Spokane County
WASHINGTON

DEPARTMENT OF BUILDING AND PLANNING
JOHN PEDERSON, DIRECTOR

TO: Spokane County Department of Building and Planning; James Moore
Spokane County Public Works; David Istrate, c/o Tamra Lockie
Spokane County Public Works; Barry Greene
Spokane County Public Works; Chris Knudson
Spokane County Environmental Services; Kevin Cooke
Spokane County Environmental Services; Rob Lindsay
Spokane County Parks and Recreation; Doug Chase
Spokane County Sheriff; Ozzie Knezovich
Spokane Regional Transportation Council, Mike Ulrich
City of Spokane, Planning & Development Department, Tirrell Black
City of Spokane, Public Works; Inga Note
City of Spokane Development Services; Eldon Brown
Spokane County Fire District #8; Marty Long
Spokane Public School District #81; Phil Wright
Spokane Transit Authority; Mike Haynes
Spokane Regional Health District; Paul Savage
Avista Utilities, Eric Grainger
Washington State Department of Transportation; Greg Figg
Washington State Department of Commerce, Dave Andersen
Washington State Department of Ecology, SEPA Registry
Washington State Department of Fish and Wildlife; Leslie King

FROM: Steve Davenport, AICP

DATE: June 24, 2020

RE: Comprehensive Plan and Zoning Map Amendment **#20-CPA-02**

Spokane County has received a formal application to amend its Comprehensive Plan Map and Zoning Map. This proposal is being circulated for agency review and comment. Attached are the details of the proposal. Please return any concerns or comments your agency may have no later **July 8th, 2020**

Please include the referenced file number **20-CPA-02** in your response.

Your agency's comments will be considered by Spokane County, as the lead agency, in preliminary review of this application and incorporated into the staff analysis and SEPA determination. A public hearing before the Spokane County Planning Commission will be

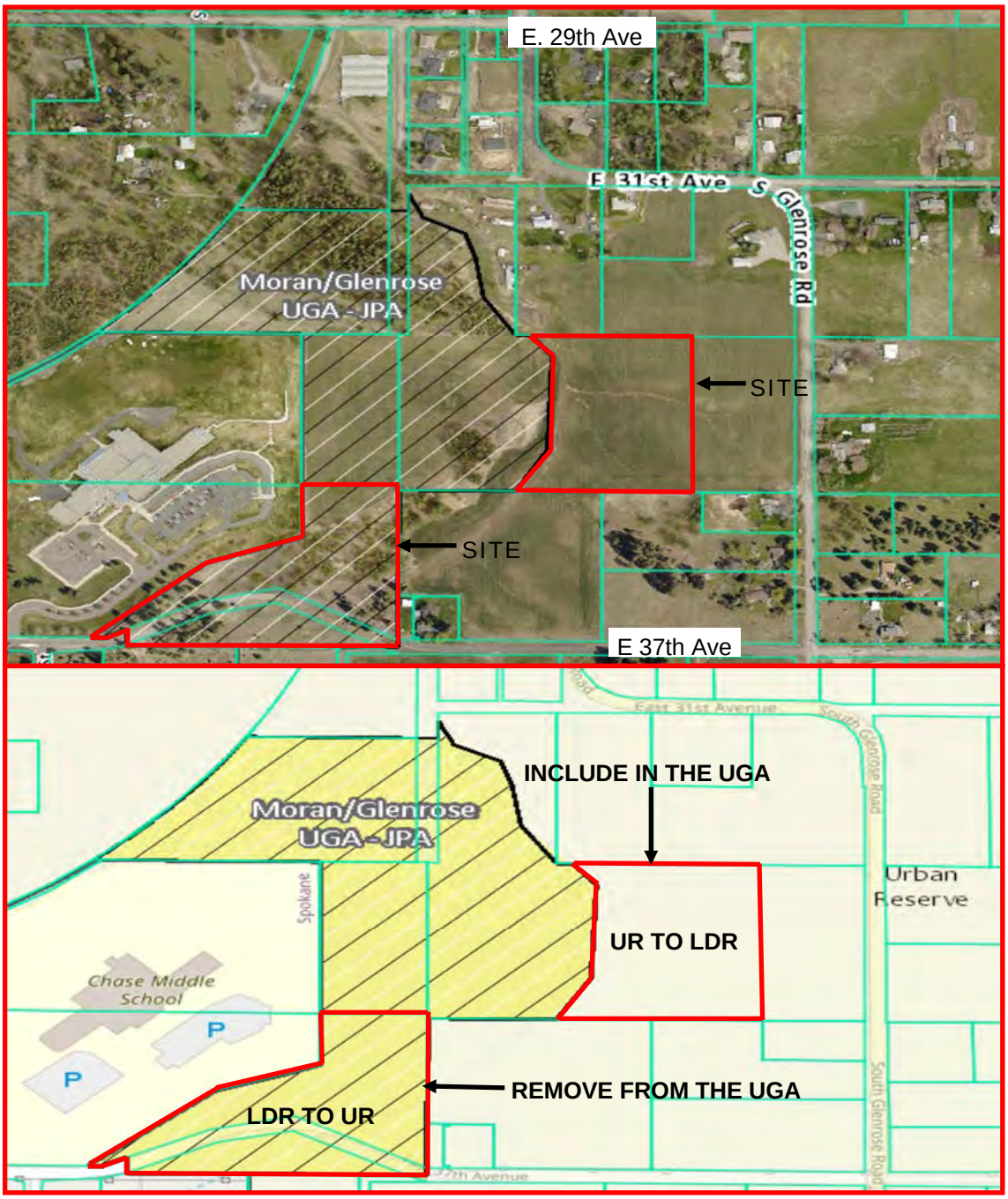
scheduled and a notification sent to your agency. The Planning Commission will, shortly thereafter, make a recommendation and forward it to the Board of County Commissioners.

If you have any questions, or need further information, please contact Steve Davenport, at 477-7221 or sdavenport@spokanecounty.org

cc: Storhaugh Engineering, lesliep@storhaugh.com
Timothy & Leslie Ansett, tlansett@msn.com

Attachments:

- Maps
- Application Materials
- Environmental Checklist
- Trip Generation Letter



20-CPA-02

Request: UGA modification. Remove 6.5 acres from UGA and change classification from Low Density Residential (LDR) to Urban Reserve (UR). Add 6.5 acres to UGA and change classification from Urban Reserve (UR) to Low Density Residential (LDR).

Applicant: George Paras Owner: Timothy & Leslie Ansett

Parcel No. 35352.9111, 35351.9127

Comment: The subject sites are vacant. The parcel to the east has frontage on S. Glenrose Rd. and the parcel to the southwest has frontage on E. 37th Ave. Public water and sewer is provided by the City of Spokane. Land uses adjacent to the subject sites includes: Chase Middle School to the west and single family dwellings on acreages to the north, south, and east. A DNR stream with a No Water Type Designation runs through the parcels.

Building and Planning Department

SPOKANE COUNTY

MAR 18 2020

DEPARTMENT OF BUILDING AND PLANNING

Annual Comprehensive Plan Amendment

Concurrent Zone Reclassification

Request to Initiate Amendment

Requestor Information (If other than owner, provide owner affidavit permission form.)

Applicant or Designated Project Contact: Storhaug Engineering

Address: 510 E. 3rd Avenue

City/State/Zip: Spokane, WA 99202

Phone Number: 509-242-1000 cell: _____ fax: _____

Email address: lesliep@storhaug.com

Property Owner Information

Legal Owner(s): Timothy and Leslie Ansett

Address: 4527 S. Pittsburg St.

City/State/Zip: Spokane, WA 99223

Phone Number: _____ cell: 509-385-7835 fax: _____

Email Address: tlansett@msn.com

Amendment Information

Address or Location: 5020 E. 29th Ave.

Parcel Number(s): 35352.9111 and 35351.9127

Type of Access: E. 37th Avenue, S. Glenrose Rd.

Project Size: 35352.9111 = 8.05 ac. and 35351.9127 = 24.38 ac.

Existing Comprehensive Plan Category: Low Density Residential (LDR), Urban Reserve (UR)

Proposed Comprehensive Plan Category: LDR, UR

Existing Zoning Classification: LDR, UR

Proposed Zoning Classification: LDR, UR

APPLICATION SUPPORT INFORMATION Provide information on the following questions; please attach separate sheet(s) as appropriate.

1. Please provide a brief description of the proposal, and any supplemental documentation or analysis in support of the projects consistency with the county's comprehensive plan. Attaching documents as attachments is acceptable.

The proposal is an amendment of the Urban Growth Area (UGA). UGA swap is allowed provided there is not a net increase in the UGA boundary. Legal descriptions attached to confirm there will not be a net increase in the UGA boundary

Signature of Property Owners or Letter of Authorization

I, the undersigned, request the Board of County Commissioners initiate a Comprehensive Plan and/or Zoning Code amendment as proposed.

I swear and affirm under penalty of perjury that the above responses are made truthfully and to the best of my knowledge.

I further swear or affirm that I am the owner of record of the area proposed for the previously identified land use action, or, if not the owner, attached herewith is written permission from the owner authorizing my actions on his/her behalf.

Signed Leslie Ansett Date 3/16/20

Address 4527 S. Pittsburg Phone 509 953-6696

City Spokane State WA Zip 99223

Signature of Applicant or Representative Date

State of Washington)
) ss:
County of Spokane)

Signed and sworn or affirmed before me on this 16 day of MARCH, 2020, By LESLIE ANSETT

Crystal Walkup

Notary Seal

CRYSTAL WALKUP
MY COMM. EXP 02/15/2023
NOTARY PUBLIC
COMM. #206059
STATE OF WASHINGTON

Notary Public in and for the State of Washington residing at SPOKANE, WASHINGTON

My appointment expires 02/15/2023

Date 03/16/2020 Applicant: STORHAUG ENGINEERING

Date _____ Planner: _____

Amount Paid Receipt #:

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Signed Timothy Ansett Date 3/16/2020

Address 4527 S. PITTSBURG Phone (509) 385-7835

City SPOKANE, WA State 99223 Zip ____

Signature of Applicant or Representative Date

State of Washington)
) ss:
County of Spokane)

Signed and sworn or affirmed before me on this 16 day of MARCH, 2020, By TIMOTHY ANSETT

Crystal Walkup

Notary Seal

CRYSTAL WALKUP NOTARY PUBLIC STATE OF WASHINGTON COMM. #206059 MY COMM. EXP 02/15/2023

Notary Public in and for the State of Washington residing at SPOKANE, WASHINGTON

My appointment expires 02/15/2023

Date 03/16/2020 Applicant: STORHAUG ENGINEERING

Date ____ Planner: ____

Amount Paid Receipt #:

RFI-2-20

Building and Planning Department

SPOKANE COUNTY

COMPREHENSIVE PLAN AMENDMENT - REQUEST FOR INITIATION

Annual Amendment Review

Preconference Information Sheet

Applicant Information

Name GEORGE PARAS

Address 603 N HAVANA

City/State/Zip SPOKANE WA 99202

Phone Number(s) 509 535 8377 954-8476

Email Address

PE

Owner Information

Owners

Address

City/State/Zip

Phone Number(s)

Email Address

Parcel Information

Parcel Number(s) 35352.9111, 35351.9127

Type of Access 31st AVENUE, GLENROSE

Site Size 35352.9111 = 8.05 ac 35351.9127 = 24.38

Site Information

Existing Zone LDR, UR UGA SWAP

Proposed Zone UR, LDR

Comprehensive Plan Category LDR, UR

Proposed Comprehensive Plan Category UR, LDR

Fire District #8

Water District COS

School District # 81 - SPOKANE

Sewer District COS

Roadway Classification GLENROSE = MINOR ARTERIAL 37TH = URBAN COLLECTER
31ST MINOR ART.

Joint Planning Area COS

Inside UGA PART IN / PART OUT - SWAP OF UGA BNDRY

Environmental or cultural resources NONE IDENTIFIED

Subarea planning area/group GLENROSE COMMUNITY

~~Floodplain~~ HIGH STORMWATER RISK AREA - TYPE A & B STREAMS
NOT IN FLOOD PLAIN

Public Transit Benefit Area (PTBA) WITHIN BOUNDARIES

Within 1,000' notification boundary of Natural Resource Lands? NO

Airport Overlay Zone NO

Any other Overlay Zone NO

ARTERIAL ROAD PLAN GLENROSE = URBAN MINOR
37TH = URBAN COLLECTOR

Critical Areas

Critical Aquifer Recharge Area designation HIGH

Wetlands DNR & NAT. WETLANDS INVENTORY SHOW STREAM TYPES

Geologically hazardous area ~~NONE SPECIFIED~~ YES

List hazard type ERODABLE SOILS - SOUTH PORTION OF SITE

Designated Shorelines

Fish and wildlife habitat area NO PRIORITY HABITAT SPECIES IDENTIFIED

Permanent or seasonal streams TYPE A & B

Public Notice Requirements if Initiated for Public Review

The applicant is responsible for public notice:

- Notice to surrounding parcels by mailing information regarding the proposed amendment to property owners and taxpayers in the vicinity
- Posting the site with sign(s).

The Department of Building and Planning will provide the applicant with a Public Notice Packet when the proposal is scheduled for public hearing.

Summary of preconference- Initial Review

Comprehensive Planning/Zoning Issues and Land use issues:

PROPOSAL WILL REQUIRE AMENDMENT OF UGA
UGA SWAP IS ALLOWED PROVIDED NO NET INCREASE IN UGA BOUNDARY
PROPOSAL WILL REQUIRE REVIEW BY STEERING COMMITTEE OF ELECTED OFFICIALS (SCEO)
COORDINATE W/ GLENROSE COMMUNITY ASSOCIATION

Services and Facilities Issues: Other Issues:

CONTACT CITY OF SPOKANE FOR PROVISION OF WATER AND SEWER
CONTACT COUNTY PUBLIC WORKS FOR TRANSPORTATION AN STORMWATER ISSUES

THE PROPOSED SCHEMATIC PLAN WOULD CREATE A NON CONFORMING LOT ADJACENT TO GLENROSE ROAD. A POTENTIAL REDESIGN MAY BE REQUIRED. I WILL CONSULT W/ JOHN PEDERSON ON THIS ISSUE.

Other Issues:

A CONDITIONAL USE PERMIT FOR A WIRELESS FACILITY WAS APPLIED FOR IN 2013 (CUE-03-13) ON PARCEL 35352.9111. THE APPLICATION WAS WITHDRAWN PRIOR TO THE PUBLIC HEARING.

PARCEL 35351.9127 IS IN A FARM & AG CONSERVATION CATEGORY FOR REDUCTION OF PROPERTY TAX (FAC-01-09) REMOVAL FROM THE PROGRAM WILL BE REQUIRED PRIOR TO FINAL PLATTING OF THE PROPERTY

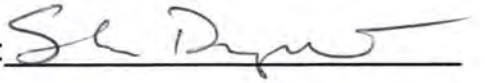
AGENCIES TO CONTACT

Discussion of your proposal with affected agencies is strongly recommended as it will inform you of any issues that may need consideration in the process.

✓	Agencies		✓	Agencies	
✓	Adjacent City C.O.S.	TERRI BLACK 625-6185		Spokane Regional Health District	324-1560
✓	Spokane County Public Works	MATT ZAREOR - STORM WATER SCOTT ENGLHARD - ROADS 477-3600	✓	Neighborhood Association(s) GLENROSE	
	Spokane County Parks & Recreation	477-4730		Spokane Regional Transportation Council	
	Spokane County Environmental Services	477-3604		Spokane Transit Authority	
✓	Spokane County Stormwater Utility	477-3604	✓	Water District COS	
	Washington State Dept of Transportation	324-6000		School District #81	
	Washington State Dept of Ecology	329-3400	✓	Fire Protection District #8	926-6699
	Washington State Dept of Fish & Wildlife	892-1001		Other	

I, the applicant or agent, acknowledge receipt of and understand the content of this document and submittal checklist. I acknowledge that initiation of a Comprehensive Plan and/or Zoning amendment is at the sole discretion of the Board of County Commissioners and that preconference fees are nonrefundable.

Date: 1-22-20 Representative 

Date: 1-22-20 Planner: 

Amount Paid	Receipt #:

File # 20-CPA-02

ENVIRONMENTAL CHECKLIST

SPOKANE ENVIRONMENTAL ORDINANCE SECTION 11.10.230[1]

Updated March 15, 2006

Environmental Checklist

Purpose of Checklist:
The State Environmental Policy Act (SEPA) chapter 43.21C RCW, requires all governmental agencies to consider the environmental impacts of a proposal before making decisions. An Environmental Impact Statement (EIS) must be prepared for all proposals with probable significant adverse impacts on the quality of the environment. The purpose of this checklist is to provide information to help you and the agency identify impacts from your proposal (and to reduce or avoid impacts from the proposal, if it can be done) and to help the agency decide whether an EIS is required.

Instructions for Applicants:
This environmental checklist asks you to describe some basic information about your proposal. Governmental agencies use this checklist to determine whether the environmental impacts of your proposal are significant, requiring preparation of an EIS. Answer the questions briefly, with the most precise information known, or give the best description you can.

You must answer each question accurately and carefully, to the best of your knowledge. In most cases, you should be able to answer the questions from your own observations or project plans without the need to hire experts. If you really do not know the answer, or if a question does not apply to your proposal, write "do not know" or "does not apply." Complete answers to the questions now may avoid unnecessary delays later.

Some questions ask about governmental regulations, such as zoning, shoreline, and landmark designations. Answer these questions if you can. If you have problems, the governmental agencies can assist you.

The checklist questions apply to all parts of your proposal, even if you plan to do them over a period of time or on different parcels of land. Attach any additional information that will describe your proposal or its environmental effects. The agency to which you submit this checklist may ask you to explain your answers or provide additional information reasonably related to determining if there may be significant adverse impact.

