Regional Transportation Concurrency System in Spokane County
A Feasibility Study

TECHNICAL MEMORANDUM # 2

Literature Survey on Various Concurrency Implementation Strategies

Prepared for

Spokane Regional Transportation Council

Prepared by

BUCHER, WILLIS & RATLIFF CORPORATION
ENGINEERS | PLANNERS | ARCHITECTS

In association with

White & Smith, LLC
Planning and Law Group

RUTH L. STEINER
Transportation & Land Use Consulting

May 2006

DRAFT

Table of Contents

INTRODUCTION AND BACKGROUND 1

PURPOSES OF CONCURRENCY 1

STATEWIDE APPROACHES TO CONCURRENCY 4

APPROACH TO REGIONAL CONCURRENCY 7

MONTGOMERY COUNTY, MARYLAND 8

ALBUQUERQUE, NEW MEXICO: THE PLANNED GROWTH STRATEGY 9

EASTSIDE OF THE PUGET SOUND REGION (BELLEVUE, REDMOND, KIRKLAND, AND ISSAQUAH 11

ORLANDO AND ORANGE COUNTY, FLORIDA 13

EVALUATION OF CONCURRENCY SYSTEMS 16

EVALUATION OF REGIONAL CONCURRENCY SYSTEMS 17

WORKS CITED 21

ADDITIONAL REFERENCES 24

DRAFT

INTRODUCTION AND BACKGROUND

Concurrency is a land use planning and implementation tool that is designed to "ensure that necessary public facilities and services to support new development are available and adequate, based on adopted level of service (LOS) standards, at the time the impacts of new development occur (White and Paster, 2003)." The term "concurrency" comes from an amendment to the Florida Growth Management Act in 1986, which states that "[i]t is the intent of the Legislature that public facilities and services needed to support development shall be available concurrent with the impact of development (Powell, 1993: 292)." The term "concurrency" is often used interchangeably with "adequate public facilities ordinances" (APFOs) (DVRPC, 2002; White and Paster, 2003;), however, others use "concurrency" to refer to the state-mandate requirement of local governments participating in state-wide growth management programs and "APFOs" to refer to locally-adopted ordinances that attempt to manage the timing of new development (Steiner, 2004). Where possible this memorandum will make that distinction. The purpose of this Technical Memorandum is to define the purposes of concurrency and APFOs, identify approaches to regional concurrency and their characteristics, and identify the strengths and weaknesses of various regional approaches to concurrency.1 Although this review may include all forms of public infrastructure and services, it generally focuses on transportation facilities.

PURPOSES OF CONCURRENCY

White and Paster (2003: 756-57) describe seven major objectives of an APFO or concurrency system:

(1) To link the provision of key public facilities and services with the type, amount, location, density, rate and timing of new development.

(2) To properly manage new growth and development so that it does not outpace the ability of service providers to accommodate the development at the established LOS standards.

[1] The initial proposal also included the types of performance measures used in concurrency programs in the topics to be addressed in this memorandum. However, due to the delay in the contract and the objectives in Task 3.33, the performance measures will not be addressed in this Technical Memorandum # 3. Instead they will be included in the second Technical Memorandum.

DRAFT

(3) To coordinate public facility and service capacity with the demands created by new development.

(4) To discourage sprawl and leapfrog development patterns and to promote more infill development and redevelopment.

(5) To encourage types of development patterns that use infrastructure more efficiently, such as New Urbanism or Transit-Oriented Development.

(6) To require that the provision of public facilities and service to new development does not cause a reduction in the levels of service provided to the existing residents.

(7) To provide an approach for providing necessary infrastructure for new residents.

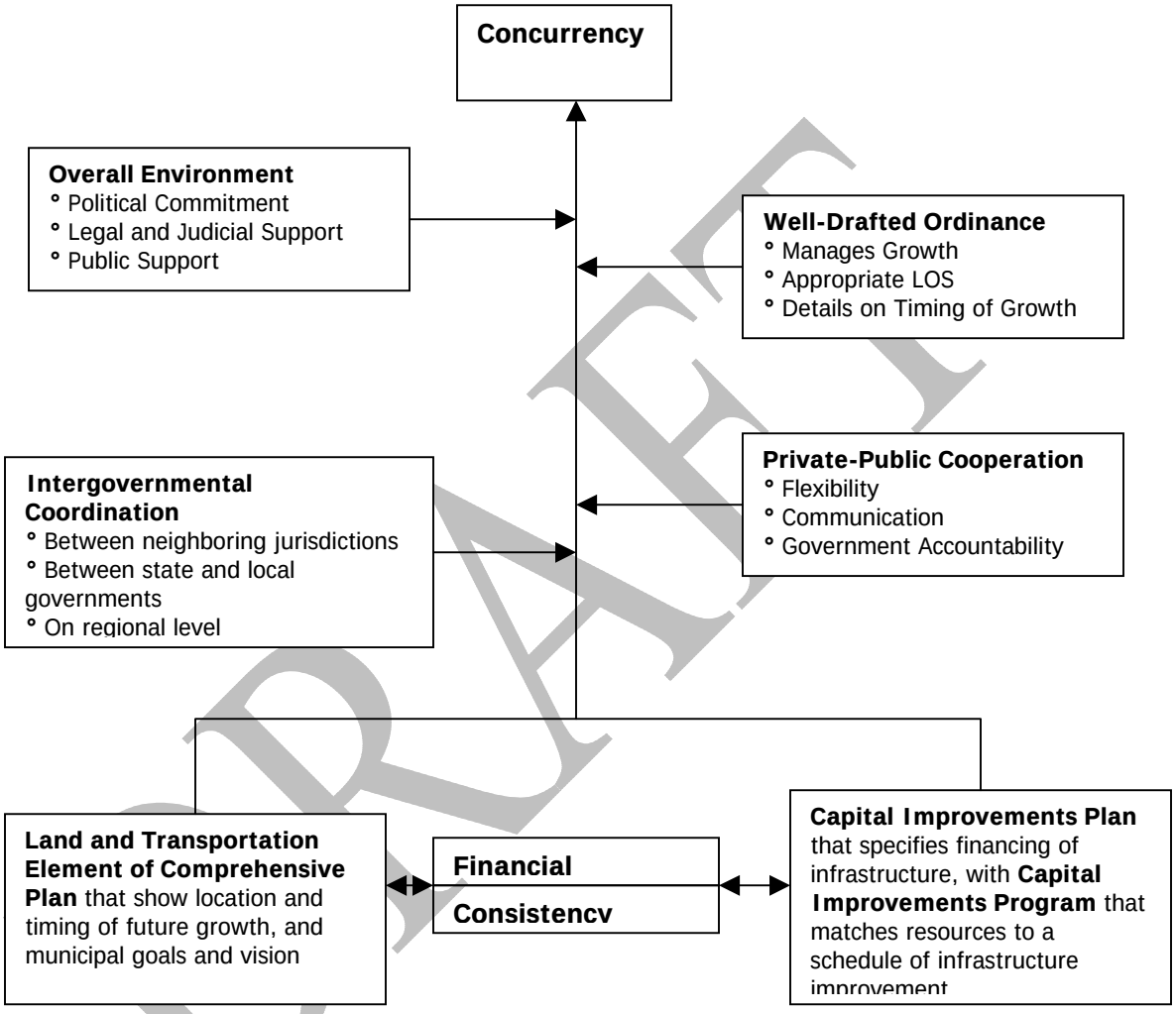
The essence of these objectives is to provide a link between the various elements of the comprehensive plan - capital improvements, transportation and land use – and to have a financially feasible plan for implementation (DVRPC, 2002; Steiner, 2001). The land use plan shows the location of future growth and the transportation plan specifies the necessary infrastructure to achieve the desired development pattern. Thus, the land use, transportation, and capital improvements elements are consistent with each other and the plans should be financially feasible. The third element of concurrency involves timing because concurrency requires that public facilities are available concurrent with the impact of development.

