



# Transportation Concurrency Management

## Administrative Manual

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September 2021

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## 1. Introduction

The purpose of this manual is to describe the procedures used to implement the City of Vancouver transportation concurrency management program. This manual describes the tools and methods by which the concurrency program will be developed and administered. In addition to tools and methods described here, professional transportation planning and engineering judgment and practices will be used to implement the program. This manual provides the necessary framework to ensure that technical methods and procedures are applied in a consistent manner

## 2. Program Overview

The Concurrency Program has three basic elements- 1) level of service standards that are affordable and consistent with the City's land use plan, 2) system monitoring and management to maintain adopted levels of service, and 3) development impact review to determine whether proposed development will cause levels of service to decline below adopted standards.

### 2.1 Level of Service Standards

Table 5-3 on page 5-13 of Vancouver's Comprehensive Plan lists the level of service for designated concurrency corridors within the City. The relevant portion of the comprehensive plan and Table 5-3 are reproduced below. In addition to the table, page 5-8 of the Comprehensive Plan describes an alternative level of service designation for corridors that are built to City standard. These are termed "Concurrency Corridors Built to Ultimate Capacity." Concurrency Corridors Built to Ultimate Capacity (CCBUC) are those corridors designated by Ordinance to be fully constructed. In designating a CCBUC, City Council, by the terms of the concurrency ordinance (VMC 11.70) is required to adopt a Corridor Management Plan (CMP) to address access management, demand management, and other means by which transportation on a designated corridor will be managed. A CMP may include specific programs and levels of service that City officials will use to ensure transportation concurrency compliance by applicants for developments.

#### **Comprehensive Plan Transportation Level of Service Standards**

For City arterial corridors that have not reached ultimate capacity, transportation level of service standards are set consistent with the latest edition of the Highway Capacity Manual. Additional considerations are also made for the multi-modal attributes and demand management strategies along each corridor. Urban street level of service standards are based on the average through-vehicle travel speed for an entire corridor or a corridor segment. Specific corridor standards are identified in Table 1.

Where a corridor has been built to full urban standard with sidewalks, bike lanes, travel lanes appropriate to its designation, intersection capacity consistent with the roadway cross section and state of the art traffic control, Council may designate that the corridor has reached ultimate capacity. Once so designated by Council action, impact review turns to safety, access management and circulation, and transportation demand management. VMC Section 11.80.130(B) includes separate failsafe standards for intersection operations that are evaluated by the City Traffic Engineer.

Table 1: Comprehensive Plan Level of Service Standards

Facility	Level of service (LOS) standard: Average peak hour travel speed (mph)
Andresen Road Mill Plain to SR-500	11
SR-500 to Padden Parkway	15
Burton Road Andresen Rd to 112th Ave	12
NE 28th St 112th Ave to 138th Ave	10
138th Ave to 162nd Ave	12
Mill Plain Blvd Fourth Plain Blvd to I-5 *	10
I-5 to Andresen Rd	12
Andresen Rd to I-205	12
I-205 to 136th Ave	10
136th Ave to 164th Ave	10
164th Ave. to 192nd Ave.	10
164th Ave SE 1st St to SR-14	10
162nd Ave SE 1st St to Fourth Plain Blvd	10
192nd Ave SR 14 to NE 18th St	10
Fourth Plain Blvd Port of Vancouver to I-5	12
I-5 to Andresen	10
Andresen to 117th Ave (SR-503)	10
117th Ave (SR-503) to 162nd Ave	10
Ft Vancouver Way / St. Johns Blvd Fourth Plain Blvd to SR-500	12
St. Johns Blvd. / St. James Blvd SR-500 to NE 63rd Street	12
NE 18th St 112th Ave to 138th Ave	12
138th Ave to 162nd Ave	12
NE 112th Ave Mill Plain Blvd. to 28th St	12
28th St to SR-500	12
NE 136th Ave Mill Plain Blvd To 28th St	12
28th St. to Fourth Plain Blvd	12
Other Principal and Minor Arterials	12

\* This portion of Mill Plain Blvd. is also SR-501, a Highway of Statewide Significance with a regionally established LOS D.

