Rules In Effect Prior To September 19, 2016

Snohomish County Department Of Public Works (DPW) Rules Adopted Pursuant to the Rulemaking Requirements of Chapter 30.82 SCC

Providing Detail and Specificity for the Traffic Mitigation and Concurrency Requirements of Chapter 30.66B SCC.

All Rules herein are adopted pursuant to the delegation of authority in SCC 30.66B.080.

Rule Numbers, Titles, and General Descriptions

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4220  PRESUBMITTAL CONFERENCES AND TRAFFIC STUDIES

4220.010  Applicability and/or Purpose

Adopted: 7/13/95, First Revision: 1/26/99, Second Revision: 7/17/00, Third Revision: 1/1/03, Fourth Revision 10/11/04

(1) This Rule applies to land development applications determined to be complete on or after the effective date of Amended Ordinance No. 95-039 (July 13, 1995). POL-4200 remains in effect for development applications determined to be complete prior to July 13, 1995.

(2) This Rule applies to Presubmittal Conferences as conducted by the Department of Public Works (DPW) pursuant to SCC 30.66B.020. Presubmittal Conferences are not the same as “Preapplication Conferences” conducted by Planning and Development Services, although they are often a part of the latter. While not every development may choose to have a Preapplication Conference, a Presubmittal Conference is mandatory.

(3) This Rule also applies to all traffic studies either required by DPW or offered by developers pursuant to SCC 30.66B.035, 040 and 045 to assess the impact of developments on the County Road System. Pursuant to interlocal agreements, traffic studies may also be required by the Washington State Department of Transportation (WSDOT) and/or other counties or cities.

4220.020  Presubmittal Conferences

Adopted: 7/13/95, First Revision: 1/26/99, Second Revision: 7/17/00, Third Revision: 1/1/03, Fourth Revision 10/11/04

(1) Developers are required to hold a conference with the Department of Public Works (DPW) before submitting applications for developments generating three or more peak hour trips and all subdivisions and short subdivisions.

(2) The Presubmittal Conference is required in order to review the transportation-related aspects of the development proposal, to determine whether a traffic study will be required by the County, WSDOT, and/or any other cities or counties, and to ensure that the application is submitted with adequate information for the review process.

(3) The determinations made by DPW at the Presubmittal Conference shall be shown on the Presubmittal Conference Review Form which will be signed by the appropriate representatives of DPW and the developer. Such determinations will include the scope of traffic information that must be included with the development’s initial application to be accepted by the County. A valid Presubmittal Conference Review Form must accompany any land use application for a development generating three or more peak hour trips and all subdivisions and short subdivisions. Presubmittal Conference Review Forms are valid for 90 days after signing unless the scope of the proposed development changes in such a way as to alter the likely traffic impacts of the development (e.g., an increase in the size of the development or change in points of access) in which case DPW may require a new presubmittal meeting, or require additional, supplemental traffic information subsequent to the application submittal.

(4) At the Presubmittal Conference, when a traffic study is required, a Traffic Study Checklist for the County may be completed by DPW staff and the appropriate developer representative. The checklist provides additional information about the extent of the
traffic study that will be required with the development’s initial application. Consistent with interlocal agreements, traffic study checklists may also be completed for WSDOT and/or other jurisdictions.

(5) Developers will be given the option of allowing the scope of traffic impact analysis to be determined by DPW after the submittal of the initial application during the preliminary review process. Under this option, developers will only be required to submit trip generation or trip generation and a trip distribution with their initial applications. If, pursuant to SCC 30.66B.020(6), a developer takes the option to submit only trip generation and distribution with his/her initial application, then the concurrency vesting date will become the date when the additional information is submitted.

(6) In some cases, the developer may be required to attend a Traffic Study Scoping Meeting called by DPW to determine in more detail the scope and extent of the traffic study and help coordinate the involvement of different parties. The meeting may include staff from different sections of DPW who may have a role in the study, staff from other involved agencies, and representatives from other developments whose traffic studies may overlap.

(7) Comparison of Traffic Study Scoping Meetings for Preapplication Concurrency Evaluations and Presubmittal Conferences: The rules and guidelines applicable to presubmittal conferences shall be the same as those for traffic study scoping meetings conducted for preapplication concurrency evaluations unless otherwise noted. Whether or not a traffic study scoping meeting is held, a presubmittal conference is still required.

4220.030. Traffic Studies
Adopted: 7/13/95, First Revision: 1/26/99, Second Revision: 7/17/00, Third Revision: 1/1/03, Fourth Revision 10/11/04, Fifth Revision 4/24/06

(1) In accordance with SCC 30.66B.035, any development that will add three (3) or more PM peak hour trips to the road system may be required to provide a traffic study where there is the need for additional information to determine the impacts of the development. Traffic studies include trip generation, traffic counts, trip distribution, trip assignment and may also include traffic impact analysis.

(2) Traffic studies may also be required of any development pursuant to the terms of an interlocal agreement between the County and other agencies or jurisdictions.

(3) The Department of Public Works (DPW) will determine the scope of the development’s required traffic study, including any determination that a traffic study is not necessary, based on factors including, but not limited to the following:

(a) the “facilities likely to be impacted,” that is, roads, streets, highways, intersections, and other transportation facilities that are likely to be impacted by the development,

(b) the estimated capacities or threshold service volumes for the facilities likely to be impacted,

(c) the difference between the forecast volumes and the estimated threshold service volumes

(d) the existing and forecast level of service of arterial units in the development’s transportation service area (TSA),

(e) the size and location of the development,
(f) the development’s estimated time line,
(g) the scope of other development activity in the vicinity,
(h) the timeline and funding status of improvements or strategies that may affect the level of service of critical arterial units,
(i) the availability, quality, and relevance of existing traffic data and/or analysis,
(j) the possibility of impacting a current or future inadequate road condition or causing an inadequate road condition,
(k) the possible need to make provisions for access and/or circulation,
(l) the possible need to make provisions for non-motorized and/or transit modes,
(m) the terms and conditions of any applicable interlocal agreements, and
(n) any other traffic-related factors deemed important by Public Works.

(4) DPW will make available to the public, for the purpose of preparing new traffic studies, all existing traffic data compiled from previous developer studies as well as data compiled by DPW including pipeline forecast reports from the database inventory of developments in the pipeline (See DPW Rule 4225).

(5) Per SCC 30.66B.035(6), if, in the opinion of the director, there is sufficient information known about a development's road system from previous traffic studies, the director may waive the requirement for a traffic study and so state the finding in the pre-submittal conference scoping sheet signed by the director and the developer.

(6) Consistent with SCC 30.66B.040, traffic studies required under this Rule shall be conducted and prepared under the direction of a responsible individual or firm acceptable to the County Traffic Engineer. More complex studies requiring expert analysis and opinion beyond the compilation of available existing data shall be conducted by an engineer licensed to practice in the State of Washington with special training and experience in traffic engineering, and preferably, membership in the Institute of Transportation Engineers (ITE). The developer shall provide to the County Traffic Engineer the credentials of the individuals selected to perform traffic studies certifying compliance with the foregoing. DPW may choose to not accept any traffic studies not signed and stamped by an engineer approved by the County.

(7) Traffic Studies will be reviewed by DPW for completeness, adequacy and accuracy. DPW will review the traffic study during the first 21 days following the submittal. If the traffic study does not meet the requirements imposed by DPW, including having the trip distribution in the required format, then DPW will request additional information and may or may not make a concurrency determination at that time.
### (8) Outline of General Traffic Study Requirements

<table>
<thead>
<tr>
<th>Development Type and/or Size</th>
<th>Trip Generation Required?</th>
<th>Trip Distribution Required?</th>
<th>Level of Service Forecasting Required?</th>
</tr>
</thead>
<tbody>
<tr>
<td>Small residential development (less than 7 PHT)</td>
<td>Yes</td>
<td>See DPW Rule 4220.030(9) below</td>
<td>No</td>
</tr>
<tr>
<td>Small non-residential development (less than 5 PHT)</td>
<td>Yes</td>
<td>Yes</td>
<td>No</td>
</tr>
<tr>
<td>Medium residential development (7 - 50 PHT)</td>
<td>Yes</td>
<td>Yes</td>
<td>No</td>
</tr>
<tr>
<td>Medium non-residential development (5 - 50 PHT)</td>
<td>Yes</td>
<td>Yes</td>
<td>Yes, for those critical arterial units within the developments TSA impacted by 3 or more directional PHT</td>
</tr>
<tr>
<td>Large development (greater than 50 PHT)</td>
<td>Yes</td>
<td>Yes</td>
<td>Yes, for those critical arterial units within the developments TSA impacted by 3 or more directional PHT</td>
</tr>
</tbody>
</table>

(9) Distributions for small developments will be required on a case-by-case basis depending on the location of the development with respect to such factors as arterial units in arrears (AUIAs), inadequate road conditions (IRCs), or WSDOT mitigation projects.

(a) A development which generates less than three (3) new directional peak-hour trips (PHT) can not possibly add three (3) new directional PHT to an AUIA or a WSDOT mitigation project, hence such development can always be deemed concurrent and demonstrate that no WSDOT mitigation payment is required. Thus, such developments will not be required to provide trip distributions and can submit a “zero offer” to WSDOT without a distribution.

(b) The threshold of three (3) PHT with respect to IRCs is NOT directional. Hence, any development generating three (3) new PHT can potentially impact an IRC. Thus, any development generating three (3) new PHT may be required to provide a distribution based on its proximity to an IRC.

(c) A residential development with five (5) or more new single-family lots (or units) may create three (3) directional PHT. Such developments may not submit a “zero offer” to WSDOT without a trip distribution (Such developments can always offer to make the standard payment based on ADT). Such developments may be required to provide trip distributions for impacts on AUIAs or IRCs.

### 4220.040 Trip generation

*Adopted 1/1/03 unless otherwise noted, First Revision 10/11/04, Second Revision 4/24/06, Third Revision 12/9/07*
(1) Trip generation means the determination of the forecast number of new vehicle trips that will be placed on the road system by the development at full occupancy. Trip generation may be required of any applicant.

(a) Credit for existing trips will be given to applications for new development if there is a permitted structure on the site that is occupied or unoccupied.

(i) In 1957 the County adopted its zoning code which prohibited more than one dwelling unit per tax parcel, except for the “Rural Use” zone. (Note that in 1957 most of the north and east county was zoned Rural Use.) In 1969 the County adopted its subdivision ordinance which prohibited more than one dwelling unit per tax parcel in the Rural Use zones as well. If the applicant can show assessor data showing a “year built” for a dwelling unit as being prior to 1957, then the County may give credit for more than one house on a legal tax parcel. The same could apply to a dwelling unit constructed between 1957 and 1969 if the applicant can show that the parcel was zoned Rural Use when the dwelling unit was constructed.

(ii) Credits under this subsection will be provided on a case-by-case basis based upon such factors as the type of permitted use and the purposes for which the original permit was intended. For example, assume a scenario in which a ‘temporary use permit’ has been granted for a mobile home which will be a second dwelling unit on a single tax parcel. The determination of whether or not credits will be provided for the second dwelling unit, will consider the purpose for which the temporary use was granted. If, for example, it was for an aging parent, the normal trip generation rate for an SFR, would not likely apply and the amount of credit would be reduced.

(b) To determine the number of new peak hour trips, DPW will accept valid trip generation data per the requirements of SCC 30.66B.130(3), including reductions for trip reduction credits under SCC 30.66B.610-680 and reductions for pass-by trips and internal crossover based on technically defensible pass-by studies for comparable developments.

(c) DPW will not accept reductions in trip generation for diverted link trips.

(2) In most cases, the AM peak-hour and PM peak hour of a development’s trip generation shall be assumed to be the same peak hours as the adjacent roadway.

(a) For the purposes of administering the concurrency provisions of Chapter 30.66B, the AM and PM peak hours of the development’s trip generation shall usually be assumed to be the same as those of any arterial units in arrears within the development’s TSA, even if there are two arterial units in arrears and their specified hours of level-of-service deficiency are different.

(b) The exceptions may come for types of developments that generate their peak traffic at times distinctly outside the usual AM and PM peak periods like schools, churches, and movie theaters.

(3) There could, in rare circumstances, be arterial units whose AM or PM peak hour falls at a time distinctly different than the AM or PM peak periods. These unusual circumstances will have to be treated on a case-by-case basis and be carefully documented.
(4) Portable classrooms for schools are assumed to be temporary structures not subject to review under Chapter 30.66B. (First adopted 1992)

(5) For all uses, the five-day, Monday through Friday, (as opposed to the seven-day) equation or average rate shall be used for trip generation for both ADT and PHT when determining impacts for concurrency, inadequate road conditions and proportionate share mitigating payments. In addition, weekend trip generation may be required to determine impacts on access and circulation.

(6) To clarify interpretations for trip generation for various ITE residential land uses the following shall be used: (First adopted 11/1/00).

<table>
<thead>
<tr>
<th>ITE Code</th>
<th>Description</th>
<th>Conditions</th>
<th>Equation or Rate</th>
</tr>
</thead>
<tbody>
<tr>
<td>210</td>
<td>Single Family</td>
<td>Duplexes, single unit structures, and single family detached units regardless of ownership or size of development</td>
<td>Rate</td>
</tr>
<tr>
<td>220</td>
<td>Apartments</td>
<td>Rental: triplexes or greater</td>
<td>Rate</td>
</tr>
<tr>
<td>230</td>
<td>Condominium/Townhouse</td>
<td>Ownership; triplex or greater</td>
<td>Equation</td>
</tr>
</tbody>
</table>
4220.045 Trip Generation for Development Applications Involving Boundary Line Adjustments or Future Development Tracts

Adopted 12/23/06 effective 1/8/07

(1) For determining impacts on level of service and/or inadequate road conditions only, the calculation of trip generation shall include the current proposed development together with all pending development on related property and all approved development on related property submitted within the previous six years. For the purposes of this Rule, ‘related property’ shall have the following meaning and shall include:

(a) all parcels currently or within the past six years involved in a boundary line adjustment (BLA) process with the subject development in which the area of any one parcel is changed by more than 50%; provided that any additional BLA involving any or all of the subject parcels and exceeding the 50% threshold will expand the related property to include all affected parcels and shall not create separate overlapping related properties, and

(b) the entire parcel subjected to a platting or development process, including any remainder parcels, future development tracts, exceptions, or similarly designated tracts or parcels,

(c) except that related property shall not include properties in subsection (a) or (b) above in developments submitted before a reduction of developable area was necessary to achieve concurrency or to not impact an IRC.

(2) Obligations for impact fees are not affected by this rule.

(3) Credit will be given only for preexisting structures consistent with DPW Rule 4220.040(1)(a).

(4) This Rule applies to any development or boundary line adjustment application submitted to PDS subsequent to January 8, 2007.

Reason for Rule 4220.045

Recently, to achieve concurrency, several new developments have utilized boundary line adjustments (BLAs) and/or future development tracts (FDTs) so that their traffic impacts on arterial units in arrears (AUIAs) from any single development are less than 3 peak-hour trips (PHTs). If developers, unable to achieve concurrency for large projects, are able to achieve concurrency by disaggregating parcels and submitting multiple small projects, it diminishes the County’s ability to ensure that capacity on the road system is available ‘concurrent’ with development.

Example

Assume a developer buys Parcel C, a large undeveloped 10-acre parcel as shown in Figure 1, next to two small Parcels A and B. Assume that Parcel C could yield 60 lots, but proximity to an arterial unit in arrears (AUIA) means that a development with more than 20 lots will impact the AUIA (i.e., add three or more directional peak-hour trips to the AUIA). Thus, the applicant could not get approval without offering to construct off-site improvements to remedy the AUIA. In some cases, the magnitude of needed improvements is too large for individual developers to finance.

Under the current rules, the developer could purchase Parcels A and B, do Boundary Line Adjustments (BLAs) to equalize the sizes of A, B and C, submit three separate applications for 20 lots each as shown in Figure 3, and thus not add three or more peak-hour trips (3+ PHT) to the AUIA. Under the proposed rule the developer could still do the BLAs and...
develop the revised Parcel A as shown in Figure 2, but could not develop Parcels B or C as shown in Figure 3 without adding 3+ PHT to the AUIA. The following explains how the language of the proposed rule would work.

1. First, why could A proceed as in Figure #2 without impacting the AUIA? For Development A, trip generation would be based on the ‘current proposed development’ plus all pending and approved developments on related parcels. Since at this point there are no proposed or pending developments for B or C, then trip generation for A would be based solely on A and with 20 lots it would not add 3+ PHT to the AUIA. At this point, Parcel B could still subdivide without having to include trips from Parcel A or C because it has not been involved in any BLAs. (Also note, that any application for a single-family residence on an existing tax lot is exempt from traffic mitigation and concurrency requirements.)

2. Assume that the applicant does BLAs on the parcels as shown in Figure 3, submits an application for Parcel A, and then submits for Parcel B. Under the proposed rule trip generation for B would include Development A which would be a pending (or approved) development on a related parcel. But why would Parcel A be related to the proposed development on Parcel B? First we ask, was Parcel A ‘involved in a BLA process’ with the subject development? No, though Parcel A was involved in a BLA, it was with Parcel C, not with Parcel B so it would not be directly related. However, Parcel A would be indirectly related under the second part of the definition of related development. Why? Because both A and B are involved in BLAs with Parcel C. The additional BLA involving Parcel B with Parcel C expands the related property to include all of the parcels affected by BLAs. Because Parcel C was involved in a BLA with Parcel A, then Parcels A, B and C all now constitute the related property. What if Parcel C tries to develop before B? How would Parcel A related under this scenario? In this case, it is actually simpler because Parcel C was involved in a BLA with Parcel A and thus Development A is directly related.

3. In Figure 4, what if Parcel A tries to develop as in Figure 2 and there happens to have been a previous Development D that was involved with a BLA with Parcel E? Is Parcel D related to Parcel A? No. Parcel D was not involved with BLAs with Parcels A, B or C and is thus not related, either directly or indirectly. Development on Parcel A would be able to proceed independently of development on Parcel D.
4220.050  Pass-By Rates
Adopted 3/31/03 unless otherwise noted, First Revision 10/11/04

(1) For any given land use being reviewed by DPW, if a pass-by rate is not included in the table shown in Subsection 4220.050(2) below, but an average pass by rate for the AM and/or PM peak hour is included in the ITE Trip Generation Report, then the ITE average pass-by rates shall be used.

(2) For Drive-Through Espresso Stands, Daycare Located on Arterials, Specialty Retail, Health Clubs, and Video Store the following pass-by rates shall apply:

<table>
<thead>
<tr>
<th>ITE Code</th>
<th>Description</th>
<th>Pass-By Rates</th>
<th>Conditions</th>
</tr>
</thead>
<tbody>
<tr>
<td>565</td>
<td>Daycare</td>
<td>75%</td>
<td>Apply this rate only to daycare facilities located on arterials.</td>
</tr>
<tr>
<td>814</td>
<td>Specialty Retail</td>
<td>25%</td>
<td></td>
</tr>
<tr>
<td>493</td>
<td>Health Club</td>
<td>54%</td>
<td></td>
</tr>
<tr>
<td>896</td>
<td>Video Store</td>
<td>53.5% for ADT, 80% for peak-hour trips</td>
<td></td>
</tr>
<tr>
<td>912</td>
<td>Drive-in Bank</td>
<td>47%</td>
<td></td>
</tr>
</tbody>
</table>

(3) Unless stated otherwise in an adopted DPW Rule, the pass-by rate for PM peak hour trips will be used for average daily trips (ADT). (Adopted 8/8/00)

4220.060  Traffic Counts
Adopted: 1/1/03, First Revision 10/11/04

(1) Traffic Studies provided for large developments will need to include traffic counts for any impacted key intersections on critical arterial units. These counts are necessary to estimate future volumes and to support the forecast assignments of trips from the development at the intersections.

(2) DPW has a regular program of conducting traffic counts and may be able to provide the developer with acceptable counts. DPW will determine whether or not specific available traffic counts are acceptable. For purposes of future analysis of level of service for traffic studies, the count date should not be more than one year prior to the submittal date of the report. An older count is only acceptable with prior written permission from the department. For other purposes, such as screening or assistance with trip distributions, counts may be up to two years old. When acceptable counts are not available from DPW, developers must provide new counts with their traffic studies.

(3) DPW may develop guidelines to be used to determine whether or not counts are acceptable and a standard format for counts, including a tabular format.
4220.070 Trip Distributions and Assignments
Adopted: 1/1/03, First Revision 10/11/04, Second Revision 12/9/07

(1) Trip distribution means applying the trip generation to the road system to forecast the number of new vehicle trips on specific roads in the system. A “trip distribution” is a type of traffic analysis that estimates the likely destinations of trips generated by a proposed development and the likely traffic routes to reach those destinations. The result of this analysis is a map or list indicating what number or percentage of trips from the proposed development are added to the development’s road system, including the number or percentage of trips added to individual traffic movements on arterial units and/or at intersections. The analysis provides a set threshold, consisting of a predefined number or percentage of trips below which no attempt is made to further distribute the trips onto the road system.

(2) Developers will be required to do both AM and PM peak-hour distributions.

(3) DPW will require three products for each distribution.
   (a) Distribution. A schematic map showing the broad distributions of trips in terms of percentages on different roads.
   (b) Assignment. A schematic map with the impacted key intersections identified by Identification Number and turning movements for each shown in separate diagrams on the same page or on different pages.
   (c) Tabular Format. The assignments in prescribed tabular form listing each intersection by intersection ID#, and the number of trips at each movement. DPW may in the future require the previous table in digital form (e.g. spreadsheet or table).

(4) Trips will be distributed onto the road system as it is expected to be in six years.
   (a) DPW will maintain an updated list of the road improvements that are expected to be completed within six years.
   (b) DPW will provide this list to the developer or the developers’ traffic consultant.

(5) Rules for How Far the Distribution is Carried Within the development’s TSA:
   (a) Within the development’s TSA the distribution will be carried out to each key intersection at which the approach or departure volumes on any leg have three (3) or more peak hour trips.
   (b) Trips assigned to I-5, I-405, and SR-2 west of 88th/92nd ST SE do not have to be distributed back onto county roads or city streets.

(6) Rules for How Far the Distribution is Carried Outside the development’s TSA:
   (a) The distribution will be carried out to each key intersection at which the approach or departure volumes on any leg have whichever of the following amounts is more:
      (i) three (3) or more peak hour trips, or
      (ii) 5% of the development’s overall peak hour trips.
(b) Trips assigned to I-5, I-405, and SR-2 west of 88th/92nd ST SE do not have to be distributed further.

(7) Trip Distributions for Cities or WSDOT: Pursuant to interlocal agreements in effect at the time of a developer’s presubmittal or traffic study scoping meeting, the County may require developers to provide distributions to state or city intersections that are not on the list of key county intersections.

(a) The purpose of adding these “other” state or city intersections is to enable the state or city to determine level of service on its facilities.

(b) Then, following submittal, the state or city shall have 21 days from the notice of application provided to them by the County to submit any requests for mitigation or inform the County that the developer did not submit the required information and that the County will have to request the information again.

(c) Note that the WSDOT threshold of ten trips is determined differently than the County threshold of three trips. Unlike the County method explained above, WSDOT adds up all of the trips at all of the individual movements on a given intersection.

4220.080 Defining a Development’s Road System
Adopted: 1/1/03, First Revision 10/11/04

A development will be assigned to an adjacent TSA only if the peak-hour trip distributions show a higher percentage of trips going to the adjacent TSA than to the TSA in which the development is located.

4220.090 Traffic Impact Analysis
Adopted: 1/1/03, First Revision 10/11/04

Traffic impact analysis means the application of traffic engineering principles and practices to determine the impacts of new vehicle trips on a particular transportation facility in terms of level of service, inadequate road conditions, access, circulation, investigation of the extent of off-site, frontage, or access improvements that may be deemed necessary, or other suspected traffic impacts that may warrant mitigation.

4220.100 Traffic Studies Used to Make Concurrency Determinations
Adopted: 1/1/03, First Revision 10/11/04

(1) Traffic Studies Required for Future Level-of-Service Analysis: For any development that will generate more than fifty (50) new peak hour trips (PHT), and unless in the opinion of the director per SCC 30.66B.035(6) there is sufficient information known about the development’s road system from previous traffic studies, the development will be required to provide traffic impact analysis to determine whether the development will impact any current or forecast arterial units in arrears or cause an arterial unit in arrears.

(a) In some cases, developments will generate more than fifty (50) total PHT, but, after reductions for trip reduction credits and/or pass-by trips, the development will generate less than fifty (50) new PHT. Unless acceptable trip reduction credits and/or pass-by rates are determined prior to or at the presubmittal conference, this may cause difficulties in determining traffic study requirements. In such cases, at the presubmittal conference, DPW will assume that the developments will generate more than fifty (50) new PHT.
(b) In such cases developments can also choose the option under SCC 30.66B.020(6) to provide only trip generation and distribution with the initial application submittal and allow DPW to determine the scope of additional analysis during preliminary review of the development.

(2) A traffic study pursuant to this Section will analyze traffic impacts for arterial units for the “forecast year” (i.e., the year of the proposed expiration date of the development’s concurrency determination). Note: The expiration date of the concurrency determination will be six (6) years after the concurrency determination is made, which is upon receipt of a development application, unless a different date is established in accordance with SCC 30.66B.155.

(3) Critical Arterial Units. Large developments (over 50 PHT) required to do traffic forecasts, will need to evaluate future level of service on all critical arterial units in their TSA on to which the developments will add three or more directional PHT. See DPW Rule 4224 for definition of critical arterial units. Any arterial unit (inside or outside the development’s TSA) impacted by more than 50 directional PHT from a particular development shall also be considered critical with respect to that development and will need to be evaluated for future level of service conditions.

(a) Large developments (over 50 PHT) required to do traffic forecasts, will need to evaluate future level of service on all critical arterial units outside their TSA on to which the developments will add fifty (50) or more directional PHT.

(b) For very large developments, typically those generating more than 100 PHT, DPW may require the developer to attend a traffic study scoping meeting to, among other things, determine if there are other arterial units, not on the critical list, that need to be evaluated for future level of service.

(4) An arterial unit NOT identified as critical at the presubmittal or NOT called out for analysis at a traffic scoping meeting is not considered to be within the scope of required future level-of-service analysis and will not be a factor in concurrency determinations except in the following instances:

(a) The arterial unit is declared to be in arrears prior to the development’s concurrency vesting date.

(b) More than one year elapses from the concurrency vesting date and the SEPA determination has not been made SCC 30.66B.150(1)(d).

(c) Between the time of application submittal and the concurrency determination, the Department of Public Works (DPW) becomes aware of possible level-of-service deficiencies on arterial units and conducts its own level-of-service analysis as the basis of the concurrency determination.

(d) The arterial unit is impacted by more than 50 directional PHT from the development per 4220.100(3).

(5) For each arterial unit, DPW will identify the “key” intersections needed to adequately estimate level of service.

(6) DPW will specify the appropriate methodology to be used to determine level of service consistent with DPW Rule 4224.
4221 DEDICATION AND DEEDING OF RIGHT-OF-WAY:

4221.010 Applicability and/or Purpose
Adopted 9/10/95: First Revision 7/10/98, Second Revision 10/11/04

(1) POL 4206 remains effective for development applications determined to be complete prior to September 10, 1995.

