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The Economic Cost of Traffic Congestion in Florida

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16. Abstract

Traffic congestion in the U.S. is bad and getting worse, and it is expensive. Appropriate solutions to this problem require appropriate information. A comprehensive and accurate analysis of congestion costs is a critical tool for planning and implementing policies to improve traffic conditions not only because the information will aid decision making and provide a basis for evaluating the effects of public interventions, but also because it will sensitize public opinion about the importance of solving congestion problems.

According to the Texas Transportation Institute's (TTI) Urban Mobility Report, which produces the most widely used estimates of the cost of congestion, in 2005, the average peak-period traveler in the urbanized areas of the country experienced an additional 38 hours in travel times and consumed an additional 26 gallons of fuel due to congestion. That means an aggregate of 4.2 billion hours of travel delay and 2.9 billion gallons of wasted fuel, representing a monetary cost of $78.2 billion, up from a cost of $14.9 billion in 1982. In Florida six of the seven urban areas with individual estimates in the Urban Mobility Report are classified as having "much higher congestion" or "higher congestion" when compared with similar regions across the country. The cost of congestion in these seven urban areas is $5.2 billion.

These estimates, however, are intended for comparisons of trends for individual cities and, by definition, they are aggregate and general. TTI itself acknowledges these limitations stating that "local and state studies are typically more detailed and relevant." For this reason, in this research, we conducted a more detailed study of congestion costs with the objective of filling some of the gaps of the Urban Mobility Report: [1] TTI just shows individual estimates of seven urban areas in Florida; [2] TTI does not take into account rural areas; [3] TTI does not allow a spatial understanding of congestion; [4] TTI uses national averages of constants and general estimations instead of specific state or local information; and [5] TTI omits important costs of congestion.

This study used historical data on traffic densities provided by the Florida Department of Transportation (FDOT) to estimate speeds, travel delay, and cost of congestion for every county in Florida. To that end, the study expanded and adapted TTI's method to all urban and rural areas, included state and local information when possible, analyzed the spatial implications of congestion, and proposed a method to calculate the costs of congestion due to unreliability. In addition, more disaggregated estimation methods were employed to calculate congestion metrics and costs to the level of road section providing more accuracy and detail.

The results of the study show that traffic congestion has been increasing in every county in Florida. Also, congestion is not just an urban issue but a rural issue as well. Rural areas adjacent to urban areas experienced worse traffic congestion than rural areas isolated from urban areas. Our findings suggest that urban freeways are more sensitive to population size than urban arterials. As population increase urban freeways experience more traffic congestion than urban arterials. The opposite is observed in rural areas. Based on these findings we recommend some directions for future research about the effect of different public interventions.

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EXECUTIVE SUMMARY

This study uses GIS historical data for the years 2003 – 2007 on traffic densities per road section (daily vehicle miles traveled [DVMT], number of lanes, lane miles, average directional factor, and average truck factor) provided by the Florida Department of Transportation (FDOT) to estimate speeds, travel delay, and cost of congestion for every county in Florida. To this end, the study expands and adapts Texas Transportation Institute's (TTI) method to all urban and rural areas, including state and local information when possible, analyzing the spatial implications of congestion, and proposing a method to calculate the costs of congestion due to unreliability. In addition, more disaggregated estimation methods are employed to calculate congestion metrics and costs to the level of road section, providing more precision and detail.

This was accomplished through the development of three sets of methodologies. The first methodology, **aggregate**, expands but doesn't modify TTI's method to rural and minor urban areas for every county in Florida. This methodology mirrors TTI's process aggregating vehicle miles traveled (VMT) per county to estimate the congestion metrics (roadway congestion index [RCI], percent of daily travel in congested conditions [PDTCC], speed, delay, and cost) aggregated per county. The second methodology, **disaggregate county** level, uses aggregated RCI and PDTCC per county and calculates a disaggregated speed, travel time, travel delay, travel time index, and congestion cost per each section of road within the county. In addition, national constants, such as vehicle occupancy, are replaced with local data. The third methodology, **disaggregate roadway** level, uses disaggregated data per section of road for the entire state (not aggregating by county) throughout the model to calculate RCI, PDTCC, and the remaining traffic indexes.

The data that has been generated from these methods show that traffic congestion in Florida reflects national traffic patterns, consecutively rising every year except 2007. Calculations performed using the aggregate methodology indicated that costs attributable to traffic congestion were $5 billion in 2003, peaked at $7.1 billion in 2006, and lowered slightly to just over $7 billion in 2007. In the second methodology, disaggregate county, traffic congestion cost $4.5 billion in 2003, peaked at $6.5 billion in 2006, and ended at $6.3 billion in 2007. The third methodology, disaggregate roadway level, generated slightly higher numbers than disaggregate county but lower than aggregate. In 2007, the three methodologies priced traffic congestion costs within the range of $6.3 billion to $7 billion.

In addition, a concise analysis of the geographic and historic trends that highlights the differences between the three different methods used in this study is presented. The overall results can be summarized as follows:

- Congestion increased every year between 2003 and 2006, decreasing in 2007 only because of the recession.
- Congestion exists in both urban and rural areas although, as could be expected, it is higher in urban areas.
- Urban congestion is a problem both on freeways and arterials. Rural congestion is more a problem on arterials than on freeways.
- Congestion in Florida is concentrated in coastal areas and in Central Florida.
- Rural congestion is higher in areas close to big and congested cities especially in South and Central Florida.
- Coastal areas and Central Florida presents more historic volatility of congestion metrics than any other region in Florida.

- Overall, the use of a disaggregated method improves the precision of the estimation and allows a better spatial understanding of congestion.

TABLE OF CONTENTS

LIST OF ACRONYMS

AADT - Annual Average Daily Traffic

DVMT - Daily Vehicle Miles Traveled

FDOT - Florida Department of Transportation

FHWA - Federal Highway Administration

GIS - Geographic Information Systems

HPMS - Highway Performance Monitoring System

PDTCC - Percent of Daily Travel in Congested Conditions

PTMS - Portable Telemetered Traffic Monitoring Sites

RCI - Roadway Congestion Index

TTI - Texas Transportation Institute

TTI - Travel Time Index

TTMS - Transportation's Telemetered Traffic Monitoring Sites

USDOT - US Department of Transportation

VMT - Vehicle Miles Traveled

Section 1 Introduction

1.1 General background for the study

Traffic congestion in the U.S. is bad and getting worse, and it is expensive. Appropriate solutions to this problem require appropriate information. A comprehensive and accurate analysis of congestion costs is a critical tool for planning and implementing policies to improve traffic conditions not only because the information will aid decision making and provide a basis for evaluating the effects of public interventions, but also because it will sensitize public opinion about the importance of solving congestion problems.

According to the Texas Transportation Institute's (TTI) Urban Mobility Report[1], which produces the most widely used estimates of the cost of congestion, in 2005, the average peak-period traveler in the urbanized areas of the country experienced an additional 38 hours extra in travel time and consumed an additional 26 gallons of fuel due to congestion. That means an aggregate of 4.2 billion hours of travel delay and 2.9 billion gallons of wasted fuel, representing a monetary cost of $78.2 billion, up from a cost of $14.9 billion in 1982. In Florida six of the seven urban areas with individual estimates in the Urban Mobility Report are classified as having "much higher congestion" or "higher congestion" when compared with similar regions across the country.[2] The cost of congestion in these seven urban areas is $5.2 billion.

[1] TTI (2007). *The 2007 Urban Mobility Report.* Texas Transportation Institute. September 2007. Available at http://tti.tamu.edu/documents/mobility_report_2007_wappx.pdf

[2] See: TTI Congestion Data for Your City available at: http://mobility.tamu.edu/ums/congestion_data/. When compared with the nation average for cities of their size, the Travel Time Index (Ratio of Travel Time in the peak period to Travel Time in free-flow conditions) the classification for Florida cities is

- H+ Much Higher: Jacksonville
- H Higher: Orlando, Cape Coral, Pensacola, Tampa, and Sarasota-Bradenton
- 0 Average: Miami

These estimates, however, are intended for comparisons of trends for individual cities so, by definition, they are aggregate and general. TTI itself acknowledges these limitations stating that "local and state studies are typically more detailed and relevant."[3] In particular there are five reasons that suggest that a more detailed study of congestion costs in Florida is advisable for policy purposes:

TTI just shows individual estimates of seven urban areas in Florida: although the last versions of the Urban Mobility Report (2007 and 2009) included an aggregate estimate of congestion costs in all 437 U.S. urban areas (439 for the 2009 version), individual estimates were only developed for 85. That means that TTI only shows the costs of congestion in seven urban areas in Florida: Miami, Orlando, Tampa, Jacksonville, Sarasota-Bradenton, Pensacola, and Cape Coral. However, there are reasons to believe that traffic congestion is getting worse in minor urban areas: according to the 2006 Florida Highway Data Source Book[4], travel delay per person in the State Highway System in urbanized areas outside the seven largest counties increased from 108.5 hours in 1995 to 138.2 hours in 2005. Other indicators provide more evidence of the importance of congestion in minor urban areas: percentage of miles congested in peak hours increased from 15% in 1995 to 19.7% in 2005 and percentage of travel congested in peak hours increased from 16.5% in 1995 to 21.2% in 2005.

TTI does not take into account rural areas: by definition the Urban Mobility Report excludes rural areas from the analysis. However, as a special report prepared for the Federal

[3] TTI (2007). *The 2007 Urban Mobility Report.* Texas Transportation Institute. September 2007. Available at http://tti.tamu.edu/documents/mobility_report_2007_wappx.pdf. Appendix B, Page B-1.
[4] Florida Department of Transportation (2007). *2006 Florida Highway Data Source Book.* Available at http://www.dot.state.fl.us/planning/statistics/sourcebook/

Highway Administration[5] points out, congestion is spreading out of cities. An indication of this is the faster growth of vehicle-miles of travel in rural areas. In Florida, according to the 2006 Florida Highway Data Source Book the travel delay per person in non-urbanized areas increased from 9.5 hours in 1995 to 37.2 hours in 2005. Other indicators like the percentage of miles congested in peak hours (from 1% in 1995 to 2.9% in 2005) and the percentage of travel congested in peak hours (from 2.1% in 1995 to 5.4% in 2005) also show the same pattern.

TTI does not allow a spatial understanding of congestion: because the estimates of congestion in the seven metropolitan areas included in the Urban Mobility Report are presented in an aggregated way and because other urbanized and rural areas are not included, TTI does not detail where congestion really happens. More specific analysis of the costs of traffic congestion like the one conducted by HDR for the Chicago Metropolitan area[6] use county-by-county breakdowns of congestion and find relevant implications for public policy. For example, this study shows that only in Chicago was congestion higher on expressways than on arterials routes. Outside Chicago the pattern was reversed: the majority of delay occurred on arterials rather than on expressways.

TTI uses national averages of constants and general estimations instead of specific state or local information: because the Urban Mobility Report seeks to compare congestion costs among many urban areas and generate aggregate costs for the nation, it uses common databases and national constants for variables like vehicle occupancy, percent of daily travel in peak periods, average cost of time, and commercial vehicle operating costs. For example, TTI

[5] Federal Highway Administration (2005). *Traffic Congestion and Reliability: Trends and Advanced Strategies for Congestion Mitigation.* Prepared by Cambridge Systematics Inc with Texas Transportation Institute. Available at http://ops.fhwa.dot.gov/congestion_report/congestion_report_05.pdf

[6] HDR (2008) *Moving at the Speed of Congestion – The True Costs of Traffic in the Chicago Metropolitan Area.* Prepared by HDR Decision Economics for the Metropolitan Planning Council. August 2008. Available at http://www.metroplanning.org/articleDetail.asp?objectID=4484

uses a constant value of vehicle occupancy in peak periods of 1.25 persons per vehicle. However, as described in page 31 of this report, using data on home-base work vehicle occupancy from the 2009 National Household Travel Survey (NHTS), it can be estimated that the vehicle occupancy in peak period in Florida varies from 1.04 to 1.11 depending on the county. This means that using TTI's constant the total time spent in congestion can be considerably overestimated.

TTI omits important costs of congestion: because the Urban Mobility Report estimates only the costs of congestion associated with travel delays and extra fuel consumption, it does not take into account other social costs such as extra times due to unreliability, productivity losses, environmental damage, and accidents caused by the increased traffic density. TTI recognizes the importance of these costs, especially the costs of unreliability. Indeed, the last versions of the Urban Mobility Report include estimates of buffer times and extra planning times for 29 cities where they are collecting more detailed traffic data. The indicator of reliability used by TTI is based on the variability of travel times with respect to the mean. From Florida, only Tampa is included in this sample.

These reasons suggest that a more detailed estimation of the costs of congestion that includes all urbanized and rural areas, a spatial analysis by county, specific data from state and local sources, and a wider range of social costs will be useful for the formulation of public policies directed to mitigate the problems of traffic congestion.

1.2 Design of the study and structure of the document

The main objective of this project is to provide a more precise and comprehensive estimate of the costs of congestion in Florida by expanding TTI's method to minor urban and rural areas, including state and local information when possible, analyzing the spatial implications of congestion, and proposing a method to calculate the costs of congestion due to unreliability. To this end the following tasks were developed:

- Expand TTI's method to minor urban and rural areas
    - Review of data sources: TTI uses the Federal Highway Administration's Highway Performance Monitoring System (HPMS) database. In particular it uses indicators like annual average daily traffic (AADT) and the daily vehicles-miles of travel (DVMT) to calculate traffic densities. The research team evaluated the quality of the data for every county in Florida to define the types of roads (by functional classification) to be included in the study[7], the time frame[8], and the estimation methods for missing data if needed.
    - Adapt TTI's method to minor urban and rural areas: TTI uses traffic densities to calculate average speeds using equations modeled for urban areas. The research team evaluated the applicability of the equations to rural areas and determined that since the equations are defined according to road type no modifications were needed.
    - Calculate congestion metrics and congestion costs using TTI's constants and equations: broadly speaking, TTI's approach is to use the estimates of speeds to

[7] TTI includes Interstates, Freeways, and Principal Arterials.

[8] TTI calculates congestion costs for all years from 1982 revising the historical data with any change in the method. According to the *2006 Florida Highway Data Source Book* data about DVMT for all Florida's Public Roads exists since 1967 but data before 1984 may not be reported consistently.

calculate travel delays and fuel consumption and compare them with the estimates for an ideal free-flow speed. The research team will apply the same procedure to find TTI's metrics and costs for every county in the state of Florida.

- Include state and local information
    - Review of state and local data sources for the national constants: the research team defined values for constants using more detailed information. In particular, it reviewed the values of vehicle occupancy using local sources.
    - Review of data sources to calibrate the general equations used by TTI: the research team explored the possibility to validate and improve TTI's models using more detailed and continuous speed data generated by the Florida Department of Transportation's telemetered traffic monitoring sites (TTMS) and portable telemetered traffic monitoring sites (PTMS). However, since the PTMS counters do not collect speed data and TTMS collect only daily directional speed data without computing or storing annual averages, the researchers concluded that it is not possible to use this information in the models.
    - Calculate congestion metrics and congestion costs using state and local information: the research team adapted TTI's method to include state and local values for constants and recalibrations of estimation models. The researchers developed the following three methodologies:
        - aggregate
        - disaggregate at the county level
        - disaggregate at the roadway level

A complete description of the differences between these approaches is presented in the next section. Also, the results for each method are presented in a comparative way in section 3. It is important to highlight that each methodology was developed as a model in Microsoft Excel software, facilitating its testing and replication.

- Propose a methodology to estimate the cost of unreliability
    - Evaluate information and data sources about travel time reliability: the research team evaluated different methods to calculate the cost of unreliability and explored which one could work better with the methods developed in this study to calculate the cost associated with delays and fuel according to available data sources. The results of this task are presented in section 4.
- Analyze the spatial implication of congestion costs
    - Map congestion costs per county: using the estimates of congestion costs the research team created maps of congestion costs by county analyzing historic, spatial, and functional patterns. The results of this task are presented in section 3.

In addition, the research team included a final section with suggestions for future work regarding the estimation of other social losses related to traffic congestion.

References

Florida Department of Transportation (2007). *2006 Florida Highway Data Source Book.* Available at http://www.dot.state.fl.us/planning/statistics/sourcebook/

Federal Highway Administration (2005). *Traffic Congestion and Reliability: Trends and Advanced Strategies for Congestion Mitigation.* Prepared by Cambridge Systematics Inc with Texas Transportation Institute. Available at http://ops.fhwa.dot.gov/congestion_report/congestion_report_05.pdf

HDR (2008) *Moving at the Speed of Congestion – The True Costs of Traffic in the Chicago Metropolitan Area.* Prepared by HDR Decision Economics for the Metropolitan Planning Council. August 2008. Available at: http://www.metroplanning.org/articleDetail.asp?objectID=4484

TTI (2009). *The 2009 Urban Mobility Report.* Texas Transportation Institute. Available at http://tti.tamu.edu/documents/mobility_report_2009_wappx.pdf

TTI (2007). *The 2007 Urban Mobility Report.* Texas Transportation Institute. September 2007. Available at http://tti.tamu.edu/documents/mobility_report_2007_wappx.pdf

Section 2 Methodology

The study uses GIS historical roadway and traffic data to estimate speeds, travel delay, and cost of congestion in freeways and major arterials for every county in Florida. The data was provided by FDOT Transportation Statistics Office from the Roadway Characteristics Inventory extracts for the years 2003 to 2008. The Roadway Characteristics Inventory[9] is the largest data base about traffic in Florida and contains information related to roads "that are maintained by or are of special interest to the Department (of Transportation in Florida)" (FDOT, 2009: 3). In particular the study uses the following variables per road section:

RDWYID:	Roadway ID of Exception Within a County
BEGPT:	Beginning Point
ENDPT:	Ending Point
RDWYSIDE:	Roadway Side
FUNCLASS:	Federal Functional Classification, 2 Digit Code
NOLANES:	Number of Through Roadway Lanes
SECTADT:	Section AADT
AVGDFACT:	Directional Distribution Factor
AVGTFACT:	Truck Percentage

The research expands and adapts Texas Transportation Institute's (TTI) method to all urban and rural areas, including state and local information when possible, analyzing the spatial implications of congestion, and proposing a method to calculate the costs of congestion due to unreliability. In addition, more disaggregated estimation methods are employed to calculate congestion metrics and costs to the level of road section providing more accuracy and detail.

This was accomplished through the development of three sets of methodologies. The first methodology, **aggregate**, expands but doesn't modify TTI's method to rural and minor urban areas for every county in Florida. This methodology mirrors TTI's process aggregating vehicle miles traveled (VMT) per county to estimate congestion metrics (roadway congestion index

[9] For more information about the dataset see: FDOT (2009) *Transportation Statistics RCI Office Handbook* available at http://www.dot.state.fl.us/planning/statistics/rci/

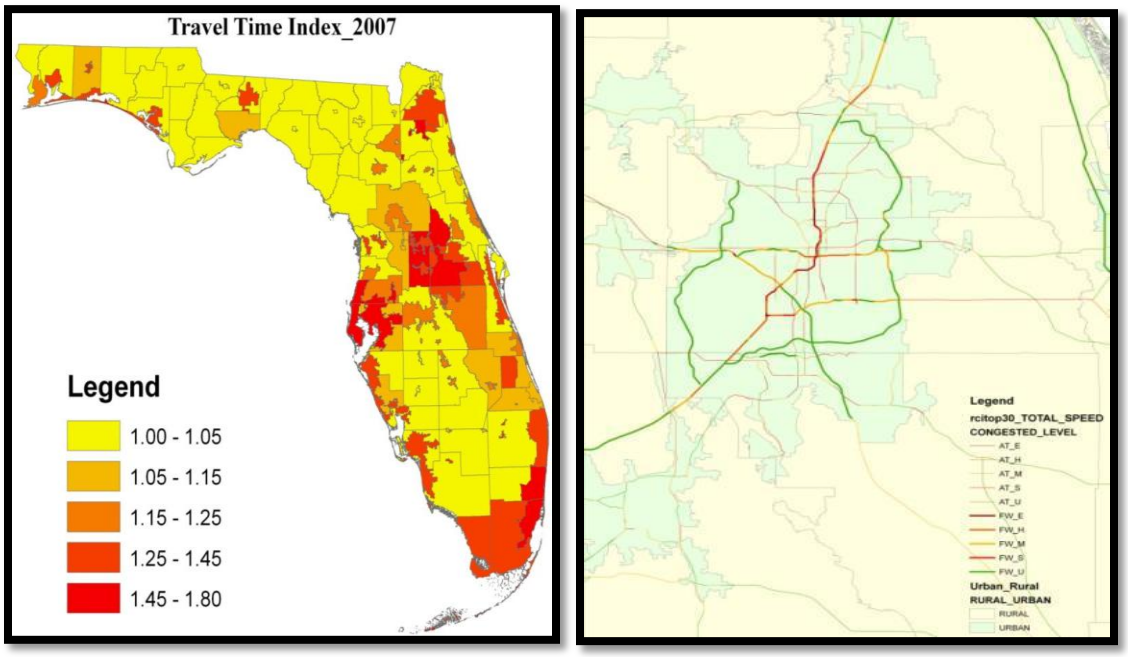
[RCI], percent of daily travel in congested conditions [PDTCC], speed, delay, and cost) aggregated per county. The second methodology, **disaggregate county** level, uses aggregated RCI and PDTCC per county and calculates a disaggregated speed, travel time, travel delay, travel time index, and congestion cost per each section of road within the county. In addition, national constants, such as vehicle occupancy, are replaced with local data. The third methodology, **disaggregate roadway** level, uses disaggregated data per section of road for the entire state (not aggregating by county) throughout the model to calculate RCI, PDTCC, and the remaining traffic indexes.

Travel Indexes	Aggregate	Disaggregate County	Disaggregate Roadway
RCI	Aggregate County	Aggregate County	Disaggregate Roadway
PDTCC	Aggregate County	Aggregate County	Disaggregate Roadway
Speed	Aggregate County	Disaggregate County	Disaggregate Roadway
Travel Time	Aggregate County	Disaggregate County	Disaggregate Roadway
Travel Delay	Aggregate County	Disaggregate County	Disaggregate Roadway
Travel Time Index	Aggregate County	Disaggregate County	Disaggregate Roadway
Congestion Cost	Aggregate County	Disaggregate County	Disaggregate Roadway

Note: Aggregate refers to calculations performed by county, disaggregate county refers to calculations performed by section of road within a county, and disaggregate roadway refers to calculations performed by section of road within the state.

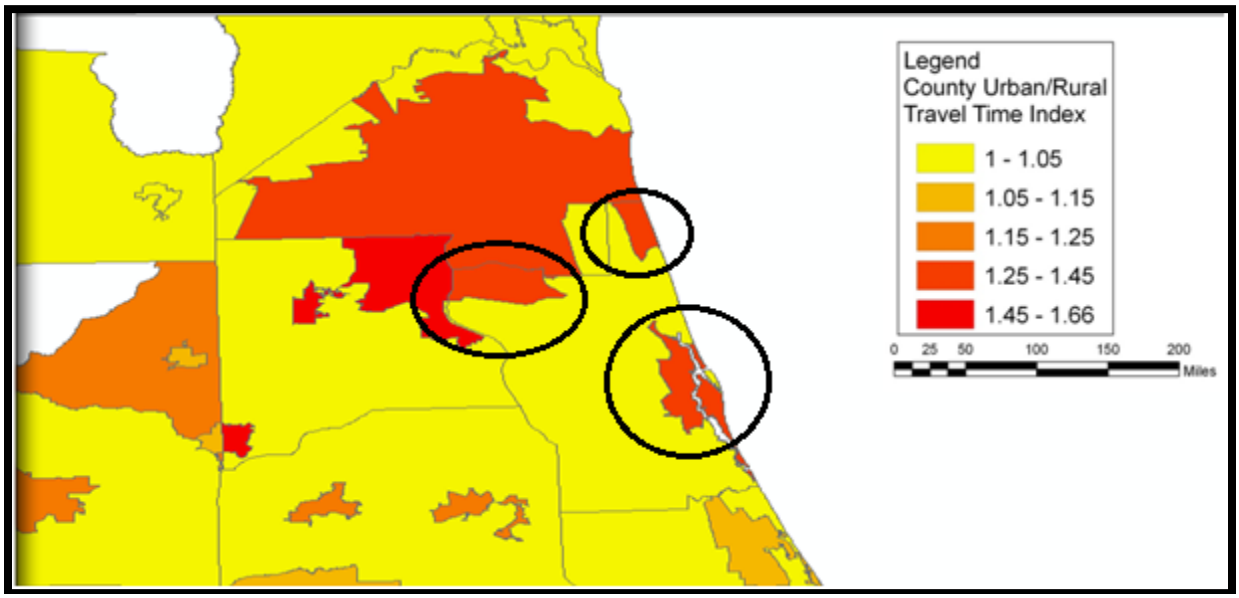
The main difference between aggregate (county level) and disaggregate (down to the road section) is represented visually in Figure 1.

Figure 1: Aggregate vs. Disaggregate Map



Although aggregation is the method proposed by Texas Transportation Institute (TTI) the study has found that aggregation could overestimate the severity of traffic congestion for certain counties. Take for example St. Johns County. The screenshot below shows that St. Johns has three urban areas. If TTI's method of aggregation is applied, only one set of results is calculated for the three urban areas. Aggregation overestimates the severity of congestion because the urban area neighboring Jacksonville is more congested than the other two urban areas in St. Johns County. Overall, aggregation punishes urban areas that lie adjacent to larger urban areas in the same county. Therefore, the study suggests that disaggregation is a superior method because it is more precise, captures traffic conditions down to each road section, and allows for more detail-oriented maps.

Figure 2: Snapshot of Northeast Florida

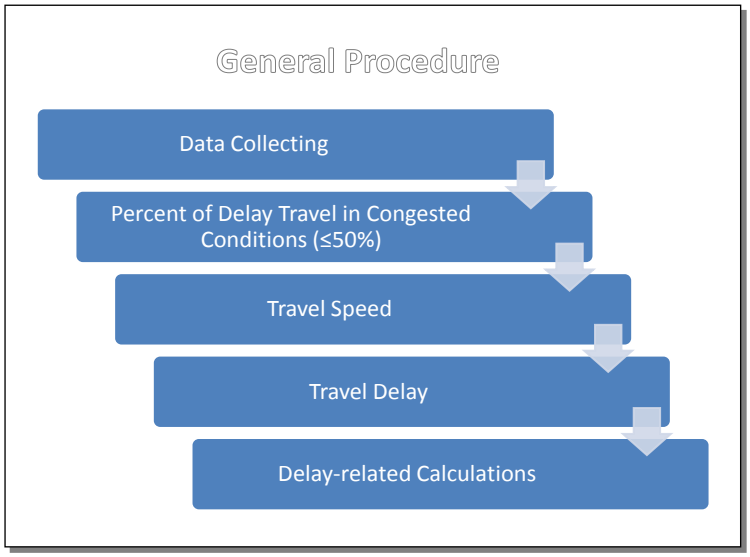


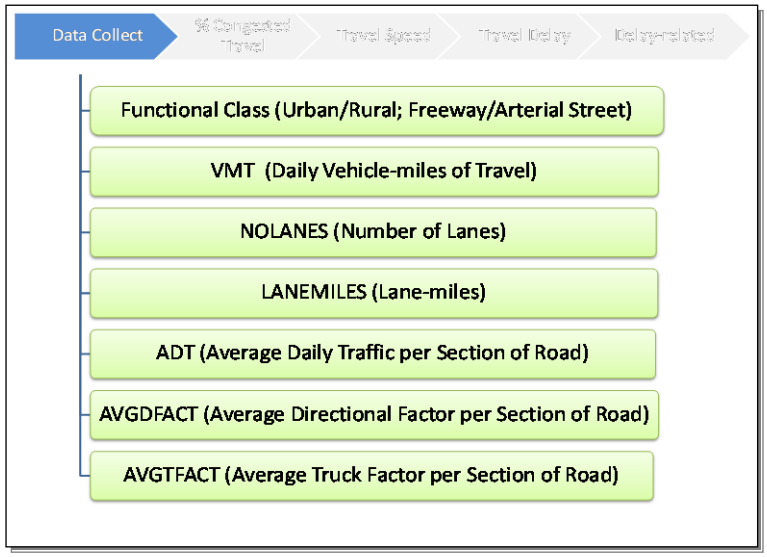
The travel time index is a ratio of travel time in the peak period to the travel time at free-flow conditions. A value of 1.35 indicates a 20 minute free-flow trip takes 27 minutes in the peak.

In addition, the study proposes two different methods of disaggregation: per county and per roadway. In disaggregate county, the results are estimated starting with an estimation of roadway congestion index (RCI) and percentage of daily travel in congested conditions (PDTCC) for the county. Since these metrics are used constantly throughout the model, the results, although disaggregated to the roadway section level, correspond to the county (i.e. there is no other possible way to aggregate/present the results). In disaggregate roadway, the results correspond only to the roadway section regardless of the county; therefore different ways of presenting the final results can be developed such as per road, per neighborhood, per urban area, per district, per region, per state, etc. It is important to highlight, once again, that each methodology was developed as a model in Microsoft Excel software facilitating its testing and replication.

The rest of this section provides step by step procedures on how to calculate aggregate, disaggregate county, and disaggregate roadway.

2.1 Aggregate





1. Filter GIS Data into Excel. COUNTY CODE and ROADWAY CODE is determined from ROADWAY column, RURAL/URBAN from FUNCLASS column, and SECTION CODE created by the research team based on ROADWAY ID.

   Roadway Metadata:
   8-character ID, the first two characters are the county code, the next 6 are the roadway code.

   Functional Class Metadata:
   01 - Principal Arterial-Interstate RURAL => Rural Freeway
   02 - Principal Arterial-Other RURAL => Rural Arterial
   11 - Principal Arterial-Interstate URBAN => Urban Freeway
   12 - Principal Arterial-Freeways and Expressways URBAN => Urban Freeway
   14 - Other Principal Arterial URBAN => Urban Arterial

   Note: We're only using functional classes 01, 02, 11, 12, and 14 because our focus is on major roads.

   Filter the following columns from GIS data:
   - ✓ COUNTY CODE (from ROADWAY column)
   - ✓ ROADWAY CODE (from ROADWAY column)
   - ✓ RURAL/URBAN (from FUNCLASS column)
   - ✓ SECTION CODE (from OBJECTID column)
   - ✓ DVMT
   - ✓ NOLANES (sum NOLANES_R and NOLANES_L)
   - ✓ LANEMILES

- ✓ SECTADT (Avg. Daily Traffic per Sec. of Road)
- ✓ AVGDFACT
- ✓ AVGTFACT

-Exclude all cases without ADT, VMT, Lane Miles, and Directional Factors of Zero.

2. Calculate Roadway Congestion Index (RCI) and Percent of Daily Travel in Congested Conditions (PDTCC). (See next page)

1) Sum to get total Freeway (FW) VMT
2) Sum to get total Arterial Street (AT) VMT
3) Sum to get total Freeway Lane-Miles
4) Sum to get total Arterial Street Lane-Miles
5) Use Eq.A-1 to get RCI

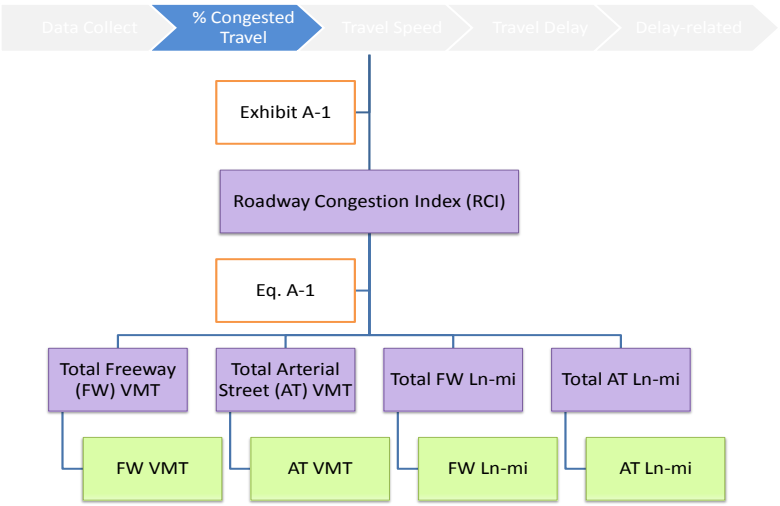
Roadway Congestion Index $= \frac{Freeway\ VMT\ per\ Ln.Mi. * Freeway\ VMT + Prin\ Art\ Str\ VMT\ per\ Ln.Mi. * Prin\ Art\ Str\ VMT}{14{,}000 * Freeway\ VMT + 5{,}000 * Prin\ Art\ Str\ VMT}$ (Eq. A-1)

6) RCI acts as an indicator of the number of hours of the day that might be affected by congested conditions (a higher RCI value means more traffic during more hours of the day). Use result from Step 2.5 and Exhibit A-1 to get PDTCC.

Exhibit A-1. Percent of Daily Travel in Congested Conditions

Roadway Congestion Index	PDTCC Estimation Equation
$0 < RCI < 0.75$	$0.333 \times RCI$
$0.75 \leq RCI < 0.9$	$0.667 \times RCI - 0.25$
$0.9 \leq RCI < 1.1$	$0.5 \times RCI - 0.1$
$1.1 \leq RCI < 1.4$	$0.167 \times RCI + 0.267$
$1.4 \leq RCI < 1.6$	0.5

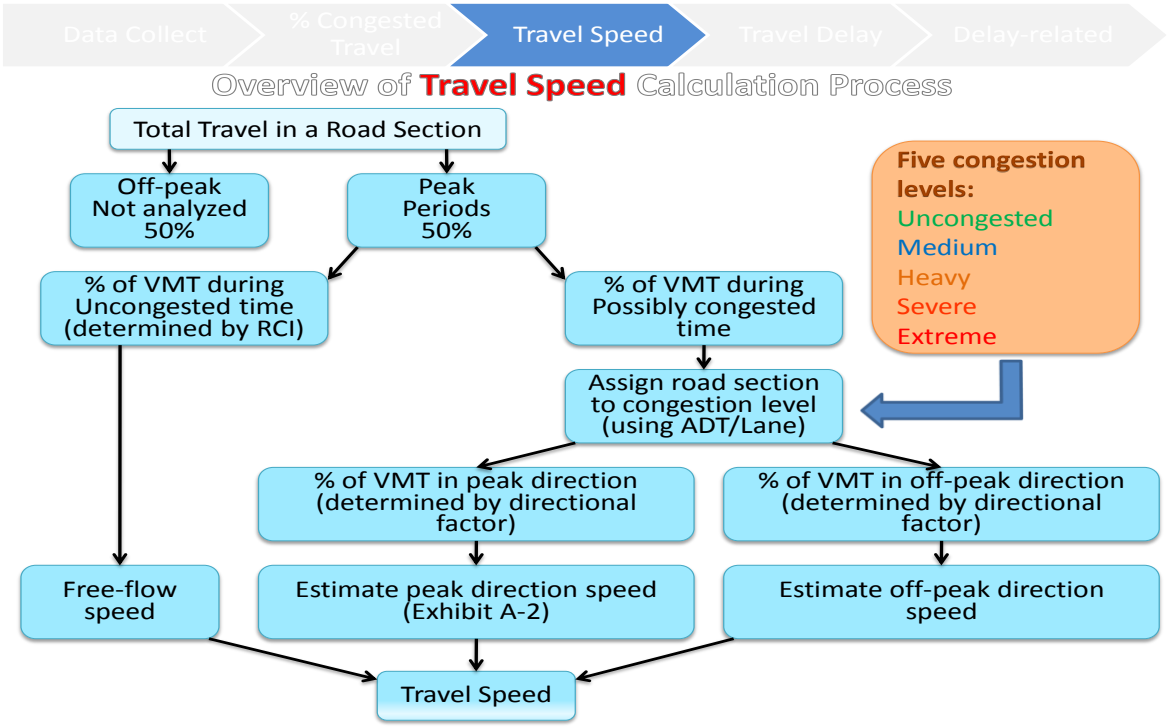
Source: TTI (2009)



Template: RCI and PDTCC

Urban Area	Roadway Congestion Index	% of Daily Traveled in Congested Conditions	Rural Area	Roadway Congestion Index	% of Daily Traveled in Congested Conditions

Steps 3 - 7 Travel Speed Calculations



3. Assign congestion level to each section of road by aligning Daily Traffic Volume per Lane (VMT/Ln-Mi) to its corresponding range using Exhibit A-2. (See diagram below)

   10 Congestion Levels – Uncongested FW, Medium FW, Heavy FW, Severe FW, Extreme FW; Uncongested AT, Medium AT, Heavy AT, Severe AT, Extreme AT.

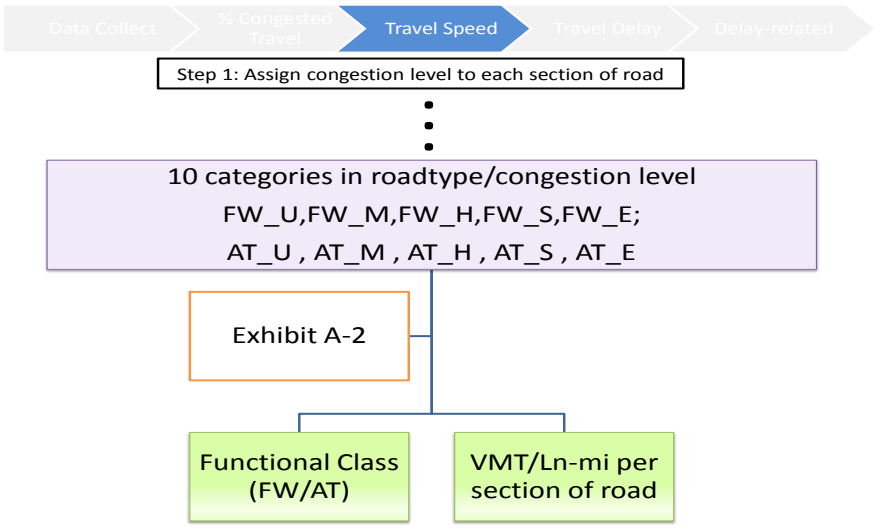


Exhibit A-2. Daily Traffic Volume per Lane and Speed Estimating Used in Delay Calculation

Facility and Congestion Level	Daily Traffic Volume per Lane	Speed Estimate Equation[1]	
		Peak Direction	Off-Peak Direction
Freeway			
Uncongested	Under 15,000	60	60
Medium	15,001 - 17,500	70-(0.9* ADT/Lane)	67-(0.6* ADT/Lane)
Heavy	17,501 - 20,000	78-(1.4* ADT/Lane)	71-(0.85* ADT/Lane)
Severe	20,001 - 25,000	96-(2.3* ADT/Lane)	88-(1.7* ADT/Lane)
Extreme	Over 25,000	76-(1.46* ADT/Lane)	85.7-(1.6*ADT/Lane)
		Lowest speed is 35 mph	Lowest Speed is 40 mph
Arterial Street			
Uncongested	Under 5,500	35	35
Medium	5,501 - 7,000	33.58-(0.74* ADT/Lane)	33.82-(0.59* ADT/Lane
Heavy	7,001 - 8,500	33.80-(0.77* ADT/Lane)	33.90-(0.59* ADT/Lane
Severe	8,501 - 10,000	31.65-(0.51* ADT/Lane)	30.10-(0.15* ADT/Lane
Extreme	Over 10,000	32.57-(0.62* ADT/Lane)	31.23-(0.27*ADT/Lane)
		Lowest speed is 20 mph	Lowest Speed is 27 mph

[1]ADT/Lane in thousands

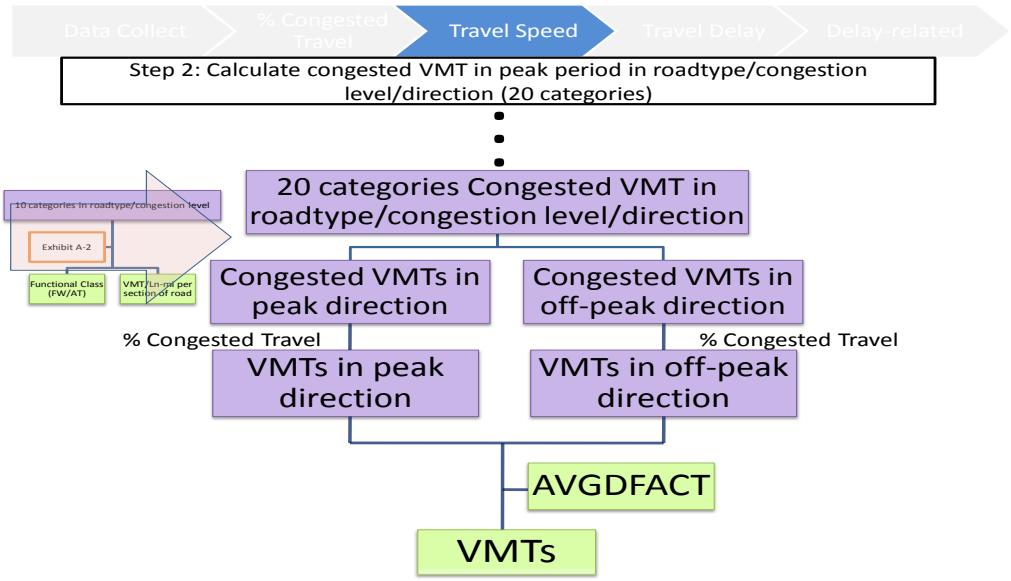
Source: TTI (2009)

4. Calculate Total Congested VMT in Peak Period for Peak and Off-Peak Direction for each congestion level (20 categories). (See next page)

    1) Separate VMT per section of road into Peak Direction and Off-Peak Direction by using Avg. Directional Factor.
    2) Congested VMT in Peak Period is calculated by multiplying each of the results in Step 4.1 by Percent of Daily Travel in Congested Conditions.

       Peak Direction = VMT * Avg. Directional Factor/100 * Percent of Daily Travel in Congested Conditions
       Off-Peak Direction = VMT * Percent of Daily Travel in Congested Conditions – Peak Direction

    3) Assign the results in Step 4.2 to each of the 10 congestion levels (Step 3) along with the Peak and Off-Peak Direction and sum them up. Results in a total of 20 categories.

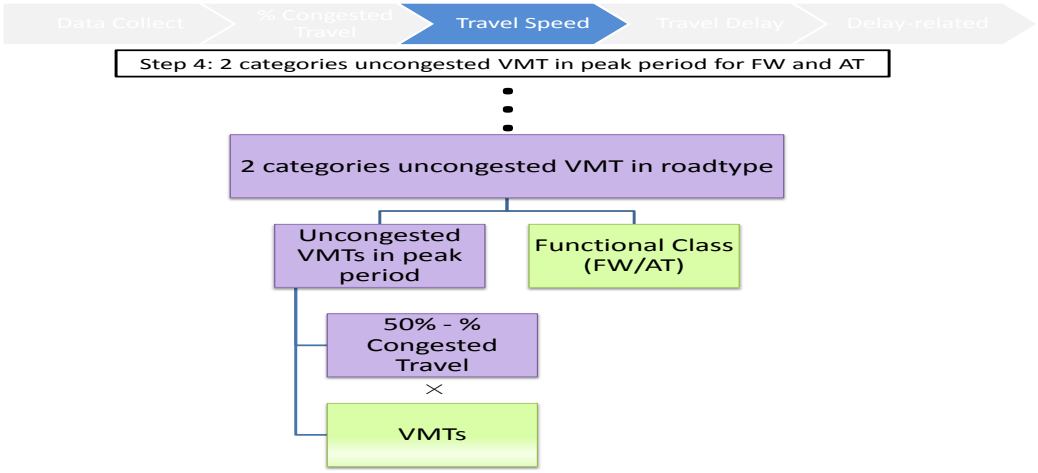


5. Calculate Total Uncongested VMT in Peak Period for Freeway and Arterial Street. (See Diagram Below).

   1) Uncongested VMT in Peak Period is calculated by multiplying each of the results in Step 4.1 by Percent of Daily Uncongested Travel in Peak Period (50% minus Percent of Daily Travel in Congested Conditions)

      Peak Direction = VMT * Avg. Directional Factor/100 * (50%-Percent of Daily Travel in Congested Conditions)
      Off-Peak Direction = VMT * (100%- Avg. Directional Factor/100)* (50%-Percent of Daily Travel in Congested Conditions)

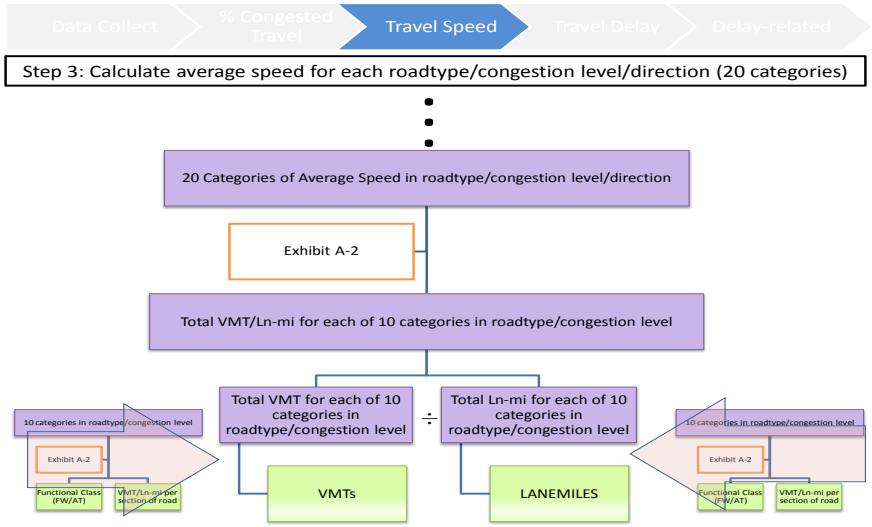
   2) Assign the results in Step 5.1 to either Freeway or Arterial and sum them up.



6. Calculate average speed for each congestion level including Peak and Off-Peak Direction (20 categories). (See diagram below)

    1) Sum up VMT for each of the 10 congestion levels from Step 3.
    2) Daily Traffic Volume per Ln-Mi is calculated by dividing results from Step 4.1 by Total Ln-Mi for each of the 10 congestion levels.
    3) Average Speed for each congestion level including Peak and Off-Peak Direction is calculated by taking the results from Step 4.2 and aligning the results with the Speed Estimate Equations from Exhibit A-2.

    Note: ADT/lane is in thousands; that is, the daily traffic volume per Ln-Mi or ADT/lane is divided by 1000.



7. Calculate Average Speed for Congested Roads. (See next page)

    1) Calculate average speed for both types of roads, Freeway and Arterial.

    Freeway Average Speed = [(∑ Freeway VMT * Average Freeway Speeds) + (FW Uncongested VMT in Peak Period (result from Step 5.2)*60 mph)] / (∑ Freeway VMT + FW Uncongested VMT in Peak Period)

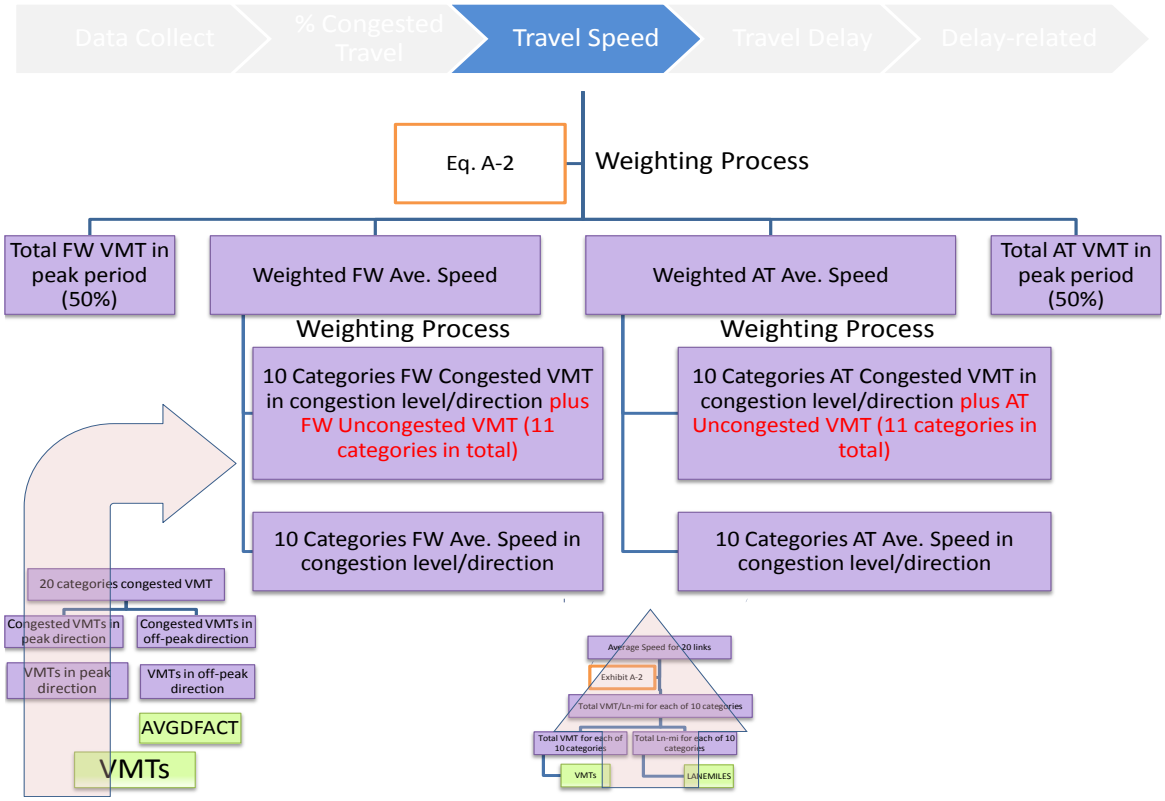
    Arterial Average Speed = [(∑ Arterial VMT * Average Arterial Speeds) + (AT Uncongested VMT in Peak Period (result from Step5.2)*35 mph)]/ (∑ Arterial VMT+ AT Uncongested VMT in Peak Period)

    Note: ∑ means total sum.

2) Average Speed for congested roads is solved using Eq.A-2

$$\text{Average Speed (mph)} = \frac{Average\ Freeway\ Speed*(Freeway\ VMT) + Average\ Arterial\ Street\ Speed*(Arterial\ VMT)}{Freeway\ VMT + Street\ VMT}$$

(Eq. A-2)



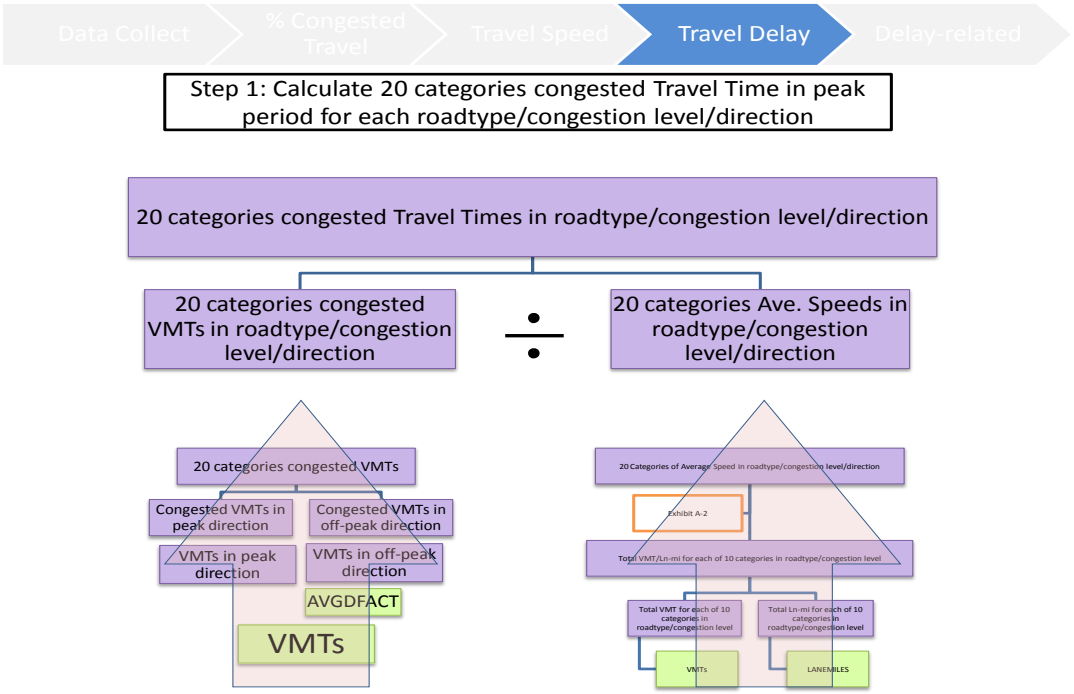
Template: Traffic Speed Estimates

Urban Area	Freeway	Arterial Street	Rural Area	Freeway	Arterial Street

Note: The total amount of travel that is included in the traffic speed estimates is **50 percent** of the average daily vehicle-miles of travel.

Steps 8 – 9 Travel Time Calculations

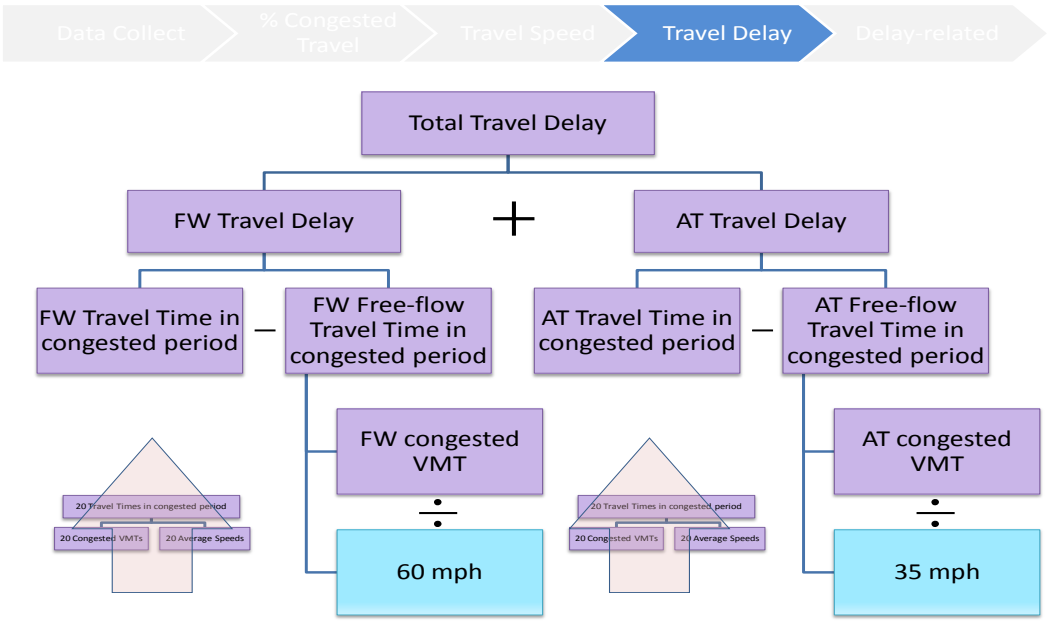
8. Calculate Travel Time in Peak Period for each congestion level including Peak and Off-Peak Direction (20 links) by dividing [∑VMT in Peak Period (results from Step 4.3)] / [Avg. Speed for each congestion level (results from Step 6.3)]. (See diagram below)



9. Calculate Total Travel Delay. (See next page)

1) Sum up results from Step 8 to get Congested Travel Time in Peak Period for Freeway and Arterial Street.
2) Calculate Uncongested Travel Time in Peak Period for FW and AT by dividing [Uncongested ∑VMTs in Peak Period (results in Step 5.2)] / [Free-flow speeds(60 mph for FW;35 mph for AT)]
3) Calculate Free-Flow Congested Travel Time in Peak Period for Freeway and Arterial Street by using ∑VMT in Peak Period for Freeway and Arterial Street divided by Free-Flow Speed (60 mph for Freeway and 35 mph for Arterial Street).
4) Calculate Travel Time Delay for each road type by using results from Step 8 minus results from Step 9.3.
5) Total Travel Time in Peak Period is the sum of Travel Time for each Congestion Level including Peak and Off-Peak Direction (result from Step 8) and Uncongested Travel Time in Peak Period for FW and AT (results from Step 9.2).

6) Total Free Flow Travel Time in Peak Period is the sum of Free-Flow Travel Time in Peak Period for Freeway and Arterial Street (results from Step 9.3) and Uncongested Travel Time in Peak Period for FW and AT (results from Step 9.2).
7) Total Travel Delay is Step 9.5 minus Step 9.6.



Steps 10 – 20 will use the following national constants.

Exhibit A-3. National Constants

Constant	Value
Vehicle Occupancy	1.25 persons per vehicle
Working Days	250 days per year
Percent of Daily Travel in Peak Periods 6 - 10 a.m. 3 -7 p.m.	50 percent
Average Cost of Time ($2007)	$15.47 per person hour[1]
Commercial Vehicle Operating Cost ($2007)	$102.12 per vehicle hour[1,2]
[1] Adjusted annually using the Consumer Price Index.	
[2] Adjusted periodically using indutry cost and logistics data.	

Source: TTI (2009)

Steps 10 – 12 Delay Related Calculations

10. Incident-Related Travel Delay for both Freeway and Arterial Street is solved using Eq.A-3

Daily Incident Vehicle – Hours of Delay = Daily Recurring Vehicle – Hours of Delay * Recurring to Incident Delay Factor Ratio (Eq. A-3)

1) Incident Delay Ratio: FW is 1.6 and AT is 1.1.
2) Freeway Daily Recurring Vehicle – Hours of Delay comes from Step 9.4.
3) Arterial Street Daily Recurring Vehicle – Hours of Delay comes from Step 9.4.

11. Annual Person Delay is solved using Eq.A-4

Annual Persons – Hours of Delay	=	Daily Vehicle-Hours of Incident and Recurring Delay on Freeways and Arterial Streets	*	250 Working Days per Year	*	1.25 Persons per Vehicle

(Eq. A-4)

1) Daily Vehicle –Hours of Incident and Recurring Delay on Freeways and Arterial Street is the sum of the results from Step 9.4, Step 10.2, and Step 10.3.
2) Annual Persons-Hours of Delay is calculated by multiplying 250*1.25 by result from Step 11.1.

12. Travel Time Index is solved using Eq.A-5 or Eq.A-6

$$\text{Travel Time Index} = \frac{Peak\ Travel\ Time}{Free{-}Flow\ Travel\ Time} \quad \text{(Eq. A-5)}$$

$$\text{Travel Time Index} = \frac{Delay\ Time\ +\ Free{-}Flow\ Travel\ Time}{Free{-}Flow\ Travel\ Time} \quad \text{(Eq. A-6)}$$

1) Delay Time is sum of results from Step 9 and Total Travel Delay from Step 9.7.
2) Peak Travel Time is sum of Delay Time and Free-Flow Travel Time.
3) Free-Flow Travel Time comes from the results of Step 9.6.

Steps 13 – 14 Annual Fuel Wasted Calculations

13. Fuel Economy is solved using Eq.A-7

Average Fuel Economy in Congestion = 8.8 + 0.25 (Average Peak Period Speed) (Eq. A-7)

Average Peak Period Congested System Speed comes from the results of Step 7.2.

14. Wasted Fuel is solved using Eq.A-8

Annual Fuel Wasted = Daily Vehicle-Hours of Incident and Recurring Delay on FW and AT (result from Step 11.1) * [Average Peak Period Speed (result from 7.2) ÷ Average Fuel Economy (result from Step 13)] * 250 Working Days per year

(Eq.A-8)

15. Calculate Percent of Commercial Vehicles

1) Calculate Number of Commercial Vehicles Per Road Section by multiplying SectADT by Average Truck Factor/100.
2) Sum up Total Commercial Vehicles (Results from Step 15.1) and ∑SectADT.
3) Percentage of Commercial Vehicles is calculated by dividing ∑Commercial Vehicles by ∑SectADT.

Steps 16 – 20 Congestion Cost

16. Annual Passenger Vehicle Delay Cost is solved using Eq.A-9

Annual Passenger Vehicle Delay Cost = Annual Persons-Hours of Delay (Eq.A-4) * 15.47 (average cost of time per person hour) * (1 – percent of commercial vehicles from Step 15.3).

(Eq.A-9)

17. Annual Fuel Cost is solved using Eq.A-10

Annual Fuel Cost = [Average Speed in Peak Period (Eq.A-2)/Fuel Economy (Eq.A-7)] * Daily Vehicle-Hours of Incident and Recurring Delay on FW and AT (result from Step 11.1) * Fuel Cost ($/gallon) * 250 Working Days per year

(Eq.A-10)

18. Annual Commercial Vehicle Cost is solved using Eq.A-11

Annual Commercial Vehicle Cost = Daily Vehicle-Hours of Incident and Recurring Delay on FW and AT (result from Step 11.1) * Percent of Commercial Vehicles (results from Step 15.3) * 102.12 (commercial vehicle operating cost per vehicle hour) * 250 Working Days per year

(Eq.A-11)

19. Total Congestion Cost is solved using Eq.A-12

Annual Cost Due to Congestion = Annual Passenger Vehicle Delay Cost (Eq.A-9) + Annual Passenger Fuel Cost (Eq.A-10) + Annual Congestion Cost (Eq.A-11)

(Eq.A-12)

20. Percent of Congested Travel is solved using Eq.A-13, Eq.A-14, Eq.A-15

Peak Period Congested Travel = Percent of Congested Peak Period Travel * VMT for Roadway Type

(Eq.A-13)

1) Percent of Congestion Peak Period Travel comes from the results of Step 2.
2) Freeway VMT comes from the results of Step 4.3.
3) Arterial Street VMT comes from the results of Step 4.3.

$$\text{Percent Congested Daily Travel} = \frac{Freeway\ Congested\ Travel\ +\ Arterial\ Congested\ Travel}{Daily\ Travel} \quad \text{(Eq.A-14)}$$

$$\text{Percent Congested Peak Period Travel} = \text{Percent Congested Daily Travel} \div 50\ \text{percent} \quad \text{(Eq.A-15)}$$

4) Use results from Eq.A-13 for Freeway and Arterial Congested Travel.
5) Daily Travel is the sum of Step 20.2 and Step 20.3

Template: Percentage of Congested Travel

Urban Area	Percent of Peak Period Travel that is Congested	Percentage of Daily Travel that is Congested	Rural Area	Percent of Peak Period Travel that is Congested	Percentage of Daily Travel that is Congested

2.2 Disaggregate County

1. Filter GIS Data into Excel. COUNTY CODE and ROADWAY CODE is determined from ROADWAY column, RURAL/URBAN from FUNCLASS column, and SECTION CODE created by the research team based on ROADWAY ID.

   Roadway Metadata:
   8-character ID, the first two characters are the county code, the next 6 are the roadway code.

   Functional Class Metadata:
   01 - Principal Arterial-Interstate RURAL => Rural Freeway
   02 - Principal Arterial-Other RURAL => Rural Arterial
   11 - Principal Arterial-Interstate URBAN => Urban Freeway
   12 - Principal Arterial-Freeways and Expressways URBAN => Urban Freeway
   14 - Other Principal Arterial URBAN => Urban Arterial

   Note: We're only using functional classes 01, 02, 11, 12, and 14 because our focus is on major roads.

   Filter the following columns from GIS data:
   - ✓ COUNTY CODE (from ROADWAY column)
   - ✓ ROADWAY CODE (from ROADWAY column)
   - ✓ RURAL/URBAN (from FUNCLASS column)
   - ✓ SECTION CODE (from OBJECTID column)
   - ✓ DVMT
   - ✓ NOLANES (sum NOLANES_R and NOLANES_L)
   - ✓ LANEMILES
   - ✓ SECTADT (Avg. Daily Traffic per Sec. of Road)
   - ✓ AVGDFACT
   - ✓ AVGTFACT

   -Exclude all cases without ADT, VMT, Lane Miles, and Directional Factors of Zero.

2. Calculate Roadway Congestion Index (RCI) and Percent of Daily Travel in Congested Conditions (PDTCC).

   1) Sum to get total Freeway (FW) VMT
   2) Sum to get total Arterial Street (AT) VMT
   3) Sum to get total Freeway Lane-Miles
   4) Sum to get total Arterial Street Lane-Miles
   5) Use Eq.B-1 to get RCI

Roadway Congestion Index $= \frac{Freeway\ VMT\ per\ Ln.Mi. * Freeway\ VMT + Prin\ Art\ Str\ VMT\ per\ Ln.Mi. * Prin\ Art\ Str\ VMT}{14{,}000 * Freeway\ VMT + 5{,}000 * Prin\ Art\ Str\ VMT}$ (Eq. B-1)

6) RCI acts as an indicator of the number of hours of the day that might be affected by congested conditions (a higher RCI value means more traffic during more hours of the day). Use result from Step 2.5 and Exhibit B-1 to get PDTCC.

Exhibit B-1. Percent of Daily Travel in Congested Conditions

Roadway Congestion Index	PDTCC Estimation Equation
$0 < RCI < 0.75$	$0.333 \times RCI$
$0.75 \leq RCI < 0.9$	$0.667 \times RCI - 0.25$
$0.9 \leq RCI < 1.1$	$0.5 \times RCI - 0.1$
$1.1 \leq RCI < 1.4$	$0.167 \times RCI + 0.267$
$1.4 \leq RCI$	0.5

Source: TTI (2009)

Template: RCI and PDTCC

Urban Area	Roadway Congestion Index	% of Daily Traveled in Congested Conditions	Rural Area	Roadway Congestion Index	% of Daily Traveled in Congested Conditions

Steps 3 - 6 Travel Speed Calculations

3. For each road section, calculate Congested VMT in Peak Period for Peak and Off-Peak Direction and separate results by roadway type.

   1) Classify roadway type into two categories - Freeway (FW) and Arterial (AT), by using Functional Class Code.

      Urban area models: FW – 11, 12; AT – 14;
      Rural area models: FW – 01; AT – 02.

2) Separate VMT per section of road into Peak Direction and Off-Peak Direction by using Avg. Directional Factor.
3) Congested VMT in Peak Period is calculated by multiplying each of the results in Step 3.2 by Percent of Daily Travel in Congested Conditions.

   Peak Direction = (VMT * Avg. Directional Factor/100) * Percent of Daily Travel in Congested Conditions

   Off-Peak Direction = VMT * Percent of Daily Travel in Congested Conditions – Peak Direction

4) Separate results from Step 3.3 by roadway type in Step 3.1.

4. For each road section, calculate Uncongested VMT in Peak Period for Peak and Off-Peak Direction and separate results by roadway type.

   1) Uncongested VMT in Peak Period is calculated by multiplying each of the results in Step 3.2 by Percent of Daily Uncongested Travel in Peak Period (50% minus Percent of Daily Travel in Congested Conditions)

      Peak Direction = (VMT * Avg. Directional Factor/100) * (50%-Percent of Daily Travel in Congested Conditions)
      Off-Peak Direction = VMT * (100%- Avg. Directional Factor/100)* (50%-Percent of Daily Travel in Congested Conditions)

   2) Separate results from Step 4.1 by roadway type in Step 3.1.

5. For each road section, calculate speed in congested condition for Peak and Off-Peak Direction and separate results by roadway type.

   1) Daily Traffic Volume per Ln-Mi is calculated by dividing each road section VMT by corresponding Ln-Mi.
   2) Average Speed for Peak and Off-Peak Direction is calculated by taking the results from Step 5.1 and aligning the results with the Speed Estimate Equations from Exhibit B-2.

Exhibit B-2. Daily Traffic Volume per Lane and Speed Estimating Used in Delay Calculation

Facility and Congestion Level	Daily Traffic Volume per Lane	Speed Estimate Equation[1] Peak Direction	Off-Peak Direction
Freeway			
Uncongested	Under 15,000	60	60
Medium	15,001 - 17,500	70-(0.9* ADT/Lane)	67-(0.6* ADT/Lane)
Heavy	17,501 - 20,000	78-(1.4* ADT/Lane)	71-(0.85* ADT/Lane)
Severe	20,001 - 25,000	96-(2.3* ADT/Lane)	88-(1.7* ADT/Lane)
Extreme	Over 25,000	76-(1.46* ADT/Lane)	85.7-(1.6*ADT/Lane)
		Lowest speed is 35 mph	Lowest Speed is 40 mph
Arterial Street			
Uncongested	Under 5,500	35	35
Medium	5,501 - 7,000	33.58-(0.74* ADT/Lane)	33.82-(0.59* ADT/Lane
Heavy	7,001 - 8,500	33.80-(0.77* ADT/Lane)	33.90-(0.59* ADT/Lane
Severe	8,501 - 10,000	31.65-(0.51* ADT/Lane)	30.10-(0.15* ADT/Lane
Extreme	Over 10,000	32.57-(0.62* ADT/Lane)	31.23-(0.27*ADT/Lane)
		Lowest speed is 20 mph	Lowest Speed is 27 mph

[1]ADT/Lane in thousands

Source: TTI (2009)

3) Separate results from Step 5.2 by roadway type in Step 3.1.

6. For each road section, calculate average speed in peak period.

1) Calculate average speed for both types of roads, Freeway and Arterial.

Freeway Average Speed = [(FW Congested VMT in Peak Direction * FW Speed in Peak Direction) + (FW Congested VMT in Off-Peak Direction * FW Speed in Off-Peak Direction) + (FW Uncongested VMT in Peak Period for Peak and Off-Peak direction (result from Step 5.1)*60 mph)] / [FW VMT in Peak Period (include congested and uncongested VMT for peak and off-peak direction)]

(Eq. B-2a)

Arterial Average Speed = [(AT Congested VMT in Peak Direction * AT Speed in Peak Direction) + (AT Congested VMT in Off-Peak Direction * AT Speed in Off-Peak Direction) + (AT Uncongested VMT in Peak Period for Peak and Off-Peak direction (result from Step 5.1)*35 mph)] / [AT VMT in Peak Period (include congested and uncongested VMT for peak and off-peak direction)]

(Eq. B-2b)

Template: Traffic Speed Estimates

Urban Area	Freeway	Arterial Street	Rural Area	Freeway	Arterial Street

Note: The total amount of travel that is included in the traffic speed estimates is **50 percent** of the average daily vehicle-miles of travel.

Steps 7 – 8 Travel Time Calculations

7. For each road section, calculate Peak Period Congested Travel Time for Peak and Off-Peak Direction, and separate results by roadway type.

    1) Calculate Peak Period Congested Travel Time for Peak and Off-Peak Direction.

        Peak Period Congested Travel Time for Peak Direction = [Congested VMT in Peak Direction (results from Step 3.3)] / [Avg. Speed in peak period (results from Step 6.1)]

        Peak Period Congested Travel Time for Off-Peak Direction = [Congested VMT in Off-Peak Direction (results from Step 3.3)] / [Avg. Speed in peak period (results from Step 6.1)]

    2) Separate results from Step 7.1 by roadway type in Step 3.1.

8. For each road section, calculate Travel Delay for Peak and Off-Peak Direction, and separate results by roadway type.
    1) Calculate Peak Period Travel Time in Free Flow Condition for Peak and Off-Peak Direction.

        Peak Period Travel Time in Free Flow Condition for Peak Direction = [Congested VMT in Peak Direction (results from Step 3.3)] / (60 mph)

        Peak Period Travel Time in Free Flow Condition for Off-Peak Direction = [Congested VMT in Off-Peak Direction (results from Step 3.3)] / (35 mph)

    2) Separate results from Step 8.1 by roadway type in Step 3.1
    3) Travel Delay for Peak and Off-Peak Direction by roadway type is calculated by subtracting Peak Period Travel Time in Free Flow Condition (results from Step 8.2) from Peak Period Congested Travel Time (results from Step 7.2)

Steps 9 – 11 will use the following constants.

Exhibit B-3. National Constants

Constant	Value
Working Days	250 days per year
Percent of Daily Travel in Peak Periods 6-10 a.m. and 3-7 p.m.	50 percent

Source: TTI (2009)

Exhibit B-4. Annual Florida Constants

Year	Avg. Cost of Time per Vehicle Hour	Fuel Cost	Commercial Vehicle Operating Cost per Vehicle Hour
2003	13.73	1.53	82.38
2004	14.1	1.99	86.24
2005	14.58	2.34	94.06
2006	15.06	2.66	98.77
2007	15.47	2.98	102.12

Source: TTI (2009)

Vehicle occupancy for Florida's commuters came from data provided by the 2009 National Household Travel Survey (NHTS). To drill down vehicle occupancy to the county level the research team generated a table, using NHTS's Online Analysis Tools, which shows average home-base work vehicle occupancy per metropolitan statistical area (MSA) population range. Then, using data provided by Enterprise Florida, the research team took the population for each of Florida's MSAs and correlated that to its respective MSA population range, thus giving the average home-base work vehicle occupancy.

Exhibit B-5. Vehicle Occupancy (person/vehicle)

COUNTY NAME	VH-OCC	COUNTY NAME	VH-OCC	COUNTY NAME	VH-OCC
Charlotte	1.08	Dixie	1.07	Santa Rosa	1.11
Citrus	1.07	Gilchrist	1.11	Wakulla	1.11
Collier	1.11	Hamilton	1.07	Walton	1.07
Desoto	1.07	Lafayette	1.07	Washington	1.07
Glades	1.07	Levy	1.07	Brevard	1.04
Hardee	1.07	Madison	1.07	Clay	1.1
Hendry	1.07	Marion	1.11	Duval	1.1
Hernando	1.1	Suwannee	1.07	Flagler	1.08
Highlands	1.07	Taylor	1.07	Nassau	1.1
Hillsborough	1.1	Union	1.07	Orange	1.1
Lake	1.1	Bay	1.08	Putnam	1.07
Lee	1.04	Calhoun	1.07	Seminole	1.1
Manatee	1.04	Escambia	1.11	St. Johns	1.1
Pasco	1.1	Franklin	1.07	Volusia	1.11
Pinellas	1.1	Gadsden	1.11	Broward	1.09
Polk	1.04	Gulf	1.07	Miami-Dade	1.09
Sarasota	1.04	Holmes	1.07	Indian River	1.08
Sumter	1.07	Jackson	1.07	Martin	1.11
Alachua	1.11	Jefferson	1.11	Monroe	1.07
Baker	1.1	Leon	1.11	Okeechobee	1.07
Bradford	1.07	Liberty	1.07	Osceola	1.1
Columbia	1.07	Okaloosa	1.08	Palm Beach	1.09
				St. Lucie	1.11

Steps 9 – 11 Delay Related Calculations

9. For each road section, Incident-Related Travel Delay for both Freeway and Arterial Street is solved using Eq.B-3

Daily Incident Vehicle – Hours of Delay = Daily Recurring Vehicle – Hours of Delay * Recurring to Incident Delay Factor Ratio (Eq. B-3)

   1) Incident Delay Ratio: FW is 1.6 and AT is 1.1.
   2) Freeway Daily Recurring Vehicle – Hours of Delay comes from Step 8.3
   3) Arterial Street Daily Recurring Vehicle – Hours of Delay comes from Step 8.3

10. For each road section, Annual Person Delay is solved using Eq.B-4

Annual Persons – Hours of Delay	=	Daily Vehicle-Hours of Incident and Recurring Delay on Freeways and Arterial Streets	*	250 Working Days per Year	*	Vehicle Occupancy

(Eq. B-4)

1) Daily Vehicle –Hours of Incident and Recurring Delay on Freeways and Arterial Street is the sum of the results from Step 8.3, Step 9.2, and Step 9.3
2) Annual Persons-Hours of Delay is calculated by multiplying 250*Vehicle Occupancy (Exhibition B-5) by result from Step 10.1

11. For each road section, Travel Time Index is solved using Eq.B-5 or Eq.B-6

$$\text{Travel Time Index} = \frac{Peak\ Travel\ Time}{Free{-}Flow\ Travel\ Time} \quad \text{(Eq. B-5)}$$

$$\text{Travel Time Index} = \frac{Delay\ Time\ +\ Free{-}Flow\ Travel\ Time}{Free{-}Flow\ Travel\ Time} \quad \text{(Eq. B-6)}$$

1) Delay Time is results from Step 10.1
2) Peak Travel Time is sum of Delay Time and Free-Flow Travel Time
3) Free-Flow Travel Time comes from the results of Step 8.1

Steps 12 – 13 Annual Fuel Wasted Calculations

12. For each road section, Fuel Economy is solved using Eq.B-7

Average Fuel Economy in Congestion = 8.8 + 0.25 (Average Peak Period Speed) (Eq. B-7)

Average Speed in Peak Period comes from the results of Step 6.1

13. For each road section, Wasted Fuel is solved using Eq.B-8

Annual Fuel Wasted = Daily Vehicle-Hours of Incident and Recurring Delay on FW and AT (result from Step 10.1) * [Average Peak Period Speed (result from 6.1) ÷ Average Fuel Economy (result from Step 12)] * 250 Working Days per year

(Eq.B-8)

Steps 14 – 17 Congestion Cost

14. For each road section, Annual Passenger Vehicle Delay Cost is solved using Eq.B-9

Annual Passenger Vehicle Delay Cost	=	Annual Persons-Hours of Delay (Eq.B-4)	*	Yearly Average cost of time per person hour (Exhibition B-4)	*	(1 – percent of commercial vehicles)

(Eq.B-9)

15. For each road section, Annual Fuel Cost is solved using Eq.B-10

Annual Fuel Cost = [Average Speed in Peak Period (Eq.B-2)/Fuel Economy (Eq.B-7)] * Daily Vehicle-Hours of Incident and Recurring Delay on FW and AT (result from Step 10.1) * Yearly Fuel Cost (Exhibition B-4) * 250 Working Days per year

(Eq.B-10)

16. For each road section, Annual Commercial Vehicle Cost is solved using Eq.B-11

Annual Commercial Vehicle Cost = Daily Vehicle-Hours of Incident and Recurring Delay on FW and AT (result from Step 10.1) * Percent of Commercial Vehicles * Yearly Commercial Vehicle Operating Cost per Vehicle Hour (Exhibition B-4) * 250 Working Days per year

(Eq.B-11)

17. For each road section, Total Congestion Cost is solved using Eq.B-12

Annual Cost Due to Congestion	=	Annual Passenger Vehicle Delay Cost (Eq.B-9)	+	Annual Passenger Fuel Cost (Eq.B-10)	+	Annual Commercial Vehicle Cost (Eq.B-11)

(Eq.B-12)

18. Percent of Congested Travel is solved using Eq.B-13, Eq.B-14, Eq.B-15

1) For each road section

Peak Period Congested Travel	=	Percent of Congested Peak Period Travel	*	VMT for Roadway Type

(Eq.B-13)

2) Percent of Congestion Peak Period Travel comes from the results of Step 2.

$$\text{Percent Congested Daily Travel} = \frac{Freeway\ Congested\ Travel\ +\ Arterial\ Congested\ Travel}{Daily\ Travel} \quad \text{(Eq.B-14)}$$

$$\text{Percent Congested Peak Period Travel} = \text{Percent Congested Daily Travel} \div 50\ \text{percent} \quad \text{(Eq.B-15)}$$

3) Use results from Eq.B-13 for Freeway and Arterial Congested Travel

Report (Aggregate previous results at county level for urban/rural areas)

- ✓ **Weighted Average Speed in Peak Period** is aggregated by weighting road section average speed in peak period (results from Step 3.4) by corresponding road section VMT
- ✓ **Freeway Weighted Average Speed in Peak Period** is aggregated by weighting Freeway road section average speed in peak period (results from Step 3.4) by corresponding road section VMT
- ✓ **Arterial Weighted Average Speed in Peak Period** is aggregated by weighting Arterial road section average speed in peak period (results from Step 3.4) by corresponding road section VMT
- ✓ **Total Travel Delay (Recurring)** is calculated by summing results from Step 8.3
- ✓ **Weighted Average Travel Time Index** is calculated by weighting road section Travel Time Index (results from Step 11) by corresponding road section VMT
- ✓ **Total Annual Passenger Vehicle Delay Cost** is calculated by summing results from Step 14
- ✓ **Total Annual Fuel Cost** is calculated by summing results from Step 15
- ✓ **Total Annual Commercial Vehicle Cost** is calculated by summing results from Step 16
- ✓ **Total Congestion Cost** is calculated by summing results from Step 17

2.3 Disaggregate Roadway

1. Filter GIS Data into Excel for entire state. COUNTY CODE and ROADWAY CODE is determined from ROADWAY column, RURAL/URBAN from FUNCLASS column, and SECTION CODE created by the research team based on ROADWAY ID.

   Roadway Metadata:
   8-character ID, the first two characters are the county code, the next 6 are the roadway code.

   Functional Class Metadata:
   01 - Principal Arterial-Interstate RURAL => Rural Freeway
   02 - Principal Arterial-Other RURAL => Rural Arterial
   11 - Principal Arterial-Interstate URBAN => Urban Freeway
   12 - Principal Arterial-Freeways and Expressways URBAN => Urban Freeway
   14 - Other Principal Arterial URBAN => Urban Arterial

   Note: We're only using functional classes 01, 02, 11, 12, and 14 because our focus is on major roads.

   Filter the following columns from GIS data:
   - ✓ COUNTY CODE (from ROADWAY column)
   - ✓ ROADWAY CODE (from ROADWAY column)
   - ✓ RURAL/URBAN (from FUNCLASS column)
   - ✓ SECTION CODE (from OBJECTID column)
   - ✓ DVMT
   - ✓ NOLANES (sum NOLANES_R and NOLANES_L)
   - ✓ LANEMILES
   - ✓ SECTADT (Avg. Daily Traffic per Sec. of Road)
   - ✓ AVGDFACT
   - ✓ AVGTFACT

-Exclude all cases without ADT, VMT, Lane Miles, and Directional Factors of Zero.

2. For each road section, calculate Roadway Congestion Index (RCI) and Percent of Daily Travel in Congested Conditions (PDTCC).

   1) Calculate Roadway Congestion Index (RCI)

      Freeway RCI = Road section VMT /14,000 (Eq. C-1a)

      Arterial RCI = Road section VMT / 5,000 (Eq. C-1b)

2) RCI acts as an indicator of the number of hours of the day that might be affected by congested conditions (a higher RCI value means more traffic during more hours of the day). Use result from Step 2.5 and Exhibit C-1 to get PDTCC.

Exhibit C-1. Percent of Daily Travel in Congested Conditions

Roadway Congestion Index	PDTCC Estimation Equation
$0 < RCI < 0.75$	$0.333 \times RCI$
$0.75 \leq RCI < 0.9$	$0.667 \times RCI - 0.25$
$0.9 \leq RCI < 1.1$	$0.5 \times RCI - 0.1$
$1.1 \leq RCI < 1.4$	$0.167 \times RCI + 0.267$
$1.4 \leq RCI$	0.5

Source: TTI (2009)

Steps 3 - 6 Travel Speed Calculations

3. For each road section, calculate Congested VMT in Peak Period for Peak and Off-Peak Direction and separate results by roadway type.

   1) Classify roadway type into two categories - Freeway (FW) and Arterial (AT), by using Functional Class Code.

      Urban area models: FW – 11, 12; AT – 14;
      Rural area models: FW – 01; AT – 02.

   2) Separate VMT per section of road into Peak Direction and Off-Peak Direction by using Avg. Directional Factor.
   3) Congested VMT in Peak Period is calculated by multiplying each of the results in Step 3.2 by Percent of Daily Travel in Congested Conditions.

      Peak Direction = (VMT * Avg. Directional Factor/100) * Percent of Daily Travel in Congested Conditions
      Off-Peak Direction = VMT * Percent of Daily Travel in Congested Conditions – Peak Direction
   4) Separate results from Step 3.3 by roadway type in Step 3.1.

4. For each road section, calculate Uncongested VMT in Peak Period for Peak and Off-Peak Direction and separate results by roadway type.

    1) Uncongested VMT in Peak Period is calculated by multiplying each of the results in Step 3.2 by Percent of Daily Uncongested Travel in Peak Period (50% minus Percent of Daily Travel in Congested Conditions)

    Peak Direction = (VMT * Avg. Directional Factor/100) * (50%-Percent of Daily Travel in Congested Conditions)
    Off-Peak Direction = VMT * (100%- Avg. Directional Factor/100)* (50%-Percent of Daily Travel in Congested Conditions)

    2) Separate results from Step 4.1 by roadway type in Step 3.1.

5. For each road section, calculate speed in congested condition for Peak and Off-Peak Direction and separate results by roadway type.

    1) Daily Traffic Volume per Ln-Mi is calculated by dividing each road section VMT by corresponding Ln-Mi.
    2) Average Speed for Peak and Off-Peak Direction is calculated by taking the results from Step 5.1 and aligning the results with the Speed Estimate Equations from Exhibit C-2.

Exhibit C-2. Daily Traffic Volume per Lane and Speed Estimating Used in Delay Calculation

Facility and Congestion Level	Daily Traffic Volume per Lane	Speed Estimate Equation[1] Peak Direction	Off-Peak Direction
Freeway			
Uncongested	Under 15,000	60	60
Medium	15,001 - 17,500	70-(0.9* ADT/Lane)	67-(0.6* ADT/Lane)
Heavy	17,501 - 20,000	78-(1.4* ADT/Lane)	71-(0.85* ADT/Lane)
Severe	20,001 - 25,000	96-(2.3* ADT/Lane)	88-(1.7* ADT/Lane)
Extreme	Over 25,000	76-(1.46* ADT/Lane)	85.7-(1.6*ADT/Lane)
		Lowest speed is 35 mph	Lowest Speed is 40 mph
Arterial Street			
Uncongested	Under 5,500	35	35
Medium	5,501 - 7,000	33.58-(0.74* ADT/Lane)	33.82-(0.59* ADT/Lane
Heavy	7,001 - 8,500	33.80-(0.77* ADT/Lane)	33.90-(0.59* ADT/Lane
Severe	8,501 - 10,000	31.65-(0.51* ADT/Lane)	30.10-(0.15* ADT/Lane
Extreme	Over 10,000	32.57-(0.62* ADT/Lane)	31.23-(0.27*ADT/Lane)
		Lowest speed is 20 mph	Lowest Speed is 27 mph

[1]ADT/Lane in thousands

Source: TTI (2009)

    3) Separate results from Step 5.2 by roadway type in Step 3.1.

6. For each road section, calculate average speed in peak period.

    1) Calculate average speed for both types of roads, Freeway and Arterial.

    Freeway Average Speed = [(FW Congested VMT in Peak Direction * FW Speed in Peak Direction) + (FW Congested VMT in Off-Peak Direction * FW Speed in Off-Peak Direction) + (FW Uncongested VMT in Peak Period for Peak and Off-Peak direction (result from Step 5.1)*60 mph)] / [FW VMT in Peak Period (include congested and uncongested VMT for peak and off-peak direction)]

    (Eq. C-2a)

    Arterial Average Speed = [(AT Congested VMT in Peak Direction * AT Speed in Peak Direction) + (AT Congested VMT in Off-Peak Direction * AT Speed in Off-Peak Direction) + (AT Uncongested VMT in Peak Period for Peak and Off-Peak direction (result from Step 5.1)*35 mph)] / [AT VMT in Peak Period (include congested and uncongested VMT for peak and off-peak direction)]

    (Eq. C-2b)

    Template: Traffic Speed Estimates

Urban Area	Freeway	Arterial Street	Rural Area	Freeway	Arterial Street

    Note: The total amount of travel that is included in the traffic speed estimates is **50 percent** of the average daily vehicle-miles of travel.

Steps 7 – 8 Travel Time Calculations

7. For each road section, calculate Peak Period Congested Travel Time for Peak and Off-Peak Direction, and separate results by roadway type.

    1) Calculate Peak Period Congested Travel Time for Peak and Off-Peak Direction.

    Peak Period Congested Travel Time for Peak Direction = [Congested VMT in Peak Direction (results from Step 3.3)] / [Avg. Speed in peak period (results from Step 6.1)]
    Peak Period Congested Travel Time for Off-Peak Direction = [Congested VMT in Off-Peak Direction (results from Step 3.3)] / [Avg. Speed in peak period (results from Step 6.1)]

    2) Separate results from Step 7.1 by roadway type in Step 3.1.

8. For each road section, calculate Travel Delay for Peak and Off-Peak Direction, and separate results by roadway type.

    1) Calculate Peak Period Travel Time in Free Flow Condition for Peak and Off-Peak Direction.

       Peak Period Travel Time in Free Flow Condition for Peak Direction = [Congested VMT in Peak Direction (results from Step 3.3)] / (60 mph)
       Peak Period Travel Time in Free Flow Condition for Off-Peak Direction = [Congested VMT in Off-Peak Direction (results from Step 3.3)] / (35 mph)

    2) Separate results from Step 8.1 by roadway type in Step 3.1
    3) Travel Delay for Peak and Off-Peak Direction by roadway type is calculated by subtracting Peak Period Travel Time in Free Flow Condition (results from Step 8.2) from Peak Period Congested Travel Time (results from Step 7.2)

Steps 9 – 11 will use the following constants.

Exhibit C-3. National Constants

Constant	Value
Working Days	250 days per year
Percent of Daily Travel in Peak Periods 6 – 10 a.m. 3-7 p.m.	50 percent

Source: TTI (2009)

Exhibit C-4. Annual Florida Constants

Year	Avg. Cost of Time per Vehicle Hour	Fuel Cost	Commercial Vehicle Operating Cost per Vehicle Hour
2003	13.73	1.53	82.38
2004	14.1	1.99	86.24
2005	14.58	2.34	94.06
2006	15.06	2.66	98.77
2007	15.47	2.98	102.12

Source: TTI (2009)

Exhibit C-5. Vehicle Occupancy (person/vehicle)

COUNTY NAME	VH-OCC	COUNTY NAME	VH-OCC	COUNTY NAME	VH-OCC
Charlotte	1.08	Dixie	1.07	Santa Rosa	1.11
Citrus	1.07	Gilchrist	1.11	Wakulla	1.11
Collier	1.11	Hamilton	1.07	Walton	1.07
Desoto	1.07	Lafayette	1.07	Washington	1.07
Glades	1.07	Levy	1.07	Brevard	1.04
Hardee	1.07	Madison	1.07	Clay	1.1
Hendry	1.07	Marion	1.11	Duval	1.1
Hernando	1.1	Suwannee	1.07	Flagler	1.08
Highlands	1.07	Taylor	1.07	Nassau	1.1
Hillsborough	1.1	Union	1.07	Orange	1.1
Lake	1.1	Bay	1.08	Putnam	1.07
Lee	1.04	Calhoun	1.07	Seminole	1.1
Manatee	1.04	Escambia	1.11	St. Johns	1.1
Pasco	1.1	Franklin	1.07	Volusia	1.11
Pinellas	1.1	Gadsden	1.11	Broward	1.09
Polk	1.04	Gulf	1.07	Miami-Dade	1.09
Sarasota	1.04	Holmes	1.07	Indian River	1.08
Sumter	1.07	Jackson	1.07	Martin	1.11
Alachua	1.11	Jefferson	1.11	Monroe	1.07
Baker	1.1	Leon	1.11	Okeechobee	1.07
Bradford	1.07	Liberty	1.07	Osceola	1.1
Columbia	1.07	Okaloosa	1.08	Palm Beach	1.09
				St. Lucie	1.11

Steps 9 – 11 Delay Related Calculations

9. For each road section, Incident-Related Travel Delay for both Freeway and Arterial Street is solved using Eq.C-3

Daily Incident Vehicle – Hours of Delay = Daily Recurring Vehicle – Hours of Delay * Recurring to Incident Delay Factor Ratio (Eq. C-3)

   1) Incident Delay Ratio: FW is 1.6 and AT is 1.1.
   2) Freeway Daily Recurring Vehicle – Hours of Delay comes from Step 8.3
   3) Arterial Street Daily Recurring Vehicle – Hours of Delay comes from Step 8.3

10. For each road section, Annual Person Delay is solved using Eq.C-4

Annual Persons – Hours Of Delay = Daily Vehicle-Hours of Incident and Recurring Delay on Freeways and Arterial Streets * 250 Working Days per Year * Vehicle Occupancy (Eq. C-4)

1) Daily Vehicle –Hours of Incident and Recurring Delay on Freeways and Arterial Street is the sum of the results from Step 8.3, Step 9.2, and Step 9.3
2) Annual Persons-Hours of Delay is calculated by multiplying 250*Vehicle Occupancy (Exhibition C-5) by result from Step 10.1

11. For each road section, Travel Time Index is solved using Eq.C-5 or Eq.C-6

$$\text{Travel Time Index} = \frac{Peak\ Travel\ Time}{Free{-}Flow\ Travel\ Time} \quad \text{(Eq. C-5)}$$

$$\text{Travel Time Index} = \frac{Delay\ Time\ +\ Free{-}Flow\ Travel\ Time}{Free{-}Flow\ Travel\ Time} \quad \text{(Eq. C-6)}$$

1) Delay Time is results from Step 10.1
2) Peak Travel Time is sum of Delay Time and Free-Flow Travel Time
3) Free-Flow Travel Time comes from the results of Step 8.1

Steps 12 – 13 Annual Fuel Wasted Calculations

12. For each road section, Fuel Economy is solved using Eq.C-7

Average Fuel Economy in Congestion = 8.8 + 0.25 (Average Peak Period Speed) (Eq. C-7)

Average Speed in Peak Period comes from the results of Step 6.1

13. For each road section, Wasted Fuel is solved using Eq.C-8

Annual Fuel Wasted = Daily Vehicle-Hours of Incident and Recurring Delay on FW and AT (result from Step 10.1) * [Average Peak Period Speed (result from 6.1) ÷ Average Fuel Economy (result from Step 12)] * 250 Working Days per year

(Eq.C-8)

Steps 14 – 17 Congestion Cost

14. For each road section, Annual Passenger Vehicle Delay Cost is solved using Eq.C-9

Annual Passenger Vehicle Delay Cost	=	Annual Persons-Hours of Delay (Eq.C-4)	*	Yearly Avg. cost of time per person hour (Exhibition C-4)	*	(1 – percent of commercial vehicles)

(Eq.C-9)

15. For each road section, Annual Fuel Cost is solved using Eq.C-10

Annual Fuel Cost = [Average Speed in Peak Period (Eq.C-2)/Fuel Economy (Eq.C-7)] * Daily Vehicle-Hours of Incident and Recurring Delay on FW and AT (result from Step 10.1) * Yearly Fuel Cost (Exhibition C-4) * 250 Working Days per year

(Eq.C-10)

16. For each road section, Annual Commercial Vehicle Cost is solved using Eq.C-11

Annual Commercial Vehicle Cost = Daily Vehicle-Hours of Incident and Recurring Delay on FW and AT (result from Step 10.1) * Percent of Commercial Vehicles * Yearly Commercial Vehicle Operating Cost per Vehicle Hour (Exhibition C-4) * 250 Working Days per year

(Eq.C-11)

17. For each road section, Total Congestion Cost is solved using Eq.C-12

Annual Cost Due to Congestion	=	Annual Passenger Vehicle Delay Cost (Eq.C-9)	+	Annual Passenger Fuel Cost (Eq.C-10)	+	Annual Commercial Vehicle Cost (Eq.C-11)

(Eq.C-12)

18. Percent of Congested Travel is solved using Eq.C-13, Eq.C-14, Eq.C-15

1) For each road section

Peak Period Congested Travel =	Percent of Congested Peak Period Travel	*	VMT for Roadway Type

(Eq.C-13)

2) Percent of Congestion Peak Period Travel comes from the results of Step 2.

$$\text{Percent Congested Daily Travel} = \frac{Freeway\ Congested\ Travel\ +\ Arterial\ Congested\ Travel}{Daily\ Travel}$$

(Eq.C-14)

Percent Congested Peak Period Travel =	Percent Congested Daily Travel	÷	50 percent

(Eq.C-15)

3) Use results from Eq.C-13 for Freeway and Arterial Congested Travel

Report (Aggregate previous results at county level for urban/rural areas)

- ✓ **Weighted Average Roadway Congestion Index** is aggregated by weighting road section RCI (results from Step 2.1) by corresponding VMT
- ✓ **Weighted Average Percent of Daily Travel in Congested Conditions** is aggregated by weighting road section PDTCC (results from Step 2.2) by corresponding VMT
- ✓ **Weighted Average Speed in Peak Period** is aggregated by weighting road section average speed in peak period (results from Step 3.4) by corresponding road section VMT
- ✓ **Freeway Weighted Average Speed in Peak Period** is aggregated by weighting Freeway road section average speed in peak period (results from Step 3.4) by corresponding road section VMT
- ✓ **Arterial Weighted Average Speed in Peak Period** is aggregated by weighting Arterial road section average speed in peak period (results from Step 3.4) by corresponding road section VMT
- ✓ **Total Travel Delay (Recurring)** is calculated by summing results from Step 8.3
- ✓ **Weighted Average Travel Time Index** is calculated by weighting road section Travel Time Index (results from Step 11) by corresponding road section VMT
- ✓ **Total Annual Passenger Vehicle Delay Cost** is calculated by summing results from Step 14
- ✓ **Total Annual Fuel Cost** is calculated by summing results from Step 15
- ✓ **Total Annual Commercial Vehicle Cost** is calculated by summing results from Step 16
- ✓ **Total Congestion Cost** is calculated by summing results from Step 17

References

FDOT (2009) *Transportation Statistics RCI Office Handbook.* Available at http://www.dot.state.fl.us/planning/statistics/rci/

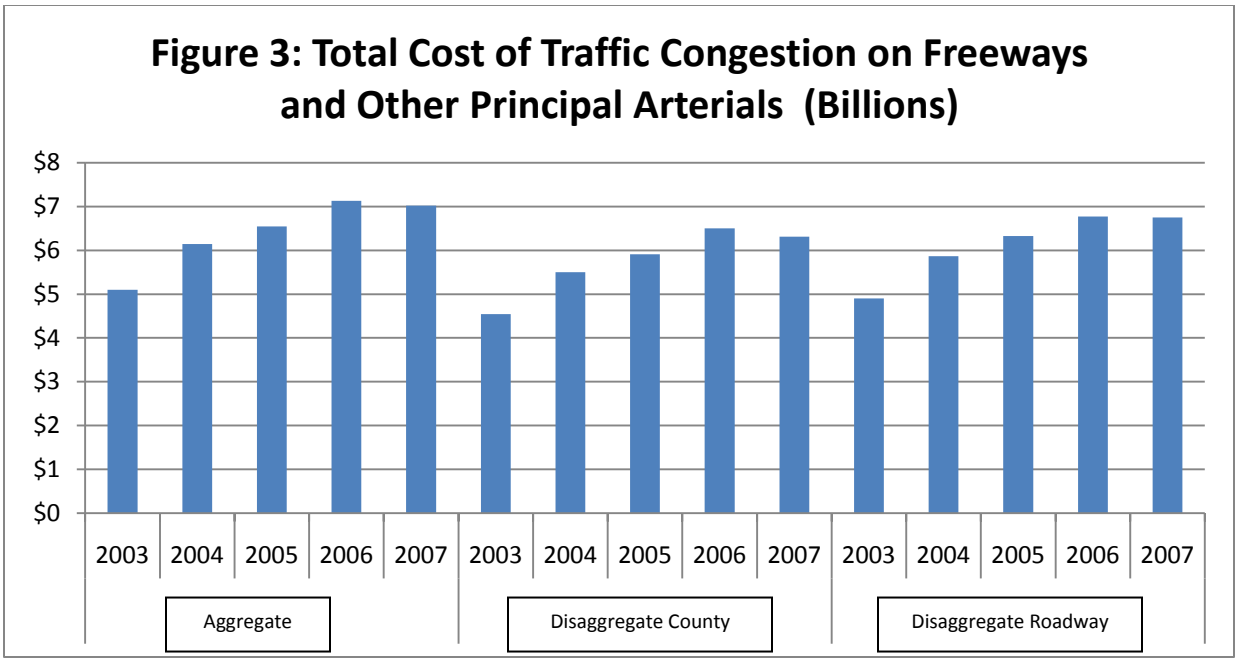
National Household Transportation Survey. Available at http://nhts.ornl.gov/

TTI (2009). *The 2009 Urban Mobility Report.* Texas Transportation Institute. Available at http://tti.tamu.edu/documents/mobility_report_2009_wappx.pdf

Section 3 Results

The American economy and traffic congestion share a direct relationship, as one decreases so does the other. In 2007, due to rising gas prices and job loss, American travelers spent one hour less stuck in traffic than they did the year before and wasted one gallon less gasoline than the year before (TTI, 2009). The differences are small, but they represent a rare break in near-constant growth in traffic over 25 years. The data that has been generated from the models shows that traffic congestion in Florida reflects national traffic patterns. Figure 3 shows that traffic congestion has been consecutively rising every year except 2007. Calculations performed using the aggregate methodology indicated that costs attributable to traffic congestion were $5 billion in 2003, peaked at $7.1 billion in 2006, and lowered slightly to just over $7 billion in 2007. In the second methodology, disaggregate county, traffic congestion cost $4.5 billion in 2003, peaked at $6.5 billion in 2006, and ended at $6.3 billion in 2007. The third methodology, disaggregate roadway, generated slightly higher numbers than disaggregate county but lower than aggregate.