Use of checklist for nonproject proposals:
Complete this checklist for nonproject proposals, even though questions may be answered *"does not apply."*

IN ADDITION, complete the SUPPLEMENTAL SHEET FOR NONPROJECT ACTIONS (Part D).

For nonproject actions, the references in the checklist to the words "project," "applicant," and "property or site" should be read as "proposal," "proposer," and "affected geographic area," respectively.

A. BACKGROUND

1. Name of proposed project, if applicable: Glenrose Urban Growth Area (UGA) Swap _____
2. Name of applicant: Storhaug Engineering _____
3. Address and phone number of applicant or contact person: 510 E. 3rd Avenue, Spokane, WA 99202 _____

4. Date checklist prepared: **March 13, 2020**

5. Agency requesting checklist: **Spokane County**

6. Proposed timing or schedule (including phasing, if applicable): **2020 - 2021**

7. a. Do you have any plans for future additions, expansion, or further activity related to or connected with this proposal? If yes, explain. **This proposal will require an amendment of the Urban Growth Area (UGA). A UGA swap is allowed provided no net increase in UGA boundary. Legal descriptions are attached to confirm that there will be no net increase to the UGA boundary.**

   b. Do you own or have options on land nearby or adjacent to this proposal? If yes, explain. **Property owners (Timothy and Leslie Ansett) also own adjacent parcel Nos. 35352.0305 and 35352.9061.**

8. List any environmental information you know about that has been prepared, or will be prepared, directly related to his proposal. **None known.**

9. Do you know whether applications are pending for governmental approvals of other proposals directly affecting the property covered by your proposal? If yes, explain. **No pending applications or proposals known at this time.**

10. List any government approvals or permits that will be needed for your proposal, if known. **Approval of Urban Growth Area amendment/swap.**

11. Give brief, complete description of your proposal, including the proposed uses and the size of the project and site. There are several questions later in this checklist that ask you to describe certain aspects of your proposal. You do not need to repeat those answers on this page. **The subject properties (parcel nos. 35352.9111 and 35351.9127) are approximately 32.43 acres. The uses of this proposal will conform to the allowed Low Density Residential / Urban Reserve zoning code requirements.**

12. Location of the proposal. Give sufficient information to a person to understand the precise location of your proposed project, including a street address, if any, and section, township and range, if known. If a proposal would occur over a range of area, provide the range or boundaries of the site(s). Provide a legal description, site plan, vicinity map, and topographic map, if reasonably available. While you should submit any plans required by the agency, you are not required to duplicate maps or detailed plans submitted with any permit application related to this checklist. **The subject properties are located on parcel nos. 35352.9111 and 35351.9127 and addressed as 5020 E. 29th Ave. Approximately 32.43 acres located in a portion in the North ½ of the Southwest ¼ of the Northeast ¼ of Section 35, Township 25 North, Range 43 East, W.M. Spokane County, WA. Please see attached topographic maps.**

13. Does the proposed action lie within the Critical Aquifer Recharge Area (CARA)? Yes. _____

14. The following questions supplement Part A.

a. Critical Aquifer Recharge Area (CARA)

(1) Describe any systems, other than those designed for the disposal of sanitary waste, installed for the purpose of discharging fluids below the ground surface (includes systems such as those for the disposal of stormwater or drainage from floor drains). Describe the type of system, the amount of material to be disposed of through the system and the types of material likely to be disposed of (including materials which may enter the system inadvertently through spills or as a result of firefighting activities).
Stormwater will be handled in accordance with the Spokane County standards. Design of a stormwater system has not been completed. _____

(2) Will any chemicals (especially organic solvents or petroleum fuels) be stored in aboveground or underground storage tanks? If so, what types and quantities of material will be stored?

No. _____

(3) What protective measures will be taken to insure that leaks or spills of any chemicals stored or used on site will not be allowed to percolate to groundwater. This includes measures to keep chemicals out of disposal systems.
Future site development will meet all permitting standards for groundwater protection. _____

(4) Will any chemicals be stored, handled or used on the site in a location where a spill or leak will drain to surface or groundwater or to a stormwater disposal system discharging to surface or groundwater?
No chemical storage is anticipated for use of property. During construction, fuels and other materials may be used subject to proper handling and disposal by the contractor and sub-contractors. _____

b. Stormwater

(1) What are the depths on the site to groundwater and to bedrock (if known)?
Unknown. _____

(2) Will stormwater be discharged into the ground? If so, describe any potential impacts?

Stormwater system will be designed and installed to Spokane County standards using grassy swale areas for percolation and overflow. Anything that does not infiltrate will be obtained and evaporated. This filtration system for commercial activities minimizes potential impacts. _____

TO BE COMPLETED BY APPLICANT

B. ENVIRONMENTAL ELEMENTS

Evaluation for Agency Use Only

1. Earth

a. General description of the site (circle one): ~~*flat, rolling,*~~ (*hilly*) ~~*steep slopes, mountains, other*~~: _____

b. What is the steepest slope on the site (approximate percent slope)? ____
The existing UGA has slopes of 0-30% max. The proposed UGA for the swap has slopes of 0-8%. _____

c. What general types of soils are found on the site (for example, clay, sand, gravel, peat, muck)? If you know the classification of agricultural soils, specify them and note any prime farmland. **Per the National Web Soil Survey (NRCS), the soil type is primarily (76%) Phoebe-Bong, moist, complex, 0-8 percent slopes. 21% of the subject property if classified as Phoebe ashy sandy loam, 3 to 8 percent slopes. A small percent (3%) of the property consists of Bong, moist-Phoebe complex, 8 to 15% slopes.**

d. Are there surface indications or history of unstable soils in the immediate vicinity? If so, describe. **Erodible soils - south portion of the site**. ____

Evaluation for Agency Use Only

e. Describe the purpose, type, and approximate quantities of any filling or grading proposed. Indicate source of fill:
No information at this time. Our next land action won't occur for approximately ~6-15 months, at which point additional information will be provided with the subsequent SEPA application.

f. Could erosion occur as a result of clearing, construction, or use? If so, generally describe.
No information at this time. Our next land action won't occur for approximately ~6-15 months, at which point additional information will be provided with the subsequent SEPA application. _____

g. About what percent of the site will be covered with impervious surfaces after project construction (for example, asphalt or buildings)?
Unknown until development plans are created. Our next land action won't occur for approximately ~6-15 months, at which point additional information will be provided with the subsequent SEPA application. _____

h. Proposed measures to reduce or control erosion or other impacts to the earth, if any:

No information at this time. Our next land action won't occur for approximately ~6-15 months, at which point additional information will be provided with the subsequent SEPA application.

2. Air

a. What type of emissions to the air would result from the proposal (i.e., dust, automobile, odors, industrial, wood smoke) during construction and when the project is completed? If any, generally describe and give approximate quantities if known.
No information at this time. Our next land action won't occur for approximately ~6-15 months, at which point additional information will be provided with the subsequent SEPA application.

b. Are there any off-site sources of emissions or odor that may affect your proposal? If so, generally describe. No

c. Proposed measures to reduce or control emissions or other impacts to air, if any:
Conformance to all applicable local, state and federal emission control requirements.

3. Water

Evaluation for Agency Use Only

a. SURFACE:

(1) Is there any surface water body on or in the immediate vicinity of the site (including year-round and seasonal streams, saltwater, lakes, ponds, wetlands)? If yes, describe type and provide names. If appropriate, state what stream or river it flows into.
DNR and National Wetlands Inventory show stream types R4SBC (Riverine (R); Intermittent (4); Streambed (SB); Seasonally Flooded (C). Type A & B streams located in the parcel (35352.9111) which will not be developed per the UGA swap.

(2) Will the project require any work over, in, or adjacent to (within 200 feet) the described waters? If yes, please describe and attach available plans.
The SEPA is being requested as part of an Urban Growth Area Swap (Comprehensive Plan Amendment), so no work is to be conducted at this point in time.

(3) Estimate the amount of fill and dredge material that would be placed in or removed from the surface water or wetlands and indicate the area of the site that would be affected. Indicate the source of fill material.

N/A

(4) Will the proposal require surface water withdrawals or diversions? Give general description, purpose, and approximate quantities if known.
None known.

(5) Does the proposal lie within a 100-year floodplain? If so, note location on the site plan.
No.

(6) Does the proposal involve any discharge of waste materials to surface waters? If so, describe the type of waste and anticipated volume of discharge.
No.

b. GROUND:

(1) Will groundwater be withdrawn, or will water be discharged to groundwater? Give general description, purpose, and approximate quantities if known.
No information at this time. Our next land action won't occur for approximately ~6-15 months, at which point additional information will be provided with the subsequent SEPA application.

(2) Describe waste material that will be discharged into the ground from septic tanks or other sanitary waste treatment facility. Describe the general size of the system, the number of houses to be served (if applicable) or the number of persons the system(s) are expected to serve.
No information at this time. Our next land action won't occur for approximately ~6-15 months, at which point additional information will be provided with the subsequent SEPA application.

Evaluation for Agency Use Only

c. WATER RUNOFF (INCLUDING STORMWATER):

(1) Describe the source of runoff (including stormwater) and method of collection and disposal if any (include quantities, if known). Where will this water flow? Will this water flow into other waters? If so, describe.

No information at this time. Our next land action won't occur for approximately ~6-15 months, at which point additional information will be provided with the subsequent SEPA application.

Could waste materials enter ground or surface waters? If so, generally describe.
No information at this time. Our next land action won't occur for approximately ~6-15 months, at which point additional information will be provided with the subsequent SEPA application.

d. PROPOSED MEASURES to reduce or control surface, ground, and runoff water impacts, if any.
No information at this time. Our next land action won't occur for approximately ~6-15 months, at which point additional information will be provided with the subsequent SEPA application.

4. Plants

a. Check or circle type of vegetation found on the site:

_____ Deciduous tree: *alder, maple, aspen, other.*

__X__ Evergreen tree: *fir, cedar, pine, other.*

__X__ Shrubs

__X__ Grass

_____ Pasture

_____ Crop or grain

_____ Wet soil plants, *cattail, buttercup, bullrush, skunk cabbage, other.*

_____ Water plants: *water lilly, eelgrass, milfoil, other.*

_____ Other types of vegetation.

b. What kind and amount of vegetation will be removed or altered?
No information at this time. Our next land action won't occur for approximately ~6-15 months, at which point additional information will be provided with the subsequent SEPA application.

Evaluation for Agency Use Only

c. List threatened or endangered species known to be on or near the site. **None known.**

c. Proposed landscaping, use of native plants, or other measures to preserve or enhance vegetation on the site, if any:
No information at this time. Our next land action won't occur for approximately ~6-15 months, at which point additional information will be provided with the subsequent SEPA application.

5. **Animals**

a. Circle any birds and animals which have been observed on or near the site are known to be on or near the site:
birds: *hawk*, ~~*heron*~~, *eagle*, *songbirds*, *other*: _____
mammals: *deer*, ~~*bear*~~, ~~*elk*~~, ~~*beaver*~~, *other*: small mammals _____
fish: ~~*bass, salmon, trout, herring, shellfish, other:*~~ _____
other: *frogs* _____

b. List any threatened or endangered species known to be on or near the site.
None known. _____
_____
_____

c. Is the site part of a migration route? If so, explain. **No**. _____
_____
_____
_____

d. Proposed measures to preserve or enhance wildlife, if any: **None proposed. Maintaining native species where feasible**. _____
_____

6. **Energy and natural resources**

a. _____ What kinds or energy (electric, natural gas, wood stove, solar) will be used to meet the completed project's energy needs? Describe whether it will be used for heating, manufacturing, etc.
No information at this time. Our next land action won't occur for approximately ~6-15 months, at which point additional information will be provided with the subsequent SEPA application. _____
_____

b. Would your project affect the potential use of solar energy by adjacent properties? If so, generally describe. **No.** _____
_____

c. What kinds of energy conservation features are included in the plans of this proposal? List other proposed measures to reduce or control energy impacts, if any:
No information at this time. Our next land action won't occur for approximately ~6-15 months, at which point additional information will be provided with the subsequent SEPA application. _____
_____

Evaluation for Agency Use Only

7. **Environmental health**

a. Are there any environmental health hazards, including exposure to toxic chemicals, risk of fire and explosion, spill, or hazardous waste that could occur as a result of this proposal? If so, describe. **None known.**

(1) Describe special emergency services that might be required.
All applicable State and Federal regulations will be followed. However, no additional special emergency services are known to be required.

(2) Proposed measures to reduce or control environmental health hazards, if any:
No information at this time. Our next land action won't occur for approximately ~6-15 months, at which point additional information will be provided with the subsequent SEPA application.

b. NOISE:

(1) What types of noise exist in the area which may affect your project (for example: traffic, equipment, operation, other)?
There is noise associated with traffic along E. 37th Avenue and S. Glenrose Road but it is not expected to impact the project.

(2) What types and levels of noise would be created by or associated with the project on a short-term or a long-term basis (for example: traffic, construction, operation, other)? Indicate what hours noise would come from the site.
No information at this time. Our next land action won't occur for approximately ~6-15 months, at which point additional information will be provided with the subsequent SEPA application.

(3) Proposed measure to reduce or control noise impacts, if any:
No information at this time. Our next land action won't occur for approximately ~6-15 months, at which point additional information will be provided with the subsequent SEPA application.

Evaluation for Agency Use Only

8. **Land and shoreline use**

a. What is the current use of the site and adjacent properties? **Agriculture and vacant forested lands.**

b. Has the site been used for agriculture? If so, describe. **Yes. Cultivation of typical regional crops has occurred on portions of both parcels.**

c. Describe any structures on the site. No existing structures located within the subject Urban Growth Area. There are some existing agriculture structures located in the northern portion of APN 35351.9127, but it is located outside of the area of interest.

d. Will any structures be demolished? If so, which?
No information at this time. Our next land action won't occur for approximately ~6-15 months, at which point additional information will be provided with the subsequent SEPA application.

e. What is the current zoning classification of the site? The site is currently has the County zoning designation of Urban Reserve (UR) and Low Density Residential (LDR).

f. What is the current comprehensive plan designation of the site? The County Comprehensive Plan Designation is Urban Reserve (UR) and Low Density Residential (LDR).

g. If applicable, what is the current shoreline master program designation of the site?
N/A

h. Has any part of the site been classified as a critical area? If so, specify.
The subject property is within the Critical Aquifer Recharge Area (CARA) of high susceptibility to groundwater contamination under the Spokane County Critical Areas Ordinance. The Critical Areas Ordinance CARA provisions protect aquifers used for potable water.

i. Approximately how many people would reside or work in the completed project?
No information at this time. Our next land action won't occur for approximately ~6-15 months, at which point additional information will be provided with the subsequent SEPA application.

j. Approximately how many people would the completed project displace?

None.

k. Proposed measures to avoid or reduce displacement impacts, if any:
N/A

Evaluation for Agency Use Only

l. Proposed measures to ensure the proposal is compatible with existing and projected land uses and plans, if any:
No information at this time. Our next land action won't occur for approximately ~6-15 months, at which point additional information will be provided with the subsequent SEPA application.

9. **Housing**

a. Approximately how many units would be provided, if any? Indicate whether high, middle or low-income housing.
No information at this time. Our next land action won't occur for approximately ~6-15 months, at which point additional information will be provided with the subsequent SEPA application.

b. Approximately how many units, if any, would be eliminated? Indicate whether high-, middle- or low-income housing. **None.**

c. Proposed measures to reduce or control housing impacts, if any: **None.**

10. **Aesthetics**

a. What is the tallest height of any proposed structure(s), not including antennas; what is the principal exterior building material(s) proposed?
No information at this time. Our next land action won't occur for approximately ~6-15 months, at which point additional information will be provided with the subsequent SEPA application.

b. What views in the immediate vicinity would be altered or obstructed?
No information at this time. Our next land action won't occur for approximately ~6-15 months, at which point additional information will be provided with the subsequent SEPA application.

c. Proposed measures to reduce or control aesthetic impacts, if any:
The development will conform to the applicable Urban Reserve and Low-Density Residential zoning, building, safety and fire codes.

11. Light and Glare

a. What type of light or glare will the proposal produce? What time of day would it mainly occur? There will be exterior lighting during non-daylight hours.
No information at this time. Our next land action won't occur for approximately ~6-15 months, at which point additional information will be provided with the subsequent SEPA application.

Evaluation for Agency Use Only

b. Could light or glare from the finished project be a safety hazard or interfere with views? **No impacts or interference is anticipated.**

c. What existing off-site sources of light or glare may affect your proposal?
None anticipated. The project is adjacent to Chase Middle School but is located in a largely residential/agricultural setting.

d. Proposed measures to reduce or control light and glare impacts, if any:
No information at this time. Our next land action won't occur for approximately ~6-15 months, at which point additional information will be provided with the subsequent SEPA application.

12. Recreation

a. What designated and informal recreational opportunities are in the immediate vicinity? **Chase Middle School is located directly to the west of the site. Thierman Road Trailhead, Morning Star Boys Ranch, and the Glenrose Dishman Hills Conservation area currently exists in immediate area. Also, a sports complex is planned to the South East of the subject site.**

b. Would the proposed project displace any existing recreational uses? If so, describe. **No.**

c. Proposed measures to reduce or control impacts on recreation, including recreation opportunities to be provided by the project or applicant, if any:
No information at this time. Our next land action won't occur for approximately ~6-15 months, at which point additional information will be provided with the subsequent SEPA application.

