

## 4.8 TRANSPORTATION/CIRCULATION

### 4.8.1 INTRODUCTION

This section identifies and discusses impacts to the transportation network anticipated under each alternative. A detailed traffic study entitled *Final Cowlitz Indian Tribe Casino Project Traffic Impact Study* was developed for the Proposed Project by Parsons Brinckerhoff Quade & Douglas, Inc. (Parsons Brinckerhoff, 2006a). This study and its associated appendices are presented as DEIS Vol. II, **Appendix T**. Further, Parsons Brinckerhoff prepared the *Cowlitz Indian Tribe Casino Project Traffic Impact Study – Supplemental Report* for the FEIS (Parsons Brinckerhoff, 2006e) (**Appendix O** of the FEIS).

#### *METHODOLOGY*

##### *Traffic Volumes*

Projected 2010 traffic volumes were derived by applying a growth factor to the historical traffic counts in the project area as described in **Section 3.8**, Transportation/Circulation. Based on historical count data obtained from the Regional Transportation Council (RTC) regional traffic counts program, growth factors of 2.45% per year for arterials and collectors and 2.0% per year for Interstate 5 (I-5) were used. The growth factors were applied to the 2005 traffic volumes collected by Parsons Brinckerhoff (2006a) to provide the *Build-out Without Project* condition. This baseline condition also assumes that the projects currently funded in the Washington Department of Transportation (WSDOT), City of Ridgefield, and Clark County transportation improvement programs (identified below) will be completed.

##### *Trip Generation*

Typically, project trip generation is derived from trip rates provided in the Institute of Transportation Engineers (ITE) Trip Generation Manual. However, because the Proposed Project and Alternatives are regional trip generators and are unique compared to other land uses in the County, a more customized approach has been developed. Relevant casino trip generation case studies in environments similar to that of the alternative project sites (i.e. rural or suburban fringe, lack of a well-established traffic circulation system, little or no fixed-route transit service, and no competing casino-resorts within 50 miles of the site) were reviewed to estimate the project trips. These case studies are limited, as the trip generation characteristics of the more common scenario, i.e. large clusters of casinos like those found in Las Vegas, are not directly transferable to the alternatives discussed in this report.

Certain characteristics, such as size, location and type of casino complex contribute to the trip generation of a proposed project. Other relevant characteristics include the number of on-site hotel rooms, the total square footage of the casino gaming-floor area, and/or the total number of employees. Additional characteristics include whether the casino has convention space, a conference or

entertainment venue, retail uses such as restaurants, or lounges and convenience stores, the recreational vehicle (RV) Park, and event trips. For this analysis, the square footage of the casino gaming-floor area is used as the primary trip generation variable because of the perceived limitation that using a gaming position rate would place on the development proposals. The proposed 5,000 seat multi-purpose room and on-site hotel are also calculated into the primary trip generation rate (Parsons Brinckerhoff, 2006a) (DEIS Vol. II, **Appendix T**).

#### *Case Studies*

Empirical data collected at Tulalip Tribal Casino, Muckleshoot Indian Tribe Casino, Chinook Winds Casino, Spirit Mountain Casino and Emerald Queen Casino, coupled with seven other studies of similar casino/resorts, provided comparisons and a reasonableness check to the final trip generation calculations for the Cowlitz casino alternatives (A, B, C and E) (Parsons Brinckerhoff, 2006a, 2006c). In the following citations, the weekday PM peak-hour trip rate is included for comparison.

1. *Tulalip Tribal Casino* – Marysville, Washington (empirical trip data collected) – This site was counted on a summer peak Friday evening as well as on summer peak Saturday evenings both without and with event traffic. This casino is located within one hour of much of the Seattle/Everett metropolitan area. It has a 2,300-seat amphitheatre and restaurants/retail shops within the casino area. This site was selected due to similarities with the Cowlitz site. The resultant trip rates were 18.0 and 15.5 trips per 1,000 gross square feet for PM peak weekday and Saturday peak hour, respectively, or 0.62 weekday PM peak trips and 0.54 Saturday peak trips per gaming position.
2. *Muckleshoot Indian Tribe Casino* – Auburn, Washington (empirical trip data collected) – This site was counted on a peak Friday summer evening. While it does not have a concert/event venue nor does it have on-site lodging, it was selected for counting due to its being located within 20 miles of the Seattle and Tacoma metropolitan areas, similar to the location of the proposed Cowlitz Casino within 20 miles of the Portland/Vancouver metropolitan area. The resultant weekday PM peak rates were 10.40 trips per 1,000 gross square feet of gaming area and 0.31 trips per gaming position.
3. *Shingle Springs Rancheria Hotel-Casino Traffic Study* – Trip generation within the Shingle Springs traffic study was based on surveys of inbound/outbound traffic at five northern California Indian gaming casinos ranging in size from 17,300 square feet to 70,000 square feet during PM peak hours – 4:00-6:00 - on weekdays in October, 1988 and May, 1999. Sites included: Alturas Casino; Elk Valley; Lucky 7; Rolling Hills and Twin Pines casinos. The trip rate for the weekday PM peak hour in this study is 4.95/1,000 square feet of casino gaming floor.

4. *Gaming Casino Traffic* – Paul Box and William Bunte, ITE Journal, March 1998. Examined casino trips at two casinos located near St. Louis, MO: Casino St. Charles (2,500 gaming positions) and Casino Queen. The Casino St. Charles observed weekday PM trip rates were 0.54 trips per gaming position during the site peak (6-7 p.m.) and 0.43 trips per gaming position for the surrounding roadway system peak (4:30 to 5:30 p.m.); the Saturday peak rate was 0.64 trips per gaming position. Thus, the trip generation rate for the system peak is 80% of the trip rate for the site peak during the PM peak period. The report also concluded that between 7 and 8% of the daily total trip generation occurred during the PM peak weekday hour. The Casino Queen (East St. Louis, IL) has 1,200 gaming positions and exhibited rates of 0.57 trips per gaming position for the weekday PM peak hour.
5. *San Diego County Casino Study* – The San Diego County Department of Public Works prepared a study of casino trip generation entitled “Report on the Potential Impacts of Tribal Gaming on Northern and Eastern San Diego County.” Based on surveys of numerous southern California Indian gaming casinos, the San Diego reports established that traffic for gaming casinos should assume a trip generation rate of 100 trips per 1,000 square feet of gaming floor on an average weekday (all day). The trip rate for the weekday PM peak hour is 3.93/1,000 square feet of casino gaming floor area.
6. *Jamul Indian Village Final Environmental Impact Study (FEIS)* – The “Jamul Indian Village FEIS” was referenced as it is an EIS that examined four casino alternatives for placing 101 acres into Federal trust for the Tribal Government. The preferred alternative included the development of a hotel and casino complex, events center, tribal offices and other ancillary uses on-site. For comparison to the Cowlitz proposal, Alternative D (of the Jamul project) was chosen as the most suitable, with 74,376 square feet of gaming floor and a 300 room hotel, among other similarities. The trip rate for the weekday PM peak hour is 4.94/1,000 square feet of casino gaming floor area.
7. *Gun Lake Casino Traffic Study* – This study was used because of its similarities to the Cowlitz proposal: it is located on a state highway; the character of the surrounding area is predominately tourism in a rural setting; and the casino has two restaurants (though not a hotel). The casino itself is comprised of 98,879 square feet of gaming space and includes 2,500 slot machines and 92 gaming tables. The restaurants include casual dining, buffet style, fast food and bars/lounges, plus an on-site retail component. The trip rate cited in this study is 6.81/1,000 square feet of casino gaming floor area.
8. *Enterprise Rancheria Casino-Hotel Traffic Impact Study* – This study was used because of its similarities and extensive research. The Enterprise trip generation rates were established by plotting rates for seven casinos ranging in size from 17,000 square feet to 447,600 square feet

- with a best-fit curve. The resulting weekday PM peak hour trip rate cited is 3.93/1,000 square feet of casino gaming floor area.
9. *Chinook Winds Casino* – Lincoln City, Oregon (empirical trip data collected). This casino is similar in size to what is proposed under Alternatives A, B, and E (of the Cowlitz project) and includes restaurants, an adjacent hotel/motel, and an entertainment center. During the weekday PM peak-hour the two entrances were observed from 4:00-5:00 p.m. – the resulting trip rate for these observations was 4.8/1,000 square feet of casino gaming floor area.
  10. *Spirit Mountain Casino* – Grand Ronde, Oregon (empirical trip data collected). During the weekday PM peak-hour the two entrances were observed from 4:00-5:00 p.m. on a peak Friday – the resulting trip rate for these observations was 6.4/1,000 square feet of casino gaming floor area for the weekday PM peak hour or 0.30 trips per gaming position.
  11. *Emerald Queen Casino* – Tacoma, Washington (empirical trip data collected). During the weekday PM peak-hour the two entrances were observed from 4:00-5:00 p.m. – the resulting trip rate for these observations was 3.7/1,000 square feet of casino gaming floor area.
  12. *Mohegan Sun Casino* – Traffic counts from an independent traffic audit were compiled and reviewed for comparisons to trip rates from the west coast casinos, the relationship between peak hour and daily traffic volumes, and traffic arrival characteristics on days of events at the events center. This study indicates that the weekday and Saturday peak hour trip generation rates are less than those observed for the west coast sites, but the daily trip generation rate is higher.

Analysis of the empirical data at Chinook Winds, Spirit Mountain and Emerald Queen led to the conclusion that the presence of an adjoining hotel and restaurants reduces the overall PM peak hour trip rate compared to adding the trip generation for each separate use (Parsons Brinckerhoff, 2006a). In other words, guests at the on-site hotel would patronize the casino and simply walk between the two. Guests of the casino would also tend to use the on-site restaurant and other amenities, thus generating far fewer vehicle trips.

A review of the independently-collected traffic counts provided by Mohegan Sun indicates that the Friday peak hour trip generation rate at that casino-resort may be lower than the empirical data collected for the West Coast casinos. The data also appears to indicate that the Mohegan Sun casino-resort has significantly higher daily trip generation rates than what was observed for the West Coast sites (Parsons Brinckerhoff, 2006a). To be conservative, the higher casino-only peak hour trip generation rates calculated from the West Coast casinos are used for peak hour traffic impact analysis,

while the higher daily trip rate from the Mohegan Sun casino complex are used to estimate daily traffic and air quality impacts. Therefore, the following casino trip generation rates are used for this study.

- Weekday AM peak hour: 2.95 trips per 1,000 gross square feet of gaming floor area (GFA).
- Weekday system PM peak hour: 9.18 trips per 1,000 gross square feet or 0.31 trips per gaming position.
- Weekday site PM peak hour: 10.94 trips per 1,000 GFA.
- Weekday daily trips: 74.63 trips per 1,000 gross square feet or 2.54 daily trips per gaming position.
- Saturday peak hour: 15.50 trips per 1,000 gross square feet or 0.53 trips per gaming position.
- Saturday daily trips: 93.24 trips per 1,000 gross square feet or 3.24 daily trips per gaming position.

#### *Hotel Trips*

The Shingle Springs Draft Environmental Impact Report (DEIR) found that when a hotel is part of a casino-hotel complex, the hotel portion of the project would generate 2.06 trips per room on an average weekday. The ITE Trip Generation Manual shows that a standard hotel (land-use #310) will generate 8.23 trips per room on an average weekday. Thus, the Shingle Springs casino study found that a hotel at a casino (in a semi-rural environment) will generate 25% of the trips a stand-alone hotel would generate on an average weekday. The reduced number accounts for those who stay at the hotel and walk, rather than drive, to the associated casino and other amenities. Observations at the other sites for which empirical data were collected corroborate this. Therefore, a 75% reduction in trip generation for the hotel portion of the Cowlitz casino project could be assumed. However, further investigation indicated that there is potential for the hotel to attract pass-by (transient lodging) trips off of I-5 that are not casino-destination trips, due to lack of other hotels in the area and growth in the La Center area. Thus, a 50% trip reduction for trip internalization is assumed instead of a 75% reduction (Parsons Brinckerhoff, 2006e).

#### *Multi-Purpose Event Center*

A Multi-purpose room with seating for 5,000 people is a component of all the gaming alternatives (A, B, C and E) for the Proposed Project. Approximately 20 to 30 events would occur on an annual basis (approximately one large event every three weeks) in the event center that will have the potential of filling most of the seats.

In accordance with the study methodology approved by Clark County, the City of Ridgefield and WsDOT, the PM peak weekday, and Saturday peak hour trip generation rates include an “85<sup>th</sup> percentile event” at the Multi-purpose room, which is consistent with the assumptions used for The Amphitheatre at Clark County. An 85<sup>th</sup> percentile event has a higher attendance than 85% of the events and a lower attendance than 15% of the events. Using The Amphitheatre at Clark County as an

example, their 85<sup>th</sup> percentile event in 2005 drew 8,400 people, or close to 85% of the highest attended event. Thus for Alternatives A, B, C, and E, an 85<sup>th</sup> percentile event would be an event that fills 4,250 seats. It is assumed that for each of the 20 to 30 events per year, 15% will have a higher attendance and 85% will have a lower attendance.

Using the report *Mode Split at Large Special Events* prepared by Charles Green for the Transportation Research Board in 1991, a weekday PM peak event would experience average auto occupancy of 2.62. Based on traffic observations for the Mohegan Sun events center, auto occupancies range from 1.8 to 2.2 persons per vehicle. Therefore, to be conservative for this analysis, a low-end average auto occupancy of 1.8 persons per vehicle was used (Parsons Brinckerhoff, 2006a). Thus, during an 85<sup>th</sup> percentile event, 4,250 event-goers will arrive in approximately 2,400 vehicles.