The components of the concurrency system have been characterized in various ways (See, DVRPC, 2002; Steiner, 2001; White, 1996; White and Paster, 2003). The approach taken by the Delaware Valley Regional Planning Commission has been adapted for this literature review because it uses a broader range of concepts that will apply to the diversity of situations discussed later in this review.[2]

DRAFT

[2] The components of a concurrency system in the other sources are more detailed and more useful to operationalize the concurrency standards. As such, they are likely to be of greater importance in the later phases of this project. For example, White and Paster (2003) include some of the following components: the LOS standard, the types of development/land uses to which concurrency is applied, the type of development approvals, the timing of concurrency determination, the effects of failing to meet concurrency, and the condition and mitigations attached to approval. Similarly, Steiner (2001) provides significant detail on how to account for capacity.

Figure 1. The Components of a Concurrency System
Source: Adapted from DVRPC 2002



DRAFT

As the flowchart in Figure 1 shows, the success of the concurrency system begins with the capital improvements plan and the comprehensive plan. The capital improvements plan needs to be consistent with the comprehensive plan in meeting the goals and visions of the community. The goals, objectives, and policies of the plan should be supported by financing of infrastructure in the Capital Improvements program. Intergovernmental coordination is necessary to ensure that adjacent jurisdictions and state and local governments and jurisdictions throughout the region have goals, objectives, and policies that are consistent with each other. Public-private cooperation is necessary to ensure that governments provide flexibility in how the concurrency needs are met and ensures that governments are accountable for providing the infrastructure in a timely manner, and that they communicate with the private sector. Well-drafted ordinances include appropriate LOS standards that are meant to manage, not limit, growth and provide appropriate details on timing of growth. The overall political environment needs to have the support of the community for the goals of the community, ongoing political commitment of elected officials, and legal and judicial support for concurrency.

STATEWIDE APPROACHES TO CONCURRENCY

To more fully place these case studies into context it is useful to understand the context of the implementation of concurrency and APFOs in the states in which these regions are located. Florida and Washington are the only two states that incorporate concurrency into their growth management framework for all counties that participate in statewide growth management programs. Florida requires concurrency of all local governments while Washington only requires counties with high populations or high rates of growth or counties that opt into the growth management program. Once a county opts into growth management in Washington, they are required to follow the state requirements for concurrency. Even though both states require concurrency, the context for implementation differs. Florida's Growth Management has been characterized as being top-down, while Washington's is characterized as being a fusion between state and local governments. The differences between the approaches taken by these states includes the use of exception areas, the establishment of LOS standards and its measurement, the coordination of concurrency review with environmental review, the

DRAFT

LOS standards on State Highways, and the use of urban growth boundaries and interregional cooperation.

The state of Florida has provided significant guidance to local governments on how to meet the requirements of concurrency. The legislation mandating concurrency was passed in 1985 and began to be implemented in the late 1980s. The transportation concurrency system has evolved from a system that was based almost exclusively on the use of LOS standards based on a volume to capacity ratio to a multimodal planning system for communities that choose to have greater flexibility than a capacity-based system affords.

Beginning in 1992, the state incorporated areawide and project specific exceptions into the concurrency framework. Project-specific exceptions include: (1) urban redevelopment projects [FSA 163.3180 (8)] (2) *de minimus* projects [FSA 163.3180 (6)]; (3) projects that promote public transportation [FSA 163.3180 (5) (b) and 9J-5.0057 (7)]; (4) part-time projects [FSA 163.3180 (5) (c)]; and (5) projects for which private contributions are made [FSA 163.3180 (11) (c)]. Areawide exceptions include: (1) transportation concurrency exception areas (TCEAs), (2) transportation concurrency management areas (TCMAs), (3) long-term concurrency management systems (LTCMS), and (4) multimodal transportation districts (MMTDs). The purpose of a TCMA is to "promote infill development or redevelopment within selected portions of urban areas in a manner that supports the provision of more efficient mobility alternatives, including public transit [FAC 9J-5.50055]." The TCMA may be established in "a compact geographic area with an existing network of roads where multiple, viable alternative travel paths or modes are available for common trips [FSA Sec. 163.3180 (7)]." An areawide LOS may be established for facilities with similar functions serving common origins and destinations [FSA Sec. 163.3180 (7)]. LTCMS are established in areas with existing deficiencies. To eliminate the backlog, a comprehensive plan is established that identifies the improvements to be made over a ten-year period or, in exceptional circumstances, over a fifteen-year period [FAC 9J-5.0055 (4)]. The purpose of a TCEA is to "reduce the adverse impact transportation concurrency may have on urban infill and redevelopment and the achievement of other goals and policies of the state comprehensive plan, such as promoting the development of public transportation [FAC 9J-5.0055 (7) and FSA Sec. 163.3180 (5) (b)]." A TCEA can be established to meet one of four purposes: (1) promotion of urban infill development, (2) urban redevelopment, (3) promotion of downtown revitalization, or (4) urban

DRAFT

infill and redevelopment. An MMTD must have at least 5,000 in residential population, a minimum of population to jobs ratio of 2:1, an appropriate mix of land use (including residential, educational, recreational, and cultural uses), and an interconnected network of streets designed to encourage walking and bicycling. Furthermore, it should use traffic calming, appropriate densities and intensities of land uses within walking distance of transit stops, and a pattern of land uses that promotes transit, bicycle and pedestrian travel, including good intermodal connections. In MMTDs, the roadway LOS is relaxed and higher pedestrian, bicycle and transit LOSs are required. In 2005, the state passed legislation that requires TCEAs to incorporate the characteristics of MMTDs into districts even as local governments are allowed to continue to allow development, even if they are not required to meet established roadway level of service standards.

In sharp contrast to Florida's complex set of transportation concurrency regulations, Washington is seen as providing significant flexibility in how to implement concurrency. The GMA in Washington directs local governments to establish LOS standards for their transportation systems and use them as a baseline for determining whether new development can be accommodated. The Act "only requires jurisdictions to adopt ordinances that establish a concurrency *measurement* system for transportation. As a result, the ability of the transportation system to support new development has become the primary test for whether development and infrastructure are 'concurrent' (Hallenbeck, Carlson, and Simmons, 2003: ix; emphasis in original)." Local governments in the State of Washington have used a variety of approaches to measure concurrency including: (1) travel delay system, (2) average vehicle operating speed, (3) LOS at a screen line rather than intersection or a link LOS, (4) arterials that serve a new development are required to meet certain construction standards, (5) person throughput or person carrying capacity, and (6) certain transportation facilities (streets, intersections, or both) that are built out are not included in concurrency calculation (Trohimovich, 2001).

A second difference between the two states is that the development review process differs. Local governments in Washington are required to conduct a review of all development impacts, including the impacts on the transportation system, under the State Environmental Policy Act (SEPA). In Florida local governments conduct such comprehensive reviews on a narrower set of projects. Large-scale development projects that are expected to have an impact

DRAFT

on more than one county are required to complete a review for Developments of Regional Impact. The DRI review process takes place instead, rather than, in addition to the concurrency review process (FDOT 1998).

The third area of major difference between the states is that Florida has established a Strategic Intermodal system that includes all roadways on the Florida Intrastate Highway System (FIHS). Since the roadways on the FIHS are intended for travel between regions in Florida, the FDOT protects the LOS on these roadways. In Washington, the highways of statewide significance are specifically exempted from concurrency.

