

After recording, return to:

RANDALL B. PRINTZ
Landerholm, Memovich,
Lansverk & Whitesides, P.S.
P.O. Box 1086
Vancouver, WA 98666-1086

Space Above for Recording Information Only

DEVELOPMENT AGREEMENT

This Development Agreement (the "Agreement") is made and entered into by and between the City of Camas, a Washington Municipal Corporation (hereinafter referred to as the "City") and Holland Acquisition Co., LLC, a Washington limited liability company (hereinafter referred to as "Holland") and Fisher Creek West LLC, (hereinafter referred to as "Fisher") Holland and Fisher, to be collectively referred to as "Owner".

RECITALS

WHEREAS, Owner owns or controls certain real property which is located within the City's municipal boundary and which is more fully described in the attached Exhibit "A", (hereinafter referred to as the "Property"); and,

WHEREAS, the City and the Owner recognize this area will develop over a period of years and wish to provide predictability about the development standards that will apply to the Property over the course of its full development in order to increase efficient use of urban services; provide compatibility amongst the various phases of the Property as they develop; and to allow for substantial environmental review to occur prior to any development, recognizing that Washington State's Environmental Policy Act discourages piecemeal review; and,

WHEREAS, the City is a Washington Municipal Corporation with land use planning and permitting authority over all land within its corporate limits; and,

WHEREAS, the Washington State Legislature has authorized the execution of Development Agreements between local governments and a person having ownership or control of real property within its jurisdiction pursuant to RCW 36.70B.170(1); and,

WHEREAS, pursuant to RCW 36.70B.170, a Development Agreement may set forth the development standards and other provisions that shall apply to, govern and vest the development, use and mitigation of the development of real property for the duration specified in the agreement; which statute provides:

(1) A local government may enter into a Development Agreement with a person having ownership or control of real property within its jurisdiction. A city may enter into a development agreement for real property outside its boundaries as part of a proposed annexation or a service agreement. A development agreement must set forth the development standards and other provisions that shall apply to and govern and vest the development, use, and mitigation of the development of the real property for the duration specified in the agreement. A development agreement shall be consistent with applicable development regulations adopted by a local government planning under chapter 36.70A RCW; and

WHEREAS, the legislative findings supporting the enactment of this section provide:

The legislature finds that the lack of certainty of the approval of development projects can result in a waste of public and private resources escalate housing costs for consumers and discourage the commitment to comprehensive planning which would make maximum efficient use of resources at the least economic cost to the public. Assurance to a development project applicant that upon government approval the project may proceed in accordance with existing policies and regulations, and subject to conditions of approval, all as set forth in a development agreement, will strengthen the public planning process, encourage private participation and comprehensive planning, and reduce the economic cost of development. Further, the lack of public facilities and services is a serious impediment to development of new housing and commercial uses. Project applicants and local governments may include provisions and agreements whereby applicants are reimbursed over time for financing public facilities. It is the intent of the legislature by RCW 36.70B.170 through 36.70B.210 to allow local governments and owners and developers of real property to enter into development agreements; and

WHEREAS, for the purposes of this Agreement, "Development Standards" includes, but is not limited to, all of the standards listed in RCW 36.70B.170(3) and any development standards provided herein; and,

NOW, THEREFORE, THE PARTIES HERETO AGREE AS FOLLOWS:

Section 1. Development Agreement. This Agreement is a Development Agreement to be implemented under the authority of and in accordance with RCW 36.70B.170 through RCW 36.70B.210 and CMC 18.55.340 it shall become a contract between the Owner and the

City upon its approval by ordinance or resolution following a public hearing as provided for in RCW 36.70B.170 and CXMC 18.55.340; and upon execution by all parties.

Section 2. Term of Agreement. This Agreement shall commence upon the Effective Date, and shall be valid for a period of ten (10) years; unless extended or terminated by mutual consent of the Parties; provided however, if this Agreement or any initial land use applications related to the Property and filed within one year of the Effective Date of this Agreement, are appealed, the term of this Agreement shall be tolled for the time during which the appeal is pending or 18 months, whichever is less.

Section 3. Vesting. Any land use applications submitted with respect to the Property during the term of this Agreement, shall be vested to the existing zoning, land use regulations and Development Standards in effect on the Effective Date of this Agreement, unless otherwise prohibited by law or as provided for in this Agreement or a previous Development Agreement still in effect. Any land use approvals affecting the Property issued during the term of this Agreement and which, but for this Agreement would expire during the term of this Agreement, shall remain in effect during the term of this Agreement. The vesting provided for under this Agreement shall not apply to System Development Charges, Impact Fees or application or review fees.

Section 4. Master Plan. CMC 18.07.030- Table 1 provides: "On tracts ten acres or more, subject to approval by city council of a master plan and development agreement, a mixed use development may be approved, provided no less than fifty-one percent of the net developable acreage is committed to commercial uses." Attached as Exhibit "B" and incorporated by reference herein, is a Mixed-Use Master Plan (Master Plan) which complies with the standards provided for in CMC 18.07.030- Table 1. The Master Plan provides the Parties with predictability regarding the future development of the Property, including any associated offsite improvements related to transportation or utilities. Future development of the Property shall be generally consistent with the Master Plan.

It is contemplated by the parties that due to the number of years it may take the project to fully build out, changing market conditions, future development patterns within the area and other factors, the parties may wish to revisit some portions of the Master Plan at a future time. While nothing contained herein shall be construed to obligate either party to amend the Master Plan or this Agreement, it is recognized that future evolution of the City may warrant consideration of such issues.

Section 5. Timing of Development. The Parties recognize that the timing of development is largely dependent upon economic conditions. The parties also recognize the importance of jobs within the City and particularly within the Grass Valley area. In furtherance of the desire for jobs in this area in balance with the desire to provide residences within walking or short commute distances from employment centers as they are developed, the Parties agree that: (1) no building permit for any residential building will be issued prior

to the issuance of a building permit for shell and core (but not tenant improvements) of an office building provided for on the Master Plan; and (2), no final occupancy permit for any residential building will be issued prior to substantial construction (seventy percent (70%) of shell and core (but not tenant improvements) of an office building provided for on the Master Plan. Nothing herein shall preclude the issuance of a temporary occupancy permit for a residential building.

Section 6. SEPA. Pursuant to the State Environmental Policy Act (SEPA), piecemeal environmental review is to be discouraged. As such, the Parties wish for SEPA review to be accomplished as part of the Agreement for as many of the Master Plan's potential adverse environmental impacts as can be reasonably analyzed, based upon current information submitted with this Agreement, including, but not limited to, the Master Plan, traffic study, tree analysis, archeological report, wetlands report and wildlife habitat report. This may be done under the Consolidated Review provisions of SEPA. The SEPA checklist attendant with this Agreement identifies various potential adverse environmental impacts of the project including transportation, parks, trees, wetlands, wildlife habitat, sewer, water and storm water. The Checklist also identifies a variety of technical reports or information that provides a basis for the proposed mitigation or partial mitigation of these impacts. It is the intent of this Agreement and its attendant SEPA process, to have the City issue a Threshold Determination (as that term is utilized in RCW 43.21C) on the identified impacts of the implementation of the Master Plan. Impacts that are identified at future stages of the development, including but not limited to, Site Plan approval, Preliminary Plat approval, Short Plat approval or building permit approvals that have been previously analyzed through this or other SEPA processes, shall not be re-analyzed on the condition that the future identified adverse impacts, in the sole discretion of the City, are substantially similar to and of the same or less intensity as those previously analyzed under this or other SEPA processes. Nothing in this Section shall preclude the City from requesting information, at the cost of the Owner, on the potential adverse environmental impacts associated with a specific land use application that has not been previously identified or analyzed as required under the State Environmental Policy Act.

Section 7. Transportation.

a) Kittelson and Associates Transportation Engineers and the City have analyzed the transportation impacts of the full development of the Property as depicted in the Master Plan. Attached as Exhibit C, is an analysis of the transportation impacts of the full buildout of the Master Plan. Based upon this analysis, the Property at full development will increase the existing number of PM peak hour trips on the transportation system by 522 trips. The Property shall be vested during the term of this Agreement with 522 PM peak hour, 535 AM Peak hour and 5037 Average Daily Trips and no additional off site transportation mitigation or analysis will be required during the term of this Agreement beyond that provided for in Exhibit C; provided however, that in the event the Owner proposes uses or intensities of uses that would cause the total number of PM Peak or Average Daily trips to exceed the number of trips analyzed as part of this Agreement, then the City may require additional transportation

analysis and lawful mitigation. The transportation vesting provided for in this Section shall be subject to the mitigation measures provided for in Exhibit C.

b) NW 38th Avenue has been identified in the City's Comprehensive Plan as a Primary Gateway into the City. In the event the Owner desires to remove or modify the existing City Monument sign on NW 38th Avenue, the Owner shall work with the City through the Sign Permitting Process to jointly develop a new design and location acceptable to the Parties. Because there are currently two monument signs, one on each side of NW 38th Avenue, the owner will replace both signs with the new design, or if approved by the City, take into account the visibility from both directions with the new sign. The entrance sign to the City, if replaced, shall be installed by Owner prior to Final Occupancy of the first Commercial Building.

Section 8. Remedies. Should a disagreement arise between the City and Owner regarding the interpretation and application of this Agreement, the parties agree to attempt to resolve the disagreement by first meeting and conferring. If such meeting proves unsuccessful to resolve the dispute, the disagreement may be resolved by judicial action filed in the Clark County Superior Court.

Section 9. Performance. Failure by either party at any time to require performance by the other party of any of the provisions hereof shall in no way affect the parties' rights hereunder to enforce the same, nor shall any waiver by a party of the breach hereof be held to be a waiver of any succeeding breach or a waiver of this non-waiver clause.

Section 10. Venue. This Agreement shall be construed in accordance with and, governed by, the laws of the State of Washington. The parties agree to venue in the Superior Court for Clark County, State of Washington, to resolve any disputes that may arise under this Agreement.

Section 11. Severability. If any portion of this Agreement shall be invalid or unenforceable to any extent, the validity of the remaining provisions shall not be affected thereby.

Section 12. Inconsistencies. If any provisions of the Camas Municipal Code are deemed inconsistent with the provisions of this Agreement, the provisions of this Agreement shall prevail.

Section 13. Binding on Successors and Recording. The rights and obligations created by this Agreement are assignable and shall be binding upon and inure to the benefit of Owner, the City, and their respective heirs, successors and assigns. Only Owner and the City or their assigns shall have the right to enforce the terms of this Amendment. This Agreement shall be recorded against the real property indicated on Exhibit "A" with the Clark County Auditor.

Section 14. Recitals. Each of the recitals contained herein are intended to be, and are incorporated as, covenants between the parties and shall be so construed.

Section 15. Amendments. This Agreement may only be amended by mutual agreement of the parties. Pursuant to RCW 36.70B.170(4), the City reserves the authority to impose new or different regulations to the extent required by a serious threat to public health and safety.

Exhibits:

Exhibit A: Legal Description of Property
Exhibit B: Master Plan
Exhibit C: Transportation Analysis

IN WITNESS WHEREOF, the parties hereto have caused this
Amendment to be executed as of the dates set forth below:

CITY OF CAMAS

Holland Acquisition Company _LLC

By _____
Title _____

By _____
Title _____

Fisher Creek West LLC

By _____
Title _____

STATE OF WASHINGTON)
) ss.

County of Clark)

I certify that I know or have satisfactory evidence that _____ is the person who appeared before me, and said person acknowledged that he signed this instrument, on oath stated that he was authorized to execute this instrument and acknowledged it as the _____ of Holland Acquisition Co, LLC to be the free and voluntary act of such party for the uses and purposes mentioned in the instrument.

DATED: _____, 2018.

NOTARY PUBLIC for the State of Washington,
Residing in the County of Clark
My Commission Expires: _____

STATE OF WASHINGTON)
) ss.
County of Clark)

I certify that I know or have satisfactory evidence that _____ is the person who appeared before me, and said person acknowledged that he signed this instrument, on oath stated that he was authorized to execute this instrument and acknowledged it as the _____ of the CITY OF CAMAS, to be the free and voluntary act of such party for the uses and purposes mentioned in the instrument.

DATED: _____, 2018.

NOTARY PUBLIC for the State of Washington,
Residing in the County of Clark
My Commission Expires: _____

STATE OF WASHINGTON)
) ss.
County of Clark)

I certify that I know or have satisfactory evidence that _____ is the person who appeared before me, and said person acknowledged that he signed this instrument, on oath stated that he was authorized to execute this instrument and acknowledged it as the _____ of Fisher Creek West, LLC

to be the free and voluntary act of such party for the uses and purposes mentioned in the instrument.

DATED: _____, 2018.

NOTARY PUBLIC for the State of Washington, Residing in the County of Clark
My Commission Expires:

126043

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EXHIBIT A

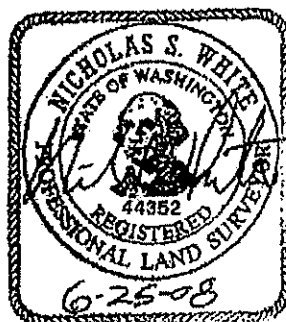
Legal Description of a Portion of "Exhibit C" AF#3181188

A tract of land located in the Northwest One-Quarter of Section 5, Township 1 North, Range 3 East, Willamette Meridian, City of Camas, Clark County, Washington, being more particularly described as follows:

Beginning at a 3 inch brass disk at the northwest corner of section 5; thence along the north line of said section South 88°42'49" East 697.30 feet to the east line of the tract described as "Easterly Parcel" per auditor's file number 4304611 and the **True Point of Beginning**; thence continuing along the north line of said section South 88°42'49" East 622.59 feet to a 5/8 inch iron rod with a yellow plastic cap stamped "PLS 13935" on the east line of the property described as "Exhibit C" per auditor's file number 3181188; thence along the east line of said "Exhibit C" South 01°14'41" West 1295.73 feet to a 1/2 inch iron rod with a yellow plastic cap stamped "YAMASHITA 36814" at the northeast corner of the plat "Awbrey Glen at Fisher's Landing"; thence along the north boundary of said plat North 84°43'46" West 39.16 feet to a point; thence North 88°57'18" West 915.21 feet to a point on the east boundary of the tract described as "Easterly Parcel" per auditor's file number 4304611; thence along the east boundary of said "Easterly Parcel" North 42°58'19" East 11.75 feet to a point; thence North 60°33'17" East 20.58 feet to a point; thence North 44°47'35" East 48.92 feet to a point; thence North 43°12'08" East 45.08 feet to a point; thence North 48°10'01" East 50.92 feet to a point; thence North 48°06'10" East 43.98 feet to a point; thence North 48°31'46" East 25.99 feet to a point; thence North 50°45'09" East 51.57 feet to a point; thence North 07°12'28" East 72.69 feet to a point; thence North 36°58'21" West 36.05 feet to a point; thence North 56°40'36" West 19.64 feet to a point; thence North 06°44'30" West 3.98 feet to a point; thence North 01°48'13" West 53.86 feet to a point; thence North 07°19'14" East 51.46 feet to a point; thence North 10°12'41" East 29.08 feet to a point; thence North 22°46'08" East 16.28 feet to a point; thence North 17°48'38" East 47.95 feet to a point; thence North 29°18'00" East 47.55 feet to a point; thence North 57°15'48" East 60.88 feet to a point; thence North 38°10'32" East 52.36 feet to a point; thence North 45°13'42" East 51.44 feet to a point; thence North 05°28'36" West 50.45 feet to a point; thence North 05°46'00" East 47.10 feet to a point; thence North 04°56'47" West 49.99 feet to a point; thence North 07°01'29" West 50.71 feet to a point; thence North 07°33'18" West 53.32 feet to a point; thence North 19°42'01" West 23.52 feet to a point; thence North 29°34'01" West 51.19 feet to a point; thence North 20°56'47" West 27.81 feet to a point; thence North 17°36'25" West 22.56 feet to a point; thence North 10°14'37" West 45.53 feet to a point; thence North 07°12'44" West 49.35 feet to a point; thence North 02°26'22" East 47.75 feet to a point; thence North 19°24'29" East 11.12 feet to a point;

thence North 33°24'37" East 50.01 feet to a point; thence North 32°04'59" East 51.01 feet to a point; thence North 29°08'35" East 30.81 feet to the **True Point of Beginning**.

