

 **TRAFFIC IMPACT ANALYSIS**

# **HARMONY AT ARLINGTON**

**JURISDICTION: CITY OF ARLINGTON**

*Prepared for:*  
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*Prepared by:*  
**Kimley»»Horn**

May 2024  
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## TRAFFIC IMPACT ANALYSIS

FOR

# HARMONY AT ARLINGTON

**Prepared for:**

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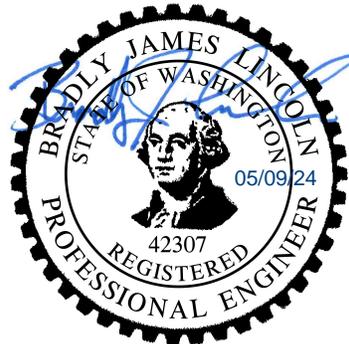
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## 1. DEVELOPMENT IDENTIFICATION

Kimley-Horn and Associates, Inc. (Kimley-Horn) has been retained to analyze the traffic impacts of the proposed Harmony at Arlington Development (Development). This report is intended to provide the City of Arlington (City) with the necessary traffic generation, trip distribution, level of service analysis, and mitigation fee determination to facilitate their review of the Development. Brad Lincoln, responsible for this report and traffic analysis, is a licensed professional engineer (Civil) in the State of Washington and member of the Washington State section of Institute of Transportation Engineers (ITE).

The Development is proposed to construct 60 single-family townhomes. The Development is located north of 204<sup>th</sup> Street NE on the west side of SR-9, on parcel 31051100304000. The site is currently listed as unoccupied and vacant per the *Snohomish County Online Property Information (SCOPI)* web map. The Development proposes to access the City street network via an existing access driveway along 204<sup>th</sup> Street NE. A site vicinity map is included in **Figure 1** and a site plan has been provided in **Appendix A**.

## 2. METHODOLOGY

### 2.1 General

Trip generation calculations for the Development have been performed using data contained in the ITE's *Trip Generation Manual, 11<sup>th</sup> Edition (2021)*. The appropriate land use for the trip generation is consistent with the City pre-application meeting notes and consistent with comments from City staff. The distribution of trips generated by the site is based on a previously approved trip distribution for residential developments in the area. The City has an interlocal agreement with Snohomish County (County) that provides for reciprocal mitigation fees. County mitigation fees can be calculated based on the default percentage in the interlocal agreement, which is 70%, or based on actual impacts. The City also has an interlocal agreement with the Washington State Department of Transportation (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. City developments are required to pay for any WSDOT improvement project on the Exhibit C list impacted with three or more directional PM peak-hour trips or based on the area wide mitigation fee.



### 3. TRIP GENERATION

The trip generation calculations for the Development are based on the average trip generation rates for ITE Land Use Code (LUC) 215, Single-Family Attached Housing. The trip generation of the Development is summarized in **Table 1**.

**Table 1: Trip Generation Summary**

| 60 Units Single-Family Attached Housing | Average Daily Trips (ADTs) |     |       | AM Peak-Hour Trips  |     |       | PM Peak-Hour Trips  |     |       |
|---|----------------------------|-----|-------|---------------------|-----|-------|---------------------|-----|-------|
|   | In                         | Out | Total | In                  | Out | Total | In                  | Out | Total |
| Generation Rate                         | 7.20 trips per unit        |     |       | 0.48 trips per unit |     |       | 0.57 trips per unit |     |       |
| Splits                                  | 50%                        | 50% | 100%  | 25%                 | 75% | 100%  | 59%                 | 41% | 100%  |
| Trips                                   | 216                        | 216 | 432   | 7                   | 22  | 29    | 20                  | 14  | 34    |

The Development is anticipated to generate approximately 432 new ADTs with approximately 29 new AM peak-hour trips and 34 new PM peak-hour trips.

### 4. TRIP DISTRIBUTION

The trip distribution is based on approved distributions for surrounding uses and surrounding land uses. The anticipated trip distribution is:

- 35% to and from the north
  - 25% along SR-9
  - 10% along E Highland Drive
- 30% to and from the west
  - 15% along 67<sup>th</sup> Avenue NE to and from the north
  - 10% along 67<sup>th</sup> Avenue NE to and from the south
  - 5% along 204<sup>th</sup> Street NE
- 20% to and from the south along SR-9
- 10% to and from the east along 207<sup>th</sup> Street NE
- 5% to and from the east along Olympic Place

A detailed trip distribution for the AM peak-hour is displayed in **Figure 2** and the PM Peak-hour is displayed in **Figure 3**.

The interlocal agreement between the City and County requires detailed development trip turning movement data at County key intersections impacted with three or more directional trips on an approach or departure. There are no County key intersections that are anticipated to be impacted by three directional peak-hour trips generated by the Development. Detailed key intersection impacts should therefore not be required.

