

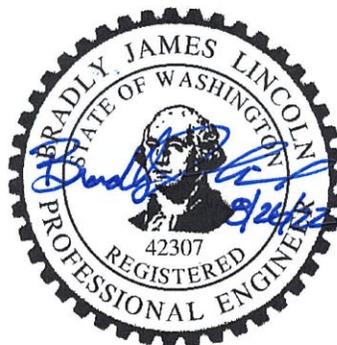
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Allen Townhomes Traffic Impact Analysis

Jurisdiction: City of Arlington

August 2022



090221501

TABLE OF CONTENTS

1. DEVELOPMENT IDENTIFICATION 1
2. METHODOLOGY 1
3. TRIP GENERATION 4
4. TRIP DISTRIBUTION 4
5. INTERSECTION ANALYSIS..... 4
 5.1 Turning Movement Calculations 7
 5.2 Level of Service Analysis..... 7
6. TRAFFIC MITIGATION FEES 7
 6.1 City of Arlington..... 7
 6.2 Snohomish County 9
 6.3 Washington State Department of Transportation 9
7. CONCLUSIONS 9

LIST OF FIGURES

Figure 1: Site Vicinity Map 2
Figure 2: Development Trip Distribution – AM Peak-Hour 5
Figure 3: Development Trip Distribution – PM Peak-Hour 6
Figure 4: Turning Movements - PM Peak-Hour 8

LIST OF TABLES

Table 1: Level of Service Criteria for Intersections..... 3
Table 2: Trip Generation Calculations 4

ATTACHMENTS

Counts and Turning Movement Calculations A
Level of Service Calculations B

1. DEVELOPMENT IDENTIFICATION

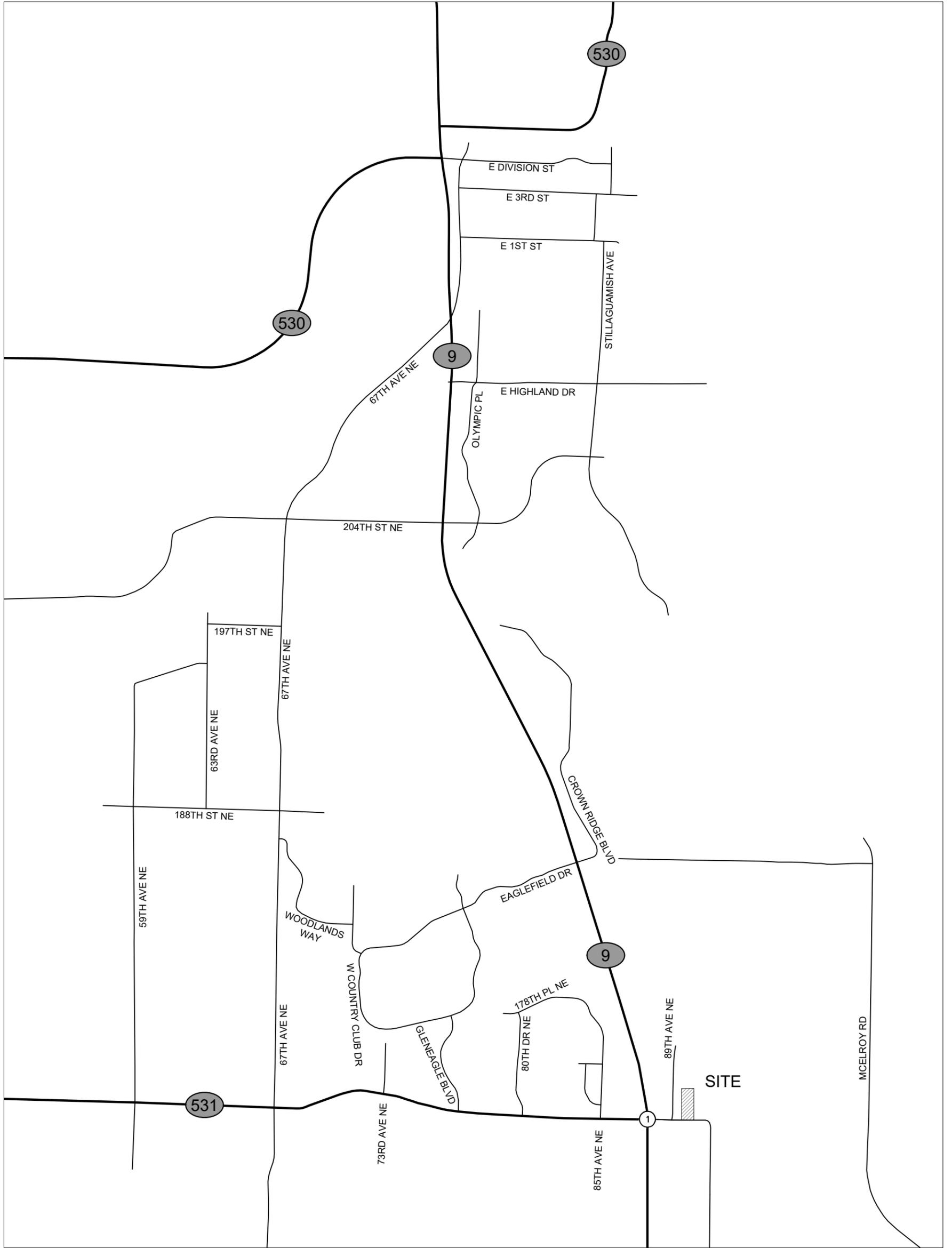
Kimley-Horn and Associates, Inc. has been retained to provide a traffic impact analysis for the proposed Allen Townhomes development to address the City of Arlington, Snohomish County, and Washington State Department of Transportation (WSDOT) traffic impacts. The Allen Townhomes development is proposed to consist of 43 single-family attached residential units. The site is located along the north side of 172nd Street NE, east of SR-9. A site vicinity map has been included in Figure 1. The development is anticipated to be constructed and occupied in the year 2026.

Brad Lincoln, responsible for this report, is a licensed professional engineer (Civil) in the State of Washington and member of the Washington State section of the Institute of Transportation Engineers (ITE).

2. METHODOLOGY

Trip generation calculations for the Allen Townhomes development have been performed according to data contained in the Institute of Transportation Engineers' (ITE) *Trip Generation Manual, 11th Edition (2021)*. The roundabout at the intersection of SR-9 at 172nd Street NE (SR-531) has been analyzed as part of this report.

The intersection has been analyzed for the 2022 existing, 2028 baseline, and 2028 future with development conditions for the PM peak-hour. The 2028 future year has been utilized to represent a 6-year horizon period, which is past when the development is anticipated to be constructed. The future year 2028 has been chosen to represent a conservatively high calculation of future operations of the study intersection.



ALLEN TOWNHOMES

CITY OF ARLINGTON

LEGEND



DEVELOPMENT SITE



STUDY INTERSECTION

FIGURE 1
VICINITY MAP

Date: August 23, 2022 - 4:57pm / User: Arjuna.H
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The peak-hour level of service (LOS) analysis calculations have been completed using the software *SIDRA Intersection 9.0* software. This software applies the operational analysis methodology of the current *Highway Capacity Manual 6th Edition (HCM)*. Traffic congestion is generally measured in terms of level of service. In accordance with the HCM, road facilities and intersections are rated between LOS A and LOS F, with LOS A being free flow and LOS F being forced flow or over-capacity conditions. The level of service at two-way stop-controlled intersections is based on the approach with the highest average delay. The level of service at signalized, all-way stop-controlled intersections, and roundabouts is based on the average delay for all approaches. Geometric characteristics and conflicting traffic movements are taken into consideration when determining level of service values. A summary of the level of service criteria has been included in Table 1.

Table 1: Level of Service Criteria for Intersections

Level of ¹ Service	Expected Delay	Intersection Control Delay (Seconds per Vehicle)	
		Unsignalized Intersections	Signalized/Roundabout Intersections
A	Little/No Delay	≤10	≤10
B	Short Delays	>10 and ≤15	>10 and ≤20
C	Average Delays	>15 and ≤25	>20 and ≤35
D	Long Delays	>25 and ≤35	>35 and ≤55
E	Very Long Delays	>35 and ≤50	>55 and ≤80
F	Extreme Delays ²	>50	>80

The City of Arlington has established an acceptable level of service of LOS D. Additionally, WSDOT typically utilizes a volume-to-capacity (v/c) ratio to evaluate the operations of roundabouts. The threshold for roundabouts is typically a v/c of 0.92.

