

# Northsound Logistics Center

Arlington, WA

Traffic Impact Analysis

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## FINDINGS/CONCLUSIONS

This Traffic Impact Analysis (TIA) has been prepared for the proposed *Northsound Logistics Center* project located on a site west of 51<sup>st</sup> Avenue NE within the Cascade Industrial Center (CIC) in the City of Arlington.

**Project Description.** Full buildout of the proposed project includes up to 210,000 square feet (SF) of building area for warehousing use on two parcels (Snohomish County parcels 31052800101700 and 31052800101000). The existing site includes one single family home that would be removed with the proposed project.

Vehicular access is proposed at two (2) new full access driveways on 51<sup>st</sup> Avenue NE; the northern driveway would provide access for non-trucks only and the southern access would provide access for all vehicles (non-trucks and trucks). Additional vehicular access is proposed at two (2) new full access driveways on the future extension of 47<sup>th</sup> Avenue NE; the northern driveway would provide access for non-trucks only and the southern access would provide access for all vehicles (non-trucks and trucks). It should be noted that the traffic analysis documented in this report conservatively assumes that all project trips would access the site via 51<sup>st</sup> Avenue NE. Full buildout and occupancy of the proposed project is anticipated to occur by 2026.

**Trip Generation.** The proposed *Northsound Logistics Center* project is estimated to generate 355 new weekday daily trips with 48 trips occurring during the weekday AM peak hour (38 in, 10 out) and 51 trips during the weekday PM peak hour (14 in, 37 out).

**Intersection Level of Service (LOS).** Weekday PM peak hour LOS analyses were conducted at three (3) study intersections in the vicinity of the proposed project. Each of the study intersections are anticipated to operate at LOS C or better during the weekday PM peak hour in 2026 with or without the proposed project.

**Site Access Evaluation.** Based on the results of the analysis, the individual movements entering and exiting the site at each of the two (2) proposed stop-controlled site access locations on 51<sup>st</sup> Avenue NE are expected to operate at LOS C or better with minimal queuing during the weekday PM peak hour in 2026.

### Mitigation.

Off-Site Improvements. Based on the results of the LOS analysis shown in this report, all off-site study intersections are expected to operate at acceptable levels (LOS C or better) with the proposed project. Therefore, no off-site traffic mitigation is proposed.

Frontage Improvements. The following frontage improvements are proposed by the *Northsound Logistics Center* project:

- Improve 51<sup>st</sup> Avenue NE along the project frontage to include road widening and new curb/gutter/sidewalk. The extent of the improvements will be coordinated with the City and may include additional right-of-way dedication to accommodate a potential future 5-lane roadway to be completed by the City.
- Construct improvements on the west side of the property frontage along 43<sup>rd</sup> Ave NE consistent with the City's plans for the new 43<sup>rd</sup> Ave NE corridor; the improvements will include a half-street roadway and new curb and gutter. The extent of the improvements will be coordinated with the City.

Note that it is assumed that all of these frontage improvements would qualify for credit against City of Arlington traffic impact fees since they are included in the City's adopted transportation improvement program (TIP).

Traffic Impact Fees. The proposed project is required to pay traffic impact fees to the City of Arlington and Snohomish County based on the following:

- **City of Arlington.** The City of Arlington requires payment of traffic mitigation fees to help fund planned roadway improvements throughout the City. The City's currently adopted traffic impact fee is \$5,841.39 per new PM peak hour trip for developments within the Cascade Industrial Center (CIC). The final traffic impact fee will be due at the time of building permit issuance and the calculated impact fee will include credit for the existing uses to be removed with this project as well as any credits related to proposed mitigation that is included in the City's 6-Year TIP.
- **Snohomish County.** The City of Arlington and Snohomish County have adopted an interlocal agreement whereby developments in Arlington must assess potential mitigation for impacts on Snohomish County roadway facilities. The *Northsound Logistics Center* project is located in TSA A and is not expected to impact any TSA A projects included in the Snohomish County's *Transportation Needs Report*. Therefore, the *Northsound Logistics Center* project would not be expected to pay traffic mitigation fees to Snohomish County.
- **WSDOT.** Traffic impact fee payments to WSDOT are based on the interlocal agreement between WSDOT and Snohomish County. No WSDOT traffic mitigation fees are identified for the *Northsound Logistics Center* project.

## INTRODUCTION

The information provided in this Traffic Impact Analysis (TIA) is being submitted to the City of Arlington for the proposed *Northsound Logistics Center* project. The information provided herein includes the applicable elements included in the City of Arlington's Traffic Analysis Procedures and Checklist. Information in this report is provided for each of the following:

- I. Project Description
- II. Trip Generation
- III. Trip Distribution
- IV. Traffic Volumes
- V. Level of Service
- VI. Mitigation Recommendations

## I. PROJECT DESCRIPTION

The proposed *Northsound Logistics Center* project is located west of 51<sup>st</sup> Avenue NE within the Cascade Industrial Center (CIC) in the City of Arlington. A project vicinity map is provided in **Figure 1**. Full buildout of the proposed project includes up to 210,000 square feet (SF) of building area for warehousing use on two parcels (Snohomish County parcels 31052800101700 and 31052800101000). The existing site includes one single family home that would be removed with the proposed project.

Vehicular access is proposed at two (2) new full access driveways on 51<sup>st</sup> Avenue NE; the northern driveway would provide access for non-trucks only and the southern access would provide access for all vehicles (non-trucks and trucks). Additional vehicular access is proposed at two (2) new full access driveways on the future extension of 47<sup>th</sup> Avenue NE; the northern driveway would provide access for non-trucks only and the southern access would provide access for all vehicles (non-trucks and trucks). It should be noted that the traffic analysis documented in this report conservatively assumes that all project trips would access the site via 51<sup>st</sup> Avenue NE.

A preliminary site plan is shown in **Appendix A**. Full buildout and occupancy of the proposed project is anticipated to occur by 2026.



Figure 1: Project Site Vicinity



## II. TRIP GENERATION

The trip generation estimates for the proposed and existing uses for the *Northsound Logistics Center* project were based on methodology documented in the Institute of Transportation Engineers (ITE) *Trip Generation Manual*, 11<sup>th</sup> Edition for Land Use Code (LUC) 150 (Warehousing) and LUC 210 (Single Family Detached Housing). Truck trips were also estimated based on truck trip rates documented in the ITE *Trip Generation Manual*, 11<sup>th</sup> Edition for LUC 150.

The resulting new weekday daily, AM peak hour, and PM peak hour trip generation estimates for the proposed project are summarized in **Table 1** and are separated into passenger vehicles, trucks, and total vehicular trips. The detailed trip generation estimates are included in **Appendix B**.

**Table 1**  
**Trip Generation Summary**

Weekday Time Period	New Trips Generated								
	PASSENGER VEHICLES			TRUCKS ONLY			TOTAL - ALL VEHICLES		
	In	Out	Total	In	Out	Total	In	Out	Total
Daily	115	114	229	63	63	126	178	177	355
AM Peak Hour	36	8	44	2	2	4	38	10	48
PM Peak Hour	11	34	45	3	3	6	14	37	51

## III. TRIP DISTRIBUTION

The distribution of project-generated vehicle trips to/from the *Northsound Logistics Center* site was estimated based on existing and anticipated travel patterns and approved traffic studies for other developments in the vicinity of the site as follows:

**Table 2**  
**Peak Hour Project Trip Distribution**

Route (Direction)	Non-Truck Trip Distribution	Truck Trip Distribution
172 <sup>nd</sup> Street NE (SR 531) (west)	70%	80%
172 <sup>nd</sup> Street NE (SR 531) (east)	20%	20%
51 <sup>st</sup> Avenue NE (north)	5%	--
51 <sup>st</sup> Avenue NE (south)	5%	--
<b>TOTAL</b>	<b>100%</b>	<b>100%</b>

**Figure 2** illustrates the resulting distribution and assignment of weekday PM peak hour project trips through the study intersections. In accordance with the *Snohomish County Traffic Worksheet and Traffic Study Requirements for Developments in the City of Arlington*, project trip impacts at Snohomish County key intersections were identified (see **Appendix C**). The weekday AM and PM peak hour trip assignment at key intersections impacted by three (3) or more directional trips are shown in tabular format in **Tables 3** and **4**.

**Table 3**  
**AM Peak Hour Trip Assignment at Snohomish County Key Intersections**

Key Intersection												
ID#	EBL	EBT	EBR	WBL	WBT	WBR	NBL	NBT	NBR	SBL	SBT	SBR
85	1	1	0	0	3	0	2	0	0	0	0	2

**Table 4**  
**PM Peak Hour Trip Assignment at Snohomish County Key Intersections**

Key Intersection												
ID#	EBL	EBT	EBR	WBL	WBT	WBR	NBL	NBT	NBR	SBL	SBT	SBR
85	2	4	2	0	2	0	0	0	0	0	0	1

## IV. TRAFFIC VOLUMES

### Existing Traffic Volumes

Existing weekday PM peak hour traffic volumes were collected at the following three (3) study intersections by All Traffic Data in November 2024:

1. 43<sup>rd</sup> Avenue NE / 172<sup>nd</sup> Street NE (SR 531)
2. 51<sup>st</sup> Avenue NE / 172<sup>nd</sup> Street NE (SR 531)
3. 51<sup>st</sup> Avenue NE / 168<sup>th</sup> Street NE

The weekday PM peak hour represents the highest one-hour time period between 4:00 and 6:00 PM.

**Figure 3** illustrates the existing 2024 weekday PM peak hour traffic volumes at the study intersections. The peak hour traffic count sheets are included in **Appendix D**.

### Future Traffic Volumes

To estimate the future 2026 No Action (Without Project) weekday PM peak hour traffic volumes, a 5% annual background growth rate was applied to the existing volumes consistent with other projects in the vicinity.

The resulting future 2026 No Action weekday PM peak hour traffic volumes at the study intersections are shown in **Figure 4**. The 2026 With Project traffic volumes were determined by adding the trip assignment from the proposed project (shown in **Figure 2**) to the future 2026 No Action traffic volumes (shown in **Figure 4**). The 2026 With Project weekday PM peak hour traffic volumes are shown in **Figure 5**.

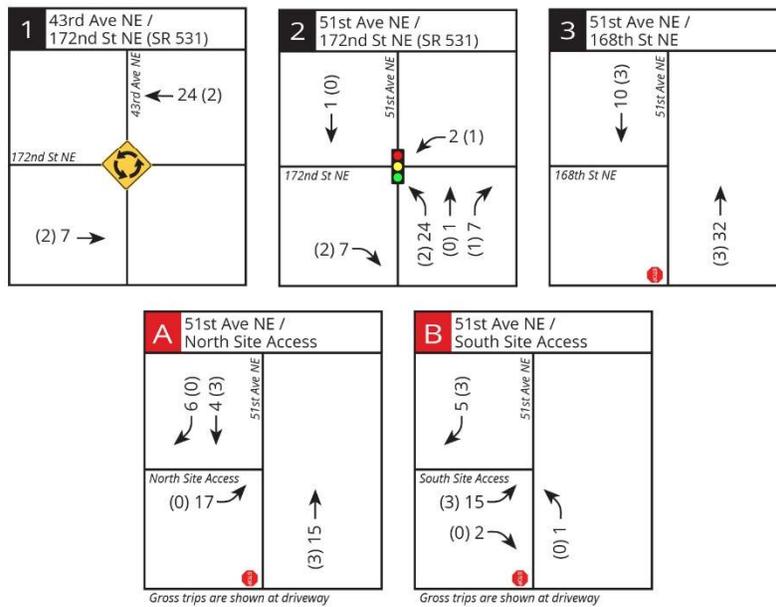


Figure 2: Weekday PM Peak Hour Project Trip Distribution and Assignment



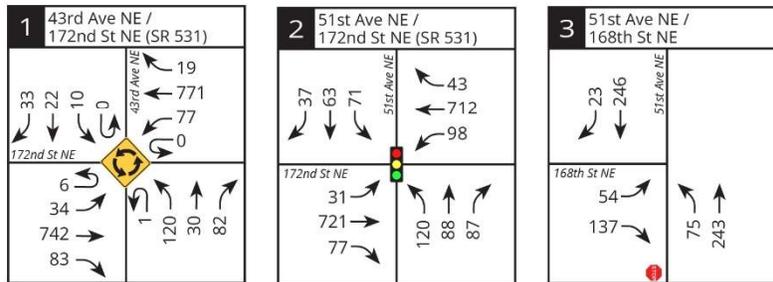


Figure 3: 2024 Existing Weekday PM Peak Hour Traffic Volumes



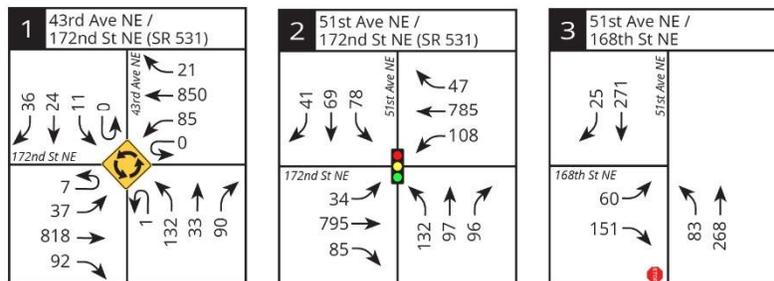


Figure 4: 2026 No Action Weekday PM Peak Hour Traffic Volumes



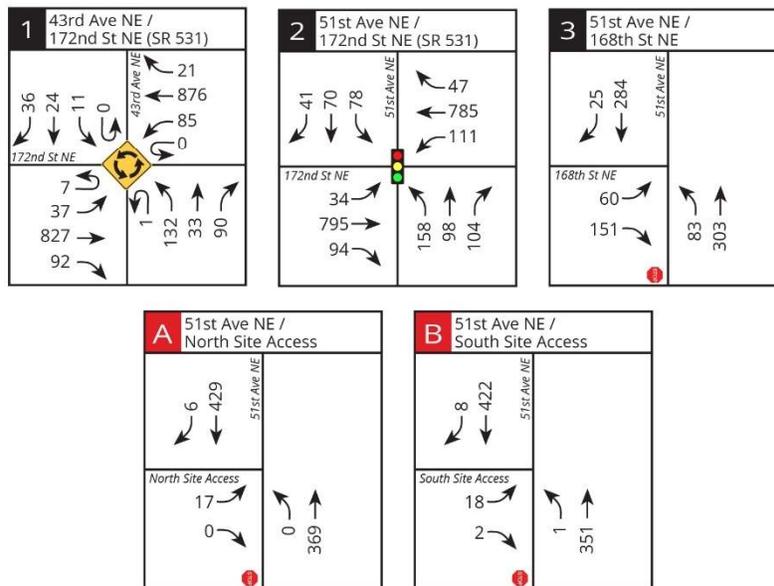


Figure 5: 2026 With Project Weekday PM Peak Hour Traffic Volumes



## V. INTERSECTION LEVELS OF SERVICE

### Existing Level of Service

Existing weekday PM peak hour level of service (LOS) analyses were conducted at the three (3) study intersections using the methodology and procedures outlined in the *Highway Capacity Manual* (HCM 7<sup>th</sup> Edition) using the *Synchro 12* software program. The 2024 existing weekday PM peak hour LOS analysis results for the study intersections are summarized in **Table 5**. The LOS methodology and calculations are included in **Appendix E**.

**Table 5**  
**Existing 2024 Weekday PM Peak Hour LOS Summary**

Study Intersection	LOS	Delay (sec)
<u>Roundabout Intersection:</u>		
1. 43 <sup>rd</sup> Avenue NE / 172 <sup>nd</sup> Street NE (SR 531)	A	4.1
<u>Signalized Intersection:</u>		
2. 51 <sup>st</sup> Avenue NE / 172 <sup>nd</sup> Street NE (SR 531)	C	24.0
<u>Two-Way Stop-Controlled Intersection:</u>		
3. 51 <sup>st</sup> Avenue NE / 168 <sup>th</sup> Street NE		
Northbound Left-Turn	A	8.0
Eastbound Approach	B	13.1

As shown in **Table 5**, each of the study intersections currently operates at LOS C or better during the weekday PM peak hour.

The currently adopted level of service standard from the City of Arlington's *2017 Comprehensive Plan* (Chapter 8: Transportation Element) is LOS D for all city arterials and LOS C for all other city streets.

### Future Level of Service

Future year (2026) weekday PM peak hour LOS analysis was conducted at the three (3) intersections for future No Action (without project) and With Project conditions.

Based on review of the City of Arlington DRAFT *Six Year Transportation Improvement Plan* (2025-2030), there are several planned improvements in the study area:

- **Item #8/Project #R-14: SR 531 Widening Project, Phase I** – This project will widen SR 531 between 43<sup>rd</sup> Avenue NE and 67<sup>th</sup> Avenue NE. The project is funded by 2015 Connecting Washington funding package.
- **Item #18: SR 531 Widening Project, Phase II (67<sup>th</sup> Avenue to SR 9)** – This project will widen SR 531 between 67<sup>th</sup> Avenue NE and SR 9 and will follow the same roadway cross-section from Phase I.
- **Item #22/Project #R-20: 51<sup>st</sup> Avenue NE Improvements from 169<sup>th</sup> St to south City limits** – This project includes the improvement of 51<sup>st</sup> Avenue NE into a three-lane urban freight corridor roadway from 169<sup>th</sup> Ave to south Arlington city limits, consistent with Arlington-Marysville CIC Transportation Planning efforts. It will also include ROW planning to make 51<sup>st</sup> Avenue NE into a five-lane urban corridor.