Traffic counts were collected by an independent auditor at the Mohegan Sun casino-resort on event and non-event days for weekdays, Fridays, and weekend days. The result of this analysis indicates that the presence of the casino/hotel, restaurant, and entertainment facilities affects arrivals and departures on event days, and is also measurably different than arrival/departure characteristics for a stand-alone facility such as an amphitheatre or an arena (Parsons Brinckerhoff, 2006a). Thus, instead of almost 50% of vehicles arriving in the 1-2 hour period prior to an event (during the transportation system's peak hour), such as what has been observed at The Amphitheatre at Clark County, the Mohegan Sun experiences significantly less event-related traffic impacts during the weekday PM peak hour.

For events at the La Center Interchange or Ridgefield Interchange sites, weekday and Saturday evening events will likely have 8:00 p.m. starting times, compared with 7:00 p.m. or 7:30 p.m. starting times for events at other entertainment venues in the Portland/Vancouver area. The later starting time is due to the desire to encourage attendees to take advantage of other offerings at the casino-resort, including the casino, restaurant, and hotel. The later starting time has a secondary implication: the number of vehicles arriving to an event during the 4:45-5:45 p.m. weekday transportation system peak hour is less than what would occur for an earlier-starting event. Based on an 8:00 p.m. event start time (consistent with the Mohegan Sun events center), approximately 8% of those traveling to an event at the project site would arrive during the local transportation system's peak hour (roughly 4:45 to 5:45 p.m.). A peak of approximately 19% of arrivals would occur during the 6 p.m. to 7 p.m. hour, which is after the system's weekday peak. To be conservative for this analysis, a 19% peak hour factor was used for the traffic impact analysis.

Further detail regarding the Mohegan Sun counts and the calculations that derived the traffic numbers shown in this report are found in Appendix A to the Final Traffic Impact Study (Parsons Brinckerhoff, 2006a) (DEIS Vol. II, **Appendix T**).

Data collected at the Tulalip Casino site indicates that approximately 42% of the event-goers arrive in the one-hour period prior to the start of the event, or 6:30 to 7:30 p.m. For the purposes of this analysis they are assumed to arrive at the site between 6:00 and 7:00 p.m., although many will arrive much later for an event that starts at 8:00 p.m. Using event-day counts taken by the Mohegan Sun Casino as well as the Mode Split at Large Special Events paper, approximately one-third or 33% of the attendees will arrive at the transportation system PM peak hour of 5:00 to 6:00 p.m.

#### *Other*

Another conservative assumption was that no trip reduction would be taken for “pass-by” trips, which are those people already traveling on the roadway system that decide to deviate from their travel path to the casino site. Checking 24-hour traffic counts by hour in the area of the I-5/La Center interchange (ramp counts as well as La Center Road counts and also in Ridgefield), the 6:00 to 7:00 p.m. time period on weekdays carries approximately 75% of the 5:00 to 6:00 p.m. peak hour traffic volumes. For a sensitivity analysis, two Year 2010 PM peak scenarios were analyzed for the I-5/La Center interchange area to determine the “worst case” scenario to be analyzed in this report:

- System PM Peak Hour: The 5:00 to 6:00 p.m. period, using peak hour traffic projections for the system plus the 5:00 to 6:00 p.m. trip generation estimates for Alternative A/B.
- Site Peak Hour: The 6:00 to 7:00 p.m. time period, using the site’s peak trip generation estimates plus 75% of the road system peak hour volumes.

#### *Trip Distribution and Assignment*

The RTC travel demand model does not provide adequate trip distribution data due to the uniqueness of the proposed use. Thus, for the casino alternatives, a special trip distribution methodology was used. Based on investigating studies conducted elsewhere, casino and event-related trip distribution is related to:

- The amount of competing gaming: The Lucky Eagle Casino in Rochester, Washington (approximately 90 miles from the Cowlitz site), and the Spirit Mountain Casino in Grande Ronde, Oregon (approximately 60 miles from the Cowlitz site) would likely compete for the gaming customers as well as concert-goers, since both sites offer entertainment (the Spirit Mountain Casino concert hall hosts concerts similar to the Cowlitz site). While there are as many as two other casinos being discussed or studied in the Portland metropolitan area, for this study they were not considered as being open; otherwise, they would compete with the Cowlitz site and the number of casino trips would be less than under our assumption.
- Time and distance: The Cowlitz site is a regional “one of a kind” generator, and as such, with the lack of accessible, competing uses, will attract trips from many locations in northwestern Oregon and southwestern Washington. Our investigation indicates that time and distance affect the time of the trip (Portland residents may leave for the casino at a later time to avoid peak hour traffic congestion, but they will still make the trip) more than they affect the

decision to make the trip. Thus, the trip distribution model has a peak weighting factor for travel time (\$20 per hour) and distance (40¢ per mile), similar to a gravity model, but all geographic areas assumed to be in the Cowlitz trip draw basin are factored into the model. Travel speeds for Portland were taken from the Portland State University congestion study.

- Population: As a one-of-a-kind generator, the Cowlitz casino will draw from a large population base, and the number of trips from a geographic area will be directly related to the number of people living in that area. Work by EcoNorthwest for casinos in Oregon confirm the large, geographically-dispersed draw of the Oregon casinos.

Vehicle distribution will likely be more reflective of the general population densities of Cowlitz, Clark and Skamania counties in Washington and the greater Portland metropolitan area in Oregon. Given that competing casino uses exist in Rochester, Washington and near Grand Ronde, Oregon, few trips are expected to be attracted from outside of the southwest Washington and Portland metropolitan areas. This is consistent with the findings of the Gaming Market Assessment, which predicts that 91% of visitors will come from within the Portland-Vancouver metro area (The Innovation Group, 2006 in Parsons Brinckerhoff, 2006a).

Trip distribution for the gaming alternatives is based on the population of the surrounding areas. Trips to and from the north of the alternative project sites will travel from the City of Woodland and Cowlitz County, as well as some trips from Columbia County, Oregon. Trips to the Pekin Ferry area cannot exit to points north, east, or west because of the Columbia River; thus, there would likely be only a small percentage traveling in that direction. Trips to the east would travel to La Center, Amboy, Yacolt, and northeast Clark County.

A separate distribution percentage is proposed for trips that travel from Ridgefield, Duluth (NE 10<sup>th</sup> Avenue at NE 219<sup>th</sup> Street), Battle Ground, and other rural areas within three miles of the alternative project sites. The remainder of the trips will travel from south of the (State Route) SR-501/Pioneer Interchange, from southern Clark County, Skamania County, and the tri-county Portland area.

These adjustments slightly increased the distribution percentages of the project traffic, or concentration of population in the northern part of the study area, as well as the percentage in the Ridgefield/Central County area; they slightly reduced the percentage in the southern Clark County/Portland area.

Access points as shown on the alternative site plans were also considered in assigning project trips. Additionally, trips were assigned to each project driveway based on the number of parking spaces (structured, surface or valet) and project component that could be accessed via each driveway.

### ***Site Access and Sight Distance***

Site access and sight distance for proposed access points for each alternative were assessed to determine whether any operational concerns would arise. Assessments were based on the American Association of State Highway and Transportation Officials' *A Policy on Geometric Design of Highways and Streets* (AASHTO, 2004).

### ***Level of Service***

A level of service (LOS) analysis was used to indicate the quality of traffic flow on roadway segments and at intersections. This LOS analysis ranks traffic flow on a scale ranging from LOS A (free flow, little congestion) to LOS F (forced flow, extreme congestion). This concept is described in more detail in **Section 3.8**, Transportation/Circulation. Level of service data were developed based on procedures in the 2000 *Highway Capacity Manual* (the most recent edition) for signalized and unsignalized intersections (Transportation Research Board, 2000).

### ***BUILD-OUT WITHOUT PROJECT CONDITION***

The existing conditions (discussed in **Section 3.8**, Transportation/Circulation) are used as a base to forecast traffic conditions in the project build-out year of 2010. The *Build-out Without Project* condition is used as the baseline condition for analyzing traffic impacts. The *Build-out Plus Project* condition is based on the addition of project traffic generated under each build alternative (Alternatives A-E) to the *Build-out Without Project* (i.e. baseline) condition.

### ***Traffic from Other Projects***

The following transportation improvement projects are anticipated to be completed by 2010 and have been included in the baseline *Build-out Without Project* conditions, thus forming the background traffic levels:

- New interchange at I-5 and SR-502/NE 219<sup>th</sup> Street.
- Interchange modifications at the I-5/Ridgefield interchange that include ramp widening and signalization that were completed in mid 2005.
- Roundabout at SR-501 at Pioneer Street in Ridgefield (this project was starting construction in the fall of 2006 and is funded by a developer).
- Extension of Pioneer Street from 65<sup>th</sup> Avenue into Union Ridge as a two-lane minor arterial, with signalization at the Pioneer/65<sup>th</sup> Avenue intersection.

The following land development projects are in process, either with approvals but not yet occupied or with currently pending applications:

- Union Ridge development, consisting of a 360-acre mixed-use development that includes a distribution center for Dollar Tree Stores, which opened in May 2004 and other uses such as

- light industrial, commercial, and residential components, located at the intersection of S 5<sup>th</sup> Street and NE 10<sup>th</sup> Avenue.
- Specht Development, consisting of a multi-tract industrial/ business park located on the west side of I-5, south of Pioneer Street.
  - Bellwood Heights, consisting of a 35-acre single-family residential subdivision, located west of I-5 along Pioneer Street (SR-501).

**Table 4.8-1** summarizes the *Build-out Without Project* (i.e. baseline) peak hour intersection operations at the project study intersections (**Figures 3.8-1** and **3.8-2**). Weekday AM, PM, and Saturday peak hour turning movement traffic volumes for *Build-out Without Project* are shown in DEIS Vol. I, Appendix C of the Final Traffic Impact Study (Parsons Brinckerhoff, 2006a) (DEIS Vol. II, **Appendix T**). As shown in **Table 4.8-1**, the following four study intersections would operate at an unacceptable LOS without the addition of project traffic:

- NW 319<sup>th</sup> Street/NW La Center Road and I-5 SB Ramps
- NW La Center Road and E 4<sup>th</sup> Street
- S Hillhurst Road (SR-501) and Pioneer Street (SR-501)
- N 45th Avenue and Pioneer Street (SR-501)

#### **TRANSPORTATION POLICIES**

Once the Federal government acquires the property in trust for the Tribe, the parcels would not be subject to State or County transportation regulations. However, the Tribal Government desires to work cooperatively with local and State authorities on matters related to transportation and circulation. Therefore, in accordance with Section 8.0 of the Memorandum of Understanding (MOU) (DEIS Vol. I, **Appendix C**) between the Tribe and Clark County and Section 3(G) of the Tribe's Environment, Public Health and Safety (EPHS) Ordinance (**Appendix U** of the FEIS), the Tribe has agreed to mitigate traffic, safety, and circulation issues at the La Center Interchange Site (Alternatives A through D) in conformity with Clark County requirements.

The MOU does not apply to the Ridgefield Interchange Site (Alternative E). If the alternative project site is taken into trust, the Tribe would enter into an agreement with Clark County and/or the City of Ridgefield, similar in intent and scope to the MOU for the La Center Interchange Site, to mitigate traffic, safety, and circulation issues at the Ridgefield Interchange Site.

#### **MEMORANDUM OF UNDERSTANDING**

Section 8.1 of the MOU and Section 3(E) of the EPHS Ordinance specify that the Tribe will mitigate traffic, safety, and circulation issues in conformity with certain specified Clark County requirements, including Clark County Code (CCC) Section 40.350.030, Street and Road Standards and Section 40.550.010, Road Modifications.

**TABLE 4.8-1**  
PEAK HOUR INTERSECTION PERFORMANCE – BUILD-OUT WITHOUT PROJECT

Unsignalized Intersections	Weekday AM Peak		Weekday PM Peak		Saturday Peak	
	Max Delay	LOS	Max Delay	LOS	Max Delay	LOS
NW 319 <sup>th</sup> Street/NW La Center Rd & I-5 SB Ramps	161 (SB left)	<b>F</b>	>300 (SB approach)	<b>F</b>	21	C
NW 319 <sup>th</sup> Street/NW La Center Rd & I-5 NB Ramps	13	B	202 (NB approach)	<b>F</b>	12	B
45 <sup>th</sup> Avenue & SR-501/Pioneer Street (Roundabout: volume/capacity ratio)	0.55	<b>E</b>	0.39	B	0.45	B
NW 31 <sup>st</sup> Avenue & NW 289 <sup>th</sup> Street	10	A	9	A	9	A
NW 51 <sup>st</sup> Avenue & NW 289 <sup>th</sup> Street	10	B	10	B	10	A
NW 319 <sup>th</sup> Street & NW 31 <sup>st</sup> Avenue	9	A	9	A	9	A
NE 10 <sup>th</sup> Avenue & 5 <sup>th</sup> Street	10	B	25	C	14	B
NE Timmen Road & NW Spencer Road	10	A	11	B	10	A
NE La Center Road & NE Timmen Road	15	C	85 (NB approach)	<b>F</b>	26	D
NW La Center Road & E 4 <sup>th</sup> Street	>300 (westbound left)	<b>F</b>	>300 (WB left)	<b>F</b>	>300 (WB left)	<b>F</b>
NE Highland Avenue & E 4 <sup>th</sup> Street	14	B	13	B	10	A
NW Pacific Hwy & NW Bolen Street	10	B	3	A	10	A
NW La Center Road & NW Paradise Park Road	79 (NB Approach)	D	101 (NB approach)	<b>F</b>	21	C
NW 319 <sup>th</sup> Street & 41 <sup>st</sup> Avenue	8	A	8	A	7	A
S Royle Road & S Hillhurst Road	15	B	11	B	9	A
S Hillhurst Road & Pioneer Street	37 (NB left)	<b>F</b>	15	C	12	B
N Reiman Road & Pioneer Street	16	C	13	B	11	B
NE 10 <sup>th</sup> Avenue & Carty	10	B	15	B	11	B
NE 259 <sup>th</sup> Street & NE 10 <sup>th</sup> Avenue	12	B	13	B	11	B
<b>Signalized Intersections</b>	<b>Average Delay</b>	<b>LOS</b>	<b>Average Delay</b>	<b>LOS</b>	<b>Average Delay</b>	<b>LOS</b>
NE 219 <sup>th</sup> Street (SR-502) & NE 10 <sup>th</sup> Avenue	19	B	26	C	22	C
Pioneer Street (SR-501) & NW 65 <sup>th</sup> Avenue	11	B	19	B	22	C
Pioneer Street (SR-501) & I-5 SB Ramps	7	A	8	A	8	
Pioneer Street (SR-501) & I-5 NB Ramps	9	A	11	B	9	A

NOTES: **Bold** text denotes unacceptable LOS.