The City of Arlington and Snohomish County have an interlocal agreement that provides for reciprocal mitigation fees. Snohomish County mitigation fees can be calculated based on the default percentage in the interlocal agreement or based on actual impacts. The City of Arlington also has an understanding with WSDOT that provides for mitigation fees to WSDOT for impacts to WSDOT improvement projects. WSDOT improvement projects and their associated fees are based on the most recent Exhibit C list.

¹ **Source:** *Highway Capacity Manual 6th Edition*.

LOS A: Free-flow traffic conditions, with minimal delay to stopped vehicles (no vehicle is delayed longer than one cycle at signalized intersection).

LOS B: Generally stable traffic flow conditions.

LOS C: Occasional back-ups may develop, but delay to vehicles is short term and still tolerable.

LOS D: During short periods of the peak hour, delays to approaching vehicles may be substantial but are tolerable during times of less demand (i.e. vehicles delayed one cycle or less at signal).

LOS E: Intersections operate at or near capacity, with long queues developing on all approaches and long delays.

LOS F: Jammed conditions on all approaches with excessively long delays and vehicles unable to move at times.

² When demand volume exceeds the capacity of the lane, extreme delays will be encountered with queuing which may cause severe congestion affecting other traffic movements in the intersection.

3. TRIP GENERATION

The trip generation calculations for the Allen Townhomes development are based on data published by the Institute of Transportation Engineers (ITE) in *Trip Generation Manual, 11th Edition (2021)*. The average trip generation rates for ITE Land Use Code (LUC) 215, Single-Family Attached Housing, has been used for the proposed units. The development is proposed to include 43 single-family attached residential units. The trip generation of the Allen Townhomes development is summarized in Table 2.

Table 2: Trip Generation Calculations

43 Single-Family Residential Units	Average Daily Trips			AM Peak-Hour Trips			PM Peak-Hour Trips		
	Inbound	Outbound	Total	Inbound	Outbound	Total	Inbound	Outbound	Total
Generation Rate	7.20 trips per unit			0.48 trips per unit			0.57 trips per unit		
Splits	50%	50%	100%	31%	69%	100%	63%	37%	100%
Trips	155	155	311	7	15	21	14	11	25

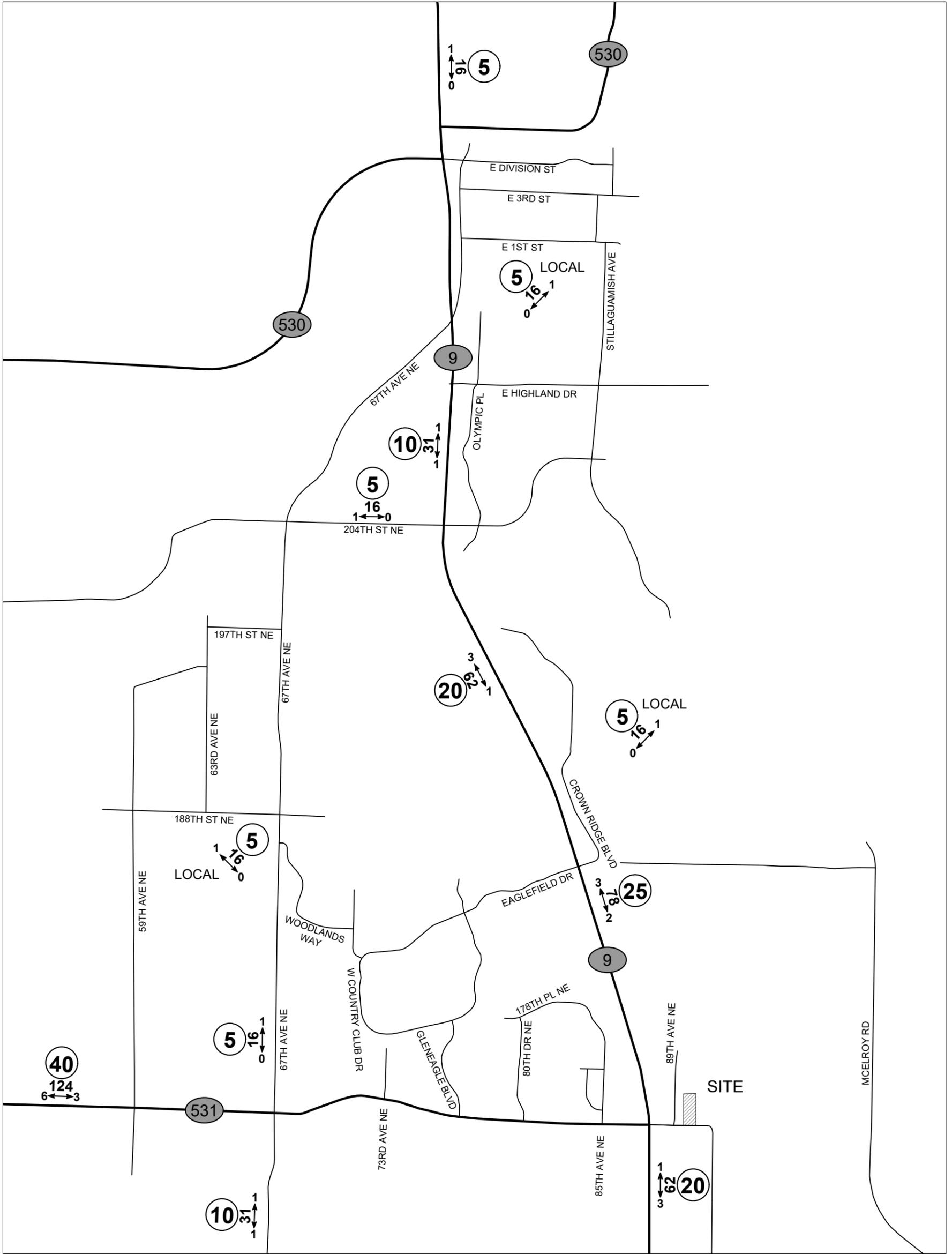
The Allen Townhomes development is anticipated to generate approximately 310 new average daily trips with approximately 21 new AM peak-hour trips and 25 new PM peak-hour trips.

4. TRIP DISTRIBUTION

The trip distribution for the Allen Townhomes development is based on surrounding land uses and approved distributions for similar developments in the site vicinity. It is anticipated that 45% of the trips generated by the development will travel along SR-9, twenty-five percent to and from the north and twenty percent to and from the south. It is estimated that 40% of the trips generated by the development will travel to and from the west along 172nd Street NE/SR-531. The remaining 15% of the trips generated by the development will travel along 67th Avenue NE, five percent to and from the north and ten percent to and from the south. Detailed trip distribution for the AM and PM peak-hours are shown in Figure 2 and Figure 3, respectively.

5. INTERSECTION ANALYSIS

The intersection of SR-9 at 172nd Street NE (SR-531), which is a roundabout, has been analyzed in this report. The intersection has been analyzed for the 2022 existing conditions, 2028 baseline, and 2028 future with development conditions. The only other signalized intersection that is impacted with 10 PM peak-hour trips is the intersection of 67th Avenue NE at 172nd Street NE (SR-531). That intersection is planned to be improved by WSDOT through the funded improvement project for 172nd Street NE (SR-531) from 43rd Avenue NE to 67th Avenue NE.



ALLEN TOWNHOMES

CITY OF ARLINGTON

LEGEND

AWDT
AM ← PEAK

NEW DAILY TRAFFIC
NEW PEAK-HOUR TRIPS



TRIP DISTRIBUTION %

FIGURE 2
DEVELOPMENT
TRIP DISTRIBUTION
AM PEAK-HOUR

5.1 Turning Movement Calculations

The 2022 existing peak-hour turning movement count for the study intersection was collected by the independent count firm Traffic Data Gathering in June 2022. The 2028 baseline turning movements at the study intersection has been calculated using a 2.0% annually compounding growth rate. The 2028 future with development conditions were analyzed by adding the trips generated by the Allen Townhomes development to the 2028 baseline turning movements. The 2022 existing turning movements, the 2028 baseline turning movements, and the 2028 future with development turning movements at the study intersection for the PM peak-hour are shown in Figure 4. The existing counts and turning movement calculations are included in the attachments.

5.2 Level of Service Analysis

The study intersection has been analyzed using the existing intersection control, channelization, peak-hour factors, and heavy vehicle factors. The level of service results shows that the intersection of SR-9 at 172nd Street NE (SR-531) currently operates at LOS A with a v/c ratio of 0.58. The intersection is anticipated to operate at LOS B with a v/c ratio of 0.70 under the 2028 baseline conditions and LOS B with a v/c ratio of 0.71 under the 2028 future with development conditions. The level of service calculations is included in the attachments.

