Hawks Ridge Apartments

Traffic Impact Analysis
Salem, Oregon

Date:
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Prepared by:
Tegan Enloe, PE

ENLOE
CONSULTING, LLC

CHAPTER 1: INTRODUCTION AND SUMMARY

KCH Enterprises, LLC, is proposing to build a multi-family development located adjacent to Cordon Rd and N Santiam Hwy in Salem, Oregon. The applicant intends to build 396 apartment units.

The purpose of this Transportation Impact Analysis (TIA) is to evaluate possible system impacts from the proposed development and, where necessary, recommend mitigation measures on the nearby transportation network. The impact analysis is focused on intersections identified as being in the study area, based on guidance from City, and shown in **Figure 1**.

1. Lancaster Dr SE/ Rickey St SE
2. Macleay Rd SE/ Cordon Rd SE
3. Cordon Rd/ Gaffin Rd SE
4. Lancaster Dr SE/ N Santiam Hwy WB Ramps
5. Lancaster Dr SE/ N Santiam Hwy EB Ramps
6. Lancaster Dr SE/ Cordon Rd SE

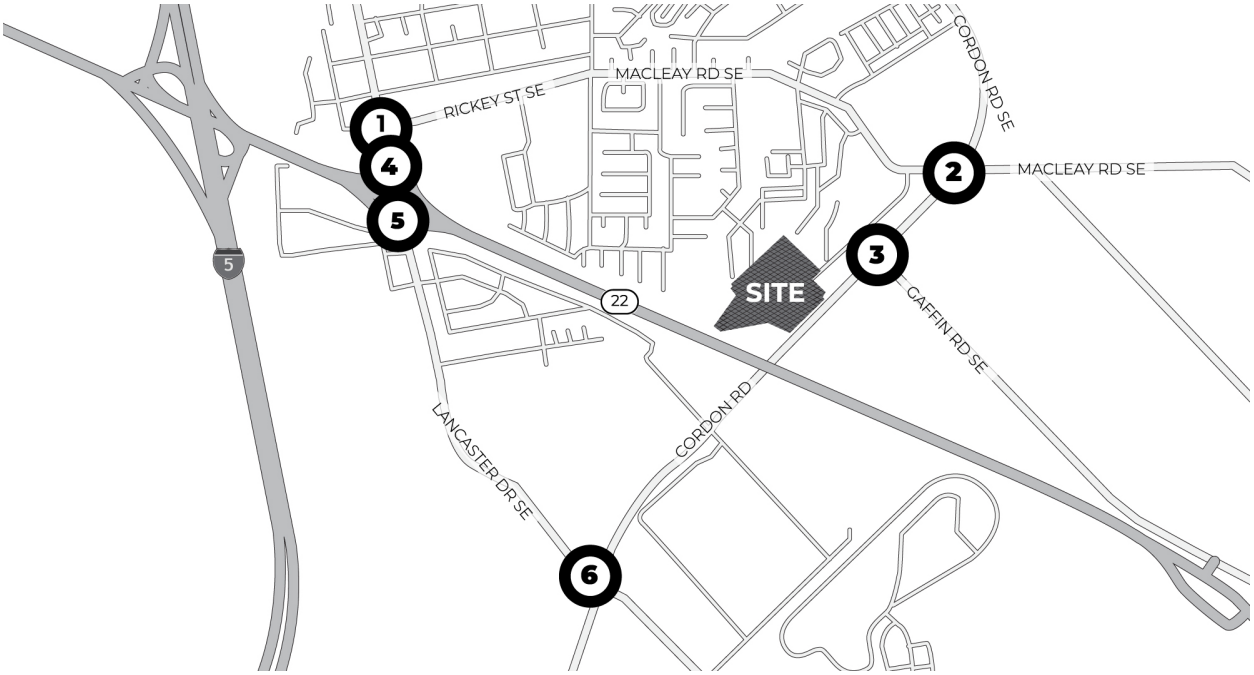


Figure 1: Study Area

Appendix A provides the site plan of the proposed development. **Table 1** lists important characteristics of the study area and proposed project.

Table 1: Key Study Area and Proposed Development Characteristics

Characteristics	Information
Study Area	
Number of Study Intersections	Six
Analysis Period	Weekday AM and PM Peak Hours
Analysis Scenarios	2022 Existing Conditions, AM Peak Hour 2022 Existing Conditions, PM Peak Hour 2024 Background Traffic, AM Peak Hour 2024 Background Traffic, PM Peak Hour 2024 Total Traffic (Background + Site), AM Peak Hour 2024 Total Traffic (Background + Site), PM Peak Hour
Project Site	
Existing Land Use	Vacant
Proposed Development	396 mid-rise apartments
Project Access	The development driveways will connect to Gaffin Rd, Seattle Slew Dr SE, and Clydesdale Dr SE.

Existing Conditions and Intersection Operations

Transportation operations for the existing roadway network are evaluated to establish a baseline of performance. The following intersections are identified for existing conditions evaluation:

1 Lancaster Dr SE/ Rickey St SE

2 Macleay Rd SE/ Cordon Rd SE

3 Cordon Rd/ Gaffin Rd SE

4 Lancaster Dr SE/ N Santiam Hwy WB Ramps

5 Lancaster Dr SE/ N Santiam Hwy EB Ramps

6 Lancaster Dr SE/ Cordon Rd SE

Table 2 shows the existing intersection operations at the study intersections.

Table 2: 2022 Existing Traffic at Study Intersection Operations

No.	Intersection	Traffic Control	Operating Standard	AM Peak Hour	PM Peak Hour
1	Lancaster Dr SE/ Rickey St SE	Signalized	LOS E, V/C 0.90	LOS C, V/C 0.47	LOS D, V/C 0.64
2	Macleay Rd SE/ Cordon Rd SE	Signalized	LOS E, V/C 0.90	LOS B, V/C 0.53	LOS B, V/C 0.66
3	Cordon Rd/ Gaffin Rd SE	Signalized	LOS E, V/C 0.90	LOS C, V/C 0.52	LOS C, V/C 0.73
4	Lancaster Dr SE/ N Santiam Hwy WB Ramps	Unsignalized (Two way stop)	LOS E	LOS E (WB)	***LOS F (WB)***
5	Lancaster Dr SE/ N Santiam Hwy EB Ramps	Signalized	LOS E, V/C 0.90	LOS C, V/C 0.39	LOS C, V/C 0.63
6	Lancaster Dr SE/ Cordon Rd SE	Signalized	LOS E, V/C 0.90	LOS B, V/C 0.41	LOS C, V/C 0.48

V/C = Volume-to-Capacity Ratio of Worst Movement
LOS = Level of Service of Worst Movement
Locations exceeding mobility standards are shown with ***bold/italicized***

Project Traffic Impact

Full build out of the project is anticipated for the year 2024. To determine whether the proposed project will result in off-site traffic impacts, future traffic volumes are estimated. **Tables 3 and 4** provide the intersection operations for the future scenarios with and without project traffic.

Table 3: 2024 Background Intersection Operations (Without Project)

No.	Intersection	Traffic Control	Operating Standard	AM Peak Hour	PM Peak Hour
1	Lancaster Dr SE/ Rickey St SE	Signalized	LOS E, V/C 0.90	LOS C, V/C 0.47	LOS D, V/C 0.65
2	Macleay Rd SE/ Cordon Rd SE	Signalized	LOS E, V/C 0.90	LOS B, V/C 0.54	LOS B, V/C 0.68
3	Cordon Rd/ Gaffin Rd SE	Signalized	LOS E, V/C 0.90	LOS C, V/C 0.52	LOS C, V/C 0.75
4	Lancaster Dr SE/ N Santiam Hwy WB Ramps	Unsignalized (Two way stop)	LOS E	***LOS F (WB)***	***LOS F (WB)***
5	Lancaster Dr SE/ N Santiam Hwy EB Ramps	Unsignalized (Two way stop)	LOS E	LOS C, V/C 0.40	LOS C, V/C 0.65
6	Lancaster Dr SE/ Cordon Rd SE	Signalized	LOS E, V/C 0.90	LOS B, V/C 0.41	LOS C, V/C 0.49

V/C = Volume-to-Capacity Ratio of Worst Movement
LOS = Level of Service of Worst Movement
Locations exceeding mobility standards are shown with ***bold/italicized***

Table 4: 2024 Total Intersection Operations (With Project)

No.	Intersection	Traffic Control	Operating Standard	AM Peak Hour	PM Peak Hour
1	Lancaster Dr SE/ Rickey St SE	Signalized	LOS E, V/C 0.90	LOS C, V/C 0.47	LOS D, V/C 0.65
2	Macleay Rd SE/ Cordon Rd SE	Signalized	LOS E, V/C 0.90	LOS B, V/C 0.54	LOS B, V/C 0.70
3	Cordon Rd/ Gaffin Rd SE	Signalized	LOS E, V/C 0.90	LOS C, V/C 0.54	LOS C, V/C 0.75
4	Lancaster Dr SE/ N Santiam Hwy WB Ramps	Unsignalized (Two way stop)	LOS E	***LOS F (WB)***	***LOS F (WB)***
5	Lancaster Dr SE/ N Santiam Hwy EB Ramps	Unsignalized (Two way stop)	LOS E	LOS C, V/C 0.41	LOS C, V/C 0.66
6	Lancaster Dr SE/ Cordon Rd SE	Signalized	LOS E, V/C 0.90	LOS B, V/C 0.43	LOS C, V/C 0.51

V/C = Volume-to-Capacity Ratio of Worst Movement
LOS = Level of Service of Worst Movement
Locations exceeding mobility standards are shown with ***bold/italicized***

Key Findings

Key findings associated with the proposed development include the following items:

- The proposed development would generate 132 (34 in, 98 out) AM peak hour trips and 166 (101 in, 65 out) PM peak hour vehicle trips.
- All study intersections are expected to operate within mobility standards, with the exception of Lancaster Dr SE/N Santiam Hwy WB Ramps. This location fails to meet mobility standards in the existing, background, and total traffic scenarios. There is no change in reported LOS between the background (without development) and total (with development) conditions.
- The queuing at some study intersection turn lanes exceeds their available storage, however, there is no significant change in queuing demand between 2024 background (no build) and total (build scenarios).

CHAPTER 2: EXISTING CONDITIONS

This chapter provides documentation of existing study area conditions, including the project site, study area roadway network, and existing traffic volumes and operations.

Project Site

KCH Enterprises, LLC, is proposing to build a multi-family development located adjacent to Cordon Rd and N Santiam Hwy in Salem, Oregon. The applicant intends to build 396 apartment units. The development driveways will connect to Gaffin Rd, Seattle Slew Dr SE, and Clydesdale Dr SE.