(2) This Rule applies to all development applications determined to be complete on or after the effective date of Amended Ordinance No. 95-070 (September 10, 1995), which are required to dedicate or deed right-of-way in accordance with section SCC30.66B.510-540.

(3) The purpose of this Rule is to identify guidelines for applicability, extent, and timing for dedication and deeding of right-of-way. For the purposes of this Rule, the term "dedication" will be used to mean conveyance of land to the County for road purposes by deed or some other instrument of conveyance or by dedication on a duly filed and recorded subdivision or short subdivision.

4221.020 Right of Way Required
Adopted 9/10/95: First Revision 7/10/98, Second Revision 10/11/04:

(1) According to SCC 30.66B.510 developers shall be required to dedicate or deed right-of-way to the county for road purposes as a condition of approval of a development, when to do so is found by the director or a county hearing body to be reasonably necessary as a direct result of a proposed development, for improvement, use or maintenance of the road system serving the development.

(2) Right-of-way dedication is determined to be reasonably necessary and will be required in the following and other particular circumstances:

   (a) To obtain the right-of-way necessary for the construction of frontage improvements along the frontage of the development's parcel in accordance with DPW Rule 4222, Frontage Improvements" where the right-of-way does not meet the requirements of the Engineering Design and Development Standards (EDDS) for the particular road classification. Right-of-way may provide for the future construction of frontage improvements by the county to address the cumulative impact of developed parcels.

   (b) To obtain the right-of-way necessary as a result of the proposed development for the construction of any other improvements, either along the frontage of the development's parcel or off site, as identified in the development approval process.

   (c) To obtain the right-of-way necessary such that an existing offset road serving the development will be located within right-of-way after the right-of-way dedication and any required development improvements.

   (d) To obtain the right-of-way necessary to attain sufficient sight distance in accordance with the EDDS.

   (e) To obtain the right-of-way necessary for maintenance of County road and/or drainage facilities.
(f) To provide the right-of-way necessary to assure that any road fronting or providing access to the development can be constructed in accordance with the EDDS.

(g) Where allowing the development to proceed, without the dedication, would prevent the construction of a public road at the present time or in the future, where it has been determined by the Department of Public Works that a public road is necessary for access and circulation.

(3) A Duplex on an existing tax lot shall not be required to dedicate, deed or establish right of way to the width prescribed in SCC 30.66B.520, but shall ensure that the dwelling setback is made with respect to the ultimate right-of-way line based on the width prescribed in SCC 30.66B.520. (Adopted 7/28/00)

**4221.030. Extent of Right-of-Way Dedication**

*Adopted 9/10/95: First Revision 7/10/98, Second Revision 10/11/04*

(1) The extent of right-of-way that will be required for any particular development shall be in accordance with SCC 30.66B.510 and 520.

(2) Additional right-of-way will be required connecting the intersecting right-of-way lines at intersections to provide a circular curve of sufficient radius to provide for the corner radii and sight distance requirements of the EDDS.

**4221.040 Format of Right-of-Way Dedication**

*Adopted 9/10/95: First Revision 7/10/98, Second Revision 10/11/04*

(1) When right-of-way is conveyed by deed, the deed must be accompanied by a Title Report less than 90 days old at the time of submittal.

(2) When right-of-way is conveyed by deed, the deed must be in the form of a Statutory Warranty Deed as provided by the Department of Public Works. The legal description on the deed must describe a parcel that is the same as or a part of the parcel described by the legal description on the Title Report, and be prepared by an attorney or a licensed surveyor.

(3) The County will only accept right-of-way which has clear title.

**4221.050 Timing of Right-of-Way Dedication**

*Adopted 9/10/95: First Revision 7/10/98, Second Revision 10/11/04*

(1) The timing of right-of-way dedication shall be in accordance with SCC 30.66B.540.

(2) Required right-of-way that will be dedicated through a deed must be conveyed to the County and accepted by the County executive prior to issuance of any building permit. An environmental risk assessment in accordance with DPW Rule 4320, "Environmental Site Assessments (ESA)" will be required prior to any right-of-way acceptance by the County.

(3) If the right-of-way dedication is in conjunction with a subdivision or short subdivision, the dedication process required by SCC 30.41A.630 or 30.41B.630, respectively shall also be followed.
4221.060 Compensation for Right-of-Way Dedication

Adopted 9/10/95: First Revision 7/10/98, Second Revision 10/11/04

(1) Except as provided for in subsection 4221.060(4) below, compensation will not be provided for right-of-way dedicated that is determined to be necessary for the use and convenience of occupants or users of the development. Examples of improvements that in most cases are determined to be necessary for the use and convenience of occupants or users of the development include, but are not limited to:

(a) a two lane road for access to the development constructed in accordance with the EDDS
(b) frontage improvements
(c) additional lanes including 2-way turn lanes to accommodate vehicles exiting or entering the site
(d) access roads to adjacent property that, once connected to the area road system, will provide a convenient alternative access to occupants of the development

(2) Except as provided for in subsection 4221.060(4) below, compensation will not be provided for right-of-way dedicated along the development's frontage on any road that is less than 30 feet from the centerline of right-of-way, or right-of-way dedicated that is less than 30 feet from the centerline of an access road required to serve the development.

(a) This standard recognizes the right-of-way standard prescribed in RCW 36.86.010 for county roads as being 30 feet on each side of the centerline, unless the county council designates a different width.

(b) Where right-of-way dedication is required along a development’s road frontage and is less than 30 feet from centerline, it is determined to be necessary for use of the occupants of the development, except where a narrower width is designated. Narrower widths have been designated in SCC 30.66B.520 for only access streets and subcollector streets in the urban area. It may also be determined in some cases that a wider width is necessary for the use and convenience of the occupants of the development. Wider widths have been designated only for arterial roads.

(3) Compensation for right-of-way dedicated is only provided in two cases. The first case in which compensation is provided, is if the right-of-way is needed by the county for improvements that are not necessary for the use and convenience of the occupants or users of the development. Examples include:

(a) additional lanes constructed on an arterial for capacity purposes where the additional lanes are not necessary due to the traffic generated by the development or necessary to accommodate vehicles exiting or entering the site, or;

(b) a road constructed to provide access to an adjacent property when the road will not become part of a roadway circulation system that will be used by occupants of the development either as an alternate access, for the provision of emergency or other services, or to provide access for the occupants to other adjacent land uses.

(4) The second case in which compensation is provided for right-of-way dedicated is if the developer is paying a mitigation fee, and the cost basis of the impact fee includes the value of the right-of-way.
(a) In this case, the compensation is needed to insure that the developer does not pay twice for the right-of-way, first through the dedication of the right-of-way itself, and secondly through an impact fee which includes the value of the right-of-way.

(b) If the right-of-way is included in the cost basis of the impact fee, then compensation is required even if the right-of-way is necessary for the use and convenience of the occupants or users of the development. In this case, the amount of the compensation shall not exceed the amount of the impact fee.

(5) Compensation for right-of-way dedicated will be provided by non-monetary compensation, as credit against a development's impact fee payment, and/or by cash payment.

(a) The Department of Public Works (DPW) will use non-monetary compensation first, credit second, and cash payment third.

(b) Examples of non-monetary compensation may include access rights, allowing the construction of frontage improvements less than the ultimate standard, deviations from EDDS, or development densities when agreed to by Planning and Development Services.

(c) Where a developer is eligible for credits from both the dedication of right-of-way and the construction of road improvements, any monetary portion of the right-of-way compensation will be credited against the developer’s impact fee payment before any construction value will be credited.

(d) Where compensation is provided by credit and/or payment from the mitigation fund and is for right-of-way dedicated that is not part of the cost basis of the impact fee, the mitigation fund will be reimbursed from the county road fund for the value of any such payment or credit.

(6) The value of any right-of-way for which compensation will be provided, shall be based upon the fair market value of the real property prior to the construction of the development or any adjacent public improvement and shall be subject to review by the County’s review appraiser. Fair market value shall be determined through the best information available, including, but not limited to:

(a) the unit costs in the Transportation Needs Report only if the total amount of compensation for right-of-way does not exceed $10,000, or

(b) current market data available to DPW through recent transactions on DPW projects or its commercial data providers, or

(c) a current appraisal report of the subject property prepared by a certified appraiser competent to perform eminent domain appraisal.
4222 FRONTAGE IMPROVEMENTS

4222.010 Applicability and/or Purpose

Adopted 9/10/95, First Revision 10/11/04

(1) POL-4205 remains effective for development applications determined to be complete prior to September 10, 1995. The interim modification to POL-4205 of May 1, 1995, also remains in effect as a permanent modification to POL-4205.

(2) This Rule applies to all development applications determined to be complete on or after the effective date of Amended Ordinance No. 95-070 (September 10, 1995), which are required to make frontage improvements in accordance with SCC30.66B.410.

(3) The purpose of this Rule is to establish guidelines for applicability, extent, standard and engineering criteria of frontage improvements.

(4) According to SCC 30.66B.410, all developments will be required to make frontage improvements along the parcel's frontage on any opened, constructed, maintained public road. The required improvement shall be constructed in accordance with the Engineering Design and Development Standards as adopted under section SCC 13.05, including correction of horizontal and vertical alignments if applicable and that the improvement standard will be established by the director in accordance with SCC 30.66B.430 and this Rule.

4222.020 Improvement Standard

Adopted 9/10/95, First Revision 10/11/04

(1) The required frontage improvement standard will be full standard improvements unless otherwise provided by this section. All developments, except duplexes on existing tax lots, will be required to make full standard frontage improvements unless the Department of Public Works (DPW) determines that a development is not required to make full standard improvements in accordance with DPW Rule 4222.030 or 4222.040 below, as determined by DPW.

(2) Where DPW determines that a development is not required to make full standard frontage improvements, as stated above, a less than full standard frontage improvement will be required. The improvement may be an interim improvement or a minimum frontage improvement, as determined by DPW. This Rule will in no way reduce the requirement to provide walkways in accordance with other county or state policy or code including the provisions of RCW 58.17.110. The description of frontage improvements is as follows:

(a) Full standard frontage improvements shall be constructed along the roads abutting the entire frontage of the development's parcel, including frontage where no access is taken. Full standard frontage improvements along roads in the urban area shall include base materials, curb, gutter, sidewalk, storm drainage improvements, and one lane of paved road section (up to twelve feet as determined by DPW) from the edge of the gutter. Full standard frontage improvements in the rural area shall include base materials, one lane of paved roadway section (up to twelve feet as determined by DPW), one paved shoulder (up to eight feet as determined by DPW), and required storm drainage improvements. Where a paved shoulder is constructed, any end of the shoulder not connecting to an existing paved shoulder
shall include a 3:1 paved transition taper constructed beyond the development's actual frontage as right-of-way allows. Paved tapers shall extend from the face of curb or edge of shoulder, as appropriate, to meet the existing pavement. Shoulders and/or sidewalks shall transition into the existing pavement as directed by DPW. If adequate right-of-way does not exist for the tapers, the scope of the tapers may be reduced, as determined by DPW, to fit within the existing right-of-way.

(b) Interim frontage improvements shall consist of improvements less than full frontage improvements. These improvements shall be determined on a case-by-case basis by DPW and will be selected to address the specific needs of the situation. Illumination may be required in conjunction with the construction of interim frontage improvements.

(c) Minimum frontage improvements shall consist of paved driveway aprons at each access point along the development's frontage. In addition, where determined necessary by DPW to provide a refuge area for pedestrians and/or pullout area for service vehicles, a shoulder shall be constructed for ten feet along the departure side of the driveway. The shoulder shall be constructed up to eight feet wide (as determined by DPW) and shall include a 3:1 paved transition taper which, where necessary, will be constructed beyond the development's frontage as right-of-way allows. The improvements shall be constructed in accordance with the Engineering Design and Development Standards.

(d) Timing of construction of frontage improvements shall be consistent with SCC 30.66B.440. For any short plats that will, prior to recording, require no road-system improvements other than frontage improvements, bonding of the construction of the frontage improvements will be acceptable to the department of public works so that the developer may construct the frontage improvements subsequent to building permit issuance but prior to final inspection.

4222.030. Extent of Improvements
Adopted 9/10/95, First Revision 10/11/04

(1) In determining the extent of frontage improvements required, the Department of Public Works will consider the factors contained in SCC 30.66B.430 and the engineering reasons contained in Section 4222.040 below.

4222.040 Engineering Criteria
Adopted 9/10/95, First Revision 10/11/04

(1) Engineering reasons which may preclude the construction of full standard frontage improvements may include the following:

(a) The probability of horizontal realignment of the road precludes the building of full frontage improvements in their ultimate horizontal location.

(b) The probability of vertical realignment precludes the building of full frontage improvements in their ultimate vertical location.

(c) The parcel abuts an arterial road which will ultimately include four or more lanes and construction of full frontage improvements at their ultimate location would create a severe discontinuity along the roadway.
(d) The road is scheduled in the Six-Year TIP and/or Annual Construction Program for construction within the next six years and it would be more efficient for Public Works to construct the full frontage improvements as part of its construction project for the entire road.

(e) The parcel abuts a road in the rural area with less than one half (1/2) of a mile of frontage, and no other full standard frontage improvements exist within one half (1/2) of a mile of the development, nor are anticipated to be constructed within one half (1/2) of a mile of the development within the next six years, and the frontage is not within one half (1/2) mile of an existing or proposed public facility such as a school, park, bus stop or walkway, or other attractor such as a neighborhood business, to which pedestrian access should be provided.

(f) The parcel abuts a road in the urban area with less than one quarter (1/4) of a mile of frontage, and no other full standard frontage improvements exist within one quarter (1/4) of a mile of the development, and 90% of parcels within one quarter (1/4) of a mile of the development are built out with little potential of infill development or redevelopment within the next six years, except for construction of accessory apartments, and the frontage is not within one quarter (1/4) mile of an existing or proposed public facility such as a school, park, bus stop or walkway, or other attractor such as a neighborhood business, to which pedestrian access should be provided.

(g) There are other significant reasons as determined by Public Works which may also preclude the construction of full standard frontage improvements at the time of development.

(h) There is no reasonable potential for the development to add any new pedestrian or vehicle trips to a road abutting the rear or side of a parcel. For example, there may be instances in which there is no reasonable potential for residents of a proposed subdivision to use a road abutting a side or rear of the overall subdivision’s parcel(s) if that road is not used for pedestrian or vehicle access to the subdivision or the abutting road is a permanent cul-de-sac serving a small number of residences.

(2) When an engineering reason, as described above, precludes the construction of full standard frontage improvements, interim or minimum frontage improvements may be required.

**4222.050 Pedestrian Walkways**

*Adopted 9/10/95, First Revision 10/11/04*

Shoulders will generally not be delineated for walkways as part of the development process. The Road Maintenance Division will generally provide walkway delineation along designated walkway locations as part of the Department of Public Work’s annual walkway program. In some cases, however, pedestrian walkways may be required along a development’s frontage as well as along offsite roads in order to provide a facility for pedestrians walking to specific locations. Examples of this may include pedestrian walkways to schools, bus stops, commercial centers, etc. When required, pedestrian walkways will be identified as part of the development approval process. Construction and delineation of the walkways must be in accordance with the Engineering Design and Development Standards.
4223 INADEQUATE ROAD CONDITIONS

4223.010 Applicability and/or Purpose
Adopted: 7/13/95, First Revision 10/11/04
In accordance with the requirements of Chapter 30.66B SCC, mitigation of impacts on inadequate road condition locations is required. This Rule identifies the criteria for determination of inadequate road condition locations.

4223.020 Mitigation of Impacts on Inadequate Road Conditions is Required
Adopted: 7/13/95, First Revision 10/11/04
(1) Mitigation of impacts on inadequate road conditions (IRCs) is required in order to improve inadequate roads in accordance with adopted standards, prior to the impacts of traffic from new development. If such conditions are found to exist in a development’s road system at the time of development application review, and if the development at the time of full occupancy will put three or more peak-hour trips through the identified location(s), or if the development’s traffic at the time of full occupancy will cause an IRC, the development will only be approved if provisions are made in accordance with sections SCC 30.66B.210-220 for elimination of the IRCs.

(a) To eliminate an IRC means to make sufficient changes to the road system to allow the county engineer to determine that the location no longer constitutes an inadequate road condition.

(b) A condition imposed on a development to construct improvements to eliminate an IRC may be imposed on more than one development.

(c) The phrase “put three or more peak-hour trips through the identified location” means any combination of trips at the location adding to three or more. IRCs are different than concurrency determinations in that regards. With IRCs there do not have to be three peak hour trips in one direction. For example, 2 westbound peak-hour trips and 1 eastbound peak-hour trip meets the three trip criteria for an IRC. Even 1 northbound, 1 southbound and 1 westbound trip meets the criteria for an IRC at an intersection.

4223.030 Timing of Elimination of Inadequate Road Conditions
Adopted: 7/13/95, First Revision 10/11/04
The improvements necessary to remove the inadequate road condition(s) must be complete or under contract before a building permit for a development will be issued, provided, that where no building permit will be associated with a conditional or special use permit, then the improvements removing the inadequate road condition must be complete as a precondition of approval. The County Engineer will determine if the improvements must be complete and accepted by the County prior to building permit issuance. In cases where building permits are issued prior to completion of the improvements, the improvements must be complete and accepted by the County before any certificate of occupancy will be issued or final inspection performed.
4223.040 Determination of Inadequate Road Condition Locations

Adopted: 7/13/95, First Revision 10/11/04

(1) The determination as to whether or not a location constitutes an inadequate road condition shall be made using a three-step procedure. The procedure shall utilize all of the following:

(a) A technical evaluation in accordance with a modified version of Report No. FHWA-RD-77-82, “Identification of Hazardous Locations,” published by the Federal Highway Administration, Department of Transportation, December 1977.

(b) A review board evaluation which shall include at a minimum three persons from the following: Public Works Director, County Engineer, Transportation and Environmental Services Director, Engineering Services Director, Traffic Engineer, Land Use Supervisor, or Transportation Specialist. At least one person on the review board shall be at the level of “Director.” In addition, the review board shall include as a non-voting member the Transportation Development Reviewer (TDR) for the TSA in which the inadequate road condition is located.

(c) A final evaluation and sign-off by the County Engineer.

4223.050 Appeal of Inadequate Road Condition Determinations

Adopted: 7/13/95, First Revision 10/11/04

The County Engineer’s determination as to whether or not a road is an inadequate road condition will be final and will not be subject to appeal. For land development review purposes, the effect of an inadequate road condition location determination on a particular development may be appealed in accordance with County code requirements for Type 1 or Type 2 developments.

4223.060 Determination that A Road Condition is No Longer Inadequate

(1) The determination that a road condition is no longer inadequate will be made by the County Engineer. There are two basic scenarios for this as described below, one based on improvements to the road system, the other based on changes to the operating characteristics of the road system.

(2) Changes in the Operating Characteristics of the Road System. There may be instances in which there are changes to the operating characteristics of the road system such as lower traffic volumes or lower accident rates which result in changes to the results of the technical analysis. In this case, the same process described in Rule 4223.040 above will be used to make a determination that a road condition is no longer inadequate.

(3) Elimination of Inadequate Road Condition (IRC) Based on Road Improvements. Typically, a determination that a road condition is no longer inadequate will occur after improvements are made to eliminate the IRC. The following describes the steps in that process.

(a) Based on the recommendations of the IRC review board, the County Traffic Engineer will conduct the necessary research, analysis and preliminary engineering to determine the scope of improvements needed to eliminate the IRC. Alternatively, the Traffic Engineer determines if the scope of improvements submitted by a development will eliminate the IRC. The Traffic Engineer reports to the TES Director.
(b) The Transportation and Environmental Services (TES) Director reviews the Traffic Engineer’s recommended improvements and determines a course of action. This may or may not include initiation of a latecomer’s cost recovery program under Chapter 13.95 SCC.

(i) If a developer is proposing to construct the improvements, then the Land Use Supervisor will be instructed to coordinate the process including, but not limited to, such things as reviewing and approving the engineering plans, requiring construction bonds, requiring right-of-way use and other construction permits, construction engineering, and inspection.

(ii) If the County is constructing the improvements, then the Program Planning Supervisor will program the improvements and coordinate construction with Engineering Services.

(c) When the improvements are completed, they will be reviewed by first the Traffic Engineer and then the County Engineer to determine if the improvements meet requirements, and to make a final review and analysis to determine that the road condition is no longer inadequate.

(d) The determination that the road condition is no longer inadequate is documented by a memorandum from the County Engineer to the TES Director and takes effect on the date of that memorandum.

(e) The TES Director instructs the appropriate section supervisors of the determination.
4224 MAKING LEVEL-OF-SERVICE DETERMINATIONS FOR USE IN CONCURRENCE DETERMINATIONS

4224.010 Applicability and/or Purpose
Adopted: 7/13/95, First Revision: 7/18/96, Second Revision: 8/19/02, Third Revision 10/11/04

(1) This Rule will be used for establishing level of service (LOS) on county road arterial units for the purpose of making concurrency determinations in accordance with Chapter 30.66B SCC for developments determined to be complete on or after the effective date of Amended Ordinance No. 95-039 (7/13/95).

(2) This Rule will also be used in determining whether or not arterial units are in arrears based on either current or future level of service conditions.

4224.020 Level of Service Standards
Adopted: 7/13/95, First Revision: 7/18/96, Second Revision: 8/19/02, Third Revision 10/11/04, Fourth Revision 4/24/06

(1) The Transportation Element of the Snohomish County Comprehensive Plan and Chapter 30.66B SCC establish the level-of-service (LOS) standards for County arterials. These level-of-service standards shall be used as the basis against which to compare level-of-service conditions on County arterials.

(2) Level-of-service conditions shall be determined from systematic measurements or valid estimates of average daily traffic (ADT) and average travel speed (See Rule 4224.040).

(3) The level-of-service standards are established in Chapter 30.66B.100-102.

4224.030 Arterial Units
Adopted: 7/13/95, First Revision: 7/18/96, Second Revision: 8/19/02, Third Revision 10/11/04, Fourth Revision 4/24/06

(1) Arterial unit, as defined in SCC 30.91A.280, means “a road, segment of a road, or portion of a road or a system of roads . . . consistent with the criteria established by the director . . . for the purpose of making level-of-service and concurrency determinations.”

(2) The list of arterial units shall in aggregate constitute the entire system of County arterials.

(3) The Department of Public Works (DPW) shall establish arterial units based on specific criteria.

(4) The designation of arterial units shall be maintained by DPW and updated on a periodic basis based on as many as possible of the following criteria:

(a) An arterial unit should not extend across the boundary of a transportation service area (TSA) . When an arterial unit comprises the boundary between two TSAs, the arterial unit will be considered to be in both TSAs.

(b) An arterial unit should not be made up of road segments with different functional classifications.
(c) Arterial units should have logical starting and ending points such as: TSA boundaries; other arterials, especially arterials with higher functional class designations; state routes; city boundaries.

(d) Arterial units should typically be 1/2 - 2 miles long in urban areas and 1-10 miles long in rural areas. Arterial units less than those suggested minimums may be necessary in certain situations, but level of service on such short units will be evaluated on the basis of at least a one-mile section of roadway in the urban area and two-mile section in the rural area wherever possible.

(5) Categories of Arterial Units for Level of Service Determinations. Categories have been developed based on the characteristics of Snohomish County arterials. Each arterial unit is assigned to one of three main categories of arterials.

(a) Category 1 – Urban. Usually Influenced by Controlled Intersections. Free-flow speeds generally less than 45 mph. Typically have one or more controlled intersections. All arterials located inside of urban growth areas (UGAs) are categorized as urban for the purpose of evaluating level of service. In addition, some arterials located outside of UGAs are categorized as urban in the Transportation Element of the Comprehensive Plan.

(b) Category 2 Rural. Arterials outside the UGA which are not categorized as urban for the purpose of evaluating level of service and which are not designed to serve as high-speed rural highways.

(c) Category 3 - Rural Two-Lane Highways. Highways with free-flow speeds typically greater than 50 mph.

(d) Categorization as urban or rural under this section for the purpose of evaluating level of service standards, does not necessarily correlate with the urban and rural engineering design and development standards (EDDS) and determinations of what design standards to use in making improvements.

4224.040 Level of Service Determinations

Adopted: 7/13/95, First Revision: 7/18/96, Second Revision: 8/19/02, Third Revision 10/11/04, Fourth Revision 4/24/06, Fifth Revision 1/22/07

(1) All aspects of level-of-service determinations, including measurement, analysis, and evaluation, shall be based on professionally recognized methods consistent with professional resources including, but not limited to, the most current edition of the Highway Capacity Manual (HCM) as published by the Transportation Research Board, National Research Council, including amendments thereto, and any other relevant published documents.

(2) Traffic Counts. Twenty-four hour traffic counts shall be conducted on all arterial units at least once every three years to measure average daily traffic (ADT) and hourly rates of flow.

(3) The Department of Public Works (DPW) shall systematically monitor the level of service on all arterial units. Snohomish County’s concurrency management system includes a two-step evaluation process as follows:

(a) Average Daily Traffic (ADT). The first step consists of a comparison of ADT with standards (i.e., thresholds of ADT) defined in SCC 30.66B.101. Weekday, two-way,
24-hour volumes will be used as the measure of ADT on arterial units. ADT will be evaluated just upstream or downstream from the key intersection on the arterial unit which is considered to be most critical for impacting level of service. This evaluation is related to screening and monitoring described below. ADT measurements will include traffic volumes from developments in the pipeline, provided that until December 31, 2008, for arterial units designated by the County Council as ultimate capacity, ADT measurement will not include pipeline volumes and will consist of a weighted average of volumes at each of the key intersections on the arterial unit, weighted by the distances between the key intersections.

(b) Average Travel Speed. The second step will be performed through operational analysis, and/or future LOS analysis as described below. The standards for average travel speed are contained in SCC 30.66B.102. Screening and monitoring, as described below, help to identify roads in which operational analysis and future LOS analysis may be needed. For arterials with preferential HOV treatments, average person travel speed shall be the measure for LOS analysis.

(4) Snohomish County’s LOS standards for arterials are contained in SCC 30.66B.100-102. The LOS of any given arterial unit is considered to be deficient (i.e., worse than the adopted standard), when ADT is greater than the threshold defined in SCC 30.66B.101 and the average travel speed is less than the threshold defined in SCC 30.66B.102.

(5) The Department of Public Works (DPW) uses a four-tiered approach to monitoring the level of service on the road system. The four tiers of LOS analyses are screening, monitoring, operational analysis, and future LOS determinations as described below:

(a) Screening. The purpose of screening is to provide an efficient method of identifying those County arterial units for which monitoring is needed. This is done using threshold testing, that is by comparing two-way peak hour volumes with threshold service volumes in DPW Rule 4224.070 and .080 and comparing average daily trips (ADT) with the thresholds in SCC 30.66B.101.

Screening also includes informal observations by County staff based on other available data such as intersection LOS provided by WSDOT for state intersections, intersection LOS determinations from other sources, field observations by County staff, and/or communications from the general public.

(b) Monitoring. The purpose of monitoring is to provide more frequent and detailed analysis for arterial units for which operational analysis may be needed.

(i) Monitoring of an arterial unit shall begin no later than once its level of service, as determined by screening, is determined to be LOS D in the urban areas or LOS B in the rural areas or once it’s ADT has exceeded the threshold in SCC 30.66B.101.

(ii) For arterial units meeting this criteria, traffic counts shall be conducted at least annually.