<sup>1</sup>For unsignalized intersections, “worst case” level-of-service is reported; usually the left-turn from a side street.

<sup>2</sup>Seconds per vehicle.

Source: Parsons Brinckerhoff, 2006a.

Additionally, the Tribe has agreed to make roadway and intersection improvements to maintain traffic LOS existing prior to development of the site, minus a vehicle credit for the amount of traffic that would be generated if the site were developed based on uses permitted in the current Agricultural zone (FEIS Vol. I, **Appendix C**).

#### **MEMORANDUM OF UNDERSTANDING**

Section 8.1 of the MOU and Section 3(E) of the EPHS Ordinance (**Appendix U** of FEIS) specify that the Tribe will mitigate traffic, safety, and circulation issues in conformity with certain specified Clark County requirements, including Clark County Code (CCC) Section 40.350.030, Street and Road Standards and Section 40.550.010, Road Modifications. Additionally, the Tribe has agreed to make roadway and intersection improvements to maintain traffic LOS existing prior to development of the site, minus a vehicle credit for the amount of traffic that would be generated if the site were developed based on uses permitted in the current Agricultural zone (FEIS Vol. I, **Appendix C**).

Further, pursuant to the MOU (Section 8.1) and EPHS Ordinance (Section 3(E)), the design of public roadway and intersection improvements impacted by the Alternatives A-D shall be approved by Clark County prior to beginning the improvement work for the following public roads: NW 319<sup>th</sup> Street, NW 41<sup>st</sup> Avenue, NW 31<sup>st</sup> Avenue, and the I-5/NW 319<sup>th</sup> Street Interchange. The design of the NW 319<sup>th</sup> Street Interchange improvements shall be approved by WsDOT prior to beginning the improvement work.

For traffic impacts related to the development of Alternative E, the Tribe intends to enter into an agreement similar in intent and scope to the MOU with Clark County, in which the Tribe agrees to mitigate traffic, safety, and circulation issues in conformity with certain specified Clark County requirements.

### **4.8.2 ALTERNATIVE A – PREFERRED CASINO-RESORT PROJECT**

#### **STUDY AREA**

Alternative A would realign NW 319<sup>th</sup> Street south of its existing alignment, connecting it with NW 41<sup>st</sup> Avenue as currently designed and re-joining the current alignment at the I-5 southbound on- and off-ramps intersection. A small portion of NW 31<sup>st</sup> Avenue would be shifted westward from its existing path. The realigned portion of NW 31<sup>st</sup> Avenue would connect with NW 319<sup>th</sup> Street at the intersection of the easternmost project driveway. **Figure 2-1** presents the site plan for Alternative A.

#### **TRIP GENERATION**

As shown in **Table 4.8-2**, Alternative A would add 16,714 weekday daily trips to the circulation network, with 482 trips occurring in the AM peak hour, 2,334 trips occurring in the PM peak hour and

2,864 occurring in the site peak hour. On Saturday, Alternative A would add 19,574 daily trips to the circulation network, with 2,373 trips occurring in the peak hour.

#### **TRIP DISTRIBUTION AND ASSIGNMENT**

The estimated number of project trips for Alternative A were distributed according to the methodology discussed above and assigned to the local street network at the project study intersections for four analysis periods; AM peak hour, system PM peak hour, site peak hour and Saturday peak hour. Trip distribution and assignment for Alternative A are shown in Appendix C of the Final Traffic Impact Study (Parsons Brinckerhoff, 2006a) (DEIS Vol. II, **Appendix T**). Accordingly, 82% of the trips would be coming from the south, including the areas of South Clark and Skamania counties, and the Tri-county Portland Metropolitan area.

**TABLE 4.8-2**  
TRIP GENERATION – ALTERNATIVES A AND B

Time Period	Rate	In/Out Split	Trip Generation		
			In	Out	Total
<b>Casino Trip Generation</b>					
Weekday (Daily)	61.89	-	-	-	10,000
Saturday (Daily)	93.24	-	-	-	12,750
Weekday AM Peak Hour	2.95	70% / 30%	277	119	396
Weekday system PM Peak Hour	9.18	53% / 47%	652	579	1,231
Weekday Site Peak Hour	10.94	53% / 47%			1,468
Saturday Peak Hour	7.04	62% / 38%	426	500	944
<b>Hotel Trip Generation</b>					
Weekday (Daily)	4.12	-	-	-	1,028
Saturday (Daily)	4.10	-	-	-	1,024
Weekday AM Peak Hour	0.28	61% / 39%	42	28	70
Weekday system PM Peak Hour	0.24	53% / 47%	31	30	61
Weekday Site Peak Hour	0.30	53% / 47%	40	36	76
Saturday Peak Hour	0.36	56% / 44%	50	40	90
<b>Retail Trip Generation</b>					
Weekday (Daily)	4.29	-	-	-	686
Saturday (Daily)	5.00	-	-	-	800
Weekday AM Peak Hour	0.10	61%/39%	10	6	16
Weekday system PM Peak Hour	0.38	48%/52%	29	32	61
Weekday Site Peak Hour	0.38	48%/52%	29	32	61
Saturday Peak Hour	0.50	52%/48%	42	38	80
<b>RV Park Trip Generation</b>					
Weekday (Daily)	1.00	-	-	-	200
Saturday (Daily)	1.00	-	-	-	200
Weekday AM Peak Hour	0.20	10%/90%	8	32	40

Time Period	Rate	In/Out Split	Trip Generation		
			In	Out	Total
Weekday system PM Peak Hour	0.30	82%/18%	50	10	60
Weekday Site Peak Hour	0.37	53%/47%	39	35	74
Saturday Peak Hour	0.36	52%/48%	37	33	70
<b>Event Center Trip Generation</b>					
Weekday (Daily)	-	-	2,400	2,400	4,800
Saturday (Daily)	-	-	2,400	2,400	4,800
Weekday AM Peak Hour	n/a	n/a	n/a	n/a	n/a
Weekday system PM Peak Hour	85 <sup>th</sup> % event	82% / 18%	792	174 <sup>1</sup>	966
Weekday Site Peak Hour	85 <sup>th</sup> % event	82% / 18%	1032	227	1259
Saturday Peak Hour	85 <sup>th</sup> % event	82% / 18%	1032	227	1259
<b>Total Trip Generation</b>					
Weekday (Daily)	-	-			16,714 <sup>2</sup>
Saturday (Daily)	-	-			19,574
Weekday AM Peak Hour	-	-	329	153	482
Weekday system PM Peak Hour	-	-	1,477	857	2,334
Weekday Site Peak Hour	-	-	1,864	1,000	2,864
Saturday Peak Hour	-	-	1,710	663	2,373

## NOTES:

<sup>1</sup> Exiting traffic includes limousines, drop-offs of event-goers, taxis, etc. Some of these trips will circulate to other parking on the site, while others will depart the site and return after the event has ended.

<sup>2</sup> By comparison, the Mohegan Sun casino/resort generates 19,400 vehicles on a peak Friday event-day, and 23,400 vehicles on a typical peak Saturday event-day. Mohegan Sun has 10,760 seats in its events center, 1,176 hotel rooms, and approximately 240,000 square feet of gaming space.

Source: Parsons Brinckerhoff, 2006a.

***SITE ACCESS AND SIGHT DISTANCE***

Access to the La Center Interchange Site for Alternative A was assessed to determine whether any operational concerns at each of the project access points would arise. Alternative A would realign NW 319<sup>th</sup> Street to the south of its current location. Review of the site plan layout for NW 319<sup>th</sup> Street (**Figure 2-1**) indicates that the road would comply with Clark County urban collector standards, thus having adequate sight distance at the access points.

For this alternative, NW 31<sup>st</sup> Avenue would be realigned westward to conform to Clark County intersection spacing standards along NW 319<sup>th</sup> Street. A review of the site plans indicates that once realigned, the proposed access points along NW 31<sup>st</sup> Avenue would have adequate sight distance and horizontal curvature.

**PEAK HOUR INTERSECTION EFFECTS****Weekday AM Peak Hour**

**Table 4.8-3** summarizes weekday AM peak hour *Build-out Plus Project* conditions for Alternative A. Weekday AM, PM, and Saturday peak hour turning movement traffic volumes for *Build-out Plus Project* are shown in Appendix F of the Supplemental Traffic Impact Study (Parsons Brinckerhoff, 2006e) (**Appendix O** of the FEIS). The following six study intersections are forecast to operate at an unacceptable LOS (i.e. will either fall below LOS D in the “build” condition or will exacerbate a location that is already below LOS D in the no-action condition) in the weekday AM peak hour under Alternative A:

- NW 319<sup>th</sup> Street/NW La Center Road and I-5 SB Ramps
- NW 319<sup>th</sup> Street/NW La Center Road and I-5 NB Ramps
- NW La Center Road at Paradise Park Road
- NW La Center Road at Timmen Road
- NW La Center Road and E 4<sup>th</sup> Street
- S Hillhurst Road and Pioneer Street

**Weekday PM Peak Hour**

**Table 4.8-4** summarizes weekday PM peak hour *Build-out Plus Project* conditions for Alternative A. Weekday PM peak hour *Build-out Plus Project* turning movement traffic volumes for Alternative A are shown in Appendix C of the Final Traffic Impact Study (Parsons Brinckerhoff, 2006a) (DEIS Vol. II, **Appendix T**). The Supplemental Traffic Impact Study (**Appendix O** of the FEIS) compared 2010 baseline (no-build) and 2010 Alternative A unmitigated analysis for the system PM peak hour and the site peak hour. The “worst case” scenario of the two peak hours is reported in the remainder of the analysis for PM peak hour. The only location that shows a worse level-of-service during the site peak hour is the intersection of NW 31<sup>st</sup> Avenue at NW 319<sup>th</sup> Street, all remaining intersections report system PM peak hour. The following six study intersections are forecast to operate at an unacceptable LOS in the weekday PM peak hour for Alternative A.

- NW 319<sup>th</sup> Street/NW La Center Road and I-5 SB Ramps
- NW 319<sup>th</sup> Street/NW La Center Road and I-5 NB Ramps
- NW La Center Road at Paradise Park Road
- NW 319<sup>th</sup> Street and NW 31<sup>st</sup> Avenue
- NW La Center Road at Timmen Road
- NW La Center Road and E 4<sup>th</sup> Street

**TABLE 4.8-3**  
WEEKDAY AM PEAK HOUR INTERSECTION CONDITIONS – BUILD-OUT PLUS PROJECT  
ALTERNATIVES A AND B

Unsignalized Intersections <sup>1</sup>	Max Delay <sup>2</sup>	LOS	(Baseline) No-Build LOS
NW 319th Street/NW La Center Rd & I-5 SB Ramps	595.5	<b>F</b>	<b>F</b>
NW 319th Street/NW La Center Rd & I-5 NB Ramps	284.8	<b>F</b>	B
45 <sup>th</sup> Avenue & SR-501/Pioneer Street (Roundabout: volume/capacity ratio)	0.55	C	B
NW 31st Avenue & NW 289th Street	9.4	A	A
NW 51st Avenue & NW 289th Street	10.2	B	B
NW 319th Street & NW 31st Avenue	18.4	C	A
NE 10th Avenue & 5th Street	12.7	B	B
NE Timmen Road & NW Spencer Road	9.6	A	A
NE La Center Road & NE Timmen Road	>300 (NB Left)	<b>F</b>	<b>F</b>
NW La Center Road & E 4th Street	>300 (WB Left)	<b>F</b>	<b>F</b>
NE Highland Avenue & E 4th Street	14.3	B	B
NW Pacific Hwy & NW Bolen Street	10.3	B	B
NW La Center Road & NW Paradise Park Road	125 (NB Approach)	<b>F</b>	<b>F</b>
NW 319th Street & 41st Avenue	7.2	A	A
S Royle Road & S Hillhurst Road	14.7	B	B
S Hillhurst Road & Pioneer Street	60	<b>E</b>	<b>E</b>
N Reiman Road & Pioneer Street	16.1	C	C
NE 10th Avenue & Carty	10.4	B	B
NE 259th Street & NE 10th Avenue	11.8	B	B
<b>Signalized Intersections</b>	<b>Average Delay</b>	<b>LOS</b>	<b>LOS</b>
NE 219th Street (SR-502) & NE 10th Avenue	19.3	B	B
Pioneer Street (SR-501) & NW 65 <sup>th</sup> Avenue	14	B	B
Pioneer Street (SR-501) & I-5 SB Ramps	9	A	A
Pioneer Street (SR-501) & I-5 NB Ramps	18	B	B

NOTES: **Bold** text denotes unacceptable LOS.

<sup>1</sup>For unsignalized intersections, “worst case” level-of-service is reported; usually the left-turn from a side street.

<sup>2</sup>Seconds per vehicle.

Source: Parsons Brinckerhoff, 2006a.

