EXHIBIT 13

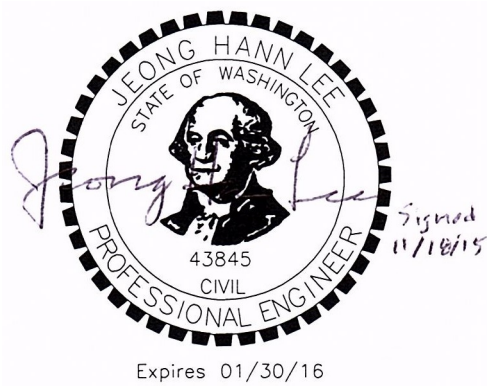
Revised Report

Parklands at Camas Meadows
Revised Traffic Impact Study

November 18, 2015

H. Lee & Associates

PARKLANDS AT CAMAS MEADOWS
REVISED TRAFFIC IMPACT STUDY



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STUDY SUMMARY

INTRODUCTION

The project site is comprised of the tax lots 175948-000 and 986031-650 and is located at 542 NW 218th Street in Camas, Washington. Figure 1 shows the project vicinity.

Project Description

The proposed project is a business park with four buildings comprised of up to 141,600 square feet in space, a 3,000 square foot coffee shop with a drive through, and a 3,000 square foot high quality restaurant. Also, there are two residential components of the proposed project which includes 42 single family residential lots and 24 residential condominium units. Access will be provided by the extension of NW Camas Meadows Drive to the east, which will connect to NW Larkspur Street. Figure 2 shows the project site plan. Initial construction is expected to begin in 2016 with full occupancy by 2020.

Scope of Traffic Impact Study

The scope of the traffic impact study was developed from known City of Camas and City of Vancouver traffic study requirements. From this information, the following intersections listed below were analyzed:

- NE 13th Street/NE 192nd Avenue
- SE 1st Street/NE & SE 192nd Avenue
- NW Lake Road/NW Parker Street/NW Larkspur Street
- NW Parker Street/NW 38th Avenue
- SE Brady Road/SE 192nd Avenue
- NE Goodwin Road/NE Ingle Road
- NE Goodwin Road/NW Camas Meadows Drive
- NW Parker Street/NW Pacific Rim Boulevard/NW Pacific Rim Drive
- NW Brady Road/NW 16th Avenue
- NW & SE Brady Road/NW McIntosh Road
- NW Payne Street/NW Lake Road

The remainder of this report presents the following analysis:

- Existing traffic conditions in the project study area.

- 2020 "Without Project" condition to establish the baseline condition by which the project impacts could be determined.

- Trip generation estimates for the proposed development.

- 2020 "With Project" condition to determine project traffic impacts.

SUMMARY OF FINDINGS

Findings

The following are the findings from the traffic analysis:

- The proposed development is expected to generate 1,895 net new daily, 197 net new A.M. peak hour (146 in, 51 out), and 191 net new P.M. peak hour (67 in, 124 out) trips.

- The TMZ corridors within the City of Vancouver impacted by 5 or more P.M. peak hour trips as shown below.

TMZ Corridor	Limits of TMZ Corridor	P.M. Peak Hour Trip Impact
18th Street	112th Avenue – 138th Avenue	0
18th Street	138th Avenue – 162nd Avenue	0
28th Street	112th Avenue – 138th Avenue	0
28th Street	138th Avenue – 162nd Avenue	0
112th Avenue	Mill Plain Blvd – 28th Street	0
112th Avenue	28th Street – 51st Street	0
136th Avenue	Mill Plain Blvd – 28th Street	0
138th Avenue	28th Street – Fourth Plain Blvd	0
162nd Avenue	1st Street – Fourth Plain Blvd	0
164th Avenue	SR 14 – 1st Street	0
192nd Avenue	SR 14 – 18th Street	150
Andresen Road	Mill Plain Blvd – SR 500	0
Andresen Road	SR 500 – 78th Street	0
Burton Road	Andresen Road – 112th Avenue	0
Fourth Plain Blvd	Port – I-5	0
Fourth Plain Blvd	I-5 – Stapleton Road	0
Fourth Plain Blvd	Stapleton Road to I-205	0
Fourth Plain Blvd	117th Avenue – 162nd Avenue	0
Mill Plain Blvd	I-5 – Andresen Road	0
Mill Plain Blvd	Andresen Road – I-205	0
Mill Plain Blvd	I-205 – 136th Avenue	0
Mill Plain Blvd	136th Avenue – 164th Avenue	0
Mill Plain Blvd	164th Avenue – 192nd Avenue	0
St. James/St. Johns Road	Fourth Plain – 78th Street	0

- Per conversations with Olson Engineering, Inc. pertaining to the Green Mountain Development, the NE Goodwin Road/NE Ingle Road intersection will be converted to a signalized intersection with additional eastbound and westbound left turn lanes. The NE Goodwin Road/NE Ingle Road intersection was analyzed in the 2020 "Without Project" and "With Project" condition based on those improvements.

The 2015 existing and 2020 "Without Project" levels of service at the southbound approach of the NW Payne Street/NW Lake Road intersection are operating at LOS D and E, respectively. With the extension of NW Camas Meadows Drive to NW Larkspur Street and the resulting trip diversion, the level of service is projected to be LOS B in the 2020 "With Project" condition.

- NE 13th Street/NE 192nd Avenue
  The southbound left turn movement in the 2020 "With Project" A.M. peak hour condition exceeds the available storage by 19 feet. This is less than one car length and is not significantly over the available storage. The southbound left turn movement LOS and v/c ratio meet the City of Vancouver standards so no mitigation is necessary. The city should monitor this condition periodically to see if it becomes an operations issue.

- SE Brady Road/NE 192nd Avenue
  The westbound left turn movement in the 2020 "With Project" A.M. and P.M. peak hour conditions exceed the available storage by 241 and 59 feet, respectively. This queue exceeding the available storage may be partially mitigated by reallocating some of the green time from the eastbound through phase to the westbound left turn phase. Reallocating the green time from NE 192nd Avenue to the westbound left movement from SE Brady Road can reduce the excessive queues along SE Brady Road. Since overall levels of service is relatively low (LOS C in the A.M. peak and LOS B in the P.M peak), it is likely that green time from NE 192nd Avenue can be reallocated to SE Brady Road. The westbound left turn movement LOS and v/c ratio meet the City of Vancouver standards so no mitigation is necessary. The City of Vancouver should monitor this movement periodically to see if it becomes a traffic operations issue.

- All of the study intersections are projected to operate at acceptable levels of service for the 2020 "With Project" condition.

Recommendations

- Based on the traffic impact analysis documented in this report, no off-site mitigation would be needed with the build out of the proposed project.

- Because the NW Camas Meadows Drive extension will be constructed for the Parklands at Camas Meadows project, the access intersections sight distances shall be verified later in the final engineering and construction stages of development.

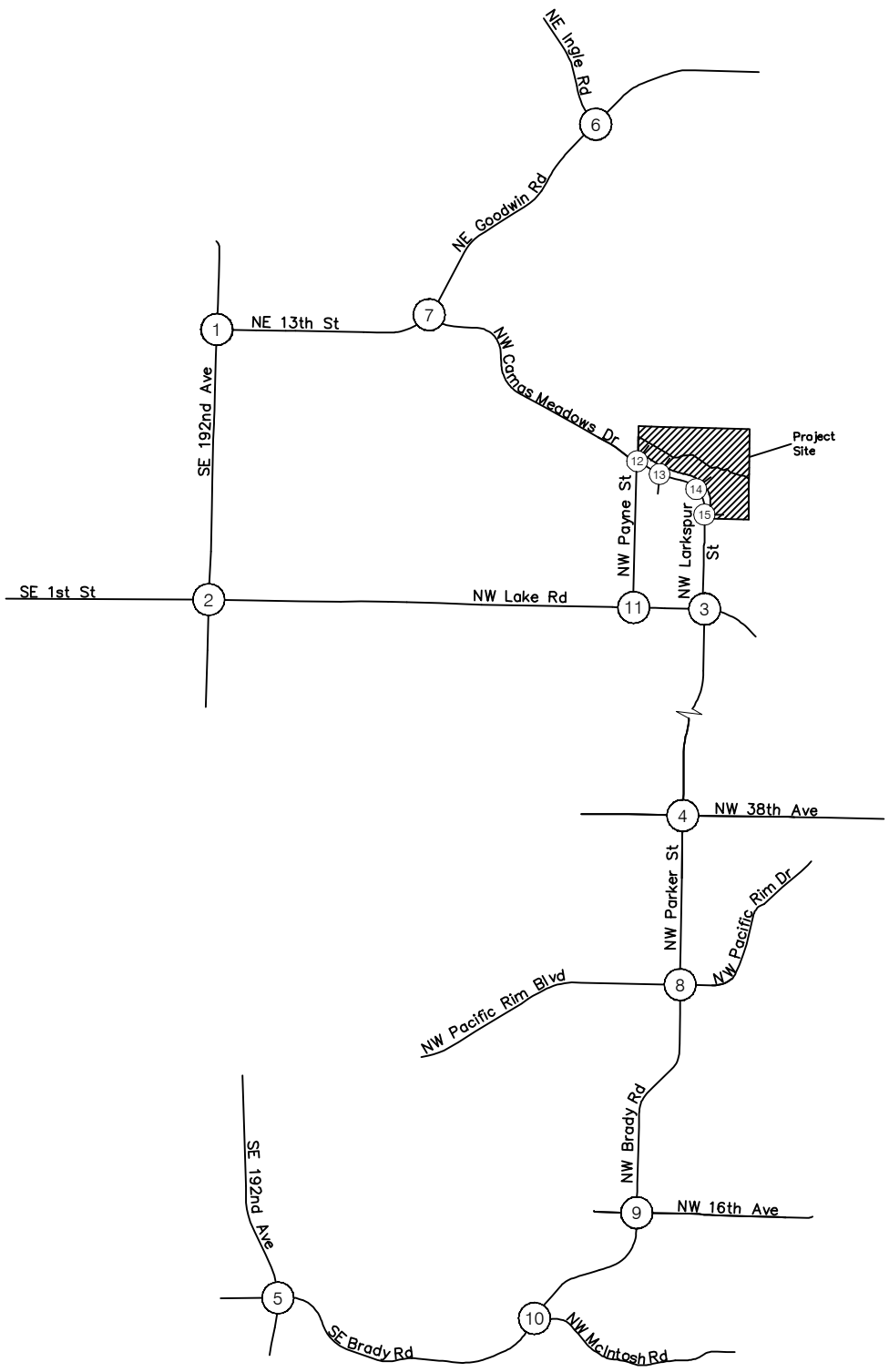

FIGURE 1
Site Vicinity Map

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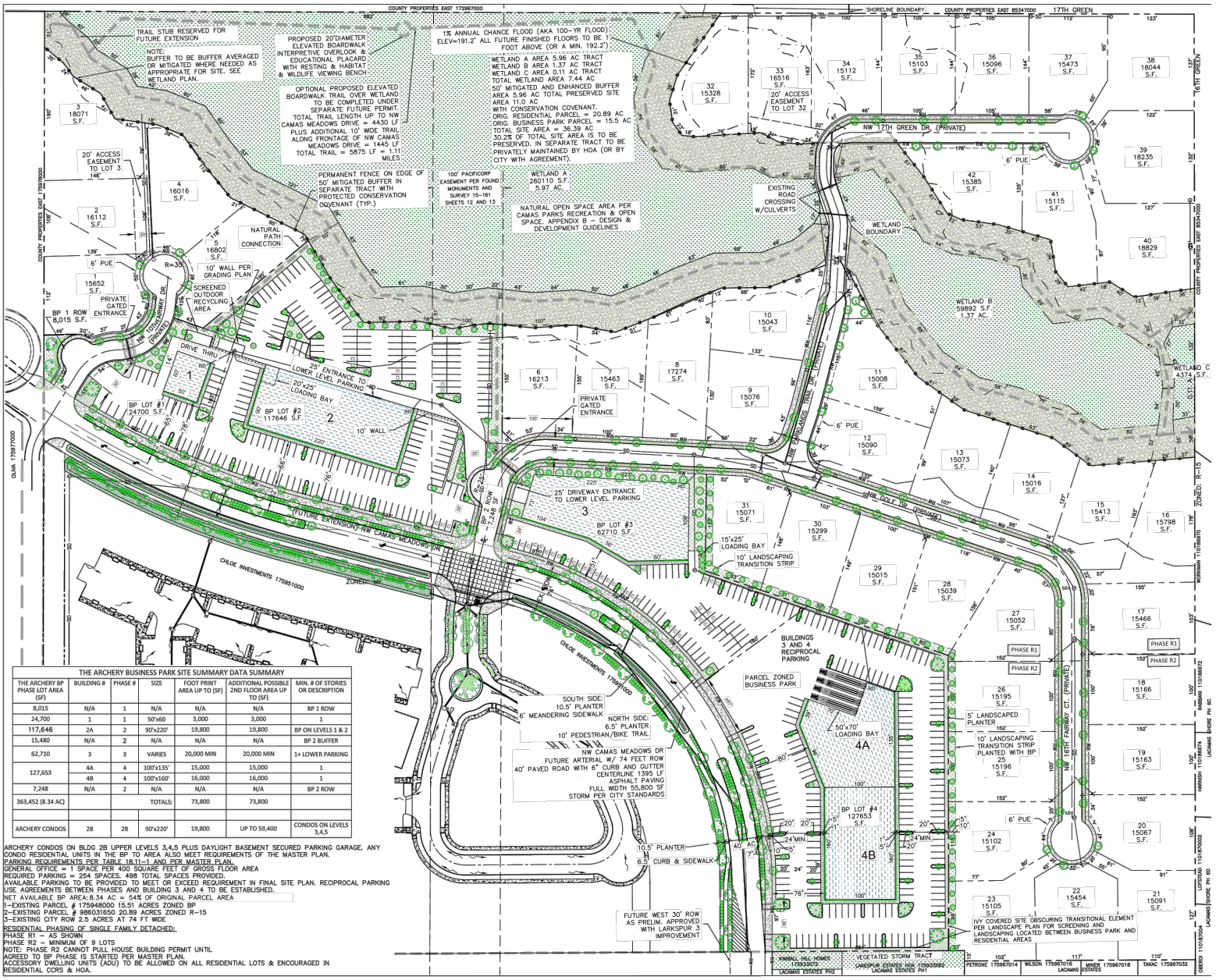

FIGURE 2
Site Plan

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SECTION II
EXISTING CONDITIONS

SITE CONDITION AND ADJACENT LAND USE

The proposed project site is comprised of the following two tax lots: 175948-000 and 986031-650. The proposed site is vacant. Camas Meadows Golf Course exists to the west, north and east. Residential uses exist to the east and south of the project site.

TRANSPORTATION FACILITIES

The following provides a description of the existing street system in the study area.

SE 1st Street: SE 1st Street is classified as a principal arterial east of SE 164th Avenue. West of SE 164th Avenue, SE 1st Street is a collector arterial. Between SE 192nd Avenue and SE 202nd Avenue, the roadway is comprised of four lanes with a center median, additional turn lanes at major intersections, bike lanes and sidewalks. West of SE 192nd Avenue, the roadway is comprised of two-lanes with additional turn lanes at major intersections. Intermittent sidewalks exist along both sides of the roadway. The posted speed limit is 40 mph.

NE 13th Street: NE 13th Street is classified as a collector arterial roadway. The roadway is comprised of two lanes. Intermittent sidewalks exist on the north side of the roadway. The posted speed limit is 35 mph.

NW 16th Avenue: NW 16th Avenue is classified as a collector roadway. The roadway is comprised of two to three lanes. West of NW Parker Street, sidewalks exist on the south side of the roadway. East of NW Parker Street sidewalks and bike lanes exist on both sides of the roadway. The posted speed limit is 35 mph.

NW 38th Avenue: NW 38th Avenue is classified as an arterial roadway. The roadway is comprised of two to three lanes. Intermittent sidewalks and bike lanes exist on both sides of the roadway. The posted speed limit is 35 mph.

NE & SE 192nd Avenue: NE 192nd Avenue is classified as a principal arterial roadway. North of NE 3rd Street, the roadway is comprised of two lanes and additional turn lanes at major intersections. South of NE 3rd Street, the roadway is comprised of four lanes with a center median and additional turn lanes at major intersections. Bike lanes and sidewalks exist on both sides of the roadway. The posted speed limit is 40 mph.

NW & SE Brady Road: NW & SE Brady Road is a two lane arterial roadway with medians and additional turn pockets at major intersections. The posted speed limit is 40 mph from SE 192nd Avenue to NW McIntosh Road. North of McIntosh Road the speed limit changes to 35 mph. Intermittent sidewalks and bike lanes exist along both sides of the roadway.

NW Parker Street: NW Parker Street is classified as an arterial roadway. Between NW 24th Avenue and NW 38th Avenue the roadway is comprised of four lanes and a center median with additional turn pockets at major intersections. Other sections of the roadway are comprised of two to three lanes with a center median and additional turn pockets at major intersections. Sidewalks and bike lanes exist on both sides of the roadway. The posted speed limit is 35 mph.

NW Pacific Rim Boulevard: NW Pacific Rim Boulevard is classified as an arterial roadway. The roadway is comprised of four to five lanes with an intermittent center median and additional turn pockets at major intersections. Sidewalks and bike lanes exist on both sides of the roadway. The posted speed limit is 35 mph.

NW Pacific Rim Drive: NW Pacific Rim Drive is classified as a collector roadway. The roadway is comprised of two lanes. Sidewalks exist on both sides of the roadway. The posted speed limit is 25 mph.

NW Lake Road: NW Lake Road is classified as an arterial roadway. The roadway is comprised of four to five lanes with an intermittent center median and additional turn pockets at major intersections. Sidewalks and bike lanes exist on both sides of the roadway. The posted speed limit is 40 mph west of NW Parker Street and 35 mph east of NW Parker Street.

NW Larkspur Street: NW Larkspur Street is classified as an arterial roadway. The roadway is comprised of two lanes with additional turn pockets at major intersections. Intermittent sidewalks exist along the west side of the roadway and continuous sidewalks exist along the east side of the roadway. There is no posted speed limit but it is assumed to be 25 mph.

NW Camas Meadows Drive: NW Camas Meadows Drive is classified as an arterial roadway. The roadway is comprised of two to three lanes. Sidewalks exist on both sides of the roadway. The posted speed limit is 35 mph.

NW McIntosh Road: NW McIntosh Road is classified as an arterial roadway. The roadway is comprised of two lanes. Intermittent sidewalks exist along both sides of the roadway. The posted speed limit is 35 mph.

NE Ingle Road: NE Ingle Road is classified as a collector roadway. The roadway is comprised of two lanes with additional turn pockets at major intersections. The posted speed limit is 35 mph.

NE Goodwin Road: NE Goodwin Road is classified as an arterial roadway. The roadway is comprised of two lanes. The posted speed limit is 50 mph.

NW Payne Street: NE Payne Street is classified as a private roadway. The roadway is comprised of two lanes and has no posted speed limit.

