Options for Making Concurrency More Multimodal

Response to SHB 1565 (2005 Session)

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Prepared for:

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TABLE OF CONTENTS

FIGURES

Executive Summary

Transportation Concurrency and the GMA

The Growth Management Act (GMA) introduced the idea of "concurrency," the policy goal of ensuring that development not outpace the provision of infrastructure. The GMA directs jurisdictions to define and establish level of service (LOS) standards for their transportation systems. If new development will cause the transportation system to exceed the established LOS standards, the jurisdiction must deny the development unless transportation improvements and strategies are implemented to accommodate the development within six years, a process known as *concurrency mitigation.*

Limitations in Existing Transportation Concurrency

The majority of local concurrency programs focus almost exclusively on auto congestion. Because this approach only counts vehicles and fails to account for people who walk, drive with friends or co-workers, ride transit, or bicycle, it has proven insufficient for denser jurisdictions. As density increases in urban areas, a growing share of travel occurs via alternative modes, and roadway capacity becomes a poor proxy for the transportation system. With roadway-only concurrency measurement systems, these communities can only choose between accepting increasing roadway size and/or congestion or denying development.

A second limitation in the current process is a lack of consideration for the regional transportation impacts of new development. Concurrency does not consider regional congestion, except when through-traffic volumes clog locally controlled roads.

Recommendations

The project team recommends that regions adopt a two-tiered concurrency system. The objective is to provide a more flexible incentive and disincentive system at the regional level while encouraging application of more multimodal transportation system measures at the local level.

Local Concurrency: Local jurisdictions should adopt multimodal concurrency measures that examine the existence (or lack) of the key facilities and services needed by the geographic subarea for which the concurrency system has been developed, regardless of the mode involved. This means that the concurrency measures will change from jurisdiction to jurisdiction and may even change from subarea to subarea within a jurisdiction. Failure to meet the standards set for the "local" portion of the recommended multimodal concurrency system will result in the denial of a development permit.

In more developed urban centers where the desired street system has been fully built, we suggest that the concurrency approach be based on the operational performance of that street system in terms of the multimodal travel time between key activity centers or along key travel corridors, or the multimodal travel time between regional growth centers and the outer limits of a radius of the average regional work trip distance (currently about 10 miles). In lightly developed, residentially oriented jurisdictions on the fringe of a metropolitan region, a suggested system would combine the need for a planned grid (redundant) street network, traditional arterial level-of-service calculations, and analysis of park-and-ride space availability. For suburban jurisdictions that fall between these two extremes, the real multimodal issue is likely to be the amount of transit service that is available, rather than the performance (travel time) of that service or the arterial network. An adopted concurrency standard might be expressed something like, "LOS D for an arterial unless high frequency transit (e.g. more than six to ten buses per hour) travel is available on that roadway during the peak period, in which case the acceptable roadway standard could be LOS E."

Alternatively, a jurisdiction may designate its geographic core or regional growth center as "exempt" from LOS calculations but establish, in collaboration with the exempt center's transportation management association (TMA), specific programs for limiting single occupant vehicle use to/from the TMA district during peak periods. This could be coordinated with and provide additional implementation support for the state program recently enacted under the Commute Trip Reduction (CTR) law establishing Growth and Transportation Efficiency Centers (GTEC). It is recommended that all employers within the core/center area be required to join the TMA.

Regional Concurrency: The project team recommends that regional agencies be given the authority to define, develop and apply a "regional concurrency system" that is in addition to the locally applied concurrency system described above. This regional authority would most likely be the existing MPO/RTPO unless an alternative regional authority were created or designated. To acknowledge the diversity of regions around the state, each regional transportation plan (RTP) currently required by state law would develop its own definition of "regional concurrency." The technical application of the regional concurrency system would only need to measure and address the regional impacts of proposed development, and the region would not have the authority to deny development (that would continue to be a local determination).

The regional authority should be empowered to develop a system of incentives and disincentives designed to encourage development in locations that can be most cost effectively served by publicly supported transportation facilities and services. Such a system may, but does not need to, involve the imposition of "impact charges" on developers based on the cost to the regional transportation system that the new trips impose. Those charges will be high for developments that impose large impacts and low for developments that impose smaller impacts. For example, each development might be charged a user fee based on the number of vehicle–miles–of–travel (VMT) that the development was expected to contribute to the regional freeway system.

The regional authority will be free to select any mechanism that provides incentives to build in areas where public costs for meeting the travel demand created by development will be lower, while imposing disincentives for building in areas where development will increase the public costs of meeting travel demand. For example, transit oriented developments (TOD) built in a defined Growth and Transportation Efficiency Center (GTEC) and/or along an existing high capacity transit route might be exempted from any concurrency review (even at the local level), thus decreasing the development cost and speeding up the permitting process. Developments not built within these constraints would have to conform to local concurrency regulations.

"Regionally concurrent" can be defined either technically or politically. If a technical approach is selected, key transportation and land-use characteristics must be defined to indicate whether or not a geographic area is "regionally concurrent." (An example of such an approach is given in the main report for this project.) Any jurisdiction that wishes to have a "regionally concurrent" sub-area will know exactly what types of land-use and transportation system attributes it needs to change or improve in order to gain that designation.

A simple political designation can also be used. For example, the region could define all GTEC's as being "regionally concurrent." It could also define any location within x-miles walking distance of a major transit station as being "regionally concurrent." Changes in these designations can be addressed through the existing regional planning process, performed in conjunction with the designated regional concurrency authority.

The project team believes very strongly that the regional concurrency authority must control/influence some transportation funding in the region. These funds can come from new sources or from existing sources. Where new funds are developed, all regional transportation facilities/modes should be eligible to receive those funds. Where existing funds are allocated on the basis of regional concurrency priorities, those funds should be spent on the mode that would have received them had they not been allocated to the regional concurrency authority.

The project team also believes these recommendations would benefit from more review from those agencies that must implement concurrency. We encourage additional outreach, testing and feedback with these agencies.

INTRODUCTION

In its July 2003 final report, *Assessing the Effectiveness of Concurrency,* The Puget Sound Regional Council concluded, "The transportation planning goal in the Growth Management Act (GMA) focuses on developing efficient multimodal transportation systems – however, the majority of local concurrency programs focus almost exclusively on auto congestion." The report recommends that "concurrency should focus on multimodal transportation" (Miller, Piro, 2003). To make progress on this recommendation, the legislature passed 2SHB 1565 in 2005, which directs regional transportation planning organizations (RTPOs) to develop transportation concurrency strategies and regional level-of-service measures that are multimodal.

This study's purpose, by legislative intent, is to examine and propose multimodal improvements to concurrency. These include both alternative ways to measure the availability and effectiveness of multimodal transportation systems, and ways to use those measurements to implement more effective multimodal transportation systems that support the intent of the GMA.

TRANSPORTATION CONCURRENCY

The GMA introduced the idea of "concurrency" in 1990 as a way of more effectively linking land-use and infrastructure planning. The term reflects the policy's goal of ensuring that developments not outpace the provision of infrastructure.[1] That is, the infrastructure improvements needed to serve new development should be in place "concurrent" with that development. The transportation infrastructure that a jurisdiction may examine to determine what might be required to serve a new development can include roads, transit service and facilities, or other modes of travel, depending on the nature of the city/county in which the development will occur.

The overarching goals of the GMA focus on making land development more efficient, conserving rural land, and reducing urban sprawl. Transportation concurrency aims to ensure that growth occurring in already developed areas does not place undue burdens on people already living and working in that area who rely on the existing and funded transportation facilities. Similarly, when growth occurs in less developed areas, transportation concurrency is intended to ensure that the required transportation improvements are funded and built to serve that growth.

The GMA directs jurisdictions to define and establish level of service (LOS) standards for their transportation systems. The transportation LOS standards serve as a

[1] This *concurrency* requirement applies to all aspects of a local government's infrastructure, including roadways, sewers, and water. However, the Act requires jurisdictions to adopt ordinances that establish a concurrency *measurement* system only 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."

baseline for determining whether current transportation facilities can accommodate the transportation impacts associated with new development. If the new development will cause the transportation system to exceed the pre-determined LOS standards, the jurisdiction must deny the development unless transportation improvements and strategies are implemented to accommodate the development within six years, a process known as *concurrency mitigation.*

LIMITATIONS IN THE CURRENT APPLICATION OF TRANSPORTATION CONCURRENCY

In the geographic regions where the primary means of transportation is the local road system, transportation concurrency as currently applied has worked well. In the areas where a significant proportion of travel occurs on regional roadways, especially highways of statewide significance, or by modes other than the single occupant automobile, transportation concurrency in Washington has been less successful. The reasons for these limitations are discussed below.

Most transportation concurrency measurement systems used in Washington are auto-focused. The vast majority of these systems use some measure of roadway congestion as their only measure of concurrency. From the vantage point of the low density spread of suburbanized America, this makes perfect sense. In exurban, underdeveloped areas with incomplete road systems, use of these measurement systems can help ensure that road systems are completed in tandem with new development.

Unfortunately, because this approach only counts cars and fails to account for people who walk, drive with friends or co-workers, ride transit, or bicycle, it has proven insufficient for denser jurisdictions because the only remedies available when standard, roadway-based LOS measures are surpassed are to build more road lanes or deny new development. Thus, the use of roadway-only concurrency systems poses an impossible choice for more fully developed urban communities where limited land availability prevents expansion of roadways and where, as density increases, a growing share of travel comprises alternative modes. With roadway-only concurrency measurement systems, these communities can only choose between accepting increasing roadway size and/or congestion or denying development.

A preferred alternative to this set of poor choices is to develop concurrency procedures that account for the mobility provided by all modes of travel.

A second limitation in the current process is a lack of consideration for the regional transportation impacts of new development. Although much of the worst congestion in the state involves regional movements, the existing concurrency process is locally focused. Unless a city specifically chooses to develop an interagency agreement with one or more of its neighbors, development impact review is restricted to transportation facilities within that jurisdiction’s boundaries. Even within those boundaries, highways of statewide significance are specifically exempted from concurrency review. The result of this tightly focused, local view of concurrency is that the regional impacts of development are rarely considered.

This would make sense if all trips generated in a city stayed in that city. But in a modern metropolitan area, a high percentage of trips leave the city in which the trips are generated to travel to other parts of the urban area over the regional roadway network. As concurrency is presently applied, these regional effects are only notable when through-traffic volumes clog locally controlled roads that are included in a city's concurrency calculations, or where congestion spillover from regional facilities affects the performance of local roads that must meet concurrency LOS standards.

When either of these cases occurs, a city's conscientious efforts to set LOS standards and balance land-use and transportation investments can be overwhelmed by traffic that begins and ends in other jurisdictions. The emphasis on local impacts and the exclusion of regional effects ignore the facts that transportation networks must be managed as a system and that transportation systems cross-jurisdictional boundaries. This is particularly true for transit systems, which must function at larger geographic scales (county-wide and region-wide) to be effective.

MULTIMODAL ASPECT OF TRANSPORTATION CONCURRENCY

Other than a few cities that use simplistic modeling techniques to decrease the assumed vehicle trip generation rates for proposed development on the basis of current transit usage rates or that simply examine the relative speed (but not capacity or usage) of transit and automobile travel on specific corridors, the concurrency decision making approaches applied by Washington jurisdictions essentially do not examine the extent, performance, capacity, or effectiveness of the current or proposed transit system.

Neither do the existing concurrency systems measure the presence or absence of other transportation system or land-use attributes that indicate the availability of sufficient mobility options to offset the detrimental effects of congestion on urban mobility.

While many cities include multimodal infrastructure in their comprehensive plans and development codes (e.g., requiring sidewalks and other multimodal transportation infrastructure as part of the site development), the adequacy, performance, and use of these facilities are not included in the transportation concurrency calculations. When these facilities are included in the concurrency process at all, their absence or existence is simply used to modify the assumed roadway capacity of monitored roads. That is, a road with a completed sidewalk is given a higher vehicle capacity value than the identical road with incomplete or non-existent sidewalks. This approach to "pedestrian infrastructure" for transportation concurrency allows slightly higher levels of development in areas with sidewalks than in areas without sidewalks by increasing the assumed number of vehicles that can efficiently use the roads in that area. Outside of the mathematical effects on vehicle capacity, this approach does not measure the "adequacy" of those multimodal transportation facilities.

In the third chapter of this document (*Alternative Approaches)* this study presents a range of alternative ways in which different measurement systems can be used to increase the multimodal nature of concurrency.

OBJECTIVES AND EVALUATION CRITIERA FOR MULTIMODAL CONCURRENCY

While almost all participants in the concurrency process agree with the basic, legally defined end goal of concurrency (“to ensure that public infrastructure supports development as it occurs”), opinions diverge significantly about how to approach and define “acceptable level of service (LOS)” and “travel accommodation” as well as how to fund the transportation improvements that will allow jurisdictions to meet their concurrency goals.

Issues with transportation concurrency arise only when development within a jurisdiction reaches the point at which the transportation levels of service adopted by that jurisdiction have been, or will be, exceeded by proposed development. At that point, a jurisdiction has three distinct choices:

- deny/stop development
- provide (fund) additional transportation facilities and/or services or
- change the adopted LOS standard to accept lower levels of transportation system performance.

How each jurisdiction chooses among these alternatives is a function of the political view of growth within that jurisdiction.

Many jurisdictions are happy to see new development. They use concurrency either as one more way to extract mitigation from developers to help build additional transportation facilities or as a gate keeper to limit the speed with which development occurs so that planned transportation projects, funded by existing sources, can be implemented to serve that growth.

Other jurisdictions (or specific interest groups within those jurisdictions) use concurrency to limit development to levels below those adopted in their comprehensive plans. This usually occurs where the implications of those comprehensive plans on transportation system performance were not adequately understood at the time the plans were adopted, or where the political acceptability of congestion relative to new growth has changed since the comprehensive plan was adopted.

Still other groups see the concurrency system as a way of funneling growth to specific geographic areas within their jurisdiction, either by changing the cost of development (lowering costs in areas where development is currently desired, raising costs in areas where growth is currently to be discouraged) or by changing a developer’s ability to obtain permits.

This range of desired outcomes from concurrency caused the project team to further explore the intended objectives for a multimodal concurrency system. The following section discusses what the project consultation and advisory committees described as being the desired objectives of a revised concurrency system.

PRIMARY OBJECTIVES

The following objectives were considered to be the primary reasons that jurisdictions are interested in developing and applying a multimodal transportation concurrency system.

Control the Timing of Development

The legislative code indicates that limits on development caused by an inability to meet adopted level of service standards are intended to be temporary, as additional transportation services are expected to be implemented to serve the adopted land-use plan.[2] Therefore, one objective of concurrency is to simply control the timing of development. This objective assumes that existing funding sources will eventually be available to increase transportation services and thus permit additional development that is acceptable within adopted comprehensive plans.

Support Transportation System Funding

Unfortunately, limits in transportation funding have frequently prevented many jurisdictions from adding the transportation system capacity necessary to maintain their adopted performance standards. As a result, some jurisdictions have used their concurrency systems to help generate additional developer contributions toward transportation system improvements. Thus, a second common objective of the concurrency systems implemented by jurisdictions is to provide a mechanism for generating additional transportation system funding. These funds can be used both to increase the number of transportation improvements and to increase the speed with which desired transportation system improvements are implemented.

Subtly Limit Level of Growth

In some jurisdictions, the adopted transportation level of service standards in the concurrency system, combined with the adopted transportation plans, do not allow authorizing development to the full level portrayed and assumed in the adopted comprehensive plan. For these jurisdictions, concurrency becomes a way to limit growth to levels below those adopted in the comprehensive plan without actually changing that

[2] The assumption is that the land-use and transportation plans have been cooperatively developed and that the transportation system will at some point in the future be expanded to meet the needs of the adopted land-use plan. WAC 365-195-510 (4) states: “To the extent that any jurisdiction uses denial of development as its regulatory response to the absence of concurrency, consideration should be given to defining this as an emergency for the purposes of the ability to amend or revise the comprehensive plan.”

plan. Essentially, development is permitted until the transportation level of service standards are reached, after which development is denied.

Focus Development in the Desired Geography

By allowing level of service standards to differ by geographic area within a jurisdiction and/or by prioritizing transportation improvements within specific geographic areas, jurisdictions can also focus allowable development within limited geographic areas. Rather than denying all development, this approach allows continued development in some parts of the city while denying it in others. Such an approach can be closely or loosely tied to the adopted comprehensive plan.

Focus Development through Financial Incentives/Disincentives

A slight variation on the previous objective is to use the cost of necessary transportation system improvements to raise the price of development in one part of the city versus another part, in order to create financial incentives for developing in some areas and corresponding financial disincentives for developing in others.

MULTIMODAL OBJECTIVES

While most jurisdictions have adopted transportation levels of service defined in terms of roadway level of service, the inability to increase roadway capacity because of financial constraints, political constraints, and/or simple lack of available right-of-way has caused many jurisdictions to look for more multimodal solutions to their transportation problems. This fits well within the guidelines of the concurrency legislation, which specifically indicates that transportation level of service should be multimodal. Translation of this desire for multimodal solutions into concurrency system objectives is reflected in several variations of the primary concurrency objectives discussed above.

Channel Development to Increase System Efficiencies

Some jurisdictions would like to use concurrency regulations to permit development where transportation alternatives to the single occupant vehicle (SOV) exist, regardless of (or in combination with) the level of roadway congestion. One form of this approach is to accept higher levels of congestion in geographic areas that contain higher levels of service for non-SOV transportation modes. For example, even if roadway congestion exceeded adopted concurrency standards, additional development would be permitted where completed pedestrian networks and urban design features encouraged walking and biking in lieu of driving a car, or where high quality transit service existed as an alternative to car use. A more stringent version of this approach permits development *only* where sufficiently high levels of service for alternative modes of travel exist. The basic objective of these requirements is to increase system efficiencies and the percentage of travel using non-SOV modes.

Support Travel Demand Management Strategies

Some jurisdictions use concurrency systems to require developers to adopt travel demand management (TDM) strategies in order to obtain development permits in geographic areas at or nearing their concurrency standards. In addition to placing specific requirements on developments to encourage multimodal travel, concurrency regulations could be designed to lower the cost of meeting level of service standards by promoting TDM in areas that are well served by multiple modes of travel, as well as increasing the cost of development in areas not well served by multiple modes of travel.

Support Expanded Travel Options

Finally, for jurisdictions looking to reduce traffic congestion levels, multimodal concurrency is viewed as a process to increase the likelihood that new development can be efficiently served by transit, or to expand the transportation options of the growing state/regional population.

REGIONAL VERSUS LOCAL CONCURRENCY OBJECTIVES

Project participants identified the fact that transportation networks must function at both the local and regional levels for the goals of the GMA to be attained. This has created some conflict over the geographic scale at which concurrency should be applied and the entities that should implement concurrency LOS standards. Ideally, concurrency should work at both the local and regional levels. Some suggested approaches to concurrency work at the local level, while others work better at the regional level. It may also be beneficial to develop a two-tiered concurrency process, with one tier designed to function at each geographic scale.

Local Control

Transportation concurrency legislation is currently oriented toward individual jurisdictions. The jurisdiction that controls land use sets the concurrency standard. This is good from the perspective of local control over land use, which is a key prerogative of local jurisdictions. Thus, a key objective of concurrency is to allow local jurisdictions to maintain control of their own land use and development.

Local control is a very important political issue. And different localities select very different combinations of land use and transportation system performance. The current status of the variations in adopted concurrency procedures suggests the desire for a flexibility that allows different jurisdictions to accommodate their different visions of the desired combination of land development and transportation system performance.

Regional System Performance

In spite of the GMA's locally focused concurrency decision process, travel crosses jurisdictional boundaries, and the trips generated in one jurisdiction frequently affect the transportation system performance experienced in neighboring jurisdictions. One limitation of the current concurrency regulations is that regional impacts are neglected for the sake of very strong local control over land use. Ideally, transportation concurrency should also help to reduce regional congestion, encourage the efficient operation of the regional transportation system, and decrease the impacts of development on neighboring jurisdictions. Regional objectives for multimodal concurrency may include reducing per capita vehicle-miles-of-travel (VMT), facilitating the growth of non-motorized travel and encouraging additional modal shift to transit/rideshare modes. This could decrease the level of travel demand to expand congested regional roads by contributing to reductions in the extent and need for single occupant vehicle (SOV) travel.