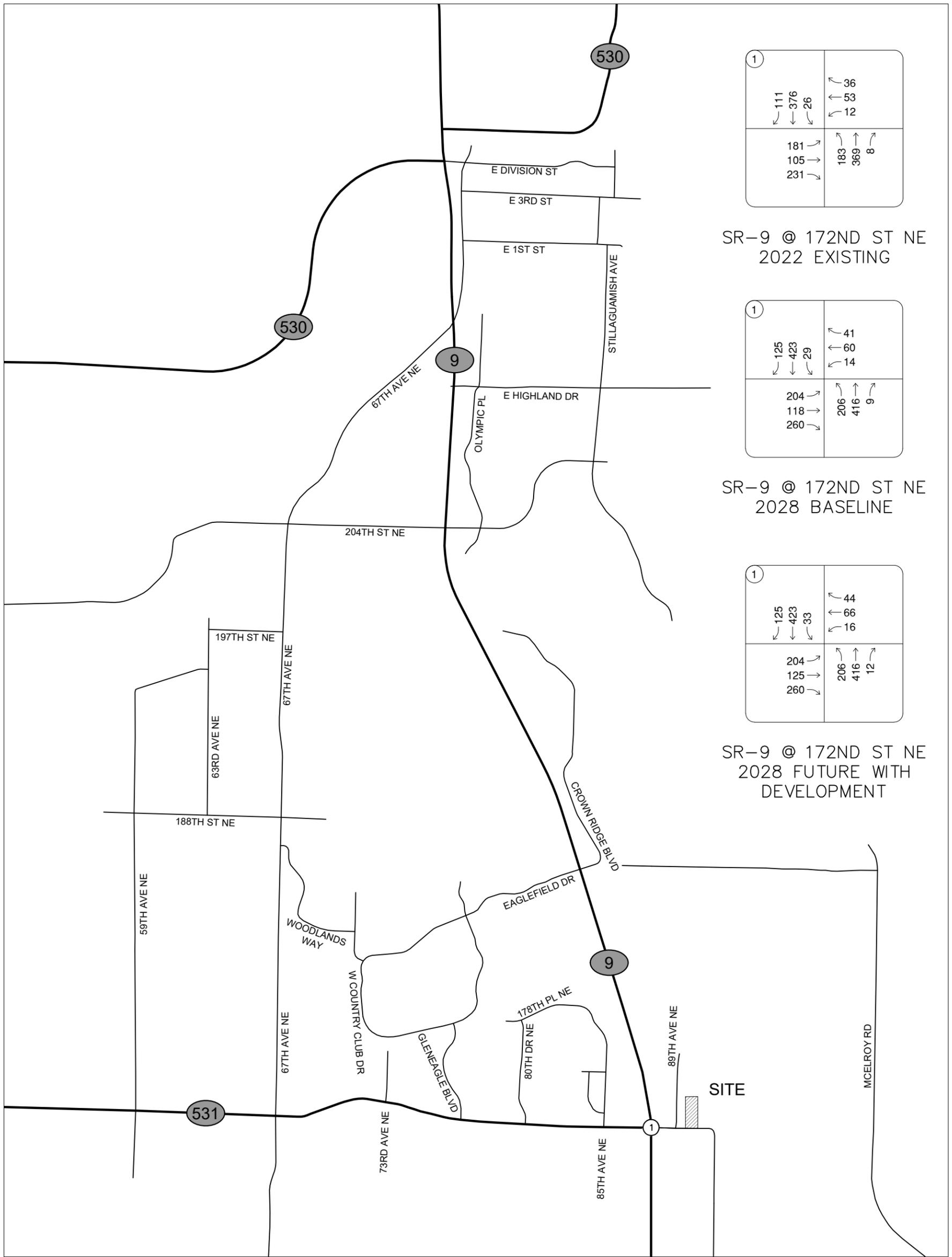
6. TRAFFIC MITIGATION FEES

The City of Arlington collects traffic mitigation fees based on the number of PM peak-hour trips generated by a development. The City of Arlington also has interlocal agreements with Snohomish County and WSDOT for traffic mitigation fees.

6.1 City of Arlington

The City of Arlington currently has a standard traffic mitigation fee of \$3,355 per PM peak-hour trip. The Allen Townhomes development is anticipated to generate 25 new PM peak-hour trips. These trips result in a City of Arlington traffic mitigation fee of \$83,875.00.

It is important to note that City of Arlington traffic mitigation fees do not vest to the time of application. It is possible that the City of Arlington mitigation fees will increase between the time of this report and when the traffic mitigation fees are required to be paid.



1	111 376 26	36 53 12
	181 105 231	183 369 8

SR-9 @ 172ND ST NE
2022 EXISTING

1	125 423 29	41 60 14
	204 118 260	206 416 9

SR-9 @ 172ND ST NE
2028 BASELINE

1	125 423 33	44 66 16
	204 125 260	206 416 12

SR-9 @ 172ND ST NE
2028 FUTURE WITH
DEVELOPMENT



ALLEN TOWNHOMES

CITY OF ARLINGTON

LEGEND
 XXX → PM PEAK-HOUR TURNING
 MOVEMENT VOLUMES

FIGURE 4
TURNING MOVEMENT

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6.2 Snohomish County

The City of Arlington has an interlocal agreement with Snohomish County that provides for mitigation payments for impacts to Snohomish County arterials. The interlocal agreement allows Snohomish County fees for City of Arlington developments to be based on the actual percentage of trips impacting Snohomish County roadways. The trip distribution shows that the nearest Snohomish County improvement project, 67th Avenue NE at 152nd Street NE, is only anticipated to be impacted by 1 PM peak-hour trips in the northbound and southbound directions. This impact will not reach the threshold of three directional PM peak-hour trips identified in the *Snohomish County Traffic Worksheet and Traffic Study Requirements for Development in the City of Arlington*.

6.3 Washington State Department of Transportation

WSDOT improvement projects and their associated fees are based on the most recent Exhibit C list, which is part of the interlocal agreement between Snohomish County and WSDOT. City of Arlington developments are required to pay for WSDOT improvement projects on the Exhibit C list impacted with 10 or more PM peak-hour trips.

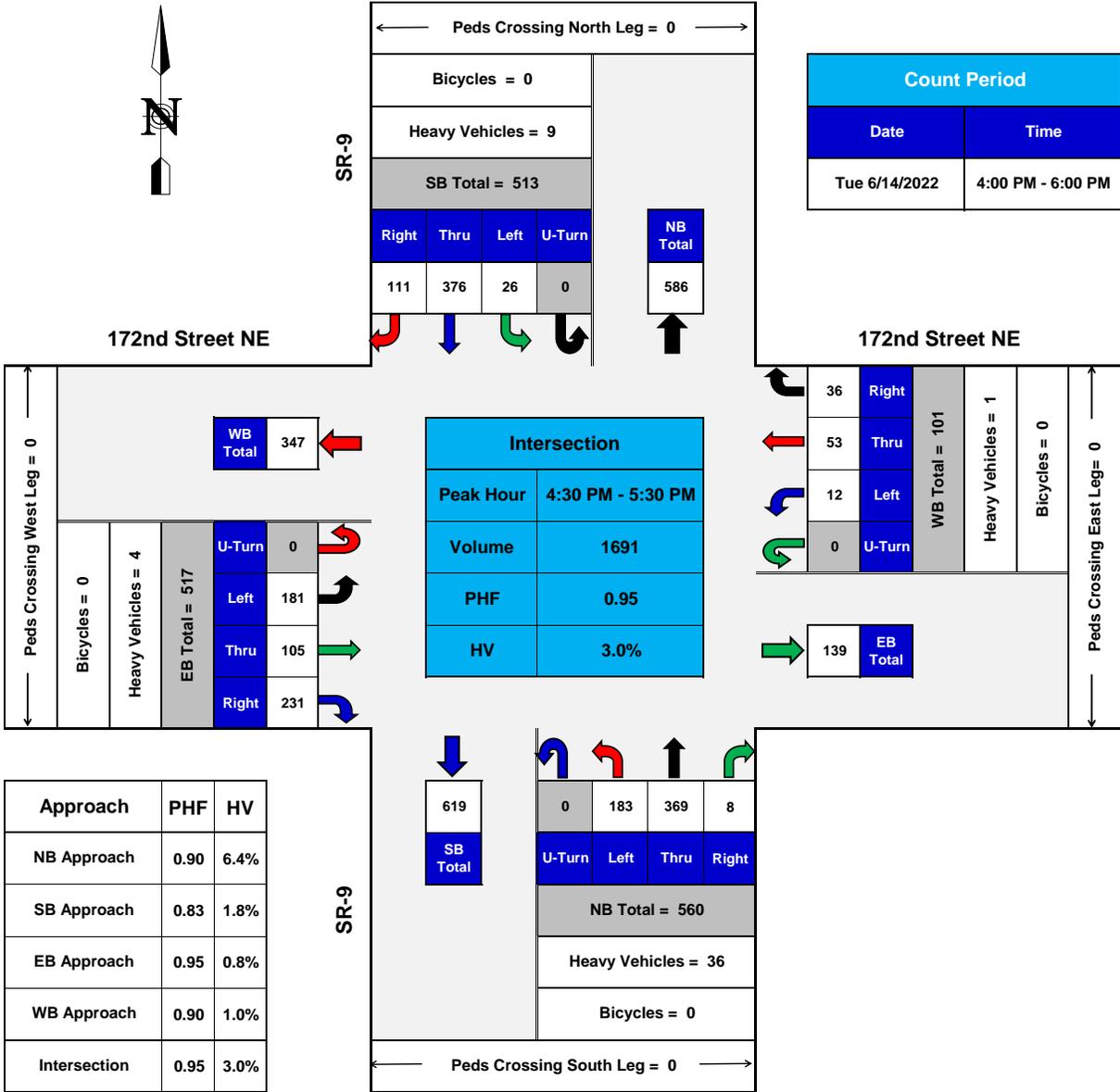
The intersections along SR-531 west of the site from 43rd Avenue NE to 67th Avenue NE are included in the Connecting Washington legislation for fully funded improvements. The improvements for the intersection of 172nd Street NE (SR-531) at 43rd Avenue NE are currently under construction. WSDOT mitigation fees should therefore not be a condition of the Allen Townhomes development.