The above described tract of land contains 21.00 acres, more or less. The basis of bearings for the above described tract is Book 51 Page 100, Clark County Survey Records.



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EXHIBIT A
Legal Description

A portion of Exhibit D of the Eiford Tracts described in Auditor's File No. 3181188 located in Section 5, Township 1 North, Range 3 East, Willamette Meridian, City of Camas, Clark County, Washington and being more particularly described as follows:

Beginning at the northeast corner of section 5 in the centerline of SE Bybee Road, thence along the north line of said section 5 North 88°42'49" West 3065.08 feet to the True Point of Beginning; thence South 00°48'45" West 764.66 feet to a point; thence North 88°42'49" West 900.12 feet to a point on the easterly line of Exhibit C of the Eiford Tracts described in Auditor's File No. 3181188; thence along said line North 01°14'41" East 764.64 feet to a 5/8 inch iron rod with a yellow plastic cap stamped "PLS 13935" on the north line of said section 5; thence along said north line South 88°42'49" East 894.35 feet to the True Point of Beginning.

The above described tract of land contains 15.75 acres, more or less. The basis of bearings is per the plat "Awbrey Glen at Fisher's Landing" recorded under Book 311 Page 53, Clark County Records.

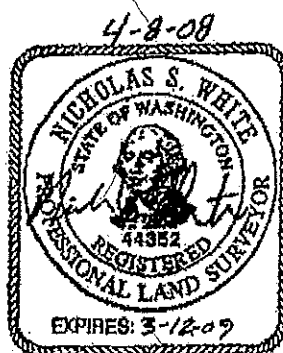




EXHIBIT 'C'

851 SW 6th AVENUE, SUITE 600
PORTLAND, OR 97204
P 503.228.5230 F 503.273.8169

February 28, 2018

Project #: 22300

James E. Carothers, PE
City of Camas
616 NE 4th Avenue
Camas, WA 98607

RE: Traffic Impact Analysis for Grass Valley Development – Camas, WA

Dear Curleigh,

This letter documents the Traffic Impact Analysis (TIA) prepared for the proposed Grass Valley mixed-use development along the south side of NW 38th Avenue in the City of Camas. The proposed development includes up to 276 apartment units, 100,000 square feet of corporate headquarters, 150,000 square feet of general office, and 20,000 square feet of retail split evenly between restaurant and grocery. Full occupancy of the development is expected by 2021.

Pursuant to City of Camas requirements, this report includes the following:

- Operational assessment of key study intersections under existing traffic conditions
- Review of reported crash data at study intersections
- Assessment of background traffic operations, including traffic associated with approved in-process developments but not the proposed project, under two road network scenarios:
 - Scenario 1: Re-align SE Bybee Road with NW Fisher Creek Drive (identified in City of Camas 6-year Street Priorities)
 - Scenario 2: Connect SE Bybee Road to SW Armstrong Drive (identified as a long-term connection in the *Camas Crossing Development TIA*)
- Trip generation and trip distribution estimate for the proposed development
- Assessment of future traffic conditions at the study intersections and the proposed site accesses after full build-out and occupancy of the proposed development under the two realignment scenarios outlined above
- Queueing, access spacing, sight distance, and on-site circulation review
- Findings and recommendations

This study assumes that activation of the SE 20th Street/NW Fisher Creek Drive intersection has occurred prior to site occupancy based on other approved and pending development. Based on the analysis provided and documented herein, the proposed development can be constructed while complying with City of Camas and City of Vancouver transportation requirements assuming provision of mitigation

measures identified in this report. Site-development related capacity improvement needs were identified at the SE 20th Street/SE 192nd Avenue intersection.

SE 20th Street/SE 192nd Avenue

- In Scenario 1, under 2021 total traffic conditions, the intersection does not satisfy City of Vancouver operating standards during the weekday p.m. peak hour.
 - Recommended mitigation to restore acceptable operations includes provision of a second westbound left-turn lane and traffic signal retiming that allocates additional green time to the primary north-south traffic patterns along NE 192nd Avenue.
- In Scenario 2, under both 2021 background and total traffic conditions, the intersection does not satisfy City of Vancouver operating standards during the weekday a.m. and p.m. peak hours.
 - Recommended mitigation to restore acceptable operations includes provision of a second westbound left-turn lane and a separate westbound right-turn lane as well as corresponding signal retiming that allocates additional green time to the primary north-south traffic patterns along NE 192nd Avenue.

Other Considerations

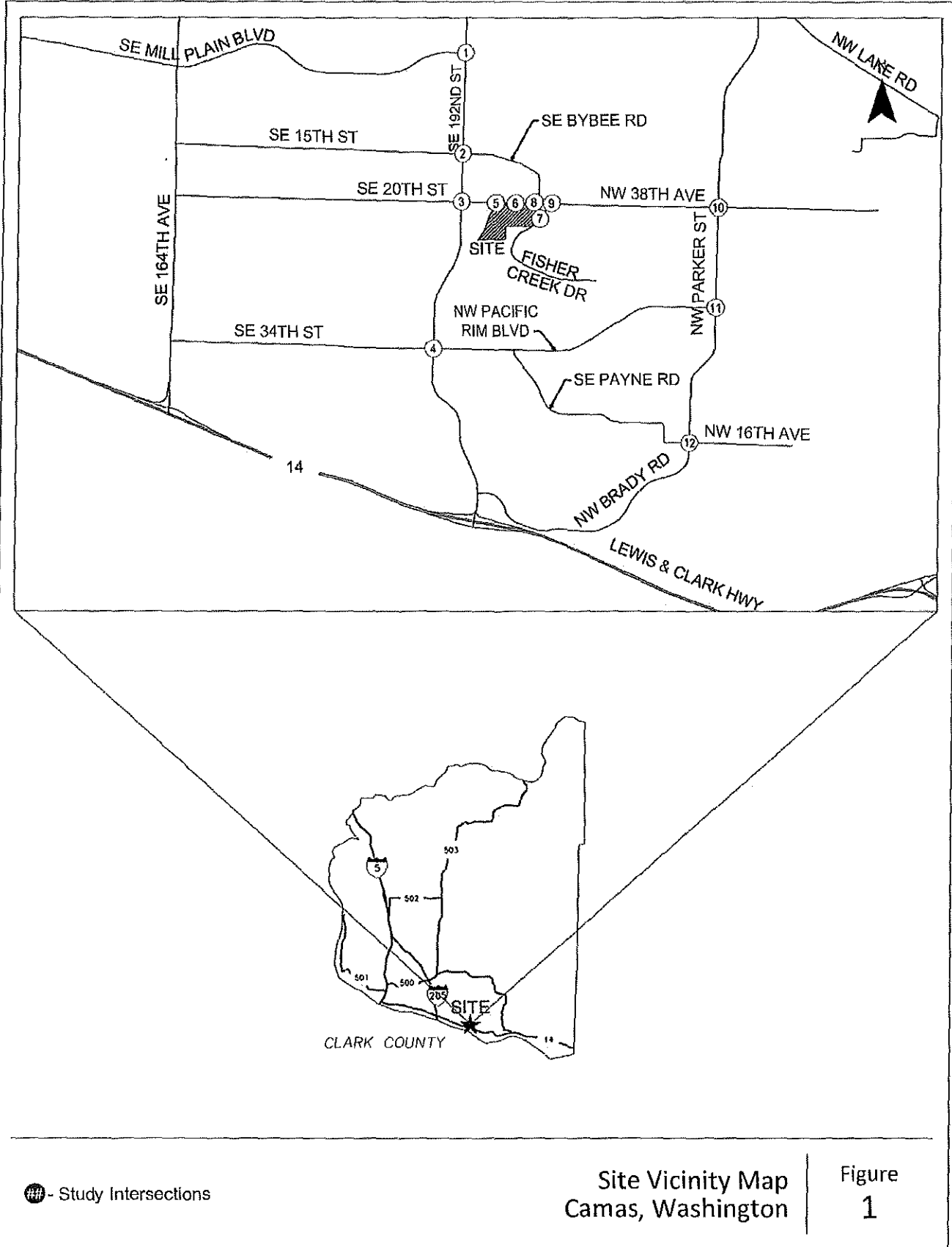
- On-site and off-site landscaping and any above ground utilities at the site driveways and internal roadways should be installed and maintained to ensure that adequate sight distance is provided upon buildout in accordance with City of Camas standards. Further, sight distance availability should be confirmed during the final engineering process.

The methodology of the analysis, findings, and recommendations are documented herein.

INTRODUCTION

Holland Acquisition Co., LLC proposes to construct a mixed-use development on the south side of NW 38th Avenue, west of NW Fisher Creek Drive. Currently, a residential home and a storage building occupy the 36-acre site and are accessible via two driveways on NW 38th Avenue. The site is currently zoned for Regional Commercial (RC) uses. Figure 1 illustrates the site location and Figure 2 shows the site plan.

The proposed development will consist of up to 276 apartment units, 100,000 square feet of corporate headquarters, 150,000 square feet of general office, and 20,000 square feet of retail split evenly between restaurant and grocery. Full occupancy of the development is expected to occur by 2021.



H:\2225\Grass Valley\report\figs\222500_Figs.dwg Feb 28, 2018 11:21am - kennolly Layout Tab: Site Vicinity Map

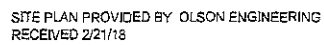


Figure
2

Access to the development is proposed via:

- two unsignalized full movement public street circulator connections to NW 38th Avenue; and
- two unsignalized connections to NW Fisher Creek Drive south of NW 38th Avenue (and north of the gated entry to the Fisher Investments Campus).

REPORT SCOPE

This analysis determines the transportation-related impacts associated with the proposed mixed-use development. The study intersections and overall study area for this project were determined through a scoping process with City of Camas staff.

Analysis Periods

Weekday a.m. and p.m. peak hour traffic conditions were modeled at the study intersections.

Study Intersections

The following study intersections were included in the analysis as shown in Figure 1.

1. SE 192nd Avenue/Mill Plain Boulevard (operated and maintained by City of Vancouver)
2. SE 192nd Avenue/SE 15th Street (operated and maintained by City of Vancouver)
3. SE 192nd Avenue/SE 20th Street (operated and maintained by City of Vancouver)
4. SE 192nd Avenue/NW Pacific Rim Boulevard (operated and maintained by City of Vancouver)
5. NW 38th Avenue/Proposed Site Driveway 1
6. NW 38th Avenue/Proposed Site Driveway 2
7. Fisher Creek Drive/Proposed Site Driveway 3¹
8. NW 38th Avenue/SE Bybee Road (existing)
9. NW 38th Avenue/NW Fisher Creek Drive (with realigned Bybee Road under Scenario 1)
10. NW 38th Avenue/NW Parker Street
11. NW Pacific Rim Boulevard/NW Parker Street
12. NW 16th Avenue/NW Brady Road

Future Roadway Connectivity Scenarios

A mixed-use development known as the Camas Crossing Development is currently proposed north of the Grass Valley Development and was in the site plan review process at the City of Camas at the time this

¹ The two proposed driveway connections to Fisher Creek Drive were analyzed as a single driveway to be conservative.

study was prepared. City of Camas required that the Grass Valley Development TIA consider the proposed Camas Crossing Development as a vested project that will re-align SE Bybee Road from its current terminus on NW 38th Avenue to the east. Per City of Camas staff, alignment modifications to SE Bybee Road are still being finalized, with the following options being considered:

- Re-align SE Bybee Road with NW Fisher Creek Drive (identified in City of Camas 6-year Street Priorities);
- Connect SE Bybee Road to SE 202nd Avenue (identified as a short-term realignment in the *Camas Crossing Development Transportation Impact Analysis, TIA*); and
- Connect SE Bybee Road to SW Armstrong Drive (identified as a long-term connection in the *Camas Crossing Development TIA*).

Per City of Camas scoping direction, two future realignment scenarios have been considered for purposes of this TIA. The first scenario analyzes impacts with SE Bybee Road aligned at NW Fisher Creek Drive and the second scenario analyzes impacts with the connection occurring at some point further east.

ANALYSIS METHODOLOGY

Intersection Levels-of-Service

Level of service (LOS) analysis described in this report was primarily performed using Synchro 8 software in accordance with the procedures stated in the *2000 Highway Capacity Manual* (HCM, Reference 1). The intersection of NW Pacific Rim Boulevard/NW Parker Street was analyzed using HCS 7 software, which implements 2010 HCM multi-lane all-way stop capacity analysis procedures, due to analysis constraints of the *2000 Highway Capacity Manual* in analyzing four-way stop-controlled intersections with multi-lane approaches.

To evaluate worst-case conditions, the peak 15-minute flow rates of the weekday a.m. and p.m. peak hours were used in the evaluation of all intersection LOS. For this reason, the operations analyses reflect conditions that are likely to occur for the peak 15 minutes out of each weekday a.m. and p.m. peak hour.

Operating Standards

Study intersections within the City of Camas are subject to the following operating standards:

- City of Camas requires a LOS D or better and a volume to capacity ratio of 0.90 or less for all intersections within the city limits of Camas, which includes all study intersections not along SE 192nd Avenue.

Study intersections within the City of Vancouver are subject to the following operating standards, as stated in the City of Vancouver Municipal Code Section 11.80.130.B:

A proposed development that adds at least five net new peak hour trips to an intersection approach operating at an LOS E or lower within the required traffic impact analysis area may be denied based upon any of the following:

- 1. For signalized intersections, when off-site intersection conditions are at a LOS F, or*
- 2. For signalized intersections, when the LOS E and the volume to capacity ratio is greater than 0.95, or*
- 3. For unsignalized intersections, when the volume to capacity ratio for any lane on any approach is greater than 0.95, and*
- 4. When significant traffic hazards would be caused or materially aggravated by the proposed development.*

EXISTING TRAFFIC CONDITIONS

The existing conditions analysis identifies site conditions, surrounding land uses, and the current operational and geometric characteristics of roadways within the study area. The purpose of this section is to create a basis for comparison to future conditions.

Site Conditions and Adjacent Land Uses

The proposed development site is mostly vacant, except for two existing structures. The site is currently zoned for Regional Commercial (RC) uses. Table 1 summarizes the attributes of the key transportation facilities in the site vicinity.

