

TRANSPORTATION IMPACT STUDY

FOR

BREEZE CREEK TRAILS SUBDIVISION

NE IVY AVENUE AT 2ND WAY

CITY OF LA CENTER, WASHINGTON



1/29/2024

PREPARED BY

KELLY ENGINEERING

January 2024

TRANSPORTATION IMPACT STUDY

Breeze Creek Trails Subdivision

City of La Center, Washington

January 29, 2024

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Table of Contents

Traffic Analysis Report
Figure 1a - Vicinity Map
Figure 1b - Aerial Photograph
Figure 1c - Proposed Development Plan
Figure 2 - Lane Configurations
Figures 3a, 3b - Existing Traffic Volumes
Figures 4a, 4b - In-Process Traffic
Figures 5a, 5b - Year 2027 Traffic Volumes w/o Project
Figures 6a, 6b - Site Traffic Distribution/Assignment
Figures 7a, 7b - Year 2027 Traffic Volumes with Project
Appendix A - Raw Traffic Count Data
Appendix B - In-Process Traffic
Appendix C - Collision Data
Appendix D - Level of Service Computer Printouts
Appendix E - References

TRANSPORTATION IMPACT STUDY

BREEZE CREEK TRAILS SUBDIVISION

January 29, 2024

INTRODUCTION

A transportation impact study (TIS) for the Breeze Creek Trails Subdivision was conducted to determine the potential traffic related impacts of the development to the surrounding roadway system. The development will consist of 15 single family detached homes. The site is undeveloped with no existing buildings or structures. The site is located south of NE Ivy Avenue and west of 2nd Way (Parcel 986044822) in La Center, Washington. The zoning designation for the 4.87 acre site is LDR-7.5 (Low Density Residential).

Land uses within the vicinity of the site consist of single family homes. A vicinity map, aerial photograph and proposed development plan are shown in Figures 1a, 1b and 1c.

Roadway Characteristics

The site access is via the existing driveway which becomes Ivy Street. This gravel driveway will be closed with the development and all new traffic will go east to NE Lockwood Creek Road through the Holley Park Subdivision. The existing public street to the east is 2nd Way.

NE Lockwood Creek Road is a two lane paved roadway with intermittent curbs and sidewalks. The roadway is classified as a Minor Arterial. The posted speed limit is 25 mph.

The study area intersections in this report are controlled by stop signs on the minor street approaches. The lane configurations for the intersections are shown in Figure 2.

Traffic Volumes

The traffic counts in this report were conducted from 7:00 to 9:00 am and 4:00 to 6:00 pm during June and July 2023 and January 2024. The traffic counts were conducted to determine the peak hours. The peak hour at an intersection is the one hour time period when traffic on the adjacent streets are the highest and congestion is most likely to occur. The existing traffic volumes are shown in Figures 3a and 3b. The raw traffic count data is included in Appendix A.

Trip Generation/Distribution

The Breeze Creek Trails Subdivision will generate approximately 141 trips per day. A trip is a one directional vehicle movement. 11 trips will occur during the weekday AM peak hour and 14 trips will occur during the PM peak hour, ITE Trip Generation Manual, 11th edition. The trip generation rates are shown in Table 1.

Table 1
Site Traffic Generation

Land Use	ITE code	Dwelling Units	Daily Trips	AM Peak Hour Trips	PM Peak Hour Trips
<i>Proposed Single Family Detached Housing</i>	210	15	141	11 (in-2, out-9)	14 (in-9, out-5)

The directional distribution of traffic generated by the development was assigned to the study area intersections. The distribution was based on the existing traffic volumes and previous traffic studies conducted in the area. The site traffic distribution and assignment diagrams are shown in Figures 6a and 6b.

Year 2027 Traffic Volumes

The year 2027 traffic volumes included a 2.0 percent per year compounded growth factor over the existing traffic volumes and in-process traffic. In-process traffic is traffic from developments that have been approved, but are not generating full build out traffic volumes. The in-process traffic was obtained from the City of La Center and is shown in Figures 4a, 4b and Appendix B. The in-process traffic for the Minit Management development was obtained from Charbonneau Engineering LLC. The in-process traffic included traffic from the Stephens Hillside Farm Subdivision, Asa's View Manor Subdivision, Valley View Subdivision, Lockwood Meadows and Minit Management developments. The Minit Management development is currently under construction on the NW corner of the NW Paradise Park Road/NW La Center Road intersection.

The year 2027 traffic volumes without the project are shown in Figures 5a and 5b. The year 2027 traffic volumes with the project are shown in Figures 7a and 7b.

Peak Hour Traffic Operations

The scope of the TIS was based on correspondence with representatives from the City of La Center and the Pre-application conference notes for the project. Based on the correspondence and notes an analysis was conducted at the following intersections during the weekday AM and PM peak hours:

- (1) Johnstorn Avenue & Lockwood Creek Road
- (2) 4th Street & Highland Avenue
- (3) Aspen Avenue & 4th Street
- (4) La Center Road & Timmen Road
- (5) La Center Road & Paradise Park Road

The study area intersections were analyzed to determine existing, year 2027 without and year 2027 with project conditions. The assumption was made that the Breeze Creek Trail Subdivision will be built out and occupied within a three year time period.

The intersection operational analysis was conducted using the procedures in the 2010 Highway Capacity Manual. These procedures describe the operation of an intersection in terms of its level of service (LOS). The LOS criteria ranges from "A", which indicates little, if any, delay to "F", which indicates that vehicles experience very long delays. The LOS criteria with the corresponding delay in seconds per vehicle is shown in Table 2. The capacity analysis summary is shown in Table 3 on page 4.

Table 2
Level of Service Criteria

Level of Service (LOS)	A	B	C	D	E	F
<i>Unsignalized intersections</i>						
Average Delay (seconds per vehicle)	≤10	>10 - 15	>15 - 25	>25 - 35	>35 - 50	>50

Table 3
Capacity Analysis Summary

	AM Peak Hour		PM Peak Hour	
	LOS	Delay (sec/veh)	LOS	Delay (sec/veh)
<i>Johnstorm Avenue & Lockwood Creek Road</i>				
Existing	C	16.2	B	10.5
Year 2027 w/o Project	C	24.6	B	12.7
Year 2027 with Project	D	26.3	B	12.9
<i>4th Street & Highland Avenue</i>				
Existing	C	21.8	C	17.7
Year 2027 w/o Project	D	33.2	D	34.3
Year 2027 with Project	D	34.1	E	35.1
<i>Aspen Avenue & 4th Street</i>				
Existing	C	16.4	B	12.1
Year 2027 w/o Project	C	21.7	C	16.2
Year 2027 with Project	C	22.0	C	16.8
<i>La Center Road & Timmen Road</i>				
Existing	B	11.1	C	20.4
Year 2027 w/o Project	B	12.4	C	23.4
Year 2027 with Project	B	12.4	C	23.6
<i>La Center Road & Paradise Park Road</i>				
Existing	C	20.4	D	34.1
Year 2027 w/o Project	E	45.7	F	83.0
Year 2027 with Project	E	46.8	F	84.7

The City of La Center has adopted LOS “E” as the minimum acceptable performance at city intersections for stop controlled intersections. Based on the results of the capacity analysis this LOS will be met with build out of the Breeze Creek Trails Subdivision with the exception of the NW Paradise Park Road/NW La Center Road intersection. This intersection is projected to operate at LOS “F” during the PM peak hour. The LOS is attributed to build out of the Minit Management development which is currently under construction. The LOS computer printouts are included in Appendix D.

Pedestrian/Bicycle/Transit Considerations

Minimal pedestrian and no bicycle activities were observed during field observations within the vicinity of the site on 2nd Way. There are no existing or planned bike lanes. The site is not served by public transit service.

Sight Distance

Sight distance was measured at the intersection of Lockwood Creek Road at Johnstorm Avenue. The measured intersection sight distance was over 280 feet when looking towards the west and east. Based on the criteria in AASHTO, A Policy on Geometric Design of Highways and Streets, 2011 and the posted speed limit of 25 mph on Lockwood Creek Road the recommended intersection sight distance is 280 feet. Therefore, the sight distance requirement is met.

Turn Lanes

A left turn lane improves safety and increases the capacity of the roadway by reducing the speed differential between the through and left turning vehicles. A left turn lane exists for vehicles turning left from Lockwood Creek Road onto Johnstorm Avenue.

Transportation Improvements

Staff from the City of La Center have indicated discussions about a roundabout at the Paradise Park Road/La Center Road intersection. A roundabout at the Timmen Road/La Center Road intersection was also mentioned and is TIF eligible.

Traffic Signal Warrant Analysis

A traffic signal warrant analysis using the tables and charts from the 2009 Manual on Uniform Traffic Control Devices (MUTCD) was conducted at the NW Paradise Park Road/NW La Center Road intersection. This intersection is projected to operate at LOS "F" with build out of the Minit Management development. The signal warrant analysis was based on the year 2027 traffic conditions with project. Based on the traffic signal warrant analysis a traffic signal is not justified. The signal warrant analysis is shown in Table 4 on page 6.

Table 4
Traffic Signal Warrant Analysis
Paradise Park Road/La Center Road, Year 2027 with Project Conditions, PM Peak hour

MUTCD Traffic Signal Warrant	Required Volumes (Veh./Hr.)		Projected Volumes (Veh./Hr.)		Warrant Met
	Major Street	Minor Street	Major Street	Minor Street	
1. Condition A – Minimum Vehicular Volume (1)	500	200	1469 (1)	81 (1)	NO
2. Condition B – Interruption of Continuous Traffic (1)	750	100	1469 (1)	81 (1)	NO
3. Peak Hour	Figure 4C-3. Warrant 3, (MUTCD)				NO

(1) Warrant met if 1A or 1B is met.

Collision Data

Collision data was obtained from the Washington State Department of Transportation (WSDOT) for the most recent three years of available data. Based on the available data the calculated accident rates do not exceed 1.0 accidents per MEV (million entering vehicles) that usually identifies an intersection with a high accident rate. The collision data is shown in Table 5 and Appendix C.

Table 5
Collision Data

Intersection	Number of Collisions	Collision Type			Rate*
		Fixed Object	Angle	Straight Ahead	
Johnstorm Avenue & Lockwood Creek Road	3	1	2		0.82
4 th Street & Highland Avenue	0				
Aspen Avenue & 4 th Street	0				
La Center Road & Timmen Road	4	2	1	1	0.30
La Center Road & Paradise Park Road	1		1		0.08

* accident rate per MEV (million entering vehicles)

CONCLUSIONS AND RECOMMENDATIONS

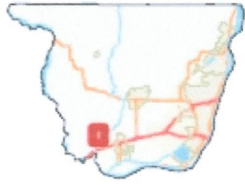
The Breeze Creek Trails Subdivision is anticipated to generate 11 trips during the AM peak hour and 14 trips during the PM peak hour. This is based on a development consisting of 15 single family detached homes.

All of the study area intersections are projected to operate at acceptable levels in the year 2027 with the exception of the NW Paradise Park Road/NW La Center Road intersection. This intersection is projected to operate at LOS "F" during the PM peak hour for vehicles approaching NW La Center Road from the north. This will occur with build out of the Minit Management development. The failing condition would be mitigated by installing a roundabout. A traffic signal is not justified at the intersection.

The NW Paradise Park Road/NW La Center Road and NW Timmen Road/NW La Center Road intersections are both under consideration to be reconstructed as roundabouts. However, justification for a roundabout is currently met at only the NW Paradise Park Road/NW La Center Road intersection.

Adequate sight distance should be maintained at both site accesses onto Aspen Avenue. Obstructions by vegetation, signs or other objects should not be allowed.

No additional transportation improvements or traffic control devices were identified to accommodate the development.



Legend

- ☐ Taxlots

Notes:

1: 18,056



This map was generated by Clark County's "MapsOnline" website. Clark County does not warrant the accuracy, reliability or timeliness of any information on this map, and shall not be held liable for losses caused by using this information. Taxlot (i.e., parcel) boundaries cannot be used to determine the location of property lines on the ground.

9.3 0 1,504.67 3,009.3 Feet

i: 1984_Web_Mercator_Auxiliary_Sphere
: County, WA. GIS - <http://gis.clark.wa.gov>

FIGURE 1a

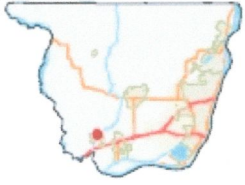


1: 2,257

This map was generated by Clark County's "MapsOnline" website. Clark County does not warrant the accuracy, reliability or timeliness of any information on this map, and shall not be held liable for losses caused by using this information. Taxlot (i.e., parcel) boundaries cannot be used to determine the location of property lines on the ground.

2 0 188.08 376.2 Feet

1984_Web_Mercator_Auxiliary_Sphere
County, WA. GIS - <http://gis.clark.wa.gov>



Legend

- Building Footprints
- Taxlots

Notes:

FIGURE 1b

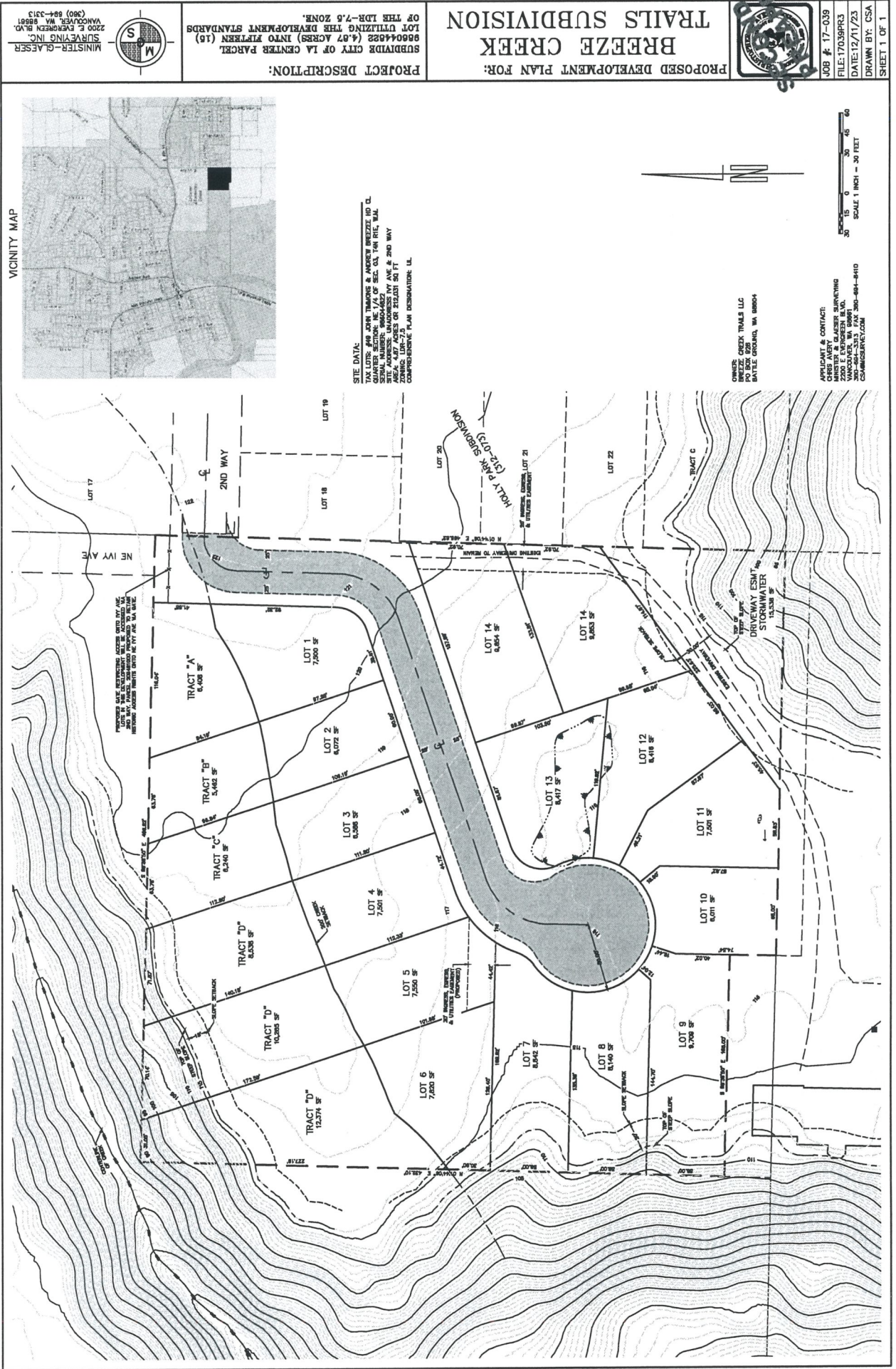


FIGURE 1c



NOT TO SCALE

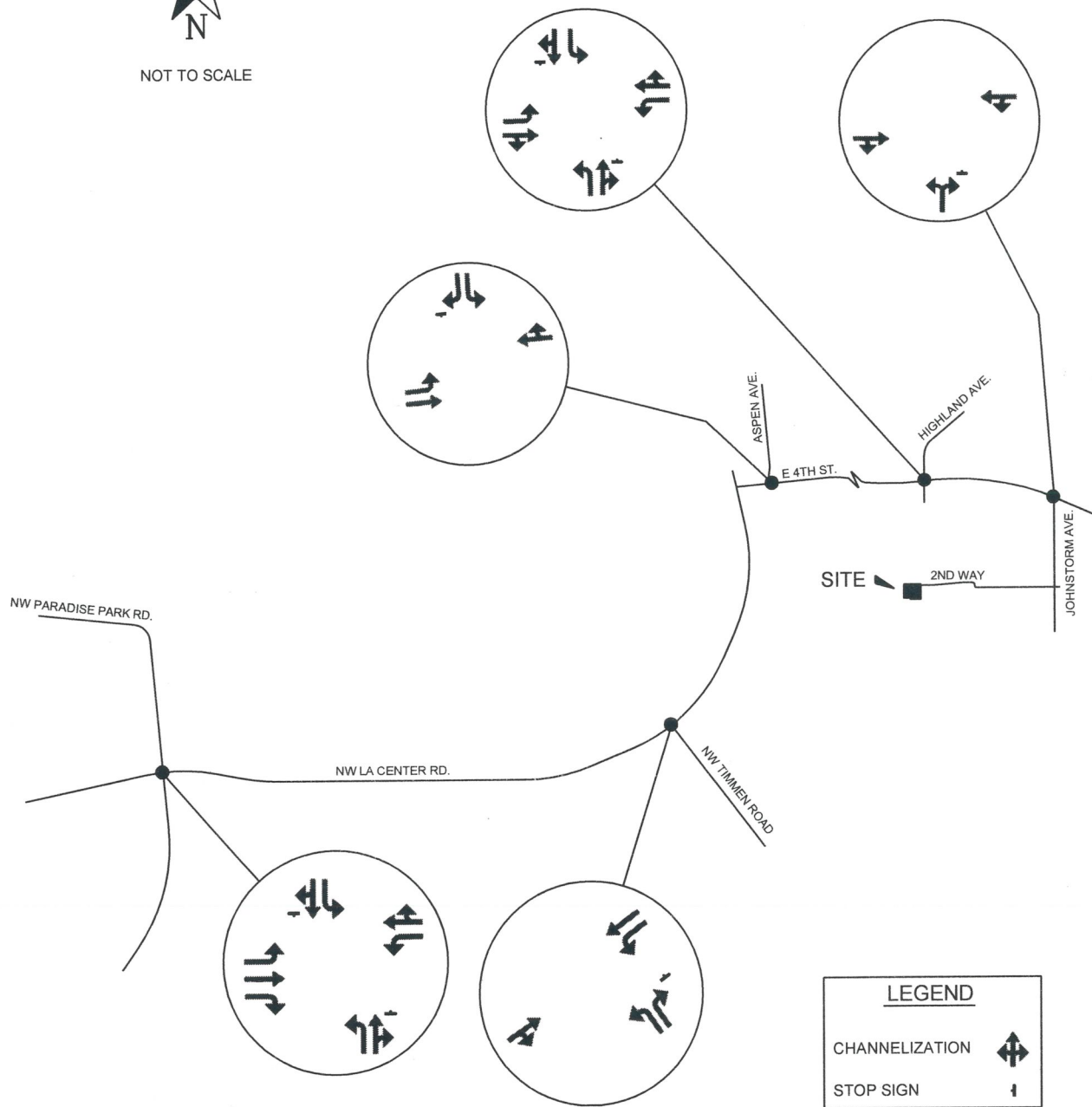


FIGURE 2
LANE CONFIGURATIONS
EXISTING CONDITIONS

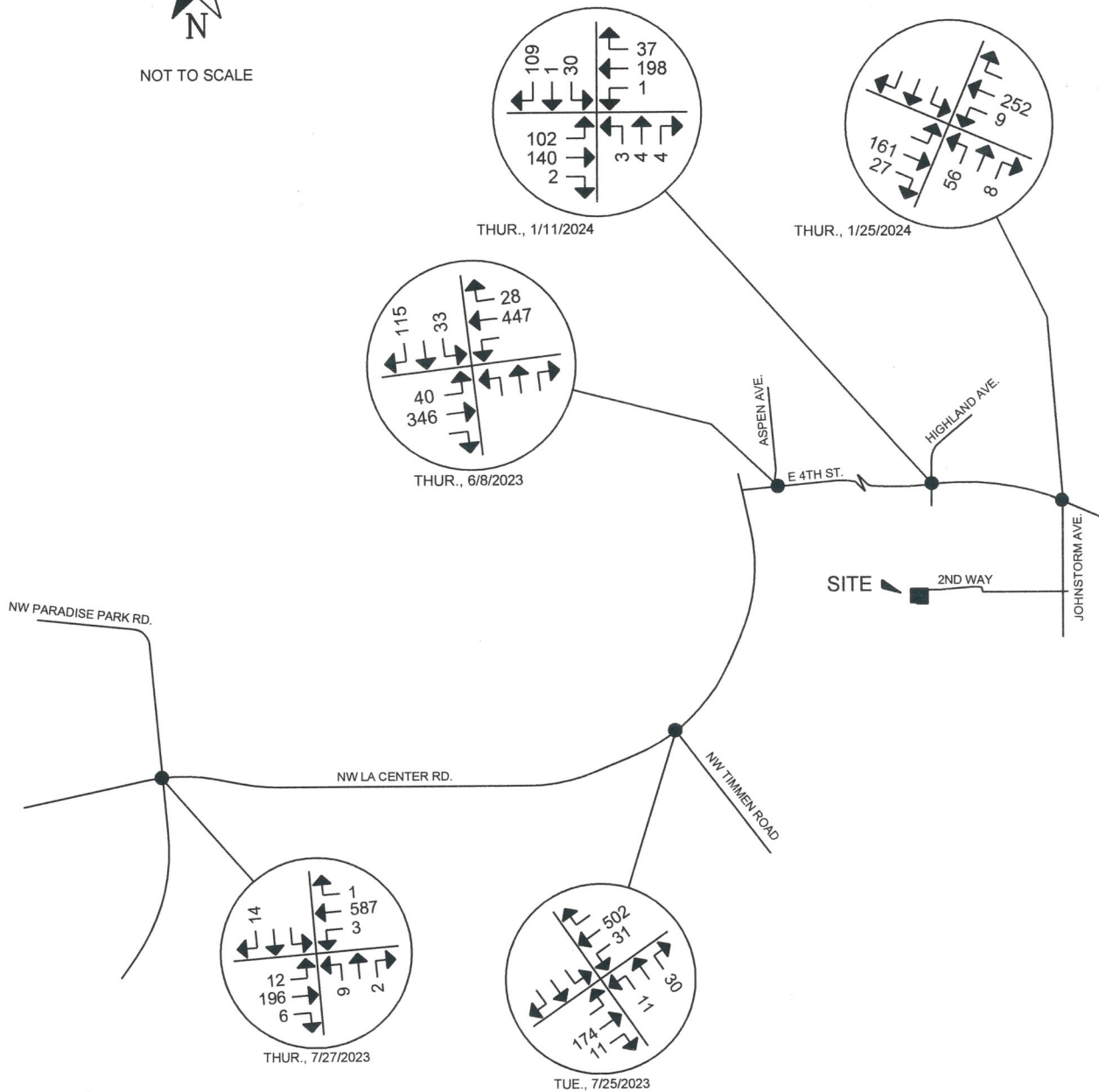
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NOT TO SCALE