13. Historic and cultural preservation

a. Are there any places or objects listed on, or proposed for, national, state, or local preservation registers known to be on or next to the site? If so, generally describe. **None known.**

b. Generally describe any landmarks or evidence of historic archaeological, scientific or cultural importance known to be on or next to the site.
None known.

c. Proposed measures to reduce or control impacts, if any:
No information at this time. Our next land action won't occur for approximately ~6-15 months, at which point additional information will be provided with the subsequent SEPA application.

Evaluation for Agency Use Only

14. Transportation

a. Identify public streets and highways serving the site, and describe proposed access to the existing street system. Show on site plans, if any. **Two access points will be provided by S. Glenrose Road and from Carnahan to 29th to subject property. Access from 37th is not proposed- too many major development constraints.**

b. Is site currently served by public transit? If not, what is the approximate distance to the nearest transit stop? **The site is not served by public transit. There currently exists a bus stop at Freya & 29th Avenue, which is 1.2 miles away.**

c. How many parking spaces would the completed project have? How many would the project eliminate?
No information at this time. Our next land action won't occur for approximately ~6-15 months, at which point additional information will be provided with the subsequent SEPA application.

e. Will the proposal require any new roads or streets, or improvements to existing roads or streets not including driveways? If so, generally describe (indicate whether public or private).
No information at this time. Our next land action won't occur for approximately ~6-15 months, at which point additional information will be provided with the subsequent SEPA application.

e. Will the project use (or occur in the immediate vicinity of) water, rail or air transportation? If so, generally describe. **No.**

f. How many vehicular trips per day would be generated by the completed project? If known, indicate when peak would occur.

No information at this time. Our next land action won't occur for approximately ~6-15 months, at which point additional information will be provided with the subsequent SEPA application.

(Note: to assist in review and if known indicate vehicle trips during PM peak, AM Peak and Weekday (24 hours).)

g. Proposed measures to reduce or control transportation impacts, if any:
N/A.

15. Public services

a. Would the project result in an increased need for public services (for example: fire protection, police protection, health care, schools, other)? If so, generally describe. **The project is currently served by Fire District 8 and School District #81 public schools.**

g. Proposed measures to reduce or control direct impacts on public services, if any:
None proposed.

Evaluation for Agency Use Only

16. Utilities

a. Circle utilities currently available at the site: *electricity, natural gas, water, refuse service, telephone, sanitary sewer,* ~~*septic system*~~*, other*:

b. Describe the utilities that are proposed for the project, the utility providing the service and the general construction activities on the site or in the immediate vicinity which might be needed.

Utilities:

Water: Water in this area is under the jurisdiction of the City of Spokane.
Sewer: Sanitary services provided by the City of Spokane
Gas/Power: Avista

C. SIGNATURE

I, the undersigned, swear under penalty of perjury that the above responses are made truthfully and to the best of my knowledge. I also understand that, should there be any willful misrepresentation or willful lack of full disclosure on my part, the *agency* must withdraw any determination of Nonsignificance that it might issue in reliance upon this checklist.

Date: 03/16/2020 Signature: L. Pereyra

SPOKANE ENVIRONMENTAL ORDINANCE

(WAC 197-11-985) Section 11.10.230(1) File No. _____

Please Print or Type:

Proponent: LESLIE PEREZ Address: 510 E. 3RD AVE. SPOKANE, WA 99202

Phone: 509-242-1000 _____

Person completing form (if different from proponent): STORHAUG ENGINEERING Address: 510 E. 3RD AVE. SPOKANE, WA 99202

Phone: 509-242-1000 _____

FOR STAFF USE ONLY

Staff member(s) reviewing checklist: _____

Based on this staff review of the environmental checklist and other pertinent information, the staff concludes that:

___ A. there are no probable significant adverse impacts and recommends a Determination of Nonsignificance.

___ B. probable significant adverse environmental impacts do exist for the current proposal and recommends a Mitigated Determination of Nonsignificance with conditions.

___ C. there are probable significant adverse environmental impacts and recommends a Determination of Significance.

T·O ENGINEERS

memo

TO:	Barry Greene, P.E. - Transportation Development Services Director Nate Thompson, P.E. - County Transportation Engineer
FROM:	Bill White - Regional Transportation Lead Christopher J. Reich, P.E. - Reich Engineering, LLC
DATE:	March 2020
JOB NO.:	200101
RE:	Ansett Property, Expanded Trip Generation Letter
CC:	George Paras, Paras Homes

03/18/2020

☐**Urgent** ☒**For Review** ☒**Please Comment** ☒**Please Reply** ☐**For Your Use**

This memorandum summarizes the expanded trip generation and distribution analysis prepared for the Ansett Property residential project proposed in Spokane County, WA. Provided is an initial impact statement that forecasts site traffic and likely approach/departure routes of these travelers. In addition, this study provides a summary of forecast levels-of-service (LOS) for key intersections located near the site. This analysis is intended to address traffic study requirements of County Engineers and Planners relating to the State Environmental Policy Act (SEPA) and Growth Management Act (GMA) processes, respectively. The study was developed in compliance with the technical requirements outlined by Technical Appendix A of Spokane County Road Standards.

This memorandum will be submitted to the County as lead land use jurisdiction and the agency maintaining approach roadways. Outside agencies can comment per invitation of County officials. Questions regarding the proposed land use action can be addressed by staff with Paras Homes. Questions about this study can be addressed by staff with the Spokane office of T-O Engineers.

1. Project Description

A 130-lot single-family residential development is proposed on nearly 35-acres situated between 29th Avenue and 37th Avenue west of Glenrose Road. Lot/home access is proposed through a "network" of three east-west and four north-south local streets. Property access to County arterials is proposed by separate approach extending north to 29th Avenue, via Carnahan Road, and east to Glenrose Road, respectively.

The property is located mostly within a low density residential (LDR) zone of Spokane County with easterly areas of the site extending into an urban reserve (UR) zone. A zone change from UR to LDR is required to address the land use proposal. A preliminary plat and parcel map also need to be created for the project and approved by County engineers.

The project would be developed in 25 to 30-lot phases annually, with full site development forecast by year 2026. Attached **Figure 1** provides a site location map. **Figure 2** provides the most current site plan. This plan is subject to change during formal design. However, the recommendations of this study should remain sufficient so long as the lot/home count or access proposal do not alter substantially from what is analyzed subsequently.

2. Street Network

The project is forecast to have the highest impact on County roads at project approach junctions with 29th Avenue and Glenrose Road, respectively, and on the off-site intersections of Glenrose Road with 29th Avenue and 37th Avenue. A description of primary study roadways is as follows:

- **29th Avenue**. An *urban minor arterial* extending from the City of Spokane and terminating at Glenrose Road. This is a two-lane road with one to three-foot paved shoulders. The speed limit is 30-mph and the County shows a count of 2,200 average daily traffic (ADT) via their GIS portal.
- **Glenrose Road.** An *urban minor arterial* extending from 17th Avenue in Spokane to 57th Avenue in the County. This is a two-lane road with one to three-foot shoulders. The speed limit is 35-mph with a count of 5,250 ADT near the proposed project approach.
- **37th Avenue**. An *urban minor arterial* extending from the City of Spokane to Glenrose Road, and then continuing as a local road to terminate at Eastern Road. This is a two-lane road with one to three-foot shoulders. The speed limit is 25 mph and the arterial section of the road has a count of 2,000 ADT.

A review was performed of the Spokane County 2019-2025 Six Year Transportation Improvement Program (TIP) to determine if any road projects are planned to increase capacity or alter travel for the noted study roads. The TIP indicates Glenrose Road would be widened and improved to an urban section from 37th Avenue to the Palouse Highway. Design and ROW acquisition would occur in 2020/21 with construction programmed by 2022. However, the TIP does not indicate whether this project would change capacity for the 37th Avenue/Glenrose Road intersection. Thus, to assure a conservative analysis, no improvements were assumed at this intersection.

There are single entering and exiting lanes on all approaches to the primary study intersections of Glenrose Road with 29th Avenue and 37th Avenue. Both intersections have stop-controls on eastbound and westbound approaches with free movements in the northbound and southbound approaches. Similarly, single entry and exit lanes would be developed at new approach intersections with 29th Avenue and Glenrose Road. Outbound movements from the site would be stop-controlled with free movements allowed on the major roadway.

3. Trip Generation Potentials

Trip generation was forecast based on the methodologies of the Trip Generation Manual (ITE, 10th Edition, 2017). Trip Generation is a nationally recognized and locally accepted resource for forecasting traffic for commercial, institutional, and residential developments. The methods were developed based on the survey of other existing land uses located within the U.S.

Trip generation was developed using ITE Land Use: 210 for Single-Family Detached Housing. The ITE definition indicates this "*includes all single-family detached homes on individual lots.*" The definition compliments the project description and site plan provided by the project applicant. Trip generation was calculated based on variables that relate housing units to ITE equations.

As indicated, the project would have 130-lots. Trip generation was forecast for the weekday and peak hours of adjacent streets, representing the impact of the project on the morning and evening rush hours of the commute. **Table 1** provides a summary of full development trip generation.

Table 1. Trip Generation Potentials

		AM Peak Hour			PM Peak Hour		
Land Use	Weekday	In	Out	Total	In	Out	Total
Single-Family, 130-Lots,	1,325	24	73	97	82	49	131

As shown, about 1,325 weekday trips are forecast with development of the Ansett project. About 97 trips would be generated during the AM peak hour and 131 trips during the PM peak hour, representing 17.2-percent of weekday trips.

4. Trip Distribution and Assignment

Trip distribution and assignment is the process of forecasting likely travel routes for development-related traffic, as to identify the impacts of a project on area streets. For this study, the distribution of trips was initially based on a comparison of existing County ADT, as count densities indicate how roadways are being utilized in relation to the region. Base or raw distributions were then adjusted to reflect the location of primary destination centers within relation to the development, such as work centers, shopping/entertainment areas, etc.

In summary, higher ADT volumes are noted comparatively to/from the north of 29th Avenue, likely reflecting the work commute between this area and the City of Spokane via Carnahan Road. The next highest count is south of 37th Avenue, which is the continuation of this commute. In addition, other commute routes, several schools, and shopping centers are situated west of the study area as accessed via 29th Avenue and 37th Avenue, respectively. As such, distributions were adjusted from Glenrose Road to other study routes to address these factors.

Trip assignments were then developed by multiplying distributions and total trip generation. Trip distributions and the resulting trip assignments are shown with **Table 2** for the weekday.

Table 2. Trip Distribution and Assignment

Location	ADT Compare	Raw Distribution	Adjusted Distribution	Weekday Assignments
29th Avenue, west of Glenrose Road	2,200	14%	15%	200
37th Avenue, west of Glenrose Road	2,000	13%	15%	200
Glenrose Road, north of 29th Avenue	7,100	47%	50%	660
Glenrose Road, south of 37th Avenue	3,900	26%	20%	265
Totals on ADT/Cordon Line	**15,200**	**100%**	**100%**	**1,325**

Source: ITE Trip Generation Manual (9th Edition)

Overall, about 35-percent of project trips were forecast to use the 29th Avenue approach and 65-percent the Glenrose Road approach. The higher access potentials for Glenrose Road is the function of this seeming to be more of a commuter route for the area versus 29th Avenue.

Peak hourly trips were then assigned to the study area based on the distribution patterns identified above. Project trip assignments are shown on attached **Figure 3** for the AM and PM peak hours. Per standard County practice, an intersection forecast to support 25 or more peak hour trips was reviewed by this study. The W. Westbow Boulevard/Aero Road intersection is forecast to support the majority of site trips with resulting assignments falling well below this threshold.

5. Traffic Forecasts

Intersection traffic counts were performed to support this study in February of 2020. Counts were performed prior to school and business closures associated with COVID-19. The peak hour count timeframes extended from 7:00 to 9:00 AM and 4:00 to 6:00 PM, per standard industry practice. The peak hour of each intersection was reviewed, which means volumes do not necessarily balance between locations, but this does assure the more conservative approach was performed via capacity analyses.

Year 2026 traffic forecasts were developed for the AM and PM peak hours of study approach and intersections. Forecasts reflect the combination of baseline growth, the assignment of previously vested development projects, and the Ansett development. A description of these forecasting elements is as follows:

- **Baseline Growth.** This refers to an increase of traffic precipitated by changes and growth far removed from a study area. This growth is typically applied by applying a growth rate to traffic counts, in this case a 1-percent annual growth rate per practices of the County for this area. This represents 6.1 percent total growth within the area, which represents the traffic of about 35-single family homes impacting Glenrose Road.
- **Vested Projects.** A vested project, also know as a pipeline project, is a development that has met agency requirements and has been approved for construction. However, the trips generated by these projects are not yet reflected int traffic counts. As such, the trips generated by these projects are assigned to roadways to address capacity needs.

  The vested projects of this study include the SYSA Sports Complex, Southgate Plaza commercial, Bella Terra residential, South Ridge residential, Centre Court, Trickle Creek phases 2 to 4, and the Commons on Regal commercial site.
- **Project Trips.** The trip assignments from the Ansett Property, as shown with Figure 3.

Intersection counts are shown with attached **Figure 3** for the AM and PM peak hours. **Figure 4** provides a summary of pipeline project trips and **Figure 5** future without-project traffic volumes. **Figure 6** shows project trip distributions and assignments. Finally, attached **Figure 7** summarizes year 2026 with-project forecasts for the AM and PM peak hours.

6. LOS/Capacity Analysis

A LOS analysis was performed to forecast capacities for project approach and off-site study intersections, as these are locations most impacted by project trips. The capacity analysis was performed using Synchro 11 (Trafficware, 2019), a software tool that applies the methods of the current Highway Capacity Manual (TRB, 2016). LOS are the function of control delays experienced by drivers stopped at an intersection with different thresholds provided for LOS A through F conditions for signalized and stop-control intersections, respectively.

Intersection geometrics and traffic controls were described with Section 2. No improvements are expected to alter capacities or change travel for the study area. As such, the future LOS analysis was based on existing conditions. LOS is the function of delay for the worse approach or approach movement at a one/two-way stop-controlled intersection.

A summary of resulting LOS is shown with **Table 3** for the AM and PM peak hours. Also shown is average vehicle control delays for each location. LOS is the function of average control delays for the worse approach or movement at a one or two-way stop.

Table 3. Existing and Year 2026 Summary LOS

	Existing				Year 2026			
	AM Peak Hour		PM Peak Hour		AM Peak Hour		PM Peak Hour	
Intersection/Location	LOS[1]	Delay[2]	LOS[1]	Delay[2]	LOS[1]	Delay[2]	LOS[1]	Delay[2]
29th Avenue/Glenrose Road	C	17.8	C	18.2	D	26.1	E	42.8
37th Avenue/Glenrose Road	B	14.6	B	13.7	C	19.2	D	25.2
Project Approach/Glenrose Road	–[3]	–[3]	–[3]	–[3]	B	13.6	B	14.8
Project Approach/29th Avenue	–[3]	–[3]	–[3]	–[3]	B	10.1	B	10.4

1. Level-of-service grade
2. Control delay for worse approach or approach movement
3. Not reviewed under existing condition

Spokane County maintains standard for stop-controlled intersections within the LOS A (free flow) to LOS F (congested) mobility range. Improvements may be warranted for intersections

and approaches that do not meet this LOS standard.

As shown, all study intersections and project approach are forecast to function in allowable LOS ranges as they operate at LOS E or better. LOS changes are noted between future and existing condition, but these intersections actually hold up well given the conservative nature of traffic forecast developed for this study. The conclusion from the analysis is sufficient capacity exists to accommodate the growth of the Ansett project and seven other pipeline projects, including baseline growth. Summary LOS worksheets are attached.

Queue potentials were noted from Synchro analyses and summarized with this report. The study indicates 95th percentile queue potentials are forecast to reach six vehicles, up to 150-feet, with the eastbound approach of the 29th Avenue/Glenrose Road intersection during the PM peak hour. Queues of up to three vehicles, 75-feet are, are forecast in the eastbound approach to the 37th Avenue/Glenrose Road intersection during the PM peak hour.

These queues seem to be typical of stop-controlled intersections along 29th Avenue and 37th Avenue, respectively, citing intersections with Freya Road as a particular example. Queues at these intersections often achieve six or more vehicles, which is why no special accommodation or provision is warranted or recommended by this study. All remaining 95th percentile queue potentials are forecast to fall within the range of two vehicles or less on stopped approaches at study intersections or project approaches between the AM and PM peak hours.

7. Turn Lane Warrants

A review of right-turn and left-turn/deceleration lanes warrants was performed for the Glenrose Road approach to/from the development, forecast as the primary site access. The analysis was performed using the guidelines provided by the WSDOT Design Manual, which provides an adaptation of warrants from NCHRP Report 279, the Intersection Channelization Guideline (TRB, 1985). Even dated, this is still a leading methodology for geometric determinations that many State and local agencies use to guide turn lane decisions at uncontrolled intersections.

Left and right-turn lane warrants are provided by Section 1310 of the Design Manual. These are graphical warrants that use plotted volumes or percent volumes versus speed (posted plus 5-mph typical) as the measure for recommending lanes and storage distances. The applicable warrant for a left-turn lane on a two-lane roadway is provided by Exhibit 1310.7A. The warrant for a right turn lane is provided by Exhibit 1310-11.

Warrants were reviewed based on forecast approach volumes for the AM and PM peak hours of the typical weekday. A summary of this analysis is provided with **Table 4**. The plotted reports are attached to this memorandum. Guidelines were compared against a 40-mph travel speed, posted plus 5-mph. Note in context to warrants, turn lanes are provided to assure the safe departure of traffic from roadways and are not necessarily a capacity-driven measure. The warrant analysis has been attached to this memorandum for review.

