	Senior Adult Housing - Attached (Retirement Community/Age-Restricted Single Family)	DU	3.33	5.43	5.93	100	5.78	$504.44	$38	$100	$694	$2,220
265	Time Share	DU	8.63	4.96	5.46	100	13.68	$504.44	$90	$150	$1,556	$5,343
	Lodging											
310	Hotel/Tourist Hotel	Room	5.55	6.57	7.07	66	7.69	$504.44	$49	$81	$846	$3,033
320	Motel	Room	3.35	4.56	5.06	77	3.76	$504.44	$25	$65	$456	$1,440
	Recreational											
430	Golf Course	Acre	3.74	6.95	7.45	90	7.47	$504.44	$48	$179	$929	$2,841
437	Bowling Alley	1,000 sf	13	5.41	5.91	90	20.22	$504.44	$131	$163	$2,209	$7,993
444	Movie Theater w/ or w/out Matinee	1,000 sf	82.3	2.35	2.85	87	53.76	$504.44	$388	$163	$6,224	$20,895
491	Racquet Club	1,000 sf	19.7	5.41	5.91	94	32.01	$504.44	$208	$163	$3,412	$12,734
492	Health/Fitness Club	1,000 sf	34.5	5.41	5.91	94	56.06	$504.44	$364	$163	$5,849	$22,428
N/A	Dance Studio (Martial Arts/Music Lessons)	1,000 sf	21.33	3.54	4.04	85	20.51	$504.44	$139	$163	$2,334	$8,010
	Institutional											
522	School	1,000 sf	20.17	3.48	3.98	80	17.94	$504.44	$122	$146	$2,052	$6,998
560	Public Assembly	1,000 sf	6.95	4.11	4.61	90	8.21	$504.44	$55	$0	$859	$3,284
565	Day Care	1,000 sf	49.63	2.13	2.63	73	24.66	$504.44	$181	$163	$2,991	$9,446
	Medical											
610	Hospital	Bed	22.32	6.95	7.45	78	38.66	$504.44	$246	$17	$3,860	$15,641
620	Nursing Home	1,000 sf	6.64	2.72	3.22	89	5.14	$504.44	$36	$130	$692	$1,899
640	Animal Hospital/Veterinary Clinic	1,000 sf	24.2	2	2.5	70	10.82	$504.44	$80	$163	$1,413	$4,047
	Office											
710	General Office: ≤ 50,000 sf	1,000 sf	10.83	6.44	6.94	92	20.50	$504.44	$131	$163	$2,209	$8,133
710	General Office: 50,001-100,000 sf	1,000 sf	10.61	6.44	6.94	92	20.08	$504.44	$129	$163	$2,178	$7,953
710	General Office: 1000,001-200,000 sf	1,000 sf	10.39	6.44	6.94	92	19.67	$504.44	$126	$163	$2,131	$7,790
710	General Office: > 200,000 sf	1,000 sf	10.18	6.44	6.94	92	19.27	$504.44	$124	$163	$2,100	$7,621
720	Small Medical/Dental Office: (≤ 10,000 sf)	1,000 sf	23.83	6.94	7.44	89	47.03	$504.44	$300	$163	$4,850	$18,872
720	Medical/Dental Office	1,000 sf	34.12	6.94	7.44	89	67.33	$504.44	$429	$163	$6,865	$27,101
732	Post Office	1,000 sf	103.94	6.44	6.94	49	104.79	$504.44	$672	$163	$10,661	$42,202

Table 3-1 (continued): Calculation of Winter Park Multi-Modal Transportation Impact Fee

Variable Factors and Fee Calculations. See Non-Variable Factors at end of table.

ITE LUC	Land Use	Unit	Trip Rate	Assess-able Trip Length	Total Trip Length	% New Trips	Capacity Con-sumed	Cost of Capacity	Annual Gas Tax Credit	Ad Valorem Credit	Credit	Fee
	Retail											
815	Free-Standing Discount Store	1,000 sf	53.12	2.52	3.02	67	28.66	$504.44	$204	$163	$3,350	$11,105
816	Hardware/Paint	1,000 sf	9.14	1.96	2.46	56	3.21	$504.44	$24	$163	$538	$1,079
820	Retail: ≤ 50,000 sfgla	1,000 sfgla	75.05	1.96	2.46	56	26.32	$504.44	$196	$163	$3,225	$10,051
820	Retail: 50,001-100,000 sfgla	1,000 sfgla	60.12	2.4	2.9	62	28.58	$504.44	$205	$163	$3,366	$11,052
820	Retail: 100,001-200,000 sfgla	1,000 sfgla	48.16	2.52	3.02	67	25.98	$504.44	$185	$163	$3,053	$10,052
820	Retail: 200,001-300,00 sfgla	1,000 sfgla	42.3	2.65	3.15	71	25.43	$504.44	$180	$163	$2,975	$9,852
820	Retail: 300,001-400,000 sflga	1,000 sfgla	38.58	2.77	3.27	73	24.93	$504.44	$175	$163	$2,897	$9,676
820	Retail: 400,001-500,000 sfgla	1,000 sfgla	35.92	2.89	3.39	75	24.88	$504.44	$174	$163	$2,881	$9,667
820	Retail: 500,000-1,000,000 sfgla	1,000 sfgla	28.78	3.51	4.01	81	26.14	$504.44	$178	$163	$2,944	$10,244
820	Retail: 1,000,001-1,200,000 sfgla	1,000 sfgla	27.14	3.75	4.25	82	26.66	$504.44	$180	$163	$2,975	$10,476
820	Retail: > 1,200,000 sfgla	1,000 sfgla	25.84	3.99	4.49	83	27.34	$504.44	$183	$163	$3,022	$10,770
840/ 841	New/Used Auto Sales	1,000 sf	24.58	4.83	5.33	79	29.97	$504.44	$197	$163	$3,241	$11,875
850	Supermarket	1,000 sf	106.64	2.18	2.68	56	41.59	$504.44	$304	$163	$4,912	$16,070
853	Convenience Market w/ Gas Pumps	1,000 sf	626.25	1.59	2.09	28	89.08	$504.44	$696	$163	$11,036	$33,899
862	Home Improvement Superstore	1,000 sf	30.74	2.52	3.02	67	16.58	$504.44	$118	$163	$2,006	$6,359
863	Electronics Superstore	1,000 sf	41.05	1.96	2.46	56	14.40	$504.44	$107	$163	$1,835	$5,427
880/ 881	Drug Store	1,000 sf	104.37	2.18	2.68	32	23.26	$504.44	$170	$163	$2,819	$8,916
	Services											
911	Bank/Savings Walk-In	1,000 sf	59.39	2.58	3.08	46	22.52	$504.44	$160	$456	$2,956	$8,404
912	Bank/Savings Drive-In	1,000 sf	102.66	2.58	3.08	46	38.93	$504.44	$276	$456	$4,768	$14,868
925	Drinking Place	1,000 sf	113.6	1.96	2.46	56	39.84	$504.44	$297	$163	$4,803	$15,293
931	Quality Restaurant	1,000 sf	86.03	3.3	3.8	77	69.84	$504.44	$478	$309	$7,776	$27,456
932	High-Turnover Restaurant	1,000 sf	106.26	3.33	3.83	71	80.27	$504.44	$549	$309	$8,886	$31,605
934	Fast Food Restaurant w/ Drive Thru	1,000 sf	482.53	2.15	2.65	58	192.25	$504.44	$1,409	$374	$22,386	$74,592
942	Auto Service	1,000 sf	28.19	3.8	4.3	72	24.64	$504.44	$166	$130	$2,723	$9,708
944	Gas Station w/ or w/out Convenience Market: < 2,000 sf	Fuel Pos.	172.01	2	2.5	23	25.28	$504.44	$188	$17	$2,954	$9,799
945	Gas Station w/ or w/out Convenience Market: 2,000-2,999 sf	Fuel Pos.	205.36	2	2.5	23	30.18	$504.44	$224	$17	$3,516	$11,709
960	Gas Station w/ Convenience Market: ≥ 3,000 sf	Fuel Pos.	230.52	2	2.5	23	33.88	$504.44	$252	$17	$3,954	$13,136
947	Self-Service Car Wash	Wash Stn.	108	2.29	2.79	68	53.73	$504.44	$389	$48	$6,125	$20,980
	Industrial											
110	General Light Industrial	1,000 sf	4.96	5.41	5.91	92	7.89	$504.44	$51	$65	$862	$3,117
140	Manufacturing	1,000 sf	3.93	5.41	5.91	92	6.25	$504.44	$41	$65	$706	$2,447
150	Warehousing	1,000 sf	1.74	5.41	5.91	92	2.77	$504.44	$18	$65	$346	$1,050
151	Mini-Warehouse	1,000 sf	1.49	3.69	4.19	92	1.62	$504.44	$11	$65	$237	$578
154	High-Cube Transload and Short-Term Storage Warehouse	1,000 sf	1.4	5.41	5.91	92	2.23	$504.44	$14	$65	$284	$839

Non-Variable Factors

Interstate & Toll Discount Factor	0.361
Cost per Added Lane Mile	$4,540,000
Capacity Added per Lane Mile	9,000
$Tax/Gallon to Capital	$0.197
Fuel Efficiency (mpg)	18.92
Effective Days per Year	365
Facility Life (years)	25
Interest Rate	4.0%
Present Worth Factor	15.6221

Appendix A

Orange County 2020 Transportation Impact Fee Study

Note: Only the relevant portions of the Orange County 2020 Transportation Impact Fee Study are provided. For example, in addition to the multi-modal (Urban) transportation impact fee, Orange County calculated fees for suburban and rural areas of the county which are not applicable to Winter Park. Therefore, those sections have been deleted or blacked out in an effort to avoid confusion about information used in the development of the Winter Park Multi-Modal Transportation Impact Fee. To reiterate, the blacked-out portions are not applicable to Winter Park since they are for suburban or rural areas.

Orange County Transportation Impact Fee Update Study

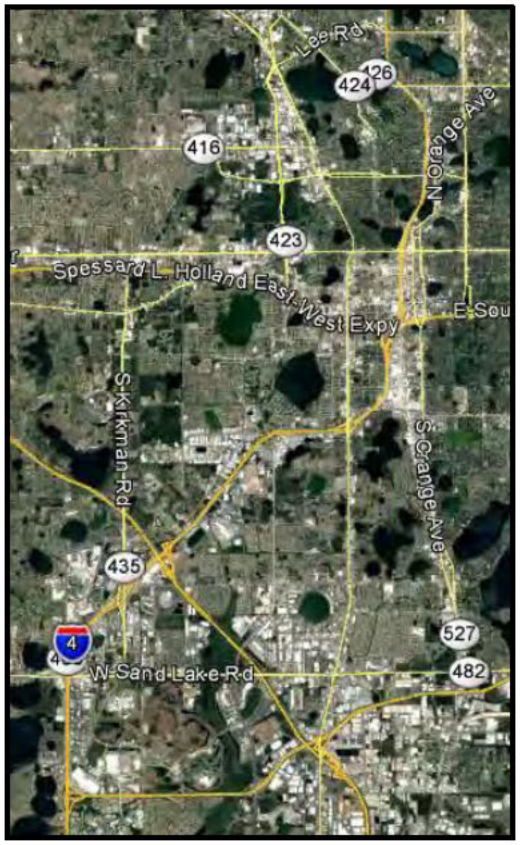
FINAL REPORT

September 11, 2020

Tindale Oliver

planning | design | engineering

ORANGE COUNTY FLORIDA



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ORANGE COUNTY
TRANSPORTATION IMPACT FEE UPDATE STUDY

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APPENDICES

I. Introduction

Orange County's Transportation Impact Fee was originally adopted in 1985 and went into effect in 1986 to assist the County in providing adequate transportation facilities for expected growth. The technical study supporting the fee levels was last updated in 2012. As part of the 2012 update, in addition to updating roadway-based transportation impact fee, a separate multi-modal fee rate was calculated for the more urbanized parts of the county, based on the boundary of the Alternative Mobility Area (AMA). The Board of County Commissioners adopted the 2012 study at a discounted rate. At this time, the County is considering eliminating the AMA designation; however, this study continues to provide fee variations based on travel and land use characteristics of various subareas within the county.

This report updates both the roadway and multi-modal impact fee variables to reflect changes to the cost, credit, and demand components since 2012. In addition, this study addresses the following:

- Fee variation by geographic area and boundary of fee districts;
- Fee levels under needs-based and asset-based approaches;
- Fee reductions for mixed-use developments based on internal capture;
- Fee reductions for affordable/workforce housing; and
- A tool for potential fee reductions for targeted land uses.

The information used to develop the Orange County Transportation Impact Fee schedules is based mostly on data received through November 2019.

Legal Overview

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

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

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

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

- **HB 227 in 2009:** The Florida legislation statutorily clarified that in any action challenging an impact fee, the government has the burden of proving by a preponderance of the evidence that the imposition or amount of the fee meets the requirements of state legal precedent or the Impact Fee Act and that the court may not use a deferential standard.
- **SB 360 in 2009:** Allowed fees to be decreased without the 90-day notice period required to increase the fees and purported to change the standard of legal review associated with impact fees. SB 360 also required the Florida Department of Community Affairs (now the Department of Economic Opportunity) and Florida Department of Transportation (FDOT) to conduct studies on "mobility fees," which were completed in 2010.
- **HB 7207 in 2011:** Required a dollar-for-dollar credit, for purposes of concurrency compliance, for impact fees paid and other concurrency mitigation required.
- **HB 319 in 2013:** Applied mostly to concurrency management authorities, but also encouraged local governments to adopt alternative mobility systems using a series of tools identified in section 163.31801 (5)(f), Florida Statutes, including:
    1. Adoption of long-term strategies to facilitate development patterns that support multi-modal solutions, including urban design, and appropriate land use mixes, including intensity and density.
    2. **Adoption of an area-wide level of service not dependent on any single road segment function.**
    3. Exempting or discounting impacts of locally desired development, such as development in urban areas, redevelopment, job creation, and mixed use on the transportation system.
    4. Assigning secondary priority to vehicle mobility and primary priority to ensuring a safe, comfortable, and attractive pedestrian environment, with convenient interconnection to transit.

5. Establishing multi-modal level of service standards that rely primarily on non-vehicular modes of transportation where existing or planned community design will provide adequate level of mobility.
6. Reducing impact fees or local access fees to promote development within urban areas, multi-modal transportation districts, and a balance of mixed-use development in certain areas or districts, or for affordable or workforce housing.

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

- **HB 207 in 2019:** Included the following changes to the Impact Fee Act along with additional clarifying language:
  - Impact fees cannot be collected prior to building permit issuance; and
  - Impact fee revenues cannot be used to pay debt service for previously approved projects unless the expenditure is reasonably connected to, or has a rational nexus with, the increased impact generated by the new residential and commercial construction.
- **HB 7103 in 2019:** Addressed multiple issues related to affordable housing/linkage fees, impact fees, and building services fees. In terms of impact fees, the bill required that when local governments increase their impact fees, the outstanding impact fee credits for developer contributions should also be increased. This requirement will operate prospectively. This bill also allowed local governments to waive/reduce impact fees for affordable housing projects without having to offset the associated revenue loss.
- **SB 1066 in 2020:** Added language allowing impact fee credits to be assignable and transferable at any time after establishment from one development or parcel to another that is within the same impact fee zone or impact fee district or that is within an adjoining impact fee zone or district within the same local government jurisdiction. In addition, added language indicating any new/increased impact fee not being applicable to current or pending permit applications submitted prior to the effective date of an ordinance or resolution imposing new/increased fees.
- **HB 1339 in 2020:** Required reporting of certain impact fee data within the annual financial audit report submitted to the Department of Financial Services.

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 based upon the specific benefit to the user related to a given infrastructure type and is not established for the primary purpose of generating revenue for the general benefit of the community, as are taxes.
- Impact fee expenditures must convey a proportional benefit to the fee payer. This is accomplished through the establishment of benefit districts, 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.

Methodology

The methodology used for the transportation impact fee study continues to follow 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. Unlike a "needs-based" approach, the consumption-based approach ensures that the impact fee is set at a rate that does not generate sufficient revenues to correct existing deficiencies. As such, the County does not need to go through the process of estimating the portion of each capacity expansion project that may be related to existing deficiencies. The study incorporates the entire network of transportation

within the county, including city, county and state roads, but excludes limited access facilities and rail facilities, which require large scale investments and are not typically funded with impact fees.

Included in this document 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:

[Demand x Cost] – Credit = Fee

The "demand" for travel placed on a transportation system is expressed in units of Vehicle-Miles of Travel (VMT) (daily vehicle-trip generation rate x the trip length x the percent new trips [of total trips]) for each land use contained in the impact fee schedule. Trip generation represents the average daily rates since new development consumes trips on a daily basis.

The "cost" of building new capacity typically is expressed in units of dollars per vehicle-mile or lane-mile of transportation capacity. Consistent with the current adopted methodology, the cost is based on county roadway costs.

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

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

Demand Variables:

- Trip generation rate
- Trip length
- Percent new trips

Cost Variables:

- Roadway cost per added lane mile

- Roadway capacity per lane mile

Credit Variables:

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

II. Demand Component

Travel Demand

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

- Number of daily trips generated
- Average length of those trips
- Proportion of travel that is new travel, rather than travel that is already on the road system
- Interstate/Toll Facility discount factor

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), which includes studies conducted in Orange County as well as in other Florida jurisdictions, and (2) the Institute of Transportation Engineers' (ITE) *Trip Generation Handbook* (10^{th} edition). The Florida Trip Characteristics Studies Database is included in Appendix A. This database was used to determine trip length, percent new trips, and the trip generation rate for several land uses.

Trip Length Adjustment Factor

Trip lengths for all land uses were adjusted to account for differences between the average trip lengths included in the Florida Studies Database, the Orlando Urban Area Transportation Study (OUATS 2040), and other Florida Standard Urban Transportation Model Structure (FSUTMS) model results. As it was the case in the 2012 update study, the OUATS 2040 model data suggested that trip lengths are typically longer in Orange County compared to other Florida counties. Therefore, residential and office trip lengths were increased by 25 percent, while lodging, recreational, institutional, retail, and industrial trip lengths were increased by five (5) percent.

Interstate & Toll Facility Discount Factor

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

To calculate the interstate and toll (I/T) facility discount factor, the loaded highway network file was generated for the OUATS 2040 model. A select link analysis was run for all traffic analysis zones located within Orange County in order to differentiate trips with an origin and/or destination within the county versus trips with no origin or destination within the county.

Currently, interstate and toll facilities in Orange County include I-4, the Florida Turnpike (SR 91), SR 408, SR 414, SR 417, SR 429, SR 451, SR 453, and SR 528. The limited access vehicle-miles of travel (Limited Access VMT) for trips with an origin and/or destination within County was calculated for the identified limited access facilities. The total Orange County VMT was calculated for all trips with an origin and/or destination within the county for all roads, including limited access facilities, located within Orange County. The I/T discount factor of 36.1 percent was determined by dividing the total limited access VMT by the total county VMT using the base year of the model.

By applying this factor to the total county VMT, the reduced VMT is then representative of only the roadways that are funded by impact fees. Appendix A, Table A-1 provides further detail on this calculation.

Land Use Changes

<u>New Land Uses</u>

Based on input from the County and a review of the Institute of Transportation Engineers' (ITE) *Trip Generation* reference report (10th edition, released September 2017), several new land uses were added to the transportation impact fee schedule.

- Single Family Tiering: The current impact fee schedule includes a single rate for all single family development. This update study includes a tiered approach that varies the fee according to square footage tiers. This approach assists the County in its goal of encouraging attainable housing by moderating impact fee levels for smaller homes. Appendix A, Tables A-2 through A-10 includes additional detail.

- Multi-Family Realignment: The current impact fee schedule includes multi-family apartment, condo/townhouse, and high-rise condo/townhouse as separate land uses. ITE 10th Edition has realigned these uses, creating a combined "multi-family housing" category, with differentiation in trip generation rate based on the number of stories. This update was incorporated into the impact fee schedule, shown by Land Use Code (LUC) used by ITE:
    - LUC 220 (multi-family/townhouse, low-rise, 1-2 floors) – includes apartments, townhouses, and condominiums located within the same building with at least three other dwelling units and that have one or two levels (floors).
    - LUC 221 (multi-family, mid-rise, 3-10 floors) – includes apartments, townhouses, and condominiums located within the same building with at least three other dwelling units and that have between three and 10 levels (floors).
    - LUC 222 (multi-family, high-rise, >10 floors) – includes apartments, townhouses, and condominiums that have more than 10 levels (floors). They are likely to have one or more elevators.
- Student Housing: ITE 10th includes this new land use (LUC 225) for consideration with two different trip generation rates depending on the proximity to campus (adjacent to campus and over ½ mile from campus), measured "per bedroom". These options replace the current Student Housing use (measured "per unit") which was based on independent trip characteristics studies conducted in Minnesota.
- Residential w/1st Floor Commercial: ITE 10th includes this new land use for consideration with two tiers:
    - LUC 231 (mid-rise residential with 1st floor commercial): mixed-use multi-family housing buildings that have between three and 10 floors and include retail space on the first level. Typically found in dense multi-use urban and center city core settings.
    - LUC 232 (high-rise residential with 1st floor commercial): mixed-use multi-family housing buildings that have more than 10 floors and include retail space that is open to the public on the first level. Typically found in dense multi-use urban and center city core settings.
- Senior Adult Housing – Attached: Attached independent living developments, including retirement communities, age-restricted, and active adult communities. These developments may include limited social or recreational services, however, they generally lack centralized dining and onsite medical facilities. Residents in these communities live independently, are typically active (requiring little to no medical supervision) and may or may not be retired.
- Dance Studio (Martial Arts/Music Lessons): Privately-owned recreation-based facility offering dance, gymnastics, ballet, or similar activity classes such as martial arts training and music lessons. Facilities typically range between 5,000 square feet and 25,000 square feet.

- LUC 720 (medical/dental office): a facility that provides diagnoses and outpatient care on a routine basis but is unable to provide prolonged in-house medical and surgical care. One or more private physicians or dentists generally operate this type of facility.
    - Small Medical/Dental Office (<10,000 square feet): Similar to the Medical/Dental Office land use in the current schedule but reflects a lower trip generation rate which is representative of smaller medical businesses that typically do not have extensive testing equipment or laboratories.
- Walk-in Bank: This land use represents generally a free-standing building with its own parking lot. These banks do not have drive-in lanes but usually contain non-drive-thru teller machines (ATMs).
- Tourist Hotel/Retail: The current schedule includes separate rates for hotel and retail development within the County's "tourist" district. However, updates to ITE since the last study and additional local studies resulted in trip generation rates for general retail and hotel land uses that are lower than those reflected for tourist hotel/retail categories. Given that generation rates for tourist hotel/retail categories are based on a smaller sample, hotel and retail development within the tourist district should be charged the same rate as development outside of the district to benefit from lower impact fee rates that are based on a larger set of data.
- High-Cube Transload and Short-Term Storage Warehouse: A high-cube warehouse (HCW) is a building that typically has at least 200,000 gross square feet of floor area, has a ceiling height of 24 feet or more, and is used primarily for the storage and/or consolidation of manufactured goods prior to their distribution to retail locations or other warehouses. A typical HCW has a high level of on-site automation and logistics management. Transload facilities have a primary function of consolidation and distribution of pallet loads for manufacturers, wholesalers, or retailers. They typically have little storage duration, high throughput, and are high-efficiency facilities. Short-term HCWs are high-efficiency distribution facilities often with custom/special features built into the structure for movement of large volumes of freight with only short-term storage of products.

<u>Significant Demand Reductions</u>

Several land uses received a significant reduction in the estimated gross vehicle miles of travel (GVMT) that they generate per unit. Appendix A includes additional detail related to the changes in the demand component for all land use categories.

- Bowling Alley (LUC 437): The trip generation rate for this land use was reduced by 61 percent due to an update from ITE 9th Edition to ITE 10th Edition. While the 9th Edition included a "daily" TGR, the 10th Edition does not and, therefore, the recommended TGR is based on the peak hour trip rate adjusted for daily. This adjustment is based on the relationship of peak

hour-to-daily trip rates for other recreational uses in ITE 10th Edition (peak hour ≈ 1/10 of daily).

- Public Assembly (LUC 560): The trip generation rate for this land use was reduced by 24 percent due to an update from ITE 9th Edition to ITE 10th Edition. Additionally, the trip length has been reduced by 49 percent and the percent new trips has been reduced by 10 percent. In the current fee schedule, the TL and PNT data were based on data from the County's 2004 update study that used the County's transportation model and a 1991 document[1] to determine these values. This update study recommends the use of the Florida Studies Trip Characteristics Database (Appendix A) and similar land uses to estimate trip length and percent new trips using more recent data relationships.
- Animal Hospital/Veterinary Clinic (LUC 640): The trip generation rate for this land use was reduced by 16 percent due to an update from ITE 9th Edition to ITE 10th Edition. Additionally, the trip length has been reduced by 63 percent and the percent new trips has been reduced by 25 percent. Similar to the Public Assembly use, in the current fee schedule the TL and PNT data is based on data from the County's 2004 update study. This update study recommends the use of the Florida Studies Trip Characteristics Database (Appendix A) to estimate trip length and percent new trips.
- Hardware/Paint Store (LUC 816): The trip generation rate for this land use was reduced by 82 percent due to an update from ITE 9th Edition to ITE 10th Edition.
- Drug Store (LUC 880/881): The trip generation rate for this land use was increased by 18 percent due to an update from ITE 9th Edition to ITE 10th Edition (includes data from both LUC 880 and 881). Additionally, the trip length has been reduced by 46 percent and the percent new trips has been reduced by 36 percent. Similar to the Public Assembly and Animal Hospital uses, in the current fee schedule the TL and PNT data is based on data from the County's 2004 update study. This update study recommends the use of the Florida Studies Trip Characteristics Database (Appendix A) to estimate trip length and percent new trips.

[1] Nicholas, James, et. al., *A Practitioner's Guide to Development Impact Fees, 1991*

III. Cost Component

Cost information from Orange County and other counties in Florida was reviewed to develop a unit cost for all phases involved in the construction of one lane-mile of roadway capacity. Additionally, cost information for bicycle/pedestrian and transit facilities was reviewed and included in the cost component calculations for the urban district multi-modal impact fee rates. Appendix B provides the data and other support information utilized in these analyses.

County Roadway Cost

This section examines the right-of-way (ROW), construction, and other cost components associated with county roads with respect to transportation capacity expansion improvements in Orange County. For this purpose, bid data for recently completed/ongoing local projects and recent construction bid data from roadway projects throughout Florida were used to identify and provide supporting cost data for County roadway improvements. The cost for each roadway capacity project was separated into three phases: design, ROW, and construction/CEI.

Design

Design costs for county roads were estimated at approximately $340,000 per lane mile based on a review of recent improvements in Orange County. When compared to the average construction cost per lane mile ($2,750,000; Appendix B, Table B-5), the design-to-construction ratio is approximately 12 percent. This ratio is within the range of design-to-construction ratios observed in other recent impact fee studies in Florida. Additional detail is provided in Appendix B, Tables B-1 and B-2.

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. ROW costs for county roads were estimated at $1.20 million per lane mile based on a review of recent improvements in Orange County. When compared to the average construction cost per lane mile ($2,750,000; Appendix B, Table B-5), the ROW-to-construction ratio is approximately 44 percent. This ratio is within the range of ROW-to-construction ratios observed in other recent impact fee studies in Florida. Additional detail is provided in Appendix B, Tables B-3 and B-4.

Construction/CEI

The construction cost for county roads was based on recently bid/ongoing projects in the Orange County. This review included 15 recent projects in Orange County with construction occurring since 2012:

- Rouse Rd from Lake Underhill Rd to SR 50
- Clarcona-Ocoee Rd from SR 429 to Clark Rd
- Holden Ave from John Young Pkwy to Orange Blossom Tr
- Palm Pkwy/AVR Connector from Palm Pkwy to Apopka-Vineland Rd
- John Young Pkwy from SR 528 to FL Turnpike
- Econlockhatchee Tr from SR 408 to SR 50
- CR 535 Seg. F from Overstreet Rd to Fossick Rd
- Reams Rd from Delmar Ave to Taborfield Ave
- Destination Pkwy 1B/2A from Tradeshow Blvd to Lake Cay
- Lake Underhill Rd from Goldenrod Rd to Chickasaw Tr
- International Dr from Westwood Blvd to Westwood Blvd
- Porter Rd from Avalon Rd to Hamlin Groves Tr
- Innovation Way Seg. 3B from Magnolia Woods Blvd to Yellow Jasmine Dr
- Boggy Creek Rd North from South Access Rd to Wetherbee Rd
- Hamlin Groves Ph. I from New Independence Pkwy north approx. 2,800 feet

The weighted average construction cost for these improvements is approximately $3.00 million per lane mile, including CEI costs. Based on a review of data from other jurisdictions, CEI is approximately nine percent of construction. Therefore, the construction portion of these improvements averages approximately $2.75 million per lane mile. Additional detail is provided in Appendix B, Table B-5.

In addition to local projects, recent improvements from other counties in Florida were reviewed to increase the sample size. This review included approximately 147 lane miles of lane addition and new road construction improvements with a weighted average cost per added lane mile of approximately $2.87 million, which does not include CEI costs. Additional detail is provided in Appendix B, Table B-6.

Based on a review of these data sets, a construction cost of $3.00 million per lane mile (for construction and CEI) was used in the impact fee calculation for Orange County improvements. This figure reflects the local data and is supported by statewide data.

As shown in Table 1, the total county roadway cost was calculated at approximately $4.54 million per lane mile.

Table 1
Estimated Total Cost per Added Lane Mile for County Roads

Cost Type	Total Cost per Lane Mile
Design[1]	$340,000
Right-of-Way[2]	$1,200,000
Construction/CEI[3]	$3,000,000
Total	**$4,540,000**

1) Source: Appendix B, Table B-1
2) Source: Appendix B, Table B-3
3) Source: Appendix B, Table B-5

Vehicle-Miles of Capacity per Lane Mile

The transportation impact fee equation includes a vehicle-mile of capacity (VMC) component. The VMC is an estimate of capacity added, per lane mile, for county roadway improvements in the 2040 Metroplan Needs Plan for Orange County. As shown in Table 2, each lane mile will add approximately 9,000 vehicles. Additional detail is provided in Appendix B, Table B-7.

Table 2
Weighted Average Capacity per Lane Mile

Source	Lane Mile Added[1]	Vehicle-Miles of Capacity Added[1]	VMC Added per Lane Mile[2]
County Roads	270.44	2,437,462	9,013
Average VMC Added per Lane Mile (Rounded)			**9,000**

1) Source: Appendix B, Table B-7
2) Vehicle-miles of capacity added divided by lane miles added

Cost per Vehicle-Mile of Capacity

The transportation cost per unit of development is assessed based on the cost per vehicle-mile of capacity. As shown in Tables 1 and 2, the cost and capacity for transportation in Orange County have been calculated based on recent improvements. As shown in Table 3, the cost per VMC for travel within the County is approximately $504.

The cost per VMC figure is used in the transportation impact fee calculations to determine the total cost per unit of development based on vehicle-miles of travel consumed. For each vehicle-

mile of travel that is added to the road system, approximately $504 of capacity is consumed.

Table 3
Weighted Average Cost per Capacity Added

Source	Cost per Lane Mile[1]	Average VMC Added per Lane Mile[2]	Cost per VMC/PMC[3]
County Roads (VMC)	$4,540,000	9,000	**$504.44**

1) Source: Table 1
2) Source: Table 2
3) Average VMC added per lane mile (Item 2) divided by cost per added lane mile (Item 1)

Bicycle and Pedestrian Facility Costs

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

Transit Capital Cost per Person-Mile of Travel

A model for transit service and cost was developed to establish both the capital cost per person-mile of capacity and the system operating characteristics in terms of system coverage, hours of service, and headways. The model developed for Orange County was based on information from the LYNX Transit Development Plan. Components of the transit capital cost include:

- Vehicle acquisition tied to new routes
- Bus stops, shelters, and benches
- Cost of road network (per person-mile of capacity) used by transit vehicles

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

Transit Capital Cost = Bus Infrastructure Cost + Road Capacity Cost

Taking into account the infrastructure costs and the decline in potential vehicle-capacity that comes with adding transit, it was determined that the difference between constructing a lane mile of roadway (for cars only) versus constructing a roadway with transit is not significant. The roadway with transit cost per PMC is approximately three (3) percent higher per lane mile than the cost to simply construct a road without transit amenities. Therefore, for the multi-modal fee calculation, the cost per VMC of approximately $504 is representative of the cost to provide transportation capacity for all modes of travel. Additional information regarding the transit capital cost calculation is included in Appendix B, Tables B-8 and B-9.

Finally, given the dominance of auto travel in terms of mode split, the demand for both roadway and multi-modal fees are measured in terms of vehicle miles of travel. In the case of multi-modal impact fee, an additional credit was subtracted to reflect future development's contributions to stand-alone transit capital, sidewalk and bicycle lane additions, which will be discussed in more detail in the next section.

IV. Credit Component

Capital Improvement Credit

The credit component of the impact fee accounts for the existing County funding sources that are being expended on transportation capacity expansion (excluding impact fee funds). This section summarizes the calculations utilized in the credit for non-impact fee contributions. Additional details are provided in Appendix C.

The present value of the portion of non-impact fee funding generated by new development over a 25-year period that is expected to be expended on capacity expansion projects was credited against the cost of the system consumed by travel associated with new development. In order to provide a connection to the demand component, which is measured in terms of travel, the non-impact fee dollars were converted to a fuel tax equivalency for all funding sources, except for ad valorem tax. The credit for ad valorem tax revenue contributions is calculated based on average property values of each land use.

City

As shown in Table 4, the City of Orlando spends, on average, $516,000 per year, which equates to 0.1 pennies, on roadway capacity-expansion projects funded with non-impact fee revenues. For the multi-modal fee, additional multi-modal capacity improvements were included in the credit, increasing the average annual funding to $2.5 million or an equivalent credit of 0.3 pennies.

County

As shown in Table 4, Orange County allocates $35.2 million per year or the equivalent of 4.9 pennies on roadway capacity-expansion projects funded with non-impact fee revenues. This amount includes the INVEST funds that the County received for transportation, which are unlikely to reoccur beyond the CIP period. Though they are not a recurring revenue source, like a fuel tax, the INVEST funds are being credited in a similar manner for impact fee purposes.

For the multi-modal fee, additional multi-modal capacity improvements were included in the credit calculations, increasing the average spending to $39.0 million per year and the equivalent credit to 5.4 pennies. This includes the portion of the County's contribution to LYNX that is dedicated to capacity expansion.

Ad Valorem Credit

The Orange County Capital Improvement Plan (FY 2019 to FY 2023) includes ad valorem tax funding for roadway capacity expansion improvements and multi-modal improvements, including lane addition projects, transit land improvements, and pedestrian enhancements. The total value of the multi-modal improvements equates to approximately $31 million, or $6 million annually of the five-year time period. For the roadway improvements only, the total value is $10 million, or approximately $2 million annually. The value per 1-mil, based on the FY 2019 Orange County budget is approximately $120 million. Therefore, approximately five (5) percent of the millage is used for multi-modal capacity expansion, and only two (2) percent is used for roadway capacity expansion.

Since ad valorem revenues are going to be used to fund a portion of the CIP, a revenue credit is given. Credit due to ad valorem tax revenues for residential and non-residential land uses is calculated based on a review of the taxable value of each land use in Orange County. Additional detail is included in Appendix D.

State

As shown in Table 4, State expenditures on state roads were reviewed and a credit for the capacity-expansion portion attributable to state projects was estimated (excluding expenditures on limited access facilities). The review, which included 10 years of historical expenditures, indicated that FDOT's roadway spending generates a credit of 8.5 pennies of equivalent gas tax revenue annually. For the multi-modal fee, a credit of 14.0 pennies was calculated to account for additional FDOT funds going towards multi-modal improvements (standalone sidewalk construction, transit, etc.), primarily for the estimated state transit funding for new capacity. The use of a 10-year period for developing a State credit results in a reasonably stable credit for Orange County, accounting for the volatility in FDOT spending in the county over short time periods.

In summary, for roadways, the City of Orlando contributes approximately 0.1 pennies and Orange County contributes 4.9 pennies, while the State spends an average of 8.5 pennies, annually, in the County. A total credit of 13.5 pennies is included in the roadway impact fee calculation to recognize the future capital revenues that are expected to be generated by new development from all non-impact fee funding sources. In addition, $2 million of ad valorem tax revenues per year are estimated to be allocated to roadway transportation capacity.

For multi-modal improvements (including roadways), the City of Orlando contributes approximately 0.5 pennies and Orange County contributes 5.4 pennies, with the State spending

an average of 14.0 pennies, annually, in Orange County. A total credit of 19.9 pennies is included in the multi-modal fee calculation to recognize the future capital revenues that are expected to be generated by new development from non-impact fee revenues. In addition, $6 million of ad valorem tax revenues per year are estimated to be allocated to multi-modal transportation capacity.

Table 4
Equivalent Pennies of Fuel Tax Revenue

Credit	Funding Source	Roadway		Multi-Modal	
		Annual Contribution[4]	Equiv. Pennies per Gallon[5]	Annual Contribution[4]	Equiv. Pennies per Gallon[5]
City Revenue[1]	Fuel Tax	$516,000	-	$2,512,000	
	City Total	**$516,000**	**$0.001**	**$2,512,000**	**$0.003**
County Revenue[2]	Fuel Tax	$8,567,000	-	$10,567,000	-
	Ad Valorem	$1,913,000	n/a	$6,160,000	n/a
	INVEST	$26,591,000	-	$26,591,000	-
	Prop. Fair Share	$45,000	-	$45,000	-
	General Fund (LYNX)	-	-	$1,793,000	-
	County Total (No Ad Val)	**$35,203,000**	**$0.049**	**$38,996,000**	**$0.054**
State Revenue[3]	Various	$61,500,000	-	$100,889,000	-
	State Total	**$61,500,000**	**$0.085**	**$100,889,000**	**$0.140**
Total			**$0.135**		**$0.197**

1) Source: Appendix C, Table C-2 (roadway) and C-5 (multi-modal)
2) Source: Appendix C, Table C-3 (roadway) and C-6 (multi-modal)
3) Source: Appendix C, Table C-4 (roadway) and C-7 (multi-modal)
4) Average annual revenue contribution for capacity expansion improvements from each funding source
5) All non-ad valorem revenues are converted to equivalent pennies of fuel tax for use in the capital improvement credit calculation for the transportation impact fee. Additional detail is provided in Appendix C. For the ad valorem credit, detailed calculations are provided in Appendix D

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 4.0 percent was used in the transportation impact fee calculation based on information provided by Orange County.

Fuel Efficiency

The fuel efficiency (i.e., the average miles traveled per gallon of fuel consumed) of the fleet of motor vehicles was estimated using the quantity of gasoline consumed by travel associated with a particular land use.

Appendix C, Table C-12 documents the calculation of fuel efficiency value based on the following equation, where "VMT" is vehicle miles of travel and "MPG" is fuel efficiency in terms of miles per gallon.

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

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

The combined total VMT for the vehicle types is then divided by the combined total gallons of fuel consumed to calculate, in effect, a "weighted" fuel efficiency value that reflects the existing fleet mix of traffic on non-interstate roadways. The VMT and average fuel efficiency data were obtained from the most recent Federal Highway Administration's *Highway Statistics 2017*. Based on the calculation completed in Appendix C, Table C-12, the fuel efficiency rate to be used in the updated impact fee equation is 18.92 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 contributions are adequately credited against the fee.

VI. Calculated Impact Fee Schedule

Detailed impact fee calculations for each land use are included in Appendix E, 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 E illustrates the following:

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

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

For clarification purposes, it may be useful to walk through the calculation of an impact fee for one of the land use categories. In the following example, the net impact fee is calculated for the single-family residential detached land use category (ITE LUC 210) using information from the impact fee schedules included in Appendix E. For each land use category, the following equations are utilized to calculate the net impact fee:

Net Impact Fee = Total Impact Cost – Capital Improvement Credit

Where:

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

Capital Improvement Credit = Present Value (Annual Capital Improvement Credit), given 4.0% interest rate & a 25-year facility life

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

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

- *Trip Rate* = the average daily trip generation rate, in vehicle-trips/day (7.81)
- *Assessable Trip Length* = the average trip length on collector roads or above, for the category, in vehicle-miles (8.28) (excluding local neighborhood roads).
- *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 (8.28 + 0.50 = 8.78)
- *% 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 travel demand occurring on interstate highways and/or toll facilities (36.1%)
- *Cost per Added Lane Mile* = unit cost to construct one lane mile of roadway, in $/lane-mile ($4,540,000)
- *Average Vehicle-Capacity Added per Lane Mile* = represents the average daily traffic on one travel lane at capacity for one lane mile of roadway, in vehicles/lane-mile/day (9,000)
    - Suburban Adjustment = [redacted]
    - Rural Adjustment = [redacted]
- *Cost per Vehicle-Mile of Capacity* = unit of vehicle-miles of capacity consumed per unit of development. Cost per added lane mile divided by average capacity added per lane mile
    - Urban = $4,540,000 / 9,000 = $504.44 per VMC
    - Suburban = [redacted]
    - Rural = [redacted]
- *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 4.00% interest and a 25-year facility life, the uniform series present worth factor is 15.6221
- *Effective Days per Year* = 365 days

- *$/Gallon to Capital* = the amount of equivalent gas tax revenue per gallon of fuel that is used for capital improvements, in $/gallon ($0.135 for roadways, $0.197 for multi-modal (including roadways)
- *Ad Valorem Credit* = the amount of ad valorem taxes used toward transportation capacity, calculated based on the average property value of each land use
- *Fuel Efficiency* = average fuel efficiency of vehicles, in vehicle-miles/gallon (18.92)

Consumption-Based Transportation Impact Fee Calculation

Using these inputs, a net impact fee can be calculated for the single-family residential detached (2,000 sf) land use category as follows:

Urban Fee District (Multi-Modal Fee) (Table E-2):

Total Impact Cost = ([7.81 * 8.28 * 1.0] /2) * (1 - 0.361) * ($4,540,000 / 9,000) = **$10,422**

Annual Cap. Improv. Credit = ([7.81 * 8.78 * 1.0] /2) * 365 * ($0.197 /18.92) = $130
Total Capital Improvement Credit = $130 * 15.6221 = $2,031
Ad Valorem Credit = $173

Net Multi-Modal Fee = $10,422 - $2,031 - $173 = **$8,218**

APPENDIX A
Demand Component Calculations

Appendix A: Demand Component

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

Interstate & Toll Facility Discount Factor

Table A-1 presents the interstate and toll facility discount factor used in the calculation of the roadway/multi-modal impact fee. This variable is based on data from the Orlando Urban Area Transportation System 2040 Model (OUATS), specifically the base year 2009 vehicle-miles of travel. It should be noted that discount factor excludes all external-to-external trips, which represent traffic that goes through Orange County, but does not necessarily stop in the county. 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/PMT that the roadway/multi-modal fee charges for each land use.

Table A-1
Interstate/Toll Facility Discount Factor

Facility Type	Total	
	VMT	%
Interstate/Toll	10,339,058	36.1%
Other Roads	18,331,972	63.9%
Total	**28,671,030**	**100.0%**
Interstate/Toll	10,339,058	**36.1%**

Source: OUATS 2040 (base year)

Single Family Trip Generation Rate Tiering

As part of this study, the demand component for single family homes is tiered by size to assist the County in its efforts to support attainable housing. The tiering analysis uses the American Community Survey (ACS) Public Use Microdata Sample (PUMS) date files as the basis. PUMS files allow for the use of census sample data collected in Orange County to create custom tables that are otherwise unavailable. For this analysis, the 5-year (2014-2018) PUMS files were utilized. The PUMS 5-year estimates incorporate 60 months of data (as opposed to the 1-year, 12-month dataset), representing a 5 percent sample of the population (1 percent for each year). The 5-year sample represents the largest and most reliable of the PUMS datasets.

To isolate the PUMS data specific to Orange County, all Public Use Microdata Areas (PUMAs) within the County were identified. PUMAs are non-overlapping areas that partition each state

into areas containing approximately 100,000 residents. These are the most detailed geographic area available within the PUMS data set.

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

Table A-2

PUMS Result Summary: Single Family Detached/Attached

Bedrooms	Persons	Vehicles	Buildings (Units)	Persons per Housing Unit	Vehicles per Housing Unit
0 to 1	360	247	218	1.65	1.13
2	3,428	2,593	1,902	1.80	1.36
3	18,436	13,661	7,772	2.37	1.76
4+	15,824	11,442	5,335	2.97	2.14
Total	**38,048**	**27,943**	**15,227**	**2.50**	**1.84**

Source: PUMS 2014-2018 dataset; PUMAs 9501-9510

As shown in Table A-2, the persons per housing unit and vehicles per housing unit were calculated for each bedroom tier, representing the entirety of Orange County. Since the transportation impact fee is not collected in the municipalities, a normalization factor was applied to adjust for the unincorporated county. As shown in Table A-3, the unincorporated persons-per-housing-unit (PPHU) was calculated using the 5-year 2014-2018 ACS data for Orange County and all municipalities. A similar analysis is completed for vehicle per housing unit (VPHU) data, resulting in PPHU and VPHU data by bedroom, for unincorporated Orange County.

Table A-3

PPHU and VPHU for Unincorporated Orange County

Item	Uninc. Orange County
Persons in Occupied Housing Units (Single Unit detached/attached)	535,047
Units in Structure (Single Unit detached/attached)	187,605
Persons per Housing Unit	**2.85**
Vehicles Available (Owner/Renter Occupied)	434,506
Units in Structure	278,932
Persons per Housing Unit	**1.56**

Source: 2014-2018 5-yr ACS Estimates for Tables B25033, B25044, and B25024. Census tracts designated as "incorporated" or "unincorporated" based on a GIS review

Table A-4 illustrates the ratio-based adjustments made to the countywide PUMS data based on the PPHU and VPHU calculated for the unincorporated county.

Table A-4

PPHU and VPHU Tiers Adjusted for Unincorporated County

Bedrooms	Persons per Housing Unit[1]	Persons per Housing Unit (Uninc.)[2]	Vehicles per Housing Unit[1]	Vehicles per Housing Unit (Uninc.)[2]
0 to 1	1.65	1.88	1.13	0.96
2	1.80	2.05	1.36	1.15
3	2.37	2.70	1.76	1.49
4+	2.97	3.39	2.14	1.81
Total	**2.50**	**2.85**	**1.84**	**1.56**

1) Source: Table A-2
2) Each bedroom tier for unincorporated county was based on the ratio of the total PPHU (or total VPHU) for the unincorporated county (Item 2) vs. the total PPHU (or total VPHU) for all of Orange County (Item 1)

The PPHU and VPHU per bedroom data was then converted to weighted average trip ends per person and per vehicles, respectively, using the ITE 10th Edition National averages. The resulting trip ends per persons and vehicles were then averaged, resulting in average trip ends, per bedroom tier, as shown in Table A-5.

Table A-5

Calculated Trip Ends per Bedroom

Bedrooms	Persons per Housing Unit (Uninc.)[1]	AWVTE per HU Based on Persons[2]	Vehicles per Housing Unit[1]	AWVTE per HU Based on Vehicles[3]	Avg. Weighted Vehicle Trip Ends per Housing Unit[4]
0 to 1	1.88	4.98	0.96	6.11	**5.55**
2	2.05	5.43	1.15	7.31	**6.37**
3	2.70	7.16	1.49	9.48	**8.32**
4+	3.39	8.98	1.81	11.51	**10.25**
ITE 10th Avg Trip Ends[5]		**2.65**	**-**	**6.36**	**-**

AWVTE = Average Weighted Vehicle Trip Ends

1) Source: Table A-4
2) PPHU (Item 1; PPHU) multiplied by the ITE 10th average trip ends per person (Item 5; 2.65)
3) VPHU (Item 1; VPHU) multiplied by the ITE 10th average trip ends per vehicle (Item 5; 6.36)
4) Average of AWVTE based on persons and AWVTE based on vehicles
5) Source: ITE 10th Edition Handbook

Using the Orange County Property Appraisers Database, the average square footage per unit by bedroom tier was determined for unincorporated Orange County, as shown in Table A-6. With these averages determined, the average trip ends were graphed per square footage to determine a line of best fit, as shown in Figure A-1.

