

*CITY OF SPOKANE
LEVELS OF SERVICE STANDARDS/
CONCURRENCY MANAGEMENT SYSTEM
Preliminary Program*

Prepared for:

*Huckell/Weinman Associates
and
City of Spokane*

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Prepared by:

*The TRANSPO Group, Inc.
11730 118th Avenue NE, Suite 600
Kirkland, WA 98034-7120
(425) 821-3665
FAX: (425) 825-8434*

CITY OF SPOKANE LOS STANDARDS/CONCURRENCY MANAGEMENT SYSTEM—PRELIMINARY PROGRAM: EXECUTIVE SUMMARY

As part of its comprehensive planning efforts, the City of Spokane is in the process of defining a transportation Level of Service Standard/Concurrency Management System (LOS/CMS) to help it manage growth and to assure adequate transportation facilities are in place concurrent with new development. The Comprehensive Plan process is currently evaluating three land use alternatives. The preliminary LOS/CMS program is being used in the evaluation of alternatives. When adopted as part of the Comprehensive Plan, the LOS/CMS program will be used by the City to implement its planning objectives and direct transportation funding to support desired growth patterns.

Key Issues Addressed by Proposed LOS/CMS Program

The City of Spokane has two levels of needs for LOS standards and CMS. At one level, the City wants the LOS standard and CMS to serve as a tool to assist in its long-range planning efforts. On a second level the City needs to establish a LOS standard and implement a CMS for evaluating the adequacy of the transportation system to support actual development proposals. There are many decisions to be made in developing a LOS/CMS that is technically sound and supports the growth objectives of the City. Key items are discussed below.

A two-tier LOS/CMS program is proposed. To meet broad planning and capital facilities programming needs, the first tier is a Planning LOS/CMS program based on travel times along principal arterials and key minor and collector routes. The second tier will be used for reviewing individual development projects. The LOS/CMS program for individual development projects still needs to be defined in terms of when and how it will be applied. The City needs to define if it will be applied to building permits, subdivisions, rezones or other development applications.

The proposed LOS/CMS program establishes different standards for different areas of the City. To be effective in helping manage and direct growth, the level of service standard must reflect the land use strategy. Where growth is encouraged, lower levels of service would be allowed.

The LOS standard allows more congestion when significant levels of alternative travel modes, such as transit are available. To help promote transit supportive land uses, the proposed Planning LOS/CMS program allows more congestion in corridors that are served by significant levels of transit service.

The LOS/CMS program should support regional air quality standards. Although not specific to the LOS/CMS program, meeting air quality standards is a short and long-term planning/implementation issue for the region.

Implementation of LOS/CMS Program will require sufficient resources. Since major planning decisions, transportation funding allocation, and approval/denial of

development projects will be influenced by the LOS/CMS program, adequate funding and resources must be provided for to implement the system.

Regional Guidelines for LOS/CMS Program

The SRTC (and its member agencies) have defined travel time as the method that the adequacy of regional facilities will be measured. The SRTC conducts regional concurrency tests annually during the month of August. The annual update takes into consideration the most recent land use data based on building permits, plat applications and employment information. It also incorporates any changes to the transportation system and proposed changes to local agency transportation plans.

In addition to the requirements for regional facilities, the SRTC Guidelines set out the responsibilities for local jurisdictions within the region. The SRTC guidelines do not require a specific process or methodology for setting the LOS standard for local jurisdictions. The guidelines do, however, indicate that local standards should be regionally consistent.

Methodology and Application for Planning Level of Service Concept

The Planning Level of Service/Congestion Management System (LOS/CMS) is intended to provide City staff, elected officials, and the public with a tool to assist in developing and evaluating land use and transportation plans. It also would be used as part of the priority programming process for development of the City's Six-Year Transportation Improvement Program (TIP). It's preliminary application to the three land use alternatives will be considered in selecting a preferred land use plan. The preliminary program will need to be refined prior to formal adoption and implementation.

Goals and objectives for the Planning LOS/CMS include the following:

- The broad planning LOS standard should be used to assess the overall adequacy of the transportation system to serve the needs of and support the land use plan.
- The LOS standard should be reasonably consistent with and compatible with the adopted standards for the Spokane region.
- The LOS/CMS program should assist in identifying and programming capital transportation facility improvements and services to provide an adequate transportation system that supports the land use plan.
- The system should be simple to understand and implement.
- The program should use available tools for implementation.

Overview of Preliminary Planning LOS/CMS Program

The following provides an overview of the interface with the regional planning model identification of the facilities to be tested, how the LOS standard would be set, and an approach for implementing the program.