In 2007, the three methodologies priced traffic congestion within the range of $6.3 billion to $7 billion. That same year TTI (2009) estimated the cost of traffic congestion in Florida's seven metropolitan statistical areas (MSAs) at $5.9 billion dollars. These results cannot be directly compared because the method of aggregation by TTI (by MSA) differs from our methods (by county or roadway section), and given the non-linear nature of these methodologies these differences tend to result in substantial variations of results. However, the fact that many of the counties that are not included in TTI's study show higher levels of congestion both in urban and rural areas, suggests that congestion is not only a problem in big metropolitan statistical areas and that small urban and rural areas also add to the cost of traffic congestion.



This section shows the main results of the study through a series of tables, maps, and graphs organized by method (aggregate, disaggregate county, and disaggregate roadway) for the years included in the analysis (2003-2007) in the following way:

1. For each method tables show the results per county differentiated per year and for urban and rural areas for the following congestion metrics:
    a. roadway congestion index (RCI)
    b. percent of daily travel in congested conditions (PDTCC)
    c. travel time index
    d. annual person delay (in hours)
    e. weighted average speed in peak period urban areas for freeways and arterials (in miles/hour)
    f. weighted average speed in peak period rural areas for freeways and arterials (in miles/hour)

g. congestion cost per year according to component: passenger vehicle delay cost, passenger vehicle fuel cost, and commercial vehicle

It is important to note that the results of the third methodology, disaggregate roadway, are presented by county. As explained in the methodology section, this does not have to be the case in the third methodology since all the results are disaggregated to the roadway section. Hence different methods can be used to present the final data: per road, per neighborhood, per urban area, per district, per region, per state, etc. The rationale behind presenting disaggregate roadway's results per county is to allow comparison between the methodologies.

2. Maps of Florida showing counties and urban areas per year for the following:
    a. roadway congestion index (RCI)
    b. percent of daily travel in congested conditions (PDTCC)
    c. travel time index
    d. annual person delay
    e. total congestion cost

    For the third method, disaggregate roadway, the maps are presented by roadway. To facilitate the visualization of the results, maps for Alachua and Miami Dade are included. Maps for the second method, disaggregate county, could also be presented in this way if needed.

3. Speed Diagrams. These graphs represent estimated travel speeds showing weighted average peak period travel speeds in relation to the county size for the years 2003-2007. The county size is set to a scale of small (less than 20,000), medium (20,000 to 200,000), large (200,000 to1 million), and very large (more than 1 million) based on population.

The objective is to analyze correlations between county size, roadway type (freeways or arterials), and rural or urban speeds.

In addition, a concise analysis of the geographic and historic trends is presented highlighting the differences between the three different methods used in this study. Overall, the results can be summarized as follows:

- Congestion increases in every year since 2003 to 2006 decreasing only in 2007 because of the economic recession.
- Congestion exists in both urban and rural areas although, as could be expected, it is higher in the first area than the second.
- Urban congestion is a problem both on freeways and on arterials. Rural congestion is more a problem on arterials than on freeways.
- Congestion in Florida is concentrated in coastal areas and in Central Florida.
- Rural congestion is higher in areas close to big and congested cities especially in South and Central Florida.
- Coastal areas and Central Florida presents more historic volatility of congestion metrics than any other region in Florida.
- Overall, the use of a disaggregated method improves precision and allows a better spatial understanding of congestion.

Section 3.1 Aggregate

3.1.1 Tables

Roadway Congestion Index

COUNTY NAME	2003		2004		2005		2006		2007	
	URBAN	RURAL	URBAN	RURAL	URBAN	RURAL	URBAN	RURAL	URBAN	RURAL
Charlotte	0.75	0.91	1.06	0.71	1.11	0.79	1.07	0.81	1.01	0.76
Citrus	1.03	0.55	1.04	0.69	1.19	0.74	1.12	0.72	1.15	0.72
Collier	1.07	0.35	1.14	0.37	1.12	0.36	1.11	0.37	1.11	0.35
Desoto	0.73	0.60	0.86	0.67	0.70	0.47	0.73	0.48	0.75	0.51
Glades		0.37		0.46		0.42		0.42		0.38
Hardee	0.71	0.44	0.81	0.54	0.76	0.52	0.67	0.50	0.38	0.46
Hendry	0.78	0.64	0.88	0.69	0.87	0.73	0.89	0.75	0.91	0.74
Hernando	1.07	0.63	1.27	0.68	0.95	0.69	0.94	0.71	0.86	0.67
Highlands	1.10	0.55	1.26	0.65	1.22	0.62	1.17	0.61	1.06	0.58
Hillsborough	1.11	0.71	1.19	0.80	1.18	0.79	1.20	0.75	1.24	0.83
Lake	1.33	1.60	1.46	1.75	1.40	1.89	1.36	1.76	1.25	1.77
Lee	1.10	0.66	1.16	0.69	1.33	0.78	1.38	0.80	1.33	0.74
Manatee	0.99	0.62	1.06	0.69	1.11	0.88	1.13	0.65	1.11	0.68
Pasco	1.28	0.84	1.28	0.90	1.25	0.92	1.31	0.94	1.33	0.95
Pinellas	1.52		1.52		1.46		1.41		1.46	
Polk	0.86	1.05	0.85	0.77	0.85	0.82	0.85	0.89	0.87	0.90
Sarasota	1.30	0.87	1.36	0.95	1.44	1.03	1.49	1.08	1.41	1.03
Sumter	0.93	0.73	0.98	0.79	1.01	0.79	0.85	0.79	0.84	0.80
Alachua	0.96	0.65	0.91	0.60	0.98	0.64	0.98	0.67	1.04	0.69
Baker	0.48	0.40	0.60	0.43	0.62	0.44	0.43	0.48	0.47	0.40
Bradford	1.21	1.00	0.79	1.03	0.87	1.13	0.81	1.07	0.78	1.03
Columbia	0.54	0.43	0.56	0.43	0.57	0.44	0.57	0.47	0.55	0.48
Dixie		0.38		0.42		0.43		0.46		0.43
Gilchrist		0.72		0.93		0.87		0.84		0.76
Hamilton		0.37		0.39		0.38		0.41		0.43
Lafayette		0.38		0.38		0.38		0.38		0.38
Levy		0.22		0.23		0.25		0.23		0.22
Madison		0.36		0.33		0.38		0.40		0.38
Marion	0.91	0.69	0.96	0.77	1.00	0.74	0.99	0.78	1.00	0.74
Suwannee		0.38		0.40		0.43		0.43		0.42
Taylor	0.47	0.29	0.52	0.33	0.52	0.33	0.52	0.33	0.51	0.29
Union										
Bay	1.28	0.51	1.23	0.53	1.36	0.53	1.23	0.53	1.43	0.54

Calhoun		0.50		0.46		0.46		0.48		0.48
Escambia	1.01	0.55	1.04	0.53	1.01	0.55	0.99	0.54	0.90	0.55
Franklin		0.27		0.28		0.25		0.25		0.27
Gadsden		0.44		0.43		0.45		0.46		0.46
Gulf		0.53		0.51		0.19		0.19		0.41
Holmes		0.31		0.31		0.32		0.32		0.34
Jackson		0.35	0.37	0.37	0.42	0.38	0.38	0.37	0.38	0.37
Jefferson		0.42		0.44		0.42		0.43		0.48
Leon	1.06	0.52	0.95	0.50	1.01	0.55	1.04	0.58	1.01	0.56
Liberty		0.38		0.40		0.41		0.39		0.41
Okaloosa	1.29	0.50	1.34	0.54	1.33	0.57	1.30	0.56	1.10	0.56
Santa Rosa	1.21	0.61	1.06	0.44	1.11	0.39	1.23	0.46	1.21	0.42
Wakulla		0.53		0.52		0.53		0.57		0.58
Walton	2.01	0.40	1.58	0.43	1.65	0.45	1.66	0.41	1.65	0.40
Washington		0.35		0.36		0.37		0.38		0.39
Brevard	1.05	0.62	1.07	0.63	1.05	0.64	1.11	0.65	1.12	0.62
Clay	1.63	0.61	1.81	0.60	1.82	0.64	1.66	0.61	1.64	0.58
Duval	1.09	0.55	1.12	0.67	1.18	0.67	1.21	0.75	1.14	0.66
Flagler	0.89	0.90	0.93	0.91	0.95	0.92	1.02	0.96	0.72	0.71
Nassau	0.89	0.58	0.99	0.59	1.06	0.59	1.17	0.66	0.99	0.64
Orange	1.14	1.52	1.21	1.69	1.11	1.33	1.11	1.24	1.13	1.26
Putnam	1.15	0.76	1.13	0.69	1.12	0.66	1.08	0.64	1.06	0.63
Seminole	1.17	0.78	1.12	0.81	1.16	0.78	1.17	0.83	1.20	0.83
St. Johns	1.26	0.57	1.44	0.65	1.35	0.62	1.32	0.66	1.34	0.71
Volusia	1.01	0.69	0.99	0.66	1.00	0.75	0.96	0.79	0.92	0.78
Broward	1.38	0.47	1.37	0.41	1.44	0.37	1.44	0.45	1.41	0.44
Miami-Dade	1.41	1.38	1.50	1.65	1.39	1.31	1.44	1.50	1.47	1.30
Indian River	1.12	0.66	1.02	0.71	0.97	0.73	1.09	0.70	1.07	0.75
Martin	0.69	0.71	0.71	0.75	0.76	0.77	0.76	0.83	0.80	0.83
Monroe	1.52	1.50	1.54	1.36	1.56	1.46	1.54	1.62	1.57	1.40
Okeechobee	1.11	0.66	1.12	0.71	1.12	0.76	1.07	0.74	1.04	0.73
Osceola	1.09	0.80	1.20	0.86	1.03	0.88	1.05	0.87	1.08	0.89
Palm Beach	1.30	0.68	1.30	0.63	1.33	0.51	1.33	0.53	1.27	0.48
St. Lucie	0.74	0.99	0.77	1.04	0.79	1.08	0.80	1.18	0.80	1.07
AVERAGE	**1.08**	**0.63**	**1.09**	**0.65**	**1.09**	**0.65**	**1.09**	**0.66**	**1.06**	**0.65**

Percent of Daily Travel in Congested Conditions

COUNTY NAME	2003		2004		2005		2006		2007	
	URBAN	RURAL	URBAN	RURAL	URBAN	RURAL	URBAN	RURAL	URBAN	RURAL
Charlotte	25%	36%	43%	24%	45%	27%	44%	29%	41%	26%
Citrus	42%	18%	42%	23%	47%	24%	45%	24%	46%	24%
Collier	43%	12%	46%	12%	45%	12%	45%	12%	45%	12%
Desoto	24%	20%	33%	22%	23%	16%	24%	16%	25%	17%
Glades		12%		15%		14%		14%		13%
Hardee	24%	15%	29%	18%	26%	17%	22%	17%	13%	15%
Hendry	27%	21%	34%	23%	33%	24%	35%	25%	35%	25%
Hernando	44%	21%	48%	23%	38%	23%	37%	24%	32%	22%
Highlands	45%	18%	48%	22%	47%	21%	46%	20%	43%	19%
Hillsborough	45%	24%	47%	28%	46%	28%	47%	25%	47%	30%
Lake	49%	50%	50%	50%	50%	50%	49%	50%	47%	50%
Lee	45%	22%	46%	23%	49%	27%	50%	28%	49%	25%
Manatee	40%	21%	43%	23%	45%	34%	46%	22%	45%	23%
Pasco	48%	31%	48%	35%	48%	36%	49%	37%	49%	37%
Pinellas	50%		50%		50%		50%		50%	
Polk	32%	42%	31%	27%	31%	30%	32%	34%	33%	35%
Sarasota	48%	33%	49%	38%	50%	42%	50%	44%	50%	41%
Sumter	36%	24%	39%	27%	41%	28%	32%	28%	31%	29%
Alachua	38%	22%	36%	20%	39%	21%	39%	22%	42%	23%
Baker	16%	13%	20%	14%	20%	15%	14%	16%	16%	13%
Bradford	47%	40%	28%	41%	33%	46%	29%	44%	27%	41%
Columbia	18%	14%	19%	14%	19%	15%	19%	16%	18%	16%
Dixie		13%		14%		14%		15%		14%
Gilchrist		24%		37%		33%		31%		26%
Hamilton		12%		13%		13%		14%		14%
Lafayette		13%		13%		13%		13%		13%
Levy		7%		8%		8%		8%		7%
Madison		12%		11%		13%		13%		13%
Marion	35%	23%	38%	26%	40%	25%	40%	27%	40%	25%
Suwannee		13%		13%		14%		14%		14%
Taylor	16%	10%	17%	11%	17%	11%	17%	11%	17%	10%
Union										
Bay	48%	17%	47%	18%	49%	18%	47%	18%	50%	18%

Calhoun		17%		15%		15%		16%		16%
Escambia	40%	18%	42%	18%	41%	18%	40%	18%	35%	18%
Franklin		9%		9%		8%		8%		9%
Gadsden		14%		14%		15%		15%		15%
Gulf		18%		17%		6%		6%		14%
Holmes		10%		10%		11%		11%		11%
Jackson		12%	12%	12%	14%	13%	13%	12%	13%	12%
Jefferson		14%		15%		14%		14%		16%
Leon	43%	17%	38%	17%	40%	18%	42%	19%	40%	19%
Liberty		13%		13%		14%		13%		14%
Okaloosa	48%	17%	49%	18%	49%	19%	48%	19%	45%	19%
Santa Rosa	47%	20%	43%	15%	45%	13%	47%	15%	47%	14%
Wakulla		18%		17%		18%		19%		19%
Walton	50%	13%	50%	14%	50%	15%	50%	14%	50%	13%
Washington		12%		12%		12%		13%		13%
Brevard	43%	20%	43%	21%	43%	21%	45%	21%	45%	21%
Clay	50%	20%	50%	20%	50%	21%	50%	20%	50%	19%
Duval	44%	18%	45%	22%	46%	22%	47%	25%	46%	22%
Flagler	34%	35%	36%	35%	37%	36%	41%	38%	24%	24%
Nassau	34%	19%	40%	20%	43%	20%	46%	22%	39%	21%
Orange	46%	50%	47%	50%	45%	49%	45%	47%	46%	48%
Putnam	46%	26%	46%	23%	45%	22%	44%	21%	43%	21%
Seminole	46%	27%	45%	29%	46%	27%	46%	31%	47%	30%
St. Johns	48%	19%	50%	22%	49%	21%	49%	22%	49%	24%
Volusia	41%	23%	39%	22%	40%	25%	38%	28%	36%	27%
Broward	50%	16%	50%	14%	50%	12%	50%	15%	50%	15%
Miami-Dade	50%	50%	50%	50%	50%	49%	50%	50%	50%	48%
Indian River	45%	22%	41%	24%	39%	24%	45%	23%	43%	25%
Martin	23%	24%	24%	25%	26%	26%	26%	30%	28%	31%
Monroe	50%	50%	50%	49%	50%	50%	50%	50%	50%	50%
Okeechobee	45%	22%	45%	24%	45%	26%	44%	25%	42%	24%
Osceola	44%	29%	47%	32%	42%	34%	43%	33%	44%	34%
Palm Beach	48%	23%	48%	21%	49%	17%	49%	18%	48%	16%
St. Lucie	25%	39%	26%	42%	28%	44%	28%	46%	29%	43%
AVERAGE	**40%**	**22%**	**41%**	**22%**	**41%**	**23%**	**40%**	**23%**	**39%**	**22%**

Travel Time Index

COUNTY NAME	2003		2004		2005		2006		2007	
	URBAN	RURAL	URBAN	RURAL	URBAN	RURAL	URBAN	RURAL	URBAN	RURAL
Charlotte	1.07	1.20	1.31	1.00	1.33	1.00	1.30	1.00	1.27	1.00
Citrus	1.16	1.02	1.18	1.01	1.32	1.09	1.28	1.09	1.27	1.00
Collier	1.27	1.00	1.35	1.00	1.33	1.00	1.36	1.01	1.33	1.01
Desoto	1.01	1.01	1.04	1.03	1.09	1.05	1.02	1.01	1.04	1.05
Glades		1.00		1.00		1.00		1.00		1.00
Hardee	1.03	1.00	1.02	1.00	1.03	1.00	1.02	1.00	1.00	1.00
Hendry	1.04	1.00	1.14	1.00	1.07	1.00	1.08	1.03	1.09	1.00
Hernando	1.11	1.00	1.36	1.03	1.23	1.03	1.25	1.00	1.18	1.00
Highlands	1.21	1.03	1.32	1.08	1.32	1.06	1.25	1.06	1.18	1.00
Hillsborough	1.40	1.03	1.44	1.08	1.45	1.06	1.45	1.06	1.48	1.09
Lake	1.40	1.54	1.46	1.60	1.44	1.65	1.41	1.62	1.33	1.63
Lee	1.31	1.00	1.37	1.00	1.43	1.00	1.45	1.00	1.40	1.00
Manatee	1.20	1.00	1.24	1.00	1.29	1.00	1.29	1.00	1.28	1.03
Pasco	1.37	1.06	1.36	1.06	1.40	1.11	1.44	1.18	1.46	1.17
Pinellas	1.51		1.51		1.50		1.47		1.48	
Polk	1.20	1.05	1.21	1.01	1.19	1.01	1.18	1.01	1.18	1.03
Sarasota	1.39	1.03	1.41	1.05	1.45	1.09	1.48	1.12	1.44	1.09
Sumter	1.11	1.06	1.13	1.08	1.16	1.09	1.09	1.09	1.08	1.09
Alachua	1.20	1.01	1.19	1.01	1.20	1.01	1.18	1.00	1.21	1.01
Baker	1.00	1.00	1.00	1.00	1.00	1.00	1.00	1.00	1.00	1.00
Bradford	1.27	1.14	1.18	1.17	1.27	1.18	1.20	1.18	1.13	1.15
Columbia	1.00	1.00	1.00	1.00	1.00	1.00	1.00	1.00	1.00	1.00
Dixie		1.00		1.00		1.00		1.00		1.00
Gilchrist		1.00		1.04		1.02		1.00		1.00
Hamilton		1.00		1.00		1.00		1.00		1.00
Lafayette		1.00		1.00		1.00		1.00		1.00
Levy		1.00		1.00		1.00		1.00		1.00
Madison		1.00		1.00		1.00		1.00		1.00
Marion	1.11	1.07	1.16	1.07	1.18	1.08	1.17	1.08	1.18	1.08
Suwannee		1.00		1.00		1.00		1.00		1.00
Taylor	1.00	1.00	1.00	1.00	1.00	1.00	1.00	1.00	1.00	1.00
Union										
Bay	1.37	1.00	1.34	1.00	1.40	1.00	1.39	1.00	1.43	1.00

Calhoun		1.01		1.01		1.01		1.00		1.01
Escambia	1.25	1.00	1.26	1.00	1.22	1.00	1.21	1.00	1.17	1.00
Franklin		1.00		1.00		1.00		1.00		1.00
Gadsden		1.00		1.00		1.00		1.00		1.00
Gulf		1.00		1.00		1.00		1.00		1.00
Holmes		1.00		1.00		1.00		1.00		1.00
Jackson		1.00	1.00	1.00	1.00	1.00	1.00	1.00	1.00	1.00
Jefferson		1.00		1.00		1.00		1.00		1.00
Leon	1.29	1.02	1.22	1.00	1.28	1.00	1.32	1.01	1.29	1.02
Liberty		1.00		1.00		1.00		1.00		1.00
Okaloosa	1.41	1.08	1.47	1.08	1.49	1.10	1.47	1.09	1.44	1.10
Santa Rosa	1.42	1.10	1.35	1.00	1.41	1.00	1.47	1.00	1.45	1.00
Wakulla		1.08		1.06		1.06		1.09		1.10
Walton	1.62	1.00	1.54	1.00	1.55	1.03	1.55	1.02	1.57	1.02
Washington		1.01		1.01		1.01		1.01		1.01
Brevard	1.26	1.04	1.27	1.04	1.27	1.04	1.30	1.05	1.32	1.04
Clay	1.50	1.05	1.57	1.02	1.57	1.02	1.52	1.02	1.51	1.02
Duval	1.28	1.00	1.31	1.00	1.43	1.00	1.46	1.02	1.37	1.01
Flagler	1.08	1.00	1.08	1.00	1.09	1.01	1.16	1.00	1.08	1.00
Nassau	1.09	1.00	1.09	1.00	1.26	1.00	1.34	1.00	1.03	1.00
Orange	1.41	1.52	1.47	1.57	1.42	1.42	1.45	1.41	1.46	1.44
Putnam	1.27	1.04	1.23	1.01	1.24	1.01	1.21	1.01	1.22	1.02
Seminole	1.44	1.00	1.37	1.04	1.38	1.04	1.40	1.04	1.41	1.04
St. Johns	1.37	1.00	1.43	1.01	1.45	1.01	1.42	1.01	1.38	1.00
Volusia	1.20	1.01	1.20	1.01	1.23	1.03	1.18	1.04	1.16	1.04
Broward	1.63	1.00	1.62	1.00	1.64	1.00	1.65	1.00	1.65	1.00
Miami-Dade	1.66	1.47	1.77	1.56	1.63	1.45	1.67	1.52	1.68	1.41
Indian River	1.30	1.06	1.23	1.06	1.19	1.08	1.31	1.07	1.22	1.07
Martin	1.08	1.06	1.07	1.08	1.05	1.08	1.05	1.08	1.05	1.09
Monroe	1.49	1.48	1.48	1.36	1.52	1.38	1.52	1.55	1.52	1.43
Okeechobee	1.24	1.06	1.26	1.06	1.22	1.07	1.21	1.07	1.18	1.08
Osceola	1.39	1.16	1.46	1.19	1.34	1.21	1.35	1.20	1.35	1.23
Palm Beach	1.49	1.10	1.45	1.11	1.48	1.00	1.49	1.00	1.42	1.00
St. Lucie	1.10	1.25	1.11	1.28	1.11	1.30	1.13	1.32	1.12	1.29
AVERAGE	**1.27**	**1.06**	**1.29**	**1.06**	**1.30**	**1.06**	**1.30**	**1.06**	**1.28**	**1.06**

Annual Person Delay (Hour)

COUNTY NAME	2003		2004		2005		2006		2007	
	URBAN	RURAL	URBAN	RURAL	URBAN	RURAL	URBAN	RURAL	URBAN	RURAL
Charlotte	104,581	956,962	1,477,581	0	1,642,445	0	1,469,106	0	1,226,774	0
Citrus	312,278	9,443	588,640	16,261	1,101,350	117,523	920,799	109,060	904,911	0
Collier	1,655,664	14,724	2,279,439	18,133	2,154,628	19,943	2,335,751	23,366	2,142,642	23,394
Desoto	6,059	6,011	27,380	45,499	28,056	42,756	7,563	6,130	14,841	46,659
Glades		0		0		0		0		0
Hardee	21,123	0	16,412	0	22,665	0	15,159	0	0	0
Hendry	25,068	0	107,646	574	51,966	7,984	60,123	72,802	65,389	5,456
Hernando	329,213	0	1,210,860	117,745	823,611	80,824	913,200	0	627,103	0
Highlands	617,089	100,217	1,086,754	271,353	1,056,873	186,655	777,914	184,951	499,795	0
Hillsborough	19,392,095	49,701	22,137,117	166,752	23,039,514	112,886	23,128,498	99,219	23,990,182	156,510
Lake	1,147,914	3,446,067	2,410,549	4,560,476	1,102,022	5,402,173	1,055,376	4,909,051	811,880	5,047,845
Lee	4,352,961	0	5,289,670	0	6,591,239	0	7,380,054	0	6,434,357	0
Manatee	1,679,306	0	2,194,754	0	2,702,728	0	2,822,791	0	2,629,939	49,764
Pasco	3,532,885	263,529	3,361,252	291,589	4,138,444	592,028	4,831,733	895,790	5,179,855	884,644
Pinellas	6,839,384		6,904,201		5,836,296		6,623,074		7,015,286	
Polk	2,515,363	263,970	2,775,233	27,699	2,505,897	32,699	2,537,944	42,888	2,604,182	144,752
Sarasota	3,905,655	163,383	4,456,219	320,462	5,234,092	588,876	5,663,160	827,622	4,914,187	576,969
Sumter	66,493	413,368	82,014	534,679	102,586	606,211	71,287	598,754	58,031	626,604
Alachua	1,444,999	70,787	1,324,681	104,033	1,532,035	77,720	1,328,885	39,394	1,575,170	117,975
Baker	0	0	0	0	0	0	0	0	0	0
Bradford	156,930	210,268	110,968	246,799	180,501	292,339	122,679	273,869	75,456	228,504
Columbia	0	0	0	0	3,941	0	0	0	0	0
Dixie		0		0		0		0		0
Gilchrist		0		27,736		11,053		0		0
Hamilton		0		0		0		0		0
Lafayette		0		0		0		0		0
Levy		0		0		0		0		0
Madison		0		0		0		0		0
Marion	1,104,408	552,456	1,711,983	581,821	1,916,275	616,732	1,844,401	645,722	1,918,616	596,596
Suwannee		0		0		0		0		0
Taylor	733	0	868	0	838	0	816	0	771	0
Union										
Bay	1,961,854	0	1,693,247	0	2,169,115	0	1,426,798	0	1,836,874	0

Calhoun		5,000		4,505		5,385		0		5,562
Escambia	2,033,218	0	2,642,227	0	2,055,459	0	1,993,431	0	1,313,353	0
Franklin		0		0		0		0		0
Gadsden		0		0		0		0		0
Gulf		0		0		0		0		0
Holmes		0		0		0		0		0
Jackson		0	0	0	0	0	0	0	0	0
Jefferson		0		0		0		0		0
Leon	2,176,880	32,942	1,820,985	0	2,463,610	0	2,912,130	14,607	2,614,747	17,779
Liberty		0		0		0		0		0
Okaloosa	1,777,282	227,048	2,739,786	242,072	2,930,392	306,338	2,796,192	276,300	1,239,823	281,653
Santa Rosa	1,110,522	269,535	1,851,158	0	2,167,863	0	2,437,064	0	2,365,237	0
Wakulla		74,986		53,625		60,346		96,935		111,700
Walton	396,354	0	423,355	18,494	448,927	133,035	449,525	61,526	465,257	65,999
Washington		13,025		16,339		16,509		20,298		25,674
Brevard	7,738,680	129,297	8,307,399	141,422	8,355,867	158,420	9,588,653	187,913	10,195,448	150,233
Clay	2,856,174	76,246	3,720,363	37,577	3,804,557	36,374	3,167,288	32,052	3,099,294	28,806
Duval	11,374,003	0	12,974,735	0	14,721,835	0	16,005,702	16,579	14,157,041	13,497
Flagler	264,054	0	280,178	0	309,037	17,409	663,355	10,748	311,732	6,843
Nassau	17,039	0	19,744	0	57,377	0	83,396	0	7,318	0
Orange	14,907,161	3,163,962	17,686,957	4,305,298	17,940,142	2,297,552	19,356,926	2,218,582	20,606,048	2,422,093
Putnam	305,530	127,699	435,341	27,583	452,435	26,435	390,479	18,775	392,195	41,682
Seminole	5,306,631	0	4,708,665	16,226	5,046,151	15,391	4,960,269	17,846	5,214,812	17,525
St. Johns	943,875	0	1,048,723	37,547	1,027,443	34,365	946,469	36,385	877,300	0
Volusia	3,563,261	43,105	3,505,386	72,729	4,262,861	191,181	3,378,168	252,252	2,969,873	272,246
Broward	46,737,867	0	44,603,532	0	47,755,774	0	49,639,257	0	49,986,050	0
Miami-Dade	50,992,652	3,546,841	63,048,420	5,099,614	51,108,942	2,501,766	54,717,572	3,312,721	50,538,055	2,109,237
Indian River	1,651,237	186,577	1,051,619	222,080	847,142	276,762	1,555,602	262,394	1,087,935	290,379
Martin	167,534	326,177	169,928	414,873	171,068	401,285	177,713	418,287	187,359	477,694
Monroe	3,589,150	1,422,052	3,558,559	923,911	3,972,868	1,060,526	3,921,599	1,686,885	3,995,099	1,130,995
Okeechobee	338,518	135,116	392,266	165,084	334,161	214,077	312,480	202,559	264,040	213,179
Osceola	4,363,108	1,082,530	5,747,844	1,401,330	4,484,056	1,537,890	4,584,336	1,504,443	4,633,498	1,822,024
Palm Beach	24,698,572	362,872	22,124,257	417,988	24,392,990	0	24,873,387	0	20,150,266	0
St. Lucie	1,003,254	652,480	1,183,071	767,119	1,406,730	707,836	1,611,801	830,750	1,474,563	735,061
TOTAL	**239,484,611**	**18,398,378**	**265,291,968**	**21,717,026**	**264,454,806**	**18,787,288**	**275,859,907**	**20,207,457**	**262,672,583**	**18,745,530**
	257,882,989		**287,008,994**		**283,242,094**		**296,067,364**		**281,418,114**	

Weighted Average Speed in Peak Period - URBAN (Miles/Hour)

COUNTY NAME	2003		2004		2005		2006		2007	
	Freeway	Arterial	Freeway	Arterial	Freeway	Arterial	Freeway	Arterial	Freeway	Arterial
Charlotte	60.0	32.0	60.0	29.6	60.0	29.3	60.0	29.6	60.0	30.2
Citrus	60.0	32.8	60.0	32.5	60.0	30.8	60.0	31.2	60.0	31.4
Collier	58.1	30.3	55.9	29.5	56.8	29.7	55.8	29.5	56.5	29.7
Desoto	60.0	34.8	60.0	34.4	60.0	33.8	60.0	34.7	60.0	34.4
Glades										
Hardee	60.0	34.6	60.0	34.8	60.0	34.6	60.0	34.7	60.0	35.0
Hendry	60.0	34.5	60.0	33.0	60.0	34.4	60.0	33.9	60.0	33.8
Hernando	60.0	33.4	60.0	30.2	60.0	31.6	60.0	31.2	60.0	32.2
Highlands	60.0	32.1	60.0	30.6	60.0	30.5	60.0	31.6	60.0	32.5
Hillsborough	53.9	29.7	52.6	29.7	52.8	29.3	53.4	28.7	52.1	28.7
Lake	60.0	29.6	60.0	28.8	60.0	29.1	56.1	29.3	56.1	30.5
Lee	57.4	29.3	55.9	28.8	58.3	28.7	52.6	28.5	53.9	28.8
Manatee	59.4	30.6	59.3	29.9	57.4	29.6	56.4	29.9	57.0	29.9
Pasco	55.9	30.0	54.1	30.3	54.8	29.5	55.2	28.8	54.9	28.6
Pinellas	60.0	28.0	60.0	28.0	60.0	28.0	60.0	28.5	60.0	28.3
Polk	59.6	31.4	59.4	31.2	60.0	31.4	60.0	31.5	60.0	31.4
Sarasota	56.9	29.0	55.6	28.9	53.9	28.5	52.2	28.4	54.1	28.7
Sumter	60.0	33.4	60.0	33.2	60.0	32.8	60.0	33.6	60.0	33.8
Alachua	60.0	31.6	60.0	31.9	60.0	31.5	60.0	31.8	59.0	31.4
Baker	60.0	35.0	60.0	35.0	60.0	35.0	60.0	35.0	60.0	35.0
Bradford	60.0	31.3	60.0	32.5	60.0	31.3	60.0	32.3	60.0	33.3
Columbia	60.0	35.0	60.0	35.0	60.0	34.9	60.0	35.0	60.0	35.0
Dixie										
Gilchrist										
Hamilton										
Lafayette										
Levy										
Madison										
Marion	60.0	32.6	60.0	31.6	60.0	31.4	60.0	31.5	60.0	31.2
Suwannee										
Taylor	60.0	35.0	60.0	35.0	60.0	35.0	60.0	35.0	60.0	35.0
Union										
Bay	60.0	30.1	60.0	30.3	60.0	29.6	60.0	29.7	60.0	29.1

Calhoun										
Escambia	59.8	30.6	59.8	30.5	59.8	31.0	59.5	31.1	59.8	31.3
Franklin										
Gadsden										
Gulf										
Holmes										
Jackson			60.0	35.0	60.0	35.0	60.0	35.0	60.0	35.0
Jefferson										
Leon	60.0	30.2	60.0	31.4	59.3	30.5	59.2	29.9	59.2	30.4
Liberty										
Okaloosa	60.0	29.3	60.0	28.6	60.0	28.3	60.0	28.5	60.0	28.6
Santa Rosa	60.0	28.1	60.0	28.8	60.0	28.2	60.0	27.7	60.0	27.8
Wakulla										
Walton	60.0	27.1	60.0	28.2	60.0	28.1	60.0	28.2	60.0	27.9
Washington										
Brevard	58.2	30.6	58.3	30.4	58.0	30.5	56.8	30.2	55.5	30.2
Clay	60.0	28.4	60.0	27.7	60.0	27.7	60.0	28.2	60.0	28.3
Duval	56.3	29.6	56.0	29.0	53.3	29.1	52.5	29.1	54.4	29.5
Flagler	60.0	32.7	59.0	33.4	58.8	33.4	58.6	31.7	60.0	33.1
Nassau	60.0	33.8	60.0	33.7	60.0	31.4	60.0	30.3	60.0	34.5
Orange	55.2	28.1	53.3	28.1	54.0	28.4	53.0	28.7	52.8	28.5
Putnam	60.0	31.4	60.0	31.9	60.0	31.8	60.0	32.1	60.0	32.0
Seminole	53.4	28.5	55.0	29.1	54.2	29.3	53.9	29.0	53.6	28.9
St. Johns	60.0	30.1	60.0	29.3	60.0	29.1	60.0	29.3	60.0	29.8
Volusia	58.9	31.2	59.1	31.2	57.7	31.1	59.2	31.4	59.6	31.6
Broward	47.6	29.2	48.1	28.8	47.6	28.7	47.7	28.5	47.3	28.9
Miami-Dade	47.9	27.7	45.6	27.5	49.2	27.7	47.7	27.9	46.9	27.8
Indian River	60.0	30.7	60.0	31.7	60.0	32.3	60.0	30.6	60.0	31.8
Martin	60.0	33.0	60.0	32.7	60.0	32.6	60.0	32.6	60.0	32.4
Monroe	60.0	28.5	60.0	28.8	60.0	28.2	60.0	28.2	60.0	28.2
Okeechobee	60.0	31.8	60.0	31.4	60.0	32.0	60.0	32.1	60.0	32.5
Osceola	53.5	29.8	52.9	28.8	57.7	29.5	57.2	29.4	58.4	29.1
Palm Beach	54.4	29.7	51.2	29.7	50.4	29.8	50.2	29.9	51.7	30.6
St. Lucie	60.0	32.7	60.0	32.4	60.0	32.2	60.0	32.0	60.0	32.3
AVERAGE	**58.5**	**31.0**	**58.2**	**30.9**	**58.2**	**30.7**	**57.9**	**30.7**	**58.0**	**31.0**

Weighted Average Speed in Peak Period - RURAL (Miles/Hour)

COUNTY NAME	2003		2004		2005		2006		2007	
	Freeway	Arterial	Freeway	Arterial	Freeway	Arterial	Freeway	Arterial	Freeway	Arterial
Charlotte	60.0	31.3	60.0	35.0	60.0	35.0	60.0	35.0	60.0	35.0
Citrus	60.0	34.8	60.0	34.8	60.0	33.7	60.0	33.7	60.0	35.0
Collier	60.0	34.9	60.0	34.9	60.0	34.8	60.0	34.8	60.0	34.8
Desoto	60.0	34.9	60.0	34.5	60.0	34.3	60.0	34.9	60.0	34.3
Glades	60.0	35.0	60.0	35.0	60.0	35.0	60.0	35.0	60.0	35.0
Hardee	60.0	35.0	60.0	35.0	60.0	35.0	60.0	35.0	60.0	35.0
Hendry	60.0	35.0	60.0	35.0	60.0	35.0	60.0	34.6	60.0	35.0
Hernando	60.0	35.0	60.0	34.3	60.0	34.4	60.0	35.0	60.0	35.0
Highlands	60.0	34.5	60.0	34.0	60.0	34.2	60.0	34.2	60.0	35.0
Hillsborough	60.0	34.5	60.0	33.3	60.0	33.7	60.0	33.7	60.0	33.0
Lake	60.0	28.2	60.0	27.5	60.0	27.0	60.0	27.5	60.0	27.4
Lee	60.0	35.0	60.0	35.0	60.0	35.0	60.0	35.0	60.0	35.0
Manatee	60.0	35.0	60.0	35.0	60.0	35.0	60.0	35.0	60.0	34.1
Pasco	60.0	33.8	60.0	33.7	60.0	32.7	60.0	31.3	60.0	31.5
Pinellas										
Polk	58.2	34.8	60.0	34.9	60.0	34.8	60.0	35.0	59.3	34.7
Sarasota	59.3	34.6	59.2	32.8	58.4	32.6	57.6	32.5	58.3	32.8
Sumter	60.0	33.2	60.0	32.8	60.0	32.7	60.0	32.6	60.0	32.5
Alachua	60.0	34.8	60.0	34.7	60.0	34.8	60.0	34.9	60.0	34.7
Baker	60.0	35.0	60.0	35.0	60.0	35.0	60.0	35.0	60.0	35.0
Bradford	60.0	33.0	60.0	32.7	60.0	32.5	60.0	32.5	60.0	32.8
Columbia	60.0	35.0	60.0	35.0	60.0	35.0	60.0	35.0	60.0	35.0
Dixie	60.0	35.0	60.0	35.0	60.0	35.0	60.0	35.0	60.0	35.0
Gilchrist	60.0	35.0	60.0	34.5	60.0	34.8	60.0	35.0	60.0	35.0
Hamilton	60.0	35.0	60.0	35.0	60.0	35.0	60.0	35.0	60.0	35.0
Lafayette	60.0	35.0	60.0	35.0	60.0	35.0	60.0	35.0	60.0	35.0
Levy	60.0	35.0	60.0	35.0	60.0	35.0	60.0	35.0	60.0	35.0
Madison	60.0	35.0	60.0	35.0	60.0	35.0	60.0	35.0	60.0	35.0
Marion	60.0	33.4	60.0	33.3	60.0	33.3	60.0	33.2	60.0	33.3
Suwannee	60.0	35.0	60.0	35.0	60.0	35.0	60.0	35.0	60.0	35.0
Taylor	60.0	35.0	60.0	35.0	60.0	35.0	60.0	35.0	60.0	35.0
Union										
Bay	60.0	35.0	60.0	35.0	60.0	35.0	60.0	35.0	60.0	35.0

Calhoun	60.0	34.9	60.0	35.0	60.0	34.9	60.0	35.0	60.0	34.9
Escambia	60.0	35.0	60.0	35.0	60.0	35.0	60.0	35.0	60.0	35.0
Franklin	60.0	35.0	60.0	35.0	60.0	35.0	60.0	35.0	60.0	35.0
Gadsden	60.0	35.0	60.0	35.0	60.0	35.0	60.0	35.0	60.0	35.0
Gulf	60.0	35.0	60.0	35.0	60.0	35.0	60.0	35.0	60.0	35.0
Holmes	60.0	35.0	60.0	35.0	60.0	35.0	60.0	35.0	60.0	35.0
Jackson	60.0	35.0	60.0	35.0	60.0	35.0	60.0	35.0	60.0	35.0
Jefferson	60.0	35.0	60.0	35.0	60.0	35.0	60.0	35.0	60.0	35.0
Leon	60.0	34.6	60.0	35.0	60.0	35.0	60.0	34.7	60.0	34.6
Liberty	60.0	35.0	60.0	35.0	60.0	35.0	60.0	35.0	60.0	35.0
Okaloosa	60.0	33.4	60.0	33.2	60.0	32.9	60.0	33.1	60.0	33.0
Santa Rosa	60.0	32.6	60.0	35.0	60.0	35.0	60.0	35.0	60.0	35.0
Wakulla	60.0	33.9	60.0	34.2	60.0	34.2	60.0	33.7	60.0	33.6
Walton	60.0	35.0	60.0	34.9	60.0	34.3	60.0	34.6	60.0	34.5
Washington	60.0	34.8	60.0	34.7	60.0	34.7	60.0	34.7	60.0	34.6
Brevard	60.0	34.1	60.0	34.0	60.0	33.9	60.0	33.8	60.0	34.0
Clay	60.0	34.4	60.0	34.7	60.0	34.7	60.0	34.7	60.0	34.8
Duval	60.0	35.0	60.0	35.0	60.0	35.0	60.0	32.3	60.0	32.7
Flagler	60.0	35.0	60.0	35.0	60.0	34.8	60.0	34.9	60.0	34.9
Nassau	60.0	35.0	60.0	35.0	60.0	35.0	60.0	35.0	60.0	35.0
Orange	60.0	28.4	60.0	27.9	60.0	29.5	60.0	29.7	60.0	29.4
Putnam	60.0	34.4	60.0	34.8	60.0	34.8	60.0	34.9	60.0	34.7
Seminole	60.0	35.0	60.0	34.5	60.0	34.5	60.0	34.4	60.0	34.4
St. Johns	60.0	35.0	60.0	34.7	60.0	34.7	60.0	34.7	60.0	35.0
Volusia	60.0	34.7	59.8	34.8	59.2	34.6	59.1	34.7	59.0	34.7
Broward	60.0	35.0	60.0	35.0	60.0	35.0	60.0	35.0	60.0	35.0
Miami-Dade	60.0	29.0	60.0	27.9	60.0	29.2	60.0	28.4	60.0	29.6
Indian River	60.0	33.3	60.0	33.2	60.0	33.0	60.0	33.1	60.0	33.2
Martin	60.0	33.0	60.0	32.7	60.0	32.4	60.0	32.2	60.0	32.1
Monroe	60.0	28.6	60.0	30.3	60.0	30.0	60.0	28.1	60.0	29.1
Okeechobee	60.0	34.2	60.0	34.1	60.0	34.0	60.0	34.0	60.0	34.0
Osceola	60.0	32.8	60.0	32.3	60.0	32.1	60.0	32.2	60.0	31.9
Palm Beach	60.0	33.9	60.0	33.7	60.0	35.0	60.0	35.0	60.0	35.0
St. Lucie	60.0	31.5	60.0	31.2	60.0	30.9	60.0	30.6	60.0	31.0
AVERAGE	**60.0**	**34.1**	**60.0**	**34.1**	**60.0**	**34.1**	**59.9**	**34.0**	**59.9**	**34.0**

Congestion Cost ($) – 2003

COUNTY NAME	Annual Passenger Vehicle Delay Cost		Annual Fuel Cost		Annual Commercial Vehicle Cost		Total Congestion Cost	
	URBAN	RURAL	URBAN	RURAL	URBAN	RURAL	URBAN	RURAL
Charlotte	1,207,590	12,179,458	262,370	2,379,407	1,095,888	4,606,249	2,565,848	19,165,114
Citrus	4,020,383	114,654	691,241	20,310	1,282,518	72,004	5,994,142	206,968
Collier	21,348,619	176,805	4,133,979	37,821	6,641,512	121,679	32,124,111	336,305
Desoto	69,177	66,570	12,274	11,823	67,232	76,645	148,683	155,038
Glades		0		0		0		0
Hardee	237,083	0	41,912	0	254,104	0	533,099	0
Hendry	278,762	0	49,175	0	314,039	0	641,977	0
Hernando	4,169,352	0	724,004	0	1,683,556	0	6,576,912	0
Highlands	7,323,097	1,075,923	1,245,016	189,971	5,517,777	1,440,275	14,085,890	2,706,169
Hillsborough	246,639,484	586,316	49,101,856	118,698	94,147,083	461,194	389,888,423	1,166,208
Lake	13,729,564	39,447,513	2,234,576	6,256,237	9,750,201	37,761,505	25,714,341	83,465,255
Lee	55,337,861	0	10,970,242	0	21,255,785	0	87,563,888	0
Manatee	20,911,365	0	4,260,527	0	10,298,449	0	35,470,342	0
Pasco	44,561,915	3,185,237	7,831,266	651,775	18,934,091	2,078,472	71,327,272	5,915,484
Pinellas	89,866,778		15,025,766		19,382,217		124,274,760	
Polk	29,921,431	2,908,116	5,837,477	606,207	22,149,639	3,437,732	57,908,547	6,952,055
Sarasota	50,126,403	1,890,297	9,246,802	419,163	16,791,564	1,694,186	76,164,768	4,003,646
Sumter	825,134	4,665,582	143,329	982,115	421,495	4,847,833	1,389,958	10,495,530
Alachua	18,316,971	810,758	3,513,261	167,057	7,309,777	773,477	29,140,008	1,751,292
Baker	0	0	0	0	0	0	0	0
Bradford	1,695,134	2,202,033	284,313	380,146	2,205,686	3,287,772	4,185,134	5,869,950
Columbia	0	0	0	0	0	0	0	0
Dixie		0		0		0		0
Gilchrist		0		0		0		0
Hamilton		0		0		0		0
Lafayette		0		0		0		0
Levy		0		0		0		0
Madison		0		0		0		0
Marion	13,442,843	6,646,027	2,717,878	1,346,066	8,259,226	4,508,104	24,419,948	12,500,197
Suwannee		0		0		0		0
Taylor	9,033	0	1,605	0	4,973	0	15,611	0
Union								
Bay	25,214,345	0	4,141,463	0	8,265,150	0	37,620,958	0

Calhoun		60,985		10,824		36,821		108,630
Escambia	25,951,405	0	5,019,618	0	9,430,465	0	40,401,488	0
Franklin		0		0		0		0
Gadsden		0		0		0		0
Gulf		0		0		0		0
Holmes		0		0		0		0
Jackson		0		0		0		0
Jefferson		0		0		0		0
Leon	28,011,606	407,993	5,253,908	82,411	9,009,414	212,666	42,274,928	703,070
Liberty		0		0		0		0
Okaloosa	22,833,771	2,680,163	3,833,138	543,570	7,527,884	2,098,594	34,194,793	5,322,327
Santa Rosa	14,047,053	3,287,950	2,614,792	677,944	5,761,985	1,981,291	22,423,830	5,947,185
Wakulla		964,721		168,846		311,212		1,444,778
Walton	5,317,057	0	824,875	0	599,416	0	6,741,348	0
Washington		151,052		31,751		133,366		316,170
Brevard	99,495,843	1,557,629	19,311,334	325,227	32,429,890	1,044,554	151,237,068	2,927,410
Clay	36,774,006	960,572	5,858,967	169,292	11,718,042	414,166	54,351,015	1,544,029
Duval	144,749,172	0	30,148,043	0	54,796,264	0	229,693,478	0
Flagler	3,303,772	0	698,656	0	1,544,135	0	5,546,564	0
Nassau	213,459	0	37,266	0	98,329	0	349,054	0
Orange	190,496,190	37,061,909	38,066,506	5,903,458	68,059,817	30,620,604	296,622,513	73,585,970
Putnam	3,878,850	1,576,465	651,907	277,970	1,517,151	848,821	6,047,908	2,703,257
Seminole	68,519,520	0	13,382,754	0	20,834,519	0	102,736,792	0
St. Johns	12,477,076	0	2,069,509	0	2,315,181	0	16,861,765	0
Volusia	45,498,278	522,729	9,020,192	112,399	16,441,413	331,712	70,959,884	966,840
Broward	607,669,486	0	116,054,611	0	163,398,824	0	887,122,922	0
Miami-Dade	662,773,899	42,335,586	125,507,346	6,814,477	179,305,014	30,540,192	967,586,259	79,690,255
Indian River	21,606,125	2,184,656	3,671,417	458,711	5,113,738	1,809,854	30,391,279	4,453,221
Martin	2,179,768	3,928,021	455,821	834,849	578,299	2,641,873	3,213,888	7,404,743
Monroe	45,198,032	17,718,734	7,204,870	2,832,621	19,588,770	8,669,000	71,991,671	29,220,355
Okeechobee	4,119,252	1,519,499	696,856	267,120	2,537,283	1,611,067	7,353,391	3,397,686
Osceola	55,950,234	12,373,177	10,386,016	2,126,659	18,985,166	11,951,802	85,321,415	26,451,637
Palm Beach	315,336,410	4,213,282	61,346,184	736,835	114,119,953	3,690,987	490,802,547	8,641,104
St. Lucie	12,777,288	7,617,058	2,632,949	1,283,380	4,787,458	6,439,136	20,197,695	15,339,575
TOTAL	**3,078,429,878**	**217,077,467**	**587,217,865**	**37,225,141**	**1,006,530,374**	**170,554,848**	**4,672,178,117**	**424,857,456**
	3,295,507,345		**624,443,006**		**1,177,085,222**		**5,097,035,573**	

Congestion Cost ($) – 2004

COUNTY NAME	Annual Passenger Vehicle Delay Cost		Annual Fuel Cost		Annual Commercial Vehicle Cost		Total Congestion Cost	
	URBAN	RURAL	URBAN	RURAL	URBAN	RURAL	URBAN	RURAL
Charlotte	18,935,279	0	4,591,514	0	9,290,027	0	32,816,820	0
Citrus	7,783,359	211,749	1,688,488	47,552	2,527,074	85,766	11,998,921	345,067
Collier	29,951,401	218,636	7,262,484	59,314	10,709,353	181,232	47,923,237	459,182
Desoto	319,618	522,650	71,388	116,859	325,064	581,733	716,070	1,221,241
Glades		0		0		0		0
Hardee	187,274	0	42,016	0	215,951	0	445,241	0
Hendry	1,181,709	6,275	258,157	1,413	1,644,559	8,872	3,084,425	16,559
Hernando	15,840,353	1,303,705	3,300,966	334,724	6,032,014	1,744,401	25,173,333	3,382,831
Highlands	13,208,233	3,003,344	2,772,110	665,975	10,348,768	4,025,695	26,329,112	7,695,014
Hillsborough	286,956,241	1,993,984	72,109,290	509,955	123,192,865	1,747,921	482,258,396	4,251,860
Lake	30,549,803	53,451,351	6,205,849	10,584,888	16,826,872	53,096,236	53,582,525	117,132,475
Lee	68,973,181	0	17,191,981	0	27,455,733	0	113,620,895	0
Manatee	28,199,459	0	7,220,130	0	13,439,128	0	48,858,717	0
Pasco	43,879,415	3,549,561	9,807,589	921,298	17,195,368	2,749,110	70,882,371	7,219,969
Pinellas	92,835,392		19,662,109		22,086,428		134,583,930	
Polk	33,943,904	312,283	8,394,323	83,253	25,379,658	382,985	67,717,884	778,521
Sarasota	58,899,296	3,860,476	13,655,643	1,077,947	19,246,295	3,219,831	91,801,233	8,158,254
Sumter	1,025,049	6,129,394	224,679	1,633,468	642,702	6,897,176	1,892,430	14,660,038
Alachua	17,247,739	1,219,924	4,140,485	315,782	6,998,375	1,208,286	28,386,598	2,743,992
Baker	0	0	0	0	0	0	0	0
Bradford	1,199,988	2,607,442	260,033	566,631	1,784,312	4,268,789	3,244,333	7,442,862
Columbia	0	0	0	0	0	0	0	0
Dixie		0		0		0		0
Gilchrist		353,108		78,945		185,783		617,836
Hamilton		0		0		0		0
Lafayette		0		0		0		0
Levy		0		0		0		0
Madison		0		0		0		0
Marion	21,428,377	7,180,511	5,446,445	1,860,780	13,263,037	5,006,377	40,137,859	14,047,669
Suwannee		0		0		0		0
Taylor	10,870	0	2,447	0	6,693	0	20,010	0
Union								
Bay	22,333,714	0	4,666,792	0	7,540,538	0	34,541,045	0

Calhoun		56,078		12,606		36,440		105,123
Escambia	35,010,685	0	8,493,823	0	10,983,487	0	54,487,996	0
Franklin		0		0		0		0
Gadsden		0		0		0		0
Gulf		0		0		0		0
Holmes		0		0		0		0
Jackson	0	0	0	0	0	0	0	0
Jefferson		0		0		0		0
Leon	24,314,910	0	5,839,705	0	6,659,363	0	36,813,979	0
Liberty		0		0		0		0
Okaloosa	36,562,612	2,897,041	7,789,730	745,319	10,120,635	2,525,665	54,472,977	6,168,024
Santa Rosa	23,785,648	0	5,743,294	0	11,330,750	0	40,859,692	0
Wakulla		697,317		155,244		287,672		1,140,233
Walton	5,715,403	222,975	1,148,447	57,976	1,242,347	184,923	8,106,198	465,874
Washington		194,926		51,782		173,497		420,206
Brevard	108,868,199	1,742,897	26,698,530	461,597	40,446,590	1,228,882	176,013,319	3,433,376
Clay	48,782,919	472,329	9,693,767	105,877	17,978,033	281,349	76,454,720	859,555
Duval	169,705,099	0	44,586,524	0	64,777,476	0	279,069,099	0
Flagler	3,599,007	0	959,672	0	1,719,942	0	6,278,622	0
Nassau	250,254	0	55,252	0	137,653	0	443,159	0
Orange	232,914,561	51,903,470	58,441,325	10,357,367	80,596,028	43,064,846	371,951,914	105,325,683
Putnam	5,578,910	346,601	1,198,171	77,862	2,737,188	207,049	9,514,270	631,512
Seminole	61,004,141	199,221	15,419,685	44,510	26,363,931	144,672	102,787,757	388,402
St. Johns	14,225,183	486,963	2,944,930	134,520	2,748,966	207,677	19,919,079	829,159
Volusia	45,802,684	919,199	11,516,848	248,972	17,728,793	520,029	75,048,325	1,688,201
Broward	591,336,269	0	143,948,928	0	183,849,167	0	919,134,364	0
Miami-Dade	831,351,569	64,321,132	195,907,507	12,842,246	281,992,127	37,106,068	1,309,251,202	114,269,446
Indian River	14,090,805	2,630,149	3,113,163	695,900	3,606,293	2,452,284	20,810,262	5,778,333
Martin	2,179,497	5,067,752	591,882	1,347,764	1,059,263	3,826,156	3,830,642	10,241,672
Monroe	46,333,992	11,942,791	9,409,786	2,493,980	18,797,562	5,305,786	74,541,340	19,742,558
Okeechobee	4,802,024	1,880,337	1,022,287	418,110	3,566,687	2,188,891	9,390,998	4,487,338
Osceola	76,125,123	16,427,240	17,660,969	3,550,490	24,071,263	16,301,277	117,857,354	36,279,007
Palm Beach	282,466,694	4,519,476	70,173,433	998,654	144,273,194	6,723,799	496,913,320	12,241,929
St. Lucie	15,397,965	9,163,642	4,017,567	1,943,039	6,279,399	8,086,947	25,694,931	19,193,628
TOTAL	**3,475,093,808**	**262,015,929**	**835,350,145**	**55,602,597**	**1,299,216,951**	**216,244,102**	**5,609,660,904**	**533,862,628**
	3,737,109,737		**890,952,742**		**1,515,461,053**		**6,143,523,532**	

Congestion Cost ($) – 2005

COUNTY NAME	Annual Passenger Vehicle Delay Cost		Annual Fuel Cost		Annual Commercial Vehicle Cost		Total Congestion Cost	
	URBAN	RURAL	URBAN	RURAL	URBAN	RURAL	URBAN	RURAL
Charlotte	21,565,908	0	5,936,047	0	12,288,110	0	39,790,065	0
Citrus	15,052,269	1,595,677	3,604,189	400,591	5,188,966	608,030	23,845,424	2,604,298
Collier	29,689,794	245,648	8,176,184	75,777	8,901,163	232,895	46,767,141	554,320
Desoto	348,258	514,996	87,630	130,541	313,813	559,389	749,701	1,204,926
Glades		0		0		0		0
Hardee	276,104	0	70,324	0	280,510	0	626,937	0
Hendry	611,985	90,972	154,515	23,278	751,875	131,274	1,518,375	245,524
Hernando	11,113,238	923,148	2,836,766	272,633	4,619,186	1,317,405	18,569,190	2,513,186
Highlands	13,671,740	2,139,019	3,261,092	541,545	8,967,147	3,005,865	25,899,979	5,686,429
Hillsborough	307,204,781	1,415,900	87,453,442	414,656	148,180,419	1,186,964	542,838,642	3,017,520
Lake	14,336,007	66,637,432	3,329,907	14,842,329	8,936,208	62,584,120	26,602,122	144,063,881
Lee	88,477,403	0	24,792,422	0	39,341,944	0	152,611,769	0
Manatee	35,826,976	0	10,373,784	0	18,470,365	0	64,671,125	0
Pasco	54,847,378	7,346,734	13,887,547	2,134,547	28,340,015	6,632,143	97,074,940	16,113,424
Pinellas	81,370,456		19,748,990		19,213,223		120,332,668	
Polk	31,534,462	383,199	8,958,245	116,538	25,813,072	482,828	66,305,779	982,565
Sarasota	72,344,927	7,384,078	18,899,602	2,333,848	20,479,725	6,202,187	111,724,254	15,920,113
Sumter	1,370,922	7,351,623	339,641	2,219,205	643,990	7,674,120	2,354,553	17,244,948
Alachua	20,128,097	910,892	5,542,778	268,839	11,400,635	1,147,145	37,071,510	2,326,876
Baker	0	0	0	0	0	0	0	0
Bradford	2,091,649	3,351,784	505,774	826,141	2,787,217	4,699,253	5,384,639	8,877,178
Columbia	49,900	0	14,821	0	38,977	0	103,698	0
Dixie		0		0		0		0
Gilchrist		141,376		36,092		102,053		279,520
Hamilton		0		0		0		0
Lafayette		0		0		0		0
Levy		0		0		0		0
Madison		0		0		0		0
Marion	24,349,821	7,717,094	7,017,353	2,258,909	18,525,381	6,579,605	49,892,556	16,555,609
Suwannee		0		0		0		0
Taylor	10,755	0	2,753	0	7,538	0	21,047	0
Union								
Bay	29,295,789	0	6,873,862	0	12,024,787	0	48,194,437	0

Calhoun		70,017		17,893		43,816		131,726
Escambia	27,807,028	0	7,790,574	0	11,155,898	0	46,753,500	0
Franklin		0		0		0		0
Gadsden		0		0		0		0
Gulf		0		0		0		0
Holmes		0		0		0		0
Jackson	0	0	0	0	0	0	0	0
Jefferson		0		0		0		0
Leon	32,836,719	0	8,882,943	0	15,910,049	0	57,629,712	0
Liberty		0		0		0		0
Okaloosa	40,322,019	3,620,455	9,706,769	1,049,079	12,402,478	4,366,002	62,431,266	9,035,536
Santa Rosa	28,725,370	0	7,708,094	0	14,874,499	0	51,307,963	0
Wakulla		816,953		206,632		324,614		1,348,199
Walton	6,229,887	1,617,807	1,421,037	473,892	1,628,151	1,661,079	9,279,075	3,752,778
Washington		202,118		61,164		199,095		462,378
Brevard	112,141,820	1,952,722	31,120,170	588,658	49,993,589	1,842,723	193,255,579	4,384,103
Clay	51,341,959	461,727	11,608,384	117,744	21,307,238	354,074	84,257,581	933,546
Duval	198,050,434	0	57,390,925	0	85,641,947	0	341,083,306	0
Flagler	4,115,449	224,452	1,245,003	65,351	2,014,382	151,621	7,374,834	441,424
Nassau	774,643	0	187,455	0	319,538	0	1,281,636	0
Orange	241,567,474	30,776,699	70,011,465	7,210,645	103,219,835	14,046,371	414,798,775	52,033,714
Putnam	6,105,549	344,139	1,487,768	87,922	2,533,844	213,081	10,127,161	645,143
Seminole	67,713,925	195,811	19,454,091	49,758	30,238,310	147,520	117,406,326	393,089
St. Johns	14,424,120	454,888	3,386,813	143,038	2,869,525	238,237	20,680,458	836,163
Volusia	56,210,519	2,399,170	16,056,575	741,584	30,666,912	2,003,782	102,934,005	5,144,535
Broward	650,191,029	0	179,793,659	0	237,862,966	0	1,067,847,654	0
Miami-Dade	687,834,375	32,430,613	189,427,451	7,553,811	295,903,230	20,877,127	1,173,165,056	60,861,551
Indian River	11,637,287	3,294,507	2,952,452	988,189	3,685,194	3,822,730	18,274,932	8,105,426
Martin	2,264,318	4,949,579	708,371	1,513,663	1,186,301	4,650,879	4,158,990	11,114,121
Monroe	53,327,155	13,902,830	12,179,860	3,284,017	23,726,682	8,049,400	89,233,697	25,236,248
Okeechobee	4,374,488	2,532,584	1,070,164	638,795	2,567,994	3,038,110	8,012,646	6,209,490
Osceola	60,135,767	18,605,010	16,493,050	4,553,659	27,052,990	19,701,887	103,681,807	42,860,555
Palm Beach	321,277,623	0	90,756,179	0	177,396,204	0	589,430,006	0
St. Lucie	18,829,238	8,724,825	5,601,883	2,093,963	8,675,138	8,234,029	33,106	19,052,817
TOTAL	**3,553,806,814**	**235,726,479**	**978,308,804**	**58,334,928**	**1,558,347,160**	**197,111,453**	**6,057,389,625**	**491,172,859**
	3,789,533,293		**1,036,643,731**		**1,755,458,613**		**6,548,562,485**	

Congestion Cost ($) – 2006

COUNTY NAME	Annual Passenger Vehicle Delay Cost		Annual Fuel Cost		Annual Commercial Vehicle Cost		Total Congestion Cost	
	URBAN	RURAL	URBAN	RURAL	URBAN	RURAL	URBAN	RURAL
Charlotte	20,063,224	0	6,109,087	0	10,816,217	0	36,988,527	0
Citrus	12,711,350	1,494,928	3,375,387	413,406	6,064,609	773,942	22,151,345	2,682,277
Collier	33,200,859	300,663	9,958,768	102,823	10,365,236	268,763	53,524,863	672,249
Desoto	95,988	70,909	26,932	19,954	93,988	112,347	216,908	203,210
Glades		0		0		0		0
Hardee	189,724	0	53,234	0	202,396	0	445,354	0
Hendry	712,943	851,198	197,743	238,332	1,010,050	1,286,495	1,920,736	2,376,025
Hernando	12,682,904	0	3,561,571	0	5,613,402	0	21,857,877	0
Highlands	10,221,046	2,213,461	2,731,906	616,735	7,840,384	3,000,594	20,793,336	5,830,791
Hillsborough	321,085,816	1,267,768	101,229,251	409,464	142,865,594	1,188,263	565,180,660	2,865,494
Lake	14,020,117	62,052,701	3,667,304	15,374,571	9,831,613	62,318,787	27,519,034	139,746,059
Lee	102,519,777	0	31,325,747	0	45,247,110	0	179,092,634	0
Manatee	38,735,135	0	12,315,689	0	19,812,246	0	70,863,070	0
Pasco	66,078,536	11,457,926	18,261,217	3,653,420	35,086,933	10,664,931	119,426,686	25,776,278
Pinellas	96,640,819		25,883,465		16,278,984		138,803,268	
Polk	33,184,501	525,978	10,395,084	175,956	26,427,500	629,185	70,007,085	1,331,119
Sarasota	80,729,315	10,332,440	23,087,673	3,578,191	23,914,047	11,183,717	127,731,036	25,094,348
Sumter	941,584	7,291,177	280,346	2,426,280	692,580	9,056,222	1,914,510	18,773,679
Alachua	18,750,104	497,601	5,743,254	163,661	6,626,167	501,992	31,119,525	1,163,254
Baker	0	0	0	0	0	0	0	0
Bradford	1,425,067	3,105,348	385,186	842,691	2,216,622	5,347,059	4,026,875	9,295,098
Columbia	0	0	0	0	0	0	0	0
Dixie		0		0		0		0
Gilchrist		0		0		0		0
Hamilton		0		0		0		0
Lafayette		0		0		0		0
Levy		0		0		0		0
Madison		0		0		0		0
Marion	24,143,006	8,377,249	7,659,925	2,717,809	19,064,921	7,069,085	50,867,852	18,164,143
Suwannee		0		0		0		0
Taylor	11,428	0	3,219	0	4,554	0	19,201	0
Union								
Bay	19,897,250	0	5,149,840	0	8,344,049	0	33,391,139	0

Calhoun		0		0		0		0
Escambia	26,918,989	0	8,365,535	0	16,275,834	0	51,560,358	0
Franklin		0		0		0		0
Gadsden		0		0		0		0
Gulf		0		0		0		0
Holmes		0		0		0		0
Jackson	0	0	0	0	0	0	0	0
Jefferson		0		0		0		0
Leon	40,325,034	189,327	11,898,913	61,941	18,529,674	160,833	70,753,621	412,101
Liberty		0		0		0		0
Okaloosa	38,925,178	3,229,294	10,396,565	1,037,033	16,713,340	4,888,799	66,035,084	9,155,126
Santa Rosa	32,020,462	0	9,170,650	0	24,563,782	0	65,754,893	0
Wakulla		1,357,575		375,498		536,529		2,269,603
Walton	6,463,583	733,168	1,623,566	239,927	1,606,918	1,014,761	9,694,066	1,987,856
Washington		240,206		79,684		343,539		663,429
Brevard	133,507,644	2,449,868	40,774,674	811,518	57,176,265	1,994,315	231,458,583	5,255,701
Clay	44,557,733	427,618	11,204,904	120,042	16,483,328	289,056	72,245,965	836,715
Duval	225,675,259	212,045	71,723,512	74,898	80,645,702	197,494	378,044,473	484,438
Flagler	9,163,510	143,580	3,003,550	46,143	4,337,035	95,937	16,504,095	285,660
Nassau	1,197,212	0	312,884	0	308,185	0	1,818,282	0
Orange	269,161,521	30,869,041	85,645,993	7,980,988	117,284,648	13,341,429	472,092,163	52,191,458
Putnam	5,411,904	254,384	1,459,015	71,566	2,459,182	148,806	9,330,101	474,757
Seminole	68,382,563	232,675	21,771,487	65,026	33,154,689	189,335	123,308,738	487,036
St. Johns	13,776,287	499,166	3,584,989	173,038	2,505,488	256,036	19,866,764	928,240
Volusia	45,810,872	3,309,149	14,540,338	1,125,514	26,571,285	2,569,716	86,922,495	7,004,379
Broward	701,025,390	0	212,681,717	0	244,193,106	0	1,157,900,213	0
Miami-Dade	771,084,245	43,129,901	232,266,367	10,886,457	277,880,249	35,466,306	1,281,230,861	89,482,664
Indian River	22,055,454	3,196,627	5,983,832	1,055,171	7,198,097	3,961,470	35,237,384	8,213,268
Martin	2,445,539	5,532,470	841,043	1,872,136	1,211,031	4,023,911	4,497,612	11,428,518
Monroe	53,379,612	23,538,654	13,416,770	5,900,611	29,799,751	9,789,574	96,596,132	39,228,839
Okeechobee	4,215,717	2,510,860	1,137,069	697,207	2,572,142	2,831,525	7,924,929	6,039,591
Osceola	63,827,518	18,856,397	19,159,628	5,087,315	27,349,086	19,940,343	110,336,233	43,884,055
Palm Beach	350,689,996	0	109,089,080	0	125,414,105	0	585,193,181	0
St. Lucie	22,330,695	10,628,048	7,265,671	2,791,840	10,194,556	9,879,881	39,790,921	23,299,769
TOTAL	**3,860,392,408**	**261,379,403**	**1,168,719,581**	**71,286,846**	**1,542,846,680**	**225,320,975**	**6,571,958,669**	**557,987,225**
	4,121,771,812		**1,240,006,427**		**1,768,167,655**		**7,129,945,894**	

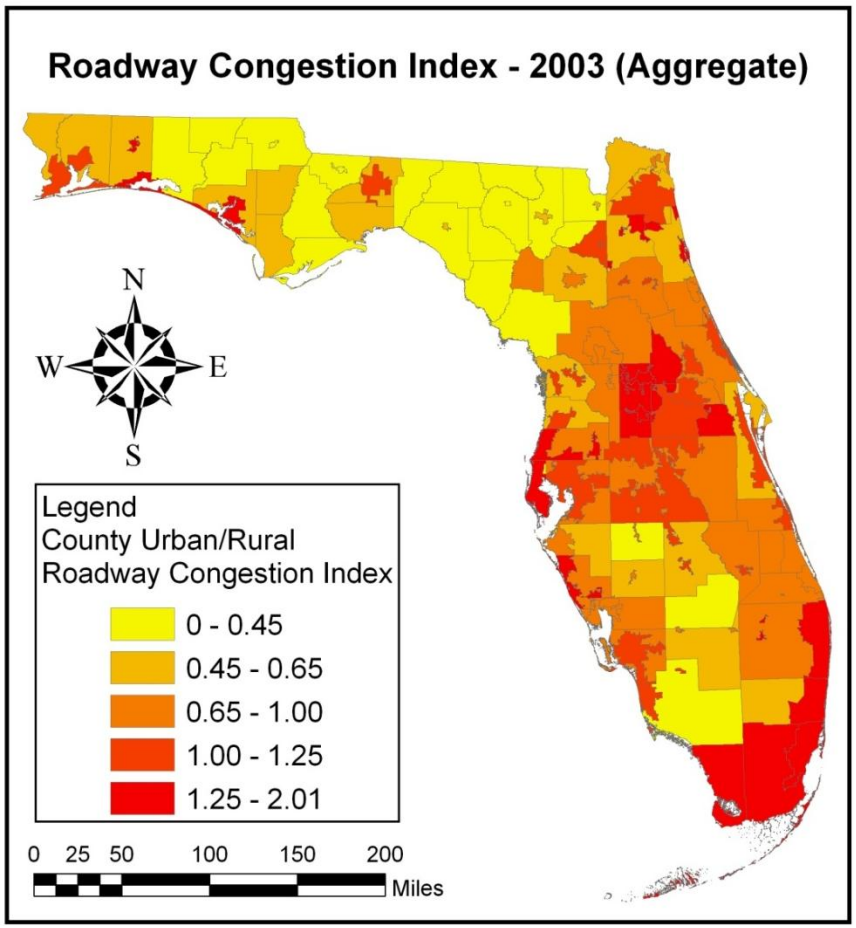
Congestion Cost ($) – 2007

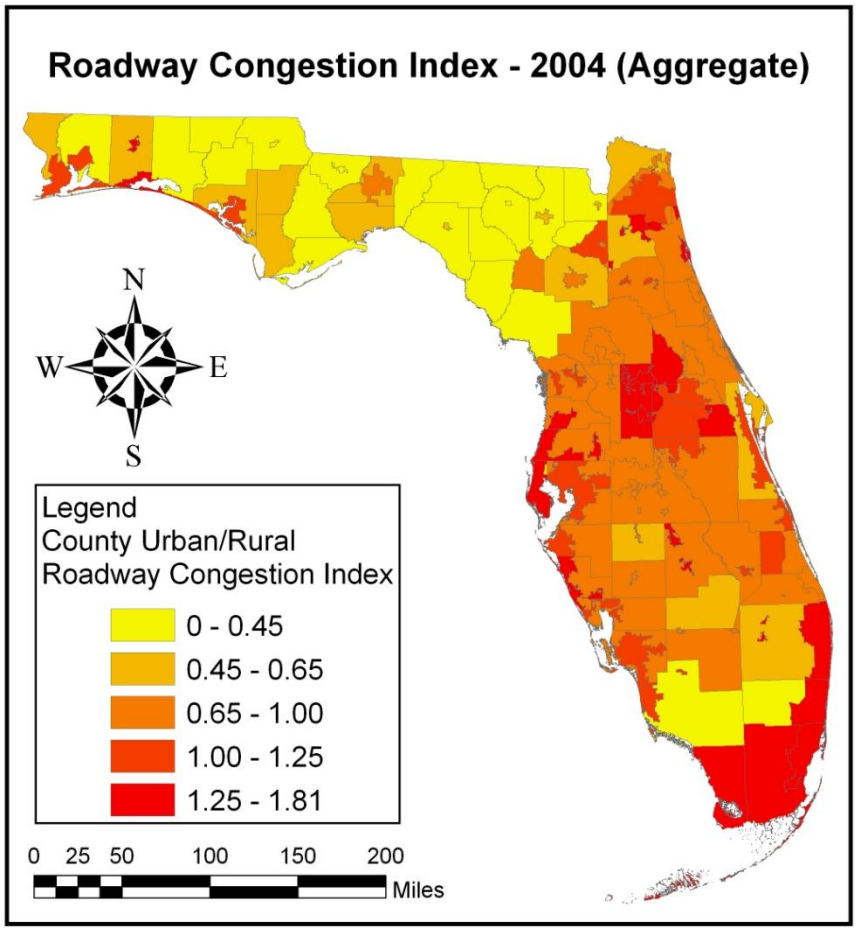
COUNTY NAME	Annual Passenger Vehicle Delay Cost		Annual Fuel Cost		Annual Commercial Vehicle Cost		Total Congestion Cost	
	URBAN	RURAL	URBAN	RURAL	URBAN	RURAL	URBAN	RURAL
Charlotte	17,218,427	0	5,740,856	0	9,293,178	0	32,252,461	
Citrus	13,091,109	0	3,802,744	0	4,794,372	0	21,688,225	
Collier	31,199,162	310,674	10,314,796	115,693	10,284,640	270,535	51,798,599	696,902
Desoto	196,138	565,888	59,767	172,241	176,626	823,444	432,532	1,561,573
Glades		0		0		0		0
Hardee	0	0	0	0	0	0	0	0
Hendry	807,200	67,911	243,921	20,861	1,079,235	87,122	2,130,356	175,895
Hernando	8,937,725	0	2,784,937	0	4,032,336	0	15,754,999	0
Highlands	6,841,283	0	2,025,593	0	4,702,943	0	13,569,819	0
Hillsborough	345,944,446	2,043,153	117,455,703	722,846	132,993,229	1,996,459	596,393,379	4,762,458
Lake	11,350,998	67,347,083	3,304,060	18,153,863	6,383,543	56,733,490	21,038,600	142,234,435
Lee	92,354,945	0	31,041,940	0	37,941,135	0	161,338,021	0
Manatee	37,376,541	666,323	13,000,575	243,051	17,472,542	546,719	67,849,658	1,456,093
Pasco	74,402,968	11,716,691	22,356,480	4,060,144	30,256,471	10,396,808	127,015,920	26,173,643
Pinellas	104,944,715		30,540,060		18,914,989		154,399,763	
Polk	35,670,489	1,871,590	12,239,225	685,132	24,377,891	1,941,880	72,287,605	4,498,602
Sarasota	71,894,730	7,649,184	22,627,974	2,902,415	21,798,357	6,741,255	116,321,061	17,292,854
Sumter	799,707	7,946,905	260,867	2,886,849	517,710	9,223,948	1,578,283	20,057,702
Alachua	22,590,531	1,537,684	7,563,213	548,880	9,386,025	1,517,645	39,539,769	3,604,210
Baker	0	0	0	0	0	0	0	0
Bradford	909,755	2,691,652	272,465	800,822	1,360,121	4,453,402	2,542,342	7,945,876
Columbia	0	0	0	0	0	0	0	0
Dixie		0		0		0		0
Gilchrist		0		0		0		0
Hamilton		0		0		0		0
Lafayette		0		0		0		0
Levy		0		0		0		0
Madison		0		0		0		0
Marion	26,123,202	8,006,884	9,062,625	2,827,977	18,788,460	6,455,712	53,974,287	17,290,573
Suwannee		0		0		0		0
Taylor	11,043	0	3,393	0	4,630	0	19,067	0
Union								
Bay	26,684,289	0	7,448,723	0	9,147,351	0	43,280,363	0

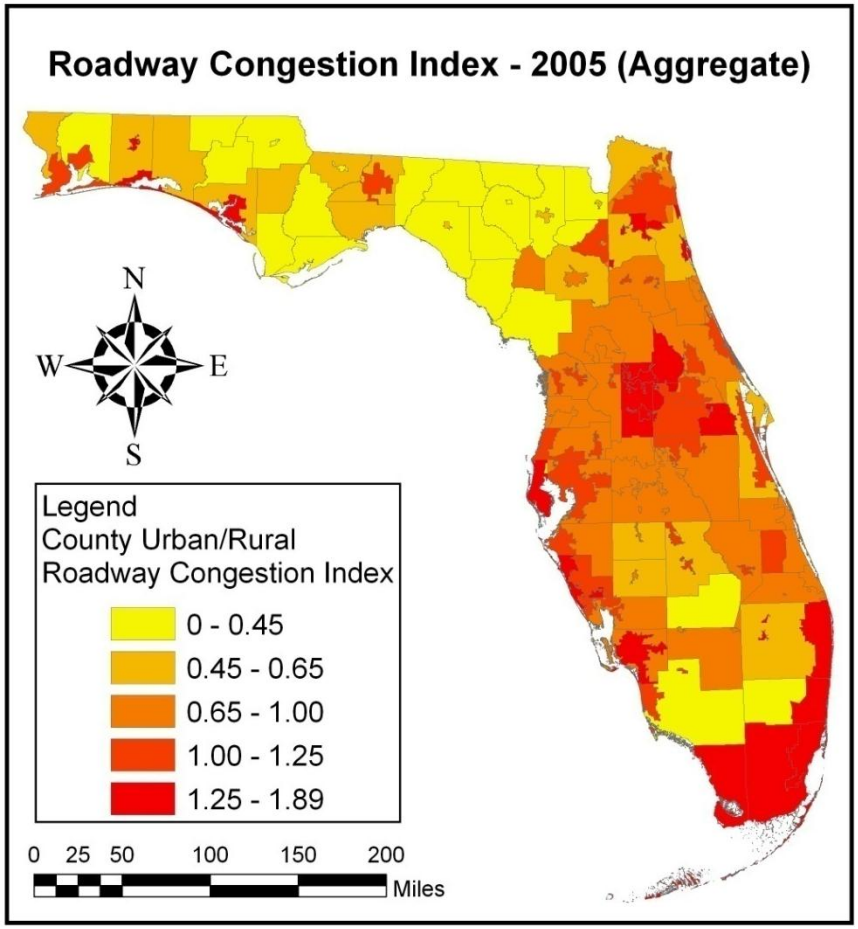
Calhoun		74,975		22,996		58,454		156,425
Escambia	17,769,777	0	6,209,229	0	13,454,751	0	37,433,757	0
Franklin		0		0		0		0
Gadsden		0		0		0		0
Gulf		0		0		0		0
Holmes		0		0		0		0
Jackson	0	0	0	0	0	0	0	0
Jefferson		0		0		0		0
Leon	37,187,348	236,214	12,081,624	84,331	17,230,577	205,058	66,499,548	525,604
Liberty		0		0		0		0
Okaloosa	17,111,307	3,275,572	5,222,533	1,145,051	10,924,911	5,711,829	33,258,752	10,132,452
Santa Rosa	32,669,309	0	10,339,825	0	20,706,067	0	63,715,201	0
Wakulla		1,608,278		484,110		632,226		2,724,614
Walton	6,866,137	785,658	1,872,082	282,969	1,750,071	1,242,810	10,488,290	2,311,438
Washington		316,972		114,566		423,546		855,084
Brevard	146,082,364	1,978,756	48,492,954	715,084	61,476,496	1,823,796	256,051,290	4,517,637
Clay	45,146,376	396,696	12,406,085	121,473	14,784,992	258,395	72,337,454	776,565
Duval	203,323,489	175,097	72,180,178	67,409	82,836,351	177,966	358,340,018	420,472
Flagler	4,212,463	92,002	1,520,930	32,240	3,221,493	73,227	8,954,886	197,469
Nassau	108,823	0	33,213	0	23,179	0	165,214	0
Orange	297,601,966	34,948,493	103,323,513	9,798,775	111,816,286	13,314,729	512,741,765	58,061,997
Putnam	5,608,770	586,871	1,646,686	179,691	2,421,228	306,039	9,676,684	1,072,601
Seminole	73,665,611	233,789	25,533,996	71,264	37,006,302	197,141	136,205,908	502,193
St. Johns	13,087,006	0	3,744,839	0	2,560,315	0	19,392,160	0
Volusia	41,898,109	3,723,852	14,558,142	1,379,174	21,365,757	2,575,979	77,822,008	7,679,005
Broward	730,260,709	0	241,606,199	0	227,204,009	0	1,199,070,918	0
Miami-Dade	741,227,242	26,584,348	238,463,423	7,480,026	214,387,116	31,926,121	1,194,077,780	65,990,495
Indian River	15,808,952	3,671,122	4,774,781	1,308,724	5,393,985	4,335,853	25,977,718	9,315,700
Martin	2,634,147	6,455,785	989,845	2,368,219	1,395,770	4,933,122	5,019,761	13,757,125
Monroe	55,061,523	15,238,829	15,109,078	4,254,010	35,607,484	11,922,567	105,778,085	31,415,406
Okeechobee	3,653,642	2,719,381	1,080,993	822,981	2,276,353	3,054,968	7,010,988	6,597,331
Osceola	66,269,959	23,113,647	21,754,218	6,772,300	28,571,151	26,790,483	116,595,327	56,676,430
Palm Beach	284,196,693	0	98,190,816	0	145,373,082	0	527,760,591	0
St. Lucie	21,020,297	9,592,515	7,471,517	2,767,303	9,459,168	9,394,150	37,950,983	21,753,968
TOTAL	**3,791,821,423**	**248,230,477**	**1,250,756,617**	**74,413,470**	**1,434,952,680**	**220,546,879**	**6,477,530,720**	**543,190,826**
	4,040,051,900		**1,325,170,087**		**1,655,499,559**		**7,020,721,546**	

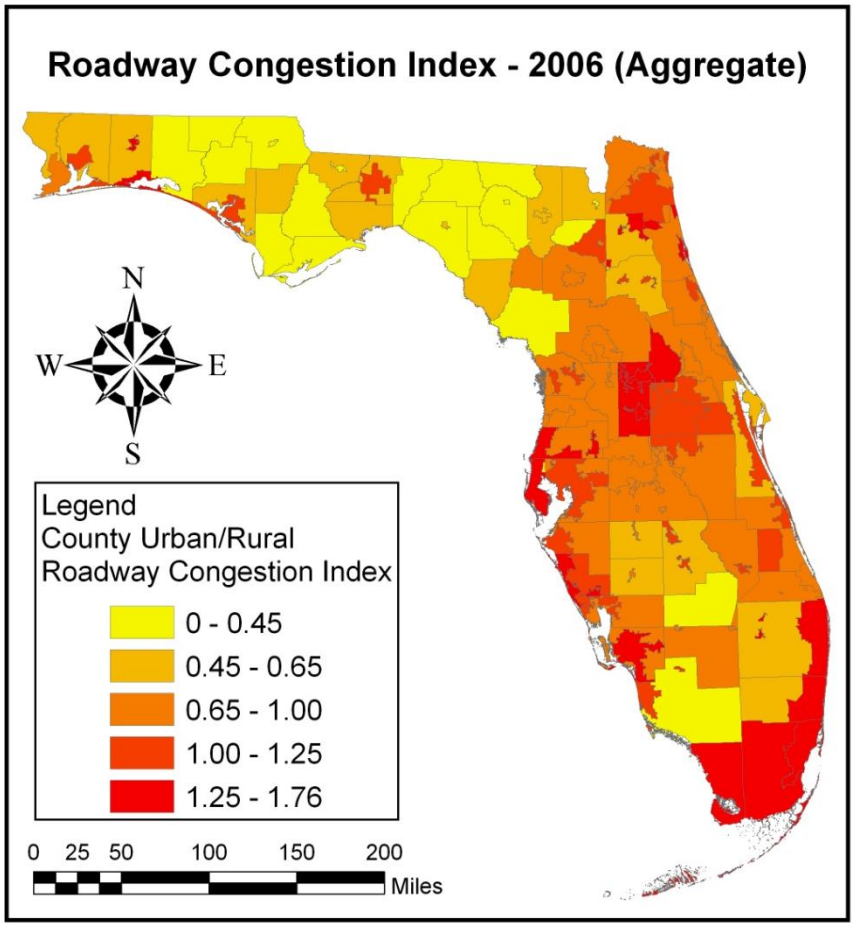
3.1.2 Maps

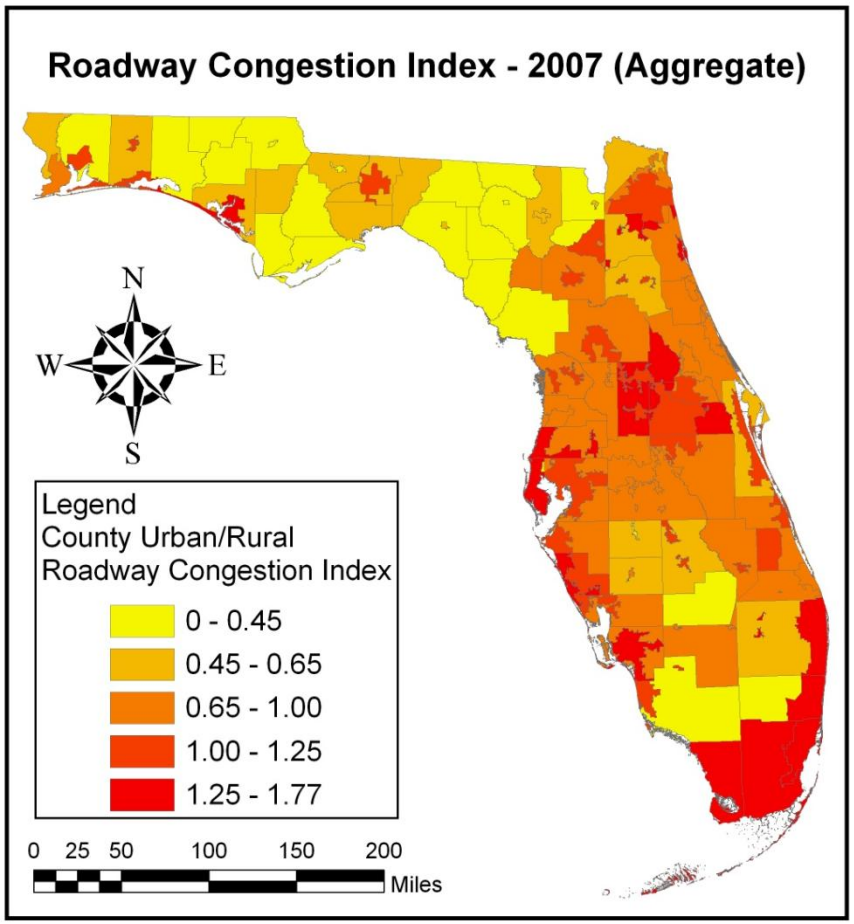
Roadway Congestion Index (RCI)





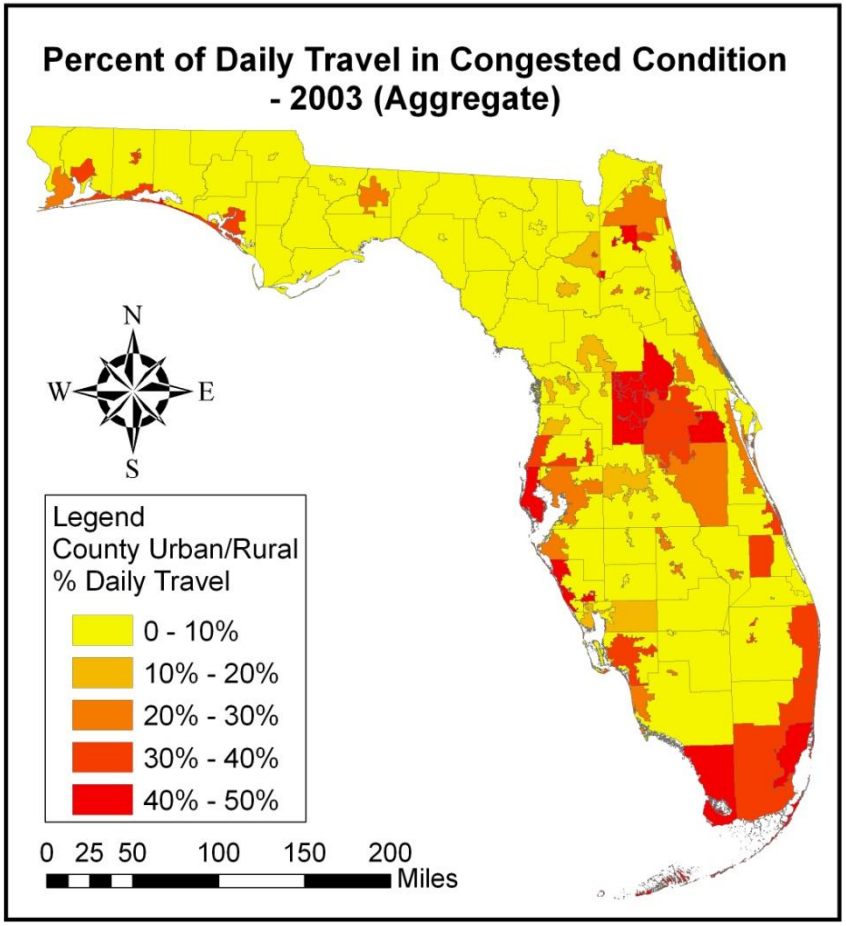

Roadway Congestion Index - 2005 (Aggregate)
N
W
E
S
Legend
County Urban/Rural
Roadway Congestion Index
0 - 0.45
0.45 - 0.65
0.65 - 1.00
1.00 - 1.25
1.25 - 1.89
0 25 50 100 150 200
Miles

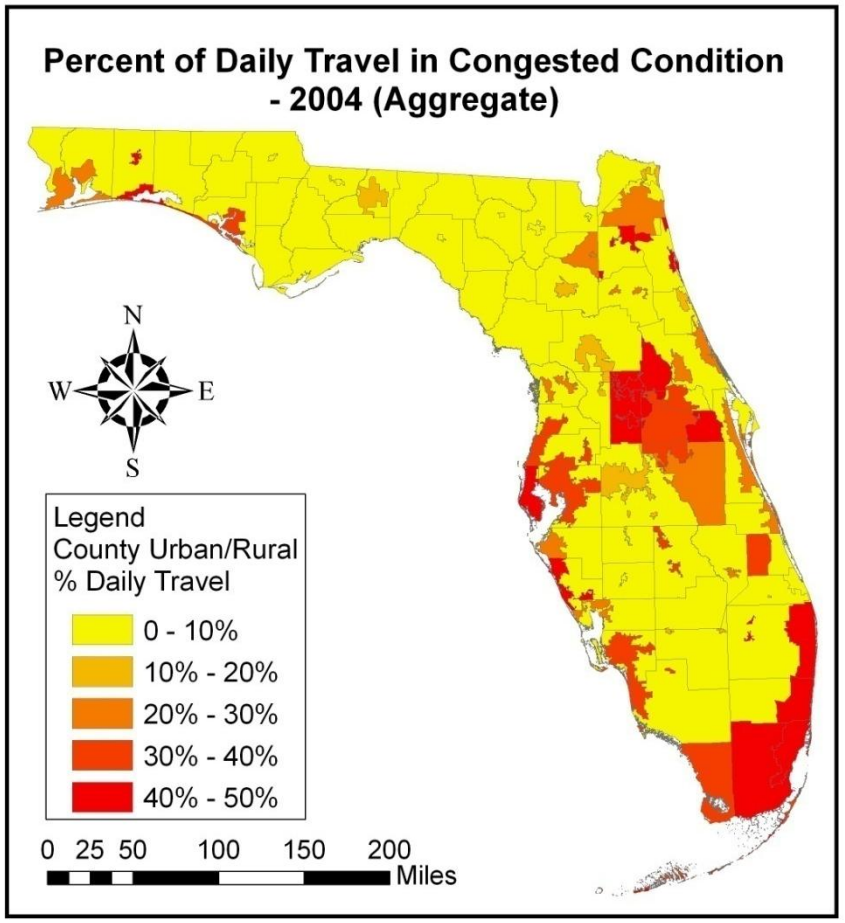

Roadway Congestion Index - 2006 (Aggregate)
N
W
E
S
Legend
County Urban/Rural
Roadway Congestion Index
0 - 0.45
0.45 - 0.65
0.65 - 1.00
1.00 - 1.25
1.25 - 1.76
0 25 50 100 150 200
Miles

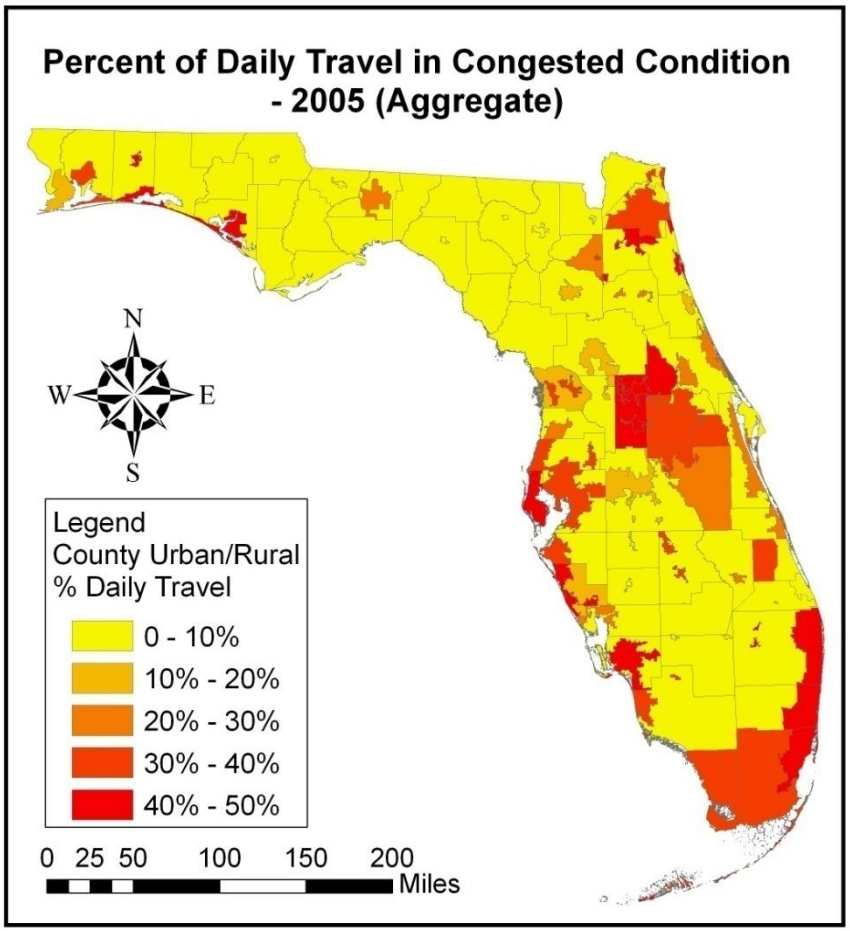


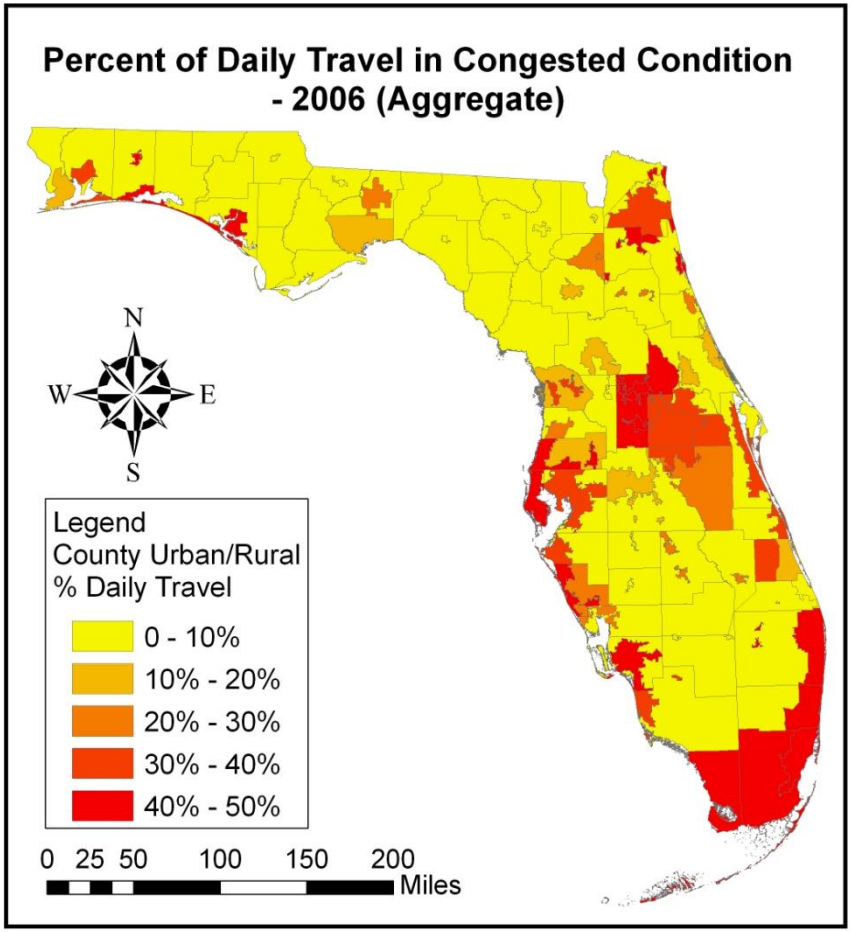
The roadway congestion index (RCI) is a measure of vehicle travel density on major roadways in an area. An RCI exceeding 1.0 indicates an undesirable congestion level on the freeways and principal arterial street systems during the peak period. The maps show that traffic congestion is heavily concentrated along the coastal areas and in Central Florida. The maps also reveal that the counties adjacent to Orlando, FL have an RCI close to or greater than 1.0, indicating that traffic congestion is not just an urban issue but a rural issue as well. Throughout the study years it appears that Central Florida experienced more volatility than any other region in Florida.