Table 4. Left and Right-Turn Lane Warrants, Project Approach/Glenrose Road

Location	Left-Turn Warrant		Right-Turn Warrant		Improvement Warranted
	DHV[1]	Lefts%[2]	Approach[3]	Right[4]	
AM Peak Hour	706	1%	256	8	No left-or right-turn lane needed
PM Peak Hour	803	3%	480	27	No left-turn needed, consider right-turn taper

1. Design hour volume, total of both directions
2. Percent left-turns in comparison with DHV (Left—turn volume / Total DHV)

As shown, a left-turn deceleration would not be warranted during the AM or PM peak hours, as based on forecast year 2026 traffic volumes. A right-turn lane is not warranted either, but there is suggestion for a right-turn pocket or taper. Note volumes would fall well below plotted criteria for the 29th Avenue approach, which is why this analysis was not provided.

8. Summary and Conclusions

The Ansett property development is proposed on 35-acres situated between 29th Avenue and 37th Avenue, west of Glenrose Road in Spokane County. The project would be developed with up to 130 single family lots with access to County arterials provided by an extended approach from 29th Avenue, via Carnahan Road, and a new approach to Glenrose Road. A zone change to LDR would be needed for an eastern portion of the site. The project would be developed in phases with completion and full occupancy anticipated by year 2026.

The project is forecast to generate 1,325 weekday trips with 97 trips generated during the AM peak hour and 131 trips during the PM peak hour. About 50-percent of trips are anticipated to/from the north of 29th Avenue and 20-percent to/from the south of 37th Avenue via Glenrose Road. The remaining 30-percent of trips are anticipated to/from the west via 29th Avenue and 37th Avenue. Project trip assignments, vested development trip totals, and baseline growth rates were used to develop conservative (higher end), yet reasonable AM and PM peak hour traffic forecasts for year 2026 upon which capacities analyses were performed.

An LOS analysis confirms roads have the capacity to accommodate forecast traffic. The conclusion is based on forecast LOS falling within Spokane County tolerances; thus, improvements are not recommended on the basis of capacity need. Queues on the eastbound approaches of the 29th Avenue and 37th Avenue intersections with Glenrose Road might fall within the range of three to six vehicles during the PM peak hour, in particular. However, no improvement recommendations are provided as these queues are already typical of existing intersections located along these roadways between peak hours.

A warrant analysis indicates no full left or right turn/deceleration lanes are warranted to promote safety at the primary project approach along Glenrose Road. With that said, warrants do suggest that a right-turn taper or pocket could be provided to promote safer turning/travel conditions. This improvement is recommended by this study, with designs provided in coordination with Spokane County Engineers.

This study should sufficiently address SEPA and GMA application processes. Please contact our office if you have questions or require further information.

Prepared by William (Bill White), T-O Engineers
In Association with Christopher J. Reich, P.E., Reich Engineering, LLC

ANSETT PROPERTY RESIDENTIAL
EXPANDED TRIP GENERATION & DISTRICT

1 SITE LOCATION MAP
SPOKANE COUNTY SOUTHEAST OF SPOKANE

T-O ENGINEERS
121 W. PACIFIC AVENUE SUITE 200
SPOKANE, WA 99201
PHONE: (509) 319-2580 WWW.TO-ENGINEERS.COM
E-FILE: 200082 _ Ansett Property Expanded TG&D _ March 2020.dwg JOB: 190581

ANSETT PROPERTY RESIDENTIAL
EXPANDED TRIP GENERATION & DISTRIBUTION

2 CONCEPT SITE PLAN

SOURCE: STORHAUG ENGINEERING

LOPMENT PLAN

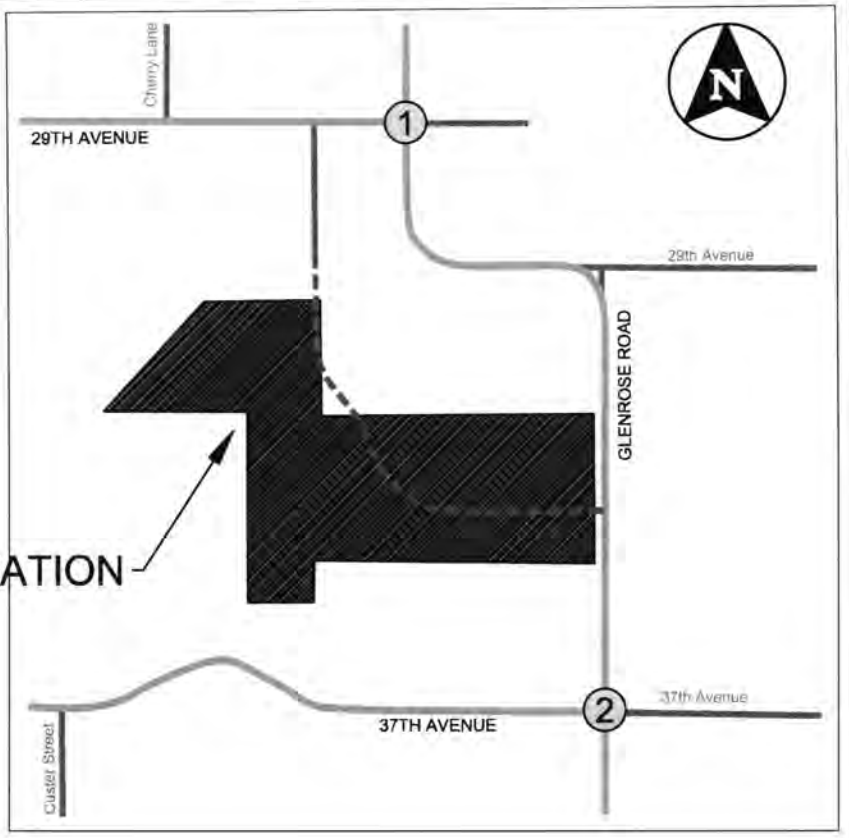
SCALE: 1"=100'-0"

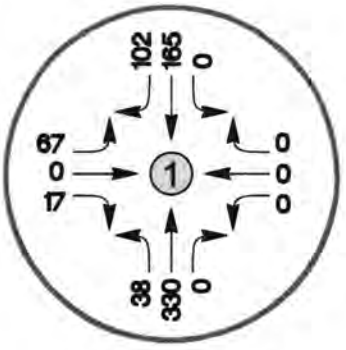
T-O ENGINEERS
121 W. PACIFIC AVENUE SUITE 200
SPOKANE, WA 99201
PHONE: (509) 319-2580 WWW.TO-ENGINEERS.COM

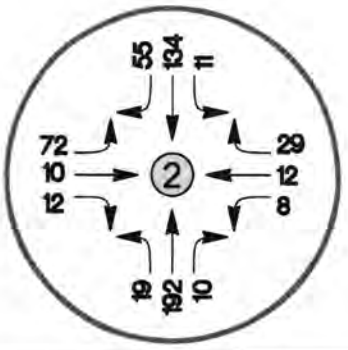
E-FILE: 200082_Ansett Property Expanded TG&D _ March 2020.dwg JOB: 190581

INTERSTATE
MINOR ARTERIAL
COLLECTOR STREET
LOCAL STREET

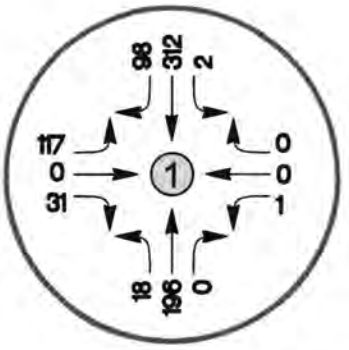
INTERSECTION
TURNING MOVEMENTS

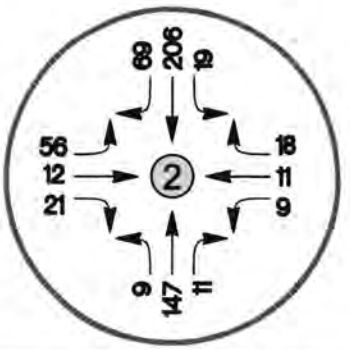






AM PEAK HOUR
PM PEAK HOUR





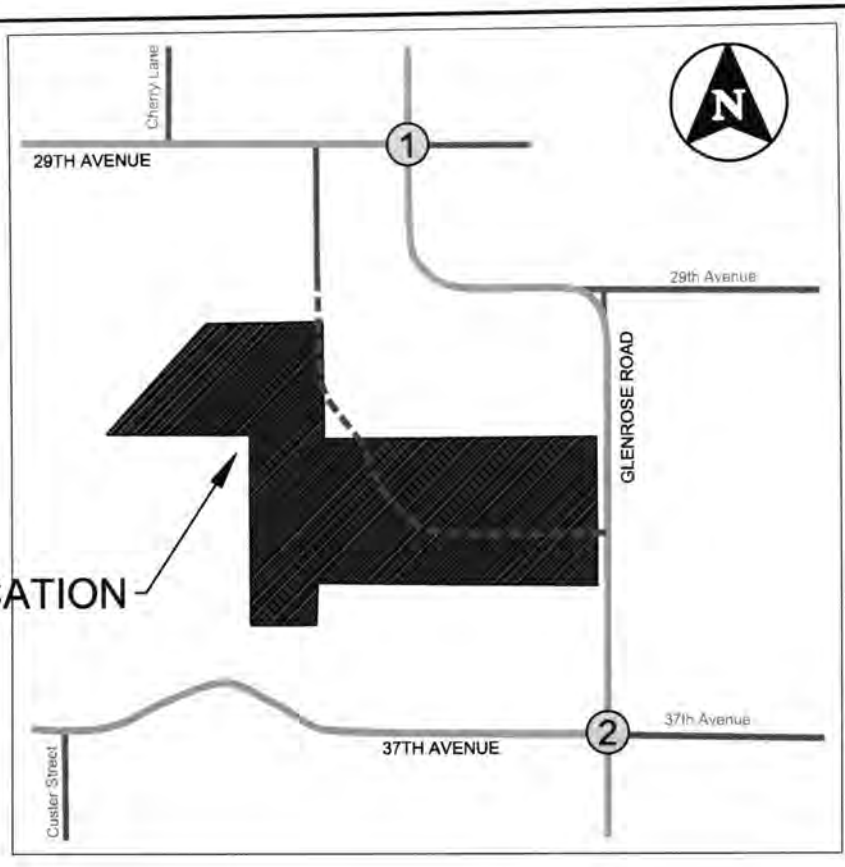
ANSETT PROPERTY RESIDENTIAL
EXPANDED TRIP GENERATION & DISTRIBUTION

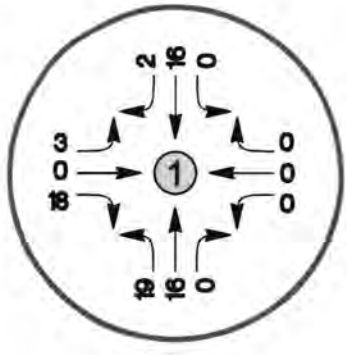
3 YEAR 2020 EXISTING VOLUMES
AM AND PM PEAK HOURS

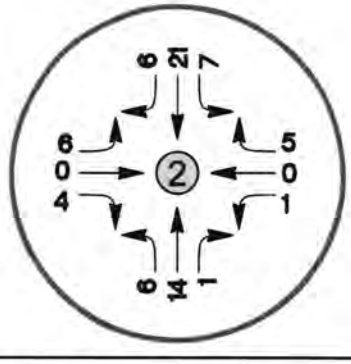
T-O ENGINEERS
121 W. PACIFIC AVENUE SUITE 200
SPOKANE, WA 99201
PHONE: (509) 319-2580 WWW.TO-ENGINEERS.COM
E-FILE: 200082 _ Ansett Property Expanded TG&D _ March 2020.dwg JOB: 200101

INTERSTATE
MINOR ARTERIAL
COLLECTOR STREET
LOCAL STREET

INTERSECTION
TURNING MOVEMENTS

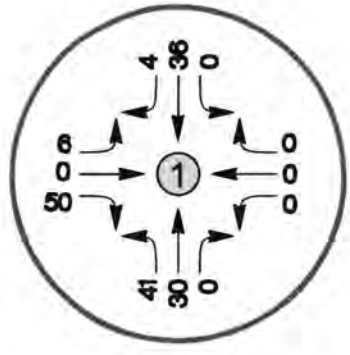


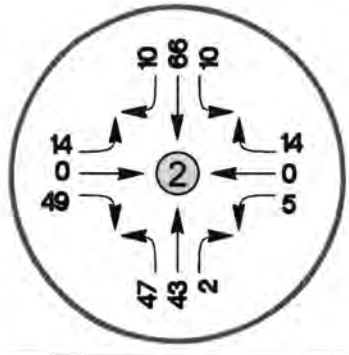




AM PEAK HOUR

PM PEAK HOUR





ANSETT PROPERTY RESIDENTIAL
EXPANDED TRIP GENERATION & DISTRIBUTION

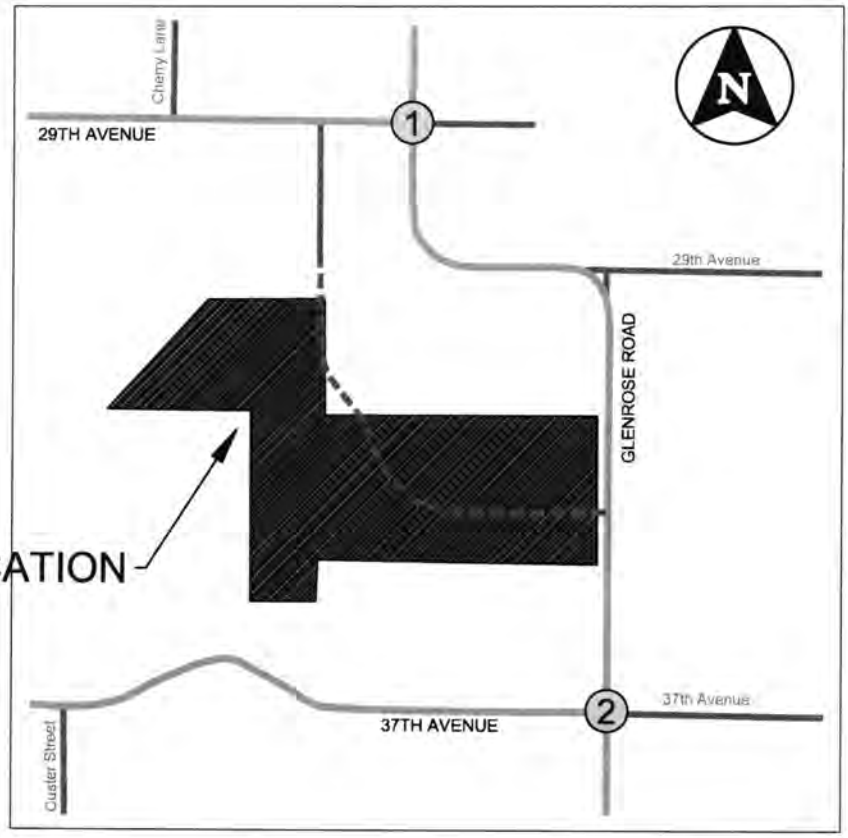
4 PIPELINE PROJECT TRIPS
AM AND PM PEAK HOURS

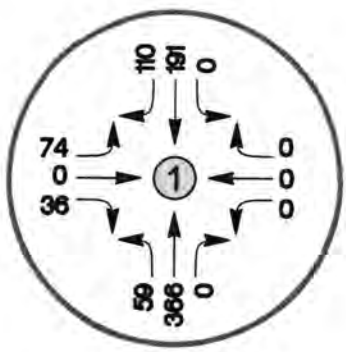
T-O ENGINEERS
121 W. PACIFIC AVENUE SUITE 200
SPOKANE, WA 99201
PHONE: (509) 319-2580 WWW.TO-ENGINEERS.COM

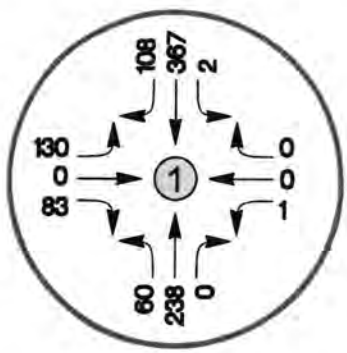
E-FILE: 200082_Ansett Property Expanded TG&D _ March 2020.dwg JOB: 200101