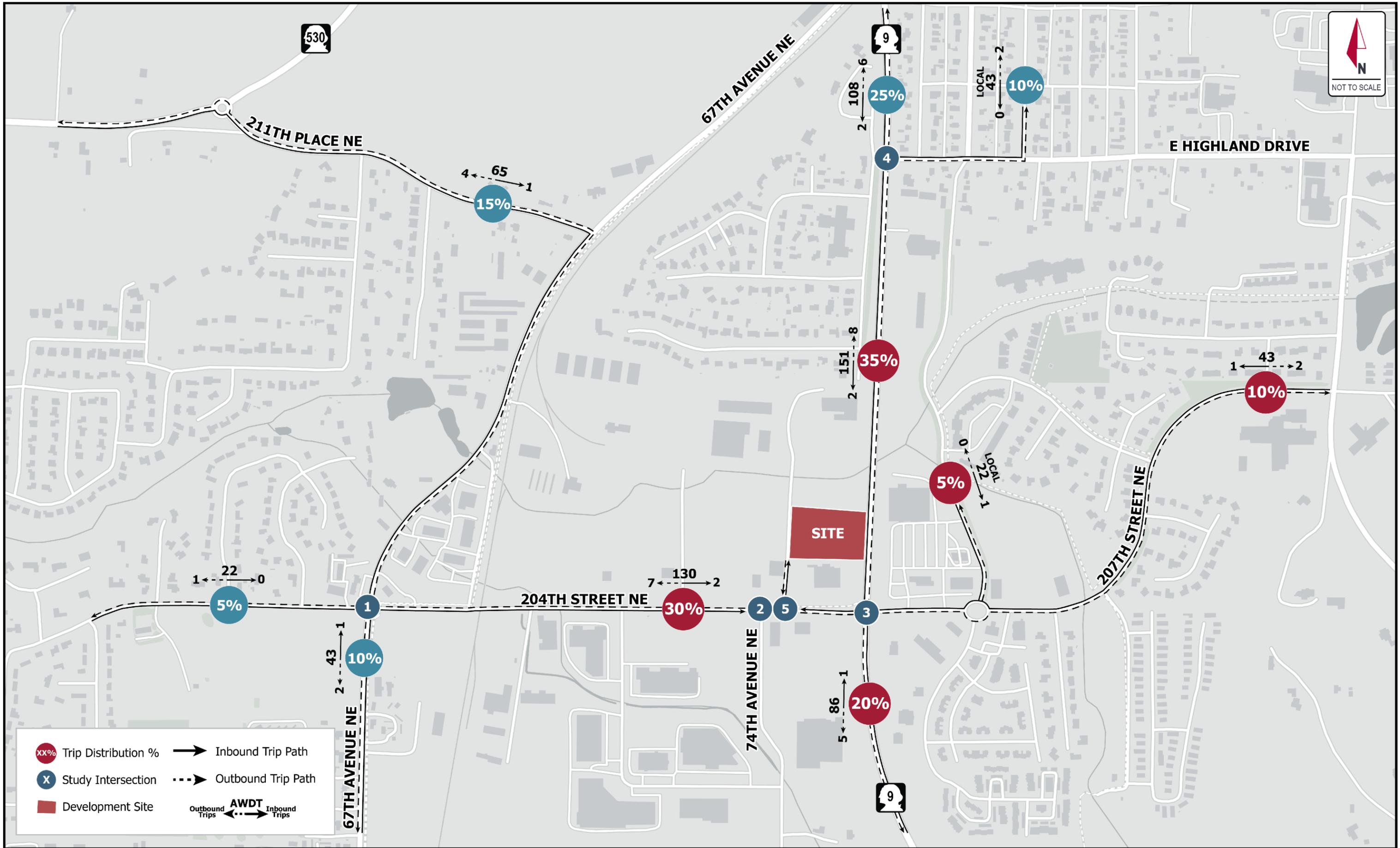


FIGURE 2: DEVELOPMENT TRIP DISTRIBUTION - AM PEAK HOUR  
 HARMONY AT ARLINGTON - CITY OF ARLINGTON, WA (090221278)

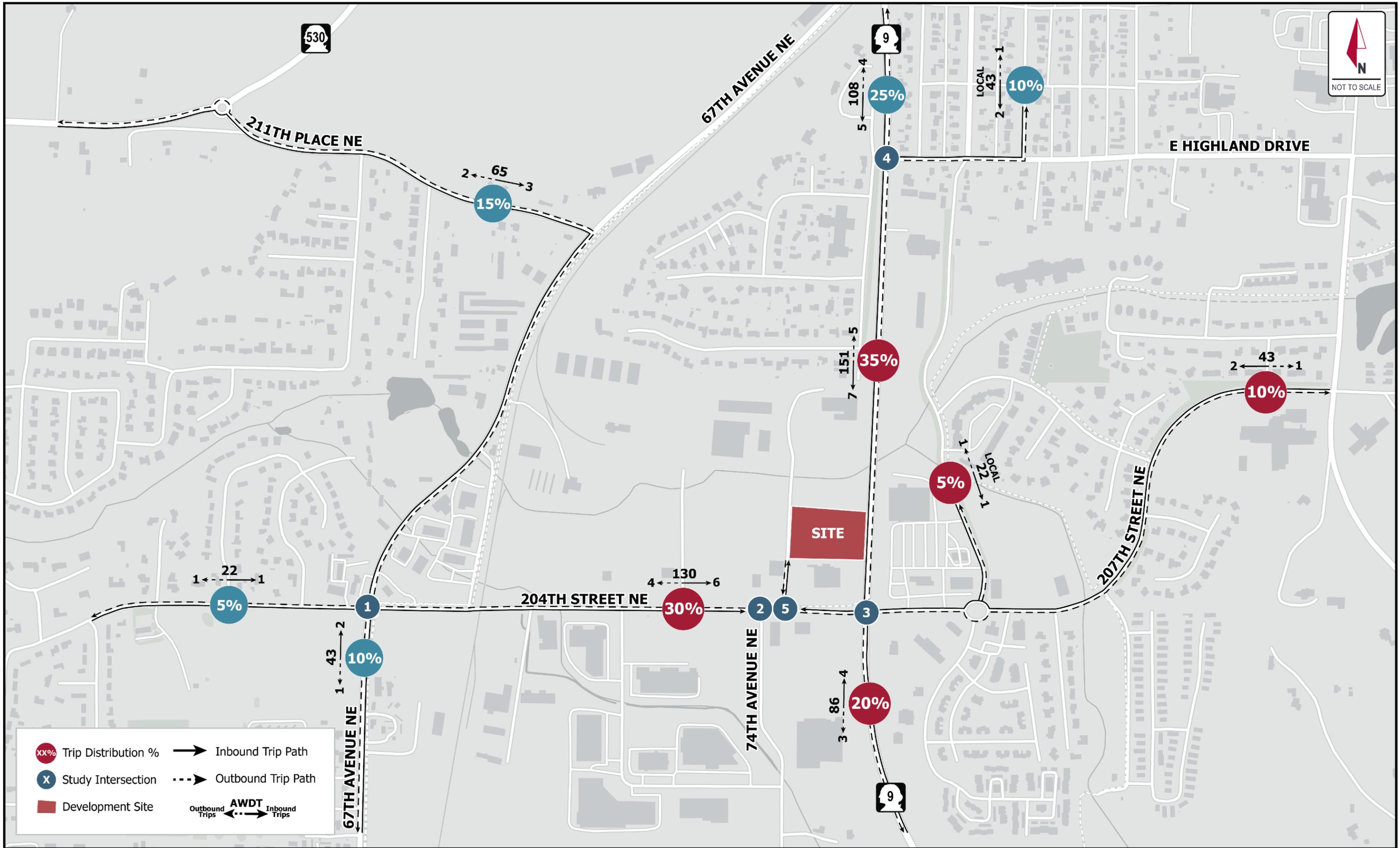


FIGURE 3: DEVELOPMENT TRIP DISTRIBUTION - PM PEAK HOUR  
 HARMONY AT ARLINGTON - CITY OF ARLINGTON, WA (090221278)

## 5. INTERSECTION LEVEL OF SERVICE ANALYSIS

There are five intersections that have been identified for analysis based on impacts of ten or more new PM peak-hour trips generated by the Development:

1. 67<sup>th</sup> Avenue NE at 204<sup>th</sup> Street NE
2. 74<sup>th</sup> Avenue NE at 204<sup>th</sup> Street NE
3. SR-9 at 204<sup>th</sup> Street NE
4. SR-9 at E Highland Drive
5. Site Access at 204<sup>th</sup> Street NE

The study intersections identified have been analyzed for the weekday PM peak-hour.