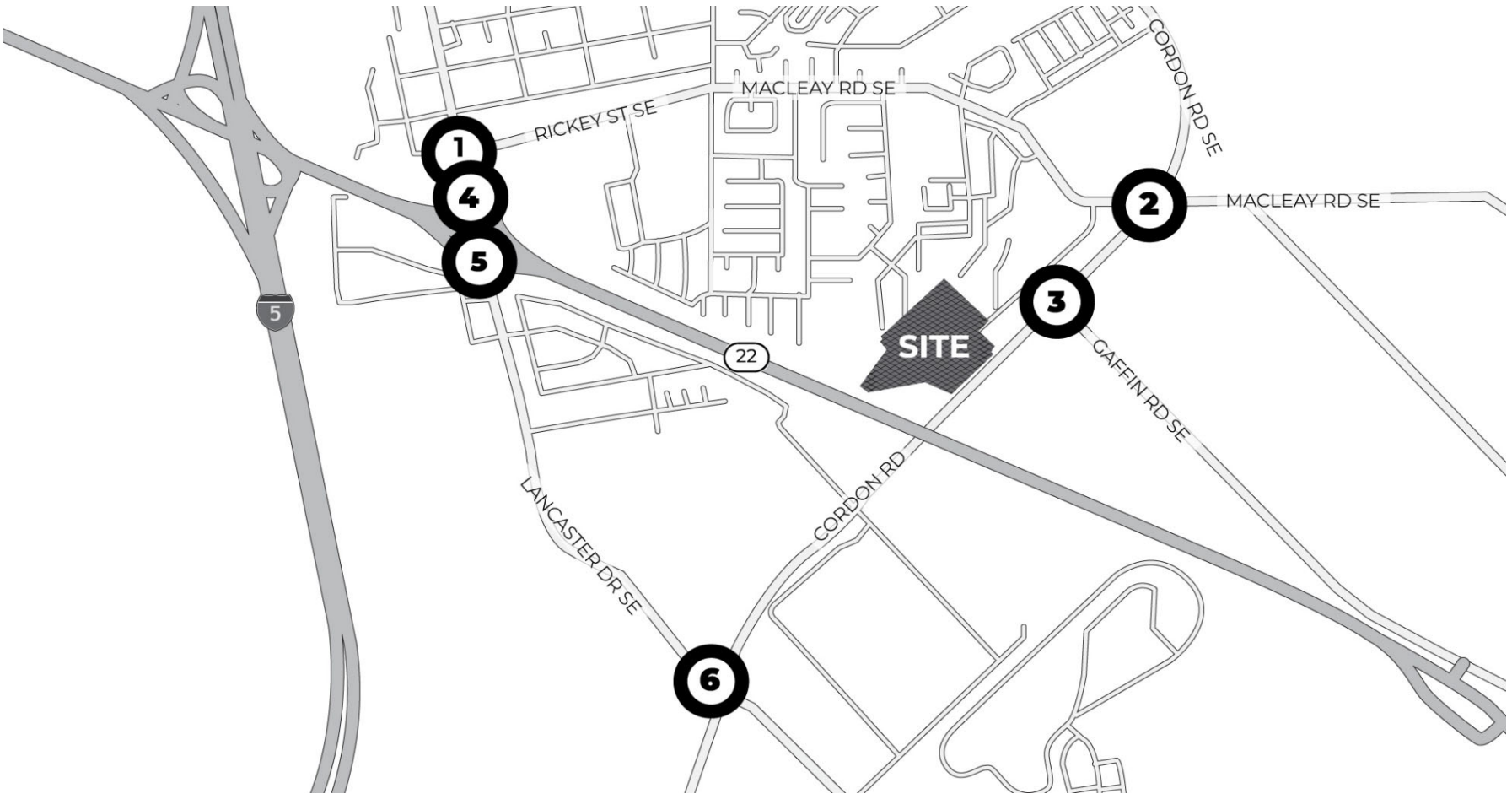
Existing Traffic Volumes and Operations

Existing AM and PM peak hour traffic operations are analyzed at the following study intersections:

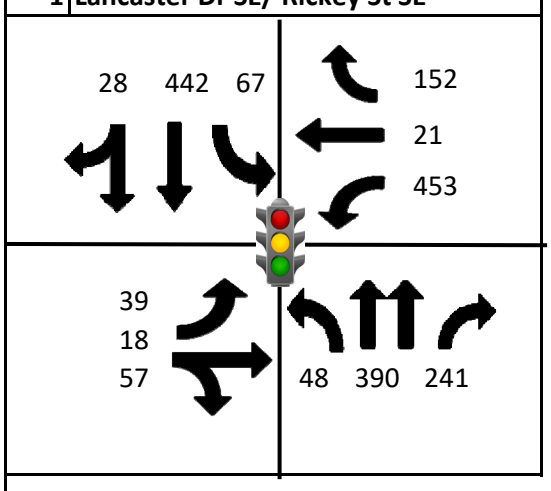
1. Lancaster Dr SE/ Rickey St SE
2. Macleay Rd SE/ Cordon Rd SE
3. Cordon Rd/ Gaffin Rd SE
4. Lancaster Dr SE/ N Santiam Hwy WB Ramps
5. Lancaster Dr SE/ N Santiam Hwy EB Ramps
6. Lancaster Dr SE/ Cordon Rd SE

Traffic counts were collected on May 24th, 2022, for use in this study. The peak hour traffic volumes analyzed under existing conditions are shown in **Figure 2 and Figure 3**, with the detailed traffic counts included in **Appendix B.** The AM Peak hour is identified as 7:20-8:20 AM and the PM Peak hour is identified as 4:40-5:40 PM.

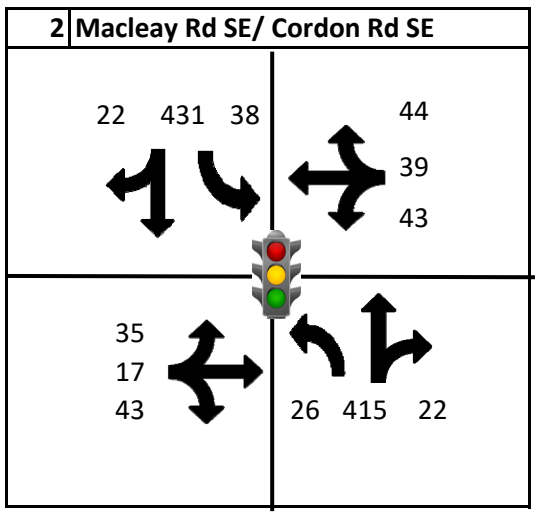
Figure 2: 2022 Existing Volumes AM Peak Hour