The scope of the traffic impact study was developed from known City of Camas and City of Vancouver traffic study requirements. From this information, the following intersections listed below were analyzed:

- NE 13th Street/NE 192nd Avenue
- SE 1st Street/NE & SE 192nd Avenue
- NW Lake Road/NW Parker Street/NW Larkspur Street
- NW Parker Street/NW 38th Avenue
- SE Brady Road/SE 192nd Avenue
- NE Goodwin Road/NE Ingle Road
- NE Goodwin Road/NW Camas Meadows Drive
- NW Parker Street/NW Pacific Rim Boulevard/NW Pacific Rim Drive
- NW Brady Road/NW 16th Avenue
- NW & SE Brady Road/NW McIntosh Road
- NW Payne Street/NW Lake Road

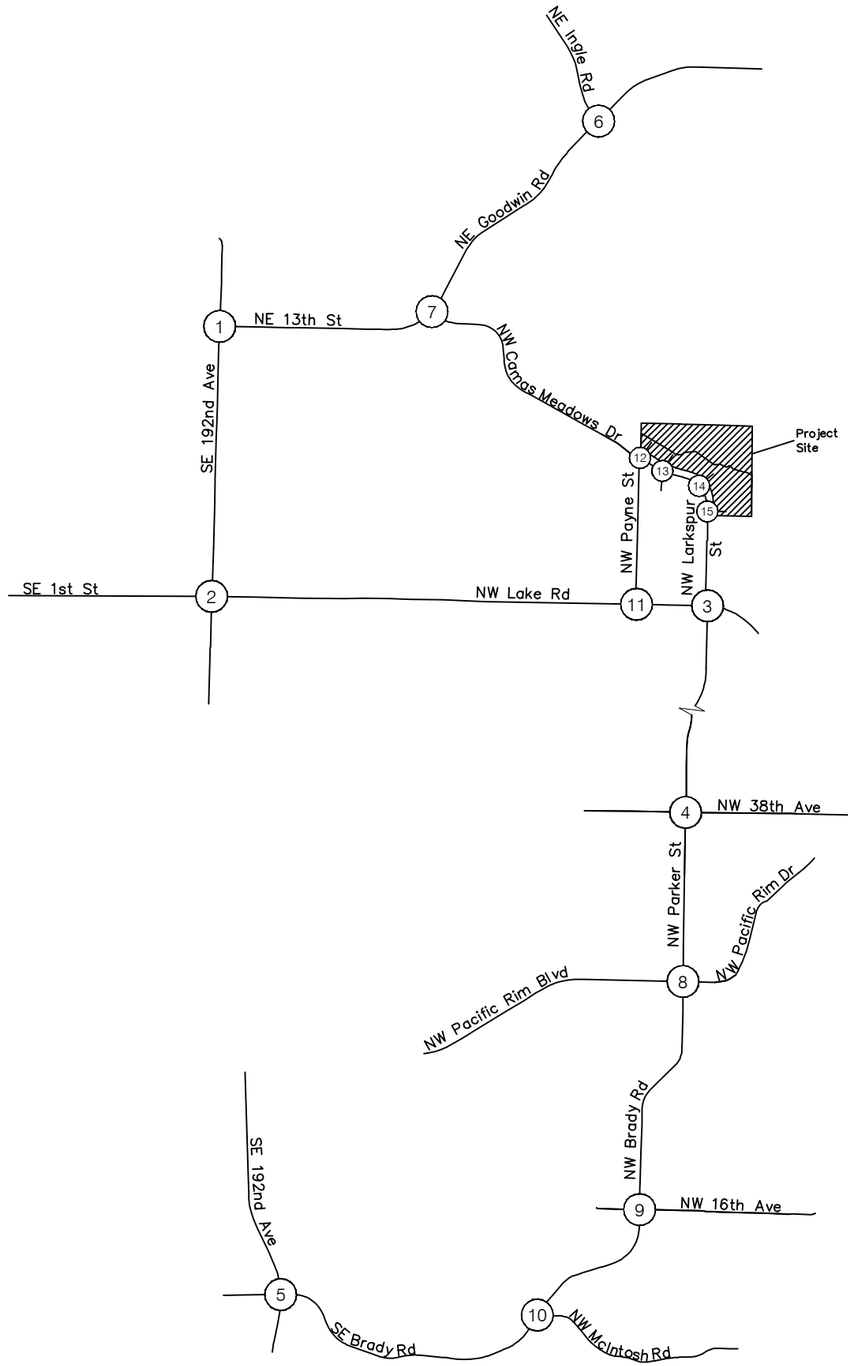
The following study area intersections are signalized:

- NE 13th Street/NE 192nd Avenue
- SE 1st Street/NE & SE 192nd Avenue
- NW Lake Road/NW Parker Street/NW Larkspur Street
- NW Parker Street/NW 38th Avenue
- SE Brady Road/SE 192nd Avenue

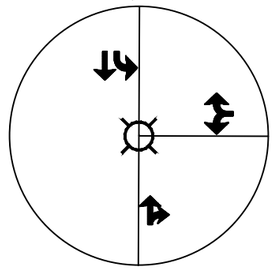
The following study area intersections are all-way-stop controlled:

- NW Parker Street/NW Pacific Rim Boulevard/NW Pacific Rim Drive
- NW Brady Road/NW 16th Avenue

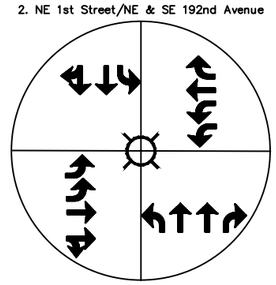
The remainder of the study area intersections are unsignalized and operate under stop sign control. Figure 3 shows the existing lane configurations and traffic control at these intersections.



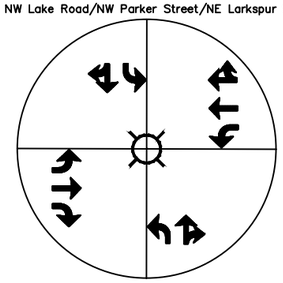
1. NE 13th Street/NE 192nd Avenue



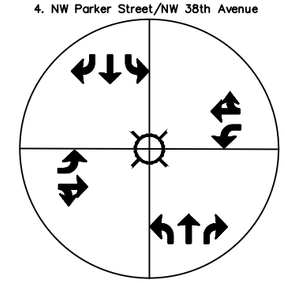
2. NE 1st Street/NE & SE 192nd Avenue



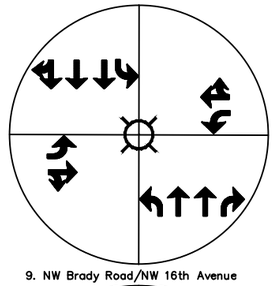
3. NW Lake Road/NW Parker Street/NE Larkspur Street



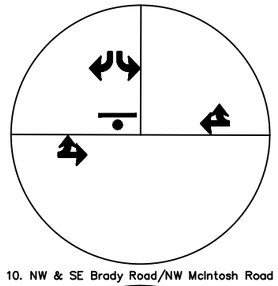
4. NW Parker Street/NW 38th Avenue



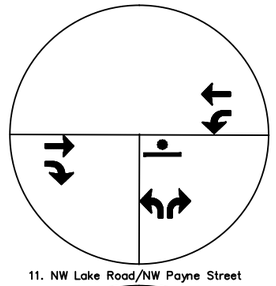
5. SE Brady Road/SE 192nd Avenue



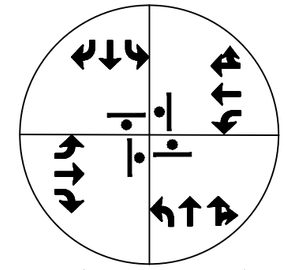
6. NE Goodwin Road/NE Ingle Road



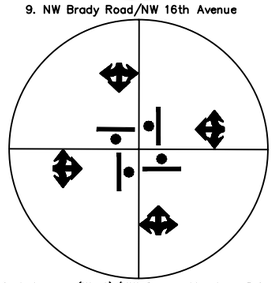
7. NE Goodwin Road/NW Camas Meadows Drive



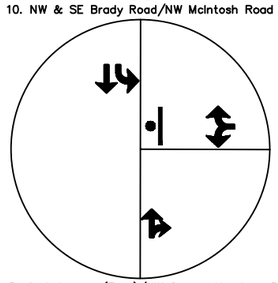
8. NW Parker Street/NW Pacific Rim Boulevard/NW Pacific Rim Drive



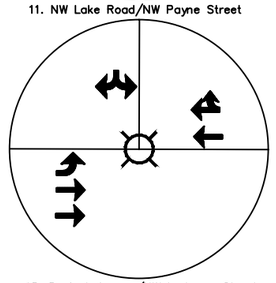
9. NW Brady Road/NW 16th Avenue



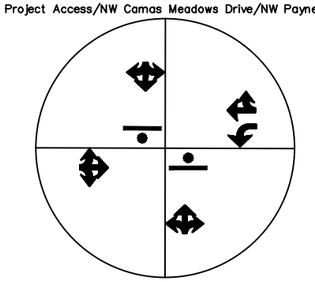
10. NW & SE Brady Road/NW McIntosh Road



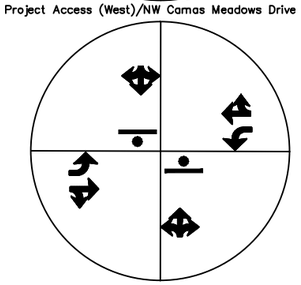
11. NW Lake Road/NW Payne Street



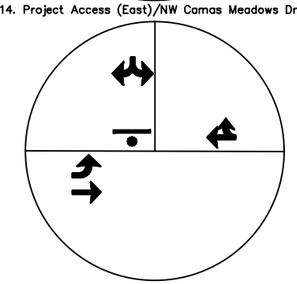
12. Project Access/NW Camas Meadows Drive/NW Payne Street



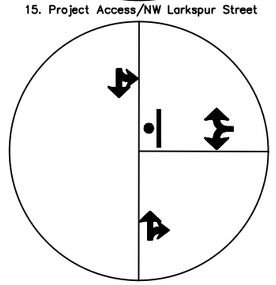
13. Project Access (West)/NW Camas Meadows Drive



14. Project Access (East)/NW Camas Meadows Drive



15. Project Access/NW Larkspur Street



NOT TO SCALE

LEGEND

- Lane Usage
- Traffic Signal
- Stop Sign

FIGURE 3
Existing Lane Configuration and Traffic Control

EXISTING TRAFFIC VOLUMES

A.M. and P.M. peak hour traffic counts were obtained at the study area intersections by H. Lee & Associates in January, April, June and July 2015. Below is a detailed list of when the traffic counts were conducted at the study area intersections.

- NE 13th St/NE 192nd Av – January 7 & 20, 2015 for A.M. and P.M. peak hours, respectively
- SE 1st St/NE & SE 192nd Av – April 1, 2015 for A.M. peak hour and January 15, 2015 for P.M. peak hour
- NW Lake R/NW Parker St/NW Larkspur St – June 9 & 10, 2015 for A.M. and P.M. peak hours, respectively
- NW Parker St/NW 38th Av – June 9, 2015 for both A.M. and P.M. peak hours
- SE Brady Rd/SE 192nd Av – June 9, 2015 for both A.M. and P.M. peak hours
- NE Goodwin Rd/NE Ingle Rd – June 10, 2015 for both A.M. and P.M. peak hours
- NE Goodwin Rd/NW Camas Meadows Dr – June 9, 2015 both A.M. and P.M. peak hours
- NW Parker St/NW Pacific Rim Blvd/NW Pacific Rim Dr – June 9 & 10, 2015 for A.M. and P.M. peak hours, respectively
- NW Brady Rd/NW 16th Av – June 11, 2015 for both A.M. and P.M. peak hours
- NW & SE Brady Rd/NW McIntosh Rd – June 9, 2015 for both A.M. and P.M. peak hours
- NW Payne St/NW Lake Rd – July 7, 2015 for both A.M. and P.M. peak hours

The existing A.M. and P.M. peak hour turning movement traffic counts are presented in Figure 4 and can be referenced in Appendix A. ADT's were collected at NW Payne Street, NW Larkspur Street and NW Camas Meadows Drive and can be referenced in Appendix A. Speed studies were also conducted at NW Camas Meadows Drive and NW Larkspur Street which can also be referenced in Appendix A.

EXISTING LEVEL OF SERVICE

Based on the traffic volumes presented in Figure 4, peak hour traffic operations were analyzed at the intersections identified above using the methodologies outlined in the 2010 Highway Capacity Manual (HCM). According to the HCM, there are six levels of service (LOS) by which the operational performance of an intersection may be described. These levels of service range between LOS "A" which indicates a relatively free-flowing condition and LOS "F" which indicates operational breakdown. LOS D is the City of Camas' adopted level of service standard for arterial/collector intersections. For non-arterial/collector intersections, LOS C is the adopted level of service standard.

The minimum level of service standard in the City of Vancouver can be referenced from Vancouver Municipal Code (VMC) Section 11.90.020(e) which states:

2) A proposed development that adds at least five (5) net new peak hour trips to a failing intersection approach within the required traffic impact analysis area may be denied based upon any of the following.

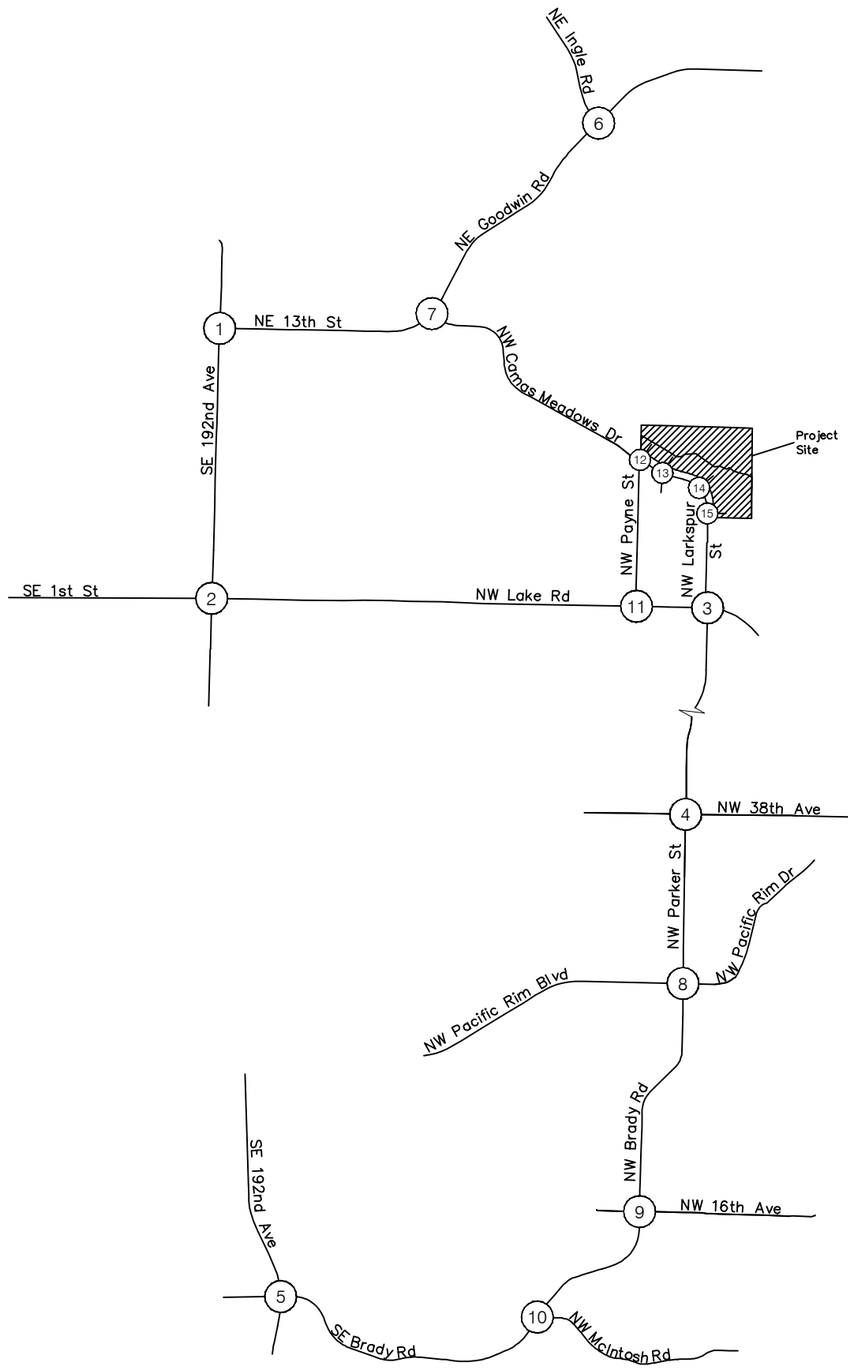
   a) For signalized intersections, when off-site intersection conditions are at a level of service "F";
   b) For signalized intersections, when the level of service is "E" and the volume to capacity ratio is greater than 0.95;
   c) For unsignalized intersections, when the volume to capacity ratio for any lane on any approach is greater than 0.95;
   d) When significant traffic hazards would be caused or materially aggravated by the proposed development;
   e) Notwithstanding a through d of this subsection, traffic impacts to intersections on Corridors Built to Ultimate Capacity shall be evaluated against the level of service standards identified in an adopted Corridor Management Plan.

3) A proposed development that is subject to denial pursuant to this section may be approved subject to conditions of approval that address the impact of traffic generated by the proposed development. Proposed developments shall not be required to address an impact unless that impact causes the volume to capacity ratio on a lane of a failing intersection approach to exceed 0.95.

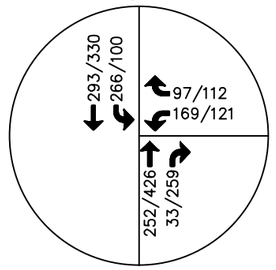
The City of Vancouver requires that the HCM levels of service be calculated by a software package called Synchro. All levels of service calculations have been conducted in Synchro.

Existing A.M. and P.M. peak hour levels of service are summarized in Table 1A for the City of Camas study area intersections. As indicated in Table 1A, all City of Cams study area intersections are currently operating at LOS C or better with the exception of NW Payne Street/NW Lake Road intersection where the southbound approach is operating at LOS D. Appendix C contains the LOS worksheets for the 2015 Existing Conditions.

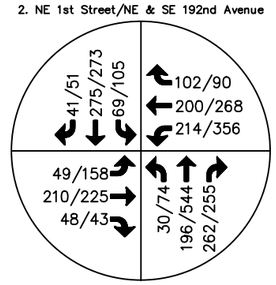
Existing A.M. and P.M. peak hour levels of service are summarized in Table 1B for the City of Vancouver study area intersections. As shown in Table 1B, the signalized study area intersections are operating at an acceptable level of service of LOS D or better. All levels of service calculations have been conducted in Synchro and the actual signal timing was utilized. The signal timing cards can be referenced in Appendix B. The LOS calculation worksheets can be referenced in Appendix C.