2.2 Current Corridor Classification developed pursuant to VMC 11.70.090

Arterial Concurrency Corridor	Extent	LOS Standard Avg. PM Peak Speed (MPH)	2012 Corridor Classification
<b>Mill Plain Blvd.</b>	Fourth Plain to I-5	10	Category 1
	I-5 to Andresen	12	Category 1
	Andresen to I-205	12	Category 1
	I-205 to 136th Ave.	10	Category 1
	136th Ave. to 164th Ave.	10	Category 1
	164th Ave. to 192nd Ave.	10	Category 1
<b>St. Johns / Ft. Van Way</b>	Mill Plain to 63rd St.	12	Category 1
<b>Fourth Plain Blvd.</b>	Mill Plain to I-5	12	Category 1
	I-5 to Andresen	10	Category 1
	Andresen to I-205	10	Category 1
	I-205 to 162nd Ave.	10	Category 1
<b>Andresen Road</b>	Mill Plain to SR500	11	Category 1
	SR500 to 78th St.	15	Category 1
<b>112th Avenue</b>	Mill Plain to 28th St.	11	Category 1
	28th St. to 51st St.	15	Category 1
<b>164th/162nd Avenue</b>	SR14 to SE 1st St.	10	Category 1
	SE 1st St. to Fourth Plain	10	Category 1
<b>Burton Road / 28th Street</b>	18th St. to 112th Ave.	12	Category 1
	112th Ave. to 138th Ave.	10	Category 1
	138th Ave. to 162nd Ave.	12	Category 1
<b>18th Street</b>	112th Ave. to 138th Ave.	12	Category 1
	138th Ave. to 164th Ave.	12	Category 1
<b>136th/137th Avenue</b>	Mill Plain to 28th St.	12	Category 1
	28th St. to Fourth Plain	12	Category 1
<b>192nd Avenue</b>	SR14 to NE 18th St.	10	Category 1

2.3 System Monitoring and Management

System monitoring and management is conducted at least annually and as often as is necessary to ensure that adopted levels of service are maintained. For most concurrency corridors, this means measuring the average pm peak hour travel speeds on the corridor and counting traffic volumes. It also requires tracking the generated trips associated with developments that have been approved but are yet to be built or completed. Tracking these trips, along with monitoring background growth, provides an early warning system to prevent levels of service from declining unexpectedly and without a plan in place to plan for and mitigate the effects of growth.

2.4 Development Review

Development review is conducted with application to the City for a development permit. If the development will generate new pm peak hour trips, the City uses information from a traffic study submitted with the development proposal to evaluate whether the potential impacts would cause

levels of service to decline below locally adopted standards and, if so, how those effects might be mitigated or managed.

The concurrency ordinance and this administrative manual are tools to help the community achieve the growth and community development aims of the City as identified in the adopted 20-year comprehensive growth management plan. Those goals include developing a multimodal transportation system that serves all system users throughout the day, balancing investments in the transportation system to make efficient use of scarce capital funding, creating a complementary transportation and land use system to reduce the need for single-occupant vehicle trips, and creating livable, walkable neighborhoods.

### **3. Roles and Responsibilities**

Responsibility for the management of Vancouver's Transportation Concurrency Program is split between the City's Community Development and Public Works Departments. This section describes the roles and responsibilities of each department.

The Concurrency Program can be roughly divided into three main activities a) policy and program development, b) system monitoring and management, and c) development review. Generally, Community Development manages the policy and program development aspects because transportation concurrency is part of and helps to implement the City's growth management plan. Public Works manages the transportation system and so handles monitoring and management of levels of transportation service. Responsibility for development review is shared.