Regional Model Interface. The regional Metropolitan Transportation Plan (MTP) financially constrained network was selected as the basis for developing the City of Spokane's LOS/CMS program. The MTP's financially constrained network includes all projects that have some existing funding commitments to be completed within 6 to 10 years. It also includes other long-range projects that will likely be completed within 20 years. This is the most realistic scenario based on current funding for the region's transportation system.

Identifying Corridors. Criteria were considered in defining which facilities would be included in the LOS/CMS program. These criteria included functional class, travel patterns, limited access facilities, jurisdiction, and the SRTC model structure. For consistency, the same arterials were used for all three land use alternatives. They were defined using the following criteria: *Functional Classification, Location, Central Business District, State Facilities.*

Defining LOS/CMS Routes. Prior to identifying specific LOS standards the arterial routes were defined as *route segments* and *aggregate arterial segments*. This process allows the LOS/CMS evaluation to consider the effects of growth within a specific area, as well as the impacts on longer trips.

Setting the LOS Standard. The LOS/CMS standard is set in two parts. The first part establishes a base LOS standard that reflects the overall LOS/CMS concept for a particular land use plan. Where growth is encouraged under a land use plan, longer travel times (slower speeds) are allowed. Higher travel speeds would be required to be maintained for longer trips that connect to an area where growth is less desirable based on the land use plan. The base LOS standard for each route segment is then adjusted based on availability significant levels of transit service or non-motorized travel. Under the preliminary LOS/CMS program approach the base LOS standard would be adjusted to reflect the availability of significant, efficient, transit service.

Implementation Approach. The LOS/CMS program concept has been developed based on the 2020 SRTC regional travel demand model. Prior to actual implementation the model tool needs to be refined to reflect actual travel times. A program for when the planning level test would be conducted also needs to be formalized.

Application to the Comprehensive Plan Land Use Alternatives

The proposed LOS/CMS program was applied to each of the three Comprehensive Plan land use alternatives:

- *Current Patterns* - reflects a condition where the City would apply the same growth practices that have occurred over the past 40 years or so.
- *Focused Growth: Centers and Corridors* - concentrates growth in mixed-use district centers, neighborhood centers, employment centers and along transportation corridors.
- *Focused Growth: Central City* - focuses growth in downtown Spokane and areas adjacent to downtown.

Each land use alternative was modeled by SRTC assuming the MTP's 2020 "financially constrained" transportation system improvements are constructed. In addition to evaluating the three land use alternatives on the "financially retrained" network, SRTC modeled the 2020 *Current Patterns* alternative on the existing or "No Action" network. This network includes no significant capacity improvements. It was evaluated since it provides a baseline condition for comparing alternatives.

LOS Standards. Assigning of the preliminary LOS standards for the three alternatives took into account the overall objectives of each of the land use plans. The base LOS standard for the *Current Patterns* was established as LOS D for all route segments. This reflects current policies, which do not attempt to direct growth to any specific areas. It also allows for moderate congestion levels anywhere in the City. Where efficient transit service is available LOS E would be allowed.

The LOS standard for the *Focused Growth: Centers and Corridors* alternatives varies from LOS C to LOS F. LOS C would be assigned to the outermost route segments where no mixed-use centers or corridors are identified in the proposed land use plan. LOS D was assigned to the route segments that serve travel between the identified centers and corridors. A base LOS D also was assigned to some major east-west routes providing access to the City of Spokane. LOS E was assigned to the route segments serving the centers and corridors, including the central business district. Applying the one-grade lower LOS standard for transit corridors results in some of the route segments serving designated growth areas being allowed to operate at LOS F.

The base LOS standard for the *Focused Growth: Central City* alternative was set as a series of rings. LOS E is allowed in the ring immediately adjacent to the downtown core. This supports the plan concept for higher densities adjacent to the downtown area. LOS D was established for the route segments from Francis on the north to 29th on the south. Growth in these areas would be able to access the downtown area in a reasonable amount of travel time. Route segments in the outer part of the City and most of the Urban Growth Area (UGA) would have LOS C assigned.

2020 LOS Deficiencies. Application of the LOS/CMS program to the alternatives resulted in some route segments being deficient compared to the preliminary standards. Just because a route segment is deficient does not necessarily mean the entire roadway needs to be improved. Forecast PM peak hour travel speeds may be only slightly below the standard. Therefore, spot intersection improvements or widening a part of a corridor may be sufficient to bring the route segment into compliance with the LOS standard.