- **Item #23: SR 531 and 63<sup>rd</sup> Avenue NE Roundabout** – This project includes the construction of a roundabout at the intersection of SR 531 and 63<sup>rd</sup> Avenue NE. The project is funded by the Connecting Washington funds that are left over from the Amazon development.
- **Item #36: 47<sup>th</sup> Ave from 169<sup>th</sup> Street to south City limits** – This developer-funded project will construct 47<sup>th</sup> Avenue as a two-lane freight-carrying urban roadway with sidewalk and multiuse trail from 169<sup>th</sup> Street NE to the south City limits.

Given there are no planned improvements before the anticipated 2026 buildout of the *Northsound Logistics Center* project, no improvements at study intersections were assumed for the future year analyses.

The LOS results at the study intersections without and with the proposed project are summarized in **Table 6**. The detailed LOS worksheets are included in **Appendix E**.

**Table 6**  
**Future 2026 Weekday PM Peak Hour LOS Summary**

Study Intersection	2026 No Action		2026 With Project	
	LOS	Delay (sec)	LOS	Delay (sec)
<u>Roundabout Intersection:</u>				
1. 43 <sup>rd</sup> Avenue NE / 172 <sup>nd</sup> Street NE (SR 531)	A	4.2	A	4.2
<u>Signalized Intersection:</u>				
2. 51 <sup>st</sup> Avenue NE / 172 <sup>nd</sup> Street NE (SR 531)	C	27.6	C	30.5
<u>Two-Way Stop-Controlled Intersection:</u>				
3. 51 <sup>st</sup> Avenue NE / 168 <sup>th</sup> Street NE				
Northbound Left-Turn	A	8.1	A	8.2
Eastbound Approach	B	14.5	C	15.3

As shown in **Table 6**, each of the study intersections are anticipated to operate at LOS C or better during the weekday PM peak hour in 2026 without or with the proposed *Northsound Logistics Center* project.

## Site Access Evaluation

Vehicular access is proposed at two (2) new full access driveways on 51<sup>st</sup> Avenue NE; the northern driveway would provide access for non-trucks only and the southern access would provide access for all vehicles (non-trucks and trucks). Additional vehicular access is proposed at two (2) new full access driveways on the future extension of 47<sup>th</sup> Avenue NE; the northern driveway would provide access for non-trucks only and the southern access would provide access for all vehicles (non-trucks and trucks). It should be noted that the traffic analysis documented in this report conservatively assumes that all project trips would access the site via 51<sup>st</sup> Avenue NE.

### LOS and Queuing

Operations (LOS and queuing) at the proposed *Northsound Logistics Center* site access locations were evaluated for future year 2026 (year of opening) weekday PM peak hour conditions. The reported queues for the individual movements at each of the proposed site access locations are 95<sup>th</sup> percentile queues,

which are only exceeded five (5) percent of the time. The 2026 weekday PM peak hour traffic volumes at the proposed site access locations were shown previously in **Figure 5**.

The year 2026 weekday PM peak hour site access analysis is summarized below in **Table 7**. The LOS and queue worksheets are included in **Appendix E**.

**Table 7**  
**Future 2026 Weekday PM Peak Hour Site Access LOS and Queue Summary**

Site Access / Movement	LOS	Delay (sec)	95 <sup>th</sup> % Queue (ft)
A. 51 <sup>st</sup> Avenue NE / North Access			
Eastbound Approach	C	17.8	< 25'
Northbound Left-Turn	A	0	0'
B. 51 <sup>st</sup> Avenue NE / South Access			
Eastbound Approach	C	15.9	< 25'
Northbound Left-Turn	A	8.3	0'

As shown in **Table 7**, the individual movements entering and exiting the site at the proposed stop-controlled site access locations on 51<sup>st</sup> Avenue NE are expected to operate at LOS C or better with minimal queueing during the weekday PM peak hour in 2026.

## VI. MITIGATION

The following measures have been identified to mitigate the transportation impacts of the proposed *Northsound Logistics Center* project.

### Off-Site Improvements

Based on the results of the LOS analysis shown in this report, all study intersections are expected to operate at LOS C or better with the proposed *Northsound Logistics Center* project. Therefore, no off-site intersection improvements are proposed.

### Frontage Improvements

The following frontage improvements are proposed by the *Northsound Logistics Center* project:

- Improve 51<sup>st</sup> Avenue NE along the project frontage to include road widening and new curb/gutter/sidewalk. The extent of the improvements will be coordinated with the City and may include additional right-of-way dedication to accommodate a potential future 5-lane roadway to be completed by the City.
- Construct improvements on the west side of the property frontage along 43<sup>rd</sup> Ave NE consistent with the City's plans for the new 43<sup>rd</sup> Ave NE corridor; the improvements will include a half-street roadway and new curb and gutter. The extent of the improvements will be coordinated with the City.

Note that it is assumed that all of these frontage improvements would qualify for credit against City of Arlington traffic impact fees since they are included in the City's adopted transportation improvement program (TIP).

### Traffic Impact Fees

**City of Arlington.** The City of Arlington requires payment of traffic mitigation fees to help fund planned roadway improvements throughout the City. The City's currently adopted traffic impact fee is \$5,841.39 per new PM peak hour trip for developments within the Cascade Industrial Center (CIC). The final traffic impact fee will be due at the time of building permit issuance and the calculated impact fee will include credit for the existing uses to be removed with this project as well as any credits related to proposed mitigation that is included in the City's 6-Year TIP.

**Snohomish County.** The City of Arlington and Snohomish County have adopted an interlocal agreement whereby developments in Arlington must assess potential mitigation for impacts on Snohomish County roadway facilities. The *Northsound Logistics Center* project is located in TSA A and is not expected to impact any TSA A projects included in the Snohomish County's *Transportation Needs Report* (see snip below). Therefore, the *Northsound Logistics Center* project would not be expected to pay traffic mitigation fees to Snohomish County.

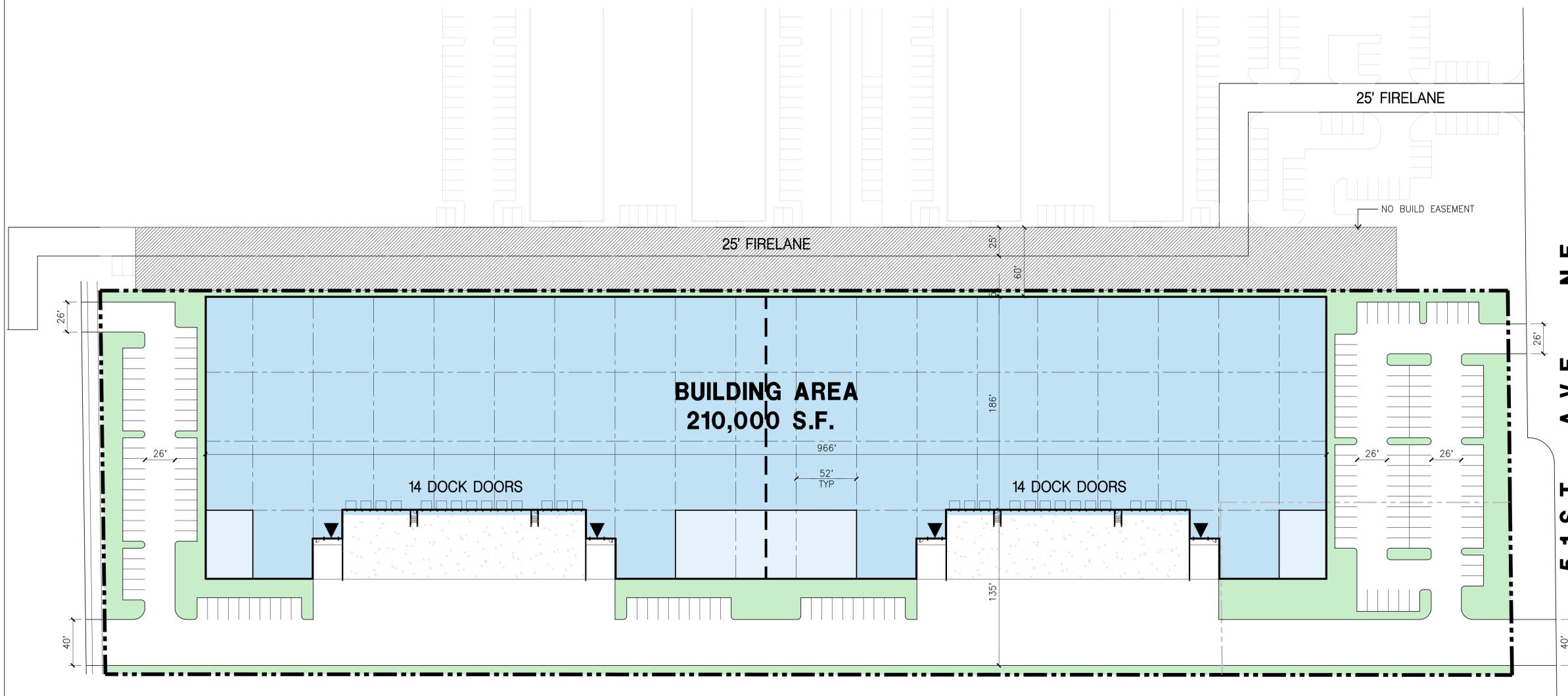
## TNR Appendix D: Impact Fee Cost Basis

Road Name	Limits	Column 1 Project Cost (\$1,000s)	Column 2 CO %	Source of Cost Estimate	Project Type	TNR ID#
<b>TSA A</b>						
67 Ave NE/152 St NE intersection		\$5,394	100%	TNR Cost Model	Major Intersection	INT-007
88 St NE	Marysville C/L to Marysville C/L	\$2,855	100%	Marysville Interlocal Agreement	Major Widening	W-017
140 St NE/23 Ave NE intersection		\$3,498	100%	2015 TE Costs	Major Intersection	INT-006
<b>Subtotal TSA A</b>			<b>\$11,747</b>			

WSDOT. Traffic impact fee payments to WSDOT are based on the interlocal agreement between WSDOT and Snohomish County. Based on the WSDOT *Traffic Impact Analysis Checklist* and *Long Version Traffic Mitigation Offer* form included in **Appendix F**, no WSDOT traffic mitigation fees are identified for the *Northsound Logistics Center* project.

# Appendix A

## Site Plan



### Aerial Map



### Tabulation

<b>SITE AREA</b>	
In s.f.	404,634 s.f.
In acres	9.29 ac
<b>BUILDING AREA</b>	
Office	10,000 s.f.
Warehouse	200,000 s.f.
<b>TOTAL</b>	<b>210,000 s.f.</b>
<b>SITE COVERAGE</b>	
Maximum	100.0%
Actual	51.9%
<b>AUTO PARKING REQUIRED</b>	
Office: 1/400 s.f.	25 stalls
Whse: 1/2,000 s.f.	100 stalls
<b>TOTAL</b>	<b>125 stalls</b>
<b>AUTO PARKING PROVIDED</b>	
Standard (9' x 19')	164 stalls
<b>ZONING ORDINANCE FOR CITY</b>	
Zoning Designation - Light Industrial (LI)	
<b>MAXIMUM BUILDING HEIGHT ALLOWED</b>	
Height - 50'	
<b>SETBACKS</b>	
<b>Building</b>	
Primary - 20'	
Accessory - 5'	

### Legend

- WAREHOUSE
- POTENTIAL OFFICE
- LANDSCAPE
- DRIVE THRU DOOR



**Note:** This is a conceptual plan. It is based on preliminary information which is not fully verified and may be incomplete. It is meant as a comparative aid in examining alternate development strategies and any quantities indicated are subject to revision as more reliable information becomes available.

# Conceptual Site Plan 51st Ave. NE.

Arlington, WA



December 11, 2024 / Job #24091

Scheme 12

# Appendix B

## Trip Generation Calculations

**Northsound Logistics Center (Arlington, WA)  
Weekday Trip Generation Summary**

Land Use	Size/Units <sup>1</sup>	ITE LUC <sup>2</sup>	Trip Rate or Equation <sup>2</sup>	Directional Distribution		Trips Generated		
				In	Out	In	Out	Total
<b>DAILY</b>								
<b>Proposed Use:</b>								
Warehousing	210,000 GFA	150	$T = 1.58(X)+38.29$	50%	50%	185	185	370
<b>Existing Use:</b>								
Single Family Detached Housing	1 DU	210	$\ln(T) = 0.92\ln(X)+2.68$	50%	50%	-7	-8	-15
<b>Net New Daily Trips =</b>						<b>178</b>	<b>177</b>	<b>355</b>
<b>AM PEAK HOUR</b>								
<b>Proposed Use:</b>								
Warehousing	210,000 GFA	150	$T = 0.12(X)+23.62$	77%	23%	38	11	49
<b>Existing Use:</b>								
Single Family Detached Housing	1 DU	210	$\ln(T) = 0.91\ln(X)+0.12$	25%	75%	0	-1	-1
<b>Net New AM Peak Hour Trips =</b>						<b>38</b>	<b>10</b>	<b>48</b>
<b>PM PEAK HOUR</b>								
<b>Proposed Use:</b>								
Warehousing	210,000 GFA	150	$T = 0.12(X)+26.48$	28%	72%	15	37	52
<b>Existing Use:</b>								
Single Family Detached Housing	1 DU	210	$\ln(T) = 0.94\ln(X)+0.27$	63%	37%	-1	0	-1
<b>Net New PM Peak Hour Trips =</b>						<b>14</b>	<b>37</b>	<b>51</b>

Trip Rate <sup>2</sup>	TRUCKS					Non-Truck Trips Generated		
	Distribution		Truck Trips Generated			Non-Truck Trips Generated		
	In	Out	In	Out	Total	In	Out	Total
0.60	50%	50%	63	63	126	122	122	244
--	--	--	--	--	--	-7	-8	-15
<b>Net New Daily Trips =</b>			<b>63</b>	<b>63</b>	<b>126</b>	<b>115</b>	<b>114</b>	<b>229</b>
0.02	52%	48%	2	2	4	36	9	45
--	--	--	--	--	--	0	-1	-1
<b>Net New AM Peak Hour Trips =</b>			<b>2</b>	<b>2</b>	<b>4</b>	<b>36</b>	<b>8</b>	<b>44</b>
0.03	52%	48%	3	3	6	12	34	46
--	--	--	--	--	--	-1	0	-1
<b>Net New PM Peak Hour Trips =</b>			<b>3</b>	<b>3</b>	<b>6</b>	<b>11</b>	<b>34</b>	<b>45</b>

Notes:

<sup>1</sup> GFA = Gross Floor Area, DU = Dwelling Units.

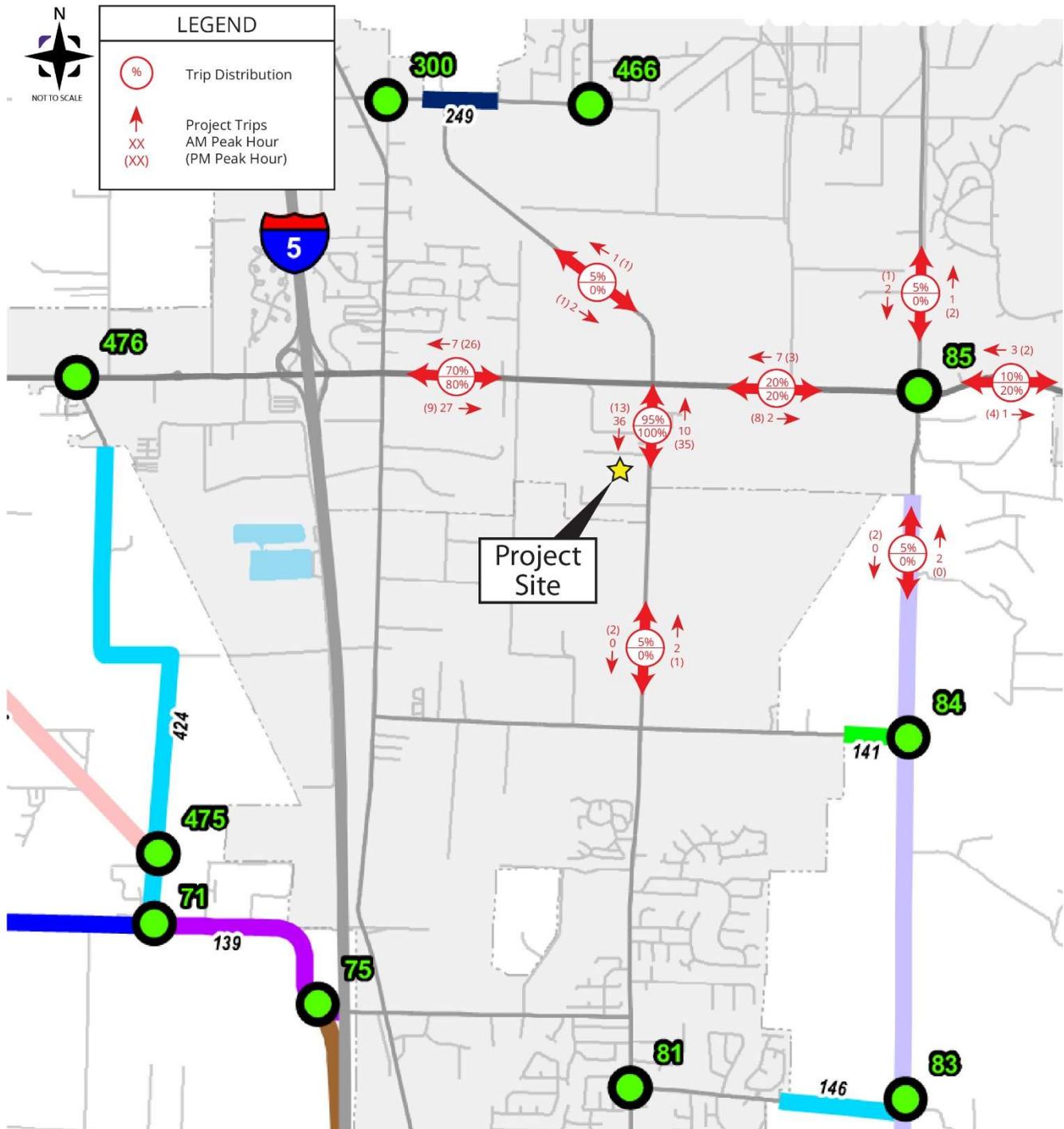
<sup>2</sup> Based on Institute of Transportation Engineers (ITE) *Trip Generation* Manual, 11th Edition, 2021.