#### **3.1 Policy and Program Development (Community Development Department)**

Adopt and maintain VMC 11.70, Transportation Concurrency  
Report to Planning Commission and City Council  
Develop Program Recommendations for Category 4 Corridors

#### **3.2 System Monitoring and Management (Public Works Department)**

Annual Corridor Monitoring (travel speeds and traffic counts)  
Annual Corridor Categorization  
Technical Analysis of potential Category 4 Corridors

#### **3.3 Transportation Development Review (Public Works & Community Development)**

Traffic study scoping (Public Works)  
Finding of transportation concurrency (Public Works)  
Identification of required mitigation (Public Works)  
Staff Report (Community Development)  
Land Use Permitting and Fee Implementation and Collection (Community Development)

## **4. System Monitoring, Management and Reporting**

### **4.1 Transportation Concurrency Corridors**

Transportation Concurrency Corridors and levels of service are identified in the Vancouver Comprehensive Plan. Levels of service are defined in terms of average pm peak hour travel speeds for most corridors. However, some corridors may be designated by City Council as “Built to Ultimate Capacity,” in which case the corridor is monitored for compliance with a Corridor Management Plan. Overall length, land use, topographical features, intersections, geometrics, access, and other criteria are considered in defining corridor limits.

Vancouver Municipal Code (VMC) 11.70 identifies four categories of concurrency corridors for the Director of Public Works (the Director) to use in managing transportation concurrency. The Director, by the terms of VMC 11.70, is obligated to monitor corridor operations as necessary to ensure continued operation at or above the adopted level of service, and to regularly categorize and report on the operation of each concurrency corridor.

Corridor monitoring consists of measuring average weekday pm peak corridor travel speeds, taking periodic traffic counts to measure the overall rate of growth in traffic volumes, and tracking approved but undeveloped trips in the system to ensure that the system can accommodate growth. Corridor evaluation may include additional analytical methods applied to current and past corridor data to determine existing and near-future level of service.

After monitoring, the Director classifies concurrency corridors into four categories: **Category 1**) operating well above adopted level of service (greater than 30% over the adopted level of service), **Category 2**) operating well (greater than 10% to 30% over the adopted level of service), **Category 3**) operating at the margin (operating lower than 10% above or below the adopted level of service), and **Category 4**) corridor built to ultimate capacity.(built to urban standard as designated by City Council). These corridors need not be designated sequentially.

For example, a Category 1 corridor could be recommended for Category 4 status if it meets the built-out corridor criteria. Likewise, a Category 2 or 3 corridor could, after monitoring, be classified as a Category 1 corridor if supported by the most recent measurements.

Category 1 corridors are evaluated as needed, but not less than once every three years. Category 2 corridors are measured for average travel speed and traffic counts at least every other year. Category 3 corridors are measured annually but may also be subject to additional analysis as necessary to track development impacts on level of service. Upon classification of a corridor as a Category 3 corridor, the Director, pursuant to VMC 11.70, will publish a policy response memorandum addressing whether the corridor is a candidate for Category 4, mitigation measures that could help maintain the corridor at or above minimum LOS standards, and the methods the Director will use to evaluate the potential impact of proposed development

### **4.2 Existing Level of Service**

Existing transportation concurrency corridor level of service is calculated directly from average measured travel speeds and accounts for previously approved but un-built development and any capacity reserved pursuant to 11.70.110.

#### 4.3 Near-future Level of Service (Category 2 operating at < 15% above minimum LOS).

Near-future transportation concurrency corridor level of service generally looks out three years and is calculated based on the trend of historical average measured travel speeds on the corridor being evaluated. The three years of growth are intended to be a proxy for approved but unbuilt development to test whether LOS is likely be exceeded during the current year.

#### 4.4 Detailed Near-future Level of Service (for Category 3 Concurrency Corridors)

Where the Director finds that the near-future level of service falls below 10% above the adopted level of service, the Director may undertake a detailed level of service evaluation. The detailed evaluation may include a corridor operational model or other appropriate analytical methods to track and evaluate potential development impacts. These methods should be identified in the policy response memorandum produced by the Director upon initial classification of any corridor as a Category 3 corridor.

#### 4.5 Corridor Management Plans (for Category 4 Concurrency Corridors)

Corridors build to ultimate capacity shall be evaluated in terms of the adopted Corridor Management Plan (CMP). Upon designation of a concurrency corridor built to ultimate capacity, the Vancouver City Council will adopt a CMP that will address, at a minimum, access management, demand management, and multimodal mobility. For each corridor built to ultimate capacity, the Director will calculate the total PM Peak Hour person trip capacity of the corridor for each mode-walk, bike, vehicle, and transit, as well as the proportion of corridor capacity of each mode.

