Orange County
Transportation Impact Fee Update

FINAL REPORT

Prepared for:

Orange County
Transportation Planning Department
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September 5, 2012
(amended November 2012)

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Tindale-Oliver & Associates, Inc.
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September 5, 2012

Mr. Renzo Nastasi
Transportation Planning Manager
Orange County Transportation Planning Division
4200 S. John Young Parkway, 2nd Floor
Orlando, Florida 32839

RE: Transportation Impact Fee Update Study

Dear Mr. Nastasi:

Enclosed is the Final Technical Report for the Orange County Transportation Impact Fee Update Study, which incorporates both Phase I and Phase II analyses. If you should have any questions concerning this report, please do not hesitate to contact me or Nilgün Kamp.

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

Sincerely,

Tindale-Oliver & Associates, Inc.

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

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Transportation Impact Fee Update Study
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Introduction

Orange County's Transportation Impact Fee Ordinance was originally adopted in 1985 and went into effect in 1986 to assist the County in providing adequate transportation facilities for expected growth. The fee has since been updated three times, with the most recent update occurring in 2004. Orange County has retained Tindale-Oliver & Associates (TOA) to prepare an update study to reflect changes to the cost, credit, and demand components since 2004. In addition, this update study also develops a separate multi-modal fee for the designated Alternative Mobility Area (AMA). This multi-modal fee will be collected in place of the transportation impact fee within the designated area, allowing for revenues to be spent on roadway, bicycle/pedestrian facilities, and transit capacity expansion projects. It should be noted that figures calculated in this study represent the technically defensible level of impact fees that the County could charge; however, the Board of County Commissioners may choose to discount the fees as a policy decision.

The primary changes to the methodology used in the 2004 technical study include the following:

- In determining the roadway cost component, the 2004 study used an approach where, on a lane addition project, costs associated with reconstruction of existing lanes were excluded from the calculation. This "historical" method was revised to use a more traditional approach where the entire cost associated with a lane addition project is incorporated in determining the cost per lane mile added. This approach recognizes that cost to make the additional capacity available is the total cost of the lane addition project. Although the "traditional" approach calculates a higher cost and therefore a higher fee, as indicated above, the Board of County Commissioners may choose to discount the calculated fee rate as a policy decision.

- Two changes have been made concerning the demand component. These changes were made to more accurately calculate the demand created by new development land uses and are described in the following paragraphs.

  - The demand component in the 2004 study relied primarily on the Orlando Urban Area Transportation Study (OUATS) travel demand data to determine trip length. The 2012 update study uses information from the prior 2004 Orange County study and TOA's database of impact fee trip characteristics studies collected throughout Florida to calculate the trip length and percent new trips used in the demand component.
  - The demand component in the 2004 study for trip generation rate used data from the Institute of Transportation Engineers (ITE) *Trip Generation Seventh Edition, 2003* and percent new trips data from the *Trip Generation Handbook, 2001* and the 1985 prior study. The 2012 update study uses data from the ITE *Trip Generation Eighth Edition, 2008*, the prior 2004 Orange County study and TOA's database of trip characteristics studies that included trip generation rate data specifically collected as part of transportation impact fee studies.

- For the Orange County AMA, a multi-modal fee was calculated that accounts for travel on several modes of transportation, including roadways, bicycle/pedestrian facilities, and transit facilities. This fee is only collected in the AMA (in place of the transportation impact fee) and allows for flexible spending on roadways, bicycle/pedestrian facilities, and transit facilities within the AMA. The County established the AMA as an extension of the existing Orlando Transportation Concurrency Exception Area (TCEA) for the purpose of reducing the adverse impacts that transportation concurrency may have on urban infill development and redevelopment. The creation of the AMA is also a step toward the achievement of other goals and policies such as promoting the development of public transportation and maximizing the use of existing public infrastructure in established areas of the County.

  According to information obtained from the Orange County Planning Division, the County requires new development and redevelopment in the AMA to support alternative modes of transportation by providing context-appropriate infrastructure that will contribute to specific and identified multi-modal needs within the AMA. Transportation network connectivity is to increase in the AMA by emphasizing direct pedestrian, bicycle, and, where appropriate, vehicular access to transit and surrounding development. All land use and development located within the AMA are exempt from transportation concurrency. A level of service evaluation is used to determine the necessary improvements (if failing) through multimodal strategies.

Following the introduction, this report provides the results of the fee analysis and consists of the following sections:

- Demand Component

- Cost Component
- Credit Component
- Calculated Transportation Impact Fee Schedule
- Transportation Impact Fee Schedule Comparison
- Benefit Districts Review
- AMA Implementation Evaluation
- Smart Growth Application to Impact Fees

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) or person-miles of travel (PMT) 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 existing deficiencies cannot be corrected with impact fee revenues. 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.

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 the transportation system is expressed in units of VMT (daily trip generation rate times the trip length times the percent new trips [of total trips]) or PMT (VMT times the person-trips factor) for each land use contained in the impact fee schedule. The trip generation is expressed in average daily rates since new development consumes trips on a daily basis. The cost of building new capacity typically is expressed in units of dollars per vehicle mile or lane mile of roadway capacity (or person-miles of capacity for the AMA). The credit is an estimate of the future non-impact fee revenues generated by new development that are allocated to transportation capacity expansion construction projects. Thus, the impact fee is an "up front" payment for a portion of the cost of building a lane mile of capacity directly related to the amount of capacity consumed by each unit of land use contained in the impact fee schedule that is not paid for by future tax revenues generated by new development.

It should be noted that the information used to develop the impact fee schedule was based on the most recent, reliable, and localized data available. The following input variables used in the fee equation:

Demand Variables:

- Trip generation rate
- Trip length
- Percent new trips
- Interstate and toll facility discount factor
- Vehicle occupancy rate (AMA only)

Cost Variables:

- Cost per lane mile
- Capacity added per lane mile
- Transit capital cost per mile of capacity (AMA only)

Credit Variables:

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

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

Demand Component

Travel Demand

The amount of transportation system consumed by a unit of new land development is calculated using the following variables and is measured in terms of the person miles of new travel a unit of development consumes on the existing transportation system (in the case of AMA), and vehicle miles of new travel a unit of development consumes on the existing road system (rest of the county).

- Number of daily trips generated;
- Average length of those trips;
- Proportion of travel that is new travel, rather than travel that is already traveling on the road system; and
- Vehicle occupancy rate (AMA only).

As part of this update, the trip characteristics variables were obtained primarily from four sources: (1) local studies conducted in Orange County, (2) similar studies previously conducted throughout Florida by TOA (Florida Studies Database), (3) information contained in the 2004 Orange County Transportation Impact Fee study, and (4) the Institute of Transportation Engineers' (ITE) *Trip Generation* report (8th edition).

The Florida Studies Database (including Orange County studies) is included in Appendix A. This database was used to determine VMT, which is developed from trip length, percent new trips, and trip rate for most land uses. The data in the trip characteristics database is based on actual land use studies and was collected throughout Florida using machine traffic counts and site specific land use origin-destination surveys. This data represents a more localized and accurate measure of trip characteristics than the information previously used in the County's transportation impact fee calculation. In addition, trip generation data from the *ITE 8th Edition Trip Generation* report was used.

In instances where trip generation was available from the *ITE Trip Generation* report and the Florida Studies Database, a blended average calculation was used to increase the sample size. For land uses not included in the ITE Trip Generation Report or in the Florida Studies Database, the demand variables from the 2004 Orange County Transportation Impact Fee study were used in the impact fee calculation.

It should be noted that trip lengths for all land uses were adjusted to account for differences between the average trip lengths included in the Florida Studies Database and the trip length within Orange County compared to other counties, based on Florida Standard Urban Transportation Model Structure (FSUTMS) model results. More specifically, the 2030 Orlando Urban Area Transportation Study (OUATS) model data suggested that trip lengths are typically longer in Orange County compared to other Florida counties. As such, residential, lodging, recreation, and office land use trip lengths were increased by 20 percent, while institution, retail, and industrial land use trip lengths were increased by five (5) percent. These adjustments are consistent with the adjustments applied to the trip lengths of other Florida County Transportation Impact Fee studies conducted by TOA and is further documented in Appendix A. This increase is applied to the average trip lengths for the applicable land uses found in the Florida Studies Database.

For the multi-modal fee calculation for the Alternative Mobility Area (AMA), it is necessary to estimate travel in units of person-miles, which indicates the number of miles traveled by each person on a trip. For example, if two people are traveling together take a six-mile bus ride to their destination, this trip results in 12 person miles of travel. A four-mile van trip with a driver and three passengers amounts to 16 person miles of travel. Vehicle-trips were converted to person-trips by applying a vehicle-trip to person-trip conversion factor of 1.30. This value represents the average vehicle occupancy rate and was derived based on a review of Orange County data from the OUATS model, nationwide travel data, and vehicle occupancy levels observed in other communities throughout Florida.

Tourist Hotel Land Use

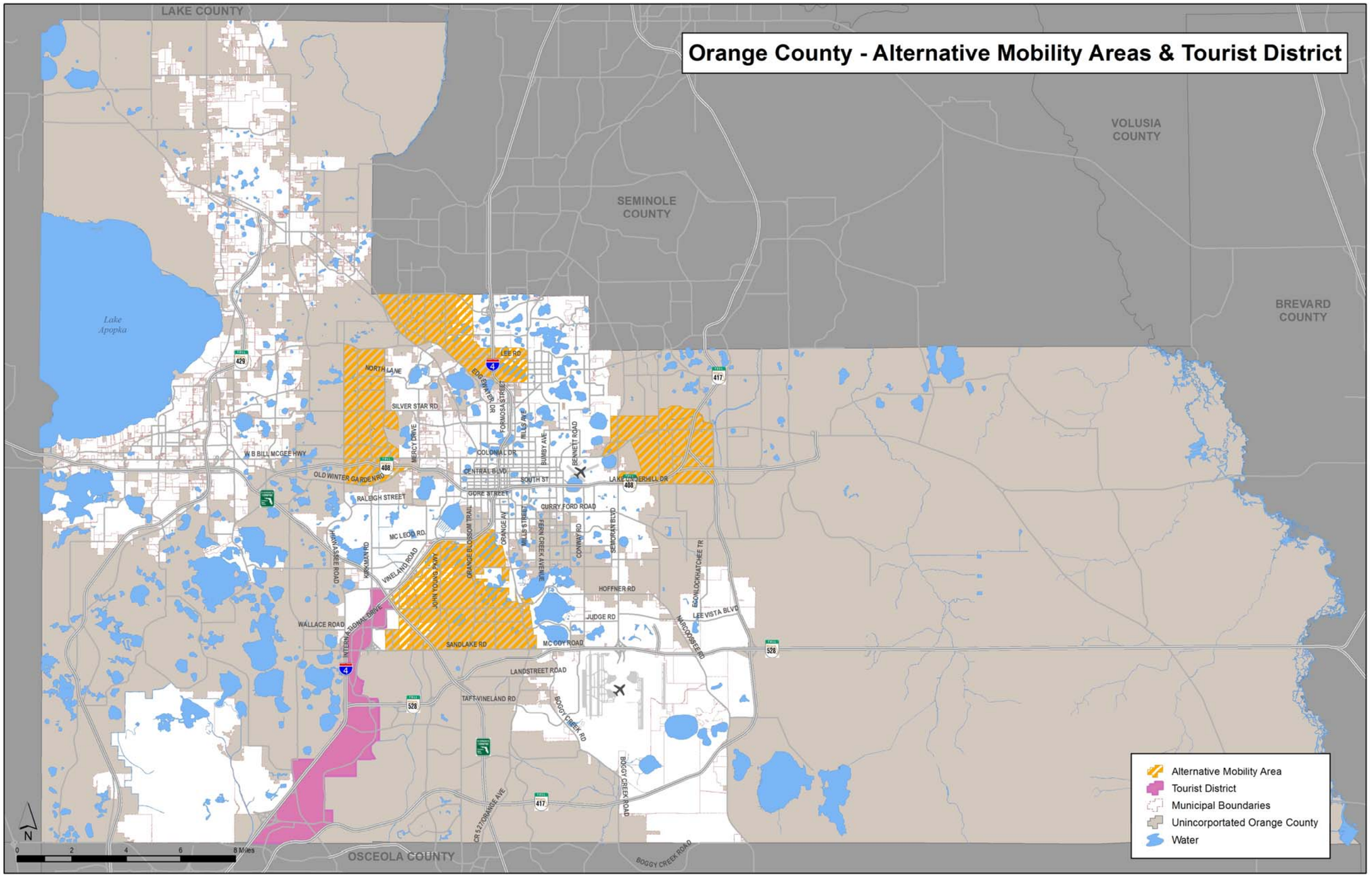
Additionally, local trip characteristics studies involving land uses along the "tourist" stretch of International Drive (see Map 1) were reviewed for inclusion in the impact fee schedule. The "tourist" stretch includes the portion of International Drive between the Orange/Osceola County line and the Orlando city limits with the boundaries set by the International Drive Master Transit and Improvement District Municipal Service Taxing Unit (Resolution No. 92-M-64). Due to their location, these developments experience unique travel characteristics because of their interdependent nature and the area's extensive transit resources and pedestrian networks.

Historically, the trip generation rates for land uses included in the impact fee schedule are determined based on nationwide data collected by the Institute of Transportation Engineers (ITE). Additionally, this

data is combined with more localized data, if available; to better reflect local travel characteristics. The ITE 8th Edition Trip Generation Manual does not provide data on "tourist" hotels and does not indicate that any of the hotel sites included in their dataset have "tourist" or other unique characteristics. While ITE does include a resort hotel land use in their dataset, there is only one corresponding study. Furthermore, ITE defines resort hotels as including recreational facilities such as golf courses, tennis courts, and beach access, which are not necessarily applicable to the Orange County tourist district. Therefore, the trip generation rate for tourist hotel is based on recent local studies conducted on tourist hotel developments within the Orange County Tourist District.

Based on a review of alternative trip characteristics studies completed for 12 tourist hotel developments along International Drive, it was determined that tourist hotels have a lower trip generation rate than a typical hotel land use. Based on these local studies, future tourist hotels will be assessed using a trip generation of 5.77 trips per 1,000 sf. This lower trip generation rate reflects the fact that many hotel patrons utilize the extensive transit and pedestrian resources offered in the area. However, the trip length and percent new trips factor for tourist hotels will remain the same as those used for the standard hotel land use (LUC 310) listed in the impact fee schedule. Additional support data is presented in Appendix A.

Map 1 – Orange County Tourist District



Interstate and Toll Facility Discount Factor

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

To calculate the interstate and toll (I/T) facility discount factor, the loaded highway network file was generated for the Orlando Urban Area Transportation Study Florida Standard Urban Transportation Model Structure (OUATS FSUTMS 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/toll facilities in Orange County include SR 528 (Bee Line Expressway), SR 408 (E-W Expressway – Orlando), SR 417 (Central Florida Greenway), SR 429 (W. Beltway in Orlando), the Florida Turnpike, and I-4. The limited access vehicle miles of travel (Limited Access VMT) for trips with an origin and/or destination within Orange 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 Orange County for all roads, including limited access roads, located within Orange County.

The I/T discount factor of 28.8 percent was determined by dividing the total Limited Access VMT by the Total Orange County VMT. By applying this factor to the total Orange County VMT, the reduced VMT is then representative of only the roadways which are funded by impact fees. For purposes of this update, an interstate/toll facility discount factor of 28.8 percent was used in the calculation of the impact fee rate for each land use.

Cost Component

Construction costs increased significantly in Florida and in Orange County between 2005 and 2007 due to additional construction demand caused by hurricanes, the housing market growth, and other factors. Appreciation in land values also resulted in higher right-of-way (ROW) costs during the same period. In early 2008, costs started to stabilize, and in recent years, communities have experienced a decrease in construction and ROW costs, returning to levels seen before 2005. Cost information from Orange County and roadway cost information from 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 transit facilities was reviewed and included in the cost component calculations for the AMA fee rate. The following subsections summarize the methodology and findings of the total unit cost analysis for county roads and for the additional modes considered in the AMA. Appendix B provides the data and other support information utilized in these analyses.

Recent Cost Trends

This section illustrates the recent trend in roadway costs for county roads in Orange County between 2004 and 2012. However, since the 2004 study, the methodology for calculating the unit cost for a roadway has been updated. Orange County's 2004 study incorporated an approach where costs associated with reconstruction of existing lanes (as part of a lane addition project) were excluded from the calculation. This "historical" method resulted in a lower cost per lane mile value. For example, using the historical method, a 2 to 4 lane improvement that is 1.5 miles long would include the 2 lanes of existing roadway in the lane mile calculation (4 lanes x 1.5 miles = 6 lane miles added). Unlike this historical method, which includes the reconstruction of existing lanes in the lanes miles added and construction cost per lane mile calculation, the more commonly used "traditional" method attributes roadway costs per lane mile to only the additional lanes of travel being created. Using the same example, a 2 to 4 lane improvement would only attribute costs to the two additional lanes (2 lanes x 1.5 miles = 3 lane miles added).

Table 1 presents the design, right-of-way, and construction costs per lane mile (using the traditional method) for local projects used in the 2004 study, the 2009 study (not adopted), and the 2012 update study.

Table 1
Trend Comparison of the Cost per Lane Mile for County Roads (Traditional Method)

Cost Phase	Capacity Added Lane Miles	Total Cost of All Projects	Cost per Lane Mile	Percent Change (by Study)
Design				
2004 Report(1)	37.76	$9,894,507	$262,037	-
2009 Report(2)	35.56	$15,471,926	$435,094	66.0%
2012 Report(3)	37.98	$10,787,934	$284,042	-34.7%
Right-of-Way				
2004 Report(1)	37.76	$39,657,330	$1,050,247	-
2009 Report(2)	35.56	$40,095,487	$1,127,545	7.4%
2012 Report(3)	39.34	$50,024,609	$1,271,597	12.8%
Construction				
2004 Report(1)	37.76	$75,270,362	$1,993,389	-
2009 Report(2)	35.56	$127,804,634	$3,594,056	80.3%
2012 Report(3)	53.16	$136,614,650	$2,569,877	-28.5%
Total Cost				
2004 Report	n/a	n/a	$3,305,673	-
2009 Report	n/a	n/a	$5,156,695	56.0%
2012 Report	n/a	n/a	**$4,125,516**	-20.0%

(1) Source: 2004 Report, Table 11 raw data with a modified cost per lane mile calculation
(2) Source: 2009 Report, Table 11 raw data with a modified cost per lane mile calculation
(3) Source: Appendix B, Table B-1. These figures only reflect local data.

Table 2 presents the design, right-of-way, and construction costs per lane mile (using the historical method) for local projects used in the 2004 study, the 2009 study (not adopted), and the 2012 update study.

Table 2
Trend Comparison of the Cost per Lane Mile for County Roads (Historical Method)

Cost Phase	Total Lane Miles	Total Cost of All Projects	Cost per Lane Mile	Percent Change (by Study)
Design				
2004 Report[1]	75.52	$9,894,507	$131,018	-
2009 Report[2]	71.12	$15,471,926	$217,547	66.0%
2012 Report[3]	79.96	$11,684,754	$146,132	-32.8%
Right-of-Way				
2004 Report[1]	75.52	$39,657,330	$525,124	-
2009 Report[2]	71.12	$40,095,487	$563,772	7.4%
2012 Report[3]	78.68	$50,024,609	$635,798	12.8%
Construction				
2004 Report[1]	75.52	$75,270,362	$996,694	-
2009 Report[2]	71.12	$127,804,634	$1,797,028	80.3%
2012 Report[3]	108.72	$151,326,412	$1,391,891	-22.5%
Total Cost				
2004 Report	n/a	n/a	$1,652,836	-
2009 Report	n/a	n/a	$2,578,347	56.0%
2012 Report	n/a	n/a	**$2,173,821**	-15.7%

(1) Source: 2004 Report, Table 11
(2) Source: 2009 Report, Table 11
(3) Source: Appendix B, Table B-1, local data only with a modified cost per lane mile calculation

It is important to note that the Table 1 and Table 2 figures for the 2012 Report only reflect the local data presented in Appendix B, Table B-1. The final roadway unit costs used in the impact fee calculation include local data as well as FDOT District 5 and statewide trend data for county roads. The roadway data from other counties support the Orange County cost levels and the methodology used for the unit cost calculation is detailed in the following sections.

County Roadway Costs (Traditional Method)

This section examines the ROW, construction, and other cost components associated with county roads with respect to transportation capacity improvements in Orange County. For this purpose, recent bid data for ongoing projects provided by the County and recent construction bid data from county roadway projects throughout Florida were used to identify and provide supporting cost data for county

improvements. The cost for each roadway capacity project was separated into three phases: design, ROW and construction.

Design

Based on a review of recently completed and ongoing projects in Orange County, design costs were estimated at 11 percent of construction costs. See Appendix B, Table B-1 for additional project detail.

Right-of-Way

The ROW cost reflects the total cost of the acquisitions along the 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 cost estimates were developed based on the local data from recently bid, recently completed roadway projects. ROW cost figures from approximately 40 lane miles of local projects (along Rock Springs Road, CR 535, Clarcona-Ocoee Road, Woodbury Road, Alafaya Trail, Rouse Road, and Econlockhatchee Trail) were reviewed, along with ROW figures from the previous Orange County transportation impact fee report and recent ROW data throughout the state of Florida in order to increase the sample size of data. The local projects indicated a ROW cost of approximately $1.27 million per lane mile (49 percent of construction costs), whereas County's 2004 study included a ROW cost of $1.05 million per lane mile (53 percent of construction costs) and recent data from other Florida communities suggest $0.99 million per lane mile (42 percent of construction costs), on average. Appendix B, Table B-1 provides additional project detail.

For purposes of this impact fee update, ROW was estimated as a percentage of the construction cost per lane mile observed for county roadways. Based on local Orange County projects and data from other Florida communities, the ROW cost was estimated at 45 percent of construction costs for roadway expansion projects. As seen in Table 3, this amount is equal to approximately $1.08 million per lane mile.

Construction

Similar to the process for estimating ROW costs, the construction cost for county roads was based on recently bid or completed local projects and costs for projects in other communities in Florida. A review of recent construction cost data for Orange County identified approximately 53 lane miles of improvements (including projects along CR 535, Clarcona-Ocoee Road, Narcoossee Road, Destination Parkway, and Rouse Road) averaging $2.57 million per lane mile. To increase the sample size of projects, recent bids from multiple communities throughout the state were also reviewed. This review included approximately 122 lane miles of roadway improvements from 10 counties and calculated an average cost of $1.90 million per lane mile. However, when looking at only the projects in FDOT District 5, the cost was $2.38 million per lane mile (based on approximately 10 lane miles of improvements). Based on this review, a county roadway construction cost of $2.40 million was used in the transportation impact fee calculation. Orange County construction costs are higher than those

experienced on average throughout Florida and the data reviewed verifies that this is a reasonable conclusion. Appendix B, Tables B-1 and B-2 provide a detailed description of the projects analyzed.

Based on discussions with County staff, it is anticipated that all of the lane miles that the County will construct in the future will have urban design characteristics.

Summary

For comparative purposes, Table 3 presents the unit cost per lane mile using the historical and traditional methods. Based on discussions with County Staff, the traditional method will be used for all subsequent calculations in this study since the traditional method is more representative of the cost to add additional capacity and is the most commonly used methodology in transportation impact fee calculations.

Table 3
Estimated Total Cost per Lane Mile for County Roads

Cost Phase	Cost Per Lane Mile (Traditional)[4]	Cost Per Lane Mile (Historical)[5]
Design[1]	$264,000	$143,000
Right-of-Way[2]	$1,080,000	$585,000
Construction[3]	$2,400,000	$1,300,000
Total Cost	**$3,744,000**	**$2,028,000**

(1) Design is estimated at 11% of the construction cost per lane mile.
(2) ROW is estimated at 45% of the construction cost per lane mile.
(3) Source: Appendix B, Tables B-1 and B-2
(4) The "traditional" method attributes costs to additional lanes of roadway capacity
(5) The "historical" method includes existing and additional lanes of roadway capacity when calculating lane miles. This value is equal to approximately 55 percent of the cost per lane mile values calculated using the traditional method.

Capacity Added per Lane Mile

An additional component of the impact fee equation is the capacity added per lane mile (also known as the maximum service volume added per mile) of roadway constructed. To calculate the vehicle miles of capacity (VMC) per lane mile of constructed future roadway, an analysis of the Metroplan 2030 Long Range Transportation Plan (LRTP) Financially Feasible Plan projects (see Appendix B, Table B-3) was conducted to reflect the mix of county road improvements that will be built in the future. As shown in Table 4, the resulting average capacity per lane mile calculated based on these projects is 9,506.

Table 4
Average Capacity per Lane Mile

Source	Lane Miles Added[1]	Vehicle Miles of Capacity Added[2]	VMC Added per Lane Mile[3]
County Roads	381.00	3,621,884	9,506

(1) Source: Appendix B, Table B-3
(2) Source: Appendix B, Table B-3
(3) Vehicle miles of capacity added (Item 2) divided by lane miles added (Item 1)

Cost per Vehicle-Mile of Capacity Added

The impact fee cost per unit of development is assessed based on the cost per vehicle-mile of capacity. As shown in Tables 3 and 4, the cost and capacity for county roads have been calculated based on typical roadway improvements. As shown in Table 5, the cost per VMC for travel within Orange County is approximately $394. This average cost per VMC figure is used in the impact fee calculation to determine the total impact cost per unit of development based on the vehicle-miles of travel consumed. For each vehicle-mile of travel that is added to the road system, approximately $394 of roadway capacity is consumed.

Table 5
Average Cost per Vehicle-Mile of Capacity Added for County Roadways in Orange County

Source	Cost per Lane Mile[1]	Average Capacity Added Per Lane Mile[2]	Cost per VMC[3]
County Roads	$3,744,000	9,506	$393.86

(1) Source: Table 3
(2) Source: Table 4
(3) Cost per lane mile (Item 1) divided by average capacity added per lane mile (Item 2)

It is important to note that capacity projects include not only lane additions, but also associated intersection improvements, traffic signalization, and other amenities and technology improvements.

County Multi-Modal Costs (AMA Only)

The remainder of this section provides the additional components used to calculate the unit cost for the multi-modal transportation fee that will apply to the Alternative Mobility Area of Orange County. This alternative fee rate takes into account the cost of providing transit facilities and allows for flexible spending of the multi-modal fee revenues collected in the AMA on roadway, bicycle/pedestrian facility as well as transit facility improvements.

Person-Miles of Capacity Added per Lane Mile – Roadways (AMA Only)

For the calculation of the roadway portion of the AMA multi-modal fee, the vehicle-miles of capacity added per lane mile (see Table 4) must be converted to person-miles of capacity (PMC) using the person trip factor (1.30 persons per vehicle). As shown in Table 6, this conversion resulted in a weighted average PMC of 12,358 for use in the AMA multi-modal fee calculation.

Table 6
Average Person-Miles of Capacity per Lane Mile (AMA Only)

Source	Lane Miles Added[1]	Vehicle Miles of Capacity Added[2]	VMC Added per Lane Mile[3]
County Roads	381.0	3,621,884	9,506
Vehicle-Trip to Person-Trip Factor[4]			**1.30**
Average PMC Added per Lane Mile[5]			**12,358**

(1) Source: Appendix B, Table B-3
(2) Source: Appendix B, Table B-3
(3) Vehicle miles of capacity added (Item 2) divided by lane miles added (Item 1)
(4) Source: Estimate based on the OUATS model, nationwide averages and vehicle occupancy factors from nearby jurisdictions
(5) VMC added per lane mile (Item 3) multiplied by the person-trip factor (Item 5)

Roadway Cost per Person-Mile of Capacity (AMA Only)

For the AMA, the roadway cost per unit of development is assessed based on the cost per person-mile of capacity. As shown in Table 7, the cost per PMC for travel within the Orange County AMA is approximately $303. This average cost per PMC figure is used in the multi-modal fee calculation to determine the total impact cost per unit of development based on the person-miles of travel consumed. For each person-mile of travel that is added to the road system, approximately $303 of roadway capacity is consumed.

Table 7
Average Cost per Person-Mile of Capacity Added for County Roadways in the Orange County AMA

Source	Cost per Lane Mile[1]	Average PMC Added per Lane Mile[2]	Cost per PMC[3]
County Roads	$3,744,000	12,358	$302.96

(1) Source: Table 3
(2) Source: Table 6
(3) Cost per lane mile (Item 1) divided by average PMC added per lane mile (Item 2)

Transit Capital Cost per Person-Mile of Travel (AMA Only)

A model for transit service and cost was developed to establish both the capital cost per person-mile of capacity and the system operating cost for revenue budget planning service provided in terms of system coverage, hours of service, and headways based on information provided by LYNX. Table 8 summarizes the total capital cost of potential service improvements and additions in the AMA as well as the person-miles of capacity that will be added with each type of service. These were then used to develop a weighted capital cost per person-mile of capacity of $328 for transit improvements within the AMA. Additional information is provided in Appendix B, Table B-5.

Table 8
Weighted Average Cost per Person-Mile of Capacity Added for Transit Facilities in the Orange County AMA

Service Type	PMC Added[(1)]	Total Capital Cost of Added Service[(2)]	Cost per PMC[(3)]
Local Service	112,972	$52,012,498	$460.40
Bus Rapid Transit	127,109	$26,815,010	$210.96
Total	**240,081**	**$78,827,508**	**$328.34**

(1) Source: Appendix B, Table B-5
(2) Source: Appendix B, Table B-5
(3) Total capital cost of added service (Item 2) divided by the total PMC added (Item 1)

Components of the capital cost considered in this study included:

- Vehicles needed and fleet margin
- Bus stops, shelters, and benches
- Transfer stations
- Cost of road capacity used by transit vehicles

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

Transit Capital Cost = Vehicle Cost + Bus Stops Cost (Bench and Shelter) + Bus Rapid Transit (BRT) Station Cost + Road Capacity Cost

Bus capital cost for local service is based on the number of buses needed during peak hours, including a 20 percent fleet margin, four bus stops per mile (one of four with a shelter), and two BRT transfer stations per mile. The 20 percent fleet margin is a standard for transit agencies to ensure that service can be provided in the event of a breakdown or required maintenance. The value of road capacity consumed by the transit service was computed as the vehicle-miles of travel by bus fleet, weighted by

the dwell-time at 4 bus stops per mile, multiplied by the cost per vehicle-mile of roadway capacity and the capacity utilization factor.

The load factor is a measure of the extent to which transit capacity is utilized. A low load factor results in a higher cost per person-mile of transit capacity because there are fewer bus riders across which to distribute the costs. Since transit service is intended to serve as an alternative to more heavily congested roads in the future, the assumption of a load factor that reflects current conditions would not be realistic. An optimistic load factor of 30 percent was used for this study, reflecting the intended, improved future service, particularly on routes where travel demands are high and the roads are most heavily congested.

As applied in this study, transit service enhancements involved improvements to traditional transit service through increased route coverage within the AMA. The additional miles of service coverage was estimated based on the Orange County Transportation Development Plan (TDP) for local transit. For BRT, it was estimated that service coverage improvements would account for 20 percent of the total potential improvements. These future service enhancements were incorporated into the cost model (Appendix B, Table B-5) with consideration given to the variation in bus cost, stops per mile, vehicle speed, and frequency.

Bicycle and Pedestrian Facility Costs

Bicycle and pedestrian facilities provide for relatively small portion of travel – short trip lengths and low volumes – and there is little data on bicycle travel generation or trip lengths. Thus, travel demand for these modes by land use cannot be analyzed as readily as vehicular or transit travel can. Because of their relatively small role in the urban travel scheme, they do not have a significant effect on evaluating the costs of providing for mobility. However, bike and pedestrian facilities are an important and standard part of the urban streets and sometimes included as a part of 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 transportation fee. Their costs have been estimated at 4.5 percent of the total roadway costs. The multi-modal transportation fee provides funding for only those bike and pedestrian facilities associated with roadways on the major road network system, and allows for facilities to be added to existing roadways or included in the construction of a new roadway or lane addition improvement within the AMA.

Summary of Transportation Costs - Blended Cost Analysis (AMA Only)

Table 9 illustrates the roadway and transit distribution and the person-trip cost per person-mile of capacity used to calculate the weighted cost per person-mile of capacity. This distribution considers the current asset distribution of the existing roadway and transit facilities (97.7% to 2.3%) and future investment levels on transit (10%) versus roadways (90%) based on planned/programmed projects. The investment levels are adjusted downward to provide a conservative estimate. As presented in Table 9, the blended cost per PMC to be used in the transportation fee calculation is $304.23.

Table 9
Weighted Average Cost per Person-Mile of Capacity Added (AMA Only)

Mode	Investment Distribution(1)	Cost per PMC(2)	Weighted Cost per PMC(3)
Roadways	95.0%	$302.96	$287.81
Transit	5.0%	$328.34	$16.42
Total	**100.0%**		**$304.23**

(1) Source: Based on the existing asset distribution and the County's reasonable future commitment to transit
(2) Source: Table 7 for roadways and Table 8 for transit
(3) Asset distribution (Item 1) multiplied by the cost per PMC (Item 2)

Credit Component

Gasoline Tax Equivalent Credit

The present value of the portion of non-impact fee revenues (converted to equivalent gasoline taxes) generated by a new development over a 25-year period that is projected to be expended on capacity expansion projects is credited against the cost of the system consumed by travel associated with new development. Because the transportation impact fee for the county is calculated based on the entire transportation network in the county, the credit calculations take into consideration funding of all capacity expansion projects on the major roadway system (as well as other modes in the case of AMA) regardless of jurisdiction/ownership.

City

A review of the City or Orlando's historical transportation expenditures (2007-2011) and the FY 2012-2016 Capital Improvement Program (CIP) showed that roadway capacity expansion projects are being funded by a combination of impact fees, fuel tax, and ad valorem taxes. As shown in Table 10, 1.1 pennies of credit is calculated for expenditures on roadway capacity expansion projects funded with recurring revenue sources other than impact fees. In addition, 0.2 pennies of credit for city debt service payments on the Narcoossee Road, John Young Parkway, and Lee Vista Boulevard projects. Thus a credit of 1.3 equivalent pennies was given for the allocation of funds that the City of Orlando collects in fuel tax, ad valorem tax, and grant revenues, and for the debt service that is being paid back with fuel tax revenues.

County

A review of the County's historical roadway financing program (FY 2006-2010) and the FY 2011-2015 Capital Improvement Plan (CIP) shows that all roadway projects are being funded by a combination of impact fees, gas tax, grant funds, and general fund revenues. As shown in Table 10, a total gas tax equivalent revenue credit of 2.5 pennies was given for gas tax equivalent expenditures on roadway capacity expansion projects.

The credit calculation also takes into consideration that some of the funding sources, such as ad valorem contributions to the Capital Projects Fund (Fund 1023), will not be recurring beyond the next five years. As shown in Table 10, a gas tax equivalent revenue credit of 0.5 pennies was given for projects funded through the Capital Projects Fund between FY 2011 and FY 2015. Unlike the county gas tax revenues, Fund 1023 is a non-recurring revenue source. Therefore, for purposes of the equivalent pennies calculation, the 5-year expenditures were divided out over a 25-year period.

State

State expenditures on State roads were reviewed, and a credit for the capacity expansion portion attributable to state projects was estimated. The equivalent number of pennies allocated to fund State projects was determined from projects spanning a 15-year period (2001-2015). This period represents past FDOT Work Program expenditures from 2001 to 2010 and also includes the current FDOT Transportation Improvement Plan (TIP) from 2011 to 2015. A list of capacity-adding roadway projects was developed, including lane additions, new road construction, intersection improvements, interchanges, traffic signal projects, and other capacity-addition projects. This review (summarized in Appendix C, Table C-5) indicates that FDOT spending generates an equivalent gas tax credit of 14.3 pennies of gas tax revenue annually. The use of a 15-year period for purposes of developing a State credit for roadway capacity-adding projects results in a reasonably stable credit for Orange County, since it accounts for the volatility in FDOT spending in the county over short time periods.

In summary, the City of Orlando contributes approximately 1.3 pennies and the County contributes approximately 3.0 pennies toward roadway capacity expansion projects, while the State spends an average of 14.3 pennies for State roadway projects in Orange County. Therefore, a total of 18.6 pennies of credit are included in the impact fee calculation to recognize the future capital revenue that is expected to be generated by new development from all non-impact fee revenues, as shown in Table 10. In reviewing several other counties throughout Florida, the total credit ranged from 13 to 30 pennies and the 18.6 pennies for Orange County is within the range of gas tax credit found in other transportation impact fee credit calculations.