The outcome of more regional objectives for transportation concurrency would be a change in development cost structure in a manner that would discourage sprawl by increasing the cost of development in outlying areas and encourage infill by reducing the cost of development in urban centers that could be more easily and effectively served by transit and other alternative forms of travel.

SECONDARY OBJECTIVES AND TOUGH TRADE-OFFS

In addition to the primary objectives presented above, the advisory and consultation groups identified a series of other considerations that are incorporated in the evaluation of alternative multimodal approaches to concurrency described in the following chapter.

Limit the Costs of the Concurrency Process

In addition to the more political or policy oriented objectives discussed above that drive the development and application of concurrency systems, jurisdictions and firms involved in developing and applying those concurrency systems consider a series of more technical objectives. These considerations less concerned with the desired outcome from the adopted concurrency systems than with the nature of the effort and process required to apply the system and the transparency and credibility of that system.

Developers, who must pay the cost of developing materials necessary to prove compliance with concurrency requirements, have an interest in limiting the cost of performing concurrency analyses, as do jurisdictions, which must both review those development applications and produce their own concurrency compliance reports. Therefore, a secondary objective of any concurrency system is to limit the cost of performing concurrency analyses and reviews. These costs include collecting the necessary data, performing the required analyses, informing the decision making process, producing the relevant reports, and reviewing the entire process in a publicly transparent manner. All things being equal, a concurrency system that costs less to apply is better than one that requires more staff time and resources to maintain. Having said that, an inexpensive system that does not serve the primary interests and objectives of the jurisdiction is less desirable than a more expensive system that produces the desired results.

Not surprisingly, the project team's review of existing concurrency systems generally found that jurisdictions attempting to use the concurrency regulations to more carefully control their development process tended to have more complex concurrency systems, whereas those relying less heavily on concurrency regulations to control or shape growth tended to select more simplistic, lower cost concurrency systems.

The cost of performing required concurrency computations tends to be driven by the following:

- quantity of data needed in the analysis (Are only roadway performance data required, or are data needed to reflect all modes of travel?)
- availability of those data (Are the data already produced/collected as a result of other activities being performed by the developer/agency, or must new data be collected or computed specifically for the concurrency analysis? Are all of the data maintained by the jurisdiction, or must the data be assembled from multiple sources?)
- complexity of the analyses required (Do new transportation modeling runs need to be performed, or can readily available data be used to meet analysis requirements?).

A corollary to lowering the cost of performing concurrency analyses is that all parties involved in concurrency prefer systems that are easy and fast to apply.

Be Transparent and Easily Understood

Jurisdictions generally prefer that the concurrency system be as transparent and easily understood as possible. A concurrency system that can be easily understood by political decision makers and the public is preferable to one viewed as a "black box." Easy to understand systems encourage better public support and understanding of the decision making process and are less likely to result in major challenges or litigation. They also reduce the cost of development by making it easy for a potential developer to compute the cost of development for a given project. This generally means that the more simplistic the system, the better.

Unfortunately, simple systems also tend to be less flexible and thus act as relatively "blunt instruments" when jurisdictions try to balance development pressures against transportation system performance. Consequently, they tend to give jurisdictions less ability to fine tune developer actions to maximize the transportation performance improvements/land-use benefits obtained from each development and its associated transportation mitigation efforts.

Be Predictable and Credible

The above discussion raises two other key objectives. The concurrency system needs to be predictable and credible. Simplicity tends to make the outcome of an analysis more predictable, but systems that are too simple can lose credibility if that simplicity means that key factors are not incorporated into the process. (For example, a concurrency system based exclusively on whether the number of roadway lanes called for in the transportation plan existed would be simple, predictable, and easily understood, but it might not be a credible approach to concurrency if the local citizenry were upset with the level of congestion found on those roads.)

As a result, the desire for simplicity tends to be traded off against more costly and complex systems designed to provide more control over development, its impacts, and the resulting mitigation efforts.

OTHER EVALUATION CRITERIA

In addition to analyzing how well each alternative was expected to succeed at the above objectives, the project team developed a number of other criteria that were used in the analysis of the relative merit of alternative approaches to concurrency. These additional evaluation criteria include the following.

Compatibility with the Existing Planning Process

This evaluation criterion examines whether the proposed process uses readily available data or requires large amounts of additional (new) analysis. An approach with a high level of compatibility to existing analytical efforts and the current political decision making framework can be implemented at lower cost and with less political capital than a process that requires new analyses, data sources, and decision making structures. Such approaches make use of existing ordinances, agreements, and working relations, without requiring new organizational infrastructure or regulatory systems. Compatibility tends to increase predictability and to lower the cost both to public and private participants. However, approaches that are too highly compatible with existing analytical and decision making frameworks may be limited and constrained by those frameworks. Compatibility and innovation can be in opposition.

Political Acceptability

This is the degree to which an approach can be adopted in the foreseeable political atmosphere. Approaches that impose significant political costs on one or more interest groups, or that require significant changes to existing legal statutes are viewed as less desirable than those that can be adopted without significant political cost. Approaches that can be adopted within the existing governmental structure are viewed as more politically acceptable than those that require the creation of new governing powers. Alternatives that can be voluntarily adopted by local agencies are viewed as more politically acceptable than those that impose standards or regulations on those jurisdictions.

Sustainability

This is the degree to which an approach is sustainable legally, financially, and structurally.[3] An approach with a high level of sustainability will itself provide or foster the means for its continued implementation. Sustainability is assessed on three levels. An approach will be sustainable legally if it can withstand legal challenge from the private sector, community groups, and (other) local jurisdictions. An approach will be sustainable financially if the cost to implement and maintain it is acceptable to the jurisdiction responsible, either because it funds itself (an ambitious measure) or because its benefits clearly outweigh its costs (a more conservative measure). An approach will be sustainable structurally if it can maintain the political support and working cooperation of the necessary participants (e.g., jurisdictions, transportation agencies, developers).

Cost, in Total and to Specific Groups

Both the jurisdictions that must design and apply concurrency regulations and the development community that frequently pays to develop the statistics used for monitoring concurrency are interested in limiting the costs of performing the concurrency calculations. Concurrency systems that are compatible with the existing planning process will, in general, be less expensive than those that require new procedures and data collection systems, or that require very specialized analytical procedures.

Where expenses must be incurred, it is important to understand whether those costs will be incurred by the private or public sectors. This is not important from an overall evaluation standpoint, but it will affect the acceptability of any proposed concurrency system by that group. (That is, the private sector is likely to object to a technically precise system that imposes significant expenses on it, while the public sector may think the merits of such a system are worth the expense – as long as the expense is paid by the private sector.)

Scalability

Concurrency must be applied by both large and small jurisdictions. Some systems may be very applicable to small geographic areas but not to larger geographic areas. Similarly, some approaches may work only at the regional level. This evaluation criterion examines whether the proposed system provides benefits at all scales of urban geography or only for specific types of jurisdictions.

[3] Note that the alternative interpretation of "sustainable" – that the approach produces sustainable outcomes – is captured under other evaluation criteria.

Adaptability to Unique Local Conditions (Versatility)

This evaluation criterion examines whether alternatives can be adjusted to meet the needs of jurisdictions that exhibit a variety of different land-use densities and development patterns. While the previous criterion looks specifically at whether the concurrency system can be applied successfully at different geographic scales, this criterion examines the ability of the alternative to adjust to the specific land uses, transportation system infrastructure and political climate of the participating jurisdictions. For example, can the same basic concurrency system be successfully applied in a suburban city interested in expanded park-and-ride service, a city with a dense urban core, and a growing ex-urban suburb that requires additional roadway capacity but also wishes to develop facilities for alternative modes of transportation?

Legality and Legislative Requirements

The final criterion is whether implementation of the system requires legislative action or can be accomplished under existing statutes. In addition, the basis for the system must be acceptable under previous case law.

ALTERNATIVE APPROACHES TO MULTIMODAL CONCURRENCY

This chapter presents strategies for including multiple modes of transportation in the transportation/land-use concurrency equation, as well as methods of measurement and implementation. The term *strategy* is used as an intentional mix of policies, institutional arrangements, plans, and program measures to move the present system of transportation concurrency from one that almost exclusively measures and accommodates private motor-vehicles toward one that better meets the Growth Management Act (GMA) intent of *managing* the transportation/land-use development process. Five broad strategies have been defined under which a number of implementation alternatives are presented and discussed. It is important to note that these strategies and implementation alternatives are not mutually exclusive; they can be mixed, matched, and tailored to meet the needs of different jurisdictions. The five strategies are the following:

A) Measure mobility performance and land development capacity differently and more appropriately
B) Modify concurrency from an on/off switch to a more flexible management tool
C) Provide physical infrastructure capacity to accommodate transit, high occupancy vehicles, and non-motorized ways to get around
D) Provide and fund transit and other HOV services
E) Develop regional and sub-regional concurrency standards accompanied by the institutional authority to enforce them

Strategies and Evalution Assessment

Each strategy and various possible implementation alternatives are described below. The strengths and weaknesses of each strategy and its various implementation alternatives are discussed as well. These discussions incorporate the team’s assessment of how each strategy may or may not support the previously described multimodal objectives and evaluation criteria. This evaluation assessment is woven into the narrative commentary of strengths and weaknesses by noting the following criteria *in italics:*

- *relevant*
- *versatile*
- *effective*
- *intelligible/transparent*
- *expands transportation options*
- *methodologically compatible*
- *structurally compatible with current practice/authority*
- *politically acceptable**
- *locally sensitive*
- *cost/affordability*
- *provides source of funding*

- *predictable*
- *scalable*
- *sustainable*
- *legality/legislative requirements*

** Note: The study team acknowledges that any assessment of "political acceptability" is inevitably subjective, for what may be "unacceptable" to public/political interests in one year has often been seen to become the "acceptable" norm just a few years later (the passage of the GMA itself is a good example of shifts in public and political attitudes from the 1980s to the 1990s).*

STRATEGY A: MEASURE MOBILITY PERFORMANCE AND LAND DEVELOPMENT CAPACITY DIFFERENTLY AND MORE APPROPRIATELY

Strategies in this category focus on measuring transportation and land capacity in ways that are multimodal, context specific, and that more clearly connect transportation and land development. These measures can be separated first into those that primarily measure mobility performance in ways that go beyond traditional auto-centric measures and second into measures that focus on current land development and whether the characteristics of the current urban form show the potential to accommodate large numbers of non-SOV trips.

A.1 – Measures of Mobility Performance

For this strategy, concurrency is evaluated by using multimodal measures of mobility performance that go beyond traditional peak-period, automobile-based volume-to-capacity ratios. These measures include level-of-service for non-peak periods, level-of-service measures that incorporate the level of transit service provided, seat capacity, person capacity, mode split standards, multimodal level-of-service computations, and travel-time measurements.

Strengths and Weaknesses

The particular strengths and weaknesses of individual measurement alternatives are listed under each of the implementations discussed in the following pages. However, a number of important strengths and weaknesses—common to all approaches to implementing Strategy A.1—are worth noting here.

Strategy A.1 alternatives that measure mobility performance continue ongoing concurrency practices, which bring a technical approach to the inherently political process of concurrency compliance. As a result, they benefit from being highly *feasible* to implement. Many of the alternatives build directly on transportation/land-use models currently in use, which makes them *intelligible* and *predictable* to planners and administrators. They are among the most *politically acceptable* implementations considered, as they respect local autonomy while remaining friendly to regional efforts to coordinate multimodal concurrency. In addition, they provide a way of presenting an inherently political process in a technical manner.

Alternatively, they offer the opportunity to *catalyze public discussion*. Implementing these approaches requires unambiguous decisions about what to measure and how relative weights get assigned—explicitly or implicitly—to different modes of transportation. These decisions can be made internally, or they can be discussed with developers and the public at large.

Measurement alternatives can be implemented by local jurisdictions as well as regional bodies and for territories ranging in size from individual cities to regions larger than the Puget Sound. Thus, these approaches are *versatile* tools that can be adapted to the needs and goals of individual jurisdictions. In addition, measurement outcomes are *predictable*, which means that different jurisdictions can compare the impacts of different measures on concurrency compliance with relatively little effort.

Jurisdictions must implement new methods and tools for the measurements of mobility performance. On the positive side, the *cost* of implementing these new techniques and developing new measurement tools should be relatively low. As detailed below, most implementations rely largely on data that are already collected (albeit sometimes for different purposes). These approaches are also *structurally compatible* with the existing decision-making process in planning agencies; they can be implemented by existing staff after relatively minor training efforts.

The costs of implementing concurrency measurement can be shouldered by individual jurisdictions or shared, to varying degrees, with the private sector (e.g., through increased permit application fees). In the event of the adoption of an alternative by multiple jurisdictions, as in the case of an inter-jurisdictional agreement or a regional effort, costs can shared among jurisdictions and the region (e.g., with pooled retraining efforts) and state-level or county-level organizations.

Any measurement alternative will, by definition, have limitations. It will not, in itself, provide ways to establish thresholds of compliance to concurrency standards. No matter what measurement alternative is selected, each jurisdiction—or each region in the case of regional concurrency—will need to decide on appropriate concurrency standards.

Additionally, the use of alternative measurement alternatives themselves will not directly provide *sources of transportation funding*. Measurement alternatives can be used to guide mitigation fee policies, and the revenue generated by these fees may be used for regionally significant projects. Measurement alternatives suffer from limited *effectiveness*: mostly they do not directly further the goals of the GMA, although we expect them to *expand transportation options* indirectly, in the mid- to long-term, as they can be calibrated to encourage increased capacity of non-SOV service. Finally, some measurement alternatives are in fact expensive to perform routinely, mostly because the data upon which they rely are not currently collected routinely. To use those alternatives, the jurisdiction must expend additional resources to collect, store, analyze, report, and forecast these statistics.

Implementation Alternative A.1.1: Time of Day Level-of-Service

Multimodal concurrency would be furthered through the implementation of more discriminating calculations of level-of-service (LOS). Currently, the vast majority of jurisdictions use PM peak-period volumes (usually the average volume during the most congested 1- or 2-hour period during the evening commute) in their volume/capacity calculations. This convention can be considered unnecessarily limiting because it can overstate the relative importance of the weekday commute relative to other time periods.

This implementation alternative would expand the LOS calculations beyond PM peak-period volumes to include off-peak volumes and/or daily average volumes. In this way, select land uses or development projects would be subject to off-peak performance standards if they were deemed to produce trips that were time-flexible. This approach could possibly replace land use-based exemptions, which have been challenged successfully in Washington State courts. Rather than attempting to "exempt" specific types of developments that produce trips primarily in off-peak periods, this approach would place more emphasis on roadway performance during off-peak periods. It could be applied just as roadway level-of-service-based concurrency systems are now. The difference is that level-of-service would be measured at times other than (or in addition to) peak periods. For example, to be considered "not concurrent," a development might have to generate enough traffic that level-of-service in the PM peak period would be worse than LOS E *and* level-of-service during the midday would be worse than LOS D (or whatever standards the local jurisdiction chose to apply).

Strengths and Weaknesses

Time of day LOS is a fairly typical measure of mobility performance. It is likely to be highly feasible for *political acceptability*. Its implementation *costs* are moderate, and it is moderately *flexible*.

Less positively, this alternative is not directly relevant to the GMA. It also would *not expand transportation options,* nor would it provide *transportation funding*. In addition, it is questionable whether specific land uses could be legally held to different LOS standards, or whether all land uses would have to be subjected to both peak and off-peak standards.

Implementation Alternative A.1.2: Level-of-Service Measures That Include the Level of Transit Service Provided

Current state law allows jurisdictions wide latitude in their definition of concurrency level-of-service. They can define LOS in terms of roadway performance, roadway capacity, transit performance, or transit capacity. Few cities, however, have chosen to adopt concurrency approaches that directly tie the presence or performance of transit services to development permits. (Some cities do this indirectly by allowing continued development in central areas where automobile congestion is significant but transit service exists and by limiting development in areas where transit service is less readily available.)

Examples of how a city could more directly include transit service in its concurrency system are provided below.

- The permissible level-of-service standard that could exist without restricting development might change, depending on the availability of transit service. For example, development might not be permitted along an arterial corridor if the arterial level-of-service met or exceeded LOS E unless there was high frequency transit service (e.g., at least one every 10-12 minutes) along that arterial .
- This approach could become more sophisticated (as described in the 2003 report "The Possibilities of Transportation Concurrency – Proposal and Evaluation of Measurement Alternatives," by Hallenbeck, Carlson, and Simmons). For example, a jurisdiction might define an LOS "benefit" for a given level of transit service. Thus, a city might define its LOS standard as the average critical volume/capacity ratio (v/c) at some group of intersections. However, for every five buses per hour that passed through that critical leg of the intersection during the peak hour, 0.1 (or any fraction of LOS measure selected) would be subtracted from the calculated v/c ratio.
- Cities might predicate concurrency on the availability of park-and-ride spaces. For example, development would not be permitted if park-and-ride space utilization in the city exceeded 98 percent (or any selected utilization rate) on the average weekday at 9:30 AM. Or if the number of "unused" park-and-ride spaces was less than 25 percent of all new trips (or any selected percentage of trips) being generated by a proposed new development.
- Total revenue hours of transit service that operate within a geographic boundary could be used to alter roadway level-of-service measures. For example, a selected roadway LOS measure would be the governing criterion for determining compliance with concurrency regulations, unless a specified number of revenue hours of transit service were being provided to that geographic area, in which case that geographic area would be defined as being in compliance with concurrency.

Generally, these methods would allow a jurisdiction to permit development where transit levels of service provided a reasonable alternative to driving. Standards and thresholds could be set on the basis of a single mode or some combination of modal performance.

The city of Bellevue has considered this type of approach. However, the only jurisdictions identified by the literature as having actually adopted this concept are Miami-Dade County, Florida, which implemented it as part of the county's Transportation Concurrency Exception Area (TCEA), and Broward County, Florida, which measures transit concurrency where transit is widely available and automobile concurrency where transit is not widely available.

Strengths and Weaknesses

Transit-enhanced LOS alternatives provide a range of promising multimodal concurrency tools. They are particularly appropriate if a jurisdiction expects transit service to accommodate a significant portion of travel to/from/within a geographic area that includes proposed new development. They are highly *feasible*, highly *versatile*, and relatively *affordable* to implement.

Variations of this methodology are particularly appropriate for non-urban applications. The project team believes that facility- and mode-based measurement systems—such as those that target park-and-ride utilization rates and bus service —are highly promising tools for fostering multimodal concurrency in low-density suburban and exurban areas. The team also recommends using measurements that take into account the frequency, network coverage, and span of transit service present for suburban applications.

The biggest drawback to including transit levels of service in concurrency is *structural compatibility*. Local jurisdictions generally do not control transit service in this state. As a result, the future service levels upon which development decisions are being made are not within the control of the local jurisdiction. This may create some difficulty when developers, cities, and transit authorities disagree over what future level of transit service should be assumed for a specific development permit review. Finally, because local jurisdictions do not operate transit services and transit agencies have not previously needed to produce many of the above statistics by subarea, some of the data required to produce the statistics listed above may be difficult for local jurisdictions to obtain, at least in the near future.

Implementation Alternative A.1.3: Seat Capacity

Currently, the majority of jurisdictions generate capacity measures based on counts of vehicles per unit time, in which SOVs significantly outweigh other types of vehicles. This alternative would expand LOS calculations beyond the “1 car = 1 traveler” baseline, as such measure is inherently *not* a multimodal measure. Capacity measurements based on vehicles per unit time would shift to capacity measurements based on the number of potential bodies transported per unit time, thus placing more emphasis on transit and non-motorized modes of transportation. Thus, for example, buses inherently provide (count) more seats than vanpools, which also provide more seats than SOVs. Development permits and mitigation efforts would be based on a minimum “seat” capacity for all supported modes of transportation.