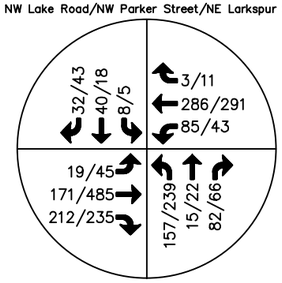
1. NE 13th Street/NE 192nd Avenue



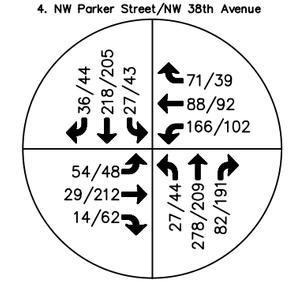
2. NE 1st Street/NE & SE 192nd Avenue



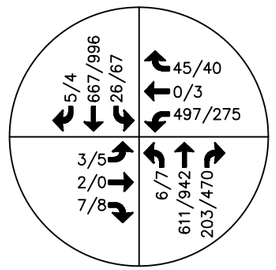
3. NW Lake Road/NW Parker Street/NE Larkspur Street



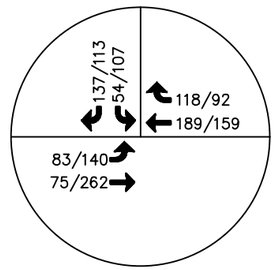
4. NW Parker Street/NW 38th Avenue



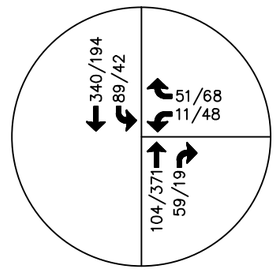
5. SE Brady Road/SE 192nd Avenue



6. NE Goodwin Road/NE Ingle Road



7. NE Goodwin Road/NW Camas Meadows Drive



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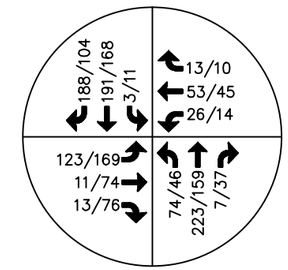

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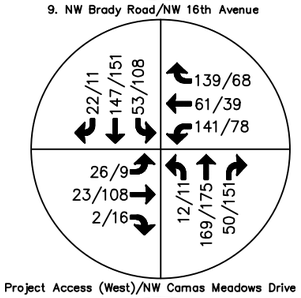
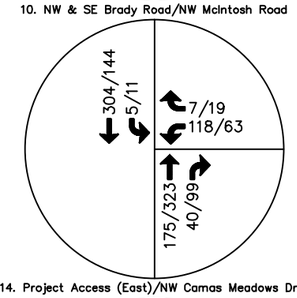
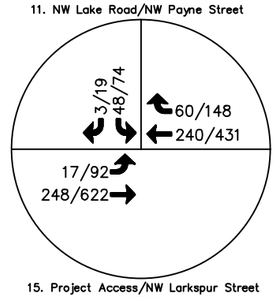


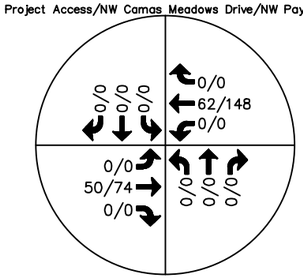
10. NW & SE Brady Road/NW McIntosh Road



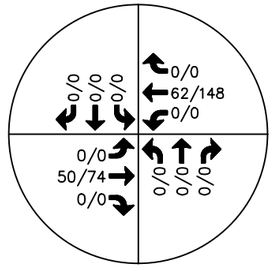
11. NW Lake Road/NW Payne Street



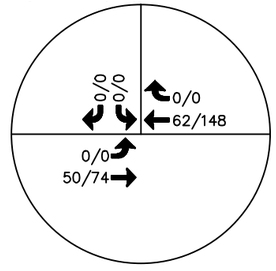
12. Project Access/NW Camas Meadows Drive/NW Payne Street



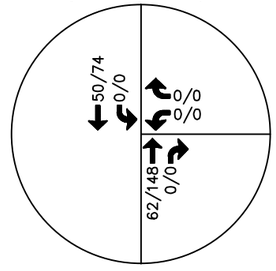
13. Project Access (West)/NW Camas Meadows Drive



14. Project Access (East)/NW Camas Meadows Drive



15. Project Access/NW Larkspur Street



LEGEND

128/200 A.M./P.M. Peak Hour Traffic Volume

NOT TO SCALE

FIGURE 4
2015 Existing A.M. and P.M. Peak Hour Traffic Volumes

Table 1A. 2015 Existing Levels of Service at City of Camas Intersections

Signalized Intersection	A.M. Peak Hour			P.M. Peak Hour		
	LOS	Average Delay (sec)	V/C Ratio	LOS	Average Delay (sec)	V/C Ratio
NW Lake Road/NW Parker Street/NW Larkspur Road	B	15.5	0.48	B	16.1	0.52
NW Parker Street/NW 38th Avenue	B	16.3	0.58	B	15.8	0.54
All Way Stop Intersections						
NW Parker St/NW Pacific Rim Blvd/NW Pacific Rim Dr	B	13.1	0.35	B	12.4	0.30
NW Brady Road/NW 16th Avenue	B	15.0	0.51	B	12.5	0.42
Unsignalized Intersection						
NE Goodwin Road/NE Ingle Road						
Eastbound Left	A	8.3	0.08	A	8.1	0.11
Southbound Left	A	14.1	0.13	C	22.2	0.35
Southbound Right	B	11.0	0.20	B	10.1	0.14
NE Goodwin Road/NW Camas Meadows Drive						
Westbound Left	C	15.3	0.04	C	16.9	0.16
Westbound Right	A	9.1	0.06	B	11.6	0.13
Southbound Left	A	7.7	0.07	A	8.4	0.04
NW & SE Brady Road/NW McIntosh Road						
Westbound Left	C	16.5	0.31	C	16.1	0.20
Westbound Right	A	9.5	0.01	B	11.4	0.04
Southbound Left	A	7.8	0.01	A	8.5	0.01
NW Lake Road/NW Payne Street						
Eastbound Left	A	8.0	0.02	A	9.2	0.11
Southbound Approach	B	12.6	0.11	D	34.6	0.46

Table 1B. 2015 Existing Levels of Service at City of Vancouver Intersections

Signalized Intersection	A.M. Peak Hour			P.M. Peak Hour		
	LOS	Average Delay (sec)	V/C Ratio	LOS	Average Delay (sec)	V/C Ratio
NE 13th Street/NE 192nd Avenue						
Westbound Approach	C	34.5	0.67	D	44.3	0.73
Northbound Approach	C	33.6	0.67	C	25.6	0.77
Southbound Approach	C	21.6	0.47	B	16.3	0.34
SE 1st Street/NE & SE 192nd Avenue						
Eastbound Approach	D	37.1	0.54	D	42.3	0.51
Westbound Approach	C	33.8	0.53	D	45.5	0.68
Northbound Approach	B	12.3	0.25	C	20.0	0.36
Southbound Approach	C	22.3	0.29	C	27.8	0.31
SE Brady Road/SE 192nd Avenue						
Eastbound Approach	C	30.3	0.09	B	15.2	0.03
Westbound Approach	E	59.0	0.90	C	34.5	0.61
Northbound Approach	B	12.0	0.33	B	13.6	0.51
Southbound Approach	B	14.1	0.38	B	14.2	0.49

Table 2 shows the 95th percentile queue for the major movements at the study area intersections. These 95th percentile queues were obtained from the Synchro level of service output and can be referenced in Appendix C. As shown in Table 2, all of the 95th percentile queues are within the available storage areas with the exception of the westbound left turn movement at the SE 192nd Avenue/SE Brady Road intersection in the A.M. peak hour. The westbound left movement at the SE 192nd Avenue/ SE Brady Road intersection has a 95th percentile queue of 584 feet in the A.M. peak hour. The available storage for the westbound left movement is only 320 feet. This queue exceeding the available storage may be partially mitigated by reallocating some of the green time from the eastbound through phase to the westbound left turn phase. Reallocating the green time for the eastbound and westbound directions of travel should minimize the impacts to the signal coordination along NE 192nd Avenue. Also, since the level of service and v/c standards are not exceeded, no mitigation of this condition should be required. The City of Vancouver should monitor this movement periodically to see if it becomes a traffic operations issue.

Table 2. 95th Percentile Queuing at Study Area Intersections for 2015 Existing Conditions

Signalized Intersection	A.M. Peak Hour Queue[1]	P.M. Peak Hour Queue[1]	Available Storage	Storage Exceeded?
NE 13th St/NE 192nd Ave				
Westbound Approach	262 feet	218 feet	continuous	No
Northbound Approach	282 feet	683 feet	continuous	No
Southbound Left	276 feet	123 feet	377 feet	No
Southbound Through	142 feet	137 feet	continuous	No
SE 1st St/NE & SE 192nd Ave				
Eastbound Left	32 feet	82 feet	285 feet	No
Eastbound Through	101 feet	116 feet	continuous	No
Westbound Left	100 feet	165 feet	345 feet	No
Westbound Through	172 feet	254 feet	continuous	No
Westbound Right	25 feet	31 feet	continuous	No
Northbound Left	44 feet	93 feet	195 feet	No
Northbound Through	79 feet	202 feet	continuous	No
Northbound Right	30 feet	37 feet	230 feet	No
Southbound Left	79 feet	122 feet	295 feet	No
Southbound Through	111 feet	111 feet	continuous	No
NW Lake Rd/NW Parker St/NW Larkspur Rd				
Eastbound Left	30 feet	58 feet	215 feet	No
Eastbound Through	134 feet	353 feet	continuous	No
Eastbound Right	25 feet	19 feet	185 feet	No
Westbound Left	85 feet	73 feet	continuous	No
Westbound Through	93 feet	97 feet	continuous	No
Northbound Left	126 feet	195 feet	350 feet	No
Northbound Through/Right	26 feet	41 feet	continuous	No
Southbound Left	25 feet	25 feet	150 feet	No
Southbound Through/Right	54 feet	47 feet	continuous	No

Table 2. 95th Percentile Queuing at Study Area Intersections for 2015 Existing Conditions Continued

Signalized Intersection	A.M. Peak Hour Queue[1]	P.M. Peak Hour Queue[1]	Available Storage	Storage Exceeded?
NW Parker St/NW 38th Ave				
Eastbound Left	46 feet	46 feet	250 feet	No
Eastbound Through/Right	27 feet	144 feet	continuous	No
Westbound Left	144 feet	100 feet	200 feet	No
Westbound Through/Right	71 feet	64 feet	continuous	No
Northbound Left	31 feet	46 feet	180 feet	No
Northbound Through	161 feet	122 feet	continuous	No
Northbound Right	25 feet	31 feet	continuous	No
Southbound Left	31 feet	44 feet	295 feet	No
Southbound Through	125 feet	120 feet	continuous	No
Southbound Right	25 feet	25 feet	190 feet	No
SE Brady Road/SE 192nd Avenue				
Eastbound Left	25 feet	25 feet	180 feet	No
Eastbound Through/Right	25 feet	25 feet	continuous	No
Westbound Left	584 feet	251 feet	320 feet	Yes
Westbound Through/Right	25 feet	29 feet	continuous	No
Northbound Left	25 feet	25 feet	325 feet	No
Northbound Through	204 feet	346 feet	continuous	No
Northbound Right	25 feet	32 feet	205 feet	No
Southbound Left	41 feet	81 feet	175 feet	No
Southbound Through	214 feet	334 feet	continuous	No
Southbound Right	25 feet	25 feet	205 feet	No
NE Goodwin Road/NE Ingle Road				
Eastbound Left	25 feet	25 feet	continuous	No
Southbound Left	25 feet	38 feet	140	No
Southbound Right	25 feet	25 feet	continuous	No
All Way Stop Intersections				
NW Parker St/NW Pacific Rim Blvd/NW Pacific Rim Dr				
Eastbound Left	38 feet	53 feet	180 feet	No
Eastbound Through	25 feet	25 feet	continuous	No
Eastbound Right	25 feet	25 feet	continuous	No
Westbound Left	25 feet	25 feet	115 feet	No
Westbound Through	25 feet	25 feet	continuous	No
Northbound Left	25 feet	25 feet	188 feet	No
Northbound Through	40 feet	25 feet	continuous	No
Southbound Left	25 feet	25 feet	190 feet	No
Southbound Through	58 feet	48 feet	continuous	No
Southbound Right	25 feet	25 feet	continuous	No
NW Brady Road/NW 16th Avenue				
Eastbound Approach	25 feet	25 feet	continuous	No
Westbound Approach	113 feet	35 feet	continuous	No
Northbound Approach	58 feet	73 feet	continuous	No
Southbound Approach	55 feet	58 feet	continuous	No
NE Goodwin Road/NW Camas Meadows Drive				
Westbound Left	25 feet	25 feet	140 feet	No
Westbound Right	25 feet	25 feet	continuous	No
Southbound Left	25 feet	25 feet	85 feet	No

[1]Future available storage to be determined with Green Mountain Development Traffic Study.

Table 2. 95th Percentile Queuing at Study Area Intersections for 2015 Existing Conditions Continued

Unsignalized Intersection	A.M. Peak Hour Queue[1]	P.M. Peak Hour Queue[1]	Available Storage	Storage Exceeded?
NW & SE Brady Road/NW McIntosh Road				
Westbound Left	53 feet	25 feet	continuous	No
Westbound Right	25 feet	25 feet	continuous	No
Southbound Left	25 feet	25 feet	105 feet	No
NW Lake Road/NW Payne Street				
Eastbound Left	25 feet	25 feet	230 feet	No
Southbound Through/Right	25 feet	55 feet	continuous	No

[1]Future available storage to be determined with Green Mountain Development Traffic Study.

ACCIDENT HISTORY

Accident data was obtained from the Washington State Department of Transportation (WSDOT) for the five year period between January 1, 2010 and December 31, 2014. The data includes total accidents and accidents by severity (i.e. fatal, injury or property damage only). This accident data is summarized in Table 3. Appendix D contains the accident data.

Table 3. Summary of Traffic Accident History in Study Area

Intersection	Average Annual Accidents				acc/mev[2]
	PDO[1]	Injury	Fatal	Total	
NE 13th Street/NE 192nd Avenue	0.8	0.8	0.0	1.6	0.26
SE 1st Street/NE & SE 192nd Avenue	0.2	1.6	0.0	1.8	0.16
NW Lake Road/NW Parker Street/NW Larkspur Street	0.6	0.0	0.0	0.6	0.09
NW Parker Street/NW 38th Avenue	1.0	0.8	0.0	1.8	0.31
SE Brady Road/SE 192nd Avenue	1.0	0.2	0.0	1.2	0.09
NE Goodwin Road/NE Ingle Road	1.2	0.6	0.0	1.8	0.45
NE Goodwin Road/NW Camas Meadows Drive	0.0	0.2	0.0	0.2	0.06
NW Parker St/NW Pacific Rim Blvd/NW Pacific Rim Dr	0.8	0.0	0.0	0.8	0.19
NW Brady Road/NW 16th Avenue	0.6	0.2	0.0	0.8	0.19
NW & SE Brady Road/NW McIntosh Road	0.2	0.0	0.0	0.2	0.67
NW Payne Street/NW Lake Road	0.0	0.2	0.0	0.2	0.03

[1] PDO = property damage only
[2] acc/mev = accidents per million entering vehicles

As shown in Table 3, all of the study area intersections have an accident rate of less than 1.00 accidents per million entering vehicles. Generally, an accident rate of less than 1.00 accidents per million entering vehicles is considered acceptable and does not warrant further analysis.

EXISTING PUBLIC TRANSIT SERVICE

C-Tran provides public transit service in the City of Camas and the City of Vancouver. Currently there is no transit service in the project vicinity.

Route #38 Mill Plain/192nd provides the nearest service to the project site, Route #38 provides services along NE 3rd Street. Route #38 Mill Plain/192nd provides service to and from Downtown Vancouver, Hudson Bay High School, Kaiser Clinic Vancouver, ML King Elementary School, Town Plaza, Peace Health SW WA Medical Center, Kaiser Clinic Cascade Park, Vancouver Clinic, Clark College, 192nd Avenue, Shahala Middle School, and Union High School along Mill Plain Boulevard, Grand Boulevard, Andresen Road, NE 112th Avenue, NE 136th Avenue, SE 164th Avenue, SE 192nd Avenue, and SE 1st Street. On weekdays, Route #38, provides services from 4:45 A.M. to 12:44 P.M. in approximately 15 to 40 minute headways. Route #38 does not provide Saturday or Sunday services.

NON-MOTORIZED TRANSPORTATION

There are sidewalks along the north side of NW Camas Meadows Drive and the east side of NW Larkspur Street in the project vicinity.

PLANNED TRANSPORTATION IMPROVEMENTS

There are twenty-one known transportation improvement projects planned by the City of Camas in the project vicinity based on the City of Camas' 2015-2020 Six Year Transportation Program. These projects are listed below. The project number is the priority number based upon the Six Year Transportation Improvement Program list.

- #2 - NW Brady Road from NW 16th Avenue to NW 25th Avenue
  This improvement project is to widen NW Brady Road and to build bike lanes. The project budget is estimated at $5,800,000 and is to be funded in federal, state, and local dollars. Right of way acquisition is planned for July 2015. Construction is scheduled for June 2016.

- #3 - NW Camas Meadows Drive from NW Payne Street to NW 60th Avenue
  This improvement project is the construction of a new roadway. The project budget is estimated at $3,360,000 and is to be funded in state and local dollars. Preliminary engineering is scheduled to start in July 2016. Right of way acquisition is planned for July 2017. Construction is scheduled for June 2018.

- #4 – NW Larkspur Street from NW Lake Road to NW 60th Avenue
  This improvement project is to widen NW Larkspur Street and to build sidewalks. The project budget is estimated at $1,070,000 and is to be funded in state and local dollar. Preliminary engineering is scheduled to start in July 2016. Right of way acquisition is planned for July 2017. Construction is scheduled for June 2018.

- #5 - NW 38th Avenue from NW Parker Street to Grass Valley Park
  This improvement project is to widen NW 38th Avenue and to build bike lanes. The project budget is estimated at $3,380,000 and is to be funded in federal and local dollars. Preliminary engineering is scheduled for 2018.

- #8 – NW Pacific Rim Boulevard at SE Payne Road
  A traffic signal is planned to be installed in 2018. The estimated cost of this traffic signal is $290,000 and is to be funded in local dollars.

- #9 – NE Goodwin Road/NE 28th Street from NW Camas Meadows to NE 232nd Avenue
  This improvement project is to widen NE Goodwin Road to five lanes with bike lanes west of NE Ingle Road and to widen the roadway to three lanes with bike lanes east of NE Ingle Road. The estimated project budget is $20,000,000 and is to be funded in federal, state, and local dollars. Preliminary engineering is scheduled to begin in 2019.

- #19 – NW 18th Avenue from NW Whitman Street to NW Brady Road
  This improvement project is the construction of a new roadway and includes bike lanes. The estimated project cost for the preliminary engineering is $5,000. No other project cost have been developed. Preliminary engineering is scheduled to begin in 2020.

- #20 – NW 18th Avenue from NW Whitman Street to West City Limits
  This improvement project is to widen NW 18th Avenue and building bike lanes. The estimated project cost for the preliminary engineering is $5,000. No other project cost have been developed. Preliminary engineering is scheduled to begin in 2020.

- #23 – NW Friberg Street/NW Strunk Road to NW Larkspur Street
  This improvement project is the new construction of a roadway. The estimated project budget for preliminary engineering is $5,000. No other project costs have been developed. The preliminary engineering is scheduled to start in 2020.

- #24 – NW Payne Street from NW Lake Road to NW Camas Meadows
  This improvement project is to widen NW Payne Street. The estimated project budget for preliminary engineering is $5,000. No other project costs have been developed. The preliminary engineering is scheduled to start in 2020.

