ISSUE IDENTIFICATION

This section discusses problems identified with the current concurrency process. It identifies areas that the project team believes need to be addressed if changes are made to the current process. Issues identified include technical, political, institutional, and financial shortcomings that either cause inaccurate output from, or are not addressed well within, the current concurrency process. These issues were raised by participating city staff, interested stakeholders, or the project team through the project interview process and the literature review. Table 2 provides a summary list of these issues.

Table 2: Problems and Issues Identified With The Current Process

Issue	Technical	Political	Institutional	Financial
Computed v/c Ratios May Not Be Accurate - V/C Ratios	X			
Computed v/c Ratios May Not Be Accurate - Undervalued Non-automobile Travel	X			
Computed v/c Ratios May Not Be Accurate - Different Computational Procedures	X			
Adopted Concurrency Standards Are Limiting Desired Local Growth in Some Places	X	X		
Regional Traffic Growth Is Limiting the Effectiveness of Concurrency	X	X		
Non-automobile Travel Is Not Truly Considered	X	X		
There Is No Agreement on How to Estimate the Effect of TDM	X			
Each City Views the Objectives of Concurrency Differently and Thus Uses Concurrency Differently		X		
Some Cities Do Not Have a Clear Vision of How They Should Develop		X		
The Public Does Not Understand the Growth Choices Available		X		
Too Much Uncertainty Is Associated with the Concurrency Process		X		
No Guarantees Exist That Transit Service Will Remain as Planned			X	
Current Funding Sources Are Insufficient and Are Heavily Skewed toward Capital Projects				X
There Is No Way to Fund New Ongoing Operations Costs through Concurrency Fees		X		X
Too Many Resources Are Used for Concurrency Calculations				X

In general, these issues define limitations of the current concurrency procedures. Addressing these limiting factors so that cities can more effectively manage new development and transportation system improvements will require exploration of other "issues" that are not discussed in the following section. Issues for further analysis are introduced in the final section of this paper.

Computed v/c Ratios May Not Be Accurate (Technical Issue)

The project team heard or identified several concerns about the accuracy of level-of-service computations used by the four cities. Three sub-issues are reflected in those concerns about accuracy. The first issue is that the public's perception of traffic congestion is worse than the reported v/c ratios. The second is some transportation professionals' concern that the current process undervalues non-automobile travel and thus does not accurately reflect the current transportation system. The third is the concern that different cities use different computational procedures, resulting in the public perception that some cities are "cooking the books" in favor of specific, pre-determined outcomes.

V/C Ratios (Technical Issue)

The first of these issues stems in part from problems with using v/c to compute level-of-service and in part from the inability of the volume estimation process to accurately reflect the "true" peak period traffic volumes. This is because on a congested street, measured traffic volumes are often lower than those associated with roadway "capacity." This is because heavy congestion causes vehicles to slow down, resulting in throughput below maximum levels. A traffic count taken during this condition reports a volume that significantly under-represents actual traffic demand for that street. When such a "low" volume statistic is used to compute v/c, the resulting ratio predicts a better level-of-service than actually exists.

While four-step planning models have capacity constraints built into their highway assignment algorithms, they do allow predicted traffic volumes to exceed "capacity" as an indicator that roadway demand exceeds capacity. When this occurs, the predicted v/c ratios are greater than 1.0, which indicates the occurrence of significant congestion. (Note that an actual traffic count taken at such a location, under those conditions, will show low volumes and significant congestion.) The ability of the forecasting process to predict v/c ratios above 1.0 is used by the cities to predict LOS failures as part of the concurrency review process.

Thus, four-step model output does not necessarily suffer from the limitation of "congestion caused" volume reductions and their effect on v/c computation. However, because four-step model volume outputs are compared with actual ground counts as part of the calibration and validation process, they are subject to being biased by the calibration process to under-estimate traffic volumes on congested roads. This is particularly true with models for which re-calibration efforts are undertaken to account for the effects of travel demand management strategies that are not effectively tracked in the mode split model.