Table 1. Existing Transportation Facilities and Roadway Designations

Roadway	Functional Classification	Cross Section	Posted Speed Limit	Sidewalks?	Bike Lanes?	On-street Parking?
SE 192 nd Avenue	Principal Arterial ¹	4 lanes ²	40 mph	Yes	Yes	No
Mill Plain Boulevard	Principal Arterial ¹	4 lanes ²	30/40 mph ⁴	Yes	Yes	No
SE 15 th Street	Collector Arterial ¹	2 lanes	40 mph	Partial	Yes	No
SE 20 th Street	Minor Arterial ¹	2/3 lanes	40 mph	Yes	Yes	No
SE 34 th Street	Principal Arterial ¹	4 lanes ²	40 mph	Partial	No	No
SE Bybee Road	Collector ³	2 lanes	30 mph	No	Partial	No
NW Fisher Creek Drive	Collector ³	2 lanes	30 mph	Partial	No	No
SE 202 nd Avenue	Local ³	2 lanes	30 mph	No	No	No
NW 38 th Avenue	Arterial ³	3 lanes	35/40 mph ⁵	Yes	Yes	No
NW Pacific Rim Boulevard	Arterial ³	4 lanes ²	35 mph	Yes	No	No
NW Parker Street	Arterial ³	2/4 lanes ²	35 mph	Partial	Partial	No
NW 16 th Avenue	Collector ³	2 lanes	25 mph	Partial	Partial	Partial
NW Brady Road	Collector/Arterial ³	2 lanes	35 mph	Partial	Partial	No

¹City of Vancouver Arterial Street System and Classification Map

²Cross-section includes additional left-turn lanes at major intersections

³City of Camas 2008 Federal Functional Classification Map

⁴Speed limit is 30 mph on eastbound approach at SE 192nd Avenue, 40 mph on westbound approach

⁵Speed limit is 40 mph on eastbound approach at SE 192nd Avenue, 35 mph on westbound approach

Pedestrian Facilities

Continuous sidewalks are provided on both sides of NW 38th Avenue between SE 192nd Avenue and NW Parker Street. A sidewalk is currently provided on the east side of NW Fisher Creek Drive. Sidewalks are currently absent on the west side of NW Fisher Creek Drive along the site frontage and will be constructed in conjunction with the proposed development.

Bicycle Facilities

Bike lanes are provided along both sides NW 38th Avenue in the site vicinity. Bike lanes are present along SE Bybee Road for approximately 100 east of SE 192nd Avenue but are not provided along the remainder of the roadway. Bike lanes are also provided along SE 192nd Avenue, Mill Plain Boulevard, SE 15th Street, SE 20th Street, and NW Parker Street.

Transit Facilities

There is no public fixed-route transit service within Camas. C-TRAN Route 37 operates along SE 192nd Avenue and SE 34th Street. Route 37 connects Fisher's Landing Transit Center and Downtown Vancouver. Service is provided on weekdays from 4:45 a.m. to 12:45 a.m., Saturdays from 7:15 a.m. to 11:30 p.m., and Sundays from 7:30 a.m. to 11 p.m. C-TRAN's "Connector" provides Camas with fully accessible dial-a-ride (reservation-based service) and scheduled stop service (no reservation required) at designated stops at Fisher's Landing Transit Center and Hiddenbrook Drive. Rides are provided on a first-come, first-served basis. Dial-a-ride services are available weekdays from 5:30-9:15 a.m. and 2:00-7:00 p.m.

Traffic Safety Summary

Crash data for the study intersections was obtained from the Washington Department of Transportation (WSDOT) for the three-year period from January 1, 2014 through December 31, 2016 and were reviewed to identify potential intersection safety issues. Table 2 summarizes the crashes reported at the study intersections. *Appendix "A" contains the detailed WSDOT crash data.*

Table 2: Intersection Crash History Summary

Location	Crash Severity			Crash Type						Total Crashes
	Fatal	Injury	PDO ¹	Rear End	Side-swipe	Angle	Turning Movement	Fixed Object	Other	
SE 192 nd Ave / Mill Plain Blvd	0	4	1	2	1	1	1	0	0	5
SE 192 nd Ave / SE 15 th St	0	2	3	4	0	0	1	0	0	5
SE 192 nd Ave / SE 20 th St	0	3	3	4	1	1	0	0	0	6
SE 192 nd Ave / NW Pacific Rim Blvd	0	4	5	1	1	3	4	0	0	9
NW 38 th Ave / SE Bybee Rd	0	0	0	0	0	0	0	0	0	0
NW 38 th Ave / NW Fisher Creek Dr	0	0	0	0	0	0	0	0	0	0
NW 38 th Ave / NW Parker St	0	3	2	0	0	0	2	3	0	5
NW Pacific Rim Blvd / NW Parker St	0	0	3	0	0	1	0	2	0	3
NW 16 th Ave / NW Brady Rd	0	0	4	1	0	1	0	0	2	4

¹PDO – Property damage only

As shown in Table 2, no fatal crashes were reported. No crashes were reported along NW 38th Avenue along or near the site frontage. Based on reviewing the crash data and considering recent urban street improvements made along the NW 38th Avenue corridor, there are no apparent traffic safety hazards that require mitigation in conjunction with site development.

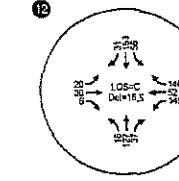
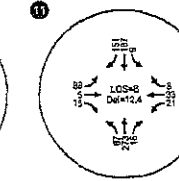
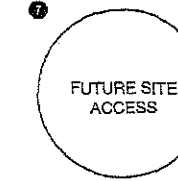
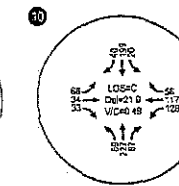
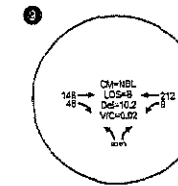
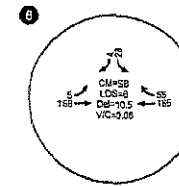
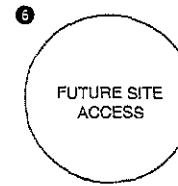
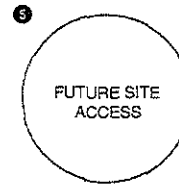
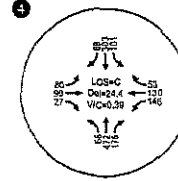
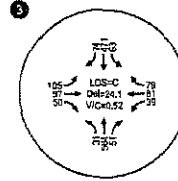
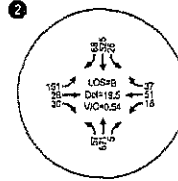
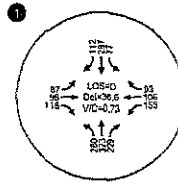
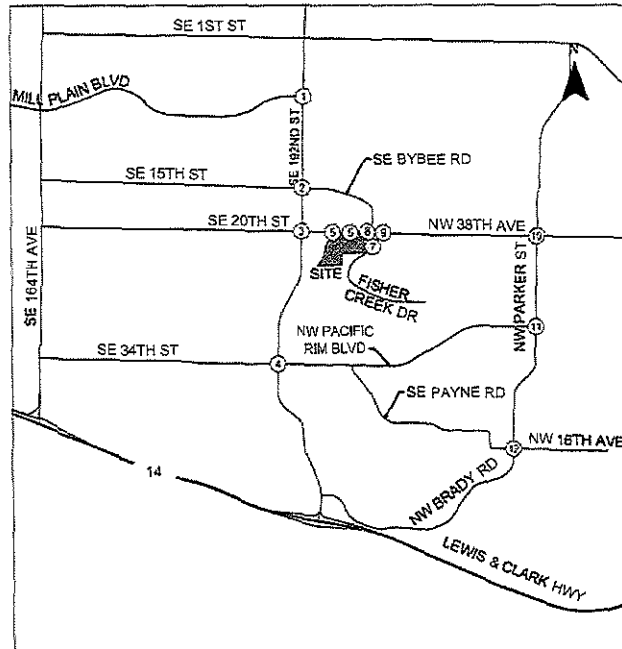
Existing Traffic Operations

Figure 3 illustrates the existing lane configurations and traffic control devices at each of these study intersections.

Turning movement counts were obtained at the study intersections on a midweek day in June 2017. All counts were performed during the morning (7:00 to 9:00 a.m.) and evening (4:00 to 6:00 p.m.) peak periods. Public schools were in session in the cities of Camas and Vancouver on the days the traffic counts were collected. The traffic counts revealed a local system morning peak from 7:30 to 8:30 a.m. and evening peak from 4:35 to 5:35 p.m.

Figures 4 and 5 show the existing traffic volumes and operations at each of the study intersections during weekday a.m. and p.m. peak hours, respectively. As shown in the figures, all study intersections operate acceptably during both peak periods, satisfying the applicable LOS and/or volume to capacity ratio standards. *Appendix "C" includes the traffic count data, and Appendix "D" includes the existing traffic analysis worksheets.*

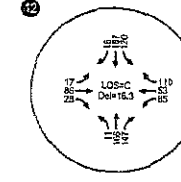
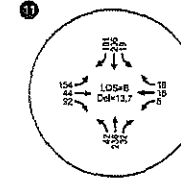
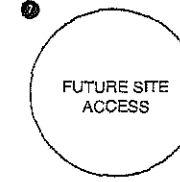
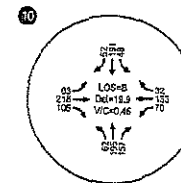
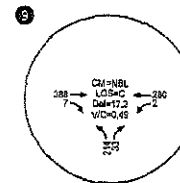
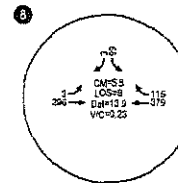
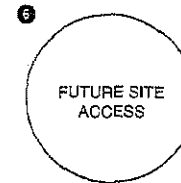
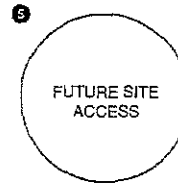
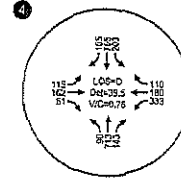
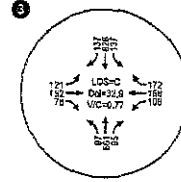
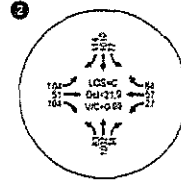
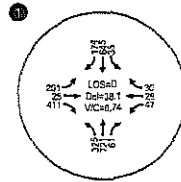
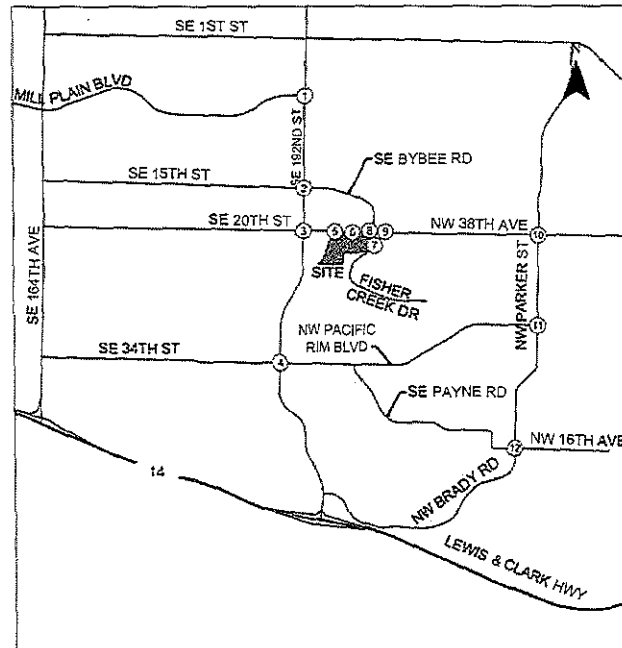




CM = CRITICAL MOVEMENT (UNSIGNALIZED)
 LOS = CRITICAL MOVEMENT LEVEL OF SERVICE
 (SIGNALIZED)/CRITICAL MOVEMENT LEVEL OF
 SERVICE (UNSIGNALIZED)
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 (SIGNALIZED)/CRITICAL MOVEMENT CONTROL
 DELAY (UNSIGNALIZED)
 V/C = CRITICAL VOLUME-TO-CAPACITY RATIO

Existing Traffic Conditions
 Weekday AM Peak Hour
 Camas, Washington

Figure
 4



CM = CRITICAL MOVEMENT (UNSIGNALIZED)
 LOS = CRITICAL MOVEMENT LEVEL OF SERVICE
 (SIGNALIZED)/CRITICAL MOVEMENT LEVEL OF
 SERVICE (UNSIGNALIZED)
 Del = INTERSECTION AVERAGE CONTROL DELAY
 (SIGNALIZED)/CRITICAL MOVEMENT CONTROL
 DELAY (UNSIGNALIZED)
 V/C = CRITICAL VOLUME-TO-CAPACITY RATIO

Existing Traffic Conditions
 Weekday PM Peak Hour
 Camas, Washington

Figure
 5

TRAFFIC IMPACT ANALYSIS

The future conditions analysis identifies how the study intersections will operate in the proposed development completion year of 2021. The following elements were analyzed to account for the impacts of the proposed development:

- 2021 Scenario 1 Background traffic conditions (SE Bybee Road aligned at NW Fisher Creek Drive **without** the proposed development);
- 2021 Scenario 2 Background traffic conditions (SE Bybee Road aligned to the east **without** the proposed development);
- 2021 Scenario 1 Total Traffic Conditions (SE Bybee Road aligned at NW Fisher Creek drive **with** the proposed development); and
- 2021 Scenario 2 Total Traffic Conditions (SE Bybee Road aligned to the east **with** the proposed development).

Year 2021 Background Conditions

The background traffic analysis identifies how the study intersections will operate in the proposed project build year with traffic growth from in-process developments within the study area, but not including the trips associated with the proposed Grass Valley project. The City of Camas identified the following approved in-process developments in the site vicinity that would potentially add trips to the study intersections:

- | | |
|--|---|
| 1. NW 38 th Dental Office | 8. Lofts at Camas Meadows |
| 2. Belz Place Residential Development ² | 9. Parklands at Camas Meadows |
| 3. CJ Dens Residential Subdivision | 10. The Village at Camas Meadows |
| 4. Columbia Pallsades Subdivision | 11. Kate's Woods Apartments |
| 5. Fisher Creek Campus Building 4 | 12. Dawson Ridge Subdivision |
| 6. Green Mountain Estates | 13. Camas Crossing Development |
| 7. Green Mountain Master Plan ³ | 14. Camas School District – Sharp Drive |

Given the traffic volumes from multiple in-process developments and per direction from City of Camas engineering staff, no additional regional background growth rate was applied at City of Camas intersections. A two percent annual growth rate plus the identified in-process trips were applied along the SE 192nd Avenue corridor per the *City of Vancouver Traffic Study Guidelines*. Appendix "E" includes the estimated in-process volumes.

² The Belz Place Development is 50 percent complete. Traffic forecasts have been adjusted accordingly.

³ The Green Mountain Master Plan is five percent complete. Traffic forecasts have been adjusted accordingly.

Future Roadway Network Changes

The capital improvement programs for both the cities of Camas and Vancouver were reviewed to determine if any of the study area roadways or intersections are targeted for capacity enhancements. The SE Bybee Road realignment to the NW Fisher Creek Drive signal is listed on the City's 6-year street plan and Capital Facilities Plan. However, the Camas Crossing development proposes to shift the realignment to SE 202nd Avenue or another point further east through the Master Plan/Development Agreement process as previously described.

As the location of SE Bybee Road's connection with NW 38th Avenue is still being determined, two background scenarios were considered. Minor changes in the in-process trip assignments are expected between Scenario 1 (SE Bybee Road aligned at NW Fisher Creek Drive) and Scenario 2 (SE Bybee Road aligned to the east).