Table 10
Equivalent Pennies of Gas Tax Revenue

Credit	Equivalent Pennies per Gallon
City Revenues[1]	$0.011
City Debt Service[2]	$0.002
County Revenues[3]	$0.025
County Non-Recurring Revenues[4]	$0.005
State Revenues[5]	$0.143
Total	**$0.186**

(1) Source: Appendix C, Table C-2
(2) Source: Appendix C, Table C-3
(3) Source: Appendix C, Table C-4
(4) Source: Appendix C, Table C-5
(5) Source: Appendix C, Table C-6

Gasoline Tax Equivalent Credit (AMA Only)

The gasoline tax equivalent credit for future developments within the AMA is calculated in a similar manner as the credit for the impact fee for the rest of Orange County but it includes additional credit eligible projects related to bicycle, pedestrian, and transit facilities. Additional projects considered include sidewalk construction, pedestrian overpasses, vehicle and equipment purchases, and other capital expenditures related to new or expanded transit services. As shown in Table 11, these additional projects increased the City credit to 1.4 pennies (previously 1.3 pennies), the County credit to 3.0 pennies (previously 2.5 pennies), while keeping the credit for non-recurring revenues at 0.5 pennies. The same review was completed for state expenditures, with the gas tax equivalent credit increasing to 16.7 pennies (previously 14.3 pennies). Therefore, a total of 21.6 pennies of credit are included in the AMA multi-modal fee calculation to recognize the future capital revenue that is expected to be generated by new development from all non-impact fee revenues.

Table 11
Equivalent Pennies of Gas Tax Revenue (AMA Only)

Credit	Equivalent Pennies per Gallon
City Revenues[1]	$0.012
City Debt Service[2]	$0.002
County Revenues[3]	$0.030
County Non-Recurring Revenues[4]	$0.005
State Revenues[5]	$0.167
Total	**$0.216**

(1) Source: Appendix C, Table C-15
(2) Source: Appendix C, Table C-16
(3) Source: Appendix C, Table C-17
(4) Source: Appendix C, Table C-18
(5) Source: Appendix C, Table C-19

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 5.0 percent was used in the transportation impact fee calculation based on the information obtained from 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-24 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 2009*. Based on the calculation completed in Appendix C, Table C-24, the fuel efficiency rate to be used in the updated impact fee equation is 18.19 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 gasoline taxes are adequately credited against the fee.

Calculated Transportation Impact Fee Schedule

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

- Demand component variables (trip rate, trip length, and percent of new trips);
- Person-trip factor (AMA only);
- Total impact fee cost;
- Annual gas tax credit;
- Present value of the gas tax credit;
- Net impact fee (net multi-modal fee for AMA);
- Current Orange County impact fee; and
- Percent difference between the calculated impact fee and the current impact fee.

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

For clarification purposes, the calculation of an impact fee for one land use category is presented. In the following example, the net impact fee is calculated for the single-family residential detached land use category (ITE LUC 210) using information from the impact fee schedules included in Appendix D, Table D-1 and Table D-2 (for the AMA). For each land use category, the following equations are utilized to calculate the net impact fee:

Net Impact Fee = Total Impact Cost – Gas Tax Credit

Where:

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

Gas Tax Credit = Present Value (Annual Gas Tax), given 5.0% interest rate & 25-year facility life

Annual Gas Tax = ([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:

- *Trip Rate* = the average daily trip generation rate, in vehicle-trips/day (7.81).
- *Assessable Trip Length* = the actual average trip length for the category, in vehicle-miles (7.94).
- *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 (7.94 + 0.50 = 8.44).
- *% New Trips* = adjustment factor to account for trips that are already on the roadway (100%).
- *Divide by 2* = the total daily miles of travel generated by a particular category (i.e., rate*length*% new trips) is divided by two to prevent the double-counting of travel generated between two land use codes since every trip has an origin and a destination.
- *Interstate/Toll Facility Discount Factor* = discount factor to account for the travel demand occurring on interstate highways and/or toll facilities (28.8%).
- *Cost per Lane Mile* = unit cost to construct one lane mile of roadway, in $/lane-mile ($3,744,000).
- *Average Capacity Added per Lane Mile* = represents the average daily traffic on one travel lane at capacity for one lane mile of roadway, in vehicles/lane-mile/day (9,506).
- *Cost per Vehicle-Mile of Capacity* = unit of vehicle-miles of capacity consumed per unit of development. Cost per lane mile divided by average capacity added per lane mile ($3,744,000 / 9,506 = $393.86
- *Present Value* = calculation of the present value of a uniform series of cash flows, gas tax payments in this case, given an interest rate, “i,” and a number of periods, “n;” for 5.0% interest and a 25-year facility life, the uniform series present worth factor is 14.0939.
- *Effective Days per Year* = 365 days.
- *$/Gallon to Capital* = the amount of gas tax revenue per gallon of fuel that is used for capital improvements, in $/gallon ($0.186).
- *Fuel Efficiency* = average fuel efficiency of vehicles, in vehicle-miles/gallon (18.19).

Transportation Impact Fee

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

Total Impact Cost = ([7.81 * 7.94 * 1.0] /2) * (1 - 0.288) * ($393.86) = $8,695
Annual Gas Tax = ([7.81 * 8.44 * 1.0] /2) * 365 * ($0.186 /18.19) = $123
Gas Tax Credit = $123 * 14.0939 = $1,734
Net Impact Fee = $8,695 - $1,734 = **$6,961**

The complete fee schedule by land use is included in Appendix D, Table D-1.

Multi-Modal Transportation Fee (AMA Only)

Additional inputs for use in the calculation of the AMA multi-modal fee:

- *Cost per Person-Mile of Capacity* = unit of person-miles of capacity consumed per unit of development ($304.23).
- *$/Gallon to Capital* = the amount of gas tax revenue per gallon of fuel that is used for capital improvements, in $/gallon ($0.216).
- *Person-Trip Factor* = Converts vehicle-miles of travel to person-miles of travel (1.30).

For the multi-modal fee, the total impact cost is slightly different:

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

Using these inputs, a net multi-modal transportation fee can be calculated for the single-family residential detached land use category in the AMA as follows:

Total Multi-Modal Cost = ([7.81 * 7.94 * 1.0] /2) * (1 - 0.288) * 1.30 * ($304.23) = $8,731
Annual Gas Tax = ([7.81 * 8.44 * 1.0] /2) * 365 * ($0.216 /18.19) = $143
Gas Tax Credit = $143 * 14.0939 = $2,015
Net Multi-Modal Fee = $8,731 - $2,015 = **$6,716**

The complete fee schedule by land use is included in Appendix D, Table D-2.

AMA Impact Fee Schedule

The impact fee schedule included for the AMA in Appendix D, Table D-2, presents fee levels that incorporates transit, bike lanes, and sidewalks and provides the County with the flexibility to spend the impact fee revenues on these facilities in addition to roadways. The impact fee variables used to calculate the fee incorporates not only the roadways, but other modes, and result in a slightly lower fee. The fee levels within AMA could be decreased further based on the following:

- Currently, the County's Future Land Use map does not identify a mixed-use designation. It is our understanding that the County is in the process of preparing an Activity Centers Map and is moving forward with developing definitions for activity centers, mixed-use and transit oriented development. As these designations are finalized, it would be possible to implement a lower fee for mixed-use and/or transit oriented developments because of the reduction in travel achieved by these types of developments.

- If the County is interested in lowering fees within certain section or the entire AMA and/or for certain land uses, it is possible to apply policy discounts, which are further discussed later in this report in the section titled "Smart Growth Application to Impact Fees."

Transportation Impact Fee Comparison

As part of the work effort in developing the Orange County transportation impact fee program, a comparison of calculated fees to transportation impact fee schedules adopted in other jurisdictions was completed. Tables 12 and 13 present Orange County's calculated impact fee using both the historical and traditional approaches and a comparison to transportation impact fees in the surrounding and other jurisdictions in Florida. Although the "traditional" approach results in a technically defensible higher fee, the Board of County Commissioners has the ability to discount the calculated fees as a policy decision in order to stay competitive to other jurisdictions or for other reasons.

It should be noted that the differences in fee levels for a given land use can be caused by several factors, including the year of the technical study, adoption percentage, study methodology including variations in costs, credits and travel demand, land use categories included in the fee schedule, etc.

Table 12
Transportation Impact Fee Comparison (Counties)

Land Use	Unit	Orange County (Traditional)[1]	Orange County (Traditional) AMA Only[2]	Orange County (Historical)[3]	Orange County (Historical) AMA Only[4]	Orange County (Existing)[5]	Polk County[6]	Lake County[7]	Seminole County[8]	Osceola County[9]	Volusia County[10]	Brevard County[11]	Pasco County[12]
Date of Last Update		2012	2012	2012	2012	2004	2008	2001	1992	2006	2001	2001	2011
Adoption Percentage		N/A	N/A	N/A	N/A	100%	100%	64%	100%	100%	68%	100%	100%
Residential:													
Single Family Detached (2,000 sq ft)	du	$6,961	$6,716	$2,976	$2,819	$2,869	$4,895	$2,189	$1,025	$7,194	$2,174	$4,353	$5,835
Non-residential:													
Light Industrial	1,000 sf	$3,863	$3,728	$1,634	$1,548	$2,565	$675	$2,157	$762	$5,882	$680	N/A	$0
Office (50,000 sf)	1,000 sf	$9,953	$9,596	$4,235	$4,005	$5,242	$5,310	$2,883	$2,247	$9,020	$4,320	$5,058	$0
High Turnover Restaurant	1,000 sf	$30,310	$29,132	$12,593	$11,808	$13,785	$30,168	$11,422	$10,546	$42,428	$10,590	$23,213	$19,658
Retail (125,000 sf)	1,000 sf	$9,780	$9,368	$3,999	$3,715	$9,521	$6,754	$2,177	$2,741	$16,690	$3,080	$5,270	$5,641
Bank w/Drive-In	1,000 sf	$20,581	$19,733	$8,428	$7,850	$19,544	$14,377	$12,207	$8,372	$43,606	$10,960	$23,331	$12,730

(1) Source: Appendix D, Table D-1
(2) Source: Appendix D, Table D-2
(3) Source: Updated transportation impact fee calculated using the historical cost calculation method detailed in the Cost Component of this report
(4) Source: Updated multi-modal transportation impact fee (AMA only) calculated using the historical cost calculation method detailed in the Cost Component of this report
(5) Source: Orange County Growth Management Department, Planning Division. Note that the fees shown reflect indexing through July 1, 2009 (indexing was suspended in 2009), and a 25 percent fee decrease was implemented in 2011.
(6) Source: Polk County Building & Construction Department. Transportation impact fee moratorium in effect through 7/31/2012
(7) Source: Lake County Growth Management Department, Development Processing Division. Transportation impact fee moratorium in effect through 3/1/2013.
(8) Source: Seminole County Growth Management Department. Average of four fee districts.
(9) Source: Osceola County Growth Management Department, Planning and Zoning Division. Transportation impact fee moratorium in effect through 7/30/2012.
(10) Source: Volusia County Growth Management Department, Building and Impact Fees
(11) Source: Brevard County Land Development Department. Note the "Light Industrial" land use is exempt from paying transportation impact fees. Transportation impact fee moratorium in effect through 3/1/2013.
(12) Source: Pasco County Multi-Modal Mobility Fee Study, adopted July 2011. Fee shown is for the Urban District

Table 13
Transportation Impact Fee Comparison (Cities)

Land Use	Unit	Orange County (Traditional)[1]	Orange County (Traditional) AMA Only[2]	Orange County (Historical)[3]	Orange County (Historical) AMA Only[4]	Orange County (Existing)[5]	City of Orlando[6]	City of Winter Garden[7]	City of Ocoee[8]
Date of Last Update		2012	2012	2012	2012	2004	2006	-	2004
Adoption Percentage		N/A	N/A	N/A	N/A	100%	50%	-	100%
Residential:									
Single Family Detached (2,000 sq ft)	du	$6,961	$6,716	$2,976	$2,819	$2,869	$2,036	$3,517	$2,976
Non-residential:									
Light Industrial	1,000 sf	$3,863	$3,728	$1,634	$1,548	$2,565	$1,505	$1,404	$2,496
Office (50,000 sf)	1,000 sf	$9,953	$9,596	$4,235	$4,005	$5,242	$3,174	$5,748	$4,750
High Turnover Restaurant	1,000 sf	$30,310	$29,132	$12,593	$11,808	$13,785	$13,483	$17,048	$19,420
Retail (125,000 sf)	1,000 sf	$9,780	$9,368	$3,999	$3,715	$9,521	$7,691	$7,645	$4,846
Bank w/Drive-In	1,000 sf	$20,581	$19,733	$8,428	$7,850	$19,544	$19,131	$30,730	$8,203

(1) Source: Appendix D, Table D-1
(2) Source: Appendix D, Table D-2
(3) Source: Updated transportation impact fee calculated using the historical cost calculation method detailed in the Cost Component of this report
(4) Source: Updated multi-modal transportation impact fee (AMA only) calculated using the historical cost calculation method detailed in the Cost Component of this report
(5) Source: Orange County Growth Management Department, Planning Division. Note that the fees shown reflect indexing through July 1, 2009 (indexing was suspended in 2009), and a 25 percent fee decrease in 2011.
(6) Source: City of Orlando Transportation Planning Department, "Traditional City" fee. Note that the fees shown reflect indexing (effective 1/1/2009) and a recent fee decrease of 25 percent.
(7) Source: City of Winter Garden Building Department
(8) Source: City of Ocoee Planning Department. Note that the fees shown reflect a recent fee decrease of 25 percent (effective 1/3/2012 until 1/3/2013).

Transportation Impact Fee Benefit Districts

As part of the update of the transportation impact fee program, the existing impact fee benefit districts (zones) illustrated in Map 2 were reviewed. Transportation impact fee districts are established to achieve two primary goals: one of meeting the dual rational nexus test of proof of benefit to fee-paying developments, and the second to ensure that funds collected are spent on eligible capital improvement projects.

The existing transportation impact fee benefit districts in Orange County were reviewed to determine if the geographic boundaries of the districts should be changed. This evaluation was completed through a review of the geographic boundaries (i.e., lakes and rivers), man-made boundaries/barriers (i.e., roads, etc.), existing and future development patterns, and roadway projects in the Metroplan 2035 LRTP. Additionally, recent impact fee revenues and expenditures within the four existing transportation impact fee zones were reviewed. During the period between FY 2005 and FY 2007, all of the districts were able to generate sufficient revenues to fund the capacity expenditures. Since FY 2008, with the downturn of the economy, the revenue generation declined and the County started to draw down on available fund balances as expenditures have exceeded collections by over $25 million. Further, since FY 2008, only District 4 has collected more revenues than it has spent, and that is due to revenue collections in FY 2008 significantly exceeding expenditures in that year.

Due to the proposed Orange County AMA multimodal impact fee, changes to the existing benefit districts are recommended. The new alignment, illustrated in Map 3, includes a fifth benefit district that essentially creates a border around the individual sections of the AMA that surround the City of Orlando and consolidates them into a single benefit district. This new district consists of the part of the county where a higher level of transit service is provided. The original four existing district boundaries were then altered to create the new fifth district. Funds collected within the new AMA benefit district can be used for roadway, bicycle/pedestrian facility, and transit facility improvements, while funds collected in the other benefit districts can only be used for roadway capacity expansion improvements.

Although the Alternative Mobility Areas are separated by the City of Orlando, they are in relatively close proximity of each other and connected by an extensive transit and roadway network. Due to this connectivity, it is reasonable to conclude that improvements made in one area of the Alternative Mobility Area will benefit the entire district.

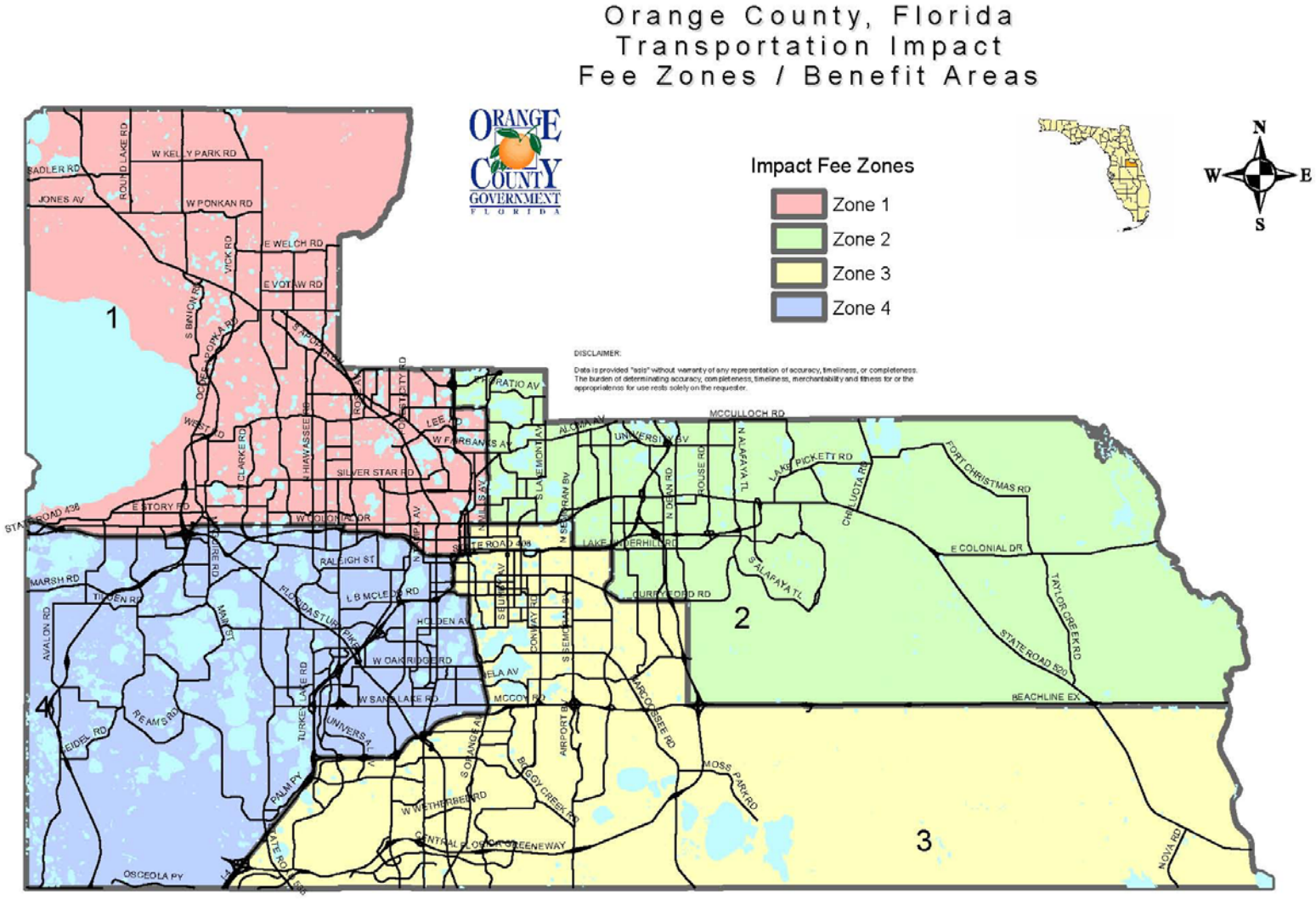
Table 14
Historical Transportation Impact Fee Revenues and Expenditures

Revenues	FY 2005	FY 2006	FY 2007	FY 2008	FY 2009	FY 2010	FY 2011 (as of 5/31)	Total
Zone 1	$4,209,747	$4,466,008	$6,517,476	$2,679,928	$1,444,805	$341,074	$142,228	$19,801,266
Zone 2	$14,530,107	$16,960,913	$9,933,770	$9,340,572	$4,203,804	$1,928,035	$788,051	$57,685,252
Zone 3	$13,721,599	$18,210,608	$14,866,969	$11,329,677	$5,245,157	$1,662,437	$1,156,671	$66,193,118
Zone 4	$12,442,104	$12,880,782	$18,464,693	$20,943,019	$4,345,429	$1,235,499	$3,127,662	$73,439,188
Total	**$44,903,557**	**$52,518,311**	**$49,782,908**	**$44,293,196**	**$15,239,195**	**$5,167,045**	**$5,214,612**	**$217,118,824**

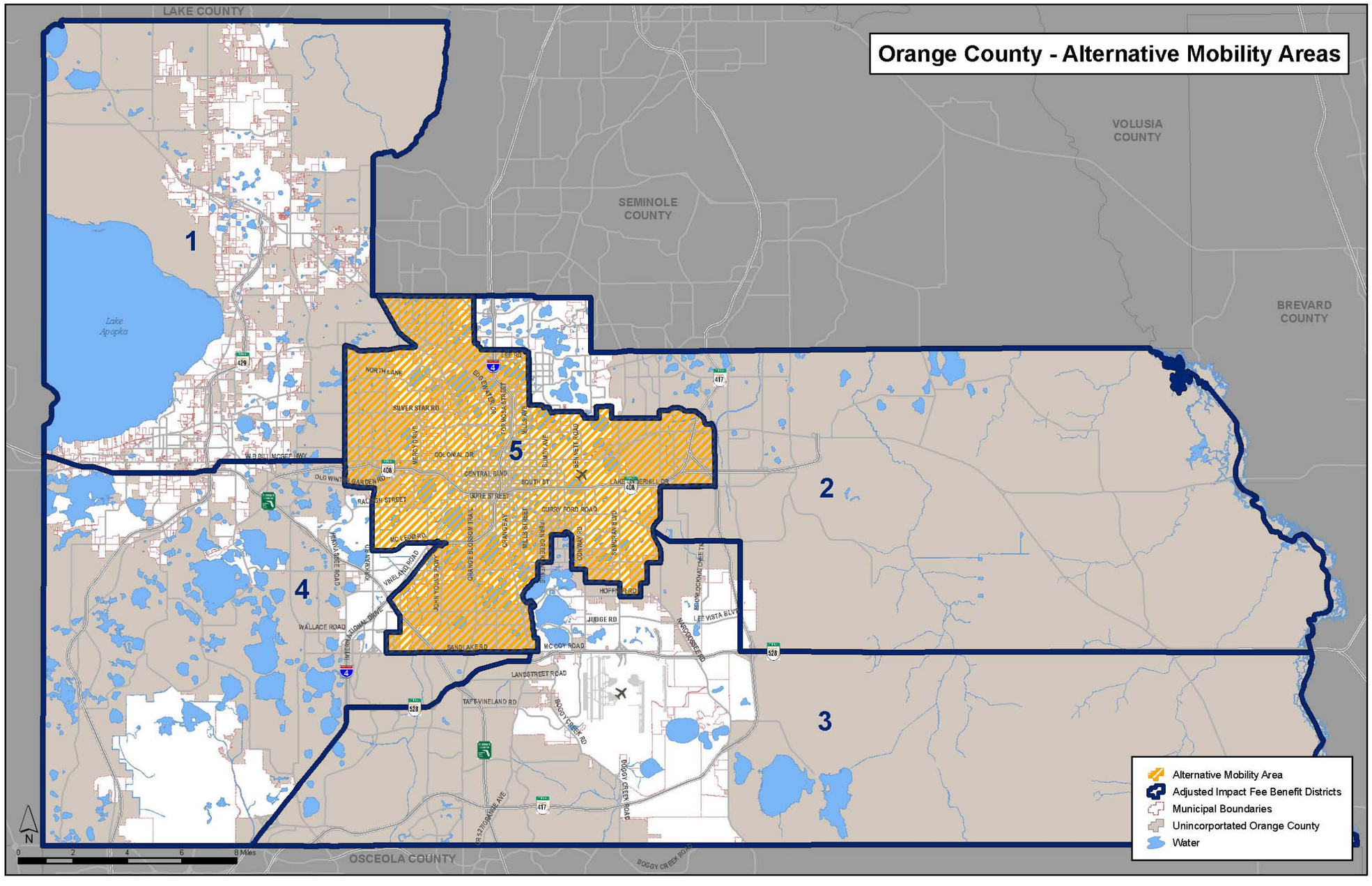
Expenditures	FY 2005	FY 2006	FY 2007	FY 2008	FY 2009	FY 2010	FY 2011 (as of 5/31)	Total
Zone 1	$5,063,897	$3,998,418	$5,966,719	$6,141,089	$5,773,370	$332,567	$1,140,594	$28,416,654
Zone 2	$9,577,142	$13,861,579	$13,692,714	$18,412,878	$10,253,601	$12,620,868	$2,028,412	$80,447,194
Zone 3	$1,651,762	$6,220,006	$14,300,571	$19,060,687	$8,924,838	$3,371,372	$1,895,126	$55,424,362
Zone 4	$8,005,034	$12,047,346	$7,275,546	$2,244,876	$8,218,901	$4,169,064	$1,147,982	$43,108,749
Total	**$24,297,835**	**$36,127,349**	**$41,235,550**	**$45,859,530**	**$33,170,710**	**$20,493,871**	**$6,212,114**	**$207,396,959**

Source: Orange County Transportation Planning Department

Map 2 – Existing Orange County Benefit Districts



Map 3 – Recommended Orange County Benefit Districts



AMA Implementation Evaluation

As part of the AMA Implementation Evaluation Task, TOA reviewed the following background documents:

- A presentation titled "Mobility Training 9-4-09"
- Flowcharts illustrating the following:
  - DRC Process
  - Planning & Zoning Rezoning Process
  - Board of Zoning Adjustment (BZA) Process
  - Commercial Site Plan Process
- Information included in the Mobility Review Monitoring System for individual applicants
- AMA-related sections of the County's Comprehensive Policy Plan amendment adoption packet submitted to the Department of Community Affairs (DCA) dated May 28, 2009
- Amendments 2009-2-B-TRAN-1 and 2010-1-B-TRAN-1 to the Transportation Element
- Information related to the AMA included on the County's website

In addition, GMB Engineers conducted interviews with five applicants who have gone through the AMA process. These meetings were scheduled in late February 2012 and collected input from the applicant's experience, as well as possible recommendations to improve the current process. In addition to the scheduled applicant meetings, the County's Planning and Transportation Planning Division staffs were contacted to discuss the process and interview results. Currently, the County is updating the Transportation Element within the Comprehensive Plan which includes the guidelines for the AMA process. TOA's comments are based primarily on the review of the above listed documents and interviews with both the applicants and County staff.

Based on review of the documents listed above and the interview results, the primary recommendations include the following:

- Because the AMA is a concurrency exception area, the review process does not have to address roadway capacity, which is a significant benefit to the development community. However, as discussed below, the County could establish a threshold for either the size of development or level of service under which it could evaluate level of service.
- It would be helpful to create a more defined methodology for the AMA process. This methodology can be handled internally; however it would be beneficial to provide supporting documentation at the Pre-Application meeting. It should be noted that the County can still have the ability to negotiate during the process.
- It was the intent of the County to develop a Mobility Plan, which would help identify the list of priority projects and improvements needed within the AMA. Such a document would assist the development community significantly. In addition to the project list, it is also important to specify how many standards each improvement is equal to, such as 2 bike racks equating 1 particular standard, etc. This will bring more clarity and certainty to the process.
- It is important to identify types and size of development that is eligible for a "Pay & Go," process that would simplify the development review process for appropriate types of development. The term "pay-and-go" refers to a process that enables development to mitigate their impacts through the payment of an impact fee or proportionate share contribution without conducting a detailed technical analysis of their transportation impacts. By allowing development to pay-and-go, the development review process is expedited, providing both a timing and financial incentive to the developer. This also creates development approval certainty when the desired type of development is being planned within the targeted areas. There are multiple approaches, within the context of a "pay-and-go" process to manage or limit the County's risk in the event of runaway growth. The County would specify the criteria and the qualifying land uses/types of developments eligible for this process, and typically, a limit to size and type is adopted to ensure no severe conditions are created.
- It is important that the both the Planning and Transportation Planning divisions be involved from the beginning once a proposed development is identified to be within the AMA. This again will simplify the process both for the development community and the County. It is our understanding that the County will soon be implementing a Land Development Management Systems (LDMS) application. This will allow County staff the ability to view vertical construction plans from the beginning. Use of this application will allow better coordination between County departments and divisions, while streamlining the review process. As a result, the Applicant will be able to determine if the project is located within an AMA area and the level of any required context study.

The following paragraphs provide a more detailed summary of input received from the applicants.

Based on the interview meetings, there was a mixed reaction in regards to the County's flexibility during the AMA process. Some of the applicants were glad the County had the flexibility to negotiate the requirements, while others wanted a more defined process with limited flexibility. While there was a split in the usefulness of the flexibility, the following comments about the existing process were made by all applicants:

- County staff was easy to work with.
- There was no defined process or methodology for AMA projects.
- The number of mobility standards was not clearly defined.
- The applicants were not aware of what was needed within the context study.
- There was uncertainty on whether the mobility standards are realistic and would benefit the project and surrounding citizens.
- Several meetings were needed to determine what was needed and what mobility standards are needed to satisfy the County requirements.
- The cost for mobility standards was not determined until later in the process. The applicants would have like the ability to inform their Client of the budget.
- It appeared that different departments were requiring different items, therefore making it a longer process.

In addition to the above comments, potential recommendations were also discussed with the applicants. These recommendations included procedures and actions that can assist the County in making the AMA process easier, as well as assist the applicant in completing the process. The following summarizes these recommendations:

- A more defined set of procedures and context review.
- Define the number of mobility standards required for developments and provide supporting documentation. The County used to have a table that included number of standards in relation to trip generation rate, which was deleted as part of the Amendment 2010-1-B-TRAN-1.
- Clarification of mobility standards. For example, the current list does not limit the number of bicycles to signify a rack, number of bicycle racks, or length of sidewalk to meet 1 mobility standard.
- Assist the applicant during the process and make the applicant aware of the AMA process earlier in the development review process.
- Provide more detail during the negotiations and reinforce the fact that the mobility item is a realistic approach toward its designed function.
- More information from County during the methodology stage of the project. This would assist the applicant in providing the accurate answers and cost estimates to their client.

- Pre-Application meeting to discuss requirements, as well as the unit cost, so that Applicant can provide client with "black and white" rules.
- Payment options or "In-Lieu" clause. Instead of constructing sidewalk, would have like to "cut a check" to the County and allow money to be placed in a designated fund (e.g., sidewalk fund) or be utilized toward another, more realistic, mobility standard.

Smart Growth Application to Impact Fees

This section of the report addresses some of the practices used or considered by other jurisdictions to differentiate fee levels for geographic subareas or certain land uses to promote transportation and land use integration, urban infill development and redevelopment, transit oriented development, activity center development, and other policy goals.

Traditional transportation impact fees represent the maximum level of fees, if adopted at 100 percent level. The Smart Growth approach calculates possible reductions from these levels for targeted areas or land uses that would allow the jurisdiction to maintain the adopted level of service (LOS) standard based on available revenues for capacity projects and growth rates. These calculations are strictly for policy consideration, and the County has no legal obligation to provide these reductions.

TOA's "Smart Growth" concept has been advanced or adopted in other communities to address planning policy issues and provide flexibility in fee levels, develop incentives to encourage the right mix of desired land uses in targeted locations, and from a regulatory perspective, establish an expedited development approval process. Communities for whom these concepts are being developed or used include Pasco County, City of Albuquerque (NM), and the City of Orlando. Three components of the Smart Growth concept include a (1) rate of growth analysis, (2) fee buy-down by geographic area, and (3) fee buy-down of "most favored" land uses.

- **Rate of Growth Analysis** – The rate of growth concept allows transportation fees to be sensitive to the growth rate within the county/city. This approach reconciles the relationship between consumption-based and needs-based fee methodologies and generally reduces fees while maintaining the adopted LOS standard due to lower growth rates.

- **Buy-down by Geographic Area and Geographic Goals** – This approach allows the County to place a priority on select urban areas to incentivize more efficient land use patterns as set forth in the County's Comprehensive Plan. For example, the geographic area buy-down could

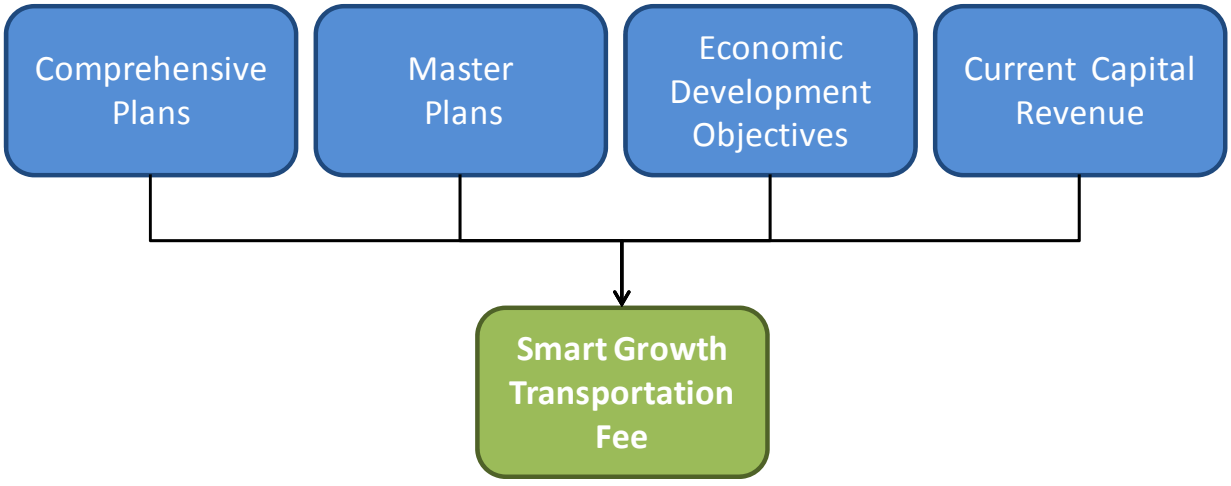
be used to meet the goal of increasing density and creating a more diverse tax base in the AMA by leveraging other revenues to offset transportation capacity costs while maintaining the adopted LOS standard. The developments in more urbanized areas with lower growth rates are likely to receive a larger discount due to the ability of the existing tax base to absorb new growth.

- **Buy-down of "Most Favored Uses"** – This approach developed by TOA allows communities to establish policies for targeted land uses related to overall benefit and need for specific uses in a city or county or in targeted geographic areas of the community. Benefits may include improved revenue generation, reduce travel demand, and a more diverse tax base that brings additional economic stability in the future. Two of the land uses that have been selected by other jurisdictions include mixed-use developments and Transit-Oriented Developments (TOD). For example, in 2011, Pasco County, Florida, adopted a multi-modal impact fee schedule with reduced impact fee rates for both TODs and Traditional Neighborhood Design (TND) developments.

As presented in Figure 1, the Smart Growth Impact Fee concept is driven by the community's economic development and growth management goals, available funding, and the desired/acceptable LOS. This approach provides the County with the necessary information to achieve a flexible program that supports the community's planning and economic development goals.

Figure 1

Smart Growth Approach to Transportation Fees

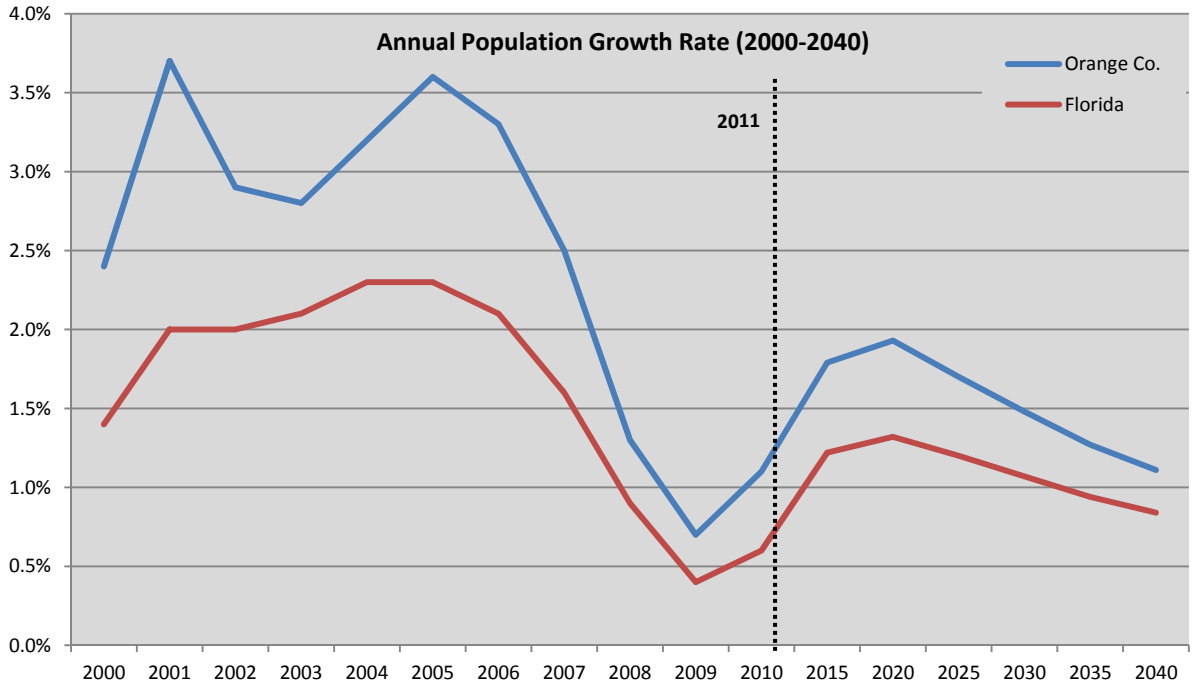


More specifically, the Smart Growth approach incorporates the following thought process and analysis:

- Impact fees calculated under traditional methods are not sensitive to growth rates experienced in the community. For example, the consumption-based fees are based on the value of the capacity that is being consumed by the new development. These calculations are not affected by slow or high growth rates and do not consider the contributions made by existing development to maintain the adopted LOS standard.