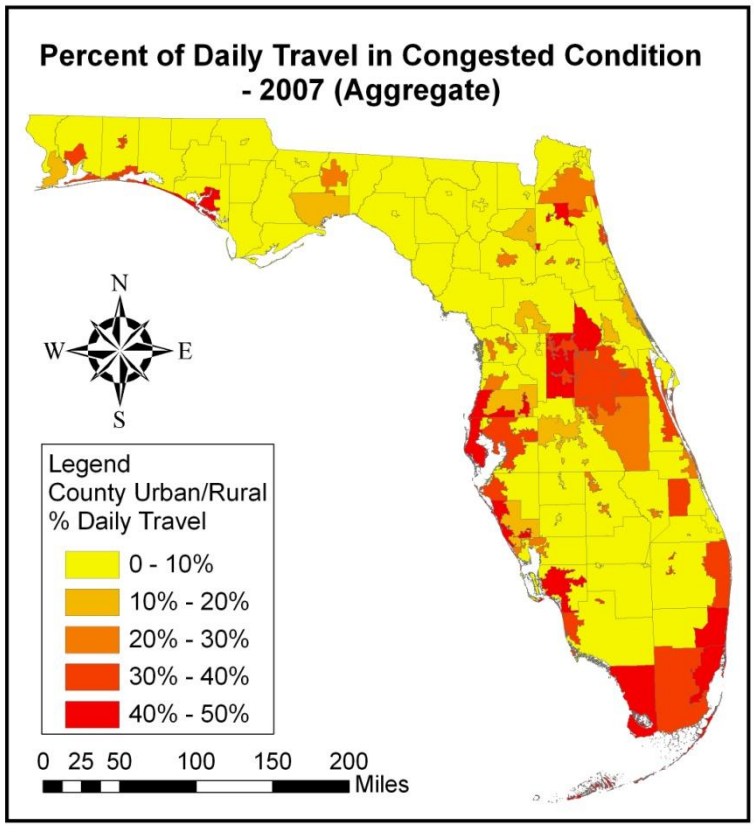
Percent of Daily Travel in Congested Conditions (PDTCC)





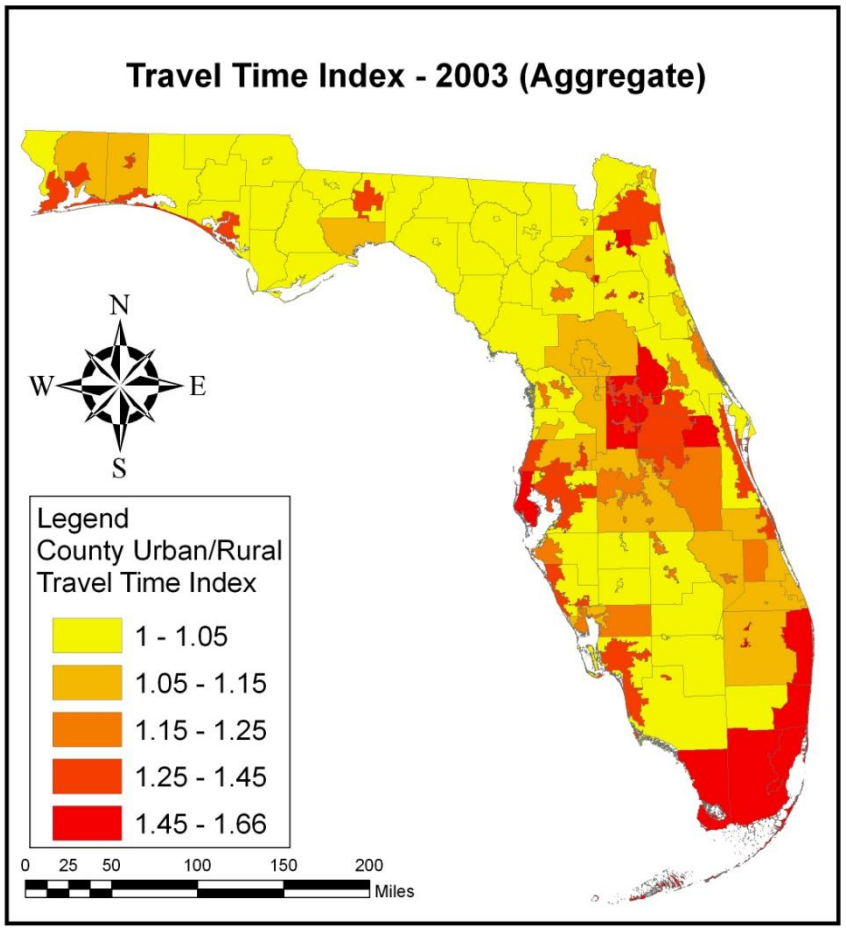

Percent of Daily Travel in Congested Condition - 2005 (Aggregate)
N
W
E
S
Legend
County Urban/Rural
% Daily Travel
0 - 10%
10% - 20%
20% - 30%
30% - 40%
40% - 50%
0 25 50 100 150 200
Miles

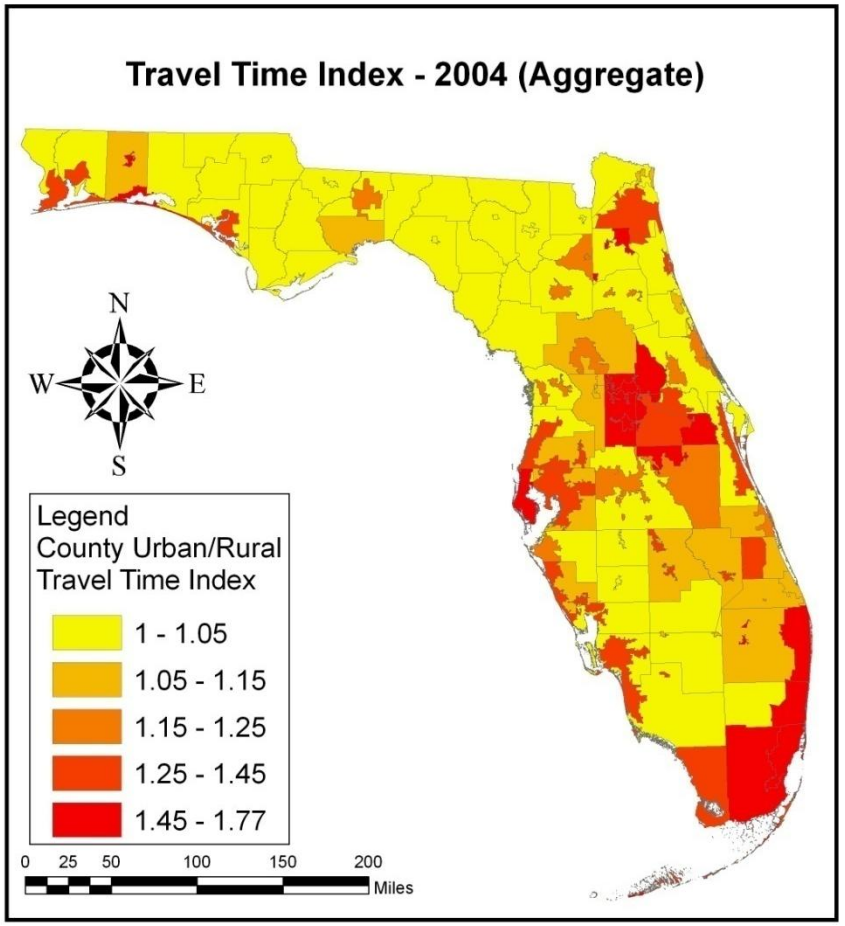

Percent of Daily Travel in Congested Condition - 2006 (Aggregate)
N
W
E
S
Legend
County Urban/Rural
% Daily Travel
0 - 10%
10% - 20%
20% - 30%
30% - 40%
40% - 50%
0 25 50 100 150 200
Miles

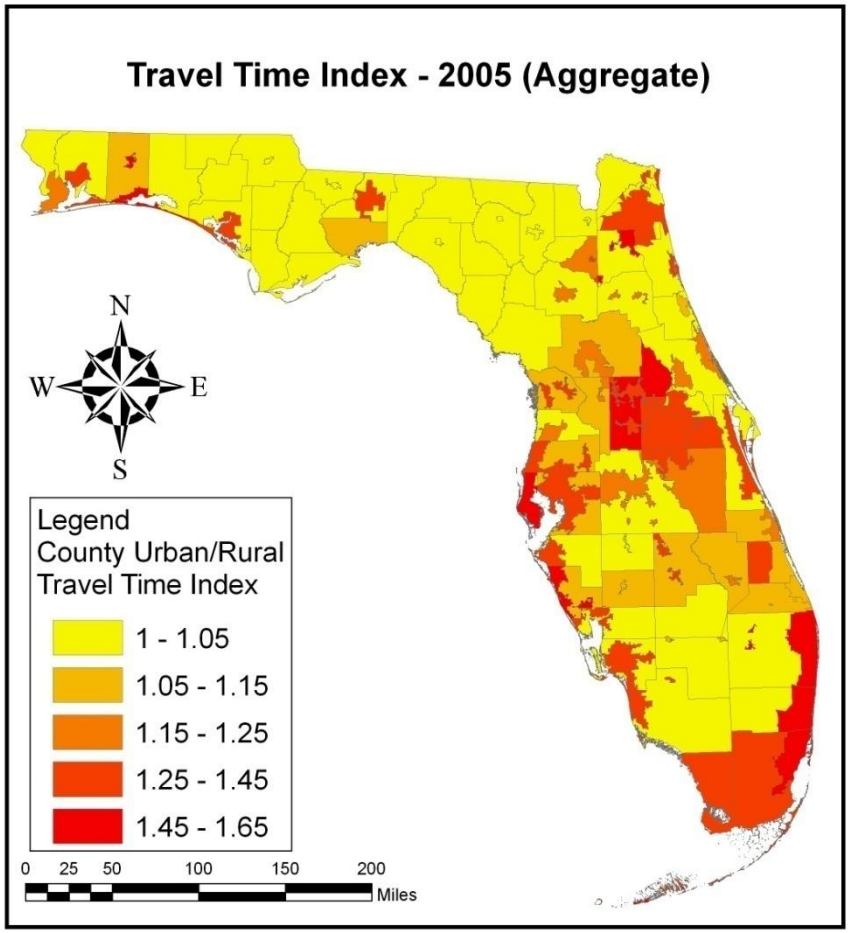


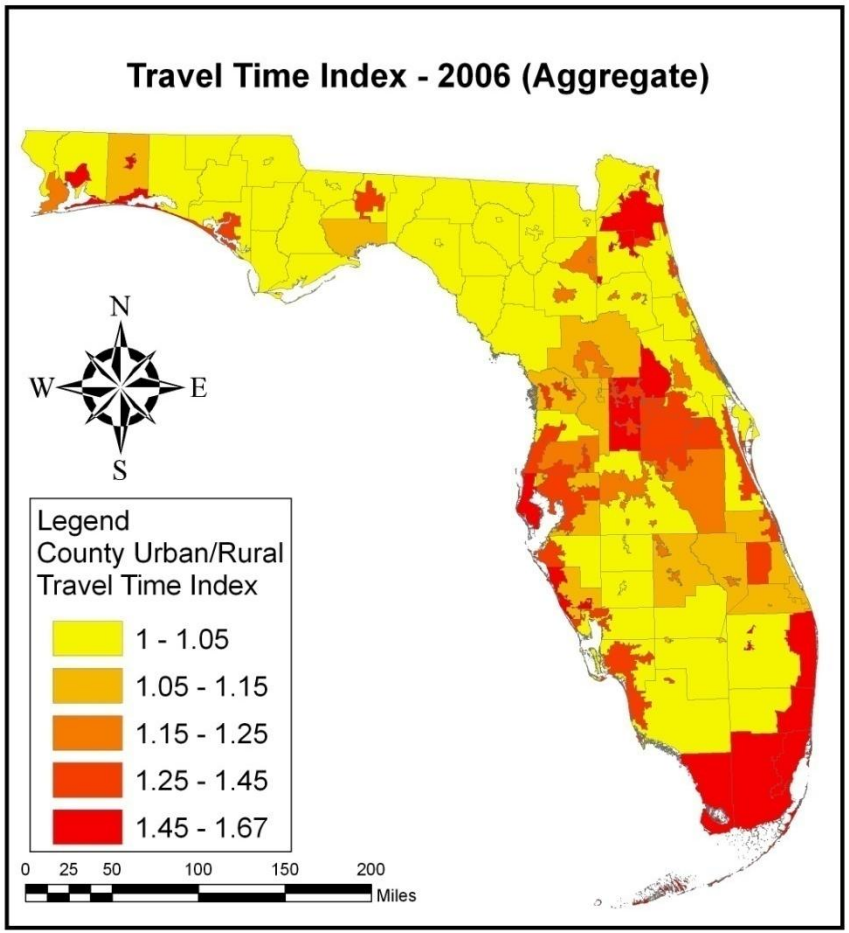
Percent of daily travel in congested conditions (PDTCC) is the amount of VMT that may suffer congestion in the peak period. Large urban areas have peak periods that are typically longer than smaller or less congested areas because not all of the demand can be handled by the transportation network during a single hour. The maximum value is 50% of daily vehicle-miles of travel. Unlike the roadway congestion index (RCI), the PDTCC shows that congestion, for the most part, is concentrated in the major cities and volatility within Central Florida isn't as severe.

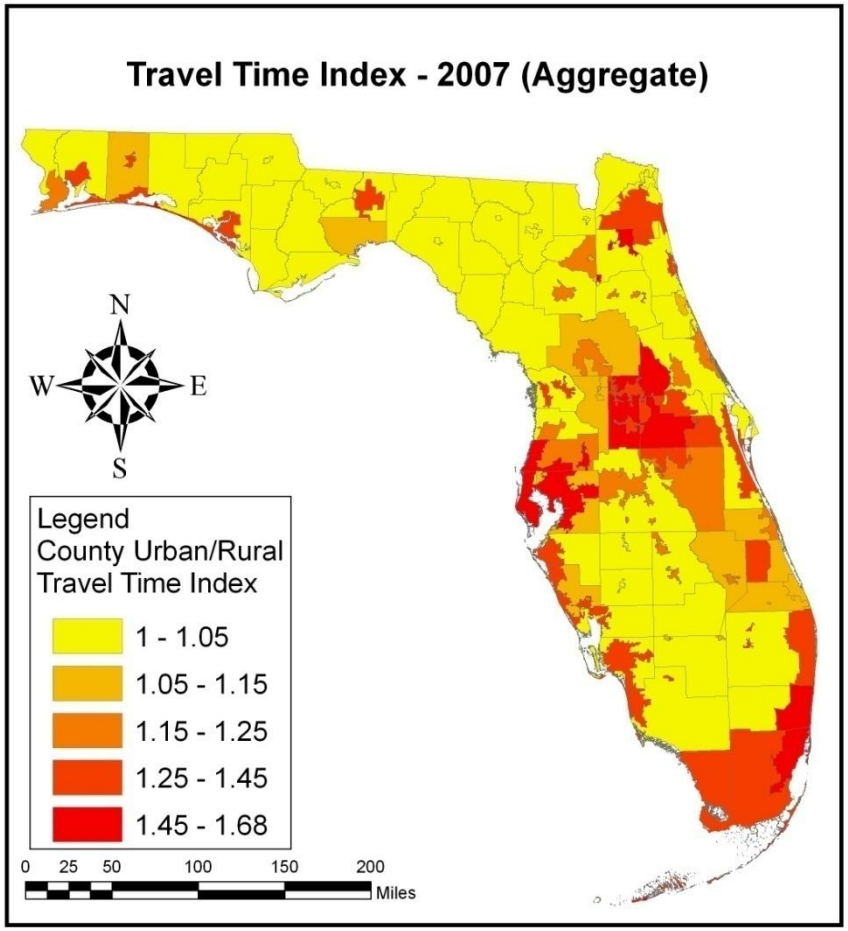
Travel Time Index





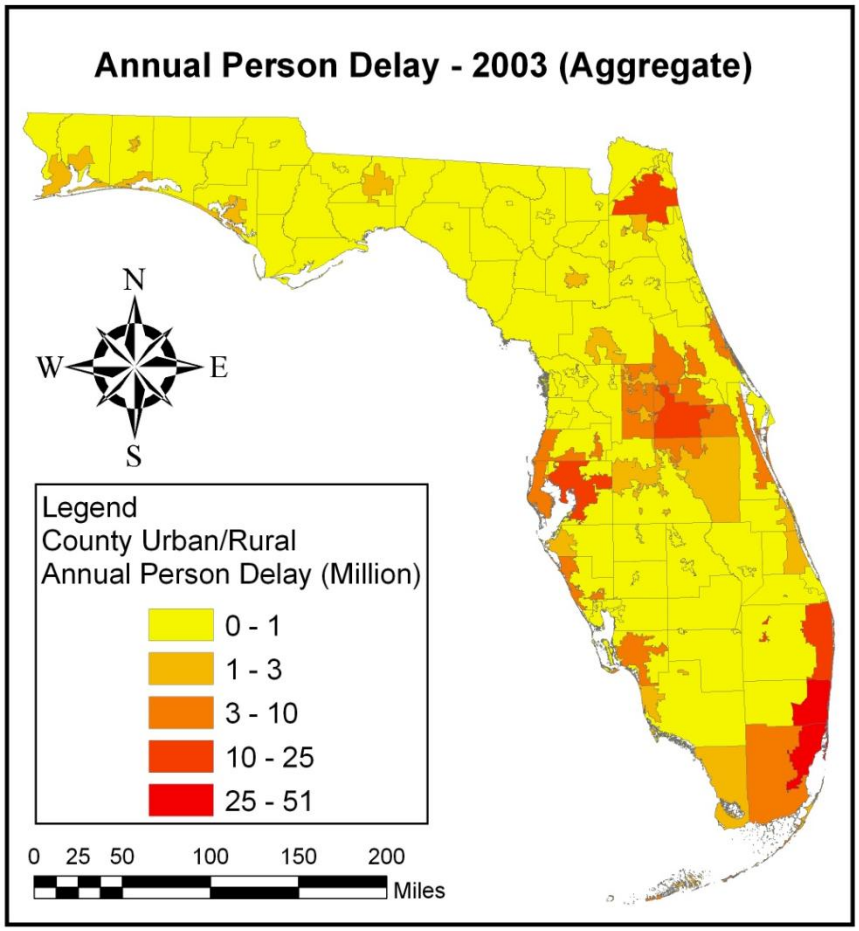

Travel Time Index - 2005 (Aggregate)
N
W
E
S
Legend
County Urban/Rural
Travel Time Index
1 - 1.05
1.05 - 1.15
1.15 - 1.25
1.25 - 1.45
1.45 - 1.65
0 25 50 100 150 200
Miles

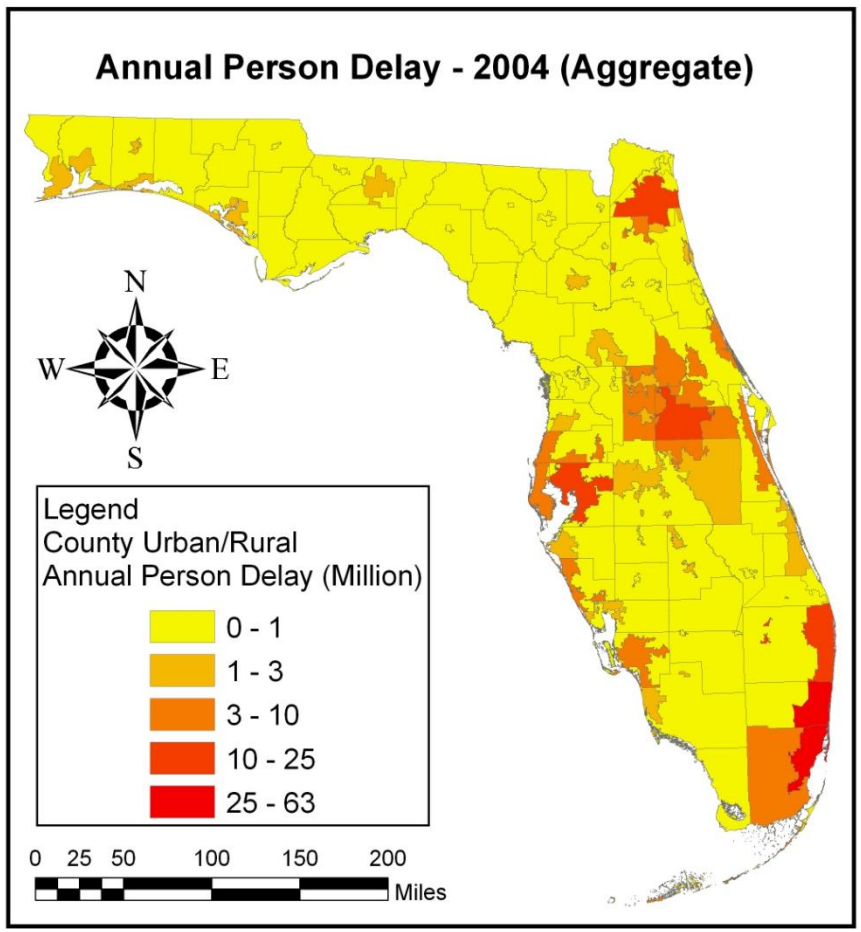

Travel Time Index - 2006 (Aggregate)
N
W
E
S
Legend
County Urban/Rural
Travel Time Index
1 - 1.05
1.05 - 1.15
1.15 - 1.25
1.25 - 1.45
1.45 - 1.67
0 25 50 100 150 200
Miles

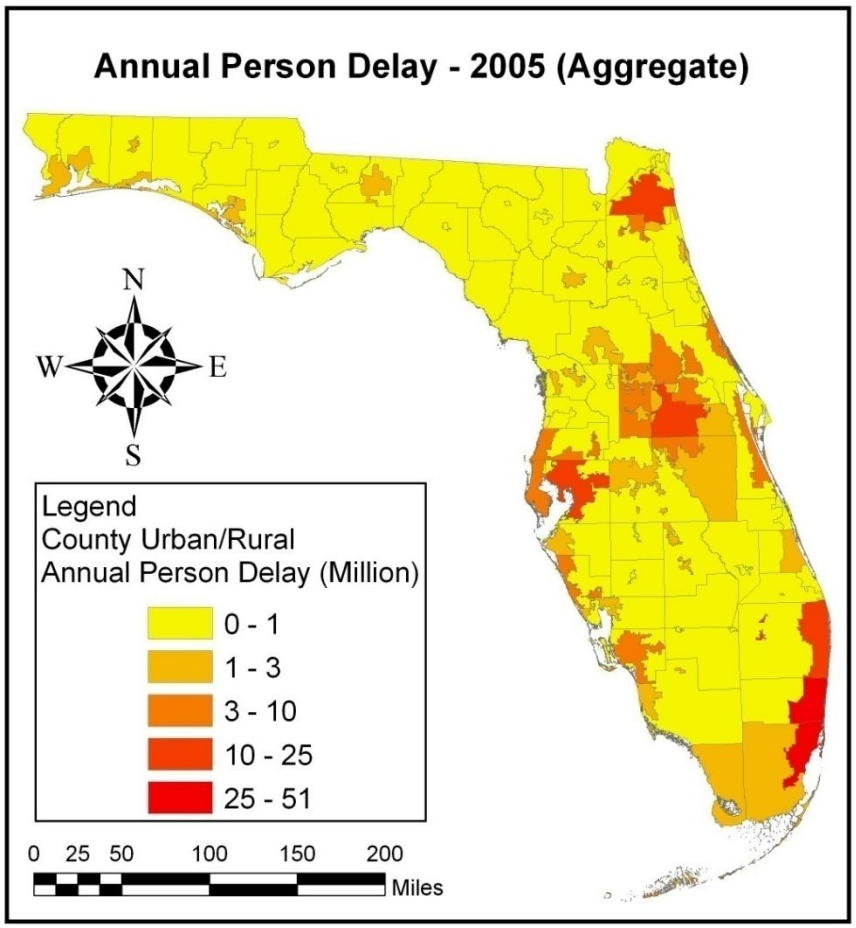


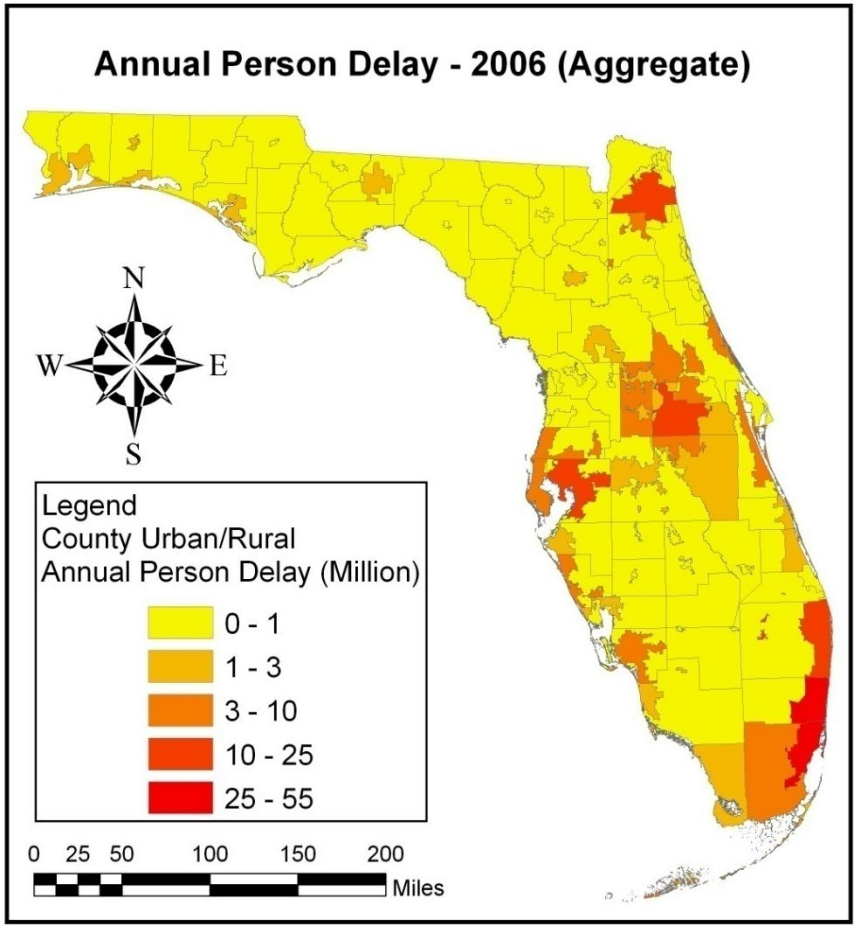
The travel time index illustrates the comparison of peak period travel to free-flow travel time. The travel time index includes both recurring and incident conditions and is, therefore, an estimate of the conditions faced by travelers. The maps show that the most fluctuation occurred in the Northeast and Southern regions of Florida. These regions include Duval, Miami-Dade, and Monroe County. From 2003-2006 congestion increased in all three of the counties, and in 2007 congestion decreased. The 2007 decrease in traffic congestion can be attributed to high gas prices and job loss. For more information on this refer to the analysis at the beginning of Section 3.

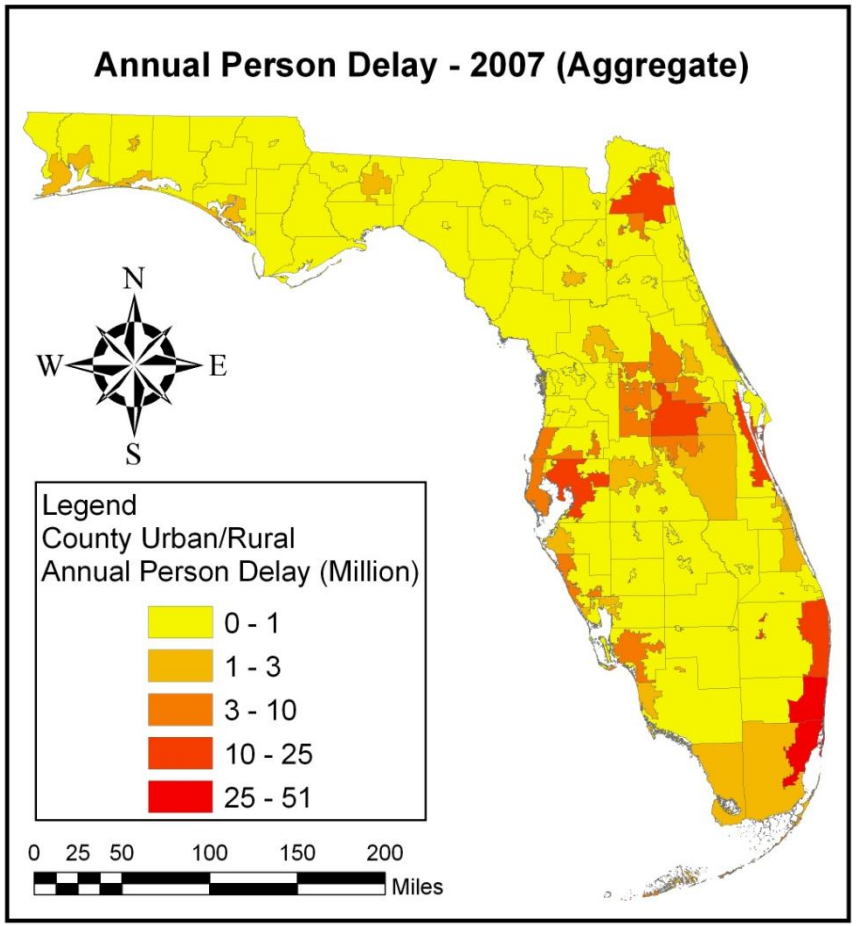
Annual Person Delay





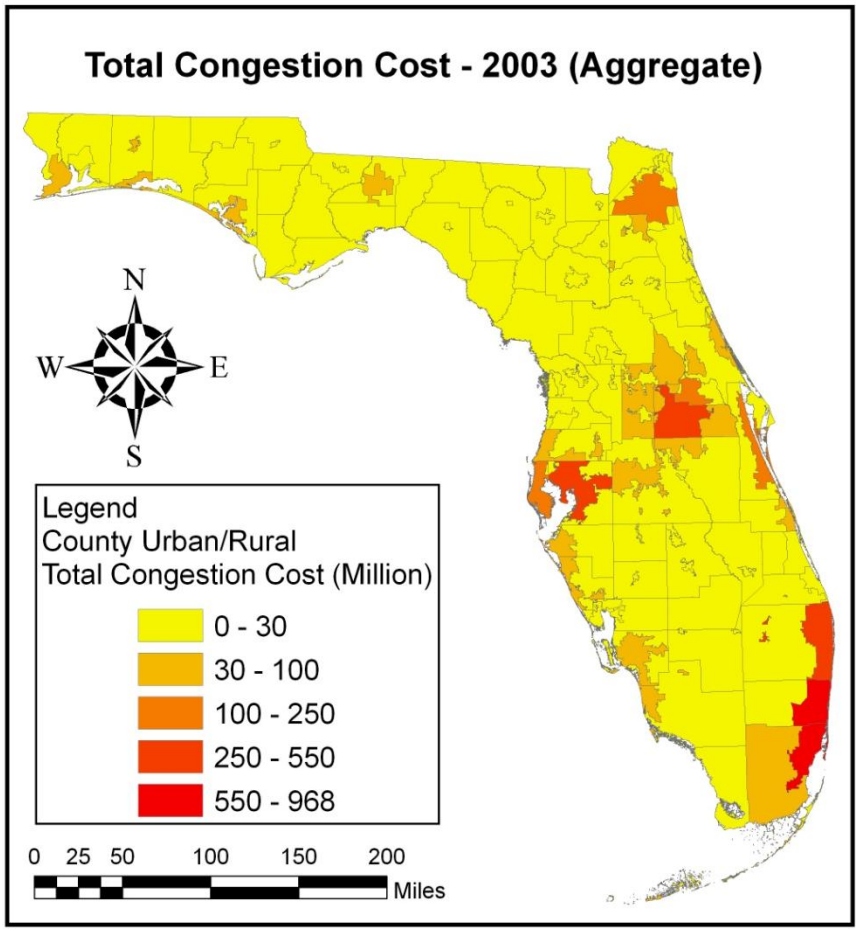

Annual Person Delay - 2005 (Aggregate)
N
W
E
S
Legend
County Urban/Rural
Annual Person Delay (Million)
0 - 1
1 - 3
3 - 10
10 - 25
25 - 51
0 25 50 100 150 200
Miles

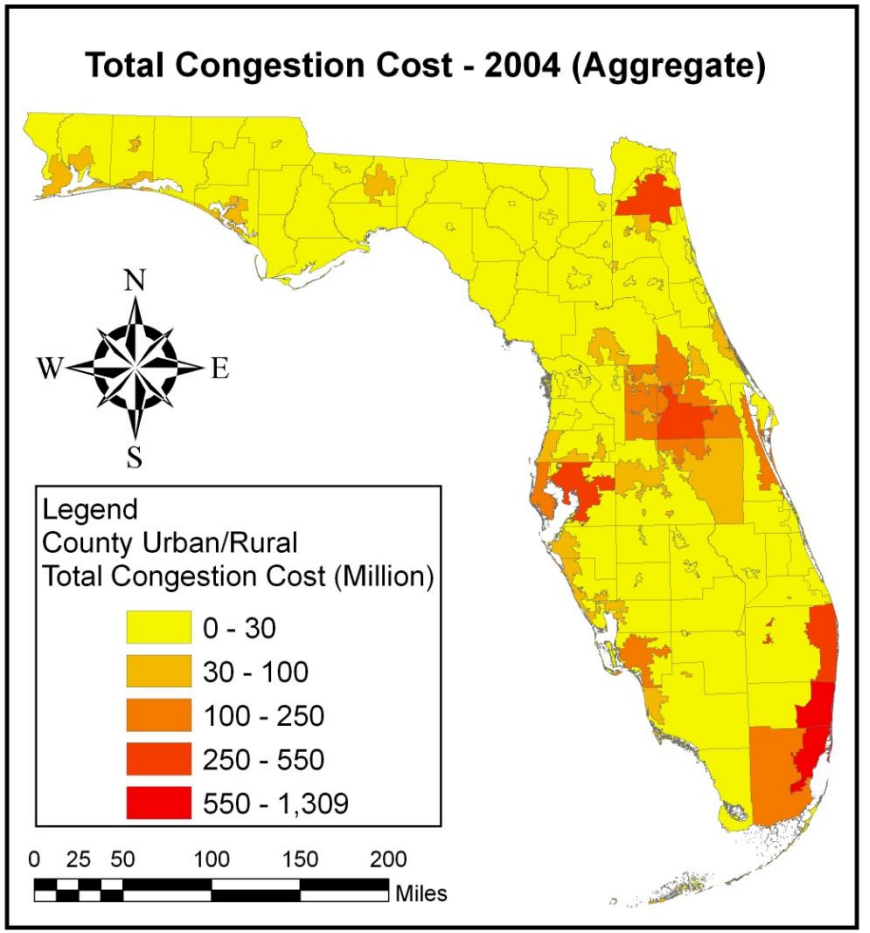

Annual Person Delay - 2006 (Aggregate)
N
W
E
S
Legend
County Urban/Rural
Annual Person Delay (Million)
0 - 1
1 - 3
3 - 10
10 - 25
25 - 55
0 25 50 100 150 200
Miles

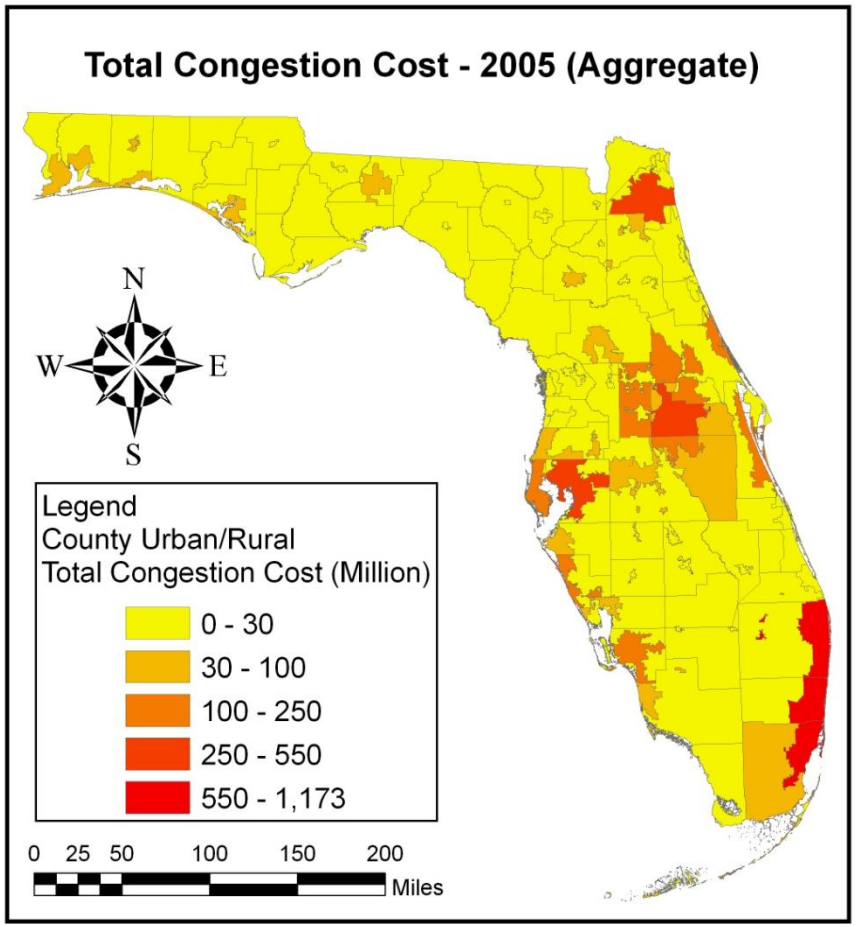


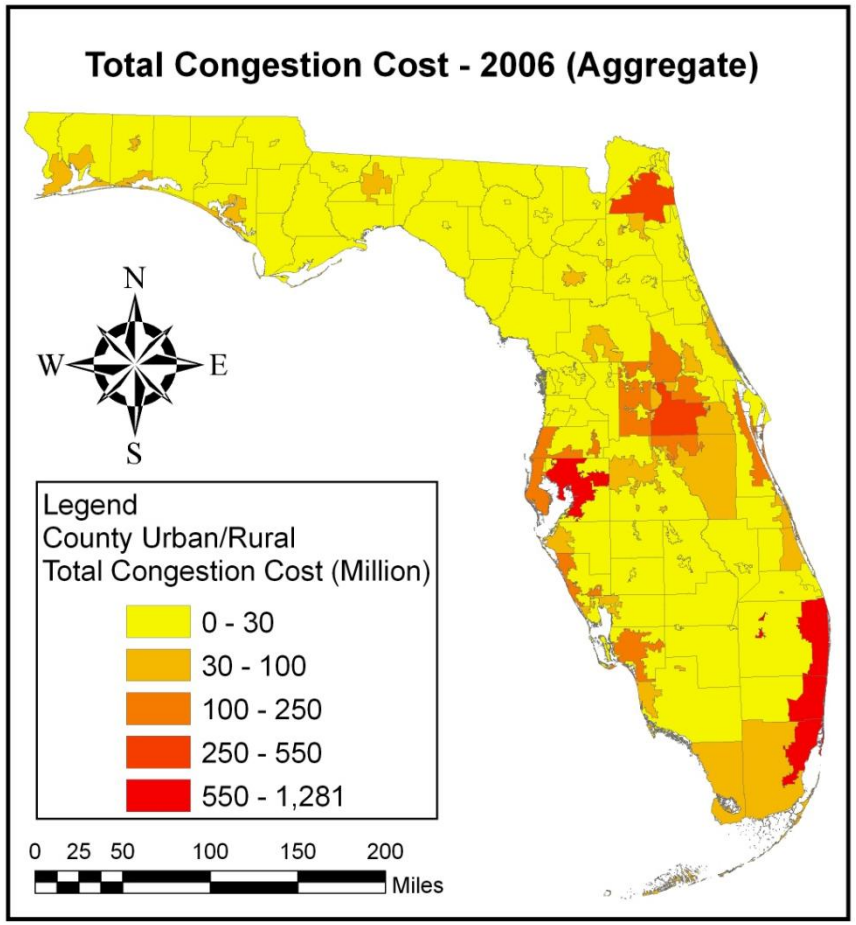
This calculation is performed to expand the daily recurring and incident delay estimates for freeways and arterial streets to a yearly estimate in each study area. Travelers' who value their time might want to avoid commuting in the Northeast, Central, and Southern regions of Florida. In these regions the counties that have the highest annual person delay are Duval, Orange, Hillsborough, Miami-Dade, and Broward County.

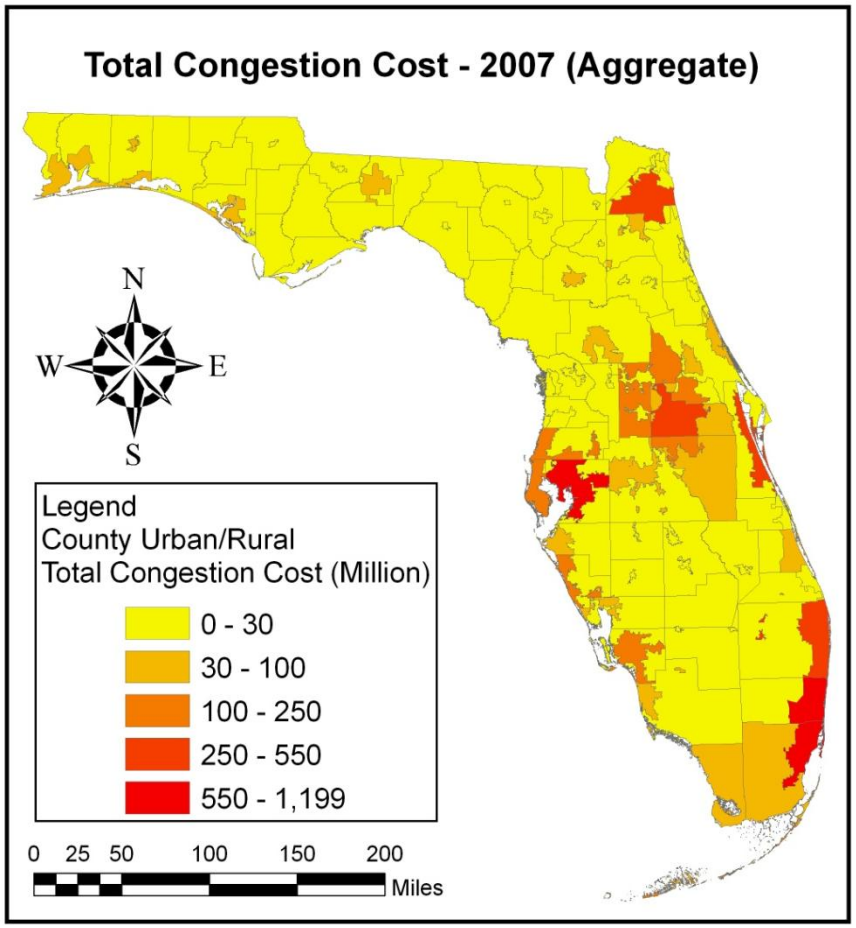
Total Cost of Traffic Congestion on Freeways and Other Principal Arterials





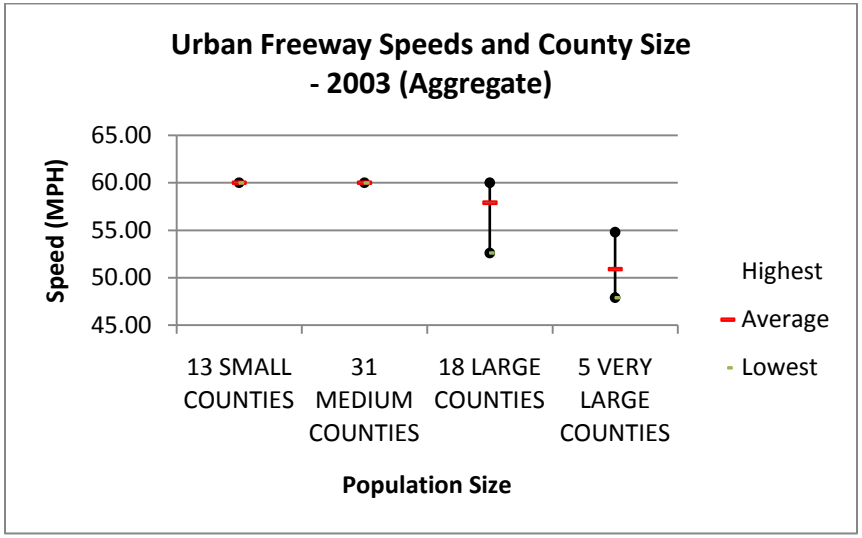

Total Congestion Cost - 2005 (Aggregate)
N
W
E
S
Legend
County Urban/Rural
Total Congestion Cost (Million)
0 - 30
30 - 100
100 - 250
250 - 550
550 - 1,173
0 25 50 100 150 200
Miles

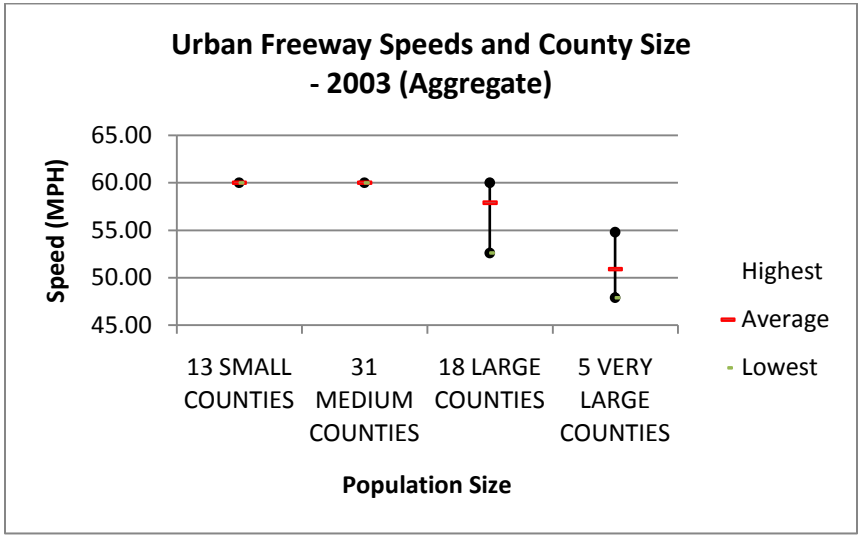

Total Congestion Cost - 2006 (Aggregate)
N
W
E
S
Legend
County Urban/Rural
Total Congestion Cost (Million)
0 - 30
30 - 100
100 - 250
250 - 550
550 - 1,281
0 25 50 100 150 200
Miles

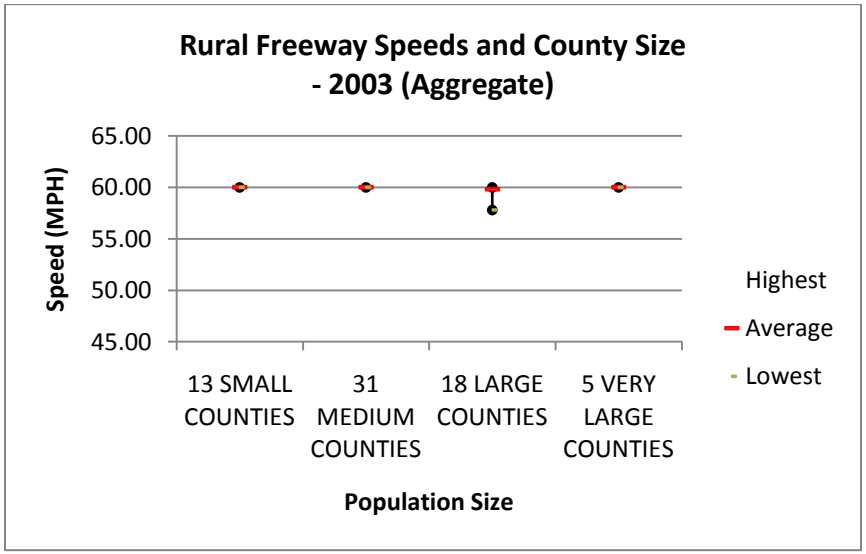


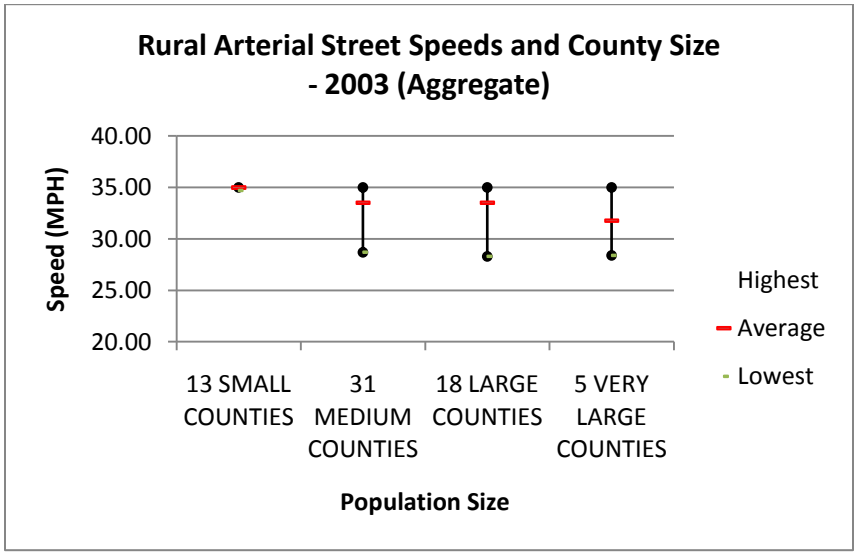
Total congestion cost combines the cost due to travel delay and wasted fuel to determine the annual cost due to congestion resulting from incident and recurring delay. Calculations performed using the aggregate methodology indicated that cost attributable to traffic congestion were $5 billion in 2003, peaked at $7.1 billion in 2006, and lowered slightly to just over $7 billion in 2007. Northeast, Central, and South Florida are the costliest congestion regions, and should receive priority when considering public interventions.

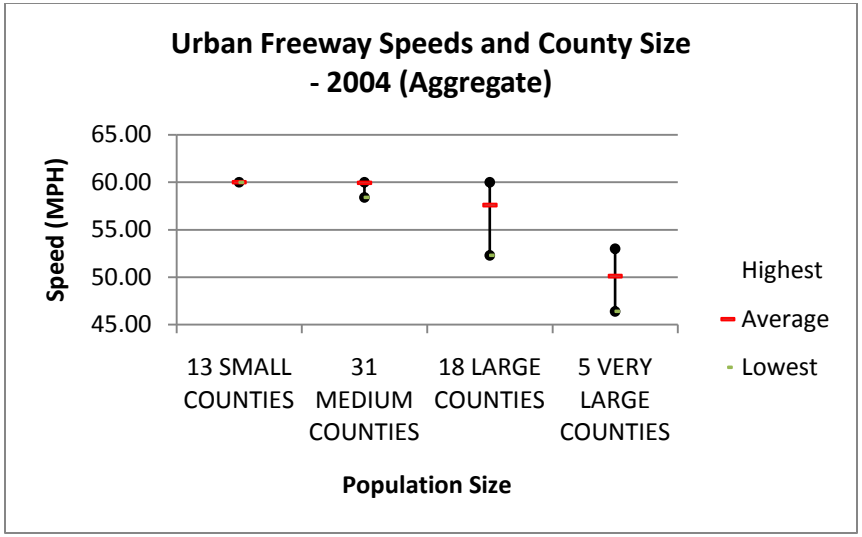
3.1.3 Speed Diagrams

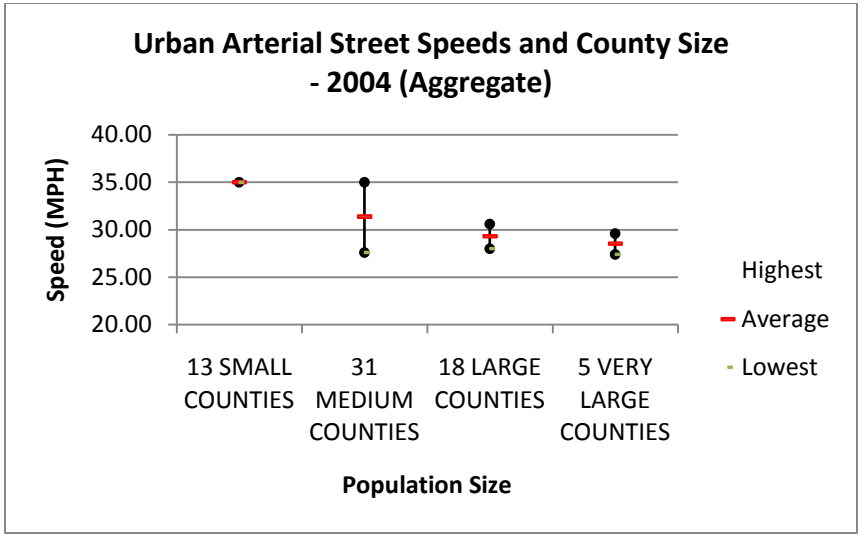


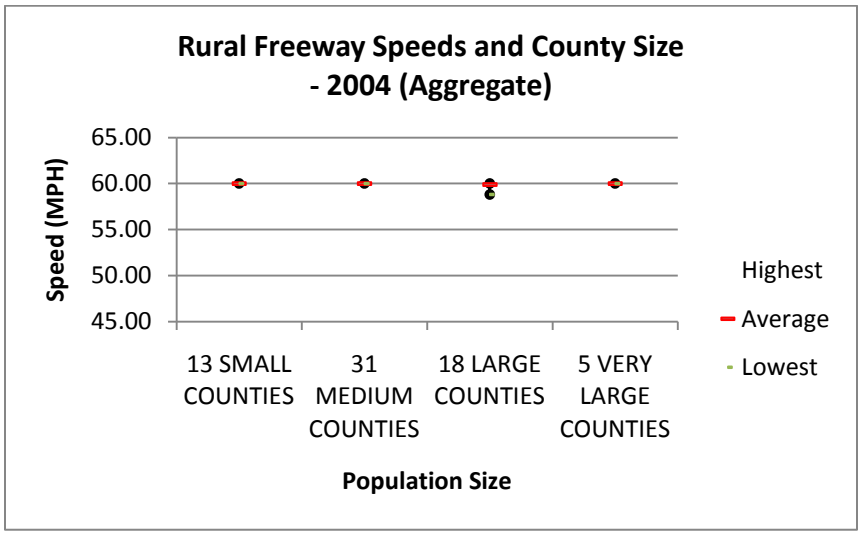


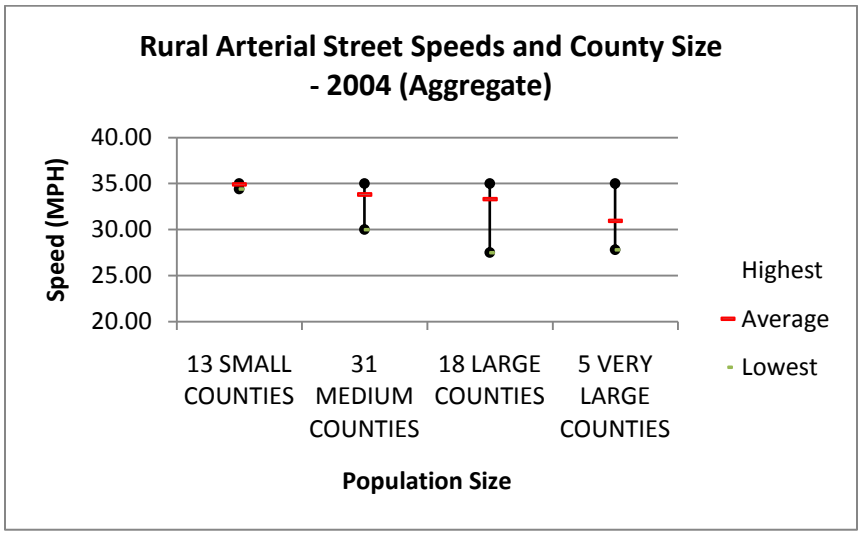





Urban Freeway Speeds and County Size - 2004 (Aggregate)
Speed (MPH)
65.00
60.00
55.00
50.00
45.00
13 SMALL COUNTIES
31 MEDIUM COUNTIES
18 LARGE COUNTIES
5 VERY LARGE COUNTIES
Population Size
Highest
Average
Lowest


Urban Arterial Street Speeds and County Size - 2004 (Aggregate)
Speed (MPH)
40.00
35.00
30.00
25.00
20.00
13 SMALL COUNTIES
31 MEDIUM COUNTIES
18 LARGE COUNTIES
5 VERY LARGE COUNTIES
Population Size
Highest
Average
Lowest


Rural Freeway Speeds and County Size - 2004 (Aggregate)
Speed (MPH)
65.00
60.00
55.00
50.00
45.00
13 SMALL COUNTIES
31 MEDIUM COUNTIES
18 LARGE COUNTIES
5 VERY LARGE COUNTIES
Population Size
Highest
Average
Lowest


Rural Arterial Street Speeds and County Size - 2004 (Aggregate)
Speed (MPH)
40.00
35.00
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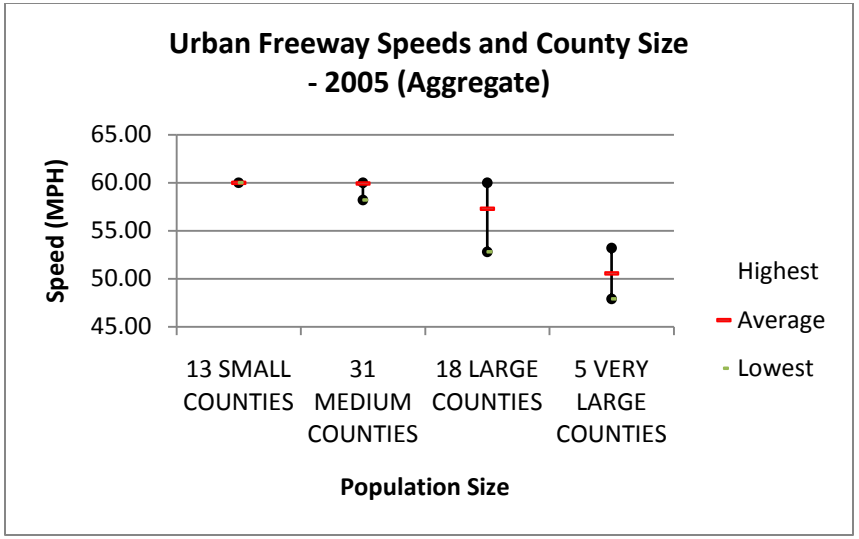
20.00
13 SMALL COUNTIES
31 MEDIUM COUNTIES
18 LARGE COUNTIES
5 VERY LARGE COUNTIES
Population Size
Highest
Average
Lowest


Urban Freeway Speeds and County Size - 2005 (Aggregate)
Speed (MPH)
65.00
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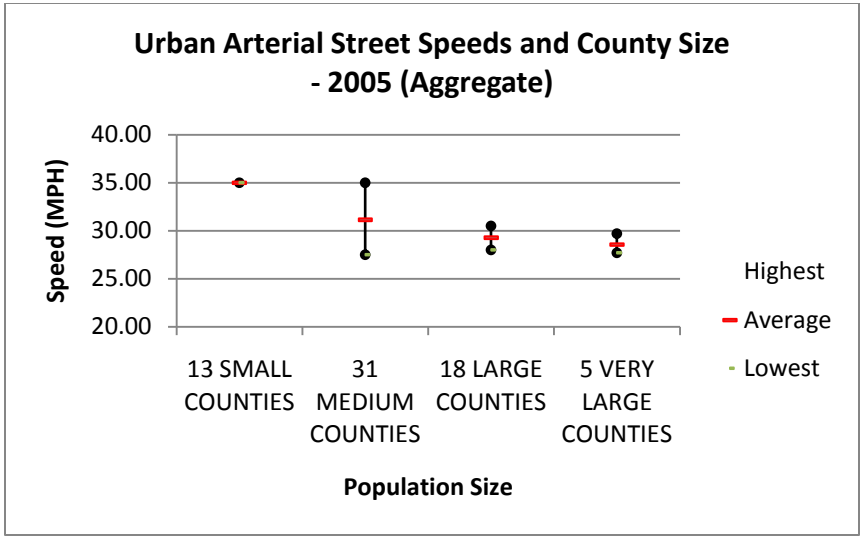
13 SMALL COUNTIES
31 MEDIUM COUNTIES
18 LARGE COUNTIES
5 VERY LARGE COUNTIES
Population Size
Highest
Average
Lowest


Urban Arterial Street Speeds and County Size - 2005 (Aggregate)
Speed (MPH)
40.00
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13 SMALL COUNTIES
31 MEDIUM COUNTIES
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Population Size
Highest
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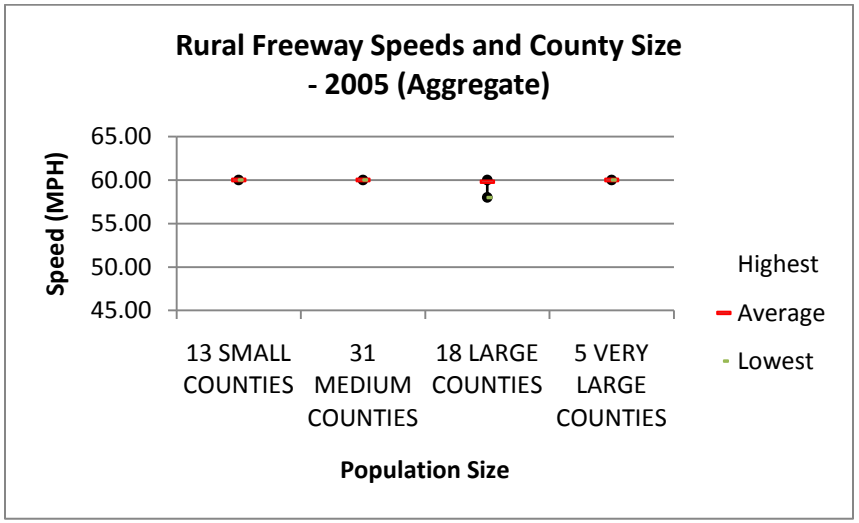
Rural Freeway Speeds and County Size - 2005 (Aggregate)
Speed (MPH)
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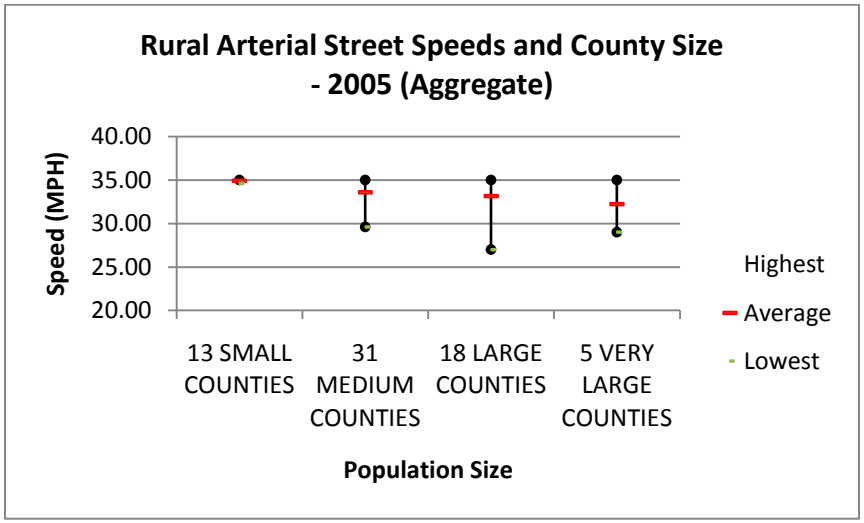
13 SMALL COUNTIES
31 MEDIUM COUNTIES
18 LARGE COUNTIES
5 VERY LARGE COUNTIES
Population Size
Highest
Average
Lowest


Rural Arterial Street Speeds and County Size - 2005 (Aggregate)
Speed (MPH)
40.00
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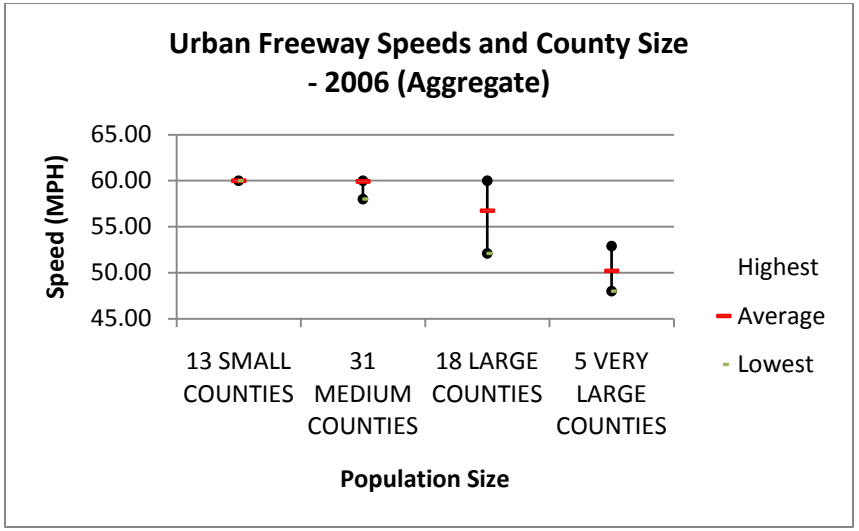
30.00
25.00
20.00
13 SMALL COUNTIES
31 MEDIUM COUNTIES
18 LARGE COUNTIES
5 VERY LARGE COUNTIES
Population Size
Highest
Average
Lowest


Urban Freeway Speeds and County Size - 2006 (Aggregate)
Speed (MPH)
65.00
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13 SMALL COUNTIES
31 MEDIUM COUNTIES
18 LARGE COUNTIES
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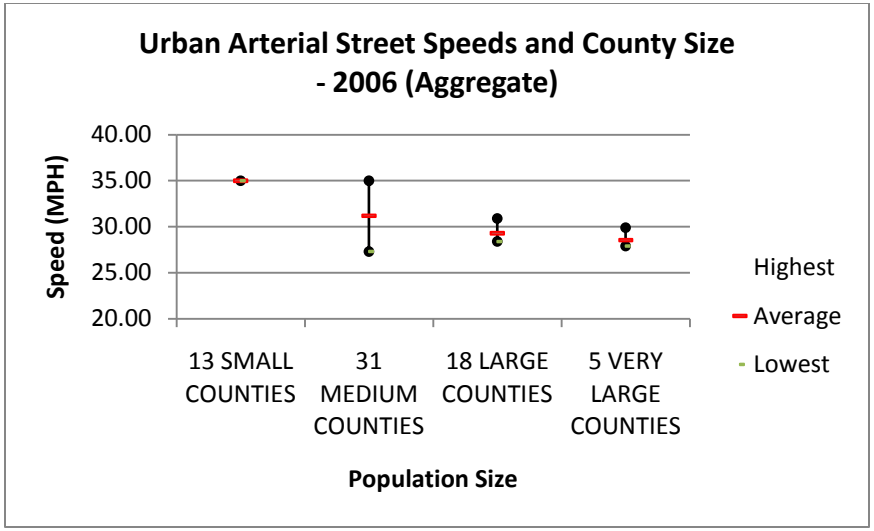
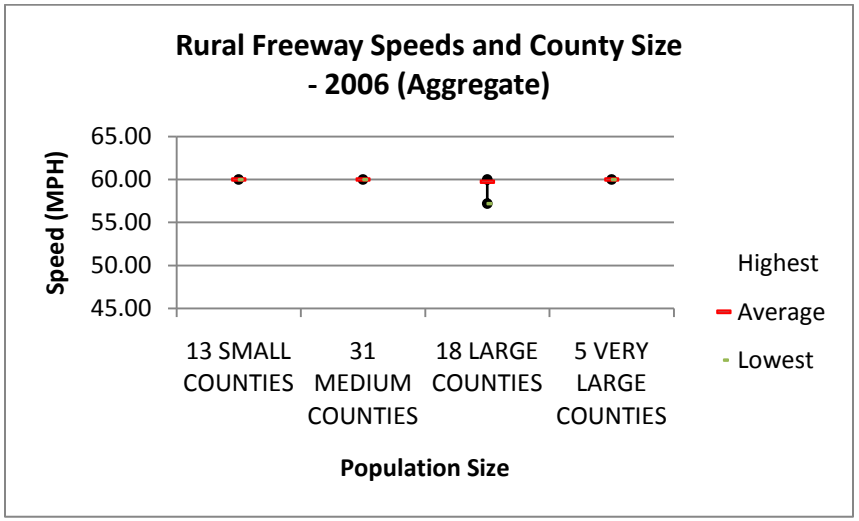
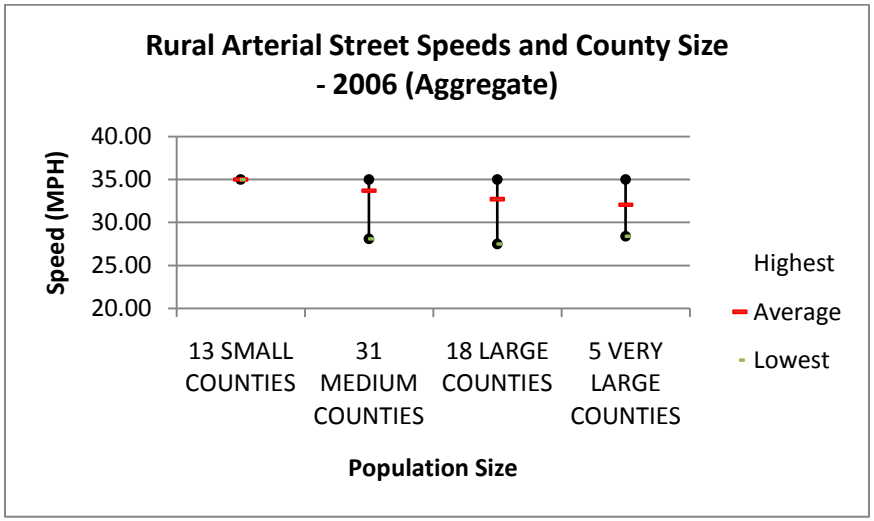
Population Size
Highest
Average
Lowest


Urban Arterial Street Speeds and County Size - 2006 (Aggregate)
Speed (MPH)
40.00
35.00
30.00
25.00
20.00
13 SMALL COUNTIES
31 MEDIUM COUNTIES
18 LARGE COUNTIES
5 VERY LARGE COUNTIES
Population Size
Highest
Average
Lowest


Rural Freeway Speeds and County Size - 2006 (Aggregate)
Speed (MPH)
65.00
60.00
55.00
50.00
45.00
13 SMALL COUNTIES
31 MEDIUM COUNTIES
18 LARGE COUNTIES
5 VERY LARGE COUNTIES
Population Size
Highest
Average
Lowest


Rural Arterial Street Speeds and County Size - 2006 (Aggregate)
Speed (MPH)
40.00
35.00
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25.00
20.00
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31 MEDIUM COUNTIES
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Population Size
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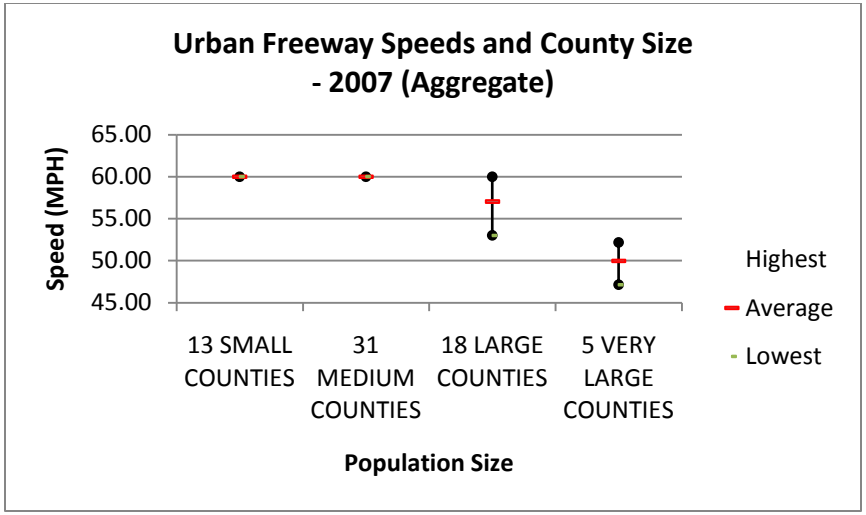
Urban Freeway Speeds and County Size - 2007 (Aggregate)
Speed (MPH)
65.00
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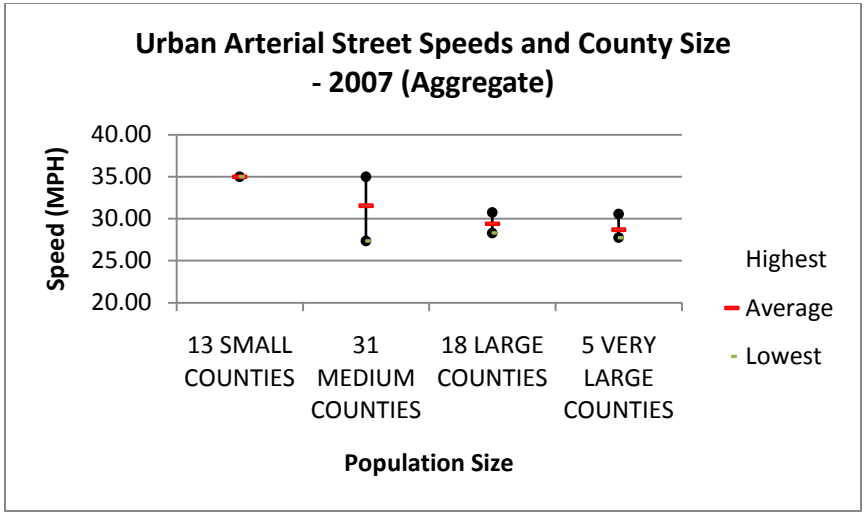
Urban Arterial Street Speeds and County Size - 2007 (Aggregate)
Speed (MPH)
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31 MEDIUM COUNTIES
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5 VERY LARGE COUNTIES
Population Size
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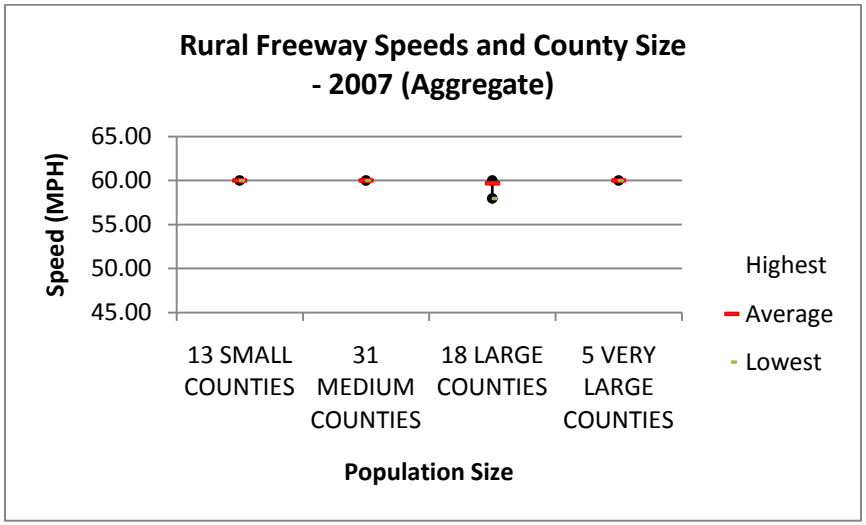
Average
Lowest


Rural Freeway Speeds and County Size - 2007 (Aggregate)
Speed (MPH)
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50.00
45.00
13 SMALL COUNTIES
31 MEDIUM COUNTIES
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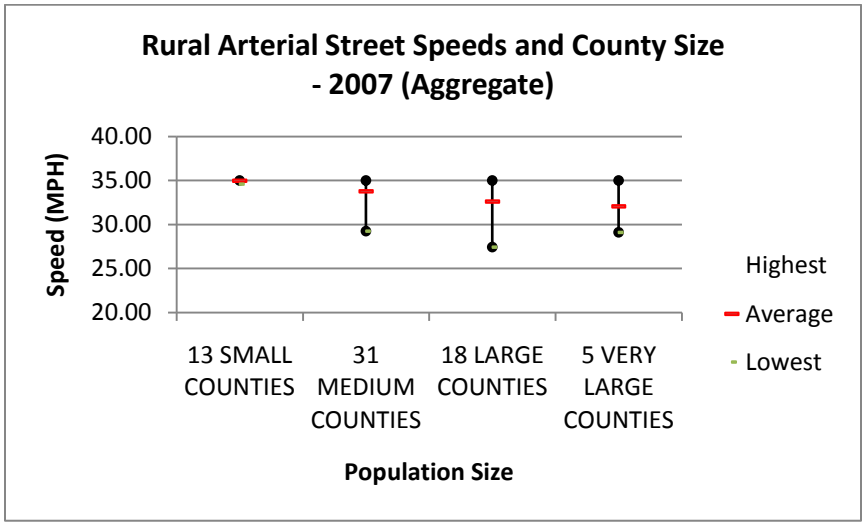
Rural Arterial Street Speeds and County Size - 2007 (Aggregate)
Speed (MPH)
40.00
35.00
30.00
25.00
20.00
13 SMALL COUNTIES
31 MEDIUM COUNTIES
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5 VERY LARGE COUNTIES
Population Size
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The speed diagrams show the following trends:

1. Regardless of county size, urban areas experience more traffic congestion than rural areas.
2. In urban areas, travel speed is more sensitive to county size on freeways than on arterial streets; whereas the reverse is observed in rural areas. The corollary of this is that in urban areas congestion is a problem both on freeways and arterials while in rural areas congestion is more a problem on arterials. These results are coincident with the results found by the HDR's study for the Chicago Metropolitan area mentioned in the introduction of this document. The HDR study uses county-by-county breakdowns of congestion, finding that only in the city of Chicago congestion was higher on expressways than on arterials routes. Outside Chicago the pattern was reversed, the majority of delay occurred on arterials rather than on expressways.
3. These results do not change when different methods of aggregation are used. Therefore, it can be concluded that this is a consistent trend that should be considered when formulating policies to address congestion in urban and rural areas.