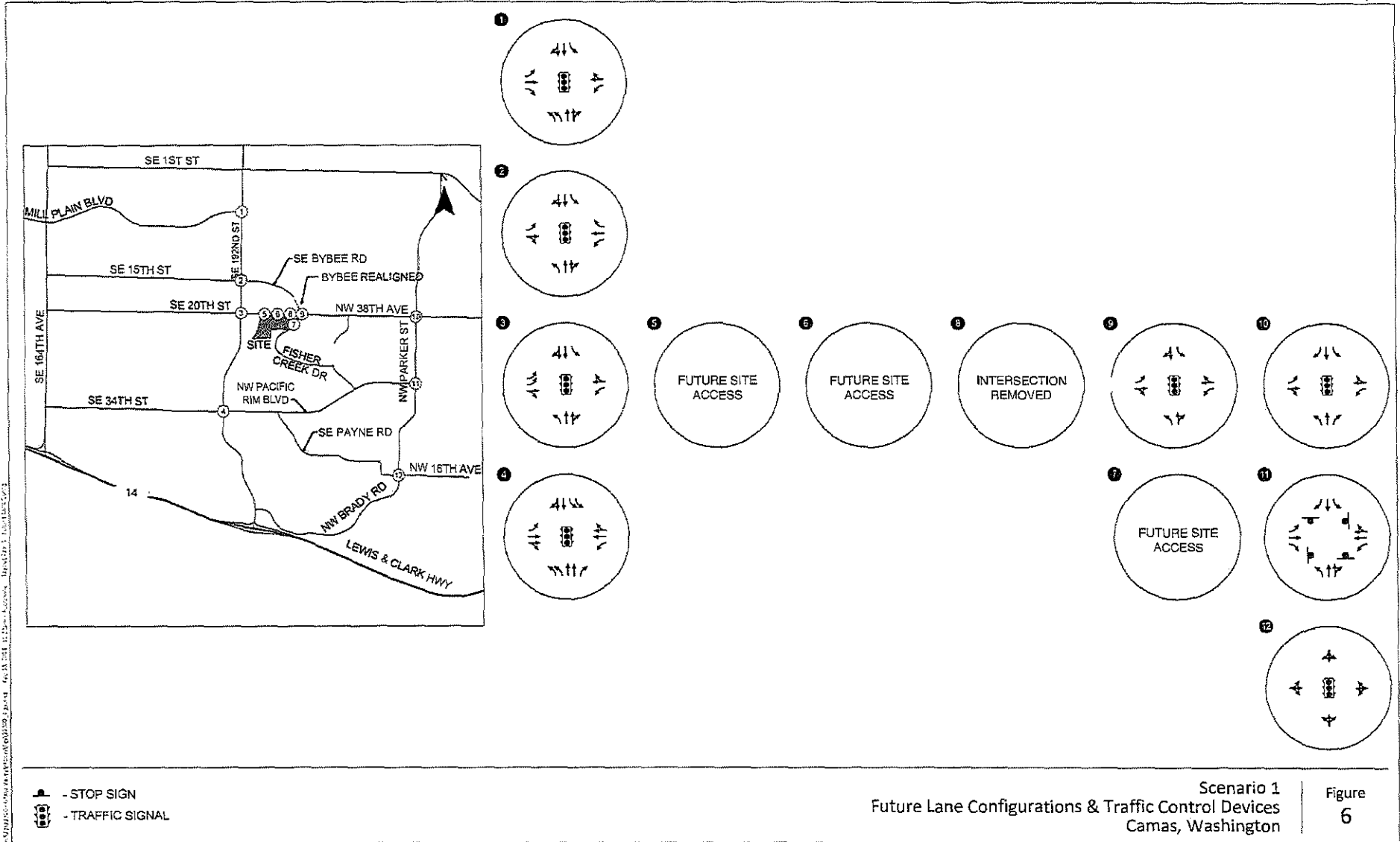
In addition, under both scenarios the NW 16th Avenue/NW Brady Road intersection will be signalized in conjunction with another in-process development. Figures 6 and 7 show the anticipated lane configurations and traffic control devices for Scenarios 1 and 2, respectively.

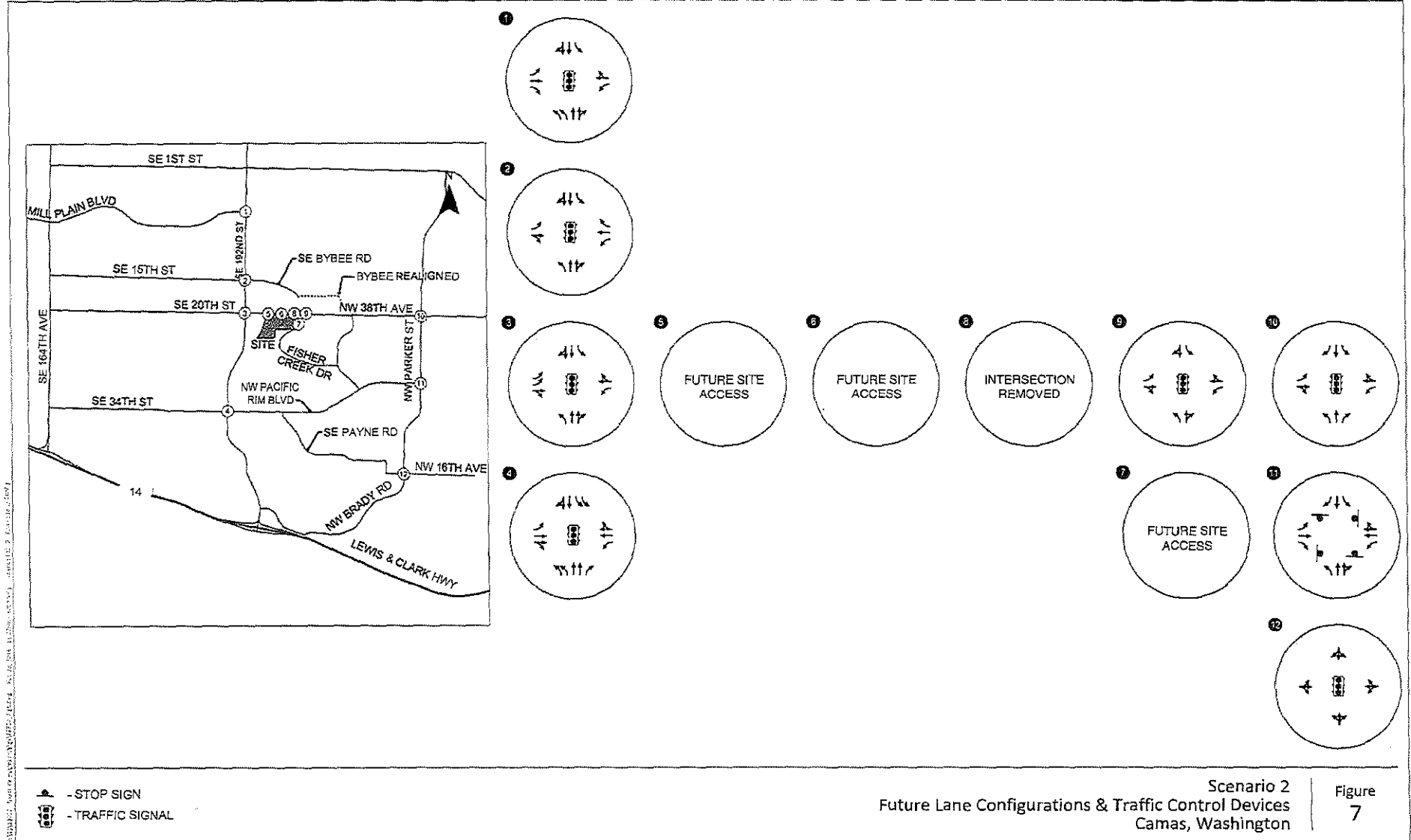
Scenario 1 (SE Bybee Road aligned at NW Fisher Creek Drive) Background Traffic Conditions

Figures 8 and 9 show the projected 2021 background traffic volumes and operations for the study intersections during the weekday a.m. and p.m. peak hours, respectively. As shown in the figures, all intersections are expected to continue operating acceptably and satisfy the jurisdictional standards of the governing agency. *Appendix "F" includes the 2021 background traffic analysis worksheets.*

Scenario 2 (SE Bybee Road aligned to the east) Background Traffic Conditions

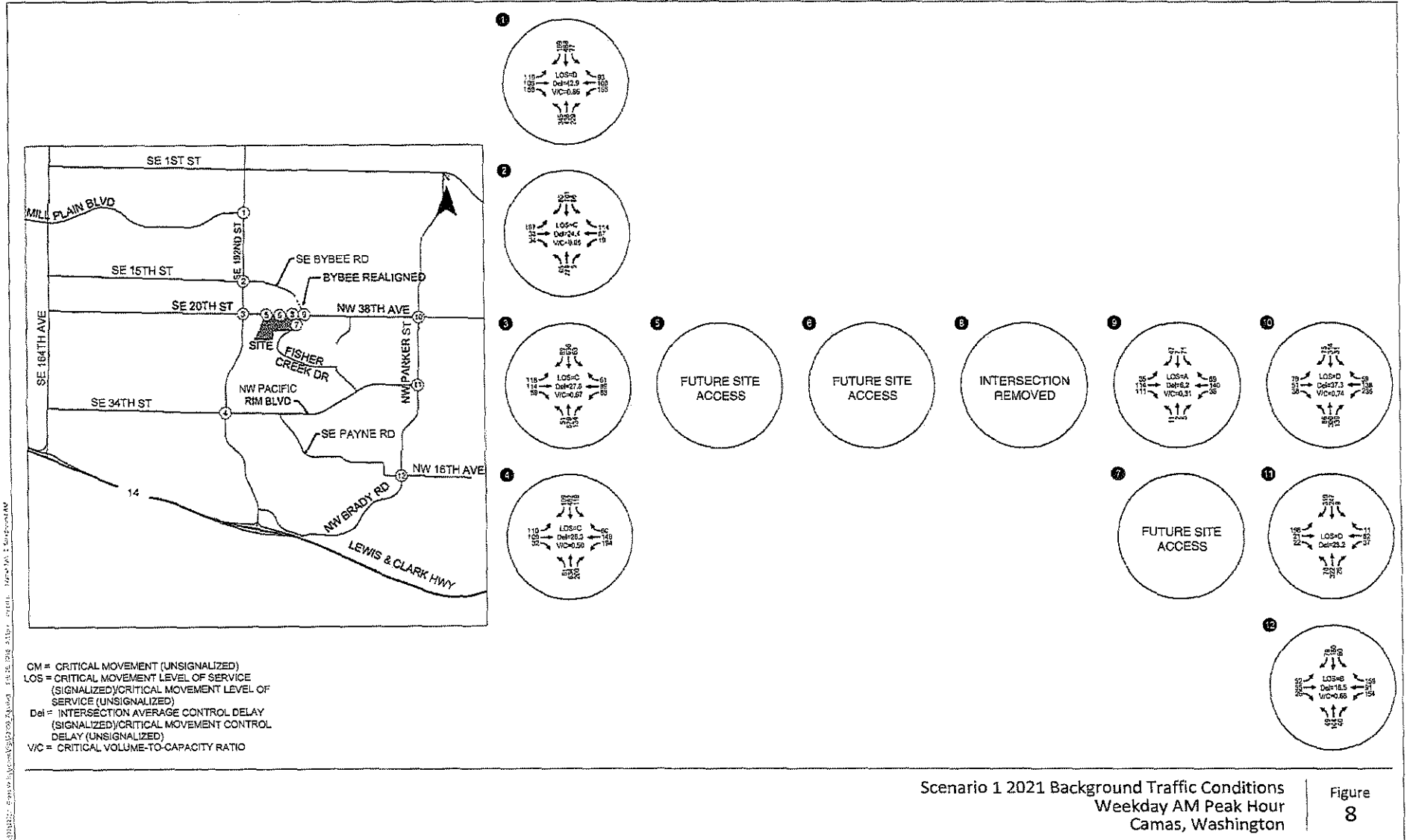
Figures 10 and 11 show the projected 2021 background traffic volumes and operations for the study intersections during the weekday a.m. and p.m. peak hours under Scenario 2. As shown in the figures, the SE 20th Street/SE 192nd Avenue intersection is projected to operate over-capacity and at LOS F during the weekday p.m. peak hour, exceeding City of Vancouver standards. All other intersections are projected to continue operating acceptably and satisfy the jurisdictional standards of the governing agency. *Appendix "F" includes the 2021 background traffic analysis worksheets.*

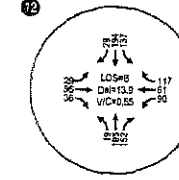
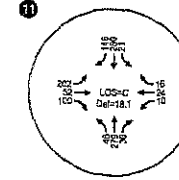
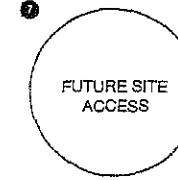
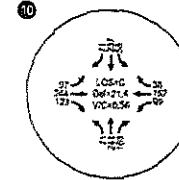
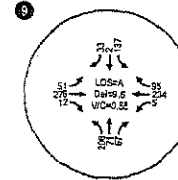
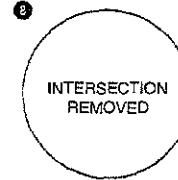
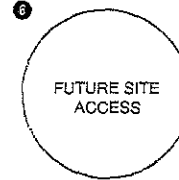
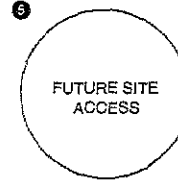
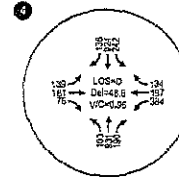
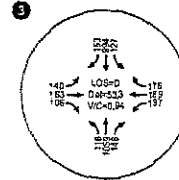
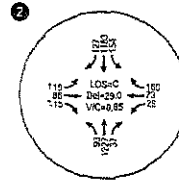
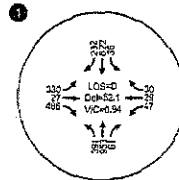
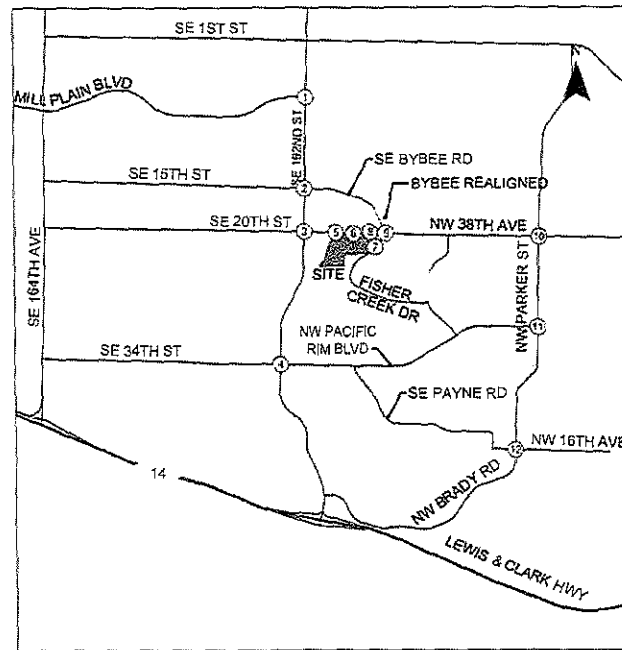




Scenario 2
 Future Lane Configurations & Traffic Control Devices
 Camas, Washington