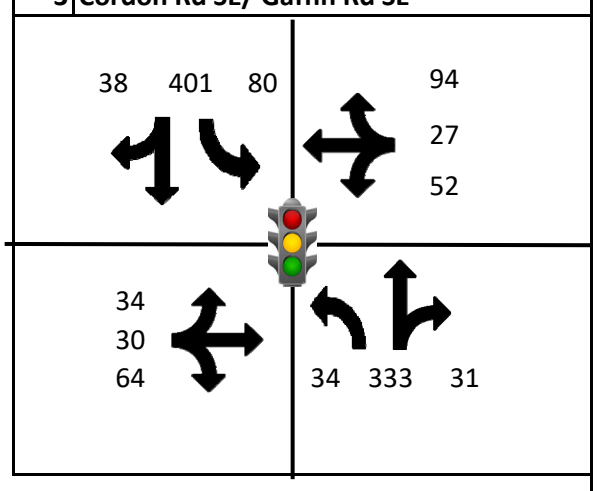
1	Lancaster Dr SE/ Rickey St SE



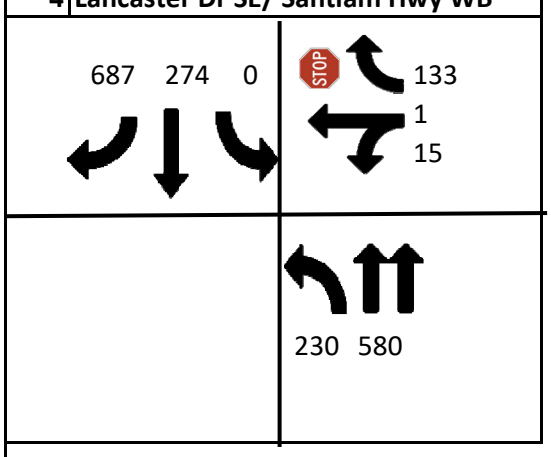
2	Macleay Rd SE/ Cordon Rd SE



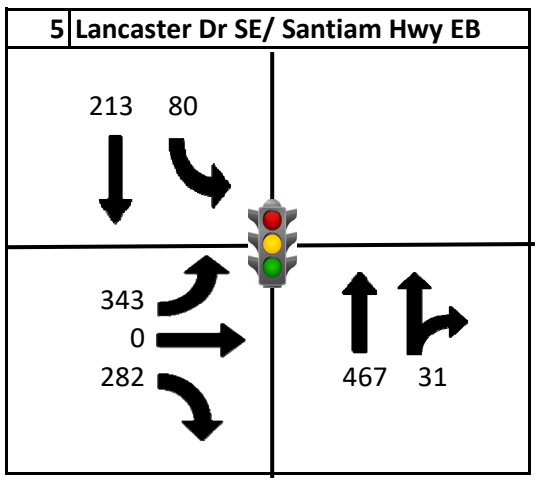
3	Cordon Rd SE/ Gaffin Rd SE



4	Lancaster Dr SE/ Santiam Hwy WB



5	Lancaster Dr SE/ Santiam Hwy EB



6	Cordon Rd SE/ Lancaster Dr SE

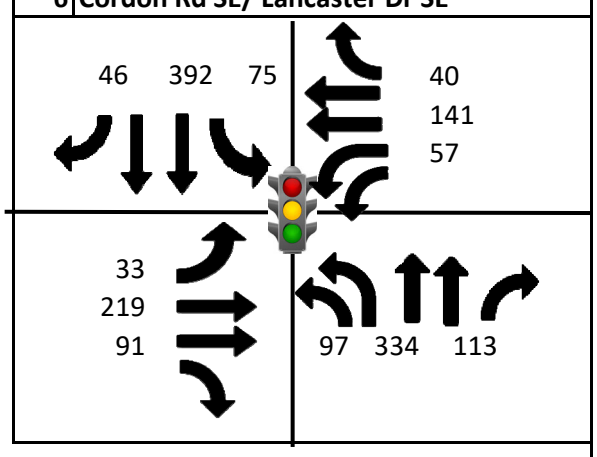
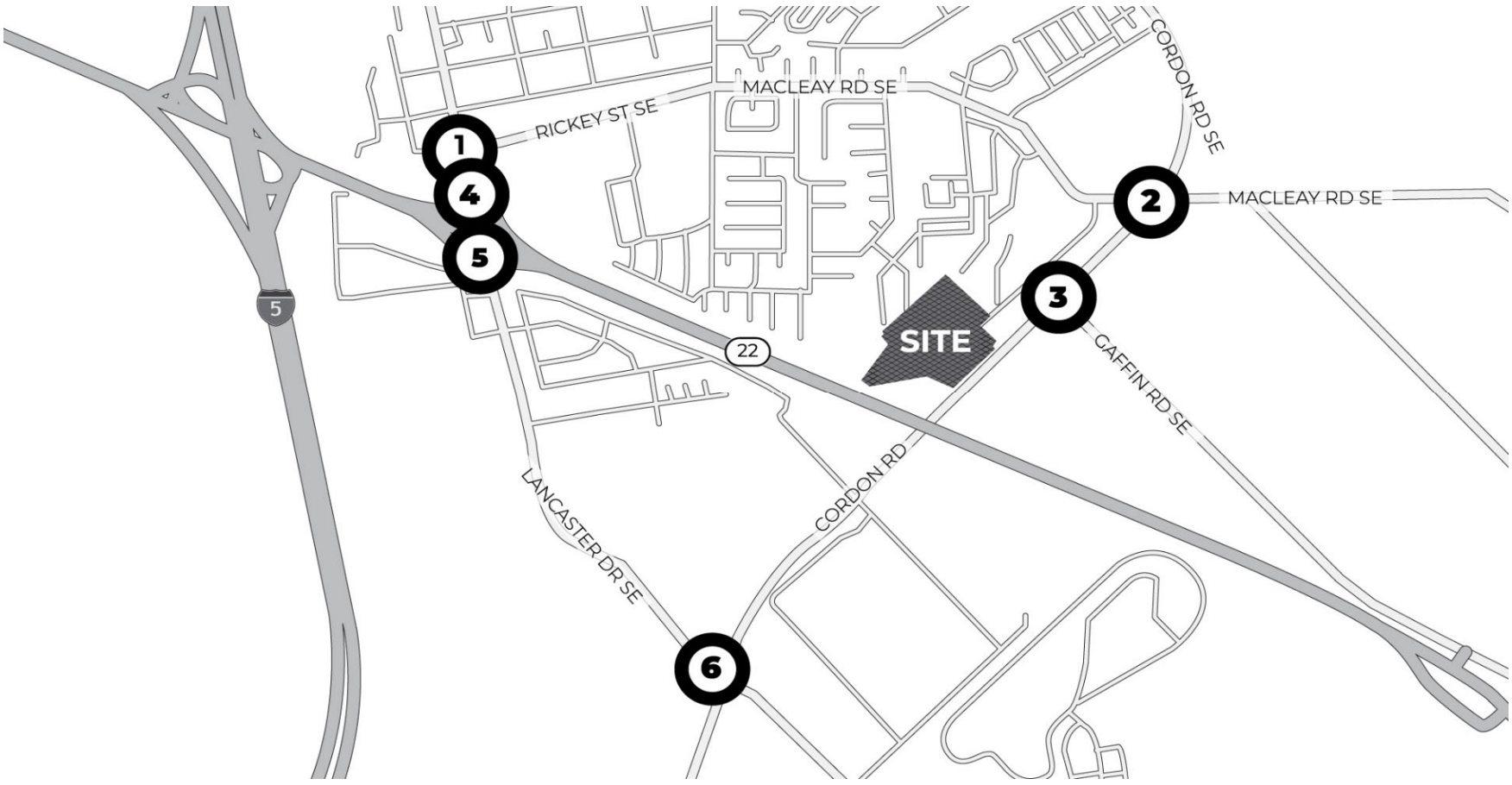
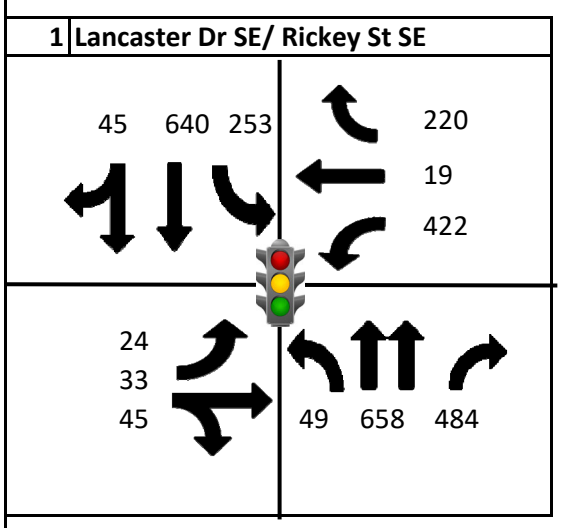
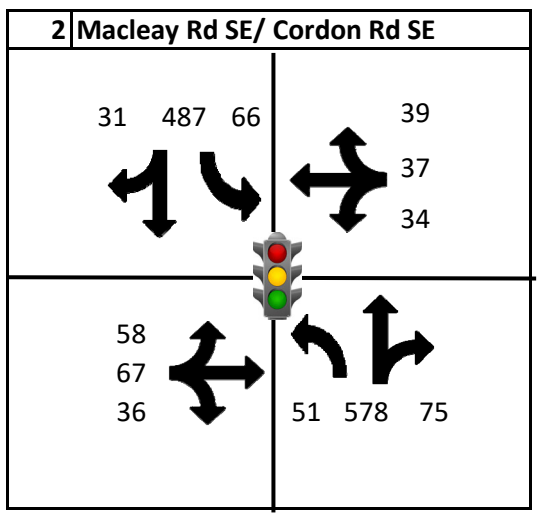
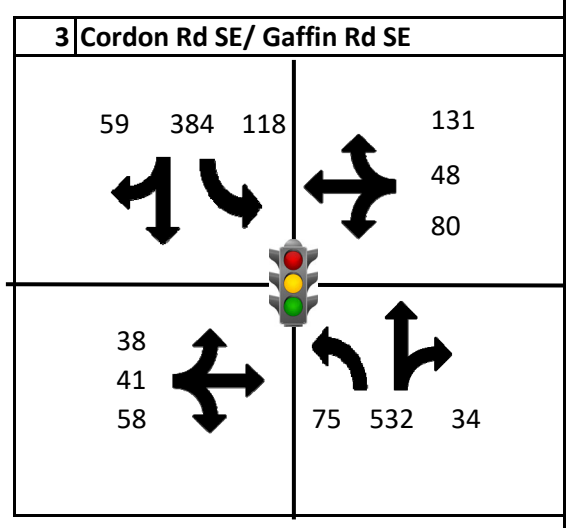


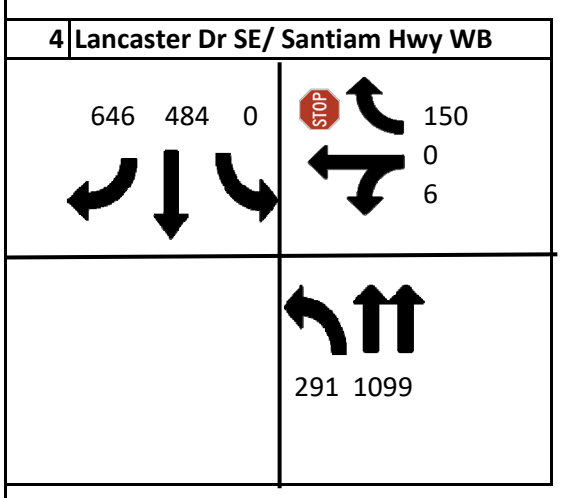
Figure 3: 2022 Existing Volumes PM Peak Hour

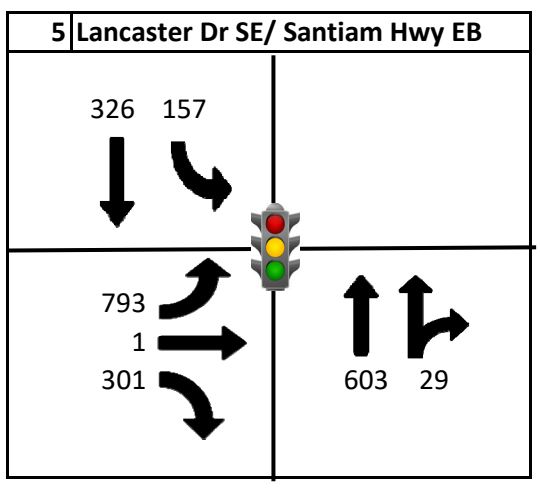


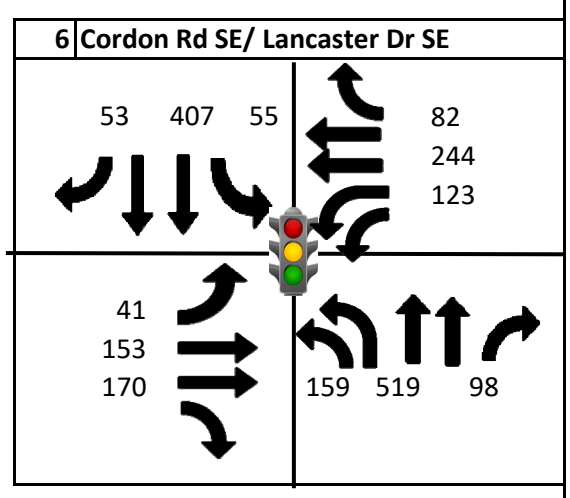












Existing Operating Conditions

Existing traffic operations at the study intersections are evaluated for the AM and PM peak hours. The estimated operational results of each study intersection are shown in **Table 5** and is based on the 2000 Highway Capacity Manual[1] methodology for signalized intersections and 2016 Highway Capacity Manual methodology[2] for unsignalized intersections. **Appendix C** provides detailed reports summarizing these results. **Appendix D** provides information on how the volumes were developed for analysis. All study intersections meet existing mobility standards, with the exception of Lancaster Dr SE at the N Santiam Hwy WB Ramps.

Table 5: 2022 Existing Intersection Operations

No.	Intersection	Traffic Control	Operating Standard	AM Peak Hour	PM Peak Hour
1	Lancaster Dr SE/ Rickey St SE	Signalized	LOS E, V/C 0.90	LOS C, V/C 0.47	LOS D, V/C 0.64
2	Macleay Rd SE/ Cordon Rd SE	Signalized	LOS E, V/C 0.90	LOS B, V/C 0.53	LOS B, V/C 0.66
3	Cordon Rd/ Gaffin Rd SE	Signalized	LOS E, V/C 0.90	LOS C, V/C 0.52	LOS C, V/C 0.73
4	Lancaster Dr SE/ N Santiam Hwy WB Ramps	Unsignalized (Two way stop)	LOS E	LOS E (WB)	***LOS F (WB)***
5	Lancaster Dr SE/ N Santiam Hwy EB Ramps	Signalized	LOS E, V/C 0.90	LOS C, V/C 0.39	LOS C, V/C 0.63
6	Lancaster Dr SE/ Cordon Rd SE	Signalized	LOS E, V/C 0.90	LOS B, V/C 0.41	LOS C, V/C 0.48

V/C = Volume-to-Capacity Ratio of Worst Movement
LOS = Level of Service of Worst Movement
Locations exceeding mobility standards are shown with ***bold/italicized***

Crash Analysis

The five most recent years of crash records (Jan 1, 2016- Dec 31, 2020) for the study area were obtained from Oregon Department of Transportation (ODOT's) online database. A copy of these records is provided in **Appendix E**. Crashes identified by ODOT as intersectional for the two cross streets were included in the analysis and compared with ODOT's 90th percentile crash rates from Exhibit 4-1 of ODOT's Analysis Procedures Manual (APM).

All intersections have crash rates below their comparable 90th percentile crash rates except for Lancaster Dr SE at the N Santiam Hwy WB ramps. This location has a 90th percentile crash rate of 0.293 and a calculated crash rate of 0.676. This indicates the location experiences more crashes than others of

[1] *2000 Highway Capacity Manual*, Transportation Research Board, Washington DC, 2000

[2] *Highway Capacity Manual 6th Edition: A Guide for Multimodal Mobility Analysis*, Transportation Research Board, Washington DC, 2016.

similar characteristics throughout the state of Oregon and would benefit from more detailed study beyond the scope of this TIA.

Table 6: Crash Rate Analysis

No.	Intersection	AADT	5 Year Crash Total (2016-2020)	Crash Rate	Intersection Type	90th Percentile Crash Rate
1	Lancaster Dr SE/ Rickey St SE	28,920	42	0.796	4SG	0.860
2	Macleay Rd SE/ Cordon Rd SE	15,590	9	0.316	4SG	0.860
3	Cordon Rd/ Gaffin Rd SE	15,980	14	0.480	4SG	0.860
4	Lancaster Dr SE/ N Santiam Hwy WB Ramps	26,760	33	***0.676***	3ST	0.293
5	Lancaster Dr SE/ N Santiam Hwy EB Ramps	22,100	16	0.397	3SG	0.509
6	Lancaster Dr SE/ Cordon Rd SE	21,040	0	N/A	4SG	0.860

Note: AADT is estimated assuming that the intersection PM Peak Hour traffic is approximately 10% of the AADT.

Locations exceeding 90th percentile crash rates are shown with ***bold/italicized***

** Location does not exist in state database

CHAPTER 3: BACKGROUND TRAFFIC

Full build out of the project is anticipated for the year 2024. To account for traffic growth a 0.88% growth rate is used to forecast the existing traffic volumes to future background traffic volumes on roads within the study area. Background traffic volumes are show in **Figures 4 and 5**.

Background Intersection Operations

Background traffic operations at the study intersections are determined based on the 2016 Highway Capacity Manual methodology[3] for unsignalized intersections and the 2000 Highway Capacity Manual methodology for signalized intersections[4]. The estimated operations of each study intersection are shown in **Table 7**. **Appendix F** provides detailed reports summarizing these results. All study intersections meet mobility standards, with the exception of Lancaster Dr SE at the N Santiam Hwy WB Ramps.

[3] *Highway Capacity Manual 6th Edition: A Guide for Multimodal Mobility Analysis,* Transportation Research Board, Washington DC, 2016.

[4] *2000 Highway Capacity Manual*, Transportation Research Board, Washington DC, 2010.