An example of how this approach might be implemented is as follows.

- First, screenlines would be defined around a geographic area within which this approach would be implemented. Next “seat capacity” passing across those screenlines for the defined time period (e.g., PM peak period) would be computed. “Seat capacity” would be computed as the number of vehicles crossing the screenline during the defined time period, times the number of “seats” associated with that mode. So an example capacity calculation would be 1 times the number of SOVs that roadway capacity indicated could be served by roads crossing the screenline PLUS 40 times the number of transit buses crossing those screenlines. Mathematically, this would be expressed as

Seat Capacity = (1 x SOV volume) + (40 x bus volume)

- Seat capacity would then be compared against the number of trips estimated to be generated within that geographic area plus those that were computed to pass through the study region during the analysis time period. If the number of trips that needed to be served exceeded the number of "seats" available, the concurrency test would fail, and the development would not be permitted. If the number of available seats exceeded the number of trips that needed to be served, the development would be permitted, regardless of how many of those trips chose to use personal vehicles versus how many chose to use the available transit.
- Considerable flexibility in computing "seat capacity" would be available to individual jurisdictions. Because most passenger cars have at least 4 seats, "car capacity" could be set to 4 rather than 1. Similarly, transit bus capacity could be assumed to be either higher or lower than the seated capacity of a standard transit coach. Finally, this approach could be modified to account for bike and walking "capacity" if these modes accounted for moderately measurable numbers of trips into an area.

The focus of this approach is less on immediately changing behavior than on providing viable options for travelers. Congestion would be allowed to get worse (as long as sufficient "seat capacity" was available to serve the proposed development). If travelers were willing to use the capacity provided by higher capacity vehicles or alternative non-motorized travel modes, then relatively little congestion would exist. If travelers opted for low capacity SOVs, congestion would occur, but development might be allowed to continue.

Strengths and Weaknesses

As this concept of seat capacity departs fairly extensively from current practice it may not appear to be *methodologically compatible*. Its strengths are that it is fairly *intelligible* and easily understood, relatively simple to compute, and easily applied. However, like many Strategy A.1 implementation alternatives, it lacks *structural compatibility* because local jurisdictions do not control transit service and they would likely have concerns that they would not be able to accurately forecast and assure transit availability. Perhaps more importantly, this approach does not address whether the services provided actually meet the needs of the traveling public. It is a measure of capacity, not a measure of system performance or use. Just because transit service exists does not mean it meets the needs of the traveling public. Consequently, development decisions might be made that would not be adequately served by the available transportation services.

Implementation Alternative A.1.4: Person Capacity

This approach represents a significant modification of the previous measurement alternative. Under a person-capacity approach, multimodal concurrency would be furthered by using calculations of LOS derived from a combination of seats provided (based on capacity) and expected behavior (based on mode choice and related transit service). This approach changes the simple calculation of “seat capacity,” described above, to a computation that accounts for whether the “available seats” are *likely* to be used.

In this alternative, capacity measurements would be shifted from vehicle or seat capacity measurements per unit of time to capacity based on predictions of actual bodies transported per unit time. Thus, this approach could take into account increased capacity resulting from improvements to HOV service. Standard “Auto capacity” would be adjusted not arbitrarily, but based on the estimated amount of transit, carpool and vanpool use occurring within the geographic region being studied.

This approach recognizes that service levels influence travel choices, e.g., rates of transit ridership will vary as a function of waiting time (headways) and convenience (network coverage). So for example, a bus would count for more persons moved than a car, and a bus on a route with a higher level-of-service would count for more persons than a bus on a low level-of-service route. Development permits and mitigation efforts would be based on minimum “person” capacity for all supported modes of transportation.

Strengths and Weaknesses

On the positive side, this approach could give specific “capacity credit” to infrastructure and service improvements that encourage use of shared ride transportation. That is, the presence of arterial HOV lanes, bus pullouts, transit shelters, travel demand management programs, and other service enhancements and inducements could increase the expected level of transit ridership and thus the “person capacity” of the transportation network. This would provide incentives for the local agency and the development community to provide these services and facilities.

On the problematic side, this approach raises challenges for *predictability*, as it requires predicting the impact of individual improvements on actual shared ride use, which is difficult to do. As a result, this approach might be more time consuming and more *costly* to apply than the “seat capacity” approach described previously.

In theory, this alternative would produce a much more realistic review of whether “adequate transportation facilities” existed to support new development. It is mode neutral, in that mode usage is directly represented as the “capacity” of any given mode is “calibrated” against actual usage in order to compute the “available person capacity.” As noted above, however, the downside of this approach is that its practical application would leave much to be desired. No local jurisdiction tracks the kinds of statistics that would be needed to calibrate the person capacity formulas, and to do so would be expensive. Furthermore, the state-of-the-art in travel forecasting does not currently provide the ability to accurately measure or forecast the ridership benefits of minor infrastructure improvements such as bus pullouts or transit shelters.

Implementation Alternative A.1.5: Mode Split Standards

Under this approach, multimodal concurrency would be based on the fraction of travelers using specific modes of travel (mode split). Development permits would only be denied if the transportation model predicted that trips generated by a project would cause an area's share of non-SOV trips to drop below an adopted standard.

For example, a jurisdiction's concurrency standard might require that at least 10 percent of all PM peak period trips take place via a mode other than SOV. Development permits would then be issued on the basis of how the trips to be generated by that development might change the mode split estimated to occur within the concurrency study area.

Strengths and Weaknesses

Using mode split standards as the concurrency measure is highly *relevant,* as it would be an excellent way to link concurrency practice to regional policy. It links development permits to the concept that as urban centers grow, mode choice must shift to higher percentages of shared ride travel. The specific mode choice standard adopted by a jurisdiction should reflect the nature of travel within that jurisdiction and should therefore not be modally biased. Thus, as a concurrency measure, mode split is versatile and can be scaled in both time (in a phased implementation) and location.

There are two primary problems with using mode split as the concurrency measure. First, as it is a statistic that is not readily collected in the field, it could be *costly* to implement. And second, unfortunately, it is not likely to be particularly *effective, since* individual developers can do little that would significantly change mode split within a jurisdiction. Adoption of a mode split measure would therefore require the introduction of a moderately expensive data collection program in order to perform field verification of forecast model results. Because mode choice is a function of more than local transportation and land-use attributes, it is unlikely that improvements made by a single developer would greatly change a jurisdiction's mode split. As a result, jurisdictions adopting this approach would be unlikely to be able to use concurrency to encourage developers to provide concurrency related mitigation, as that mitigation would be unlikely to shift the mode split statistic significantly if it did not meet the adopted standard.

Implementation Alternative A.1.6: Multimodal Level-of-Service Computations

This implementation alternative would compute a combined level-of-service based on both the percentage of travel taking place by each mode of interest and the level-of-service calculated for each of those modes. Each jurisdiction would define which modes would be included in its concurrency calculation. LOS computations would be based on an adopted standard.[4] First calculating the LOS for each mode, and then combining those LOS measures would compute an "average" LOS per traveler. Each mode of travel would be weighed by the percentage of travel occurring via that mode.

For example, if four modes were considered—car, bus, bike, and walking—and the LOS and mode split percentages for a geographic region being studied were as follows:

Car = 70 percent of users, LOS = F
Bus = 20 percent, LOS = C
Bike = 4 percent, LOS = B
Walk = 6 percent, LOS = B

then the "combined" LOS for this example would be calculated as LOS E.[5] Development permits would be issued if the combined LOS was better than the adopted standard. A developer that was denied a permit because the transportation system's performance fell below the adopted multi-modal standard could propose transportation system improvements or services that would either improve the LOS of specific modes or that would shift mode split to modes that had higher levels of service in order to obtain a combined LOS that met the adopted concurrency standard.

Strengths and Weaknesses

The strength of this approach is its *relevance*, in that it weights the importance of each mode of travel relative to the actual percentage of travel taking place with that mode. For example, the more people who walked, the more important the level-of-service would be for walking. Thus the measure directly relates to the performance of the transportation system being used in the region. In addition, because improvements could be made to any mode in order to improve the overall transportation system's performance, the mitigation selected whenever the adopted standard was exceeded would be mode neutral. This could indirectly contribute to expanding the availability of alternative transportation options within a jurisdiction.

This approach suffers the same *cost/affordability* problem as the mode split approach described above in that each jurisdiction would have to implement a data collection program that captured current mode split data in order to correctly weight the relative importance of each mode of travel. This would increase the cost of performing this approach. It also has problems for *methodological compatibility* with current practices for most jurisdictions as it would also require multiple LOS computations, making it more complex and resource intensive than many of the other Strategy A approaches. Lastly, few jurisdictions in the region have adopted procedures for

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4 The State of Florida has produced guidance documents for computing level of service for transit, cycling, and walking as part of its own growth management efforts. These procedures could be adopted as the mechanism for performing these LOS computations unless Washington decided to adopt alternative methods. Florida's procedures can be found at http://www.dot.state.fl.us/Planning/systems/sm/los/default.htm

5 This assumes LOS A = 1, LOS B = 2, etc, making the weighted LOS score for the example equal to 0.7*6 + 0.2*3 + 0.04*2 + 0.06*2 = 5 (LOS E)

computing level-of-service for transit, cycling, or walking. Therefore, considerable effort would be required to initially adopt procedures and set multi-modal standards.

Implementation Alternative A.1.7: Travel Time-Based Measurements

Under this approach, adopting LOS measures based on travel time would further multimodal concurrency.

This approach would replace road-based measurements with measurements based on the time required to travel to and from locations within a jurisdiction. Issuance of a development permit would depend on the transportation model predicting that trips generated by a project would not cause travel time to increase beyond a predetermined level.

Unlike traditional V/C based measures of congestion, travel-time measurements are not inherently car-based. Alternative modes of travel can be built directly into the travel time calculations. Separate travel time LOS standards can be set for various modes, or the modes can be combined into one travel LOS standard through the use of weighted averages.

One example of a travel time approach to concurrency already exists in Washington. The city of Renton employs a "Key Center" approach, in which the LOS standards are based on the time it takes to travel out of the city from a central point. Under the Key Center approach, the concurrency determination is based on the development's effect on travel to and from a pre-determined key point. The actual calculation used by Renton is the travel rate (miles traveled in 30 minutes) for three modes (HOV, SOV, and transit) from a key point along a series of defined corridors. A composite average travel rate is then computed by using the equation

[SOV travel rate + HOV travel rate + (2 x Transit travel rate)] / 3.

This composite travel rate value is then compared against the concurrency standard. The standard is applied citywide for all development proposals.

An alternative approach, called a "corridor" approach, defines LOS standards for a variety of important corridors throughout the jurisdiction. Using the corridor approach, the concurrency determination would be based on a development's effects on either the corridors near the development site or the corridors accepting the majority of the development's trips.

Strengths and Weaknesses

The project team believes that travel-time-based measurements could by highly *relevant* and *effective,* as they stand out among measurements of mobility performance, especially for urban center applications. Travel-time based measurements are highly intuitive concepts that are readily credible and *politically acceptable* among politicians and the public while also providing a *versatile* and *effective* means of furthering multimodal concurrency. So long as the implementation recognizes the contribution of multiple modes of transportation, not only SOV, this alternative is expected to contribute indirectly, but significantly, to *expanding transportation options*. Furthermore, travel-time -based measurements, despite appearing to be fundamental departures from existing LOS measurements, are *methodologically and structurally compatible* with current planning practice; this alternative should be *cost effective* to implement and *affordable* to the private sector.

The weakness of travel time measures is in its *scalability, for* in smaller cities travel time within the city may be very short and, as a result of the effects of signal timing, highly variable. (For example, for cities where the "corridor" being measured is only three intersections in length, hitting two red lights rather than one can create a significant percentage change in total travel time.) The variability in travel time, especially on arterials, can make setting and monitoring performance standards more difficult and resource intensive than more traditional roadway LOS computations.

A.2 – Measures of Land Development Capacity Related to Transportation System Performance

Multimodal concurrency can be evaluated by measuring land development capacity. The assumption behind this strategy is that new development may be permitted in areas where traffic is already congested ONLY if the proposed use of land will generate primarily (or a large percentage of) non-SOV additional trips.

Measures of land use are proxies of travel demand. For many years, research in land use and transportation has shown that non-SOV travel tends to work best, and therefore occurs most frequently, under certain land-use conditions. Generally, density of development is the determining aspect of land use that leads individual travelers to switch to modes other than private cars. The Washington State GMA has long supported increasing the density of development to achieve efficiency in the delivery of services and the provision of infrastructure, including transportation.

Thresholds of land capacity beyond which more people use transit, walk, or bicycle have been researched in numerous studies. A half-dozen or so aspects of land use can be measured to find these thresholds. Notable key aspects include the following:

- Development *intensity* related to places of residence, places of employment, and increasingly, to where people shop. Intensity measures count people, housing units, and square feet of employment uses per unit of area considered (be it a district, a neighborhood, or a corridor).
- How, and the extent to which, land uses are *mixed* enough for people to be able to walk or bike to their destinations. Land-use mix measures include the types of land uses that are linked by frequent travel, and the distances between these land uses.
- How, and the extent to which, the infrastructure for non-SOV travel is continuous and well *connected*. Common measures of connectivity include block size and length of sidewalks.

- *Parking* availability and costs have been identified as the latest aspects of land use considered to impact a person's mode choice. A limited parking supply, defined either by a limited number of stalls or by the high costs of parking, is increasingly understood as a powerful mechanism for enticing people to switch their mode of travel away from SOV.

Measures of land capacity and land-use conditions that support non-SOV travel are best derived from a combination of the land-use aspects described above. The Transportation-Efficient Land Use Mapping Index (TELUMI), further discussed below, is an example of a way to measure development capacity as it relates to travel in a relatively sophisticated way. At the same time, more simple measures are often used effectively in practice. For example, residential and employment density can be sufficient measures of travel demand to help establish optimum transit routes.

Measurements of development capacity for multimodal concurrency should consider both the proposed new development and the characteristics of the surrounding area.

An important step in using Strategy A.2 is to define how development capacity is measured and at what scale the capacity is calculated. Measures of net or gross residential density (the latter may include street rights-of-way or all other uses in a given area) differ significantly. Furthermore, the decision to take the measures at the scale of a district, a neighborhood, or an entire jurisdiction also yields different values.

The scale at which development capacity is measured should relate to the mode of travel being emphasized. Non-motorized modes – walking and biking – typically take place in relatively smaller geographic areas where land-use conditions must be supportive of these modes, usually by providing a mix of compact or concentrated non-residential attractions/destinations to which one is inclined to readily walk or ride a bike. Even within predefined "walkable" or "bikable" areas, development capacity measures yield a wide range of values. For example, the Kent East Hill and the First Hill neighborhoods in Seattle both have residential densities that are high enough to support transit and walking. However, Kent East Hill densities are at lower values of walkability characterized by fewer compact mixed-use attractions/destinations than First Hill, which has higher walkability values. These values in turn relate to the numbers of people taking transit or walking in the two neighborhoods.

On the other hand, carpooling or transit use requires measuring the development capacity of different areas that are spread geographically to consider land uses around both trip origins and destinations. For transit also, the assumed access mode—such as walking or driving—will determine the appropriate "catchment" area for which land capacity measures are taken.

Strengths and Weaknesses

These approaches are highly *relevant* to the goals of the GMA because they tackle the current lack of coordination between land-use patterns and required transportation services. These approaches also have the advantage of using data sets that either already exist or are being developed by most jurisdictions as part of existing development review efforts. While most of the alternatives are not *structurally compatible* with existing transportation planning practice, they do make use of existing land-use data and technical skills (they are *methodologically compatible* with existing development review and permitting efforts). Therefore, the cost of implementing these approaches should be modest, although adoption of these approaches will require some additional funding.

The implementation alternatives within this strategy tend to be very predictable, because the analysis is done once (perhaps updated annually), with an outcome that describes which geographic locations are "concurrent" and which are not. This means that potential developers know immediately whether concurrency is a constraint on their development.

What is not predicable is the specific transportation system performance effects, particularly secondary ones, of this approach on concurrency. Because these approaches use indirect measures of transportation system performance, actual performance can be very different than what is expected.

These approaches are not universally applicable. They are best applied in geographic regions that are interested in non-SOV solutions to transportation mobility. Therefore, they may not be effective in jurisdictions that wish to use concurrency standards to expand roadway capacity. In this sense, these strategies are not *mode neutral*, as they primarily apply to non-automobile modes.

Implementation Alternative A.2.1: Establishing Area-Based Thresholds of Land-Use Intensity

High residential and employment densities have been shown to be sufficient to establish well-used transit routes. Therefore, a jurisdiction could simply define areas where residential and/or employment densities were sufficient to support more transit-based travel. New development in these designated areas would not be subject to concurrency review based on the knowledge that new development would further contribute to higher transit use.

The definition of these areas would be based simply on land-use intensity measures. However, careful consideration would need to be given to whether the measures should be of net or gross density (the latter might include street rights-of-way or all other uses in a given area) because these differ significantly. Furthermore, the decision to take the measures at the scale of a district, a neighborhood, or an entire jurisdiction would also yield different values.

As noted above, the scale at which land-use intensity is measured should relate to the mode of travel to access transit that will be emphasized. Non-motorized modes (to transit or by themselves) typically take place in areas as small and one quarter mile in radius, where land-use conditions must be supportive. On the other hand, the park-and-ride access mode draws from large areas of up to several miles in radius.

Strengths and Weaknesses

The main strengths of this approach to concurrency are its simplicity and transparency. This makes this approach both very predictable (because a map would exist describing which geographic areas were concurrent) and understandable because the criteria used to define those geographic areas are relatively simple. This alternative would also be fairly inexpensive to implement, as it relies on data that already exist and would not require extensive technical analysis.

The primary weakness of this approach is that there is no direct connection between the land development it allows and the transportation services needed by that land development. That is, just because development intensity correlates well with high levels of transit use does not mean that the required transit services would be provided or that other factors, such as lack of sidewalks or steep hills, would not limit the actual use of transit. Thus, for any given geographic area, the assumptions that underlie this approach might not be valid, resulting in approval of new development in areas where insufficient transportation services existed.

Implementation Alternative A.2.2: Transportation-Efficient Land Use Mapping Index

The Transportation-Efficient Land Use Mapping Index (TELUMI) is an example of a tool to measure land development capacity and use in a more comprehensive way. The TELUMI (based on previous research supported by WSDOT) helps both visualize and quantify the complex relationships between land use and travel behavior. It could serve to measure land use and capacity related to less SOV travel for concurrency purposes.

TELUMI is built on nine map layers representing transportation efficiency (TE) zones, which are defined by individual land-use variables known to affect travel behavior. The tenth layer is a composite index that maps TE zones derived from the relative effects of the nine variables on transit use. This composite layer is based on statistical analysis modeling the relationship between the land-use variables and bus ridership.

Each map displays three classes of zones: high, latent, and low transportation efficiency (TE). High TE zones typically have land-use conditions that support many convenient transportation options, accommodating transit, non-motorized, and other non-SOV travel. Low TE values, in contrast, correspond to areas with few transportation options beyond SOV travel. Latent TE zones have limited travel options, but their land-use conditions favor cost-effective investments in future multimodal transportation systems. The three classes of zones could correspond to concurrency thresholds: new development would be allowed without mitigation in high TE zones; they would require mitigation in latent TE zones; and they could be denied or be assigned higher mitigation requirements (or fees) in low TE zones.

In King County, the TELUMI composite map shows only 8 and 9 percent of the Urban Growth Boundary area with high and latent TE, respectively. However, high and latent TE zones presently contain more than 40 percent of the residential units and nearly 80 percent of the employment, indicating that these activities are concentrated enough to support multiple travel options.

Only 20 percent of highways and primary streets line areas with high and latent TE, suggesting disparity in the way the road network services land-use patterns. However, the calculations measure the presence or absence of transportation facilities, not their capacity, and further study is needed.

