



Evaluation of Current Methodology to Determine Traffic Concurrency

Task Work Order No. 20
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Table of Contents

Executive Summary.....	v
1.0 Introduction	1
2.0 Study Coordination	2
2.1 Study Advisory Committee	2
2.2 Input/Recommendations from the SAC (PTC)	2
3.0 Review of Concurrency Management Programs	3
3.1 Transportation Concurrency Statutes in Florida.....	3
3.1.1 History of Transportation Concurrency	3
3.1.2 Community Planning Act of 2011	4
3.2 Transportation Concurrency Programs in Florida.....	6
3.2.1 Alachua County, Florida	6
3.2.2 City of Hialeah, Florida	7
3.2.3 City of Miami, Florida	7
3.2.4 Orange County, Florida	8
3.2.5 Pasco County, Florida.....	8
3.3 Transportation Concurrency in Other Areas.....	9
3.3.1 Bellingham, Washington	9
3.3.2 King County, Washington.....	13
3.3.3 Redmond, Washington	14
3.3.4 Montgomery County, Maryland	17
4.0 Assessment of the Current Methodology	19
4.1 Current Concurrency Approach in Miami-Dade County	19
4.1.1 Miami-Dade County's Comprehensive Development Master Plan	19
4.1.2 Administrative Order 4-85	20
4.1.3 Chapter 33-G, Service Concurrency Management Program, Code of Miami-DadeCounty.....	21
4.2 Miami-Dade County Concurrency Assessment Matrix	21
4.3 Assessment of the Current Miami-Dade County Concurrency Management Program	24
5.0 Analysis of Best Practices.....	26
5.1 Summary of Best Practices.....	26
5.1.1 Summary	26
5.1.2 Mobility Fee Considerations	27
5.3 Recommendations to Improve the Current Methodology	28
6.0 Developing Scenarios	32
6.1 Scenario #1: Multimodal Transportation Concurrency	32
6.1.1 Land Use Type Calculations.....	32
6.1.2 Person-Trip Calculation Methodology	36
6.1.3 Weighting.....	38
6.1.4 Calculation Tools	38
6.1.5 Scenario#1 Summary	39
6.2 Scenario #2: The Mobility Fee Approach	40
6.3 Recommended Approach	42
7.0 Alternative Approaches	42

7.1 Development of Alternatives to the Current Concurrency Program in Miami-Dade County.....	43
7.2 Comparative Analysis of the Proposed Alternatives.....	43
“Keep Current Program” Alternative	43
“Minimal Change” Approach	45
“Alternative Approach”	46
7.3 Summary of the Proposed Alternatives	47
8.0 Evaluation of Impacts.....	48
8.1 Evaluation Approach	48
8.2 Scenario Evaluation.....	49
8.2.1 Program Implementation and Methodology.....	51
8.2.2 Traffic Improvement	52
8.2.3 Transit Operation	53
8.2.4 Implementation of Bicycle and Pedestrian Facilities	54
8.2.5 Capital, Maintenance and Operating Costs	55
8.2.6 Jurisdictional Boundaries	56
8.2.7 Monitoring	57
8.3 Evaluation Summary	58
9.0 Recommendations for Miami-Dade County’s Current Concurrency Management System.....	59
9.1 Recommended Amendments to the Comprehensive Development Master Plan	59
9.2 Recommended Action Plan for the Alternative Approach	60
10.0 Conclusion.....	66

List of Tables

Table 1: City of Bellingham’s LOS Criteria for Motorized and Non-Motorized Modes.....	10
Table 2: King County LOS by Average Travel Speed.....	13
Table 3: Montgomery County Arterial Mobility LOS.....	18
Table 4: Montgomery County Transit Mobility LOS	18
Table 5: Relationship between Arterial and Transit LOS, Montgomery County, WA.....	18
Table 6: Transportation Concurrency Elements in Miami-Dade County, Current Guidance and Proposed Recommendations.....	22
Table 7: Comparison of Concurrency Approaches.....	29
Table 8: Correlation between Bellingham Area Type and SERPM Model Area Type	33
Table 9: Calculation Results for the City of Coral Gables Example	39
Table 10: Distance Threshold Limits	41
Table 11: Model Proximity Incentive/Disincentive Calculations	42
Table 12: Summary of the proposed alternatives	47
Table 13: Summary of Potential Impacts from Recommended Concurrency Methodology Improvements	50
Table 14: Summary of Evaluation of Impacts	59
Table 15: Recommended Changes to the CDMP	60

List of Figures

Figure 1: Weighting Factors for Person-Trips in Each Concurrency Service Area.....	12
Figure 2: Calculating Person-trips and Mobility Units in Redmond, Washington’s Concurrency Program	15
Figure 3: City of Redmond Transportation Concurrency Concept.....	16
Figure 4: Concurrency Service Areas for Miami-Dade County, as determined by SERPM	34
Figure 5: Coral Gables CSA Multimodal Network and Land Use Area Types.....	35

List of Appendices

Appendix A: History of Concurrency Management Legislation in Florida	
Appendix B: Concurrency Evaluation Matrix for Cities within Miami-Dade County	
Appendix C: Concurrency Evaluation Matrix for Miami-Dade County	
Appendix D: City of Miami Peak Hour Person-Trip Level of Service Calculation Methodology	
Appendix E: Miami-Dade County Traffic Impact Fee Schedule	

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Executive Summary

Transportation concurrency requires local governments to define Level of Service (LOS) thresholds for transportation systems, to determine whether a new development can be accommodated by the existing and planned infrastructure. Florida's transportation concurrency requirements have significantly changed in recent decades, prompting many local governments to revise their existing concurrency programs. In Miami-Dade County, the Comprehensive Development Master Plan (CDMP), Administrative Order No. 4-85, and Chapter 33-G, Service Concurrency Management Program of the Code of Miami-Dade County, establish concurrency standards and criteria for the County.

The CDMP establishes and monitors LOS standards and relates concurrency requirements to the Long-Range Transportation Plan (LRTP). Administrative Order 4-85 establishes the policies and procedures for implementing concurrency. Chapter 33-G identifies the agencies responsible for concurrency review, and describes specific development types that are exempt from meeting concurrency requirements.

While it is a well established program, the current concurrency methodology employed by Miami-Dade County is focused primarily on roadway networks, rather than on a multimodal approach. Additionally, the current approach does not link new development impacts to land use patterns, density and intensity. A complete assessment of the current concurrency system in Miami-Dade County is presented in Section 4 of this report. Recommendations to the specific concurrency components are also included.

This study provides a detailed assessment of Miami-Dade County's current transportation concurrency program, and proposes recommendations for alternative methodologies that can be applied to address its limitations, within the framework of recent Florida Growth Management legislation changes. The scenarios and recommendations presented aim to facilitate implementing a multimodal transportation system and describe key principles that are considered critical elements of an effective concurrency management system.

The County's Planners' Technical Committee served as the Study Advisory Committee (SAC) to assist throughout the course of the study. Meetings and presentations were held to communicate research results, develop alternative scenarios and prepare recommendations. Consensus was attained on key items, including developing a multimodal analysis approach to concurrency; funding transit operations through concurrency if possible; taking regional planning into consideration; promoting high density development through concurrency; fostering economic development; and ensuring the program's alignment with future land use and transportation goals.

A review of concurrency and growth management laws in Florida indicated that LOS standards serve as the backbone of transportation concurrency; where local jurisdictions are required to establish minimum LOS thresholds. Consequently, new development applications must either provide the needed improvements based on concurrency thresholds; provide monetary contributions; or hold development until further infrastructure improvements are implemented. Implementing concurrency in Florida has been challenging; however, where issues such as the system's complexity; unpredictability of mitigation costs, and the focus on vehicular travel, have spurred the recent legislative changes to concurrency.

Specifically, the Community Planning Act of 2011 proposed several changes to transportation concurrency in the State, including shifting the enforcement and administration of concurrency from the

state level to the local jurisdiction level. Furthermore, local governments can elect whether to continue to apply concurrency, but if they do choose to do so, LOS standards must be tied to the comprehensive plan and the Capital Improvement Program. Local jurisdictions are also encouraged to promote multimodal transportation, safe pedestrian environments, and compact development through concurrency.

Concurrency programs in other areas of Florida were reviewed to identify alternative approaches that could potentially be applied to Miami-Dade County's concurrency program. Alachua County utilizes a Multimodal Transportation Mitigation (MMTM) program that establishes multimodal LOS standards, and is tied to the County's mobility plan and comprehensive plan. Orange County's multimodal approach to concurrency utilizes Alternative Mobility Areas (AMA) within the urban core and Multimodal Transportation Districts (MMTD) outside of the urban center. Pasco County adopted a multimodal mobility fee program that replaces impact fees and funds infrastructure operations and maintenance costs through tax increment financing. All of the municipalities within Miami-Dade County were also reviewed, including the City of Miami, which utilizes Transportation Concurrency Exception Areas (TCEAs) to promote development in Urban Infill Areas (UIA). The City of Hialeah also promotes multimodal development through its concurrency program.

A nationwide review of best practices for concurrency revealed that the City of Bellingham, Washington, utilizes an award-winning multimodal concurrency program that establishes multimodal thresholds through person-trip credits. The program designates Concurrency Service Areas (CSAs) that are classified into three land use patterns and vary by density and intensity. In King County, Washington, LOS thresholds are dependent on land use patterns and roadway classifications. The City of Redmond, Washington, adopted a mobility fee approach, where concurrency is calculated based on the available supply of existing and planned infrastructure and is compared to the expected infrastructure demand. Montgomery County, Maryland, utilizes its adequate public facilities ordinance to establish LOS standards and apply concurrency.

Based on the literature review and stakeholder input, it was determined that the concurrency approach adopted in Bellingham, Washington, and the mobility fee approach that replaces impact fees would be most appropriate for scenario evaluation to potentially integrate into the current Miami-Dade County concurrency program. A set of 11 principles that collectively represent the elements of an effective concurrency program were identified, and a matrix comparing the Miami-Dade concurrency program to the Bellingham's multimodal concurrency program and the City of Redmond's mobility fee approach was developed. The Miami-Dade County, City of Bellingham, and City of Redmond scenarios were scored based on meeting the 11 principles. Through this comparative matrix, general recommendations to the existing Miami-Dade concurrency program were made.

The methodologies used to calculate multimodal concurrency, as adopted in the Bellingham approach, and mobility fees similar to the City of Redmond's approach are described in Section 6 of this report. The scenarios demonstrate how each of these two approaches can be adapted into Miami-Dade's concurrency program. In the multimodal transportation concurrency scenario, the City of Coral Gables was chosen as an example application for Miami-Dade County. Land use patterns derived from the Southeast Florida Regional Planning Model (SERPM) were matched with the CSAs identified in the

Bellingham approach. The CSAs were then overlaid with the existing multimodal transportation network. The capacity and demand of each travel mode were converted to person-trips, and were weighted based on the land use patterns. Once the person-trip thresholds were established, evaluating a new development's concurrency compliance was determined by calculating the area of each land use pattern surrounding the development, computing the peak hour capacity and the expected volume for each mode, and then calculating the available person-trips. The second scenario described the mobility fee approach, where unit base costs for each housing type are assigned and a tiered mobility fee structure based on the proximity to the different transportation modes within specific land use patterns is used to assess the appropriate development fees.

Based on the research conducted, stakeholder input and scenario development that demonstrated the applicability of best practices into Miami-Dade's current concurrency program, three incremental alternatives are proposed: "keep the current program", "minimal changes" and "alternative approach". The "keep the current program" alternative retains the current concurrency approach utilized in Miami-Dade County, provided that the program is updated to match new legislative changes. The "minimal changes" approach proposed minor changes to the current program to offset some of the shortcomings of the existing system, such as expanding the area of impact, considering peak-direction LOS and incentivizing development near transit. The "alternative approach" is a hybrid program that includes multimodal concurrency, considers land use patterns, and applies mobility fees in lieu of transportation impact fees.

Section 7 of this report describes each of the three alternative approaches, and pros and cons of each option are outlined. In general, while maintaining the current program has the least implementation impacts, it is not fully multimodal, equitable, or compatible across local jurisdictions in the County. The "minimal changes" approach would account for a larger transportation network and incentivize development near transit, but it is still not a fully multimodal program and does not fund transit operations. Adopting the "alternative approach" would address the disadvantages of the preceding two alternatives through multimodal concurrency that takes into consideration land use patterns and mobility fees that can be utilized to fund transit operations and maintenance.

Following the identification of the three approaches, Section 8 of this report presents an evaluation of the impacts of each alternative based on the following factors: program implementation and methodology; traffic improvement; transit operations; implementation of bicycle and pedestrian facilities; capital, maintenance and operating costs; jurisdictional boundaries; and monitoring. For each of these factors, the proposed approaches were scored based on their impacts on the community, developers, and agencies involved. The evaluation results revealed that keeping the current program would yield negative net impacts overall. While the "minimal changes" approach has positive impacts relative to keeping the current program, it also has negative impacts that offset the positive elements. In comparison, the evaluation process found that implementing the "alternative approach" would ultimately yield the most positive impacts.

Finally, Section 9 of this report includes two recommendation components: 1) recommended changes to the CDMP in the event any of the three approaches are implemented, and 2) an action plan for the recommended "alternative approach". The proposed changes to the concurrency program should be

incorporated into the CDMP and the land development regulations, and guidance is provided on which components would require amendment. The plan of action to implement the hybrid alternative approach includes determining CSAs and mobility fee zones. Thresholds for multimodal transportation facilities should be calculated based on the person-trip methodology. Person-trips are then attributed to the appropriate CSA. Mobility fees should also be calculated based on CSAs. Once thresholds are established, strategies should be developed to manage infrastructure expenditure of funds.

This study recommends the “alternative approach” to the current concurrency program in Miami-Dade County, and provides a step-by-step process to implement the needed changes. It is anticipated, however, that further stakeholder coordination regarding an appropriate transportation concurrency program would be needed. Special consideration should be attributed towards the institutional issues, costs and effort required to implement the recommended changes.

1.0 Introduction

Transportation concurrency is a process that requires local governments to define traffic conditions that constitute adequate Levels of Service (LOS) for transportation systems, and determine whether a new development should be approved based on the availability of existing capacity and/or future infrastructure. The main purpose of this system is to establish a direct relationship between new development and the need for infrastructure improvements in order to ensure that adequate infrastructure capacity is available to support proposed projects.

Florida's transportation concurrency requirements have significantly evolved over the past few decades; as a result of continuous debate and proposed revisions. While concurrency has helped to coordinate the timing of new development with the availability of existing transportation facilities, it also has its limitations, including the difficulty and complexity of its administration; the lack of predictability in mitigation costs; the perception that costs are inequitable as a result of the "last-in pays" approach; and the focus on vehicular travel rather than multimodal transportation.

In Miami-Dade County, the Comprehensive Development Master Plan (CDMP), Administrative Order No. 4-85, and Chapter 33-G, Service Concurrency Management Program of the Code of Miami-Dade County, establish the methods and criteria to be utilized by concurrency agencies to review applications for new development and evaluate their impact on roadway levels of service. The current methodology focuses on determining traffic impacts on the nearest roadway(s) in the roadway network accessed by the subject development, rather than a more comprehensive review of the overall transportation network.

Additionally, although Miami-Dade County and its municipalities have encouraged denser urban development through transportation concurrency exception areas (TCEAs) and other tools, the 2011 Community Planning Act and other legislative changes could limit concurrency as a mitigation method for new development. Moreover, the current impact fee structure provides limited incentives in terms of reduced rates to develop in the Urban Infill Area (UIA) of Miami-Dade County. Therefore, this study provides an assessment of Miami-Dade County's current Transportation Concurrency Management Program, and proposes alternative methodologies that can be applied to improve the current system, within the context of recent Florida Growth Management legislation changes.

The recommendations proposed in this study present alternative approaches to the current concurrency program and impact fee structure that take into consideration multimodal transportation options and different land use patterns, density and intensity. The report describes the methodology used in each of the proposed alternatives, and demonstrates their applicability to Miami-Dade County through scenario examples.

Through the research of best practices, stakeholder input, and scenario development, three main alternatives are proposed: "keeping the current program", "minimal changes" and the "alternative approach. The impacts of each of these alternatives are evaluated based on different factors that assess the feasibility of implementation, multimodal funding, and monitoring. Finally, specific recommendations are proposed to amend the CDMP, and a plan of action is developed describing the next steps needed to implement the recommended "alternative approach".

2.0 Study Coordination

2.1 Study Advisory Committee

At the onset of this study, the County's Planners' Technical Committee (PTC) served as the Study Advisory Committee (SAC). The PTC is a technical committee that consists of planning representatives from Miami-Dade County and its municipalities. The PTC helped identify concurrency methodologies from other areas that could potentially be integrated into Miami-Dade County's current concurrency management program. Progress meetings were also held with the Miami-Dade MPO and County staff to monitor the study's progress; provide feedback for the methods considered; and discuss analysis results and recommendations.

The study's kick-off meeting was held on October 7, 2012, during the regularly scheduled PTC meeting, to provide an introduction to the project purpose and goals, and to initiate the discussion on the desired outcomes for the project. Following the literature research and best practices analysis that was conducted for this study, a presentation was conducted on March 2, 2012 to the PTC. The meeting helped define the next steps of the study and identified key transportation concurrency programs from other areas across the nation that could be adapted and integrated into Miami-Dade County's concurrency management system.

During the coordination efforts, while overall satisfaction with the current structure and operation of the County's concurrency management program was expressed; there was support for exploring methods to improve consistency between county and city concurrency methodologies. The impacts of the proposed changes to the current system on economic development were also emphasized. Additionally, the need to better understand the potential impacts of new statutory changes to concurrency management enacted by the Legislature in 2011 and 2012 was also discussed.

2.2 Input/Recommendations from the SAC (PTC)

Through the discussions and progress meetings held with the PTC and other stakeholders, a number of key items were identified for further analysis in this study. Discussion items regarding possible modifications to the existing concurrency methodology included:

- ❖ Multimodal measures and impact mitigation is being employed in some of the more urbanized areas in the county, as well as across the South Florida region. Developing similar county-level strategies as part of the County's concurrency process was generally supported.
- ❖ Funding multimodal alternatives through concurrency was generally supported, especially funding transit operational costs. The current concurrency system does not fund transit operations and maintenance costs.
- ❖ Regional planning should be taken into consideration when applying concurrency, since major transportation corridors, employment centers and population clusters cross county lines. Specifically, commuting patterns across the Tri-County area (Miami-Dade, Broward and Palm Beach Counties) are considered regionally significant and would impact infrastructure demands.

- ❖ Impact fees, mobility fees and other proportionate-share strategies may not fully support the needed infrastructure improvements. Alternatively, promoting higher density development would enhance the tax base and improve the ability to make improvements over time and provide greater stability in funding, compared to the one-time fee strategies.
- ❖ Measures and strategies should foster economic development. Predictability of fees, as well as a streamlined review process, is desirable for sustaining a process that supports economic development goals in the county.
- ❖ The recommended methodology must be sensitive to supporting future land use and transportation goals. In particular, there is a need to balance urban and rural fees to ensure that impact fees take into consideration the true costs of development.

The following sections include a review of concurrency programs in peer regions across the country and an assessment of the current transportation concurrency program in Miami-Dade County. A review of past and present Florida Statutes pertaining to transportation concurrency is also provided. Through input from the SAC and review of best practices alternatives scenarios were developed, and recommendations are proposed to update the current concurrency program in Miami-Dade County.

3.0 Review of Concurrency Management Programs

This section summarizes the history of concurrency management legislation in the State of Florida, including the 2011 Community Planning Act (HB 7207). Concurrency management programs currently in place in municipalities in Miami-Dade County, other counties in Florida, and areas in other states are also described. These programs provide alternative methods that can be integrated into an updated transportation concurrency program in Miami-Dade County.

3.1 Transportation Concurrency Statutes in Florida

3.1.1 History of Transportation Concurrency

The Growth Management Act of 1985 required local governments to establish a systematic process that ensures new development does not occur unless adequate infrastructure is in place. The backbone of transportation concurrency is the LOS standards assigned to public roadways. Local jurisdictions are generally responsible for establishing the applicable LOS standards.

Transportation concurrency requires defining what constitutes adequate roadway LOS. Concurrency also calls for measuring whether new development infrastructure needs can be adequately handled by the combination of existing capacity and programmed improvements. Based on concurrency requirements, if capacity is not available, developers must either: (1) provide the necessary improvements, (2) provide monetary contributions toward the improvements, or (3) hold development until additional infrastructure is implemented. The statutory requirements of transportation concurrency were codified in Chapter 163, F.S., and the applicable administrative rules were established in the 9J-5, F.A.C. Rule.

Transportation concurrency in Florida has been challenging to implement and has been the subject of extensive review and debate. While concurrency has helped to coordinate the timing of development with the availability of transportation facilities, the system also has its limitations, including the difficulty and complexity of its administration; lack of predictability in mitigation costs; perception that costs are

inequitable as a result of the “last-in pays” approach; and the focus on vehicular travel rather than multimodal transportation.

As a result, several Acts enacted through the Florida Legislation have been aimed at augmenting transportation concurrency in the State. The changes proposed were designed to provide more flexibility in the application of transportation concurrency, especially within urbanized areas. Examples of these changes include the creation of special concurrency districts where LOS standards could be reduced, eliminated or revised to include multiple modes. A synopsis of the various legislative changes to concurrency is provided in Appendix A.

During the 2011 Regular Session, the Legislature revisited the issue of transportation concurrency by enacting the “Community Planning Act” (House Bill 7207). The Act substantially amends Part II of Chapter 163, F.S., and shifts the State’s role in the growth management process to one of protecting important State resources and facilities. Consequently, the Act provides local jurisdictions with greater control over planning decisions that affect the growth and development.

3.1.2 Community Planning Act of 2011

Provisions enacted in HB 7207 present several changes to the current transportation concurrency process in the State of Florida. Notably, the Act removes the state-mandated requirement for transportation concurrency, and provides local governments with the option of continuing to apply concurrency within their jurisdictions. Local jurisdictions can continue to utilize existing TCEAs as an exception to locally required transportation concurrency. For jurisdictions that choose to continue to apply transportation concurrency, minimum requirements and guidelines are provided.

The Act stipulates that all comprehensive plans containing concurrency provisions must include principles, guidelines, standards and strategies for the establishment of a concurrency management system. In addition, comprehensive plans must identify infrastructure needs to ensure that the adopted LOS standards are achieved and maintained for the five-year period of the capital improvement schedule. Local governments electing to eliminate transportation concurrency must adopt a comprehensive plan amendment. The Act also repealed Rule 9J-5, FAC, which established minimum criteria for reviewing and amending comprehensive plans. Provisions and definitions pertaining to plan amendments are now incorporated into various elements of the Act.

Local governments are encouraged, though not required, to develop policy guidelines and techniques to address potential adverse impacts of concurrency that may arise in the following development scenarios: (1) urban infill and redevelopment efforts and urban service areas; (2) projects that impose only “part-time” demands on the transportation system; (3) de minimis¹ impacts; and (4) community-desired types of development, such as job creation projects. Similarly, local governments are encouraged to develop tools and techniques to complement transportation concurrency, including:

- ❖ Developing long-term strategies to facilitate development patterns that support multimodal transportation, including compact urban design; a diverse land use mix, and appropriate levels of intensity and density.

¹ A de minimis impact is “an impact that would not affect more than one percent of the maximum volume at the adopted level of service of the transportation facility as determined by the local government” (s. 163.3180(6), Florida Statutes).

- ❖ Developing area-wide LOS standards that are not dependent on the function of a single road segment.
- ❖ Through exemptions and other strategies, incentivizing development of locally desired development, such as development in urban areas, redevelopment, job creation, and mixed use.
- ❖ Assigning primary priority to ensuring a safe, comfortable, and attractive pedestrian environment, with convenient interconnections to transit.
- ❖ Establishing multimodal LOS standards that promote alternative modes of transportation.
- ❖ Reducing impact fees or local access fees to promote development within urban areas, multimodal transportation districts, and create a balance of mixed use development in certain areas or districts that would also promote affordable/workforce housing.
- ❖ Coordinating with adjacent local jurisdictions to systemize methodologies for measuring impacts on transportation facilities.

Moreover, applicants for development orders and development permits (including Development of Regional Impact (DRI) applicants) can satisfy transportation concurrency requirements if:

- ❖ The applicant enters into a binding agreement to pay for or construct the proportionate share of required improvements;
- ❖ The proportionate-share contribution is sufficient to accomplish one or more mobility improvements that will benefit a regionally significant transportation facility; and
- ❖ The local jurisdiction has provided the means by which the landowner will be assessed the proportionate share of providing the transportation facilities necessary to serve the proposed development.

In addition, the Act fundamentally revised the methodology used to calculate proportionate-share contributions. The contribution is now calculated based on a formula that takes into consideration the expected number of the development phase's peak hour trips, change in peak hour roadway volume, and the construction cost at the time of development payment of the necessary improvement. The proportionate-share formula is to be applied only to facilities determined to be significantly impacted by the project under review. The proportionate-share formula was also amended so that developers shall not contribute to currently deficient transportation facilities².

When transportation impact mitigation is provided for a particular phase of the development, full mitigation must be maintained in subsequent phases. Unmitigated trips from a phase may be cumulatively analyzed with trips from subsequent phases to determine whether mitigation is required. In projecting the number of trips to be generated by the development under review, trips assigned to a toll-financed facility are eliminated from the analysis. Finally, the Act provides that

² Based on transportation concurrency provisions, the term "transportation deficiency" means "a facility or facilities in which the adopted level of service standard is exceeded by the existing, committed, and vested trips, plus additional projected background trips from any source other than the development project under review, and trips that are forecast by established traffic standards, including traffic modeling, consistent with the University of Florida's Bureau of Economic and Business Research medium population projections. Additional projected background trips are to be coincident with the particular stage or phase of development under review." (Laws of Florida, Chapter 2011-139, House Bill No. 7207)

applicants must receive credit on a dollar-for-dollar basis for impact fees, mobility fees, and other transportation concurrency mitigation requirements for the project.