7. CONCLUSIONS

The Allen Townhomes development is proposed to include 43 single-family attached units. The Allen Townhomes development is anticipated to generate approximately 310 new average daily trips with approximately 21 new AM peak-hour trips and 25 new PM peak-hour trips. The analysis shows the study intersection will operate at acceptable levels of service. Intersection improvements at off-site intersections should therefore not be a condition of the development. The traffic mitigation fees to the City of Arlington should total \$83,875.00, based on the current fee. Snohomish County and WSDOT traffic mitigation fees should not be required.

Counts and Turning Movement Calculations

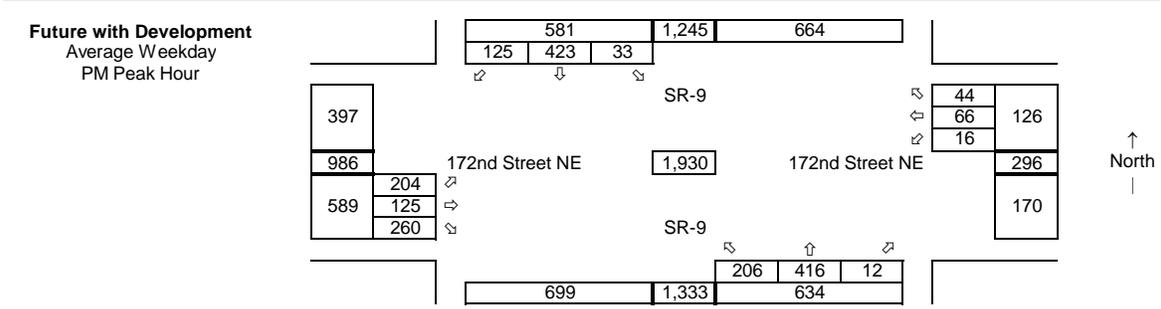
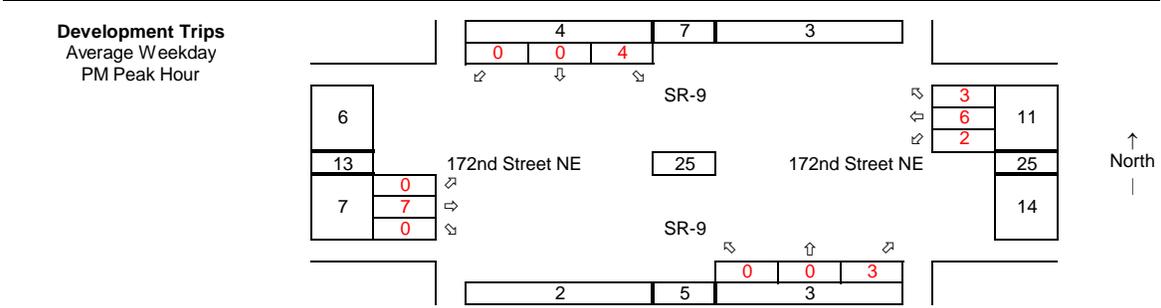
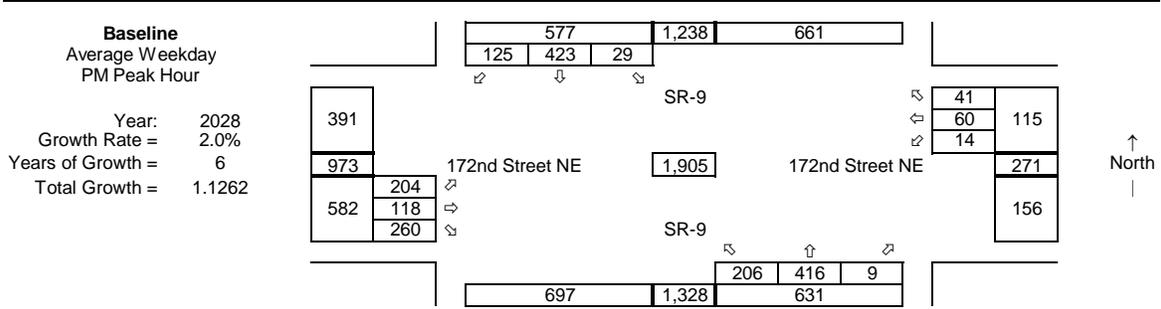
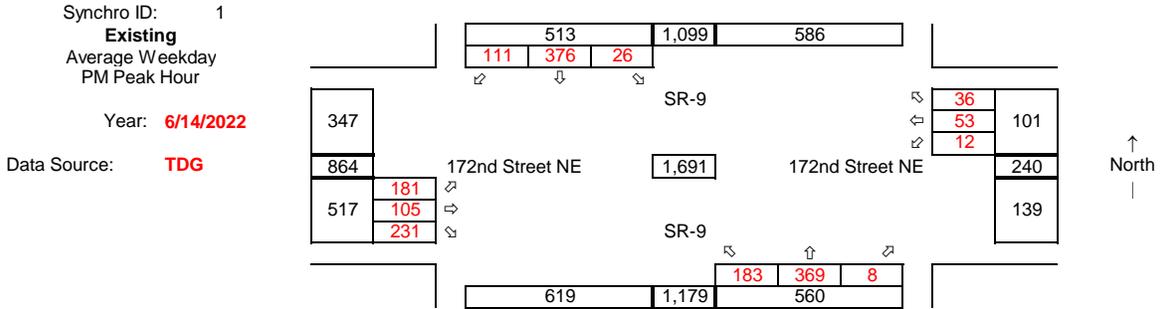
SR-9 @ 172nd Street NE
Arlington, WA