- #25 – North Dwyer Creek Master Plan Street "A" from NW Lake Road to NW Camas Meadows Drive
  This improvement project is the new construction of a roadway. The estimated project budget for preliminary engineering is $5,000. No other project costs have been developed. The preliminary engineering is scheduled to start in 2020.

- #26 – NW McIntosh Road from NW Brady Road to NW 11th Avenue
  This improvement project is to widen NW McIntosh Road and to build bike lanes. The estimated project budget for preliminary engineering is $5,000. No other project costs have been developed. The preliminary engineering is scheduled to start in 2019.

- #29 – NE 18th Street from NE 192nd Avenue to NE Goodwin Road
  This improvement project is the new construction of a roadway with a potential alternate alignment. The estimated project budget for preliminary engineering is $5,000. No other project costs have been developed. The preliminary engineering is scheduled to start in 2020.

- #31 – NW Camas Meadows Drive from NE 13th Street to NE 18th Street
  This improvement project is the new construction of a roadway with a potential alternate alignment. The estimated project budget for preliminary engineering is $5,000. No other project costs have been developed. The preliminary engineering is scheduled to start in 2020.

- #35 – NE Ingle Road Extension from NE Goodwin Road to NE 232nd Avenue
  This improvement project is the new construction of a roadway, which would extend NE Ingle Road from NE Goodwin Road to NE 232nd Avenue. The estimated project budget for preliminary engineering is $5,000. No other project costs have been developed. The preliminary engineering is scheduled to start in 2020.

- #38 – NW Pacific Rim Boulevard at SE Payne Road
  A traffic signal is planned to be installed in 2016. The estimated cost of this traffic signal is $270,000.

- #36 – NW Brady Road at NW 16th Avenue
  A traffic signal is planned to be installed in 2019. The estimated cost of this traffic signal is $290,000.

- #38 – NW Goodwin Road at NW Camas Meadows Drive
  A traffic signal is planned to be installed in 2019. The estimated cost of this traffic signal is $290,000

- #39 – NW Pacific Rim Boulevard at NW Parker Street
  A traffic signal is planned at this intersection. Preliminary engineering is expected to begin in 2020. The project budget for preliminary engineering is $5,000.

- #43 – NE Goodwin Road at NE Ingle Road
  A traffic signal is planned at this intersection. Preliminary engineering is expected to begin in 2020. The project budget for preliminary engineering is $5,000.

- #55 – NW 18th Avenue from SE 201st Avenue to NW Beech Street
  A shared pedestrian path is planned along NW 18th Street from SE 201st Avenue to NW Beech Street. The estimated cost of this project is $250,000. The project is scheduled to begin in 2014.

A review of the City of Vancouver's Six Year TIP, 2015-2020, revealed that there are no funded projects in the study area.

The following transportation improvement projects are partially funded:

- SE 1st Street - SE 164th Avenue to SE 192nd Avenue
  The existing two lane roadway will be upgraded to urban standards. The roadway will be improved to a three and five lane principal arterial (one or two lanes in each direction plus a center turn lane). The roadway cross section will vary per segment. Street upgrades include sidewalks, bike lanes, street lights, and sound walls at required locations. The total project cost is estimated at $16,270,000. PSE and ROW phases of the project are only partially funded. No funding has been secured for construction. This project is currently in the design phase. Start of construction is not known yet because funding is not secure.

The following transportation improvement projects are unfunded:

- NE 192nd Avenue - SE 1st Street to NE 18th Street
  The existing two lane roadway will be upgraded to a five lane principal arterial with bike lanes, sidewalks, and street lights. The total project cost is estimated at $4,215,763. The start of construction is not known yet because funding is not secure.

- NE 9th Street - NE 172nd Avenue to NE 192nd Avenue
  This project is the construction of a new urban collector (one lane each direction plus a center turn lane) that includes sidewalks, bike lanes, and street lights. This planned roadway is in conjunction with the Section 30 Sub Area Plan concept. The total project cost is unknown at this time.

SECTION III
TRAFFIC IMPACT ANALYSIS

ANALYSIS METHODOLOGY

The traffic impacts generated by the proposed Parklands at Camas Meadows during the A.M. and P.M. peak hour were analyzed as follows:

- For the City of Camas study area intersections, 2020 "Without Project" traffic volumes were established as the future baseline condition for the traffic analysis and to define a baseline by which project impacts could be determined. The 2020 "Without Project" condition traffic volumes were derived by adding "in-process" traffic volumes from fourteen previously approved developments yet to be built to the 2015 existing traffic volumes.

  For the City of Vancouver study area intersections, 2020 "Without Project" traffic volumes were established as the future baseline condition for the traffic analysis and to define a baseline by which project impacts could be determined. The 2020 "Without Project" condition traffic volumes were derived by using a 2.0 percent annual, compounded growth factor.

- A.M., P.M., and daily trip generation were estimated for the proposed development using the rates in "Trip Generation, 9th Edition," (Institute of Transportation Engineers, 2012).

- Trip distribution of site-generated traffic was developed from existing count information as well as logical travel paths to the major transportation facilities.

- Predicted A.M. and P.M. peak hour site-generated traffic from the proposed development was assigned to the roadway network and added to the 2020 "Without Project" traffic volumes to develop the 2020 "With Project" traffic volumes.

A detailed discussion of the methodology summarized above and the analysis results are contained in the remainder of this section.

2020 "WITHOUT PROJECT" TRAFFIC VOLUMES AND LEVELS OF SERVICE

The 2020 "Without Project" condition was analyzed as the future baseline condition for the traffic analysis and to define a baseline by which project impacts could be determined.

For the City of Camas study area intersections, the 2020 "Without Project" condition traffic volumes were derived by adding traffic generated by fourteen "in process" developments which are approved but not built to the existing traffic counts. The "in-process" traffic information was obtained from City of Camas staff. The fourteen "in process" developments are as follows:

- Alpha Tec
- Belz Place Development
- Bishop Subdivision
- Brady Road Subdivision
- C J Dens Subdivision
- Deerhaven Subdivision
- Fisher Creek Campus, Bldg 3
- Fisher Creek Campus, Bldg 4
- Green Mountain Mixed Use PRD
- Millshore Downs Development
- North Hills Subdivision
- Parker Village Subdivision
- Stoneleaf Subdivision
- Summit at Columbia Vista Subdivision

The 2020 "Without Project" traffic volumes for the City of Vancouver study area intersections were derived by using a 2.0 percent annual, compounded growth factor. The growth factor obtained from the City of Vancouver Traffic Study Guidelines, January 2012.

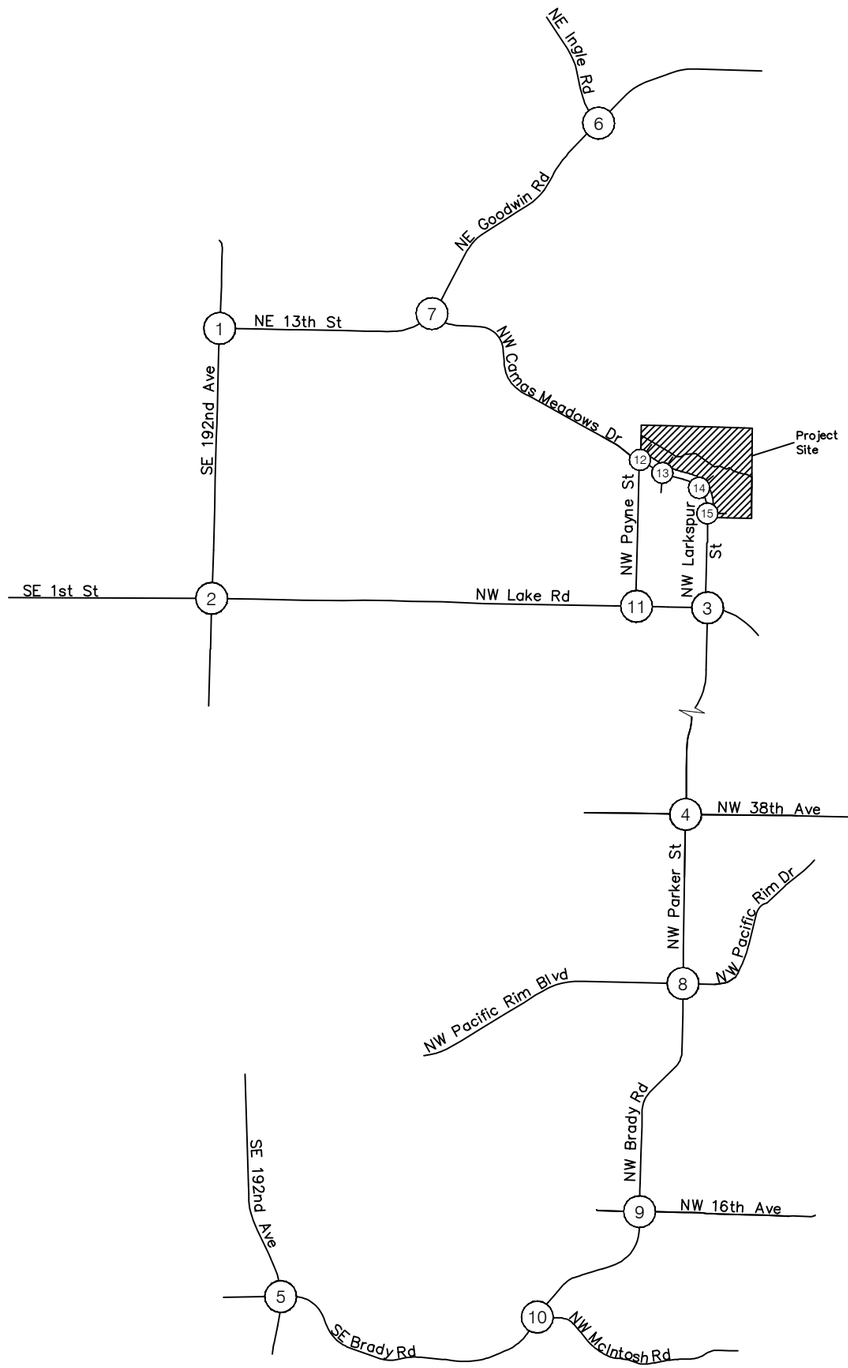
Figure 5 shows the 2020 "Without Project" traffic volumes for all of the study intersections.

Levels of service were calculated at the study area intersections with 2020 "Without Project" traffic volumes and the existing lane configurations shown earlier in Figure 3. The results of the analysis are shown in Table 4A and 4B for all the study area intersections. The levels of service calculation worksheets can be referenced in Appendix E.

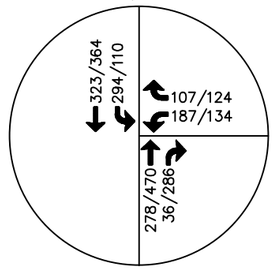
Per conversations with Olson Engineering, Inc. pertaining to the Green Mountain Development, the NE Goodwin Road/NE Ingle Road intersection will be converted to a signalized intersection with additional eastbound and westbound left turn lanes. The NE Goodwin Road/NE Ingle Road intersection was analyzed in the 2020 "Without Project" condition based on those improvements.

As shown in Table 4A, all City of Camas intersections are projected to operate at LOS C or better in the 2020 "Without Project" condition (which meets the City of Camas' standards) with the exception of NW Payne Street/NW Lake Road intersection where the southbound approach is projected to operate at LOS E.

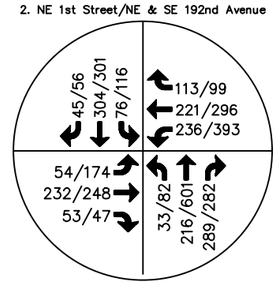
As shown in Table 4B, all City of Vancouver intersection approaches are projected to operate at an acceptable level of service of LOS D or better except the westbound approach at SE 192nd Avenue/SE Brady Road intersection which is projected to operate at LOS F.



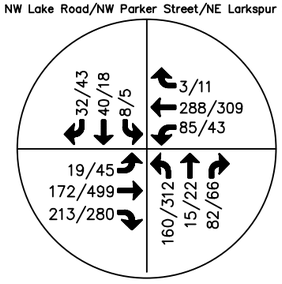
1. NE 13th Street/NE 192nd Avenue



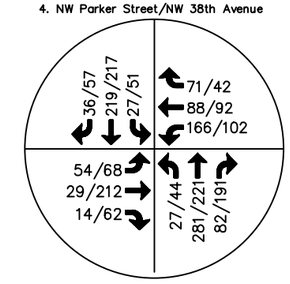
2. NE 1st Street/NE & SE 192nd Avenue



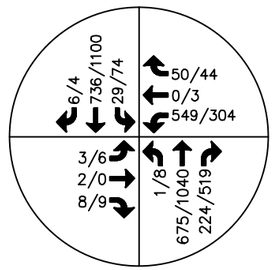
3. NW Lake Road/NW Parker Street/NE Larkspur Street



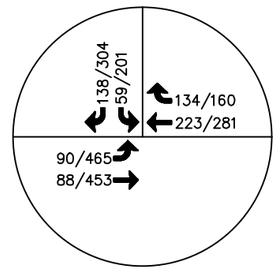
4. NW Parker Street/NW 38th Avenue



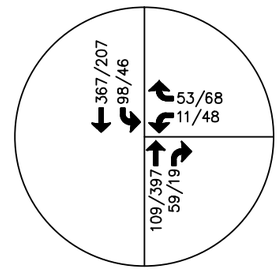
5. SE Brady Road/SE 192nd Avenue



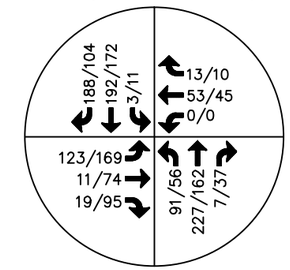
6. NE Goodwin Road/NE Ingle Road



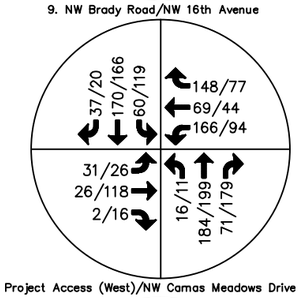
7. NE Goodwin Road/NW Camas Meadows Drive



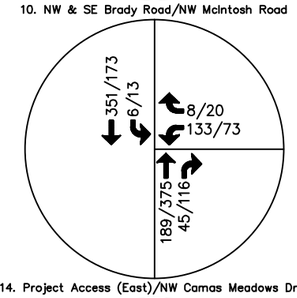
8. NW Parker Street/NW Pacific Rim Boulevard/NW Pacific Rim Drive



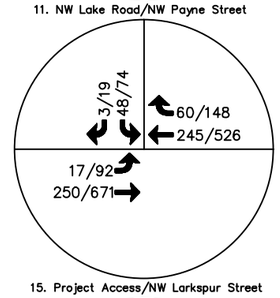
9. NW Brady Road/NW 16th Avenue



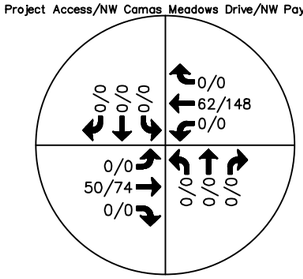
10. NW & SE Brady Road/NW McIntosh Road



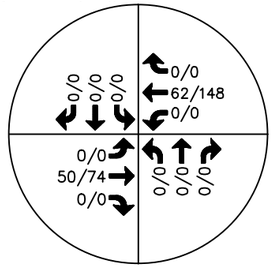
11. NW Lake Road/NW Payne Street



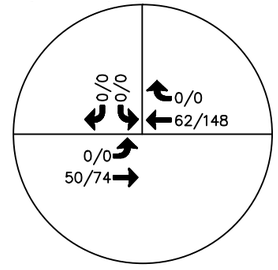
12. Project Access/NW Camas Meadows Drive/NW Payne Street



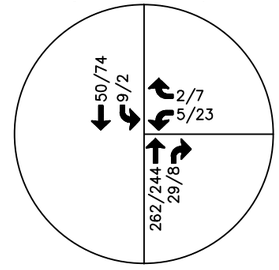
13. Project Access (West)/NW Camas Meadows Drive



14. Project Access (East)/NW Camas Meadows Drive



15. Project Access/NW Larkspur Street



LEGEND

128/200 A.M./P.M. Peak Hour Traffic Volume

NOT TO SCALE

FIGURE 5
2020 "Without Project"
A.M. and P.M. Peak Hour Traffic Volumes

Table 4A. 2020 "Without Project" Levels of Service at City of Camas Intersections

Signalized Intersection	A.M. Peak Hour LOS	A.M. Peak Hour Average Delay (sec)	A.M. Peak Hour V/C Ratio	P.M. Peak Hour LOS	P.M. Peak Hour Average Delay (sec)	P.M. Peak Hour V/C Ratio
NW Lake Road/NW Parker Street/NW Larkspur Road	B	15.5	0.49	B	17.9	0.56
NW Parker Street/NW 38th Avenue	B	16.3	0.58	B	16.2	0.54
NE Goodwin Road/NE Ingle Road	A	8.3	0.40	B	14.8	0.56
All Way Stop Intersections						
NW Parker St/NW Pacific Rim Blvd/NW Pacific Rim Dr	B	13.4	0.36	B	12.6	0.30
NW Brady Road/NW 16th Avenue	C	21.4	0.63	C	15.9	0.52
Unsignalized Intersection						
NE Goodwin Road/NW Camas Meadows Drive						
Westbound Left	C	16.2	0.04	C	18.1	0.17
Westbound Right	A	9.2	0.07	B	11.9	0.13
Southbound Left	A	7.7	0.08	A	8.5	0.05
NW & SE Brady Road/NW McIntosh Road						
Westbound Left	C	19.4	0.39	C	19.4	0.27
Westbound Right	A	9.6	0.01	B	12.1	0.05
Southbound Left	A	7.8	0.01	A	8.8	0.02
NW Lake Road/NW Payne Street						
Eastbound Left	A	8.0	0.02	A	9.7	0.12
Southbound Approach	B	12.7	0.11	E	48.0	0.57

Table 4B. 2020 "Without Project" Levels of Service at City of Vancouver Intersections

Signalized Intersection	A.M. Peak Hour LOS	A.M. Peak Hour Average Delay (sec)	A.M. Peak Hour V/C Ratio	P.M. Peak Hour LOS	P.M. Peak Hour Average Delay (sec)	P.M. Peak Hour V/C Ratio
NE 13th Street/NE 192nd Avenue						
Westbound Approach	D	38.9	0.73	D	45.8	0.76
Northbound Approach	D	38.0	0.72	C	34.2	0.87
Southbound Approach	C	24.4	0.51	B	17.4	0.37
SE 1st Street/NE & SE 192nd Avenue						
Eastbound Approach	D	36.8	0.55	D	42.3	0.53
Westbound Approach	C	34.0	0.57	D	47.5	0.72
Northbound Approach	B	13.5	0.29	C	21.7	0.42
Southbound Approach	C	23.9	0.33	C	29.6	0.35
SE Brady Road/SE 192nd Avenue						
Eastbound Approach	C	29.6	0.10	B	15.9	0.03
Westbound Approach	F	84.7	0.99	D	35.0	0.63
Northbound Approach	B	12.4	0.36	B	15.4	0.58
Southbound Approach	B	14.6	0.42	B	15.7	0.56

Table 5 shows the 95th percentile queue for the major movements at the study area intersections for the 2020 "Without Project" conditions. These 95th percentile queues were obtained from the Synchro level of service output and can be referenced in Appendix E. As shown in Table 8, all of the 95th percentile queues are within the available storage areas with the exception of the westbound left turn movement at the SE 192nd Avenue/SE Brady Road intersection in the A.M. peak hour. The westbound left movement at the SE 192nd Avenue/ SE Brady Road intersection has a 95th percentile queue of 666 feet in the A.M. peak hour. The available storage for the westbound left movement is only 320 feet. This queue exceeding the available storage may be partially mitigated by reallocating some of the green time from the eastbound through phase to the westbound left turn phase. Reallocating the green time for the eastbound and westbound directions of travel should minimize the impacts to the signal coordination along NE 192nd Avenue. The City of Vancouver should monitor this movement periodically to see if it becomes a traffic operations issue.