#### 4.6 Level of Service and Corridor Classification Reporting

A periodic report will be prepared that summarizes the existing level of service for each corridor, the traffic volumes on each corridor, and the number of new trips approved for the corridor since the last report. The report will include evaluation of any corridor designated as a corridor built to ultimate capacity, against the standards identified in the CMP.

The report shall categorize Transportation Concurrency Corridors into Category 1, Category 2, Category 3, and Category 4. Where appropriate, the report shall include the Near-future level of service for Category 2 and 3 Concurrency Corridors.

### **5. Transportation Development Review- Concurrency**

Review of potential impacts from a proposed development for consistency with adopted levels of service standards is conducted in conjunction with the land use review process. To satisfy transportation concurrency, an applicant is required to submit at least trip generation and distribution for the proposed development (See Appendix A for traffic study requirements to satisfy all sections of VMC Title 11). Upon receipt of a satisfactory application, the Director shall evaluate the application according to review process in VMC 11.70.100, and as described below.



Generally, where a proposed development sends trips to a Category 1 or Category 2 corridor, the Director shall track those trips and presume concurrency between LOS measurements pursuant to 11.70.100 VMC, except possibly on Category 2 corridors that are operating at less than 15% over the minimum LOS. Specific procedures for each class of corridor are described below.

5.1 Category 1 transportation concurrency corridors are presumed to operate within acceptable levels of service between corridor level of service measurements and are not specifically evaluated with each development application. However, trips distributed to each corridor from approved developments are tracked. Where there is a dramatic increase in approved trips on a Category 1 Corridor between measurements of existing level of service, the Director may undertake a review of the Corridor's designation as a Category 1 Corridor.

5.2 Category 2 transportation concurrency corridors are presumed to operate within acceptable levels of service between corridor level of service measurements where the near-future level of service is over 15% above the adopted level of service standard for the corridor. Where the Director finds that the near-future level of service falls below the 15% threshold, the Director may require additional analysis of the impact of the development on corridor level of service.

5.3 Category 3 transportation concurrency corridors operating at close to the adopted level of service will likely require additional analysis either by the Director or by the development applicant. Methods and procedures for review of potential development impacts will be addressed in the Director's policy response memo prepared pursuant to VMC 11.70.090(D).

5.4 Category 4 Corridors, those corridors designated by City Council as Built to Ultimate Capacity, shall be evaluated against the standards identified in the Corridor Management Plan that is adopted by ordinance along with the Category 4 classification.

For Category 4 corridors, in addition to compliance with requirements in an adopted CMP, the Director will track the new PM Peak person trips generated by the development by mode. A development will be deemed to satisfy transportation concurrency where the proposed development 1) complies with the corridor management plan and 2) demonstrates consistency with the corridor's person trip capacity.

#### 5.5 Concurrency Monitoring in the Vancouver City Center Vision Plan Area

Within the Vancouver City Center Vision (VCCV) Plan Area, the Director shall annually collect West Mill Plain average weekday pm peak travel speeds and traffic counts and compare the weekday p.m. peak hour traffic volume on Mill Plain Boulevard at three key intersections:

- 15<sup>th</sup> Street (Mill Plain Boulevard westbound) at C Street
- Mill Plain Boulevard (eastbound) at C Street
- Mill Plain Boulevard at Kauffman Street

So long as the measured average PM peak speed is above the adopted LOS and the sum of the existing traffic volumes and the projected traffic volumes of approved development at the three intersections on the Mill Plain Boulevard, Fourth Plain Boulevard to I-5 corridor are less than or equal to the 2023 traffic volume projections within the VCCV Supplemental Final

Environmental Impact Statement, transportation concurrency will be satisfied for development within the VCCV Plan Area. If the projected volumes at one or more of the three intersections equals or exceeds the VCCV traffic volume projection, the Director shall develop or require a more detailed review to determine whether transportation concurrency is met.