INTERSTATE
MINOR ARTERIAL
COLLECTOR STREET
LOCAL STREET

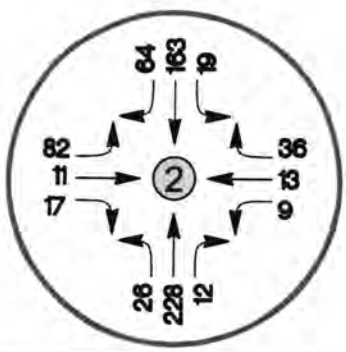
INTERSECTION
TURNING MOVEMENTS

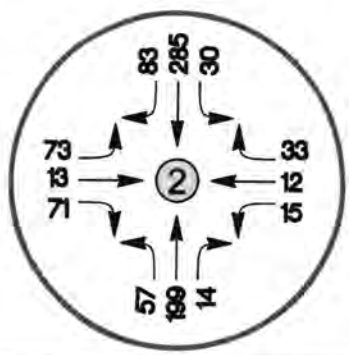






AM PEAK HOUR
PM PEAK HOUR





ANSETT PROPERTY RESIDENTIAL
EXPANDED TRIP GENERATION & DISTRIBUTION

5 YEAR 2026 WITHOUT-PROJECT
AM AND PM PEAK HOURS

T-O ENGINEERS
121 W. PACIFIC AVENUE SUITE 200
SPOKANE, WA 99201
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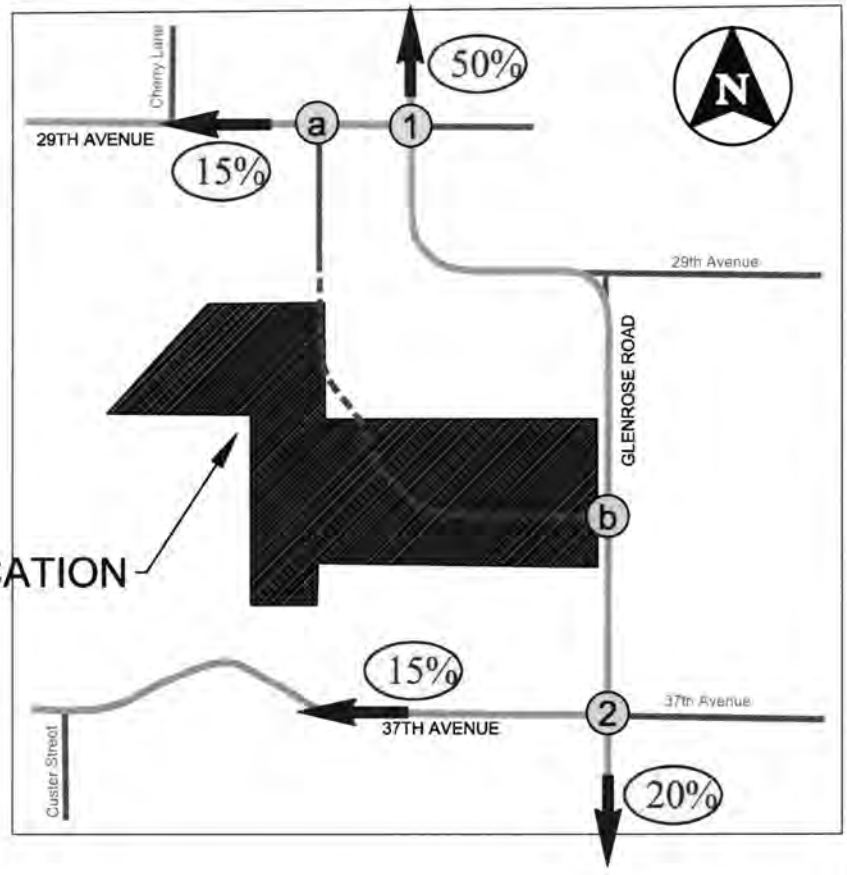
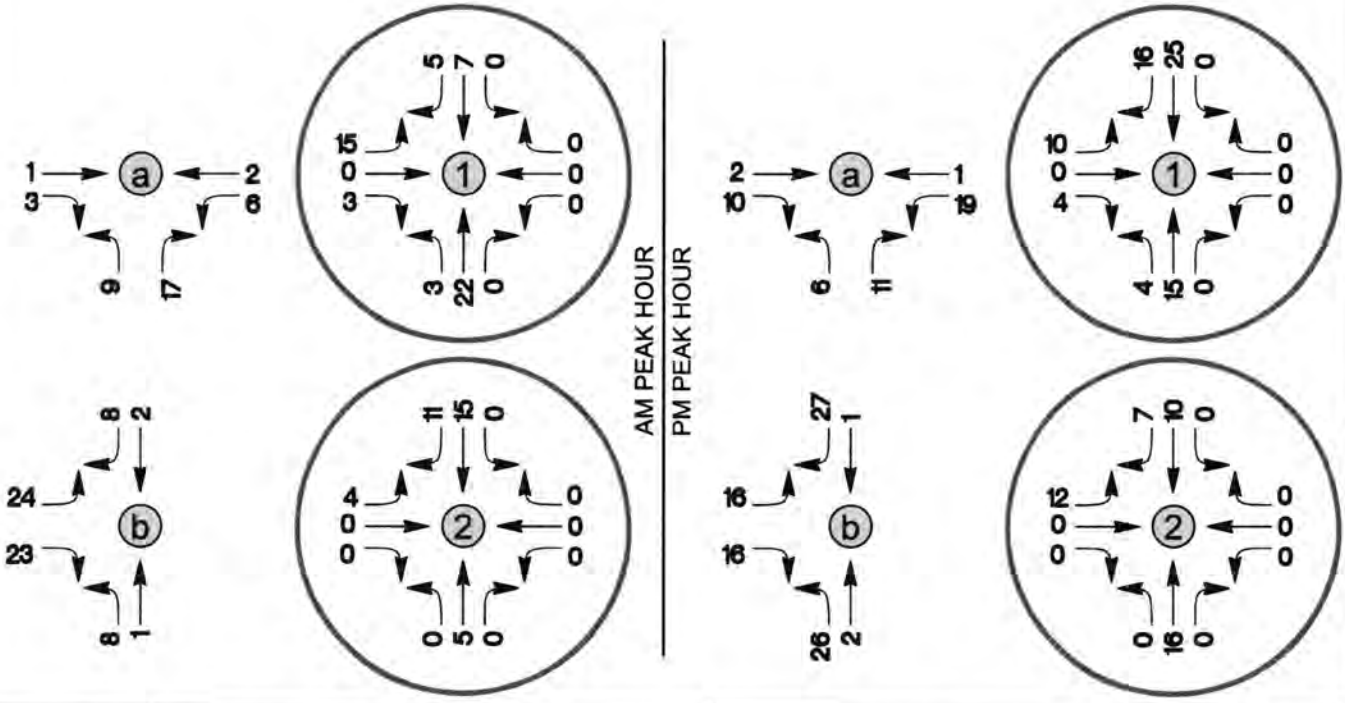
INTERSTATE
MINOR ARTERIAL
COLLECTOR STREET
LOCAL STREET

INTERSECTION
TURNING MOVEMENTS





ANSETT PROPERTY RESIDENTIAL
EXPANDED TRIP GENERATION & DISTRIBUTION

6 PROJECT TRIP ASSIGNMENTS
AM AND PM PEAK HOURS

T-O ENGINEERS
121 W. PACIFIC AVENUE SUITE 200
SPOKANE, WA 99201
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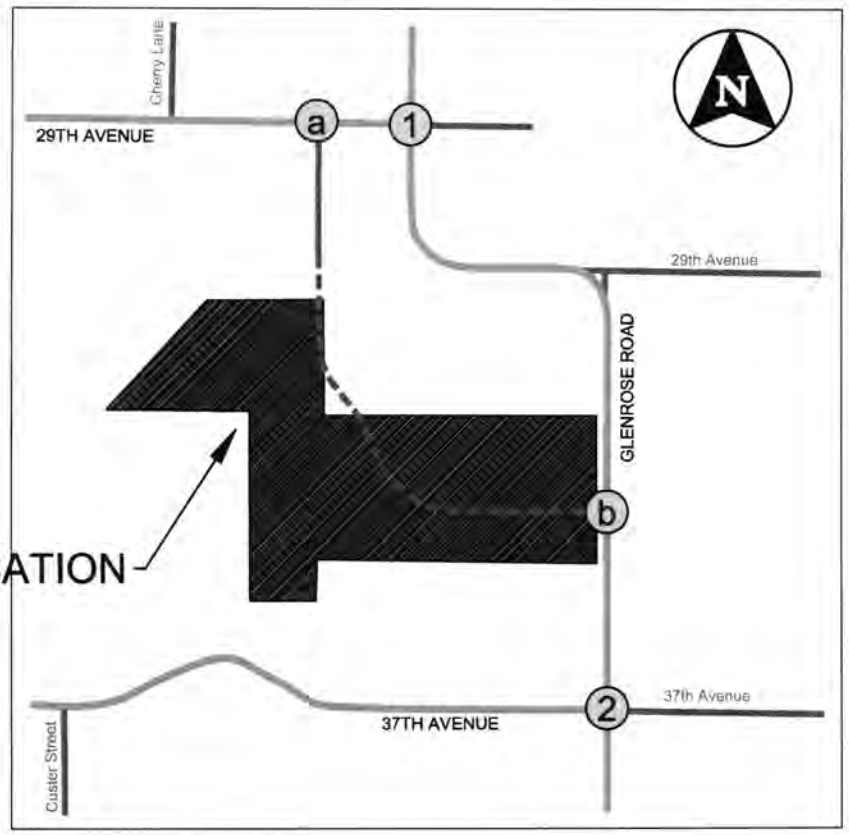
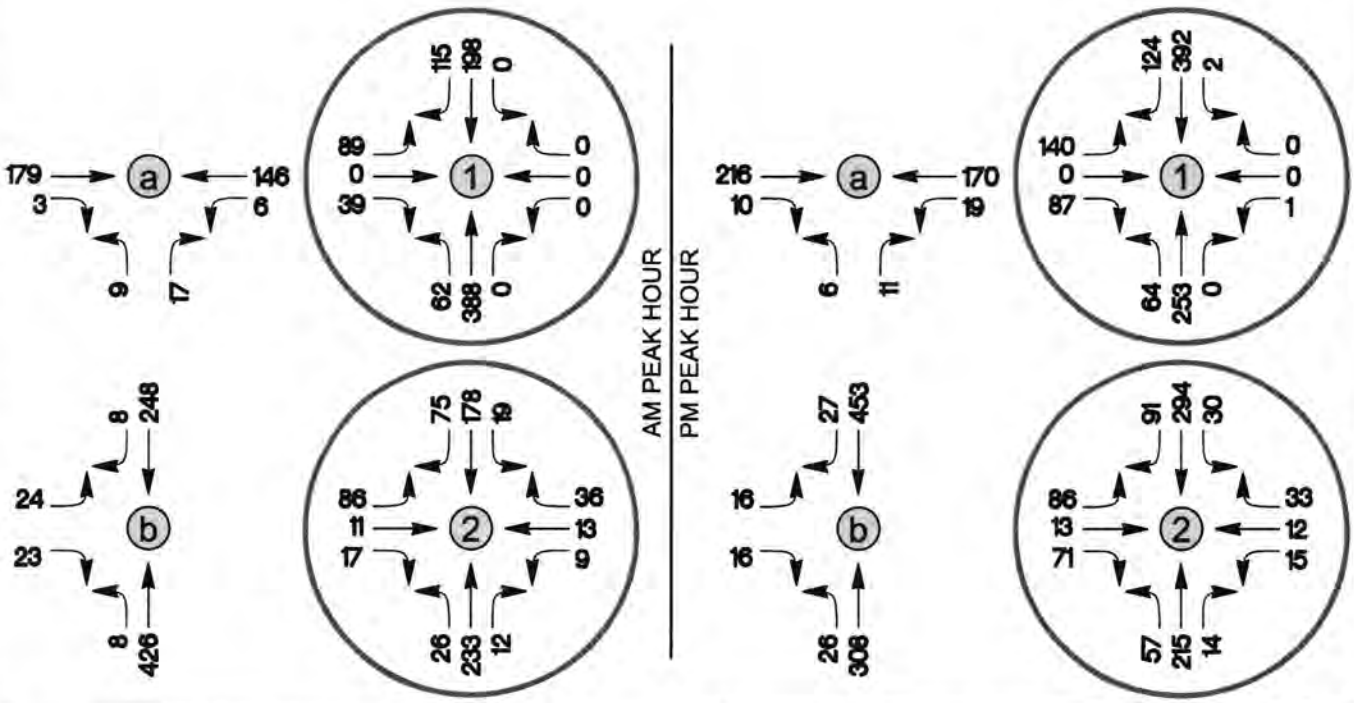
INTERSTATE
MINOR ARTERIAL
COLLECTOR STREET
LOCAL STREET

INTERSECTION
TURNING MOVEMENTS





ANSETT PROPERTY RESIDENTIAL
EXPANDED TRIP GENERATION & DISTRIBUTION

7 YEAR 2026 WITH-PROJECT
AM AND PM PEAK HOURS

T-O ENGINEERS
121 W. PACIFIC AVENUE SUITE 200
SPOKANE, WA 99201
PHONE: (509) 319-2580 WWW.TO-ENGINEERS.COM
E-FILE: 200082 _ Ansett Property Expanded TG&D _ March 2020.dwg JOB: 200101

Intersection	
Int Delay, s/veh	2.5

Movement	EBL	EBT	EBR	WBL	WBT	WBR	NBL	NBT	NBR	SBL	SBT	SBR
Lane Configurations		↕			↕			↕			↕	
Traffic Vol, veh/h	67	0	17	0	0	0	38	330	0	0	165	102
Future Vol, veh/h	67	0	17	0	0	0	38	330	0	0	165	102
Conflicting Peds, #/hr	0	0	0	0	0	0	0	0	0	0	0	0
Sign Control	Stop	Stop	Stop	Stop	Stop	Stop	Free	Free	Free	Free	Free	Free
RT Channelized	-	-	None	-	-	None	-	-	None	-	-	None
Storage Length	-	-	-	-	-	-	-	-	-	-	-	-
Veh in Median Storage, #	-	0	-	-	0	-	-	0	-	-	0	-
Grade, %	-	0	-	-	0	-	-	0	-	-	0	-
Peak Hour Factor	87	87	87	87	87	87	87	87	87	87	87	87
Heavy Vehicles, %	2	2	2	2	2	2	2	2	2	2	2	2
Mvmt Flow	77	0	20	0	0	0	44	379	0	0	190	117

Major/Minor	Minor2			Minor1			Major1			Major2		
Conflicting Flow All	716	716	249	726	774	379	307	0	0	379	0	0
Stage 1	249	249	-	467	467	-	-	-	-	-	-	-
Stage 2	467	467	-	259	307	-	-	-	-	-	-	-
Critical Hdwy	7.12	6.52	6.22	7.12	6.52	6.22	4.12	-	-	4.12	-	-
Critical Hdwy Stg 1	6.12	5.52	-	6.12	5.52	-	-	-	-	-	-	-
Critical Hdwy Stg 2	6.12	5.52	-	6.12	5.52	-	-	-	-	-	-	-
Follow-up Hdwy	3.518	4.018	3.318	3.518	4.018	3.318	2.218	-	-	2.218	-	-
Pot Cap-1 Maneuver	345	356	790	340	329	668	1254	-	-	1179	-	-
Stage 1	755	701	-	576	562	-	-	-	-	-	-	-
Stage 2	576	562	-	746	661	-	-	-	-	-	-	-
Platoon blocked, %								-	-		-	-
Mov Cap-1 Maneuver	333	340	790	320	315	668	1254	-	-	1179	-	-
Mov Cap-2 Maneuver	333	340	-	320	315	-	-	-	-	-	-	-
Stage 1	722	701	-	551	537	-	-	-	-	-	-	-
Stage 2	551	537	-	728	661	-	-	-	-	-	-	-

Approach	EB	WB	NB	SB
HCM Control Delay, s	17.8	0	0.8	0
HCM LOS	C	A		

Minor Lane/Major Mvmt	NBL	NBT	NBR	EBLn1	WBLn1	SBL	SBT	SBR
Capacity (veh/h)	1254	-	-	377	-	1179	-	-
HCM Lane V/C Ratio	0.035	-	-	0.256	-	-	-	-
HCM Control Delay (s)	8	0	-	17.8	0	0	-	-
HCM Lane LOS	A	A	-	C	A	A	-	-
HCM 95th %tile Q(veh)	0.1	-	-	1	-	0	-	-

Intersection	
Int Delay, s/veh	3.7

Movement	EBL	EBT	EBR	WBL	WBT	WBR	NBL	NBT	NBR	SBL	SBT	SBR
Lane Configurations		↕			↕			↕			↕	
Traffic Vol, veh/h	117	0	31	1	0	0	18	196	0	2	312	98
Future Vol, veh/h	117	0	31	1	0	0	18	196	0	2	312	98
Conflicting Peds, #/hr	0	0	0	0	0	0	0	0	0	0	0	0
Sign Control	Stop	Stop	Stop	Stop	Stop	Stop	Free	Free	Free	Free	Free	Free
RT Channelized	-	-	None	-	-	None	-	-	None	-	-	None
Storage Length	-	-	-	-	-	-	-	-	-	-	-	-
Veh in Median Storage, #	-	0	-	-	0	-	-	0	-	-	0	-
Grade, %	-	0	-	-	0	-	-	0	-	-	0	-
Peak Hour Factor	95	95	95	95	95	95	95	95	95	95	95	95
Heavy Vehicles, %	2	2	2	2	2	2	2	2	2	2	2	2
Mvmt Flow	123	0	33	1	0	0	19	206	0	2	328	103

Major/Minor	Minor2			Minor1			Major1			Major2		
Conflicting Flow All	628	628	380	644	679	206	431	0	0	206	0	0
Stage 1	384	384	-	244	244	-	-	-	-	-	-	-
Stage 2	244	244	-	400	435	-	-	-	-	-	-	-
Critical Hdwy	7.12	6.52	6.22	7.12	6.52	6.22	4.12	-	-	4.12	-	-
Critical Hdwy Stg 1	6.12	5.52	-	6.12	5.52	-	-	-	-	-	-	-
Critical Hdwy Stg 2	6.12	5.52	-	6.12	5.52	-	-	-	-	-	-	-
Follow-up Hdwy	3.518	4.018	3.318	3.518	4.018	3.318	2.218	-	-	2.218	-	-
Pot Cap-1 Maneuver	395	400	667	386	374	835	1129	-	-	1365	-	-
Stage 1	639	611	-	760	704	-	-	-	-	-	-	-
Stage 2	760	704	-	626	580	-	-	-	-	-	-	-
Platoon blocked, %								-	-		-	-
Mov Cap-1 Maneuver	389	392	667	361	366	835	1129	-	-	1365	-	-
Mov Cap-2 Maneuver	389	392	-	361	366	-	-	-	-	-	-	-
Stage 1	627	610	-	746	691	-	-	-	-	-	-	-
Stage 2	746	691	-	594	579	-	-	-	-	-	-	-