TURNING MOVEMENTS DIAGRAM
PEAK HOUR SUMMARY



1 SR9 @ 172ND St NE_PM



Level of Service Calculations

SITE LAYOUT

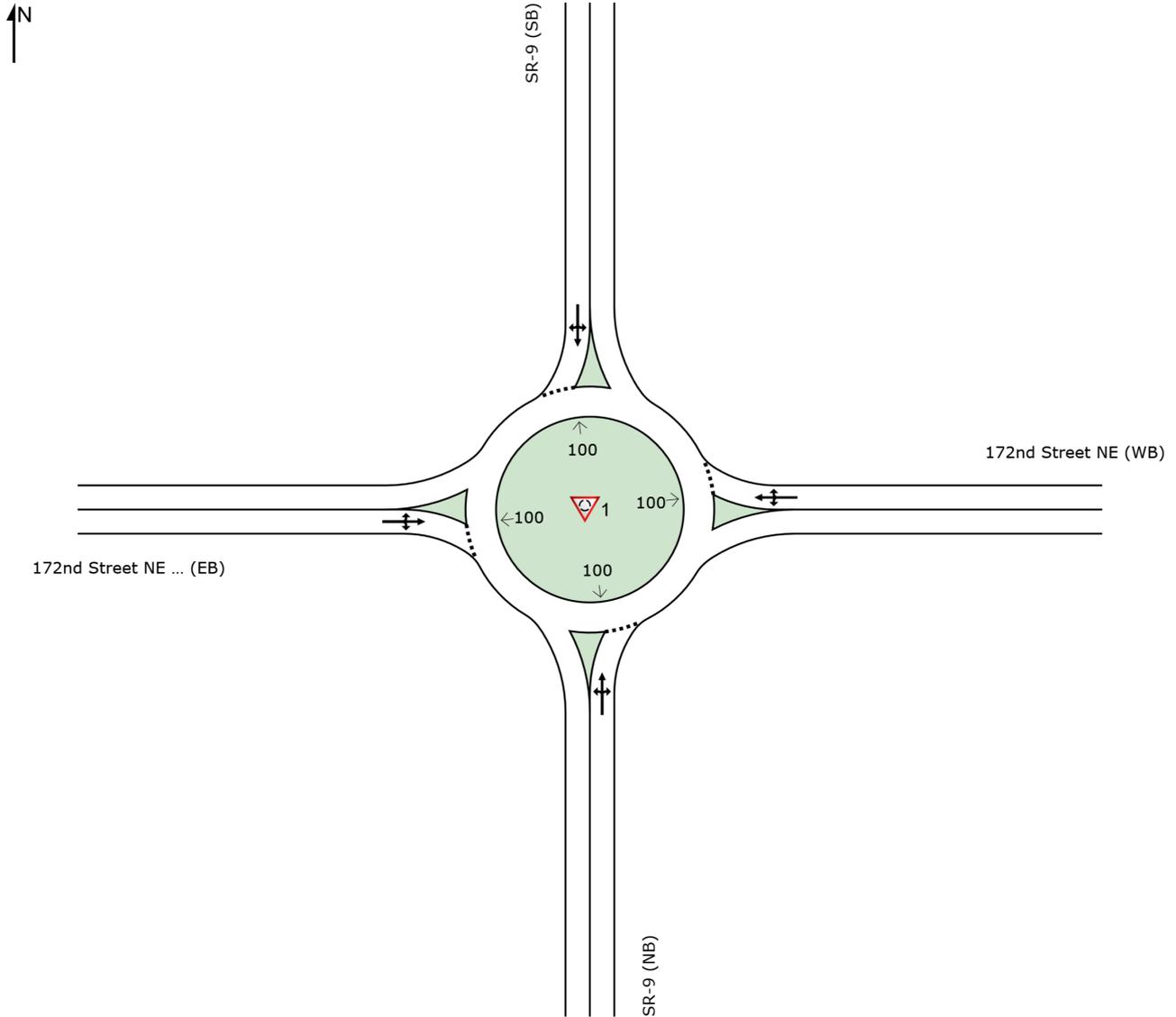
Site: 1 [2022 Existing Conditions (Site Folder: General)]

SR-9 at 172nd Street NE (SR-531)

Site Category: (None)

Roundabout

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MOVEMENT FLOWS FOR SITE (DEMAND)

Approach movement demand flow rates (veh/h)

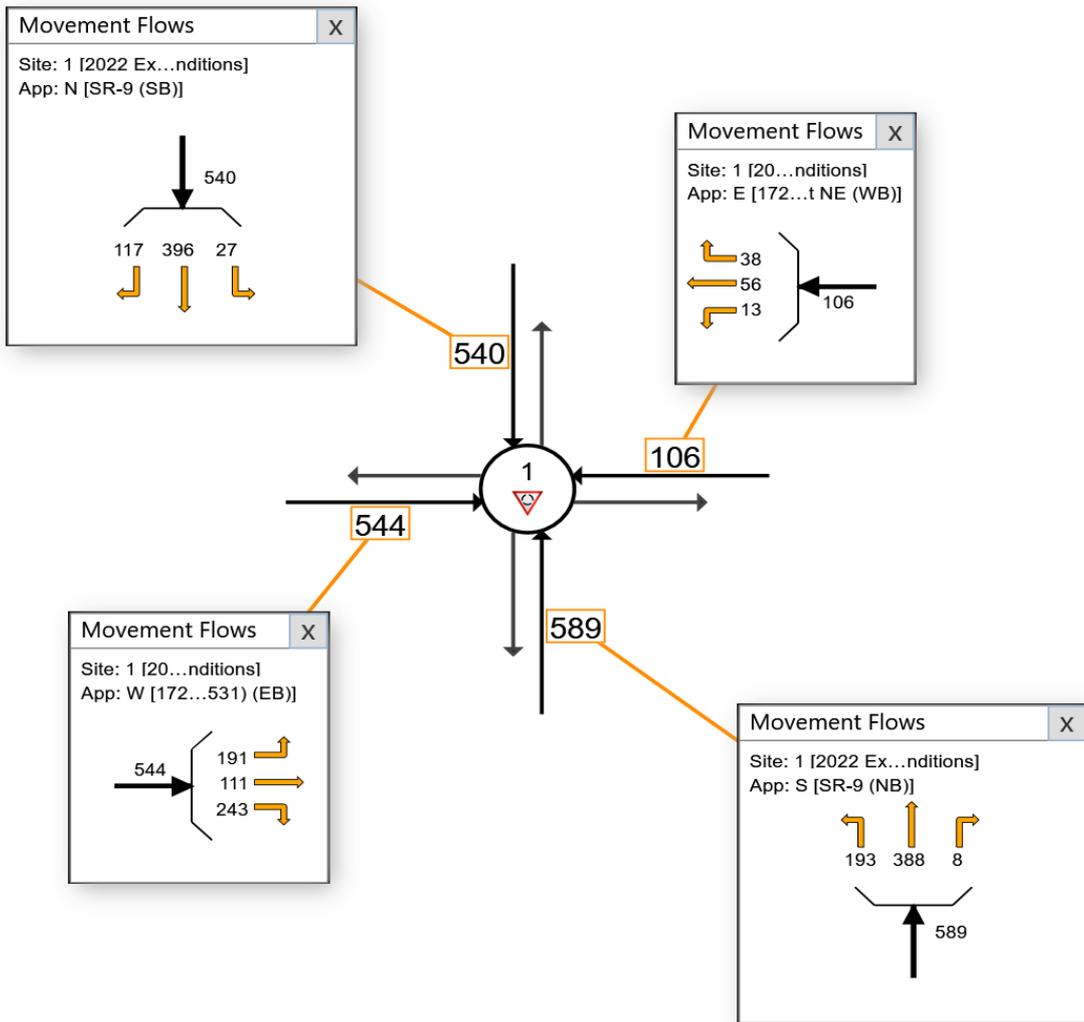
All Movement Classes

Site: 1 [2022 Existing Conditions (Site Folder: General)]

SR-9 at 172nd Street NE (SR-531)
 Site Category: (None)
 Roundabout

Use the button below to open or close all popup boxes. Click value labels to open selected ones.
 Click and drag popup boxes to move to preferred positions.

Close All Popups



MOVEMENT SUMMARY

Site: 1 [2022 Existing Conditions (Site Folder: General)]

SR-9 at 172nd Street NE (SR-531)

Site Category: (None)

Roundabout

Vehicle Movement Performance														
Mov ID	Turn	INPUT VOLUMES		DEMAND FLOWS		Deg. Satn	Aver. Delay	Level of Service	95% BACK OF QUEUE		Prop. Que	Effective Stop Rate	Aver. No. Cycles	Aver. Speed
		[Total veh/h]	[HV %]	[Total veh/h]	[HV %]				[Veh. veh]	[Dist ft]				
South: SR-9 (NB)														
3	L2	183	3.0	193	3.0	0.577	12.9	LOS B	5.3	135.9	0.76	0.74	0.80	34.7
8	T1	369	3.0	388	3.0	0.577	6.9	LOS A	5.3	135.9	0.76	0.74	0.80	34.7
18	R2	8	3.0	8	3.0	0.577	6.9	LOS A	5.3	135.9	0.76	0.74	0.80	33.7
Approach		560	3.0	589	3.0	0.577	8.8	LOS A	5.3	135.9	0.76	0.74	0.80	34.7
East: 172nd Street NE (WB)														
1	L2	12	3.0	13	3.0	0.159	14.8	LOS B	1.1	27.1	0.80	0.78	0.80	34.9
6	T1	53	3.0	56	3.0	0.159	8.8	LOS A	1.1	27.1	0.80	0.78	0.80	34.8
16	R2	36	3.0	38	3.0	0.159	8.9	LOS A	1.1	27.1	0.80	0.78	0.80	33.8
Approach		101	3.0	106	3.0	0.159	9.6	LOS A	1.1	27.1	0.80	0.78	0.80	34.5
North: SR-9 (SB)														
7	L2	26	3.0	27	3.0	0.491	11.7	LOS B	3.8	98.2	0.63	0.59	0.63	35.9
4	T1	376	3.0	396	3.0	0.491	5.8	LOS A	3.8	98.2	0.63	0.59	0.63	35.9
14	R2	111	3.0	117	3.0	0.491	5.8	LOS A	3.8	98.2	0.63	0.59	0.63	34.8
Approach		513	3.0	540	3.0	0.491	6.1	LOS A	3.8	98.2	0.63	0.59	0.63	35.6
West: 172nd Street NE (SR-531) (EB)														
5	L2	181	3.0	191	3.0	0.579	14.3	LOS B	5.4	139.1	0.81	0.85	0.91	34.4
2	T1	105	3.0	111	3.0	0.579	8.3	LOS A	5.4	139.1	0.81	0.85	0.91	34.3
12	R2	231	3.0	243	3.0	0.579	8.3	LOS A	5.4	139.1	0.81	0.85	0.91	33.4
Approach		517	3.0	544	3.0	0.579	10.4	LOS B	5.4	139.1	0.81	0.85	0.91	33.9
All Vehicles		1691	3.0	1780	3.0	0.579	8.5	LOS A	5.4	139.1	0.74	0.73	0.78	34.7