Table A-6

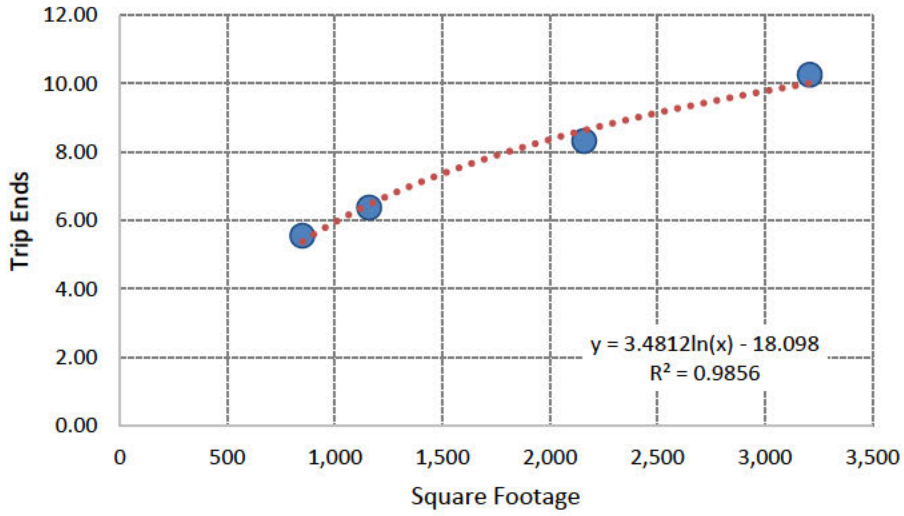
Trip Ends vs. Bedrooms vs. Square Footage

Bedrooms	Average Unit Size (Sq Ft)[1]	Avg. Weighted Vehicle Trip Ends per Housing Unit[2]
0 to 1	850	5.55
2	1,160	6.37
3	2,160	8.32
4+	3,210	10.25

1) Source: Orange County Property Appraiser's Parcel Database
2) Source: Table A-5

Figure A-1

Average Trip Ends per Square Footage



Using the resulting best-fit equation (as shown in Figure A-1), the trip generation rates for various square footage tiers were calculated. As a final adjustment, the resulting trip generation rates were adjusted to account for the differences between the national ITE 10th Edition average trip generation rate and the Florida Studies Trip Characteristics Database average trip generation rate for the single family land use. The resulting trip generation rates are shown in Table A-7.

Table A-7

Trip Generation Rates by Tier

Tier	Sq Ft Input	TGR[1]	TGR Adj.[2]
Single Family (Detached) - 1,200 sf or less	1,000	6.58	**6.15**
Single Family (Detached) - 1,201 to 2,000 sf	**2,000**	**8.36**	**7.81**
Single Family (Detached) - 2,001 to 3,500 sf	3,500	10.31	**9.63**
Single Family (Detached) - greater than 3,500 sf	4,000	10.78	**10.07**

1) Calculated using the sq ft inputs and the line of best fit from Figure 1
2) TGR (Item 1) adjusted from National data to Florida data. The ratio between the calculated TGR for the 1,501-2,000 sq ft tier (8.36) and the FL studies average TGR (7.81; detail is presented later in this Appendix) was applied to all other sq ft tiers.

Tables A-8 through A-10 present the tiered single family rates for each fee district.

Table A-8

Calculated Single Family Tiered Fee Rates (URBAN)

ITE LUC	Land Use	Unit	Trip Rate	Net Multi-Modal Fee
	URBAN			
210	Single Family (Detached) - 1,200 sf or less	du	6.15	**$6,425**
210	Single Family (Detached) - 1,201 to 2,000 sf	du	7.81	**$8,218**
210	Single Family (Detached) - 2,001 to 3,500 sf	du	9.63	**$10,163**
210	Single Family (Detached) - greater than 3,500 sf	du	10.07	**$10,640**

Table A-9

Calculated Single Family Tiered Fee Rates (SUBURBAN)

Table A-10

Calculated Single Family Tiered Fee Rates (RURAL)

Demand Variable Changes

Since the last demand component update in 2012, the trip generation rate (TGR), trip length (TL), and percent new trips (PNT) have changed for several land uses. These variables were updated based on additional data included in the Florida Studies database (including local Orange County studies) and the use of the ITE 10th Edition Trip Generation Reference Report. Table A-11 presents the changes to the gross VMT while Tables A-12 through A-14 provide detail on each individual input variable. For the trip length comparison in Table A-13, it is important to note that these figures reflect the trip length figures used in the impact fee calculations prior to the application of local adjustment factor to reflect longer trip lengths in Orange County.

Table A-11
Percent Change in Gross VMT of Impact Fee Land Uses

ITE LUC	Land Use	Unit	GVMT 2012	GVMT 2020	GVMT %	Explanation
	RESIDENTIAL:					
210	Single Family (Detached) - 1,200 sf or less	du	25.85	20.36	-21%	Single Family TGR tiering by square footage added
210	Single Family (Detached) - 1,201 to 2,000 sf	du	25.85	25.85	0%	Single Family TGR tiering by square footage added
210	Single Family (Detached) - 2,001 to 3,500 sf	du	25.85	31.88	23%	Single Family TGR tiering by square footage added
210	Single Family (Detached) - greater than 3,500 sf	du	25.85	33.33	29%	Single Family TGR tiering by square footage added
220	Multi-Family Housing/Townhouse (Low-Rise, 1-2 floors)	du	16.83	18.67	11%	Re-alignment of multi-family land uses in ITE 10th Edition
221	Multi-Family Housing (Mid-Rise, 3-10 floors)	du	16.83	13.87	-18%	Re-alignment of multi-family land uses in ITE 10th Edition
222	Multi-Family Housing (High-Rise, >10 floors)	du	10.66	11.35	6%	Re-alignment of multi-family land uses in ITE 10th Edition
225	Student Housing (Adjacent to Campus)	bedroom	-	4.02	-	Unit change (previously "per du"), TGR & TL update, see Tables A-12 and A-13
225	Student Housing (Over 1/2 mile from Campus)	bedroom	-	7.60	-	Unit change (previously "per du"), TGR & TL update, see Tables A-12 and A-13
231	Mid-Rise Residential w/1st floor Commercial	du	-	8.77	-	New land use
232	High-Rise Residential w/1st floor Commercial	du	-	5.13	-	New land use
240	Mobile Home Park	du	9.59	9.59	0%	No change
251	Senior Adult Housing - Detached (Retirement Community/ Age-Restricted Single-Family)	du	8.48	9.49	12%	TGR update, see Table A-12
252	Senior Adult Housing - Attached (Retirement Community/ Age-Restricted Single-Family)	du	-	7.23	-	New land use
265	Time Share	du	13.91	17.13	23%	TGR update, see Table A-12
	LODGING:					
310	Hotel/Tourist Hotel	room	13.14	11.47	-13%	TGR update, see Table A-12
320	Motel	room	9.41	5.60	-40%	TGR update, see Table A-12
	RECREATIONAL:					
430	Golf Course	acre	15.01	11.14	-26%	TGR update, see Table A-12
437	Bowling Alley	1,000 sf	77.24	30.13	-61%	TGR update, see Table A-12
443	Movie Theater	1,000 sf	76.25	80.19	5%	TGR update, see Table A-12
491	Racquet Club	1,000 sf	33.96	47.68	40%	TGR update, see Table A-12
492	Health/Fitness Club	1,000 sf	79.71	83.51	5%	TGR update, see Table A-12
n/a	Dance Studio (Martial Arts/Music Lessons)	1,000 sf	-	30.55	-	New land use
	INSTITUTIONAL:					
522	School	1,000 sf	52.85	26.71	-49%	TGR, TL & PNT update, see Tables A-12, A-13, and A-14
560	Public Assembly	1,000 sf	34.94	12.23	-65%	TGR, TL & PNT update, see Tables A-12, A-13, and A-14
565	Day Care	1,000 sf	55.62	36.77	-34%	TGR update, see Table A-12
590	Library	1,000 sf	91.22	116.86	28%	TGR update, see Table A-12
	MEDICAL:					
610	Hospital	bed	30.10	57.63	91%	TGR & PNT update, see Tables A-12 and A-14
620	Nursing Home	1,000 sf	2.86	7.65	167%	TGR update, see Table A-12
640	Animal Hospital/Veterinary Clinic	1,000 sf	67.97	16.09	-76%	TGR & TL update, see Tables A-12 and A-13
	OFFICE:					
710	General Office 50,000 sf or less	1,000 sf	37.07	25.66	-31%	TGR update, see Table A-12
710	General Office 50,001-100,000 sf	1,000 sf	31.60	25.14	-20%	TGR update, see Table A-12
710	General Office 100,001-200,000 sf	1,000 sf	26.94	24.61	-9%	TGR update, see Table A-12
710	General Office greater than 200,000 sf	1,000 sf	22.98	24.12	5%	TGR update, see Table A-12
720	Small Medical/Dental Office (10,000 sq ft or less)	1,000 sf	85.75	58.85	-31%	TGR update, see Table A-12
720	Medical/Dental Office	1,000 sf	85.75	84.27	-2%	TGR update, see Table A-12
732	Post Office	1,000 sf	136.51	131.15	-4%	TGR update, see Table A-12
	RETAIL:					
815	Free-Standing Discount Store	1,000 sf	46.02	42.71	-7%	TGR update, see Table A-12
816	Hardware/Paint Store	1,000 sf	26.86	4.79	-82%	TGR update, see Table A-12
820	Retail/Tourist Retail: 50,000 sfgla or less	1,000 sfgla	45.32	39.30	-13%	TGR update, see Table A-12
820	Retail/Tourist Retail: 50,001-100,000 sfgla	1,000 sfgla	48.21	42.68	-11%	TGR update, see Table A-12
820	Retail/Tourist Retail: 100,001-200,000 sfgla	1,000 sfgla	42.84	38.72	-10%	TGR update, see Table A-12
820	Retail/Tourist Retail: 200,001-300,000 sfgla	1,000 sfgla	41.36	37.84	-9%	TGR update, see Table A-12
820	Retail/Tourist Retail: 300,001-400,000 sfgla	1,000 sfgla	40.28	37.18	-8%	TGR update, see Table A-12
820	Retail/Tourist Retail: 400,001-500,000 sfgla	1,000 sfgla	39.87	37.04	-7%	TGR update, see Table A-12
820	Retail/Tourist Retail: 500,001-1,000,000 sfgla	1,000 sfgla	41.03	38.93	-5%	TGR update, see Table A-12
820	Retail/Tourist Retail: 1,000,001-1,200,000 sfgla	1,000 sfgla	41.66	39.72	-5%	TGR update, see Table A-12
820	Retail/Tourist Retail: greater than 1,200,000 sfgla	1,000 sfgla	42.52	40.75	-4%	TGR update, see Table A-12
840/841	New/Used Auto Sales	1,000 sf	47.97	44.66	-7%	TGR update, see Table A-12
850	Supermarket	1,000 sf	60.21	62.11	3%	TGR update, see Table A-12
853	Convenience Market w/Gas Pumps	1,000 sf	163.86	132.39	-19%	TGR update, see Table A-12
862	Home Improvement Superstore	1,000 sf	23.96	24.71	3%	TGR update, see Table A-12
863	Electronics Superstore	1,000 sf	12.30	21.49	75%	TGR, TL & PNT update, see Tables A-12, A-13, and A-14
880/881	Drug Store	1,000 sf	85.81	34.73	-60%	TGR, TL & PNT update, see Tables A-12, A-13, and A-14
	SERVICES:					
911	Bank/Savings Walk-In	1,000 sf	-	33.60	-	New land use
912	Bank/Savings Drive-In	1,000 sf	90.15	58.09	-36%	TGR update, see Table A-12
925	Drinking Place	1,000 sf	30.96	59.48	92%	TGR, TL & PNT update, see Tables A-12, A-13, and A-14
931	Quality Restaurant	1,000 sf	110.13	104.00	-6%	TGR update, see Table A-12
932	High-Turnover Restaurant	1,000 sf	131.22	119.58	-9%	TGR update, see Table A-12
934	Fast Food Restarurant w/Drive-Thru	1,000 sf	303.79	286.86	-6%	TGR update, see Table A-12
942	Auto Service	1,000 sf	52.17	36.74	-30%	TGR, TL & PNT update, see Tables A-12, A-13, and A-14
944	Gas Station with or w/o Convenience Market <2,000 sq ft	fuel pos.	36.83	37.58	2%	TGR update, see Table A-12
945	Gas Station w/Convenience Market 2,000-2,999 sq ft	fuel pos.	-	44.87	-	New land use
960	Gas Station w/Convenience Market 3,000+ sq ft	fuel pos.	-	50.37	-	New land use
947	Self-Service Car Wash	wash station	80.05	80.05	0%	No change
	INDUSTRIAL:					
110	General Light Industrial	1,000 sf	16.51	11.75	-29%	TGR update, see Table A-12
140	Manufacturing	1,000 sf	9.05	9.31	3%	TGR update, see Table A-12
150	Warehouse	1,000 sf	8.43	4.12	-51%	TGR update, see Table A-12
151	Mini-Warehouse	1,000 sf	3.07	2.41	-21%	TGR & TL update, see Tables A-12 and A-13
154	High-Cube Transload and Short-Term Storage Warehouse	1,000 sf	-	3.32	-	New land use

- Gross VMT = TGR * TL * PNT / 2
- Individual input variables are shown in Tables A-12 through A-14
- The trip length values used to calculate the GVMT do NOT include the TL adjustment factors that are applied in the impact fee rate calculations. The TL shown in Table A-13 provide a comparison to the 2012 report of the unadjusted TL values
- See Appendix E for additional information

Table A-12
Percent Change in Trip Generation Rate of Impact Fee Land Uses

ITE LUC	Land Use	Unit	TGR 2012	TGR 2020	TGR %	Explanation
	RESIDENTIAL:					
210	Single Family (Detached) - 1,200 sf or less	du	7.81	6.15	-21%	Single Family tiering by square footage added
210	Single Family (Detached) - 1,201 to 2,000 sf	du	7.81	7.81	0%	Single Family tiering by square footage added
210	Single Family (Detached) - 2,001 to 3,500 sf	du	7.81	9.63	23%	Single Family tiering by square footage added
210	Single Family (Detached) - greater than 3,500 sf	du	7.81	10.07	29%	Single Family tiering by square footage added
220	Multi-Family Housing/Townhouse (Low-Rise, 1-2 floors)	du	6.60	7.32	11%	Re-alignment of multi-family land uses in ITE 10th Edition
221	Multi-Family Housing (Mid-Rise, 3-10 floors)	du	6.60	5.44	-18%	Re-alignment of multi-family land uses in ITE 10th Edition
222	Multi-Family Housing (High-Rise, >10 floors)	du	4.18	4.45	6%	Re-alignment of multi-family land uses in ITE 10th Edition
225	Student Housing (Adjacent to Campus)	bedroom	-	3.15	-	Updated TGR in ITE 10th Edition, unit change (previously "per du")
225	Student Housing (Over 1/2 mile from Campus)	bedroom	-	3.97	-	Updated TGR in ITE 10th Edition, unit change (previously "per du")
231	Mid-Rise Residential w/1st floor Commercial	du	-	3.44	-	New land use
232	High-Rise Residential w/1st floor Commercial	du	-	2.01	-	New land use
240	Mobile Home Park	du	4.17	4.17	0%	No change
251	Senior Adult Housing - Detached (Retirement Community/ Age-Restricted Single-Family)	du	3.13	3.50	12%	Updated TGR in ITE 10th Edition
252	Senior Adult Housing - Attached (Retirement Community/ Age-Restricted Single-Family)	du	-	3.33	-	New land use
265	Time Share	du	7.01	8.63	23%	Updated TGR in ITE 10th Edition
	LODGING:					
310	Hotel/Tourist Hotel	room	6.36	5.55	-13%	Additional FL Studies added and updated TGR in ITE 10th Edition
320	Motel	room	5.63	3.35	-40%	Updated TGR in ITE 10th Edition
	RECREATIONAL:					
430	Golf Course	acre	5.04	3.74	-26%	Updated TGR in ITE 10th Edition
437	Bowling Alley	1,000 sf	33.33	13.00	-61%	Updated TGR in ITE 10th Edition (peak hour adjusted for daily)
443	Movie Theater	1,000 sf	78.06	82.30	5%	Updated TGR in ITE 10th Edition
491	Racquet Club	1,000 sf	14.03	19.70	40%	Updated TGR in ITE 10th Edition (peak hour adjusted for daily)
492	Health/Fitness Club	1,000 sf	32.93	34.50	5%	Updated TGR in ITE 10th Edition (peak hour adjusted for daily)
n/a	Dance Studio (Martial Arts/Music Lessons)	1,000 sf	-	21.33	-	New land use
	INSTITUTIONAL:					
522	School	1,000 sf	13.78	20.17	46%	Updated TGR in ITE 10th Edition
560	Public Assembly	1,000 sf	9.11	6.95	-24%	Updated TGR in ITE 10th Edition
565	Day Care	1,000 sf	75.07	49.63	-34%	Updated TGR in ITE 10th Edition
590	Library	1,000 sf	56.24	72.05	28%	Updated TGR in ITE 10th Edition
	MEDICAL:					
610	Hospital	bed	11.81	22.32	89%	Updated TGR in ITE 10th Edition
620	Nursing Home	1,000 sf	2.48	6.64	168%	Updated TGR in ITE 10th Edition
640	Animal Hospital/Veterinary Clinic	1,000 sf	28.66	24.20	-16%	Updated TGR in ITE 10th Edition
	OFFICE:					
710	General Office 50,000 sf or less	1,000 sf	15.65	10.83	-31%	Updated TGR equation in ITE 10th Edition
710	General Office 50,001-100,000 sf	1,000 sf	13.34	10.61	-20%	Updated TGR equation in ITE 10th Edition
710	General Office 100,001-200,000 sf	1,000 sf	11.37	10.39	-9%	Updated TGR equation in ITE 10th Edition
710	General Office greater than 200,000 sf	1,000 sf	9.70	10.18	5%	Updated TGR equation in ITE 10th Edition
720	Small Medical/Dental Office (10,000 sq ft or less)	1,000 sf	34.72	23.83	-31%	New land use (change shown from the medical/dental office)
720	Medical/Dental Office	1,000 sf	34.72	34.12	-2%	Updated TGR in ITE 10th Edition
732	Post Office	1,000 sf	108.19	103.94	-4%	Updated TGR in ITE 10th Edition
	RETAIL:					
815	Free-Standing Discount Store	1,000 sf	57.24	53.12	-7%	Updated TGR in ITE 10th Edition
816	Hardware/Paint Store	1,000 sf	51.29	9.14	-82%	Updated TGR in ITE 10th Edition
820	Retail/Tourist Retail: 50,000 sfgla or less	1,000 sfgla	86.56	75.05	-13%	Updated TGR equation in ITE 10th Edition
820	Retail/Tourist Retail: 50,001-100,000 sfgla	1,000 sfgla	67.91	60.12	-11%	Updated TGR equation in ITE 10th Edition
820	Retail/Tourist Retail: 100,001-200,000 sfgla	1,000 sfgla	53.28	48.16	-10%	Updated TGR equation in ITE 10th Edition
820	Retail/Tourist Retail: 200,001-300,000 sfgla	1,000 sfgla	46.23	42.30	-9%	Updated TGR equation in ITE 10th Edition
820	Retail/Tourist Retail: 300,001-400,000 sfgla	1,000 sfgla	41.80	38.58	-8%	Updated TGR equation in ITE 10th Edition
820	Retail/Tourist Retail: 400,001-500,000 sfgla	1,000 sfgla	38.66	35.92	-7%	Updated TGR equation in ITE 10th Edition
820	Retail/Tourist Retail: 500,001-1,000,000 sfgla	1,000 sfgla	30.33	28.78	-5%	Updated TGR equation in ITE 10th Edition
820	Retail/Tourist Retail: 1,000,001-1,200,000 sfgla	1,000 sfgla	28.46	27.14	-5%	Updated TGR equation in ITE 10th Edition
820	Retail/Tourist Retail: greater than 1,200,000 sfgla	1,000 sfgla	26.96	25.84	-4%	Updated TGR equation in ITE 10th Edition
840/841	New/Used Auto Sales	1,000 sf	26.40	24.58	-7%	Updated TGR in ITE 10th Edition
850	Supermarket	1,000 sf	103.38	106.64	3%	Updated TGR in ITE 10th Edition
853	Convenience Market w/Gas Pumps	1,000 sf	775.14	626.25	-19%	Updated TGR in ITE 10th Edition
862	Home Improvement Superstore	1,000 sf	29.80	30.74	3%	Updated TGR in ITE 10th Edition
863	Electronics Superstore	1,000 sf	45.04	41.05	-9%	Updated TGR in ITE 10th Edition
880/881	Drug Store	1,000 sf	88.46	104.37	18%	Updated TGR in ITE 10th Edition
	SERVICES:					
911	Bank/Savings Walk-In	1,000 sf	-	59.39	-	New land use. TGR from ITE 10th (PM 4-6pm adjusted for daily)
912	Bank/Savings Drive-In	1,000 sf	159.34	102.66	-36%	Updated TGR in ITE 10th Edition
925	Drinking Place	1,000 sf	113.40	113.60	0%	Updated TGR in ITE 10th Edition (peak hour adjusted for daily)
931	Quality Restaurant	1,000 sf	91.10	86.03	-6%	Updated TGR in ITE 10th Edition
932	High-Turnover Restaurant	1,000 sf	116.60	106.26	-9%	Additional FL Studies added and updated TGR in ITE 10th Edition
934	Fast Food Restarurant w/Drive-Thru	1,000 sf	511.00	482.53	-6%	Updated TGR in ITE 10th Edition
942	Auto Service	1,000 sf	25.67	28.19	10%	Updated TGR in ITE 10th Edition (peak hour adjusted for daily)
944	Gas Station with or w/o Convenience Market <2,000 sq ft	fuel pos.	168.56	172.01	2%	Updated TGR in ITE 10th Edition
945	Gas Station w/Convenience Market 2,000-2,999 sq ft	fuel pos.	-	205.36	-	New land use
960	Gas Station w/Convenience Market 3,000+ sq ft	fuel pos.	-	230.52	-	New land use
947	Self-Service Car Wash	wash station	108.00	108.00	0%	No change
	INDUSTRIAL:					
110	General Light Industrial	1,000 sf	6.97	4.96	-29%	Updated TGR in ITE 10th Edition
140	Manufacturing	1,000 sf	3.82	3.93	3%	Updated TGR in ITE 10th Edition
150	Warehouse	1,000 sf	3.56	1.74	-51%	Updated TGR in ITE 10th Edition
151	Mini-Warehouse	1,000 sf	2.15	1.49	-31%	Additional FL Studies added
154	High-Cube Transload and Short-Term Storage Warehouse	1,000 sf	-	1.40	-	New land use

See Appendix E for additional information

Table A-13
Percent Change in Trip Length (Unadjusted) of Impact Fee Land Uses

ITE LUC	Land Use	Unit	TL 2012	TL 2020	TL %	Explanation
	RESIDENTIAL:					
210	Single Family (Detached) - 1,200 sf or less	du	6.62	6.62	0%	No change
210	Single Family (Detached) - 1,201 to 2,000 sf	du	6.62	6.62	0%	No change
210	Single Family (Detached) - 2,001 to 3,500 sf	du	6.62	6.62	0%	No change
210	Single Family (Detached) - greater than 3,500 sf	du	6.62	6.62	0%	No change
220	Multi-Family Housing/Townhouse (Low-Rise, 1-2 floors)	du	5.10	5.10	0%	No change
221	Multi-Family Housing (Mid-Rise, 3-10 floors)	du	5.10	5.10	0%	No change
222	Multi-Family Housing (High-Rise, >10 floors)	du	5.10	5.10	0%	No change
225	Student Housing (Adjacent to Campus)	bedroom	5.10	2.55	-50%	Updated to use 50% of LUC 220
225	Student Housing (Over 1/2 mile from Campus)	bedroom	5.10	3.83	-25%	Updated to use 75% of LUC 220
231	Mid-Rise Residential w/1st floor Commercial	du	-	5.10	-	New land use
232	High-Rise Residential w/1st floor Commercial	du	-	5.10	-	New land use
240	Mobile Home Park	du	4.60	4.60	0%	No change
251	Senior Adult Housing - Detached (Retirement Community/ Age-Restricted Single-Family)	du	5.42	5.42	0%	No change
252	Senior Adult Housing - Attached (Retirement Community/ Age-Restricted Single-Family)	du	-	4.34	-	New land use
265	Time Share	du	3.97	3.97	0%	No change
	LODGING:					
310	Hotel/Tourist Hotel	room	6.26	6.26	0%	No change
320	Motel	room	4.34	4.34	0%	No change
	RECREATIONAL:					
430	Golf Course	acre	6.62	6.62	0%	No change
437	Bowling Alley	1,000 sf	5.15	5.15	0%	No change
443	Movie Theater	1,000 sf	2.22	2.24	1%	Updated weighted average calculation
491	Racquet Club	1,000 sf	5.15	5.15	0%	No change
492	Health/Fitness Club	1,000 sf	5.15	5.15	0%	No change
n/a	Dance Studio (Martial Arts/Music Lessons)	1,000 sf	-	3.37	-	New land use
	INSTITUTIONAL:					
522	School	1,000 sf	7.67	3.31	-57%	Updated to use 50% of single family per review of travel demand models
560	Public Assembly	1,000 sf	7.67	3.91	-49%	Updated to use the midpoint of office and retail (App. A)
565	Day Care	1,000 sf	2.03	2.03	0%	No change
590	Library	1,000 sf	6.62	6.62	0%	No change
	MEDICAL:					
610	Hospital	bed	6.62	6.62	0%	No change
620	Nursing Home	1,000 sf	2.59	2.59	0%	No change
640	Animal Hospital/Veterinary Clinic	1,000 sf	5.10	1.90	-63%	Updated to use FL Studies; previously used 2004 study
	OFFICE:					
710	General Office 50,000 sf or less	1,000 sf	5.15	5.15	0%	No change
710	General Office 50,001-100,000 sf	1,000 sf	5.15	5.15	0%	No change
710	General Office 100,001-200,000 sf	1,000 sf	5.15	5.15	0%	No change
710	General Office greater than 200,000 sf	1,000 sf	5.15	5.15	0%	No change
720	Small Medical/Dental Office	1,000 sf	5.55	5.55	0%	No change
720	Medical/Dental Office	1,000 sf	5.55	5.55	0%	No change
732	Post Office	1,000 sf	5.15	5.15	0%	No change
	RETAIL:					
815	Free-Standing Discount Store	1,000 sf	2.40	2.40	0%	No change
816	Hardware/Paint Store	1,000 sf	1.87	1.87	0%	No change
820	Retail/Tourist Retail: 50,000 sfgla or less	1,000 sfgla	1.87	1.87	0%	No change
820	Retail/Tourist Retail: 50,001-100,000 sfgla	1,000 sfgla	2.29	2.29	0%	No change
820	Retail/Tourist Retail: 100,001-200,000 sfgla	1,000 sfgla	2.40	2.40	0%	No change
820	Retail/Tourist Retail: 200,001-300,000 sfgla	1,000 sfgla	2.52	2.52	0%	No change
820	Retail/Tourist Retail: 300,001-400,000 sfgla	1,000 sfgla	2.64	2.64	0%	No change
820	Retail/Tourist Retail: 400,001-500,000 sfgla	1,000 sfgla	2.75	2.75	0%	No change
820	Retail/Tourist Retail: 500,001-1,000,000 sfgla	1,000 sfgla	3.34	3.34	0%	No change
820	Retail/Tourist Retail: 1,000,001-1,200,000 sfgla	1,000 sfgla	3.57	3.57	0%	No change
820	Retail/Tourist Retail: greater than 1,200,000 sfgla	1,000 sfgla	3.80	3.80	0%	No change
840/841	New/Used Auto Sales	1,000 sf	4.60	4.60	0%	No change
850	Supermarket	1,000 sf	2.08	2.08	0%	No change
853	Convenience Market w/Gas Pumps	1,000 sf	1.51	1.51	0%	No change
862	Home Improvement Superstore	1,000 sf	2.40	2.40	0%	No change
863	Electronics Superstore	1,000 sf	1.27	1.87	47%	Updated to <50,000 sq ft retail tier; previously used <10,000 sq ft
880/881	Drug Store	1,000 sf	3.88	2.08	-46%	Updated to use FL Studies; previously used 2004 study
	SERVICES:					
911	Bank/Savings Walk-In	1,000 sf	-	2.46	-	New land use
912	Bank/Savings Drive-In	1,000 sf	2.46	2.46	0%	No change
925	Drinking Place	1,000 sf	1.27	1.87	47%	Updated to <50,000 sq ft retail tier; previously used <10,000 sq ft
931	Quality Restaurant	1,000 sf	3.14	3.14	0%	No change
932	High-Turnover Restaurant	1,000 sf	3.17	3.17	0%	No change
934	Fast Food Restarurant w/Drive-Thru	1,000 sf	2.05	2.05	0%	No change
942	Auto Service	1,000 sf	7.97	3.62	-55%	Updated to use FL Studies; previously used 2004 study
944	Gas Station with or w/o Convenience Market <2,000 sq ft	fuel pos.	1.90	1.90	0%	No change
945	Gas Station w/Convenience Market 2,000-2,999 sq ft	fuel pos.	-	1.90	-	New land use
960	Gas Station w/Convenience Market 3,000+ sq ft	fuel pos.	-	1.90	-	New land use
947	Self-Service Car Wash	wash station	2.18	2.18	0%	No change
	INDUSTRIAL:					
110	General Light Industrial	1,000 sf	5.15	5.15	0%	No change
140	Manufacturing	1,000 sf	5.15	5.15	0%	No change
150	Warehouse	1,000 sf	5.15	5.15	0%	No change
151	Mini-Warehouse	1,000 sf	3.10	3.51	13%	Updated to use the midpoint of office and retail (<50k sq ft)
154	High-Cube Transload and Short-Term Storage Warehouse	1,000 sf	-	5.15	-	New land use

- The trip length values shown do NOT include the TL adjustment factors that are applied in the impact fee rate calculations. The TL shown in Table A-13 provide a comparison to the 2012 report of the raw, unadjusted TL values
- See Appendix E for additional information

Table A-14
Percent Change in Percent New Trips of Impact Fee Land Uses

ITE LUC	Land Use	Unit	PNT 2012	PNT 2020	PNT %	Explanation
	RESIDENTIAL:					
210	Single Family (Detached) - 1,200 sf or less	du	100%	100%	0%	No change
210	Single Family (Detached) - 1,201 to 2,000 sf	du	100%	100%	0%	No change
210	Single Family (Detached) - 2,001 to 3,500 sf	du	100%	100%	0%	No change
210	Single Family (Detached) - greater than 3,500 sf	du	100%	100%	0%	No change
220	Multi-Family Housing/Townhouse (Low-Rise, 1-2 floors)	du	100%	100%	0%	No change
221	Multi-Family Housing (Mid-Rise, 3-10 floors)	du	100%	100%	0%	No change
222	Multi-Family Housing (High-Rise, >10 floors)	du	100%	100%	0%	No change
225	Student Housing (Adjacent to Campus)	bedroom	100%	100%	0%	No change
225	Student Housing (Over 1/2 mile from Campus)	bedroom	100%	100%	0%	No change
231	Mid-Rise Residential w/1st floor Commercial	du	-	100%	-	New land use
232	High-Rise Residential w/1st floor Commercial	du	-	100%	-	New land use
240	Mobile Home Park	du	100%	100%	0%	No change
251	Senior Adult Housing - Detached (Retirement Community/ Age-Restricted Single-Family)	du	100%	100%	0%	No change
252	Senior Adult Housing - Attached (Retirement Community/ Age-Restricted Single-Family)	du	-	100%	-	New land use
265	Time Share	du	100%	100%	0%	No change
	LODGING:					
310	Hotel/Tourist Hotel	room	66%	66%	0%	No change
320	Motel	room	77%	77%	0%	No change
	RECREATIONAL:					
430	Golf Course	acre	90%	90%	0%	No change
437	Bowling Alley	1,000 sf	90%	90%	0%	No change
443	Movie Theater	1,000 sf	88%	87%	-1%	Updated weighted average calculation
491	Racquet Club	1,000 sf	94%	94%	0%	No change
492	Health/Fitness Club	1,000 sf	94%	94%	0%	No change
n/a	Dance Studio (Martial Arts/Music Lessons)	1,000 sf	-	85%	-	New land use
	INSTITUTIONAL:					
522	School	1,000 sf	100%	80%	-20%	Updated; based on office land use w/adjustment
560	Public Assembly	1,000 sf	100%	90%	-10%	Updated; based on office land use
565	Day Care	1,000 sf	73%	73%	0%	No change
590	Library	1,000 sf	49%	49%	0%	No change
	MEDICAL:					
610	Hospital	bed	77%	78%	1%	Updated; based on midpoint of office and hotel
620	Nursing Home	1,000 sf	89%	89%	0%	No change
640	Animal Hospital/Veterinary Clinic	1,000 sf	93%	70%	-25%	Updated to use FL Studies; previously used 2004 study
	OFFICE:					
710	General Office 50,000 sf or less	1,000 sf	92%	92%	0%	No change
710	General Office 50,001-100,000 sf	1,000 sf	92%	92%	0%	No change
710	General Office 100,001-200,000 sf	1,000 sf	92%	92%	0%	No change
710	General Office greater than 200,000 sf	1,000 sf	92%	92%	0%	No change
720	Small Medical/Dental Office	1,000 sf	89%	89%	0%	No change
720	Medical/Dental Office	1,000 sf	89%	89%	0%	No change
732	Post Office	1,000 sf	49%	49%	0%	No change
	RETAIL:					
815	Free-Standing Discount Store	1,000 sf	67%	67%	0%	No change
816	Hardware/Paint Store	1,000 sf	56%	56%	0%	No change
820	Retail/Tourist Retail: 50,000 sfgla or less	1,000 sfgla	56%	56%	0%	No change
820	Retail/Tourist Retail: 50,001-100,000 sfgla	1,000 sfgla	62%	62%	0%	No change
820	Retail/Tourist Retail: 100,001-200,000 sfgla	1,000 sfgla	67%	67%	0%	No change
820	Retail/Tourist Retail: 200,001-300,000 sfgla	1,000 sfgla	71%	71%	0%	No change
820	Retail/Tourist Retail: 300,001-400,000 sfgla	1,000 sfgla	73%	73%	0%	No change
820	Retail/Tourist Retail: 400,001-500,000 sfgla	1,000 sfgla	75%	75%	0%	No change
820	Retail/Tourist Retail: 500,001-1,000,000 sfgla	1,000 sfgla	81%	81%	0%	No change
820	Retail/Tourist Retail: 1,000,001-1,200,000 sfgla	1,000 sfgla	82%	82%	0%	No change
820	Retail/Tourist Retail: greater than 1,200,000 sfgla	1,000 sfgla	83%	83%	0%	No change
840/841	New/Used Auto Sales	1,000 sf	79%	79%	0%	No change
850	Supermarket	1,000 sf	56%	56%	0%	No change
853	Convenience Market w/Gas Pumps	1,000 sf	28%	28%	0%	No change
862	Home Improvement Superstore	1,000 sf	67%	67%	0%	No change
863	Electronics Superstore	1,000 sf	43%	56%	30%	Updated to <50,000 sq ft retail tier; previously used <10,000 sq ft
880/881	Drug Store	1,000 sf	50%	32%	-36%	Updated to use FL Studies; previously used 2004 study
	SERVICES:					
911	Bank/Savings Walk-In	1,000 sf	-	46%	-	New land use
912	Bank/Savings Drive-In	1,000 sf	46%	46%	0%	No change
925	Drinking Place	1,000 sf	43%	56%	30%	Updated to <50,000 sq ft retail tier; previously used <10,000 sq ft
931	Quality Restaurant	1,000 sf	77%	77%	0%	No change
932	High-Turnover Restaurant	1,000 sf	71%	71%	0%	No change
934	Fast Food Restarurant w/Drive-Thru	1,000 sf	58%	58%	0%	No change
942	Auto Service	1,000 sf	51%	72%	41%	Updated to use FL Studies; previously used 2004 study
944	Gas Station with or w/o Convenience Market <2,000 sq ft	fuel pos.	23%	23%	0%	No change
945	Gas Station w/Convenience Market 2,000-2,999 sq ft	fuel pos.	-	23%	-	New land use
960	Gas Station w/Convenience Market 3,000+ sq ft	fuel pos.	-	23%	-	New land use
947	Self-Service Car Wash	wash station	68%	68%	0%	No change
	INDUSTRIAL:					
110	General Light Industrial	1,000 sf	92%	92%	0%	No change
140	Manufacturing	1,000 sf	92%	92%	0%	No change
150	Warehouse	1,000 sf	92%	92%	0%	No change
151	Mini-Warehouse	1,000 sf	92%	92%	0%	No change
154	High-Cube Transload and Short-Term Storage Warehouse	1,000 sf	-	92%	-	New land use

See Appendix E for additional information

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 the transportation impact fee schedule using data from studies in the Florida Studies Database and the Institute of Transportation Engineers' (ITE) *Trip Generation* reference report (10th edition). In instances, when both ITE *Trip Generation* reference report (10th edition) and Florida Studies trip generation rate (TGR) data are available for a particular land use, the data is typically blended to increase the sample size and provide a more valid estimate of the average number of trips generated per unit of development. If no Florida Studies data is available, only TGR data from the ITE reference report is used in the fee calculation. The database includes several local Orange County studies (highlighted).

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.

Land Use 151: Mini-Warehouse

Location	Size (1,000 sf)	Date	Total # Interviews	# Trip Length Interviews	Trip Gen Rate	Time Period	Trip Length	Percent New Trips	VMT	Source
Orange Co, FL	89.6	2006	-	-	1.23	-	-	-	-	Orange County
Orange Co, FL	84.7	2006	-	-	1.39	-	-	-	-	Orange County
Orange Co, FL	93.0	2006	-	-	1.51	-	-	-	-	Orange County
Orange Co, FL	107.0	2007	-	-	1.45	-	-	-	-	Orange County
Orange Co, FL	77.0	2009	-	-	2.18	-	-	-	-	Tindale Oliver
Orange Co, FL	93.7	2012	-	-	1.15	-	-	-	-	Tindale Oliver
Total Size	545.0	5					**Average Trip Length:**	**n/a**		
ITE	780 0	15					**Weighted Average Trip Length:**	**n/a**		
Blended total	1,325.0						Weighted Percent New Trip Average	-		

Weighted Average Trip Generation Rate	1.47
ITE Average Trip Generation Rate	1.51
Blend of FL Studies and ITE Average Trip Generation Rate:	**1.49**

Land Use 210: Single Family - Detached

Location	Size / Units	Date	Total # Interviews	# Trip Length Interviews	Trip Gen Rate	Time Period	Trip Length	Percent New Trips	VMT	Source
Gwinnett Co, GA	-	12/13-18/92	-	-	5.80	-	5.40	-	31.32	Street Smarts
Gwinnett Co, GA	-	12/13-18/92	-	-	5.40	-	6.10	-	32.94	Street Smarts
Sarasota Co, FL	76	Jun-93	70	70	10.03	-	6.00	-	60.18	Sarasota County
Sarasota Co, FL	79	Jun-93	86	86	9.77	-	4.40	-	42.99	Sarasota County
Sarasota Co, FL	135	Jun-93	75	75	8.05	-	5.90	-	47.50	Sarasota County
Sarasota Co, FL	152	Jun-93	63	63	8.55	-	7.30	-	62.42	Sarasota County
Sarasota Co, FL	193	Jun-93	123	123	6.85	-	4.60	-	31.51	Sarasota County
Sarasota Co, FL	97	Jun-93	33	33	13.20	-	3.00	-	39.60	Sarasota County
Sarasota Co, FL	282	Jun-93	146	146	6.61	-	8.40	-	55.52	Sarasota County
Sarasota Co, FL	393	Jun-93	207	207	7.76	-	5.40	-	41.90	Sarasota County
Hernando Co, FL	76	May-96	148	148	10.01	9a-6p	4.85	-	48.55	Tindale Oliver
Hernando Co, FL	128	May-96	205	205	8.17	9a-6p	6.03	-	49.27	Tindale Oliver
Hernando Co, FL	232	May-96	182	182	7.24	9a-6p	5.04	-	36.49	Tindale Oliver
Hernando Co, FL	301	May-96	264	264	8.93	9a-6p	3.28	-	29.29	Tindale Oliver
Charlotte Co, FL	135	Oct-97	230	-	5.30	9a-5p	7.90	-	41.87	Tindale Oliver
Charlotte Co, FL	142	Oct-97	245	-	5.20	9a-5p	4.10	-	21.32	Tindale Oliver
Charlotte Co, FL	150	Oct-97	160	-	5.00	9a-5p	10.80	-	54.00	Tindale Oliver
Charlotte Co, FL	215	Oct-97	158	-	7.60	9a-5p	4.60	-	34.96	Tindale Oliver
Charlotte Co, FL	257	Oct-97	225	-	7.60	9a-5p	7.40	-	56.24	Tindale Oliver
Charlotte Co, FL	345	Oct-97	161	-	7.00	9a-5p	6.60	-	46.20	Tindale Oliver
Charlotte Co, FL	368	Oct-97	152	-	6.60	9a-5p	5.70	-	37.62	Tindale Oliver
Charlotte Co, FL	383	Oct-97	516	-	8.40	9a-5p	5.00	-	42.00	Tindale Oliver
Charlotte Co, FL	441	Oct-97	195	-	8.20	9a-5p	4.70	-	38.54	Tindale Oliver
Charlotte Co, FL	1,169	Oct-97	348	-	6.10	9a-5p	8.00	-	48.80	Tindale Oliver
Collier Co, FL	90	Dec-99	91	-	12.80	8a-6p	11.40	-	145.92	Tindale Oliver
Collier Co, FL	400	Dec-99	389	-	7.80	8a-6p	6.40	-	49.92	Tindale Oliver
Lake Co, FL	49	Apr-02	170	-	6.70	7a-6p	10.20	-	68.34	Tindale Oliver
Lake Co, FL	52	Apr-02	212	-	10.00	7a-6p	7.60	-	76.00	Tindale Oliver
Lake Co, FL	126	Apr-02	217	-	8.50	7a-6p	8.30	-	70.55	Tindale Oliver
Pasco Co, FL	55	Apr-02	133	-	6.80	8a-6p	8.12	-	55.22	Tindale Oliver
Pasco Co, FL	60	Apr-02	106	-	7.73	8a-6p	8.75	-	67.64	Tindale Oliver
Pasco Co, FL	70	Apr-02	188	-	7.80	8a-6p	6.03	-	47.03	Tindale Oliver
Pasco Co, FL	74	Apr-02	188	-	8.18	8a-6p	5.95	-	48.67	Tindale Oliver
Pasco Co, FL	189	Apr-02	261	-	7.46	8a-6p	8.99	-	67.07	Tindale Oliver
Marion Co, FL	102	Apr-02	167	-	8.02	7a-6p	5.10	-	40.90	Kimley-Horn & Associates
Marion Co, FL	105	Apr-02	169	-	7.23	7a-6p	7.22	-	52.20	Kimley-Horn & Associates
Marion Co, FL	124	Apr-02	170	-	6.04	7a-6p	7.29	-	44.03	Kimley-Horn & Associates
Marion Co, FL	132	Apr-02	171	-	7.87	7a-6p	7.00	-	55.09	Kimley-Horn & Associates
Marion Co, FL	133	Apr-02	209	-	8.04	7a-6p	4.92	-	39.56	Kimley-Horn & Associates
Citrus Co, FL	111	Oct-03	273	-	8.66	7a-6p	7.70	-	66.68	Tindale Oliver
Citrus Co, FL	231	Oct-03	155	-	5.71	7a-6p	4.82	-	27.52	Tindale Oliver
Citrus Co, FL	306	Oct-03	146	-	8.40	7a-6p	3.94	-	33.10	Tindale Oliver
Citrus Co, FL	364	Oct-03	345	-	7.20	7a-6p	9.14	-	65.81	Tindale Oliver
Citrus Co, FL	374	Oct-03	248	-	12.30	7a-6p	6.88	-	84.62	Tindale Oliver
Lake Co, FL	42	Dec-06	122	-	11.26	-	5.56	-	62.61	Tindale Oliver
Lake Co, FL	51	Dec-06	346	-	18.22	-	9.46	-	172.36	Tindale Oliver
Lake Co, FL	59	Dec-06	144	-	12.07	-	10.79	-	130.24	Tindale Oliver
Lake Co, FL	90	Dec-06	194	-	9.12	-	5.78	-	52.71	Tindale Oliver
Lake Co, FL	239	Dec-06	385	-	7.58	-	8.93	-	67.69	Tindale Oliver
Hernando Co, FL	232	Apr-07	516	-	8.02	7a-6p	8.16	-	65.44	Tindale Oliver
Hernando Co, FL	95	Apr-07	256	-	8.08	7a-6p	5.88	-	47.51	Tindale Oliver
Hernando Co, FL	90	Apr-07	338	-	7.13	7a-6p	5.86	-	41.78	Tindale Oliver
Hernando Co, FL	58	Apr-07	153	-	6.16	7a-6p	8.39	-	51.68	Tindale Oliver
Collier Co, FL	74	Mar-08	503	-	12.81	7a-6p	3.05	-	39.07	Tindale Oliver
Collier Co, FL	97	Mar-08	512	-	8.78	7a-6p	11.29	-	99.13	Tindale Oliver
Collier Co, FL	315	Mar-08	1,347	-	6.97	7a-6p	6.55	-	45.65	Tindale Oliver
Collier Co, FL	42	Mar-08	314	-	9.55	7a-6p	10.98	-	104.86	Tindale Oliver
Total Size	10,380	55	13,130				Average Trip Length:	6.79		
							Weighted Average Trip Length:	6.62		

Note Georgia studies are not included in summary statistics

Weighted Average Trip Generation Rate: 7.81

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

Location	Size / Units	Date	Total # Interviews	# Trip Length Interviews	Trip Gen Rate	Time Period	Trip Length	Percent New Trips	VMT	Source
Sarasota Co, FL	212	Jun-93	42	42	5.78	-	5.20	-	30.06	Sarasota County
Sarasota Co, FL	243	Jun-93	36	36	5.84	-	-	-	-	Sarasota County
Marion Co, FL	214	Apr-02	175	175	6.84	-	4.61	-	31.53	Kimley-Horn & Associates
Marion Co, FL	240	Apr-02	174	174	6.96	-	3.43	-	23.87	Kimley-Horn & Associates
Marion Co, FL	288	Apr-02	175	175	5.66	-	5.55	-	31.41	Kimley-Horn & Associates
Marion Co, FL	480	Apr-02	175	175	5.73	-	6.88	-	39.42	Kimley-Horn & Associates
Marion Co, FL	500	Apr-02	170	170	5.46	-	5.94	-	32.43	Kimley-Horn & Associates
Lake Co, FL	250	Dec-06	135	135	6.71	-	5.33	-	35.76	Tindale Oliver
Lake Co, FL	157	Dec-06	265	265	13.97	-	2.62	-	36.60	Tindale Oliver
Lake Co, FL	169	Dec-06	212	-	8.09	-	6.00	-	48.54	Tindale Oliver
Lake Co, FL	226	Dec-06	301	-	6.74	-	2.17	-	14.63	Tindale Oliver
Hernando Co, FL	312	Apr-07	456	-	4.09	-	5.95	-	24.34	Tindale Oliver
Hernando Co, FL	176	Apr-07	332	-	5.38	-	5.24	-	28.19	Tindale Oliver
Orange Co, FL	364	Nov-13	-	-	9.08	-	-	-	-	Orange County
Orange Co, FL	108	Aug-14	-	-	5.51	-	-	-	-	Orange County
Hernando Co, FL	31	May-96	31	31	6.12	9a-6p	4.98	-	30.48	Tindale Oliver
Hernando Co, FL	128	May-96	128	128	6.47	9a-6p	5.18	-	33.51	Tindale Oliver
Pasco Co, FL	229	Apr-02	198	198	4.77	9a-6p	-	-	-	Tindale Oliver
Pasco Co, FL	248	Apr-02	353	353	4.24	9a-6p	3.53	-	14.97	Tindale Oliver
Total Size	4,575						Average Trip Length:	4.27		
Total Size (TL)	3,631						Weighted Average Trip Length:	5.10		