Approach	EB	WB	NB	SB
HCM Control Delay, s	18.2	15	0.7	0
HCM LOS	C	C		

Minor Lane/Major Mvmt	NBL	NBT	NBR	EBLn1	WBLn1	SBL	SBT	SBR
Capacity (veh/h)	1129	-	-	426	361	1365	-	-
HCM Lane V/C Ratio	0.017	-	-	0.366	0.003	0.002	-	-
HCM Control Delay (s)	8.2	0	-	18.2	15	7.6	0	-
HCM Lane LOS	A	A	-	C	C	A	A	-
HCM 95th %tile Q(veh)	0.1	-	-	1.6	0	0	-	-

Intersection	
Int Delay, s/veh	3.2

Movement	EBL	EBT	EBR	WBL	WBT	WBR	NBL	NBT	NBR	SBL	SBT	SBR
Lane Configurations		↕			↕			↕			↕	
Traffic Vol, veh/h	56	12	21	9	11	18	9	147	11	19	206	69
Future Vol, veh/h	56	12	21	9	11	18	9	147	11	19	206	69
Conflicting Peds, #/hr	0	0	0	0	0	0	0	0	0	0	0	0
Sign Control	Stop	Stop	Stop	Stop	Stop	Stop	Free	Free	Free	Free	Free	Free
RT Channelized	-	-	None	-	-	None	-	-	None	-	-	None
Storage Length	-	-	-	-	-	-	-	-	-	-	-	-
Veh in Median Storage, #	-	0	-	-	0	-	-	0	-	-	0	-
Grade, %	-	0	-	-	0	-	-	0	-	-	0	-
Peak Hour Factor	94	94	94	94	94	94	94	94	94	94	94	94
Heavy Vehicles, %	2	2	2	2	2	2	2	2	2	2	2	2
Mvmt Flow	60	13	22	10	12	19	10	156	12	20	219	73

Major/Minor	Minor2			Minor1			Major1			Major2		
Conflicting Flow All	494	484	256	495	514	162	292	0	0	168	0	0
Stage 1	296	296	-	182	182	-	-	-	-	-	-	-
Stage 2	198	188	-	313	332	-	-	-	-	-	-	-
Critical Hdwy	7.12	6.52	6.22	7.12	6.52	6.22	4.12	-	-	4.12	-	-
Critical Hdwy Stg 1	6.12	5.52	-	6.12	5.52	-	-	-	-	-	-	-
Critical Hdwy Stg 2	6.12	5.52	-	6.12	5.52	-	-	-	-	-	-	-
Follow-up Hdwy	3.518	4.018	3.318	3.518	4.018	3.318	2.218	-	-	2.218	-	-
Pot Cap-1 Maneuver	486	483	783	485	464	883	1270	-	-	1410	-	-
Stage 1	712	668	-	820	749	-	-	-	-	-	-	-
Stage 2	804	745	-	698	644	-	-	-	-	-	-	-
Platoon blocked, %								-	-		-	-
Mov Cap-1 Maneuver	457	470	783	453	452	883	1270	-	-	1410	-	-
Mov Cap-2 Maneuver	457	470	-	453	452	-	-	-	-	-	-	-
Stage 1	706	657	-	813	742	-	-	-	-	-	-	-
Stage 2	767	738	-	654	633	-	-	-	-	-	-	-

Approach	EB	WB	NB	SB
HCM Control Delay, s	13.7	11.6	0.4	0.5
HCM LOS	B	B		

Minor Lane/Major Mvmt	NBL	NBT	NBR	EBLn1	WBLn1	SBL	SBT	SBR
Capacity (veh/h)	1270	-	-	509	588	1410	-	-
HCM Lane V/C Ratio	0.008	-	-	0.186	0.069	0.014	-	-
HCM Control Delay (s)	7.9	0	-	13.7	11.6	7.6	0	-
HCM Lane LOS	A	A	-	B	B	A	A	-
HCM 95th %tile Q(veh)	0	-	-	0.7	0.2	0	-	-

Intersection	
Int Delay, s/veh	4.3

Movement	EBL	EBT	EBR	WBL	WBT	WBR	NBL	NBT	NBR	SBL	SBT	SBR
Lane Configurations		↕			↕			↕			↕	
Traffic Vol, veh/h	89	0	39	0	0	0	62	388	0	0	198	115
Future Vol, veh/h	89	0	39	0	0	0	62	388	0	0	198	115
Conflicting Peds, #/hr	0	0	0	0	0	0	0	0	0	0	0	0
Sign Control	Stop	Stop	Stop	Stop	Stop	Stop	Free	Free	Free	Free	Free	Free
RT Channelized	-	-	None	-	-	None	-	-	None	-	-	None
Storage Length	-	-	-	-	-	-	-	-	-	-	-	-
Veh in Median Storage,#	-	0	-	-	0	-	-	0	-	-	0	-
Grade, %	-	0	-	-	0	-	-	0	-	-	0	-
Peak Hour Factor	87	87	87	87	87	87	87	87	87	87	87	87
Heavy Vehicles, %	2	2	2	2	2	2	2	2	2	2	2	2
Mvmt Flow	102	0	45	0	0	0	71	446	0	0	228	132

Major/Minor	Minor2			Minor1			Major1			Major2		
Conflicting Flow All	882	882	294	905	948	446	360	0	0	446	0	0
Stage 1	294	294	-	588	588	-	-	-	-	-	-	-
Stage 2	588	588	-	317	360	-	-	-	-	-	-	-
Critical Hdwy	7.12	6.52	6.22	7.12	6.52	6.22	4.12	-	-	4.12	-	-
Critical Hdwy Stg 1	6.12	5.52	-	6.12	5.52	-	-	-	-	-	-	-
Critical Hdwy Stg 2	6.12	5.52	-	6.12	5.52	-	-	-	-	-	-	-
Follow-up Hdwy	3.518	4.018	3.318	3.518	4.018	3.318	2.218	-	-	2.218	-	-
Pot Cap-1 Maneuver	267	285	745	257	261	612	1199	-	-	1114	-	-
Stage 1	714	670	-	495	496	-	-	-	-	-	-	-
Stage 2	495	496	-	694	626	-	-	-	-	-	-	-
Platoon blocked, %								-	-		-	-
Mov Cap-1 Maneuver	251	262	745	227	240	612	1199	-	-	1114	-	-
Mov Cap-2 Maneuver	251	262	-	227	240	-	-	-	-	-	-	-
Stage 1	658	670	-	456	457	-	-	-	-	-	-	-
Stage 2	456	457	-	652	626	-	-	-	-	-	-	-

Approach	EB	WB	NB	SB
HCM Control Delay, s	26.1	0	1.1	0
HCM LOS	D	A		

Minor Lane/Major Mvmt	NBL	NBT	NBR	EBLn1	WBLn1	SBL	SBT	SBR
Capacity (veh/h)	1199	-	-	315	-	1114	-	-
HCM Lane V/C Ratio	0.059	-	-	0.467	-	-	-	-
HCM Control Delay (s)	8.2	0	-	26.1	0	0	-	-
HCM Lane LOS	A	A	-	D	A	A	-	-
HCM 95th %tile Q(veh)	0.2	-	-	2.4	-	0	-	-

Intersection	
Int Delay, s/veh	4.6

Movement	EBL	EBT	EBR	WBL	WBT	WBR	NBL	NBT	NBR	SBL	SBT	SBR
Lane Configurations		↕			↕			↕			↕	
Traffic Vol, veh/h	86	11	17	9	13	36	26	233	12	19	178	75
Future Vol, veh/h	86	11	17	9	13	36	26	233	12	19	178	75
Conflicting Peds, #/hr	0	0	0	0	0	0	0	0	0	0	0	0
Sign Control	Stop	Stop	Stop	Stop	Stop	Stop	Free	Free	Free	Free	Free	Free
RT Channelized	-	-	None	-	-	None	-	-	None	-	-	None
Storage Length	-	-	-	-	-	-	-	-	-	-	-	-
Veh in Median Storage,#	-	0	-	-	0	-	-	0	-	-	0	-
Grade, %	-	0	-	-	0	-	-	0	-	-	0	-
Peak Hour Factor	89	89	89	89	89	89	89	89	89	89	89	89
Heavy Vehicles, %	2	2	2	2	2	2	2	2	2	2	2	2
Mvmt Flow	97	12	19	10	15	40	29	262	13	21	200	84

Major/Minor	Minor2			Minor1			Major1			Major2		
Conflicting Flow All	638	617	242	627	653	269	284	0	0	275	0	0
Stage 1	284	284	-	327	327	-	-	-	-	-	-	-
Stage 2	354	333	-	300	326	-	-	-	-	-	-	-
Critical Hdwy	7.12	6.52	6.22	7.12	6.52	6.22	4.12	-	-	4.12	-	-
Critical Hdwy Stg 1	6.12	5.52	-	6.12	5.52	-	-	-	-	-	-	-
Critical Hdwy Stg 2	6.12	5.52	-	6.12	5.52	-	-	-	-	-	-	-
Follow-up Hdwy	3.518	4.018	3.318	3.518	4.018	3.318	2.218	-	-	2.218	-	-
Pot Cap-1 Maneuver	389	405	797	396	387	770	1278	-	-	1288	-	-
Stage 1	723	676	-	686	648	-	-	-	-	-	-	-
Stage 2	663	644	-	709	648	-	-	-	-	-	-	-
Platoon blocked, %								-	-		-	-
Mov Cap-1 Maneuver	345	386	797	364	369	770	1278	-	-	1288	-	-
Mov Cap-2 Maneuver	345	386	-	364	369	-	-	-	-	-	-	-
Stage 1	703	662	-	667	631	-	-	-	-	-	-	-
Stage 2	597	627	-	666	635	-	-	-	-	-	-	-

Approach	EB	WB	NB	SB
HCM Control Delay, s	19.2	12.5	0.8	0.5
HCM LOS	C	B		

Minor Lane/Major Mvmt	NBL	NBT	NBR	EBLn1	WBLn1	SBL	SBT	SBR
Capacity (veh/h)	1278	-	-	381	544	1288	-	-
HCM Lane V/C Ratio	0.023	-	-	0.336	0.12	0.017	-	-
HCM Control Delay (s)	7.9	0	-	19.2	12.5	7.8	0	-
HCM Lane LOS	A	A	-	C	B	A	A	-
HCM 95th %tile Q(veh)	0.1	-	-	1.5	0.4	0.1	-	-

Intersection	
Int Delay, s/veh	0.9

Movement	EBL	EBR	NBL	NBT	SBT	SBR
Lane Configurations						
Traffic Vol, veh/h	24	23	8	426	248	8
Future Vol, veh/h	24	23	8	426	248	8
Conflicting Peds, #/hr	0	0	0	0	0	0
Sign Control	Stop	Stop	Free	Free	Free	Free
RT Channelized		None		None		None
Storage Length	0	-	-	-	-	-
Veh in Median Storage, #		-	-	0	0	-
Grade, %	0	-	-	0	0	-
Peak Hour Factor	87	87	87	87	87	87
Heavy Vehicles, %	2	2	2	2	2	2
Mvmt Flow	28	26	9	490	285	9

Major/Minor	Minor2		Major1		Major2	
Conflicting Flow All	798	290	294	0	-	0
Stage 1	290	-	-	-	-	-
Stage 2	508	-	-	-	-	-
Critical Hdwy	6.42	6.22	4.12	-	-	-
Critical Hdwy Stg 1	5.42	-	-	-	-	-
Critical Hdwy Stg 2	5.42	-	-	-	-	-
Follow-up Hdwy	3.518	3.318	2.218	-	-	-
Pot Cap-1 Maneuver	355	749	1268	-	-	-
Stage 1	759	-	-	-	-	-
Stage 2	604	-	-	-	-	-
Platoon blocked, %				-	-	-
Mov Cap-1 Maneuver	351	749	1268	-	-	-
Mov Cap-2 Maneuver	351	-	-	-	-	-
Stage 1	751	-	-	-	-	-
Stage 2	604	-	-	-	-	-

Approach	EB	NB	SB
HCM Control Delay, s	13.6	0.1	0
HCM LOS	B		

Minor Lane/Major Mvmt	NBL	NBT	EBLn1	SBT	SBR
Capacity (veh/h)	1268	-	474	-	-
HCM Lane V/C Ratio	0.007	-	0.114	-	-
HCM Control Delay (s)	7.9	0	13.6	-	-
HCM Lane LOS	A	A	B	-	-
HCM 95th %tile Q(veh)	0	-	0.4	-	-

Intersection	
Int Delay, s/veh	0.9

Movement	EBT	EBR	WBL	WBT	NBL	NBR
Lane Configurations						
Traffic Vol, veh/h	179	3	6	146	9	17
Future Vol, veh/h	179	3	6	146	9	17
Conflicting Peds, #/hr	0	0	0	0	0	0
Sign Control	Free	Free	Free	Free	Stop	Stop
RT Channelized		None		None		None
Storage Length	-	-	-	-	0	-
Veh in Median Storage, #	0	-	-	0	0	-
Grade, %	0	-	-	0	0	-
Peak Hour Factor	87	87	87	87	87	87
Heavy Vehicles, %	2	2	2	2	2	2
Mvmt Flow	206	3	7	168	10	20

Major/Minor	Major1		Major2		Minor1	
Conflicting Flow All	0	0	209	0	390	208
Stage 1	-	-	-	-	208	-
Stage 2	-	-	-	-	182	-
Critical Hdwy	-	-	4.12	-	6.42	6.22
Critical Hdwy Stg 1	-	-	-	-	5.42	-
Critical Hdwy Stg 2	-	-	-	-	5.42	-
Follow-up Hdwy	-	-	2.218	-	3.518	3.318
Pot Cap-1 Maneuver	-	-	1362	-	614	832
Stage 1	-	-	-	-	827	-
Stage 2	-	-	-	-	849	-
Platoon blocked, %	-	-		-		
Mov Cap-1 Maneuver	-	-	1362	-	610	832
Mov Cap-2 Maneuver	-	-	-	-	610	-
Stage 1	-	-	-	-	827	-
Stage 2	-	-	-	-	844	-

Approach	EB	WB	NB
HCM Control Delay, s	0	0.3	10.1
HCM LOS			B

Minor Lane/Major Mvmt	NBLn1	EBT	EBR	WBL	WBT
Capacity (veh/h)	739	-	-	1362	-
HCM Lane V/C Ratio	0.04	-	-	0.005	-
HCM Control Delay (s)	10.1	-	-	7.7	0
HCM Lane LOS	B	-	-	A	A
HCM 95th %tile Q(veh)	0.1	-	-	0	-

Intersection	
Int Delay, s/veh	3.8

Movement	EBL	EBT	EBR	WBL	WBT	WBR	NBL	NBT	NBR	SBL	SBT	SBR
Lane Configurations		↕			↕			↕			↕	
Traffic Vol, veh/h	72	10	12	8	12	29	19	192	10	11	134	55
Future Vol, veh/h	72	10	12	8	12	29	19	192	10	11	134	55
Conflicting Peds, #/hr	0	0	0	0	0	0	0	0	0	0	0	0
Sign Control	Stop	Stop	Stop	Stop	Stop	Stop	Free	Free	Free	Free	Free	Free
RT Channelized	-	-	None	-	-	None	-	-	None	-	-	None
Storage Length	-	-	-	-	-	-	-	-	-	-	-	-
Veh in Median Storage,#	-	0	-	-	0	-	-	0	-	-	0	-
Grade, %	-	0	-	-	0	-	-	0	-	-	0	-
Peak Hour Factor	89	89	89	89	89	89	89	89	89	89	89	89
Heavy Vehicles, %	2	2	2	2	2	2	2	2	2	2	2	2
Mvmt Flow	81	11	13	9	13	33	21	216	11	12	151	62

Major/Minor	Minor2			Minor1			Major1			Major2		
Conflicting Flow All	493	475	182	482	501	222	213	0	0	227	0	0
Stage 1	206	206	-	264	264	-	-	-	-	-	-	-
Stage 2	287	269	-	218	237	-	-	-	-	-	-	-
Critical Hdwy	7.12	6.52	6.22	7.12	6.52	6.22	4.12	-	-	4.12	-	-
Critical Hdwy Stg 1	6.12	5.52	-	6.12	5.52	-	-	-	-	-	-	-
Critical Hdwy Stg 2	6.12	5.52	-	6.12	5.52	-	-	-	-	-	-	-
Follow-up Hdwy	3.518	4.018	3.318	3.518	4.018	3.318	2.218	-	-	2.218	-	-
Pot Cap-1 Maneuver	486	488	861	495	472	818	1357	-	-	1341	-	-
Stage 1	796	731	-	741	690	-	-	-	-	-	-	-
Stage 2	720	687	-	784	709	-	-	-	-	-	-	-
Platoon blocked, %								-	-		-	-
Mov Cap-1 Maneuver	447	474	861	468	459	818	1357	-	-	1341	-	-
Mov Cap-2 Maneuver	447	474	-	468	459	-	-	-	-	-	-	-
Stage 1	782	724	-	728	678	-	-	-	-	-	-	-
Stage 2	665	675	-	752	702	-	-	-	-	-	-	-

Approach	EB	WB	NB	SB
HCM Control Delay, s	14.6	11.3	0.7	0.4
HCM LOS	B	B		

Minor Lane/Major Mvmt	NBL	NBT	NBR	EBLn1	WBLn1	SBL	SBT	SBR
Capacity (veh/h)	1357	-	-	479	623	1341	-	-
HCM Lane V/C Ratio	0.016	-	-	0.22	0.088	0.009	-	-
HCM Control Delay (s)	7.7	0	-	14.6	11.3	7.7	0	-
HCM Lane LOS	A	A	-	B	B	A	A	-
HCM 95th %tile Q(veh)	0	-	-	0.8	0.3	0	-	-