Site Level of Service (LOS) Method: Delay & v/c (HCM 6). Site LOS Method is specified in the Parameter Settings dialog (Site tab). Roundabout LOS Method: Same as Signalised Intersections.

Vehicle movement LOS values are based on average delay and v/c ratio (degree of saturation) per movement.

LOS F will result if v/c > 1 irrespective of movement delay value (does not apply for approaches and intersection).

Intersection and Approach LOS values are based on average delay for all movements (v/c not used as specified in HCM 6).

Roundabout Capacity Model: SIDRA Standard.

Delay Model: SIDRA Standard (Geometric Delay is included).

Queue Model: HCM Queue Formula.

Gap-Acceptance Capacity: SIDRA Standard (Akçelik M3D).

HV (%) values are calculated for All Movement Classes of All Heavy Vehicle Model Designation.

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SITE LAYOUT

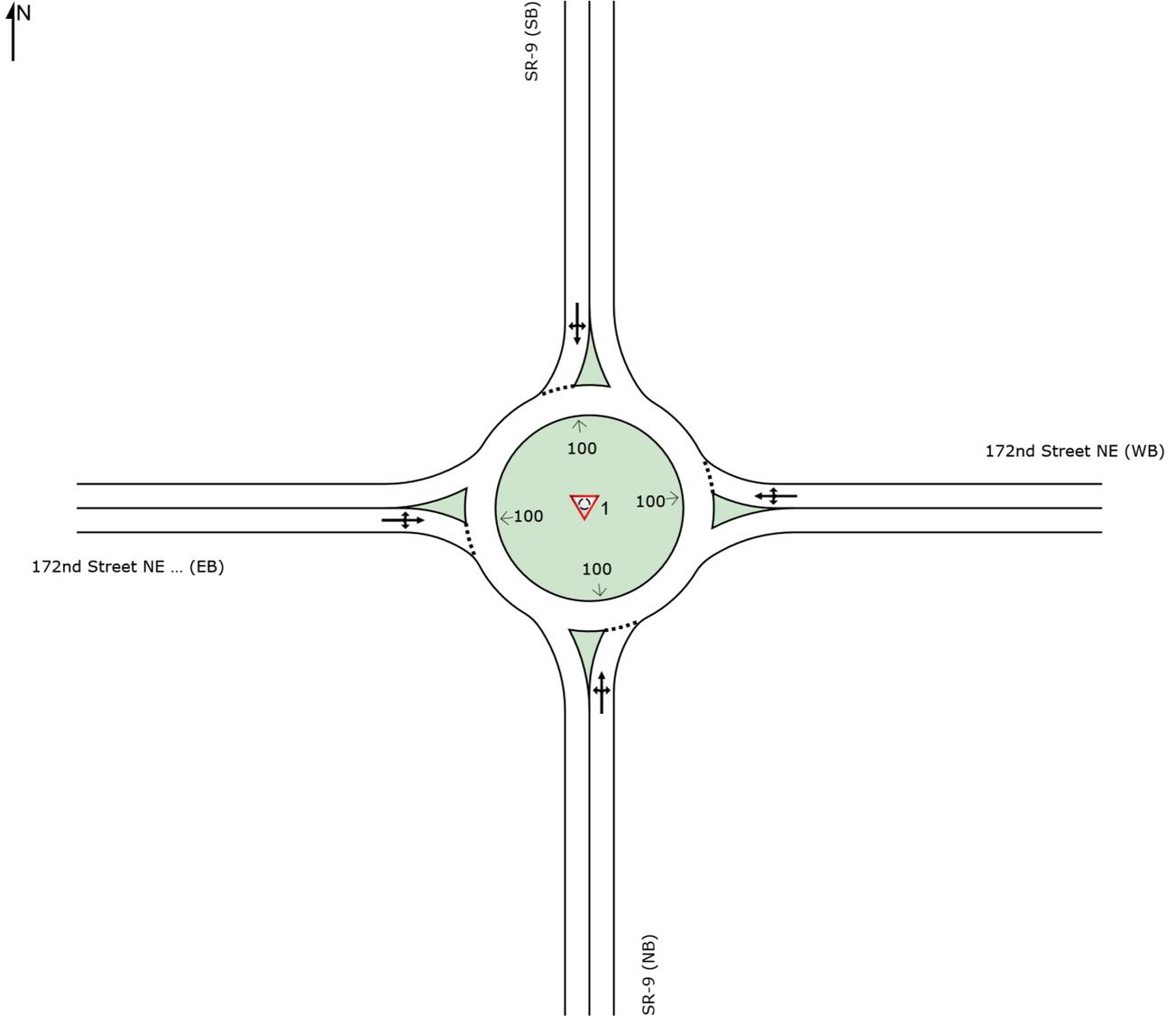
Site: 1 [2028 Baseline Conditions (Site Folder: General)]

SR-9 at 172nd Street NE (SR-531)

Site Category: (None)

Roundabout

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MOVEMENT FLOWS FOR SITE (DEMAND)

Approach movement demand flow rates (veh/h)

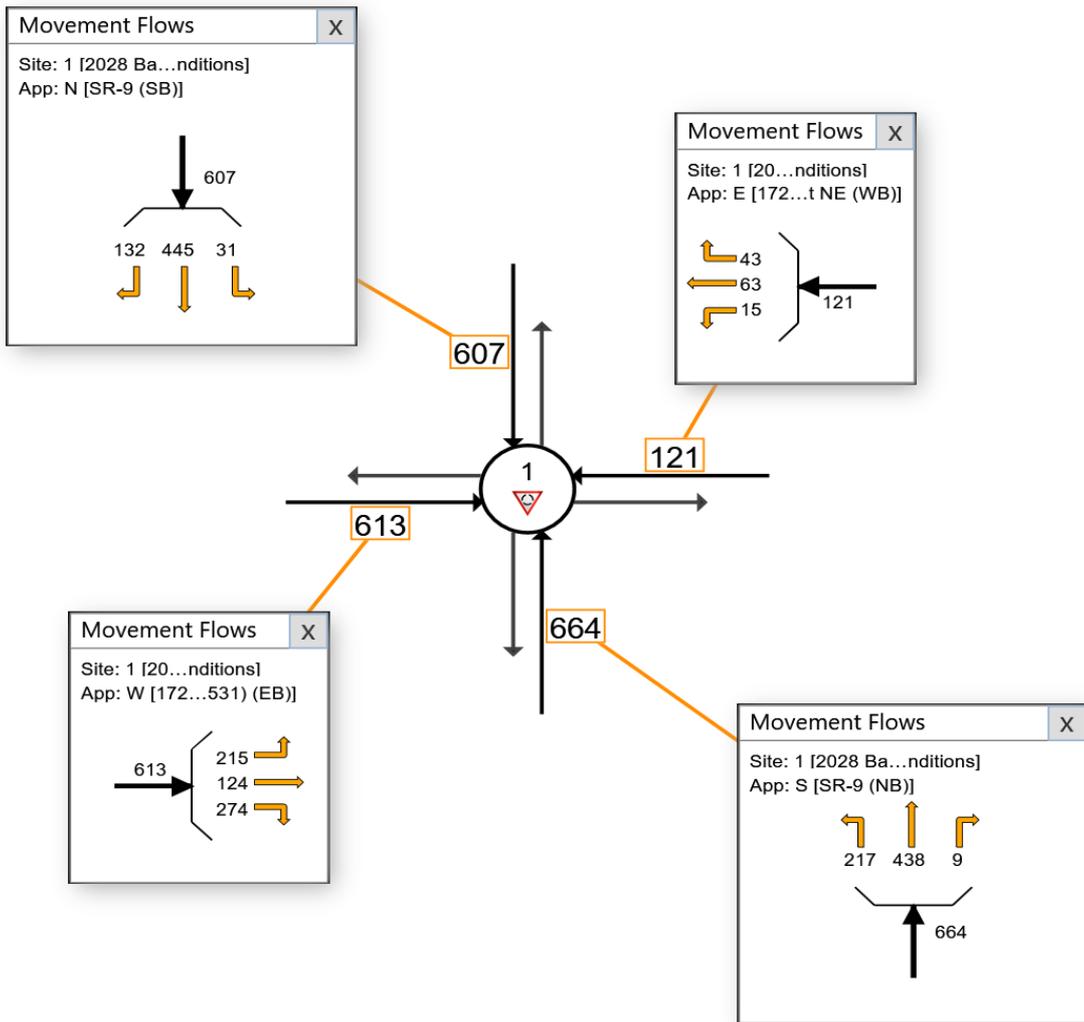
All Movement Classes

Site: 1 [2028 Baseline Conditions (Site Folder: General)]