(c) Operational Analysis. Operational analysis includes measurements of ADT and average travel speeds for current and future conditions and also identifies the cause of LOS problems and points the way to possible solutions.

(i) Operational analysis of an arterial unit shall begin no later than once its level of
service, as determined by monitoring, is determined to be LOS E or worse in the urban areas or LOS C or worse in the rural areas.

(ii) For arterial units meeting this criteria, travel time and delay studies shall be conducted at least annually. This may include future LOS determinations made in conjunction with development applications.

(iii) Appropriate methods that are consistent with the framework established in DPW Rule 4224 including 4224.040(7) below shall be used to make the LOS determinations for all arterial units that meet the criteria for operational analysis.

(d) Future LOS Determinations. Used to forecast future level of service on arterial units using methods compatible with those used for operational analysis.

(i) Future LOS determinations may be conducted by DPW (e.g. technical studies, design reports, etc.) or may be required of developers as part of the development review process. (See also DPW Rule-4220) Future LOS determinations used to make concurrency determinations for large developments shall be made through traffic studies. Future LOS determinations may also be conducted by DPW as part of technical studies, design reports, concurrency determinations or other studies.

(ii) Appropriate methods that are consistent with the framework established in DPW Rule 4224 including 4224.040(7) below shall be used to make the future level-of-service determinations in traffic studies. When bottlenecks downstream from an arterial unit cause delay on the arterial unit being evaluated, as in cases where queues from one intersection spill back through an adjacent intersection, then the methods must be able to account for this effect.

(6) The County Traffic Engineer will make the final determination on what level of service methodologies will be acceptable based on these rules with adjustments and exceptions made on a case-by-case basis.

(a) When developments are required to conduct future LOS analysis, methodologies that differ from these rules will be spelled out in a traffic study scoping document.

(b) With prior written approval by the County Traffic Engineer of professionally accepted methodology, a developer may also propose analysis showing that actual level-of-service on a specific arterial unit would be better than that indicated by the methods required above.

(c) LOS determinations based on the traffic studies, including any pre-approved special methodology, shall be subject to final review and approval by the County Traffic Engineer.

(d) All traffic studies and scoping documents are available for public review by contacting the transportation development reviewer as shown on the notice of application.

(7) Level-of-Service Methods. The county has identified methods appropriate for the four types of LOS determinations and applied them to the main categories of arterial units as shown in the following table.
<table>
<thead>
<tr>
<th>Category</th>
<th>Screening</th>
<th>Monitoring</th>
<th>Operational Analysis and Future LOS Determinations</th>
</tr>
</thead>
<tbody>
<tr>
<td>Category 1 – Urban Arterials. Usually Influenced by Controlled Intersections and Category 2 Rural Arterials</td>
<td>Threshold testing using tables developed by DPW (See 4224.070) and the ADT thresholds in SCC 30.66B.101.</td>
<td>Threshold testing which may include values for input factors obtained from measurements instead of default values.</td>
<td>HCM Chapters 10 &amp; 15 and other appropriate methodologies consistent with HCM including travel-time studies and estimation of travel time with models such as Synchro.</td>
</tr>
<tr>
<td>Category 3 Rural Two-Lane Highways</td>
<td></td>
<td></td>
<td>HCM Chapters 12 &amp; 20 and other appropriate methodologies consistent with HCM including travel-time studies and estimation of travel time with models such as Synchro.</td>
</tr>
</tbody>
</table>

(8) Peak Hours and Directions of Level-Of-Service Deficiencies. Determinations that arterial units are in arrears will specify one or more weekday peak hours (AM peak and/or PM peak) and travel directions of level-of-service deficiency. For each arterial unit there are actually four possibilities for an arterial unit in arrears, that is, two directions each for the two peak hours (AM and PM).

(9) Critical Arterial Units. DPW will develop and maintain a list showing the critical arterial units for each TSA.

(a) The list will be updated on an ongoing basis as new information becomes available, but at least once each year. The list includes all of the arterial units at risk for concurrency and for which forecasts should be required, typically those being monitored or under operational analysis.

(b) The Transportation Development Reviewers (TDRs), other DPW staff, and citizens are encouraged to suggest to Traffic Operations any “critical” arterial units that may need to be added to the lists based on field observations, and/or other information. This does not mean that arterial units are added to the critical list simply because of field observations. It means that field observations can trigger further investigation by Traffic Operations including additional traffic counts or travel time studies to make an objective determination as to whether or not the arterial unit needs to be added to the critical list.

(c) The most up-to-date list of critical arterial units will be provided to the Transportation Development Reviewers (TDRs) who will in turn provide them to developers at the presubmittal meeting or traffic study scoping meetings.
(10) Key Intersections. For each arterial unit, DPW will identify the “key” intersections needed to adequately estimate level of service.

(a) State and City intersections that lie AT the terminus of a county arterial unit WILL be included in the list of key intersections.

(b) State and City intersections that lie NEAR the terminus of a county arterial unit MAY be included in the list of key intersections.

(11) Traffic Counts at Key Intersections. DPW will conduct regular manual counts at the key intersections. DPW will prioritize these counts, based on the LOS status of the corresponding arterial unit. Counts will include AM and PM peak-hour counts. The peak hours will be the peak hours of the arterial units.

4224.050 Arterial Units in Arrears

Adopted: 7/13/95, First Revision: 7/18/96, Second Revision: 8/19/02, Third Revision 10/11/04

(1) SCC 30.91A.290 defines “arterial unit in arrears” to mean “any arterial unit operating, or forecast to operate within six years, below the adopted level-of-service standard contained in SCC 30.66B.100, unless a financial commitment is in place to complete improvements or implement strategies that are forecast to remedy the deficiency within six years.

(2) The Transportation and Environmental Services (TES) Director shall make the final determination as to whether or not an arterial unit is in arrears.

(3) The County Traffic Engineer shall determine appropriate methodologies and shall make the final determination as to whether or not an arterial unit is currently or is forecast to be operating below the adopted level-of-service standard.

(4) For any arterial unit determined by the County Traffic Engineer to have deficient level of service, the Program Planning Supervisor will evaluate relevant transportation projects to determine whether or not there is a programmed improvement(s) or strategy that might affect the LOS deficiency. For any such project(s), the Program Planning Supervisor shall determine whether or not a financial commitment is in place and a reasonably certain date upon which the project(s) shall be completed. The phrase “financial commitment in place” shall have the following meanings:

(a) Public Agencies: Grant funds shall be considered committed for a project when they have been awarded by the funding agency.

(b) For the County, projects must be shown as fully-funded on the County six-year TIP.

(c) For cities, as with the County, projects must be shown as fully-funded on the City six-year TIP. For joint city/county projects, the projects must be shown as fully-funded on both the County and the City six-year TIP.

(d) For WSDOT, construction funding for projects must be shown as a line item on an adopted construction or capital budget.

(e) For Transit Agencies, funding for projects must be shown as a line item on an adopted construction or capital budget.
(f) For cities, WSDOT, Transit Agencies and other agencies, the County must receive a letter from the agency indicating that there is a financial commitment in place per the criteria of this section.

(g) Private Developers: For construction of improvements by developers the term “financial commitment in place” shall mean that all of the following conditions have been met:

(i) Construction plans and cost estimates for the improvements have been submitted by the development, and

(ii) The County Engineer has determined that the cost estimates and construction plans are adequate to determine the amount of funds required to secure right-of-way, complete the design, secure all permits, and construct the improvements, and

(iii) 150% of the estimated funds required for acquisition of the right of way have been placed in an escrow account by the development, and

(iv) The development has secured a guarantee to the County in the form of a performance bond or other surety for 150% of the estimated funds required to complete the design, secure all permits, and construct the improvements.

Alternatively, prior to a determination by the Transportation and Environmental Services Director that an arterial unit is no longer in arrears based on developer-constructed improvements the improvements must be substantially complete as determined by the County Engineer, the improved road(s) must be open to the public, and any unfinished project work items must be guaranteed to the County by the developer with a performance bond or other surety.

(5) The County Traffic Engineer shall determine whether or not the project(s), if any, identified above is reasonably certain to remedy the LOS deficiency.

(6) For any arterial unit with deficient level of service the Program Planning Supervisor and the County Traffic Engineer shall assemble documents supporting their determinations in DPW Rule 4224.050(2) and (3) above and provide these to the TES Director. The TES Director shall review these documents and determine if the arterial unit is in arrears.

(7) If an arterial unit is determined to be in arrears the TES Director shall promptly, and in writing, notify the Public Works Director. The TES Director shall also hold a review meeting in accordance with Rule 4224 to determine the appropriate action to address the arterial unit in arrears.

(8) State or City Projects Considered in LOS Determinations. State or city transportation projects will be considered in making determinations about whether or not arterial units are in arrears. Developments submitted prior to the effective date of Ordinance 01-011 and Ordinance 01-013, with issues related to the changes in code, should consult with DPW about whether or not the revised regulations may affect their projects. For instance, if arterial units are found to no longer be in arrears based on funded state improvements, certain developments currently under review might be deemed concurrent under the revised rules that might not be deemed concurrent under the previous rules.
4224.060 Arterial Units No Longer in Arrears
Adopted: 7/13/95, First Revision: 7/18/96, Second Revision: 8/19/02, Third Revision 10/11/04

(1) The Transportation and Environmental Services (TES) Director shall make the final determination as to whether or not an arterial unit in arrears is NO LONGER in arrears.

(2) The County Traffic Engineer shall determine appropriate methodologies and shall make the final determination as to whether or not conditions have changed and the level of service on an arterial unit in arrears is once again operating and/or is now forecast to be operating AT OR ABOVE the adopted level-of-service standard. If so, the County Traffic Engineer shall assemble documents supporting this determination and provide these to the Transportation and Environmental Services (TES) Director.

(3) The TES Director shall review these documents and determine if the arterial unit is NO LONGER in arrears and, in writing, notify the Public Works Director and all supervisors in the Transportation and Environmental Services Division.

(4) If an arterial unit in arrears is once again operating above the adopted level-of-service standard, but within six years is forecast to be operating below the adopted level-of-service, then the arterial units shall be considered to be still in arrears.

(5) For any arterial unit in arrears the Program Planning Supervisor will monitor planned and programmed improvements or strategies that may effect the level-of-service deficiency. For any such projects, the Program Planning Supervisor shall determine if and when a financial commitment is in place to complete the improvements or implement the strategies within six years.

(6) The County Traffic Engineer shall determine whether or not the projects or strategies identified above are reasonably certain to remedy the LOS deficiency. If so, the Program Planning Supervisor and the County Traffic Engineer shall assemble documents supporting this determination and provide these to the Transportation and Environmental Services (TES) Director.

(7) The TES Director shall review these documents and determine if the arterial unit is NO LONGER in arrears and, in writing, notify the Public Works Director and all supervisors in the Transportation and Environmental Services Division.
4224.070  Level of Service Screening Tables for Urban/Suburban Category 1 Arterial Units

Adopted: 2/14/96, First Revision: 4/30/99, Third Revision 10/11/04, Fourth Revision 01/20/14

(1) **Urban/Suburban Category 1, Arterial Units Influenced by Signalized Intersections.** Contained within this section are sets of tables of maximum service volumes for urban/suburban arterial units. The maximum service volumes vary by arterial classification, lane design and signalization. Instructions for, and an example of screening-table use are as follows.

(2) Instructions for Urban/Suburban Category 1  
   (a) Take the two-way, peak-hour volume for a given arterial unit.  
   (b) Determine the number of signals per mile on the arterial unit.  
   (c) Select the appropriate table set based on signals per mile.  
   (d) Determine the arterial unit's class and its standard or nonstandard lane widths.  
   (e) Select the appropriate table for class and standard/nonstandard lane widths.  
   (f) Select the overall through approach width and number of lanes.  
   (g) Compare the arterial peak hour volume with the maximum service volume for the appropriate LOS taken directly from the table.

(3) Example for Urban/Suburban Category 1  
   (a) A given arterial unit has a two-way, peak-hour volume of 3,700 vehicles per hour (vph).  
   (b) Number of signals per mile is 0.10.  
   (c) Table Set 1 is selected because 0.10 is bracketed by 0.0-0.50 signals per mile.  
   (d) The arterial unit is a principal arterial with standard 12 foot lanes.  
   (e) Table 1-A is selected for principal arterials.  
   (f) Through approach width is 24 feet with four through lanes and one continuous left-turn lane  
      (if through approach width varies by approach, assume lesser width).  
   (g) The peak hour volume of 3,700 vph is greater than the maximum service volume of 3,660 for LOS C under a 5-lane roadway.  
   (h) The arterial unit can be expected to operate within the volume range for LOS D.

(4) Tables for Urban/Suburban Category 1  
   (a) There are six table sets for this category as shown below.  
   (b) Each table shows maximum service volume thresholds for LOS B through E.  
   (c) Volumes are expressed as two-way vehicles per hour.  
   (d) Volumes vary by approach width and number of lanes.  
   (e) Table sets vary by the number of signalized intersections per mile.  
   (f) There are three tables in each set, first principal arterials with standard lane widths, second minor and collector arterials with standard lane widths, third for all arterials with non-standard lane widths.
### Table 1a: Principal Arterials with Standard Lane Widths

<table>
<thead>
<tr>
<th>LOS</th>
<th>2-lane</th>
<th>3-lane</th>
<th>4-lane</th>
<th>5-lane</th>
<th>6-lane</th>
<th>7-lane</th>
</tr>
</thead>
<tbody>
<tr>
<td>A</td>
<td>n/a**</td>
<td>n/a**</td>
<td>n/a**</td>
<td>n/a**</td>
<td>n/a**</td>
<td>n/a**</td>
</tr>
<tr>
<td>B</td>
<td>1,390</td>
<td>1,670</td>
<td>2,840</td>
<td>3,410</td>
<td>4,290</td>
<td>5,150</td>
</tr>
<tr>
<td>C</td>
<td>1,500</td>
<td>1,800</td>
<td>3,050</td>
<td>3,660</td>
<td>4,600</td>
<td>5,520</td>
</tr>
<tr>
<td>D</td>
<td>1,560</td>
<td>1,870</td>
<td>3,170</td>
<td>3,800</td>
<td>4,780</td>
<td>5,740</td>
</tr>
<tr>
<td>E</td>
<td>1,580</td>
<td>1,900</td>
<td>3,200</td>
<td>3,840</td>
<td>4,830</td>
<td>5,800</td>
</tr>
</tbody>
</table>

### Table 1b: Minor and Collector Arterials with Standard Lane Widths

<table>
<thead>
<tr>
<th>LOS</th>
<th>2-lane</th>
<th>3-lane</th>
<th>4-lane</th>
<th>5-lane</th>
</tr>
</thead>
<tbody>
<tr>
<td>A</td>
<td>n/a**</td>
<td>n/a**</td>
<td>n/a**</td>
<td>n/a**</td>
</tr>
<tr>
<td>B</td>
<td>1,360</td>
<td>1,630</td>
<td>2,770</td>
<td>3,320</td>
</tr>
<tr>
<td>C</td>
<td>1,460</td>
<td>1,750</td>
<td>2,970</td>
<td>3,560</td>
</tr>
<tr>
<td>D</td>
<td>1,520</td>
<td>1,820</td>
<td>3,090</td>
<td>3,710</td>
</tr>
<tr>
<td>E</td>
<td>1,540</td>
<td>1,850</td>
<td>3,120</td>
<td>3,740</td>
</tr>
</tbody>
</table>

### Table 1c: Principal, Minor and Collector Arterials with Nonstandard Lane Widths

<table>
<thead>
<tr>
<th>LOS</th>
<th>≤11 ft</th>
<th>≤11 ft</th>
<th>≤22 ft</th>
<th>≤22 ft</th>
<th>31 ft</th>
<th>31 ft</th>
<th>36 ft</th>
<th>36 ft</th>
</tr>
</thead>
<tbody>
<tr>
<td>A</td>
<td>n/a**</td>
<td>n/a**</td>
<td>n/a**</td>
<td>n/a**</td>
<td>n/a**</td>
<td>n/a**</td>
<td>n/a**</td>
<td>n/a**</td>
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<tr>
<td>B</td>
<td>1,290</td>
<td>1,550</td>
<td>2,640</td>
<td>3,170</td>
<td>4,000</td>
<td>4,800</td>
<td>4250</td>
<td>5100</td>
</tr>
<tr>
<td>C</td>
<td>1,390</td>
<td>1,670</td>
<td>2,820</td>
<td>3,380</td>
<td>4,260</td>
<td>5,110</td>
<td>4550</td>
<td>5460</td>
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<tr>
<td>D</td>
<td>1,450</td>
<td>1,740</td>
<td>2,930</td>
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<td>4,430</td>
<td>5,320</td>
<td>4730</td>
<td>5680</td>
</tr>
<tr>
<td>E</td>
<td>1,460</td>
<td>1,750</td>
<td>2,960</td>
<td>3,550</td>
<td>4,470</td>
<td>5,360</td>
<td>3,510</td>
<td>5740</td>
</tr>
</tbody>
</table>

* Interpolation is only appropriate for service volumes between 31 and 36 feet.
** Not applicable to the screening process
### TABLE SET 2

#### 0.51 – 1.00 Signalized Intersections Per Mile

**Table 2a: Principal Arterial with Standard Lane Widths**

<table>
<thead>
<tr>
<th>LOS</th>
<th>12 ft 2-lane</th>
<th>12 ft 3-lane</th>
<th>24 ft 4-lane</th>
<th>24 ft 5-lane</th>
<th>37 ft 6-lane</th>
<th>37 ft 7-lane</th>
</tr>
</thead>
<tbody>
<tr>
<td>A</td>
<td>n/a**</td>
<td>n/a**</td>
<td>n/a**</td>
<td>n/a**</td>
<td>n/a**</td>
<td>n/a**</td>
</tr>
<tr>
<td>B</td>
<td>900</td>
<td>1,080</td>
<td>1,920</td>
<td>2,300</td>
<td>2,920</td>
<td>3,500</td>
</tr>
<tr>
<td>C</td>
<td>1,440</td>
<td>1,730</td>
<td>2,920</td>
<td>3,500</td>
<td>4,420</td>
<td>5,300</td>
</tr>
<tr>
<td>D</td>
<td>1,500</td>
<td>1,800</td>
<td>3,050</td>
<td>3,660</td>
<td>4,600</td>
<td>5,520</td>
</tr>
<tr>
<td>E</td>
<td>1,520</td>
<td>1,820</td>
<td>3,080</td>
<td>3,700</td>
<td>4,650</td>
<td>5,580</td>
</tr>
</tbody>
</table>

**Table 2b: Minor And Collector Arterials With Standard Lane Widths**

<table>
<thead>
<tr>
<th>LOS</th>
<th>12 ft 2-lane</th>
<th>12 ft 3-lane</th>
<th>23 ft 4-lane</th>
<th>23 ft 5-lane</th>
</tr>
</thead>
<tbody>
<tr>
<td>A</td>
<td>n/a**</td>
<td>n/a**</td>
<td>n/a**</td>
<td>n/a**</td>
</tr>
<tr>
<td>B</td>
<td>890</td>
<td>1,070</td>
<td>1,890</td>
<td>2,270</td>
</tr>
<tr>
<td>C</td>
<td>1,390</td>
<td>1,670</td>
<td>2,860</td>
<td>3,430</td>
</tr>
<tr>
<td>D</td>
<td>1,460</td>
<td>1,750</td>
<td>2,970</td>
<td>3,560</td>
</tr>
<tr>
<td>E</td>
<td>1,470</td>
<td>1,760</td>
<td>3,000</td>
<td>3,600</td>
</tr>
</tbody>
</table>

**Table 2c: Principal, Minor And Collector Arterials With Nonstandard Lane Widths**

<table>
<thead>
<tr>
<th>LOS</th>
<th>≤11 ft 2-lane</th>
<th>≤11 ft 3-lane</th>
<th>≤22 ft 4-lane</th>
<th>≤22 ft 5-lane</th>
<th>31 ft 6-lane</th>
<th>31 ft 7-lane</th>
<th>36 ft 6-lane</th>
<th>36 ft 7-lane</th>
</tr>
</thead>
<tbody>
<tr>
<td>A</td>
<td>n/a**</td>
<td>n/a**</td>
<td>n/a**</td>
<td>n/a**</td>
<td>n/a**</td>
<td>n/a**</td>
<td>n/a**</td>
<td>n/a**</td>
</tr>
<tr>
<td>B</td>
<td>860</td>
<td>1,030</td>
<td>1,820</td>
<td>2,180</td>
<td>2,790</td>
<td>3,350</td>
<td>2890</td>
<td>3470</td>
</tr>
<tr>
<td>C</td>
<td>1,320</td>
<td>1,580</td>
<td>2,720</td>
<td>3,260</td>
<td>4,100</td>
<td>4,920</td>
<td>4380</td>
<td>5250</td>
</tr>
<tr>
<td>D</td>
<td>1,390</td>
<td>1,670</td>
<td>2,820</td>
<td>3,380</td>
<td>4,260</td>
<td>5,110</td>
<td>4550</td>
<td>5460</td>
</tr>
<tr>
<td>E</td>
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<td>1,680</td>
<td>2,850</td>
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<td>4,300</td>
<td>5,160</td>
<td>4600</td>
<td>5520</td>
</tr>
</tbody>
</table>

* Interpolation is only appropriate for service volumes between 31 and 36 feet.

** Not applicable to the screening process
### TABLE SET 3

**1.01 – 1.50 Signalized Intersections Per Mile**

#### Table 3a: Principal Arterial with Standard Lane Widths

<table>
<thead>
<tr>
<th>Table 3a</th>
<th>12 ft</th>
<th>12 ft</th>
<th>24 ft</th>
<th>24 ft</th>
<th>37 ft</th>
<th>37 ft</th>
</tr>
</thead>
<tbody>
<tr>
<td>LOS</td>
<td>2-lane</td>
<td>3-lane</td>
<td>4-lane</td>
<td>5-lane</td>
<td>6-lane</td>
<td>7-lane</td>
</tr>
<tr>
<td>A</td>
<td>n/a**</td>
<td>n/a**</td>
<td>n/a**</td>
<td>n/a**</td>
<td>n/a**</td>
<td>n/a**</td>
</tr>
<tr>
<td>B</td>
<td>440</td>
<td>530</td>
<td>890</td>
<td>1,070</td>
<td>1,360</td>
<td>1,630</td>
</tr>
<tr>
<td>C</td>
<td>1,300</td>
<td>1,560</td>
<td>2,740</td>
<td>3,290</td>
<td>4,170</td>
<td>5,000</td>
</tr>
<tr>
<td>D</td>
<td>1,470</td>
<td>1,760</td>
<td>3,000</td>
<td>3,600</td>
<td>4,560</td>
<td>5,470</td>
</tr>
<tr>
<td>E</td>
<td>1,500</td>
<td>1,800</td>
<td>3,050</td>
<td>3,660</td>
<td>4,600</td>
<td>5,520</td>
</tr>
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</table>

#### Table 3b: Minor And Collector Arterials With Standard Lane Widths

<table>
<thead>
<tr>
<th>Table 3b</th>
<th>12 ft</th>
<th>12 ft</th>
<th>23 ft</th>
<th>23 ft</th>
</tr>
</thead>
<tbody>
<tr>
<td>LOS</td>
<td>2-lane</td>
<td>3-lane</td>
<td>4-lane</td>
<td>5-lane</td>
</tr>
<tr>
<td>A</td>
<td>n/a**</td>
<td>n/a**</td>
<td>n/a**</td>
<td>n/a**</td>
</tr>
<tr>
<td>B</td>
<td>420</td>
<td>500</td>
<td>890</td>
<td>1,070</td>
</tr>
<tr>
<td>C</td>
<td>1,270</td>
<td>1,520</td>
<td>2,670</td>
<td>3,200</td>
</tr>
<tr>
<td>D</td>
<td>1,440</td>
<td>1,730</td>
<td>2,940</td>
<td>3,530</td>
</tr>
<tr>
<td>E</td>
<td>1,460</td>
<td>1,750</td>
<td>2,970</td>
<td>3,560</td>
</tr>
</tbody>
</table>

#### Table 3c: Principal, Minor And Collector Arterials With Nonstandard Lane Widths*

<table>
<thead>
<tr>
<th>Table 3c</th>
<th>≤11 ft</th>
<th>≤11 ft</th>
<th>≤22 ft</th>
<th>≤22 ft</th>
<th>31 ft</th>
<th>31 ft</th>
<th>36 ft</th>
<th>36 ft</th>
</tr>
</thead>
<tbody>
<tr>
<td>LOS</td>
<td>2-lane</td>
<td>3-lane</td>
<td>4-lane</td>
<td>5-lane</td>
<td>6-lane</td>
<td>7-lane</td>
<td>6-lane</td>
<td>7-lane</td>
</tr>
<tr>
<td>A</td>
<td>n/a**</td>
<td>n/a**</td>
<td>n/a**</td>
<td>n/a**</td>
<td>n/a**</td>
<td>n/a**</td>
<td>n/a**</td>
<td>n/a**</td>
</tr>
<tr>
<td>B</td>
<td>400</td>
<td>480</td>
<td>860</td>
<td>1,030</td>
<td>1,300</td>
<td>1,560</td>
<td>1,350</td>
<td>1,610</td>
</tr>
<tr>
<td>C</td>
<td>1,200</td>
<td>1,440</td>
<td>2,560</td>
<td>3,070</td>
<td>3,890</td>
<td>4,670</td>
<td>4,130</td>
<td>4,950</td>
</tr>
<tr>
<td>D</td>
<td>1,370</td>
<td>1,640</td>
<td>2,790</td>
<td>3,350</td>
<td>4,220</td>
<td>5,060</td>
<td>4,510</td>
<td>5,420</td>
</tr>
<tr>
<td>E</td>
<td>1,390</td>
<td>1,670</td>
<td>2,820</td>
<td>3,380</td>
<td>4,260</td>
<td>5,110</td>
<td>4,550</td>
<td>5,460</td>
</tr>
</tbody>
</table>

* Interpolation is only appropriate for service volumes between 31 and 36 feet.
** Not applicable to the screening process
# TABLE SET 4

1.51 - 2.00 Signalized Intersections Per Mile

## Table 4a: Principal Arterial with Standard Lane Widths

<table>
<thead>
<tr>
<th>LOS</th>
<th>12 ft 2-lane</th>
<th>12 ft 3-lane</th>
<th>24 ft 4-lane</th>
<th>24 ft 5-lane</th>
<th>37 ft 6-lane</th>
<th>37 ft 7-lane</th>
</tr>
</thead>
<tbody>
<tr>
<td>A</td>
<td>n/a**</td>
<td>n/a**</td>
<td>n/a**</td>
<td>n/a**</td>
<td>n/a**</td>
<td>n/a**</td>
</tr>
<tr>
<td>B</td>
<td>240</td>
<td>290</td>
<td>500</td>
<td>600</td>
<td>770</td>
<td>920</td>
</tr>
<tr>
<td>C</td>
<td>1,170</td>
<td>1,400</td>
<td>2,520</td>
<td>3,020</td>
<td>3,900</td>
<td>4,680</td>
</tr>
<tr>
<td>D</td>
<td>1,420</td>
<td>1,700</td>
<td>2,920</td>
<td>3,500</td>
<td>4,420</td>
<td>5,300</td>
</tr>
<tr>
<td>E</td>
<td>1,500</td>
<td>1,800</td>
<td>3,050</td>
<td>3,660</td>
<td>4,600</td>
<td>5,520</td>
</tr>
</tbody>
</table>

## Table 4b: Minor And Collector Arterials With Standard Lane Widths

<table>
<thead>
<tr>
<th>LOS</th>
<th>12 ft 2-lane</th>
<th>12 ft 3-lane</th>
<th>23 ft 4-lane</th>
<th>23 ft 5-lane</th>
</tr>
</thead>
<tbody>
<tr>
<td>A</td>
<td>n/a**</td>
<td>n/a**</td>
<td>n/a**</td>
<td>n/a**</td>
</tr>
<tr>
<td>B</td>
<td>240</td>
<td>290</td>
<td>500</td>
<td>600</td>
</tr>
<tr>
<td>C</td>
<td>1,140</td>
<td>1,370</td>
<td>2,470</td>
<td>2,960</td>
</tr>
<tr>
<td>D</td>
<td>1,390</td>
<td>1,670</td>
<td>2,860</td>
<td>3,430</td>
</tr>
<tr>
<td>E</td>
<td>1,460</td>
<td>1,750</td>
<td>2,970</td>
<td>3,560</td>
</tr>
</tbody>
</table>

## Table 4c: Principal, Minor And Collector Arterials With Nonstandard Lane Widths*

* Interpolation is only appropriate for service volumes between 31 and 36 feet.