ITE Average Trip Generation Rate (LUC 220: Low-Rise): 7.32

ITE Average Trip Generation Rate (LUC 221: Mid-Rise): 5.44

ITE Average Trip Generation Rate (LUC 222: High-Rise): 4.45

Land Use 240: Mobile Home Park

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

Weighted Average Trip Generation Rate: **4.17**

Land Use 251: Senior Adult Housing - Detached

Location	Size / Units	Date	Total # Interviews	# Trip Length Interviews	Trip Gen Rate	Time Period	Trip Length	Percent New Trips	VMT	Source
Lakeland, FL	67	3/28-4/2/90	26	24	3.50	9am-4pm	2.44	-	8.54	Tindale Oliver
Marion Co, FL	778	Apr-02	175	-	2.96	24hr.	3.49	-	10.33	Kimley-Horn & Associates
Marion Co, FL	877	Apr-02	209	-	2.91	24hr.	5.90	-	17.17	Kimley-Horn & Associates
Marion Co, FL	1,054	Apr-02	173	-	3.65	24hr.	6.00	-	21.90	Kimley-Horn & Associates
Marion Co, FL	3,076	Apr-02	198	-	2.63	24hr.	5.16	-	13.57	Kimley-Horn & Associates
Marion Co, FL	3,625	Apr-02	164	-	2.50	24hr.	5.83	-	14.58	Kimley-Horn & Associates
Total Size	9,477	6	945				**Average Trip Length:**	**4.80**		
ITE	9,170	14					**Weighted Average Trip Length:**	**5.42**		
Blended total	18,647									

Weighted Average Trip Generation Rate 2.75
ITE Average Trip Generation Rate 4.27
Blend of FL Studies and ITE Average Trip Generation Rate: **3.50**

Land Use 252: Senior Adult Housing - Attached

Location	Size / Units	Date	Total # Interviews	# Trip Length Interviews	Trip Gen Rate	Time Period	Trip Length	Percent New Trips	VMT	Source
Sun City Center, FL	208	Oct-91	726	726	2.46	24hr.	-	-	-	Tindale Oliver
Total Size	208	1					**Average Trip Length:**	**-**		
ITE	486	6					**Weighted Average Trip Length:**	**-**		
Blended total	694									

Weighted Average Trip Generation Rate 2.46
ITE Average Trip Generation Rate 3.70
Blend of FL Studies and ITE Average Trip Generation Rate: **3.33**

Land Use 310: Hotel

Location	Size (Rooms)	Date	Total # Interviews	# Trip Length Interviews	Trip Gen Rate	Time Period	Trip Length	Percent New Trips	VMT	Source
Pinellas Co, FL	174	Aug-89	134	106	12.50	7-11a/3-7p	6.30	79.0	62.21	Tindale Oliver
Pinellas Co, FL	114	Oct-89	30	14	7.30	12-7p	6.20	47.0	21.27	Tindale Oliver
Orange Co, FL	123	1997	-	-	6.32					Orange County
Orange Co, FL	120	1997	-	-	5.27					Orange County
Orange Co, FL	146	1997	-	-	7.61					Orange County
Orange Co, FL	252	1997	-	-	5.63					Orange County
Orange Co, FL	172	1997	-	-	6.36					Orange County
Orange Co, FL	170	1997	-	-	6.06					Orange County
Orange Co, FL	128	1997	-	-	6.10					Orange County
Orange Co, FL	200	1997	-	-	4.56					Orange County
Orange Co, FL	112	1998	-	-	2.78					Orange County
Orange Co, FL	130	1998	-	-	9.12					Orange County
Orange Co, FL	106	1998	-	-	7.34					Orange County
Orange Co, FL	98	1998	-	-	7.32					Orange County
Orange Co, FL	120	1998	-	-	5.57					Orange County
Orange Co, FL	70	1999	-	-	1.85					Orange County
Orange Co, FL	123	1999	-	-	4.81					Orange County
Orange Co, FL	123	1999	-	-	3.70					Orange County
Orange Co, FL	211	2000	-	-	2.23					Orange County
Orange Co, FL	144	2000	-	-	7.32					Orange County
Orange Co, FL	105	2001	-	-	5.25					Orange County
Orange Co, FL	891	2005	-	-	5.69					Orange County
Orange Co, FL	1,584	2005	-	-	5.88					Orange County
Orange Co, FL	210	2006	-	-	4.88					Orange County
Orange Co, FL	1,499	2006	-	-	4.69					Orange County
Orange Co, FL	144	-	-	-	4.74					Orange County
Orange Co, FL	148	-	-	-	7.61					Orange County
Orange Co, FL	160	-	-	-	6.19					Orange County
Orange Co, FL	130	-	-	-	4.29					Orange County
Orange Co, FL	130	-	-	-	3.40					Orange County
Orange Co, FL	144	-	-	-	7.66					Orange County
Orange Co, FL	100	-	-	-	7.37					Orange County
Orange Co, FL	190	-	-	-	4.71					Orange County
Orange Co, FL	1,501	2011	-	-	3.50					Tindale Oliver
Orange Co, FL	174	2011	-	-	7.03					Tindale Oliver
Orange Co, FL	238	2014	-	-	4.05					Tindale Oliver
Total Size	10,184	21	164				**Average Trip Length:**	**6.25**		
ITE	876	6					**Weighted Average Trip Length:**	**6.26**		
Blended total	11,060									

Weighted Percent New Trip Average 66.3
Weighted Average Trip Generation Rate 5.31
ITE Average Trip Generation Rate 8.36
Blend of FL Studies and ITE Average Trip Generation Rate: **5.55**

Land Use 320: Motel

Location	Size (Rooms)	Date	Total # Interviews	# Trip Length Interviews	Trip Gen Rate	Time Period	Trip Length	Percent New Trips	VMT	Source
Pinellas Co, FL	48	Oct-89	46	24	-	10a-2p	2.80	65.0	-	Tindale Oliver
Pinellas Co, FL	54	Oct-89	32	22	-	12p-7p	3.80	69.0	-	Tindale Oliver
Pinellas Co, FL	120	Oct-89	26	22	-	2p-7p	5.20	84.6	-	Tindale Oliver
Total Size	222	3	104			**Average Trip Length:**	**3.93**			
ITE	654	6				**Weighted Average Trip Length:**	**4.34**			
							Weighted Percent New Trip Average	76.6		
								ITE Average Trip Generation Rate:		**3.35**

Land Use 444: Movie Theater

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	24.7	Oct-89	151	116	113.10	2p-8p	2.70	77.0	235.13	Tindale Oliver
Pinellas Co, FL	34.0	Sep-89	122	116	63.40	2p-8p	1.90	95.0	114.44	Tindale Oliver
Total Size	58.7	2	273			**Average Trip Length:**	**2.30**			
ITE	28.0	1				**Weighted Average Trip Length:**	**2.24**			
Blended total	86.7						Weighted Percent New Trip Average	87.4		
								Weighted Average Trip Generation Rate		84.31
								ITE Average Trip Generation Rate		78.09
								Blend of FL Studies and ITE Average Trip Generation Rate:		**82.30**

Land Use 492: Health/Fitness Club

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	-	-	7.90	94.0	-	Kimley-Horn & Associates
Total Size			33			**Average Trip Length:**	**n/a**			
ITE	37	8					Percent New Trip Average	94.0		
								ITE Average Trip Generation Rate (adjusted):		**34.50**

Land Use 565: Day Care Center

Location	Size (1,000 sf)	Date	Total # Interviews	# Trip Length Interviews	Trip Gen Rate	Time Period	Trip Length	Percent New Trips	VMT	Source
Pinellas Co, FL	5.6	Aug-89	94	66	66.99	7a-6p	1.90	70.0	89.10	Tindale Oliver
Pinellas Co, FL	10.0	Sep-89	179	134	66.99	7a-6p	2.10	75.0	105.51	Tindale Oliver
Tampa, FL	-	Mar-86	28	25	-	-	2.60	89.0	-	Kimley-Horn & Associates
Total Size	15.6	2	301			**Average Trip Length:**	**2.20**			
ITE	135.0	27				**Weighted Average Trip Length:**	**2.03**			
Blended total	150.6						Weighted Percent New Trip Average	73.2		
								Weighted Average Trip Generation Rate		66.99
								ITE Average Trip Generation Rate		47.62
								Blend of FL Studies and ITE Average Trip Generation Rate:		**49.63**

Land Use 620: Nursing Home

Location	Size (Beds)	Date	Total # Interviews	# Trip Length Interviews	Trip Gen Rate	Time Period	Trip Length	Percent New Trips	VMT	Source
Lakeland, FL	120	Mar-90	74	66	2.86	11a-4p	2.59	89.0	6.59	Tindale Oliver
Total Size	120	1	74			**Average Trip Length:**	**2.59**			
ITE	480	3				**Weighted Average Trip Length:**	**2.59**			
Blended total	600						Weighted Percent New Trip Average	89.0		
								ITE Average Trip Generation Rate (per 1,000 sq ft):		**6.64**

Land Use 640: Animal Hospital/Veterinary Clinic

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	4.0	-	-	-	21.50	-	-	-	-	Tindale Oliver
Clearwater, FL	3.0	Sep-89	-	-	44.00	-	1.90	70.0	-	Tindale Oliver
Clearwater, FL	2.0	Aug-89	-	-	-	-	1.90	70.0	-	Tindale Oliver
Total Size	7.0	3	0			**Average Trip Length:**	**1.90**			
ITE	18.0	6				**Weighted Average Trip Length:**	**1.90**			
	25.0						Weighted Percent New Trip Average	70.0		
								Weighted Average Trip Generation Rate		31.14
								ITE Average Trip Generation Rate		21.50
								Blend of FL Studies and ITE Average Trip Generation Rate:		**24.20**

Land Use 710: General Office Building

Location	Size (1,000 sf)	Date	Total # Interviews	# Trip Length Interviews	Trip Gen Rate	Time Period	Trip Length	Percent New Trips	VMT	Source
Sarasota Co, FL	14.3	Jun-93	14	14	46.85	-	11.30	-	529.41	Sarasota County
Gwinnett Co, GA	98.0	Dec-92	-	-	4.30	-	5.40	-	-	Street Smarts
Gwinnett Co, GA	180.0	Dec-92	-	-	3.60	-	5.90	-	-	Street Smarts
Pinellas Co, FL	187.0	Oct-89	431	388	18.49	7a-5p	6.30	90.0	104.84	Tindale Oliver
St. Petersburg, FL	262.8	Sep-89	291	274	-	7a-5p	3.40	94.0	-	Tindale Oliver
Total Size	742.1	5	736			**Average Trip Length:**	**6.46**			
ITE	11,286.0	66				**Weighted Average Trip Length:**	**5.15**			
							Weighted Percent New Trip Average	92.3		

Land Use 720: Small Medical/Dental Office Building

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
Site 1	2.100	35	35	22	22	13	13	70	70	23 33	23.33	**11.11**	**11.11**	**22.22**
Site 2	3 000	40	40	52	52	53	53	145	145	48 33	48.33	**16.11**	**16.11**	**32.22**
Site 3	2 000	28	28	19	21	24	26	71	75	23.67	25.00	**11.84**	**12.50**	**24.34**
Site 4	1 000	30	30	52	52	57	57	139	139	46 33	46.33	**46.33**	**46.33**	**92.66**
Site 5	3 024	31	32	43	43	24	24	98	99	32.67	33.00	**10.80**	**10.91**	**21.71**
Site 6	1 860	22	24	19	17	11	11	52	52	17 33	17.33	**9.32**	**9.32**	**18.64**
Average												**17.59**	**17.71**	**35.30**
Average (excluding Site 4)												**11.84**	**11.99**	**23.83**

Land Use 720: Medical/Dental Office Building

Location	Size (1,000 sf)	Date	Total # Interviews	# Trip Length Interviews	Trip Gen Rate	Time Period	Trip Length	Percent New Trips	VMT	Source
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
St. Petersburg, FL	-	Nov-89	34	30	57.20	9a-4p	1.20	88.0	-	Tindale Oliver
Hernando Co, FL	58.4	May-96	390	349	28.52	9a-6p	6.47	89.5	165.09	Tindale Oliver
Hernando Co, FL	28.0	May-96	202	189	49.75	9a-6p	6.06	93.8	282.64	Tindale Oliver
Charlotte Co, FL	11.0	Oct-97	-	186	49.50	9a-5p	4.60	92.1	209.67	Tindale Oliver
Charlotte Co, FL	28.0	Oct-97	-	186	31.00	9a-5p	3.60	81.6	91.04	Tindale Oliver
Charlotte Co, FL	30.4	Oct-97	-	324	39.80	9a-5p	3.30	83.5	109.68	Tindale Oliver
Citrus Co, FL	38.9	Oct-03	-	168	32.26	8-6p	6.80	97.1	213.03	Tindale Oliver
Citrus Co, FL	10.0	Nov-03	-	340	40.56	8-630p	6.20	92.4	232.33	Tindale Oliver
Citrus Co, FL	5.3	Dec-03	-	20	29.36	8-5p	5.25	95.2	146.78	Tindale Oliver
Orange Co, FL	50.6	2009	-	-	26.72	-	-	-	-	Orange County
Orange Co, FL	23.5	2010	-	-	16.58	-	-	-	-	Tindale Oliver
Total Size	298.6		11	763			**Average Trip Length:**	**5.07**		
ITE	672.0		28				**Weighted Average Trip Length:**	**5.55**		
Blended total	970.6						Weighted Percent New Trip Average	88.9		

Average Trip Generation Rate 32.59

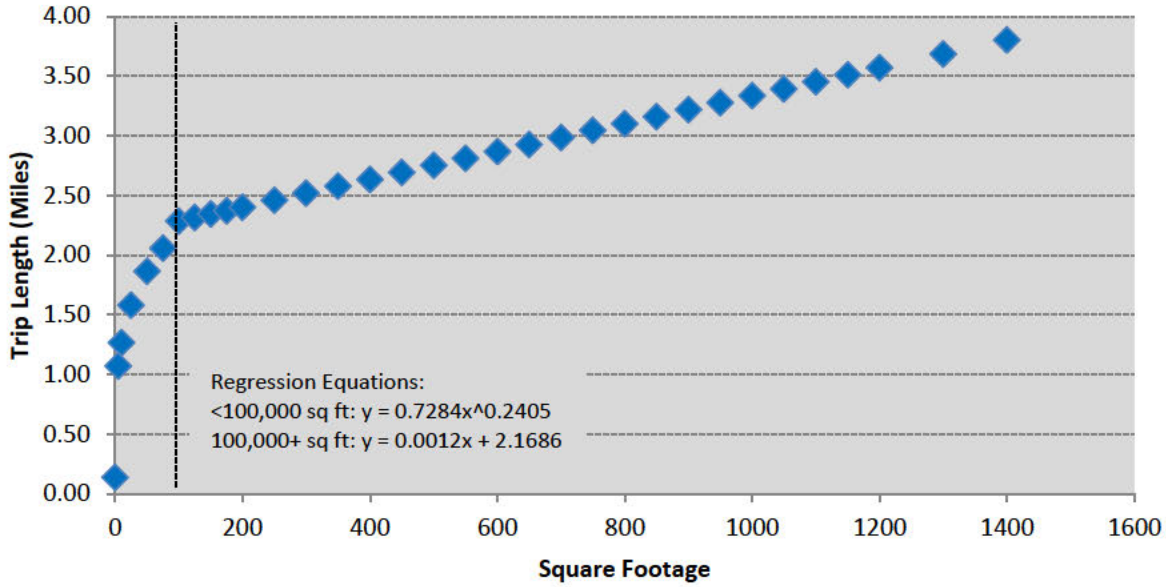
ITE Average Trip Generation Rate 34.80

Blend of FL Studies and ITE Average Trip Generation Rate: 34.12

Land Use 820: Shopping Center

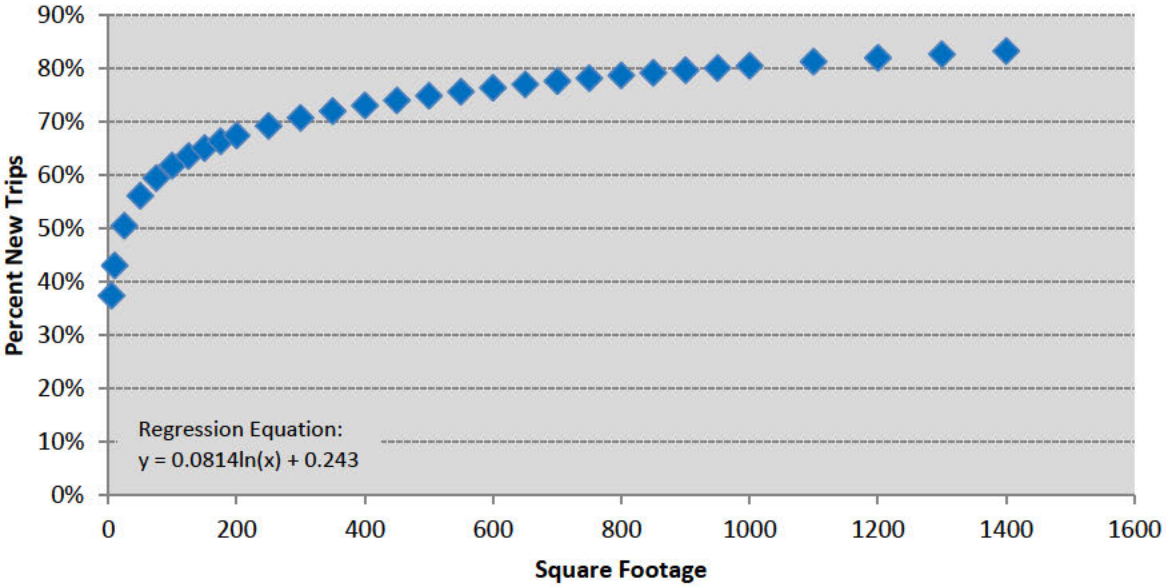
Location	Size (1,000 sf)	Date	Total # Interviews	# Trip Length Interviews	Trip Gen Rate	Time Period	Trip Length	Percent New Trips	VMT	Source
Tampa, FL	-	Mar-86	527	348	-	-	-	66.0	-	Kimley-Horn & Associates
Tampa, FL	-	Mar-86	170	-	-	-	1.70	-	-	Kimley-Horn & Associates
Tampa, FL	-	Mar-86	354	269	-	-	-	76.0	-	Kimley-Horn & Associates
Tampa, FL	-	Mar-86	144	-	-	-	2.50	-	-	Kimley-Horn & Associates
St. Petersburg, FL	1,192.0	Aug-89	384	298	-	11a-7p	3.60	78.0	-	Tindale Oliver
St. Petersburg, FL	132.3	Sep-89	400	368	77.00	10a-7p	1.80	92.0	127.51	Tindale Oliver
Largo, FL	425.0	Aug-89	160	120	26.73	10a-6p	2.30	75.0	46.11	Tindale Oliver
Dunedin, FL	80.5	Sep-89	276	210	81.48	9a-5p	1.40	76.0	86.69	Tindale Oliver
Pinellas Park, FL	696.0	Sep-89	485	388	-	9a-6p	3.20	80.0	-	Tindale Oliver
Seminole, FL	425.0	Oct-89	674	586	-	-	-	87.0	-	Tindale Oliver
Hillsborough Co, FL	134.0	Jul-91	-	-	-	-	1.30	74.0	-	Tindale Oliver
Hillsborough Co, FL	151.0	Jul-91	-	-	-	-	1.30	73.0	-	Tindale Oliver
Collier Co, FL	-	Aug-91	68	64	-	-	3.33	94.1	-	Tindale Oliver
Collier Co, FL	-	Aug-91	208	154	-	-	2.64	74.0	-	Tindale Oliver
Sarasota/Bradenton, FL	109.0	Sep-92	300	185	-	12a-6p	-	61.6	-	King Engineering Associates, Inc.
Ocala, FL	133.4	Sep-92	300	192	-	12a-6p	-	64.0	-	King Engineering Associates, Inc.
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	-	-	84.0	-	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
Charlotte Co, FL	88.0	Oct-97	-	-	73.50	9a-5p	1.80	57.1	75.56	Tindale Oliver
Charlotte Co, FL	191.9	Oct-97	-	-	72.00	9a-5p	2.40	50.9	87.97	Tindale Oliver
Charlotte Co, FL	51.3	Oct-97	-	-	43.00	9a-5p	2.70	51.8	60.08	Tindale Oliver
Lake Co, FL	67.8	Apr-01	246	177	102.60	-	3.40	71.2	248.37	Tindale Oliver
Lake Co, FL	72.3	Apr-01	444	376	65.30	-	4.50	59.0	173.37	Tindale Oliver
Pasco Co, FL	65.6	Apr-02	222	-	145.64	9a-5p	1.46	46.9	99.62	Tindale Oliver
Pasco Co, FL	75.8	Apr-02	134	-	38.23	9a-5p	2.36	58.2	52.52	Tindale Oliver
Citrus Co, FL	185.0	Oct-03	-	784	55.84	8a-6p	2.40	88.1	118.05	Tindale Oliver
Citrus Co, FL	91.3	Nov-03	-	390	54.50	8a-6p	1.60	88.0	76.77	Tindale Oliver
Bozeman, MT	104.3	Dec-06	359	359	46.96	-	3.35	49.0	77.08	Tindale Oliver
Bozeman, MT	159.9	Dec-06	502	502	56.49	-	1.56	54.0	47.59	Tindale Oliver
Bozeman, MT	35.9	Dec-06	329	329	69.30	-	1.39	74.0	71.28	Tindale Oliver
Total Size	5,757.5		7,536				**Average Trip Length:**	**2.66**		

Figure A-2
LUC 820: Retail/Shopping Center – Florida Curve Trip Length Regression



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

Figure A-3
LUC 820: Retail/Shopping Center – Florida Curve Percent New Trips Regression



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

Land Use 840/841: New/Used Automobile Sales

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
Clearwater, FL	43.0	Oct-89	136	106	29.40	9a-5p	4.50	78.0	103.19	Tindale Oliver
Orange Co, FL	13.8	1997	-	-	35.75	-	-	-	-	Orange County
Orange Co, FL	34.4	1998	-	-	23.45	-	-	-	-	Orange County
Orange Co, FL	66.3	2001	-	-	28.50	-	-	-	-	Orange County
Orange Co, FL	39.1	2002	-	-	10.48	-	-	-	-	Orange County
Orange Co, FL	116.7	2003	-	-	22.18	-	-	-	-	Orange County
Orange Co, FL	51.7	2007	-	-	40.34	-	-	-	-	L-TEC
Orange Co, FL	36.6	-	-	-	15.17	-	-	-	-	Orange County
Orange Co, FL	216.4	2008	-	-	13.45	-	-	-	-	Orange County
Total Size	618.0	8	288				**Average Trip Length:**	**4.60**		
ITE (840)	648.0	18					**Weighted Average Trip Length:**	**4.60**		
ITE (841)	28.0	14					Weighted Percent New Trip Average	78.5		
Blended total	1,294.0									

Weighted Average Trip Generation Rate	21.04
ITE Average Trip Generation Rate (LUC 840)	27.84
ITE Average Trip Generation Rate (LUC 841)	27.06
Blend of FL Studies and ITE Average Trip Generation Rate:	**24.58**

Land Use 850: Supermarket

Location	Size (1,000 sf)	Date	Total # Interviews	# Trip Length Interviews	Trip Gen Rate	Time Period	Trip Length	Percent New Trips	VMT	Source
Palm Harbor, FL	62.0	Aug-89	163	62	106.26	9a-4p	2.08	56.0	123.77	Tindale Oliver
Total Size	62.0	1	163				**Average Trip Length:**	**2.08**		
ITE	170.0	5					**Weighted Average Trip Length:**	**2.08**		
Blended total	232.0						Weighted Percent New Trip Average	56.0		

Weighted Average Trip Generation Rate	106.26
ITE Average Trip Generation Rate	106.78
Blend of FL Studies and ITE Average Trip Generation Rate:	**106.64**

Land Use 853: Convenience Market with Gasoline Pumps

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
Marion Co, FL	2.1	Jun-91	66	24	997.60	24hr.	1.67	36.4	606.42	Tindale Oliver
Marion Co, FL	4.4	Jun-91	85	25	486.70	48hrs.	1.06	29.4	151.68	Tindale Oliver
Collier Co, FL	-	Aug-91	96	38	-	-	1.19	39.6	-	Tindale Oliver
Collier Co, FL	-	Aug-91	78	16	-	-	1.06	20.5	-	Tindale Oliver
Tampa, FL	2.3	10/13-15/92	239	74	-	24hr.	1.06	31.1	-	Tindale Oliver
Ellenton, FL	3.3	10/20-22/92	124	44	-	24hr.	0.96	35.3	-	Tindale Oliver
Tampa, FL	3.8	11/10-12/92	142	23	-	24hr.	3.13	16.4	-	Tindale Oliver
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				**Average Trip Length:**	**1.44**		
ITE	102.0	34					**Weighted Average Trip Length:**	**1.51**		
Blended Total	127.1						Weighted Percent New Trip Average	27.7		
	117.6									

Average Trip Generation Rate	639.68
ITE Average Trip Generation Rate	624.20
Blend of FL Studies and ITE Average Trip Generation Rate:	**626.25**

Land Use 880/881: Pharmacy with and without Drive-Through Window

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
Pasco Co, FL	12.0	Apr-02	212	90	122.16	-	2.04	42.5	105.79	Tindale Oliver
Pasco Co, FL	15.1	Apr-02	1192	54	97.96	-	2.13	28.1	58.69	Tindale Oliver
Total Size	38.2	3	1,542				**Average Trip Length:**	**2.07**		
ITE (LUC 880)	66.0	6					**Weighted Average Trip Length:**	**2.08**		
ITE (LUC 881)	208.0	16					Weighted Percent New Trip Average	32.0		
Blended total	312.2									

Average Trip Generation Rate	103.03
ITE Average Trip Generation Rate (LUC 880)	90.08
ITE Average Trip Generation Rate (LUC 881)	109.16
Blend of FL Studies and ITE Average Trip Generation Rate:	**104.37**

Land Use 912: Drive-In Bank

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
Largo, FL	2.0	Sep-89	129	94	-	-	1.60	73.0	-	Tindale Oliver
Seminole, FL	4.5	Oct-89	-	-	-	-	-	-	-	Tindale Oliver
Marion Co, FL	2.3	Jun-91	69	29	-	24hr.	1.33	42.0	-	Tindale Oliver
Marion Co, FL	3.1	Jun-91	47	32	-	24hr.	1.75	68.1	-	Tindale Oliver
Marion Co, FL	2.5	Jul-91	57	26	-	48hrs.	2.70	45.6	-	Tindale Oliver
Collier Co, FL	-	Aug-91	162	96	-	24hr.	0.88	59.3	-	Tindale Oliver
Collier Co, FL	-	Aug-91	116	54	-	-	1.58	46.6	-	Tindale Oliver
Collier Co, FL	-	Aug-91	142	68	-	-	2.08	47.9	-	Tindale Oliver
Hernando Co, FL	5.4	May-96	164	41	-	9a-6p	2.77	24.7	-	Tindale Oliver
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				**Average Trip Length:**	**2.38**		
ITE	147.0	21					**Weighted Average Trip Length:**	**2.46**		
Blended total	172.2						Weighted Percent New Trip Average	46.2		
	149.7									

Weighted Average Trip Generation Rate	246.66
ITE Average Trip Generation Rate	100.03
Blend of FL Studies and ITE Average Trip Generation Rate:	**102.66**

Land Use 931: Quality Restaurant

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	82.0	-	Kimley-Horn & Associates
St. Petersburg, FL	7.5	Oct-89	177	154	-	11a-2p/4-8p	3.50	87.0	-	Tindale Oliver
Clearwater, FL	8.0	Oct-89	60	40	110.63	10a-2p/5-9p	2.80	67.0	207.54	Tindale Oliver
Total Size	15.5	2	313				**Average Trip Length:**	**2.80**		
ITE	90.0	10					**Weighted Average Trip Length:**	**3.14**		
Blended total	105.5						Weighted Percent New Trip Average	76.7		
	98.0							Weighted Average Trip Generation Rate		110.63
								ITE Average Trip Generation Rate		83.84
								Blend of FL Studies and ITE Average Trip Generation Rate:		**86.03**

Land Use 932: High-Turnover (Sit-Down) Restaurant

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	1996	242	175	187.51	9a-6p	2.76	72.5	375.00	Tindale Oliver
Hernando Co, FL	8.2	1996	154	93	102.71	9a-6p	4.15	60.2	256.43	Tindale Oliver
St. Petersburg, FL	5.0	1989	74	68	132.60	1130-7p	2.00	92.0	243.98	Tindale Oliver
Kenneth City, FL	5.2	1989	236	176	127.88	4p-730p	2.30	75.0	220.59	Tindale Oliver
Pasco Co, FL	5.2	2002	114	88	82.47	9a-6p	3.72	77.2	236.81	Tindale Oliver
Pasco Co, FL	5.8	2002	182	102	116.97	9a-6p	3.49	56.0	228.77	Tindale Oliver
Orange Co, FL	5.0	1996	-	-	135.68	-	-	-	-	Orange County
Orange Co, FL	9.7	1996	-	-	132.32	-	-	-	-	Orange County
Orange Co, FL	11.2	1998	-	-	18.76	-	-	-	-	Orange County
Orange Co, FL	7.0	1998	-	-	126.40	-	-	-	-	Orange County
Orange Co, FL	4.6	1998	-	-	129.23	-	-	-	-	Orange County
Orange Co, FL	7.4	1998	-	-	147.44	-	-	-	-	Orange County
Orange Co, FL	6.7	1998	-	-	82.58	-	-	-	-	Orange County
Orange Co, FL	11.3	2000	-	-	95.33	-	-	-	-	Orange County
Orange Co, FL	7.2	2000	-	-	98.06	-	-	-	-	Orange County
Orange Co, FL	11.4	2001	-	-	91.67	-	-	-	-	Orange County
Orange Co, FL	5.6	2001	-	-	145.59	-	-	-	-	Orange County
Orange Co, FL	5.5	-	-	-	100.18	-	-	-	-	Orange County
Orange Co, FL	11.3	-	-	-	62.12	-	-	-	-	Orange County
Orange Co, FL	10.4	-	-	-	31.77	-	-	-	-	Orange County
Orange Co, FL	5.9	-	-	-	147.74	-	-	-	-	Orange County
Orange Co, FL	8.9	2008	-	-	52.69	-	-	-	-	Orange County
Orange Co, FL	9.7	2010	-	-	105.84	-	-	-	-	Orange County
Orange Co, FL	9.5	2013	-	-	40.46	-	-	-	-	Orange County
Orange Co, FL	11.0	2015	-	-	138.39	-	-	-	-	Orange County
Total Size	194.9	21	1,102				**Average Trip Length:**	**3.07**		
ITE	250.0	50					**Weighted Average Trip Length:**	**3.17**		
Blended total	444.9						Weighted Percent New Trip Average	70.8		
								Weighted Average Trip Generation Rate		98.67
								ITE Average Trip Generation Rate		112.18
								Blend of FL Studies and ITE Average Trip Generation Rate:		**106.26**

Land Use 934: Fast Food Restaurant with Drive-Through Window

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
Pinellas Co, FL	4.30	Oct-89	456	260	660.40	1 day	2.30	57.0	865.78	Tindale Oliver
Tarpon Springs, FL	-	Oct-89	233	114	-	7a-7p	3.60	49.0	-	Tindale Oliver
Marion Co, FL	1.60	Jun-91	60	32	962.50	48hrs.	0.91	53.3	466.84	Tindale Oliver
Marion Co, FL	4.00	Jun-91	75	46	625.00	48hrs.	1.54	61.3	590.01	Tindale Oliver
Collier Co, FL	-	Aug-91	66	44	-	-	1.91	66.7	-	Tindale Oliver
Collier Co, FL	-	Aug-91	118	40	-	-	1.17	33.9	-	Tindale Oliver
Hernando Co, FL	5.43	May-96	136	82	311.83	9a-6p	1.68	60.2	315.27	Tindale Oliver
Hernando Co, FL	3.13	May-96	168	82	547.34	9a-6p	1.59	48.8	425.04	Tindale Oliver
Orange Co, FL	8.93	1996	-	-	377.00	-	-	-	-	Orange County
Lake Co, FL	2.20	Apr-01	376	252	934.30	-	2.50	74.6	1742.47	Tindale Oliver
Lake Co, FL	3.20	Apr-01	171	182	654.90	-	-	47.8	-	Tindale Oliver
Lake Co, FL	3.80	Apr-01	188	137	353.70	-	3.30	70.8	826.38	Tindale Oliver
Pasco Co, FL	2.66	Apr-02	100	46	283.12	9a-6p	-	46.0	-	Tindale Oliver
Pasco Co, FL	2.96	Apr-02	486	164	515.32	9a-6p	2.72	33.7	472.92	Tindale Oliver
Pasco Co, FL	4.42	Apr-02	168	120	759.24	9a-6p	1.89	71.4	1024.99	Tindale Oliver
Total Size	48.8	13	4,463				**Average Trip Length:**	**2.11**		
ITE	201.0	67					**Weighted Average Trip Length:**	**2.05**		
Blended total	249.8						Weighted Percent New Trip Average	57.9		
	34.0							Weighted Average Trip Generation Rate		530.19
								ITE Average Trip Generation Rate		470.95
								Blend of FL Studies and ITE Average Trip Generation Rate:		**482.53**

Land Use 942: Automobile Care Center

Location	Size (1,000 sf)	Date	Total # Interviews	# Trip Length Interviews	Trip Gen Rate	Time Period	Trip Length	Percent New Trips	VMT	Source
Largo, FL	5.5	Sep-89	34	30	37.64	9a-5p	2.40	88.0	79.50	Tindale Oliver
Jacksonville, FL	2.3	2/3-4/90	124	94	-	9a-5p	3.07	76.0	-	Tindale Oliver
Jacksonville, FL	2.3	2/3-4/90	110	74	-	9a-5p	2.96	67.0	-	Tindale Oliver
Jacksonville, FL	2.4	2/3-4/90	132	87	-	9a-5p	2.32	66.0	-	Tindale Oliver
Lakeland, FL	5.2	Mar-90	24	14	-	9a-4p	1.36	59.0	-	Tindale Oliver
Lakeland, FL	-	Mar-90	54	42	-	9a-4p	2.44	78.0	-	Tindale Oliver
Orange Co, FL	25.0	Nov-92	41	39	-	2-6p	4.60	-	-	LCE, Inc.
Orange Co, FL	36.6	-	-	-	15.17	-	-	-	-	Orange County
Orange Co, FL	7.0	-	-	-	46.43	-	-	-	-	Orange County
Total Size	86.2	6	519				**Average Trip Length:**	**2.74**		
ITE	102.0	6					**Weighted Average Trip Length:**	**3.62**		
Blended total	188.2						Weighted Percent New Trip Average	72.2		
	151.1							Weighted Average Trip Generation Rate		22.14
								ITE Average Trip Generation Rate (adjusted)		31.10
								Blend of FL Studies and ITE Average Trip Generation Rate:		**28.19**

Land Use 944/945: Gasoline/Service Station with and without Convenience Market

Location	Size (1,000 sf)	Date	Total # Interviews	# Trip Length Interviews	Trip Gen Rate	Time Period	Trip Length	Percent New Trips	VMT	Source
Largo, FL	0.6	Nov-89	70	14	-	8am-5pm	1.90	23.0	-	Tindale Oliver
Collier Co, FL	-	Aug-91	168	40	-	-	1.01	23.8	-	Tindale Oliver
Total Size	0.6	1	238			**Average Trip Length:**	**1.46**			
ITE LUC 944 (vfp)	144.0	18				**Weighted Average Trip Length:**	**1.90**			
ITE LUC 945 (vfp)	90.0	5				Weighted Percent New Trip Average		23.0		
						ITE Average Trip Generation Rate - per fuel position (LUC 944)				172.01
						ITE Average Trip Generation Rate - per fuel position (LUC 945)				205.36
						Blended ITE Average Trip Generation Rate - per fuel position:				**184.84**

Land Use 947: Self-Service Car Wash

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
Clearwater, FL	-	Nov-89	177	108	-	10am-5pm	1.30	61.0	-	Tindale Oliver
Collier Co, FL	11	Dec-09	304	-	-	-	2.50	57.0	-	Tindale Oliver
Collier Co, FL	8	Jan-09	186	-	-	-	1.96	72.0	-	Tindale Oliver
Total Size	29	3	778			**Average Trip Length:**	**1.94**			
ITE	5	1				**Weighted Average Trip Length:**	**2.18**			
						Weighted Percent New Trip Average		67.7		

Land Use N/A: Dance Studio

Location	Size (1,000 sf)	Date	Total # Interviews	# Trip Length Interviews	Trip Gen Rate	Time Period	Trip Length	Percent New Trips	VMT	Source
Collier Co, FL	7.000	Jul-08	-	-	30.29	-	-	-	-	Tindale Oliver
Collier Co, FL	20.48	Jul-08	-	-	17.19	-	-	-	-	Tindale Oliver
Collier Co, FL	8.705	Jul-08	-	-	23.89	-	-	-	-	Tindale Oliver
Total Size	36.2	3				**Average Trip Length:**	**n/a**			
						Weighted Average Trip Length:	**n/a**			
								Weighted Average Trip Generation Rate:		**21.33**

Land Use N/A: Specialty Retail Center

Location	Size (1,000 sf)	Date	Total # Interviews	# Trip Length Interviews	Trip Gen Rate	Time Period	Trip Length	Percent New Trips	VMT	Source
Orlando, FL	56.5	Jan-96	-	602	-	varied	3.54	87.9	-	LCE, Inc.
Collier Co, FL	12.0	May-99	-	13	19.70	8a-6p	3.70	75.0	54.67	Tindale Oliver
Collier Co, FL	12.0	May-99	-	146	127.50	8a-6p	2.24	84.3	240.76	Tindale Oliver
Total Size	80.5	3				**Average Trip Length:**	**3.16**			
ITE	100.0	4				**Weighted Average Trip Length:**	**3.37**			
Blended total	156.5					Weighted Percent New Trip Average		85.4		

Evaluation of Mixed-Use Developments

Mixed-Use Internal Capture

To correspond with adopted fiscal neutrality and sustainability guiding policies, Orange County has made efforts to define and encourage infill and redevelopment activity and create mixed-use developments, Traditional Neighborhood Developments (TND), and Transit Oriented Developments (TOD). In addition, the County's Comprehensive Plan historically has designated the International Drive tourist corridor as an Activity Center (AC) and implemented I-Drive District Overlay Zone within the past year. This Overlay Zone is an example of transect-based planning and describes the site design requirements in terms of road layout, intersection spacing, requirements of sidewalks, interconnectivity, spacing between uses, etc. These types of requirements are critical in mixed-use developments' ability to reduce trips. If designed correctly, these developments tend to have reduced travel demand which in turn reduces the need to provide additional transportation infrastructure.

Mixed-Use Models

This section provides a summary of more commonly used models in estimating the reduction of travel achieved by mixed-use development.

- Historically, the ITE model has been the primary model used to quantify internal capture. ITE groups land uses into three categories:
    - Residential;
    - Office; and
    - Retail.

  Internal capture calculations focus on trip reduction, especially between residential and retail uses. The data is available for weekday P.M. peak hour, midday, and "daily," which is based on data collection between noon and 6:30 PM. ITE calculations fail to capture much of the interaction between residential and office land uses. Compared to raw data used for verification, ITE method error rate is about one-half.

- Several publications by National Cooperative Highway Research Program (NCHRP) made improvements to the original ITE approach, which were summarized in the NCHRP 684. This improved estimate method was developed based on existing survey data from prior studies plus three pilot data collection surveys for this study.
    - Although the model developed as part of NCHRP 684 continued to focus on trip reduction, three land uses were added: restaurant, hotel, and cinema. These resulted for a higher internal capture percentage. **The authors caution users to limit their applications to these six uses, and that the model was not tested for any additional land uses.** The model should only be used for development up to 300 acres.
    - NCHRP Report 684 also added weekday A.M. peak hour and created a land use classification structure that would permit disaggregation of the six land uses to more detailed categories should enough data become available.
    - Included the **effects of proximity (convenient walking distance) between interacting land uses to represent both compactness and design.** The report states that several planners and architects recommend ¼-mile or longer walking distances. However, developers contacted for the study reported that acceptable walking distances range from 600 feet to 1,000 feet. The study found that when the major uses were within a convenient (e.g., covered walkways, etc.) and short walking distance, the capture rate increased.

- This method reduced the estimation error by half compared to the original ITE method, resulting in an error rate of about one-fourth of the raw trip generation rates.

- Since the late 1980s, there have been numerous studies of various census and regional travel survey databases, limited site data collection, and studies and surveys of related travel and development characteristics that could contribute useful material for developing an improved estimation technique. Internal trip capture rates estimated in this research vary widely depending on conditions and land uses, but for developments with major commercial components, capture rates typically reached up to more than 30 percent. For mixed-use neighborhoods and small communities, internal capture reached 50 percent and even higher.

- Other widely used approach is a policy-based flat percentage reduction in external trips. Such percentages are established by local planning, zoning, or transportation engineering officials for use in transportation impact analyses (TIAs) prepared to support applications for zoning, subdivision, site plan approval, or access permits. The percentages are typically arbitrarily selected and tend to range from 5 percent to 25 percent, with 10 percent being most commonly used discount factor.

Table A-15 provides a summary of some of these studies and resulting internal capture levels.

Table A-15
Comparison of Mixed-Use Models

Source	Reference	Range of Internal Capture
Research Studies		
ITE 2nd Edition	Institute of Transportation Engineers Handbook, 2nd Ed.	5-25%
NCHRP 684/ITE 3rd Edition	National Cooperative Highway Research Program	28-41%
EPX MXD Model v4.0	EPA, Fehr & Peers	8-28%
ITE 1998 surveys (origins)	NCHRP 684, PDF pg 19	0-53%
ITE 1998 surveys (destinations)	NCHRP 684, PDF pg 19	0-37%
Districtwide TGR Study, FDOT, District IV, March 1995	NCHRP 684, PDF pg 20	28-41%
FDOT Trip Characteristics Study of MXDs, FDOT, District IV, March 1993	NCHRP 684, PDF pg 21 (Table 8)	7-62%
Trip Generation for MXDs, Technical Committee Report, Colorado-Wyoming Section, ITE, January 1986	NCHRP 684, PDF pg 23	25%
Brandermill PUD Traffic Generation Study, Technical Report, JHK & Associates, Alexandria, Virginia, June 1984	NCHRP 684, PDF pg 23	45-55%
Kittelson & Associates, Crocker Center, Mizner Park, Galleria	NCHRP 684, PDF pg 25	38-41%
Mehara and Keller	NCHRP 684, PDF pg 25	0-40%
Local Government Practices		
Transportation Impact Analyses (ITE Method)	NCHRP 684, PDF pg 11	5-25%

Internal Capture Sensitivity Analysis

This section illustrates potential internal capture reductions that may occur if proposed developments include the right mix of land uses. Note that this analysis only considers the mix of uses and not the specific design standards.

Tables A-16 through A-18 present a sensitivity analysis for internal capture that includes developments of all levels, in terms of both units of development and percent of travel. Observations include:

- When single family units dominate the overall development (generating over 60 percent of trips or over 80 percent of vehicle miles of travel (VMT)), there does not seem to be any substantial internal capture.
- In cases where there are three or more uses with some level of activity, the internal capture improves. The internal capture rate is higher when travel generated by each land use is balanced (e.g., no one land use exceeds 50 percent of trips).
- Availability of retail (including restaurants) is important in achieving high levels of internal capture.

- Travel demand characteristics used in the standard impact fee calculations evolved over time to recognize reduction in travel due to the availability of multiple uses at a regional level.
- Any additional internal capture that is attributed to a mixed-use development needs to be due to the increase in pedestrian travel as well as travel within the development. Some of the variables that will determine the level internal capture include:
    - Scale of development;
    - Complementary land uses;
    - Proximity and connectivity between each pair of land uses, especially the layout of the land uses relative to each other; and
    - Other characteristics such as proximity to transit and pedestrian access within and around the site.
- Industry models used to measure internal capture suggest that to the extent travel distribution from each land use within the mixed-use development is balanced, the level of internal capture increases. When one land use is dominant, internal capture percentage decreases. For example, when residential development generates more than 60 percent of trips and 80 percent of VMT, the resulting internal capture is negligible. On the other hand, a mix of at least three different uses, with none of the uses generating more than 50 percent of travel, result in higher levels of internal capture.

As previously mentioned, the NCHRP model does not account for proximity of uses, density, and other design elements. It is recommended that potential mixed-use developments include elements of connectivity, promote walkability between land uses, and include access to other travel modes (transit, bike lanes, etc) when possible. These factors, along with a balanced mix of uses, will yield the most favorable internal capture rates.

Due to the large scale of potential future developments, it may be difficult to achieve reasonable walkability and enhanced trip capture. By focusing on smaller, inter-connected areas, developers can work towards creating a truly “mixed-use” community. The sensitivity analysis in Tables A-16 through A-18 provide general guidelines that can be applied to future development in order to achieve the best balance of uses.