In the short-term, plan amendments must comply with the revised concurrency requirements, including:

- ❖ Studies and techniques for evaluating and measuring LOS must be professionally acceptable;
- ❖ The five-year capital improvements schedule shall identify facilities necessary to meet the adopted LOS;
- ❖ The local jurisdiction must consult with the Florida Department of Transportation (FDOT) when proposed amendments affect the Strategic Intermodal System;
- ❖ Public transit facilities are exempt from transportation concurrency requirements; and
- ❖ Binding proportionate-share agreements to pay for or construct the proportionate share of required improvements should be executed.

In 2012, HB 7081, the glitch bill, was approved. The Bill clarifies the 2011 Community Planning Act's requirement for a plan amendment in the event concurrency is rescinded. The Bill states that such comprehensive plan amendments must be processed under an expedited, modified review process that is not subject to state review. Plan amendments must be provided to local agencies if requested, however. Plan amendments should also be provided to the appropriate state agency; i.e. plan amendments rescinding transportation concurrency must be submitted to the Florida Department of Transportation.

3.2 Transportation Concurrency Programs in Florida

In light of current transportation concurrency impacts and the changes proposed by the new Legislative Act of 2011, local jurisdictions in Florida have been exploring alternatives to the traditional transportation concurrency system. For example, Duval and Pasco Counties have recently adopted mobility fees in lieu of transportation concurrency. Mobility fees were viewed as a funding mechanism for transportation modes that incentivize compact development and do not require building extensive infrastructure. Similarly, Alachua County established a multimodal transportation fee approach as an alternative to impact fees.

This section provides an overview of the key transportation concurrency management programs implemented in local jurisdictions in Florida, which were identified by the study team as appropriate examples. In addition to the following programs described, concurrency programs from municipalities within Miami-Dade County were also examined, including the cities of Aventura, Homestead, Miami Beach, Miami Gardens, Miami Lakes, Miami Shores Village, and North Miami. A review of these jurisdictions is outlined in Appendix B. Subsequent sections of this report provide a review of the specific requirements of the Miami-Dade County concurrency management program, as well as best practices drawn from other jurisdictions.

3.2.1 Alachua County, Florida

In 2011, Alachua County adopted its Multi-Modal Transportation Mitigation (MMTM) Program to simplify the concurrency and proportionate-share process. Through this program, new development applicants make a one-time payment to meet concurrency. MMTM is based on the County's Mobility

Plan, which establishes land uses supportive of multimodal transportation, through the creation of policies promoting Traditional Neighborhood Development (TND) and Transit Oriented Development (TOD) within the County's Urban Cluster.

The Mobility Plan establishes multimodal LOS standards and identifies the multimodal infrastructure needed to provide mobility within the Urban Cluster, and forecast multimodal infrastructure costs. The Mobility Plan has also been incorporated into the following elements of the Alachua County Comprehensive Plan: (1) Future Land Use Element; (2) Transportation Mobility Element; and (3) Capital Improvements Element.

The Mobility Plan supports land use and transportation strategies that promote compact, mixed-use, and energy efficient developments that provide multimodal mobility options. In addition, the Mobility Plan promotes grid roadway networks, thereby enhancing connectivity. Multimodal LOS standards are established in the Transportation Mobility Element. The Mobility Plan also identifies the necessary multimodal projects needed to achieve the adopted LOS standards by 2030, and includes a twenty-year Capital Improvements schedule that incorporates funding of capital infrastructure for multimodal transportation networks, including funding frequent transit service along dedicated transit corridors, as densities and intensities increase within the Urban Cluster.

The Alachua MMTM Program provides an alternative to traditional transportation concurrency within the Urban Cluster, allowing new developments to mitigate transportation impacts and pass concurrency requirements through a one-time mitigation payment. The MMTM fee model is different from an impact fee, mobility fee or multimodal transportation fee in that it specifically applies to developments that have not received final transportation concurrency approval and do not currently have a valid Final Certificate of Level of Service Compliance (CLSC).

Multimodal projects identified in the Mobility Plan, including transit operations, are based on the projected increase in vehicle miles traveled (VMT) within the Urban Cluster between 2008 and 2030. While the projected costs of multimodal projects, including transit operations, are included in the Capital Improvements Element (CIE), additional multimodal projects may be added to the CIE to address other transportation needs, changes in VMT, and updates to cost estimates for design, construction, right-of-way and transit facilities and operation.

3.2.2 City of Hialeah, Florida

Although the City of Hialeah does not designate TCEAs, it incorporates many of the elements desired in a TCEA into its comprehensive plan. Notably, the comprehensive plan addresses density and intensity requirements in the downtown urban center to support multimodal transportation and encourage mixed-use development. New developments are required to include provisions for mass transit, such as bus shelters, turn-outs, designated bus stops, and mass transit service information.

3.2.3 City of Miami, Florida

The City of Miami's comprehensive plan designates Urban Infill Areas (UIA) within the City boundary as TCEAs. Additionally, the City adopted Miami-Dade County's tiered LOS standards for UIAs. LOS is defined based on multimodal capacity, thus encompassing the frequency of existing and programmed public

transit service. The City utilizes a multimodal person-trip methodology for calculating LOS to measure multimodal capacity in future peak LOS conditions.

3.2.4 Orange County, Florida

Orange County's comprehensive plan identifies goals, objectives, and policies that are relevant to transportation concurrency. The County defines an Alternative Mobility Area (AMA), where concurrency is not required. The AMA consists of the Orlando TCEA and the surrounding area. The purpose of the AMA designation in the Comprehensive Plan is to reduce the adverse impacts that concurrency requirements may have on infill and redevelopment efforts and public transit service in the urban core. The AMA is supported by the following strategies:

- ❖ Context-sensitive infrastructure that contributes to the specific mobility needs of the AMA is required for new development and redevelopment projects;
- ❖ Providing safe and convenient pedestrian, bicycle, and transit access to new development projects is required;
- ❖ All development within the AMA is required to provide alternative mobility strategies appropriate to the area; and
- ❖ The County may require the submission of a Planning Context Assessment Study to determine land use and transportation interconnectivity.

Additionally, Orange County designates Multimodal Transportation Districts (MMTDs) to areas outside of the AMA, provided that:

- ❖ Primary priority is assigned to a safe, comfortable, and attractive pedestrian environment with convenient transit provisions;
- ❖ A compact environment of Transportation Concurrency Management Areas (TCMA) can be created with an existing network of roads and viable alternative travel modes;
- ❖ Concurrency exceptions are awarded to projects that directly promote public transportation within the Urban Service Boundary through transit terminals, routes, and exclusive transit lanes; shelters and stations, projects that include fixed-rail or transit terminals as part of overall design, as well as projects that are transit-oriented and designed to complement existing or planned public transportation projects;
- ❖ High density land use that supports transit service is incorporated;
- ❖ Parking supply is based on average demand, utilizing shared parking and other techniques;
- ❖ Active urban design and architecture that promotes alternative modes of travel is encouraged; and
- ❖ Interagency coordination to support the overall regional multimodal transportation system is maintained.

3.2.5 Pasco County, Florida

In July 2011, Pasco County became the first county in Florida to adopt a mobility fee approach to replace impact fees. The new approach assesses capital costs for roads, transit and bicycle and pedestrian facilities. Additionally, mobility fees address operational and maintenance costs through the gas tax and

tax increment financing provisions. The County adopted the MPO's Long Range Transportation Plan as the basis for mobility fees.

Mobility fees utilize a tiered rate structure that includes lower fees in the urban market area and higher fees in suburban and rural areas. As part of the mobility fee approach, certain land uses (office, industrial, traditional neighborhood development, and transit-oriented development) receive preferred rates. One of the unique elements of the Pasco County mobility fee approach is the buy-down provision, which stipulates that alternative transportation revenue sources can subsidize, or "buy-down", the mobility fee for preferred uses and locations. Funding sources include the "Penny for Pasco" sales tax and a new 33.33 percent countywide tax increment district. The buy-down is calculated annually based on actual permits and revenues.

Under the Pasco County mobility fee system, municipalities have the option to participate. Mobility fees and tax increment revenues are earmarked for improvements in municipalities that adopt the approach. Additionally, cities benefit from TND rates incorporated into the fee schedule. Facilities that are designated as part of the Strategic Intermodal System within Pasco County also receive a portion of the fee.

Under the County's Timing and Phasing System, the County chose to eliminate transportation concurrency, and instead LOS analysis is performed only at key stages of discretionary development (conditional uses and special exceptions). Discretionary entitlements can be timed to match available transportation capacity. Exemptions are provided for office, industrial and hotel uses. This approach leverages TND and development in the County's designated urban areas. Finally, it should be noted that besides funding needed infrastructure improvements, the Pasco County approach is utilized for promoting economic development efforts, activities that support tourism, and "smart growth" development.

3.3 Transportation Concurrency in Other Areas

This section provides an overview of concurrency programs applied in other regions nationwide that were reviewed for this study. The programs present innovative methods that can be adapted and integrated into Miami-Dade County's current concurrency program. The section that follows presents an assessment of the existing concurrency system in Miami-Dade. Subsequently, a summary of best practices deduced from the literature review and stakeholder input is included.

3.3.1 Bellingham, Washington

In 2009, the City of Bellingham was awarded Washington's transportation planning award (sponsored by the American Planning Association, APA) for its multimodal concurrency program. The program adopts a tool that is plan-based, and is designed to accomplish the specific transportation and land use goals of local communities. While the program is not tied to the City's Transportation Impact Fee (TIF) schedule, the TIF Reduction Program for Urban Village areas has also received a planning achievement award for its progressive approach.

The City's concurrency program includes Multi-Modal Level of Service (MMLOS) and new multimodal performance measures. The multimodal measures include sidewalks, bike lanes, and transit amenities,

and traditional automobile measures. The methodology also takes into account land use densities and intensities.

As part of the multimodal concurrency program, the City of Bellingham designated Concurrency Service Areas (CSAs) within its boundaries. Specifically, the City designated 16 CSAs that are grouped into three main classifications based on location, land use type and availability of multimodal transportation facilities. The three classifications are displayed in a color-coded system. Higher person-trip availability is awarded to areas that promote infill and redevelopment opportunities. The CSAs are classified as follows:

- ❖ **Urban Villages (Type 1)** are areas with established master plans that contain high frequency transit service, higher density and mixed land uses, and a high percentage of bicycle and pedestrian facilities. These areas have a lower reliance on the automobile as the sole means of transportation.
- ❖ **Transition Areas (Type 2)** are areas that are predominantly residential, but have a defined grid roadway network pattern, moderate densities with some mixed use and commercial uses, some high frequency transit service, and moderate bicycle and pedestrian facilities. These areas are characterized by a moderate reliance on automobile use for mobility.
- ❖ **Outer Edges (Type 3)** are areas located farthest from the urban core, have moderate to low density land uses with little mixed-use, and have a low availability of transit service and bicycle and pedestrian facilities. These areas rely primarily on automobile travel.

Level of Service (LOS) and Person-Trips Calculation

To measure LOS, the City of Bellingham established a “Person Trips Available” (PTA) methodology; based on arterial and transit capacity for motorized modes, and the degree of network completeness for pedestrian and bicycle modes. LOS criteria are determined as shown in Table 1.

Table 1: City of Bellingham’s LOS Criteria for Motorized and Non-Motorized Modes

Motorized Transportation Modes	
Arterial Streets	Peak hour LOS PTA during weekday PM peak hours based on data collected at designated concurrency measurement points for each CSA.
Transit	Determine seating capacity, measure ridership, and equate to person-trips available via public transit service during weekday PM peak hour based on data collected at designated Concurrency Measurement Points for each CSA.
Non-Motorized Modes	
Bicycle	Credit person-trips according to the degree of bicycle network completeness for designated system facilities/routes for each CSA.
Pedestrian	Credit person-trips according to the degree of pedestrian network completeness for designated system facilities/routes for each CSA.
Trails	Credit person-trips according to the degree of bicycle and pedestrian network completeness, where trails serve a clear transportation function for a CSA.

Source: Multimodal Level of Service, Bellingham Management Code (BMC) 13.70

Person-trips are calculated by mode as follows:

Automobiles – Traffic counts for major arterials are updated regularly (at least annually) along major arterials in each CSA, and are converted to person-trips using local and national data for average car occupancy rates.

Transit – Transit person-trips are calculated using seating capacity on buses and transit ridership on select routes at concurrency measuring points. Transit person-trips are also weighted based on land use classifications. Person-trips are calculated by multiplying headways and seating capacity per hour in both directions, and comparing it to travel demand at PM peak hours

EXAMPLE: A high frequency transit line has 15-minute headways, and each bus contains an available 40 seats. Person-trips per hour would be 40 seats x 4 trips per hour x 2 directions = 320 person-trips per hour.

Bicycle and Pedestrian – Non-motorized travel modes are measured by the degree of completeness of the selected bicycle and pedestrian routes for each CSA, and are then converted to PTA credits. The City works with the Bicycle and Pedestrian Advisory Committee to determine the degree of completeness for each of the selected facilities within a CSA (measured in linear feet). The City then awards 20 person-trip credits for each one percent of bicycle or pedestrian facilities that is above the 50 complete threshold (the percentage indicates the minimum level of completeness of a planned system that allows it to be considered a viable alternative mode). Ten points are awarded for each multiuse trail completed above the 50 percent threshold. The formula for awarding person-trip credits is as follows:

Step 1: $(\text{Planned Network/Existing Inventory}) \times 100 = \text{Percent Complete}$

Step 2: $(\text{Percent Complete} - \text{Minimum Threshold for Person-Trip Credits}) \times 20 \text{ credits}$

EXAMPLE: An inventory of existing infrastructure shows that there are 45,000 linear feet of bicycle facilities serving a selected CSA. An additional 27,000 linear feet are planned and funded in the six-year transportation improvement program. The person-trip calculation is as follows:

Step 1: $(27,000 / 45,000) \times 100 = 60.0 \% \text{Complete}$

Step 2: $60.0\% - 50\% = 10\%$

$10\% \times 20 \text{ credits} = 200 \text{ Person-trip Credits for the existing bicycle facilities}$

Weighting/Evaluation Criteria

In addition to the person-trip credit calculations in the City of Bellingham's multimodal concurrency program, motorized and non-motorized travel modes are weighted in each CSA. Figure 1 illustrates the distribution of the weighting factors across the three area types. The weighting criteria depend on the land uses within each CSA. For example, the auto mode weight factor in Urban Village Areas (Type 1) is lower than that in both the Medium Density Areas (Type 2), and the Lower Density and Auto-Oriented Areas (Type 3). Conversely, the transit mode weight factor in Type 1 and Type 2 areas is higher than that in Type 3.

For non-motorized travel modes, while the minimum percentage of completion for the system is the same for all Area Types (set at 50 percent), the mode weight factor for both the pedestrian and bicycle modes is higher in the Urban Village Areas. The same concept applies to multiuse trails. The aim of the weighting factors is to normalize the different modes of travel based on the three main land use categories, thereby allowing for a consistent multimodal analysis approach to evaluating transportation concurrency.

Figure 1: Weighting Factors for Person-Trips in Each Concurrency Service Area

	Transportation Concurrency Service Areas		
Mode	Type 1 ¹	Type 2 ²	Type 3 ³
Motorized			
Auto			
Mode weight factor ⁴	0.70	0.80	0.90
Transit			
Mode weight factor ⁵	1.00	1.00	0.80
Non-Motorized			
Pedestrian			
Percent threshold for minimum system complete ⁶	50%	50%	50%
Person trip credit for 1% greater than minimum threshold ⁷	20	20	20
Mode weight factor ⁸	1.00	0.90	0.80
Bicycle			
Percent threshold for minimum system complete	50%	50%	50%
Person trip credit for 1% greater than threshold	20	20	20
Mode weight factor ⁹	1.00	0.90	0.80
Multi-Use Trails ¹⁰			
Person trip credit for 1% greater than threshold ¹¹	10	10	10
Mode weight factor ¹²	1.00	0.90	0.80

1. Type 1 = Urban Village areas with adopted master plans, high-density mixed use zoning, or an active master plan process.

2. Type 2 = Medium density areas adjacent to and influenced by Urban Villages.

3. Type 3 = Lower density and auto-oriented areas outside of Urban Villages.

4. Auto mode weight factor considers the importance of roadways to a service area, relative to the availability of other mode alternatives.

5. Transit mode weight factor considers the availability/viability of the transit mode to a service area.

6. This is the minimum level of the planned system completed for it to be considered a viable mode alternative.

7. Person trips credited to service area based on the amount of the system completed minus the minimum threshold.

8. Pedestrian mode weight factor considers the importance of pedestrian facilities to a service area, relative to land use and travel patterns.

9. Bicycle mode weight factor considers the importance of bicycle facilities to a service area, relative to land use and travel patterns.

10. Multi-Use Trails = relatively level, multi-use trails connecting activity centers, destinations, and biking facilities.

11. Person trips credited to service area based on each comparative 1% of the total planned bike system adopted in Comprehensive Plan.

12. Multi-Use Trail mode weight factor considers the importance of bike-friendly trails to a service area, relative to land use and travel patterns.

Once the multimodal person-trip credit thresholds are calculated for each CSA type based on the above analysis method, they are established as the thresholds for determining concurrency. Person-trip credit thresholds replace LOS standards that are adopted as part of other concurrency programs. These thresholds take into consideration transportation from a multimodal perspective and land use types based on density and intensity.

To calculate available credits for a new development based on the person-trip multimodal concurrency methodology, the peak hour capacity of each transportation facility adjacent to the development is

calculated for each mode, measured in person miles of travel. The volume of each facility is also computed in person miles of travel. The remaining capacity is then determined by subtracting the volume from the facility's peak hour capacity. Finally, the resulting available capacity is divided by the trip length of each land use area type, to determine the available unit capacity in person-trips. The calculated unit capacity of each mode is compared to corresponding person-trip threshold to determine whether concurrency is satisfied.

3.3.2 King County, Washington

The concurrency management system utilized in King County is designed to meet statewide concurrency standards. The program involves determining actual travel time (or sampled, where funding is limited) by corridor segment on state highways and principal and minor arterials in the County. Travel time (calculated as average travel speed per hour) is associated with levels of service, and varies by roadway classification and land use type.

There are three land use area types that are used for this approach: the Urban Growth Boundary (UGB), rural mobility areas, rural neighborhood commercial centers, and minor developments and public and educational facilities. LOS thresholds for the UGB and rural mobility areas in King County are designated as LOS E. The rural area LOS threshold is designated as LOS B. Rural neighborhood commercial centers are assigned LOS D. LOS standards for minor developments and public and educational facilities are assigned as LOS F.

Table 2 shows the LOS thresholds assigned based on roadway classification. As shown, LOS thresholds A through F are assigned based on travel speed for each of the four main roadway classifications. Once the LOS threshold is determined based on the land use type, the LOS by roadway classification is compared to that threshold. If the identified LOS is at or above the land use LOS threshold, then the development meets concurrency.

Table 2: King County LOS by Average Travel Speed

Road Classification:	I (State Routes)	II (Principal Arterials)	III (Minor Arterials)	IV (Collector Arterials)
LEVEL OF SERVICE	AVERAGE TRAVEL SPEED (MILES PER HOUR)			
A	>42	>35	>30	>25
B	>34 – 42	>28 – 35	>24 – 30	>19 – 25
C	>27 – 34	>22 – 28	>18 – 24	>13 – 19
D	>21 – 27	>17 – 22	>14 – 18	>9 – 13
E	>16 – 21	>13 – 17	>10 – 14	>7 – 9
F	<=16	<=13	<=10	<=7

EXAMPLE:

A new development is proposed within the UGB, and is adjacent to a principal arterial roadway.

To calculate concurrency compliance, it is determined that a LOS threshold E should be met since the development is located in the UGB. Then, the appropriate average travel speed for the adjacent roadway is determined based on the roadway classification. In this case, the adjacent roadway is a

principal arterial. Therefore, to meet concurrency, the adjacent principal arterial should have an average travel speed of 13 to 17 miles per hour or better.

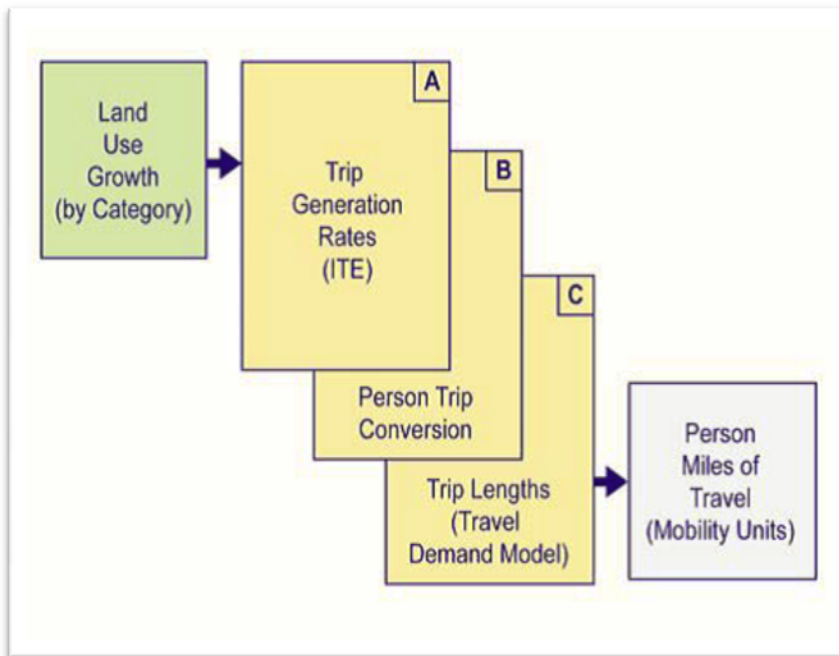
Subsequent to determining LOS thresholds for transportation corridors, travel sheds (delineated traffic areas) are identified for geographic areas sharing similar traffic patterns. Concurrency is evaluated by travel time per roadway mileage for each travel shed. Evaluation criteria requires that 85 percent of the arterial mileage within the travel shed should meet concurrency standards. The determinations are made based on a pass/fail system. Additional elements of this concurrency system include:

- ❖ Both residential and non-residential developments are tested using the same concurrency standards.
- ❖ The system also identifies rural mobility areas that may provide land use, enhanced multimodal travel and reduced trip lengths within rural areas.
- ❖ Major corridors causing the travel shed to fail concurrency are evaluated to identify projects needed to bring the travel shed back into compliance.
- ❖ An impact fee system is in place by ordinance in King County, and is found to be similar in scope to growth management legislation and proportionate-share provisions in Florida in the following ways:
 - Impact fees shall not exceed a proportionate share of costs for transportation improvements related to the new development.
 - Concurrency requirements may not be used to correct existing infrastructure deficiencies.
 - Concurrency may only be applied to transportation improvements that are related to the traffic impacts of the new development.

3.3.3 Redmond, Washington

The City of Redmond utilizes transportation concurrency to help implement their Long Range Transportation Facilities plan. The Plan includes transportation facilities based on the city's vision for land use and transportation balance over the long range 25-year planning horizon. Concurrency is determined for the short-range six-year planning horizon. As illustrated in Figure 2, the concurrency method applied is based on a supply and demand concept and the use of "mobility units" for calculation of person-trips.

Figure 2: Calculating Person-trips and Mobility Units in Redmond, Washington's Concurrency Program



Source: City of Redmond Transportation Concurrency System Update, 2008.

The concurrency process includes the following steps:

Step 1: Land Use Summary Table – Measure of Growth

For a fair comparison between the supply and demand of transportation facilities, a land use summary table including the number of residential dwelling units and the square footage of non-residential space is created for the base and forecast years. The difference between the existing and projected land use capacity provides a measure of the rate of growth.

Step 2: Identify Mobility Units – Demand

To determine the transportation impacts that will be generated by future land uses, “mobility units” are developed to measure person miles of travel. Mobility units are developed by converting trip generation rates to person-trips using the Institute of Transportation Engineers (ITE) trip generation rates for the forecasted land use by category, and then dividing the person-trips by the trip lengths (in miles) that are identified in the City’s travel demand model.

Step 3: Linking the Long-Range Plan to the Six-Year Improvement Plan-Supply

The long range plan for the City of Redmond provides a list of transportation improvements and strategies that need to be implemented by the horizon year to meet forecasted travel demands. Percentages for the total cost of improvements are categorized by travel mode. For each mode, a comparison is made between projects needed to support the long range plans and what is programmed in the six-year transportation improvement program, and a percentage of the improvements completed within the six-year period is determined.