<table>
<thead>
<tr>
<th>LOS</th>
<th>≤11 ft 2-lane</th>
<th>≤11 ft 3-lane</th>
<th>≤22 ft 4-lane</th>
<th>≤22 ft 5-lane</th>
<th>31 ft 6-lane</th>
<th>31 ft 7-lane</th>
<th>36 ft 6-lane</th>
<th>36 ft 7-lane</th>
</tr>
</thead>
<tbody>
<tr>
<td>A</td>
<td>n/a**</td>
<td>n/a**</td>
<td>n/a**</td>
<td>n/a**</td>
<td>n/a**</td>
<td>n/a**</td>
<td>n/a**</td>
<td>n/a**</td>
</tr>
<tr>
<td>B</td>
<td>240</td>
<td>290</td>
<td>490</td>
<td>590</td>
<td>740</td>
<td>890</td>
<td>760</td>
<td>910</td>
</tr>
<tr>
<td>C</td>
<td>1,090</td>
<td>1,310</td>
<td>2,360</td>
<td>2,830</td>
<td>3,660</td>
<td>4,390</td>
<td>3,860</td>
<td>4,630</td>
</tr>
<tr>
<td>D</td>
<td>1,320</td>
<td>1,580</td>
<td>2,700</td>
<td>3,240</td>
<td>4,100</td>
<td>4,920</td>
<td>4,380</td>
<td>5,250</td>
</tr>
<tr>
<td>E</td>
<td>1,390</td>
<td>1,670</td>
<td>2,820</td>
<td>3,380</td>
<td>4,260</td>
<td>5,110</td>
<td>4,550</td>
<td>5,460</td>
</tr>
</tbody>
</table>

**  Not applicable to the screening process
### TABLE SET 5

**2.01 – 4.00 Signalized Intersections Per Mile**

#### Table 5a: Principal Arterial with Standard Lane Widths

<table>
<thead>
<tr>
<th>Table 5a</th>
<th>12 ft</th>
<th>12 ft</th>
<th>24 ft</th>
<th>24 ft</th>
<th>37 ft</th>
<th>37 ft</th>
</tr>
</thead>
<tbody>
<tr>
<td>LOS</td>
<td>2-lane</td>
<td>3-lane</td>
<td>4-lane</td>
<td>5-lane</td>
<td>6-lane</td>
<td>7-lane</td>
</tr>
<tr>
<td>A</td>
<td>n/a**</td>
<td>n/a**</td>
<td>n/a**</td>
<td>n/a**</td>
<td>n/a**</td>
<td>n/a**</td>
</tr>
<tr>
<td>B</td>
<td>140</td>
<td>170</td>
<td>300</td>
<td>360</td>
<td>460</td>
<td>550</td>
</tr>
<tr>
<td>C</td>
<td>720</td>
<td>860</td>
<td>1,500</td>
<td>1,800</td>
<td>2,300</td>
<td>2,760</td>
</tr>
<tr>
<td>D</td>
<td>1,320</td>
<td>1,580</td>
<td>2,770</td>
<td>3,320</td>
<td>4,200</td>
<td>5,040</td>
</tr>
<tr>
<td>E</td>
<td>1,440</td>
<td>1,730</td>
<td>2,960</td>
<td>3,550</td>
<td>4,460</td>
<td>5,350</td>
</tr>
</tbody>
</table>

#### Table 5b: Minor And Collector Arterials With Standard Lane Widths

<table>
<thead>
<tr>
<th>Table 5b</th>
<th>12 ft</th>
<th>12 ft</th>
<th>23 ft</th>
<th>23 ft</th>
</tr>
</thead>
<tbody>
<tr>
<td>LOS</td>
<td>2-lane</td>
<td>3-lane</td>
<td>4-lane</td>
<td>5-lane</td>
</tr>
<tr>
<td>A</td>
<td>n/a**</td>
<td>n/a**</td>
<td>n/a**</td>
<td>n/a**</td>
</tr>
<tr>
<td>B</td>
<td>140</td>
<td>170</td>
<td>290</td>
<td>350</td>
</tr>
<tr>
<td>C</td>
<td>700</td>
<td>840</td>
<td>1,470</td>
<td>1,760</td>
</tr>
<tr>
<td>D</td>
<td>1,290</td>
<td>1,550</td>
<td>2,700</td>
<td>3,240</td>
</tr>
<tr>
<td>E</td>
<td>1,400</td>
<td>1,680</td>
<td>2,870</td>
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</table>

#### Table 5c: Principal, Minor And Collector Arterials With Nonstandard Lane Widths*

<table>
<thead>
<tr>
<th>Table 5c</th>
<th>≤11 ft</th>
<th>≤11 ft</th>
<th>≤22 ft</th>
<th>≤22 ft</th>
<th>31 ft</th>
<th>31 ft</th>
<th>36 ft</th>
<th>36 ft</th>
</tr>
</thead>
<tbody>
<tr>
<td>LOS</td>
<td>2-lane</td>
<td>3-lane</td>
<td>4-lane</td>
<td>5-lane</td>
<td>6-lane</td>
<td>7-lane</td>
<td>6-lane</td>
<td>7-lane</td>
</tr>
<tr>
<td>A</td>
<td>n/a**</td>
<td>n/a**</td>
<td>n/a**</td>
<td>n/a**</td>
<td>n/a**</td>
<td>n/a**</td>
<td>n/a**</td>
<td>n/a**</td>
</tr>
<tr>
<td>B</td>
<td>130</td>
<td>160</td>
<td>280</td>
<td>340</td>
<td>430</td>
<td>520</td>
<td>460</td>
<td>540</td>
</tr>
<tr>
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<td>800</td>
<td>1,420</td>
<td>1,700</td>
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<td>2,600</td>
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<td>2730</td>
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<td>2,570</td>
<td>3,080</td>
<td>3,900</td>
<td>4,680</td>
<td>4160</td>
<td>4990</td>
</tr>
<tr>
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<td>1,610</td>
<td>2,740</td>
<td>3,290</td>
<td>4,140</td>
<td>4,970</td>
<td>4420</td>
<td>5300</td>
</tr>
</tbody>
</table>

* Interpolation is only appropriate for service volumes between 31 and 36 feet.

** Not applicable to the screening process
TABLE SET 6

>&4.00 Signalized Intersections Per Mile

Table 6a: Principal Arterial with Standard Lane Widths

<table>
<thead>
<tr>
<th>Table 6a</th>
<th>12 ft</th>
<th>12 ft</th>
<th>24 ft</th>
<th>24 ft</th>
<th>37 ft</th>
<th>37 ft</th>
</tr>
</thead>
<tbody>
<tr>
<td>LOS</td>
<td>2-lane</td>
<td>3-lane</td>
<td>4-lane</td>
<td>5-lane</td>
<td>6-lane</td>
<td>7-lane</td>
</tr>
<tr>
<td>A</td>
<td>n/a**</td>
<td>n/a**</td>
<td>n/a**</td>
<td>n/a**</td>
<td>n/a**</td>
<td>n/a**</td>
</tr>
<tr>
<td>B</td>
<td>50</td>
<td>60</td>
<td>100</td>
<td>120</td>
<td>160</td>
<td>190</td>
</tr>
<tr>
<td>C</td>
<td>240</td>
<td>290</td>
<td>520</td>
<td>620</td>
<td>790</td>
<td>950</td>
</tr>
<tr>
<td>D</td>
<td>970</td>
<td>1,160</td>
<td>2,100</td>
<td>2,520</td>
<td>3,270</td>
<td>3,920</td>
</tr>
<tr>
<td>E</td>
<td>1,390</td>
<td>1,670</td>
<td>2,840</td>
<td>3,410</td>
<td>4,300</td>
<td>5,160</td>
</tr>
</tbody>
</table>

Table 6b: Minor And Collector Arterials With Standard Lane Widths

<table>
<thead>
<tr>
<th>Table 6b</th>
<th>12 ft</th>
<th>12 ft</th>
<th>23 ft</th>
<th>23 ft</th>
</tr>
</thead>
<tbody>
<tr>
<td>LOS</td>
<td>2-lane</td>
<td>3-lane</td>
<td>4-lane</td>
<td>5-lane</td>
</tr>
<tr>
<td>A</td>
<td>n/a**</td>
<td>n/a**</td>
<td>n/a**</td>
<td>n/a**</td>
</tr>
<tr>
<td>B</td>
<td>50</td>
<td>60</td>
<td>100</td>
<td>120</td>
</tr>
<tr>
<td>C</td>
<td>240</td>
<td>290</td>
<td>500</td>
<td>600</td>
</tr>
<tr>
<td>D</td>
<td>940</td>
<td>1,130</td>
<td>2,060</td>
<td>2,470</td>
</tr>
<tr>
<td>E</td>
<td>1,360</td>
<td>1,630</td>
<td>2,770</td>
<td>3,320</td>
</tr>
</tbody>
</table>

Table 6c: Principal, Minor And Collector Arterials With Nonstandard Lane Widths*

<table>
<thead>
<tr>
<th>Table 6c</th>
<th>≤11 ft</th>
<th>≤11 ft</th>
<th>≤22 ft</th>
<th>≤22 ft</th>
<th>31 ft</th>
<th>31 ft</th>
<th>36 ft</th>
<th>36 ft</th>
</tr>
</thead>
<tbody>
<tr>
<td>LOS</td>
<td>2-lane</td>
<td>3-lane</td>
<td>4-lane</td>
<td>5-lane</td>
<td>6-lane</td>
<td>7-lane</td>
<td>6-lane</td>
<td>7-lane</td>
</tr>
<tr>
<td>A</td>
<td>n/a**</td>
<td>n/a**</td>
<td>n/a**</td>
<td>n/a**</td>
<td>n/a**</td>
<td>n/a**</td>
<td>n/a**</td>
<td>n/a**</td>
</tr>
<tr>
<td>B</td>
<td>40</td>
<td>50</td>
<td>100</td>
<td>120</td>
<td>150</td>
<td>180</td>
<td>160</td>
<td>190</td>
</tr>
<tr>
<td>C</td>
<td>220</td>
<td>260</td>
<td>490</td>
<td>590</td>
<td>740</td>
<td>890</td>
<td>780</td>
<td>940</td>
</tr>
<tr>
<td>D</td>
<td>900</td>
<td>1,080</td>
<td>1,960</td>
<td>2,350</td>
<td>3,040</td>
<td>3,650</td>
<td>3,240</td>
<td>3,880</td>
</tr>
<tr>
<td>E</td>
<td>1,290</td>
<td>1,550</td>
<td>2,640</td>
<td>3,170</td>
<td>3,990</td>
<td>4,790</td>
<td>4,260</td>
<td>5,110</td>
</tr>
</tbody>
</table>

* Interpolation is only appropriate for service volumes between 31 and 36 feet.
** Not applicable to the screening process
4224.080  Level of Service Table for Rural Category 2 Arterial Units
Adopted: 2/14/96, First Revision: 4/30/99, Second Revision 10/11/04, Third Revision 01/20/14

(1) **Rural Category 2: Two-Lane Arterial Units NOT Primarily Influenced by Signalized Intersections.** Contained within this section is Table 7 showing maximum service volumes for rural arterial units. The values in Table 7 represent maximum service volumes (MSVs) for LOS A through LOS E measured in vehicles per hour for two-lane arterials not influenced by signalized intersections. The maximum service volumes vary by free-flow speed and lane and shoulder widths. Instructions for, and an example of screening-table use are as follows.

(2) Instructions for Rural Category 2
   (a) Take the two-way, peak-hour volume for a given arterial unit.
   (b) Determine the arterial type based on average free flow speed and standards (lane and shoulder widths).

(3) Compare arterial peak-hour volume with maximum service volume for type of road to estimate LOS.

(4) Example for Rural Category 2
   (a) A given arterial unit has a peak-hour, two-way volume of 920 vehicles per hour (vph).
   (b) The arterial unit is not built to standards and has average free flow speed of 38 mph (i.e. < 40).
   (c) The peak hour volume of 920 vph is greater than the maximum service volume of 680 vph for LOS B.
   (d) The arterial unit can be expected to operate within the volume range for LOS C.

(5) Default Values Used For Tables
   (a) directional split 60/40, heavy vehicles 6% (trucks + buses + RVs), peak hour factor 0.91
   (b) Assumes terrain is two-thirds rolling and one-third level.

(6) Table 7 for Rural Category 2
   (a) There is only one table for this category as shown below.
   (b) Table 7 shows maximum service volume thresholds for LOS A through E.
   (c) Volumes are expressed as two-way vehicles per hour.
   (d) Volumes vary by whether free-flow speed is greater or less than 40 miles per hour.
   (e) Volumes vary by whether or not the arterial unit is constructed to standards or not.
   (f) Table 7 also shows the assumed volume-to-capacity (V/C) ratios.
### Table 7

<table>
<thead>
<tr>
<th>LOS</th>
<th>Free Flow Speed &lt;= 40 mph</th>
<th>Free Flow Speed &gt; 40 mph</th>
</tr>
</thead>
<tbody>
<tr>
<td></td>
<td>V/C</td>
<td>Not to Standards</td>
</tr>
<tr>
<td>A</td>
<td>0.23</td>
<td>410</td>
</tr>
<tr>
<td>B</td>
<td>0.38</td>
<td>680</td>
</tr>
<tr>
<td>C</td>
<td>0.55</td>
<td>980</td>
</tr>
<tr>
<td>D</td>
<td>0.79</td>
<td>1,400</td>
</tr>
<tr>
<td>E</td>
<td>1.00</td>
<td>1,780</td>
</tr>
</tbody>
</table>

#### 4224.090 Level of Service C Thresholds for Rural Arterial Units

*Adopted: 5/10/02, First Revision 10/11/04, Second Revision 01/20/14*

(1) **LOS C Thresholds for Rural Arterial Units.**

(a) Snohomish County Council has adopted a level-of-service (LOS) standard of C for rural arterial units located outside the urban growth area (UGA) which are not categorized as urban for the purpose of evaluating level of service and which are not designed to serve as high-speed rural highways. Snohomish County Public Works (DPW) has developed the following Rule to provide a rational, technically defensible methodology for applying the LOS C standard to the rural (i.e., outside the UGA) arterial units. The method is similar to that used for urban arterial units, in that average travel speed is the criteria by which LOS is determined. Average travel speed on arterial units is either measured in actual field tests (travel time studies using the average car method) or is estimated using traffic engineering models (e.g., Synchro). Given an average travel speed for an arterial unit (either measured for current conditions or estimated for future conditions), a determination is made as to whether or not the speed is greater than a predefined minimum threshold needed to achieve LOS C.

(b) This LOS C threshold can be calculated in different ways depending on the characteristics of the arterial unit. The following describes three possible situations.

(2) **LOS C Threshold Methodology for Rural Highways or Rural Arterials with No Controlled Intersections.** For rural highways or rural arterials with no controlled intersections that cause delay, then the LOS C threshold is simply 75% of the average free-flow speed for the arterial unit. The 75% threshold is based on the methodology in the Highway Capacity Manual for measuring LOS on rural highways.
(3) **LOS C Threshold Methodology for Rural Highways or Rural Arterials with Controlled Intersections.** For rural highways or rural arterials with controlled intersections that cause delay then the LOS C threshold is calculated as follows:
(a) Determine the travel time in seconds on the arterial unit at 75% of the free flow speed.
(b) Add 35 seconds for each signalized intersection and 25 seconds for each stop-controlled intersection on the unit. (These are the amounts allowed by HCM for the maximum intersection delay for LOS C.)
(c) Convert the total seconds from steps (1) and (2) into miles per hour. This is the LOS C threshold.
(d) Table 8 below shows the LOS C thresholds for a rural arterial unit with a controlled intersection at one end, varying by length of arterial unit and free flow speed.
(e) Chart 1 below depicts Table 8 in graphical form.
(f) Table 9 below shows an individual example of how the LOS C threshold is determined for a fictitious rural arterial unit in which there is a signalized intersection at one terminus.
(g) Note that free-flow speeds of 50 mph or greater will only be used for arterial units in which the legal speed limits are 40 mph or greater.

(4) **LOS C Threshold Methodology for Arterial Units with Poor Operating Characteristics.** For some arterial units with poor operating characteristics in which free flow speed is difficult to measure or not representative of the unit as a whole, then a substitute for free-flow speed may be calculated by multiplying 75% by the average travel speed for off-peak conditions.

(5) The County Traffic Engineer will apply these same basic principles to other situations as the need arises to determine the appropriate LOS C thresholds for any rural arterial unit. Typically, the calculation of LOS C thresholds will be determined once an arterial unit has reached the level of operational analysis. Prior to that time, level-of-service will be based on maximum service volumes.
Table 8. LOS C Thresholds for Rural Arterial Units With One Controlled Intersection at Terminus

1. Seconds to Travel the Arterial Unit
   Calculation of the time (in seconds) to travel the arterial unit at LOS C (75% of free flow).

<table>
<thead>
<tr>
<th>free flow speed</th>
<th>75% of free flow speed</th>
<th>Length of Arterial Unit (in miles)</th>
</tr>
</thead>
<tbody>
<tr>
<td></td>
<td></td>
<td>1.0</td>
</tr>
<tr>
<td>30</td>
<td>22.5</td>
<td>160</td>
</tr>
<tr>
<td>35</td>
<td>26.3</td>
<td>137</td>
</tr>
<tr>
<td>40</td>
<td>30.0</td>
<td>120</td>
</tr>
<tr>
<td>45</td>
<td>33.8</td>
<td>107</td>
</tr>
<tr>
<td>50</td>
<td>37.5</td>
<td>96</td>
</tr>
</tbody>
</table>

2. Total Travel Time on Arterial Unit at LOS C
   Add maximum controlled delay allowed at intersection at LOS C (35 seconds).

<table>
<thead>
<tr>
<th>free flow speed</th>
<th>Length of Arterial Unit (in miles)</th>
</tr>
</thead>
<tbody>
<tr>
<td></td>
<td>1.0</td>
</tr>
<tr>
<td>30</td>
<td>195</td>
</tr>
<tr>
<td>35</td>
<td>172</td>
</tr>
<tr>
<td>40</td>
<td>155</td>
</tr>
<tr>
<td>45</td>
<td>142</td>
</tr>
<tr>
<td>50</td>
<td>131</td>
</tr>
</tbody>
</table>

3. LOS C Thresholds in Miles Per Hour
   Determine minimum travel speed at LOS C (Convert travel time into speed).

<table>
<thead>
<tr>
<th>free flow speed</th>
<th>Length of Arterial Unit (in miles)</th>
</tr>
</thead>
<tbody>
<tr>
<td></td>
<td>1.0</td>
</tr>
<tr>
<td>30</td>
<td>18</td>
</tr>
<tr>
<td>35</td>
<td>21</td>
</tr>
<tr>
<td>40</td>
<td>23</td>
</tr>
<tr>
<td>45</td>
<td>25</td>
</tr>
<tr>
<td>*50</td>
<td>27</td>
</tr>
</tbody>
</table>

*only used for arterial units in which the free-flow speed is 40 mph or greater
Chart 1

LOS C Threshold for Rural Arterial Unit with a Signalized Intersection at Terminus

![Graph showing LOS C threshold for different speeds and lengths of arterial units.]
Table 9: Sample calculation of the minimum travel speed needed for LOS C on a fictional rural arterial unit with a signalized intersection at one terminus.

<table>
<thead>
<tr>
<th>1. Inputs</th>
<th></th>
</tr>
</thead>
<tbody>
<tr>
<td>Arterial Unit:</td>
<td>272</td>
</tr>
<tr>
<td>Description:</td>
<td>South Road from 150th to Mountain Pl</td>
</tr>
<tr>
<td>Free Flow Speed (miles per hour):</td>
<td>41.4</td>
</tr>
<tr>
<td>Length of Arterial Unit (in miles):</td>
<td>1.40</td>
</tr>
</tbody>
</table>

<table>
<thead>
<tr>
<th>2. Seconds to Travel the Arterial Unit</th>
<th></th>
</tr>
</thead>
<tbody>
<tr>
<td>75% of free flow speed (miles per hour):</td>
<td>31.1</td>
</tr>
<tr>
<td>Time (in seconds) to travel the arterial unit at LOS C (75% of free flow speed):</td>
<td>162.3</td>
</tr>
</tbody>
</table>

<table>
<thead>
<tr>
<th>3. Total Travel Time on Arterial Unit at LOS C</th>
<th></th>
</tr>
</thead>
<tbody>
<tr>
<td>The time in seconds to travel the arterial unit (Step 2) plus the maximum controlled delay allowed at intersection at LOS C (35 seconds):</td>
<td>197.3</td>
</tr>
</tbody>
</table>

<table>
<thead>
<tr>
<th>4. LOS C Thresholds in Miles Per Hour</th>
<th></th>
</tr>
</thead>
<tbody>
<tr>
<td>Convert total travel time (Step 3) into speed (miles per hour) to derive the minimum travel speed needed to achieve LOS C:</td>
<td>25.5</td>
</tr>
</tbody>
</table>
4224.100 Ultimate Capacity Process

Adopted 4/24/06

(1) SCC 30.66B SCC provides that based on an engineer’s report and ultimate-capacity recommendation by DPW, the County Council, may adopt a motion designating an arterial unit as ultimate capacity. That motion will establish the County’s commitment to specific improvements or actions that the County Council determines to be appropriate.

(a) The engineer’s report will be reviewed and approved by the County Engineer and will include:

(i) an analysis of the improvements to the roadway that would NOT be warranted because of excessive costs; and

(ii) identification of all improvements needed to remedy any inadequate road conditions (IRCs) on the arterial unit; and

(iii) identification of improvements shown in adopted Transportation Element and status of funding and/or completion of such improvements; and

(iv) identification of any other improvements or actions completed, funded, and or planned, that would be practicable and effective in preserving capacity and improving efficiency; and

(v) a report on any completed access management plans or standards, or if none, a determination of whether or not access management would be appropriate for the arterial unit, and if so, a scope, budget and timeline for development and implementation of an access management plan; and

(vi) a report on any completed signal coordination or other Transportation System Management (TSM) actions, and a determination of whether or not additional TSM strategies would be appropriate for the arterial unit, and if so, a scope, budget and timeline for development and implementation of a TSM plan; and

(vii) a report on any completed Transportation Demand Management (TDM) strategies, and a determination of whether or not additional Transportation Demand Management (TDM) strategies would be appropriate for the arterial unit, and if so, a scope, budget and timeline for development and implementation of a TDM plan; and

(ix) evaluation of the extent to which funding commitments are in place for each identified improvement and action; and

(x) evaluation of a reasonable time line for progress and completion of each identified improvement and action based on a review of the current DPW work programs; and

(xi) Identification of the applicable specific growth management objectives and analysis of how these objectives support or do not support the designation of ultimate capacity for the arterial unit.

(b) The evaluation and recommendation on whether or not the arterial unit is a candidate for ultimate capacity will be based on the criteria identified in SCC
30.66B.110 and DPW Rule 4224.110 and will be reviewed and approved by the Public Works Director.

(2) “Impacting” an ultimate capacity facility means adding three (3) or more directional peak-hour trips to it in accordance with the provisions of SCC 30.66B.160(2) and DPW Rules including DPW Rule 4225.020(2). Developments impacting ultimate capacity facilities will be allowed to add new trips to the road system before improvements or actions identified in the County Council motion are completed, provided that the following conditions are met:

(a) The provisions of SCC 30.66B.220 will apply to the timing of improvements to remedy any IRCs identified by the County Council in the motion declaring a facility to be ultimate capacity; and

(b) The requirements of SCC 30.66B.160 and SCC 30.66B.610-650 will apply to requirements for transportation demand management (TDM) measures for developments impacting ultimate capacity facilities.

(i) A pending development, that has not been given concurrency approval because of impacts to an arterial unit in arrears, may request a new concurrency determination if the arterial unit in arrears is designated as ultimate capacity.

(ii) Such development may be able to retain its original concurrency vesting date if none of the exceptions in DPW Rule 4225.070(3) apply, and provided that the applicant submits a revised TDM plan and/or voluntary TDM offer that meets the requirements of SCC 30.66B.160 and SCC 30.66B.610-650 for developments impacting ultimate capacity facilities.

(c) Nothing prevents the County Council from postponing decisions on ultimate capacity contingent on additional information, analysis, or completion of improvements or actions.

**New Rule 4224.110 Ultimate Capacity Criteria**

*Adopted 4/24/06*

(1) The definitions below apply to this section.

(a) “Facility,” as used below in this section means the existing facility plus any improvements which are fully funded and programmed for construction within six years.

b) “Facility” as used in this Rule, shall refer to “arterial units” as defined in SCC 30.66B.110(1)(c).

(c) “Fully funded” as used in SCC 30.66B.110(1)(c) shall mean the same as “funding commitment in place” as used in Chapter 30.66B SCC and Department of Public Works (DPW) Rules.

(d) “Construction” as used in SCC 30.66B.110(1)(c) and this Rule shall mean that construction of the improvements are substantially complete and the improved facility is open for public use.

(e) “Unwarranted public expenditures,” or “constraints to cost-effective improvements” or “excessive expenditure of public funds” as used in Snohomish
County Code and this DPW Rule, should be considered, at least in part, in terms of whether or not the identified improvements are shown in the currently-adopted Transportation Element as either Critical Arterial System Improvements (CASIs) or Arterial Level of Service Improvements (ALOSIs). That is, improvements identified as CASIs or ALOSIs may not generally be considered as “unwarranted” or “constrained” or “excessive” because the Transportation Element has demonstrated that they can likely be financed and constructed within the horizon of the plan using revenues that the county reasonably expects to secure.

(f) “Ultimate Capacity” refers to the congestion level of service standard as opposed to the description of physical improvements to the arterial unit. That is, it refers to a level of service that reflects the “ultimate” capacity of the arterial unit in terms of traffic flow. It contrasts with “ultimate standard” or “ultimate improvements” which refer to the degree to which the physical improvements on a roadway match the “ultimate” level of improvement as identified in the most currently-adopted Transportation Element.

(g) “Arterial Unit” refers to the arterial units defined under the county’s concurrency management system. However, this does not mean that the beginning and ending points of arterial units cannot be modified to correspond to sections of road designated for ultimate capacity.