Consequently, any vehicle volume-based approach to level-of-service computation will suffer from this same problem, regardless of whether it computes v/c directly or uses the basic v/c ratio to compute a related statistic (e.g., total delay) or level-of-service value.

A second problem that effects the "accuracy" of v/c based level-of-service computations when they are compared to the general public perception of congestion stems from the timing of traffic volume counts. The concurrency process assumes that "peak" conditions occur in the PM peak period (evening rush hour). In many locations, this time period is not when peak traffic demand occurs. Instead, peak traffic demand can occur on weekends (when shopping trips are highest), on Friday evenings (because of recreational movements), earlier in the day (because of traffic movements to/from schools), or during peak seasonal events (such as Christmas shopping periods). Because the public experiences and remembers these "actual peak" conditions, they are skeptical of level-of-service conditions being reported that do not reflect these same extreme levels of congestion.

Unfortunately, current traffic planning and forecasting procedures do a poor job of estimating non-commute trip travel patterns. Adding to this problem is the fact that "peak" conditions in one part of a zone may easily occur at different times of the day and/or year, which makes it especially difficult to compute an "accurate zonal average" v/c ratio for all intersections or roadway segments in a zone. In many cases, cities even lack the data needed to accurately describe the size, timing, and duration of these "unusual" peak conditions, because permanent data collection capabilities are needed over wide geographic areas to accurately measure and record these events, and the cities can not afford these data collection efforts. The result is an inability to accurately measure and model many of the peak conditions experienced by the public.

Undervalued Non-automobile Travel (Technical Issue)

The second major "accuracy" concern is that the v/c-based computational process does not accurately reflect all travel in a zone. This basic concern appears to be quite true. In zones where few alternatives to the car exist, the basic v/c process works reasonably well (subject to the limitations discussed above and elsewhere in this report). However, where transit service or other non-automobile modes serve a significant portion of current or planned trips, the current v/c-based procedures undervalue the mobility provided by these modes of travel and thus tend to present a view of transportation system concurrency that is inappropriately skewed toward roadway performance. The incorporation of non-automobile travel within the concurrency process is covered in more detail in another subsection below.

Different Computational Procedures (Technical Issue)

The last issue relates to the accuracy of the alternative procedures used by the four cities. The project team is confident that the differences in equations and algorithms used by the four cities are not a major source of inaccuracy. Instead, each city is using a reasonable, professionally accepted approach to the computation of v/c. As noted earlier in this report, the observed differences simply reflect the local choices made by the cities as they attempt to use the concurrency process to meet their specific needs and interests. Any "inaccuracy" is caused not by the differences in technique used but in the assumptions required to develop vehicle volumes input into those procedures.

Adopted Concurrency Standards Are Limiting Desired Local Growth in Some Places (Technical and Political Issue)

In almost all cases where concurrency is limiting development desired by the local jurisdiction, the "concurrency failure" is in large part caused by increases in pass-through traffic, both generated in and bound for areas outside of the local jurisdiction. These non-local traffic volume increases use road capacity that then becomes unavailable for serving local land use development. In some areas, regional traffic growth has caused roadway congestion to increase beyond concurrency standards initially adopted by the city.

At the same time, increases in roadway capacity on these routes would result in publicly unacceptable decreases in quality of life within the local area.

The root cause of these difficulties is discussed in the following subsection.

Regional Traffic Growth Is Limiting the Effectiveness of Concurrency (Technical and Political Issue)

Concurrency is intended to provide local control over the interaction of land use and transportation. However, by focusing exclusively on the local transportation impacts of land use and excluding the regional impacts, the current process has inadvertently created a system that causes loss of local development control for areas with roads that carry significant regional traffic volumes. This "local only" focus has also skewed land-use development decisions to favor those developments that can minimize local transportation impacts and maximize regional impacts.