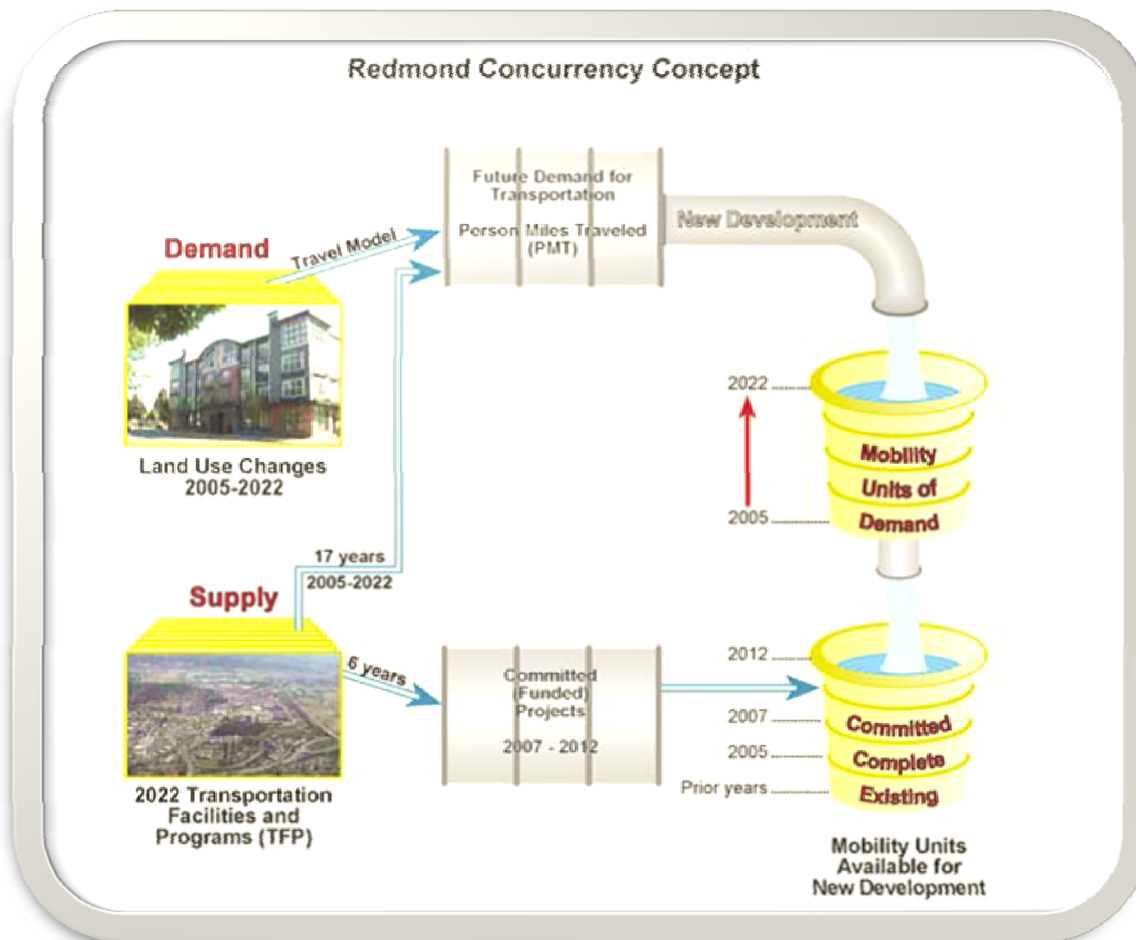
Step 4: Evaluating Concurrency – Supply versus Demand

A comparison of the demand for mobility units through the twenty-five year horizon against the supply available (percentage of completed projects) provides the amount of mobility units needed for a new development. Each development is then analyzed to determine the number of mobility units expected to be generated by the particular development against the calculated available mobility units from the six-year transportation improvement plan. If sufficient mobility units are available, the proposed development is determined to meet concurrency. If mobility units are not sufficient, the developer may:

- (1) Wait until units become available as projects are implemented within the improvement program,
- (2) Pay for additional mobility units to offset the impacts of the development, or
- (3) Agree to accelerate the implementation of key infrastructure projects needed to meet the City's transportation demand.

Figure 3 below illustrates the four-step process employed in determining transportation concurrency in Redmond, Washington.

Figure 3: City of Redmond Transportation Concurrency Concept



Source: City of Redmond Transportation Concurrency System Update, 2008.

The transportation concurrency report for the City of Redmond also identified a number of recommendations for concurrency and development review that may be considered for Miami-Dade County's concurrency policies, including:

- ❖ *Maintaining an "Annual Mobility Report Card"* to assess performance for each mode and determine needed modifications to meet mode split and assess progress towards completing projects within the 25-year horizon.
- ❖ *Incorporating incentives.* While concurrency addresses growth rates, impact fees and incentives can impact the density and quality of growth. Incentives are recommended as part of the impact or mobility fee process for desirable growth measures.
- ❖ *Modifying the current travel demand model.* It is recommended that the travel demand model be modified to quantify reduced auto trips for specific types of development. This would specifically address trip length variation, as it is used to calculate mobility units.
- ❖ *Integrating pedestrian connectivity considerations.* Pedestrian connections to transit stops within a quarter of a mile of new developments should be reviewed to determine whether facilities are sufficient, and to allow for improving deficient pedestrian areas in lieu of impact fees.
- ❖ *Considering Bicycle Parking Ordinances.* In the City of Redmond, non-residential projects that are larger than 100,000 square feet are required to provide bicycle parking and other bicycle facilities to accommodate the bicycle mode. Miami-Dade County's current Bicycle Parking Ordinance ties the amount of bicycle parking to the amount of automobile parking in most commercial land uses. It is recommended that the quantity requirements for bicycle parking be determined by land use type. Guidance can be found in the Association of Pedestrian Bicycle Professionals publication Bicycle Parking Guidelines 2nd Edition.

3.3.4 Montgomery County, Maryland

Montgomery County, Maryland, has had an adequate public facilities ordinance in place since 1974. Every two years, the County is required to review and update its growth policy, including the adequate facilities ordinance. The most recent growth policy update, the 2009-2011 Growth Management Policy, was reviewed for this study.

The ordinance requires that all development projects pass a two-pronged test for concurrency in each policy area (a geographically-defined boundary). The test of the policy area includes the relative arterial mobility test and the relative transit mobility test. The relative arterial mobility test measures the congestion of the arterial network, and is based on "urban street delay of service", or a comparison between modeled congested speeds and free-flow speeds on arterials roads. Table 3 below shows the breakdown of the arterial mobility LOS thresholds in Montgomery County. For example, a trip along an urban arterial with free flow speed of 40 miles per hour is attributed LOS A conditions when the actual speed is at least 34 miles per hour, including the delay experienced at traffic signals.

Table 3: Montgomery County Arterial Mobility LOS

Level of Service	Urban Street Travel Speed
A	At least 85% of free-flow speed
B	At least 70% of free-flow speed
C	At least 55% of free-flow speed
D	At least 40% of free-flow speed
E	At least 25% of free-flow speed
F	At least 25% of free-flow speed

Source: Resolution 16-1187, Policy Area Mobility Review, 2011.

The relative transit mobility measure is a LOS standard based on transit/auto travel time, or the relative speed by which journey-to-work trips can be made by transit, compared to automobile trips. Table 4 illustrates the transit mobility LOS thresholds utilized by Montgomery County. For example, if the relative speed of a journey to work transit trip is determined to equal 75 percent of the speed for the same trip by car, a LOS B is assigned to the transit trip.

Table 4: Montgomery County Transit Mobility LOS

Level of Service	Urban Street Travel Speed
A	100% or more than highway speed (faster than automobile travel)
B	At least 75% of highway speed
C	At least 60% of highway speed
D	At least 50% of highway speed
E	At least 42.5% of highway speed
F	Less than 42.5% of highway speed

Source: Resolution 16-1187, Policy Area Mobility Review, 2011.

The two measures are viewed as inversely proportional to one another, and reflect the County's encouragement of development near high quality transit facilities, where roadway congestion levels can be compensated by providing high-quality transit service. In these areas, transit LOS equivalency rates are calculated to establish acceptable arterial LOS. As shown in Table 5, if an area has a transit LOS A, arterial LOS D within the same area is considered acceptable. Alternatively, if transit LOS is determined to be F in a particular area, the arterial LOS that must be achieved is set at A.

Table 5: Relationship between Arterial and Transit LOS, Montgomery County, WA

Transit LOS	Arterial LOS
A	D
B	D
C	D
D	C
E	B
F	A

Source: Resolution 16-1187, Policy Area Mobility Review, 2011.

Montgomery County uses modeling data to compute the relationship between the programmed set of transportation facilities and the geographic pattern of existing and committed jobs and housing units. The traffic model tests future land uses and compares the resulting traffic volumes to the arterial LOS in each policy area. Full mitigation (defined as mitigating 50 percent of the trips created by a proposed development) is required when:

1. The LOS on local roads is expected to exceed the arterial LOS, or
2. The magnitude of the future development in a policy area will cause the LOS on local roads in other policy areas to exceed arterial LOS standards.

An annual analysis of these factors is required, and if policy areas are found to require full mitigation, the Planning Board may not approve additional development projects, with the exception of special circumstances in specific policy areas as defined in their growth policy (updated every two years). The Planning Board may adopt Policy Area Mobility Review guidelines and other technical materials to further specify standards in policy areas regarding the adequacy of mitigation.

4.0 Assessment of the Current Methodology

Provisions governing transportation concurrency management in Miami-Dade County are incorporated into the elements of the Miami-Dade County CDMP; Section 33G-Code of Miami-Dade County; and Administrative Order 4-85. Concurrency determinations are conducted in conjunction with key development approval activities, including: zoning applications, site plan and subdivision approvals; and prior to the issuance of building permits and certificates of use and occupancy. This section provides an overview of the key elements of the existing concurrency management program. An assessment of the different concurrency elements based on best practices approaches is also provided in this section.

4.1 Current Concurrency Approach in Miami-Dade County

4.1.1 Miami-Dade County's Comprehensive Development Master Plan

Miami-Dade County's Comprehensive Development Master Plan (CDMP) establishes and monitors LOS standards and relates concurrency requirements to the LRTP. The CDMP consists of several elements, three of which specifically address transportation concurrency. The three elements are:

- 1) The Capital Improvements Element (CIE), which ensures comprehensive plans are financially feasible. Besides addressing concurrency in its goals and policies, the CIE includes a sub-element on the Concurrency Management Program.
- 2) The Land Use Element, whose goals and policies ensure that the County's land use patterns are consistent with the projected population and economic growth.
- 3) The Transportation Element, which calls for a comprehensive approach to multimodal transportation in the County, promoting circulation for both motorized and non-motorized travel modes. The Transportation Element includes the Traffic Circulation and Mass Transit sub-elements, which specifically address concurrency and LOS thresholds for roads and transit.

Miami-Dade County established UIAs in 1989 to aid in transportation concurrency management. The UIA³ falls entirely within Miami-Dade County's Urban Development Boundary (UDB). Additionally, in 1994, Miami-Dade County amended the CDMP to:

- ❖ Designate the Urban Infill Area as a Transportation Concurrency Exception Area (TCEA);
- ❖ Authorize the creation of Redevelopment Concurrency Exception Areas; and

³UIA is defined as that part of Miami-Dade County located east of, and including, SR 826 (Palmetto) Expressway and NW/SW 77 Avenue, excluding the area north of SR 826 and west of I-95, and the City of Islandia.

- ❖ Authorize concurrency exceptions for projects that promote public transit or pose only part-time demands on the transportation system.

Miami-Dade County's CDMP states that a new development will not be denied concurrency approval for infrastructure facilities if it is consistent with the CDMP and meets the following criteria:

- a) The new development is within the Urban Infill Area(UIA); or
- b) The new development is proposed within an existing service area within the Urban Development Boundary (UDB), and is in an area that is eligible for a Community Development Block Grant (CDBG), or in an Enterprise Zone; or
- c) The new development poses only part-time demands on the transportation system and is within one-quarter mile of a major transit station or hub; and
- d) If the new development implements traffic reduction measures for single-occupancy travel in the event that the proposed development increases peak-hour traffic to the point of not meeting LOS standards established in the CDMP.

The County adopted a tiered approach to setting LOS standards. LOS standards are different for urban and rural areas, accounting for the variations in congestion levels and transit service between different land use designations.

The Traffic Circulation sub-element of the CDMP designates minimum LOS standards for the Florida Interstate Highway System (FIHS), the Strategic Intermodal System (SIS), and non-FIHS facilities. It also includes separate provisions for UIAs, Non-UDB, and accounts for whether transit service is available (transit service availability is none, 20-minute headways, or premium service). Additionally, the Traffic Circulation sub-element provides a comprehensive traffic count system that monitors LOS on county roads. Issuance of Development Orders (DO) is linked to compliance with LOS standards and other fiscally-constrained improvement programs. The mass transit sub-element of the CDMP establishes minimum transit LOS standards in the County's UDB, and monitors transit LOS on an annual basis. Guidance on "community urban centers" is also provided, where development focuses on promoting transit use.

4.1.2 Administrative Order 4-85

Administrative Order (AO) 4-85 identifies methods and criteria to be utilized by concurrency review agencies when evaluating development order applications and impacts on LOS standards. The AO encompasses concurrency policies and procedures, and includes a schedule of fees for concurrency analysis. Traffic impacts are calculated on roadways nearest to the new development, and concurrency is determined based on preset traffic count stations.

The adopted LOS standard in the area located between the UIA and UDB is LOS D, for state and county roads. The adopted LOS standard within the UIA or the TCEA is LOS E for state and county roads if there is no public mass transit service available. If transit service is located within a half-mile of the development, and has 20 minute headways or less, roadways are permitted to operate at 120 percent of their capacity. Corridors can operate at 150 percent of their capacity only if extraordinary transit service, such as commuter rail, is provided within a half-mile. Transit LOS standards vary based on the combined resident and workforce population density and the proximity of the transit route to the new development.

Per the AO, development impacts are evaluated for roadway capacity needs based on the LOS of the nearest roadways. To calculate impacts, trip generation rates should be obtained from the Miami-Dade County Road Impact Fee Ordinance, the Miami-Dade Road Impact Fee Manual, or the most recent edition of the ITE's Trip Generation Manual. Committed facility improvements should be incorporated into the impact calculations. The AO provides developers the option to submit traffic impact studies.

To monitor transit LOS, maps should be maintained for peak-hour headway service, bus route spacing, and population and employment densities. Evaluating development impacts on transit service considers whether the new development would increase the population and employment density over the LOS threshold. If it is determined that additional transit service is needed, an appropriate route or route extension is identified to meet the CDMP transit LOS standard. In determining the appropriate route, vehicle capacity needs and the economic feasibility of the transit route are considered based on Miami-Dade Transit (MDT)'s methodology for forecasting transit ridership.

4.1.3 Chapter 33-G, Service Concurrency Management Program, Code of Miami-Dade County

Chapter 33-G, Service Concurrency Management Program, of the Code of Miami-Dade County requires the Department of Regulatory and Economic Resources (DRER) to administer the concurrency management process. Per the Code, various concurrency review agencies are responsible for conducting reviews for the concurrency services at the time of development order applications. Concurrency review agencies must utilize and apply the concurrency analysis methods stated in Administrative Order 4-85.

Additionally, Section 33-G establishes the regulatory framework governing concurrency management. Under the Code, DRER administers the concurrency management program through:

- ❖ Receiving development applications and ensuring their completeness;
- ❖ Distributing development applications to the appropriate concurrency agencies;
- ❖ Monitoring and enforcing concurrency timelines;
- ❖ Compiling agency review statements;
- ❖ Approving or denying development applications; and
- ❖ Maintaining records and documentation for development applications.

Section 33-G also describes the types of development that are exempt from transportation concurrency, including developments within the County's UIA, empowerment/enterprise zones, projects within a quarter-mile of the transit stations, and developments that pose only part-time demands on the transportation network.

4.2 Miami-Dade County Concurrency Assessment Matrix

Table 6 outlines the different elements of Miami-Dade County's transportation concurrency policies that have been reviewed in this study. Key elements pertaining to concurrency were extracted from the Miami-Dade CDMP, Administrative Order 4-85, and Chapter 33-G, Service Concurrency Management Program of the Code of Miami-Dade County. Concurrency-related characteristics of each element are provided, as well as recommendations for potentially updating the current concurrency management system, based on the literature review and stakeholder input. Appendix C includes a more detailed description of the elements reviewed.

Table 6: Transportation Concurrency Elements in Miami-Dade County, Current Guidance and Proposed Recommendations

Guidance	Characteristics	Recommendations
Miami-Dade Comprehensive Development Master Plan (CDMP)		
Traffic Circulation Sub-Element		
Level of Service (LOS) Standards	The CDMP designates minimum LOS standards for FIHS (SIS) and non-FIHS (SIS) facilities, and includes separate provisions for UIA, Non-UDB areas. It also accounts for transit service.	Link LOS standards with the land use types and intensities.
		Develop and adopt LOS standards for bicycles and pedestrians in TCEAs, urban infill areas and roadways parallel to premium transit and integrate with roadway and transit LOS standards.
		Alternative strategies outlined in 163.3180 (5) could be implemented; assigning primary priority to safe, comfortable pedestrian environments.
LOS Monitoring	The CDMP requires annual traffic counts to monitor the operating conditions of all state and county roads.	Monitor the operating conditions of non-auto modes and integrate with automobile LOS monitoring. FDOT's LOSPLAN software could be utilized for this purpose.
Issuance of Development Orders (DO)	Issuance of DO is based on compliance with: LOS standards; the Congestion Management Plan (CMP); and the CIE.	LOS standards should be developed for non-auto modes for Issuance of DO.
Traffic System Management Techniques (TSM)	Includes low-cost efficiency improvements such as signal timing, intersection signing, marking, channelization, on-street parking, etc.	Develop a policy to address operational efficiency improvements and mitigation options that address a comprehensive access management program within the UDB for low-cost improvements should be developed. The program should identify major corridors for improvements. Proposed efforts should be coordinated with FDOT for state facilities
Mass Transit Sub-Element		
Overview	Emphasizes a balanced transportation system by 2025; coordination with the land use element; and describes transit services in the 2003 EAR element.	Additional guidance on the relationship between the long range planning process and concurrency management should be provided.

Guidance	Characteristics	Recommendations
Minimum Transit LOS in Urban Development Boundary (UDB)	The adopted transit LOS standard inside the UDB is defined as the area with resident/work force population of 10,000 persons/square mile. Transit service should provide 30-minute headways and an average route spacing of 1 mile. Specific population/employment densities warrant transit service.	New legislation calls for use of the Bureau of Economic and Business Research's (BEBR) mid-range projections, which could be applied here.
		Sufficient demand to warrant service should be defined.
		Special provisions should be provided for TCEAs to include greater transit service.
		Special provisions for TOD should be considered.
		Transit LOS can be incorporated into MMLOS standards.
LOS Monitoring	Annual monitoring of transit system LOS.	LOS monitoring should be incorporated into the annual Transit Development Plan (TDP) analysis process, to more effectively coordinate transit development plans, comprehensive plan, and the CMP.
Administrative Order 4-85		
Mass Transit		
Minimum LOS Standards	Minimum standards require at least 60 minute transit service headways in the UDB, and average route spacing of 1 mile if:	BEBR's mid-range projections can be used to determine population density.
	The combined proposed population and employment density exceeds the existing transit network capacity by 4,000 persons/square mile, and the expansion corridor has a 1/2-mile buffer on both sides.	Given the new legislation changes to financial feasibility, a clearer definition is needed for the Economic Feasibility section of the Mass Transit Sub-Element.
	The development must demonstrate sufficient demand to warrant transit service.	
	The transit investment must be economically feasible.	
	The transit investment should not be at the detriment of existing or planned service in higher density areas.	

Guidance	Characteristics	Recommendations
Analysis Period	Average of the two highest consecutive hours.	Peak hour.
Area of Influence	The area of influence is currently based on predetermined traffic count stations closest to the new development.	The area of influence should be either based on the development size or the percentage of the maximum service flow rate.
Methodology	An Area within 1 to 2 miles of routes with 60-minute or shorter headways must meet LOS standards.	
	Miami-Dade Transit (MDT) prepares and maintains data on peak hour headway service for all routes, as well as population and employment densities.	The 10,000 persons/square mile threshold should be revisited to consider thresholds from the Transit Cooperative Research Program's (TCRP) Transit Capacity and Quality of Service Manual. The Manual identifies a density of three households per acre and four jobs per acre as the thresholds to qualify as a transit-supportive environment.
	If the population and employment estimates of the Traffic Analysis District (TAD) are less than 10,000 persons/square mile, no transit service is required to meet LOS standards.	
Chapter 33-G of the Service Concurrency Management Program		
Review Agencies	Chapter 33-G identifies the concurrency review agencies for the specific services. Review agencies include MDT for public transit and Public Works for traffic circulation.	The Review Agencies Section should consider formally involving the South Florida Regional Planning Commission (SFRPC) for regionally significant developments, and FDOT for impacted state facilities.
Exemptions from Concurrency	Provides case study examples of DOs that have been issued (approved) despite potential negative concurrency impacts. Examples are developments in the UIA, empowerment/enterprise zones, developments with part time demands on the transportation system, projects that are within quarter-mile from a transit station, or de minimis impact projects.	The type and intensity of development near transit should be addressed in this section, to ensure land use type consistency.

4.3 Assessment of the Current Miami-Dade County Concurrency Management Program

Based on the review of the transportation concurrency programs in Miami-Dade County and the research conducted on concurrency programs in other areas, the following points highlight the potential opportunities where the County's existing concurrency system can be updated:

- ❖ While the CDMP establishes LOS standards for different facility types (roadways and mass transit), these standards are not linked to the type and intensity of development. Doing so would assist in predicting traffic impacts of new developments on the overall transportation network.
- ❖ The Traffic Circulation Sub-Element in the CDMP is currently vehicle-oriented. Adopting a more multimodal approach, including developing MMLOS standards and monitoring non-auto travel, would provide for a more comprehensive transportation system that addresses operational efficiency improvements and offers multimodal mitigation options. This should be accomplished at both the policy and technical levels.
- ❖ The Mass Transit Sub-Element in the CDMP can be improved by integrating mid-range projections from the BEBR and MMLOS standards into the current process to enhance consistency.
- ❖ One element that can be updated in Administrative Order 4-85 is the density threshold that is currently being utilized to calculate peak hour headway service. The Transit Cooperative Research Program's (TCRP) Transit Capacity and Quality of Service Manual could provide some guidance on more up-to-date thresholds.
- ❖ Possible amendments to Section 33-G, Service Concurrency Management Program, Code of Miami-Dade County, include involving the SFRPC in concurrency reviews of regionally significant projects, and FDOT for developments that impact state facilities. Additionally, this is another element of the transportation concurrency system where a development's type and intensity can be incorporated, to ensure that land use types support transit.
- ❖ Greater coordination between the concurrency management process and transit development plans should be enhanced to implement multimodal strategies and monitor transit LOS.
- ❖ Further coordination should be maintained between LRTP plans and long-term county-level mobility goals.
- ❖ Population and employment density calculations may also consider nationally recognized research on "transit supportive" environments to develop preliminary requirements for multimodal considerations in areas that currently do not have transit service.
- ❖ LOS standards can be based on land use patterns to facilitate the transportation needs of the different area types.
- ❖ Impact fee credits or reductions may be developed where mitigation occurs on particular corridors that have been identified in county and regional plans for multimodal improvements.
- ❖ There is an opportunity to develop mobility fees in a manner that allows for funding transit operations or furthering mode split based on persons per units of measure and residential versus non-residential developments.

5.0 Analysis of Best Practices

5.1 Summary of Best Practices

5.1.1 Summary

The literature reviewed for this study included innovative tools and approaches that were utilized to apply transportation concurrency. In Florida, a number of counties have already implemented alternative approaches to the current concurrency system. In Alachua County, the MMTM Program, which is based on the County's mobility plan, was created to simplify concurrency requirements. The MMTM program establishes multimodal LOS standards, and requires a one-time mitigation payment for new developments. The MMTM also incorporates current and future vehicle miles traveled (VMT) estimates, and is integrated into the County's Comprehensive Plan, in its Future Land Use Element; Transportation Mobility Element; and Capital Improvements Element.

Orange County, Florida's comprehensive plan defines an Alternative Mobility Area (AMA) within its urban core that is designated as TCEAs. Development within the AMA is required to include safe and convenient multimodal transportation alternatives. Additionally, the County designates MMTDs that promote compact multimodal development in areas outside of the AMA.

Pasco County, Florida's mobility fee program is the first of its kind in the State. The program replaces impact fees and concurrency, evaluates developments from a multimodal perspective, and addresses operations and maintenance costs through tax increment financing. The mobility fee approach is tied to the County's LRTP, and is based on a tiered structure that levies higher fees on areas outside of the urban market. Cities and municipalities in Pasco County can elect whether to participate in the mobility fee program.

Concurrency programs in Miami-Dade County's cities and municipalities were also reviewed, including the Cities of Aventura, Hialeah, Homestead, Miami, Miami Beach, Miami Gardens, Miami Lakes, Miami Shores Village, and North Miami. The City of Miami designates TCEAs within its urban infill areas, and sets multimodal LOS standards that utilize the person-trip methodology to predict future LOS conditions. While the City of Hialeah does not specifically designate TCEAs, it encourages multimodal transportation, and requires that new development include provisions for mass transit.

In addition to reviewing transportation concurrency in Miami-Dade County and the State of Florida, concurrency programs utilized in other areas across the nation were also reviewed. The City of Bellingham, Washington, adopted an award-winning multimodal concurrency program that establishes MMLOS standards based on a weighted person-trips analysis approach. The program also designates CSAs that are classified into three land use types; delineating transitions between urban and rural areas, and accounting for the different transportation needs of each land use type.

In King County, Washington, travel time on corridor segments of major roadways is calculated to determine LOS thresholds for concurrency. LOS standards vary by land use type, and travel sheds are identified for areas with similar traffic patterns. The determinations are made based on a pass/fail system. Impact fees are also assessed as part of the County's concurrency program.

The City of Redmond in Washington utilizes mobility units to calculate person units and apply transportation concurrency. The City's concurrency program is designed to help implement the Long Range Transportation Facilities Plan. The approach is based on supply and demand, where current and future land use requirements are calculated based on land use factors. Demand is determined based on the mobility units estimated for transportation impacts of new development, and fiscally constrained projects in the County's LRTP represent the supply side of this formula. Concurrency is then calculated based on the difference between the supply and demand.

Montgomery County, Maryland, applies transportation concurrency through its adequate public facilities ordinance. The ordinance establishes LOS standards through a two-pronged test, which takes into consideration congestion on the arterial network and relative transit travel time. The level of mitigation is determined based on the two-pronged concurrency test.

5.1.2 Mobility Fee Considerations

As previously elucidated, a number of jurisdictions in Florida are currently evaluating the application of mobility fees as an alternative to transportation concurrency and transportation impact fees. Mobility fees address many of the longstanding concerns associated with transportation concurrency, and may result in a system that is more equitable and internally consistent with the goals of growth management. This section identifies key considerations that should be addressed when developing a mobility fee program.

In December of 2009, the FDOT and the Department of Community Affairs⁴ issued a report entitled *Joint Report on the Mobility Fee Methodology Study*. The report, based on extensive stakeholder input, identified the basic principles to be considered when implementing a mobility fee approach. These principles include the following:

- ❖ *Fairness and Funding:* The mobility fee program should ensure that new development provides mitigation for impacts on the transportation system. Development should not be required to pay for transportation backlogs caused by a shortfall in public investments of existing infrastructure.
- ❖ *Transparency and Predictability:* A mobility fee program should be transparent and predictable in its application.
- ❖ *Countywide minimum application:* A mobility fee program should be applied at a county level, with participation from local governments within the county. There should also be an option for a regional/multicounty application. Local governments would enter into an inter-local agreement to establish the framework for the mobility fee program, which would include establishing funding priorities and methods to ensure equitable distribution of funds. Comprehensive plan amendments would be necessary to establish the mobility fee program, allow intergovernmental coordination, and modify current transportation concurrency management policies.

