MIAMI-DADE MPO
Metropolitan Planning Organization

Evaluation of Current Methodology to Determine Traffic Concurrency

Task Work Order No. 20

Study Purpose

- Assess Miami-Dade County's current Transportation Concurrency Program
- Identify Amendments to Comply with Legislative Changes
- Recommend Alternative Approaches

Study Advisory Committee

- County Planning staff
- Planners Technical Committee, representing all of the municipalities in Miami-Dade County
- Miami Dade Transit
- MPO

Concurrency Assessment Inputs

Stakeholder Input

- Improve consistency, equitability, & predictability
- Support multimodal approach
- Fund transit operations
- Consider regional perspective
- Consider Land Use Patterns
- Consider economic development impacts
- Foster Greater Coordination

New Legislation

- HB 7207 "The Community Planning Act of 2011"
  - State role
  - Local control
- Transportation concurrency made optional, if retained:
  - consult FDOT on amendments affecting the SIS
  - Calculation of proportionate share contributions revised

Best Practices

- Cities of Miami, Hialeah, and Jacksonville, FL
- **Cities of Bellingham and Redmond, Washington**
- Alachua, Pasco, and Orange Counties, FL
- Montgomery County, Maryland
- King County, Washington

General Principles for Effective Concurrency

Principle	Miami-Dade	Multimodal Concurrency	Mobility Fees
Comprehensive Plan-based and supportive of anticipated infill	2	3	3
Is multi-modal	2	3	3
Ties revenue generation to planning objectives	1	3	3
Receptive to transportation demand management strategies	2	3	1
County-wide and compatible with municipal governments.	1	2	3
Based on accepted transportation planning and engineering principles and Florida law	2	3	3
Understandable for local development project evaluation	2	1	2
Does not require significant additional data collection	3	2	2
Is equitable	0	3	3
Ease of implementation or update	3	1	2
Readily explainable to elected officials and public	2	1	1
Total	**20**	**25**	**26**
Scale: 0-3, where 0 =Does not meet the principle at all & 3 =Completely meets the principle			

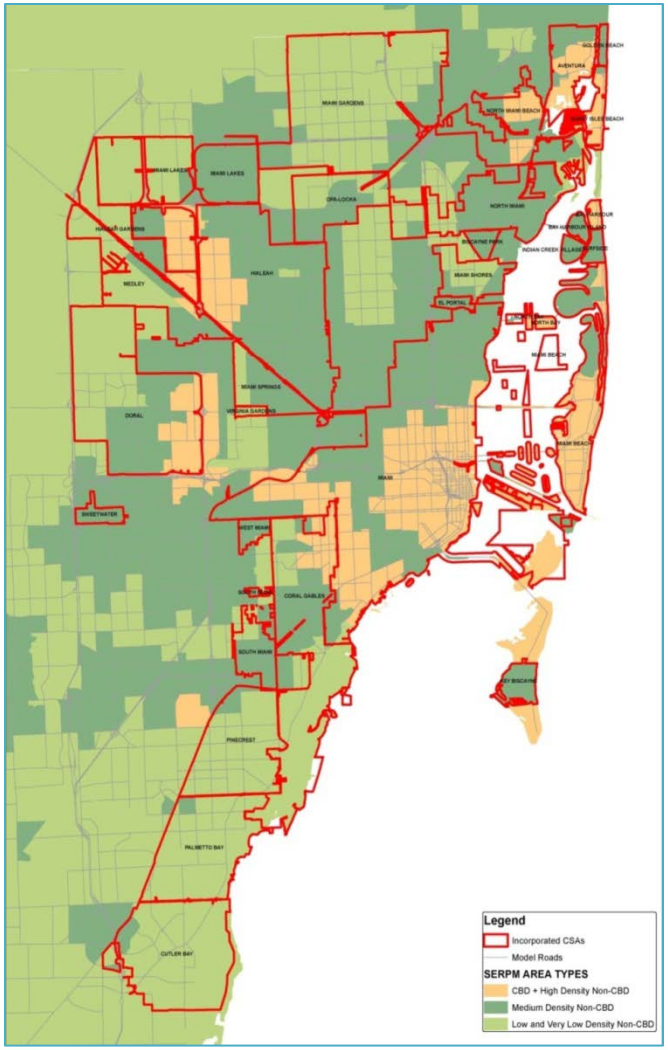
Scenario Development – Multimodal Concurrency

- Utilizes Multimodal Person-Trips
- Concurrency Service Areas (CSAs) are created
- CSAs fit within three Land Use Patterns:
  - Urban Area
  - Transition Area
  - Rural Area
- Demonstration Example: City of Coral Gables