Table A-16
Comparison of Mixed-Use Internal Capture

Secnario	Single Family DU's	Hotel Rooms	Retail Sq Ft	Office Sq Ft	Restaurant Sq Ft	AM Peak Hr: IC %	PM Peak Hr: IC %	Average Internal Capture %	Trip Distribution				
									Single Family	Hotel	Retail	Office	Restaurant
Scenario #1.01	**50**	50	10,000	10,000	2,000	19%	29%	**24%**	20%	15%	33%	24%	8%
Scenario #1.02	**50**	60	10,000	10,000	2,000	18%	29%	**24%**	20%	17%	32%	23%	8%
Scenario #1.03	**50**	75	10,000	10,000	2,000	18%	28%	**23%**	19%	20%	31%	22%	8%
Scenario #1.04	**50**	90	10,000	10,000	2,000	17%	27%	**22%**	18%	23%	30%	22%	8%
Scenario #1.05	**50**	120	10,000	10,000	2,000	15%	26%	**21%**	17%	28%	28%	20%	7%
Scenario #1.06	**50**	200	10,000	10,000	2,000	13%	22%	**18%**	15%	38%	24%	17%	6%
Scenario #1.07	**50**	300	10,000	10,000	2,000	10%	19%	**15%**	12%	47%	20%	15%	5%
Scenario #1.08	**50**	400	10,000	10,000	2,000	9%	17%	**13%**	11%	54%	18%	13%	4%
Scenario #1.09	**50**	500	10,000	10,000	2,000	8%	15%	**12%**	10%	59%	16%	11%	4%
Scenario #1.10	**50**	600	10,000	10,000	2,000	7%	14%	**11%**	9%	63%	14%	10%	4%
Scenario #1.11	**50**	50	20,000	10,000	2,000	19%	27%	**23%**	17%	12%	44%	20%	7%
Scenario #1.12	**50**	50	50,000	10,000	2,000	18%	22%	**20%**	12%	9%	59%	15%	5%
Scenario #1.13	**50**	50	80,000	10,000	2,000	16%	18%	**17%**	10%	7%	66%	12%	4%
Scenario #1.14	**50**	50	100,000	10,000	2,000	15%	16%	**16%**	9%	7%	69%	11%	4%
Scenario #1.15	**50**	50	300,000	10,000	2,000	10%	9%	**10%**	5%	4%	82%	6%	2%
Scenario #1.16	**50**	50	500,000	10,000	2,000	8%	7%	**8%**	4%	3%	87%	5%	2%
Scenario #1.17	**50**	50	1,000,000	10,000	2,000	6%	4%	**5%**	3%	2%	91%	3%	1%
Scenario #1.18	**50**	50	2,000,000	10,000	2,000	4%	3%	**4%**	2%	1%	94%	2%	1%
Scenario #1.19	**50**	50	3,000,000	10,000	2,000	3%	2%	**3%**	1%	1%	95%	2%	1%
Scenario #1.20	**50**	50	10,000	20,000	2,000	20%	28%	**24%**	19%	14%	31%	29%	8%
Scenario #1.21	**50**	50	10,000	50,000	2,000	19%	26%	**23%**	16%	12%	26%	39%	7%
Scenario #1.22	**50**	50	10,000	80,000	2,000	19%	24%	**22%**	14%	10%	23%	46%	6%
Scenario #1.23	**50**	50	10,000	100,000	2,000	18%	23%	**21%**	13%	10%	22%	50%	5%
Scenario #1.24	**50**	50	10,000	300,000	2,000	13%	15%	**14%**	8%	6%	13%	70%	3%
Scenario #1.25	**50**	50	10,000	500,000	2,000	9%	11%	**10%**	6%	4%	10%	78%	2%
Scenario #1.26	**50**	50	10,000	1,000,000	2,000	6%	7%	**7%**	4%	3%	6%	86%	2%
Scenario #1.27	**50**	50	10,000	2,000,000	2,000	3%	4%	**4%**	2%	2%	3%	92%	1%
Scenario #1.28	**50**	50	10,000	3,000,000	2,000	3%	3%	**3%**	2%	1%	2%	94%	1%
Scenario #1.29	**50**	50	10,000	10,000	5,000	22%	36%	**29%**	18%	13%	29%	21%	18%
Scenario #1.30	**50**	50	10,000	10,000	7,000	22%	40%	**31%**	17%	12%	27%	20%	24%
Scenario #1.31	**50**	50	10,000	10,000	10,000	19%	43%	**31%**	15%	11%	25%	18%	31%
Scenario #1.32	**50**	50	10,000	10,000	15,000	16%	45%	**31%**	13%	10%	22%	16%	40%
Scenario #1.33	**50**	50	10,000	10,000	30,000	10%	40%	**25%**	9%	7%	15%	11%	57%
Scenario #1.34	**50**	50	10,000	10,000	50,000	7%	32%	**20%**	7%	5%	11%	8%	69%
Scenario #1.35	**50**	50	10,000	10,000	100,000	4%	20%	**12%**	4%	3%	7%	5%	82%
Scenario #1.36	**50**	50	10,000	10,000	200,000	2%	11%	**7%**	2%	2%	4%	3%	90%
Scenario #1.37	**50**	50	10,000	10,000	400,000	1%	6%	**4%**	1%	1%	2%	1%	95%
Scenario #1.38	**50**	60	20,000	20,000	5,000	25%	32%	**29%**	14%	12%	37%	22%	15%
Scenario #1.39	**50**	75	50,000	50,000	7,000	28%	27%	**28%**	9%	10%	45%	23%	13%
Scenario #1.40	**50**	90	80,000	80,000	10,000	28%	26%	**27%**	7%	9%	46%	23%	15%
Scenario #1.41	**50**	120	100,000	100,000	15,000	28%	27%	**28%**	6%	10%	44%	22%	18%
Scenario #1.42	**50**	200	300,000	300,000	30,000	28%	23%	**26%**	3%	8%	46%	26%	18%
Scenario #1.43	**50**	300	500,000	500,000	50,000	28%	23%	**26%**	2%	8%	43%	26%	21%
Scenario #1.44	**50**	400	1,000,000	1,000,000	100,000	28%	24%	**26%**	1%	6%	40%	28%	24%
Scenario #1.45	**50**	500	2,000,000	2,000,000	200,000	27%	25%	**26%**	1%	4%	37%	30%	28%
Scenario #1.46	**50**	600	3,000,000	3,000,000	400,000	23%	30%	**27%**	0%	3%	31%	28%	37%
Scenario #1.47	**50**	50	3,000,000	3,000,000	400,000	65%	27%	**46%**	0%	0%	32%	29%	38%
Scenario #1.48	**50**	600	10,000	3,000,000	400,000	18%	11%	**15%**	1%	5%	1%	41%	53%
Scenario #1.49	**50**	600	3,000,000	10,000	400,000	6%	33%	**20%**	1%	5%	43%	1%	51%
Scenario #1.50	**50**	600	3,000,000	3,000,000	2,000	14%	7%	**11%**	1%	5%	50%	44%	0%

Notes:

- Each scenario includes a different mix of dwelling units, hotel rooms and non-residential development.
- Using the ITE 9th Edition handbook, AM and PM Peak Hour trip generation rates are applied to each land use and each development scenario. This results in the total AM and PM Peak Hour trips. Using the direction distribution provided in the ITE handbook, the "entering" and "exiting" trips are determined.
- The resulting trips are entered into the NCHRP internal capture model which outputs the internal capture percentages for both AM and PM Peak Hour.
- The average internal capture shown in the tab above reflects the average of the AM and PM Peak Hour internal capture.
- The trip distribution illustrates the proportion of trip that is attributed to each land use in each scenario. The scenarios which include a balanced distribution of trip tend to yield higher internal capture.

Table A-17
Comparison of Mixed-Use Internal Capture

Secnario	Single Family DU's	Hotel Rooms	Retail Sq Ft	Office Sq Ft	Restaurant Sq Ft	AM Peak Hr: IC %	PM Peak Hr: IC %	Average Internal Capture %	Trip Distribution				
									Single Family	Hotel	Retail	Office	Restaurant
Scenario #2.01	**1,000**	50	10,000	10,000	2,000	5%	11%	**8%**	79%	4%	9%	6%	2%
Scenario #2.02	**1,000**	60	10,000	10,000	2,000	5%	11%	**8%**	79%	4%	8%	6%	2%
Scenario #2.03	**1,000**	75	10,000	10,000	2,000	5%	11%	**8%**	78%	5%	8%	6%	2%
Scenario #2.04	**1,000**	90	10,000	10,000	2,000	5%	11%	**8%**	77%	6%	8%	6%	2%
Scenario #2.05	**1,000**	120	10,000	10,000	2,000	5%	11%	**8%**	76%	8%	8%	6%	2%
Scenario #2.06	**1,000**	200	10,000	10,000	2,000	5%	11%	**8%**	72%	12%	8%	6%	2%
Scenario #2.07	**1,000**	300	10,000	10,000	2,000	5%	10%	**8%**	68%	17%	7%	5%	2%
Scenario #2.08	**1,000**	400	10,000	10,000	2,000	4%	10%	**7%**	65%	21%	7%	5%	2%
Scenario #2.09	**1,000**	500	10,000	10,000	2,000	4%	9%	**7%**	62%	25%	7%	5%	2%
Scenario #2.10	**1,000**	600	10,000	10,000	2,000	4%	9%	**7%**	59%	28%	6%	5%	2%
Scenario #2.11	**1,000**	50	20,000	10,000	2,000	6%	13%	**10%**	76%	4%	13%	6%	2%
Scenario #2.12	**1,000**	50	50,000	10,000	2,000	7%	17%	**12%**	68%	3%	21%	5%	2%
Scenario #2.13	**1,000**	50	80,000	10,000	2,000	6%	19%	**13%**	64%	3%	27%	5%	2%
Scenario #2.14	**1,000**	50	100,000	10,000	2,000	6%	20%	**13%**	61%	3%	30%	5%	2%
Scenario #2.15	**1,000**	50	300,000	10,000	2,000	5%	25%	**15%**	46%	2%	47%	4%	1%
Scenario #2.16	**1,000**	50	500,000	10,000	2,000	5%	27%	**16%**	39%	2%	55%	3%	1%
Scenario #2.17	**1,000**	50	1,000,000	10,000	2,000	4%	22%	**13%**	30%	1%	66%	2%	1%
Scenario #2.18	**1,000**	50	2,000,000	10,000	2,000	3%	16%	**10%**	21%	1%	75%	2%	1%
Scenario #2.19	**1,000**	50	3,000,000	10,000	2,000	3%	12%	**8%**	17%	1%	80%	1%	0%
Scenario #2.20	**1,000**	50	10,000	20,000	2,000	6%	11%	**9%**	78%	4%	8%	8%	2%
Scenario #2.21	**1,000**	50	10,000	50,000	2,000	7%	11%	**9%**	75%	4%	8%	12%	2%
Scenario #2.22	**1,000**	50	10,000	80,000	2,000	8%	11%	**10%**	72%	3%	8%	15%	2%
Scenario #2.23	**1,000**	50	10,000	100,000	2,000	8%	11%	**10%**	70%	3%	8%	17%	2%
Scenario #2.24	**1,000**	50	10,000	300,000	2,000	9%	10%	**10%**	57%	3%	6%	32%	2%
Scenario #2.25	**1,000**	50	10,000	500,000	2,000	7%	9%	**8%**	49%	2%	5%	42%	1%
Scenario #2.26	**1,000**	50	10,000	1,000,000	2,000	5%	7%	**6%**	37%	2%	4%	57%	1%
Scenario #2.27	**1,000**	50	10,000	2,000,000	2,000	4%	5%	**5%**	25%	1%	3%	71%	1%
Scenario #2.28	**1,000**	50	10,000	3,000,000	2,000	3%	4%	**4%**	19%	1%	2%	78%	1%
Scenario #2.29	**1,000**	50	10,000	10,000	5,000	7%	13%	**10%**	77%	4%	8%	6%	5%
Scenario #2.30	**1,000**	50	10,000	10,000	7,000	7%	15%	**11%**	75%	4%	8%	6%	7%
Scenario #2.31	**1,000**	50	10,000	10,000	10,000	8%	18%	**13%**	73%	4%	8%	6%	10%
Scenario #2.32	**1,000**	50	10,000	10,000	15,000	9%	21%	**15%**	70%	3%	7%	5%	14%
Scenario #2.33	**1,000**	50	10,000	10,000	30,000	11%	24%	**18%**	61%	3%	7%	5%	25%
Scenario #2.34	**1,000**	50	10,000	10,000	50,000	13%	26%	**20%**	53%	3%	6%	4%	35%
Scenario #2.35	**1,000**	50	10,000	10,000	100,000	15%	26%	**21%**	39%	2%	4%	3%	52%
Scenario #2.36	**1,000**	50	10,000	10,000	200,000	9%	18%	**14%**	26%	1%	3%	2%	68%
Scenario #2.37	**1,000**	50	10,000	10,000	400,000	5%	11%	**8%**	15%	1%	2%	1%	81%
Scenario #2.38	**1,000**	60	20,000	20,000	5,000	9%	16%	**13%**	72%	4%	12%	7%	5%
Scenario #2.39	**1,000**	75	50,000	50,000	7,000	13%	21%	**17%**	61%	4%	19%	10%	6%
Scenario #2.40	**1,000**	90	80,000	80,000	10,000	15%	25%	**20%**	54%	4%	23%	11%	7%
Scenario #2.41	**1,000**	120	100,000	100,000	15,000	18%	28%	**23%**	49%	5%	24%	12%	10%
Scenario #2.42	**1,000**	200	300,000	300,000	30,000	24%	35%	**30%**	32%	5%	32%	18%	13%
Scenario #2.43	**1,000**	300	500,000	500,000	50,000	27%	39%	**33%**	24%	6%	34%	21%	16%
Scenario #2.44	**1,000**	400	1,000,000	1,000,000	100,000	30%	38%	**34%**	16%	5%	35%	24%	21%
Scenario #2.45	**1,000**	500	2,000,000	2,000,000	200,000	28%	34%	**31%**	10%	4%	34%	27%	26%
Scenario #2.46	**1,000**	600	3,000,000	3,000,000	400,000	24%	35%	**30%**	6%	3%	30%	26%	34%
Scenario #2.47	**1,000**	50	3,000,000	3,000,000	400,000	63%	33%	**48%**	7%	0%	30%	27%	35%
Scenario #2.48	**1,000**	600	10,000	3,000,000	400,000	20%	14%	**17%**	9%	4%	1%	37%	48%
Scenario #2.49	**1,000**	600	3,000,000	10,000	400,000	9%	39%	**24%**	9%	4%	40%	1%	47%
Scenario #2.50	**1,000**	600	3,000,000	3,000,000	2,000	13%	14%	**14%**	10%	5%	45%	40%	0%

Notes:

- Each scenario includes a different mix of dwelling units, hotel rooms and non-residential development.
- Using the ITE 9th Edition handbook, AM and PM Peak Hour trip generation rates are applied to each land use and each development scenario. This results in the total AM and PM Peak Hour trips. Using the direction distribution provided in the ITE handbook, the "entering" and "exiting" trips are determined.
- The resulting trips are entered into the NCHRP internal capture model which outputs the internal capture percentages for both AM and PM Peak Hour.
- The average internal capture shown in the tab above reflects the average of the AM and PM Peak Hour internal capture.
- The trip distribution illustrates the proportion of trip that is attributed to each land use in each scenario. The scenarios which include a balanced distribution of trip tend to yield higher internal capture.

Table A-18
Comparison of Mixed-Use Internal Capture

Secnario	Single Family DU's	Hotel Rooms	Retail Sq Ft	Office Sq Ft	Restaurant Sq Ft	AM Peak Hr: IC %	PM Peak Hr: IC %	Average Internal Capture %	Trip Distribution				
									Single Family	Hotel	Retail	Office	Restaurant
Scenario #3.01	**5,000**	50	10,000	10,000	2,000	1%	3%	**2%**	95%	1%	2%	2%	1%
Scenario #3.02	**5,000**	60	10,000	10,000	2,000	1%	3%	**2%**	94%	1%	2%	2%	1%
Scenario #3.03	**5,000**	75	10,000	10,000	2,000	1%	3%	**2%**	94%	1%	2%	2%	1%
Scenario #3.04	**5,000**	90	10,000	10,000	2,000	1%	3%	**2%**	94%	2%	2%	2%	1%
Scenario #3.05	**5,000**	120	10,000	10,000	2,000	1%	3%	**2%**	93%	2%	2%	2%	1%
Scenario #3.06	**5,000**	200	10,000	10,000	2,000	1%	3%	**2%**	92%	3%	2%	2%	1%
Scenario #3.07	**5,000**	300	10,000	10,000	2,000	1%	4%	**3%**	91%	5%	2%	2%	1%
Scenario #3.08	**5,000**	400	10,000	10,000	2,000	1%	4%	**3%**	89%	6%	2%	2%	1%
Scenario #3.09	**5,000**	500	10,000	10,000	2,000	1%	4%	**3%**	88%	8%	2%	1%	1%
Scenario #3.10	**5,000**	600	10,000	10,000	2,000	1%	4%	**3%**	87%	9%	2%	1%	1%
Scenario #3.11	**5,000**	50	20,000	10,000	2,000	1%	4%	**3%**	93%	1%	3%	2%	1%
Scenario #3.12	**5,000**	50	50,000	10,000	2,000	2%	6%	**4%**	91%	1%	6%	2%	1%
Scenario #3.13	**5,000**	50	80,000	10,000	2,000	2%	7%	**5%**	89%	1%	8%	2%	1%
Scenario #3.14	**5,000**	50	100,000	10,000	2,000	2%	7%	**5%**	88%	1%	9%	1%	1%
Scenario #3.15	**5,000**	50	300,000	10,000	2,000	3%	11%	**7%**	80%	1%	18%	1%	0%
Scenario #3.16	**5,000**	50	500,000	10,000	2,000	3%	14%	**9%**	75%	1%	23%	1%	0%
Scenario #3.17	**5,000**	50	1,000,000	10,000	2,000	3%	17%	**10%**	66%	1%	32%	1%	0%
Scenario #3.18	**5,000**	50	2,000,000	10,000	2,000	3%	21%	**12%**	55%	1%	43%	1%	0%
Scenario #3.19	**5,000**	50	3,000,000	10,000	2,000	3%	23%	**13%**	49%	1%	49%	1%	0%
Scenario #3.20	**5,000**	50	10,000	20,000	2,000	1%	3%	**2%**	94%	1%	2%	2%	1%
Scenario #3.21	**5,000**	50	10,000	50,000	2,000	2%	3%	**3%**	93%	1%	2%	3%	1%
Scenario #3.22	**5,000**	50	10,000	80,000	2,000	2%	4%	**3%**	92%	1%	2%	4%	1%
Scenario #3.23	**5,000**	50	10,000	100,000	2,000	2%	4%	**3%**	91%	1%	2%	5%	1%
Scenario #3.24	**5,000**	50	10,000	300,000	2,000	3%	5%	**4%**	86%	1%	2%	11%	1%
Scenario #3.25	**5,000**	50	10,000	500,000	2,000	3%	5%	**4%**	81%	1%	2%	15%	0%
Scenario #3.26	**5,000**	50	10,000	1,000,000	2,000	3%	5%	**4%**	72%	1%	2%	25%	0%
Scenario #3.27	**5,000**	50	10,000	2,000,000	2,000	3%	5%	**4%**	60%	1%	1%	38%	0%
Scenario #3.28	**5,000**	50	10,000	3,000,000	2,000	3%	4%	**4%**	52%	1%	1%	46%	0%
Scenario #3.29	**5,000**	50	10,000	10,000	5,000	2%	4%	**3%**	94%	1%	2%	2%	1%
Scenario #3.30	**5,000**	50	10,000	10,000	7,000	2%	5%	**4%**	93%	1%	2%	2%	2%
Scenario #3.31	**5,000**	50	10,000	10,000	10,000	2%	5%	**4%**	93%	1%	2%	2%	3%
Scenario #3.32	**5,000**	50	10,000	10,000	15,000	2%	6%	**4%**	91%	1%	2%	2%	4%
Scenario #3.33	**5,000**	50	10,000	10,000	30,000	3%	8%	**6%**	88%	1%	2%	1%	8%
Scenario #3.34	**5,000**	50	10,000	10,000	50,000	4%	10%	**7%**	84%	1%	2%	1%	12%
Scenario #3.35	**5,000**	50	10,000	10,000	100,000	7%	12%	**10%**	74%	1%	2%	1%	22%
Scenario #3.36	**5,000**	50	10,000	10,000	200,000	10%	15%	**13%**	61%	1%	1%	1%	36%
Scenario #3.37	**5,000**	50	10,000	10,000	400,000	14%	18%	**16%**	45%	0%	1%	1%	53%
Scenario #3.38	**5,000**	60	20,000	20,000	5,000	2%	5%	**4%**	92%	1%	3%	2%	1%
Scenario #3.39	**5,000**	75	50,000	50,000	7,000	4%	7%	**6%**	88%	1%	6%	3%	2%
Scenario #3.40	**5,000**	90	80,000	80,000	10,000	5%	10%	**8%**	84%	2%	8%	4%	2%
Scenario #3.41	**5,000**	120	100,000	100,000	15,000	6%	12%	**9%**	81%	2%	9%	4%	4%
Scenario #3.42	**5,000**	200	300,000	300,000	30,000	11%	19%	**15%**	68%	3%	15%	8%	6%
Scenario #3.43	**5,000**	300	500,000	500,000	50,000	15%	24%	**20%**	59%	3%	18%	11%	9%
Scenario #3.44	**5,000**	400	1,000,000	1,000,000	100,000	20%	31%	**26%**	46%	3%	22%	16%	13%
Scenario #3.45	**5,000**	500	2,000,000	2,000,000	200,000	25%	37%	**31%**	33%	3%	25%	20%	19%
Scenario #3.46	**5,000**	600	3,000,000	3,000,000	400,000	27%	44%	**36%**	24%	3%	24%	22%	28%
Scenario #3.47	**5,000**	50	3,000,000	3,000,000	400,000	57%	41%	**49%**	24%	0%	25%	22%	29%
Scenario #3.48	**5,000**	600	10,000	3,000,000	400,000	23%	19%	**21%**	31%	3%	1%	28%	37%
Scenario #3.49	**5,000**	600	3,000,000	10,000	400,000	16%	48%	**32%**	30%	3%	30%	1%	36%
Scenario #3.50	**5,000**	600	3,000,000	3,000,000	2,000	10%	23%	**17%**	33%	3%	33%	30%	0%

Notes:

- Each scenario includes a different mix of dwelling units, hotel rooms and non-residential development.
- Using the ITE 9th Edition handbook, AM and PM Peak Hour trip generation rates are applied to each land use and each development scenario. This results in the total AM and PM Peak Hour trips. Using the direction distribution provided in the ITE handbook, the "entering" and "exiting" trips are determined.
- The resulting trips are entered into the NCHRP internal capture model which outputs the internal capture percentages for both AM and PM Peak Hour.
- The average internal capture shown in the tab above reflects the average of the AM and PM Peak Hour internal capture.
- The trip distribution illustrates the proportion of trips that is attributed to each land use in each scenario. The scenarios which include a balanced distribution of trips tend to yield higher internal capture.

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Table A-19 illustrates the projected internal capture reduction for local example developments. These development levels were derived from the County's Comprehensive Plan Future Land Use Element. As shown, both developments are weighted toward residential in terms of trips and result in a limited internal capture.

Table A-19

Orange County Internal Capture Example

Secnario	Single Family DU's	Hotel Rooms	Retail Sq Ft	Office Sq Ft	AM Peak Hr: IC %	PM Peak Hr: IC %	Average Internal Capture %	Trip Distribution			
								Single Family	Hotel	Retail	Office
Innovation Place	5,500	200	1,235,000	2,267,000	9%	18%	**14%**	49%	1%	24%	25%
Sunbridge	7,400	500	880,000	5,470,000	8%	12%	**10%**	45%	2%	13%	40%

Source: NCHRP 684 Internal Capture Model

Development details for Innovation Place as shown in FLU 8.1.4 of the County's Comprehensive Plan

Development details for Sunbridge as provided by staff via the "Sunbridge Fact Sheet"

APPENDIX B
Cost Component Calculations

Appendix B: Cost Component

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

- Design
- Right-of-Way
- Construction/CEI
- Roadway Capacity
- Transit Capital Costs

Design

The design cost per lane mile was based on a review of recently completed and ongoing projects in Orange County. As shown in Table B-1, projects in projects in Orange County averaged approximately $340,000 per lane mile for design. When compared to a local construction cost of approximately $2.75 million (excluding CEI; as shown in Table B-5), design is equivalent to approximately 12 percent of the construction cost per lane mile. This ratio falls within the range observed in several other recent impact fee studies in Florida. As shown in Table B-2, design factors from other communities ranged from 6 percent to 14 percent with a weighted average of 11 percent.

For purposes of this study, the design cost for county roads was calculated at $340,000, or approximately 12 percent of the construction cost (excluding CEI) per lane mile.

Table B-1

Design Cost for County Roads – Orange County

CIP #	Project Name	From	To	Year	Improvement	Length	Lanes Added	Lane Miles Added	Design Cost	Cost per Lane Mile
3017	Rock Springs Rd	Ponkan Rd	Kelly Park Rd	1996	2 to 4 Lanes	2.10	2	4.20	$1,466,024	$349,053
3038a	Clarcona-Ocoee Rd	Ocoee-Apopka Rd	Hiawassee Rd	2000	2 to 4 Lanes	5.08	2	10.16	$2,106,461	$207,329
3045	Holden Ave	JYP	OBT	2003	0/2 to 4 Lanes	1.24	2/4	3.50	$1,295,324	$370,093
3096a	Kennedy Blvd	All American Blvd	Wymore Rd	2000	2 to 4 Lanes	2.03	2	4.06	$1,641,051	$404,200
3097	All American Blvd	Edgewater Dr	Forest City Rd	2005	2 to 4 Lanes	1.06	2	2.12	$1,361,667	$642,296
5001a	John Young Pkwy	SR 528	FL Turnpike	2009	4 to 6 Lanes	2.34	2	4.68	$816,979	$174,568
5023	Edgewater Dr	Clarcona-Ocoee Rd	Pine Hills Rd	2005	2 to 4 Lanes	1.51	2	3.02	$2,107,966	$698,002
5024a	Econ Tr	Lake Underhill	SR 50	2008	2 to 4 Lanes	2.40	2	4.80	$3,150,355	$656,324
5027a	Texas Ave	Oak Ridge Rd	Holden Ave	2008	2 to 4 Lanes	1.76	2	3.52	$1,419,796	$403,351
5029a	Valencia College Ln	Goldenrod Rd	Econlockhatchee Tr	2007	2 to 4 Lanes	1.90	2	3.80	$2,153,633	$566,746
5059c	Woodbury Rd	S. of SR 50	Challenger Pkwy	2008	2 to 4 Lanes	0.65	2	1.30	$538,566	$414,282
5062a	Alafaya Tr	Avalon Park Blvd	Mark Twain Blvd	2005	2 to 4 Lanes	3.83	2	7.66	$1,879,773	$245,401
5066a	CR 535 Seg A	Magnolia Park Ct	SR 429	2007	2 to 4 Lanes	1.37	2	2.74	$1,003,106	$366,097
5066b	CR 535 Seg C&E	Ficquette Rd	Butler Ridge Rd	2007	2 to 4 Lanes	1.10	2	2.20	$945,254	$429,661
5067	CR 535 Seg F	Overstreet Rd	Fossick Rd	2013	2 to 4 Lanes	0.60	2	1.20	$289,032	$240,860
5068	Reams Rd	Delmar	Taborfield	2013	2 to 4 Lanes	0.36	2	0.72	$166,519	$231,276
5085a	Boggy Creek Rd	Osceola Co. Line	SR 417	2008	2 to 4 Lanes	1.19	2	2.38	$1,614,195	$678,233
5090b	Lake Underhill	Goldenrod Rd	Chickasaw Tr	2008	2 to 4 Lanes	0.69	2	1.38	$670,883	$486,147
5090d	Lake Underhill	Econlockhatchee Tr	Rouse Rd	2014	2 to 4 Lanes	1.87	2	3.74	$1,602,515	$428,480
5091	Wildwood	International Dr	Palm Pkwy	2011	2 to 4 Lanes	1.87	2	3.74	$1,795,605	$480,108
5101	Narcoossee Rd	Osceola Co. Line	SR 417	2008	2 to 6 Lanes	3.80	4	15.20	$820,000	$53,947
5102	Sand Lake Rd	President's Dr	FL Mall	2001	4 to 6 Lanes	1.00	2	2.00	$896,820	$448,410
5107	International Dr	Westwood Blvd	Westwood Blvd	2010	4 to 6 Lanes	2.20	2	4.40	$1,015,146	$230,715
5110	Taft-Vineland Rd	Central FL Pkwy	John Young Pkwy	2007	2 to 4 Lanes	0.50	2	1.00	$555,370	$555,370
5111	Wetherbee Rd	Balcombe Rd	Orange Ave	2010	2 to 4 Lanes	1.50	2	3.00	$958,400	$319,467
5140	Ficquette Rd	Summerlake Blvd	Overstreet Rd	2018	2 to 4 Lanes	1.50	2	3.00	$1,368,055	$456,018
Total								**99.52**	**$33,638,495**	**$340,000**

Source: Orange County Transportation Planning Division; Community, Environment & Development Services Department and Orange County Development Engineering Division. The data shown represent the full detail that was available.

Table B-2

Design Cost Factor for County Roads – Recent Impact Fee Studies

Year	City/County	City/County Roadways (Cost per Lane Mile)		
		Design	Constr.	Design Ratio
2012	Osceola	$371,196	$2,651,400	14%
2012	City of Orlando	$288,000	$2,400,000	12%
2012	City of Sarasota	$240,000	$2,400,000	10%
2013	Hernando	$198,000	$1,980,000	10%
2013	Charlotte	$220,000	$2,200,000	10%
2014	Indian River	$159,000	$1,598,000	10%
2015	Collier	$270,000	$2,700,000	10%
2015	Brevard	$242,000	$2,023,000	12%
2015	Sumter	$210,000	$2,100,000	10%
2015	Marion	$167,000	$2,668,000	6%
2015	Palm Beach	$224,000	$1,759,000	13%
2016	Hillsborough	$348,000	$2,897,000	12%
2016	St. Lucie	$220,000	$2,200,000	10%
2017	Clay	$239,000	$2,385,000	10%
2018	City of Tampa	$403,000	$3,100,000	13%
2018	City of Hallandale Beach	$171,000	$1,710,000	10%
2018	City of Oviedo	$319,000	$2,900,000	11%
2018	Collier	$385,000	$3,500,000	11%
Average		**$259,678**	**$2,398,411**	**11%**

Source: Recent impact fee studies conducted throughout Florida

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.

To estimate the ROW cost for Orange County, Tindale Oliver conducted a review of recently completed ROW acquisitions along capacity expansion projects in Orange County and reviewed ROW-to-construction cost ratios from recent transportation impact fee studies from other counties in Florida. As shown in Table B-3, recent ROW costs from 17 Orange County improvements indicated a weighted average cost of approximately $1.20 million per lane mile. This cost was then compared to the weighted average construction cost per added lane mile ($2.75 million, shown in Table B-5) for recent Orange County improvement projects, calculating a ROW-to-construction ratio of approximately 44 percent. This ratio is within the range of the ROW-to-construction factors for recent studies throughout Florida, which ranged from 26 percent to 60 percent with an average of 41 percent (see Table B-4 for additional detail).

Table B-3

Right-of-Way Cost for County Roads – Orange County

CIP #	Project Name	From	To	Year	Improvement	Length	Lanes Added	Lane Miles Added	ROW Cost	Cost per Lane Mile
3017	Rock Springs Rd	Ponkan Rd	Kelly Park Rd	2008	2 to 4 Lanes	2.10	2	4.20	$1,893,491	$450,831
3018a	Rouse Rd	Lake Underhill	Corporate Blvd	2011	2 to 4 Lanes	4.15	2	8.30	$26,918,176	$3,243,154
3038a	Clarcona-Ocoee Rd	Ocoee-Apopka Rd	Hiawassee Rd	2009	2 to 4 lanes	5.08	2	10.16	$15,082,963	$1,484,544
3045	Holden Ave	JYP	OBT	2015	0/2 to 4 Lanes	1.24	2/4	3.50	$12,874,389	$3,678,397
3097	All American Blvd	Edgewater Dr	Forest City Rd	TBD	2 to 4 Lanes	1.06	2	2.12	$11,288,484	$5,324,757
5024b	Econ Trail	SR 408	SR 50	2015	2 to 4 Lanes	1.376	2	2.75	$1,312,402	$477,237
5029c	Valencia College Ln	OOCEA	Econlockhatchee Tr	2013	2 to 4 Lanes	0.90	2	1.80	$5,334,487	$2,963,604
5062a	Alafaya Tr	Avalon Park Blvd	Mark Twain Blvd	2011	2 to 4 Lanes	3.83	2	7.66	$723,164	$94,408
5066a	CR 535 Seg A	Magnolia Park Ct	SR 429	2011	2 to 4 Lanes	1.37	2	2.74	$2,552,940	$931,730
5066b	CR 535 Seg C&E	Fiquette Rd	Butler Ridge Rd	2008	2 to 4 Lanes	1.10	2	2.20	$1,960,704	$891,229
5067	CR 535 Seg F	Overstreet Rd	Fossick Rd	2016	2 to 4 Lanes	0.60	2	1.20	$110,485	$92,071
5068	Reams Rd	Delmar	Taborfield	2015	2 to 4 Lanes	0.36	2	0.72	$13,884	$19,283
5085c	Boggy Creek Rd North	BCID Intersection	SR 417	-	2 to 4 Lanes	0.21	2	0.42	$883,168	$2,102,781
5089b	Destination Pkwy 1A	International Dr	Tradeshow Blvd	2008	2 to 4 Lanes	0.35	2	0.70	$1,758,440	$2,512,057
5090b	Lake Underhill	Goldenrod Rd	Chickasaw Tr	2012	2 to 4 Lanes	0.69	2	1.38	$30,686	$22,236
5101	Narcoossee Rd	Osceola Co. Line	SR 417	2012	2 to 6 Lanes	3.80	4	15.20	$201,064	$13,228
5107	International Dr	Westwood Blvd	Westwood Blvd	2013	4 to 6 Lanes	2.20	2	4.40	$22,425	$5,097
Total								**69.45**	**$82,961,352**	**$1,200,000**

Source: Orange County Transportation Planning Division; Community, Environment & Development Services Department and Orange County Development Engineering Division. The data shown represent the full detail that staff was able to provide

Table B-4

Right-of-Way Cost Factor for County – Recent Impact Fee Studies

Year	City/County	City/County Roadways (Cost per Lane Mile)		
		ROW	Constr.	ROW Ratio
2012	Osceola	$1,087,074	$2,651,400	41%
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%
2014	Indian River	$656,000	$1,598,000	41%
2015	Collier	$863,000	$2,700,000	32%
2015	Brevard	$708,000	$2,023,000	35%
2015	Sumter	$945,000	$2,100,000	45%
2015	Marion	$1,001,000	$1,668,000	60%
2015	Palm Beach	$721,000	$1,759,000	41%
2016	Hillsborough	$1,448,000	$2,897,000	50%
2016	St. Lucie	$990,000	$2,200,000	45%
2017	Clay	$954,000	$2,385,000	40%
2018	Collier	$1,208,000	$3,500,000	35%
Average		**$941,792**	**$2,297,427**	**41%**

Source: Recent impact fee studies conducted throughout Florida

Construction/CEI

The construction/CEI cost for county roads (curb & gutter, urban section design) was based on Orange County projects and the cost of recent projects in other communities in Florida. As shown in Table B-5, the review of construction data calculated a weighted average cost of $3.00 million per lane mile. It should be noted that the construction cost data in Table B-5 include construction engineering and inspection (CEI) costs. Based on the CEI-to-construction cost ratios observed in recent impact fee studies throughout Florida (approximately 9 percent), the CEI and construction portions of the cost per lane mile figure were estimated.

- Construction ≈ $2,750,000
- CEI ≈ $250,000

In addition to Orange County improvements, recent bids/completed projects from other communities throughout Florida were reviewed to increase the sample size of data. This review, as shown in Table B-6, included approximately 147 lane miles of improvements across 13 different counties, averaging $2.87 million per lane mile. However, the construction cost data for these improvements do not include associated CEI costs. With CEI estimated at approximately nine percent of construction costs (based on recently completed impact fee studies throughout Florida), the statewide figure would increase to approximately $3.10 million per lane mile for County roads.

Based on the recent Orange County projects and supported by the projects from throughout Florida, a construction cost of **$3.00 million** per lane mile was used in the impact fee calculation.

Table B-5

Construction/CEI Cost for County Roads – Orange County

CIP #	Project Name	From	To	Year	Improvement	Length	Lanes Added	Lane Miles Added	Construction/ CEI Cost	Cost per Lane Mile
3018a	Rouse Rd	Lake Underhill Rd	SR 50	2013	2 to 4 Lanes	1.55	2	3.10	$8,343,305	$2,691,389
3038a	Clarcona-Ocoee Rd	SR 429	Clark Rd	2012	2 to 4 Lanes	2.13	2	4.26	$8,608,970	$2,020,885
3045	Holden Ave	John Young Pkwy	Orange Blossom Tr	2019	0/2 to 4 Lanes	1.24	2/4	3.50	$20,657,990	$5,902,283
3095	Palm Pkwy/AVR Connector	Palm Pkwy	Apopka-Vineland Rd	2019	0 to 4 Lanes	1.50	4	6.00	$7,927,033	$1,321,172
5001a	John Young Parkway	SR 528	FL Turnpike	2012	4 to 6 Lanes	2.34	2	4.68	$14,108,710	$3,014,682
5024b	Econ Trail	SR 408	SR 50	2012	2 to 4 Lanes	1.376	2	2.75	$8,805,928	$3,202,156
5067	CR 535 Seg F	Overstreet Rd	Fossick Rd	2014	2 to 4 Lanes	0.60	2	1.20	$3,586,534	$2,988,778
5068	Reams Rd	Delmar Ave	Taborfield Ave	2017	2 to 4 Lanes	0.36	2	0.72	$3,746,796	$5,203,883
5089c	Destination Pkwy 1B/2A	Tradeshow Blvd	Lake Cay	2017	2 to 4 Lanes	0.78	2	1.56	$6,714,729	$4,304,313
5090b	Lake Underhill Rd	Goldenrod Rd	Chickasaw Tr	2013	2 to 4 Lanes	0.69	2	1.38	$7,002,038	$5,073,941
5107	International Dr	Westwood Blvd	Westwood Blvd	2015	4 to 6 Lanes	2.20	2	4.40	$18,435,028	$4,189,779
-	Porter Rd	Avalon Rd	Hamlin Groves Tr	2018	2 to 4 lanes	1.06	2	2.12	$3,118,145	$1,470,823
-	Innovation Way Seg 3B	Magnolia Woods Blvd	Yellow Jasmine Dr	2018	0 to 2 lanes	0.30	2	0.61	$596,909	$978,539
-	Boggy Creek Rd North	South Access Rd	Wetherbee Rd	2019	2 to 4 lanes	1.29	2	2.58	$9,434,917	$3,656,945
-	Hamlin Groves Ph I	New Independence Pkwy	N. approx 2800 LF	2017	0 to 4 Lanes	0.62	4	2.48	$2,272,939	$916,508
Total (Construction & CEI)								**41.34**	**$123,359,971**	**$3,000,000**
Estimated CEI Portion[(1)]										**$250,000**
Estimated Construction Portion[(1)]										**$2,750,000**

1) The CEI portion was estimated based on the CEI-to-construction cost ratios observed in several recent impact fee studies throughout Florida, which average approximately 9% of the construction costs (per lane mile)

Source: Orange County Transportation Planning Division; Community, Environment & Development Services Department and Orange County Development Engineering Division. The data shown represent the full detail that staff was able to provide

Table B-6
Construction Cost for County Roads - 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
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 (CR 35A) 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	S. of SR 40	N. of Peruvian Ln	2012	Bid	2 to 4	Urban	0.89	2	1.78	$5,276,057	$2,964,077
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	2.00	2	4.00	$17,122,640	$4,280,660
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	2.40	2	4.80	$16,003,504	$3,334,063
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
Hillsborough	7	Turkey Creek Rd	Dr. MLK Blvd	Sydney Rd	2014	Bid	2 to 4	Urban	1.40	2	2.80	$6,166,000	$2,202,143
Sarasota	1	Bee Ridge Rd	Mauna Loa Blvd	Iona Rd	2014	Bid	2 to 4	Urban	2.68	2	5.36	$14,066,523	$2,624,351
St. Lucie	4	W Midway Rd (CR 712)	Selvitz Rd	South 25th St	2014	Bid	2 to 4	Urban	1.00	2	2.00	$6,144,000	$3,072,000
Lake	5	N Hancock Rd Ext.	Old 50	Gatewood Dr	2014	Bid	0/2 to 4	Urban	1.50	2/4	5.00	$8,185,574	$1,637,115
Polk	1	CR 655 & CR 559A	Pace Rd & N of CR 559A	N of CR 559A & SR 599	2014	Bid	2 to 4	Urban	2.60	2	5.20	$10,793,552	$2,075,683
Volusia	5	Howland Blvd	Courtland Blvd	N of SR 415	2014	Bid	2 to 4	Urban	2.08	2	4.16	$11,110,480	$2,670,788
Hillsborough	7	Citrus Park Extension	Sheldon Dr	Countryway Blvd	2015	Bid	0 to 4	Urban	2.70	4	10.80	$46,942,585	$4,346,536
Polk	1	Ernie Caldwell Blvd	Pine Tree Tr	US 17/92	2015	Bid	0 to 4	Urban	2.41	4	9.64	$19,535,391	$2,026,493
Volusia	5	LPGA Blvd	Jimmy Ann Dr/Grand Reserve	Derbyshire Rd	2016	Bid	2 to 4	Urban	0.68	2	1.36	$3,758,279	$2,763,440
St. Lucie	4	W Midway Rd (CR 712)	W. of South 25th St	E. of SR 5 (US 1)	2016	Bid	2 to 4	Urban	1.77	2	3.54	$24,415,701	$6,897,091
Volusia	5	Howland Blvd	Providence Blvd	Elkcam Blvd	2017	Bid	2 to 4	Urban	2.15	2	4.30	$10,850,000	$2,523,256
Volusia	5	Orange Camp Rd	MLK Blvd	I-4 in DeLand	2017	Bid	2 to 4	Urban	0.75	2	1.50	$10,332,000	$6,888,000
Lake	5	CR 466A, Ph. IIIA	Poinsettia Ave	Century Ave	2018	Bid	2 to 4	Urban	0.42	2	0.84	$3,062,456	$3,645,781
Lee	1	Alico Rd	Ben Hill Griffin Pkwy	E. of Airport Haul Rd	2018	Bid	2 to 4	Urban	1.78	2	3.56	$18,062,562	$5,073,753
Lee	1	Homestead Rd	S. of Sunrise Blvd	N. of Alabama Rd	2018	Bid	2 to 4	Urban	2.25	2	4.50	$14,041,919	$3,120,426
Hillsborough	7	Van Dyke Rd	Suncoast Pkwy	Whirley Ave	2018	Estimate	2 to 4	Urban	2.05	2	4.10	$20,000,000	$4,878,049
Total									**Count:**	**32**	**147.08**	**$421,680,650**	**$2,870,000**

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

Roadway Capacity

As shown in Table B-7, the average capacity per lane mile was based on the projects in the Metroplan 2040 Long Range Transportation Plan's Cost Feasible and Needs Plans. This listing of projects reflects the mix of improvements that will yield the vehicle-miles of capacity (VMC) that will be built in Orange County. The resulting weighted average capacity per lane mile of approximately 9,000 was used in the transportation impact fee calculation.