#### 5.6 Tracking Approved Development

For each corridor, between corridor speed/travel time measurements, trips generated from approved development shall be recorded and tracked. Trips reserved pursuant to VMC 11.70.110 shall also be tracked by corridor.

**CONCURRENCY ADMIN MANUAL APPENDIX A:  
Traffic Study Guidelines**



# TRAFFIC STUDY GUIDELINES

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The scope of the traffic impact analysis (TIA) should follow these guidelines and the requirements of VMC 11.80.130 (Traffic Impact Analysis) and VMC 11.70 (Transportation Concurrency). The City's Traffic Engineer may require more or less analysis where warranted.

The TIA shall be prepared and stamped by a Civil Engineer licensed in the State of Washington with appropriate traffic engineering experience. Submittal of the traffic study is a Fully Complete item for project submittal. If the applicant is utilizing the 90 Day Streamline Review Process the traffic study shall be submitted 2 weeks prior to the Pre-Submittal meeting.

## **I. Introduction, Project Description, and Methodology**

- Table of contents, general description of the project, a description of the contents of the report, and an explanation of the analysis methodology.
- Vicinity map of the project site, surrounding transportation system, and new and existing access points.
- A description of the existing adjacent street system including street names, roadway classifications, number of lanes and lane widths, on-street parking, intersection lane configurations, traffic control systems for all intersections, signalized & unsignalized, pedestrian and bicycle facilities, and transit service including routes and headways.

## **II. Trip Generation and Distribution**

- Use the most current edition of the *Institute of Transportation Engineers (ITE) Trip Generation Manual*, and follow the guidelines specified in the most current ITE Trip Generation Handbook. Trip generation and distribution shall be justified by the applicant and approved by the City Traffic Engineer prior to completion of the TIA.
- Use the weighted average rate given in the ITE Trip Generation Manual to calculate trip generation for the ADT.
- Use the methodology described in the ITE Trip Generation Handbook to calculate trip generation for AM and PM peak hour trips.
- Approved pass-by trips shall be included at driveways.

### **A. General TIA Requirements.**

- For any development generating 5 or more net new PM Peak Hour trips, trip generation and distribution is required for project-generated AM & PM peak hour trips at or adjacent to all site accesses.
- When generating fewer than 5 trips, only trip generation is required. In this case, the trip generation calculation does not have to be completed by a licensed engineer.
- Additionally, for developments generating 20 or more PM peak hour trips, the City Traffic Engineer may require traffic impact analysis of surrounding intersections. If such analysis is required, it shall encompass all intersections specified by the traffic engineer for LOS analysis that fall within the limits identified in 11.80.130(A)(2). The analysis may also include intersections beyond the thresholds listed in 11.80.130(A)(2) where significant traffic hazards would be caused or materially aggravated by the proposed development.
- Trip distribution shall use the Regional Transportation Council select link assignment for the project TAZ. However, if the project generates fewer than 20 net new PM weekday peak hour trips, trip distribution may be based on existing traffic patterns and guidelines in the current ITE Trip Generation Handbook.

### **B. Transportation Concurrency Requirements.**

- For developments generating 5 or more net new PM Peak Trips, the applicant is required to submit trip generation and distribution for the proposed development and to list the number of PM peak trips entering each of the concurrency corridors in table format. See Table 1 below for the list of corridors
- For developments generating fewer than 5 net new PM Peak Trips, trip distribution is not required. However, for concurrency purposes, all trips shall be assumed to impact the closest concurrency corridor.

- Transportation Concurrency is evaluated according to the Corridor Classification. The Director may require additional information or modeling if an impacted corridor is operating close to the adopted level of service. Generally, where a proposed development sends trips to a Category 1 or Category 2 corridor, the Director shall track those trips and presume concurrency between LOS measurements pursuant to VMC 11.70.090.