Scenario Development – Multimodal Concurrency

Concurrency Service Areas:

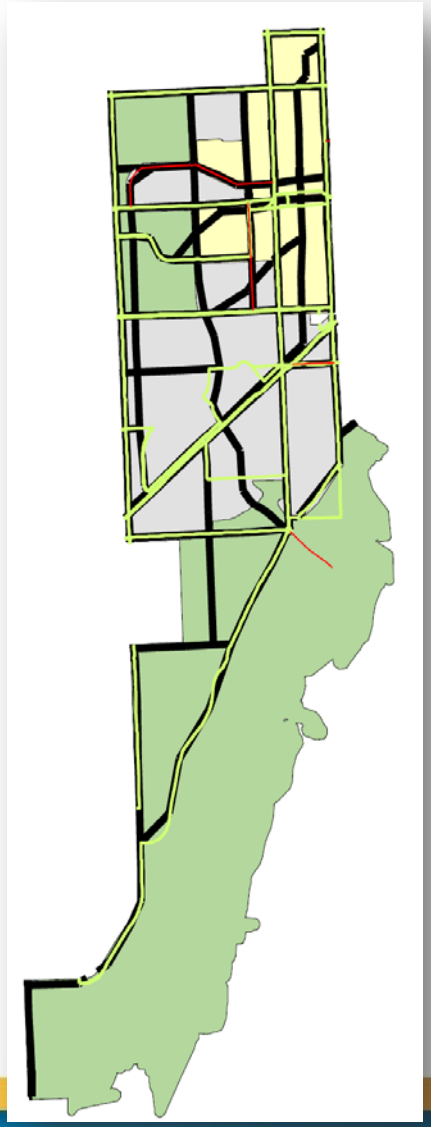
- Apply data from the Southeast Florida Region Travel Demand Model (SERPM) to define CSAs
- Use the SERPM model's transportation analysis zones (TAZs) to identify land use patterns:
  - Urban Area – (CBD + High Density Non-CBD)
  - Transition Area – (Medium Density Non-CBD)
  - Rural Area – (Low and Very Low Density Non –CBD)



Scenario Development – Multimodal Concurrency

Modal Networks:

- Identify transportation network for each mode
- Overlay CSAs with transportation networks
- Categorize by land use pattern
- Calculate multimodal person-trips



Scenario Development – Multimodal Concurrency

Determining Capacity by Mode

- Automobile Mode
  - SERPM model
- Transit Mode
  - SERPM Model and MDT schedules
- Bicycle and Pedestrian Modes
  - Relative completion of planned bicycle and pedestrian systems
  - Facilities must be included in the Comprehensive Plan or the MPO Congestion Management Plan

Scenario Development – Multimodal Concurrency

Analysis Results

		Area Type		
		Urban	Transition	Rural
Area (square miles)		2.40	5.23	10.79
Peak Hour Capacity (Person Miles of Travel)	Total (Per)	257,279	324,763	226,147
Volume (Person Miles of Travel)	Total (Per)	165,453	238,444	141,632
Capacity Left (Person Miles of Travel)	Total (Per)	91,827	86,319	84,514
Average Trip Lengths (From Model)		6.20	7.77	10.08
Capacity Left (Person Trips Available)		14,811	11,114	8,382

Vehicle Occupancy: 1.34
Bus Occupancy: 50%

Scenario Development – Multimodal Concurrency

Benefits & Challenges

- **Benefits:**
  - Basis to award credit for non-auto trips
  - Allows more person-trips before the concurrency threshold is tripped
  - Adjusts impact fees to reflect actual costs of development
  - Utilizes a trip length multiplier to account for land use patterns
  - Thorough, innovative and defensible approach
- **Challenges:**
  - Effort and cost to modify existing procedures
  - Reluctance to change

Scenario Development – Mobility Fees

The Changing Landscape

EVALUATION OF THE

MOBILITY FEE CONCEPT

FINAL REPORT

November 2009

Prepared for

Florida Department of Community Affairs
Florida Department of Transportation

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JOINT REPORT ON THE MOBILITY FEE METHODOLOGY STUDY

Submitted to the President of the Florida Senate and the Speaker of the Florida House of Representatives, pursuant to Section 13, Chapter 2009-96 Laws of Florida, the Community Renewal Act

Prepared by
Florida Department of Transportation
Florida Department of Community Affairs