TELUMI would be useful in defining inter-jurisdictional, and especially regional, concurrency standards and in identifying areas and corridors that would offer the highest promise of multimodal travel.

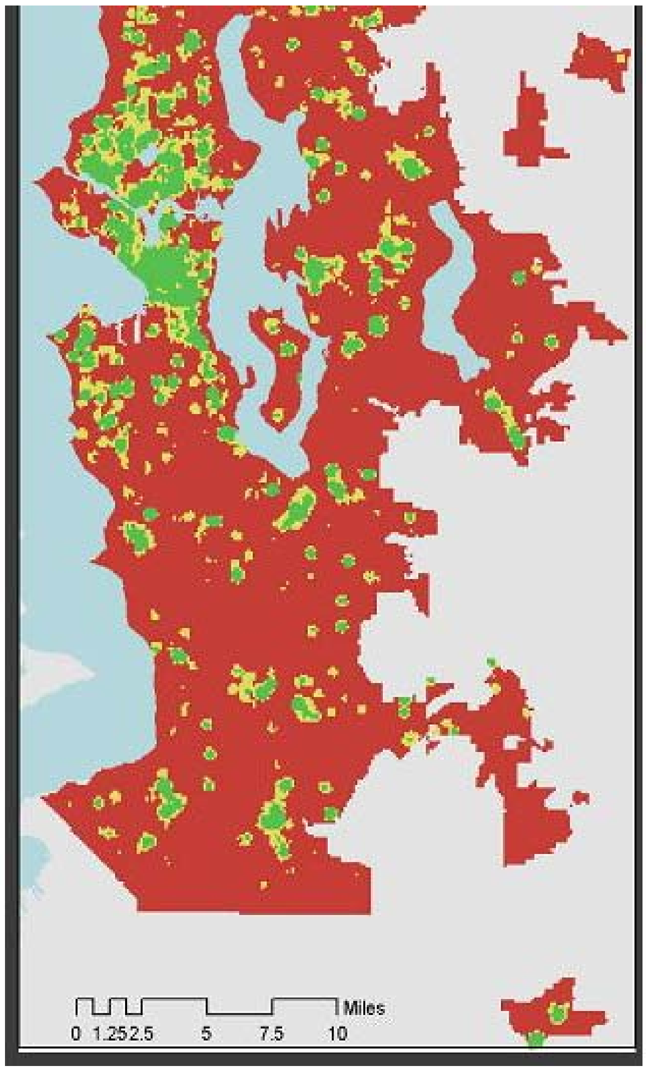

Figure 1: Example of a TELUMI map indicating the geographic distribution of land with strong or weak multimodal transportation attributes

Strengths and Weaknesses

TELUMI occupies a middle ground in terms of feasibility. It identifies strong and weak multimodal areas by using a clearly defined technical process. But this technical tool is new and untested. The basis of TELUMI would need to be explained to both the decision makers looking to adopt a new concurrency system and to any lay audience that wanted to review that concurrency system. Thus, TELUMI would be technically *credible* at the professional level, but it is unclear whether it would be *understandable* and thus credible with lay audiences.

Adopting TELUMI would require current staff to analyze land use and travel data with the TELUMI model. This would entail extracting existing data sets from city GIS records and placing them within the TELUMI structure. While these tasks have already been done for much of King County, such technical tasks would need to be performed for any other portion of the central Puget Sound region and other regions around the state if this approach were to be adopted. Resources would likely needed to assist local and regional agencies in accomplishing these tasks.

TELUMI does offer the potential to provide a reliable, accurate way of identifying areas of high, latent, and low multimodal potential, which would not only help further the goals of the GMA but this tool could also help guide transit choices for new routes and expanded service. Moreover, by identifying areas in latent transportation efficiency, which can become transportation efficient readily easily, this tool would provide a basis for targeting regional and local policies and programs aiming to expand transportation options and to proactively address concurrency compliance issues in growth areas.

STRATEGY B: MODIFY CONCURRENCY FROM AN ON/OFF SWITCH TO A GRADUATED CONCURRENCY COMPLIANCE MEASURE

Strategy B suggests that the state legislature change the concurrency legislation to allow a more graduated approach to concurrency level-of-service and its resulting mitigation mechanisms. Rather than having only one level-of-service standard, which results in a yes/no, build/no build decision, jurisdictions would set several standards, each associated with a different level of required mitigation.

Concurrency in Washington State is designed as a binary decision system, with a black/white, YES/NO outcome. A development either passes or fails the concurrency standard. A development that passes concurrency review can be permitted, and a development proposal that fails cannot be built.

This binary system engenders considerable “mathematical gymnastics” as developers, development opponents, and local jurisdictions try to push each proposed development to one side or the other of that yes/no decision. In many cases, developers “volunteer” to pay for specific transportation system improvements that allow the estimated level-of-service to drop below the adopted concurrency standard and, therefore, permit development. This is often appreciated by local jurisdictions; partly because of the extra transportation improvements they receive, but also because in most cases they are happy to have the new development.

Thus, concurrency can become a “de facto” impact fee system that only concentrates those fees on infrastructure projects that affect the level-of-service measurement. These infrastructure projects, while often appreciated, may not be the best expenditure of funds for providing mobility within the jurisdiction. For example, under current road congestion-based concurrency systems, a common result is the need to accept intersection designs that might otherwise not have been implemented to meet local plan goal/policies (e.g., double left turn lanes), simply to enable those intersections to meet an adopted evening peak period performance standard and thus continue to permit desired development.

Where level-of-service standards are entirely based on roadway congestion, developers only provide roadway mitigation improvements because those are the only improvements that affect the level-of-service measurement, even though other and possible better mitigations might provide more mobility for the affected jurisdiction. Strategy B deals with this problem by changing the definition of “level-of-service,” as suggested elsewhere in this report.

Instead of stopping development when a somewhat arbitrary boundary condition relating to transportation system performance was reached, Strategy B would increase the size of development mitigation fees as congestion became greater. With this strategy, development permitted in the comprehensive plan would not necessarily need to be denied. However, when congestion was bad enough, the mitigation required from that development might be very substantial. The transportation mitigation fees generated by such an approach to concurrency would then be used to fund transportation services and system improvements that could provide mobility to the region being affected by that new development.

The level-of-service standards adopted to implement this graduated approach to concurrency, and the mitigation that would be required on the basis of those different standards, could be based on variations of the approaches currently used by jurisdictions around the state or on many of the ideas explained in this chapter. The differences would be that each jurisdiction would adopt more than one level-of-service standard and that once a standard was exceeded, development would not necessarily be prohibited; rather, mitigation requirements would become more significant.

Strengths and Weaknesses

Strategy B approaches are uneven in their *effectiveness*. On the one hand, they directly advance the goals of the GMA by expanding ways in which densification and infill can be encouraged and ways in which leap-frog and auto-dependent development can be discouraged. On the other hand, they do nothing by themselves to *expand actual transportation options*. (The latter limitation could be mitigated in part by directing the collected fees to non-SOV service infrastructure, e.g., as detailed under Strategy C.)

These approaches raise revenue for their implementing jurisdiction; fees are a *source of transportation funding*, and they cover the cost of implementation and operation, making these alternatives *sustainable*.

Although graduated concurrency compliance measures are mostly easily implemented as fees, they do not have to be fee based. Graduated fees are likely to cause some political resistance, as not all developers would pay the same amount for a development of the same size, thus raising concerns about the fairness of such an approach. This problem, however, exists today when the first development is built before adopted LOS standards have been reached and then the trips associated with a second development exceed that standard. Thus, the *cost to the private sector* is variable. In some cases the strategy will cause development fees to rise. However, it does remove the "build/no build" decision, which can add considerably to the cost and uncertainty of the development permit process.

Graduated compliance measures are *versatile*. Whether implemented at the local or regional level, these approaches can be tailored to the varying goals, opportunities, and constraints of different jurisdictions. However, by definition, these incentive-based systems create winners and losers and thus are bound to cause some political controversy, thereby increasing the risk that these approaches are not *politically acceptable*.

<u>Implementation Alternative B.1: Variable Impact Fees Based on Roadway Level-of-Service</u>

This alternative assumes that once congestion had reached an adopted level, "concurrency mitigation" fees would be required. (No concurrency mitigation fee would be assessed on developments if the roadway level-of-service adopted by the jurisdiction was not exceeded.) Under this approach, greater levels of congestion would result in greater concurrency mitigation fees.

The idea is that in areas where multimodal transportation alternatives are intended to be a key factor in the provision of mobility, roadway level-of-service should not be the deciding factor in whether a development is permitted. As congestion increases, more and more funding is required to provide the operational improvements (e.g., transit service or routine signal timing plan enhancements) needed to maintain reasonable travel options for all the trips in the area.

Impact fees could be based on the number of trips generated by the new development or on the total vehicle-miles-of-travel (VMT) the proposed development was expected to generate. Fees would rise per trip (or per VMT) with increasing levels of roadway congestion.

For example, using variations on ideas from Strategy D below, assume that an example city adopted three level-of-service standards. Each would be based on the average LOS of the five intersections that made up the central business district of the city. If the average peak period LOS was LOS C or better, concurrency would be met, and no multimodal concurrency fees would be required. If the average LOS was D, then a multimodal concurrency fee of $X per daily trip generated would be applied to all developments. If the average LOS was computed as E, the multimodal fee would become $2X per daily trip generated. If LOS was computed as F, the multimodal concurrency fee would become $3X.

The money from these fees could be used only to either 1) improve operation of the roadways that did not meet the adopted performance standard or 2) provide alternative means of transportation (i.e., transit service) that would serve the development and the surrounding geographic area, as suggested in Strategy D below.[6]

It would be important that the size of the impact fees be clearly defined as part of the concurrency system. This would ensure that all developers were treated equally under the law.

Strengths and Weaknesses

This approach has a number of strengths. Foremost among those strengths is *structurally compatible in* that it would provide direct financial incentives to develop in locations that were "concurrent." It is also reasonably *transparent* and easily applied. While there would still be financial discontinuities associated with each adopted level-of-service standard, by removing the build/no build constraint, at no time would the developer be put in the position of expending the resources needed to plan and design a development only to have it turned down at the permit stage because of congestion conditions that were beyond the developer's control.

The primary weaknesses of this approach are that it would be more complex than the current system, and it might raise questions about *legality* unless the definition of level-of-service was changed to reflect the benefits that expending the money generated would produce.

Implementation Alternative B.2: Variable Regional Concurrency Fees Based on the Presence of Multimodal Travel Capacity

This alternative combines the need to address the regional impacts of development with the approach of increasing the costs of development for developments that would generate more travel on already congested roadways. This alternative would compute a "regional concurrency mitigation fee" based on the impact that a proposed development would have on congested regional roadways. Such a fee would produce funds that would be used to either help expand those congested facilities or fund alternative means of travel. By simply charging the developer money rather than making a "build/no build" decision, this approach would provide a much higher level of certainty to the development community, greatly improving their business control.

The intent of this alternative is to reward developments that are built in geographic areas with a strong multimodal transportation infrastructure and that would

[6] Note that there would be significant legal issues with this particular implementation concept.

therefore generate fewer vehicle trips than similarly sized developments built in areas with limited alternative travel options, where most trips would be made via automobile. Regional concurrency mitigation fees would be graduated on the basis of the location of new projects: developments built in areas having strong multimodal transportation options would pay lower, or no, "mitigation fees" than developments built in areas where the only viable mode of travel was the car. Similarly, developments in regional centers would pay lower (or no) concurrency impact fees than developments placed on the edges of the metropolitan region, as the impacts of those developments would be far larger on the regional roadway system. In addition to location, concurrency requirements could also consider the appropriateness of the projects' design attributes.

Three somewhat different approaches to this basic idea are listed below.

- Computational techniques such as TELUMI (see prior Strategy A.2) could be used to define "areas with strong multimodal transportation infrastructure." A development occurring within a "green[7]" TELUMI area would not be assessed a regional concurrency fee. Developments in "yellow" TELUMI areas would be required to pay a modest fee per trip generated. Developments in "red" TELUMI areas would be required to pay higher fees. Figure 1 (see prior Strategy A.2.2) illustrates what a TELUMI map might look like.
- Rather than relying on a computational approach to determining a regional concurrency fee structure, the state/region could simply define geographic areas within which concurrency fees would and would not be applied. For example, development in areas within the boundaries of a "Growth and Transportation Efficiency Center" (GTEC) (currently being defined by WSDOT, regional and local agencies) could be considered to have zero or low impact on regional facilities that did not meet standards, while development outside of those designated centers would be subject to some level of concurrency mitigation (a fee) based on the region of the state in which that development was located. (Developments in the Puget Sound metropolitan region would likely pay higher fees than those in other portions of the state, given the region's larger congestion problems and greater cost of mitigating those problems.)
- Regional concurrency impact fees could be based on the total VMT generated by a proposed development, rather than the number of trips that development generated. This would significantly reduce the size of the regional impact fee for transit-oriented developments built in urban centers while increasing the size of those fees for cul-de-sac style developments built on the urban fringes with little potential for multimodal travel opportunities.

[7] In this example, "green" signifies geographic areas that have very strong multi-modal transportation attributes or alternatives; "yellow" signifies geographic areas that have modest multi-modal attributes, while "red" signifies areas with few alternatives to the car. The criteria used by TELUMI to make these designations would need to be adopted by the region.

Strengths and Weaknesses

Each of these approaches is *relevant* as they could be used to encourage development in areas that had lower regional impacts while discouraging (but not stopping) development in areas with larger regional transportation impacts. By tying the incentives/disincentives to the regional transportation system costs that new development would impose on the public sector, the cost of development would more accurately reflect total costs, while market forces and individual choices would still be encouraged to control location decisions and travel behavior. The primary difference would be whether the geographic areas that benefited or lost from these designations were selected on the basis of their technical land use attributes, their existing (or proposed) transportation facilities, or political considerations of where growth was and was not acceptable.

Because the TELUMI approach would define exactly what land use attributes constituted a "regionally concurrent" area, and because there would be financial incentives for building in these areas, it is likely that adopting the TELUMI-based sub-alternative would foster an increase in the availability of land containing these attributes. Cities interested in encouraging development would need to supply those attributes to compete for new development, and developers would gain financially from building in these areas.

The GTEC-based system would be better connected to existing regional policy than either the TELUMI- or VMT-based sub-alternatives. That connection might make it more *politically acceptable*. If land development and transportation funding were targeted to these designated growth areas, a virtuous circle of transportation and land-use development should take place, resulting in the benefits anticipated by the Growth Management regulations.

Once implemented, both the GTEC- and TELUMI-based systems would produce very *predictable*, and *transparent* results. This would increase the certainty of the development environment and thus decrease the *costs* associated with development.

VMT-based impact fees would offer the benefit of a renewable source of transportation funding in an implementation that would be *methodologically compatible* with current planning practice. However, this alternative would not be *structurally compatible* as it would require new approaches to transportation calculations and it would have less *political acceptability*, as its costs to developers would be less predictable and its application would be less connected to existing growth management policies.

STRATEGY C: PROVIDE PHYSICAL INFRASTRUCTURE CAPACITY TO ACCOMMODATE TRANSIT, HIGH OCCUPANCY VEHICLES, AND NON-MOTORIZED MOVEMENT

This strategy is based on the assumption that in mostly built-out urban areas there will be little, if any, further investment in the vehicular capacity of the road infrastructure that already exists, and therefore, the existing network of streets and roads is likely to be the total supply of available facilities. Strategy C is intended to help new development achieve concurrency by better utilizing that fixed supply of facilities.

The reality is that neither federal, nor state, nor local budgets have built-in mechanisms to allow significant increases in the number of new roads or even in the width of existing roads to serve future development. Concurrency requirements and transportation system user fees are also unlikely to be substantial enough to increase the capacity of the vehicular infrastructure so that it meets the needs of new development or redevelopment. Developers are typically able to provide the new roads and streets needed *internally* for new development at the fringe. However, it is unlikely that either developers or the public sector will be able to provide roads to serve multiple developments. In other words, new local streets may be provided to new development at the fringe, but new arterials and collectors are unlikely to be created there because public sector budgets currently lack the option to build such facilities. The result is that, with the exception of roads in new subdivisions, the public and its local governments have to utilize what already exists. The question is then: How can existing facilities be used differently so that they are concurrent with the impacts of development?

Infrastructure capacity is, at its most rudimentary level, defined by the space allocated to roads—the road or street "right-of-way." So far, concurrency has examined the capacity of rights-of-way in terms of the number of car trips they can accommodate. Under this scenario, the threshold beyond which no additional car trips can be accommodated is quickly met. However, when assessed through the lens of multimodal concurrency, the capacity of existing rights-of-way can yield very different results: the same 75-foot right-of-way can carry many more people in HOV lanes or in buses than in individual cars. And it can carry more cyclists, and even more walkers, although neither as quickly nor between as diverse a set of origins and destinations. A multimodal concurrency strategy focusing on infrastructure capacity can therefore attain very different numbers of travelers able to use a given facility, depending on the transportation mode considered.

This strategy aims to modify the current infrastructure design and to shift its current emphasis on accommodating cars to that of accommodating other modes of travel. The rationale is that if there are no walkways, no bike paths or lanes, or no bus pull-outs and shelters, it is very difficult for people to choose and use alternatives to the private auto. In contrast, if public policy and practice assured that such multimodal facilities were in place or would be in place in a six-year time frame, then the intent and test of transportation concurrency would be met.

Under Strategy C, multimodal concurrency would be furthered through design and construction standards (i.e., codes) guiding the design of infrastructure that supports transit and non-motorized modes. This approach would be familiar to most local jurisdictions that already require new development to build sidewalks, bicycle parking, and other non-single occupancy vehicle (SOV) facilities. In the context of multimodal concurrency, however, the standards for regional facilities could be instigated not only by individual jurisdictions, but also by multiple jurisdictions (through inter-jurisdictional agreements) or by regional bodies. Implementation alternatives would emphasize the provision of the physical infrastructure necessary to encourage the use of non-SOV modes of travel.

The implementation of multimodal capacity would be addressed by each new permitted development. The revenues generated through concurrency mitigation requirements and fees could aim at corridor or area-wide implementation of multimodal infrastructure. Specific emphasis could be given to corridors of regional significance, urban centers and villages, and designated Growth and Transportation Efficiency Centers (GTECs). The following strategies have been devised to provide physical infrastructure to accommodate transit, high-occupancy vehicles, and non-motorized movement: sidewalks, bicycle lanes, on-street parking, dedicated transit or non-motorized lanes, re-striping, bus pullouts, signalization, and local improvement districts.

Strengths and Weaknesses

Strategies to provide physical infrastructure capacity to accommodate transit, high occupancy vehicles, and non-motorized ways to get around are highly *feasible*. Most of the alternatives build on common urban design interventions already used by many local governments throughout Washington State. They represent concrete steps to developing environments for promoting non-SOV modes of travel that are *intelligible* to and widely accepted by the public, planners, and politicians alike. These alternatives are highly *compatible*, both methodologically and structurally, with current planning practices

Physical infrastructure capacity-based approaches to furthering multimodal concurrency tend to be modest in scope; this is both a strength and a weakness. On a positive note, they are *locally sensitive* and relatively low *cost* alternatives that can be implemented in phases and used strategically to target specific sub-areas of a jurisdiction. Implementations costs can be shared between jurisdictions and private developers. Taken together these strategies become a "toolbox" of options that can be combined or used individually. Either way, they are highly *versatile* alternatives that can be specified for large areas, yet often implemented on a single site or multiple adjacent sites.

On a negative note, physical infrastructure capacity-based approaches have limited *effectiveness*, particularly when considered individually instead of as part of a larger network or system. Taken by themselves, they do not significantly *expand transportation options*, nor do they contribute directly to furthering the goals of the GMA. Collectively, they support the expansion of transportation options and the goals of the GMA. Although all the alternatives discussed below are known to increase local quality of life, their transportation effects (e.g., on mode choice) are less well understood.

Building sidewalks or bicycle lanes does not, in and of itself, guarantee that they will be used. Consequently, it is difficult to quantitatively *predict* how they will further multimodal concurrency.