Intersection	
Int Delay, s/veh	9.7

Movement	EBL	EBT	EBR	WBL	WBT	WBR	NBL	NBT	NBR	SBL	SBT	SBR
Lane Configurations		↕			↕			↕			↕	
Traffic Vol, veh/h	140	0	87	1	0	0	64	253	0	2	392	124
Future Vol, veh/h	140	0	87	1	0	0	64	253	0	2	392	124
Conflicting Peds, #/hr	0	0	0	0	0	0	0	0	0	0	0	0
Sign Control	Stop	Stop	Stop	Stop	Stop	Stop	Free	Free	Free	Free	Free	Free
RT Channelized	-	-	None	-	-	None	-	-	None	-	-	None
Storage Length	-	-	-	-	-	-	-	-	-	-	-	-
Veh in Median Storage, #	-	0	-	-	0	-	-	0	-	-	0	-
Grade, %	-	0	-	-	0	-	-	0	-	-	0	-
Peak Hour Factor	95	95	95	95	95	95	95	95	95	95	95	95
Heavy Vehicles, %	2	2	2	2	2	2	2	2	2	2	2	2
Mvmt Flow	147	0	92	1	0	0	67	266	0	2	413	131

Major/Minor	Minor2			Minor1			Major1			Major2		
Conflicting Flow All	883	883	479	929	948	266	544	0	0	266	0	0
Stage 1	483	483	-	400	400	-	-	-	-	-	-	-
Stage 2	400	400	-	529	548	-	-	-	-	-	-	-
Critical Hdwy	7.12	6.52	6.22	7.12	6.52	6.22	4.12	-	-	4.12	-	-
Critical Hdwy Stg 1	6.12	5.52	-	6.12	5.52	-	-	-	-	-	-	-
Critical Hdwy Stg 2	6.12	5.52	-	6.12	5.52	-	-	-	-	-	-	-
Follow-up Hdwy	3.518	4.018	3.318	3.518	4.018	3.318	2.218	-	-	2.218	-	-
Pot Cap-1 Maneuver	266	285	587	248	261	773	1025	-	-	1298	-	-
Stage 1	565	553	-	626	602	-	-	-	-	-	-	-
Stage 2	626	602	-	533	517	-	-	-	-	-	-	-
Platoon blocked, %								-	-		-	-
Mov Cap-1 Maneuver	250	262	587	197	240	773	1025	-	-	1298	-	-
Mov Cap-2 Maneuver	250	262	-	197	240	-	-	-	-	-	-	-
Stage 1	521	552	-	578	556	-	-	-	-	-	-	-
Stage 2	578	556	-	449	516	-	-	-	-	-	-	-

Approach	EB	WB	NB	SB
HCM Control Delay, s	42.8	23.4	1.8	0
HCM LOS	E	C		

Minor Lane/Major Mvmt	NBL	NBT	NBR	EBLn1	WBLn1	SBL	SBT	SBR
Capacity (veh/h)	1025	-	-	321	197	1298	-	-
HCM Lane V/C Ratio	0.066	-	-	0.744	0.005	0.002	-	-
HCM Control Delay (s)	8.8	0	-	42.8	23.4	7.8	0	-
HCM Lane LOS	A	A	-	E	C	A	A	-
HCM 95th %tile Q(veh)	0.2	-	-	5.6	0	0	-	-

Intersection	
Int Delay, s/veh	6.5

Movement	EBL	EBT	EBR	WBL	WBT	WBR	NBL	NBT	NBR	SBL	SBT	SBR
Lane Configurations		↕			↕			↕			↕	
Traffic Vol, veh/h	86	13	71	15	12	33	57	215	14	30	294	91
Future Vol, veh/h	86	13	71	15	12	33	57	215	14	30	294	91
Conflicting Peds, #/hr	0	0	0	0	0	0	0	0	0	0	0	0
Sign Control	Stop	Stop	Stop	Stop	Stop	Stop	Free	Free	Free	Free	Free	Free
RT Channelized	-	-	None	-	-	None	-	-	None	-	-	None
Storage Length	-	-	-	-	-	-	-	-	-	-	-	-
Veh in Median Storage, #	-	0	-	-	0	-	-	0	-	-	0	-
Grade, %	-	0	-	-	0	-	-	0	-	-	0	-
Peak Hour Factor	94	94	94	94	94	94	94	94	94	94	94	94
Heavy Vehicles, %	2	2	2	2	2	2	2	2	2	2	2	2
Mvmt Flow	91	14	76	16	13	35	61	229	15	32	313	97

Major/Minor	Minor2			Minor1			Major1			Major2		
Conflicting Flow All	809	792	362	830	833	237	410	0	0	244	0	0
Stage 1	426	426	-	359	359	-	-	-	-	-	-	-
Stage 2	383	366	-	471	474	-	-	-	-	-	-	-
Critical Hdwy	7.12	6.52	6.22	7.12	6.52	6.22	4.12	-	-	4.12	-	-
Critical Hdwy Stg 1	6.12	5.52	-	6.12	5.52	-	-	-	-	-	-	-
Critical Hdwy Stg 2	6.12	5.52	-	6.12	5.52	-	-	-	-	-	-	-
Follow-up Hdwy	3.518	4.018	3.318	3.518	4.018	3.318	2.218	-	-	2.218	-	-
Pot Cap-1 Maneuver	299	322	683	289	304	802	1149	-	-	1322	-	-
Stage 1	606	586	-	659	627	-	-	-	-	-	-	-
Stage 2	640	623	-	573	558	-	-	-	-	-	-	-
Platoon blocked, %								-	-		-	-
Mov Cap-1 Maneuver	257	292	683	230	276	802	1149	-	-	1322	-	-
Mov Cap-2 Maneuver	257	292	-	230	276	-	-	-	-	-	-	-
Stage 1	568	567	-	618	588	-	-	-	-	-	-	-
Stage 2	562	584	-	481	540	-	-	-	-	-	-	-

Approach	EB	WB	NB	SB
HCM Control Delay, s	25.5	15.7	1.7	0.6
HCM LOS	D	C		

Minor Lane/Major Mvmt	NBL	NBT	NBR	EBLn1	WBLn1	SBL	SBT	SBR
Capacity (veh/h)	1149	-	-	352	400	1322	-	-
HCM Lane V/C Ratio	0.053	-	-	0.514	0.16	0.024	-	-
HCM Control Delay (s)	8.3	0	-	25.5	15.7	7.8	0	-
HCM Lane LOS	A	A	-	D	C	A	A	-
HCM 95th %tile Q(veh)	0.2	-	-	2.8	0.6	0.1	-	-

Intersection	
Int Delay, s/veh	0.8

Movement	EBL	EBR	NBL	NBT	SBT	SBR
Lane Configurations						
Traffic Vol, veh/h	16	16	26	308	453	27
Future Vol, veh/h	16	16	26	308	453	27
Conflicting Peds, #/hr	0	0	0	0	0	0
Sign Control	Stop	Stop	Free	Free	Free	Free
RT Channelized		None		None		None
Storage Length	0	-	-	-	-	-
Veh in Median Storage, #	0	-	-	0	0	-
Grade, %	0	-	-	0	0	-
Peak Hour Factor	94	94	94	94	94	94
Heavy Vehicles, %	2	2	2	2	2	2
Mvmt Flow	17	17	28	328	482	29

Major/Minor	Minor2		Major1		Major2	
Conflicting Flow All	881	497	511	0	-	0
Stage 1	497	-	-	-	-	-
Stage 2	384	-	-	-	-	-
Critical Hdwy	6.42	6.22	4.12	-	-	-
Critical Hdwy Stg 1	5.42	-	-	-	-	-
Critical Hdwy Stg 2	5.42	-	-	-	-	-
Follow-up Hdwy	3.518	3.318	2.218	-	-	-
Pot Cap-1 Maneuver	317	573	1054	-	-	-
Stage 1	611	-	-	-	-	-
Stage 2	688	-	-	-	-	-
Platoon blocked, %				-	-	-
Mov Cap-1 Maneuver	307	573	1054	-	-	-
Mov Cap-2 Maneuver	307	-	-	-	-	-
Stage 1	591	-	-	-	-	-
Stage 2	688	-	-	-	-	-

Approach	EB	NB	SB
HCM Control Delay, s	14.8	0.7	0
HCM LOS	B		

Minor Lane/Major Mvmt	NBL	NBT	EBLn1	SBT	SBR
Capacity (veh/h)	1054	-	400	-	-
HCM Lane V/C Ratio	0.026	-	0.085	-	-
HCM Control Delay (s)	8.5	0	14.8	-	-
HCM Lane LOS	A	A	B	-	-
HCM 95th %tile Q(veh)	0.1	-	0.3	-	-

Intersection	
Int Delay, s/veh	0.8

Movement	EBT	EBR	WBL	WBT	NBL	NBR
Lane Configurations						
Traffic Vol, veh/h	216	10	19	170	6	11
Future Vol, veh/h	216	10	19	170	6	11
Conflicting Peds, #/hr	0	0	0	0	0	0
Sign Control	Free	Free	Free	Free	Stop	Stop
RT Channelized	-	None	-	None	-	None
Storage Length	-	-	-	-	0	-
Veh in Median Storage, #	0	-	-	0	0	-
Grade, %	0	-	-	0	0	-
Peak Hour Factor	92	92	92	92	92	92
Heavy Vehicles, %	2	2	2	2	2	2
Mvmt Flow	235	11	21	185	7	12

Major/Minor	Major1		Major2		Minor1	
Conflicting Flow All	0	0	246	0	468	241
Stage 1	-	-	-	-	241	-
Stage 2	-	-	-	-	227	-
Critical Hdwy	-	-	4.12	-	6.42	6.22
Critical Hdwy Stg 1	-	-	-	-	5.42	-
Critical Hdwy Stg 2	-	-	-	-	5.42	-
Follow-up Hdwy	-	-	2.218	-	3.518	3.318
Pot Cap-1 Maneuver	-	-	1320	-	553	798
Stage 1	-	-	-	-	799	-
Stage 2	-	-	-	-	811	-
Platoon blocked, %	-	-		-		
Mov Cap-1 Maneuver	-	-	1320	-	543	798
Mov Cap-2 Maneuver	-	-	-	-	543	-
Stage 1	-	-	-	-	799	-
Stage 2	-	-	-	-	796	-

Approach	EB	WB	NB
HCM Control Delay, s	0	0.8	10.4
HCM LOS			B

Minor Lane/Major Mvmt	NBLn1	EBT	EBR	WBL	WBT
Capacity (veh/h)	685	-	-	1320	-
HCM Lane V/C Ratio	0.027	-	-	0.016	-
HCM Control Delay (s)	10.4	-	-	7.8	0
HCM Lane LOS	B	-	-	A	A
HCM 95th %tile Q(veh)	0.1	-	-	0	-

Exhibit 1310-7a Left-Turn Storage Guidelines: Two-Lane, Unsignalized

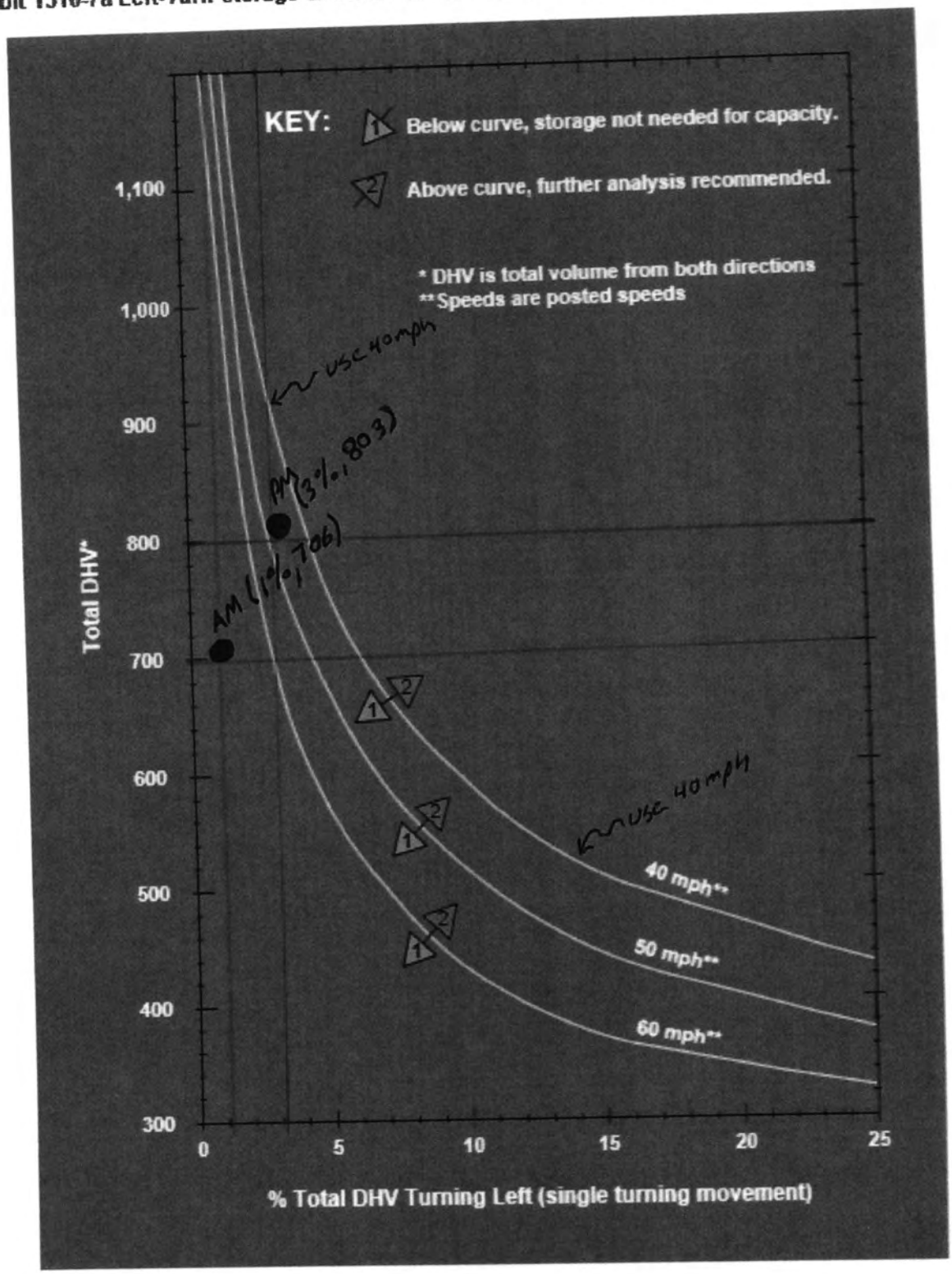
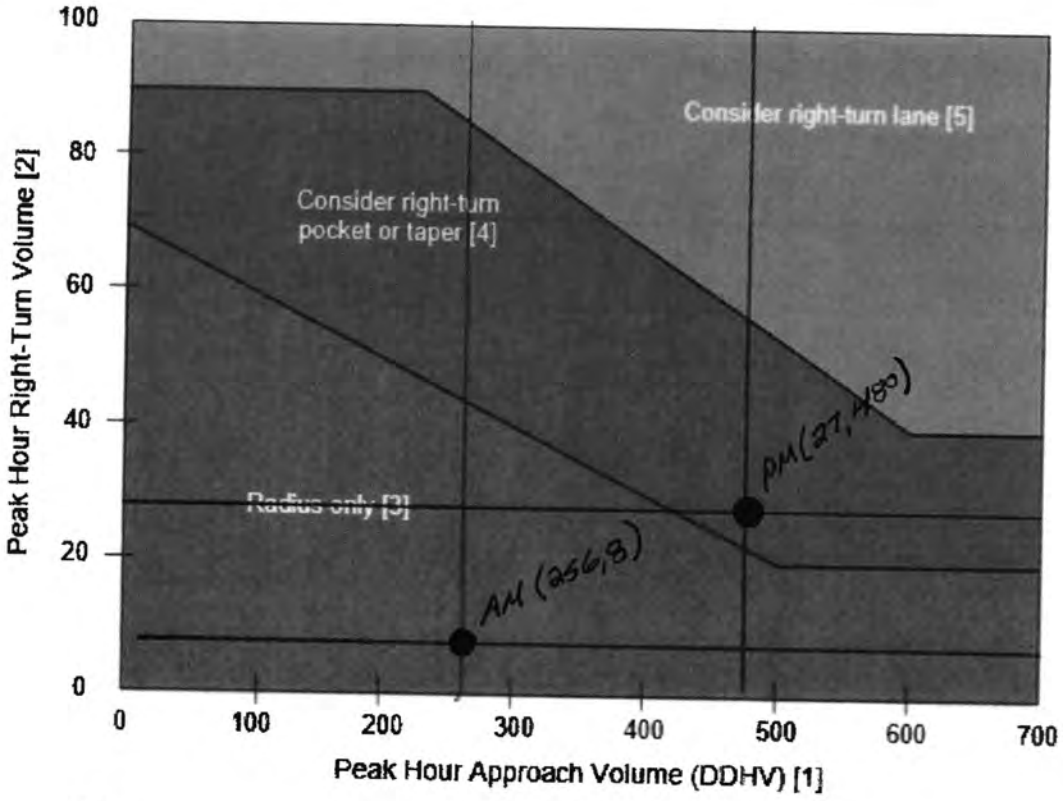


Exhibit 1310-11 Right-Turn Lane Guidelines



Notes:

[1] For two-lane highways, use the peak hour DDHV (through + right-turn).
For multilane, high-speed highways (posted speed 45 mph or above), use the right-lane peak hour approach volume (through + right-turn).