⁴ In 2011 pursuant to Ch 2011-142 F.S. the Department of Community Affairs was eliminated and its responsibilities for land use planning were transferred to the newly created Department of Economic Opportunity.

- ❖ *Multimodal Planning:* A mobility fee program should be based on mobility plans. Mobility plans should incorporate multimodal travel options, including transit, bikeways, pedestrian walkways, congestion management strategies and other appropriate facilities and services. Additionally, mobility plans should identify areas where development is desired to reduce auto dependence.
- ❖ *Promote Compact, Mixed Use and Energy Efficient Development:* To meet the new legislative's direction to "promote compact, mixed-use and energy-efficient development" a mobility fee program should be sensitive to both vehicle and person miles traveled, and should vary by location and development type. A mobility fee structure should incorporate the location of new development to support a growth management policy encouraging urban infill, redevelopment, transit supportive development and design strategies and measures to reduce transportation demand.
- ❖ *Local Government Flexibility:* Local governments should have the option to retain the ability to pursue land use and transportation strategies that address the specific needs of their area, including the option to retain locally adopted impact fees.

5.3 Recommendations to Improve the Current Methodology

The literature review revealed that while transportation concurrency programs vary from one place to another, there are certain characteristics that effective concurrency management systems share. It was also found that efficient concurrency has a strong link to the jurisdiction's LRTP. Therefore, eleven principles were identified as being desirable in a concurrency management system. These overarching principles were used to evaluate the effectiveness of the current concurrency program in Miami-Dade County, and gauge it against the concurrency approach utilized in the City of Bellingham, Washington, as well as the mobility fee approach described in section 5.1.2 of this report.

The evaluation criteria involved scoring the three approaches based on meeting the particular principle, for all eleven principles. An approach that is considered as completely meeting the principle received a score of '3'. Conversely, an approach that is not perceived to meet a particular principle is assigned a score of '0'. Table 7 summarizes the results of the evaluation. As shown, both the Bellingham concurrency program and the mobility fees approach received a higher total score than the current concurrency program utilized in Miami-Dade County. A more detailed discussion of the scores and potential enhancements to increase the Miami-Dade scores follows.

Table 7: Comparison of Concurrency Approaches

Principle No.	Principle	Miami-Dade	Bellingham	Mobility Fees
1	Comprehensive Plan-based and supportive of anticipated infill	2	3	3
2	Multimodal	2	3	3
3	Ties revenue generation to planning objectives	1	3	3
4	Receptive to transportation demand management strategies	2	3	1
5	Countywide and compatible with municipal governments.	1	2	3
6	Based on accepted transportation planning and engineering principles and Florida law	2	3	3
7	Understandable for local development project evaluation	2	1	2
8	Does not require significant additional data collection	3	2	2
9	Is equitable	0	3	3
10	Ease of implementation or update	3	1	2
11	Readily explainable to elected officials and public	2	1	1
Total		20	25	26
<i>Scale: 0-3, where 0 =Does not meet the principle at all & 3 =Completely meets the principle</i>				

The following summarizes the results of the above evaluation process based on the eleven principles. A specific recommendation was not shown in bold text if the current Miami-Dade approach scored higher or the same as the proposed alternatives for the particular principle.

1. **Concurrency should be comprehensive plan-based and supportive of anticipated infill.** Although all three approaches are considered comprehensive plan-based, the Bellingham and Mobility Fee scenarios provide stronger links to encouraging infill development through the use of financial incentives and credit for multimodal alternatives. ***To receive a score of 3, the Miami-Dade approach would need to provide financial incentives that encourage infill development in the UIA.***
2. **Concurrency should be multimodal with total arterial capacity accounting for all available modes of transportation.** The Bellingham and Mobility Fee approaches provide specific multimodal credit calculations, compared to the current Miami-Dade concurrency system, which does not include non-auto trip calculations. ***While the Miami-Dade concurrency program takes***

roadway LOS standards into consideration, a more integrated multimodal system that also accounts for non-motorized road users should be adopted.

3. **Concurrency should tie revenue generation to planning objectives.** The current Miami-Dade concurrency system ties revenue to fixing deficient roadway segments and transit capital costs. There are also minor reductions in impact fees for development in the UIA. Conversely, both of the alternative approaches use a mobility or impact fee approach that is based on the actual impact that developments pose in the existing infrastructure system. The Bellingham approach utilizes a trip length multiplier for each of the three CSA land use area types; thus longer trips generated in suburban settings are charged higher fees. The mobility fee approach utilizes an incentive program to reduce impact fees for development near multimodal facilities. ***The Miami-Dade concurrency approach should include a methodology for measuring impacts for a larger multimodal transportation network that utilizes trip lengths to tie concurrency to the true impacts of new development. The system should also assess a tiered fee structure that facilitates development in land use areas and transportation modes preferred by planning objectives.***
4. **Concurrency should be receptive to a wide variety of transportation demand management strategies.** Both the City of Miami and the Bellingham concurrency systems utilize person-trips to account for higher vehicle occupancy. The City of Miami system only applies the methodology to designated corridors within the City of Miami, however. ***To be more receptive to transportation demand strategies, the Miami-Dade concurrency program should adopt a similar person-trip approach that would evaluate the multimodal transportation network at a county-level for all corridors.***
5. **Concurrency should be countywide and compatible with municipalities.** Miami-Dade County and its incorporated municipalities utilize compatible TCEAs. The mobility fee approach provides a simpler method, however, that ensures compatibility through utilizing a fixed spreadsheet that is tied into the County's Geographic Information system (GIS) system. The Bellingham approach takes advantage of existing comprehensive plans for the County and municipalities, and can be applied at both levels. ***To develop a concurrency system at the county-level that is compatible with municipalities in Miami-Dade County, the program should:***
 - a. ***Apply a methodology that takes into consideration all land use area types and travel modes within the County; and***
 - b. ***Utilize a systematic approach that facilitates applying the methodology at the different local levels.***
6. **Concurrency should be based on accepted transportation planning and engineering principles and Florida laws pertaining to concurrency requirements.** Although the current Miami-Dade County concurrency system is consistent with the State of Florida's transportation concurrency requirements, it does not reflect the latest best practices. The Bellingham approach is a recognized best practice in multimodal concurrency. The mobility fee approach presents a sound planning and engineering system that could be implemented in lieu of transportation

concurrency legislation. *The Miami-Dade concurrency program should be updated to reflect the latest legislative changes pertaining to concurrency, and should consider the best practices presented in this report to implement an alternative approach that is more multimodal and representative of the true benefits and burdens of new development.*

7. **Concurrency should be understandable and usable for local development, project evaluation, monitoring, and tracking.** The current Miami-Dade concurrency system is a complex system that could be simplified through integrating the recommendations presented in this report. While both the Bellingham and mobility fee approaches are also considered complex, requiring training and education, developing a similar streamlined approach that would ultimately facilitate applying concurrency is important to ensure the success of the concurrency program.
8. **Concurrency should not create significant additional data collection, monitoring, or evaluation requirements for transportation planning staff or the development community.** The current Miami-Dade County system requires the least data requirements. While both alternative approaches require additional data collection and tracking, most of this data is available in GIS format. As will be demonstrated later in this report, the data required to implement an alternative concurrency program in Miami-Dade County are already available, and can be extrapolated for utilization in concurrency applications.
9. **Concurrency should be equitable to all development so that the “last one in” isn’t the only one required to pay.** Currently in Miami-Dade County, only developments that trip concurrency are held responsible for infrastructure mitigation costs. Both proposed alternatives assume that all development is subject to multimodal fees, based on their multimodal impacts. *One of the main criticisms of the current concurrency program in Miami-Dade County is its inequitably; thus to make it more equitable, it should:*
 - a. Be multimodal;
 - b. Apply to all new development;
 - c. Adopt a tiered fee structure that is based on all land use types.
10. **Concurrency should facilitate implementation or update.** The current Miami-Dade concurrency system is considered a relatively complex system. New legislative changes to concurrency, including proportionate-share options, may impact mitigation costs. Conversely, the alternatives proposed provide a stratified and simplified approach to concurrency.
11. **Concurrency should be relatively easy to explain to elected officials and the public at large.** With the new legislative concurrency requirements, education for elected officials and the public will be necessary. While both proposed alternatives would require initial training, the mobility fee approach is deemed as the simplest approach to implement. Ultimately, implementing a systematic program that is comprehensive and compatible with municipalities would facilitate the transportation concurrency system in the County.

Section 6 is focused on the development of scenarios based on the findings of the analysis. The scenarios include transit, vehicular traffic, bicycle and pedestrian modes. The scenarios described test hypothetical projects to demonstrate the applicability of the two scenarios to Miami-Dade County's transportation concurrency program.

6.0 Developing Scenarios

This section describes the approaches selected to develop analysis scenarios for application to Miami-Dade County's concurrency management structure. After reviewing the current transportation concurrency program in Miami-Dade County and concurrency programs in other areas nationwide, two approaches were selected. The scenarios incorporate the recommended concurrency guidelines and principles proposed in this study, and can serve as the starting point for applying alternative concurrency approaches to the current system.

The concurrency approach that received the most favorable feedback was the program utilized in Bellingham, Washington. The City of Bellingham's multimodal approach to concurrency incorporates MMLOS, multimodal performance measures, and land use densities to account for development impacts from a comprehensive multimodal perspective. To demonstrate the applicability of the Bellingham concurrency approach to Miami-Dade County, the City of Coral Gables was selected as an example area within the County.

The other approach that was selected was the mobility fee approach, which would replace the impact fee schedule currently in place in Miami-Dade County. Mobility fees take into account the different travel modes, and assess fees to new development, based on the mode type and proximity to the particular mode. An example of the different mobility fees that would be assessed based on this approach is provided in the scenario analysis.

6.1 Scenario #1: Multimodal Transportation Concurrency

For this scenario, the City of Coral Gables was selected as an example to demonstrate the applicability of the Bellingham, Washington approach for use in Miami-Dade County. The City of Coral Gables was specifically selected because it has a mix of the three area types that are referenced in the Bellingham approach within its boundary; as the methodology takes into account concurrency service areas and service area classifications. The example scenario could be implemented using existing comprehensive plans and GIS data.

6.1.1 Land Use Type Calculations

The first step in the implementation of this scenario is to develop Concurrency Service Areas (CSAs) within the City boundaries. CSAs should correspond to the land use types, transportation plans and policies within the municipality. CSAs should also foster balanced long-term growth, and should be sensitive to development impacts and multimodal facilities within the UDB.

To obtain consistent land use data that could be analyzed for transportation facilities and adapted into comparable CSAs, the Southeast Florida Regional Planning Model (SERPM) was utilized. Transportation Analysis Zones (TAZs) were used to classify the five area types in the SERPM model, to match the three land use categories adopted in the City of Bellingham approach. Table 8 below illustrates the correlation

between the categories used in the City of Bellingham's concurrency approach and the example developed for the City of Coral Gables.

Table 8: Correlation between Bellingham Area Type and SERPM Model Area Type

Land Use Area Types					
Bellingham Area Type	Urban Area		Transitioning Area	Rural/Outer Edges	
SERPM Model Area Type	CBD	High Density Non-CBD	Medium Density	Low Density	Very Low Density

Figure 4 illustrates the CSAs that were developed for the City of Coral Gables, as defined by the five SERPM model area types. The land use designations allow for a concurrency analysis that is sensitive to the needs of the land use pattern, densities, and intensities. The developed CSAs were then overlaid with the existing transportation network, as shown in Figure 5. Figure 5 illustrates the transit, bicycle and roadway networks by land use area type. The map does not include Metrorail stops, or bike facilities along Old Cutler Road. The overlaid transportation network sets the framework for the multimodal analysis of this approach.

Figure 4: Concurrency Service Areas for Miami-Dade County, as determined by SERPM

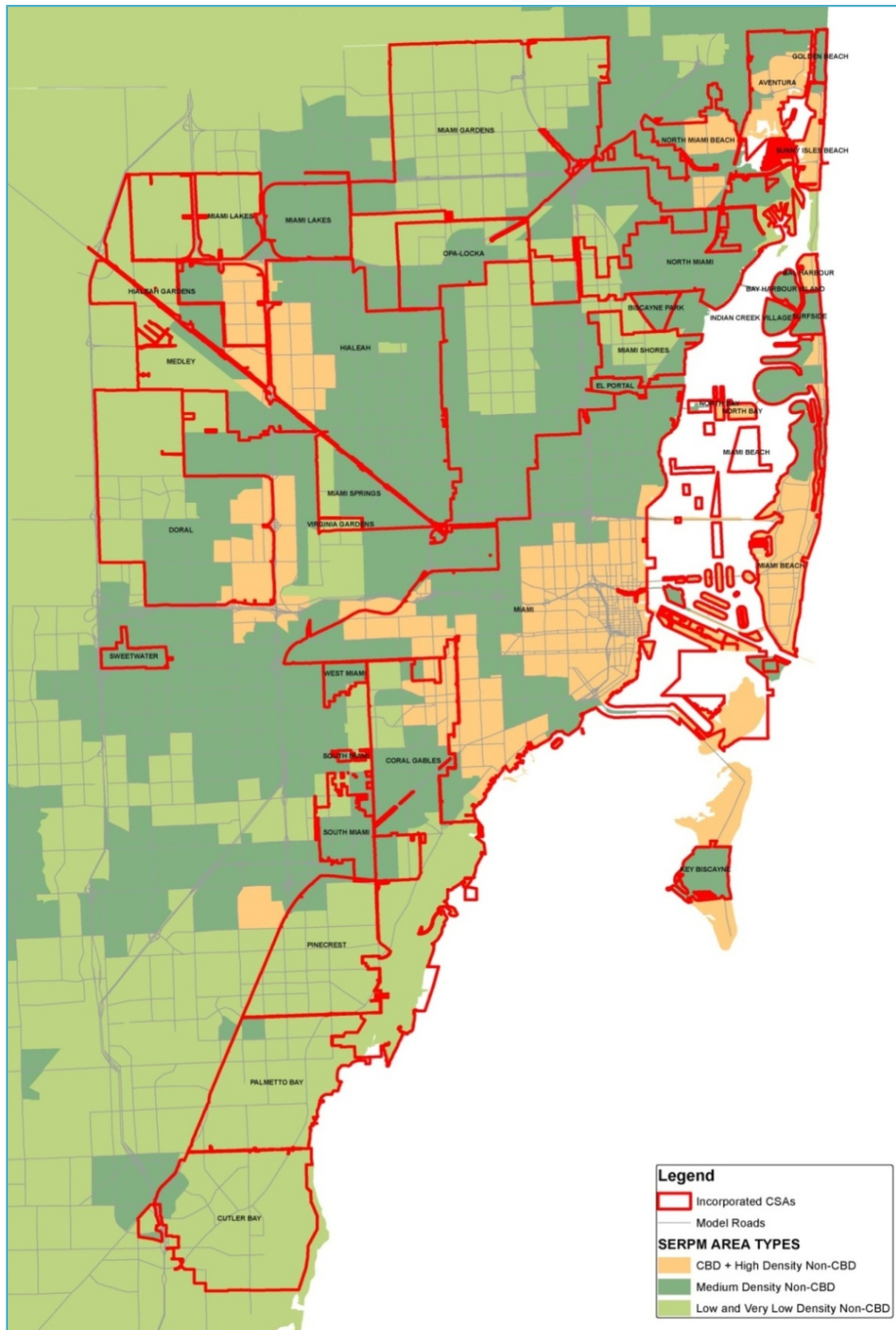
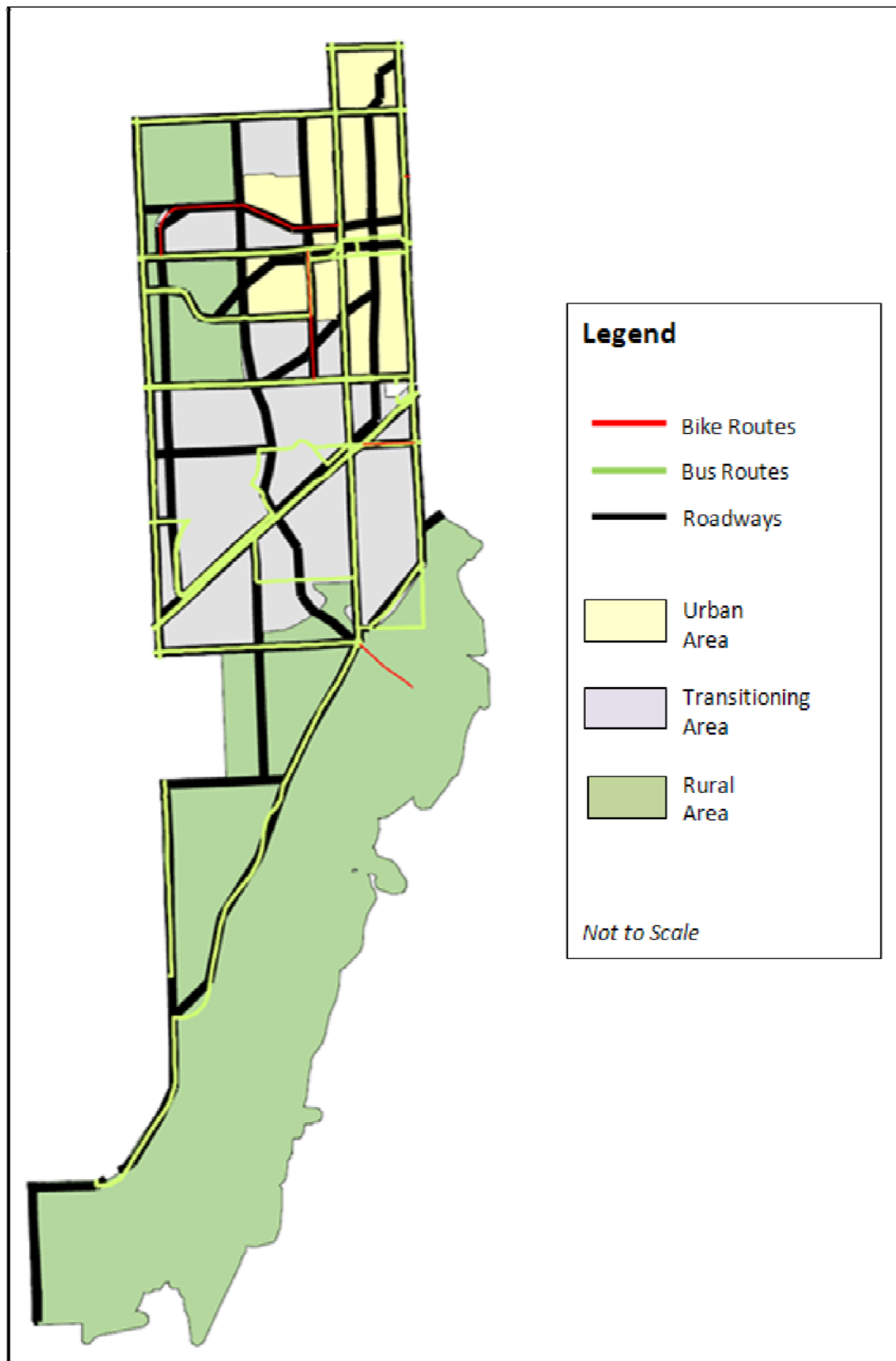


Figure 5: Coral Gables CSA Multimodal Network and Land Use Area Types



6.1.2 Person-Trip Calculation Methodology

To provide a comparable consistent method among all transportation modes, the Bellingham methodology utilized person-trips as the common measurement unit. This approach is similar to the person-trips methodology adopted by the City of Miami for auto and transit modes on routes designated as Transportation Corridors. Details on the City of Miami Person-trip methodology can be found in Appendix D. Since the City of Coral Gables does not have a similar methodology, person-trips were calculated using data from the SERPM.

Vehicular Person-Trips

Roadway capacity and demand was first extrapolated from the SERPM. A vehicle occupancy ratio of 1.34⁵ was used to compute automobile person-trips. An alternative approach would have been to use person-trips from the City of Miami's designations. The drawbacks of doing so, however, is that person-trips are only calculated for specifically designated "Transportation Corridors" in the City of Miami. Thus, the designated Transportation Corridors do not include most state facilities.

Transit Person-Trips

The transit mode is one of two elements in the "motorized component" of this approach. It is based on the availability of transit to serve growth in a CSA. Similar to vehicular person-trip calculations, the SERPM's TAZs were used to determine transit demand and capacity. The mileage of each transit route was calculated for each CSA within the City of Coral Gables.

Using bus schedules, peak hour bus frequency was determined. Route mileage was multiplied by the frequency to obtain available bus mile capacity. The product was then converted to person-trips, by multiplying bus miles by 40, assuming that a typical bus holds 40 persons. Additionally, for the purpose of this analysis, 50 percent capacity was assumed. If the analysis is implemented, however, percent capacity can be calculated using actual ridership figures obtained from the governing transit agency.

Bicycle Person-Trips

The bicycle mode is one of two elements in the "non-motorized component". It is based on the relative completion of the planned bicycle improvements that serve travel demand needs within and to/from each CSA. To be considered part of the "planned bicycle system", a bicycle facility must be included in the City's adopted Comprehensive Plan or the Miami-Dade MPO's Congestion Management Plan (CMP).

Bicycle facilities within the designated Coral Gables' CSAs were mapped using the GIS database of existing bicycle facilities maintained by Miami-Dade County. Programmed bicycle facilities, obtained from the Transportation Improvement Program (TIP) and mitigation development agreements, were also included in the analysis. Other resources that were consulted to obtain information on bicycle facility improvements include the City of Coral Gables Bicycle Plan and the Pedestrian Sidewalks Assessment.

The "Bicycle Minimum Percent Complete Threshold", which is the minimum level of completion of the planned system to be considered a viable alternative mode of transportation, was utilized in the

⁵ The ratio was obtained from the "Southeast Florida Regional Travel Characteristics Study", completed in October, 2000 for the Tri-County South Florida region as a data validation effort for SERPM.

analysis. The 50-percent threshold that was adopted in Bellingham was used for this analysis. The “Bicycle Person-Trip Credit” is a factor that assigns the number of person-trips to be credited to a CSA, based on the amount of the system’s completion that is above the minimum threshold. The specific value should reflect the degree that bicycle travel can accommodate the projected growth within a particular CSA. A higher value is applied in CSAs that include a higher focus on bicycle access.

In the multimodal concurrency program in Bellingham, twenty credits are received for each percent above the minimum 50 percent threshold. The maximum bicycle person-trip credit for each CSA is set at 1,000, which sums up to 100 percent if added to the minimum 50 percent threshold.

Bicycle person-trips are calculated as follows:

1. The total distance of existing and planned bicycle facilities is divided by the total distance of planned bicycle facilities to yield the percent completeness of the planned bicycle system for each CSA.
2. The minimum percent completeness is subtracted from the total percentage of completed planned bicycle facilities. The product is the percent complete facilities that are above the minimum threshold.
3. The percent complete facilities that are above the minimum threshold are multiplied by person-trip credit to get the maximum available bicycle person-trips for the CSA.

Pedestrian Person-Trips

The pedestrian mode is the other element in the “non-motorized component”. It is based on the relative completion of the planned pedestrian system to be able to serve the projected travel needs of a CSA. To be considered part of the “planned pedestrian system”, the facility must be included in the City’s adopted Comprehensive Plan, the City’s Bicycle Lanes & Pedestrian Sidewalks Assessment, or Miami-Dade MPO’s CMP.

The County’s GIS pedestrian facilities inventory was utilized for this analysis. Pedestrian facilities within each CSA were mapped, including existing and programmed facilities. Other sources used to obtain pedestrian data include the TIP funding program and development mitigation agreements.

The “Pedestrian Minimum Percent Complete Threshold” is the minimum level of completion of the planned system to be considered a viable alternative mode of transportation. The 50-percent threshold that was adopted in Bellingham was used for this analysis.

“Pedestrian Person-Trip Credit” is a factor that assigns the number of person-trips to be credited to a CSA, based on the amount of completion that is above the minimum threshold. A higher value was assigned to pedestrian-friendly CSAs. In the multimodal concurrency program in Bellingham, twenty credits are received for each percent above the minimum 50 percent threshold. The maximum pedestrian person-trip credit for each CSA is set at 1,000, which sums up to 100 percent if added to the minimum 50 percent threshold.

Pedestrian person-trips were calculated as follows:

1. The total distance of existing and planned pedestrian facilities is divided by the total distance of planned pedestrian facilities to yield the percent completeness of the planned pedestrian system for each CSA.
2. The minimum percent completeness is subtracted from the total percentage of completed planned pedestrian facilities. The product is the percent complete facilities that are above the minimum threshold.
3. The percent complete facilities that are above the minimum threshold are multiplied by person-trip credit to get the maximum available pedestrian person-trips for the CSA.

6.1.3 Weighting

After person-trips are calculated for each travel mode, weighting factors are applied. Since equivalent local data for weighting factors is currently not available, Mode weighting factors applied in the Bellingham approach were utilized. The transit mode weight factor considers the availability of transit within a CSA, where the factor is higher in CSAs where there are existing or planned transit facilities. The bicycle and pedestrian mode weight factors take into consideration the viability of the facilities within each CSA, relative to land use and travel patterns, and other mode alternatives.

The weighting criteria utilized in the City of Bellingham approach are policy-based, and are not tied to specific mode share numbers. Because local-specific criteria thresholds have not yet been developed, the City of Bellingham's criteria were used for the City of Coral Gables example. To develop local-specific weighting factor criteria for Miami-Dade County, it is recommended that mode split targets, categorized by land use type be used. The 2010 Census Journey to Work data is another possible source.

6.1.4 Calculation Tools

In the City of Bellingham's approach, spreadsheet tools were used to calculate, track, and evaluate multimodal concurrency. The Concurrency Evaluation Tracking Tool (CETT) was used to calculate person-trips available for each CSA, and track development person-trips that had Temporary or Final Certificates of Concurrency. This tool is similar to "checkbook" style concurrency management systems utilized in Florida.