Figure
 7

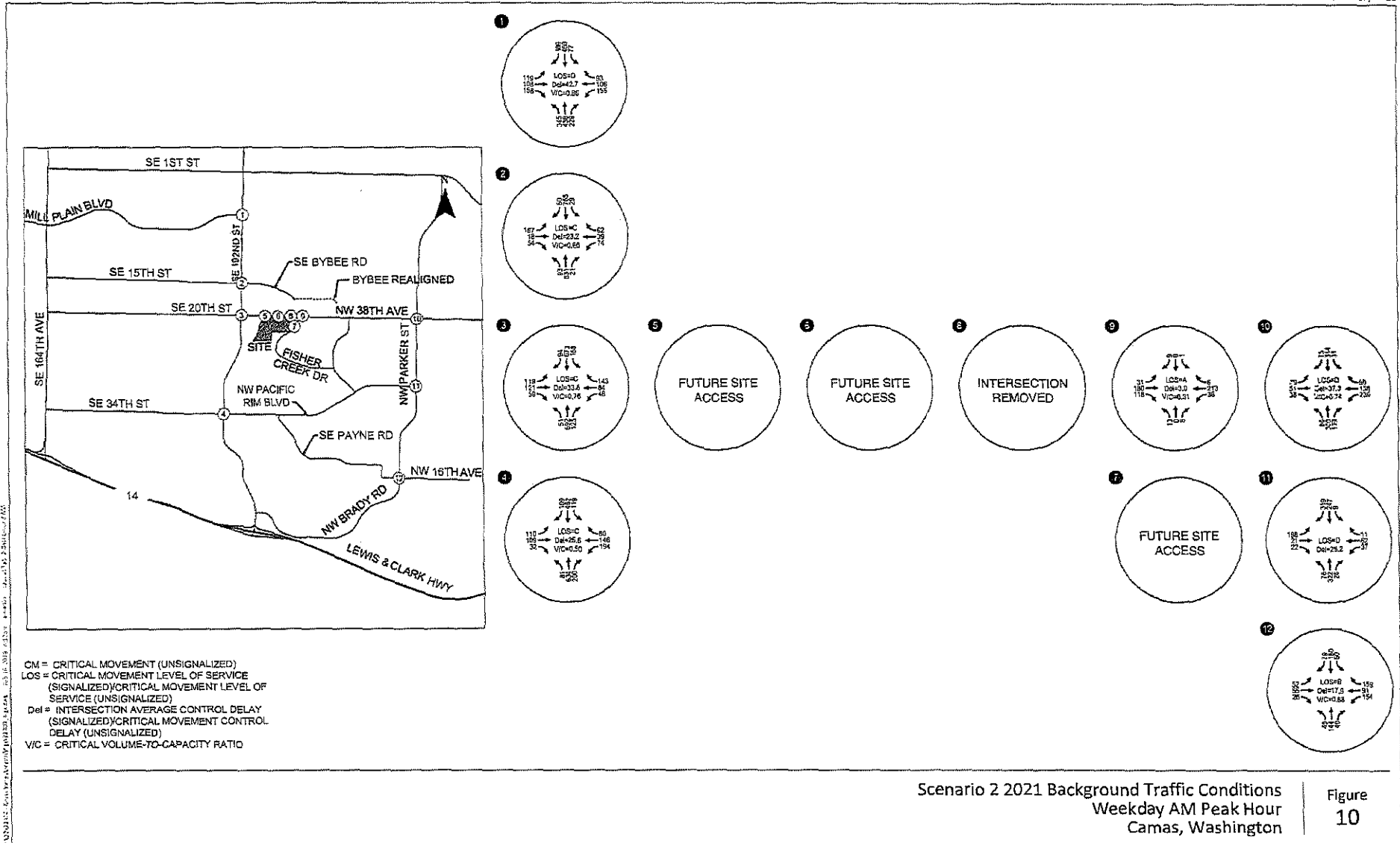


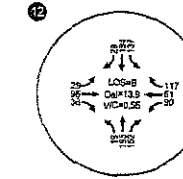
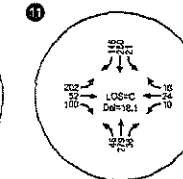
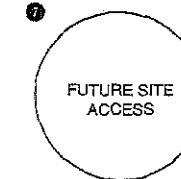
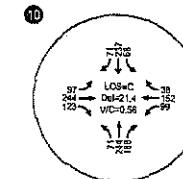
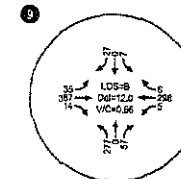
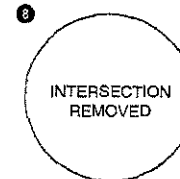
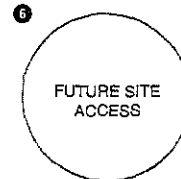
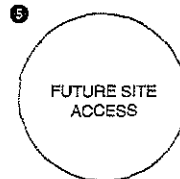
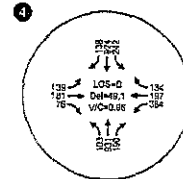
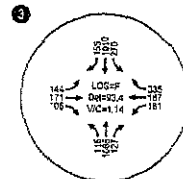
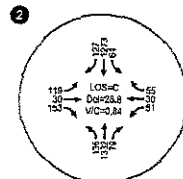
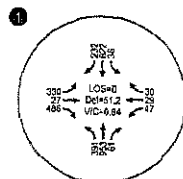
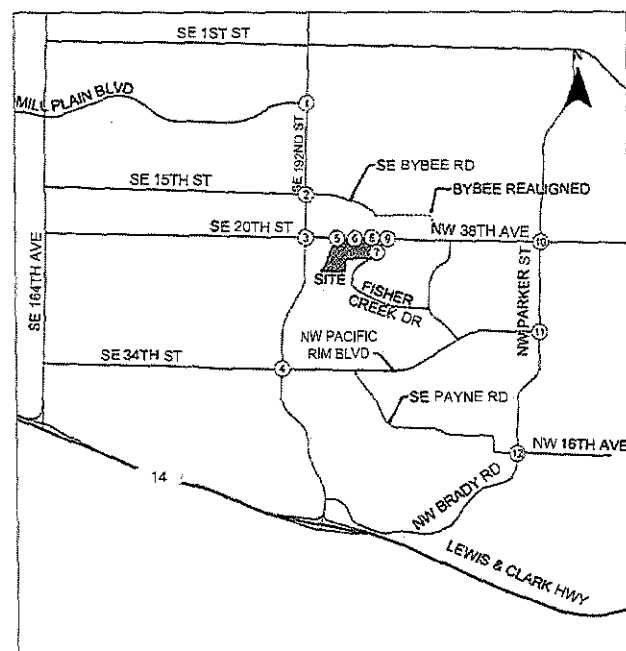


CM = CRITICAL MOVEMENT (UNSIGNALIZED)
 LOS = CRITICAL MOVEMENT LEVEL OF SERVICE
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 DELAY (UNSIGNALIZED)
 V/C = CRITICAL VOLUME-TO-CAPACITY RATIO

Scenario 1 2021 Background Traffic Conditions
 Weekday PM Peak Hour
 Camas, Washington

Figure
 9





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 LOS = CRITICAL MOVEMENT LEVEL OF SERVICE
 (SIGNALIZED)/CRITICAL MOVEMENT LEVEL OF
 SERVICE (UNSIGNALIZED)
 Dd = INTERSECTION AVERAGE CONTROL DELAY
 (SIGNALIZED)/CRITICAL MOVEMENT CONTROL
 DELAY (UNSIGNALIZED)
 V/C = CRITICAL VOLUME-TO-CAPACITY RATIO

Scenario 2 2021 Background Traffic Conditions
 Weekday PM Peak Hour
 Camas, Washington

Figure
 11

Proposed Development Plan

The applicant proposes to construct a mixed-use development consisting of up to 276 apartment units, 100,000 square feet of corporate headquarters, 150,000 square feet of general office, and 20,000 square feet of retail split evenly between restaurant and grocery. Access to the development is proposed via two unsignalized driveways on NW 38th Avenue and two unsignalized driveways on NW Fisher Creek Drive south of NW 38th Avenue (and north of the gated entry to the Fisher Investments Campus). The location of the western driveway on NW 38th Avenue is being coordinated with the neighboring Camas Crossing development to align the site driveways.

Other planned transportation improvements associated with the proposed development include a sidewalk along the site frontage on the west side of NW Fisher Creek Drive and a southbound right turn lane into the site at the unsignalized driveway on NW Fisher Creek Drive. Full occupancy of the development is expected to occur by 2021.

Trip Generation

Estimates of average weekday a.m. and p.m. peak hour vehicle trip ends were obtained from the standard reference manual, *Trip Generation, 9th Edition*, published by the Institute of Transportation Engineers (Reference 2). Pass-by rates were developed based on guidance in *Trip Generation Handbook, 3rd Edition* (Reference 3), and trip internalization rates between uses were developed based on guidance in *Trip Generation Handbook, 2nd Edition* (Reference 4) for daily trips, and NCHRP Report 684 (Reference 5) for peak hour trips. Appendix "G" includes the OTISS Traffic software trip internalization calculations. Table 3 summarizes the trip generation for the proposed development.

Table 3: Site Trip Generation Estimate

Land Use Category	ITE Code	Size	Units	Total Daily Trips	Weekday AM Peak Hour			Weekday PM Peak Hour		
					Total	In	Out	Total	In	Out
Residential Apartments	220	276	DU	1,835	141	28	113	171	111	60
Less Internal Trips				-254	-17	-2	-15	-38	-23	-15
Corporate Headquarters Building	714	100,000	Sq. Ft.	798	152	141	11	141	14	127
General Office Building	710	150,000	Sq. Ft.	1,654	234	206	28	224	38	186
Less Internal Trips				-124	-40	-21	-19	-12	-2	-10
High-Turnover (Sit-Down) Restaurant	932	10,000	Sq. Ft.	1,272	108	59	49	99	59	40
Less Internal Trips				-455	-45	-27	-18	-47	-24	-23
Less Pass-By Trips (21% Daily and AM peak, 43% PM peak)				-172	-12	-6	-6	-22	-11	-11
Supermarket	850	10,000	Sq. Ft.	1,022	34	21	13	95	48	47
Less Internal Trips				-433	-16	-9	-7	-51	-25	-26
Less Pass-By Trips (18% Daily and AM peak, 36% PM peak)				-106	-4	-2	-2	-38	-19	-19
Total Trips				6,581	669	455	214	730	270	460
Less Internal Trips				-1,266	-118	-59	-59	-148	-74	-74
Less Pass-by Trips				-278	-16	-8	-8	-60	-30	-30
Net New Primary Trips				5,037	535	388	147	522	166	356

Trip Distribution

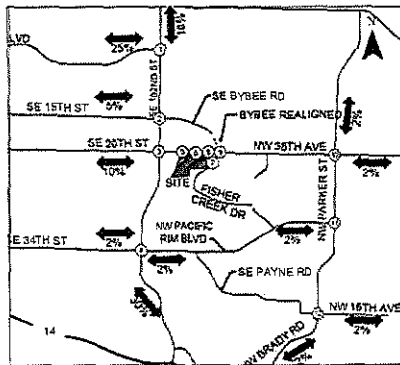
The distribution of site-generated trips onto the study area roadway system was estimated based on a review of surrounding roadway characteristics, existing uses, the 2035 travel demand model maintained by the Southwest Washington Regional Transportation Council (RTC) (select zone analysis of TAZ #651), and other trip distribution patterns used for similar projects in the area.

Three distinct distribution patterns were employed in the analysis (one each for residential, office, and retail uses) recognizing trips associated with each of the land uses will have different travel patterns. For example, some retail trips are likely to be made from employees of existing businesses and homes in the immediate site vicinity given the project location whereas residential trips are likely to travel further to and from the site. Further, the market area for retail uses will be limited to the west where there are multiple competing uses while there is little retail service provided east of the site. Figures 12 and 13 illustrate the three estimated trip distribution patterns.

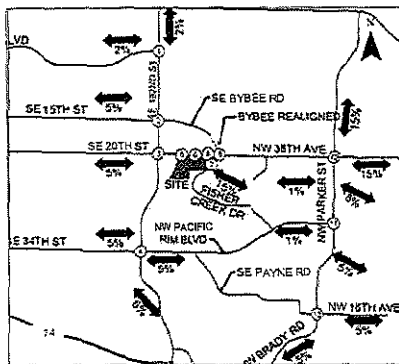
Trip Assignment

The weekday a.m. and p.m. peak hour site trips shown in Table 3 were assigned to the roadway network based on the trip distribution patterns shown in Figures 12 and 13. Figures 12 and 13 also show the a.m. and p.m. peak hour primary trip assignments for site development under Scenario 1. Figures 14 and 15 show the a.m. and p.m. peak hour pass-by trip assignments. New trip assignments under Scenario 2 are shown on Figures 16 and 17 (site pass-by trip assignment remains the same under Scenarios 1 and 2).

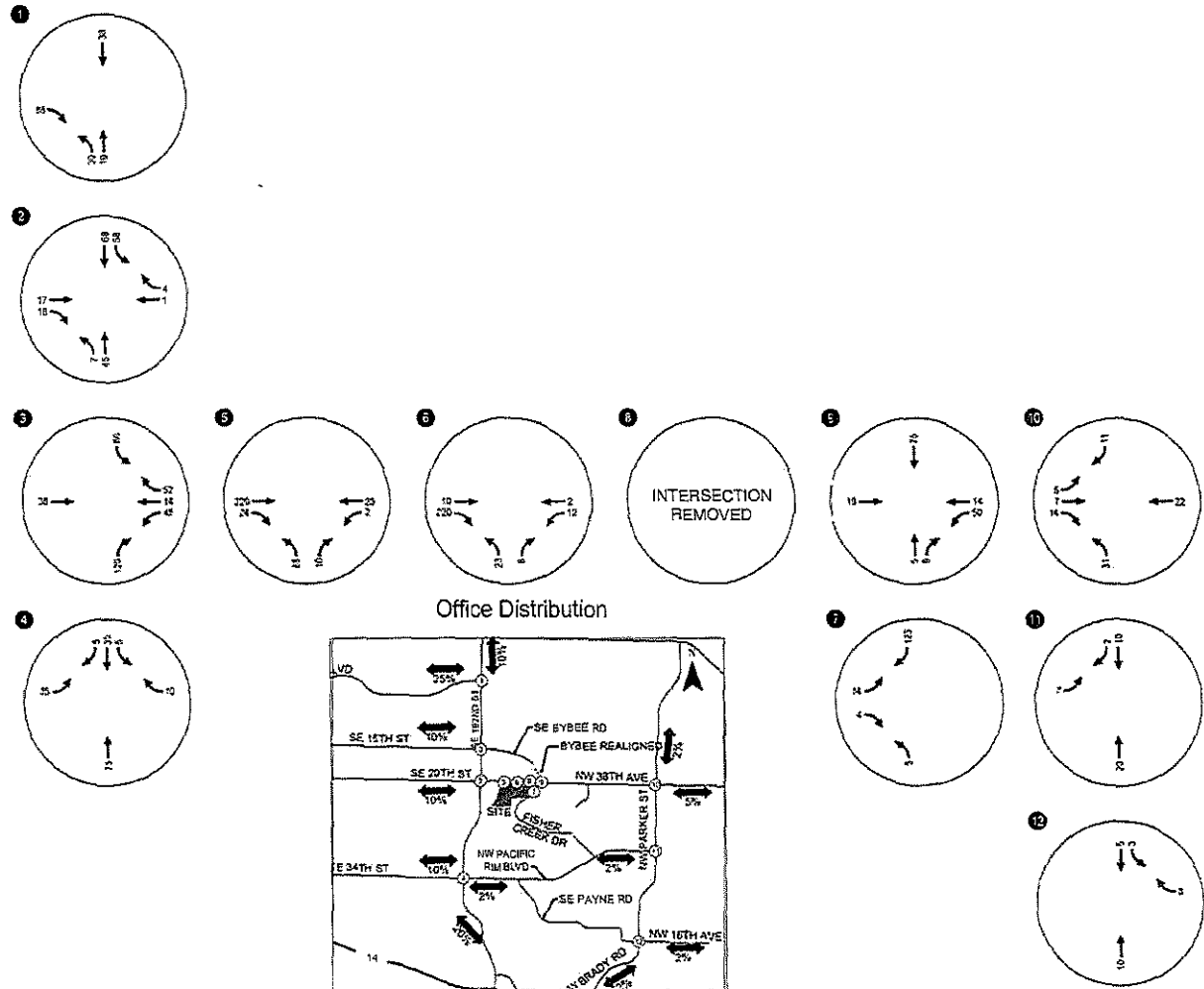
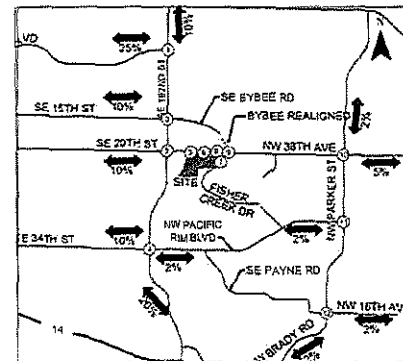
Residential Distribution