### 5.1 Intersection Volumes

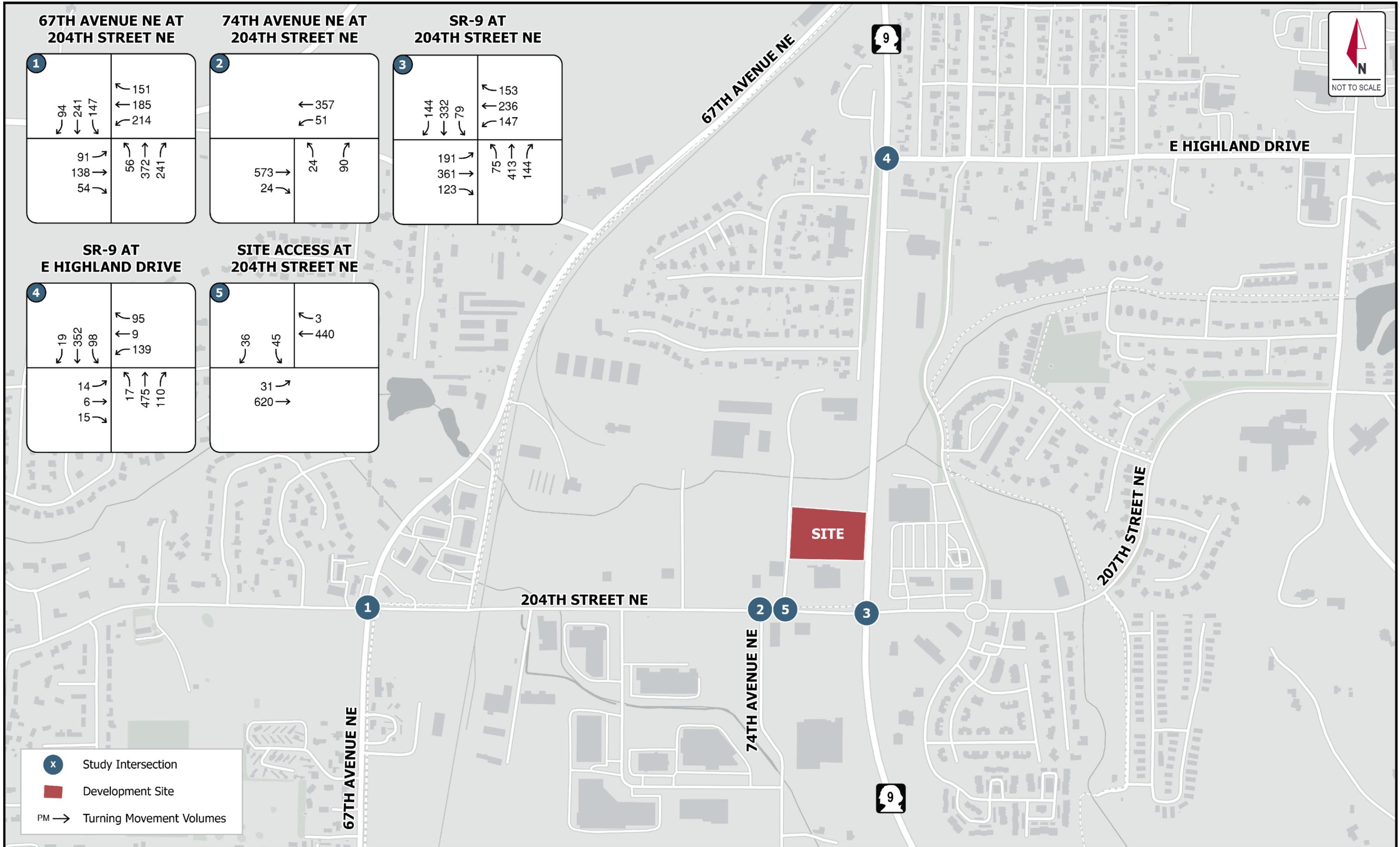
The existing PM peak-hour turning movements at the study intersections were collected by the independent count firm Traffic Data Gathering (TDG) between June 2023 to March 2024 and from neighboring pipeline projects. The counts collected prior to 2024 were grown by applying a 2.0% annual compounding growth rate to simulate current year volumes. The 2024 turning movements at the study intersections are shown in **Figure 4**. The existing count data is included in **Appendix B**.