One other major area of difference is the approach taken to intergovernmental coordination and urban growth boundaries. Although both states' legislation includes the use of urban growth boundaries, Florida's laws are less strictly enforced and Florida lacks a solid framework for intergovernmental cooperation. In contrast Washington's laws include Regional Transportation Planning Organizations (RTPOs).

Maryland has taken a different approach to coordination of land use and transportation that involves the use of priority funding areas (PFAs). The PFAs are established so that the state can only invest money in PFA that are established by local governments to be consistent with other planning goals. The state then establishes criteria to designate these funding areas and all state projects are reviewed annually to determine their consistency with quality growth objectives. The advantages of PFA's are that they are incentive based and they channel state money into areas that are suited for growth. They limit growth in rural areas by limiting state investment that would spur growth into these areas; local governments and developers in non-PFA areas pay the cost of development in these areas. The disadvantages of PFAs are that they target development to areas that are already developed, they limit assistance to rural areas, and they do nothing to preserve affordable housing outside of PFA areas.

APPROACH TO REGIONAL CONCURRENCY

In order to understand the regional approaches to concurrency, it is necessary to understand the broader context in which concurrency is being implemented. Concurrency should not be the only tool used by local governments to implement growth management; it needs to be reinforced by other policies that together with concurrency support the goals and

DRAFT

vision of the community. In this literature search, the research team was able to identify several regions in diverse locations that are either using or have studied using concurrency or APFOs as a part of a growth management program. The following locations were identified: Albuquerque and Bernalillo County, New Mexico (White and Paster, 2003; City of Albuquerque, 2002a, 2002b); Montgomery and other counties in Maryland (Levinson, 1997; Cohen, 2005; NCSMRE, 2005; NCSMRE, 2006); Boise, Idaho (Freilich, 2003); Dane County (Madison), Wisconsin (Freilich, 2003); Davidson and Concord-Cabarrus County, North Carolina (White and Paster, 2003); Puget Sound Region (PSRC, 2003), the Eastside of the Puget Sound Region (Bellevue, Redmond, Kirkland, and Issaquah) (Hallenbeck, Carlson and Simmons 2003); Clark County, Washington (ECONorthwest 2002); Hillsborough (Tampa) (White and Paster, 2003), Orlando and Orange County (Steiner *et al.*, 2000), Palm Beach, Miami-Dade, and Duval (Jacksonville) and other counties in Florida. Because of the availability of both secondary and primary sources of information on these identified cases, the following regions will be highlighted in this research: Montgomery County, Maryland; Albuquerque, NM; Bellevue, Redmond, Kirkland, and Issaquah, Washington; and Orlando and Orange County, Florida. In the evaluation, examples will be cited from counties in Florida.

MONTGOMERY COUNTY, MARYLAND

Montgomery County, Maryland has had an adequate public facilities system since 1974 (Levinson, 1997). The system was established with a requirement that all development proposals pass two tests of transportation facilities adequacy (DVRPC, 2002). The first of these, the Policy Area Transportation Review analyzed the effect of growth on overall road system of the twenty-two policy areas in the community. If the growth in population or jobs could be accommodated with existing roadway capacity, programmed roadway capacity or programmed bus, rail, or other forms of mass transportation, the development could be permitted. The second test is the Local Area Transportation Review, which measures level of service at local intersections, and requires certain standards to be met before development is approved. The standards are lower in areas with better transit service and ensure that nearby intersections will not be overwhelmed. In 2005, the Policy Area Transportation Review was eliminated from the process. Much of the structure of the Policy Area review was retained but the process was simplified (MCDPP, 2005).

DRAFT

The success of the Montgomery County APFO system can be measured by the length of time that it has been in place. The County continually evaluates the implementation of the system but it continues to be in place. The program is generally seen as not being transferable because it is too complex (DVRPC, 2002). Additionally, concerns have been raised about whether more traffic congestion is worse in the county because adjacent counties have not used such strict growth controls and they have allowed development that uses the roads in Montgomery County (Levinson 1997).

ALBUQUERQUE, NEW MEXICO: THE PLANNED GROWTH STRATEGY

In 2002, the Albuquerque City Council adopted the Planned Growth Strategy (PGS), a comprehensive strategy designed to direct future growth in the Albuquerque/Bernalillo County Region.[3] The PGS was developed through a series of public workshops, citizens' surveys, and technical studies by consultants to develop goals and policies for regional growth and to test the fiscal impacts of various growth scenarios. The PGS was established with seven basic ideas: (1) local government should play a proactive role, (2) the community, not just development, matters in new and old areas, (3) the existing community – neighborhoods, schools and businesses – come first in vitality and development, (4) maintain, rehabilitate and improve infrastructure in existing neighborhoods, (5) develop first where infrastructure exists to grow efficiently, (6) do not just plan – implement, and (7) keep the community involved (City of Albuquerque 2002a). The PGS is designed to address the linkage between infrastructure and population and employment growth in the community. The six major guiding principles in the strategy include:

1. The location of population and housing should be phased and timed to achieve community goals. These goals are represented by the Planned Growth Strategy Preferred Alternative.
2. Critical infrastructure capacity (streets, parks, schools, water, sewer, and storm drainage) is available to support urban growth.
3. The needs of growth, rehabilitation, and correction of existing infrastructure deficiencies are fully funded.

[3] According to White and Paster (2003) Bernalillo County had not adopted the PGS in 2003. A search of the Bernilillo County website did not contradict this conclusion, however, several sector plans were found on the website

DRAFT

4. Implementation is guided by adopted plans, e.g., corridor plans, sector (neighborhood) plans, redevelopment plans, and area plans.
5. Charges for infrastructure to support growth reflect the costs of growth to the community.
6. The system is flexible (City of Albuquerque 2002b: 170).

The PGS identifies short-term (1-10 years) and medium-term (10-25 years) growth areas that reflect the community's goals for the location, density, timing, and sequencing of development. In other words, the fully served areas may be more appropriate for higher density, but those served areas should also develop before new development occurs in unserved areas.

The PGS includes a "Preferred Alternative" that is based upon the availability of infrastructure in the community. The location of infrastructure is divided into three "tiers:" the "Fully Served Areas," which contain the full range of urban infrastructure, the "Partially Served Areas," which have some, but not all, of the necessary infrastructure and services, and the "Unserved Areas," which lack all or most of the needed infrastructure and services (City of Albuquerque, 2002b). The Planned Growth Strategy is to be implemented with a variety of tools, including: capital improvements programs, service standards and concurrency or adequate public facilities ordinances, development impact fees, development agreements, development incentives and inducements, and community plans (City of Albuquerque, 2002b).

Several advantages are attributed to the PGS. The adequate public facilities ordinance is considered a comprehensive tool that "could tie together many of the policies scattered among the City/County Comprehensive Plan, the Sector Plans, Area Plans, and infrastructure master plans into one set of standards (City of Albuquerque, 2002a: 172)." Second, the Capital Improvements Program/Adequate Public Facilities Ordinance approach is flexible enough to be mandatory or incentive-based or a combination of both approaches. A purely incentive-based system would tie the level of service to increases in density or provide other regulatory or financial incentives. A purely mandatory system would directly tie issuance of development permits to level of service standards for infrastructure. The city appears to be using a combination of both incentives and mandates to implement this plan. Third, even though no

DRAFT

system can ensure that all costs are fully funded, the variable Capital Improvements Program/APFO increases the likelihood that critical infrastructure will be available to serve urban growth. Expansion of infrastructure is tied to level of service standards that make sense for a particular area of the community. In areas where capacity cannot be expanded due to policy or physical constraints, a lower level of service can be assigned or the area can be exempted from APFO. This creates incentives for infill development by removing steps in the development review process. A long-range constrained Capital Improvements Program assures that the community is also making land available for future development to accommodate the growth in population and employment (City of Albuquerque, 2002b). Finally, a varied level of service approach assures that infrastructure charges reflect the true cost to the community because development cannot proceed unless the level of service standards will be met. The cost of providing the cost of service will be identified in the Capital Improvements Plan. A developer can choose to phase their project to match the build out of infrastructure based on the area's level of service or voluntarily advance the facilities with a development agreement (City of Albuquerque, 2002b).