December 1, 2009

Scenario Development – Mobility Fees

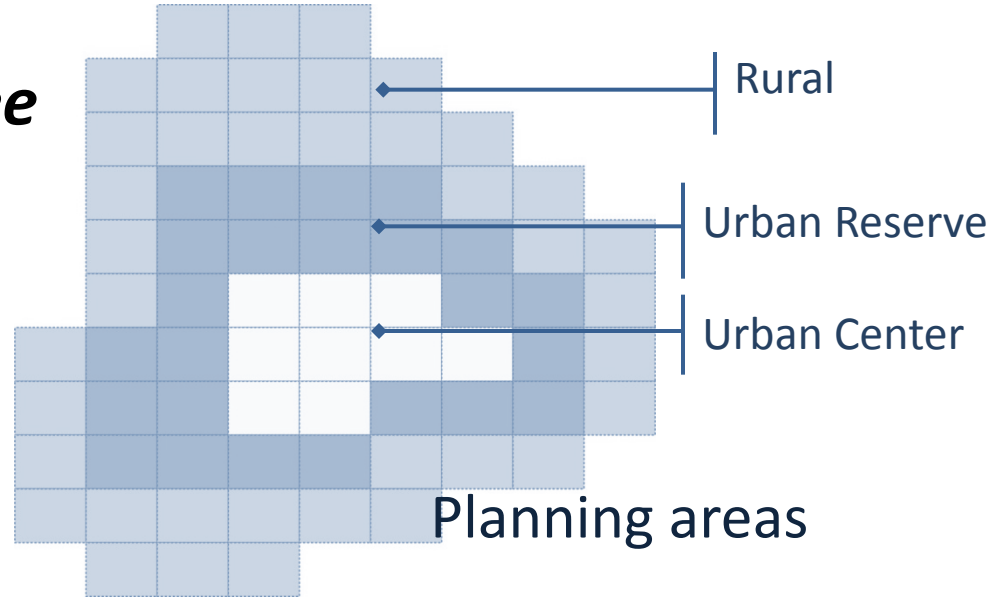
- Could replace concurrency
- Goals
  - Improved mobility
  - Pay for new impacts
  - Promote compact, mixed-use, and energy-efficient development
  - Be “Mode Neutral”
- Should be tied to a plan
- Used in Pasco and Alachua Counties

Scenario Development – Mobility Fees

Establishing The Mobility Fee

Location-based rate

Rate varies according to the development location in the region



Urban center =

- *downtown urban core*
- *regional activity center*
- *traditional town/village*
- *transit corridor activity center*

Source: USF Center for Urban Transportation Research

Scenario Development – Mobility Fees

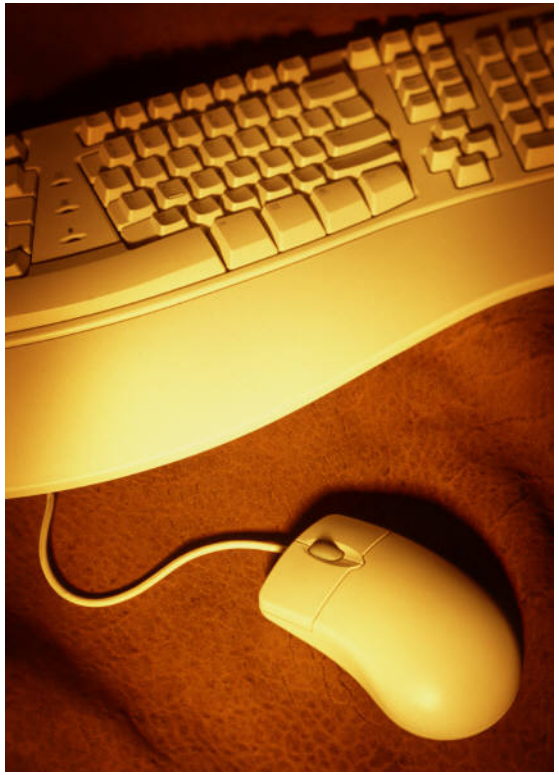
Elements

- All new development subject to fees
- "Base cost" established for each housing type
- Base cost is linked to Land Use Patterns (Outer Edge, Transition, Urban)
- Analysis determines proximity to respective modal networks
- Fee is adjusted accordingly

Scenario Development – Mobility Fees

Application

- Spreadsheet developed to input data:
  - Number of units
  - Type of units
  - Proximity to nearest modal infrastructure
- Calculate mobility fee
- Intended for use within a GIS system to:
  - Identify the development land use pattern
  - Determine modal proximity
  - Assign incentive/disincentive