To ensure consistency, the Person Trip Calculator (PTC) utilized in the Bellingham approach provides a streamlined method to calculate person-trips for developer concurrency applications. Calculations show that using person-trips as the unit for transportation concurrency is sensitive to travel mode, vehicle occupancy and travel distance for auto and transit modes. The Bellingham approach converts the degree of completion of the pedestrian and bicycle network to person-trips, where the person-trips are ultimately applied as a credit, thereby increasing the number of available person-trips.

Table 9 includes a summary of the calculations applied for the City of Coral Gables examples. The table illustrates the sensitivity of the analysis to multimodal inputs and vehicle miles traveled. As shown, the urban land use area type within the City of Coral Gables was calculated as 2.4 square miles, the transitioning area was 5.2 square miles, and the rural areas were found to be 10.8 square miles. As expected, bus and bicycle service miles are greater in urban areas. Available peak hour capacity miles were then calculated for bus and roadway miles. While bus peak hour person miles were greatest in

urban areas, the largest amount of roadway person miles was in the transitioning area type. The anticipated volume of person miles traveled was also calculated for the auto and bus modes.

The capacity remaining (available person miles traveled) was then computed by subtracting the volume of person miles traveled from the peak hour capacity. Available roadway capacity left is similar for the three area types. Available bus personal miles of travel were highest in the urban area. The available capacities were then divided by the average trip length of each area type to calculate the available capacity per trip length. Trip lengths were obtained from the SERPM model. As shown, the available unit capacity is highest in the urban area type.

Table 9: Calculation Results for the City of Coral Gables Example

		Area Type		
		Urban	Transition	Rural
Area (square miles)		2.40	5.23	10.79
Bike Lane Miles		3.2	3.1	2.2
Peak Hour Bus Miles		802	664	543
Roadway Lane Miles		73	103	70
Peak Hour Capacity (Person Miles of Travel)	Bike (Per)	-	-	-
	Bus (Per)	32,068	26,557	21,735
	Roadway (Veh)	168,068	222,542	152,546
	Roadway (Per)	225,212	298,206	204,411
	Total (Per)	257,279	324,763	226,147
Volume (Person Miles of Travel)	Bike (Per)	-	-	-
	Bus (Per)	16,034	13,278	10,868
	Roadway (Veh)	111,506	168,034	97,586
	Roadway (Per)	149,419	225,166	130,765
	Total (Per)	165,453	238,444	141,632
Capacity Left (Person Miles of Travel)	Bike (Per)	-	-	-
	Bus (Per)	16,034	13,278	10,868
	Roadway (Veh)	56,562	54,508	54,960
	Roadway (Per)	75,793	73,040	73,647
	Total (Per)	91,827	86,319	84,514
Average Trip Lengths (From the SERPM) (miles)		6.20	7.77	10.08
Capacity Left (Person-Trips Available)		14,811	11,114	8,382

Vehicle Occupancy: 1.34, Bus Occupancy: 50%

6.1.5 Scenario#1 Summary

The multimodal approach to transportation concurrency provides a method for calculating the available capacity of a transportation network for new developments before infrastructure improvements are needed. With plan-based land use data and trip lengths, this approach provides a basis for adjusting impact fees to reflect the actual costs of providing infrastructure. This can be accomplished by utilizing a trip length multiplier to adjust per unit impact fees by land use area type.

The benefits of the approach presented in Scenario #1 include:

- ❖ The approach measures development impacts from a multimodal perspective and provides credit for non-motorized solutions.
- ❖ The methodology utilizes existing land use configurations from the travel demand model. Alternatively, currently defined TCEA boundaries can be used.
- ❖ This scenario incentivizes compact development, which requires lower infrastructure costs, through charging lower fees for high density development.
- ❖ The scenario is Plan-based, thereby linking regulatory functions to planning functions.
- ❖ The approach is consistent with the person-trip methodology currently employed in the City of Miami.
- ❖ There is an opportunity to link comprehensive plans and regulatory functions with transit development plans through this analysis approach.
- ❖ This concurrency analysis process could serve as a pilot program for the State to implement concurrency elements that conform to the new legislative changes.

Limitations to the implementation of Scenario #1 include:

- ❖ The multimodal approach presents a new program that would require training and education.
- ❖ If implemented, the methodology would require adapting the current concurrency tracking system in Miami-Dade County.
- ❖ As with other major public process modifications, instituting this approach would require political will.

Finally, this approach is based on multimodal transportation elements within comprehensive plans of the different municipalities in the County. Each of these plans would need to be tied to a multimodal schedule of capital improvements. With the proportionate-share calculations for transportation concurrency in Florida currently under discussion, it is recommended that developer contributions be sought using an updated impact fee or mobility fee schedule. It is recommended that this tiered approach be expanded to coincide with the three CSA area type designations.

6.2 Scenario #2: The Mobility Fee Approach

The second scenario analysis is a mobility fee approach that reflects multimodal conditions and multimodal improvements. This approach can be implemented using existing comprehensive plans, GIS layers, and impact fee schedules. This section describes the mobility fee approach, where calculations are based on the Miami-Dade County Road Impact Fee schedule. The schedule can be found in Appendix E.

The Mobility Fee Model attempts to provide a consistent method for the costs of development on the transportation system within Miami-Dade County for all development types, regardless of location, where incentives or disincentives are based on the proximity to particular transportation modes. In this scenario, all new development is subject to a fee calculation. A “base cost” (per unit cost) is established for each housing type, and is used for that housing type regardless of location. The base cost fee is then plugged into one of the three different “proximity” categories: Outer Edge, Transition, and Urban. The

analysis is conducted to account for the proximity to specific modal networks, and the fee is adjusted accordingly.

In some cases, incentives (fee credits) can potentially eliminate all fees. In these cases, the location selected for development is considered to have an overall benefit to the economy and quality of life of the particular neighborhood or municipality. The overall benefit is determined based on different elements, including elements that are indirectly related to the transportation system. Direct elements include the likelihood of the increased use of public transit, and increase in the transit mode split. Indirect elements include the ability of the development to support the viability of neighborhood businesses and local sales tax dollars.

This scenario was developed in spreadsheet form, where information about the development such as the number of units, unit type, and proximity to particular travel modes can be input. The spreadsheet utilizes GIS to identify the development's location.

The mobility fee has three different “proximity” charts that are used to determine the fee amounts. While the “base cost” remains constant, proximity categories allow for different incentivizing/disincentivizing fees based on the geographic location of the development. The proximity categories are directly related to the areas defined in local government comprehensive plans. The following assumptions are made for the proximity categories:

- ❖ *Outer Edge areas* are primarily low density/very low density rural, undeveloped, and generally auto-oriented areas.
- ❖ *Transition areas* are primarily suburban/medium density/Non-CBD (Central Business District) areas, but could potentially contain higher density “cores” that would have alternative travel modes.
- ❖ *Urban areas* are primarily high density/CBD areas that typically include the most diverse combination of transportation options.

Table 10 includes the distance threshold limits for each proximity area. Distance thresholds are based on land use area type, and were determined based on the best practices reviewed for this study.

Table 10: Distance Threshold Limits

	Near	Moderate	Far
Outer Edge	5 “block equivalent” – 2 miles	2 to 5 miles	Greater than 5 miles
Transition	Less than 5 blocks	5 blocks to 2 miles	Greater than 2 miles
Urban	Less than 2 blocks	2-5 blocks	Greater than 5 blocks

Base costs were derived from the existing impact fee ordinance for the County. These unit costs remain the same regardless of location. For this scenario, the “base costs” used were: Single-Family Detached (\$4,832.47), Apartment-Rental (\$3,375.73), Condominium (\$2,943.37), Townhouse/Duplex/Triplex (\$2,943.37), and Mobile Home (\$2,506.48). These costs reflect an average of the unit fees for development within and outside of the Urban Infill Area.

Modal Proximity (Per Unit) Incentive/Disincentive – This is the location-based decision-making element that incentivizes/disincentivizes location decisions. These are fees that vary depending on the land use

area type and transportation mode. The incentives/disincentives are used to adjust the base (per unit) cost, depending on the mode and proximity. Incentives/disincentives are determined by calculating the distance from modal networks and land use area types, where a higher land use density and higher proximity to multiple travel modes yields a larger incentive. The total fee is then determined by adding the Modal Proximity Incentives/Disincentives. A summary of this procedure is shown in Table 11:

Table 11: Model Proximity Incentive/Disincentive Calculations

New Development: 50 Townhouses are being proposed in the Transition zone	
<u>Step 1:</u> Multiply the number of proposed townhomes by the base cost for the housing type.	
(50 Townhouses) x \$2,943.37 “base cost” =	\$147,168.50
<u>Step 2:</u> Calculate the Incentives/Disincentives per unit:	
The new development is at a moderate distance to a major collector(s)=	\$150.00
It is near a bus stop =	\$1,500.00
It is within moderate proximity to a rail station=	\$250.00
The new development is not near bike facilities =	-\$50.00
It is within moderate proximity to pedestrian facilities =	\$100.00
Total Incentive/Disincentive Costs per Unit =	\$1950.00
<u>Step 3:</u> Calculate the total amount of Mobility Fees due	
Total Mobility Costs = \$1,950 x 50 units =	\$97,500.00
Total Fee Due = \$147,168.50 - \$97,500 =	\$49,688.50

6.3 Recommended Approach

Ultimately, it is recommended that Miami-Dade County implement a hybrid approach that combines the multimodal concurrency program and mobility fees approaches. A multimodal program would facilitate incorporating MMLOS thresholds, and would integrate land use types into the concurrency process, thereby producing a more balanced approach that both promotes compact development in urban areas, and allows roadway improvements in rural areas. A mobility fee approach would facilitate coordination with land use and transportation goals, and would also incorporate multimodal considerations into the process. The two recommended approaches are evaluated and scored for their usefulness to the Miami-Dade County in the Section 7.

7.0 Alternative Approaches

This section describes the alternative approaches that were selected based on the literature review, stakeholder input, best practices, and scenario development analysis. The alternatives build on the general principles of an effective concurrency system analyzed in section 5.3 of this report. The “keep the current program”, “minimal change” and “alternative approach” options present the different directions that Miami-Dade County could undertake regarding concurrency. Each alternative is detailed in this section, and pros and cons are outlined. Following sections will focus on the analysis of the specific three alternatives.

7.1 Development of Alternatives to the Current Concurrency Program in Miami-Dade County

Preceding sections in this report described the elements of the current concurrency system in Miami-Dade County, as well as concurrency programs in other parts of the State and the nation. The current system and the two recommended best practices approaches were evaluated based on common principles of an effective concurrency program. Scenario calculations were also developed to demonstrate the applicability of the best practices approaches to the current system in the County.

Based on the above analysis, three alternative approaches are proposed for further evaluation in this study: “keep the current program”, a “minimal change” and an “alternative approach”. The “keep the current program” alternative assumes that the current concurrency system in Miami-Dade County is maintained after incorporating the necessary amendments to comply with the new 2011 Community Planning Act. The “minimal change” approach proposes implementing minor changes to the current system, including expanding the traffic impacts of new development beyond adjacent corridors, discounting impact fees based on proximity to transit, and taking into account peak directional travel.

The “alternative approach” recommends replacing the current concurrency system with a hybrid approach that utilizes the best practices approaches illuminated in this study. Specifically, a hybrid approach would combine the multimodal concurrency program utilized in Bellingham, Washington, and also integrate mobility fees that account for different travel modes, based on proximity to the new development. In essence, the “alternative approach” recommends an alternative to the concurrency system in Miami-Dade County that addresses the shortcomings of the current system and encompasses the eleven principles of an effective concurrency system. The following section provides a comparative analysis of the three recommended approaches, which includes a description of each alternative, and the pros and cons of each.

7.2 Comparative Analysis of the Proposed Alternatives

The following is a description of each alternative approach and the advantages and disadvantages of each.

“Keep Current Program” Alternative

The “*keep current program*” alternative involves updating the current concurrency system in Miami-Dade County to comply with legislative changes, while maintaining the main approach. New Florida legislation provides local jurisdictions with the option of whether to enforce concurrency. Additionally, new State laws encourage, but do not require, multimodal impact analysis that also takes into consideration different land use patterns.

The clear advantage of choosing to not make major changes to the current concurrency system in Miami-Dade County is that it has the least implementation impacts. The familiarity of stakeholders, including agencies, the development community, and the public, with the current system provides the basis for keeping conditions as is, notwithstanding existing inadequacies and inequalities.

There are several limitations to the current concurrency system, however, including:

- ❖ ***The current system only evaluates corridors that are adjacent to the new development.*** While adjacent corridors are evaluated for meeting LOS thresholds, the current concurrency system

does not evaluate other corridors within the vicinity of the development that may be close to, at, or above maximum capacity.

- ❖ ***The current system is not fully multimodal.*** The current system only takes into consideration roadway and transit LOS standards in applying concurrency and impact fees. While the current program encourages development that accounts for transit within the UIA, non-auto travel modes are not incentivized. Additionally, bicyclist and pedestrian travel modes are not included in the current concurrency and impact fee system.
- ❖ ***Land use patterns, densities and intensities are not taken into consideration.*** The only elements that are related to land use patterns in the current concurrency system are TCEAs in UIAs, which are not representative of all land use types and densities across the County.
- ❖ ***The current system is not equitable.*** As mentioned earlier in the report, the current concurrency system is not considered equitable, because:
 - Only developments that trip concurrency are subject to mitigation costs.
 - Since the current concurrency system is not fully multimodal, it does not account for the incentives and disincentives of the different travel modes.
- ❖ ***The current program does not provide transit operations funding.*** The current road impact fee ordinance includes language that allows using impact fees for capital transit investments. However, the impact fees cannot be used to fund transit operations and maintenance.
- ❖ ***The current county-level program is not easily applied to all municipalities.*** While Miami-Dade County currently applies concurrency countywide, some municipalities require additional provisions that are not part of the comprehensive county-level system. For example, the City of Miami applies a person-trip methodology to calculate multimodal concurrency on specific corridors within its City limits. Other local jurisdictions within Miami-Dade County do not utilize this approach.
- ❖ ***There are inconsistencies in the current requirements and provisions of TCEAs.*** While the current system utilizes TCEAs to promote development in the UIA, the requirements for implementing TCEAs differ between the County and municipalities.
- ❖ ***There are proportionate-share uncertainties.*** The new legislation redefines the calculation for proportionate share that requires the local government to assume the affected facility is operating at the adopted level of service, thus not accounting for existing deficiency. The ultimate result of this is that local governments have to negotiate with developers regarding how their development affects the transportation system and effectively removes the possibility of receiving additional mitigation funds beyond those that are collected as part of the impact fee formula. The anticipated net result is that development will be allowed without the local government being able to collect sufficient funds to address the impacts created by that development.

The main purpose of this study is to evaluate alternative approaches to the current concurrency system in Miami-Dade County, in light of new legislative changes, and to make the process more representative of the true costs of new development. The study includes demonstrations of how alternative approaches could be reasonably assimilated into the current program. Therefore, applying the appropriate alternative approach would compensate for the shortcomings of the current system.

“Minimal Change” Approach

The “*minimal change*” approach includes changes that would update the current concurrency system to match new legislative laws. Additionally, minor changes that do not involve a complete revamp of the existing system would be implemented, such as expanding the area of impact and discounting impact fees based on proximity to transit. The minimal change approach would address some of the current inadequacies of the current system.

The minimal approach should expand the evaluation of development impacts to a larger network, to ensure that all corridors that would potentially be impacted are assessed. To determine the larger “traffic impact area”, trip lengths can be assigned based on predetermined thresholds. For instance, the “radius” of the impact area can be directly proportional to the additional trips that are expected from the new development; and any facility within that impact area that exhibits an increase of two percent or greater of the maximum capacity should be evaluated for concurrency. The following is an example of the relationship between trip generation and the impact area:

<u>New Peak Hour Trips Generated</u>	<u>Primary Impact Area</u>
Less than 50 trips	½ mile
50 to 150 trips	1 mile
151 to 500 trips	2 miles
501 to 1,000 trips	3 miles
Greater than 1,000 trips	4 miles

Calculating the increased capacity posed by the new development should be based on directional peak hour capacity, rather than the bidirectional method currently used, which does not recognize the actual maximum capacity of a corridor during peak hours. Finally, the minimal approach should consider incentivizing existing and future transit investments by providing credit, or discounted impact fees for new developments that are adjacent to transit. While the current roadway impact fee ordinance allows for transit investments to be considered a roadway capacity improvement for utilizing roadway impact fees, the current formula does not include credits for distinguishing between a transit and a vehicle-oriented improvement.

Expanding the evaluation of new development impacts to a larger transportation network ensures that all burdened corridors are taken into consideration. The recommended threshold criteria that are linked to added trip capacity also provide an improved method to calculating concurrency. However, these enhancements do not account for land use patterns. Excluding land use considerations from impact fee calculations leads to an inequitable fee structure that does not incentivize development in urban areas (except in TCEAs); thus manifesting the existing issues of pushing development out to cheaper, more rural areas.

Additionally, the minimal change approach does not consider the bicycle and pedestrian modes, which could provide viable alternative modes of transportation. An effective concurrency system should consider all travel modes on all corridors, to ensure the accuracy of added trip calculations, and to enable incentivizing development that supports non-auto travel modes. To implement a multimodal

system, a calculation model similar to the person-trip methodology described in the Bellingham concurrency system should be adopted, to normalize trip calculations. And to further ensure the equitability of an alternative approach to concurrency, mobility fees should be implemented. This would account for both the different modes of transportation, and for proximity to the new development. Finally, an alternative system such as the one proposed in the alternative approach should be developed to offset uncertainties in proportionate-share provisions, and also to provide funding for transit operations and maintenance.

“Alternative Approach”

The “*alternative approach*” consists of a hybrid approach that encompasses the best practices presented in this study. Specifically, the alternative approach draws from the multimodal concurrency system used in Bellingham, Washington, and also integrates the tiered structure of the mobility fee approach. Adopting the hybrid concurrency alternative allows for evaluating new development impacts based on all travel modes, accounting for all transportation corridors, incorporating all land use patterns, and providing a structured mobility fee schedule that incentivizes development in urban areas.

To establish the hybrid approach in Miami-Dade County, CSAs would need to be identified and stratified based on land use patterns in the County. It is recommended that the developed CSAs match the existing TCEAs and municipality boundaries. Person-trips are then calculated for each travel mode, and are weighted based on the viability of the mode in the particular development area. Peak hour and expected volume capacities are computed using trip lengths from the local travel demand model. The mobility fee approach can then be applied to determine the fees that will be assessed to the new development. This is done by evaluating fees that are dependent on the development type’s base cost and the proximity of each transportation mode to the development. Section 6 of this report provides a detailed analysis of calculating CSAs, multimodal person-trips, and mobility fees. Additionally, Section 9 describes the implementation methodology for the alternative approach.

The hybrid alternative provides a more equitable concurrency system that takes into account all transportation modes and land use patterns. The approach should be applied to all new development, and its tiered structure allows for realizing the true costs of new development. If implemented countywide, the system provides a comprehensive system that is compatible with municipalities and unincorporated areas within the County. Additionally, the alternative approach promotes economic development in the urban core, offsetting the adverse impacts on urban areas due to the current impact fee schedule that pushes development to suburban and rural areas. Lastly, a multimodal concurrency program that applies mobility fees may not require the use of proportionate share as defined in the new legislation. This theory, however, has yet to be tested in the legal system.

Implementing the hybrid approach involves a complete revamp of the current concurrency system in Miami-Dade County. This will initially require considerable training and education of the agencies involved, the development community, and the public, to get acquainted with the new system. Additionally, to ameliorate the perceived complexity with the proposed alternative, a plan of action that clearly demonstrates the applicability of the recommendations to the current concurrency system in Miami-Dade County would facilitate the “buy-in” from stakeholders and ensure the success of its

implementation. The following sections include an evaluation of the proposed alternative approach from a programmatic perspective, and a step-by-step implementation process.

7.3 Summary of the Proposed Alternatives

Table 12 provides a summary of the three alternatives that are recommended in this study. A brief description that highlights the main differences between the three options is included. The pros and cons of each alternative are also presented.

Table 12: Summary of the proposed alternatives

Alternative	Description of Alternative	Pros	Cons
<i>“Keep Current Program”</i>	Keep current concurrency system.	<ul style="list-style-type: none"> • Least impacts. • Familiarity with the existing system. • Includes transit improvements in impact fee expenditures. 	<ul style="list-style-type: none"> • Not fully multimodal. • Land use types are not taken into consideration. • Not equitable. • Full development impacts are not realized. • Not compatible between municipalities. • Inconsistent TCEAs. • Uncertainties in proportionate share. • Does not include transit operations funding.
<i>“Minimal Change”</i>	<ul style="list-style-type: none"> • Expand the impact area. • Consider peak-directional travel. • Integrate trip lengths into impact fee calculations. • Discount transit impact fees. 	<ul style="list-style-type: none"> • Accounts for corridors within the larger transportation network. • Represents corridor requirements at maximum capacity. • Sets impact thresholds. • Incentivizes transit. • Includes transit improvements in impact fee expenditures. 	<ul style="list-style-type: none"> • Adopting trip lengths does not take land use patterns into consideration. • Not fully multimodal. • Does not include mobility fees. • Uncertainties in proportionate share. • Does not include transit operations funding.
<i>“Alternative Approach”</i>	Hybrid Approach: <ul style="list-style-type: none"> • Multimodal. • Mobility fees. 	<ul style="list-style-type: none"> • Fully multimodal. • Can be used for transit operations and maintenance funding. • Takes all land use patterns into consideration. • Equitable. • Compatible. • Realizes the true costs of new development. • Promotes economic development. • May provide alternative to proportionate share. 	<ul style="list-style-type: none"> • Involves the most education and training. • Requires a clear plan of action. • Ultimate success depends on “buy-in” from all stakeholders.

Section 8 includes an evaluation of the impacts of implementing the three alternatives presented above. The impacts are evaluated based on integrating multimodal options, feasibility of implementation and monitoring, and compatibility with municipalities and unincorporated areas within Miami-Dade County. The impacts are assessed from the perspective of the implementing agencies, the development community, and the public. Additionally, a step-by-step plan of action is proposed for implementing the recommended “alternative approach” in Section 9.

8.0 Evaluation of Impacts

The recommended approach for Miami-Dade County is to implement the “alternative approach”, which is a combination of a multimodal concurrency program and mobility fees in lieu of transportation impact fees. The multimodal concurrency program is based on person-trips and would establish level-of-service standards for roads, transit and non-motorized facilities that are tied to land use types and intensities. The use of mobility fees in lieu of impact fees allows for further coordination between land use goals and transportation improvements by promoting multimodal options in the more urban areas while still providing funding for roadways in more rural areas. This section of the report provides an assessment of the potential impacts of the alternative approach on the community, developers and agencies; compared to the options of keeping the current program and applying minimal changes.

8.1 Evaluation Approach

A series of factors were identified for which potential impacts should be assessed. These factors ensure the evaluation of each of the three alternatives from a programmatic, operations, implementation, and monitoring perspective. Although the evaluation is qualitative in nature, to simplify the results, a numerical scale was used to quantify the potential impacts on each of the factors and for the different stakeholders (community, developers, and agencies).

The scale used reflects the positive and negative impacts incurred by the particular approach. A score of “-1” means negative impact and a score of “1” means positive impact. A score of “0” means no impact. Table 13 shows the values assigned to each component of the evaluation process.

Each approach was evaluated for short- and long-term impacts pertaining to the evaluative factor, in order to reflect both the immediate and the continuing effects of the approaches over time. The net impact of the short and long term scores was calculated by summing up the assigned scores. An average impact score was then calculated for each alternative, by factor. The total average score, which represents the average score for each alternative based on all seven factors, is shown in red in the bottom right corner of Table 13. The values represent the net impact of each alternative.

For purposes of this evaluation, it is important to have a common understanding of how the stakeholders are defined. Community is defined as the general public, including those individuals who may undertake small-scale development activities that might require concurrency review, such as constructing a single family home, office or other establishment on a single parcel of land. Developer is defined as any person or entity that represents land owners through the development review process, as well as those persons or entities that own or oversee large-scale development activities, such as multiple single-family housing units that comprise an entire subdivision or community, multifamily housing, and other nonresidential uses meant to provide space for more than two tenants. Agencies are

defined as all local, regional, state and federal agencies that are involved in the development review process in Miami-Dade County.

8.2 Scenario Evaluation

The results of the evaluation process are summarized in Table 13 on the following page. A description of each factor's evaluation is detailed in the text that follows the table.

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Table 13: Summary of Potential Impacts from Recommended Concurrency Methodology Improvements

Factor #	Alternative	Community			Developer			Agency			Average Score by Factor
		Short-Term	Long-Term	Net Impact	Short-Term	Long-Term	Net Impact	Short-Term	Long-Term	Net Impact	
1	Program Implementation and Methodology										
	Keep Current Program	0	0	0	-1	0	-1	-1	0	-1	-1
	Minimal Change	0	1	1	-1	1	0	-1	1	0	0
	Alternative Approach	0	1	1	-1	1	0	-1	1	0	0
2	Traffic Improvement										
	Keep Current Program	0	-1	-1	0	0	0	0	-1	-1	-1
	Minimal Change	0	1	1	0	0	0	0	1	1	1
	Alternative Approach	0	1	1	0	0	0	0	1	1	1
3	Transit Operations										
	Keep Current Program	0	-1	-1	0	0	0	-1	-1	-2	-1
	Minimal Change	0	-1	-1	0	0	0	-1	-1	-2	-1
	Alternative Approach	0	1	1	0	0	0	1	1	2	1
4	Implementation of Bicycle & Pedestrian Facilities										
	Keep Current Program	0	-1	-1	0	0	0	0	-1	-1	-1
	Minimal Change	0	-1	-1	0	0	0	0	-1	-1	-1
	Alternative Approach	0	1	1	0	0	0	0	1	1	1
5	Capital, Maintenance and Operating Costs										
	Keep Current Program	0	-1	-1	0	0	0	0	-1	-1	-1
	Minimal Change	0	-1	-1	0	0	0	1	0	1	0
	Alternative Approach	0	1	1	0	0	0	1	1	2	1
6	Jurisdictional Boundaries										
	Keep Current Program	0	0	0	0	0	0	0	0	0	0
	Minimal Change	0	0	0	-1	-1	-2	1	-1	0	-1
	Alternative Approach	0	0	0	1	1	2	-1	1	0	1
7	Monitoring										
	Keep Current Program	0	0	0	0	0	0	0	-1	-1	0
	Minimal Change	0	0	0	0	0	0	-1	-1	-2	-1
	Alternative Approach	0	0	0	0	0	0	-1	1	0	0
Average for Keep Current Program		0	-1	-1	0	0	0	0	-1	-1	-1
Average for Minimal Change		0	0	0	0	0	0	0	0	0	0
Average for Alternative Approach		0	1	1	0	0	0	0	1	1	1
Scoring: -1 = negative impact, 0 = no impact, 1 = positive impact											

8.2.1 Program Implementation and Methodology

This factor assesses the impacts the proposed methodology and implementation of the proposed program will have on each of the identified stakeholders.