- Historically, many jurisdictions within Florida experienced high growth rates, which required a significant amount of investment in new infrastructure. With slower growth rates over the past several years, the burden of new growth has started to become more manageable. As presented in Figure 2, Orange County experienced an average annual growth rate of almost 2.5 percent between 2000 and 2010, which is estimated to decrease to approximately 1.6 percent over the next 30 years.

Figure 2
Population Trends: Orange County and Florida



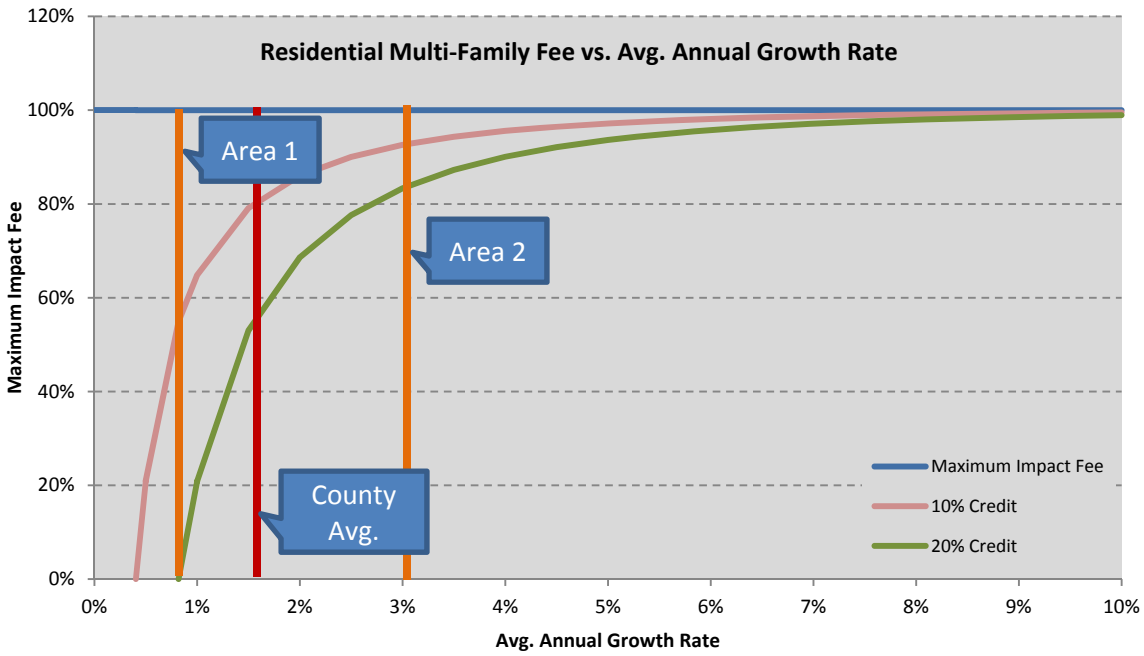
Source: University of Florida, Bureau of Economic and Business Research (BEBR)

Smart Growth incorporates the effect of the community's growth rate on the existing tax base's ability to absorb growth while maintaining the adopted LOS standard. Impact fees, if calculated correctly and adopted at the legally maximum level, would allow a community to maintain its LOS for a given

infrastructure without any additional revenue contributions beyond what was contributed from the new development. When additional funds from existing development are also used toward the expansion of the same infrastructure, the LOS improves, if the legally maximum fee is charged.

Figure 3 illustrates this concept as an example, using a new development credit level of 10 percent and 20 percent of the total cost. The credit component is calculated as part of the traditional impact fee calculations and represents the non-impact fee revenue contributions of the new development toward transportation capacity projects. The traditional impact fee calculations reduce the total cost by the contributions received from the new development to determine net impact fee. The Smart Growth approach takes into consideration the availability of the portion of revenues collected from the existing development, and calculates the potential policy reductions based on this revenue.

Figure 3
Smart Growth Level of Service Curve: Multi-Family Example



- As presented, the County's average annual growth rate is projected to be approximately 1.6 percent through 2040. With this growth rate, the available revenues (measured in terms of the credit percentage) would allow the County to adopt the fee at approximately 80 percent for the multi-family land use (as an example) at 10 percent credit level, and still maintain the adopted transportation level of service standard. If the County decides to allocate additional revenue sources toward transportation capacity projects, the necessary adoption level to maintain the adopted LOS standard decreases. This is illustrated in Figure 3 under the 20 percent credit

option. The adoption level necessary to maintain the LOS decreases from 80 percent to 60 percent of the maximum fee for the multi-family land use.

Figure 3 also presents how the discount levels vary with different growth rates by focusing on subareas of the county that have different levels of projected growth. As shown, as the growth rate becomes lower, the County's existing tax base will be able to absorb the new growth at a higher rate. Alternatively, with high growth rates, the County will need a larger portion, or the entire transportation impact fee to fund the additional transportation infrastructure needs. For example, in Area 1, the growth is projected to be less than 1 percent per year, and as such, it is possible to adopt the fees at approximately 55 percent (at 10 percent credit level) and still maintain the LOS standard. In Area 2, which represents a higher growth area (3 percent), the fees need to be adopted at about 90 percent to maintain the adopted LOS standard due to a higher growth rate, using a 10 percent credit.

- It is important to note that whether to fund capacity expansion projects solely with transportation impact fee collections or supplement funding with alternative sources is strictly a policy decision. As the level of contributions from non-impact fee funding increase, the impact fees decrease for two reasons: 1) due to additional credit to new development, which is legally required to not to overcharge the new development; and 2) due to the availability of additional revenue sources from the existing development. In other words, the Smart Growth model considers all revenue sources available for a given infrastructure and adjusts the level of impact fees needed based on the level of investment needed from the new development.

The Smart Growth approach is one of the tools to incentivize targeted land uses or development in desired locations. Other tools may include development review process concepts such as the "pay-and-go" approach, not requiring a significant transportation impact study for development approval in targeted geographic areas, and establishing Comprehensive Plan policies that provide assurance that the County's funding goals are based upon or consistent with the level of expenditures, capital and operating, for needed improvements to alternative modes of travel.

Appendix A
Demand Component Calculations

Demand Component

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

Table A-1 presents a comparison of model trip lengths that were reviewed in relation to trip length outputs from the OUATS model. Based on this review, the trip lengths for residential, lodging, recreation, and office land uses were adjusted by 20 percent, and the trip lengths for institutional, retail, and industrial land uses were adjusted by five (5) percent.

Table A-1
FSUTMS Model Trip Length Comparison

County	Study Year	Model Type	Home-Based Work	Home-Based Shopping
Polk	2005	County	9.83	8.12
Marion	2005	County	9.60	8.82
Pasco	2006	Regional	10.61	5.93
Highlands	2006	County	9.28	7.61
Lake	2007	Regional	10.24	6.58
Volusia	2007	Regional	11.17	8.24
Flagler	2007	Regional	11.62	8.45
Hernando	2007	Regional	9.84	5.88
Sumter	2008	Regional	11.62	8.48
Leon	2008	Regional	8.86	7.39
Sarasota	2011	Regional	11.72	8.17
Average			**10.40**	**7.60**
Orange(1)	2011	Regional	13.33	8.05
Orange vs. Average			**28%**	**6%**

(1) Source: OUATS Model

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 20 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. In addition, local studies conducted in Orange County are incorporated in the calculation of trip generation rate.

TOA estimates trip generation rates for all land uses in a transportation impact fee schedule using data from studies in the Florida Studies Database and the Institute of Transportation Engineers' (ITE) *Trip Generation* reference report (8th edition). In instances, when both ITE *Trip Generation* reference report (8th edition) and Florida Studies trip generation rate (TGR) data are available for a particular land use, the data is typically blended together to increase the sample size and provide a more valid estimate of the average number of trips generated per unit of development. If no Florida Studies data is available, only TGR data from the ITE reference report is used in the fee calculation.

The trip generation rate for each respective land use is calculated using machine counts that record daily traffic into and out of the site studied. The traffic count hoses are set at entrances to residential subdivisions for the residential land uses and at all access points for non-residential land uses.

The trip length information is obtained through origin-destination surveys that ask respondents where they came from prior to arriving at the site and where they intended to go after leaving the site. The results of these surveys were used to estimate average trip length by land use. It should be noted that residential, lodging, recreation, and office trip lengths were increased by 20 percent, and institution, retail, and industrial trip lengths were increased by five (5) percent based on a review of OUATS model, model results for other counties included in the Florida Studies Database, and Florida Studies trip lengths.

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. TOA has published an article entitled, *Measuring Travel Characteristics for Transportation Impact Fees, ITE Journal, April 1991* on the data collecting methodology for trip characteristics studies.

Mini-Warehouse (ITE LUC 151)

Location	Size (1,000 sf)	Date	Total # Interviews	# Trip Length Interviews	Trip Gen Rate	Time Period	Trip Length	Percent New Tris	VMT	Source
Orange Co, FL	107.0	-	-	-	1.45	-	-	-	-	Orange County
Orange Co, FL	89.6	-	-	-	1.23	-	-	-	-	Orange County
Orange Co, FL	84.7	-	-	-	1.39	-	-	-	-	Orange County
Orange Co, FL	93.0	-	-	-	1.51	-	-	-	-	Orange County
Orange Co, FL	77.0	-	-	-	2.18	-	-	-	-	Orange County
Total Size	451.3						**Average Trip Length:**	**n/a**		
ITE	784						**Weighted Average Trip Length:**	**n/a**		
Blended total	1,235.3						Weighted Percent New Trip Average:	-		

Weighted Average Trip Generation Rate: 1.53
ITE Average Trip Generation Rate: 2.50
Blend of FL Studies and ITE Average Trip Generation Rate: 2.15

Single-Family Detached Housing (ITE LUC 210)

Location	Size / Units	Date	Total # Interviews	# Trip Length Interviews	Trip Gen Rate	Time Period	Trip Length	Percent New Trips	VMT	Source
Gwinnett Co, GA	-	12/13-18/92	-	-	5.80	-	5.40	N/A	31.32	Street Smarts
Gwinnett Co, GA	-	12/13-18/92	-	-	5.40	-	6.10	N/A	32.94	Street Smarts
Sarasota Co, FL	76	Jun-93	70	70	10.03	-	6.00	N/A	60.18	Sarasota County
Sarasota Co, FL	79	Jun-93	86	86	9.77	-	4.40	N/A	42.99	Sarasota County
Sarasota Co, FL	135	Jun-93	75	75	8.05	-	5.90	N/A	47.50	Sarasota County
Sarasota Co, FL	152	Jun-93	63	63	8.55	-	7.30	N/A	62.42	Sarasota County
Sarasota Co, FL	193	Jun-93	123	123	6.85	-	4.60	N/A	31.51	Sarasota County
Sarasota Co, FL	97	Jun-93	33	33	13.20	-	3.00	N/A	39.60	Sarasota County
Sarasota Co, FL	282	Jun-93	146	146	6.61	-	8.40	N/A	55.52	Sarasota County
Sarasota Co, FL	393	Jun-93	207	207	7.76	-	5.40	N/A	41.90	Sarasota County
Hernando Co, FL	76	May-96	148	148	10.01	9a-6p	4.85	N/A	48.55	Tindale-Oliver & Associates
Hernando Co, FL	128	May-96	205	205	8.17	9a-6p	6.03	N/A	49.27	Tindale-Oliver & Associates
Hernando Co, FL	232	May-96	182	182	7.24	9a-6p	5.04	N/A	36.49	Tindale-Oliver & Associates
Hernando Co, FL	301	May-96	264	264	8.93	9a-6p	3.28	N/A	29.29	Tindale-Oliver & Associates
Charlotte Co, FL	135	Oct-97	230	-	5.30	9a-5p	7.90	N/A	41.87	Tindale-Oliver & Associates
Charlotte Co, FL	142	Oct-97	245	-	5.20	9a-5p	4.10	N/A	21.32	Tindale-Oliver & Associates
Charlotte Co, FL	150	Oct-97	160	-	5.00	9a-5p	10.80	N/A	54.00	Tindale-Oliver & Associates
Charlotte Co, FL	215	Oct-97	158	-	7.60	9a-5p	4.60	N/A	34.96	Tindale-Oliver & Associates
Charlotte Co, FL	257	Oct-97	225	-	7.60	9a-5p	7.40	N/A	56.24	Tindale-Oliver & Associates
Charlotte Co, FL	345	Oct-97	161	-	7.00	9a-5p	6.60	N/A	46.20	Tindale-Oliver & Associates
Charlotte Co, FL	368	Oct-97	152	-	6.60	9a-5p	5.70	N/A	37.62	Tindale-Oliver & Associates
Charlotte Co, FL	383	Oct-97	516	-	8.40	9a-5p	5.00	N/A	42.00	Tindale-Oliver & Associates
Charlotte Co, FL	441	Oct-97	195	-	8.20	9a-5p	4.70	N/A	38.54	Tindale-Oliver & Associates
Charlotte Co, FL	1,169	Oct-97	348	-	6.10	9a-5p	8.00	N/A	48.80	Tindale-Oliver & Associates
Collier Co, FL	90	Dec-99	91	-	12.80	8a-6p	11.40	N/A	145.92	Tindale-Oliver & Associates
Collier Co, FL	400	Dec-99	389	-	7.80	8a-6p	6.40	N/A	49.92	Tindale-Oliver & Associates
Lake Co, FL	49	Apr-02	170	-	6.70	7a-6p	10.20	N/A	68.34	Tindale-Oliver & Associates
Lake Co, FL	52	Apr-02	212	-	10.00	7a-6p	7.60	N/A	76.00	Tindale-Oliver & Associates
Lake Co, FL	126	Apr-02	217	-	8.50	7a-6p	8.30	N/A	70.55	Tindale-Oliver & Associates
Pasco Co, FL	55	Apr-02	133	-	6.80	8a-6p	8.12	N/A	55.22	Tindale-Oliver & Associates
Pasco Co, FL	60	Apr-02	106	-	7.73	8a-6p	8.75	N/A	67.64	Tindale-Oliver & Associates
Pasco Co, FL	70	Apr-02	188	-	7.80	8a-6p	6.03	N/A	47.03	Tindale-Oliver & Associates
Pasco Co, FL	74	Apr-02	188	-	8.18	8a-6p	5.95	N/A	48.67	Tindale-Oliver & Associates
Pasco Co, FL	189	Apr-02	261	-	7.46	8a-6p	8.99	N/A	67.07	Tindale-Oliver & Associates
Marion Co, FL	102	Apr-02	167	-	8.02	7a-6p	5.10	N/A	40.90	Kimley-Horn & Associates
Marion Co, FL	105	Apr-02	169	-	7.23	7a-6p	7.22	N/A	52.20	Kimley-Horn & Associates
Marion Co, FL	124	Apr-02	170	-	6.04	7a-6p	7.29	N/A	44.03	Kimley-Horn & Associates
Marion Co, FL	132	Apr-02	171	-	7.87	7a-6p	7.00	N/A	55.09	Kimley-Horn & Associates
Marion Co, FL	133	Apr-02	209	-	8.04	7a-6p	4.92	N/A	39.56	Kimley-Horn & Associates
Citrus Co, FL	111	Oct-03	273	-	8.66	7a-6p	7.70	N/A	66.68	Tindale-Oliver & Associates
Citrus Co, FL	231	Oct-03	155	-	5.71	7a-6p	4.82	N/A	27.52	Tindale-Oliver & Associates
Citrus Co, FL	306	Oct-03	146	-	8.40	7a-6p	3.94	N/A	33.10	Tindale-Oliver & Associates
Citrus Co, FL	364	Oct-03	345	-	7.20	7a-6p	9.14	N/A	65.81	Tindale-Oliver & Associates
Citrus Co, FL	374	Oct-03	248	-	12.30	7a-6p	6.88	N/A	84.62	Tindale-Oliver & Associates
Lake Co, FL	42	Dec-06	122	-	11.26	-	5.56	N/A	62.61	Tindale-Oliver & Associates
Lake Co, FL	51	Dec-06	346	-	18.22	-	9.46	N/A	172.36	Tindale-Oliver & Associates
Lake Co, FL	59	Dec-06	144	-	12.07	-	10.79	N/A	130.24	Tindale-Oliver & Associates
Lake Co, FL	90	Dec-06	194	-	9.12	-	5.78	N/A	52.71	Tindale-Oliver & Associates
Lake Co, FL	239	Dec-06	385	-	7.58	-	8.93	N/A	67.69	Tindale-Oliver & Associates
Hernando Co, FL	232	Apr-07	516	-	8.02	7a-6p	8.16	N/A	65.44	Tindale-Oliver & Associates
Hernando Co, FL	95	Apr-07	256	-	8.08	7a-6p	5.88	N/A	47.51	Tindale-Oliver & Associates
Hernando Co, FL	90	Apr-07	338	-	7.13	7a-6p	5.86	N/A	41.78	Tindale-Oliver & Associates
Hernando Co, FL	58	Apr-07	153	-	6.16	7a-6p	8.39	N/A	51.68	Tindale-Oliver & Associates
Collier Co, FL	74	Mar-08	503	-	12.81	7a-6p	3.05	N/A	39.07	Tindale-Oliver & Associates
Collier Co, FL	97	Mar-08	512	-	8.78	7a-6p	11.29	N/A	99.13	Tindale-Oliver & Associates
Collier Co, FL	315	Mar-08	1,347	-	6.97	7a-6p	6.55	N/A	45.65	Tindale-Oliver & Associates
Collier Co, FL	42	Mar-08	314	-	9.55	7a-6p	10.98	N/A	104.86	Tindale-Oliver & Associates
Total Size	10,380		13,130				**Average Trip Length:**	**6.70**		
							Weighted Average Trip Length:	**6.62**		
							Orange County Adjusted Trip Length:	**7.94**		

Weighted Average Trip Generation Rate: 7.81

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

Location	Size / Units	Date	Total # Interviews	# Trip Length Interviews	Trip Gen Rate	Time Period	Trip Length	Percent New Trips	VMT	Source
Sarasota Co, FL	212	Jun-93	42	42	5.78	-	5.20	N/A	30.06	Sarasota County
Sarasota Co, FL	243	Jun-93	36	36	5.84	-	-	N/A	-	Sarasota County
Marion Co, FL	214	Apr-02	175	175	6.84	-	4.61	N/A	31.53	Kimley-Horn & Associates
Marion Co, FL	240	Apr-02	174	174	6.96	-	3.43	N/A	23.87	Kimley-Horn & Associates
Marion Co, FL	288	Apr-02	175	175	5.66	-	5.55	N/A	31.41	Kimley-Horn & Associates
Marion Co, FL	480	Apr-02	175	175	5.73	-	6.88	N/A	39.42	Kimley-Horn & Associates
Marion Co, FL	500	Apr-02	170	170	5.46	-	5.94	N/A	32.43	Kimley-Horn & Associates
Lake Co, FL	250	Dec-06	135	135	6.71	-	5.33	N/A	35.76	Tindale-Oliver & Associates
Lake Co, FL	157	Dec-06	265	265	13.97	-	2.62	N/A	36.60	Tindale-Oliver & Associates
Lake Co, FL	169	Dec-06	212	-	8.09	-	6.00	N/A	48.54	Tindale-Oliver & Associates
Lake Co, FL	226	Dec-06	301	-	6.74	-	2.17	N/A	14.63	Tindale-Oliver & Associates
Hernando Co, FL	312	Apr-07	456	-	4.09	-	5.95	N/A	24.34	Tindale-Oliver & Associates
Hernando Co, FL	176	Apr-07	332	-	5.38	-	5.24	N/A	28.19	Tindale-Oliver & Associates
Hernando Co, FL	31	May-96	31	31	6.12	9a-6p	4.98	N/A	30.48	Tindale-Oliver & Associates
Hernando Co, FL	128	May-96	128	128	6.47	9a-6p	5.18	N/A	33.51	Tindale-Oliver & Associates
Pasco Co, FL	229	Apr-02	198	198	4.77	9a-6p	-	N/A	-	Tindale-Oliver & Associates
Pasco Co, FL	248	Apr-02	353	353	4.24	9a-6p	3.53	N/A	14.97	Tindale-Oliver & Associates
Total Size	4,103						**Average Trip Length:**	**4.84**		
Total Size (TL)	3,631						**Weighted Average Trip Length:**	**5.10**		
							Orange County Adjusted Trip Length:	**6.12**		

				LUC 220: Multi-Family
Total Size	3,467	13	Weighted Average Trip Generation Rate:	6.31
ITE	18,480	88	ITE Average Trip Generation Rate:	6.65
Blended total	21,947		**Blend of FL Studies and ITE Average Trip Generation Rate:**	**6.60**

LUC 230 Studies are highlighted

				LUC 230: Condo/Townhouse
Total Size	636	4	Weighted Average Trip Generation Rate:	4.97
ITE	10,024	56	ITE Average Trip Generation Rate:	5.81
Blended total	10,660		**Blend of FL Studies and ITE Average Trip Generation Rate:**	**5.76**

Mobile Home Park (ITE LUC 240)

Location	Size / Units	Date	Total # Interviews	# Trip Length Interviews	Trip Gen Rate	Time Period	Trip Length	Percent New Trips	VMT	Source
Marion Co, FL	67	Jul-91	22	22	5.40	48hrs.	2.29	N/A	12.37	Tindale-Oliver & Associates
Marion Co, FL	82	Jul-91	58	58	10.80	24hr.	3.72	N/A	40.18	Tindale-Oliver & Associates
Marion Co, FL	137	Jul-91	22	22	3.10	24hr.	4.88	N/A	15.13	Tindale-Oliver & Associates
Marion Co, FL	188	Apr-02	147	-	3.51	24hr.	5.48	N/A	19.23	Kimley-Horn & Associates
Marion Co, FL	227	Apr-02	173	-	2.76	24hr.	8.80	N/A	24.29	Kimley-Horn & Associates
Sarasota Co, FL	235	Jun-93	100	100	3.51	-	5.10	N/A	17.90	Sarasota County
Marion Co, FL	297	Apr-02	175	-	4.78	24hr.	4.76	N/A	22.75	Kimley-Horn & Associates
Sarasota Co, FL	996	Jun-93	181	181	4.19	-	4.40	N/A	18.44	Sarasota County
Hernando Co, FL	1,892	May-96	425	425	4.13	9a-6p	4.13	N/A	17.06	Tindale-Oliver & Associates
Total Size	4,121		1,303				**Average Trip Length:**	**4.84**		
							Weighted Average Trip Length:	**4.60**		
							Orange County Adjusted Trip Length:	**5.52**		

Weighted Average Trip Generation Rate: 4.17

Retirement Community/Age-Restricted Single Family (ITE LUC 251)

Location	Size / Units	Date	Total # Interviews	# Trip Lengt 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	N/A	8.54	Tindale-Oliver & Associates
Marion Co, FL	778	Apr-02	175	-	2.96	24hr.	3.49	N/A	10.33	Kimley-Horn & Associates
Marion Co, FL	877	Apr-02	209	-	2.91	24hr.	5.90	N/A	17.17	Kimley-Horn & Associates
Marion Co, FL	1,054	Apr-02	173	-	3.65	24hr.	6.00	N/A	21.90	Kimley-Horn & Associates
Marion Co, FL	3,076	Apr-02	198	-	2.63	24hr.	5.16	N/A	13.57	Kimley-Horn & Associates
Marion Co, FL	3,625	Apr-02	164	-	2.50	24hr.	5.83	N/A	14.58	Kimley-Horn & Associates
Total Size	9,477		945				**Average Trip Length:**	**4.80**		
ITE	6,034						**Weighted Average Trip Length:**	**5.42**		
							Orange County Adjusted Trip Length:	**6.50**		

Blended total	15,511	Weighted Average Trip Generation Rate:	2.75
		ITE Average Trip Generation Rate (8th):	3.71
		Blend of FL Studies and ITE Average Trip Generation Rate:	**3.13**

Hotel (ITE LUC 310)

Location	Size (Rooms)	Date	Total # Interviews	# Trip Lengt Interviews	Trip Gen Rate	Time Period	Trip Length	Percent New Trips	VMT	Source
Pinellas Co, FL	174	Aug-89	134	106	12.50	7-11a/3-7p	6.30	79.0	62.21	Tindale-Oliver & Associates
Pinellas Co, FL	114	Oct-89	30	14	7.30	12-7p	6.20	47.0	21.27	Tindale-Oliver & Associates
Orange Co, FL	70	-	-	-	1.85	-	-	-	-	Orange County
Orange Co, FL	211	-	-	-	2.23	-	-	-	-	Orange County
Orange Co, FL	112	-	-	-	2.78	-	-	-	-	Orange County
Orange Co, FL	1,495	-	-	-	3.50	-	-	-	-	Orange County
Orange Co, FL	123	-	-	-	3.70	-	-	-	-	Orange County
Orange Co, FL	130	-	-	-	4.29	-	-	-	-	Orange County
Orange Co, FL	1,499	-	-	-	4.69	-	-	-	-	Orange County
Orange Co, FL	190	-	-	-	4.71	-	-	-	-	Orange County
Orange Co, FL	123	-	-	-	4.81	-	-	-	-	Orange County
Orange Co, FL	105	-	-	-	5.25	-	-	-	-	Orange County
Orange Co, FL	120	-	-	-	5.27	-	-	-	-	Orange County
Orange Co, FL	1,584	-	-	-	5.88	-	-	-	-	Orange County
Orange Co, FL	128	-	-	-	6.10	-	-	-	-	Orange County
Orange Co, FL	174	-	-	-	7.03	-	-	-	-	Orange County
Orange Co, FL	144	-	-	-	7.32	-	-	-	-	Orange County
Orange Co, FL	98	-	-	-	7.32	-	-	-	-	Orange County
Orange Co, FL	106	-	-	-	7.34	-	-	-	-	Orange County
Orange Co, FL	100	-	-	-	7.37	-	-	-	-	Orange County
Orange Co, FL	144	-	-	-	7.66	-	-	-	-	Orange County
Total Size	6,944		164				**Average Trip Lengt:**	**6.25**		
ITE	4,760						**Weighted Average Trip Lengt:**	**6.26**		
							Orange County Adjusted Trip Lengt:	**7.51**		
Blended total	11,704						Weighted Percent New Trip Average:	66.3		

Weighted Average Trip Generation Rate: 5.12
ITE Average Trip Generation Rate: 8.17
Blend of FL Studies and ITE Average Trip Generation Rate: 6.36

Motel (ITE LUC 320)

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 & Associates
Pinellas Co, FL	54	Oct-89	32	22	-	12p-7p	3.80	69.0	-	Tindale-Oliver & Associates
Pinellas Co, FL	120	Oct-89	26	22	-	2p-7p	5.20	84.6	-	Tindale-Oliver & Associates
Total Size	222		104				**Average Trip Length:**	**3.93**		
							Weighted Average Trip Length:	**4.34**		
							Orange County Adjusted Trip Length:	**5.21**		
							Weighted Percent New Trip Average:	76.6		

ITE Average Trip Generation Rate (8th): 5.63

Movie Theater with Matinee (ITE LUC 444)

Location	Size (Screens)	Date	Total # Interviews	# Trip Length Interviews	Trip Gen Rate	Time Period	Trip Lengt	Percent New Trips	VMT	Source
Pinellas Co, FL	8	Oct-89	151	116	113.10	2p-8p	2.70	77.0	235.13	Tindale-Oliver & Associates
Pinellas Co, FL	12	Sep-89	122	116	63.40	2p-8p	1.90	95.0	114.44	Tindale-Oliver & Associates
Total Size	20		273				**Average Trip Length:**	**2.30**		
ITE	10 estimated						**Weighted Average Trip Length:**	**2.22**		
							Orange County Adjusted Trip Length:	**2.66**		
							Weighted Percent New Trip Average:	87.8		

Health Club (ITE LUC 492)

Location	Size (1,000 sf)	Date	Total # Interviews	# Trip Length Interviews	Trip Gen Rate	Time Period	Trip Length	Percent New Trips	VMT	Source
Tampa, FL	-	Mar-86	33	31	-	-	7.90	94.0	-	Kimley-Horn & Associates
Average Size:			33				**Average Trip Length:**	**n/a**		
							Percent New Trip Average:	94.0		

ITE Average Trip Generation Rate (8th): 32.93

Day Care Center (ITE LUC 565)

Location	Size (1,000 sf)	Date	Total # Interviews	# Trip Length Interviews	Trip Gen Rate	Time Period	Trip Length	Percent New Trips	VMT	Source
Pinellas Co, FL	5.6	Aug-89	94	66	66.99	7a-6p	1.90	70.0	89.10	Tindale-Oliver & Associates
Pinellas Co, FL	10.0	Sep-89	179	134	66.99	7a-6p	2.10	75.0	105.51	Tindale-Oliver & Associates
Tampa, FL	-	Mar-86	28	25	-	-	2.60	89.0	-	Kimley-Horn & Associates
Total Size	15.6		301				**Average Trip Length:**	**2.20**		
ITE	30.0						**Weighted Average Trip Length:**	**2.03**		
							Orange County Adjusted Trip Length:	**2.13**		
Blended total	45.6						Weighted Percent New Trip Average:	73.2		

Weighted Average Trip Generation Rate: 66.99
ITE Average Trip Generation Rate (8th): 79.26
Blend of FL Studies and ITE Average Trip Generation Rate: 75.07

Nursing Home (ITE LUC 620)

Location	Size (Beds)	Date	Total # Interviews	# Trip Length Interviews	Trip Gen Rate	Time Period	Trip Lengt	Percent New Trips	VMT	Source
Lakeland, FL	120	Mar-90	74	66	2.86	11a-4p	2.59	89.0	6.59	Tindale-Oliver & Associates
Total Size	120		74				**Average Trip Length:**	**2.59**		
ITE	415						**Weighted Average Trip Length:**	**2.59**		
							Orange County Adjusted Trip Length:	**2.72**		
Blended total	535						Weighted Percent New Trip Average:	89.0		

Weighted Average Trip Generation Rate: 2.86
ITE Average Trip Generation Rate (8th): 2.37
Blend of FL Studies and ITE Average Trip Generation Rate: 2.48

Clinic (ITE LUC 630)

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	103.9	Aug-89	614	572	37.03	7a-430p	5.10	93.0	175.63	Tindale-Oliver & Associates
St. Petersburg, FL	-	Oct-89	280	252	-	9a-5p	4.10	90.0	-	Tindale-Oliver & Associates
Total Size	103.9		894				**Average Trip Length:**	**4.60**		
ITE	224.0						**Weighted Average Trip Length:**	**5.10**		
							Orange County Adjusted Trip Length:	**5.36**		
							Weighted Percent New Trip Average:	93.0		

General Office Building (ITE LUC 710)

Location	Size (1,000 sf)	Date	Total # Interviews	# Trip Length Interviews	Trip Gen Rate	Time Period	Trip Length	Percent New Trips	VMT	Source
Sarasota Co, FL	14.3	Jun-93	14	14	46.85	-	11.30	-	529.41	Sarasota County
Gwinnett Co, GA	98.0	Dec-92	-	-	4.30	-	5.40	-	-	Street Smarts
Gwinnett Co, GA	180.0	Dec-92	-	-	3.60	-	5.90	-	-	Street Smarts
Pinellas Co, FL	187.0	Oct-89	431	388	18.49	7a-5p	6.30	90.0	104.84	Tindale-Oliver & Associates
St. Petersburg, FL	262.8	Sep-89	291	274	-	7a-5p	3.40	94.0	-	Tindale-Oliver & Associates
Total Size	742.1		736				**Average Trip Length:**	**6.46**		
							Weighted Average Trip Length:	**5.15**		
							Orange County Adjusted Trip Length:	**6.18**		
							Weighted Percent New Trip Average:	92.3		

Medical-Dental Office Building (ITE LUC 720)

Location	Size (1,000 sf)	Date	Total # Interviews	# Trip Length Interviews	Trip Gen Rate	Time Period	Trip Lengt	Percent New Trips	VMT	Source
Tampa, FL	-	Mar-86	33	26	-	-	6.00	79.0	-	Kimley-Horn & Associates
Palm Harbor, FL	14.6	Oct-89	104	76	33.98	9a-5p	6.30	73.0	156.27	Tindale-Oliver & Associates
St. Petersburg, FL	-	Nov-89	34	30	57.20	9a-4p	1.20	88.0	-	Tindale-Oliver & Associates
Hernando Co, FL	58.4	May-96	390	349	28.52	9a-6p	6.47	89.5	165.09	Tindale-Oliver & Associates
Hernando Co, FL	28.0	May-96	202	189	49.75	9a-6p	6.06	93.8	282.64	Tindale-Oliver & Associates
Charlotte Co, FL	11.0	Oct-97	-	186	49.50	9a-5p	4.60	92.1	209.67	Tindale-Oliver & Associates
Charlotte Co, FL	28.0	Oct-97	-	186	31.00	9a-5p	3.60	81.6	91.04	Tindale-Oliver & Associates
Charlotte Co, FL	30.4	Oct-97	-	324	39.80	9a-5p	3.30	83.5	109.68	Tindale-Oliver & Associates
Citrus Co, FL	38.9	Oct-03	-	168	32.26	8-6p	6.80	97.1	213.03	Tindale-Oliver & Associates
Citrus Co, FL	10.0	Nov-03	-	340	40.56	8-630p	6.20	92.4	232.33	Tindale-Oliver & Associates
Citrus Co, FL	5.3	Dec-03	-	20	29.36	8-5p	5.25	95.2	146.78	Tindale-Oliver & Associates
Orange Co, FL	50.6	-	-	-	26.72	-	-	-	-	Orange County
Orange Co, FL	23.5	-	-	-	16.58	-	-	-	-	Orange County
Total Size	298.6		763				**Average Trip Length:**	**5.07**		
ITE	450.0						**Weighted Average Trip Length:**	**5.55**		
							Orange County Adjusted Trip Length:	**6.66**		
Blended total	748.6						Weighted Percent New Trip Average:	88.9		

Average Trip Generation Rate: 32.59
ITE Average Trip Generation Rate (8th): 36.13
Blend of FL Studies and ITE Average Trip Generation Rate: 34.72

Specialty Retail Center (ITE LUC 814)

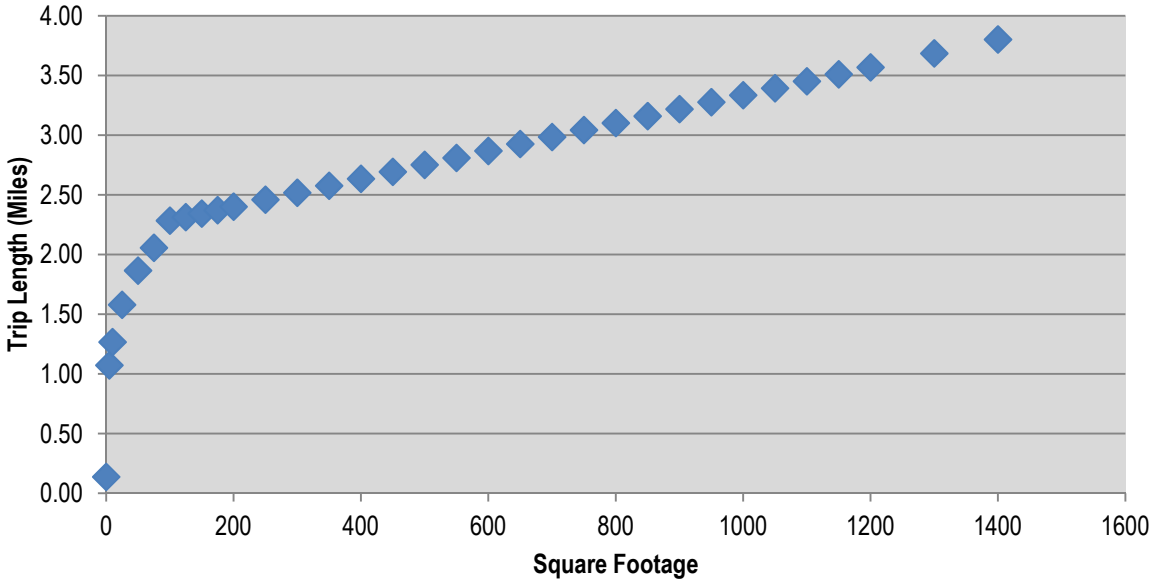
Location	Size (1,000 sf)	Date	Total # Interviews	# Trip Length Interviews	Trip Gen Rate	Time Period	Trip Length	Percent New Trips	VMT	Source
Orlando, FL	56.5	Jan-96	-	602	-	varied	3.54	87.9	-	LCE, Inc. *
Collier Co, FL	12.0	May-99	-	13	19.70	8a-6p	3.70	75.0	54.67	Tindale-Oliver & Associates
Collier Co, FL	12.0	May-99	-	146	127.50	8a-6p	2.24	84.3	240.76	Tindale-Oliver & Associates
Total Size	80.5	24.0	-				**Average Trip Lengt:**	**3.16**		
ITE	100.0	100.0					**Weighted Average Trip Lengt:**	**3.37**		
							Orange County Adjusted Trip Lengt:	**3.54**		
Blended total	156.5	124.0					Weighted Percent New Trip Average:	85.4		