Table B-7
Metroplan 2040 Long Range Transportation Plan – Cost Feasible and Needs Plan Improvements

Jurisdiction	Description	From	To	Improvement	Length	Lanes Added	Lane Miles Added	Initial Capacity	Future Capacity	Added Capacity	Vehicle Miles of Capacity Added
County/City	SR 15 (Narcoossee Rd)	SR 528 (Beachline Expwy)	Lee Vista Blvd	Widen to 6 Lanes	1.32	2	2.64	35,820	53,910	18,090	23,879
County/City	Central Florida Pkwy	International Dr	SR 423 (John Young Pkwy)	Widen to 6 Lanes	1.94	2	3.88	35,820	53,910	18,090	35,095
County/City	International Dr	Hawaiian Ct	SR 482	Widen to 6 Lanes	2.05	2	4.10	35,820	53,910	18,090	37,085
County/City	Apopka-Vineland Rd	CR 535	Fenton Ave	Widen to 6 Lanes	1.43	2	2.86	35,820	53,910	18,090	25,869
County/City	Landstar Blvd	Osceola Co. Line	SR 417	Widen to 6 Lanes	1.53	2	3.06	35,820	53,910	18,090	27,678
County/City	Apopka-Vineland Rd	Darlene Rd	Kilgore Rd	Widen to 6 Lanes	1.34	2	2.68	35,820	53,910	18,090	24,241
County/City	New Independence Pkwy/Wellness Way	Lake Co. Line	SR 429	New/Widen 4 Lanes	1.07/0.45	2	5.00	0	29,160	29,160	44,323
County/City	Alafaya Tr	Huckleberry Finn Dr	Lake Underhill Rd	Widen to 6 Lanes	0.28	2	0.56	35,820	53,910	18,090	5,065
County/City	Apopka-Vineland Rd	Kilgore Rd	SR 482	Widen to 6 Lanes	0.75	2	1.50	29,160	45,000	15,840	11,880
County/City	Hiawassee Rd	SR 50 (Colonial Dr)	Silver Star Rd	Widen to 6 Lanes	1.76	2	3.52	35,820	53,910	18,090	31,838
County/City	Apopka-Vineland Rd	Fenton Ave	Darlene Rd	Widen to 6 Lanes	1.01	2	2.02	35,820	53,910	18,090	18,271
County/City	Universal Blvd	SR 482	Pointe Plaza Ave	Widen to 6 Lanes	1.00	2	2.00	29,160	45,000	15,840	15,840
County/City	Central Florida Pkwy	SR 423 (John Young Pkwy)	Orange Blossom Tr	Widen to 6 Lanes	1.23	2	2.46	35,820	53,910	18,090	22,251
County/City	International Dr	SR 482	Kirkman Rd	Widen to 6 Lanes	1.39	2	2.78	29,160	45,000	15,840	22,018
County/City	International Dr South	Westwood Blvd	Hawaiian Ct	Widen to 6 Lanes	2.50	2	5.00	35,820	53,910	18,090	45,225
County/City	Turkey Lake Rd	Sand Lake Commons Blvd	SR 482	Widen to 6 Lanes	1.63	2	3.26	35,820	53,910	18,090	29,487
County/City	Boggy Creek Rd	Beacon Park Blvd	SR 417	Widen to 6 Lanes	1.56	2	3.12	27,360	41,220	13,860	21,622
County/City	Clarke Rd	White Rd	SR 50	Widen to 6 Lanes	0.80	2	1.60	35,820	53,910	18,090	14,472
County/City	Universal Blvd	SR 482	Carrier Dr	Widen to 6 Lanes	1.00	2	2.00	30,420	45,810	15,390	15,390
County/City	Conroy Rd	Millenia Blvd	Eastgate Dr	Widen to 6 Lanes	0.29	2	0.58	14,040	30,420	16,380	4,750
County/City	Turkey Lake Rd	Central Florida Pkwy	Sand Lake Commons Blvd	Widen to 6 Lanes	1.18	2	2.36	35,820	53,910	18,090	21,346
County/City	Apopka-Vineland Rd	Conroy-Windermere Rd	Westover Roberts Rd	Widen to 6 Lanes	1.77	2	3.54	35,820	53,910	18,090	32,019
County/City	Avalon Rd (CR 545)	Seidel Rd	McKinney Rd	Widen to 4 Lanes	3.88	2	7.76	15,930	35,820	19,890	77,173
County/City	Oakland Ave	Tubb St	Avalon Rd	Widen to 4 Lanes	1.12	2	2.24	14,040	29,160	15,120	16,934
County/City	Avalon Rd (CR 545)	Tilden Rd	Marsh Rd	Widen to 4 Lanes	0.73	2	1.46	15,930	35,820	19,890	14,520
County/City	Avalon Rd (CR 545)	McKinney Rd	Tilden Rd	Widen to 4 Lanes	2.26	2	4.52	15,930	35,820	19,890	44,951
County/City	Hiawassee Rd	Clarcona-Ocoee Rd	John Land Apopka Expwy	Widen to 6 Lanes	0.58	2	1.16	35,820	53,910	18,090	10,492
County/City	Apopka-Vineland Rd	SR 482	Conroy-Windermere Rd	Widen to 6 Lanes	3.15	2	6.30	30,420	45,000	14,580	45,927
County/City	Avalon Rd (CR 545)	Flamingo Crossings Blvd	Seidel Rd	Widen to 4 Lanes	0.49	2	0.98	15,930	35,820	19,890	9,746
County/City	Avalon Rd (CR 545)	US 192	Hartzog Rd	Widen to 4 Lanes	0.97	2	1.94	15,930	35,820	19,890	19,293
County/City	Clarcona-Ocoee Rd	Apopka-Vineland Rd	Hiawassee Rd	Widen to 6 Lanes	1.37	2	2.74	35,820	53,910	18,090	24,783
County/City	Clarcona-Ocoee Rd	Clarke Rd	Apopka-Vineland Rd	Widen to 6 Lanes	1.17	2	2.34	27,360	41,220	13,860	16,216
County/City	Lake Underhill Rd (CR 15)	E Anderson St (CR 15)	Gaston Foster Rd	Widen to 4 Lanes	1.20	2	2.40	14,040	30,420	16,380	19,656
County/City	Ocoee-Apopka Rd	SR 438	Fullers Cross Rd	Widen to 4 Lanes	1.50	2	3.00	12,780	27,360	14,580	21,870
County/City	Wymore Rd	Lee Rd	Kennedy Blvd	Widen to 4 Lanes	0.89	2	1.78	15,930	35,820	19,890	17,702
County/City	Ocoee-Apopka Rd	McCormick Rd	Binion Rd	Widen to 4 Lanes	0.65	2	1.30	14,300	51,000	36,700	23,855
County/City	Glenridge Way	Winter Park Rd	Lakemont Ave	Widen to 4 Lanes	1.14	2	2.28	14,040	29,160	15,120	17,237
County/City	Taft-Vineland Rd	American Eagle Way	US 441	Widen to 4 Lanes	0.21	2	0.42	35,820	53,910	18,090	3,799
County/City	Boggy Creek Rd	Wetherbee Rd	Tradeport Dr	Widen to 4 Lanes	1.32	2	2.64	15,930	35,820	19,890	26,255
County/City	Avalon Rd (CR 545)	SR 50	Oakland Ave	Widen to 4 Lanes	0.27	2	0.54	15,930	35,820	19,890	5,370
County/City	Econlockhatchee Tr	Lee Vista Blvd	Curry Ford Rd	Widen to 4 Lanes	2.25	2	4.50	14,040	29,160	15,120	34,020
County/City	Mercy Dr	Old Winter Garden Rd	W Princeton St	Widen to 4 Lanes	1.67	2	3.34	14,040	30,420	16,380	27,355
County/City	Reams Rd	Summerlake Park Blvd	Center Dr	Widen to 4 Lanes	1.95	2	3.90	15,930	35,820	19,890	38,786
County/City	Boggy Creek Rd	SR 417 (Greenway)	Wetherbee Rd	Widen to 4 Lanes	2.58	2	5.16	15,930	35,820	19,890	51,316
County/City	Sadler Ave	Lake County Line	US 441	Widen to 4 Lanes	2.37	2	4.74	12,780	27,360	14,580	34,555
County/City	Geneva St	Bluford Ave	Bowness Rd	Widen to 4 Lanes	0.17	2	0.34	14,040	29,160	15,120	2,570
County/City	Clarke Rd	Hackney-Prairie Rd	AD Mims Rd	Widen to 6 Lanes	0.72	2	1.44	27,360	41,220	13,860	9,979
County/City	Clarcona Rd	McCormick Rd	Keene Rd	Widen to 4 Lanes	1.01	2	2.02	12,780	27,360	14,580	14,726
County/City	Round Lake Rd	Sadler Ave	Kelly Park Rd	Widen to 4 Lanes	0.50	2	1.00	14,300	51,000	36,700	18,350
County/City	Boggy Creek Rd	Dowden Rd	Landstreet Rd	Widen to 4 Lanes	0.59	2	1.18	14,040	29,160	15,120	8,921
County/City	Ocoee-Apopka Rd	West Rd	McCormick Rd	Widen to 4 Lanes	1.33	2	2.66	14,300	51,000	36,700	48,811
County/City	Ocoee-Apopka Rd	Binion Rd	Keene Rd	Widen to 4 Lanes	0.65	2	1.30	14,300	51,000	36,700	23,855
County/City	Jones Ave	US 441	Lake Co. Line	Widen to 4 Lanes	3.17	2	6.34	12,780	27,360	14,580	46,219
County/City	Chuluota Rd (CR 419)	Lake Pickett Rd	SR 50	Widen to 4 Lanes	1.95	2	3.90	12,870	45,900	33,030	64,409
County/City	Story Rd	9th St	Carter Rd	Widen to 4 Lanes	0.64	2	1.28	14,040	29,160	15,120	9,677
County/City	Roberson Rd	Windermere Rd	Maguire Rd	Widen to 4 Lanes	1.00	2	2.00	12,780	27,360	14,580	14,580
County/City	Clarke Rd	Clarcona-Ocoee Rd	Hackney-Prairie Rd	Widen to 4 Lanes	0.78	2	1.56	12,780	27,360	14,580	11,372
County/City	Reams Rd	Center Dr	CR 535	Widen to 4 Lanes	1.94	2	3.88	15,930	35,820	19,890	38,587
County/City	Story Rd	Carter Rd	Bowness Rd	Widen to 4 Lanes	1.13	2	2.26	14,040	29,160	15,120	17,086
County/City	Wallace Rd	Apopka-Vineland Rd	Dr. Phillips Blvd	Widen to 4 Lanes	0.50	2	1.00	15,930	35,820	19,890	9,945
County/City	Plymouth-Sorrento Rd	Schopke Rd	SR 429	Widen to 4 Lanes	2.80	2	5.60	29,970	35,820	5,850	16,380
County/City	Lake Pickett Rd	Percival Rd	South Tanner Rd	Widen to 4 Lanes	1.25	2	2.50	12,780	27,360	14,580	18,225
County/City	Ponkan Rd	Round Lake Rd	Plymouth-Sorrento Rd	Widen to 4 Lanes	2.62	2	5.24	12,870	27,360	14,490	37,964
County/City	Ocoee-Apopka Rd	Fullers Cross Rd	West Rd	Widen to 4 Lanes	0.53	2	1.06	12,780	27,360	14,580	7,727
County/City	Chuluota Rd (CR 419)	Seminole Co.	Lake Pickett Rd	Widen to 4 Lanes	1.79	2	3.58	14,300	51,000	36,700	65,693
County/City	Kelly Park Rd	Round Lake Rd	Plymouth-Sorrento Rd	Widen to 4 Lanes	2.03	2	4.06	12,870	27,360	14,490	29,415
County/City	Raleigh St	Poppy Ave	Willie May's Pkwy	Widen to 4 Lanes	0.64	2	1.28	14,040	30,420	16,380	10,483
County/City	Lake Pickett Rd	SR 50	Percival Rd	Widen to 4 Lanes	1.07	2	2.14	15,930	35,820	19,890	21,282
County/City	Lakewood Ave	Fullers Cross Rd	Pat's Lane	Widen to 4 Lanes	0.28	2	0.56	12,780	27,360	14,580	4,082
County/City	Pope St	Young Pine Rd	Innovation Rd	Widen to 4 Lanes	1.95	2	3.90	15,930	35,820	19,890	38,786
County/City	Young Pine Rd	Pope Rd	Lee Vista Blvd	Widen to 4 Lanes	0.80	2	1.60	15,930	35,820	19,890	15,912
County/City	Bowness Rd/Kissimmee Ave	Story Rd/Geneva St	Kissimmee Ave	Widen to 4 Lanes	0.19	2	0.38	14,040	29,160	15,120	2,873
County/City	Rose Ave	Beggs Rd	Maitland Blvd	Widen to 4 Lanes	0.99	2	1.98	15,930	35,820	19,890	19,691
County/City	Valencia College Ln	Frontage Rd	Econlockhatchee Tr	Widen to 4 Lanes	1.01	2	2.02	15,930	35,820	19,890	20,089
County/City	Wallace Rd	Dr. Phillips Blvd	Turkey Lake Rd	Widen to 4 Lanes	1.02	2	2.04	14,040	29,160	15,120	15,422
County/City	White Rd	Montgomery Ave	Clarke Rd	Widen to 4 Lanes	0.64	2	1.28	14,040	29,160	15,120	9,677
County/City	Windermere Rd	Roberson Rd	Maguire Rd	Widen to 4 Lanes	1.83	2	3.66	12,780	27,360	14,580	26,681
County/City	Apopka-Vineland Rd	AD Mims Rd	Clarcona-Ocoee Rd	Widen to 4 Lanes	1.67	2	3.34	12,780	27,360	14,580	24,349
County/City	Boggy Creek Rd	Tradeport Dr	Dowden Rd	Widen to 4 Lanes	1.31	2	2.62	15,930	35,820	19,890	26,056
County/City	Lake Margaret Dr	Bumby Ave	Semoran Blvd	Widen to 4 Lanes	2.60	2	5.20	14,040	29,160	15,120	39,312
County/City	Winegard Rd	Sand Lake Rd	Lancaster Rd	Widen to 4 Lanes	0.85	2	1.70	14,040	29,160	15,120	12,852
County/City	Lakeville Rd	Beggs Rd	Apopka Blvd	Widen to 4 Lanes	1.78	2	3.56	12,780	27,360	14,580	25,952
County/City	Pershing Ave	Bumby Ave	Conway Gardens Rd	Widen to 4 Lanes	0.75	2	1.50	14,040	30,420	16,380	12,285
County/City	Lakeville Rd	Clarcona-Ocoee Rd	Beggs Rd	Widen to 4 Lanes	0.83	2	1.66	12,780	27,360	14,580	12,101
County/City	S Rio Grande Ave	Long St	W Anderson St	Widen to 4 Lanes	0.06	2	0.12	15,930	35,820	19,890	1,193
County/City	Apopka-Vineland Rd	I-4 WB Ramp	CR 535	Widen to 8 Lanes	0.58	2	1.16	53,910	72,090	18,180	10,544
County/City	Boggy Creek Rd	Jeff Fuqua Blvd	Wetherbee Rd	Widen to 4 Lanes	1.30	2	2.60	53,910	72,090	18,180	23,634
County/City	CR 535	Buena Vista Dr	Equestrian Dr	Widen to 6 Lanes	1.17	2	2.34	35,820	53,910	18,090	21,165
County/City	Curry Ford Rd	Goldenrod Rd	Dean Rd	Widen to 6 Lanes	3.10	2	6.20	35,820	53,910	18,090	56,079
County/City	Dean Rd	University Blvd	McCulloch Rd	Widen to 4 Lanes	1.02	2	2.04	15,930	35,820	19,890	20,288
County/City	Goldenrod Rd	Lee Vista Blvd	0.29 miles N of Lee Vista Blvd	Widen to 6 Lanes	0.29	2	0.58	35,820	53,910	18,090	5,246
County/City	John Young Pkwy	Osceola Co. Line	Town Center Blvd	Widen to 8 Lanes	1.77	2	3.54	53,910	72,090	18,180	32,179
County/City	John Young Pkwy	Town Center Blvd	Deerfield Blvd	Widen to 8 Lanes	0.64	2	1.28	53,910	72,090	18,180	11,635
County/City	John Young Pkwy	Central Florida Pkwy	Interstate 4	Widen to 8 Lanes	7.30	2	14.60	53,910	72,090	18,180	132,714
County/City	John Young Pkwy	Interstate 4	SR 50	Widen to 8 Lanes	3.20	2	6.40	53,910	72,090	18,180	58,176
County/City	Kennedy Blvd	Forest City Rd	Keller Rd	Widen to 4 Lanes	1.02	2	2.04	15,930	35,820	19,890	20,288
County/City	Kennedy Blvd	Keller Rd	Wymore Rd	Widen to 4 Lanes	0.74	2	1.48	15,930	35,820	19,890	14,719
County/City	Lake Margaret Dr	Bumby Ave	Semoran Blvd	Widen to 4 Lanes	2.60	2	5.20	14,040	30,420	16,380	42,588
County/City	Nova Rd (CR 532)	Osceola Co. Line	SR 520	Widen to 4 Lanes	2.63	2	5.26	12,870	27,360	14,490	38,109
County/City	Orange Ave	Osceola Co. Line	Town Center Blvd	Widen to 4 Lanes	1.22	2	2.44	15,930	35,820	19,890	24,266
County/City	Orange Ave	Taft-Vineland Rd	Landstreet Rd	Widen to 6 Lanes	1.08	2	2.16	30,420	45,000	14,580	15,746
County/City	Orange Ave	Landstreet Rd	SR 482	Widen to 6 Lanes	1.06	2	2.12	35,820	53,910	18,090	19,175
County/City	Palm Pkwy/Turkey Lake Rd	SR 535	Central Florida Pkwy	Widen to 6 Lanes	2.66	2	5.32	35,820	53,910	18,090	48,119
County/City	Sand Lake Rd	Apopka-Vineland Rd	Turkey Lake Rd	Widen to 6 Lanes	1.33	2	2.66	35,820	53,910	18,090	24,060
County/City	Silver Star Rd	Mercy Dr	SR 441 (Orange Blossom Tr)	Widen to 4 Lanes	1.33	2	2.66	15,930	35,820	19,890	26,454
County/City	Tradeport Dr	Earhart Dr	SR 528 (BeachLine Expwy)	Widen to 6 Lanes	1.05	2	2.10	35,820	53,910	18,090	18,995
County/City	West Lake Butler Rd	Winter Garden-Vineland Rd	McKinnon Rd	Widen to 4 Lanes	0.50	2	1.00	12,780	27,360	14,580	7,290
Total:							**297.88**				2,656,493
										VMC Added per Lane Mile:	**9,000**

Source: Metroplan 2040 Long Range Transportation Plan, Tech Memo #3, Table 9; Needs Plan

Transit Capital Costs – Multi-Modal Fee

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

First, Table B-8 calculates the person-miles of capacity added for each new transit vehicle on the road. This calculation adjusts for the fact that buses have a significantly higher person-capacity than passenger vehicles. This table also identifies transit capital cost variables that will be used to calculate the added capital cost of constructing/expanding a roadway with transit facilities.

Next, Table B-9 combines the roadway VMC and the transit PMC to calculate the marginal change in cost per PMC. First, the roadway characteristics, including cost and capacity, were used to calculate the roadway cost per VMC for a generic 26-mile roadway segment. Then, an adjustment factor was applied to recognize that incorporating transit along a segment of roadway decreases the vehicle-capacity as the bus makes intermittent stops and interrupts the free-flowing traffic. As shown in Table B-9, the bus blockage adjustment factor is much higher for a 2-lane roadway than for a 4-lane roadway. On a 2-lane road, all cars get caught behind the bus during a stop, while on a 4-lane roadway, there is an unobstructed travel lane that cars can use to pass-by or maneuver around the slower transit vehicle. This adjusted VMC was then converted to PMC using the vehicle-miles to person-miles adjustment factor (1.40) previously discussed in this report. The additional person-capacity from the buses was added to the adjusted roadway PMC. The person-miles of capacity that a transit system would add to the stretch of roadway (Table B-8) mitigates the decrease in vehicle-miles of capacity due to the bus blockage adjustments.

Next, the capital cost of transit infrastructure was added to the capital cost of the roadway expansion for both new road construction (0 to 2 lanes) and lane addition (2 to 4 lanes). With the transit infrastructure included, the updated cost per PMC was calculated, which now reflects the total cost of building a new road with transit or expanding a roadway and adding transit amenities. When compared to the cost per PMC for simply building/expanding a roadway without transit, the added cost of transit is between two (2) percent and five (5) percent.

As a final step, the increased costs were then weighted by the lane mile distribution of new road construction and lane addition improvements in the Metroplan 2040 Long Range Transportation Plan. As shown, the plan calls for a higher number of lane addition improvements through 2040.

When the marginal cost of transit is included and weighted by this ratio, the resulting percent change is approximately 2.66 percent. Essentially, adding transit does not have a significant effect on the cost per person-mile of capacity for new road construction and lane addition improvements.

As it is currently structured, the transit model detailed in Tables B-8 and B-9 assumes that transit-miles and road-miles will be added to the system at the same rate. If the County builds more transit-miles, this will increase the bus traffic on existing roads, adding more stops, higher stop frequency, and creating additional bus blockage. As a result, the capital cost per person-mile for a roadway with transit would increase in relation to the ratio of added transit-miles vs. roadway-miles. For example, if the transit-mile investment was double that of roadway construction/expansion, the 2.66 percent change calculated in Table B-9 would increase to approximately 5.32 percent. The annual construction figures for transit-miles and road-miles should be tracked by the County and adjusted for in subsequent transportation impact fee update studies.

Table B-8
Multi-Modal Cost per Person-Mile of Capacity

Input	Local Transit	
Transit Person-Miles of Capacity Calculation		**Source:**
Vehicle Capacity[1]	50	1) Source: Local transit is assumed to have 40 seats with a 25 percent standing room capacity equivalent
Number of Vehicles (20% fleet margin)[2]	2	2) Cycle time (Item 9) divided by headway time (Item 6) increased by 20 percent to accommodate the required fleet margin
Service Span (hours)[3]	16	3) Source: Assumption based on current LYNX routes
Cycles/Hour (aka Peak Vehicles)[4]	1.00	4) Headway time (Item 6) divided by 60
Cycles per Day[5]	16	5) Service span (Item 3) multiplied by the cycles/hour (Item 4)
Headway Time (minutes)[6]	60	6) Source: Assumption based on current LYNX routes
Speed (mph)[7]	14	7) Source: Integrated National Transit Database Analysis System (INTDAS). 6-yr average
Round Trip Length (miles)[8]	26.0	8) Source: Average trip length of current LYNX routes
Cycle Time (minutes)[9]	111	9) Round trip length (Item 8) divided by speed (Item 7) multiplied by 60
Total Person-Miles of Capacity[10]	20,800	10) Vehicle capacity (Item 1) multiplied by the cycles per day (Item 5) multiplied by the round trip length (Item 8)
Load Factor/System Capacity[11]	30%	11) Source: Optimistic assumption based on future goals
Adjusted Person-Miles of Capacity[12]	**6,240**	12) Total person-miles of capacity (Item 10) multiplied by the load factor (Item 11)
Capital Cost Variables		
Stops per Mile (w/o Shelter)[13]	3	13) Source: Model assumes 3 bench stops per mile
Shelters per Mile[14]	1	14) Source: Model assumes 1 shelter stop per mile
Vehicle Cost[15]	$600,000	15) Source: Assumption based on local characteristics and industry knowledge
Simple Bus Stop[16]	$10,000	16) Source: Assumption based on local characteristics and industry knowledge
Sheltered Bus Stop[17]	$30,000	17) Source: Assumption based on local characteristics and industry knowledge

Table B-9
Multi-Modal Fee: Transit Component Model

Item	New Road Construction		Lane Addtions		
	Roadway	Transit	Roadway	Transit	
Roadway Characteristics:					**Source:**
Roadway Cost per Mile[(1)]	$9,080,000		$9,080,000		1) Source: Table 1, adjusted to cost "per mile"
Roadway Segment Length (miles)[(2)]	26.0		26.0		2) Source: Average length of LYNX route
Roadway Segment Cost[(3)]	$236,080,000	**PMC**	$236,080,000	**PMC**	3) Roadway cost per mile (Item 1) multiplied by the roadway segment length (Item 2)
Average Capacity Added (per mile)[(4)]	18,000	25,200	18,000	25,200	4) Source: Table 2, adjusted to capacity "per mile"
VMC/PMC Added (entire segment)[(5)]	468,000	655,200	468,000	655,200	5) Roadway segment length (Item 2) multiplied by the average capacity added (Item 4) for both VMC and PMC
Roadway Cost per VMC/PMC[(6)]	$504.44	**$360.32**	$504.44	**$360.32**	6) Roadway segment cost (Item 3) divided by the VMC/PMC added (Item 5) individually
Transit Capacity:					
Adjustment for Bus Blockage[(7)]	3.2%	-	1.6%	-	7) Source: 2010 Highway Capacity Manual, Equation 18-9
VMC/PMC Added (transit deduction)[(8)]	14,976	20,966	7,488	10,483	8) VMC added (Item 5) multiplied by the adjustment for bus blockage (Item 7). For PMC, multiply the VMC by 1.40 persons per vehicle
VMC/PMC Added (less transit deduction)[(9)]	453,024	634,234	460,512	644,717	9) VMC/PMC added (entire segment) (Item 5) less the VMC/PMC added (transit deduction) (Item 8) for VMC and PMC individually
PMC Added (transit addition ONLY)[(10)]		6,240		6,240	10) Source: Table B-8, Adjusted Person-Miles of Capacity (Item 12)
Net PMC Added (transit effect included)[(11)]		640,474		650,957	11) PMC added (less transit deduction) (Item 9) plus the PMC added (transit addition ONLY) (Item 10)
Road/Transit Cost per PMC (Road Capital)[(12)]		$368.60		$362.67	12) Road segment cost (Item 3) divided by the net PMC added (transit effect included) (Item 11)
Transit Infrastructure:					
Buses Needed[(13)]	2	$1,200,000	2	$1,200,000	13) Number of vehicles (see Table B-8, Item 2) multiplied by the vehicle cost (see Table B-8, Item 15)
Stops per mile (both sides of street)[(14)]	3	$1,560,000	3	$1,560,000	14) Stops per mile (3) multiplied by the roadway segment length (Item 2) multiplied by the cost per stop (Table B-8, Item 16)
Shelters per mile (both sides of street)[(15)]	1	$1,560,000	1	$1,560,000	15) Shelters per mile (1) multiplied by the roadway segment length (Item 2) multiplied by the cost per shelter (Table B-8, Item 17)
Total infrastructure[(16)]		$4,320,000		$4,320,000	16) Sum of buses needed (Item 13), stops needed (Item 14), and shelters needed (Item 15)
Multi-Modal Cost per PMC:					
Road/Transit Cost per PMC[(17)]		**$375.35**		**$369.30**	17) Sum of the roadway segment cost (Item 3) and the total transit infrastructure cost (Item 16) divided by the net PMC added (Item 11)
Percent Change[(18)]		**4.17%**		**2.49%**	18) Percent difference between the road/transit cost per PMC (Item 17) and the Roadway cost per PMC (Item 6)
Weighted Multi-Modal Cost per PMC:					
Lane Mile Distribution w/Transit Facilities[(19)]		10%		90%	19) Source: Estimate based on mix of Cost Feasible and Needs Plan improvements
Weighted Roadway Cost per PMC[(20)]		$36.03		$324.29	20) Roadway cost per PMC (Item 6) multiplied by the lane mile distribution (Item 19)
Weighted Road/Transit Cost per PMC[(21)]		$37.53		$332.37	21) Road/Transit cost per PMC (Item 17) multiplied by the lane mile distribution (Item 19)
Weighted Average Multi-Modal Cost per PMC:					
Weighted Average Roadway Cost per PMC (new road construction and lane additions)[(22)]				$360.32	22) Sum of the weighted roadway cost per PMC (Item 20) for new road construction and lane additions
Weighted Average Road/Transit Cost per PMC (new road construction and lane additions)[(23)]				$369.90	23) Sum of the weighted road/transit cost per PMC (Item 21) for new road construction and lane additions
Percent Change[(24)]				**2.66%**	24) Percent difference between the weighted average road/transit cost per PMC (Item 23) and the weighted average roadway cost per PMC (Item 22)

APPENDIX C
Credit Component Calculations

Appendix C: Credit Component

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

1. Constitutional Fuel Tax (2¢/gallon)

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

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.
- Orange County currently dedicates these revenues to capacity improvements and operations/maintenance.

3. 1st Local Option Tax (up to 6¢/gallon)

- Tax applies to every net gallon of motor and diesel fuel sold within a county.
- Proceeds may be used to fund transportation expenditures.

- To accommodate statewide equalization, all six cents are automatically levied on diesel fuel in every county, regardless of whether a county is levying the tax on motor fuel at all or at the maximum rate.
- Proceeds are distributed to a county and its municipalities according to a mutually agreed upon distribution ratio, or by using a formula contained in the Florida Statutes.
- Orange County currently dedicates a small portion to capacity expansion, with most of these revenues going towards operations/maintenance.

Each year, the Florida Legislature's Office of Economic and Demographic Research (EDR) produces the *Local Government Financial Information Handbook*, which details the estimated local government revenues for the upcoming fiscal year. Included in this document are the estimated distributions of the various fuel tax revenues for each county in the state. The 2019-20 data represent projected fuel tax distributions to Orange County for the current fiscal year. Table C-1 shows the distribution per penny for each of the fuel levies, and then the calculation of the weighted average for the value of a penny of fuel tax. The weighting procedure takes into account the differing amount of revenues generated for the various types of fuel taxes. It is estimated that approximately $7.2 million of annual revenue will be generated for the County from one penny of fuel tax in Orange County.

Table C-1
Estimated Fuel Tax Distribution Allocated to Capital Programs for Orange County & Municipalities, FY 2019-20[1]

Tax	Amount of Levy per Gallon	Total Distribution	Distribution per Penny
Constitutional Fuel Tax	$0.02	$12,989,743	$6,494,872
County Fuel Tax	$0.01	$5,714,513	$5,714,513
1st Local Option (1-6 cents)	$0.06	$46,070,352	$7,678,392
Total	**$0.09**	**$64,774,608**	
Weighted Average per Penny[2]			**$7,197,179**

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

Capital Improvement Credit - Roadways

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

- City (Orlando) capital project funding (cash funding)

- County capital project funding (cash funding)
    - INVEST, fuel tax, proportionate fair share fund
    - LYNX capital contribution
    - Ad Valorem funding (separate credit calculations are included in Appendix D)
- State capital project funding

The annual expenditures from each revenue source (except for ad valorem tax revenues) are converted to equivalent fuel tax pennies to be able to create a connection between travel by each land use and non-impact fee revenue contributions. In the case of ad valorem tax revenues used toward capacity expansion projects, the credit is based on average taxable value of each land use. These calculations are included in Appendix D.

City Capital Project Funding (Roads ONLY)

A review of Orlando's future roadway financing programs indicate that the City is primarily funding roadway capacity-expansion improvements with fuel tax revenues. As shown in Table C-2, a City credit of 0.1 pennies will be included in the roadway impact fee calculation.

Table C-2
City Fuel Tax Equivalent Pennies - Roadways

Source	Cost of Projects	Number of Years	Revenue from 1 Penny[2]	Equivalent Pennies[3]
Fuel Tax Expenditures (FY 2019-2023)[1]	$2,580,000	5	$7,197,179	$0.001
Total				**$0.001**

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

County Capital Project Funding (Roads ONLY)

A review of the County's future roadway financing programs indicated that a combination of fuel tax, INVEST, and proportionate fair share revenues are used to fund roadway capacity expansion projects, in addition to ad valorem funds (see Appendix D) and impact fee funds (not credit eligible). As shown in Table C-3, Orange County uses 4.9 equivalent pennies for capacity-expansion projects such as new road construction, lane additions, and intersection improvements.

Table C-3
County Fuel Tax Equivalent Pennies - Roadways

Source	Cost of Projects	Number of Years	Revenue from 1 Penny[3]	Equivalent Pennies[4]
Fuel Tax/Prop. Share Exp. (FY 2019-2023)[1]	$43,060,482	5	$7,197,179	$0.012
INVEST, CIP funds[2]	$132,953,070	5	$7,197,179	$0.037
Total	**$176,013,552**			**$0.049**

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

State Capital Project Funding (Roads ONLY)

In the calculation of the equivalent pennies of fuel tax from the State, expenditures on roadway capacity-expansion spanning a 10-year period (from FY 2010 to FY 2019) were reviewed. From these expenditures, a list of improvements was developed, including lane additions, new road construction, intersection improvements, interchanges, traffic signal projects, etc. The use of a 10-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 historical roadway capacity-expansion projects:

- FY 2010-2014 work plan equates to 9.1 pennies
- FY 2015-2019 work plan equates to 8.0 pennies

The combined weighted average over the 16-year period of state expenditure for capacity-expansion roadway projects results in a total of 9.3 equivalent pennies. Table C-4 documents this calculation. The specific projects that were used in the equivalent penny calculations are summarized in Table C-4.

Table C-4
State Fuel Tax Equivalent Pennies - Roadways

Source	Cost of Projects	Number of Years	Revenue from 1 Penny[3]	Equivalent Pennies[4]
Historical Work Program (FY 2015-2019)[1]	$286,550,946	5	$7,197,179	$0.080
Historical Work Program (FY 2010-2014)[2]	$328,449,775	5	$7,197,179	$0.091
Total	**$615,000,721**	**10**	**$7,197,179**	**$0.085**

1) Source: Table C-10
2) Source: Table C-10
3) Source: Table C-1
4) Cost of projects divided by number of years divided by revenue from 1 penny (Item 3) divided by 100

Capital Improvement Credit – Multi-Modal

For the multi-modal fee, the capital improvement credit includes the roadway expenditures previously detailed along with the capacity-expansion expenditures for multi-modal improvements in Orange County.

City Capital Project Funding (Multi-Modal)

A review of Orlando's future transportation financing programs indicate that the City is primarily funding capacity-expansion improvements with fuel tax revenues. As shown in Table C-5, a City credit of 0.3 pennies will be included in the multi-modal transportation impact fee calculation.

Table C-5
City Fuel Tax Equivalent Pennies – Multi-Modal

Source	Cost of Projects	Number of Years	Revenue from 1 Penny[3]	Equivalent Pennies[4]
Fuel Tax Expenditures (FY 2019-2023)[1]	$12,561,000	5	$7,197,179	$0.003
Total				**$0.003**

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

County Capital Project Funding (Multi-Modal)

As shown in Table C-6, when capacity funding for multimodal projects is considered, Orange County uses 5.4 equivalent pennies from non-impact fee and non-ad valorem funding for projects such as new road construction, lane additions, transit lanes, sidewalks, and intersection improvements. A separate ad valorem credit analysis is located in Appendix D.

Table C-6
County Fuel Tax Equivalent Pennies – Multi-Modal

Source	Cost of Projects	Number of Years	Revenue from 1 Penny[4]	Equivalent Pennies[5]
Fuel Tax/Prop. Share Exp. (FY 2019-2023)[1]	$53,060,482	5	$7,197,179	$0.015
INVEST, CIP funds[2]	$132,953,070	5	$7,197,179	$0.037
LYNX Capital Contribution[3]	$1,793,000	1	$7,197,179	$0.002
Total	**$187,806,552**			**$0.054**

1) Source: Table C-9
2) Source: Table C-9
3) Source: LYNX Funding Detail Report, September 2019
4) Source: Table C-1
5) Cost of projects divided by number of years divided by revenue from 1 penny (Item 3) divided by 100

State Capital Project Funding (Multi-Modal)

In the calculation of the equivalent pennies of fuel tax from the State, expenditures on transportation capacity-expansion spanning a 10-year period (from FY 2010 to FY 2019) were reviewed. From these, a list of improvements was developed, including lane additions, new road construction, intersection improvements, interchanges, traffic signal projects, vehicle acquisition, capital for fixed route service, sidewalks etc.

Several of the transit expenditures did not contain enough detail to determine if the expenditure was capacity expansion or operations/maintenance. For example, vehicle purchases are grouped into a single expenditure without indicating if the vehicles are replacements or are associated with expanded service. Therefore, the total transit expenditures were adjusted to 60 percent to account for the portion of expenditures associated with operations/maintenance. The use of a 60 percent adjustment factor was based on the distribution of Section 5307 expenditures projected in the County's latest Transit Development Plan.

The total cost of the historical transportation capacity-expansion projects:

- FY 2010-2014 work plan equates to 13.4 pennies
- FY 2015-2019 work plan equates to 14.6 pennies

The combined weighted average over the 10-year period of state expenditure for multi-modal capacity-expansion projects results in a total of 14.0 equivalent pennies. Table C-7 documents this calculation. The specific projects that were used in the equivalent penny calculations are summarized in Tables C-10 and C-11.

Table C-7
State Fuel Tax Equivalent Pennies

Source	Cost of Projects	Number of Years	Revenue from 1 Penny[3]	Equivalent Pennies[4]
Historical Work Program (FY 2015-2019)[1]	$525,208,503	5	$7,197,179	$0.146
Historical Work Program (FY 2010-2014)[2]	$483,685,935	5	$7,197,179	$0.134
Total	**$1,008,894,438**	**10**	**$7,197,179**	**$0.140**

1) Source: Table C-11
2) Source: Table C-11
3) Source: Table C-1
4) Cost of projects divided by number of years divided by revenue from 1 penny (Item 3) divided by 100

Table C-8
City of Orlando - Capital Improvement Program, FY 2018/19 to FY 2022/23

ID	Project Name	Road Capacity	Multi-Modal Capacity	FY 2018/19	FY 2019/20	FY 2020/21	FY 2021/22	FY 2022/23	Total
94-812-008	Bicycle Plan Implementation	-	Yes	$150,000	$150,000	$150,000	$150,000	$150,000	**$750,000**
08-660-001	New Traffic Signal Locations	Yes	Yes	$100,000	$370,000	$370,000	$370,000	$370,000	**$1,580,000**
81-755-004	Regional Computerized Signal System	Yes	Yes	$100,000	$100,000	$100,000	$100,000	$100,000	**$500,000**
19-TSP-002	Robinson Street "Complete Streets"	-	Yes	$0	$0	$6,481,000	$0	$0	**$6,481,000**
84-722-039	School Safety Sidewalk Program	-	Yes	$100,000	$100,000	$100,000	$100,000	$100,000	**$500,000**
05-734-026	Traffic Counts and Travel Time Studies	Yes	Yes	$100,000	$100,000	$100,000	$100,000	$100,000	**$500,000**
19-TSP-001	Virginia Drive Improvements	-	Yes	$250,000	$0	$500,000	$500,000	$1,000,000	**$2,250,000**
Total - Roads				**$300,000**	**$570,000**	**$570,000**	**$570,000**	**$570,000**	**$2,580,000**
Total - Multi-Modal				**$800,000**	**$820,000**	**$7,801,000**	**$1,320,000**	**$1,820,000**	**$12,561,000**

Source: City of Orlando CIP, FY 2019-2023

Table C-9

Orange County - Capital Improvement Program, FY 2018/19 to FY 2022/23

Project Number	Project Title	Road Capacity	Multi-Modal Capacity	Funding	FY 2018/19	FY 2019/20	FY 2020/21	FY 2021/22	FY 2022/23	Total
2722	Intersection WID/CW	Yes	Yes	Fuel Tax/Prop. Share	$3,500,100	$3,000,100	$3,000,100	$3,000,100	$3,000,100	**$15,500,500**
2752	R. Crotty Pkwy (436-Dean)	Yes	Yes	INVEST	$400,000	$0	$3,625,526	$0	$0	**$4,025,526**
2766	ROW & Drainage	Yes	Yes	Fuel Tax/Prop. Share	$5,000	$5,000	$5,000	$5,000	$5,000	**$25,000**
2841	Sidewalk Program C-W	-	Yes	Fuel Tax/Prop. Share	$2,000,000	$2,000,000	$2,000,000	$2,000,000	$2,000,000	**$10,000,000**
3073	Kirkman Rd Extension Study	Yes	Yes	Ad Valorem	$100	$0	$0	$0	$0	**$100**
3074	International Dr Ultimate Tran Study	Yes	Yes	Ad Valorem	$1,000,000	$0	$0	$0	$0	**$1,000,000**
3096	Kennedy Blvd (Forest Cty - I-4)	Yes	Yes	INVEST	$0	$600,000	$5,000,000	$6,100,000	$1,700,000	**$13,400,000**
		Yes	Yes	Fuel Tax/Prop. Share	$3,500,000	$3,000,000	$3,500,000	$0	$0	**$10,000,000**
3097	All American (OBT - Forest Cty)	Yes	Yes	Fuel Tax/Prop. Share	$2,200,000	$300,000	$4,309,688	$400,000	$0	**$7,209,688**
5001	John Young Pkwy/6-Lane	Yes	Yes	Ad Valorem	$100	$500,000	$100	$0	$0	**$500,200**
5004	Chuluota Rd	Yes	Yes	INVEST	$619,000	$1,228,000	$3,995,600	$3,488,400	$0	**$9,331,000**
		Yes	Yes	Fuel Tax/Prop. Share	$69,274	$0	$0	$0	$0	**$69,274**
5005	McCulloch Rd	Yes	Yes	INVEST	$796,272	$1,946,160	$1,946,160	$375,280	$3,604,928	**$8,668,800**
5006	CR 545 Village H ROW	Yes	Yes	Fuel Tax/Prop. Share	$155,920	$0	$0	$0	$0	**$155,920**
5024	Econ Trail (Lk Underhill - SR 50)	Yes	Yes	INVEST	$2,500,000	$10,700,000	$9,800,000	$347,669	$0	**$23,347,669**
5027	Texas Ave (Oak Rdg - Holden)	Yes	Yes	INVEST	$0	$2,479,176	$900,000	$0	$0	**$3,379,176**
5033	Raleigh St Impr (Kirkman Rd to Ivey Ln)	Yes	Yes	Fuel Tax/Prop. Share	$1,250,000	$0	$0	$0	$0	**$1,250,000**
5059	Woodbury Rd Study	Yes	Yes	Fuel Tax/Prop. Share	$100	$0	$0	$0	$0	**$100**
5070	I-Drive Transit Lanes	-	Yes	Ad Valorem	$5,000,000	$9,000,000	$4,532,955	$500,000	$0	**$19,032,955**
5084	Holden Heights Ph. IV	Yes	Yes	Fuel Tax/Prop. Share	$50,000	$0	$0	$0	$0	**$50,000**
5085	Boggy Creek Rd	Yes	Yes	INVEST	$3,731,005	$4,025,000	$238,727	$0	$0	**$7,994,732**
5089	Destination Pkwy	Yes	Yes	Ad Valorem	$220,000	$0	$0	$0	$0	**$220,000**
5090	Lk Uhill (Chickasaw - Rouse)	Yes	Yes	INVEST	$1,950,000	$650,000	$5,500,000	$9,300,000	$3,900,000	**$21,300,000**
5095	Pedestrian Enhancements	-	Yes	Ad Valorem	$600,000	$400,000	$400,000	$400,000	$400,000	**$2,200,000**
5109	Legacy - Holden Ave (JYP - OBT)	Yes	Yes	Ad Valorem	$3,242,748	$0	$0	$0	$0	**$3,242,748**
5121	Legacy - Texas Ave	Yes	Yes	Ad Valorem	$4,554,929	$0	$0	$0	$0	**$4,554,929**
5122	Legacy - Valencia College Ln	Yes	Yes	Ad Valorem	$48,478	$0	$0	$0	$0	**$48,478**
5139	Reams (Summerlk - Taborfld)	Yes	Yes	INVEST	$1,639,700	$2,139,700	$4,270,600	$4,364,167	$12,160,000	**$24,574,167**
5140	Ficquette (Summerlk - Overst)	Yes	Yes	INVEST	$1,000,000	$2,000,000	$4,000,000	$5,200,000	$4,732,000	**$16,932,000**
2720	Signal Installation CW	Yes	Yes	Fuel Tax/Prop. Share	$1,760,000	$1,760,000	$1,760,000	$1,760,000	$1,760,000	**$8,800,000**
Total - Roadway (Fuel Tax/Prop. Share):					$12,490,394	$8,065,100	$12,574,788	$5,165,100	$4,765,100	**$43,060,482**
Total - Roadway (INVEST):					$12,635,977	$25,768,036	$39,276,613	$29,175,516	$26,096,928	**$132,953,070**
Total - Roadway (Ad Valorem):					$9,066,355	$500,000	$100	$0	$0	**$9,566,455**
Total - Roadway					**$34,192,726**	**$34,333,136**	**$51,851,501**	**$34,340,616**	**$30,862,028**	**$185,580,007**
Total - Multi-Modal (Fuel Tax/Prop. Share):					$14,490,394	$10,065,100	$14,574,788	$7,165,100	$6,765,100	**$53,060,482**
Total - Multi-Modal (INVEST):					$12,635,977	$25,768,036	$39,276,613	$29,175,516	$26,096,928	**$132,953,070**
Total - Multi-Modal (Ad Valorem):					$14,666,355	$9,900,000	$4,933,055	$900,000	$400,000	**$30,799,410**
Total - Multi-Modal:					**$41,792,726**	**$45,733,136**	**$58,784,456**	**$37,240,616**	**$33,262,028**	**$216,812,962**

Source: Orange County Transportation Planning Division; Community, Environment & Development Services Department

Table C-10
Florida Department of Transportation, District 5 – Orange County Work Program FY 2010 to FY 2019, Roadways ONLY