SR-9 at 172nd Street NE (SR-531)
 Site Category: (None)
 Roundabout

Use the button below to open or close all popup boxes. Click value labels to open selected ones.
 Click and drag popup boxes to move to preferred positions.

Close All Popups



MOVEMENT SUMMARY

Site: 1 [2028 Baseline Conditions (Site Folder: General)]

SR-9 at 172nd Street NE (SR-531)

Site Category: (None)

Roundabout

Vehicle Movement Performance														
Mov ID	Turn	INPUT VOLUMES		DEMAND FLOWS		Deg. Satn	Aver. Delay	Level of Service	95% BACK OF QUEUE		Prop. Que	Effective Stop Rate	Aver. No. Cycles	Aver. Speed
		[Total veh/h]	[HV %]	[Total veh/h]	[HV %]				[Veh. veh]	[Dist ft]				
South: SR-9 (NB)														
3	L2	206	3.0	217	3.0	0.684	15.0	LOS B	8.1	206.9	0.88	0.88	1.04	34.1
8	T1	416	3.0	438	3.0	0.684	9.0	LOS A	8.1	206.9	0.88	0.88	1.04	34.1
18	R2	9	3.0	9	3.0	0.684	9.1	LOS A	8.1	206.9	0.88	0.88	1.04	33.1
Approach		631	3.0	664	3.0	0.684	11.0	LOS B	8.1	206.9	0.88	0.88	1.04	34.1
East: 172nd Street NE (WB)														
1	L2	14	3.0	15	3.0	0.212	16.1	LOS B	1.5	38.6	0.88	0.85	0.88	34.2
6	T1	60	3.0	63	3.0	0.212	10.1	LOS B	1.5	38.6	0.88	0.85	0.88	34.1
16	R2	41	3.0	43	3.0	0.212	10.2	LOS B	1.5	38.6	0.88	0.85	0.88	33.2
Approach		115	3.0	121	3.0	0.212	10.9	LOS B	1.5	38.6	0.88	0.85	0.88	33.8
North: SR-9 (SB)														
7	L2	29	3.0	31	3.0	0.573	12.4	LOS B	5.1	129.5	0.72	0.66	0.74	35.6
4	T1	423	3.0	445	3.0	0.573	6.4	LOS A	5.1	129.5	0.72	0.66	0.74	35.5
14	R2	125	3.0	132	3.0	0.573	6.5	LOS A	5.1	129.5	0.72	0.66	0.74	34.5
Approach		577	3.0	607	3.0	0.573	6.7	LOS A	5.1	129.5	0.72	0.66	0.74	35.3
West: 172nd Street NE (SR-531) (EB)														
5	L2	204	3.0	215	3.0	0.696	17.2	LOS B	8.4	214.5	0.93	1.00	1.20	33.0
2	T1	118	3.0	124	3.0	0.696	11.2	LOS B	8.4	214.5	0.93	1.00	1.20	32.9
12	R2	260	3.0	274	3.0	0.696	11.3	LOS B	8.4	214.5	0.93	1.00	1.20	32.0
Approach		582	3.0	613	3.0	0.696	13.3	LOS B	8.4	214.5	0.93	1.00	1.20	32.6
All Vehicles		1905	3.0	2005	3.0	0.696	10.4	LOS B	8.4	214.5	0.85	0.85	0.99	33.9

Site Level of Service (LOS) Method: Delay & v/c (HCM 6). Site LOS Method is specified in the Parameter Settings dialog (Site tab).
Roundabout LOS Method: Same as Signalised Intersections.

Vehicle movement LOS values are based on average delay and v/c ratio (degree of saturation) per movement.

LOS F will result if v/c > 1 irrespective of movement delay value (does not apply for approaches and intersection).

Intersection and Approach LOS values are based on average delay for all movements (v/c not used as specified in HCM 6).

Roundabout Capacity Model: SIDRA Standard.

Delay Model: SIDRA Standard (Geometric Delay is included).

Queue Model: HCM Queue Formula.

Gap-Acceptance Capacity: SIDRA Standard (Akçelik M3D).

HV (%) values are calculated for All Movement Classes of All Heavy Vehicle Model Designation.

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SITE LAYOUT

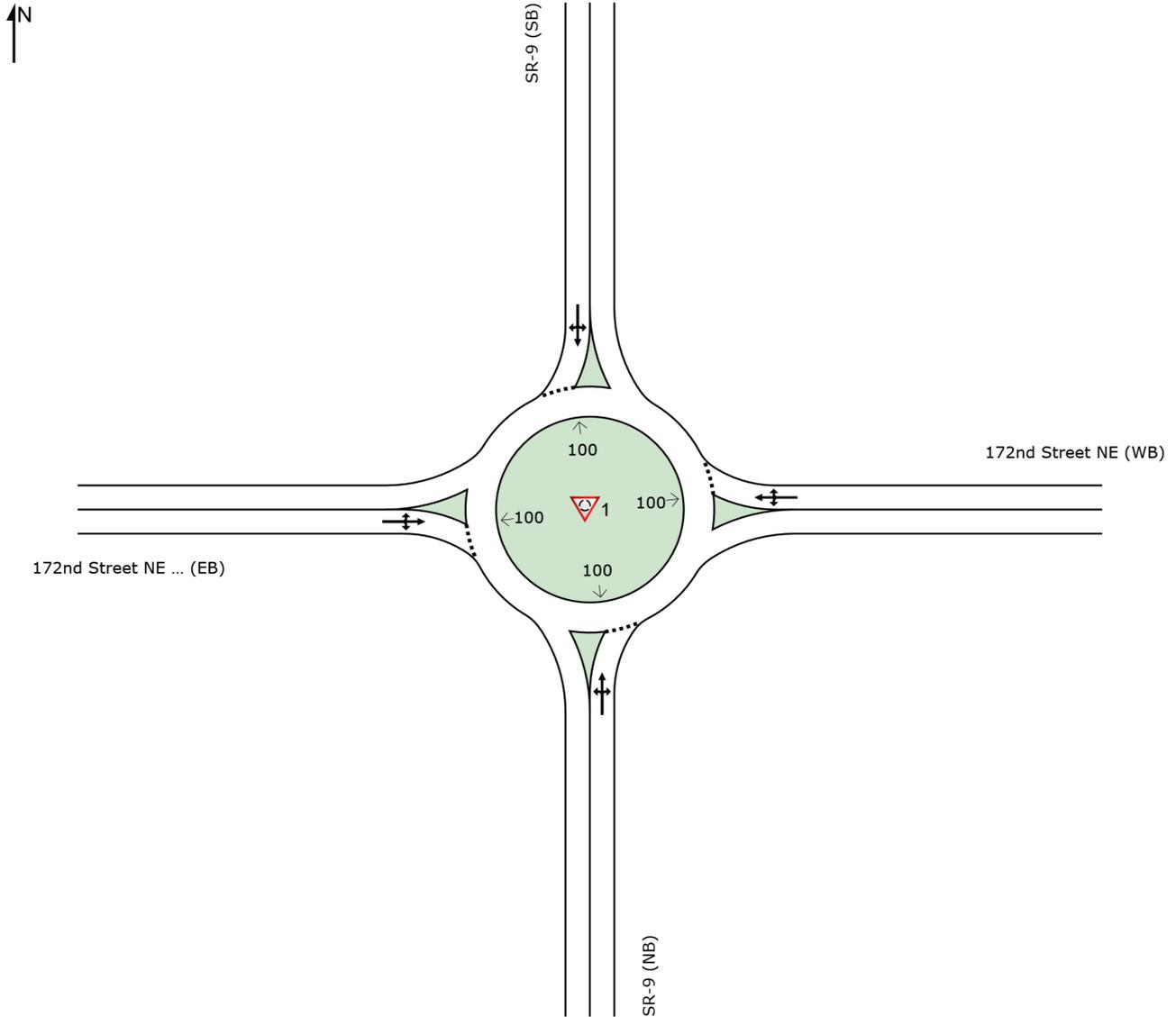
Site: 1 [2028 Future Conditions (Site Folder: General)]

SR-9 at 172nd Street NE (SR-531)

Site Category: (None)

Roundabout

Layout pictures are schematic functional drawings reflecting input data. They are not design drawings.