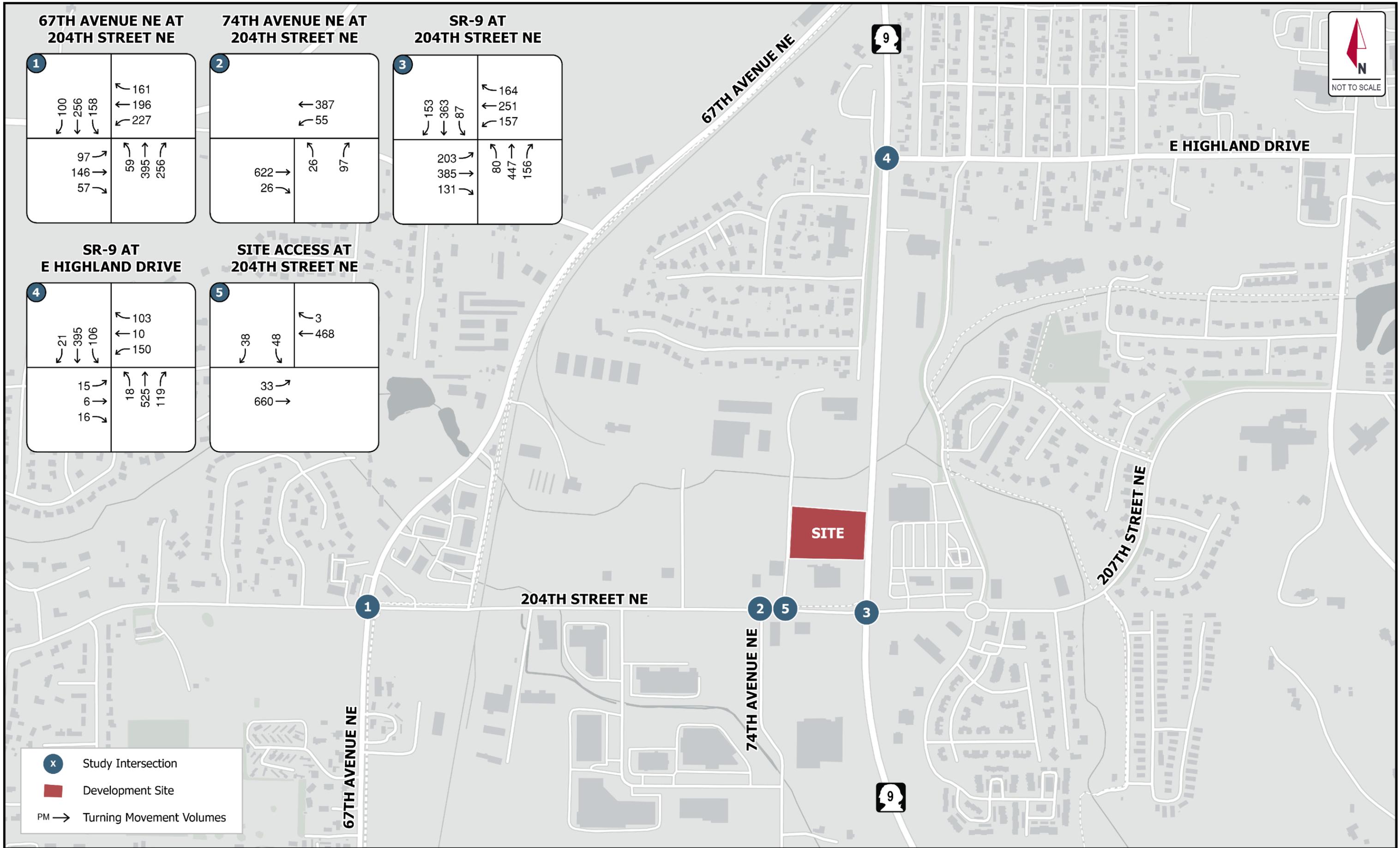
The future analysis has been performed for the year 2027, which represents a conservative 3-year horizon period for full build-out of the Development. The 2027 no-build turning movements have been calculated by applying a 2.0% annually compounding growth rate applied to the 2024 existing turning movements and adding trips generated by the following pipeline developments:

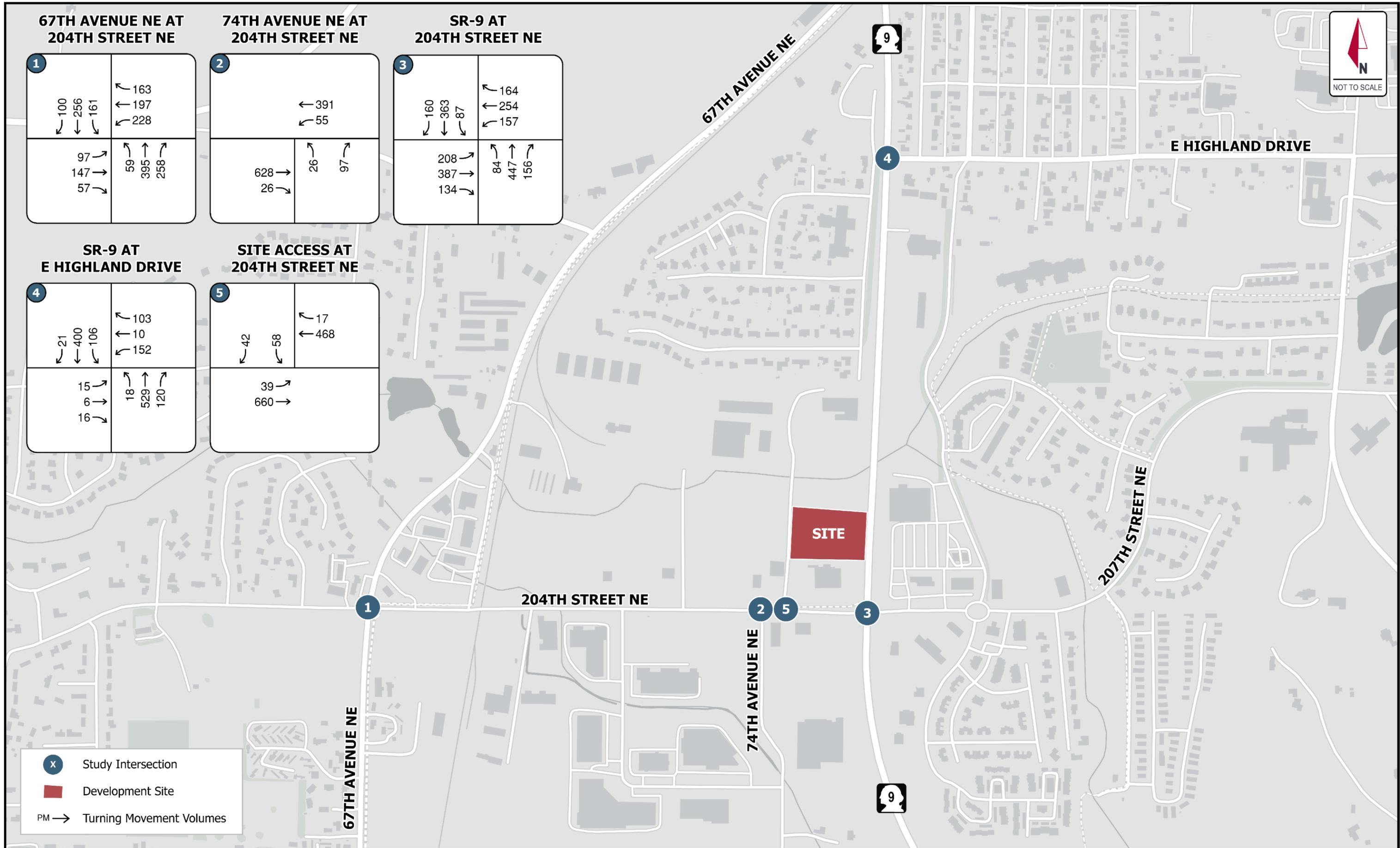
- Wet Rabbit Car Wash – Transpo Group (December 2023)
- Zahradnik Development – Kimley-Horn (December 2021)

The 2027 no-build turning movements at the study intersections are shown in **Figure 5**. The pipeline project distributions are included with the existing count data in **Appendix B**.