Table 7: 2024 Background Intersection Operations

No.	Intersection	Traffic Control	Operating Standard	AM Peak Hour	PM Peak Hour
1	Lancaster Dr SE/ Rickey St SE	Signalized	LOS E, V/C 0.90	LOS C, V/C 0.47	LOS D, V/C 0.65
2	Macleay Rd SE/ Cordon Rd SE	Signalized	LOS E, V/C 0.90	LOS B, V/C 0.54	LOS B, V/C 0.68
3	Cordon Rd/ Gaffin Rd SE	Signalized	LOS E, V/C 0.90	LOS C, V/C 0.52	LOS C, V/C 0.75
4	Lancaster Dr SE/ N Santiam Hwy WB Ramps	Unsignalized (Two way stop)	LOS E	***LOS F (WB)***	***LOS F (WB)***
5	Lancaster Dr SE/ N Santiam Hwy EB Ramps	Unsignalized (Two way stop)	LOS E	LOS C, V/C 0.40	LOS C, V/C 0.65
6	Lancaster Dr SE/ Cordon Rd SE	Signalized	LOS E, V/C 0.90	LOS B, V/C 0.41	LOS C, V/C 0.49

V/C = Volume-to-Capacity Ratio of Worst Movement
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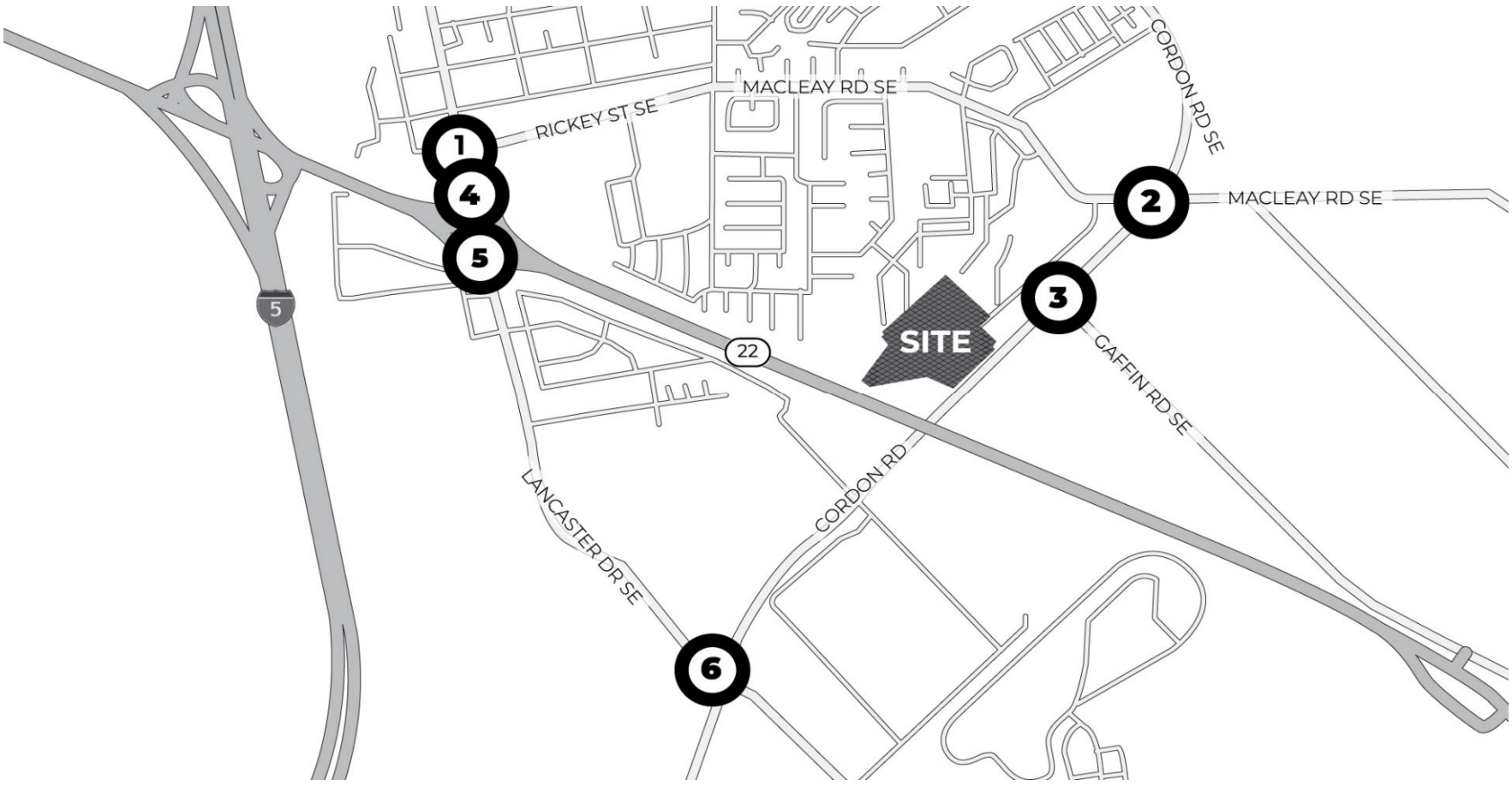
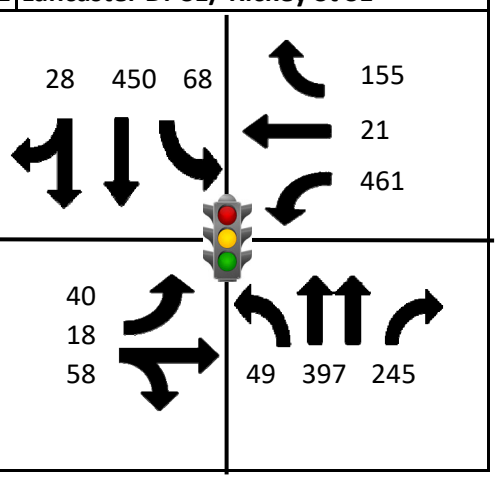
Locations exceeding mobility standards are shown with ***bold/italicized***

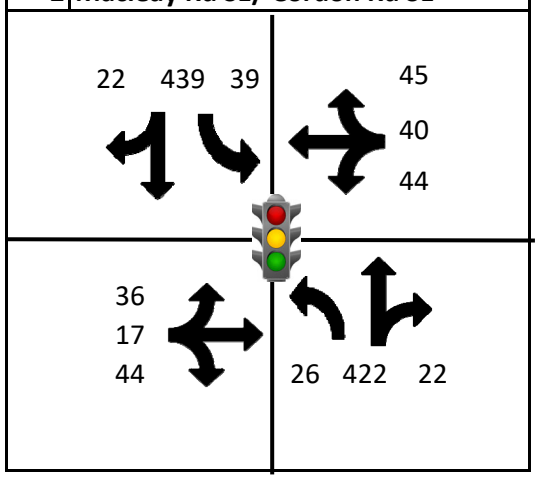
Figure 4: 2024 Background Volumes AM Peak Hour