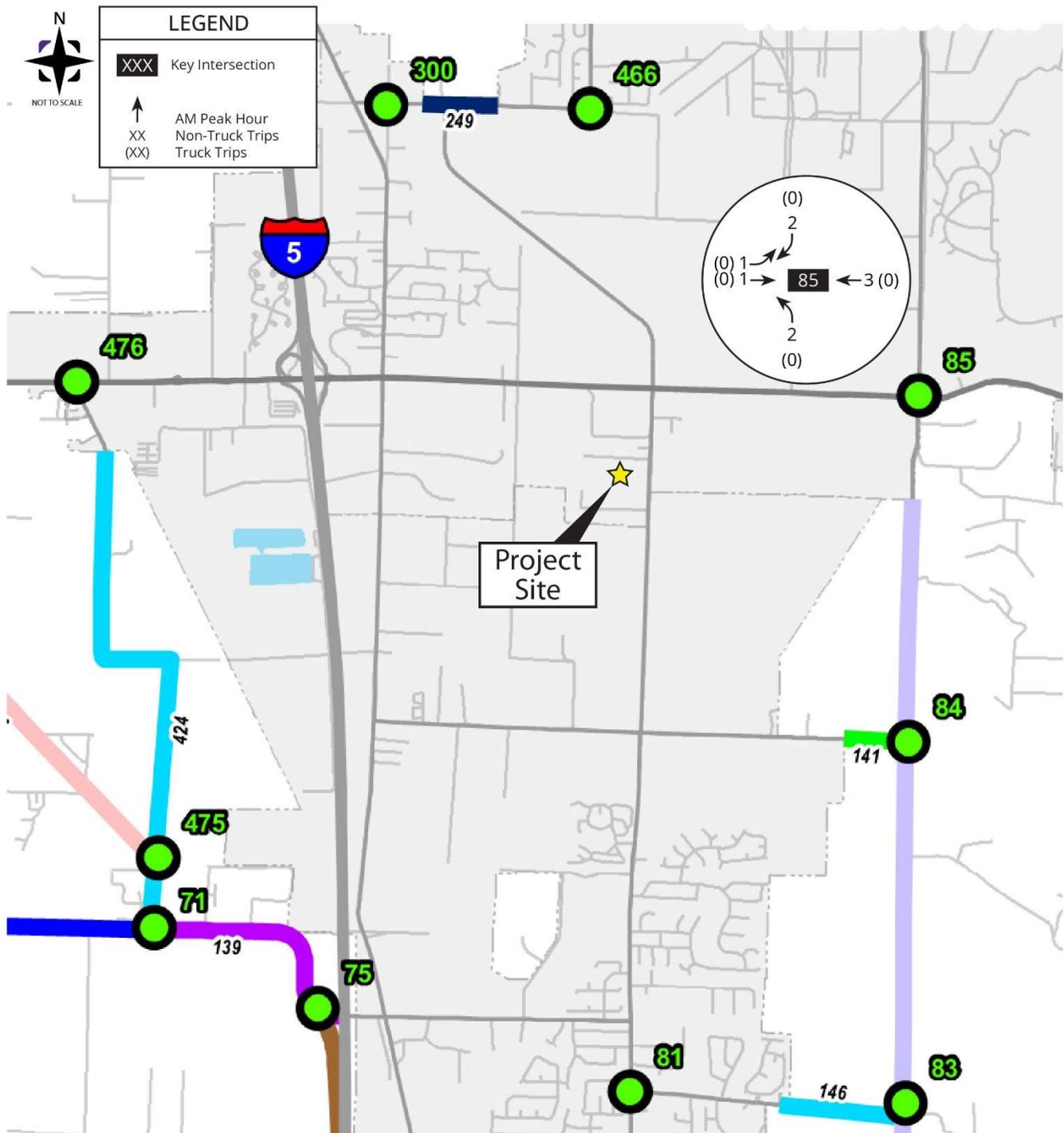
# Appendix C

Weekday Project Trip Distribution and Assignment for Snohomish  
County

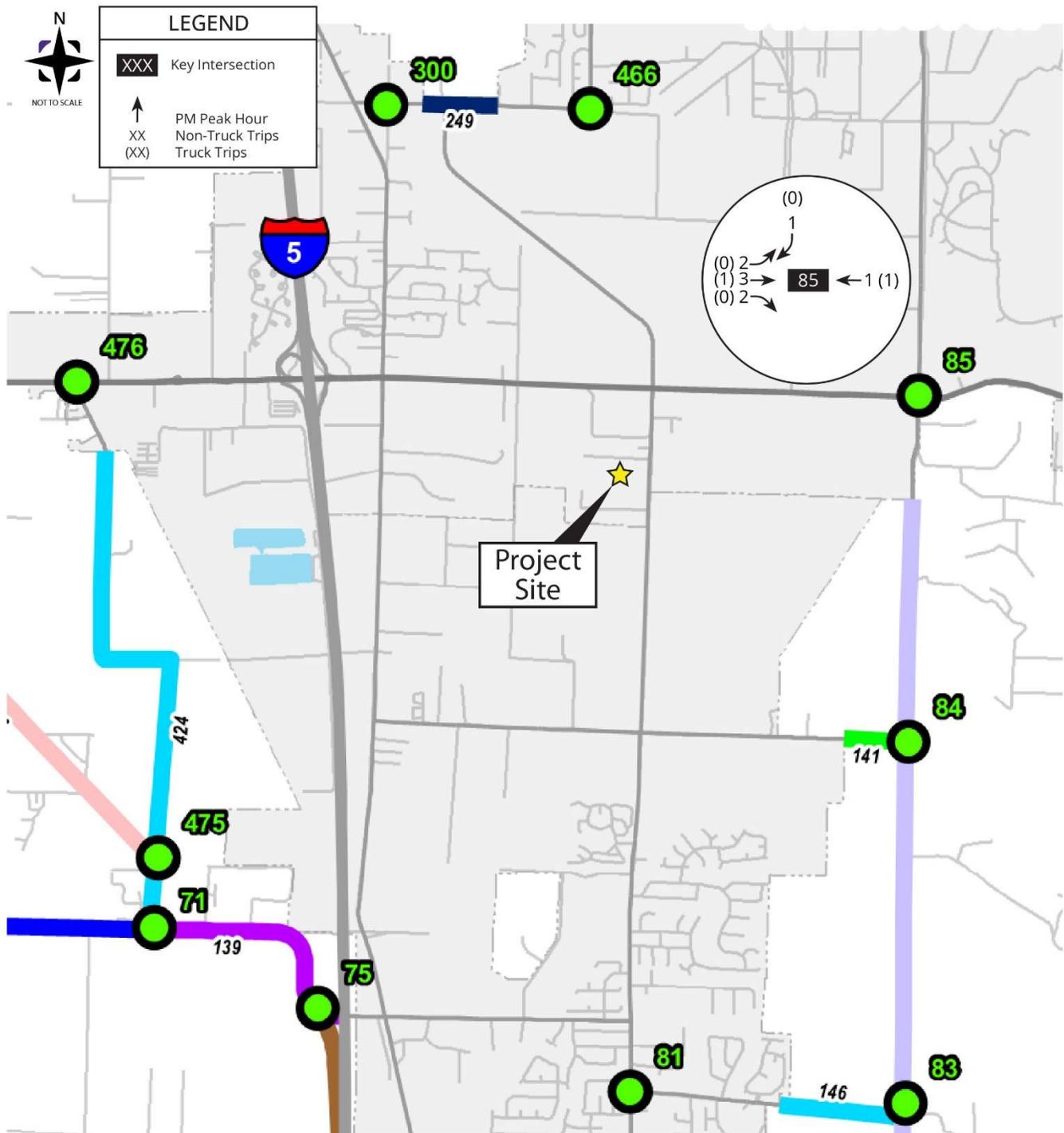




Appendix C1: AM and PM Peak Hour Project Trip Distribution and Assignment



Appendix C2: AM Peak Hour Project Trip Assignment at Snohomish County Key Intersections



Appendix C3: PM Peak Hour Project Trip Assignment at Snohomish County Key Intersections

# Appendix D

## Existing Traffic Counts



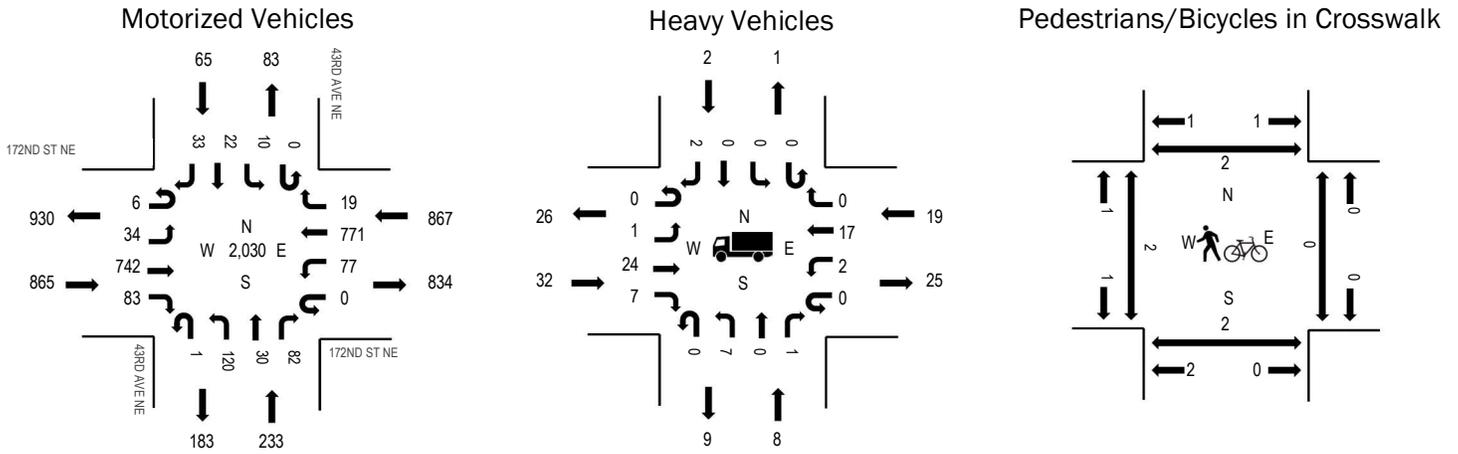
(303) 216-2439  
www.alltrafficdata.net

Location: 1 43RD AVE NE & 172ND ST NE PM

Date: Wednesday, November 6, 2024

Peak Hour: 04:00 PM - 05:00 PM

**Peak Hour**



	HV%	PHF
EB	3.7%	0.90
WB	2.2%	0.91
NB	3.4%	0.88
SB	3.1%	0.86
All	3.0%	0.95

**Traffic Counts - Motorized Vehicles**

Interval Start Time	172ND ST NE Eastbound				172ND ST NE Westbound				43RD AVE NE Northbound				43RD AVE NE Southbound				Total	Rolling Hour
	U-Turn	Left	Thru	Right	U-Turn	Left	Thru	Right	U-Turn	Left	Thru	Right	U-Turn	Left	Thru	Right		
4:00 PM	2	9	176	17	0	16	218	4	1	21	7	17	0	1	8	10	507	2,030
4:15 PM	1	11	179	17	0	19	180	3	0	31	10	18	0	5	5	5	484	2,014
4:30 PM	1	6	183	22	0	20	209	10	0	35	8	23	0	2	5	11	535	2,022
4:45 PM	2	8	204	27	0	22	164	2	0	33	5	24	0	2	4	7	504	1,980
5:00 PM	1	6	183	18	1	19	179	2	0	36	7	26	0	0	6	7	491	1,981
5:15 PM	1	5	160	38	0	15	175	5	0	35	7	35	0	1	8	7	492	
5:30 PM	0	2	194	44	0	13	156	4	0	26	4	31	0	3	10	6	493	
5:45 PM	2	4	185	56	0	20	169	9	0	20	3	25	0	3	4	5	505	
Count Total	10	51	1,464	239	1	144	1,450	39	1	237	51	199	0	17	50	58	4,011	
Peak Hour	6	34	742	83	0	77	771	19	1	120	30	82	0	10	22	33	2,030	

**Traffic Counts - Heavy Vehicles, Bicycles on Road, and Pedestrians/Bicycles in Crosswalk**

Interval Start Time	Heavy Vehicles					Interval Start Time	Bicycles on Roadway					Interval Start Time	Pedestrians/Bicycles on Crosswalk				
	EB	NB	WB	SB	Total		EB	NB	WB	SB	Total		EB	NB	WB	SB	Total
4:00 PM	8	1	5	1	15	4:00 PM	1	0	0	0	1	4:00 PM	1	2	0	1	4
4:15 PM	5	3	4	0	12	4:15 PM	0	0	1	0	1	4:15 PM	0	0	0	1	1
4:30 PM	10	3	5	0	18	4:30 PM	0	0	0	0	0	4:30 PM	1	0	0	0	1
4:45 PM	9	1	5	1	16	4:45 PM	0	0	0	0	0	4:45 PM	0	0	0	0	0
5:00 PM	12	4	5	0	21	5:00 PM	0	0	1	0	1	5:00 PM	0	0	0	0	0
5:15 PM	5	2	8	0	15	5:15 PM	0	0	0	0	0	5:15 PM	1	0	0	0	1
5:30 PM	6	3	1	0	10	5:30 PM	0	0	1	0	1	5:30 PM	1	0	0	0	1
5:45 PM	4	1	5	0	10	5:45 PM	0	0	0	0	0	5:45 PM	0	1	0	0	1
Count Total	59	18	38	2	117	Count Total	1	0	3	0	4	Count Total	4	3	0	2	9
Peak Hour	32	8	19	2	61	Peak Hour	1	0	1	0	2	Peak Hour	2	2	0	2	6



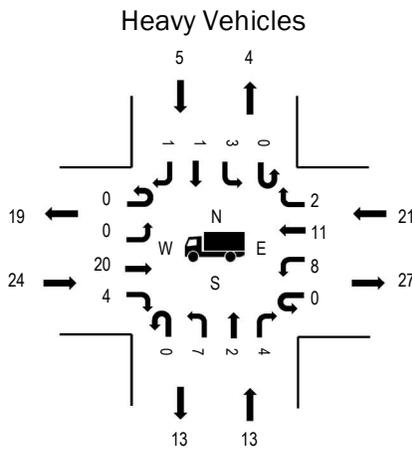
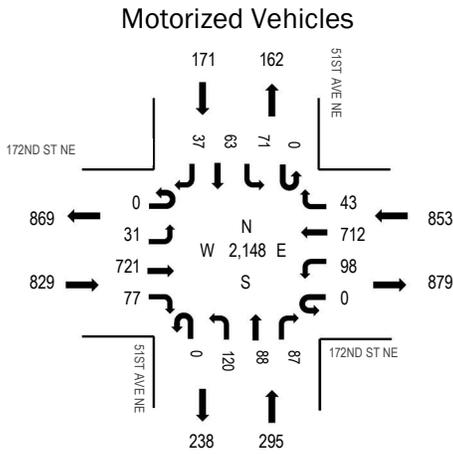
(303) 216-2439  
www.alltrafficdata.net