**TABLE 4.8-4**  
WEEKDAY PM PEAK HOUR INTERSECTION CONDITIONS – BUILD-OUT PLUS PROJECT  
ALTERNATIVES A AND B

Unsignalized Intersections <sup>1</sup>	Max Delay <sup>2</sup>	LOS	(Baseline) No-Build LOS
NW 319th Street/NW La Center Rd & I-5 SB Ramps	very high	<b>F</b>	<b>F</b>
NW 319th Street/NW La Center Rd & I-5 NB Ramps	very high	<b>F</b>	<b>F</b>
45 <sup>th</sup> Avenue & SR-501/Pioneer Street (Roundabout: volume/capacity ratio)	0.39	B	B
NW 31st Avenue & NW 289th Street	9.9	A	A
NW 51st Avenue & NW 289th Street	9.6	A	A
NW 319th Street & NW 31st Avenue	very high	<b>F</b>	<b>A</b>
NE 10th Avenue & 5th Street	16.3	C	C
NE Timmen Road & NW Spencer Road	10.2	B	B
NE La Center Road & NE Timmen Road	101	<b>F</b>	<b>F</b>
NW La Center Road & E 4th Street	440	<b>F</b>	<b>F</b>
NE Highland Avenue & E 4th Street	11.1	B	B
NW Pacific Hwy & NW Bolen Street	10.7	A/B	A/B
NW La Center Road & NW Paradise Park Road	117	<b>F</b>	<b>F</b>
NW 319th Street & 41st Avenue	6.9	A	A
S Royle Road & S Hillhurst Road	10.9	B	B
S Hillhurst Road & Pioneer Street	14.5	B	B
N Reiman Road & Pioneer Street	13.4	B	B
NE 10th Avenue & Carty	12.3	B	B
NE 259th Street & NE 10th Avenue	15.2	C	C
<b>Signalized Intersections</b>	<b>Average Delay</b>	<b>LOS</b>	<b>LOS</b>
NE 219th Street (SR-502) & NE 10th Avenue	27.8	C	C
Pioneer Street (SR-501) & NW 65 <sup>th</sup> Avenue	19	B	B
Pioneer Street (SR-501) & I-5 SB Ramps	8	A	A
Pioneer Street (SR-501) & I-5 NB Ramps	11	B	B

NOTES: **Bold** text denotes unacceptable LOS.

<sup>1</sup>For unsignalized intersections, “worst case” level-of-service is reported; usually the left-turn from a side street.

<sup>2</sup>Seconds per vehicle.

Source: Parsons Brinckerhoff, 2006a.

***Saturday Peak Hour***

**Table 4.8-5** summarizes Saturday peak hour *Build-out Plus Project* conditions for Alternative A. Saturday peak hour *Build-out Plus Project* turning movement traffic volumes for Alternative A are shown in Appendix C of the Final Traffic Impact Study (Parsons Brinckerhoff, 2006a) (DEIS Vol. II, **Appendix T**). The following four study intersections are forecast to operate at an unacceptable LOS in the Saturday PM peak hour for Alternative A.

- NW 319<sup>th</sup> Street/NW La Center Road and I-5 SB Ramps
- NW 319<sup>th</sup> Street/NW La Center Road and I-5 NB Ramps
- NW 319<sup>th</sup> Street and NW 31<sup>st</sup> Avenue
- NW La Center Road and E 4<sup>th</sup> Street

***ACCIDENT ANALYSIS***

WsDOT has determined that the La Center and Ridgefield interchanges are part of a High Accident Corridor due to traffic backups onto the I-5 mainline and the relatively short diverge points (off-ramps from I-5) at these two interchanges. A review of the county's accident data does not indicate a high accident condition. One single location was identified with a concentration of accidents: the NW La Center Road intersection with the I-5 northbound ramps (county road milepost 1.16). While the La Center Road segment had the highest number of accidents, it should be noted that this is a 1.5-mile segment, which does not show a single location of recurring accidents.

Development of Alternative A would impact traffic operations at the La Center interchange (NW 319<sup>th</sup> Street and I-5). This is a significant impact. Mitigation measures recommended in **Section 5.0**, including the proposed project to improve the interchange and extend the deceleration length of the off-ramps, would reduce adverse effects associated with the High Accident condition at the La Center interchange to less than significant.

***INTERSTATES 5 AND 205 THROUGH VANCOUVER***

Alternative A will add to traffic congestion levels along I-5 and I-205 during the weekday PM peak hour. However, the proposed project will not measurably affect any specific intersection, as trips to and from the casino site will come from a variety of locations and take various routes to and from I-5 and I-205. The incremental increase from the project is generally small. However, worst-case analysis of casino trips results show an estimated high of a possible 500 increased peak hour trips on an event day. Table 63 of the Supplemental TIS indicates that the most heavily affected segments of the Interstate system are I-5 north of SR-500 (north bound) and I-205 north of SR-500 (north bound). Table 64 of the Supplemental TIS shows that these two segments, and I-205 from SR-14 to Mill Plain (north bound), will experience reduced levels of service. It should be noted the Columbia River Crossing DEIS is considering a number of potential improvements to the corridor including replacement of the Interstate Bridge on I-5. Similarly, the I-205 corridor between SR-500 and the

**TABLE 4.8-5**  
SATURDAY PEAK HOUR INTERSECTION CONDITIONS – BUILD-OUT PLUS PROJECT  
ALTERNATIVES A AND B

Unsignalized Intersections <sup>1</sup>	Max Delay <sup>2</sup>	LOS	(Baseline) No-Build LOS
NW 319th Street/NW La Center Rd & I-5 SB Ramps	very high	<b>F</b>	<b>C</b>
NW 319th Street/NW La Center Rd & I-5 NB Ramps	very high	<b>F</b>	<b>B</b>
45th Avenue & Pioneer Street (SR-501)	19.0	C	C
Pioneer Street (SR-501) & NW 65th Avenue	19.2	C	C
NW 31st Avenue & NW 289th Street	9.7	A	B
NW 51st Avenue & NW 289th Street	9.9	A	A
NW 319th Street & NW 31st Avenue	very high	<b>F</b>	<b>A</b>
NE 10th Avenue & 5th Street	14.1	B	B
NE Timmen Road & NW Spencer Road	9.5	A	A
NE La Center Road & NE Timmen Road	15	B	B
NW La Center Road & E 4th Street	>300 (WB left)	F	F
NE Highland Avenue & E 4th Street	9.6	A	A
NW Pacific Hwy & NW Bolen Street	10.2	B	A
NW La Center Road & NW Paradise Park Road	23	C	B
NW 319th Street & 41st Avenue	7.0	A	A
S Royle Road & S Hillhurst Road	9.3	A	A
S Hillhurst Road & Pioneer Street	11.9	B	B
N Reiman Road & Pioneer Street	11.3	B	B
NE 10th Avenue & Carty	11.4	B	B
NE 259th Street & NE 10th Avenue	11.9	B	B
<b>Signalized Intersections</b>	<b>Average Delay</b>	<b>LOS</b>	<b>LOS</b>
NE 219th Street (SR-502) & NE 10th Avenue	20.4	C	C
Pioneer Street (SR-501) & I-5 SB Ramps	6.3	A	A
Pioneer Street (SR-501) & I-5 NB Ramps	6.8	A	A

NOTES: **Bold** text denotes unacceptable LOS.

<sup>1</sup>For unsignalized intersections, “worst case” level-of-service is reported; usually the left-turn from a side street.

<sup>2</sup>Seconds per vehicle.

Source: Parsons Brinckerhoff, 2006a.

Glenn Jackson Bridge is currently undergoing an environmental assessment for proposed modifications. These modifications are expected to improve levels of service substantially over existing conditions.

***COINCIDENTAL EVENTS AT COWLITZ EVENTS CENTER AND CLARK COUNTY AMPHITHEATRE ANALYSIS***

There will be occasional times when there are events at the Cowlitz Events Center on the same date as the Clark County Amphitheatre. Since the Amphitheatre is a seasonal facility, with approximately 15 to 20 events per year (based on experience for 2004 through 2006), and the Cowlitz Events Center is a year-round facility with 20 to 30 events assumed per year, likely only 3 to 4 times per year would coincidentally scheduled events occur. On these occasions, the Clark County Amphitheatre will have a much larger impact on I-5 (18,000 seats, approximately 7,500 vehicles at an 85<sup>th</sup> percentile event) than the Cowlitz Events Center (5,000 seats, approximately 2,400 vehicles at an 85<sup>th</sup> percentile event). The two times when I-5 could experience traffic congestion due to coincidental events is before an event between 5:00 and 7:00 p.m. on weeknights that are not holidays, and after an event between 10:30 p.m. and 12:00 a.m.

**Appendix O** of the FEIS determined that the 6:00 to 7:00 p.m. time period would have a higher Cowlitz traffic level than the 5:00 to 6:00 p.m. time period. The Clark County Amphitheatre has its highest impacts at approximately 5:30 to 6:30 p.m. for events that typically start on weeknights at 7:00 or 7:30 p.m. Field observations made during some of the largest 2005 and 2006 events at the Amphitheatre concluded that 6:00 to 7:00 p.m. before an event, the right lanes of I-5 are often slowed and at times queued due to event arrivals. Traffic changes initiated in 2005 and refined in 2006 have reduced this queuing, which tends to now occur during events above the 85<sup>th</sup> percentile. During this time period, approximately 400 to 500 vehicles would be heading for the Cowlitz Events Center, of which half use I-205 to get to I-5 and the other half are already on I-5. The vehicles on I-5 should not contribute to the Amphitheatre congestion in the right lane (two right lanes approaching the two-lane 179<sup>th</sup> Street off-ramp) as they can stay in the left two lanes and avoid the congestion. The vehicles using I-205 would likely increase the congestion level slightly as they enter I-5 just south of the point where the Amphitheatre traffic is affecting I-5 operations. However, the addition of 250 vehicles to the I-205 traffic levels is expected to impact I-205 speeds by less than 5 mph. These effects will be less pronounced on weekend nights when simultaneous events may occur.

After events, the impacts are expected to be less pronounced. The Amphitheatre traffic management plan includes closing the right-lane of southbound I-5 north of 179<sup>th</sup> Street to allow Amphitheatre traffic its own lane to enter onto southbound I-5. At that time of night, the background traffic on I-5 is low (approximately 700-800 vehicles per hour not including Amphitheatre traffic in the 2010 base scenario). Adding 1,800 Cowlitz Events Center vehicles to 2,000 Amphitheatre vehicles yields a total

of 3,800 vehicles on I-5 between 179<sup>th</sup> Street and I-205, which is LOS D using the Highway Capacity Manual. This impact would be less than significant.

#### ***EMERGENCY SERVICES ANALYSIS***

Alternative A would result in traffic impacts to emergency services. Clark County Fire Districts 2 and 12 and Woodland Fire Department operate fire stations in the study area. In the study area, there are 6 fire stations, located at:

1. 911 N. 65<sup>th</sup> Avenue in Ridgefield (near NE 279<sup>th</sup> Street)
2. 414 E Cedar in downtown La Center
3. 117 N 3<sup>rd</sup> Avenue in downtown Ridgefield
4. 38615 NE 41<sup>st</sup> Avenue northeast of La Center
5. 100 Davidson Avenue west of I-5 in downtown Woodland
6. 314 NW 389<sup>th</sup> Street northeast of La Center.

Alternative A would impact fire response from the La Center area fire stations responding to calls west of I-5 using NW 319<sup>th</sup> Street. In the unmitigated scenarios, interchange congestion along with the narrow I-5 overpass will result in delays to response times during weekday and event-time peaks. This is a significant impact. By mitigating to a minimum LOS D at the interchange (as discussed in **Section 5.2.7**) and improving the interchange roads and NW 319<sup>th</sup> Street to urban standards, response times would be improved back to the no-build alternative as there would be less traffic queuing to bypass, as well as adequate space on the I-5 overpass and along NW 319<sup>th</sup> Street for vehicles to pull off to the side to allow emergency vehicles to pass.

Alternative A would have very minor impacts on the other fire stations due to a small increase in traffic volumes along their primary response routes from site traffic, but these impacts are minor (in all cases, fewer than 30 vehicles per hour) and are not expected to result in any measurable delays to emergency vehicles.

#### ***IMPACT ANALYSIS***

Development of Alternative A would have a significant impact on transportation and circulation in the project area as described above. **Section 5.2.7** presents a list of mitigation measures recommended to reduce project-related traffic impacts. With the mitigation measures in place, all of the study intersections show LOS D or better as provided for in the MOU (DEIS Vol. I, **Appendix C**) and EPHS Ordinance (**Appendix U** of FEIS). Therefore, this impact would be less than significant after mitigation.

### 4.8.3 ALTERNATIVE B – PREFERRED PROJECT WITHOUT REROUTING NW 319<sup>TH</sup> STREET

#### *STUDY AREA*

The project study area for Alternative B is similar to that of Alternative A, except that NW 319<sup>th</sup> Street would remain in its current alignment. NW 31<sup>st</sup> Avenue would be realigned as described under Alternative A. **Figure 2-6** presents the site plan for Alternative B.

#### *TRIP GENERATION*

As shown earlier in **Table 4.8-2**, Alternative B would add would add 16,714 weekday daily trips to the circulation network, with 482 trips occurring in the AM peak hour, 2,334 trips occurring in the PM peak hour and 2,864 trips occurring in the site peak hour. On Saturday, Alternative B would add 19,574 daily trips to the circulation network, with 2,373 trips occurring in the peak hour.

#### *TRIP DISTRIBUTION AND ASSIGNMENT*

The trip distribution and trip assignment for Alternative B would remain the same as Alternative A as both are similar with the exception that NW 319<sup>th</sup> Street would not be rerouted. Trip assignments for Alternative B are shown in Appendix C of the Final Traffic Impact Study (Parsons Brinckerhoff, 2006a) (DEIS Vol. II, **Appendix T**). The project trips were assigned to the local street network at the project study intersections for three analysis periods; AM peak hour, system PM peak hour, site peak hour, and Saturday peak hour. As with Alternative A, 82% of the trips would be coming from the south, including the areas of South Clark and Skamania counties, and the Tri-county Portland Metropolitan area.

#### *SITE ACCESS AND SIGHT DISTANCE*

Under Alternative B, NW 319<sup>th</sup> Street would not be realigned. A review of the site plan layout (**Figure 2-6**) indicates that Alternative B would have adequate sight distance in both directions of travel for the three easternmost access points (casino porte cochere/Parking Garage #1, casino surface parking [right-in/right-out access only], and casino/hotel porte cochere). The two westernmost accesses (RV parking/internal circulation road, Parking Garage #2 and associated roundabout) would not have adequate sight distance unless NW 319<sup>th</sup> Street was regraded to improve the vertical alignment.