ID	Description	Wkmx Description	FY 2010	FY 2011	FY 2012	FY 2013	FY 2014	FY 2015	FY 2016	FY 2017	FY 2018	FY 2019	Total
238429-5	SR 50 FROM LAKE CO LINE TO EAST OF TURNPIKE RAMPS	ADD LANES & RECONSTRUCT	$0	$0	$433	$9,002	$184	$0	$0	$0	$0	$0	**$9,619**
239203-2	SR 50 FROM W OF SR 436 TO 0.2 MILE W OF SR 417 (GRWY)	ADD LANES & REHABILITATE PVMNT	$2,538,607	$571,271	$3,750	$5,401	$0	$0	$0	$0	$0	$0	**$3,119,029**
239203-3	SR 50 FROM 0.3MI E OF S R417 (GRWY) TO CR 425 (DEAN RD)	ADD LANES & REHABILITATE PVMNT	$9,269,279	$10,606,271	$9,094,227	$9,004,786	$9,000,000	$9,000,000	$9,000,000	$9,000,000	$7,400,597	$0	**$81,375,160**
239203-4	SR 50 (COLONIAL DR) FROM E OF CR 425 (DEAN RD) TO E OF OLD CHENEY HWY	ADD LANES & REHABILITATE PVMNT	$693,407	$497,837	$183,839	$252,054	$50,206,209	$130,371	$413,836	$2,384,646	$49,381	$57,344	**$54,868,924**
239203-7	SR 50 EAST OF OLD CHENEY HWY TO CHULUOTA RD	ADD LANES & REHABILITATE PVMNT	$0	$0	$0	$0	$0	$2,741,400	$31,929	$6,252	$2,053	$2,960	**$2,784,594**
239203-8	SR 50 CHULUOTA RD TO SR 520	ADD LANES & REHABILITATE PVMNT	$0	$0	$0	$0	$0	$2,866,925	$28,392	$10,163	$2,362	$10,536	**$2,918,378**
239266-3	SR 15 (HOFFNER RD) FROM N OF LEE VISTA BLVD TO W OF SR 436	ADD LANES & RECONSTRUCT	$105,975	$745,829	$112,730	$51,039	$641,092	$23,393,682	$124,821	$2,420,755	$323,806	$1,452,553	**$29,372,282**
239266-4	SR 15 HOFFNER AVE FROM W OF SR 436 TO CONWAY ROAD	ADD LANES & RECONSTRUCT	$0	$0	$0	$0	$0	$10,734,891	$34,045	$1,246,538	$208,870	$367,739	**$12,592,083**
239288-1	SR 435 KIRKMAN ROAD FROM 1700' S. OF CONROY RD TO SR 50	ADD LANES & RECONSTRUCT	$106,000	$0	$0	$0	$0	$0	$0	$0	$0	$0	**$106,000**
239304-1	SR 530 (US 192) FROM LAKE CO LINE TO E OF SECRET LAKE DR	ADD LANES & RECONSTRUCT	$15,756	$3,918	$106,077	$8,678,226	$968,150	$30,467	$621	$0	$0	$0	**$9,803,215**
239422-1	SR 434 FOREST CITY FROM SR 424 EDGEWATER DR TO SEMINOLE CO LINE	ADD LANES & RECONSTRUCT	$0	$11,754	$1,604,769	$28,076	$39,956	$15,135	$1,608,585	$323,145	$672,297	$706,416	**$5,010,133**
239496-2	SR 423/434 EXTENSION FROM SHADER RD TO SR 424 (EDGEWATER DR)	NEW ROAD CONSTRUCTION	$332,031	$45,266,588	$922,689	$282,468	$144,930	$1,019	$0	$0	$0	$0	**$46,949,725**
239496-3	SR 423 (JOHN YOUNG PARKWAY) WIDENING FROM SR 50 TO SHADER RD	ADD LANES & RECONSTRUCT	$0	$3,810	$2,390,502	$224,889	$317,366	$103,977	$83,215	$1,066,809	$29,846,940	$730,222	**$34,767,730**
239535-2	SR 50 FROM E RAMPS TPK TO AVALON RD	ADD LANES & RECONSTRUCT	$296,541	$78,287	$8,224,102	$89,883	$148,166	$8,558	$6,637	$1,009	$152	$0	**$8,853,335**
239535-3	SR 50 SR 429 (WESTERN BELTWAY) TO E OF WEST OAKS MALL	ADD LANES & RECONSTRUCT	$1,067,414	$94,226	$225,080	$615,552	$277,930	$29,102,430	$1,321,839	$4,626,346	$1,602,799	$972,841	**$39,906,457**
239535-4	SR 50 FROM GOOD HOMES RD TO PINE HILLS RD	ADD LANES & RECONSTRUCT	$1,551,880	$567,377	$937,461	$49,241	$138,384	$0	$0	$0	$391	$368	**$3,245,102**
239535-5	SR 50 FROM E OF WEST OAKS MALL TO W OF GOOD HOMES RD	ADD LANES & RECONSTRUCT	$0	$31,246	$14,137,919	$306,796	$1,130,853	$505,650	$43,120	$22,063	$17,892	$3,525	**$16,199,064**
407143-2	SR 482 FROM E END OF BRIDGE OVER TURNPIKE TO ORANGE BLOSSOM TRAIL	ADD LANES & REHABILITATE PVMNT	$1,178	$13	$649	$0	$0	$0	$0	$0	$0	$0	**$1,840**
407143-3	SR 482(SAND LAKE RD) FROM TURKEY LAKE RD TO PRESIDENTS DR	ADD LANES & RECONSTRUCT	$2,153,052	$13,480,514	$2,178,718	$1,605,096	$59,115	$19,119	$9,510	$1,774,907	$350	$8,824	**$21,289,205**
407143-4	SR 482 SAND LAKE RD FROM W OF INTERNATIONAL DR TO UNIVERSAL BLVD	ADD LANES & RECONSTRUCT	$0	$0	$0	$0	$617,706	$7,248	$10,216,205	$174,501	$627,887	$1,198,450	**$12,841,997**
407143-5	SR 482 SAND LAKE RD FROM UNIVERSAL BLVD TO W OF JOHN YOUNG PARKWAY	ADD LANES & RECONSTRUCT	$0	$0	$0	$0	$7,086	$1,331,046	$37,399,820	$240,924	$1,400,353	$1,826,069	**$42,205,298**
407143-6	JOHN YOUNG PARKWAY AT SR 482 SAND LAKE RD OVERPASS	ADD LANES & RECONSTRUCT	$0	$873	$427	$0	$0	$19,314	$23,105,275	$16,786	$292,793	$541,142	**$23,976,610**
408429-2	SR 15/600 (US 17/92) ORLANDO AVE FROM S OF NOTTINGHAM ST TO MONROE AVE	URBAN CORRIDOR IMPROVEMENTS	$0	$0	$0	$0	$0	$0	$0	$0	$2,582,329	$212,641	**$2,794,970**
410983-1	SR 50 FROM W OF AVALON RD SR 429 (WESTERN BELTWAY)	ADD LANES & RECONSTRUCT	$18,339,966	$457,105	$960,554	$8,491	$2,194	$291	$0	$0	$0	$0	**$19,768,601**
413019-5	ORANGE TRAFFIC ENGINEERING CONTRACTS	TRAFFIC SIGNALS	$633,047	$662,626	$683,206	$724,904	$839,419	$786,206	$1,386,543	$1,993,862	$2,080,041	$2,080,577	**$11,870,431**
414999-1	SR 50 FROM PETE PARRISH/SILVERTON TO SPRINGDALE RD	TRAFFIC SIGNALS	$0	$0	$5,624	$684,026	$103,097	$87,707	$617	$0	$0	$26,034	**$907,105**
414999-2	SR 50 AT MERCY DRIVE	TRAFFIC SIGNALS	$0	$0	$0	$0	$241,335	$42,294	$622	$0	$0	$25,344	**$309,595**
416368-1	SR 527/SR 426 PEDESTRIAN CORRIDOR FROM 17-92 (MILLS) TO LAKEMONT	INTERSECTION IMPROVEMENT	$489,640	$0	$0	$0	$0	$0	$0	$0	$0	$0	**$489,640**
416724-1	ORANGE COUNTYWIDE ADVANCE ROW ACQUISITION	RIGHT OF WAY - FUTURE CAPACITY	$1,391	$6,887,799	$10,230,153	$14,082,226	$6,031,130	$1,210,674	$955,519	$763,131	$2,701	$385,012	**$40,549,736**
417258-1	INTERNATIONAL DRIVE FROM OAK RIDGE ROAD TO W OF UNIVERSAL BLVD	TRAFFIC OPS IMPROVEMENT	$300,185	$0	$0	$5,170,540	$2,642	$3,657	$604	$69	$0	$0	**$5,477,697**
421217-2	SR 482 (MCCOY RD) @ GONDOLA DR TRAFFIC SIGNAL INSTALLATION	TRAFFIC SIGNALS	$65,431	$0	$0	$0	$0	$0	$0	$0	$0	$0	**$65,431**
422223-1	SR 438 (SILVERSTAR) @ ORANGE AVE/INTERSECTION PEDESTRIAN SAFETY IMPROV	ADD LEFT TURN LANE(S)	$0	$306,429	$52,754	$0	$0	$0	$0	$0	$0	$0	**$359,183**
423029-1	SR 535 AT INTERNATIONAL DRIVE	TRAFFIC SIGNALS	$0	$0	$0	$0	$0	$0	$0	$927,740	$11,289	$38,334	**$977,363**
423856-1	SR 15/600 (US 17/92) AT HORATIO AVE INTERSECT TRAFFIC OPS IMPROVEMENT	TRAFFIC OPS IMPROVEMENT	$0	$0	$1,076,155	$486,009	$188,038	$2,786	$207	$0	$0	$0	**$1,753,195**
424217-1	SR 414 (MAITLAND BLVD) FROM SR 400 (I-4) TO CR 427 (MAITLAND AVE)	ADD LANES & REHABILITATE PVMNT	$0	$350,829	$97,141	$45,994	$1,545,007	$528,965	$30,054	$325,673	$331,008	$8,739,598	**$11,994,269**
424530-1	SR 500 US 441 FROM OAKRIDGE RD TO 34TH STREET	TRAFFIC OPS IMPROVEMENT	$0	$0	$2,652,603	$66,106	$309	$0	$0	$0	$0	$6,920	**$2,725,938**
425833-1	OPTICOM GPS SYSTEM ORLANDO CITYWIDE ON-SYSTEM SIGNALS	TRAFFIC CONTROL DEVICES/SYSTEM	$1,086,024	$0	$0	$0	$0	$0	$0	$0	$0	$0	**$1,086,024**
425833-2	OPTICOM GPS SYSTEM ORLANDO CITYWIDE OFF-SHS INTERSECTIONS	TRAFFIC CONTROL DEVICES/SYSTEM	$600,691	$0	$0	$0	$0	$0	$0	$0	$0	$0	**$600,691**
426341-1	EXPAND/UPGRADE REGIONAL COMPUTERIZED ITS DOWNTOWN ORLANDO SYSTEM	OTHER ITS	$3,154,100	$0	$0	$0	$0	$0	$0	$0	$0	$0	**$3,154,100**
427046-2	ORANGE COUNTY TRAFFIC SIGNAL RETIMING COUNTYWIDE	TRAFFIC SIGNAL UPDATE	$473,850	$488,100	$488,844	$488,478	$510,057	$691,989	$0	$0	$0	$0	**$3,141,318**
427046-5	TRAFFIC SIGNAL RETIMING (ORANGE, OSCEOLA, SEMINOLE)	TRAFFIC SIGNAL UPDATE	$0	$0	$0	$0	$0	$0	$1,243,119	$0	$0	$0	**$1,243,119**
427047-1	SR 500 (US 441) FROM LANDSTREET ROAD TO OAKRIDGE ROAD	INTERSECTION IMPROVEMENT	$0	$3,094	$2,342,935	$237,831	$16,569	$0	$0	$0	$0	$0	**$2,600,429**
427114-1	INTERSECTION MAQUIRE ROAD AND PARK AVENUE NEW ROUNDABOUT WINDERMER	NEW ROAD CONSTRUCTION	$245,983	$0	$0	$0	$0	$0	$0	$0	$0	$0	**$245,983**
427851-2	NORTH THISTLE LANE FROM N OF OLD COLONY RD TO S OF MOWHAWK TRAIL	INTERSECTION IMPROVEMENT	$0	$42,707	$93,812	$714	$0	$0	$0	$0	$0	$0	**$137,233**
428093-1	KELLER ROAD AT WESTHALL LANE	TRAFFIC SIGNAL UPDATE	$176,029	$0	$0	$0	$0	$0	$0	$0	$0	$0	**$176,029**
428184-1	WATERFORD CHASE PARK WAY AT AVALON PARK BLVD INTERSECTION	INTERSECTION IMPROVEMENT	$297,687	$0	$0	$0	$0	$0	$0	$0	$0	$0	**$297,687**
428588-1	SR 551 (GOLDENROD) & EDGEWATER DR TRAFFIC CONTROL SYSTEM (2 LOCATIONS)	TRAFFIC CONTROL DEVICES/SYSTEM	$0	$293,784	$840	$0	$0	$0	$0	$0	$0	$159	**$294,783**
428952-1	SR 434 FROM N OF SR 50 TO W OF STRATEGY BLVD	TRAFFIC OPS IMPROVEMENT	$0	$0	$20,106	$14,583	$1,106,814	$909	$0	$19	$0	$134	**$1,142,565**
428986-1	CITYWIDE FIBER OPTIC CABLE WITHIN ORLANDO CITY LIMITS	TRAFFIC CONTROL DEVICES/SYSTEM	$0	$409,240	$0	$0	$0	$0	$0	$0	$0	$0	**$409,240**
428986-2	CITYWIDE FIBER OPTIC CABLE WITHIN ORLANDO CITY LIMITS	TRAFFIC CONTROL DEVICES/SYSTEM	$0	$249,118	$0	$0	$0	$0	$0	$0	$0	$0	**$249,118**
429611-1	FORT CHRISTMAS ROAD AT WHEELER ROAD	INTERSECTION IMPROVEMENT	$0	$0	$130,317	$0	$845,116	$1,158	$740	$0	$0	$0	**$977,331**
430027-1	ORANGE COUNTYWIDE ATMS PROJECT ON SYSTEM/OFF SYSTEM	TRAFFIC CONTROL DEVICES/SYSTEM	$0	$0	$5,092,967	$3,115	$3,386	$42	$0	$0	$0	$0	**$5,099,510**
430155-1	SR 50 OUTFALL SURVEY	PRELIMINARY ENGINEERING	$0	$0	$655	$0	$0	$0	$0	$0	$0	$0	**$655**
430201-1	CITY OF ORLANDO REGIONAL COMPUTERIZED SIGNAL SYSTEM	TRAFFIC CONTROL DEVICES/SYSTEM	$0	$0	$3,799,075	$2,269	$2,219	$42	$0	$0	$0	$0	**$3,803,605**
430569-1	SR 438 (SILVER STAR RD) FROM 2ND STREET TO SILVER CREST BLVD	INTERSECTION IMPROVEMENT	$0	$252,178	$16,956	$1,035,118	$88,862	$97	$0	$0	$0	$0	**$1,393,211**
431081-1	WEKIVA PARKWAY LINE AND GRADE ORANGE COUNTY SEGMENT	NEW ROAD CONSTRUCTION	$0	$0	$1,868,548	$82,647	$9,655	$91	$234	$99	$0	$101	**$1,961,375**
431163-4	SR 46 (WEKIVA PKWY) REALIGNMENT LAKE CO. LINE TO SYS INTERCH WITH SR 42	NEW ROAD CONSTRUCTION	$0	$0	$0	$367	$0	$0	$63	$0	$0	$2,569	**$2,999**
431184-1	SR 527 (ORANGE AVE) FROM IVANHOE BLVD TO SR 15/600	PRELIMINARY ENGINEERING	$0	$0	$1,822	$0	$0	$0	$0	$0	$0	$0	**$1,822**
432064-1	US 17-92 FROM PARK AVENUE TO PACKWOOD AVENUE	TRAFFIC SIGNAL UPDATE	$0	$0	$141,000	$0	$0	$0	$0	$0	$0	$0	**$141,000**
432076-1	ORANGE-LYNX FUNDING OPPORTUNITY #: FTA-2012-006-TPM-VTCL	TRANSIT IMPROVEMENT	$0	$0	$0	$1,056,800	$0	$0	$0	$0	$0	$0	**$1,056,800**

Table C-10 (continued)

Florida Department of Transportation, District 5 – Orange County Work Program FY 2010 to FY 2019, Roadways ONLY

ID	Description	Wkmx Description	FY 2010	FY 2011	FY 2012	FY 2013	FY 2014	FY 2015	FY 2016	FY 2017	FY 2018	FY 2019	Total
432226-1	SR 426 AT SR 436	TRAFFIC OPS IMPROVEMENT	$0	$0	$0	$0	$243,219	$1,208,021	$61,325	$0	$0	$0	**$1,512,565**
433130-1	ORLANDO SUNRAIL STATION ROAD IMPROVEMENTS (TWO LOCATIONS)	TRAFFIC OPS IMPROVEMENT	$0	$0	$0	$3,940,480	$92,960	$0	$0	$0	$0	$0	**$4,033,440**
433621-1	SR 414 (MAITLAND BLVD) FROM SR 434 WB AT MAITLAND SUMMIT BLVD	ADD TURN LANE(S)	$0	$0	$0	$341,130	$5,251	$0	$0	$0	$0	$0	**$346,381**
433648-1	SR 527 (ORANGE AVE) FROM S OF LAKE GATLIN RD RD TO NORTH OF HOLDEN AVE	TRAFFIC OPS IMPROVEMENT	$0	$0	$0	$608,313	$25,808	$45,317	$2,459,948	$105,804	$184,055	$6,854	**$3,436,099**
433663-1	SAND LAKE RD/TPK INTERCHANGE (SR 482/SR 91) (MP 257)	INTERCHANGE (NEW)	$0	$0	$0	$0	$0	$0	$0	$6,866	$0	$0	**$6,866**
434694-1	SR 552 AT SR 436	ADD TURN LANE(S)	$0	$0	$0	$0	$6,175	$278,951	$27,355	$779,069	$74,103	$241	**$1,165,894**
434917-1	SR 482/US 441 (ADAPTIVE SIGNALS) COUNTY WIDE	TRAFFIC CONTROL DEVICES/SYSTEM	$0	$0	$0	$0	$2,506,139	$1	$0	$0	$0	$0	**$2,506,140**
435525-1	GATLIN AVE AND KENNEDY AVE & GATLIN AVE AND ARROW RD IMPROVEMENTS	INTERSECTION IMPROVEMENT	$0	$0	$0	$0	$0	$0	$0	$0	$0	$1,337,700	**$1,337,700**
435526-1	SR 434 (ALAFAYA TRAIL) AT CORPORATE BLVD	INTERSECTION IMPROVEMENT	$0	$0	$0	$0	$218,351	$8	$135	$379	$0	$289,500	**$508,373**
435527-1	POWERS DRIVE AT NORTH LANE	INTERSECTION IMPROVEMENT	$0	$0	$0	$0	$0	$0	$0	$0	$0	$201,000	**$201,000**
435529-1	ORANGE COUNTY ATMS AT VARIOUS LOCATIONS COUNTYWIDE	TRAFFIC CONTROL DEVICES/SYSTEM	$0	$0	$0	$0	$3,299,999	$32	$66,560	$0	$0	$0	**$3,366,591**
435554-1	VINELAND AVENUE AT SR 535	INTERSECTION IMPROVEMENT	$0	$0	$0	$0	$298,841	$8	$135	$352	$0	$0	**$299,336**
435587-1	WALLACE RD AT DR PHILLIPS BLVD	INTERSECTION IMPROVEMENT	$0	$0	$0	$0	$0	$0	$0	$0	$1,429,695	$68,459	**$1,498,154**
436346-1	UCF BIG DATA RESEARCH	ADV TRAVELER INFORMATION SYSTM	$0	$0	$0	$0	$0	$0	$100,000	$100,000	$100,000	$200,000	**$500,000**
436508-1	US 441 (SR 500/600) FROM S OF SAND LAKE RD TO KALEY ST	TRAFFIC SIGNALS	$0	$0	$0	$0	$0	$302,400	$0	$0	$0	$0	**$302,400**
437175-1	SR 535/VINELAND RD FROM ORANGE/OSCEOLA COUNTY LINE TO I-4	PD&E/EMO STUDY	$0	$0	$0	$0	$0	$0	$113,920	$0	$129,819	$0	**$243,739**
437508-1	ORLANDO CITYWIDE PEDESTRIAN TRAFFIC SIGNALS	TRAFFIC SIGNALS	$0	$0	$0	$0	$0	$0	$0	$0	$0	$443,000	**$443,000**
437592-1	SR 600/SR 500/US 441/US 17-92 FROM S OF SR 482 (SAND LAKE RD) TO N OF SR 482	INTERSECTION IMPROVEMENT	$0	$0	$0	$0	$0	$0	$8,213	$769,582	$14,815	$1,521,339	**$2,313,949**
437597-1	SR 50/WEST COLONIAL DR FROM WEST OF CARTER ROAD TO EAST OF CARTER ROAD	TRAFFIC OPS IMPROVEMENT	$0	$0	$0	$0	$0	$0	$175,209	$7,655	$732	$6,375	**$189,971**
439074-1	CITY OF ORLANDO TRAFFIC SIGNAL UPGRADES	ATMS - ARTERIAL TRAFFIC MGMT	$0	$0	$0	$0	$0	$0	$398,910	$0	$0	$0	**$398,910**
439133-1	SR 15 @ CURRY FORD RD	TRAFFIC SIGNAL UPDATE	$0	$0	$0	$0	$0	$0	$0	$0	$357,003	$13,869	**$370,872**
440314-1	PD&E FOR COLONIAL PARKWAY (SR 504) - WOODBURY ROAD TO SR 520	PD&E/EMO STUDY	$0	$0	$0	$0	$0	$0	$0	$1,988	$0	$0	**$1,988**
440821-2	UCF AUTOMATED SHUTTLE SERVICE	ITS COMMUNICATION SYSTEM	$0	$0	$0	$0	$0	$0	$0	$0	$0	$840,000	**$840,000**
441197-1	SR 426 (FAIRBANKS AVE) FROM SR 15 (US 17/92/SR 600/ORLANDO AVE) TO WARD	INTERSECTION IMPROVEMENT	$0	$0	$0	$0	$0	$0	$0	$0	$22,804	$40,671	**$63,475**
441395-1	US 441 AT ROSAMOND DRIVE	INTERSECTION IMPROVEMENT	$0	$0	$0	$0	$0	$0	$0	$0	$0	$441,506	**$441,506**
441400-1	SADLER RD @ US 441	INTERSECTION IMPROVEMENT	$0	$0	$0	$0	$0	$0	$0	$0	$0	$493,464	**$493,464**
441402-1	CR 439/TURKEY LAKE RD @ VINELAND RD	INTERSECTION IMPROVEMENT	$0	$0	$0	$0	$0	$0	$0	$0	$0	$187,518	**$187,518**
441490-1	UNIVERSITY BLVD @ DEAN RD	INTERSECTION IMPROVEMENT	$0	$0	$0	$0	$0	$0	$0	$0	$493,134	$20,000	**$513,134**
441616-1	ORANGE COUNTY ATM PHASE #4 - COUNTYWIDE ROADS	ITS COMMUNICATION SYSTEM	$0	$0	$0	$0	$0	$0	$0	$0	$0	$377,115	**$377,115**
442087-1	SR 552 AT FREDRICA DRIVE (SIGNALIZATION)	TRAFFIC SIGNALS	$0	$0	$0	$0	$0	$0	$0	$0	$0	$310,000	**$310,000**
442088-1	SR 50 AT O-BERRY HOOVER RD - SIGNALS INSTALLATION	TRAFFIC SIGNALS	$0	$0	$0	$0	$0	$0	$0	$0	$0	$300,000	**$300,000**
442544-1	CITY OF ORLANDO ATSPM TRAFFIC CONTROL DEVICES	TRAFFIC CONTROL DEVICES/SYSTEM	$0	$0	$0	$0	$0	$0	$0	$0	$479,825	$500,000	**$979,825**
442545-1	ORANGE COUNTY ATSPM EQUIPMENT TRAFFIC CONTROL DEVICES	TRAFFIC CONTROL DEVICES/SYSTEM	$0	$0	$0	$0	$0	$0	$0	$0	$0	$1,089,937	**$1,089,937**
442548-1	CITY OF ORLANDO ATMS MODULE TRAFFIC CONTROL DEVICES	TRAFFIC CONTROL DEVICES/SYSTEM	$0	$0	$0	$0	$0	$0	$0	$0	$0	$160,000	**$160,000**
442549-1	ORANGE COUNTY ATMS MODULE TRAFFIC CONTROL DEVICES/SYSTEM PROJECT	TRAFFIC CONTROL DEVICES/SYSTEM	$0	$0	$0	$0	$0	$0	$0	$0	$0	$186,400	**$186,400**
442550-1	METROPLAN AREA REMOTE ATSPM EQUIPMENT TRAFFIC CONTROL DEVICES/SYSTEM	TRAFFIC CONTROL DEVICES/SYSTEM	$0	$0	$0	$0	$0	$0	$0	$0	$0	$449,409	**$449,409**
442687-1	ICM FOR METROPLAN AREA SIGNAL DEVICE INSTALLATION	TRAFFIC CONTROL DEVICES/SYSTEM	$0	$0	$0	$0	$0	$0	$0	$0	$475,000	$843,530	**$1,318,530**
442739-1	ADAPTIVE TRAFFIC SIGNAL INTERFACE WITH TRAIN AVL	ITS COMMUNICATION SYSTEM	$0	$0	$0	$0	$0	$0	$0	$0	$0	$250,000	**$250,000**
442740-1	ORLANDO ATCMTD COMMUNICATIONS SERVICES	OTHER ITS	$0	$0	$0	$0	$0	$0	$0	$0	$100,000	$111,427	**$211,427**
442741-1	CONNECTED AND AUTONOMOUS VEHICLE ATCMTD RESEARCH	OTHER ITS	$0	$0	$0	$0	$0	$0	$0	$0	$0	$250,000	**$250,000**
442742-1	ATCMTD MOBILITY AND SAFETY BEFORE AND AFTER STUDY	OTHER ITS	$0	$0	$0	$0	$0	$0	$0	$0	$0	$100,000	**$100,000**
443817-1	SR 435 KIRKMAN RD EXT TO CARRIER DR INTERSECTION	NEW ROAD CONSTRUCTION	$0	$0	$0	$0	$0	$0	$0	$0	$20 052	$20 000	**$40,052**
Total - Roadways			**$43,995,144**	**$82,362,823**	**$69,879,439**	**$50,282,650**	**$81,929,719**	**$85,202,878**	**$90,457,882**	**$29,097,132**	**$51,337,328**	**$30,455,726**	**$615,000,721**
Total - Roadways - Timeframe Summary						FY 2010-2014:	**$328,449,775**				FY 2015-2019:	**$286,550,946**	**$615,000,721**

Source: FDOT, District 5

Table C-11

Florida Department of Transportation, District 5 – Orange County Work Program FY 2010 to FY 2019, Multi-Modal ONLY

ID	Description	Wkmx Description	Adjustment	FY 2010	FY 2011	FY 2012	FY 2013	FY 2014	FY 2015	FY 2016	FY 2017	FY 2018	FY 2019	Total
246538-1	ORANGE-CFRTA/LYNX FIXED ROUTE SECTION 5309 OPERATIONS FACILITY	CAPITAL FOR FIXED ROUTE	60%	$0	$0	$12,800,000	$0	$0	$0	$0	$0	$0	$0	**$12,800,000**
246543-1	ORANGE-CFRTA/LYNX SEC 5307 PURCHASE VEHICLE & HIGHWAY EQUIPMENT	CAPITAL FOR FIXED ROUTE	60%	$0	$0	$0	$0	$0	$0	$0	$0	$15,437,000	$0	**$15,437,000**
246544-1	ORANGE-CFRTA/LYNX FIXED ROUTE SECTION 5309 OPERATIONS FACILITY	CAPITAL FOR FIXED ROUTE	60%	$0	$0	$0	$0	$12,000,000	$0	$12,000,000	$0	$0	$0	**$24,000,000**
246556-1	ORANGE-CFRTA/LYNX EXPANSION OF OPERATING CENTER LAND ACQ, ENG & CONST	CAPITAL FOR FIXED ROUTE	60%	$0	$0	$0	$0	$0	$0	$0	$0	$0	$3,300,000	**$3,300,000**
246572-1	ORANGE-CFRTA/LYNX CAPITAL ASSIST/TRANSIT EN HANCEMENT/SECTION #5307	CAPITAL FOR FIXED ROUTE	60%	$0	$0	$0	$0	$0	$0	$0	$0	$18,000,000	$9,000,000	**$27,000,000**
246572-2	ORANGE-CFRTA/LYNX FTA SECTION 5307 LAND ACQ, ENGINEERING & CONST	PTO STUDIES	60%	$0	$0	$0	$0	$0	$0	$0	$0	$0	$3,000,000	**$3,000,000**
246594-1	ORANGE-CFRTA/LYNX PURCHASE OF COMMUTER VANS FTA SECTION 5307	CAPITAL FOR FIXED ROUTE	60%	$0	$0	$0	$0	$0	$0	$0	$0	$5,340,000	$0	**$5,340,000**
246594-2	ORANGE-CFRTA/LYNX PURCHASE OF COMMUTER VANS SECTION #5307	CAPITAL FOR FIXED ROUTE	60%	$0	$0	$0	$0	$0	$0	$0	$0	$5,568,000	$1,500,000	**$7,068,000**
246595-1	ORANGE-CFRTA/LYNX FACILITY IMPROVE EQUIPMNT FTA SECTION #5307	CAPITAL FOR FIXED ROUTE	60%	$0	$0	$0	$0	$0	$0	$0	$0	$4,000,000	$6,000,000	**$10,000,000**
246595-2	ORANGE-CFRTA/LYNX FACILITY IMPROVE/EQUIP SECTION # 5307	CAPITAL FOR FIXED ROUTE	60%	$0	$0	$0	$0	$1,000,000	$0	$2,000,000	$1,000,000	$0	$0	**$4,000,000**
246620-1	ORANGE-CFRTA/LYNX PURCH VEHICLES/HWY EQUIPM FTA SECTION 5307/5309	CAPITAL FOR FIXED ROUTE	60%	$2,357,585	$0	$0	$0	$0	$0	$0	$0	$0	$0	**$2,357,585**
406928-1	ORANGE-LYNX SR 50 UCF CONNECTOR ALTERNATIVES ANALYSIS	URBAN CORRIDOR IMPROVEMENTS	60%	$0	$0	$0	$1,200,000	$0	$0	$0	$0	$0	$0	**$1,200,000**
406930-1	ORANGE-LYNX ALTERNATIVES ANALYSIS US 192 CORRIDOR	URBAN CORRIDOR IMPROVEMENTS	60%	$0	$0	$800,000	$0	$0	$0	$0	$0	$0	$0	**$800,000**
408228-1	KISSIMMEE/OSCEOLA CTY/INTERMODAL CENTER FTA SECTION 5309	PUBLIC TRANSPORTATION STATION	60%	$0	$0	$500,000	$0	$0	$0	$0	$0	$0	$0	**$500,000**
414749-1	ORANGE-LYNX/CAPITAL FIXED RTE/MAINT, SUPPORT & FUEL FTA SECTION #5307	CAPITAL FOR FIXED ROUTE	60%	$0	$0	$0	$0	$0	$0	$0	$0	$120,358,806	$37,123,761	**$157,482,567**
414749-2	ORANGE-LYNX CAPITAL FIXED ROUTE/MAINT & SUPPO RT SECTION 5307	CAPITAL FOR FIXED ROUTE	60%	$0	$0	$0	$0	$0	$0	$0	$0	$12,000,000	$1,000,000	**$13,000,000**
415259-1	ORANGE-REG TRANSIT SYSTEM MODELING STUDY	PTO STUDIES	60%	$240,000	$0	$238,509	$0	$0	$0	$0	$0	$0	$0	**$478,509**
416169-1	LYNX SECTION 5307 FIXED ROUTE PROJECT PURCHASE BUS/EQUIPMENT	CAPITAL FOR FIXED ROUTE	60%	$22,322,980	$22,345,100	$22,560,412	$0	$0	$0	$0	$0	$0	$0	**$67,228,492**
416169-2	LYNX SECTION 5307 FIXED ROUTE PROJECT PURCHASE BUS/EQUIPMENT	CAPITAL FOR FIXED ROUTE	60%	$0	$0	$0	$24,595,950	$0	$0	$0	$0	$0	$0	**$24,595,950**
419774-1	CHURCH STREET IMPROVEMENTS	SIDEWALK	-	$399,504	$0	$12,118,109	$1,672	$70,629	$2,394	$1,326	$647	$284	$0	**$12,594,565**
420638-1	METROPLAN ORLANDO MP O SECTION 5303 UPWP	PTO STUDIES	60%	$666,874	$675,364	$0	$0	$0	$0	$0	$0	$0	$0	**$1,342,238**
422430-1	ORANGE- METROPLAN ORLANDO PLANNING STUDIES SECTION 5303	PTO STUDIES	60%	$0	$0	$703,475	$717,251	$904,789	$905,123	$884,439	$0	$0	$0	**$4,115,077**
424253-1	CFRT (LYNX) SECTION 5309 CAPITAL IMPROVEMENTS	FIXED GUIDEWAY IMPROVEMENTS	60%	$0	$0	$0	$3,250,000	$3,500,000	$0	$0	$0	$3,750,000	$350,000	**$10,850,000**
424253-2	CFRT (LYNX) SECTION #5309 CAPITAL IMPROVEMENTS	FIXED GUIDEWAY IMPROVEMENTS	60%	$0	$0	$0	$0	$3,250,000	$0	$0	$0	$0	$0	**$3,250,000**
424255-1	CFTA (LYNX) SECTION 5309 LYMMO UPGRADE	FIXED GUIDEWAY IMPROVEMENTS	60%	$0	$0	$0	$750,000	$0	$800,000	$0	$0	$1,200,000	$400,000	**$3,150,000**
424255-2	CFTA (LYNX) ORLANDO EAST-WEST/CIRCULATOR SYST EM/FTA SECTION 5309	FIXED GUIDEWAY IMPROVEMENTS	60%	$0	$0	$8,926,000	$0	$0	$0	$0	$0	$0	$0	**$8,926,000**
424255-3	CFTA (LYNX) SECTION #5309 LYMMO UPGRADE	FIXED GUIDEWAY IMPROVEMENTS	60%	$0	$0	$0	$0	$0	$500,000	$0	$0	$1,500,000	$500,000	**$2,500,000**
424335-1	CENTRAL FLORIDA REG. TRANS AUTH LYNX/FTA BUS PURCHS/FTA SECTION 5309	CAPITAL FOR FIXED ROUTE	60%	$0	$4,193,528	$0	$0	$0	$0	$0	$0	$0	$0	**$4,193,528**
424337-1	CITY OF ORLANDO ANALYSIS FOR EAST-WEST CIRCULATOR/FTA SECT #5309	PTO STUDIES	60%	$0	$926,000	$0	$0	$0	$0	$0	$0	$0	$0	**$926,000**
425442-1	LYNX CFRTA SECTION 5307 CAPITAL FOR BUSES/EQUIPMENT/GRANT #FL-95-2016	CAPITAL FOR FIXED ROUTE	60%	$0	$0	$0	$0	$15,370,766	$15,701,000	$16,419,364	$13,888,094	$7,106,587	$7,106,587	**$75,592,398**
426102-1	ARRA SECTION 5307 LYNX URBAN CAPITAL FOR FIXED ROUTE PROJECTS	CAPITAL FOR FIXED ROUTE	60%	$0	$0	$2,250,000	$0	$0	$0	$0	$0	$0	$0	**$2,250,000**
426104-1	ARRA SECTION 5307 LYNX URBAN CAPITAL FOR FIXED ROUTE PROJECTS	CAPITAL FOR FIXED ROUTE	60%	$0	$0	$8,500,000	$0	$0	$0	$0	$0	$0	$0	**$8,500,000**
426106-1	ARRA SECTION 5307 LYNX URBAN CAPITAL FOR FIXED ROUTE PROJECTS	CAPITAL FOR FIXED ROUTE	60%	$0	$0	$5,344,615	$0	$0	$0	$0	$0	$0	$0	**$5,344,615**
426107-1	ARRA SECTION 5307 LYNX URBAN CAPTIAL FOR FIXED ROUTE PROJECTS	CAPITAL FOR FIXED ROUTE	60%	$0	$0	$4,920,000	$0	$0	$0	$0	$0	$0	$0	**$4,920,000**
426159-1	ARRA SECTION 5307 LYNX URBAN CAPITAL FOR FIXED ROUTE PROJECTS	CAPITAL FOR FIXED ROUTE	60%	$0	$0	$2,060,000	$0	$0	$0	$0	$0	$0	$0	**$2,060,000**
426163-1	ARRA SECTION 5307 LYNX URBAN CAPITAL FOR FIXED ROUTE PROJECTS	CAPITAL FOR FIXED ROUTE	60%	$0	$0	$2,000,000	$0	$0	$0	$0	$0	$0	$0	**$2,000,000**
426358-1	ARRA SECTION 5307 LYNX URBAN CAPITAL FOR FIXED ROUTE PROJECTS	CAPITAL FOR FIXED ROUTE	60%	$0	$0	$4,000,000	$0	$0	$0	$0	$0	$0	$0	**$4,000,000**
426359-1	ARRA SECTION 5307 LYNX URBAN CAPITAL FOR FIXED ROUTE PROJECTS	CAPITAL FOR FIXED ROUTE	60%	$0	$0	$500,000	$0	$0	$0	$0	$0	$0	$0	**$500,000**
426791-1	ORANGE CO WINTER PARK SECTION 5309	INTERMODAL HUB CAPACITY	60%	$0	$0	$950,000	$0	$0	$0	$0	$0	$0	$0	**$950,000**
427851-1	ARAPAHO TRAIL FROM ALGONQUIN TRAIL TO THUNDERBIRD TRAIL	SIDEWALK	-	$0	$42,974	$149,276	$209	$0	$0	$0	$0	$0	$0	**$192,459**
428046-1	CITYWIDE ORLANDO SIDEWALK IMPROVEMENT PH I & II VARIED LOCATION	SIDEWALK	-	$0	$1,999,998	$1,600	$440	$2,362,912	$862,343	$2,914	$996	$0	$0	**$5,231,203**
428525-1	FLEET PEEPLES PARK MULTI-USE TRAIL	SIDEWALK	-	$79,201	$0	$0	$0	$0	$0	$0	$0	$0	$0	**$79,201**
429054-1	US 441 FROM S OF GORE ST TO S OF CENTRAL BLVD	SIDEWALK	-	$0	$0	$0	$1,038,506	$162,509	$38,669	$0	$0	$0	$130,427	**$1,370,111**
429202-1	CENTRAL FL REGIONAL TRANS AUTHORITY DBA LYNX SEC 5309 URBAN TRAIL	URBAN CORRIDOR IMPROVEMENTS	60%	$0	$0	$1,233,132	$0	$0	$0	$0	$0	$0	$0	**$1,233,132**
430250-1	CFRTA DBA LYNX FUNDING OPPORTUNITY #: DTOS59-10-RA-TIGER2	CAPITAL FOR FIXED ROUTE	60%	$0	$0	$0	$13,000,000	$0	$0	$0	$0	$0	$0	**$13,000,000**
430294-1	ORANGE-LYNX FTA SECTION 5307	CAPITAL FOR FIXED ROUTE	60%	$0	$0	$0	$2,000,000	$0	$0	$0	$0	$0	$0	**$2,000,000**
430456-1	SR 436 FROM CURRY FORD RD TO OLD CHENEY HWY	SIDEWALK	-	$0	$1,400,000	$963,997	$276,600	$1,360	$456	$21	$0	$0	$0	**$2,642,434**
430672-1	ORLANDO SIDEWALKS VARIOUS LOCATIONS ON STATE ROADS	SIDEWALK	-	$0	$0	$712,922	$1,729,302	$206,452	$10,472	$0	$0	$0	$0	**$2,659,148**
431405-1	ORANGE-METROPLAN ORL PLANNING STUDIES SECTION 5303	PTO STUDIES	60%	$0	$0	$0	$0	$0	$0	$0	$917,245	$939,736	$971,408	**$2,828,389**
431529-1	BROOKSHIRE ELEMENTARY SCHOOL SIDEWALKS MULTIPLE LOCATIONS	SIDEWALK	-	$0	$0	$0	$7,198	$30	$94,336	$1,527	$0	$0	$0	**$103,091**
432139-1	LYNX SECTION 5307 FIXED ROUTE PROJECT PURCHASE EQUIPMENT	CAPITAL FOR FIXED ROUTE	60%	$0	$0	$0	$5,270,000	$0	$0	$0	$0	$0	$0	**$5,270,000**
433130-2	COLUMBIA STREET FROM SLIGH BLVD TO ORANGE AVE	FIXED GUIDEWAY IMPROVEMENTS	60%	$0	$0	$0	$0	$0	$1,500,000	$0	$0	$0	$0	**$1,500,000**
433340-1	ORANGE-LYNX (CFRTA) STATE OF GOOD REPAIR GRAN T FOR VEHICLES	PURCHASE VEHICLES/EQUIPMENT	60%	$0	$0	$0	$0	$0	$0	$0	$0	$0	$3,360,000	**$3,360,000**
435250-1	CFRTA SECTION 5307 CAPITAL FOR BUSES AND EQUIPMENT	CAPITAL FOR FIXED ROUTE	60%	$0	$0	$0	$0	$0	$0	$0	$0	$0	$18,351,700	**$18,351,700**
435452-1	METROPLAN ORLANDO STUDY	PTO STUDIES	60%	$0	$0	$0	$0	$21,500	$0	$0	$0	$0	$0	**$21,500**
435555-1	CITY OF ORLANDO ECONOMIC DEVELOPMENT TRAN SPORTATION FUND GRANT	SIDEWALK	-	$0	$0	$0	$0	$201,462	$0	$0	$0	$0	$0	**$201,462**
435567-1	METROPLAN ORLANDO BICYCLE/PEDESTRIAN COUNT PROJECT	PTO STUDIES	60%	$0	$0	$0	$0	$5,000	$0	$0	$0	$0	$0	**$5,000**
435712-1	CENTRAL FL REGIONAL TRANSPORTATION AUTHORITY DBA LYNX	CAPITAL FOR FIXED ROUTE	60%	$0	$0	$0	$0	$0	$0	$0	$0	$12,539,110	$7,628,338	**$20,167,448**
437280-1	ORANGE-LYNX CENTRAL FL REG TRANSP BUS & BUS FAC PROG LADDERS OF OPP	CAPITAL FOR FIXED ROUTE	60%	$0	$0	$0	$0	$0	$0	$0	$0	$9,390,860	$0	**$9,390,860**
437575-1	ORANGE BLOSSOM TRAIL PHASE 2A FROM 30TH STREET TO GORE STREET	SIDEWALK	-	$0	$0	$0	$0	$0	$0	$0	$0	$0	$1,221,053	**$1,221,053**
437739-1	SR 50/EAST COLONIAL DRIVE FROM SR 417 SB RAMPS TO CONSTANTINE STREET	SIDEWALK	-	$0	$0	$0	$0	$0	$0	$245,644	$10,043	$1,095	$6,314	**$263,096**
437997-1	ORANGE-CENTRAL FLORIDA REGIONAL TRANSPORTATION AUTHORITY LYNX SEC 5339	CAPITAL FOR FIXED ROUTE	60%	$0	$0	$0	$0	$0	$0	$134,367	$0	$0	$0	**$134,367**
441066-1	SR 482/ SAND LAKE RD FROM LAKE GLORIA BLVD TO ORANGE AVE	SIDEWALK	-	$0	$0	$0	$0	$0	$0	$0	$452,487	$109,166	$2,442,029	**$3,003,682**
444932-1	ORANGE-LYNX EXPANSION OF LYNX OPERATIONS CENTER	CAPITAL FOR FIXED ROUTE	60%	$0	$0	$0	$0	$0	$0	$0	$0	$0	$2,500,000	**$2,500,000**
444934-1	ORANGE-LYNX PURCHASE OF FAREBOXES	CAPITAL FOR FIXED ROUTE	60%	$0	$0	$0	$0	$0	$0	$0	$0	$0	$1,200,000	**$1,200,000**
445597-1	ORANGE-LYNX FTA EMERGENCY RELIEF PROGRAM-ER RESILIENCE FUNDS	CAPITAL FOR FIXED ROUTE	60%	$0	$0	$0	$0	$0	$0	$0	$0	$0	$1 300 000	**$1,300,000**
Total - Multi-Modal (Unadjusted):				**$26,066,144**	**$31,582,964**	**$92,232,047**	**$53,837,128**	**$39,057,409**	**$20,414,793**	**$31,689,602**	**$16,269,512**	**$217,240,644**	**$108,391,617**	**$636,781,860**
Total - Bike/Ped:				$478,705	$3,442,972	$13,945,904	$3,053,927	$3,005,354	$1,008,670	$251,432	$464,173	$110,545	$3,799,823	**$29,561,505**
Total - Transit (Adjusted):				$15 352 463	$16 883 995	$46 971 686	$30 469 921	$21 631 233	$11 643 674	$18 862 902	$9 483 203	$130 278 059	$62 755 076	**$364,332,212**
Total - Multi-Modal (Adjusted):				$15,831,168	$20,326,967	$60,917,590	$33,523,848	$24,636,587	$12,652,344	$19,114,334	$9,947,376	$130,388,604	$66,554,899	**$393,893,717**
Multi-Modal - Timeframe Summary (Adjusted):							FY 2010-2014:	$155,236,160				FY 2015-2019:	$238,657,557	$393,893,717
Roadways - Timeframe Summary (from Table C-10):							FY 2010-2014:	$328,449,775				FY 2015-2019:	$286,550,946	$615,000,721
Total - Timeframe Summary:							FY 2010-2014:	**$483,685,935**				FY 2015-2019:	**$525,208,503**	$1,008,894,438

Source: FDOT, District 5

Table C-12
Average Motor Vehicle Fuel Efficiency – Excluding Interstate Travel

Travel Vehicle Miles of Travel (VMT) @			
	22.3	**6.5**	
Other Arterial Rural	320,839,000,000	46,784,000,000	367,623,000,000
Other Rural	302,342,000,000	31,207,000,000	333,549,000,000
Other Urban	1,566,682,000,000	95,483,000,000	1,662,165,000,000
Total	***2,189,863,000,000***	***173,474,000,000***	***2,363,337,000,000***

Percent VMT

@ 22.3 mpg	@ 6.5 mpg
87%	13%
91%	9%
94%	6%
93%	**7%**

Fuel Consumed			
	Gallons @ 22.3 mpg	Gallons @ 6.5 mpg	
Other Arterial Rural	14,387,399,103	7,197,538,462	21,584,937,565
Other Rural	13,557,937,220	4,801,076,923	18,359,014,143
Other Urban	70,254,798,206	14,689,692,308	84,944,490,514
Total	***98,200,134,529***	***26,688,307,693***	***124,888,442,222***

Total Mileage and Fuel	
2,363,337	**miles (millions)**
124,888	**gallons (millions)**
18.92	**mpg**

Source: U.S. Department of Transportation, Federal Highway Administration, *Highway Statistics 2017*, Section V, Table VM-1
Annual Vehicle Distance Traveled in Miles and Related Data - 2017 by Highway Category and Vehicle Type
http://www.fhwa.dot.gov/policyinformation/statistics.cfm

Source: See Table C-13

Table C-13
Annual Vehicle Distance Traveled in Miles and Related Data (2017) - By Highway Category and Vehicle Type[1/]

Published March 2019 — TABLE VM-1

YEAR	ITEM	LIGHT DUTY VEHICLES SHORT WB[(2)]	MOTOR-CYCLES	BUSES	LIGHT DUTY VEHICLES LONG WB[(2)]	SINGLE-UNIT TRUCKS[(3)]	COMBINATION TRUCKS	SUBTOTALS		ALL MOTOR VEHICLES
								ALL LIGHT VEHICLES[(2)]	SINGLE-UNIT 2-AXLE 6-TIRE OR MORE AND COMBINATION TRUCKS	
	Motor-Vehicle Travel: (millions of vehicle-miles)									
2017	Interstate Rural	142,445	1,128	1,775	44,928	10,103	52,171	**187,373**	**62,274**	252,550
2017	Other Arterial Rural	228,664	2,661	2,109	92,175	16,814	29,970	**320,839**	**46,784**	372,393
2017	Other Rural	213,923	2,728	1,986	88,419	16,563	14,644	**302,342**	**31,207**	338,262
2017	All Rural	585,032	6,517	5,870	225,522	43,480	96,785	810,554	140,265	963,206
2017	Interstate Urban	400,339	2,596	2,628	99,803	18,617	43,228	**500,142**	**61,844**	567,210
2017	Other Urban	1,235,430	11,036	8,730	331,253	54,006	41,478	**1,566,682**	**95,483**	1,681,932
2017	All Urban	1,635,769	13,632	11,358	431,056	72,622	84,705	2,066,824	157,328	2,249,142
2017	Total Rural and Urban[(5)]	2,220,801	20,149	17,227	656,578	116,102	181,490	2,877,378	297,593	3,212,347
2017	Number of motor vehicles registered[(2)]	193,672,370	8,715,204	983,231	56,880,878	9,336,998	2,892,218	250,553,248	12,229,216	272,480,899
2017	Average miles traveled per vehicle	11,467	2,312	17,521	11,543	12,435	62,751	11,484	24,335	11,789
2017	Person-miles of travel[(4)] (millions)	3,709,919	23,382	365,220	1,106,303	116,102	181,490	4,816,223	297,593	5,502,417
2017	Fuel consumed (thousand gallons)	91,712,165	458,429	2,350,323	37,466,749	15,599,855	30,363,561	129,178,914	45,963,416	177,951,081
2017	Average fuel consumption per vehicle (gallons)	474	53	2,390	659	1,671	10,498	516	3,758	653
2017	Average miles traveled per gallon of fuel consumed	24.2	44.0	7.3	17.5	7.4	6.0	**22.3**	**6.5**	18.1

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

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

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

(4) Starting with 2009 VM-1, vehicle occupancy is estimated by the FHWA from the 2009 National Household Travel Survey (NHTS) and the annual R.L. Polk Vehicle registration data; For single unit truck and heavy trucks, 1 motor vehicle mile travelled = 1 person-mile traveled.

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

APPENDIX D
Ad Valorem Credit

Appendix D: Ad Valorem Credit

This appendix presents the detailed ad valorem credit calculations for each land use in Orange County's transportation impact fee schedule.

Residential Land Uses

In determining the ad valorem credit for residential land uses, the study evaluated the taxable values for new residential properties in Orange County. For this analysis, residential buildings constructed since 2009 were classified as "new". The following data was reviewed for each residential land uses:

- Weighted average, median, minimum, and maximum taxable value per square foot for new properties (built since 2009) and all properties within Orange County; and
- Professional judgement based on extensive impact fee experience in other communities in Florida.

It should be noted that the ad valorem revenues used towards transportation capital projects is a fixed amount and not a percentage of the County's ad valorem revenues. Over the next five years and beyond, this amount will be limited to $6.2 million per year (multi-modal) or $1.9 million per year (roads only)[4]. As presented in Table D-1, the taxable value of a new home ($334,000) was used to calculate the present value of the ad valorem credit. The resulting 1-mil taxes are brought to present value based on an interest rate of 4.0 percent, which is consistent with current market trends and the interest rate at which the County is likely to borrow. Table D-1 also provides the portion of the 1-mil collections that would be used toward transportation capital expansion projects. It is estimated that Orange County will spend five (5) percent of a mil of ad valorem revenue to fund multi-modal capacity expansion projects and two (2) percent of a mil for roadway capacity expansion projects. Tables D-2 through D-10 present this same analysis for the other residential land uses in the Orange County transportation impact fee schedule.

Note:

- Multi-Family ad valorem credit was used for Student Housing. For Student Housing per bedroom, estimated three bedrooms per dwelling unit.
- Multi-Family ad valorem credit was used for Mid-Rise/High-Rise with 1st floor Commercial.
- Condominium ad valorem credit (Tables D-5 and D-10) was used for Timeshare.