Location: 2 51ST AVE NE & 172ND ST NE PM

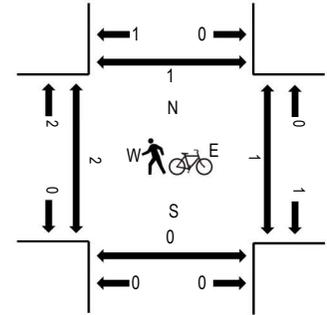
Date: Wednesday, November 6, 2024

Peak Hour: 04:00 PM - 05:00 PM

**Peak Hour**



**Pedestrians/Bicycles in Crosswalk**



	HV%	PHF
EB	2.9%	0.97
WB	2.5%	0.87
NB	4.4%	0.92
SB	2.9%	0.62
All	2.9%	0.94

**Traffic Counts - Motorized Vehicles**

Interval Start Time	172ND ST NE Eastbound				172ND ST NE Westbound				51ST AVE NE Northbound				51ST AVE NE Southbound				Total	Rolling Hour
	U-Turn	Left	Thru	Right	U-Turn	Left	Thru	Right	U-Turn	Left	Thru	Right	U-Turn	Left	Thru	Right		
4:00 PM	0	7	183	22	0	30	201	15	0	32	24	24	0	15	12	9	574	2,148
4:15 PM	0	7	179	13	0	19	166	10	0	27	34	19	0	7	12	6	499	2,086
4:30 PM	0	7	178	20	0	28	181	12	0	34	15	25	0	30	27	12	569	2,077
4:45 PM	0	10	181	22	0	21	164	6	0	27	15	19	0	19	12	10	506	1,995
5:00 PM	0	11	174	26	0	26	152	14	0	28	16	26	0	16	13	10	512	1,977
5:15 PM	0	7	192	18	0	17	147	8	0	31	20	22	0	9	9	10	490	
5:30 PM	0	7	208	20	0	16	137	7	0	23	15	25	0	13	10	6	487	
5:45 PM	1	5	167	16	0	40	169	10	0	20	14	16	0	10	15	5	488	
Count Total	1	61	1,462	157	0	197	1,317	82	0	222	153	176	0	119	110	68	4,125	
Peak Hour	0	31	721	77	0	98	712	43	0	120	88	87	0	71	63	37	2,148	

**Traffic Counts - Heavy Vehicles, Bicycles on Road, and Pedestrians/Bicycles in Crosswalk**

Interval Start Time	Heavy Vehicles					Interval Start Time	Bicycles on Roadway					Interval Start Time	Pedestrians/Bicycles on Crosswalk				
	EB	NB	WB	SB	Total		EB	NB	WB	SB	Total		EB	NB	WB	SB	Total
4:00 PM	7	2	7	1	17	4:00 PM	1	0	0	0	1	4:00 PM	0	0	0	0	0
4:15 PM	4	5	6	0	15	4:15 PM	0	0	1	0	1	4:15 PM	2	0	0	0	2
4:30 PM	7	4	4	3	18	4:30 PM	0	0	0	0	0	4:30 PM	0	0	1	1	2
4:45 PM	6	2	4	1	13	4:45 PM	0	1	0	0	1	4:45 PM	0	0	0	0	0
5:00 PM	9	0	5	1	15	5:00 PM	0	0	1	0	1	5:00 PM	0	0	0	1	1
5:15 PM	4	4	6	1	15	5:15 PM	0	0	0	0	0	5:15 PM	0	0	0	0	0
5:30 PM	4	1	2	1	8	5:30 PM	0	0	1	0	1	5:30 PM	0	1	0	0	1
5:45 PM	3	1	4	1	9	5:45 PM	0	0	0	0	0	5:45 PM	0	0	0	0	0
Count Total	44	19	38	9	110	Count Total	1	1	3	0	5	Count Total	2	1	1	2	6
Peak Hour	24	13	21	5	63	Peak Hour	1	1	1	0	3	Peak Hour	2	0	1	1	4



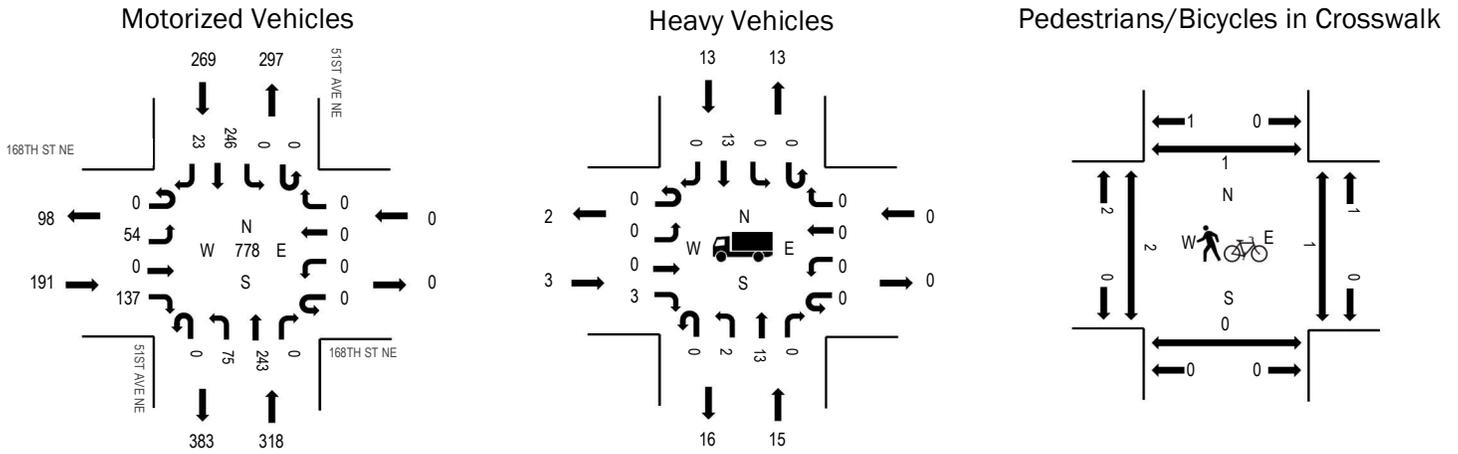
(303) 216-2439  
www.alltrafficdata.net

Location: 3 51ST AVE NE & 168TH ST NE PM

Date: Wednesday, November 6, 2024

Peak Hour: 04:00 PM - 05:00 PM

**Peak Hour**



	HV%	PHF
EB	1.6%	0.94
WB	0.0%	0.00
NB	4.7%	0.90
SB	4.8%	0.81
All	4.0%	0.95

**Traffic Counts - Motorized Vehicles**

Interval Start Time	168TH ST NE Eastbound				168TH ST NE Westbound				51ST AVE NE Northbound				51ST AVE NE Southbound				Total	Rolling Hour
	U-Turn	Left	Thru	Right	U-Turn	Left	Thru	Right	U-Turn	Left	Thru	Right	U-Turn	Left	Thru	Right		
4:00 PM	0	17	0	29	0	0	0	0	0	19	65	0	0	0	62	9	201	778
4:15 PM	0	13	0	37	0	0	0	0	0	26	62	0	0	0	43	6	187	751
4:30 PM	0	12	0	32	0	0	0	0	0	23	54	0	0	0	80	3	204	725
4:45 PM	0	12	0	39	0	0	0	0	0	7	62	0	0	0	61	5	186	681
5:00 PM	0	10	0	32	0	0	0	0	0	23	46	0	0	0	59	4	174	662
5:15 PM	0	12	0	26	0	0	0	0	0	14	64	0	0	0	44	1	161	
5:30 PM	0	7	0	25	0	0	0	0	0	16	54	0	0	0	52	6	160	
5:45 PM	0	6	0	31	0	0	0	0	0	13	55	0	0	0	54	8	167	
Count Total	0	89	0	251	0	0	0	0	0	141	462	0	0	0	455	42	1,440	
Peak Hour	0	54	0	137	0	0	0	0	0	75	243	0	0	0	246	23	778	

**Traffic Counts - Heavy Vehicles, Bicycles on Road, and Pedestrians/Bicycles in Crosswalk**

Interval Start Time	Heavy Vehicles					Interval Start Time	Bicycles on Roadway					Interval Start Time	Pedestrians/Bicycles on Crosswalk				
	EB	NB	WB	SB	Total		EB	NB	WB	SB	Total		EB	NB	WB	SB	Total
4:00 PM	0	2	0	5	7	4:00 PM	0	0	0	0	0	4:00 PM	0	0	0	0	0
4:15 PM	1	6	0	3	10	4:15 PM	0	1	0	0	1	4:15 PM	2	0	0	1	3
4:30 PM	2	4	0	1	7	4:30 PM	0	0	0	1	1	4:30 PM	0	0	0	0	0
4:45 PM	0	3	0	4	7	4:45 PM	0	1	0	1	2	4:45 PM	0	0	1	0	1
5:00 PM	2	2	0	1	5	5:00 PM	0	0	0	0	0	5:00 PM	0	0	0	0	0
5:15 PM	0	4	0	2	6	5:15 PM	0	0	0	0	0	5:15 PM	1	0	0	0	1
5:30 PM	1	1	0	2	4	5:30 PM	0	0	0	0	0	5:30 PM	1	0	0	0	1
5:45 PM	0	1	0	2	3	5:45 PM	0	0	0	0	0	5:45 PM	7	0	0	0	7
Count Total	6	23	0	20	49	Count Total	0	2	0	2	4	Count Total	11	0	1	1	13
Peak Hour	3	15	0	13	31	Peak Hour	0	2	0	2	4	Peak Hour	2	0	1	1	4

# Appendix E

Level of Service (LOS) Methodology and Calculations

## Level of Service Methodology

Level of Service (LOS) generally refers to the degree of congestion at an intersection. It is a measure of vehicle operating speed, travel time, travel delays, and driving comfort. A letter scale from A to F generally describes intersection LOS.

**Signalized Intersection LOS** represents the average control delay (sec/veh) and can be reported for the overall intersection, for each approach, and for each lane group (additional v/c ratio criteria apply to lane group LOS only). The table below outlines the HCM (7<sup>th</sup> Edition) LOS criteria for signalized intersections.

### LOS Criteria for Signalized Intersections <sup>1</sup>

Control Delay (sec/veh)	Level of Service <sup>2</sup>	General Description <sup>3</sup>
≤ 10	A	Exceptionally Favorable Progression (or very short cycle lengths) – Most vehicles arrive during the green indication and travel through the intersection without stopping.
> 10 to ≤ 20	B	Highly Favorable Progression (or short cycle lengths) – While more vehicles than LOS A stop, most vehicles still pass through the intersection without stopping.
> 20 to ≤ 35	C	Favorable Progression (or moderate cycle lengths) – Individual cycle failures begin to appear, but many vehicles still pass through the intersection without stopping.
> 35 to ≤ 55	D	Ineffective Progression (or long cycle lengths) – Many vehicles stop and individual cycle failures are noticeable.
> 55 to ≤ 80	E	Unfavorable Progression (and long cycle lengths) – Individual cycle failures are frequent.
> 80	F	Very Poor Progression (and long cycle lengths) – Most cycles fail to clear the queue at this level.

<sup>1</sup> Source: Highway Capacity Manual 7<sup>th</sup> Edition, Transportation Research Board, 2022.

<sup>2</sup> If the volume-to-capacity (v/c) ratio for a lane group exceeds 1.0, LOS F is assigned to the individual lane group. For approach-based and intersection-wide assessments at signals, LOS is defined solely by control delay.

<sup>3</sup> Individual cycle failures: one or more queued vehicles are not able to depart as a result of insufficient capacity during the cycle.

Synchro 12 and/or HCM 2000 LOS methodology may be used when HCM 7<sup>th</sup> Edition methodology is not supported at an intersection (i.e., intersection geometry and/or custom phasing) or jurisdictional standards require use of an alternative methodology.

**Unsignalized Intersection LOS** (two-way stop control, all-way stop control, and roundabouts) is based on the average control delay. For two-way stop-controlled intersections, the LOS criteria apply to each controlled minor-street approach, controlled minor-street lane group, and controlled major-street movement (additional v/c ratio criteria apply to lane group LOS only). LOS is not calculated for major-street approaches or for the intersection as a whole at two-way stop-controlled intersections. For all-way stop-controlled intersections and roundabouts, LOS can be reported for the overall intersection, for each approach, and for each lane group (additional v/c ratio criteria apply to lane group LOS only). The table below outlines the HCM (7<sup>th</sup> Edition) LOS criteria for unsignalized intersections based on these methodologies.

### LOS Criteria for Unsignalized Intersections<sup>1</sup>

Control Delay (sec/veh)	Level of Service <sup>2</sup>
≤ 10	A
> 10 to ≤ 15	B
> 15 to ≤ 25	C
> 25 to ≤ 35	D
> 35 to ≤ 50	E
> 50	F

<sup>1</sup> Source: Highway Capacity Manual 7<sup>th</sup> Edition, Transportation Research Board, 2022.

<sup>2</sup> If the volume-to-capacity (v/c) ratio for a lane group exceeds 1.0, LOS F is assigned to the individual lane group. For approach-based and intersection-wide assessments at unsignalized intersections, LOS is defined solely by control delay.

2024 Existing

# LANE LEVEL OF SERVICE

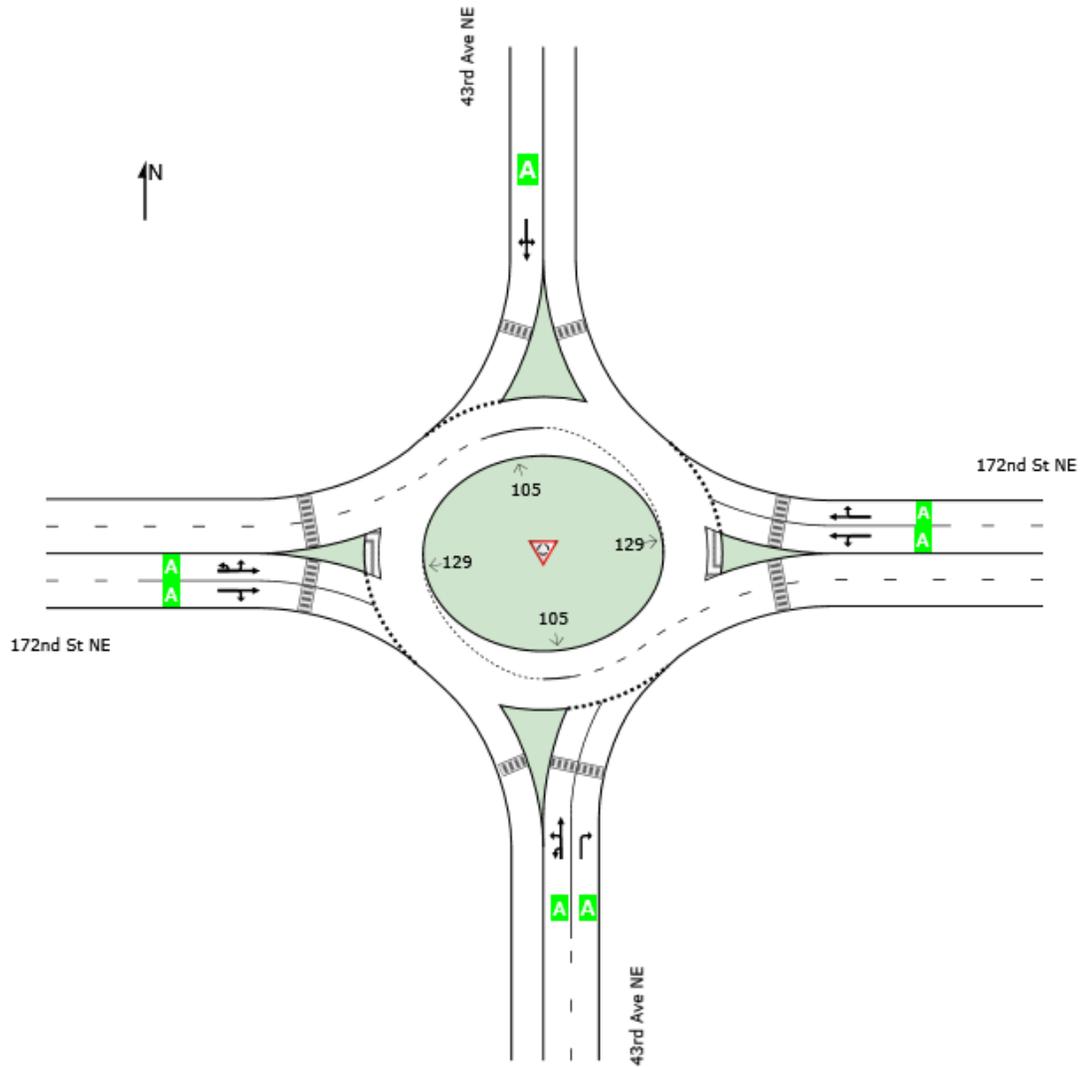
## Lane Level of Service

Site: 1 [SR-531 / 43rd Ave NE (Site Folder: 2024 Existing - PM Peak Hour)]

Output produced by SIDRA INTERSECTION Version: 9.1.5.224

SR-531 / 43rd Ave NE  
 Site Category: 2024 Existing - PM Peak Hour  
 Roundabout

	Approaches				Intersection
	South	East	North	West	
LOS	A	A	A	A	A



Site Level of Service (LOS) Method: Delay & Degree of Saturation (SIDRA). Site LOS Method is specified in the Parameter Settings dialog (Options tab).

Roundabout LOS Method: Same as Signalised Intersections.

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

Intersection and Approach LOS values are based on average delay for all lanes (v/c not used).