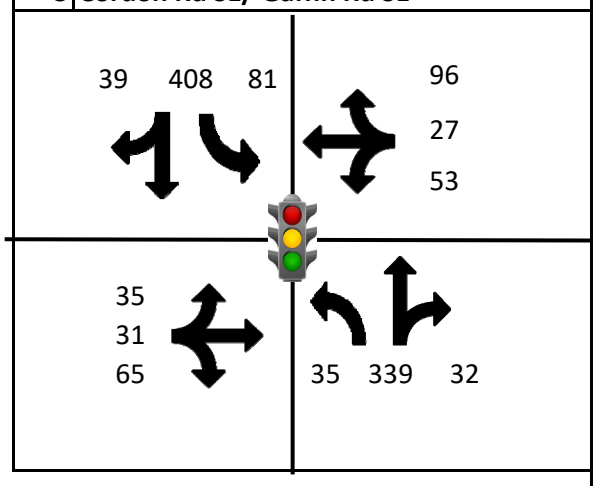
1 Lancaster Dr SE/ Rickey St SE



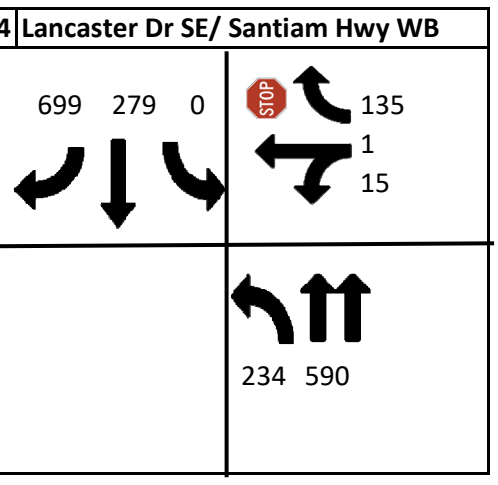
2 Macleay Rd SE/ Cordon Rd SE



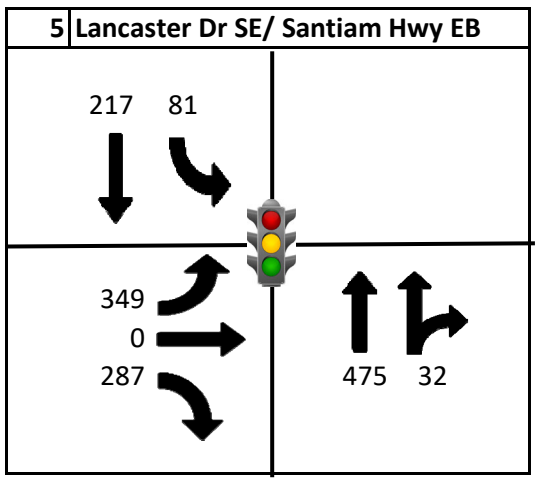
3 Cordon Rd SE/ Gaffin Rd SE



4 Lancaster Dr SE/ Santiam Hwy WB



5 Lancaster Dr SE/ Santiam Hwy EB



6 Cordon Rd SE/ Lancaster Dr SE

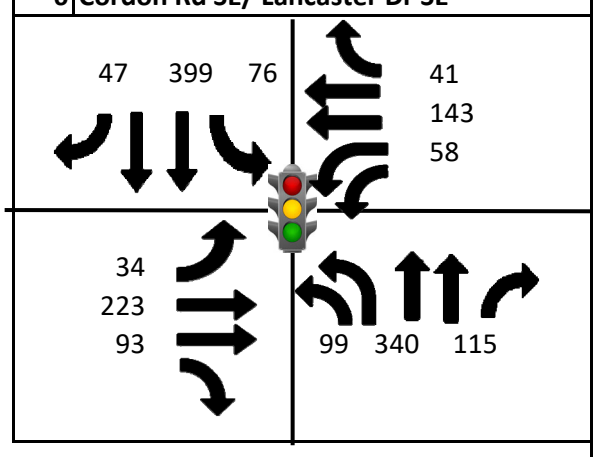
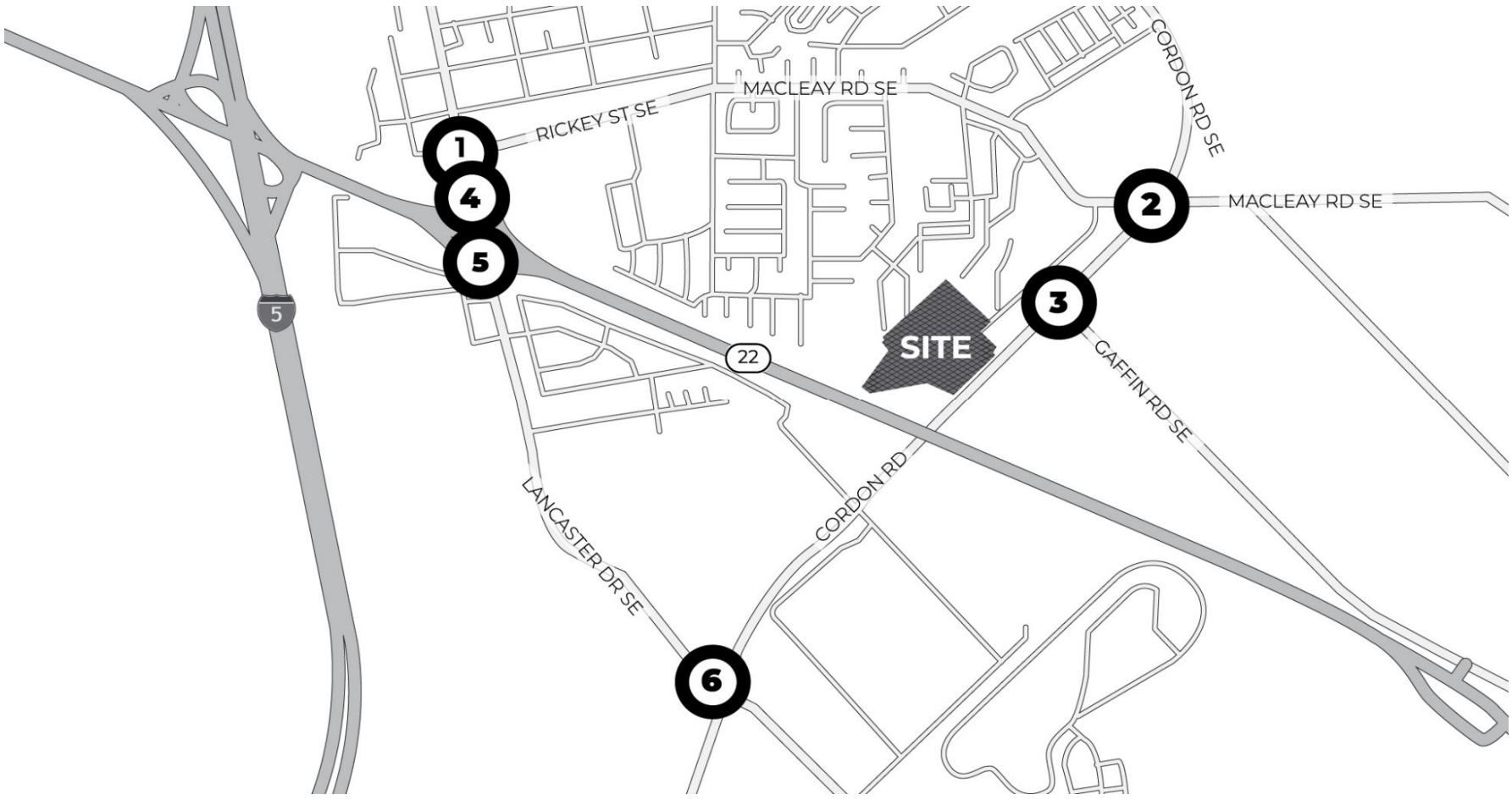
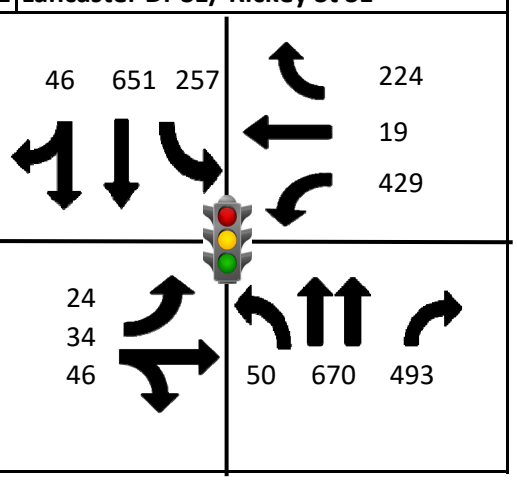


Figure 5: 2024 Background Volumes PM Peak Hour



1 Lancaster Dr SE/ Rickey St SE



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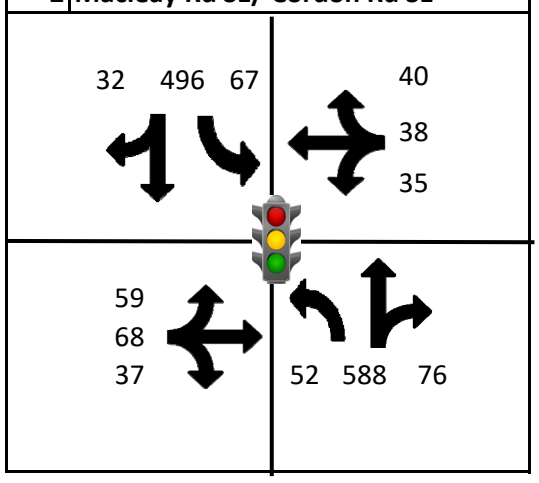
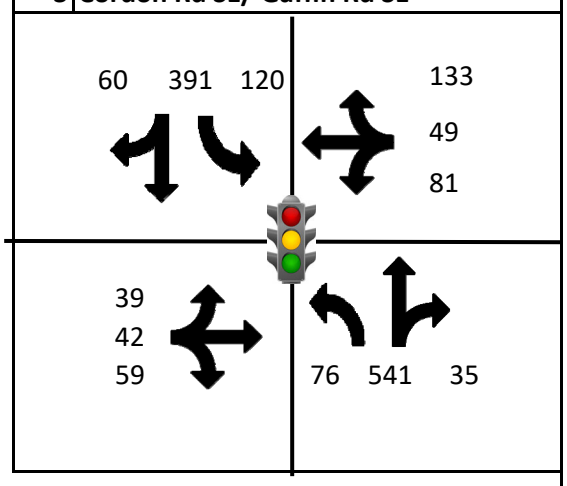
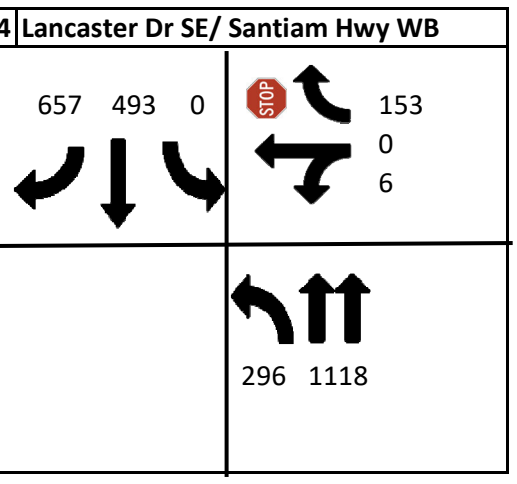


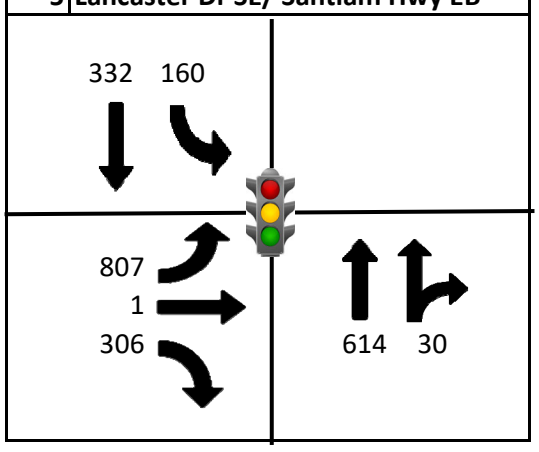
3 Cordon Rd SE/ Gaffin Rd SE



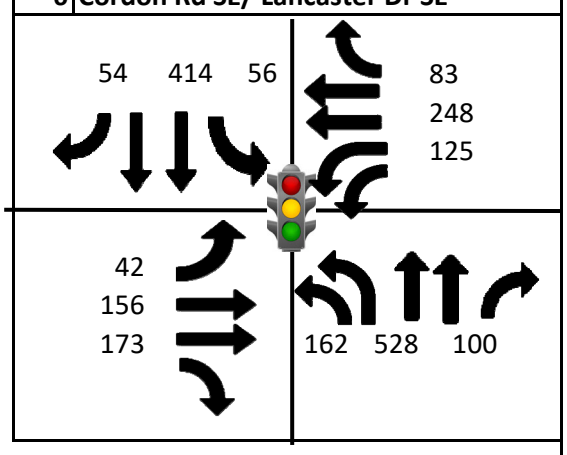
4 Lancaster Dr SE/ Santiam Hwy WB



5 Lancaster Dr SE/ Santiam Hwy EB



6 Cordon Rd SE/ Lancaster Dr SE



CHAPTER 4: PROJECT IMPACTS

This chapter reviews the impacts that the proposed development would have on the study area transportation system. The focus of the impact analysis is on the following study intersections:

1. Lancaster Dr SE/ Rickey St SE
2. Macleay Rd SE/ Cordon Rd SE
3. Cordon Rd/ Gaffin Rd SE
4. Lancaster Dr SE/ N Santiam Hwy WB Ramps
5. Lancaster Dr SE/ N Santiam Hwy EB Ramps
6. Lancaster Dr SE/ Cordon Rd SE

Trip Generation

Trip generation is used to estimate the number of vehicle trips added to the roadway network by a development during a specified period. In this case, the AM and PM peak hour periods are studied. Trip generation estimates are established using data and methodology provided by the Institute of Transportation Engineers (ITE).[5]

Trip generation values for the proposed development are estimated using the ITE Trip Generation Manual, 10th Edition, and the Land Use Code 221: Multi-Family Mid-Rise. Trip numbers are estimated using data provided by ITE for the number of intended dwelling units. The applicant intends to build 396 apartment units. Trip generation values are provided in **Table 8**.

[5] *Trip Generation, 10th Edition*, Institute of Transportation Engineers, 2017.

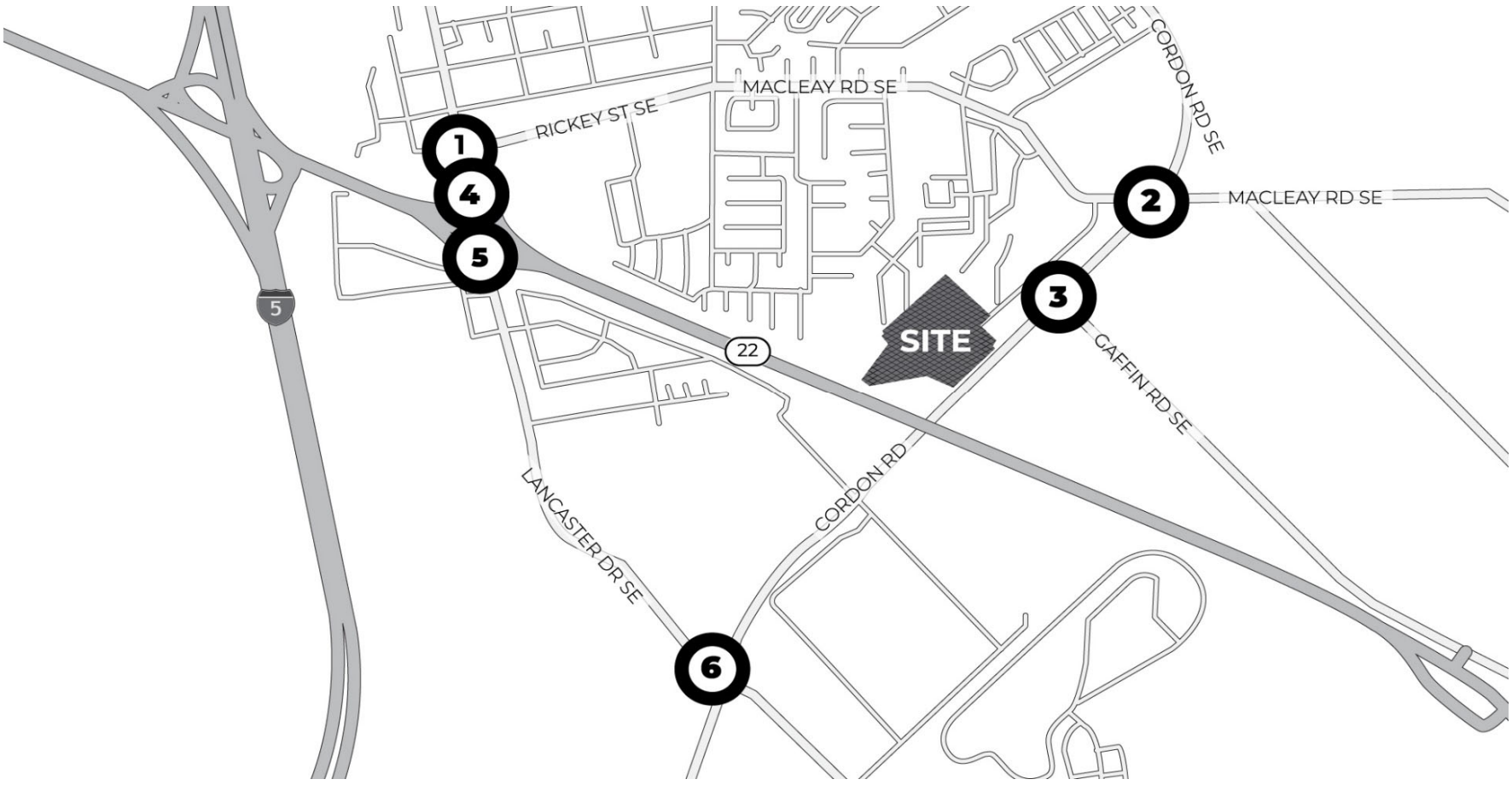
Table 8: Trip Generation Summary

Land Use	Unit of Measure	Time Period	Peak Hour Trips		
			In	Out	Total
Multi-Family Mid-Rise (221)	396 Dwelling Units	AM Peak	34	98	132
Multi-Family Mid-Rise (221)	396 Dwelling Units	PM Peak	101	65	166