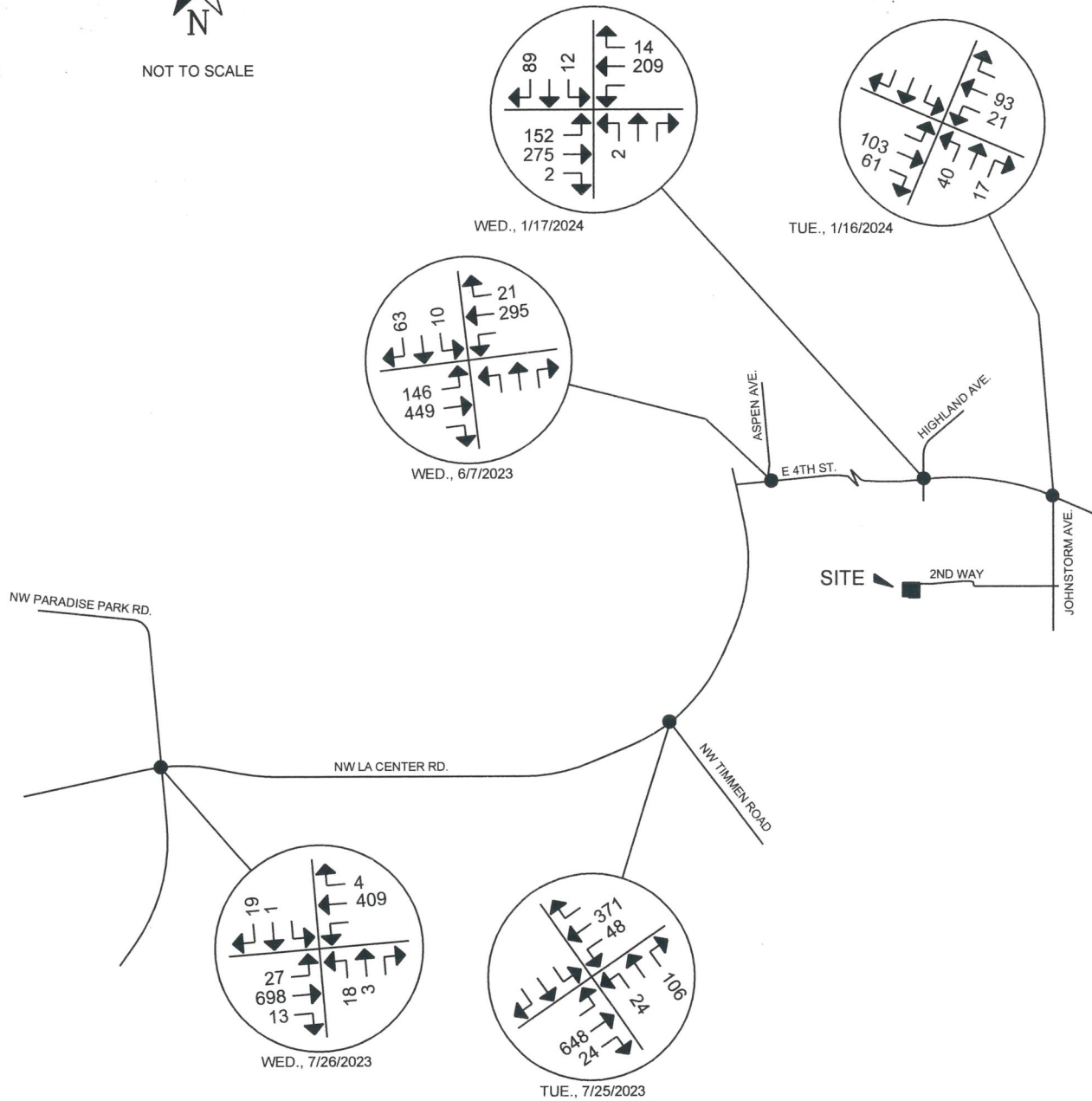
BREEZE CREEK TRAILS SUBDIVISION

FIGURE 3a
EXISTING TRAFFIC VOLUMES
AM PEAK HOUR

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NOT TO SCALE



BREEZE CREEK TRAILS SUBDIVISION

FIGURE 3b
EXISTING TRAFFIC VOLUMES
PM PEAK HOUR

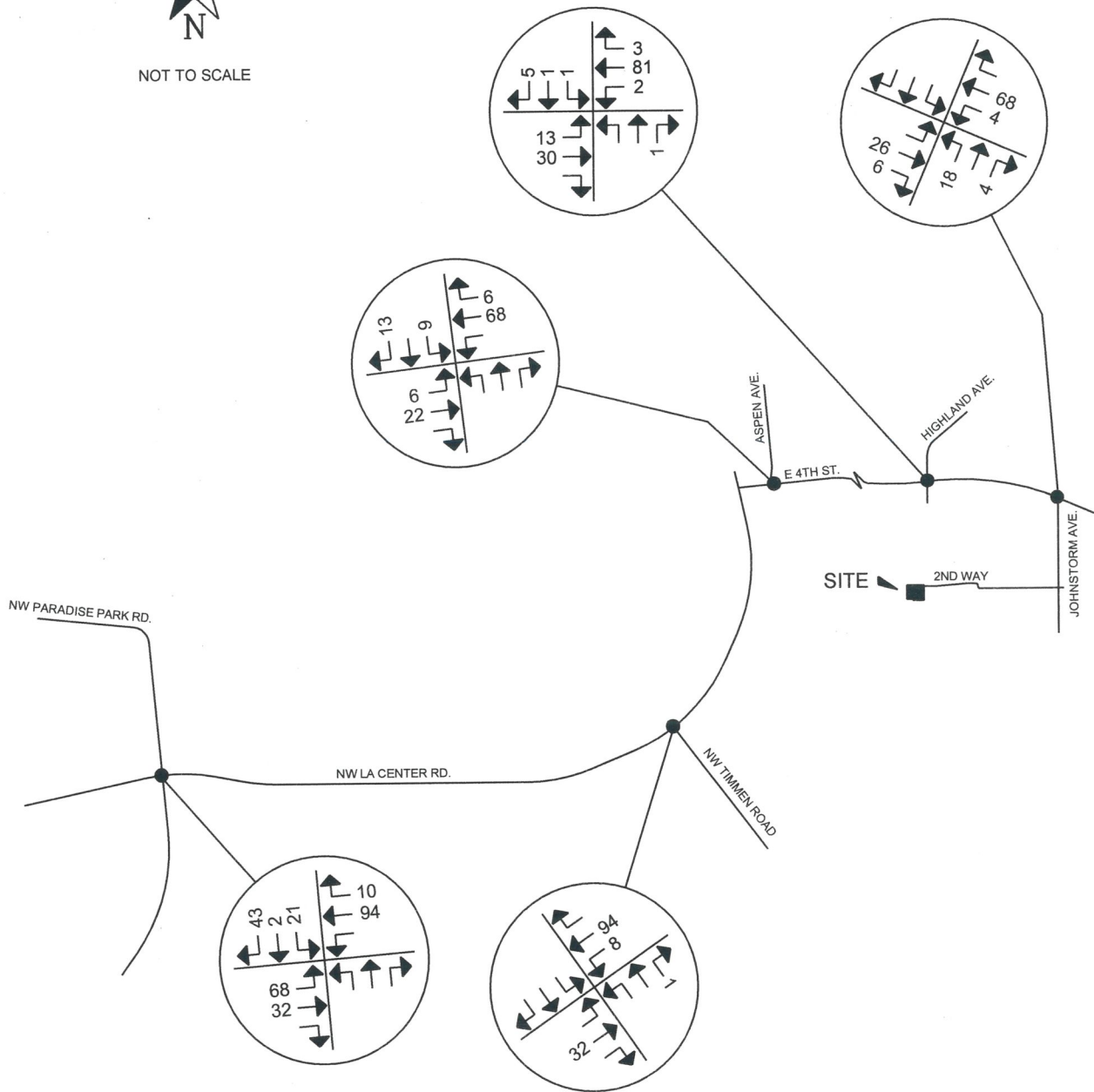
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NOT TO SCALE



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FIGURE 4a
IN-PROCESS TRAFFIC
AM PEAK HOUR

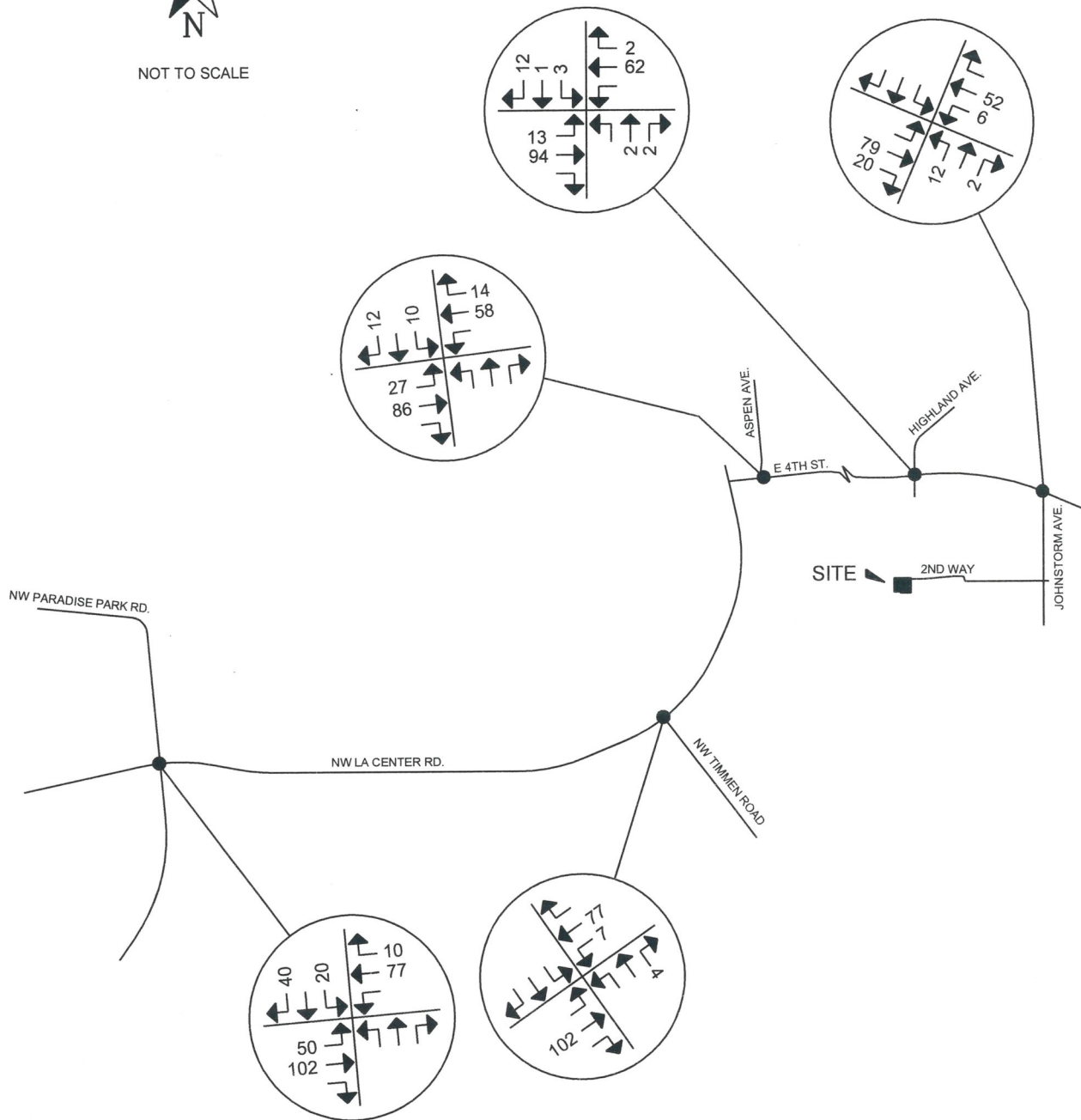
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BREEZE CREEK TRAILS SUBDIVISION

FFIGURE 4b
IN-PROCESS TRAFFIC
PM PEAK HOUR

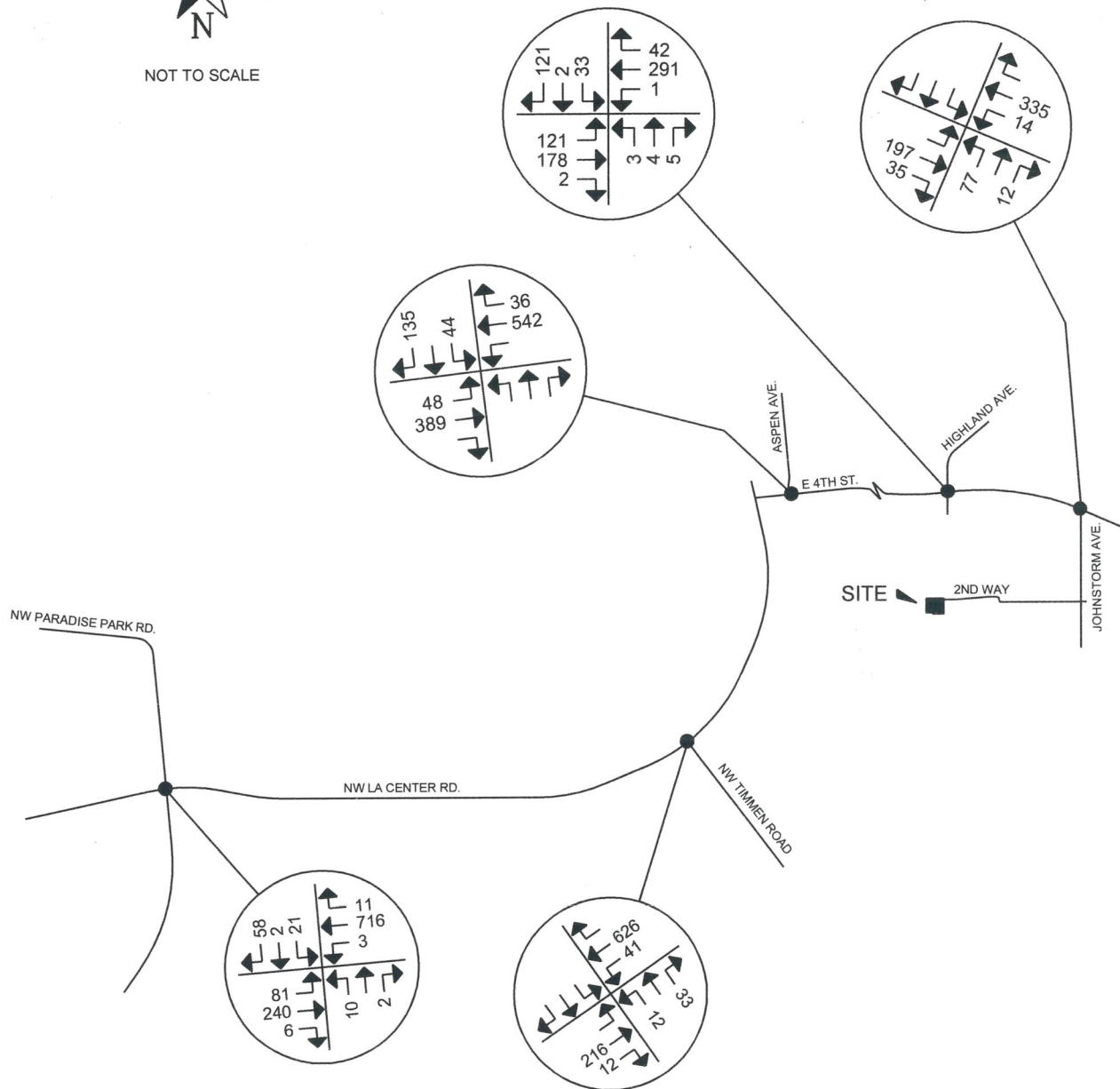
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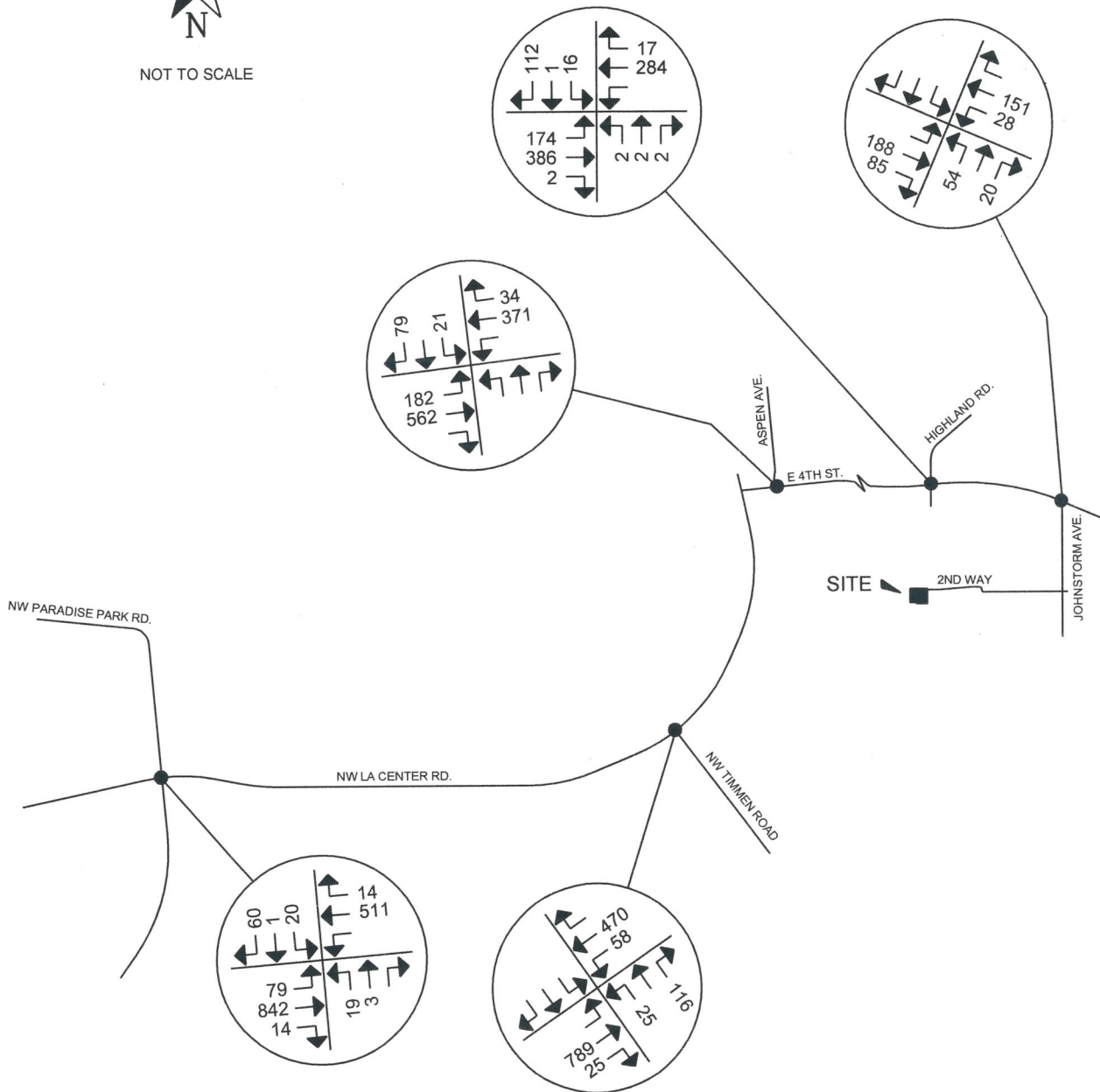
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FIGURE 5a
YEAR 2027 TRAFFIC VOLUMES
W/O PROJECT, AM PEAK HOUR

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BREEZE CREEK TRAILS SUBDIVISION

FIGURE 5b
YEAR 2027 TRAFFIC VOLUMES
W/O PROJECT, PM PEAK HOUR

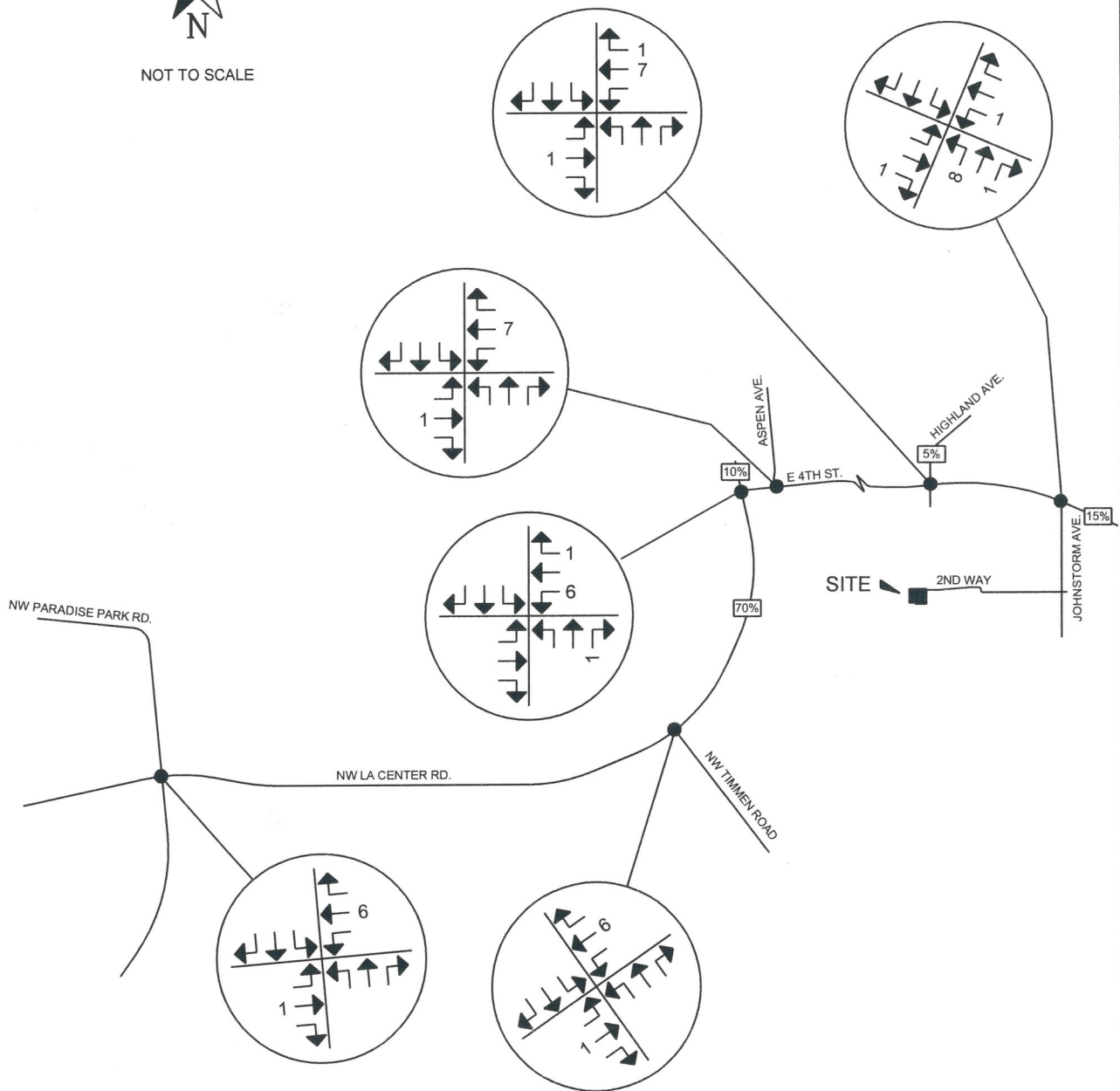
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NOT TO SCALE



AM PEAK HOUR SITE TRIPS:
IN-2, OUT-9

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FIGURE 6a
**SITE TRAFFIC DISTRIBUTION/
ASSIGNMENT, AM PEAK HOUR**

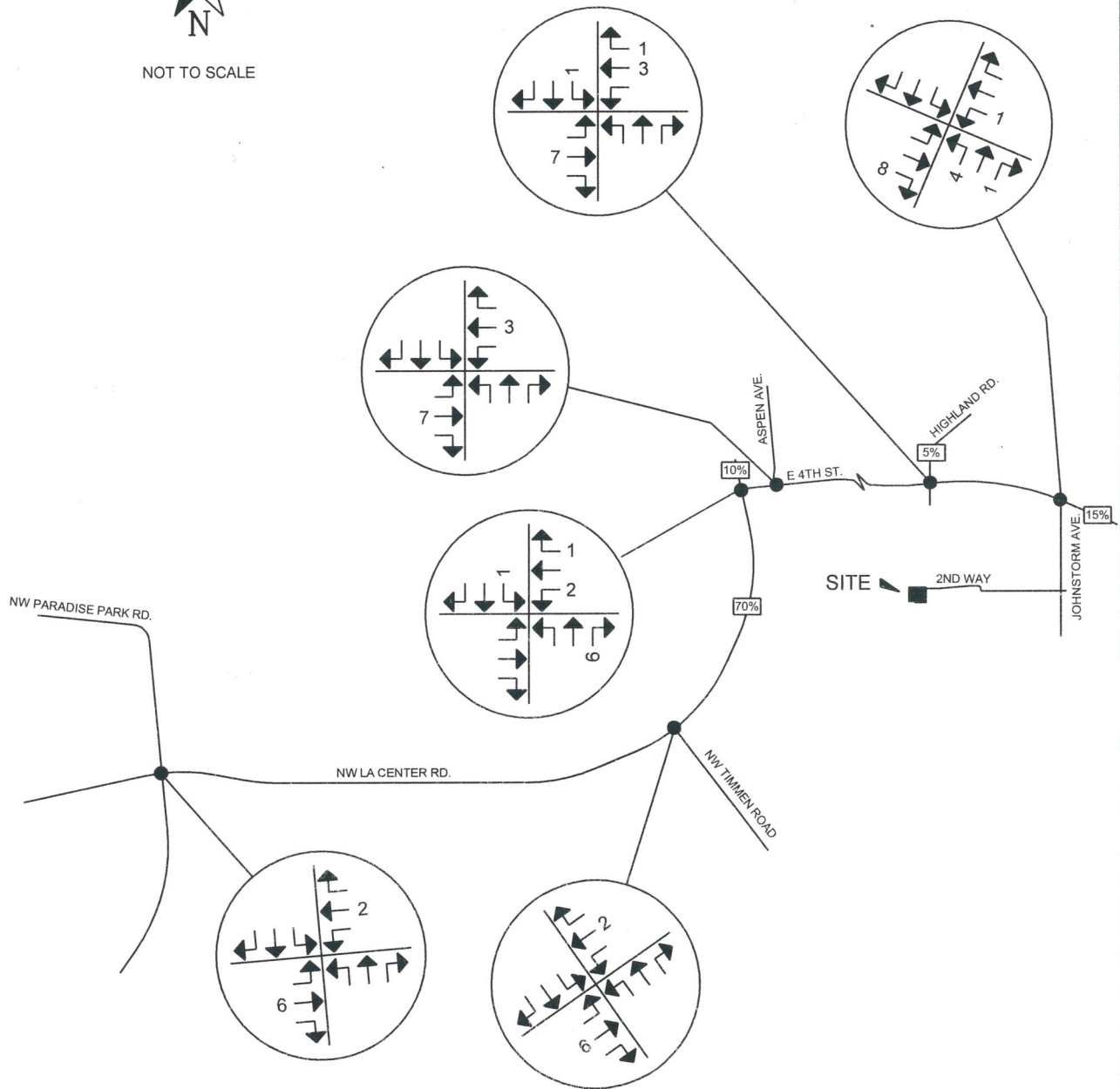
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NOT TO SCALE