Retail Distribution



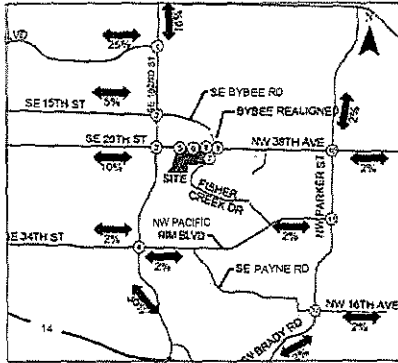
Office Distribution



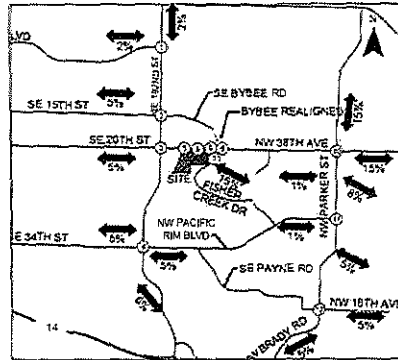
Scenario 1 Trip Distribution & Assignment
Weekday AM Peak Hour
Camas, Washington

Figure
12

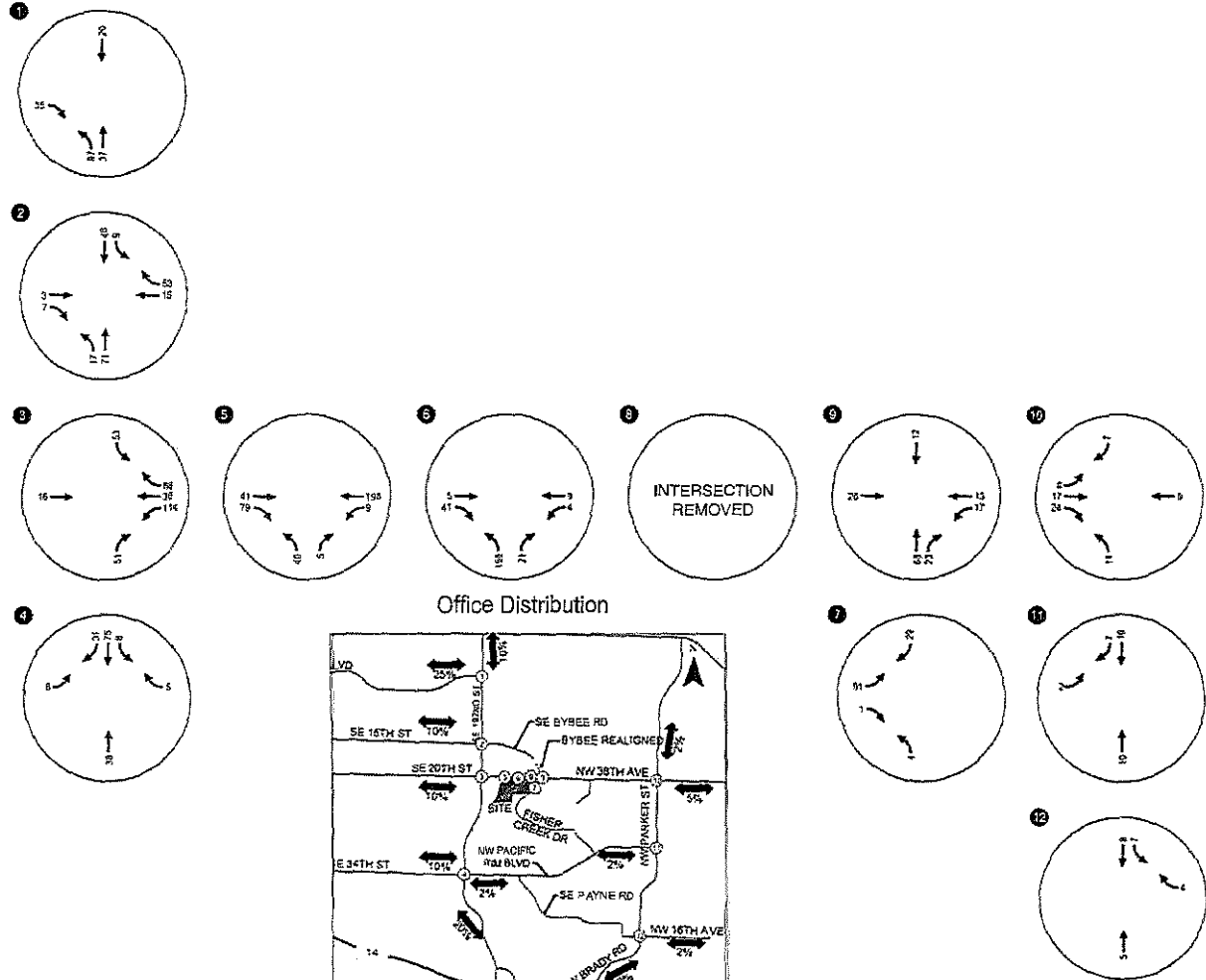
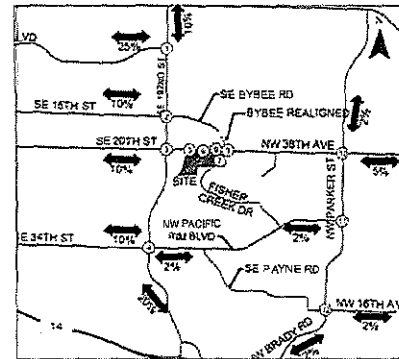
Residential Distribution



Retail Distribution



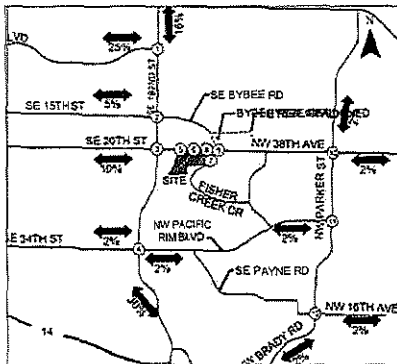
Office Distribution



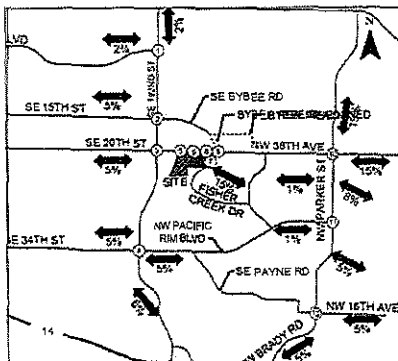
Scenario 1 Trip Distribution & Assignment
Weekday PM Peak Hour
Camas, Washington

Figure
13

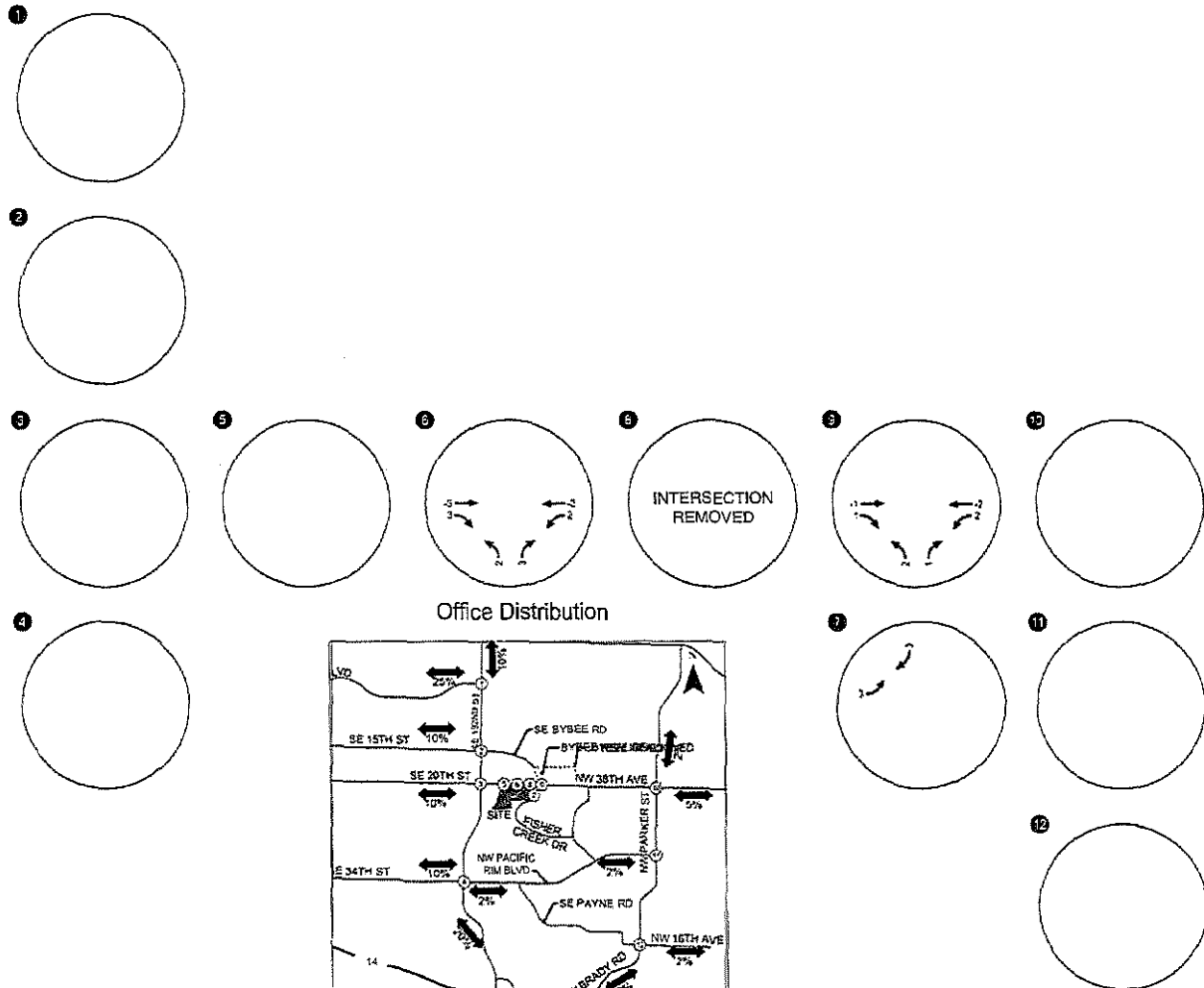
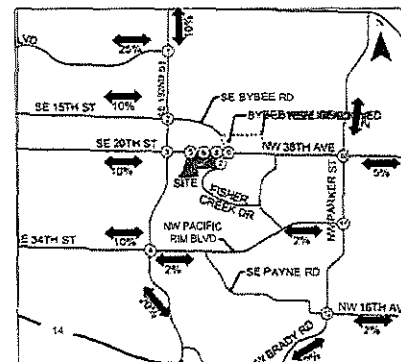
Residential Distribution



Retail Distribution



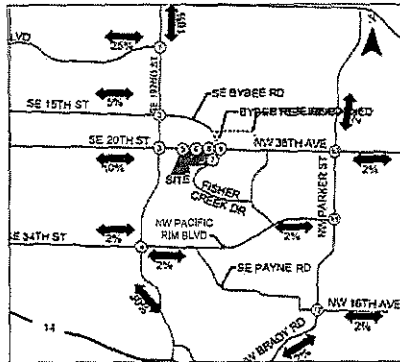
Office Distribution



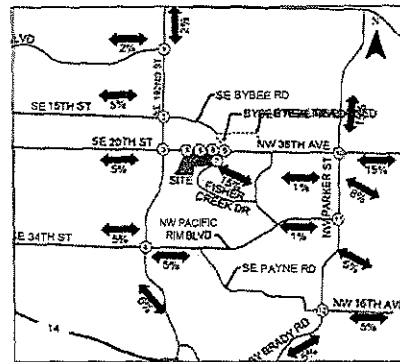
Pass-By Trips
Weekday AM Peak Hour
Camas, Washington

Figure
14

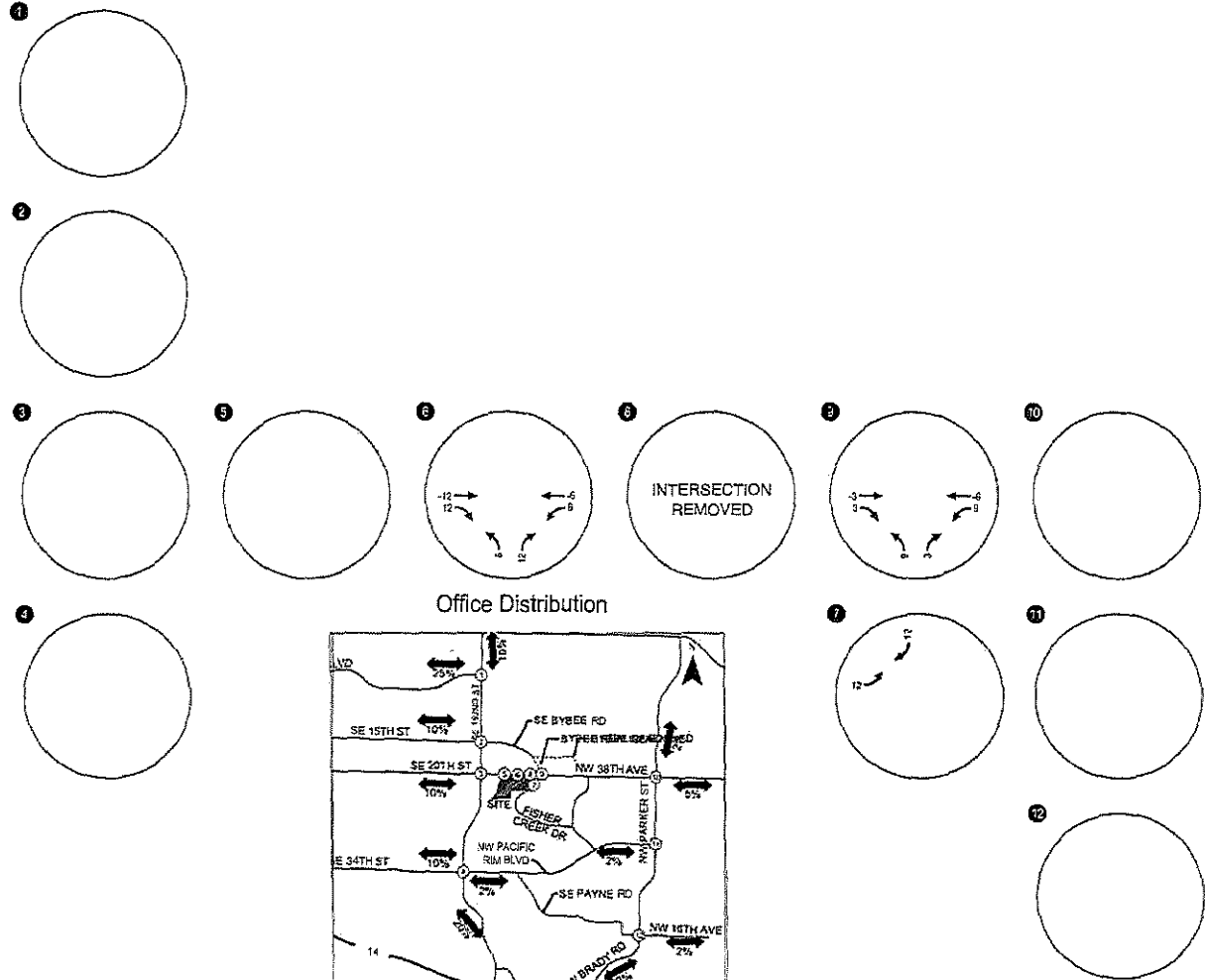
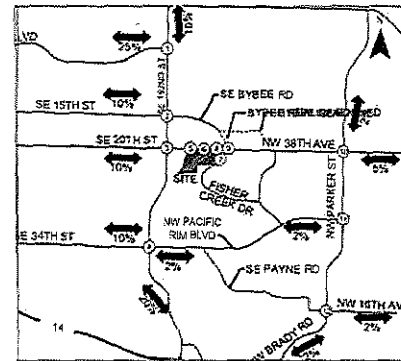
Residential Distribution