For this alternative, NW 31<sup>st</sup> Avenue would be realigned westward to conform to Clark County intersection spacing standards along NW 319<sup>th</sup> Street. A review of the site plans indicates that once realigned, the proposed access points along NW 31<sup>st</sup> Avenue would have adequate sight distance and horizontal curvature.

***PEAK HOUR INTERSECTION EFFECTS***

Alternatives A and B would not have noticeable differences with or without the rerouting of NW 319<sup>th</sup> Street as the majority of site traffic would go through the two main garage driveways. The two driveways would have similar traffic control characteristic effects to the site traffic operation (Parsons Brinckerhoff, 2006b). Therefore, peak hour intersection effects for Alternative B are the same as described for Alternative A and shown earlier in **Tables 4.8-3** through **4.8-5**. The Supplemental Traffic Impact Study (**Appendix O** of the FEIS) compared 2010 baseline (no-build) and 2010 Alternative B unmitigated analysis for the system PM peak hour and the site peak hour. The “worst case” scenario of the two peak hours is reported in the remainder of the analysis for PM peak hour. The only location that shows a worse level-of-service during the site peak hour is the intersection of NW 31<sup>st</sup> Avenue at NW 319<sup>th</sup> Street, all remaining intersections report system PM peak hour.

***ACCIDENT ANALYSIS***

As with Alternative A, Alternative B would impact the La Center Interchange (NW 319<sup>th</sup> Street and I-5), which has been determined by WsDOT to be a High Accident Corridor due to traffic backups onto the I-5 mainline. This is a significant impact. Mitigation measures are recommended in **Section 5.0** to reduce the impact to less than significant.

***INTERSTATES 5 AND 205 THROUGH VANCOUVER***

Impacts associated with traffic congestion levels along I-5 and I-205 during the weekday PM peak hour under Alternative B would be similar to Alternative A.

***COINCIDENTAL EVENTS AT COWLITZ EVENTS CENTER AND CLARK COUNTY AMPHITHEATRE ANALYSIS***

Impacts from coincidental events at Cowlitz Events Center and Clark County Amphitheatre under Alternative B would be similar to Alternative A. This impact would be less than significant.

***EMERGENCY SERVICES ANALYSIS***

Alternative B would impact fire response from the La Center area fire stations responding to calls west of I-5 using NW 319<sup>th</sup> Street similar to Alternative A. This is a significant impact. By mitigating to a minimum LOS D at the interchange (as discussed in **Section 5.2.7**) and improving the interchange roads and NW 319<sup>th</sup> Street to urban standards, response times would be improved back to the no-build alternative as there would be less traffic queuing to bypass, as well as adequate space on the I-5 overpass and along NW 319<sup>th</sup> Street for vehicles to pull off to the side to allow emergency vehicles to pass.

Alternative C would have very minor impacts on the other fire stations similar to Alternative B. This would be a less than significant impact.

**IMPACT ANALYSIS**

Development of Alternative B would have a significant impact on transportation and circulation in the project area as described above. **Section 5.2.7** presents a list of mitigation measures recommended to reduce project-related traffic impacts. With the mitigation measures in place, all of the study intersections show LOS D or better as provided for in the MOU (DEIS Vol. I, **Appendix C**) and EPHS Ordinance (**Appendix U** of FEIS). Therefore, this impact would be less than significant after mitigation.

**4.8.4 ALTERNATIVE C – REDUCED INTENSITY****STUDY AREA**

While Alternative C is a reduced intensity development, it occupies the same study area and includes the same modified roadway alignment as described for Alternative B (i.e. NW 319<sup>th</sup> Street would not be rerouted and a small portion of NW 31<sup>st</sup> Avenue would be shifted westward from its existing path). **Figure 2-7** presents the site plan for Alternative C.

**TRIP GENERATION**

As shown in **Table 4.8-6**, Alternative C would add 10,780 weekday daily trips to the circulation network, with 305 trips occurring in the AM peak hour, 1,811 trips occurring in the PM peak hour and 2,243 trips occurring in the site peak hour. On Saturday, Alternative C would add 13,365 daily trips to the circulation network, with 1,966 trips occurring in the peak hour.

**TABLE 4.8-6**  
TRIP GENERATION – ALTERNATIVE C

Time Period	Rate	In/Out Split	Trip Generation		
			In	Out	Total
<b>Casino Trip Generation</b>					
Weekday (Daily)	61.89				4,882
Saturday (Daily)	93.24				7,355
Weekday AM Peak Hour	2.95	70% / 30%	163	70	233
Weekday system PM Peak Hour	9.18	50% / 50%	362	362	724
Weekday Site Peak Hour	10.94	52% / 48%	449	414	863
Saturday Peak Hour	7.04	62% / 38%	344	211	555
<b>Hotel Trip Generation</b>					
Weekday (Daily)	2.06				412
Saturday (Daily)	2.05				410
Weekday AM Peak Hour	0.28	61% / 39%	34	22	56
Weekday system PM Peak Hour	0.24	53% / 47%	25	23	48
Weekday Site Peak Hour	0.30	53% / 47%	32	28	60
Saturday Peak Hour	0.36	56% / 44%	40	32	72

Time Period	Rate	In/Out Split	Trip Generation		
			In	Out	Total
<b>Retail Trip Generation</b>					
Weekday (Daily)	4.29				686
Saturday (Daily)	5.00				800
Weekday AM Peak Hour	.10	61%/39%	10	6	16
Weekday PM Peak Hour	.38	48%/52%	29	32	61
Weekday Site Peak Hour	.38	48%/52%	29	32	61
Saturday Peak Hour	.50	52%/48%	42	38	80
<b>RV Park Trip Generation</b>					
Weekday (Daily)	1.00				200
Saturday (Daily)	1.00				200
Weekday AM Peak Hour	.20	10%/90%	8	32	40
Weekday system PM Peak Hour	.30	82%/18%	50	10	60
Weekday Site Peak Hour	.37	53%/47%	39	35	74
Saturday Peak Hour	.36	52%/48%	37	33	70
<b>Event Center Trip Generation</b>					
Weekday (Daily)			2,400	2,400	4,800
Saturday (Daily)			2,400	2,400	4,800
Weekday AM Peak Hour	n/a	n/a	n/a	n/a	n/a
Weekday system PM Peak Hour	85 <sup>th</sup> % event	82% / 18%	792	174 <sup>1</sup>	966
Weekday Site Peak Hour	85 <sup>th</sup> % event	82% / 18%	1032	227	1259
Saturday Peak Hour	85 <sup>th</sup> % event	82% / 18%	1032	227	1259
<b>Total Trip Generation</b>					
Weekday (Daily)					10,780
Saturday (Daily)					13,365
Weekday AM Peak Hour			207	98	305
Weekday system PM Peak Hour			1,215	596	1,811
Weekday Site Peak Hour			1,542	701	2,243
Saturday Peak Hour			1,458	508	1,966

## NOTES:

<sup>1</sup> Exiting traffic includes limousines, drop-offs of event-goers, taxis, etc. Some of these trips will circulate to other parking on the site, while others will depart the site and return after the event has ended.

Source: Parsons Brinckerhoff, 2006a.

**TRIP DISTRIBUTION AND ASSIGNMENT**

Although Alternative C is a reduced intensity use from that described under Alternative A, the trip distribution would remain the same. Trip assignments for Alternative C are shown in Appendix C of the Final Traffic Impact Study (Parsons Brinckerhoff, 2006a) (DEIS Vol. II, **Appendix T**). The project trips were assigned to the local street network at the project study intersections for three analysis periods; AM peak hour, system PM peak hour, site peak hour, and Saturday peak hour. As

with Alternative A, 82% of the trips would be coming from the south, including the areas of South Clark and Skamania counties, and the Tri-county Portland Metropolitan area.

#### ***SITE ACCESS AND SIGHT DISTANCE***

As with Alternative B, NW 319<sup>th</sup> Street would not be realigned under Alternative C. A review of the site plan layout (**Figure 2-7**) indicates that Alternative C would have adequate sight distance in both directions of travel for the two easternmost access points (casino porte cochere/Parking Garage #1 and casino/hotel porte cochere). The two westernmost accesses (RV parking/internal circulation road and Parking Garage #2) would not have adequate sight distance unless NW 319<sup>th</sup> Street was regraded to improve the vertical alignment.

For this alternative, NW 31<sup>st</sup> Avenue would be realigned westward to conform to Clark County intersection spacing standards along NW 319<sup>th</sup> Street. A review of the site plans indicates that once realigned, the proposed access points along NW 31<sup>st</sup> Avenue would have adequate sight distance and horizontal curvature.

#### ***PEAK HOUR INTERSECTION EFFECTS***

##### ***Weekday AM Peak Hour***

**Table 4.8-7** summarizes weekday AM peak hour *Build-out Plus Project* conditions for Alternative C. Weekday AM peak hour *Build-out Plus Project* turning movement traffic volumes for Alternative A are shown in Appendix C of the Final Traffic Impact Study (Parsons Brinckerhoff, 2006a) (DEIS Vol. II, **Appendix T**). The following seven study intersections are forecast to operate at an unacceptable LOS in the weekday AM peak hour under Alternative C.

- NW 319<sup>th</sup> Street/NW La Center Road and I-5 SB Ramps
- NW 319<sup>th</sup> Street/NW La Center Road and I-5 NB Ramps
- NW La Center Road and E 4<sup>th</sup> Street
- S Hillhurst Road and Pioneer Street
- NW 319<sup>th</sup> Street and NW 31<sup>st</sup> Avenue
- La Center Road at Timmen Road
- La Center Road at Paradise Park Rd.

##### ***Weekday PM Peak Hour***

**Table 4.8-8** summarizes weekday PM peak hour *Build-out Plus Project* conditions for Alternative C. Weekday PM peak hour *Build-out Plus Project* turning movement traffic volumes for Alternative C. The following six study intersections are forecast to operate at an unacceptable LOS in the weekday PM peak hour under Alternative C. The Supplemental Traffic Impact Study (**Appendix O** of the FEIS) compared 2010 baseline (no-build) and 2010 Alternative A/B unmitigated analysis for the

**TABLE 4.8-7**  
WEEKDAY AM PEAK HOUR INTERSECTION CONDITIONS – BUILD-OUT PLUS PROJECT  
ALTERNATIVE C

Unsignalized Intersections <sup>1</sup>	Max Delay <sup>2</sup>	LOS	(Baseline) No-Build LOS
NW 319th Street/NW La Center Rd & I-5 SB Ramps	393.4	<b>F</b>	<b>F</b>
NW 319th Street/NW La Center Rd & I-5 NB Ramps	90.1	<b>F</b>	<b>B</b>
45 <sup>th</sup> Avenue & SR-501/Pioneer Street (Roundabout: volume/capacity ratio)	0.67	C	B
NW 31st Avenue & NW 289th Street	9.4	A	A
NW 51st Avenue & NW 289th Street	10.2	B	B
NW 319th Street & NW 31st Avenue	66	<b>E</b>	A
NE 10th Avenue & 5th Street	12.0	B	B
NE Timmen Road & NW Spencer Road	9.6	A	A
NE La Center Road & NE Timmen Road	100 (NB Approach)	F	F
NW La Center Road & E 4th Street	>300 (WB Left)	<b>F</b>	<b>F</b>
NE Highland Avenue & E 4th Street	14.3	B	B
NW Pacific Hwy & NW Bolen Street	10.3	B	B
NW La Center Road & NW Paradise Park Road	57 (NB Approach)	<b>F</b>	<b>F</b>
NW 319th Street & 41st Avenue	7.2	A	A
S Royle Road & S Hillhurst Road	14.7	B	B
S Hillhurst Road & Pioneer Street	100.2	<b>F</b>	<b>F</b>
N Reiman Road & Pioneer Street	16.1	C	C
NE 10th Avenue & Carty	10.4	B	B
NE 259th Street & NE 10th Avenue	11.8	B	B
<b>Signalized Intersections</b>	<b>Average Delay</b>	<b>LOS</b>	<b>LOS</b>
NE 219th Street (SR-502) & NE 10th Avenue	21	C	C
Pioneer Street (SR-501) and NW 65 <sup>th</sup> Avenue	19.1	C	C
Pioneer Street (SR-501) & I-5 SB Ramps	13	B	B
Pioneer Street (SR-501) & I-5 NB Ramps	23	C	C

NOTES: **Bold** text denotes unacceptable LOS.

<sup>1</sup>For unsignalized intersections, “worst case” level-of-service is reported; usually the left-turn from a side street.

<sup>2</sup>Seconds per vehicle.

Source: Parsons Brinckerhoff, 2006a.