Section 3.2 Disaggregate County

3.2.1 Tables

Roadway Congestion Index

COUNTY NAME	2003		2004		2005		2006		2007	
	URBAN	RURAL	URBAN	RURAL	URBAN	RURAL	URBAN	RURAL	URBAN	RURAL
Charlotte	0.75	0.91	1.06	0.91	1.11	0.79	1.07	0.81	1.01	0.76
Citrus	1.03	0.55	1.04	0.69	1.19	0.74	1.12	0.72	1.15	0.72
Collier	1.07	0.35	1.14	0.37	1.12	0.36	1.11	0.37	1.11	0.35
Desoto	0.73	0.60	0.86	0.67	0.70	0.47	0.73	0.48	0.75	0.51
Glades		0.37		0.46		0.42		0.42		0.38
Hardee	0.71	0.44	0.81	0.54	0.76	0.52	0.67	0.50	0.38	0.46
Hendry	0.78	0.64	0.88	0.69	0.87	0.73	0.89	0.75	0.91	0.74
Hernando	1.07	0.63	1.27	0.68	0.95	0.69	0.94	0.71	0.86	0.67
Highlands	1.10	0.55	1.26	0.65	1.22	0.62	1.17	0.61	1.06	0.58
Hillsborough	1.11	0.71	1.19	0.80	1.18	0.79	1.20	0.75	1.24	0.83
Lake	1.33	1.60	1.46	1.75	1.40	1.89	1.36	1.76	1.25	1.77
Lee	1.10	0.66	1.16	0.69	1.33	0.78	1.38	0.80	1.33	0.74
Manatee	0.99	0.62	1.06	0.69	1.11	0.88	1.13	0.65	1.11	0.68
Pasco	1.28	0.84	1.28	0.90	1.25	0.92	1.31	0.94	1.33	0.95
Pinellas	1.52		1.52		1.46		1.41		1.46	
Polk	0.86	1.05	0.85	0.77	0.85	0.82	0.85	0.89	0.87	0.90
Sarasota	1.30	0.87	1.36	0.95	1.44	1.03	1.49	1.08	1.41	1.03
Sumter	0.93	0.73	0.98	0.79	1.01	0.79	0.85	0.79	0.84	0.80
Alachua	0.96	0.65	0.91	0.60	0.98	0.64	0.98	0.67	1.04	0.69
Baker	0.48	0.40	0.60	0.43	0.62	0.44	0.43	0.48	0.47	0.40
Bradford	1.21	1.00	0.79	1.03	0.87	1.13	0.81	1.07	0.78	1.03
Columbia	0.54	0.43	0.56	0.43	0.57	0.44	0.57	0.47	0.55	0.48
Dixie		0.38		0.42		0.43		0.46		0.43
Gilchrist		0.72		0.93		0.87		0.84		0.76
Hamilton		0.37		0.39		0.38		0.41		0.43
Lafayette		0.38		0.38		0.38		0.38		0.38
Levy		0.22		0.23		0.25		0.23		0.22
Madison		0.36		0.33		0.38		0.40		0.38
Marion	0.91	0.69	0.96	0.77	1.00	0.74	0.99	0.78	1.00	0.74
Suwannee		0.38		0.40		0.43		0.43		0.42
Taylor	0.47	0.29	0.52	0.33	0.52	0.33	0.52	0.33	0.51	0.29
Union										
Bay	1.28	0.51	1.23	0.53	1.36	0.53	1.23	0.53	1.43	0.54
Calhoun		0.50		0.46		0.46		0.48		0.48

Escambia	1.01	0.55	1.04	0.53	1.01	0.55	0.99	0.54	0.90	0.55
Franklin		0.27		0.28		0.25		0.25		0.27
Gadsden		0.44		0.43		0.45		0.46		0.46
Gulf		0.53		0.51		0.19		0.19		0.41
Holmes		0.31		0.31		0.32		0.32		0.34
Jackson		0.35	0.37	0.37	0.42	0.38	0.38	0.37	0.38	0.37
Jefferson		0.42		0.44		0.42		0.43		0.48
Leon	1.06	0.52	0.95	0.50	1.01	0.55	1.04	0.58	1.01	0.56
Liberty		0.38		0.40		0.41		0.39		0.41
Okaloosa	1.29	0.50	1.34	0.54	1.33	0.57	1.30	0.56	1.10	0.56
Santa Rosa	1.21	0.61	1.06	0.44	1.11	0.39	1.23	0.46	1.21	0.42
Wakulla		0.53		0.52		0.53		0.57		0.58
Walton	2.01	0.40	1.58	0.43	1.65	0.45	1.66	0.41	1.65	0.40
Washington		0.35		0.36		0.37		0.38		0.39
Brevard	1.05	0.62	1.07	0.63	1.05	0.64	1.11	0.65	1.12	0.62
Clay	1.63	0.61	1.81	0.60	1.82	0.64	1.66	0.61	1.64	0.58
Duval	1.09	0.55	1.12	0.67	1.18	0.67	1.21	0.75	1.14	0.66
Flagler	0.89	0.90	0.93	0.91	0.95	0.92	1.02	0.96	0.72	0.71
Nassau	0.89	0.58	0.99	0.59	1.06	0.59	1.17	0.66	0.99	0.64
Orange	1.14	1.52	1.21	1.69	1.11	1.33	1.11	1.24	1.13	1.26
Putnam	1.15	0.76	1.13	0.69	1.12	0.66	1.08	0.64	1.06	0.63
Seminole	1.17	0.78	1.12	0.81	1.16	0.78	1.17	0.83	1.20	0.83
St. Johns	1.26	0.57	1.44	0.65	1.35	0.62	1.32	0.66	1.34	0.71
Volusia	1.01	0.69	0.99	0.66	1.00	0.75	0.96	0.79	0.92	0.78
Broward	1.38	0.47	1.37	0.41	1.44	0.37	1.44	0.45	1.41	0.44
Miami-Dade	1.41	1.38	1.50	1.65	1.39	1.31	1.44	1.50	1.47	1.30
Indian River	1.12	0.66	1.02	0.71	0.97	0.73	1.09	0.70	1.07	0.75
Martin	0.69	0.71	0.71	0.75	0.76	0.77	0.76	0.83	0.80	0.83
Monroe	1.52	1.50	1.54	1.36	1.56	1.46	1.54	1.62	1.57	1.40
Okeechobee	1.11	0.66	1.12	0.71	1.12	0.76	1.07	0.74	1.04	0.73
Osceola	1.09	0.80	1.20	0.86	1.03	0.88	1.05	0.87	1.08	0.89
Palm Beach	1.30	0.68	1.30	0.63	1.33	0.51	1.33	0.53	1.27	0.48
St. Lucie	0.74	0.99	0.77	1.04	0.79	1.08	0.80	1.18	0.80	1.07
AVERAGE	**1.08**	**0.63**	**1.09**	**0.66**	**1.09**	**0.65**	**1.09**	**0.66**	**1.06**	**0.65**

Percent of Daily Travel in Congested Condition

COUNTY NAME	2003		2004		2005		2006		2007	
	URBAN	RURAL	URBAN	RURAL	URBAN	RURAL	URBAN	RURAL	URBAN	RURAL
Charlotte	25%	36%	43%	36%	45%	27%	44%	29%	41%	26%
Citrus	42%	18%	42%	23%	47%	24%	45%	24%	46%	24%
Collier	43%	12%	46%	12%	45%	12%	45%	12%	45%	12%
Desoto	24%	20%	33%	22%	23%	16%	24%	16%	25%	17%
Glades		12%		15%		14%		14%		13%
Hardee	24%	15%	29%	18%	26%	17%	22%	17%	13%	15%
Hendry	27%	21%	34%	23%	33%	24%	35%	25%	35%	25%
Hernando	44%	21%	48%	23%	38%	23%	37%	24%	32%	22%
Highlands	45%	18%	48%	22%	47%	21%	46%	20%	43%	19%
Hillsborough	45%	24%	47%	28%	46%	28%	47%	25%	47%	30%
Lake	49%	50%	50%	50%	50%	50%	49%	50%	47%	50%
Lee	45%	22%	46%	23%	49%	27%	50%	28%	49%	25%
Manatee	40%	21%	43%	23%	45%	34%	46%	22%	45%	23%
Pasco	48%	31%	48%	35%	48%	36%	49%	37%	49%	37%
Pinellas	50%		50%		50%		50%		50%	
Polk	32%	42%	31%	27%	31%	30%	32%	34%	33%	35%
Sarasota	48%	33%	49%	38%	50%	42%	50%	44%	50%	41%
Sumter	36%	24%	39%	27%	41%	28%	32%	28%	31%	29%
Alachua	38%	22%	36%	20%	39%	21%	39%	22%	42%	23%
Baker	16%	13%	20%	14%	20%	15%	14%	16%	16%	13%
Bradford	47%	40%	28%	41%	33%	46%	29%	44%	27%	41%
Columbia	18%	14%	19%	14%	19%	15%	19%	16%	18%	16%
Dixie		13%		14%		14%		15%		14%
Gilchrist		24%		37%		33%		31%		26%
Hamilton		12%		13%		13%		14%		14%
Lafayette		13%		13%		13%		13%		13%
Levy		7%		8%		8%		8%		7%
Madison		12%		11%		13%		13%		13%
Marion	35%	23%	38%	26%	40%	25%	40%	27%	40%	25%
Suwannee		13%		13%		14%		14%		14%
Taylor	16%	10%	17%	11%	17%	11%	17%	11%	17%	10%
Union										
Bay	48%	17%	47%	18%	49%	18%	47%	18%	50%	18%
Calhoun		17%		15%		15%		16%		16%
Escambia	40%	18%	42%	18%	41%	18%	40%	18%	35%	18%

Franklin		9%		9%		8%		8%		9%
Gadsden		14%		14%		15%		15%		15%
Gulf		18%		17%		6%		6%		14%
Holmes		10%		10%		11%		11%		11%
Jackson		12%	12%	12%	14%	13%	13%	12%	13%	12%
Jefferson		14%		15%		14%		14%		16%
Leon	43%	17%	38%	17%	40%	18%	42%	19%	40%	19%
Liberty		13%		13%		14%		13%		14%
Okaloosa	48%	17%	49%	18%	49%	19%	48%	19%	45%	19%
Santa Rosa	47%	20%	43%	15%	45%	13%	47%	15%	47%	14%
Wakulla		18%		17%		18%		19%		19%
Walton	50%	13%	50%	14%	50%	15%	50%	14%	50%	13%
Washington		12%		12%		12%		13%		13%
Brevard	43%	20%	43%	21%	43%	21%	45%	21%	45%	21%
Clay	50%	20%	50%	20%	50%	21%	50%	20%	50%	19%
Duval	44%	18%	45%	22%	46%	22%	47%	25%	46%	22%
Flagler	34%	35%	36%	35%	37%	36%	41%	38%	24%	24%
Nassau	34%	19%	40%	20%	43%	20%	46%	22%	39%	21%
Orange	46%	50%	47%	50%	45%	49%	45%	47%	46%	48%
Putnam	46%	26%	46%	23%	45%	22%	44%	21%	43%	21%
Seminole	46%	27%	45%	29%	46%	27%	46%	31%	47%	30%
St. Johns	48%	19%	50%	22%	49%	21%	49%	22%	49%	24%
Volusia	41%	23%	39%	22%	40%	25%	38%	28%	36%	27%
Broward	50%	16%	50%	14%	50%	12%	50%	15%	50%	15%
Miami-Dade	50%	50%	50%	50%	50%	49%	50%	50%	50%	48%
Indian River	45%	22%	41%	24%	39%	24%	45%	23%	43%	25%
Martin	23%	24%	24%	25%	26%	26%	26%	30%	28%	31%
Monroe	50%	50%	50%	49%	50%	50%	50%	50%	50%	50%
Okeechobee	45%	22%	45%	24%	45%	26%	44%	25%	42%	24%
Osceola	44%	29%	47%	32%	42%	34%	43%	33%	44%	34%
Palm Beach	48%	23%	48%	21%	49%	17%	49%	18%	48%	16%
St. Lucie	25%	39%	26%	42%	28%	44%	28%	46%	29%	43%
AVERAGE	**40%**	**22%**	**41%**	**22%**	**41%**	**23%**	**40%**	**23%**	**39%**	**22%**

Travel Time Index

COUNTY NAME	2003		2004		2005		2006		2007	
	URBAN	RURAL	URBAN	RURAL	URBAN	RURAL	URBAN	RURAL	URBAN	RURAL
Charlotte	1.09	1.24	1.31	1.24	1.31	1.00	1.30	1.00	1.28	1.00
Citrus	1.19	1.05	1.21	1.03	1.34	1.19	1.28	1.00	1.29	1.00
Collier	1.28	1.01	1.36	1.01	1.34	1.01	1.38	1.02	1.34	1.02
Desoto	1.02	1.01	1.06	1.08	1.19	1.16	1.05	1.02	1.09	1.14
Glades		1.00		1.00		1.00		1.00		1.00
Hardee	1.06	1.00	1.03	1.00	1.05	1.00	1.05	1.00	1.00	1.00
Hendry	1.07	1.00	1.21	1.00	1.11	1.01	1.12	1.06	1.12	1.00
Hernando	1.13	1.00	1.37	1.06	1.29	1.04	1.32	1.00	1.27	1.00
Highlands	1.23	1.09	1.34	1.17	1.34	1.13	1.27	1.13	1.20	1.00
Hillsborough	1.43	1.05	1.47	1.11	1.48	1.08	1.47	1.10	1.51	1.11
Lake	1.41	1.54	1.47	1.60	1.44	1.66	1.42	1.62	1.34	1.63
Lee	1.31	1.00	1.37	1.00	1.42	1.00	1.44	1.00	1.39	1.00
Manatee	1.21	1.00	1.23	1.00	1.30	1.00	1.29	1.00	1.28	1.05
Pasco	1.38	1.07	1.37	1.06	1.41	1.12	1.45	1.19	1.46	1.18
Pinellas	1.49		1.49		1.49		1.45		1.47	
Polk	1.27	1.08	1.29	1.01	1.25	1.01	1.23	1.01	1.23	1.05
Sarasota	1.38	1.06	1.40	1.07	1.44	1.11	1.47	1.15	1.42	1.11
Sumter	1.16	1.10	1.17	1.10	1.20	1.11	1.13	1.11	1.11	1.11
Alachua	1.22	1.01	1.23	1.02	1.23	1.02	1.20	1.01	1.22	1.02
Baker	1.00	1.00	1.00	1.00	1.00	1.00	1.00	1.00	1.00	1.00
Bradford	1.29	1.18	1.33	1.20	1.40	1.20	1.34	1.21	1.24	1.19
Columbia	1.00	1.00	1.00	1.00	1.01	1.00	1.00	1.00	1.00	1.00
Dixie		1.00		1.00		1.00		1.00		1.00
Gilchrist		1.00		1.05		1.02		1.00		1.00
Hamilton		1.00		1.00		1.00		1.00		1.00
Lafayette		1.00		1.00		1.00		1.00		1.00
Levy		1.00		1.00		1.00		1.00		1.00
Madison		1.00		1.00		1.00		1.00		1.00
Marion	1.13	1.13	1.17	1.11	1.18	1.12	1.17	1.12	1.18	1.12
Suwannee		1.00		1.00		1.00		1.00		1.00
Taylor	1.00	1.00	1.00	1.00	1.00	1.00	1.00	1.00	1.00	1.00
Union										
Bay	1.39	1.00	1.37	1.00	1.41	1.00	1.41	1.00	1.43	1.00
Calhoun		1.02		1.03		1.03		1.00		1.03
Escambia	1.27	1.00	1.27	1.00	1.23	1.00	1.23	1.00	1.20	1.00
Franklin		1.00		1.00		1.00		1.00		1.00

Gadsden		1.00		1.00		1.00		1.00		1.00
Gulf		1.00		1.00		1.00		1.00		1.00
Holmes		1.00		1.00		1.00		1.00		1.00
Jackson		1.00	1.00	1.00	1.00	1.00	1.00	1.00	1.00	1.00
Jefferson		1.00		1.00		1.00		1.00		1.00
Leon	1.30	1.04	1.26	1.00	1.31	1.00	1.35	1.03	1.32	1.03
Liberty		1.00		1.00		1.00		1.00		1.00
Okaloosa	1.41	1.18	1.46	1.18	1.48	1.22	1.47	1.20	1.46	1.20
Santa Rosa	1.39	1.19	1.34	1.00	1.39	1.00	1.44	1.00	1.42	1.00
Wakulla		1.22		1.16		1.17		1.25		1.27
Walton	1.62	1.00	1.54	1.01	1.55	1.09	1.55	1.05	1.57	1.06
Washington		1.03		1.03		1.03		1.03		1.04
Brevard	1.27	1.07	1.28	1.07	1.29	1.07	1.31	1.08	1.33	1.07
Clay	1.50	1.11	1.58	1.06	1.58	1.05	1.53	1.05	1.52	1.05
Duval	1.30	1.00	1.31	1.00	1.45	1.00	1.48	1.02	1.40	1.02
Flagler	1.08	1.00	1.11	1.00	1.12	1.01	1.17	1.01	1.11	1.01
Nassau	1.13	1.00	1.12	1.00	1.30	1.00	1.37	1.00	1.04	1.00
Orange	1.42	1.52	1.48	1.58	1.45	1.43	1.49	1.44	1.49	1.46
Putnam	1.29	1.08	1.25	1.03	1.27	1.03	1.24	1.02	1.26	1.04
Seminole	1.46	1.00	1.39	1.07	1.41	1.07	1.42	1.07	1.44	1.07
St. Johns	1.38	1.00	1.43	1.01	1.45	1.01	1.43	1.01	1.39	1.00
Volusia	1.22	1.01	1.22	1.03	1.26	1.07	1.20	1.07	1.19	1.08
Broward	1.66	1.00	1.64	1.00	1.67	1.00	1.66	1.00	1.68	1.00
Miami-Dade	1.67	1.47	1.78	1.57	1.63	1.46	1.68	1.53	1.71	1.43
Indian River	1.33	1.10	1.27	1.10	1.24	1.12	1.33	1.12	1.25	1.11
Martin	1.13	1.09	1.10	1.12	1.07	1.11	1.07	1.10	1.06	1.11
Monroe	1.49	1.48	1.48	1.36	1.54	1.38	1.53	1.55	1.53	1.43
Okeechobee	1.26	1.13	1.29	1.11	1.24	1.14	1.24	1.15	1.22	1.16
Osceola	1.44	1.28	1.49	1.30	1.37	1.32	1.38	1.31	1.35	1.33
Palm Beach	1.54	1.21	1.50	1.27	1.53	1.00	1.54	1.00	1.46	1.00
St. Lucie	1.15	1.31	1.16	1.33	1.16	1.34	1.17	1.35	1.16	1.34
AVERAGE	**1.29**	**1.08**	**1.31**	**1.08**	**1.32**	**1.08**	**1.32**	**1.08**	**1.29**	**1.08**

Annual Person Delay (Hour)

COUNTY NAME	2003		2004		2005		2006		2007	
	URBAN	RURAL	URBAN	RURAL	URBAN	RURAL	URBAN	RURAL	URBAN	RURAL
Charlotte	90,382	829,853	1,298,642	829,853	1,439,255	0	1,288,571	0	1,063,276	0
Citrus	278,029	8,083	506,325	13,923	945,269	100,600	726,911	0	778,117	0
Collier	1,472,942	13,075	2,051,159	16,102	1,938,193	17,710	2,102,264	20,749	1,933,425	20,774
Desoto	5,181	5,146	23,448	38,997	24,054	36,601	6,474	5,248	12,737	39,941
Glades		0		0		0		0		0
Hardee	18,081	0	14,049	0	19,443	0	12,976	0	0	0
Hendry	21,458	0	92,287	493	44,524	6,834	51,468	62,352	55,989	4,671
Hernando	289,773	0	1,067,621	103,616	726,923	71,125	804,679	0	552,526	0
Highlands	530,770	85,786	934,846	232,282	905,572	159,895	667,250	158,335	428,200	0
Hillsborough	16,921,250	43,737	19,150,421	146,827	20,284,708	99,627	20,576,416	87,365	21,164,660	137,813
Lake	1,016,208	3,032,734	2,135,416	4,013,855	970,786	4,792,105	932,845	4,329,013	720,317	4,444,720
Lee	3,727,132	0	4,532,965	0	5,528,954	0	6,187,000	0	5,385,355	0
Manatee	1,438,346	0	1,880,323	0	2,374,947	0	2,381,815	0	2,266,467	41,404
Pasco	3,157,227	233,239	2,966,545	257,280	3,679,950	522,415	4,321,107	795,887	4,585,906	781,502
Pinellas	6,070,579		6,127,235		5,216,738		5,894,264		6,335,401	
Polk	2,112,432	227,662	2,324,646	23,046	2,088,900	27,206	2,115,823	35,683	2,170,265	140,613
Sarasota	3,317,729	165,946	3,758,049	303,450	4,391,124	501,990	4,747,961	739,262	4,120,173	493,310
Sumter	57,019	343,939	70,272	457,688	87,926	519,032	61,022	512,664	49,685	536,449
Alachua	1,287,049	63,095	1,180,880	92,491	1,365,501	69,044	1,183,781	35,181	1,429,216	104,947
Baker	0	0	0	0	0	0	0	0	0	0
Bradford	134,687	179,990	95,476	212,368	156,215	250,243	105,454	235,605	64,655	195,599
Columbia	0	0	0	0	3,405	0	0	0	0	0
Dixie		0		0		0		0		0
Gilchrist		0		24,635		9,815		0		0
Hamilton		0		0		0		0		0
Lafayette		0		0		0		0		0
Levy		0		0		0		0		0
Madison		0		0		0		0		0
Marion	984,055	490,938	1,522,348	517,988	1,706,214	548,441	1,646,059	574,058	1,693,325	530,639
Suwannee		0		0		0		0		0
Taylor	628	0	746	0	745	0	703	0	663	0
Union										
Bay	1,717,720	0	1,469,520	0	1,876,194	0	1,234,076	0	1,585,893	0
Calhoun		4,280		3,857		4,609		0		4,761
Escambia	1,826,761	0	2,363,836	0	1,831,559	0	1,784,467	0	1,177,022	0
Franklin		0		0		0		0		0

Gadsden		0		0		0		0		0
Gulf		0		0		0		0		0
Holmes		0		0		0		0		0
Jackson		0	0	0	0	0	0	0	0	0
Jefferson		0		0		0		0		0
Leon	1,937,978	29,253	1,630,309	0	2,211,972	0	2,610,465	12,971	2,347,499	15,788
Liberty		0		0		0		0		0
Okaloosa	1,524,443	196,170	2,384,599	209,150	2,545,487	264,676	2,424,071	238,723	1,079,860	243,348
Santa Rosa	989,918	239,405	1,647,447	0	1,926,699	0	2,167,881	0	2,104,931	0
Wakulla		66,679		47,619		51,656		86,078		99,189
Walton	339,279	0	362,392	15,865	384,282	114,377	384,794	52,747	398,260	56,625
Washington		11,176		14,076		14,182		17,433		22,049
Brevard	6,522,962	107,575	7,108,529	117,663	7,070,615	131,806	8,096,567	156,344	8,524,024	124,994
Clay	2,523,161	67,109	3,313,337	33,067	3,388,002	32,009	2,811,041	28,217	2,744,637	25,349
Duval	10,194,372	0	11,496,907	0	12,993,357	0	13,979,817	14,590	12,709,846	11,877
Flagler	226,003	0	266,542	0	294,354	15,042	587,558	9,286	259,180	5,913
Nassau	14,994	0	17,374	0	50,500	0	73,632	0	6,440	0
Orange	13,241,200	2,802,327	15,395,357	3,860,886	16,083,137	2,021,717	17,275,953	1,953,312	18,037,577	2,133,406
Putnam	262,323	109,310	373,497	23,611	387,964	22,629	335,458	16,075	336,933	35,687
Seminole	4,790,731	0	4,192,004	14,279	4,511,747	13,544	4,435,144	15,705	4,681,999	15,422
St. Johns	832,633	0	925,663	33,041	908,232	30,242	836,084	32,019	774,826	0
Volusia	3,202,195	38,301	3,183,134	74,472	3,821,048	169,776	3,010,801	224,073	2,667,819	241,754
Broward	39,435,308	0	37,734,610	0	40,660,516	0	41,418,880	0	42,696,720	0
Miami-Dade	43,831,530	3,098,527	52,955,228	4,507,261	43,990,427	2,188,066	46,592,011	2,934,357	43,702,996	1,839,563
Indian River	1,429,729	161,203	910,332	191,877	734,520	239,123	1,349,994	226,709	944,762	250,887
Martin	148,776	289,645	150,902	368,407	151,909	356,341	157,901	371,439	166,817	424,192
Monroe	3,084,179	1,217,575	3,053,455	790,871	3,473,140	907,989	3,374,836	1,444,738	3,445,821	968,953
Okeechobee	290,927	115,660	337,492	120,056	286,376	183,277	268,103	173,390	226,387	182,481
Osceola	3,902,740	952,872	5,131,725	1,233,313	4,024,154	1,353,607	4,091,736	1,323,921	4,110,703	1,604,064
Palm Beach	21,775,989	316,425	19,892,275	364,485	21,807,814	0	22,096,176	0	17,818,044	0
St. Lucie	893,188	579,402	1,052,376	681,202	1,252,016	628,558	1,435,126	737,706	1,308,951	652,734
TOTAL	**207,869,994**	**16,126,112**	**229,082,541**	**19,989,952**	**230,565,368**	**16,475,908**	**238,647,413**	**17,661,235**	**228,668,306**	**16,431,417**
	223,996,106		**249,072,493**		**247,041,276**		**256,308,648**		**245,099,723**	

Weighted Average Speed in Peak Period - URBAN (Miles/Hour)

COUNTY NAME	2003		2004		2005		2006		2007	
	Freeway	Arterial	Freeway	Arterial	Freeway	Arterial	Freeway	Arterial	Freeway	Arterial
Charlotte	60.0	32.0	60.0	29.6	60.0	29.2	60.0	29.6	60.0	30.2
Citrus	60.0	32.8	60.0	32.5	60.0	30.7	60.0	31.5	60.0	31.4
Collier	58.1	30.3	55.6	29.5	56.5	29.6	55.5	29.5	56.2	29.7
Desoto	60.0	34.9	60.0	34.4	60.0	33.8	60.0	34.7	60.0	34.4
Glades										
Hardee	60.0	34.6	60.0	34.7	60.0	34.6	60.0	34.7	60.0	35.0
Hendry	60.0	34.5	60.0	33.0	60.0	34.0	60.0	33.9	60.0	33.8
Hernando	60.0	33.4	60.0	30.1	60.0	31.6	60.0	31.2	60.0	32.2
Highlands	60.0	32.1	60.0	30.5	60.0	30.5	60.0	31.6	60.0	32.5
Hillsborough	54.0	29.7	52.7	29.6	52.7	29.3	53.3	28.7	52.1	28.6
Lake	60.0	29.5	60.0	28.8	60.0	29.1	55.2	29.3	55.2	30.5
Lee	57.1	29.3	55.5	28.8	53.3	28.6	52.5	28.5	53.8	28.8
Manatee	59.3	30.6	59.1	29.8	56.8	29.6	56.2	29.9	56.6	29.9
Pasco	55.1	30.0	54.1	30.3	54.7	29.5	55.2	28.8	54.9	28.6
Pinellas	60.0	28.0	60.0	27.9	60.0	27.9	60.0	28.4	60.0	28.3
Polk	59.5	31.4	59.4	31.2	60.0	31.4	60.0	31.5	60.0	31.4
Sarasota	56.2	29.0	55.1	28.9	53.7	28.5	52.0	28.4	53.9	28.7
Sumter	60.0	33.4	60.0	33.2	60.0	32.8	60.0	33.6	60.0	33.8
Alachua	60.0	31.6	60.0	31.9	60.0	31.5	60.0	31.8	58.7	31.4
Baker	60.0	35.0	60.0	35.0	60.0	35.0	60.0	35.0	60.0	35.0
Bradford	60.0	31.3	60.0	32.5	60.0	31.3	60.0	32.3	60.0	33.3
Columbia	60.0	35.0	60.0	35.0	60.0	34.9	60.0	35.0	60.0	35.0
Dixie										
Gilchrist										
Hamilton										
Lafayette										
Levy										
Madison										
Marion	60.0	32.6	60.0	31.6	60.0	31.3	60.0	31.5	60.0	31.2
Suwannee										
Taylor	60.0	35.0	60.0	35.0	60.0	35.0	60.0	35.0	60.0	35.0
Union										
Bay	60.0	30.0	60.0	30.3	60.0	29.6	60.0	29.7	60.0	29.1
Calhoun										
Escambia	59.8	30.5	59.8	30.5	59.8	31.0	59.4	31.1	59.8	31.3
Franklin										

Gadsden										
Gulf										
Holmes										
Jackson			60.0	35.0	60.0	35.0	60.0	35.0	60.0	35.0
Jefferson										
Leon	60.0	30.1	60.0	31.3	59.1	30.5	59.0	29.9	59.0	30.3
Liberty										
Okaloosa	60.0	29.3	60.0	28.5	60.0	28.3	60.0	28.5	60.0	28.6
Santa Rosa	60.0	28.1	60.0	28.8	60.0	30.6	60.0	27.7	60.0	27.8
Wakulla										
Walton	60.0	27.1	60.0	28.2	60.0	28.1	60.0	28.2	60.0	27.9
Washington										
Brevard	58.0	30.6	58.0	30.4	57.8	30.5	56.7	30.2	55.5	30.2
Clay	60.0	28.4	60.0	27.6	60.0	27.6	60.0	28.2	60.0	28.3
Duval	56.2	29.6	55.9	29.0	53.3	29.0	52.5	29.1	54.3	29.5
Flagler	60.0	32.7	58.7	33.4	58.5	33.4	58.2	31.8	60.0	33.1
Nassau	60.0	33.8	60.0	33.7	60.0	31.4	60.0	30.3	60.0	34.5
Orange	55.2	28.1	53.4	28.1	53.8	28.4	52.8	28.6	52.8	28.5
Putnam	60.0	31.4	60.0	31.9	60.0	31.8	60.0	32.1	60.0	32.0
Seminole	53.3	28.4	54.9	29.1	54.1	29.2	53.7	29.0	53.4	28.9
St. Johns	60.0	30.1	60.0	29.3	60.0	29.1	60.0	29.3	60.0	29.8
Volusia	58.8	31.2	58.9	31.2	57.7	31.1	59.2	31.4	59.5	31.6
Broward	47.9	29.2	48.4	28.8	47.9	28.7	48.0	28.7	47.5	28.8
Miami-Dade	48.2	27.7	46.3	27.4	49.4	27.7	48.0	27.9	47.1	27.7
Indian River	60.0	30.7	60.0	31.7	60.0	32.3	60.0	30.6	60.0	31.8
Martin	60.0	33.0	60.0	32.7	60.0	32.6	60.0	32.6	60.0	32.4
Monroe	60.0	28.4	60.0	28.8	60.0	28.1	60.0	28.2	60.0	28.2
Okeechobee	60.0	31.8	60.0	31.4	60.0	32.0	60.0	32.1	60.0	32.5
Osceola	53.5	29.8	52.8	28.7	57.4	29.5	56.8	29.4	58.3	29.1
Palm Beach	50.3	29.6	50.8	29.7	50.1	29.8	49.9	29.9	51.5	30.6
St. Lucie	60.0	32.7	60.0	32.4	60.0	32.2	60.0	32.0	60.0	32.3
AVERAGE	**58.3**	**31.0**	**58.2**	**30.9**	**58.1**	**30.8**	**57.8**	**30.7**	**58.0**	**31.0**

Weighted Average Speed in Peak Period - RURAL (Miles/Hour)

COUNTY NAME	2003		2004		2005		2006		2007	
	Freeway	Arterial	Freeway	Arterial	Freeway	Arterial	Freeway	Arterial	Freeway	Arterial
Charlotte	60.0	31.3	60.0	31.3	60.0	35.0	60.0	35.0	60.0	35.0
Citrus	60.0	34.7	60.0	34.8	60.0	33.7	60.0	35.0	60.0	35.0
Collier	60.0	34.9	60.0	34.9	60.0	34.8	60.0	34.8	60.0	34.8
Desoto	60.0	34.9	60.0	34.5	60.0	34.3	60.0	34.9	60.0	34.3
Glades	60.0	35.0	60.0	35.0	60.0	35.0	60.0	35.0	60.0	35.0
Hardee	60.0	35.0	60.0	35.0	60.0	35.0	60.0	35.0	60.0	35.0
Hendry	60.0	35.0	60.0	35.0	60.0	35.0	60.0	34.6	60.0	35.0
Hernando	60.0	35.0	60.0	34.3	60.0	34.4	60.0	35.0	60.0	35.0
Highlands	60.0	34.5	60.0	34.0	60.0	34.2	60.0	34.2	60.0	35.0
Hillsborough	60.0	34.5	60.0	33.3	60.0	33.7	60.0	33.6	60.0	32.9
Lake	60.0	28.2	60.0	27.5	60.0	26.9	60.0	27.5	60.0	27.4
Lee	60.0	35.0	60.0	35.0	60.0	35.0	60.0	35.0	60.0	35.0
Manatee	60.0	35.0	60.0	35.0	60.0	35.0	60.0	35.0	60.0	34.1
Pasco	60.0	33.8	60.0	33.7	60.0	32.7	60.0	31.3	60.0	31.5
Pinellas										
Polk	58.1	34.8	60.0	34.9	60.0	34.8	60.0	34.8	59.2	34.7
Sarasota	59.2	34.6	59.0	32.8	58.3	32.6	57.4	32.5	58.3	32.8
Sumter	60.0	33.2	60.0	32.8	60.0	32.7	60.0	32.6	60.0	32.5
Alachua	60.0	34.8	60.0	34.7	60.0	34.8	60.0	34.9	60.0	34.7
Baker	60.0	35.0	60.0	35.0	60.0	35.0	60.0	35.0	60.0	35.0
Bradford	60.0	33.0	60.0	32.6	60.0	32.5	60.0	32.5	60.0	32.8
Columbia	60.0	35.0	60.0	35.0	60.0	35.0	60.0	35.0	60.0	35.0
Dixie	60.0	35.0	60.0	35.0	60.0	35.0	60.0	35.0	60.0	35.0
Gilchrist	60.0	35.0	60.0	34.5	60.0	34.8	60.0	35.0	60.0	35.0
Hamilton	60.0	35.0	60.0	35.0	60.0	35.0	60.0	35.0	60.0	35.0
Lafayette	60.0	35.0	60.0	35.0	60.0	35.0	60.0	35.0	60.0	35.0
Levy	60.0	35.0	60.0	35.0	60.0	35.0	60.0	35.0	60.0	35.0
Madison	60.0	35.0	60.0	35.0	60.0	35.0	60.0	35.0	60.0	35.0
Marion	60.0	33.4	60.0	33.3	60.0	33.3	60.0	33.2	60.0	33.3
Suwannee	60.0	35.0	60.0	35.0	60.0	35.0	60.0	35.0	60.0	35.0
Taylor	60.0	35.0	60.0	35.0	60.0	35.0	60.0	35.0	60.0	35.0
Union										
Bay	60.0	35.0	60.0	35.0	60.0	35.0	60.0	35.0	60.0	35.0
Calhoun	60.0	34.9	60.0	34.9	60.0	34.9	60.0	35.0	60.0	34.9
Escambia	60.0	35.0	60.0	35.0	60.0	35.0	60.0	35.0	60.0	35.0
Franklin	60.0	35.0	60.0	35.0	60.0	35.0	60.0	35.0	60.0	35.0

Gadsden	60.0	35.0	60.0	35.0	60.0	35.0	60.0	35.0	60.0	35.0
Gulf	60.0	35.0	60.0	35.0	60.0	35.0	60.0	35.0	60.0	35.0
Holmes	60.0	35.0	60.0	35.0	60.0	35.0	60.0	35.0	60.0	35.0
Jackson	60.0	35.0	60.0	35.0	60.0	35.0	60.0	35.0	60.0	35.0
Jefferson	60.0	35.0	60.0	35.0	60.0	35.0	60.0	35.0	60.0	35.0
Leon	60.0	34.6	60.0	35.0	60.0	35.0	60.0	34.7	60.0	34.6
Liberty	60.0	35.0	60.0	35.0	60.0	35.0	60.0	35.0	60.0	35.0
Okaloosa	60.0	33.4	60.0	33.2	60.0	32.9	60.0	33.1	60.0	33.0
Santa Rosa	60.0	32.5	60.0	35.0	60.0	35.0	60.0	35.0	60.0	35.0
Wakulla	60.0	33.9	60.0	34.2	60.0	34.2	60.0	33.7	60.0	33.6
Walton	60.0	35.0	60.0	34.9	60.0	34.3	60.0	34.6	60.0	34.5
Washington	60.0	34.8	60.0	34.7	60.0	34.7	60.0	34.7	60.0	34.6
Brevard	60.0	34.1	60.0	34.0	60.0	33.9	60.0	33.8	60.0	34.0
Clay	60.0	34.4	60.0	34.7	60.0	34.7	60.0	34.7	60.0	34.7
Duval	60.0	35.0	60.0	35.0	60.0	35.0	60.0	32.3	60.0	32.7
Flagler	60.0	35.0	60.0	35.0	60.0	34.8	60.0	34.9	60.0	34.9
Nassau	60.0	35.0	60.0	35.0	60.0	35.0	60.0	35.0	60.0	35.0
Orange	60.0	28.4	60.0	27.8	60.0	29.5	60.0	29.7	60.0	29.4
Putnam	60.0	34.4	60.0	34.8	60.0	34.8	60.0	34.9	60.0	34.7
Seminole	60.0	35.0	60.0	34.5	60.0	34.5	60.0	34.4	60.0	34.4
St. Johns	60.0	35.0	60.0	34.7	60.0	34.7	60.0	34.7	60.0	35.0
Volusia	60.0	34.7	59.7	34.8	59.2	34.7	59.1	34.7	59.0	34.7
Broward	60.0	35.0	60.0	35.0	60.0	35.0	60.0	35.0	60.0	35.0
Miami-Dade	60.0	29.0	60.0	27.8	60.0	29.2	60.0	28.3	60.0	29.6
Indian River	60.0	33.3	60.0	33.2	60.0	33.0	60.0	33.1	60.0	33.2
Martin	60.0	33.0	60.0	32.7	60.0	32.4	60.0	32.2	60.0	32.1
Monroe	60.0	28.6	60.0	30.3	60.0	30.0	60.0	28.1	60.0	29.1
Okeechobee	60.0	34.2	60.0	34.2	60.0	34.0	60.0	34.0	60.0	33.9
Osceola	60.0	32.8	60.0	32.3	60.0	32.0	60.0	32.1	60.0	31.9
Palm Beach	60.0	33.9	60.0	33.7	60.0	35.0	60.0	35.0	60.0	35.0
St. Lucie	60.0	31.5	60.0	31.2	60.0	30.9	60.0	30.6	60.0	31.0
AVERAGE	**60.0**	**34.1**	**60.0**	**34.0**	**60.0**	**34.1**	**59.9**	**34.0**	**59.9**	**34.0**

Congestion Cost ($) - 2003

COUNTY NAME	Annual Passenger Vehicle Delay Cost		Annual Fuel Cost		Annual Commercial Vehicle Cost		Total Congestion Cost	
	URBAN	RURAL	URBAN	RURAL	URBAN	RURAL	URBAN	RURAL
Charlotte	1,190,330	10,807,700	234,570	2,159,364	281,160	3,256,552	1,706,059	16,223,616
Citrus	3,607,432	98,110	706,868	22,384	1,134,664	72,192	5,448,964	192,685
Collier	18,998,686	159,534	3,809,665	35,277	6,620,600	107,999	29,428,951	302,809
Desoto	59,612	57,532	14,039	14,206	64,580	73,571	138,231	145,308
Glades		0		0		0		0
Hardee	197,663	0	49,501	0	283,710	0	530,874	0
Hendry	262,860	0	58,110	0	178,115	0	499,085	0
Hernando	3,790,737	0	741,792	0	1,024,612	0	5,557,141	0
Highlands	6,340,022	946,747	1,392,164	237,828	5,312,770	1,295,843	13,044,956	2,480,417
Hillsborough	216,439,608	557,413	46,318,192	115,840	86,668,086	235,079	349,425,886	908,332
Lake	12,187,140	35,053,159	2,543,275	7,283,012	9,629,438	35,925,128	24,359,854	78,261,298
Lee	47,678,216	0	10,389,508	0	20,165,206	0	78,232,931	0
Manatee	18,132,891	0	3,963,536	0	9,320,771	0	31,417,199	0
Pasco	40,671,126	2,895,293	7,924,941	609,375	14,605,061	1,674,996	63,201,128	5,179,663
Pinellas	79,676,817		14,729,458		20,030,380		114,436,655	
Polk	24,729,948	2,706,963	5,848,668	782,016	24,656,192	2,416,330	55,234,807	5,905,309
Sarasota	43,045,076	1,975,359	8,961,974	591,106	14,465,467	1,748,528	66,472,517	4,314,993
Sumter	745,905	4,159,655	151,478	959,813	207,275	3,245,913	1,104,658	8,365,381
Alachua	16,693,954	736,748	3,265,715	167,338	5,282,280	700,230	25,241,949	1,604,316
Baker	0	0	0	0	0	0	0	0
Bradford	1,490,953	2,066,714	349,863	478,310	2,009,149	2,268,477	3,849,966	4,813,501
Columbia	0	0	0	0	0	0	0	0
Dixie		0		0		0		0
Gilchrist		0		0		0		0
Hamilton		0		0		0		0
Lafayette		0		0		0		0
Levy		0		0		0		0
Madison		0		0		0		0
Marion	12,605,224	6,172,330	2,530,411	1,293,130	4,896,468	3,071,584	20,032,104	10,537,044
Suwannee		0		0		0		0
Taylor	8,326	0	1,746	0	1,663	0	11,735	0
Union								
Bay	22,109,430	0	4,334,552	0	8,193,682	0	34,637,663	0
Calhoun		51,188		11,890		42,512		105,591
Escambia	23,653,083	0	4,568,057	0	7,720,804	0	35,941,944	0
Franklin		0		0		0		0

Gadsden		0		0		0		0
Gulf		0		0		0		0
Holmes		0		0		0		0
Jackson		0		0		0		0
Jefferson		0		0		0		0
Leon	25,271,585	377,591	4,809,353	78,132	7,226,202	130,000	37,307,141	585,723
Liberty		0		0		0		0
Okaloosa	19,774,079	2,553,109	3,896,009	535,986	6,485,139	779,434	30,155,227	3,868,529
Santa Rosa	12,921,932	3,086,275	2,413,687	634,098	3,619,679	1,085,169	18,955,298	4,805,542
Wakulla		883,742		178,073		171,649		1,233,464
Walton	4,561,404	0	840,944	0	543,323	0	5,945,671	0
Washington		143,133		31,243		57,794		232,170
Brevard	85,258,398	1,318,415	18,070,838	303,149	24,818,482	914,936	128,147,718	2,536,500
Clay	33,047,602	880,618	6,163,710	178,024	8,702,189	222,446	47,913,501	1,281,087
Duval	131,709,438	0	28,851,228	0	45,050,646	0	205,611,312	0
Flagler	2,998,655	0	586,335	0	579,824	0	4,164,814	0
Nassau	188,076	0	39,362	0	97,583	0	325,021	0
Orange	172,200,243	33,491,872	35,575,100	6,732,672	52,371,431	27,185,886	260,146,774	67,410,431
Putnam	3,373,855	1,391,417	675,879	296,090	1,277,612	613,516	5,327,346	2,301,023
Seminole	62,627,280	0	13,088,083	0	17,178,836	0	92,894,199	0
St. Johns	11,068,053	0	2,060,135	0	1,985,462	0	15,113,650	0
Volusia	41,486,863	494,704	8,373,319	101,458	13,401,480	168,454	63,261,662	764,615
Broward	513,590,160	0	110,784,325	0	153,339,170	0	777,713,655	0
Miami-Dade	570,604,101	38,751,505	120,977,496	7,588,730	171,758,603	20,869,357	863,340,200	67,209,592
Indian River	18,616,625	1,883,311	3,684,725	439,294	5,630,852	1,833,364	27,932,202	4,155,969
Martin	1,993,818	3,638,003	388,159	762,532	264,203	1,831,491	2,646,181	6,232,027
Monroe	38,655,578	15,170,951	7,818,486	3,079,191	20,692,713	8,671,123	67,166,777	26,921,265
Okeechobee	3,573,304	1,351,184	754,472	318,230	2,361,447	1,328,045	6,689,224	2,997,459
Osceola	50,520,723	11,132,265	10,372,284	2,525,982	16,712,186	10,639,990	77,605,192	24,298,238
Palm Beach	278,063,176	4,095,570	61,637,753	825,042	115,162,301	1,370,315	454,863,231	6,290,927
St. Lucie	11,709,347	6,769,069	2,334,510	1,488,530	2,995,297	6,411,451	17,039,154	14,669,051
TOTAL	**2,688,129,334**	**195,857,178**	**567,084,275**	**40,857,343**	**915,006,794**	**140,419,353**	**4,170,220,404**	**377,133,875**
	2,883,986,513		**607,941,619**		**1,055,426,147**		**4,547,354,279**	

Congestion Cost ($) – 2004

COUNTY NAME	Annual Passenger Vehicle Delay Cost		Annual Fuel Cost		Annual Commercial Vehicle Cost		Total Congestion Cost	
	URBAN	RURAL	URBAN	RURAL	URBAN	RURAL	URBAN	RURAL
Charlotte	17,241,362	11,098,949	4,255,003	2,808,584	6,056,814	3,409,141	27,553,178	17,316,675
Citrus	6,630,523	179,031	1,727,339	49,836	2,907,582	98,813	11,265,444	327,680
Collier	27,055,065	195,253	7,027,088	56,360	10,283,537	175,144	44,365,690	426,757
Desoto	279,470	460,917	81,735	139,578	292,374	508,365	653,580	1,108,860
Glades		0		0		0		0
Hardee	155,220	0	49,111	0	245,028	0	449,358	0
Hendry	986,619	5,481	322,579	1,762	1,798,436	8,445	3,107,633	15,688
Hernando	14,298,739	1,234,095	3,487,380	357,453	4,196,424	1,261,579	21,982,543	2,853,127
Highlands	11,318,491	2,705,975	3,152,140	827,988	10,648,331	3,253,627	25,118,963	6,787,589
Hillsborough	249,032,044	1,876,297	69,353,598	503,108	116,704,188	1,078,511	435,089,829	3,457,916
Lake	27,075,484	47,389,845	6,887,846	12,459,295	16,869,217	51,185,229	50,832,548	111,034,369
Lee	59,360,009	0	16,694,862	0	26,787,061	0	102,841,932	0
Manatee	24,410,665	0	6,640,350	0	12,361,376	0	43,412,390	0
Pasco	39,556,223	3,223,317	9,770,041	865,704	12,633,290	2,248,184	61,959,555	6,337,205
Pinellas	82,476,142		19,349,410		21,784,452		123,610,004	
Polk	28,248,013	279,446	8,385,009	84,287	26,638,292	267,632	63,271,314	631,366
Sarasota	49,974,393	3,848,567	13,274,232	1,307,793	17,726,090	2,529,300	80,974,714	7,685,660
Sumter	926,889	5,660,891	240,424	1,598,256	59,760	4,530,150	1,227,073	11,789,297
Alachua	15,698,940	1,110,545	3,918,135	319,805	5,242,740	1,066,676	24,859,814	2,497,027
Baker	0	0	0	0	0	0	0	0
Bradford	1,026,497	2,357,338	336,880	733,107	1,827,537	3,641,486	3,190,914	6,731,931
Columbia	0	0	0	0	0	0	0	0
Dixie		0		0		0		0
Gilchrist		318,503		82,729		159,009		560,240
Hamilton		0		0		0		0
Lafayette		0		0		0		0
Levy		0		0		0		0
Madison		0		0		0		0
Marion	19,751,720	6,612,098	5,037,048	1,762,243	9,441,119	3,810,493	34,229,886	12,184,835
Suwannee		0		0		0		0
Taylor	10,177	0	2,686	0	1,917	0	14,780	0
Union								
Bay	19,376,891	0	4,894,251	0	7,607,699	0	31,878,841	0
Calhoun		47,124		13,971		41,465		102,559
Escambia	31,809,057	0	7,656,934	0	8,381,201	0	47,847,191	0
Franklin		0		0		0		0

Gadsden		0		0		0		0
Gulf		0		0		0		0
Holmes		0		0		0		0
Jackson	0	0	0	0	0	0	0	0
Jefferson		0		0		0		0
Leon	22,110,819	0	5,334,863	0	4,830,167	0	32,275,849	0
Liberty		0		0		0		0
Okaloosa	32,167,701	2,791,540	7,723,338	740,572	8,240,839	891,835	48,131,878	4,423,947
Santa Rosa	21,984,991	0	5,304,632	0	6,854,769	0	34,144,392	0
Wakulla		638,861		165,140		179,435		983,436
Walton	4,933,950	203,232	1,164,427	57,527	1,004,759	117,008	7,103,136	377,767
Washington		184,420		51,181		80,322		315,923
Brevard	94,830,101	1,487,824	25,466,796	430,343	31,758,666	1,006,967	152,055,563	2,925,135
Clay	44,287,920	437,224	10,407,109	113,991	13,512,250	161,386	68,207,279	712,601
Duval	152,483,468	0	42,070,953	0	53,506,129	0	248,060,550	0
Flagler	3,498,635	0	1,021,309	0	1,470,197	0	5,990,141	0
Nassau	219,086	0	58,802	0	143,980	0	421,868	0
Orange	205,476,476	47,473,532	54,648,679	11,942,945	64,488,530	38,727,191	324,613,685	98,143,668
Putnam	4,784,581	307,677	1,252,209	84,345	2,753,611	144,246	8,790,401	536,269
Seminole	55,392,963	178,381	14,982,468	49,306	20,652,953	127,620	91,028,383	355,307
St. Johns	12,616,510	441,605	2,951,081	115,151	2,420,567	159,812	17,988,158	716,568
Volusia	42,306,639	926,011	10,816,901	298,618	14,191,777	683,541	67,315,317	1,908,170
Broward	505,010,396	0	139,107,849	0	151,772,067	0	795,890,313	0
Miami-Dade	699,146,013	57,372,245	189,092,240	14,185,464	266,663,890	34,678,541	1,154,902,143	106,236,250
Indian River	12,201,809	2,300,187	3,106,288	677,049	3,589,789	2,295,196	18,897,886	5,272,432
Martin	2,037,831	4,682,974	510,707	1,254,218	495,329	2,818,834	3,043,867	8,756,026
Monroe	39,544,249	10,186,696	9,975,435	2,606,271	20,060,759	5,513,746	69,580,442	18,306,713
Okeechobee	4,104,841	1,692,785	1,139,574	429,809	3,737,180	0	8,981,594	2,122,593
Osceola	68,333,046	14,784,734	17,450,518	4,214,007	22,376,098	14,484,422	108,159,662	33,483,163
Palm Beach	254,771,673	4,844,766	74,275,341	1,236,306	144,263,094	1,652,407	473,310,107	7,733,479
St. Lucie	14,200,532	8,166,127	3,558,159	2,258,567	3,515,302	7,928,180	21,273,993	18,352,875
TOTAL	**3,023,142,861**	**247,704,494**	**813,963,756**	**64,882,672**	**1,162,797,163**	**190,923,936**	**4,999,903,781**	**503,511,103**
	3,270,847,356		**878,846,429**		**1,353,721,099**		**5,503,414,884**	

Congestion Cost ($) - 2005

COUNTY NAME	Annual Passenger Vehicle Delay Cost		Annual Fuel Cost		Annual Commercial Vehicle Cost		Total Congestion Cost	
	URBAN	RURAL	URBAN	RURAL	URBAN	RURAL	URBAN	RURAL
Charlotte	19,932,092	0	5,514,680	0	6,285,477	0	31,732,249	0
Citrus	13,026,133	1,393,262	3,725,651	422,555	4,557,467	443,054	21,309,251	2,258,871
Collier	26,927,701	222,497	7,727,070	72,868	7,736,628	207,546	42,391,400	502,911
Desoto	301,815	458,369	100,442	155,270	294,808	453,876	697,065	1,067,516
Glades		0		0		0		0
Hardee	245,161	0	81,142	0	231,036	0	557,338	0
Hendry	546,990	73,961	181,652	28,690	616,030	154,854	1,344,672	257,506
Hernando	10,064,017	875,953	2,869,269	290,367	3,134,900	944,506	16,068,185	2,110,826
Highlands	11,825,063	1,967,154	3,607,993	674,755	8,309,425	2,195,348	23,742,481	4,837,257
Hillsborough	272,268,050	1,251,030	85,414,312	404,140	137,723,547	1,181,931	495,405,909	2,837,101
Lake	12,644,228	59,168,229	3,700,923	17,334,217	8,854,899	62,757,452	25,200,049	139,259,899
Lee	74,004,534	0	24,371,935	0	40,988,176	0	139,364,645	0
Manatee	31,689,589	0	10,324,767	0	18,219,612	0	60,233,968	0
Pasco	49,934,116	6,982,953	14,253,679	2,046,621	21,814,547	5,876,606	86,002,341	14,906,180
Pinellas	72,836,201		19,343,531		18,907,210		111,086,942	
Polk	26,446,110	335,880	8,757,145	116,214	24,875,080	377,023	60,078,335	829,116
Sarasota	60,923,365	6,502,600	18,338,437	2,589,664	19,225,038	5,064,343	98,486,839	14,156,607
Sumter	1,192,575	6,405,740	352,729	2,127,506	538,920	7,004,509	2,084,224	15,537,755
Alachua	18,435,374	808,816	5,280,617	280,024	8,564,723	1,149,870	32,280,714	2,238,709
Baker	0	0	0	0	0	0	0	0
Bradford	1,796,475	2,872,820	632,751	1,004,439	2,874,061	4,676,989	5,303,287	8,554,248
Columbia	45,365	0	14,272	0	25,530	0	85,167	0
Dixie		0		0		0		0
Gilchrist		137,457		38,933		78,762		255,152
Hamilton		0		0		0		0
Lafayette		0		0		0		0
Levy		0		0		0		0
Madison		0		0		0		0
Marion	22,922,199	7,140,333	6,606,818	2,196,788	11,358,960	4,974,725	40,887,977	14,311,846
Suwannee		0		0		0		0
Taylor	10,363	0	3,045	0	2,917	0	16,326	0
Union								
Bay	25,249,654	0	7,269,442	0	12,575,610	0	45,094,706	0
Calhoun		58,828		19,593		50,485		128,906
Escambia	24,929,187	0	7,072,137	0	10,315,979	0	42,317,304	0
Franklin		0		0		0		0

Gadsden		0		0		0		0
Gulf		0		0		0		0
Holmes		0		0		0		0
Jackson	0	0	0	0	0	0	0	0
Jefferson		0		0		0		0
Leon	30,862,031	0	8,543,219	0	8,070,090	0	47,475,340	0
Liberty		0		0		0		0
Okaloosa	35,487,572	3,601,583	9,684,086	1,096,836	9,710,544	1,537,523	54,882,203	6,235,943
Santa Rosa	26,464,053	0	7,539,923	0	9,457,327	0	43,461,303	0
Wakulla		716,850		218,037		218,873		1,153,760
Walton	5,402,244	1,461,464	1,446,423	486,235	1,209,355	1,242,911	8,058,021	3,190,610
Washington		191,123		60,562		94,381		346,067
Brevard	96,518,853	1,701,284	29,867,733	565,354	40,759,285	1,367,436	167,145,871	3,634,075
Clay	46,733,626	437,113	12,512,573	129,427	15,620,583	173,481	74,866,782	740,021
Duval	176,245,286	0	55,661,134	0	77,403,094	0	309,309,514	0
Flagler	3,961,545	205,186	1,341,525	61,332	1,972,075	84,366	7,275,145	350,884
Nassau	681,510	0	199,751	0	321,275	0	1,202,535	0
Orange	219,710,750	26,716,458	68,637,720	7,536,153	86,690,167	16,187,963	375,038,636	50,440,575
Putnam	5,227,607	303,168	1,735,451	95,227	2,586,019	161,324	9,549,078	559,719
Seminole	61,576,016	173,396	21,790,133	62,662	24,663,065	141,173	108,029,214	377,231
St. Johns	12,799,395	417,951	3,411,393	124,214	2,595,957	134,727	18,806,745	676,891
Volusia	51,589,810	2,119,011	15,610,711	842,173	23,951,595	2,070,908	91,152,115	5,032,093
Broward	558,923,331	0	176,462,281	0	200,682,815	0	936,068,427	0
Miami-Dade	598,489,344	28,947,595	184,739,936	8,251,847	253,856,339	17,486,069	1,037,085,619	54,685,512
Indian River	10,147,604	2,959,613	2,942,288	987,473	3,355,289	3,146,781	16,445,181	7,093,868
Martin	2,116,792	4,650,965	601,077	1,407,834	569,782	3,164,527	3,287,650	9,223,326
Monroe	46,550,207	11,808,974	13,209,388	3,495,678	24,648,609	8,618,868	84,408,204	23,923,520
Okeechobee	3,801,388	2,270,306	1,134,797	761,729	2,254,802	2,423,038	7,190,987	5,455,073
Osceola	55,570,507	16,753,542	15,972,697	5,399,815	18,190,636	17,489,175	89,733,840	39,642,532
Palm Beach	288,727,687	0	96,293,550	0	173,002,872	0	558,024,109	0
St. Lucie	17,340,500	7,779,640	4,971,221	2,425,008	5,311,564	8,048,073	27,623,285	18,252,721
TOTAL	**3,133,124,014**	**209,871,106**	**969,853,449**	**63,810,241**	**1,354,913,717**	**181,383,478**	**5,457,891,180**	**455,064,826**
	3,342,995,121		**1,033,663,690**		**1,536,297,195**		**5,912,956,006**	

Congestion Cost ($) - 2006

COUNTY NAME	Annual Passenger Vehicle Delay Cost		Annual Fuel Cost		Annual Commercial Vehicle Cost		Total Congestion Cost	
	URBAN	RURAL	URBAN	RURAL	URBAN	RURAL	URBAN	RURAL
Charlotte	18,446,554	0	6,340,416	0	5,825,615	0	30,612,585	0
Citrus	10,078,354	0	3,673,017	0	5,325,948	0	19,077,319	0
Collier	30,031,390	273,635	10,739,035	108,532	9,623,215	229,491	50,393,640	611,658
Desoto	83,508	64,897	34,185	28,332	85,757	86,609	203,451	179,838
Glades		0		0		0		0
Hardee	154,522	0	69,530	0	250,706	0	474,758	0
Hendry	637,327	769,664	265,854	333,227	844,491	1,038,099	1,747,672	2,140,990
Hernando	11,429,934	0	4,054,734	0	4,105,137	0	19,589,805	0
Highlands	8,965,275	2,023,829	3,386,970	850,781	6,641,284	2,210,827	18,993,528	5,085,438
Hillsborough	287,751,868	1,141,366	109,832,544	453,691	131,937,517	1,039,543	529,521,929	2,634,600
Lake	12,463,177	54,434,699	4,556,055	19,869,279	9,452,881	64,154,825	26,472,112	138,458,802
Lee	85,280,273	0	34,919,719	0	49,793,333	0	169,993,326	0
Manatee	33,054,711	0	13,477,697	0	17,754,544	0	64,286,952	0
Pasco	60,619,032	10,682,677	21,102,760	3,945,509	26,572,608	7,771,076	108,294,400	22,399,262
Pinellas	86,342,663		27,939,922		14,458,102		128,740,687	
Polk	27,831,370	456,112	11,330,880	191,959	25,432,406	512,560	64,594,657	1,160,631
Sarasota	67,889,140	9,569,687	25,489,297	4,932,038	22,797,841	9,860,367	116,176,279	24,362,093
Sumter	862,834	6,418,708	316,740	2,673,289	344,206	7,980,510	1,523,780	17,072,507
Alachua	17,213,021	482,878	5,856,317	181,335	3,632,042	277,391	26,701,380	941,603
Baker	0	0	0	0	0	0	0	0
Bradford	1,204,073	2,791,313	555,733	1,210,575	2,354,053	4,639,289	4,113,859	8,641,177
Columbia	0	0	0	0	0	0	0	0
Dixie		0		0		0		0
Gilchrist		0		0		0		0
Hamilton		0		0		0		0
Lafayette		0		0		0		0
Levy		0		0		0		0
Madison		0		0		0		0
Marion	22,881,452	7,748,774	8,156,164	2,917,124	11,274,618	5,297,210	42,312,234	15,963,107
Suwannee		0		0		0		0
Taylor	10,323	0	3,798	0	1,656	0	15,777	0
Union								
Bay	17,190,880	0	6,134,161	0	8,467,084	0	31,792,125	0
Calhoun		0		0		0		0
Escambia	25,218,932	0	8,889,158	0	9,779,377	0	43,887,467	0
Franklin		0		0		0		0
Gadsden		0		0		0		0

Gulf		0		0		0		0
Holmes		0		0		0		0
Jackson	0	0	0	0	0	0	0	0
Jefferson		0		0		0		0
Leon	37,579,742	184,658	12,742,469	67,157	10,244,489	63,134	60,566,700	314,949
Liberty		0		0		0		0
Okaloosa	34,743,353	3,392,039	11,783,501	1,261,932	10,706,982	1,233,513	57,233,835	5,887,484
Santa Rosa	31,575,323	0	10,238,418	0	11,284,078	0	53,097,820	0
Wakulla								
Walton	5,591,589	718,843	1,844,365	286,250	1,246,741	462,908	8,682,696	1,468,001
Washington		245,825		94,581		102,481		442,886
Brevard	113,634,581	2,144,028	44,086,341	851,315	52,339,541	1,327,514	210,060,462	4,322,857
Clay	40155154.23	402144.2429	13343628.31	145817.7698	12992403.92	135950.2269	66491186.46	683912.24
Duval	196137807.3	208386.4433	76938592.45	75677.96341	85845330.76	67598.18188	358921730.5	351662.589
Flagler	8360657.584	130509.1117	3208543.31	47938.84839	2963257.8	56730.79799	14532458.69	235178.758
Nassau	1057398.718	0	366303.6909	0	307064.4281	0	1730766.836	0
Orange	243850191.2	27123663.66	95092423.18	9312425.262	97337019.96	13672631.83	436279634.3	50108720.8
Putnam	4667722.929	226108.1448	1696797.385	86350.07999	2355373.472	97973.62728	8719893.786	410431.852
Seminole	62165242.87	206544.2493	24268329.2	80901.12137	27593309.8	178662.6038	114026881.9	466107.974
St. Johns	12212357.22	468177.0168	4020146.555	167147.4397	2260043.846	83663.48953	18492547.62	718987.946
Volusia	42482789.63	2958504.293	15313229.15	1403189.447	16897517.91	2458103.643	74693536.69	6819797.38
Broward	590570896.5	0	228458167.7	0	199745979.1	0	1018775043	0
Miami-Dade	660642524.2	38344295.03	251752036.5	13878692.75	246892856.4	35181635.37	1159287417	87404623.2
Indian River	19343368.76	2934193.55	6844287.396	1195412.712	5996953.458	2915110.728	32184609.61	7044716.99
Martin	2257524.892	4966703.427	797621.6164	1858269.889	711758.541	3705621.285	3766905.05	10530594.6
Monroe	45730082.56	20345945.56	16471893.86	6957172.004	31228810.13	8653482.266	93430786.54	35956599.8
Okeechobee	3642451.453	2246005.463	1366072.119	920457.7497	2422248.283	2238757.078	7430771.855	5405220.29
Osceola	58348498.88	17148906.61	20811487.32	6752768.421	19514631.04	16630628.68	98674617.24	40532303.7
Palm Beach	313482924.3	0	124368409.2	0	116039015.2	0	553890348.7	0
St. Lucie	20523373.61	9719674.64	7238104.802	3599047.17	6438011.17	8213874.442	34199489.58	21532596.3
TOTAL	**3,374,396,166**	**230,973,393**	**1,280,175,855**	**86,738,175**	**1,330,117,838**	**202,577,770**	**5,984,689,859**	**520,289,337**
	3,605,369,559		**1,366,914,030**		**1,532,695,608**		**6,504,979,196**	

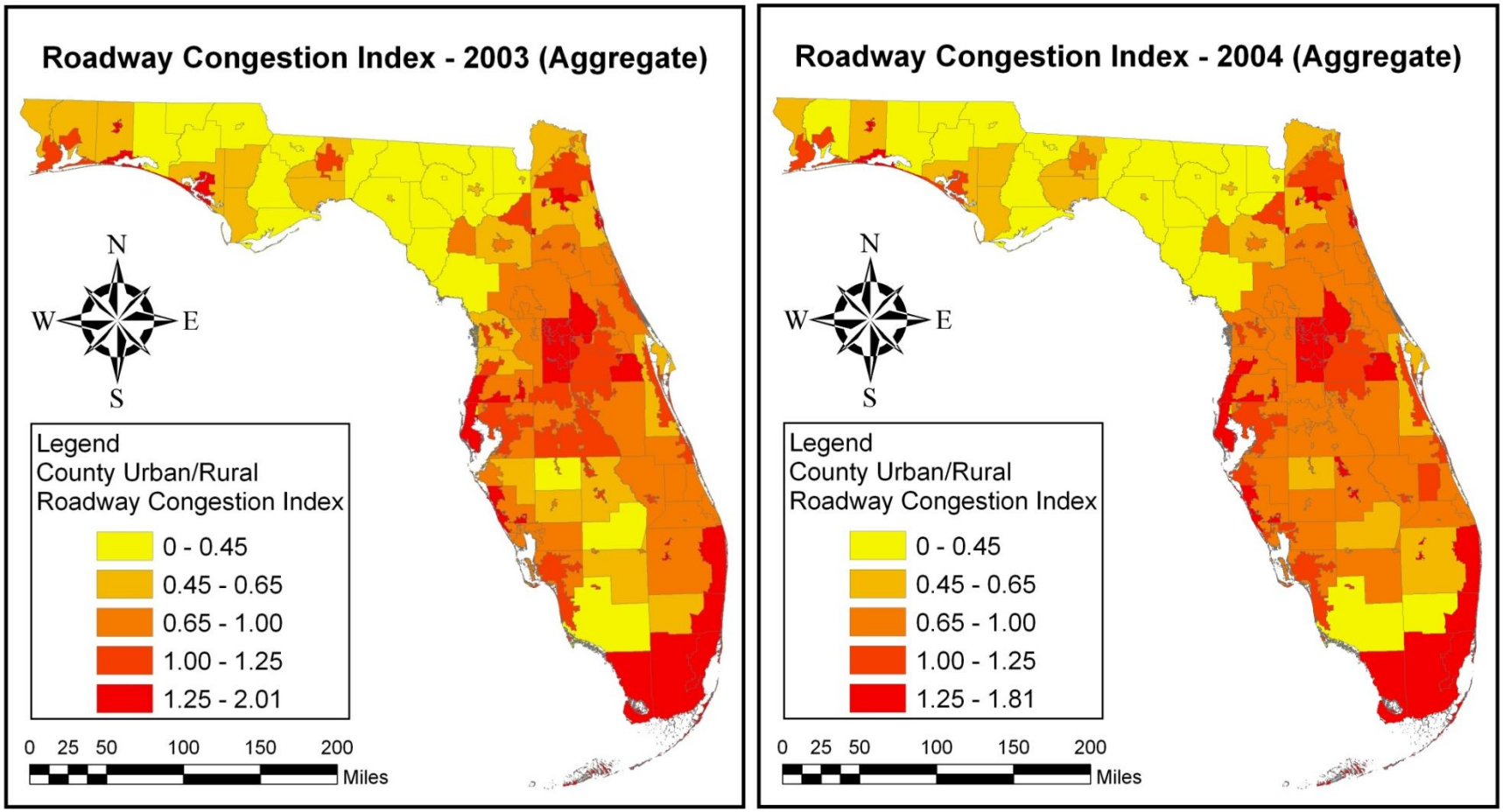
Congestion Cost ($) - 2007

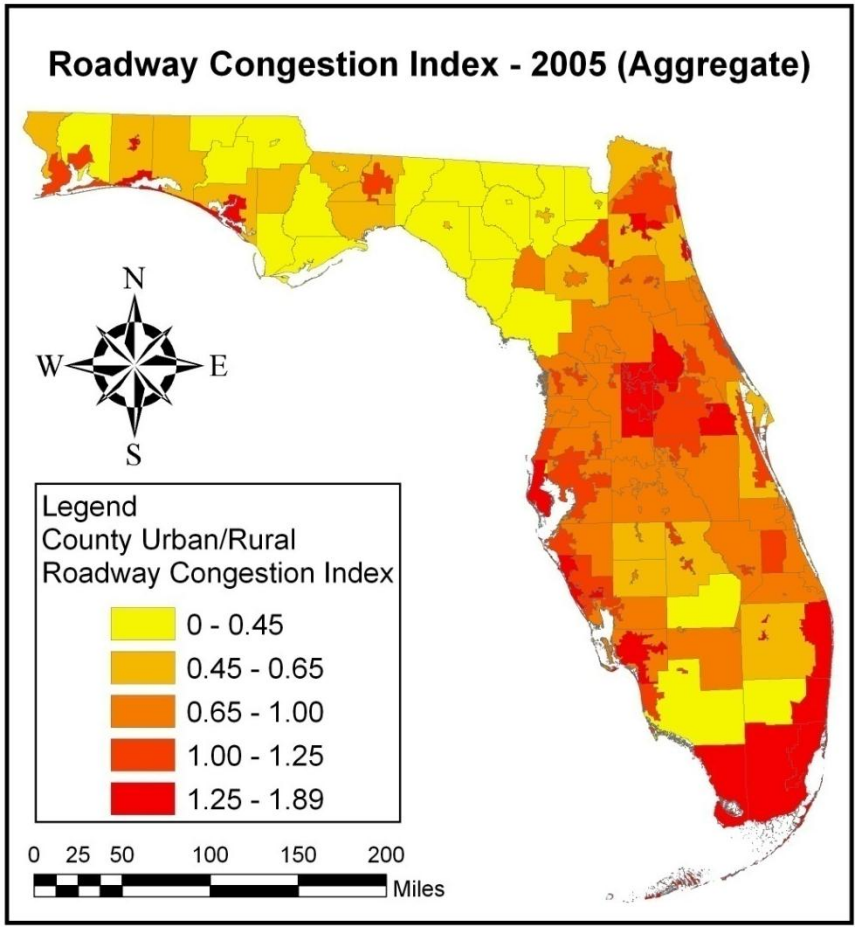
COUNTY NAME	Annual Passenger Vehicle Delay Cost		Annual Fuel Cost		Annual Commercial Vehicle Cost		Total Congestion Cost	
	URBAN	RURAL	URBAN	RURAL	URBAN	RURAL	URBAN	RURAL
Charlotte	15,753,565	0	5,310,533	0	4,249,914	0	25,314,012	0
Citrus	11,346,204	0	3,917,635	0	4,264,601	0	19,528,440	0
Collier	28,446,638	279,463	9,890,083	108,707	8,703,114	249,218	47,039,834	637,388
Desoto	169,851	539,752	67,456	215,214	167,763	482,067	405,070	1,237,033
Glades		0		0		0		0
Hardee	0	0	0	0	0	0	0	0
Hendry	704,347	60,589	288,032	24,863	998,179	71,963	1,990,558	157,415
Hernando	8,090,138	0	2,817,070	0	2,745,143	0	13,652,350	0
Highlands	5,988,717	0	2,205,257	0	3,920,836	0	12,114,809	0
Hillsborough	306,533,226	1,864,905	113,735,360	707,892	125,326,471	1,602,667	545,595,057	4,175,464
Lake	10,165,703	58,923,757	3,558,665	20,359,393	5,866,637	59,026,748	19,591,006	138,309,898
Lee	77,170,100	0	30,266,440	0	38,980,728	0	146,417,268	0
Manatee	32,636,907	534,830	12,744,664	228,430	15,394,290	670,812	60,775,861	1,434,072
Pasco	66,762,029	10,887,585	22,395,377	3,908,488	25,096,061	7,214,729	114,253,468	22,010,803
Pinellas	95,132,132		29,817,832		17,262,148		142,212,111	
Polk	29,840,688	1,902,963	11,582,147	927,904	23,696,301	1,728,497	65,119,136	4,559,364
Sarasota	60,493,672	6,745,051	21,995,496	3,261,008	20,599,455	5,626,581	103,088,624	15,632,639
Sumter	723,258	7,064,378	259,542	2,790,477	279,874	7,615,912	1,262,674	17,470,766
Alachua	20,995,248	1,417,172	7,208,569	540,757	6,629,219	1,227,185	34,833,036	3,185,114
Baker	0	0	0	0	0	0	0	0
Bradford	794,134	2,451,296	341,312	1,008,435	1,271,397	3,545,021	2,406,842	7,004,753
Columbia	0	0	0	0	0	0	0	0
Dixie		0		0		0		0
Gilchrist		0		0		0		0
Hamilton		0		0		0		0
Lafayette		0		0		0		0
Levy		0		0		0		0
Madison		0		0		0		0
Marion	24,148,953	7,350,907	8,470,836	2,709,001	12,282,909	5,102,954	44,902,697	15,162,861
Suwannee		0		0		0		0
Taylor	10,103	0	3,584	0	962	0	14,649	0
Union								
Bay	22,981,620	0	7,828,519	0	9,486,992	0	40,297,131	0
Calhoun		63,430		25,751		63,069		152,251
Escambia	16,751,683	0	5,890,220	0	8,663,858	0	31,305,761	0

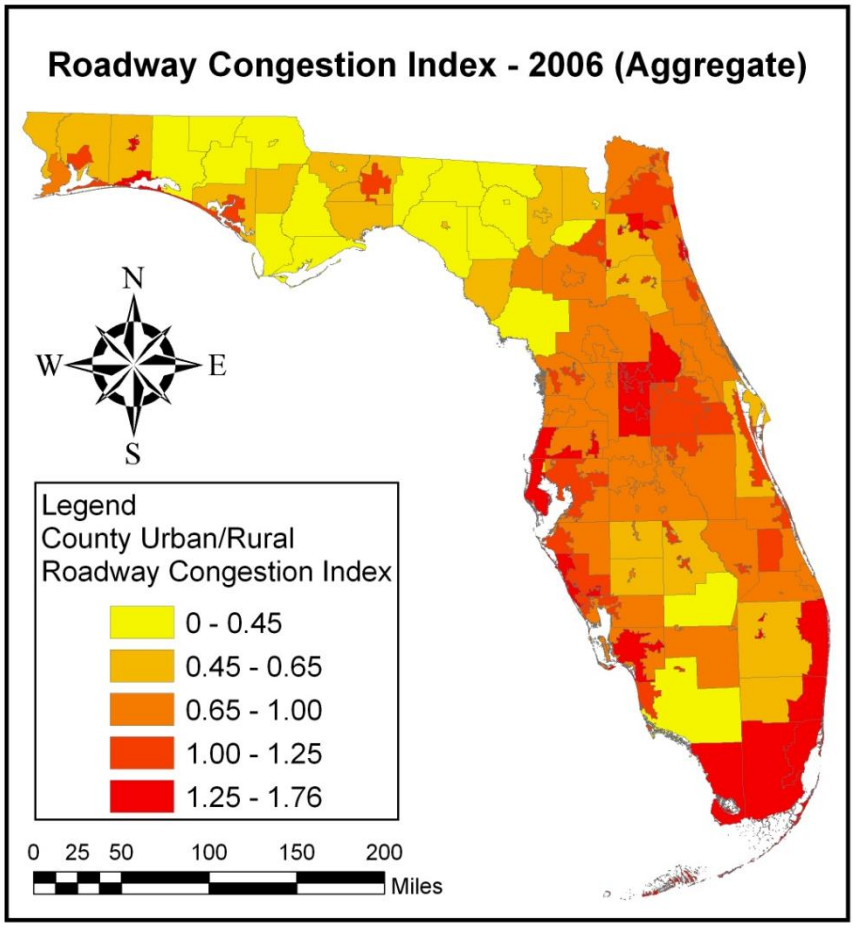
Franklin		0		0		0		0
Gadsden		0		0		0		0
Gulf		0		0		0		0
Holmes		0		0		0		0
Jackson	0	0	0	0	0	0	0	0
Jefferson		0		0		0		0
Leon	34,620,926	234,519	11,534,125	81,570	10,079,504	57,809	56,234,555	373,897
Liberty		0		0		0		0
Okaloosa	15,662,768	3,403,568	5,231,633	1,286,197	6,372,956	2,206,649	27,267,357	6,896,414
Santa Rosa	31,123,233	0	9,966,494	0	8,563,979	0	49,653,706	0
Wakulla		1,465,232		511,006		411,705		2,387,944
Walton	5,959,620	776,352	1,904,824	307,416	1,242,916	614,669	9,107,360	1,698,437
Washington		312,727		119,321		175,017		607,065
Brevard	122,582,962	1,740,212	47,183,527	683,760	58,926,122	1,227,869	228,692,610	3,651,841
Clay	40,532,314	372,565	13,029,550	131,490	11,565,356	117,538	65,127,221	621,593
Duval	182,377,616	176,098	70,254,145	61,994	85,477,292	45,870	338,109,052	283,961
Flagler	3,951,978	85,891	1,351,291	31,297	351,707	34,104	5,654,976	151,291
Nassau	95,482	0	32,623	0	24,871	0	152,976	0
Orange	264,055,650	30,497,108	99,432,628	10,105,463	89,929,839	15,042,735	453,418,117	55,645,307
Putnam	4,820,301	512,349	1,713,931	191,730	2,418,734	245,113	8,952,967	949,192
Seminole	67,642,008	209,382	25,629,125	79,503	28,736,151	175,248	122,007,285	464,133
St. Johns	11,615,164	0	3,736,677	0	2,228,734	0	17,580,575	0
Volusia	39,001,081	3,377,300	13,501,048	1,519,447	13,500,181	2,156,540	66,002,310	7,053,287
Broward	628,041,179	0	235,538,333	0	196,684,863	0	1,060,264,375	0
Miami-Dade	642,892,129	23,894,595	233,084,401	8,910,547	201,021,872	27,636,703	1,076,998,403	60,441,845
Indian River	13,831,181	3,345,618	4,789,054	1,316,780	4,793,751	3,273,746	23,413,986	7,936,144
Martin	2,451,731	5,980,680	838,544	2,114,277	766,771	3,458,607	4,057,046	11,553,564
Monroe	47,374,718	13,060,243	16,739,193	4,843,688	36,597,157	11,903,412	100,711,068	29,807,342
Okeechobee	3,150,072	2,433,407	1,161,231	967,651	2,172,440	2,403,385	6,483,743	5,804,443
Osceola	60,353,435	21,409,223	20,465,305	8,128,301	19,438,271	20,437,529	100,257,012	49,975,053
Palm Beach	253,385,703	0	101,802,891	0	134,805,704	0	489,994,298	0
St. Lucie	19,304,571	8,704,303	6,591,668	3,203,714	5,619,310	8,287,115	31,515,549	20,195,132
TOTAL	**3,330,464,736**	**222,077,452**	**1,226,106,870**	**81,411,469**	**1,257,205,335**	**194,138,786**	**5,813,776,942**	**497,627,707**
	3,552,542,188		**1,307,518,340**		**1,451,344,121**		**6,311,404,649**	

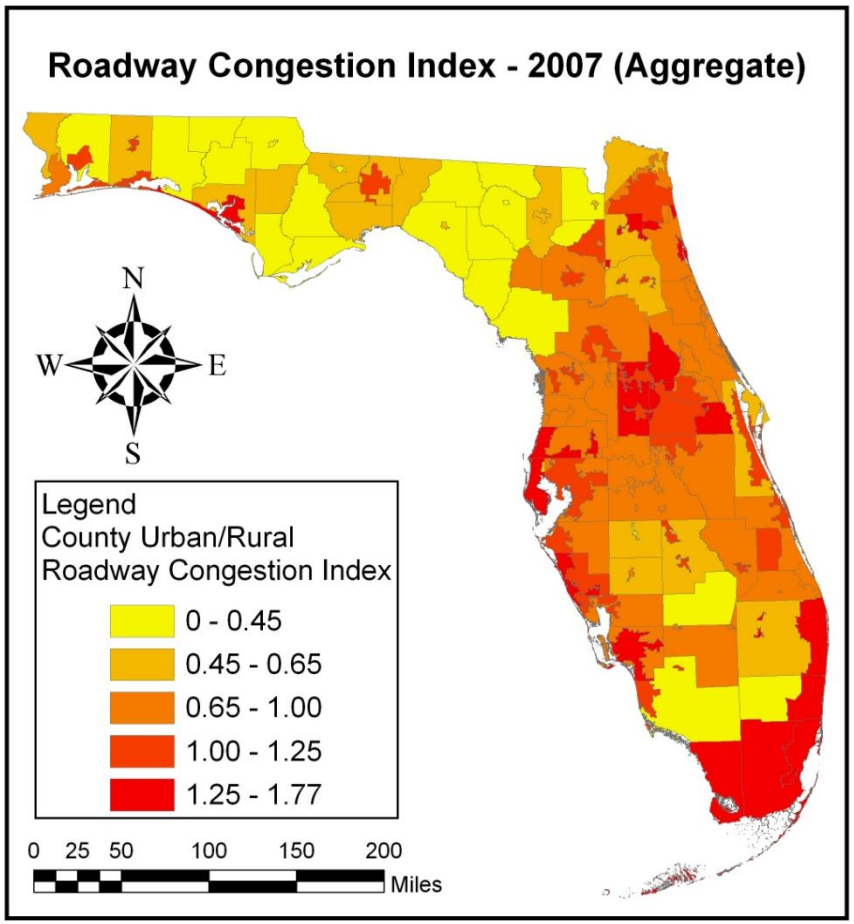
3.2.2 Maps

Roadway Congestion Index (RCI)



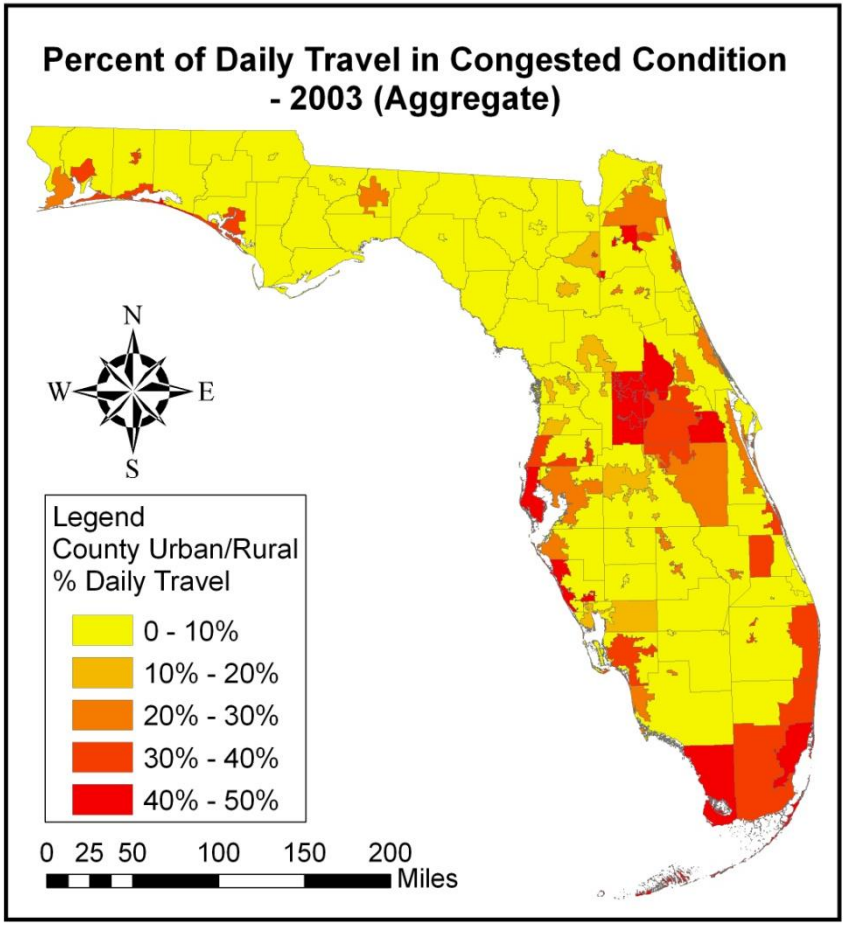

Roadway Congestion Index - 2005 (Aggregate)
N
W
E
S
Legend
County Urban/Rural
Roadway Congestion Index
0 - 0.45
0.45 - 0.65
0.65 - 1.00
1.00 - 1.25
1.25 - 1.89
0 25 50 100 150 200
Miles

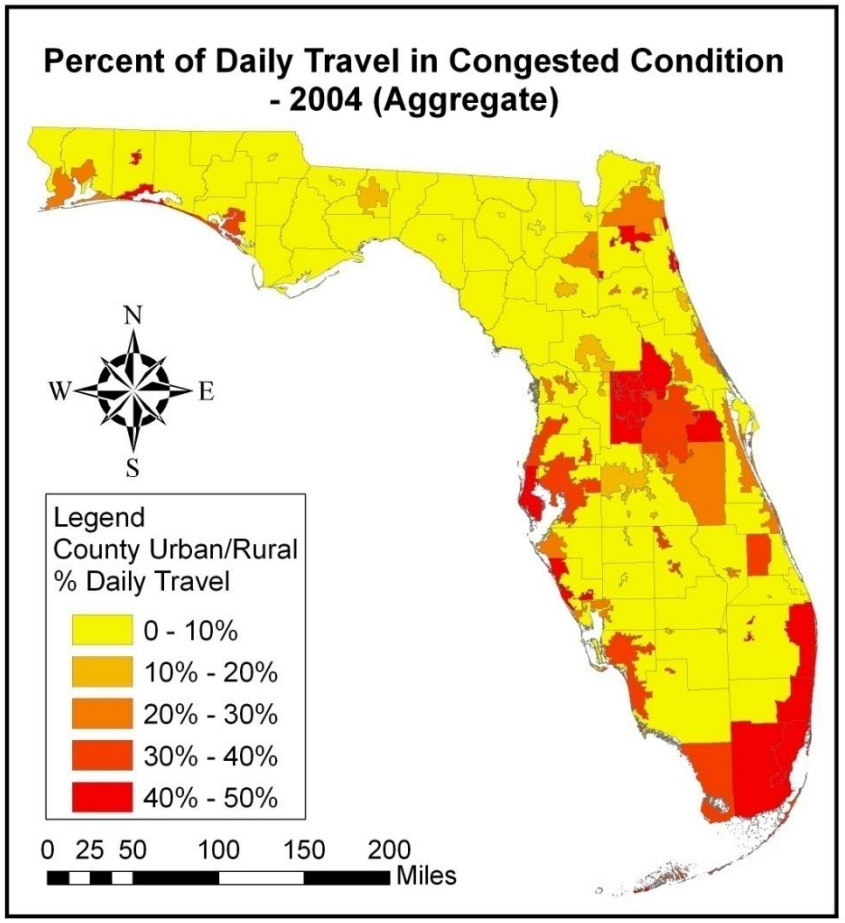

Roadway Congestion Index - 2006 (Aggregate)
N
W
E
S
Legend
County Urban/Rural
Roadway Congestion Index
0 - 0.45
0.45 - 0.65
0.65 - 1.00
1.00 - 1.25
1.25 - 1.76
0 25 50 100 150 200
Miles

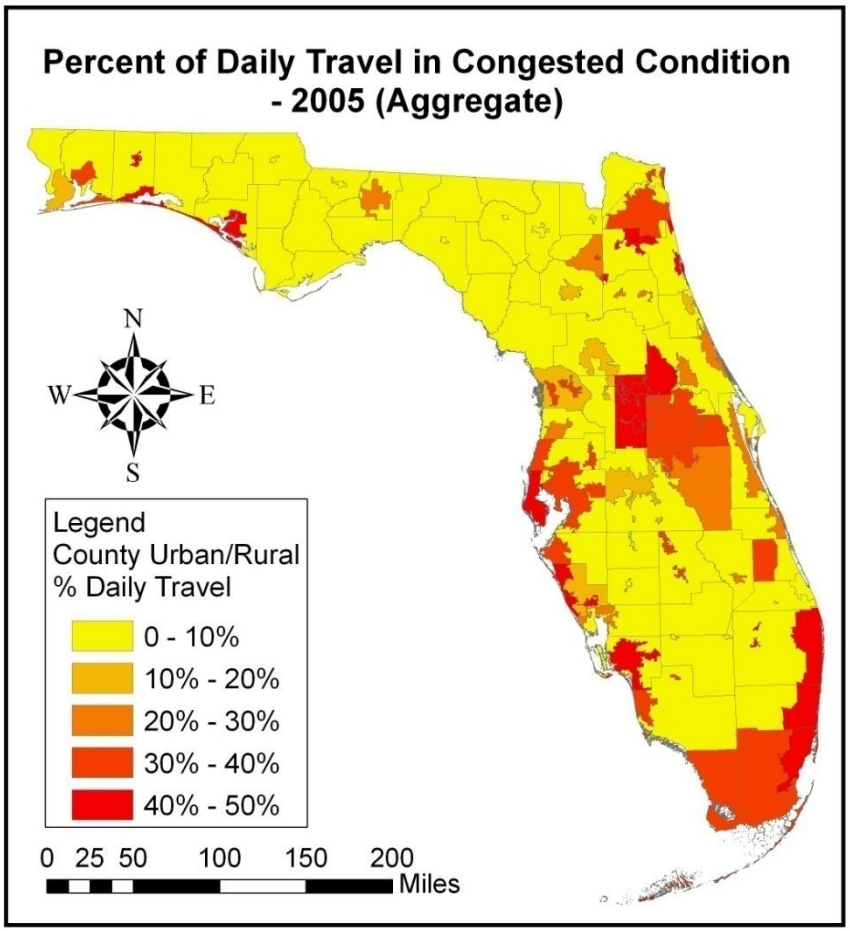


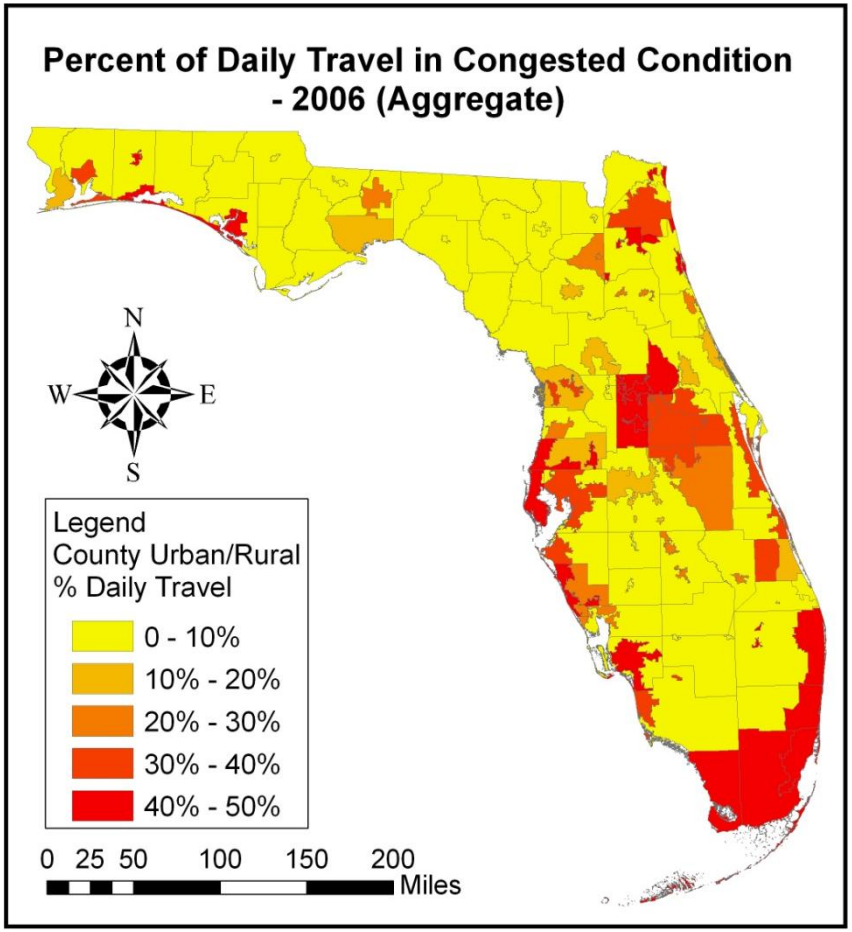
Since both disaggregate county and aggregate methods use aggregation to calculate roadway congestion index (RCI) the results are exactly the same. For map analysis refer to section 3.1.2.

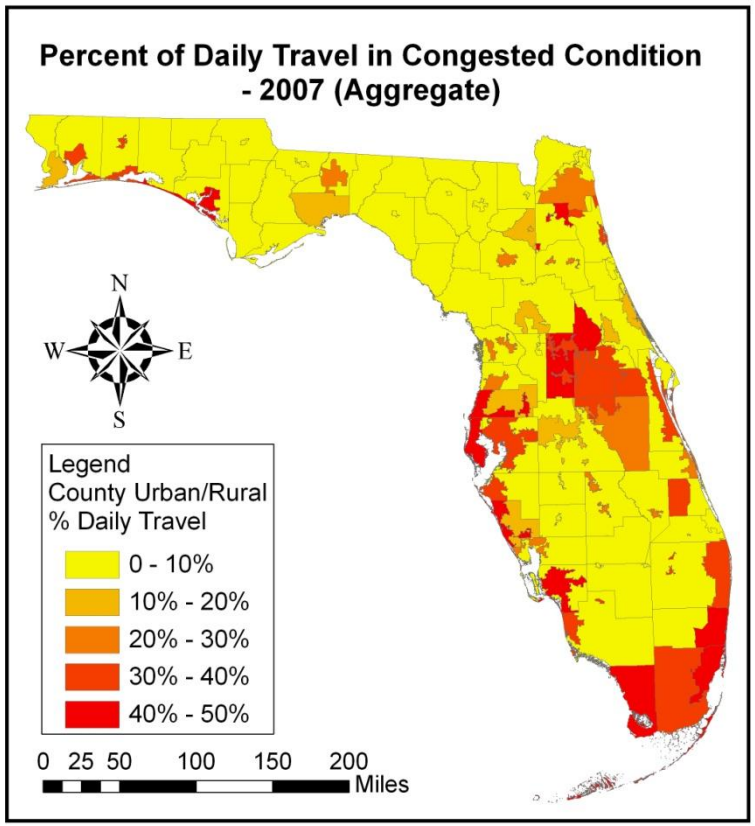
Percent of Daily Travel in Congested Conditions (PDTCC)





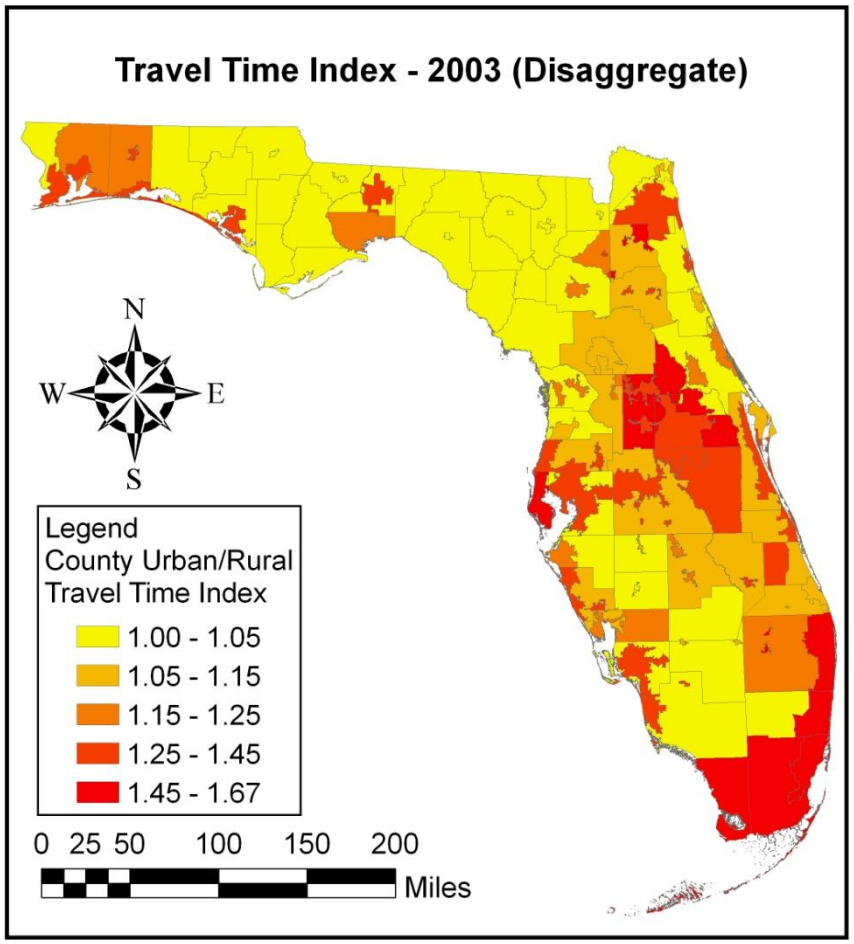

Percent of Daily Travel in Congested Condition - 2005 (Aggregate)
N
W
E
S
Legend
County Urban/Rural
% Daily Travel
0 - 10%
10% - 20%
20% - 30%
30% - 40%
40% - 50%
0 25 50 100 150 200
Miles

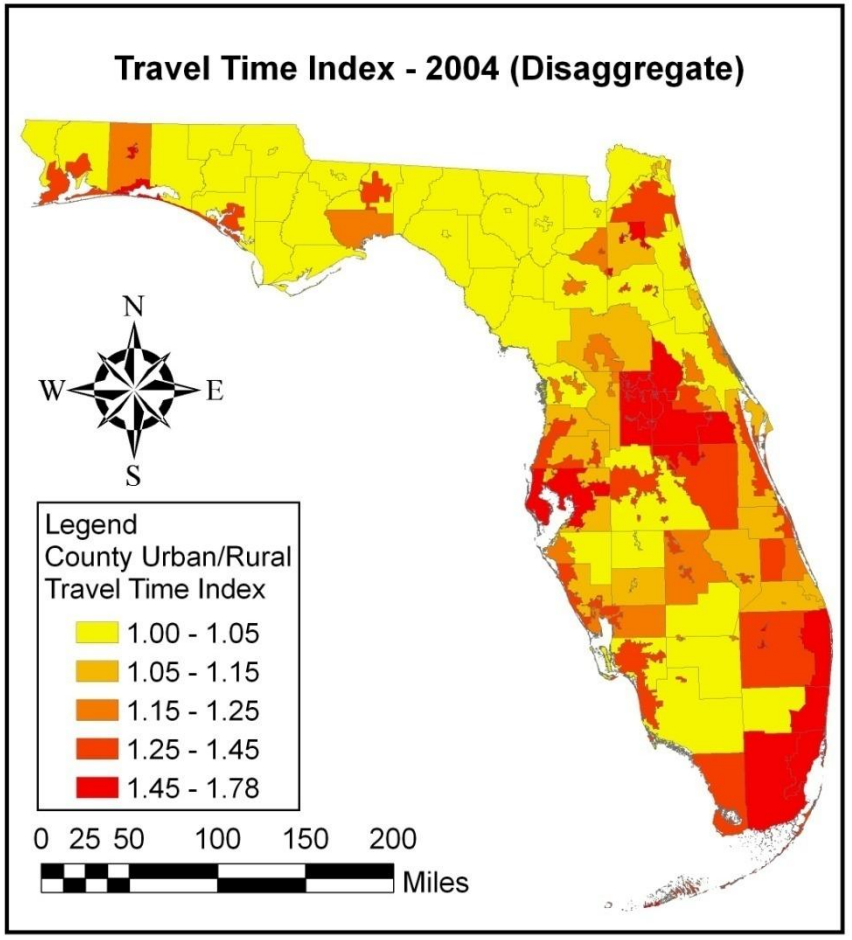

Percent of Daily Travel in Congested Condition - 2006 (Aggregate)
N
W
E
S
Legend
County Urban/Rural
% Daily Travel
0 - 10%
10% - 20%
20% - 30%
30% - 40%
40% - 50%
0 25 50 100 150 200
Miles

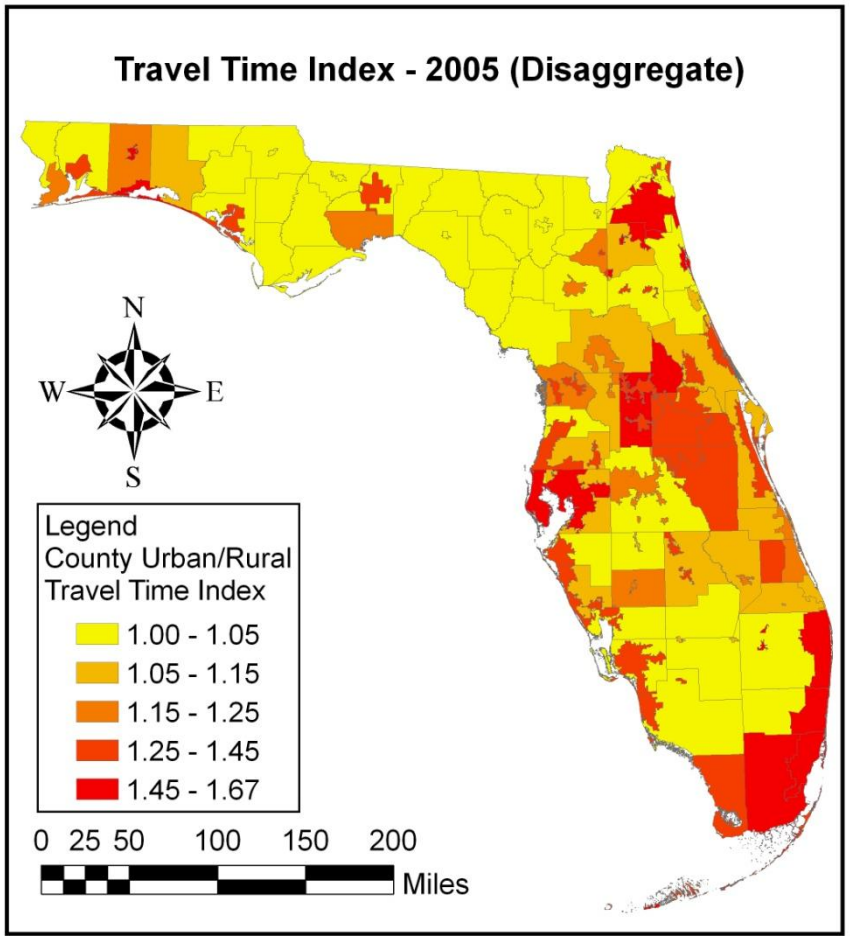


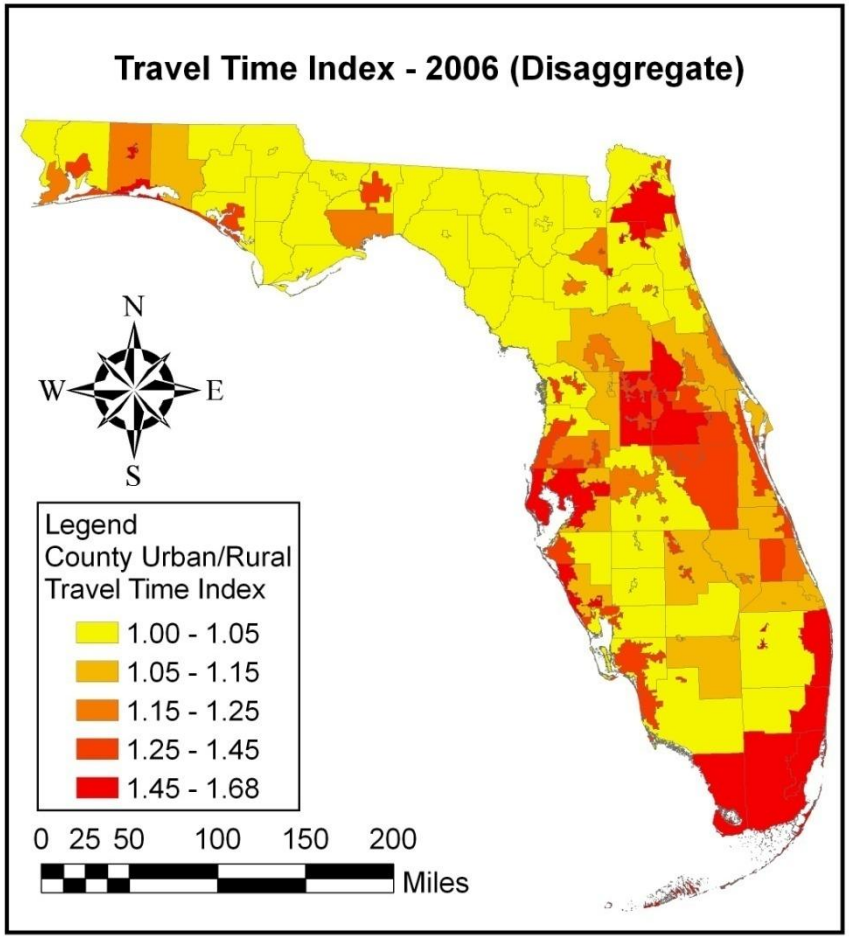
Since both disaggregate county and aggregate methods use aggregation to calculate percent of daily travel in congested conditions (PDTCC) the results are exactly the same. For map analysis refer to section 3.1.2.