By law, concurrency is defined by local conditions, and any fees generated for traffic mitigation must be spent on impacts directly attributable to the development. Thus, real but "less direct" regional impacts occur without mitigation. For example, a development in Kent increases the number of people driving up I-405 and on SR 520 to Redmond's Microsoft campus. This increase in traffic increases congestion on these routes and shifts commuters traveling from Issaquah to Redmond away from I-405 and onto 148th Ave. Concurrency does not recognize these real impacts on 148th Ave, nor does it provide funds to mitigate them. Yet this increase in traffic on 148th Ave can prevent further development contemplated in Bellevue's comprehensive plan because the "extra" traffic now using this street cause a failure of the v/c based concurrency standard.

Adding to the problems this regional pass-through traffic creates is the fact that no funds exist to mitigate the "Kent caused" traffic increase, and Bellevue residents object to the road expansion plans that would be necessary to lower the v/c ratio for that street.

The above example illustrates how the "local only" focus of concurrency can easily result in a loss of actual local control over both facility performance and local development.- State routes are specifically exempted from concurrency calculations, yet congestion on state routes causes travelers to divert onto "local" roads. These "extra" pass-through vehicle trips often create "local" concurrency failures that can not be mitigated with transportation strategies acceptable to local residents and businesses. In large part no local transportation changes other than roadway expansion can affect these trips, since the trips themselves start and end outside of the local area. They are thus not affected by local land-use actions or local TDM measures. Instead, they simply use up "local" roadway capacity and limit local development.

For developers, this "local only" review of concurrency results in a large incentive to build sprawl style developments in undeveloped, uncongested areas and considerable disincentive to develop in existing urban centers. This is precisely opposite to the intent of Washington's Growth Management Act which is to encourage development in urban areas and reduce the inappropriate conversion of undeveloped land into sprawling, low-density development (RCW 36.70A.020), and is inadvertently being caused by the exclusive application of roadway LOS standards which favor development in less dense areas away from centers and closer to the edge of the Urban Growth Area. Costs imposed to help roads meet concurrency standards mean that developments must internalize the cost of mitigation required to meet local concurrency failures, but current regulations externalize the cost of regional concurrency failures and other regional trip impacts. This provides a strong economic incentive to build in low density areas that have less chance of "tripping" local concurrency levels. These development locations are not easily or effectively served by non-auto modes, and thus the vast majority of trips they generate require single occupant automobile travel. Since regional impacts are ignored, no incentive exists for the developer to mitigate the impacts of those trips. For example, in the 148th Ave illustration above, no incentive exists for the Kent developer to fund the regional transit facilities (e.g., park and ride lots, expanded transit service) necessary for making transit a viable travel option to Redmond, in order to reduce SOV trips on I-405.

Thus, because the current concurrency process ignores "concurrency failures" that are not geographically close to the development or that occur on state routes, it encourages development that exacerbates those problems. These problems in turn create congestion in communities that contain regional transportation facilities, and that congestion effectively eliminates that community's ability to control its land-use decisions relative to its traffic congestion levels.

Non-automobile Travel Is Not Truly Considered (Technical and Political Issue)

When asked by PSRC, all four cities indicated that they use a "multi-modal" approach to level-of-service computation. At first glance, this seemed a somewhat surprising response to the project team since the concurrency determination is based exclusively on roadway v/c.

Cities answered "multi-modal" to PSRC's questionnaire because in both the "project specific" and "four-step modeling" procedures, a mode split estimation is performed, and "non-driver" trips are removed from the vehicle volume estimates. Thus, the effects of transit usage, walking, biking, and other forms of transportation to and from new developments are removed from the v/c calculations used to compute level-of-service. Consequently, the current processes are indeed "multi-modal."

This definition of "multi-modal" has an interesting effect. In theory, for all four jurisdictions, if the roads serving a geographic area were "congested," no development would be permitted in that area, even if it were served by a rail transit line where "extra" capacity existed and 95 percent of new peak period trips were served by that rail line (unless the developer was somehow able to build additional roadway "capacity"). This is because all four cities currently incorporate only roadway congestion in the "definition" of concurrency. Thus, the process may be considered "multi-modal" technically speaking, but functionally the determination of concurrency is based strictly on roadway conditions.