(2) In making a recommendation to County Council as to whether or not a facility should be designated as ultimate capacity, DPW will use the criteria identified in SCC 30.66B.110 and as presented below with somewhat greater specificity and consisting of a series of directed questions for which DPW will provide answers supported by specific details and analysis. (See also flow chart below provided for information purposes only.)

(a) Would additional improvements to the specified transportation facility require unwarranted public expenditures and/or would they cause severe environmental or community impacts?
   o If yes, go to (2)(b)
   o If no, facility does not meet criteria for ultimate capacity designation.

(b) Would determination of ultimate capacity advance one or more specific growth management goals or objectives?
   o If yes, go to (2)(c)
   o If no, facility does not meet criteria for ultimate capacity designation.

(c) Is the facility identified in the Transportation Element as a Critical Arterial System Improvement?
   o If yes, go to (2)(d)
   o If no, go to (2)(e)

(d) Two part question: One, are the number of lanes and other improvements consistent with the adopted Transportation Element and two, do they meet the Engineering Design and Development Standards (EDDS)? (Note, “meeting EDDS”
includes any formally approved deviations or improvements consistent with DPW design plans approved by the County Engineer.)

- If yes to both, facility meets criteria for ultimate capacity designation.
- If no to either, facility does not meet criteria for ultimate capacity designation.

(e) Two part question: One, are the number of vehicle lanes consistent with the adopted Transportation Element and two, do they meet EDDS?

- If yes to both, go to (2)(g)
- If no to either, go to (2)(f).

(f) Is the number of general-purpose travel lanes (excluding turn lanes) consistent with the adopted Transportation Element?

- If yes, go to (2)(g)
- If no, facility does not meet criteria for ultimate capacity designation.

(g) Two part question: One, are appropriate provisions made to accommodate pedestrian demand for any portions of the arterial unit for which pedestrian improvements are identified in the Transportation Needs Report as being a high or medium priority and two, are appropriate provisions made to accommodate bicycle demand for any portion of the arterial unit identified in the Transportation Element as a link in the countywide bicycle facility system? “Appropriate provisions to accommodate the pedestrian and bicycle demand” in this section shall mean that the facility is improved consistent with EDDS. Consistency with EDDS includes approved deviations from EDDS when appropriate as determined necessary by the County Engineer and/or Director of Public Works, based on engineering criteria including those in SCC Chapter 30.66B.430(3).

- If yes to both, go to (2)(h)
- If no to either, facility does not meet criteria for ultimate capacity designation.

(h) Two part question: One, are all intersections signalized that meet warrants and two, are additional left-turn or right-turn lanes provided to maximize efficiency and, where appropriate, to match the ultimate lane configurations identified in the Transportation Element?

- If yes to both, go to (2)(i)
- If no to either, facility does not meet criteria for ultimate capacity designation.

(i) Is the source of delay another agency’s facility?

- If yes, go to (2)(j)
- If no, go to (2)(k)

(j) Four part question: One, does the County section of road approaching the other agency’s facility meet the standards in EDDS? Two, is the number of lanes on the County approach consistent with the adopted Transportation Element? Three, are
additional left-turn or right-turn lanes provided on the county approach to maximize efficiency on the county approach and, where appropriate, to match the ultimate lane configuration of the other agency’s transportation facility? Four, is the length of turn pockets designed to accommodate 2025 forecast demand?

- If yes to all four parts, go to (2)(k)
- If no to any of the four parts, facility does not meet criteria for ultimate capacity designation.

(k) Are there physical, environmental, existing structures or other constraints that preclude additional cost effective improvements to the county road that would significantly improve LOS?

- If yes, facility meets criteria for ultimate capacity designation.
- If no, facility does not meet criteria for ultimate capacity designation.

(l) Unlike the code and rules dealing with ultimate capacity, the following flow chart is provided solely for informational purposes.
Define Facility

Satisfaction of criteria 2(a) and 2(b) ?

Is facility a critical arterial system improvement (CASI)?

Are improvements consistent with adopted Transportation Element and EDDS standards?

Are total vehicle lanes consistent with the adopted Transportation Element and EDDS standards?

Are the general-purpose travel lanes (excluding turn lanes) consistent with the adopted Transportation Element and EDDS?

Appropriate bicycle provisions?

Appropriate pedestrian provisions?

Intersections signalized and/or channelized?

Is the source of delay another agency’s facility?

Approach constructed per 3(g)?

Are there physical, environmental, existing structures or other constraints that preclude additional cost effective improvements?

Facility meets criteria for ultimate capacity designation.

Facility does not meet criteria for ultimate capacity designation.
4225 MAKING CONCURRENcy DETERMINATIONS

4225.010 Applicability and/or Purpose
Adopted 1/1/03, First Revision 10/11/04

(1) This Rule applies to land development applications determined to be complete on or after the effective date of Amended Ordinance No. 01-011 effective October 14, 2001.

(2) This Rule describes when concurrency determinations are made and how they are documented.

4225.020 Concurrency Management System
Adopted 1/1/03, First Revision 10/11/04, Second Revision 4/24/06

(1) “In arrears” means formally designated by the Department of Public Works (DPW) prior to the development’s concurrency vesting date.

(2) For each arterial unit there are actually four possibilities for an arterial unit in arrears, that is, two directions each for the two peak hours (AM and PM). If for instance, an arterial unit is in arrears only because of LOS deficiencies westbound in the AM, then a development will be stopped only if it adds three or more trips westbound in the AM peak hour.

(3) The concurrency management system includes three tiers of developments, small (residential developments generating less than 7 peak-hour trips and commercial developments generating less than 5 peak-hour trips), large (developments generating more than 50 peak-hour trips), and medium-sized (in between small and large).

(a) A small or medium or large-sized development in a Transportation Service Area (TSA) with one or more arterial unit in arrears can only be deemed concurrent on the basis of a trip distribution showing it does not add 3 or more peak-hour trips (PHT) to any of the arterial units in arrears. For small developments the requirement for the distribution may be waived by the transportation development reviewers based on professional judgment if it is obvious that the development will not add 3 PHT to any arterial unit in arrears (See DPW Rule 4220.030(9)). The reviewer will document this determination in the concurrency decision.

(b) A large-sized development is also required to conduct level-of-service analysis for future conditions. (See section “Forecasting” below for details of this requirement including exceptions).

(c) A small or medium-sized development, in a TSA with no arterial units in arrears shall be deemed concurrent.

(4) A concurrency determination made on this basis cannot be changed because of a subsequent designation of an arterial unit in arrears, even if the development’s trip distribution shows that the development would add 3 or more PHT to the arterial unit in arrears, unless, more than one year has elapsed since the concurrency vesting date and the development’s SEPA determination has NOT been made.

4225.030. The Development’s Road System and Impacts on Arterial Units in Arrears in Adjacent TSAs
Adopted 1/1/03, First Revision 10/11/04
(1) Developments are only evaluated for their impacts on arterial units in arrears on their road system, that is within the Development’s Transportation Service Area (TSA). A development will NOT fail the concurrency test on the sole basis of adding 3 or more peak-hour trips (PHT) to an arterial unit in arrears in another TSA.

(2) If a development adds three or more PHT to an arterial unit in arrears in another TSA, then that impact will be disclosed and evaluated under SEPA.

(3) Adding three or more PHT, but less than 50 PHT, to an arterial unit in arrears in another TSA shall not require mitigation for adverse environmental impacts and shall not be considered a significant adverse environmental impact.

(4) If a development adds 50 or more PHT to an arterial unit in arrears in another TSA, then the director may determine that the specific impacts of the development are not adequately addressed solely through the requirements of Chapter 30.66B SCC, and such development may be determined by the director under SCC 30.66B.010(2) to have a significant adverse environmental impact and may be required to prepare an environmental impact statement and propose measures to mitigate the significant adverse environmental impact.

(5) Note that consistent with the requirements for trip distributions, trips from developments in adjacent TSAs will be added to the pipeline inventory database.

4225.040 Defining Responsibility for Knowledge of Level of Service Conditions of the Road System

Adopted 1/1/03, First Revision 10/11/04

(1) Part of the County’s concurrency management system involves systematically measuring level of service on arterial units. This ongoing process is based on adopted departmental Rules and accepted principles of professional traffic engineering. (DPW Rule 4224, “Making Level of Service Determinations.”)

(2) At any point in time, there may be arterial units operating at a worse level of service than most recently estimated by the Department of Public Works (DPW), or even operating below the County’s adopted standards. DPW makes determinations on which arterial units are in arrears based on the best and most recent information available and consistent with its adopted Rules.

(3) Concurrency determinations are based on the list of arterial units in arrears and other information at the concurrency vesting dates. Developers will not be held accountable for arterial units not designated as in arrears as of their concurrency vesting date because DPW lacked certain information at that time. The fact that DPW did not have certain information in hand at a certain point in time and thus failed to designate an arterial unit as in arrears will not be considered to be a mistake, such that a concurrency determination can be changed because of it.

(4) Beginning with the October 2001 revisions to Chapter 30.66B, the DPW may designate an arterial unit as in arrears based on a forecast level of service deficiency. The same Rules summarized in this section with respect to “knowledge in hand” at the time of determinations of arterial units in arrears and use of the concurrency vesting date as the “point in time” for analysis also applies to forecast levels of service.
4225.050 Making and Documenting Concurrency Determinations

Adopted 1/1/03, First Revision 10/11/04

(1) The deadline for the first set of written comments from DPW to the Department of Planning and Development Services (PDS), and hence the deadline for making a concurrency determination, is 21 days after submittal of the initial application.

(2) The written concurrency determination will state that the determination is preliminary, because it is contingent upon the development application being deemed complete by PDS. If PDS determines that the development is NOT complete, then the developer will be notified that:

   (a) the concurrency determination may change if more than one year elapses and a SEPA threshold determination has not been made for the project, and
   (b) in that case DPW may require updated traffic information to determine if the concurrency decision should be changed, and
   (c) suggesting that the developer work closely with DPW if it looks like one year may elapse so that any required updates to the traffic study will not delay the review of the project.

(3) If the traffic study submitted by the developer with the initial application is sufficient for DPW to make a concurrency determination, then that determination is included in the first set of preliminary comments sent to PDS. Note that this occurs prior to the completeness determination made by PDS. Thus, it is a “preliminary” determination contingent upon the development being deemed complete by PDS (see previous subsection).

(4) The written concurrency determination will document the criteria upon which the determination was made. Such criteria shall be based on one or more of the following:

   (a) thresholds based on number of peak hour trips generated,
   (b) the development’s transportation service area (TSA),
   (c) whether or not there are any arterial units in arrears in the development’s TSA as of the development’s concurrency vesting date,
   (d) future level-of-service conditions documented by traffic impact analysis,
   (e) information about improvements or strategies which may affect level of service, and
   (f) additional information needed to make a concurrency determination.

(5) Whenever a concurrency determination finds that a development can NOT be deemed concurrent, then DPW’s written comments to PDS will indicate that:

   (a) The written determination will point out that the development cannot be deemed concurrent at that point in time, and
   (b) alert the applicant of the options available under SCC 30.66B.167, and, if available,
   (c) describe DPW’s plans to remedy the level-of-service deficiency to allow the development to proceed in the future. Examples of plans to remedy a level-of-
service deficiency might include projects in the Transportation Element, Grant Applications, TIP projects, State projects, or Strategic Plans for arterial units in arrears under DPW Rule 4224.

(6) If more information is required before a development can be deemed concurrent, then DPW’s written comments to PDS will indicate that:

(a) The development can not be deemed concurrent at that point in time, but

(b) the development may be deemed concurrent later based on review of supplemental information, and

(c) identifying the supplemental information needed to make the concurrency determination.

(d) If DPW requires more information to be able to make the concurrency determination, then it will request of PDS that the 120-day clock be stopped pending submittal of the additional information.

(i) Upon submittal of the additional information DPW has another 14 days to review the additional information, make another concurrency determination, and submit another set of written comments to PDS.

(ii) This process may be repeated again if the applicant fails to provide the required information.

(7) Whenever a concurrency determination finds that a development is concurrent the written determination will include the following:

(a) Indicate the concurrency vesting date.

(b) Indicate that the proposed date that the concurrency determination will expire will be a maximum of six years from the concurrency determination date unless a longer expiration date has been determined for a binding site plan under the provisions of 30.66B.155(1)(c).

(c) Draft the terms of any proposals offered by the developer that will be tied to the concurrency determination.

(d) Draft the terms of any other conditions that have to be satisfied to enable the development to be deemed concurrent.

(e) Attach copies of any developer written proposals.

(8) Consistent with SCC 30.66B.070(2)(d), the record of development obligation shall document the concurrency determination for the development including the concurrency determination date, the concurrency expiration date, and any conditions that have to be satisfied by the developer prior to building permit issuance.

4225.070 Defining Key “Points in Time” Associated with Concurrency Determinations

Adopted 1/1/03, First Revision 10/11/04

(1) “Concurrency Preliminary Determination Date.” The “concurrency preliminary determination date” will be the date of the memorandum from DPW to the Department of Planning and Development Services (PDS) containing the preliminary concurrency determination for a development. Typically, this will be the date of the “preliminary
comments.” At this point it is called “preliminary” because PDS has not yet determined whether or not the application is complete. If the application is deemed complete, then the concurrency determination stands and can only be changed based on the criteria in SCC 30.66B.150.

(2) “Concurrency Inventory Date.” The “concurrency inventory date” is that date when developments that are deemed concurrent are considered to be part of the inventory of developments in the pipeline used to forecast future traffic volumes at key intersections. For developments deemed concurrent under the regular application process, and for an application that is later determined to be complete, the concurrency inventory date will be 30 days from the date of submittal. This allows two days for DPW to enter the development into the database after the 28 days allowed by PDS to make the completeness determination. There are some exceptions for establishing the concurrency inventory date (see below under the exceptions for concurrency vesting date).

(3) “Concurrency Vesting Date.” The significance of the “concurrency vesting date” is that it is the “point in time” for which the concurrency analysis is based, including any subsequent reviews or appeals. In most cases this will be the same as the regulatory completeness date as determined by PDS that is the date of submittal of an application that is later determined to be complete. Exceptions are as follows:

(a) There may be instances in which an application is deemed complete for regulatory vesting purposes by PDS, but the applicant has failed to submit a traffic study that adequately meets the requirements established by the Department of Public Works (DPW) at the presubmittal or traffic study scoping meeting. In these cases, the concurrency vesting date will become the date upon which adequate traffic study information is submitted. For these developments, the concurrency inventory date will be the date of the comment letter to PDS providing the concurrency determination.

(b) For preapplication concurrency evaluations, the concurrency vesting date will be the date upon which the applicant submits sufficient traffic information to enable DPW to make the concurrency evaluation. For developments deemed concurrent under the preapplication concurrency evaluation process, the concurrency inventory date is the date of the notice of decision on the concurrency evaluation issued by PDS under SCC 30.66B.175(7).

(c) For developers that choose, pursuant to SCC 30.66B.020(6), to submit only trip generation and trip distribution with their initial application, their concurrency vesting date will be the date upon which they submit the additional required traffic information sufficient to enable DPW to make the concurrency determination. For these developments, the concurrency inventory date will be the date of the comment letter to PDS providing the concurrency determination.

(d) For developers that submit sufficient traffic information with their initial submittal to enable DPW to make the concurrency determination, but PDS determines the applications are NOT complete based on the criteria listed in the submittal checklist for each type of application and/or the applicable codes, the “preliminary” concurrency determination is essentially nullified and a new concurrency determination is made again at such time as the development is deemed complete by PDS. Essentially, DPW cannot deem concurrent an incomplete application, even if the cause of the
incompleteness is not related to traffic. DPW shall assume that an incomplete application has no standing, and the concurrency vesting date cannot be earlier than the PDS completeness date, except for developments utilizing the preapplication concurrency evaluation process.

4225.080 Excluding Developments from the Pipeline
Adopted 1/1/03, First Revision 10/11/04, Second Revision 12/9/07

(1) Determining whether or not the trips from a particular development will be part of the pipeline for a particular intersection at a particular time will depend on the relationship between the occupancy date and the count date.

(a) Count Date. For each key intersection, the date of the most recent traffic count. Note that for any particular intersection there may be a different count date for the AM and PM peak hours.

(b) Occupancy Date. The date a development is assumed to be occupied. The date of occupation (or, in some cases, the date that the development is no longer considered viable) will be based on documentation acceptable to the Department of Public Works (DPW) such as certificates of occupancy, photographs, aerial photographs, or letters from owners. After the occupancy date, it is assumed that trips generated by the development will be captured by any traffic counts.

(i) With building permits the occupancy date will be the date of the certificate of occupancy.

(ii) For subdivisions, lacking other documentation, the date of occupation will be assumed to be two years after final approval.

(iii) For official site plans, lacking other documentation, the date of occupation will be assumed to be two years from the issuance of the “Lot Memorandum.”

(2) There are a few other cases in which developments or portions of developments will be excluded from the pipeline. These include:

(a) A development will be excluded if it was given a preapplication concurrency approval and more than 180 days has passed and a subsequent application has not been filed for that application.

(b) The inventory will only include applications submitted and deemed concurrent since 1995.

(c) Non-Viability. Entering a date in a field that indicates that as of this date the development is no longer considered viable and is not expected to be constructed.

(d) Partial Occupancy. Entering a percentage in the percent occupied field of the database and a corresponding date indicating that as of that date the development is considered to be X% occupied.

4225.090 Pipeline Forecast Reports
Adopted 1/1/03, First Revision 10/11/04, Second Revision 4/24/06

(1) Given a key intersection, at any point in time, the “pipeline” or “traffic volume forecast” will consist of the distributed trips from all of the developments in the inventory except those developments that have an occupancy date that is prior to the intersection count date. DPW will use the most up-to-date pipeline available whenever it conducts a
future LOS analysis (either for a concurrency determination or to determine whether a unit should be in arrears)

(2) Within 90 days of the presubmittal or traffic scoping meeting, and upon the request of the developer, DPW will provide the developer with reports from the pipeline inventory database. These reports will be known as the “pipeline forecast reports.”

(a) One pipeline forecast report will be provided for each key intersection on each identified critical arterial unit.

(b) If acceptable current counts are available, DPW will provide them. If not, the developer will have to provide the counts. (See Rule 4220.060(2))

(c) The information in the pipeline forecast report will be valid for ninety days from the date of the report, except as follows:

   (i) DPW will provide the developer with trip distributions from any other large developments (over 50 PHT) added to the inventory during the 90-day period.

   (ii) To be deemed concurrent, the subject developer will have to either add these other large developments to the forecast, or provide with the submittal of the traffic study other analysis showing that the additional trips will not cause the LOS to fall below the adopted standard, PROVIDED, the subject developer will not have to consider any other large developments whose concurrency inventory date is less than 30 days prior to the subject development’s submittal date. (These 30- and 90-day “grace periods” will apply only for a pipeline report used in conducting future LOS analyses submitted by the developer.)

4225.100  Preapplication Concurrency Evaluation Process
Adopted 1/1/03, First Revision 10/11/04, Second Revision 12/9/07

(1) Application for a preapplication concurrency evaluation will be consistent with SCC 30.66B.175(2) and the following:

   (a) No formality is required to initiate the preapplication concurrency evaluation process.

   (b) A developer can initiate the preapplication concurrency evaluation process for a parcel(s) by requesting a traffic study scoping meeting over the telephone.

   (c) The formal application will consist of a written request for a preapplication concurrency evaluation, a basic information form, a copy of the traffic study scoping checklist, the traffic study itself, a payment in the amount of the review fee, and a completed “phased” SEPA checklist limited to impacts on level of service in terms of concurrency.

   (d) The basic proposal will consist of a list of Tax Account Numbers (with Section, Township, Range) defining the parcel, the maximum number of AM and PM peak hour trips to be analyzed for concurrency, the name and general location of the possible access roads and the “worst-case” access scenario in terms of impacts on level of service.

   (e) The “site plan” will not show any details of building layouts, but will be limited to the vicinity map showing general location and the road system in the area of the proposal.
(2) Traffic Study Scoping. Prior to submitting applications, applicants will attend a traffic study scoping meeting.

(a) DPW has developed a checklist to be completed by DPW and Developer at the traffic study scoping meeting.

(b) The concurrency coordinator may also attend the scoping meetings.

(c) Land Use may also request to have a representative from Traffic Operations attend the traffic study scoping meeting.

(d) Because of the methodology adopted by Ordinance 01-011 to estimate future traffic volumes (i.e., using the pipeline inventory rather than using growth factors), the forecast will not vary by number of years. With this methodology, for example, there is no difference between a three-year forecast and a six-year forecast. In almost all cases the forecast year will be six years in the future. If a developer wants more than six years, then it will have to be determined on a case-by-case basis.

(3) Submittals for preapplication concurrency evaluations will include the following:

(a) Application submittals will be by appointment only. DPW will attend the submittal meeting.

(b) the Department of Planning and Development Services (PDS) will not keep a project file or copy of all of the application materials. PDS will only take copies of what it needs to generate the notice of application.

(c) Preapplication concurrency applications will need to be assigned a standard project file number in AMANDA and tracked in such a way as to be tied to the subsequent application for the development.

(4) Providing Notice will be done consistent with SCC 30.66B.175(3) and (7) and the following:

(a) PDS or DPW will provide notice of application including posting, mailing, and publication consistent with SCC 30.70.

(b) PDS or DPW will provide notice of decision consistent with SCC 30.71 (notice to parties of record). However, when the notice of decision also includes notice of a SEPA determination, the notice will also be made consistent with SCC 30.70 (publish, post, mail to neighbors, community groups, agencies, and parties of record).

(5) Scope of Review for preapplication concurrency evaluations will include the following:

(a) Though the road system includes City streets and State highways, the preapplication concurrency evaluation will be limited to County arterial units. Level-of-service impacts to City streets and State highways will be reviewed during the subsequent application.

(b) Comments received during the 21-day public comment period will go directly to DPW. Comments will be evaluated and reviewed.

(c) DPW will review the application during the 21-day public comment period, and finalize its review just following the close of that 21-day period.
(6) SEPA Review for preapplication concurrency evaluations will include the following:

(a) A “co-lead” agreement has been executed between DPW and PDS. DPW will be the acting lead for Phase One, concurrency. PDS will be the acting lead for Phase Two, all other aspects of development review.

(b) Phased Review. Phase one covers just impacts on the level-of-service of County arterial units. Phase two, associated with any subsequent application, covers all other traffic impacts except for level-of-service of County arterial units. This phase two review may include, but is not limited to, traffic impacts on safety, access, circulation, and impacts on City streets or State highways.

(c) The SEPA evaluation will be limited solely to the impacts on level of service on County arterial units, measured in terms of the county’s concurrency regulations.

(d) If DPW cannot give an approval, then it will notify the developer of such and generally not make a SEPA threshold determination. In such cases, if DPW had to make a determination under SEPA then a DS would be likely.

(e) If the developer proposed improvements to the road system to achieve concurrency, then the review of any environmental impacts associated with those improvements would have to be handled during the second phase of SEPA review on the subsequent application.

(7) Form of Determination for preapplication concurrency evaluations will include the following:

(a) The concurrency determination, whether for approval or not, will take the form of a letter to the applicant from DPW with copies to the parties of record.

(b) DPW will also write a “memo to file” summarizing the review of the traffic analysis.

(8) Appeals for preapplication concurrency evaluations will include the following:

(a) For now, appeals will go to PDS first for tracking and processing and then to the Hearing Examiner and DPW.

(b) For now, DPW will prepare the technical response for appeals.

(c) Appeals will follow the same tracks as will appeals of concurrency determinations depending on the type of the development to be applied for (i.e., whether or not the Hearing Examiner has original jurisdiction).

(9) Clarifications on Validity of Subsequent Applications

(a) SCC 30.66B.175(11) provides that pre-application concurrency approvals are valid for six months following the notice of decision unless an appeal is pending, in which case the approval shall be valid for six months following resolution of all appeals. This means that to be considered valid, a subsequent application must be submitted within six months, not that the concurrency determination on a subsequent application has to be made within six months.

(b) A subsequent land-use application for a development may be submitted prior to the end of the appeal period on the notice of preapplication concurrency decision or prior to the resolution of any appeals. In such instances, however, DPW will not make the concurrency determination on the subsequent land-use application until
the comment period has ended, and any appeals have been resolved. DPW will alert PDS to this fact, so that PDS does not issue SEPA until concurrency has been determined. Once the appeal period has ended and any appeals have been resolved, then DPW will make the concurrency determination based on the preapplication concurrency evaluation, and such determination will have the same force and effect as if the applicant had waited to submit the land-use application until after the appeal period and resolution of any appeals. In particular, SCC 30.66B.175(8) shall not be construed to mean that concurrency determinations made in these instances are subject to further review, comment, or appeal. Specifically, the proviso after the phrase “no further review” in SCC 30.66B.175(8) means no review beyond that which is needed to resolve any appeals of the preapplication concurrency evaluation.

4225.110 Conditional Concurrency Approvals
Adopted 1/1/03, First Revision 10/11/04

(1) The Department of Public Works (DPW) may deem that a development is concurrent based upon satisfaction of specific conditions.

(a) Conditions necessary for concurrency will be documented in writing on the concurrency determination per SCC 30.66B.120(2)(b).

(b) DPW may only deem a development conditionally concurrent if a written proposal has been received from the applicant. If no public agency is constructing road improvements that will remedy level-of-service deficiencies pertinent to the developer’s concurrency determination, or if DPW has determined that such improvements are not fully funded, then the applicant must offer to either construct the needed improvements or, if applicable, contribute an equitable proportionate share payment towards the improvements. The proportionate share option will only be applicable if some mechanism for pooling contributions from developers for the project has already been established by other developers and/or other agencies.

(c) The Land Use Supervisor will review all proposals for conditional concurrency and make the final determination.

(d) When concurrency is granted based on conditions, those conditions shall be recorded against the real property on which the development is proposed.

(2) Conditions necessary for concurrency have to be satisfied prior to the issuance of any building permits.

(a) If a development is deemed concurrent conditional upon the construction of improvements by the developer, then the improvements must be under contract prior to building permit issuance and complete prior to occupancy consistent with SCC 30.66B.170(6). These conditions must be stated as such on the written proposal described under subsection 4225.110(1)(b) above.

(b) If a development is deemed concurrent conditional upon the construction of improvements by the County, WSDOT, or another jurisdiction, then there must be a financial commitment in place for improvements that will remedy the arterial unit in arrears consistent with SCC 30.66B.167(2)(a).
(3) Conditional concurrency may be provided based on phasing of a development.

(a) For subdivisions, conditions have to be based on specific phases, as opposed to a specified number of individual building permits. For example, assume that a 100-lot subdivision can be deemed concurrent based on the construction of a traffic signal, but the signal is only needed after 50 lots have been occupied. In such case, the development could be broken into two 50-lot phases and would be conditioned such that building permits for phase two could not be issued until the traffic signal was under contract. Under this example what would NOT be allowed is to establish a more broadly-written condition to the effect of “building permits for the 51st and subsequent lots cannot be issued until such time as the traffic signal is under contract.” Basing the conditions on specific phases, as opposed to specified numbers of individual building permits is the only way in which the County can effectively enforce such conditions.

(b) For subdivisions, conditions based on phases shall be recorded as a precondition to preliminary approval.