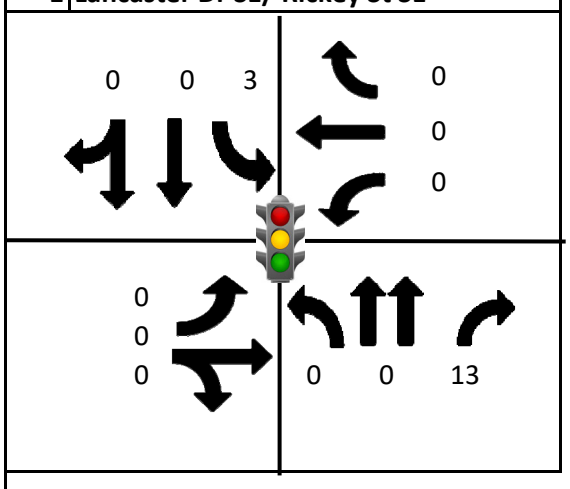
Trip Distribution

Trip distribution provides an estimation of where trips from the development originate and end on the study area network. This is represented as percentages where large portions of the trips generated enter and exit the project study area. The trip distribution percentages are included in **Appendix D**. **Figures 6 and 7** show the trips generated by the study distributed on the network.

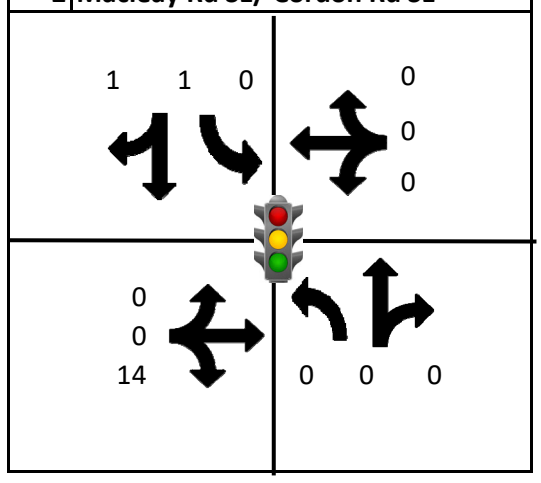
Figure 6: Site Generated Volumes AM Peak Hour



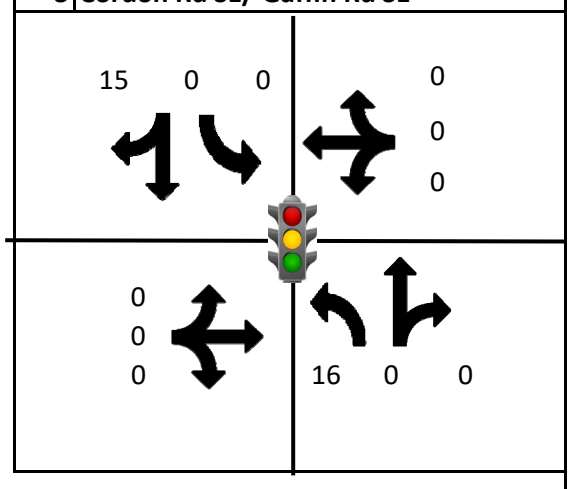
1 Lancaster Dr SE/ Rickey St SE



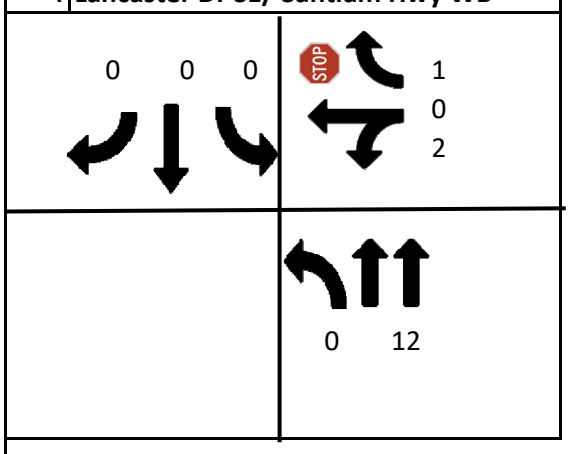
2 Macleay Rd SE/ Cordon Rd SE



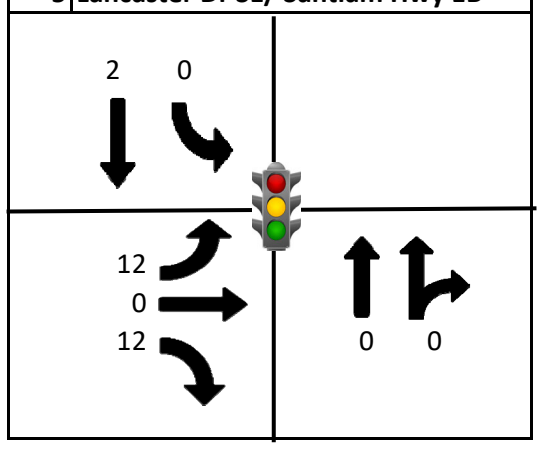
3 Cordon Rd SE/ Gaffin Rd SE



4 Lancaster Dr SE/ Santiam Hwy WB



5 Lancaster Dr SE/ Santiam Hwy EB



6 Cordon Rd SE/ Lancaster Dr SE

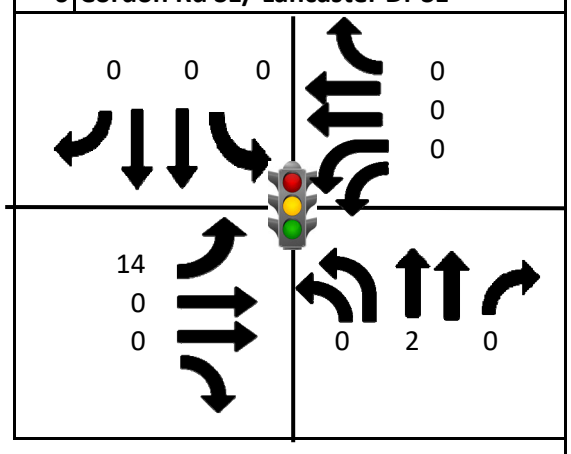
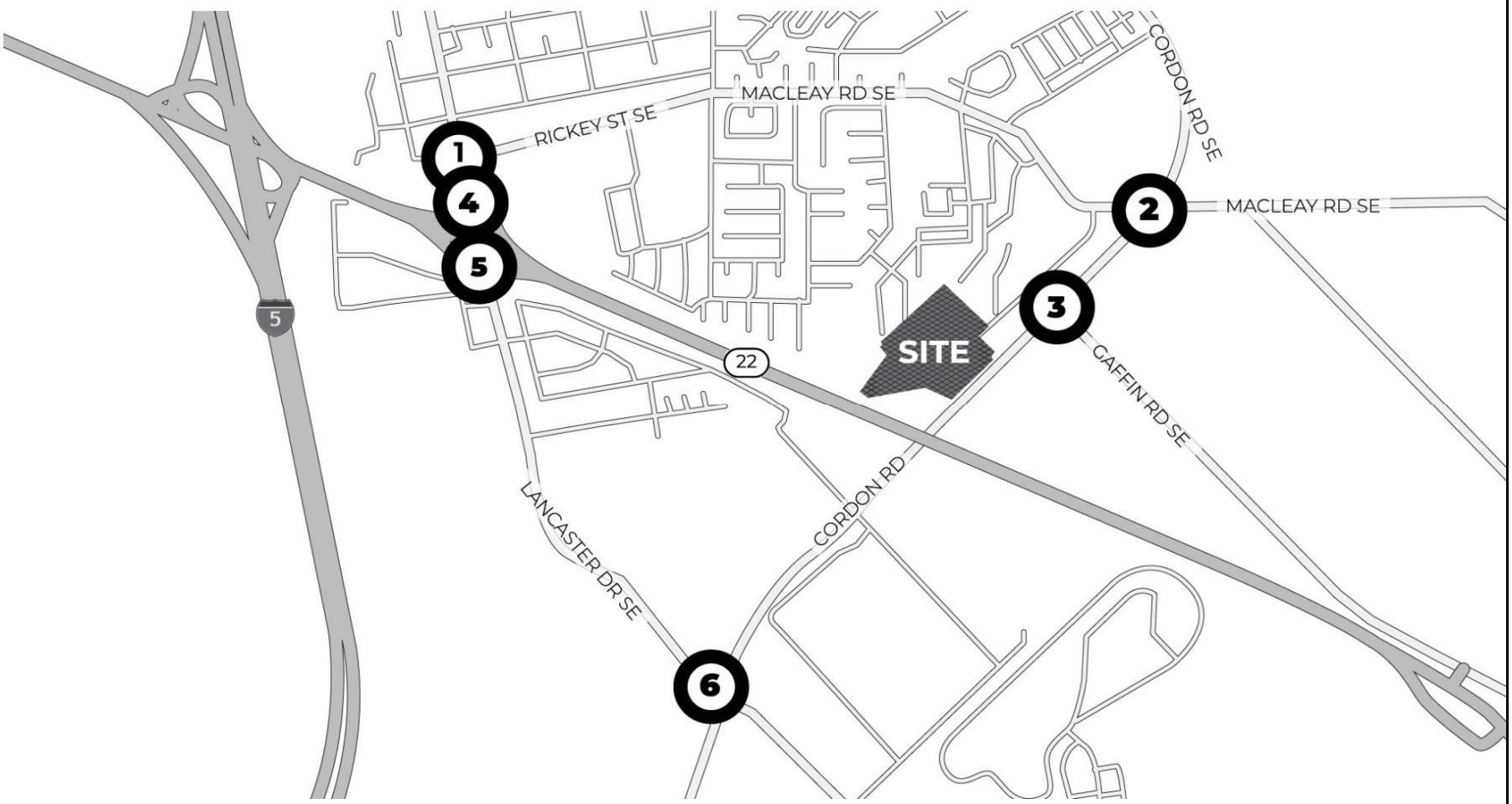
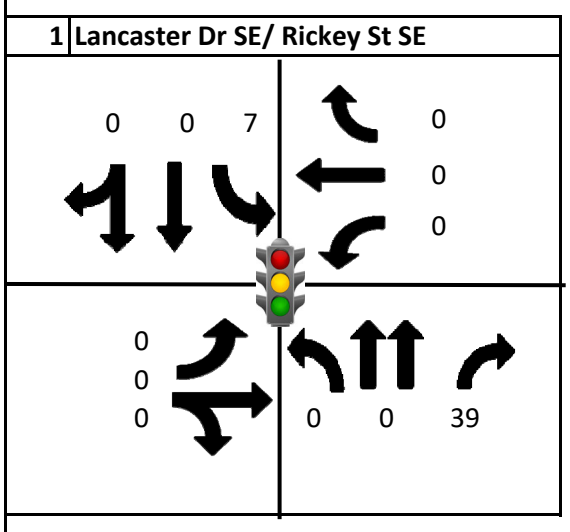
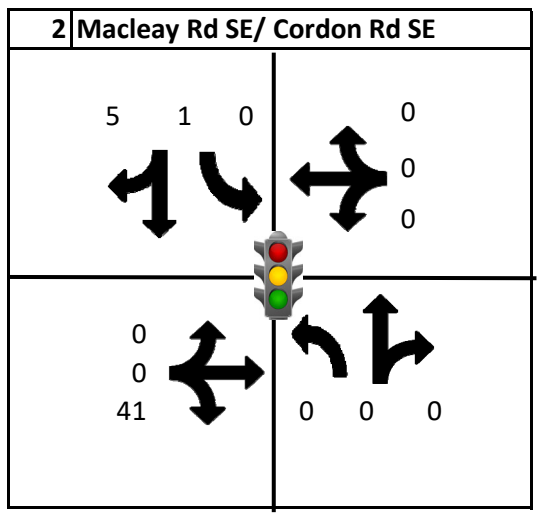
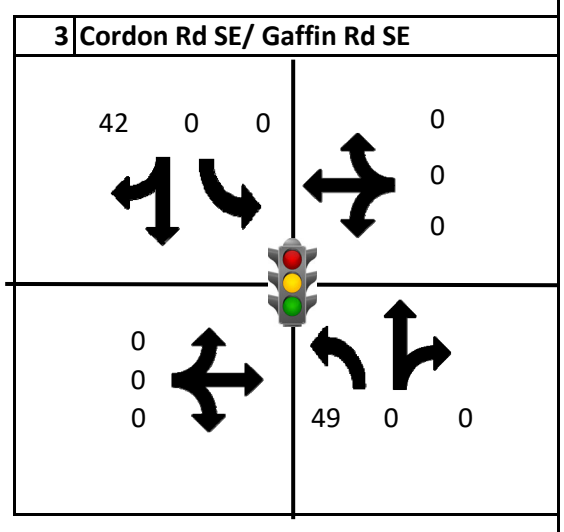