Retail Distribution



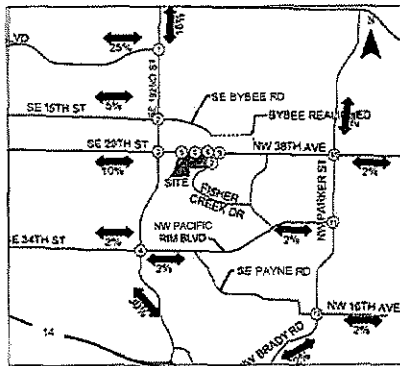
Office Distribution



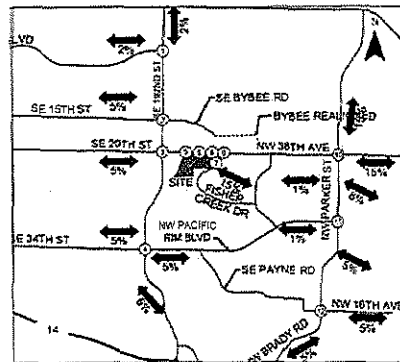
Pass-By Trips
Weekday PM Peak Hour
Camas, Washington

Figure
15

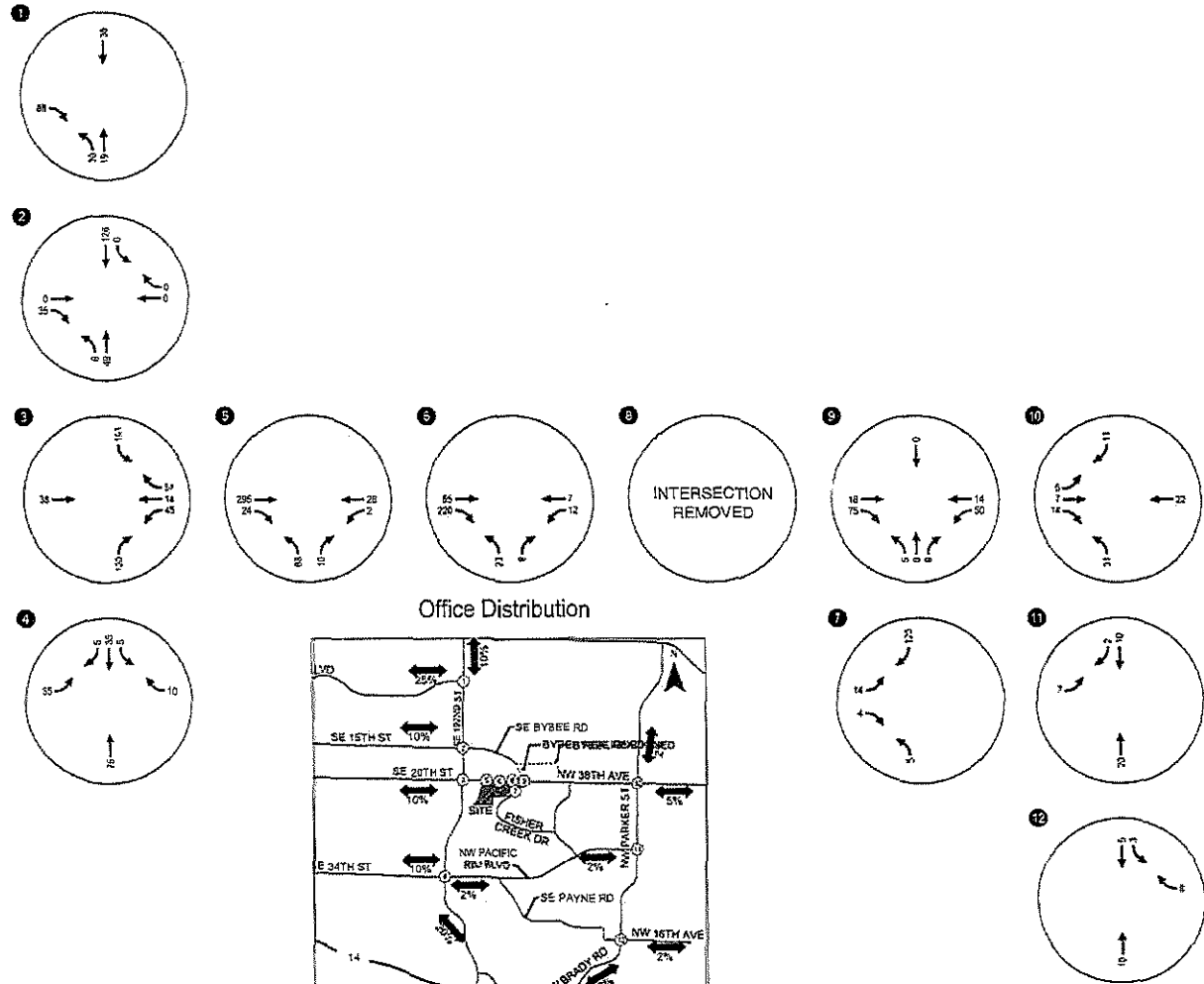
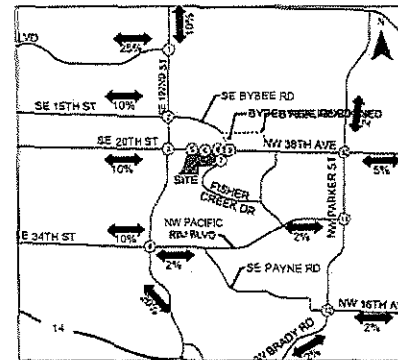
Residential Distribution



Retail Distribution



Office Distribution



Scenario 2 Trip Distribution & Assignment
Weekday AM Peak Hour
Camas, Washington

Figure
16

[illegible][illegible]

Scenario 2 Trip Distribution & Assignment
Weekday PM Peak Hour
Camas, Washington

Figure
17

Year 2021 Total Traffic Conditions

The total traffic conditions analysis forecasts how the study intersections will operate with the inclusion of site-generated traffic. These future conditions were evaluated for both roadway network scenarios as described below.

Scenario 1 (SE Bybee Road aligned at NW Fisher Creek Drive) Total Traffic Conditions

The total traffic volumes at the study intersections include the 2021 background traffic volumes (Figures 8 and 9), primary site-generated trips (Figures 12 and 13) and pass-by site-generated trips (Figures 14 and 15). Figures 18 and 19 show the 2021 total traffic volumes and operations during the weekday a.m. and p.m. peak hours for Scenario 1.

As shown in Figure 19, the SE 20th Street/SE 192nd Avenue intersection is projected to operate at an unacceptable LOS "F" during the weekday p.m. peak hour. *Appendix "H" includes the year 2021 total traffic analysis worksheets.* All other study intersections are predicted to continue to operate acceptably and satisfy the applicable mobility standards.

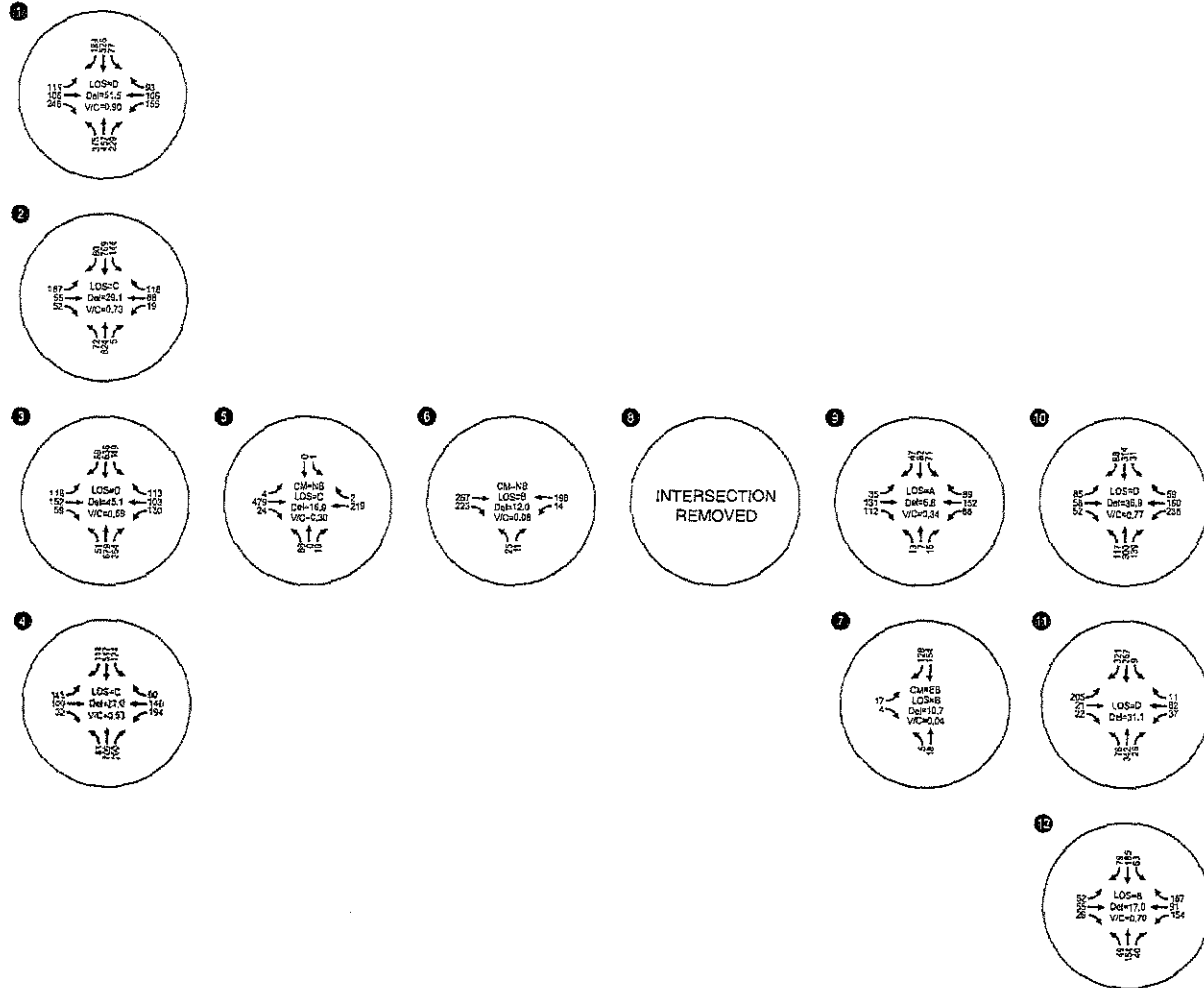
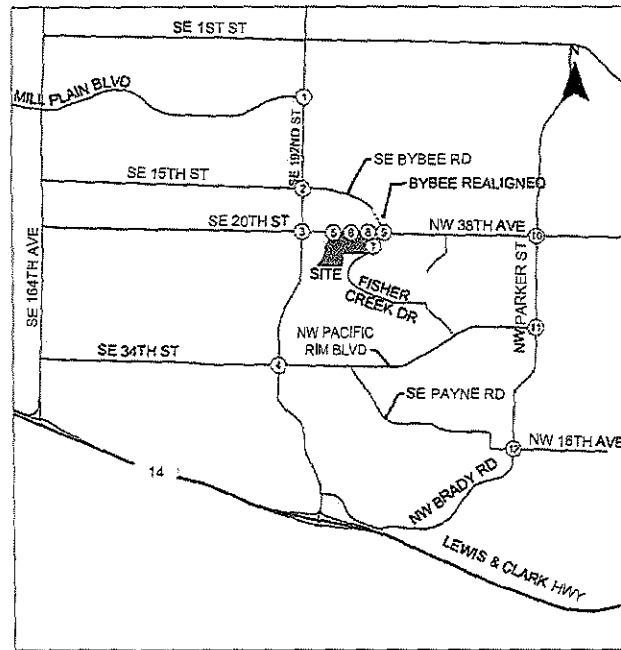
SE 20th Street/SE 192nd Avenue Intersection Mitigation

Operations of the SE 20th Street/SE 192nd Avenue intersection could be mitigated to comply with City of Vancouver standards through the addition of a second westbound left-turn lane on SE 20th Street. The additional left-turn lane would add westbound left-turn capacity and allow for traffic signal retiming that allocates additional green time to the primary north-south traffic patterns along SE 192nd Avenue. With this mitigation in place, the intersection is projected to operate at LOS D and a volume to capacity ratio of 1.02 during the weekday p.m. peak hour. *Mitigated operations analysis assuming the additional turn lane and signal retiming for p.m. peak hour conditions is provided at the end of Appendix "H".*

Scenario 2 (SE Bybee Road aligned to the east) Total Traffic Conditions

The Scenario 2 total traffic volumes at the study intersections reflect summation of the 2021 background traffic volumes (Figures 10 and 11), primary site-generated trips (Figures 16 and 17) and pass-by site-generated trips (Figures 14 and 15). Figures 20 and 21 show the 2021 total traffic volumes and operations during the weekday a.m. and p.m. peak hours for Scenario 2.