(c) Changes in the phasing plan upon which concurrency was conditionally granted, but not considered at preliminary plat approval may result in the need for a plat modification and potentially an additional hearing. For example, a modification will likely be needed if a developer wants to build a phase sooner than in the approved conditions. Building a phase later than in the approved conditions will typically not require a modification solely to address concurrency.

(d) In some cases a developer with concurrency approval for an entire subdivision decides to build in phases subsequent to preliminary approval. This will not cause any changes in the concurrency approval or require a plat modification solely to address concurrency.

(4) Developments currently have TDM options under SCC 30.66B.610-680 for trip reduction credits based on site design and voluntary trip reduction programs. Concurrency granted on the basis of trip reductions under SCC 30.66B.610-680 is not considered to be conditional. The purpose of the following section is to define Rules with respect to TDM proposals by developments that go beyond the trip reduction percentages allowed under SCC 30.66B.610-680 for the purposes of achieving conditional concurrency.

(a) SCC 30.66B.167(2) provides that a development proposal that cannot be deemed concurrent may offer proposals to lessen impacts on the road system in such a way as to allow the county to deem the development concurrent. Such proposals could include, but are not limited to, various transportation demand management (TDM) strategies such as voluntary trip reduction programs.

(b) Applicants considering TDM strategies should meet with the County prior to submittal so that the TDM plan and necessary traffic analysis can be part of the original submittal.

(c) Any such TDM strategies have to be offered voluntarily by the applicant in writing.
(d) Conditions established by such proposals will be recorded as a covenant on the involved parcels and may involve aspects such as annual reporting and monitoring requirements that will continue subsequent to occupancy of the development.

4225.120 Extending Expiration Dates of Concurrency under SCC 30.66B.155(5)

Adopted 1/1/03, First Revision 10/11/04, Second Revision 4/24/06

(1) Extensions for small or medium-sized developments in TSAs with NO arterial units in arrears (AUIAs) or Ultimate Capacity Arterial Units (UCAUs) will be made as follows:

(a) One-time six-year extensions are automatic.

(b) They can be made up to six months in advance of the expiration date of the existing concurrency determination.

(c) There will be no review fee.

(d) There will be no public notice provided.

(2) Extensions for small or medium-sized developments in TSAs with AUIAs or UCAUs and extensions for large developments will be made as follows:

(a) Extensions under this subsection can be made up to one year in advance of the expiration date of the existing concurrency determination.

(b) Developments under this subsection are required to pay review fees at the same rate as developments requesting preapplication concurrency evaluations.

(c) One-time six-year extensions are granted if the criteria shown in subsection 4225.120(4) below are met demonstrating that conditions have not changed.

(d) No notice will be provided of extensions granted under this subsection when it is demonstrated that conditions have not changed.

(e) If conditions HAVE changed, then the development must essentially get a new concurrency determination with notice provided consistent with section 4225.120(5) below.

(f) For the purposes of subsections D and E below, the word “impact,” used in the context of “impact on an arterial unit,” means that the trip distribution indicates that the development will add three or more directional peak-hour trips to the arterial unit.

(3) Criteria (a), (b), (c) and (d) below must ALL be met to demonstrate that conditions have not changed:

(a) The development itself has not changed in such a way that might worsen LOS on the road system (e.g., increased trip generation, changes in access points, etc.), and

(b) the original trip distribution can be considered adequate because nothing has changed on the road system that might affect the original trip distribution in a way that increases impacts level of service, or a new trip distribution is provided, and

(c) either of the following two criteria are met:

(i) the development’s trip distribution shows both AM and PM distribution in proper format, or
(ii) the distribution shows only the PM distribution and there are no AM level-of-service issues for this development, and

(d) the appropriate criteria below are met depending on the size of the development and whether or not the development is in a TSA with any AUIAs or UCAUs.

(i) For a small or medium-sized development in a TSA with one or more AUIAs or UCAUs, the original trip distribution must be adequate and show that the development does not impact any AUIAs or UCAUs.

(ii) For a large-sized development in a TSA with no AUIAs or UCAUs, the original trip distribution must be adequate and either of the two following criteria must be met:

(A) The development does not impact any critical arterial units, or

(B) the development is in the pipeline and LOS analysis has been conducted within the last six months on all critical arterial units impacted by the development and shows adequate future LOS.

(iii) For a large-sized development in a TSA with one or more AUIAs or UCAUs the original trip distribution is adequate and shows that the development does not impact any AUIAs or UCAUs and either of the following two criteria is met.

(A) The development does not impact any critical arterial units, or

(B) the development is in the pipeline and LOS analysis has been conducted within the last six months on all critical arterial units impacted by the development and shows adequate future LOS.

(4) Requirements for Concurrency Evaluations if Conditions HAVE Changed

(a) For a small or medium-sized development in a TSA with one or more AUIAs or UCAUs a new trip distribution is required, and if the development impacts an AUIA then no extension can be granted. If the development impacts an UCAU, then an extension can only be granted if the developer voluntarily offers to mitigate the impacts on the UCA consistent with the requirements if SCC 30.66B.160(2)(c). If the development does not impact an AUIA or UCAU, then an extension is granted on the basis that conditions for the development have not changed.

(b) For a large-sized development in a TSA with no AUIAs or UCAUs the Director requires a new concurrency evaluation following the same basic procedures as a preapplication concurrency evaluation.

(c) For a large-sized development in a TSA with one or more AUIAs or UCAUs a new trip distribution is required, and if the development impacts an AUIA then no extension can be granted. If the development does not impact an AUIA, then the Director requires a new concurrency evaluation following the same basic procedures as the preapplication concurrency evaluations. If the development impacts an UCAU, then an extension can only be granted if the developer voluntarily offers to mitigate the impacts on the UCUA consistent with the requirements if SCC 30.66B.160(2)(c),
4226  CREDITS FOR DEVELOPER CONSTRUCTION OF
IMPROVEMENTS TO THE ROAD SYSTEM

4226.010  Applicability and/or Purpose
Adopted 9/10/95, First Revision 10/11/04

POL-4205 remains effective for development applications determined to be complete
prior to September 10, 1995. The interim modification to POL-4205 of May 1, 1995,
also remains in effect as a permanent modification to POL-4205.

4226.020  Credit for Developer Construction of Improvements
Adopted 9/10/95, First Revision 10/11/04, Second Revision 4/24/06

(1) As required by RCW 82.02.060(3), credit against a development's impact fee shall
be provided for dedication of land for, or construction of, any road-system improvements
that are identified in the Transportation Needs Report (TNR) as being part of the impact
fee cost basis, and that are determined by the Department of Public Works (DPW) to be
part of “ultimate” (as opposed to interim) road-system improvements, and that are
imposed by the county as a condition of approval. Credits shall not exceed 100% of the
amount calculated using the unit costs of the TNR impact fee cost basis as provided in
DPW Rule 4226.020(6) below.

(a) DPW Rule 4221 contains policies about credits for dedication or deeding of
right-of-way.

(b) DPW Rule 4221.060(5)(c) indicates that where a developer is eligible for credits
from both the dedication of right-of-way and the construction of road improvements,
compensation for right-of-way will be credited against the developer’s impact fee
payment before any construction value will be credited.

(c) A construction project’s preliminary engineering, construction engineering,
and/or mobilization, may also be creditable, to the extent that the developer is
responsible for these aspects of the project.

(2) Credit will be given against a development's road system impact fee, required by
Chapter 30.66B SCC, for the construction of improvements to the road system only
where they are identified in the Transportation Needs Report as part of the impact fee
cost basis.

(3) The purpose of such credits is to prevent a developer from paying twice for the
same improvement, first, as a cost associated with the construction of the actual road-
system improvements, and second, as part of an impact fee payment.

(4) Creditable road-system improvements may include, but are not limited to, frontage
improvements, improvements to eliminate inadequate road conditions, improvements to
provide access and circulation, and improvements to remedy arterial units in arrears.

(a) In the case where DPW has determined that full standard or interim standard
frontage improvements should not be built, yet the developer still wishes to build the
full standard frontage improvements on a road that is part of the impact fee cost
basis, limited credit may be given, as determined by DPW. Limited credit will be
based upon those improvements which can be utilized as part of the ultimate improvements.

(b) Credit will be given for the construction of and delineation of pedestrian walkways when required by DPW only to the extent that improvements constructed are identified in the Transportation Needs Report as part of the impact fee cost basis.

(c) No credit will be given for the construction of minimum frontage improvements.

(d) The County may agree to provide credits against a developer’s impact fees for construction of certain additional road-system improvements not needed strictly for the use and convenience of the occupants or users of the development if the developer voluntarily offers to construct such additional improvements in conjunction with the development, and the improvements are part of the impact fee cost basis, and the County has determined that the net cost to the County will be less than if the County constructed the improvements itself.

(5) Credits for construction of road-system improvements may not exceed the value of a development’s impact fee even though the construction of improvements may still be required.

(a) In such cases, the developer may be eligible for a reimbursement contract (a.k.a., latecomer’s agreement) under 13.95 SCC.

(b) Also, the County may agree to extend credits for construction of road-system improvements to more than one development in cases where a single developer has, or expects to have, more than one development within the same Transportation Service Area (TSA).

   (i) Such agreement must be in writing and authorized by the County Engineer.

   (ii) The agreement must be negotiated prior to the developer beginning construction.

   (iii) The extent of the system improvements must exceed what is normally required of a particular developer (such as beyond frontage improvements).

   (iv) The system improvements must have significant public value, such that the credit would be commensurate with the public benefit.

   (v) For developments that have already paid impact fees, such “extended” credit shall only be an option in cases where the paid fees have not yet been budgeted or spent by the County on a road project.

   (vi) For “future” developments whose impact fee has not yet been paid, such extended credit shall only be available for new developments which become vested within six years of when the County Engineer authorizes the credit/construction agreement.

(6) Credits will be based upon the dollar amounts used to compute the road needs costs in the impact fee cost basis as found in the Snohomish County Transportation Needs Report (TNR). The County will calculate the amount of credit by applying the relevant costs in the impact fee cost basis to the dimensions and/or quantities of constructed improvements, except that when the amount of such calculation exceeds
$100,000, the following shall apply. The initial credit shall only equal 85% of the amount calculated unless, and until, the developer provides copies of receipts and cancelled checks documenting that the actual costs of the improvements to the developer equaled or exceeded 85% of the amount calculated using the TNR impact fee cost basis. Then, the amount of the final credit shall be determined and shall not exceed the amount documented by receipts and/or cancelled checks and shall not exceed 100% of the amount calculated using the TNR impact fee cost basis. If the final credit amount has not been determined by the time the developer wishes to pay the impact fee, then the developer can choose to wait to pay the fee or can choose to proceed to pay the fee and have the County refund all or part of the fee if the final credit is determined within six months of fee payment.

4226.030 Requests for Credits and Application to Individual Units

Adopted 12/9/07

(1) The developer is responsible to request impact fee credits for road improvements in writing (or e-mail) and to provide the county with all documents and information the county determines are needed to calculate the credits. Such request and submittal of required information shall be made with the first submittal of the construction plans for the improvement for which credit is being sought. This will allow the calculation of credits to be completed sufficiently in advance of final development review so that the final plat mylar, site plan, and record of developer obligations accurately reflect the net per unit impact fee after application of all available credits.

(2) Credits applied to a development will be evenly distributed among any units that make up the development. For example, in a subdivision, the total amount of credits will be divided by the total number of new lots, and the same per-lot amount will be applied to each building permit application within the subdivision.
4227 TRANSIT COMPATIBILITY CRITERIA FOR DETERMINING THE CONCURRENcy OF LAND DEVELOPMENT WITH TRANSPORTATION IMPROVEMENTS

4227.010 Applicability and/or Purpose
Adopted 12/21/98, First Revision 10/11/04

(1) The State Growth Management Act RCW 36.70A.070(6)(b)(ii) requires Snohomish County to adopt within its comprehensive plan (transportation element) level of service standards which address roadway and transit routes. In addition, RCW 36.70A.070 (e) requires that no development shall be approved which would cause the level of service on a designated county arterial to fall below the adopted level of service standards unless improvements are programmed and funding identified which would remedy the deficiency within six years. SCC 30.66B.100 includes the arterial level of service standards and a reference to transit compatibility criteria by which the Department of Public Works (DPW) will plan, program, and construct transportation system capacity improvements in order to facilitate new land development that is consistent with the county’s comprehensive plan.

(2) Consistent with the delegation of authority, by the County Council, to the Public Works Director under Chapter 30.66B.080 Snohomish County Code (SCC), departmental Rule 4227 establishes the criteria by which a decision regarding transit compatibility can be made for land development. This Rule provides a detailed explanation of the transit compatibility criteria adopted within the county’s comprehensive plan - transportation element and how the criteria apply to land development proposals and the roads serving them. Consistent with SCC 30.66B.167(1), developers can choose to have their development proposals reviewed under the transit compatibility criteria detailed in this Rule which may modify concurrency determinations.

4227.020 Level of Service Standards Include Transit Compatibility Factors
Adopted 12/21/98, First Revision 10/11/04

Level of service standards and referenced transit compatibility criteria for roadways are established within Chapter 30.66B SCC based on policies adopted as part of the Transportation Element of the Snohomish County Comprehensive Plan. Chapter 30.66B.100 presents the adopted level of service standards for arterial roadways from the Transportation Element of Snohomish County’s Comprehensive Plan. These standards are based on methods for determining level of service from the most current edition of the Highway Capacity Manual, Special Report 209, published by the Transportation Research Board.

4227.030. Transit Compatibility Concepts and Definition of Terms
Adopted 12/21/98, First Revision 10/11/04, Second Revision 12/9/07

(1) Transit compatibility is based on specific criteria identified within the Transportation Element of the Comprehensive Plan.

(2) Importantly, the following definitions describe the site-related and roadway-related criteria by which a proposed development can be determined to be transit compatible:
(a) Predefined land uses - these are land uses that have been determined to be transit compatible and supportive in that they generate person trips that have the potential to be served by public transit. The type of activities associated with the particular land use are such that it is practical to use public transit. The density of people or employees and/or the intensity of the land use can also make it practical to be served by transit. DPW Rule 4229.090 provides a list of the predefined land uses that are potentially transit compatible if they meet the appropriate density criteria. Mixed-use land developments may be deemed transit compatible based on individual land uses. Other land uses not predefined can be deemed transit compatible, on a case-by-case basis, if it can be demonstrated that they have potential to generate significant amounts of transit ridership.

(b) Site location - the site of a land development proposal would have to be within a direct walking distance of one-quarter mile or less (< 1/4 mile) to an existing or officially, planned transit route.

(c) Density (gross acre) - minimum densities are identified for residential and commercial land development proposals. Four or more dwelling units per gross acre is the minimum density for transit compatible urban residential land uses under the comprehensive plan. Seven or more dwelling units per acre is viewed by the public transit industry as a more ideal density target to be supportive of transit. Clustering of rural dwelling units would be necessary for a rural residential land use to be transit compatible. Fifteen or more employees per gross acre is the minimum density for transit compatible urban and rural non-residential land developments.

(d) Transit supportive design - is achieved when a proposed development provides opportunities through site design to make public transportation an attractive alternative to the automobile. Five aspects of site design can provide support for public transportation and include:

   (i) pedestrian access to/from a development,
   (ii) building location within a development,
   (iii) the amount and location of parking,
   (iv) internal circulation for pedestrians and transit vehicles, and
   (v) the availability of pedestrian and transit facilities within a development.

(e) Park-and-ride capacity - maximum number of vehicles that can be parked at a park-and-ride facility or facilities within two miles or less of a residential land development proposal. For this criteria to be satisfied for urban and rural residential developments, vehicle capacity must be available at a park-and-ride lot that is within two miles or less travel distance by auto. Available capacity would be enough vehicle parking to satisfy transit ridership accessing the lot by auto for the residential development under consideration. If a park-and-ride lot is within half a mile or less walking distance to/from an urban residential development, then this transit compatibility criteria may be satisfied regardless of available capacity.

(f) Roadway condition - relates to the presence of shelters and seats at transit stops within the urban area and, at a minimum, having safe and accessible stops within rural areas. This may also include the ability to safely cross arterial roadways near transit stops.
(g) Walkway to transit stop - transit compatibility is possible where a paved walkway (i.e., at least five feet wide for a raised sidewalk or seven feet for an at-grade walkway or shoulder) is provided on at least one side of an arterial within a quarter mile of a transit stop.

(h) Peak transit headway - the time interval between transit vehicles moving in the same direction along a given arterial roadway during peak travel periods (i.e., 6:00 to 9:00 AM and 3:30 to 6:30 PM).

(i) Transit load factor - the ratio of passengers to available seats on a transit vehicle moving in the same direction along a given arterial roadway during peak travel periods (i.e., 6:00 to 9:00 AM and 3:30 to 6:30 PM) and typically represented as a decimal (e.g., 0.76 or 1.22).

(j) Designated urban centers - designated urban centers are parts of the urban community that have clearly defined boundaries where higher residential and commercial densities occur. According to the county’s General Policy Plan (GPP), the urban centers are to be designed to support multimodal transportation, and have site design features that support and accommodate pedestrian and public transit uses.

(k) Transit usage and facilities study - is a study conducted by a developer in cooperation with the county and transit operating agency in order to make a determination whether a development is transit compatible or not. The study includes data collected in regards to: boarding/alighting, passenger loading, bus stop/shelter inventory, safety considerations at transit stops and arterial crossings, and park-and-ride usage.

4227.040 Transit Compatibility Minimum Criteria for Level of Service Determinations

Adopted 12/21/98, First Revision 10/11/04

The table below presents a summary of the criteria for determining if a development and/or roadway is compatible with and supportive of the provision of fixed-route transit services.

<table>
<thead>
<tr>
<th>MINIMUM CRITERIA</th>
<th>URBAN RESIDENTIAL(1)</th>
<th>URBAN COMMERCIAL(1)</th>
<th>RURAL RESIDENTIAL</th>
<th>RURAL COMMERCIAL</th>
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</thead>
<tbody>
<tr>
<td>Site Location</td>
<td>≤ 1/4 mile to route</td>
<td>≤ 1/4 mile to route</td>
<td>≤ 1/4 mile to route</td>
<td>≤ 1/4 mile to route</td>
</tr>
<tr>
<td>Density (gross acre)</td>
<td>4+ du/acre</td>
<td>15+ employees/acre</td>
<td>clustering</td>
<td>15+ employees/acre</td>
</tr>
<tr>
<td>Land Use</td>
<td>predefined</td>
<td>predefined</td>
<td>predefined</td>
<td>predefined</td>
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注：
(1) 与城市住宅区相关的土地使用；
(2) 与城市商业区相关的土地使用；
(3) 与农村住宅区相关的土地使用；
(4) 与农村商业区相关的土地使用。

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<th>RURAL RESIDENTIAL</th>
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</tr>
</thead>
<tbody>
<tr>
<td>Design</td>
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<td>transit supportive</td>
</tr>
<tr>
<td>P&amp;R Capacity</td>
<td>≤2 mi. by car/ or 1/2 mi. by walk</td>
<td>N/A</td>
<td>≤2 mi. by car</td>
<td>N/A</td>
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</tbody>
</table>

**ROADWAY-RELATED**

<table>
<thead>
<tr>
<th>Condition</th>
<th>seats and shelter</th>
<th>seats and shelter</th>
<th>safe and accessible</th>
<th>safe and accessible</th>
</tr>
</thead>
<tbody>
<tr>
<td>Walkway to transit stop</td>
<td>for 1/4 mi. to stop</td>
<td>for 1/4 mi. to stop</td>
<td>N/A</td>
<td>N/A</td>
</tr>
<tr>
<td>Peak transit headway</td>
<td>≤ 2 hours (2)</td>
<td>≤ 2 hours (2)</td>
<td>≤ 3 hours</td>
<td>≤ 3 hours</td>
</tr>
<tr>
<td>Transit load factor</td>
<td>1.2 maximum (bus)</td>
<td>1.2 maximum (bus)</td>
<td>1.0 maximum</td>
<td>1.0 maximum</td>
</tr>
</tbody>
</table>

Footnote (1)  Designated urban centers would be designed for transit compatibility.

Footnote (2)  During peak period designated urban centers should also be ≤ 1 hour headway.

**4227.050 Transit Compatibility Determination Performed by Transportation Planning**

*Adopted 12/21/98, First Revision 10/11/04*

(1) The Department of Public Works (DPW) Transportation Planning Group will establish a procedure for transit compatibility determinations in cooperation with Community Transit and Everett Transit, the Sound Transit and King County METRO, as well as maintain a data base of transit facilities and improvements to aid in making determinations of transit compatibility.

(2) The transit compatibility determination performed by Transportation Planning shall consist of:

(a) an initial determination of eligibility, upon request by a land development analyst on behalf of a developer, based on site-related criteria such as type and intensity of land use;

(b) a scoping of a transit usage and facilities study where a development is eligible and additional information is needed from the developer to make the transit compatibility determination;
(c) a collaborative process with the appropriate transit agency to review the results of the transit usage and facilities study that will result in a transit compatibility determination, and

(d) a recommendation to Land Development on transit-related mitigation for the transit compatibility determination so that a Transportation Development Reviewer (TDR) can complete review of the proposed land development.

(3) The data base on transit facilities and improvements, maintained by the Transportation Planning Group shall at minimum consist of inventories and data related to:

(a) the predefined land uses eligible to be transit compatible if they meet specific criteria (along with land use information and maps illustrating urban/rural boundaries, planned densities and zoning);

(b) all transit routes or lines by operating agency;

(c) all bus stops, seats and shelter locations on individual routes;

(d) the presence or lack of walkways on arterials within 1/4 mile of transit routes or lines;

(e) average peak period headways experienced on individual transit routes and lines;

(f) park-and-ride lot location and capacity, and

(g) transit boarding/alighting and loading information acquired through various studies.

4227.060 Making Concurrency Determinations Based on Level Of Service (LOS) Standards and Transit Compatibility Criteria

Adopted 12/21/98, First Revision 10/11/04, Second Revision 12/9/07

(1) This transit compatibility Rule shall be used in conjunction with DPW Rule 4224 to make concurrency determinations based on level of service (LOS) standards and transit compatibility criteria.

(2) Pursuant to SCC 30.66B.102, in making a determination that a land development proposal is concurrent with capacity improvements to impacted arterial units, special allowance can be made for developments that are deemed transit supportive and where impacted arterial units are transit compatible. Level of service will be computed on an hourly basis consistent with the most current version of the Highway Capacity Manual: Special Report 209, Transportation Research Board.

4227.070 Transit Compatibility Practices

Adopted 12/21/98, First Revision 10/11/04

(1) Transportation Planning shall work with the appropriate transit agency to identify transit compatibility practices that would satisfy the level of service transit compatibility criteria adopted within the Transportation Element of the Snohomish County GMA.
Comprehensive Plan and then will prepare a written recommendation to the Transportation Development Reviewer (TDR).

(2) Transit-compatibility practices related to land use may include, but are not limited to those listed below.

(a) Land Use. Mixed land uses on single sites and near bus routes (e.g., residential, office, retail and other commercial).

(b) Transit-supportive residential densities (e.g., 4 to 20 dwelling units per acre where the total units amount to 50 or more) and employment densities (e.g., 50-60 employees per acre where the total employment base is 10,000 or more).

(c) Office and retail uses should be located along roadway(s) with transit service with parking placed on side and rear of parcels.

(d) Reduced parking spaces related to a maximum rate per unit gross floor area.

(e) Other land use practices that are proven to be supportive of transit operations and increased ridership.

(3) Transit-compatibility practices related to Onsite Design may include, but are not limited to those listed below.

(a) Orient buildings to transit stops with limited front lot setbacks.

(b) Minimize the distance between building entrances and the nearest transit stop and provide a direct pedestrian route from stop to entry.

(c) Geometrics of onsite roads should be designed to accommodate transit where service is expected (e.g., turning radii, road widths and pavement depths).

(d) Layout streets within subdivisions to allow through movement of transit vehicles and pedestrians by minimizing branching, circuitry and cul-de-sacs.

(e) Onsite pedestrian circulation should be direct, and incorporate continuous walkways, landscaping, access to bus stops and safe roadway crossings.

(f) Provision of park-and-ride and/or park-and-pool spaces on large commercial sites for use by transit users.

(g) Contribute to funding of custom bus service for employees.

(h) Transit passenger comfort, safety and security should be part of site design (e.g., lighting, weather protection, visibility).

(i) Other onsite capital improvements supportive of transit services.

(4) Transit-compatibility practices related to Off-site Design may include, but are not limited to those listed below.

(a) Provide walkways to transit stops from developments that are within 1/4 mile or less from transit routes (walkways would need to meet county design standards).

(b) Provide onsite bus stops and pullouts along development frontages served by transit.

(c) Provide bus shelters, shelter pads and seating.
(d) Contribute funding towards preferential signalization for transit on designated arterials.
(e) Contribute to the design and construction of arterial HOV lanes.
(f) Contribute to expansion of park-and-ride lot capacity.
(g) Other offsite capital improvements supportive of transit services.
(h) Improve pedestrian crossings across arterials.

(5) Transportation Planning will seek recommendations and concurrence from the appropriate transit agencies regarding transit compatible practices.

4227.080 Documents to be Used as Reference Materials
Adopted 12/21/98, First Revision 10/11/04

(1) The Department of Public Works (DPW) will rely on a number of other documents as reference materials for determining transit compatibility and supportive land uses, including the following, as now existing or hereafter amended.

(b) Creating Transportation Choices Through Zoning, 1994. Snohomish County Transportation Authority.
(c) Commute Trip Reduction Plan for Unincorporated Snohomish County, 1998. Snohomish County Public Works Department.
(e) Snohomish County GMA Comprehensive Plan: Transportation Element, 1995. Snohomish County Planning Department.

4227.090 Land Uses That Have Potential to be Transit Compatible
Adopted 12/21/98, First Revision 10/11/04

(1) Urban Residential. The following urban residential land uses have the potential to be transit compatible if they include at least four dwelling units per gross acre.
(a) Single-family Detached Housing
(b) Apartments
(c) Low-rise Apartments
(d) High-rise Apartments
(e) Condominiums/Townhouses
(f) Mobile Home Park
(g) Retirement Community
(h) Elderly Housing

(2) Urban Commercial. The following urban land uses have the potential to be transit compatible if they include 15 or more employees per gross acre employed at the site.
(a) Hotels
(b) Amusement park
(c) Zoo
(d) Military Base
(e) Schools
(f) Community College
(g) College/University
(h) Library
(i) Hospital/Clinic
(j) General Office Building
(k) Medical-Dental Office Building
(l) Government Office Building
(m) Office Park
(n) Business Park
(o) Specialty Retail Center
(p) Discount Store
(q) Shopping Center (multiple uses)  (u) General Light Industrial
(r) Waterport/Marine Terminal  (v) General Heavy Industrial
(s) General Aviation Airport  (w) Industrial Park
(t) Commercial Aviation Airport  (x) Manufacturing

(3) Rural Residential. The following rural residential land uses have the potential to be transit compatible if they are clustered and thereby allow four dwelling units per cluster acreage.

(a) Single-family Detached Housing  (d) Retirement Community
(b) Apartments  (e) Elderly Housing
(c) Mobile Home Park

(4) Rural Commercial. The following rural land uses have the potential to be transit compatible if they include 15 or more employees per gross acre employed at the site.