Scenario Development – Mobility Fees

Distance Thresholds

- Based on land use area type
- Distance Limits: Near, moderate and far
- Should be adjusted to meet local needs

Land Use Area Type	Near	Moderate	Far
Outer Edge	5 “block equivalent” – 2 miles	2 to 5 miles	> 5 miles
Transition	< 5 blocks	5 blocks to 2 miles	> 2 miles
Urban	< 2 blocks	2 to 5 blocks	> 5 blocks

Scenario Development – Mobility Fees

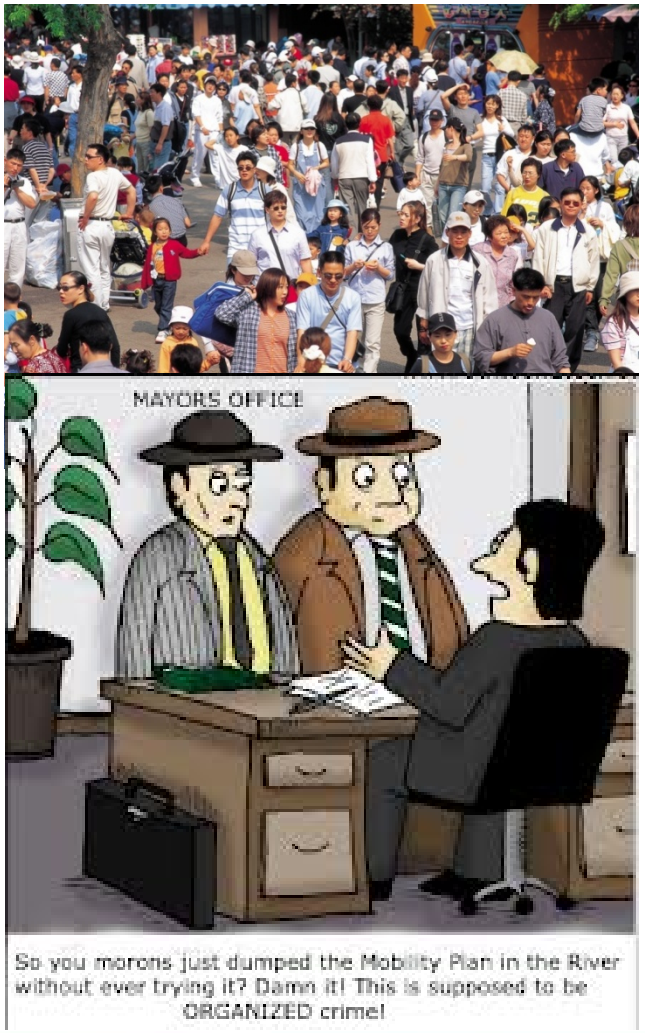
Example Calculation

Step 1: Base Cost = 50 units x $2,943.37	**$147,168.50**
Step 2: Calculate Incentives/Disincentives Per Unit	
Moderate distance to a major collector (roadway)	$150.00
Near bus stop	$1,500.00
Moderate to rail station	$250.00
Far from bike facilities	-$50.00
Moderate to pedestrian facilities	$100.00
Total Incentive/Disincentive Costs Per Unit	$1,950.00
Total Mobility Costs = $1,950 x 50 units	**$97,500.00**
Step 3: Calculate Final Cost $147,168.50 - $97,500	**$49,688.50**

Scenario Development – Mobility Fees

Benefits & Challenges

- **Benefits:**
  - Serves other public purposes, including:
    - Economic development and tourism
    - Promotion of "smart growth" and reduction of sprawl
  - Can be implemented using existing data sources and tools
  - Reflects the true transportation costs of all development, regardless of location
- **Challenges:**
  - Effort and cost to modify existing procedures
  - Reluctance to change



Alternatives

1) **Keep the Current Program**
   - Update to match new legislation
   - Roadway + transit capital funding only
2) **Minimal Changes**
   - Expand impact area
   - Calculate peak-directional capacity
   - Incentivize development near transit
3) **Alternative Approach**
   - Apply multimodal concurrency
   - Use mobility fees in lieu of impact fees
   - Account for land use patterns

Evaluation of Impacts by Alternative

Seven Evaluative Factors:

1. Program implementation and methodology
2. Traffic improvement
3. Transit operations
4. Implementation of bicycle and pedestrian facilities
5. Capital, maintenance and operating costs
6. Jurisdictional boundaries
7. Monitoring