Moreover, none of these alternatives is a *source of transportation funding*. Thus, they are not necessarily *sustainable.* However, the actual infrastructure, once provided, is sustainable, given its relatively low operating costs; the vulnerability of these approaches is that the costs of maintenance and system operations are not incorporated into the cost of providing them.

It may be best to consider the following implementations, with the exception of local improvement districts (C.7), as necessary and desirable, but not sufficient, elements for creating environments that foster multimodal concurrency.

Implementation Alternative C.1: Sidewalks

Most jurisdictions already require the building of sidewalks and have design standards that require sidewalks to be built in conjunction with new development or major redevelopment. For example, 95 percent of jurisdictions surveyed in the Puget Sound have sidewalk requirements for their commercial and multifamily zones (WSDOT 2002). So far, however, the inclusion of sidewalks in new development has not been factored into concurrency calculations. This could be changed relatively easily. A development that provides sidewalks could be allowed to automatically reduce the number of estimated new vehicle trips by assuming that some proportion of those trips would walk to nearby destinations. This might only be allowed in areas that contained a given level of density, a given mix of accessible land uses, or other factors shown to promote walking as a travel mode (as opposed to walking simply for recreation or exercise). In areas where sidewalks are discontinuous, a special levy could be applied for the construction of sidewalks that connect the new development and with existing development.

Strengths and Weaknesses

Sidewalks should be seen as a minimum requirement throughout urban areas and in rural centers, and indeed they are required of new development in the vast majority of comprehensive plans in Washington State. They represent a necessary component of any multimodal environment that seeks to support non-motorized transportation options. Sidewalks constitute a highly *versatile* alternative that can be implemented in a piece-meal manner with the costs shared between the public and private sectors. This approach is the most feasible alternative for local governments because it is *politically feasibl*e, extremely creditable, and *methodologically and structurally compatible* with existing planning practice.

Unfortunately, the actual transportation behavior impacts of providing sidewalks are neither clear nor *predictable*. Unlike the *ITE Trip Generation Handbook,* there is no simple formula for estimating the number of trips that would be served by newly built sidewalks. It is not obvious to the project team that—taken by itself—expanding the sidewalk system is an *effective* strategy for furthering multimodal concurrency.

<u>Implementation Alternative C.2: Bicycle Lanes</u>

The accommodation of bicyclists has also been partially addressed by many jurisdictions through the requirement that new development provide bicycle parking. For example, more than 74 percent of jurisdictions surveyed required bicycle parking (WSDOT 2002) and showers/changing rooms for bicyclists in their commercial and multifamily zones. However, bicycle lanes, like sidewalks, are not effective unless they are continuous over long stretches, on or off-road, and are part of a greater network of bicycle lanes/routes that connect travelers to and between their origins and destinations.

In areas where new development or redevelopment takes place along narrow rights-of-way, the jurisdiction could demand that existing on-street parking be eliminated and replaced by a bicycle lane. If the loss of on-street parking was deemed problematic, corresponding stalls could be provided on private land by the city using funds from the new development. At the discretion of the owner, those stalls could be subject to the same time limitations or costs that on-street parking in the neighborhood commanded. No laws require street rights-of-way to accommodate parked cars. On the contrary, many suburban jurisdictions prohibit on-street parking.

In newer areas where the right-of-way is more generous or on-street parking is prohibited, bicycle lanes could be formally accommodated (striped) within the typically wide traffic lanes lining private development.

Strengths and Weaknesses

As discussed above, bicycle lanes have similar characteristics to as sidewalks: they are feasible and *versatile* but of questionable *effectiveness* in and of themselves if done in isolated pieces. Bicycle lanes are not as frequently required in comprehensive plans.

<u>Implementation Alternative C.3: On-Street Parking and Dedicated Transit or Non-motorized Lanes</u>

A similar approach could be taken for dedicated bus lanes. Under concurrency, jurisdictions could mandate that major new development be accompanied by the provision of such lanes if it is part of an important transit route.[8] This approach might, at first, generate discontinuous transit lanes. However, it would get private property owners to give up the idea of using on-street parking. The lanes could replace existing on-street parking, or they could be striped on wide right-hand lanes. Dedicated bus lanes resulting from new development or redevelopment could be introduced gradually: first at peak

[8] This would be a change in use of the existing street. It would not be a "taking" of private land at the location of the development. However, the project team's opinion is that requiring provision of land for such a transit lane might not pass legal standards for proportionality.

hours (just as on-street parking is limited to non-peak hours) and then, when transit demand and service increased, for longer periods of time.

On-street parking has been hailed by advocates of walking as a way to protect pedestrians from vehicular traffic. Parked cars act as a protective physical and psychological barrier between traffic and pedestrians. However, other protective devices may be just as effective and perhaps more pleasing than parked cars; for example, complemented by trees planted at regular intervals and other landscaped or "designed" hard surfaces, the space occupied by a bus or a bike lane can add to the security and the safety of those walking along the right-of-way in the same way that, or even better than, parked cars do. Parked cars have also been touted as an effective way of slowing traffic. This is also true because getting in and out of an on-street parking space likely stops passing cars. However, speed limits can be just as effective if the political will exists to enforce them.

Strengths and Weaknesses

Like sidewalks and bicycle lanes, dedicated transit and non-motorized lanes provide additional capacity for multimodal alternatives. They can be used by communities in specific locations where frequent transit service is available. However, changing the use of a lane of traffic to improve the transit capacity can be controversial not very *politically acceptable* because it can reduce the availability of convenient parking spaces or reduce the SOV capacity along a specific corridor. Additionally, dedicated lanes need to be provided in a broader multimodal network, or their capacity gains will be limited.

Implementation Alternative C.4: Re-striping

Many streets and roads have unduly wide traffic lanes with shoulders. These wide shoulder lanes can be reconfigured to fit bike lanes, wider sidewalks, or bus lanes in the right-of-way. This involves re-striping, a notably cheap means of increasing the mobility and safety of non-SOV modes on existing rights-of way. Lanes wider than 11 feet have been deemed important for vehicular safety purposes. Yet wide lanes only serve faster traffic and traffic in which drivers don't need to exercise extra care in using the roadway. Many older roads and streets in the state have 11-foot or narrower lanes and a right-of-way that is too narrow to meet current lane standards. These locations are known to have slower traffic and to force drivers to concentrate to ensure safety.. Multimodal concurrency standards could reverse the trend of road design regulations catering to unfocused driving and, in effect, reward safe drivers.

Strengths and Weaknesses

Like sidewalks, bicycle lanes, and dedicated transit and non-motorized lanes, re-striping can provide capacity for multimodal alternatives. Re-striping can be a *low cost* approach for use in a variety of contexts to provide additional capacity and greater safety for both drivers and pedestrians.

Implementation Alternative C.5: Bus Pull-Outs

Bus pull-outs have the potential to augment the existing capacity of the roadway by ensuring minimal impact of bus service on vehicular traffic. Pullouts allow traffic to continue unimpeded as transit riders board or alight buses. They could be required every two or more blocks, as necessary, to accommodate transit service on designated transit routes. Developers on pullout blocks could be required to build them, while those on alternating blocks could be asked to contribute to a fund to build pull-outs along the major transit routes.

Strengths and Weaknesses

Bus pull-out can provide additional capacity for transit by providing a protected environment in which users may enter and leave transit vehicles. As such, they increase transit capacity. However, bus pullouts can raise problems for *political acceptability* as they can become controversial, depending on the urban design features in the corridor in which they are built. In urban areas, businesses may object to using a lane for bus pullouts that could otherwise be used for parking or additional roadway traffic. Furthermore, if bus pull-outs are not properly designed, drivers may have difficulty merging back into traffic; this may offset the overall efficiency gained by moving stopped buses out of the flow of traffic.

Implementation Alternative C.6: Signalization

Signals are an integral part of infrastructure in urbanized areas. Signalization is an effective tool for increasing the capacity of existing infrastructure. It is not unusual for jurisdictions to require new development to contribute to new signalization in order to better accommodate the additional trips being generated. So far, however, most mitigation involving signalization has focused on vehicular traffic and often on improvement at a single or limited number of intersections. A multimodal approach to concurrency could include changes in signal progression that improved the overall efficiency along a single corridor, signal prioritization, or signal override for transit vehicles. Thus jurisdictions could consider new signalization as a way to mitigate concurrency requirements.

While changes in signalization frequently focus on improving the efficiency of vehicle movements, signalized intersections have long been associated with a decreased risk of collisions between pedestrians and motor vehicles. Signalization is now increasingly and routinely used to improve the speed of bus transit and to reduce conflicts between individual cars and buses or trains in the road right-of-way. It would be possible to use signalization to shorten non-motorized trips by changing signal timing plans to favor walking or biking.

Strengths and Weaknesses

Like other strategies in this section, signalization is highly feasible, highly *versatile*, relatively affordable, but of limited effectiveness when implemented by itself.

Signalization improvements could be installed along a corridor or in an area of the community but would need to be coordinated with other strategies to be more effective.

Implementation Alternative C.7: Local Improvement Districts

All of the strategies in this section are of limited effectiveness when implemented separately. Their effectiveness could be increased if they were packaged together to create a specific area that focused investments to support multimodal activities. This area of benefit or Local Improvement District (LID) could be structured in a manner similar to the multimodal districts that have been established in Florida. . Local jurisdictions could condition development on the formation of a LID, in which developers would pay for needed improvements to the multimodal infrastructure. Local government could provide an incentive for developers to work with their neighbors and upgrade their surroundings for multimodal travel, or they could match the funding provided by the private sector.

A LID could be structured to organize a group of property owners and developers into a single unit that would be similar to large-scale developers who cover a substantial portion of needed infrastructure improvements. As such, the first developers could entice their "neighbors" to join in providing the medium- to long-term multimodal benefits of a LID.

Strengths and Weaknesses

LIDs would provide an opportunity to package together various physical infrastructure strategies to create localized areas in which all of these strategies were focused. They are *structurally compatible* in the ability to overcome the difficulty of coordinating the separate and individual multimodal investments of adjacent property owners by creating a coherent and cohesive set of strategies for a defined subarea of a city that could be implemented over the medium to long term. Within the LID, the various components of a multimodal environment would be provided in a coordinated fashion by using funding from both the private and public sector. The weakness of the LID would result from the risk associated with development and redevelopment of separate parcels in a community. Because investments in land development and the associated infrastructure are made over a medium to long-term timeframe, the success of a LID would be subject to the ups and downs of the real-estate market.

STRATEGY D: PROVIDE AND FUND TRANSIT AND OTHER HOV SERVICES

This strategy is designed to improve the multimodal application of concurrency in areas where the desired road network has been completed but does not perform to a desired standard, or where expansion of existing roadway capacity has a lower priority than the provision of alternative forms of mobility. In this basic approach, additional development would be permitted in these congested areas as long as sufficient funding was provided by the developer to expand the availability and use of shared ride modes of travel within the geographic area occupied by the proposed development.

This approach would shift the current focus of mitigation efforts from improvements in infrastructure intended for use by single occupant vehicles (SOV) to improvements in all modes of transportation. Instead of spending mitigation fees on widening roads or building turning lanes, jurisdictions would use concurrency and other development impact fees to assure adequate levels of service by supplying additional transit services, or increasing the availability and desirability of other non-SOV modes of travel such as van pooling, carpooling, walking, and biking. .

A simplistic approach to these strategies would start with a city adopting a traditional roadway-based LOS standard. (For example, "The average LOS for the five intersections in the city center must be better than LOS C if additional development is to be permitted.") However, unlike traditional concurrency systems, if this level-of-service standard was exceeded, development would still be permitted, as long as the developer provided additional multimodal or high occupancy vehicle (HOV) travel alternatives. The types of alternatives the developer would be required to provide would be determined by the number of trips created by the new development that caused the adopted LOS for the area to be exceeded.

Sufficient multimodal capacity to meet new development would be defined by the additional multimodal capacity needed to carry the new trips generated by development or the number of trips by which the development exceeded the LOS standard. Strategies that provided HOV and non-SOV capacity would *not* require that multimodal services reduce SOV usage to meet the LOS standards.

Strengths and Weaknesses

Strategy D alternatives are highly *effective* approaches to furthering multimodal concurrency because investments would be made in all modes of transportation.. These alternatives are directly *relevant* to the goals of the GMA, as they provide disincentives to urban sprawl that occurs because proposed development does not meet the vehicle-based LOS standard, and they *expand transportation options* in already developed areas.

These approaches represent innovative ways of providing additional transit and HOV service—service that is concrete and understood by the public. Thus, these alternatives are *intelligible* and *credible*. As is discussed below, transit and HOV service-based approaches show mixed performance on the other evaluation criteria: *feasibility*, *cost* and *versatility*.

<u>Implementation Alternative D.1: Transit Service as Mitigation</u>

This approach would provide "seed funding" for transit as mitigation for developments in areas that exceeded concurrency level-of-service standards. Developer payments would be made on the basis of the number of trips to be generated by the proposed new development. Those funds would then be used to purchase (or subsidize expansion of) transit service to the geographic region containing that development. The jurisdiction that controlled the expenditure of those transit funds would need to be established in the legislation or regulation that permitted this concurrency approach.

Candidates for handling these funds include the jurisdiction involved, a transportation management association serving the new development and to which the new development was a dues-paying partner, or the transit agency that provided the services.

These developer mitigation fees would be paid out over six years[9] from the opening of the development. Mitigation payouts could be made in equal allotments, or they could be based upon the demand from the new development; with less service in the early years and more as the project was completed. At the end of six years, the developer subsidy would end, and the previously subsidized transit services would be required to compete on an even-cost basis with all other transit services in the region.

This approach also assumes that an increase in the level of transit service provided could increase transit ridership commensurate with the number of trips that a new development produced. As a result, this approach is applicable only for geographic areas that are conducive to transit service. If the geographic layout and density of the developed region were conducive to transit usage (i.e., were truly multimodal), the supplied transit service would be heavily used and would compete effectively for available transit service funding once the seed funding had been exhausted.

If the developed region was not conducive to good transit ridership because of poor urban design or insufficient density, then the transit service would be lightly used. If this happened, it would confirm to the jurisdiction that it had not provided the land-use support required for good transit usage, and the transit service should logically be reduced in that area. This approach would provide an incentive for local jurisdictions to adopt land-use plans that were conducive to transit use if they intended for transit service to be an alternative to roadway expansion.

This approach also presumes that the funding generated by the new development's concurrency mitigation fees would be sufficient to result in a useful increase in transit service to the affected area. It is unclear, without further research that is beyond the scope of this project, whether mitigation fees that were acceptable to the development community could generate sufficient funding to adequately increase transit services to specific developments.

As with traditional impact fees, concurrency mitigation transit fees could be based on the total number of trips generated by the proposed development or the total number of trips generated in the PM peak period. The fee per trip generated could be based on the cost of transit service per revenue seat mile or other transit cost function. Finally, transit mitigation fees also could be graduated on the basis of the degree to which the roadway level-of-service standards were exceeded. (See Strategy B above for more on this concept.)

[9] The authorizing legislature for this strategy could also change the duration of the payout.

Strengths and Weaknesses

Mitigation through transit service can be exceptionally *effective*. It is directly *relevant* to the goals of the GMA because it encourages the coordination of land use and transportation and discourages development that is not easily served by transit.. It has the potential of reducing regional congestion, encouraging the efficient operation of the regional transportation system, and decreasing the impacts of development on neighboring jurisdictions. Mitigation through transit service unambiguously *expands transportation options.*

However, this approach is less robust in terms of *political acceptability* than others; its financial feasibility and sustainability is questionable since the fate of service expanded through one-time mitigation efforts is not assured. Just as the results of this alternative are unpredictable because of lack of prior implementation, this untested approach is not *structurally compatible* as it would require restructuring current relationships between local planning and transit agencies. It is not clear that negotiations for additional service would be smooth or ultimately fruitful in all cases. Mitigation through transit service is relatively un-versatile. Transit routes generally operate along corridors and between centers and across jurisdictional boundaries. If the efforts of adjacent jurisdictions were not coordinated, this approach would result in piece-meal implementation. In addition, mitigation through transit service is clearly not neutral toward alternative modes.

Implementation Alternative D.2: Transit Endowment Funds as Mitigation

One limitation with Alternative D.1 is that at the end of the six-year payout period, no funding would exist to provide transit service to the newly developed area. As noted above, this could result in a loss of transit service to the area. If this transit service carried significant ridership, the result would be both an increase in roadway congestion and the loss of an effective alternative mode of travel within a congested area.

A possible solution to this shortcoming would be to allow the creation of transit endowments in specified geographic areas. In these areas, developer mitigation fees would become part of the endowment. Proceeds from the endowment would then be available to purchase additional transit service to the area.

Strengths and Weaknesses

The advantage of this approach is that this “additional” transit service funding could, in principle, be available in perpetuity to fund services that would mitigate the continuing travel demand from permitted development. The endowment would be expected to grow over time as development occurred, thus providing a continuing, growing source of transit operations funding to serve that growing geographic area.

The limitation of the endowment approach is the level of need for financial feasibility to add totally new transit services, as the annual yield from most endowments would be estimated on the order of 5 percent of their value. This would be slightly less than one-third of the potential annual payout of the approach taken in Alternative D.1.

In addition, transit endowment funds suffer from the same limitations as Alternative D.1 (mitigation through transit service) discussed above. Any approach that relied on one-time payments into a fund would be more vulnerable to legal challenges related to how the funds were spent, and, as such, would be less politically acceptable than other approaches.

Implementation Alternative D.3: Travel Demand Management as Mitigation

The third alternative of Strategy D for using HOV services in lieu of expanded roadway capacity in areas that exceed level-of-service standards is to require the developer (or future tenants) to participate in a predefined travel demand management (TDM) program. A variety of TDM strategies exist for both reducing total vehicle travel demand and reducing the impact of the vehicle travel demand that remains. (Please see Appendix A for an additional discussion of TDM in the context of multimodal concurrency.)

Because a large number of potential TDM actions can be taken, and because the "best" TDM approach should be determined on a site-specific basis, the "mitigation" required of the developer (and any tenants of that developer) might be to select a specific number of TDM actions from a list of acceptable programs supplied by the local jurisdiction. This approach has been adopted in some Florida cities that have "concurrency exception areas," such as Jacksonville and Gainesville.[10] A further refinement to this approach is that the number of TDM actions that a developer must select be determined by the degree to which the adopted level-of-service standards have been exceeded. (This refinement is very similar to what is proposed in Strategy B.)

An alternative to selecting from a list of acceptable actions is to require the developer to fully participate in an existing transportation management association (TMA). "Full participation" would, at a minimum, consist of fully funding the programs adopted by the TMA to manage travel demand in the TMA's geographic region. The TMA would then be responsible for selecting the appropriate TDM measures for that specific area.

Jurisdictions adopting such an approach would need to have formal TMAs for the geographic areas within which the city wished to allow roadway level-of-service to be exceeded and to rely on multimodal alternatives for maintaining mobility. The

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[10] City of Jacksonville Concurrency Management Office. 2006. TCEA Implementation Plan. Accessed on October 18, 2006 at: http://www.coj.net/Departments/Planning+and+Development/Transportation+Planning/TCEA+Implementation+Plan.htm

City of Gainesville Community Development Department. 2005. Comprehensive Plan: Concurrency Management Element: Goals, Objectives and Policies. Accessed on October 18, 2006 at: http://www.cityofgainesville.org/comdev/common/docs/compplan/concurrencymgmt01.pdf jurisdiction would also need assurances that the TMA was adopting strategies and programs that were providing sufficient multimodal options to meet the mobility needs of the region, while limiting traffic impacts on surrounding neighborhoods and cities.

Strengths and Weaknesses

The project team believes that TDM is an exceptionally *effective* and promising tool for the promotion of multimodal concurrency, particularly with the potential for some linkages to the existing GTEC program. This alternative is particularly well suited to being paired with the implementation of a regional strategy (see Strategy E in next section).