Weighted Average Trip Generation Rate: 73.60
ITE Average Trip Generation Rate (8th): 44.32
Blend of FL Studies and ITE Average Trip Generation Rate: 49.99

Shopping Center (ITE LUC 820)

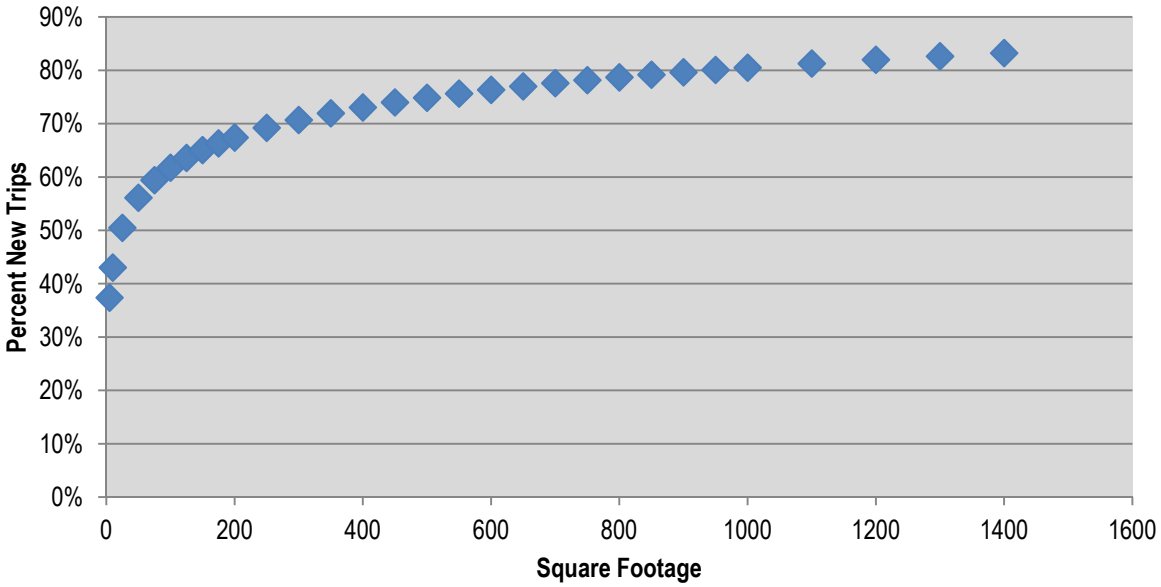
Location	Size (1,000 sf)	Date	Total # Interviews	# Trip Length Interviews	Trip Gen Rate	Time Period	Trip Length	Percent New Trips	VMT	Source
Tampa, FL	-	Mar-86	527	348	-	-	-	66.0	-	Kimley-Horn & Associates
Tampa, FL	-	Mar-86	170	-	-	-	1.70	-	-	Kimley-Horn & Associates
Tampa, FL	-	Mar-86	354	269	-	-	-	76.0	-	Kimley-Horn & Associates
Tampa, FL	-	Mar-86	144	-	-	-	2.50	-	-	Kimley-Horn & Associates
St. Petersburg, FL	1,192.0	Aug-89	384	298	-	11a-7p	3.60	78.0	-	Tindale-Oliver & Associates
St. Petersburg, FL	132.3	Sep-89	400	368	77.00	10a-7p	1.80	92.0	127.51	Tindale-Oliver & Associates
Largo, FL	425.0	Aug-89	160	120	26.73	10a-6p	2.30	75.0	46.11	Tindale-Oliver & Associates
Dunedin, FL	80.5	Sep-89	276	210	81.48	9a-5p	1.40	76.0	86.69	Tindale-Oliver & Associates
Pinellas Park, FL	696.0	Sep-89	485	388	-	9a-6p	3.20	80.0	-	Tindale-Oliver & Associates
Seminole, FL	425.0	Oct-89	674	586	-	-	-	87.0	-	Tindale-Oliver & Associates
Hillsborough Co, FL	134.0	Jul-91	-	-	-	-	1.30	74.0	-	Tindale-Oliver & Associates
Hillsborough Co, FL	151.0	Jul-91	-	-	-	-	1.30	73.0	-	Tindale-Oliver & Associates
Collier Co, FL	-	Aug-91	68	64	-	-	3.33	94.1	-	Tindale-Oliver & Associates
Collier Co, FL	-	Aug-91	208	154	-	-	2.64	74.0	-	Tindale-Oliver & Associates
Sarasota/Bradenton, FL	109.0	Sep-92	300	185	-	12a-6p	-	61.6	-	King Engineering Associates, Inc.
Ocala, FL	133.4	Sep-92	300	192	-	12a-6p	-	64.0	-	King Engineering Associates, Inc.
Gwinnett Co, GA	99.1	Dec-92	-	-	46.00	-	3.20	70.0	103.04	Street Smarts
Gwinnett Co, GA	314.7	Dec-92	-	-	27.00	-	8.50	84.0	192.78	Street Smarts
Sarasota Co, FL	110.0	Jun-93	58	58	122.14	-	3.20	-	-	Sarasota County
Sarasota Co, FL	146.1	Jun-93	65	65	51.53	-	2.80	-	-	Sarasota County
Sarasota Co, FL	157.5	Jun-93	57	57	79.79	-	3.40	-	-	Sarasota County
Sarasota Co, FL	191.0	Jun-93	62	62	66.79	-	5.90	-	-	Sarasota County
Hernando Co, FL	107.8	May-96	608	331	77.60	9a-6p	4.68	54.5	197.85	Tindale-Oliver & Associates
Charlotte Co, FL	88.0	Oct-97	-	-	73.50	9a-5p	1.80	57.1	75.56	Tindale-Oliver & Associates
Charlotte Co, FL	191.9	Oct-97	-	-	72.00	9a-5p	2.40	50.9	87.97	Tindale-Oliver & Associates
Charlotte Co, FL	51.3	Oct-97	-	-	43.00	9a-5p	2.70	51.8	60.08	Tindale-Oliver & Associates
Lake Co, FL	67.8	Apr-01	246	177	102.60	-	3.40	71.2	248.37	Tindale-Oliver & Associates
Lake Co, FL	72.3	Apr-01	444	376	65.30	-	4.50	59.0	173.37	Tindale-Oliver & Associates
Pasco Co, FL	65.6	Apr-02	222	-	145.64	9a-5p	1.46	46.9	99.62	Tindale-Oliver & Associates
Pasco Co, FL	75.8	Apr-02	134	-	38.23	9a-5p	2.36	58.2	52.52	Tindale-Oliver & Associates
Citrus Co, FL	185.0	Oct-03	-	784	55.84	8a-6p	2.40	88.1	118.05	Tindale-Oliver & Associates
Citrus Co, FL	91.3	Nov-03	-	390	54.50	8a-6p	1.60	88.0	76.77	Tindale-Oliver & Associates
Bozeman, MT	104.3	Dec-06	359	359	46.96	-	3.35	49.0	77.08	Tindale-Oliver & Associates
Bozeman, MT	159.9	Dec-06	502	502	56.49	-	1.56	54.0	47.59	Tindale-Oliver & Associates
Bozeman, MT	35.9	Dec-06	329	329	69.30	-	1.39	74.0	71.28	Tindale-Oliver & Associates
Total Size	5,757.5		7,536				Average Trip Length:	n/a		
							Weighted Average Trip Length:	n/a		

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



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

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



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

New Car Sales (ITE LUC 841)

Location	Size (1,000 sf)	Date	Total # Interviews	# Trip Length Interviews	Trip Gen Rate	Time Period	Trip Length	Percent New Trips	VMT	Source
St.Petersburg, FL	43.0	Oct-89	152	120	-	9a-5p	4.70	79.0	-	Tindale-Oliver & Associates
Clearwater, FL	43.0	Oct-89	136	106	29.40	9a-5p	4.50	78.0	103.19	Tindale-Oliver & Associates
Orange Co, FL	116.7	-	-	-	22.18	-	-	-	-	Orange County
Orange Co, FL	99.8	-	-	-	13.45	-	-	-	-	Orange County
Orange Co, FL	39.1	-	-	-	10.48	-	-	-	-	Orange County
Orange Co, FL	66.3	-	-	-	28.50	-	-	-	-	Orange County
Orange Co, FL	46.7	-	-	-	40.34	-	-	-	-	Orange County
Orange Co, FL	34.4	-	-	-	23.45	-	-	-	-	Orange County
Orange Co, FL	13.8	-	-	-	35.75	-	-	-	-	Orange County
Total Size	502.7		288				Average Trip Lengt:	4.60		
ITE	374.0						Weighted Average Trip Lengt:	4.60		
							Orange County Adjusted Trip Lengt:	4.83		
Blended total	876.7						Weighted Percent New Trip Average:	78.5		

Weighted Average Trip Generation Rate:	23.22
ITE Average Trip Generation Rate (8th):	33.34
Blend of FL Studies and ITE Average Trip Generation Rate:	**26.40**

Supermarket (ITE LUC 850)

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 & Associates
Total Size	62.0		163				Average Trip Length:	2.08		
ITE	156.0						Weighted Average Trip Length:	2.08		
							Orange County Adjusted Trip Length:	2.18		
Blended total	218.0						Weighted Percent New Trip Average:	56.0		

Weighted Average Trip Generation Rate:	106.26
ITE Average Trip Generation Rate (8th):	102.24
Blend of FL Studies and ITE Average Trip Generation Rate:	**103.38**

Service Station w/Convenience Market (ITE LUC 853)

Location	Size (1,000 sf)	Date	Total # Interviews	# Trip Lengt Interviews	Trip Gen Rate	Time Period	Trip Length	Percent New Trips	VMT	Source
Tampa, FL	-	Mar-86	72	-	-	-	2.00	-	-	Kimley-Horn & Associates
Marion Co, FL	1.1	Jun-91	77	20	544.80	24hr.	0.89	26.0	126.07	Tindale-Oliver & Associates
Marion Co, FL	2.1	Jun-91	66	24	997.60	24hr.	1.67	36.4	606.42	Tindale-Oliver & Associates
Marion Co, FL	4.4	Jun-91	85	25	486.70	48hrs.	1.06	29.4	151.68	Tindale-Oliver & Associates
Collier Co, FL	-	Aug-91	96	38	-	-	1.19	39.6	-	Tindale-Oliver & Associates
Collier Co, FL	-	Aug-91	78	16	-	-	1.06	20.5	-	Tindale-Oliver & Associates
Tampa, FL	2.3	10/13-15/92	239	74	-	24hr.	1.06	31.1	-	Tindale-Oliver & Associates
Ellenton, FL	3.3	10/20-22/92	124	44	-	24hr.	0.96	35.3	-	Tindale-Oliver & Associates
Tampa, FL	3.8	11/10-12/92	142	23	-	24hr.	3.13	16.4	-	Tindale-Oliver & Associates
Marion Co, FL	2.5	Apr-02	87	-	719.79	24hr.	1.62	32.8	322.19	Kimley-Horn & Associates
Marion Co, FL	2.5	Apr-02	23	-	610.46	24hr.	1.77	11.7	126.61	Kimley-Horn & Associates
Marion Co, FL	3.0	Apr-02	59	-	606.02	24hr.	0.83	32.6	195.00	Kimley-Horn & Associates
Total Size	25.1	15.6	1,148			**Average Trip Length:**	**1.44**			
ITE	30.0	30.0				**Weighted Average Trip Length:**	**1.51**			
						Orange County Adjusted Trip Length:	**1.59**			
Blended Total	55.1	45.6				Weighted Percent New Trip Average:		27.7		

Average Trip Generation Rate: 639.68

ITE Average Trip Generation Rate (8th): 845.60

Blend of FL Studies and ITE Average Trip Generation Rate: 775.14

Drive-In Bank (ITE LUC 912)

Location	Size (1,000 sf)	Date	Total # Interviews	# Trip Length Interviews	Trip Gen Rate	Time Period	Trip Length	Percent New Trips	VMT	Source
Tampa, FL	-	Mar-86	77	-	-	-	2.40	-	-	Kimley-Horn & Associates
Tampa, FL	-	Mar-86	211	-	-	-	-	54.0	-	Kimley-Horn & Associates
Clearwater, FL	0.4	Aug-89	113	52	-	9a-6p	5.20	46.0	-	Tindale-Oliver & Associates
Largo, FL	2.0	Sep-89	129	94	-	-	1.60	73.0	-	Tindale-Oliver & Associates
Seminole, FL	4.5	Oct-89	-	-	-	-	-	-	-	Tindale-Oliver & Associates
Marion Co, FL	2.3	Jun-91	69	29	-	24hr.	1.33	42.0	-	Tindale-Oliver & Associates
Marion Co, FL	3.1	Jun-91	47	32	-	24hr.	1.75	68.1	-	Tindale-Oliver & Associates
Marion Co, FL	2.5	Jul-91	57	26	-	48hrs.	2.70	45.6	-	Tindale-Oliver & Associates
Collier Co, FL	-	Aug-91	162	96	-	24hr.	0.88	59.3	-	Tindale-Oliver & Associates
Collier Co, FL	-	Aug-91	116	54	-	-	1.58	46.6	-	Tindale-Oliver & Associates
Collier Co, FL	-	Aug-91	142	68	-	-	2.08	47.9	-	Tindale-Oliver & Associates
Hernando Co, FL	5.4	May-96	164	41	-	9a-6p	2.77	24.7	-	Tindale-Oliver & Associates
Marion Co, FL	2.4	Apr-02	70	-	-	24hr.	3.55	54.6	-	Kimley-Horn & Associates
Marion Co, FL	2.7	May-02	50	-	246.66	24hr.	2.66	40.5	265.44	Kimley-Horn & Associates
Total Size	25.2	2.7	1,407			**Average Trip Length:**	**2.38**			
ITE	21.0	21.0				**Weighted Average Trip Length:**	**2.46**			
						Orange County Adjusted Trip Length:	**2.58**			
Blended total	46.2	23.7				Weighted Percent New Trip Average:		46.2		

Weighted Average Trip Generation Rate: 246.66

ITE Average Trip Generation Rate (8th): 148.15

Blend of FL Studies and ITE Average Trip Generation Rate: 159.34

Quality Restaurant (ITE LUC 931)

Location	Size (1,000 sf)	Date	Total # Interviews	# Trip Length Interviews	Trip Gen Rate	Time Period	Trip Lengt	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 & Associates
Clearwater, FL	8.0	Oct-89	60	40	110.63	10a-2p/5-9p	2.80	67.0	207.54	Tindale-Oliver & Associates
Total Size	15.5	8.0	313			**Average Trip Length:**	**2.80**			
ITE	135.0	135.0				**Weighted Average Trip Length:**	**3.14**			
						Orange County Adjusted Trip Length:	**3.30**			
Blended total	150.5	143.0				Weighted Percent New Trip Average:		76.7		

Weighted Average Trip Generation Rate: 110.63

ITE Average Trip Generation Rate (8th): 89.95

Blend of FL Studies and ITE Average Trip Generation Rate: 91.10

High-Turnover Restaurant (ITE LUC 932)

Location	Size (1,000 sf)	Date	Total # Interviews	# Trip Length Interviews	Trip Gen Rate	Time Period	Trip Length	Percent New Trips	VMT	Source
Hernando Co, FL	6.2	May-96	242	175	187.51	9a-6p	2.76	72.5	375.00	Tindale-Oliver & Associates
Hernando Co, FL	8.2	May-96	154	93	102.71	9a-6p	4.15	60.2	256.43	Tindale-Oliver & Associates
St. Petersburg, FL	5.0	Oct-89	74	68	132.60	1130-7p	2.00	92.0	243.98	Tindale-Oliver & Associates
Kenneth City, FL	5.2	Oct-89	236	176	127.88	4p-730p	2.30	75.0	220.59	Tindale-Oliver & Associates
Pasco Co, FL	5.2	Apr-02	114	88	82.47	9a-6p	3.72	77.2	236.81	Tindale-Oliver & Associates
Pasco Co, FL	5.8	Apr-02	182	102	116.97	9a-6p	3.49	56.0	228.77	Tindale-Oliver & Associates
Orange Co, FL	8.9	-	-	-	52.69	-	-	-	-	Orange County
Orange Co, FL	11.3	-	-	-	62.12	-	-	-	-	Orange County
Orange Co, FL	6.7	-	-	-	82.58	-	-	-	-	Orange County
Orange Co, FL	11.4	-	-	-	91.67	-	-	-	-	Orange County
Orange Co, FL	11.3	-	-	-	95.33	-	-	-	-	Orange County
Orange Co, FL	7.2	-	-	-	98.06	-	-	-	-	Orange County
Orange Co, FL	5.5	-	-	-	100.18	-	-	-	-	Orange County
Orange Co, FL	9.7	-	-	-	105.84	-	-	-	-	Orange County
Orange Co, FL	4.6	-	-	-	129.23	-	-	-	-	Orange County
Orange Co, FL	7.0	-	-	-	126.40	-	-	-	-	Orange County
Orange Co, FL	9.7	-	-	-	132.32	-	-	-	-	Orange County
Orange Co, FL	5.0	-	-	-	135.68	-	-	-	-	Orange County
Orange Co, FL	5.6	-	-	-	145.59	-	-	-	-	Orange County
Orange Co, FL	7.4	-	-	-	147.44	-	-	-	-	Orange County
Orange Co, FL	5.9	-	-	-	147.74	-	-	-	-	Orange County
Total Size	152.8		1,102				**Average Trip Length:**	**3.07**		
ITE	98.0						**Weighted Average Trip Length:**	**3.17**		
							Orange County Adjusted Trip Length:	**3.33**		
Blended total	250.8						Weighted Percent New Trip Average:	70.8		

Weighted Average Trip Generation Rate: 109.84
ITE Average Trip Generation Rate (8th): 127.15
Blend of FL Studies and ITE Average Trip Generation Rate: 116.60

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

Location	Size (1,000 sf)	Date	Total # Interviews	# Trip Length Interviews	Trip Gen Rate	Time Period	Trip Lengt	Percent New Trips	VMT	Source
Tampa, FL	-	Mar-86	61	-	-	-	2.70	-	-	Kimley-Horn & Associates
Tampa, FL	-	Mar-86	306	-	-	-	-	65.0	-	Kimley-Horn & Associates
Pinellas Co, FL	2.20	Aug-89	81	48	502.80	11a-2p	1.70	59.0	504.31	Tindale-Oliver & Associates
Pinellas Co, FL	4.30	Oct-89	456	260	660.40	1 day	2.30	57.0	865.78	Tindale-Oliver & Associates
Tarpon Springs, FL	-	Oct-89	233	114	-	7a-7p	3.60	49.0	-	Tindale-Oliver & Associates
Marion Co, FL	1.60	Jun-91	60	32	962.50	48hrs.	0.91	53.3	466.84	Tindale-Oliver & Associates
Marion Co, FL	4.00	Jun-91	75	46	625.00	48hrs.	1.54	61.3	590.01	Tindale-Oliver & Associates
Collier Co, FL	-	Aug-91	66	44	-	-	1.91	66.7	-	Tindale-Oliver & Associates
Collier Co, FL	-	Aug-91	118	40	-	-	1.17	33.9	-	Tindale-Oliver & Associates
Hernando Co, FL	5.43	May-96	136	82	311.83	9a-6p	1.68	60.2	315.27	Tindale-Oliver & Associates
Hernando Co, FL	3.13	May-96	168	82	547.34	9a-6p	1.59	48.8	425.04	Tindale-Oliver & Associates
Lake Co, FL	2.20	Apr-01	376	252	934.30	-	2.50	74.6	1742.47	Tindale-Oliver & Associates
Lake Co, FL	3.20	Apr-01	171	182	654.90	-	4.10	47.8	1283.47	Tindale-Oliver & Associates
Lake Co, FL	3.80	Apr-01	188	137	353.70	-	3.30	70.8	826.38	Tindale-Oliver & Associates
Pasco Co, FL	2.66	Apr-02	100	46	283.12	9a-6p	5.10	46.0	664.20	Tindale-Oliver & Associates
Pasco Co, FL	2.96	Apr-02	486	164	515.32	9a-6p	2.72	33.7	472.92	Tindale-Oliver & Associates
Pasco Co, FL	4.42	Apr-02	168	120	759.24	9a-6p	1.89	71.4	1024.99	Tindale-Oliver & Associates
Orange Co, FL	8.93	-	-	-	377.00	-	-	-	-	Orange County
Total Size	48.8	34.0	4,463				**Average Trip Length:**	**2.42**		
ITE	63.0	63.0					**Weighted Average Trip Length:**	**2.05**		
							Orange County Adjusted Trip Length:	**2.15**		
Blended total	111.8	97.0					Weighted Percent New Trip Average:	57.9		

Weighted Average Trip Generation Rate: 530.19
ITE Average Trip Generation Rate (8th): 496.12
Blend of FL Studies and ITE Average Trip Generation Rate: 511.00

Service Station (ITE LUC 944)

Location	Size (1,000 sf)	Date	Total # Interviews	# Trip Length Interviews	Trip Gen Rate	Time Period	Trip Length	Percent New Trips	VMT	Source
Largo, FL	0.6	Nov-89	70	14	-	8am-5pm	1.90	23.0	-	Tindale-Oliver & Associates
Collier County, FL	-	Aug-91	168	40	-	-	1.01	23.8	-	Tindale-Oliver & Associates
Total Size	0.6		238				**Average Trip Length:**	**1.46**		
							Weighted Average Trip Length:	**1.90**		
							Orange County Adjusted Trip Length:	**2.00**		
							Weighted Percent New Trip Average:	23.0		

ITE Average Trip Generation Rate - per fuel position (8th): 168.56

Self-Service Car Wash (ITE LUC 947)

Location	Size (Bays)	Date	Total # Interviews	# Trip Lengt Interviews	Trip Gen Rate	Time Period	Trip Lengt	Percent New Trips	VMT	Source
Largo, FL	10	Nov-89	111	84	-	8am-5pm	2.00	76.0	-	Tindale-Oliver & Associates
Clearwater, FL	-	Nov-89	177	108	-	10am-5pm	1.30	61.0	-	Tindale-Oliver & Associates
Collier, FL	11	Dec-09	304	-	-	-	2.50	57.0	-	Tindale-Oliver & Associates
Collier, FL	8	Jan-09	186	-	-	-	1.96	72.0	-	Tindale-Oliver & Associates
Total Size	29		778			**Average Trip Lengt:**	**1.94**			
						Weighted Average Trip Lengt:	**2.18**			
						Orange County Adjusted Trip Lengt:	**2.29**			
								Weighted Percent New Trip Average:	67.7	
								ITE Average Trip Generation Rate - per wash station (8th):		**108.00**

Tourist Hotel – Local Studies

ID	Development	Location	Date	Size	Units	Type	ADT	
1	Holiday Inn - Lake Buena Vista	S. of I-4 & SR 535	Jul-91	507	rooms	Hotel	5.32	/room
2	Best Western All Suites	NE of International Dr & SR 535	Apr-92	280	rooms	Hotel	5.62	/occ room
3	Castle Hotel	NE of International Dr & Austrian Ct	Jan-93	215	rooms	Hotel	4.87	/occ room
4	Rosen Convention Hotel	International Dr & Hawaiian Ct	Aug-93	1,334	rooms	Hotel	5.68	/occ room
5	Hilton Grand Vacation Club	SE of CFL Pkwy & Sea Harbor Ext.	Mar-94	424	rooms	Hotel	5.99	/occ room
6	Sierra Land DRI	NE of SR 535 & SR 536	Apr-94	782	rooms	Hotel	5.50	/occ room
7	Sierra Land DRI	NE of SR 535 & SR 536	Apr-94	583	rooms	All Suites	6.87	/occ room
8	Westgate Lakes Timeshare	N. of CFL Pkwy & I-4	Sep-94	590	rooms	Timeshare	5.99	/occ room
9	Sierra Suites Hotel	Republic Dr & Austrian Ct	Jun-97	137	rooms	Hotel	7.61	/occ room
10	Sierra Suites Hotel	Palm Pkwy & Lake Ave	Jun-97	125	rooms	Hotel	7.61	/occ room
11	Hampton Inn	SW of Palm Pkwy & Lake Ave	Jul-97	150	rooms	Hotel	5.27	/occ room
12	Hampton Inn	Republic Dr	Oct-97	172	rooms	Hotel	3.06	/occ room
Weighted Average				**442**	**rooms**		**5.77**	**/room**

Source: Alternative Road Impact Fee Studies

Appendix B
Cost Component Calculations

Cost Component

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

- Right-of-Way
- Construction
- Design
- Roadway capacity
- Transit capital costs (AMA Only)

It is important to note that costs for city, county, and state roads were reviewed, but for purposes of this update, only the costs for county roads was considered in the impact fee equation.

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 determine a ROW acquisition cost per lane mile for county roads, TOA conducted a review of recently completed ROW acquisitions and current ROW estimates along capacity expansion projects and also considered ROW figures from the previous Orange County transportation impact fee reports and other impact fee reports for counties in Florida.

As shown in Table B-1, Orange County Transportation Planning Department provided recent ROW cost figures for eight local projects, which yielded a weighted average cost of $1.27 million per lane mile. Looking at the construction cost for projects from the same time period, this ROW costs was approximately 49 percent of the cost to construct the roadway. A review of the 2004 and 2009 (not adopted) transportation impact fee reports indicated an average ROW cost of $1.09 million per lane mile (39 percent of the corresponding construction costs), and a review of recent data from other counties throughout Florida indicated an average ROW cost of $0.99 million per lane mile (42 percent of the corresponding construction costs). Based on these data sources, it was determined that ROW should be estimated at approximately 45 percent of the cost to construct a roadway.

Using a factor of 45 percent for the relationship of ROW to construction costs, the ROW cost for county roadway in Orange County was calculated to be $1.08 million per lane mile.

Construction

As shown in Table B-1, a review of construction cost data for recent local county roadway capacity expansion projects identified 13 improvements. These 13 improvements (53.16 lane miles) had a weighted average construction cost of approximately $2.57 million per lane mile. In addition to looking at local data, a review of recently bid projects located throughout the state of Florida was conducted. As shown in Table B-2, a total of 22 projects from 9 different counties estimated a weighted average cost per lane mile of $1.90 million. When looking only at the projects from FDOT District 5, though, the average cost was $2.38 million per lane mile, which is consistent with the Orange County local projects. Similar to the process for ROW, the construction costs from previous Orange County transportation impact fee studies and from TIF reports throughout Florida were also reviewed. When combined, the projects listed in the 2004 and 2009 TIF reports indicated a weighted average cost of $2.77 million per lane mile, while additional TIF's statewide reported an average cost of $2.37 million per lane mile. Based on this data, a construction cost of $2.40 million per lane mile was used to calculate the transportation impact fee for Orange County.

During the review process for construction costs, recent trends and cost fluctuations were also considered. Volatility in construction costs statewide and indicated that costs are returning to levels seen between 2000 and 2004, as opposed to the higher costs seen between 2005 and 2009. This trend is consistent with the costs developed for this update.

Design

The design cost factor for county roads was determined based on a review of recent local projects. Based on this review, it was determined that design costs are approximately 11 percent of construction costs for county road projects. Based on this percentage (as shown in Table B-1), design costs are approximately $0.26 million per lane mile. In reviewing several other counties throughout Florida, the design cost factors ranged from 7 to 14 percent of construction costs, verifying that the 11 percent used for Orange County is a reasonable amount to use in the impact fee calculation.

Roadway Capacity

As shown in Table B-3, the average capacity per lane mile was based on the projects in the MetroPlan 2030 LRTP Financially Feasible Plan. 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. It should be noted that the County only intends to build roadways with urban section design characteristics. The resulting weighted average capacity per lane mile calculated based on these projects is 9,506 was used in the transportation impact fee calculation.

Table B-1
Recent Roadway Capacity Expansion Projects in Orange County – County Roads

CIP #	Project Name	From	To	Year	Improvement	Length	Lanes Added	Lane Miles Added	Design Cost	Design Cost per Lane Mile	ROW Cost	ROW Cost per lane mile	Construction Cost	Construction Cost per lane mile	Design / Constr.	ROW / Constr.
5066c	CR 535 Seg D & D-1	Marleon Dr	Chase Rd	2005	2 to 4 Lanes	2.12	2	4.24	-		-	-	$10,817,577	$2,551,315	n/a	n/a
5089d	Destination Pkwy	Lake Cay	Shingle Creek	2005	2 to 4 Lanes	0.90	2	1.80	-		-	-	$5,264,867	$2,924,926	n/a	n/a
5101a	Narcoossee Road	Osceola County line	SR 417	2005	2 to 6 Lanes	3.80	4	15.20	-		-	-	$17,549,947	$1,154,602	n/a	n/a
3017a	Rock Springs Rd	Ponkan Rd	Kelly Park Rd	2007	2 to 4 Lanes	2.10	2	4.20	$1,000,000	$238,095	$1,334,985	$317,854	$18,044,083	$4,296,210	6%	7%
3038b	Clarcona-Ocoee Rd	Ocoee Apopka Rd	SR 417	2008	2 to 4 Lanes	0.40	2	0.80	-	-	-	-	$2,803,484	$3,504,355	n/a	n/a
5066b	CR 535 Seg C&E	Ficquette Rd	Butler Ridge Dr	2008	2 to 4 Lanes	1.10	2	2.20	$945,254	$429,661	$1,960,704	$891,229	$3,693,616	$1,678,916	26%	53%
5089b	Destination Pkwy	International Dr	Tradeshow Blvd	2008	2 to 4 Lanes	0.71	2	1.42	-	-	-	-	$3,017,443	$2,124,960	n/a	n/a
3038a	Clarcona-Ocoee Rd	Ocoee Apopka Rd	Hiawassee Rd	2009	2 to 4 Lanes	5.08	2	10.16	$2,251,571	$221,611	$15,797,393	$1,554,862	-	-	n/a	n/a
3038d	Clarcona-Ocoee Rd	Clark	Hiawassee Rd	2009	2 to 4 Lanes	2.50	2	5.00	-	-	-	-	$10,182,738	$2,036,548	n/a	n/a
5059a	Woodbury Rd	South of SR 50	Challenger Pkwy	2009	2 to 4 Lanes	0.65	2	1.30	$579,275	$445,596	$190,842	$146,802	$4,088,942	$3,145,340	14%	5%
5110a	Taft-Vineland Rd	Central Florida Pkwy	John Young Pkwy	2009	2 to 4 Lanes	0.70	2	1.40	$558,200	$398,714	-	-	$4,462,535	$3,187,525	13%	n/a
5062a	Alafaya Trail	Avalon Pk Blvd	Mark Twain Blvd	2010	2 to 4 Lanes	3.83	2	7.66	$1,934,128	$252,497	$781,920	$102,078	$18,918,599	$2,469,791	10%	4%
3018a	Rouse Road	Lake Underhill	Corporate Blvd	2011	2 to 4 Lanes	4.16	2	8.32	$2,464,943	$296,267	$23,051,176	$2,770,574	-	-	n/a	n/a
3018b	Rouse Road	SR 50	Corporate Blvd	2011	2 to 4 Lanes	2.60	2	5.20	-	-	-	-	$29,380,249	$5,650,048	n/a	n/a
5024b	Econ. Trail	SR 408	SR 50	2011	2 to 4 Lanes	1.38	2	2.76	-	-	$4,714,154	$1,708,027	-	-	n/a	n/a
5066a	CR 535 Seg A	Magnolia Park Ct	SR 429	2011	2 to 4 Lanes	1.37	2	2.74	$1,054,563	$384,877	$2,193,435	$800,524	$8,390,570	$3,062,252	13%	26%
Total (Design)								**37.98**	**$10,787,934**	**$284,042**						
Total (Right-of-Way)								**39.34**			**$50,024,609**	**$1,271,597**				
Total (Construction)								**53.16**					**$136,614,650**	**$2,569,877**	**11%**	**49%**
Construction (excluding Rouse Road (3018b) and Narcoossee Road) - Low and High								**32.76**					**$89,684,454**	**$2,737,621**	-	-

Source: Orange County staff

Table B-2
Recent Roadway Capacity Expansion Projects through Florida – County Roads

County	District	Description	From	To	Year	Status	Feature	Design	Length	Lanes Added	Lane Miles Added	Construction Cost	Construction Cost per Lane
Collier	1	Santa Barbara Blvd Extension	Rattlesnake Hammock Rd	Davis Blvd	2008	Bid	0 to 6	Urban	2.00	6	12.00	$18,947,979	$1,578,998
Polk	1	Silver Connector Rd	E.F. Griffin Rd	US 98	2008	Bid	0 to 2	Urban	0.33	2	0.66	$1,560,483	$2,364,368
Polk	1	County Line Rd	Ewell Ave	Pipkin Rd	2008	Bid	2 to 4	Urban	1.20	2	2.40	$3,993,892	$1,664,122
Volusia	5	Debary Ave	Deltona Blvd	Providence Blvd	2008	Bid	2 to 4	Urban	1.84	2	3.68	$7,405,914	$2,012,477
Volusia	5	S. Williamson Blvd Phase II	S. of Sabal Creek Blvd	N. of Moody Bridge	2008	Bid	2 to 4	Urban	1.91	2	3.82	$11,109,225	$2,908,174
Lake	5	CR 466 (Segment A)	US 301	CR 319	2008	Bid	2 to 4	Urban	1.00	2	2.00	$4,062,660	$2,031,330
Hillsborough	7	40th St	River Pines Apts	Humphrey St	2008	Bid	2 to 4	Urban	0.95	2	1.90	$5,154,862	$2,713,085
Hillsborough	7	Race Track Rd (Phase I)	Douglas Rd	Linebaugh Ave	2008	Bid	2 to 6	Urban	1.01	4	4.04	$10,099,911	$2,499,978
Lee	1	Gladiolus Dr (Ph. I)	A&W Bulb Rd	Winkler Rd	2008	Bid	2 to 4/6	Urban	1.94	2/4	5.44	$13,971,509	$2,568,292
Lee	1	Gladiolus Dr (Ph. II)	Pine Ridge Rd	A&W Bulb Rd	2008	Bid	2 to 4	Urban	1.02	2	2.04	$6,748,642	$3,308,158
Hillsborough	7	Bruce B. Downs	Palm Springs Blvd	Pebble Beach Blvd	2009	Bid	4 to 8	Urban	7.20	4	28.80	$40,575,305	$1,408,865
Hillsborough	7	Race Track Rd (Phase IV)	Douglas Rd	Hillsborough Ave	2009	Bid	2 to 6	Urban	0.56	4	2.24	$4,397,412	$1,963,130
Sarasota	1	Fruitville Rd (Ph. I)	Tatum Rd	Debrecen Rd	2009	Bid	2 to 4	Urban	0.72	2	1.44	$4,355,796	$3,024,858
Sarasota	1	Fruitville Rd (Ph. II)	Coburn Rd	Tatum Rd	2009	Bid	2 to 4	Urban	1.26	2	2.52	$8,557,904	$3,395,994
Lee	1	Colonial Blvd (CR 884)	I-75	SR 82	2009	Bid	4 to 6	Urban	2.70	2	5.40	$14,576,393	$2,699,332
Broward	4	Bailey Rd	NW 64th Ave / SW 81st Ave	SR 7 (US 441)	2010	Bid	2 to 4	Urban	2.00	2	4.00	$6,330,297	$1,582,574
Collier	1	Oil Well Rd (Segment 2)	Immokalee Rd	E. of Everglades Blvd	2010	Bid	2 to 4	Urban	3.33	2	6.66	$19,735,024	$2,963,217
Collier	1	Oil Well Rd (Segment 4A)	W. of Oil Well Grade Rd	W. of Camp Keais Rd	2010	Bid	2 to 6	Urban	3.79	4	15.16	$19,464,255	$1,283,922
Lee	1	Six Mile Cypress Pkwy	Daniels Pkwy	S. of Winkler Rd Ext.	2010	Bid	2 to 4	Urban	3.09	2	6.18	$6,711,242	$1,085,961
Sarasota	1	North Cattlemen Rd	Richardson Rd	Desoto Rd	2011	Bid	2 to 4	Urban	2.55	2	5.10	$12,153,584	$2,383,056
Lee	1	Daniels Pkwy	Chamberlin Pkwy	Gateway Blvd	2011	Bid	4 to 6	Urban	2.05	2	4.10	$2,906,553	$708,915
Pinellas	1	Bryan Dairy Rd	Starkey Rd (CR 1)	72nd St	2011	Bid	4 to 6	Urban	1.47	2	2.94	$10,327,383	$3,512,715
Total											**122.52**	**$233,146,225**	**$1,902,924**
Total (District 5 Only)											**9.50**	**$22,577,799**	**$2,376,610**

Source: Roadway bids from recent impact fee studies and from the TOA Cost Database, with information having been provided by each respective County.