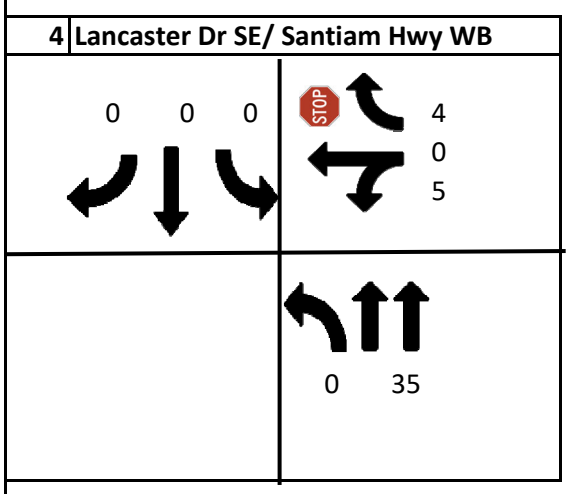
Figure 7: Site Generated Volumes PM Peak Hour

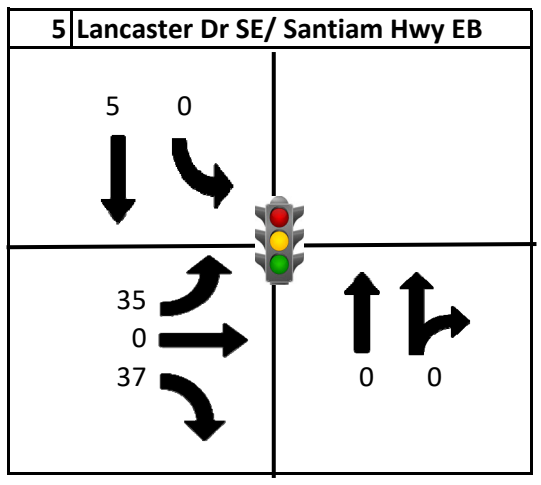


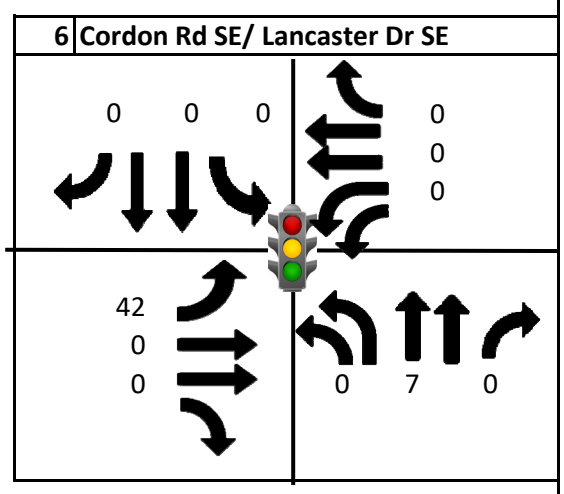












Future Traffic Volumes with the Proposed Development

The estimated trips associated with the proposed development are added to the background volumes to estimate the total traffic scenario traffic volumes. **Figure 8 and Figure 9** show the 2024 total traffic volumes used for the opening year analysis.

Table 9 lists the study intersection total traffic operating conditions for the AM and PM peak hours. Traffic operations at the study intersections are determined for the peak hours based on the 2016 Highway Capacity Manual methodology[6] for unsignalized intersections and the 2000 Highway Capacity Manual methodology for signalized intersections[7]. **Appendix G** provides detailed reports for the operational results.

Based on the operational analysis, all study intersections will function within their applicable mobility standards for the planned opening year with the proposed development, with the exception of Lancaster Dr SE at the N Santiam Hwy WB Ramps.

Table 9: 2024 Total Intersection Operations (with Project)

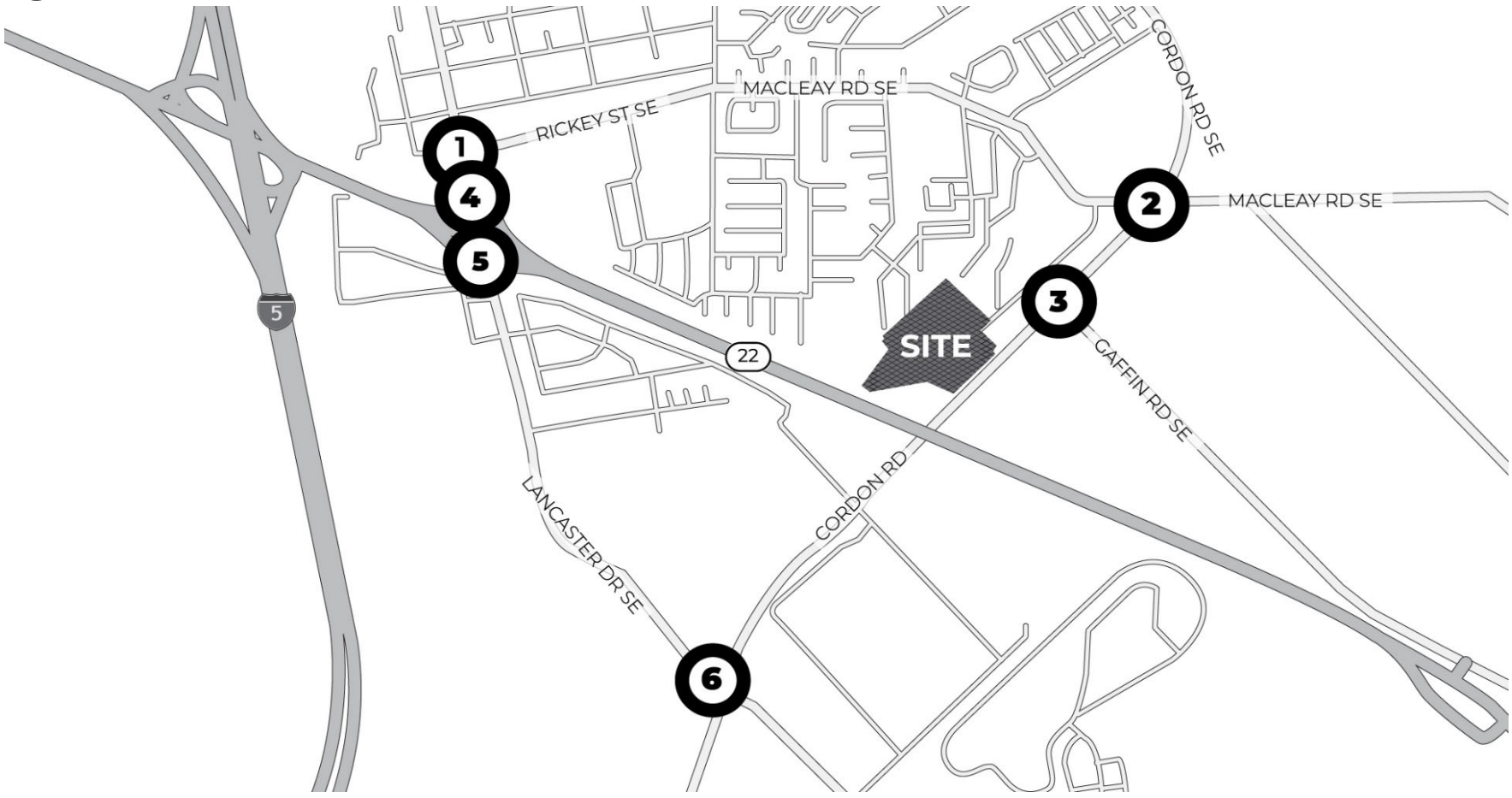
No.	Intersection	Traffic Control	Operating Standard	AM Peak Hour	PM Peak Hour
1	Lancaster Dr SE/ Rickey St SE	Signalized	LOS E, V/C 0.90	LOS C, V/C 0.47	LOS D, V/C 0.65
2	Macleay Rd SE/ Cordon Rd SE	Signalized	LOS E, V/C 0.90	LOS B, V/C 0.54	LOS B, V/C 0.70
3	Cordon Rd/ Gaffin Rd SE	Signalized	LOS E, V/C 0.90	LOS C, V/C 0.54	LOS C, V/C 0.75
4	Lancaster Dr SE/ N Santiam Hwy WB Ramps	Unsignalized (Two way stop)	LOS E	***LOS F (WB)***	***LOS F (WB)***
5	Lancaster Dr SE/ N Santiam Hwy EB Ramps	Unsignalized (Two way stop)	LOS E	LOS C, V/C 0.41	LOS C, V/C 0.66
6	Lancaster Dr SE/ Cordon Rd SE	Signalized	LOS E, V/C 0.90	LOS B, V/C 0.43	LOS C, V/C 0.51

V/C = Volume-to-Capacity Ratio of Worst Movement
LOS = Level of Service of Worst Movement
Locations exceeding mobility standards are shown with ***bold/italicized***

[6] *Highway Capacity Manual 6th Edition: A Guide for Multimodal Mobility Analysis*, Transportation Research Board, Washington DC, 2016.

[7] *2000 Highway Capacity Manual*, Transportation Research Board, Washington DC, 2010.