**Table 1: Concurrency Corridors and Current Classification**

Arterial Concurrency Corridor	Extent	LOS Standard Avg. PM Peak Speed (MPH)	2012 Corridor Classification
<b>Mill Plain Blvd.</b>	Fourth Plain to I-5	10	Category 1
	I-5 to Andresen	12	Category 1
	Andresen to I-205	12	Category 1
	I-205 to 136th Ave.	10	Category 1
	136th Ave. to 164th Ave.	10	Category 1
	164th Ave. to 192nd Ave.	10	Category 1
<b>St. Johns / Ft. Van Way</b>	Mill Plain to 63rd St.	12	Category 1
<b>Fourth Plain Blvd.</b>	Mill Plain to I-5	12	Category 1
	I-5 to Andresen	10	Category 1
	Andresen to I-205	10	Category 1
	I-205 to 162nd Ave.	10	Category 1
<b>Andresen Road</b>	Mill Plain to SR500	11	Category 1
	SR500 to 78th St.	15	Category 1
<b>112th Avenue</b>	Mill Plain to 28th St.	11	Category 1
	28th St. to 51st St.	15	Category 1
<b>164th/162nd Avenue</b>	SR14 to SE 1st St.	10	Category 1
	SE 1st St. to Fourth Plain	10	Category 1
<b>Burton Road / 28th Street</b>	18th St. to 112th Ave.	12	Category 1
	112th Ave. to 138th Ave.	10	Category 1
	138th Ave. to 162nd Ave.	12	Category 1
<b>18th Street</b>	112th Ave. to 138th Ave.	12	Category 1
	138th Ave. to 164th Ave.	12	Category 1
<b>136th/137th Avenue</b>	Mill Plain to 28th St.	12	Category 1
	28th St. to Fourth Plain	12	Category 1
<b>192nd Avenue</b>	SR14 to NE 18th St.	10	Category 1

Monitoring fees of \$57.00 per trip shall be charged for trips sent to every corridor, up to a maximum monitoring fee of \$1500 for any single development (VMC 20.180.070).

### **III. Traffic Safety and Circulation**

#### **A. Collision Analysis.**

- Provide a five-year collision history and crash rate per Million Entering Vehicles (MEV) at intersections adjacent to the development or as specified by the City Traffic Engineer. Provide proposed mitigations for intersections with crash rate exceeding 1.0 per MEV. Copies of the collision reports shall be included in an appendix to the TIA.
- Wherever collision rates are equal to or greater than 1.0 per MEV, a detailed collision site analysis and recommended mitigation will be required. The site analysis will include at a minimum the following:

- Collision Diagrams with Vehicle-type symbols, Movement symbols, Severity symbols, and Accident-type symbols.
- Condition Diagrams which describe all physical and environmental conditions at the site including all geometric features, signs, signal, markings, lighting, and all relevant features of the roadside environment.
- Interpretation of results and recommended mitigation(s).
- Provide safety analysis for proposed offset centerline of driveway/ street

#### **B. Access Management and Circulation Analysis**

- Include proposed locations of all access points to the public roadway.
- Include proposed distances between new access points and existing adjacent driveways and intersections.
- Provide safety analysis for proposed offset centerline of driveway/street.
- Include an adequate street cross circulation layout and connection plan that accounts for future development build out of the vicinity.
- Median Breaks requests shall meet the criteria outlined in VMC 11.80.110(C)(1).

#### **C. Sight Distance Analysis (VMC 11.80.140)**

- Provide sight distance analysis for a) each proposed access point to a public street and b) each proposed new roadway approach. Intersection sight distance analysis will be done per the most current version of *A Policy on Geometric Design of Highways and Streets (AASHTO)*, and the City of Vancouver Transportation Standard Plans.
- Planning requirements for Vision Clearance Triangles can be found in VMC 20.985.020.

#### **D. Pedestrian, Bike, and Transit Facilities**

- Identify and analyze safety associated with pedestrian, bicycle, and transit facilities (existing and proposed) which provide circulation and connection onsite and offsite.