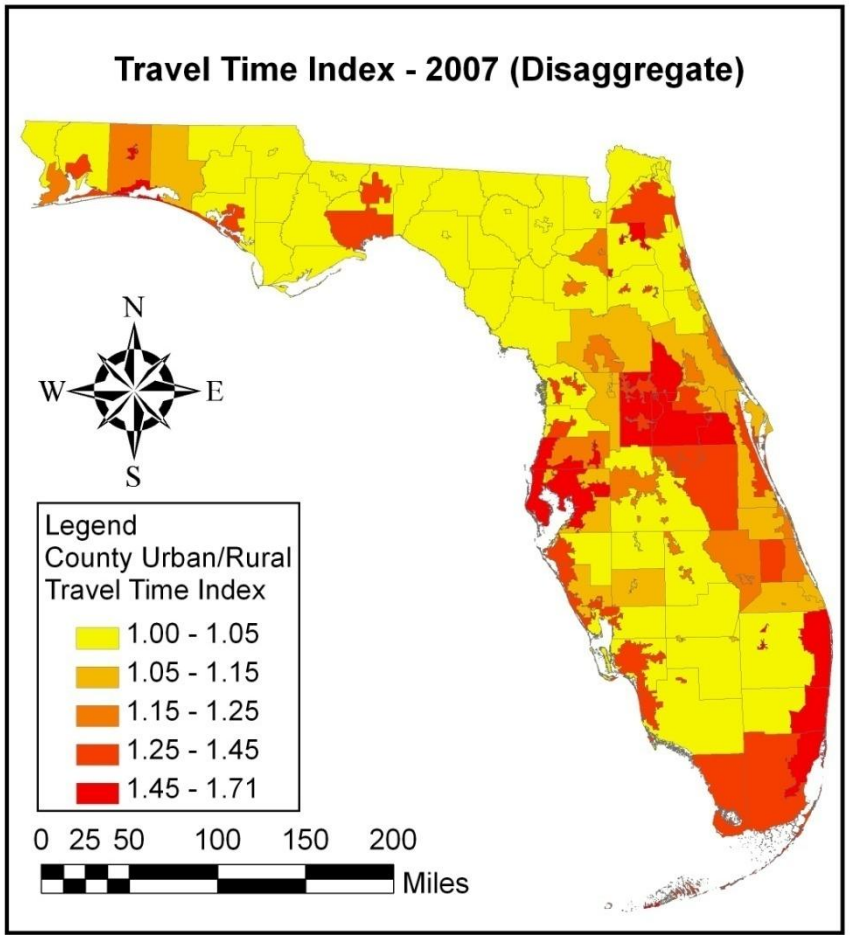
Travel Time Index





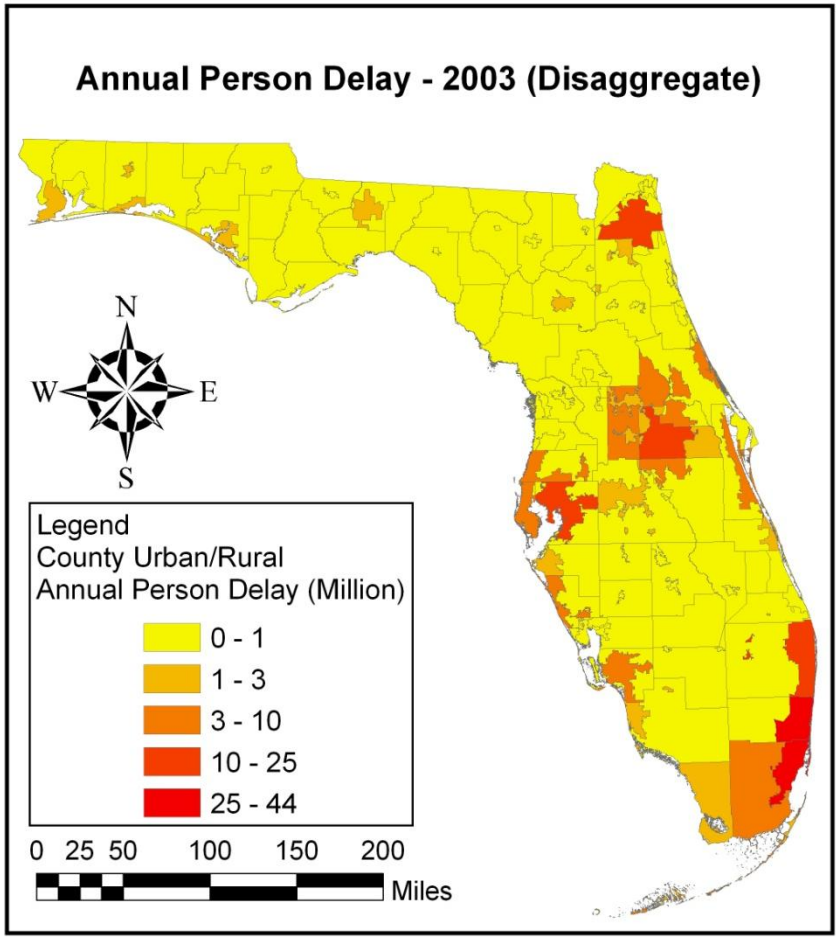

Travel Time Index - 2005 (Disaggregate)
N
W
E
S
Legend
County Urban/Rural
Travel Time Index
1.00 - 1.05
1.05 - 1.15
1.15 - 1.25
1.25 - 1.45
1.45 - 1.67
0 25 50 100 150 200
Miles

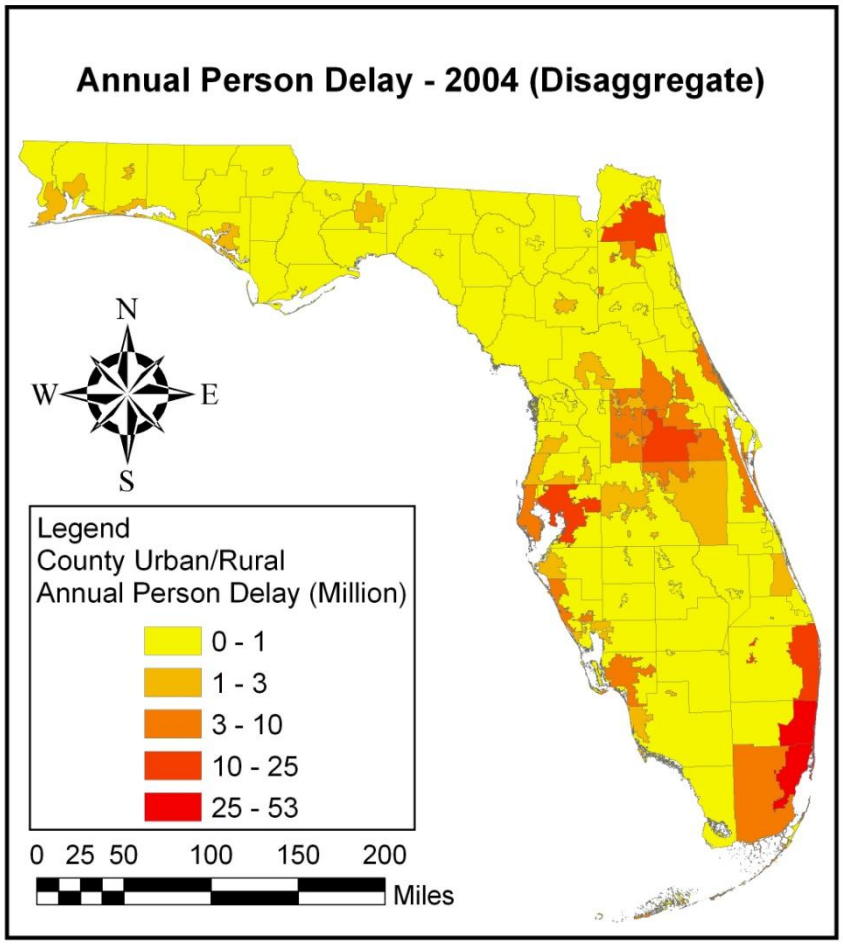

Travel Time Index - 2006 (Disaggregate)
N
W
E
S
Legend
County Urban/Rural
Travel Time Index
1.00 - 1.05
1.05 - 1.15
1.15 - 1.25
1.25 - 1.45
1.45 - 1.68
0 25 50 100 150 200
Miles

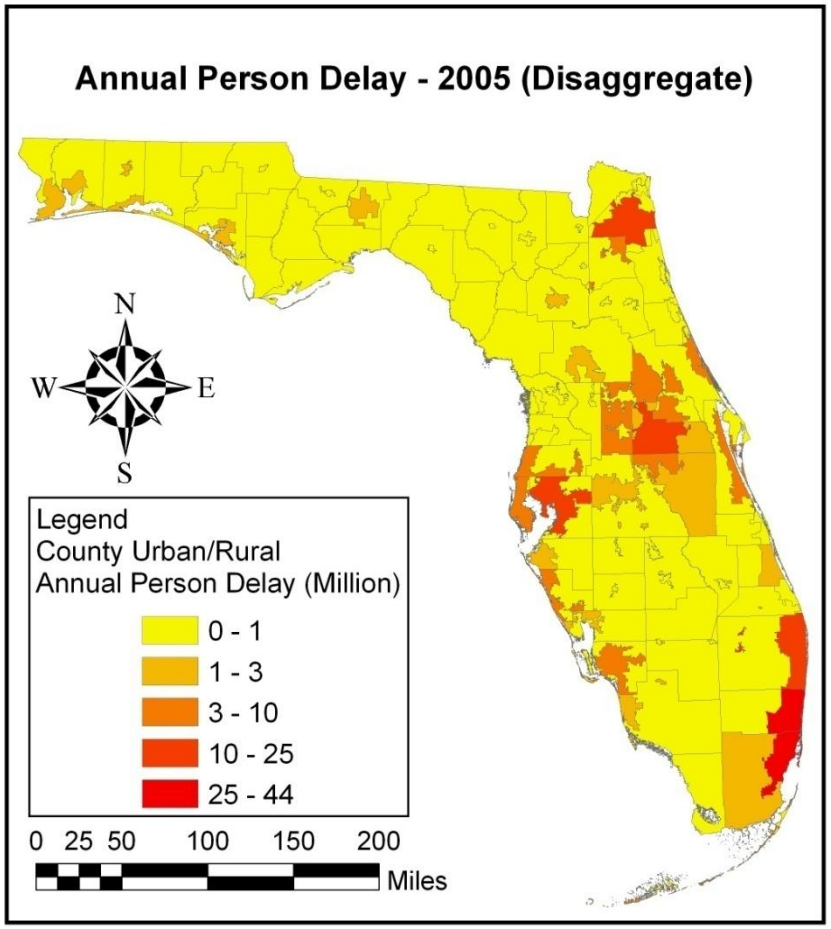


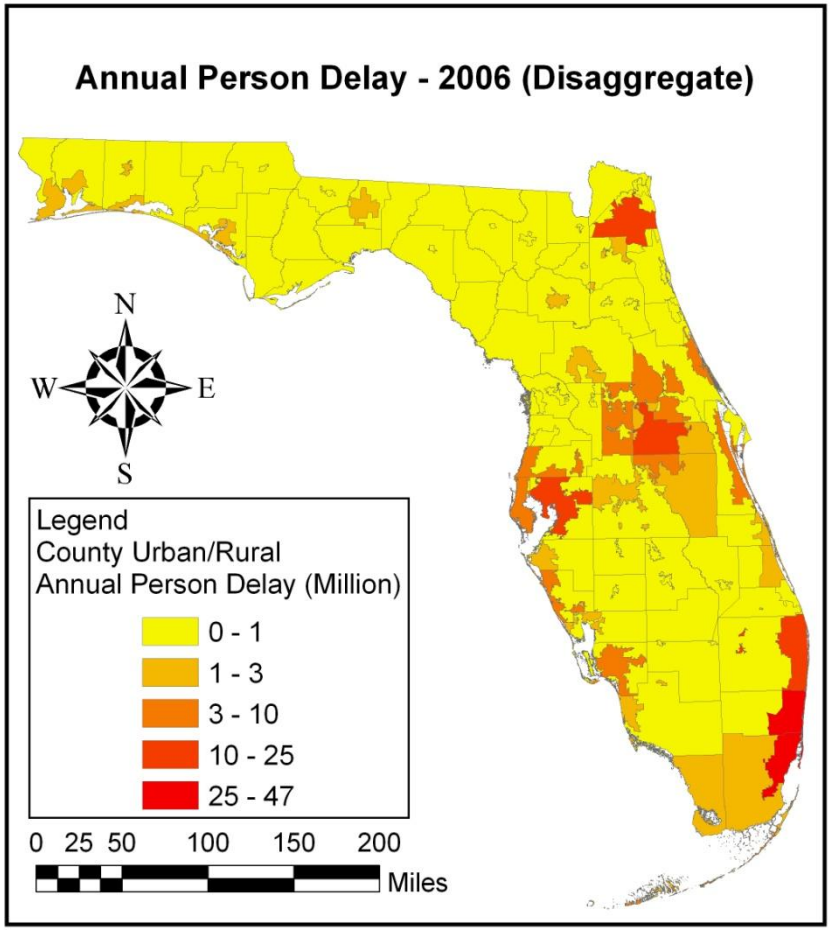
Adding local information, such as vehicle occupancy, and using a disaggregated method does not seem to have much of an effect on the overall pattern of travel time index, however, as explained in the methodology, this method is more precise and could be more relevant when conducting an in-depth analysis.

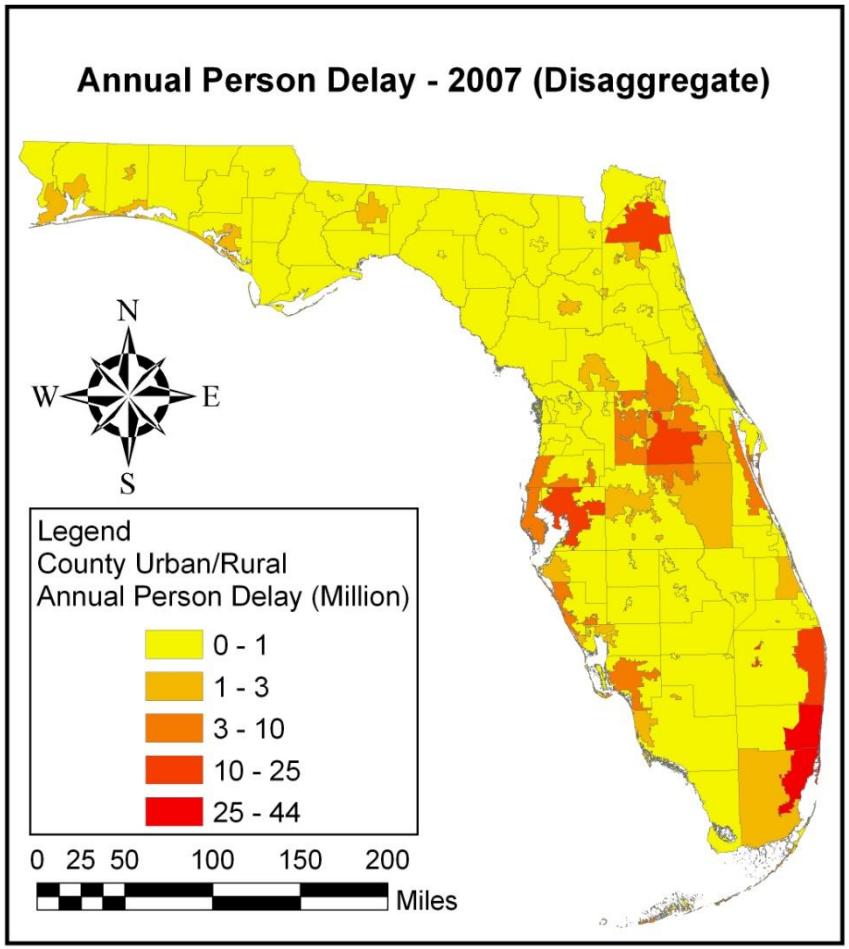
Annual Person Delay





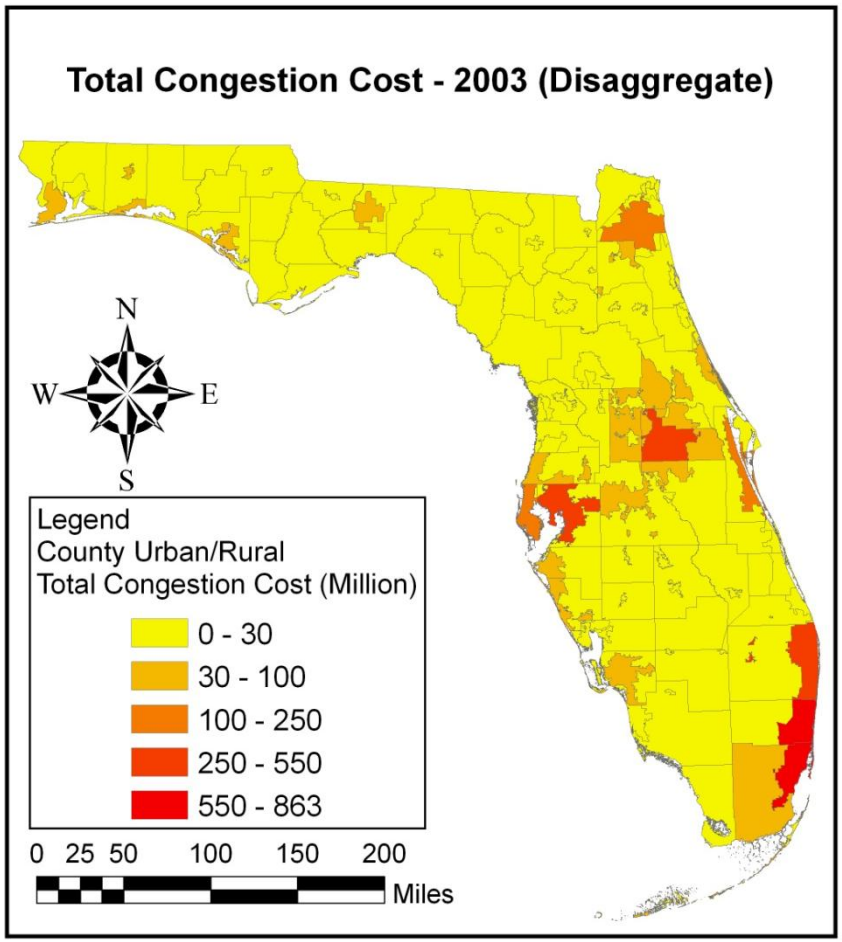

Annual Person Delay - 2005 (Disaggregate)
N
W
E
S
Legend
County Urban/Rural
Annual Person Delay (Million)
0 - 1
1 - 3
3 - 10
10 - 25
25 - 44
0 25 50 100 150 200
Miles

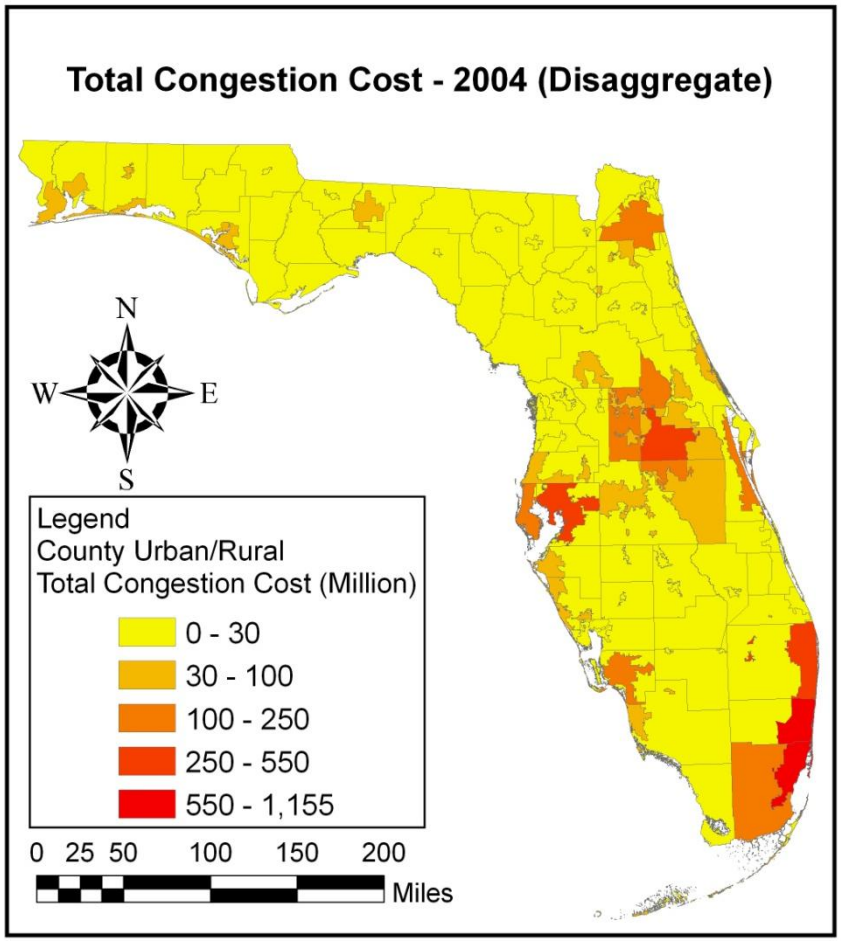

Annual Person Delay - 2006 (Disaggregate)
N
W
E
S
Legend
County Urban/Rural
Annual Person Delay (Million)
0 - 1
1 - 3
3 - 10
10 - 25
25 - 47
0 25 50 100 150 200
Miles

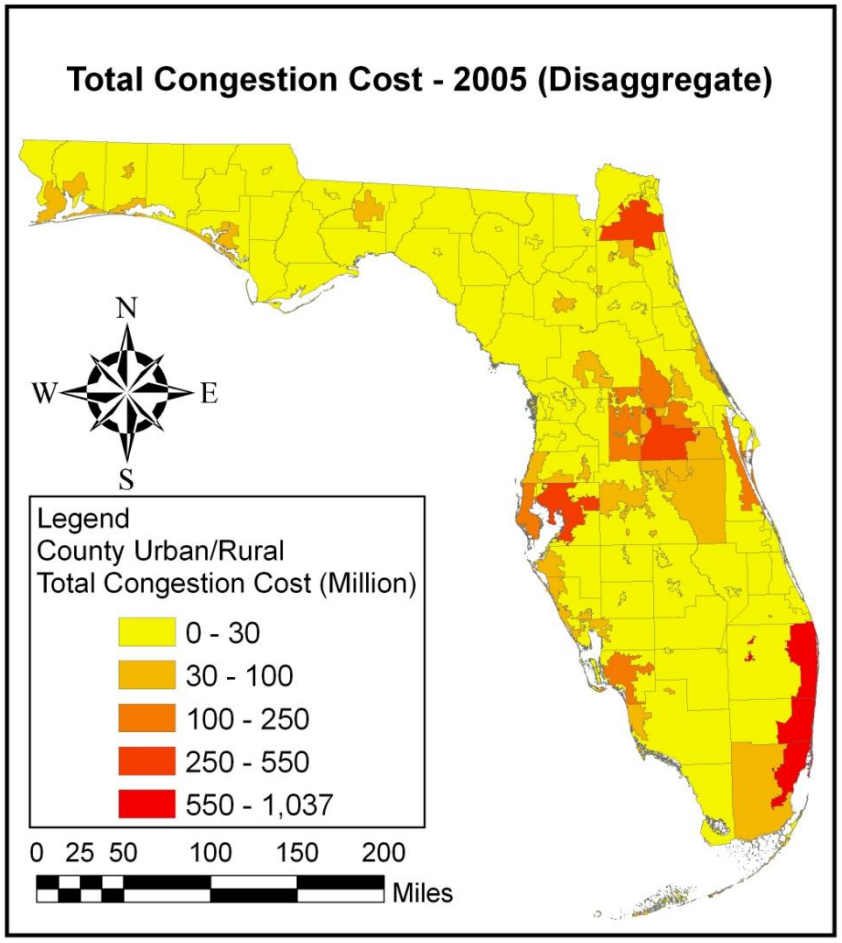


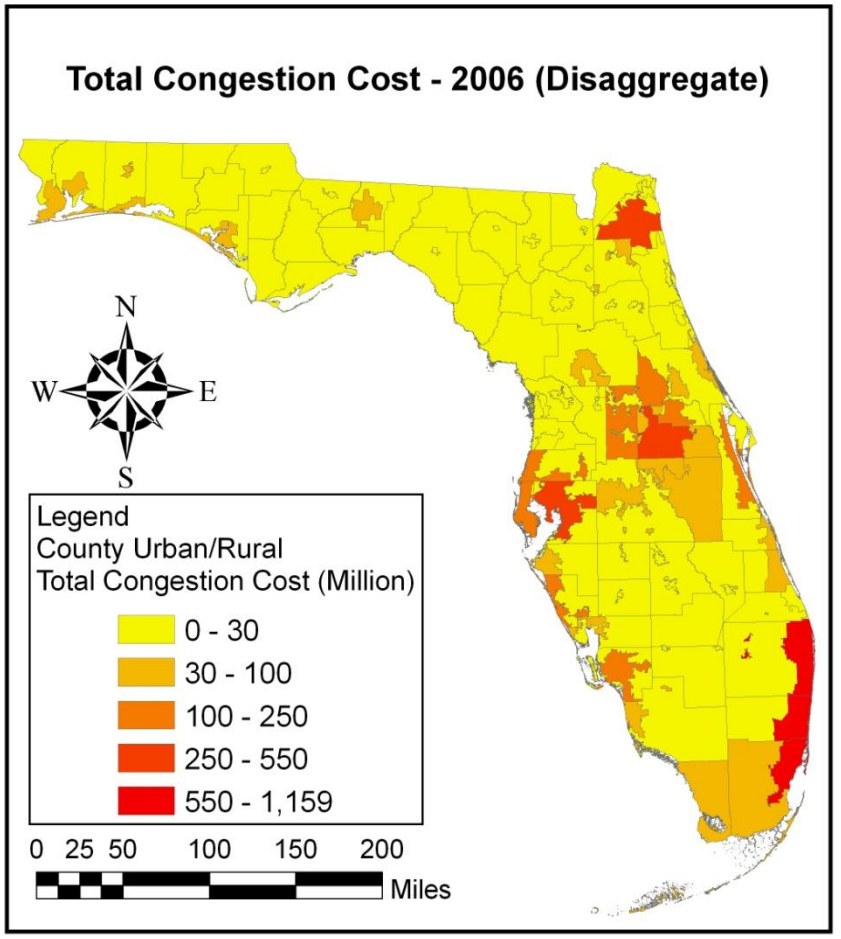
It can be observed from the maps that annual person delay decreased in Palm Beach and Hillsborough. In this case, even though the overall results did not change much, local information and a disaggregated method, as opposed to the use of national constants and aggregation, helped improve accuracy and reduce overestimation.

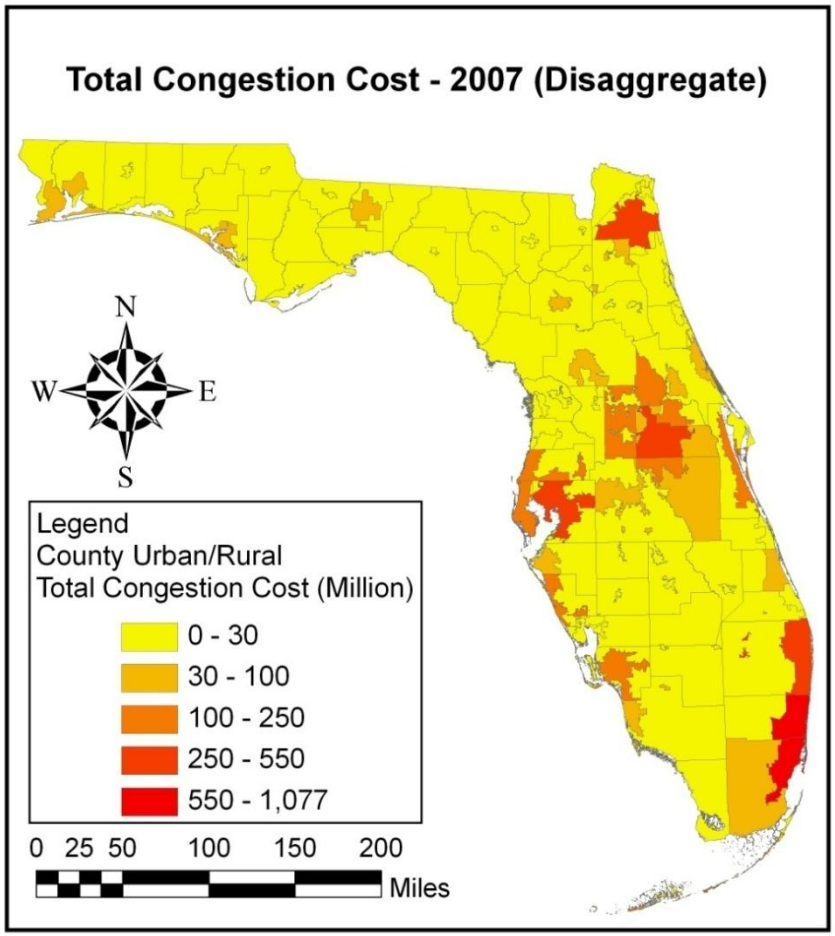
Total Cost of Traffic Congestion on Freeways and Other Principal Arterials





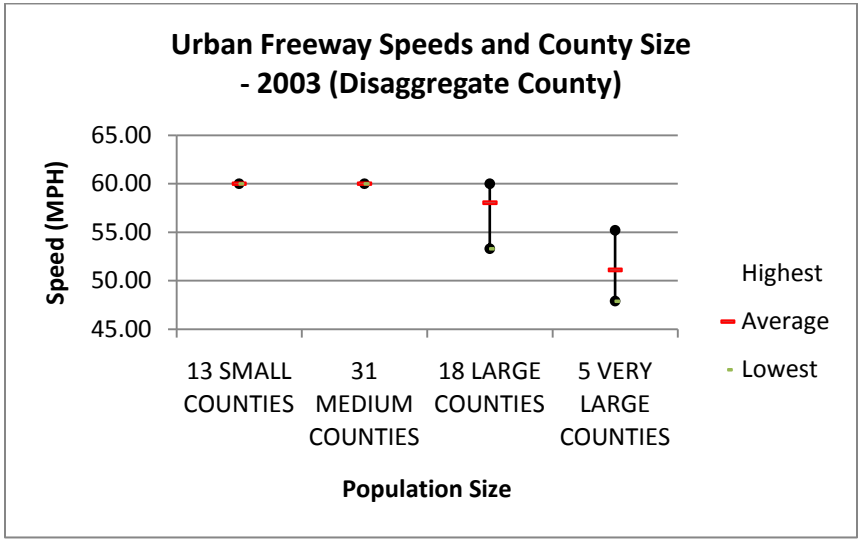

Total Congestion Cost - 2005 (Disaggregate)
N
W
E
S
Legend
County Urban/Rural
Total Congestion Cost (Million)
0 - 30
30 - 100
100 - 250
250 - 550
550 - 1,037
0 25 50 100 150 200
Miles

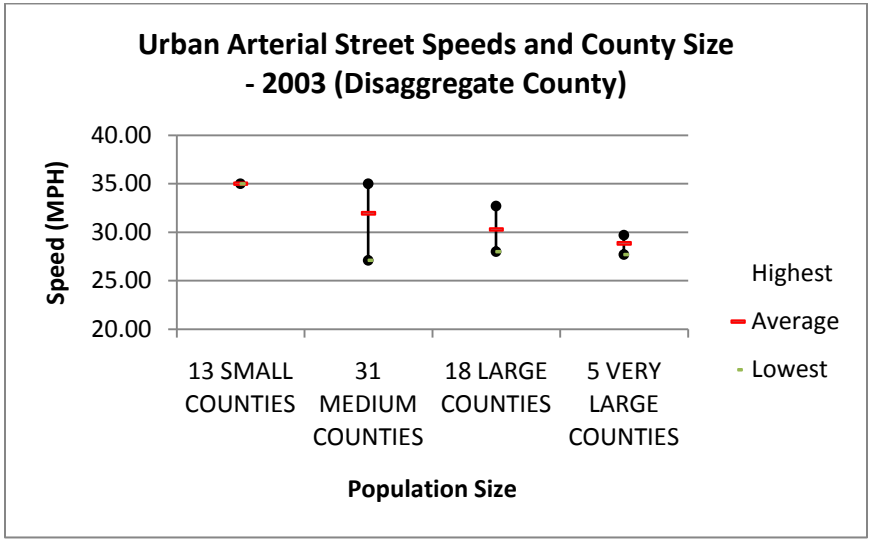

Total Congestion Cost - 2006 (Disaggregate)
N
W
E
S
Legend
County Urban/Rural
Total Congestion Cost (Million)
0 - 30
30 - 100
100 - 250
250 - 550
550 - 1,159
0 25 50 100 150 200
Miles

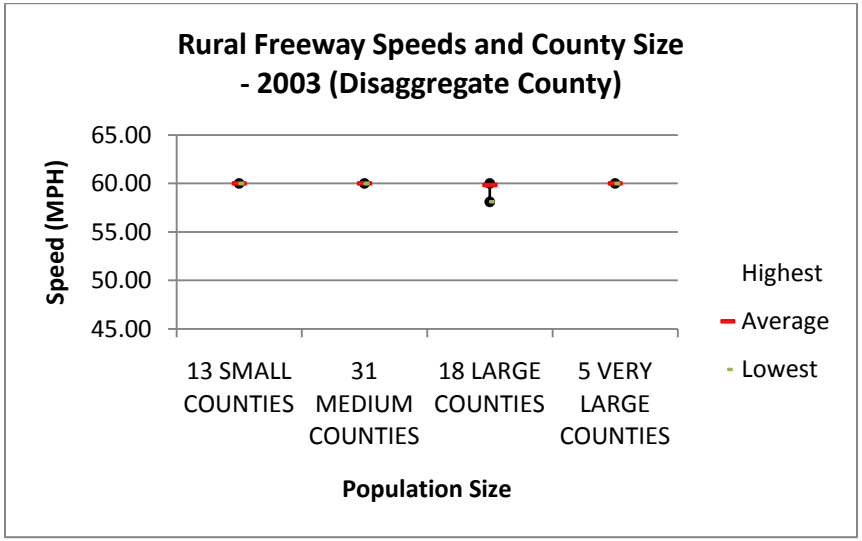


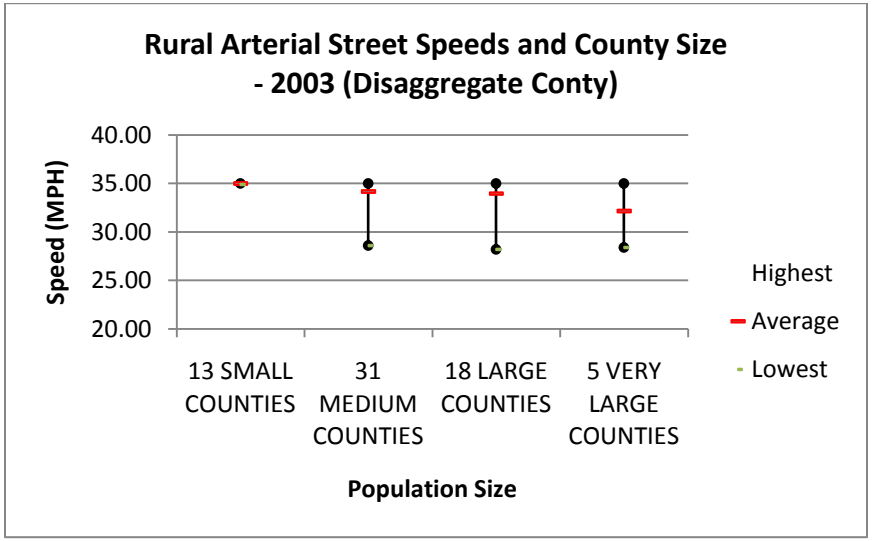
Based on the disaggregate county calculation method, traffic congestion cost $4.5 billion in 2003, peaked at $6.5 billion in 2006, and ended at $6.3 billion in 2007. It's clear from the results that local information and disaggregation reduced the cost of congestion.

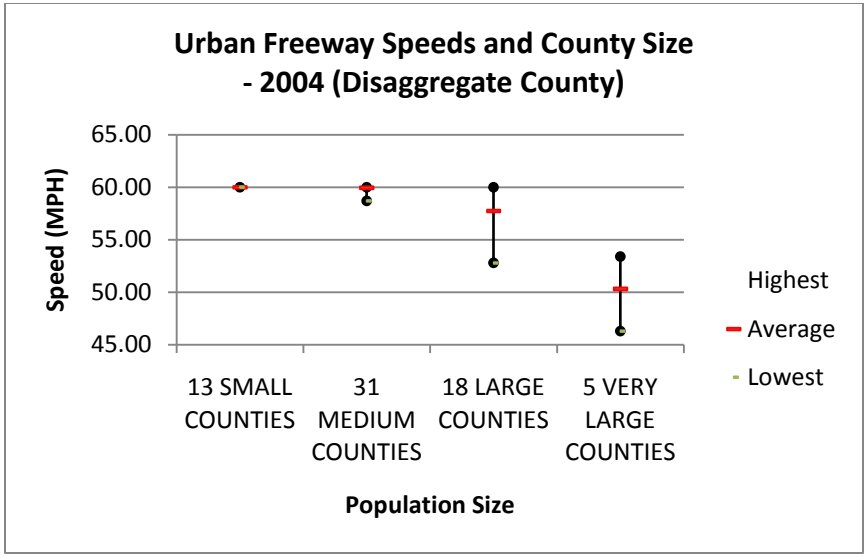
3.2.3 Speed Diagrams

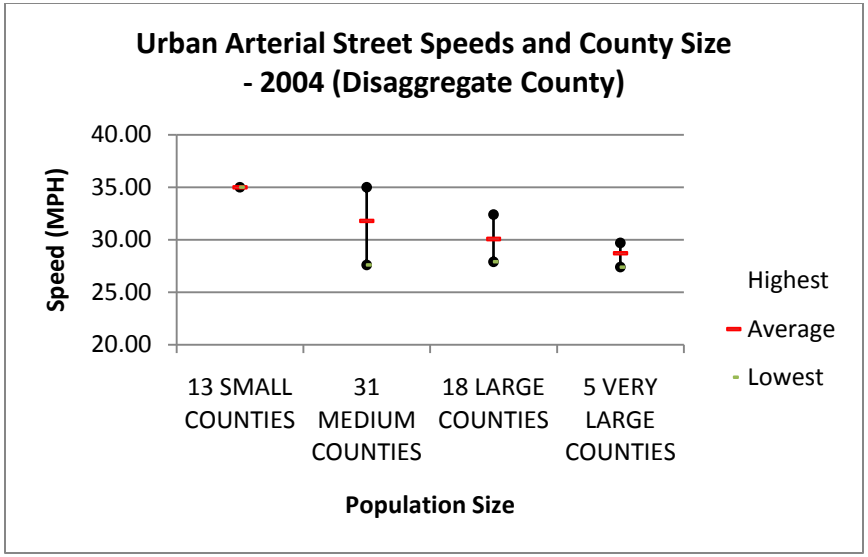









Urban Freeway Speeds and County Size - 2004 (Disaggregate County)
Speed (MPH)
65.00
60.00
55.00
50.00
45.00
13 SMALL COUNTIES
31 MEDIUM COUNTIES
18 LARGE COUNTIES
5 VERY LARGE COUNTIES
Population Size
Highest
Average
Lowest


Urban Arterial Street Speeds and County Size - 2004 (Disaggregate County)
Speed (MPH)
40.00
35.00
30.00
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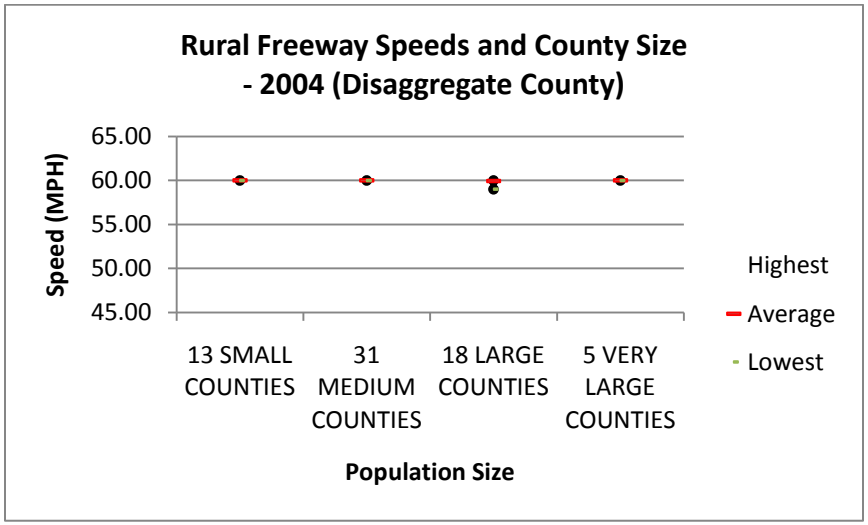
13 SMALL COUNTIES
31 MEDIUM COUNTIES
18 LARGE COUNTIES
5 VERY LARGE COUNTIES
Population Size
Highest
Average
Lowest


Rural Freeway Speeds and County Size - 2004 (Disaggregate County)
Speed (MPH)
65.00
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13 SMALL COUNTIES
31 MEDIUM COUNTIES
18 LARGE COUNTIES
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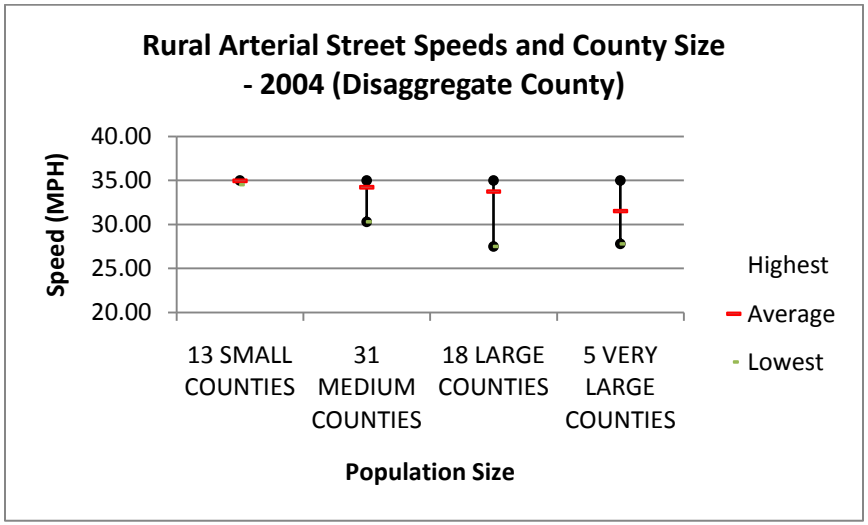
Population Size
Highest
Average
Lowest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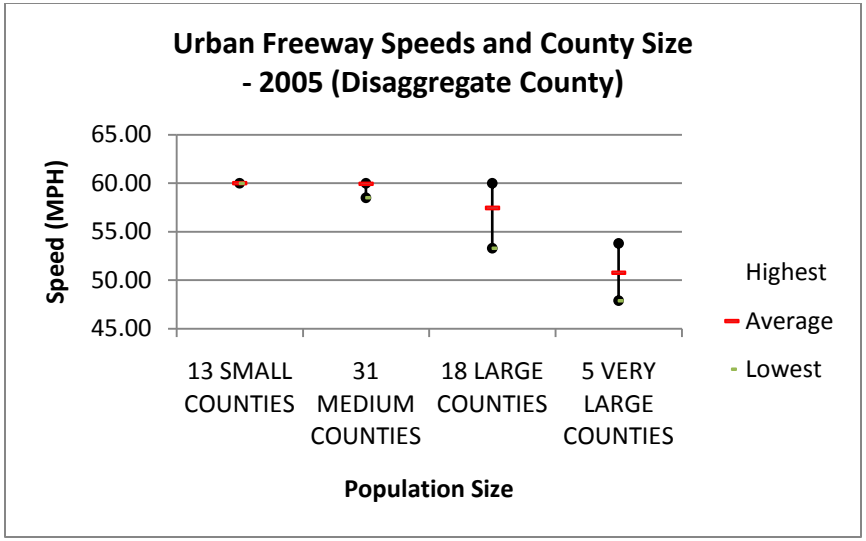
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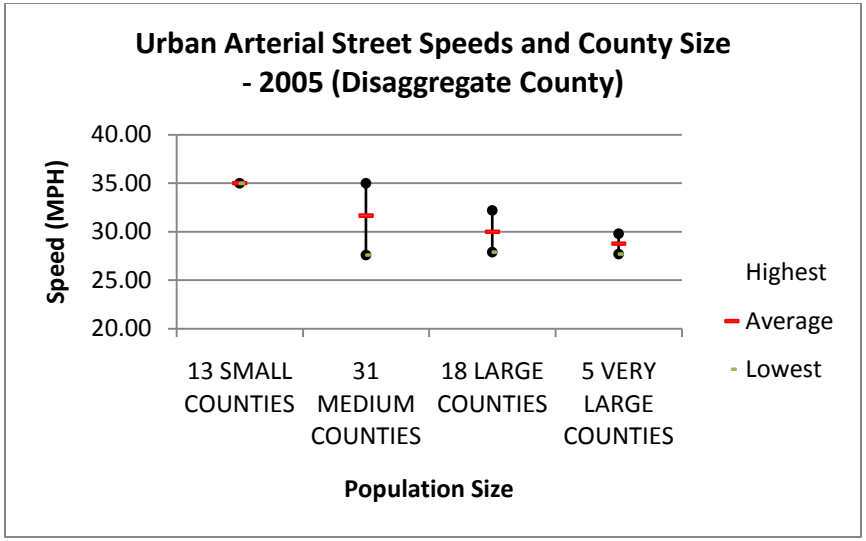
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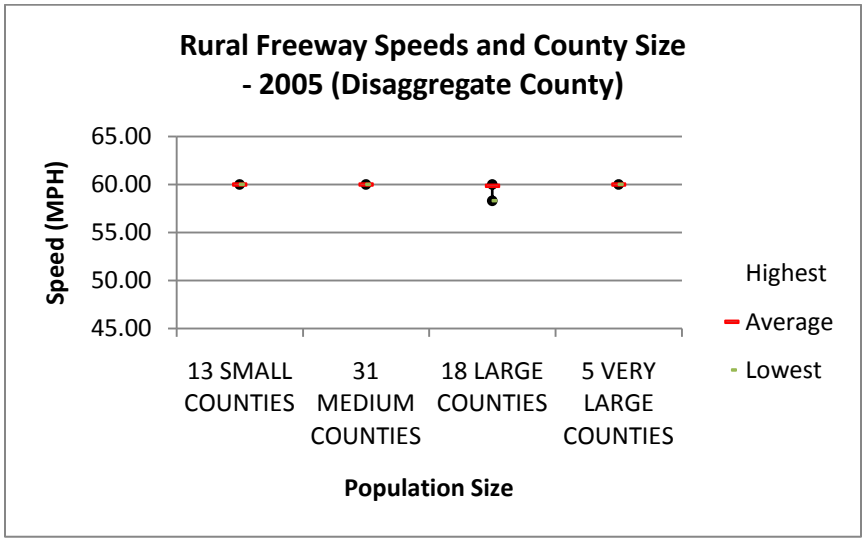
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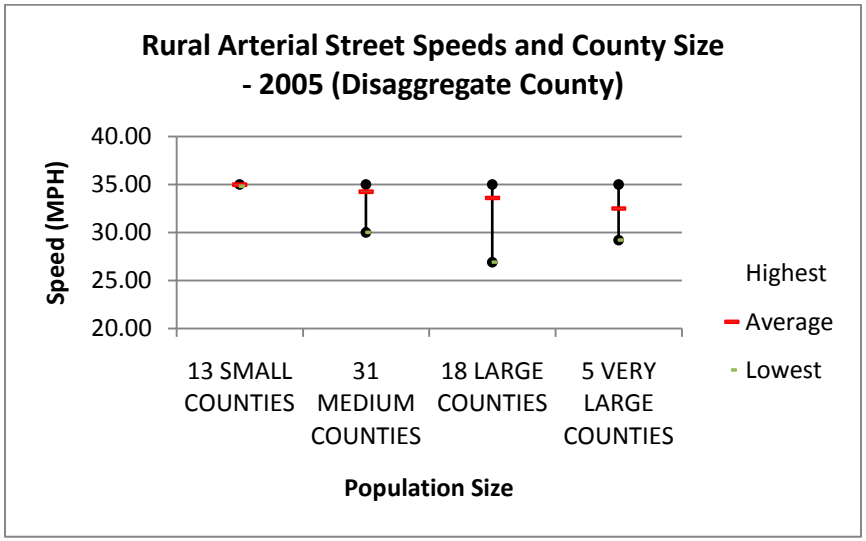
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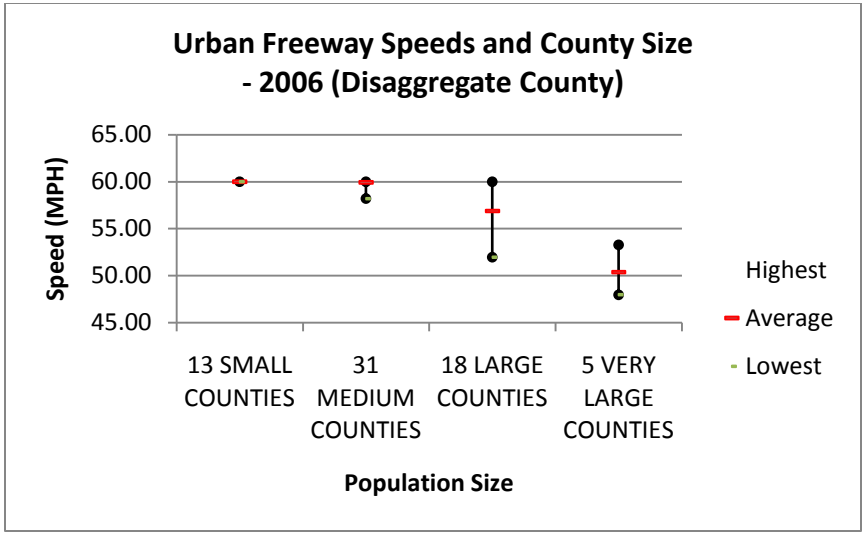
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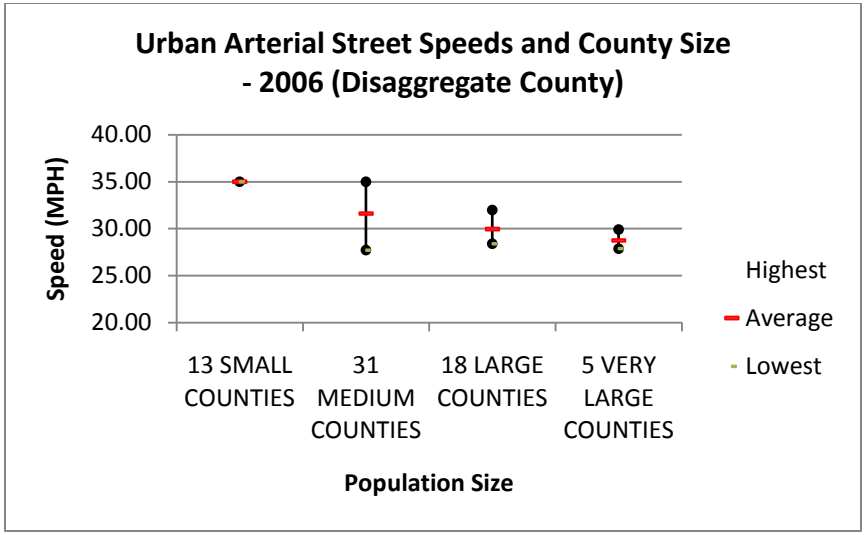
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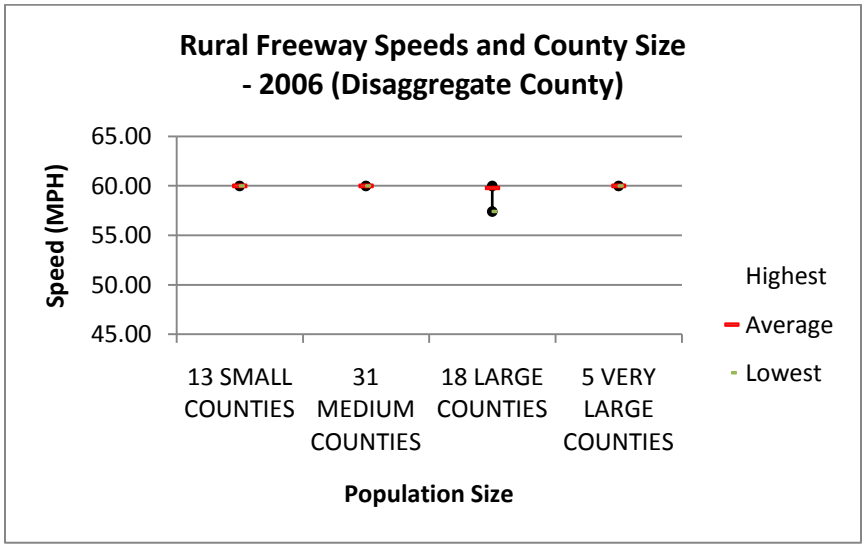
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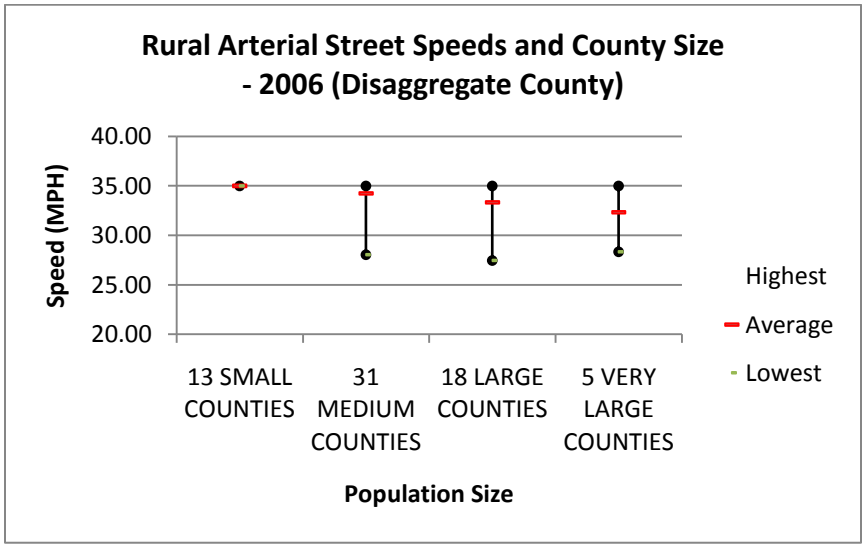
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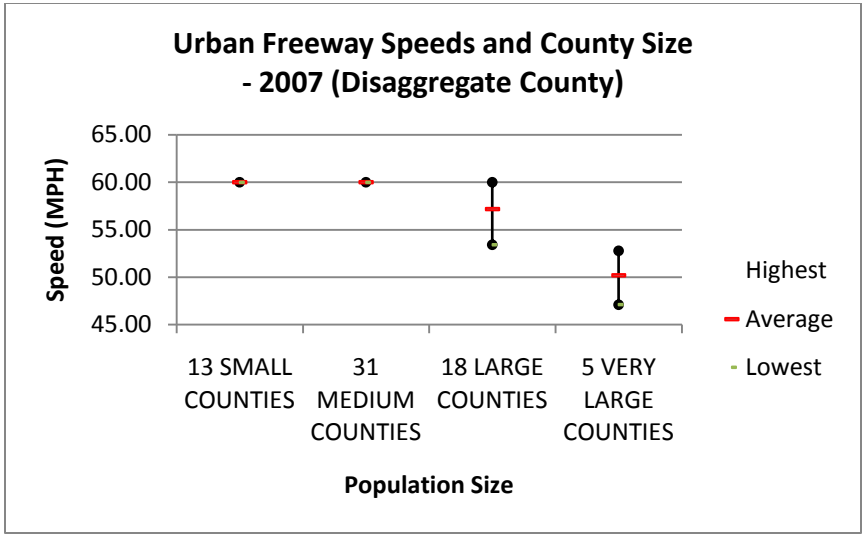
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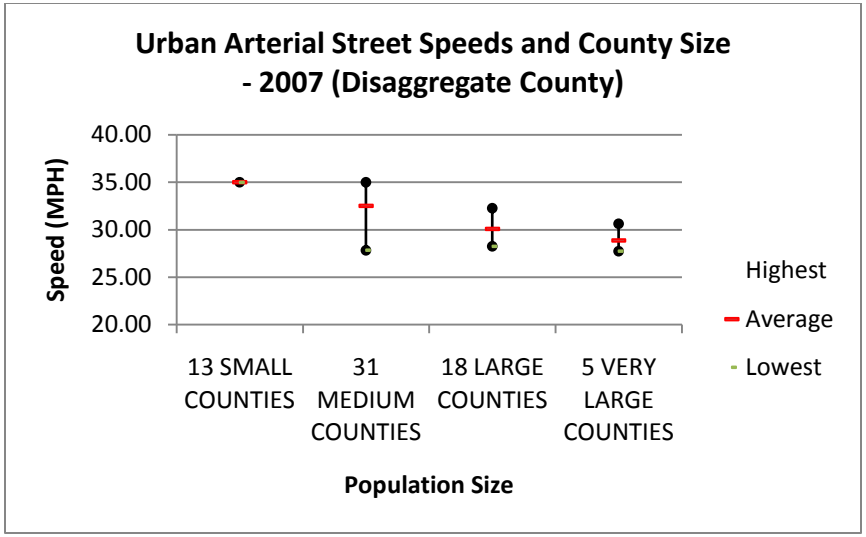
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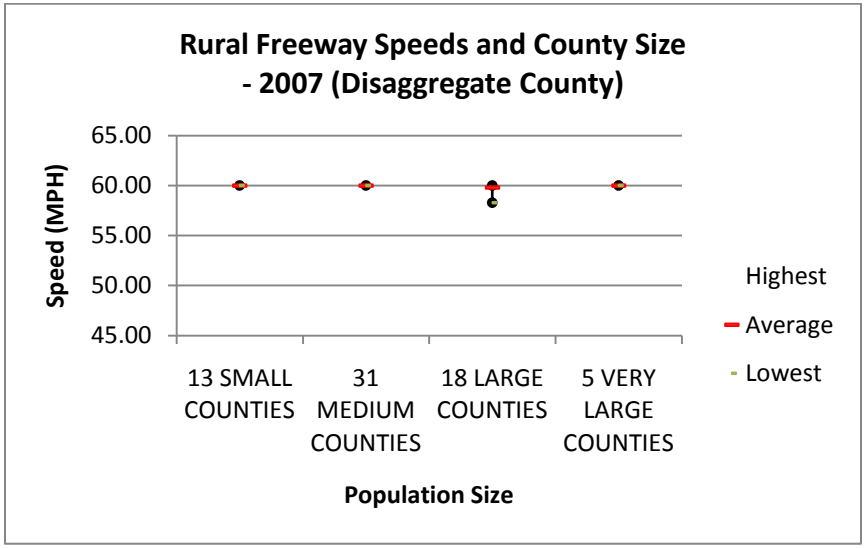
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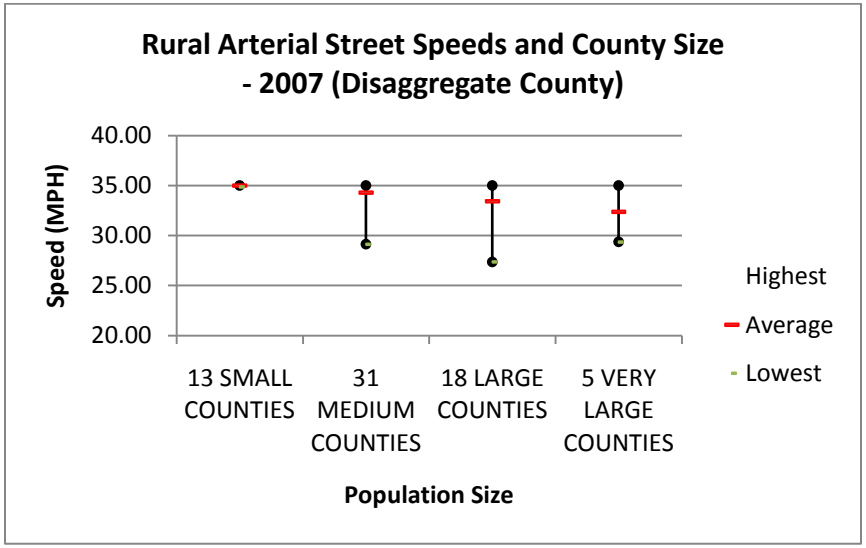
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Section 3.3 Disaggregate Roadway

3.3.1 Tables

Roadway Congestion Index

COUNTY NAME	2003		2004		2005		2006		2007	
	URBAN	RURAL	URBAN	RURAL	URBAN	RURAL	URBAN	RURAL	URBAN	RURAL
Charlotte	0.92	1.17	1.37	0.76	1.40	0.79	1.36	0.81	1.28	0.76
Citrus	1.12	0.63	1.16	0.85	1.36	0.86	1.26	0.84	1.29	0.83
Collier	1.27	0.40	1.36	0.43	1.34	0.42	1.38	0.42	1.33	0.41
Desoto	0.82	0.65	0.96	0.75	1.00	0.85	0.84	0.55	0.88	0.73
Glades		0.39		0.48		0.44		0.44		0.39
Hardee	0.77	0.48	0.87	0.58	0.82	0.56	0.73	0.54	0.65	0.50
Hendry	0.94	0.67	1.05	0.71	1.02	0.77	1.05	0.78	1.07	0.78
Hernando	1.10	0.64	1.35	0.78	1.16	0.75	1.16	0.72	1.07	0.69
Highlands	1.15	0.70	1.31	0.86	1.27	0.77	1.22	0.76	1.10	0.70
Hillsborough	1.43	0.83	1.44	0.92	1.48	0.88	1.51	0.85	1.55	0.91
Lake	1.41	1.93	1.54	2.07	1.45	2.24	1.43	2.21	1.29	2.27
Lee	1.43	0.67	1.49	0.70	1.55	0.80	1.55	0.80	1.50	0.75
Manatee	1.18	0.63	1.27	0.69	1.32	0.87	1.30	0.68	1.27	0.71
Pasco	1.54	0.92	1.51	0.96	1.55	1.07	1.65	1.14	1.65	1.11
Pinellas	1.86		1.85		1.85		1.81		1.79	
Polk	1.24	0.99	1.26	0.78	1.19	0.82	1.15	0.89	1.17	0.89
Sarasota	1.52	0.90	1.55	0.99	1.60	1.07	1.64	1.12	1.55	1.08
Sumter	1.02	0.86	1.09	0.93	1.13	0.95	1.02	0.97	0.98	0.98
Alachua	1.16	0.69	1.15	0.68	1.19	0.71	1.14	0.70	1.17	0.72
Baker	0.48	0.41	0.60	0.44	0.62	0.45	0.44	0.51	0.47	0.41
Bradford	1.27	1.06	1.20	1.06	1.34	1.16	1.22	1.10	1.19	1.07
Columbia	0.62	0.45	0.64	0.45	0.66	0.46	0.63	0.49	0.61	0.50
Dixie		0.42		0.50		0.50		0.59		0.51
Gilchrist		0.74		0.96		0.90		0.86		0.78
Hamilton		0.37		0.39		0.90		0.41		0.44
Lafayette		0.39		0.40		0.40		0.39		0.38
Levy		0.24		0.27		0.27		0.26		0.26
Madison		0.36		0.34		0.38		0.40		0.38
Marion	1.01	0.87	1.10	0.90	1.14	0.91	1.12	0.92	1.11	0.90
Suwannee		0.39		0.42		0.43		0.43		0.43
Taylor	0.54	0.30	0.60	0.35	0.60	0.35	0.59	0.36	0.57	0.30
Union										
Bay	1.46	0.60	1.34	0.62	1.46	0.62	1.45	0.62	1.56	0.63

Calhoun		0.57		0.52		0.53		0.52		0.54
Escambia	1.31	0.61	1.32	0.57	1.22	0.58	1.20	0.57	1.12	0.59
Franklin		0.35		0.34		0.32		0.31		0.33
Gadsden		0.47		0.46		0.49		0.49		0.50
Gulf		0.66		0.64		0.26		0.26		0.56
Holmes		0.31		0.31		0.32		0.33		0.34
Jackson		0.36	0.37	0.37	0.42	0.38	0.38	0.37	0.38	0.38
Jefferson		0.40		0.42		0.40		0.41		0.46
Leon	1.35	0.63	1.27	0.55	1.33	0.58	1.39	0.62	1.34	0.62
Liberty		0.38		0.40		0.41		0.39		0.41
Okaloosa	1.49	0.81	1.67	0.84	1.71	0.95	1.68	0.89	1.71	0.90
Santa Rosa	1.53	0.83	1.40	0.44	1.48	0.39	1.61	0.46	1.57	0.42
Wakulla		0.84		0.82		0.85		0.92		0.98
Walton	2.14	0.49	2.00	0.56	2.05	0.64	2.05	0.55	2.10	0.52
Washington		0.44		0.45		0.46		0.49		0.52
Brevard	1.29	0.75	1.30	0.76	1.31	0.79	1.33	0.82	1.35	0.77
Clay	1.78	0.89	1.99	0.83	2.01	0.84	1.82	0.79	1.81	0.79
Duval	1.29	0.57	1.32	0.71	1.44	0.71	1.46	0.76	1.38	0.69
Flagler	1.07	0.82	1.08	0.84	1.05	0.86	1.42	0.89	1.21	0.74
Nassau	0.94	0.63	1.02	0.66	1.09	0.64	1.20	0.70	1.03	0.67
Orange	1.49	1.89	1.54	2.09	1.48	1.66	1.48	1.64	1.49	1.71
Putnam	1.30	0.87	1.26	0.76	1.27	0.70	1.20	0.68	1.18	0.68
Seminole	1.55	0.82	1.41	0.85	1.42	0.83	1.40	0.88	1.42	0.87
St. Johns	1.47	0.62	1.61	0.69	1.64	0.68	1.59	0.72	1.48	0.75
Volusia	1.16	0.76	1.15	0.73	1.18	0.83	1.13	0.87	1.08	0.88
Broward	1.57	0.48	1.59	0.42	1.60	0.40	1.96	0.47	1.60	0.45
Miami-Dade	1.69	1.70	1.80	1.97	1.66	1.61	1.70	1.87	1.75	1.54
Indian River	1.28	0.76	1.13	0.82	1.14	0.87	1.20	0.85	1.18	0.89
Martin	0.90	0.84	0.87	0.92	0.87	0.98	0.87	0.98	0.89	1.03
Monroe	1.63	1.64	1.71	1.50	1.77	1.59	1.76	1.90	1.82	1.45
Okeechobee	1.22	0.81	1.23	0.85	1.22	0.94	1.16	0.93	1.12	0.94
Osceola	1.50	0.98	1.62	1.06	1.49	1.14	1.48	1.10	1.47	1.17
Palm Beach	1.46	1.22	1.42	1.33	1.42	0.60	1.42	0.61	1.35	0.54
St. Lucie	0.97	1.08	1.01	1.14	1.01	1.22	1.04	1.28	1.05	1.25
AVERAGE	**1.26**	**0.72**	**1.29**	**0.75**	**1.30**	**0.75**	**1.30**	**0.75**	**1.27**	**0.74**

Percent of Daily Travel in Congested Condition

COUNTY NAME	2003		2004		2005		2006		2007	
	URBAN	RURAL	URBAN	RURAL	URBAN	RURAL	URBAN	RURAL	URBAN	RURAL
Charlotte	28%	37%	41%	27%	42%	28%	41%	29%	40%	26%
Citrus	42%	23%	42%	34%	44%	33%	43%	32%	44%	32%
Collier	43%	14%	44%	15%	44%	14%	45%	14%	45%	14%
Desoto	30%	23%	36%	27%	36%	30%	30%	19%	31%	26%
Glades		13%		16%		15%		15%		13%
Hardee	27%	16%	32%	20%	30%	19%	26%	18%	22%	17%
Hendry	35%	24%	39%	25%	37%	28%	38%	28%	38%	28%
Hernando	43%	22%	46%	26%	41%	26%	42%	25%	40%	24%
Highlands	44%	26%	47%	30%	46%	29%	45%	28%	43%	26%
Hillsborough	42%	30%	44%	33%	44%	33%	45%	32%	46%	33%
Lake	47%	47%	48%	48%	48%	49%	48%	48%	46%	47%
Lee	46%	22%	46%	24%	47%	28%	48%	29%	47%	25%
Manatee	42%	22%	42%	24%	44%	33%	45%	24%	44%	25%
Pasco	45%	33%	45%	36%	46%	37%	46%	38%	46%	39%
Pinellas	47%		47%		46%		47%		47%	
Polk	42%	38%	39%	28%	37%	30%	39%	34%	39%	34%
Sarasota	47%	33%	48%	37%	49%	41%	49%	43%	49%	41%
Sumter	36%	28%	38%	30%	39%	31%	35%	30%	34%	31%
Alachua	39%	24%	38%	24%	40%	25%	40%	24%	42%	25%
Baker	16%	14%	20%	15%	21%	15%	15%	17%	16%	14%
Bradford	46%	41%	44%	41%	46%	45%	45%	43%	43%	41%
Columbia	22%	15%	22%	15%	24%	15%	22%	16%	21%	17%
Dixie		14%		17%		17%		20%		17%
Gilchrist		26%		37%		34%		32%		29%
Hamilton		12%		13%		34%		14%		15%
Lafayette		13%		13%		13%		13%		13%
Levy		8%		9%		9%		9%		9%
Madison		12%		11%		13%		13%		13%
Marion	37%	30%	39%	31%	41%	30%	41%	32%	41%	30%
Suwannee		13%		14%		14%		14%		14%
Taylor	18%	10%	20%	12%	20%	12%	20%	12%	19%	10%
Union										
Bay	46%	20%	45%	21%	47%	21%	47%	21%	48%	22%
Calhoun		20%		18%		19%		18%		19%
Escambia	41%	22%	42%	20%	41%	20%	41%	20%	38%	21%

Franklin		12%		11%		11%		10%		11%
Gadsden		16%		15%		16%		17%		17%
Gulf		24%		23%		9%		9%		19%
Holmes		10%		10%		11%		11%		11%
Jackson		12%	12%	12%	14%	13%	13%	12%	13%	13%
Jefferson		13%		14%		13%		14%		15%
Leon	42%	22%	40%	19%	41%	20%	42%	21%	41%	21%
Liberty		13%		13%		14%		13%		14%
Okaloosa	46%	26%	45%	27%	45%	28%	45%	28%	41%	28%
Santa Rosa	42%	29%	40%	15%	40%	13%	41%	15%	41%	14%
Wakulla		31%		30%		30%		32%		33%
Walton	49%	17%	46%	20%	46%	23%	46%	20%	46%	18%
Washington		15%		15%		16%		16%		17%
Brevard	43%	25%	43%	25%	43%	26%	44%	26%	44%	25%
Clay	48%	28%	49%	29%	49%	30%	48%	28%	48%	28%
Duval	43%	19%	43%	24%	44%	24%	45%	26%	44%	23%
Flagler	35%	31%	37%	32%	37%	33%	40%	34%	29%	26%
Nassau	37%	21%	41%	23%	44%	22%	46%	24%	42%	23%
Orange	43%	46%	45%	47%	44%	43%	45%	42%	45%	43%
Putnam	43%	30%	43%	27%	42%	24%	42%	24%	42%	24%
Seminole	45%	31%	44%	32%	44%	31%	44%	33%	44%	33%
St. Johns	44%	21%	47%	24%	48%	24%	48%	26%	46%	27%
Volusia	41%	28%	41%	27%	41%	30%	40%	32%	38%	32%
Broward	46%	16%	47%	14%	48%	13%	48%	16%	47%	15%
Miami-Dade	47%	45%	48%	47%	47%	45%	47%	46%	48%	45%
Indian River	44%	27%	42%	29%	40%	30%	44%	29%	44%	31%
Martin	28%	29%	27%	32%	28%	31%	28%	33%	30%	35%
Monroe	49%	48%	48%	46%	48%	48%	48%	48%	48%	48%
Okeechobee	42%	30%	43%	31%	43%	34%	42%	34%	42%	33%
Osceola	44%	39%	45%	40%	43%	42%	44%	41%	44%	42%
Palm Beach	46%	30%	46%	28%	47%	21%	47%	22%	46%	19%
St. Lucie	32%	41%	33%	43%	33%	43%	34%	44%	33%	43%
AVERAGE	**40%**	**24%**	**41%**	**25%**	**41%**	**25%**	**41%**	**25%**	**40%**	**25%**

Travel Time Index

COUNTY NAME	2003		2004		2005		2006		2007	
	URBAN	RURAL	URBAN	RURAL	URBAN	RURAL	URBAN	RURAL	URBAN	RURAL
Charlotte	1.09	1.24	1.31	1.00	1.31	1.00	1.30	1.00	1.28	1.00
Citrus	1.19	1.05	1.21	1.03	1.34	1.19	1.28	1.00	1.29	1.00
Collier	1.28	1.01	1.36	1.01	1.34	1.01	1.38	1.02	1.34	1.02
Desoto	1.02	1.01	1.06	1.08	1.19	1.16	1.05	1.02	1.09	1.14
Glades		1.00		1.00		1.00		1.00		1.00
Hardee	1.06	1.00	1.03	1.00	1.05	1.00	1.05	1.00	1.00	1.00
Hendry	1.07	1.00	1.21	1.00	1.11	1.01	1.12	1.06	1.12	1.00
Hernando	1.13	1.00	1.37	1.06	1.29	1.04	1.32	1.00	1.27	1.00
Highlands	1.23	1.09	1.34	1.17	1.34	1.13	1.27	1.13	1.20	1.00
Hillsborough	1.43	1.05	1.47	1.11	1.48	1.08	1.47	1.10	1.51	1.11
Lake	1.41	1.54	1.47	1.60	1.44	1.66	1.42	1.62	1.34	1.63
Lee	1.31	1.00	1.37	1.00	1.42	1.00	1.44	1.00	1.39	1.00
Manatee	1.21	1.00	1.23	1.00	1.30	1.00	1.29	1.00	1.28	1.05
Pasco	1.38	1.07	1.37	1.06	1.41	1.12	1.45	1.19	1.46	1.18
Pinellas	1.49		1.49		1.49		1.45		1.47	
Polk	1.27	1.08	1.29	1.01	1.25	1.01	1.23	1.01	1.23	1.05
Sarasota	1.38	1.06	1.40	1.07	1.44	1.11	1.47	1.15	1.42	1.11
Sumter	1.16	1.10	1.17	1.10	1.20	1.11	1.13	1.11	1.11	1.11
Alachua	1.22	1.01	1.23	1.02	1.23	1.02	1.20	1.01	1.22	1.02
Baker	1.00	1.00	1.00	1.00	1.00	1.00	1.00	1.00	1.00	1.00
Bradford	1.29	1.18	1.33	1.20	1.40	1.20	1.34	1.21	1.24	1.19
Columbia	1.00	1.00	1.00	1.00	1.01	1.00	1.00	1.00	1.00	1.00
Dixie		1.00		1.00		1.00		1.00		1.00
Gilchrist		1.00		1.05		1.02		1.00		1.00
Hamilton		1.00		1.00		1.02		1.00		1.00
Lafayette		1.00		1.00		1.00		1.00		1.00
Levy		1.00		1.00		1.00		1.00		1.00
Madison		1.00		1.00		1.00		1.00		1.00
Marion	1.13	1.13	1.17	1.11	1.18	1.12	1.17	1.12	1.18	1.12
Suwannee		1.00		1.00		1.00		1.00		1.00
Taylor	1.00	1.00	1.00	1.00	1.00	1.00	1.00	1.00	1.00	1.00
Union										
Bay	1.39	1.00	1.37	1.00	1.41	1.00	1.41	1.00	1.43	1.00
Calhoun		1.02		1.03		1.03		1.00		1.03
Escambia	1.27	1.00	1.27	1.00	1.23	1.00	1.23	1.00	1.20	1.00

Franklin		1.00		1.00		1.00		1.00		1.00
Gadsden		1.00		1.00		1.00		1.00		1.00
Gulf		1.00		1.00		1.00		1.00		1.00
Holmes		1.00		1.00		1.00		1.00		1.00
Jackson		1.00	1.00	1.00	1.00	1.00	1.00	1.00	1.00	1.00
Jefferson		1.00		1.00		1.00		1.00		1.00
Leon	1.30	1.04	1.26	1.00	1.31	1.00	1.35	1.03	1.32	1.03
Liberty		1.00		1.00		1.00		1.00		1.00
Okaloosa	1.41	1.18	1.46	1.18	1.48	1.22	1.47	1.20	1.46	1.20
Santa Rosa	1.39	1.19	1.34	1.00	1.39	1.00	1.44	1.00	1.42	1.00
Wakulla		1.22		1.16		1.17		1.25		1.27
Walton	1.62	1.00	1.54	1.01	1.55	1.09	1.55	1.05	1.57	1.06
Washington		1.03		1.03		1.03		1.03		1.04
Brevard	1.27	1.07	1.28	1.07	1.29	1.07	1.31	1.08	1.33	1.07
Clay	1.50	1.11	1.58	1.06	1.58	1.05	1.53	1.05	1.52	1.05
Duval	1.30	1.00	1.31	1.00	1.45	1.00	1.48	1.02	1.40	1.02
Flagler	1.08	1.00	1.11	1.00	1.12	1.01	1.17	1.01	1.11	1.01
Nassau	1.13	1.00	1.12	1.00	1.30	1.00	1.37	1.00	1.04	1.00
Orange	1.42	1.52	1.48	1.58	1.45	1.43	1.49	1.44	1.49	1.46
Putnam	1.29	1.08	1.25	1.03	1.27	1.03	1.24	1.02	1.26	1.04
Seminole	1.46	1.00	1.39	1.07	1.41	1.07	1.42	1.07	1.44	1.07
St. Johns	1.38	1.00	1.43	1.01	1.45	1.01	1.43	1.01	1.39	1.00
Volusia	1.22	1.01	1.22	1.03	1.26	1.07	1.20	1.07	1.19	1.08
Broward	1.66	1.00	1.64	1.00	1.67	1.00	1.66	1.00	1.68	1.00
Miami-Dade	1.67	1.47	1.78	1.57	1.63	1.46	1.68	1.53	1.71	1.43
Indian River	1.33	1.10	1.27	1.10	1.24	1.12	1.33	1.12	1.25	1.11
Martin	1.13	1.09	1.10	1.12	1.07	1.11	1.07	1.10	1.06	1.11
Monroe	1.49	1.48	1.48	1.36	1.54	1.38	1.53	1.55	1.53	1.43
Okeechobee	1.26	1.13	1.29	1.13	1.24	1.14	1.24	1.15	1.22	1.16
Osceola	1.44	1.28	1.49	1.30	1.37	1.32	1.38	1.31	1.35	1.33
Palm Beach	1.54	1.21	1.50	1.27	1.53	1.00	1.54	1.00	1.46	1.00
St. Lucie	1.15	1.31	1.16	1.33	1.16	1.34	1.17	1.35	1.16	1.34
AVERAGE	**1.29**	**1.08**	**1.31**	**1.08**	**1.32**	**1.08**	**1.32**	**1.08**	**1.29**	**1.08**

Annual Person Delay (Hour)

COUNTY NAME	2003		2004		2005		2006		2007	
	URBAN	RURAL	URBAN	RURAL	URBAN	RURAL	URBAN	RURAL	URBAN	RURAL
Charlotte	178,711	1,155,694	1,506,871	0	1,590,219	0	1,470,609	0	1,306,291	0
Citrus	316,761	20,911	594,085	27,599	1,004,380	187,113	787,223	0	839,911	0
Collier	1,682,298	53,636	2,208,004	63,576	2,109,596	73,716	2,304,348	84,784	2,110,062	88,586
Desoto	10,630	12,095	34,455	81,045	49,593	115,485	13,095	16,466	25,356	115,828
Glades		0		0		0		0		0
Hardee	36,216	0	23,864	0	35,803	0	26,820	0	0	0
Hendry	39,613	0	128,948	1,010	66,176	12,909	73,247	113,786	78,056	9,078
Hernando	323,180	0	1,086,872	227,324	945,999	147,012	1,057,073	0	821,716	0
Highlands	570,672	216,441	960,440	527,968	932,647	358,268	705,084	359,500	470,114	0
Hillsborough	18,541,699	90,485	20,450,752	243,809	21,645,896	167,033	21,921,233	161,987	22,174,976	214,177
Lake	1,011,552	3,005,135	2,104,775	3,997,593	956,939	4,769,241	934,082	4,309,617	741,408	4,405,730
Lee	4,111,092	0	4,860,337	0	5,633,911	0	6,197,499	0	5,469,102	0
Manatee	1,773,618	0	2,171,137	0	2,578,795	0	2,571,739	0	2,456,097	83,749
Pasco	3,254,387	358,765	3,064,785	356,841	3,822,305	713,719	4,417,162	1,036,584	4,652,388	1,013,912
Pinellas	6,043,905		6,100,600		5,187,323		5,853,936		6,300,625	
Polk	3,224,535	260,441	3,657,878	40,155	3,291,474	42,930	3,281,497	50,356	3,268,330	188,292
Sarasota	3,397,746	234,507	3,771,430	389,849	4,374,060	593,074	4,730,309	812,840	4,099,276	587,670
Sumter	75,748	721,120	88,313	832,811	106,051	927,054	94,772	920,112	78,506	933,208
Alachua	1,677,026	138,259	1,650,441	219,228	1,745,452	152,852	1,508,413	74,980	1,675,961	217,202
Baker	0	0	0	0	0	0	0	0	0	0
Bradford	141,493	212,238	165,835	242,336	227,180	260,886	177,481	257,303	119,578	225,207
Columbia	0	0	0	0	8,363	0	0	0	0	0
Dixie		0		0		0		0		0
Gilchrist		0		31,721		14,510		0		0
Hamilton		0		0		14,510		0		0
Lafayette		0		0		0		0		0
Levy		0		0		0		0		0
Madison		0		0		0		0		0
Marion	1,343,157	1,051,152	1,934,840	986,694	2,111,814	1,102,721	2,035,040	1,040,216	2,067,695	1,060,805
Suwannee		0		0		0		0		0
Taylor	1,884	0	2,062	0	1,963	0	1,936	0	1,834	0
Union										
Bay	1,762,495	0	1,532,891	0	1,880,458	0	1,289,166	0	1,567,911	0
Calhoun		11,700		11,564		14,190		0		14,179
Escambia	2,246,412	0	2,788,889	0	2,233,610	0	2,228,647	0	1,654,908	0
Franklin		0		0		0		0		0

Gadsden		0		0		0		0		0
Gulf		0		0		0		0		0
Holmes		0		0		0		0		0
Jackson		0	0	0	0	0	0	0	0	0
Jefferson		0		0		0		0		0
Leon	2,256,237	79,163	2,160,460	0	2,716,734	0	3,086,225	31,239	2,877,683	41,458
Liberty		0		0		0		0		0
Okaloosa	1,581,879	583,646	2,424,565	576,277	2,596,359	697,024	2,492,047	637,191	1,191,472	648,449
Santa Rosa	1,053,273	586,074	1,913,105	0	2,125,596	0	2,291,283	0	2,244,402	0
Wakulla		182,969		136,120		151,193		223,824		254,289
Walton	339,279	0	362,392	51,648	384,282	362,406	384,794	182,338	398,260	203,672
Washington		46,193		56,126		55,567		67,710		84,260
Brevard	7,535,805	262,386	8,052,430	282,018	8,165,023	309,700	8,825,132	363,658	9,282,107	304,472
Clay	2,519,226	163,339	3,303,086	82,441	3,372,440	74,597	2,797,632	68,909	2,731,324	65,124
Duval	11,352,240	0	12,541,725	0	13,914,202	0	14,815,240	27,320	13,807,942	24,813
Flagler	329,898	0	348,863	0	376,882	19,263	701,360	11,475	535,118	11,785
Nassau	19,965	0	20,014	0	53,758	0	75,783	0	7,513	0
Orange	14,410,163	2,798,170	16,351,639	3,858,236	17,676,809	2,067,982	19,026,744	2,061,167	19,661,496	2,230,113
Putnam	281,997	206,804	407,485	47,999	425,873	48,359	375,635	35,009	386,019	78,929
Seminole	5,171,166	0	4,600,920	22,472	4,876,960	22,444	4,757,692	23,334	4,982,159	23,137
St. Johns	863,464	0	919,477	70,291	913,109	67,054	846,038	66,848	773,446	0
Volusia	3,878,908	77,865	3,974,869	152,992	4,676,460	324,831	3,895,351	394,262	3,622,662	442,146
Broward	39,418,737	0	37,860,548	0	40,457,926	0	41,234,244	0	42,527,525	0
Miami-Dade	43,692,519	3,100,085	52,867,314	4,505,843	43,888,804	2,253,287	46,406,118	2,925,303	43,593,022	1,890,591
Indian River	1,538,004	342,242	1,058,234	386,572	919,758	488,680	1,449,402	487,740	1,065,908	503,506
Martin	318,992	613,407	315,925	740,596	291,165	673,325	305,637	616,619	294,684	691,836
Monroe	3,057,828	1,198,320	3,030,150	791,276	3,441,025	906,543	3,342,318	1,426,805	3,413,823	950,945
Okeechobee	316,045	247,303	363,221	285,524	310,296	352,608	296,741	353,067	257,678	373,483
Osceola	4,378,692	1,520,653	5,474,739	1,798,528	4,796,762	1,967,681	4,741,459	1,922,940	4,641,453	2,335,092
Palm Beach	22,345,893	701,524	20,309,846	875,310	22,005,129	0	22,308,377	0	18,245,678	0
St. Lucie	1,804,786	685,835	1,973,099	774,669	2,224,599	716,186	2,500,134	795,451	2,277,831	752,490
TOTAL	**220,229,828**	**20,938,554**	**241,522,612**	**23,776,060**	**243,149,955**	**21,225,952**	**250,635,799**	**21,960,737**	**240,799,306**	**21,068,216**
	241,168,382		**265,298,672**		**264,375,907**		**272,596,536**		**261,867,521**	

Weighted Average Speed in Peak Period - URBAN (Miles/Hour)

COUNTY NAME	2003		2004		2005		2006		2007	
	Freeway	Arterial	Freeway	Arterial	Freeway	Arterial	Freeway	Arterial	Freeway	Arterial
Charlotte	60.0	29.1	60.0	28.7	60.0	28.6	60.0	28.8	60.0	29.1
Citrus	60.0	32.4	60.0	32.1	60.0	30.5	60.0	31.2	60.0	31.1
Collier	57.9	29.6	55.3	29.1	56.3	29.1	55.2	28.9	55.9	29.2
Desoto	60.0	34.7	60.0	34.2	60.0	32.5	60.0	34.4	60.0	33.8
Glades										
Hardee	60.0	34.2	60.0	34.6	60.0	34.3	60.0	34.4	60.0	35.0
Hendry	60.0	34.0	60.0	32.2	60.0	33.6	60.0	33.5	60.0	33.4
Hernando	60.0	33.2	60.0	30.1	60.0	30.5	60.0	30.0	60.0	30.8
Highlands	60.0	31.8	60.0	30.4	60.0	30.4	60.0	31.4	60.0	32.3
Hillsborough	53.4	29.2	52.2	29.3	52.3	28.9	52.9	28.2	51.7	28.4
Lake	60.0	29.6	60.0	28.8	60.0	29.1	55.5	29.3	55.3	30.3
Lee	56.9	28.7	55.3	28.3	53.2	28.5	52.5	28.5	53.7	28.7
Manatee	59.2	29.5	59.1	29.0	56.6	29.0	56.0	29.4	56.5	29.4
Pasco	55.1	29.8	54.0	30.1	54.6	29.3	55.1	28.7	54.8	28.5
Pinellas	60.0	28.1	60.0	28.0	60.0	28.0	60.0	28.5	60.0	28.3
Polk	59.3	29.5	59.1	29.0	59.9	29.3	59.9	29.5	59.9	29.6
Sarasota	56.4	28.9	55.3	28.8	53.9	28.5	52.1	28.4	54.1	28.7
Sumter	60.0	32.9	60.0	32.7	60.0	32.4	60.0	32.8	60.0	33.1
Alachua	60.0	30.6	60.0	30.6	60.0	30.5	60.0	30.9	58.6	30.7
Baker	60.0	35.0	60.0	35.0	60.0	35.0	60.0	35.0	60.0	35.0
Bradford	60.0	31.1	60.0	30.6	60.0	29.6	60.0	30.4	60.0	31.8
Columbia	60.0	35.0	60.0	35.0	60.0	34.8	60.0	35.0	60.0	35.0
Dixie										
Gilchrist										
Hamilton										
Lafayette										
Levy										
Madison										
Marion	60.0	31.7	60.0	30.6	60.0	30.5	60.0	30.6	60.0	30.4
Suwannee										
Taylor	60.0	34.9	60.0	34.9	60.0	34.9	60.0	34.9	60.0	34.9
Union										
Bay	60.0	29.9	60.0	30.1	60.0	29.6	60.0	29.5	60.0	29.2
Calhoun										
Escambia	59.8	29.5	59.8	29.7	59.7	30.1	59.3	30.2	59.7	29.8
Franklin										

Gadsden										
Gulf										
Holmes										
Jackson			60.0	35.0	60.0	35.0	60.0	35.0	60.0	35.0
Jefferson										
Leon	60.0	29.4	60.0	30.2	59.0	29.4	58.9	28.9	58.9	29.3
Liberty										
Okaloosa	60.0	29.2	60.0	28.4	60.0	28.2	60.0	28.3	60.0	28.0
Santa Rosa	60.0	27.6	60.0	27.8	60.0	27.5	60.0	27.3	60.0	27.4
Wakulla										
Walton	60.0	27.1	60.0	28.2	60.0	28.1	60.0	28.2	60.0	27.9
Washington										
Brevard	57.8	29.9	57.8	29.7	57.5	29.8	56.4	29.7	55.1	29.8
Clay	60.0	28.4	60.0	27.6	60.0	27.7	60.0	28.2	60.0	28.3
Duval	55.8	29.0	55.6	28.5	52.8	28.6	52.1	28.7	53.8	29.0
Flagler	60.0	31.7	58.4	32.8	58.2	32.8	58.0	31.1	60.0	31.1
Nassau	60.0	33.4	60.0	33.5	60.0	31.1	60.0	30.1	60.0	34.4
Orange	54.8	27.5	53.0	27.6	53.2	27.7	52.2	28.0	52.2	27.9
Putnam	60.0	31.1	60.0	31.6	60.0	31.5	60.0	31.7	60.0	31.6
Seminole	52.7	27.9	54.4	28.5	53.6	28.7	53.3	28.5	53.0	28.5
St. Johns	60.0	29.9	60.0	29.3	60.0	29.0	60.0	29.3	60.0	29.8
Volusia	58.6	30.4	58.7	30.2	57.2	30.2	58.9	30.3	59.4	30.4
Broward	47.9	29.2	48.4	28.8	47.9	28.8	48.0	28.7	47.6	28.9
Miami-Dade	48.3	27.7	46.4	27.4	49.4	27.7	48.1	27.9	47.2	27.8
Indian River	60.0	30.4	60.0	31.2	60.0	31.6	60.0	30.2	60.0	31.4
Martin	60.0	30.6	60.0	30.1	60.0	30.5	60.0	30.3	60.0	30.4
Monroe	60.0	28.5	60.0	28.8	60.0	28.2	60.0	28.2	60.0	28.3
Okeechobee	60.0	31.5	60.0	31.1	60.0	31.8	60.0	31.8	60.0	32.1
Osceola	52.6	29.1	52.3	28.3	57.0	28.4	56.4	28.5	58.1	28.3
Palm Beach	50.1	29.5	50.6	29.6	50.0	29.7	49.8	29.9	51.3	30.6
St. Lucie	60.0	30.4	60.0	30.2	60.0	30.0	60.0	29.8	60.0	30.2
AVERAGE	**58.3**	**30.5**	**58.1**	**30.3**	**58.0**	**30.2**	**57.8**	**30.2**	**57.9**	**30.5**

Weighted Average Speed in Peak Period - RURAL (Miles/Hour)

COUNTY NAME	2003		2004		2005		2006		2007	
	Freeway	Arterial	Freeway	Arterial	Freeway	Arterial	Freeway	Arterial	Freeway	Arterial
Charlotte	60.0	29.8	60.0	35.0	60.0	35.0	60.0	35.0	60.0	35.0
Citrus	60.0	34.3	60.0	34.6	60.0	32.5	60.0	35.0	60.0	35.0
Collier	60.0	34.5	60.0	34.4	60.0	34.3	60.0	34.1	60.0	34.1
Desoto	60.0	34.8	60.0	34.0	60.0	32.8	60.0	34.7	60.0	33.1
Glades	60.0	35.0	60.0	35.0	60.0	35.0	60.0	35.0	60.0	35.0
Hardee	60.0	35.0	60.0	35.0	60.0	35.0	60.0	35.0	60.0	35.0
Hendry	60.0	35.0	60.0	35.0	60.0	34.9	60.0	34.2	60.0	34.9
Hernando	60.0	35.0	60.0	33.5	60.0	33.8	60.0	35.0	60.0	35.0
Highlands	60.0	33.8	60.0	32.6	60.0	33.3	60.0	33.2	60.0	35.0
Hillsborough	60.0	33.9	60.0	32.2	60.0	32.8	60.0	32.5	60.0	31.8
Lake	60.0	28.3	60.0	27.5	60.0	27.0	60.0	27.5	60.0	27.4
Lee	60.0	35.0	60.0	35.0	60.0	35.0	60.0	35.0	60.0	35.0
Manatee	60.0	35.0	60.0	35.0	60.0	35.0	60.0	35.0	60.0	33.2
Pasco	60.0	33.1	60.0	33.2	60.0	31.9	60.0	30.2	60.0	30.5
Pinellas										
Polk	57.8	34.7	60.0	34.7	60.0	34.7	60.0	34.7	58.9	34.6
Sarasota	58.9	34.4	58.8	32.1	58.0	32.1	57.2	32.2	58.0	32.4
Sumter	60.0	31.3	60.0	31.0	60.0	30.8	60.0	30.8	60.0	30.7
Alachua	60.0	34.6	60.0	34.4	60.0	34.6	60.0	34.8	60.0	34.4
Baker	60.0	35.0	60.0	35.0	60.0	35.0	60.0	35.0	60.0	35.0
Bradford	60.0	32.7	60.0	32.3	60.0	32.4	60.0	32.3	60.0	32.5
Columbia	60.0	35.0	60.0	35.0	60.0	35.0	60.0	35.0	60.0	35.0
Dixie	60.0	35.0	60.0	35.0	60.0	35.0	60.0	35.0	60.0	35.0
Gilchrist	60.0	35.0	60.0	34.4	60.0	34.7	60.0	35.0	60.0	35.0
Hamilton	60.0	35.0	60.0	35.0	60.0	34.7	60.0	35.0	60.0	35.0
Lafayette	60.0	35.0	60.0	35.0	60.0	35.0	60.0	35.0	60.0	35.0
Levy	60.0	35.0	60.0	35.0	60.0	35.0	60.0	35.0	60.0	35.0
Madison	60.0	35.0	60.0	35.0	60.0	35.0	60.0	35.0	60.0	35.0
Marion	60.0	31.6	60.0	31.8	60.0	31.6	60.0	31.7	60.0	31.5
Suwannee	60.0	35.0	60.0	35.0	60.0	35.0	60.0	35.0	60.0	35.0
Taylor	60.0	35.0	60.0	35.0	60.0	35.0	60.0	35.0	60.0	35.0
Union										
Bay	60.0	35.0	60.0	35.0	60.0	35.0	60.0	35.0	60.0	35.0
Calhoun	60.0	34.7	60.0	34.6	60.0	34.6	60.0	35.0	60.0	34.6
Escambia	60.0	35.0	60.0	35.0	60.0	35.0	60.0	35.0	60.0	35.0
Franklin	60.0	35.0	60.0	35.0	60.0	35.0	60.0	35.0	60.0	35.0

Gadsden	60.0	35.0	60.0	35.0	60.0	35.0	60.0	35.0	60.0	35.0
Gulf	60.0	35.0	60.0	35.0	60.0	35.0	60.0	35.0	60.0	35.0
Holmes	60.0	35.0	60.0	35.0	60.0	35.0	60.0	35.0	60.0	35.0
Jackson	60.0	35.0	60.0	35.0	60.0	35.0	60.0	35.0	60.0	35.0
Jefferson	60.0	35.0	60.0	35.0	60.0	35.0	60.0	35.0	60.0	35.0
Leon	60.0	34.0	60.0	35.0	60.0	35.0	60.0	34.2	60.0	34.0
Liberty	60.0	35.0	60.0	35.0	60.0	35.0	60.0	35.0	60.0	35.0
Okaloosa	60.0	30.2	60.0	30.0	60.0	29.6	60.0	29.8	60.0	29.8
Santa Rosa	60.0	29.0	60.0	35.0	60.0	35.0	60.0	35.0	60.0	35.0
Wakulla	60.0	32.1	60.0	32.8	60.0	32.6	60.0	31.7	60.0	31.4
Walton	60.0	35.0	60.0	34.6	60.0	32.7	60.0	33.5	60.0	33.0
Washington	60.0	34.1	60.0	33.9	60.0	33.9	60.0	33.8	60.0	33.6
Brevard	60.0	32.7	60.0	32.7	60.0	32.5	60.0	32.1	60.0	32.5
Clay	60.0	33.5	60.0	34.2	60.0	34.3	60.0	34.4	60.0	34.3
Duval	60.0	35.0	60.0	35.0	60.0	35.0	60.0	30.0	60.0	30.2
Flagler	60.0	35.0	60.0	35.0	60.0	34.8	60.0	34.9	60.0	34.9
Nassau	60.0	35.0	60.0	35.0	60.0	35.0	60.0	35.0	60.0	35.0
Orange	60.0	28.4	60.0	27.8	60.0	29.4	60.0	29.4	60.0	29.1
Putnam	60.0	33.9	60.0	34.7	60.0	34.7	60.0	34.7	60.0	34.4
Seminole	60.0	35.0	60.0	34.2	60.0	34.1	60.0	34.2	60.0	34.2
St. Johns	60.0	35.0	60.0	34.4	60.0	34.4	60.0	34.4	60.0	35.0
Volusia	60.0	34.4	59.4	34.5	58.5	34.5	58.3	34.4	58.1	34.4
Broward	60.0	35.0	60.0	35.0	60.0	35.0	60.0	35.0	60.0	35.0
Miami-Dade	60.0	29.0	60.0	27.8	60.0	29.0	60.0	28.4	60.0	29.4
Indian River	60.0	31.4	60.0	31.5	60.0	30.8	60.0	30.8	60.0	31.5
Martin	60.0	30.7	60.0	30.4	60.0	30.1	60.0	30.3	60.0	30.3
Monroe	60.0	28.7	60.0	30.3	60.0	30.0	60.0	28.1	60.0	29.2
Okeechobee	60.0	33.3	60.0	33.3	60.0	33.0	60.0	33.0	60.0	32.8
Osceola	60.0	31.4	60.0	31.1	60.0	30.7	60.0	30.9	60.0	30.5
Palm Beach	60.0	32.5	60.0	31.9	60.0	35.0	60.0	35.0	60.0	35.0
St. Lucie	60.0	30.9	60.0	30.6	60.0	30.3	60.0	30.2	60.0	30.3
AVERAGE	**59.9**	**33.6**	**60.0**	**33.7**	**59.9**	**33.6**	**59.9**	**33.6**	**59.9**	**33.6**