EASTSIDE OF THE PUGET SOUND REGION (BELLEVUE, REDMOND, KIRKLAND, AND ISSAQUAH

In 2001, the cities of Bellevue, Kirkland, Issaquah and Redmond, Washington began a two-year cooperative study to accomplish the following goals: (1) describe and assess the four cities' existing approach to transportation concurrency, (2) develop and analyze alternative approaches that are more multi-modal in nature, (3) evaluate alternative approaches for the four cities in reaching the objectives of the Growth Management Act and the region's Vision 2020 plan, and (5) recommend changes, if necessary, to state and local laws to improve the effectiveness of transportation concurrency (Hallenbeck, Carlson, and Simmons, 2003). These communities worked with an interdisciplinary team from the University of Washington led by Washington State Transportation Center, and including the Evans School of Public Affairs, the School of Urban Design and Planning and the consulting firm of Kittleson and Associates.

After completing this study, several conclusions were reached by the research team. Most notably that the four Eastside cities have sufficient flexibility under current law to develop, implement and fund a variety of multi-modal concurrency approaches, both within their own jurisdictions and among one or more of their neighbors. A regional approach to transportation

DRAFT

planning could be coordinated under the existing authority of the Puget Sound Regional Council and would not require significant change to state or local concurrency legislation unless the four cities would like to create some form of metropolitan government (Hallenbeck, Evans, and Simmons, 2003).

The University of Washington team found that the existing transportation concurrency system is implemented using roadway capacity, or the volume /capacity ratio (v/c) as a metric. However, each city uses a slightly different computation method to calculate the v/c and a different LOS service standard. Bellevue, Redmond, and Kirkland LOS standards vary by geographic location, requiring better LOS in some zones (usually residential areas) and permitting more congestion in other areas (generally commercial areas). Issaquah varies LOS standards by arterial street rather than by zone (Hallenbeck, Evans, and Simmons, 2003).

To overcome the constraint of volume to capacity, several alternative approaches for concurrency are recommended. Three approaches include: (1) enhanced volume/capacity, (2) travel time as a measurement for concurrency, and (3) a regional mode-split concurrency system. The enhanced volume/capacity would allow jurisdictions to incorporate transit and other alternative modes of transportation capacity when setting and implementing the LOS standard. The measured v/c ratios of cars to roadway capacity do not change. Rather, jurisdictions make a policy choice to permit a higher v/c ratio and higher levels of congestion where certain levels of transit service or other transportation choices, such as walking or bicycling exist. This method can also incorporate a more robust process of developer negotiation in the mitigation process. Travel time can be measured to and from key places in a city or along main corridors. Its advantage over v/c ratio is that it is relatively easily explained and understood by the general public. The disadvantage of using travel time is that the public will easily understand, and may not accept, an LOS change in travel time for a 5-mile trip from 7 to 12 minutes (Hallenbeck, Evans, and Simmons 2003). The four cities could adopt a regional system of concurrency, but depending upon how it is structured it may require a change in state law. A regional mode-split approach replaces a facility performance calculation with a measure of how well a region (or sub-region) achieves a transportation policy target of reducing vehicle miles traveled (VMT) (Hallenbeck, Evans, and Simmons, 2003). Thus, if the regional LOS target is to increase the share of non-single occupancy vehicle (SOV) trips during the evening peak by 3 percent within five years, and the share of non-SOV trips increase from 8

DRAFT

percent to 11 percent, the region would remain concurrent. After five years, the region would establish another goal. The report compares these three approaches to concurrency and concludes that the approaches score differently on a set of criteria and the analysis can be used for each jurisdiction to tailor its transportation concurrency to the policies it wants to achieve.

Finally, the report makes three groups of suggestions about how to move beyond LOS measures to involve other actions that may make a difference in the medium-term: using fewer roads, funding transit more, and acting inter-jurisdictionally. The communities could use roads less through monetary rewards for residents who reduce SOV usage and by introducing variable roadway pricing based on time-of-day congestion. They could fund transit more through developer agreements to fund Transportation Management Associations and transit service, by concentrating new development in transit friendly nodes and corridors to build ridership for more frequent service and by subsidizing transit service with Flexpass and other tools until important routes reach core status and attain a higher level of permanence. The four cities are urged to act inter-jurisdictionally by expanding developer agreements to include transportation systems and services across city boundaries, forming a multi-city Transportation Benefit District that rationalizes varying LOS standards and sets subregional performance targets and rewards and by creating a region-wide transportation concurrency authority to establish and manage regional VMT reduction and mode-split credits (Hallenbeck, Evans, Simmons, 2003).

ORLANDO AND ORANGE COUNTY, FLORIDA

The city of Orlando and Orange County have incorporated several principles of New Urbanism into their land development planning. This has been accomplished through a mixture of tools that promote New Urbanism in both jurisdictions. The City of Orlando has used the principles of New Urbanism in three diverse settings: downtown revitalization, redevelopment of Baldwin Park, and the South East Sector Plan. Each of these plans has incorporated a variety of planning tools with the concurrency program that is mandated by the State of Florida. Similarly, Orange County has used principles of New Urbanism in its Horizons West planning effort.

In the Downtown area, the City of Orlando has used a series of downtown Redevelopment Plans to gradually redevelop a vibrant downtown. The City and businesses put together a partnership in the early 1990s to incorporate the Central Business District into a

DRAFT

downtown Development of Regional Impact (DRI) and a TCEA. The last two downtown plans have encouraged multimodal planning through the use of remote parking and a free downtown circulator called the Lymmo. They have also encouraged urban design features that hide parking and reduce its impact on pedestrians by gradually improving the pedestrian environment through use of streetscape improvements including use of brick pavers at many street crossings, planting of street trees along green corridors, and developing a system of bicycle trails throughout the downtown. The DRI has targets for the mode split among downtown employees and downtown transportation improvements are funded through a private-public partnership that includes tax-increment financing (TIF), and a special assessment on downtown business (Steiner, Wright, and Paul with Kolinski, Perez, and Bojanowski, 2000). Finally, the Downtown Redevelopment District includes high-density residential development because the Downtown Redevelopment District is located in the middle of a TCEA, level of service standards only apply to facilities on the Florida Intrastate Highway System.

The Baldwin Park project provides an example of redevelopment in the City of Orlando that uses New Urbanist principles. Baldwin Park was the Orlando Naval Training Center until the mid-1990s when it was turned over to the City of Orlando as a part of the Base Realignment and Closure (BRAC) Act. The project includes approximately 1,000 acres that is located about 4 miles east of downtown Orlando. The vision for Baldwin Park is to create a walkable community that includes two lakes, 200 acres of parks, over 3,000 residential units, an elementary and middle school, a village center, and over a million square feet of office space (Steiner *et al.* 2000). The decision to build the project, based upon New Urbanist principles, was made after transportation modeling of the project area showed that without significant network connectivity, roads all around the project would fail. When the land was used as a Naval Training Center, it included only 3 connections into the site; today, the neighborhood has over twenty roadways connecting to the site so that traffic can be dispersed.