The 2027 full-build turning movements at the study intersections have been calculated by adding the trips generated by the Development to the 2027 no-build turning movements. The 2027 full-build turning movements are shown in **Figure 6**. The turning movement calculations are included in **Appendix C**.







## 5.2 Level of Service Calculations

The level of service calculations have been performed utilizing the existing channelization, existing intersection control, signal timing data provided by the City and WSDOT, peak-hour factors, and heavy vehicle factors from the 2024 turning movement counts. A future signal improvement at 74<sup>th</sup> Avenue NE at 204<sup>th</sup> Street NE was also analyzed based on discussions with City staff. The 2024 existing, 2027 baseline, and 2027 future with development horizon-year calculations are summarized for the PM peak-hours in **Table 2**.

**Table 2: Level of Service Summary – PM Peak-Hour**

| Intersections  | 2024 Existing Conditions |          | 2027 Conditions |          |            |          |
|--|--------------------------|----------|-----------------|----------|------------|----------|
|  | LOS                      | Delay    | No-Build        |          | Full-Build |          |
|  |                          |          | LOS             | Delay    | LOS        | Delay    |
| 1. 67th Avenue NE at 204th Street NE                         | C                        | 27.7 sec | C               | 29.2 sec | C          | 29.4 sec |
| 2. 74th Avenue NE at 204th Street NE<br>- Signal Improvement | C                        | 15.7 sec | C               | 16.9 sec | C          | 17.1 sec |
|  | ---                      | ---      | A               | 8.7 sec  | A          | 8.6 sec  |
| 3. SR-9 at 204th Street NE                                   | D                        | 45.0 sec | D               | 51.8 sec | D          | 52.1 sec |
| 4. SR-9 at E Highland Drive                                  | C                        | 24.4 sec | C               | 27.9 sec | C          | 28.2 sec |
| 5. Site Access at 204th Street NE                            | C                        | 16.3 sec | C               | 17.3 sec | C          | 18.5 sec |

The analysis shows that the study intersections currently operate at LOS D or better during the PM peak-hour. The study intersections are anticipated to continue operating at LOS D or better under the 2027 horizon-year no-build and full-build conditions. Additionally, the 2027 future with development analysis shows a 95<sup>th</sup> percentile queue length of 84 feet and a 50<sup>th</sup> percentile queue length of 38 feet for westbound movements at the intersection of 74<sup>th</sup> Avenue NE at 204<sup>th</sup> Street NE. The nearest driveway access is approximately 80 feet to the east of the assumed start of queue for westbound movements. Therefore, the average westbound queue at the future signalized intersection will not block the nearest neighboring access. It is important to note that there will be internal connectivity to the driveway farther east if the driveway closest to 74<sup>th</sup> Avenue NE is blocked. The intersection LOS calculations are provided in the **Appendix D**.

## 6. SITE ACCESS

The Development is proposed to utilize a proposed shared private drive that will extend to an existing roadway to the west the site. The posted speed limit along this private drive is not known at the time of this report, therefore an assumed speed limit of 25 miles per hour (mph) has been used for sight distance analysis. The [City of Arlington Design and Construction Standards and Specifications](#), Section 2-3 Roadway Geometrics recognizes the guidelines published by the American Association of State Highway and Transportation Officials (AASHTO) for safe stopping and enter sight distance requirements. The stopping and intersection sight distances are 155 feet and 280 feet, respectively, for a 25-mph posted speed. The Development’s access to the shared private drive is expected to have adequate stopping and entering sight distance in each direction to satisfy the AASHTO requirements.

## 7. TRAFFIC MITIGATION FEES

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

### 7.1 City of Arlington

The City currently has a traffic mitigation fee of \$3,355 per PM peak-hour trip based on the [City of Arlington Impact and Mitigation Fees](#) worksheet. The Development is anticipated to generate 34 new PM peak-hour trips. The Development is not located within the Cascade Industrial Center Planned Action Area and should not incur any additional traffic mitigation fees. This results in City traffic mitigation fees of \$114,070.00.

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

### 7.2 Snohomish County

The City has an interlocal agreement with the County that provides for mitigation payments for impacts to County improvement projects. County fees are based on impacts to improvement projects included in the *Transportation Needs Report (TNR)*. There are not any County projects on the *TNR* that will be impacted by three directional PM peak-hour trips generated by the Development. County traffic mitigation fees should therefore not be a condition of approval for the Development.

### 7.3 Washington State Department of Transportation

The WSDOT improvement projects and their associated fees are based on the most recent Exhibit C list, which is part of the interlocal agreement between the County and WSDOT. City developments are required to pay for WSDOT improvement projects on the Exhibit C list impacted with ten or more PM peak-hour trips. There are not any WSDOT improvement projects that are anticipated to be impacted by ten PM peak-hour trips and therefore WSDOT traffic mitigation fees should not be a condition of approval for the Development.

## 8. CONCLUSIONS

The Development is proposed to construct 60 single-family townhomes. The Development is located north of 204<sup>th</sup> Street NE on the west side of SR-9, and is currently listed as unoccupied and vacant per the *SCOPI* web map. The Development proposes to access the City street network via an existing access driveway along 204<sup>th</sup> Street NE. The Development is anticipated to generate approximately 432 new ADTs with approximately 29 new AM peak-hour trips and 34 new PM peak-hour trips. The analysis shows that the study intersections currently operate at LOS D or better during the PM peak-hour, and will continue to operate at LOS D or better during the 2027 no-build and full-build conditions. The access location appears to have adequate sight distance, based on a preliminary evaluation. The Development is anticipated to have City traffic mitigation fees totaling \$114,070.00 based on the current City Impact and Mitigation Fees worksheet. County or WSDOT fees should not be required since the impacts will not reach the County and WSDOT thresholds.