Summary	Average Impact to the Community	Average Impact to the Developer	Average Impact to the Agency	Average Impact by Factor
Score by Stakeholder for Keep Current Program	-1	0	-1	**-1**
Score by Stakeholder for Minimal Change	0	0	0	**0**
Score by Stakeholder for Alternative Approach	1	0	1	**1**

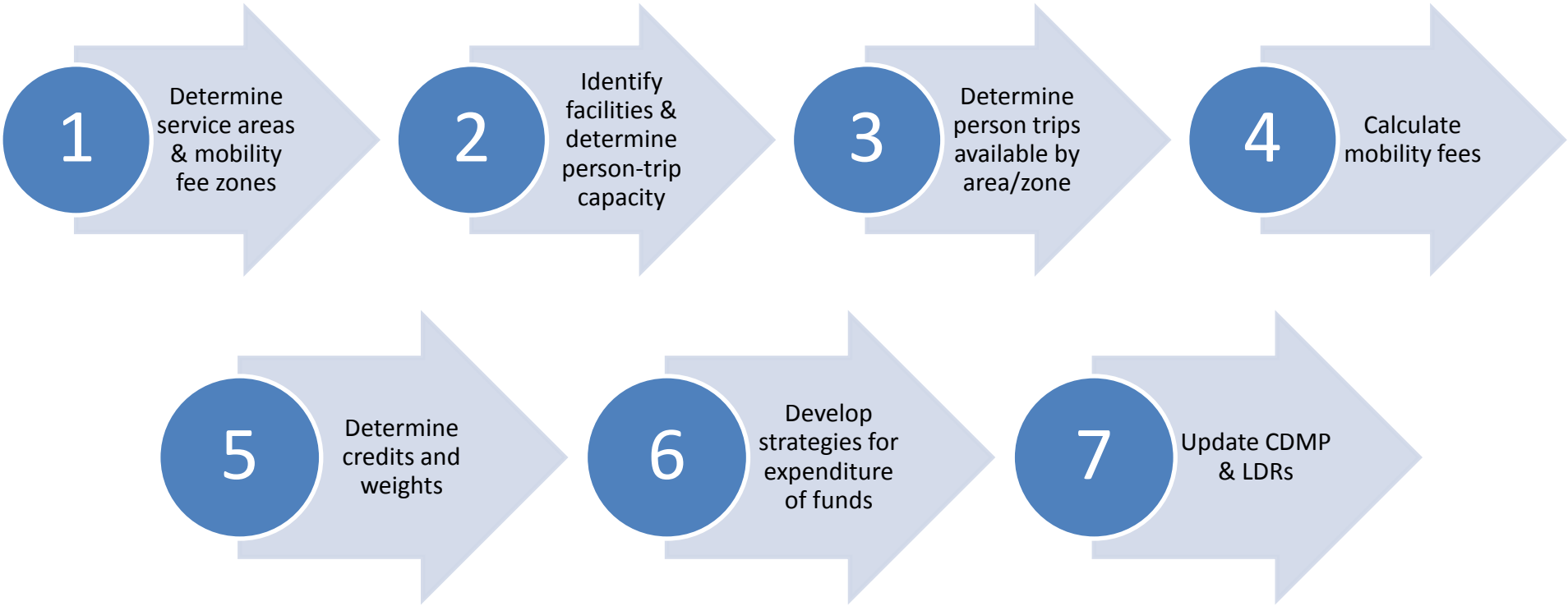
Scoring: -1 = negative impact, 0 = no impact, 1 = positive impact

Recommendations – Plan Amendments

CDMP Component	Keep Current Program	Minimal Change	Alternative Approach
Capital Improvements Element	X	X	X
Introduction			X
CIE-3C Traffic Circulation		X	X
CIE-3C Mass Transit	X	X	X
Concurrency Management Program, item #3	X	X	X
Concurrency Management Program, item #4	X	X	X
Concurrency Management Program, Figures 1 & 2			X
Implementation Schedules of Improvements, Traffic Circulation and Mass Transit			X
Transportation Element	X	X	X
Introduction			X
Objective TC-1 and supporting policies	X	X	X
Future Traffic Circulation Map Series, Figure 5			X
Future Land Use Element	X	X	X
Interpretation of the Land Use Plan Map: Policy of the Land Use Element			X

Recommendations – Action Plan

Alternative Approach = Multimodal Concurrency + Mobility Fees



Next Steps

- Use recommended framework for further stakeholder discussion on transportation concurrency
- Additional focus on:
  - Institutional issues
  - Costs
  - Effort required to implement the recommended changes