As summarized in [Table E-1](#), a total of 22 of the 58 route segments would not meet the LOS standard for the *Current Patterns on No Action* scenario. This represents 44.4 miles of arterial routes that would be below the preliminary LOS standard. The adjustment to the LOS standard for transit does not change the number of deficient route segments. Without additional capacity, as defined in the financially constrained network, significant congestion will result. The congestion will be most pronounced on north-south routes.

Table E-1. 2020 PM Peak Hour LOS Deficiencies Summary

Route Segments	Alternative							
	Current Patterns on No Action Network		Current Patterns on Financially Constrained Network		Focused Growth: Centers and Corridors on Financially Constrained Network		Focused Growth: Central City on Financially Constrained Network	
	W/O Transit Adjustment	With Transit Adjustment	W/O Transit Adjustment	With Transit Adjustment	W/O Transit Adjustment	With Transit Adjustment	W/O Transit Adjustment	With Transit Adjustment
Number of Deficient Route Segments								
North-South ^{1,3}	17 ¹	17 ¹	10 ³	10 ³	9 ³	8 ³	9 ³	8 ³
East-West ²	5	5	5	2	5	2	5	3
Total Number^{4,5}	22	22	15	12	14	10	14	11
Deficient Route Segments (Miles)								
North-South	29.4	29.4	13.7	13.7	12.3	10.4	13.2	11.3
East-West	15.0	15.0	19.8	3.5	19.8	3.5	20.4	5.3
Total Miles^{4,5}	44.4⁴	44.4⁴	33.6⁵	17.3⁵	32.2⁵	13.9⁵	33.6⁵	16.6⁵
Aggregate Segments Number of Deficient ⁶	3	3	1	1	1	1	1	1

1. Total number of North-South route segments for no action network is 38 covering 79.3 miles of roadway.
2. Total number of East-West route segments is 20 covering 68.9 miles of roadway for all alternatives.
3. Total number of North-South route segments for financially constrained network is 39 covering 80.1 miles of roadway.
4. Total number of route segments for no action network is 58 covering 148.2 miles of roadway.
5. Total number of route segments for financially constrained network is 59 covering 149.0 miles of roadway.
6. Total number of Aggregate Segments is 6; mileage is included in route segment summary.

Addition of improvements identified in the SRTC’s MTP financially constrained network significantly reduces the number and extent of the deficient route segments under the *Current Patterns* alternative. A total of 17.3 miles of route segments would be deficient under this alternative, with the transit adjustment. This is a significant improvement over the *Current Patterns* on the No Action Network, which had 44.4 miles of deficient route segments.

The *Focused Growth: Centers and Corridors* alternative on the MTP financially constrained system results in a total of 10 route segments falling below the preliminary standard. This assumes the adjustment for transit. These cover 13.9 miles of arterials. With the transit adjustment to the LOS standard, one-half of the north-south corridors between I-90 and Buckeye/North Foothills/Euclid would be below the standard.

After adjustment for transit, the *Focused Growth: Central City* alternative has two additional route segments that are identified as deficient compared to the *Focused Growth: Centers and Corridors* alternative. These are Lincoln between Buckeye and Francis and 57th between Hatch Road and the Palouse Highway. However, under this alternative, Monroe between Buckeye and the Spokane River would meet the preliminary LOS standard set for this

alternative. With the adjustment for transit, this alternative results in 11 route segments being below the preliminary LOS standard. These segments cover 16.6 miles of arterials.

Costs for Bringing Alternatives into Compliance. There are several possible approaches for bringing the alternatives into compliance.

- Revising the LOS standards is one potential approach; however, this method needs to be discussed in the public forum as part of selecting a preferred land use plan and concurrency standard.
- Defining intersection and roadway improvements that would add capacity to the deficient corridor. The added capacity provided by the *Financially Constrained* network was shown to greatly reduce the number of deficiencies for the *Current Patterns* alternative. The full route segment may not need to be fully improved to meet the standard.
- Adding capacity to a parallel route to direct forecast traffic away from the deficient route segment.

Table E-2 summarizes the planning level costs of the potential improvements to bring the three alternatives into compliance. The *Current Patterns* on the No Action network was not evaluated, since the regional MTP is based on the Financially Constrained network were assumed for all three action alternatives. The two *Focused Growth* alternatives gave approximately \$2 - \$3 million costs than the *Current Patterns* alternative.

Costs of improving WSDOT facilities for the MTP within the City are not included; however they would be the same for all alternatives.