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

# MOVEMENT SUMMARY

Site: 1 [SR-531 / 43rd Ave NE (Site Folder: 2024 Existing - PM Peak Hour)]

Output produced by SIDRA INTERSECTION Version: 9.1.5.224

SR-531 / 43rd Ave NE  
 Site Category: 2024 Existing - PM Peak Hour  
 Roundabout

Vehicle Movement Performance															
Mov ID	Turn	Mov Class	Demand Flows		Arrival Flows		Deg. Satn	Aver. Delay	Level of Service	95% Back Of Queue		Prop. Que	Eff. Stop Rate	Aver. No. of Cycles	Aver. Speed
			[ Total HV ]	%	[ Total HV ]	%	v/c	sec		[ Veh. veh	Dist ]				mph
			veh/h		veh/h					ft					
South: 43rd Ave NE															
3u	U	All MCs	1	0.0	1	0.0	0.160	7.9	LOS A	0.6	14.4	0.43	0.56	0.43	23.3
3	L2	All MCs	126	3.0	126	3.0	0.160	6.6	LOS A	0.6	14.4	0.43	0.56	0.43	23.3
8	T1	All MCs	32	3.0	32	3.0	0.160	1.5	LOS A	0.6	14.4	0.43	0.56	0.43	23.5
18	R2	All MCs	86	3.0	86	3.0	0.106	3.0	LOS A	0.4	9.0	0.44	0.47	0.44	24.1
Approach			246	3.0	246	3.0	0.160	4.7	LOS A	0.6	14.4	0.44	0.53	0.44	23.6
East: 172nd St NE															
1	L2	All MCs	81	2.0	81	2.0	0.355	9.9	LOS A	2.2	56.1	0.45	0.45	0.45	31.2
6	T1	All MCs	812	2.0	812	2.0	0.355	3.5	LOS A	2.3	57.5	0.43	0.41	0.43	32.0
16	R2	All MCs	20	2.0	20	2.0	0.355	3.8	LOS A	2.3	57.5	0.43	0.37	0.43	31.9
Approach			913	2.0	913	2.0	0.355	4.1	LOS A	2.3	57.5	0.44	0.41	0.44	31.9
North: 43rd Ave NE															
7	L2	All MCs	11	3.0	11	3.0	0.100	34.6	LOS C	0.3	8.5	0.54	0.80	0.54	8.3
4	T1	All MCs	24	3.0	24	3.0	0.100	2.6	LOS A	0.3	8.5	0.54	0.80	0.54	22.9
14	R2	All MCs	35	3.0	35	3.0	0.100	3.5	LOS A	0.3	8.5	0.54	0.80	0.54	22.9
Approach			69	3.0	69	3.0	0.100	7.9	LOS A	0.3	8.5	0.54	0.80	0.54	18.0
West: 172nd St NE															
5u	U	All MCs	6	4.0	6	4.0	0.232	11.6	LOS B	1.2	32.1	0.29	0.38	0.29	31.6
5	L2	All MCs	36	4.0	36	4.0	0.232	9.3	LOS A	1.2	32.1	0.29	0.38	0.29	31.7
2	T1	All MCs	497	4.0	497	4.0	0.232	3.0	LOS A	1.3	32.7	0.29	0.36	0.29	32.4
12	R2	All MCs	87	4.0	87	4.0	0.232	3.3	LOS A	1.3	32.7	0.28	0.34	0.28	32.4
Approach			626	4.0	626	4.0	0.232	3.5	LOS A	1.3	32.7	0.29	0.36	0.29	32.3
All Vehicles			1854	2.8	1854	2.8	0.355	4.1	LOS A	2.3	57.5	0.39	0.42	0.39	29.8

Site Level of Service (LOS) Method: Delay & Degree of Saturation (SIDRA). Site LOS Method is specified in the Parameter Settings dialog (Options 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.

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

Roundabout Capacity Model: SIDRA HCM.

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

Queue Model: SIDRA queue estimation methods are used for Back of Queue and Queue at Start of Gap.

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

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

Arrival Flows used in performance calculations are adjusted to include any Initial Queued Demand and Upstream Capacity Constraint effects.

Lanes, Volumes, Timings  
2: 51st Ave NE & SR 531

12/12/2024



Lane Group	EBL	EBT	EBR	WBL	WBT	WBR	NBL	NBT	NBR	SBL	SBT	SBR
Lane Configurations												
Traffic Volume (vph)	31	721	77	98	712	43	120	88	87	71	63	37
Future Volume (vph)	31	721	77	98	712	43	120	88	87	71	63	37
Ideal Flow (vphpl)	1750	1750	1750	1750	1750	1750	1750	1750	1750	1750	1750	1750
Storage Length (ft)	250		0	250		0	200		200	200		0
Storage Lanes	1		0	1		0	1		1	1		0
Taper Length (ft)	25			25			25			25		
Right Turn on Red			Yes			Yes			Yes			Yes
Link Speed (mph)		35			35			40				35
Link Distance (ft)		2302			2616			1358				499
Travel Time (s)		44.8			51.0			23.1				9.7
Confl. Peds. (#/hr)	1					1	2		1	1		2
Peak Hour Factor	0.94	0.94	0.94	0.94	0.94	0.94	0.94	0.94	0.94	0.94	0.94	0.94
Heavy Vehicles (%)	3%	3%	3%	3%	3%	3%	4%	4%	4%	3%	3%	3%
Shared Lane Traffic (%)												
Turn Type	pm+pt	NA		pm+pt	NA		Perm	NA	Perm	Perm	NA	
Protected Phases	5	2		1	6			4			8	
Permitted Phases	2			6			4		4	8		
Detector Phase	5	2		1	6		4	4	4	8	8	
Switch Phase												
Minimum Initial (s)	5.0	10.0		5.0	10.0		7.0	7.0	7.0	7.0	7.0	
Minimum Split (s)	10.5	33.9		10.5	36.9		35.3	35.3	35.3	30.1	30.1	
Total Split (s)	26.0	95.0		26.0	95.0		39.0	39.0	39.0	39.0	39.0	
Total Split (%)	16.3%	59.4%		16.3%	59.4%		24.4%	24.4%	24.4%	24.4%	24.4%	
Yellow Time (s)	3.5	3.9		3.5	3.9		4.3	4.3	4.3	3.1	3.1	
All-Red Time (s)	2.0	2.0		2.0	2.0		2.0	2.0	2.0	2.0	2.0	
Lost Time Adjust (s)	0.0	0.0		0.0	0.0		0.0	0.0	0.0	0.0	0.0	
Total Lost Time (s)	5.5	5.9		5.5	5.9		6.3	6.3	6.3	5.1	5.1	
Lead/Lag	Lead	Lag		Lead	Lag							
Lead-Lag Optimize?												
Recall Mode	None	C-Min		None	C-Min		None	None	None	None	None	

Intersection Summary

Area Type: Other  
 Cycle Length: 160  
 Actuated Cycle Length: 160  
 Offset: 0 (0%), Referenced to phase 2:EBTL and 6:WBTL, Start of Green  
 Natural Cycle: 105  
 Control Type: Actuated-Coordinated  
 Description: PM Peak

Splits and Phases: 2: 51st Ave NE & SR 531



HCM 7th Signalized Intersection Summary  
 2: 51st Ave NE & SR 531

12/12/2024



Movement	EBL	EBT	EBR	WBL	WBT	WBR	NBL	NBT	NBR	SBL	SBT	SBR
Lane Configurations	↖	↗		↖	↗		↖	↗	↗	↖	↗	
Traffic Volume (veh/h)	31	721	77	98	712	43	120	88	87	71	63	37
Future Volume (veh/h)	31	721	77	98	712	43	120	88	87	71	63	37
Initial Q (Qb), veh	0	0	0	0	0	0	0	0	0	0	0	0
Lane Width Adj.	1.00	1.00	1.00	1.00	1.00	1.00	1.00	1.00	1.00	1.00	1.00	1.00
Ped-Bike Adj(A_pbT)	1.00		1.00	1.00		1.00	1.00		0.99	1.00		0.99
Parking Bus, Adj	1.00	1.00	1.00	1.00	1.00	1.00	1.00	1.00	1.00	1.00	1.00	1.00
Work Zone On Approach		No			No			No				No
Adj Sat Flow, veh/h/ln	1709	1709	1709	1709	1709	1709	1695	1695	1695	1709	1709	1709
Adj Flow Rate, veh/h	33	767	82	104	757	46	128	94	93	76	67	39
Peak Hour Factor	0.94	0.94	0.94	0.94	0.94	0.94	0.94	0.94	0.94	0.94	0.94	0.94
Percent Heavy Veh, %	3	3	3	3	3	3	4	4	4	3	3	3
Cap, veh/h	541	1030	110	327	1099	67	193	299	252	196	178	104
Arrive On Green	0.02	0.68	0.68	0.07	1.00	1.00	0.18	0.18	0.18	0.18	0.18	0.18
Sat Flow, veh/h	1628	1517	162	1628	1595	97	1263	1695	1429	1183	1011	588
Grp Volume(v), veh/h	33	0	849	104	0	803	128	94	93	76	0	106
Grp Sat Flow(s),veh/h/ln	1628	0	1680	1628	0	1692	1263	1695	1429	1183	0	1599
Q Serve(g_s), s	1.0	0.0	52.5	3.2	0.0	0.0	15.9	7.7	9.2	9.6	0.0	9.4
Cycle Q Clear(g_c), s	1.0	0.0	52.5	3.2	0.0	0.0	25.3	7.7	9.2	17.3	0.0	9.4
Prop In Lane	1.00		0.10	1.00		0.06	1.00		1.00	1.00		0.37
Lane Grp Cap(c), veh/h	541	0	1140	327	0	1166	193	299	252	196	0	282
V/C Ratio(X)	0.06	0.00	0.74	0.32	0.00	0.69	0.66	0.31	0.37	0.39	0.00	0.38
Avail Cap(c_a), veh/h	710	0	1140	479	0	1166	229	346	292	238	0	339
HCM Platoon Ratio	1.00	1.00	1.00	2.00	2.00	2.00	1.00	1.00	1.00	1.00	1.00	1.00
Upstream Filter(l)	1.00	0.00	1.00	1.00	0.00	1.00	1.00	1.00	1.00	1.00	0.00	1.00
Uniform Delay (d), s/veh	7.2	0.0	16.7	16.6	0.0	0.0	69.3	57.5	58.1	65.1	0.0	58.2
Incr Delay (d2), s/veh	0.1	0.0	4.4	0.8	0.0	3.3	6.8	0.9	1.3	1.8	0.0	1.2
Initial Q Delay(d3), s/veh	0.0	0.0	0.0	0.0	0.0	0.0	0.0	0.0	0.0	0.0	0.0	0.0
%ile BackOfQ(50%),veh/ln	0.3	0.0	20.6	1.4	0.0	1.1	5.5	3.4	3.4	3.0	0.0	3.9
Unsig. Movement Delay, s/veh												
LnGrp Delay(d), s/veh	7.3	0.0	21.1	17.4	0.0	3.3	76.1	58.3	59.4	66.8	0.0	59.3
LnGrp LOS	A		C	B		A	E	E	E	E		E
Approach Vol, veh/h		882			907			315				182
Approach Delay, s/veh		20.6			5.0			65.9				62.5
Approach LOS		C			A			E				E
Timer - Assigned Phs	1	2		4	5	6		8				
Phs Duration (G+Y+Rc), s	11.0	114.5		34.5	9.3	116.2		34.5				
Change Period (Y+Rc), s	5.5	5.9		6.3	5.5	5.9		* 6.3				
Max Green Setting (Gmax), s	20.5	89.1		32.7	20.5	89.1		* 34				
Max Q Clear Time (g_c+I1), s	5.2	54.5		27.3	3.0	2.0		19.3				
Green Ext Time (p_c), s	0.3	11.1		0.8	0.1	11.5		0.9				

Intersection Summary

HCM 7th Control Delay, s/veh	24.0
HCM 7th LOS	C

Notes

\* HCM 7th computational engine requires equal clearance times for the phases crossing the barrier.



Lane Group	EBL	EBR	NBL	NBT	SBT	SBR
Lane Configurations						
Traffic Volume (vph)	54	137	75	243	246	23
Future Volume (vph)	54	137	75	243	246	23
Ideal Flow (vphpl)	1750	1750	1750	1750	1750	1750
Storage Length (ft)	0	0	0			215
Storage Lanes	1	0	0			1
Taper Length (ft)	25		25			
Link Speed (mph)	25			40	40	
Link Distance (ft)	330			460	1358	
Travel Time (s)	9.0			7.8	23.1	
Confl. Peds. (#/hr)	1		2			2
Peak Hour Factor	0.95	0.95	0.95	0.95	0.95	0.95
Heavy Vehicles (%)	2%	2%	5%	5%	5%	5%
Shared Lane Traffic (%)						
Sign Control	Stop			Free	Free	

**Intersection Summary**

Area Type: Other  
 Control Type: Unsignalized

Intersection						
Int Delay, s/veh	4					
Movement	EBL	EBR	NBL	NBT	SBT	SBR
Lane Configurations	W			←	↑	↑
Traffic Vol, veh/h	54	137	75	243	246	23
Future Vol, veh/h	54	137	75	243	246	23
Conflicting Peds, #/hr	1	0	2	0	0	2
Sign Control	Stop	Stop	Free	Free	Free	Free
RT Channelized	-	None	-	None	-	None
Storage Length	0	-	-	-	-	215
Veh in Median Storage, #	0	-	-	0	0	-
Grade, %	0	-	-	0	0	-
Peak Hour Factor	95	95	95	95	95	95
Heavy Vehicles, %	2	2	5	5	5	5
Mvmt Flow	57	144	79	256	259	24
Major/Minor	Minor2	Major1	Major2			
Conflicting Flow All	676	261	285	0	-	0
Stage 1	261	-	-	-	-	-
Stage 2	415	-	-	-	-	-
Critical Hdwy	6.42	6.22	4.15	-	-	-
Critical Hdwy Stg 1	5.42	-	-	-	-	-
Critical Hdwy Stg 2	5.42	-	-	-	-	-
Follow-up Hdwy	3.518	3.318	2.245	-	-	-
Pot Cap-1 Maneuver	429	852	1277	-	-	-
Stage 1	821	-	-	-	-	-
Stage 2	667	-	-	-	-	-
Platoon blocked, %	0	0	0	-	-	-
Mov Cap-1 Maneuver	397	850	1274	-	-	-
Mov Cap-2 Maneuver	397	-	-	-	-	-
Stage 1	760	-	-	-	-	-
Stage 2	665	-	-	-	-	-
Approach	EB	NB	SB			
HCM Ctrl Dly, s/v	13.13	1.89	0			
HCM LOS	B					
Minor Lane/Major Mvmt	NBL	NBT	EBLn1	SBT	SBR	
Capacity (veh/h)	425	-	643	-	-	
HCM Lane V/C Ratio	0.062	-	0.313	-	-	
HCM Ctrl Dly (s/v)	8	0	13.1	-	-	
HCM Lane LOS	A	A	B	-	-	
HCM 95th %tile Q(veh)	0.2	-	1.3	-	-	

2026 No Action

# LANE LEVEL OF SERVICE

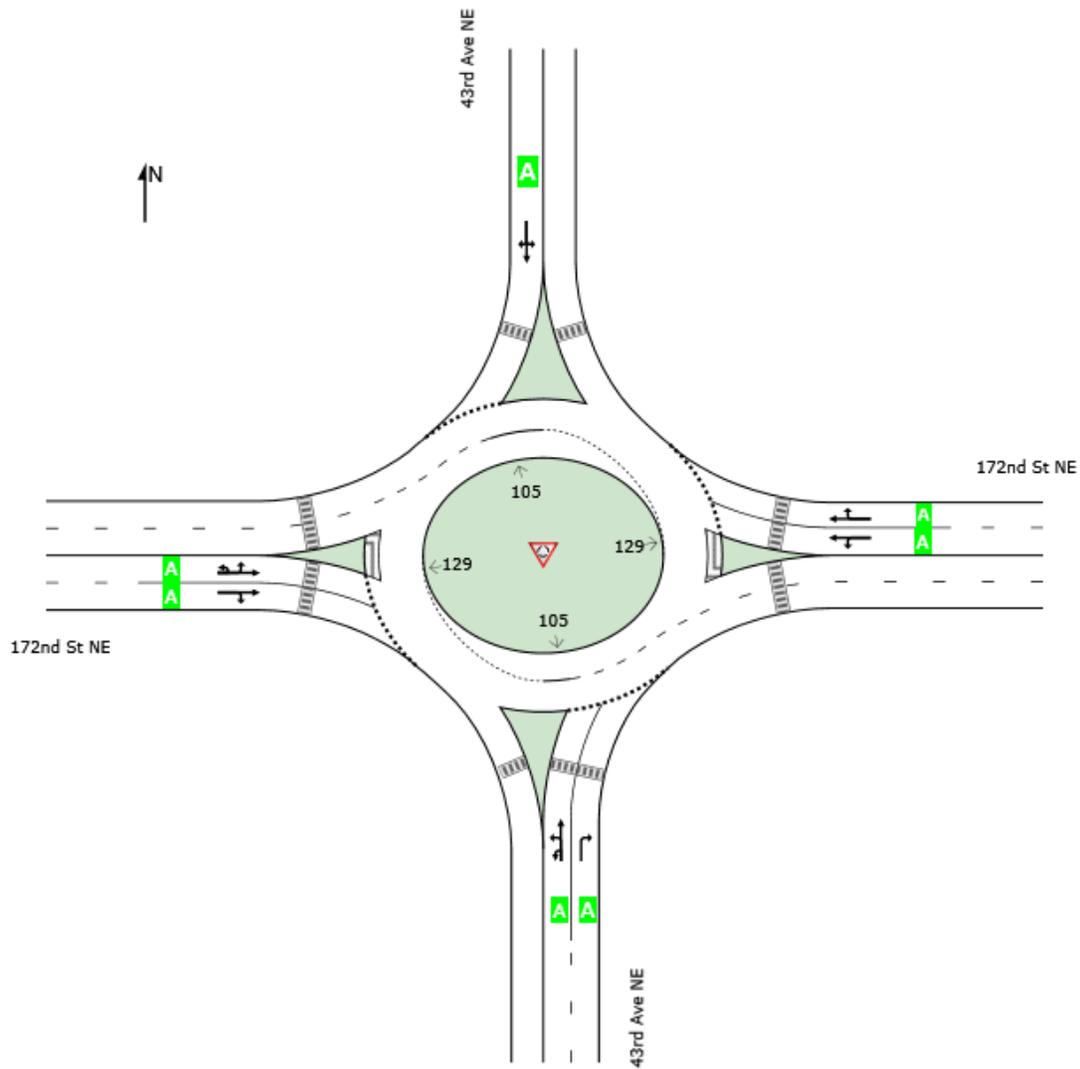
## Lane Level of Service

Site: 1 [SR-531 / 43rd Ave NE (Site Folder: 2026 No Action - PM Peak Hour)]

Output produced by SIDRA INTERSECTION Version: 9.1.5.224

SR-531 / 43rd Ave NE  
 Site Category: 2026 No Action - PM Peak Hour  
 Roundabout

	Approaches				Intersection
	South	East	North	West	
LOS	A	A	A	A	A



Site Level of Service (LOS) Method: Delay & Degree of Saturation (SIDRA). Site LOS Method is specified in the Parameter Settings dialog (Options tab).