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MOVEMENT FLOWS FOR SITE (DEMAND)

Approach movement demand flow rates (veh/h)

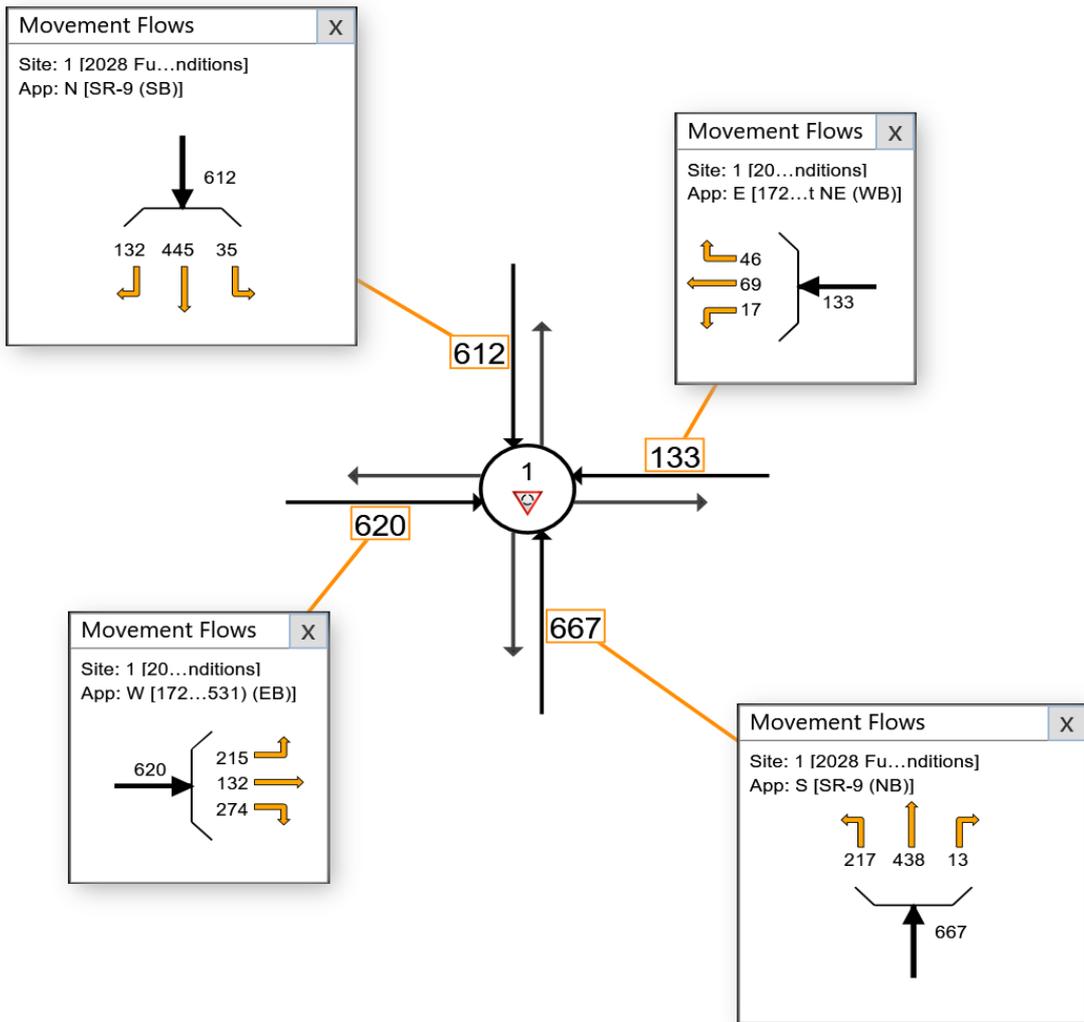
All Movement Classes

Site: 1 [2028 Future Conditions (Site Folder: General)]

SR-9 at 172nd Street NE (SR-531)
 Site Category: (None)
 Roundabout

Use the button below to open or close all popup boxes. Click value labels to open selected ones.
 Click and drag popup boxes to move to preferred positions.

Close All Popups



MOVEMENT SUMMARY

Site: 1 [2028 Future Conditions (Site Folder: General)]

SR-9 at 172nd Street NE (SR-531)

Site Category: (None)

Roundabout

Vehicle Movement Performance														
Mov ID	Turn	INPUT VOLUMES		DEMAND FLOWS		Deg. Satn	Aver. Delay	Level of Service	95% BACK OF QUEUE		Prop. Que	Effective Stop Rate	Aver. No. Cycles	Aver. Speed
		[Total veh/h]	[HV %]	[Total veh/h]	[HV %]				[Veh. veh]	[Dist ft]				
South: SR-9 (NB)														
3	L2	206	3.0	217	3.0	0.695	15.4	LOS B	8.4	215.9	0.90	0.90	1.08	34.0
8	T1	416	3.0	438	3.0	0.695	9.4	LOS A	8.4	215.9	0.90	0.90	1.08	34.0
18	R2	12	3.0	13	3.0	0.695	9.5	LOS A	8.4	215.9	0.90	0.90	1.08	33.0
Approach		634	3.0	667	3.0	0.695	11.4	LOS B	8.4	215.9	0.90	0.90	1.08	34.0
East: 172nd Street NE (WB)														
1	L2	16	3.0	17	3.0	0.233	16.2	LOS B	1.7	42.9	0.89	0.86	0.89	34.1
6	T1	66	3.0	69	3.0	0.233	10.2	LOS B	1.7	42.9	0.89	0.86	0.89	34.1
16	R2	44	3.0	46	3.0	0.233	10.3	LOS B	1.7	42.9	0.89	0.86	0.89	33.1
Approach		126	3.0	133	3.0	0.233	11.0	LOS B	1.7	42.9	0.89	0.86	0.89	33.7
North: SR-9 (SB)														
7	L2	33	3.0	35	3.0	0.581	12.6	LOS B	5.2	134.3	0.73	0.69	0.76	35.6
4	T1	423	3.0	445	3.0	0.581	6.6	LOS A	5.2	134.3	0.73	0.69	0.76	35.5
14	R2	125	3.0	132	3.0	0.581	6.7	LOS A	5.2	134.3	0.73	0.69	0.76	34.4
Approach		581	3.0	612	3.0	0.581	7.0	LOS A	5.2	134.3	0.73	0.69	0.76	35.3
West: 172nd Street NE (SR-531) (EB)														
5	L2	204	3.0	215	3.0	0.710	17.6	LOS B	8.8	225.3	0.94	1.02	1.24	32.8
2	T1	125	3.0	132	3.0	0.710	11.7	LOS B	8.8	225.3	0.94	1.02	1.24	32.7
12	R2	260	3.0	274	3.0	0.710	11.7	LOS B	8.8	225.3	0.94	1.02	1.24	31.8
Approach		589	3.0	620	3.0	0.710	13.8	LOS B	8.8	225.3	0.94	1.02	1.24	32.4
All Vehicles		1930	3.0	2032	3.0	0.710	10.7	LOS B	8.8	225.3	0.86	0.87	1.02	33.8

Site Level of Service (LOS) Method: Delay & v/c (HCM 6). Site LOS Method is specified in the Parameter Settings dialog (Site tab).
Roundabout LOS Method: Same as Signalised Intersections.

Vehicle movement LOS values are based on average delay and v/c ratio (degree of saturation) per movement.

LOS F will result if v/c > 1 irrespective of movement delay value (does not apply for approaches and intersection).

Intersection and Approach LOS values are based on average delay for all movements (v/c not used as specified in HCM 6).

Roundabout Capacity Model: SIDRA Standard.

Delay Model: SIDRA Standard (Geometric Delay is included).

Queue Model: HCM Queue Formula.

Gap-Acceptance Capacity: SIDRA Standard (Akçelik M3D).

HV (%) values are calculated for All Movement Classes of All Heavy Vehicle Model Designation.

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