1. *Community:*

- ❖ Keep the Current Program: Keeping the current program will have no impact on the general public, both in the short- and long-terms.
- ❖ Minimal Change: Applying the minimal changes approach will initially have no impact on the community. In the long-term, however, positive impacts will be realized because incentivizing transit may lead to implementing transit investments that would benefit the public. Expanding the impact area may also lead to congestion relief over time. Therefore, the net impacts of this approach are positive.
- ❖ Alternative Approach: Similar to the minimal change approach, no short-term impacts will be realized by the public by implementing the alternative approach. In the long-term, however, the multimodal approach may lead to implementing alternative modes of travel that the public would benefit from. Additionally, the multimodal concurrency and mobility fee program would be beneficial to small-scale developers since it is more equitable and may provide financial incentives. The net impact of the alternative approach to the community from an implementation perspective is positive.

2. *Developer:*

- ❖ Keep the Current Program: Keeping the current program will initially have negative impacts on developers due to the need to get familiarized with the changes required by the new legislation, but there will be no impact in the long-term.
- ❖ Minimal Change: Implementing the minimal change approach will also initially have negative impacts on developers, when new legislative changes are integrated, in addition to the proposed minor changes to the concurrency program. In the long-term, there will be minor positive impacts, as the benefits realized by structuring impact fees based on a larger network and incentivizing investment near transit. The net impacts will therefore balance out.
- ❖ Alternative Approach: The initial learning curve will be steep, especially given the complexities of the multimodal approach, leading to possibly significant negative impacts at the beginning. However, the recommended changes are more equitable and provide more certainty to developers, eventually leading to positive impacts. Similar to the minimal changes approach, net impacts will balance out.

3. *Agencies:*

- ❖ Keep the Current Program: Similar to impacts to developers, agencies would have to integrate legislative changes into the existing program, yielding negative impacts in the short-term. There will be no impacts in the long-term.
- ❖ Minimal Change: Since agencies are charged with regulating and implementing changes to the current concurrency program, they would incur negative impacts in the short-term. Even with minor changes, however, these impacts would diminish over time.

- ❖ Alternative Approach: Implementing the alternative approach will initially have the most significant negative impacts on agencies. Other agencies, such as FDOT, MDT and any municipalities who opt to participate in the program will also have to learn the new system and potentially adopt changes to their policies, plans and ordinances, as applicable. Over the long-term, however, as agencies systemize the new program, impacts will ultimately be positive, thereby offsetting the initial negative impacts.

8.2.2 Traffic Improvement

This factor assesses the impact of the recommendations on existing and future traffic conditions. Generally speaking, adopting a new approach to concurrency will not impact traffic conditions since it is a program that measures existing capacity and potential impacts from proposed developments. Simply considering other modes as part of the concurrency methodology does not mean that people will start using those modes more than in the past. Perhaps the biggest impact that may result is that by using person-trips, additional development may be able to be permitted without additional improvements (as was seen in the Coral Gables scenario example), and therefore, it could be perceived that traffic conditions are made worse. Similarly, the switch to mobility fees will not directly impact traffic conditions; however, over the long-term, as more mobility options are made available, traffic conditions may improve as more people use transit or non-motorized modes to reach their destinations.

1. *Community*:

- ❖ Keep the Current Program: Initially, keeping the current concurrency system will have no impacts. Over the long-term, however, traffic conditions may worsen due to the lack of multimodal options that the current program does not support.
- ❖ Minimal Approach: While the minimal approach may not initially have any impacts to the community, taking the larger transportation network into consideration, along with evaluating concurrency based on peak-directional travel, would improve traffic conditions for the public.
- ❖ Alternative Approach: Similar to the previous two alternatives, no improvements in traffic conditions will be realized at the beginning. However, once the alternative approach, which is a multimodal modal concurrency program that also considers multimodal mobility fees, is implemented, the incentivized system would enhance multimodal options and alleviate traffic congestion.

2. *Developer*:

- ❖ Keep the Current Program: Per the new legislation, which includes proportionate-share exemptions, while impact fees can still be assessed, additional mitigation cannot be required for corridors that are currently deficient. Therefore, worsening traffic conditions would not impact developers.
- ❖ Minimal Approach: Similar to existing conditions, implementing minor changes to the current concurrency program will not have any impacts from the perspective of developers.
- ❖ Alternative Approach: The alternative approach will not have actual impacts pertaining to developers.

3. *Agencies:*

- ❖ Keep the Current Program: If the current concurrency program is maintained, the limited impact area, bi-directional evaluation, and auto-oriented program would ultimately lead to worsening traffic conditions. This would incur negative impacts on the agencies involved, as they would have more limited resources to support congested corridors.
- ❖ Minimal Change: The minimal changes involved in this alternative include considering a larger transportation network. This would allow for evaluating corridors within the vicinity of a new development that are near or at maximum capacity. Additionally, evaluating concurrency based on peak-direction travel ensures congestion levels are adequately evaluated. Finally, incentivizing development near transit facilitates may reduce traffic congestion. These factors would ultimately yield positive impacts to implementing agencies.
- ❖ Alternative Approach: The alternative approach provides a tiered structure that considers multimodal transportation and land use patterns. Mobility fees that give credit for proximity to alternative travel modes could mitigate congestion; thus yielding the most positive impacts over time in terms of relieving traffic congestion.

8.2.3 Transit Operation

This factor assesses the impacts of the recommendations on existing and future transit operations. As with traffic, the adoption of a new methodology will not necessarily directly affect transit operations; this will only occur when the anticipated results begin to take effect and more people begin to use transit as an alternative to driving. Mobility fees have a greater potential impact since they can be used to fund operations; however, this impact will be limited, as proposed, since the fees are tied to new development and will be collected one-time and will be dependent upon economic cycles.

1. *Community:*

- ❖ Keep the Current Program: Keeping the current concurrency program does not provide any funding for transit operations, so transit investments that the public can benefit from are limited; thereby yielding negative impacts in the long-term.
- ❖ Minimal Change: Similar to the current program, applying minimal changes would not change the impact fee schedule in a way that allows funding for transit operations, thus inflicting negative impacts on the community over time.
- ❖ Alternative Approach: The alternative approach is the only alternative that would generate positive impacts to the community in terms of providing transit operations funding through mobility fees. While impact fees can only be used for funding transit capital improvements, mobility fees can be used for transit operations that would enhance transit efficiency for the public in the long run.

2. *Developer:*

- ❖ Keep the Current Program: Based on the current concurrency program, there will be no impact to developers regarding the lack of transit operations funding mechanisms.

- ❖ Minimal Change: Similar to the current program, developers will not be impacted by the lack of transit operations funding through impact fees.
- ❖ Alternative Approach: While mobility fees are the only funding mechanism that can potentially fund transit operations, there are no direct impacts tied to developers.

3. *Agencies*:

- ❖ Keep the Current Program: Since impact fees cannot be used to fund transit operations, keeping the current program will have cumulatively negative impacts for agencies. Ultimately, agencies will have limited financial resources to fund transit operations; even though impact fees can be used to fund capital transit investments.
- ❖ Minimal Change: Since the proposed minimal changes retain the impact fee schedule, incentivizing development near transit would not help fund transit operations; thereby yielding the same negative impacts as the current program.
- ❖ Alternative Approach: Out of the three alternatives considered in this study, the alternative approach is the only alternative that provides a funding source for transit operations through mobility fees; thus having the most positive impact. In addition to the half-cent sales tax, federal funding, and general revenue funds, mobility fees collected from new development can be utilized for transit operations and maintenance. It is important to note, however, that since mobility fees are collected on a one-time basis and transit operations need a steady funding stream, the ability of mobility fees to fund transit operations remains limited.

8.2.4 Implementation of Bicycle and Pedestrian Facilities

The recommended hybrid approach of multimodal concurrency and mobility fees has the greatest potential to impact the implementation of these facilities. By including bicycle and pedestrian facilities as part of the concurrency program, up-to-date information about existing, programmed and planned facilities will be required; thus these facilities will receive equal attention in the process whereas the current approach focuses solely on roadways. Given that the cost of these improvements is significantly less than those associated with roadway and transit facilities, the collection of mobility fees that can be applied to their construction may significantly improve the number and condition of the facilities provided.

1. *Community*:

- ❖ Keep the Current Program: The current program does not consider bicycle and pedestrian facilities in evaluating concurrency and in calculating impact fees. This may lead to limited investments and improvements to non-motorized facilities that benefit the public; resulting in negative impacts over time.
- ❖ Minimal Approach: Similar to the existing program, the proposed minimal changes do not take bicycle and pedestrian facilities into consideration, thus yielding negative impacts over time.
- ❖ Alternative Approach: Through multimodal concurrency and mobility fees, the alternative approach accounts for bicycle and pedestrian facilities as part of the overall transportation network that provides viable alternative modes of travel, and also provides incentives for

development near these facilities. This provides funding for bicycle and pedestrian facilities that the public can utilize; thus yielding positive impacts in the long-run.

2. *Developer:*

- ❖ Keep the Current Program: Developers will not be impacted by the lack of including bicycle and pedestrian facilities in the current concurrency program.
- ❖ Minimal Change: Similar to the current program, the minimal changes approach will not impact developers from the perspective of bicycle and pedestrian improvements.
- ❖ Alternative Approach: While the construction of more bicycle and pedestrian facilities that may result from this approach through person-trip and mobility fee calculations, this will have no direct impact on developers.

3. *Agencies:*

- ❖ Keep the Current Program: The current program does not consider bicycle and pedestrian facilities, which does not provide agencies with funding sources for these facilities; leading to negative impacts over time.
- ❖ Minimal change: The negative impacts of not considering bicycle and pedestrian facilities are similar in the minimal change alternative; which will be realized over time.
- ❖ Alternative Approach: It is the fully multimodal and mobility fee approach of this alternative that accounts for non-motorized travel, thus yielding positive impacts in the long-term for agencies, in terms of implementing bicycle and pedestrian facilities.

8.2.5 Capital, Maintenance and Operating Costs

This assesses the ability of the recommended approach to providing new or recurring funds that will cover capital, maintenance and operating costs. The concurrency management program does not provide any funding itself, so it will not directly impact this factor. The mobility fee will provide funding for all of these types of costs, but as recommended, it replaces the impact fees so its usefulness is limited due to its one-time collection and its ties to economic conditions that affect development cycles.

1. *Community:*

- ❖ Keep the Current Program: In the short-term, the public will not notice any impacts by keeping the current program. In the long-term, however, due to the limited ability of the current program to realize the true costs of development, there will be insufficient funds available to improve public facilities.
- ❖ Minimal Change: The minimal change approach takes into consideration several factors that would improve the methodology used to calculate concurrency and collect fees, but since the fees collected could still not be used to fund operations and maintenance costs of transportation facilities, the negative impacts would remain.
- ❖ Alternative Approach: The alternative approach is the only option that would generate positive impacts to the public, because mobility fees can be used to fund capital, operations and maintenance costs, more capital can be used towards public facilities.

2. *Developer:*

- ❖ Keep the Current Program: Having limited ability to fund capital, operations and maintenance costs has no direct impact on developers.
- ❖ Minimal Change: The minimal changes approach will also not have direct impacts on developers in terms of funding capital, operations and maintenance costs.
- ❖ Alternative Approach: Similarly, no direct impacts to developers are attributed through the alternative approach.

3. *Agencies:*

- ❖ Keep the Current Program Agencies: Keeping the current program will have the most negative impacts on infrastructure funding, therefore burdening the agencies involved in allocating alternative funding sources.
- ❖ Minimal Change: Since the minimal change approach takes into consideration a larger transportation impact area, and incentivizes investment near transit, more funds can be recouped for infrastructure improvements at the beginning. However, since impact fees cannot be used to fund operating costs, there will be no impact in the long-term.
- ❖ Alternative Approach: The alternative approach provides a multimodal concurrency option that considers all travel modes and applies a mobility fee that can be utilized for all infrastructure funding types, thus generating positive impacts in the short and long-terms.

8.2.6 Jurisdictional Boundaries

This factor assesses the ability of the recommended approach to be applied within municipalities and outside of unincorporated Miami-Dade County. Both the multimodal concurrency approach and the mobility fees are capable of being applied to municipal areas, as well as to facilities that are under the jurisdiction of other agencies.

1. *Community*

- ❖ Keep the Current Program: The general public is not typically aware of jurisdictional boundaries, therefore there will be no impacts of keeping the current program. For small-scale developers, they would not be affected by this since they are less likely to be submitting applications for projects that have regional impacts.
- ❖ Minimal Change: Similarly, minimal changes to the current program will not impact the public based on the jurisdictional boundary factor.
- ❖ Alternative Approach: Implementing the alternative approach could have major changes and impacts in terms of jurisdictional boundaries. However, these impacts will not be noticed by the public.

2. *Developer*

- ❖ Keep the Current Program: Keeping the current program will not impact developers in terms of jurisdictional boundaries.
- ❖ Minimal Change: Expanding the area of impact to encompass a larger transportation area will require a learning curve for developers across jurisdictions in the short term. In the long-

term, since the minimal change approach does not necessarily promote consistency across jurisdictions, developers may be faced with conflicting new development application regulations from one local jurisdiction to another.

- ❖ Alternative Approach: If the alternative approach is consistently applied within the County, it will facilitate the process of new development applications across jurisdictions, resulting in overall positive impacts.

3. *Agencies*

- ❖ Keep the Current Program: Except for the choice of local jurisdictions to opt out of concurrency, there will be no impacts realized by keeping the current program.
- ❖ Minimal Change: The proposed minor changes will initially involve benefits to agencies, because a larger transportation network with more potentially congested corridors will be evaluated. In the long-run, however, not considering land use patterns and not having a comprehensive approach will have negative impacts.
- ❖ Alternative Approach: Initially, applying the alternative approach would have minor negative impacts on agencies, for two reasons: (1) the County's revision of its approach will affect other agencies even if they do not participate in the same methodology and (2) if other agencies decide to participate, they will need to revise their policies and ordinances as appropriate. If, by adopting the multimodal concurrency approach based on person-trips, more capacity is available in unincorporated areas, and then more development may be permitted, which could impact traffic on roadways that pass through adjacent municipalities. The staff time that will be required to prepare inter-local agreements for the distribution of funds collected for mobility fees contributes to the negative impact. In the long-term, however, the alternative option provides a more systematic, consistent and unified approach to concurrency that facilitates the process, yielding positive long-term impacts that offset the initial negative impacts.

8.2.7 Monitoring

For this evaluation, monitoring was considered the amount of effort required to ensure the recommended approach is being implemented appropriately through the provision of updated information and oversight of the program. Although the initial switch from the current system to the recommended approach will be challenging for the first few months, once the system is learned, monitoring it should not be any more complicated than what is currently undertaken.

1. *Community:*

- ❖ Keep the Current Program: The general public will not be affected by monitoring activities of keeping the current program, thus there will be no impact to the community.
- ❖ Minimal Change: Monitoring minor changes to the current program will also not affect the community.
- ❖ Alternative Approach: Similar to the previous two alternatives, the public is not involved and will not be impacted by monitoring activities of the concurrency program.

2. *Developer:*

- ❖ Keep the Current Program: Developers would not be impacted by monitoring the current program.
- ❖ Minimal Change: Monitoring minor changes to the program will not impact developers.
- ❖ Alternative Approach: Similarly, developers are not involved in monitoring concurrency; therefore they will not be impacted by this factor.

3. *Agencies:*

- ❖ Keep the Current Program: Initially, keeping the current program will not have impacts on agencies. However, in the long-term, the current inconsistencies of applying concurrency between local jurisdictions will make it difficult to monitor concurrency at the county-level.
- ❖ Minimal Change: Since the minimal changes proposed for this alternative would not resolve inconsistencies across jurisdictions, monitoring the concurrency program will remain difficult, both in the short- and long-terms.
- ❖ Alternative Approach: Monitoring the alternative approach will initially have a negative impact on agencies due to the effort involved in applying and tracking the new program. In the long-term, however, if implemented countywide, the new program would be more consistent and ultimately have a positive impact.

8.3 Evaluation Summary

A summary of the evaluation is included in Table 14. The table illustrates the summary of the scores by stakeholder, and by the overall impact of each alternative (shown in the red text). As shown, the net impact of keeping the current program will be negative on the community, mainly as a result of not implementing multimodal public facilities. Overall, there will be no net impacts of keeping the current program on developers, primarily because many of the factors used for the evaluation process do not affect developers. Agencies will incur the most negative impacts of keeping the current program, as a result of the continuing inconsistencies between concurrency applications, not realizing the full costs of new development, and the lack of multimodal and operational funding tools. This assessment leads to an overall negative impact of the current concurrency program if all stakeholders are taken into consideration.

While the minimal changes approach proposes some amendments to the current system, such as a larger transportation impact area and development near transit incentives, overall the net positive impacts of this approach are offset by the potential negative impacts, resulting in a net zero impact for all stakeholders. Implementing the alternative approach, which includes a multimodal concurrency program and mobility fees that can be used to fund maintenance operations costs, would ultimately yield the most positive impacts out of the three proposed alternatives. The public would benefit from potential improvements to multimodal facilities. Applying the alternative approach at the county-level would facilitate the concurrency process and provide a more adequate method to recover the costs of new development. Impacts of the new alternative approach on developers would vary depending on the factor, resulting in the negative and positive impacts balancing out for this stakeholder group. In summary, the alternative approach is shown to be the only alternative with an overall positive impact, taking into consideration all factors, stakeholders, and lifecycle impacts.

Table 14: Summary of Evaluation of Impacts

Summary	Community Impact	Developer Impact	Agency Impact	Average Impact Score by Factor
Average Score by Stakeholder for Keep Current Program	-1	0	-1	-1
Average Score by Stakeholder for Minimal Change	0	0	0	0
Average Score by Stakeholder for Alternative Approach	1	0	1	1
Scoring: -1 = negative impact, 0 = no impact, 1 = positive impact				

The scoring, as previously mentioned, is qualitative and different results may occur once discussions or workshops are held with representatives from each of the stakeholder groups to review the recommended changes (which are discussed in more detail in the next section of the report). The benefits that could be derived from adopting the recommended approach could be substantially greater than what is shown in the evaluation model; as it will support multimodal improvements and better connect land use and transportation plans and goals. The purpose of the recommended approach is to encourage infill and redevelopment in areas where multiple mobility options exist; thereby reversing the effects of traditional concurrency that has tended to push development into more rural areas as a result of lower costs for the necessary improvements.

9.0 Recommendations for Miami-Dade County's Current Concurrency Management System

This section consists of two distinct subsections: 1) specific recommended changes to Miami-Dade County's CDMP based on the implementation of any of the three proposed alternatives (keep the current program, minimal changes, and alternative approach), and 2) an action plan for the "alternative approach", which according to the evaluation process conducted, would reap the most positive impacts to the community, developers and agencies in Miami-Dade County.

9.1 Recommended Amendments to the Comprehensive Development Master Plan

Sections 7 and 8 described the three alternatives proposed by this study, based on the literature review, best practices and stakeholder input. To further expand on the specific impacts of the three alternatives, this section includes specific strategies and policies extracted from the CDMP that will need to be revised to reflect the proposed changes. Table 15 identifies the components of the CDMP that would need to be changed in the event that any one of the alternatives identified in this report is implemented. Those components of the CDMP that are affected by the alternative are marked with an "X". If the box is blank, then a change is not required to that component as a result of selecting that particular alternative. Notes at the bottom of the table provide more information about the changes that are required, but are not intended to provide specific language for the amendments.

In general, the "alternative approach" will involve the most changes to the CDMP, primarily because the approach calls for developing CSAs to account for all land use patterns. The current language in the CDMP would have to be revised to address the new CSAs and the currently used TCMA's. Additionally,

the alternative approach proposes multimodal concurrency, thus there are sub-elements in the CDMP that need to reflect that aspect. The minimal changes approach will involve changes pertaining to calculating peak hour capacity. Other recommended changes include updating the current text to match new legislative requirements. This would apply to all of the three proposed alternatives.

Table 15: Recommended Changes to the CDMP

CDMP Component	Keep Current Program	Minimal Change	Alternative Approach
Capital Improvements Element	X ¹	X ¹	X ¹
Introduction			X ²
CIE-3C Traffic Circulation		X ³	X ⁴
CIE-3C Mass Transit	X ⁵	X ⁵	X ⁴
Concurrency Management Program, Item 3	X ¹	X ¹	X ⁴
Concurrency Management Program, Item 4	X ⁶	X ⁶	X ¹
Concurrency Management Program, Figures 1 & 2			X ⁷
Implementation Schedules of Improvements, Traffic Circulation and Mass Transit			X ^{2, 4}
Transportation Element	X ¹	X ¹	X ¹
Introduction			X ²
Objective TC-1 and supporting policies	X ¹	X ¹	X ²
Future Traffic Circulation Map Series, Figure 5			X ⁷
Future Land Use Element	X ¹	X ¹	X ¹
Interpretation of the Land Use Plan Map: Policy of the Land Use Element			X ⁷
Notes: ¹ To update references based on changes adopted in HB 7207. ² To include the Transit Development Plan as one of the plans incorporated by reference into the CIE for financial details of transit improvements that can be funded with mobility fees. ³ To reflect peak-directional LOS. ⁴ To revise LOS standards to reflect person-trips by concurrency service area. ⁵ Per the new legislation, LOS standards should be revised to include BEBR mid-range projections. ⁶ To reflect changes to the proportionate-share definition to ensure that developers are not required to correction of an existing deficiency. ⁷ To identify the CSAs.			

9.2 Recommended Action Plan for the Alternative Approach

The purpose of this study was to evaluate alternative methodologies for concurrency and make a recommendation as to which methodology would work best for Miami-Dade County. The recommended changes included in this section are based on the study team's review of concurrency management programs in other areas and should be further evaluated through a series of workshops and discussions with stakeholder groups, including the County Attorney, representatives from the development community, the public, and other agencies or County departments that may be affected by its implementation. Moreover, the County is advised to conduct additional research with the communities who have implemented similar programs, such as Bellingham, Washington and Pasco County, Florida, in order to identify other issues that may need to be addressed regarding implementation, as well as to see if there are additional lessons to be learned since those communities implemented their programs.

The following plan of action is recommended for adopting the alternative approach, which encompasses a multimodal concurrency management program and establishing mobility fees. It is recommended that a technical committee comprised of planners, transportation professionals, and others currently involved in the implementation of concurrency be formed and consulted throughout the process. The timing of such stakeholder meetings is suggested in the specific steps delineated below.

Step 1: Determine concurrency service areas/mobility fee zones for those portions of the County that will be affected by the new program. While the County may wish to apply multimodal concurrency throughout the unincorporated area, it needs to consider if it will apply mobility fees in a similar fashion or restrict those to more urban areas. The same methodology is recommended for identifying these areas as was applied to Coral Gables in Section 6.1 of this report.

- ❖ Legal issues – The County will need to amend the Comprehensive Plan to identify concurrency service areas/mobility fee zones in both the text and the maps of the plan. Similar changes will be required for land development regulations.
- ❖ Jurisdictional boundaries – As part of the technical committee and through stakeholder outreach, the County needs to determine if other municipalities are interested in participating in the multimodal concurrency program and mobility fee zones.
- ❖ Coordination with other entities - Even if other municipalities do not participate, there will need to be some agreements reached with agencies such as FDOT and MDT who maintain facilities to which mobility fees may be applied.
- ❖ Criteria and guidelines for implementation – The identified areas should have similar travel and land use characteristics.
- ❖ Monitoring – As development occurs, the service areas/zones may need to be revised to reflect these changes. Through coordination with the technical committee, the County should identify a timeframe for regularly reviewing the classifications, or establishing thresholds for each area/zone to allow for a more automatic reclassification, instead of waiting for a specific review period.
- ❖ Enforcement – Related to service areas and fee zones, the County will need to identify the areas that would be exempt from the requirements.
- ❖ Timeframe – Since the areas/zones form the basis for the entire program, sufficient time should be allocated to complete this step, including the coordination with other jurisdictions and agencies that will participate or be affected. If the methodology described in section 6 of this report is accepted, then this step could take as little as 4-6 months; if a different methodology is used then the time necessary could easily grow to 9 to 12 months.

Step 2: Identify transportation facilities for each mode and calculate their available person-trip capacity. The available person-trip capacity will be the new level of service standard that is adopted for each concurrency service area/mobility fee zone. The recommended approach is similar to that used in Bellingham, which was applied to Coral Gables in Section 6.1 of this report.

- ❖ Legal issues – Will need to amend comprehensive plan to identify new level-of-service standards and how they are calculated. Similar changes will be required for land development regulations.
- ❖ Jurisdictional boundaries – Local boundaries will not be affected by this step.