### **IV. Traffic Impact Analysis**

#### **A. Existing Conditions**

- A turning movement count diagram for each intersection identified by the traffic engineer and the date collected. *Traffic counts older than two years will not be accepted for traffic operations analysis.*
- For driveways and intersections adjacent to the development and intersections impacted by 20 or more project generated peak hour trips, complete an AM and PM peak hour delay, LOS, and queuing analysis for the intersection, each approach, and all turning movements. The analysis shall be based on signal timing and coordination as it exists in the field. Optimized signal timing/coordination will not be accepted. Contact Richard Gamble at [Richard.Gamble@cityofvancouver.us](mailto:Richard.Gamble@cityofvancouver.us) or 360-487-8251 for signal timing data.
- Use the delay criteria in the current Highway Capacity Manual (HCM) for intersection, intersection approach, and turning movement level of service.
- Summarize Measures of Effectiveness (MOEs) in table format and describe key findings from the delay, LOS, and queuing analysis.
- Include output from the traffic analysis software in an appendix and submit an electronic copy of the traffic analysis file (e.g., the \*.syn file from Synchro).

#### **B. Year of Opening Baseline Conditions Analysis (may be required by traffic engineer)**

- To the existing condition traffic volumes, add background and in-process development(s) traffic to the year of opening. A compounded 2% annual growth rate shall be used to account for traffic from both background and in-process developments for the 164<sup>th</sup>/162<sup>nd</sup> Ave. corridor and all corridors east of that corridor. For all other areas of the City, a 1.5% compounded rate shall be applied. The City's Traffic Engineer must approve alternative rates.
- Using the parameters and reporting requirements described above in the Existing Conditions analysis instructions, complete an analysis of year of opening conditions.
- A turn movement forecast diagram for each intersection identified by the traffic engineer.

#### **C. Year of Opening with Project Conditions (may be required by traffic engineer)**

- Using the parameters and reporting described above in the Year of Opening Baseline Conditions Analysis instructions, analyze future conditions with project-generated traffic.
- Optimized signal timings are allowed. Traffic signal cycle lengths are not to exceed 120 sec/cycle. At new or existing intersections located on a corridor with coordinated signal timing plans, the cycle length shall not be less than what currently exists.
- Provide traffic signal / turn lane warrants as defined by the most current version of the *Manual on Uniform Traffic Control Devices (MUTCD)* for any existing and proposed intersections.
- Describe potential mitigation strategies for any identified impact.

#### **D. Future 5-Year Build Out Conditions**

- Using the parameters and reporting described above in the Year of Opening with Project Conditions Analysis instructions, analyze future conditions with five (5) years of background and in-process development(s) traffic growth from the year of opening. Note that if the year of opening is several years from the date of the development application, the compounded growth rate would be applied to 5 years plus the number of years between the year of application and the year of opening.
- Describe potential mitigation strategies for any identified impact.

### **V. Conclusions and Recommendations**

- Provide a comprehensive summary of all study results, conclusions, and recommendations of the engineer, including proposed mitigations. Conclusions and recommendations should follow the same format and address each section of the traffic study.

### **VI. Proportionate Share Contributions**

- Where an impact is identified, an applicant may participate in the cost of roadway or traffic signal modifications at one or more of the following project locations. Proportionate share participation is calculated based on the peak hour distribution of project generated trips as demonstrated in the approved traffic study. Proportionate share payments are due prior to civil plan approval.



<b>Project Location</b>	<b>Unit Cost per Trip</b>	<b>City Project No.</b>
137 <sup>th</sup> Ave – 49 <sup>th</sup> St to Fourth Plain Blvd	<b>\$3,000</b> per PM peak hour trip	71237
Fourth Plain Blvd & 152 <sup>nd</sup> Ave signal	<b>\$333</b> per PM peak hour trip	100351
Leiser / St. Helens / MacArthur	<b>\$2,000</b> per PM peak hour trip	71244
176 <sup>th</sup> Ave & SE 20 <sup>th</sup> St	<b>\$400</b> per PM peak hour trip	71227
192 <sup>nd</sup> Ave & NE 13 <sup>th</sup> St	<b>\$400</b> per PM peak hour trip	72331
192 <sup>nd</sup> Ave & SE 34 <sup>th</sup> St	<b>\$150</b> per PM peak hour trip	TBD
192 <sup>nd</sup> Ave & SR-14 ramps	<b>\$2,000</b> per PM peak hour trip	100443
Grove St / Columbia House Blvd / SR-14 WB off-ramp	<b>\$600</b> per <b>AM</b> peak hour trip	100352