PM PEAK HOUR SITE TRIPS:
IN-9, OUT-5

BREEZE CREEK TRAIL SUBDIVISION

FIGURE 6b
**SITE TRAFFIC DISTRIBUTION/
ASSIGNMENT, PM PEAK HOUR**

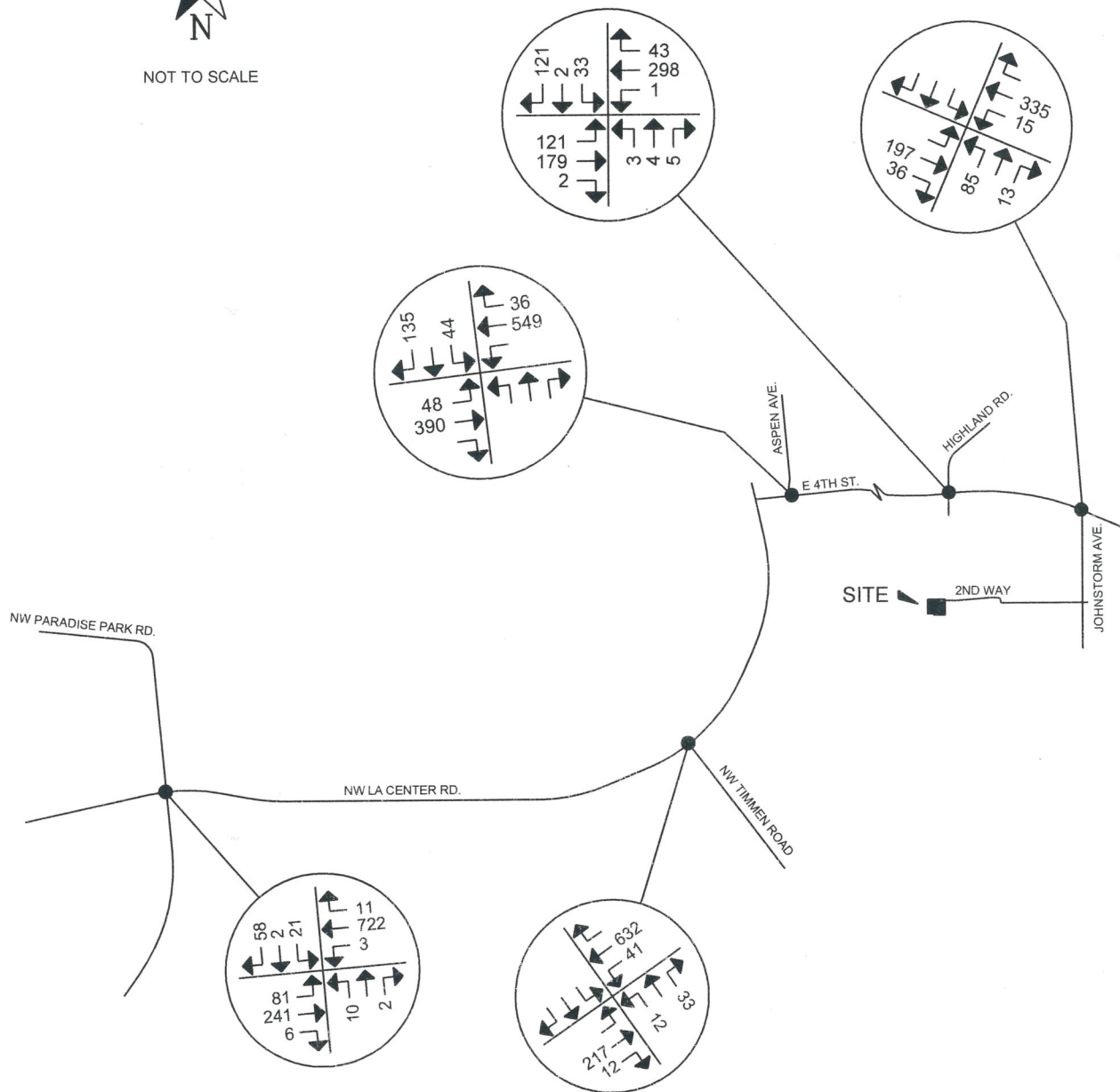
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NOT TO SCALE



BREEZE CREEK TRAIL SUBDIVISION

FIGURE 7a
YEAR 2027 TRAFFIC VOLUMES
WITH PROJECT, AM PEAK HOUR

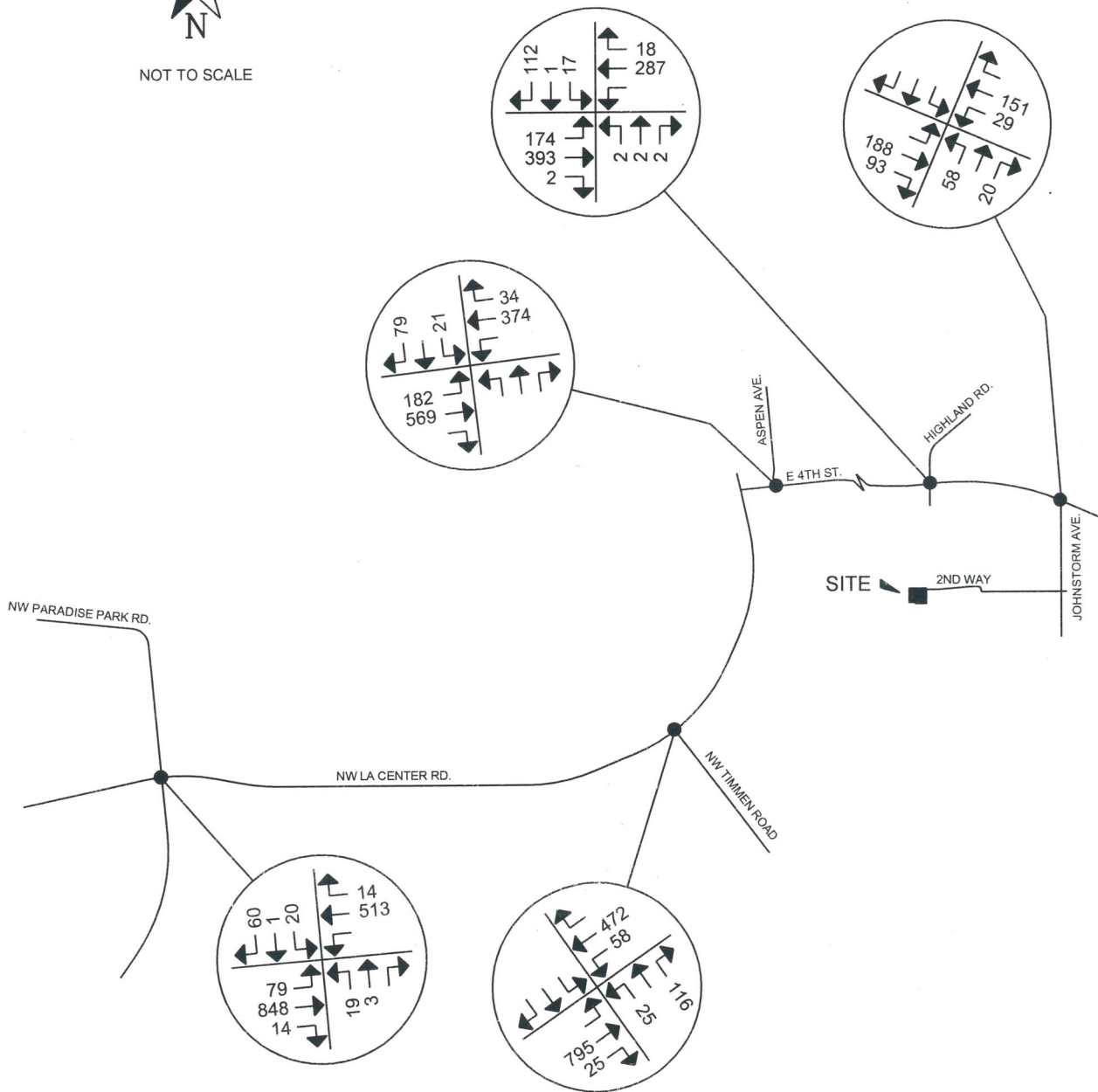
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NOT TO SCALE



BREEZE CREEK TRAIL SUBDIVISION

FIGURE 7b
YEAR 2027 TRAFFIC VOLUMES
WITH PROJECT, PM PEAK HOUR

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APPENDIX A
RAW TRAFFIC COUNT DATA

INTERSECTION TURN MOVEMENT SURVEY

NW PARADISE PARK ROAD & NW LA CENTER ROAD

DATE OF COUNT: 7/27/2023, 07:00-09:00
 DAY OF WEEK: THUR.
 WEATHER: SUNNY
 COUNTER: DSK

Time Period From – To	FROM NORTH			FROM EAST			FROM SOUTH			FROM WEST			TOTAL
	L	T	R	L	T	R	L	T	R	L	T	R	
07:00-07:05	0	0	1	0	42	0	1	0	0	2	10	1	57
07:05-07:10	0	0	1	0	45	0	0	0	0	0	14	1	61
07:10-07:15	0	0	0	0	43	0	2	0	1	0	12	2	60
07:15-07:20	0	0	0	0	38	0	0	0	0	0	15	0	53
07:20-07:25	0	0	1	1	59	0	2	0	0	0	12	0	75
07:25-07:30	0	0	2	0	51	0	1	0	0	3	7	0	64
07:30-07:35	0	0	1	0	44	0	0	0	0	1	9	1	56
07:35-07:40	0	0	0	0	49	0	1	0	0	0	19	1	70
07:40-07:45	0	0	1	1	53	0	0	0	0	2	23	1	81
07:45-07:50	0	0	2	0	61	0	1	0	1	4	20	0	89
07:50-07:55	0	0	4	0	48	0	1	0	0	0	21	0	74
07:55-08:00	0	0	0	0	37	0	2	0	0	0	16	1	56
08:00-08:05	0	0	0	0	39	0	1	0	1	1	16	0	58
08:05-08:10	0	0	3	0	56	1	0	0	0	1	23	1	85
08:10-08:15	0	0	0	1	52	0	0	0	0	0	15	1	69
08:15-08:20	0	0	1	0	23	0	2	0	0	2	17	1	46
08:20-08:25	1	0	0	0	30	0	1	0	1	0	23	1	57
08:25-08:30	0	0	1	0	35	0	0	0	0	1	11	2	50
08:30-08:35	0	0	0	0	43	0	0	0	0	0	14	2	59
08:35-08:40	0	0	0	0	42	0	1	0	0	3	19	0	65
08:40-08:45	0	0	0	0	37	0	0	0	0	0	17	0	54
08:45-08:50	0	0	0	0	29	0	0	0	0	1	15	1	46
08:50-08:55	0	0	0	0	40	0	1	0	0	0	10	0	51
08:55-09:00	0	0	1	0	39	0	2	0	0	1	11	1	55
Peak Hour Total	0	0	14	3	587	1	9	0	2	12	196	6	830
% Trucks	0	0	0	0	0	0	33	0	0	0	1	0	
Peds	0	0	0	0	0	0	0	0	0	0	0	0	
Bikes	0	0	0	0	0	0	0	0	0	0	0	0	

PEAK HOUR: 07:15-08:15

PHF Intersection: 0.85

KELLY ENGINEERING

INTERSECTION TURN MOVEMENT SURVEY

NW PARADISE PARK ROAD & NW LA CENTER ROAD

DATE OF COUNT: 7/26/2023, 16:00-18:00
 DAY OF WEEK: WED.
 WEATHER: CLOUDY
 COUNTER: KAK

Time Period From – To	FROM NORTH			FROM EAST			FROM SOUTH			FROM WEST			TOTAL
	L	T	R	L	T	R	L	T	R	L	T	R	
16:00-16:05	0	0	1	0	33	0	2	0	0	2	45	1	84
16:05-16:10	0	0	2	1	34	2	2	0	0	3	48	1	93
16:10-16:15	0	0	2	0	26	0	0	0	0	3	50	1	82
16:15-16:20	0	0	3	0	27	0	2	0	0	0	47	1	80
16:20-16:25	0	0	1	0	32	0	2	0	1	0	53	1	90
16:25-16:30	0	0	1	0	25	0	0	0	0	2	64	0	92
16:30-16:35	0	0	1	0	31	1	0	0	0	1	48	2	84
16:35-16:40	1	0	0	0	35	0	0	0	0	0	53	3	92
16:40-16:45	0	0	0	0	31	0	1	0	0	3	65	2	102
16:45-16:50	0	0	2	0	38	0	4	1	0	0	59	1	105
16:50-16:55	0	0	2	0	35	2	0	0	0	1	43	1	84
16:55-17:00	0	0	2	0	35	0	3	0	0	2	49	0	91
17:00-17:05	0	0	1	0	39	0	0	0	0	2	60	0	102
17:05-17:10	0	0	1	0	37	0	1	1	0	5	46	2	93
17:10-17:15	0	0	4	0	37	1	0	0	0	2	58	0	102
17:15-17:20	0	0	3	0	35	0	2	0	0	4	68	3	115
17:20-17:25	0	0	0	0	36	0	4	0	0	2	62	1	105
17:25-17:30	0	0	1	0	29	0	0	0	0	1	58	3	92
17:30-17:35	0	1	2	0	28	1	2	1	0	2	68	0	105
17:35-17:40	0	0	1	0	29	0	1	0	0	3	62	0	96
17:40-17:45	0	0	1	0	27	0	0	0	0	1	47	2	78
17:45-17:50	0	0	0	0	25	1	1	0	0	2	51	0	80
17:50-17:55	0	0	2	0	30	0	0	0	0	2	44	1	79
17:55-18:00	0	0	0	0	26	0	1	1	0	1	50	1	80
Peak Hour Total	0	1	19	0	409	4	18	3	0	27	698	13	1192
% Trucks	0	0	0	0	1	0	0	0	0	0	1	0	
Peds	0	0	0	0	2	0	0	0	0	0	1	0	
Bikes	0	0	0	0	0	0	0	0	0	0	0	0	

PEAK HOUR: 16:40-17:40

PHF Intersection: 0.93

KELLY ENGINEERING

INTERSECTION TURN MOVEMENT SURVEY **NW TIMMEN ROAD & NW LA CENTER ROAD**

DATE OF COUNT: 7/25/2023, 07:00-09:00
 DAY OF WEEK: TUE.
 WEATHER: SUNNY
 COUNTER: KAK

Time Period From – To	FROM NORTH			FROM EAST			FROM SOUTH			FROM WEST			TOTAL
	L	T	R	L	T	R	L	T	R	L	T	R	
07:00-07:05	0	0	0	2	32	0	1	0	1	0	6	1	43
07:05-07:10	0	0	0	3	35	0	2	0	1	0	7	0	48
07:10-07:15	0	0	0	3	38	0	0	0	1	0	7	0	49
07:15-07:20	0	0	0	1	40	0	0	0	0	0	8	0	49
07:20-07:25	0	0	0	2	51	0	1	0	3	0	15	1	73
07:25-07:30	0	0	0	2	41	0	1	0	1	0	12	3	60
07:30-07:35	0	0	0	1	54	0	1	0	2	0	12	1	71
07:35-07:40	0	0	0	4	46	0	0	0	2	0	12	0	64
07:40-07:45	0	0	0	4	36	0	0	0	0	0	14	1	55
07:45-07:50	0	0	0	5	36	0	0	0	1	0	14	0	56
07:50-07:55	0	0	0	5	48	0	2	0	3	0	20	0	78
07:55-08:00	0	0	0	4	33	0	1	0	4	0	23	0	65
08:00-08:05	0	0	0	1	45	0	0	0	3	0	12	1	62
08:05-08:10	0	0	0	2	44	0	0	0	4	0	12	2	64
08:10-08:15	0	0	0	0	34	0	3	0	3	0	13	0	53
08:15-08:20	0	0	0	1	34	0	2	0	4	0	15	2	58
08:20-08:25	0	0	0	2	35	0	0	0	1	0	24	0	62
08:25-08:30	0	0	0	5	29	0	0	0	6	0	20	0	60
08:30-08:35	0	0	0	3	36	0	0	0	2	0	15	0	56
08:35-08:40	0	0	0	5	48	0	2	0	0	0	14	0	69
08:40-08:45	0	0	0	3	39	0	1	0	2	0	14	1	60
08:45-08:50	0	0	0	3	34	0	1	0	1	0	31	2	72
08:50-08:55	0	0	0	3	32	0	2	0	1	0	19	0	57
08:55-09:00	0	0	0	3	20	0	0	0	4	0	20	1	48
Peak Hour Total	0	0	0	31	502	0	11	0	30	0	174	11	759
% Trucks	0	0	0	3	1	0	0	0	3	0	1	0	
Peds	0	0	0	0	0	0	0	0	0	0	0	0	
Bikes	0	0	0	0	0	0	0	0	0	0	0	0	

PEAK HOUR: 07:20-08:20
 PHF Intersection: 0.93

KELLY ENGINEERING

INTERSECTION TURN MOVEMENT SURVEY **NW TIMMEN ROAD & NW LA CENTER ROAD**

DATE OF COUNT: 7/25/2023, 16:00-18:00
 DAY OF WEEK: TUE.
 WEATHER: SUNNY
 COUNTER: KAK

Time Period From – To	FROM NORTH			FROM EAST			FROM SOUTH			FROM WEST			TOTAL
	L	T	R	L	T	R	L	T	R	L	T	R	
16:00-16:05	0	0	0	6	30	0	2	0	7	0	43	3	91
16:05-16:10	0	0	0	1	31	0	0	0	6	0	44	1	83
16:10-16:15	0	0	0	4	25	0	1	0	5	0	45	2	82
16:15-16:20	0	0	0	4	44	0	3	0	3	0	43	2	99
16:20-16:25	0	0	0	4	30	0	0	0	5	0	57	1	97
16:25-16:30	0	0	0	3	25	0	1	0	9	0	40	3	81
16:30-16:35	0	0	0	4	22	0	1	0	14	0	48	1	90
16:35-16:40	0	0	0	4	22	0	4	0	10	0	52	0	92
16:40-16:45	0	0	0	3	31	0	2	0	10	0	43	1	90
16:45-16:50	0	0	0	0	28	0	1	0	10	0	49	1	89
16:50-16:55	0	0	0	5	28	0	3	0	6	0	37	4	83
16:55-17:00	0	0	0	5	24	0	1	0	5	0	58	1	94
17:00-17:05	0	0	0	3	29	0	1	0	11	0	55	2	101
17:05-17:10	0	0	0	4	33	0	3	0	10	0	64	3	117
17:10-17:15	0	0	0	4	30	0	3	0	6	0	61	6	110
17:15-17:20	0	0	0	5	42	0	4	0	14	0	61	2	128
17:20-17:25	0	0	0	4	27	0	1	0	5	0	45	1	83
17:25-17:30	0	0	0	4	35	0	1	0	5	0	40	2	87
17:30-17:35	0	0	0	3	33	0	1	0	16	0	64	1	118
17:35-17:40	0	0	0	3	36	0	2	0	5	0	46	1	93
17:40-17:45	0	0	0	2	28	0	3	0	9	0	56	2	100
17:45-17:50	0	0	0	7	21	0	2	0	13	0	48	2	93
17:50-17:55	0	0	0	4	33	0	2	0	7	0	50	1	97
17:55-18:00	0	0	0	2	29	0	0	0	8	0	49	2	90
Peak Hour Total	0	0	0	48	371	0	24	0	106	0	648	24	1221
% Trucks	0	0	0	0	0	0	12	0	0	0	0	0	
Peds	0	0	0	0	0	0	0	0	0	0	0	0	
Bikes	0	0	0	0	0	0	0	0	0	0	0	0	

PEAK HOUR: 16:55-17:55

PHF Intersection: 0.86

KELLY ENGINEERING

INTERSECTION TURN MOVEMENT SURVEY

E 4TH STREET & ASPEN AVENUE

DATE OF COUNT: 6/8/2023, 07:00-09:00
 DAY OF WEEK: THUR.
 WEATHER: CLOUDY
 COUNTER: KAK

Time Period From – To	FROM NORTH			FROM EAST			FROM SOUTH			FROM WEST			TOTAL
	L	T	R	L	T	R	L	T	R	L	T	R	
07:00-07:05	2	0	5	0	32	2	0	0	0	3	10	0	54
07:05-07:10	0	0	11	0	18	0	0	0	0	1	14	0	44
07:10-07:15	1	0	7	0	33	0	0	0	0	0	12	0	53
07:15-07:20	2	0	6	0	33	0	0	0	0	2	16	0	59
07:20-07:25	1	0	11	0	38	1	0	0	0	1	22	0	74
07:25-07:30	1	0	15	0	31	1	0	0	0	6	13	0	67
07:30-07:35	0	0	7	0	32	2	0	0	0	1	16	0	58
07:35-07:40	2	0	14	0	32	1	0	0	0	4	32	0	85
07:40-07:45	1	0	9	0	29	1	0	0	0	2	32	0	74
07:45-07:50	4	0	13	0	21	0	0	0	0	1	44	0	83
07:50-07:55	8	0	7	0	31	2	0	0	0	8	46	0	102
07:55-08:00	7	0	10	0	45	1	0	0	0	0	48	0	111
08:00-08:05	3	0	8	0	46	3	0	0	0	4	32	0	96
08:05-08:10	2	0	7	0	41	7	0	0	0	4	24	0	85
08:10-08:15	3	0	8	0	50	5	0	0	0	5	22	0	93
08:15-08:20	1	0	6	0	51	4	0	0	0	4	15	0	81
08:20-08:25	0	0	7	0	34	1	0	0	0	3	10	0	55
08:25-08:30	0	0	8	0	25	3	0	0	0	2	15	0	53
08:30-08:35	2	0	17	0	19	0	0	0	0	6	14	0	58
08:35-08:40	1	0	7	0	28	0	0	0	0	7	10	0	53
08:40-08:45	0	0	6	0	21	1	0	0	0	4	13	0	45
08:45-08:50	2	0	8	0	30	0	0	0	0	3	12	0	55
08:50-08:55	1	0	9	0	27	1	0	0	0	1	11	0	41
08:55-09:00	0	0	10	0	24	2	0	0	0	2	14	0	52
Peak Hour Total	33	0	115	0	447	28	0	0	0	40	346	0	1009
% Trucks	3	0	1	0	1	6	0	0	0	0	4	0	
Peds	0	0	0	0	0	0	0	0	0	0	0	0	
Bikes	0	0	0	0	0	0	0	0	0	0	0	0	

PEAK HOUR: 07:20-08:20
 PHF Intersection: 0.82

KELLY ENGINEERING

INTERSECTION TURN MOVEMENT SURVEY E 4TH STREET & ASPEN AVENUE

DATE OF COUNT: 6/7/2023, 16:00-18:00
DAY OF WEEK: WED.
WEATHER: CLOUDY
COUNTER: KAK

Time Period From – To	FROM NORTH			FROM EAST			FROM SOUTH			FROM WEST			TOTAL
	L	T	R	L	T	R	L	T	R	L	T	R	
16:00-16:05	0	0	8	0	19	0	0	0	0	10	23	0	60
16:05-16:10	1	0	8	0	22	3	0	0	0	4	30	0	68
16:10-16:15	2	0	6	0	22	1	0	0	0	15	32	0	78
16:15-16:20	0	0	7	0	27	3	0	0	0	9	36	0	82
16:20-16:25	1	0	14	0	19	3	0	0	0	11	36	0	84
16:25-16:30	1	0	5	0	23	0	0	0	0	12	21	0	62
16:30-16:35	1	0	7	0	26	3	0	0	0	11	34	0	82
16:35-16:40	1	0	7	0	32	1	0	0	0	12	39	0	92
16:40-16:45	1	0	3	0	14	2	0	0	0	11	42	0	73
16:45-16:50	1	0	4	0	19	1	0	0	0	19	37	0	81
16:50-16:55	1	0	4	0	21	2	0	0	0	15	42	0	85
16:55-17:00	1	0	7	0	27	1	0	0	0	7	45	0	88
17:00-17:05	0	0	12	0	28	2	0	0	0	8	24	0	74
17:05-17:10	1	0	2	0	23	2	0	0	0	12	36	0	76
17:10-17:15	0	0	4	0	27	0	0	0	0	17	35	0	83
17:15-17:20	0	0	8	0	27	2	0	0	0	12	35	0	84
17:20-17:25	1	0	2	0	26	5	0	0	0	10	43	0	87
17:25-17:30	2	0	3	0	25	0	0	0	0	12	37	0	79
17:30-17:35	1	0	3	0	16	2	0	0	0	11	43	0	76
17:35-17:40	3	0	5	0	18	1	0	0	0	11	45	0	83
17:40-17:45	1	0	2	0	21	0	0	0	0	9	29	0	62
17:45-17:50	2	0	3	0	23	1	0	0	0	7	31	0	67
17:50-17:55	0	0	2	0	21	2	0	0	0	12	31	0	68
17:55-18:00	0	0	3	0	18	1	0	0	0	10	28	0	60
Peak Hour Total	10	0	63	0	295	21	0	0	0	146	449	0	984
% Trucks	10	0	2	0	0	0	0	0	0	1	0	0	
Peds	0	0	0	0	0	0	0	0	0	0	0	0	
Bikes	0	0	0	0	0	0	0	0	0	0	0	0	

PEAK HOUR: 16:30-17:30
PHF Intersection 0.97

KELLY ENGINEERING

INTERSECTION TURN MOVEMENT SURVEY **HIGHLAND ROAD & 4TH STREET**

DATE OF COUNT: 1/11/2024, 07:00-09:00
 DAY OF WEEK: THUR.
 WEATHER: CLOUDY
 COUNTER: KAK

Time Period From – To	FROM NORTH			FROM EAST			FROM SOUTH			FROM WEST			TOTAL
	L	T	R	L	T	R	L	T	R	L	T	R	
07:00-07:05	0	0	3	0	10	0	0	0	0	2	6	0	21
07:05-07:10	1	0	9	0	14	2	0	0	0	2	7	0	35
07:10-07:15	0	0	12	0	19	0	1	0	0	4	2	0	38
07:15-07:20	1	0	7	0	15	0	0	0	0	2	1	0	25
07:20-07:25	0	0	8	1	12	0	0	0	0	2	6	2	31
07:25-07:30	2	0	15	1	23	0	2	0	0	10	6	0	59
07:30-07:35	1	0	19	0	34	3	1	1	2	6	5	1	73
07:35-07:40	3	2	7	0	33	2	2	2	5	11	21	1	89
07:40-07:45	2	0	10	0	26	0	0	1	4	7	15	0	65
07:45-07:50	3	0	8	0	13	1	1	0	2	6	8	1	43
07:50-07:55	4	0	8	0	10	1	0	0	0	6	10	0	16
07:55-08:00	1	0	6	0	13	1	0	0	0	9	6	0	36
08:00-08:05	0	0	4	0	11	2	1	0	1	5	14	0	38
08:05-08:10	3	0	1	0	4	0	0	0	0	3	8	0	19
08:10-08:15	4	0	5	0	13	4	1	0	0	10	7	0	44
08:15-08:20	2	0	7	0	18	4	0	0	0	3	4	1	39
08:20-08:25	2	0	6	1	11	2	0	0	1	9	14	0	46
08:25-08:30	6	0	13	0	9	6	1	0	0	14	12	0	61
08:30-08:35	4	0	19	0	20	1	0	0	1	14	22	0	81
08:35-08:40	5	0	11	0	21	7	0	0	0	15	17	1	77
08:40-08:45	2	0	16	0	39	6	0	4	0	12	12	0	91
08:45-08:50	0	0	14	0	28	4	0	0	1	5	17	0	69
08:50-08:55	0	0	6	0	12	0	0	0	0	5	5	0	28
08:55-09:00	2	1	7	0	12	1	0	0	0	7	8	0	38
Peak Hour Total	30	1	109	1	198	37	3	4	4	102	140	2	631
% Trucks	0	0	3	0	2	3	100	0	25	1	0	0	
Peds	0	2	0	0	6	0	0	0	0	0	1	0	
Bikes	0	0	0	0	0	0	0	0	0	0	0	0	