[4] Additional detail can be found in Appendix C, Table C-9

Table D-1

1-Mil Credit Calculation for Single Family Homes - MULTI-MODAL

Item	Figure
Total Allocation from the General Fund FY 2018/19[1]	$531,499,459
County General Fund Millage[2]	4.4347
Revenues Generated from 1-mil[3]	$119,850,150
Annual ad valorem revenue that goes to transportation capacity[4]	$6,160,000
Percentage of millage used for transportation capacity expansion projects[5]	5%
Average taxable value of a new home[6]	$334,000
Annual increase in the countywide taxable values[7]	5.8%

Year	Taxable Value	Market Value	Value Used for Credit	1-Mil Tax	Ad Valorem for Transportation	Present Value
2020	$334,000	n/a	$334,000	$334.00	$17	$17
2021					$16	$15
2022					$15	$14
2023					$14	$13
2024					$14	$12
2025					$13	$11
2026					$12	$10
2027					$11	$9
2028					$11	$8
2029					$10	$7
2030					$10	$7
2031					$9	$6
2032					$9	$5
2033					$8	$5
2034					$8	$4
2035					$7	$4
2036					$7	$4
2037					$7	$3
2038					$6	$3
2039					$6	$3
2040					$6	$3
2041					$5	$2
2042					$5	$2
2043					$5	$2
2044					$4	$2
2045					$4	$2
Total					**$239**	**$173**
Interest Rate[8]						**4.0%**

1) Source: Orange County FY 2019 Adopted Budget
2) Total millage assessed to residents within Orange County applied to the General Fund
3) Total projected allocation from the general fund (Item 1) divided by the County's millage rate (Item 2)
4) Source: Avg annual ad valorem revenues for multi-modal transportation capacity from FY 2019-2023; Table C-9
5) Annual ad valorem revenues for capacity expansion (Item 4) divided by the revenue generated by 1-mil (Item 3)
6) Source: Average taxable value for new homes (built since 2009) in Orange County
7) Source: Review of average annual increase in countywide taxable values for Orange County (2000-2019)
8) Source: Interest rate estimated for new bond issues in Orange County

Table D-2

1-Mil Credit Calculation for Multi-Family Apartments - MULTI-MODAL

Item	Figure
Total Allocation from the General Fund FY 2018/19[1]	$531,499,459
County General Fund Millage[2]	4.4347
Revenues Generated from 1-mil[3]	$119,850,150
Annual ad valorem revenue that goes to transportation capacity[4]	$6,160,000
Percentage of millage used for transportation capacity expansion projects[5]	5%
Average taxable value of a multi-family unit[6]	$179,000
Annual increase in the countywide taxable values[7]	5.8%

Year	Taxable Value	Market Value	Value Used for Credit	1-Mil Tax	Ad Valorem for Transportation	Present Value
2020	$179,000	n/a	$179,000	$179.00	$9	$9
2021					$9	$8
2022					$8	$7
2023					$8	$7
2024					$7	$6
2025					$7	$6
2026					$6	$5
2027					$6	$5
2028					$6	$4
2029					$5	$4
2030					$5	$3
2031					$5	$3
2032					$5	$3
2033					$4	$3
2034					$4	$2
2035					$4	$2
2036					$4	$2
2037					$3	$2
2038					$3	$2
2039					$3	$1
2040					$3	$1
2041					$3	$1
2042					$3	$1
2043					$2	$1
2044					$2	$1
2045					$2	$1
Total					**$126**	**$90**
Interest Rate[8]						**4.0%**

1) Source: Orange County FY 2019 Adopted Budget
2) Total millage assessed to residents within Orange County applied to the General Fund
3) Total projected allocation from the general fund (Item 1) divided by the County's millage rate (Item 2)
4) Source: Avg annual ad valorem revenues for multi-modal transportation capacity from FY 2019-2023; Table C-9
5) Annual ad valorem revenues for capacity expansion (Item 4) divided by the revenue generated by 1-mil (Item 3)
6) Source: Average taxable value for new apartments (built since 2009) in Orange County
7) Source: Review of average annual increase in countywide taxable values for Orange County (2000-2019)
8) Source: Interest rate estimated for new bond issues in Orange County

Table D-3

1-Mil Credit Calculation for Mobile Homes - MULTI-MODAL

Item	Figure
Total Allocation from the General Fund FY 2018/19[1]	$531,499,459
County General Fund Millage[2]	4.4347
Revenues Generated from 1-mil[3]	$119,850,150
Annual ad valorem revenue that goes to transportation capacity[4]	$6,160,000
Percentage of millage used for transportation capacity expansion projects[5]	5%
Average taxable value of a mobile home[6]	$67,000
Annual increase in the countywide taxable values[7]	5.8%

Year	Taxable Value	Market Value	Value Used for Credit	1-Mil Tax	Ad Valorem for Transportation	Present Value
2020	$67,000	n/a	$67,000	$67.00	$3	$3
2021					$3	$3
2022					$3	$2
2023					$3	$2
2024					$2	$2
2025					$2	$2
2026					$2	$2
2027					$2	$2
2028					$2	$1
2029					$2	$1
2030					$2	$1
2031					$2	$1
2032					$2	$1
2033					$1	$1
2034					$1	$1
2035					$1	$1
2036					$1	$1
2037					$1	$1
2038					$1	$1
2039					$1	$0
2040					$1	$0
2041					$1	$0
2042					$1	$0
2043					$1	$0
2044					$1	$0
2045					$1	$0
Total					**$42**	**$29**
Interest Rate[8]						**4.0%**

1) Source: Orange County FY 2019 Adopted Budget
2) Total millage assessed to residents within Orange County applied to the General Fund
3) Total projected allocation from the general fund (Item 1) divided by the County's millage rate (Item 2)
4) Source: Avg annual ad valorem revenues for multi-modal transportation capacity from FY 2019-2023; Table C-9
5) Annual ad valorem revenues for capacity expansion (Item 4) divided by the revenue generated by 1-mil (Item 3)
6) Source: Average taxable value for new mobile homes (built since 2009) in Orange County
7) Source: Review of average annual increase in countywide taxable values for Orange County (2000-2019)
8) Source: Interest rate estimated for new bond issues in Orange County

Table D-4

1-Mil Credit Calculation for Retirement Homes - MULTI-MODAL

Item	Figure
Total Allocation from the General Fund FY 2018/19[1]	$531,499,459
County General Fund Millage[2]	4.4347
Revenues Generated from 1-mil[3]	$119,850,150
Annual ad valorem revenue that goes to transportation capacity[4]	$6,160,000
Percentage of millage used for transportation capacity expansion projects[5]	5%
Average taxable value of a retirement home (per du)[6]	$190,000
Annual increase in the countywide taxable values[7]	5.8%

Year	Taxable Value	Market Value	Value Used for Credit	1-Mil Tax	Ad Valorem for Transportation	Present Value
2020	$190,000	n/a	$190,000	$190.00	$10	$10
2021					$9	$9
2022					$9	$8
2023					$8	$8
2024					$8	$7
2025					$8	$6
2026					$7	$6
2027					$7	$5
2028					$6	$5
2029					$6	$4
2030					$6	$4
2031					$5	$3
2032					$5	$3
2033					$5	$3
2034					$5	$3
2035					$4	$2
2036					$4	$2
2037					$4	$2
2038					$4	$2
2039					$3	$2
2040					$3	$1
2041					$3	$1
2042					$3	$1
2043					$3	$1
2044					$3	$1
2045					$2	$1
Total					**$140**	**$100**
Interest Rate[8]						**4.0%**

1) Source: Orange County FY 2019 Adopted Budget
2) Total millage assessed to residents within Orange County applied to the General Fund
3) Total projected allocation from the general fund (Item 1) divided by the County's millage rate (Item 2)
4) Source: Avg annual ad valorem revenues for multi-modal transportation capacity from FY 2019-2023; Table C-9
5) Annual ad valorem revenues for capacity expansion (Item 4) divided by the revenue generated by 1-mil (Item 3)
6) Source: Average taxable value for new retirement home unit (built since 2009) in Orange County
7) Source: Review of average annual increase in countywide taxable values for Orange County (2000-2019)
8) Source: Interest rate estimated for new bond issues in Orange County

Table D-5

1-Mil Credit Calculation for Condominiums - MULTI-MODAL

Item	Figure
Total Allocation from the General Fund FY 2018/19[1]	$531,499,459
County General Fund Millage[2]	4.4347
Revenues Generated from 1-mil[3]	$119,850,150
Annual ad valorem revenue that goes to transportation capacity[4]	$6,160,000
Percentage of millage used for transportation capacity expansion projects[5]	5%
Average taxable value of a condominium (per du)[6]	$284,000
Annual increase in the countywide taxable values[7]	5.8%

Year	Taxable Value	Market Value	Value Used for Credit	1-Mil Tax	Ad Valorem for Transportation	Present Value
2020	$284,000	n/a	$284,000	$284.00	$15	$15
2021					$14	$14
2022					$13	$12
2023					$13	$11
2024					$12	$10
2025					$11	$9
2026					$11	$8
2027					$10	$8
2028					$10	$7
2029					$9	$6
2030					$9	$6
2031					$8	$5
2032					$8	$5
2033					$7	$4
2034					$7	$4
2035					$6	$4
2036					$6	$3
2037					$6	$3
2038					$5	$3
2039					$5	$2
2040					$5	$2
2041					$5	$2
2042					$4	$2
2043					$4	$2
2044					$4	$2
2045					$4	$1
Total					**$211**	**$150**
Interest Rate[8]						**4.0%**

1) Source: Orange County FY 2019 Adopted Budget
2) Total millage assessed to residents within Orange County applied to the General Fund
3) Total projected allocation from the general fund (Item 1) divided by the County's millage rate (Item 2)
4) Source: Avg annual ad valorem revenues for multi-modal transportation capacity from FY 2019-2023; Table C-9
5) Annual ad valorem revenues for capacity expansion (Item 4) divided by the revenue generated by 1-mil (Item 3)
6) Source: Average taxable value for new condo unit (built since 2009) in Orange County
7) Source: Review of average annual increase in countywide taxable values for Orange County (2000-2019)
8) Source: Interest rate estimated for new bond issues in Orange County

Table D-6

1-Mil Credit Calculation for Single Family Homes – ROADS ONLY

Item	Figure
Total Allocation from the General Fund FY 2018/19[1]	$531,499,459
County General Fund Millage[2]	4.4347
Revenues Generated from 1-mil[3]	$119,850,150
Annual ad valorem revenue that goes to transportation capacity[4]	$1,913,000
Percentage of millage used for transportation capacity expansion projects[5]	2%
Average taxable value of a new home[6]	$334,000
Annual increase in the countywide taxable values[7]	5.8%

Year	Taxable Value	Market Value	Value Used for Credit	1-Mil Tax	Ad Valorem for Transportation	Present Value
2020	$334,000	n/a	$334,000	$334.00	$5	$5
2021					$5	$5
2022					$4	$4
2023					$4	$4
2024					$4	$3
2025					$4	$3
2026					$4	$3
2027					$3	$3
2028					$3	$2
2029					$3	$2
2030					$3	$2
2031					$3	$2
2032					$3	$2
2033					$2	$1
2034					$2	$1
2035					$2	$1
2036					$2	$1
2037					$2	$1
2038					$2	$1
2039					$2	$1
2040					$2	$1
2041					$2	$1
2042					$1	$1
2043					$1	$1
2044					$1	$1
2045					$1	$0
Total					**$70**	**$52**
Interest Rate[8]						**4.0%**

1) Source: Orange County FY 2019 Adopted Budget
2) Total millage assessed to residents within Orange County applied to the General Fund
3) Total projected allocation from the general fund (Item 1) divided by the County's millage rate (Item 2)
4) Source: Avg annual ad valorem revenues for roadway capacity from FY 2019-2023; Table C-9
5) Annual ad valorem revenues for capacity expansion (Item 4) divided by the revenue generated by 1-mil (Item 3)
6) Source: Average taxable value for new homes (built since 2009) in Orange County
7) Source: Review of average annual increase in countywide taxable values for Orange County (2000-2019)
8) Source: Interest rate estimated for new bond issues in Orange County

Table D-7

1-Mil Credit Calculation for Multi-Family Apartments - ROADS ONLY

Item	Figure
Total Allocation from the General Fund FY 2018/19[1]	$531,499,459
County General Fund Millage[2]	4.4347
Revenues Generated from 1-mil[3]	$119,850,150
Annual ad valorem revenue that goes to transportation capacity[4]	$1,913,000
Percentage of millage used for transportation capacity expansion projects[5]	2%
Average taxable value of a multi-family unit[6]	$179,000
Annual increase in the countywide taxable values[7]	5.8%

Year	Taxable Value	Market Value	Value Used for Credit	1-Mil Tax	Ad Valorem for Transportation	Present Value
2020	$179,000	n/a	$179,000	$179.00	$3	$3
2021					$3	$3
2022					$3	$2
2023					$3	$2
2024					$2	$2
2025					$2	$2
2026					$2	$2
2027					$2	$2
2028					$2	$1
2029					$2	$1
2030					$2	$1
2031					$2	$1
2032					$2	$1
2033					$1	$1
2034					$1	$1
2035					$1	$1
2036					$1	$1
2037					$1	$1
2038					$1	$1
2039					$1	$0
2040					$1	$0
2041					$1	$0
2042					$1	$0
2043					$1	$0
2044					$1	$0
2045					$1	$0
Total					**$42**	**$29**
Interest Rate[8]						**4.0%**

1) Source: Orange County FY 2019 Adopted Budget
2) Total millage assessed to residents within Orange County applied to the General Fund
3) Total projected allocation from the general fund (Item 1) divided by the County's millage rate (Item 2)
4) Source: Avg annual ad valorem revenues for roadway capacity from FY 2019-2023; Table C-9
5) Annual ad valorem revenues for capacity expansion (Item 4) divided by the revenue generated by 1-mil (Item 3)
6) Source: Average taxable value for new apartments (built since 2009) in Orange County
7) Source: Review of average annual increase in countywide taxable values for Orange County (2000-2019)
8) Source: Interest rate estimated for new bond issues in Orange County

Table D-8

1-Mil Credit Calculation for Mobile Homes - ROADS ONLY

Item	Figure
Total Allocation from the General Fund FY 2018/19[1]	$531,499,459
County General Fund Millage[2]	4.4347
Revenues Generated from 1-mil[3]	$119,850,150
Annual ad valorem revenue that goes to transportation capacity[4]	$1,913,000
Percentage of millage used for transportation capacity expansion projects[5]	2%
Average taxable value of a mobile home[6]	$67,000
Annual increase in the countywide taxable values[7]	5.8%

Year	Taxable Value	Market Value	Value Used for Credit	1-Mil Tax	Ad Valorem for Transportation	Present Value
2020	$67,000	n/a	$67,000	$67.00	$1	$1
2021					$1	$1
2022					$1	$1
2023					$1	$1
2024					$1	$1
2025					$1	$1
2026					$1	$1
2027					$1	$1
2028					$1	$0
2029					$1	$0
2030					$1	$0
2031					$1	$0
2032					$1	$0
2033					$0	$0
2034					$0	$0
2035					$0	$0
2036					$0	$0
2037					$0	$0
2038					$0	$0
2039					$0	$0
2040					$0	$0
2041					$0	$0
2042					$0	$0
2043					$0	$0
2044					$0	$0
2045					$0	$0
Total					**$14**	**$8**
Interest Rate[8]						**4.0%**

1) Source: Orange County FY 2019 Adopted Budget
2) Total millage assessed to residents within Orange County applied to the General Fund
3) Total projected allocation from the general fund (Item 1) divided by the County's millage rate (Item 2)
4) Source: Avg annual ad valorem revenues for roadway capacity from FY 2019-2023; Table C-9
5) Annual ad valorem revenues for capacity expansion (Item 4) divided by the revenue generated by 1-mil (Item 3)
6) Source: Average taxable value for new mobile homes (built since 2009) in Orange County
7) Source: Review of average annual increase in countywide taxable values for Orange County (2000-2019)
8) Source: Interest rate estimated for new bond issues in Orange County

Table D-9

1-Mil Credit Calculation for Retirement Homes - ROADS ONLY

Item	Figure
Total Allocation from the General Fund FY 2018/19[1]	$531,499,459
County General Fund Millage[2]	4.4347
Revenues Generated from 1-mil[3]	$119,850,150
Annual ad valorem revenue that goes to transportation capacity[4]	$1,913,000
Percentage of millage used for transportation capacity expansion projects[5]	2%
Average taxable value of a retirement home (per du)[6]	$190,000
Annual increase in the countywide taxable values[7]	5.8%

Year	Taxable Value	Market Value	Value Used for Credit	1-Mil Tax	Ad Valorem for Transportation	Present Value
2020	$190,000	n/a	$190,000	$190.00	$3	$3
2021					$3	$3
2022					$3	$2
2023					$3	$2
2024					$2	$2
2025					$2	$2
2026					$2	$2
2027					$2	$2
2028					$2	$1
2029					$2	$1
2030					$2	$1
2031					$2	$1
2032					$2	$1
2033					$1	$1
2034					$1	$1
2035					$1	$1
2036					$1	$1
2037					$1	$1
2038					$1	$1
2039					$1	$0
2040					$1	$0
2041					$1	$0
2042					$1	$0
2043					$1	$0
2044					$1	$0
2045					$1	$0
Total					**$42**	**$29**
Interest Rate[8]						**4.0%**

1) Source: Orange County FY 2019 Adopted Budget
2) Total millage assessed to residents within Orange County applied to the General Fund
3) Total projected allocation from the general fund (Item 1) divided by the County's millage rate (Item 2)
4) Source: Avg annual ad valorem revenues for roadway capacity from FY 2019-2023; Table C-9
5) Annual ad valorem revenues for capacity expansion (Item 4) divided by the revenue generated by 1-mil (Item 3)
6) Source: Average taxable value for new retirement home unit (built since 2009) in Orange County
7) Source: Review of average annual increase in countywide taxable values for Orange County (2000-2019)
8) Source: Interest rate estimated for new bond issues in Orange County

Table D-10

1-Mil Credit Calculation for Condominiums - ROADS ONLY

Item	Figure
Total Allocation from the General Fund FY 2018/19[1]	$531,499,459
County General Fund Millage[2]	4.4347
Revenues Generated from 1-mil[3]	$119,850,150
Annual ad valorem revenue that goes to transportation capacity[4]	$1,913,000
Percentage of millage used for transportation capacity expansion projects[5]	2%
Average taxable value of a condominium (per du)[6]	$284,000
Annual increase in the countywide taxable values[7]	5.8%

Year	Taxable Value	Market Value	Value Used for Credit	1-Mil Tax	Ad Valorem for Transportation	Present Value
2020	$284,000	n/a	$284,000	$284.00	$5	$5
2021					$5	$5
2022					$4	$4
2023					$4	$4
2024					$4	$3
2025					$4	$3
2026					$4	$3
2027					$3	$3
2028					$3	$2
2029					$3	$2
2030					$3	$2
2031					$3	$2
2032					$3	$2
2033					$2	$1
2034					$2	$1
2035					$2	$1
2036					$2	$1
2037					$2	$1
2038					$2	$1
2039					$2	$1
2040					$2	$1
2041					$2	$1
2042					$1	$1
2043					$1	$1
2044					$1	$1
2045					$1	$0
Total					**$70**	**$52**
Interest Rate[8]						**4.0%**

1) Source: Orange County FY 2019 Adopted Budget
2) Total millage assessed to residents within Orange County applied to the General Fund
3) Total projected allocation from the general fund (Item 1) divided by the County's millage rate (Item 2)
4) Source: Avg annual ad valorem revenues for roadway capacity from FY 2019-2023; Table C-9
5) Annual ad valorem revenues for capacity expansion (Item 4) divided by the revenue generated by 1-mil (Item 3)
6) Source: Average taxable value for new condo unit (built since 2009) in Orange County
7) Source: Review of average annual increase in countywide taxable values for Orange County (2000-2019)
8) Source: Interest rate estimated for new bond issues in Orange County

Non-Residential Land Uses

Table D-11 provides an explanation of ad valorem credit calculated for non-residential land uses. To determine the taxable value of a unit for each land use, the taxable value of recently built properties (2009 to present) was compared to the taxable value for all properties in the County database, for each respective land use. Based on a review of factors such as the weighted average, median, minimum, and maximum values per square foot, a unit value was estimated for each land use or a comparable land use category was identified. It should be noted that the 1-mil credit calculations for these land uses represent broad estimated and are based on the Consultant's experience in other jurisdictions and knowledge of the industry.

In calculating the present value of non-residential land uses, an annual value increase of approximately six (6) percent was used for commercial, institutional, and industrial land uses based on a review of the annual increase in taxable values for the respective land use category from 2000 to 2019 in Orange County.

Table D-11

1-Mil Credit Calculation for Non-Residential Land Uses

ITE LUC	Land Use	Unit	Taxable Value of Unit[1]	1-Mil Credit[2]				Methodology
				Multi-Modal		Roads ONLY		
				Annual	Total	Annual	Total	
	Lodging:							
310	Hotel/Tourist Hotel	room	$94,000	$5	$81	$2	$33	Estimates an average size of 400 sq ft per room and an average cost of $235 per sq ft
320	Motel	room	$70,500	$4	$65	$1	$17	Estimates an average size of 300 sq ft per room and an average cost of $235 per sq ft
	Recreational:							
430	Golf Course	acre	$220,000	$11	$179	$4	$65	Cost per acre is estimated at $220,000 based on the value of vacant commercial land in Orange County
437	Bowling Alley	1,000 sf	$185,000	$10	$163	$3	$48	Comparable to Retail land use ($185 per sq ft)
444	Movie Theater	1,000 sf	$185,000	$10	$163	$3	$48	Comparable to Retail land use ($185 per sq ft)
491	Racquet Club	1,000 sf	$185,000	$10	$163	$3	$48	Comparable to Retail land use ($185 per sq ft)
492	Health Club	1,000 sf	$185,000	$10	$163	$3	$48	Comparable to Retail land use ($185 per sq ft)
n/a	Dance Studio (Martial Arts/Music Lessons)	1,000 sf	$185,000	$10	$163	$3	$48	Comparable to Retail land use ($185 per sq ft)
	Instituttional:							
522	School	1,000 sf	$170,000	$9	$146	$3	$48	Based on taxable value of recently built private schools ($170 per sq ft)
560	Public Assembly	1,000 sf	-	$0	$0	$0	$0	Public assembly land uses are exempt from paying property taxes
565	Day Care	1,000 sf	$190,000	$10	$163	$3	$48	Comparable to General Office ($190 per sq ft)
590	Library	1,000 sf	-	$0	$0	$0	$0	Library land uses are exempt from paying property taxes
	Medical:							
610	Hospital	bed	$16,000	$1	$17	$0	$0	Estimates an average size of 100 sq ft per bed (accounting for surrounding area) and an average cost of $160 per sq ft
620	Nursing Home	1,000 sf	$165,000	$8	$130	$3	$48	Based on taxable value of recently built Homes for the Aged ($165 per sq ft)
640	Animal Hospital/Veterinary Clinic	1,000 sf	$190,000	$10	$163	$3	$48	Comparable to General Office ($190 per sq ft)
	Office:							
710	General Office 50,000 sf or less	1,000 sf	$190,000	$10	$163	$3	$48	Based on taxable value of recently built Office Buildings ($190 per sq ft)
710	General Office 50,001-100,000 sf	1,000 sf	$190,000	$10	$163	$3	$48	Based on taxable value of recently built Office Buildings ($190 per sq ft)
710	General Office 100,001-200,000 sf	1,000 sf	$190,000	$10	$163	$3	$48	Based on taxable value of recently built Office Buildings ($190 per sq ft)
710	General Office greater than 200,000 sf	1,000 sf	$190,000	$10	$163	$3	$48	Based on taxable value of recently built Office Buildings ($190 per sq ft)
720	Small Medical/Dental Office (10,000 sf or less)	1,000 sf	$190,000	$10	$163	$3	$48	Comparable to General Office ($190 per sq ft)
720	Medical/Dental Office	1,000 sf	$190,000	$10	$163	$3	$48	Comparable to General Office ($190 per sq ft)
732	Post Office	1,000 sf	$190,000	$10	$163	$3	$48	Comparable to General Office ($190 per sq ft)
	Retail:							
815	Free-Standing Discount Store	1,000 sf	$185,000	$10	$163	$3	$48	Comparable to Retail land use ($185 per sq ft)
816	Hardware/Paint	1,000 sf	$185,000	$10	$163	$3	$48	Comparable to Retail land use ($185 per sq ft)
820	Retail/Tourist Retail: 50,000 sfgla or less	1,000 sfgla	$185,000	$10	$163	$3	$48	Based on taxable value of recently built Retail land uses ($185 per sq ft)
820	Retail/Tourist Retail: 50,001-100,000 sfgla	1,000 sfgla	$185,000	$10	$163	$3	$48	Based on taxable value of recently built Retail land uses ($185 per sq ft)
820	Retail/Tourist Retail: 100,001-200,000 sfgla	1,000 sfgla	$185,000	$10	$163	$3	$48	Based on taxable value of recently built Retail land uses ($185 per sq ft)
820	Retail/Tourist Retail: 200,001-300,000 sfgla	1,000 sfgla	$185,000	$10	$163	$3	$48	Based on taxable value of recently built Retail land uses ($185 per sq ft)
820	Retail/Tourist Retail: 300,001-400,000 sfgla	1,000 sfgla	$185,000	$10	$163	$3	$48	Based on taxable value of recently built Retail land uses ($185 per sq ft)
820	Retail/Tourist Retail: 400,001-500,000 sfgla	1,000 sfgla	$185,000	$10	$163	$3	$48	Based on taxable value of recently built Retail land uses ($185 per sq ft)
820	Retail/Tourist Retail: 500,001-1,000,000 sfgla	1,000 sfgla	$185,000	$10	$163	$3	$48	Based on taxable value of recently built Retail land uses ($185 per sq ft)
820	Retail/Tourist Retail: 1,000,001-1,200,000 sfgla	1,000 sfgla	$185,000	$10	$163	$3	$48	Based on taxable value of recently built Retail land uses ($185 per sq ft)
820	Retail/Tourist Retail: greater than 1,200,000 sfgla	1,000 sfgla	$185,000	$10	$163	$3	$48	Based on taxable value of recently built Retail land uses ($185 per sq ft)
840/841	New/Used Auto Sales	1,000 sf	$185,000	$10	$163	$3	$48	Comparable to Retail land use ($185 per sq ft)
850	Supermarket	1,000 sf	$185,000	$10	$163	$3	$48	Comparable to Retail land use ($185 per sq ft)
853	Convenience Market w/Gas Pumps	1,000 sf	$185,000	$10	$163	$3	$48	Comparable to Retail land use ($185 per sq ft)
862	Home Improvement Superstore	1,000 sf	$185,000	$10	$163	$3	$48	Comparable to Retail land use ($185 per sq ft)
863	Electronics Superstore	1,000 sf	$185,000	$10	$163	$3	$48	Comparable to Retail land use ($185 per sq ft)
880/881	Pharmacy/Drug Store with and w/o Drive-Thru	1,000 sf	$185,000	$10	$163	$3	$48	Comparable to Retail land use ($185 per sq ft)

Table D-11 (continued)

1-Mil Credit Calculation for Non-Residential Land Uses

ITE LUC	Land Use	Unit	Taxable Value of Unit[1]	1-Mil Credit[2]				Methodology
				Multi-Modal		Roads ONLY		
				Annual	Total	Annual	Total	
	Services:							
911	Bank/Savings Walk-In	1,000 sf	$550,000	$28	$456	$9	$146	Based on taxable value of recently built Bank land uses ($550 per sq ft)
912	Bank/Savings Drive-In	1,000 sf	$550,000	$28	$456	$9	$146	Based on taxable value of recently built Bank land uses ($550 per sq ft)
925	Drinking Place	1,000 sf	$185,000	$10	$163	$3	$48	Comparable to Retail land use ($185 per sq ft)
931	Quality Restaurant	1,000 sf	$360,000	$19	$309	$6	$98	Based on taxable value of recently built Restaurant land uses ($360 per sq ft)
932	High-Turnover Restaurant	1,000 sf	$360,000	$19	$309	$6	$98	Based on taxable value of recently built Restaurant land uses ($360 per sq ft)
934	Fast Food Restaurant w/Drive-Thru	1,000 sf	$440,000	$23	$374	$7	$115	Based on taxable value of recently built Fast Food Restaurant land uses ($440 per sq ft)
942	Auto Service	1,000 sf	$150,000	$8	$130	$2	$33	Based on taxable value of recently built Auto Sales/Repair land uses ($150 per sq ft)
944	Gas Station with or w/o Convenience Market <2,000 sq ft	fuel pos.	$15,355	$1	$17	$0	$0	Estimates that 1,000 sq ft of space can accommodate 4 rows and 3 fueling positions per row and an average cost of $185 per sq ft based on the Retail land use
945	Gas Station w/Convenience Market 2,000-2,999 sq ft	fuel pos.	$15,355	$1	$17	$0	$0	
960	Gas Station w/Convenience Market 3,000+ sq ft	fuel pos.	$15,355	$1	$17	$0	$0	
947	Self-Service Car Wash	wash stn.	$60,125	$3	$48	$1	$17	Estimates the sq ft per service bay is 325 ft (25 x 13 ft) and a cost of $185 per sq ft based on the Retail land use
	Industrial:							
110	General Light Industrial	1,000 sf	$80,000	$4	$65	$1	$17	Comparable to Manufacturing land use ($80 per sq ft)
140	Manufacturing	1,000 sf	$80,000	$4	$65	$1	$17	Based on taxable value of recently built Manufacturing land uses ($80 per sq ft)
150	Warehousing	1,000 sf	$75,000	$4	$65	$1	$17	Based on taxable value of recently built Warehouse land uses ($75 per sq ft)
151	Mini-Warehouse	1,000 sf	$75,000	$4	$65	$1	$17	Comparable to Warehousing land use ($75 per sq ft)
154	High-Cube Transload and Short-Term Storage Warehouse	1,000 sf	$75,000	$4	$65	$1	$17	Comparable to Warehousing land use ($75 per sq ft)

1) Source: Based on information from the Orange County 2019 NAL parcel database
2) Present value of the ad valorem credit to be applied to the transportation impact fee

APPENDIX E
Calculated Impact Fee Schedule

Appendix E: Calculated Impact Fee Schedule

This appendix presents the detailed impact fee calculations for each land use in Orange County's transportation impact fee schedule.

Table E-1 presents a summary of current Orange County impact fee rates and the calculated rates for each option. If the County opts to keep the current fee districts, the updated fee rates will come from Table E-2 (Urban) and Table E-3 (Non-Urban). If the County elects to move to three fee districts, the updated impact fee rates are shown in Table E-2 (Urban), Table E-3 (Suburban), and Table E-4 (Rural).

Table E-2
Calculated Multi-Modal Impact Fee Schedule – Urban Fee District

	Gasoline Tax								Unit Cost per Lane Mile:	$4,540,000						Interstate/Toll Facility Adjustment Factor:	36.1%	
	$$ per gallon to capital:	$0.197		City Revenues:	$0 003				Average VMC per Lane Mile:	9,000						Cost per VMC:	$504.44	
	Facility life (years):	25		County Revenues:	$0 054				Fuel Efficiency:	18 92 mpg								
	Interest rate:	4.0%		State Revenues:	$0.140				Effective days per year:	365								

ITE LUC	Land Use	Unit	Trip Rate	Trip Rate Source*	Initial Trip Length	Trip Length Adj. Factor	Assessable Trip Length[1]	Total Trip Length	Trip Length Source*	% New Trips	% New Trips Source*	Net VMT[2]	Total Impact Cost	Annual Gas Tax	Gas Tax Credit	Ad Valorem Credit	Net Impact Fee	Current Fee[3]	% Change
	Residential:																		
210	Single Family (Detached) - 1,200 sf or less	du	6.15	PUMS Tiering Analysis (Appendix A)	6.62	1.25	8 28	8.78	Appendix A: LUC 210	100%	n/a	16.27	$8,207	$103	$1,609	$173	**$6,425**	$3,898	65%
210	Single Family (Detached) - 1,201 to 2,000 sf	du	7.81	PUMS Tiering Analysis (Appendix A)	6.62	1.25	8 28	8.78	Appendix A: LUC 210	100%	n/a	20.66	$10,422	$130	$2,031	$173	**$8,218**	$3,898	111%
210	Single Family (Detached) - 2,001 to 3,500 sf	du	9.63	PUMS Tiering Analysis (Appendix A)	6.62	1.25	8 28	8.78	Appendix A: LUC 210	100%	n/a	25.48	$12,851	$161	$2,515	$173	**$10,163**	$3,898	161%
210	Single Family (Detached) - greater than 3,500 sf	du	10 07	PUMS Tiering Analysis (Appendix A)	6.62	1.25	8 28	8.78	Appendix A: LUC 210	100%	n/a	26.64	$13,438	$168	$2,625	$173	**$10,640**	$3,898	173%
220	Multi-Family Housing/Townhouse (Low-Rise, 1-2 floors)	du	7.32	ITE 10th Edition	5.10	1.25	6 38	6 88	Appendix A: LUC 220/221/222	100%	n/a	14.92	$7,527	$96	$1,500	$90	**$5,937**	$2,524	135%
221	Multi-Family Housing (Mid-Rise, 3-10 floors)	du	5.44	ITE 10th Edition	5.10	1.25	6 38	6 88	Appendix A: LUC 220/221/222	100%	n/a	11.09	$5,594	$71	$1,109	$90	**$4,395**	$2,524	74%
222	Multi-Family Housing (High-Rise, >10 floors)	du	4.45	ITE 10th Edition	5.10	1.25	6 38	6 88	Appendix A: LUC 220/221/222	100%	n/a	9.07	$4,576	$58	$906	$90	**$3,580**	$1,598	124%
225	Student Housing (Adjacent to Campus)	bedroom	3.15	ITE 10th Edition	2 55	1.25	3.19	3.69	Same as LUC 220 (adjusted)	100%	n/a	3.21	$1,620	$22	$344	$30	**$1,246**	-	-
225	Student Housing (Over 1/2 mile from Campus)	bedroom	3.97	ITE 10th Edition	3 83	1.25	4.79	5 29	Same as LUC 220 (adjusted)	100%	n/a	6.08	$3,065	$40	$625	$30	**$2,410**	-	-
231	Mid-Rise Residential w/1st floor Commercial	du	3.44	ITE 10th Edition	5.10	1.25	6 38	6 88	Same as LUC 220	100%	n/a	7.01	$3,537	$45	$703	$90	**$2,744**	-	-
232	High-Rise Residential w/1st floor Commercial	du	2.01	ITE 10th Edition (adjusted)	5.10	1.25	6 38	6 88	Same as LUC 220	100%	n/a	4.10	$2,067	$26	$406	$90	**$1,571**	-	-
240	Mobile Home Park	du	4.17	Appendix A: LUC 240	4.60	1.25	5.75	6 25	Appendix A: LUC 240	100%	n/a	7.66	$3,864	$50	$781	$29	**$3,054**	$1,436	113%
251	Senior Adult Housing - Detached (Retirement Community/Age-Restricted Single Family)	du	3.50	Appendix A: LUC 251	5.42	1.25	6.78	7 28	Appendix A: LUC 251	100%	n/a	7.58	$3,825	$48	$750	$100	**$2,975**	$1,274	134%
252	Senior Adult Housing - Attached (Retirement Community/Age-Restricted Single Family)	du	3.33	Appendix A: LUC 252	4 34	1.25	5.43	5 93	Same as LUC 251 (adjusted)[5]	100%	n/a	5.78	$2,914	$38	$594	$100	**$2,220**	$1,274	74%
265	Time Share	du	8.63	ITE 10th Edition	3 97	1.25	4 96	5.46	Previous Report	100%	n/a	13.68	$6,899	$90	$1,406	$150	**$5,343**	$2,076	157%
	Lodging:																		
310	Hotel/Tourist Hotel	room	5.55	Appendix A: LUC 310	6 26	1.05	6 57	7 07	Appendix A: LUC 310	66%	Appendix A: LUC 310	7.69	$3,879	$49	$765	$81	**$3,033**	$1,978	53%
320	Motel	room	3.35	ITE 10th Edition	4 34	1.05	4 56	5 06	Appendix A: LUC 320	77%	Appendix A: LUC 320	3.76	$1,896	$25	$391	$65	**$1,440**	$1,411	2%
	Recreational:																		
430	Golf Course	acre	3.74	ITE 10th Edition	6.62	1.05	6 95	7.45	Same as LUC 210	90%	Based on LUC 710	7.47	$3,770	$48	$750	$179	**$2,841**	$2,267	25%
437	Bowling Alley	1,000 sf	13 00	ITE 10th Edition (adjusted)	5.15	1.05	5.41	5 91	Same as LUC 710	90%	Based on LUC 710	20.22	$10,201	$131	$2,046	$163	**$7,992**	$11,604	-31%
444	Movie Theater with or without Matinee	1,000 sf	82 30	Appendix A: LUC 444	2 24	1.05	2 35	2 85	Appendix A: LUC 444	87%	Appendix A: LUC 444	53.76	$27,119	$388	$6,061	$163	**$20,895**	$11,151	87%
491	Racquet Club	1,000 sf	19.70	ITE 10th Edition (adjusted)	5.15	1.05	5.41	5 91	Same as LUC 710	94%	Same as LUC 492	32.01	$16,146	$208	$3,249	$163	**$12,734**	$5,106	149%
492	Health/Fitness Club	1,000 sf	34 50	ITE 10th Edition (adjusted)	5.15	1.05	5.41	5 91	Same as LUC 710	94%	Appendix A: LUC 492	56.06	$28,276	$364	$5,686	$163	**$22,427**	$11,974	87%
n/a	Dance Studio (Martial Arts/Music Lessons)	1,000 sf	21 33	Appendix A: LUC N/A Dance Studio	3 37	1.05	3 54	4 04	Appendix A: LUC N/A Specialty Retail	85%	Appendix A: LUC N/A Specialty Retail	20.51	$10,344	$139	$2,171	$163	**$8,010**	-	-
	Institutional:																		
522	School	1,000 sf	20.17	ITE 10th Edition	3 31	1.05	3.48	3 98	50% of LUC 210: Travel Demand Model	80%	Based on LUC 710 (adjusted)[6]	17.94	$9,050	$122	$1,906	$146	**$6,998**	$6,974	0%
560	Public Assembly	1,000 sf	6.95	ITE 10th Edition	3 91	1.05	4.11	4.61	Midpoint of LUC 710 & LUC 820 (App. A)	90%	Based on LUC 710	8.21	$4,143	$55	$859	$0	**$3,284**	$4,614	-29%
565	Day Care	1,000 sf	49.63	Appendix A: LUC 565	2 03	1.05	2.13	2.63	Appendix A: LUC 565	73%	Appendix A: LUC 565	24.66	$12,437	$181	$2,828	$163	**$9,446**	$7,043	34%

Table E-2 (continued)
Calculated Multi-Modal Impact Fee Schedule – Urban Fee District

ITE LUC	Land Use	Unit	Trip Rate	Trip Rate Source*	Initial Trip Length	Trip Length Adj. Factor	Assessable Trip Length[1]	Total Trip Length	Trip Length Source*	% New Trips	% New Trips Source*	Net VMT[2]	Total Impact Cost	Annual Gas Tax	Gas Tax Credit	Ad Valorem Credit	Net Impact Fee	Current Fee[3]	% Change
	Institutional:																		
590	Library	1,000 sf	72 05	ITE 10th Edition	6.62	1.05	6 95	7.45	Same as LUC 210	49%	Previous Report	78.39	$39,545	$500	$7,811	$0	**$31,734**	$12,015	164%
	Medical:																		
610	Hospital	bed	22 32	ITE 10th Edition	6.62	1.05	6 95	7.45	Same as LUC 210	78%	Midpoint of LUC 310 & LUC 720	38.66	$19,501	$246	$3,843	$17	**$15,641**	$3,968	294%
620	Nursing Home	1,000 sf	6.64	ITE 10th Edition	2 59	1.05	2.72	3 22	Appendix A: LUC 620	89%	Appendix A: LUC 620	5.14	$2,591	$36	$562	$130	**$1,899**	$369	415%
640	Animal Hospital/Veterinary Clinic	1,000 sf	24 20	Appendix A: LUC 640	1 90	1.05	2 00	2 50	Appendix A: LUC 640	70%	Appendix A: LUC 640	10.82	$5,460	$80	$1,250	$163	**$4,047**	$8,921	-55%
	Office:																		
710	General Office 50,000 sf or less[4]	1,000 sf	10 83	ITE 10th equation	5.15	1.25	6.44	6 94	Appendix A: LUC 710	92%	Appendix A: LUC 710	20.50	$10,341	$131	$2,046	$163	**$8,132**	$5,574	46%
710	General Office 50,001-100,000 sf[4]	1,000 sf	10.61	ITE 10th equation	5.15	1.25	6.44	6 94	Appendix A: LUC 710	92%	Appendix A: LUC 710	20.08	$10,131	$129	$2,015	$163	**$7,953**	$4,748	68%
710	General Office 100,001-200,000 sf[4]	1,000 sf	10 39	ITE 10th equation	5.15	1.25	6.44	6 94	Appendix A: LUC 710	92%	Appendix A: LUC 710	19.67	$9,921	$126	$1,968	$163	**$7,790**	$4,050	92%
710	General Office greater than 200,000 sf[4]	1,000 sf	10.18	ITE 10th equation	5.15	1.25	6.44	6 94	Appendix A: LUC 710	92%	Appendix A: LUC 710	19.27	$9,721	$124	$1,937	$163	**$7,621**	$3,455	121%
720	Small Medical/Dental Office (10,000 sf or less)	1,000 sf	23 83	Appendix A: LUC 720 Small Medical/Dental	5 55	1.25	6 94	7.44	Appendix A: LUC 720	89%	Appendix A: LUC 720	47.03	$23,722	$300	$4,687	$163	**$18,872**	$12,900	46%
720	Medical/Dental Office	1,000 sf	34.12	Appendix A: LUC 720	5 55	1.25	6 94	7.44	Appendix A: LUC 720	89%	Appendix A: LUC 720	67.33	$33,966	$429	$6,702	$163	**$27,101**	$12,900	110%
732	Post Office	1,000 sf	103.94	ITE 10th Edition	5.15	1.25	6.44	6 94	Same as LUC 710	49%	Previous Report	104.79	$52,862	$672	$10,498	$163	**$42,201**	$20,508	106%
	Retail:																		
815	Free-Standing Discount Store	1,000 sf	53.12	ITE 10th Edition	2.40	1.05	2 52	3 02	Same as LUC 820 (100-200k)	67%	Same as LUC 820 (100-200k)	28.66	$14,455	$204	$3,187	$163	**$11,105**	$5,884	89%
816	Hardware/Paint	1,000 sf	9.14	ITE 10th Edition	1 87	1.05	1 96	2.46	Same as LUC 820 (<50k)	56%	Same as LUC 820 (<50k)	3.21	$1,617	$24	$375	$163	**$1,079**	$3,378	-68%
820	Retail/Tourist Retail: 50,000 sfgla or less[4]	1,000 sfgla	75 05	ITE 10th equation	1 87	1.05	1 96	2.46	Appendix A: Figure A-2	56%	Appendix A: Figure A-3	26.32	$13,276	$196	$3,062	$163	**$10,051**	$5,700	76%
820	Retail/Tourist Retail: 50,001-100,000 sfgla[4]	1,000 sfgla	60.12	ITE 10th equation	2 29	1.05	2.40	2 90	Appendix A: Figure A-2	62%	Appendix A: Figure A-3	28.58	$14,418	$205	$3,203	$163	**$11,052**	$6,135	80%
820	Retail/Tourist Retail: 100,001-200,000 sfgla[4]	1,000 sfgla	48.16	ITE 10th equation	2.40	1.05	2 52	3 02	Appendix A: Figure A-2	67%	Appendix A: Figure A-3	25.98	$13,105	$185	$2,890	$163	**$10,052**	$5,477	84%
820	Retail/Tourist Retail: 200,001-300,000 sfgla[4]	1,000 sfgla	42 30	ITE 10th equation	2 52	1.05	2.65	3.15	Appendix A: Figure A-2	71%	Appendix A: Figure A-3	25.43	$12,827	$180	$2,812	$163	**$9,852**	$5,307	86%
820	Retail/Tourist Retail: 300,001-400,000 sfgla[4]	1,000 sfgla	38 58	ITE 10th equation	2.64	1.05	2.77	3 27	Appendix A: Figure A-2	73%	Appendix A: Figure A-3	24.93	$12,573	$175	$2,734	$163	**$9,676**	$5,169	87%
820	Retail/Tourist Retail: 400,001-500,000 sfgla[4]	1,000 sfgla	35 92	ITE 10th equation	2.75	1.05	2 89	3 39	Appendix A: Figure A-2	75%	Appendix A: Figure A-3	24.88	$12,548	$174	$2,718	$163	**$9,667**	$5,135	88%
820	Retail/Tourist Retail: 500,001-1,000,000 sfgla[4]	1,000 sfgla	28.78	ITE 10th equation	3 34	1.05	3 51	4 01	Appendix A: Figure A-2	81%	Appendix A: Figure A-3	26.14	$13,188	$178	$2,781	$163	**$10,244**	$5,319	93%
820	Retail/Tourist Retail: 1,000,001-1,200,000 sfgla[4]	1,000 sfgla	27.14	ITE 10th equation	3 57	1.05	3.75	4 25	Appendix A: Figure A-2	82%	Appendix A: Figure A-3	26.66	$13,450	$180	$2,812	$163	**$10,475**	$5,412	94%
820	Retail/Tourist Retail: greater than 1,200,000 sfgla[4]	1,000 sfgla	25 84	ITE 10th equation	3 80	1.05	3 99	4.49	Appendix A: Figure A-2	83%	Appendix A: Figure A-3	27.34	$13,792	$183	$2,859	$163	**$10,770**	$5,534	95%
840/841	New/Used Auto Sales	1,000 sf	24 58	Appendix A: LUC 840/841	4.60	1.05	4 83	5 33	Appendix A: LUC 840/841	79%	Appendix A: LUC 840/841	29.97	$15,116	$197	$3,078	$163	**$11,875**	$6,276	89%
850	Supermarket	1,000 sf	106.64	Appendix A: LUC 850	2 08	1.05	2.18	2.68	Appendix A: LUC 850	56%	Appendix A: LUC 850	41.59	$20,982	$304	$4,749	$163	**$16,070**	$7,621	111%
853	Convenience Market w/Gas Pumps	1,000 sf	626.25	Appendix A: LUC 853	1 51	1.05	1 59	2 09	Appendix A: LUC 853	28%	Appendix A: LUC 853	89.08	$44,935	$696	$10,873	$163	**$33,899**	$20,411	66%
862	Home Improvement Superstore	1,000 sf	30.74	ITE 10th Edition	2.40	1.05	2 52	3 02	Same as LUC 820 (100-200k)	67%	Same as LUC 820 (100-200k)	16.58	$8,365	$118	$1,843	$163	**$6,359**	$3,059	108%
863	Electronics Superstore	1,000 sf	41 05	ITE 10th Edition	1 87	1.05	1 96	2.46	Same as LUC 820 (<50k)	56%	Same as LUC 820 (<50k)	14.40	$7,262	$107	$1,672	$163	**$5,427**	$1,502	261%
880/881	Drug Store	1,000 sf	104.37	Appendix A: LUC 880/881	2 08	1.05	2.18	2.68	Appendix A: LUC 880/881	32%	Appendix A: LUC 880/881	23.26	$11,734	$170	$2,656	$163	**$8,915**	$11,160	-20%

Table E-2 (continued)
Calculated Multi-Modal Impact Fee Schedule – Urban Fee District

ITE LUC	Land Use	Unit	Trip Rate	Trip Rate Source*	Initial Trip Length	Trip Length Adj. Factor	Assessable Trip Length[1]	Total Trip Length	Trip Length Source*	% New Trips	% New Trips Source*	Net VMT[2]	Total Impact Cost	Annual Gas Tax	Gas Tax Credit	Ad Valorem Credit	Net Impact Fee	Current Fee[3]	% Change
	Services:																		
911	Bank/Savings Walk-In	1,000 sf	59 39	ITE 10th Edition (adjusted)	2.46	1.05	2 58	3 08	Same as LUC 912	46%	Same as LUC 912	22.52	$11,360	$160	$2,500	$456	**$8,404**	$11,525	-27%
912	Bank/Savings Drive-In	1,000 sf	102.66	Appendix A: LUC 912	2.46	1.05	2 58	3 08	Appendix A: LUC 912	46%	Appendix A: LUC 912	38.93	$19,636	$276	$4,312	$456	**$14,868**	$11,525	29%
925	Drinking Place	1,000 sf	113.60	ITE 10th Edition (adjusted)	1 87	1.05	1 96	2.46	Same as LUC 820 (<50k)	56%	Same as LUC 820 (<50k)	39.84	$20,096	$297	$4,640	$163	**$15,293**	$3,774	305%
931	Quality Restaurant	1,000 sf	86 03	Appendix A: LUC 931	3.14	1.05	3 30	3 80	Appendix A: LUC 931	77%	Appendix A: LUC 931	69.84	$35,232	$478	$7,467	$309	**$27,456**	$14,253	93%
932	High-Turnover Restaurant	1,000 sf	106.26	Appendix A: LUC 932	3.17	1.05	3 33	3 83	Appendix A: LUC 932	71%	Appendix A: LUC 932	80.27	$40,490	$549	$8,577	$309	**$31,604**	$16,974	86%
934	Fast Food Restaurant w/Drive-Thru	1,000 sf	482.53	Appendix A: LUC 934	2 05	1.05	2.15	2.65	Appendix A: LUC 934	58%	Appendix A: LUC 934	192 25	$96,978	$1,409	$22,012	$374	**$74,592**	$38,463	94%
942	Auto Service	1,000 sf	28.19	Appendix A: LUC 942	3.62	1.05	3 80	4 30	Appendix A: LUC 942	72%	Appendix A: LUC 942	24.64	$12,431	$166	$2,593	$130	**$9,708**	$6,891	41%
944	Gas Station with or w/o Convenience Market <2,000 sq ft	fuel pos.	172.01	ITE 10th Edition	1 90	1.05	2 00	2 50	Appendix A: LUC 944/945	23%	Appendix A: LUC 944/945	25.28	$12,752	$188	$2,937	$17	**$9,798**	$4,660	110%
945	Gas Station w/Convenience Market 2,000-2,999 sq ft	fuel pos.	205.36	ITE 10th Edition	1 90	1.05	2 00	2 50	Appendix A: LUC 944/945	23%	Appendix A: LUC 944/945	30.18	$15,225	$224	$3,499	$17	**$11,709**	$4,660	151%
960	Gas Station w/Convenience Market 3,000+ sq ft	fuel pos.	230.52	ITE 10th Edition	1 90	1.05	2 00	2 50	Same as LUC 945	23%	Same as LUC 945	33.88	$17,090	$252	$3,937	$17	**$13,136**	$4,660	182%
947	Self-Service Car Wash	wash stn.	108.00	ITE 10th Edition	2.18	1.05	2 29	2.79	Appendix A: LUC 947	68%	Appendix A: LUC 947	53.73	$27,105	$389	$6,077	$48	**$20,980**	$10,190	106%
	Industrial:																		
110	General Light Industrial	1,000 sf	4.96	ITE 10th Edition	5.15	1.05	5.41	5 91	Same as LUC 710	92%	Same as LUC 710	7.89	$3,979	$51	$797	$65	**$3,117**	$2,163	44%
140	Manufacturing	1,000 sf	3.93	ITE 10th Edition	5.15	1.05	5.41	5 91	Same as LUC 710	92%	Same as LUC 710	6.25	$3,153	$41	$641	$65	**$2,447**	$1,185	106%
150	Warehousing	1,000 sf	1.74	ITE 10th Edition	5.15	1.05	5.41	5 91	Same as LUC 710	92%	Same as LUC 710	2.77	$1,396	$18	$281	$65	**$1,050**	$1,107	-5%
151	Mini-Warehouse	1,000 sf	1.49	Appendix A: LUC 151	3 51	1.05	3.69	4.19	Midpoint of LUC 710 & LUC 820 <50k	92%	Same as LUC 710	1.62	$815	$11	$172	$65	**$578**	$396	46%
154	High-Cube Transload and Short-Term Storage Warehouse	1,000 sf	1.40	ITE 10th Edition	5.15	1.05	5.41	5 91	Same as LUC 710	92%	Same as LUC 710	2.23	$1,123	$14	$219	$65	**$839**	$396	112%

1) Initial trip length multiplied by the trip length adjustment factor
2) Net PMT 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
3) Source: Orange County Planning Division; Community, Environment & Development Services Department. Fees were adopted at 42 percent in 2012 and phased to 56 percent in 2014. Senior Adult Housing – Detached (LUC 251) rate is shown for Senior Adult Housing – Attached (LUC 252). Mini-Warehouse (LUC 151) rate is shown for High-Cube Warehouse (LUC 154)
4) The trip rates for office and retail/shopping center use an end-point regression value
5) The trip length for Senior Adult Housing Detached was based on the trip length for LUC 252, but was then adjusted by 80% based on the relationship of the trip lengths for LUC 210 (Single Family Detached) and LUC 220 (Multi-Family)
6) The percent new trips for schools was estimated at 90 percent, based on LUC 710, but then adjusted to 80% to provide a conservative fee rate. This adjustment reflects the nature of the elementary and middle school uses where attendees are unable to drive and are dropped off by parents on their way to another destination

*Refer to the Trip Characteristics Database section of Appendix A for additional support detail and backup information

APPENDIX F
Traffic Impact Studies:
PM Peak Hour Pass-By Rates

Appendix F: Traffic Impact Studies: PM Peak Hour Pass-By Rates

This appendix presents the PM peak hour pass-by rates that Orange County uses for traffic impact fee studies. This table is included for informational purposes only and is not related to the transportation impact fee study rate calculations.