Table B-3
Orange County 2030 Long Range Transportation Plan

Jurisdiction	Location	From	To	Area Type	Functional Class	Improvement	Length	Lanes Added	Lane Miles Added	Initial Capacity	Future Capacity	Added Capacity	Vehicle Miles of Capacity Added	VMC per Lane Mile
County	A.D. Mims Rd	Wurst Rd	Clarke Rd	Urban	Collector	2 to 4	0.64	2	1.28	15,840	34,920	19,080	12,211	9,540
County	A.D. Mims Rd	Clarke Rd	Apopka-Vineland Rd	Urban	Collector	2 to 4	1.04	2	2.08	15,840	34,920	19,080	19,843	9,540
County	All American Blvd	Clarcona-Ocoee Rd	Forest City Rd	Urban	Collector	0 to 4	1.07	4	4.28	0	34,921	34,921	37,365	8,730
County	Apopka-Vineland Rd/CR 435	Wintergarden-Vineland Rd	Fenton Rd	Urban	Minor Arterial	4 to 6	1.43	2	2.86	34,920	52,560	17,640	25,225	8,820
County	Apopka-Vineland Rd/CR 435	Fenton Rd	Darlene Rd	Urban	Minor Arterial	4 to 6	1.01	2	2.02	34,920	52,560	17,640	17,816	8,820
County	Apopka-Vineland Rd/CR 435	Darlene Rd	Kilgore Rd	Urban	Minor Arterial	4 to 6	1.34	2	2.68	34,920	52,560	17,640	23,638	8,820
County	Apopka-Vineland Rd/CR 435	Kilgore Rd	Sand Lake Rd	Urban	Minor Arterial	4 to 6	0.76	2	1.52	34,920	52,560	17,640	13,406	8,820
County	Apopka-Vineland Rd/CR 435	Sand Lake Rd	Conroy-Windermere Rd	Urban	Minor Arterial	4 to 6	3.15	2	6.30	31,590	47,790	16,200	51,030	8,100
County	Apopka-Vineland Rd/CR 435	Conroy-Windermere Rd	Old Winter Garden Rd	Urban	Minor Arterial	4 to 6	3.47	2	6.94	34,920	52,560	17,640	61,211	8,820
County	Apopka-Vineland Rd/CR 435	SR 50/Colonial Dr	Balboa Dr	Urban	Collector	4 to 6	0.53	2	1.06	34,920	52,560	17,640	9,349	8,820
County	Apopka-Vineland Rd/CR 435	Balboa Dr	SR 438/Silver Star Rd	Urban	Collector	4 to 6	1.27	2	2.54	34,920	52,560	17,640	22,403	8,820
County	Apopka-Vineland Rd/CR 435	SR 438/Silver Star Rd	A.D. Mims Rd	Urban	Collector	4 to 6	0.89	2	1.78	34,920	52,560	17,640	15,700	8,820
County	Apopka-Vineland Rd/CR 435	A.D. Mims Rd	Clarcona-Ocoee Rd	Urban	Collector	4 to 6	1.69	2	3.38	34,920	52,560	17,640	29,812	8,820
County	Avalon Rd (CR 545)	US 192	Seidel Rd	Urban	Collector	2 to 4	5.26	2	10.52	15,840	34,920	19,080	100,361	9,540
County	Avalon Rd (CR 545)	Seidel Rd	McKinney Rd	Urban	Collector	2 to 4	3.89	2	7.78	15,840	34,920	19,080	74,221	9,540
County	Avalon Rd (CR 545)	McKinney Rd	Tilden Rd	Urban	Collector	2 to 4	3.51	2	7.02	15,840	34,920	19,080	66,971	9,540
County	Avalon Rd (CR 545)	Tilden Rd	Siplin Rd	Urban	Collector	2 to 4	2.81	2	5.62	15,840	34,920	19,080	53,615	9,540
County	Avalon Rd (CR 545)	Siplin Rd	SR 50/Colonial Dr	Urban	Collector	2 to 4	0.75	2	1.50	12,672	27,936	15,264	11,448	7,632
County	Beulah Rd	Marshall Farms Rd	SR 50/Colonial Dr	Urban	Collector	2 to 4	0.48	2	0.96	12,672	27,936	15,264	7,327	7,632
County	Boggy Creek Rd	Osceola Co. Line	SR 417	Urban	Minor Arterial	2 to 4	1.46	2	2.92	15,840	34,920	19,080	27,857	9,540
County	Boggy Creek Rd	SR 417/Greenway	Wetherbee Rd	Urban	Minor Arterial	4 to 6	2.59	2	5.18	34,920	52,560	17,640	45,688	8,820
County	Boggy Creek Rd	Wetherbee Rd	Tradeport Dr	Urban	Minor Arterial	4 to 6	1.32	2	2.64	34,920	52,560	17,640	23,285	8,820
County	Bowness Rd/Kissimmee Ave (Ocoee)	Story Rd	S. Kissimmee Ave	Urban	Minor Arterial	2 to 4	0.16	2	0.32	15,840	34,920	19,080	3,053	9,541
County	Bowness Rd (Ocoee)	S Kissimmee Ave	Franklin St	Urban	Minor Arterial	2 to 4	0.82	2	1.64	15,840	34,920	19,080	15,646	9,540
County	Central Florida Pkwy	Turkey Lake Rd	International Dr	Urban	Minor Arterial	2 to 4	1.38	2	2.76	14,580	31,590	17,010	23,474	8,505
County	Central Florida Pkwy	International Dr	SR 423/John Young Pkwy	Urban	Minor Arterial	4 to 6	1.96	2	3.92	31,590	47,790	16,200	31,752	8,100
County	Chickasaw Tr	Cascade Dr	Curry Ford Rd	Urban	Collector	2 to 4	0.82	2	1.64	15,840	34,920	19,080	15,646	9,540
County	Chickasaw Tr/Vista Park Blvd	0.5 miles N of Lee Vist Blvd	Cascade Dr	Urban	Collector	2 to 4	2.89	2	5.78	15,840	34,920	19,080	55,141	9,540
County	Clarcona Rd	Clarcona-Ocoee Rd	Gilliam Rd	Urban	Collector	4 to 6	0.92	2	1.84	27,936	42,048	14,112	12,983	7,056
County	Clarcona Rd	Gilliam Rd	Keene St	Urban	Collector	4 to 6	1.06	2	2.12	27,936	42,048	14,112	14,959	7,056
County	Clarcona Rd	Keene St	Cleveland St	Urban	Collector	4 to 6	1.09	2	2.18	27,936	42,048	14,112	15,382	7,056
County	Clarcona-Ocoee Rd	Fullers Cross Rd	West Rd	Urban	Collector	2 to 4	0.30	2	0.60	15,840	34,920	19,080	5,724	9,540
County	Clarcona-Ocoee Rd	West Rd	Adair St	Urban	Collector	4 to 6	0.50	2	1.00	34,920	52,560	17,640	8,820	8,820
County	Clarcona-Ocoee Rd	Adair St	Clarke Rd	Urban	Collector	4 to 6	1.62	2	3.24	34,920	52,560	17,640	28,577	8,820
County	Clarcona-Ocoee Rd	Clarke Rd	Apopka-Vineland Rd	Urban	Collector	4 to 6	1.16	2	2.32	34,920	52,560	17,640	20,462	8,820
County	Clarcona-Ocoee Rd	Apopka-Vineland Rd	Hiawassee Rd	Urban	Collector	4 to 6	1.37	2	2.74	34,920	52,560	17,640	24,167	8,820

Table B-3 (continued)
Orange County 2030 Long Range Transportation Plan

Jurisdiction	Location	From	To	Area Type	Functional Class	Improvement	Length	Lanes Added	Lane Miles Added	Initial Capacity	Future Capacity	Added Capacity	Vehicle Miles of Capacity Added	VMC per Lane Mile
County	Conroy-Windermere Rd	Lake St	Apopka-Vineland Rd	Urban	Collector	2 to 4	1.33	2	2.66	15,840	34,920	19,080	25,376	9,540
County	Conway Rd	McCoy Rd	Judge Rd	Urban	Minor Arterial	4 to 6	1.03	2	2.06	34,920	52,560	17,640	18,169	8,820
County	CR 438A (Kennedy Blvd/Lake Ave)	Keller Rd	Wymore Rd	Urban	Collector	4 to 6	0.74	2	1.48	31,590	47,790	16,200	11,988	8,100
County	CR 438A (Kennedy Blvd/Lake Ave)	Wymore Rd	US 17-92	Urban	Collector	2 to 4	1.25	2	2.50	12,672	27,936	15,264	19,080	7,632
County	CR 535 (Wintergarden Vineland Rd)	Buena Vista Dr	Reams Rd	Urban	Collector	4 to 6	4.54	2	9.08	34,920	52,560	17,640	80,086	8,820
County	CR 535 (Wintergarden Vineland Rd)	Reams Rd	Chase Rd	Urban	Collector	4 to 6	1.38	2	2.76	34,920	52,560	17,640	24,343	8,820
County	CR 535 (Wintergarden Vineland Rd)	Chase Rd	Ficquette Rd/Hancock Rd	Urban	Collector	4 to 6	1.85	2	3.70	34,920	52,560	17,640	32,634	8,820
County	CR 535 (Wintergarden-Vineland Rd)	Ficquette Rd/Hancock Rd	Tilden Rd	Urban	Collector	4 to 6	1.97	2	3.94	34,920	52,560	17,640	34,751	8,820
County	CR 535 (Wintergarden-Vineland Rd)	Tilden Rd	SR 429	Urban	Collector	4 to 6	0.90	2	1.80	34,920	52,560	17,640	15,876	8,820
County	CR 535 (Wintergarden-Vineland Rd)	SR 429	Roper Rd	Urban	Collector	4 to 6	1.42	2	2.84	34,920	52,560	17,640	25,049	8,820
County	CR 535 (Wintergarden Vineland Rd)	Roper Rd	SR 50/Colonial Dr	Urban	Collector	4 to 6	1.23	2	2.46	34,920	52,560	17,640	21,697	8,820
County	Dowden Rd (4th St)	Orange Ave	Boggy Creek Rd	Urban	Collector	4 to 6	1.11	2	2.22	34,920	52,560	17,640	19,580	8,820
County	Econlockhatchee Trail	Lee Vista Blvd	Orlando City Limits	Urban	Collector	2 to 4	1.20	2	2.40	14,580	31,590	17,010	20,412	8,505
County	Econlockhatchee Trail	Orlando City Limits	Curry Ford Rd	Urban	Collector	2 to 4	1.10	2	2.20	14,580	31,590	17,010	18,711	8,505
County	Econlockhatchee Trail	Curry Ford Rd	SR 50	Urban	Collector	2 to 4	4.08	2	8.16	14,580	31,590	17,010	69,401	8,505
County	Ficquette Rd-Hancock Rd	Lake Hancock Rd	600' W of Overstreet Rd	Urban	Collector	2 to 4	1.65	2	3.30	15,840	34,920	19,080	31,482	9,540
County	Good Homes Rd	Old Winter Garden Rd	SR 408	Urban	Collector	4 to 6	0.25	2	0.50	31,590	47,790	16,200	4,050	8,100
County	Good Homes Rd	SR 408	SR 50/Colonial Dr	Urban	Collector	4 to 6	0.41	2	0.82	31,590	47,790	16,200	6,642	8,100
County	Hemple Ave	Windy Ridge Rd	Gotha Rd	Urban	Collector	2 to 4	1.40	2	2.80	12,672	27,936	15,264	21,370	7,632
County	Hemple Ave	Gotha Rd	Old Winter Garden Rd	Urban	Collector	2 to 4	1.30	2	2.60	15,840	34,920	19,080	24,804	9,540
County	Hiawassee Rd	Clarcona-Ocoee Rd	Beggs Rd	Urban	Minor Arterial	4 to 6	0.83	2	1.66	34,920	52,560	17,640	14,641	8,820
County	Hiawassee Rd	Beggs Rd	Apopka Blvd	Urban	Minor Arterial	4 to 6	1.61	2	3.22	34,920	52,560	17,640	28,400	8,820
County	International Dr	N Hawaian Ct	Sand Lake Rd	Urban	Minor Arterial	4 to 6	2.05	2	4.10	31,590	47,790	16,200	33,210	8,100
County	International Dr South	Osceola Co. Line	SR 535/Vineland Rd	Urban	Minor Arterial	6 to 8	2.03	2	4.06	52,560	69,930	17,370	35,261	8,685
County	International Dr South	SR 535/Vineland RD	SR 417/Greenway	Urban	Minor Arterial	0 to 6	0.62	6	3.72	0	52,560	52,560	32,587	8,760
County	International Dr South	SR 417/Greenway	S. Westwood Blvd	Urban	Minor Arterial	4 to 6	3.13	2	6.26	34,920	52,560	17,640	55,213	8,820
County	International Dr South	S. Westwood Blvd	N. Westwood Blvd	Urban	Minor Arterial	4 to 6	2.17	2	4.34	34,920	52,560	17,640	38,279	8,820
County	Lake Hancock Rd	Seidel Rd	Reams Rd	Urban	Collector	2 to 4	1.38	2	2.76	27,900	72,800	44,900	61,962	22,450
County	Lake Pickett Rd	SR 50/Colonial Dr	Percival Rd	Urban	Collector	2 to 4	1.06	2	2.12	15,840	34,920	19,080	20,225	9,540
County	Lake Pickett Rd	Percival Rd	S. Tanner Rd	Urban	Collector	2 to 4	1.24	2	2.48	15,840	34,920	19,080	23,659	9,540
County	Lake Underhill Rd	Goldenrod Rd	Chickasaw Trail	Urban	Minor Arterial	2 to 4	1.23	2	2.46	14,580	31,590	17,010	20,922	8,505
County	Lake Underhill Rd	Chickasaw Tr	Dean Rd	Urban	Minor Arterial	2 to 4	1.30	2	2.60	14,580	31,590	17,010	22,113	8,505
County	Lake Underhill Rd	Dean Rd	Rouse Rd	Urban	Minor Arterial	2 to 4	1.45	2	2.90	14,580	31,590	17,010	24,665	8,505
County	Lakeville Rd	Clarcona-Ocoee Rd	Beggs Rd	Urban	Collector	2 to 4	0.82	2	1.64	15,840	34,920	19,080	15,646	9,540
County	Lakeville Rd	Beggs Rd	Apopka Blvd	Urban	Collector	2 to 4	1.79	2	3.58	15,840	34,920	19,080	34,153	9,540
County	Landstar Blvd	Osceola Co. Line	SR 417/Greenway	Urban	Collector	4 to 6	1.62	2	3.24	15,840	34,920	19,080	30,910	9,540

Table B-3 (continued)
Orange County 2030 Long Range Transportation Plan

Jurisdiction	Location	From	To	Area Type	Functional Class	Improvement	Length	Lanes Added	Lane Miles Added	Initial Capacity	Future Capacity	Added Capacity	Vehicle Miles of Capacity Added	VMC per Lane Mile
County	Landstar Blvd	SR 417/Greenway	Wetherbee Rd	Urban	Collector	4 to 6	1.90	2	3.80	15,840	34,920	19,080	36,252	9,540
County	Maguire Rd	Gotha Rd	Roberson Rd	Urban	Collector	2 to 4	0.94	2	1.88	15,840	34,920	19,080	17,935	9,540
County	Maguire Rd/Main St	1350' S of Lake Butler Blvd	Gotha Rd	Urban	Collector	2 to 4	1.01	2	2.02	12,672	27,936	15,264	15,417	7,632
County	Marshall Farms Rd	Beulah Rd	Windermere Rd	Urban	Collector	2 to 4	0.71	2	1.42	12,672	27,936	15,264	10,837	7,632
County	Moss Park Rd	Lake Hart Rd	Lake Mary Jane Rd	Urban	Collector	2 to 4	1.60	2	3.20	15,840	34,920	19,080	30,528	9,540
County	Ocoee-Apopka Rd	SR 438/Silver Star Rd	Fullers Cross Rd	Urban	Collector	4 to 6	1.44	2	2.88	34,920	52,560	17,640	25,402	8,820
County	Ocoee-Apopka Rd	Fullers Cross Rd	West Rd	Urban	Collector	4 to 6	0.60	2	1.20	34,920	52,560	17,640	10,584	8,820
County	Ocoee-Apopka Rd	West Rd	McCormick Rd	Urban	Collector	2 to 4	1.34	2	2.68	27,900	72,800	44,900	60,166	22,450
County	Ocoee-Apopka Rd	McCormick Rd	Binion Rd	Urban	Collector	2 to 4	0.64	2	1.28	27,900	72,800	44,900	28,736	22,450
County	Ocoee-Apopka Rd	Binion Rd	Harmon Rd	Urban	Collector	2 to 4	1.42	2	2.84	27,900	72,800	44,900	63,758	22,450
County	Ocoee-Apopka Rd	Harmon Rd	Bradshaw Rd	Urban	Collector	2 to 4	1.54	2	3.08	27,900	72,800	44,900	69,146	22,450
County	Ocoee-Apopka Rd/Michael Gladden Blvd	Bradshaw Rd	Central Ave	Urban	Collector	2 to 4	0.58	2	1.16	15,840	34,920	19,080	11,066	9,540
County	Old Winter Garden Rd	Professional Pkwy	Blackwood Ave	Urban	Minor Arterial	4 to 6	0.27	2	0.54	34,920	52,560	17,640	4,763	8,820
County	Old Winter Garden Rd	Blackwood Ave	Hemple Ave	Urban	Minor Arterial	4 to 6	0.41	2	0.82	34,920	52,560	17,640	7,232	8,820
County	Old Winter Garden Rd	Hemple Ave	Citrus Oaks Ave	Urban	Minor Arterial	4 to 6	0.28	2	0.56	34,920	52,560	17,640	4,939	8,820
County	Old Winter Garden Rd	Citrus Oaks Ave	Good Homes Rd	Urban	Minor Arterial	4 to 6	0.90	2	1.80	34,920	52,560	17,640	15,876	8,820
County	Old Winter Garden Rd	Good Homes Rd	Apopka-Vineland Rd	Urban	Minor Arterial	4 to 6	0.43	2	0.86	34,920	52,560	17,640	7,585	8,820
County	Old Winter Garden Rd	Apopka-Vineland Rd	Hiawassee Rd	Urban	Minor Arterial	4 to 6	1.36	2	2.72	34,920	52,560	17,640	23,990	8,820
County	Orangewood Blvd	SR 528/Beachline	Central FL Pkwy	Urban	Collector	4 to 6	0.96	2	1.92	34,920	52,560	17,640	16,934	8,820
County	Palm Pkwy/Turkey Lake Rd	Winter Garden-Vineland Rd	Central FL Pkwy	Urban	Minor Arterial	4 to 6	2.68	2	5.36	34,920	52,560	17,640	47,275	8,820
County	Pershing Ave	Bumby Ave	Conway Gardens Rd	Urban	Collector	2 to 4	0.75	2	1.50	12,672	27,936	15,264	11,448	7,632
County	Piedmont-Wekiwa Springs Rd	Apopka Blvd	US 441/Orange Blossom Tr	Urban	Minor Arterial	4 to 6	0.45	2	0.90	34,920	52,560	17,640	7,938	8,820
County	Piedmont-Wekiwa Springs Rd	US 441/Orange Blossom Tr	Semoran Blvd	Urban	Collector	4 to 6	1.31	2	2.62	34,920	52,560	17,640	23,108	8,820
County	Pine Hills Rd	Clarcona-Ocoee Rd	Beggs Rd	Urban	Minor Arterial	4 to 6	0.98	2	1.96	34,920	52,560	17,640	17,287	8,820
County	Plymouth-Sorrento Rd (CR 437)	Ponkan Rd	US 441/Orange Blossom Tr	Urban	Collector	2 to 4	2.37	2	4.74	15,840	34,920	19,080	45,220	9,540
County	Ponkan Rd	Plymouth-Sorrento Rd	Rock Springs Rd	Urban	Collector	2 to 4	3.18	2	6.36	15,840	34,920	19,080	60,674	9,540
County	Professional Pkwy	Maguire Rd	Old Winter Garden Rd	Urban	Collector	4 to 6	0.45	2	0.90	34,920	52,560	17,640	7,938	8,820
County	Reams Rd	2500' south of CR 535	CR 535	Urban	Collector	2 to 4	0.47	2	0.94	15,840	34,920	19,080	8,968	9,540
County	Reams Rd	Lake Hancock Rd	Center Dr	Urban	Collector	2 to 6	1.93	4	7.72	15,840	52,560	36,720	70,870	9,180
County	Reams Rd	Center Dr	Winter Garden-Vineland Rd	Urban	Collector	2 to 6	2.00	4	8.00	15,840	52,560	36,720	73,440	9,180
County	Rock Springs Rd	Welch Rd	Ponkan Rd	Urban	Collector	4 to 6	1.54	2	3.08	34,920	52,560	17,640	27,166	8,820
County	Rose Ave	Clarcona-Ocoee Rd	US 441/Orange Blossom Tr	Urban	Collector	2 to 4	0.50	2	1.00	11,664	25,272	13,608	6,804	6,804
County	Sadler Ave	US 441/Orange Blossom Tr	Round Lake Rd	Urban	Collector	2 to 4	1.69	2	3.38	12,672	27,936	15,264	25,796	7,632
County	Sadler Ave	Lake Co. Line	US 441/Orange Blossom Tr	Urban	Collector	2 to 4	2.37	2	4.74	12,672	27,936	15,264	36,176	7,632
County	Seidel Rd	Avalon Rd	Lake Hancock Rd	Urban	Collector	2 to 4	2.48	2	4.96	27,900	72,800	44,900	111,352	22,450
County	Story Rd	9th St	Carter Rd	Urban	Collector	2 to 4	0.64	2	1.28	12,672	27,936	15,264	9,769	7,632

Table B-3 (continued)
Orange County 2030 Long Range Transportation Plan

Jurisdiction	Location	From	To	Area Type	Functional Class	Improvement	Length	Lanes Added	Lane Miles Added	Initial Capacity	Future Capacity	Added Capacity	Vehicle Miles of Capacity Added	VMC per Lane Mile
County	Story Rd	Carter Rd	Bowness Rd/Kissimmee Ave	Urban	Collector	2 to 4	1.12	2	2.24	12,672	27,936	15,264	17,096	7,632
County	Taft-Vineland Rd	US 441/Orange Blossom Tr	General Blvd	Urban	Minor Arterial	4 to 6	0.99	2	1.98	34,920	52,560	17,640	17,464	8,820
County	Taft-Vineland Rd	General Blvd	Orange Ave	Urban	Minor Arterial	4 to 6	1.04	2	2.08	34,920	52,560	17,640	18,346	8,820
County	Tilden Rd	Avalon Rd	Winter Garden-Vineland Rd	Urban	Collector	2 to 4	2.17	2	4.34	15,840	34,920	19,080	41,404	9,540
County	Tradeport Dr	Centerport St	Secure Rd	Urban	Collector	4 to 6	0.60	2	1.20	34,920	52,560	17,640	10,584	8,820
County	Tradeport Dr	Secure Rd	Jetport Dr	Urban	Collector	4 to 6	0.60	2	1.20	34,920	52,560	17,640	10,584	8,820
County	Tradeport Dr	Boggy Creek Rd	Centerport St	Urban	Collector	4 to 6	1.80	2	3.60	34,920	52,560	17,640	31,752	8,820
County	Turkey Lake Rd	Central Florida Pkwy	Sand Lake Commons Blvd	Urban	Minor Arterial	4 to 6	1.36	2	2.72	31,590	47,790	16,200	22,032	8,100
County	Turkey Lake Rd	Sand Lake Commons Blvd	Sand Lake Rd	Urban	Minor Arterial	4 to 6	1.43	2	2.86	31,590	47,790	16,200	23,166	8,100
County	Universal Blvd	Sand Lake Rd	Pointe Plaza Ave	Urban	Collector	4 to 6	1.02	2	2.04	34,920	52,560	17,640	17,993	8,820
County	Wallace Rd	Apopka-Vineland Rd	Dr. Phillips Blvd	Urban	Collector	2 to 4	0.50	2	1.00	15,840	34,920	19,080	9,540	9,540
County	Wallace Rd	Dr. Phillips Blvd	Turkey Lake Rd	Urban	Collector	2 to 4	1.03	2	2.06	15,840	34,920	19,080	19,652	9,540
County	Wekiwa Springs Rd	Orchard Dr	Seminole Co. Line	Urban	Collector	2 to 4	1.25	2	2.50	15,840	34,920	19,080	23,850	9,540
County	Welch Rd	Rock Springs Rd	Thompson Rd	Urban	Collector	2 to 4	1.26	2	2.52	15,840	34,920	19,080	24,041	9,540
County	Welch Rd	Thompson Rd	Wekiwa Springs Rd	Urban	Collector	2 to 4	1.29	2	2.58	15,840	34,920	19,080	24,613	9,540
County	Wetherbee Rd	US 441/Orange Blossom Tr	Orange Ave	Urban	Collector	4 to 6	1.88	2	3.76	34,920	52,560	17,640	33,163	8,820
County	Wetherbee Rd	Landstar Blvd	Boggy Creek Rd	Urban	Collector	4 to 6	2.40	2	4.80	34,920	52,560	17,640	42,336	8,820
County	Windermere Rd	Marshall Farms Rd	Warrior Rd	Urban	Collector	2 to 4	0.36	2	0.72	15,840	34,920	19,080	6,869	9,540
County	Windermere Rd/Tomyn Rd	Roberson Rd	Maguire Rd	Urban	Collector	2 to 4	2.09	2	4.18	15,840	34,920	19,080	39,877	9,540
County	Wurst Rd	Lakewood Ave	Adair St	Urban	Collector	2 to 4	0.52	2	1.04	12,672	27,936	15,264	7,937	7,632
County	Wurst Rd	Adair St	A.D. Mims Rd	Urban	Collector	2 to 4	0.66	2	1.32	12,672	27,936	15,264	10,074	7,632
County	Wymore Rd	Kennedy Blvd	Maitland Blvd	Urban	Collector	2 to 4	0.87	2	1.74	15,840	34,920	19,080	16,600	9,540
County	Wymore Rd	Lee Rd	Kennedy Blvd	Urban	Collector	2 to 4	0.88	2	1.76	15,840	34,920	19,080	16,790	9,540
County	Young Pine Rd	Lamberton Rd	Lee Vista Blvd	Urban	Collector	2 to 4	2.14	2	4.28	15,840	34,920	19,080	40,831	9,540
Total									**381.00**				**3,621,884**	**9,506**

Source: MetroPlan 2030 Long Range Transportation Plan Financially Feasible Plan – Highway Projects. Only includes County roadways where length and functional classification data was available.

Transit Capital Costs (AMA Only)

Components of the capital cost considered in this study included:

- Vehicles needed and fleet margin
- Bus stops, shelters, and benches
- Transfer stations
- Cost of road network used by transit vehicles

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

Transit Capital Cost = Vehicle Cost + Bus Stops Cost (Bench and Shelter) + BRT Station Cost + Road Capacity Cost

Table B-4 presents a series of assumptions that were incorporated into the transit cost model for LYNX service in the AMA. Table B-5 illustrates the cost per PMC for the transit portion of the AMA fee. This was calculated based on an assumption of 174 miles of potential additional transit service (based on the Orange County TDP), with BRT accounting for 20 percent of the total additional services. The assumptions from Table B-4 have been applied to the additional transit service to determine a general cost per person-mile of capacity for the Orange County AMA.

Table B-4
Transit Capital Cost Assumptions

Description	Local Service	Bus Rapid Transit
Service Span	18 hrs	18 hrs
Headway	30 mins	10 mins
Vehicle Capacity (equivalent seats)	60 seats	90 seats
Average Bus Speed	14 mph	30 mph
Fleet Margin	20%	20%
Load Factor/System Capacity	30%	30%
Bench Stop Spacing	3 per mile	n/a
Shelter Stop Spacing	1 per mile	n/a
Station Stop Spacing (BRT only)	n/a	2 per mile
Vehicle Cost	$585,000	$908,320
Bench Stop Cost	$6,000	n/a
Shelter Stop Cost	$35,000	n/a
Station Stop Cost	n/a	$150,000

Source: Assumptions were based on LYNX data, industry standards, and the consultant's professional knowledge of transit systems

Table B-5
Cost per Person-Mile of Capacity – Transit (AMA Only)

Input	Orange County AMA (Local Transit)	Orange County AMA (BRT)
Transit Person-Miles of Capacity Calculation		
Vehicle Capacity[1]	60	90
Number of Vehicles (20% fleet margin)[2]	30	10
Cycles per Day[3]	36	108
Headway Time (minutes)[4]	30	10
Speed (mph)[5]	14	30
Round Trip Length (miles)[6]	174.34	43.59
Cycle Time (minutes)[7]	747	87
Total Person-Miles of Capacity[8]	376,574	423,695
Load Factor/System Capacity[9]	30%	30%
Adjusted Person-Miles of Capacity[10]	**112,972**	**127,109**
Capital Cost Calculation		
Vehicle-Miles per Day[11]	6,276	4,708
Seconds per Stop[12]	14.4	14.4
Headway Factor[12]	2.1	2.1
GC Factor (Green Light)[12]	0.44	0.44
Stops per Mile[13]	4	2
Cost per Vehicle-Mile of Capital[14]	$394	$394
Transit Portion of Roadway Capital Cost[15]	$29,842,488	$11,193,310
Bus Cost[16]	$585,000	$908,320
Number of Buses[17]	30	10
Total Bus Capital Cost[18]	$17,550,000	$9,083,200
Total Bus Stop/Shelter Cost[19]	$4,620,010	$0
Total Transfer Station Cost (BRT)[20]	$0	$6,538,500
Total Capital Cost[21]	$52,012,498	$26,815,010
Capital Cost per PMC[22]	**$460.40**	**$210.96**

(1) Local transit is assumed to have 40 seats with a 50 percent standing room capacity equivalent. BRT is assumed to have 60 seats with a 50 percent standing room capacity equivalent.

(2) Cycle time (Item 7) divided by headway time (Item 4) increased by 20 percent to accommodate the required fleet margin

(3) Service span (18 hrs from Table B-4) multiplied by cycles per hour (60 mins. divided by headway time (Item 4))

(4) Source: Table B-4 for local transit and BRT respectively

(5) Source: Table B-4 for local transit and BRT respectively
(6) Source: Assumption based on Orange County TDP and 20% BRT ratio
(7) Round trip length (Item 6) divided by speed (Item 5) multiplied by 60 minutes
(8) Vehicle capacity (Item 1) multiplied by cycles per day (Item 3) multiplied by round trip length (Item 6)
(9) Source: Assumption based on future goals
(10) Total person-miles of capacity (Item 8) multiplied by the load factor (Item 9)
(11) Cycles per day (Item 3) multiplied by the round trip length (Item 6)
(12) Source: Assumption based on 2010 Highway Capacity Manual workshop
(13) Source: Assumption based on local characteristics and industry knowledge
(14) Source: Cost per VMC for roadways, $3.74 million (Table 3) divided by the roadway capacity per lane mile of 9,506 (Table 4)
(15) Vehicle miles per day * (seconds per stop / headway factor) * GC factor * stops per mile * cost per vehicle-mile of capacity
(16) Source: Table B-4
(17) Source: Same as Item 2
(18) Bus cost (Item 16) multiplied by number of buses (Item 17)
(19) Source: Round trip length (Item 6) divided in half, multiplied by the stops per mile and then multiplied by the bus stop and bus shelter cost from Table B-4, accounting for 3 bench stops and 1 shelter stop per mile
(20) Source: Round trip length (Item 6) divided in half and multiplied by the stops per mile for BRT (Item 13), and then multiplied by the shelter cost from Table B-4
(21) Sum of transit portion of roadway cost (Item 15), total bus capital cost (Item 18), total bus stop/shelter cost (Item 19), and total transfer station cost (Item 20)
(22) Total capital cost (Item 21) divided by the adjusted person-miles of capacity (Item 10)

Appendix C
Credit Component Calculations

Credit Component

This appendix presents the detailed calculations for the credit component. Currently, in addition to the capital support that ultimately results from State fuel tax revenues, Orange County also receives financial benefit from several other funding sources. Of these, 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.

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.

3. 1st Local Option Tax (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.

Each year, the Florida Legislative Committee on Intergovernmental Relations (LCIR) 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 2011-12 data represent projected fuel tax

distributions to Orange County for the upcoming fiscal year. In the table, the fuel tax revenue data are used to calculate the value per penny (per gallon of fuel) that should be used to estimate the "equivalent pennies" of other revenue sources. Table 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 gas tax revenues. The weighted average figure of approximately $6.03 million estimates the annual revenue that one penny of gas tax generates in Orange County.

Table C-1
Estimated Fuel Tax Distribution Allocated to Capital Programs for Orange County & Municipalities, FY 2011-12[1]

Tax	Amount of Levy per Gallon	Total Distribution	Distribution Per Penny
Constitutional Fuel Tax	$0.02	$11,020,388	$5,510,194
County Fuel Tax	$0.01	$4,904,254	$4,904,254
1st Local Option (1-6 cents)	$0.06	$38,314,994	$6,385,832
Total	**$0.09**	**$54,239,636**	
Weighted Average per Penny[2]			**$6,026,626**

(1) Source: Florida Legislative Committee on Intergovernmental relations, www.floridacir.gov/revenue_estimates.cfm

(2) The weighted average distribution per penny is calculated by taking the sum of the total distribution and dividing that value by the sum of the total levies per gallon (multiplied by 100).

Gas Tax Credit

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

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

City Gas Tax Equivalent Pennies

A review of the City of Orlando's historical transportation financing program (FY 2007-2011) and the FY 2012-2016 CIP shows that roadway capacity expansion projects are being funded by a combination of impact fees, fuel tax, and ad valorem taxes. As shown in Table C-2, 1.1 equivalent pennies of credit is used to fund roadway capacity expansion projects with recurring revenue sources other than impact fees. As shown in Table C-3, additional 0.2 pennies of credit is calculated for debt service payments on the Narcoossee Road, John Young Parkway, and Lee Vista Boulevard projects. Thus a credit of 1.3

equivalent pennies was given for the allocation of funds that the City of Orlando collects in fuel tax, ad valorem tax, and grant revenues, and for the debt service expenditures.

Table C-2
City Gas Tax Equivalent Pennies

Source	Cost of Projects	Number of Years	Revenue from 1 penny[3]	Equivalent Pennies[4]
Projected CIP Expenditures (FY 2012-2016)[1]	$8,999,000	5	$6,026,626	$0.003
Historical City Expenditures (FY 2007-2011)[2]	$54,983,103	5	$6,026,626	$0.018
Total	**$63,982,103**	**10**	**$6,026,626**	**$0.011**

(1) Source: Table C-7
(2) Source: Table C-7
(3) Source: Table C-1
(4) Cost of projects divided by number of years divided by revenue from 1 penny (Item 4) divided by 100

Table C-3
City Debt Service Equivalent Pennies

Source	Annual Payment (Present Value)	Number of Years	Revenue from 1 penny[4]	Equivalent Pennies[5]
Narcoossee Rd - Internal Loan Fund[1]	$625,589	4	$6,026,626	$0.001
John Young Pkwy - Internal Loan Fund[2]	$154,292	1	$6,026,626	$0.000
Lee Vista Blvd - Internal Loan Fund[3]	$193,003	4	$6,026,626	$0.000
Total	**$972,884**	**9**	**$6,026,626**	**$0.002**

(1) Source: Table C-8
(2) Source: Table C-9
(3) Source: Table C-10
(4) Source: Table C-1
(5) Cost of projects divided by number of years divided by revenue from 1 penny (Item 4) divided by 100

County Gas Tax Equivalent Pennies

A review of the County's historical roadway financing program (FY 2006-2010) and the Capital Improvement Plan (CIP) for FY 2011-2015 indicates that a combination of gas tax revenues, impact fees, grant funds, and proportionate share revenues are used to fund roadway capacity expansion projects. As shown in Table C-4, Orange County receives a credit of 2.5 pennies for the portion of recurring gas tax revenues dedicated to capacity expansion projects such as new road construction, lane additions, and intersection improvements. Additionally, as shown in Table C-5, Orange County is given a credit for non-recurring ad valorem revenues allocated to the Capital Projects Fund between FY 2011 and FY 2015. Unlike the county gas tax revenues, Fund 1023 is a non-recurring revenue source. Therefore, for purposes of the equivalent pennies calculation, the 5-year expenditures were divided out over a 25-yr period. This credit is equal to 0.5 pennies of equivalent gas tax. Thus, a total

credit of 3.1 equivalent pennies will be given for the county gas tax expenditures (recurring and non-recurring) dedicated to roadway capacity expansion.