PEAK HOUR: 08:00-09:00
 PHF Intersection: 0.63

KELLY ENGINEERING

INTERSECTION TURN MOVEMENT SURVEY

HIGHLAND ROAD & 4TH STREET

DATE OF COUNT: 1/17/2024, 16:00-18:00
 DAY OF WEEK: WED.
 WEATHER: RAIN
 COUNTER: DSK

Time Period From – To	FROM NORTH			FROM EAST			FROM SOUTH			FROM WEST			TOTAL
	L	T	R	L	T	R	L	T	R	L	T	R	
16:00-16:05	0	0	6	0	17	0	1	0	0	8	22	3	57
16:05-16:10	4	0	11	0	14	0	2	0	0	10	23	0	64
16:10-16:15	1	0	7	0	17	0	1	0	0	10	16	0	52
16:15-16:20	2	0	5	0	22	0	1	0	0	8	36	0	74
16:20-16:25	1	0	9	0	19	1	0	0	0	17	16	0	63
16:25-16:30	3	0	6	0	23	0	1	0	0	11	26	2	72
16:30-16:35	1	0	8	0	21	6	0	0	0	16	26	0	78
16:35-16:40	2	0	13	0	15	0	0	0	0	10	17	0	57
16:40-16:45	1	0	12	0	10	2	0	0	0	15	21	0	61
16:45-16:50	2	0	7	0	16	0	0	0	0	17	26	0	68
16:50-16:55	0	0	7	0	16	0	0	0	0	7	9	0	39
16:55-17:00	0	0	4	0	18	1	0	0	0	13	27	0	63
17:00-17:05	0	0	5	0	23	1	0	0	0	15	20	0	64
17:05-17:10	0	0	5	0	11	0	0	0	0	11	28	0	55
17:10-17:15	0	0	8	0	15	3	0	0	0	12	23	0	61
17:15-17:20	1	0	8	0	9	2	2	0	0	20	16	0	58
17:20-17:25	2	0	3	0	17	4	0	0	0	15	28	1	70
17:25-17:30	2	0	10	0	10	2	0	0	0	21	24	0	69
17:30-17:35	2	0	6	0	16	1	0	0	0	21	13	0	59
17:35-17:40	0	0	4	0	10	1	0	0	0	13	19	0	47
17:40-17:45	0	0	5	0	9	0	0	0	0	14	10	0	38
17:45-17:50	1	0	5	0	11	0	1	0	0	15	15	1	49
17:50-17:55	0	0	4	0	10	1	0	0	0	8	16	0	39
17:55-18:00	0	0	3	0	11	0	0	0	0	10	9	0	33
Peak Hour Total	12	0	89	0	209	14	2	0	0	152	275	2	755
% Trucks	0	0	3	0	1	0	0	0	0	0	0	0	
Peds	0	0	0	0	0	0	0	0	0	0	0	0	
Bikes	0	0	0	0	0	0	0	0	0	0	0	0	

PEAK HOUR: 16:15-17:15

PHF Intersection: 0.89

KELLY ENGINEERING

INTERSECTION TURN MOVEMENT SURVEY

NE JOHNSTORM AVENUE & NE LOCKWOOD CREEK ROAD

DATE OF COUNT: 1/25/2024, 07:00-09:00
 DAY OF WEEK: THUR.
 WEATHER: RAIN
 COUNTER: DSK

Time Period From – To	FROM NORTH			FROM EAST			FROM SOUTH			FROM WEST			TOTAL
	L	T	R	L	T	R	L	T	R	L	T	R	
07:00-07:05	0	0	0	0	12	0	2	0	1	0	5	0	20
07:05-07:10	0	0	0	1	8	0	1	0	0	0	10	1	21
07:10-07:15	0	0	0	0	19	0	9	0	0	0	2	0	30
07:15-07:20	0	0	0	0	17	0	2	0	0	0	5	1	25
07:20-07:25	0	0	0	1	18	0	7	0	0	0	8	3	37
07:25-07:30	0	0	0	1	28	0	9	0	0	0	17	0	55
07:30-07:35	0	0	0	0	47	0	7	0	2	0	15	3	74
07:35-07:40	0	0	0	2	36	0	10	0	0	0	20	5	73
07:40-07:45	0	0	0	0	23	0	5	0	2	0	24	3	57
07:45-07:50	0	0	0	0	11	0	5	0	1	0	24	5	46
07:50-07:55	0	0	0	0	24	0	2	0	1	0	10	0	37
07:55-08:00	0	0	0	0	7	0	2	0	0	0	9	2	20
08:00-08:05	0	0	0	1	15	0	1	0	0	0	9	1	27
08:05-08:10	0	0	0	0	5	0	3	0	0	0	9	0	17
08:10-08:15	0	0	0	0	12	0	4	0	0	0	9	2	27
08:15-08:20	0	0	0	3	9	0	4	0	1	0	8	1	26
08:20-08:25	0	0	0	1	32	0	5	0	0	0	11	2	51
08:25-08:30	0	0	0	2	31	0	8	0	1	0	13	3	58
08:30-08:35	0	0	0	3	16	0	5	0	0	0	21	1	46
08:35-08:40	0	0	0	3	31	0	6	0	2	0	22	4	68
08:40-08:45	0	0	0	3	36	0	7	0	2	0	14	6	68
08:45-08:50	0	0	0	1	36	0	3	0	5	0	10	2	57
08:50-08:55	0	0	0	0	13	0	3	0	1	0	6	5	28
08:55-09:00	0	0	0	1	14	0	4	0	2	0	7	2	30
Peak Hour Total	0	0	0	9	252	0	56	0	8	0	161	27	513
% Trucks	0	0	0	11	2	0	2	0	0	0	4	4	
Peds	0	0	0	0	0	0	0	0	0	0	0	0	
Bikes	0	0	0	0	0	0	0	0	0	0	0	0	

PEAK HOUR: 07:30-08:30

PHF Intersection: 0.63

KELLY ENGINEERING

INTERSECTION TURN MOVEMENT SURVEY

NE JOHNSTORM AVENUE & NE LOCKWOOD CREEK ROAD

DATE OF COUNT: 1/16/2024, 16:00-18:00
 DAY OF WEEK: TUE.
 WEATHER: CLOUDY
 COUNTER: KAK

Time Period From – To	FROM NORTH			FROM EAST			FROM SOUTH			FROM WEST			TOTAL
	L	T	R	L	T	R	L	T	R	L	T	R	
16:00-16:05	0	0	0	1	8	0	3	0	2	0	15	4	33
16:05-16:10	0	0	0	2	2	0	4	0	0	0	7	5	20
16:15-16:20	0	0	0	2	12	0	2	0	1	0	9	3	29
16:10-16:15	0	0	0	1	10	0	3	0	1	0	14	1	30
16:20-16:25	0	0	0	2	10	0	7	0	2	0	9	12	42
16:25-16:30	0	0	0	1	6	0	5	0	2	0	1	5	20
16:30-16:35	0	0	0	4	4	0	6	0	3	0	6	6	29
16:35-16:40	0	0	0	2	12	0	1	0	2	0	12	7	36
16:40-16:45	0	0	0	3	5	0	2	0	1	0	10	8	29
16:45-16:50	0	0	0	1	7	0	0	0	1	0	5	3	17
16:50-16:55	0	0	0	0	11	0	3	0	1	0	5	2	22
16:55-17:00	0	0	0	2	6	0	4	0	1	0	10	5	28
17:00-17:05	0	0	0	0	10	0	2	0	0	0	12	2	26
17:05-17:10	0	0	0	1	4	0	3	0	2	0	16	5	31
17:10-17:15	0	0	0	0	8	0	3	0	1	0	11	3	26
17:15-17:20	0	0	0	1	9	0	5	0	2	0	13	1	31
17:20-17:25	0	0	0	0	8	0	3	0	0	0	15	4	30
17:25-17:30	0	0	0	0	11	0	6	0	0	0	14	7	38
17:30-17:35	0	0	0	0	2	0	2	0	0	0	19	5	28
17:35-17:40	0	0	0	0	6	0	1	0	0	0	10	6	23
17:40-17:45	0	0	0	0	4	0	1	0	1	0	10	2	18
17:45-17:50	0	0	0	1	5	0	2	0	2	0	7	4	21
17:50-17:55	0	0	0	2	7	0	2	0	0	0	8	1	20
17:55-18:00	0	0	0	1	7	0	0	0	1	0	10	3	22
Peak Hour Total	0	0	0	21	93	0	40	0	17	0	103	61	335
U-turns	0	0	0	0	1	0	0	0	0	0	0	0	
% Trucks	0	0	0	0	0	0	0	0	0	0	0	0	
Peds	0	0	0	0	0	0	0	0	0	0	0	0	
Bikes	0	0	0	0	0	0	0	0	0	0	0	0	

PEAK HOUR: 16:00-17:00

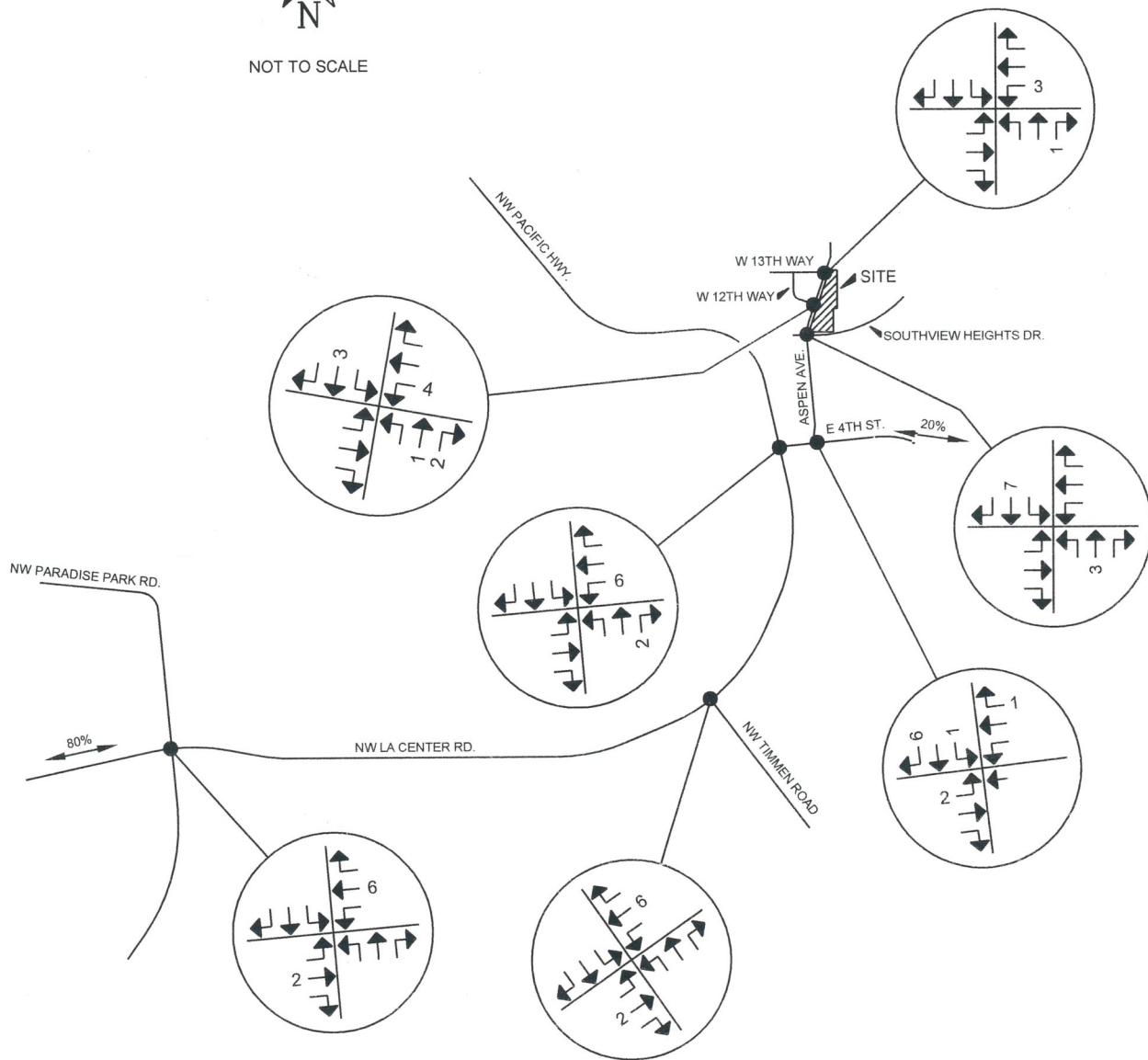
PHF Roundabout: 0.83

KELLY ENGINEERING

APPENDIX B
IN-PROCESS TRAFFIC



NOT TO SCALE



AM PEAK HOUR SITE TRIPS
IN-3, OUT-7

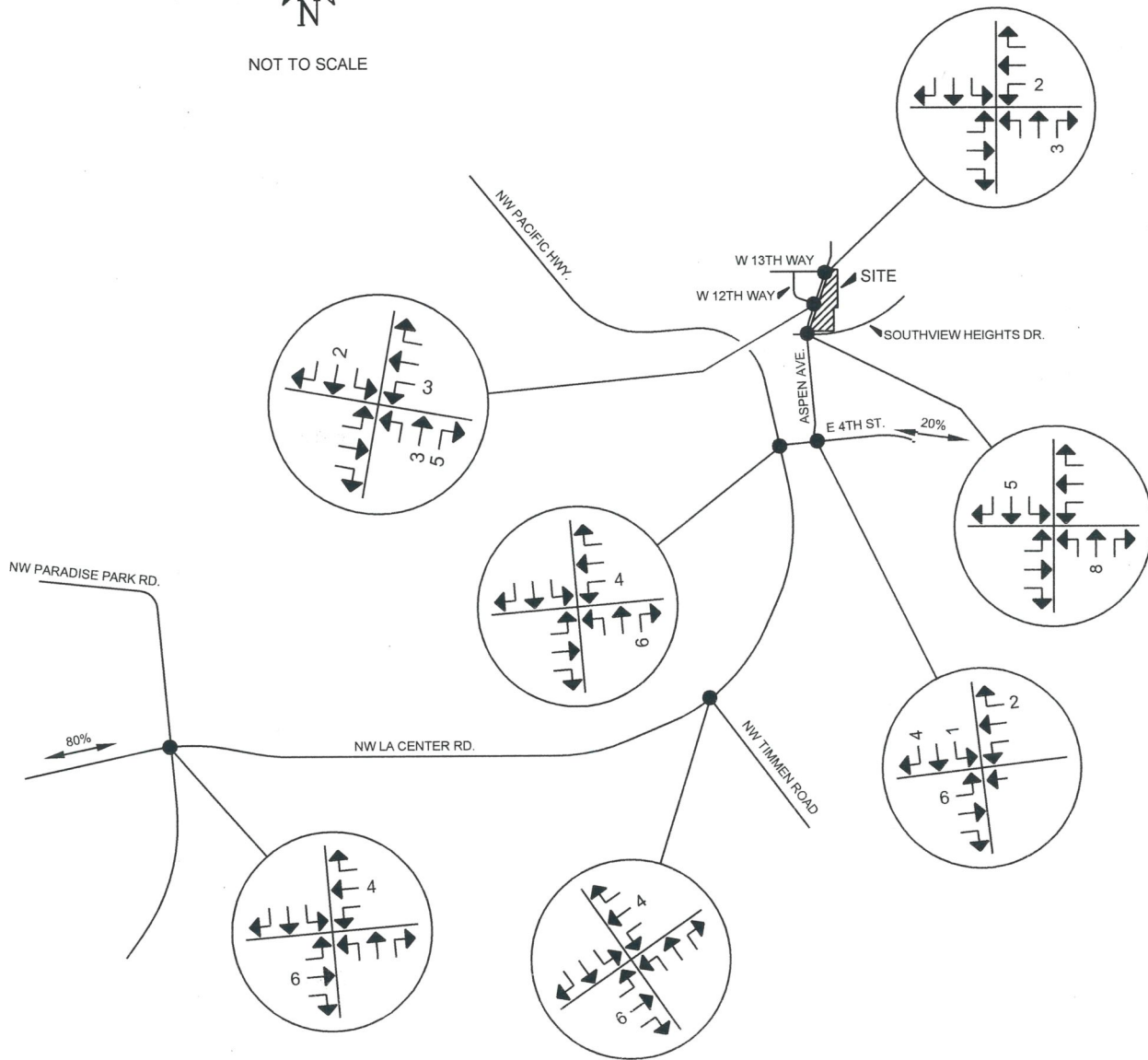
ASPEN AVENUE SUBDIVISION

FIGURE 6a
**SITE TRAFFIC DISTRIBUTION/
ASSIGNMENT, AM PEAK HOUR**

KELLY ENGINEERING
1805 NE 94th St. No. 19, Vancouver, WA 98665
Phone: 360-433-7530



NOT TO SCALE



PM PEAK HOUR SITE TRIPS
IN-8, OUT-5

ASPEN AVENUE SUBDIVISION

FIGURE 6b
**SITE TRAFFIC DISTRIBUTION/
ASSIGNMENT, PM PEAK HOUR**

KELLY ENGINEERING

1805 NE 94th St. No. 19, Vancouver, WA 98665

Phone: 360-433-7530



**HAYWARD USKOSKI
& ASSOCIATES**

MEMORANDUM

To: City of LaCenter
From: Valerie Uskoski, PE
Date: December 13, 2021
RE: Stephens Hillside Farm Traffic



Hayward Uskoski and Associates, Inc. (HUA) has reviewed the traffic study for the approved Stephens Hillside Farm Subdivision. HUA is proposing to revise the approved layout to reconfigure the internal layout to better conform with the existing topography.

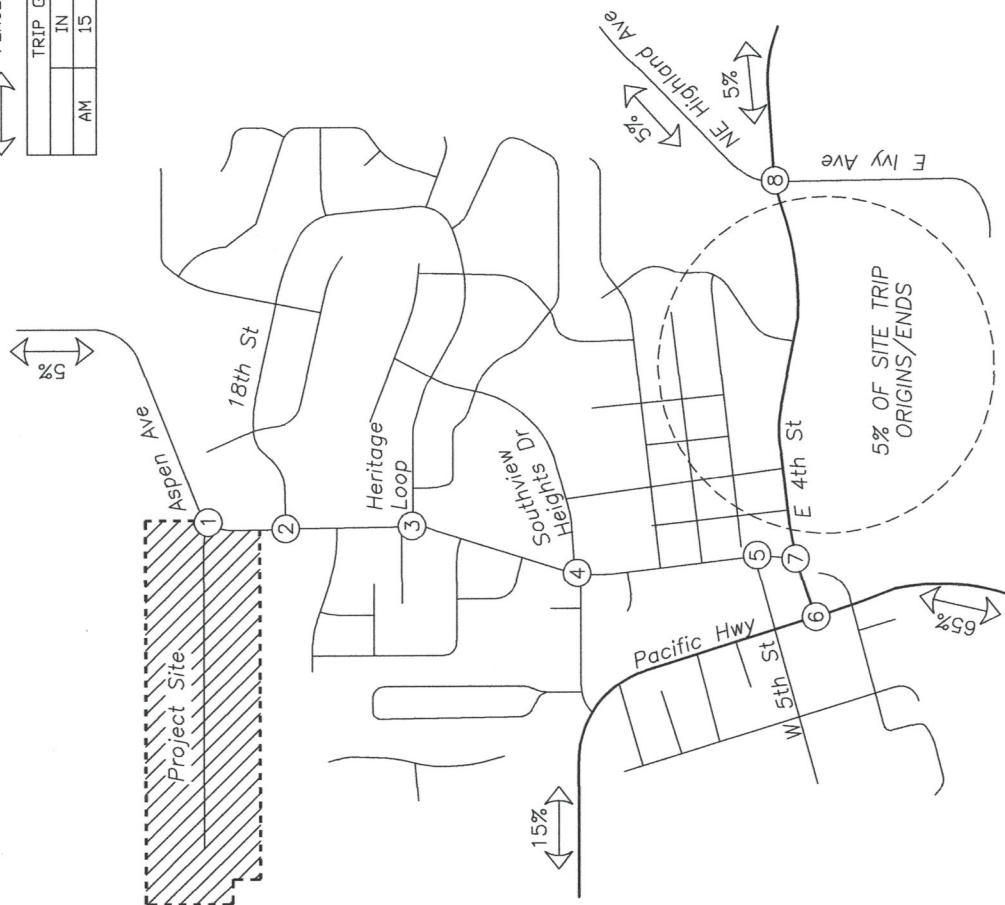
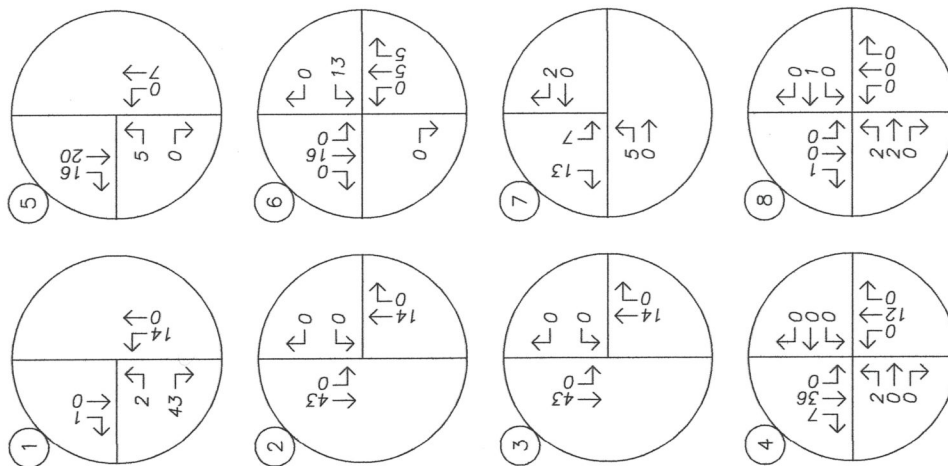
The original application proposed 85 lots as does the revision. The original plat connected to the existing road network at Aspen Ave and provided cross circulation to the west at the terminus of W 19th Street and three street extensions to the northern boundary; however, the proposed extension of Bluebird Ave terminated at 7 foot retaining wall which precluded future extension of the roadway due to grades beyond the wall.

The revised layout maintains the connection to the existing road network at Aspen Ave and at the west terminus of W 19th Street. The connections to the north at Falcon and Dove Avenues are maintained. The extension of Bluebird has been eliminated. While one connection was eliminated, the street would not have been extended in future due to the grades above the 7-foot wall being in excess of 15%. This effectively reduced future cross circulation to Falcon and Dove to the north.

HUA has determined that the traffic study is still relevant and applicable for the revised traffic study and both the lot yield and all viable external connection points remain unchanged. HUA identified no additional factors that would warrant a new traffic study for the proposed reconfiguration.