Roundabout LOS Method: Same as Signalised Intersections.

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

Intersection and Approach LOS values are based on average delay for all lanes (v/c not used).

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

# MOVEMENT SUMMARY

Site: 1 [SR-531 / 43rd Ave NE (Site Folder: 2026 No Action - PM Peak Hour)]

Output produced by SIDRA INTERSECTION Version: 9.1.5.224

SR-531 / 43rd Ave NE  
 Site Category: 2026 No Action - PM Peak Hour  
 Roundabout

Vehicle Movement Performance															
Mov ID	Turn	Mov Class	Demand Flows		Arrival Flows		Deg. Satn	Aver. Delay	Level of Service	95% Back Of Queue		Prop. Que	Eff. Stop Rate	Aver. No. of Cycles	Aver. Speed
			[ Total HV ]	%	[ Total HV ]	%	v/c	sec		[ Veh. veh	Dist ]				mph
			veh/h		veh/h					ft					
South: 43rd Ave NE															
3u	U	All MCs	1	0.0	1	0.0	0.204	8.6	LOS A	0.8	19.5	0.55	0.65	0.55	23.2
3	L2	All MCs	139	3.0	139	3.0	0.204	7.4	LOS A	0.8	19.5	0.55	0.65	0.55	23.2
8	T1	All MCs	35	3.0	35	3.0	0.204	2.2	LOS A	0.8	19.5	0.55	0.65	0.55	23.3
18	R2	All MCs	95	3.0	95	3.0	0.140	4.0	LOS A	0.5	12.3	0.55	0.60	0.55	23.9
Approach			270	3.0	270	3.0	0.204	5.5	LOS A	0.8	19.5	0.55	0.63	0.55	23.4
East: 172nd St NE															
1	L2	All MCs	89	2.0	89	2.0	0.400	10.0	LOS B	2.6	67.2	0.50	0.46	0.50	31.1
6	T1	All MCs	895	2.0	895	2.0	0.400	3.7	LOS A	2.7	69.2	0.49	0.42	0.49	31.8
16	R2	All MCs	22	2.0	22	2.0	0.400	3.9	LOS A	2.7	69.2	0.48	0.39	0.48	31.8
Approach			1006	2.0	1006	2.0	0.400	4.3	LOS A	2.7	69.2	0.49	0.43	0.49	31.8
North: 43rd Ave NE															
7	L2	All MCs	12	3.0	12	3.0	0.118	34.9	LOS C	0.4	10.5	0.58	0.82	0.58	8.3
4	T1	All MCs	26	3.0	26	3.0	0.118	2.9	LOS A	0.4	10.5	0.58	0.82	0.58	22.8
14	R2	All MCs	38	3.0	38	3.0	0.118	3.9	LOS A	0.4	10.5	0.58	0.82	0.58	22.8
Approach			75	3.0	75	3.0	0.118	8.3	LOS A	0.4	10.5	0.58	0.82	0.58	18.0
West: 172nd St NE															
5u	U	All MCs	7	4.0	7	4.0	0.377	11.8	LOS B	2.4	61.2	0.36	0.38	0.36	31.6
5	L2	All MCs	39	4.0	39	4.0	0.377	9.5	LOS A	2.4	61.2	0.36	0.38	0.36	31.6
2	T1	All MCs	861	4.0	861	4.0	0.377	3.2	LOS A	2.4	62.2	0.35	0.37	0.35	32.3
12	R2	All MCs	97	4.0	97	4.0	0.377	3.5	LOS A	2.4	62.2	0.34	0.35	0.34	32.2
Approach			1004	4.0	1004	4.0	0.377	3.5	LOS A	2.4	62.2	0.35	0.36	0.35	32.2
All Vehicles			2356	3.0	2356	3.0	0.400	4.2	LOS A	2.7	69.2	0.44	0.44	0.44	30.0

Site Level of Service (LOS) Method: Delay & Degree of Saturation (SIDRA). Site LOS Method is specified in the Parameter Settings dialog (Options 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.

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

Roundabout Capacity Model: SIDRA HCM.

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

Queue Model: SIDRA queue estimation methods are used for Back of Queue and Queue at Start of Gap.

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

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

Arrival Flows used in performance calculations are adjusted to include any Initial Queued Demand and Upstream Capacity Constraint effects.

Lanes, Volumes, Timings  
2: 51st Ave NE & SR 531

12/12/2024

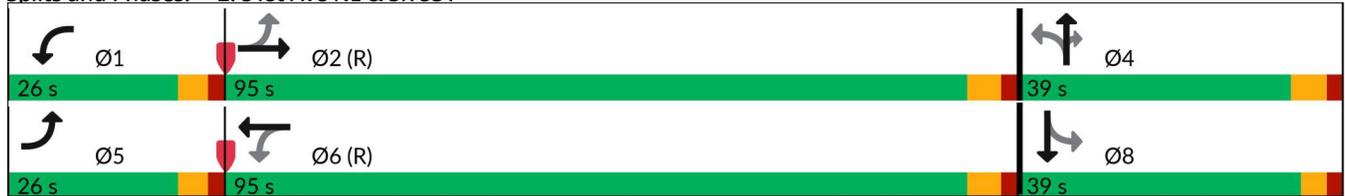


Lane Group	EBL	EBT	EBR	WBL	WBT	WBR	NBL	NBT	NBR	SBL	SBT	SBR
Lane Configurations												
Traffic Volume (vph)	34	795	85	108	785	47	132	97	96	78	69	41
Future Volume (vph)	34	795	85	108	785	47	132	97	96	78	69	41
Ideal Flow (vphpl)	1750	1750	1750	1750	1750	1750	1750	1750	1750	1750	1750	1750
Storage Length (ft)	250		0	250		0	200		200	200		0
Storage Lanes	1		0	1		0	1		1	1		0
Taper Length (ft)	25			25			25			25		
Right Turn on Red			Yes			Yes			Yes			Yes
Link Speed (mph)		35			35			40				35
Link Distance (ft)		2302			2616			1358				499
Travel Time (s)		44.8			51.0			23.1				9.7
Confl. Peds. (#/hr)	1					1	2		1	1		2
Peak Hour Factor	0.94	0.94	0.94	0.94	0.94	0.94	0.94	0.94	0.94	0.94	0.94	0.94
Heavy Vehicles (%)	3%	3%	3%	3%	3%	3%	4%	4%	4%	3%	3%	3%
Shared Lane Traffic (%)												
Turn Type	pm+pt	NA		pm+pt	NA		Perm	NA	Perm	Perm	NA	
Protected Phases	5	2		1	6			4			8	
Permitted Phases	2			6			4		4	8		
Detector Phase	5	2		1	6		4	4	4	8	8	
Switch Phase												
Minimum Initial (s)	5.0	10.0		5.0	10.0		7.0	7.0	7.0	7.0	7.0	
Minimum Split (s)	10.5	33.9		10.5	36.9		35.3	35.3	35.3	30.1	30.1	
Total Split (s)	26.0	95.0		26.0	95.0		39.0	39.0	39.0	39.0	39.0	
Total Split (%)	16.3%	59.4%		16.3%	59.4%		24.4%	24.4%	24.4%	24.4%	24.4%	
Yellow Time (s)	3.5	3.9		3.5	3.9		4.3	4.3	4.3	3.1	3.1	
All-Red Time (s)	2.0	2.0		2.0	2.0		2.0	2.0	2.0	2.0	2.0	
Lost Time Adjust (s)	0.0	0.0		0.0	0.0		0.0	0.0	0.0	0.0	0.0	
Total Lost Time (s)	5.5	5.9		5.5	5.9		6.3	6.3	6.3	5.1	5.1	
Lead/Lag	Lead	Lag		Lead	Lag							
Lead-Lag Optimize?												
Recall Mode	None	C-Min		None	C-Min		None	None	None	None	None	

Intersection Summary

Area Type: Other  
 Cycle Length: 160  
 Actuated Cycle Length: 160  
 Offset: 0 (0%), Referenced to phase 2:EBTL and 6:WBTL, Start of Green  
 Natural Cycle: 115  
 Control Type: Actuated-Coordinated  
 Description: PM Peak

Splits and Phases: 2: 51st Ave NE & SR 531



HCM 7th Signalized Intersection Summary  
 2: 51st Ave NE & SR 531

12/12/2024



Movement	EBL	EBT	EBR	WBL	WBT	WBR	NBL	NBT	NBR	SBL	SBT	SBR	
Lane Configurations													
Traffic Volume (veh/h)	34	795	85	108	785	47	132	97	96	78	69	41	
Future Volume (veh/h)	34	795	85	108	785	47	132	97	96	78	69	41	
Initial Q (Qb), veh	0	0	0	0	0	0	0	0	0	0	0	0	
Lane Width Adj.	1.00	1.00	1.00	1.00	1.00	1.00	1.00	1.00	1.00	1.00	1.00	1.00	
Ped-Bike Adj(A_pbT)	1.00		1.00	1.00		1.00	1.00		0.99	1.00		0.99	
Parking Bus, Adj	1.00	1.00	1.00	1.00	1.00	1.00	1.00	1.00	1.00	1.00	1.00	1.00	
Work Zone On Approach	No			No			No			No			
Adj Sat Flow, veh/h/ln	1709	1709	1709	1709	1709	1709	1695	1695	1695	1709	1709	1709	
Adj Flow Rate, veh/h	36	846	90	115	835	50	140	103	102	83	73	44	
Peak Hour Factor	0.94	0.94	0.94	0.94	0.94	0.94	0.94	0.94	0.94	0.94	0.94	0.94	
Percent Heavy Veh, %	3	3	3	3	3	3	4	4	4	3	3	3	
Cap, veh/h	497	1004	107	247	1077	64	203	322	272	205	189	114	
Arrive On Green	0.02	0.66	0.66	0.08	1.00	1.00	0.19	0.19	0.19	0.19	0.19	0.19	
Sat Flow, veh/h	1628	1518	162	1628	1596	96	1251	1695	1429	1164	997	601	
Grp Volume(v), veh/h	36	0	936	115	0	885	140	103	102	83	0	117	
Grp Sat Flow(s),veh/h/ln	1628	0	1680	1628	0	1692	1251	1695	1429	1164	0	1597	
Q Serve(g_s), s	1.1	0.0	68.2	3.8	0.0	0.0	17.6	8.4	10.0	10.6	0.0	10.2	
Cycle Q Clear(g_c), s	1.1	0.0	68.2	3.8	0.0	0.0	27.9	8.4	10.0	19.0	0.0	10.2	
Prop In Lane	1.00		0.10	1.00		0.06	1.00		1.00	1.00		0.38	
Lane Grp Cap(c), veh/h	497	0	1111	247	0	1141	203	322	272	205	0	303	
V/C Ratio(X)	0.07	0.00	0.84	0.47	0.00	0.78	0.69	0.32	0.38	0.40	0.00	0.39	
Avail Cap(c_a), veh/h	665	0	1111	393	0	1141	221	346	292	231	0	338	
HCM Platoon Ratio	1.00	1.00	1.00	2.00	2.00	2.00	1.00	1.00	1.00	1.00	1.00	1.00	
Upstream Filter(I)	1.00	0.00	1.00	1.00	0.00	1.00	1.00	1.00	1.00	1.00	0.00	1.00	
Uniform Delay (d), s/veh	8.1	0.0	20.7	24.7	0.0	0.0	68.8	55.9	56.5	64.1	0.0	56.6	
Incr Delay (d2), s/veh	0.1	0.0	7.8	1.9	0.0	5.2	9.2	0.8	1.2	1.8	0.0	1.1	
Initial Q Delay(d3), s/veh	0.0	0.0	0.0	0.0	0.0	0.0	0.0	0.0	0.0	0.0	0.0	0.0	
%ile BackOfQ(50%),veh/ln	0.4	0.0	27.7	2.3	0.0	1.6	6.1	3.7	3.7	3.3	0.0	4.2	
Unsig. Movement Delay, s/veh													
LnGrp Delay(d), s/veh	8.2	0.0	28.6	26.6	0.0	5.2	78.0	56.7	57.7	65.9	0.0	57.8	
LnGrp LOS	A		C	C		A	E	E	E	E		E	
Approach Vol, veh/h	972						1000		345		200		
Approach Delay, s/veh	27.8						7.7		65.7		61.1		
Approach LOS	C						A		E		E		
Timer - Assigned Phs	1	2	4		5	6	8						
Phs Duration (G+Y+Rc), s	11.6	111.7	36.7		9.5	113.8	36.7						
Change Period (Y+Rc), s	5.5	5.9	6.3		5.5	5.9	* 6.3						
Max Green Setting (Gmax), s	20.5	89.1	32.7		20.5	89.1	* 34						
Max Q Clear Time (g_c+I1), s	5.8	70.2	29.9		3.1	2.0	21.0						
Green Ext Time (p_c), s	0.4	9.6	0.5		0.1	14.1	1.0						

Intersection Summary

HCM 7th Control Delay, s/veh	27.6
HCM 7th LOS	C

Notes

\* HCM 7th computational engine requires equal clearance times for the phases crossing the barrier.