Figure 8: 2024 Total Volumes AM Peak Hour



1	Lancaster Dr SE/ Rickey St SE
28 450 71	155 21 461
40 18 58	49 397 258

2	Macleay Rd SE/ Cordon Rd SE
23 440 39	45 40 44
36 17 58	26 422 22

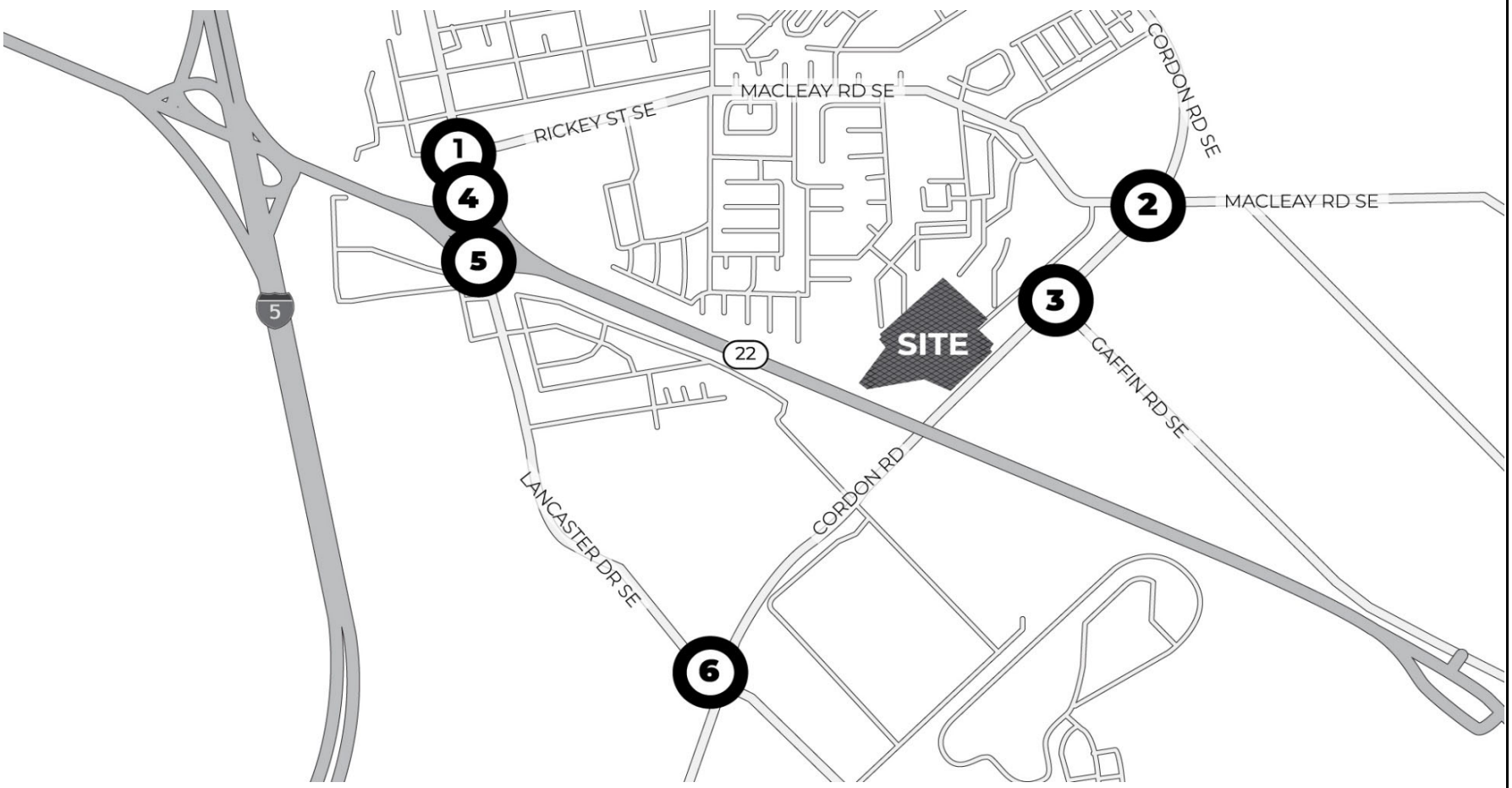
3	Cordon Rd SE/ Gaffin Rd SE
54 408 81	96 27 53
35 31 65	51 339 32

4	Lancaster Dr SE/ Santiam Hwy WB
699 279 0	136 1 17
	234 602

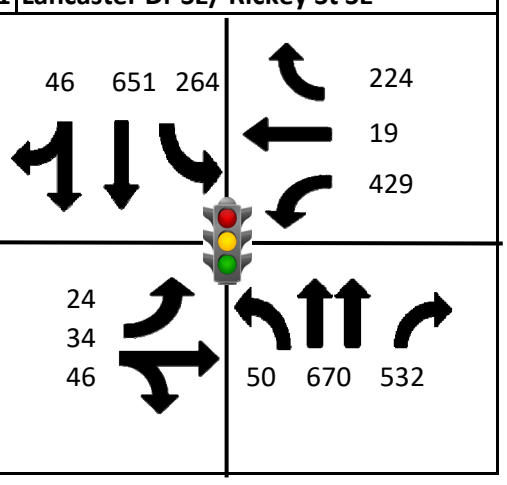
5	Lancaster Dr SE/ Santiam Hwy EB
219 81	
361 0 299	475 32

6	Cordon Rd SE/ Lancaster Dr SE
47 399 76	41 143 58
48 223 93	99 342 115

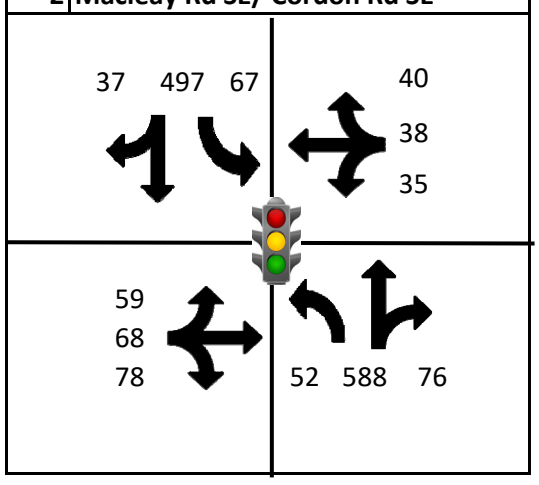
Figure 9: 2024 Total Volumes PM Peak Hour



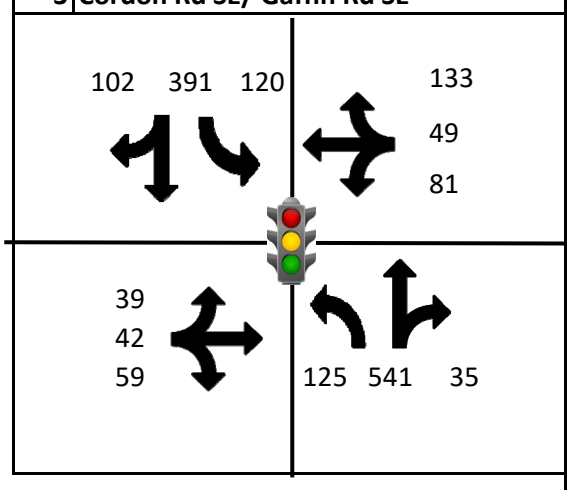
1 Lancaster Dr SE/ Rickey St SE



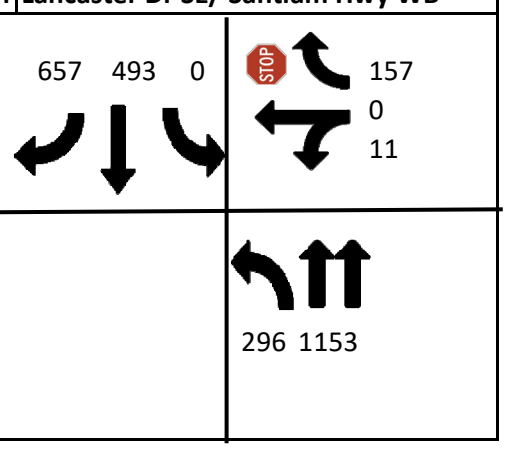
2 Macleay Rd SE/ Cordon Rd SE



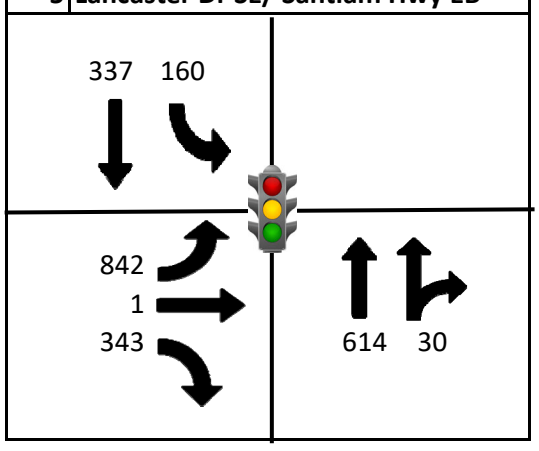
3 Cordon Rd SE/ Gaffin Rd SE



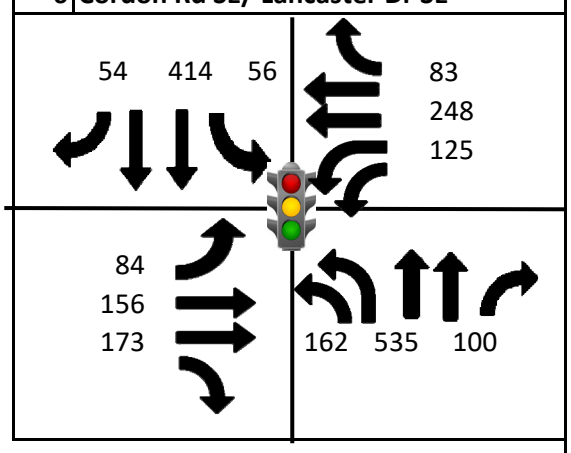
4 Lancaster Dr SE/ Santiam Hwy WB



5 Lancaster Dr SE/ Santiam Hwy EB



6 Cordon Rd SE/ Lancaster Dr SE



Vehicle Queuing Analysis

The City of Salem requires a queuing analysis be included in any TIA to account for queuing on the roadway network. **Table 10** lists the anticipated queuing at the study intersections. Queues are reported at the 95th percentile using Synchro SimTraffic. The model is calibrated using the ODOT Analysis Procedures Manual (APM) SimTraffic guidance. The table identifies locations where the queuing exceeds available storage, however, there is no significant change in storage demands between the 2024 background and 2024 total (with development) scenarios.

Table 10: Vehicle Queuing Analysis

No.	Intersection	Movement	Available Storage (ft)	95th Percentile Queue (ft) (AM/PM)	
				2024 Background	2024 Total Traffic
1	Lancaster Dr SE/ Rickey St SE	NBL	450	110/100	110/105
		SBL	300	195/***305***	255/***310***
		EBL	100	85/80	90/60
		WBL	300	***490/460***	***475/470***
2	Macleay Rd SE/ Cordon Rd SE	NBL	175	30/85	40/110
		SBL	150	55/90	50/70
3	Cordon Rd/ Gaffin Rd SE	NBL	375	75/115	95/200
		SBL	150	115/***175***	125/***160***
		EBL	100	70/70	80/70
		WBL	100	***110/115***	85/***120***
4	Lancaster Dr SE/ N Santiam Hwy WB Ramps	NBL	250	110/125	95/120
		SBR	250	***560/510***	***515/500***
		WBR	50	***80/90***	***85/85***
5	Lancaster Dr SE/ N Santiam Hwy EB Ramps	SBL	250	80/200	80/170
		EBL	625	240/545	245/565
		EBR	275	170/***385***	190/***405***

No.	Intersection	Movement	Available Storage (ft)	95th Percentile Queue (ft) (AM/PM)	
				2024 Background	2024 Total Traffic
6	Lancaster Dr SE/ Cordon Rd SE	NBL	300	105/160	100/185
		SBL	200	110/85	125/95
		SBR	200	45/50	45/65
		EBL	330	75/90	85/145
		EBR	150	60/85	60/100
		WBL	225	100/120	100/120
		WBR	200	70/65	60/65

Key Findings

Key findings associated with the proposed development include the following items:

- The proposed development would generate 132 (34 in, 98 out) AM peak hour trips and 166 (101 in, 65 out) PM peak hour vehicle trips.
- All study intersections are expected to operate within mobility standards, with the exception of Lancaster Dr SE/N Santiam Hwy WB Ramps. This location fails to meet mobility standards in the existing, background, and total traffic scenarios. There is no change in reported LOS between the background (without development) and total (with development) conditions.
- The queuing at some study intersection turn lanes exceeds their available storage, however, there is no significant change in queuing demand between 2024 background (no build) and total (build scenarios).