Congestion Cost ($) - 2003

COUNTY NAME	Annual Passenger Vehicle Delay Cost		Annual Fuel Cost		Annual Commercial Vehicle Cost		Total Congestion Cost	
	URBAN	RURAL	URBAN	RURAL	URBAN	RURAL	URBAN	RURAL
Charlotte	2,353,779	15,052,746	416,399	2,892,120	555,144	4,527,413	3,325,323	22,472,279
Citrus	4,109,392	253,800	821,760	54,950	1,344,305	186,752	6,275,456	495,502
Collier	21,696,691	654,461	4,286,026	135,592	7,574,349	443,049	33,557,067	1,233,102
Desoto	122,322	135,222	27,054	31,787	132,518	172,919	281,894	339,928
Glades		0		0		0		0
Hardee	395,907	0	94,565	0	568,254	0	1,058,726	0
Hendry	485,230	0	101,983	0	328,915	0	916,128	0
Hernando	4,227,628	0	818,607	0	1,143,484	0	6,189,719	0
Highlands	6,823,535	2,388,683	1,485,065	571,995	5,673,606	3,269,468	13,982,206	6,230,146
Hillsborough	237,202,989	1,155,102	49,854,447	226,105	94,770,196	475,978	381,827,632	1,857,185
Lake	12,133,921	34,730,940	2,529,699	7,218,566	9,571,041	35,615,791	24,234,661	77,565,297
Lee	52,626,852	0	11,289,253	0	22,029,483	0	85,945,588	0
Manatee	22,374,643	0	4,761,258	0	11,406,541	0	38,542,442	0
Pasco	41,934,272	4,452,178	8,119,859	901,282	14,991,625	2,583,642	65,045,756	7,937,102
Pinellas	79,325,232		14,668,157		19,950,473		113,943,863	
Polk	37,744,949	3,096,312	8,557,983	889,974	37,661,056	2,766,593	83,963,988	6,752,879
Sarasota	44,100,223	2,790,917	9,125,678	827,254	14,716,361	2,474,204	67,942,262	6,092,375
Sumter	991,181	8,721,305	195,636	1,840,642	273,856	6,614,979	1,460,673	17,176,926
Alachua	21,752,323	1,616,007	4,134,639	349,349	6,882,387	1,525,891	32,769,349	3,491,247
Baker	0	0	0	0	0	0	0	0
Bradford	1,568,681	2,436,997	365,346	555,483	2,097,316	2,674,910	4,031,342	5,667,390
Columbia	0	0	0	0	0	0	0	0
Dixie		0		0		0		0
Gilchrist		0		0		0		0
Hamilton		0		0		0		0
Lafayette		0		0		0		0
Levy		0		0		0		0
Madison		0		0		0		0
Marion	17,211,840	13,216,433	3,355,560	2,616,827	6,647,032	6,572,315	27,214,432	22,405,575
Suwannee		0		0		0		0
Taylor	24,976	0	4,951	0	4,990	0	34,917	0
Union								
Bay	22,691,625	0	4,427,939	0	8,374,619	0	35,494,183	0
Calhoun		139,918		30,894		116,202		287,014
Escambia	29,085,180	0	5,465,673	0	9,503,019	0	44,053,873	0

Franklin		0		0		0		0
Gadsden		0		0		0		0
Gulf		0		0		0		0
Holmes		0		0		0		0
Jackson		0		0		0		0
Jefferson		0		0		0		0
Leon	29,421,398	1,021,846	5,487,633	199,950	8,414,792	351,676	43,323,824	1,573,472
Liberty		0		0		0		0
Okaloosa	20,517,628	7,596,041	3,988,856	1,476,290	6,675,403	2,318,982	31,181,887	11,391,312
Santa Rosa	13,749,029	7,554,865	2,543,926	1,459,063	3,850,848	2,659,087	20,143,803	11,673,015
Wakulla		2,425,616		459,378		467,798		3,352,793
Walton	4,561,404	0	840,944	0	543,323	0	5,945,671	0
Washington		591,627		120,304		238,876		950,807
Brevard	98,562,230	3,215,740	20,505,720	691,170	28,294,450	2,231,617	147,362,400	6,138,528
Clay	33,000,234	2,144,062	6,154,662	401,597	8,665,816	537,756	47,820,713	3,083,415
Duval	146,710,261	0	31,645,706	0	49,941,788	0	228,297,754	0
Flagler	4,377,154	0	816,506	0	846,372	0	6,040,032	0
Nassau	250,305	0	51,356	0	129,936	0	431,596	0
Orange	187,412,217	33,438,838	38,179,123	6,723,286	56,941,752	27,163,827	282,533,092	67,325,951
Putnam	3,626,429	2,632,425	719,458	530,298	1,376,018	1,160,712	5,721,904	4,323,435
Seminole	67,603,132	0	13,986,544	0	18,528,976	0	100,118,652	0
St. Johns	11,479,960	0	2,124,162	0	2,047,673	0	15,651,795	0
Volusia	50,261,950	1,005,783	9,938,999	197,604	16,191,674	342,189	76,392,623	1,545,576
Broward	513,358,518	0	110,628,156	0	153,361,881	0	777,348,554	0
Miami-Dade	568,792,422	38,795,502	120,598,243	7,588,103	171,224,930	20,744,937	860,615,595	67,128,541
Indian River	20,020,688	3,998,363	3,929,058	891,146	6,089,474	3,892,323	30,039,220	8,781,832
Martin	4,273,809	7,704,513	774,327	1,527,715	572,700	3,878,706	5,620,836	13,110,933
Monroe	38,325,947	14,931,042	7,756,454	3,033,093	20,512,335	8,534,001	66,594,736	26,498,136
Okeechobee	3,882,728	2,889,071	811,115	650,018	2,560,219	2,839,591	7,254,063	6,378,679
Osceola	56,683,593	17,765,570	11,457,308	3,911,559	18,740,967	16,979,966	86,881,868	38,657,094
Palm Beach	285,303,779	9,080,011	62,930,847	1,638,244	118,377,939	3,038,031	466,612,565	13,756,286
St. Lucie	23,657,147	8,012,507	4,439,506	1,737,544	6,067,954	7,589,197	34,164,606	17,339,247
TOTAL	**2,846,815,331**	**255,644,444**	**595,216,148**	**52,379,180**	**976,157,792**	**174,989,379**	**4,418,189,269**	**483,012,999**
	3,102,459,775		**647,595,328**		**1,151,147,171**		**4,901,202,268**	

Congestion Cost ($) - 2004

COUNTY NAME	Annual Passenger Vehicle Delay Cost		Annual Fuel Cost		Annual Commercial Vehicle Cost		Total Congestion Cost	
	URBAN	RURAL	URBAN	RURAL	URBAN	RURAL	URBAN	RURAL
Charlotte	20,006,268	0	4,826,745	0	7,025,874	0	31,858,887	0
Citrus	7,779,479	354,934	1,992,160	95,020	3,413,205	195,579	13,184,844	645,532
Collier	29,124,106	770,920	7,487,520	207,194	11,068,590	691,521	47,680,217	1,669,636
Desoto	410,514	957,713	115,981	277,855	430,445	1,057,610	956,940	2,293,178
Glades		0		0		0		0
Hardee	263,662	0	79,481	0	416,214	0	759,357	0
Hendry	1,381,106	11,252	438,462	3,449	2,498,336	17,114	4,317,904	31,814
Hernando	14,564,216	2,707,485	3,539,067	736,985	4,229,617	2,767,782	22,332,900	6,212,252
Highlands	11,629,366	6,146,898	3,226,811	1,775,626	10,934,156	7,416,484	25,790,334	15,339,009
Hillsborough	265,951,039	3,118,986	73,183,486	801,891	124,575,760	1,772,153	463,710,285	5,693,030
Lake	26,681,987	47,199,586	6,796,071	12,410,497	16,654,912	50,968,166	50,132,971	110,578,250
Lee	63,672,644	0	17,695,741	0	28,570,899	0	109,939,284	0
Manatee	28,194,378	0	7,510,242	0	14,224,242	0	49,928,862	0
Pasco	40,877,488	4,472,861	10,037,135	1,162,686	12,988,725	3,105,948	63,903,348	8,741,495
Pinellas	82,116,220		19,269,659		21,697,580		123,083,460	
Polk	44,443,093	486,879	12,591,811	141,771	41,949,582	466,370	98,984,486	1,095,020
Sarasota	50,166,800	4,952,722	13,278,478	1,654,631	17,704,110	3,200,186	81,149,388	9,807,539
Sumter	1,164,868	10,300,587	294,735	2,743,475	459,235	8,243,039	1,918,837	21,287,102
Alachua	21,942,010	2,632,294	5,287,405	719,534	7,324,220	2,528,199	34,553,634	5,880,027
Baker	0	0	0	0	0	0	0	0
Bradford	1,786,203	2,690,741	560,737	826,650	3,155,735	4,151,052	5,502,675	7,668,443
Columbia	0	0	0	0	0	0	0	0
Dixie		0		0		0		0
Gilchrist		410,109		104,380		204,719		719,209
Hamilton		0		0		0		0
Lafayette		0		0		0		0
Levy		0		0		0		0
Madison		0		0		0		0
Marion	25,111,766	12,599,259	6,240,321	3,186,357	11,954,268	7,235,615	43,306,355	23,021,230
Suwannee		0		0		0		0
Taylor	28,149	0	7,010	0	5,302	0	40,461	0
Union								
Bay	20,218,633	0	5,076,506	0	7,900,953	0	33,196,091	0
Calhoun		141,303		39,750		124,335		305,389
Escambia	37,527,846	0	8,835,143	0	9,893,455	0	56,256,444	0
Franklin		0		0		0		0

Gadsden		0		0		0		0
Gulf		0		0		0		0
Holmes		0		0		0		0
Jackson	0	0	0	0	0	0	0	0
Jefferson		0		0		0		0
Leon	29,301,426	0	6,829,751	0	6,397,622	0	42,528,799	0
Liberty		0		0		0		0
Okaloosa	32,706,658	7,691,609	7,831,364	1,890,730	8,379,937	2,457,298	48,917,959	12,039,637
Santa Rosa	25,530,070	0	6,037,221	0	7,960,638	0	39,527,930	0
Wakulla		1,826,201		442,428		512,918		2,781,547
Walton	4,933,950	661,163	1,164,427	176,830	1,004,759	383,392	7,103,136	1,221,385
Washington		735,530		190,719		319,199		1,245,448
Brevard	107,495,561	3,566,067	28,373,049	962,360	35,543,423	2,413,533	171,412,033	6,941,960
Clay	44,157,522	1,090,641	10,376,057	261,911	13,433,616	399,118	67,967,195	1,751,670
Duval	166,382,352	0	45,321,828	0	58,138,194	0	269,842,375	0
Flagler	4,604,698	0	1,292,803	0	1,779,811	0	7,677,312	0
Nassau	252,374	0	67,008	0	165,857	0	485,238	0
Orange	218,236,015	47,438,664	57,419,745	11,935,194	68,514,370	38,713,294	344,170,130	98,087,151
Putnam	5,219,826	625,481	1,351,047	164,165	3,005,076	293,240	9,575,950	1,082,886
Seminole	60,802,076	280,736	16,240,387	75,464	22,635,345	200,847	99,677,808	557,047
St. Johns	12,533,639	939,462	2,932,872	234,515	2,396,416	287,112	17,862,927	1,461,089
Volusia	52,856,882	1,905,223	13,188,960	597,080	17,570,775	1,388,395	83,616,617	3,890,698
Broward	506,719,546	0	139,344,002	0	152,145,656	0	798,209,204	0
Miami-Dade	697,982,922	57,353,861	188,744,961	14,181,161	266,234,681	34,669,570	1,152,962,564	106,204,591
Indian River	14,187,626	4,634,150	3,559,236	1,301,966	4,153,817	4,624,095	21,900,680	10,560,210
Martin	4,269,185	9,417,096	994,225	2,380,237	1,021,379	5,649,619	6,284,789	17,446,953
Monroe	39,243,986	10,191,918	9,904,000	2,605,678	19,898,793	5,516,573	69,046,779	18,314,169
Okeechobee	4,418,567	3,423,039	1,215,191	969,605	4,017,618	3,445,993	9,651,376	7,838,637
Osceola	72,893,085	21,560,433	18,436,268	5,975,318	23,913,334	21,122,491	115,242,687	48,658,242
Palm Beach	260,020,439	11,634,676	75,482,504	2,608,300	147,848,585	3,968,245	483,351,528	18,211,221
St. Lucie	26,623,358	9,286,590	6,296,494	2,538,554	6,597,587	9,015,994	39,517,439	20,841,138
TOTAL	**3,186,413,603**	**294,217,069**	**850,774,105**	**76,379,967**	**1,231,832,707**	**229,526,801**	**5,269,020,415**	**600,123,837**
	3,480,630,673		**927,154,072**		**1,461,359,507**		**5,869,144,252**	

Congestion Cost ($) - 2005

COUNTY NAME	Annual Passenger Vehicle Delay Cost		Annual Fuel Cost		Annual Commercial Vehicle Cost		Total Congestion Cost	
	URBAN	RURAL	URBAN	RURAL	URBAN	RURAL	URBAN	RURAL
Charlotte	22,022,918	0	6,000,454	0	6,943,982	0	34,967,354	0
Citrus	13,842,179	2,591,424	3,927,043	758,204	4,833,512	824,066	22,602,734	4,173,693
Collier	29,312,908	926,134	8,313,749	280,443	8,398,309	863,902	46,024,966	2,070,479
Desoto	622,036	1,446,314	196,278	457,543	609,104	1,431,676	1,427,418	3,335,534
Glades		0		0		0		0
Hardee	451,137	0	143,256	0	427,305	0	1,021,698	0
Hendry	813,975	139,832	259,807	52,163	909,636	291,688	1,983,418	483,683
Hernando	13,101,582	1,810,565	3,639,914	573,071	4,053,116	1,952,261	20,794,612	4,335,897
Highlands	12,195,430	4,410,596	3,700,875	1,444,228	8,456,442	4,901,494	24,352,747	10,756,318
Hillsborough	290,565,365	2,096,698	89,973,538	654,799	146,806,981	1,986,067	527,345,884	4,737,564
Lake	12,463,216	58,885,077	3,652,682	17,253,352	8,732,462	62,463,018	24,848,360	138,601,446
Lee	75,423,461	0	24,761,996	0	41,678,920	0	141,864,377	0
Manatee	34,429,116	0	11,054,533	0	19,662,286	0	65,145,935	0
Pasco	51,881,033	9,042,535	14,713,171	2,699,886	22,568,813	7,996,599	89,163,018	19,739,019
Pinellas	72,426,600		19,239,896		18,794,234		110,460,731	
Polk	41,653,552	530,015	13,161,488	177,622	39,304,164	594,933	94,119,204	1,302,570
Sarasota	60,696,913	7,690,606	18,252,816	3,028,659	19,086,444	5,932,795	98,036,172	16,652,061
Sumter	1,438,544	11,438,643	416,610	3,586,279	649,189	12,527,646	2,504,343	27,552,569
Alachua	23,564,597	1,790,796	6,566,378	589,931	10,950,329	2,544,379	41,081,304	4,925,106
Baker	0	0	0	0	0	0	0	0
Bradford	2,612,604	2,995,061	896,268	1,042,068	4,218,523	4,875,640	7,727,395	8,912,769
Columbia	111,440	0	33,654	0	63,301	0	208,394	0
Dixie		0		0		0		0
Gilchrist		191,527		55,770		116,443		363,740
Hamilton		191,527		55,770		116,443		363,740
Lafayette		0		0		0		0
Levy		0		0		0		0
Madison		0		0		0		0
Marion	28,375,706	14,357,651	7,988,395	4,172,544	14,033,241	9,996,699	50,397,343	28,526,894
Suwannee		0		0		0		0
Taylor	27,303	0	7,872	0	7,974	0	43,149	0
Union								
Bay	25,311,691	0	7,280,332	0	12,576,395	0	45,168,418	0
Calhoun		181,117		56,797		155,430		393,344
Escambia	30,398,612	0	8,425,121	0	12,597,054	0	51,420,787	0
Franklin		0		0		0		0

Gadsden		0		0		0		0
Gulf		0		0		0		0
Holmes		0		0		0		0
Jackson	0	0	0	0	0	0	0	0
Jefferson		0		0		0		0
Leon	37,919,373	0	10,207,808	0	9,825,813	0	57,952,995	0
Liberty		0		0		0		0
Okaloosa	36,197,458	9,484,767	9,845,057	2,663,949	9,900,668	4,049,067	55,943,183	16,197,782
Santa Rosa	29,195,965	0	7,849,569	0	10,433,854	0	47,479,388	0
Wakulla		2,098,138		574,302		617,532		3,289,972
Walton	5,402,244	4,633,401	1,446,423	1,446,025	1,209,355	3,921,943	8,058,021	10,001,369
Washington		748,951		221,168		369,098		1,339,217
Brevard	111,534,249	3,997,455	33,859,926	1,236,538	46,596,919	3,213,022	191,991,094	8,447,015
Clay	46,530,247	1,019,670	12,457,429	279,346	15,482,700	398,561	74,470,376	1,697,577
Duval	188,738,674	0	58,906,226	0	82,872,185	0	330,517,086	0
Flagler	5,091,391	262,763	1,676,642	77,130	2,410,553	108,040	9,178,587	447,933
Nassau	725,484	0	211,570	0	342,005	0	1,279,059	0
Orange	241,542,556	27,327,391	74,335,569	7,680,938	94,924,000	16,561,018	410,802,126	51,569,347
Putnam	5,738,533	647,899	1,655,735	194,438	2,837,938	344,765	10,232,206	1,187,102
Seminole	66,569,168	287,339	20,489,840	88,630	26,608,124	233,943	113,667,132	609,912
St. Johns	12,869,989	926,706	3,424,879	263,586	2,598,906	298,725	18,893,774	1,489,018
Volusia	63,150,001	4,050,863	18,679,491	1,575,211	29,250,446	3,982,200	111,079,937	9,608,275
Broward	556,177,933	0	175,583,337	0	199,449,580	0	931,210,850	0
Miami-Dade	597,115,246	29,811,495	184,171,970	8,458,571	253,219,644	18,001,085	1,034,506,860	56,271,151
Indian River	12,710,675	6,048,369	3,599,058	1,911,196	4,177,828	6,430,873	20,487,561	14,390,438
Martin	4,056,409	8,788,253	1,077,455	2,490,250	1,097,128	5,979,546	6,230,991	17,258,049
Monroe	46,122,793	11,790,022	13,092,581	3,490,547	24,402,478	8,605,975	83,617,851	23,886,545
Okeechobee	4,120,211	4,367,771	1,217,582	1,392,338	2,435,260	4,662,125	7,773,054	10,422,234
Osceola	66,259,026	24,353,908	18,598,292	7,603,254	21,569,393	25,423,267	106,426,711	57,380,429
Palm Beach	291,319,169	0	96,832,062	0	174,691,923	0	562,843,153	0
St. Lucie	30,808,229	8,864,209	8,379,850	2,725,259	9,452,731	9,170,064	48,640,811	20,759,532
TOTAL	**3,303,636,939**	**270,225,489**	**1,010,204,475**	**81,311,805**	**1,432,151,149**	**231,942,029**	**5,745,992,564**	**583,479,323**
	3,573,862,428		**1,091,516,280**		**1,664,093,179**		**6,329,471,887**	

Congestion Cost ($) - 2006

COUNTY NAME	Annual Passenger Vehicle Delay Cost		Annual Fuel Cost		Annual Commercial Vehicle Cost		Total Congestion Cost	
	URBAN	RURAL	URBAN	RURAL	URBAN	RURAL	URBAN	RURAL
Charlotte	21,052,753	0	6,336,126	0	6,647,247	0	34,036,126	0
Citrus	10,914,191	0	3,516,099	0	5,770,137	0	20,200,427	0
Collier	32,925,511	1,118,138	10,381,271	364,168	10,505,124	937,753	53,811,906	2,420,059
Desoto	168,913	203,645	58,047	74,030	173,462	271,775	400,423	549,451
Glades		0		0		0		0
Hardee	319,368	0	122,890	0	518,162	0	960,420	0
Hendry	906,682	1,404,688	325,565	523,924	1,203,901	1,893,522	2,436,148	3,822,134
Hernando	15,015,990	0	4,633,544	0	5,387,035	0	25,036,569	0
Highlands	9,483,619	4,595,874	3,174,044	1,644,839	6,956,515	5,015,009	19,614,178	11,255,722
Hillsborough	306,586,583	2,116,065	103,189,608	723,022	140,393,262	1,928,554	550,169,453	4,767,641
Lake	12,479,429	54,188,260	4,068,877	17,658,747	9,467,077	63,882,532	26,015,383	135,729,540
Lee	85,418,104	0	31,206,032	0	49,921,231	0	166,545,367	0
Manatee	35,700,010	0	12,858,836	0	19,110,153	0	67,668,998	0
Pasco	61,976,703	13,915,967	19,181,367	4,435,180	27,102,730	10,105,909	108,260,799	28,457,056
Pinellas	85,749,676		24,778,630		14,372,476		124,900,782	
Polk	43,160,755	643,655	15,031,615	235,087	39,467,875	723,339	97,660,244	1,602,081
Sarasota	67,644,817	10,529,008	22,657,899	4,808,525	22,662,117	10,798,436	112,964,833	26,135,969
Sumter	1,339,944	11,519,096	420,135	4,034,846	535,205	14,329,151	2,295,284	29,883,094
Alachua	21,934,400	1,030,033	6,492,488	328,423	4,622,240	585,904	33,049,127	1,944,359
Baker	0	0	0	0	0	0	0	0
Bradford	2,028,939	3,048,409	800,944	1,170,009	3,946,886	5,066,341	6,776,768	9,284,759
Columbia	0	0	0	0	0	0	0	0
Dixie		0		0		0		0
Gilchrist		0		0		0		0
Hamilton		0		0		0		0
Lafayette		0		0		0		0
Levy		0		0		0		0
Madison		0		0		0		0
Marion	28,287,373	14,050,872	8,807,167	4,490,086	13,945,987	9,540,903	51,040,526	28,081,861
Suwannee		0		0		0		0
Taylor	28,418	0	8,822	0	4,558	0	41,799	0
Union								
Bay	17,963,977	0	5,687,137	0	8,810,590	0	32,461,704	0
Calhoun		0		0		0		0
Escambia	31,507,938	0	9,661,186	0	12,144,845	0	53,313,969	0
Franklin		0		0		0		0

Gadsden		0		0		0		0
Gulf		0		0		0		0
Holmes		0		0		0		0
Jackson	0	0	0	0	0	0	0	0
Jefferson		0		0		0		0
Leon	44,444,106	444,722	13,127,918	136,857	12,020,507	152,049	69,592,531	733,629
Liberty		0		0		0		0
Okaloosa	35,718,947	9,053,917	10,764,062	2,777,974	10,999,238	3,292,451	57,482,248	15,124,342
Santa Rosa	32,488,105	0	9,576,187	0	11,927,023	0	53,991,315	0
Wakulla		3,194,886		965,685		1,039,290		5,199,862
Walton	5,591,589	2,484,349	1,646,313	827,948	1,246,741	1,603,788	8,484,643	4,916,085
Washington		954,869		303,082		397,422		1,655,373
Brevard	123,916,004	4,987,036	42,421,393	1,638,124	56,695,668	3,087,815	223,033,064	9,712,975
Clay	39,972,151	982,767	11,857,071	294,447	12,879,492	327,924	64,708,714	1,605,138
Duval	207,862,868	390,212	72,032,185	121,549	90,951,448	126,580	370,846,501	638,341
Flagler	10,005,744	161,275	3,340,154	51,993	3,380,847	70,104	16,726,745	283,372
Nassau	1,088,297	0	335,504	0	315,959	0	1,739,760	0
Orange	268,627,641	28,621,120	92,030,372	8,698,496	106,813,771	14,428,850	467,471,784	51,748,467
Putnam	5,226,287	492,411	1,673,001	160,640	2,640,369	213,443	9,539,658	866,494
Seminole	66,694,360	306,890	23,001,659	104,576	29,551,634	265,463	119,247,653	676,929
St. Johns	12,357,625	977,436	3,621,909	298,780	2,287,769	174,668	18,267,303	1,450,885
Volusia	54,957,412	5,201,120	17,248,130	2,153,323	21,900,297	4,351,433	94,105,839	11,705,875
Broward	587,972,929	0	203,004,186	0	198,647,032	0	989,624,147	0
Miami-Dade	658,047,577	38,225,269	223,775,582	12,351,994	245,661,844	35,077,315	1,127,485,003	85,654,579
Indian River	20,768,715	6,312,602	6,510,054	2,169,577	6,432,615	6,271,548	33,711,383	14,753,726
Martin	4,371,190	8,247,026	1,290,814	2,611,180	1,369,023	6,140,447	7,031,027	16,998,653
Monroe	45,293,903	20,099,126	14,569,389	6,136,748	30,900,714	8,510,976	90,764,005	34,746,850
Okeechobee	4,034,830	4,573,432	1,333,814	1,585,280	2,660,656	4,558,806	8,029,300	10,717,517
Osceola	67,634,618	24,907,867	21,118,285	8,500,119	22,488,024	24,156,563	111,240,927	57,564,550
Palm Beach	316,549,388	0	111,658,411	0	116,816,930	0	545,024,729	0
St. Lucie	35,752,556	10,480,489	10,676,546	3,435,077	11,222,968	8,856,822	57,652,069	22,772,388
TOTAL	**3,541,970,929**	**289,462,534**	**1,190,011,267**	**95,814,335**	**1,403,479,385**	**248,182,885**	**6,135,461,581**	**633,459,754**
	3,831,433,463		**1,285,825,602**		**1,651,662,270**		**6,768,921,335**	

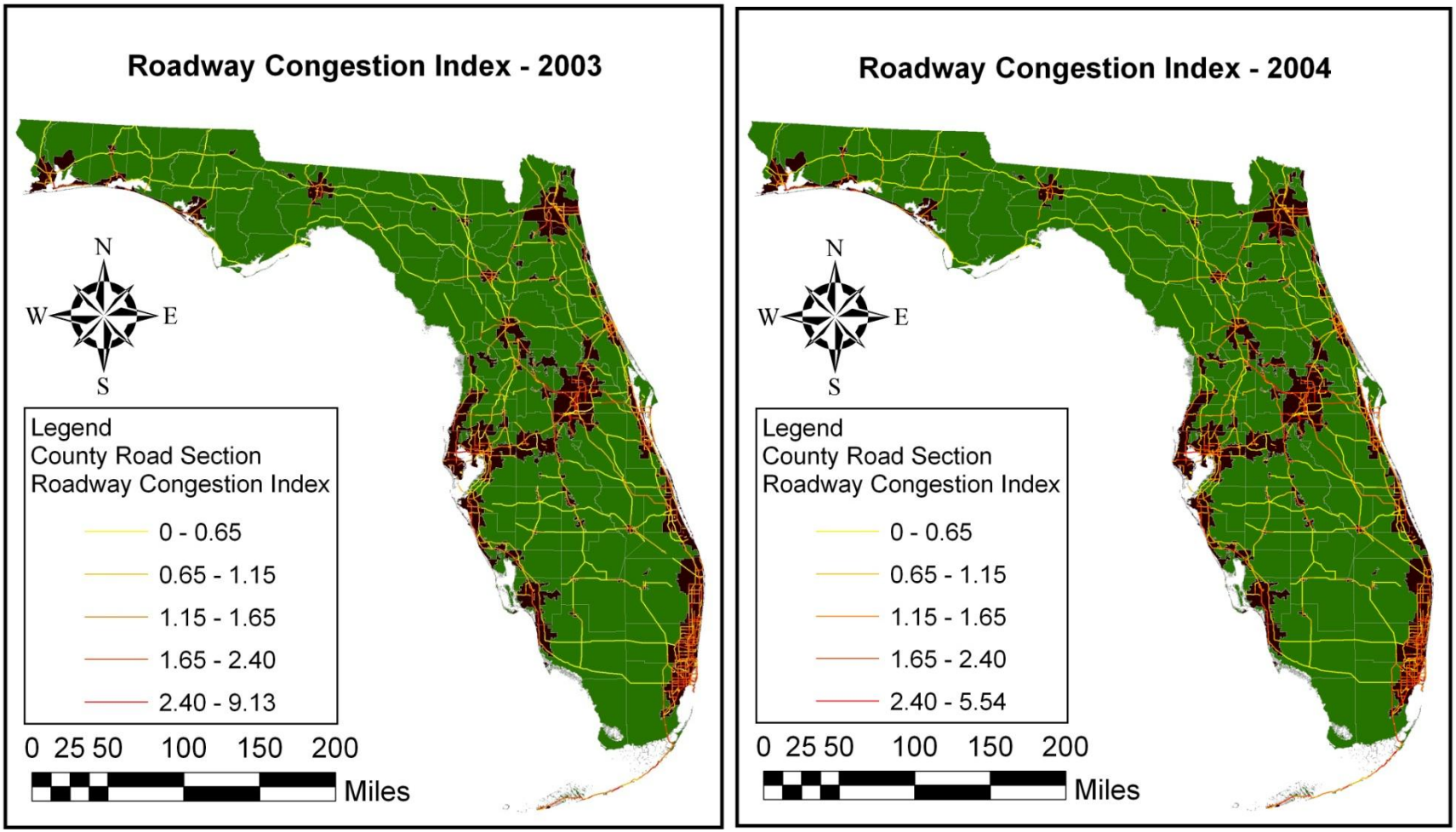
Congestion Cost ($) - 2007

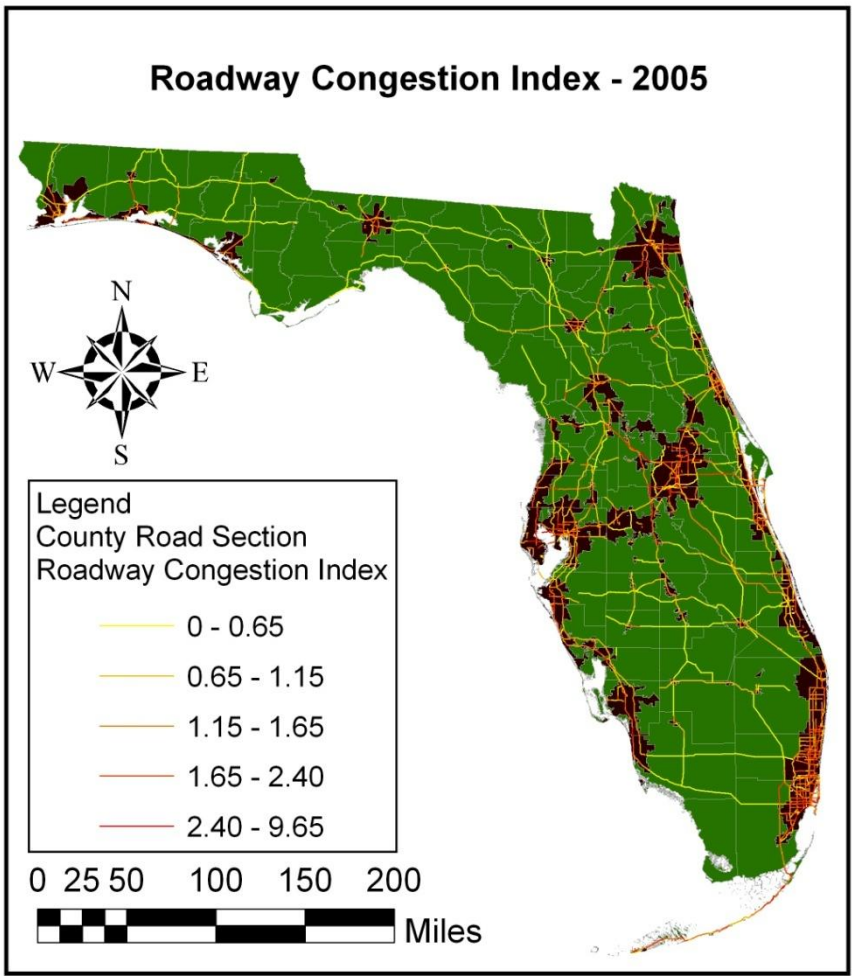
COUNTY NAME	Annual Passenger Vehicle Delay Cost		Annual Fuel Cost		Annual Commercial Vehicle Cost		Total Congestion Cost	
	URBAN	RURAL	URBAN	RURAL	URBAN	RURAL	URBAN	RURAL
Charlotte	19,354,277	0	6,352,214	0	5,220,092	0	30,926,582	0
Citrus	12,247,851	0	4,188,337	0	4,599,708	0	21,035,897	0
Collier	31,053,638	1,191,728	10,673,693	424,906	9,449,904	1,062,754	51,177,235	2,679,388
Desoto	338,176	1,565,317	127,107	584,253	333,657	1,397,595	798,940	3,547,165
Glades		0		0		0		0
Hardee	0	0	0	0	0	0	0	0
Hendry	981,485	117,761	387,311	46,175	1,394,566	139,850	2,763,362	303,786
Hernando	12,034,769	0	4,054,441	0	4,063,812	0	20,153,021	0
Highlands	6,577,274	0	2,400,853	0	4,290,112	0	13,268,239	0
Hillsborough	321,211,957	2,897,955	118,153,214	1,066,036	131,032,650	2,492,639	570,397,821	6,456,630
Lake	10,463,722	58,385,031	3,647,414	20,183,202	6,036,182	58,639,998	20,147,318	137,208,231
Lee	78,385,402	0	30,649,569	0	39,490,190	0	148,525,161	0
Manatee	35,382,922	1,081,823	13,648,336	443,937	16,584,785	1,356,878	65,616,043	2,882,638
Pasco	67,732,920	14,124,178	22,660,936	4,930,859	25,441,623	9,367,902	115,835,479	28,422,939
Pinellas	94,610,314		29,662,867		17,165,126		141,438,307	
Polk	44,935,484	2,547,227	16,734,074	1,224,367	35,707,118	2,320,864	97,376,675	6,092,458
Sarasota	60,195,225	8,039,525	21,866,833	3,844,503	20,441,821	6,675,632	102,503,879	18,559,660
Sumter	1,142,496	12,287,952	393,099	4,581,950	444,168	13,256,453	1,979,763	30,126,355
Alachua	24,662,506	2,936,655	8,287,980	1,068,421	7,520,644	2,518,351	40,471,130	6,523,427
Baker	0	0	0	0	0	0	0	0
Bradford	1,469,756	2,822,349	600,454	1,145,507	2,345,041	4,081,631	4,415,251	8,049,486
Columbia	0	0	0	0	0	0	0	0
Dixie		0		0		0		0
Gilchrist		0		0		0		0
Hamilton		0		0		0		0
Lafayette		0		0		0		0
Levy		0		0		0		0
Madison		0		0		0		0
Marion	29,489,704	14,702,812	10,054,663	5,123,793	14,852,810	10,156,483	54,397,177	29,983,087
Suwannee		0		0		0		0
Taylor	27,939	0	9,387	0	2,660	0	39,987	0
Union								
Bay	22,728,019	0	7,747,044	0	9,336,787	0	39,811,850	0
Calhoun		188,901		72,277		187,826		449,004
Escambia	23,554,558	0	7,981,080	0	12,172,697	0	43,708,335	0
Franklin		0		0		0		0

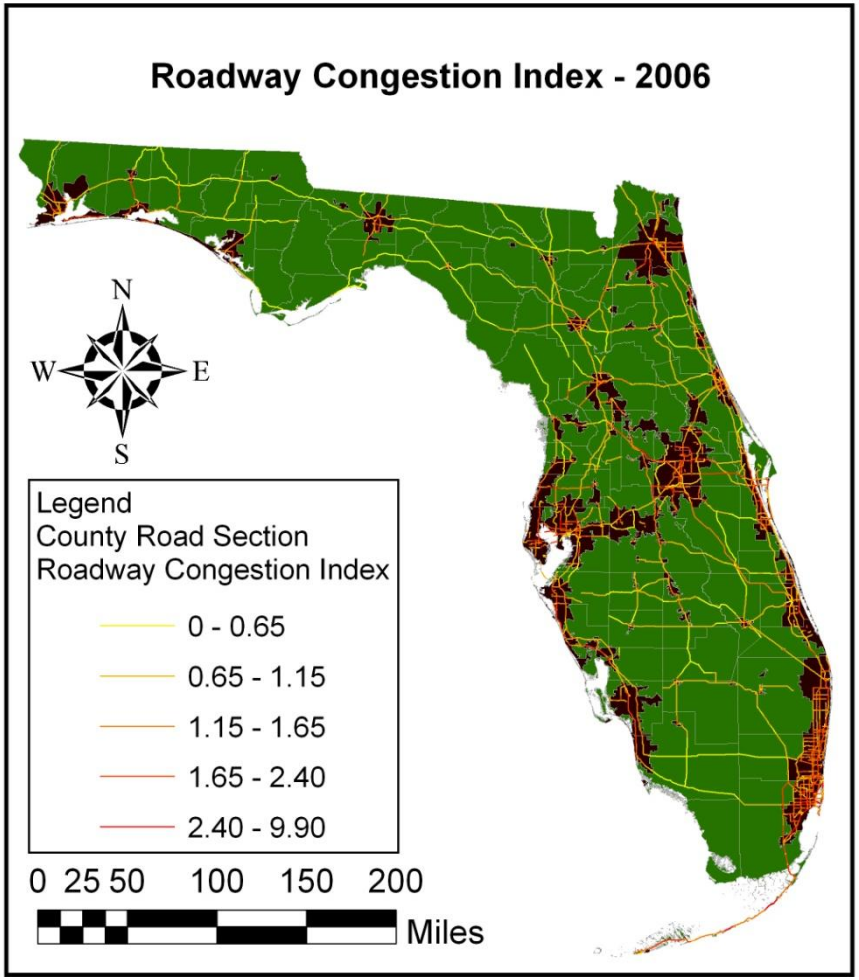
Gadsden		0		0		0		0
Gulf		0		0		0		0
Holmes		0		0		0		0
Jackson	0	0	0	0	0	0	0	0
Jefferson		0		0		0		0
Leon	42,454,511	615,825	13,757,437	200,331	12,270,086	151,802	68,482,033	967,958
Liberty		0		0		0		0
Okaloosa	17,283,837	9,069,486	5,677,119	3,166,401	7,018,197	5,880,057	29,979,153	18,115,945
Santa Rosa	33,185,376	0	10,522,871	0	9,131,763	0	52,840,010	0
Wakulla		3,756,244		1,221,314		1,056,244		6,033,802
Walton	5,959,620	2,792,067	1,904,824	1,033,622	1,242,916	2,213,192	9,107,360	6,038,881
Washington		1,195,092		418,515		668,830		2,282,437
Brevard	133,482,560	4,238,967	50,888,943	1,546,916	64,181,282	2,990,954	248,552,785	8,776,838
Clay	40,342,874	957,872	12,969,910	313,108	11,466,256	297,639	64,779,039	1,568,618
Duval	198,122,819	367,890	75,219,063	124,199	92,932,597	95,828	366,274,479	587,917
Flagler	8,160,915	171,191	2,605,609	59,731	717,320	67,974	11,483,845	298,895
Nassau	111,386	0	37,604	0	29,014	0	178,003	0
Orange	287,910,578	31,879,304	106,833,259	10,487,145	97,533,792	15,726,018	492,277,629	58,092,468
Putnam	5,522,219	1,133,248	1,933,664	405,363	2,773,108	541,595	10,228,991	2,080,205
Seminole	71,990,846	314,125	27,013,006	116,206	30,504,283	262,915	129,508,135	693,246
St. Johns	11,594,921	0	3,725,519	0	2,222,092	0	17,542,532	0
Volusia	52,955,911	6,173,506	17,785,605	2,706,091	18,356,405	3,963,624	89,097,921	12,843,221
Broward	625,552,901	0	234,628,267	0	195,902,609	0	1,056,083,778	0
Miami-Dade	641,273,410	24,574,154	232,482,262	9,118,855	200,521,815	28,301,998	1,074,277,487	61,995,007
Indian River	15,604,260	6,714,329	5,335,847	2,501,252	5,411,320	6,570,088	26,351,428	15,785,668
Martin	4,329,985	9,754,195	1,398,184	3,267,916	1,360,486	5,640,818	7,088,656	18,662,928
Monroe	46,941,769	12,813,774	16,591,186	4,761,170	36,214,353	11,705,286	99,747,308	29,280,230
Okeechobee	3,588,388	4,980,454	1,304,083	1,872,681	2,454,724	4,919,007	7,347,195	11,772,142
Osceola	68,154,786	31,164,557	22,743,123	11,442,235	21,894,840	29,761,162	112,792,750	72,367,954
Palm Beach	259,544,023	0	103,667,384	0	137,574,402	0	500,785,809	0
St. Lucie	33,597,919	10,034,565	10,871,600	3,637,091	9,753,820	9,553,618	54,223,339	23,225,274
TOTAL	**3,506,246,208**	**285,590,057**	**1,280,177,273**	**103,140,325**	**1,329,393,633**	**244,023,505**	**6,115,817,114**	**632,753,888**
	3,791,836,265		**1,383,317,598**		**1,573,417,138**		**6,748,571,002**	

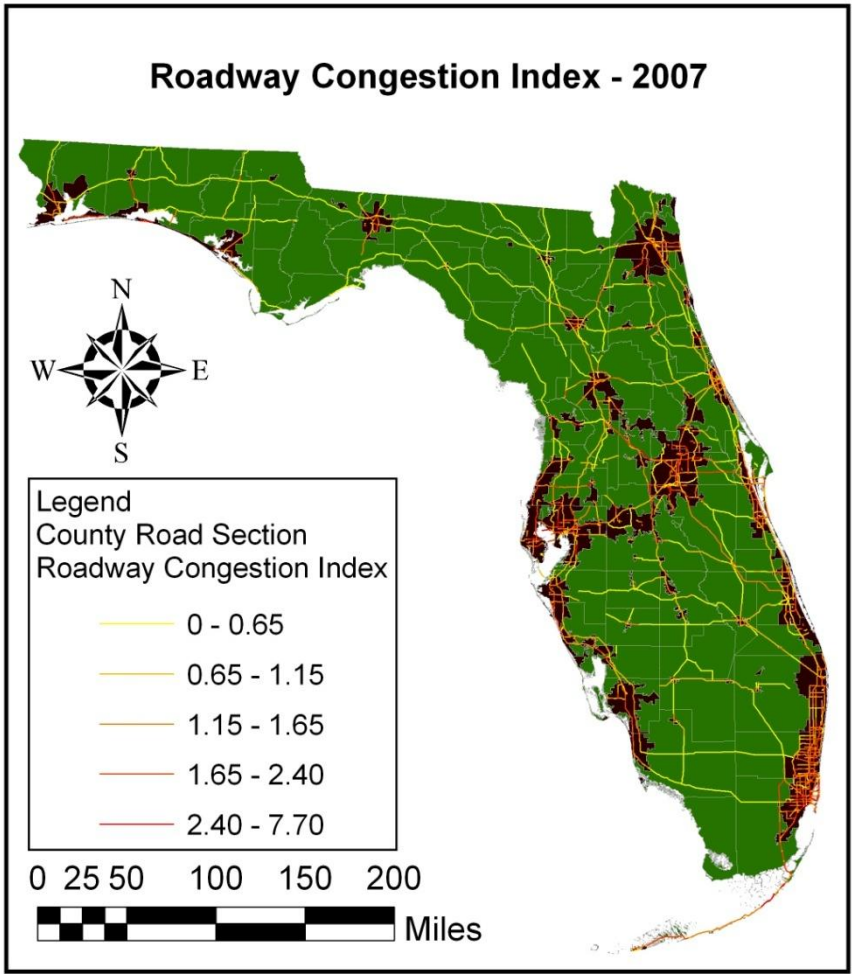
3.3.2 Maps

Roadway Congestion Index (RCI)

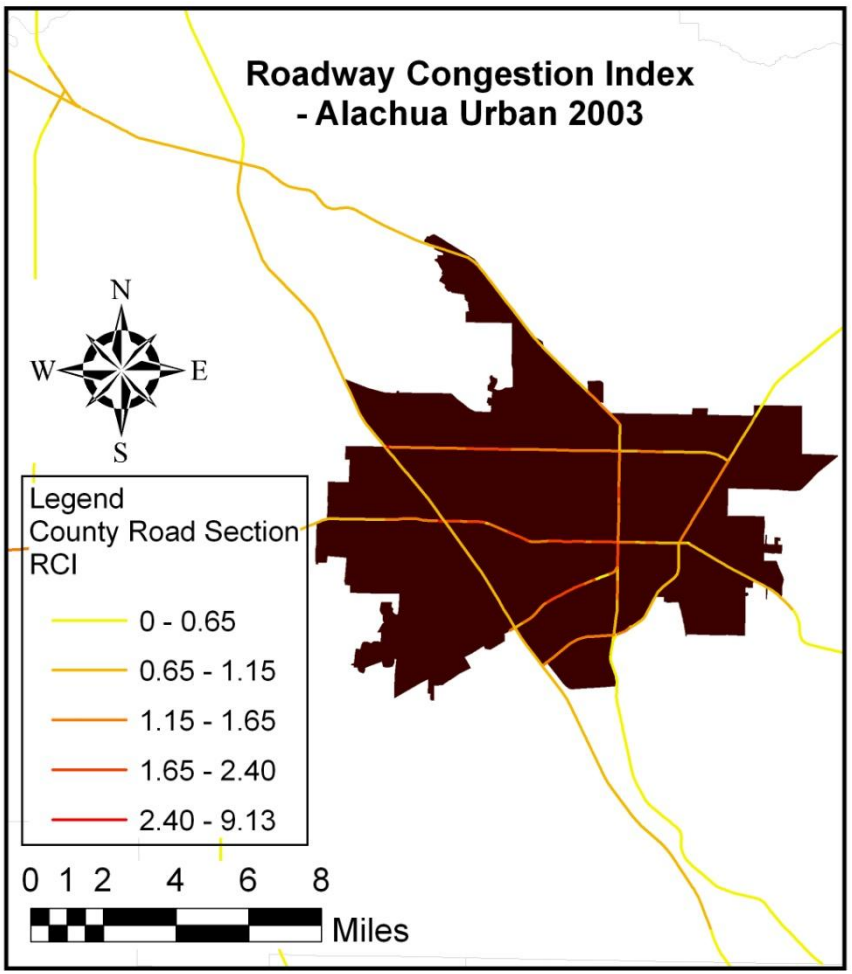


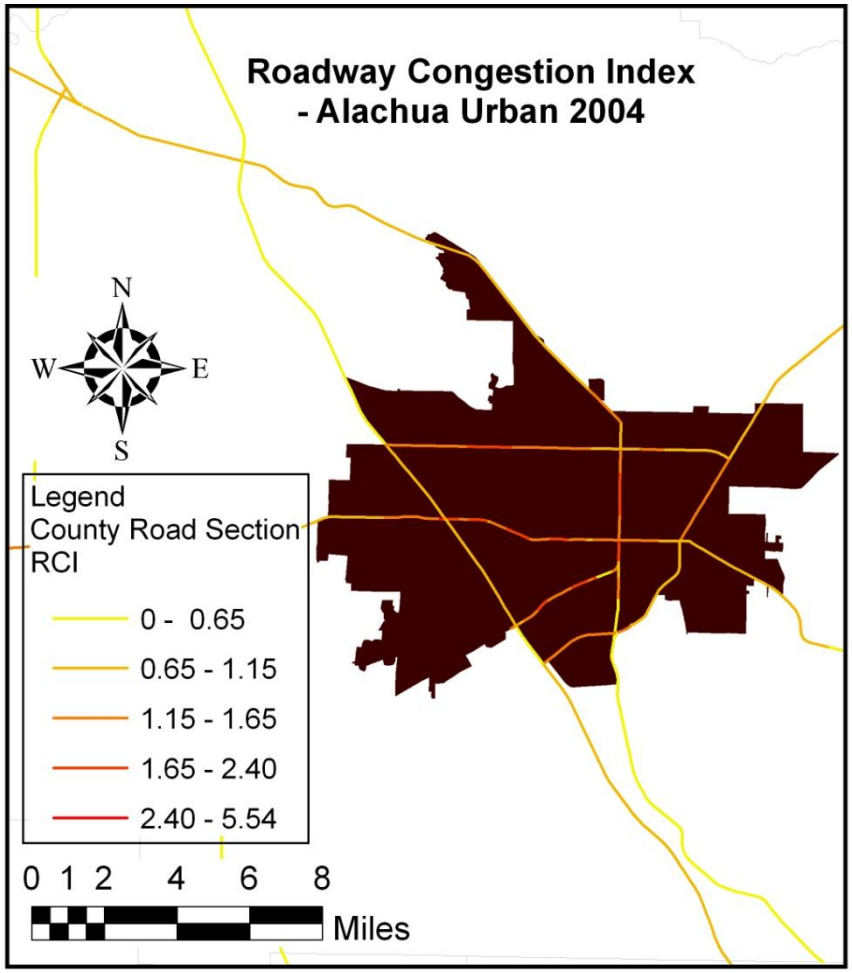

Roadway Congestion Index - 2005
N
W
E
S
Legend
County Road Section
Roadway Congestion Index
0 - 0.65
0.65 - 1.15
1.15 - 1.65
1.65 - 2.40
2.40 - 9.65
0 25 50 100 150 200
Miles

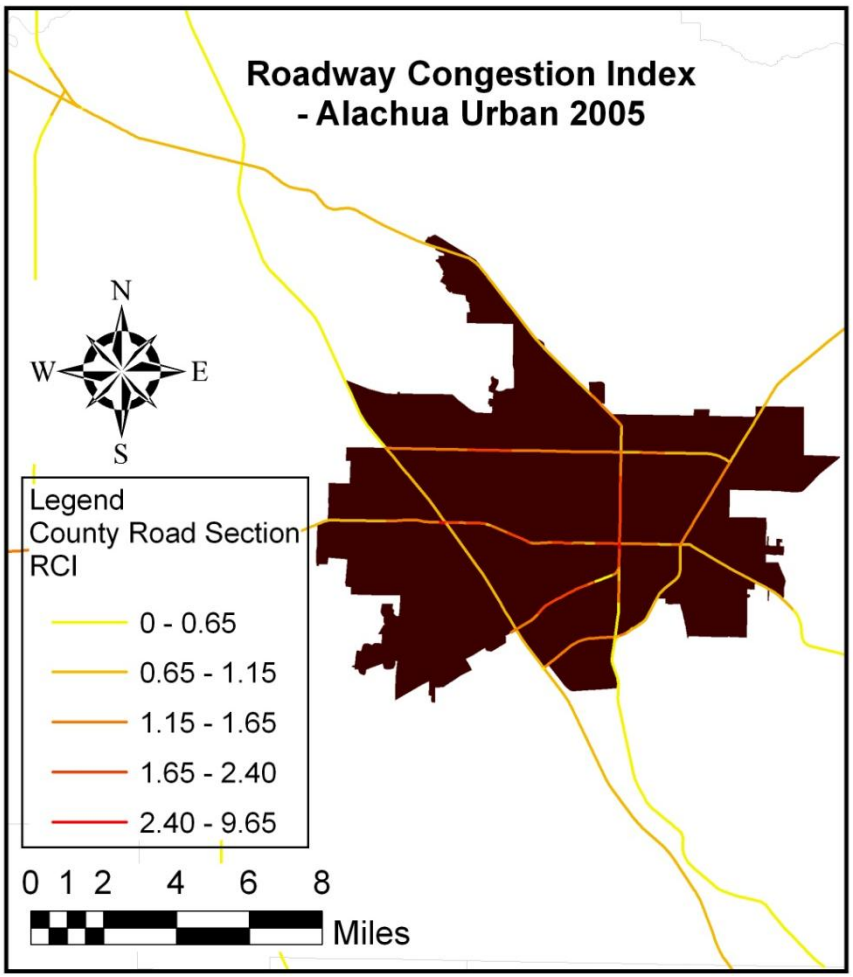

Roadway Congestion Index - 2006
N
W
E
S
Legend
County Road Section
Roadway Congestion Index
0 - 0.65
0.65 - 1.15
1.15 - 1.65
1.65 - 2.40
2.40 - 9.90
0 25 50 100 150 200
Miles

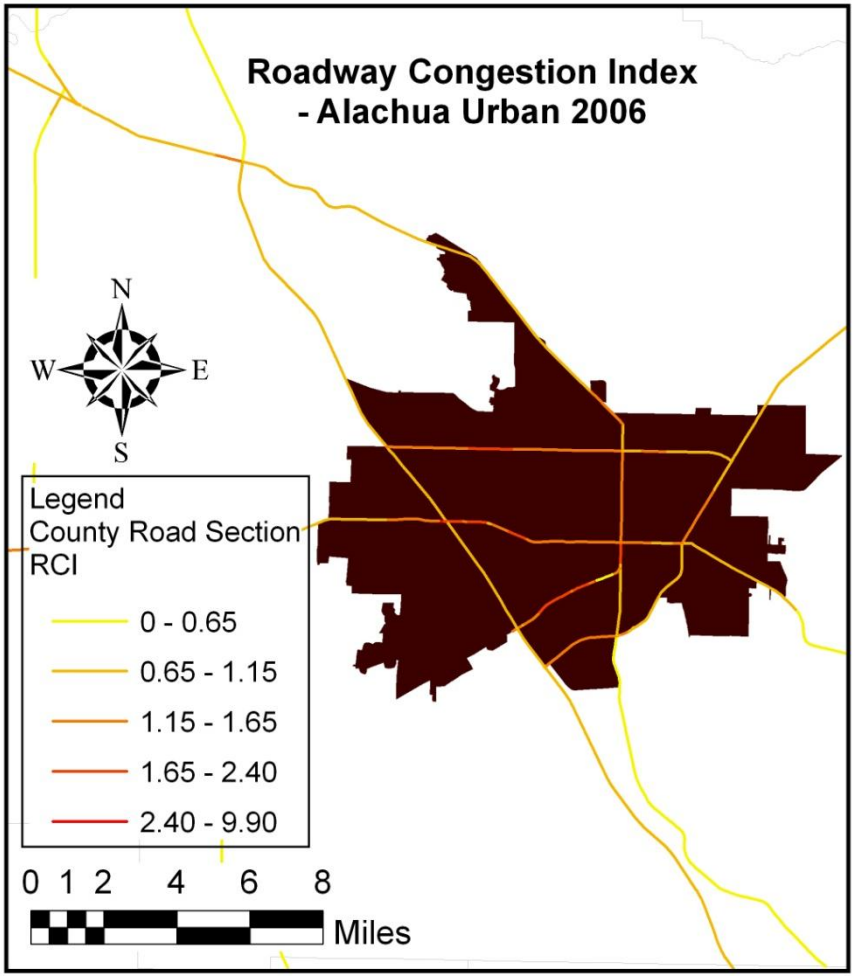


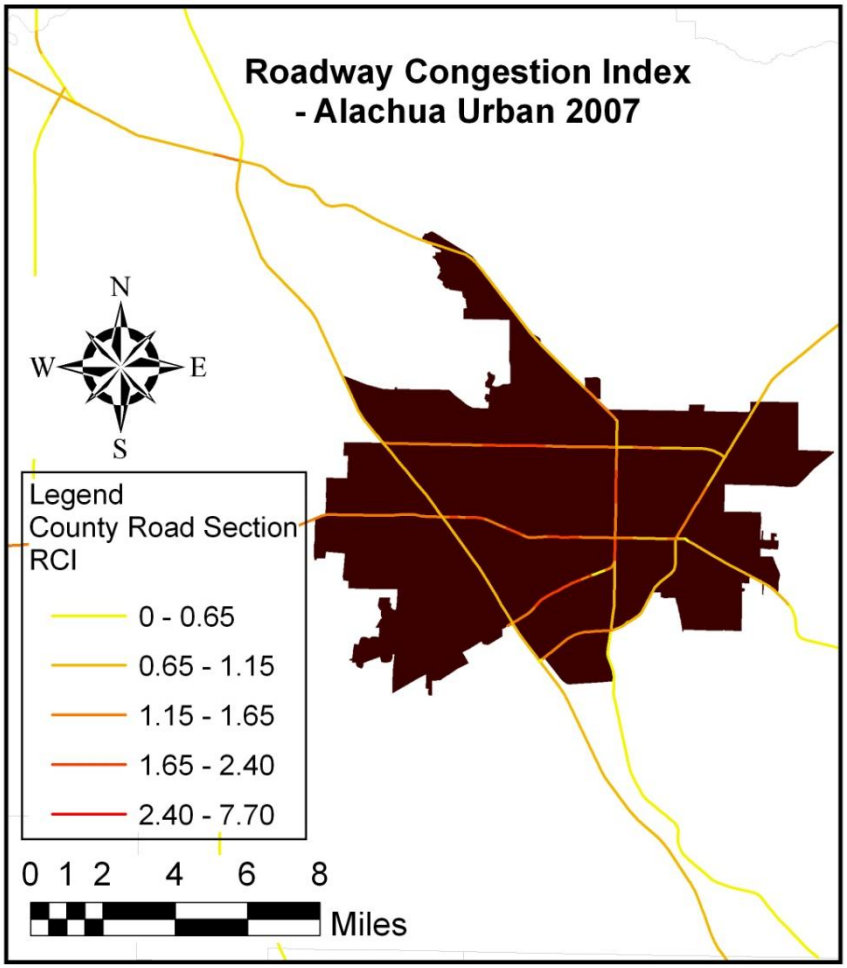
One of the major advantages of disaggregation is that it allows for more detail oriented maps. In the aggregate analysis of RCI the research team noticed that traffic patterns generated from Central Florida were more unstable than the other regions. Using disaggregation the research team can now analyze individual roads rather than a generalized region. With this new set of eyes we can see that if Central Florida wants to maintain regional mobility between the urban part of Marion County and the urban part of Orange County improvements are going to have to be made along SR91 or SR25.

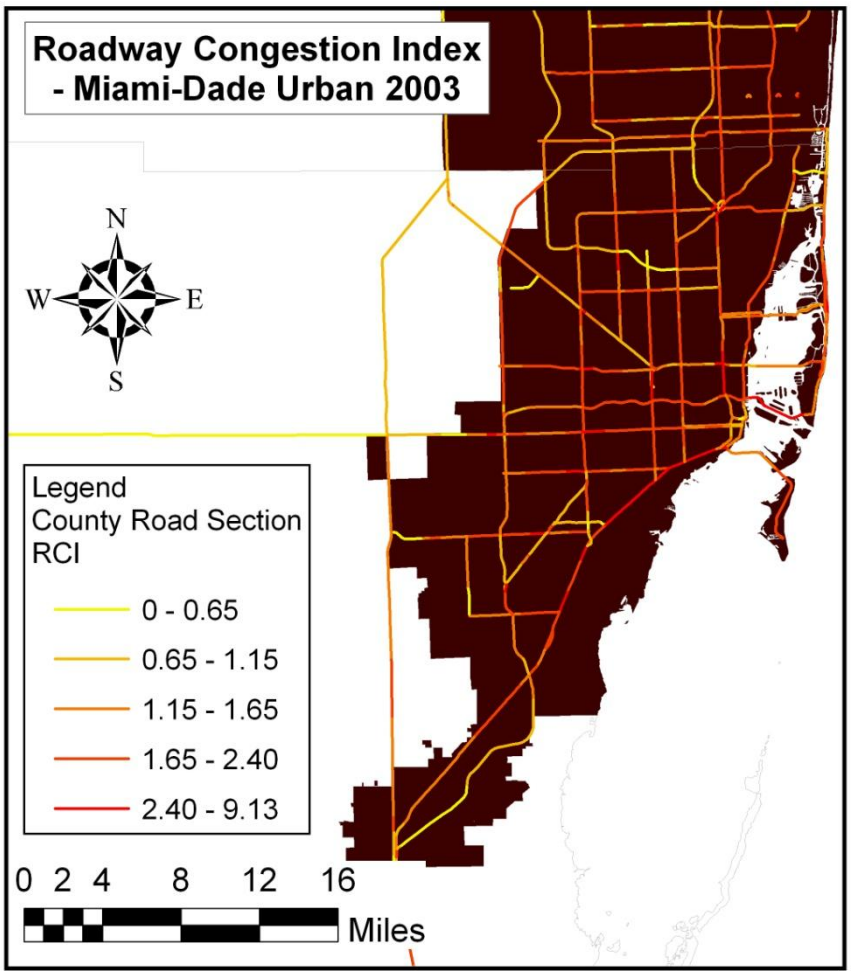

Roadway Congestion Index
- Alachua Urban 2003
N
W
E
S
Legend
County Road Section
RCI
0 - 0.65
0.65 - 1.15
1.15 - 1.65
1.65 - 2.40
2.40 - 9.13
0 1 2 4 6 8
Miles

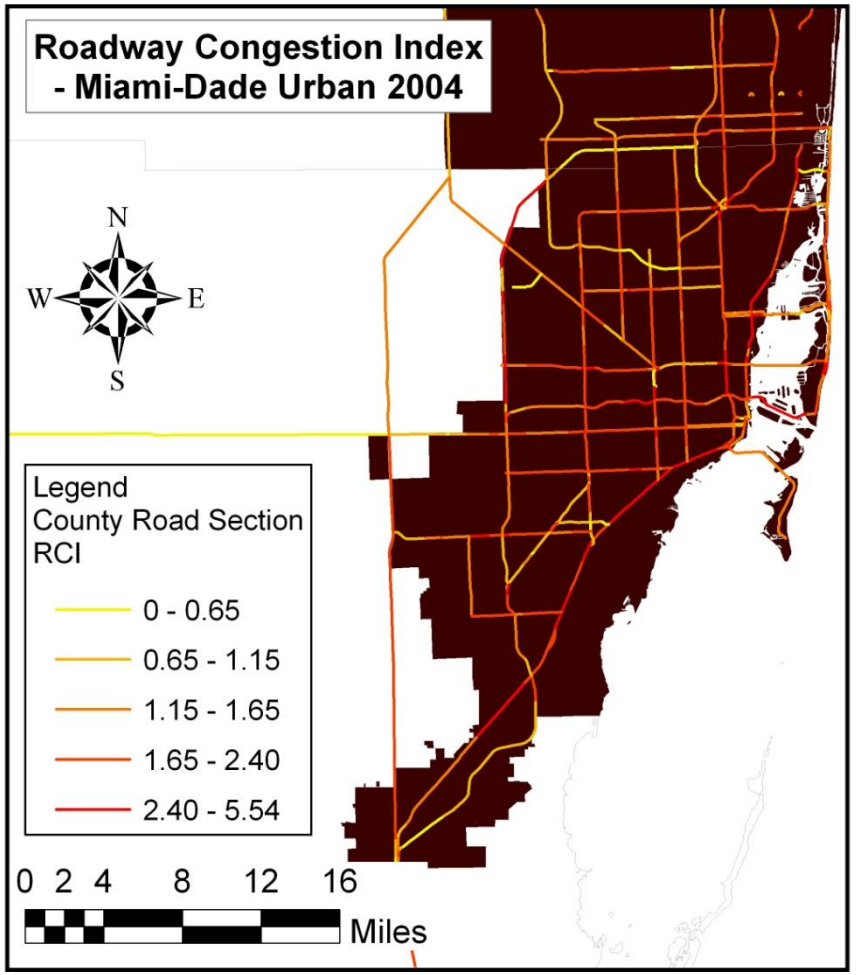

Roadway Congestion Index
- Alachua Urban 2004
N
W
E
S
Legend
County Road Section
RCI
0 - 0.65
0.65 - 1.15
1.15 - 1.65
1.65 - 2.40
2.40 - 5.54
0 1 2 4 6 8
Miles

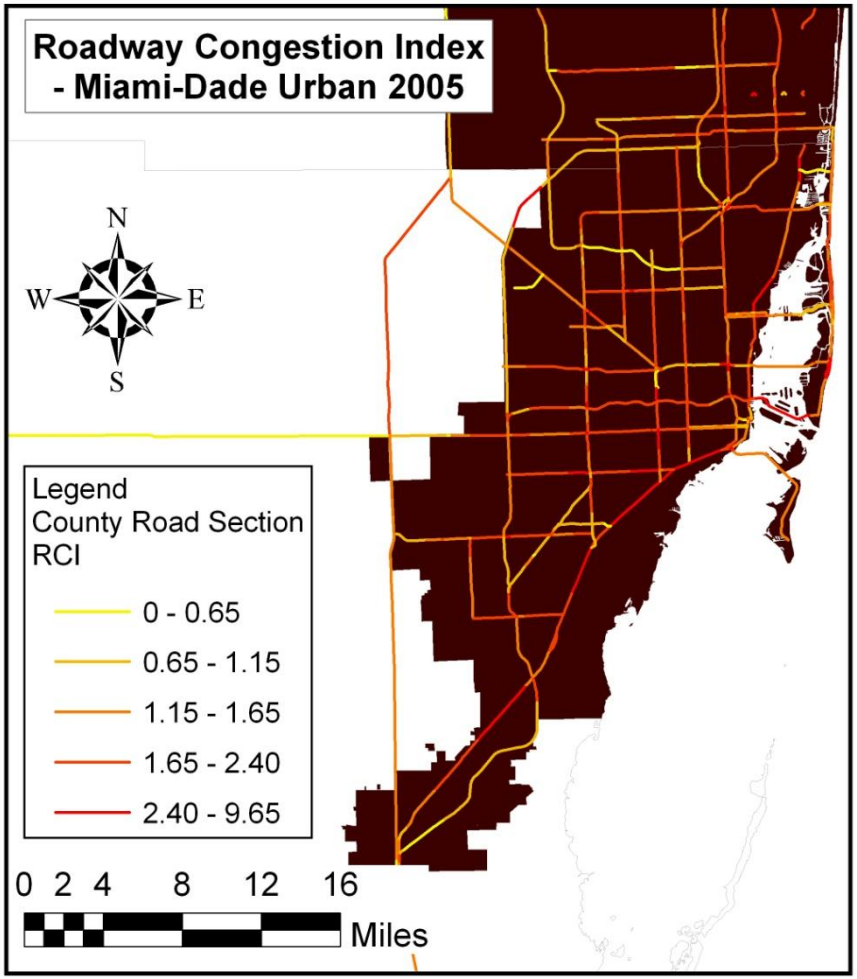

Roadway Congestion Index
- Alachua Urban 2005
N
W
E
S
Legend
County Road Section
RCI
0 - 0.65
0.65 - 1.15
1.15 - 1.65
1.65 - 2.40
2.40 - 9.65
0 1 2 4 6 8
Miles

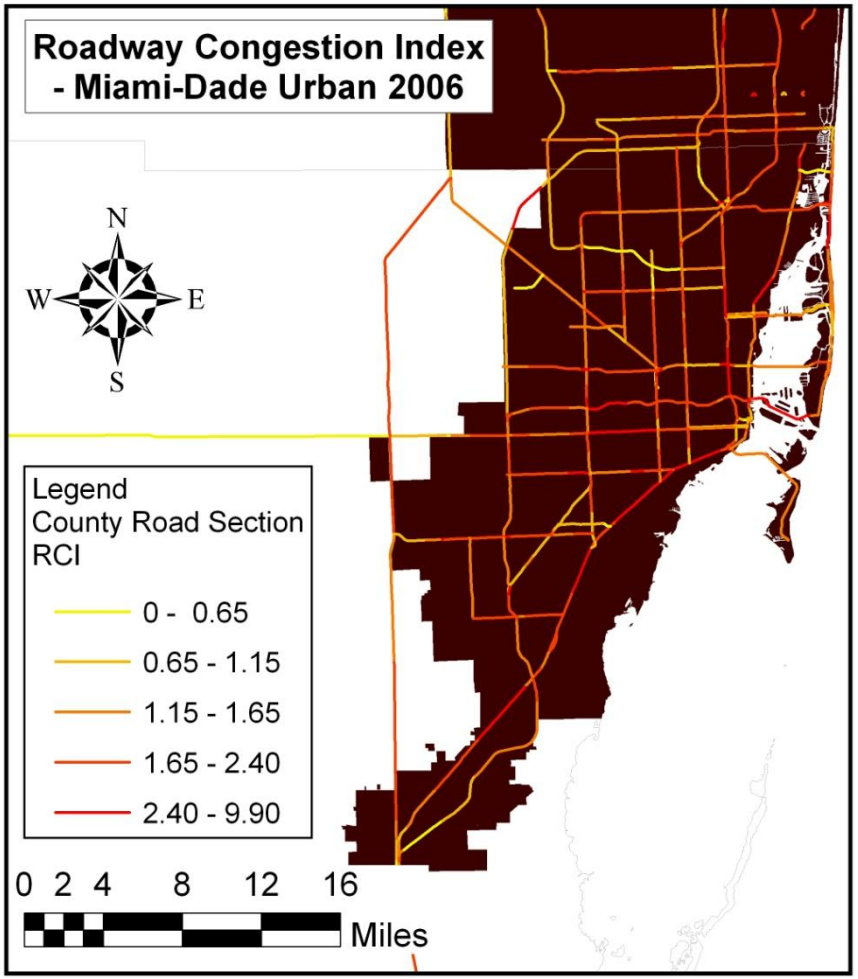

Roadway Congestion Index
- Alachua Urban 2006
N
W
E
S
Legend
County Road Section
RCI
0 - 0.65
0.65 - 1.15
1.15 - 1.65
1.65 - 2.40
2.40 - 9.90
0 1 2 4 6 8
Miles

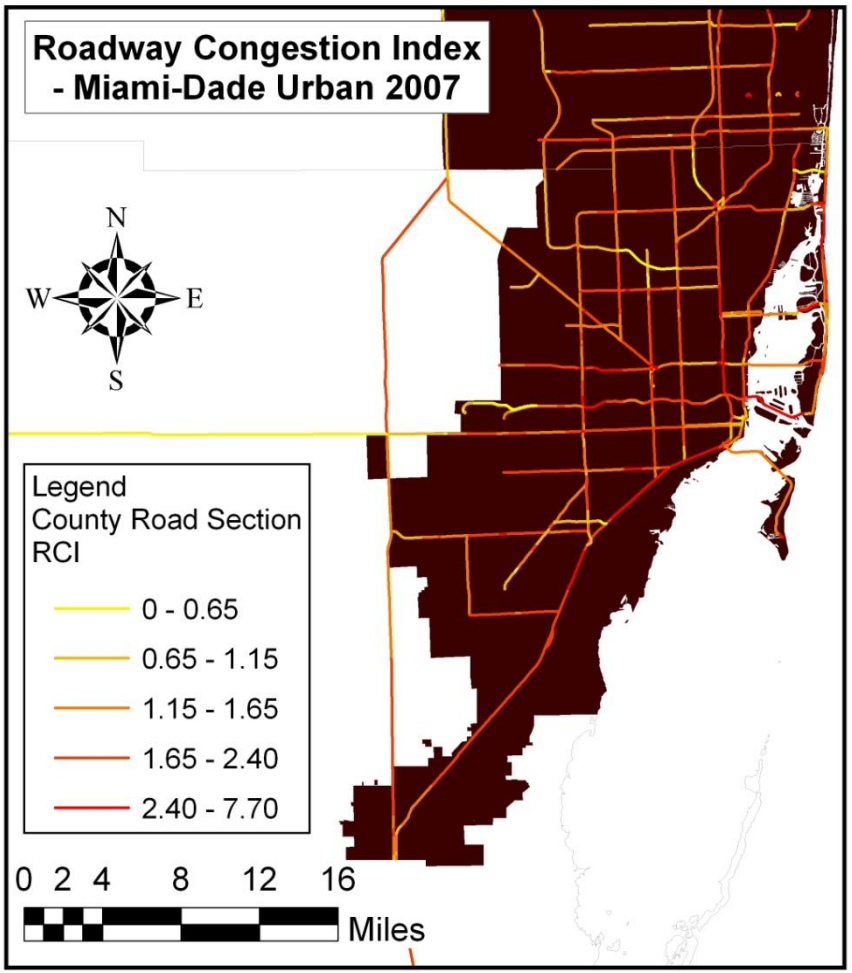

Roadway Congestion Index
- Alachua Urban 2007
N
W
E
S
Legend
County Road Section
RCI
0 - 0.65
0.65 - 1.15
1.15 - 1.65
1.65 - 2.40
2.40 - 7.70
0 1 2 4 6 8
Miles


Roadway Congestion Index
- Miami-Dade Urban 2003
N
W
E
S
Legend
County Road Section
RCI
0 - 0.65
0.65 - 1.15
1.15 - 1.65
1.65 - 2.40
2.40 - 9.13
0 2 4 8 12 16
Miles

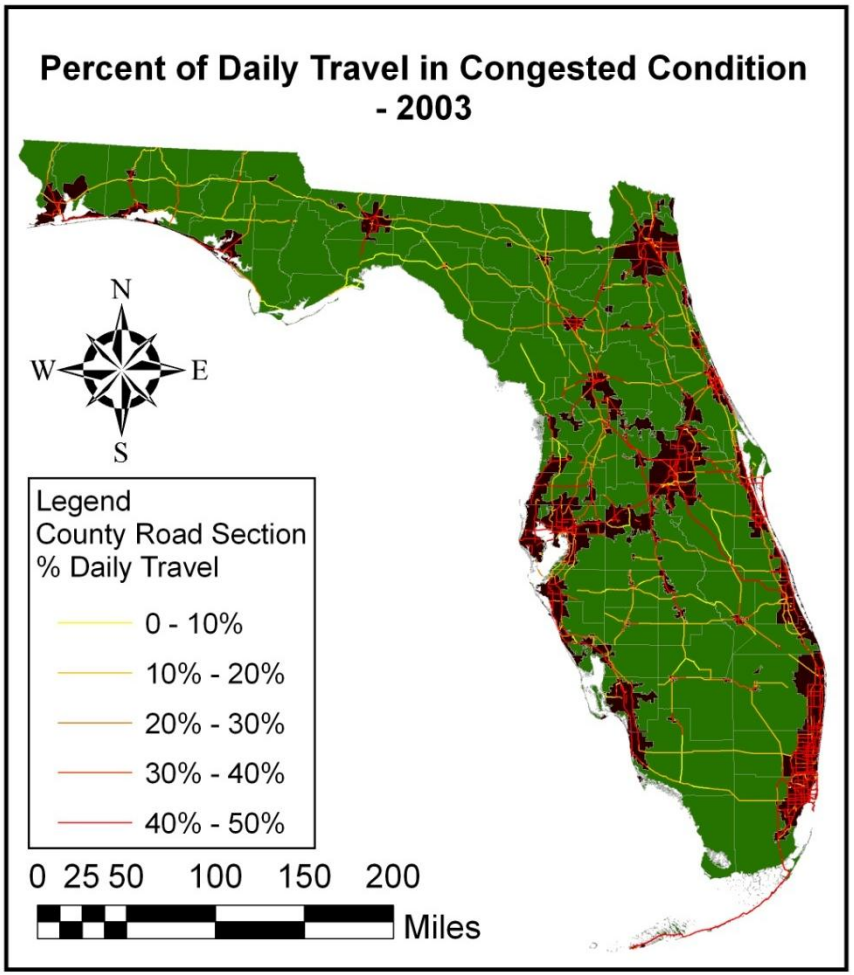

Roadway Congestion Index
- Miami-Dade Urban 2004
N
W
E
S
Legend
County Road Section
RCI
0 - 0.65
0.65 - 1.15
1.15 - 1.65
1.65 - 2.40
2.40 - 5.54
0 2 4 8 12 16
Miles

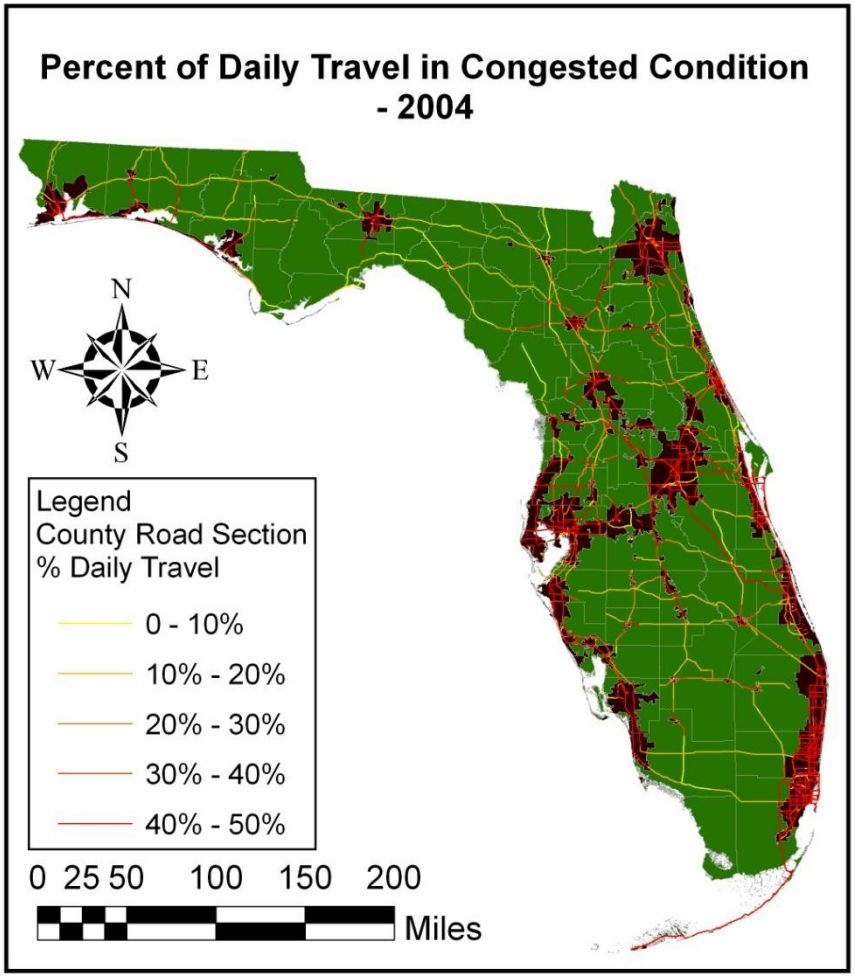

Roadway Congestion Index
- Miami-Dade Urban 2005
N
W
E
S
Legend
County Road Section
RCI
0 - 0.65
0.65 - 1.15
1.15 - 1.65
1.65 - 2.40
2.40 - 9.65
0 2 4 8 12 16
Miles

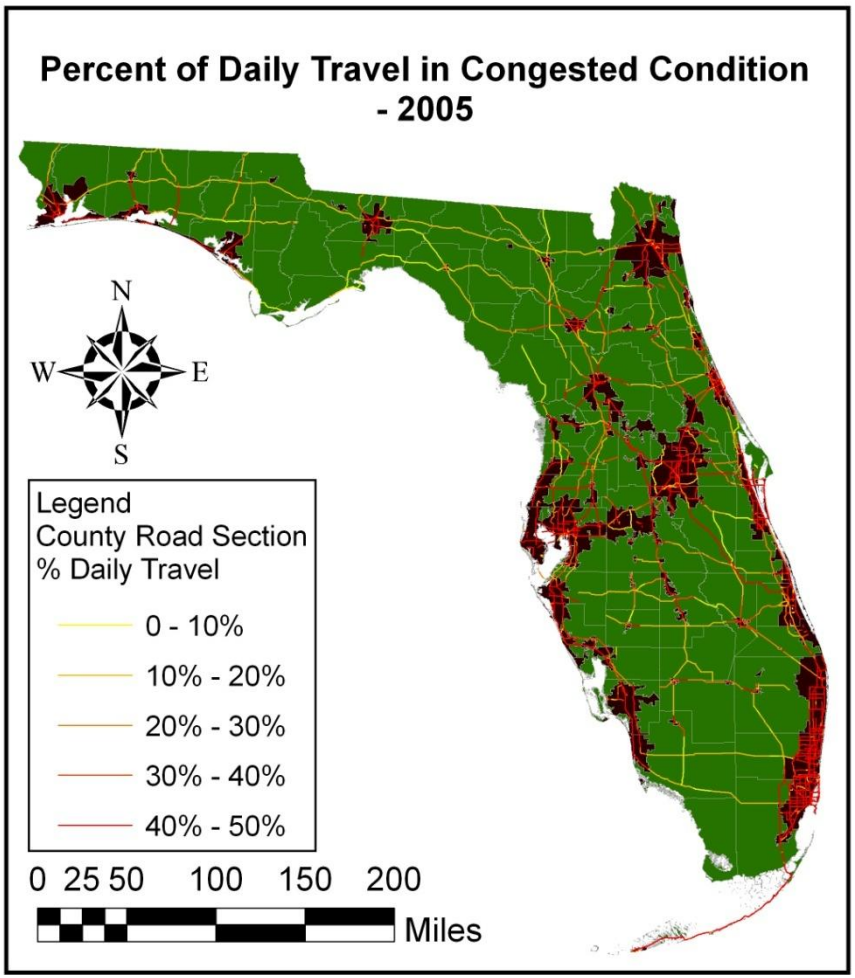

Roadway Congestion Index
- Miami-Dade Urban 2006
N
W
E
S
Legend
County Road Section
RCI
0 - 0.65
0.65 - 1.15
1.15 - 1.65
1.65 - 2.40
2.40 - 9.90
0 2 4 8 12 16
Miles

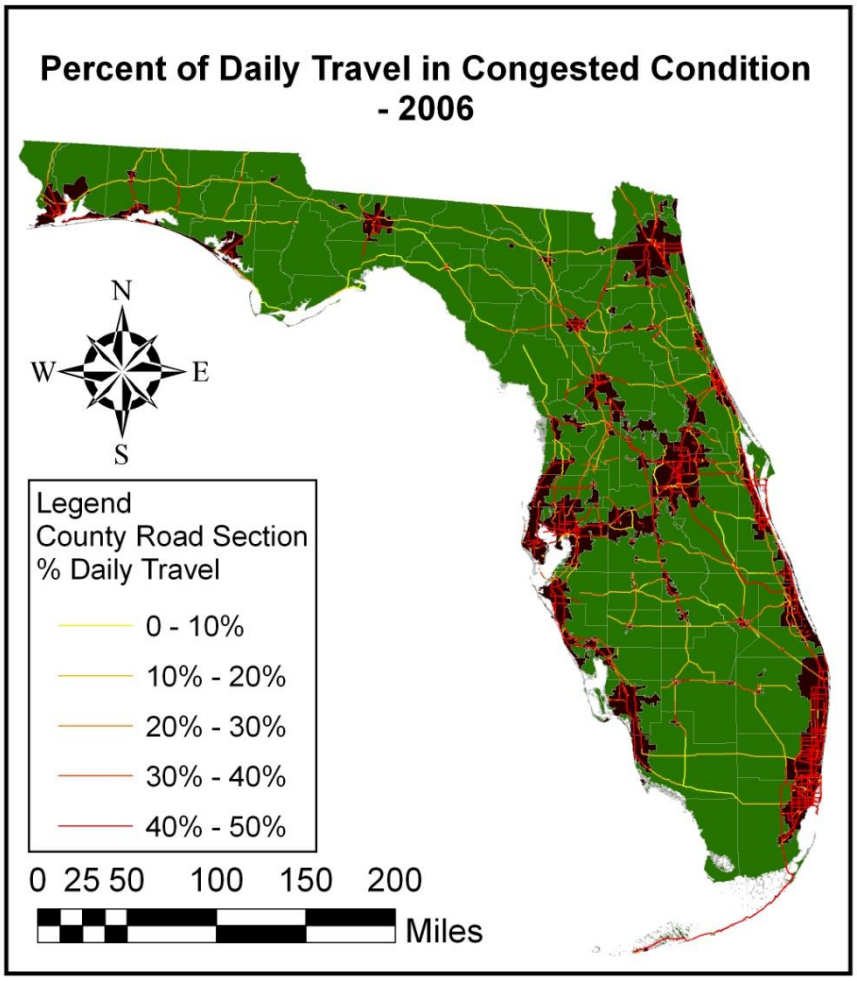

Roadway Congestion Index
- Miami-Dade Urban 2007
N
W
E
S
Legend
County Road Section
RCI
0 - 0.65
0.65 - 1.15
1.15 - 1.65
1.65 - 2.40
2.40 - 7.70
0 2 4 8 12 16
Miles

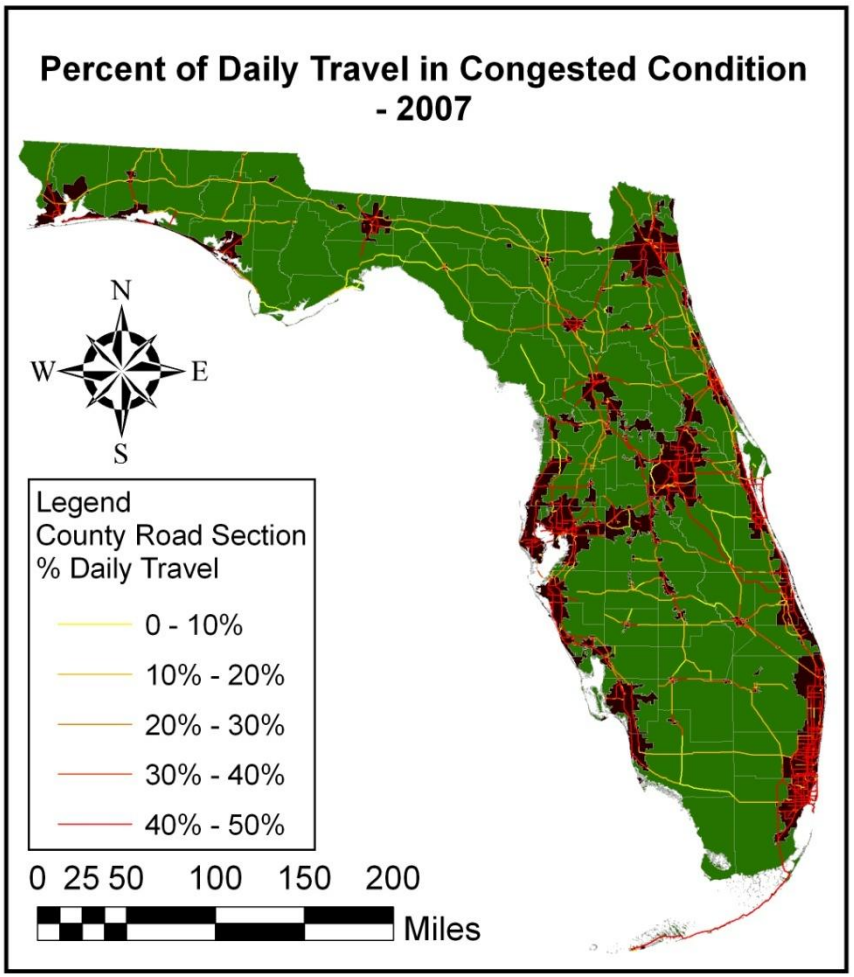
Percent of Daily Travel in Congested Conditions (PDTCC)



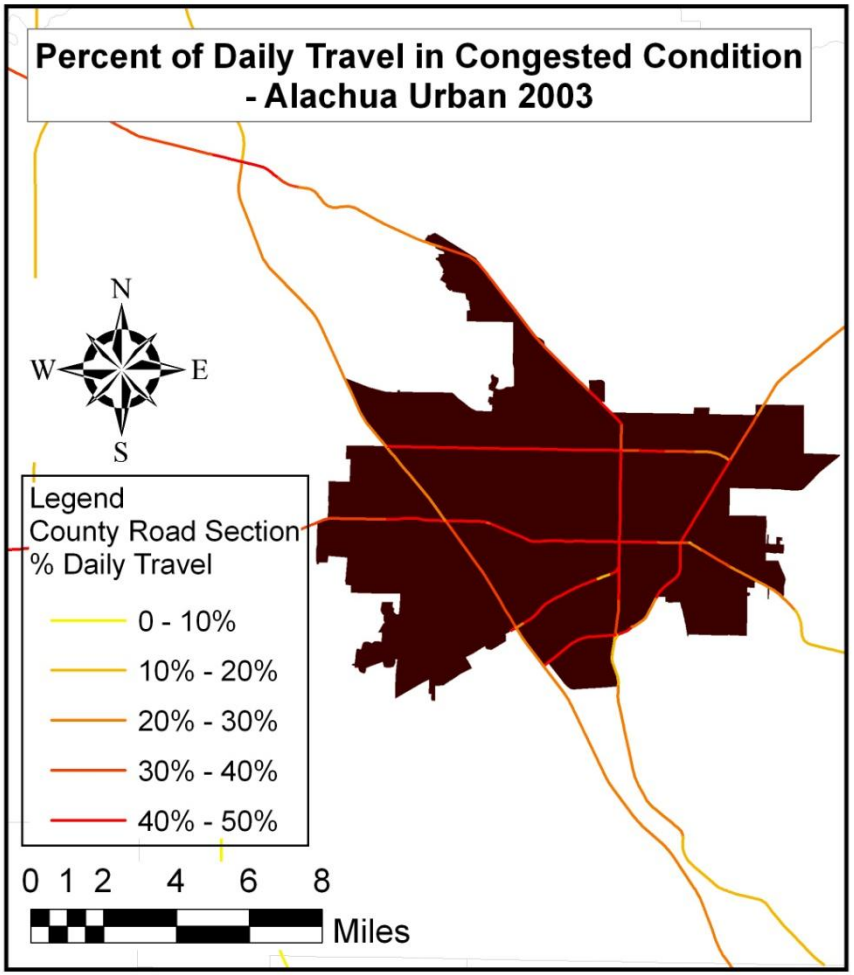


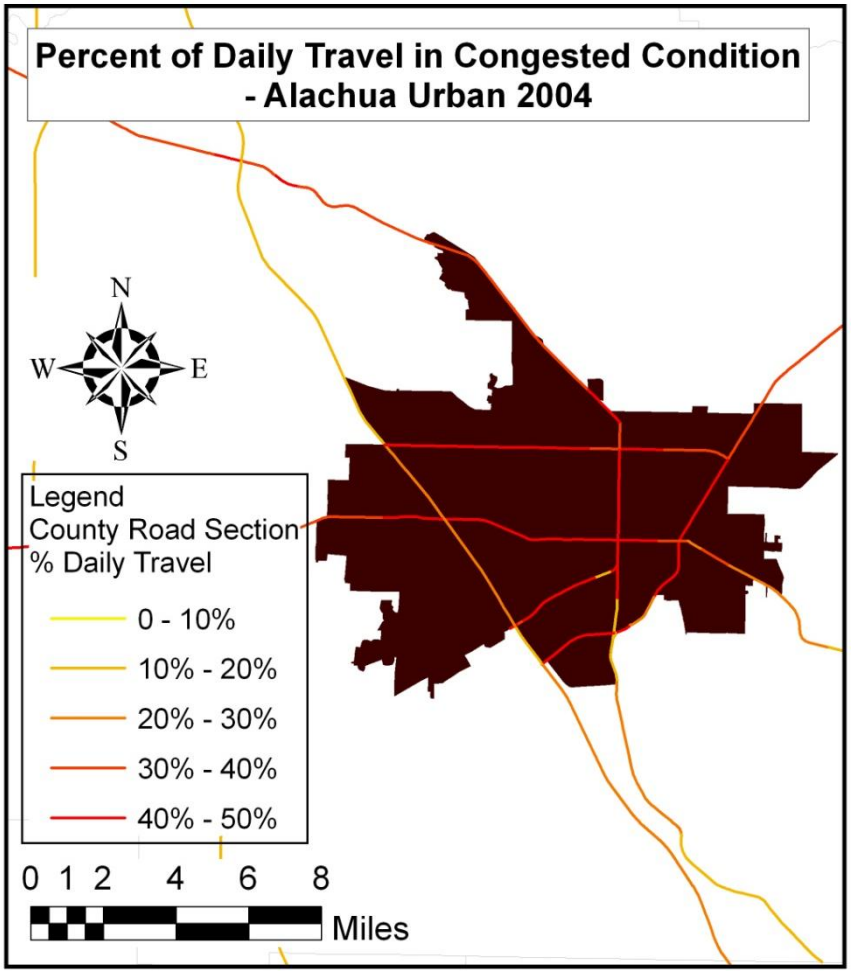

Percent of Daily Travel in Congested Condition - 2005
N
W
E
S
Legend
County Road Section
% Daily Travel
0 - 10%
10% - 20%
20% - 30%
30% - 40%
40% - 50%
0 25 50 100 150 200
Miles

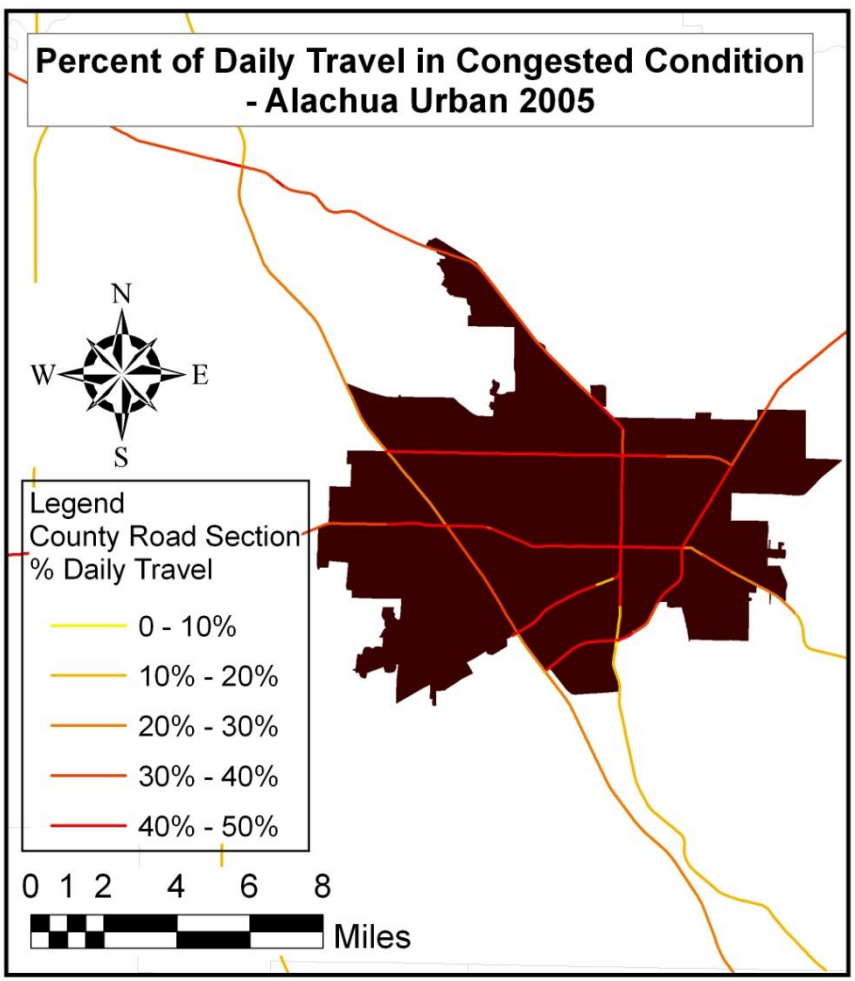

Percent of Daily Travel in Congested Condition - 2006
N
W
E
S
Legend
County Road Section
% Daily Travel
0 - 10%
10% - 20%
20% - 30%
30% - 40%
40% - 50%
0 25 50 100 150 200
Miles

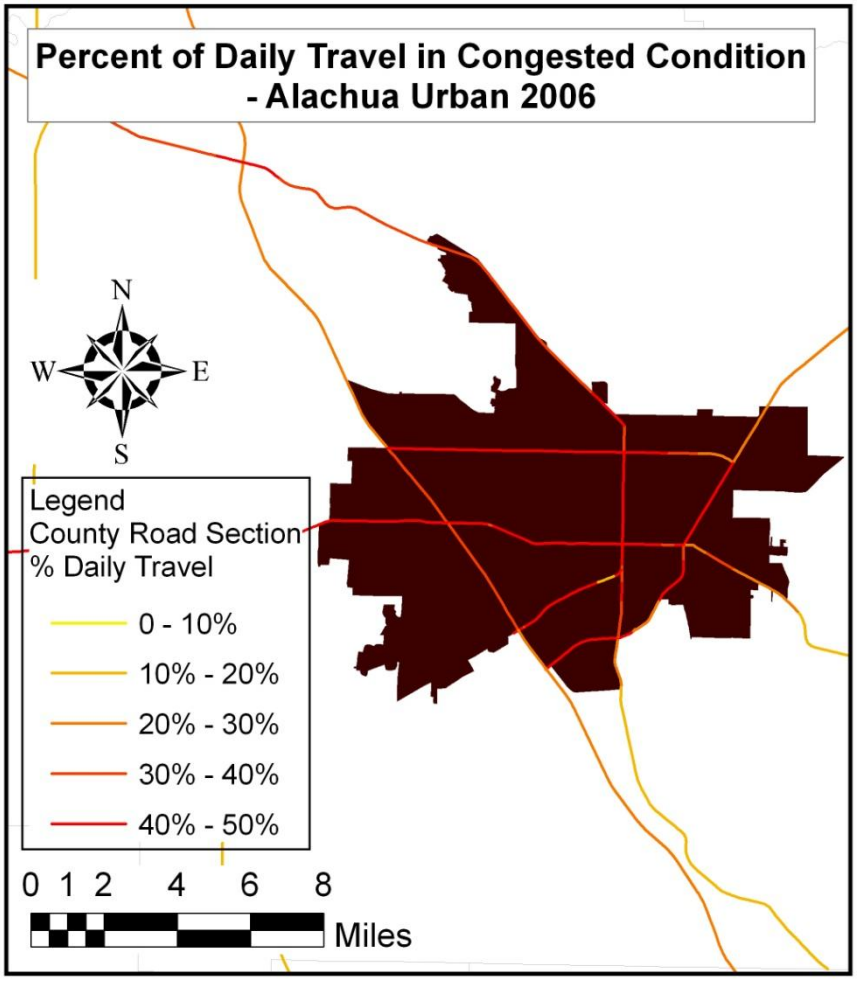


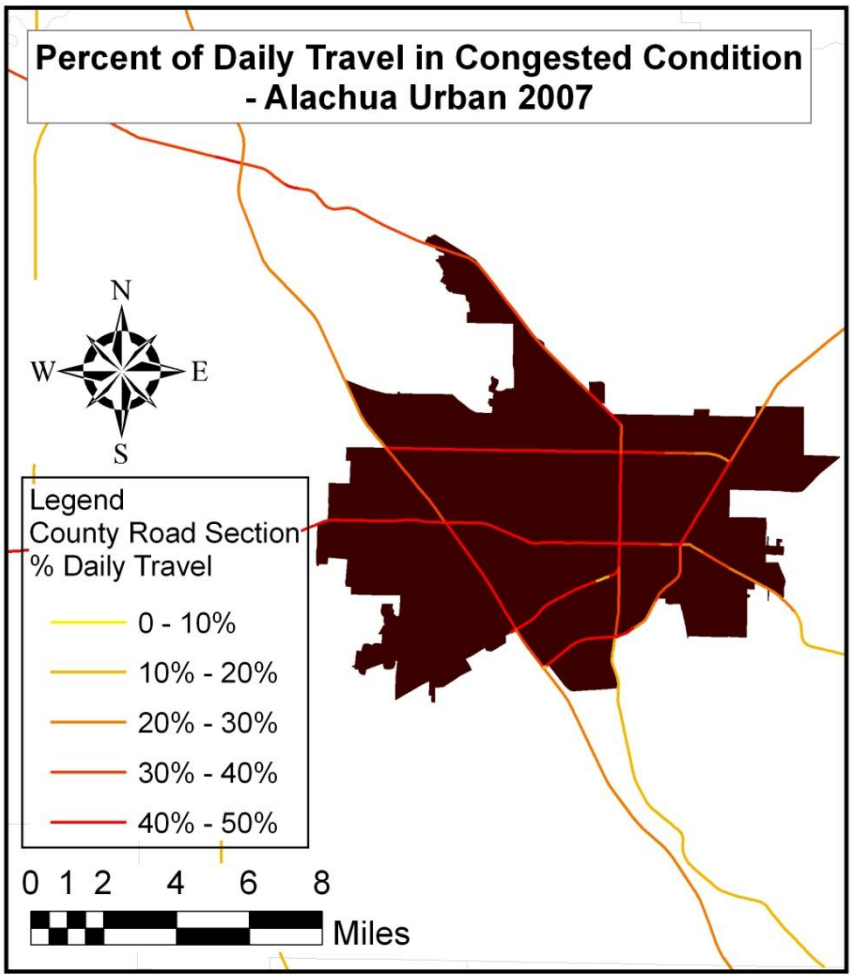
The disaggregate roadway method for PDTCC reveals an additional level of detail that shows that rural areas adjacent to urban areas experience worse traffic congestion than rural areas isolated from urban areas.