LEGEND

AM PEAK HOUR



XX%  PERCENT OF PROJECT TRIPS

TRIP GENERATION			
	IN	OUT	TOTAL
AM	15	45	60

SITE TRIP ASSIGNMENT
Proposed Development
AM Peak Hour

FIGURE 5

PAGE
12



no scale

STEPHENS HILLSIDE FARMS SUBDIVISION

LEGEND

XX% PERCENT OF PROJECT TRIPS

TRIP GENERATION			
	IN	OUT	TOTAL
PM	50	30	80

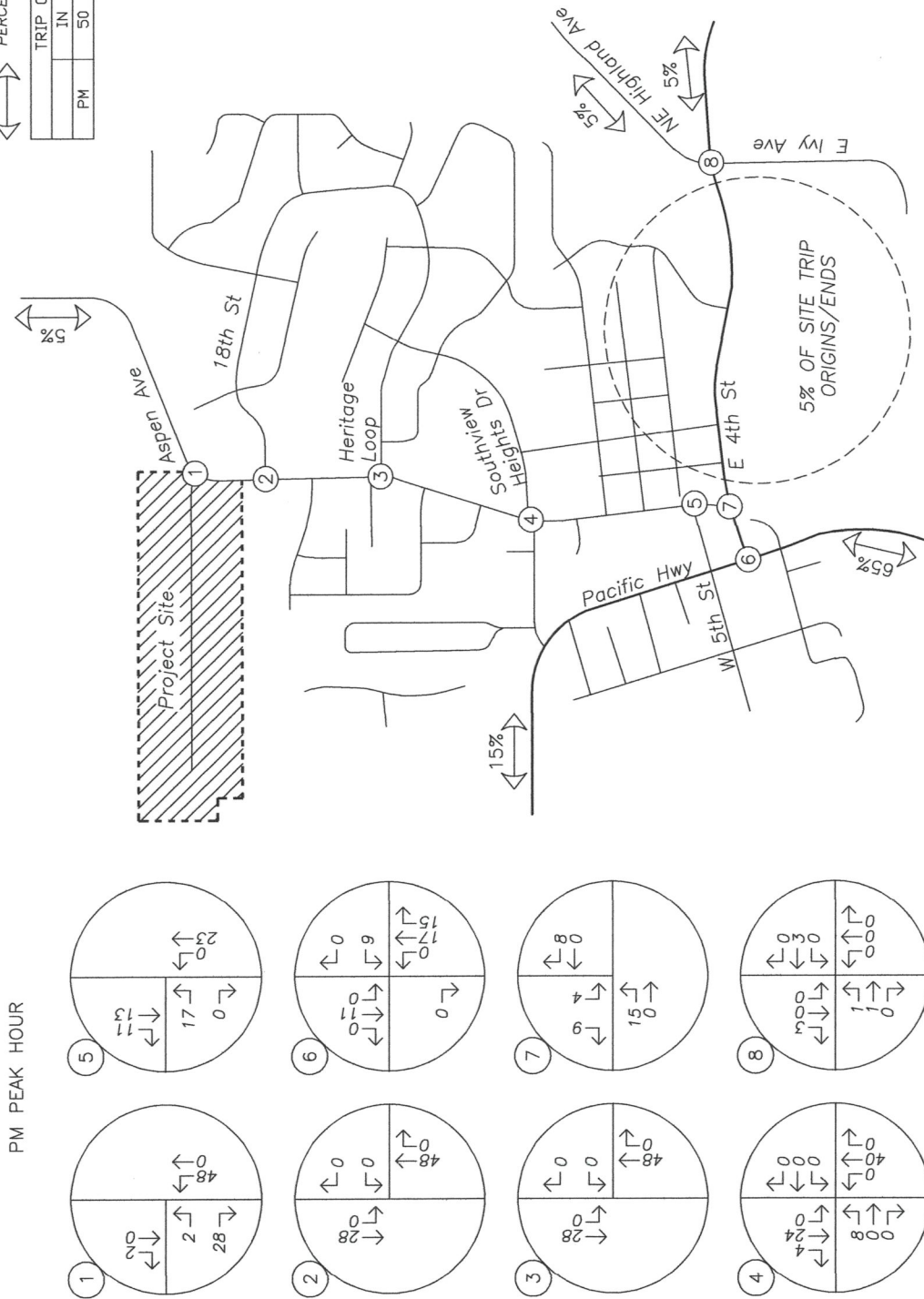


FIGURE
6

PAGE
13



SITE TRIP ASSIGNMENT
Proposed Development Plan - Site Trips
PM Peak Hour

1e



MEMORANDUM

Date: March 2, 2020

To: Mike Odren, RLA
Associate Principal
Olson Engineering, Inc.
222 East Evergreen Blvd
Vancouver WA 98660

From: Frank Charbonneau, PE, PTOE

Subject: Trip Generation Assessment
Minit Management Development
NW Paradise Park Road, La Center

FL2024

This memo will serve as the trip generation assessment documenting the number of vehicular trips that will be produced by the proposed Minit Management development. The four acre site at address #2814 NW 319th Street is located in the northeast quadrant of NW La Center Road and the I-5 northbound on-ramp.

The development project will demolish the existing convenience store and gas station facilities and construct several new buildings consisting of 11,600 square feet of general retail, fast foot restaurant with drive-through totaling 2,800 square feet, convenience market with coffee drive-through totaling 4,510 square feet, and a 101 unit hotel. Parking on the site for 184 spaces will be provided, including eight ADA parking stalls. A copy of the project's site plan is attached to this memo.

The site we be served by three driveway accesses connecting to the perimeter road (NW Paradise Park Road) on the property's north and east sides. The nearest major intersections include NW La Center Road at the I-5 northbound off-ramp which is configured as a round-about and NW Paradise Park Road at NW La Center Road. This intersection is controlled by stop signing on the northbound Paradise Park Road approach and on the southbound Paradise Road approach.

The City of La Center issued a pre-application conference report (2019-018-PAC) dated June 11, 2019 documenting the application's process and requirements. The staff report detailed that the development agreement between the City and Minit Management LLC dated March 2016 vested a total of 199 PM peak hour trips for the site. As a result it was necessary to submit a trip generation assessment to verify the trip projection.

The number of trips were calculated based on the proposed building uses and sizes. Trip credits were applied for the existing facilities that will be demolished including the convenience market and gas station and a cardlock fueling station. The trip calculations were determined for the weekday average daily traffic (ADT) and the weekday AM and PM peak hours.

Table 3 presents the net trip generation results (proposed site trips – existing site trips) for the development project. When the new facility is developed it is projected that the site will generate a net of 76 trips in the AM peak hour 52 trips in the PM peak hour. The ADT is projected to increase by 946 trips per day.

Table 3 Net New Trips

Site Uses	Weekday Peak Hour						Weekday ADT
	AM Peak Hour			PM Peak Hour			
	Total	Enter	Exit	Total	Enter	Exit	
Proposed Site ¹	144	78	66	120	60	60	4,326
Existing Site ²	-68	-34	-34	-68	-33	-35	3,380
Net New Trips ³	76	44	32	52	27	25	946

¹ Refer to Table 2.

² Refer to Table 1.

³ Net New Trips = Proposed Site Trips - Existing Site Trips.

It is recommended that the City of La Center support the proposed development without the application of traffic impact fees as the projected number of site trips falls below the vested number of peak hour trips (199 trips) identified in the City's development agreement with Minit Management.

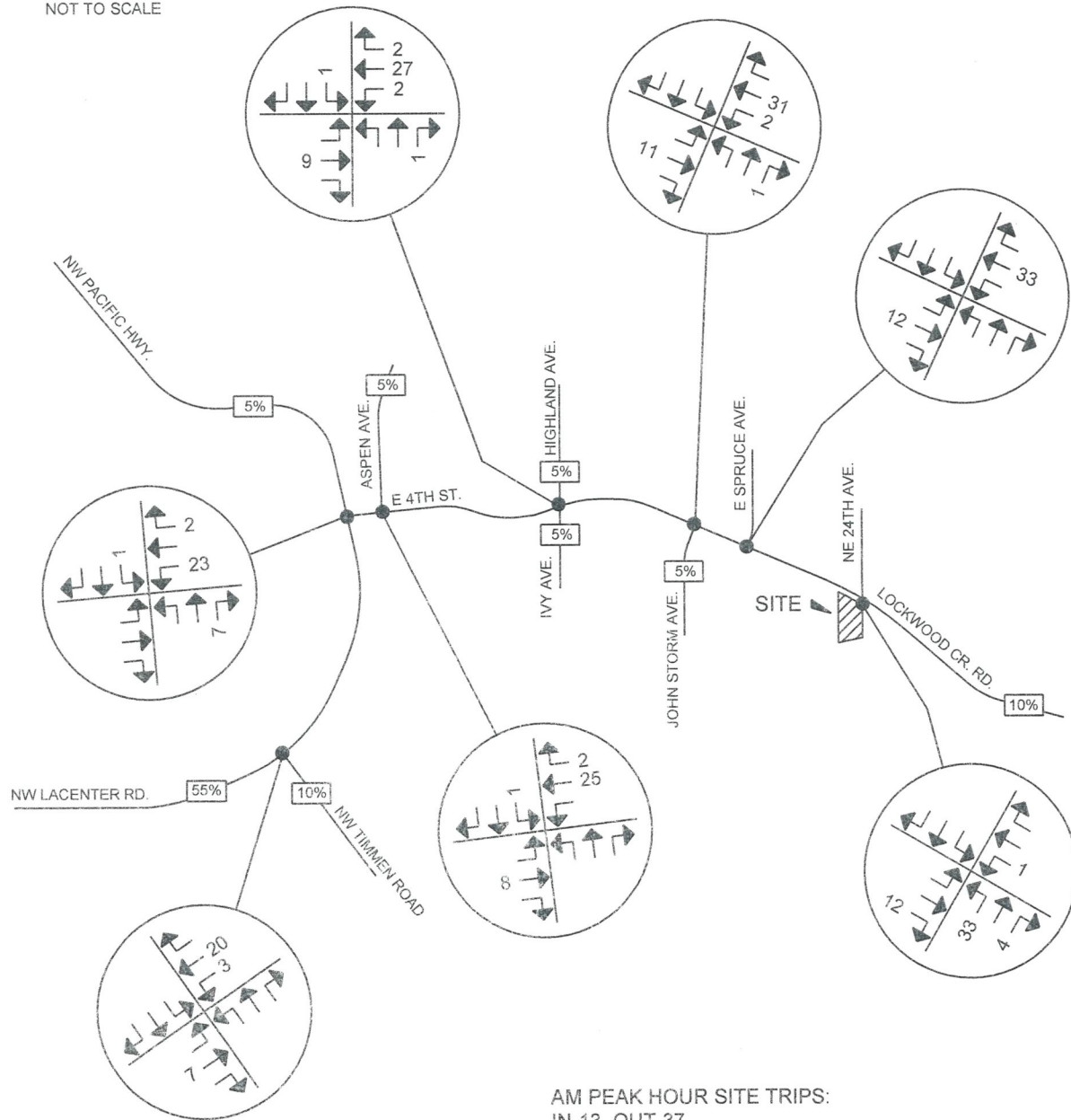
If you should need any additional traffic engineering support on this project or if there are any further questions, please contact Frank Charbonneau, PE, PTOE at 503.293.1118 or email Frank@CharbonneauEngineer.com.

Attachment

- Site Plan



NOT TO SCALE



AM PEAK HOUR SITE TRIPS:
IN-13, OUT-37

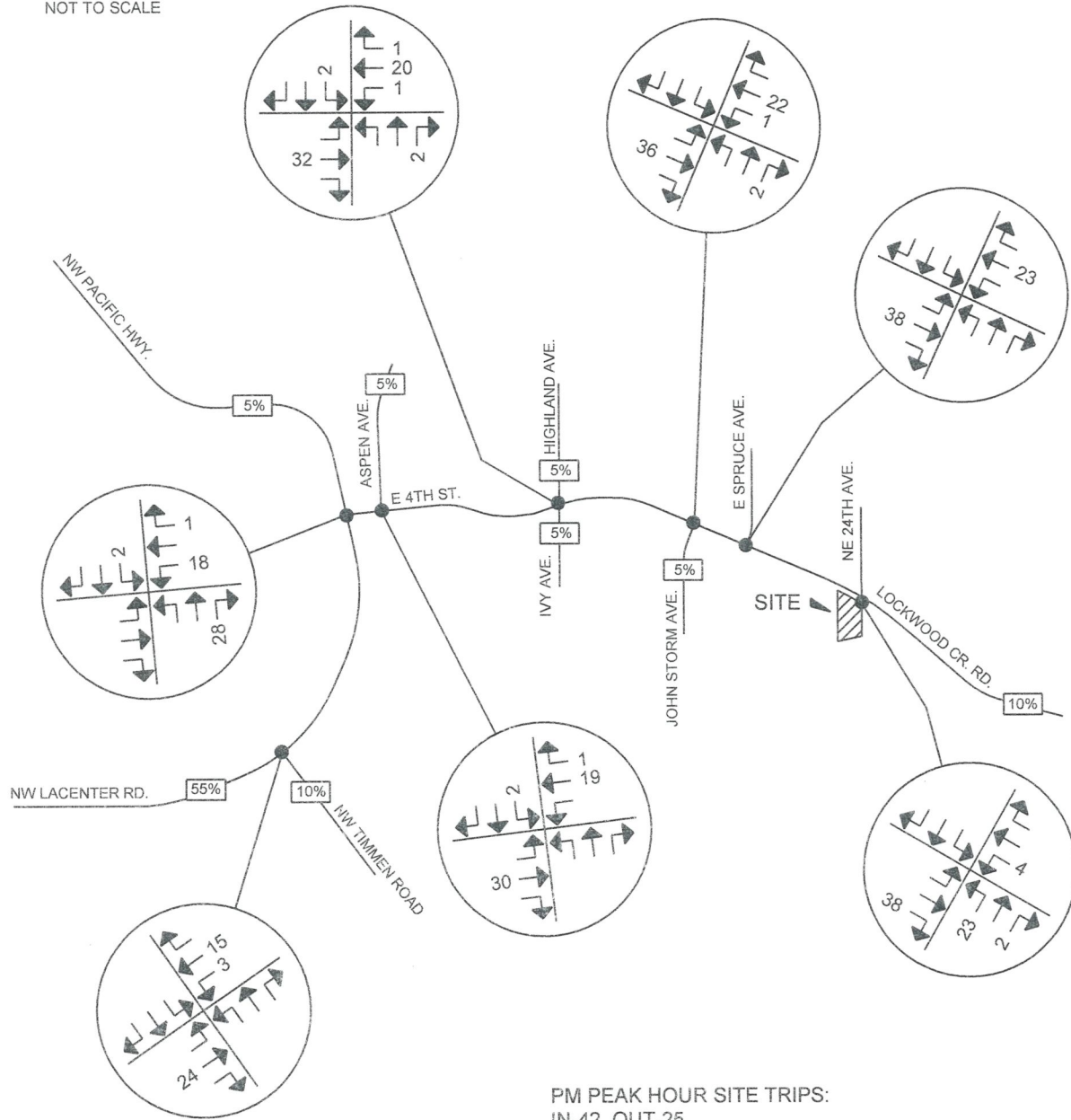
ASA'S VIEW SUBDIVISION

FIGURE 7a
SITE TRAFFIC DISTRIBUTION/ASSIGNMENT
AM PEAK HOUR

KELLY ENGINEERING
1805 NE 94th St. No. 19, Vancouver, WA 98665
Phone: 360-433-7530



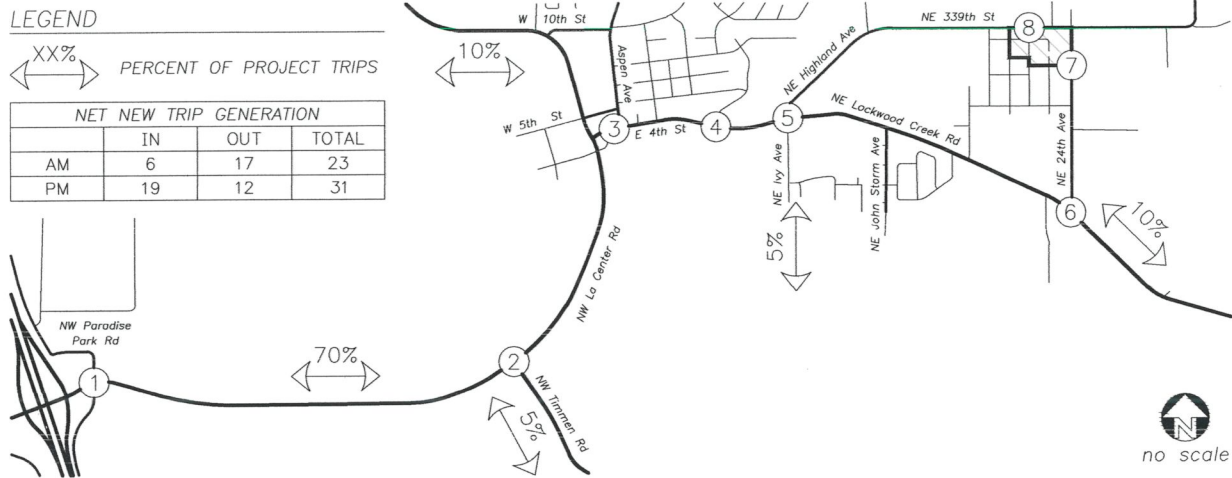
NOT TO SCALE



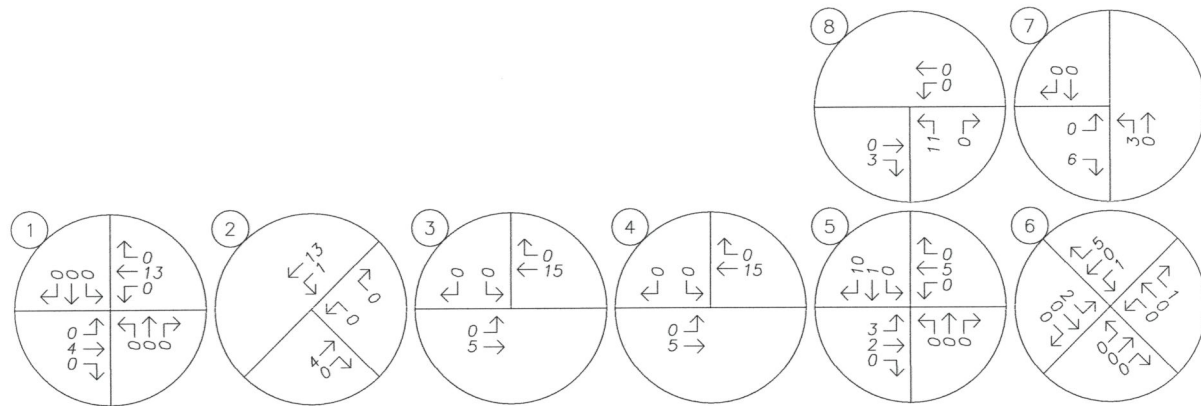
ASA'S VIEW SUBDIVISION

FIGURE 7b
SITE TRAFFIC DISTRIBUTION/ASSIGNMENT
PM PEAK HOUR

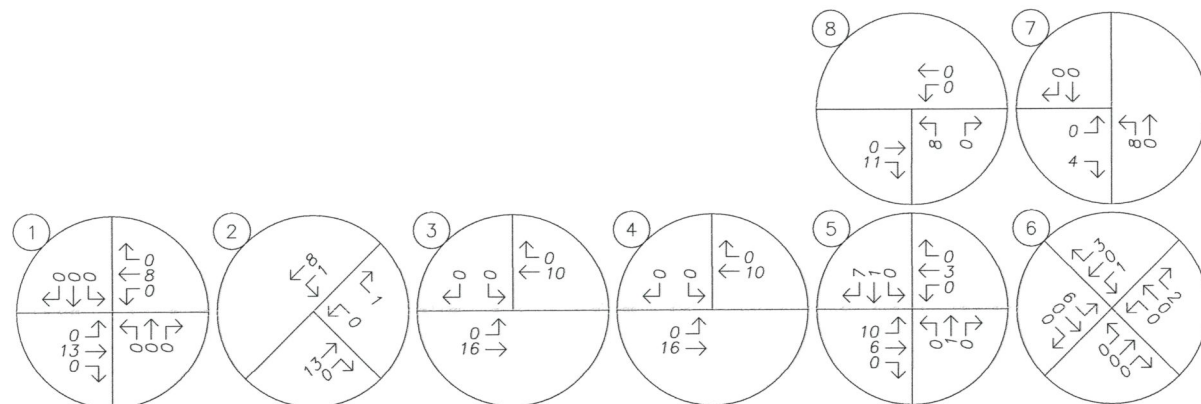
KELLY ENGINEERING
1805 NE 94th St. No. 19, Vancouver, WA 98665
Phone: 360-433-7530



AM PEAK HOUR



PM PEAK HOUR

**SITE TRIP DISTRIBUTION & ASSIGNMENT**

Proposed Development Plan - Site Trips
AM & PM Peak Hours

Figure 3

Valley View Subdivision

9/20/2022



MEMORANDUM

Date: October 26, 2021

To: Nicolle Sicilia
PLS Engineering

From: Frank Charbonneau, PE, PTOE

Subject: Trip Generation Update & Assessment
Lockwood Meadows Subdivision
Lockwood Creek Road, La Center

FL2182

As requested a trip generation update and assessment has been prepared to document the Lockwood Meadows Subdivision site trip generation associated with reducing the number units from 74 housing units to 71 units.

In August 2021 the traffic impact analysis was issued for the development project that planned for 74 single-family housing units. The trip generation identified in the report specified the ADT at 699 daily trips with 55 trips in the AM peak hour and 73 trips in the PM peak hour.

The proposed reduction in housing to 71 units will generate the following number of trips.

Trip Generation Summary for 71 Housing Units

ITE Land Use	Units (#)	Weekday						
		ADT	AM Peak Hour			PM Peak Hour		
			Total	Enter	Exit	Total	Enter	Exit
Single-Family (#210)	71							
Generation Rate ¹		9.44	0.74	25%	75%	0.99	63%	37%
Site Trips		670	53	13	40	70	44	26

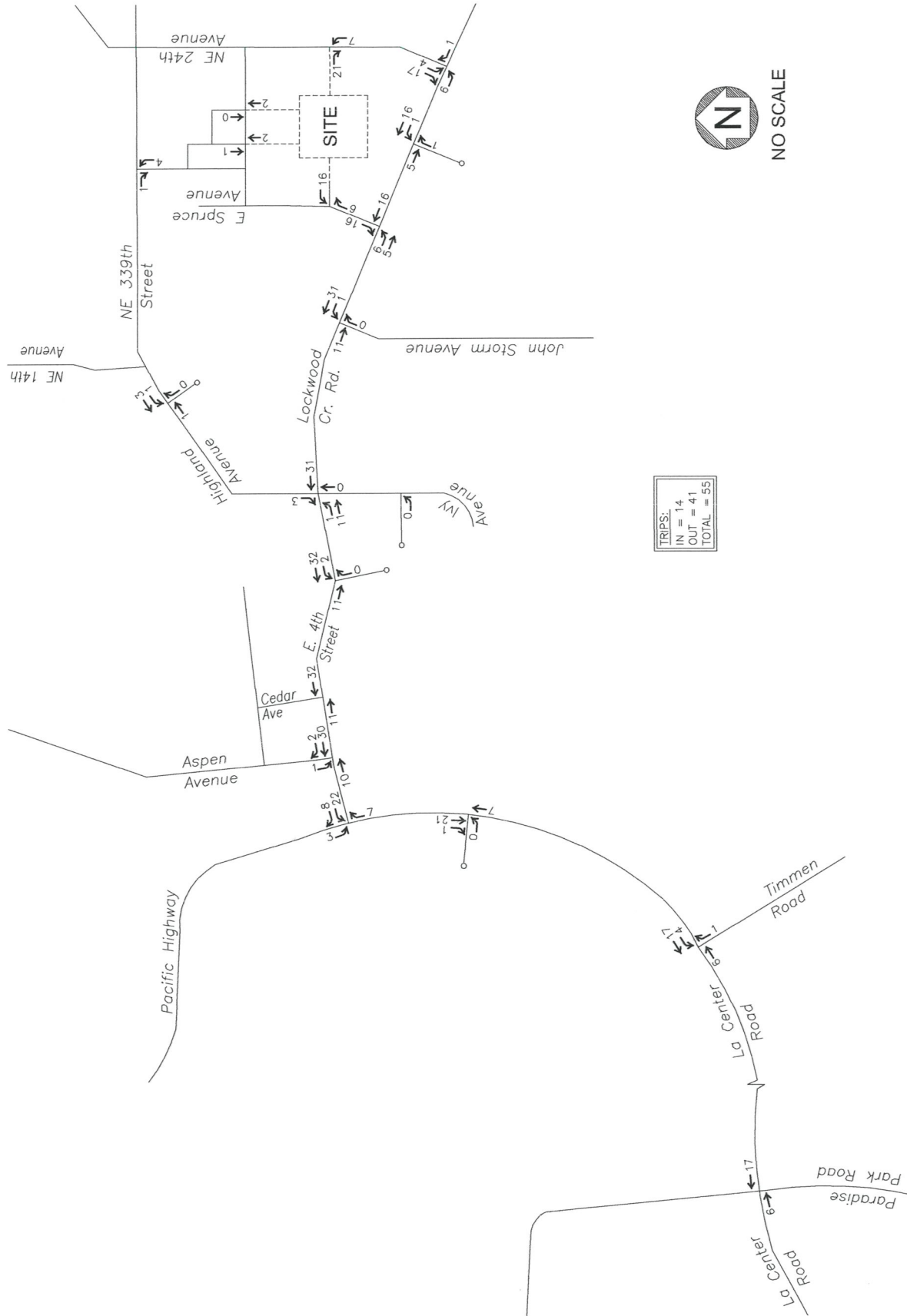
¹ Source: *Trip Generation*, 10th Edition, ITE, 2017, average rates.

By reducing the number of lots from 74 to 71 units the site's trip generation will be reduced by 29 ADT trips, two AM peak hour trips, and three PM peak hour trips. Therefore, the trip distribution and assignments to the project's surrounding study intersections will be less and not result in any additional impacts beyond those identified in the original traffic report.

If you should have any questions, please contact Frank Charbonneau, PE, PTOE at 503.293.1118 or email Frank@CharbonneauEngineer.com.

FILE: 2125flow.dwg

PLOT DATE: 08.01.21



CHARBONNEAU
ENGINEERING LLC

PROJECT: 21-25

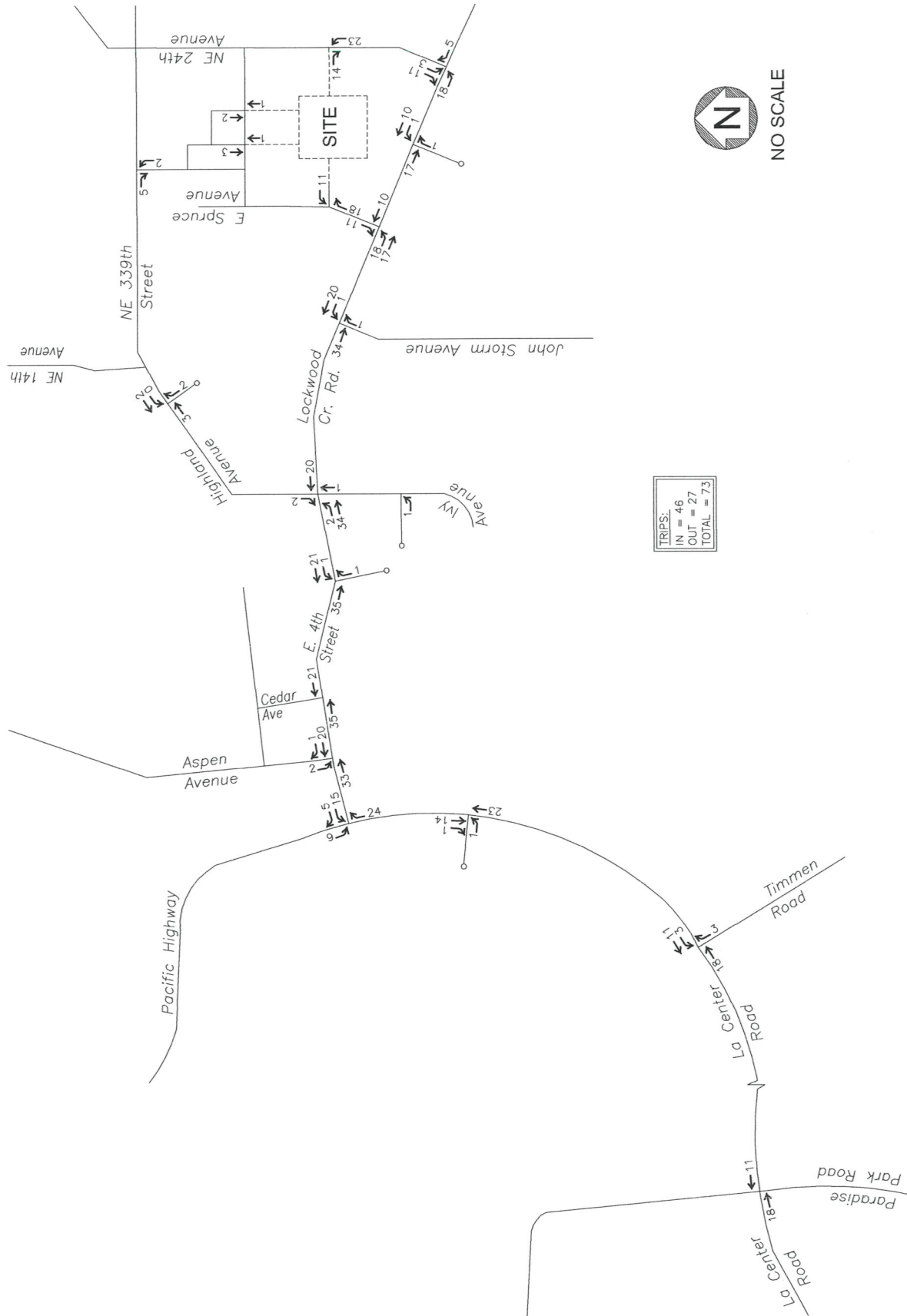
NOTES: Trip generation is based on
Single-Family Residential (ITE 210) trip rates.