**TABLE 4.8-8**  
WEEKDAY PM PEAK HOUR INTERSECTION CONDITIONS – BUILD-OUT PLUS PROJECT  
ALTERNATIVE C

<b>Unsignalized Intersections<sup>1</sup></b>	<b>Maximum Delay (seconds/vehicle)</b>	<b>LOS</b>	<b>(Baseline) No-Build LOS</b>
NW 319th Street/NW La Center Rd & I-5 SB Ramps	very high	<b>F</b>	<b>D</b>
NW 319th Street/NW La Center Rd & I-5 NB Ramps	very high	<b>F</b>	<b>C</b>
45 <sup>th</sup> Avenue & SR-501/Pioneer Street (Roundabout: volume/capacity ratio)	0.58	B	B
NW 31st Avenue & NW 289th Street	9.8	A	B
NW 51st Avenue & NW 289th Street	9.6	A	A
NW 319th Street & NW 31st Avenue	802.6	<b>F</b>	A
NE 10th Avenue & 5th Street	16.3	C	C
NE Timmen Road & NW Spencer Road	10.2	B	B
NE La Center Road & NE Timmen Road	114 (NB Approach)	<b>F</b>	<b>F</b>
NW La Center Road & E 4th Street	>300 (WB Left)	<b>F</b>	<b>F</b>
NE Highland Avenue & E 4th Street	11.1	B	B
NW Pacific Hwy & NW Bolen Street	10.7	B	B
NW La Center Road & NW Paradise Park Road	130 (NB Approach)	<b>F</b>	<b>F</b>
NW 319th Street & 41st Avenue	6.9	A	A
S Royle Road & S Hillhurst Road	10.9	B	B
S Hillhurst Road & Pioneer Street	14.5	B	B
N Reiman Road & Pioneer Street	13.3	B	B
NE 10th Avenue & Carty	12.3	B	B
NE 259th Street & NE 10th Avenue	15.2	C	C
<b>Signalized Intersections</b>	<b>Average Delay</b>	<b>LOS</b>	<b>LOS</b>
NE 219th Street (SR-502) & NE 10th Avenue	26.2	C	C
Pioneer Street (SR-501) and NW 65 <sup>th</sup> Avenue	23	C	C
Pioneer Street (SR-501) & I-5 SB Ramps	7.9	A	A
Pioneer Street (SR-501) & I-5 NB Ramps	10.2	B	A

NOTES: **Bold** text denotes unacceptable LOS.

<sup>1</sup>For unsignalized intersections, “worst case” level-of-service is reported; usually the left-turn from a side street.

<sup>2</sup>Seconds per vehicle.

Source: Parsons Brinckerhoff, 2006a.

system PM peak hour and the site peak hour. The “worst case” scenario of the two peak hours is reported in the remainder of the analysis for PM peak hour. The only location that shows a worse level-of-service during the site peak hour is the intersection of NW 31<sup>st</sup> Avenue at NW 319<sup>th</sup> Street, all remaining intersections report system PM peak hour.

- NW 319<sup>th</sup> Street/NW La Center Road and I-5 SB Ramps
- NW 319<sup>th</sup> Street/NW La Center Road and I-5 NB Ramps
- NW 319<sup>th</sup> Street and NW 31<sup>st</sup> Avenue
- NW La Center Road and E 4<sup>th</sup> Street
- La Center Road at Timmen Road
- La Center Road at Paradise Park Rd.

### ***Saturday Peak Hour***

**Table 4.8-9** summarizes Saturday peak hour *Build-out Plus Project* conditions for Alternative C. Saturday peak hour *Build-out Plus Project* turning movement traffic volumes for Alternative C. The following three study intersections are forecast to operate at an unacceptable LOS in the Saturday peak hour under Alternative C.

- NW 319<sup>th</sup> Street/NW La Center Road and I-5 SB Ramps
- NW 319<sup>th</sup> Street/NW La Center Road and I-5 NB Ramps
- NW 319<sup>th</sup> Street and NW 31<sup>st</sup> Avenue

### ***ACCIDENT ANALYSIS***

As with Alternative A, Alternative C would impact the La Center Interchange (NW 319<sup>th</sup> Street and I-5), which has been determined by WsDOT to be a High Accident Corridor due to traffic backups onto the I-5 mainline. This is a significant impact. Mitigation measures are recommended in **Section 5.0** to reduce the impact to less than significant.

### ***INTERSTATES 5 AND 205 THROUGH VANCOUVER***

Impacts to traffic congestion levels along I-5 and I-205 resulting from special event traffic during the weekday PM peak hour under Alternative C would be similar to Alternative A.

### ***COINCIDENTAL EVENTS AT COWLITZ EVENTS CENTER AND CLARK COUNTY AMPHITHEATRE ANALYSIS***

Impacts from coincidental events at Cowlitz Events Center and Clark County Amphitheatre under Alternative C would be similar to Alternative A. This impact would be less than significant.

**TABLE 4.8-9**  
SATURDAY PEAK HOUR INTERSECTION CONDITIONS – BUILD-OUT PLUS PROJECT  
ALTERNATIVE C

Unsignalized Intersections <sup>1</sup>	Max Delay <sup>2</sup>	LOS	(Baseline) No-Build LOS
NW 319th Street/NW La Center Rd & I-5 SB Ramps	very high	<b>F</b>	<b>C</b>
NW 319th Street/NW La Center Rd & I-5 NB Ramps	very high	<b>F</b>	<b>B</b>
45th Avenue & Pioneer Street (SR-501)	19.0	C	C
Pioneer Street (SR-501) & NW 65th Avenue	19.0	C	C
NW 31st Avenue & NW 289th Street	9.6	A	B
NW 51st Avenue & NW 289th Street	9.9	A	A
NW 319th Street & NW 31st Avenue	very high	<b>F</b>	<b>A</b>
NE 10th Avenue & 5th Street	14.1	B	B
NE Timmen Road & NW Spencer Road	9.5	A	A
NE La Center Road & NE Timmen Road	14.6	B	B
NW La Center Road & E 4th Street	18.7	C	C
NE Highland Avenue & E 4th Street	9.6	A	A
NW Pacific Hwy & NW Bolen Street	10.2	B	A
NW La Center Road & NW Paradise Park Road	23.9	C	C
NW 319th Street & 41st Avenue	7.0	A	A
S Royle Road & S Hillhurst Road	9.3	A	A
S Hillhurst Road & Pioneer Street	11.9	B	B
N Reiman Road & Pioneer Street	11.3	B	B
NE 10th Avenue & Carty	11.4	B	B
NE 259th Street & NE 10th Avenue	11.9	B	B
Signalized Intersections	Average Delay	LOS	LOS
NE 219th Street (SR-502) & NE 10th Avenue	21.4	C	C
Pioneer Street (SR-501) & I-5 SB Ramps	6.3	A	A
Pioneer Street (SR-501) & I-5 NB Ramps	6.8	A	A

NOTES: **Bold** text denotes unacceptable LOS.

<sup>1</sup>For unsignalized intersections, “worst case” level-of-service is reported; usually the left-turn from a side street.

<sup>2</sup>Seconds per vehicle.

Source: Parsons Brinckerhoff, 2006a.

### ***EMERGENCY SERVICES ANALYSIS***

Alternative C would impact fire response from the La Center area fire stations responding to calls west of I-5 using NW 319<sup>th</sup> Street similar to Alternative A. This is a significant impact. By mitigating to a minimum LOS D at the interchange (as discussed in **Section 5.2.7**) and improving the interchange roads and NW 319<sup>th</sup> Street to urban standards, response times would be improved back to the no-build alternative as there would be less traffic queuing to bypass, as well as adequate space on the I-5 overpass and along NW 319<sup>th</sup> Street for vehicles to pull off to the side to allow emergency vehicles to pass.

Alternative C would have very minor impacts on the other fire stations similar to Alternative A. This would be a less than significant impact.

### ***IMPACT ANALYSIS***

Development of Alternative C would have a significant impact on transportation and circulation in the project area as described above. **Section 5.2.7** presents a list of mitigation measures recommended to reduce project-related traffic impacts. With the mitigation measures in place, all of the study intersections show LOS D or better as provided for in the MOU (DEIS Vol. I, **Appendix C**) and EPHS Ordinance (**Appendix U** of FEIS). Therefore, this impact would be less than significant after mitigation.

## **4.8.5 ALTERNATIVE D – BUSINESS PARK**

### ***STUDY AREA***

The study area for Alternative D is the same as for Alternative A and includes the same modified alignment of NW 31<sup>st</sup> Avenue. As with Alternative A, NW 319<sup>th</sup> Street is not rerouted under this alternative. **Figure 2-8** presents the site plan for Alternative D.

### ***TRIP GENERATION***

As shown in **Table 4.8-10**, Alternative D would add 16,829 weekday daily trips to the circulation network, with 2,455 occurring in the AM peak hour and 2,204 trips occurring in the PM peak hour. On Saturday, Alternative D would add 2,865 Saturday daily trips to the circulation network, with 341 trips occurring in the peak hour.

### ***TRIP DISTRIBUTION AND ASSIGNMENT***

As the RTC travel demand model is able to replicate trip distribution for business park land uses, as proposed in Alternative D, the 2028 “SR 502/I-5 Interchange Environmental Assessment” model run supplied by RTC was used. Trip distribution and trip assignment for Alternative D are shown in Appendix C of the Final Traffic Impact Study (Parsons Brinckerhoff, 2006a) (DEIS Vol. II, **Appendix T**). The project trips were assigned to the local street network at the project study intersections for

three analysis periods; AM peak hour, PM peak hour and Saturday peak hour. For this alternative, 82% of the trips would be coming from the south, including the areas of South Clark and Skamania counties, and the Tri-county Portland Metropolitan area. While this distribution is similar to that shown for Alternative A, the differences here are that there would be 2% of the trips coming from the north (as opposed to 7% under Alternatives A-C) and 10% of the trips coming from the cities of Ridgefield, Battleground, and central Clark County (as opposed to 5% under Alternatives A-C).

**TABLE 4.8-10**  
TRIP GENERATION – ALTERNATIVE D

Time Period	Rate	In/Out Split	Trip Generation		
			In	Out	Total
<b>Class A Office Space (ITE 710)</b>					
Weekday (Daily)	11.01	50% / 50%	2,477	2,477	4,955
Saturday (Daily)	2.37	50% / 50%	533	533	1,067
Weekday AM Peak Hour	1.56	88% / 12%	618	84	702
Weekday PM Peak Hour	1.49	17% / 83%	114	557	671
Saturday Peak Hour	0.41	54% / 46%	100	85	185
<b>Office Park (ITE 750)</b>					
Weekday (Daily)	11.42	50% / 50%	5,483	5,483	10,967
Saturday (Daily)	1.64	50% / 50%	787	787	1,575
Weekday AM Peak Hour	1.74	89% / 11%	1,487	184	1,671
Weekday PM Peak Hour	1.5	14% / 86%	202	1,239	1,440
Saturday Peak Hour	0.14	74% / 26%	99	35	134
<b>Major Warehouse Building (ITE 150)</b>					
Weekday (Daily)	4.96	50% / 50%	454	454	908
Saturday (Daily)	1.22	50% / 50%	112	112	223
Weekday AM Peak Hour	0.45	82% / 18%	68	15	82
Weekday PM Peak Hour	0.51	24% / 76%	22	71	93
Saturday Peak Hour	0.12	64% / 36%	14	8	22
<b>Total Trip Generation</b>					
Weekday (Daily)			8,414	8,414	16,829
Saturday (Daily)			1,432	1,432	2,865
Weekday AM Peak Hour			2,172	283	2,455
Weekday PM Peak Hour			338	1,866	2,204
Saturday Peak Hour			213	128	341

Source: Parsons Brinckerhoff, 2006a.

#### ***SITE ACCESS AND SIGHT DISTANCE***

As with Alternative B, NW 319<sup>th</sup> Street would not be realigned under Alternative D. A review of the site plan layout (**Figure 2-8**) indicates that Alternative D would have adequate sight distance for the

three easternmost access points in both directions of travel. The two westernmost access points would not have adequate sight distance unless NW 319<sup>th</sup> Street were regraded to improve the vertical alignment.

For this alternative, NW 31<sup>st</sup> Avenue would be realigned westward to conform to Clark County intersection spacing standards along NW 319<sup>th</sup> Street. A review of the site plans indicates that once realigned, the proposed access points along NW 31<sup>st</sup> Avenue would have adequate sight distance and horizontal curvature.

#### ***PEAK HOUR INTERSECTION EFFECTS***

##### ***Weekday AM Peak Hour***

**Table 4.8-11** summarizes weekday AM peak hour *Build-out Plus Project* conditions for Alternative D. Weekday AM peak hour *Build-out Plus Project* turning movement traffic volumes for Alternative D are shown in Appendix C of the Final Traffic Impact Study (Parsons Brinckerhoff, 2006a) (DEIS Vol. II, **Appendix T**). The following seven study intersections are forecast to operate at an unacceptable LOS in the weekday AM peak hour under Alternative D.

- NW 319<sup>th</sup> Street/NW La Center Road and I-5 SB Ramps
- NW 319<sup>th</sup> Street/NW La Center Road and I-5 NB Ramps
- N 45<sup>th</sup> Avenue and Pioneer Street (SR-501)
- NW 319<sup>th</sup> Street and NW 31<sup>st</sup> Avenue
- NW La Center Road and E 4<sup>th</sup> Street
- NW La Center Road and NW Paradise Park Road
- S Hillhurst Road (SR-501) and Pioneer Street (SR-501)

##### ***Weekday PM Peak Hour***

**Table 4.8-12** summarizes weekday PM peak hour *Build-out Plus Project* conditions for Alternative D. Weekday PM peak hour *Build-out Plus Project* turning movement traffic volumes for Alternative D are shown in Appendix C of the Final Traffic Impact Study (Parsons Brinckerhoff, 2006a) (DEIS Vol. II, **Appendix T**). The following four study intersections are forecast to operate at an unacceptable LOS in the weekday PM peak hour under Alternative D.