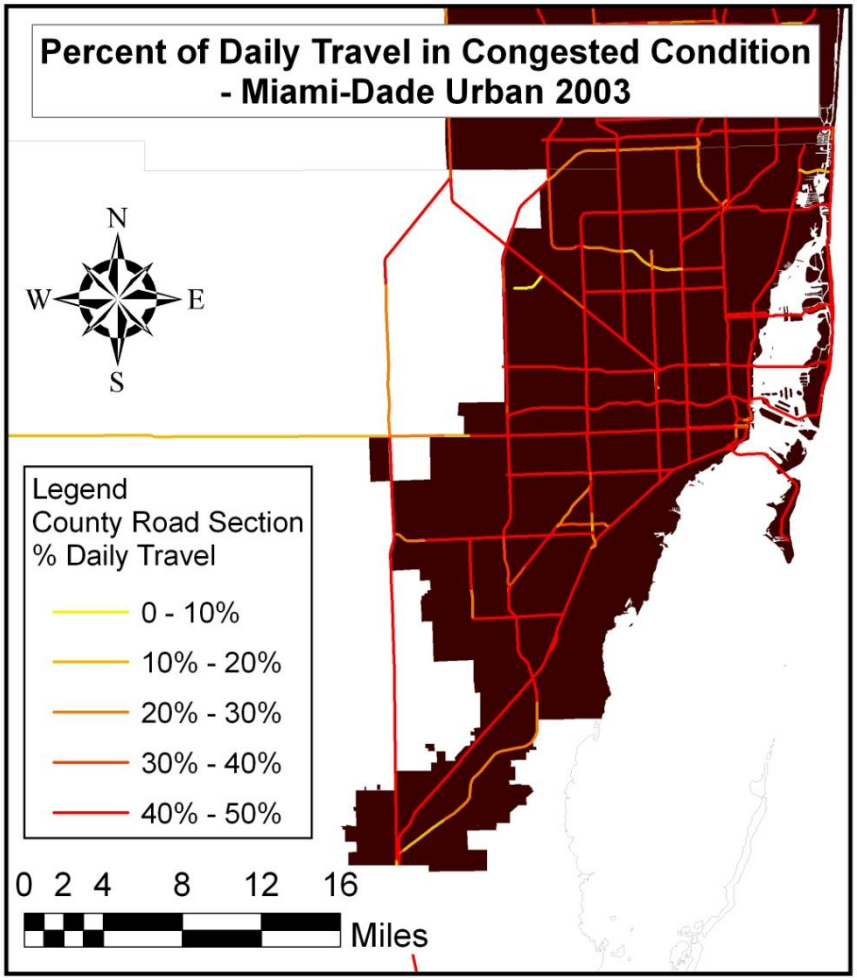

Percent of Daily Travel in Congested Condition
- Alachua Urban 2003
N
W
E
S
Legend
County Road Section
% Daily Travel
0 - 10%
10% - 20%
20% - 30%
30% - 40%
40% - 50%
0 1 2 4 6 8
Miles

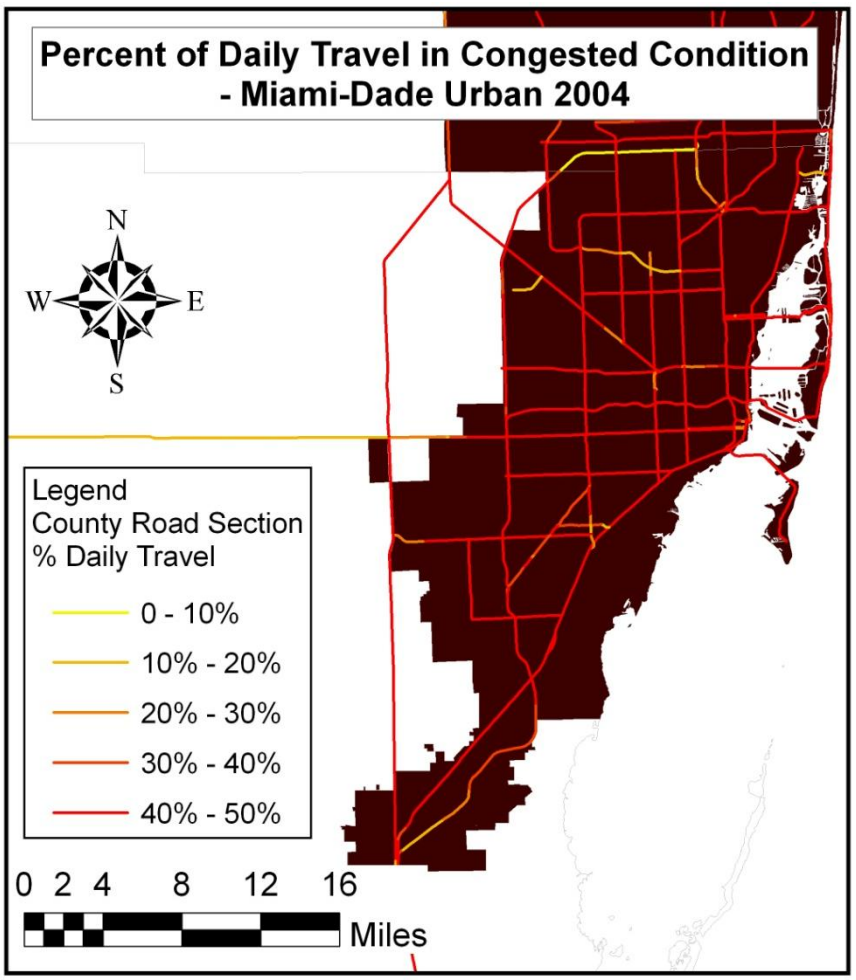

Percent of Daily Travel in Congested Condition
- Alachua Urban 2004
N
W
E
S
Legend
County Road Section
% Daily Travel
0 - 10%
10% - 20%
20% - 30%
30% - 40%
40% - 50%
0 1 2 4 6 8
Miles

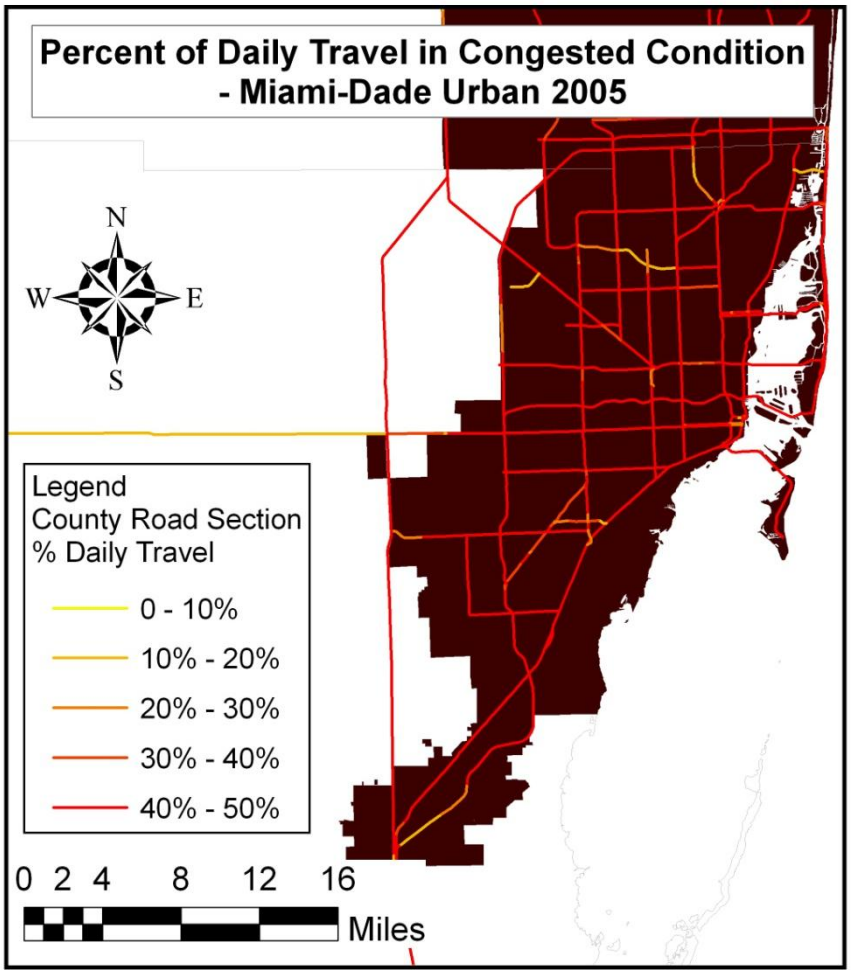

Percent of Daily Travel in Congested Condition
- Alachua Urban 2005
N
W
E
S
Legend
County Road Section
% Daily Travel
0 - 10%
10% - 20%
20% - 30%
30% - 40%
40% - 50%
0 1 2 4 6 8
Miles

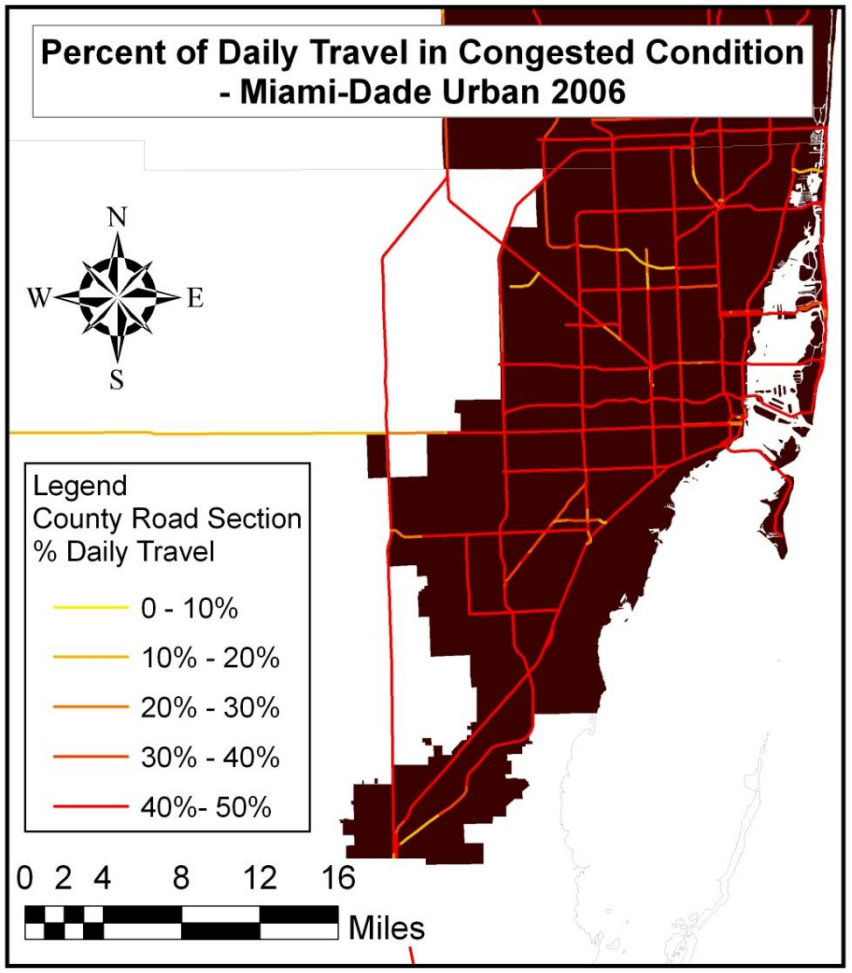

Percent of Daily Travel in Congested Condition
- Alachua Urban 2006
N
W
E
S
Legend
County Road Section
% Daily Travel
0 - 10%
10% - 20%
20% - 30%
30% - 40%
40% - 50%
0 1 2 4 6 8
Miles

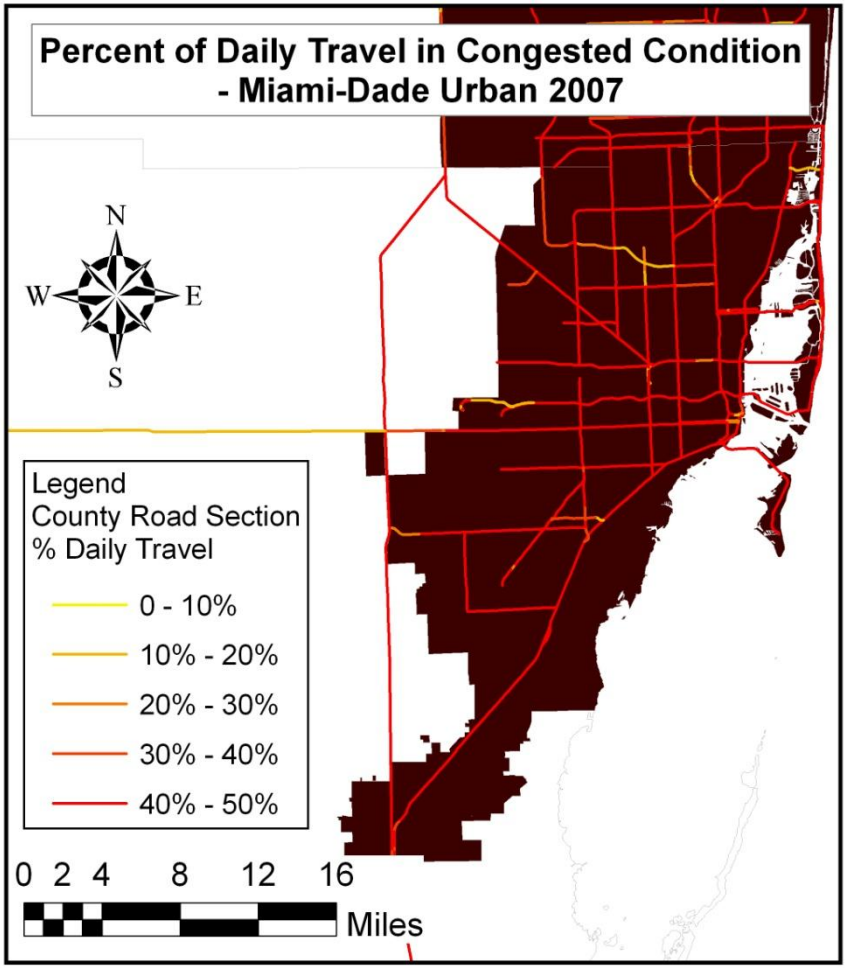

Percent of Daily Travel in Congested Condition
- Alachua Urban 2007
N
W
E
S
Legend
County Road Section
% Daily Travel
0 - 10%
10% - 20%
20% - 30%
30% - 40%
40% - 50%
0 1 2 4 6 8
Miles


Percent of Daily Travel in Congested Condition
- Miami-Dade Urban 2003
N
W
E
S
Legend
County Road Section
% Daily Travel
0 - 10%
10% - 20%
20% - 30%
30% - 40%
40% - 50%
0 2 4 8 12 16
Miles

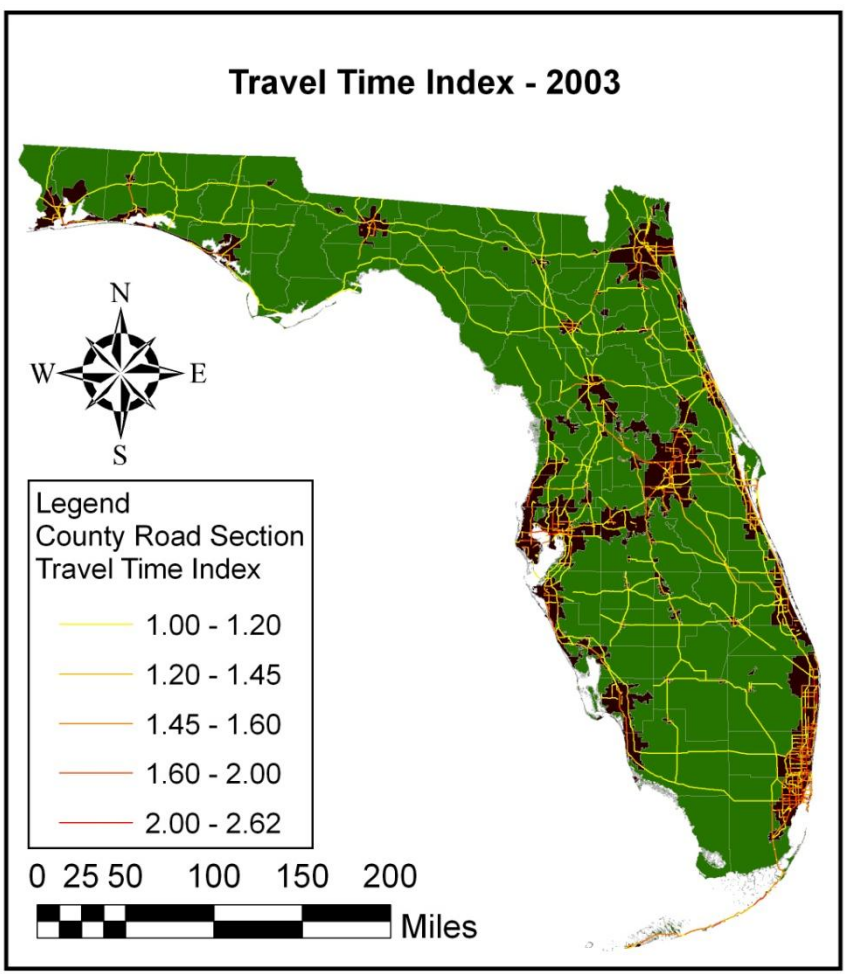

Percent of Daily Travel in Congested Condition
- Miami-Dade Urban 2004
N
W
E
S
Legend
County Road Section
% Daily Travel
0 - 10%
10% - 20%
20% - 30%
30% - 40%
40% - 50%
0 2 4 8 12 16
Miles

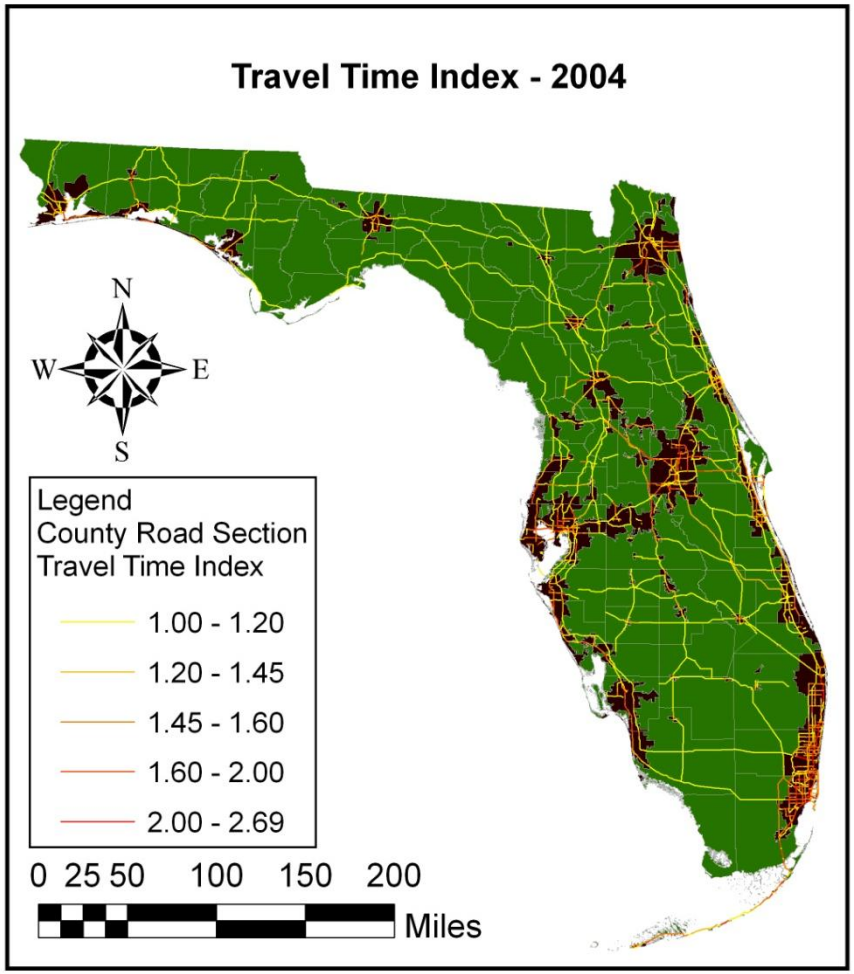

Percent of Daily Travel in Congested Condition
- Miami-Dade Urban 2005
N
W
E
S
Legend
County Road Section
% Daily Travel
0 - 10%
10% - 20%
20% - 30%
30% - 40%
40% - 50%
0 2 4 8 12 16
Miles

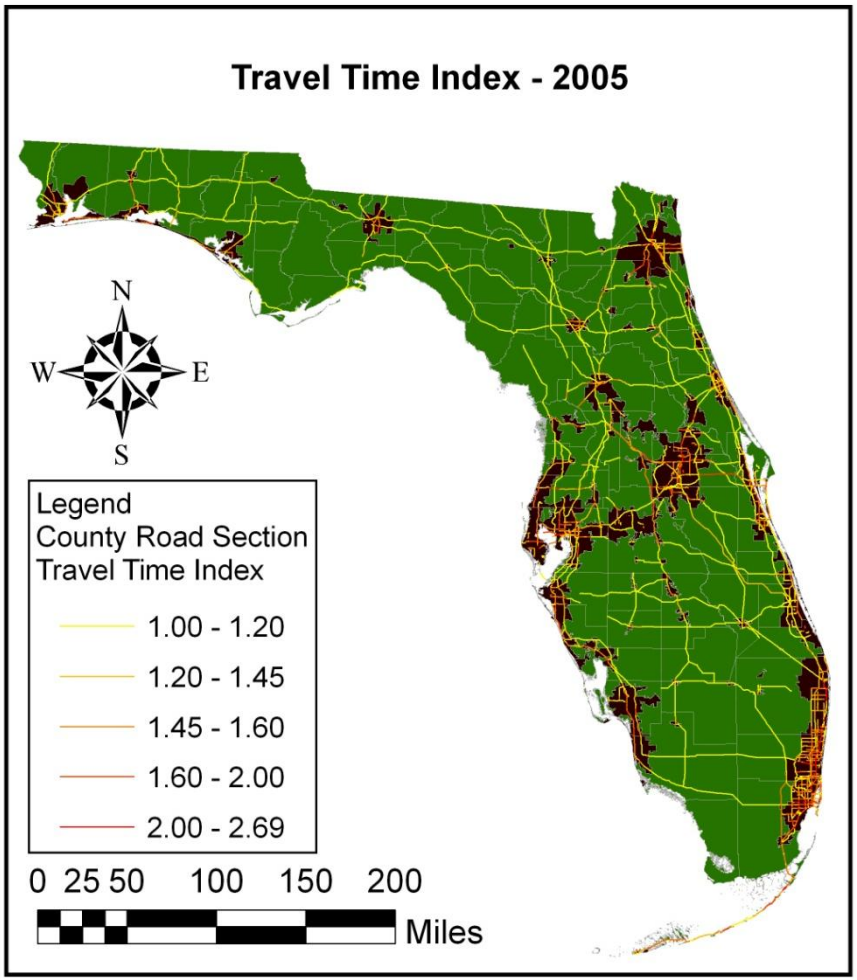

Percent of Daily Travel in Congested Condition
- Miami-Dade Urban 2006
N
W
E
S
Legend
County Road Section
% Daily Travel
0 - 10%
10% - 20%
20% - 30%
30% - 40%
40%- 50%
0 2 4 8 12 16
Miles

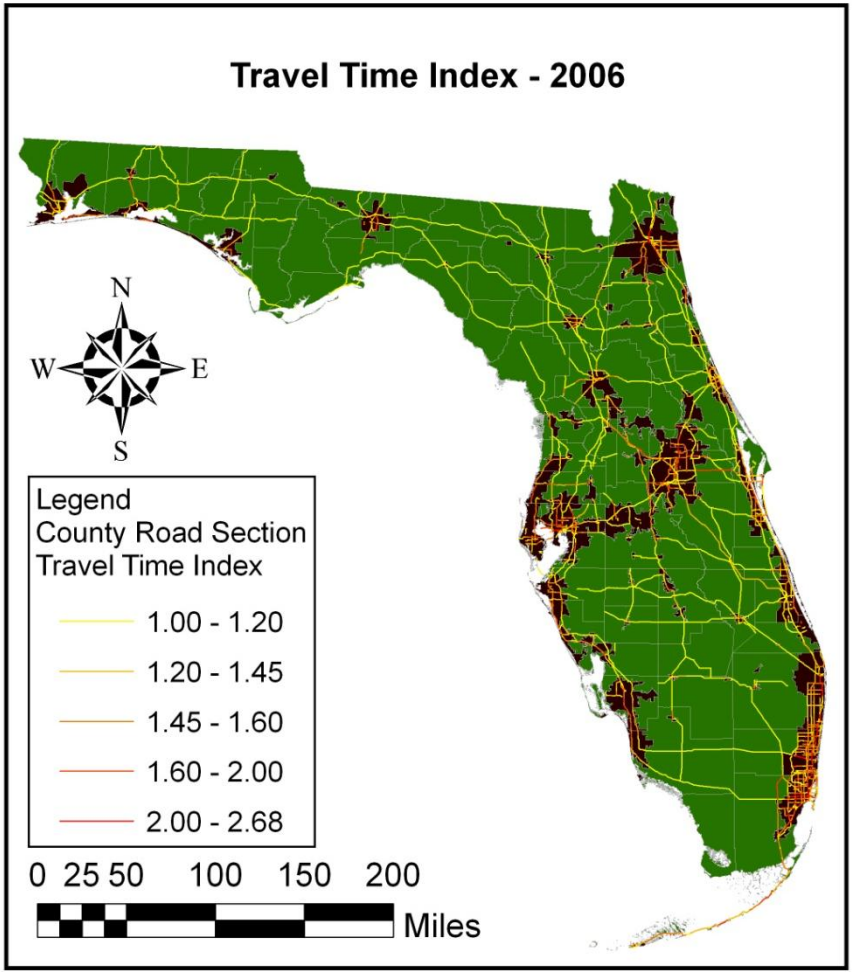

Percent of Daily Travel in Congested Condition
- Miami-Dade Urban 2007
N
W
E
S
Legend
County Road Section
% Daily Travel
0 - 10%
10% - 20%
20% - 30%
30% - 40%
40% - 50%
0 2 4 8 12 16
Miles

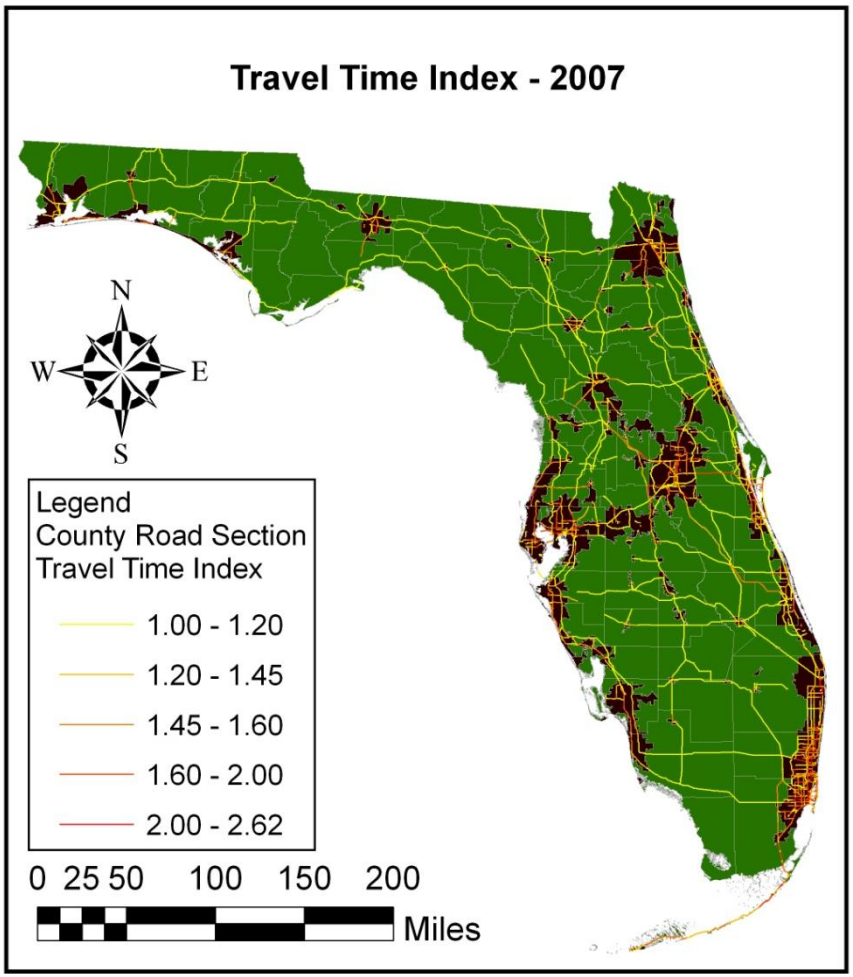
Travel Time Index

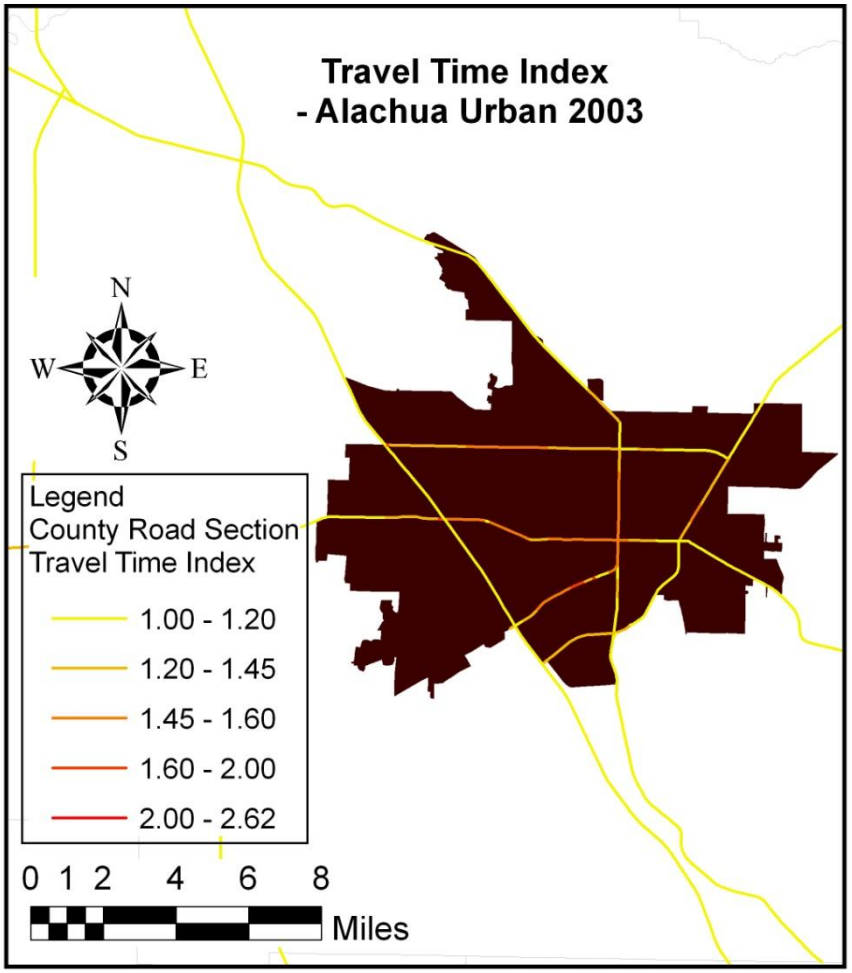


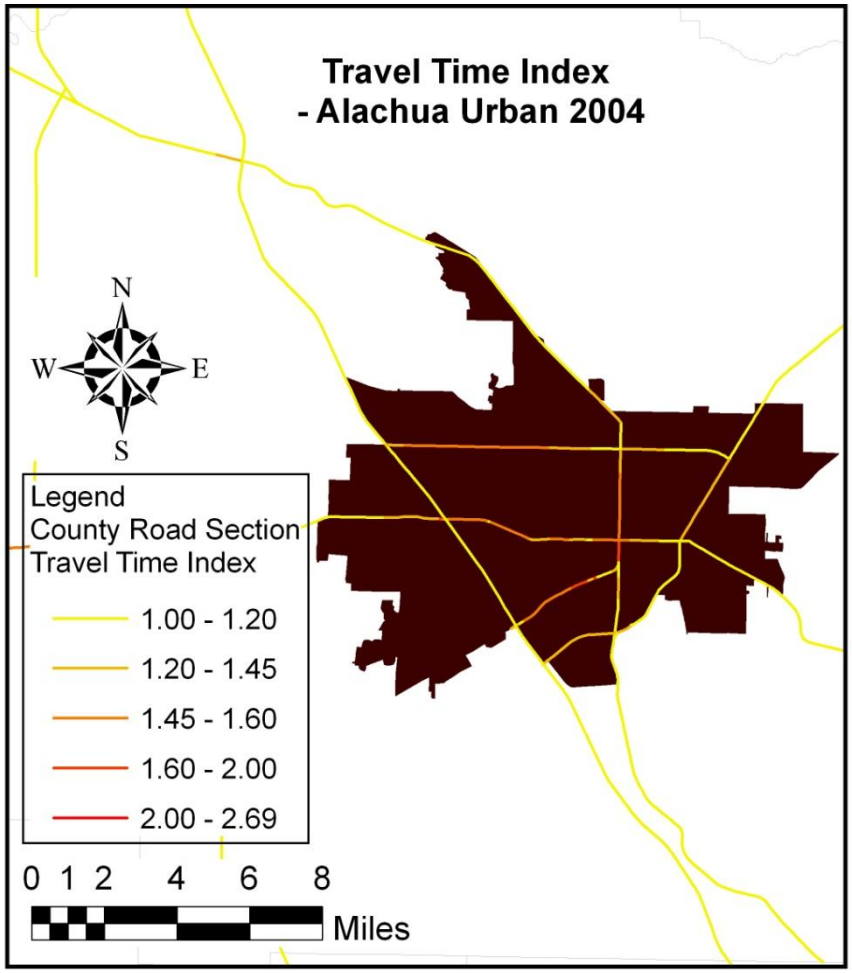


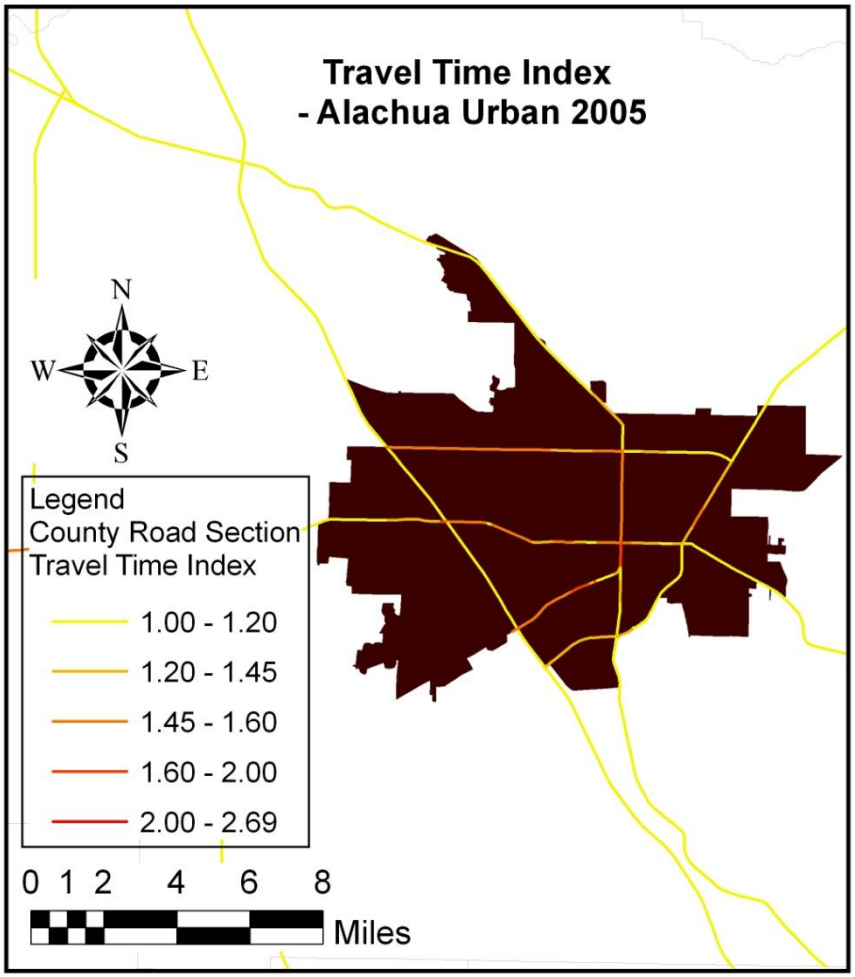

Travel Time Index - 2005
N
W
E
S
Legend
County Road Section
Travel Time Index
1.00 - 1.20
1.20 - 1.45
1.45 - 1.60
1.60 - 2.00
2.00 - 2.69
0 25 50 100 150 200
Miles

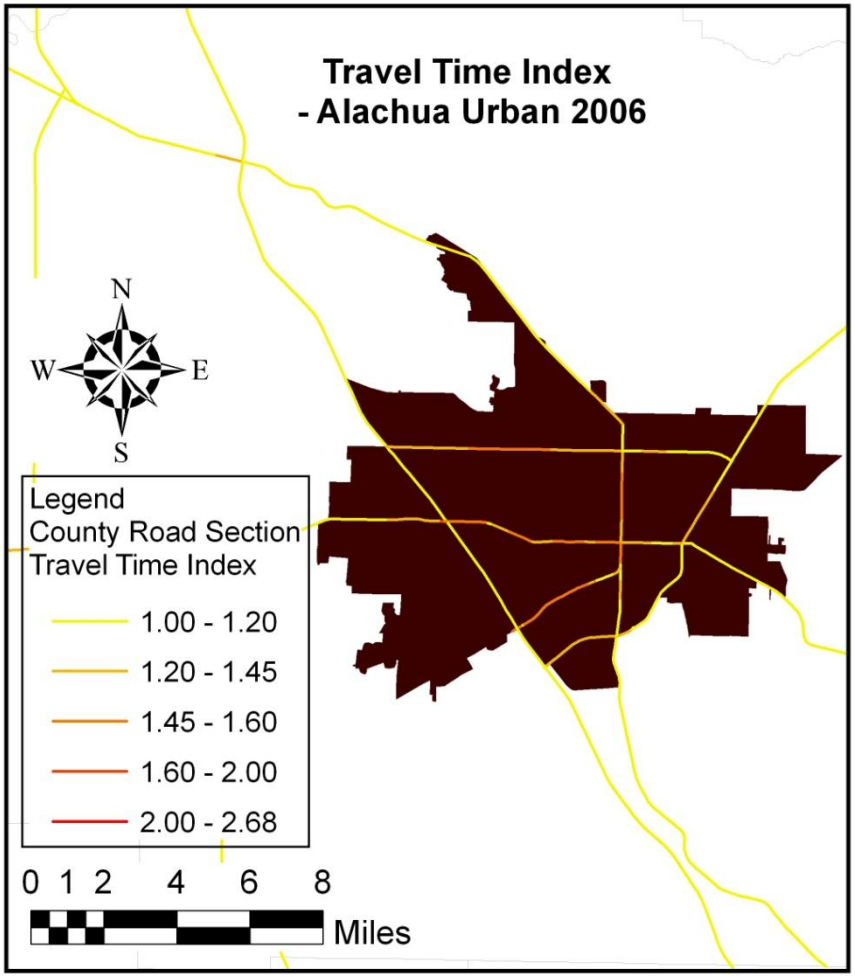

Travel Time Index - 2006
N
W
E
S
Legend
County Road Section
Travel Time Index
1.00 - 1.20
1.20 - 1.45
1.45 - 1.60
1.60 - 2.00
2.00 - 2.68
0 25 50 100 150 200
Miles

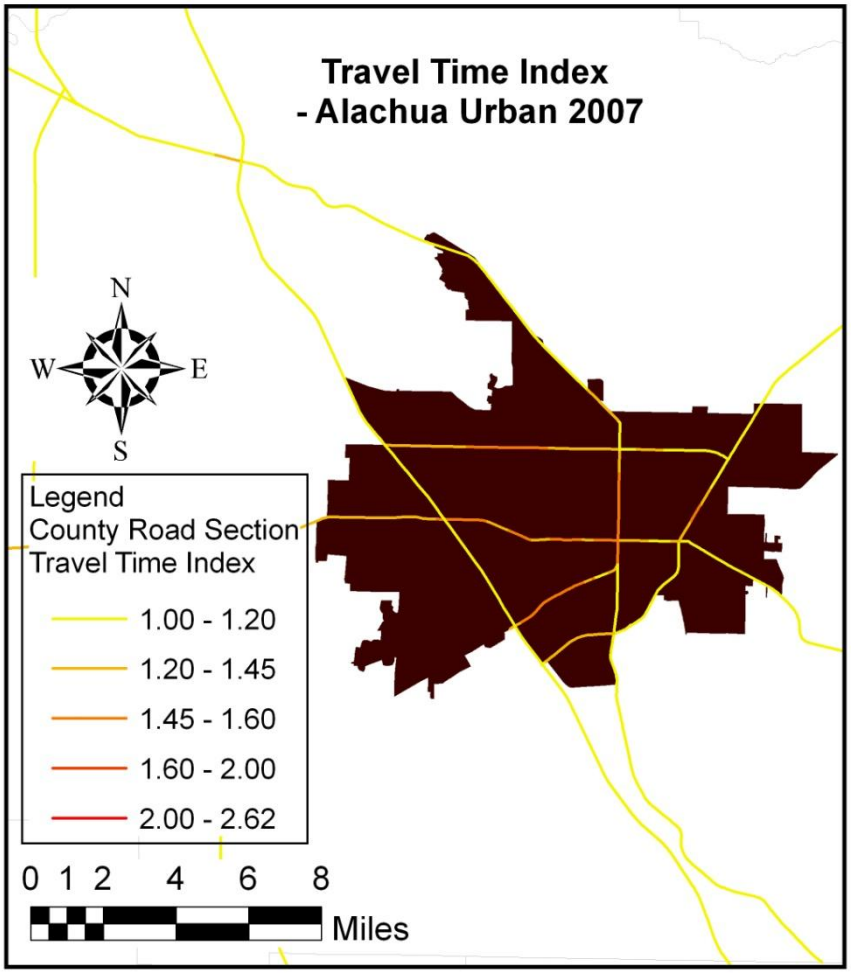

Travel Time Index - 2007
N
W
E
S
Legend
County Road Section
Travel Time Index
1.00 - 1.20
1.20 - 1.45
1.45 - 1.60
1.60 - 2.00
2.00 - 2.62
0 25 50 100 150 200
Miles

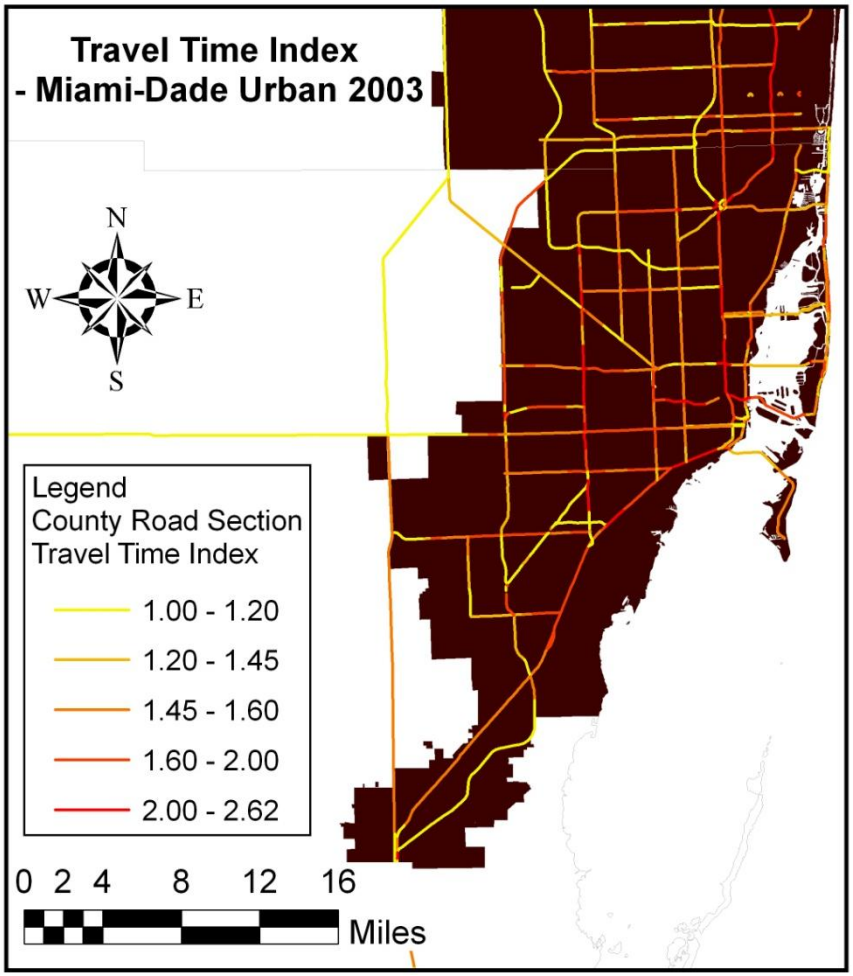

Travel Time Index
- Alachua Urban 2003
N
W
E
S
Legend
County Road Section
Travel Time Index
1.00 - 1.20
1.20 - 1.45
1.45 - 1.60
1.60 - 2.00
2.00 - 2.62
0 1 2 4 6 8
Miles

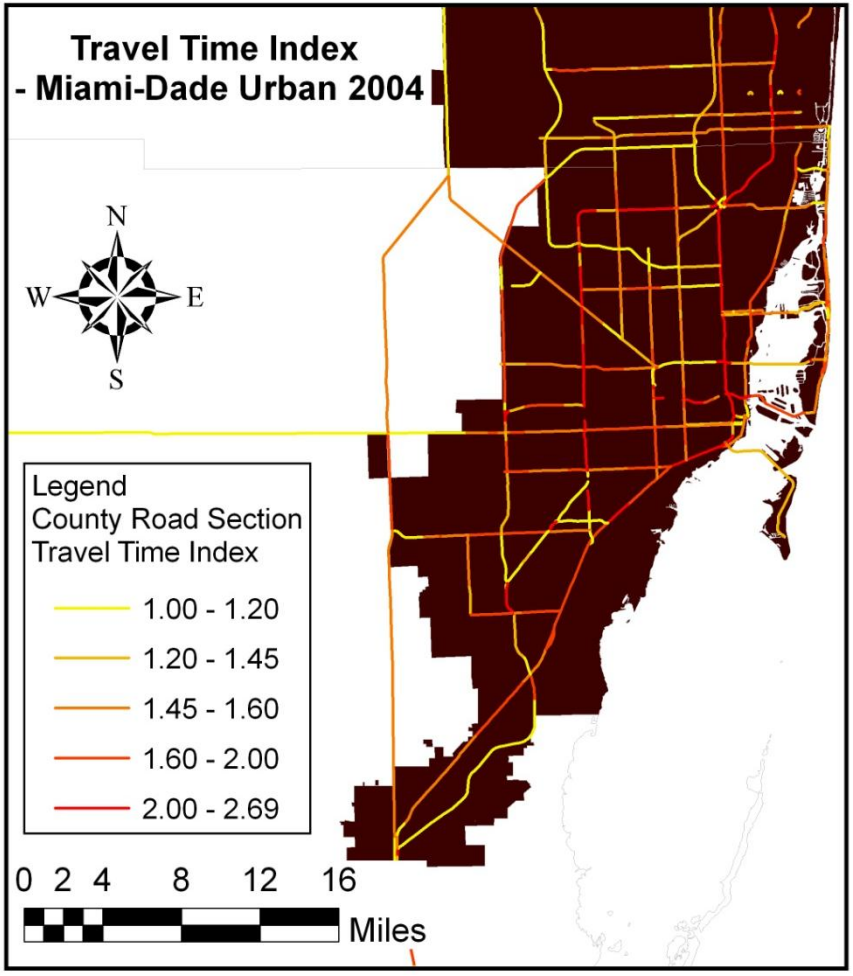

Travel Time Index
- Alachua Urban 2004
N
W
E
S
Legend
County Road Section
Travel Time Index
1.00 - 1.20
1.20 - 1.45
1.45 - 1.60
1.60 - 2.00
2.00 - 2.69
0 1 2 4 6 8
Miles

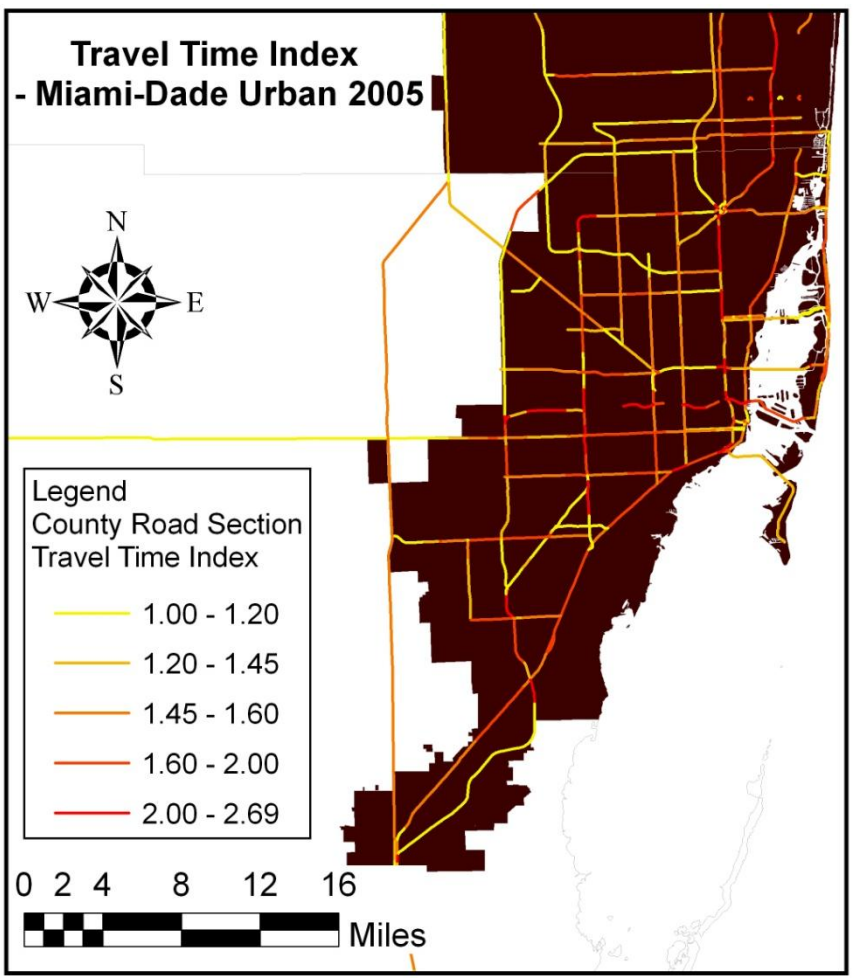

Travel Time Index
- Alachua Urban 2005
N
W
E
S
Legend
County Road Section
Travel Time Index
1.00 - 1.20
1.20 - 1.45
1.45 - 1.60
1.60 - 2.00
2.00 - 2.69
0 1 2 4 6 8
Miles

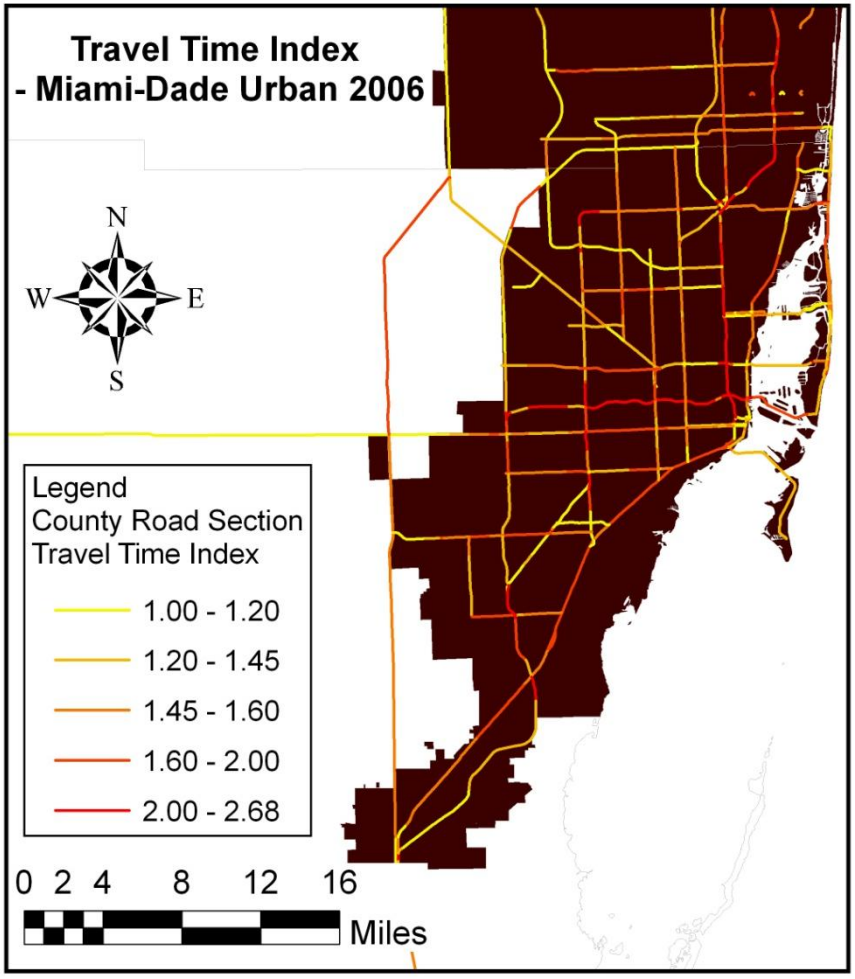

Travel Time Index
- Alachua Urban 2006
N
W
E
S
Legend
County Road Section
Travel Time Index
1.00 - 1.20
1.20 - 1.45
1.45 - 1.60
1.60 - 2.00
2.00 - 2.68
0 1 2 4 6 8
Miles

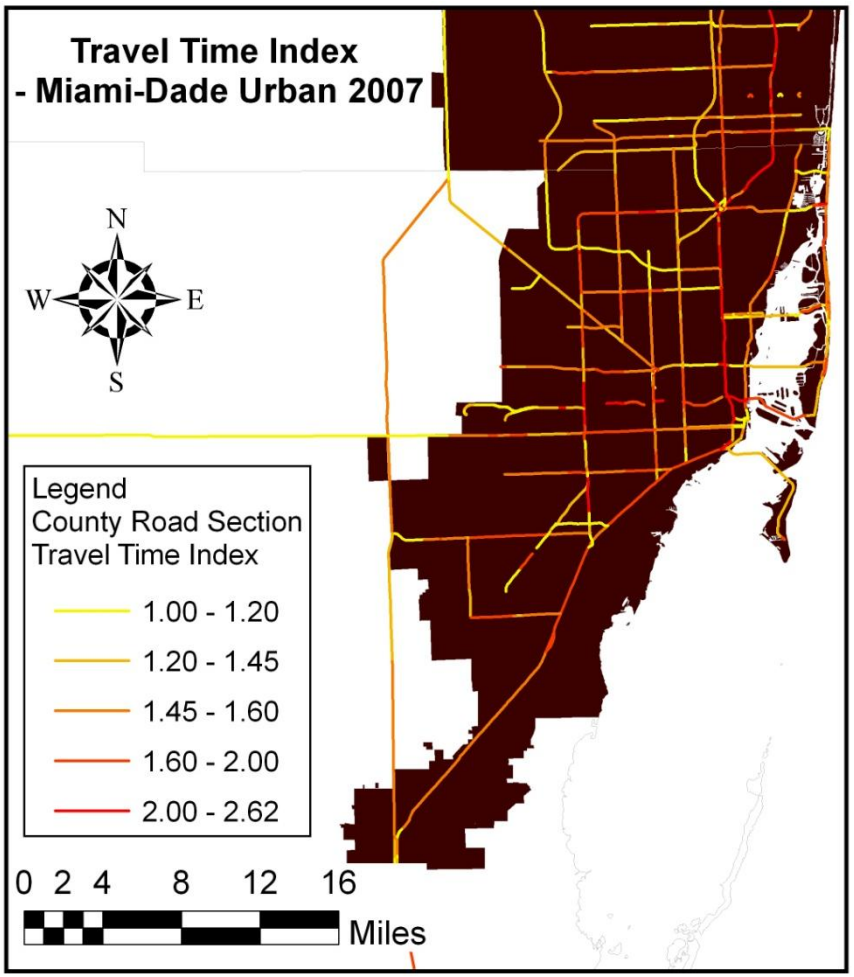

Travel Time Index
- Alachua Urban 2007
N
W
E
S
Legend
County Road Section
Travel Time Index
1.00 - 1.20
1.20 - 1.45
1.45 - 1.60
1.60 - 2.00
2.00 - 2.62
0 1 2 4 6 8
Miles


Travel Time Index
- Miami-Dade Urban 2003
N
W
E
S
Legend
County Road Section
Travel Time Index
1.00 - 1.20
1.20 - 1.45
1.45 - 1.60
1.60 - 2.00
2.00 - 2.62
0 2 4 8 12 16
Miles

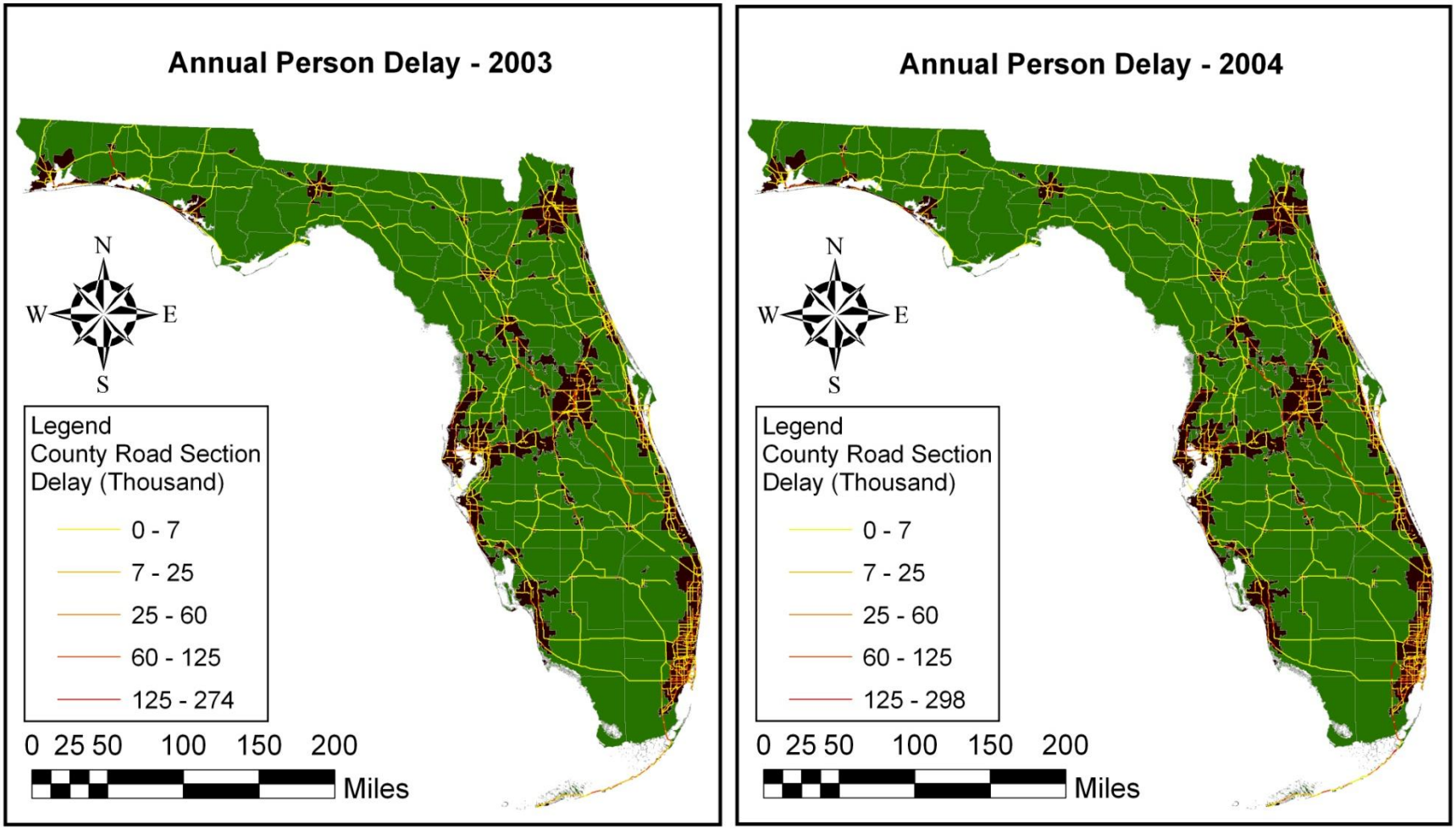

Travel Time Index
- Miami-Dade Urban 2004
N
W
E
S
Legend
County Road Section
Travel Time Index
1.00 - 1.20
1.20 - 1.45
1.45 - 1.60
1.60 - 2.00
2.00 - 2.69
0 2 4 8 12 16
Miles

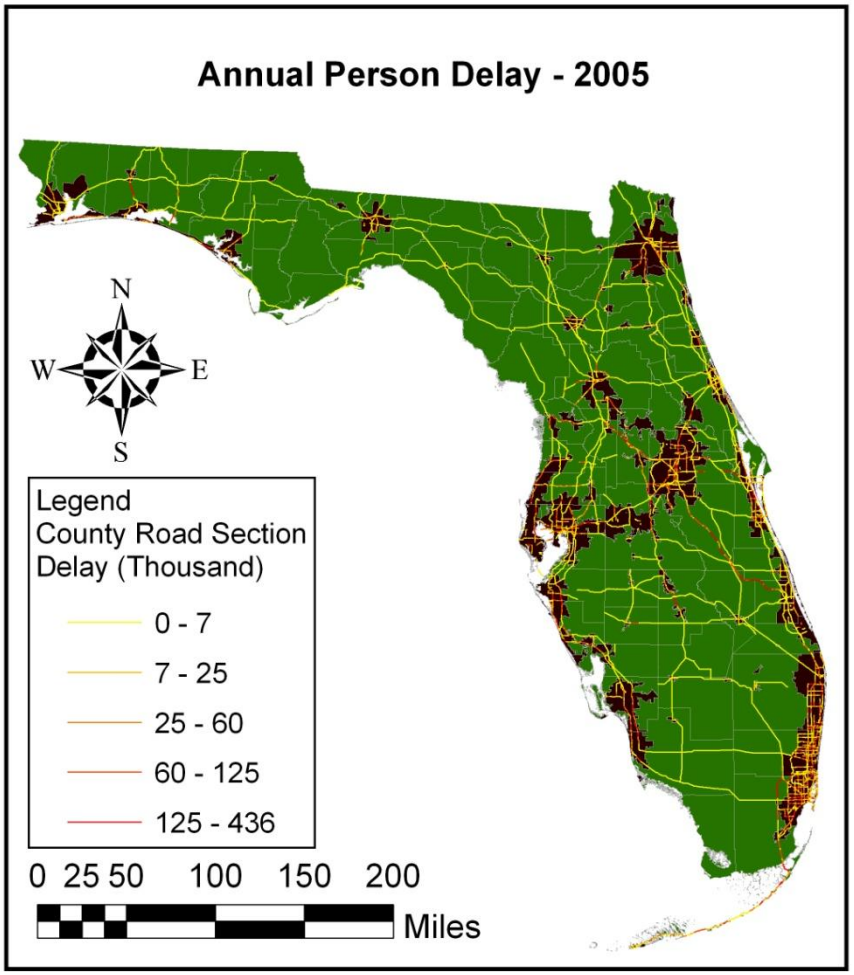

Travel Time Index
- Miami-Dade Urban 2005
N
W
E
S
Legend
County Road Section
Travel Time Index
1.00 - 1.20
1.20 - 1.45
1.45 - 1.60
1.60 - 2.00
2.00 - 2.69
0 2 4 8 12 16
Miles

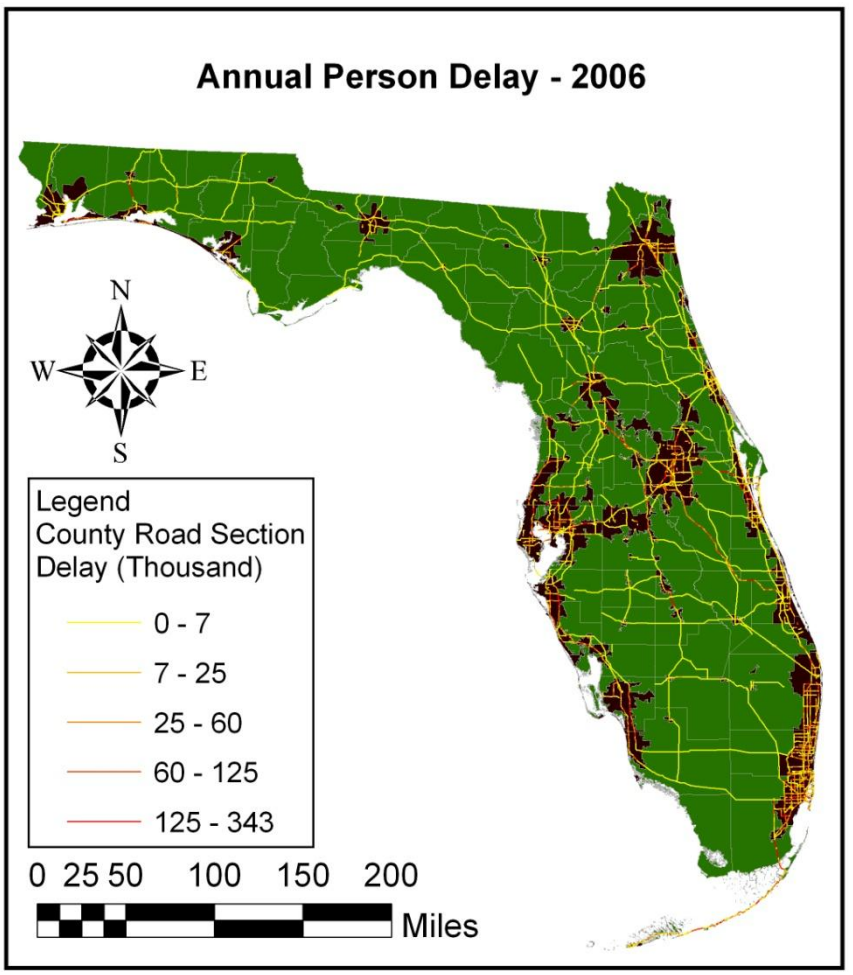

Travel Time Index
- Miami-Dade Urban 2006
N
W
E
S
Legend
County Road Section
Travel Time Index
1.00 - 1.20
1.20 - 1.45
1.45 - 1.60
1.60 - 2.00
2.00 - 2.68
0 2 4 8 12 16
Miles

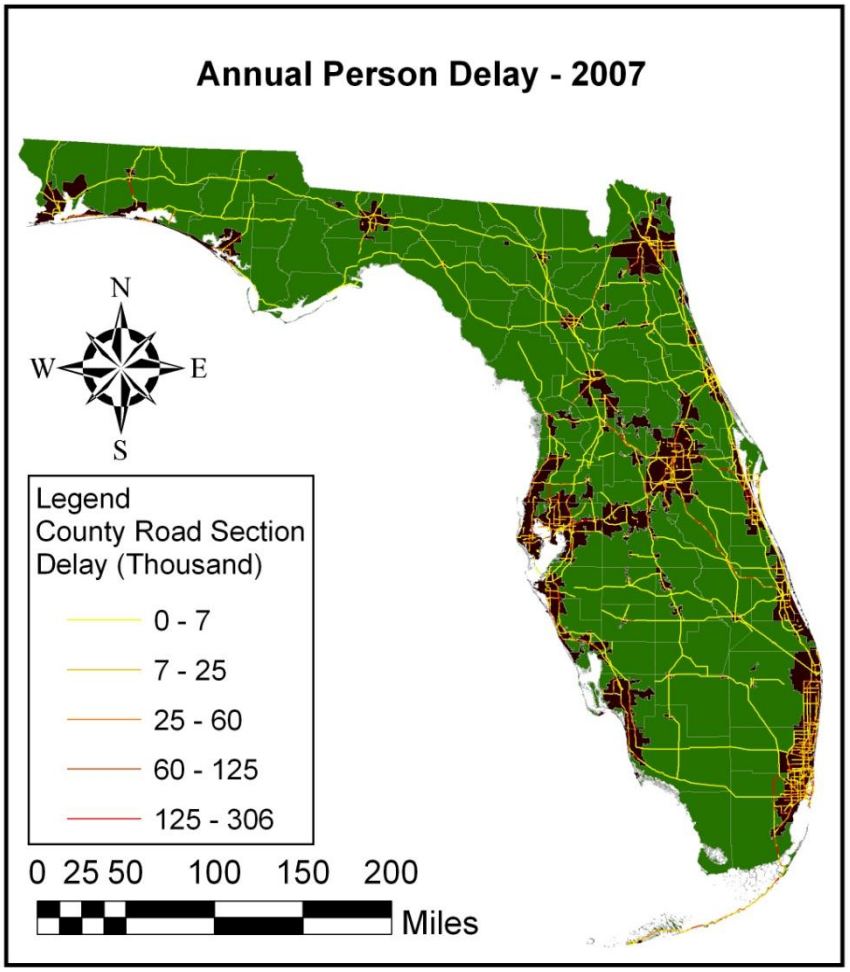

Travel Time Index
- Miami-Dade Urban 2007
N
W
E
S
Legend
County Road Section
Travel Time Index
1.00 - 1.20
1.20 - 1.45
1.45 - 1.60
1.60 - 2.00
2.00 - 2.62
0 2 4 8 12 16
Miles

Annual Person Delay

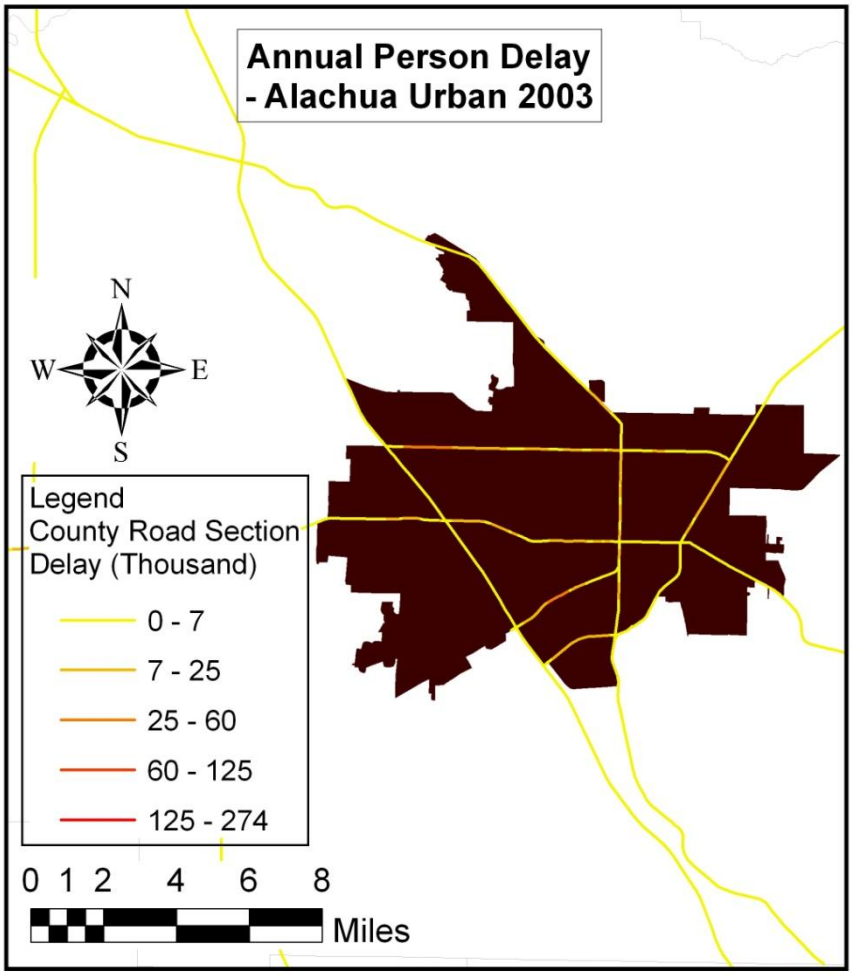


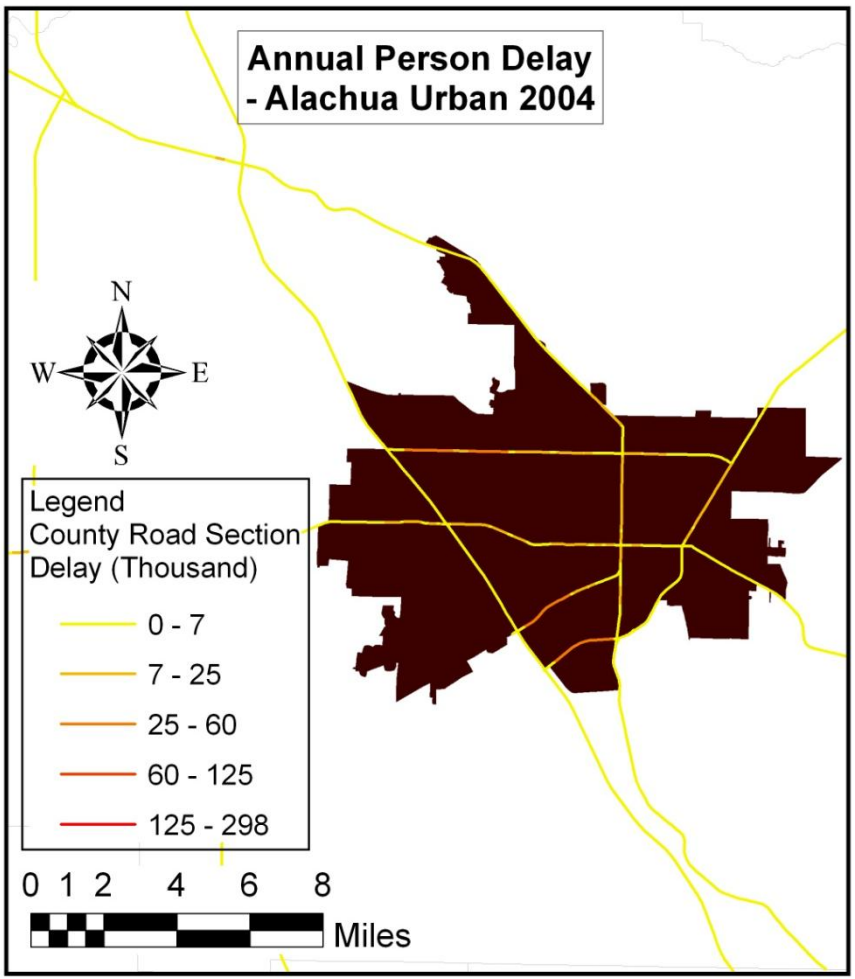

Annual Person Delay - 2005
N
W
E
S
Legend
County Road Section
Delay (Thousand)
0 - 7
7 - 25
25 - 60
60 - 125
125 - 436
0 25 50 100 150 200
Miles

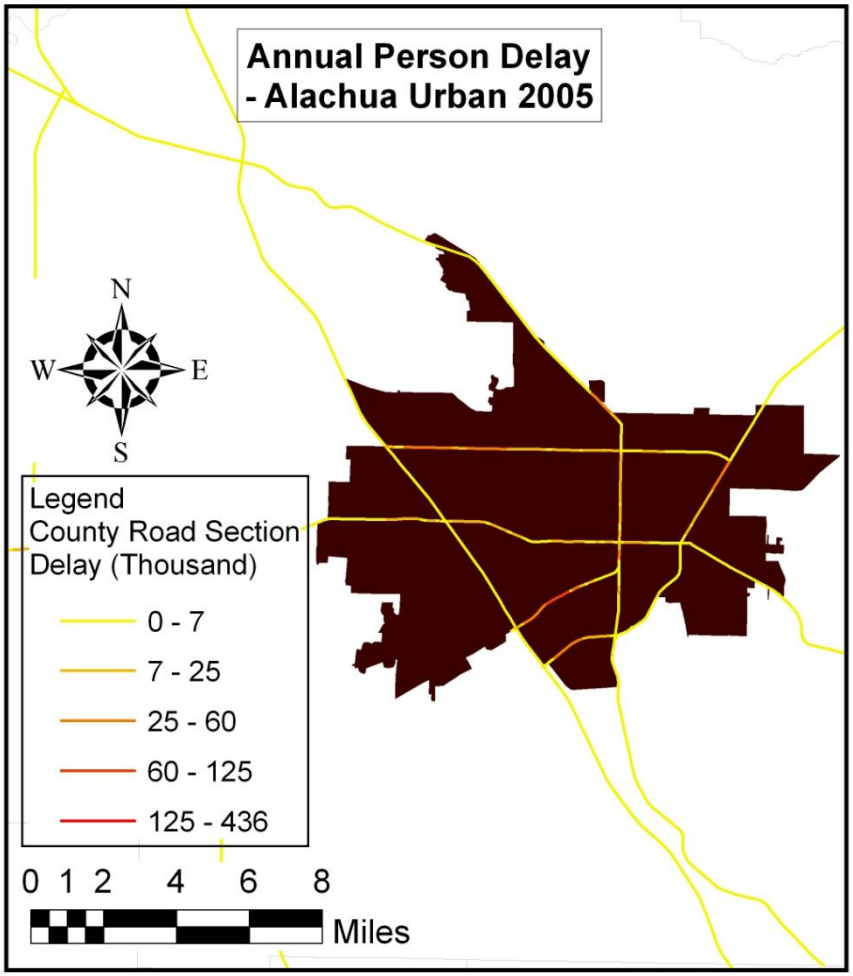

Annual Person Delay - 2006
N
W
E
S
Legend
County Road Section
Delay (Thousand)
0 - 7
7 - 25
25 - 60
60 - 125
125 - 343
0 25 50 100 150 200
Miles

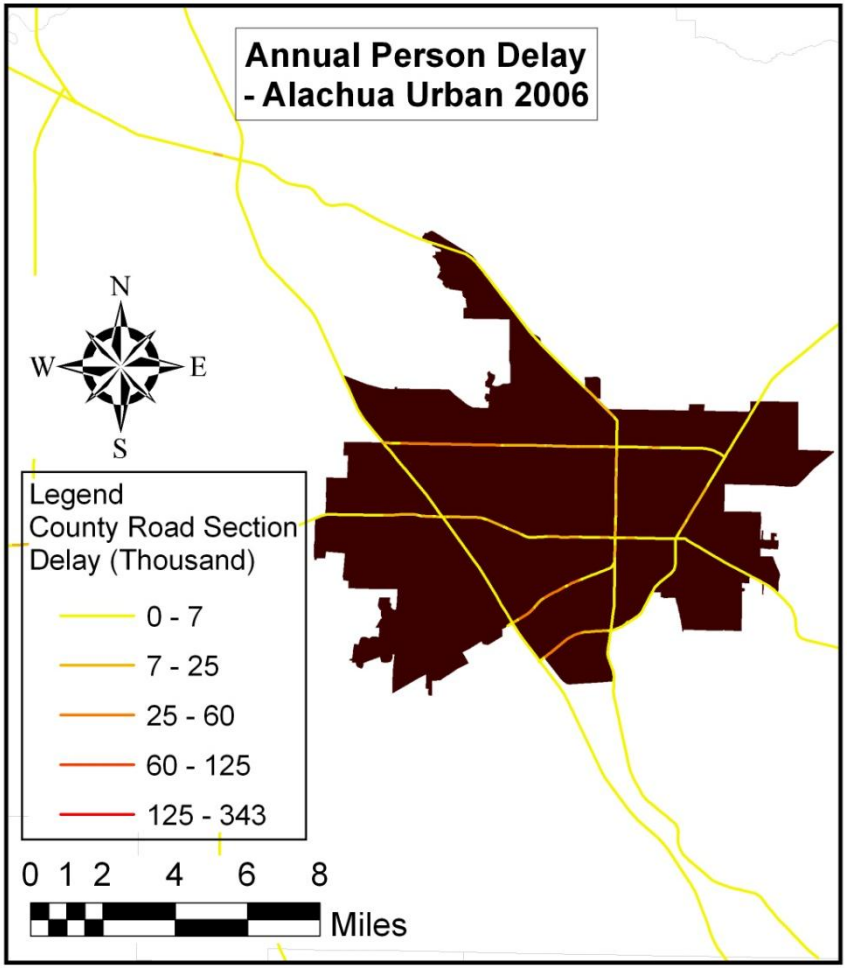


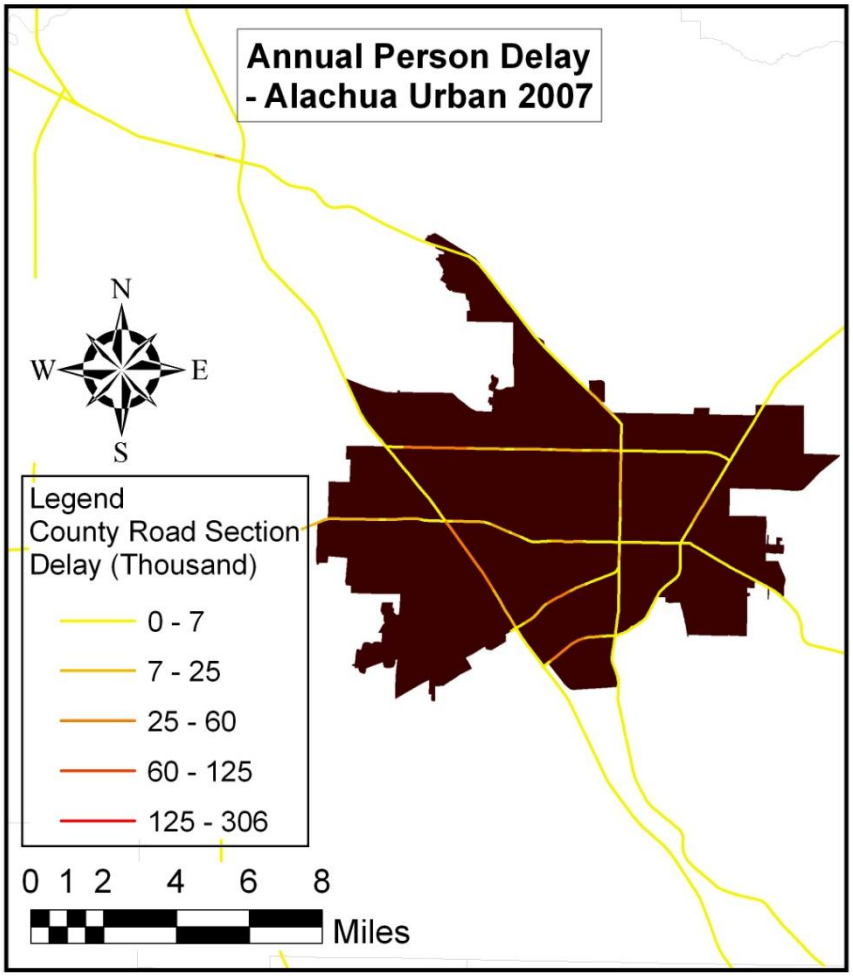
Just to reiterate, a disaggregate representation of the results allows a more individualized analysis because it shows congestion metrics, in this case annual person delay, per section of the road.