Table 5. 95th Percentile Queuing at Study Area Intersections for 2020 "Without Project"

Signalized Intersection	A.M. Peak Hour Queue[1]	P.M. Peak Hour Queue[1]	Available Storage	Storage Exceeded?
NE 13th St/NE 192nd Ave				
Westbound Approach	303 feet	247 feet	continuous	No
Northbound Approach	327 feet	849feet	continuous	No
Southbound Left	335 feet	137 feet	377 feet	No
Southbound Through	175 feet	166 feet	continuous	No
SE 1st St/NE & SE 192nd Ave				
Eastbound Left	34 feet	89 feet	285 feet	No
Eastbound Through	108 feet	128 feet	continuous	No
Westbound Left	109 feet	181 feet	345 feet	No
Westbound Through	186 feet	304 feet	continuous	No
Westbound Right	25 feet	32 feet	continuous	No
Northbound Left	47 feet	100 feet	195 feet	No
Northbound Through	86 feet	225 feet	continuous	No
Northbound Right	51 feet	61 feet	230 feet	No
Southbound Left	88 feet	134 feet	295 feet	No
Southbound Through	128 feet	123 feet	continuous	No
NW Lake Rd/NW Parker St/NW Larkspur Rd				
Eastbound Left	30 feet	58 feet	215 feet	No
Eastbound Through	134 feet	366 feet	continuous	No
Eastbound Right	25 feet	25 feet	185 feet	No
Westbound Left	85 feet	73 feet	continuous	No
Westbound Through	94 feet	103 feet	continuous	No
Northbound Left	128 feet	279 feet	350 feet	No
Northbound Through/Right	27 feet	41 feet	continuous	No
Southbound Left	25 feet	25 feet	150 feet	No
Southbound Through/Right	54 feet	47 feet	continuous	No

Table 5. 95th Percentile Queuing at Study Area Intersections for 2020 "Without Project" Continued

Signalized Intersection	A.M. Peak Hour Queue[1]	P.M. Peak Hour Queue[1]	Available Storage	Storage Exceeded?
NW Parker St/NW 38th Ave				
Eastbound Left	46 feet	59 feet	250 feet	No
Eastbound Through/Right	27 feet	144 feet	continuous	No
Westbound Left	144 feet	100 feet	200 feet	No
Westbound Through/Right	71 feet	65 feet	continuous	No
Northbound Left	31 feet	46 feet	180 feet	No
Northbound Through	163 feet	129 feet	continuous	No
Northbound Right	25 feet	31 feet	continuous	No
Southbound Left	31 feet	57 feet	295 feet	No
Southbound Through	126 feet	127 feet	continuous	No
Southbound Right	25 feet	25 feet	190 feet	No
SE Brady Road/SE 192nd Avenue				
Eastbound Left	25 feet	25 feet	180 feet	No
Eastbound Through/Right	25 feet	25 feet	continuous	No
Westbound Left	666 feet	311 feet	320 feet	Yes
Westbound Through/Right	25 feet	31 feet	continuous	No
Northbound Left	25 feet	25 feet	325 feet	No
Northbound Through	231 feet	398 feet	continuous	No
Northbound Right	25 feet	33 feet	205 feet	No
Southbound Left	45 feet	87 feet	175 feet	No
Southbound Through	242 feet	385 feet	continuous	No
Southbound Right	25 feet	25 feet	205 feet	No
NE Goodwin Road/NE Ingle Road				
Eastbound Left	53 feet	347 feet	TBD[1]	No[1]
Eastbound Through	25 feet	131 feet	TBD[1]	No[1]
Westbound Through/	100 feet	160 feet	TBD[1]	No[1]
Westbound Right	25 feet	28 feet	TBD[1]	No[1]
Southbound Left	40 feet	116 feet	TBD[1]	No[1]
Southbound Right	25 feet	32 feet	TBD[1]	No[1]
All Way Stop Intersections				
NW Parker St/NW Pacific Rim Blvd/NW Pacific Rim Dr				
Eastbound Left	40 feet	53 feet	180 feet	No
Eastbound Through	25 feet	25 feet	continuous	No
Eastbound Right	25 feet	25 feet	continuous	No
Westbound Left	25 feet	25 feet	115 feet	No
Westbound Through	25 feet	25 feet	continuous	No
Northbound Left	25 feet	25 feet	188 feet	No
Northbound Through	43 feet	33 feet	continuous	No
Southbound Left	25 feet	25 feet	190 feet	No
Southbound Through	60 feet	25 feet	continuous	No
Southbound Right	25 feet	25 feet	continuous	No
NW Brady Road/NW 16th Avenue				
Eastbound Approach	25 feet	33 feet	continuous	No
Westbound Approach	185 feet	50 feet	continuous	No
Northbound Approach	93 feet	118 feet	continuous	No
Southbound Approach	93 feet	83 feet	continuous	No

[1]Future available storage to be determined with Green Mountain Development Traffic Study.

Table 5. 95th Percentile Queuing at Study Area Intersections for 2020 "Without Project" Continued

Unsignalized Intersection	A.M. Peak Hour Queue[1]	P.M. Peak Hour Queue[1]	Available Storage	Storage Exceeded?
NE Goodwin Road/NW Camas Meadows Drive				
Westbound Left	25 feet	25 feet	140 feet	No
Westbound Right	25 feet	25 feet	continuous	No
Southbound Left	25 feet	25 feet	85 feet	No
NW & SE Brady Road/NW McIntosh Road				
Westbound Left	45 feet	28 feet	continuous	No
Westbound Right	25 feet	25 feet	continuous	No
Southbound Left	25 feet	25 feet	105 feet	No
NW Lake Road/NW Payne Street				
Eastbound Left	25 feet	25 feet	230 feet	No
Southbound Left/Right	25 feet	75 feet	continuous	No

DEVELOPMENT PLANS

As stated in the previous section, the proposed project is a business park with four buildings comprised of up to 141,600 square feet in space, a 3,000 square foot coffee shop with a drive through, and a 3,000 square foot high quality restaurant. Also, there are two residential components of the proposed project which includes 42 single family residential lots and 24 residential condominium units. Access will be provided by the extension of NW Camas Meadows Drive to the east, which will connect to NW Larkspur Street. As previously shown, Figure 2 shows the project site plan. Initial construction is expected to begin in 2016 with full occupancy by 2020.

TRIP GENERATION

Estimates of daily, A.M. peak hour, and P.M. peak hour trips generated by the proposed project were developed from rates published in "Trip Generation, 9th Edition" (Institute of Transportation Engineers, 2012). The proposed development is expected to generate 5,026 gross new daily trips, 545 gross new A.M. peak hour (329 in, 216 out), and 382 net new P.M. peak hour (159 in, 223 out) trips. Of these gross new trips, there are 119 daily, 0 A.M. peak hour (0 in, 0 out), and 10 P.M. peak hour (5 in, 5 out) pass-by trips. The proposed project is expected to generate 4,907 net new daily trips, 545 net new A.M. peak hour trips (329 in, 216 out), and 372 net new P.M. peak hour trips (154 in, 218 out). Table 6 summarizes the trip generation for Parklands at Camas Meadows subdivision and business park development.

Table 6. Trip Generation Summary for Parklands at Camas Meadows

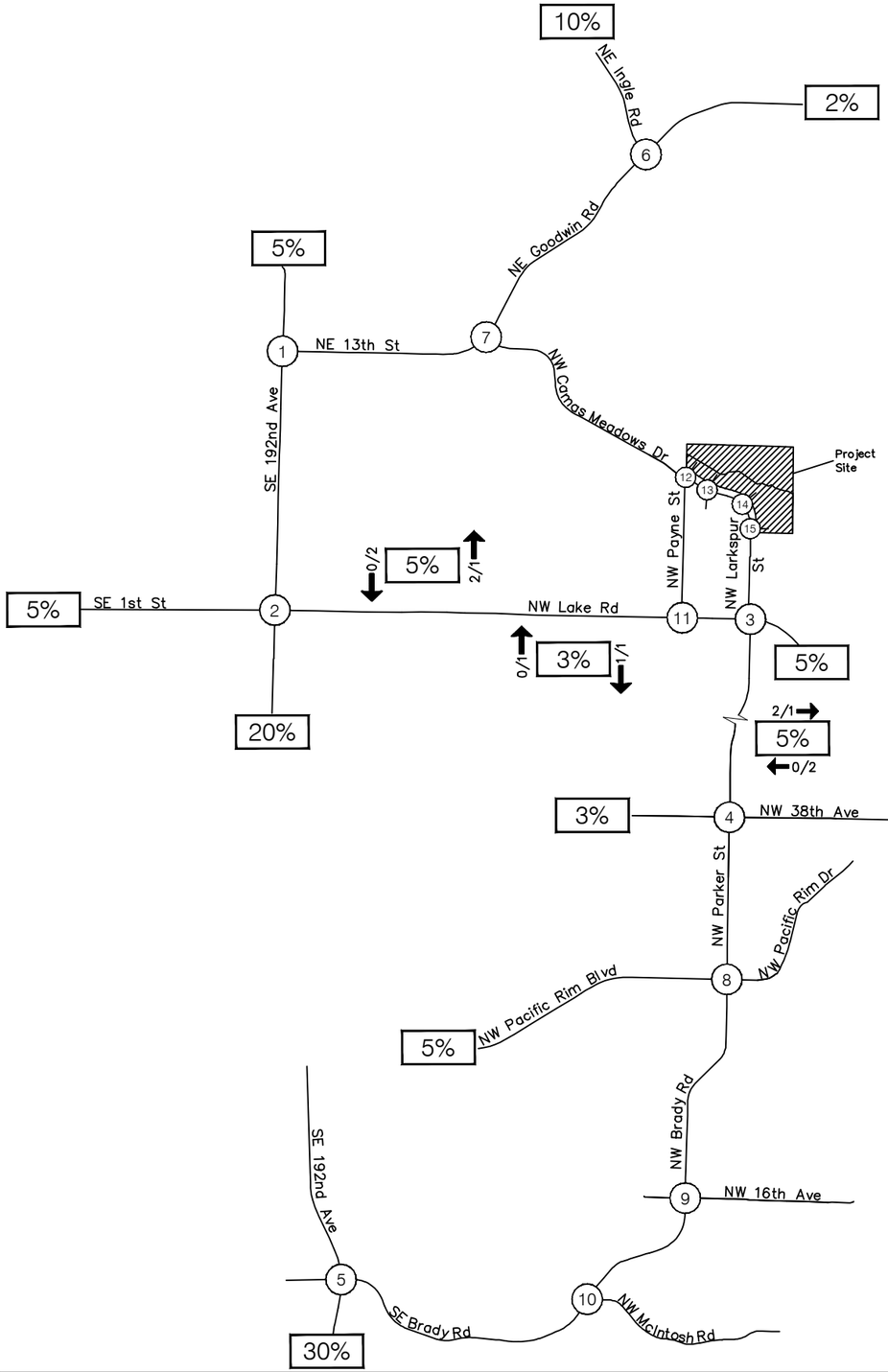
	Average Daily	A.M. Peak			P.M. Peak		
		In	Out	Total	In	Out	Total
Trip Generation for Building #1							
Coffee Shop with Drive Through (ITE Code 937) – 3 ksf							
Rate per 1,000 square feet (ksf)	818.58	51.30	49.28	100.58	21.40	21.40	42.80
Net Trips	2,456	154	148	302	64	64	128
Business Park (ITE Code 770) – 3 ksf							
Rate per 1,000 square feet (ksf)	12.44	1.19	0.21	1.40	0.33	0.93	1.26
Net Trips	37	3	1	4	1	3	4
Net Total – Building #1	2,493	157	149	306	65	67	132
Trip Generation for Building #2							
Quality Restaurant (ITE Code 931) – 3 ksf							
Rate per 1,000 square feet (ksf)	89.95	0.40	0.41	0.81	5.02	2.47	7.49
Gross Trips	270	1	1	2	15	7	22
Pass-by Trips – 44%	-119	-	-	-	-5	-5	-10
Net Trips for Quality Restaurant	151	1	1	2	10	2	12
Business Park (ITE Code 770) – 36.6 ksf							
Rate per 1,000 square feet (ksf)	12.44	1.19	0.21	1.40	0.33	0.93	1.26
Net Trips	455	43	8	51	12	34	46
Residential Condo/Townhouse (ITE Code 230) – 24 residential units							
Rate per dwelling unit	5.81	0.07	0.37	0.44	0.35	0.17	0.52
Net Trips	139	2	9	11	8	4	12
Net Total – Building #2	745	46	18	64	30	40	70
Trip Generation for Building #3							
Business Park (ITE Code 770) – 40.0 ksf							
Rate per 1,000 square feet (ksf)	12.44	1.19	0.21	1.40	0.33	0.93	1.26
Net Total – Building #3	498	48	8	56	13	37	50
Trip Generation for Building #4a							
Business Park (ITE Code 770) – 30.0 ksf							
Rate per 1,000 square feet (ksf)	12.44	1.19	0.21	1.40	0.33	0.93	1.26
Net Total – Building #4a	373	36	6	42	10	28	38
Trip Generation for Building #4b							
Business Park (ITE Code 770) – 32.0 ksf							
Rate per 1,000 square feet (ksf)	12.44	1.19	0.21	1.40	0.33	0.93	1.26
Net Total – Building #4b	398	38	7	45	10	30	40
Single Family Residential (ITE Code 210)							
Rate per dwelling unit	9.52	0.19	0.56	0.75	0.63	0.37	1.00
Net Trips – 42 units	400	4	28	32	26	16	42
Summary							
Gross Total Trips	5,026	329	216	545	159	223	382
Pass-by Trips	-119	0	0	0	-5	-5	-10
Net New Trips	4,907	329	216	545	154	218	372

TRIP DISTRIBUTION AND ASSIGNMENT

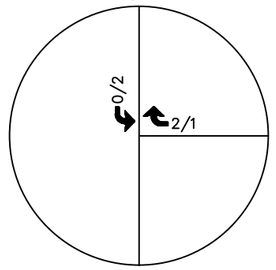
Separate trip distribution patterns were developed for the residential, business park, and coffee shop/restaurant uses. The residential trip distribution pattern was based on primarily commute patterns, school locations, and shopping center locations. The business park trip distribution pattern was based on logical travel paths to major travel corridors and residential areas where employees may reside. Figure 6a shows the resulting trip distribution pattern and assignment of project generated trips for the residential uses. Figure 6b shows the resulting trip distribution pattern and assignment of project generated trips for the coffee shop/quality restaurant uses. Figure 6c shows the pass-by trip distribution and assignment of the quality restaurant use. Figure 6d shows the resulting trip distribution pattern and assignment of project generated trips for the business park use. Figure 6e shows the trip assignment of all the project-generated trips. Table 7 summarizes project-generated P.M. peak hour trip impact to each of the City of Vancouver's TMZ corridors.

Table 7. TMZ Corridor Project Trip Impact

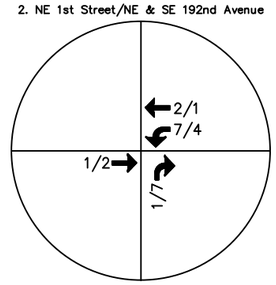
TMZ Corridor	Limits of TMZ Corridor	P.M. Peak Hour Trip Impact
18th Street	112th Avenue – 138th Avenue	0
18th Street	138th Avenue – 162nd Avenue	0
28th Street	112th Avenue – 138th Avenue	0
28th Street	138th Avenue – 162nd Avenue	0
112th Avenue	Mill Plain Blvd – 28th Street	0
112th Avenue	28th Street – 51st Street	0
136th Avenue	Mill Plain Blvd – 28th Street	0
138th Avenue	28th Street – Fourth Plain Blvd	0
162nd Avenue	1st Street – Fourth Plain Blvd	0
164th Avenue	SR 14 – 1st Street	0
192nd Avenue	SR 14 – 18th Street	150
Andresen Road	Mill Plain Blvd – SR 500	0
Andresen Road	SR 500 – 78th Street	0
Burton Road	Andresen Road – 112th Avenue	0
Fourth Plain Blvd	Port – I-5	0
Fourth Plain Blvd	I-5 – Stapleton Road	0
Fourth Plain Blvd	Stapleton Road to I-205	0
Fourth Plain Blvd	117th Avenue – 162nd Avenue	0
Mill Plain Blvd	I-5 – Andresen Road	0
Mill Plain Blvd	Andresen Road – I-205	0
Mill Plain Blvd	I-205 – 136th Avenue	0
Mill Plain Blvd	136th Avenue – 164th Avenue	0
Mill Plain Blvd	164th Avenue – 192nd Avenue	0
St. James/St. Johns Road	Fourth Plain – 78th Street	0



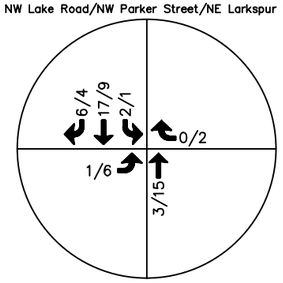
1. NE 13th Street/NE 192nd Avenue



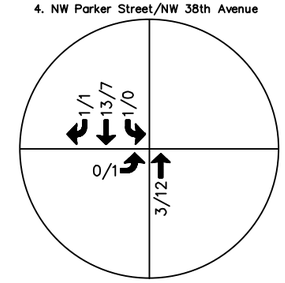
2. NE 1st Street/NE & SE 192nd Avenue



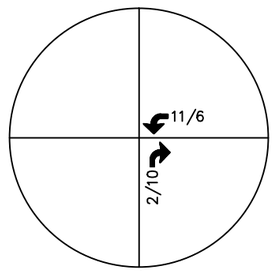
3. NW Lake Road/NW Parker Street/NE Larkspur Street



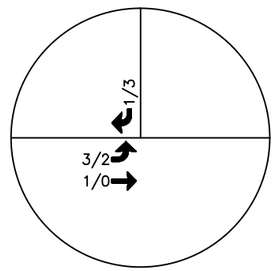
4. NW Parker Street/NW 38th Avenue



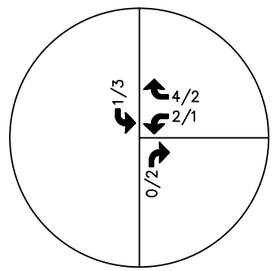
5. SE Brady Road/SE 192nd Avenue



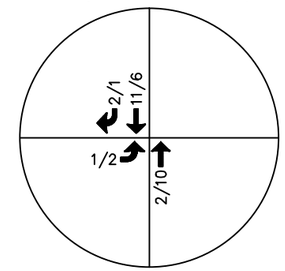
6. NE Goodwin Road/NE Ingle Road



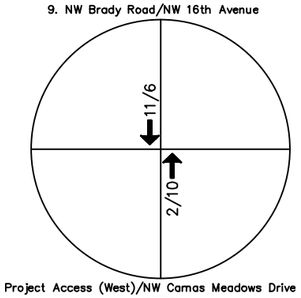
7. NE Goodwin Road/NW Camas Meadows Drive