There Is No Agreement on How to Estimate the Effect of TDM (Technical Issue)

Many key travel demand management actions (carpool formation programs, building-based transit pass subsidization programs, guaranteed ride home programs, the provision of bike lockers and showers) are not directly accounted for in the mode split models used to forecast future transportation system mode split and performance. This is both because no nationally accepted guide similar to ITE's *Trip Generation* book exists for these programs, and because the mode split models used in the BKR and Issaquah four-step modeling efforts do not include these items as input variables. In addition, the four-step planning mode-split models use zonal average input variables, and thus development specific TDM programs are not even potential model inputs (assuming the mode split model could be redesigned and calibrated to include them).

While each city uses the best available information to determine the effects of specific proposed TDM improvements for each development review, the lack of a common national standard makes effects of TDM actions subject to "second guessing" by groups participating in the concurrency review process. This in turn slows down the process, makes its outcome less predictable, and leads to considerable disagreement about its accuracy.

Each City Views the Objectives of Concurrency Differently and Thus Uses Concurrency Differently (Political Issue)

While all cities agree on the basic goal of concurrency (keeping transportation improvements in step with development), the more practical objectives of each city differ, depending on their individual needs, pressures, and situations. These differences lead to different approaches to calculating concurrency. These differences generally result in concurrency outcomes that address specific local objectives. Thus, a single "consistent" approach to concurrency is unlikely to be acceptable across all four cities.

Some Cities Do Not Have a Clear Vision of How They Should Develop (Political Issue)

Many jurisdictions and most of the general public do not have a clear vision of how land use is expected to change in the future (either short- or long-term) and how the transportation system needs to change to meet that growth. Without an agreed upon vision, review of individual development projects is very difficult, and the determination of required mitigation fees is haphazard. If a clear vision can be expressed and agreed upon <u>for both land use and transportation system changes,</u> it will be much easier to compute the cost of required improvements and to assign those costs appropriately.

Having a clear vision also eases the task of communicating what that vision is and how a given development project or transportation improvement will fit into that vision.

Ideally, each city's vision includes both a concept of its own transportation/land-use system and how that system both contributes to and fits within the regional transportation/land-use vision.

<u>The Public Does Not Understand the Growth Choices Available (Political Issue)</u>

Broad public support exists for each of the following four statements: 1) "I want to drive my car." 2) "I don't want the impacts from roads hurting my neighborhood's quality of life." 3) "I want to develop my property to maximize its value." and 4) "I want to pay lower taxes." Large segments of the public do not understand that these choices are mutually exclusive, in that increasing car use requires increasing roadway space (or increasing congestion), and that space invariably comes at the expense of some existing neighborhood's quality of life. The public does not actually have the choice of "development or no development," as state law requires each jurisdiction planning under GMA to accept its share of projected growth. The real choice is, "Where and how do we develop?" Public officials and city residents might find the concurrency dialogue easier with the understanding that pushing growth elsewhere often does not relieve the local area of growth impacts, just the possible benefits from local growth. (See the effects of pass-through traffic above.)

The existing concurrency process does not help explain these choices and does not make the broad consequences of specific development decisions clear.

<u>Too Much Uncertainty Is Associated with the Concurrency Process (Political Issue)</u>

Members of the development community interviewed by the project team were uniform in their frustration with the current process, both in terms of the delays it caused in the development process and in terms of the uncertainty associated with the costs imposed on their developments.

For cities where developers can "buy their way out" of concurrency failures (usually by funding projects or programs that allow roadways to operate within the concurrency standards adopted by the city) developers complained about the variability of these costs, and the delays in determining just what those costs would be. In general, when considering development of a parcel, developers would like to have a better, and earlier, understanding of what size of development will fit within existing concurrency standards, what transportation improvements could be made to keep a larger development within concurrency standards, and what the costs associated with those improvements would be. This information is needed early in the development process in order to make informed business decisions.