**APPENDIX A**  
**SITE PLAN**

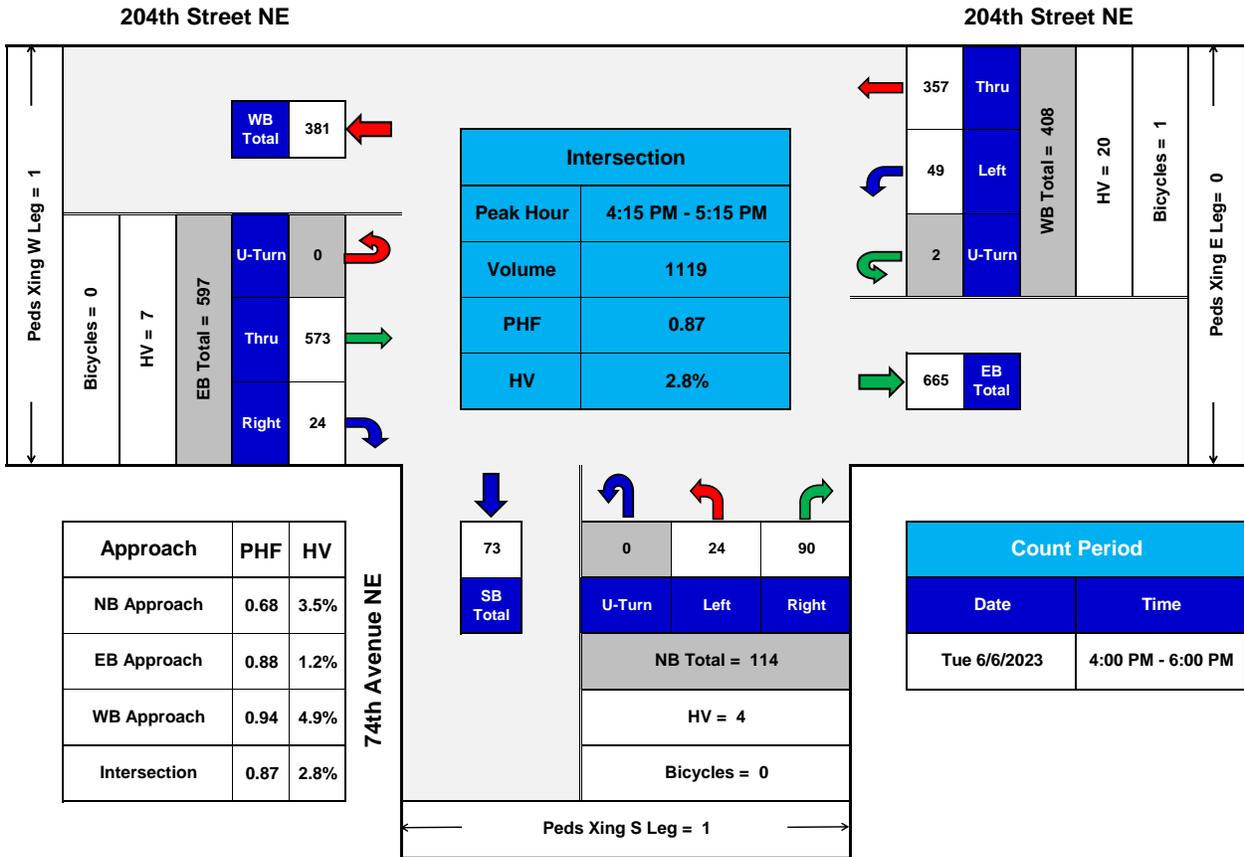


**APPENDIX B**  
**EXISTING COUNT DATA AND PIPELINE TRIP DISTRIBUTION**





**74th Avenue NE @ 204th Street NE**  
Arlington, WA



PHF = Peak Hour Factor  
HV = Heavy Vehicles

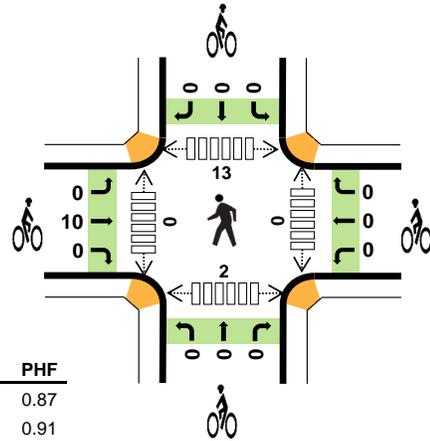
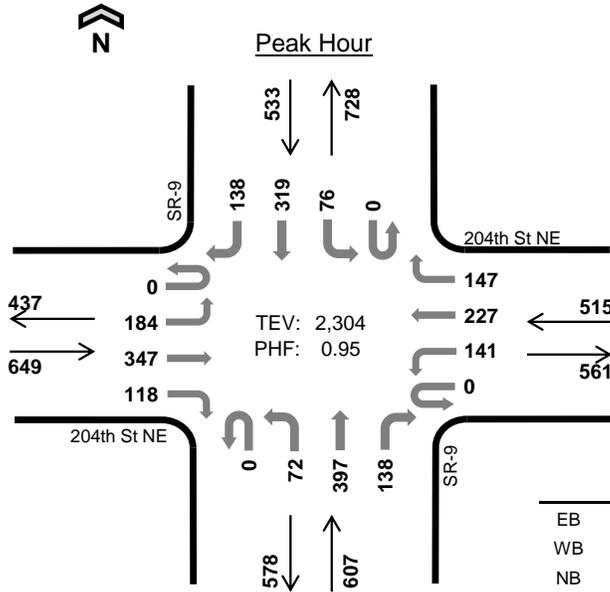
**TURNING MOVEMENTS DIAGRAM**  
PEAK HOUR SUMMARY



### SR-9 204th St NE



Date: 06/02/2022  
 Count Period: 4:00 PM to 6:00 PM  
 Peak Hour: 4:00 PM to 5:00 PM



|       | HV %: | PHF  |
|-------|-------|------|
| EB    | 2.8%  | 0.87 |
| WB    | 1.6%  | 0.91 |
| NB    | 2.3%  | 0.91 |
| SB    | 4.9%  | 0.82 |
| TOTAL | 2.9%  | 0.95 |