- NW 319<sup>th</sup> Street/NW La Center Road and I-5 SB Ramps
- NW 319<sup>th</sup> Street/NW La Center Road and I-5 NB Ramps
- NW 319<sup>th</sup> Street and NW 31<sup>st</sup> Avenue
- NW La Center Road and 4<sup>th</sup> Street

**TABLE 4.8-11**  
WEEKDAY AM PEAK HOUR INTERSECTION CONDITIONS – BUILD-OUT PLUS PROJECT ALTERNATIVE D

Unsignalized Intersections <sup>1</sup>	Max Delay <sup>2</sup>	LOS	(Baseline) No-Build LOS
NW 319th Street/NW La Center Rd & I-5 SB Ramps	very high	<b>F</b>	<b>F</b>
NW 319th Street/NW La Center Rd & I-5 NB Ramps	very high	<b>F</b>	<b>B</b>
45th Avenue & Pioneer Street (SR-501)	69.8	<b>F</b>	<b>E</b>
Pioneer Street (SR-501) & NW 65th Avenue	21.6	C	C
NW 31st Avenue & NW 289th Street	10.3	B	A
NW 51st Avenue & NW 289th Street	10.4	B	B
NW 319th Street & NW 31st Avenue	very high	<b>F</b>	<b>A</b>
NE 10th Avenue & 5th Street	12.3	B	B
NE Timmen Road & NW Spencer Road	9.6	A	A
NE La Center Road & NE Timmen Road	16.9	C	C
NW La Center Road & E 4th Street	138.6	<b>F</b>	<b>F</b>
NE Highland Avenue & E 4th Street	15.4	C	B
NW Pacific Hwy & NW Bolen Street	10.7	B	B
NW La Center Road & NW Paradise Park Road	37.6	<b>E</b>	<b>D</b>
NW 319th Street & 41st Avenue	7.0	A	A
S Royle Road & S Hillhurst Road	15.4	C	B
S Hillhurst Road & Pioneer Street	142.3	<b>F</b>	<b>F</b>
N Reiman Road & Pioneer Street	17.2	C	C
NE 10th Avenue & Carty	10.5	B	B
NE 259th Street & NE 10th Avenue	12.1	B	B
<b>Signalized Intersections</b>	<b>Average Delay</b>	<b>LOS</b>	<b>LOS</b>
NE 219th Street (SR-502) & NE 10th Avenue	19.6	B	B
Pioneer Street (SR-501) & I-5 SB Ramps	7.0	A	A
Pioneer Street (SR-501) & I-5 NB Ramps	9.0	A	A

NOTES: **Bold** text denotes unacceptable LOS.

<sup>1</sup>For unsignalized intersections, “worst case” level-of-service is reported; usually the left-turn from a side street.

<sup>2</sup>Seconds per vehicle.

Source: Parsons Brinckerhoff, 2006a.

**TABLE 4.8-12**  
WEEKDAY PM PEAK HOUR INTERSECTION CONDITIONS – BUILD-OUT PLUS PROJECT ALTERNATIVE D

Unsignalized Intersections <sup>1</sup>	Max Delay <sup>2</sup>	LOS	(Baseline) No-Build LOS
NW 319th Street/NW La Center Rd & I-5 SB Ramps	very high	<b>F</b>	<b>D</b>
NW 319th Street/NW La Center Rd & I-5 NB Ramps	very high	<b>F</b>	<b>C</b>
45th Avenue & Pioneer Street (SR-501)	26.1	D	D
Pioneer Street (SR-501) & NW 65th Avenue	33.2	D	D
NW 31st Avenue & NW 289th Street	10.3	B	B
NW 51st Avenue & NW 289th Street	10.7	A	A
NW 319th Street & NW 31st Avenue	211.7	<b>F</b>	<b>A</b>
NE 10th Avenue & 5th Street	16.2	C	C
NE Timmen Road & NW Spencer Road	10.2	B	B
NE La Center Road & NE Timmen Road	21.7	C	C
NW La Center Road & E 4th Street	41.9	<b>E</b>	<b>D</b>
NE Highland Avenue & E 4th Street	11.2	B	B
NW Pacific Hwy & NW Bolen Street	10.8	B	B
NW La Center Road & NW Paradise Park Road	33.5	D	D
NW 319th Street & 41st Avenue	7.1	A	A
S Royle Road & S Hillhurst Road	11.4	B	B
S Hillhurst Road & Pioneer Street	14.9	B	B
N Reiman Road & Pioneer Street	13.8	B	B
NE 10th Avenue & Carty	12.5	B	B
NE 259th Street & NE 10th Avenue	15.3	C	C
<b>Signalized Intersections</b>	<b>Average Delay</b>	<b>LOS</b>	<b>LOS</b>
NE 219th Street (SR-502) & NE 10th Avenue	25.9	C	C
Pioneer Street (SR-501) & I-5 SB Ramps	8.7	A	A
Pioneer Street (SR-501) & I-5 NB Ramps	10.5	B	A

NOTES: **Bold** text denotes unacceptable LOS.

<sup>1</sup>For unsignalized intersections, “worst case” level-of-service is reported; usually the left-turn from a side street.

<sup>2</sup>Seconds per vehicle.

Source: Parsons Brinckerhoff, 2006a.

***Saturday Peak Hour***

**Table 4.8-13** summarizes Saturday peak hour *Build-out Plus Project* conditions for Alternative D. Saturday peak hour *Build-out Plus Project* turning movement traffic volumes for Alternative D are shown in Appendix C of the Final Traffic Impact Study (Parsons Brinckerhoff, 2006a) (DEIS Vol. II, **Appendix T**). NW 319<sup>th</sup> Street/NW La Center Road and I-5 NB Ramps (Intersection #4) is the only intersection forecast to operate at an unacceptable LOS in the Saturday peak hour under Alternative D.

***ACCIDENT ANALYSIS***

As with Alternative A, Alternative D would impact the La Center Interchange (NW 319<sup>th</sup> Street and I-5), which has been determined by WsDOT to be a High Accident Corridor due to traffic backups onto the I-5 mainline. This is a significant impact. Mitigation measures are recommended in **Section 5.0** to reduce the impact to less than significant.

***INTERSTATES 5 AND 205 THROUGH VANCOUVER***

Because Alternative D would not include the development of an events center, traffic resulting from Alternative D would not measurably affect traffic congestion levels along I-5 and I-205.

***COINCIDENTAL EVENTS AT COWLITZ EVENTS CENTER AND CLARK COUNTY AMPHITHEATRE ANALYSIS***

Alternative D would not include the development of an events center and, therefore, no impacts would result from an event center as discussed under Alternative A. This impact would be less than significant.

***EMERGENCY SERVICES ANALYSIS***

While Alternative D would consist of the development of a business park rather than a casino-resort project, Alternative D would impact fire response from the La Center area fire stations responding to calls west of I-5 using NW 319<sup>th</sup> Street similar to Alternative A. This is a significant impact. By mitigating to a minimum LOS D at the interchange (as discussed in **Section 5.2.7**) and improving the interchange roads and NW 319<sup>th</sup> Street to urban standards, response times would be improved back to the no-build alternative as there would be less traffic queuing to bypass, as well as adequate space on the I-5 overpass and along NW 319<sup>th</sup> Street for vehicles to pull off to the side to allow emergency vehicles to pass.

Alternative D would have very minor impacts on the other fire stations similar to Alternative A. This would be a less than significant impact.

***IMPACT ANALYSIS***

Development of Alternative D would have a significant impact on transportation and circulation in the project area as described above. **Section 5.2.7** presents a list of mitigation measures recommended to

**TABLE 4.8-13**  
SATURDAY PEAK HOUR INTERSECTION CONDITIONS – BUILD-OUT PLUS PROJECT  
ALTERNATIVE D

Unsignalized Intersections <sup>1</sup>	Max Delay <sup>2</sup>	LOS	(Baseline) No-Build LOS
NW 319th Street/NW La Center Rd & I-5 SB Ramps	34.4	D	C
NW 319th Street/NW La Center Rd & I-5 NB Ramps	44.3	<b>E</b>	<b>B</b>
45th Avenue & Pioneer Street (SR-501)	18.4	C	C
Pioneer Street (SR-501) & NW 65th Avenue	18.4	C	C
NW 31st Avenue & NW 289th Street	9.3	A	A
NW 51st Avenue & NW 289th Street	9.8	A	A
NW 319th Street & NW 31st Avenue	12.5	B	A
NE 10th Avenue & 5th Street	14.0	B	B
NE Timmen Road & NW Spencer Road	9.5	A	A
NE La Center Road & NE Timmen Road	14.1	B	B
NW La Center Road & E 4th Street	16.0	C	C
NE Highland Avenue & E 4th Street	9.5	A	A
NW Pacific Hwy & NW Bolen Street	10.0	A	A
NW La Center Road & NW Paradise Park Road	21.6	C	C
NW 319th Street & 41st Avenue	6.7	A	A
S Royle Road & S Hillhurst Road	9.2	A	A
S Hillhurst Road & Pioneer Street	11.8	B	B
N Reiman Road & Pioneer Street	11.2	B	B
NE 10th Avenue & Carty	11.3	B	B
NE 259th Street & NE 10th Avenue	11.8	B	B
<b>Signalized Intersections</b>	<b>Average Delay</b>	<b>LOS</b>	<b>LOS</b>
NE 219th Street (SR-502) & NE 10th Avenue	21.3	C	C
Pioneer Street (SR-501) & I-5 SB Ramps	6.2	A	A
Pioneer Street (SR-501) & I-5 NB Ramps	6.8	A	A

NOTES: **Bold** text denotes unacceptable LOS.

<sup>1</sup>For unsignalized intersections, “worst case” level-of-service is reported; usually the left-turn from a side street.

<sup>2</sup>Seconds per vehicle.

Source: Parsons Brinckerhoff, 2006a.

reduce project-related traffic impacts. With the mitigation measures in place, all of the study intersections show LOS D or better as provided for in the MOU (DEIS Vol. I, **Appendix C**) and EPHS Ordinance (**Appendix U** of FEIS) with the exception of NW La Center Road and NW Paradise Park Road, which remains unacceptable at LOS E. Therefore, this impact would continue to be significant after mitigation.

#### **4.8.6 ALTERNATIVE E – RIDGEFIELD INTERCHANGE SITE**

##### ***STUDY AREA***

Alternative E would not modify any existing public roadway alignments, however, one private road and one driveway would become public roadways as discussed below. Primary access would be through a new driveway off of N 65<sup>th</sup> Avenue, north of the intersection of Pioneer Street (SR-501) and N 65<sup>th</sup> Avenue. Two additional access driveways flank either side of the primary access driveway. The southernmost driveway would provide access to the smaller (southern) porte-cochere, a parking garage, the RV Park, cultural center, Tribal offices and Tribal housing. The northernmost driveway would provide access to a second parking garage and surface parking, including the employee parking spaces. On the northern boundary of the project site, a driveway located along NE 279<sup>th</sup> Street, east of its intersection with N 65<sup>th</sup> Avenue, would provide additional access to the employee parking spaces. 78<sup>th</sup> Place/N 3<sup>rd</sup> Street, currently a private dead-end road, would be extended from its connection with NE 264<sup>th</sup> Avenue/S 5<sup>th</sup> Street, north through the project site to connect with NE 279<sup>th</sup> Street. This roadway would provide access to the Tribal housing, as well as an indirect route to the Tribal offices, cultural center, RV Park, and casino-hotel facilities. According to Clark County Code, a private roadway cannot connect two public roads (Clark County, 2004b), therefore, this roadway would be reclassified as a public road/urban collector. However, once the land is in trust, the County would no longer have jurisdiction over the road. Accordingly, the Tribe would grant the County right-of-way over the road. **Figure 2-9** presents the site plan for Alternative E.

##### ***TRIP GENERATION***

Trip generation methodology is the same as used for Alternatives A through C and shown in **Section 4.8.1** above. As shown in **Table 4.8-14**, Alternative E would add 17,400 weekday daily trips to the circulation network, with 482 trips occurring in the AM peak hour, 2,400 trips occurring in the PM peak hour and 2,942 trips occurring in the site peak hour. On Saturday, Alternative E would add 19,900 Saturday daily trips to the circulation network, with 2,373 trips occurring in the peak hour.

##### ***TRIP DISTRIBUTION AND ASSIGNMENT***

Trip distribution and assignment methodology is the same as used for Alternatives A through C and shown in **Section 4.8.1** above. Trip assignments for Alternative E are shown in Appendix C of the Final Traffic Impact Study (Parsons Brinckerhoff, 2006a) (DEIS Vol. II, **Appendix T**) and are the same as shown for Alternatives A through C.

**TABLE 4.8-14**  
TRIP GENERATION – ALTERNATIVE E

Time Period	Rate	In/Out Split	Trip Generation		
			In	Out	Total
<b>Casino Trip Generation</b>					
Weekday (Daily)	61.89				10,500
Saturday (Daily)	93.24				13,500
Weekday AM Peak Hour	2.95	70% / 30%	277	119	396
Weekday system PM Peak Hour	9.18	50% / 50%	649	648	1,297
Weekday Site Peak Hour	10.94	52% / 48%	804	742	1,546
Saturday Peak Hour	7.04	62% / 38%	586	358	944
<b>Hotel Trip Generation</b>					
Weekday (Daily)	4.12				1028
Saturday (Daily)	4.10				1024
Weekday AM Peak Hour	0.28	61% / 39%	42	28	70
Weekday system PM Peak Hour	0.24	53% / 47%	38	34	72
Weekday Site Peak Hour	0.30	53% / 47%	48	42	90
Saturday Peak Hour	0.36	56% / 44%	60	48	108
<b>Retail Trip Generation</b>					
Weekday (Daily)	4.29				686
Saturday (Daily)	5.00				800
Weekday AM Peak Hour	.10	61%/39%	10	6	16
Weekday system PM Peak Hour	.38	48%/52%	29	32	61
Weekday Site Peak Hour	.38	48%/52%	29	32	61
Saturday Peak Hour	.50	52%/48%	42	38	80
<b>RV Park Trip Generation</b>					
Weekday (Daily)	1.00				200
Saturday (Daily)	1.00				200
Weekday AM Peak Hour	.20	10%/90%	8	32	40
Weekday system PM Peak Hour	.30	82%/18%	50	10	60
Weekday Site Peak Hour	.37	53%/47%	39	35	74
Saturday Peak Hour	.36	52%/48%	37	33	70
<b>Event Center Trip Generation</b>					
Weekday (Daily)			2,400	2,400	4,800
Saturday (Daily)			2,400	2,400	4,800
Weekday AM Peak Hour	n/a	n/a	n/a	n/a	n/a
Weekday system PM Peak Hour	85 <sup>th</sup> % event	82% / 18%	792	174 <sup>1</sup>	966
Weekday Site Peak Hour	85 <sup>th</sup> % event	82% / 18%	1032	227	1259
Saturday Peak Hour	85 <sup>th</sup> % event	82% / 18%	1032	227	1259
<b>Total Trip Generation</b>					
Weekday (Daily)					17,400
Saturday (Daily)					19,900

Weekday AM Peak Hour			329	153	482
Weekday system PM Peak Hour			1,510	890	2,400
Weekday Site Peak Hour			1,905	1,037	2,942
Saturday Peak Hour			1,710	663	2,373

## NOTES:

<sup>1</sup> Exiting traffic includes limousines, drop-offs of event-goers, taxis, etc. Some of these trips will circulate to other parking on the site, while others will depart the site and return after the event has ended.