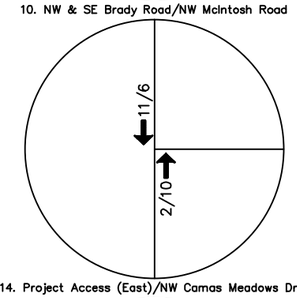
8. NW Parker Street/NW Pacific Rim Boulevard/NW Pacific Rim Drive



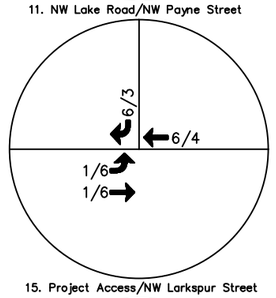
9. NW Brady Road/NW 16th Avenue



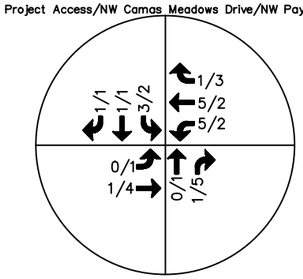
10. NW & SE Brady Road/NW McIntosh Road



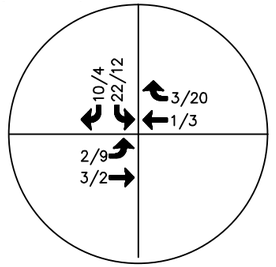
11. NW Lake Road/NW Payne Street



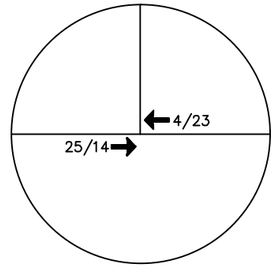
12. Project Access/NW Camas Meadows Drive/NW Payne Street



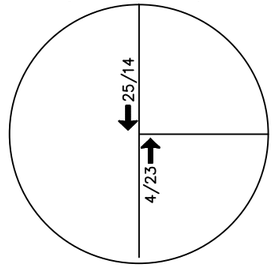
13. Project Access (West)/NW Camas Meadows Drive



14. Project Access (East)/NW Camas Meadows Drive



15. Project Access/NW Larkspur Street



NOT TO SCALE

LEGEND

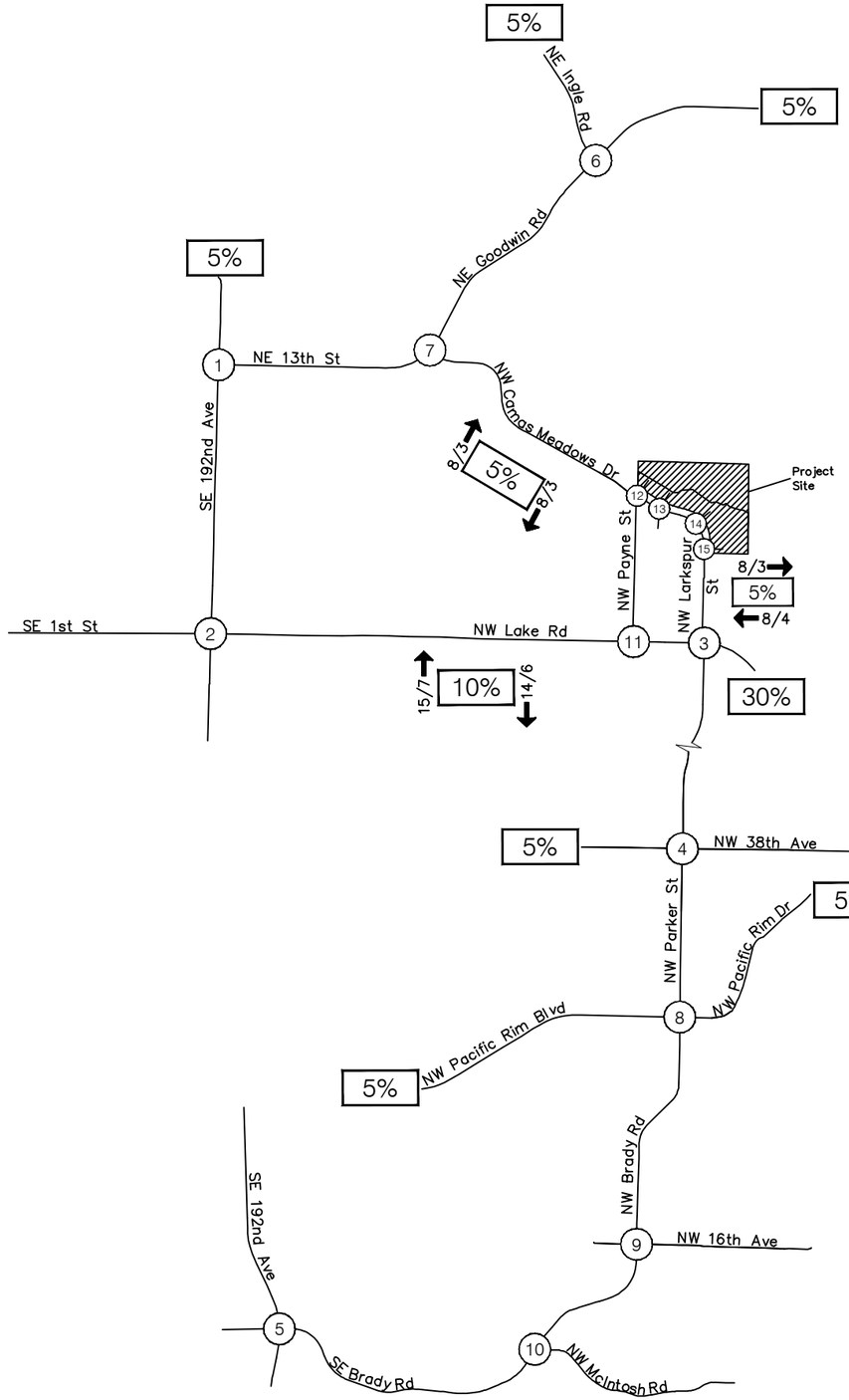
128/200 A.M./P.M. Peak Hour Traffic Volume

10% A.M. and P.M. Peak Hour Trip Distribution

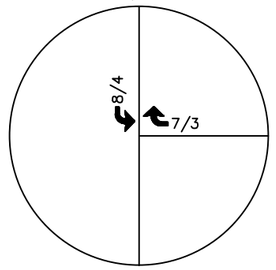
FIGURE 6a
"Residential"
Trip Distribution and Assignment
Traffic Volumes

315021.0Figures.Dwg

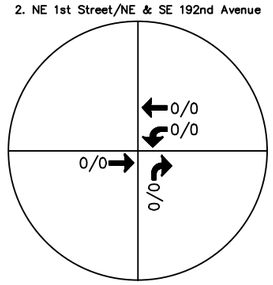
Parklands at Camas Meadows TIA
Camas, WA



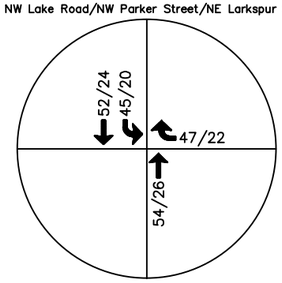
1. NE 13th Street/NE 192nd Avenue



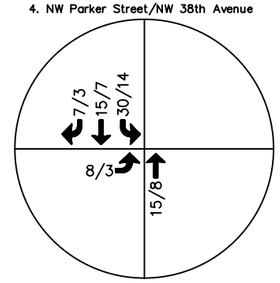
2. NE 1st Street/NE & SE 192nd Avenue



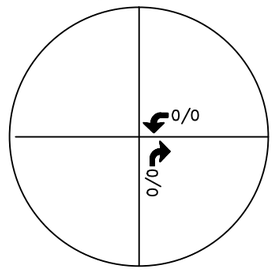
3. NW Lake Road/NW Parker Street/NE Larkspur Street



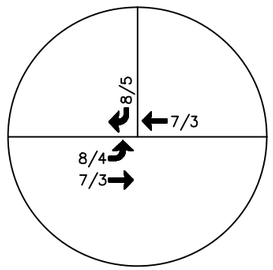
4. NW Parker Street/NW 38th Avenue



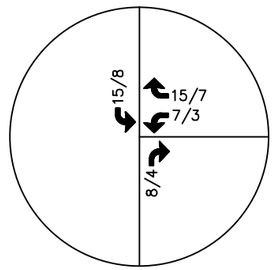
5. SE Brady Road/SE 192nd Avenue



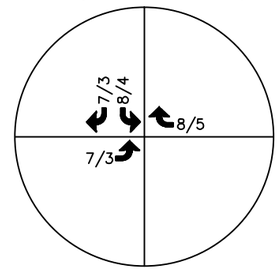
6. NE Goodwin Road/NE Ingle Road



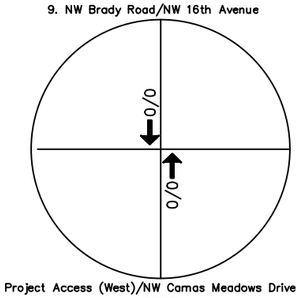
7. NE Goodwin Road/NW Camas Meadows Drive



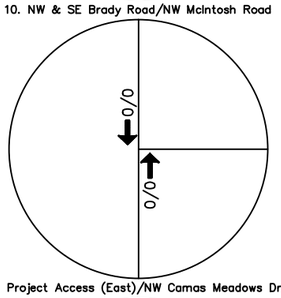
8. NW Parker Street/NW Pacific Rim Boulevard/NW Pacific Rim Drive



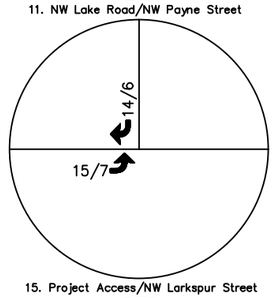
9. NW Brady Road/NW 16th Avenue



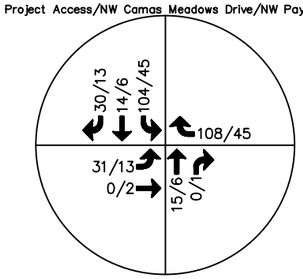
10. NW & SE Brady Road/NW McIntosh Road



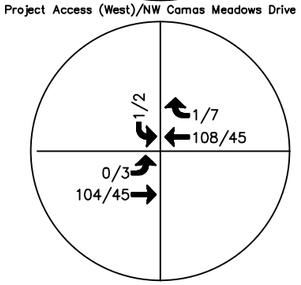
11. NW Lake Road/NW Payne Street



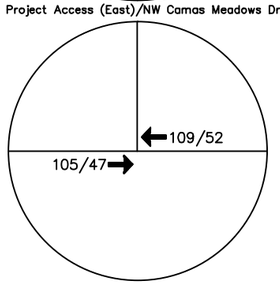
12. Project Access/NW Camas Meadows Drive/NW Payne Street



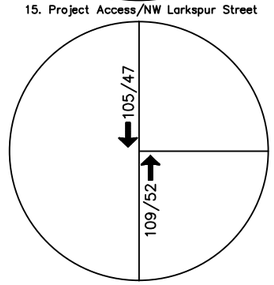
13. Project Access (West)/NW Camas Meadows Drive



14. Project Access (East)/NW Camas Meadows Drive



15. Project Access/NW Larkspur Street



NOT TO SCALE

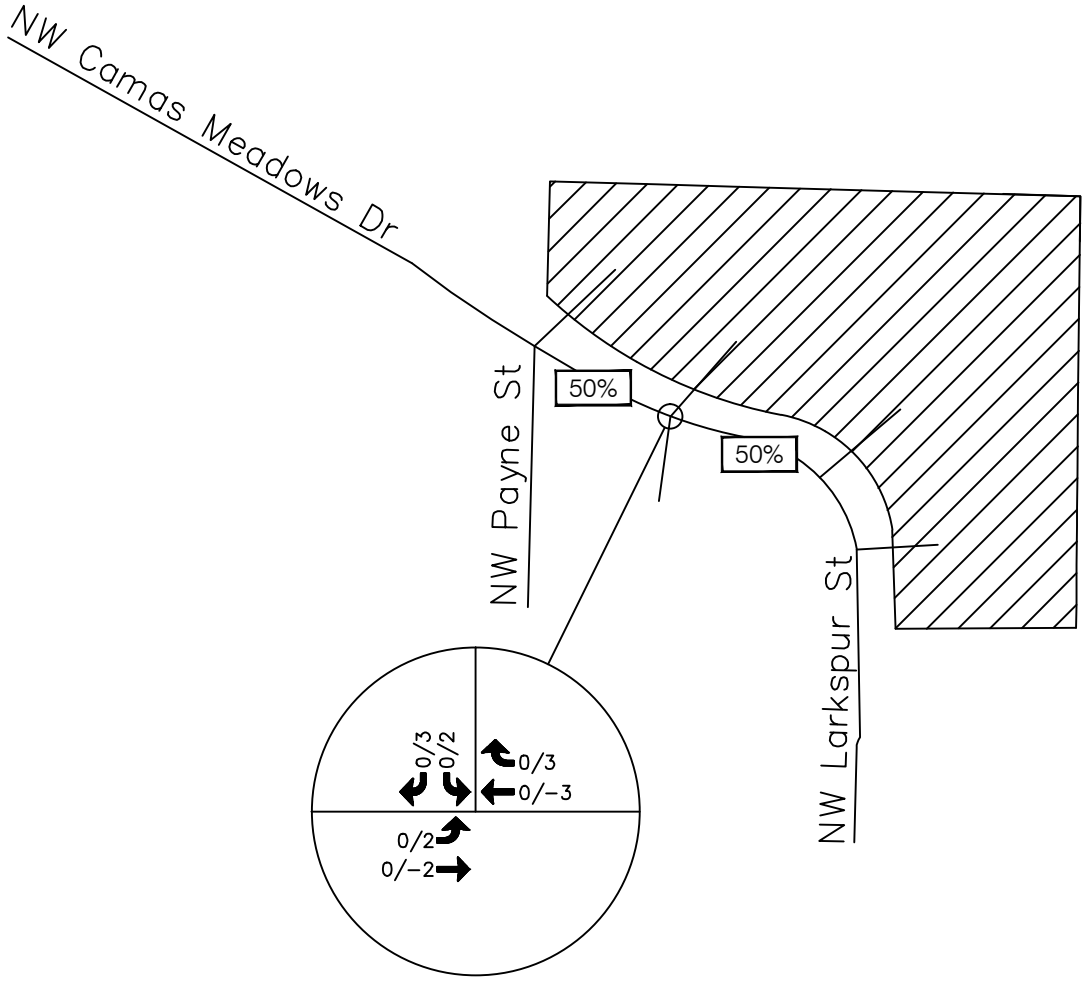
LEGEND

100/128 A.M./P.M. Peak Hour Traffic Volumes

10% A.M. and P.M. Peak Hour Trip Distribution

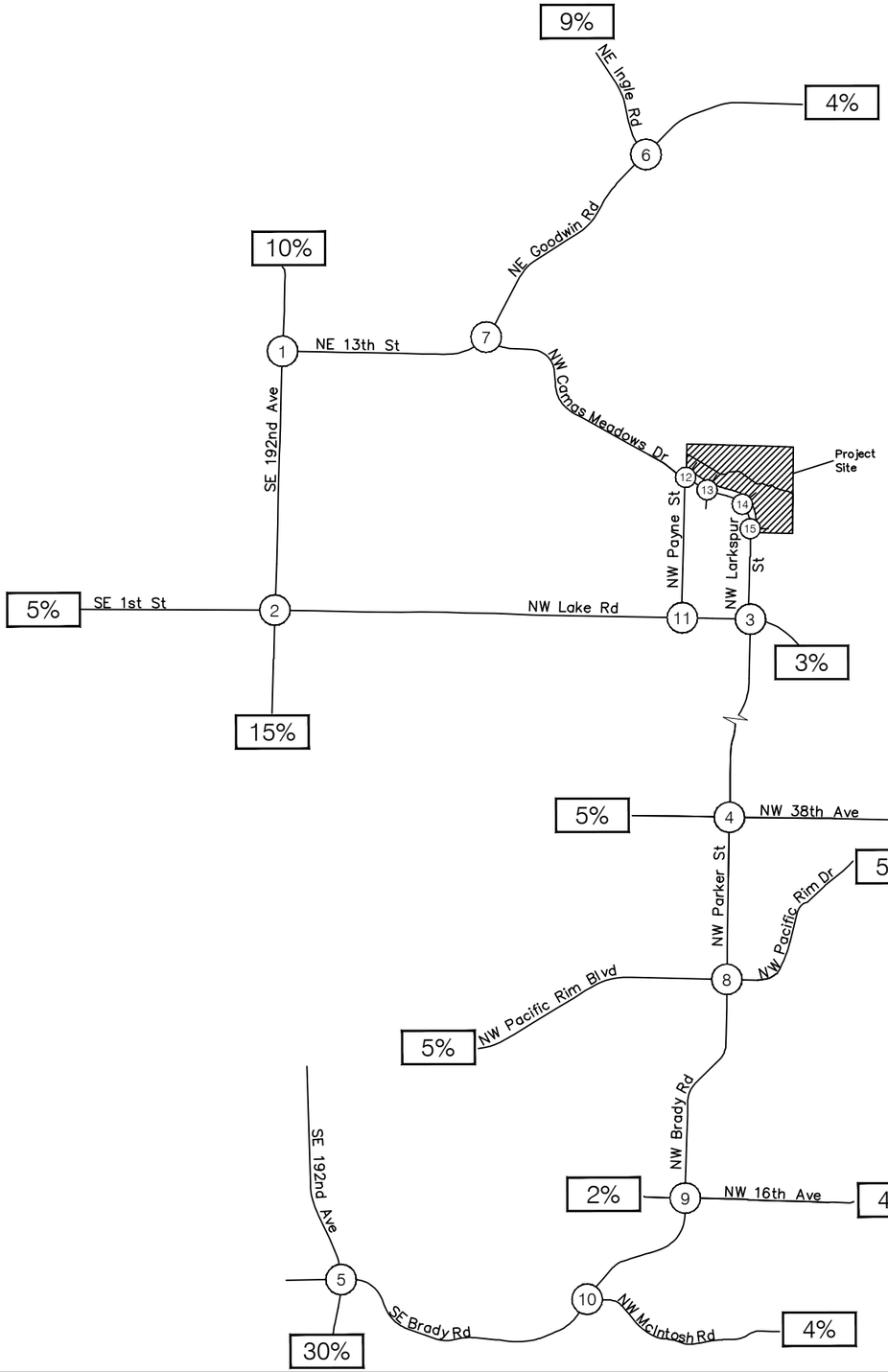
FIGURE 6b
"Coffee Shop/Quality Restaurant"
Trip Distribution and Assignment
Traffic Volumes