Table C-4
County Gas Tax Equivalent Pennies

Source	Cost of Projects	Number of Years	Revenue from 1 penny[3]	Equivalent Pennies[4]
Projected CIP Expenditures (FY 2011-2015)[1]	$77,506,684	5	$6,026,626	$0.026
Historical County Expenditures (FY 2006-2010)[2]	$70,882,750	5	$6,026,626	$0.024
Total	**$148,389,434**	**10**	**$6,026,626**	**$0.025**

(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 4) divided by 100

Table C-5
County Gas Tax Equivalent Pennies for Non-Recurring Revenues

Source	Cost of Projects	Number of Years	Revenue from 1 penny[2]	Equivalent Pennies[3]
Projected Revenue Expenditures (2011-2015)[1]	$81,570,168	25	$6,026,626	$0.005
Total	**$81,570,168**	**25**	**$6,026,626**	**$0.005**

(1) Source: Table C-12
(2) Source: Table C-1
(3) Cost of projects divided by number of years divided by revenue from 1 penny (Item 4) divided by 100

State Gas Tax Expenditures

In the calculation of the equivalent pennies of gas tax from the State, expenditures on roadway capacity expansion spanning a 15-year period (from FY 2001 to FY 2015) were reviewed. For calculation purposes, the 15-year period was broken into three increments; two historical (FY 2001-2005 and FY 2006-2010) and one future (FY 2011-2015). Information on historical projects' funding and the future year estimates was obtained from the FDOT Work Programs. The use of a 15-year period, for purposes of developing a State credit for roadway capacity expansion projects, results in a stable credit, as it accounts for the volatility in FDOT spending in the county over short periods of time.

The total cost of the capacity-adding projects for the five-year "historical" periods and projected in the five-year Transportation Improvement Program are as follows:

- FY 2001-2005 work plan equates to 14.3 pennies
- FY 2006-2010 work plan equates to 19.2 pennies
- FY 2011-2015 TIP equates to 9.5 pennies

The combined weighted average over the 15-year period of state expenditure for capacity-adding roadway projects results in a total of 14.3 equivalent pennies. Table C-6 documents this calculation. The specific projects that were used in the equivalent penny calculations are summarized in Tables C-13 and C-14.

Table C-6
Equivalent Penny Calculation for State Portion

Source	Cost of Projects	Number of Years	Revenue from 1 penny[4]	Equivalent Pennies[5]
Projected Work Program (FY 2011-2015)[1]	$287,592,915	5	$6,026,626	$0.095
Historical Work Program (FY 2006-2010)[2]	$578,907,396	5	$6,026,626	$0.192
Historical Work Program (FY 2001-2005)[3]	$429,516,000	5	$6,026,626	$0.143
Total	**$1,296,016,311**	**15**	**$6,026,626**	**$0.143**

(1) Source: Table C-14, total cost of expansion projects
(2) Source: Table C-13, total cost of expansion projects
(3) Source: Table C-13, total cost of expansion projects
(4) Source: Table C-1
(5) Cost of projects divided by number of years divided by revenue from 1 penny (Item 4) divided by 100

Table C-7
Historical and Programmed Capital Improvement Plan Expenditures for the City of Orlando, FY 2007-2016

#	Mode	Description	On/From/To	2006/2007	2007/2008	2008/2009	2009/2010	2010/2011	2011/2012	2012/2013	2013/2014	2014/2015	2015/2016	Total
1337	Road	Congestion Management	I Dr. Congestion Mgmt LAP	$0	$0	$0	$56,138	$446,384	$0	$0	$0	$0	$0	$502,522
1900	Road	n/a	IT S Downtown FDOT LAP	$0	$0	$0	$3,036,128	$117,972	$0	$0	$0	$0	$0	$3,154,100
1909	Road	n/a	Bumby Ave Improvements	$0	$0	$0	$113	$949,242	$0	$0	$0	$0	$0	$949,355
1909	Road	n/a	Bumby Ave Non Grant	$0	$0	$0	$12,038	$154,215	$0	$0	$0	$0	$0	$166,253
2149	Road	Widen to 4 Lanes	Conway: Hoffner to Beachline	$1,380,481	$7,436,169	$5,305,465	$1,947,360	$1,753,487	$0	$0	$0	$0	$0	$17,822,962
2382	Road	Traffic Signal	New Traffic Signal Locations	$15,704	$25,869	$43	$58,091	$400,558	$94,000	$370,000	$370,000	$370,000	$370,000	$2,074,265
2484	Road	Traffic Signal	Signal @ Millenia Blvd/Way	$0	$0	$0	$3,565	$0	$0	$0	$0	$0	$0	$3,565
2488	Road	n/a	Narcoossee Design	$1,697,264	$834	$0	$193,160	$400,221	$0	$0	$0	$0	$0	$2,291,479
2491	Road	New Road Construction	B. Obama Pkwy.	$1,889,919	$2,341,258	$1,509,952	$2,135,383	$8,799,635	$0	$0	$0	$0	$0	$16,676,147
2498	Road	Traffic Signal	Hiawassee / Hunterdon Signal	$0	$214,304	$0	$0	$0	$0	$0	$0	$0	$0	$214,304
2620	Road	Traffic Signal	Orange/Grant Signal	$0	$0	$0	$1	$0	$0	$0	$0	$0	$0	$1
2665	Road	Intersection	Boggy Creek/Landstreet Int.	$0	$1,882	$0	$0	$0	$0	$0	$0	$0	$0	$1,882
2679	Road	Congestion Management	US 17/92 Congestion Mgmt Study	$92,098	$51,450	$100,191	$3,858,565	$783,543	$0	$0	$0	$0	$0	$4,885,847
2679	Road	Congestion Management	US 17/92 Congestion Mgmt Study	$0	$0	$0	$57,949	$8,515	$0	$0	$0	$0	$0	$66,464
2825	Road	n/a	Malibu Groves Wall	$178,244	$0	$0	$0	$0	$0	$0	$0	$0	$0	$178,244
2850	Road	n/a	Narcoossee ROW	$158,884	$548,467	$0	$0	$0	$0	$0	$0	$0	$0	$707,351
2897	Road	Turn Signal	Pine St. & Church/Orange Turn	$251,189	$62,772	$122,510	$719,991	$0	$0	$0	$0	$0	$0	$1,156,462
2935	Road	Add Bike Lanes	W. Gore St	$0	$0	$0	$0	$63,122	$0	$0	$0	$0	$0	$63,122
2940	Road	Interchange	I-4/JYP Interchange	$9,494	$5,900	$0	$0	$0	$0	$0	$0	$0	$0	$15,394
2984	Road	Traffic Signal	Signal Universal/Wet n Wild	$73,971	$0	$0	$0	$0	$0	$0	$0	$0	$0	$73,971
2996	Road	Intersection	Raleigh Intersections	$0	$191,866	$0	$0	$0	$0	$0	$0	$0	$0	$191,866
3138	Road	n/a	N. I Drive	$127,776	$467,586	$1,602,468	$118,967	$122	$0	$0	$0	$0	$0	$2,316,919
3410	Road	Capacity Improvements	SR 50: Tampa to Bumby	$8,376	$0	$0	$0	$0	$0	$0	$0	$0	$0	$8,376
3413	Road	Capacity Improvements	Alden Rd	$124,162	$0	$0	$0	$0	$0	$0	$0	$0	$0	$124,162
4824	Road	Intersection	Intersection Improvements	$0	$0	$28,897	$0	$0	$0	$0	$0	$0	$0	$28,897
4859	Road	Signals	Developer Signals - Matching Funds	$0	$0	$0	$0	$0	$0	$150,000	$150,000	$150,000	$150,000	$600,000
4951	Road	Capacity Improvements	Crystal Lake/Maguire	$135	$490	$261	$0	$0	$0	$0	$0	$0	$0	$886
4951	Road	Capacity Improvements	Crystal Lake/Maguire - CIP	$189,609	$6,223	$27,845	$16,801	$0	$0	$0	$0	$0	$0	$240,478
4978	Road	Signal System Fiber Interconnect	Area-Wide Signal System Fiber Interconnect	$59,644	$88,667	$120,890	$104,255	$318,577	$100,000	$100,000	$100,000	$100,000	$100,000	$1,192,033
4985	Road	n/a	Division/Kaley/Columbia	$32,253	$314,729	$85	$0	$0	$0	$0	$0	$0	$0	$347,067
6206	Road	n/a	RCSS Fiber Design	$36,994	$34,196	$17,830	$1,853	$58,830	$0	$0	$0	$0	$0	$149,703
6207	Road	Signal Re-Timing	I Dr. Traffic Signal Retiming	$26,937	$22,373	$0	$0	$0	$0	$0	$0	$0	$0	$49,310
6236	Road	Traffic Signal	Windhover Dr Signal	$0	$56,298	$0	$0	$0	$0	$0	$0	$0	$0	$56,298
6270	Road	Traffic Signal	Radebaugh/Vineland Signal	$0	$43,922	$0	$0	$0	$0	$0	$0	$0	$0	$43,922
6272	Road	Traffic Signal	Narcoossee/Nonacrest Signal	$0	$17,809	$268,504	$0	$0	$0	$0	$0	$0	$0	$286,313
6313	Road	n/a	Edgewater High Traffic Impr	$0	$0	$0	$0	$351,692	$0	$0	$0	$0	$0	$351,692
6337	Road	Turn Lane	Amelia Turn Lane/Urban Trail	$0	$0	$0	$5,665	$0	$0	$0	$0	$0	$0	$5,665
6347	Road	n/a	South & Anderson Improvements	$0	$0	$0	$79,024	$220,658	$0	$0	$0	$0	$0	$299,682
6350	Road	FDOT Design Guidelines	Orange, Semoran, and Colonial	$0	$0	$0	$0	$0	$0	$75,000	$0	$0	$0	$75,000
6357	Road	n/a	Lk Underhill/Yucatan JPA	$0	$0	$0	$30,763	$291,122	$0	$0	$0	$0	$0	$321,885
6368	Road	Traffic Signal	Division & Michigan Signal	$0	$0	$0	$32,130	$6,129	$0	$0	$0	$0	$0	$38,259
n/a	Road	Streetscapes	Main St	$0	$0	$0	$0	$0	$0	$125,000	$125,000	$0	$0	$250,000
n/a	Road	Widen to 4 Lanes	Narcoossee Rd: Goldenrod to Lee Vista	$0	$0	$0	$0	$0	$0	$0	$6,000,000	$0	$0	$6,000,000
Total				**$6,353,134**	**$11,933,064**	**$9,104,941**	**$12,467,940**	**$15,124,024**	**$194,000**	**$820,000**	**$6,745,000**	**$620,000**	**$620,000**	**$63,982,103**

Source: City of Orlando Staff and the FY 2012-2016 Capital Improvement Program

Table C-8
City Debt Service – Narcoossee Rd Internal Loan Fund

Period Ending	Principal	Interest (3.79%)	Total Debt Service	Present Value of Debt Service
10/1/2012	$1,525,847.00	$57,829.60	$1,583,676.60	$1,525,847
10/1/2013	$1,609,769.00	$61,010.25	$1,670,779.25	$1,550,987
10/1/2014	$1,698,306.00	$64,365.80	$1,762,671.80	$1,576,540
10/1/2015	$1,791,713.00	$67,905.92	$1,859,618.92	$1,602,514
Total	**$6,625,635.00**	**$251,111.57**	**$6,876,746.57**	**$6,255,888**

Present Value of Remaining Payments	$2,502,355
Number of Years of Remaining Payments	4
Present Value of Annual Payment	**$625,589**

Source: City of Orlando

Table C-9
City Debt Service – Narcoossee Rd Internal Loan Fund

Period Ending	Principal	Interest (3.79%)	Total Debt Service	Present Value of Debt Service
10/1/2012	$385,731.00	$14,619.20	$400,350.20	$385,731
Total	**$385,731.00**	**$14,619.20**	**$400,350.20**	**$385,731**

Present Value of Remaining Payments	$154,292
Number of Years of Remaining Payments	1
Present Value of Annual Payment	**$154,292**

Source: City of Orlando

Table C-10
City Debt Service – Narcoossee Rd Internal Loan Fund

Period Ending	Principal	Interest (3.79%)	Total Debt Service	Present Value of Debt Service
10/1/2012	$460,690.00	$17,460.15	$478,150.15	$460,690
10/1/2013	$492,938.00	$18,682.35	$511,620.35	$474,938
10/1/2014	$527,444.00	$19,990.13	$547,434.13	$489,627
10/1/2015	$564,365.00	$21,389.43	$585,754.43	$504,770
Total	**$2,045,437.00**	**$77,522.06**	**$2,122,959.06**	**$1,930,025**

Present Value of Remaining Payments	$772,010
Number of Years of Remaining Payments	4
Present Value of Annual Payment	**$193,003**

Source: City of Orlando

Table C-11
Historical and Programmed Capital Improvement Plan Expenditures for Orange County FY 2006-2015

ID	Description	FY 2006	FY 2007	FY 2008	FY 2009	FY 2010	FY 2011	FY 2012	FY 2013	FY 2014	FY 2015	Total
2720	Signal Installation C/W	$804,059	$1,691,721	$1,424,314	$797,602	$748,849	$0	$0	$0	$0	$0	**$5,466,545**
2722	Intersection Wid/Cw	$1,864,652	$1,440,497	$94,461	$1,013	$30,315	$8,946	$2,000,100	$1,958,100	$2,800,100	$3,000,100	**$13,198,284**
2752	East/West Rd (436 to Dean)	$4,140	$37,543	$422,431	$50,161	$24,394	$347,971	$0	$0	$0	$0	**$886,640**
2870	North Ocoee-Addition I S/D Rds	$369,768	$0	$0	$0	$0	$0	$0	$0	$0	$0	**$369,768**
2917	OWG Rd/Ivey Ln-441	$5,405	$0	$0	$0	$0	$0	$0	$0	$0	$0	**$5,405**
2929	Orange/Weath to Taft-Vineland	$14,444	$0	$0	$0	$0	$0	$0	$0	$0	$0	**$14,444**
2942	Econ. Tr (Curry Ford Rd to Lake Underhill Rd)	$0	$0	$0	$0	$0	$100	$0	$0	$0	$0	**$100**
2956	SR 535 Grand Cypress To Buena	$930,044	$55,382	$4,676	$0	$0	$0	$0	$0	$0	$0	**$990,102**
2978	Apopka Vineland (SR 50 to A.D. Mims)	$113,460	$0	$0	$0	$0	$0	$0	$0	$0	$0	**$113,460**
2994	Curry Fd Rd (Goldenrod to Dean)	$1,620,827	$1,941,980	$88,367	$1,708	$313,086	$3,929	$0	$0	$0	$0	**$3,969,897**
3001	Forsyth Rd (SR 50 to Aloma Ave)	$518,253	$5,663	$40,900	$64,473	$573	$302,197	$0	$0	$0	$0	**$932,059**
3002	Hiawassee Rd Ext. (C-O to OBT)	$26,645	$11,672	$8,372	$90	$0	$0	$0	$0	$0	$0	**$46,779**
3006	Lancaster Rd	$461,153	$184,390	$33,868	$7,010	$0	$0	$0	$0	$0	$0	**$686,421**
3016	Old Winter Garden Rd (A-V to Hiaw Rd)	$42,553	$1,497	$0	$0	$0	$0	$0	$0	$0	$0	**$44,050**
3017	Rock Springs Rd	$343,438	$742,238	$2,883,116	$3,518,025	$102,986	$97,128	$10,000	$0	$0	$0	**$7,696,931**
3018	Rouse Rd Section 2	$0	$0	$0	$0	$0	$42,680	$100	$0	$0	$0	**$42,780**
3019	Apopka Vnlnd Rd (C-W to OWG)	$178,405	$163,900	$8,400	$0	$2,511	$0	$0	$0	$0	$0	**$353,216**
3024	Landstreet Rd (OBT to Orange Ave)	$1,739	$4,446	$353,405	-$10,813	$0	$17,978	$0	$0	$0	$0	**$366,755**
3030	N Tanner Road	$6,353	$0	$0	$0	$0	$0	$0	$0	$0	$0	**$6,353**
3034	Old Winter Garden Rd (SR 50 to A-V)	$3,115,912	$2,499	$4,500	$0	$0	$0	$0	$0	$0	$0	**$3,122,911**
3037	Taft-Vineland Rd (US 441 to Orange Ave)	$10	$66	$203	$27	$108	$737,262	$324,000	$621,000	$1,026,000	$630,000	**$3,338,676**
3038	Clarcona-Ocoee Rd (Oc-Ap to Hiaw)	$58,177	$1,354,765	$2,933,522	$62,830	$3,640,570	$4,778,356	$521,709	$100	$0	$0	**$13,350,029**
3045	Holden Ave (JYP to Orange Ave)	$2,794	$37,417	$26,426	$28,146	$6,437	$7,267	$100	$0	$0	$0	**$108,587**
3071	Dean Rd (University to Co. Line)	$0	$0	$0	$0	$0	$100	$0	$0	$0	$0	**$100**
3072	Intersection Improvement - University & Alafaya	$0	$0	$0	$8,979	$0	$0	$0	$0	$0	$0	**$8,979**
3096	Kennedy Blvd (Forest City to I-4)	$24,373	$394,877	$110,798	$1,425,058	-$78,581	$78,132	$228,255	$0	$0	$0	**$2,182,912**
3097	All American/OBT to Forest Cty	$11,265	$0	$0	$0	$0	$200	$0	$0	$319,000	$0	**$330,465**
5001	John Young Parkway/6-Lane	$271,498	$15,850	$135,717	$170,056	$852,114	$2,260,171	$2,700,000	$5,800,000	$2,500,000	$12,000,000	**$26,705,406**
5023	Edgewater (Forest City/Beggs)	$14,460	$17,994	$111,085	$49,344	$140,342	$316,908	$400,000	$0	$0	$0	**$1,050,133**
5024	Econ. Tr (Lake Underhill to SR 50)	$7,880	$0	$10,300	$0	$4,000	$512,974	$1,200,100	$2,800,000	$2,000,000	$0	**$6,535,254**
5025	Weatherbee Rd (US 441 to Boggy Creek Rd)	$0	$37,239	$0	$0	$0	$0	$0	$0	$0	$0	**$37,239**
5026	SR 50 West (Kirkman to Turnpike)	$0	$0	$969,800	$0	$0	$0	$0	$0	$0	$0	**$969,800**
5027	Texas Ave (Oak Ridge to Holden)	$0	$0	$0	$0	$0	$100	$0	$0	$0	$0	**$100**
5028	Good Homes Rd (OWG to SR 50)	$73,217	$0	$0	$0	$0	$0	$0	$0	$0	$0	**$73,217**
5029	Valencia Col Ln (Goldenrod to Econ. Tr)	$0	$0	$17,125	$0	$0	$0	$0	$0	$0	$0	**$17,125**
5057	University Blvd/Lake Underhill	$11,116	$156,305	$839,109	$0	$25,685	$805,794	$1,200,000	$0	$0	$0	**$3,038,009**
5058	Taft-Vineland Rd Ext. (JYP-OBT)	$0	$0	$24,777	$0	$0	$0	$0	$0	$0	$0	**$24,777**
5059	Wood Bury Rd	$0	$99,420	$57,215	$3,313	$1,049	$100	$0	$0	$0	$0	**$161,097**
5062	Alafaya Tr Avalon Pk Curryford	$13,420	$0	$0	$0	$37,050	$18,725	$0	$0	$0	$0	**$69,195**

Table C-11 (continued)
Historical and Programmed Capital Improvement Plan Expenditures for Orange County FY 2006-2015

ID	Description	FY 2006	FY 2007	FY 2008	FY 2009	FY 2010	FY 2011	FY 2012	FY 2013	FY 2014	FY 2015	Total
5063	Innov. Way (SR 528 to Avalon Pk)	$0	$7,841,148	$4,311,940	$144,212	$0	$0	$0	$0	$0	$0	**$12,297,300**
5066	CR 535 (Chase Rd to SR 429)	$29,300	$0	$2,815,384	$689,016	$0	$0	$0	$0	$0	$0	**$3,533,700**
5069	Porter Rd (545 to Ficquette)	$0	$0	$0	$0	$0	$100	$0	$0	$0	$0	**$100**
5072	Pine Hills Rd Ex Apopka Bypass	$0	$52,329	$0	$0	$0	$100	$0	$0	$0	$0	**$52,429**
5073	Econ. Tr (SR 50 to University)	$0	$0	$0	$0	$0	$100	$0	$0	$0	$0	**$100**
5085	Boggy Creek Rd (Co. Line to SR 417)	$0	$0	$0	$0	$0	$100	$0	$0	$0	$0	**$100**
5089	Destination Parkway	$1,760	$1,625,347	$3,467,791	$3,197,301	$217,611	-$1,596,243	$7,526,783	$3,400,000	$500,000	$0	**$18,340,350**
5090	Lake Underhill (Chickasaw To Rouse)	$0	$100,800	$70,500	$0	$172	$100	$60,029	$0	$0	$0	**$231,601**
5101	Narcoossee Road	$0	$0	$0	$1,890,637	$1,979,581	$0	$0	$0	$0	$0	**$3,870,218**
5104	Lake Destiny Drive Ext.	$0	$92,326	$0	$0	$0	$4,497	$0	$0	$0	$0	**$96,823**
5107	I-Drive N Westwood to S. Westwood	$0	$0	$7,148	$289,320	$120,909	$964,452	$800,000	$7,000,000	$4,470,884	$0	**$13,652,713**
Total		**$10,940,520**	**$18,109,311**	**$21,275,650**	**$12,387,508**	**$8,169,761**	**$9,710,224**	**$16,971,176**	**$21,579,200**	**$13,615,984**	**$15,630,100**	**$148,389,434**

Source: Orange County Staff

Table C-12
Programmed Capital Improvement Plan Expenditures for Orange County FY 2006-2015 – Non-Recurring Revenue Source

Funding Source	FY 2011	FY 2012	FY 2013	FY 2014	FY 2015	Total
Captial Projects Fund	$23,427,724	$24,475,297	$22,178,864	$10,788,283	$700,000	**$81,570,168**

Source: Orange County FY 2011 Capital Improvement Plan

Table C-13
FDOT FY 2001 – FY 2010 Orange County Work Program – Transportation Projects

Proj #	Description	On/From/To	FY 2000/2001	FY 2001/2002	FY 2002/2003	FY 2003/2004	FY 2004/2005	FY 2005/2006	FY 2006/2007	FY 2007/2008	FY 2008/2009	FY 2009/2010	Total
2384292	PD&E/EMO Study	SR 50 from Lake Co. Line to E. Ramps of Tunrpike	$9,000	$4,000	$88,000	$0	$0	$0	$0	$0	$0	$0	$101,000
2384295	Add Lanes & Reconstruct	SR 50 from Lake Co. Line to E. Ramps of Tunrpike Ramps	$0	$0	$1,246,000	$173,000	$52,000	$1,085,000	$3,477,000	$1,461,000	$0	$1,454,961	$8,948,961
2391851	Add Lanes & Reconstruct	SR 500 US 441 OBT from Taft Vineland Road to 1310' S. Sand Lake Rd.	$0	$2,000	$0	$0	$0	$0	$0	$0	$0	$0	$2,000
2392031	Preliminary Engineering	SR 50 from SR 439 to SR 520	$1,000	$0	$0	$0	$0	$0	$0	$0	$0	$0	$1,000
2392032	Add Lanes & Rehabilitate Pavement	SR 50 from W. of SR 436 to 0.2 miles W. of SR 417	$25,000	$155,000	$1,404,000	$91,000	$2,032,000	$21,060,000	$5,605,000	$57,664,000	$5,736,000	$3,213,731	$96,985,731
2392033	Add Lanes & Rehabilitate Pavement	SR 50 from 3 miles E. of SR 417 to CR 425 (Dean Rd)	$16,000	$166,000	$351,000	$409,000	$510,000	$631,000	$6,051,000	$27,000	$15,746,000	$9,501,720	$33,408,720
2392034	Add Lanes & Rehabilitate Pavement	SR 50 from East of CR 425 (Dean Rd) to East of Old Cheney Hwy	$19,000	$35,000	$1,208,000	$80,000	$128,000	$24,000	$14,000	$83,000	$14,000	$927,162	$2,532,162
2392036	Add Lanes & Rehabilitate Pavement	SR 50 Erosion Conrtol Tropical Storm Fay	$0	$0	$0	$0	$0	$0	$0	$0	$84,000	$0	$84,000
2392061	Add Lanes & Rehabilitate Pavement	SR 551 Goldenrod Rd from SR 50 to University Blvd	$0	$50,000	$0	$0	$0	$0	$0	$0	$0	$0	$50,000
2392181	Add Lanes & Rehabilitate Pavement	SR 15 Conway Rd from SR 15 Hoffner Rd to SR 552 Curryford Rd	$1,730,000	$573,000	$42,000	$0	$3,000	$0	$0	$0	$0	$0	$2,348,000
2392401	Add Lanes & Reconstruct	SR 551 Goldenrod Rd from SR 15 to Curryford Rd.	$14,000	$0	$0	$0	$0	$0	$0	$0	$0	$0	$14,000
2392551	Add Lanes & Reconstruct	SR 436 from SR 500 US 441 to Seminole Co. Line	$337,000	$470,000	$1,089,000	$11,000	$0	$0	$0	$0	$0	$0	$1,907,000
2392631	New Road Construction	SR 414 Maitland Blvd. SR 500/US 441 Seminole Co. Line	$490,000	$169,000	$0	$0	$0	$0	$0	$0	$0	$0	$659,000
2392661	PD&E/EMO Study	SR 15 from SR 528 to CR 506 Conway Rd	$62,000	$4,000	$0	$0	$0	$0	$0	$0	$0	$0	$66,000
2392662	Add Lanes & Reconstruct	Narcoossee Rd from S. of SR 528 to Lee Vista Blvd	$0	$0	$0	$0	$0	$0	$10,379,000	$9,621,000	$0	$0	$20,000,000
2392663	Add Lanes & Reconstruct	SR 15 Hoffner Rd from N. of Lee Vista Blvd to W. of SR 436	$0	$0	$0	$0	$0	$0	$3,372,000	$36,000	$91,000	$74,850	$3,573,850
2392881	Add Lanes & Reconstruct	SR 435 Kirkman Road from 1700' S. of Conroy Rd to SR 50	$1,503,000	$18,005,000	$1,540,000	$924,000	$57,000	$798,000	$2,000	$4,000	$0	$24,999	$22,857,999
2392891	Add Lanes & Reconstruct	SR 438 Silver Star from W. of Clarke Rd to Hiawasee Rd	$4,465,000	$13,945,000	$416,000	$685,000	$1,000	$39,000	$179,000	$0	$0	$1,026	$19,731,026
2392921	Add Lanes & Reconstruct	SR 520 from SR 50 to W. end SR 528 Interchange	$815,000	$19,486,000	$1,317,000	$332,000	$862,000	$765,000	$211,000	$0	$0	$0	$23,788,000
2392931	Add Lanes & Reconstruct	SR 520 from W. End SR 528 Int to E of CR 532	$136,000	$413,000	$501,000	$149,000	$20,578,000	$740,000	$1,006,000	$249,000	$1,000	$0	$23,773,000
2392941	Add Lanes & Reconstruct	520 from E of CR 532 to W. of Brevard Co. Line	$34,000	$26,000	$70,000	$7,789,000	$292,000	$383,000	$114,000	$267,000	$0	$0	$8,975,000
2393041	Add Lanes & Reconstruct	SR 530 (US 192) from Lake Co. Line to E. of Secret Lake Dr	$322,000	$0	$0	$0	$6,000	$76,000	$153,000	$134,000	$77,000	$25,000	$793,000
2393721	Add Thru Lane	SR 536 from I-4 to SR 535	$88,000	$0	$0	$0	$200,000	$0	$0	$0	$0	$0	$288,000
2394141	Preliminary Engineering for Future Capacity	Apopka/US 441 Bypass from W. CR 437 Smith Rd to SR 500 US 441	$0	$473,000	$6,000	$19,000	$10,000	$0	$0	$0	$0	$0	$508,000
2394161	Add Lanes & Reconstruct	SR 500 US 441 from Osceola Co. Line to Taft-Vineland Rd	$2,408,000	$4,135,000	$7,318,000	$28,296,000	$625,000	$1,095,000	$927,000	$152,000	$94,000	$0	$45,050,000
2394511	Add Left Turn Lane(s)	SR 438 Int. Ocoee Hills Rd	$17,000	$0	$0	$0	$0	$0	$0	$0	$0	$0	$17,000
2394541	PD&E/EMO Study	SR 436 from 0.54 miles S. of SR 528 to SR 50	$7,000	$4,000	$1,000	$0	$0	$0	$0	$0	$0	$0	$12,000
2394542	Add Lanes & Reconstruct	SR 436 from SB ramp of SR 528 to SR 552 Curryford Rd	$1,935,000	$307,000	$28,504,000	$1,438,000	$304,000	$380,000	$5,000	$0	$0	$0	$32,873,000
2394961	Preliminary Engineering	SR 423 John Young Expwy from SR 50 to SR 434 Forest City Rd	$4,000	$13,000	$0	$0	$0	$0	$0	$0	$0	$0	$17,000
2394962	New Road Construction	SR 423/434 Ext. from Shader Rd to SR 424 (Edgewater Dr)	$2,204,000	$124,000	$1,152,000	$63,000	$2,450,000	$20,728,000	$954,000	$3,762,000	$7,597,000	$374,278	$39,408,278
2395011	Add Left Turn Lane(s)	SR 500 US 441 Int. Suncrest D. (NB LT TN LN)	$8,000	$0	$0	$0	$0	$0	$0	$0	$0		$8,000
2395181	Add Lanes & Rehabilitate Pavement	SR 434 Alafaya Tr from 0.5 miles N. of Univ. Blvd to McCulloch Rd	$7,000	$581,000	$4,000	$17,000	$4,000	$0	$0	$0	$0		$613,000
2395351	PD&E/EMO Study	SR 50 from Turnpike to Pine Hills	$9,000	$27,000	$765,000	$2,000	$0	$0	$0	$0	$0		$803,000
2395352	Add Lanes & Reconstruct	SR 50 from E. ramps Turnpike to Avalon Rd	$0	$0	$0	$0	$1,272,000	$13,000	$67,000	$630,000	$5,200,000	$2,356,588	$9,538,588
2395353	Add Lanes & Reconstruct	SR 50 from SR 429 (Western Beltway) to E. of West Oaks Mall	$0	$0	$1,067,000	$2,416,000	$168,000	$3,707,000	$7,060,000	$435,000	$226,000	$9,046,480	$24,125,480
2395354	Add Lanes & Reconstruct	SR 50 from Good Homes Rd to Pine Hills Rd	$0	$0	$600,000	$25,000	$479,000	$1,087,000	$4,611,000	$3,493,000	$27,614,000	$15,040,016	$52,949,016
2395391	Add Right Turn Lane(s)	SR 50 Int. Hiawassee (EB RT TN LN)	$0	$131,000	$0	$0	$0	$0	$0	$0	$0	$0	$131,000
2416991	Add Lanes & Reconstruct	CR 506 (Conway Rd) from SR 528 (Beachline) to SR 15 (Hoffner Rd)	$957,000	$0	$0	$0	$4,640,000	$0	$16,891,000	$0	$0	$0	$22,488,000
2429761	New Road Construction	Southern Connect Ext Orange/Osceola C/L Southern Connect Tie In	$0	$8,000	$0	$0	$0	$0	$0	$0	$0	$0	$8,000
2430131	Interchange (Major)	Western Beltway "A" Interchange	$3,000	$2,724,000	$0	$0	$0	$0	$0	$0	$0	$0	$2,727,000
2430133	Interchange (Major)	Auxilary Lanes from Western Beltway "A" to East/West Expressway	$2,490,000	$108,000	$284,000	$0	$996,000	$0	$0	$0	$0	$0	$3,878,000
2430135	Interchange (Major)	Thermoplastic for Aux Lanes	$0	$0	$12,000	$0	$0	$0	$0	$0	$0	$0	$12,000
2430136	Interchange (Major)	Western Beltway "A" Interchange Ramps to and from the South	$0	$15,000,000	$2,400,000	$0	$0	$0	$15,000,000	$0	$0	$0	$32,400,000
2430171	Interchange (Major)	SR 417/Turnpike Int. (SR 417/SR 91)	$0	$4,715,000	$0	$0	$0	$125,000	$0	$0	$0	$0	$4,840,000
4034982	New Road Construction	Western Beltway "C" (SR 429) Section 2B, US 192 to 1 mile N. of US192	$119,000	$202,000	$199,000	$18,771,000	$1,066,000	$1,591,000	$124,000	$2,000	$0	$0	$22,074,000
4034983	New Road Construction	Western Beltway "C" (SR 429) Section 3, 1 mile N. of US 192 to Seidel Rd	$604,000	$615,000	$1,099,000	$38,416,000	$912,000	$2,976,000	$461,000	$20,000	$0	$0	$45,103,000
4034985	New Road Construction	Western Beltway "C" (SR 429) Mitigation	$0	$2,250,000	$6,023,000	$0	$0	$0	$0	$0	$0	$0	$8,273,000
4034986	New Road Construction	Western Beltway "C" (SR 429) Toll Plazas	$386,000	$0	$219,000	$15,258,000	$1,327,000	$7,774,000	$854,000	$100,000	$150,000	$4,052	$26,072,052
4034987	New Road Construction	Western Beltway "C" (SR 429) Toll Equipment	$0	$0	$0	$0	$0	$0	$11,000	$0	$0	$0	$11,000
4034989	New Road Construction	Western Beltway "C" (SR 429) Access Road	$0	$0	$0	$0	$0	$0	$0	$0	$0	$710	$710
4039731	Add Turn Lane(s)	SR 434 from All American Blvd to Falkner Rd	$0	$153,000	$0	$0	$0	$0	$0	$0	$0	$0	$153,000
4060901	Add Lanes & Reconstruct	Widen Beachline (SR 528) from MP 5.65 to 6.83	$0	$0	$8,659,000	$251,000	$6,665,000	$8,653,000	$22,087,000	$1,510,000	$733,000	$85,030	$48,643,030
4060905	Add Lanes & Reconstruct	Widen Beachline (SR 528) from I-4 to Turnpike	$0	$0	$0	$0	$0	$0	$0	$0	$8,000	$251,000	$259,000

Table C-13 (continued)
FDOT FY 2001 – FY 2010 Orange County Work Program – Transportation Projects