Properly implemented, TDM *expands transportation options* and decreases the impacts of new development on existing roads. Managing demand for transportation renders existing infrastructure more efficient—increasing their performance—and promotes densification and infill development as mandated by the GMA.

As TDM implementations are already widely practiced in the Washington, they are *politically acceptable* and friendly to the private sector. They are a relatively un-intrusive alternative that can be extremely *versatile* and carefully tailored to different application environments. Their *flexibility* grants more autonomy to developers, e.g., letting them come up with their own plans for reducing SOV trips, and can be adapted over time as an area evolves, e.g., from suburban to urban. However, most TDM programs are implemented by employers or activity centers and *not* developers. Therefore, they may not be *politically acceptable* to all developers in some communities.

This approach has been implemented in other states and benefits from the credibility of prior testing.

As with any implementation that focuses on provision of service rather than infrastructure, this alternative is potentially less *sustainable*. For example, employers may move or go bankrupt, creating challenges to the continuation of management programs.

STRATEGY E: DEVELOP REGIONAL AND SUB-REGIONAL CONCURRENCY STANDARDS ACCOMPANIED BY INSTITUTIONAL AUTHORITY TO ENFORCE THEM

Today's metropolitan form and function are characterized by the distribution of residential and employment activity in a multinucleated pattern throughout a region. People living in or around metropolitan areas such as Seattle, Spokane, or Vancouver may live many miles from where they work for a variety of reasons, including housing costs and availability, coordinating proximity to work location for multiple wage earners in each household, and access to public transportation. This pattern has also been evolving in the other metropolitan areas around the state. These realities mean that Washingtonians, and Americans in general, travel longer distances and record more vehicle miles traveled (VMT) than ever before. The flow of traffic and of public transportation does not respect political and geographic boundaries, and long-term regional plans like the Puget Sound Regional Council's Vision 2020 envision over twenty distinct urban-level centers in the Puget Sound region with travel and improved access among them.

While metropolitan development and personal travel patterns occur at a regional level, land-use and level-of-service (LOS) responsibilities are delegated to local governments. While local jurisdictions control land use, they generally do not control the funding or provision of transit service that provides a key modal alternative to the private automobile. These simple facts are at the root of a significant disconnection between the policy intent of multimodal transportation concurrency and the ability of any single municipality to effectively manage growth through LOS standards, which are currently employed in a fragmented manner.

A simplified example illustrates the existing situation. City planners, using the best of community involvement processes, establish LOS standards for 148th NE, a main north-south arterial in Bellevue, and these standards are consistent with desired growth and zoning in the corridor and the city. Elected officials and area residents approve the LOS standards with adoption of the city's comprehensive plan. However, 148th NE also conveniently connects Microsoft's Redmond campus to the north with many Microsoft employees living east of Bellevue and south of I-90. These regional residents who live in one jurisdiction but work in another pass through Bellevue each day and quickly overwhelm the established LOS standards, which leads to a denial of new development within Bellevue. From a multimodal perspective this circumstance is doubly frustrating, as it prevents/denies denser development from occurring in the corridor that would normally support higher levels of pedestrian activity and greater transit and vanpool service in the corridor, which in turn could move more people more efficiently without necessarily widening the roadway.

The Growth Management Act is based on comprehensiveness, concurrency, and consistency. Three types of consistency exist in the implementation of growth management. There is concurrency that is: (1) internal (to the departments of local jurisdictions), (2) horizontal (across departments at the same level of government); and (3) vertical (between local governments and regional and state agencies). The concurrency requirements in and of themselves require that local governments coordinate their land-use plans with their transportation plans. Under the concept of vertical consistency, each municipality's comprehensive plan must be consistent with and reinforce adopted countywide policies, which must also be consistent with the area's regional plan, and the region's transportation plan must also be consistent with the state transportation plan. But transportation concurrency standards are not required to be consistent across jurisdictional boundaries, they are only required to be "regionally coordinated," a somewhat nebulous direction. In metropolitan areas, no regional governing body has the authority to establish land-use, transportation, or concurrency standards that can be linked to supporting decisions for well-coordinated multimodal investments. Highways of Statewide Significance (HSS) are exempted from transportation concurrency altogether, creating a two-way dilemma. It has legally removed the state Department of Transportation from direct responsibility to work with localities to ensure that they develop a network for multimodal travel or enforce multimodal concurrency standards, and it has also removed the need for local jurisdictions to restrict development due to congested conditions that may be found on adjacent state highways.

Because people, firms, traffic, and transportation operate on local, metropolitan, and regional levels, multimodal transportation concurrency will need to function at those levels as well in order to be effective. A variety of alternatives can be employed to realign and empower the institutional framework so that transportation concurrency can work at the larger geographic and political scales. Regional transportation concurrency requires coordination and cooperation between local and regional governments under the guidance of the state. Thus a number of options are suggested in this section as potential strategies/concepts to help achieve regional concurrency. These include a combination of solutions ranging from voluntary cooperation among adjacent jurisdictions, to use of existing regulatory power by the RTPOs, to new state authorization that could grant additional power to the RTPO, to creation of new regional authority to implement the regional mandate, to greater support from state agencies involved in land-use and transportation planning funding. At first glance, any imposition of a new layer of government, new requirements, or constraints for local governments could be viewed as both onerous and "dead on arrival." However, most local governments know that transportation concurrency cannot work in the present atomized environment and many might actually (though silently) welcome some form of an authority that could set a standard they must jointly meet if it might offer a better means to achieve their own adopted comprehensive plan's goals and policies. Therefore, four options have been identified that offer different approaches to consider that could begin to address the needs for regional concurrency.

Strengths and Weaknesses

The strengths and weaknesses common to all the approaches to implementing Strategy E are discussed below.

Strategy E approaches are highly *relevant* to the goals of the GMA because they tackle the current lack of regional coordination that not only encourages individual jurisdictions to export their congestion but also undermines efforts to curb sprawl, protect natural resources, and fully exploit existing infrastructure. A regional approach redresses limitations in the present concurrency system that unintentionally provide incentives for developers to externalize transportation costs, thus decreasing development costs but increasing regional transportation needs and problems in ways unable to be addressed by local jurisdictions.

The cost of implementing these approaches would largely be borne primarily by the public sector, as these implementation approaches are based on the expansion of authority or creation of regional organizations. Thus implementation of the system itself should be *affordable to the private sector,* although the outcome of a regional concurrency system could result in an increase in development impact fees for some developments.

Approaches under Strategy E could possibly be the least *politically acceptable* implementation strategies developed for this study. Implementation actions designed to further regional efforts to coordinate multimodal concurrency are likely to be viewed as negatively affecting local autonomy.

The alternatives' specific effects, particularly secondary ones, are relatively difficult to *predict*; the alternatives are not *structurally compatible* with existing planning practice, although they make use of existing data and technical skills (they are *methodologically compatible*).

Regional approaches are mixed in terms of their overall *versatility*. On the one hand they are difficult to implement in a *scaled* manner, as they typically require synchronized implementation (equivalent application across participating jurisdictions at the time of implementation). Also, it is challenging to maintain effectiveness while being as *locally sensitive* as individual jurisdictions would likely want. On the other hand, regional approaches are appropriate to jurisdictions with different development environments: urban, suburban, and exurban/rural communities. These approaches can be tailored to provide frameworks that are as useful to jurisdictions in Whatcom County as in King County.

Regional approaches present important catalysts for public discussion: they are inherently controversial, yet they offer the promise of real improvements to congestion and inefficient development. Also, they are essentially two-step approaches, in which each step would be open to a public discussion about transportation priorities. The first part involves designating what "regionally concurrent" means. The second is about what happens to a specific development proposal once that decision has been made.

Under current planning authority, regional alternatives might best be considered as necessary and helpful but not fully sufficient approaches to achieving effective and sustainable multimodal concurrency. Regional agencies should be given the authority to develop and apply a "regional concurrency system" that is in addition to—not instead of—the locally applied concurrency systems previously described.

Accordingly, the project team recommends that regional approaches be paired with local approaches to craft a two-tiered concurrency system. Such a system would provide a more flexible incentive and disincentive system at the regional level, while incorporating the key transportation system attributes that are actually desired by local agencies.

Implementation Alternative E.1: Regional LOS Standards

Previous revisions to Washington law (1998) mandated that regional transportation planning organizations (RTPOs) establish regional level-of-service standards for state highways that are not designated as being of "Statewide Significance. This was intended to encourage greater consistency for regional system performance and monitoring across jurisdictions. With the passage of 2SHB 1565 (2005), RTPOs must now also define and establish measures for peak period multimodal capacity for regional growth centers and measures for vehicle LOS at off-peak times. These measures for "regional centers" are a new role for RTPOs. RTPOs could also be further empowered to achieve regional LOS standards that would incorporate multimodal measures and set regional attainment targets as suggested in the following alternatives.

Strengths and Weaknesses

The primary strength of this alternative is that it creates regional LOS standards, which are necessary for concurrency to be applied regionally. This is *structurally compatible* because this alternative depends on existing regional agencies and does not require the creation of additional institutional relationships. The primary weakness of the alternative is *political acceptability* in terms of the challenge for development of regional standards to which all local jurisdictions within that region can agree. Finding agreement may either prohibit the adoption of those standards or cause friction between jurisdictions.

Implementation Alternative E.2: LOS Standards Enforcement

Aversion to additional layers of government, especially at the regional level, means that almost all MPOs in the United States are voluntary associations of government with little or no authority to enforce their plans. However, a modest example of the MPO's existing "power of the purse" is it's authority granted under federal transportation law for development a regional transportation improvement plan (RTIP). This federal authority for RTIP development enables the larger MPOs to select and prioritize federally funded projects within their regions, with the general exception that WSDOT retains authority, in consultation with the region, to select/prioritize major state highway projects on the state's national transportation system (NTS). For roadways, the NTS consists mostly of the limited access freeway network. This regional authority to develop the RTIP is intended to support implementation of a region's RTP. Two actions could be considered to enable regions to achieve enforcement of regional LOS standards. First, state authority could be granted to enable RTPOs to prioritize and select (i.e., approve for funding) all regionally significant transportation projects for all modes, including transit and state highways. Second, in those corridors and centers that the RTPO/region identifies as having or needing multimodal investments to achieve the regional LOS standards, the state legislature could consider providing regional authority to enforce the regional multimodal standards by requiring local jurisdictions to form inter-local agreements that adopt the new regional standards. Inter-jurisdictional cooperation would be rewarded with priority project funding and, as developed, increased project funding to support identified local and regional multimodal investments in given corridors and centers.

Strengths and Weaknesses

This alternative points out that without some type of enforcement mechanism, no regionally defined approach to concurrency will be effective. An enforcement capability is necessary to obtain the benefits anticipated from any kind of adopted regional concurrency system. There are two primary weaknesses with this alternative. The first is that no regional enforcement is necessary unless there is a regional system to enforce or a regional agreement on concurrency standards designed to reduce the effect of growth on the level of congestion found on regional movements. Second, this concept, given current alignments of authority, would not likely be very *politically acceptable*, as any form of regional enforcement authority is likely to be viewed as a potential loss of power/control by both local and state jurisdictions, and thus such an approach may generate political opposition from those jurisdictions.

<u>Implementation Alternative E.3: Regional SOV VMT Targets</u>

Under the existing system, there are few rewards for individuals to drive less in SOVs. A regionally adopted target that would propose capping SOV VMT could begin to change that while offering the possibility of reducing the congestion burdens and threat to continued development that localities experience. RTPOs could establish a target at the existing or some former VMT level (in 1991 Oregon's Transportation Rule required metropolitan areas to reduce per capita VMT 20 percent by 2025, a target that has since been reduced) and then employ a series of voluntary TDM, educational, and incentive measures to aid individuals and communities to reduce drive-alone behavior (if only slightly). The RTPO also could establish a target for each municipality and have the authority to require changes to local land-use and transportation plans, achieved in combination with greater authority over modal investment allocations, to enhance the modal choices available to residents of the municipality. Similarly, the RTPO could work with related nonprofit and for-profit organizations that could help influence VMT through economic incentives to align efforts toward the same end.

The RTPOs and the state could negotiate with auto insurance providers to offer variable mileage-based rates. A trial SOV/VMT cap and trade system, based on emissions trading schemes, could be established with a volunteer group of residents in a fashion similar to the PSRC's Value Pricing prototype. Would it be possible to operationalize such a system? Would it encourage personal decisions that saved individuals money while meeting a regional VMT reduction target? Could it be popularized? RTPOs could attempt to answer these questions by taking initiatives like these. A regional pilot project (or at least a research study to explore this in greater depth) could be conducted to test the practical feasibility and potential costs and benefits of this concept.

Strengths and Weaknesses

This alternative is very *relevant* as it would bring market forces to bear on the goal of reducing vehicle miles of travel. By making vehicle travel a marketable good (with reductions in such offering personal economic benefits), one might identify financial incentives that could be appropriately sized to resolve market demands, some of which could be provided to developers (and consequently consumers) who are willing to live in communities that required and/or encouraged less vehicular travel by offering *expanded transportation options* to support the multimodal goals of the GMA.

Application of market forces would make this approach as financially (economically) efficient *and affordable* as possible. An example of such an incentive playing out to encourage “multimodal non-SOV travel” for personal economic benefits is the concept of a Transportation Efficient Mortgage (TEM). This has been applied by a banking institution in the City of Seattle whereby the bank extends a greater/larger proportional mortgage loan to consumers/households if the home being purchased is what is defined as a “highly multimodal” community. According to this private economic research, households located in relatively high-density communities that also have high levels of local transit service tend to own fewer automobiles. Therefore, such households in those “multimodal” communities also have been found to have greater levels of discretionary income, thus warranting the bank’s granting of higher levels of credit/loan amounts to these households.

The weakness of this approach is lack of *methodological compatibility, as* it is far outside of the “norm” of current policy approaches. This would make the approach controversial if it were selected for implementation. At the same time, because no similar system exists, considerable technical effort would need to be expended to develop and implement the system. Finally, both current planning and regulatory processes would need to be revised to accommodate such a system. The result is that adoption of such an approach, while it could be quite beneficial and *effective* in the long run, is not likely to be seen as *politically acceptabl*e.

Implementation Alternative E.4: A Regional Transportation Commission Assumes Responsibility for Transportation Concurrency

If a new regional transportation commission (RTC) were created (whether by a new, expanded or combination of existing entities), it could make recommendations to the governor and legislature proposing additional authority that could include regional concurrency for the central Puget Sound region. While we do not know what form this would take, the Portland Metropolitan Council and the Georgia Regional Transportation Authority offer models that combine regional transportation and land-use powers. Were such a model adopted in Washington State, multimodal standards, funding, and enforcement authority could fit well into the scope of its new powers.

Strengths and Weaknesses

The primary strength of this approach is that responsibility for regional concurrency would be a natural task for a regional transportation commission. The primary weakness of this alternative is that it is unclear whether such a regional agency will exist and what roles might be given to it by the legislature.

Implementation Alternative E.5: A Integrating Regional Transportation Concurrency with Land Use.

Alternative E.5.1 Transportation Addendum to the Buildable Lands Program

A final idea is to strengthen and improve land-use and transportation linkages by introducing a *regional* 6-year concurrency plan. This idea suggests integrating three planning efforts that now take place quite independently: land use, transportation, and transit planning. Under the GMA, jurisdictions are required to define the rationale behind their zoning regulations in their comprehensive plans. However, while zoning regulations can be used to calculate/assess the allowable "built-out" development capacity, they do not necessarily help predict the amount or the location of development that does actually take place. The concept for a new/modified regional 6-year concurrency plan is to develop a mechanism to not only monitor development activity in accordance with the land use plans but to also assess such development in relation to the 6-year transportation plans, which would reach beyond road components to bring in transit plans..

The GMA already has an instrument that requires jurisdictions to monitor development capacity over a 5-year interval. That is the Buildable Lands Program (1997 Amendment to GMA). The program requires jurisdictions to document whether the development (in residential, commercial, and industrial uses) that has occurred is consistent with their planning assumptions and targets. Specifically, jurisdictions have to show whether urban densities are being achieved within UGAs and whether the supply of land within UGAs is sufficient to accommodate the given jurisdiction's adopted allocation of projected population and job growth. Overall the program requires "reasonable measures" to increase "consistency" between local planning and actual development and to ensure sufficient housing and job capacity. Note that the same reference to consistency is used in the Buildable Lands Program (BLP).

The Buildable Lands Program is currently limited to examining land-use planning, land supply, and development capacity. It does not address the impact of land use on travel demand nor does it identify whether the locally planned transportation facilities that were adopted in the transportation element and were assumed to support such development were ever completed or determined to be financially feasible. Additionally, under current state mandates, with the exception of Sound Transit, there are no requirements for transit agencies to prepare transit plans to be consistent with the local land use plans in their respective service districts. The concurrency legislation proposed under this alternative would connect the Buildable Lands Program to new short-term (6-year) transit and transportation plans, and the current condition of the individual jurisdiction's concurrency programs. The county-level and 5-year aspects of the Buildable Lands Program could reasonably fit into the existing requirements for local transportation plans completed by cities and counties.

The periodic updates of regional transportation plans could begin to establish closer linkages of city and county transportation plans and transit agency plans to land use through the region's adopted plans for land development strategies. Current state law requires city and county transportation elements to be reviewed and certified by RTPOs for consistency with the given region's adopted regional transportation plan. As special districts such as transit agencies were exempted from GMA planning requirements when GMA laws were first passed in 1990-91, transit agency plans are not subject to this more rigorous regional plan consistency examination and are less connected to support multimodal concurrency in regional centers. However, modest modifications to broaden and include transportation and transit plan elements for consistency examination under the Buildable Lands Program's focus on land development could do much to address the central concerns and deficiencies of the existing concurrency system. The basic intent of this alternative is to require that these existing planning efforts show that development and transportation (including transit) plans and programs are compatible with each other.

Strengths and Weaknesses

This alternative is *relevant* in having the advantage of helping forge ties between agencies and departments that are responsible for making multimodal concurrency work. It would put transportation on par with land development, which is at the center of GMA. And it would bring the transit agencies, now non-GMA special districts, into the GMA institutional setting. Thus it would provide the region with the information necessary to understand the regional impacts of concurrency on growth and would identify any inconsistencies in places where development was expected to take place, where transportation investments would be made, and where deficiencies in the performance of the transportation system existed.

One of the downsides to this approach is that it would only report the summation of the individual agency's concurrency system and Buildable Lands Programs. It could take a few iterations of such examinations before one might expect to see actual changes in the outcome of those programs. Also, it would not provide a mechanism for reconciling potential inconsistencies and deficiencies that might be identified. In addition, it would not provide new incentives or disincentives that would change the development decisions that could not be adequately served by the regional transportation system. However, if one combined the concept in this alternative with an extension of new regional authority as suggested in earlier alternatives, one might expect to achieve improved results through regional decisions that could better influence priorities and provide incentives or rewards for resource allocations. Perhaps one of the more major downsides of this concept is that changes of this nature would not likely be viewed as *politically acceptable* to existing local jurisdictions or transit agencies. Lastly, the lack of *structural compatibility* to current planning and plan monitoring practices adds to likely resistance to this idea.

Alternative E.5.2 Transit Plan Consistency Certification

Currently, transit agency short-range transit plans are required to demonstrate financial feasibility through development and submittal of a 6-year financial plan. However, transit plans do not have to be long-range (20 year) plans and, with the exception of specific state direction on Sound Transit's plans, are not required to be certified as being consistent with regional transportation plans. As noted above, the GMA does require local city and county comprehensive plans to be found compatible by RTPOs with the a region's long-range transportation, growth and economic plan, as documented in each regional plan's adopted multicounty or countywide policies. Additionally, the GMA requires that RTPOs conduct a plan consistency review to certify that the local city/county transportation elements are fully consistent with the regional transportation plan. This alternative proposes extending transit agency planning requirements to become parallel with city and county planning mandates by requiring development of long-range transit plans that would be reviewed and certified by RTPOs to determine consistency with the regional transportation plan. Similar to the suggestion in the above alternative for a five-year review and update of the consistency between what has been planned and what has actually been implemented, this idea suggests pursuing improved multimodal concurrency delivery and accountability by having RTPOs conduct an assessment of how consistent city and county transportation elements and transit agency plans are being implemented when compared to what each adopted in their plans. This review/assessment could be incorporated into the five-year update of each region's transportation plan and could help inform the adequacy and viability of achieving the region's development strategy, especially for supporting stronger multimodal development in and between regional centers.