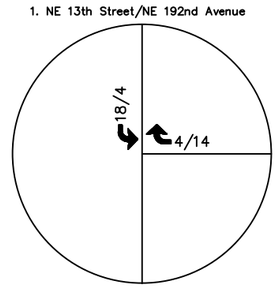
315021.0Figures.Dwg

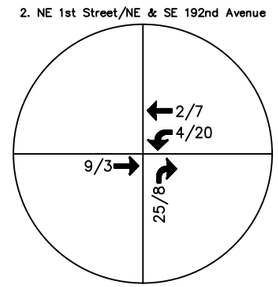


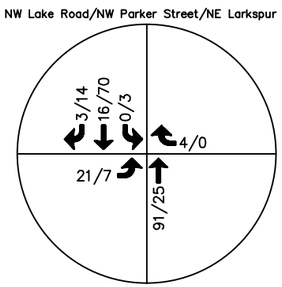
NOT TO SCALE

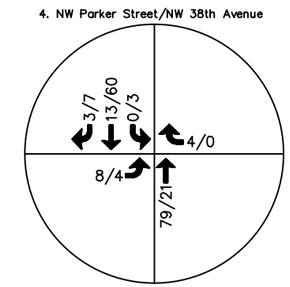
FIGURE 6c
"Quality Restaurant"
Pass-By Trips
Traffic Volumes

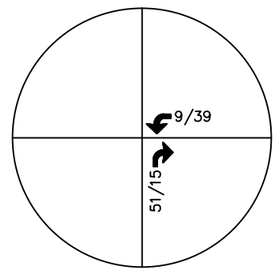


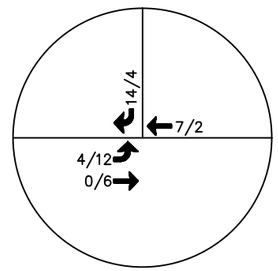


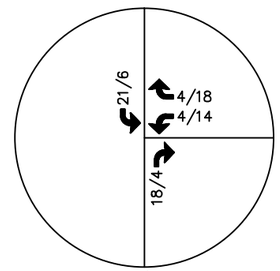


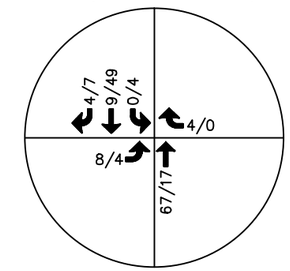


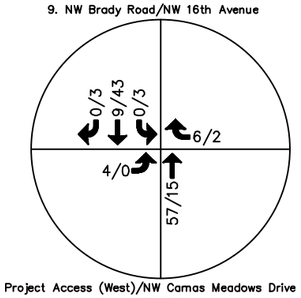


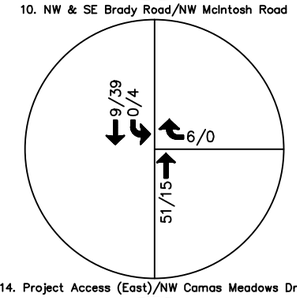


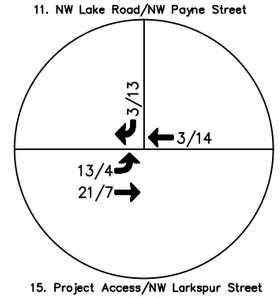


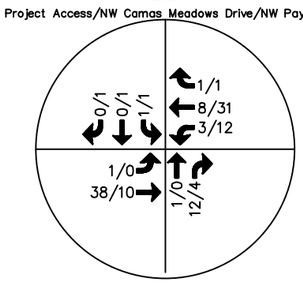


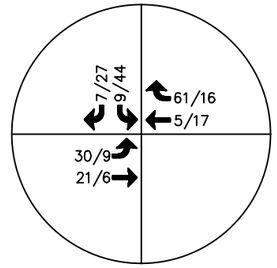


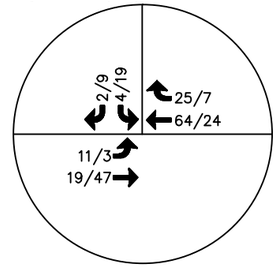


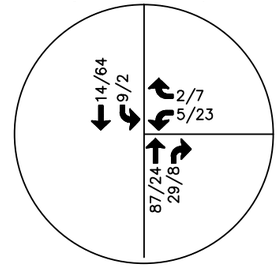












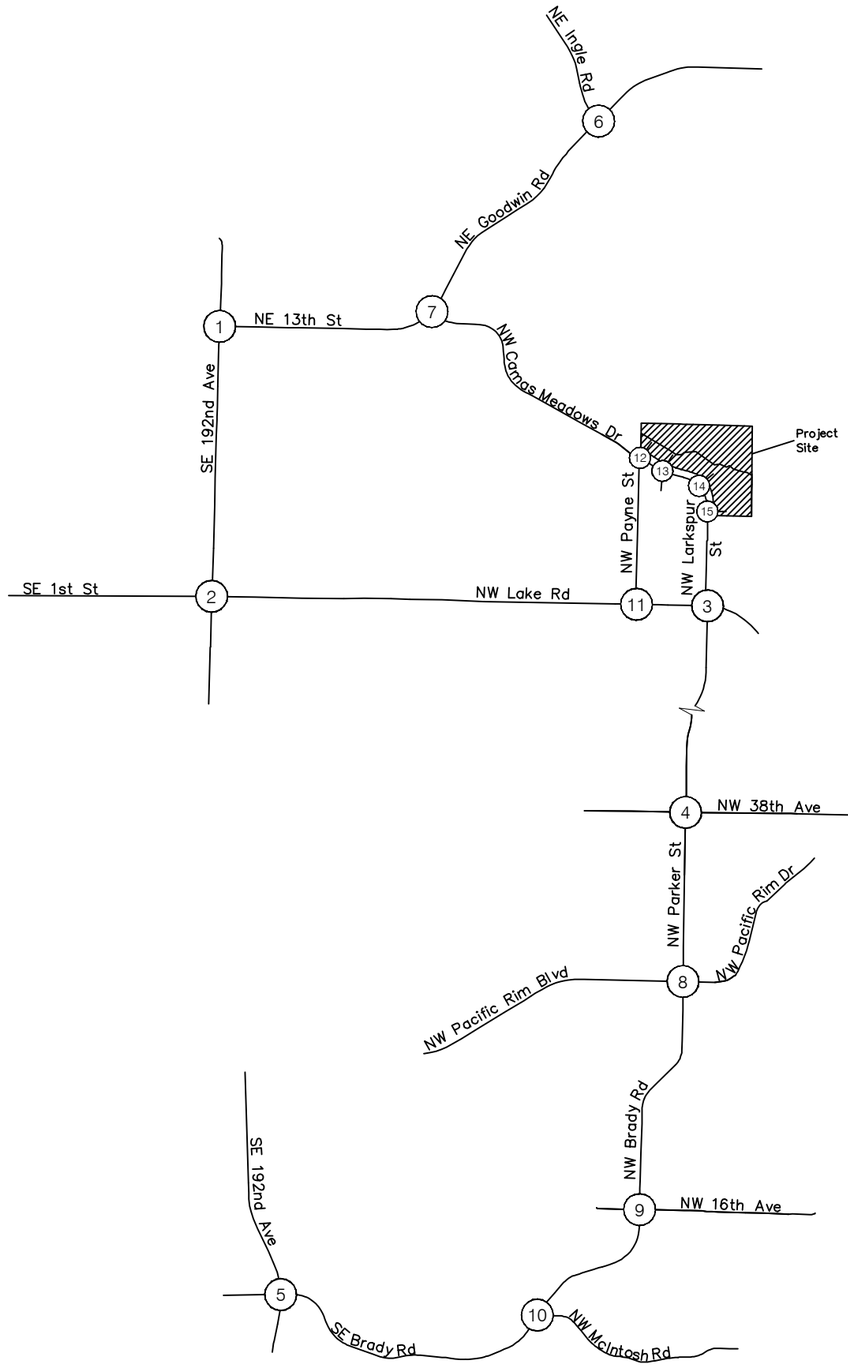
NOT TO SCALE

LEGEND

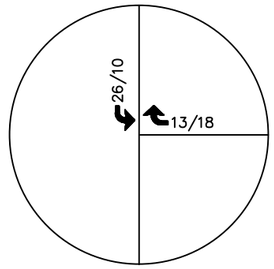
100/128 A.M./P.M. Peak Hour Traffic Volumes

10% A.M. and P.M. Peak Hour Trip Distribution

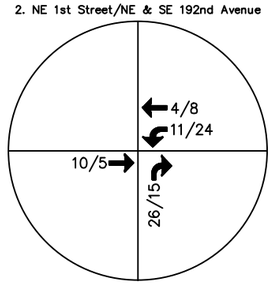
FIGURE 6d
"Business Park"
Trip Distribution and Assignment
Traffic Volumes



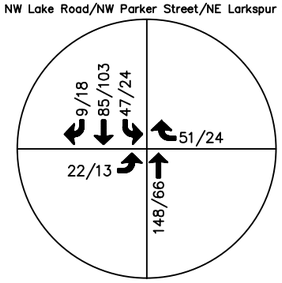
1. NE 13th Street/NE 192nd Avenue



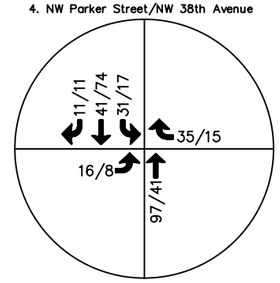
2. NE 1st Street/NE & SE 192nd Avenue



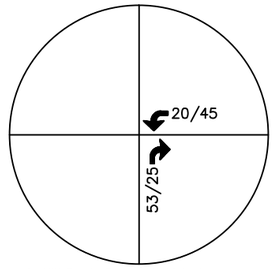
3. NW Lake Road/NW Parker Street/NE Larkspur Street



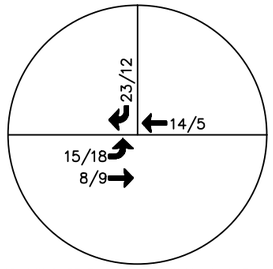
4. NW Parker Street/NW 38th Avenue



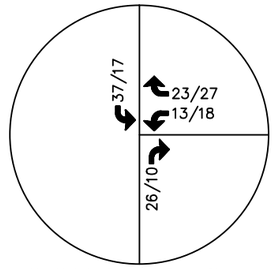
5. SE Brady Road/SE 192nd Avenue



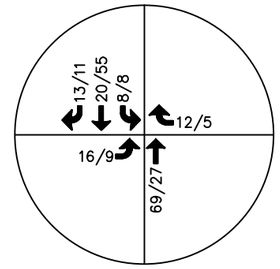
6. NE Goodwin Road/NE Ingle Road



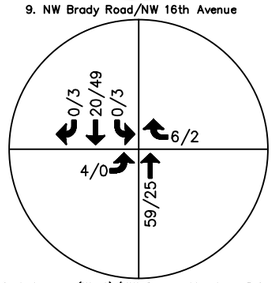
7. NE Goodwin Road/NW Camas Meadows Drive



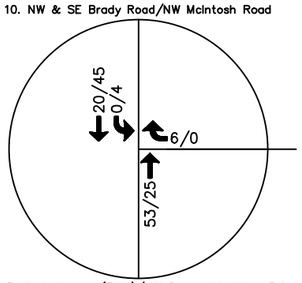
8. NW Parker Street/NW Pacific Rim Boulevard/NW Pacific Rim Drive



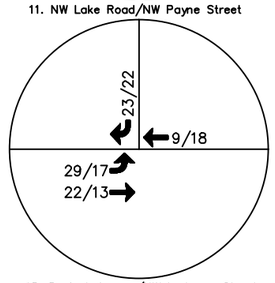
9. NW Brady Road/NW 16th Avenue



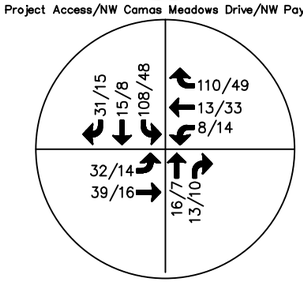
10. NW & SE Brady Road/NW McIntosh Road



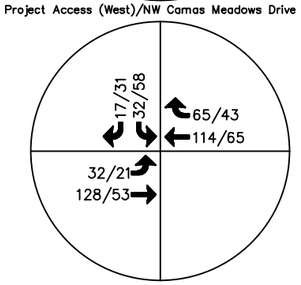
11. NW Lake Road/NW Payne Street



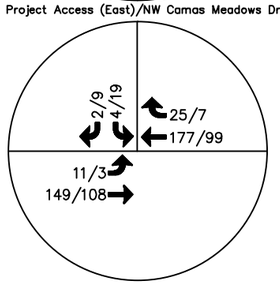
12. Project Access/NW Camas Meadows Drive/NW Payne Street



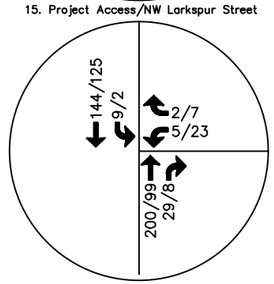
13. Project Access (West)/NW Camas Meadows Drive



14. Project Access (East)/NW Camas Meadows Drive



15. Project Access/NW Larkspur Street



LEGEND

100/128 A.M./P.M. Peak Hour Traffic Volumes

NOT TO SCALE

FIGURE 6e
"Combined Use"
Trip Distribution and Assignment
Traffic Volumes

315021.0Figures.Dwg

2020 "WITH PROJECT" TRAFFIC VOLUMES AND LEVELS OF SERVICE

The traffic volumes shown in Figures 5, 6a and 6b were combined to arrive at the 2020 "With Project" A.M. and P.M. peak hour traffic volumes. Figure 7 shows these traffic volumes. Based on the traffic volumes shown in Figure 7 and the existing lane configurations shown in Figure 3, levels of service were calculated for the 2020 "With Project" condition. Appendix F contains the LOS worksheets for the 2020 "With Project" condition. Table 8A and 8B shows the results of the analysis.

Per conversations with Olson Engineering, Inc. pertaining to the Green Mountain Development, the NE Goodwin Road/NE Ingle Road intersection will be converted to a signalized intersection with additional eastbound and westbound left turn lanes. The NE Goodwin Road/NE Ingle Road intersection was analyzed in the 2020 "Without Project" condition based on those improvements.

It should be noted that the 2020 "With Project" condition was based on the extension of NE Camas Meadows Drive to NW Larkspur Road. Based on this connection, traffic was diverted away from the NW Lake Road/NW Payne Street intersection. All of the southbound right turn movements at the NW Lake Road/NW Payne Street intersection were maintained while the southbound left turns were diverted to the NW Lake Road/NW Parker Street/NW Larkspur Road intersection.

As shown in Table 8A, all City of Camas study area intersections operate at LOS D or better which is within the City of Camas' standard.

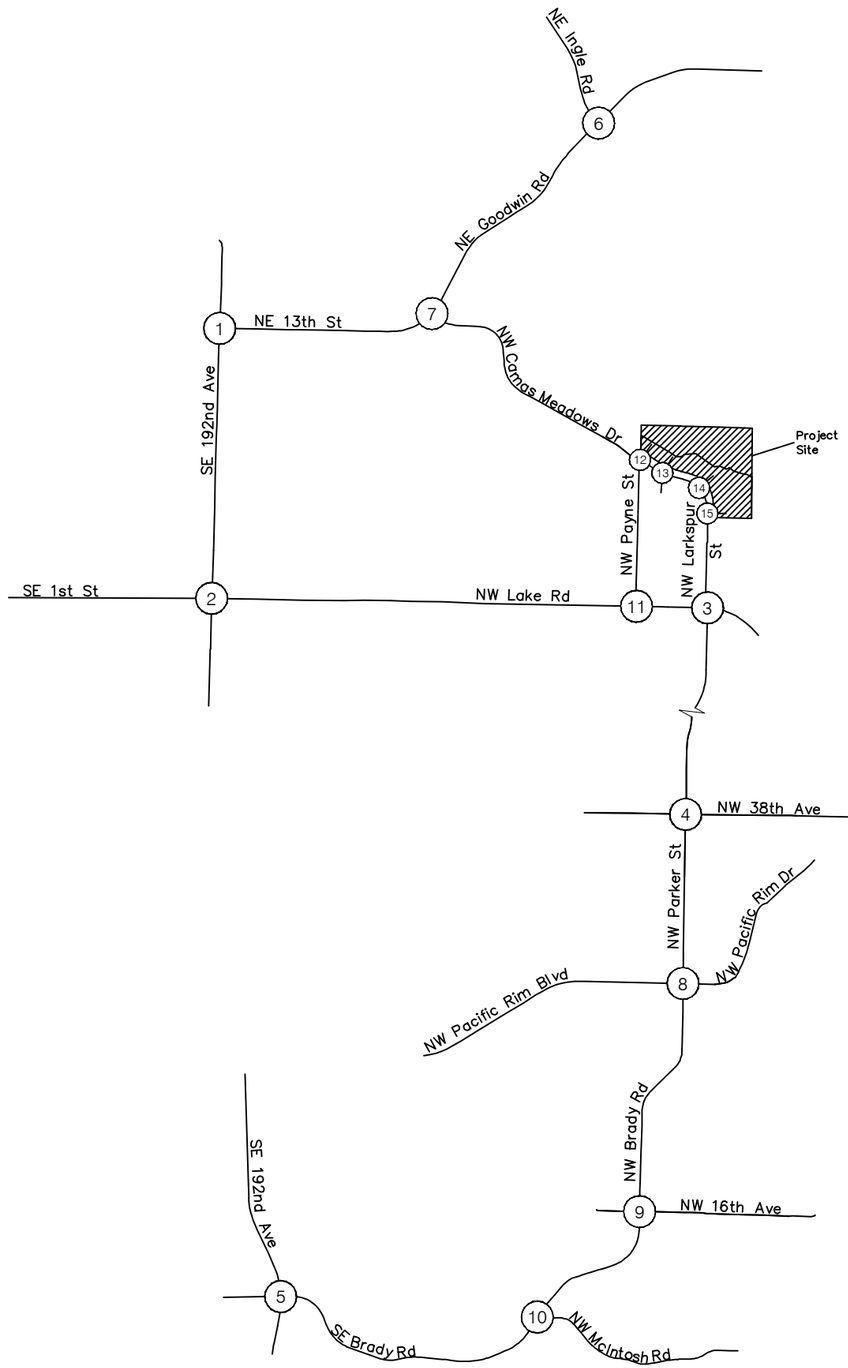
As shown in Table 8B, all City of Vancouver intersection approaches are projected to operate at an acceptable level of service of LOS D or better.

Table 9 shows the 95th percentile queue for the major movements at the study area intersections. These 95th percentile queues were obtained from the Synchro level of service output and can be referenced in Appendix F. As shown in Table 9, all of the 95th percentile queues are within the available storage areas with the exception of the following movements:

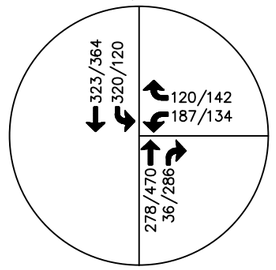
- NE 13th Street/NE 192nd Avenue
  The southbound left turn movement in the 2020 "With Project" A.M. peak hour condition exceeds the available storage by 19 feet. This is less than one car length and is not significantly over the available storage. The southbound left turn movement LOS and v/c ratio meet the City of Vancouver standards so no mitigation is necessary. The city should monitor this condition periodically to see if it becomes an operations issue.