Proj #	Description	On/From/To	FY 2000/2001	FY 2001/2002	FY 2002/2003	FY 2003/2004	FY 2004/2005	FY 2005/2006	FY 2006/2007	FY 2007/2008	FY 2008/2009	FY 2009/2010	Total
4061021	Interchange (Major)	E/W Expwy/Turnpike (SR 408/SR 91) Modification	$0	$1,920,000	$114,000	$13,000	$22,211,000	$1,329,000	$289,000	$0	$0	$0	$25,876,000
4066381	Add Turn Lane(s)	CR 482 Sand Lake Rd @ Turkey Lake Rd	$0	$0	$80,000	$444,000	$0	$0	$0	$0	$0	$0	$524,000
4066411	Add Turn Lane(s)	Powers Dr @ SR 50	$0	$464,000	$14,000	$0	$0	$0	$0	$0	$0	$0	$478,000
4071432	Add Lanes & Reconstruct	SR 482 from E. end of Bridge Over Turnpike to Orange Blossom Trail	$0	$0	$0	$0	$0	$0	$710,000	$0	$2,500,000	$10,000	$3,220,000
4071433	Add Lanes & Reconstruct	SR 482 (Sand Lake Rd) from Turkey Lake Rd to Presidents Dr	$0	$0	$0	$0	$788,000	$278,000	$5,134,000	$39,000	$264,000	$22,408,063	$28,911,063
4084331	Preliminary Eng. for Future Capacity	SR 526 from Hughey Ave to 500' E. or Garland Ave	$0	$0	$127,000	$0	$0	$0	$0	$0	$0	$0	$127,000
4090931	Add Thru Lane(s)	SR 15 from E. of Mauana Loa Ln to E. of Turnbull Dr.	$0	$0	$0	$680,000	$76,000	$30,000	$5,000	$0	$0	$0	$791,000
4092821	Add Turn Lane(s)	Americana Blvd Int. Texas Ave.	$0	$0	$33,000	$130,000	$0	$0	$0	$0	$0	$0	$163,000
4103211	Add Lanes & Rehabilitate Pavement	Widen Bee Line Expwy PD&E Study	$0	$1,129,000	$0	$0	$0	$0	$0	$0	$0	$0	$1,129,000
4105161	Add Lanes & Rehabilitate Pavement	Kennedy Blvd from Forest City Rd to Wymore Rd	$0	$252,000	$0	$0	$0	$0	$1,078,000	$0	$0	$0	$1,330,000
4105171	New Road Construction	SR 414 @ SR 15/600 US 17/92 Off Ramp Construction	$0	$675,000	$0	$0	$0	$0	$127,000	$0	$0	$0	$802,000
4105181	New Road Construction	Stoneybrook West Pkwy from CR 545 Hartwoodmarsh to Windermere Rd	$0	$1,662,000	$0	$0	$0	$0	$0	$0	$0	$0	$1,662,000
4109831	Add Lanes & Reconstruct	SR 50 from W. of Avalon Rd SR 429 (Western Beltway)	$0	$2,100,000	$55,000	$696,000	$127,000	$4,250,000	$5,209,000	$1,921,000	$673,000	$26,212,093	$41,243,093
4121921	Intersection (Minor)	Pembrook Dr at Maitland Summit Blvd	$0	$0	$0	$0	$130,000	$0	$0	$0	$0	$0	$130,000
4122792	Add Lanes & Reconstruct	Widen SR 50 N/B exit ramp at MP 272	$0	$0	$50,000	$13,000	$4,884,000	$353,000	$443,000	$1,093,000	$6,776,000	$64,056	$13,676,056
4129861	Intersection (Minor)	City of Orlando Intersection Imp Boggy Cr & Landstreet	$0	$0	$582,000	$0	$0	$0	$0	$0	$0	$0	$582,000
4152001	Add Turn Lane(s)	SR 438 at SR 537	$0	$0	$0	$147,000	$0	$0	$0	$0	$0	$0	$147,000
4155192	Add Lanes & Reconstruct	SR 438 from Dillard Street to SR 429	$0	$0	$0	$0	$0	$0	$0	$2,012,000	$0	$0	$2,012,000
4161891	Add Right Turn Lane(s)	SR 414 from Keller Rd Eastward	$0	$0	$0	$0	$0	$0	$0	$166,000	$0	$0	$166,000
4164941	Right of Way Acquisition	SR 414 Maitland Ext. (Apopka Bypass)	$0	$0	$0	$0	$35,000,000	$0	$0	$0	$0	$0	$35,000,000
4167241	Right of Way - Future Capacity	SR 50 Orange County Advance ROW Acquisition	$0	$0	$0	$0	$1,284,000	$10,387,000	$124,000	$185,000	$3,854,000	$7,163,012	$22,997,012
4168931	Add Turn Lane(s)	SR 423 at SR 424	$0	$0	$0	$0	$0	$0	$0	$74,000	$0	$0	$74,000
4170011	Interchange Ramp (Modify)	SR 50 Entrance Ramp NB onto Turnpike (SR 91) at MP 272	$0	$0	$0	$0	$1,000	$0	$0	$0	$2,665,000	$135,605	$2,801,605
4170561	Interchange (Major)	SR 528/SR 436 Interchange Improvements	$0	$0	$0	$0	$18,500,000	$7,123,000	$0	$0	$0	$0	$25,623,000
4183231	Add Left Turn Lane(s)	SR 423 from Winter Garden Rd to John Young Pkwy	$0	$0	$0	$0	$0	$303,000	$33,000	$0	$0	$0	$336,000
4183241	Intersection (Minor)	Division Ave Intersection of Kaley and Columbia	$0	$0	$0	$0	$0	$287,000	$0	$0	$0	$0	$287,000
4196601	Add Lanes & Reconstruct	Rouse Road Lake Underhill Corporate Blvd	$0	$0	$0	$0	$0	$1,875,000	$2,000,000	$0	$0	$0	$3,875,000
4197661	Intersection (Minor)	SR 417 @ Boggy Rd Interchange	$0	$0	$0	$0	$0	$0	$0	$9,252,000	$0	$0	$9,252,000
4200861	Add Lanes & Rehabilitate Pavement	Good Homes Rd from SR 408 to 1000' N of SR 50	$0	$0	$0	$0	$0	$0	$47,000	$1,291,000	$0	$50,726	$1,388,726
4210201	New Road Construction	Innovation Way from SR 528 to Alafaya Trail	$0	$0	$0	$0	$0	$0	$12,000,000	$0	$0	$0	$12,000,000
4210231	Add Lanes & Reconstruct	CR 15/Narcoossee Rd from Osceola Co. Line to SR 417	$0	$0	$0	$0	$0	$0	$5,700,000	$0	$0	$0	$5,700,000
4222231	Add Left Turn Lane(s)	SR 438 (Silverstar) @ Orange Ave	$0	$0	$0	$0	$0	$0	$0	$0	$0	$5,000	$5,000
4223301	Add Lanes & Reconstruct	Widen Beachline from Turnpike to Sand Lake Rd	$0	$0	$0	$0	$0	$0	$0	$52,615,000	$317,000	$3,950,238	$56,882,238
4226431	Add Lanes & Reconstruct	CR 535 Chase Rd to SR 429	$0	$0	$0	$0	$0	$0	$0	$350,000	$0	$0	$350,000
4252331	Right of Way Acquisition	Wekiva Pkwy ROW Pine Plant Advanced Acquisition	$0	$0	$0	$0	$0	$0	$0	$0	$15,000,000	$0	$15,000,000
Total			**$21,224,000**	**$93,275,000**	**$68,639,000**	**$117,738,000**	**$128,640,000**	**$99,945,000**	**$132,514,000**	**$148,648,000**	**$95,420,000**	**$102,380,396**	**$1,008,423,396**

Source: FDOT Gaming Reports for Orange County

Table C-14
FY 2011 – FY 2015 Orange County Transportation Improvement Program

TIP #	Description	On/To/From	2010/11	2011/12	2012/13	2013/14	2014/15	Total
2384295	Widen to 6 Lanes	SR 50 from Orange/Lake Co. Line to E. ramps of FL Turnpike	$1,454,961	$0	$0	$0	$0	$1,454,961
2392032	Widen to 6 Lanes, flyover @ SR 436	SR 50 from W. of SR 436 to 0.2 miles W. of SR 417	$493,000	$0	$0	$0	$0	$493,000
2392033	Widen to 6 Lanes	SR 50 from 0.3 miles E. of SR 417 to CR 425 (Dean Rd)	$10,567,317	$9,043,386	$9,000,000	$9,000,000	$9,000,000	$46,610,703
2392034	Widen to 6 Lanes	SR 50 from CR 425 (Dean Rd) to E. of Old Cheney Hwy	$200,000	$0	$45,432,007	$0	$249,441	$45,881,448
2392663	Widen to 4 Lanes	SR 15/Hoffner Ave. from N. of Lee Vista Blvd to W. of SR 436	$1,401,282	$0	$0	$0	$0	$1,401,282
2392665	Widen to 4 Lanes	SR 15/Hoffner Ave. from Lee Vista Blvd to Goldenrod Rd	$0	$0	$1,000,000	$557,693	$0	$1,557,693
2392891	Widen to 4 and 6 Lanes	SR 438/Silver Star Rd from W. of Clarke Rd to Hiawassee Rd	$1,026	$0	$0	$0	$0	$1,026
2393041	Widen to 6 Lanes	SR 530/US 192 from Lake/Orange Co. Line to Orange/Osceola Co. Line	$9,596	$0	$0	$0	$0	$9,596
2394962	New 6-Lane Road, flyover @ US 441	SR 423/434/John Young Pkwy Ext. from Shader Rd to SR 424/Edgewater Dr.	$56,885,399	$0	$0	$0	$0	$56,885,399
2395352	Widen to 6 Lanes	SR 50 from E. ramps of FL Turnpike to Avalon Rd	$2,116,079	$0	$12,132,083	$0	$68,340	$14,316,502
2395353	Widen to 6 Lanes	SR 50 from SR 429/Western Expy to E. of West Oaks Mall	$8,296,475	$1,050,000	$0	$0	$47,455,073	$56,801,548
2395354	Widen to 6 Lanes	SR 50 from Good Homes Rd to Pine Hills Dr	$13,755,514	$157,016	$0	$0	$0	$13,912,530
2395355	Widen to 6 Lanes	SR 50 from E. of West Oaks Mall to W. of Good Homes Rd	$0	$0	$15,420,599	$0	$0	$15,420,599
4071432	Widen/Resurface Existing Lanes	SR 482 (Sand Lake Rd) from bridge over FL Turnpike to SR 500/US 441	$8,968	$0	$0	$0	$0	$8,968
4071433	Widen to 6 Lanes	SR 482 (Sand Lake Rd) from Turkey Lake Rd to President's Dr	$19,566,544	$0	$0	$0	$0	$19,566,544
4109831	Widen to 6 Lanes	SR 50 from Avalon Rd to SR 429/Western Expy	$5,470,461	$125,858	$0	$0	$0	$5,596,319
4167241	Right-of-Way Acquisition	Orange Co. - Future Capacity	$7,161,619	$0	$0	$0	$0	$7,161,619
4200861	Widen to 4 Lanes	Good Homes Rd from SR 408 to N. of SR 50	$50,726	$0	$0	$0	$0	$50,726
4242171	PD&E/EMO Study	SR 414 (Maitland Blvd) from I-4 to Maitland Ave	$462,452	$0	$0	$0	$0	$462,452
Total			**$127,901,419**	**$10,376,260**	**$82,984,689**	**$9,557,693**	**$56,772,854**	**$287,592,915**

Source: MetroPlan Orlando Transportation Improvement Program

Gas Tax Credit (AMA Only)

A revenue credit for the annual gas tax equivalent expenditures on roadway, bicycle/pedestrian, and transit capacity expansion projects in Orange County is presented below. The three components of the credit are as follows:

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

City Gas Tax Equivalent Pennies

Similar to the city gas tax revenue credit for roadways projects, a review of the City of Orlando's historical transportation financing program (FY 2007-2011) and the FY 2012-2016 CIP was conducted to identify non-impact fee revenues used to fund capacity expansion projects for all modes. As shown in Table C-15, 1.2 equivalent pennies of credit is calculated for the portion of recurring revenues dedicated to capacity expansion projects such as new road construction, lane additions, intersection improvements, sidewalk construction, transit vehicle purchases, and capital expenditures associated with new and expanded transit service. As shown in Table C-16, additional 0.2 pennies of credit is given for debt service payments on the Narcoossee Road, John Young Parkway, and Lee Vista Boulevard projects. Thus a credit of 1.2 equivalent pennies was given for the allocation of funds that the City of Orlando collects in fuel tax, ad valorem tax, and grant revenues, and for the debt service expenditures.

Table C-15
City Gas Tax Equivalent Pennies (AMA Only)

Source	Cost of Projects	Number of Years	Revenue from 1 Penny[3]	Equivalent Pennies[4]
Projected CIP Expenditures (FY 2012-2016)[1]	$15,204,000	5	$6,026,626	$0.005
Historical City Expenditures (FY 2007-2011)[2]	$59,060,867	5	$6,026,626	$0.020
Total	**$74,264,867**	**10**	**$6,026,626**	**$0.012**

(1) Source: Table C-7 totals combined with Table C-20 totals
(2) Source: Table C-7 totals combined with Table C-20 totals
(3) Source: Table C-1
(4) Cost of projects divided by number of years divided by revenue from 1 penny (Item 4) divided by 100

Table C-16
City of Orlando Debt Service Equivalent Pennies (AMA Only)

Source	Annual Payment (Present Value)	Number of Years	Revenue from 1 penny[4]	Equivalent Pennies[5]
Narcoossee Rd - Internal Loan Fund[1]	$625,589	4	$6,026,626	$0.001
John Young Pkwy - Internal Loan Fund[2]	$154,292	1	$6,026,626	$0.000
Lee Vista Blvd - Internal Loan Fund[3]	$193,003	4	$6,026,626	$0.000
Total	**$972,884**	**9**	**$6,026,626**	**$0.002**

(1) Source: Table C-8
(2) Source: Table C-9
(3) Source: Table C-10
(4) Source: Table C-1
(5) Cost of projects divided by number of years divided by revenue from 1 penny (Item 4) divided by 100

County Gas Tax Equivalent Pennies

Similar to the county gas tax revenue credit for roadway projects, a review of the County's historical roadway financing program (FY 2006-2010) and the Capital Improvement Plan (CIP) for FY 2011-2015 was conducted to identify non-impact fee revenues used to fund capacity expansion projects for all modes. As shown in Table C-17, Orange County receives a credit of 3.0 pennies for the portion of recurring gas tax revenues dedicated to capacity expansion projects such as new road construction, lane additions, intersection improvements, sidewalk construction, transit vehicle purchases, and capital expenditures associated with new and expanded transit service. Additionally, as shown in Table C-18, Orange County is given a credit for non-recurring ad valorem revenues allocated to the Capital Projects Fund between FY 2011 and FY 2015. Because this is a non-recurring revenue source, for purposes of the equivalent pennies calculation, the 5-year expenditures were divided out over a 25-year period. This credit is equal to 0.5 pennies of equivalent gas tax. Thus, a total credit of 3.5 equivalent pennies will be given for the county gas tax expenditures (recurring and non-recurring) dedicated to multi-modal capacity expansion projects.

Table C-17
County Gas Tax Equivalent Pennies (AMA Only)

Source	Cost of Projects	Number of Years	Revenue from 1 penny[3]	Equivalent Pennies[4]
Projected CIP Expenditures (FY 2011-2015)[1]	$99,777,597	5	$6,026,626	$0.033
Historical County Expenditures (FY 2006-2010)[2]	$82,492,229	5	$6,026,626	$0.027
Total	**$182,269,826**	**10**	**$6,026,626**	**$0.030**

(1) Source: Table C-11 totals combined with Table C-21 totals
(2) Source: Table C-11 totals combined with Table C-21 totals
(3) Source: Table C-1
(4) Cost of projects divided by number of years divided by revenue from 1 penny (Item 4) divided by 100

Table C-18
County Gas Tax Equivalent Pennies for Non-Recurring Revenues (AMA Only)

Source	Cost of Projects	Number of Years	Revenue from 1 penny[2]	Equivalent Pennies[3]
Projected Revenue Expenditures (2011-2015)[1]	$81,570,168	25	$6,026,626	$0.005
Total	**$81,570,168**	**25**	**$6,026,626**	**$0.005**

(1) Source: Table C-12
(2) Source: Table C-1
(3) Cost of projects divided by number of years divided by revenue from 1 penny (Item 4) divided by 100

State Gas Tax Expenditures

As explained previously, in the calculation of the equivalent pennies of gas tax from the State, expenditures on multi-modal capacity expansion spanning a 15-year period (from FY 2001 to FY 2015) were reviewed. For calculation purposes, the 15-year period was broken into three increments; two historical (FY 2001-2005 and FY 2006-2010) and one future (FY 2011-2015). Information on historical projects' funding and the future year estimates was obtained from the FDOT Work Programs. The use of a 15-year period, for purposes of developing a State credit for multi-modal capacity expansion projects, results in a stable credit, as it accounts for the volatility in FDOT spending in the county over short periods of time.

The total cost of the capacity-adding projects for the five-year "historical" periods and projected in the five-year Transportation Improvement Program are as follows:

- FY 2001-2005 work plan equates to 15.8 pennies
- FY 2006-2010 work plan equates to 22.1 pennies
- FY 2011-2015 TIP equates to 12.4 pennies

The combined weighted average over the 15-year period of state expenditure for capacity-adding multi-modal projects results in a total of 16.7 equivalent pennies. Table C-19 documents this calculation. The specific projects that were used in the equivalent penny calculations are summarized in Tables C-13 and C-14, as well as Tables C-22 and C-23.

Table C-19
Equivalent Penny Calculation for State Portion (AMA Only)

Source	Cost of Projects	Number of Years	Revenue from 1 penny[4]	Equivalent Pennies[5]
Projected Work Program (FY 2011-2015)[1]	$372,355,615	5	$6,026,626	$0.124
Historical Work Program (FY 2006-2010)[2]	$665,811,340	5	$6,026,626	$0.221
Historical Work Program (FY 2001-2005)[3]	$475,372,000	5	$6,026,626	$0.158
Total	**$1,513,538,955**	**15**	**$6,026,626**	**$0.167**

(1) Source: Table C-14 totals combined with Table C-23 totals
(2) Source: Table C-13 totals combined with Table C-22 totals
(3) Source: Table C-13 totals combined with Table C-22 totals
(4) Source: Table C-1
(5) Cost of projects divided by number of years divided by revenue from 1 penny (Item 4) divided by 100

Tables C-20 through C-23 presents the multi-modal fee credit eligible projects that were used to calculate the gasoline tax equivalent credit for the Orange County AMA. These projects are considered in addition to the roadway projects presented as part of the impact fee (Tables C-7 through C-14).

Table C-20
Historical and Programmed Capital Improvement Plan Expenditures for the City of Orlando FY 2007-2016 – Bicycle/Pedestrian and Transit Improvements

#	Mode	Description	On/From/To	2006/2007	2007/2008	2008/2009	2009/2010	2010/2011	2011/2012	2012/2013	2013/2014	2014/2015	2015/2016	Total
1383	Bike/Ped	Bike Trail Improvements	Dinky Line Trail	$0	$0	$0	$104,429	$23,916	$0	$0	$0	$0	$0	$128,345
1383	Bike/Ped	Bike Trail Improvements	Dinky Line Trail ROW LAP	$0	$0	$0	$2,081,959	$289,756	$0	$0	$0	$0	$0	$2,371,715
2443	Bike/Ped	Bike Trail Improvements	Alden Road Bicycle Path	$0	$375	$0	$0	$0	$0	$0	$0	$0	$0	$375
2444	Bike/Ped	Bike Trail Improvements	Shingle Creek Trail	$198,554	$880,613	$2,019	$0	$344	$0	$0	$0	$0	$0	$1,081,530
2687	Bike/Ped	Bike Trail Improvements	Southeast Bike/Pedestrain Trl	$39,360	$2,728	$340	$0	$950	$0	$0	$0	$0	$0	$43,378
2885	Bike/Ped	n/a	Pedestrian Improvements	$53,870	$203,577	$17,872	$255	$2,086	$0	$0	$0	$0	$0	$277,660
3417	Bike/Ped	n/a	Bicycle Plan Implementation	$3,035	$4,255	$2,253	$30,399	$12,420	$0	$0	$0	$0	$0	$52,362
4105	Bike/Ped	Sidewalk Construction	School Safety Sidewalk Program	$0	$0	$0	$0	$0	$500,000	$500,000	$2,500,000	$500,000	$500,000	$4,500,000
6202	Bike/Ped	n/a	City Sidewalks/Streetscape	$255	$44,212	$1,123	$85	$0	$0	$0	$0	$0	$0	$45,675
6213	Transit	Downtown Pedestrian Circulator	Gertrudes Walk	$0		$0	$0	$0	$0	$150,000	$0	$0	$0	$150,000
6296	Transit	LYMMO Expansion	LYMMO East/West Ext.	$0	$0	$0	$0	$0	$460,000	$1,000,000	$0	$0	$0	$1,460,000
6348	Bike/Ped	Bike Trail Improvements	Trail Projects	$0	$0	$0	$0	$0	$95,000	$0	$0	$0	$0	$95,000
8637	Bike/Ped	Bike Trail Improvements	Dinky Line Bike Trail	$861	$3,084	$11,313	$18,492	$42,974	$0	$0	$0	$0	$0	$76,724
Total				**$295,935**	**$1,138,844**	**$34,920**	**$2,235,619**	**$372,446**	**$1,055,000**	**$1,650,000**	**$2,500,000**	**$500,000**	**$500,000**	**$10,282,764**

Source: City of Orlando Staff and the FY 2012-2016 Capital Improvement Program

Table C-21
Historical and Programmed Capital Improvement Plan Expenditures for Orange County FY 2006-2015 – Bicycle/Pedestrian and Transit Improvements

ID	Description	FY 2006	FY 2007	FY 2008	FY 2009	FY 2010	FY 2011	FY 2012	FY 2013	FY 2014	FY 2015	Total
2841	Sidewalk Prgm C/W	$2,319,357	$2,146,894	$2,348,386	$1,943,433	$1,874,727	$2,215,707	$2,000,100	$2,000,100	$2,000,100	$2,000,100	**$20,848,904**
5071	I-Drive Pedestrian Bridge	$0	$0	$0	$0	$70,044	$57,319	$1,372,637	$8,000,000	$0	$0	**$9,500,000**
5074	I-Drive Sidewalk Improvements	$0	$0	$0	$0	$780,220	$0	$0	$0	$0	$0	**$780,220**
5095	Pedestrian Enhancements	$3,755	$20,582	$75,733	$0	$0	$100	$750,100	$0	$0	$0	**$850,270**
5070	I-Drive Transit Lanes	$0	$0	$0	$0	$25,350	$1,800,000	$74,650	$0	$0	$0	**$1,900,000**
5080	Canadian Ct Intermodal Center	$0	$0	$998	$0	$0	$0	$0	$0	$0	$0	**$998**
Total		**$2,323,112**	**$2,167,476**	**$2,425,117**	**$1,943,433**	**$2,750,341**	**$4,073,126**	**$4,197,487**	**$10,000,100**	**$2,000,100**	**$2,000,100**	**$33,880,392**

Source: Orange County Staff

Table C-22
FDOT FY 2000 – FY 2010 Orange County Work Program – Bicycle/Pedestrian and Transit Improvements

Proj #	Description	On/From/To	FY 2000/2001	FY 2001/2002	FY 2002/2003	FY 2003/2004	FY 2004/2005	FY 2005/2006	FY 2006/2007	FY 2007/2008	FY 2008/2009	FY 2009/2010	Total
4218641	Pedestrian/Wildlife Overpass	I-4 Ped. Gateway Bridge from N. Ivanhoe Blvd to S. Ivanhoe Blvd	$0	$0	$0	$0	$0	$0	$14,000	$891,000	$1,000	$1,623,817	$2,529,817
4221331	Pedestrian/Wildlife Overpass	SR 436 Pedestrian Overpass	$0	$0	$0	$0	$0	$0	$0	$0	$0	$8,160	$8,160
4040601	Sidewalk	SR 482 from International Dr to Turkey Lake Rd	$22,000	$0	$0	$0	$0	$0	$0	$0	$0	$0	$22,000
4041791	Sidewalk	Conway Gardens Sidewalk @ 6 locations	$37,000	$0	$0	$0	$0	$0	$0	$0	$0	$0	$37,000
4051631	Sidewalk	Shingle Creek, Ph. I from Lake Fran Tr to Mall at Milennia	$0	$0	$1,531,000	$0	$0	$0	$0	$154,000	$0	$0	$1,685,000
4064121	Sidewalk	Construct Sidewalk @ 1 location	$0	$28,000	$0	$0	$0	$0	$0	$0	$0	$0	$28,000
4107731	Sidewalk	Mercy Dr from W. Colonial Dr SR 50 to Silver Star Rd SR 438	$0	$0	$0	$73,000	$0	$0	$0	$0	$0	$0	$73,000
4114461	Sidewalk	SR 15/Hoffner Rd Gulfstream Bay Ct Sandra Ln	$0	$0	$0	$77,000	$18,000	$0	$0	$0	$0	$0	$95,000
4163681	Sidewalk	SR 527/Orange Ave/SR 426/Fairbanks Ave from US 17/92/Mills Ave to Lakemont Ave	$0	$0	$0	$0	$0	$0	$0	$0	$0	$491,964	$491,964
4196781	Sidewalk	SR 527 (Orange Ave) from SR 482 (Sand Lake Rd) to Locust Ave	$0	$0	$0	$0	$0	$0	$432,000	$44,000	$0	$13,727	$489,727
4197741	Sidewalk	Church St Improvements	$0	$0	$0	$0	$0	$0	$2,148,000	$0	$0	$1,000,000	$3,148,000
2465381	Capital for Fixed-Route	LYNX	$0	$0	$0	$0	$0	$0	$0	$0	$0	$4,000,000	$4,000,000
2465431	Capital for Fixed-Route	Orange - CFRTA/LYNX Sec. 5307 Purchase Vehicles & Hwy Equip	$0	$1,281,200	$0	$0	$0	$0	$0	$0	$0	$1,543,700	$2,824,900
2465581	Capital for Fixed-Route	Orange - CFRTA/LYNX Facility Construction Enhancements	$500,000	$500,000	$500,000	$500,000	$500,000	$0	$0	$500,000	$500,000	$500,000	$4,000,000
2465721	Capital for Fixed-Route	Orange - CFRTA/LYNX Capital Assistance for Transit Enhancements	$2,280,000	$2,880,000	$1,080,000	$1,080,000	$1,080,000	$1,080,000	$1,080,000	$2,830,000	$1,200,000	$3,000,000	$17,590,000
2465941	Capital for Fixed-Route	Orange - CFRTA/LYNX Purchase of Commuter Vans	$594,000	$987,000	$0	$1,037,000	$1,068,000	$1,068,000	$1,068,000	$1,068,000	$1,068,000	$1,068,000	$9,026,000
2465951	Capital for Fixed-Route	Orange - CFRTA/LYNX Facility Improvement Equipment	$628,000	$785,000	$785,000	$785,000	$785,000	$1,000,000	$1,000,000	$1,000,000	$1,000,000	$1,000,000	$8,768,000
2466201	Capital for Fixed-Route	Orange - CFRTA/LYNX Purchase Vehicles & Hwy Equip.	$0	$0	$448,900	$349,200	$2,196,700	$2,079,100	$1,879,900	$1,867,900	$0	$294,710	$9,116,410
4077551	Transit Improvement	Orange - GOAA Intermodal Transit System	$600,000	$600,000	$450,000	$0	$0	$0	$0	$0	$0	$0	$1,650,000
4082281	Public Transportation Shelter	Kissimmee Osceola County Intermodal Center	$0	$0	$0	$0	$0	$0	$0	$0	$1,000,000	$0	$1,000,000
4083681	Capital for Fixed-Route	LYNX Communication Urban Capital Grant	$3,655,000	$1,000,000	$1,200,000	$1,000,000	$0	$0	$0	$0	$0	$0	$6,855,000
4083701	Capital for Fixed-Route	LYNX Farebox Urban Capital Grant	$2,000,000	$0	$0	$0	$0	$0	$0	$0	$0	$0	$2,000,000
4111651	Purchase Vehicles/Equip	Orange - Quest, Inc 1 Bus & 1 Van w/lift, 1 Minivan	$0	$102,000	$0	$0	$0	$0	$0	$0	$0	$0	$102,000
4143331	Commuter Trans. Assistance	Orange - LYNX	$0	$0	$0	$263,000	$0	$0	$0	$0	$0	$0	$263,000
4147491	Capital for Fixed-Route	Orange - LYNX Capital Fixed-Rte for Maint. And Support Equip	$0	$0	$0	$0	$0	$0	$0	$631,200	$900,000	$700,000	$2,231,200
4147871	Urban Corridor Improvements	Orange - LYNX Sec. 5307 Innovative Tech. for Clean Fuel Projects	$0	$0	$0	$0	$0	$0	$0	$0	$900,000	$0	$900,000
4153491	Construct/Expand Terminal Facility	Multimodal Terminals per Senate Bill 2A	$0	$0	$0	$984,000	$1,986,000	$0	$0	$0	$0	$0	$2,970,000
4161691	Capital for Fixed-Route	LYNX Sec. 5307 Fixed-Rte Project Purchase Bus/Equip	$0	$0	$0	$0	$0	$0	$0	$0	$2,154,300	$2,232,298	$4,386,598
4164931	Transit Improvement	LYNX Area-wide Service Expansion	$0	$0	$0	$7,600,000	$0	$0	$0	$0	$0	$0	$7,600,000
4211391	Intermodal Hub Capacity	LYNX Service Expansion/Enhancement Program	$0	$0	$0	$0	$0	$0	$9,780,000	$0	$3,437,000	$0	$13,217,000
4243351	Capital for Fixed-Route	Central Florida Reg. Transportation Auth. LNYX FTA Bus Acquisition	$0	$0	$0	$0	$0	$0	$0	$0	$137,200	$419,353	$556,553
4245821	Transit Improvement	Orange County Share-A-Ride Signs	$0	$0	$0	$0	$0	$0	$0	$0	$21,000	$0	$21,000
4261021	Transit Improvement	Bus Facility & Infrastructure Investments	$0	$0	$0	$0	$0	$0	$0	$0	$0	$2,250,000	$2,250,000
4261041	Transit Improvement	Community Circulator Vehicles	$0	$0	$0	$0	$0	$0	$0	$0	$0	$8,500,000	$8,500,000
4261061	Transit Improvement	Workforce Corridor Shelters	$0	$0	$0	$0	$0	$0	$0	$0	$0	$5,344,615	$5,344,615
4261071	Transit Improvement	Bus Transfer Centers	$0	$0	$0	$0	$0	$0	$0	$0	$0	$4,920,000	$4,920,000
4261591	Transit Improvement	LYNX Operations Center Ph. 2	$0	$0	$0	$0	$0	$0	$0	$0	$0	$2,060,000	$2,060,000
4261631	Transit Improvement	Smart Bus Technologies	$0	$0	$0	$0	$0	$0	$0	$0	$0	$2,000,000	$2,000,000
Total			**$10,316,000**	**$8,163,200**	**$5,994,900**	**$13,748,200**	**$7,633,700**	**$5,227,100**	**$17,401,900**	**$8,986,100**	**$12,318,500**	**$42,970,344**	**$132,759,944**

Source: FDOT Gaming Reports for Orange County

Table C-23
FY 2011 – FY 2015 Orange County Transportation Improvement Program – Bicycle/Pedestrian and Transit Improvements

TIP #	Mode	Description	On/To/From	Agency	2010/11	2011/12	2012/13	2013/14	2014/15	Total
4196781	Bike/Ped	Sidewalk	SR 527/Orange Ave from SR 482/Sand Lake Rd to Locust Ave	Orange	$14,000	$0	$0	$0	$0	$14,000
4218641	Bike/Ped	Pedestrian Overpass	I-4 Pedestrian Gateway Bridge from N. Ivanhoe Blvd to S. Ivanhoe Blvd	Orange	$12,000	$1,798,000	$0	$0	$0	$1,810,000
4279661	Bike/Ped	Pedestrian Safety Improvement	Howell Branch Rd from Temple Trail to Temple Dr	Orange	$10,000	$0	$47,000	$0	$0	$57,000
4280461	Bike/Ped	Sidewalk Improvement Project	Orlando; Citywide	Orange	$0	$0	$0	$4,181,000	$0	$4,181,000
4285841	Bike/Ped	Pedestrian Safety Improvement	SR 482/Sand Lake Rd @ Universal Blvd	Orange	$89,000	$0	$0	$0	$0	$89,000
4304561	Bike/Ped	Sidewalk	SR 436 from Curry Ford Rd to Old Cheney Hwy	Orange	$1,400,000	$0	$0	$0	$0	$1,400,000
2465431	Transit	Purchase Vehicles and Related Equipment		CFRTA/LYNX	$1,543,700	$0	$0	$	$0	$1,543,700
2465721	Transit	Purchase Commuter Vans		CFRTA/LYNX	$2,136,000	$1,068,000	$1,068,000	$1,068,00	$1,068,000	$6,408,000
2465981	Transit	Capital Cost of Contracting		CFRTA/LYNX	$200,000	$100,000	$100,000	$100,00	$100,000	$600,000
4161691	Transit	SU Set-Aside - Purchase Transit Coaches (Inlcuding associated equipment and styling)		CFRTA/LYNX	$2,234,500	$2,256,100	$2,459,600	$	$0	$6,950,200
4242551	Transit	LYMMO Upgrade		CFRTA/LYNX	$634,000	$386,000	$400,000	$400,00	$400,000	$2,220,000
4242552	Transit	East-West Circulator System - New Start Earmark		CFRTA/LYNX	$8,926,000	$0	$0	$	$0	$8,926,000
4243351	Transit	Purchase Transit Coaches		CFRTA/LYNX	$4,194,000	$0	$0	$0	$0	$4,194,000
4254201	Transit	Transit Service Frequency Improvements - Link 103		CFRTA/LYNX	$225,000	$0	$0	$	$0	$225,000
4254211	Transit	Transit Service Frequency Improvements - Link 306		CFRTA/LYNX	$49,000	$0	$0	$0	$0	$49,000
4254241	Transit	Transit Service Frequency Improvements - Link 111		CFRTA/LYNX	$506,000	$0	$0	$	$0	$506,000
4254421	Transit	SU Set-Aside - Capital for Buses & Equipment		CFRTA/LYNX	$0	$0	$0	$1,284,60	$1,310,200	$2,594,800
4261021	Transit	Bus Facility & Infrastructure Investments in LEED Transit		CFRTA/LYNX	$2,250,000	$0	$0	$	$0	$2,250,000
4261041	Transit	Smarter Green/Fuel-Efficient Community Circulator Vehicles		CFRTA/LYNX	$8,500,000	$0	$0	$0	$0	$8,500,000
4261061	Transit	Invest in Workforce Corridor Shelters to meet Ridership Capacity		CFRTA/LYNX	$5,345,000	$0	$0	$0	$0	$5,345,000
4261631	Transit	Smart Bus Technologies		CFRTA/LYNX	$2,000,000	$0	$0	$0	$0	$2,000,000
4284321	Transit	Purchase Transit Coaches		CFRTA/LYNX	$1,500,000	$0	$0	$0	$0	$1,500,000
4302501	Transit	Parramore Bus Rapid Transit at Orlando Creative Village		CFRTA/LYNX	$10,000,000	$0	$0	$0	$0	$10,000,000
4302941	Transit	Capital for Fixed-Route		CFRTA/LYNX	$1,900,000	$0	$0	$0	$0	$1,900,000
n/a	Transit	Transit Expansion/Enhancement Program		CFRTA/LYNX	$1,471,000	$1,471,000	$1,471,000	$1,471,00	$1,471,000	$7,355,000
n/a	Transit	Areawide Service Expansion Program		CFRTA/LYNX	$829,000	$829,000	$829,000	$829,00	$829,000	$4,145,000
Total					**$55,968,200**	**$7,908,100**	**$6,374,600**	**$9,333,600**	**$5,178,200**	**$84,762,700**

Source: MetroPlan Orlando Transportation Improvement Program

Table C-24
Average Motor Vehicle Fuel Efficiency – Excluding Interstate Travel

Travel Vehicle Miles of Travel (VMT) @			
	21.7	6.5	
Other Arterial Rural	318,561,000,000	48,549,000,000	367,110,000,000
Other Rural	324,384,000,000	35,494,000,000	359,878,000,000
Other Urban	1,383,890,000,000	98,204,000,000	1,482,094,000,000
Total	***2,026,835,000,000***	***182,247,000,000***	***2,209,082,000,000***

Percent VMT

@ 21.7 mpg	@ 6.5 mpg
87%	13%
90%	10%
93%	7%
92%	**8%**

Fuel Consumed			
	Gallons @ 21.7 mpg	Gallons @ 6.5 mpg	
Other Arterial Rural	14,680,230,415	7,469,076,923	22,149,307,338
Other Rural	14,948,571,429	5,460,615,385	20,409,186,814
Other Urban	63,773,732,719	15,108,307,692	78,882,040,411
Total	***93,402,534,563***	***28,038,000,000***	***121,440,534,563***

Total Mileage and Fuel	
2,209,082	**miles (millions)**
121,441	**gallons (millions)**
18.19	**mpg**

Source: U.S. Department of Transportation, Federal Highway Administration, *Highway Statistics 2009* , Section V, Table VM-1
Annual Vehicle Distance Traveled in Miles and Related Data - 2009 by Highway Category and Vehicle Type
http://www.fhwa.dot.gov/policyinformation/statistics.cfm

Source: See Table C-25

Table C-25
Annual Vehicle Distance Traveled in Miles and Related Data (2009) - By Highway Category and Vehicle Type[1/]

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)									
2009	Interstate Rural	139,621	1,480	1,601	42,002	10,991	46,178	**181,622**	**57,169**	241,873
2009	Other Arterial Rural	229,367	3,295	2,063	89,194	19,364	29,185	**318,561**	**48,549**	372,468
2009	Other Rural	226,498	3,502	2,506	97,887	19,173	16,322	**324,384**	**35,494**	365,886
2009	All Rural	595,485	8,277	6,170	229,082	49,528	91,684	824,567	141,212	980,227
2009	Interstate Urban	334,765	2,323	2,170	87,116	15,649	32,940	**421,881**	**48,589**	474,963
2009	Other Urban	1,083,185	10,201	6,017	300,705	54,986	43,218	**1,383,890**	**98,204**	1,498,311
2009	All Urban	1,417,950	12,523	8,187	387,821	70,635	76,158	1,805,771	146,793	1,973,274
2009	Total Rural and Urban	2,013,436	20,800	14,358	616,903	120,163	167,842	2,630,338	288,005	2,953,501
2009	Number of motor vehicles registered 2/	193,979,654	7,929,724	841,993	40,488,025	8,356,097	2,617,118	234,467,679	10,973,214	254,212,610
2009	Average miles traveled per vehicle	10,380	2,623	17,052	15,237	14,380	64,132	11,218	26,246	11,618
2009	Person-miles of travel 4/ (millions)	2,797,438	22,404	304,386	824,151	120,163	167,842	3,621,589	288,005	4,236,384
2009	Fuel consumed (thousand gallons)	85,560,236	474,909	1,868,792	35,763,797	16,342,208	28,130,088	121,324,034	44,472,296	168,140,031
2009	Average fuel consumption per vehicle (gallons)	441	60	2,219	883	1,956	10,748	517	4,053	661
2009	Average miles traveled per gallon of fuel consumed	23.8	43.2	7.2	17.4	7.4	6.0	**21.7**	**6.5**	17.6

1/ The FHWA estimates national trends by using State reported Highway Performance and Monitoring System (HPMS) data, fuel consumption data (MF-21 and MF-27), vehicle registration data (MV-1, MV-9, and MV-10), other data such as the R.L. Polk vehicle data, and a host of modeling techniques. Starting with the 2009 VM-1, an enhanced methodology is used to provide timely indicators on both travel and travel behavior changes.