**CONCURRENCY ADMIN MANUAL APPENDIX B:  
Draft Outline of a Category 4 Designation Memorandum**

- 1) Corridor Description
  - a) General description of facility characteristics- number of lanes, sidewalks, bike lanes, pavement condition, etc. (include photos)
  - b) Existing Arterial Classification
  - c) Existing LOS (including historical LOS trend)
  - d) Adopted LOS
  - e) Recent or Planned Capital Improvements, if any
  - f) Land Use
    - i) Types, mix, and intensities of uses
    - ii) Land available for development/redevelopment
  - g) Existing Transit Service- frequency and capacity
  - h) Safety / Collision Analysis
  - i) Other Corridor Characteristics
    - i) Pedestrian Use
    - ii) Bike Use
    - iii) Other unique uses users of this corridor, for example high use by specific population- aged, blind, disabled, or for a specific type of use such as industrial access.
    - iv) Transportation Systems Management Systems
    - v) Transportation Demand Management Employers
    - vi) Access Management Status – frequencies of driveways, existence of medians or left turn restriction, for example.
  
- 2) Eligibility for Category 4 or Corridor Built to Ultimate Capacity Status
  - a) Comparison of existing corridor characteristics with arterial standards
  - b) Description and comparison of each arterial-to-arterial intersection on the corridor
  - c) Evaluation of Comprehensive Plan Objectives (pp. 5-54 to 5-55 Vancouver Comp Plan):
    - i) Transportation System Balance: Does the corridor offer a balance of modal capacity and overlapping transportation systems that facilitate mobility?
    - ii) Transportation Connectivity: Is the corridor connected via multiple modes to nearby land uses and intermodal transfer points?
    - iii) Transportation / Land Use Integration: Does the corridor provide transportation capacity and mobility consistent with the existing and planned land uses? Is the corridor context sensitive—is it a livable street if residential, is it commercially viable and attractive if commercial, is it functional and accessible if industrial?
    - iv) Neighborhood Traffic: How will the corridor designation affect neighborhood traffic? If effects are identified, what strategies can be incorporated into the Corridor Management Plan to mitigate potential impacts?
  - d) Evaluation of Growth Management Act Objectives (RCW 36.70A.020). Will designation of the City concurrency corridor as a corridor built to ultimate capacity . . .
    - i) Encourage development in urban areas where adequate public facilities exist or can be provided in an efficient manner?
    - ii) Reduce the inappropriate conversion of undeveloped land into sprawling low-density development?
    - iii) Encourage the availability of affordable housing?
    - iv) Encourage economic development and promote economic opportunity?

- v) Protect the environment and enhance the state's high quality of life?
- vi) Ensure that the public facilities necessary to support development are adequate to serve planned development?

3) Recommendation

- a) Findings and Conclusions
- b) Strategies, projects, and management approaches that should be addressed when developing the Corridor Management Plan
- c) Staff Recommendation including proposed timeline for development of a Corridor Management Plan and formal designation by ordinance of Category 4 status.

## **CONCURRENCY ADMIN MANUAL APPENDIX C:**

### **Corridor Management Plan Outline**

Note: much of the initial information for the Corridor Management Plan should be pulled directly from the Director's Report supporting the recommendation for Category 4 classification.

- 1) Introduction & Description
- 2) Specific Elements
  - a) Estimate of total person trip capacity by mode for the corridor
  - b) Description of assumptions underlying person trip capacity calculation
  - c) Description of methodology to estimate person-trip generation for a proposed development
- 3) Access Management Strategies and Projects
  - a) Identify specific projects/programs and cost estimate
- 4) Transportation System Management Strategies and Projects
  - a) Identify specific projects/programs and cost estimate
- 5) Transportation Demand Management Strategies and Programs
  - a) Identify specific strategies, approaches, or programs that may be implemented for the corridors.
  - b) Where appropriate, set up architecture for a Transportation Management Association and establish mandatory participation or voluntary payment-in-lieu of participation.
- 6) Needed capital project/s, either on the corridor or on parallel corridors.
- 7) Development Review Standards and Procedures.