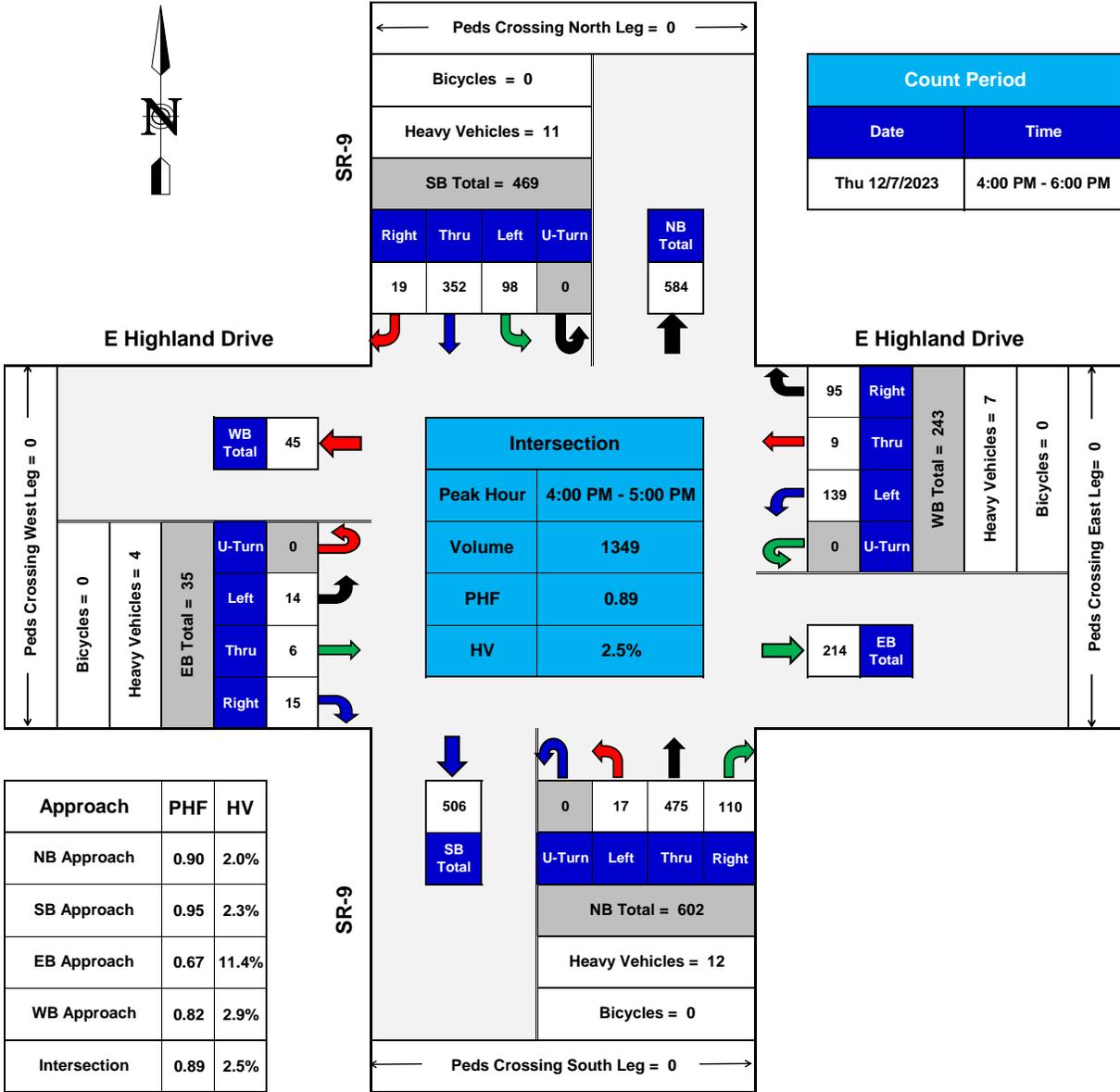
#### Two-Hour Count Summaries

| Interval Start | 204th St NE Eastbound |     |     |     | 204th St NE Westbound |     |     |     | SR-9 Northbound |     |     |     | SR-9 Southbound |     |     |     | 15-min Total | Rolling One Hour |   |
|----------------|-----------------------|-----|-----|-----|-----------------------|-----|-----|-----|-----------------|-----|-----|-----|-----------------|-----|-----|-----|--------------|------------------|---|
|                | UT                    | LT  | TH  | RT  | UT                    | LT  | TH  | RT  | UT              | LT  | TH  | RT  | UT              | LT  | TH  | RT  |              |                  |   |
| 4:00 PM        | 0                     | 37  | 80  | 24  | 0                     | 34  | 62  | 29  | 0               | 20  | 110 | 23  | 0               | 21  | 91  | 29  | 560          | 0                |   |
| 4:15 PM        | 0                     | 44  | 85  | 29  | 0                     | 49  | 53  | 39  | 0               | 20  | 95  | 33  | 0               | 16  | 58  | 38  | 559          | 0                |   |
| 4:30 PM        | 0                     | 61  | 94  | 31  | 0                     | 31  | 62  | 45  | 0               | 16  | 107 | 43  | 0               | 12  | 75  | 31  | 608          | 0                |   |
| 4:45 PM        | 0                     | 42  | 88  | 34  | 0                     | 27  | 50  | 34  | 0               | 16  | 85  | 39  | 0               | 27  | 95  | 40  | 577          | 2,304            |   |
| 5:00 PM        | 0                     | 32  | 99  | 34  | 0                     | 36  | 55  | 37  | 0               | 14  | 86  | 28  | 0               | 13  | 76  | 28  | 538          | 2,282            |   |
| 5:15 PM        | 0                     | 34  | 74  | 16  | 0                     | 28  | 53  | 45  | 0               | 13  | 60  | 22  | 0               | 16  | 52  | 24  | 437          | 2,160            |   |
| 5:30 PM        | 0                     | 28  | 78  | 19  | 0                     | 27  | 40  | 21  | 0               | 11  | 79  | 37  | 0               | 16  | 74  | 29  | 459          | 2,011            |   |
| 5:45 PM        | 0                     | 30  | 60  | 23  | 0                     | 28  | 57  | 33  | 0               | 9   | 100 | 35  | 0               | 28  | 78  | 26  | 507          | 1,941            |   |
| Count Total    | 0                     | 308 | 658 | 210 | 0                     | 260 | 432 | 283 | 0               | 119 | 722 | 260 | 0               | 149 | 599 | 245 | 4,245        | 0                |   |
| Peak Hour      | All                   | 0   | 184 | 347 | 118                   | 0   | 141 | 227 | 147             | 0   | 72  | 397 | 138             | 0   | 76  | 319 | 138          | 2,304            | 0 |
|                | HV                    | 0   | 14  | 3   | 1                     | 0   | 2   | 5   | 1               | 0   | 3   | 11  | 0               | 0   | 4   | 12  | 10           | 66               | 0 |
|                | HV%                   | -   | 8%  | 1%  | 1%                    | -   | 1%  | 2%  | 1%              | -   | 4%  | 3%  | 0%              | -   | 5%  | 4%  | 7%           | 3%               | 0 |

Note: Two-hour count summary volumes include heavy vehicles but exclude bicycles in overall count.