Source: Parsons Brinckerhoff, 2006a.

***SITE ACCESS AND SIGHT DISTANCE***

Access to the Alternative E site was assessed to determine whether any operational concerns at each of the project access points would arise. The existing private dead-end road, 78<sup>th</sup> Place/N 3<sup>rd</sup> Street, would be extended north from its connection with NE 264<sup>th</sup> Avenue/S 5<sup>th</sup> Street through the project site to connect with NE 279<sup>th</sup> Street. Additionally, the existing private driveway off N 65<sup>th</sup> Avenue would be extended east through the site to connect with N 65<sup>th</sup> Avenue and 78<sup>th</sup> Place/N 3<sup>rd</sup> Street, providing access to the southern porte cochere, employee parking lot, RV facility, cultural center and tribal offices. A review of the site plan for Alternative E shows adequate sight distance for the access points along N 65<sup>th</sup> Avenue, NE 279<sup>th</sup> Street, and the two new public roadways through the site.

***PEAK HOUR INTERSECTION EFFECTS******Weekday AM Peak Hour***

**Table 4.8-15** summarizes weekday AM peak hour *Build-out Plus Project* conditions for Alternative E. Weekday AM peak hour *Build-out Plus Project* turning movement traffic volumes for Alternative E are shown in Appendix C of the Final Traffic Impact Study (Parsons Brinckerhoff, 2006a) (DEIS Vol. II, **Appendix T**). The following seven study intersections are forecast to operate at an unacceptable LOS in the weekday AM peak hour under Alternative E.

- NW 319<sup>th</sup> Street/NW La Center Road and I-5 SB Ramps
- NW 319<sup>th</sup> Street/NW La Center Road and I-5 NB Ramps
- Pioneer Street and NW 65<sup>th</sup> Avenue
- NW La Center Road and E 4<sup>th</sup> Street
- S Hillhurst Road and Pioneer Street (SR-501)
- Pioneer Street (SR-501) and I-5 SB Ramps
- Pioneer Street (SR-501) and I-5 NB Ramps

**TABLE 4.8-15**  
WEEKDAY AM PEAK HOUR INTERSECTION CONDITIONS – BUILD-OUT PLUS PROJECT  
ALTERNATIVE E

Unsignalized Intersections <sup>1</sup>	Max Delay <sup>2</sup>	LOS	(Baseline) No-Build LOS
NW 319th Street/NW La Center Rd & I-5 SB Ramps	>300	<b>F</b>	<b>F</b>
NW 319th Street/NW La Center Rd & I-5 NB Ramps	>300	<b>F</b>	<b>F</b>
45th Avenue & Pioneer Street (SR-501)	0.67	C	C
NW 31st Avenue & NW 289th Street	9.6	A	A
NW 51st Avenue & NW 289th Street	10.2	B	B
NW 319th Street & NW 31st Avenue	9.3	A	A
NE 10th Avenue & 5th Street	12.0	B	B
NE Timmen Road & NW Spencer Road	9.6	A	A
NE La Center Road & NE Timmen Road	>300	<b>F</b>	<b>F</b>
NW La Center Road & E 4th Street	72.3	<b>F</b>	<b>F</b>
NE Highland Avenue & E 4th Street	14.3	B	B
NW Pacific Hwy & NW Bolen Street	10.3	B	B
NW La Center Road & NW Paradise Park Road	30.7	D	D
NW 319th Street & 41st Avenue	7.2	A	A
S Royle Road & S Hillhurst Road	14.7	B	B
S Hillhurst Road & Pioneer Street	101.7	<b>F</b>	<b>F</b>
N Reiman Road & Pioneer Street	16.1	C	C
NE 10th Avenue & Carty	10.4	B	B
NE 259th Street & NE 10th Avenue	11.8	B	B
<b>Signalized Intersections</b>	<b>Average Delay</b>	<b>LOS</b>	<b>LOS</b>
NE 219th Street (SR-502) & NE 10th Avenue	18.3	B	B
Pioneer Street (SR-501) and NW 65 <sup>th</sup> Avenue	20.9	C	C
Pioneer Street (SR-501) & I-5 SB Ramps	10.3	B	A
Pioneer Street (SR-501) & I-5 NB Ramps	33	D	A

NOTES: **Bold** text denotes unacceptable LOS.

<sup>1</sup>For unsignalized intersections, “worst case” level-of-service is reported; usually the left-turn from a side street.

<sup>2</sup>Seconds per vehicle.

Source: Parsons Brinckerhoff, 2006a.

***Weekday PM Peak Hour***

**Table 4.8-16** summarizes weekday PM peak hour *Build-out Plus Project* conditions for Alternative E. Weekday PM peak hour *Build-out Plus Project* turning movement traffic volumes for Alternative E are shown in Appendix C of the Final Traffic Impact Study (Parsons Brinckerhoff, 2006a) (DEIS Vol. II, **Appendix T**). The following seven study intersections are forecast to operate at an unacceptable LOS in the weekday PM peak hour under Alternative E.

- NW 319<sup>th</sup> Street/NW La Center Road and I-5 SB Ramps
- NW 319<sup>th</sup> Street/NW La Center Road and I-5 NB Ramps
- NE La Center Road and NE Timmen Road
- Pioneer Street (SR-501) and NW 65<sup>th</sup> Avenue
- NW La Center Road and E 4<sup>th</sup> Street
- Pioneer Street (SR-501) and I-5 SB Ramps
- Pioneer Street (SR-501) and I-5 NB Ramp

***Saturday Peak Hour***

**Table 4.8-17** summarizes Saturday peak hour *Build-out Plus Project* conditions for Alternative E. Saturday peak hour *Build-out Plus Project* turning movement traffic volumes for Alternative E are shown in Appendix C of the Final Traffic Impact Study (Parsons Brinckerhoff, 2006a) (DEIS Vol. II, **Appendix T**). The following three study intersections are forecast to operate at an unacceptable LOS in the Saturday peak hour under Alternative E.

- Pioneer Street (SR-501) and NW 65<sup>th</sup> Avenue
- Pioneer Street (SR-501) and I-5 SB Ramps
- Pioneer Street (SR-501) and I-5 NB Ramps

***ACCIDENT ANALYSIS***

The La Center and Ridgefield interchanges are in an area determined by WsDOT to be a High Accident Corridor due to traffic backups onto the I-5 mainline. Alternative E would have an impact on the Ridgefield Interchange, however, based on an analysis of the project trips added to projected (2010) on-ramp queues, these queues would be contained during typical weekday peak hour periods. Therefore, Alternative E would not exacerbate the high accident condition in this area. Additionally, the recently constructed WsDOT project at the Ridgefield Interchange provided minor improvements (adding right-turn lanes to the northbound off-ramp and southbound on-ramp, etc.), alleviating the frequent ramp backups. With these improvements plus project mitigation in place, backups onto the I-5 mainline would be lessened, thereby resulting in greater safety in the High Accident Corridor. This impact is less than significant. No mitigation is required.

**TABLE 4.8-16**  
WEEKDAY PM PEAK HOUR INTERSECTION CONDITIONS – BUILD-OUT PLUS PROJECT ALTERNATIVE E

Unsignalized Intersections <sup>1</sup>	Max Delay <sup>2</sup>	LOS	(Baseline) No-Build LOS
NW 319th Street/NW La Center Rd & I-5 SB Ramps	>300	<b>F</b>	<b>F</b>
NW 319th Street/NW La Center Rd & I-5 NB Ramps	>300	<b>F</b>	<b>F</b>
45th Avenue & Pioneer Street (SR-501)	0.41	B	B
NW 31st Avenue & NW 289th Street	10.5	B	B
NW 51st Avenue & NW 289th Street	9.6	A	A
NW 319th Street & NW 31st Avenue	9.1	A	A
NE 10th Avenue & 5th Street	16.8	C	C
NE Timmen Road & NW Spencer Road	10.2	B	B
NE La Center Road & NE Timmen Road	100	<b>F</b>	<b>F</b>
NW La Center Road & E 4th Street	>300 (WB Left)	<b>F</b>	<b>F</b>
NE Highland Avenue & E 4th Street	11.1	B	B
NW Pacific Hwy & NW Bolen Street	10.7	B	B
NW La Center Road & NW Paradise Park Road	110	<b>F</b>	<b>F</b>
NW 319th Street & 41st Avenue	7.5	A	A
S Royle Road & S Hillhurst Road	10.9	B	B
S Hillhurst Road & Pioneer Street	14.5	B	B
N Reiman Road & Pioneer Street	13.4	B	B
NE 10th Avenue & Carty	12.4	B	B
NE 259th Street & NE 10th Avenue	15.4	C	C
<b>Signalized Intersections</b>	<b>Average Delay</b>	<b>LOS</b>	<b>LOS</b>
NE 219th Street (SR-502) & NE 10th Avenue	26.0	C	C
Pioneer Street (SR-501) and NW 65 <sup>th</sup> Avenue	very high	<b>F</b>	C
Pioneer Street (SR-501) & I-5 SB Ramps	>300	<b>F</b>	A
Pioneer Street (SR-501) & I-5 NB Ramps	>300	<b>F</b>	A

NOTES: **Bold** text denotes unacceptable LOS.

<sup>1</sup> For unsignalized intersections, “worst case” level-of-service is reported; usually the left-turn from a side street.

<sup>2</sup> Seconds per vehicle.

Source: Parsons Brinckerhoff, 2006a.

**TABLE 4.8-17**  
SATURDAY PEAK HOUR INTERSECTION CONDITIONS – BUILD-OUT PLUS PROJECT ALTERNATIVE E

Unsignalized Intersections <sup>1</sup>	Max Delay <sup>2</sup>	LOS	(Baseline) No-Build LOS
NW 319th Street/NW La Center Rd & I-5 SB Ramps	30.5	D	C
NW 319th Street/NW La Center Rd & I-5 NB Ramps	13.6	B	B
45th Avenue & Pioneer Street (SR-501)	20.4	C	C
Pioneer Street (SR-501) & NW 65th Avenue	very high	<b>F</b>	<b>C</b>
NW 31st Avenue & NW 289th Street	10.7	B	B
NW 51st Avenue & NW 289th Street	9.9	A	A
NW 319th Street & NW 31st Avenue	8.8	A	A
NE 10th Avenue & 5th Street	14.3	B	B
NE Timmen Road & NW Spencer Road	9.5	A	A
NE La Center Road & NE Timmen Road	14.9	B	B
NW La Center Road & E 4th Street	19.6	C	C
NE Highland Avenue & E 4th Street	9.6	A	A
NW Pacific Hwy & NW Bolen Street	10.2	B	A
NW La Center Road & NW Paradise Park Road	24.7	C	C
NW 319th Street & 41st Avenue	7.3	A	A
S Royle Road & S Hillhurst Road	9.3	A	A
S Hillhurst Road & Pioneer Street	11.9	B	B
N Reiman Road & Pioneer Street	11.3	B	B
NE 10th Avenue & Carty	11.5	B	B
NE 259th Street & NE 10th Avenue	12.1	B	B
<b>Signalized Intersections</b>	<b>Average Delay</b>	<b>LOS</b>	<b>LOS</b>
NE 219th Street (SR-502) & NE 10th Avenue	21.4	C	C
Pioneer Street (SR-501) & I-5 SB Ramps	178.4	<b>F</b>	<b>A</b>
Pioneer Street (SR-501) & I-5 NB Ramps	319.3	<b>F</b>	<b>A</b>

NOTES: **Bold** text denotes unacceptable LOS.

<sup>1</sup>For unsignalized intersections, “worst case” level-of-service is reported; usually the left-turn from a side street.

<sup>2</sup>Seconds per vehicle.

Source: Parsons Brinckerhoff, 2006a.

***INTERSTATES 5 AND 205 THROUGH VANCOUVER***

Impacts to traffic congestion levels along I-5 and I-205 resulting from special event traffic during the weekday PM peak hour under Alternative E would be similar to Alternative A.

***COINCIDENTAL EVENTS AT COWLITZ EVENTS CENTER AND CLARK COUNTY AMPHITHEATRE ANALYSIS***

Impacts from coincidental events at Cowlitz Events Center and Clark County Amphitheatre under Alternative D would be similar to Alternative A.

***EMERGENCY SERVICES ANALYSIS***

Alternative E would directly impact the Fire District 12 station on N. 65<sup>th</sup> Avenue, as it is within one-half mile of the fire station and would significantly add to the traffic volumes along N. 65<sup>th</sup> Avenue as well as Pioneer Street between the casino site and I-5. The fire station exit onto N. 65<sup>th</sup> Avenue would experience delays due to additional site-bound traffic on 65<sup>th</sup> Avenue but would be at LOS C in an unsignalized condition during the site peak hours. This impact would be less than significant.

***IMPACT ANALYSIS***

Development of Alternative E would have a significant impact on transportation and circulation in the project area as described above. **Section 5.2.7** presents a list of mitigation measures recommended to reduce project-related traffic impacts. With the mitigation measures in place, all of the study intersections show LOS D or better, with the exception of NW 319<sup>th</sup> Street/NW La Center Road and I-5 SB ramps, which remains unacceptable at LOS F in the weekday AM and LOS E in the weekday PM peak hours. Therefore, this impact continues to be significant after mitigation.

**4.8.7 ALTERNATIVE F – NO ACTION**

The traffic conditions under the No Action Alternative would continue as described for the baseline *Build-out without Project* conditions. No project related traffic would be added to the local roadways, I-5, or SR-501; therefore, no effects would occur under this alternative.