TRIP ASSIGNMENT
AM PEAK HOUR
LOCKWOOD MEADOWS

FIGURE
5a

FILE: 2125flow.dwg

PLOT DATE: 08.01.21



CHARBONNEAU
ENGINEERING LLC
PROJECT: 21-25

NOTES: Trip generation is based on
Single-Family Residential (ITE 210) trip rates.

TRIP ASSIGNMENT
PM PEAK HOUR
LOCKWOOD MEADOWS

FIGURE
5b

APPENDIX C
COLLISION DATA

OFFICER REPORTED CRASHES THAT OCCURRED at OR in the vicinity of MULTIPLE INTERSECTIONS IN THE CITY OF LA CENTER

08/25/2020 - 08/25/2023 See 2nd tab below for road info

Under 23 U.S. Code § 148 and 23 U.S. Code § 407, safety data, reports, surveys, schedules, lists compiled or collected for the purpose of identifying, evaluating, or planning the safety enhancement of potential crash sites, hazardous roadway conditions, or railway-highway crossings are not subject to discovery or admitted into evidence in a Federal or State court proceeding or considered for other purposes in any action for damages arising from any occurrence at a location mentioned or addressed in such reports, surveys, schedules, lists, or data.

JURISDICTION	COUNTY	CITY	PRIMARY TRAFFICWAY	BLOCK NUMBER	INTERSECTING TRAFFICWAY	DIST FROM REF POINT	MI or FT	COMP DIR FROM REF POINT	REFERENCE POINT NAME
City Street	Clark	La Center	NE JOHN STORM AVE	300		94	F	S	NE LOCKWOOD CREEK RD
City Street	Clark	La Center	NE LOCKWOOD CREEK RD	1517	NE JOHN STORM AVE				
City Street	Clark	La Center	NE LOCKWOOD CREEK RD	1517	NE JOHN STORM AVE				
City Street	Clark	La Center	NW 319TH ST	2700		51	F	W	NW PARADISE PARK RD
City Street	Clark	La Center	NW 319TH ST	2800		109	F	W	NW PARADISE PARK RD
City Street	Clark	La Center	NW LA CENTER RD	2798	NW PARADISE PARK RD				
City Street	Clark	La Center	NW LA CENTER RD	32088	NW TIMMEN RD				
City Street	Clark	La Center	NW LA CENTER RD	32088	NW TIMMEN RD				
City Street	Clark	La Center	NW LA CENTER RD	32088	NW TIMMEN RD				
City Street	Clark	La Center	NW TIMMEN RD	31986	NW LA CENTER RD				

MILEPOST	A / B	SR ONLY HISTORY / SUSPENSE IND	REPORT NUMBER	DATE	TIME	MOST SEVERE INJURY TYPE	# I F N J	# V A T	# E D H	# K E S	# B I K E S	VEHICLE 1 TYPE
		No	EE07803	12/29/2022	23:00	Unknown	0	0	1	0	0	Passenger Car
		No	ED27543	01/20/2023	13:30	No Apparent Injury	0	0	2	0	0	Pickup, Panel Truck or Vanette under 10,000 lb
		No	ED27543	01/20/2023	13:30	No Apparent Injury	0	0	2	0	0	Pickup, Panel Truck or Vanette under 10,000 lb
		No	EB81369	10/20/2021	16:54	No Apparent Injury	0	0	2	0	0	Pickup, Panel Truck or Vanette under 10,000 lb
		No	EC58162	06/18/2022	12:18	No Apparent Injury	0	0	2	0	0	Passenger Car
		No	EB57965	08/14/2021	14:27	No Apparent Injury	0	0	2	0	0	Passenger Car
		No	EB92925	11/20/2021	15:30	No Apparent Injury	0	0	2	0	0	Passenger Car
		No	EB98726	12/09/2021	13:23	No Apparent Injury	0	0	1	0	0	Pickup, Panel Truck or Vanette under 10,000 lb
		No	ED04764	10/21/2022	12:36	Suspected Minor Injury	1	0	2	0	0	Pickup, Panel Truck or Vanette under 10,000 lb
		No	EC15297	12/18/2021	23:24	Suspected Minor Injury	1	0	1	0	0	Pickup, Panel Truck or Vanette under 10,000 lb

VEHICLE 2 TYPE	JUNCTION RELATIONSHIP	WEATHER	ROADWAY SURFACE CONDITION	LIGHTING CONDITION
	Not at Intersection and Not Related	Other	Dry	Dark - Unknown Lightin
Pickup,Panel Truck or Vanette under 10,000 lb	At Intersection and Related	Clear or Partly Cloudy	Dry	Daylight
Pickup,Panel Truck or Vanette under 10,000 lb	At Intersection and Related	Clear or Partly Cloudy	Dry	Daylight
Pickup,Panel Truck or Vanette under 10,000 lb	Driveway Related but Not at Driveway	Raining	Wet	Daylight
Truck Tractor & Semi-Trailer	At Driveway	Overcast	Dry	Daylight
Pickup,Panel Truck or Vanette under 10,000 lb	At Intersection and Related	Overcast	Dry	Daylight
Pickup,Panel Truck or Vanette under 10,000 lb	At Driveway within Major Intersection	Clear	Dry	Daylight
	At Intersection and Not Related	Overcast	Wet	Daylight
Passenger Car	At Intersection and Related	Raining	Wet	Daylight
	At Intersection and Related	Snowing	Wet	Dark-Street Lights On

FIRST COLLISION TYPE / OBJECT STRUCK	VEHICLE 1 ACTION	VEHICLE 2 ACTION	VEHICLE 1 COMPASS DIRECTION FROM
Mailbox	Going Straight Ahead		North
Entering at angle	Stopped at Signal or Stop Sign	Making Left Turn	Vehicle Stopped
Entering at angle	Stopped at Signal or Stop Sign	Making Left Turn	Vehicle Stopped
Entering at angle	Making Left Turn	Going Straight Ahead	Northwest
Entering at angle	Making Right Turn	Going Straight Ahead	Vehicle Stopped
From opposite direction - one left turn - one straight	Going Straight Ahead	Making Left Turn	West
Entering at angle	Going Straight Ahead	Making Right Turn	Southwest
Vehicle Strikes Deer	Going Straight Ahead		Southwest
From same direction - both going straight - both moving - rear-end	Slowing	Going Straight Ahead	West
Guardrail - Through, Over or Under	Going Straight Ahead		Southeast

VEHICLE 1 COMPASS DIRECTION TO	VEHICLE 2 COMPASS DIRECTION FROM	VEHICLE 2 COMPASS DIRECTION TO	MV DRIVER CONTRIBUTING CIRCUMSTANCE 1 (UNIT 1)	MV DRIVER CONTRIBUTING CIRCUMSTANCE 1 (UNIT 2)
South			Unknown Distraction	
Vehicle Stopped	East	South	None	Unknown Distraction
Vehicle Stopped	East	South	None	Unknown Distraction
Southeast	East	West	Other Contributing Circ Not Listed	None
Vehicle Stopped	East	West	Unknown Distraction	Unknown Distraction
East	East	South	None	Did Not Grant RW to Vehicle
Northeast	Northwest	Southwest	None	Unknown Distraction
Northeast			None	
East	West	East	None	Other Distractions
Northwest			Under Influence of Alcohol	

FIRST IMPACT LOCATION (City, County & Misc Trafficways - 2010 forward)	WA STATE PLANE SOUTH - X 2010 - FORWARD	WA STATE PLANE SOUTH - Y 2010 - FORWARD
Past the Outside Shoulder of Primary Trafficway	1091084.74	200305.06
Lane of Primary Trafficway	1091089.23	200399.24
Lane of Primary Trafficway	1091089.23	200399.24
Lane of Primary Trafficway	1079854.38	197201.70
Lane of Primary Trafficway	1079795.02	197209.48
Lane of Primary Trafficway	1079903.93	197214.91
Lane of Primary Trafficway	1085769.12	197298.37
Lane of Primary Trafficway	1085769.12	197298.37
Lane of Primary Trafficway	1085769.12	197298.37
Other Location (City/County/Misc. Trafficway)	1085769.12	197298.37

APPENDIX D
LEVEL OF SERVICE COMPUTER PRINTOUTS

TWO-WAY STOP CONTROL SUMMARY

General Information				Site Information				
Analyst	DSK			Intersection	Johnstorm Ave. & Lockwood			
Agency/Co.	Kelly Engineering			Jurisdiction	City of Ridgefield			
Date Performed	1/23/2024			Analysis Year	2024			
Analysis Time Period	AM peak Hour							
Project Description Existing								
East/West Street: Lockwood Creek Road				North/South Street: Johnstorm Ave.				
Intersection Orientation: East-West				Study Period (hrs): 0.25				
Vehicle Volumes and Adjustments								
Major Street	Eastbound			Westbound				
Movement	1	2	3	4	5	6		
	L	T	R	L	T	R		
Volume (veh/h)		161	27	9	252			
Peak-Hour Factor, PHF	0.63	0.63	0.63	0.63	0.63	0.63		
Hourly Flow Rate, HFR (veh/h)	0	255	42	14	400	0		
Percent Heavy Vehicles	1	--	--	11	--	--		
Median Type	Undivided							
RT Channelized			0			0		
Lanes	0	1	0	0	1	0		
Configuration			TR	LT				
Upstream Signal		0			0			
Minor Street	Northbound			Southbound				
Movement	7	8	9	10	11	12		
	L	T	R	L	T	R		
Volume (veh/h)	56		8					
Peak-Hour Factor, PHF	0.63	0.63	0.63	0.63	0.63	0.63		
Hourly Flow Rate, HFR (veh/h)	88	0	12	0	0	0		
Percent Heavy Vehicles	2	0	0	3	0	3		
Percent Grade (%)	0			0				
Flared Approach		N			N			
Storage		0			0			
RT Channelized			0			0		
Lanes	0	0	0	0	0	0		
Configuration		LR						
Delay, Queue Length, and Level of Service								
Approach	Eastbound	Westbound	Northbound			Southbound		
Movement	1	4	7	8	9	10	11	12
Lane Configuration		LT		LR				
v (veh/h)		14		100				
C (m) (veh/h)		1215		422				
v/c		0.01		0.24				
95% queue length		0.03		0.91				
Control Delay (s/veh)		8.0		16.2				
LOS		A		C				
Approach Delay (s/veh)	--	--	16.2					
Approach LOS	--	--	C					

TWO-WAY STOP CONTROL SUMMARY

General Information				Site Information				
Analyst	DSK			Intersection	Johnstorm Ave. & Lockwood			
Agency/Co.	Kelly Engineering			Jurisdiction	City of Ridgefield			
Date Performed	1/23/2024			Analysis Year	2027			
Analysis Time Period								
Project Description Year 2027 w/o Project								
East/West Street: Lockwood Creek Road				North/South Street: Johnstorm Ave.				
Intersection Orientation: East-West				Study Period (hrs): 0.25				
Vehicle Volumes and Adjustments								
Major Street	Eastbound			Westbound				
Movement	1	2	3	4	5	6		
	L	T	R	L	T	R		
Volume (veh/h)		197	35	14	335			
Peak-Hour Factor, PHF	0.63	0.63	0.63	0.63	0.63	0.63		
Hourly Flow Rate, HFR (veh/h)	0	312	55	22	531	0		
Percent Heavy Vehicles	1	--	--	11	--	--		
Median Type	Undivided							
RT Channelized			0			0		
Lanes	0	1	0	0	1	0		
Configuration			TR	LT				
Upstream Signal		0			0			
Minor Street	Northbound			Southbound				
Movement	7	8	9	10	11	12		
	L	T	R	L	T	R		
Volume (veh/h)	77		12					
Peak-Hour Factor, PHF	0.63	0.63	0.63	0.63	0.63	0.63		
Hourly Flow Rate, HFR (veh/h)	122	0	19	0	0	0		
Percent Heavy Vehicles	2	0	0	3	0	3		
Percent Grade (%)	0			0				
Flared Approach		N			N			
Storage		0			0			
RT Channelized			0			0		
Lanes	0	0	0	0	0	0		
Configuration		LR						
Delay, Queue Length, and Level of Service								
Approach	Eastbound	Westbound	Northbound			Southbound		
Movement	1	4	7	8	9	10	11	12
Lane Configuration		LT		LR				
v (veh/h)		22		141				
C (m) (veh/h)		1144		322				
v/c		0.02		0.44				
95% queue length		0.06		2.14				
Control Delay (s/veh)		8.2		24.6				
LOS		A		C				
Approach Delay (s/veh)	--	--	24.6					
Approach LOS	--	--	C					

TWO-WAY STOP CONTROL SUMMARY

General Information			Site Information	
Analyst	DSK		Intersection	Johnstorm Ave. & Lockwood
Agency/Co.	Kelly Engineering		Jurisdiction	City of Ridgefield
Date Performed	1/23/2024		Analysis Year	2027
Analysis Time Period	AM Peak Hour			

Project Description Year 2027 with Project

East/West Street: Lockwood Creek Road

North/South Street: Johnstorm Ave.

Intersection Orientation: East-West

Study Period (hrs): 0.25

Vehicle Volumes and Adjustments

Major Street	Eastbound			Westbound		
Movement	1	2	3	4	5	6
	L	T	R	L	T	R
Volume (veh/h)		197	36	15	335	
Peak-Hour Factor, PHF	0.63	0.63	0.63	0.63	0.63	0.63
Hourly Flow Rate, HFR (veh/h)	0	312	57	23	531	0
Percent Heavy Vehicles	1	--	--	11	--	--
Median Type	Undivided					
RT Channelized			0			0
Lanes	0	1	0	0	1	0
Configuration			TR	LT		
Upstream Signal		0			0	

Minor Street	Northbound			Southbound		
Movement	7	8	9	10	11	12
	L	T	R	L	T	R
Volume (veh/h)	85		13			
Peak-Hour Factor, PHF	0.63	0.63	0.63	0.63	0.63	0.63
Hourly Flow Rate, HFR (veh/h)	134	0	20	0	0	0
Percent Heavy Vehicles	2	0	0	3	0	3
Percent Grade (%)	0			0		
Flared Approach		N			N	
Storage		0			0	
RT Channelized			0			0
Lanes	0	0	0	0	0	0
Configuration		LR				

Delay, Queue Length, and Level of Service

Approach	Eastbound	Westbound	Northbound			Southbound		
Movement	1	4	7	8	9	10	11	12
Lane Configuration		LT		LR				
v (veh/h)		23		154				
C (m) (veh/h)		1142		320				
v/c		0.02		0.48				
95% queue length		0.06		2.49				
Control Delay (s/veh)		8.2		26.3				
LOS		A		D				
Approach Delay (s/veh)	--	--	26.3					
Approach LOS	--	--	D					

TWO-WAY STOP CONTROL SUMMARY

General Information							Site Information		
Analyst	DSK			Intersection	Lockwood & Johnstorm Ave.				
Agency/Co.	Kelly Engineering			Jurisdiction	City of La Center				
Date Performed	1/15/2024			Analysis Year	2024				
Analysis Time Period	PM Peak Hour								
Project Description Existing									
East/West Street: Lockwood Cr. Rd.				North/South Street: Johnstorm Ave.					
Intersection Orientation: East-West				Study Period (hrs): 0.25					
Vehicle Volumes and Adjustments									
Major Street	Eastbound			Westbound					
Movement	1	2	3	4	5	6			
	L	T	R	L	T	R			
Volume (veh/h)		103	61	21	93				
Peak-Hour Factor, PHF	0.85	0.83	0.83	0.83	0.83	0.85			
Hourly Flow Rate, HFR (veh/h)	0	124	73	25	112	0			
Percent Heavy Vehicles	1	--	--	0	--	--			
Median Type	Undivided								
RT Channelized			0			0			
Lanes	0	1	0	0	1	0			
Configuration			TR	LT					
Upstream Signal		0			0				
Minor Street	Northbound			Southbound					
Movement	7	8	9	10	11	12			
	L	T	R	L	T	R			
Volume (veh/h)	40		17						
Peak-Hour Factor, PHF	0.83	0.85	0.83	0.85	0.85	0.85			
Hourly Flow Rate, HFR (veh/h)	48	0	20	0	0	0			
Percent Heavy Vehicles	0	0	0	0	0	3			
Percent Grade (%)	0			0					
Flared Approach		N			N				
Storage		0			0				
RT Channelized			0			0			
Lanes	0	0	0	0	0	0			
Configuration		LR							
Delay, Queue Length, and Level of Service									
Approach	Eastbound	Westbound	Northbound			Southbound			
Movement	1	4	7	8	9	10	11	12	
Lane Configuration		LT		LR					
v (veh/h)		25		68					
C (m) (veh/h)		1388		718					
v/c		0.02		0.09					
95% queue length		0.06		0.31					
Control Delay (s/veh)		7.6		10.5					
LOS		A		B					
Approach Delay (s/veh)	--	--	10.5						
Approach LOS	--	--	B						

TWO-WAY STOP CONTROL SUMMARY

General Information		Site Information	
Analyst	DSK	Intersection	Lockwood & Johnstorm Ave.
Agency/Co.	Kelly Engineering	Jurisdiction	City of La Center
Date Performed	1/15/2024	Analysis Year	2027
Analysis Time Period	PM Peak Hour		
Project Description Year 2027 w/o Project			
East/West Street: Lockwood Cr. Rd.		North/South Street: Johnstorm Ave.	
Intersection Orientation: East-West		Study Period (hrs): 0.25	

Vehicle Volumes and Adjustments

Major Street	Eastbound			Westbound		
Movement	1	2	3	4	5	6
	L	T	R	L	T	R
Volume (veh/h)		188	85	28	151	
Peak-Hour Factor, PHF	0.85	0.83	0.83	0.83	0.83	0.85
Hourly Flow Rate, HFR (veh/h)	0	226	102	33	181	0
Percent Heavy Vehicles	1	--	--	0	--	--
Median Type	Undivided					
RT Channelized			0			0
Lanes	0	1	0	0	1	0
Configuration			TR	LT		
Upstream Signal		0			0	
Minor Street	Northbound			Southbound		
Movement	7	8	9	10	11	12
	L	T	R	L	T	R
Volume (veh/h)	54		20			
Peak-Hour Factor, PHF	0.83	0.85	0.83	0.85	0.85	0.85
Hourly Flow Rate, HFR (veh/h)	65	0	24	0	0	0
Percent Heavy Vehicles	0	0	0	0	0	3
Percent Grade (%)		0			0	
Flared Approach		N			N	
Storage		0			0	
RT Channelized			0			0
Lanes	0	0	0	0	0	0
Configuration		LR				

Delay, Queue Length, and Level of Service

Approach	Eastbound	Westbound	Northbound			Southbound		
Movement	1	4	7	8	9	10	11	12
Lane Configuration		LT		LR				
v (veh/h)		33		89				
C (m) (veh/h)		1243		554				
v/c		0.03		0.16				
95% queue length		0.08		0.57				
Control Delay (s/veh)		8.0		12.7				
LOS		A		B				
Approach Delay (s/veh)	--	--	12.7					
Approach LOS	--	--	B					

TWO-WAY STOP CONTROL SUMMARY

General Information							Site Information		
Analyst	DSK			Intersection	Lockwood & Johnstorm Ave.				
Agency/Co.	Kelly Engineering			Jurisdiction	City of La Center				
Date Performed	1/15/2024			Analysis Year	2027				
Analysis Time Period	PM Peak Hour								
Project Description Year 2027 with Project									
East/West Street: Lockwood Cr. Rd.				North/South Street: Johnstorm Ave.					
Intersection Orientation: East-West				Study Period (hrs): 0.25					
Vehicle Volumes and Adjustments									
Major Street	Eastbound			Westbound					
Movement	1	2	3	4	5	6			
	L	T	R	L	T	R			
Volume (veh/h)		188	93	29	151				
Peak-Hour Factor, PHF	0.85	0.83	0.83	0.83	0.83	0.85			
Hourly Flow Rate, HFR (veh/h)	0	226	112	34	181	0			
Percent Heavy Vehicles	1	--	--	0	--	--			
Median Type	Undivided								
RT Channelized			0			0			
Lanes	0	1	0	0	1	0			
Configuration			TR	LT					
Upstream Signal		0			0				
Minor Street	Northbound			Southbound					
Movement	7	8	9	10	11	12			
	L	T	R	L	T	R			
Volume (veh/h)	58		20						
Peak-Hour Factor, PHF	0.83	0.85	0.83	0.85	0.85	0.85			
Hourly Flow Rate, HFR (veh/h)	69	0	24	0	0	0			
Percent Heavy Vehicles	0	0	0	0	0	3			
Percent Grade (%)	0			0					
Flared Approach		N			N				
Storage		0			0				
RT Channelized			0			0			
Lanes	0	0	0	0	0	0			
Configuration		LR							
Delay, Queue Length, and Level of Service									
Approach	Eastbound	Westbound	Northbound			Southbound			
Movement	1	4	7	8	9	10	11	12	
Lane Configuration		LT		LR					
v (veh/h)		34		93					
C (m) (veh/h)		1232		547					
v/c		0.03		0.17					
95% queue length		0.09		0.61					
Control Delay (s/veh)		8.0		12.9					
LOS		A		B					
Approach Delay (s/veh)	--	--	12.9						
Approach LOS	--	--	B						

TWO-WAY STOP CONTROL SUMMARY

General Information				Site Information				
Analyst	DSK			Intersection	4th St. & Highland Rd.			
Agency/Co.	Kelly Engineering			Jurisdiction	City of Ridgefield			
Date Performed	1/23/2024			Analysis Year	2024			
Analysis Time Period	Existing AM							
Project Description Existing								
East/West Street: E 4th St.				North/South Street: Highland Rd.				
Intersection Orientation: East-West				Study Period (hrs): 0.25				
Vehicle Volumes and Adjustments								
Major Street	Eastbound			Westbound				
Movement	1	2	3	4	5	6		
	L	T	R	L	T	R		
Volume (veh/h)	102	140	2	1	198	37		
Peak-Hour Factor, PHF	0.63	0.63	0.63	0.63	0.63	0.63		
Hourly Flow Rate, HFR (veh/h)	161	222	3	1	314	58		
Percent Heavy Vehicles	1	--	--	0	--	--		
Median Type	Undivided							
RT Channelized			0			0		
Lanes	1	1	0	1	1	0		
Configuration	L		TR	L		TR		
Upstream Signal		0			0			
Minor Street	Northbound			Southbound				
Movement	7	8	9	10	11	12		
	L	T	R	L	T	R		
Volume (veh/h)	3	4	4	30	1	109		
Peak-Hour Factor, PHF	0.63	0.63	0.63	0.63	0.63	0.63		
Hourly Flow Rate, HFR (veh/h)	4	6	6	47	1	173		
Percent Heavy Vehicles	100	0	25	3	0	3		
Percent Grade (%)	0			0				
Flared Approach		N			N			
Storage		0			0			
RT Channelized			0			0		
Lanes	1	1	0	1	1	0		
Configuration	L		TR	L		TR		
Delay, Queue Length, and Level of Service								
Approach	Eastbound	Westbound	Northbound			Southbound		
Movement	1	4	7	8	9	10	11	12
Lane Configuration	L	L	L		TR	L		TR
v (veh/h)	161	1	4		12	47		174
C (m) (veh/h)	1192	1356	104		360	227		690
v/c	0.14	0.00	0.04		0.03	0.21		0.25
95% queue length	0.47	0.00	0.12		0.10	0.76		1.00
Control Delay (s/veh)	8.5	7.7	41.0		15.3	25.0		12.0
LOS	A	A	E		C	C		B
Approach Delay (s/veh)	--	--	21.8			14.7		
Approach LOS	--	--	C			B		