Table E-2. Order of Magnitude Improvement Costs¹

	<i>Current Patterns</i>		Focused Growth: Centers and Corridors		Focused Growth: Central City	
	Number	Costs \$1000's	Number	Costs \$1000's	Number	Costs \$1000's
MTP Financially Constrained Network Improvements ²	4	\$49,200	4	\$49,200	4	\$49,200
Major Intersection Improvements	9	\$2,250	18	\$4,500	18	\$4,500
Roadway Widening	6.2 Miles	\$9,300	3.1 Miles	\$4,650	2.9 Miles	\$4,350
Total		\$60,750		\$58,350		\$58,050

^{1.} All alternatives reflect SRTC MTP financially constrained network

^{2.} Cost estimate includes \$38 million for Post Street Bridge replacement which has been deleted by the City from MTP Financially Constrained Network.

Future Refinements. The proposed Planning LOS/CMS program will require refinements prior to implementation for the City's ongoing use. Prior to refining the process, the City must make a determination that the approach and overall concept are consistent with its overall vision. The process is generally consistent with the regional SRTC LOS/CMS program; however, the City's program would apply to a greater number of facilities.

The Planning LOS/CMS program is only conceptual at this time. It's application to the land use alternatives evaluation is based solely on 2020 PM peak hour model data provided by SRTC. Prior to implementation, the City in conjunction with SRTC should obtain actual travel time data for the corridors and update the regional model calibration.

Level of Service/Concurrency Management/System Program-System Concept for Development Review

This component of the City's LOS/CMS program would be applied to meet the GMA and SRTC requirements that minimum LOS thresholds be maintained with each development. If minimum thresholds cannot be assured within six years, then the development should not be approved at that time.

Key goals and objectives for the development review level of service standard include:

- Ensure that development can be supported by an adequate transportation system.
- The development review program should support the land use and transportation elements of City's Comprehensive Plan.
- Meet City's responsibility for SEPA review related to levels of service.
- Apply development review standards consistently.
- Provide input to City's transportation facilities planning and programming processes.
- The development review LOS standard process should be relatively easy to apply and understand.

Overview of Conceptual Strategy for Development Review

Figure E-1 provides a schematic flow chart of the conceptual process development review LOS review process. The conceptual LOS/CMS strategy for development review consists of two parts:

- Evaluate consistency with City Comprehensive Plan and Planning LOS/CMS standards. This step would tie the development review evaluation to the Planning.
- Evaluate intersection LOS/CMS in local vicinity of project. This includes identifying facilities to be evaluated, setting the standard, and defining improvement strategies for mitigation.

Application of Development Review Program to Land Use Alternatives

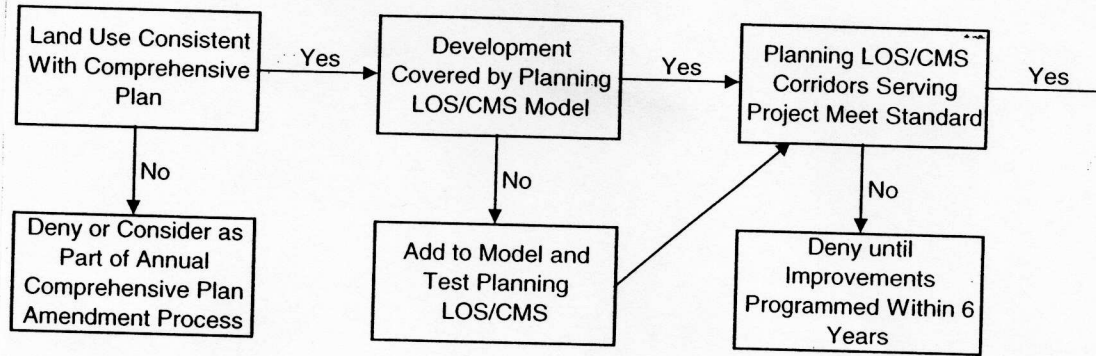
The primary issue in applying the project level LOS standard to the three growth scenarios is the setting of acceptable standards. As with the corridor travel times, lower LOS standards (LOS D, E or F) could be applied within the designated growth areas for the *Focused Growth: City Center and Centers and Corridors* alternatives. A higher standard (e.g. LOS C)

could be applied to areas where growth would not be desired under that plan alternative. Under the *Current Patterns* alternative, differential standards would not likely be applied.

Prior to being a valid tool for evaluating development projects versus a LOS/CMS standard several items must be addressed. First, detailed administrative procedures must be prepared. Second, the travel model process must be developed to evaluate a six-year horizon, instead of 2020 forecasts. The administrative procedures and travel model process are some of the key issues that need to be developed and/or refined prior to implementing the development review LOS/CMS process.

Part I.

Check Consistency with Comprehensive Plan and Planning LOS/CMS Standard



Part II.

Local Area LOS/CMS Evaluation