Even without the presence of added "concurrency related fees" that allow developments to stay within concurrency standards, developers were unhappy with the time required to learn whether their proposals were permissible within existing standards, and to negotiate changes (smaller size, adoption of specific TDM programs) that allowed their proposals to remain within standards.

No Guarantees Exist That Transit Service Will Remain as Planned (Institutional Issue)

In this region, transit service is a county or regional agency function, but concurrency is a local jurisdiction function. Cities have relatively little control over the amount of transit service provided and the routing of that transit service. Because cities have relatively little control over the transit service provided to a given development, there is concern that reliance on transit as a long-term travel mitigation measure is impermanent and therefore risky.

Current Funding Sources Are Insufficient and Are Heavily Skewed toward Capital Projects (Financial Issue)

The PSRC Phase 1 Concurrency report[2] noted that over 70 percent of responding jurisdictions indicated that developer fees pay less than 10 percent of the costs of needed transportation improvements. When added to the reduced transportation funding available from state and federal sources, the result is that the cities face a significant deficit when comparing transportation needs with available revenue. Because it does not pay for all associated costs, new development further exacerbates the revenue problem, and the "regional" trip problem noted above makes the situation even worse.

As a result, the concurrency process frequently becomes one more way to generate transportation improvement funds, rather than a "go/no go" development switch. In areas already "non-concurrent" this results in a bias toward large developments that are more likely to be able afford the mitigation fees required to permit increases in travel activity.

[2] Implementing Destination 2030, Assessing the Effectiveness of Concurrency: Phase 1 Report, Survey Results, January 2002, PSRC

Another drawback of the current approach to concurrency is that it further exacerbates the emphasis on capital projects to the detriment of operational improvements. This occurs because concurrency funds are spent on capital projects, and they must be matched with local funds, since concurrency fees can only be proportional to the impact of the development. Thus concurrency becomes a drain on existing local funds that might be used for operational improvements.

There Is No Way to Fund New Ongoing Operations Costs through Concurrency Fees (Financial and Political Issue)

By law, traffic impact fees must be spent on mitigation of direct impacts. Similarly, concurrency related "fees" must be spent in a way that allows impacted streets to lower their v/c ratios to the point where the proposed development does not violate the existing v/c standards. This has traditionally meant capital improvements (particularly given the use of v/c as the measurement criterion). The project team has found no mechanism to date that allows a city to collect and spend mitigation funds (either impact fees or concurrency specific fees) slowly over time to provide ongoing operational improvements—such as new bus service, periodic signal retiming, or general TDM program funding—that would add the necessary additional transportation system capacity in place of increasing roadway capacity. (Note that Redmond has developed a mechanism that allows it to negotiate an agreement with a developer where the developer funds the on-going TDM program, rather than providing the money to the city, which can then fund the TDM effort. This agreement then becomes legally binding on future property owners.)

In locations where roadway expansion is not acceptable, operational improvements are the only available mechanism for increasing person and vehicle throughput. If funds are not available to maintain those operational improvements, either congestion will increase or desired development will be prevented.

One potential way to begin to approach this problem is in use in Redmond. Redmond allows developers to propose long term TDM activities as part of their traffic mitigation plan. A key here is that funding and operation of the TDM program remains in the control of the property owner (and with subsequent property owners), and that the development must continue to generate traffic levels at or below agreed upon rates. These agreements become a legal requirement tied to site approval and remain as covenants with the property.

The primary limitation with this approach is that control of funds remains with the property owner. This may hamper a city's ability to combine these funds to provide a more effective TDM program or fund operational improvements (such as new bus service) that might have a greater impact on transportation system performance.

Too Many Resources Are Used for Concurrency Calculations (Financial Issue)

Each of the cities interviewed indicated a desire to reduce the staff time and resources needed to perform concurrency reviews. Their concerns mirrored the developers' concerns in that too much time was required to determine the concurrency standing for specific developments and then determine the required/acceptable mitigation required from developments.