[2] When all three of the following conditions are met, reduce the right-turn DDHV by 20:

- The posted speed is 45 mph or below
- The right-turn volume is greater than 40 VPH
- The peak hour approach volume (DDHV) is less than 300 VPH

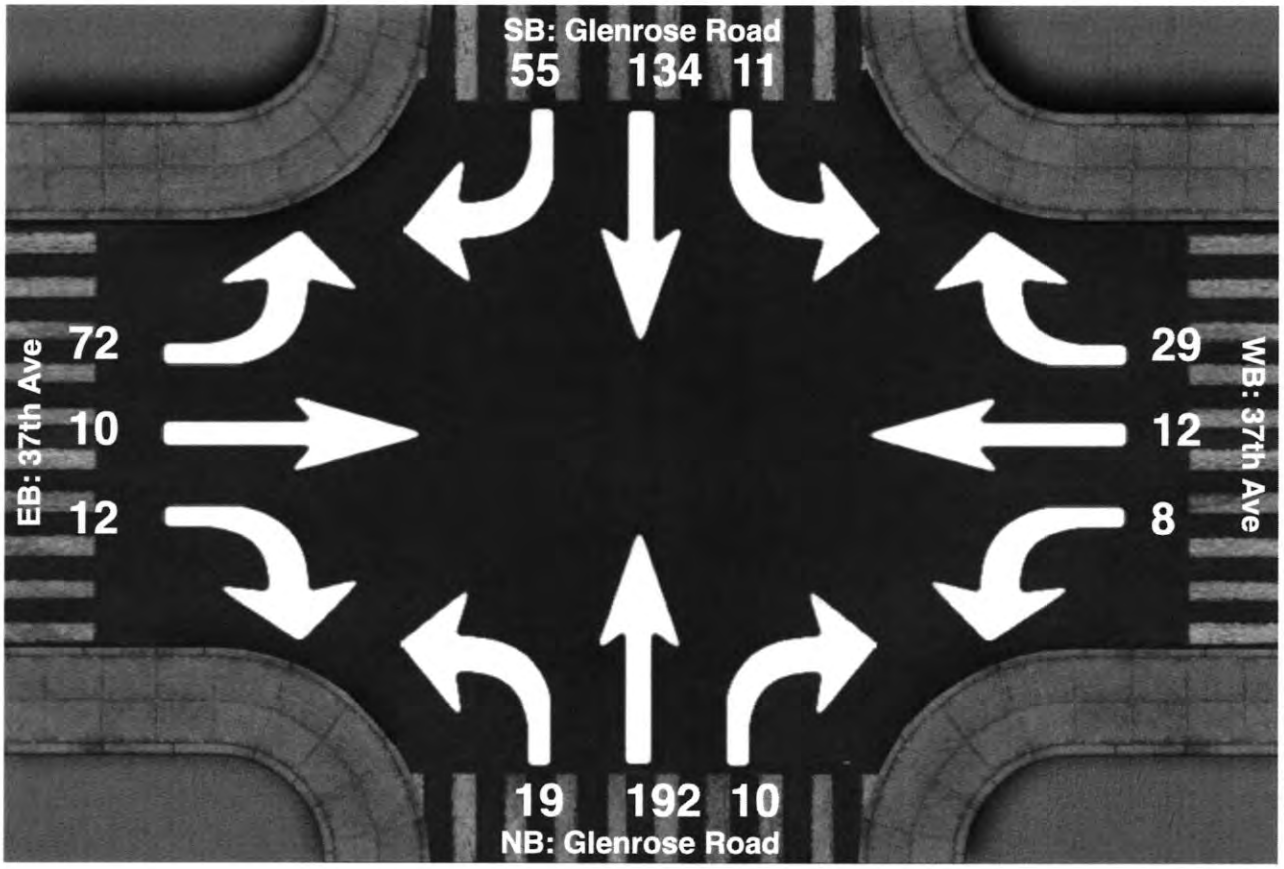
[3] For right-turn corner design, see Exhibit 1310-6.

[4] For right-turn pocket or taper design, see Exhibit 1310-12.

[5] For right-turn lane design, see Exhibit 1310-13.

Intersection Peak Hour

Location: Glenrose Road at 37th Ave, Spokane Wa
GPS Coordinates: Lat=47.541071, Lon=-117.393318
Date: 2020-02-25
Day of week: Tuesday
Weather: Clear
Analyst: Mike McCluskey



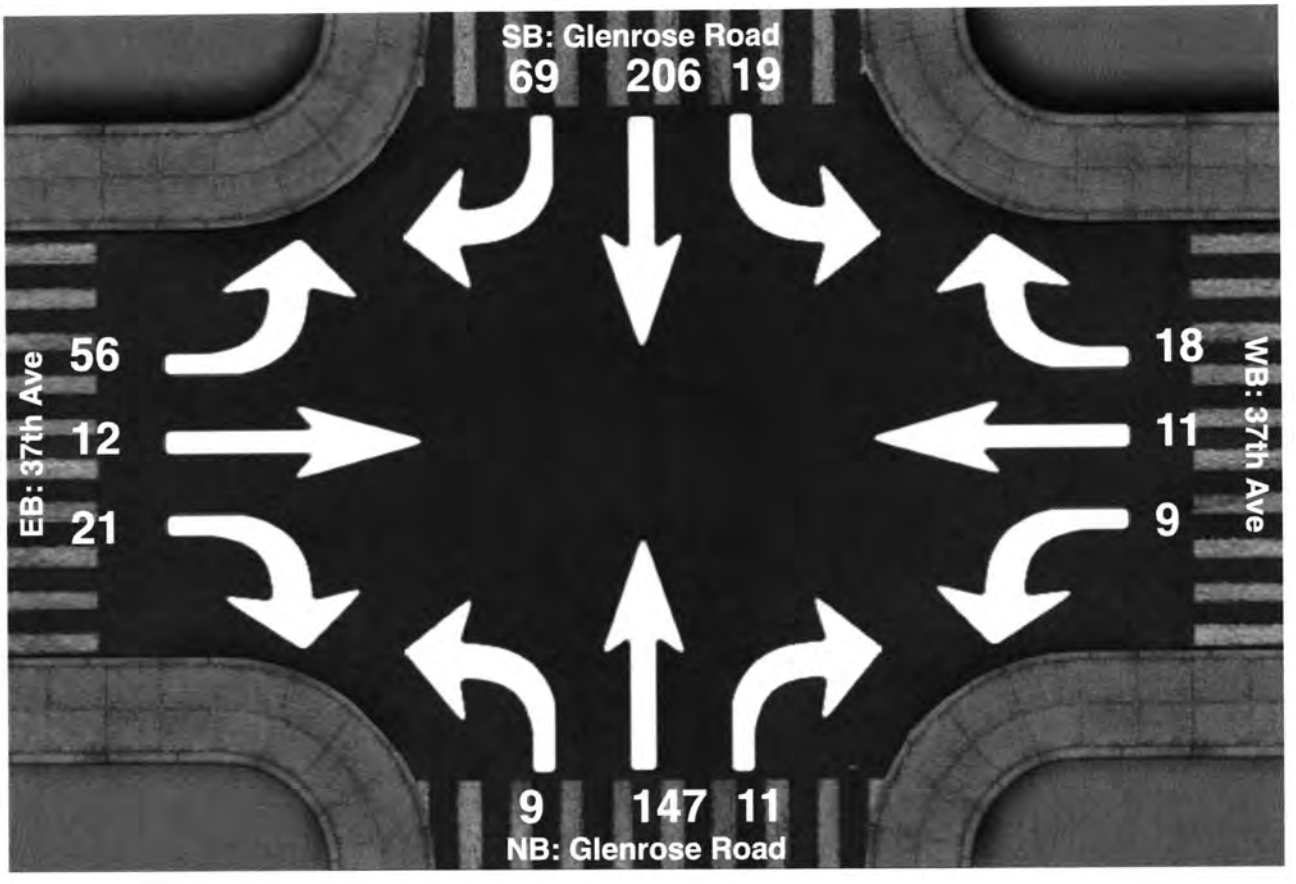
Intersection Peak Hour

07:45 - 08:45

	SouthBound			Westbound			Northbound			Eastbound			Total
	Left	Thru	Right	Left	Thru	Right	Left	Thru	Right	Left	Thru	Right	
Vehicle Total	11	134	55	8	12	29	19	192	10	72	10	12	564
Factor	0.69	0.76	0.72	0.67	0.75	0.40	0.68	0.80	0.50	0.56	0.83	0.60	0.89
Approach Factor	0.79			0.58			0.81			0.59			

Intersection Peak Hour

Location: Glenrose Road at 37th Ave, Spokane Wa.
GPS Coordinates: Lat=47.621019, Lon=-117.331145
Date: 2020-02-25
Day of week: Tuesday
Weather: Overcast
Analyst: Mike McCluskey



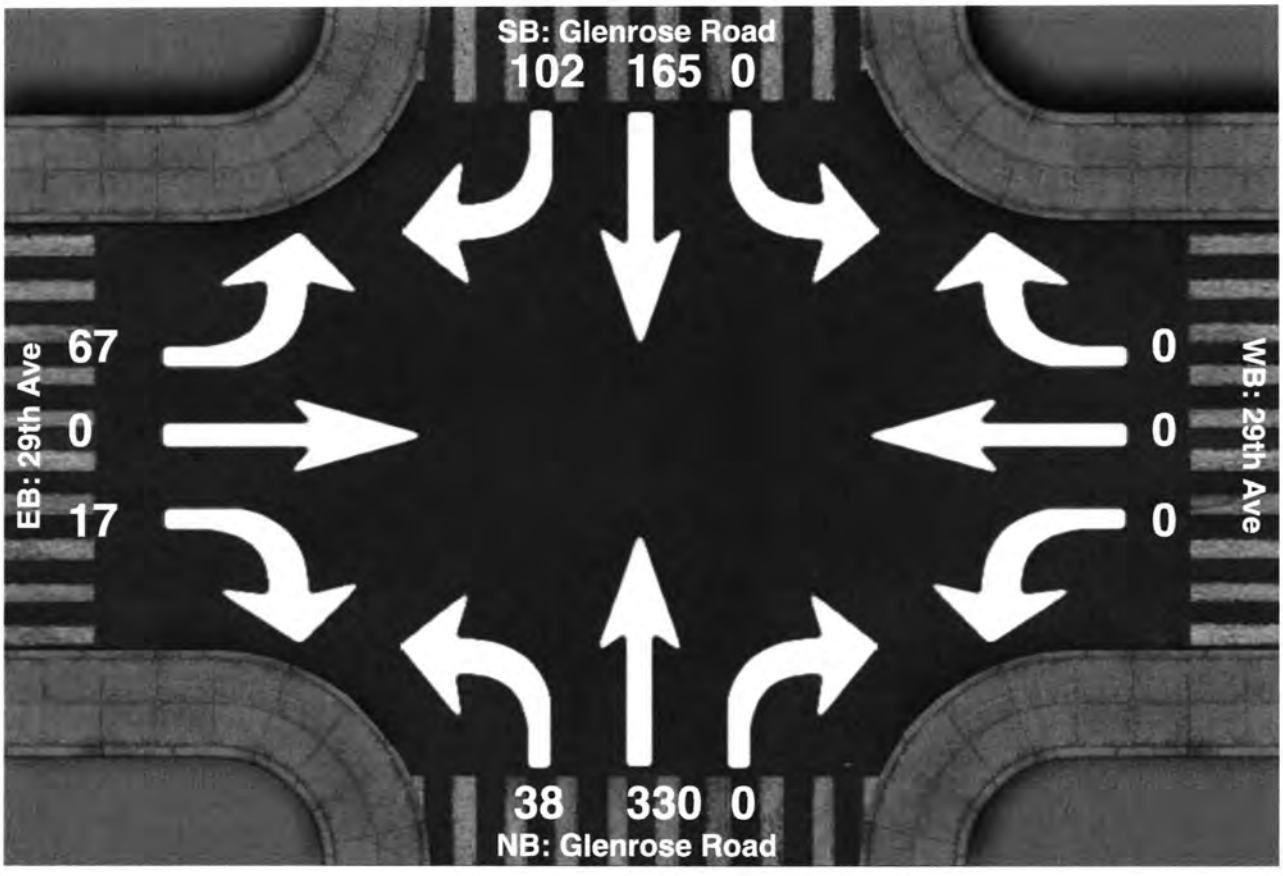
Intersection Peak Hour

16:30 - 17:30

	SouthBound			Westbound			Northbound			Eastbound			Total
	Left	Thru	Right	Left	Thru	Right	Left	Thru	Right	Left	Thru	Right	
Vehicle Total	19	206	69	9	11	18	9	147	11	56	12	21	588
Factor	0.95	0.84	0.86	0.56	0.55	0.64	0.45	0.92	0.92	0.82	0.75	0.66	0.94
Approach Factor	0.89			0.79			0.93			0.77			

Intersection Peak Hour

Location: Glenrose Road at 29th Ave, Spokane Wa
GPS Coordinates: Lat=47.541067, Lon=-117.393262
Date: 2020-02-26
Day of week: Wednesday
Weather: Clear
Analyst: Mike McCluskey



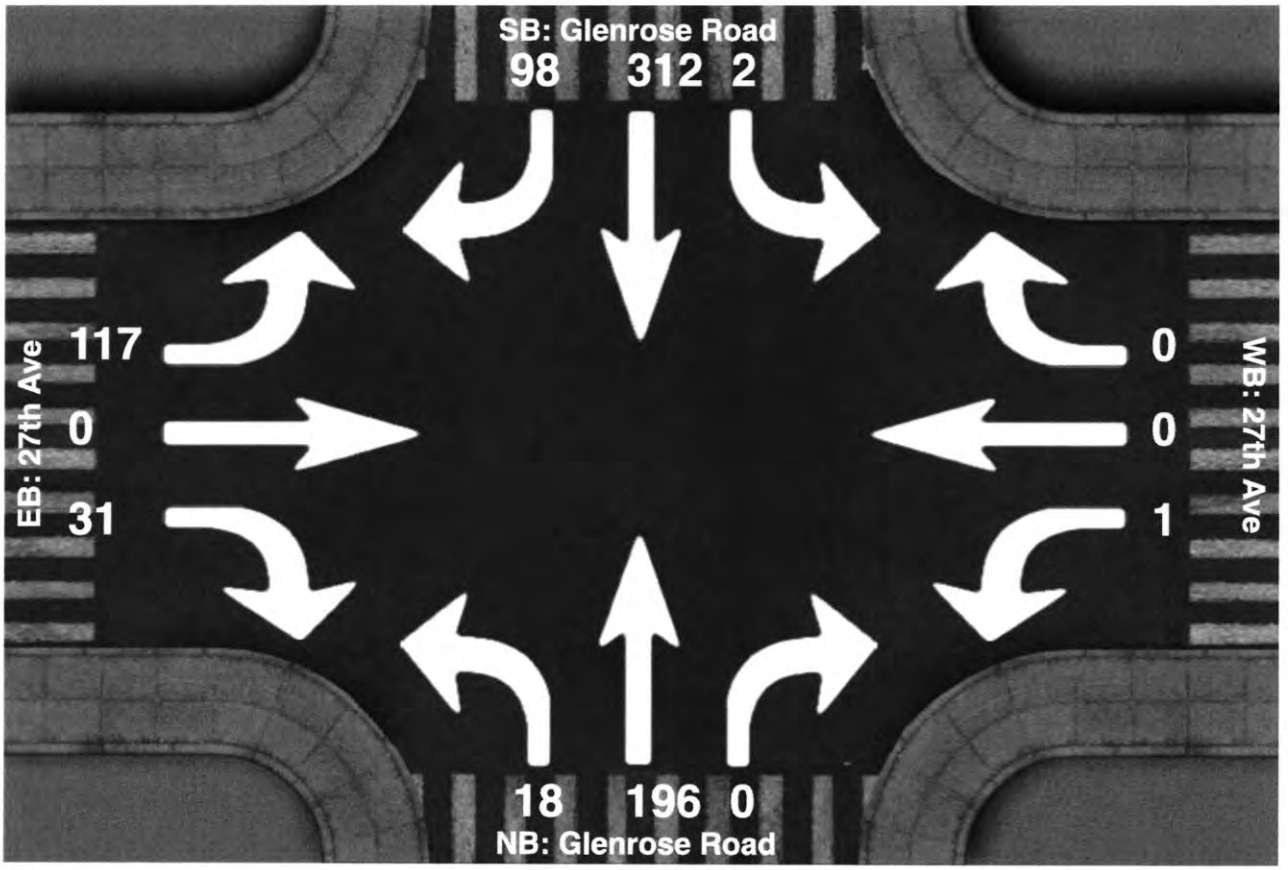
Intersection Peak Hour

07:30 - 08:30

	SouthBound			Westbound			Northbound			Eastbound			Total
	Left	Thru	Right	Left	Thru	Right	Left	Thru	Right	Left	Thru	Right	
Vehicle Total	0	165	102	0	0	0	38	330	0	67	0	17	719
Factor	0.00	0.90	0.91	0.00	0.00	0.00	0.68	0.75	0.00	0.67	0.00	0.61	0.87
Approach Factor	0.95			0.00			0.79			0.78			

Intersection Peak Hour

Location: Glenrose Road at 27th Ave, Spokane Wa.
GPS Coordinates: Lat=47.541068, Lon=-117.393278
Date: 2020-02-26
Day of week: Wednesday
Weather: Clear
Analyst: Mike McCluskey



Intersection Peak Hour

17:00 - 18:00

	SouthBound			Westbound			Northbound			Eastbound			Total
	Left	Thru	Right	Left	Thru	Right	Left	Thru	Right	Left	Thru	Right	
Vehicle Total	2	312	98	1	0	0	18	196	0	117	0	31	775
Factor	0.50	0.89	0.88	0.25	0.00	0.00	0.75	0.88	0.00	0.84	0.00	0.86	0.95
Approach Factor	0.91			0.25			0.86			0.88			