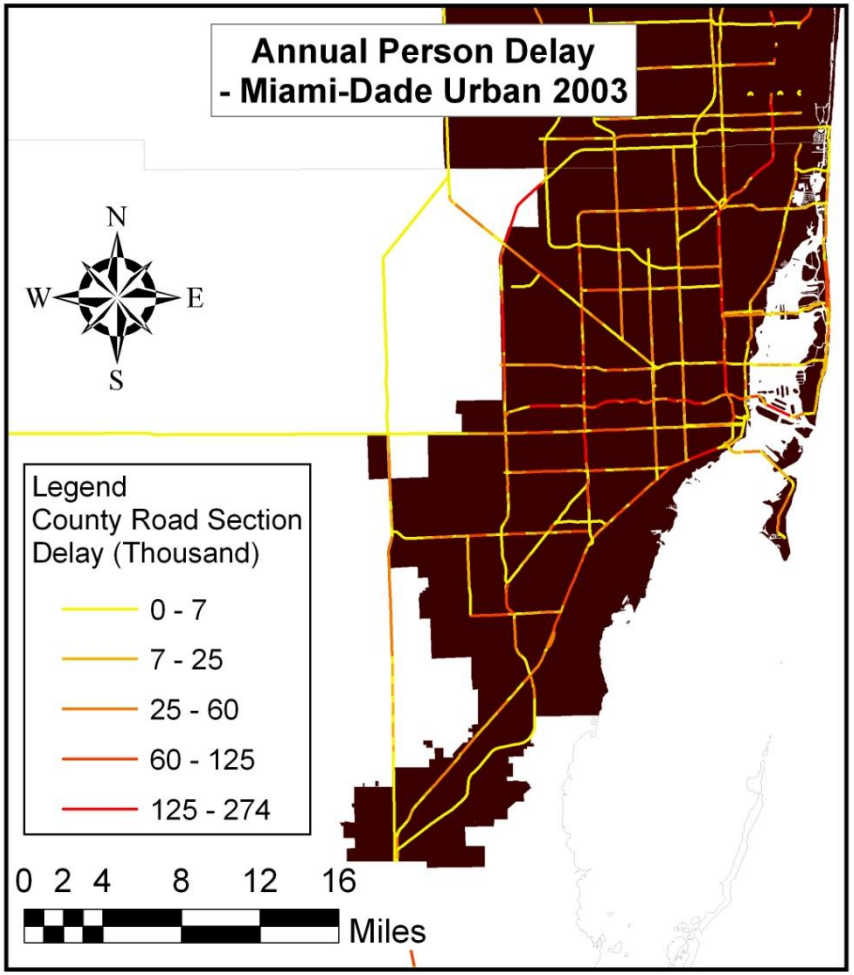

Annual Person Delay
- Alachua Urban 2003
N
W
E
S
Legend
County Road Section
Delay (Thousand)
0 - 7
7 - 25
25 - 60
60 - 125
125 - 274
0 1 2 4 6 8
Miles

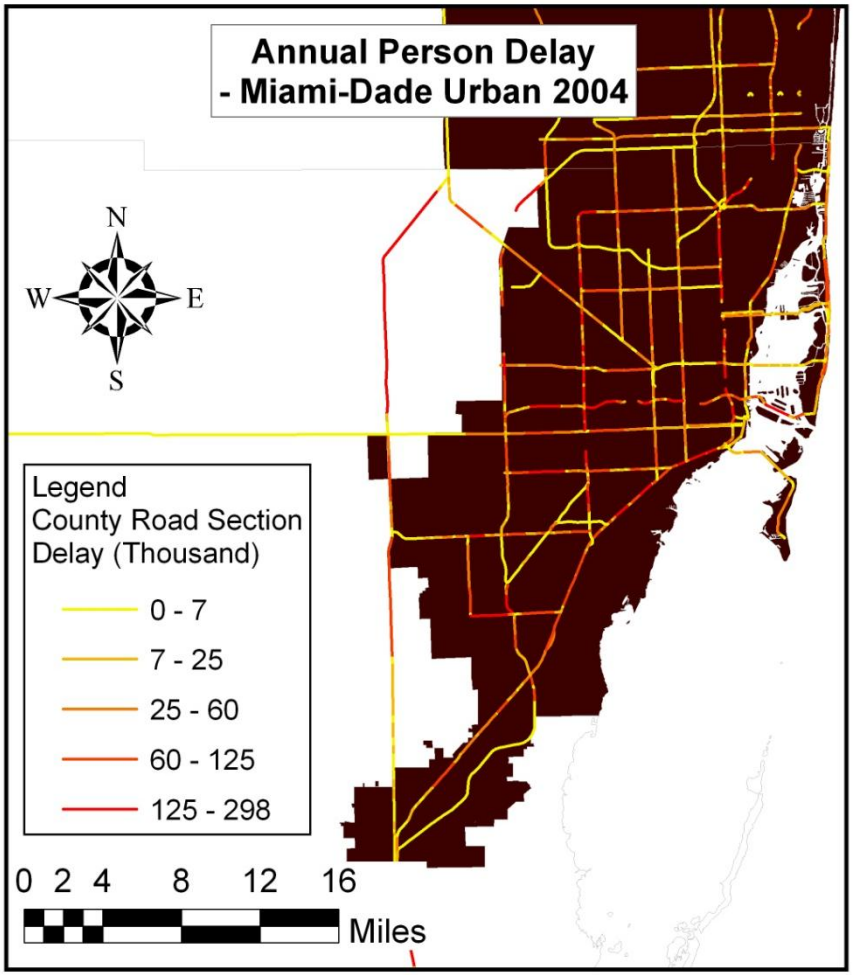

Annual Person Delay
- Alachua Urban 2004
N
W
E
S
Legend
County Road Section
Delay (Thousand)
0 - 7
7 - 25
25 - 60
60 - 125
125 - 298
0 1 2 4 6 8
Miles

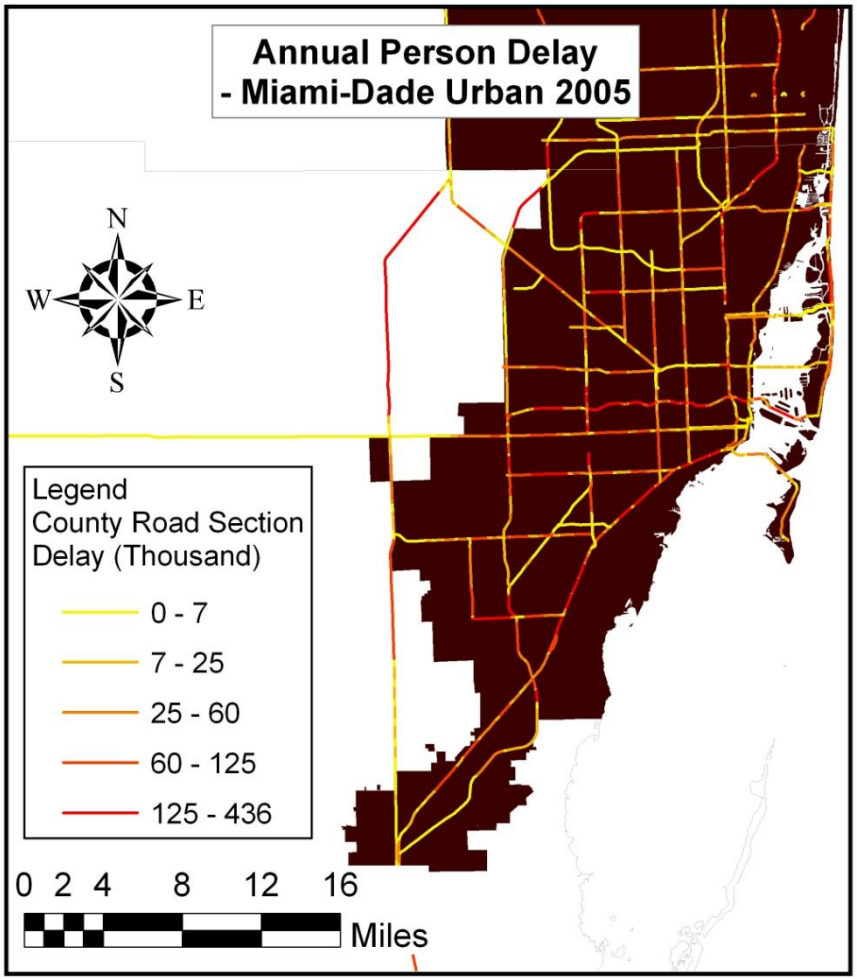

Annual Person Delay
- Alachua Urban 2005
N
W
E
S
Legend
County Road Section
Delay (Thousand)
0 - 7
7 - 25
25 - 60
60 - 125
125 - 436
0 1 2 4 6 8
Miles

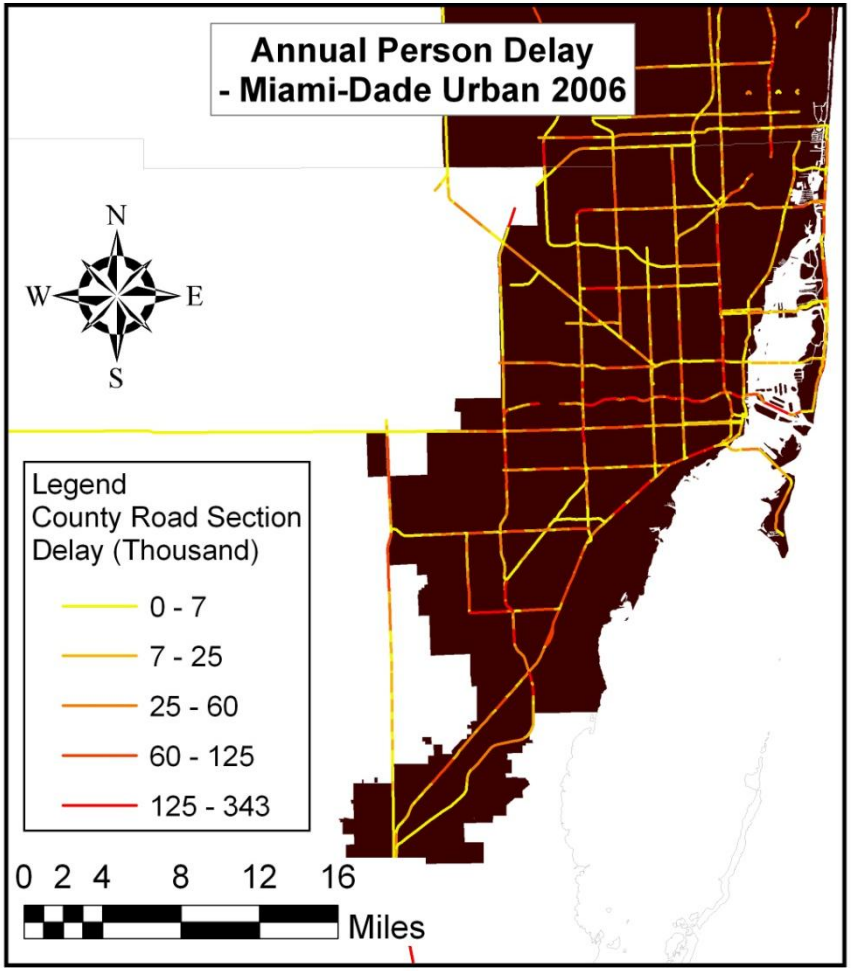

Annual Person Delay
- Alachua Urban 2006
N
W
E
S
Legend
County Road Section
Delay (Thousand)
0 - 7
7 - 25
25 - 60
60 - 125
125 - 343
0 1 2 4 6 8
Miles

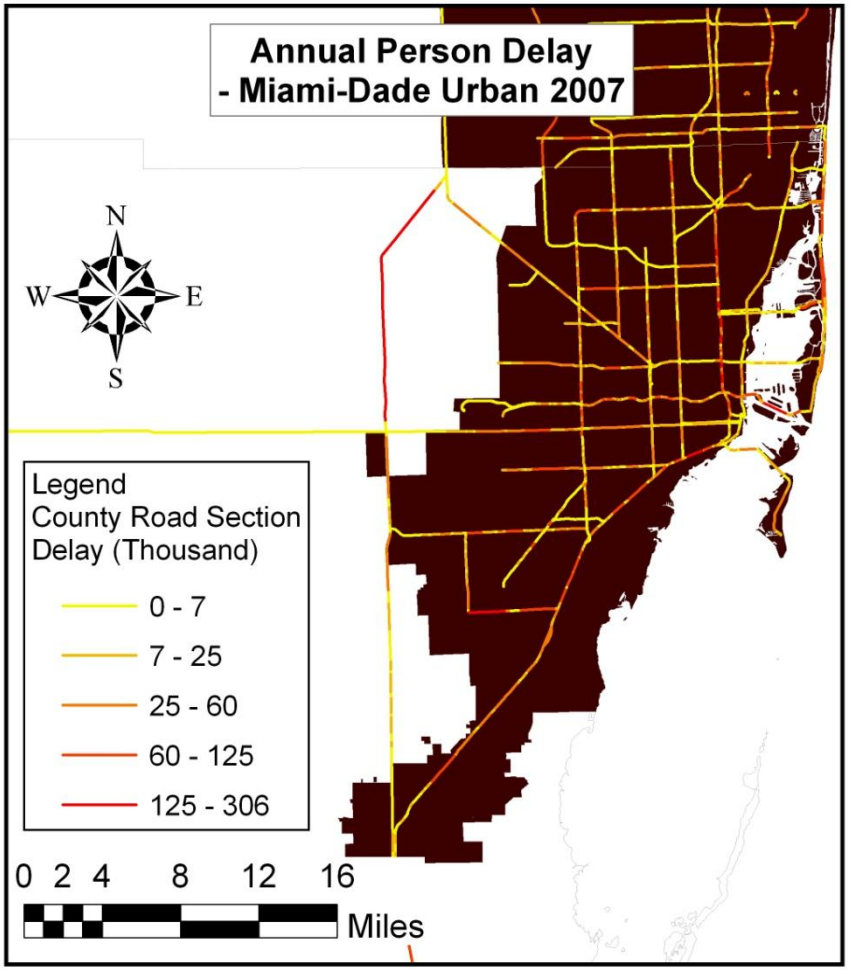

Annual Person Delay
- Alachua Urban 2007
N
W
E
S
Legend
County Road Section
Delay (Thousand)
0 - 7
7 - 25
25 - 60
60 - 125
125 - 306
0 1 2 4 6 8
Miles


Annual Person Delay
- Miami-Dade Urban 2003
N
W
E
S
Legend
County Road Section
Delay (Thousand)
0 - 7
7 - 25
25 - 60
60 - 125
125 - 274
0 2 4 8 12 16
Miles

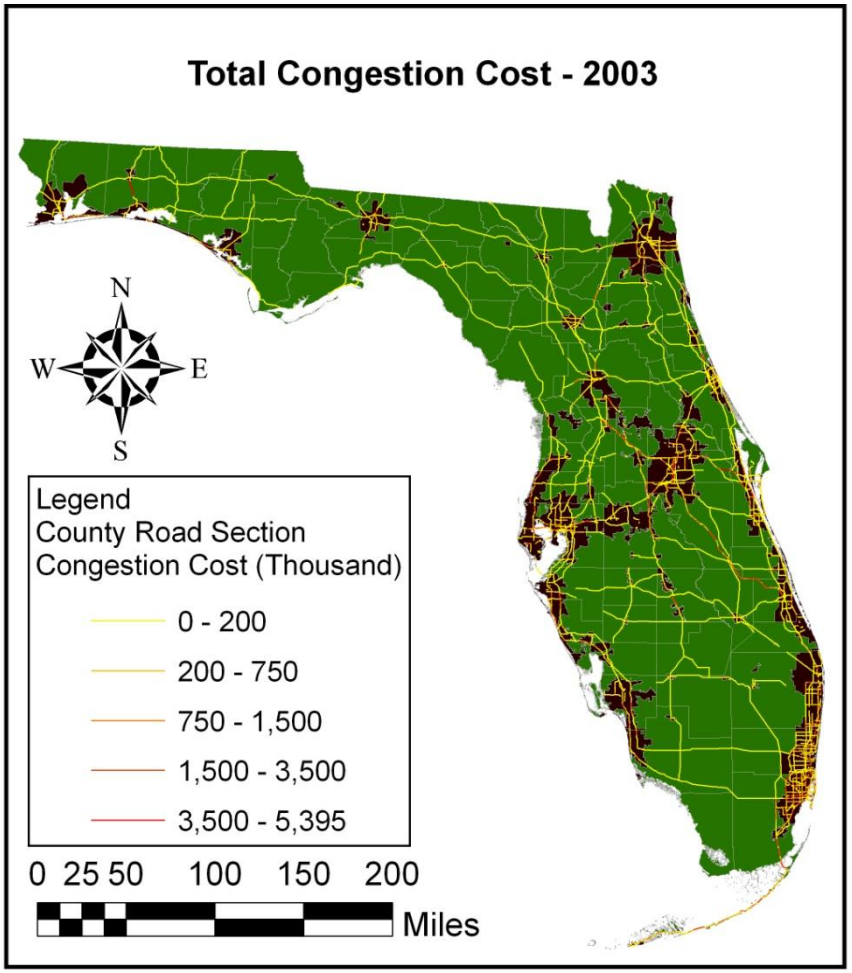

Annual Person Delay
- Miami-Dade Urban 2004
N
W
E
S
Legend
County Road Section
Delay (Thousand)
0 - 7
7 - 25
25 - 60
60 - 125
125 - 298
0 2 4 8 12 16
Miles

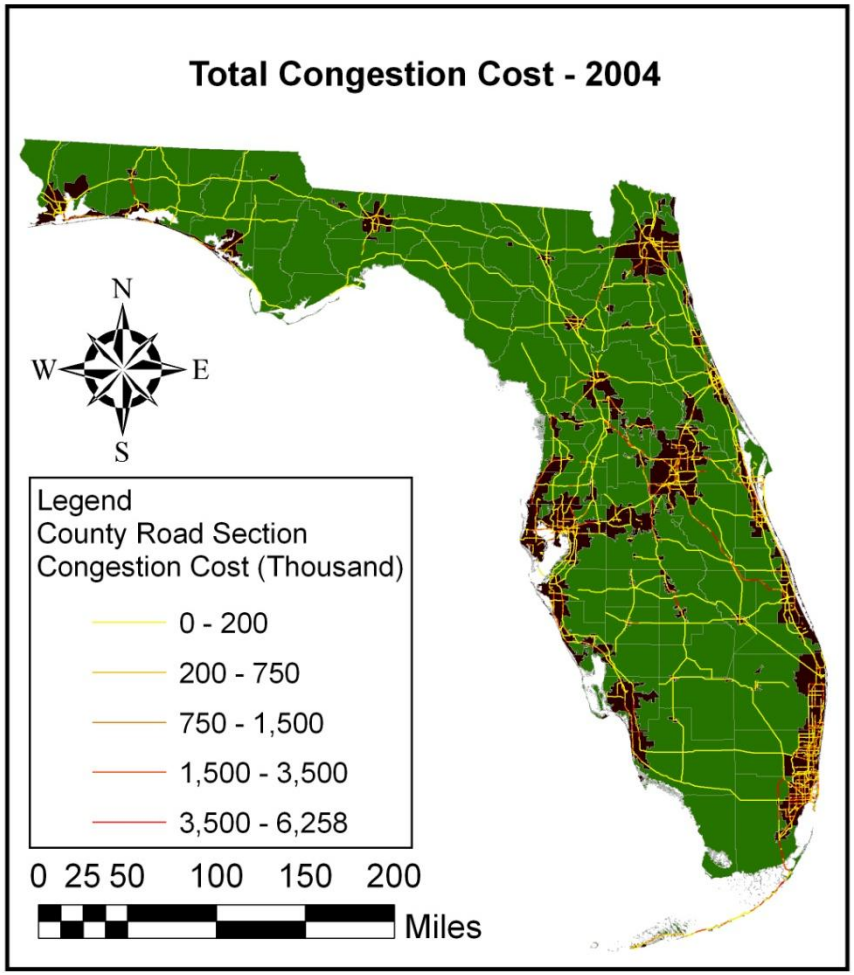

Annual Person Delay
- Miami-Dade Urban 2005
N
W
E
S
Legend
County Road Section
Delay (Thousand)
0 - 7
7 - 25
25 - 60
60 - 125
125 - 436
0 2 4 8 12 16
Miles

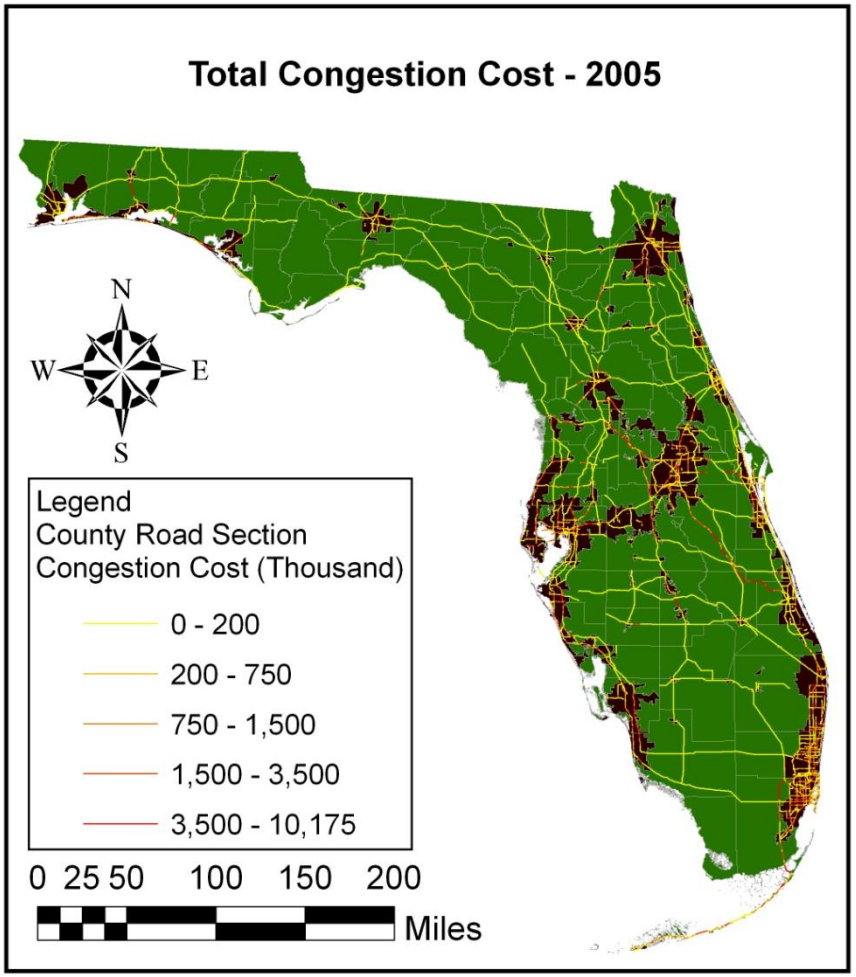

Annual Person Delay
- Miami-Dade Urban 2006
N
W
E
S
Legend
County Road Section
Delay (Thousand)
0 - 7
7 - 25
25 - 60
60 - 125
125 - 343
0 2 4 8 12 16
Miles

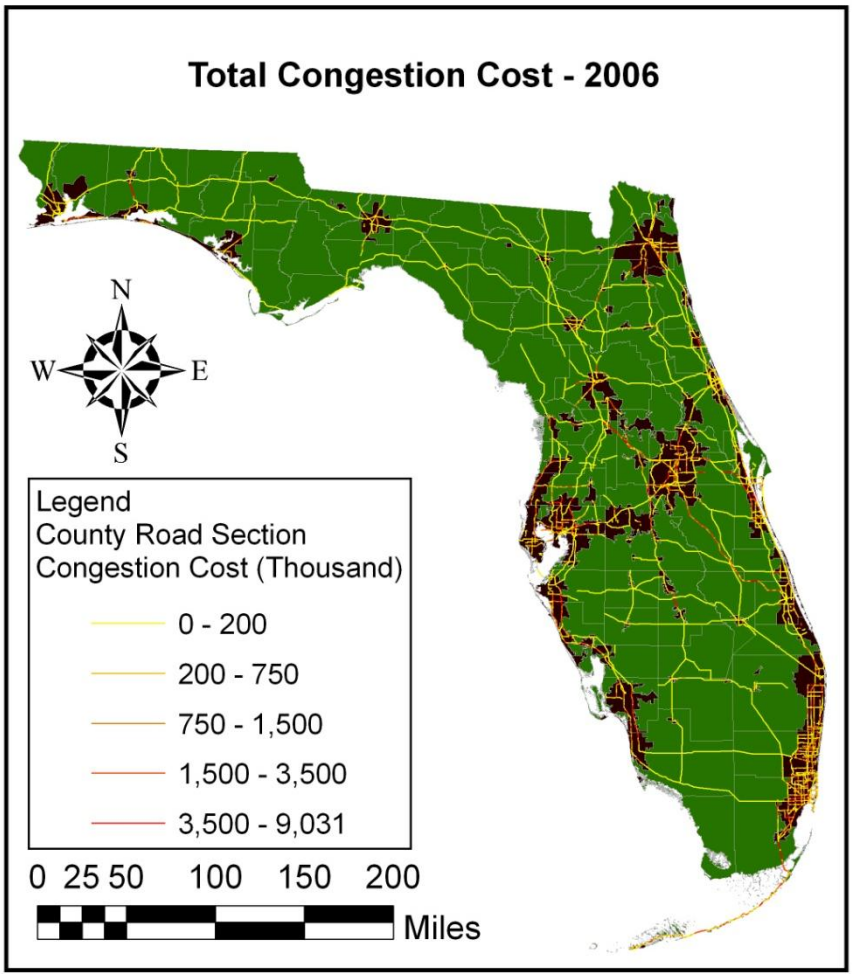

Annual Person Delay
- Miami-Dade Urban 2007
N
W
E
S
Legend
County Road Section
Delay (Thousand)
0 - 7
7 - 25
25 - 60
60 - 125
125 - 306
0 2 4 8 12 16
Miles

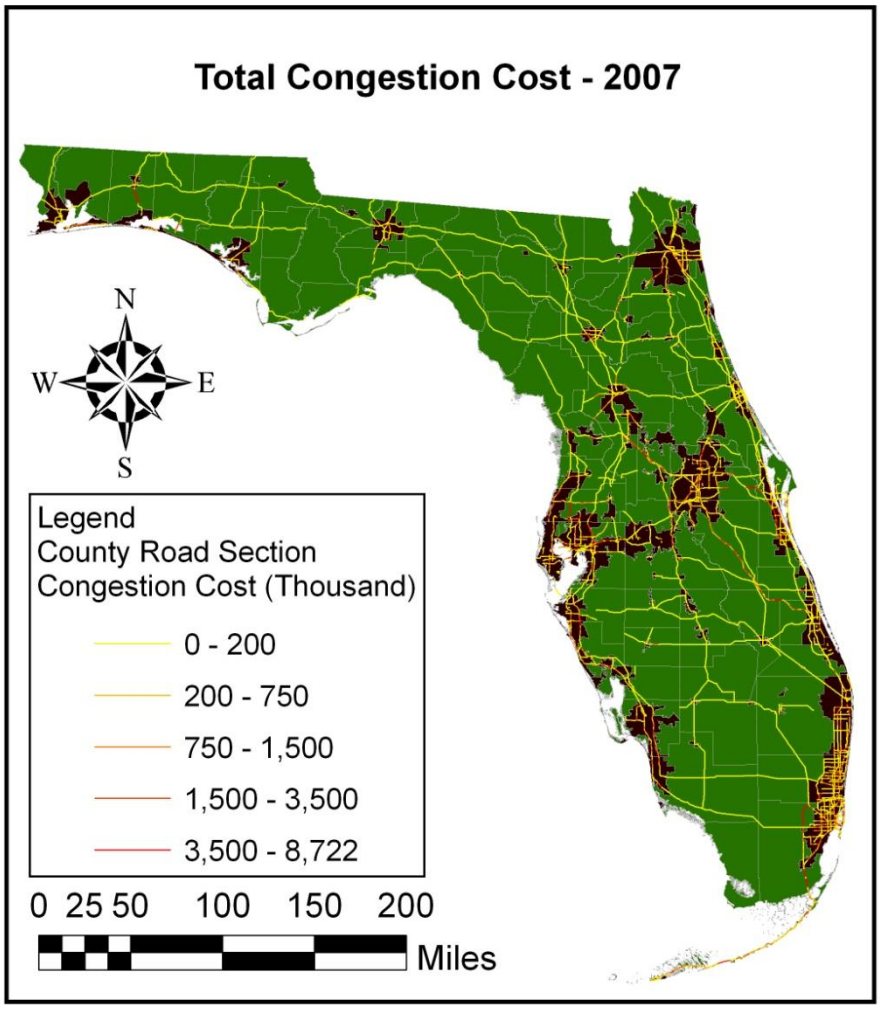
Total Cost of Traffic Congestion on Freeways and Other Principal Arterials



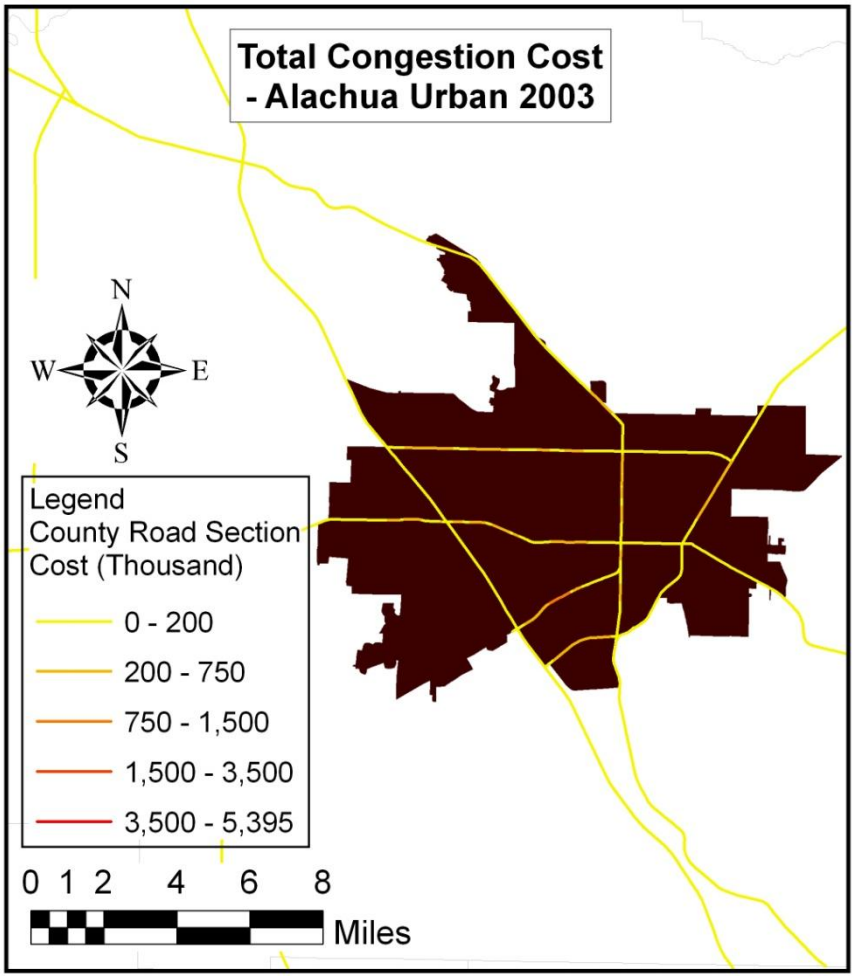


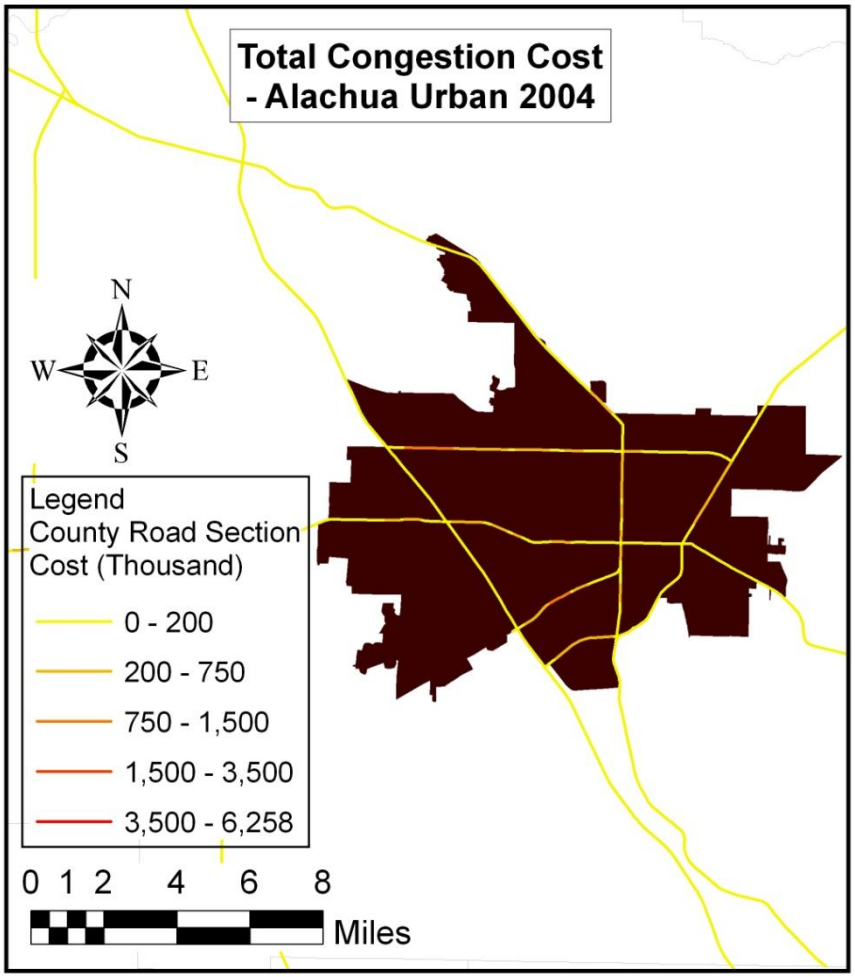

Total Congestion Cost - 2005
N
W
E
S
Legend
County Road Section
Congestion Cost (Thousand)
0 - 200
200 - 750
750 - 1,500
1,500 - 3,500
3,500 - 10,175
0 25 50 100 150 200
Miles

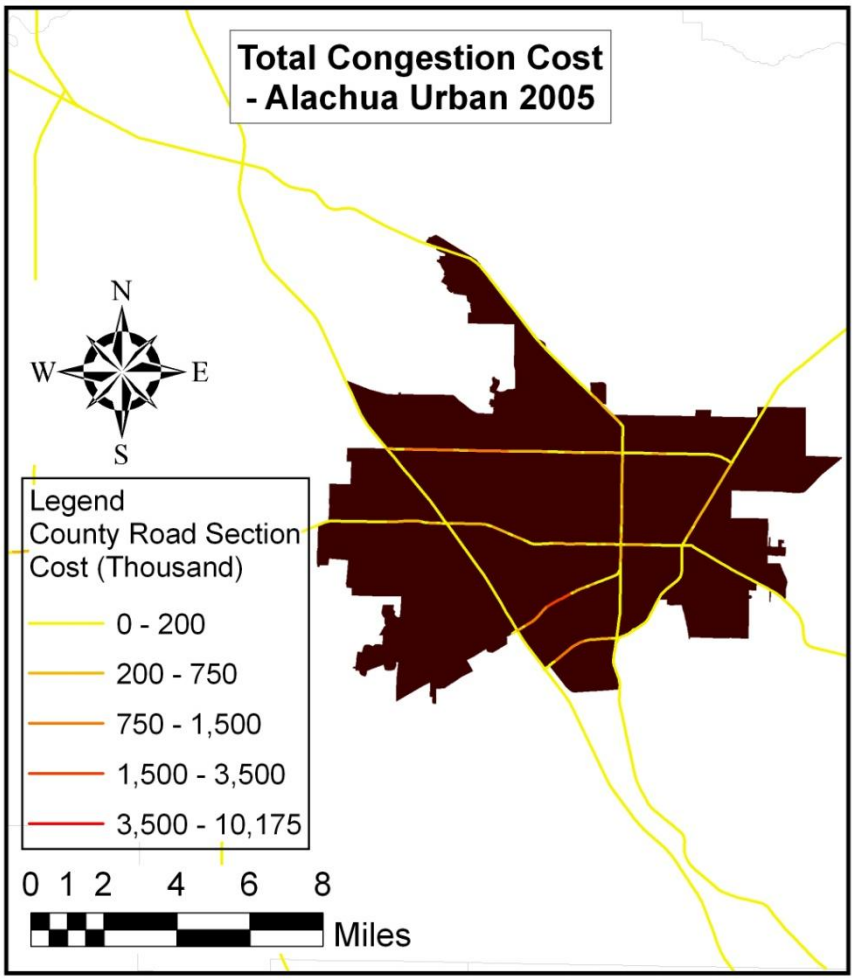

Total Congestion Cost - 2006
N
W
E
S
Legend
County Road Section
Congestion Cost (Thousand)
0 - 200
200 - 750
750 - 1,500
1,500 - 3,500
3,500 - 9,031
0 25 50 100 150 200
Miles

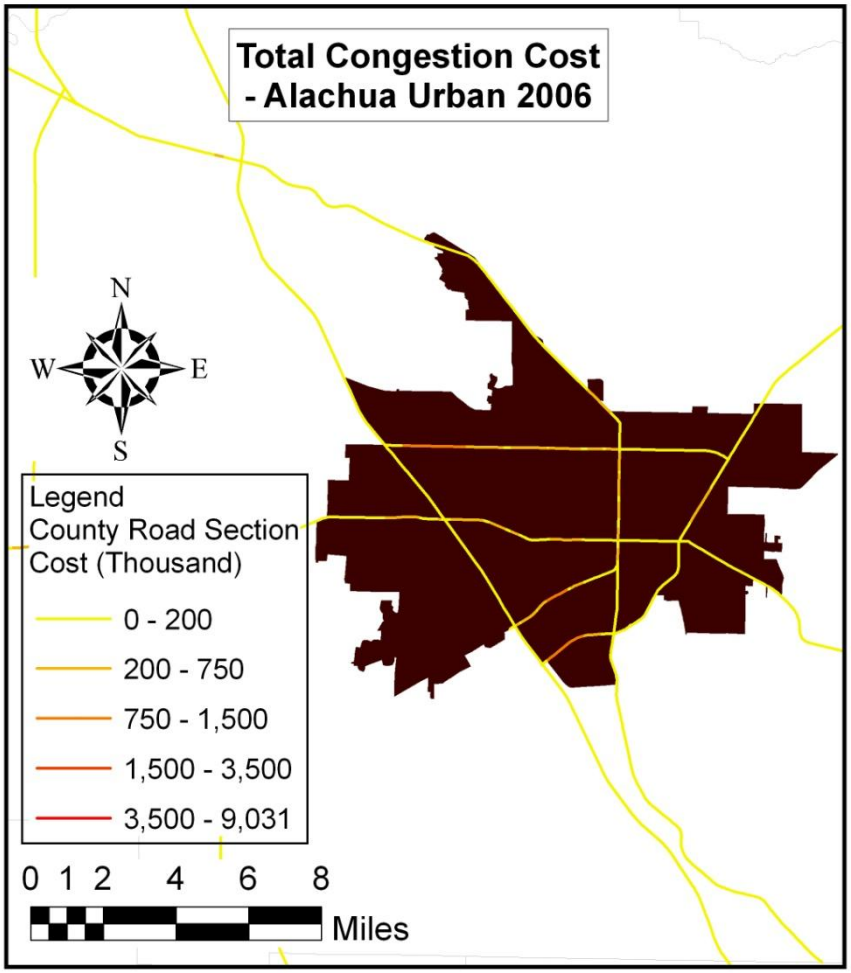


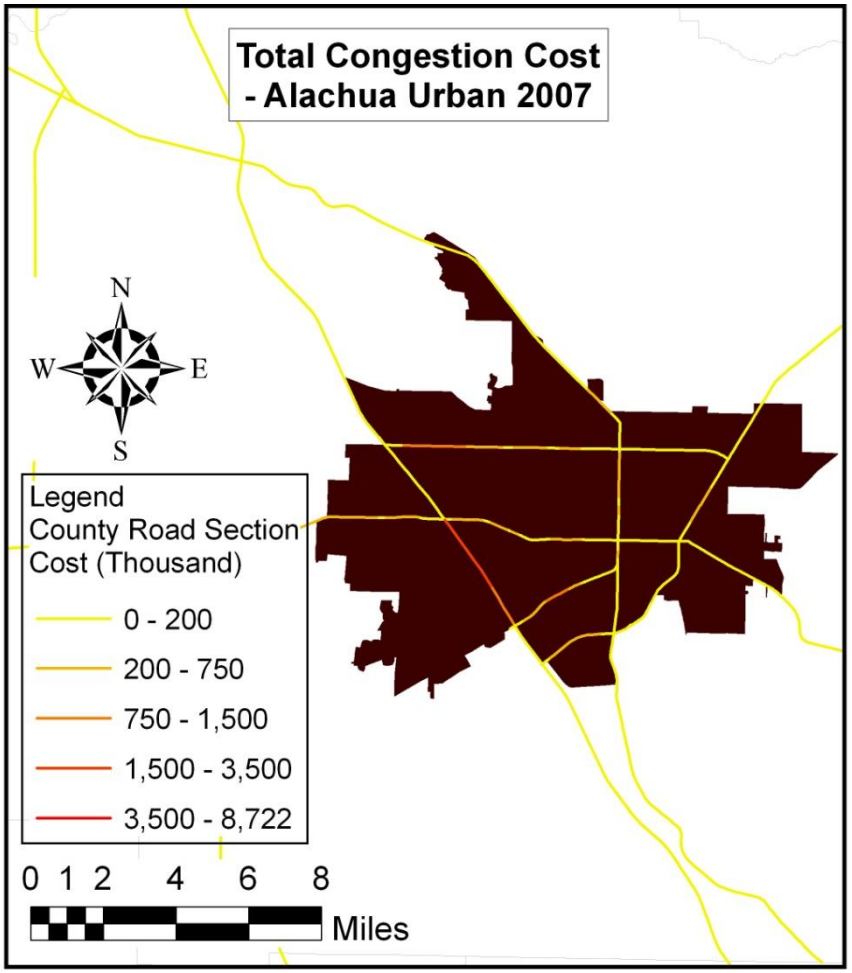
The disaggregate roadway method generated slightly higher numbers than the disaggregate county but lower than the aggregate method.

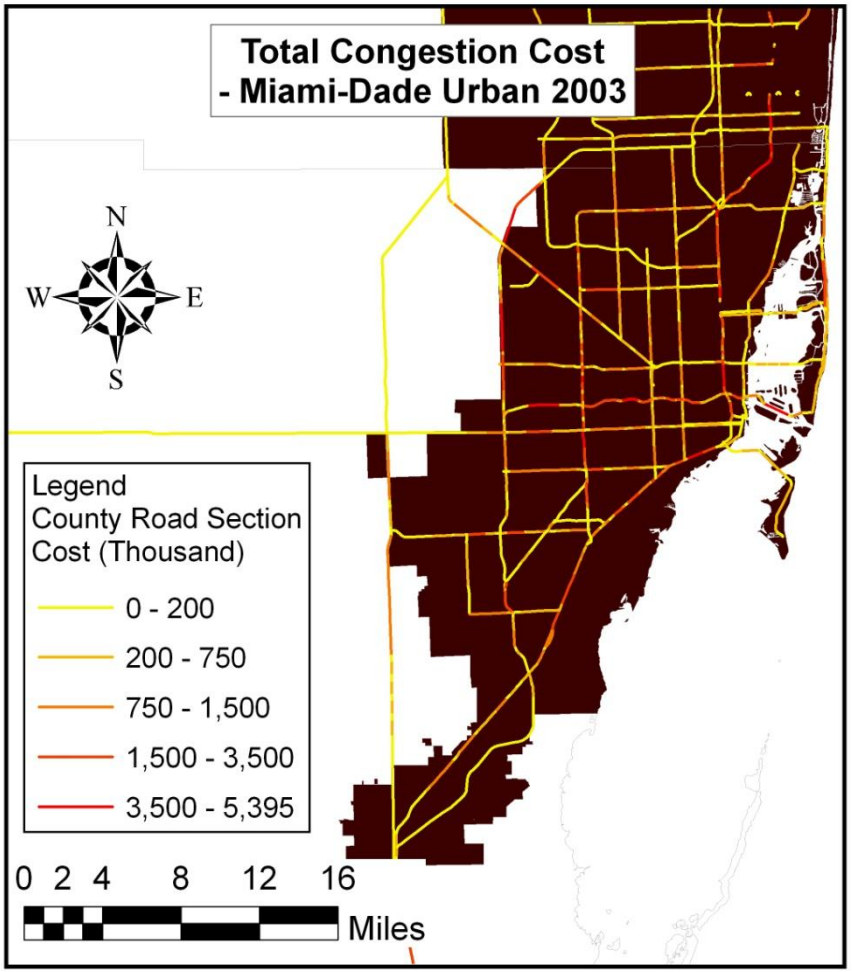

Total Congestion Cost
- Alachua Urban 2003
N
W
E
S
Legend
County Road Section
Cost (Thousand)
0 - 200
200 - 750
750 - 1,500
1,500 - 3,500
3,500 - 5,395
0 1 2 4 6 8
Miles

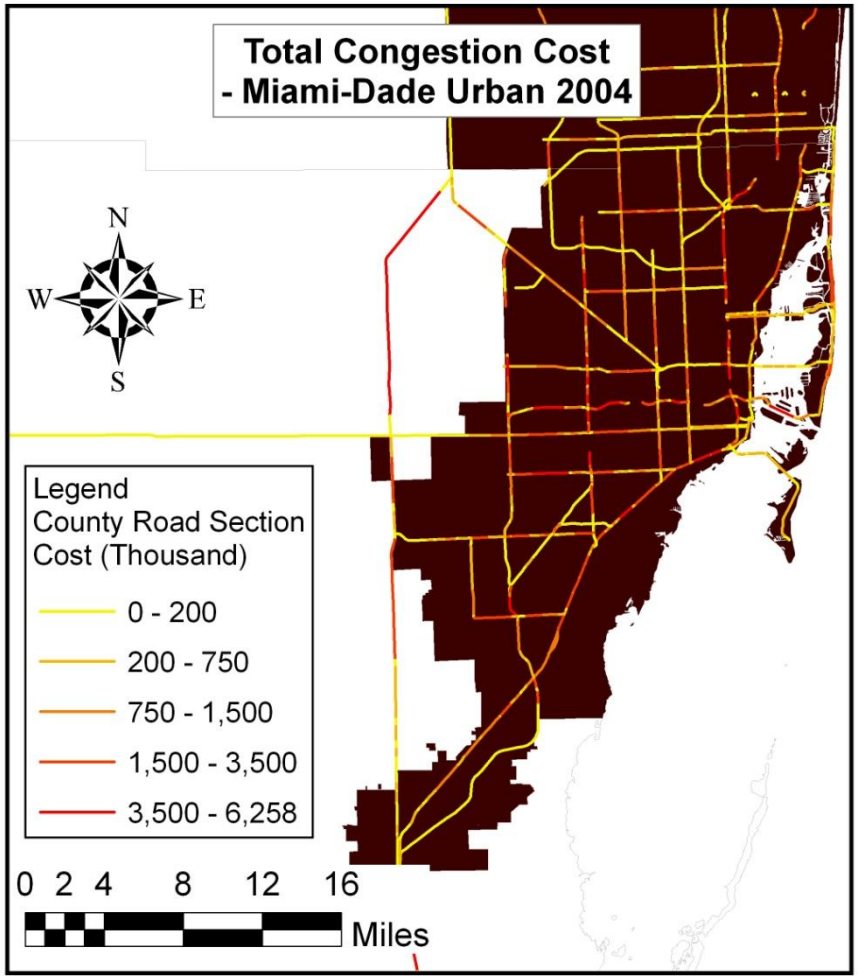

Total Congestion Cost
- Alachua Urban 2004
N
W
E
S
Legend
County Road Section
Cost (Thousand)
0 - 200
200 - 750
750 - 1,500
1,500 - 3,500
3,500 - 6,258
0 1 2 4 6 8
Miles

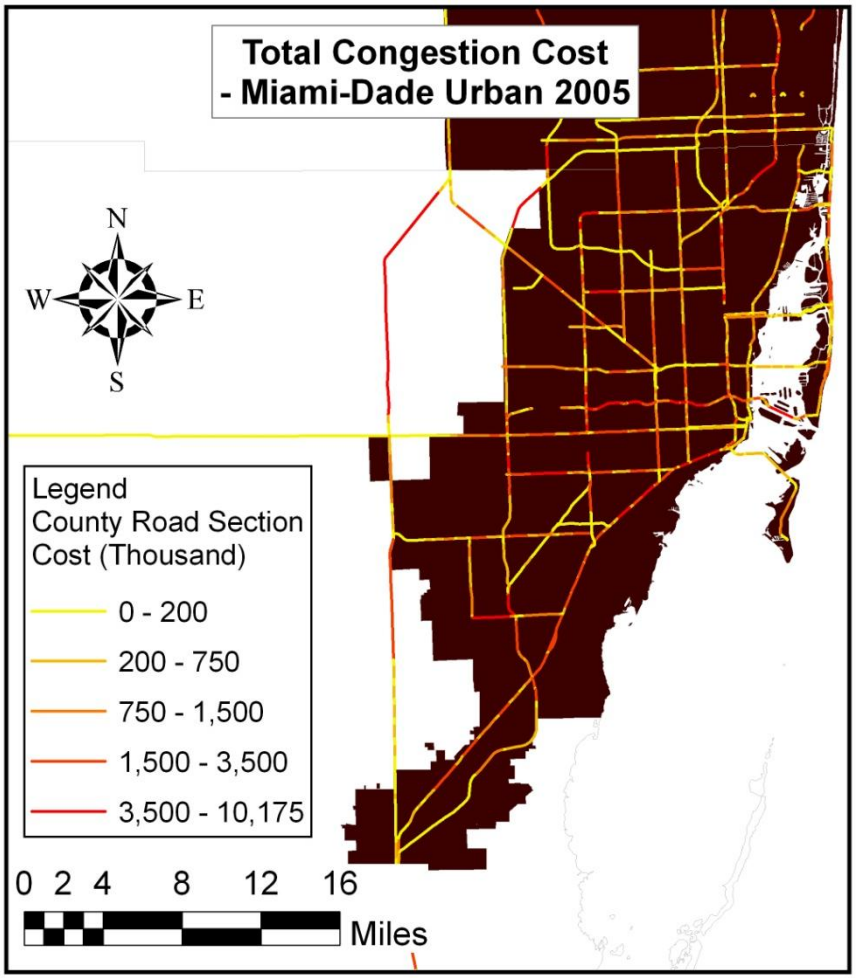

Total Congestion Cost
- Alachua Urban 2005
N
W
E
S
Legend
County Road Section
Cost (Thousand)
0 - 200
200 - 750
750 - 1,500
1,500 - 3,500
3,500 - 10,175
0 1 2 4 6 8
Miles

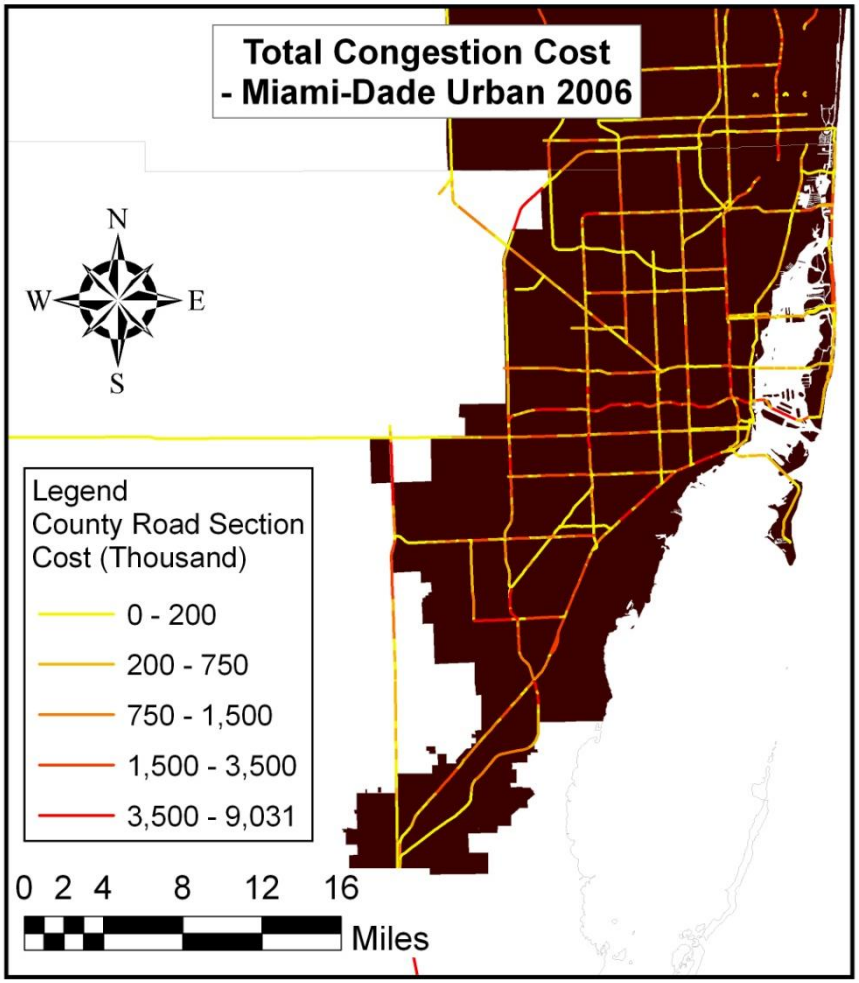

Total Congestion Cost
- Alachua Urban 2006
N
W
E
S
Legend
County Road Section
Cost (Thousand)
0 - 200
200 - 750
750 - 1,500
1,500 - 3,500
3,500 - 9,031
0 1 2 4 6 8
Miles

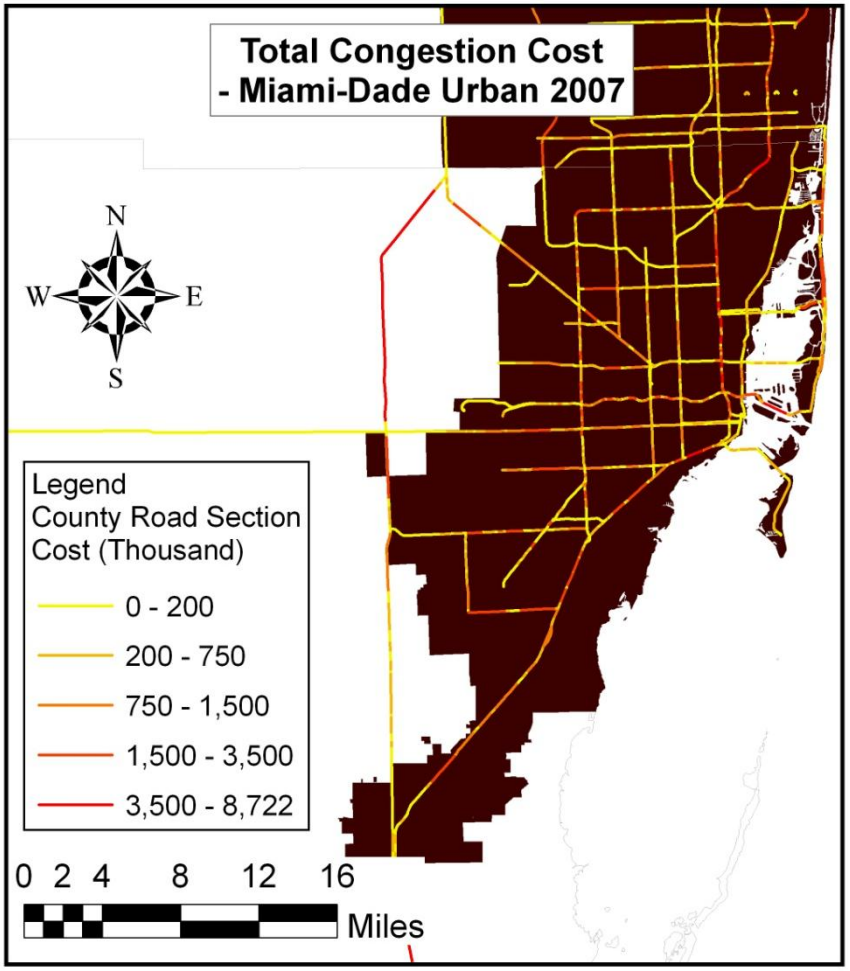

Total Congestion Cost
- Alachua Urban 2007
N
W
E
S
Legend
County Road Section
Cost (Thousand)
0 - 200
200 - 750
750 - 1,500
1,500 - 3,500
3,500 - 8,722
0 1 2 4 6 8
Miles


Total Congestion Cost
- Miami-Dade Urban 2003
N
W
E
S
Legend
County Road Section
Cost (Thousand)
0 - 200
200 - 750
750 - 1,500
1,500 - 3,500
3,500 - 5,395
0 2 4 8 12 16
Miles

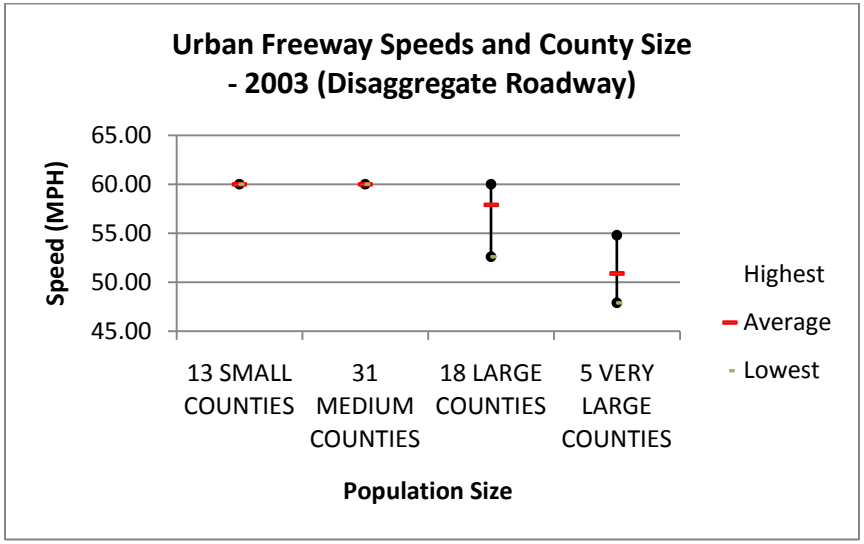

Total Congestion Cost
- Miami-Dade Urban 2004
N
W
E
S
Legend
County Road Section
Cost (Thousand)
0 - 200
200 - 750
750 - 1,500
1,500 - 3,500
3,500 - 6,258
0 2 4 8 12 16
Miles

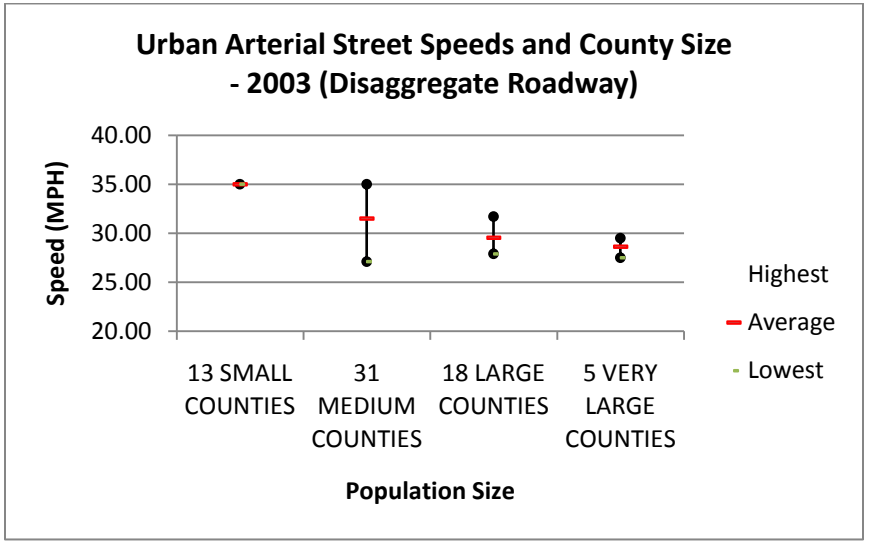

Total Congestion Cost
- Miami-Dade Urban 2005
N
W
E
S
Legend
County Road Section
Cost (Thousand)
0 - 200
200 - 750
750 - 1,500
1,500 - 3,500
3,500 - 10,175
0 2 4 8 12 16
Miles

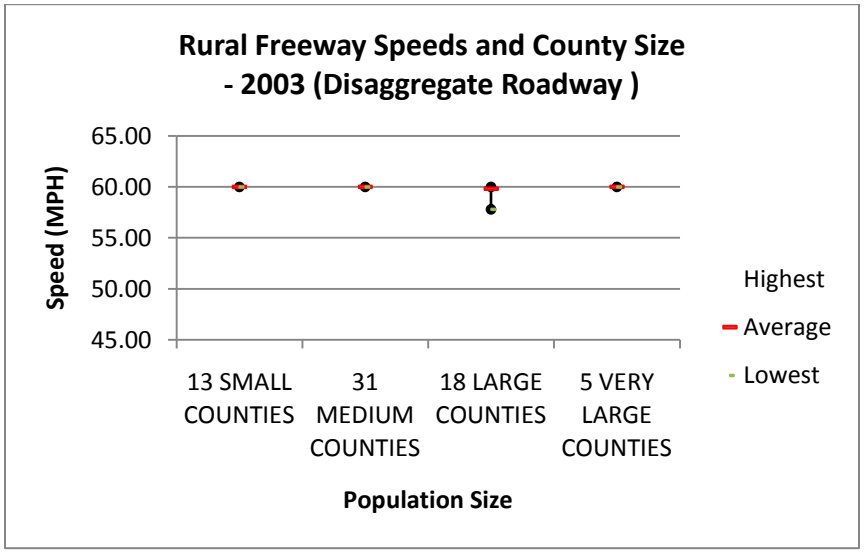

Total Congestion Cost
- Miami-Dade Urban 2006
N
W
E
S
Legend
County Road Section
Cost (Thousand)
0 - 200
200 - 750
750 - 1,500
1,500 - 3,500
3,500 - 9,031
0 2 4 8 12 16
Miles

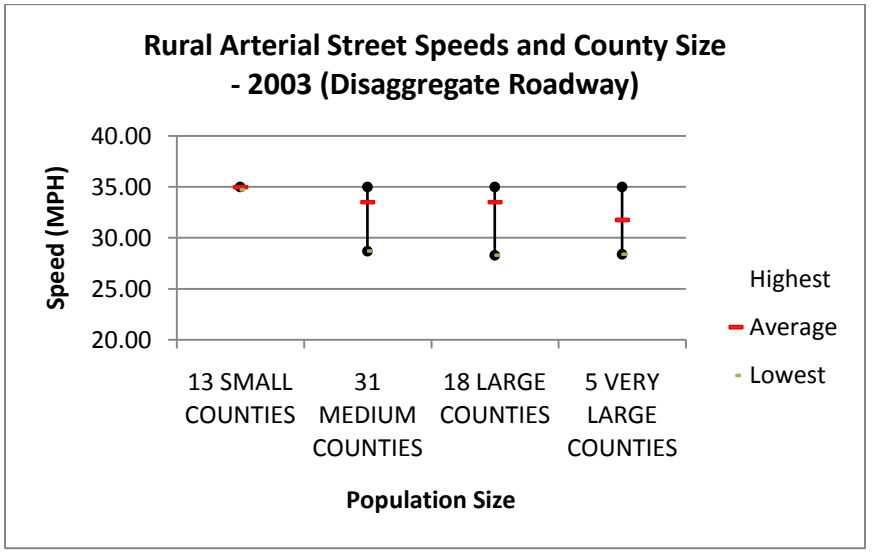

Total Congestion Cost
- Miami-Dade Urban 2007
N
W
E
S
Legend
County Road Section
Cost (Thousand)
0 - 200
200 - 750
750 - 1,500
1,500 - 3,500
3,500 - 8,722
0 2 4 8 12 16
Miles

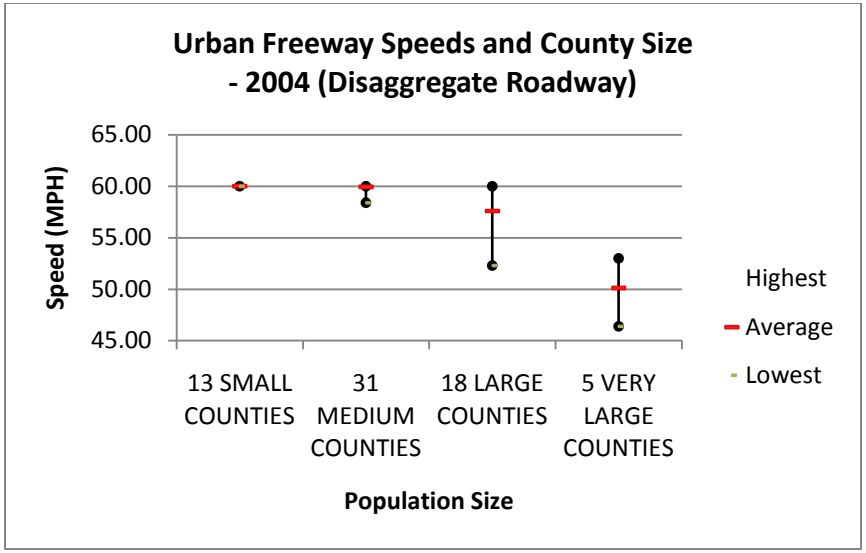
3.3.3 Speed Diagrams







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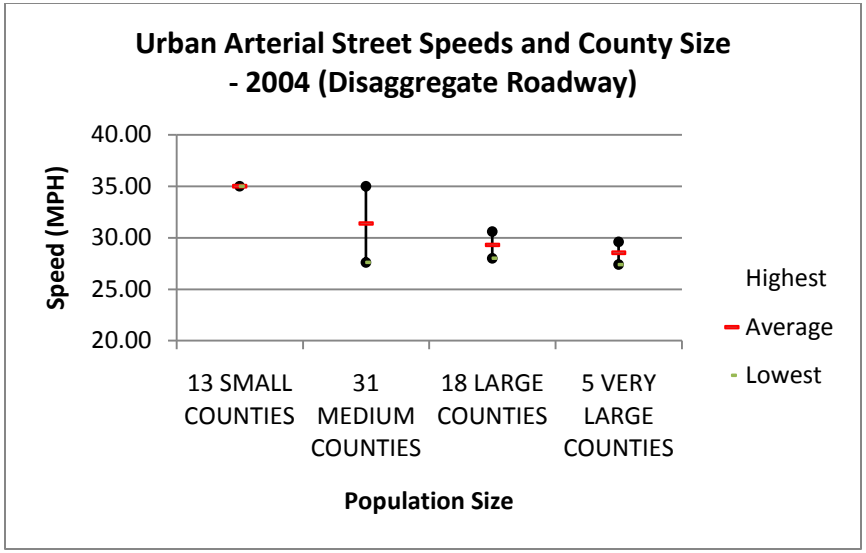
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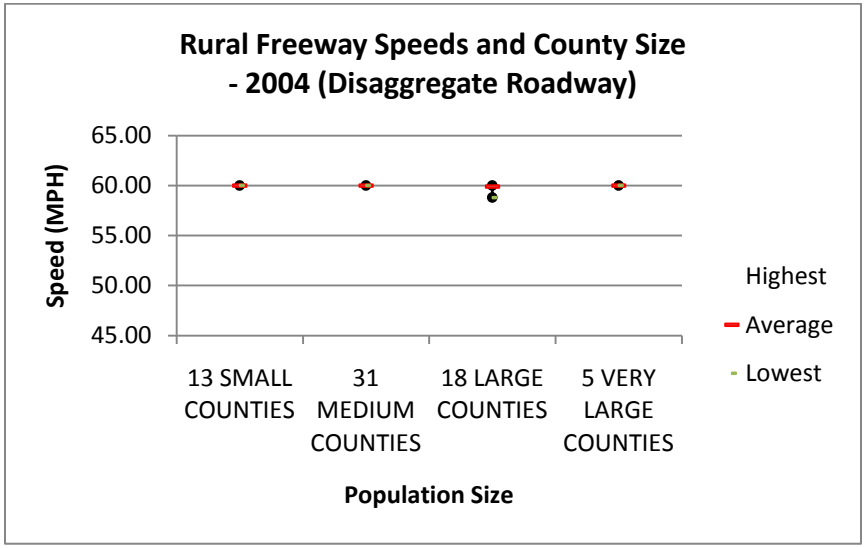
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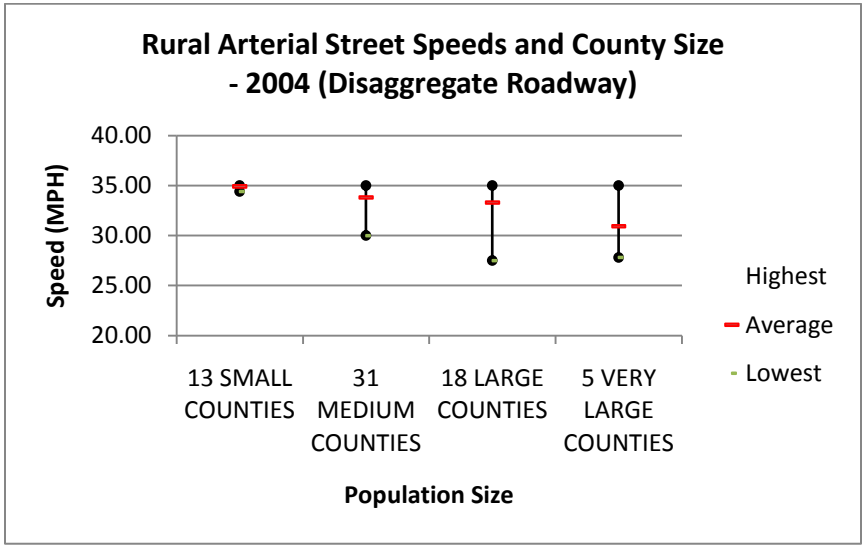
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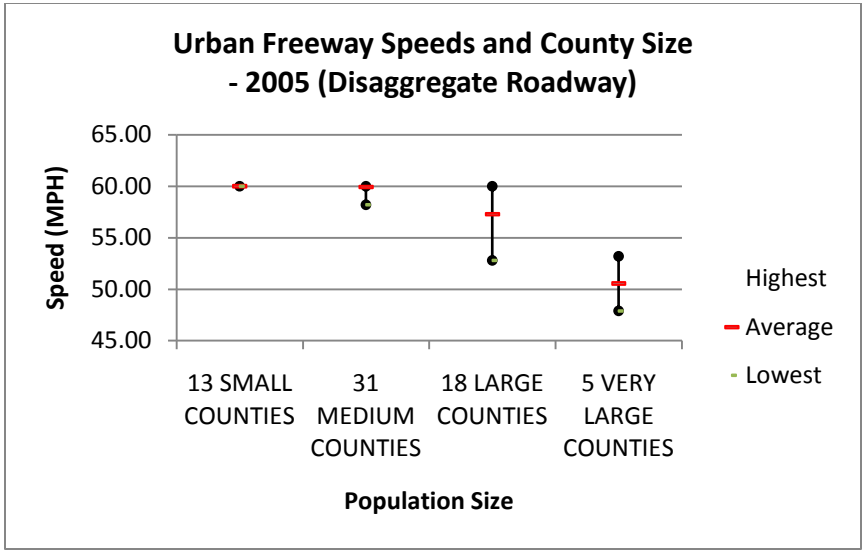
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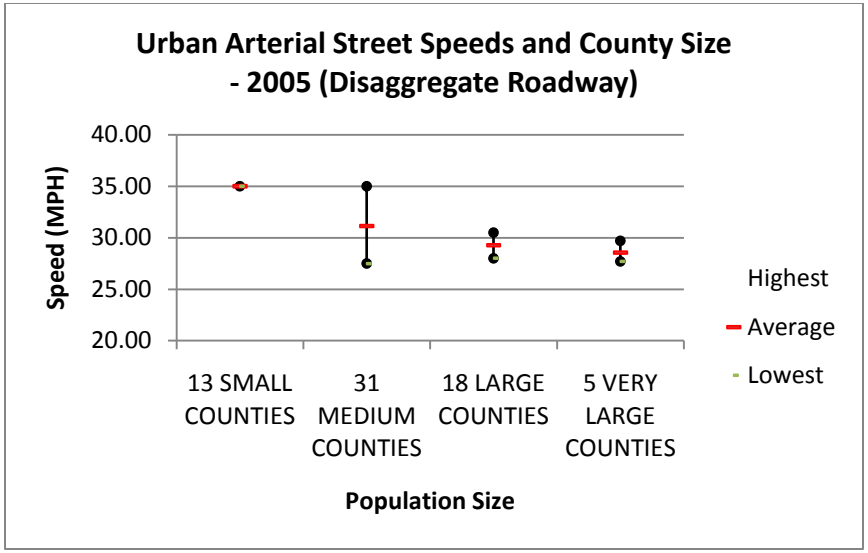
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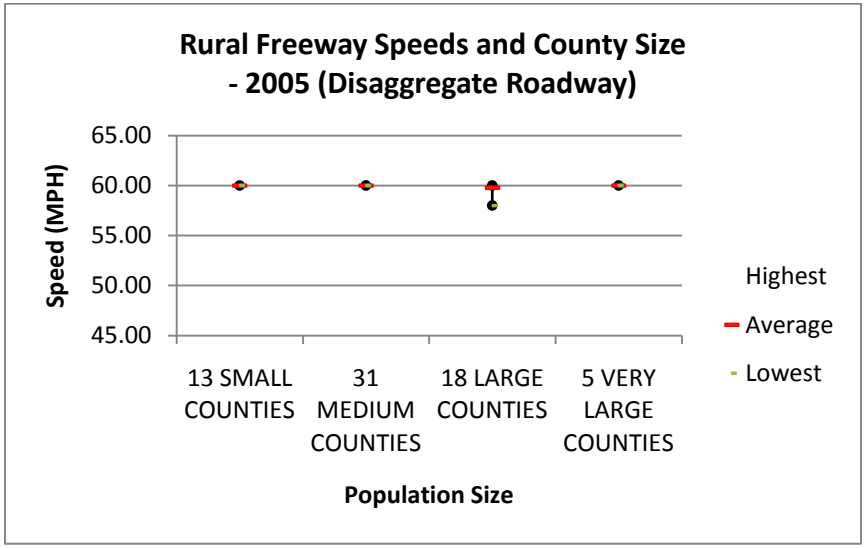
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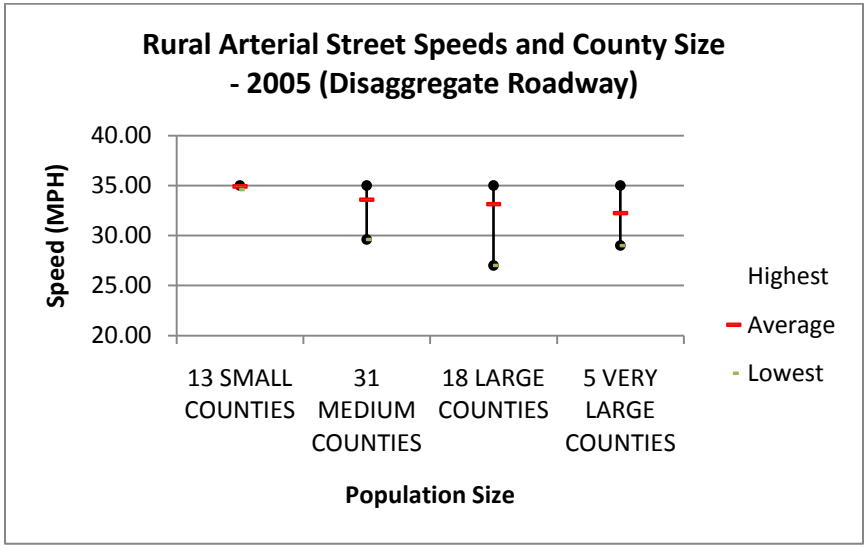
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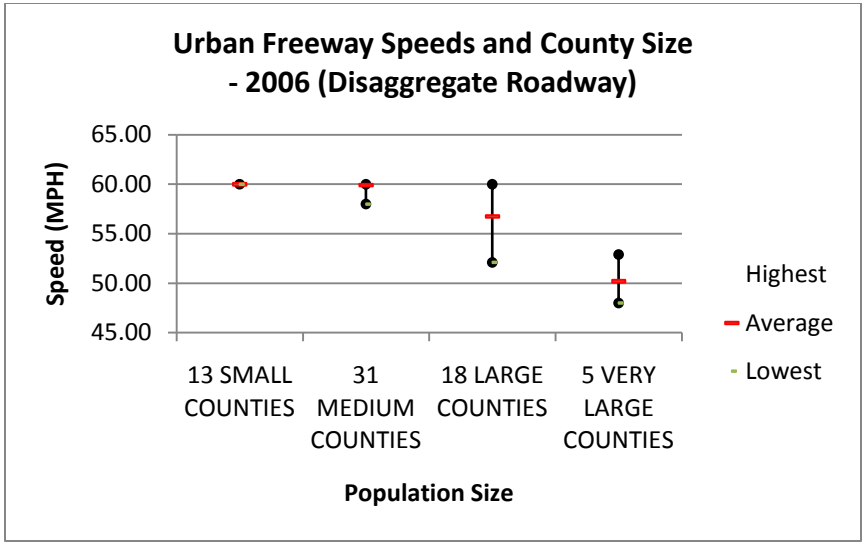
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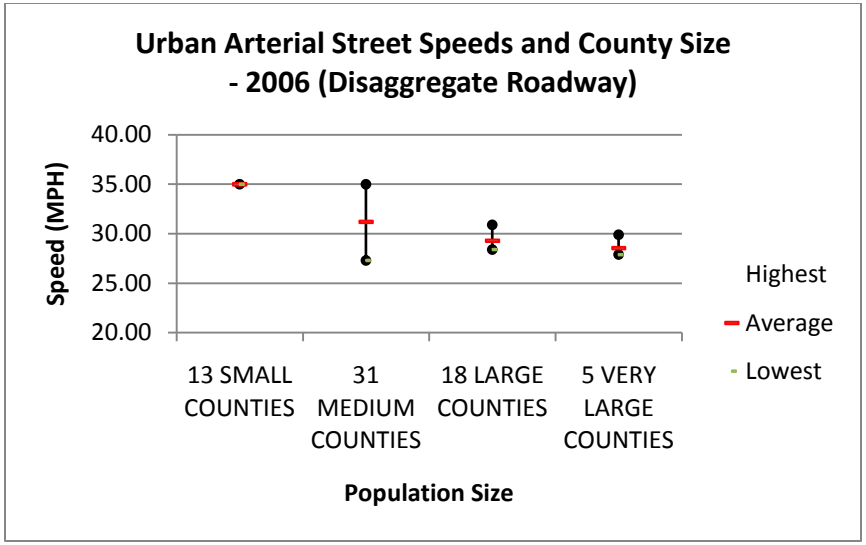
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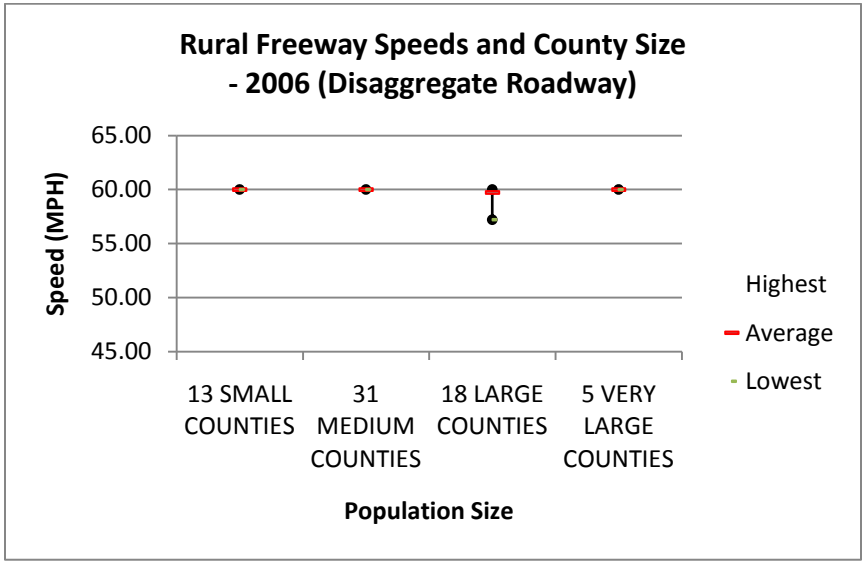
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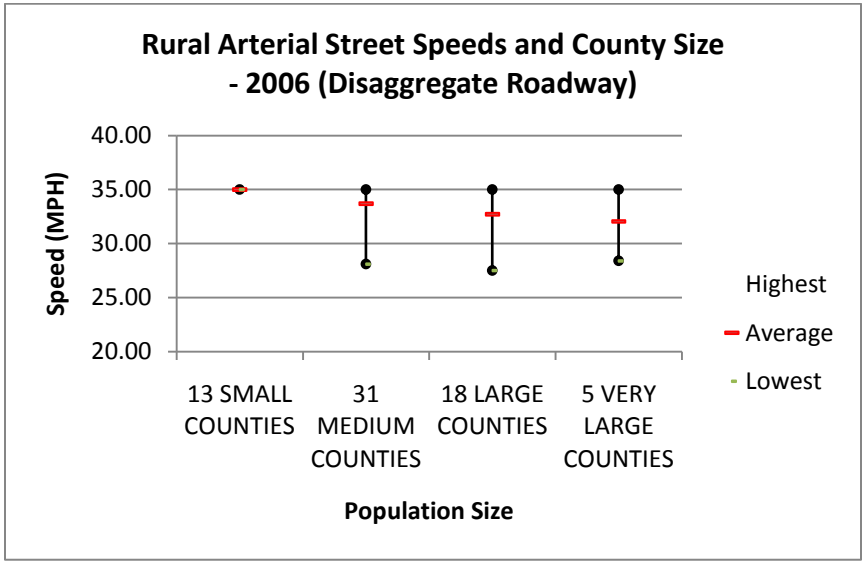
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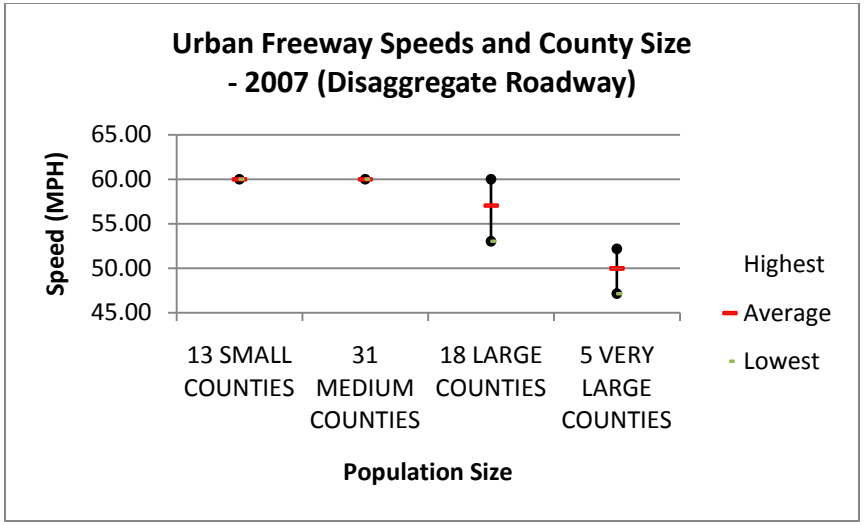
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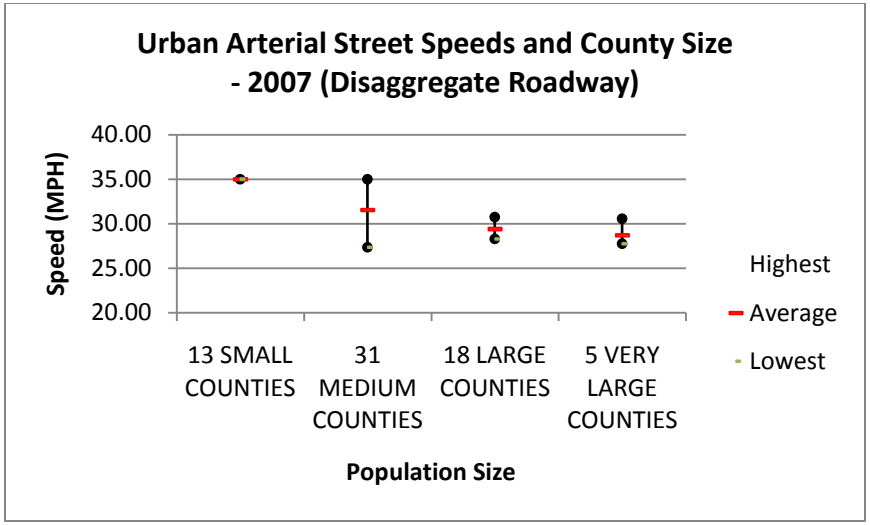
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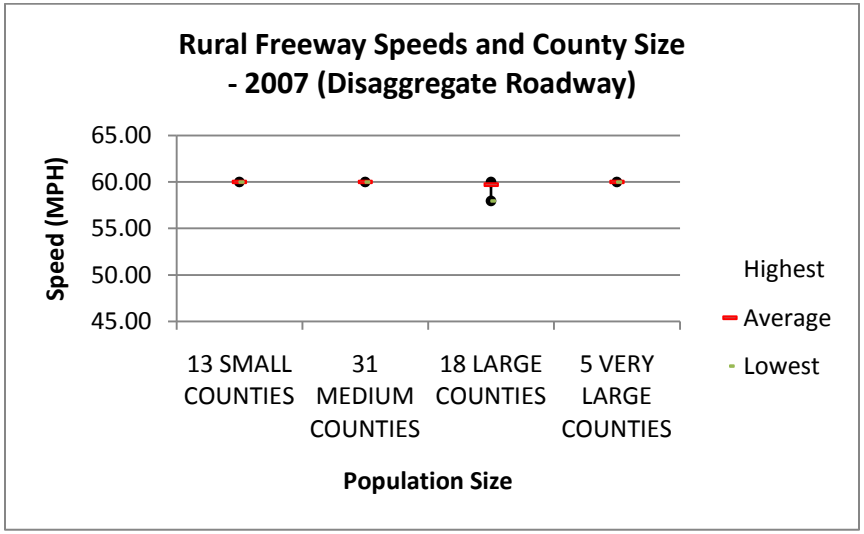
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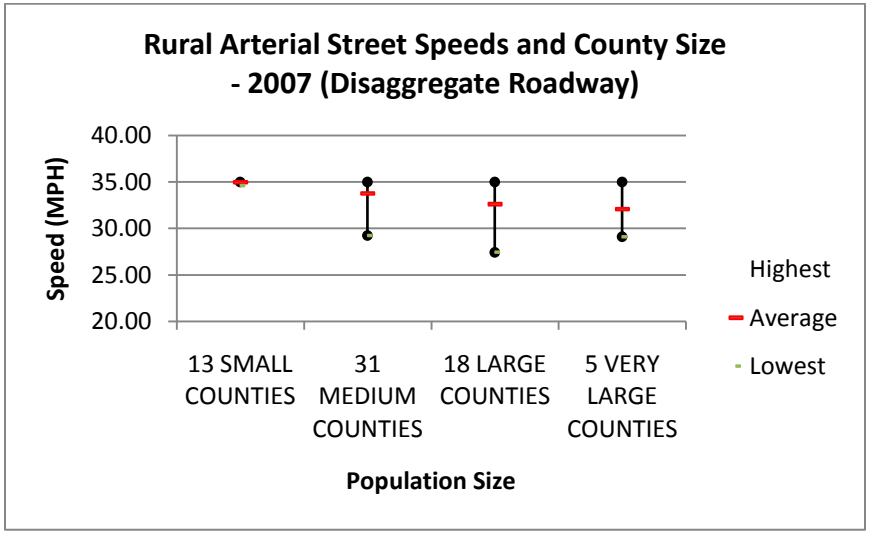
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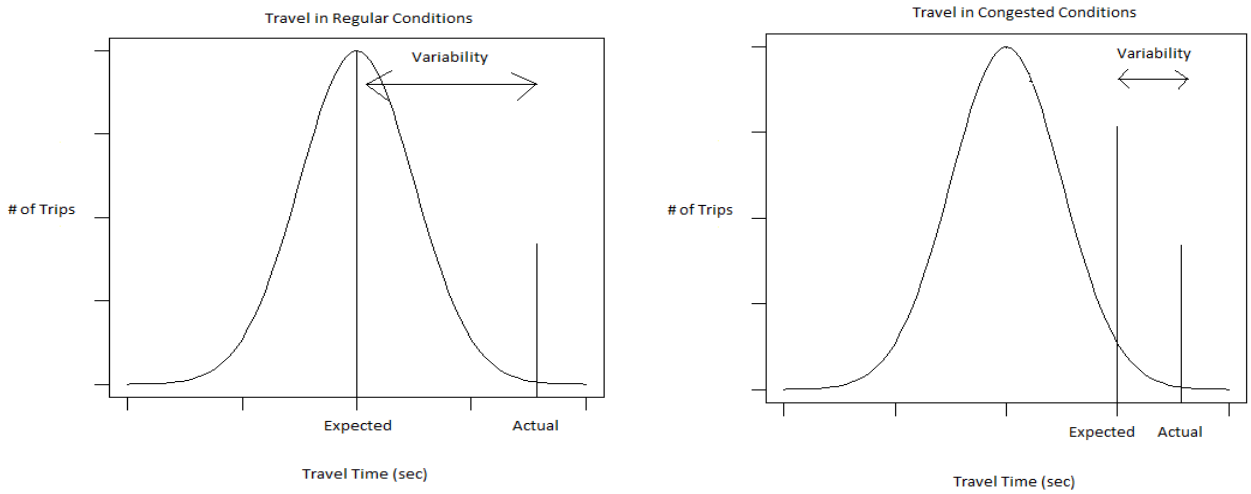
Section 4 Reliability

In recent years, there has been an abundance of studies on travel time reliability. This section of the report evaluates several studies of reliability in order to define the best method to calculate the cost of unreliability.

In the 1998 California Transportation Plan (NCHRP, 2003), reliability is defined as the level of variability between the expected travel time (based on scheduled or average travel time) and the actual travel time experienced. In that definition, the expected travel time is based on scheduled or average travel time, while the actual travel time incorporates the effects of non-recurrent congestion. Elefteriadou and Cui (2007) observe that while the expected travel time (mean travel time during the period of interest) is well defined, the level of variability is not. According to Elefteriadou and Cui, it is not clear what variability level is considered reliable (failure is not defined). "In addition, for facilities that are congested for a large portion of the time, the expected travel time would be high. In those cases the difference between the two values (expected – actual travel time) may be small, labeling the facility as reliable when it is consistently congested." See figure 4.

FIGURE 4: Variability Level in Regular vs. Congested Conditions



Source: Elefteriadou and Cui (2007)

The Florida Department of Transportation (FDOT, 2000) developed the Florida Reliability Method. They defined reliability on a highway system as the percent of travel on a corridor that takes no longer than the expected travel time plus a certain acceptable additional time. They defined these three variables (travel time, expected travel time, and acceptable additional time) as follows:

- Travel time is the time it takes a typical commuter to move from the beginning to the end of a corridor.
- Expected travel time is the median travel time across the corridor during the time period being analyzed.
- Acceptable additional time is the amount of additional time, beyond the expected travel time, that a commuter would find acceptable during a commute.

The threshold when travel exceeds the acceptable additional time beyond the expected travel time is obtained using the following equation:

Acceptable TT = x + Δ

Where x: The median travel time

Δ: Acceptable additional time, expressed as a percentage of median travel time

The percent of reliable travel is calculated as the percent of travel on a corridor that takes no longer than this acceptable travel time. According to Elefteriadou and Cui (2007), "this definition defines failure clearly and quantitatively, however it relies on the value of a median travel time, which may change from year to year. Thus this definition does not allow the tracking of reliability over time."

TTI recommends the Buffer Time Index as a measure of reliability (TTI, 2007). The buffer index represents the extra buffer time (or time cushion) that most travelers add to the average travel time when planning trips to ensure on-time arrival. This extra time is added to account for any unexpected delay. The buffer index is expressed as a percentage and its value increases as reliability gets worse. For example, a buffer index of 40 percent means that, for a 20-minute average travel time, a traveler should budget an additional 8 minutes (20 minutes * 40 percent = 8 minutes) to ensure on-time arrival most of the time. In this example, the 8 extra minutes is called the buffer time. The buffer index is computed as the difference between the 95th percentile travel time and average travel time, divided by the average travel time.

Buffer Index (BI) = $\frac{95th\ percentile\ confidence\ travel\ rate - average\ travel\ rate}{average\ travel\ rate}$ * 100%

For similar reasons as the Florida Reliability Method, this definition is based on the average travel rate which does not all the tracking of reliability over time (Elefteriadou and Cui, 2007).

Elefteriadou and Cui (2007) suggest that the definitions of travel time reliability fall in two categories: "a) Approaches based on the concept of reliability used in manufacturing and other engineering disciplines, which define reliability as the probably of non-failure over time;

and b) Approaches based on the concept of variability of travel time. Those definitions focus on the perspective of the traveler. They define reliability as the 'unpredictability' of travel times, and they are intended to be used by travelers budgeting time for their trip." The first type of definition is more appropriate for tracking the performance of a facility over time, and is closely related to congestion. The second type of definition would be more useful to travelers planning their trip. For the purposes of the Florida Department of Transportation (FDOT) it is recommended that the first type of approach be used for calculating a statewide estimation of reliability.

References

Cui, Xiao and Elefteriadou, Lily (2007) "*Travel Time Reliability and Truck Level of Service on the Strategic Intermodal System",* University of Florida, April 2007.

Federal Highway Administration (2006) "*Travel Time Reliability: Making It There on Time, All the Time*", Department of Transportation.

NCHRP (2003) "*NCHRP Synthesis 311, "Performance Measures of Operational Effectiveness for Highway Segments and Systems, A Sythnthesis of Highway Practice*", Transportation Research Board.

Section 5 Directions for Future Work

Although traffic congestion is often perceived as one of the most pressing urban problems, there is no agreement about the actual extent and costs of the problem. As described in the introduction of this document, in 2007, the Texas Transportation Institute (TTI) estimated a cost of congestion for the year 2005 of $78 billion (TTI, 2007). Jack Wells, chief economist of the US Department of Transportation (USDOT), estimate was $168.3 billion in 2006 (USDOT, 2006). Douglas Lee calculated a cost of congestion of $108 billion in 2002 as well as an economic loss of $12 billion based on willingness to pay for increased traffic speed (VTPI, 2009). Clifford Winston and Ashley Langer's calculations resulted in a total cost of $37.5 billion in 2004 (VTPI, 2009). In 2007 dollars these estimates range from $14 billion to $173 billion, a very broad interval that suggests that a careful revision of methods, concepts and assumptions in the assessment of congestion costs is needed.

This study expands and adapts the method developed by TTI in its annual Urban Mobility Report to minor urban and rural areas in Florida. As explained in the methodology section, TTI's approach is to estimate the average peak-period speed for highways and main arterials using data on traffic density values provided by the states and the USDOT. The difference between traveling times at this actual average peak-period speed and traveling times at an ideal free flow speed (speed with no traffic: 60 mph in freeways and 35 mph on major streets) is the travel delay. The travel delay is annualized and multiplied by the vehicle occupancy (1.25 persons per vehicle) and the value of person time ($14.60 per hour) to find the annual passenger vehicle delay cost. Similar procedures are followed to calculate the annual commercial cost (costs for commercial vehicles) and the annual passenger fuel cost (the extra fuel cost due to congestion). These three costs are added to estimate the annual cost due to congestion.

Therefore, broadly speaking, TTI's method is to estimate the traveling delays and fuel consumption at actual speeds and compare them with the estimates for an ideal free-flow speed. This approach, however, has been criticized on many grounds that can be classified in two groups: critiques about what is included and critiques about what is excluded. The critiques about what is included are focused on the estimation method and the concept of congestion that can be summarized as follows:

Critiques about what is included:

- **TTI only includes major urban areas and uses national constants instead of state or local information.**
- **TTI does not measure congestion empirically:** TTI's indexes are not the product of direct measurement but the product of computerized estimation models (Downs, 2004).
- **Comparing the speed at free flow conditions with the speed in congested conditions is misleading because traffic would increase in free-flow conditions**: the "specific combinations of the present quantity of traffic, plus free flow conditions, could never actually both exist at the same time" (Goodwin, 2004: 12).[10]
- **TTI does not detail where congestion really happens:** because not all congestion within a region is the same, a county-by-county breakdown is more useful for policy implications (HDR, 2008).[11]

[10] This is related with what it has been termed the 'law of peak hour congestion': traffic is a self-balancing system where increments in the system capacity induce more traffic from a latent demand: "If the use of private automobiles (…) is so attractive under un-congested toll-free conditions, relative to other modes, that in effect nothing stops the growth of such traffic but congestion and delay, then such traffic will grow until sufficient congestion and delay are generated to constitute a deterrent" (Vickrey, 1969: 257)

[11] As described in the introduction and results sections this study of the cost of traffic in the Chicago Metropolitan Area showed that only in the city of Chicago congestion was higher on expressways than on arterials routes. Outside Chicago the pattern was reversed: the majority of delay occurred on arterials rather than on expressways (HDR, 2008).

- **The monetary value of the time spent in traffic cannot be equated with the value of working time:** not only because the value of time will depend on the reason of the journey but also because "if there were no congestion, converting the sixteen minutes per day saved into compensated work would hardly be feasible for most people" (Downs, 2004: 27).

Critiques about what is excluded

- **Unreliability:** as traffic approaches the maximum capacity of the road system (that is as congestion grows) its performance becomes unstable because any minor change can create gridlock. In this way, "as congestion increases, journey times are not only longer, they are also more unpredictable" (Goodwin, 2004: 22). Growing instability forces travelers to include extra travel times in their trips increasing the time losses caused by congestion.
- **Increasing Operating Costs:** congestion produces higher shipping costs, delayed or missed deliveries, and increased inventories due to the unreliability of the transportation system. According to Cambridge Systematics (2007) Jack Wells estimated the cost of unreliability in terms of time losses and precautionary inventory for the US in $38 billion in 2005 and the cost of truck cargo delays in $3.8 billion. That is more than 66% of TTI's estimates for that year (TTI's report of 2005 reported a total cost of $63.1 billion).
- **Productivity Losses:** congestion reduces the size of markets which, in turn, reduces the scope of business, the size of the labor pool, and the economies of agglomeration (Wells, 2006). That represents extra costs for existing firms due to the need of decentralizing operations (EDRG, 2005), reductions of job growth due to higher labor costs (HDR, 2008), and comparative disadvantages for the location of economic activities in relation to congestion-free sites (Bilbao-Ubillos, 2008). Wells estimated productivity losses for $38 billion which added to the costs of unreliability, the extra costs of operation for firms, and

TTI's estimates for that year result in $141.2 billion or 2.14 times TTI's estimates (Cambridge Systematics, 2007).

- **Environmental Damage:** automobile emissions include pollutants that deplete the ozone layer, produce acid rain, and cause adverse effects in human health. Congestion intensifies these negative effects not only because it raises fuel consumption per mile but also because intermittent engine operation increases the volume of pollutants emitted per gallon (Bilbao-Ubillos, 2008).
- **Accidents:** although there is no consensus about the relationship between accidents and congestion, crash frequency (as opposed to severity) tends to increase in congested conditions (VTIP, 2009; Cambridge Systematics, 2008), this is because congestion elevates traffic density, causes people to switch lanes continuously, and raises the variability of speeds (Cambridge Systematics, 2008; Wells, 2006). Wells' estimation includes $12.6 billion for safety and environmental costs, which added to the costs described above and the cost of congestion in cities not included in TTI's report results in a total of $168.3 billion or 2.75 times TTI's estimates (Cambridge Systematics, 2007).
- **Neighborhood Effects:** high volumes of traffic produce noise and barrier effects for residents living close to major roads. Noise is a physical pollutant that influences human health, generates stress, and affects concentration. Barrier effects prevent residents from crossing streets, increase accidents, limit mobility, and affect social integration (Bilbao-Ubillos, 2008).

The last two TTI reports (TTI, 2007 and 2009) tried to answer some of these critiques by including specific sections addressing buffer times, acceptable conditions other than free-flow, and empirical data on traffic volume and speed. However, these estimates are not included in the

calculation of the annual cost due to congestion because they are based on small samples, which make it impossible to compare these values with the values of time and fuel loss for the urban areas. This is because, as the authors state, the Urban Mobility Report seeks to understand and compare congestion in many urban areas and there are not enough cities conducting thorough evaluation studies (TTI, 2007).

This study contributes to solve some of the critiques to TTI's method. In particular it expands the method to minor urban and rural areas, it uses local constants when possible, and it allows a spatial understanding of congestion since it uses geo-referenced databases. However, addressing other shortcomings of TTI's approach demands a more comprehensive effort. In this regard the research team suggests exploring the following possibilities to overcome some of the limitations of TTI's method:

- Identification of direct measures of speeds produced by states, counties, and urban areas on a regular basis and definition of an objective measure of congestion: an empirical assessment of traffic conditions will allow spatial analyses and the identification of a more realistic baseline to define congestion (other than free-flow speed).
- Identification of the monetary value of time: identify the pros and cons of weighting the monetary value of time according to the reason for the journey and according to the availability of data. Define a measure for the value of time (aggregated or disaggregated).
- Identification of methods to calculate the incidence of factors excluded from TTI's estimates (according to the availability of data).
- Unreliability: calculate buffer times adapting TTI's method. TTI's estimate buffer times use the variability of travel times as the difference between the 95th percentile and the average

(TTI, 2007) as described in section 4 of this report. Determine the monetary impact using the value of time.

- Increasing Operating Costs: estimate wasted time for trucks adapting the methodology used by HDR in Chicago (HDR, 2008) and then estimate impacts for delayed deliveries and precautionary inventory as a function of time and its value.
- Productivity Losses: estimate the impact in the labor market and agglomeration economies adapting the methodology used by ATKINS to calculate the costs of congestion of England's East Midlands (ATKINS, 2007). This methodology uses the individual cost of congestion for time and fuel losses and the elasticity of labor demand to calculate the number of people who could enter the labor market as a result of better mobility conditions. Also, this methodology estimates diseconomies of agglomeration by comparing the actual density of the urban area with the optimum density (which is a function of the number of jobs and travel times without congestion).
- Environmental Damage and Neighborhood Effects: explore methodologies to measure these impacts and define the one that is more effective given the availability of data. There are at least 6 ways to measure the cost of external effects (Bilbao-Ubillos, 2008): 1. Through willingness to pay to avoid the problem. 2. Through hedonic pricing. 3. Through the cost of alleviation measures. 4. Through the cost of elimination and prevention. 5. Through the cost of medical care and loss production caused. 6. Through the measurement of the physical level of the externality and "then, by analogy, obtain the pricing attributed by other rigorous studies to those levels in equivalent environments" (Bilbao-Ubillos, 2008: 1099)
- Accidents: identify the specific type of accidents associated with traffic congestion, estimate the frequency of these accidents and determine the impact using the criteria of insurance

companies to calculate personal injuries and material damage (Cambridge Systematics, 2008; Bilbao-Ubillos, 2008).

As it was stated in the introduction to this document, it is important for FDOT to continue in the direction of assessing the cost of congestion in a recurrent and realistic way since this will inform decision making, provide a basis for evaluating the effects of public policies and sensitize public opinion about the importance of solving traffic problems. Problems that, as this report has shown, affect a big portion of Florida citizens and create considerable cost to the economy of the State.

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