- SE Brady Road/NE 192nd Avenue
  The westbound left turn movement in the 2020 "With Project" A.M. and P.M. peak hour conditions exceed the available storage by 241 and 59 feet, respectively. This queue exceeding the available storage may be partially mitigated by reallocating some of the green time from the eastbound through phase to the westbound left turn phase. Reallocating the green time from NE 192nd Avenue to the westbound left movement from SE Brady Road can reduce the excessive queues along SE Brady Road. Since overall levels of service is relatively

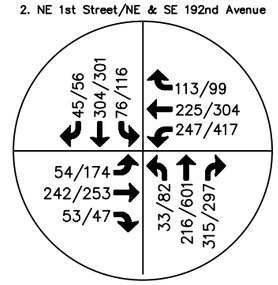
low (LOS C in the A.M. peak and LOS B in the P.M peak), it is likely that green time from NE 192nd Avenue can be reallocated to SE Brady Road. The westbound left turn movement LOS and v/c ratio meet the City of Vancouver standards so no mitigation is necessary. The City of Vancouver should monitor this movement periodically to see if it becomes a traffic operations issue.



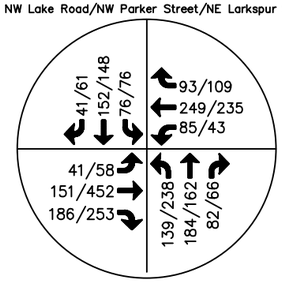
1. NE 13th Street/NE 192nd Avenue



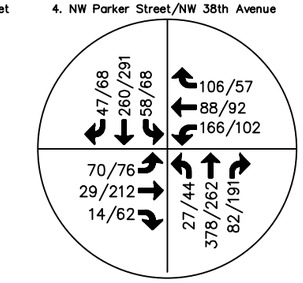
2. NE 1st Street/NE & SE 192nd Avenue



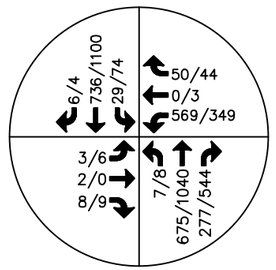
3. NW Lake Road/NW Parker Street/NE Larkspur Street



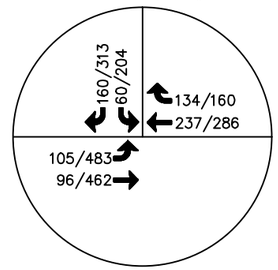
4. NW Parker Street/NW 38th Avenue



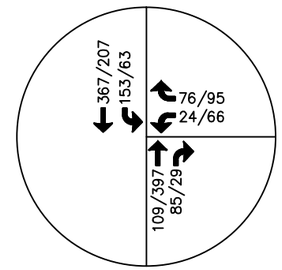
5. SE Brady Road/SE 192nd Avenue



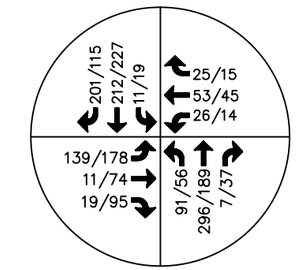
6. NE Goodwin Road/NE Ingle Road



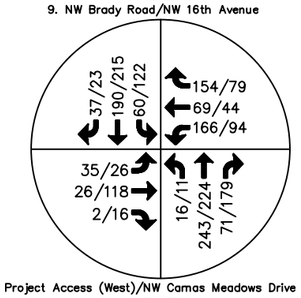
7. NE Goodwin Road/NW Camas Meadows Drive



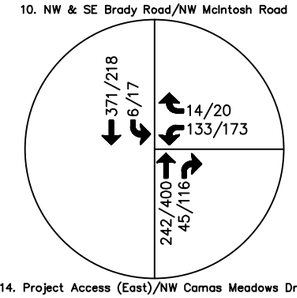
8. NW Parker Street/NW Pacific Rim Boulevard/NW Pacific Rim Drive



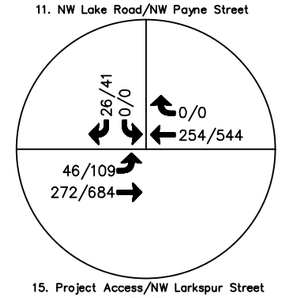
9. NW Brady Road/NW 16th Avenue



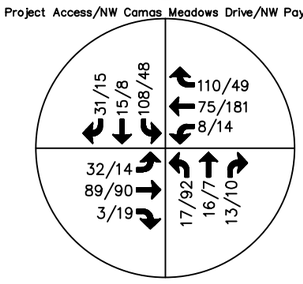
10. NW & SE Brady Road/NW McIntosh Road



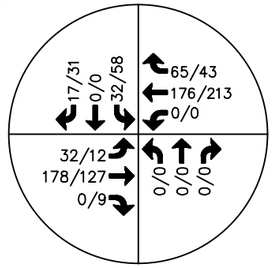
11. NW Lake Road/NW Payne Street



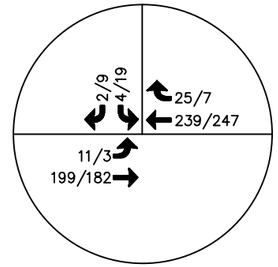
12. Project Access/NW Camas Meadows Drive/NW Payne Street



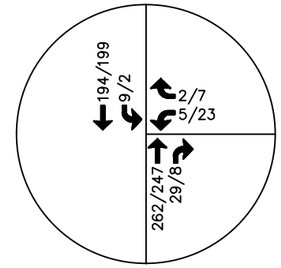
13. Project Access (West)/NW Camas Meadows Drive



14. Project Access (East)/NW Camas Meadows Drive



15. Project Access/NW Larkspur Street



LEGEND

128/200 AM/PM Peak Hour Traffic Volume

NOT TO SCALE

FIGURE 7
2020 "With Project"
A.M. and P.M. Peak Hour Traffic Volumes

Table 8A. 2020 "With Project" Levels of Service at City of Camas Intersections

Signalized Intersection	A.M. Peak Hour LOS	A.M. Peak Hour Average Delay (sec)	A.M. Peak Hour V/C Ratio	P.M. Peak Hour LOS	P.M. Peak Hour Average Delay (sec)	P.M. Peak Hour V/C Ratio
NW Lake Road/NW Parker Street/NW Larkspur Road	C	21.4	0.52	C	22.2	0.52
NW Parker Street/NW 38th Avenue	C	21.6	0.59	B	17.2	0.42
NE Goodwin Road/NW Ingle Road	A	8.9	0.23	B	15.8	0.56
All Way Stop Intersections						
NW Parker St/NW Pacific Rim Blvd/NW Pacific Rim Dr	C	15.6	0.44	B	14.6	0.38
NW Brady Road/NW 16th Avenue	D	28.2	0.73	C	19.2	0.59
Unsignalized Intersections						
NE Goodwin Road/NW Camas Meadows Drive						
Westbound Left	C	18.9	0.10	C	20.7	0.25
Westbound Right	A	9.3	0.07	B	12.4	0.19
Southbound Left	A	7.7	0.08	A	8.5	0.07
NW & SE Brady Road/NW McIntosh Road						
Westbound Left	C	22.6	0.44	C	22.5	0.31
Westbound Right	B	10.1	0.02	B	12.4	0.05
Southbound Left	A	8.0	0.01	A	9.0	0.02
NW Lake Road/NW Payne Street						
Eastbound Left	A	7.9	0.04	A	9.1	0.12
Southbound Approach	A	9.2	0.01	B	10.5	0.06
NW Payne St/NW Camas Meadows Dr/Project Access						
Eastbound Left	A	7.7	0.03	A	7.8	0.01
Westbound Left	A	7.4	0.01	A	7.5	0.01
Northbound Approach	B	11.6	0.09	B	14.5	0.26
Southbound Approach	B	13.7	0.31	B	13.0	0.16
NW Camas Meadows Dr/West Project Access						
Eastbound Left	A	7.9	0.03	A	7.9	0.02
Southbound Approach	B	12.0	0.10	B	12.5	0.18
NW Camas Meadows Dr/East Project Access						
Eastbound Left	A	7.9	0.01	A	7.9	0.01
Southbound Approach	B	11.6	0.01	B	11.8	0.06
NW Larkspur St/Project Access						
Westbound Approach	B	11.9	0.02	B	12.2	0.07
Southbound Left	A	8.0	0.01	A	7.9	0.01

Table 8B. 2020 "With Project" Levels of Service at City of Vancouver Intersections

Signalized Intersection	A.M. Peak Hour			P.M. Peak Hour		
	LOS	Average Delay (sec)	V/C Ratio	LOS	Average Delay (sec)	V/C Ratio
NE 13th Street/NE 192nd Avenue						
Westbound Approach	D	41.4	0.76	D	46.5	0.81
Northbound Approach	D	40.1	0.73	D	37.0	0.89
Southbound Approach	C	25.5	0.52	B	18.6	0.37
Overall Intersection LOS	C	33.0		C	32.8	
SE 1st Street/NE & SE 192nd Avenue						
Eastbound Approach	D	37.0	0.56	D	42.4	0.53
Westbound Approach	C	34.4	0.57	D	49.0	0.74
Northbound Approach	B	13.8	0.31	C	21.7	0.42
Southbound Approach	C	24.1	0.33	C	29.7	0.35
Overall Intersection LOS	C	26.6		C	34.8	
SE Brady Road/SE 192nd Avenue						
Eastbound Approach	C	26.3	0.09	B	15.9	0.04
Westbound Approach	C	24.7	0.71	D	36.7	0.67
Northbound Approach	B	17.0	0.55	B	15.9	0.60
Southbound Approach	C	20.6	0.63	B	16.5	0.58
Overall Intersection LOS	C	20.3		B	18.7	

Table 9. 95th Percentile Queuing at Study Area Intersections for 2020 "With Project"

Signalized Intersection	A.M. Peak Hour Queue[1]	P.M. Peak Hour Queue[1]	Available Storage	Storage Exceeded?
NE 13th St/NE 192nd Ave				
Westbound Approach	317 feet	265 feet	continuous	No
Northbound Approach	327 feet	886 feet	continuous	No
Southbound Left	396 feet	150 feet	377 feet	Yes
Southbound Through	175 feet	175 feet	continuous	No
SE 1st St/NE & SE 192nd Ave				
Eastbound Left	34 feet	89 feet	285 feet	No
Eastbound Through	113 feet	131 feet	continuous	No
Westbound Left	114 feet	207 feet	345 feet	No
Westbound Through	187 feet	319 feet	continuous	No
Westbound Right	25 feet	32 feet	continuous	No
Northbound Left	47 feet	100 feet	195 feet	No
Northbound Through	86 feet	225 feet	continuous	No
Northbound Right	68 feet	70 feet	230 feet	No
Southbound Left	88 feet	134 feet	295 feet	No
Southbound Through	128 feet	123 feet	continuous	No
NW Lake Rd/NW Parker St/NW Larkspur Rd				
Eastbound Left	52 feet	75 feet	215 feet	No
Eastbound Through	124 feet	359 feet	continuous	No
Eastbound Right	25 feet	25 feet	185 feet	No
Westbound Left	86 feet	79 feet	continuous	No
Westbound Through	100 feet	101 feet	continuous	No
Northbound Left	117 feet	211 feet	350 feet	No
Northbound Through/Right	162 feet	150 feet	continuous	No
Southbound Left	127 feet	145 feet	150 feet	No
Southbound Through/Right	160 feet	207 feet	continuous	No

Table 9. 95th Percentile Queuing at Study Area Intersections for 2020 "With Project" Continued

Signalized Intersection	A.M. Peak Hour Queue	P.M. Peak Hour Queue	Available Storage	Storage Exceeded?
NW Parker St/NW 38th Ave				
Eastbound Left	57 feet	65 feet	250 feet	No
Eastbound Through/Right	27 feet	144 feet	continuous	No
Westbound Left	148 feet	100 feet	200 feet	No
Westbound Through/Right	77 feet	68 feet	continuous	No
Northbound Left	31 feet	46 feet	180 feet	No
Northbound Through	275 feet	153 feet	continuous	No
Northbound Right	25 feet	31 feet	continuous	No
Southbound Left	66 feet	80 feet	295 feet	No
Southbound Through	153 feet	171 feet	continuous	No
Southbound Right	25 feet	25 feet	190 feet	No
SE Brady Road/SE 192nd Avenue				
Eastbound Left	25 feet	25 feet	180 feet	No
Eastbound Through/Right	25 feet	25 feet	continuous	No
Westbound Left	561 feet	379 feet	320 feet	Yes
Westbound Through/Right	25 feet	31 feet	continuous	No
Northbound Left	25 feet	25 feet	325 feet	No
Northbound Through	230 feet	398 feet	continuous	No
Northbound Right	25 feet	34 feet	205 feet	No
Southbound Left	42 feet	87 feet	175 feet	No
Southbound Through	243 feet	385 feet	continuous	No
Southbound Right	25 feet	25 feet	205 feet	No
NE Goodwin Road/NE Ingle Road				
Eastbound Left	61 feet	364 feet	TBD[1]	No[1]
Eastbound Through	25 feet	134 feet	TBD[1]	No[1]
Westbound Through	106 feet	163 feet	TBD[1]	No[1]
Westbound Right	25 feet	30 feet	TBD[1]	No[1]
Southbound Left	41 feet	116 feet	TBD[1]	No[1]
Southbound Right	25 feet	36 feet	TBD[1]	No[1]
All Way Stop Intersections				
NW Parker St/NW Pacific Rim Blvd/NW Pacific Rim Dr				
Eastbound Left	53 feet	65 feet	180 feet	No
Eastbound Through	25 feet	25 feet	continuous	No
Eastbound Right	25 feet	25 feet	continuous	No
Westbound Left	25 feet	25 feet	115 feet	No
Westbound Through	25 feet	25 feet	continuous	No
Northbound Left	25 feet	25 feet	188 feet	No
Northbound Through	73 feet	35 feet	continuous	No
Southbound Left	25 feet	25 feet	190 feet	No
Southbound Through	83 feet	90 feet	continuous	No
Southbound Right	83 feet	90 feet	continuous	No
NW Brady Road/NW 16th Avenue				
Eastbound Approach	25 feet	35 feet	continuous	No
Westbound Approach	228 feet	53 feet	continuous	No
Northbound Approach	158 feet	150 feet	continuous	No
Southbound Approach	123 feet	123 feet	continuous	No
Unsignalized Intersections				
NE Goodwin Road/NW Camas Meadows Drive				
Westbound Left	25 feet	25 feet	140 feet	No
Westbound Right	25 feet	25 feet	continuous	No
Southbound Left	25 feet	25 feet	85 feet	No

[1]Future available storage to be determined with Green Mountain Development Traffic Study.

Table 9. 95th Percentile Queuing at Study Area Intersections for 2020 "With Project" Continued

Unsignalized Intersection	A.M. Peak Hour Queue	P.M. Peak Hour Queue	Available Storage	Storage Exceeded?
NW & SE Brady Road/NW McIntosh Road				
Westbound Left	55 feet	33 feet	continuous	No
Westbound Right	25 feet	25 feet	continuous	No
Southbound Left	25 feet	25 feet	105 feet	No
NW Lake Road/NW Payne Street				
Eastbound Left	25 feet	25 feet	230 feet	No
Southbound Through/Right	25 feet	25 feet	continuous	No

CONCLUSIONS

Findings

The following are the findings from the traffic analysis:

- The proposed development is expected to generate 1,895 net new daily, 197 net new A.M. peak hour (146 in, 51 out), and 191 net new P.M. peak hour (67 in, 124 out) trips.

- The TMZ corridors within the City of Vancouver impacted by 5 or more P.M. peak hour trips as shown below.

TMZ Corridor	Limits of TMZ Corridor	P.M. Peak Hour Trip Impact
18th Street	112th Avenue – 138th Avenue	0
18th Street	138th Avenue – 162nd Avenue	0
28th Street	112th Avenue – 138th Avenue	0
28th Street	138th Avenue – 162nd Avenue	0
112th Avenue	Mill Plain Blvd – 28th Street	0
112th Avenue	28th Street – 51st Street	0
136th Avenue	Mill Plain Blvd – 28th Street	0
138th Avenue	28th Street – Fourth Plain Blvd	0
162nd Avenue	1st Street – Fourth Plain Blvd	0
164th Avenue	SR 14 – 1st Street	0
192nd Avenue	SR 14 – 18th Street	150
Andresen Road	Mill Plain Blvd – SR 500	0
Andresen Road	SR 500 – 78th Street	0
Burton Road	Andresen Road – 112th Avenue	0
Fourth Plain Blvd	Port – I-5	0
Fourth Plain Blvd	I-5 – Stapleton Road	0
Fourth Plain Blvd	Stapleton Road to I-205	0
Fourth Plain Blvd	117th Avenue – 162nd Avenue	0
Mill Plain Blvd	I-5 – Andresen Road	0
Mill Plain Blvd	Andresen Road – I-205	0
Mill Plain Blvd	I-205 – 136th Avenue	0
Mill Plain Blvd	136th Avenue – 164th Avenue	0
Mill Plain Blvd	164th Avenue – 192nd Avenue	0
St. James/St. Johns Road	Fourth Plain – 78th Street	0

- Per conversations with Olson Engineering, Inc. pertaining to the Green Mountain Development, the NE Goodwin Road/NE Ingle Road intersection will be converted to a signalized intersection with additional eastbound and westbound left turn lanes. The NE Goodwin Road/NE Ingle Road intersection was analyzed in the 2020 "Without Project" and “With Project” condition based on those improvements.

  The 2015 existing and 2020 "Without Project" levels of service at the southbound approach of the NW Payne Street/NW Lake Road intersection are operating at LOS D and E, respectively.

With the extension of NW Camas Meadows Drive to NW Larkspur Street and the resulting trip diversion, the level of service is projected to be LOS B in the 2020 "With Project" condition.

- NE 13th Street/NE 192nd Avenue
  The southbound left turn movement in the 2020 "With Project" A.M. peak hour condition exceeds the available storage by 19 feet. This is less than one car length and is not significantly over the available storage. The southbound left turn movement LOS and v/c ratio meet the City of Vancouver standards so no mitigation is necessary. The city should monitor this condition periodically to see if it becomes an operations issue.

- SE Brady Road/NE 192nd Avenue
  The westbound left turn movement in the 2020 "With Project" A.M. and P.M. peak hour conditions exceed the available storage by 241 and 59 feet, respectively. This queue exceeding the available storage may be partially mitigated by reallocating some of the green time from the eastbound through phase to the westbound left turn phase. Reallocating the green time from NE 192nd Avenue to the westbound left movement from SE Brady Road can reduce the excessive queues along SE Brady Road. Since overall levels of service is relatively low (LOS C in the A.M. peak and LOS B in the P.M peak), it is likely that green time from NE 192nd Avenue can be reallocated to SE Brady Road. The westbound left turn movement LOS and v/c ratio meet the City of Vancouver standards so no mitigation is necessary. The City of Vancouver should monitor this movement periodically to see if it becomes a traffic operations issue.

- All of the study intersections are projected to operate at acceptable levels of service for the 2020 "With Project" condition.

Recommendations

- Based on the traffic impact analysis documented in this report, no off-site mitigation would be needed with the build out of the proposed project.

- Because the NW Camas Meadows Drive extension will be constructed for the Parklands at Camas Meadows project, the access intersections sight distances shall be verified later in the final engineering and construction stages of development.