2/ Light Duty Vehicles Short WB - passenger cars, light trucks, vans and sport utility vehicles with a wheelbase (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/ Vehicle occupancy is estimated by the FHWA from the 2009 National Household Travel Survey (NHTS); For single unit truck and heavy trucks, 1 motor vehicle mile travelled = 1 person-mile traveled.

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

Appendix D
Calculated Transportation Impact Fee Schedule

Table D-1
Calculated Transportation Impact Fee Schedule

Gasoline Tax						Unit Construction Cost:	$3,744,000			Interstate/Toll Facility Adjustment Factor:	28.8%					
$$ per gallon to capital:	$0.186		City Revenues:	$0.013		Capacity per lane mile:	9,506			Cost per VMC:	$393.86					
Facility life (years):	25		County Revenues:	$0.030		Fuel Efficiency:	18.19 mpg									
Interest rate:	5.0%		State Revenues:	$0.143		Effectivedays per year:	365									

ITE LUC	Land Use	Unit	Trip Rate	Trip Rate Source	Assessable Trip Length	Total Trip Length	Trip Length Source	% New Trips	% New Trips Source	Net VMT[1]	Total Impact Cost	Annual Gas Tax	Gas Tax Credit	Net Impact Fee	Curernt Adopted IF Rate	% Change
	RESIDENTIAL:															
210	Single Family (Detached)	du	7.81	Florida Studies	7.94	8.44	FL Studies	100%	N/A	22.08	$8,695	$123	$1,734	$6,961	$2,869	143%
220	Multi-Family (Apartment)	du	6.60	Blend ITE 8th & FL Studies	6.12	6.62	FL Studies (LUC 220/230)	100%	N/A	14.38	$5,663	$82	$1,156	$4,507	$2,011	124%
230	Residential Condominium/Townhouse	du	5.76	Blend ITE 8th & FL Studies	6.12	6.62	FL Studies (LUC 220/230)	100%	N/A	12.55	$4,943	$71	$1,001	$3,942	n/a	n/a
232	High-Rise Residential Condo/Townhouse	du	4.18	ITE 8th Edition	6.12	6.62	Same as LUC 220	100%	N/A	9.11	$3,587	$52	$733	$2,854	n/a	n/a
240	Mobile Home Park	du	4.17	Florida Studies	5.52	6.02	FL Studies	100%	N/A	8.19	$3,227	$47	$662	$2,565	$1,497	71%
251	Retirement Community/Age-Restricted	du	3.13	Blend ITE 8th & FL Studies	6.50	7.00	FL Studies	100%	N/A	7.24	$2,853	$41	$578	$2,275	$646	252%
n/a	Student Housing	du	2.82	University of Minnesota Study	6.12	6.62	Same as LUC 220	100%	N/A	6.14	$2,420	$35	$493	$1,927	n/a	n/a
	LODGING:															
310	Hotel	room	6.36	Blend ITE 8th & FL Studies	7.51	8.01	FL Studies	66%	FL Studies	11.22	$4,420	$63	$888	$3,532	$2,128	66%
320	Motel	room	5.63	ITE 8th Edition	5.21	5.71	FL Studies	77%	FL Studies	8.04	$3,167	$46	$648	$2,519	$2,128	18%
n/a	Tourist Hotel	room	5.77	Local TCS Studies	7.51	8.01	Same as LUC 310	66%	Same as LUC 310	10.18	$4,010	$57	$803	$3,207	$832	286%
n/a	Time Share	du	7.01	Previous TIF Study[3]	4.76	5.26	Previous TIF Study[3]	100%	Previous TIF Study[3]	11.88	$4,679	$69	$972	$3,707	$1,016	265%
	RECREATION:															
430	Golf Course	acre	5.04	ITE 8th Edition	7.94	8.44	Same as LUC 210	90%	FL Schedules	12.82	$5,050	$71	$1,001	$4,049	n/a	n/a
437	Bowling Alley	1,000 sf	33.33	ITE 8th Edition	6.18	6.68	Same as LUC 710	90%	Same as LUC 430	66.00	$25,993	$374	$5,271	$20,722	n/a	n/a
443	Movie Theater without Matinee	1,000 sf	78.06	ITE 8th Edition	2.66	3.16	Same as LUC 444	88%	Same as LUC 444	65.05	$25,620	$405	$5,708	$19,912	n/a	n/a
491	Racquet Club	1,000 sf	14.03	ITE 8th Edition	6.18	6.68	Same as LUC 710	94%	Same as LUC 492	29.02	$11,428	$164	$2,311	$9,117	$2,461	271%
492	Health/Fitness Club	1,000 sf	32.93	ITE 8th Edition	6.18	6.68	Same as LUC 710	94%	FL Studies	68.10	$26,822	$386	$5,440	$21,382	n/a	n/a
	INSTITUTIONS:															
565	Day Care	1,000 sf	75.07	ITE 8th Edition	2.13	2.63	FL Studies	73%	FL Studies	41.55	$16,367	$269	$3,791	$12,576	$5,543	127%
590	Library	1,000 sf	56.24	ITE 8th Edition	6.95	7.45	Same as LUC 210	49%	Previous TIF Study[3]	68.18	$26,854	$383	$5,398	$21,456	$7,377	191%

Table D-1 (continued)
Calculated Transportation Impact Fee Schedule

ITE LUC	Land Use	Unit	Trip Rate	Trip Rate Source	Assessable Trip Length	Total Trip Length	Trip Length Source	% New Trips	% New Trips Source	Net VMT[1]	Total Impact Cost	Annual Gas Tax	Gas Tax Credit	Net Impact Fee	Curernt Adopted IF Rate	% Change
	INSTITUTIONS:															
610	Hospital	bed	11.81	ITE 8th Edition	6.95	7.45	Same as LUC 210	77%	FL Schedules	22.50	$8,862	$126	$1,776	$7,086	$5,121	38%
620	Nursing Home	1,000 sf	2.48	Blend ITE 8th & FL Studies	2.72	3.22	FL Studies	89%	FL Studies	2.14	$842	$13	$183	$659	$1,778	-63%
640	Animal Hospital/Veterinary Clinic	1,000 sf	28.66	ITE 8th Edition (Adjusted)[4]	5.36	5.86	Same as LUC 630	93%	Same as LUC 630	50.86	$20,031	$291	$4,101	$15,930	n/a	n/a
n/a	School	1,000 sf	13.78	Previous TIF Study[3]	8.05	8.55	Previous TIF Study[3]	100%	Previous TIF Study[3]	39.49	$15,554	$220	$3,101	$12,453	$3,842	224%
n/a	Public Assembly	1,000 sf	9.11	Previous TIF Study[3]	8.05	8.55	Previous TIF Study[3]	100%	Previous TIF Study[3]	26.11	$10,283	$145	$2,044	$8,239	$2,542	224%
	OFFICE:															
710	General Office 50,000 sf or less[2]	1,000 sf	15.65	ITE 8th equation	6.18	6.68	FL Studies	92%	FL Studies	31.68	$12,476	$179	$2,523	$9,953	$5,242	90%
710	General Office 50,001-100,000 sf[2]	1,000 sf	13.34	ITE 8th equation	6.18	6.68	FL Studies	92%	FL Studies	27.00	$10,635	$153	$2,156	$8,479	$5,242	62%
710	General Office 100,001-200,000 sf[2]	1,000 sf	11.37	ITE 8th equation	6.18	6.68	FL Studies	92%	FL Studies	23.01	$9,064	$130	$1,832	$7,232	$4,071	78%
710	General Office greater than 200,000 sf[2]	1,000 sf	9.70	ITE 8th equation	6.18	6.68	FL Studies	92%	FL Studies	19.63	$7,733	$111	$1,564	$6,169	$3,623	70%
720	Medical Office	1,000 sf	34.72	Blend ITE 8th & FL Studies	6.66	7.16	FL Studies	89%	FL Studies	73.26	$28,856	$413	$5,821	$23,035	$12,098	90%
732	Post Office	1,000 sf	108.19	ITE 8th Edition	6.18	6.68	Same as LUC 710	49%	Previous TIF Study[3]	116.63	$45,937	$661	$9,316	$36,621	$15,570	135%
	RETAIL:															
814	Specialty Retail Center	1,000 sf	49.99	Blend ITE 8th & FL Studies	3.54	4.04	FL Studies	85%	FL Studies	53.55	$21,091	$320	$4,510	$16,581	n/a	n/a
815	Free-Standing Discount Store	1,000 sf	57.24	ITE 8th Edition	2.52	3.02	Same as LUC 820 (100-200K)	67%	Same as LUC 820 (100-200K)	34.41	$13,551	$216	$3,044	$10,507	n/a	n/a
816	Hardware/Paint Store	1,000 sf	51.29	ITE 8th Edition	1.96	2.46	Same as LUC 820 (25-50K)	56%	Same as LUC 820 (25-5050K)	20.04	$7,893	$132	$1,860	$6,033	n/a	n/a
820	Retail 50,000 sfgla or less[2]	1,000 sfgla	86.56	ITE 8th equation	1.96	2.46	FL Curve[6]	56%	FL Curve[6]	33.82	$13,321	$223	$3,143	$10,178	$10,366	-2%
820	Retail 50,001-100,000 sfgla[2]	1,000 sfgla	67.91	ITE 8th equation	2.40	2.90	FL Curve[6]	62%	FL Curve[6]	35.97	$14,169	$228	$3,213	$10,956	$10,585	4%
820	Retail 100,001-200,000 sfgla[2]	1,000 sfgla	53.28	ITE 8th equation	2.52	3.02	FL Curve[6]	67%	FL Curve[6]	32.03	$12,613	$201	$2,833	$9,780	$9,521	3%
820	Retail 200,001-300,000 sfgla[2]	1,000 sfgla	46.23	ITE 8th equation	2.65	3.15	FL Curve[6]	71%	FL Curve[6]	30.97	$12,196	$193	$2,720	$9,476	$8,685	9%
820	Retail 300,001-400,000 sfgla[2]	1,000 sfgla	41.80	ITE 8th equation	2.77	3.27	FL Curve[6]	73%	FL Curve[6]	30.09	$11,851	$186	$2,621	$9,230	$8,104	14%
820	Retail 400,001-500,000 sfgla[2]	1,000 sfgla	38.66	ITE 8th equation	2.89	3.39	FL Curve[6]	75%	FL Curve[6]	29.83	$11,749	$183	$2,579	$9,170	$7,658	20%

Table D-1 (continued)
Calculated Transportation Impact Fee Schedule

ITE LUC	Land Use	Unit	Trip Rate	Trip Rate Source	Assessable Trip Length	Total Trip Length	Trip Length Source	% New Trips	% New Trips Source	Net VMT[1]	Total Impact Cost	Annual Gas Tax	Gas Tax Credit	Net Impact Fee	Curernt Adopted IF Rate	% Change
	RETAIL:															
820	Retail 500,001-1,000,000 sfgla[2]	1,000 sfgla	30.33	ITE 8th equation	3.51	4.01	FL Curve[6]	81%	FL Curve[6]	30.70	$12,091	$184	$2,593	$9,498	$6,702	42%
820	Retail 1,000,001-1,200,000 sfgla[2]	1,000 sfgla	28.46	ITE 8th equation	3.75	4.25	FL Curve[6]	82%	FL Curve[6]	31.16	$12,271	$185	$2,607	$9,664	$6,118	58%
820	Retail greater than 1,200,000 sfgla[2]	1,000 sfgla	26.96	ITE 8th equation	3.99	4.49	FL Curve[6]	83%	FL Curve[6]	31.78	$12,519	$187	$2,636	$9,883	$5,853	69%
841	New/Used Auto Sales	1,000 sf	26.40	Blend ITE 8th & FL Studies	4.83	5.33	FL Studies	79%	FL Studies	35.86	$14,124	$207	$2,917	$11,207	$4,799	134%
850	Supermarket	1,000 sf	103.38	Blend ITE 8th & FL Studies	2.18	2.68	FL Studies	56%	FL Studies	44.93	$17,696	$290	$4,087	$13,609	$10,208	33%
853	Convenience Market w/Gas Pumps	1,000 sf	775.14	Blend ITE 8th & FL Studies	1.59	2.09	FL Studies	28%	FL Studies	122.85	$48,386	$847	$11,938	$36,448	n/a	n/a
862	Home Improvement Superstore	1,000 sf	29.80	ITE 8th Edition	2.52	3.02	Same as LUC 820 (100-200K)	67%	Same as LUC 820 (100-200K)	17.91	$7,055	$113	$1,593	$5,462	n/a	n/a
863	Electronics Superstore	1,000 sf	45.04	ITE 8th Edition	1.33	1.83	Same as LUC 820 (<50K)	43%	Same as LUC 820 (<50K)	9.17	$3,612	$66	$930	$2,682	n/a	n/a
912	Bank/Savings Drive-In	1,000 sf	159.34	Blend ITE 8th & FL Studies	2.58	3.08	FL Studies	46%	FL Studies	67.32	$26,515	$421	$5,934	$20,581	$19,544	5%
925	Drinking Place	1,000 sf	113.40	ITE 8th Edition (Adjusted)[5]	1.33	1.83	Same as LUC 820 (<50K)	43%	Same as LUC 820 (<50K)	23.09	$9,093	$167	$2,354	$6,739	n/a	n/a
931	Quality Restaurant	1,000 sf	91.10	Blend ITE 8th & FL Studies	3.30	3.80	FL Studies	77%	FL Studies	82.41	$32,457	$497	$7,005	$25,452	$10,018	154%
932	High-Turnover Restaurant	1,000 sf	116.60	Blend ITE 8th & FL Studies	3.33	3.83	FL Studies	71%	FL Studies	98.14	$38,654	$592	$8,344	$30,310	$13,785	120%
934	Fast Food Rest. w/Drive-Thru	1,000 sf	511.00	Blend ITE 8th & FL Studies	2.15	2.65	FL Studies	58%	FL Studies	226.85	$89,346	$1,466	$20,662	$68,684	$21,869	214%
944	Service Station	fuel pos.	168.56	ITE 8th Edition	2.00	2.50	FL Studies	23%	FL Studies	27.60	$10,872	$181	$2,551	$8,321	n/a	n/a
947	Self-Service Car Wash	wash station	108.00	ITE 8th Edition	2.29	2.79	FL Studies	68%	FL Studies	59.87	$23,581	$382	$5,384	$18,197	n/a	n/a
n/a	Tourist Retail	1,000 sf	74.99	Previous TIF Study[3]	3.50	4.00	Previous TIF Study[3]	40%	Previous TIF Study[3]	37.38	$14,720	$224	$3,157	$11,563	$3,638	218%
n/a	Auto Service	1,000 sf	25.67	Previous TIF Study[3]	8.37	8.87	Previous TIF Study[3]	51%	Previous TIF Study[3]	39.01	$15,364	$217	$3,058	$12,306	$3,792	225%
n/a	Drug Store	1,000 sf	88.46	Previous TIF Study[3]	4.07	4.57	Previous TIF Study[3]	50%	Previous TIF Study[3]	64.09	$25,241	$377	$5,313	$19,928	$6,242	219%

Table D-1 (continued)
Calculated Transportation Impact Fee Schedule

ITE LUC	Land Use	Unit	Trip Rate	Trip Rate Source	Assessable Trip Length	Total Trip Length	Trip Length Source	% New Trips	% New Trips Source	Net VMT[(1)]	Total Impact Cost	Annual Gas Tax	Gas Tax Credit	Net Impact Fee	Curernt Adopted IF Rate	% Change
	INDUSTRIAL:															
110	General Light Industrial	1,000 sf	6.97	ITE 8th Edition	5.41	5.91	Same as LUC 710	92%	Same as LUC 710	12.35	$4,864	$71	$1,001	$3,863	$2,565	51%
140	Manufacturing	1,000 sf	3.82	ITE 8th Edition	5.41	5.91	Same as LUC 710	92%	Same as LUC 710	6.77	$2,666	$39	$550	$2,116	$1,403	51%
150	Warehousing	1,000 sf	3.56	ITE 8th Edition	5.41	5.91	Same as LUC 710	92%	Same as LUC 710	6.31	$2,484	$36	$507	$1,977	$1,822	9%
151	Mini-Warehouse	1,000 sf	2.15	Blend ITE 8th & FL Studies	3.26	3.76	FL Schedules	92%	Same as LUC 710	2.30	$904	$14	$197	$707	$734	-4%

Note: All the land uses in this fee schedule expressed in 1,000 sf units refers to gross floor area except for shopping centers (LUC 820) that refers to gross leasable area.

(1) Net VMT is 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-mile of maximum level of service volume to determine the total impact cost.

(2) The trip generation rate recommended for the office and shopping center uses the end-point regression value.

(3) The previous transportation impact fee study indicated that these variables were determined through alternative assessments.

(4) For LUC 640, the TGR was calculated using the ratio for weekday and PM peak hour trip generation rate for LUC 630. The PM peak hour for LUC 640 was adjusted by a factor of 6.07 (31.45 / 5.18 = 6.07)

(5) For LUC 925, the TGR was calculated by adjusting the PM peak hour trip generation rate by a factor of 10

(6) The Florida Curve uses trip characteristic data from the Florida Studies Database to calculate trip length and percent new trips values by size (sq. ft) through a regression analysis

Table D-2
Calculated Multi-Modal Transportation Fee Schedule (Alternative Mobility Area)

Gasoline Tax							Roadway Cost per PMC:	$302.96						Interstate/Toll Facility Adjustment Factor:	28.8%			
$$ per gallon to capital:	$0.216		City Revenues:	$0.014			Transit Cost per PMC:	$328.34						Transportation Cost per PMC:	$304.23			
Facility life (years):	25		County Revenues:	$0.035			Fuel Efficiency:	18.19 mpg										
Interest rate:	5.0%		State Revenues:	$0.167			Effectivedays per year:	365										

ITE LUC	Land Use	Unit	Trip Rate	Trip Rate Source	Assessable Trip Length	Total Trip Length	Trip Length Source	% New Trips	% New Trips Source	Net VMT[1]	Person-Trip Factor	Net PMT	Total Impact Cost	Annual Gas Tax	Gas Tax Credit	Net Multi-Modal Fee	Curernt Adopted IF Rate	% Change
	RESIDENTIAL:																	
210	Single Family (Detached)	du	7.81	Florida Studies	7.94	8.44	FL Studies	100%	N/A	22.08	1.30	28.70	$8,731	$143	$2,015	$6,716	$2,869	134%
220	Multi-Family (Apartment)	du	6.60	Blend ITE 8th & FL Studies	6.12	6.62	FL Studies (LUC 220/230)	100%	N/A	14.38	1.30	18.69	$5,687	$95	$1,339	$4,348	$2,011	116%
230	Residential Condominium/Townhouse	du	5.76	Blend ITE 8th & FL Studies	6.12	6.62	FL Studies (LUC 220/230)	100%	N/A	12.55	1.30	16.32	$4,963	$83	$1,170	$3,793	n/a	n/a
232	High-Rise Residential Condo/Townhouse	du	4.18	ITE 8th Edition	6.12	6.62	Same as LUC 220	100%	N/A	9.11	1.30	11.84	$3,602	$60	$846	$2,756	n/a	n/a
240	Mobile Home Park	du	4.17	Florida Studies	5.52	6.02	FL Studies	100%	N/A	8.19	1.30	10.65	$3,241	$54	$761	$2,480	$1,497	66%
251	Retirement Community/Age-Restricted	du	3.13	Blend ITE 8th & FL Studies	6.50	7.00	FL Studies	100%	N/A	7.24	1.30	9.41	$2,865	$47	$662	$2,203	$646	241%
n/a	Student Housing	du	2.82	University of Minnesota Study	6.12	6.62	Same as LUC 220	100%	N/A	6.14	1.30	7.98	$2,430	$40	$564	$1,866	n/a	n/a
	LODGING:																	
310	Hotel	room	6.36	Blend ITE 8th & FL Studies	7.51	8.01	FL Studies	66%	FL Studies	11.22	1.30	14.59	$4,439	$73	$1,029	$3,410	$2,128	60%
320	Motel	room	5.63	ITE 8th Edition	5.21	5.71	FL Studies	77%	FL Studies	8.04	1.30	10.45	$3,180	$54	$761	$2,419	$2,128	14%
n/a	Time Share	du	7.01	Previous TIF Study[3]	4.76	5.26	Previous TIF Study[3]	100%	Previous TIF Study[3]	11.88	1.30	15.44	$4,698	$80	$1,128	$3,570	$1,016	251%
	RECREATION:																	
430	Golf Course	acre	5.04	ITE 8th Edition	7.94	8.44	Same as LUC 210	90%	FL Schedules	12.82	1.30	16.67	$5,071	$83	$1,170	$3,901	n/a	n/a
437	Bowling Alley	1,000 sf	33.33	ITE 8th Edition	6.18	6.68	Same as LUC 710	90%	Same as LUC 430	66.00	1.30	85.80	$26,101	$434	$6,117	$19,984	n/a	n/a
443	Movie Theater without Matinee	1,000 sf	78.06	ITE 8th Edition	2.66	3.16	Same as LUC 444	88%	Same as LUC 444	65.05	1.30	84.57	$25,727	$470	$6,624	$19,103	n/a	n/a
491	Racquet Club	1,000 sf	14.03	ITE 8th Edition	6.18	6.68	Same as LUC 710	94%	Same as LUC 492	29.02	1.30	37.73	$11,475	$191	$2,692	$8,783	$2,461	257%
492	Health/Fitness Club	1,000 sf	32.93	ITE 8th Edition	6.18	6.68	Same as LUC 710	94%	FL Studies	68.10	1.30	88.53	$26,934	$448	$6,314	$20,620	n/a	n/a
	INSTITUTIONS:																	
565	Day Care	1,000 sf	75.07	ITE 8th Edition	2.13	2.63	FL Studies	73%	FL Studies	41.55	1.30	54.02	$16,435	$312	$4,397	$12,038	$5,543	117%
590	Library	1,000 sf	56.24	ITE 8th Edition	6.95	7.45	Same as LUC 210	49%	Previous TIF Study[3]	68.18	1.30	88.63	$26,966	$445	$6,272	$20,694	$7,377	181%
610	Hospital	bed	11.81	ITE 8th Edition	6.95	7.45	Same as LUC 210	77%	FL Schedules	22.50	1.30	29.25	$8,899	$147	$2,072	$6,827	$5,121	33%
620	Nursing Home	1,000 sf	2.48	Blend ITE 8th & FL Studies	2.72	3.22	FL Studies	89%	FL Studies	2.14	1.30	2.78	$845	$15	$211	$634	$1,778	-64%
640	Animal Hospital/Veterinary Clinic	1,000 sf	28.66	ITE 8th Edition (Adjusted)[4]	5.36	5.86	Same as LUC 630	93%	Same as LUC 630	50.86	1.30	66.12	$20,115	$338	$4,764	$15,351	n/a	n/a
n/a	School	1,000 sf	13.78	Previous TIF Study[3]	8.05	8.55	Previous TIF Study[3]	100%	Previous TIF Study[3]	39.49	1.30	51.34	$15,619	$255	$3,594	$12,025	$3,842	213%

Table D-2 (continued)
Calculated Multi-Modal Transportation Fee Schedule (Alternative Mobility Area)

ITE LUC	Land Use	Unit	Trip Rate	Trip Rate Source	Assessable Trip Length	Total Trip Length	Trip Length Source	% New Trips	% New Trips Source	Net VMT[1]	Person-Trip Factor	Net PMT	Total Impact Cost	Annual Gas Tax	Gas Tax Credit	Net Multi-Modal Fee	Curernt Adopted IF Rate	% Change
	INSTITUTIONS:																	
n/a	Public Assembly	1,000 sf	9.11	Previous TIF Study[3]	8.05	8.55	Previous TIF Study[3]	100%	Previous TIF Study[3]	26.11	1.30	33.94	$10,325	$169	$2,382	$7,943	$2,542	213%
	OFFICE:																	
710	General Office 50,000 sf or less[2]	1,000 sf	15.65	ITE 8th equation	6.18	6.68	FL Studies	92%	FL Studies	31.68	1.30	41.18	$12,528	$208	$2,932	$9,596	$5,242	83%
710	General Office 50,001-100,000 sf[2]	1,000 sf	13.34	ITE 8th equation	6.18	6.68	FL Studies	92%	FL Studies	27.00	1.30	35.10	$10,679	$178	$2,509	$8,170	$5,242	56%
710	General Office 100,001-200,000 sf[2]	1,000 sf	11.37	ITE 8th equation	6.18	6.68	FL Studies	92%	FL Studies	23.01	1.30	29.91	$9,102	$151	$2,128	$6,974	$4,071	71%
710	General Office greater than 200,000 sf[2]	1,000 sf	9.70	ITE 8th equation	6.18	6.68	FL Studies	92%	FL Studies	19.63	1.30	25.52	$7,765	$129	$1,818	$5,947	$3,623	64%
720	Medical Office	1,000 sf	34.72	Blend ITE 8th & FL Studies	6.66	7.16	FL Studies	89%	FL Studies	73.26	1.30	95.24	$28,976	$479	$6,751	$22,225	$12,098	84%
732	Post Office	1,000 sf	108.19	ITE 8th Edition	6.18	6.68	Same as LUC 710	49%	Previous TIF Study[3]	116.63	1.30	151.62	$46,128	$767	$10,810	$35,318	$15,570	127%
	RETAIL:																	
814	Specialty Retail Center	1,000 sf	49.99	Blend ITE 8th & FL Studies	3.54	4.04	FL Studies	85%	FL Studies	53.55	1.30	69.62	$21,179	$372	$5,243	$15,936	n/a	n/a
815	Free-Standing Discount Store	1,000 sf	57.24	ITE 8th Edition	2.52	3.02	Same as LUC 820 (100-200K)	67%	Same as LUC 820 (100-200K)	34.41	1.30	44.73	$13,607	$251	$3,538	$10,069	n/a	n/a
816	Hardware/Paint Store	1,000 sf	51.29	ITE 8th Edition	1.96	2.46	Same as LUC 820 (25-50K)	56%	Same as LUC 820 (25-5050K)	20.04	1.30	26.05	$7,926	$153	$2,156	$5,770	n/a	n/a
820	Retail 50,000 sfgla or less[2]	1,000 sfgla	86.56	ITE 8th equation	1.96	2.46	FL Curve[6]	56%	FL Curve[6]	33.82	1.30	43.97	$13,377	$258	$3,636	$9,741	$10,366	-6%
820	Retail 50,001-100,000 sfgla[2]	1,000 sfgla	67.91	ITE 8th equation	2.40	2.90	FL Curve[6]	62%	FL Curve[6]	35.97	1.30	46.76	$14,228	$265	$3,735	$10,493	$10,585	-1%
820	Retail 100,001-200,000 sfgla[2]	1,000 sfgla	53.28	ITE 8th equation	2.52	3.02	FL Curve[6]	67%	FL Curve[6]	32.03	1.30	41.64	$12,666	$234	$3,298	$9,368	$9,521	-2%
820	Retail 200,001-300,000 sfgla[2]	1,000 sfgla	46.23	ITE 8th equation	2.65	3.15	FL Curve[6]	71%	FL Curve[6]	30.97	1.30	40.26	$12,247	$224	$3,157	$9,090	$8,685	5%
820	Retail 300,001-400,000 sfgla[2]	1,000 sfgla	41.80	ITE 8th equation	2.77	3.27	FL Curve[6]	73%	FL Curve[6]	30.09	1.30	39.12	$11,901	$216	$3,044	$8,857	$8,104	9%
820	Retail 400,001-500,000 sfgla[2]	1,000 sfgla	38.66	ITE 8th equation	2.89	3.39	FL Curve[6]	75%	FL Curve[6]	29.83	1.30	38.78	$11,798	$213	$3,002	$8,796	$7,658	15%
820	Retail 500,001-1,000,000 sfgla[2]	1,000 sfgla	30.33	ITE 8th equation	3.51	4.01	FL Curve[6]	81%	FL Curve[6]	30.70	1.30	39.91	$12,141	$213	$3,002	$9,139	$6,702	36%
820	Retail 1,000,001-1,200,000 sfgla[2]	1,000 sfgla	28.46	ITE 8th equation	3.75	4.25	FL Curve[6]	82%	FL Curve[6]	31.16	1.30	40.51	$12,322	$215	$3,030	$9,292	$6,118	52%
820	Retail greater than 1,200,000 sfgla[2]	1,000 sfgla	26.96	ITE 8th equation	3.99	4.49	FL Curve[6]	83%	FL Curve[6]	31.78	1.30	41.31	$12,571	$218	$3,072	$9,499	$5,853	62%
841	New/Used Auto Sales	1,000 sf	26.40	Blend ITE 8th & FL Studies	4.83	5.33	FL Studies	79%	FL Studies	35.86	1.30	46.62	$14,183	$241	$3,397	$10,786	$4,799	125%
850	Supermarket	1,000 sf	103.38	Blend ITE 8th & FL Studies	2.18	2.68	FL Studies	56%	FL Studies	44.93	1.30	58.41	$17,770	$336	$4,736	$13,034	$10,208	28%
853	Convenience Market w/Gas Pumps	1,000 sf	775.14	Blend ITE 8th & FL Studies	1.59	2.09	FL Studies	28%	FL Studies	122.85	1.30	159.71	$48,588	$983	$13,854	$34,734	n/a	n/a
862	Home Improvement Superstore	1,000 sf	29.80	ITE 8th Edition	2.52	3.02	Same as LUC 820 (100-200K)	67%	Same as LUC 820 (100-200K)	17.91	1.30	23.28	$7,084	$131	$1,846	$5,238	n/a	n/a

Table D-2 (continued)
Calculated Multi-Modal Transportation Fee Schedule (Alternative Mobility Area)

ITE LUC	Land Use	Unit	Trip Rate	Trip Rate Source	Assessable Trip Length	Total Trip Length	Trip Length Source	% New Trips	% New Trips Source	Net VMT[1]	Person-Trip Factor	Net PMT	Total Impact Cost	Annual Gas Tax	Gas Tax Credit	Net Multi-Modal Fee	Curernt Adopted IF Rate	% Change
	RETAIL:																	
863	Electronics Superstore	1,000 sf	45.04	ITE 8th Edition	1.33	1.83	Same as LUC 820 (<50K)	43%	Same as LUC 820 (<50K)	9.17	1.30	11.92	$3,627	$77	$1,085	$2,542	n/a	n/a
912	Bank/Savings Drive-In	1,000 sf	159.34	Blend ITE 8th & FL Studies	2.58	3.08	FL Studies	46%	FL Studies	67.32	1.30	87.52	$26,625	$489	$6,892	$19,733	$19,544	1%
925	Drinking Place	1,000 sf	113.40	ITE 8th Edition (Adjusted)[5]	1.33	1.83	Same as LUC 820 (<50K)	43%	Same as LUC 820 (<50K)	23.09	1.30	30.02	$9,131	$193	$2,720	$6,411	n/a	n/a
931	Quality Restaurant	1,000 sf	91.10	Blend ITE 8th & FL Studies	3.30	3.80	FL Studies	77%	FL Studies	82.41	1.30	107.13	$32,593	$578	$8,146	$24,447	$10,018	144%
932	High-Turnover Restaurant	1,000 sf	116.60	Blend ITE 8th & FL Studies	3.33	3.83	FL Studies	71%	FL Studies	98.14	1.30	127.58	$38,815	$687	$9,683	$29,132	$13,785	111%
934	Fast Food Rest. w/Drive-Thru	1,000 sf	511.00	Blend ITE 8th & FL Studies	2.15	2.65	FL Studies	58%	FL Studies	226.85	1.30	294.91	$89,719	$1,702	$23,988	$65,731	$21,869	201%
944	Service Station	fuel pos.	168.56	ITE 8th Edition	2.00	2.50	FL Studies	23%	FL Studies	27.60	1.30	35.88	$10,917	$210	$2,960	$7,957	n/a	n/a
947	Self-Service Car Wash	wash station	108.00	ITE 8th Edition	2.29	2.79	FL Studies	68%	FL Studies	59.87	1.30	77.83	$23,679	$444	$6,258	$17,421	n/a	n/a
n/a	Auto Service	1,000 sf	25.67	Previous TIF Study[3]	8.37	8.87	Previous TIF Study[3]	51%	Previous TIF Study[3]	39.01	1.30	50.71	$15,428	$252	$3,552	$11,876	$3,792	213%
n/a	Drug Store	1,000 sf	88.46	Previous TIF Study[3]	4.07	4.57	Previous TIF Study[3]	50%	Previous TIF Study[3]	64.09	1.30	83.32	$25,346	$438	$6,173	$19,173	$6,242	207%
	INDUSTRIAL:																	
110	General Light Industrial	1,000 sf	6.97	ITE 8th Edition	5.41	5.91	Same as LUC 710	92%	Same as LUC 710	12.35	1.30	16.06	$4,884	$82	$1,156	$3,728	$2,565	45%
140	Manufacturing	1,000 sf	3.82	ITE 8th Edition	5.41	5.91	Same as LUC 710	92%	Same as LUC 710	6.77	1.30	8.80	$2,677	$45	$634	$2,043	$1,403	46%
150	Warehousing	1,000 sf	3.56	ITE 8th Edition	5.41	5.91	Same as LUC 710	92%	Same as LUC 710	6.31	1.30	8.20	$2,495	$42	$592	$1,903	$1,822	4%
151	Mini-Warehouse	1,000 sf	2.15	Blend ITE 8th & FL Studies	3.26	3.76	FL Schedules	92%	Same as LUC 710	2.30	1.30	2.99	$908	$16	$226	$682	$734	-7%

Note: All the land uses in this fee schedule expressed in 1,000 sf units refers to gross floor area except for shopping centers (LUC 820) that refers to gross leasable area.

(1) Net PMT is calculated as ((Trip Generation Rate * Trip Length * % New Trips) * (1-Interstate/Toll Facility Adjustment Factor)/2) * Person-Trip Factor. This reflects the unit of person-miles of capacity consumed per unit of development and is multiplied by the cost per person-mile of maximum level of service volume to determine the total impact cost.

(2) The trip generation rate recommended for the office and shopping center uses the end-point regression value.

(3) The previous transportation impact fee study indicated that these variables were determined through alternative assessments.

(4) For LUC 640, the TGR was calculated using the ratio for weekday and PM peak hour trip generation rate for LUC 630. The PM peak hour for LUC 640 was adjusted by a factor of 6.07 (31.45 / 5.18 = 6.07)

(5) For LUC 925, the TGR was calculated by adjusting the PM peak hour trip generation rate by a factor of 10

(6) The Florida Curve uses trip characteristic data from the Florida Studies Database to calculate trip length and percent new trips values by size (sq. ft) through a regression analysis