As shown in the figures, the SE 20th Street/SE 192nd Avenue continues to operate at an unacceptable level based on the City of Vancouver standards during the weekday p.m. peak hour. Compared to Scenario 1, the intersection experiences higher traffic volumes and delay. The other study intersections are projected to continue to operate acceptably and satisfy the applicable mobility standards. *Appendix "H" includes the year 2021 total traffic analysis worksheets.*



CM = CRITICAL MOVEMENT (UNSIGNALIZED)
 LOS = CRITICAL MOVEMENT LEVEL OF SERVICE (SIGNALIZED)/CRITICAL MOVEMENT LEVEL OF SERVICE (UNSIGNALIZED)
 Del = INTERSECTION AVERAGE CONTROL DELAY (SIGNALIZED)/CRITICAL MOVEMENT CONTROL DELAY (UNSIGNALIZED)
 V/C = CRITICAL VOLUME-TO-CAPACITY RATIO

Scenario 1 2021 Total Traffic Conditions
 Weekday AM Peak Hour
 Camas, Washington

Figure
 18

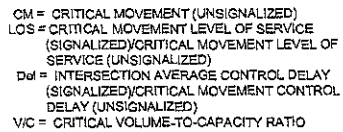
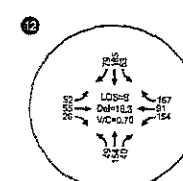
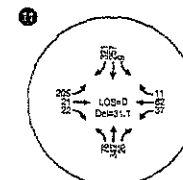
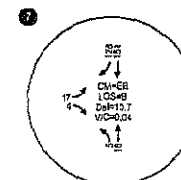
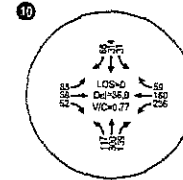
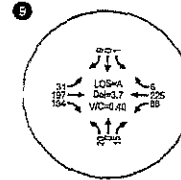
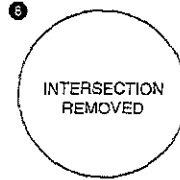
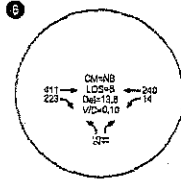
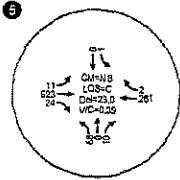
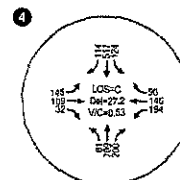
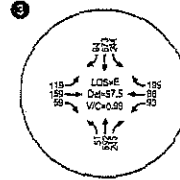
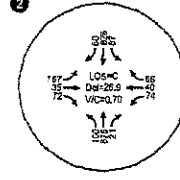
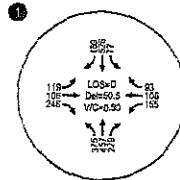
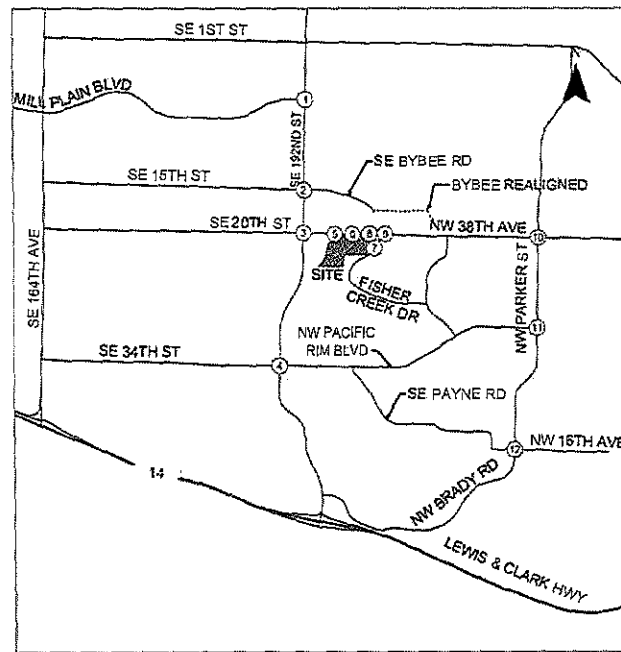


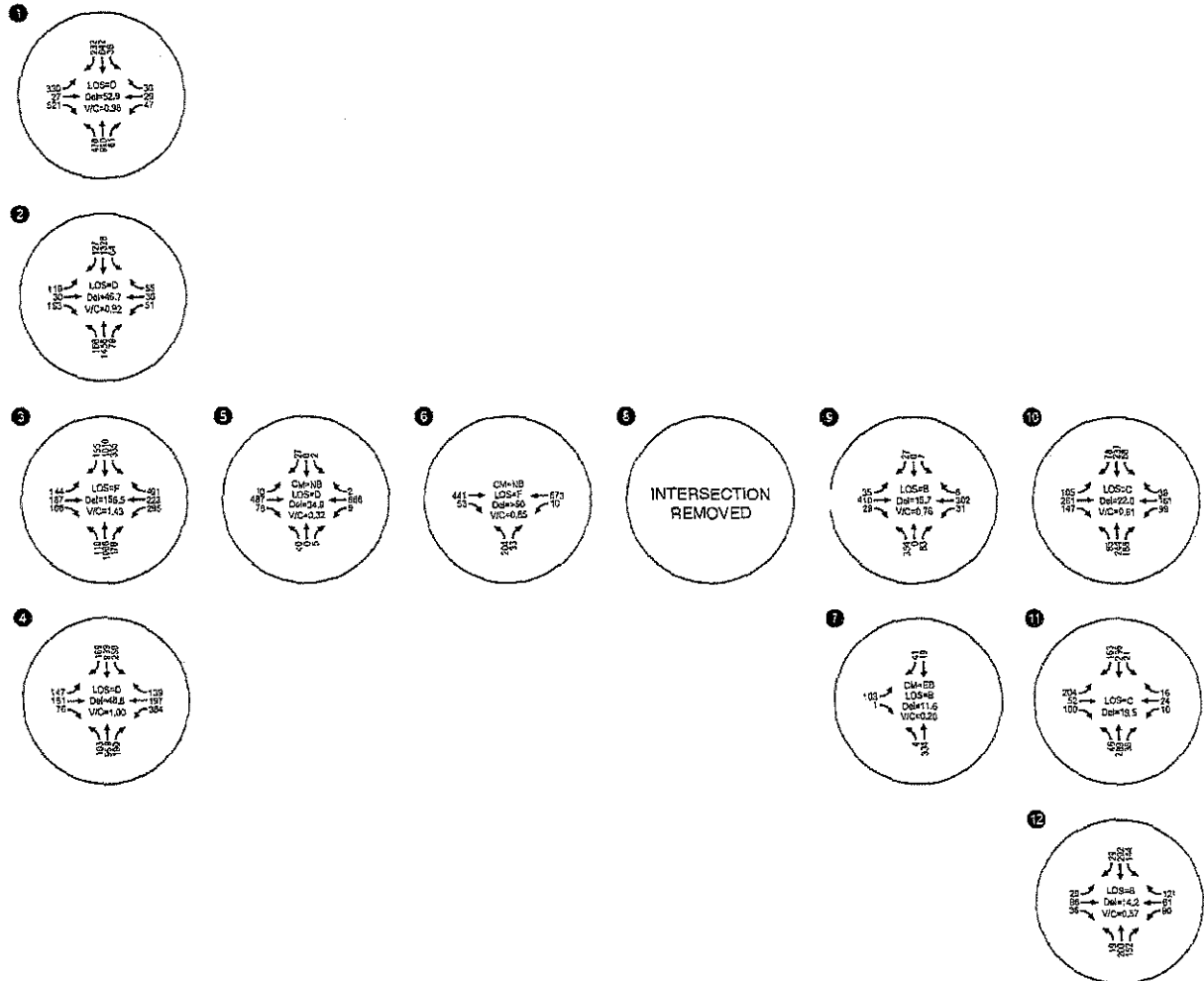
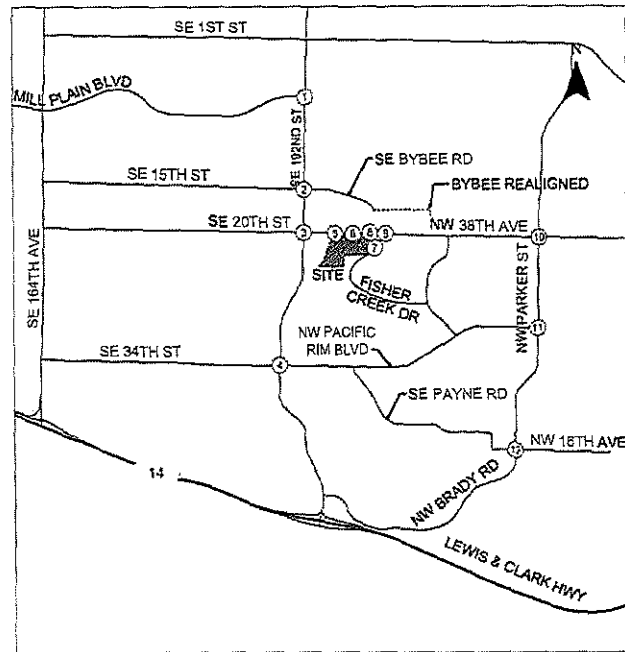
Figure 19



CM = CRITICAL MOVEMENT (UNSIGNALIZED)
 LOS = CRITICAL MOVEMENT LEVEL OF SERVICE
 (SIGNALIZED)/CRITICAL MOVEMENT LEVEL OF
 SERVICE (UNSIGNALIZED)
 Dm = INTERSECTION AVERAGE CONTROL DELAY
 (SIGNALIZED)/CRITICAL MOVEMENT CONTROL
 DELAY (UNSIGNALIZED)
 V/C = CRITICAL VOLUME-TO-CAPACITY RATIO

Scenario 2 2021 Total Traffic Conditions
 Weekday AM Peak Hour
 Camas, Washington

Figure
 20



CM = CRITICAL MOVEMENT (UNSIGNALIZED)
LOS = CRITICAL MOVEMENT LEVEL OF SERVICE
(SIGNALIZED); CRITICAL MOVEMENT LEVEL OF
SERVICE (UNSIGNALIZED)
Del = INTERSECTION AVERAGE CONTROL DELAY
(SIGNALIZED); CRITICAL MOVEMENT CONTROL
DELAY (UNSIGNALIZED)
VIC = CRITICAL VOLUME-TO-CAPACITY RATIO

Scenario 2 2021 Total Traffic Conditions
Weekday PM Peak Hour
Camas, Washington

Figure
21

SE 20th Street/SE 192nd Avenue Intersection Mitigation

Mitigation of the SE 20th Street/SE 192nd Avenue intersection under Scenario 2 requires the addition of a second westbound left-turn lane as well as a separate westbound right-turn lane. Similar to Scenario 1, the additional westbound approach capacity would allow for traffic signal retiming that allocates additional green time to the primary north-south traffic patterns along SE 192nd Avenue. These mitigations would restore intersection operations to a level in compliance with City of Vancouver standards. *Mitigated intersection operations analysis for Scenario 2 is provided at the end of Appendix "H".*

While not required to mitigate the traffic impacts of the proposed development, intersection operations could be further enhanced through provision of a westbound right-turn traffic signal overlap phase for the new westbound right-turn lane.

Queueing Analysis

Site Driveways

A 95th-percentile queuing analysis was performed for the three proposed site access points along NW 38th Avenue and Fisher Creek Driver under 2021 peak hour total traffic conditions. Table 5 summarizes the 95th-percentile queue estimates for the stop controlled approaches, rounded up to the nearest single vehicle length (estimated at 25 feet).

Table 5: 95th-Percentile Queue Analysis Findings (2021 Total Traffic Conditions)

Intersection	Movement	Available Storage (feet)	Scenario 1		Scenario 2	
			AM Peak Hour Queue (feet)	PM Peak Hour Queue (feet)	AM Peak Hour Queue (feet)	PM Peak Hour Queue (feet)
5 NW 38 th Avenue/ Proposed Site Driveway 1	Westbound Left		0	25	0	25
	Northbound		50	25	50	50
6 NW 38 th Avenue/ Proposed Site Driveway 2	Westbound Left		25	25	25	25
	Northbound		25	125	25	200
7 Fisher Creek Drive/ Proposed Site Driveway 3	Eastbound		25	25	25	25

Site driveway queues are projected to be longer under Roadway network Scenario 2, reflecting the projected increase in east-west traffic volumes on NW 38th Avenue along the site frontage as compared to Scenario 1.

As Table 5 indicates, the 95th-percentile queue for the northbound approach at the NW 38th Avenue/Proposed Site Driveway 2 intersection is expected to reach five car lengths under Scenario 1 and eight car lengths under Scenario 2. While the queuing condition will occur on-site and not impact the public roadway approaches, the on-site queuing could be reduced through provision of a shared through/left-turn lane and a separate right-turn lane northbound at the eastern site driveway on NW

38th Avenue. As the site plan is finalized, it is recommended that the site plan provide adequate storage for each of the stop controlled approaches.

SE 192nd Avenue/SE 20th Street Intersection

Table 6 summarized projected queues at the signalized SE 192nd Avenue/SE 20th Street intersection for both Scenarios 1 and 2 assuming provision of the previously recommended mitigation measures. A more detailed summary of the queue results is provided within the LOS worksheets for this intersection in Appendix "H".

Table 6: SE 192nd Avenue/SE 20th Street Intersection 95th-Percentile Queue Analysis Results (2021 Total Traffic Conditions)

Approach	Movement	Storage ¹	Scenario 1		Scenario 2	
			AM Peak Hour Queue (ft)	PM Peak Hour Queue (ft)	AM Peak Hour Queue (ft)	PM Peak Hour Queue (ft)
Eastbound	Left	100'	68	104	68	96
	Through-Right	230'/825'	191	296	199	372
Westbound	Left	100'	174	166	113	188
	Through	325'/2,110'	172	517	222	227
	Right	200'				386
Northbound	Left	325'	65	137	65	125
	Through-Right	190'/1,285'	440	584	444	590
Southbound	Left	400'	235	154	408	253
	Through-Right	1080'	235	312	265	284

¹When two storage lengths are shown, the first measurement represents distance to nearest driveway intersection and the second measurement represents distance to nearest street intersection.

Driveway Sight Distance Considerations

Access to the development is proposed via two full-access, stop-controlled driveways on NW 38th Avenue and two full-access stop-controlled driveways on NW Fisher Creek Drive. As site civil engineering plans are finalized, landscaping, above ground utilities, and signing should be located and maintained along the site frontage and throughout the site in a manner that preserves adequate intersection sight distance in accordance with City of Camas standards. Sight distance availability should be confirmed during the final engineering process.

FINDINGS AND RECOMMENDATIONS

Based on the results of the transportation impact analysis, the proposed development can be constructed while maintaining acceptable levels of service and safety on the surrounding transportation system given assuming the provision of the recommended mitigation measures. The primary findings and recommendations of this study are summarized below.

Findings

- The proposed mixed-use development is estimated to generate 5,037 net new weekday trips, including 535 during the a.m. peak hour (388 in, 147 out) and 522 during the p.m. peak hour (166 in, 356 out).
- Under Scenario 1 year 2021 total traffic conditions, the SE 20th Street/SE 192nd Street intersection requires mitigation to comply with City of Vancouver operating standards during the weekday p.m. peak hour.
 - Mitigation to restore acceptable operations includes provision of a second westbound left-turn lane and traffic signal retiming that allocates additional green time to the primary north-south traffic patterns along NE 192nd Avenue.
- Under Scenario 2, both year 2021 background and total traffic conditions require mitigation at the SE 20th Street/SE 192nd Street intersection to comply with City of Vancouver operating standards during the weekday p.m. peak hour.
 - Scenario 2 involves higher westbound approach traffic volumes as compared to Scenario 1.
 - Mitigation to restore acceptable operations includes provision of a second westbound left-turn lane and a separate westbound right-turn lane as well as corresponding signal retiming that allocates additional green time to the primary north-south traffic patterns along NE 192nd Avenue.


Recommendations

- The SE 20th Street/SE 192nd Street intersection should be mitigated to comply with City of Vancouver operating standards in conjunction with site development.
 - For network connectivity Scenario 1, mitigation should include provision of a second westbound left-turn lane and traffic signal retiming that allocates additional green time to the primary north-south traffic patterns along NE 192nd Avenue.
 - For network connectivity Scenario 2, mitigation should include provision of a second westbound left-turn lane and a separate westbound right-turn lane as well as corresponding signal retiming that allocates additional green time to the primary north-south traffic patterns along NE 192nd Avenue.

- On-site and off-site landscaping and any above ground utilities at the site driveways and internal roadways should be installed and maintained to ensure that adequate sight distance is provided upon buildout in accordance with City of Camas standards. Further, sight distance availability should be confirmed during the final engineering process.

We trust this report adequately addresses the traffic impacts associated with the proposed Grass Valley development. Please contact us if you have any questions.

Sincerely,
KITTELSON & ASSOCIATES, INC.


Chris Brehmer, P.E.
Senior Principal Engineer


Kristine Connolly
Engineering Associate

REFERENCES

1. Transportation Research Board. *Highway Capacity Manual 2000*. 2000.
2. Institute of Transportation Engineers. *Trip Generation*, 9th Edition. 2012.
3. Institute of Transportation Engineers. *Trip Generation Manual*, 3rd Edition. 2014.
4. Institute of Transportation Engineers. *Trip Generation Handbook*, 2nd Edition. 2004.
5. Transportation Research Board. *NCHRP Report 684*. 2011.

APPENDICES

- A. Crash data
- B. Description of Level of Service Criteria
- C. Traffic count data
- D. Existing Traffic Operations Analysis Worksheets
- E. In-process volumes
- F. Year 2021 Background Traffic Operations Analysis Worksheets
- G. OTISS Traffic Calculations
- H. Year 2021 Total Traffic Operations Analysis Worksheets