TWO-WAY STOP CONTROL SUMMARY

General Information				Site Information				
Analyst	DSK			Intersection	4th St. & Highland Rd.			
Agency/Co.	Kelly Engineering			Jurisdiction	City of Ridgefield			
Date Performed	1/23/2024			Analysis Year	2027			
Analysis Time Period	Existing A.M.							
Project Description Year 2027 w/o Project								
East/West Street: E 4th St.				North/South Street: Highland Rd.				
Intersection Orientation: East-West				Study Period (hrs): 0.25				
Vehicle Volumes and Adjustments								
Major Street	Eastbound			Westbound				
Movement	1	2	3	4	5	6		
	L	T	R	L	T	R		
Volume (veh/h)	121	178	2	1	291	42		
Peak-Hour Factor, PHF	0.63	0.63	0.63	0.63	0.63	0.63		
Hourly Flow Rate, HFR (veh/h)	192	282	3	1	461	66		
Percent Heavy Vehicles	1	--	--	0	--	--		
Median Type	Undivided							
RT Channelized			0			0		
Lanes	1	1	0	1	1	0		
Configuration	L		TR	L		TR		
Upstream Signal		0			0			
Minor Street	Northbound			Southbound				
Movement	7	8	9	10	11	12		
	L	T	R	L	T	R		
Volume (veh/h)	3	4	5	33	2	121		
Peak-Hour Factor, PHF	0.63	0.63	0.63	0.63	0.63	0.63		
Hourly Flow Rate, HFR (veh/h)	4	6	7	52	3	192		
Percent Heavy Vehicles	100	0	25	3	0	3		
Percent Grade (%)	0			0				
Flared Approach		N			N			
Storage		0			0			
RT Channelized			0			0		
Lanes	1	1	0	1	1	0		
Configuration	L		TR	L		TR		
Delay, Queue Length, and Level of Service								
Approach	Eastbound	Westbound	Northbound			Southbound		
Movement	1	4	7	8	9	10	11	12
Lane Configuration	L	L	L		TR	L		TR
v (veh/h)	192	1	4		13	52		195
C (m) (veh/h)	1045	1289	53		264	139		551
v/c	0.18	0.00	0.08		0.05	0.37		0.35
95% queue length	0.67	0.00	0.24		0.15	1.57		1.59
Control Delay (s/veh)	9.2	7.8	78.4		19.3	45.6		15.1
LOS	A	A	F		C	E		C
Approach Delay (s/veh)	--	--	33.2			21.5		
Approach LOS	--	--	D			C		

TWO-WAY STOP CONTROL SUMMARY

General Information				Site Information			
Analyst	DSK			Intersection	4th St. & Highland Rd.		
Agency/Co.	Kelly Engineering			Jurisdiction	City of Ridgefield		
Date Performed	1/23/2024			Analysis Year	2027		
Analysis Time Period	Existing AM						
Project Description Year 2027 with Project							
East/West Street: E 4th St.				North/South Street: Highland Rd.			
Intersection Orientation: East-West				Study Period (hrs): 0.25			
Vehicle Volumes and Adjustments							
Major Street	Eastbound			Westbound			
Movement	1	2	3	4	5	6	
	L	T	R	L	T	R	
Volume (veh/h)	121	179	2	1	298	42	
Peak-Hour Factor, PHF	0.63	0.63	0.63	0.63	0.63	0.63	
Hourly Flow Rate, HFR (veh/h)	192	284	3	1	473	66	
Percent Heavy Vehicles	1	--	--	0	--	--	
Median Type	Undivided						
RT Channelized			0			0	
Lanes	1	1	0	1	1	0	
Configuration	L		TR	L		TR	
Upstream Signal		0			0		
Minor Street	Northbound			Southbound			
Movement	7	8	9	10	11	12	
	L	T	R	L	T	R	
Volume (veh/h)	3	4	5	33	2	121	
Peak-Hour Factor, PHF	0.63	0.63	0.63	0.63	0.63	0.63	
Hourly Flow Rate, HFR (veh/h)	4	6	7	52	3	192	
Percent Heavy Vehicles	100	0	25	3	0	3	
Percent Grade (%)	0			0			
Flared Approach		N			N		
Storage		0			0		
RT Channelized			0			0	
Lanes	1	1	0	1	1	0	
Configuration	L		TR	L		TR	
Delay, Queue Length, and Level of Service							
Approach	Eastbound	Westbound	Northbound			Southbound	
Movement	1	4	7	8	9	10	11
Lane Configuration	L	L	L		TR	L	TR
v (veh/h)	192	1	4		13	52	195
C (m) (veh/h)	1034	1287	51		260	136	542
v/c	0.19	0.00	0.08		0.05	0.38	0.36
95% queue length	0.68	0.00	0.25		0.16	1.61	1.62
Control Delay (s/veh)	9.3	7.8	81.5		19.6	47.0	15.3
LOS	A	A	F		C	E	C
Approach Delay (s/veh)	--	--	34.1			22.0	
Approach LOS	--	--	D			C	

TWO-WAY STOP CONTROL SUMMARY

General Information							Site Information		
Analyst	DSK			Intersection	4th St. & Highland Ave.				
Agency/Co.	Kelly Engineering			Jurisdiction	City of La Center				
Date Performed	1/15/2024			Analysis Year	2024				
Analysis Time Period	PM Peak Hour								
Project Description Existing									
East/West Street: 4th St.				North/South Street: Highland Ave.					
Intersection Orientation: East-West				Study Period (hrs): 0.25					
Vehicle Volumes and Adjustments									
Major Street	Eastbound			Westbound					
Movement	1	2	3	4	5	6			
	L	T	R	L	T	R			
Volume (veh/h)	152	275	2	0	295	21			
Peak-Hour Factor, PHF	0.63	0.63	0.63	0.63	0.63	0.63			
Hourly Flow Rate, HFR (veh/h)	241	436	3	0	468	33			
Percent Heavy Vehicles	1	--	--	1	--	--			
Median Type	Undivided								
RT Channelized			0			0			
Lanes	1	1	0	1	1	0			
Configuration	L		TR	L		TR			
Upstream Signal		0			0				
Minor Street	Northbound			Southbound					
Movement	7	8	9	10	11	12			
	L	T	R	L	T	R			
Volume (veh/h)	2	0	0	12	0	89			
Peak-Hour Factor, PHF	0.63	0.63	0.63	0.63	0.63	0.63			
Hourly Flow Rate, HFR (veh/h)	3	0	0	19	0	141			
Percent Heavy Vehicles	100	0	25	0	0	3			
Percent Grade (%)	0			0					
Flared Approach		N			N				
Storage		0			0				
RT Channelized			0			0			
Lanes	1	1	0	1	1	0			
Configuration	L		TR	L		TR			
Delay, Queue Length, and Level of Service									
Approach	Eastbound	Westbound	Northbound			Southbound			
Movement	1	4	7	8	9	10	11		
Lane Configuration	L	L	L		TR	L	TR		
v (veh/h)	241	0	3		0	19	141		
C (m) (veh/h)	1068	1126	40			97	581		
v/c	0.23	0.00	0.08			0.20	0.24		
95% queue length	0.87	0.00	0.23			0.68	0.95		
Control Delay (s/veh)	9.4	8.2	102.2			50.9	13.2		
LOS	A	A	F			F	B		
Approach Delay (s/veh)	--	--				17.7			
Approach LOS	--	--				C			

TWO-WAY STOP CONTROL SUMMARY

General Information				Site Information			
Analyst	DSK			Intersection	4th St. & Highland Ave.		
Agency/Co.	Kelly Engineering			Jurisdiction	City of La Center		
Date Performed	1/15/2024			Analysis Year	2027		
Analysis Time Period	PM Peak Hour						
Project Description Year 2027 w/o Project							
East/West Street: 4th St.				North/South Street: Highland Ave.			
Intersection Orientation: East-West				Study Period (hrs): 0.25			
Vehicle Volumes and Adjustments							
Major Street	Eastbound			Westbound			
Movement	1	2	3	4	5	6	
	L	T	R	L	T	R	
Volume (veh/h)	174	386	2	0	284	17	
Peak-Hour Factor, PHF	0.85	0.85	0.85	0.85	0.85	0.85	
Hourly Flow Rate, HFR (veh/h)	204	454	2	0	334	19	
Percent Heavy Vehicles	1	--	--	1	--	--	
Median Type	Undivided						
RT Channelized			0			0	
Lanes	1	1	0	1	1	0	
Configuration	L		TR	L		TR	
Upstream Signal		0			0		
Minor Street	Northbound			Southbound			
Movement	7	8	9	10	11	12	
	L	T	R	L	T	R	
Volume (veh/h)	2	2	2	16	1	112	
Peak-Hour Factor, PHF	0.85	0.85	0.85	0.85	0.85	0.85	
Hourly Flow Rate, HFR (veh/h)	2	2	2	18	1	131	
Percent Heavy Vehicles	100	0	25	0	0	3	
Percent Grade (%)	0			0			
Flared Approach		N			N		
Storage		0			0		
RT Channelized			0			0	
Lanes	1	1	0	1	1	0	
Configuration	L		TR	L		TR	
Delay, Queue Length, and Level of Service							
Approach	Eastbound	Westbound	Northbound			Southbound	
Movement	1	4	7	8	9	10	11
Lane Configuration	L	L	L		TR	L	TR
v (veh/h)	204	0	2		4	18	132
C (m) (veh/h)	1211	1110	65		239	138	678
v/c	0.17	0.00	0.03		0.02	0.13	0.19
95% queue length	0.60	0.00	0.09		0.05	0.44	0.72
Control Delay (s/veh)	8.6	8.2	62.1		20.3	35.0	11.6
LOS	A	A	F		C	D	B
Approach Delay (s/veh)	--	--	34.3			14.4	
Approach LOS	--	--	D			B	

TWO-WAY STOP CONTROL SUMMARY							
General Information				Site Information			
Analyst	DSK			Intersection	4th St. & Highland Ave.		
Agency/Co.	Kelly Engineering			Jurisdiction	City of La Center		
Date Performed	1/15/2024			Analysis Year	2027		
Analysis Time Period	PM Peak Hour						
Project Description Year 2027 with Project							
East/West Street: 4th St.				North/South Street: Highland Ave.			
Intersection Orientation: East-West				Study Period (hrs): 0.25			
Vehicle Volumes and Adjustments							
Major Street	Eastbound			Westbound			
Movement	1	2	3	4	5	6	
	L	T	R	L	T	R	
Volume (veh/h)	174	393	2	0	287	18	
Peak-Hour Factor, PHF	0.85	0.85	0.85	0.85	0.85	0.85	
Hourly Flow Rate, HFR (veh/h)	204	462	2	0	337	21	
Percent Heavy Vehicles	1	--	--	1	--	--	
Median Type	Undivided						
RT Channelized			0			0	
Lanes	1	1	0	1	1	0	
Configuration	L		TR	L		TR	
Upstream Signal		0			0		
Minor Street	Northbound			Southbound			
Movement	7	8	9	10	11	12	
	L	T	R	L	T	R	
Volume (veh/h)	2	2	2	17	1	112	
Peak-Hour Factor, PHF	0.85	0.85	0.85	0.85	0.85	0.85	
Hourly Flow Rate, HFR (veh/h)	2	2	2	19	1	131	
Percent Heavy Vehicles	100	0	25	0	0	3	
Percent Grade (%)	0			0			
Flared Approach		N			N		
Storage		0			0		
RT Channelized			0			0	
Lanes	1	1	0	1	1	0	
Configuration	L		TR	L		TR	
Delay, Queue Length, and Level of Service							
Approach	Eastbound	Westbound	Northbound			Southbound	
Movement	1	4	7	8	9	10	11
Lane Configuration	L	L	L		TR	L	TR
v (veh/h)	204	0	2		4	19	
C (m) (veh/h)	1206	1103	63		235	136	675
v/c	0.17	0.00	0.03		0.02	0.14	0.20
95% queue length	0.61	0.00	0.10		0.05	0.47	0.72
Control Delay (s/veh)	8.6	8.3	64.0		20.6	35.7	11.6
LOS	A	A	F		C	E	B
Approach Delay (s/veh)	--	--	35.1			14.7	
Approach LOS	--	--	E			B	

TWO-WAY STOP CONTROL SUMMARY

General Information				Site Information				
Analyst	DSK			Intersection	4th St. & Aspen Ave.			
Agency/Co.	Kelly Engineering			Jurisdiction	City of Ridgefield			
Date Performed	1/23/2024			Analysis Year	2024			
Analysis Time Period	AM Peak Hour							
Project Description Existing								
East/West Street: 4th St.				North/South Street: Aspen Ave.				
Intersection Orientation: East-West				Study Period (hrs): 0.25				
Vehicle Volumes and Adjustments								
Major Street	Eastbound			Westbound				
Movement	1	2	3	4	5	6		
	L	T	R	L	T	R		
Volume (veh/h)	40	346			447	28		
Peak-Hour Factor, PHF	0.82	0.82	0.93	0.93	0.82	0.82		
Hourly Flow Rate, HFR (veh/h)	48	421	0	0	545	34		
Percent Heavy Vehicles	0	--	--	3	--	--		
Median Type	Undivided							
RT Channelized			0			0		
Lanes	1	1	0	0	1	0		
Configuration	L	T				TR		
Upstream Signal		0			0			
Minor Street	Northbound			Southbound				
Movement	7	8	9	10	11	12		
	L	T	R	L	T	R		
Volume (veh/h)				33		115		
Peak-Hour Factor, PHF	0.93	0.85	0.93	0.82	0.85	0.82		
Hourly Flow Rate, HFR (veh/h)	0	0	0	40	0	140		
Percent Heavy Vehicles	13	0	3	3	0	1		
Percent Grade (%)	0			0				
Flared Approach		N			N			
Storage		0			0			
RT Channelized			0			0		
Lanes	0	0	0	1	0	1		
Configuration				L		R		
Delay, Queue Length, and Level of Service								
Approach	Eastbound	Westbound	Northbound			Southbound		
Movement	1	4	7	8	9	10	11	12
Lane Configuration	L					L		R
v (veh/h)	48					40		140
C (m) (veh/h)	1005					229		528
v/c	0.05					0.17		0.27
95% queue length	0.15					0.62		1.06
Control Delay (s/veh)	8.8					24.0		14.3
LOS	A					C		B
Approach Delay (s/veh)	--	--				16.4		
Approach LOS	--	--				C		

TWO-WAY STOP CONTROL SUMMARY

General Information				Site Information			
Analyst	DSK			Intersection	4th St. & Aspen Ave.		
Agency/Co.	Kelly Engineering			Jurisdiction	City of Ridgefield		
Date Performed	1/23/2024			Analysis Year	2027		
Analysis Time Period	AM Peak Hour						
Project Description Year 2027 w/o Project							
East/West Street: 4th St.				North/South Street: Aspen Ave.			
Intersection Orientation: East-West				Study Period (hrs): 0.25			
Vehicle Volumes and Adjustments							
Major Street	Eastbound			Westbound			
Movement	1	2	3	4	5	6	
	L	T	R	L	T	R	
Volume (veh/h)	48	389			542	36	
Peak-Hour Factor, PHF	0.82	0.82	0.93	0.93	0.82	0.82	
Hourly Flow Rate, HFR (veh/h)	58	474	0	0	660	43	
Percent Heavy Vehicles	0	--	--	3	--	--	
Median Type	Undivided						
RT Channelized			0			0	
Lanes	1	1	0	0	1	0	
Configuration	L	T				TR	
Upstream Signal		0			0		
Minor Street	Northbound			Southbound			
Movement	7	8	9	10	11	12	
	L	T	R	L	T	R	
Volume (veh/h)				44		135	
Peak-Hour Factor, PHF	0.93	0.85	0.93	0.82	0.85	0.82	
Hourly Flow Rate, HFR (veh/h)	0	0	0	53	0	164	
Percent Heavy Vehicles	13	0	3	3	0	1	
Percent Grade (%)	0			0			
Flared Approach		N			N		
Storage		0			0		
RT Channelized			0			0	
Lanes	0	0	0	1	0	1	
Configuration				L		R	
Delay, Queue Length, and Level of Service							
Approach	Eastbound	Westbound	Northbound			Southbound	
Movement	1	4	7	8	9	10	11
Lane Configuration	L					L	R
v (veh/h)	58					53	164
C (m) (veh/h)	904					172	452
v/c	0.06					0.31	0.36
95% queue length	0.21					1.23	1.63
Control Delay (s/veh)	9.3					35.0	17.4
LOS	A					D	C
Approach Delay (s/veh)	--	--				21.7	
Approach LOS	--	--				C	

TWO-WAY STOP CONTROL SUMMARY

General Information				Site Information			
Analyst	DSK			Intersection	4th St. & Aspen Ave.		
Agency/Co.	Kelly Engineering			Jurisdiction	City of Ridgefield		
Date Performed	1/23/2024			Analysis Year	2027		
Analysis Time Period	AM Peak Hour						
Project Description Year 2027 with Project							
East/West Street: 4th St.				North/South Street: Aspen Ave.			
Intersection Orientation: East-West				Study Period (hrs): 0.25			
Vehicle Volumes and Adjustments							
Major Street	Eastbound			Westbound			
Movement	1	2	3	4	5	6	
	L	T	R	L	T	R	
Volume (veh/h)	48	390			549	36	
Peak-Hour Factor, PHF	0.82	0.82	0.93	0.93	0.82	0.82	
Hourly Flow Rate, HFR (veh/h)	58	475	0	0	669	43	
Percent Heavy Vehicles	0	--	--	3	--	--	
Median Type	Undivided						
RT Channelized			0			0	
Lanes	1	1	0	0	1	0	
Configuration	L	T				TR	
Upstream Signal		0			0		
Minor Street	Northbound			Southbound			
Movement	7	8	9	10	11	12	
	L	T	R	L	T	R	
Volume (veh/h)				44		135	
Peak-Hour Factor, PHF	0.93	0.85	0.93	0.82	0.85	0.82	
Hourly Flow Rate, HFR (veh/h)	0	0	0	53	0	164	
Percent Heavy Vehicles	13	0	3	3	0	1	
Percent Grade (%)	0			0			
Flared Approach		N			N		
Storage		0			0		
RT Channelized			0			0	
Lanes	0	0	0	1	0	1	
Configuration				L		R	
Delay, Queue Length, and Level of Service							
Approach	Eastbound	Westbound	Northbound			Southbound	
Movement	1	4	7	8	9	10	11
Lane Configuration	L					L	R
v (veh/h)	58					53	164
C (m) (veh/h)	897					170	447
v/c	0.06					0.31	0.37
95% queue length	0.21					1.25	1.66
Control Delay (s/veh)	9.3					35.5	17.6
LOS	A					E	C
Approach Delay (s/veh)	--	--				22.0	
Approach LOS	--	--				C	

TWO-WAY STOP CONTROL SUMMARY

General Information				Site Information			
Analyst	DSK			Intersection	4th St. & Aspen Ave.		
Agency/Co.	Kelly Engineering			Jurisdiction	City of La Center		
Date Performed	1/15/2024			Analysis Year	2024		
Analysis Time Period	PM Peak Hour						
Project Description Existing							
East/West Street: 4th St.				North/South Street: Aspen Ave.			
Intersection Orientation: East-West				Study Period (hrs): 0.25			
Vehicle Volumes and Adjustments							
Major Street	Eastbound			Westbound			
Movement	1	2	3	4	5	6	
	L	T	R	L	T	R	
Volume (veh/h)	146	449			295	21	
Peak-Hour Factor, PHF	0.97	0.97	0.95	0.95	0.97	0.97	
Hourly Flow Rate, HFR (veh/h)	150	462	0	0	304	21	
Percent Heavy Vehicles	1	--	--	0	--	--	
Median Type	Undivided						
RT Channelized			0			0	
Lanes	1	1	0	0	1	0	
Configuration	L	T				TR	
Upstream Signal		0			0		
Minor Street	Northbound			Southbound			
Movement	7	8	9	10	11	12	
	L	T	R	L	T	R	
Volume (veh/h)				10		63	
Peak-Hour Factor, PHF	0.95	0.93	0.95	0.97	0.93	0.97	
Hourly Flow Rate, HFR (veh/h)	0	0	0	10	0	64	
Percent Heavy Vehicles	12	0	0	0	0	2	
Percent Grade (%)	0			0			
Flared Approach		N			N		
Storage		0			0		
RT Channelized			0			0	
Lanes	0	0	0	1	0	1	
Configuration				L		R	
Delay, Queue Length, and Level of Service							
Approach	Eastbound	Westbound	Northbound			Southbound	
Movement	1	4	7	8	9	10	11
Lane Configuration	L					L	R
v (veh/h)	150					10	64
C (m) (veh/h)	1240					215	726
v/c	0.12					0.05	0.09
95% queue length	0.41					0.15	0.29
Control Delay (s/veh)	8.3					22.6	10.4
LOS	A					C	B
Approach Delay (s/veh)	--	--				12.1	
Approach LOS	--	--				B	

TWO-WAY STOP CONTROL SUMMARY

General Information				Site Information				
Analyst	DSK			Intersection	4th St. & Aspen Ave.			
Agency/Co.	Kelly Engineering			Jurisdiction	City of La Center			
Date Performed	1/15/2024			Analysis Year	2027			
Analysis Time Period	PM Peak Hour							
Project Description Year 2027 w/o Project								
East/West Street: 4th St.				North/South Street: Aspen Ave.				
Intersection Orientation: East-West				Study Period (hrs): 0.25				
Vehicle Volumes and Adjustments								
Major Street	Eastbound			Westbound				
Movement	1	2	3	4	5	6		
	L	T	R	L	T	R		
Volume (veh/h)	182	562			371	34		
Peak-Hour Factor, PHF	0.97	0.97	0.95	0.95	0.97	0.97		
Hourly Flow Rate, HFR (veh/h)	187	579	0	0	382	35		
Percent Heavy Vehicles	1	--	--	0	--	--		
Median Type	Undivided							
RT Channelized			0			0		
Lanes	1	1	0	0	1	0		
Configuration	L	T				TR		
Upstream Signal		0			0			
Minor Street	Northbound			Southbound				
Movement	7	8	9	10	11	12		
	L	T	R	L	T	R		
Volume (veh/h)				21		79		
Peak-Hour Factor, PHF	0.95	0.93	0.95	0.97	0.93	0.97		
Hourly Flow Rate, HFR (veh/h)	0	0	0	21	0	81		
Percent Heavy Vehicles	12	0	0	0	0	2		
Percent Grade (%)	0			0				
Flared Approach		N			N			
Storage		0			0			
RT Channelized			0			0		
Lanes	0	0	0	1	0	1		
Configuration				L		R		
Delay, Queue Length, and Level of Service								
Approach	Eastbound	Westbound	Northbound			Southbound		
Movement	1	4	7	8	9	10	11	12
Lane Configuration	L					L		R
v (veh/h)	187					21		81
C (m) (veh/h)	1147					140		650
v/c	0.16					0.15		0.12
95% queue length	0.58					0.51		0.42
Control Delay (s/veh)	8.7					35.2		11.3
LOS	A					E		B
Approach Delay (s/veh)	--	--				16.2		
Approach LOS	--	--				C		

TWO-WAY STOP CONTROL SUMMARY

General Information				Site Information				
Analyst	DSK			Intersection	4th St. & Aspen Ave.			
Agency/Co.	Kelly Engineering			Jurisdiction	City of La Center			
Date Performed	1/15/2024			Analysis Year	2027			
Analysis Time Period	PM Peak Hour							
Project Description Year 2027 with Project								
East/West Street: Aspen Ave.				North/South Street: Aspen Ave.				
Intersection Orientation: East-West				Study Period (hrs): 0.25				
Vehicle Volumes and Adjustments								
Major Street	Eastbound			Westbound				
Movement	1	2	3	4	5	6		
	L	T	R	L	T	R		
Volume (veh/h)	182	569			374	34		
Peak-Hour Factor, PHF	0.97	0.97	1.00	1.00	0.97	0.97		
Hourly Flow Rate, HFR (veh/h)	187	586	0	0	385	35		
Percent Heavy Vehicles	1	--	--	0	--	--		
Median Type	Undivided							
RT Channelized			0			0		
Lanes	1	1	0	0	1	0		
Configuration	L	T				TR		
Upstream Signal		0			0			
Minor Street	Northbound			Southbound				
Movement	7	8	9	10	11	12		
	L	T	R	L	T	R		
Volume (veh/h)				21		79		
Peak-Hour Factor, PHF	1.00	1.00	1.00	0.97	1.00	0.97		
Hourly Flow Rate, HFR (veh/h)	0	0	0	21	0	81		
Percent Heavy Vehicles	0	0	0	10	0	2		
Percent Grade (%)	0			0				
Flared Approach		N			N			
Storage		0			0			
RT Channelized			0			0		
Lanes	0	0	0	1	0	1		
Configuration				L		R		
Delay, Queue Length, and Level of Service								
Approach	Eastbound	Westbound	Northbound			Southbound		
Movement	1	4	7	8	9	10	11	12
Lane Configuration	L					L		R
v (veh/h)	187					21		81
C (m) (veh/h)	1145					131		648
v/c	0.16					0.16		0.13
95% queue length	0.58					0.55		0.43
Control Delay (s/veh)	8.8					37.7		11.3
LOS	A					E		B
Approach Delay (s/veh)	--	--				16.8		
Approach LOS	--	--				C		

TWO-WAY STOP CONTROL SUMMARY

General Information				Site Information				
Analyst	DSK			Intersection	Ia Center Rd. & Timmen Rd.			
Agency/Co.	Kelly Engineering			Jurisdiction	City of Ridgefield			
Date Performed	1/23/2024			Analysis Year	2023			
Analysis Time Period	AM Peak Hour							
Project Description Existing								
East/West Street: La Center Rd.				North/South Street: Timmen Rd.				
Intersection Orientation: East-West				Study Period (hrs): 0.25				
Vehicle Volumes and Adjustments								
Major Street	Eastbound			Westbound				
Movement	1	2	3	4	5	6		
	L	T	R	L	T	R		
Volume (veh/h)		174	11	31	502			
Peak-Hour Factor, PHF	0.85	0.93	0.93	0.93	0.93	1.00		
Hourly Flow Rate, HFR (veh/h)	0	187	11	33	539	0		
Percent Heavy Vehicles	0	--	--	3	--	--		
Median Type	Undivided							
RT Channelized			0			0		
Lanes	0	1	0	1	1	0		
Configuration			TR	L	T			
Upstream Signal		0			0			
Minor Street	Northbound			Southbound				
Movement	7	8	9	10	11	12		
	L	T	R	L	T	R		
Volume (veh/h)	11		30					
Peak-Hour Factor, PHF	0.93	0.85	0.93	0.85	0.85	0.85		
Hourly Flow Rate, HFR (veh/h)	11	0	32	0	0	0		
Percent Heavy Vehicles	13	0	3	0	0	0		
Percent Grade (%)	0			0				
Flared Approach		N			N			
Storage		0			0			
RT Channelized			0			0		
Lanes	1	0	1	0	0	0		
Configuration	L		R					
Delay, Queue Length, and Level of Service								
Approach	Eastbound	Westbound	Northbound			Southbound		
Movement	1	4	7	8	9	10	11	12
Lane Configuration		L	L		R			
v (veh/h)		33	11		32			
C (m) (veh/h)		1369	333		847			
v/c		0.02	0.03		0.04			
95% queue length		0.07	0.10		0.12			
Control Delay (s/veh)		7.7	16.2		9.4			
LOS		A	C		A			
Approach Delay (s/veh)	--	--	11.1					
Approach LOS	--	--	B					