- ❖ Coordination with other entities – If other jurisdictions elect to participate in the multimodal concurrency and mobility fee program, then coordination with these agencies will be important for determining available capacity, especially for bicycle and pedestrian facilities. Coordination with FDOT and MDT will be essential for determining the capacity of their facilities that will be affected.
- ❖ Criteria and guidelines for implementation – The methodology utilized in Bellingham, Washington for roads and transit is pretty straight forward and recommended for Miami-Dade County. One consideration for the transit calculation is to use total load capacity as opposed to just seated capacity, especially in the more urban areas where rail transit is provided. Some additional consideration may be necessary for bicycle and pedestrian facilities, especially for areas of the County with significant tourist activity. For example, the calculation of available capacity may need to consider the width of the facility. The County could also consider applying FDOT's Quality/Level of Service Handbook to account for bicycle facilities included as part of the roadway network.
- ❖ Monitoring – An annual report that provides the available capacity by service area/fee zone and identifies where potential concurrency problems may exist or arise would be beneficial. Since spreadsheets to track available capacity and capacity consumed by development will need to be maintained, an annual report would be a good way to provide that information to the community and other stakeholders.
- ❖ Enforcement – No specific recommendations for enforcement are needed for this step.
- ❖ Timeframe – The greatest amount of time will be required for determining the methodology to be utilized for calculating available capacity, especially for bicycle and pedestrian person-trips. However, as with the identification of service areas/fee zones, this is a critical component of the program and the time will be well invested. It is anticipated that this step could require between three and six months for completion.

Step 3: Determine the person-trips available in each concurrency service area/fee zone, utilizing the same approach illustrated for Coral Gables in Section 6.1 of this report. This calculation uses information from Step 2 and divides it by the average trip length from the Southeast Florida Regional Planning Model (SERPM).

- ❖ Legal issues – The methodology used for this calculation will need to be documented in the land development regulations for transparency reasons.
- ❖ Jurisdictional boundaries – Jurisdictional boundaries will not be affected by this step.
- ❖ Coordination with other entities – Coordination should occur with the technical committee formed.
- ❖ Criteria and guidelines for implementation – SERPM for Miami-Dade County may need to be modified to better reflect the reduction in automobile trips that occurs with specific types of development, such as mixed-use.
- ❖ Monitoring – A periodic evaluation of the average trip lengths being produced by the model should be undertaken.
- ❖ Enforcement – No specific recommendations for enforcement are needed for this step.

- ❖ Timeframe – Unless there is significant discussion regarding the methodology for determining average trip length, this step should be able to be completed within one to two months.

At this point in the process it would be beneficial to reach out to the various stakeholder groups to review the findings of the first three steps and receive feedback.

Step 4: Calculate mobility fees by service area/zone through close coordination with the technical committee. The specific focus should be on the cost per person-trip for each mode and if additional factors should be applied to account for land use type and cross area/zone travel.

- ❖ Legal issues – The methodology used for this calculation will need to be documented in the land development regulations for transparency reasons. The Comprehensive Plan should be amended to include the concept of mobility fees and the general framework of the program.
- ❖ Jurisdictional boundaries – These will not be affected by this step.
- ❖ Coordination with other entities – Coordination should occur with the technical committee formed. Specifically, FDOT and MDT will need to be involved in determining the person-trip costs for their facilities. A special technical committee should be convened to review the reasonableness of the fee calculations and results. While this committee could include representatives from the technical committee, it is important to include individuals who can conduct economic analysis to determine how the proposed fees correspond with the improvement needs. It is unlikely that the fees will cover the total costs associated with multimodal infrastructure and transit service so it would be good to know how much of a gap will exist.
- ❖ Criteria and guidelines for implementation – Both Bellingham, Washington and Pasco County, Florida either incorporated or considered additional factors that account for land use type, recognizing that more urbanized areas provide alternatives to automobile travel. These factors reduce the value assigned to automobile travel/roadways and increase the value for transit and non-motorized modes. In Pasco County, Florida, their mobility fee study recommended that cross area/zone travel be considered in determining the fees since most trips travel through more than a single area/zone. Essentially, the mobility fee for a single-family home considers the proportion of the trip that occurs within each of the three identified zones and proportions the fee accordingly. Given the regional nature of travel within Miami-Dade County, this approach should be considered. The disadvantage is that it further complicates the calculations.
- ❖ Monitoring – A periodic evaluation of the construction costs needs to be conducted since these are part of the cost per person-trip for each mode.
- ❖ Enforcement – No specific recommendations for enforcement for this step.
- ❖ Timeframe – As the end result that will receive the most attention from stakeholders, this step should allow sufficient time for engagement and ensuring that all fee calculations are correct. It is estimated that this step could take six to nine months.

Step 5: Determine additional criteria that may be applied in the different service areas or based on the proximity to alternative modes. In the mobility fee scenario included in Section 6.2 of this report, additional fees or credits were calculated based on the proximity of the proposed development to transportation facilities. After the base mobility fee is determined through the previous

step, the County should consider if there are certain areas where redevelopment or infill should be further encouraged through the application of these types of credits.

- ❖ Legal issues – The methodology and rationale for any such criteria will need to be documented in the land development regulations for transparency reasons. The Comprehensive Plan should be amended to tie these criteria to the specific goals and policies of the plan.
- ❖ Jurisdictional boundaries – These will not be affected by this step.
- ❖ Coordination with other entities – Since this step may reduce the funds available for facilities in certain areas, coordination with maintaining entities such as FDOT and MDT is highly recommended.
- ❖ Criteria and guidelines for implementation – In addition to proximity factors, the County may want to consider mitigation alternatives that could be applied to reduce or eliminate the required fee. In Pasco County, the following mitigation measures are provided: operational or capital enhancements for transit, participation in transit pass program for employees, van pooling and ride-share participation, funding of bicycle, pedestrian and transit stop improvements, lighting improvements, connectivity improvements, and any other type of activity that increases mobility options and intermodal connections.
- ❖ Monitoring – A periodic review of the criteria should be conducted to assess if their implementation results in the expected outcomes, and if revisions are necessary.
- ❖ Enforcement – No specific recommendations for enforcement are needed for this step.
- ❖ Timeframe – It is estimated that this will take approximately three to four months to complete.

Step 6: Develop strategies for expenditure of funds. The recommendation is that Comprehensive Plans, the Long Range Transportation Plan (LRTP), the Transportation Improvement Program (TIP) and the Transit Development Plan (TDP) serve as the plans from which projects will be funded with mobility fees. The prioritization of the projects could be based on the priorities set forth in these documents. If the mobility fee program covers a multijurisdictional area, then the prioritization could be based on the projects identified in the transportation elements of each jurisdiction's comprehensive plan.

- ❖ Legal issues – The correlation between the plans that include the projects that will be funded by the fees should be included in the Comprehensive Plan. Similar language should be incorporated into the land development regulations.
- ❖ Jurisdictional boundaries – While boundaries will not be affected by this step, coordination with the jurisdictions in which the mobility fees will be applied should be conducted to ensure project prioritization is appropriately determined.
- ❖ Coordination with other entities – Coordination with the MPO, MDT and any other agencies whose plans will be tied to the expenditure of mobility fees should be undertaken.
- ❖ Criteria and guidelines for implementation – The LRTP and TDP should be formally tied to the concurrency program through Comprehensive Plan Amendments that identify these documents as establishing the priorities for funding with mobility fee revenues.
- ❖ Monitoring – As part of the overall tracking system, the expenditure of mobility fees should be monitored, tying the fees to the specific improvements that were completed.
- ❖ Enforcement – No specific recommendations for enforcement for this step.

- ❖ Timeframe – It is estimated that this will take approximately one to two months to complete.

Step 7: Incorporate changes into the Comprehensive Development Master Plan and land development regulations per appropriate processes. At this point, additional outreach to the public and stakeholders should occur in accordance with local and statutory requirements.

- ❖ Legal issues – All proposed ordinances should be reviewed by the County Attorney and against the requirements of the 2011 Community Planning Act or subsequent legislation, as appropriate.
- ❖ Jurisdictional boundaries – If other jurisdictions opt to participate in the program, then similar meetings and hearings will have to be conducted to update their plans and ordinances. The County should provide support, as appropriate. Once the programs are in place, inter-local agreements may be necessary to address the collection and distribution of mobility fee funds.
- ❖ Coordination with other entities – Coordination will occur as required for comprehensive plan amendments.
- ❖ Criteria and guidelines for implementation – As part of the program, the County may want to consider allowing an applicant to prepare an independent mobility fee study to determine a more appropriate fee for a specific type of development if the applicant disagrees with the fee suggested by the County.
- ❖ Monitoring – As part of the ordinance revisions, the department(s) responsible for maintaining the program should be identified along with the departments and other agencies with which coordination will be required to keep the information for the program up-to-date.
- ❖ Enforcement – In reviewing the ordinances adopted by the City of Bellingham and Pasco County, enforcement provisions are fairly typical. Some notable features are that both concurrency approval and mobility fees are tied to the land and intensity of the development; the concurrency approval can be revoked if funding for a previously committed transportation project is lost, and if mobility fees are unpaid, each day of unpaid fees constitutes a separate offense that is punishable by the incursion of fines.
- ❖ Timeframe – The County should consider including a provision that allows property owners and developers to exempt out of the mobility fees for a certain period of time and pay the impact fees instead. In Pasco County, the time period allowed is three years.
- ❖ Fees – In addition to the mobility fees collected, the County can charge fees for the concurrency determination and, if desired, for reviewing an independent mobility fee study prepared by an applicant.

It is anticipated that the time required to complete this entire process is 2-3 years. The key factor that influences the length of time required is the amount of coordination and outreach that occurs. As noted at the beginning of this section, since the purpose of this study was to identify a professionally accepted methodology, the County is advised to conduct some additional research regarding the actual implementation of the recommended approach. Ultimately, if the County decides to not pursue the recommendations of this study, it will need to update its Comprehensive Plan to comply with the provisions of the 2011 Community Planning Act.

10.0 Conclusion

Miami-Dade's concurrency methodology has remained the same since its original adoption in 1987. While the program has been modified to reflect changes in the state legislation, it remains focused on roadway impacts and improvements. The purpose of this study was to evaluate the County's concurrency system and make recommendations for how this system could be improved, based on a review of concurrency programs in other areas of the state and country. Based on this review, it is recommended that the County adopt a multimodal concurrency program and replace its current transportation impact fees with mobility fees. This recommended change will improve the link between land use and transportation planning, helping the County to achieve its goals in both areas, and will generate funding that can be used to improve the facilities provided for all modes of travel, as well as to fund operations and maintenance costs. The framework provided in this study requires further stakeholder coordination. Special consideration should be attributed towards the institutional issues, costs and effort required to implement the recommended changes.

Appendix A: History of Concurrency Management Legislation in Florida

Appendix A: Legislative Changes to Concurrency in the State of Florida

- ❖ In 1993, the Legislature authorized the establishment of Transportation Concurrency Management Areas (TCMAs), which permit the development of area-wide LOS standards to address concurrency issues within urban areas.
- ❖ Also in 1993, responding to complaints that transportation concurrency was inhibiting development in central cities, the Legislature created Transportation Concurrency Exception Areas (TCEAs), which allowed local governments to designate certain zones where transportation concurrency is effectively waived.
- ❖ In 1999, the Legislature established Multi-Modal Transportation Districts (MMTDs), where local governments could pursue alternative modes of transportation when permitting development, while still meeting the established LOS standards.
- ❖ In 2005, Legislature passed the first version of SB 360 (Chapter 2005-290, L.O.F.), introducing the most significant changes to Florida's growth management laws since 1985. The new bill required local comprehensive plans to be financially feasible, and the plan's capital improvement program to include a schedule of improvements that ensures adopted LOS standards are achieved and maintained. Additionally, the bill mandated that transportation facilities must be in place or under construction within three years of the local government's approval of the permit (or an agreement that is functionally equivalent to a permit).
- ❖ SB 360 also requires that local governments adopt a methodology for assessing proportionate fair share mitigation options. Developers can elect to satisfy transportation concurrency requirements by contributing to proportionate fair-share mitigation fees for those facilities or segments that are identified in the 5-year schedule of capital improvements. The intent of the proportionate fair-share option is to provide development applicants with an opportunity to proceed under certain conditions, notwithstanding meeting transportation concurrency, by contributing their share of the cost for improving the impacted transportation facility ("pay and go").
- ❖ In 2009, the Legislature enacted the second version of SB 360 (Chapter 2009-96, L.O.F.), named the "Community Renewal Act". The Act characterizes the existing transportation concurrency system as "complex, inequitable, lacking uniformity among jurisdictions, too focused on roadways to the detriment of desired land use patterns and transportation alternatives, and frequently preventing the attainment of important growth management goals". The objective of the Act is to encourage development away from suburban and rural areas and into urban areas, which had been made too expensive for development due, in part, to transportation concurrency requirements.
- ❖ The 2009 Act also creates a new definition for "dense urban land areas" (DULA), and amends S. 163.3180, F.S., to remove state-mandated transportation concurrency requirements for DULAs, allowing TCEAs in qualifying areas, and also permitting additional TCEAs in urban infill areas, community redevelopment areas, downtown revitalization areas, and urban service areas.

- ❖ The Act also directs the Department of Community Affairs and the Department of Transportation to prepare a broader plan for mobility fee methodology that includes recommendations for legislative amendments. The objective is to implement mobility fees that would replace existing local government's concurrency management systems. The legislature viewed mobility fees as a funding mechanism for all transportation modes, and an incentive for compact development.
- ❖ During the 2011 Regular Session, the Legislature revisited the issue of transportation concurrency by enacting the "Community Planning Act" (House Bill 7207). The Act substantially amends Part II of Chapter 163, F.S., and shifts the State's role in the growth management process to one of protecting important State resources and facilities. Consequently, the Act provides local jurisdictions with greater control over planning decisions that affect the growth and development. Local jurisdictions can continue to utilize existing TCEAs as an exception to locally required transportation concurrency.
- ❖ The Act stipulates that all comprehensive plans containing concurrency provisions must include principles, guidelines, standards and strategies for the establishment of a concurrency management system. In addition, comprehensive plans must identify infrastructure needs to ensure that the adopted LOS standards are achieved and maintained for the five-year period of the capital improvement schedule. Local governments electing to eliminate transportation concurrency must adopt a comprehensive plan amendment. The Act also repealed Rule 9J-5, FAC, which established minimum criteria for reviewing and amending comprehensive plans. Provisions and definitions pertaining to plan amendments are now incorporated into various elements of the Act.
- ❖ In addition, the Act fundamentally revised the methodology used to calculate proportionate-share contributions. The contribution is now calculated based on a formula that takes into consideration the expected number of the development phase's peak hour trips, change in peak hour roadway volume, and the construction cost at the time of development payment of the necessary improvement. The proportionate-share formula is to be applied only to facilities determined to be significantly impacted by the project under review. The proportionate share formula was also amended so that developers shall not contribute to currently deficient transportation facilities¹.
- ❖ In 2012, HB 7081, the glitch bill to the 2011 Community Planning Act, was approved. The Bill clarifies that comprehensive plan amendments required to rescind concurrency must be processed under a modified state expedited review process. While the plan amendment is not subject to state review, a local government must provide a copy to other local agencies or municipalities if requested. Once adopted, the plan amendment must be submitted to the Florida Department of Economic Opportunity (DEO). Additionally, if the amendment rescinds transportation concurrency, a copy must be submitted to the Florida Department of Transportation. Alternatively, if the amendment rescinds school concurrency, the Department of Education must receive a copy.

¹ Based on transportation concurrency provisions, the term "transportation deficiency" means "a facility or facilities in which the adopted level of service standard is exceeded by the existing, committed, and vested trips, plus additional projected background trips from any source other than the development project under review, and trips that are forecast by established traffic standards, including traffic modeling, consistent with the University of Florida's Bureau of Economic and Business Research medium population projections. Additional projected background trips are to be coincident with the particular stage or phase of development under review."

Appendix B: Concurrency Evaluation Matrix for Cities within Miami-Dade County

Miami-Dade County Municipality Concurrency Review Matrix

Topic	Reference	Characteristics	Comments/Questions
City of Miami Transportation Element			
Goals	TR-1	Mentions traffic circulation network consistent with furthering neighborhood plans, supporting economic development, conserving energy, and enhancing the natural environment	Consider whether any of these elements are appropriate further considerations at county level - do any special provisions need to made for these items, particularly economic development promotion?
LOS	TR-1.1	Defines city street LOS based upon multimodal capacity recognizing frequency of existing and programmed public transit within TCEA. Appendix includes LOS of roadways, bikes, and pedestrian facilities.	May be worth looking at what is included for multimodal LOS in City of Miami for potential inclusion in County, as appropriate.
	TR-1.1.1	Policies in this objective discuss UIA and emphasis on intensity of development promoting livability of residential neighborhoods and viability of commercial areas. Also provides priority of redeveloping vacant or underutilized parcels and promotion of public transit	
	TR-1.1.1	Provides for transportation corridor levels of service standards	Something similar, like area-wide LOS might be considered at county-level
	TR-1.1.2	Miami utilizes person-trip methodology for LOS and may includes roadway, mass transit, pedestrian way, bikeway, or other modes or in combination with others and provides for measuring capacity of all transportation modes in future peak LOS conditions. Provides LOS standards on city roads based on existing transit	Seem to utilize same catchment areas for determinations as the county.
FDOT Road LOS	TR-1.1.3	Defines FDOT LOS, consistent with county	
Evaluating MM Corridors	TR-1.1.4	Provides requirement for city to update person-trip methodology within 18 months to reinforce transportation corridors plan	This might be something to consider with regard to the county's provisions to coordinate with TDP process. Are specific transit corridors defined in the TDP?
TSM	TR-1.1.5	Same as county provisions but includes improving street design, carpooling and encouraging staggered work schedules	
Coordination with County on Public Transit	TR-1.1.6	This relates to their TCEA and how to promote TOD policies within the county comprehensive plan through coordination	
Restoring 2-lane streets	TR_1.1.7	Meant to improve access and reduce trip length and vehicular speeds in dense areas	
Parking	TR-1.1.8	Requires adequate parking facilities with energy efficient lighting - should not disrupt residential communities	
	TR-1.1.15	Manages parking in TCEA downtown through minimum and maximum parking requirements	
Transportation Control Measures	TR-1.1.9	For supporting the TCEA, TDM strategies are required for existing and future developments	
Support Grid	TR-1.1.11	Provision to extend or relocate streets that do not fit the developed grid system downtown that disrupt circulation	

Miami-Dade County Municipality Concurrency Review Matrix

Topic	Reference	Characteristics	Comments/Questions
Hialeah Concurrency Management System			
Purpose and Components of CMS	8-1 and 8-2	Includes road and mass transit concurrency	Although mass transit is included, it mentions later that this is generally not applicable. This could be given the lack of public transit facilities in Hialeah.
		Contains a computer monitoring and update program to compare impacts of proposed impacts against surplus and uncommitted capacity	
Types of concurrency reviews	8-3	2 Types based on whether type and size of development (intensity/density) is known or not:	This might be worth consideration for county review processes where intensity/density is unknown. Could be based on intensity/density based on location with or outside UIA?
		* Concurrency Information Statement: When density/intensity is not known - Statement on all 7 concurrency services and is a prerequisite for any preliminary development application	
		* Concurrency Impact Stmt: When density/intensity is known, provides analysis of 7 services. This is a prerequisite for issuance of a final devt. Order	
Methodology	8-4	Defines "remaining capacity" as unused or uncommitted or surplus capacity that remains without causing LOS standard failure. Takes into account committed improvements and considers commitments from other DO's (approved or pending)	New legislation - not responsible for previous LOS failures from other developments/only their share
Zones		Methodology identifies service area or zones for each of the 7 services. These zones are defined by individual services and socioeconomic factors	Even though mass transit is included here, it states that concurrency is not generally applicable. Frequency of bus trips and proximity to rail lines may be considered toward a credit for specific projects.
County Capacity Analysis		States that in some instances capacity calculations are prepared by the county and they issue a letter of capacity that constitutes a blanket determination of concurrency for that service	Is this something that has helped the county streamline? Is it something to be considered in development of their methodology overall?
Funding on Traffic or Mass Transit Improvements		Planning department provides analysis of planned and committed improvements. For traffic and mass transit, this includes those in the CIE for the city and county and by FDOT to be constructed within 3 years of the adopted budgets.	
Prop Fair Share	8-5	Applicability - applies to all developments notified of a lack of capacity including facilities maintained by FDOT or others - Does not apply to DRIs or others exempt from concurrency	Consider updates to proportionate fair share contribution calculations and coordination with county.
		Requirements: One or more improvements are in the CIE that would satisfy CMP	Given the legislative update, again would encourage the idea of providing some sort of provision for whether a funded/unfunded improvement.
		Provisions may apply if a project(s) needed to satisfy concurrency are not currently included in the 5-year CIE where city council holds public hearing to consider the agreement and future changes to CIE or city council approves prop share by resolution and it improvements is determined to be financially feasible.	See above - changes on financial feasibility given new legislation

Miami-Dade County Municipality Concurrency Review Matrix

Topic	Reference	Characteristics	Comments/Questions
Timeframe		Within 10 days- city certifies whether sufficient/complete/consistent with prop share program and sends letter	
		Applicant has 30 days to remedy the insufficiency or prop share agreement is abandoned	
		For SIS, applicant must show agreement with FDOT for inclusion in prop share agreement	
		Within 60 days of sufficiency determination, prop share obligation and binding agreement is prepared by applicant with city assistance and sent to city (copy to FDOT on SIS)	Must also be no fewer than 14 days prior to city council meeting when agreement will be considered.
Obligation		Can include private funds, contributions of land, and construction and contribution of facilities	
		Calculated based on cumulative number of trips from proposed development expected to reach roadways during peak hour from complete build-out of a stage or phase divided by change in peak hour max service volume multiplied by construction cost at time of developer payment	163.3180(5)(h)3(8)- prop share formula shall be applied only to those facilities determined to be significantly impacted by project traffic under review. If any road determined to be deficient without project under review, costs of correcting that deficiency shall be removed from prop share calculation and necessary improvements to correct deficiency will be considered to be in place for prop share calculation.
		Provides impact fee credit for prop share where mitigation is occurring on county roads. Also provides potential for major projects not in county's impact fee ordinance that can demonstrate significant benefit to impacted transportation to get impact fee credits.	This is the policy mechanism to coordinate the county impact fee system with the city's prop share ordinances. Potential for coordinating city prop share with county policies.
TCMA		Prop share in TCMA assessed based on expected costs and transportation benefits of all programmed improvements in the area and based on expected trip generation of proposed development.	
City of Aventura Concurrency Management System			
City of Aventura Comp Plan	CMS	Consistent with County concurrency requirements for UIA and LOS in general	
		Necessary transportation facilities must be contracted for construction no later than 36 months after issuance of CO	Consistent with County requirements.
Impact Fees	City Ordinance Ch. 2, Article IV, Division 5	The city has been designated a TCEA, and is located in a compact, high density, regional desitnation community near build out and lacks parallel road facilities to relieve congested/constrained corridors. This ordinance provides for payment of a transportation mitigation fee fro the expansion, operation, or maintenance of the city's transit circulator. The computation formula is based on the persons per units of measure and the number of residential dwelling units or office, retail, tourist accomidation, industrial, or institutional per 1,000 square feet.	This progressive policy may be considered by the County for TCEAs or other specifically identified corridors where transit is a viable alternative adn where density and intensity of uses are comparable. The county may consider coordinating the determination of these areas with long range transportation plans for improvements to determine a preferred computational structure for assessing impact fees.

Miami-Dade County Municipality Concurrency Review Matrix

Topic	Reference	Characteristics	Comments/Questions
City of Miami Beach Concurrency Management System (Chapter 122, Code of Ordinances)			
Concurrency Exemptions	122-5	Includes developments that: * do not require rezoning, * do not increase intensity of use, * renovate historic structures, * develop land for single family purposes, * is residential and does not increase the number of dwelling units existing or approved for the property, etc.	Consider coordination of regional long range transportation plans for a balanced system with municipal concurrency exemptions to ensure consistency.
LOS Standards	122-6	Capacity credits available within the TCMA.	
		Roads and transit facilities deemed available if they are in existence at the time of DO, funded and developed at the time the development would be built, subject of an enforceable mitigation program, programmed within 3 years of development building.	
Determination of Concurrency	122-8	Sets up a mitigation program based on the same methodology as the city's concurrency determinations and the city's municipal mobility plan. Includes responsibilities , a method of securing performance of the mitigation program, payment of mitigation funds and a proposed recapture program for the provision of excess capacity, if applicable.	
		Concurrency management division may grant up to 30% mitigation credit to projects with approved historic designation undergoing major rehabilitation. No credit granted to projects that are intensifying land usage.	Mitigation credits provided here for historic rehabilitation may be considered by the county for addressing intensity/density and/or mode split.
City of Homestead Comprehensive Plan			
LOS Standards and Concurrency Mgt	Capital Improvements, Objective 3, Policy 1	Item #5 indicates that transportation facilities must be programmed into the CIE for construction in or before year 3	New legislation removes requirement for financial feasibility in CIE - may be an item for discussion between county and municipalities on how to address uniformly
		References Rule 9J-5 and concurrency requirements under Chapter 163	Wording needs to be updated to ensure that references are still valid (i.e. Rule 9J-5)
LOS standards	Policy 3.3	References mandatory concurrency under 163 and 380	Needs to be verified for consistency with new legislation. May just need to be rephrased.
Local LOS standards	Policy 3.5	LOS is consistent with county provisions on state and county roads. For city roads and streets, it is LOS E (same as county road) and specifies routes #38 and #70 for transit provisions.	Does not include much detail on concurrency determinations where transit is available; assume this is because it is the same as county provisions.
		Mandates that if project to raise LOS standards is included in first 3 years of FDOT Work Program for state roads or first 3 years in CIE for county/city roads	New legislation removes requirement for financial feasibility in CIE - may be an item for discussion between county and municipalities on how to address uniformly
Miami Shores Village Transportation Element			
LOS standard	Policy 1.1	Allows LOSF for Biscayne Blvd., all other arterials and collectors are LOS D and local roads are LOS B	Because the Villages are a small demographic area with the major roadway being Biscayne, they provide guidance specifically for this roadway.
LOS Provisions related to transit	Policy 1.2	Consistent with county allowances: 150% of capacity for CRT/Express Bus within .5 mile, 120% of capacity for transit headways of 20 minutes or less, and LOS E for all roadways without any transit service	Does not address intensity/density issues as they relate to transit
TCMA/TCEA	Policy 1.12	The Village shall evaluate the utility of employing TCMA/TCEAs in the CMS. TCMA/TCEAs authorized under 9J-5.	9J-5 no longer applicable. Updated Chapter 163 still allows for the use of TCEAs/TCMA. These areas should be identified if considering implementing for county provisions.