The pass-by rates presented are used for specific site impact analysis to ensure safety and public welfare guidelines are met prior to the development of a given site. Though similar in name to the percent new trips values used in the impact fee calculation, these pass-by rates do not provide a comparable measure and are only used for traffic impact studies of specific sites.

Table F-1
PM Peak Hour Pass-By Rates

ITE LUC	Land Use	Unit	% New Trips	% Pass-by
	RESIDENTIAL:			
210	Single Family (Detached)	du	100%	0%
220	Multi-Family Housing/Townhouse (Low-Rise, 1-2 Floors)	du	100%	0%
221	Multi-Family Housing (Mid-Rise, 3-10 Floors)	du	100%	0%
222	Multi-Family Housing (High-Rise, >10 Floors)	du	100%	0%
225	Student Housing (ITE - Adjacent to Campus)	bedroom	100%	0%
225	Student Housing (ITE - Over 1/2 Mile from Campus)	bedroom	100%	0%
231	Mid-Rise Residential w/1st Floor Commercial	du	100%	0%
232	High-Rise Residential w/1st Floor Commercial	du	100%	0%
240	Mobile Home Park	du	100%	0%
251	Senior Adult Housing - Detached (Retirement Community/Age-Restricted Single-Family)	du	100%	0%
252	Senior Adult Housing - Attached (Retirement Community/Age-Restricted Single-Family)	du	100%	0%
265	Time Share	du	100%	0%
	LODGING:			
310	Hotel/Tourist Hotel	room	100%	0%
320	Motel	room	100%	0%
	RECREATIONAL:			
430	Golf Course	acre	100%	0%
437	Bowling Alley	1,000 sf	100%	0%
444	Movie Theater	1,000 sf	100%	0%
491	Racquet Club	1,000 sf	100%	0%
492	Health/Fitness Club	1,000 sf	100%	0%
n/a	Dance Studio (Martial Arts/Music Lessons)	1,000 sf	100%	0%
	INSTITUTIONAL:			
522	School	1,000 sf	100%	0%
560	Public Assembly	1,000 sf	100%	0%
565	Day Care	1,000 sf	100%	0%
590	Library	1,000 sf	100%	0%
	MEDICAL:			
610	Hospital	bed	100%	0%
620	Nursing Home	1,000 sf	100%	0%
640	Animal Hospital/Veterinary Clinic	1,000 sf	100%	0%
	OFFICE:			
710	General Office 50,000 sf or less	1,000 sf	100%	0%
710	General Office 50,001-100,000 sf	1,000 sf	100%	0%
710	General Office 100,001-200,000 sf	1,000 sf	100%	0%
710	General Office greater than 200,000 sf	1,000 sf	100%	0%
720	Small Medical/Dental Office (10,000 sf or less)	1,000 sf	100%	0%
720	Medical/Dental Office	1,000 sf	100%	0%
732	Post Office	1,000 sf	100%	0%
	RETAIL:			
815	Free-Standing Discount Store	1,000 sf	83%	17%
816	Hardware/Paint Store	1,000 sf	74%	26%
820	Retail/Tourist Retail: 50,000 sfgla or less	1,000 sfgla	66%	34%
820	Retail/Tourist Retail: 50,001-100,000 sfgla	1,000 sfgla	66%	34%
820	Retail/Tourist Retail:100,001-200,000 sfgla	1,000 sfgla	66%	34%
820	Retail/Tourist Retail: 200,001-300,000 sfgla	1,000 sfgla	66%	34%
820	Retail/Tourist Retail: 300,001-400,000 sfgla	1,000 sfgla	66%	34%
820	Retail/Tourist Retail: 400,001-500,000 sfgla	1,000 sfgla	66%	34%
820	Retail/Tourist Retail: 500,001-1,000,000 sfgla	1,000 sfgla	66%	34%
820	Retail/Tourist Retail: 1,000,001-1,200,000 sfgla	1,000 sfgla	66%	34%
820	Retail/Tourist Retail: greater than 1,200,000 sfgla	1,000 sfgla	66%	34%
840/841	New/Used Auto Sales	1,000 sf	100%	0%
850	Supermarket	1,000 sf	64%	36%
853	Convenience Market w/Gas Pumps	1,000 sf	36%	64%
862	Home Improvement Superstore	1,000 sf	52%	48%
863	Electronics Superstore	1,000 sf	61%	39%
880/881	Drug Store	1,000 sf	47%	53%

Table F-1 (continued)
PM Peak Hour Pass-By Rates

ITE LUC	Land Use	Unit	% New Trips	% Pass-by
	SERVICES:			
911	Bank/Savings Walk-In	1,000 sf	100%	0%
912	Bank/Savings Drive-In	1,000 sf	53%	47%
925	Drinking Place	1,000 sf	100%	0%
931	Quality Restaurant	1,000 sf	56%	44%
932	High-Turnover Restaurant	1,000 sf	57%	43%
934	Fast Food Restaurant w/Drive-Thru	1,000 sf	50%	50%
942	Auto Service	1,000 sf	100%	0%
944	Gas Station with or w/o Convenience Market <2,000 sq ft	fuel pos.	43%	57%
945	Gas Station w/Convenience Market 2,000-2,999 sq ft	fuel pos.	43%	57%
960	Gas Station w/Convenience Market 3,000+ sq ft	fuel pos.	43%	57%
947	Self-Service Car Wash	wash station	100%	0%
	INDUSTRIAL:			
110	General Light Industrial	1,000 sf	100%	0%
140	Manufacturing	1,000 sf	100%	0%
150	Warehouse	1,000 sf	100%	0%
151	Mini-Warehouse	1,000 sf	100%	0%
154	High-Cube Transload and Short-Term Storage Warehouse	1,000 sf	100%	0%

Source: ITE Trip Generation Handbook, 3rd Edition and Orange County

ORDINANCE NO._____

AN ORDINANCE OF THE CITY OF WINTER PARK, FLORIDA, ADOPTING A NEW CHAPTER 59, CITY CODE OF ORDINANCES ENTITLED, "MULTI-MODAL TRANSPORTATION IMPACT FEE," THEREBY CREATING AND IMPOSING A MULTI-MODAL TRANSPORTATION IMPACT FEE ON DEVELOPMENT WITHIN THE CITY LIMITS AND CREATING A MULTI-MODAL TRANSPORTATION IMPACT FEE PROGRAM AND ADOPTING RELATED PROVISIONS; PROVIDING FOR LEGISLATIVE FINDINGS AND ADOPTING A MULTI-MODAL TRANSPORTATION IMPACT FEE STUDY IN SUPPORT OF SUCH IMPACT FEE; PROVIDING FOR CONFLICTS, SEVERABILITY AND AN EFFECTIVE DATE.

RECITALS

WHEREAS, the City Commission has retained the firm of Kimley-Horn and Associates, Inc. to study the technical basis to enact a new multi-modal transportation impact fee program within the City limits; and

WHEREAS, Kimley-Horn and Associates, Inc. has prepared and presented to the City Commission a report titled "Multi-Modal Transportation Impact Fee Report, City of Winter Park, Florida" dated September 2021 (the "Impact Fee Study"), which establishes the proportionate share of new development's impacts on the Transportation Facilities for which impact fees will be collected pursuant to this Ordinance; and

WHEREAS, the Impact Fee Study has been presented to and reviewed by the City Commission, which has determined: (1) that impact fees are necessary to offset the costs to the City associated with meeting the demand for additional Transportation Facilities created by projected new residential and non-residential development; (2) that the amount of the impact fees to be imposed by the City bears a reasonable relationship to the burden imposed upon the City to provide to new development the additional Transportation Facilities addressed in the Impact Fee Study, (3) the expenditure of transportation impact fees, pursuant to the terms of this Ordinance, will result in a beneficial use to such new development reasonably related to the impact fees, per dwelling unit, by type, and per increment of non-residential development; (4) that an "rational nexus" exists between the projected new development and the need for additional Transportation Facilities to be funded via the transportation impact fees; and (5) that the amount of the transportation impact fees is "roughly proportional" to the additional Transportation Facilities needed to provide adequate service to new development; and,

WHEREAS, pursuant to § 163.31801, Florida Statutes:

(a) The Impact Fee Study, and the multi-modal transportation impact fees recommended therein, are based on the most recent and localized data;

(b) This Ordinance includes procedures for accounting and reporting of transportation impact fee collections and expenditures in order to assure compliance with applicable legal standards;

(c) This Ordinance provides for a separate accounting fund for the revenues and expenditures for which an impact fee will be collected;

(d) Administrative fees charged pursuant to this Ordinance for the collection of transportation impact fees are limited to actual costs to the City to administer collection of transportation impact fees;

(e) The City provided notice on the 28th day of September, 2021, which is more than ninety (90) days prior to the effective date of this Ordinance; and

(f) This Ordinance requires audits of the City's financial statements to include an affidavit of the City's chief financial officer stating that the requirements of § 163.31801, Fla. Stat. have been complied with; and

WHEREAS, planning for new roads and multimodal transportation improvements to serve new growth and development that generate additional travel, and the implementation of such planning through the comprehensive planning process is a responsibility of the city under Chapter 163, pt. II (the Community Planning Act), Florida Statutes, and is in the best interest of the health, safety, and welfare of the citizens of the City; and

WHEREAS, the Florida Legislature finds that impact fees are an important source of revenue for a local government to use in funding the infrastructure necessitated by new growth. The Legislature further finds that impact fees are an outgrowth of the home rule power of a local government to provide certain services within its jurisdiction; and

WHEREAS, on November 2, 2021, the City's local planning agency, the Planning & Zoning Board held a hearing on this Ordinance and made a recommendation to the City Commission; and

WHEREAS, the City Commission finds, based on the Impact Fee Study, that multi-modal improvements, including those associated with vehicular, bike, pedestrian, and transit travel, expand the capacity of the City's transportation facilities; and

WHEREAS, the transportation impact fees assessed pursuant to this Ordinance are necessary to ensure the public health, safety, and welfare of the residents of the City of Winter Park;

NOW THEREFORE, BE IN ENACTED BY THE CITY COMMISSION OF THE CITY OF WINTER PARK, FLORIDA AS FOLLOWS:

Section 1. Recitals. The foregoing recitals are hereby ratified and confirmed as being true and correct and are hereby made a part of this Ordinance as legislative findings.

Section 2. City Code Amendment. A new Chapter 59 of the Winter Park Code of Ordinances is hereby adopted to read as follows (words that are ~~stricken out~~ are deletions; words that are underlined are additions):

CHAPTER 59 – MULTI-MODAL TRANSPORTATION IMPACT FEE

Sec. 59-1. Purpose and authority.

(a) The city commission of the City of Winter Park recognizes the urban nature of the city and that growth and development in the city will require that the capacity of the city's multi-modal transportation be expanded in order to maintain adequate levels of service and transportation choices, and that without a funded program for multi-modal transportation improvements, new growth and development would have to be limited in order to protect the health, safety, and welfare of the citizens of the City of Winter Park.

(b) The city commission has completed a study identifying the cost, credit, and demand components of the multi-modal transportation impact fee.

(c) The purpose of this chapter is to ensure that new growth and development that is approved by the city pays a proportional share of the costs of multi-modal transportation facilities needed to serve new growth and development.

(d) This chapter, which requires new development to pay reasonable impact fees, requires new development to pay its proportional share of the reasonably anticipated expansion costs of new multi-modal transportation facilities created by new growth and development to assist the city in effectively implementing and carrying out the city's comprehensive plan, as amended and adopted under § 163.3161 et seq., Florida Statutes, and ensuing capital improvements program in the best interests of the public health, safety, and welfare.

(e) The technical data, findings and conclusions herein are based on the report entitled "Multi-Modal Transportation Impact Fee Report, City of Winter Park, Florida," prepared by Kimley-Horn and Associates, Inc., and dated September 2021 (referred to in this Chapter as the "Technical Report").

Sec. 59-2. Adoption of technical report as basis of impact fees.

The city hereby adopts and incorporates by reference, the report entitled "Multi-Modal Transportation Impact Fee Report, City of Winter Park, Florida," prepared by Kimley-Horn and Associates, Inc., and dated September 2021 (referred to in this Chapter as the "Technical Report"), which was used as the basis for and supports the rates and reasonableness of the impact fees imposed by this chapter.

Sec. 59-3. Interpretations of this chapter.

Interpretation of the provisions of this chapter will be made by the director.

Sec. 59-4. Effect on other regulations and requirements.

(a) This chapter may not be construed to alter, amend, or modify any other provision of the city's code of ordinances, including the city's land development regulations. Other provisions of the city's code of ordinances will be operative and remain in full force and effect regardless of any contrary provisions, definitions, or intentions that are or may be expressed or implied in this chapter.

(b) The payment of impact fees does not entitle the applicant to a building permit or certificate of occupancy unless all other applicable land use, land development, zoning, planning, and other applicable requirements, standards, and conditions have been met. Such other requirements, standards, and conditions are independent of the requirement for payment of multi-modal transportation impact fees required by this chapter.

(c) This chapter, including the specific impact fee ordinances for particular public facilities, does not affect, in any manner, the permissible use of property, density, or intensity of development, design and improvement standards, or other applicable standards or requirements of the city's land development regulations.

Sec. 59-5. Definitions.

The following words, terms, and phrases, when used in this chapter, have the meanings ascribed to them in this section, except where the context clearly indicates a different meaning:

City means the City of Winter Park, Florida.

Demand component of the impact fee means the vehicle miles traveled calculated for each land use, which is comprised of three (3) components: the trip generation rate; trip length; and percent new trips. The components for each land use are set forth in the technical report.

Developer means a person, corporation, limited liability company, partnership, trust, organization, or other legal entity undertaking development.

Development means any construction or expansion of building(s) or structure(s), or any changes in the use of any building(s) or structure(s) or land use that will generate additional impact on the city's public facilities.

Director means the director of the Planning & Transportation Department of the city or his/her designee.

Encumbered means legally obligated or otherwise committed to use by appropriation or contract.

Essential public services means services or buildings owned, managed, or operated by or in the interest of a governmental entity, which provide a function critical to the health, safety, and welfare of the public, but which are not proprietary in nature.

Essential public services may specifically include, but not be limited to, public schools (including charter schools), water and sewer services, emergency services, publicly owned housing, and public safety facilities and services.

Proportional share means that share or portion of the cost of public facility improvements, which is reasonably attributable to or needed to serve a particular development.

Fee payer means a person undertaking development who pays a multi-modal transportation impact fee in accordance with the terms of this chapter.

Impact fee means a fee imposed pursuant to this chapter.

Impact fee account means an account established by the city for the purpose of segregating multimodal transportation impact fee revenues from all other city funds. This fund account shall be titled "multimodal transportation impact fee fund."

Infrastructure shall have the same meaning ascribed to such term in § 163.31801, Florida Statutes, as such definition may be amended or transferred.

Level of service means a measure of the availability and accessibility of public facilities in support of public facility services.

Multi-modal transportation impact fee (or *impact fee*) means a proportional share impact fee, imposed by this chapter, necessary to mitigate the multi-modal capital costs to the city to provide the multi-modal facilities needed to offset the impacts of new residential and nonresidential growth in the city.

Multi-modal facilities means transportation (roadway, bicycle, and pedestrian) and transit facilities, including land, that are planned and designed to provide off-site transportation capacity to new development, in contrast to "on-site" improvements, which are necessary to provide safe and/or efficient access to a particular development. The fact that either type of improvement may have incidental benefits of special or general character may not be considered in determining which facilities are considered a multimodal facility. The character of the improvement will control a determination of whether an improvement meets the definition of a multimodal facility, and the physical location of the improvement on or off-site will not be considered determinative.

Multi-modal capital costs include, but are not limited to, costs associated with the planning, design, and construction of new or expanded roadway, bicycle, and pedestrian improvements to the city's classified road system and transit facilities, which improvements have a life expectancy of five (5) or more years, and the land acquisition, land improvement, design, and engineering costs related thereto. Additionally, such assets must have an individual cost of more than five hundred dollars ($500.00) for tangible personal property or one thousand dollars ($1,000.00) for buildings, improvements, infrastructure, and utility systems. Such costs do not include the cost of repair or maintenance or personnel, training, or other operating costs but do include the following costs as they relate to the provision of multimodal improvements to the city's classified road system and transit facilities:

(1) The cost of all labor and materials;

(2) The cost of all lands, property, rights, easements and franchises acquired, including costs of acquisition or condemnation;

(3) The cost of all plans and specifications;

(4) The cost of all construction, including new through lanes, new turn lanes, new bridges, new drainage facilities in conjunction with roadway improvements which add capacity to the roadway system, new street lighting, new traffic signalization and landscaping, and new curbs, sidewalks, medians and shoulders, all in accordance with the City of Winter Park comprehensive plan and its zoning regulations;

(5) The costs of transit improvements, including lighting, landscaping, bus shelters, bus stops, benches, transfer stations, and park and ride lots;

(6) The cost of bicycle facilities and pedestrian walkway improvements, including bridges;

(7) The cost of relocating utilities to accommodate new roadway construction;

(8) The cost of planning, engineering and legal services;

(9) The cost of all land surveying, and soils and materials testing;

(10) The cost of mitigating negative impacts of construction including natural resource impacts, environmental impacts, noise impacts, air quality impacts, and community impacts;

(11) Intelligent Transportation Systems (ITS); and

(12) Other mobility improvements.

Regardless of the foregoing, multi-modal capital costs do not include any costs to which impact fees may not be applied pursuant to applicable statute.

Non-commencement means the cancellation of construction activity making a material change in a structure, or the cancellation of any other development activity making a material change in the use or appearance of land.

Person means an individual, corporation, governmental agency, business trust, estate, trust, partnership, limited liability company, association, two (2) or more persons having joint or common interest, or any other legal entity.

Public facilities means capacity-adding multi-modal facilities for which impact fees are collected pursuant to this chapter.

Technical report means the "Multi-Modal Transportation Impact Fee Report, City of Winter Park, Florida," prepared by Kimley-Horn and Associates, Inc., and dated September 2021.

Temporary uses means uses that are required in the construction phase of development or are uniquely seasonal in nature, including, but not limited to: contractor's project offices, project sales offices, seasonal sales of trees or farm produce, carnivals, and tent meetings.

Sec. 59-6. Applicability of this chapter.

(a) *Affected area.* This chapter applies to all new development within the city.

(b) *Type of development affected.* Except where specifically exempted by the provisions of this chapter, this chapter applies to all new development.

(c) *Type of development exempted.* The following types of development are exempt from the payment of multi-modal transportation impact fees pursuant to this chapter:

(1) Alterations of an existing dwelling unit where no additional units or square footage are created and the use is not changed;

(2) The construction of accessory buildings or structures that will not increase the traffic generation associated with the principal building or structure or the land;

(3) The replacement of a destroyed or partially destroyed building or structure with a new building or structure of the same size and use;

(4) Temporary uses; and

(5) Essential public services.

(d) *Reductions.* Reductions from the requirement to pay impact fees pursuant to this chapter may be granted only as specifically provided in this chapter.

Sec. 59-7. Collection of impact fees.

(a) Impact fees required by this chapter will be assessed against new development not exempted pursuant to section 59-6(c) and will be collected at the time of issuance of a building permit by the city. Any person who seeks to develop or redevelop real property located in the city by applying for a building permit shall pay the impact fees in the manner and amounts set forth in this chapter, unless such development or redevelopment is exempt pursuant to section 59-6(c). The city commission may, by resolution, establish and collect an administrative charge to offset its actual costs of impact fee collection.

(b) In the event impact fees due under this chapter, or any portion or combination thereof, are not paid when due for any reason, including by mistake or inadvertence, the city shall have the right to proceed to collect such fees as follows:

(1) The city shall serve, by certified mail-return receipt requested and regular U.S. Mail, a notice of nonpayment upon the building permit applicant at the address set forth in the building permit application, and then current owner of the property based on the ownership information appearing on the Orange County Property Appraiser website. Provided the city sends the notice of nonpayment, the applicant's and/or current owner's failure to receive delivery of such notice of nonpayment shall not invalidate or otherwise impact the city's

ability to collect the outstanding amount owed and place and foreclose a notice of lien against the applicable property.

(2) The notice of nonpayment shall contain:

a. A description of the property;
b. Advise the applicant and the property owner of the amount due and the fee and/or charges that were not paid; and
c. Advise that in the event the impact fees are not paid within 30 calendar days from the date of the notice of nonpayment, that a notice of lien against the applicable property for which the building permit was secured may be recorded in the official records of the county and such notice of lien may be foreclosed upon by the city to collect the outstanding sums owed plus accrued interest and attorneys' fees and other collection expenses.

(3) If the amount set forth in the notice of nonpayment is not paid within 30 days from the date of the notice of nonpayment, then:

a. The outstanding balance owed to the city shall accrue interest at the rate of 12 percent per annum until such amount is paid in full;
b. The city may proceed to record a notice of lien against the applicable property in the official records of the county. Once recorded, the notice of lien shall constitute a lien against the property described therein; and
c. A copy of the notice of lien shall be served by U.S. Mail to the applicant and the property owner at the same addresses as set forth in subsection (1) above.

(4) After the expiration of 60 days from the date of recording of the notice of lien, a suit may be filed to foreclose said lien. Such foreclosure proceedings shall be instituted and prosecuted in conformity with the procedures for the foreclosure of liens as set forth in the Florida Statutes. The city shall also have the right to bring an action for monetary judgment to collect past due amounts owed.

(5) The owner shall be responsible for and the city shall be entitled to reimbursement for the payment of all collection expenses and costs, including attorneys' fees and litigation costs and recording and filing fees, incurred by the city in the collection of fees and charges, filing of liens and in actions to foreclose such liens or actions for a monetary judgment.

(6) If impact fees or any portion or combination thereof, have not been paid when due, the city shall have the right to, without notice, immediately withhold the issuance of and not process for review any certificate of occupancy, development permit or development order applications associated with the development and property at issue and may issue and enforce a stop work order on construction associated with the development and property at issue until such fees and charges and the city's associated collection costs are paid in full.

(c) The collection and enforcement procedures set forth in this section shall be cumulative with, supplemental to and in addition to, any applicable procedures provided in any other ordinance or administrative regulations of the city, any applicable law or administrative regulation of the state, or any agreement. Failure of the city to follow the procedure set forth in this section shall not constitute a waiver of its rights to proceed under any other ordinances or administrative regulations of the city, any applicable law or administrative regulation of the state, or any agreement.

Sec. 59-8. Alternative calculation of multi-modal transportation impact fees.

(a) In the event an applicant believes that the cost of off-site transportation improvements needed to serve his or her proposed development is less than the fee established in section 59-20, the applicant may, at no expense to the city, submit an alternative fee calculation to the director, or the director's designee, pursuant to the provisions of this section. At the time of issuance of a building permit, an applicant must pay or defer the assessed impact fee, clearly marked as "under protest," if he or she intends to submit an alternative fee calculation to the city. In such case, the applicant must, no later than ninety (90) days after payment or deferral under protest, notify the city, in writing, of his or her intent to submit the alternative impact fee calculation; failure to provide such written notification shall waive the applicant's right to submit an alternative fee calculation. Such an alternative fee calculation shall be timely submitted to the director for review and approval and is subject to approval by the city commission, including executing and entering into an alternative impact fee agreement with the city, prior to issuance of any certificate of occupancy, temporary or permanent. The alternative impact fee agreement must be in a form and with terms acceptable to the city.

If the data, information, and assumptions used by the applicant to calculate the alternative impact fee satisfy the requirements of this section, the alternative impact fee shall be deemed the impact fee due and owing for the proposed development. The proposed development shall be presumed to generate the maximum number of average daily trips to be generated by the most intensive use permitted under the applicable land development regulations such as the comprehensive plan or zoning regulations or under applicable deed or plat restrictions.

(b) The alternative impact fee shall be calculated by use of the following formula for each land use:

Fee = (Capacity Consumed x Cost of Capacity) – Credit

Where:

Capacity Consumed = ([Trip Rate x Assessable Trip Length x % New Trips] / 2) x (1 - Interstate & Toll Facility Discount Factor)

Cost of Capacity = Cost per Added Lane Mile / Average Vehicle-Capacity Added per Lane Mile

Credit = Present Value Gas Tax Credit + Present Value of Ad Valorem Credit, given 4.0% interest rate and a 25-year facility life

Trip Rate = the average daily trip generation rate for the type of development (land use) proposed, in vehicle-trips/day

Assessable Trip Length = the average trip length on collector roads or above, for the proposed land use, in miles (this excludes travel on local neighborhood roads).

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

% New Trips = adjustment factor to account for pass-by trips associated with the proposed land use that are already on the roadway

Divide by 2 = the total daily miles of travel generated by the proposed land use 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 travel demand occurring on interstate highways and/or toll facilities

Cost per Added Lane Mile = unit cost to construct one lane mile of roadway, including multi-modal elements, in $/lane-mile ($4,540,000)

Average Vehicle-Capacity Added per Lane Mile = represents the average daily traffic on one travel lane at capacity for one lane mile of roadway, in vehicles/lane-mile/day (9,000)

Cost per Vehicle-Mile of Capacity = Cost per added lane mile divided by average capacity added per lane mile ($504.44)

$Tax/Gallon to Capital = the amount of equivalent gas tax revenue per gallon of fuel that is used for capital improvements, in $/gallon ($0.197)

Fuel Efficiency = average fuel efficiency of vehicles, in vehicle-miles/gallon (18.92)

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 4.00% interest and a 25-year facility life, the uniform series present worth factor is 15.6221

Effective Days per Year = 365 days

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

Ad Valorem Credit = present value of the amount of ad valorem taxes used toward transportation capacity, calculated based on the projected property value of the proposed land use (see calculations in Appendix D of Appendix A to the City of Winter Park Multi-Modal Transportation Impact Fee Report, 2021)

Fees are based on the applicable Trip Rate variable (i.e., 1,000 square feet, dwelling unit, rooms, etc.). The total impact fee is calculated as the size of the proposed development (measured by the Trip Rate variable) x the alternative impact fee (per the Trip Rate variable).

Sec. 59-9. Credits.

(a) Any person who initiates any development may apply for a credit against the impact fees imposed by this chapter for any contribution, payment, construction, or dedication of land accepted and received by the city for public facilities, not otherwise required in order to obtain development approval, consistent with the capital improvements program, including all public facilities capital costs. Consistent with state law, the city must credit against the collection of the impact fees any contribution, whether identified in a proportionate share agreement or other form of exaction, related to public facilities or infrastructure, including land dedication, site planning and design, or construction. Any such contribution must be applied on a dollar-for-dollar basis at fair market value to reduce any impact fee to be collected for the general category or class of public facilities or infrastructure for which the contribution was made.

(b) Development agreements entered into prior to the adoption of this chapter that contained public facility improvements may be entitled to a credit under the provisions of this section if the improvement is a public facility and is consistent with the capital improvements program.

(c) A developer may apply for a credit against the impact fees imposed by this chapter upon development of a vacant parcel or the redevelopment of a parcel. It is the responsibility of the developer to provide evidence to the director as to the highest intensity building or structure constructed, or previously constructed upon the parcel by which to calculate the reduction in the total amount of impact fees otherwise required for the subject parcel. If this evidence cannot be ascertained, the city must use the trip generation rate of the last known building or structure on the parcel to determine whether payment of additional impact fees apply. If the parcel to be developed has been, or may be, annexed into the city, this credit must be based upon recognition of the trip generation of the highest intensity building or structure in existence prior to the annexation, at the time of annexation, or post-annexation.

(d) Except as limited above, if an applicant is entitled to a credit, such credit must be equal to the dollar value of the cost of the public facilities contributed, paid for, constructed, or dedicated to the city, based on the following criteria:

(1) The value of the construction of an improvement or the value of conveyed capital equipment shall be based upon the actual cost of construction or acquisition of said improvement or capital equipment as certified by a professional architect or engineer as registered by the State of Florida or as shown by a manufacturer's or supplier's invoice. However, as to the construction of improvements to land, in no event shall any credit be granted in excess of the estimated construction costs provided by a professional architect or engineer as registered by the State of Florida and approved by the city as reasonable, unless the construction project is competitively bid, in which case, the credit shall be limited to the actual cost of construction. The cost of professional services shall be reasonable as approved by the city and in accordance with local industry standards, in order to be eligible for impact fee credits. In the city's determination of

reasonableness of the costs of construction, capital equipment and professional services, among other things, the city shall have the right to review and evaluate cost information provided by the applicant or property owner and use and rely on the opinion of other professionals; and

(2) The value of conveyed land shall be based upon a written appraisal of fair market value as determined by a Member Appraisal Institute (MAI) appraiser who was selected and paid for by the applicant, and who used generally accepted appraisal techniques. If the appraisal does not conform to the requirements of this section and any applicable administrative regulations, the appraisal shall be corrected and resubmitted. In the event the city manager or city manager's designee disagrees with the appraised value, he or she may engage another MAI appraiser at the city's expense and the value shall be an amount equal to the average of the two appraisals. If either party does not accept the average of the two appraisals, a third appraisal shall be obtained, with the cost of said third appraisal being shared equally by the city and the owner or applicant. The third appraiser shall be selected by the first two appraisers and the third appraisal shall be binding on the parties.

(e) The developer shall initiate a determination of entitlement to credit by submitting a proposed credit agreement to the director. The credit agreement must include the following information:

(1) The property and project for which the credit agreement is being proposed;

(2) A proposed plan of specific public facility improvements, prepared and certified by a duly qualified and licensed Florida engineer;

(3) The estimated costs for the suggested public facilities improvements consistent with the definition of public facilities capital costs, which shall be based on local information for similar public facilities improvements, along with a construction timetable for the completion of such improvements;

(4) A legal description and sketch for any land proposed to be conveyed to the city and a written appraisal prepared in conformity with subsection (d)(2) of this section; and

(5) General terms of a credit agreement as the director, the city manager and/or the city attorney may require.

(f) The proposed credit agreement shall be prepared by qualified professionals in the field of planning and engineering, impact analysis, and economics, as related to the particular impact fee to be credited.

(g) Within ten (10) business days of receipt of the proposed credit agreement, the director shall determine if the proposal is complete. If it is determined that the proposed credit agreement is not complete, the director will send a written statement to the applicant outlining the deficiencies. The director shall take no further action on the proposed credit agreement until all deficiencies have been corrected or otherwise settled.

(h) Once the director determines the credit agreement is complete, the director will review it within thirty (30) business days, to determine: (1) if such proposed credit agreement is in conformity with needed contemplated improvements and additions to the city facilities impacted by the construction; (2) if the proposed conveyance of land or capital equipment and construction by the applicant is consistent with the public interest; (3) if the proposed time schedule is consistent with the capital improvement program for the city facilities impacted by the construction. If the director determines that either the suggested public facilities improvement is not consistent with the capital improvements program or that the proposed costs are not acceptable, the director may propose a suggested public facility improvement similar to that proposed, but consistent with the provisions of this chapter. The director will make a recommendation to the city commission on the proposed credit agreement when such matter is scheduled for consideration.

(i) If the proposed credit agreement is approved by the city commission, a credit agreement will be prepared and signed by the applicant and the city. The credit agreement must specifically outline the public facility improvement that will be constructed by the applicant, the time by which it shall be completed, and the dollar credit the applicant will receive for construction of the public facilities improvement.

(j) Within ten (10) business days after execution by the city, the credit agreement will be recorded with the Orange County Clerk of the Court.

(k) Credits shall expire 36 months from the effective date of the credit agreement. No credits given shall exceed the total amount of impact fees that become due under this chapter concerning impact construction upon the property.

Sec. 59-10. Use of funds collected; impact fee accounts.

(a) There is hereby established a separate trust fund account titled the "multi-modal transportation impact fee fund." Impact fees collected pursuant to this chapter must be used solely for the purpose of acquisition, expansion, and development of infrastructure as identified in the capital improvements program, the need for which results from and the provision of which will benefit new development paying impact fees. Allowable expenditures include, but are not limited to:

(1) Public facilities and public facilities capital costs identified in the capital improvements program;

(2) Repayment of monies transferred or borrowed from any budgetary fund of the city which were used to fund the acquisition, expense and development of the public facilities identified in the capital improvements program;

(3) Payment of principal and interest, necessary reserves and costs of issuance under any bonds or other indebtedness issued by the city to provide funds for acquisition, expansion and development of public facilities identified in the capital improvements program; and

(4) Administration of the city's impact fee program to the extent that such administration costs do not exceed actual costs.

(b) Impact fees collected will be encumbered for the construction of public facilities within seven (7) years of the date of collection.

(c) In order to ensure that impact fee revenues are earmarked and spent solely for the expansion of public facilities necessary to offset the impacts of new development, the following provisions apply:

(1) The city shall establish and maintain a separate impact fee account for which the impact fee is collected, in accordance with the provisions of this chapter. This fund shall be the multimodal transportation impact fee fund.

(2) Impact fees must be spent solely for capacity-adding improvements to the city's multimodal transportation system.

(3) Any amounts in the multimodal transportation impact fee fund not immediately necessary for expenditure must be invested in an interest bearing account, and all interest income derived from such investments must be deposited in the multimodal transportation impact fee fund.

(d) Impact fee revenues must remain segregated from other city funds, and only impact fees and accrued interest may be maintained in the multimodal transportation impact fee fund.

(e) Amounts withdrawn from the multi-modal transportation impact fee fund must be used solely in accordance with the provisions of this chapter. Amounts on deposit in the multimodal transportation impact fee fund must not be used for any expenditure that would be classified as a maintenance, operations, or repair expense.

Sec. 59-11. Refunds.

(a) In the event multi-modal transportation impact fees are not encumbered within seven (7) years from the date of collection, the city will refund the amount of the fee along with accrued interest to the owner of the land for which the fee was collected upon the request of the owner of the land. For purposes of refunds, the owner of the land on which an impact fee was paid is the owner of record at the time that the refund is paid. The owner of the property on which an impact fee has been paid has standing to file suit for a refund under the provisions of this section. No action may be commenced following one (1) year after the date of expiration of the required encumbrance date.

(b) A refund application must include the following information:

(1) A notarized sworn statement that the fee payer paid the impact fee for the property and the amount paid;

(2) A copy of the dated receipt issued by the city for payment of the fee;

(3) A certified copy of the latest recorded deed for the property; and

(4) A copy of the most recent ad valorem tax bill.

(c) Within ten (10) business days of receipt of a refund application, the director shall determine if it is complete. If the director determines the refund application is not complete, he or she shall send a written statement specifying the deficiencies by mail to the person submitting the refund application. Unless the deficiencies are corrected, the director will take no further action on the refund application.

(d) When the director determines the refund application is complete, the director shall review it within ten (10) business days and approve the proposed refund if he or she determines that the city has not spent or encumbered an impact fee within seven (7) years from the date the fees were paid.

(e) When the refund application is approved, the money will be returned with interest actually accrued, less any administrative charges paid to offset the city's costs of collection.

(f) Any fee payer may appeal the director's decision regarding a refund application by filing a notice of appeal with the city auditor and clerk within ten (10) business days of the date of the director's decision. The city commission shall hold a de novo public hearing to consider the appeal and may affirm, affirm with conditions, or reverse the decision of the director.

Sec. 59-12. Updating, annual reporting, and audits.

(a) At least once every five (5) years, the city shall update the technical report, which provides the basis for the multimodal transportation impact fees imposed under this chapter.

(b) On an annual basis, a report to the city commission must be made on the following:

(1) The amount of impact fee revenues currently on account for which impact fees are collected;

(2) The amount and nature of any expenditure or encumbrance of impact fees since the prior annual report; and

(3) The amount and nature of any planned expenditures or encumbrances of impact fees prior to the next annual report.

(c) Audits of the city's financial statements, which are performed by a certified public accountant pursuant to § 218.39, Florida Statutes, as may be amended or transferred, and submitted to the auditor general, must include an affidavit signed by the finance director, stating that the city has complied with the requirements of § 163.31801, Florida Statutes, as may be amended or transferred.

(d) All updates and annual adjustments to this chapter must comply with statutory requirements for notice and publication.

Sec. 59-13. Appeals.

(a) *Initiation.* A fee payer may appeal a final decision of the director made pursuant to any provision of this chapter to the city commission, by filing a written appeal with the city, within ten (10) business days of the decision. The appeal must include a written notice stating and specifying briefly the grounds of the appeal. The city shall place the appeal on the city commission's agenda for a regularly scheduled meeting or a special meeting called for that purpose, and forward the record of the matter that is on appeal to the city commission.

(b) *Record.* The record considered by the city commission will be the record of the application associated with the final decision being appealed and any other documents related to such decision.

(c) *Notice.* The city shall provide the applicant at least fifteen (15) calendar days' notice of the appeal before the city commission by mail or hand delivery.

(d) *Hearing on appeal.* At the hearing on the appeal, the city commission shall provide the appellant an opportunity to identify the grounds for the appeal and the basis for the director's alleged error on the decision, based on the record. To the extent relevant, the director will be allowed to respond, based on the record. After the presentations, the city commission may hear from any other person(s) it deems appropriate and then, based on the testimony heard at the hearing and the record, affirm, modify, or reverse the decision of the director.

(e) *Standards.* To reverse a decision of the director, the city commission must find that there is a clear and demonstrable error in the application of the facts in the record to the applicable standards set forth in this chapter. If the city commission reverses or modifies the decision, it must provide the director clear direction on the proper decision. In no case does the city commission have the authority to negotiate the amount of the impact fees or waive the impact fees otherwise specified in this chapter. The decision of city commission is final.

(f) *Form of decision.* The city commission's decision on the appeal must be in writing and include findings of fact and the application of those facts to the relevant standards.

Sec. 59-20. Multi-modal Transportation Impact Fee Schedule

(a) *Multi-modal impact fee schedule*. A multi-modal impact fee will be assessed and collected from new development pursuant to all applicable provisions of this chapter, in accordance with the following fee schedule:

Winter Park Multi-Modal Transportation Impact Fee Schedule

ITE LUC	Land Use	Unit	Fee
-	**Residential**	-	-
210	Single Family (Detached): ≤ 1,200 sf	DU	$6,425
210	Single Family (Detached): 1,201-2,000 sf	DU	$8,218
210	Single Family (Detached): 2,001-3,500 sf	DU	$10,163
210	Single Family (Detached): > 3,500 sf	DU	$10,640
220	Multi-Family Housing/Townhouse (Low-Rise, 1-2 floors)	DU	$5,937
221	Multi-Family Housing (Mid-Rise, 3-10 floors)	DU	$4,395
222	Multi-Family Housing (High-Rise, > 10 floors)	DU	$3,580
225	Student Housing (Adjacent to Campus)	Bedroom	$1,246
225	Student Housing (Over 1/2 mile from Campus)	Bedroom	$2,410
231	Mid-Rise Residential w/ first floor Commercial	DU	$2,744
232	High-Rise Residential w/ first floor Commercial	DU	$1,571
240	Mobile Home Park	DU	$3,054
251	Senior Adult Housing - Detached (Retirement Community/Age-Restricted Single Family)	DU	$2,975
252	Senior Adult Housing - Attached (Retirement Community/Age-Restricted Single Family)	DU	$2,220
265	Time Share	DU	$5,343
-	**Lodging**	-	-
310	Hotel/Tourist Hotel	Room	$3,033
320	Motel	Room	$1,440
-	**Recreational**	-	-
430	Golf Course	Acre	$2,841
437	Bowling Alley	1,000 sf	$7,993
444	Movie Theater w/ or w/out Matinee	1,000 sf	$20,895
491	Racquet Club	1,000 sf	$12,734
492	Health/Fitness Club	1,000 sf	$22,428
N/A	Dance Studio (Martial Arts/Music Lessons)	1,000 sf	$8,010
-	**Institutional**	-	-

522	School	1,000 sf	$6,998
560	Public Assembly	1,000 sf	$3,284
565	Day Care	1,000 sf	$9,446
	Medical		
610	Hospital	Bed	$15,641
620	Nursing Home	1,000 sf	$1,899
640	Animal Hospital/Veterinary Clinic	1,000 sf	$4,047
	Office		
710	General Office: ≤ 50,000 sf	1,000 sf	$8,133
710	General Office: 50,001-100,000 sf	1,000 sf	$7,953
710	General Office: 1000,001-200,000 sf	1,000 sf	$7,790
710	General Office: > 200,000 sf	1,000 sf	$7,621
720	Small Medical/Dental Office: (≤ 10,000 sf)	1,000 sf	$18,872
720	Medical/Dental Office	1,000 sf	$27,101
732	Post Office	1,000 sf	$42,202
	Retail		
815	Free-Standing Discount Store	1,000 sf	$11,105
816	Hardware/Paint	1,000 sf	$1,079
820	Retail: ≤ 50,000 sfgla	1,000 sfgla	$10,051
820	Retail: 50,001-100,000 sfgla	1,000 sfgla	$11,052
820	Retail: 100,001-200,000 sfgla	1,000 sfgla	$10,052
820	Retail: 200,001-300,00 sfgla	1,000 sfgla	$9,852
820	Retail: 300,001-400,000 sflga	1,000 sfgla	$9,676
820	Retail: 400,001-500,000 sfgla	1,000 sfgla	$9,667
820	Retail: 500,000-1,000,000 sfgla	1,000 sfgla	$10,244
820	Retail: 1,000,001-1,200,000 sfgla	1,000 sfgla	$10,476
820	Retail: > 1,200,000 sfgla	1,000 sfgla	$10,770
840/ 841	New/Used Auto Sales	1,000 sf	$11,875

850	Supermarket	1,000 sf	$16,070
853	Convenience Market w/ Gas Pumps	1,000 sf	$33,899
862	Home Improvement Superstore	1,000 sf	$6,359
863	Electronics Superstore	1,000 sf	$5,427
880/ 881	Drug Store	1,000 sf	$8,916
Services			
911	Bank/Savings Walk-In	1,000 sf	$8,404
912	Bank/Savings Drive-In	1,000 sf	$14,868
925	Drinking Place	1,000 sf	$15,293
931	Quality Restaurant	1,000 sf	$27,456
932	High-Turnover Restaurant	1,000 sf	$31,605
934	Fast Food Restaurant w/ Drive Thru	1,000 sf	$74,592
942	Auto Service	1,000 sf	$9,708
944	Gas Station w/ or w/out Convenience Market: ≤ 2,000 sf	Fuel Pos.	$9,799
945	Gas Station w/ or w/out Convenience Market: 2,000-2,999 sf	Fuel Pos.	$11,709
960	Gas Station w/ Convenience Market: ≥ 3,000 sf	Fuel Pos.	$13,136
947	Self-Service Car Wash	Wash Station	$20,980
Industrial			
110	General Light Industrial	1,000 sf	$3,117
140	Manufacturing	1,000 sf	$2,447
150	Warehousing	1,000 sf	$1,050
151	Mini-Warehouse	1,000 sf	$578
154	High-Cube Transload and Short-Term Storage Warehouse	1,000 sf	$839

Section 3. Codification. Section 2 of this Ordinance will be incorporated into the Winter Park City Code. Any section, paragraph number, letter and/or any heading may be changed or modified as necessary to effectuate the foregoing. Grammatical, typographical, and similar or like errors may be corrected, and additions, alterations, and omissions not affecting the construction or meaning of this ordinance and the City Code may be freely made.

Section 4. Severability. If any section, subsection, sentence, clause, phrase, word or provision of this Ordinance is for any reason held invalid or unconstitutional by any court of

competent jurisdiction, whether for substantive, procedural, or any other reason, such portion shall be deemed a separate, distinct and independent provision, and such holding shall not affect the validity of the remaining portions of this Ordinance.

Section 5. Conflicts. In the event of a conflict or conflicts between this Ordinance and any other Ordinance or provision of law, this Ordinance governs and controls to the extent of any such conflict.

Section 6. Directions to City Staff. City Staff under the direction of the City Manager are directed and authorized to take such actions as are necessary and advisable to effect and carry out this Ordinance.

Section 7. Effective Dates. This Ordinance shall become effective on January 1, 2022 after its adoption by the City Commission of the City of Winter Park, Florida.

First Reading held on November 10, 2021

Second Reading held on December 8, 2021

ADOPTED at a regular meeting of the City Commission of the City of Winter Park, Florida, held in City Hall, Winter Park, on this _____ day of _____, 2021.

_____
Mayor Phil Anderson

ATTEST:

_____
Rene Cranis, City Clerk