(a) Military Base  (k) Discount Store
(b) Schools  (l) Shopping Center (multiple uses)
(c) Library  (m) General Aviation Airport
(d) Hospital/Clinic  (n) Commercial Aviation Airport
(e) General Office Building  (o) General Light Industrial
(f) Medical-Dental Office Building  (p) General Heavy Industrial
(g) Government Office Building  (q) Industrial Park
(h) Office Park  (r) Manufacturing
(i) Business Park
(j) Specialty Retail Center
4228 TRANSPORTATION DEMAND MANAGEMENT (TDM) FOR DEVELOPMENT

4228.010 Applicability and/or Purpose  
_Adopted 9/27/01, First Revision 10/11/04_  
(1) This Rule applies to land development applications determined to be complete on or after the effective date of Amended Ordinance No. 95-039 (July 13, 1995).  
(2) This Rule relates to Transportation Demand Management (TDM) plans and trip reduction credits pursuant to SCC 30.66B.610-680.  
(3) This Rule describes how trip reduction credits are approved and managed.

4228.020 Trip Reduction Credits Procedures.  
_Adopted 9/27/01, First Revision 10/11/04_  
(1) Developers are encouraged to provide Transportation Demand Management (TDM) measures to mitigate their traffic impacts and may be eligible for trip reduction credits.  
(2) Developers will be informed of TDM options at the presubmittal conference.  
(3) The Department of Public Works (DPW) will help developers apply the on-site design principles of Sno-Trans' "A Guide to Land Use and Public Transportation" (document available for reference at DPW) to facilitate compatibility with TDM.

4228.030 TDM measures eligible for trip reduction credits may include:  
_Adopted 9/27/01, First Revision 10/11/04_  
(1) Transportation Demand Management (TDM) measures eligible for trip reduction credits may include:  
   (a) construction of on-site design features for TDM compatibility,  
   (b) implementation of voluntary trip reduction programs, and  
   (c) additional TDM measures with an area-wide impact may be eligible for trip reduction credits on a case-by-case basis.

4228.040 TDM Plans  
_Adopted 9/27/01, First Revision 10/11/04_  
(1) Developers wishing to receive credits by providing Transportation Demand Management (TDM) measures must provide TDM plans with their initial development application. Such TDM plans will describe the TDM measures proposed for the development.  
(2) Based upon adopted Rules the Department of Public Works (DPW) will determine if a development application's TDM plan meets the requirements for on-site TDM compatibility and/or voluntary trip reduction programs and/or measures with an area-wide impact and will determine the amount, if any, of trip reduction credits.
(3) A development proposing TDM measures shall include the TDM plan as part of a mitigation proposal under SCC 30.66B.055(4).

(4) The written submittal of voluntary trip reduction programs shall be provided in the TDM plan in a form acceptable to DPW. When a traffic study is required the submittal will be part of that study.

4228.050 Restrictions
Adopted 9/27/01, First Revision 10/11/04

(1) On-site features accepted for Transportation Demand Management (TDM) compatibility in a mitigation proposal and/or measures with area-wide impacts allowed credits under this section must be constructed before any certificate of occupancy or final inspection will be issued.

(2) Special access easements accepted for TDM compatibility in a mitigation proposal must be recorded as restrictive covenants on the appropriate property title(s) before any certificate of occupancy or final inspection will be issued.

(3) Voluntary trip reduction programs accepted for TDM compatibility in a mitigation proposal must be recorded as restrictive covenants on the appropriate property title(s) before any certificate of occupancy or final inspection will be issued. Such restriction shall state that the owner agrees to the implementation and ongoing operation of a voluntary trip reduction program as per Chapter 32.40 SCC by the proposed occupant(s) of the site and by all subsequent occupants as a condition of use for that property.

(4) The Department of Public Works (DPW) will release the owner from title restrictions after a six-year time period during which the owner of the development demonstrates satisfactory fulfillment of the terms of the voluntary trip reduction program as agreed upon in the TDM plan.

(5) DPW will determine fulfillment of the terms of the voluntary trip reduction program through the development's annual report and through verification by DPW's monitoring program under Section 4228.100(5) below.

(6) If DPW determines that the terms of the voluntary trip reduction program are not being fulfilled DPW will notify the developer or owner in writing.

(7) After the determination of program fulfillment has been made for the sixth year of the voluntary trip reduction program, DPW shall, within 90 days provide appropriate documentation enabling the owner to remove the voluntary trip reduction program title encumbrance.

(8) Voluntary trip reduction programs accepted for any development occupied by an affected, major employer subject to the provisions of the commute trip reduction ordinance, Chapter 32.40 SCC, shall, in any cases of conflicting requirements, meet the requirements of Chapter 32.40 SCC.

4228.060 Application of Trip Reduction Credits
Adopted 9/27/01, First Revision 10/11/04
(1) Trip reduction credits allowed to developers will be used in accordance with SCC 30.66B.670.

(2) The Department of Public Works (DPW) will encourage other jurisdictions to allow trip reduction credits granted to a development to apply against its calculated trip generation including PM peak-hour trips and ADT for use in determining impacts on state facilities as per SCC 30.66B.710 or other jurisdiction’s facilities as per SCC 30.66B.720.

4228.070 Modification of TDM Plans.

Adopted 9/27/01, First Revision 10/11/04

(1) After occupancy or upon resale, a development and/or owner which decides to not implement or discontinue a trip reduction program contrary to the title covenant or to remove or cease maintaining site-design features contrary to the developer’s Transportation Demand Management (TDM) plan may do so by making a payment to the Department of Public Works (DPW) equal to the amount of the discount(s) resulting from the initial credit to any proportionate share mitigating payment imposed under this title to mitigate the development’s impact on the future capacity of county roads, mitigation requirement and/or any TDM payment under SCC 30.66B.625 with adjustments for inflation.

(2) The county shall, upon receipt of such payment release the developer and/or owner from any further trip reduction program obligation and allow the developer and/or owner to remove the restrictive covenant and/or release the developer and/or owner from obligations of the TDM plan. Upon failure by a developer and/or owner to make such payment in full to DPW, the Public Works Director, after notice to the developer and/or owner, may place a lien upon the property for an amount equal to the required payment and/or withhold further certificates of occupancy or occupancy approval.

(3) Upon failure by a developer and/or owner to maintain on-site features approved as part of a TDM plan or to continue an approved trip reduction program contrary to a restrictive covenant, the Public Works Director, after notice to the developer and/or owner, may place a lien upon the property for an amount equal to the discount(s) resulting from the initial credit to any proportionate share mitigating payment imposed under this title to mitigate the development’s impact on the future capacity of county roads, mitigation requirement and/or any TDM payment under SCC 30.66B.625 with adjustments for inflation.

(4) Any development that does not implement a TDM plan as approved, may be subject to a new concurrency determination.

4228.080 Trip Reduction Credits for TDM Compatible On-Site Design Features for Commercial Developments.

Adopted 9/27/01, First Revision 10/11/04, Second Revision 12/9/07

(1) The Department of Public Works (DPW) will allow a five percent trip reduction credit to any commercial development including multi-family residential deemed "Transportation Demand Management (TDM) compatible" by incorporating on-site design features as described in SCC 30.66B.640(2) to the satisfaction of the DPW.
(a) The intent of SCC 30.66B.640(2) is to apply to both commercial developments and multi-family residential developments. The code uses the word “including” because at the time it was adopted, multi-family was considered to be a commercial development.

(b) The term “adjacent” in SCC 30.66B.640(2)(d) shall mean a bus stop or pedestrian facility located immediately next to the perimeter boundary of the development, on a parcel that is coincident with a parcel of the development, that can be reached without having to construct off-site improvements. If neither a bus stop nor a pedestrian facility is located adjacent to the development, then SCC 30.66B.640(2) shall not be a criteria that has to be met to be eligible for trip reduction credits.

(2) The DPW will allow up to two additional trip reduction credits pursuant to SCC 30.66B.650(1) and as indicated below to any commercial development, including multi-family residential, voluntarily agreeing to implement a voluntary trip reduction program under SCC 30.66B.650(2) and deemed "TDM compatible" for on-site design SCC 30.66B.640(2) which constructs or incorporates bicycle facilities and reduced automobile parking to the satisfaction of DPW consistent with the following.

(a) For employment sites an additional one percent trip reduction credit for on-site bicycle facilities including bicycle parking lockers or secure/covered racks and bicyclist/pedestrian shower and locker facilities sufficient to meet the needs of one percent of the development's peak-hour trips; and/or

(b) An additional one percent trip reduction credit for a reduction of required parking spaces under SCC 30.26.040 resulting in provision of parking spaces less than the amounts specified as minimum requirements under SCC 30.26.030.

4228.090 Trip Reduction Credits for TDM Compatible On-Site Design Features for Residential Developments.
Adopted 9/27/01, First Revision 10/11/04

(1) The Department of Public Works (DPW) will allow a five percent trip reduction credit to any subdivision or short subdivision for single-family and/or duplex residential units deemed "Transportation Demand Management (TDM) compatible" by incorporating on-site design features as described in SCC 30.66B.640(3) to the satisfaction of the DPW:

(a) The term “adjacent” in SCC 30.66B.640(3)(b) is defined in Rule 4228.080(1)(b).

(b) For calculating gross density, the area defined by the perimeter of the boundaries of the parcel(s) being developed shall be used, including any right-of-way dedications included within that perimeter. The ratio of units to square feet cannot be rounded up to achieve the threshold (e.g., 3.99 is still less than 4).

4228.100 Trip Reduction Credits for Voluntary Trip Reduction Programs for Commercial Development.
Adopted 9/27/01, First Revision 10/11/04

(1) Pursuant to SCC 30.66B.650(2), the Department of Public Works (DPW) will
allow a five percent trip reduction credit to a commercial development including multi-family residential which voluntarily agrees to implement a trip reduction program under the provisions of Chapter 32.40 SCC and to the satisfaction of DPW. The intent of SCC 30.66B.650(2) is to apply to both commercial developments and multi-family residential developments.

(2) Voluntary trip reduction programs under this section will meet the same basic requirements as those required of affected employers under SCC 32.40 with the following exceptions and/or modifications:

   (a) Use of concepts applying to "employer(s)" and "employee(s)" will be applied to "developer(s)", "owners", "managers", or "occupants" and to any persons making trips to and from the development site; and
   (b) use of concepts applying to "Commute Trip Reduction" or "CTR" will be applied to "Trip Reduction" in general and include trips outside the peak hours; and
   (c) the term "Transportation Coordinator" will be used instead of "Employee Transportation Coordinator"; and
   (d) the CTR zones, CTR performance targets, and surveys as per SCC 32.40.050(2) will not apply to voluntary trip reduction programs under this section.

(3) Voluntary trip reduction programs under this section will include the "basic measures" of designation of a transportation coordinator, distribution of information, annual report, and ridematching program.

   (a) The transportation coordinator must at minimum: be regularly available to answer questions on how to access the site using alternative transportation modes, be able to provide information about the nearest transit stops and routes, provide employees or residents with ridematch applications for the regional ridematch program and provide personalized ridematching assistance, and be available to DPW to coordinate the monitoring of the development's trip reduction program.
   (b) The annual report shall be on a form available from the DPW. The annual report shall be submitted to the DPW each year prior to the anniversary date of the issuance of the development's initial occupancy permit. The annual report will provide information to the DPW indicating the status of the trip reduction program including at minimum: confirmation of continuing operation of the program, any changes in the program, results from any formal or informal surveys, and a general assessment of the effectiveness of the program.

(4) Voluntary trip reduction programs under this section will include an additional minimum number of trip reduction measures from the "Selection Menu" shown in Table 4228.1 below and described in SCC 32.40.050(4), to meet the following requirements:

   (a) developments with 200 or less ADT: no additional selectable measures; and
   (b) developments with 201 — 800 ADT: one additional measure; and
(c) developments with 801 — 2,000 ADT: two additional measures; and
(d) developments with 2,001 — 10,000 ADT: three additional measures at least one of which must be from category two or area-wide enhancements; and
(e) developments with 10,000 or more ADT: four additional measures at least two of which must be from category two or area-wide enhancements.

(5) The DPW shall have the right to monitor voluntary trip reduction programs under this section including:

(a) semi-annual telephone calls to the transportation coordinator to confirm the program's status; and
(b) annual site visits, by appointment, to confirm the program's status and maintenance of TDM-compatible site features.

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**4228.110 Additional Trip Reduction Credits for Trip Reduction Measures with Area-Wide Impact.**

*Adopted 9/27/01, First Revision 10/11/04*

(1) Pursuant to SCC 30.66B.650(3) the Department of Public Works (DPW) may allow to a development on a case-by-case basis up to five percent additional trip reduction credits for on-site measures with an area-wide impact not used to satisfy requirements under SCC 30.66B.650(2).
(2) The DPW may allow up to a five percent trip reduction credit for one or a combination of more than one of the following to the satisfaction of the DPW:

(a) mixed-use site design; and/or

(b) construction of designated, signed commuter parking spaces for commuters accessing transit, carpools, or vanpools (i.e. park-and-pool or park-and-ride spaces) PROVIDED, That the total number of parking spaces constructed by any non-residential development is less than or equal to the minimum specified under SCC 30.26.030; and/or

(c) other innovative projects with area-wide impacts approved by the DPW.

(3) Such credits may only be allowed based upon analysis in a traffic study by the developer which substantiates that the measure(s) are likely to achieve the requested trip reduction or achieve a commensurate reduction in vehicle trips from traffic in the area (existing traffic or traffic not generated by the development). Such substantiation must include detailed data on the travel characteristics of the affected trip-makers, identification of the selected trip reduction measures and their relationship to the travel characteristics of the affected trip-makers, specification of the percent reduction likely for each of the selected trip reduction measures, and supporting documentation which may include case studies, available research, or other data and information showing that the selected measures are likely to meet the indicated reductions.
4229  WRITTEN PROPOSALS AND RECORDS OF DEVELOPMENT OBLIGATIONS

4229.010  Applicability and/or Purpose
Adopted: 7/13/95, First Revision 10/11/04
This Rule applies to voluntary agreements, written proposals and records of developer obligations in conjunction with land development applications determined to be complete on or after the effective date of Amended Ordinance No. 95-039 (July 13, 1995). POL-4201 remains effective for development applications determined to be complete prior to July 13, 1995.

4229.020  Written Proposals
Adopted: 7/13/95, First Revision 10/11/04
In accordance with the requirements of SCC 30.66B.055(4), developers shall make a written proposal for transportation demand management measures or measures to mitigate impacts on roads under the jurisdiction of another agency. A sample proposal will be made available by the Department of Public Works.

4229.030  Voluntary Agreements
Adopted: 7/13/95, First Revision 10/11/04
(1) Voluntary agreements between developers and agencies (city, WSDOT, or another county) may be required for mitigation imposed under interlocal agreements. The Department of Public Works will work with the other agencies to develop the format for such agreements and make them available to developers.
(2) The Department of Public Works may also execute voluntary agreements with developers related to construction of off-site improvements by developers, particularly for large projects when credits against impact fees or purchase of right-of-way are involved.

4229.040  Record of Development Obligations
Adopted: 7/13/95, First Revision 10/11/04
Where mitigation is by payment of an impact fee pursuant to SCC 30.66B.310, neither a voluntary agreement nor a written proposal is applicable. However, a record of development obligations will be prepared containing a description of impact fee requirements and any other mitigation conditions in accordance with SCC30.66B.070(2), and will be signed by the Director of Public Works or an authorized designee.

4229.060  Recording and Release
Adopted: 7/13/95
(1) Records of development obligations will be recorded against the real property on which the development is proposed when they are in conjunction with certain developments requiring subsequent approvals per SCC 30.66B.070(5), for example, a conditional use permit requiring the future issuance of commercial building permits. Recording is required so that future purchasers or other interested parties will be
notified of any mitigation requirements associated with land use approvals pertaining to the property of interest.

(2) Developments for which recording of the record of developer obligations (RDO) is typically not required include commercial building permit applications, duplex residential building permits, and residential subdivisions and short subdivisions.

(a) For building permits, obligations are fulfilled prior to building permit issuance or included as part of the approved construction plans, so recording the RDO is not required.
(b) For residential subdivisions and short subdivisions, recording the RDO is not required because obligations are fulfilled prior to recording, included as part of the approved construction plans, or noted on the final plat (as in the case of right-of-way dedications and/or impact fee payments deferred to the time of building permit). The exception to this is that recording of the RDO may be required where TDM programs, such as voluntary commute trip reduction programs, are part of the development obligation and will be an ongoing obligation associated with the property.

(3) Recording of agreements and records of development obligations will be required for non-residential subdivisions and binding site plans as the proposed use may change after recording and prior to building permit issuance.

(4) Upon request, agreements and records of development obligations will be released from the title of the property once the approval has expired or the developer obligations have been fulfilled.
4230 TRANSPORTATION IMPACT ANALYSES (TIAS) AND CERTAIN TRANSPORTATION MITIGATION REQUIREMENTS ASSOCIATED WITH FULLY CONTAINED COMMUNITIES (FCCS)

4230.010 Applicability and/or Purpose

Adopted: 7/8/07

(1) This Rule applies to applications for fully contained communities (FCCs) determined to be complete on or after the effective date of Amended Ordinance No. 05-101 (February 1, 2006).

(2) This Rule applies to traffic study and mitigation requirements for FCCs.

(3) Traffic impact analyses (TIAs) for FCCs will be required in conjunction with each phase of FCC approvals, though specific requirements will differ for each phase. In general, TIAs will move from the broad, long term analysis associated with the initial FCC permit and subsequent Sector or Phase Approvals, to the narrow, short-term analysis associated with the final individual development applications within the FCC.

   (a) The general purpose of the initial, broad analysis is to establish the overall adequacy of the future transportation system to accommodate the FCC and will include, among other things, the identification of the improvements to the transportation system necessary to support the FCC, the cost and timing of these improvements, and the extent to which the applicant will be responsible for paying for and/or constructing the improvements.

   (b) The general purpose of the subsequent, more detailed analysis, is to establish compliance with Chapter 30.66B SCC with respect to concurrency, impact fees, and the other requirements of that chapter. Intermediate phases, such as sector-plan approvals, will also require TIAs, and may require elements of both the broad and the detailed analysis.

(4) Requirements will vary to some extent, based on the individual circumstances of the application. The final determinations on the scope of the TIAs will be made on a case-by-case basis using, for guidance, the provisions of Chapter 30.66B SCC and Departmental Rules including this Rule and will be approved by the directors of both Public Works and Planning and Development Services.

(5) One purpose of the TIAs is to provide all of the traffic analysis necessary to provide full disclosure under the State Environmental Protection Act (SEPS) of impacts on county highways, roads and streets. It is assumed that an Environmental Impact Statement (EIS) will be required in conjunction with any initial FCC permit, that a supplemental EIS may be required in conjunction with intermediate approvals, and that SEPA threshold determinations will be made in conjunction with final land use applications.
4230.020 Timing of TIAs for Initial FCC Permits

Adopted: 7/8/07

(1) Given the size and complexity of proposals for FCCs, several steps are required in the preparation of the TIA for the initial FCC permit as follows:

(a) Preliminary Draft TIA for Initial FCC Permit. Following the traffic study scoping process outlined in DPW Rule 4230.030 below, the applicant will be required to submit a preliminary draft TIA once the TIA is at the 70 - 80 percent completion level. The Department of Public Works (DPW) will provide initial comments and work with the applicant to establish a schedule for addressing these comments. In addition (or alternatively), the applicant may work with DPW to establish a series of work sessions to review key assumptions, methods, and results, to develop the preliminary draft TIA and/or address DPW comments. This process culminates in the completion of the draft TIA for the initial FCC permit as described in subsection (1)(b) below.

(b) Draft TIA for Initial FCC Permit. The applicant will be required to submit the draft TIA at least two weeks prior to the Preapplication Conference required under SCC 30.33A.040(2). This will enable the county to assess the likely transportation impacts of the proposed fully contained community (FCC) and be prepared to address those impacts at the Preapplication Conference. Completion of the draft TIA is also needed at this early point in the process to provide information for the pre-application open house as required under SCC 30.33A.040(3). Revisions to the TIA may be required prior to submittal of the application for the FCC. The same options described in subsection (1)(a) above may be utilized to resolve any issues associated with the draft TIA

(c) Final TIA for Initial FCC Permit. The applicant will be required to submit a final TIA with the initial application.

4230.030 Scope of Broad, Long-Term TIAs for Initial FCC Permits

Adopted: 7/8/07

(1) The applicant will be required to attend a meeting with the department of public works and the department of planning and development services to identify the scope of the initial, long-term TIA. Based on this meeting, the department of public works will draft a written transportation study scoping document providing the detailed requirements of the initial TIA and the assignment of responsibilities among the private and public parties and provide it to the applicant.

(2) At the traffic study scoping meeting, the applicant will provide the land-use assumptions to be used for the timing of different phases of the FCC. This is necessary to ascertain the horizon years for the analysis and the types and quantities of different land uses that will be associated with these different horizon years.
(3) The applicant must review, approve and sign the draft scope of work prior to conducting the analysis and submitting it to the department of public works.

(4) The department of public works will review the TIA and determine whether or not it meets the requirements of the written scope. If not, the department of public works will require the applicant to make the necessary revisions.

(5) The scope of the TIA, as determined by the department of public works in the transportation study scoping meeting, will include the following and may be further defined by specific additions or amendments to department of public works rules and/or FCC submittal checklists:

(a) Trip Generation. The TIA must provide estimates of the number of new trips expected to be generated by the FCC for average daily traffic (ADT), AM system peak hour, and PM system peak hour.

(b) Vehicle Trip Targets and Mode Split Ranges. In addition to passenger vehicles, the TIA must estimate the percentage of new trips generated that are likely to use the various different modes of transportation including transit, carpool, vanpool, pedestrian, bicycle, and large trucks. The TIA must provide an estimated total number of new vehicle trips that will be added to the road system by the FCC at full occupancy. This vehicle trip target will necessarily be based on estimated mode splits. The mode splits for the various different modes may be expressed as ‘possible ranges’ provided that cumulatively these ranges demonstrate that the vehicle trip target is reasonable.

(i) In addition to providing the mode split estimates for the trip distributions and assignments discussed in subsection (c) below, the analysis of mode splits is important to determine long-term needs for transit service and infrastructure, pedestrian/bicycle infrastructure, and road improvements needed to support freight and goods movement.

(ii) The pedestrian information will also be necessary to demonstrate the extent to which the proposed FCC meets the criteria for being pedestrian oriented by estimating the percentage of future occupants of the FCC who will likely be able to access basic goods, services and public facilities on foot within the FCC.

(iii) The mode split estimates may consist of mode-split targets combined with strategies for achieving those targets. Such strategies must include estimates of associated capital, marketing, and operating costs as well as empirical, methodological or anecdotal basis for how the strategies will enable the FCC to achieve the mode-split targets. Consistent with Rule 4230.060(1)(e) below, such strategies must at minimum demonstrate a viable potential for removing 5% of the FCC’s peak hour trips from the road system external to the FCC.

(c) Trip Distribution and Assignment. The TIA must determine the distribution of FCC trips, by mode, within the proposed FCC and to and from Snohomish County and the region, and estimates of the number of new trips that will likely be added to county roads, state highways, and city streets.
(i) Within the FCC, the distribution need not be detailed, but should identify in tabular form the estimated number of new vehicle trips that will remain internal to the FCC and the ranges of mode splits demonstrating that the vehicle trip target is reasonable.

(ii) External to the FCC, the distribution will provide estimates of the number of vehicles likely to be added to the road system, using the Department of Public Works “Required Format for Trip Distributions.” The information on the various different modes need not be shown as separate distributions, but can be shown in a table of ranges estimating the number of carpools, vanpools, buses and large trucks.

(d) Impacted Transportation System. Based on the trip distributions, the TIA must identify the “impacted transportation system” which shall consist of all county roads, city streets, and state highways on to which the FCC is expected to add new trips in excess of the predefined thresholds identified below.

(i) The thresholds for the broad, long term analysis associated with the initial FCC permit and subsequent Sector or Phase Approvals will be defined as the greater of two measurements, 5% of total FCC new peak hour vehicle trips (PHTs) or 50 non-directional PHTs. This means that for an FCC generating more than 1,000 new peak hour trips, the threshold would be 5%. For an FCC generating less than 1,000 new peak hour trips the threshold would be 50 non-directional peak hour trips. The Transportation Service Areas (TSAs) shall not apply to analysis for the applications for the broad, long term analysis associated with the initial FCC permit.

(e) Current Trips. Based on recent traffic counts at selected key intersections and cut lines, the TIA must estimate the number of current vehicle trips on the impacted transportation system. In the draft written scope described under subsection (1) above, DPW will identify those key intersections and cut lines for which the TIA must provide current traffic counts.

(i) Turning movement counts of vehicles at selected key intersections will be used primarily in level-of-service analysis.

(ii) Volumes at cut lines will be used primarily to calibrate travel-demand models.

(iii) Breakouts of current trips by truck and rideshare modes may be needed to support assumptions on mode splits and/or targets as described under subsection (5)(b) above.

(f) Forecast Travel Demand. For the impacted transportation system, for each horizon year, for each mode, the TIA must provide a forecast of the future travel demand based on the travel demand model of the currently-adopted county GMA Transportation Element (TE).

(i) DPW will work with the applicant to ensure that the methods and assumptions used in forecasting travel demand are consistent with the county’s land use and transportation models used to forecast future growth and travel demand.
(ii) Horizon Years. All of the traffic impact analysis must provide information for different future horizon years corresponding with the planned phases of the FCC and the horizon years of the TE. At minimum this should include short-term (corresponding to the short-range horizon of the TE); long-term (corresponding to the horizon year of the TE); and project build out (time of full occupancy of the FCC, even if it is beyond the horizon TE). In addition, intermediate horizon years could be required corresponding to distinct, significant phases of the FCC.

(iii) For horizon years beyond the horizon of the TE DPW will work with the applicant to develop assumptions for growth factors based on regional or state forecasts or models.

(iv) Mode splits may be based on mode targets as provided for in subsection 5(b)(iii) above.

(g) Total Forecast Trips. For the impacted transportation system, for each horizon year, for each mode, for ADT, AM PHT and PM PHT the TIA must estimate the total of current trips, plus forecast travel demand, plus the new trips likely to be added to the road system by the FCC. Snohomish County Public Works will assist the applicant on a case-by-case basis: Such assistance will include at minimum review, comment and approval of the applicant’s proposed methodology, and could be as much as full partnership using any of the transportation planning tools utilized by public works.

(h) Project Identification. For the impacted transportation system, the TIA must identify the transportation improvements needed to support the total forecast trips. Project identification will be based on the regulations and standards in effect at the time of submittal of the initial application, and corresponding to the jurisdiction with ownership of the impacted facility. For example, with county roads this might mean Chapter 30.66B SCC, department of public works rules, and/or the county’s EDDS. For state highways WSDOT standards would apply, and for City streets, City regulations and standards would apply.

(i) For the broad, long-term TIAs for initial FCC permits these standards will usually be applied broadly, consistent with the “planning level” analysis the agencies perform for long-range planning. For example, in estimating level-of-service on county roads, comparisons of forecast volumes with estimated capacities (i.e., “V/C ratios) will likely be more appropriate than more data intensive analysis (e.g., delay or travel-time simulation models). These standards will include, but are not limited to, those associated with level-of-service, inadequate road conditions, frontage improvements, right-of-way dedication, access, and circulation. In some cases, however, (e.g., impacts on freeways and freeway interchanges) more sophisticated modeling may be required (e.g., microscopic simulation models) to adequately evaluate level of service impacts.