The Southeast Sector Plan involves 19,300 acres of development within a 20 to 30 minute driving distance to Downtown Orlando, and many of the entertainment attractions and is directly adjacent to the Orlando International Airport. This area is planned for over 13,300 residential units and a population of more than 28,000 residents, 2.1 million square feet of retail space, 3.3 million square feet of office space, 1,950 hotel rooms, 4.7 million square feet of industrial space, and 600,000 square feet of civic/governmental space within the next fifteen

DRAFT

years (City of Orlando, 2005). This project is being built as a partnership between the property owners in the area, the Greater Orlando Aviation Authority, Orlando Utilities Commission, representatives of local, regional, and state agencies affected by or having permitting jurisdiction of aspects of the project, and representatives of interest groups concerned with building successful communities. The area will be identified by the pattern of residential neighborhoods that focus on town, village and neighborhood centers, by the design of homes and commercial buildings and by the proximity to nature. Neighborhoods will be developed at a pedestrian scale with schools and parks as a focal point for activity. The Southeast Sector Plan provides a mix of land uses built on a connected grid that supports all modes of transportation. Pedestrian travel is supported by the close proximity of services to residences and through designs for pedestrian comfort including a fully coordinated system of pedestrian and bikeways that are linked to commercial areas, transit stops, employment centers, parks, open spaces, schools and other community facilities. Although cars will be accommodated, land use patterns, street layouts and densities will make walking, bicycling and public transit viable alternatives to the automobile. The Southeast Sector Plan includes fee waivers and expedited permitting to encourage the development of traditional street design (City of Orlando, 2005).

The Horizons West plan is located in Southwest Orange County, north of Disney and west of the City of Orlando. This project represents the evolution of rural lands no longer for agricultural use into self-sustaining urban environments that feature mixed-use, pedestrian-oriented communities that provide community school and parks that respect the natural environment. The County has been able to avoid piecemeal growth and suburban sprawl by master planning 38,000 acres that were formerly orange groves. In the 1980s, a series of severe freezes eliminated the citrus groves that had been in the area; the citrus industry moved to warmer climates in South Florida.

In 1993, a conceptual master plan was initiated by Horizon West, Inc., a group of property owners working with Orange County to find a sustainable long-term solution for the area. Horizon West was designed to provide housing in an area of Orange County that had historically had five-to-ten-acre rural zoning that forced development into the adjacent counties. The plan will include six or seven mixed-use villages and town centers when it is completed. Villages include two to four neighborhoods oriented around community schools and parks that are no more than one half-mile walking distance from the neighborhoods, on between 1,000

DRAFT

and 3,000 acres surrounded by a greenbelt. In Horizon West's villages diverse housing types are available or will be built, including single-family homes, townhomes, estates, and apartments. Housing will be priced from the low $100,000s up to $700,000.

Horizon West was planned using the Optional Sector Planning process developed by the Florida Department of Community Affairs as an alternative to Developments of Regional Impact. Each sector plan combines the purposes of the State Growth Management Act, requires public participation throughout the process, emphasizes urban form and the protection of regional resources and facilities, and can be applied to areas greater than 5,000 acres (FDCA, 2006). The Horizon West Plan is implemented through the use of transfer of development rights to ensure that the greenbelts are provided and protected and through a requirement that new development contribute to schools, parks, and other public facilities needed to serve the community (Testerman and Torres, 2004).

EVALUATION OF CONCURRENCY SYSTEMS

Before evaluating regional concurrency systems, it is useful to evaluate concurrency and APFO systems in general. Concurrency system has been the subject of numerous reviews that characterize its flaw. A major criticism is that it contributes to sprawl rather than to compact development (Downs 2003; DeGrove 1992; LUTSC 1999). A second major set of issues particularly in Florida has been the failure of the state to fund the infrastructure backlog (Ben-Zadok and Gale, 2001; Downs, 2003) and the related failure of local governments to develop financially feasible plans (Downs, 2003; TLUSC 1999). In 2005, the state of Florida Legislature passed the Growth Management Reform Act (GMRA) to address concerns about transportation funding. Under this legislation, local governments will be required to develop proportional fair share methodologies and cost feasible capital improvements plans that are updated on an annual basis. If local governments do not submit their updated capital improvements plans on an annual basis, the state will delay approval of all new development.

Some have criticized local governments in Florida for taking a one sizes fits all approach (LUTSC 1999) to concurrency, while others suggest that there is significant variability in concurrency practice (Chapin, 2005). This criticism does not apply to local governments in Washington because of the flexibility that is incorporated into the state implementation. Others suggest concurrency has been unable to balance community and economic development goals

DRAFT

with the state's need to facilitate interstate and interregional mobility (TLUSC 1999) and regional traffic presents a significant challenge to cities' ability to manage local transportation concurrency because a city's efforts to set LOS standards can be offset by traffic that passes through and clogs roadways and intersections in the process (Hallenback, Evans and Simmons 2003).

Similarly, concurrency is criticized for the emphasis given to high levels of vehicle mobility because it impedes the attainment of more important goals for community design (TLUSC 1999) and it fails to encourage use of capacity for alternative modes of transportation (Hallenbeck Evans and Simmons, 2003). The exclusive use of roadway-capacity-based LOS standards may not provide the correct signals for local government decision makers. Current LOS standards may be based more on an expression of people's congestion preference than on coordination of cities' long-term land use-transportation goals (Hallenbeck, Evans, and Simmons 2003). Most jurisdictions' LOS standards are not designed to evolve over time and, therefore, do not reflect changing land-use and transportation values (Hallenbeck, Evans, and Simmons, 2003). Finally, concurrency and APFOs are criticized for increasing housing costs (Downs 2003; NCSGRE 2006); these criticisms are similar to those made of other forms of land use controls (Reason Foundation…)

EVALUATION OF REGIONAL CONCURRENCY SYSTEMS

In evaluating concurrency systems, it is important to remember that concurrency is an evolutionary process that develops over time; most of the regional concurrency efforts have been in place for a relatively short time. Additionally, many of the tools for implementing concurrency are relatively new and also evolving with the regional growth management systems. Two of the regions discussed above – the Eastside Cities of the Puget Sound Region and Albuquerque are early in the implementation process.

To evaluate regional concurrency systems, it is useful to reconsider the components of a concurrency system as outlined in Figure 1. In the next section, each of the four regions will be evaluated to see how they rate in each of the boxes on that figure.

The bottom of the chart identifies the importance of consistency and a financial feasible plan that coordinates the land use plan, transportation plan with the capital improvements plan.

DRAFT

The consistency requirement considers how the vision of the region is coordinated with the implementation steps identified in the Comprehensive Plan and the financial feasibility can be determined based upon whether the plan is simply a wish list of projects or a systematic plan of how capital improvements will be made on an ongoing basis. Montgomery County, Maryland has had a county-wide growth management system since 1974 and its plan show consistency between land use, transportation and a financially-feasible capital improvements plan. The transportation capacity is monitored through the Local Area Transportation Review and, up until recently, had also been monitored through a Policy Area Transportation Review. In evaluating concurrency in Montgomery County it is important to recognize that not all counties in the area use APFOs. Thus, there may be spillover effects with development that is denied in Montgomery County occurring in neighboring counties. In the Albuquerque region, the implementation of regional concurrency is relatively new. It is still not clear whether Bernalillo County has adopted APFOs, but they have begun to develop sector plans and have developed a vision for critical infrastructure projects. The coordination between land use and transportation investments is clear from a review of planning documents. Transportation projects of both regional and local significance are identified in the plan. The Eastside cities of the Puget Sound Region show a variety of local goals with respect to land use and transportation. While each local community is internally consistent, they have conflicting visions of what the regional system should be. While many communities in Florida are criticized for the lack of a financially feasible plan, Orlando and Orange County have developed a vision for the community that is supported by a financially feasible plan for its implementation.