Lane Group	EBL	EBR	NBL	NBT	SBT	SBR
Lane Configurations						
Traffic Volume (vph)	60	151	83	268	271	25
Future Volume (vph)	60	151	83	268	271	25
Ideal Flow (vphpl)	1750	1750	1750	1750	1750	1750
Storage Length (ft)	0	0	0			215
Storage Lanes	1	0	0			1
Taper Length (ft)	25		25			
Link Speed (mph)	25			40	40	
Link Distance (ft)	330			460	1358	
Travel Time (s)	9.0			7.8	23.1	
Confl. Peds. (#/hr)	1		2			2
Peak Hour Factor	0.95	0.95	0.95	0.95	0.95	0.95
Heavy Vehicles (%)	2%	2%	5%	5%	5%	5%
Shared Lane Traffic (%)						
Sign Control	Stop			Free	Free	

**Intersection Summary**

Area Type: Other  
 Control Type: Unsignalized

Intersection						
Int Delay, s/veh	4.4					
Movement	EBL	EBR	NBL	NBT	SBT	SBR
Lane Configurations	W			←	↑	↑
Traffic Vol, veh/h	60	151	83	268	271	25
Future Vol, veh/h	60	151	83	268	271	25
Conflicting Peds, #/hr	1	0	2	0	0	2
Sign Control	Stop	Stop	Free	Free	Free	Free
RT Channelized	-	None	-	None	-	None
Storage Length	0	-	-	-	-	215
Veh in Median Storage, #	0	-	-	0	0	-
Grade, %	0	-	-	0	0	-
Peak Hour Factor	95	95	95	95	95	95
Heavy Vehicles, %	2	2	5	5	5	5
Mvmt Flow	63	159	87	282	285	26
Major/Minor	Minor2	Major1		Major2		
Conflicting Flow All	745	287	314	0	-	0
Stage 1	287	-	-	-	-	-
Stage 2	458	-	-	-	-	-
Critical Hdwy	6.42	6.22	4.15	-	-	-
Critical Hdwy Stg 1	5.42	-	-	-	-	-
Critical Hdwy Stg 2	5.42	-	-	-	-	-
Follow-up Hdwy	3.518	3.318	2.245	-	-	-
Pot Cap-1 Maneuver	387	829	1245	-	-	-
Stage 1	801	-	-	-	-	-
Stage 2	637	-	-	-	-	-
Platoon blocked, %	0	0	0	-	-	-
Mov Cap-1 Maneuver	353	827	1242	-	-	-
Mov Cap-2 Maneuver	353	-	-	-	-	-
Stage 1	733	-	-	-	-	-
Stage 2	636	-	-	-	-	-
Approach	EB	NB		SB		
HCM Ctrl Dly, s/v	14.52	1.92		0		
HCM LOS	B					
Minor Lane/Major Mvmt	NBL	NBT	EBLn1	SBT	SBR	
Capacity (veh/h)	426	-	599	-	-	
HCM Lane V/C Ratio	0.07	-	0.371	-	-	
HCM Ctrl Dly (s/v)	8.1	0	14.5	-	-	
HCM Lane LOS	A	A	B	-	-	
HCM 95th %tile Q(veh)	0.2	-	1.7	-	-	

2026 With Project

# LANE LEVEL OF SERVICE

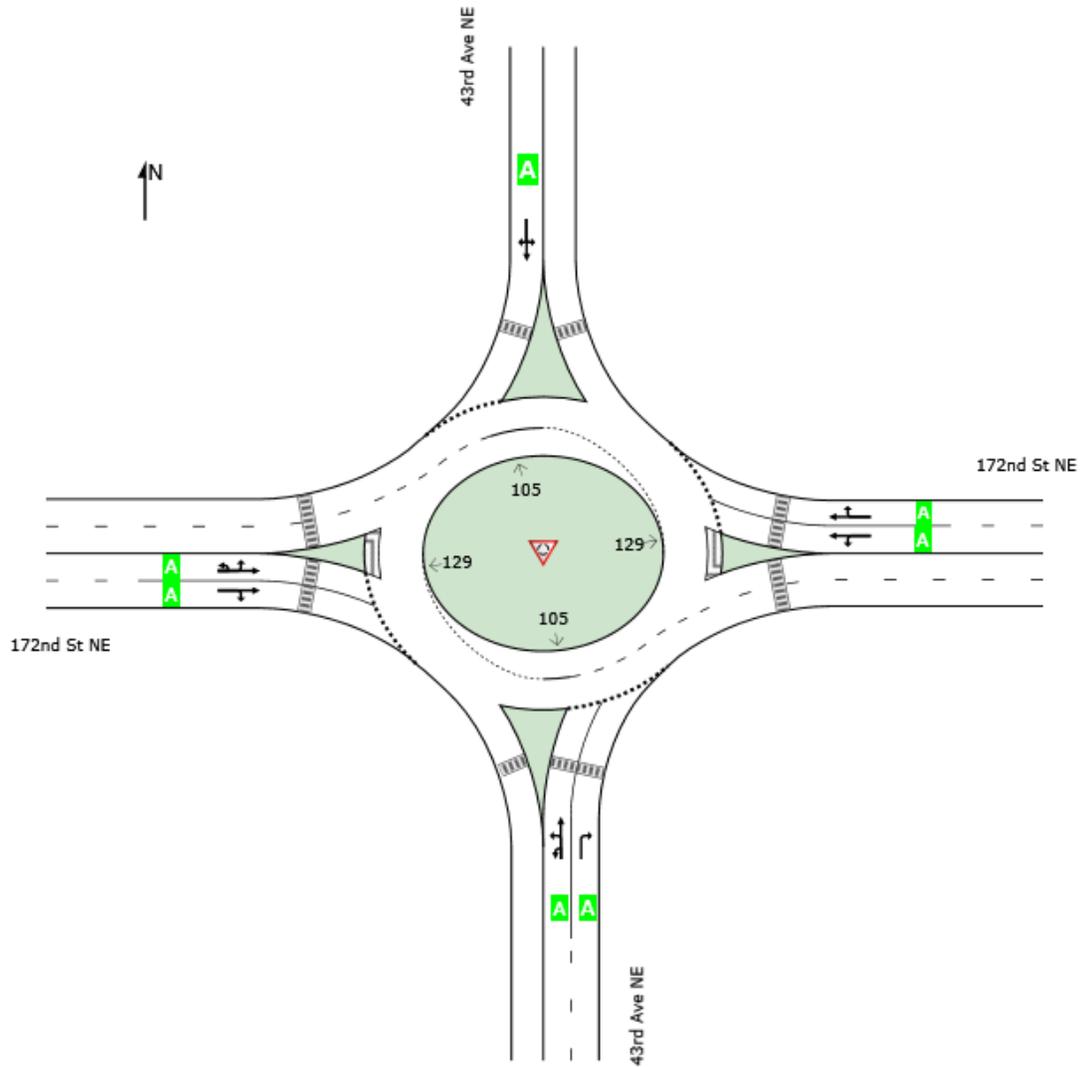
## Lane Level of Service

Site: 1 [SR-531 / 43rd Ave NE (Site Folder: 2026 With Project - PM Peak Hour)]

Output produced by SIDRA INTERSECTION Version: 9.1.5.224

SR-531 / 43rd Ave NE  
 Site Category: 2026 With Project - PM Peak Hour  
 Roundabout

	Approaches				Intersection
	South	East	North	West	
LOS	A	A	A	A	A



Site Level of Service (LOS) Method: Delay & Degree of Saturation (SIDRA). Site LOS Method is specified in the Parameter Settings dialog (Options tab).

Roundabout LOS Method: Same as Signalised Intersections.

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

Intersection and Approach LOS values are based on average delay for all lanes (v/c not used).

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

# MOVEMENT SUMMARY

Site: 1 [SR-531 / 43rd Ave NE (Site Folder: 2026 With Project - PM Peak Hour)]

Output produced by SIDRA INTERSECTION Version: 9.1.5.224

SR-531 / 43rd Ave NE  
 Site Category: 2026 With Project - PM Peak Hour  
 Roundabout

Vehicle Movement Performance															
Mov ID	Turn	Mov Class	Demand Flows		Arrival Flows		Deg. Satn	Aver. Delay	Level of Service	95% Back Of Queue		Prop. Que	Eff. Stop Rate	Aver. No. of Cycles	Aver. Speed
			[ Total HV ] veh/h	%	[ Total HV ] veh/h	%				[ Veh. veh	[ Dist ] ft				
South: 43rd Ave NE															
3u	U	All MCs	1	0.0	1	0.0	0.205	8.7	LOS A	0.8	19.6	0.55	0.65	0.55	23.2
3	L2	All MCs	139	3.0	139	3.0	0.205	7.4	LOS A	0.8	19.6	0.55	0.65	0.55	23.2
8	T1	All MCs	35	3.0	35	3.0	0.205	2.2	LOS A	0.8	19.6	0.55	0.65	0.55	23.3
18	R2	All MCs	95	3.0	95	3.0	0.141	4.1	LOS A	0.5	12.3	0.55	0.60	0.55	23.9
Approach			270	3.0	270	3.0	0.205	5.6	LOS A	0.8	19.6	0.55	0.63	0.55	23.4
East: 172nd St NE															
1	L2	All MCs	89	2.0	89	2.0	0.411	10.1	LOS B	2.8	69.9	0.50	0.47	0.50	31.1
6	T1	All MCs	922	2.0	922	2.0	0.411	3.7	LOS A	2.8	72.0	0.49	0.42	0.49	31.8
16	R2	All MCs	22	2.0	22	2.0	0.411	4.0	LOS A	2.8	72.0	0.48	0.39	0.48	31.8
Approach			1034	2.0	1034	2.0	0.411	4.3	LOS A	2.8	72.0	0.49	0.43	0.49	31.7
North: 43rd Ave NE															
7	L2	All MCs	12	3.0	12	3.0	0.120	35.0	LOS D	0.4	10.7	0.59	0.83	0.59	8.3
4	T1	All MCs	26	3.0	26	3.0	0.120	3.0	LOS A	0.4	10.7	0.59	0.83	0.59	22.8
14	R2	All MCs	38	3.0	38	3.0	0.120	4.0	LOS A	0.4	10.7	0.59	0.83	0.59	22.8
Approach			75	3.0	75	3.0	0.120	8.4	LOS A	0.4	10.7	0.59	0.83	0.59	17.9
West: 172nd St NE															
5u	U	All MCs	7	4.0	7	4.0	0.380	11.8	LOS B	2.4	61.9	0.36	0.38	0.36	31.6
5	L2	All MCs	39	4.0	39	4.0	0.380	9.5	LOS A	2.4	61.9	0.36	0.38	0.36	31.6
2	T1	All MCs	871	4.0	871	4.0	0.380	3.2	LOS A	2.4	62.8	0.35	0.37	0.35	32.3
12	R2	All MCs	97	2.0	97	2.0	0.380	3.5	LOS A	2.4	62.8	0.35	0.35	0.35	32.2
Approach			1014	3.8	1014	3.8	0.380	3.5	LOS A	2.4	62.8	0.35	0.36	0.35	32.2
All Vehicles			2393	2.9	2393	2.9	0.411	4.2	LOS A	2.8	72.0	0.44	0.44	0.44	30.0

Site Level of Service (LOS) Method: Delay & Degree of Saturation (SIDRA). Site LOS Method is specified in the Parameter Settings dialog (Options 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.

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

Roundabout Capacity Model: SIDRA HCM.

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

Queue Model: SIDRA queue estimation methods are used for Back of Queue and Queue at Start of Gap.

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

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

Arrival Flows used in performance calculations are adjusted to include any Initial Queued Demand and Upstream Capacity Constraint effects.

Lanes, Volumes, Timings  
2: 51st Ave NE & SR 531

12/20/2024



Lane Group	EBL	EBT	EBR	WBL	WBT	WBR	NBL	NBT	NBR	SBL	SBT	SBR
Lane Configurations												
Traffic Volume (vph)	34	795	94	111	785	47	158	98	104	78	70	41
Future Volume (vph)	34	795	94	111	785	47	158	98	104	78	70	41
Ideal Flow (vphpl)	1750	1750	1750	1750	1750	1750	1750	1750	1750	1750	1750	1750
Storage Length (ft)	250		0	250		0	200		200	200		0
Storage Lanes	1		0	1		0	1		1	1		0
Taper Length (ft)	25			25			25			25		
Right Turn on Red			Yes			Yes			Yes			Yes
Link Speed (mph)		35			35			40			35	
Link Distance (ft)		2302			2616			1358			499	
Travel Time (s)		44.8			51.0			23.1			9.7	
Confl. Peds. (#/hr)	1					1	2		1	1		2
Peak Hour Factor	0.94	0.94	0.94	0.94	0.94	0.94	0.94	0.94	0.94	0.94	0.94	0.94
Heavy Vehicles (%)	3%	3%	3%	3%	3%	3%	5%	5%	5%	3%	3%	3%
Shared Lane Traffic (%)												
Turn Type	pm+pt	NA		pm+pt	NA		Perm	NA	Perm	Perm	NA	
Protected Phases	5	2		1	6			4			8	
Permitted Phases	2			6			4		4	8		
Detector Phase	5	2		1	6		4	4	4	8	8	
Switch Phase												
Minimum Initial (s)	5.0	10.0		5.0	10.0		7.0	7.0	7.0	7.0	7.0	
Minimum Split (s)	10.5	33.9		10.5	36.9		35.3	35.3	35.3	30.1	30.1	
Total Split (s)	26.0	95.0		26.0	95.0		39.0	39.0	39.0	39.0	39.0	
Total Split (%)	16.3%	59.4%		16.3%	59.4%		24.4%	24.4%	24.4%	24.4%	24.4%	
Yellow Time (s)	3.5	3.9		3.5	3.9		4.3	4.3	4.3	3.1	3.1	
All-Red Time (s)	2.0	2.0		2.0	2.0		2.0	2.0	2.0	2.0	2.0	
Lost Time Adjust (s)	0.0	0.0		0.0	0.0		0.0	0.0	0.0	0.0	0.0	
Total Lost Time (s)	5.5	5.9		5.5	5.9		6.3	6.3	6.3	5.1	5.1	
Lead/Lag	Lead	Lag		Lead	Lag							
Lead-Lag Optimize?												
Recall Mode	None	C-Min		None	C-Min		None	None	None	None	None	

Intersection Summary

Area Type: Other  
 Cycle Length: 160  
 Actuated Cycle Length: 160  
 Offset: 0 (0%), Referenced to phase 2:EBTL and 6:WBTL, Start of Green  
 Natural Cycle: 115  
 Control Type: Actuated-Coordinated  
 Description: PM Peak

Splits and Phases: 2: 51st Ave NE & SR 531



HCM 7th Signalized Intersection Summary  
 2: 51st Ave NE & SR 531

12/20/2024



Movement	EBL	EBT	EBR	WBL	WBT	WBR	NBL	NBT	NBR	SBL	SBT	SBR
Lane Configurations	↖	↗		↖	↗		↖	↗	↗	↖	↗	
Traffic Volume (veh/h)	34	795	94	111	785	47	158	98	104	78	70	41
Future Volume (veh/h)	34	795	94	111	785	47	158	98	104	78	70	41
Initial Q (Qb), veh	0	0	0	0	0	0	0	0	0	0	0	0
Lane Width Adj.	1.00	1.00	1.00	1.00	1.00	1.00	1.00	1.00	1.00	1.00	1.00	1.00
Ped-Bike Adj(A_pbT)	1.00		1.00	1.00		1.00	1.00		1.00	1.00		1.00
Parking Bus, Adj	1.00	1.00	1.00	1.00	1.00	1.00	1.00	1.00	1.00	1.00	1.00	1.00
Work Zone On Approach		No			No			No			No	
Adj Sat Flow, veh/h/ln	1709	1709	1709	1709	1709	1709	1682	1682	1682	1709	1709	1709
Adj Flow Rate, veh/h	36	846	100	118	835	50	168	104	111	83	74	44
Peak Hour Factor	0.94	0.94	0.94	0.94	0.94	0.94	0.94	0.94	0.94	0.94	0.94	0.94
Percent Heavy Veh, %	3	3	3	3	3	3	5	5	5	3	3	3
Cap, veh/h	487	967	114	219	1054	63	220	344	290	220	205	122
Arrive On Green	0.02	0.64	0.64	0.08	1.00	1.00	0.20	0.20	0.20	0.20	0.20	0.20
Sat Flow, veh/h	1628	1500	177	1628	1596	96	1240	1682	1418	1154	1002	596
Grp Volume(v), veh/h	36	0	946	118	0	885	168	104	111	83	0	118
Grp Sat Flow(s),veh/h/ln	1628	0	1677	1628	0	1692	1240	1682	1418	1154	0	1598
Q Serve(g_s), s	1.2	0.0	73.5	4.1	0.0	0.0	21.5	8.4	10.8	10.5	0.0	10.1
Cycle Q Clear(g_c), s	1.2	0.0	73.5	4.1	0.0	0.0	31.7	8.4	10.8	18.9	0.0	10.1
Prop In Lane	1.00		0.11	1.00		0.06	1.00		1.00	1.00		0.37
Lane Grp Cap(c), veh/h	487	0	1081	219	0	1117	220	344	290	220	0	327
V/C Ratio(X)	0.07	0.00	0.87	0.54	0.00	0.79	0.76	0.30	0.38	0.38	0.00	0.36
Avail Cap(c_a), veh/h	655	0	1081	362	0	1117	220	344	290	229	0	339
HCM Platoon Ratio	1.00	1.00	1.00	2.00	2.00	2.00	1.00	1.00	1.00	1.00	1.00	1.00
Upstream Filter(l)	1.00	0.00	1.00	1.00	0.00	1.00	1.00	1.00	1.00	1.00	0.00	1.00
Uniform Delay (d), s/veh	8.9	0.0	23.2	28.3	0.0	0.0	68.3	54.0	54.9	62.0	0.0	54.7
Incr Delay (d2), s/veh	0.1	0.0	9.9	2.9	0.0	5.8	15.6	0.7	1.2	1.5	0.0	1.0
Initial Q Delay(d3), s/veh	0.0	0.0	0.0	0.0	0.0	0.0	0.0	0.0	0.0	0.0	0.0	0.0
%ile BackOfQ(50%),veh/ln	0.4	0.0	30.5	2.6	0.0	1.8	7.7	3.6	4.0	3.2	0.0	4.2
Unsig. Movement Delay, s/veh												
LnGrp Delay(d), s/veh	9.0	0.0	33.0	31.2	0.0	5.8	83.9	54.7	56.1	63.5	0.0	55.6
LnGrp LOS	A		C	C		A	F	D	E	E		E
Approach Vol, veh/h		982			1003			383				201
Approach Delay, s/veh		32.2			8.8			67.9				58.9
Approach LOS		C			A			E				E
Timer - Assigned Phs	1	2		4	5	6		8				
Phs Duration (G+Y+Rc), s	11.9	109.1		39.0	9.5	111.5		39.0				
Change Period (Y+Rc), s	5.5	5.9		6.3	5.5	5.9		* 6.3				
Max Green Setting (Gmax), s	20.5	89.1		32.7	20.5	89.1		* 34				
Max Q Clear Time (g_c+I1), s	6.1	75.5		33.7	3.2	2.0		20.9				
Green Ext Time (p_c), s	0.4	7.8		0.0	0.1	14.1		1.0				

Intersection Summary

HCM 7th Control Delay, s/veh	30.5
HCM 7th LOS	C

Notes

\* HCM 7th computational engine requires equal clearance times for the phases crossing the barrier.