Miami-Dade County Municipality Concurrency Review Matrix

Topic	Reference	Characteristics	Comments/Questions
Miami Gardens Concurrency Management Impact Fees (Chapter 34, Zoning and Land Development Code)			
Prop Fair Share	34-91	Following standards for roads must be met: must comply with city/county/state agencies, LOS standards to be met and facilities to be in place at time of final DO or when impacts of DO are expected to occur, or facilities to be under construction at time of final DO, or programmed within 3 years	New legislation removes requirement for financial feasibility in CIE - may be an item for discussion between county and municipalities on how to address uniformly
Prop Fair Share	34-92, 93	Provides prop fair share procedures and obligations. This section is typical in language with references to Chapter 163 requirements throughout.	References to Chapter 163 will need to be updated to address new legislative changes and the new methodology for prop share identified.
LOS standards	34-94	Allows for area wide LOS E for non FIHS/SIS facilities and overall average LOS E within TCMA's. Provides LOS for areas inside Miami Gardens, for roadways parallel to exclusive transit facilities, and for areas inside the TCMA's	Provisions for TCMA and roadways with parallel dedicated transit facilities only dictate LOS standards and do not address density/intensity of use or mode split.
Miami Lakes Transportation Element			
LOS Standards	2.2.1	Identifies area east of Palmetto Expressway as within UIA and west as outside of UIA. Also identifies category for FIHS roads. Uses the same indications on LOS and provision for exceeding LOS when transit is available as county provisions. Also addresses areas within TCMA's for FIHS roads.	Does not address intensity/density issues as they relate to transit
TDM and reducing VMT	2.2.3	In partnership with MPO, city to examine TDM strategies for reducing peak hour travel and VMT	Have not seen this provision in other municipalities reviewed and may be considered for county modifications as well.
Encouraging use of FIHS alternatives	2.2.5	Identifies a number of strategies for encouraging use of alternatives to FIHS, including feasibility studies for local road expansions, transit systems, reinforcing grid system, designated areas as TMAs, improving transit service headways, etc.	This provision is excellent for supporting multimodal development and may be considered in a modified format as strategies within county as well.
North Miami Transportation Element			
LOS for City, County and State Roads	2A 1.1	Establishes same LOS standards and provisions if transit service is available as county.	Does not address intensity/density issues as they relate to transit
LOS Standards for FIHS Roads	2A 1.2	Limited Access Highway = LOS D, or E when exclusive through lanes exist	Consistent with county rules and includes TCMA similar to parallel exclusive transit facilities referred to in the county comprehensive plan. Please note that new legislation renames concurrency backlog authorities to transportation deficiency authorities and plans are now "transportation sufficiency plans".
		Controlled Access Highway = LOS D, or LOS E where parallel to exclusive transit facilities or located inside TCMA	
		Constrained/backlogged roads must be managed to avoid significant additional deterioration.	
Roadway, Transit, Bike/Ped Improvements	2A 1.3	In connection with future development, these improvements must be built by developer in accordance with LDR and under construction within 3 years after DO approved.	Consistent with county provisions.
TCEA	2A .2	Allows city to forego concurrency requirements in support of the TCEA, develop economic incentives within the regional activity center	
Funding of TCEA	2A 2.3	Transit impact fee established to improve transit within TCEA, utilize sales tax, improve service headways, utilize transportation enhancement funds issued by FDOT D6 for TCEA mobility strategies, and pursue grants from MPO.	This is the most detailed municipal information on funding sources available for TCEA support. May be considered if this strategy is to be embraced by County as an option.
Alternatives for FIHS	2A 2.6	Among other strategies, identifies applying to FDOT to partner in development of a Transportation Management Initiative to mitigate peak hour traffic impacts through TDM programs such as carpooling, ridesharings, flex hours, etc.	May be considered by county in promoting transportation alternatives to FIHS/SIS in designated areas within the county.

Miami-Dade County Municipality Concurrency Review Matrix

Topic	Reference	Characteristics	Comments/Questions
Implementation of Master Plan for TCEA	2A 2.7	Provides number of strategies to improve sidewalks, bike/ped capabilities, integrating transit services.	These ideas are considered on a larger scale as part of the LRTP and TDP. May consider including this kind of detailed provision for potential TDM strategies to support these policies at the county level.
Designated TOD Districts	2A 2.8	Creates TOD overlay district and land development regulations to establish an appropriate mix of uses, densities and site designs within districts.	May be considered if pursuing a district or area wide LOS at the county level.
Parking Strategies	2A 2.9	Provides a deadline for initiating a city-wide parking master plan to promote the TCEA	County may consider how to address parking to promote mode share.
Large Scale Developments	2A 2.12	All future large scale development projects that will significantly impact state, county or city roads have to submit a TDM program and shall demonstrate that every effort would be made to ensure the proposed transportation strategies will reduce traffic impacts anticipated from the proposed development.	May consider a provision similar to this for county review in dealing with DRIs and desired plans for growth.

Appendix C: Concurrency Evaluation Matrix for Miami-Dade County

Miami-Dade County Concurrency Provision Review Matrix

Topic	Reference	Characteristics	Notable Features	Opportunities for Improvement
Miami-Dade Comprehensive Plan				
Traffic Circulation Sub-Element				
L RTP	TC-1A - Linkage to Long Range Transportation Plan	Upon completion of L RTP updates, traffic and mass transit elements are enhanced/revised as needed.		
LOS Standards (Peak Periods)	TC-1B	Designates minimum LOS for FIHS (SIS) and non-FIHS (SIS) facilities and includes separate provisions by UIA, Non-UDB and accounts for whether transit is provided (none, 20 min headways, premium svc)	The LOS standard for automobiles is E in Transportation Concurrency Exception Areas (TCEAs). This acknowledges that non-auto mobility is a priority.	There is an opportunity to link the LOS standards with type and intensity of development at the county level. The current LOS standards do not address this.
			LOS standards account for urban infill areas and roadways parallel to transit facilities	LOS standards could be specified for bicycles and pedestrians in TCEAs, urban infill areas and roadways parallel to premium transit. These standards could help drive mitigation strategies for these modes, particularly when a corridor is constrained for vehicular travel.
				Alternative strategies outlined in 163.3180 (5) could be implemented. These strategies assign secondary priority to vehicle mobility in certain areas and primary priority to ensuring safe, comfortable pedestrian environment.
LOS Monitoring	TC-1C	There is a comprehensive traffic count system annual which monitors LOS on at minimum .on county roads and also utilizes FDOT counts where available.	This process assures consistency between county and state count programs	LOS could be monitored for non-auto modes. FDOT LOSPLAN software or generalized tables allow for this with relative ease, particularly if this is integrated with automobile LOS monitoring.
Issuance of Development Orders (DO)	TC-1D	The element links issuing a DO based on compliance with LOS standards, the Congestion Management Plan and the Capital Improvements Element (CIE)	This process lays out specific requirements for issuance of DOs based on sound planning principles	LOS standards could be set for non-auto modes for DOs
Traffic System Management Techniques (TSM)	TC-1E	This calls for low cost efficiency improvements such as signal timing, intersection signing, marking, channelization, on-street parking, etc	This process allows for lower cost improvements which avoid widening roadways	Consider making this a more specific policy to address operational efficiency improvements and develop mitigation options that begin to address a comprehensive access management program within the UDB for these low cost improvements. The program could be as specific as to identify major corridors for improvements. This would need to be coordinated with FDOT for state facilities
Mass Transit Sub-Element				
Overview	Introduction	This section provides purpose for the element and provides for balanced system by 2025, coordination with land use element and patterns, and provides mention of transit services described in 2003 EAR element and patterns, and provides mention of transit services described in 2003 EAR		Consider additional guidance or direction on how the long range planning processes and concurrency management system work together to provide the balanced transportation system.
Minimum Transit LOS in UDB	MT-1A	Defined as areas with resident/work force pop of 10,000/sq mile and calls for 30-minute headways and average 1-mile spacing of routes provided certain combined population/employment densities and location, has sufficient demand to warrant service, is economically feasible, expansion of service is not detrimental to higher density areas more suited to transit and needed.	Most notable is the inclusion of a mass transit element which specifies minimum service based on defined land use and population requirements	New legislation calls for use of BEBR mid-range projections. There is potential for using that in this section
				Sufficient demand to warrant service should be defined
				Special provisions or differences should be laid out for TCEAs which should include greater transit service to compensate for reduced automobile mobility.
				Consider adding special provisions if the proposed development is Transit Oriented Design (TOD).
Issuance of DO's	MT-1B		DOs are contingent upon compliance with Minimum Transit LOS	Could potentially build transit level of service standards into MMLOS standards for all modes.

Miami-Dade County Concurrency Provision Review Matrix

Topic	Reference	Characteristics	Notable Features	Opportunities for Improvement
LOS Monitoring	MT-1C	Annual monitoring of transit system LOS	Annual monitoring of transit system compliance with adopted LOS	There is a potential to incorporate this process into the annual Transit Development Plan (TDP) analysis to more effectively coordinate transit development plans, comprehensive plan, and the CMS
Areas around future rapid transit stations	MT-2B	Designed as community urban centers with focus on promoting transit use	Calls for these areas to be designed and developed as community urban centers with focus on promoting transit use as defined in Land Use Element	
Administrative Order 4-85				
Mass Transit Sub-Element				
Minimum LOS		Requires at least 60 minute public transit headways in UDB and average route spacing of 1 mile if:		In discussion with County staff it was determined that BEBR numbers would be used to determine population density. Further clarification should be provided herein, and County will need to determine whether to use mid-range projections.
		* Avg. combined population and employment density between existing transit network and area of expansions is in excess of 4,000/square mile and corridor is 1/2-mile on either side of any needed new routes or extensions		
		* Must show sufficient demand to warrant service.		
		* Must be economically feasible		From Mass Transit Minimum LOS Section – Economic Feasibility - A clear definition is needed, especially given new legislation and changes to financial feasibility element.
		* Not done at detriment of existing or planned service in higher density area with more need		
Methodology		Area within 1-2 mile of routes with 60-minute or shorter headways meet LOS standard. MDTA will prepare and maintain data showing peak hour headway service for all routes and spacing as well as combined population and employment densities		
		If population and employment of TAD is less than 10,000 persons/square mile, no transit service required to meet LOS standard		In discussions with County staff, regarding the 10,000 persons/square mile threshold may not have suitable research behind it and that modification might be desirable. The county may want to consider using the Transit Cooperative Research Program’s (TCRP) Transit Capacity and Quality of Service Manual which identifies a density of three households per acre and/or four jobs per acre as the thresholds to qualify as a transit-supportive environment.
Chapter 33G- Service Concurrency Management Program				
Review Agencies	Sec 33G-4	Identifies the concurrency review agencies for various specified services, including transportation. Includes Metro-Miami Dade Transit Agency for public transit and Public Works for traffic circulation.		From the Review Agencies Sec 33G-4 – which identifies the concurrency review agencies for various specified services. Consider formally including the RPC for regionally significant development and FDOT for impacted state facilities - at discretion of the county.
Exemptions from Concurrency	Sec 33G-5(1) (a and b)	Provides detailed cases where development orders will still be issued even when negatively impacting concurrency requirements. Among them are developments in the UIA, empowerment/enterprise zones, a development that only poses part time demands on transportation system, that incorporates a transit station or is within 1/4 mile of transit, de minimus impacts.		There is an opportunity to identify and address type and intensity of development in this section near transit. The way this is written it could produce land uses not consistent with promoting transit and other modes. Discussion needs to be conducted to determine preferred methodology for intensity/density measures.

Appendix D: City of Miami Peak Hour Person Trip Level of Service Calculation Methodology

City of Miami Peak Hour Person Trip Level of Service Calculation Methodology

Peak Hour Person Trip Level of Service Calculation Methodology

The City of Miami has adopted through its Transportation Element a new method for measuring the capacity of a roadway for the purpose of transportation concurrency review, in which the fundamental measure of travel is the person trip and not the vehicle trip, and 'transportation corridor' capacity is the sum of two or more modes of person trip travel (i.e. vehicle + public transit) instead of vehicle capacity alone. Level of service evaluations are performed for the major roadways within the City using person trip volumes developed from the corresponding vehicle trip evaluation tables and transit ridership data provided by Miami-Dade Transit. The level of service evaluations are based upon the best available information and the methodology for calculating peak hour person trip demand and capacity was validated by Miami-Dade Transit.

Transit Demand

Peak-hour bus ridership is calculated by comparing peak-hour boardings to average weekday boardings. Miami-Dade Transit Bus Boarding Reports were collected for each bus route in the City for which information was available on January 29, 2004. This date represents a mid-weekday in peak-season, with school boardings, and for a month in which holidays would not significantly skew the average weekday ridership statistics. Boardings on all runs operating between 7:00 AM and 9:00 AM, and between 4:00 PM and 6:00 PM were totaled. An AM peak-hour factor of 6.24 percent and a PM peak-hour factor of 6.08 percent were calculated. The PM factor was applied to average weekday ridership information to derive a peak-hour ridership volume similar to a "k" factor in vehicle trip methodology. Miami-Dade Transit agreed that this was an acceptable conversion. Peak-hour ridership for Metrorail is based on information published in Miami-Dade Transit's Ridership Technical Report for January 2004. The PM peak-hour of ridership is reported as 4:00 PM to 5:00 PM, with 10 percent of all daily boardings occurring during this hour. This peak-hour factor was applied to average weekday boardings. Miami-Dade Transit does not collect time-of-day information on Metromover boardings. Therefore, due to the intermodal connectivity of Metrorail and Metromover, the peak-hour factor of 10 percent reported for Metrorail was applied to Metromover average weekday boardings.

Transit Capacity

Peak hour bus capacity is based on peak-hour headways published in the Miami-Dade Transit Schedules dated October 2003, and bus capacities for each route as provided by Miami-Dade Transit. Metrorail capacity is based on six car train-sets each with a capacity of 164 passengers per car as directed by Miami-Dade Transit. A peak-hour Metrorail headway of six minutes is based on published information in the Miami-Dade Transit Schedules dated October 2003. Metromover capacity is based on individual cars with a capacity of 96 passengers operating on 90-second headways per Miami-Dade Transit.

Person Trips

Vehicle trip volumes are converted to person trip volumes by multiplying the number of vehicle trips reported for the individual segment by the assumed vehicle occupancy rate plus the total average weekday transit ridership statistic reported for all routes serving the individual segment. The assumed occupancy rate is 1.34 for the baseline based upon the Southeast Florida Regional Travel Characteristics Study and 1.40 for the long range planning horizon (2025), a slightly higher occupancy rate in accordance with the provisions of the City of Miami Concurrency Management System. Roadway links within one-half mile of the Metrorail or Metromover systems were considered to benefit from the remaining capacity of these transit systems. For the long range planning horizon (2025), a linear growth rate of 0.434 percent is applied to existing (2004) transit ridership statistics reported for each roadway segment to account for some growth in general demand for the system. The growth rate for transit usage represents the annual calculated growth rate from system-wide Metrobus ridership data published by Miami-Dade Transit for Fiscal Year 1997 and 2002.

Person Trip Capacity

Maximum service capacities for measuring level of service are developed by multiplying the vehicle capacity by the assumed vehicle occupancy rate plus the net remaining daily person capacity available for future transit demand along the travel corridor. For the long range planning horizon (2025), the same linear growth rate of 0.434 percent is applied to the statistic representing the remaining daily person capacity available for transit use. This reflects the assumption that Miami-Dade Transit will, at a minimum, continue to improve its service capacity within the study area in proportion to the increase in demand for transit service by identifying appropriate improvements within the Agency's Five Year Transit Development Plan. Although not included in the capacity calculations for this analysis, additional transit capacity within the study area is anticipated through the year 2008 and beyond to include increased service times, additional bus routes on a new grid routing system and additional municipal bus circulator programs. In discussions with MDT staff, these improvements cannot be quantified as specific capacity improvements for roadway segments are not available at this time, but these general improvements are targeted in The Peoples Transportation Plan with funding secured through the half cent sales tax referendum approved by Miami-Dade County voters. More information about The Peoples Transportation Plan is discussed in the Analysis of Future Transportation System section.

Peak Hour Person Trip Level of Service Measurements

Similar to a traditional vehicle capacity methodology, peak hour person trip volume-to-capacity (V/C) statistics calculated for each roadway segment are measured against volume-to-capacity (V/C) thresholds established by the City of Miami for use in performing person trip capacity analysis. These thresholds are documented in a report entitled Transportation Corridors: Meeting the Challenge of Growth Management in Miami. Level of service evaluations for County and State roadway segments afforded increased capacity thresholds due to extraordinary transit service are evaluated based on Level of Service E capacities in the City's volume-to-capacity table for person trips and adjusted to allowable increased levels of service (i.e. E+20/E+50) when the volume-to-capacity ratio exceeds 1.0.

Appendix E: Miami-Dade County Traffic Impact Fee Schedule

MIAMI-DADE COUNTY IMPACT FEES RATE SCHEDULE-Effective October 1, 2012 through December 31, 2012

LAND USE	ROAD Non UIA*	ROAD UIA*	FIRE	POLICE	SCHOOL	PARKS DIST 1	PARKS DIST 2	PARKS DIST 3	UNITS
Port and Terminal									
Truck Terminals	\$4.0151	\$3.7966	\$1.2828	\$0.3587		North SW 8 ST	Middle	South SW 184 ST	sq. ft.
Industrial									
Industrial Park	\$2.7963	\$2.6442	\$1.2828	\$0.3587					sq. ft.
Manufacturing	\$1.5350	\$1.4513	\$1.2828	\$0.3587					sq. ft.
Warehousing	\$1.9930	\$1.8840	\$1.2828	\$0.3587					sq. ft.
Mini-Warehouse	\$0.9623	\$0.9097	\$1.2828	\$0.3587					sq. ft.
Residential									
Single Family Detached	\$3,801.63	\$3,594.48	\$396.09	\$516.86	\$612.00	\$3,681.10	\$2,597.53	\$2,315.63	unit
Total road, fire, police, park & school						Non UIA**	\$9,007.68	\$7,924.12	\$7,642.22
						UIA**	\$8,800.53	\$7,716.97	\$7,435.06
plus (max. 3,800 sq. ft. per unit)						\$0.918			sq. ft.
Apartment (Rentals)	\$2,669.57	\$2,523.86	\$396.09	\$516.86	\$612.00	\$2,160.84	\$1,628.49	\$1,434.68	unit
Total road, fire, police, park & school						Non UIA**	\$6,355.36	\$5,823.01	\$5,629.21
						UIA**	\$6,209.65	\$5,677.31	\$5,483.50
plus (max. 3,800 sq. ft. per unit)						\$0.918			sq. ft.
Condominium	\$2,327.48	\$2,200.78	\$396.09	\$516.86	\$612.00	\$2,160.84	\$1,628.49	\$1,434.68	unit
Total road, fire, police, park & school						Non UIA**	\$6,013.27	\$5,480.92	\$5,287.12
						UIA**	\$5,886.57	\$5,354.22	\$5,160.42
plus (max. 3,800 sq. ft. per unit)						\$0.918			sq. ft.
Townhouse	\$2,327.48	\$2,200.78	\$396.09	\$516.86	\$612.00	\$3,113.52	\$2,121.82	\$2,128.12	unit
Total road, fire, police, park & school						Non UIA**	\$6,965.95	\$5,974.25	\$5,980.55
						UIA**	\$6,839.25	\$5,847.55	\$5,853.85
plus (max. 3,800 sq. ft. per unit)						\$0.918			sq. ft.
Duplex/Triplex	\$1,982.22	\$1,873.89	\$396.09	\$516.86	\$612.00	\$3,681.10	\$2,597.53	\$2,315.63	unit
Total road, fire, police, park & school						Non UIA**	\$7,188.27	\$6,104.71	\$5,822.80
						UIA**	\$7,079.94	\$5,996.38	\$5,714.48
plus (max. 3,800 sq. ft. per unit)						\$0.918			sq. ft.
Lodging									
Hotel	\$3,543.1655	\$3,349.9480	\$0.4236	\$0.3587					room/sq. ft.
Motel	\$3,618.5520	\$3,421.5335	\$0.4236	\$0.3587					room/sq. ft.
Recreational									
Marina	\$1,216.3200	\$1,149.8025	\$0.4236	\$0.3587					berth/sq. ft.
Golf Course	\$14,686.4305	\$13,886.3200	\$0.4236	\$0.3587					hole/sq. ft.
Racquet Club	\$15,902.7505	\$15,036.1225	\$0.4236	\$0.3587					Court/sq. ft.
Health/Fitness	\$1.6522	\$1.5622	\$0.4236	\$0.3587					Court/sq. ft.
Institutional									
Elementary School	\$79.1875	\$74.7530	\$0.4236	\$0.3587					St. Sta./sq. ft.
High School	\$445.9840	\$421.9110	\$0.4236	\$0.3587					St. Sta./sq. ft.
Jr./Community College	\$475.1250	\$449.1515	\$0.4236	\$0.3587					St. Sta./sq. ft.
University	\$942.0145	\$890.7010	\$0.4236	\$0.3587					St. Sta./sq. ft.
Church/Synagogue	\$2.3769	\$2.2470	\$0.4236	\$0.3587					sq. ft.
Day Care Center	\$3.2309	\$3.0554	\$0.4236	\$0.3587					sq. ft.
Medical									
Hospital	\$7.1053	\$6.7183	\$0.9440	\$0.3587					sq. ft.
Nursing Home	\$958.4855	\$905.9050	\$0.9440	\$0.3587					bed/sq. ft.
Office									
General Office Building									
1 - 50,000	\$6.1944	\$5.8573	\$0.3147	\$0.3587					sq. ft.
50,001 - 100,000	\$5.2815	\$4.9939	\$0.3147	\$0.3587					sq. ft.
100,001 - 150,000	\$4.5036	\$4.2584	\$0.3147	\$0.3587					sq. ft.
150,001 - 200,000	\$4.5036	\$4.2584	\$0.3147	\$0.3587					sq. ft.
200,001 - 300,000	\$4.1025	\$3.8789	\$0.3147	\$0.3587					sq. ft.
300,001 - 400,000	\$3.8396	\$3.6306	\$0.3147	\$0.3587					sq. ft.
400,001 - 500,000	\$3.6477	\$3.4488	\$0.3147	\$0.3587					sq. ft.
500,001 - 600,000	\$3.4976	\$3.3075	\$0.3147	\$0.3587					sq. ft.
600,001 - 700,000	\$3.3759	\$3.1922	\$0.3147	\$0.3587					sq. ft.
700,001 - more	\$3.2739	\$3.0953	\$0.3147	\$0.3587					sq. ft.
Medical Office Building	\$14.3044	\$13.5252	\$0.3147	\$0.3587					sq. ft.
Research Center	\$3.2106	\$3.0357	\$0.3147	\$0.3587					sq. ft.
Business Park	\$5.0522	\$4.7766	\$0.3147	\$0.3587					sq. ft.
Retail									
Shopping Center/General Retail									
1 - 10,000	\$7.4886	\$7.0806	\$0.4236	\$0.3587					sq. ft.
10,001 - 50,000	\$5.5957	\$5.2910	\$0.4236	\$0.3587					sq. ft.
50,001 - 100,000	\$5.3315	\$5.0408	\$0.4236	\$0.3587					sq. ft.
100,001 - 200,000	\$8.0626	\$7.6235	\$0.4236	\$0.3587					sq. ft.
200,001 - 300,000	\$7.4785	\$7.0711	\$0.4236	\$0.3587					sq. ft.
300,001 - 400,000	\$10.2956	\$9.7350	\$0.4236	\$0.3587					sq. ft.
400,001 - 500,000	\$9.8199	\$9.2852	\$0.4236	\$0.3587					sq. ft.
500,001 - 600,000	\$9.3524	\$8.8430	\$0.4236	\$0.3587					sq. ft.
600,001 - 800,000	\$8.7094	\$8.2349	\$0.4236	\$0.3587					sq. ft.
800,001 - 1,000,000	\$8.1715	\$7.7262	\$0.4236	\$0.3587					sq. ft.
1,000,001 - 1,200,000	\$7.7756	\$7.3524	\$0.4236	\$0.3587					sq. ft.
1,200,001 - more	\$7.6673	\$7.2498	\$0.4236	\$0.3587					sq. ft.
Services									
Nursery/Garden Center	\$7.0597	\$6.6752	\$0.4236	\$0.3587					sq. ft.
Quality Restaurant	\$27.1056	\$25.6289	\$0.4236	\$0.3587					sq. ft.
High Turnover Rest.	\$20.6597	\$19.5340	\$0.4236	\$0.3587					sq. ft.
Fast Food Rest. No Drive Thru	\$29.1885	\$27.5984	\$0.4236	\$0.3587					sq. ft.
Fast Food Rest. w/ Drive Thru	\$20.2245	\$19.1228	\$0.4236	\$0.3587					sq. ft.
Car Sales (New & Used Car Sales Area)	\$9.6862	\$9.1585	\$0.4236	\$0.3587					sq. ft.
Car Sales (Service and Parts Sales Area)	\$6.1880	\$5.8510	\$0.4236	\$0.3587					sq. ft.
Car Sales (Parking Area)	\$1.9930	\$1.8840	\$0.4236	\$0.3587					sq. ft.
Service Stations w/ Gasoline	\$4,810.1655	\$4,547.8965	\$0.4236	\$0.3587					Pump/sq. ft.
Convenience Market	\$21.0594	\$19.9122	\$0.4236	\$0.3587					sq. ft.
Convenience Market w/ Gasoline	\$24.1300	\$22.8155	\$0.4236	\$0.3587					sq. ft.
Bank (Walk-in)	\$6.3787	\$6.0316	\$0.3147	\$0.3587					sq. ft.
Bank (Drive-in)	\$10.0486	\$9.5012	\$0.3147	\$0.3587					sq. ft.

*UIA (Urban Infill Area) - means that part of Miami-Dade County located east of, and including S.R. 826 (Palmetto Expressway) and NW/SW 77 Avenue and, excluding the area north of and west of I-95, and the City of Islandia.

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Prepared by

JACOBS

**CDM
Smith**



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