The second component of the concurrency system is intergovernmental coordination, which needs to occur between neighboring jurisdictions, between state and local governments and on a regional basis. In both Florida and Washington, ongoing conflicts exist between their respective Departments of Transportation and local governments over the management of the state highway system. Maryland has reduced these conflicts with their Priority Funding Areas because the local governments work in coordination with the state to establish areas where the state will support growth through infrastructure investment. Thus, in Montgomery County, Maryland, the decisions may not be coordinated with the rest of the region, but the decisions are consistent with those of the state. In Florida, the City of Orlando and Orange County are not coordinating their planning efforts with each other or with adjacent jurisdictions. However,

DRAFT

these jurisdictions are coordinating with other cities in Orange County and other adjacent counties.

The third component of the concurrency system is the private-public cooperation. In Montgomery County, Orange County and the City of Orlando, and Albuquerque, the private sector took a major role in identifying the vision of the region and putting together the implementation plan.

The fourth component of the concurrency systems, well-drafted ordinances, was not evaluated in great detail. Each of these regions are seen as managing growth rather than trying to control it. Albuquerque and the Eastside Cities are still early in the process of implementing their plans. The use of appropriate LOS standards was raised in the Eastside Study area of the Puget Sound Region. The Orlando/Orange County plan provides an example of the flexibility that is found in Florida's concurrency system. That region has taken advantage of the flexibility available in concurrency exception areas and DRI in Downtown Orlando and the flexibility in Sector Plans.

The final component is the overall political environment. In each of these regions there is evidence of a political commitment including legal and judicial support and public support. All of the planning processes included participation from a broad group of participants. One other aspect of political commitment that is important is a commitment to impose sanctions for projects that are not consistent with the concurrency requirement, which is a moratorium on growth. With the exception of Montgomery County, Maryland, none of these regions has used concurrency long enough to ensure that a sustained political commitment exists for the vision of the regional growth plan.

In summary, the four regions described here have many of the components outlined by DVRPC as being important in a concurrency system. All of these regions show evidence of consistency between and among the land use plan, the transportation plan, and the capital improvements plan and they generally have a financially feasible plan. They all show evidence of private-public cooperation that ensures communication of the goals of the plan, flexibility in the means of achieving that vision and accountability for the public role in implementing the plan. These regions have well-drafted ordinances that manage rather than control growth and incorporate the details of timing of growth in the plan. Not all regions show evidence of using

DRAFT

appropriate LOS measures.[4] The political environment in each of these regions is supportive of the implementation of regional concurrency. Finally, the weakest link in regional concurrency is intergovernmental coordination. In both Washington and Florida, the state and local governments disagree on the management of roadways of the state highway system and coordination on a regional level and between neighboring jurisdictions is not readily apparent. A cautionary note on these results is necessary. The examples provided in this summary are a snapshot of regional concurrency systems and these systems cannot be entirely divorced from regional approaches to planning. Many of the regions that are recognized for their regional governance, (e.g., Minneapolis, Indianapolis, Lexington, and Kentucky) do not uniformly apply APFOs as a part of their planning process. Additionally, the question of regionalism is much more complex than afforded by this project (see, for example, Katz, 2000)

Ultimately, this raises a related question of how a region is defined and what constitutes a regional approach to concurrency. Is a region county-wide? Is it the same as the Metropolitan Statistical Areas (MSAs) used by the U.S. Census Bureau? Or, is a region simply defined by its communities? As a part of this research, the tiered approach to growth management in Palm Beach County was reviewed. Under this tiered system, the LOS on roadway varies from one tier to the other. While this system provides an interesting approach to growth management, it is not particularly innovative in its concurrency system. Two other large counties in Florida may eventually provide examples of innovative concurrency management system. Jacksonville/Duval County is currently incorporating exception areas into its concurrency system and Miami-Dade County has a complex system of concurrency that also uses a tiered approach and exception areas. The Jacksonville/Duval County exception area is still under review and Miami-Dade County's system is neither well-understood nor well-documented.

DRAFT

[4] Technical Memorandum 3 will outline options for measuring level of service and identify their advantages and disadvantages.

WORKS CITED

Albuquerque, City of. (2002a). Planned growth strategy summary presentation. Available at: http://www.cabq.gov/council/pdf/pgspres.pdf

Albuquerque, City of. (2002b). Planned growth strategy, section 2: Implementation pp. 168-202. Available at: http://www.cabq.gov/council/pdf/Part2-5.pdf

Ben-Zadok, E., and Gale, D. E. (2001). "Innovation and Reform, Intentional Inaction, and Tactical Breakdown: The Implementation Record of the Florida Concurrency Policy," *Urban Affairs Review* 36, 6: 836-871.

Chapin, T. (2005). A review of local government concurrency practices in Florida. Available at: http://www.fsu.edu/~durp/publications/workpapers/WPS_05-05_Chapin.pdf

City of Orlando Planning and Development Bureau. (2005). Southeast sector plan: Vision statement. Available at: http://www.cityoforlando.net/planning/deptpage/sesp/sespvisi.htm

Cohen, J. (2005). Findings from case studies of local adequate public facilities ordinance implementation in N. Central Maryland (October 24). Available at: http://www.smartgrowth.umd.edu/pdf/NorthCentralAPFOs.ppt

DeGrove, J. M. 1992. *Planning and Growth Management in the States*. Lincoln Institute of Land Policy: Cambridge, MA.

Delaware Valley Regional Planning Commission (DVRPC). (2002). Managing growth: Infrastructure concurrency implementation barriers and ways to overcome them.

Downs, A. 2003. Why Florida's concurrency principles (for controlling new development by regulating road construction) do not – and cannot – work effectively. *Transportation Quarterly* 57, 1: 13-18.

ECONOrthwest and the Trasnspo Group, Henderson, Young & Company, Winterbrook Planning Services and Parametrix. (2002). Clark County Concurrency Summary. Available at:

Florida Administrative Code (FAC) 9J-5.50055 Available at: http://www.dca.state.fl.us/fdcp/dcp/publications/statutesruleslegis/index.cfm

DRAFT

Florida Department of Community Affairs (FDCA) Division of Community Planning. (2006). Optional sector plans. Available at: http://www.dca.state.fl.us/fdcp/dcp/optionalsectorplans/index.cfm

Florida Department of Transportation (FDOT) Systems Planning Office. (1998). Site impact handbook. Available at: http://www.dot.state.fl.us/planning/systems/sm/siteimp/sihandbook.htm

Florida Statutes Annotated (FSA) Available at: http://www.flsenate.gov/statutes/index.cfm?statuteyear=2004&tab=statutes&submenu=1

Freilich, R. H. (2003). Drafting and implementing a smart growth plan. Presentation to the Dane County, Wisconsin. Available at: http://www.daneplan.org/ppt/20030930_freilich_presentation.ppt#257,1,Dane County, Wisconsin Drafting And Implementing A Smart Growth Plan

Freilich, R. H. (2004). Blueprint for good growth. Presentation to the Boise City Club November 17, 2004. Available at: http://www.blueprintforgoodgrowth.com/PDFs/city%20club%20workshop_111704.ppt#256,1,Boise City Club November 17, 2004

Hallenbeck, M. E., Carlson, D., and Simmons, J. (2003). The possibilities of transportation concurrency: Proposal and evaluation of measurement alternatives. University of Washington, Seattle. Available at: http://depts.washington.edu/trac/concurrency/report.html

Katz, Bruce (ed.). (2000). *Reflections on Regionalism.* Washington, DC: Brookings Institution Press.