TWO-WAY STOP CONTROL SUMMARY

General Information				Site Information				
Analyst	DSK			Intersection	la Center Rd. & Timmen Rd.			
Agency/Co.	Kelly Engineering			Jurisdiction	City of Ridgefield			
Date Performed	1/23/2024			Analysis Year	2027			
Analysis Time Period	AM Peak Hour							
Project Description Year 2027 w/o Project								
East/West Street: La Center Rd.				North/South Street: Timmen Rd.				
Intersection Orientation: East-West				Study Period (hrs): 0.25				
Vehicle Volumes and Adjustments								
Major Street	Eastbound			Westbound				
Movement	1	2	3	4	5	6		
	L	T	R	L	T	R		
Volume (veh/h)		216	12	41	626			
Peak-Hour Factor, PHF	0.85	0.93	0.93	0.93	0.93	1.00		
Hourly Flow Rate, HFR (veh/h)	0	232	12	44	673	0		
Percent Heavy Vehicles	0	--	--	3	--	--		
Median Type	Undivided							
RT Channelized			0			0		
Lanes	0	1	0	1	1	0		
Configuration			TR	L	T			
Upstream Signal		0			0			
Minor Street	Northbound			Southbound				
Movement	7	8	9	10	11	12		
	L	T	R	L	T	R		
Volume (veh/h)	12		33					
Peak-Hour Factor, PHF	0.93	0.85	0.93	0.85	0.85	0.85		
Hourly Flow Rate, HFR (veh/h)	12	0	35	0	0	0		
Percent Heavy Vehicles	13	0	3	0	0	0		
Percent Grade (%)	0			0				
Flared Approach		N			N			
Storage		0			0			
RT Channelized			0			0		
Lanes	1	0	1	0	0	0		
Configuration	L		R					
Delay, Queue Length, and Level of Service								
Approach	Eastbound	Westbound	Northbound			Southbound		
Movement	1	4	7	8	9	10	11	12
Lane Configuration		L	L		R			
v (veh/h)		44	12		35			
C (m) (veh/h)		1316	249		798			
v/c		0.03	0.05		0.04			
95% queue length		0.10	0.15		0.14			
Control Delay (s/veh)		7.8	20.2		9.7			
LOS		A	C		A			
Approach Delay (s/veh)	--	--	12.4					
Approach LOS	--	--	B					

TWO-WAY STOP CONTROL SUMMARY							
General Information				Site Information			
Analyst	DSK			Intersection	la Center Rd. & Timmen Rd.		
Agency/Co.	Kelly Engineering			Jurisdiction	City of Ridgefield		
Date Performed	1/23/2024			Analysis Year	2027		
Analysis Time Period	AM Peak Hour						
Project Description Year 2027 with Project							
East/West Street: La Center Rd.				North/South Street: Timmen Rd.			
Intersection Orientation: East-West				Study Period (hrs): 0.25			
Vehicle Volumes and Adjustments							
Major Street	Eastbound			Westbound			
Movement	1	2	3	4	5	6	
	L	T	R	L	T	R	
Volume (veh/h)		217	12	41	632		
Peak-Hour Factor, PHF	0.85	0.93	0.93	0.93	0.93	1.00	
Hourly Flow Rate, HFR (veh/h)	0	233	12	44	679	0	
Percent Heavy Vehicles	0	--	--	3	--	--	
Median Type	Undivided						
RT Channelized			0			0	
Lanes	0	1	0	1	1	0	
Configuration			TR	L	T		
Upstream Signal		0			0		
Minor Street	Northbound			Southbound			
Movement	7	8	9	10	11	12	
	L	T	R	L	T	R	
Volume (veh/h)	12		33				
Peak-Hour Factor, PHF	0.93	0.85	0.93	0.85	0.85	0.85	
Hourly Flow Rate, HFR (veh/h)	12	0	35	0	0	0	
Percent Heavy Vehicles	13	0	3	0	0	0	
Percent Grade (%)	0			0			
Flared Approach		N			N		
Storage		0			0		
RT Channelized			0			0	
Lanes	1	0	1	0	0	0	
Configuration	L		R				
Delay, Queue Length, and Level of Service							
Approach	Eastbound	Westbound	Northbound			Southbound	
Movement	1	4	7	8	9	10	11 12
Lane Configuration		L	L		R		
v (veh/h)		44	12		35		
C (m) (veh/h)		1315	246		797		
v/c		0.03	0.05		0.04		
95% queue length		0.10	0.15		0.14		
Control Delay (s/veh)		7.8	20.4		9.7		
LOS		A	C		A		
Approach Delay (s/veh)	--	--	12.4				
Approach LOS	--	--	B				

TWO-WAY STOP CONTROL SUMMARY

General Information							Site Information		
Analyst	DSK			Intersection	La Center Rd & Timmen Rd.				
Agency/Co.	Kelly Engineering			Jurisdiction	City of La Center				
Date Performed	1/15/2024			Analysis Year	2024				
Analysis Time Period	PM Peak Hour								
Project Description Existing									
East/West Street: La Center Road				North/South Street: Timmen Rd.					
Intersection Orientation: East-West				Study Period (hrs): 0.25					
Vehicle Volumes and Adjustments									
Major Street	Eastbound			Westbound					
Movement	1	2	3	4	5	6			
	L	T	R	L	T	R			
Volume (veh/h)		648	24	48	371				
Peak-Hour Factor, PHF	0.93	0.86	0.86	0.86	0.86	0.93			
Hourly Flow Rate, HFR (veh/h)	0	753	27	55	431	0			
Percent Heavy Vehicles	0	--	--	0	--	--			
Median Type	Undivided								
RT Channelized			0			0			
Lanes	0	1	0	1	1	0			
Configuration			TR	L	T				
Upstream Signal		0			0				
Minor Street	Northbound			Southbound					
Movement	7	8	9	10	11	12			
	L	T	R	L	T	R			
Volume (veh/h)	24		106						
Peak-Hour Factor, PHF	0.86	0.93	0.86	0.93	0.93	0.93			
Hourly Flow Rate, HFR (veh/h)	27	0	123	0	0	0			
Percent Heavy Vehicles	12	0	0	0	0	0			
Percent Grade (%)	0			0					
Flared Approach		N			N				
Storage		0			0				
RT Channelized			0			0			
Lanes	1	0	1	0	0	0			
Configuration	L		R						
Delay, Queue Length, and Level of Service									
Approach	Eastbound	Westbound	Northbound			Southbound			
Movement	1	4	7	8	9	10	11	12	
Lane Configuration		L	L		R				
v (veh/h)		55	27		123				
C (m) (veh/h)		846	157		406				
v/c		0.07	0.17		0.30				
95% queue length		0.21	0.60		1.26				
Control Delay (s/veh)		9.6	32.6		17.7				
LOS		A	D		C				
Approach Delay (s/veh)	--	--	20.4						
Approach LOS	--	--	C						

TWO-WAY STOP CONTROL SUMMARY

General Information				Site Information				
Analyst	DSK			Intersection	La Center Rd & Timmen Rd.			
Agency/Co.	Kelly Engineering			Jurisdiction	City of La Center			
Date Performed	1/15/2024			Analysis Year	2027			
Analysis Time Period	PM Peak Hour							
Project Description Year 2027 w/o Project								
East/West Street: La Center Road				North/South Street: Timmen Rd.				
Intersection Orientation: East-West				Study Period (hrs): 0.25				
Vehicle Volumes and Adjustments								
Major Street	Eastbound			Westbound				
Movement	1	2	3	4	5	6		
	L	T	R	L	T	R		
Volume (veh/h)		789	25	58	470			
Peak-Hour Factor, PHF	0.93	0.95	0.95	0.95	0.95	0.93		
Hourly Flow Rate, HFR (veh/h)	0	830	26	61	494	0		
Percent Heavy Vehicles	0	--	--	0	--	--		
Median Type	Undivided							
RT Channelized			0			0		
Lanes	0	1	0	1	1	0		
Configuration			TR	L	T			
Upstream Signal		0			0			
Minor Street	Northbound			Southbound				
Movement	7	8	9	10	11	12		
	L	T	R	L	T	R		
Volume (veh/h)	25		116					
Peak-Hour Factor, PHF	0.95	0.93	0.95	0.93	0.93	0.93		
Hourly Flow Rate, HFR (veh/h)	26	0	122	0	0	0		
Percent Heavy Vehicles	12	0	0	0	0	0		
Percent Grade (%)	0			0				
Flared Approach		N			N			
Storage		0			0			
RT Channelized			0			0		
Lanes	1	0	1	0	0	0		
Configuration	L		R					
Delay, Queue Length, and Level of Service								
Approach	Eastbound	Westbound	Northbound			Southbound		
Movement	1	4	7	8	9	10	11	12
Lane Configuration		L	L		R			
v (veh/h)		61	26		122			
C (m) (veh/h)		793	125		367			
v/c		0.08	0.21		0.33			
95% queue length		0.25	0.74		1.43			
Control Delay (s/veh)		9.9	41.2		19.6			
LOS		A	E		C			
Approach Delay (s/veh)	--	--	23.4					
Approach LOS	--	--	C					

TWO-WAY STOP CONTROL SUMMARY							
General Information				Site Information			
Analyst	DSK			Intersection	La Center Rd & Timmen Rd.		
Agency/Co.	Kelly Engineering			Jurisdiction	City of La Center		
Date Performed	1/15/2024			Analysis Year	2027		
Analysis Time Period	PM Peak Hour						
Project Description Year 2027 with Project							
East/West Street: La Center Road				North/South Street: Timmen Rd.			
Intersection Orientation: East-West				Study Period (hrs): 0.25			
Vehicle Volumes and Adjustments							
Major Street	Eastbound			Westbound			
Movement	1	2	3	4	5	6	
	L	T	R	L	T	R	
Volume (veh/h)		795	25	58			
Peak-Hour Factor, PHF	0.93	0.95	0.95	0.95	0.95	0.93	
Hourly Flow Rate, HFR (veh/h)	0	836	26	61	494	0	
Percent Heavy Vehicles	0	--	--	0	--	--	
Median Type	Undivided						
RT Channelized			0			0	
Lanes	0	1	0	1	1	0	
Configuration			TR	L	T		
Upstream Signal		0			0		
Minor Street	Northbound			Southbound			
Movement	7	8	9	10	11	12	
	L	T	R	L	T	R	
Volume (veh/h)	25		116				
Peak-Hour Factor, PHF	0.95	0.93	0.95	0.93	0.93	0.93	
Hourly Flow Rate, HFR (veh/h)	26	0	122	0	0	0	
Percent Heavy Vehicles	12	0	0	0	0	0	
Percent Grade (%)	0			0			
Flared Approach		N			N		
Storage		0			0		
RT Channelized			0			0	
Lanes	1	0	1	0	0	0	
Configuration	L		R				
Delay, Queue Length, and Level of Service							
Approach	Eastbound	Westbound	Northbound			Southbound	
Movement	1	4	7	8	9	10	11 12
Lane Configuration		L	L		R		
v (veh/h)		61	26		122		
C (m) (veh/h)		789	124		364		
v/c		0.08	0.21		0.34		
95% queue length		0.25	0.75		1.44		
Control Delay (s/veh)		9.9	41.6		19.8		
LOS		A	E		C		
Approach Delay (s/veh)	--	--	23.6				
Approach LOS	--	--	C				

TWO-WAY STOP CONTROL SUMMARY

General Information				Site Information				
Analyst	DSK			Intersection	La Center Rd. & Paradise			
Agency/Co.	Kelly Engineering			Jurisdiction	City of Ridgefield			
Date Performed	1/23/2024			Analysis Year	2024			
Analysis Time Period	AM Peak Hour							
Project Description Existing								
East/West Street: La Center Rd.				North/South Street: Paradise Park Rd.				
Intersection Orientation: East-West				Study Period (hrs): 0.25				
Vehicle Volumes and Adjustments								
Major Street	Eastbound			Westbound				
Movement	1	2	3	4	5	6		
	L	T	R	L	T	R		
Volume (veh/h)	12	196	6	3	587	1		
Peak-Hour Factor, PHF	0.85	0.85	0.85	0.85	0.85	1.00		
Hourly Flow Rate, HFR (veh/h)	14	230	7	3	690	1		
Percent Heavy Vehicles	0	--	--	0	--	--		
Median Type	Undivided							
RT Channelized			0			0		
Lanes	1	1	1	1	1	0		
Configuration	L	T	R	L		TR		
Upstream Signal		0			0			
Minor Street	Northbound			Southbound				
Movement	7	8	9	10	11	12		
	L	T	R	L	T	R		
Volume (veh/h)	9	0	2	0	0	14		
Peak-Hour Factor, PHF	0.85	0.85	0.85	0.85	0.85	0.85		
Hourly Flow Rate, HFR (veh/h)	10	0	2	0	0	16		
Percent Heavy Vehicles	13	0	0	0	0	0		
Percent Grade (%)	0			0				
Flared Approach		N			N			
Storage		0			0			
RT Channelized			0			0		
Lanes	1	1	0	1	1	0		
Configuration	L		TR	L		TR		
Delay, Queue Length, and Level of Service								
Approach	Eastbound	Westbound	Northbound			Southbound		
Movement	1	4	7	8	9	10	11	12
Lane Configuration	L	L	L		TR	L		TR
v (veh/h)	14	3	10		2	0		16
C (m) (veh/h)	913	1342	214		814	235		449
v/c	0.02	0.00	0.05		0.00	0.00		0.04
95% queue length	0.05	0.01	0.15		0.01	0.00		0.11
Control Delay (s/veh)	9.0	7.7	22.6		9.4	20.3		13.3
LOS	A	A	C		A	C		B
Approach Delay (s/veh)	--	--	20.4			13.3		
Approach LOS	--	--	C			B		

TWO-WAY STOP CONTROL SUMMARY

General Information				Site Information				
Analyst	DSK			Intersection	La Center Rd. & Paradise			
Agency/Co.	Kelly Engineering			Jurisdiction	City of Ridgefield			
Date Performed	1/23/2024			Analysis Year	2027			
Analysis Time Period	AM Peak Hour							
Project Description Year 2027 w/o Project								
East/West Street: La Center Rd.				North/South Street: Paradise Park Rd.				
Intersection Orientation: East-West				Study Period (hrs): 0.25				
Vehicle Volumes and Adjustments								
Major Street	Eastbound			Westbound				
Movement	1	2	3	4	5	6		
	L	T	R	L	T	R		
Volume (veh/h)	81	240	6	3	716	11		
Peak-Hour Factor, PHF	0.85	0.85	0.85	0.85	0.85	1.00		
Hourly Flow Rate, HFR (veh/h)	95	282	7	3	842	11		
Percent Heavy Vehicles	0	--	--	0	--	--		
Median Type	Undivided							
RT Channelized			0			0		
Lanes	1	1	1	1	1	0		
Configuration	L	T	R	L		TR		
Upstream Signal		0			0			
Minor Street	Northbound			Southbound				
Movement	7	8	9	10	11	12		
	L	T	R	L	T	R		
Volume (veh/h)	10	0	2	21	2	58		
Peak-Hour Factor, PHF	0.85	0.85	0.85	0.85	0.85	0.85		
Hourly Flow Rate, HFR (veh/h)	11	0	2	24	2	68		
Percent Heavy Vehicles	13	0	0	0	0	0		
Percent Grade (%)	0			0				
Flared Approach		N			N			
Storage		0			0			
RT Channelized			0			0		
Lanes	1	1	0	1	1	0		
Configuration	L		TR	L		TR		
Delay, Queue Length, and Level of Service								
Approach	Eastbound	Westbound	Northbound			Southbound		
Movement	1	4	7	8	9	10	11	12
Lane Configuration	L	L	L		TR	L		TR
v (veh/h)	95	3	11		2	24		70
C (m) (veh/h)	795	1284	87		762	120		347
v/c	0.12	0.00	0.13		0.00	0.20		0.20
95% queue length	0.41	0.01	0.42		0.01	0.71		0.74
Control Delay (s/veh)	10.1	7.8	52.3		9.7	42.3		18.0
LOS	B	A	F		A	E		C
Approach Delay (s/veh)	--	--	45.7			24.2		
Approach LOS	--	--	E			C		

TWO-WAY STOP CONTROL SUMMARY

General Information				Site Information				
Analyst	DSK			Intersection	La Center Rd. & Paradise			
Agency/Co.	Kelly Engineering			Jurisdiction	City of Ridgefield			
Date Performed	1/23/2024			Analysis Year	2027			
Analysis Time Period	AM Peak Hour							
Project Description Year 2027 with Project								
East/West Street: La Center Rd.				North/South Street: Paradise Park Rd.				
Intersection Orientation: East-West				Study Period (hrs): 0.25				
Vehicle Volumes and Adjustments								
Major Street	Eastbound			Westbound				
Movement	1	2	3	4	5	6		
	L	T	R	L	T	R		
Volume (veh/h)	81	241	6	3	722	11		
Peak-Hour Factor, PHF	0.85	0.85	0.85	0.85	0.85	1.00		
Hourly Flow Rate, HFR (veh/h)	95	283	7	3	849	11		
Percent Heavy Vehicles	0	--	--	0	--	--		
Median Type	Undivided							
RT Channelized			0			0		
Lanes	1	1	1	1	1	0		
Configuration	L	T	R	L		TR		
Upstream Signal		0			0			
Minor Street	Northbound			Southbound				
Movement	7	8	9	10	11	12		
	L	T	R	L	T	R		
Volume (veh/h)	10	0	2	21	2	58		
Peak-Hour Factor, PHF	0.85	0.85	0.85	0.85	0.85	0.85		
Hourly Flow Rate, HFR (veh/h)	11	0	2	24	2	68		
Percent Heavy Vehicles	13	0	0	0	0	0		
Percent Grade (%)	0			0				
Flared Approach		N			N			
Storage		0			0			
RT Channelized			0			0		
Lanes	1	1	0	1	1	0		
Configuration	L		TR	L		TR		
Delay, Queue Length, and Level of Service								
Approach	Eastbound	Westbound	Northbound			Southbound		
Movement	1	4	7	8	9	10	11	12
Lane Configuration	L	L	L		TR	L		TR
v (veh/h)	95	3	11		2	24		70
C (m) (veh/h)	790	1283	85		761	118		345
v/c	0.12	0.00	0.13		0.00	0.20		0.20
95% queue length	0.41	0.01	0.43		0.01	0.72		0.75
Control Delay (s/veh)	10.2	7.8	53.6		9.7	43.1		18.1
LOS	B	A	F		A	E		C
Approach Delay (s/veh)	--	--	46.8			24.5		
Approach LOS	--	--	E			C		

TWO-WAY STOP CONTROL SUMMARY

General Information				Site Information				
Analyst	DSK	Intersection Jurisdiction Analysis Year		La Center Rd & Paradise Park City of La Center 2024				
Agency/Co.	Kelly Engineering							
Date Performed	1/15/2024							
Analysis Time Period	PM Peak Hour							
Project Description Existing								
East/West Street: La Center Road				North/South Street: paradise Park Rd				
Intersection Orientation: East-West				Study Period (hrs): 0.25				
Vehicle Volumes and Adjustments								
Major Street	Eastbound			Westbound				
Movement	1	2	3	4	5	6		
	L	T	R	L	T	R		
Volume (veh/h)	27	698	13	0	409	4		
Peak-Hour Factor, PHF	0.93	0.93	0.93	0.93	0.93	0.93		
Hourly Flow Rate, HFR (veh/h)	29	750	13	0	439	4		
Percent Heavy Vehicles	0	--	--	0	--	--		
Median Type	Undivided							
RT Channelized			0			0		
Lanes	1	1	1	1	1	0		
Configuration	L	T	R	L		TR		
Upstream Signal		0			0			
Minor Street	Northbound			Southbound				
Movement	7	8	9	10	11	12		
	L	T	R	L	T	R		
Volume (veh/h)	18	3	0	0	1	19		
Peak-Hour Factor, PHF	0.93	0.93	0.93	0.93	0.93	0.93		
Hourly Flow Rate, HFR (veh/h)	19	3	0	0	1	20		
Percent Heavy Vehicles	0	0	0	0	0	0		
Percent Grade (%)	0			0				
Flared Approach		N			N			
Storage		0			0			
RT Channelized			0			0		
Lanes	0	2	0	1	1	0		
Configuration	LT		TR	L		TR		
Delay, Queue Length, and Level of Service								
Approach	Eastbound	Westbound	Northbound			Southbound		
Movement	1	4	7	8	9	10	11	12
Lane Configuration	L	L	LT		TR	L		TR
v (veh/h)	29	0	20		1	0		21
C (m) (veh/h)	1128	859	142		170	144		550
v/c	0.03	0.00	0.14		0.01	0.00		0.04
95% queue length	0.08	0.00	0.48		0.02	0.00		0.12
Control Delay (s/veh)	8.3	9.2	34.5		26.3	30.0		11.8
LOS	A	A	D		D	D		B
Approach Delay (s/veh)	--	--	34.1			11.8		
Approach LOS	--	--	D			B		

TWO-WAY STOP CONTROL SUMMARY								
General Information				Site Information				
Analyst	DSK			Intersection	La Center Rd & Paradise Park			
Agency/Co.	Kelly Engineering			Jurisdiction	City of La Center			
Date Performed	1/15/2024			Analysis Year	2027			
Analysis Time Period	PM Peak Hour							
Project Description Year 2027 w/o Project								
East/West Street: La Center Road				North/South Street: paradise Park Rd				
Intersection Orientation: East-West				Study Period (hrs): 0.25				
Vehicle Volumes and Adjustments								
Major Street	Eastbound			Westbound				
Movement	1	2	3	4	5	6		
	L	T	R	L	T	R		
Volume (veh/h)	79	842	14	0	511	14		
Peak-Hour Factor, PHF	0.93	0.93	0.93	0.93	0.93	0.93		
Hourly Flow Rate, HFR (veh/h)	84	905	15	0	549	15		
Percent Heavy Vehicles	0	--	--	0	--	--		
Median Type	Undivided							
RT Channelized			0			0		
Lanes	1	1	1	1	1	0		
Configuration	L	T	R	L		TR		
Upstream Signal		0			0			
Minor Street	Northbound			Southbound				
Movement	7	8	9	10	11	12		
	L	T	R	L	T	R		
Volume (veh/h)	19	3	0	20	1	60		
Peak-Hour Factor, PHF	0.93	0.93	0.93	0.93	0.93	0.93		
Hourly Flow Rate, HFR (veh/h)	20	3	0	21	1	64		
Percent Heavy Vehicles	0	0	0	0	0	0		
Percent Grade (%)	0			0				
Flared Approach		N			N			
Storage		0			0			
RT Channelized			0			0		
Lanes	0	2	0	1	1	0		
Configuration	LT		TR	L		TR		
Delay, Queue Length, and Level of Service								
Approach	Eastbound	Westbound	Northbound			Southbound		
Movement	1	4	7	8	9	10	11	12
Lane Configuration	L	L	LT		TR	L		TR
v (veh/h)	84	0	21		1	21		65
C (m) (veh/h)	1018	750	65		94	74		498
v/c	0.08	0.00	0.32		0.01	0.28		0.13
95% queue length	0.27	0.00	1.18		0.03	1.03		0.45
Control Delay (s/veh)	8.9	9.8	84.9		43.7	71.9		13.3
LOS	A	A	F		E	F		B
Approach Delay (s/veh)	--	--	83.0			27.6		
Approach LOS	--	--	F			D		

TWO-WAY STOP CONTROL SUMMARY

General Information				Site Information				
Analyst	DSK			Intersection	La Center Rd & Paradise Park			
Agency/Co.	Kelly Engineering			Jurisdiction	City of La Center			
Date Performed	1/15/2024			Analysis Year	2027			
Analysis Time Period	PM Peak Hour							
Project Description Year 2027 with Project								
East/West Street: La Center Road				North/South Street: paradise Park Rd				
Intersection Orientation: East-West				Study Period (hrs): 0.25				
Vehicle Volumes and Adjustments								
Major Street	Eastbound			Westbound				
Movement	1	2	3	4	5	6		
	L	T	R	L	T	R		
Volume (veh/h)	79	848	14	0	513	14		
Peak-Hour Factor, PHF	0.93	0.93	0.93	0.93	0.93	0.93		
Hourly Flow Rate, HFR (veh/h)	84	911	15	0	551	15		
Percent Heavy Vehicles	0	--	--	0	--	--		
Median Type	Undivided							
RT Channelized			0			0		
Lanes	1	1	1	1	1	0		
Configuration	L	T	R	L		TR		
Upstream Signal		0			0			
Minor Street	Northbound			Southbound				
Movement	7	8	9	10	11	12		
	L	T	R	L	T	R		
Volume (veh/h)	19	3	0	20	1	60		
Peak-Hour Factor, PHF	0.93	0.93	0.93	0.93	0.93	0.93		
Hourly Flow Rate, HFR (veh/h)	20	3	0	21	1	64		
Percent Heavy Vehicles	0	0	0	0	0	0		
Percent Grade (%)	0			0				
Flared Approach		N			N			
Storage		0			0			
RT Channelized			0			0		
Lanes	0	2	0	1	1	0		
Configuration	LT		TR	L		TR		
Delay, Queue Length, and Level of Service								
Approach	Eastbound	Westbound	Northbound			Southbound		
Movement	1	4	7	8	9	10	11	12
Lane Configuration	L	L	LT		TR	L		TR
v (veh/h)	84	0	21		1	21		65
C (m) (veh/h)	1016	746	64		93	73		496
v/c	0.08	0.00	0.33		0.01	0.29		0.13
95% queue length	0.27	0.00	1.20		0.03	1.04		0.45
Control Delay (s/veh)	8.9	9.8	86.6		44.1	73.1		13.3
LOS	A	A	F		E	F		B
Approach Delay (s/veh)	--	--	84.7			27.9		
Approach LOS	--	--	F			D		

APPENDIX E

REFERENCES

References

1. Trip Generation Manual, 11th Edition, 2017, Institute of Transportation Engineers.
2. Highway Capacity Manual, 2000 and 2010, Transportation Research Board, National Research Council.
3. Pre-Application Conference Notes, Breeze Creek Trail Subdivision (2023-029-PAC).