Strengths and Weaknesses

This alternative is *relevant* in that it proposes to place transit modal planning in the same regional transportation and land development planning arena with cities and counties. While this does seek regional integration and coordination of planning for local jurisdictional plans and local transit plans, the continued lack of direct connectivity between local concurrency planning and transit investment/improvement decision suggests a challenge/difficulty in achieving *structural compatibility.* In the absence of regional authority to influence transit resource investment decisions for facilities and services local land use decisions to achieve multimodalism in regional growth centers would still be illusive. And, as with the above alternative, the *political acceptability* of this concept is not highly likely, as it could be seen as diminishing local transit autonomy/authority.

CONCLUSIONS AND RECOMMENDATIONS

CONCLUSIONS

Transportation concurrency is valuable. Washington state's transportation concurrency requirement is an important policy innovation that can enable jurisdictions to balance and manage development with transportation infrastructure and services. However, it still needs refinement to realize its potential. This is in part because it is relatively new—only fifteen years old—and rare—only a few other states employ it—so that Washington is pioneering and evolving its application.

Multi-modal *measures* are essential. Jurisdictions need more complete ways to measure transportation concurrency. At present almost all cities and counties measure only motor vehicle movement. More sophisticated (but not necessarily more complicated) measurement systems as suggested herein should be adopted to begin to measure and monitor how people are riding public transit, carpooling, walking and biking as well as the amount of time they spend getting around in all these modes.

One size does not fit all. No single concurrency measurement system will work for all jurisdictions. The measures that are used should be flexible enough to change from jurisdiction to jurisdiction, depending on the attributes of each location and the transportation system plans for that locality.

Transportation concurrency requires local *and* regional components. Regional cross-jurisdictional travel reflects the essence of a mobile, diverse and economically viable economy. Economics, traffic, and transportation operate on the regional level and can easily overwhelm local transportation concurrency regulations. To achieve the land-use and transportation balance intended by the GMA, transportation concurrency must exist at both the local and regional levels. A two-tier system of transportation concurrency measurement and funding is required. Existing local jurisdiction plans and permitting powers must remain. But a new regional authority that "rewards" transportation efficient land use and supports multi-modal transportation investments must be added.

RECOMMENDATIONS

The project team recommendations are drawn from the report's five strategies. To start with, we recommend that a two-tiered transportation concurrency system be created to provide incentives and disincentives at the regional level while incorporating key transportation system attributes desired by local jurisdictions. Such a system should result in reduced costs for development in centers and corridors served by multiple modes, as well as increased funding support for transportation service. At the same time, control of local development decisions and multimodal measures should remain at the local level, ensuring that new development only occurs when it meets local requirements.

The regional incentive approach will redress limitations in the present concurrency systems that often cause developers to externalize transportation costs, thereby increasing the region's transportation burden. The two-tier system will tie incentives/disincentives to the costs that new development imposes on neighboring communities and the broader public. This should have the effect of encouraging market forces and individuals to choose location decisions and travel behaviors that better serve the metropolitan region as a whole.

Local Multimodal Transportation Concurrency

The project team recommends the use of multimodal concurrency measures that detail the existence (or lack thereof) of the key facilities and services required to serve the geographic subarea for which the concurrency system has been developed, regardless of the mode involved. This means two things: 1) each jurisdiction must have a plan in place that defines the kind of development it wants, and 2) the concurrency measures will change from jurisdiction to jurisdiction, and may even change from subarea to subarea within a jurisdiction.

As with the existing transportation concurrency systems, failure of the "local" portion of the recommended multimodal concurrency system will result in denial of the development permit. That is, if the locally identified transportation system cannot accommodate the proposed development, it may not be built.

In urban centers where the desired street system has been built out, we recommend that measures of multimodal transportation concurrency be *travel-time based*. The measures could be either 1) multimodal travel time between key *activity centers* or along key *travel corridors* or 2) the multimodal travel time between *regional growth centers* and the outer limits of a radius of the average regional work trip distance (currently about 10 miles). The standard against which actual and predicted travel times were compared might be set for both HOV and SOV modes, and if either travel time achieved the adopted standard, the concurrency standard would be met. If neither travel time measure could be met, the jurisdiction would have the option of improving travel conditions for whichever mode could most cost effectively meet the desired performance goal. For example, this might entail providing transit signal priority on arterials along the key routes in order to speed transit and thus improve HOV travel times.

In exurban areas—lightly developed, residentially oriented jurisdictions on the fringe of a metropolitan region—a multimodal concurrency measurement system might be more *facilities based*. One suggested system would combine traditional arterial level-of-service calculations and park-and-ride space availability.[11] In a developing region

[11] The space availability measure could be stated as, "1 unused park-and-ride parking space must exist within the jurisdiction (or within an identified set of park-and-ride facilities) for every 10 new residential trips added by a development." (The ratio of spaces to residential trips could be based on existing park-and-ride usage and residential trip making.)

with a (presumed) lack of transportation infrastructure, the jurisdiction might set its concurrency standard as being met only if both roadway level-of-service and park-and-ride space availability existed. Failure of either standard would require mitigation of that failure by the developer. Where transit, walking, or biking would not reasonably be expected to provide mobility in the future, such as in more sparsely populated rural areas and/or mostly rural RTPO regions, the concurrency system could even be completely auto oriented.

In suburban jurisdictions in growing metropolitan areas, the real multi-modal issue is likely to be the amount of transit service that is present, rather than the performance (travel time) of that service. Cities that were once "suburban" residential communities that are becoming denser could implement a composite transportation concurrency approach that starts with an arterial-based roadway level-of-service calculation and then modifies that calculation as sufficient transit service is provided. For example, an adopted arterial standard might be LOS D unless more than six to ten buses per hour traveled on that roadway during the peak period, in which case the acceptable roadway standard could be LOS E.

Alternatively, the city might designate its central business district as a regional growth center and "exempt" that area from having to meet the LOS standards adopted for other subareas. Instead, it would form a transportation management association (TMA) for that area and work with that TMA to implement appropriate travel demand management (TDM) strategies in order to establish effective alternatives to SOV use during peak periods.

A variety of other alternative multi-modal concurrency measures and their relative merits can be examined in the previous chapter of this report.

Regional Transportation Concurrency

The study team recommends that the state delegate power to regional entities to establish *and* enforce region-wide multimodal LOS concurrency standards. The state legislature has already mandated that regional transportation planning organizations (RTPOs) establish multimodal LOS standards for highways of non-statewide significance to achieve consistency across jurisdictions. Now the RTPO or new institutions—such as the proposed regional transportation commission—should be empowered to enforce transportation concurrency and given greater authority to provide funding incentives to promote development and multimodal options in regional growth centers and key corridors. In the absence of such an institution and authority, multimodal transportation concurrency and the two-tier model will be highly doubtful.

There are two parts to a "regional transportation concurrency" system. The first part is defining what "regionally concurrent" means. The second part is supporting or mitigating specific development proposals once a transportation concurrency determination has been made.

“Regionally concurrent” can be defined on either a technical or a policy basis. If a **technical approach** is selected, a set of key transportation and land-use characteristics are defined that indicate whether a geographic area is “regionally concurrent.” It is then a simple matter of applying these characteristics/criteria and developing a map of “regionally concurrent” and “regionally non-concurrent” areas within the region. The TELUMI model is an excellent example of a tool for developing such a map; it identifies geographic areas that are “conducive to multimodal travel.” Development proposals in these areas would be considered “regionally concurrent” if they also met local development regulations. Because this technical approach defines exactly what attributes constitute a “regionally concurrent” area, any jurisdiction that had subareas that were not “regionally concurrent” but wished to designate them as such would know exactly what types of land-use and transportation system attributes would need to be changed/improved in order to gain that designation.

In a **policy approach,** places in which regionally significant transportation investments and services have been or will be made or deployed would be “regionally concurrent.” For example, the region could define all Growth and Transportation Efficiency Centers (GTECs) as being “regionally concurrent.” It could also define any location within “X-mile” walking distance of a major transit station as being “regionally concurrent.” Once a development proposal had been approved as “regionally concurrent,” incentives in the form of increased funding for multiple modes of transportation infrastructure and/or service would be forthcoming from the regional entity. Several possible funding sources could be prioritized for these areas:

- funding in Regional Transportation Improvement Programs (RTIP) that the RTPO/MPO already prioritizes as an agent of the state and federal government

- funds from mitigation fees collected from approved developments that are not in the “regionally concurrent” areas, and

- funds for transportation infrastructure and service improvements from a potentially new regional transportation commission (assuming it would be given funding authority).

Regional authority should be granted to develop a system of incentives and disincentives designed to encourage development in locations that can be most cost-effectively served by publicly supported transportation facilities and services. The specific incentive/disincentive system would be designed and implemented by each regional authority. Such a system could involve the imposition of “impact charges” on developers based on the costs of servicing new trips being imposed on the regional transportation system. (Those charges would be higher on types of developments that imposed large impacts on the regional transportation system and smaller on developments that imposed smaller impacts. For example, each development might be charged a user fee based on the number of vehicle-miles-of-travel (VMT) that a development was expected to contribute to the regional freeway system.)

However, such “charges” should be a regional option and the regional authority would not have to impose a “charge” based system. It would be free to select any mechanism that it found could best provide incentives to build in areas in which the public cost of meeting that development’s travel demand would be lower, while also imposing disincentives for building in areas in which the public costs of meeting travel demand would be higher. For example, transit oriented developments (TOD) built in a defined (GTEC and/or along an existing high capacity transit route might be exempted from any concurrency review (even at the local level), thus decreasing the development cost and speeding up the permitting process. Developments not built within these constraints would have to conform to local concurrency regulations.

# # #

APPENDIX A:

AN EXAMINATION OF CURRENT LEGAL STATUTES AFFECTING CONCURRENCY

INTRODUCTION

The purpose of this memo is to document state laws requiring and supporting the implementation of multimodal transportation concurrency in Washington. Concurrency, or ensuring public infrastructure supports development as it occurs,[12] is a requirement of the Growth Management Act (GMA) adopted by Washington in 1990. The structure of this memo describes the context of the GMA before addressing the two major parts of concurrency. Each of the parts is described generally, and then by location of powers, followed by a brief discussion of current implementations and notes on legal powers still available for better support of multimodal transportation. The memo then has a short discussion of land-use and inter-jurisdictional cooperation powers that local jurisdictions could use to further multimodal concurrency followed by a cursory review of funding sources linked to new development. The memo closes with a summary of the status of the law and a review of powers available to further multimodal concurrency.

Despite being an important part of the GMA, concurrency has received limited formal review. Only four cases regarding concurrency have reached the appellate court level in Washington and none have made it to the Supreme Court of Washington. Therefore, this concurrency review rests heavily on the text of the RCW and the WAC; where appropriate, local implementations of concurrency are used as illustrations.

THE GROWTH MANAGEMENT ACT

In response to the surging population growth of the 1980s, the legislature adopted the GMA to preserve rural, resource, and ecological lands while encouraging coordinated, planned urban growth. *See* RCW 36.70A.010, 020. Under the GMA, populous or fast growing counties and the cities they contain are required to produce comprehensive plans reflecting a consistent approach to a wide variety of government actions. RCW 36.70A.040. Presently, 29 of Washington's 39 counties are required to complete comprehensive plans compliant with the GMA.

The first three goals announced in the GMA are: promote urban growth, reduce sprawl, and encourage multimodal transportation. RCW 35.70A.020(1), (2), (3). Local jurisdictions are expected work towards these goals in a manner that is tailored to the local situation. *Id*. Where the goals are in conflict with each other, local jurisdictions are empowered to emphasize one goal or goals at the expense of others. Overall, the GMA

[12] In other jurisdictions, this type of provision is referred to as an Adequate Public Facilities Ordinance (APFO).

requires that local jurisdictions follow a planning process but does not that they reach a particular outcome. *West Seattle Defense Fund v. City of Seattle* (*WSDF I*), Cent. Puget Sound Growth Mgmt. Hearings Bd. Case No. 94-3-0016 (4316), FDO, at 60 (1994).

The GMA requires that sufficient transportation capacity exist to accommodate new development. *See* RCW 36.70A.070(6)(b). In meeting this requirement, local governments first decide what transportation options are locally important. Then the jurisdiction decides what balance between supply and demand is appropriate for its community. Once the balance is chosen, the government must enforce it by denying approval for any development that does not maintain this balance. *Id*. Development can still continue in locally congested areas if an improvement or strategy is in place at the time of the development to accommodate the new transit demand or such an improvement or strategy will be completed within six years. *Id*. If no improvement or strategy would accommodate the proposed development's impact, then the jurisdiction may not approve that development. *Id.* A jurisdiction can use these three decisions—what type of transportation, how much, and whether to accommodate increased demand—to enforce its chosen development vision.

THE LEVEL OF SERVICE REQUIREMENT

Description

The GMA requires local jurisdictions to establish a level of service (LOS) methodology and standard for arterials, transit routes, and locally owned transit facilities. RCW 36.70A.070(6)(a)(iii)(B), 36.70A.070(6)(b). An LOS methodology is simply an objective way to quantify transportation system performance. WAC 365-195-210. The GMA does not set a baseline standard for local jurisdictions, but it does require them to set one for themselves. *WSDF I*, FDO, at 60.

Location of Powers

Control over the definition of LOS is held locally. The transportation element of the local comprehensive plan is required to be consistent with county, regional, and state six-year transportation plans, but the only direct oversight of LOS measurements is assigned to the regional transportation planning organization (RPTO). RCW 36.70.070(6)(c). The RPTO is tasked with reviewing, but not changing, local LOS methodologies to promote regionally consistent evaluation of transportation. RCW 47.80.023(7).

Jurisdictions may change or update LOS standards by following the rules governing comprehensive plan updates including public participation requirements. The entire comprehensive plan must be reviewed every seven years, but partial updates may be issued once a year or more frequently if urgent. *See* RCW 36.70A.130(4), (2)(a), (2)(b). In general, changes to a comprehensive plan or to development regulations must be submitted to the department of community, trade, and economic development at least 60 days prior to adoption. RCW 36.70A.106.

Changes to the LOS methodology may be made at any time. *Sammamish Cmty. Council v. Bellevue*, 108 Wn. App. 46, 56 (2001). Comprehensive plans are required to include a LOS standard, but are not required to include the LOS methodology. *Id*. Jurisdictions may change both the technical manner in which LOS is measured and the transportation facilities selected for measurement. *Montlake Cmty. Club v. Cent. Puget Sound Growth Mgmt. Hearings Bd.*, 110 Wn. App. 731, 739-40 (2002).

Present Implementation

Most jurisdictions use a volume-to-capacity ratio (V/C) as their LOS methodology. The V/C ratio "measures whether or not the physical geometry of the roadway provides sufficient capacity for the number of vehicles [attempting to use the roadway]." *City of Bellevue v. E. Bellevue Cmty. Mun. Corp.*, 119 Wn. App. 405, 411 (2003).

Local jurisdictions have adopted a variety of tailored LOS standards. Some cities, such as Seattle, have decided to accept a great deal of congestion. Seattle Muni. Code Exhibit 23.52.004(B). Other cites have set their baseline closer to free flowing traffic. *See, e.g.*, Issaquah Muni. Code 18.15.220(38). Many jurisdictions use different standards for different areas, tolerating greater congestion in the commercial core, for instance, than in residential neighborhoods. *See, e.g.*, Bellevue Municipal Code 14.10.030(A).

Opportunities for Expanded Implementation

Implementations of LOS methods and standards are entitled to the presumption of validity. RCW 36.70A.3201. When challenged in court, they can only be overcome by clear and convincing evidence, not a mere preponderance of evidence. *Id*.

Localities have the power to create LOS methodologies reflecting varied transportation choices. Jurisdictions are encouraged, but not required, to innovate and find new ways to measure their traffic. WAC 365-195-325(2)(e), RCW 36.70A.108(1)(b). More jurisdictions could adopt models like Renton's, which uses a weighted average of travel distances achieved by a single-occupancy vehicle, high-occupancy vehicle, and bus traveling for a half-hour during the afternoon rush hour. City of Renton, 2004 Comprehensive Plan, pg XI-20.

Additionally, jurisdictions have the discretion to select the aspect(s) of transportation mode(s) to measure. WAC 365-195-210 provides "[s]tandards may be expressed in terms such as speed and travel time, freedom to maneuver, traffic interruptions, comfort, convenience, geographic accessibility, and safety." Renton's focuses on speed while Vancouver's uses a mix of average corridor travel speed, the time it takes to clear specified intersections, and a mobility index measuring groups of intersections. City of Renton, 2004 Comprehensive Plan, pg XI-20, Vancouver Mun. Code 11.05.030(A)(2),(8),(9).

TRIP ACCOMODATION REQUIREMENT

Description

If a proposed development would increase traffic on a locally owned facility beyond the LOS standard, then the jurisdiction must deny or delay the development unless improvements or strategies accommodate the new trips within six years. RCW 36.70A.070(6)(b); WAC 365-195-835(3)(d)(iii). Strategies for accommodating new development may include increased public transportation service, ride sharing programs, demand management, and other transportation systems management strategies. RCW 36.70A.070(6)(b). Multimodal improvements and strategies are specifically authorized later in the code. RCW 36.70A.108(1).

If improvements or strategies are not in place at the time of the development, then a financial commitment must exist to complete them within six years. RCW 36.70A.070(6)(b). It is unclear at what point service based accommodations would be deemed "complete" in the meaning of the statute. By their very nature, service accommodations are an on-going process unlike a physical improvement, which has an objective completion point.

A jurisdiction may establish a minimum number of new trips required to trigger concurrency enforcement. A development generating a handful of trips does not require evaluation or mitigation if the jurisdiction includes the trips as part of later system reviews. *See Progress Clark County, Inc., et al. v. City of Vancouver*; Order Finding Compliance; W. Wash. Growth Mgmt. Hearings Bd. (October 30, 2003) (Approving Vancouver Muni. Code 11.95.080 which exempts developments creating 10 or fewer trips from concurrency requirements, but includes the new trips as part of the city's annual concurrency review).

Additionally, jurisdictions are not required to deny, delay, or mitigate development if the local LOS conditions allow the development, but the development would cause a facility owned by the state or a neighboring jurisdiction to fail the applicable LOS test. *See* RCW 36.70A.070(6)(b). For certain state facilities, local jurisdictions are legally prevented from denying development based upon the increased traffic burdens on those state facilities. RCW 36.70A.070(6)(a)(iii)(C).

For developments generating more than a handful of new trips, the standard must be consistently applied and no variance may be granted. *Bellevue*, 119 Wn. App. at 414. A jurisdiction may change the LOS standard in order to allow more congestion in an area, but it may not allow individually selected developments or developers to be exempted from standards the jurisdiction still enforces on others. *Id*.

Improvements and strategies required by concurrency are separate and distinct from development impact fees, although the improvements and strategies may be funded by impact fees. Impact fees can be assessed whenever a development relies on public facilities; concurrency mitigation is only required when the development would overburden those facilities. Impact fees may be spent by the jurisdiction according to its own priorities; concurrency mitigation must directly accommodate the new trips created by the development. *See* Thomas M. Walsh & Roger A. Pearce, *The Concurrency Requirement of the Growth Management Act*, 16 U. Puget Sound L. Rev. 1025, 1026-7 (1993).

<u>Location of Powers</u>

Local jurisdictions have sole authority to approve strategies or improvements necessary to accommodate development. Decisions on how to accommodate the increased demand are often made on a case by case basis, but may be informed by the local needs identified in the transportation element of the jurisdiction's comprehensive plan. RCW 36.70A.070(6)(a)(iii)(F).