Knapp, G., Cohen, J., and Bento, A. (2003). Adequate public facilities ordinances in Maryland: Prevalence, practice and policy effects. Available at: http://www.smartgrowth.umd.edu/pdf/APFO3Ps.ppt#264,1,ADEQUATE PUBLIC FACILITY ORDINANCES IN MARYLAND: Prevalence, Practice, and Policy Effects.

Levinson, D. (1997). The limits to growth management: Development regulation in Montgomery County, Maryland. *Environment and Planning B: Planning and Design* 24: 689-707.

DRAFT

Montgomery County Department of Parks and Planning (MCDPP) (2005). Growth policy worksession 3: Approval activity under the new growth policy, development pressure on the agricultural reserve, and the boundaries of the Governor policy area. Available at: http://www.mc-mncppc.org/development/agp/2005%20policy/item1_092205_opt.pdf

National Center for Smart Growth Research and Education. (2005). Adequate public facilities ordinances in Maryland: An analysis of their implementation and effects on residential development in the Baltimore metropolitan area. A Report for the Home Builders Association of Maryland (January 12). Available at: http://www.smartgrowth.umd.edu/research/pdf/Cohen_APFOBaltimore_041906.pdf

National Center for Smart Growth Research and Education. (2006). Adequate public facilities in Maryland: Inappropriate use, inconsistent standards, unintended consequences. A report prepared for the Home Builders Association of Maryland and the Maryland National Capital Building Industry Association (April 20). Available at: http://www.smartgrowth.umd.edu/research/pdf/NCSG_APFOMaryland_041906.pdf

Powell, D. L. (1993). Managing Florida's growth: The next generation. *Florida State University Law Review,* 21: 223-339.

Puget Sound Regional Council (PSRC). (2003). Implementing 2030 DESTINATION monitoring regional progress: Assessing the effectiveness of concurrency: Final Report. Seattle, Washington: Puget Sound Regional Council. Available at: http://www.psrc.org/projects/growth/concur/concurrencyfinal.pdf

Steiner, R. and Davis, K. (2004). Can cities and counties get along? Lessons from the implementation of transportation concurrency in Florida and Washington State. Presented at the Access to Destinations Conference in Minneapolis, MN in November 2004.

Steiner, R. L. (2001). Florida's transportation concurrency: Are the current tools adequate to meet the needs for coordinated land use and transportation?" *University of Florida Journal of Law and Public Policy* 12, 2, pp. 269-297.

Steiner, R. L., Wright, S. A., Paul, J. B., with assistance from Karen Kolinski, Angie Perez, and Alice N. Bojanowski. (2000). Travel in new urbanist and traditional communities: A case

DRAFT

study of downtown Orlando. Prepared for the Florida Department of Department of Transportation Office of Policy Planning under Contract BC-354-15.

Testerman, C., and Torres, A.B. (2004). Horizon West, Orange County Florida. *Terrain.org: A Journal of the Built and Natural Environment.* Issue No. 14 (Winter/Spring). Available at: http://www.terrain.org/unsprawl/14/

Transportation and Land Use Study Committee. (1999). Final Report of the Transportation and Land Use Study Committee.

Trohimovich, T. (2001). Current issues in growth management/land use and transportation: The "new cities" experience. Chapter Three/C. Prepared for 1000 Friends of Washington, Seattle, WA. http://depts.washington.edu/trac/concurrency/pdf/trohimovich-b.pdf

White, M. S. (1996). Adequate public facilities ordinances and transportation Management. Planning Advisory Services Report Number 465. Chicago, IL: American Planning Association.

White, M. S., and Paster, E. L. (2003). Creating effective land use regulations through concurrency. *Natural Resources Journal* 43, 3: 753-79.

ADDITIONAL REFERENCES

Arline, T. K. (1998). Primer on Florida's growth management system. Paper delivered August 1998 at Smart Growth Conference in Atlanta by Legal Director of 1000 Friends of Florida. Available at: http://www.state.fl.us/fdi/fscc/news/state/9804/fgme.htm

Audirac, I., O'Dell, W., and Shermyen, A. (1992). Concurrency management systems in Florida: A catalog and analysis. Monograph 7. Gainesville, FL: Bureau of Economic and Business Research, University of Florida.

Boggs, H. G., and Apgar, R. C. (1991). Concurrency and growth management: A lawyer's primer. *Journal of Land Use and Environmental Law,* 7: 1-27.

Cervero, R. (2000). Growing smart by linking transportation and urban development. *Virginia Environmental Law Journal,* 19: 357-374.

DRAFT

City of Orlando Downtown Strategic Transition Team. (2003). Downtown Orlando: 20-point strategic implementation team. Available at: http://www.cityoforlando.net/planning/Transportation/documents/20_points.pdf

Dawson, M. (1996). The best laid plans: The rise and fall of growth management in Florida. *Journal of Land Use and Environmental Law*, 11(2). Available at: www.law.fsu.edu/journals/landuse/112.html

Downs, A. (2004). Still stuck in traffic: Coping with peak-hour traffic congestion. Washington, DC: The Brookings Institute.

Durden, B., Layman, D., and Ansbacher, S. (1996). Waiting for the go: Concurrency, takings and property rights act. *Nova Law Review,* 20(2): 661-682.

Environmental Land Management Study Committee, State of Florida (ELMS). (1992). Building successful communities: Final report. Tallahassee, FL: State of Florida (December).

Eustis, J. M. (1993). Between Scylla and Charybdis: Growth management act implementation that avoids takings and substantive due process limitations. *Puget Sound Law Review,* 16: 1181-1221.

Ewing, R. (2000). Florida's growth management learning curve. *Virginia Environmental Law Journal,* 19: 375-392.

Florida Department of Transportation (FDOT) Systems Planning Office. (1992). 1992 Level of Service Handbook. Tallahassee: Florida Department of Transportation.

Florida Department of Transportation (FDOT) Systems Planning Office. (2002). 2002 Quality/Level of Service Handbook. Available at: http://www.dot.state.fl.us/planning/systems/sm/los/pdfs/QLOS2002Novweb.pdf

Florida Department of Transportation (FDOT) Systems Planning Office. (2003). Multimodal Transportation Districts and Areawide Level of Service Handbook. Available at: http://www.dot.state.fl.us/planning/systems/sm/los/pdfs/MMAreawideQOS1211.pdf

Florida Department of Transportation (FDOT). Systems Planning Office. (1998). 1998 Level of Service Handbook. Available at: http://www.dot.state.fl.us/Planning/Systems/sm/los/98los.pdf

DRAFT

Florida's Growth Management Study Commission (FGMSC). (2001). A livable Florida for today and tomorrow. Available at: http://www.dca.state.fl.us/growth/pdf/gmsc.pdf

Freilich, R. H. (1993). Economic development and public transit: Making the most of the Washington growth management act. *Puget Sound Law Review,* 16: 949-973.

Freilich, R. H., and White, S. M. (1991). Transportation congestion and growth management: Comprehensive approaches to resolving America's major quality of life crisis. *Loyola Law Review,* 24: 915-???.

Gale, D. (1992). Eight state-sponsored growth management programs: A comparative analysis. *Journal of the American Planning Association*, 58(5).

Guttenplan, M., Davis, B., Steiner, R. L., and Miller, D. (2003). Planning level areawide multi-modal level of service (LOS) analysis: Performance measures for congestion management. *Transportation Research Record 1858:* 61-68.

Guttenplan, M., Landis, B. W., Crider, L., and McLeod, D. S. (2001). Multimodal level of service (LOS) analysis at a planning level. Florida department of transportation (FDOT), TRB Paper No. 01-3084.