Lane Group	EBL	EBR	NBL	NBT	SBT	SBR
Lane Configurations						
Traffic Volume (vph)	60	151	83	303	284	25
Future Volume (vph)	60	151	83	303	284	25
Ideal Flow (vphpl)	1750	1750	1750	1750	1750	1750
Storage Length (ft)	0	0	0			215
Storage Lanes	1	0	0			1
Taper Length (ft)	25		25			
Link Speed (mph)	25			40	40	
Link Distance (ft)	330			670	1358	
Travel Time (s)	9.0			11.4	23.1	
Confl. Peds. (#/hr)	1		2			2
Peak Hour Factor	0.95	0.95	0.95	0.95	0.95	0.95
Heavy Vehicles (%)	1%	1%	5%	5%	6%	6%
Shared Lane Traffic (%)						
Sign Control	Stop			Free	Free	

**Intersection Summary**

Area Type: Other  
 Control Type: Unsignalized

Intersection						
Int Delay, s/veh	4.3					
Movement	EBL	EBR	NBL	NBT	SBT	SBR
Lane Configurations	W			←	↑	↑
Traffic Vol, veh/h	60	151	83	303	284	25
Future Vol, veh/h	60	151	83	303	284	25
Conflicting Peds, #/hr	1	0	2	0	0	2
Sign Control	Stop	Stop	Free	Free	Free	Free
RT Channelized	-	None	-	None	-	None
Storage Length	0	-	-	-	-	215
Veh in Median Storage, #	0	-	-	0	0	-
Grade, %	0	-	-	0	0	-
Peak Hour Factor	95	95	95	95	95	95
Heavy Vehicles, %	1	1	5	5	6	6
Mvmt Flow	63	159	87	319	299	26
Major/Minor	Minor2	Major1		Major2		
Conflicting Flow All	796	301	327	0	0	
Stage 1	301	-	-	-	-	
Stage 2	495	-	-	-	-	
Critical Hdwy	6.41	6.21	4.15	-	-	
Critical Hdwy Stg 1	5.41	-	-	-	-	
Critical Hdwy Stg 2	5.41	-	-	-	-	
Follow-up Hdwy	3.509	3.309	2.245	-	-	
Pot Cap-1 Maneuver	359	815	1228	-	-	
Stage 1	790	-	-	-	-	
Stage 2	615	-	-	-	-	
Platoon blocked, %	0	0	0	-	-	
Mov Cap-1 Maneuver	327	813	1226	-	-	
Mov Cap-2 Maneuver	327	-	-	-	-	
Stage 1	720	-	-	-	-	
Stage 2	614	-	-	-	-	
Approach	EB	NB	SB			
HCM Ctrl Dly, s/v	15.26	1.76	0			
HCM LOS	C					
Minor Lane/Major Mvmt	NBL	NBT	EBLn1	SBT	SBR	
Capacity (veh/h)	387	-	571	-	-	
HCM Lane V/C Ratio	0.071	-	0.389	-	-	
HCM Ctrl Dly (s/v)	8.2	0	15.3	-	-	
HCM Lane LOS	A	A	C	-	-	
HCM 95th %tile Q(veh)	0.2	-	1.8	-	-	

Lanes, Volumes, Timings  
 4: 51st Ave NE & North Access

12/20/2024



Lane Group	EBL	EBR	NBL	NBT	SBT	SBR
Lane Configurations						
Traffic Volume (vph)	17	0	0	369	429	6
Future Volume (vph)	17	0	0	369	429	6
Ideal Flow (vphpl)	1750	1750	1750	1750	1750	1750
Link Speed (mph)	25			40	40	
Link Distance (ft)	207			183	670	
Travel Time (s)	5.6			3.1	11.4	
Peak Hour Factor	0.92	0.92	0.92	0.92	0.92	0.92
Heavy Vehicles (%)	20%	20%	4%	4%	5%	5%
Shared Lane Traffic (%)						
Sign Control	Stop			Free	Free	

**Intersection Summary**

Area Type: Other  
 Control Type: Unsignalized

Intersection						
Int Delay, s/veh	0.4					
Movement	EBL	EBR	NBL	NBT	SBT	SBR
Lane Configurations	Y			4	4	
Traffic Vol, veh/h	17	0	0	369	429	6
Future Vol, veh/h	17	0	0	369	429	6
Conflicting Peds, #/hr	0	0	0	0	0	0
Sign Control	Stop	Stop	Free	Free	Free	Free
RT Channelized	-	None	-	None	-	None
Storage Length	0	-	-	-	-	-
Veh in Median Storage, #	0	-	-	0	0	-
Grade, %	0	-	-	0	0	-
Peak Hour Factor	92	92	92	92	92	92
Heavy Vehicles, %	20	20	4	4	5	5
Mvmt Flow	18	0	0	401	466	7
Major/Minor	Minor2	Major1		Major2		
Conflicting Flow All	871	470	473	0	0	
Stage 1	470	-	-	-	-	
Stage 2	401	-	-	-	-	
Critical Hdwy	6.6	6.4	4.14	-	-	
Critical Hdwy Stg 1	5.6	-	-	-	-	
Critical Hdwy Stg 2	5.6	-	-	-	-	
Follow-up Hdwy	3.68	3.48	2.236	-	-	
Pot Cap-1 Maneuver	299	639	1076	-	-	
Stage 1	632	-	-	-	-	
Stage 2	639	-	-	-	-	
Platoon blocked, %	0	0	0	-	-	
Mov Cap-1 Maneuver	299	639	1076	-	-	
Mov Cap-2 Maneuver	299	-	-	-	-	
Stage 1	632	-	-	-	-	
Stage 2	639	-	-	-	-	
Approach	EB	NB		SB		
HCM Ctrl Dly, s/v	17.84	0		0		
HCM LOS	C					
Minor Lane/Major Mvmt	NBL	NBT	EBLn1	SBT	SBR	
Capacity (veh/h)	1076	-	299	-	-	
HCM Lane V/C Ratio	-	-	0.062	-	-	
HCM Ctrl Dly (s/v)	0	-	17.8	-	-	
HCM Lane LOS	A	-	C	-	-	
HCM 95th %tile Q(veh)	0	-	0.2	-	-	

Lanes, Volumes, Timings  
 5: 51st Ave NE & South Access

12/20/2024



Lane Group	EBL	EBR	NBL	NBT	SBT	SBR
Lane Configurations	Y			4	4	
Traffic Volume (vph)	18	2	1	351	422	8
Future Volume (vph)	18	2	1	351	422	8
Ideal Flow (vphpl)	1750	1750	1750	1750	1750	1750
Link Speed (mph)	25			40	40	
Link Distance (ft)	217			142	183	
Travel Time (s)	5.9			2.4	3.1	
Peak Hour Factor	0.92	0.92	0.92	0.92	0.92	0.92
Heavy Vehicles (%)	0%	0%	5%	5%	4%	4%
Shared Lane Traffic (%)						
Sign Control	Stop			Free	Free	

**Intersection Summary**  
 Area Type: Other  
 Control Type: Unsignalized

Intersection						
Int Delay, s/veh	0.4					
Movement	EBL	EBR	NBL	NBT	SBT	SBR
Lane Configurations	Y			4	4	
Traffic Vol, veh/h	18	2	1	351	422	8
Future Vol, veh/h	18	2	1	351	422	8
Conflicting Peds, #/hr	0	0	0	0	0	0
Sign Control	Stop	Stop	Free	Free	Free	Free
RT Channelized	-	None	-	None	-	None
Storage Length	0	-	-	-	-	-
Veh in Median Storage, #	0	-	-	0	0	-
Grade, %	0	-	-	0	0	-
Peak Hour Factor	92	92	92	92	92	92
Heavy Vehicles, %	0	0	5	5	4	4
Mvmt Flow	20	2	1	382	459	9
Major/Minor	Minor2	Major1		Major2		
Conflicting Flow All	847	463	467	0	0	
Stage 1	463	-	-	-	-	
Stage 2	384	-	-	-	-	
Critical Hdwy	6.4	6.2	4.15	-	-	
Critical Hdwy Stg 1	5.4	-	-	-	-	
Critical Hdwy Stg 2	5.4	-	-	-	-	
Follow-up Hdwy	3.5	3.3	2.245	-	-	
Pot Cap-1 Maneuver	335	678	1076	-	-	
Stage 1	670	-	-	-	-	
Stage 2	693	-	-	-	-	
Platoon blocked, %	0	0	0	-	-	
Mov Cap-1 Maneuver	334	678	1076	-	-	
Mov Cap-2 Maneuver	334	-	-	-	-	
Stage 1	669	-	-	-	-	
Stage 2	693	-	-	-	-	
Approach	EB	NB		SB		
HCM Ctrl Dly, s/v	15.9	0.02		0		
HCM LOS	C					
Minor Lane/Major Mvmt	NBL	NBT	EBLn1	SBT	SBR	
Capacity (veh/h)	5	-	352	-	-	
HCM Lane V/C Ratio	0.001	-	0.062	-	-	
HCM Ctrl Dly (s/v)	8.3	0	15.9	-	-	
HCM Lane LOS	A	A	C	-	-	
HCM 95th %tile Q(veh)	0	-	0.2	-	-	

# Appendix F

WSDOT Traffic Impact Analysis Checklist and Long Version Traffic  
Mitigation Offer

# Long Version Traffic Mitigation Offer to WSDOT

This three-page version is intended for developments required to submit a comprehensive traffic study consistent with Section One *and* Section Two of the WSDOT Traffic Analysis Checklist.

## Section One: Offer of Mitigation by Applicant for Proposed Snohomish County Development

<i><b>This section to be completed by applicant</b></i>				
Name of Proposed Development <b>Northsound Logistics Center</b>			Snohomish County Project File Number (Only if this offer is not submitted to PDS with initial application)	
Name of Applicant <b>Rockefeller Acquisitions, LLC</b>				
Address of Applicant <b>400 University Street, Suite 300, Seattle, WA 98101</b>				
<b>PROPORTIONATE SHARE CALCULATION: <i>Choose Option 1A or 1B Below</i></b>				
<input checked="" type="checkbox"/> <b>Option 1A</b> for Proportionate Share Mitigation Based on Impacts to Projects in Exhibit C of the WSDOT/COUNTY Interlocal Agreement <span style="color: blue; font-weight: bold;">NO IMPACT</span>				
WSDOT Improvement ID#	Title/Description of WSDOT Project	ADTs Impacting Improvement	Improvement Cost per ADT	Proportionate Share Obligation
--	--	--	\$ --	\$ --
			\$	\$
			\$	\$
			\$	\$
			\$	\$
			\$	\$
			\$	\$
<b>Proportionate Share Sum</b>				<b>\$ 0</b>
The APPLICANT hereby voluntarily agrees to pay the proportionate share sum amount shown above for impacts of the DEVELOPMENT on the capacity of state highways, based on the "proportionate share" method adopted in Section 5.2(a) of the applicable version of the WSDOT/COUNTY interlocal agreement (ILA), the list of projects in Exhibit C of the ILA, and information provided in the comprehensive Traffic Study attached hereto.				
<input type="checkbox"/> <b>Option 1B</b> for Proportionate Share Mitigation based on standard amount				
1	_____	<i>New Average Daily Traffic (ADT) generated (from Line 5a of the WSDOT Traffic Study Checklist Section One)</i>		
2	\$36.00	<i>The current "standard payment" rate per ADT in Section 5.2(b) of the applicable version of the WSDOT/COUNTY interlocal agreement (ILA)</i>		
3	\$ _____	<i>Proportionate share calculation (#1 x #2 = #3).</i>		
The APPLICANT hereby voluntarily agrees to pay the amount shown on line #3 above for impacts of the DEVELOPMENT on the capacity of state highways, based on the "standard payment" rate and method adopted in Section 5.2(b) of the applicable version of the WSDOT/COUNTY interlocal agreement (ILA), and based on information provided in the WSDOT Traffic Study Checklist Section One (attached hereto).				

HIGH ACCIDENT LOCATIONS (ILA SECTION 5.3.A)	
<input checked="" type="checkbox"/> No impact	<input type="checkbox"/> Mitigation as described in attached document.
LEVEL OF SERVICE AT STATE HIGHWAY INTERSECTIONS (ILA SECTION 5.3.B)	
<input checked="" type="checkbox"/> No impact	<input type="checkbox"/> Mitigation as described in attached document.
INSTALLATION OF TRAFFIC SIGNAL (ILA SECTION 5.4)	
<input checked="" type="checkbox"/> No impact or not applicable	<input type="checkbox"/> Mitigation or other provisions as described in attached document.
CHANNELIZATION REVISIONS (ILA SECTION 5.5)	
<input checked="" type="checkbox"/> No impact or not applicable	<input type="checkbox"/> Mitigation or other provisions as described in attached document.
FRONTAGE IMPROVEMENTS (ILA SECTION 5.6)	
<input checked="" type="checkbox"/> No impact or not applicable	<input type="checkbox"/> Mitigation or other provisions as described in attached document.
RIGHT-OF-WAY REQUIREMENTS (ILA SECTION 5.7)	
<input checked="" type="checkbox"/> No impact or not applicable	<input type="checkbox"/> Mitigation or other provisions as described in attached document.
SETBACK REQUIREMENTS (ILA SECTION 5.8)	
<input checked="" type="checkbox"/> No impact or not applicable	<input type="checkbox"/> Mitigation or other provisions as described in attached document.
ACCESS CONNECTIONS (ILA SECTION 5.9)	
<input checked="" type="checkbox"/> No impact or not applicable	<input type="checkbox"/> Permitted Access to adjacent State Highway verified by DEVELOPER or application made with WSDOT
<b>SUBMITTAL OPTIONS</b>	
<p>If this offer and all necessary attachments are submitted to Snohomish County PDS (COUNTY) with the initial development application, then PDS will send all documents to WSDOT for review and comment(s) and WSDOT will send the written offer back to PDS. Otherwise, the applicant is responsible for working directly with WSDOT, submitting the required documents, obtaining WSDOT's signature, and submitting the written offer to PDS</p>	
<input checked="" type="checkbox"/> This offer, Sections One and Two of WSDOT Traffic Study Checklist, and all necessary supporting documentation (one original plus two copies) are hereby submitted to PDS with initial application	
<input type="checkbox"/> Applicant is working directly with WSDOT	
BY:	
_____	Date _____
Signature of Applicant or Authorized Representative	Print Name and Title

**Section Two: Processing by Snohomish County PDS if included with initial application. Otherwise applicant works directly with WSDOT (Section 3).**

***This section to be completed by Snohomish County PDS***

Date Received	Name of PDS Planner Assigned to Project	Phone Number of Planner
<u>Instructions to PDS</u>	Send this three-page offer, Sections One and Two of WSDOT Traffic Study Checklist, and all attachments to WSDOT and DPW as shown below:	
1. Original mailed to WSDOT Snohomish Area Development Services, MS 240, WSDOT NW Region, PO Box 330310, Seattle WA 98133-9710 2. Convenience copy mailed to Snohomish County Public Works Land Use Section		
BY:		
_____ Date _____		_____
Initiated by PDS Staff Person		Print Name and Title

**Section Three: Review and/or Approval by WSDOT**

<b><i>This section to be completed by WSDOT</i></b>	
<b>WSDOT RECEIPT OF OFFER ATTACHMENT(S)</b>	
<input type="checkbox"/> Original offer, Sections One and Two of WSDOT Traffic Study Checklist, and all attachments received from Snohomish County PDS.	
<input type="checkbox"/> Original offer and attachment(s) received from _____	
BY:	
_____ Date _____	
Initiated by WSDOT Staff Person	Print Name and Title
<b>WSDOT REQUEST</b>	
WSDOT has reviewed the traffic study and this mitigation offer submitted by the Applicant and has determined as follows:	
<input type="checkbox"/> WSDOT requests that the COUNTY impose the mitigation offered above as a condition of approval for the DEVELOPMENT. WSDOT agrees to accept changes in the proportionate payment amount shown above resulting from TDM or lot-yield adjustments approved by the COUNTY.	<input type="checkbox"/> WSDOT requests that the COUNTY require additional supplemental information to adequately evaluate the proposed development's impacts.
<input type="checkbox"/> The information requested is shown in the attached document.	
<b>ROUTING BY WSDOT</b>	
<input type="checkbox"/> Original written offer with all applicable signatures has been mailed to the PDS Planner shown in Section 2 above at Snohomish County PDS, 3000 Rockefeller, Everett WA 98201.	
<input type="checkbox"/> Copy of written offer with all signatures has been mailed to Snohomish County DPW Land Use Division, 3000 Rockefeller, Everett, WA 98201.	
Alternatively, in cases in which the form was not submitted to PDS with initial application	
<input type="checkbox"/> Original written offer has been mailed to the applicant shown above and a copy has been mailed to Snohomish County DPW Land Use Division, 2930 Wetmore, Everett, WA 98201	
BY:	
_____ Date _____	
Signature of Authorized WSDOT Official	Print Name and Title