While local jurisdictions are empowered to approve service based concurrency mitigation, it is rare for a jurisdiction to directly control the provision of transit service within its borders. Instead, most jurisdictions receive transit service from a provider organized under a Public Transportation Benefit Area (PTBA) (Chapter 35.57A RCW);[13] Washington State Transportation Resource Manual (Updated January 2005), pg. 297. PTBAs are governed by a collection of representatives from the areas they serve. RCW 36.57A.050. As independent organizations, the governing board oversees the operations and management of the PTBAs. RCW 36.57A.080. The governing board includes elected officials from constituent jurisdictions, but the PTBAs are free to set routes and schedules without giving deference to their constituent jurisdictions. *Id.*

<u>Present Use</u>

Improvements and strategies are determined on a case by case basis in each jurisdiction, but most focus on improving physical facilities. Puget Sound Regional Council, *Assessing the Effectiveness of Concurrency: Phase 2 Report – Analysis of Practices*, pg. 52 (2002). Many jurisdictions use a "pay-and-go" approach where the developer pays a portion of the costs of the mitigation and the jurisdiction assumes the responsibility for implementing the improvements or strategies. *Id*.

Jurisdictions using service-based accommodations currently favor travel demand management (TDM). *Id*, pg. 53. In order to address the possibility of future funding shortfalls, Issaquah makes TDM programs a condition of the permit that then runs with the development. *Id*.

[13] There are six exceptions. The cities of Everett, Yakima and Pullman, which run their own municipal systems. The counties of Garfield, Grays Harbor, and King operate systems under different authorizing statutes. Those counties maintain control of both land-use and public transportation in their unicorporated areas. Washington State Transportation Resource Manual (Updated January 2005), pg. 297.

Opportunities for Expanded Implementation

Localities are not limited to physical improvements and may use increased service offerings as a strategy to accommodate development. Additionally, the mitigation is not required to serve the users of the development. If improvements or strategies targeted an off-site location will improve the LOS measurement at the transportation facility impacted by the proposed development, then that mitigation would also be acceptable for the proposed development.

Jurisdictions have limited opportunities for multimodal mitigation since most LOS standards do not account for non-motorized travel and do not count high-occupancy vehicles differently than single-occupancy vehicles. As multimodalism is often weakly reflected in the LOS measurement, jurisdictions have difficulty proving that multimodal improvements or strategies are well targeted for ensuring local facilities meet or exceed the LOS standards.

Limits on the Use of Permit Conditions

Conditioning development permits is a very complicated issue in Washington. Local jurisdictions frequently impose conditions on permit approval instead of simply issuing or denying a permit. The Washington State Supreme Court has recognized that RCW 82.02.020 defines the limits of governmental power to place conditions on new development.[14] RCW 82.02.020 limits the ability of local jurisdictions to impose taxes, fees, or other costs upon development either directly or indirectly. The statute does have exceptions for certain programs and types of fees, but it makes no explicit reference to concurrency.

RCW 82.02.020 states that "no county, city, town, or other municipal corporation shall impose any tax, fee, or charge, either direct or indirect, on the construction or reconstruction of residential buildings, commercial buildings, industrial buildings, or on any other building or building space or appurtenance thereto, or on the development, subdivision, classification, or reclassification of land," except as explicitly provided for in other parts of Chapter 82.02 RCW. Amongst the programs exempted from the strictures of RCW 82.02.020 are: transportation impact fees (RCW 39.92), transportation benefit districts (RCW 36.73.120), "special assessments on property specifically benefited thereby," and system improvement fees (RCW 82.02.050).

When evaluating the legality of permit conditions, RCW 82.02.020 should be preferred to tests based upon the United States Constitution. "[N]either the United States Supreme Court nor [the Washington State Supreme Court] has determined that the tests applied in *Nollan*[15] and *Dolan*[16] to evaluate land exactions must be extended to the

[14] *See, e.g, City of Olympia v. Drebick*, 156 Wash.2d 289 (2006*); Isla Verde Int'l Holdings, Inc. v. City of Camas*, 146 Wash.2d 740 (2002); *Benchmark Land Co. v. City of Battle Ground*, 146 Wash.2d 685 (2002).

[15] *Nollan v. California Coastal Commission*, 483 U.S. 825 (1987) (Holding that requiring a property owner to grant the public a beach access easement was not sufficiently related to the loss of the public's views of the ocean).

consideration of fees imposed to mitigate the direct impacts of a new development, much less to the consideration of more general growth impact fees imposed pursuant to statutorily authorized local ordinances." *City of Olympia v. Drebick*, 156 Wash.2d 289, 302 (2006) (Citing *City of Monterey v. Del Monte Dunes at Monterey, Ltd.*, 526 U.S. 687, 702-03 (1999)). RCW 82.02.020 also includes restrictions on the exaction of land as a condition of permit approval.

In addition to limiting taxes and fees on developments, the RCW 82.02.020 prohibits "voluntary agreements for local off-site transportation improvements within the geographic boundaries of the area or areas covered by an adopted transportation program authorized by chapter 39.92 RCW." As defined in RCW 39.92.020(5), off-site transportation improvements are improvements already provided for in a transportation plan. This limited definition implies that transportation improvements that are not on the same land as the development, but that are not already provided for in the transportation plan, can be provided by a developer through a voluntary agreement if they are "reasonably necessary as a direct result" of the proposed development. This result is consistent with the goal of preventing duplicative fees found in RCW 82.02.050(1)(c).

While local jurisdictions generally limit mitigation conditions to provision for physical infrastructure such as roadways and sidewalks, they have the authority to require new development to contribute towards its increase in demand for transportation services as well as the physical infrastructure. See *infra* TRANSPORTATION SYSTEM FUNDING.

LAND USE AND COOPERATION POWERS

Multimodal transportation depends on certain land-uses patterns, such as dense development, to support it. *See*, *e.g.*, RCW 81.104.080. Local jurisdictions have the land-use authority to create density in numerous ways, including zoning requirements and tax incentives. While land-use powers are located in individual jurisdictions, the traffic impacts often span the transportation facilities of multiple jurisdictions. Concurrency implementations must implement the land-use element of the jurisdiction's comprehensive plan and consider the effects on neighboring jurisdictions. *See* RCW 36.70A.070(6)(a)(v). Local jurisdictions do not have to express deference to the plans of neighboring jurisdictions; only consideration is required. *Id*.

Land Use

Land-use planning and transportation planning is formally divided. The separation between land-use planning and transportation planning is present in numerous places within the law. For example, RCW 35.77.010 requires a public hearing to evaluate the transportation plan and RCW 35.63.100 requires a public hearing to evaluate the land-use plan. Nothing in either provision prevents both hearings from being held jointly, but a

[16] *Dolan v. City of Tigard*, 512 U.S. 374 (1994) (Finding that the city could not require a property owner to contribute land to a community river walk as a condition of allowing a building and parking lot to be enlarged).

joint hearing is neither required nor suggested. Land-use planning and transportation planning are also divided in the GMA. In a comprehensive plan, the transportation element must "implement" the land-use element, but the land-use element is not similarly bound. RCW 36.70A.070(6).

In rare instances, land-use authority is held without any transportation authority. The community councils which Bellevue has incorporated, for instance, retain land-use control of their geographic regions while possessing no transportation powers of their own. *Bellevue*, 119 Wn. App. at 410. Another instance is the Columbia Gorge Commission which has the authority to veto developments within three Washington counties and three Oregon counties, but is without any transportation powers. *See* RCW 43.97.015(a)(2),(3),(4). Such clear separation is unusual, but it highlights the way in which the two powers are often viewed independently. More often, transportation power is held without land-use power; only five areas of the state control both land-use and public transportation: the cities of Everett, Yakima, and Pullman and the unincorporated areas of Garfield and King counties. Washington State Transportation Resource Manual (Updated January 2005), pg. 297.

Local jurisdictions can not use the concurrency provision to prevent development outside their boundaries. Comprehensive plans, though, are required to evaluate the impact of their land-use and transportation decisions on the transportation systems of neighboring jurisdictions. RCW 36.70A.070(6)(a)(v). And a few jurisdictions, such as Bellevue, have unilaterally decided to disallow concurrency mitigation within its boundaries that would have the effect of shifting concurrency problems to neighboring jurisdictions. Bellevue Muni. Code 14.10.050(D)(6).

Interlocal Agreements

Interlocal agreements can be used to achieve inter-jurisdictional concurrency, mass transit provision, and enforce lockstep coordination. In Washington State, every power held individually by any two or more local jurisdictions can be shared by those jurisdictions. RCW 39.34.030. Therefore, local jurisdictions that find it useful may agree with each other to enforce concurrency not only for their own facilities but also for those of the other. King County formally provides such arrangements. King County Code 14.70.290(B),(D).

Jurisdictions may also use intergovernmental agreements to engage in partnerships with transit providers. Bellevue, for instance, is part of a long-term partnership with King Country Metro, Sound Transit, and the Bellevue Downtown Association to reduce single-occupancy vehicle trips.

Regional Transportation Planning Organizations

RTPOs, such as the Puget Sound Regional Council, are established through Chapter 47.80 RCW. RTPOs are "formed through the voluntary association of local governments" and must have as members at least 60 percent of the governments within their area representing at least 75 percent of the residents. RCW 47.80.020. RTPOs can also be designated as Metropolitan Planning Organizations for the purposes of federal law. RCW 47.80.020; 23 U.S.C. § 134(d)(1)(B).

An RTPO has the authority under both state and federal law to develop a transportation plan for its region. RCW 47.80.023(5), 47.80.030(1); 23 U.S.C. § 134(i). The plan must "set[] forth a proposed regional transportation approach, including capital investments [and] service improvements." RCW 47.80.030(1)(f). "All transportation projects . . . within the region that have an impact upon regional facilities or services must be consistent with the plan . . . ." RCW 47.80.030(3). The RTPO also has responsibility for certifying "that the transportation elements of comprehensive plans adopted by [local jurisdictions] within the region … are consistent with the adopted regional plan. …" RCW 47.80.23(3).

Another duty of RTPOs could be very useful in promoting multimodal concurrency. State law grants RTPOs the authority to "review LOS methodologies used by [local jurisdictions] to promote a consistent regional evaluation of facilities and corridors." RCW 47.80.023(7). When connected with their comprehensive plan certification responsibility, RTPOs have the power to withhold certification of the transportation elements of local plans if the local plan features an LOS methodology inconsistent with the one designated by the RTPO. The RTPO is not granted any explict authority over LOS standards, just measurement methodologies.

Regional Transportation Commission

The 2006 legislature created a new governmental task force in the central Puget Sound region. The Regional Transportation Commission (RTC) is tasked with providing a review and evaluation of transportation planning and provision in the central Puget Sound region. *See* RCW 36.120.020(8)(e). Part of the RTC's task is to propose a "regional transportation governing entity", its powers and its funding. 2006 Wash. Legis. Serv. Ch. 311 (S.H.B. 2871) (West). At this time it is too early to speculate about the results of the RTC's work.

TRANSPORTATION SYSTEM FUNDING

The funding tools available to local jurisdictions are complex and potentially overlapping. Funding tools for local improvement of transportation faculties is found in three major parts of the RCW: mitigation for impacts on the transportation system under the State Environmental Policy Act (SEPA) in RCW 43.21C.060; system impact fees provided under the GMA provision codified at RCW 82.02.050; and transportation impact fees set forth in RCW 39.92.040.

Regardless of the system used, reassessing how local jurisdictions evaluate transportation impacts could increase development incentives for multimodalism. Most jurisdictions currently assess transportation impacts of new development as the number of new vehicle trips starting or ending at the proposed development during the evening rush hour. As a result, developers are charged equally per trip regardless of the development's location relative to complementary land-uses within the jurisdiction. Jurisdictions have the authority to evaluate the impact based upon additional factors such as the mode of transportation used by each trip or the number of miles traveled per trip. For example, Redmond bases its impact fees on the average vehicle miles traveled per trip. Redmond Municipal Code 20D.210.10-120.

Washington's State Environmental Policy Act

Local jurisdictions often use Washington's State Environmental Policy Act (SEPA) for evaluating and reducing the impacts of a proposed development. SEPA allows local jurisdictions to condition permits and other actions in order "to mitigate specific adverse environmental impacts. …" RCW 43.21C.060. Any such conditions must "be reasonable and capable of being accomplished." *Id*. Mitigation, defined by WAC 197-11-768(4), includes measures for "[r]educing or eliminating the impact over time by preservation and maintenance operations during the life of the action."

The transportation system is one of the environmental factors evaluated for significant impacts under SEPA. WAC 197-11-144(2)(c), as authorized by RCW 43.21C.110(1)(f).

Fees imposed under SEPA authority may not be legally enforceable. RCW 82.02.020 does not exempt mitigation under SEPA from the blanket prohibition against taxes or fees placed upon development. But RCW 82.02.100 contemplates the possibility of SEPA fees overlapping with other impact fees. RCW 82.02.100 states that fees shall not be collected under both RCW 43.21C.060 and RCW 82.02.050 for the same improvement, it is possible that the contemplated SEPA fees are fees-in-lieu of an action or land dedication and not direct fees. If RCW 82.02.100 is interpreted to apply only to fees-in-lieu and not direct fees, then fees imposed on SEPA would conflict with RCW 82.02.020.

Local jurisdictions can, subject to defined criteria, encourage density by exempting infill development consisting of "new residential or mixed-use development" from the requirements of SEPA. Such exemptions must be categorical and are limited to areas where the density is less than the density called for in the comprehensive plan. RCW 43.21C.229.

System Improvement Fees

RCW 82.02.050 authorizes local jurisdictions to impose fees upon new development for the development's impact on various capital facilities systems within that jurisdiction. Since the money is restricted to implementing sections of the capital facilities plan, system improvement fees are only useful for non-service based multimodal efforts such as HOV lanes.

In 2006, the Washington State Supreme Court upheld the City of Olympia's assessment of system improvement fees on a development near the city limit. *City of Olympia v. Drebick*, 156 Wash.2d 289 (2006). The fees were based upon the cost of transportation improvements necessitated by projected growth divided by the number of new trips expect. *Id.* at 304. The developer argued that many of the trips generated by the proposed development would leave the City of Olympia's street system after a short distance and therefore the development would not be benefit by improvements to the larger system. *Id.* at 310. The court found that "[n]otably . . . the legislature did not require that the funded facilities be *directly* or *specifically* related and beneficial to the development seeking approval." *Id.* at 301. The court held it was sufficient that the fees funded improvements that "'when considered as a whole'" benefited the proposed development. *Id.* at 305 (quoting the findings of the Hearing Examiner).

Transportation Impact Fees

Chapter 39.92 RCW allows local jurisdictions to impose transportation impact fees based upon the expected costs of accommodated development within a defined area. Local jurisdictions have it within their power to encourage development in certain areas by creating distinct transportation impact fee areas with different fees. RCW 39.92.030(1). If distinct areas are drawn, the improvements funded by the fees collected in the different areas must also be distinct. *See id.*

Transportation impact fees include some provision for multimodal transportation. Like system improvement fees, transportation impact fees are focused in capital facilities but the fees themselves must take into account the developer's involvement with trip reduction programs. RCW 39.92.030(3),(6). Accounting for trip reduction programs is further supported by the clause requiring transportation impact fees to be "reasonably necessary as a direct result of the proposed development." RCW 39.92.030(4).

Local governments choosing to use the transportation impact fees set forth under Chapter 39.92 RCW forgo their ability to enter into voluntary agreements with developers to complete any improvements that are present in their transportation plans. *See* RCW 82.02.020. This limitation on transportation impact fees is not placed on system improvement fees. *Id.*

CONCLUSION

At present, nothing in the law prevents multimodal concurrency. Indeed, many parts explicitly support it. In theory, relevant jurisdictions possess the powers to make it a reality. But exercising some of those powers require the commitment of significant local resources.

In furthering multimodal concurrency, the most important legal step a jurisdiction takes is selecting how to measure LOS. Not only does the measurement methodology reflect the jurisdiction's transportation vision for how people and goods will move within its boundaries, but it also determines how funds can be spent to accommodate new transportation demand. Currently, jurisdictions are varying the LOS standard to reduce concurrency pressure in target areas and they are very successful at working with developers to accommodate new growth. However, they are still evolving in determining how to integrate multimodalism in their development review processes.

Regional LOS coordination is also an important step. Coordination of LOS standards would be more effective if a region employed a uniform LOS methodology. In King County, for instance, most jurisdictions implement LOS differently than their neighbors making coordination of the LOS standards like coordinating apples with oranges. Explicitly empowering counties or RTPOs to propagate a single methodology, or set of compatible methodologies, would enhance regional transportation analysis. The new requirement that RTPOs create a measurement of total multimodal capacity for regional growth centers creates a regionally applied methodology for the first time. RCW 47.80.030(1)(f).

APPENDIX B:

A GENERAL DISCUSSION OF TRAVEL DEMAND MANAGEMENT (TDM)

INTRODUCTION

Travel demand management (TDM) has been defined in a number of ways. Some researchers limit TDM to strategies and actions that reduce the demand for travel while others include supply side activities under the general discussion of TDM. The examples provided below attempt to find a balance between the extreme perspectives and include strategies that enhance the supply of alternative modes of transportation and reduce the demand for single-occupant vehicles. Some categorize TDM on the basis of the influence of the policies. For example, Litman (2006) defines TDM strategies on the basis of the benefit to consumers for their usage: positive incentives, mixed, and negative incentives. TDM strategies can be described on the basis of the scale of their impact, the travel purpose, the method used to influence demand, and the justifications for participating in TDM activities. The scale of impact can be characterized in a manner similar to many land-use and transportation impacts: site scale, area-wide (neighborhood, or sub-area of region) and region-wide. Travel purpose can be separated into commuter (work-related), shopping (neighborhood goods and services), and tourist. Methods to influence demand include voluntary action, pricing strategies, and regulation. Justifications for participating in TDM include the following:

(a) environmental health and protection (an increase in public (and employee) health through reduced air pollution and lower levels of stress)
(b) improvement in regional mobility and thus economic health
(c) transportation choice (enhanced customer access and efficient land-use patterns that enhance transportation choice)
(d) community livability (connection of trip reduction to core business (e.g., telecommunications technologies for telecommuting))
(e) reduced congestion and decreased parking demand
(f) extended hours of service through alternative work hour programs
(g) enhanced ability to recruit and retain staff
(h) opportunities for creative and flexible space planning and sharing
(i) mitigation of new development traffic impacts at a fraction of the cost for new physical improvements
(j) improved productivity (especially through telecommuting)
(k) consumer savings (vehicle costs)
(l) road safety for all users of the transportation system.

A DEFINITION OF TDM

Travel demand management is "any action or set of actions aimed at influencing people's travel behavior in a way that alternative mobility options are presented and/or congestion is reduced." (Meyer 1999) Four types of such action include the following:

(a) moving travelers to alternative transportation modes or services that result in higher vehicle occupancy
(b) providing incentives and disincentives to reduce travel or to push trips to off-peak hours
(c) accomplishing the trip purpose through non-transportation means
(d) changing the pattern of activity through the coordination of land use and transportation.

Examples of TDM strategies that encourage shifts to alternative modes include carpools, vanpools, and providing additional transit. Strategies to reduce travel to off-peak include congestion pricing, parking pricing and management, employer-based ride sharing and transit-subsidies, park-and-ride facilities, flexible work hours, and alternative work schedules. TDM strategies that accomplish the trip purpose through non-transportation means reduce the need for travel. These strategies include telecommuting, home shopping, and other such strategies whereby the need for a trip is eliminated entirely. These actions can be used in combination with each other rather than depending upon one type of action to the exclusion of the others. TDM strategies that change the pattern of activity thorough coordination of land use are designed to reduce the impact of the transportation through five different effects: (a) reduced automobile trip generation, (b) higher rates of internal capture, (c) mode shift to walking and/or transit, (d) change in activity pattern (more and/or different trip chaining), and (e) shorter trip distance. These strategies include transit-oriented development (TOD), regional activity centers and other smart growth strategies that enhance the multimodal environment through increased density, better neighborhood connectivity, and mixed land use.