Hall, R. (1990). Everything you wanted to know about transportation level of service. Proceedings of The Florida Bar Continuing Education Committee, the Environmental and Land Use and Local Government Law Section, Course No. 6806. *Land Use Conflicts: Remedies and Enforcement:* 7-1 – 7.12.

Hialeah, City of. (2004). Concurrency management system. Report prepared by The Corradino Group.

Jacksonville, City of. (1998). Development agreement between the City of Jacksonville and Arthur Chester Skinner, III, *et al.* (September 2).

Kelly, E. D. (1993). Managing community growth: Policies, techniques, and impacts. Westport, CT: Praeger.

Layman, D. M. (1997). Environmental and land use law: Concurrency and moratoria. *The Florida Bar Journal*, 71: 49-53.

Lincks, T. F. (1990). Transportation considerations. Proceedings of Florida bar environmental and land use law section. *Mechanics of Zoning and Land Use Law*. 1.1 – 1.20.

DRAFT

Marshall, J. T. (2002). Special series: New urbanism and smart growth: Florida's downtowns: The key to smart growth, urban revitalization, and green space preservation. *Fordham University School of Law,* 29: 1509-1527.

McKay, P. S. (1989). Capital improvements planning in Florida. Chapter III in Barbara Brumback and M.J. Marvin (eds). *Implementation of the 1985 Growth Management Act: From Planning to Land Development Regulations.* Fort Lauderdale, FL: Florida Atlantic University/Florida International University Joint Center for Environmental and Urban Problems, Monograph #89-1, pp. 39-53.

Merrill, W., III. (1990). Implementing comprehensive plans through local land development regulations. Proceedings of the Florida Bar Continuing Legal Education Committee and the Environmental and Land Use Law Section, the Local Government Law Section Course No. 7013R *Local Land Development Regulations: Issues and Ideas*: 3.1 – 3.19.

Metz, S. W. (1991). An overview of growth management: Where we are/where we have been. Proceeding of the Conference on *Growth Management for the 1990s: Legal Problems and Practical Solutions:* 1.1 – 1.32.

Miami Beach, City of. (2000). Transportation concurrency management areas. Report prepared by the Corradino Group.

Murphy, M. (1996). Property rights and growth management in Florida: Balancing opportunity and responsibility in a changing political climate. *Pace Environmental Law Review,* 14: 269-321.

Nicholas, J. C. and Steiner, R. L. (2000). Smart growth and sustainable development in Florida. *Wake Forest Law Review,* 35(3): 645-670.

Pelham, T. 1992. Adequate public facilities requirements: Reflections on Florida's concurrency system for managing growth. *Florida State University Law Review,* 19: 974-1053.

Pelham, T. 2001. Restructuring Florida's growth management system: Alternative approaches to plan implementation and concurrency. *University of Florida Journal of Law and Public Policy,* 12(2): 299-310.

Porter, D. R. (1993). State growth management: The intergovernmental experiment. *Pace Law Review,* 13: 481-503.

DRAFT

Powell, D. L. (1994). Recent changes in concurrency. *The Florida State Bar Journal,* 68: 67-???.

Powell, D. L. (2001). Growth management: Florida's past as prologue for the future. *Florida State University Law Review,* 28: 519-542.

Rhodes, R. M. (1991). Concurrency: Problems, practicalities, and prospects. *Journal of Land Use and Environmental Law,* 6: 241-254.

Rhodes, R. M. (1991). Concurrency – A practical perspective. Proceeding of the Conference by the Florida Bar Environmental and Land Use Law Section on *Growth Management for the 1990s: Legal Problems and Practical Solutions.*

Roberts, T. H. (1986). Capital improvements programming after the growth management act: A planner's perspective. Chapter IX in John M. DeGrove and Julian Conrad Juergensmeyer (eds.), *Perspectives on Florida's Growth Management Act of 1985*. Lincoln Institute of Land Policy Monograph #89-5. Cambridge, MA: Lincoln Institute, pp. 151-73.

Robertson, C. A. (1996). Concurrency and its relation to growth management. *Nova Law Review,* 20(2): 891-917.

Sakowicz, J. C. (2004). Urban sprawl: Florida's and Maryland's approaches. *Journal of Land Use and Environmental Law*, 19: 337-424.

Siemon, C. L. (1986). What goes around, comes around. Chapter IX in John M. DeGrove and Julian Conrad Juergensmeyer (eds.), *Perspectives on Florida's Growth Management Act of 1985*. Lincoln Institute of Land Policy Monograph #89-5. Cambridge, MA: Lincoln Institute, pp. 115-31.

Steiner, R. (1999). Concurrency management: Florida's example. *Transportation Research Record: Journal of the Transportation Research Board* 1685: 181-86.

Steiner, R. (forthcoming). Transportation concurrency: An idea before its time? Chapter 7 in C. Connerly, T. Chapin, and H. Higgins (eds.), *Regulating Development in the Sunshine State: Evaluating Florida's Growth Management Approach.* Ashgate Publishing.

Steiner, R. L., Bond, A., Miller, D., and Shad, P. (2004). Future directions for multimodal areawide level of service handbook Research and Development. Prepared for the

DRAFT

Florida Department of Transportation Office of Systems Planning under contract # BC-354-78.

Steiner, R. L., and Miller, D., with assistance from Karen Kolinski. (2002). Multimodal quality of service, part II: Areawide level of service (including the Gainesville case study). Prepared for the Florida Department of Transportation Office of Systems Planning under Contract No. BC-354, RPWO28, July 2002. Incorporated into Appendix of "Multimodal Transportation Districts and Areawide Quality of Service Handbook" available at: http://www.dot.state.fl.us/planning/systems/sm/los/pdfs/MMTDQOS.pdf

Steiner, R. L., and Waterman, J. *et al.* (1999). The impact of concurrency management and the Florida growth management act on transportation investments. Prepared for the Florida Department of Transportation Department of Policy Planning under Contract No. BB-866.

Steiner, R. L., Li, I., Shad, P., and Brown, M. B. (2003). Multimodal trade-off analysis in traffic impact studies. Prepared for the Florida Department of Transportation Office of Systems Planning (May). Available at: http://www.dot.state.fl.us/planning/systems/sm/los/pdfs/mmtradeoff.pdf

U. S. Department of Transportation Federal Highway Administration. (2005). Transportation Solutions Conference Proceedings.

Walsh, Thomas M. 1993. The concurrency requirement of the Washington State growth management act. *Puget Sound Law Review,* 16: 1025-1057.

Weaver, R. L. (2000). Environmental and land use law: A vision of the future of Florida land use law. *The Florida Bar Journal,* 74: 91-95.

Weaver, R. L. (2001). Concurrency, concurrency alternatives, infrastructure, planning and regional solution issues. *Journal of Law and Public Policy,* 12: 251-67.

Weaver, R. L., Hanna, J. E., Carraway, C. B., Craine, B., and Smith, D. M. (1990). Everything you wanted to know about transportation level of service, proceedings of the Florida bar continuing education committee, the environmental and land use and local government law section. *Land Use Conflicts: Remedies and Enforcement,* 7-1 – 7.12.

Weaver, R., Hanna, J., Smolker, D., Carraway, C., and Craine, B. (1989). It's a mad, mad, mad, mad, mad, world. Proceedings of The Florida Bar Continuing Education Committee

DRAFT

and the Environmental and Land Use and Local Government Law Section of *Every Which Way But Loose: Concurrency Revisited.* Course No. 6639.

Ziegler, E. H. (2003). Urban sprawl, growth management and sustainable development in the United States: Thoughts on the sentimental quest for a new middle landscape. *Virginia Journal of Social Policy and the Law*, 11: 26-65

DRAFT