(ii) For each identified improvement, the TIA must determine the extent to which the improvement has already been identified in the TE, and the extent to which the need for the project is triggered by the new trips generated by
the FCC compared to the extent to which the improvements would be needed without the FCC.

(iii) For any proposed FCC, such improvements must include, at minimum, all improvements needed to meet adopted standards on the two main access facilities (i.e., roads, streets, or highways) that will each provide a primary and secondary access from the FCC to the region. The primary access must meet adopted standards from the FCC to a state highway of statewide significance. The secondary access must meet adopted standards from the FCC to any state highway.

(iv) The method of identifying projects must be consistent with DPW’s method of identifying projects for the TE. DPW will work with the applicant in identifying and applying these methods. Typically, the method will consist of comparing total forecast system peak-hour trips with the maximum service volumes provided in DPW Rule 4224. However, in certain cases, e.g., impacts on critical arterial units or certain key intersections or interchanges, more detailed operational analysis may be required.

(i) Project Costs. The TIA must provide estimates of the year-of-expenditure costs of each identified projects, based on the cost model in the Transportation Needs Report. These cost estimates should be aggregated into three groups corresponding to the time-ranges for improvements used in the TE, short-range (next six years), long-range (up to the horizon year of the TE), and project build out beyond long range (ultimate build-out beyond the horizon year of the TE). Once aggregated, the cost estimates can be shown as ranges of costs to reflect the declining accuracy of cost projects as projected further into the future.

4230.040 Intermediate TIAs for Phase Approvals

Adopted: 7/8/07

(1) Intermediate TIAs for Phase Approvals. The requirements for mid-term TIAs for intermediate sector plan approvals or other planning-level phase approvals (hereinafter for this chapter “intermediate TIAs” for “phase approvals”) will be based on transportation study scoping meetings and documents established in the same manner as the initial TIA. The requirements will be similar to those for the initial long-range TIAs, but the focus will be narrower and will have two primary components.

(a) First, the intermediate TIA must demonstrate consistency with (or lesser impact than) the initial long-term TIA. The purpose of this additional analysis to demonstrate consistency with the initial TIA, is to demonstrate that the transportation impacts of the proposed phase approval are within the ranges identified in the broad, long-term initial TIA. If they are not, then the department of planning and development services will require the applicant to get approval for a modification of the initial FCC permit prior to approval of the subject FCC application. This may include the identification of additional improvements to the transportation system not identified in the initial FCC TIA, FCC approval, and developer agreement. This might also include other modifications agreed to by the
applicant and the county such as changes to mode targets based on empirical data gathered after occupancy of earlier FCC phases.

(b) In addition, the TIA must demonstrate that subsequent development applications within the phase approval, will likely be able to meet the requirements of Chapter 30.66B SCC at the time of their submittal.

4230.050 Short-Term TIA’s for Final Development Applications within the FCC

Adopted: 7/8/07

(1) Traffic studies for subsequent, final development applications within the FCC such as applications for residential subdivisions, binding site plans or commercial building permits, will be subject to the same requirements of Chapter 30.66B SCC and department of public works rules as similar applications outside the FCC, except that they must also show how the transportation impacts are consistent with the broad, long-term TIA’s associated with the initial FCC permit and any subsequent phase approvals. Such applications must also provide transportation studies consistent with presubmittal conferences that address all of the requirements of Chapter 30.66B SCC including concurrency.

(a) The thresholds for the short-term analysis associated with the final individual development applications within the FCC will be the same code and rule provisions that apply to all regular development applications.

(b) The Transportation Service Areas (TSAs) shall apply to the analysis for the final, individual development applications within the FCC.

4230.060 Additional Traffic Analysis and Mitigation Requirements

Adopted: 7/8/07

(1) Boundaries for transportation service areas (TSAs) will not apply to initial TIA’s, may not apply to intermediate TIA’s, but will apply to final TIA’s.

(2) Interlocal agreements with the state and other jurisdictions will not limit the scope of initial TIA’s, may or may not limit the scope of intermediate TIA’s, but will affect the scope of final TIA’s.

(3) Analysis of impacts on state and interstate freeway operations, including I-5, I-405, and US 2, will be required of initial TIA’s, and may or may not be required of intermediate and final TIA’s.

(4) In addition to all other requirements in Chapters 30.33A and 30.66B SCC, departmental rules, and submittal checklists, applicants for FCCs must provide the following additional traffic analysis and mitigation requirements.

(a) Compliance with SCC 30.33A.010(2)(e) and 30.33A.020(3) demonstrating that the proposed FCC will be pedestrian oriented and that pedestrian, bicycle, and high occupancy vehicles facilities are designated and incorporated into the design and management of the FCC. Compliance with requirements for pedestrian
orientation must include analysis of the extent to which future occupants of the FCC will likely be able to access basic goods, services and public facilities on foot within the FCC. Compliance with requirements for pedestrian orientation and pedestrian, bicycle and high occupancy vehicle facilities should also use the “Residential Handbook for Snohomish County Communities” or a similar reference as a guide.

(b) Compliance with the transit-oriented development portion of 30.33A.020(2). Demonstration of transit orientation should use Snohomish County Tomorrow’s “Transit Oriented Development Guidelines” or a similar reference as a guide. Analysis under this section must include discussion about the relationship of the proposed FCC to current or future inclusion in a public transit benefit area.

(c) Compliance with SCC 30.33A.010(3)(g) demonstrating that the FCC will have adequate access to and from the cities and employment centers in the county and the region.

(d) Demonstrate consistency with the TE in terms of policy, terminology, and format to enable the county to use the TIAs to update the TE as needed. This shall include a revenue/expenditure forecast for the county for the horizon year of the TE which builds upon and updates the analysis of the TE by incorporating the impacts of the FCC on county revenues and expenditures. The TIAs for FCCs must demonstrate the adequacy of the updated revenue forecast to pay for the updated expenditure forecast. (This subsection applies only to TIAs for initial and intermediate FCC applications).

(e) Consistent with SCC 30.66B.630, the FCC must provide sufficient transportation demand management (TDM) measures to indicate the potential for removing a minimum of five percent of its PM peak-hour trips from the road system. In the application of this TDM requirement to FCCs, the road system shall be interpreted to mean the road system external to the FCC. This requirement shall be met through the provisions of chapter 30.66B.600-.699 SCC and related department of public work rules. This subsection applies to all FCC applications. Mode split strategies identified pursuant to DPW Rule 4230.030(5)(b) above may be used to meet this requirement, provided that internal capture of vehicle trips shall not be included in the calculation of the five percent reduction of external trips.

(f) Justification for any deviations from the Engineering Design Development Standards (EDDS) that are anticipated. Justification should demonstrate that the deviations are necessary to promote a strong sense of identity and should also demonstrate how the deviations meet or exceed the general purposes of EDDS. The “Residential Handbook for Snohomish County Communities” should be referenced in justifying the necessity of alternative standards.
4231 TRANSPORTATION IMPACT ANALYSES AND CERTAIN TRANSPORTATION MITIGATION REQUIREMENTS ASSOCIATED WITH MINERAL OPERATIONS AND/OR OTHER DEVELOPMENTS GENERATING LARGE TRUCK TRAFFIC

4231.010 Applicability and/or Purpose
Adopted: 12/23/06

(1) This Rule applies to applications for mineral operations determined to be complete on or after the effective date of Amended Ordinance No. 05-083 (February 1, 2006).

(2) This Rule applies to traffic study and mitigation requirements for mineral operations.

(3) This Rule builds on existing Snohomish County development review code and rules with modifications to address the unique characteristics of the heavy trucking activity associated with mineral operations.

(4) While this Rule focuses on mineral operations, it may be applied to any development activity that generates a large quantity of heavy trucks such as a warehouse/distribution center or other activity involving significant trucking.

(5) In addition to all other requirements under Chapter 30.66B SCC, applications for mineral operations submitted in accordance with chapter 30.31D SCC shall be subject to the requirements of this Rule. The additional requirements are necessary to address the unique characteristics of the large trucks generated by mineral operations and to identify impacts and mitigation requirements.

(6) The objective of this Rule is to provide sufficient detail and specificity related to traffic study and mitigation requirements for applications for mineral operations so that as much as possible, mitigation requirements are clearly identified at the time of project approval.

4231.020 General Traffic Study Requirements
Adopted: 12/23/06

1) Applicants for mineral operations in accordance with chapter 30.31D SCC must submit a traffic study consistent with the provisions of Chapter 30.66B SCC, chapter 13.40 SCC, and department of public works rules.

2) Prior to submittal, all mineral operation applicants will be required to attend traffic study scoping meetings at which time the department of public works will provide applicants with detailed instructions for the required submittals.

3) The County's Transportation Service Areas (TSAs) will be used in defining a development's road system, but analysis of impacts beyond the TSA boundaries to encompass the development's "impact study area" will be required to provide for full
disclosure of traffic impacts under the State Environmental Protection Act (SEPA).

4) DPW Rule 4220 also applies to traffic study requirements for applicants under this section.

5) The 2005 Mineral Resource Lands Transportation Study will be provided to applicants for the purpose of gathering data on geographic and temporal distributions of mineral operations and traffic generated by mineral operations.

4231.030 Trip Generation, Distribution and Assignment
Adopted: 12/23/06

1) Prepare Trip Generation.
   a) Calculate trip generation based on size of facility, average daily extraction rates and other factors.
   b) Determine and list the numbers, types and sizes of vehicles and their passenger car equivalents (PCEs). Some analysis will utilize the actual number of trucks as opposed to their passenger car equivalents. Other analysis (e.g., grade analysis and some aspects of LOS analysis) will utilize passenger car equivalents.
   c) Determine vehicle and PCE trip generation for average weekday and weekend daily traffic (ADT) and weekday AM peak hour and PM peak hour.
   d) Determine average seasonal impact conditions (i.e., average seasonal material/trucks/traffic impacts). An additional analysis scenario may be required if the mineral operation is proposed to have a significantly higher-than-average level of activity for part of the year.
   e) Include adjustments related to proposed hours of operation.

2) Develop Trip Distribution and Assignment.
   a) Must be consistent with DPW document called “Format for Trip Distributions and Assignments,” except that trips assigned to SR-2 west of 88th/92nd ST SE do have to be distributed to I-5.
   b) Provide schematic maps showing the broad distributions of trips in terms of percentages on different roads. Provide separate distributions and assignments for different types of vehicles, one for large trucks and one for all other vehicles.
   c) Provide a detailed explanation of the methodologies used to determine the distribution. For example, a mining applicant can develop traffic distribution based on the specific market such as a batch processing plant or limited service area (same as current traffic study requirements). This will be subject to review and approval by the County. The “2005 Mineral Resource Lands Transportation Study” may be useful in helping to determine distributions.
   d) Provide peak hour turning movements of total vehicles at key intersections for weekday and weekend ADT, weekday AM peak hour, and weekday PM peak hour.
e) Carry peak hour traffic assignment out to a three-trip threshold consistent with SCC Chapter 30.66B and DPW Rules. The geographical extent of impacts using this threshold determines the study impact area. This analysis will not use PCE-based trip generation.

4231.040 Traffic Impact Analysis for Mineral Operations
Adopted: 12/23/06

1) In addition to all other requirements under Chapter 30.66B SCC, traffic studies submitted by applicants under this section shall include additional information addressing the impacts of large trucks, including all of the following:

   a) All analysis must address the extent to which any identified deficiency already exists prior to the commencement of the mineral operations, the extent to which the deficiency applies to all classes of vehicle operations or is limited to deficiencies for large truck operations, the extent to which the commencement of mineral operations will create new deficiencies, and the extent to which the commencement of mineral operations will exacerbate existing deficiencies.

   b) The applicant must determine traffic, geometric, and structural needs on any access road(s) connecting the site with the nearest arterial(s) and all other roads, streets and highways in the impact study area (See DPW Rule 4231.030 for definition of impact study area).

   c) The County Engineer will consider, and may grant, reductions in traffic study requirements under this section in response to timely written requests by the applicant.

   d) The applicant must identify any roads, streets, highways, intersections, bridges, road surfaces, edge treatments, traffic control features or other transportation facilities that do not meet the department of public works (DPW) engineering design and development standards (EDDS) or do not meet structural, geometric or safety standards based on engineering analysis.

   e) The analysis must take into consideration truck volumes, road grades, percent passing zones, shoulder widths, potential icy conditions, and the characteristics of large trucks such as height, length, weight, turning radii, and vehicle performance (acceleration and deceleration) as well as any other relevant factors identified by the County in the traffic study scoping meeting.

   f) The analysis must include consideration of both outgoing and incoming large trucks, and the directions in which they are loaded. In addition to the primary mineral excavation operations, this analysis must consider any backfilling operations, either in conjunction with reclamation, or as an operation ancillary to the primary mineral excavation operations (e.g., storage of fill materials).

   g) Analysis must evaluate the appropriate roadway geometry including, but not limited to required road widths and bridge widths, starting and stopping sight distances, intersection sight distances, horizontal and vertical curves.
h) Where appropriate for analysis of rural roads, the two-lane rural highway process provided by the Transportation Research Board’s most current Highway Capacity Manual will be utilized to make determinations related to roadway geometry. Analysis will be done assuming LOS C or better for rural areas.

i) Analysis must evaluate the need for turn lanes at access points and or intersections including analysis of storage/queuing impacts.

j) Analysis must evaluate the needed turn radii for large trucks with respect to existing geometry of roads, streets and highways in the study impact area.

k) Analysis must determine needs for permanent and temporary traffic control (e.g., signs, signals, etc.).

l) Analysis must determine adequacy or inadequacy of bridge structure(s). Apply County rating system based on additional loading from mineral resource activity.

m) Analysis must evaluate adequacy of existing pavement structures to accommodate the proposed mineral operations.

   i) For any public access road(s) between the site and the nearest arterial(s) provide a report from a professional Engineer practicing in pavement design or Geotechnical design, which evaluates the structure of the road with respect to its ability to withstand the impacts of the large trucks generated by the development and with respect to the County’s normal maintenance cycle for that road. This will require either evidence from as-built plans and maintenance records when available or from boring to determine thickness of pavement layers, base layers, and characteristics of subgrade soils and at sufficiently frequent locations along the access road(s) to capture any significant differences between different segments of the road(s).

   ii) For all other county roads or city streets evaluated under this section, provide a survey of pavement condition ratings or equivalent evaluation using the inspection procedures and guidelines published by the Northwest Pavement Management Association.

n) Analysis must evaluate impacts on school bus stops/walk routes/or other locales of concentrated pedestrian/bicycle activity and

   i) Evaluate any conflicts with bus stops.

   ii) Evaluate need for pullouts, shoulder improvements, or limited operation hours, if appropriate.

   iii) Evaluate need for pedestrian/bicycle/trail crossing enhancements such as signing, beacons, or signals, as appropriate.

o) Analysis must evaluate locations where icy conditions will most typically be found and the need for additional signing or other safety enhancements.

p) Analysis by applicants in Transportation Service Areas A, B, or C must evaluate the need and initial feasibility for alternate public and/or private routes such as the Granite Falls alternate route.

q) Applicant must identify any private, on-site access roads for which the applicant intends to transfer jurisdiction to the county upon cessation of
operations, and how these roads will be designed to meet EDDS.

r) Applicant must provide other information as determined by DPW, including, but not limited to:

i) Identify impacted sections of county roads by name, from, to, road numbers, milepost from and milepost to.

ii) Description of what will be hauled and quantities involved.

iii) Steps proposed to prevent tracking dirt/mud/dust onto street system.

iv) Where applicable, information, traffic analysis, and traffic mitigation offers consistent with interlocal agreements between the County and WSDOT, and between the County and other jurisdictions.

s) For any identified deficiency, the applicant will identify specific improvements that would be sufficient to remediate the deficiencies. For each deficiency the analysis must provide a defensible basis for determining the extent to which the applicant should be responsible for constructing the identified improvements and the necessary timing of such improvements. Some deficiencies (e.g., a bridge that is structurally obsolete) may require improvements constructed solely by the applicant prior to commencing operations. Other deficiencies (e.g., increased frequency of pavement overlays), may be the joint responsibility of the County and the applicant through some form of voluntary agreement.

2) Concurrency evaluations will be required of all applicants under this section.

a) The thresholds for concurrency evaluations will be based on vehicles, not passenger car equivalents (PCEs), (i.e., a large truck will be counted as one vehicle).

b) Forecasts must include volumes from existing development plus pipeline development, plus project traffic.

c) Intersection analyses are included in arterial speed calculation.

d) PCE adjustments will be included in calculating intersection delays and travel speeds in corridors in that the analysis must be based on the number and/or percentage of heavy vehicles.

e) TDM strategies will not apply because developments cannot mitigate truck activity with carpools and buses.

3) Evaluations for Inadequate Road Condition (IRC)s will be required of all applicants under this section.

a) The thresholds for IRC analysis will be based on vehicles, not PCEs, however all analyses must reflect the size, performance, and other characteristics of large trucks.

b) Thresholds for IRCs are three non-directional PHT, not directional as for other impacts.

4) The amounts of road system impact fees will be based on vehicles, not PCEs.
4231.050 Application of 30.66B Development Review Requirements and Identification of Improvements

Adopted: 12/23/06

1) In addition to all other requirements of Chapter 30.66B SCC, proposals for mineral operations submitted in accordance with Chapter 30.31D SCC are required to mitigate any structural, traffic, or geometric deficiencies as determined necessary by the department of public works (DPW).

2) Based on analysis under DPW Rule 4231.040, the County will identify any mitigation payments and improvements needed to mitigate the development’s impacts, the extent to which the applicant will be responsible for such improvements, and the timing of such improvements, including, but not limited to:
   a) Improvements to remedy arterial units in arrears; and
   b) Improvements to remedy inadequate road conditions (IRCs); and
   c) Improvements to bring county roads up to standards based on geometry, operations and/or structure; and
   d) Mitigation payments to the state or cities consistent with interlocal agreements; and
   e) Improvements to city streets or state highways consistent with interlocal agreements; and
   f) County impact fees and transportation demand management (TDM) payments.

3) At the conclusion of the mineral operation, any private access and circulation roads constructed to serve the development which the developer wants to deed to the County as a public road should conform to the County’s Engineering Design and Development Standards (EDDS), unless it is concluded by the county that the road is not consistent with the comprehensive plan and should be removed.

4231.060 Responsibilities for State Highways and City Streets

Adopted: 12/23/06

1) Transportation analysis and mitigation requirements for impacts on highways, streets, and roads by developments under this section shall be consistent with and not reduce minimum requirements of adopted interlocal agreements with the state, cities, or other counties. Such interlocal agreements may include provisions whereby the county recognizes certain legislatively-adopted city, state or other county transportation mitigation policies as county SEPA policies and enforce such policies as a condition of development for applicants under this section.

2) To address impacts and mitigation on State Highways and City Streets the County will do the following:
   a) County will work with WSDOT and with cities to provide examples of how policies can be modified to better analyze and mitigate the impacts of large trucks.
b) County will apply and or modify interlocal agreements with WSDOT and Cities regarding passenger-car equivalents (PCEs).

c) For those cities that do not currently have interlocal agreements with the County, the County will continue to be responsive, supportive and cooperative in negotiating and executing such agreements.

d) For applications affected by this Rule, the County will ensure that the notice of application is sent to WSDOT and impacted cities so that they can request mitigation measures consistent with the terms of existing interlocal agreements.

4231.070 State Laws Related To Local Government Authority To Regulate Streets And Roads

Adopted: 12/23/06

1) It is the intent of DPW Rules 4231.010 - .060 to address the impacts on the road system from new mineral operations by providing for imposition of mitigation requirements at the time of development approval which adequately address all of the County's concerns regarding public health/safety and the integrity of the road system.

2) State law does not appear to give specific legislative authority to local governments to recoup excessive wear and tear on roadways due to vehicles operating within legal load limits, generated by approved mineral operations (or any other approved developments).

3) State law does appear to provide authority to local governments to protect public health/safety and the integrity of the road system by imposing restrictions on specific roads or implementing road closures to protect safety or prevent damage. The county's regulations based on the state laws is contained in Snohomish County Code Title 13.

a) The state laws related to local government authority to regulate streets and roads are:

   i) RCW 36.32.120(2) & (7) – general jurisdiction over roads and public health and safety
   ii) RCW 36.75.020 & .040(4) – general authority to administer county roads
   iii) RCW 36.75.270 – authority to limit or prohibit vehicles on county roads and bridges (needs resolution, specified duration, notice and signs)
   iv) RCW 36.80.030 – authority of county road engineer to administer county roads

b) The County's responsibility to close roads, or restrict traffic under certain conditions are contained in:

   i) RCW 46.44.080 – authorizes restrictions to prevent damage by providing that "local authorities with respect to public highways under their jurisdiction may prohibit the operation thereon of motor trucks or other vehicles or may impose limits as to the weight thereof, or any other restrictions as may be deemed necessary, whenever any such public highway by reason of rain, snow, climatic or other conditions, will be seriously damaged or destroyed unless the operation
of vehicles thereon be prohibited or restricted or the permissible weights thereof reduced."

ii) RCW 36.75.270 – applies to all vehicles, procedural requirements for closures/restrictions (basically, ordinance or resolution of legislative body and posting and maintenance of notice signs at each end of affected highway)

iii) RCW 47.48.010 – authorizes road closures and restrictions by providing that “whenever the condition of any . . . county road . . . is such that for any reason its unrestricted use or continued use by vehicles or by any class of vehicles will greatly damage that . . . county road . . . or will be dangerous to traffic . . . the county legislative authority . . . is authorized to close the . . . county road . . . to travel by all vehicles or by any class of vehicles . . . for such a definite period as it shall determine."

iv) RCW 47.48.020 – emergency closures

c) The authority of the County to regulate overweight or oversize truckloads is contained in RCW 46.44.010 through 46.44.180.

d) Because the County may close roads for safety reasons or to protect the integrity of the road system, it would be reasonable to assume that it may also negotiate terms of continued use on a case by case basis. Arterial roads are typically constructed to a standard to withstand traffic from heavy trucks, and most arterial roads already serve a significant volume of heavy trucks making it difficult to fairly assign the cause of any extraordinary damage or accelerated deterioration to any one generator of heavy truck traffic. Thus, for approved mineral operations, only local access roads between the site and the nearest arterial(s) will be subject to restrictions or road closures related to extraordinary damage or accelerated deterioration

e) The terms “extraordinary damage” and “accelerated deterioration” are based on the following definitions:

(i) Accelerated Deterioration: Use of a road that results in the need for additional maintenance.

(ii) Additional Maintenance: Grading, reshaping, repair, and/or modification of roads in excess of the same operations identified as routine maintenance operations performed by the County.

(iii) Extraordinary - beyond what is common or usual.

(iv) Routine Maintenance - the grading, reshaping, repair and/or modification of the road prism as indicated in the regular maintenance schedule.
4232 CONCURRENCY REQUIREMENTS FOR CERTAIN PUBLIC FACILITIES NEEDED TO SUPPORT RESIDENTIAL DEVELOPMENT

4232.010 Applicability and Purpose

Adopted: 12/9/07

1) This Rule applies to applications for public facilities determined to be complete on or after the effective date of Amended Ordinance No. 05-092 (February 1, 2006) which amended Chapter 30.66B to provide a reduced LOS standard for certain public facilities needed to support residential development.

   a) SCC 30.66B.102 provides the reduced LOS standards for ‘qualifying’ public facilities.
   b) SCC 30.66B.103(2) provides criteria that public facilities need to meet in order to qualify for the reduced LOS standards.
   c) SCC 30.66B.080(11) authorizes the public works director to adopt an administrative rule related to concurrency for certain public facilities needed to support residential development.
   d) SCC 30.66B.166 requires public facilities that utilize the reduced LOS standards in order to achieve concurrency to provide mitigation measures intended to increase the efficiency of the road system by reducing vehicle trips.

2) Consistent with the provisions of Chapter 30.82 SCC this rules is intended to provide detail or specificity for the code sections cited above.

4232.020 Process and Timing

Adopted: 12/9/07

1) For applications seeking the reduced LOS standard for concurrency, the main task to be accomplished will be a determination by the county that the applicant qualifies as a ‘public facility needed to serve residential development.’

2) The following lays out the key steps to be followed by the applicant and the county. All steps will be ‘in writing’ (with FAX or e-mail being acceptable). Deviation from this process and timeline may be allowed on a case-by-case basis.

   a) The process will be initiated by notification from the applicant to PDS of the need for a determination as to whether or not a proposed public facility will qualify.
   b) The County will respond with a request for a traffic study scoping meeting. County staff will work with the applicant to set up the meeting.
   c) At the traffic study scoping meeting county staff will outline the criteria in SCC 30.66B.103(2) that public facilities need to meet in order to qualify for the
reduced LOS standards and describe the process established by this rule.

d) Following the traffic study scoping meeting, the applicant will submit, in writing, to the supervisor of the traffic review group in PDS, sufficient information to enable PDS to determine if the project meets the criteria in SCC 30.66B.130(2).

e) The final determination by PDS will be made by the appropriate division manager, based on a recommendation from the supervisor of the traffic review group.

4232.030 Showing that the Critical Unit Meets the Criteria for Transit Supportive Design

*Adopted: 12/9/07*

1) SCC 30.66B.166 provides that if a public facility is deemed concurrent pursuant to SCC 30.66B.103(2), then the development will be required as a condition of approval to take measures to ‘increase the efficiency’ of the existing road system and preserve capacity by fulfilling either of the following two options:

   a) By providing sufficient transportation demand management (TDM) measures under SCC 30.66B.610--.650 to indicate the potential for removing a minimum of ten percent of the development’s peak-hour trips from the road system, or

   b) by meeting the adopted criteria for a transit compatible development in accordance with DPW Rule 4227, provided that under this option the impacted arterial unit must meet the adopted criteria for transit supportive design.

      i) Under this option, the reason for the proviso (that the impacted arterial unit must meet the adopted criteria for transit supportive design) is that there could be instances in which the applicant’s critical arterial unit is not within a quarter mile of the development.

      ii) For example, assume that a school meets all of the requirements for transit compatibility by being within ¼ mile of a transit route, having pedestrian facilities connecting to the transit route, etc., but cannot get concurrency because of impacts to a second arterial unit located 1 mile from the school that is in arrears. Under this scenario, it is this second arterial unit (in addition to the arterial unit within ¼ mile) that will also have to meet the adopted ‘roadway related’ criteria for transit supportive design (which in general terms mean the road has a transit route with peak-hour headways under two hours, bus stops with seats and shelters, walkways that extend for ¼ mile in each direction from the bus stops, and buses with current ridership such that the maximum peak load factors are on average less than 1.2 passengers for every seat).
4232.040 Public Facility Needed to Support Residential Development Not Needing to Use SCC 30.66B.103(2)

Adopted: 12/9/07

1) Applicants will only be required to, or allowed to, use the code and rule provisions related to reduced LOS standards for qualified public facilities, when it is necessary to obtain concurrency.

   a) If a public facility does not need a reduced LOS standard to achieve concurrency, then it does not make sense to require the additional application requirements, the additional review requirements, and the additional mitigation requirements required to establish that the public facility is needed to support residential development.

   b) If at any time during the process, it becomes evident that the reduced LOS standard is not necessary to obtain concurrency, then the review of the application will be finalized (and all mitigation established) consistent with a similar application that is able to attain concurrency without reduced LOS standards.