| Interval Start | Heavy Vehicle Totals |    |    |    |       | Bicycles |    |    |    |       | Pedestrians (Crossing Leg) |      |       |       |       |
|----------------|----------------------|----|----|----|-------|----------|----|----|----|-------|----------------------------|------|-------|-------|-------|
|                | EB                   | WB | NB | SB | Total | EB       | WB | NB | SB | Total | East                       | West | North | South | Total |
| 4:00 PM        | 5                    | 3  | 6  | 9  | 23    | 0        | 0  | 0  | 0  | 0     | 0                          | 0    | 1     | 0     | 1     |
| 4:15 PM        | 4                    | 3  | 4  | 6  | 17    | 10       | 0  | 0  | 0  | 10    | 0                          | 0    | 1     | 1     | 2     |
| 4:30 PM        | 5                    | 2  | 3  | 5  | 15    | 0        | 0  | 0  | 0  | 0     | 0                          | 0    | 0     | 0     | 0     |
| 4:45 PM        | 4                    | 0  | 1  | 6  | 11    | 0        | 0  | 0  | 0  | 0     | 0                          | 0    | 11    | 1     | 12    |
| 5:00 PM        | 2                    | 4  | 2  | 4  | 12    | 1        | 0  | 0  | 0  | 1     | 0                          | 0    | 3     | 1     | 4     |
| 5:15 PM        | 4                    | 1  | 4  | 3  | 12    | 0        | 0  | 0  | 0  | 0     | 0                          | 0    | 0     | 0     | 0     |
| 5:30 PM        | 3                    | 0  | 5  | 3  | 11    | 0        | 0  | 0  | 0  | 0     | 0                          | 0    | 0     | 0     | 0     |
| 5:45 PM        | 2                    | 0  | 2  | 1  | 5     | 0        | 0  | 0  | 0  | 0     | 0                          | 0    | 0     | 1     | 1     |
| Count Total    | 29                   | 13 | 27 | 37 | 106   | 11       | 0  | 0  | 0  | 11    | 0                          | 0    | 16    | 4     | 20    |
| Peak Hour      | 18                   | 8  | 14 | 26 | 66    | 10       | 0  | 0  | 0  | 10    | 0                          | 0    | 13    | 2     | 15    |

## E Highland Drive @ SR-9 Arlington, WA

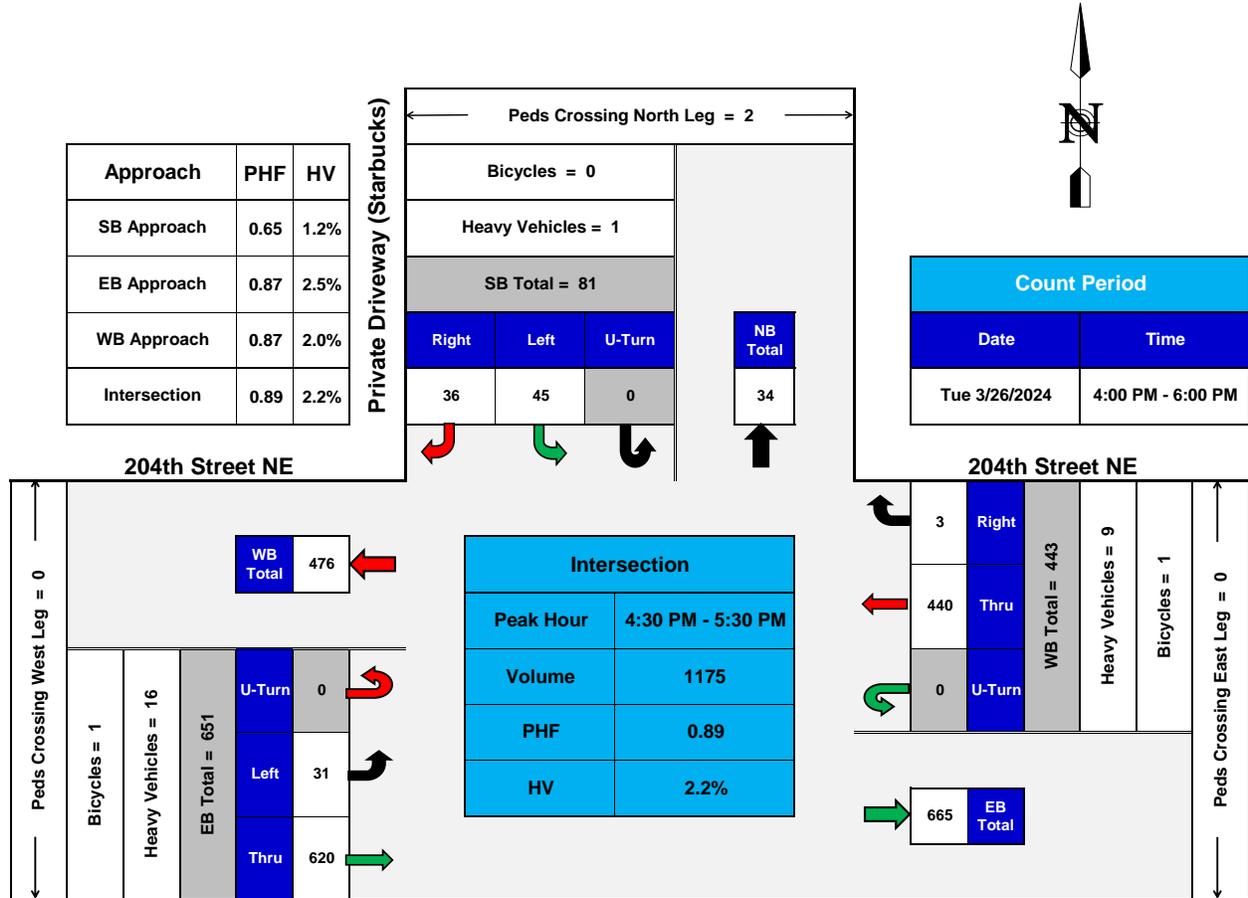


PHF = Peak Hour Factor  
HV = Heavy Vehicles

### TURNING MOVEMENTS DIAGRAM PEAK HOUR SUMMARY



**Private Driveway (Starbucks) @ 204th Street NE  
Arlington, WA**



PHF = Peak Hour Factor  
HV = Heavy Vehicles

**TURNING MOVEMENTS DIAGRAM  
PEAK HOUR SUMMARY**



## Traffic Impact Analysis

# WET RABBIT CAR WASH

Prepared for:  
Wet Rabbit

December 2023

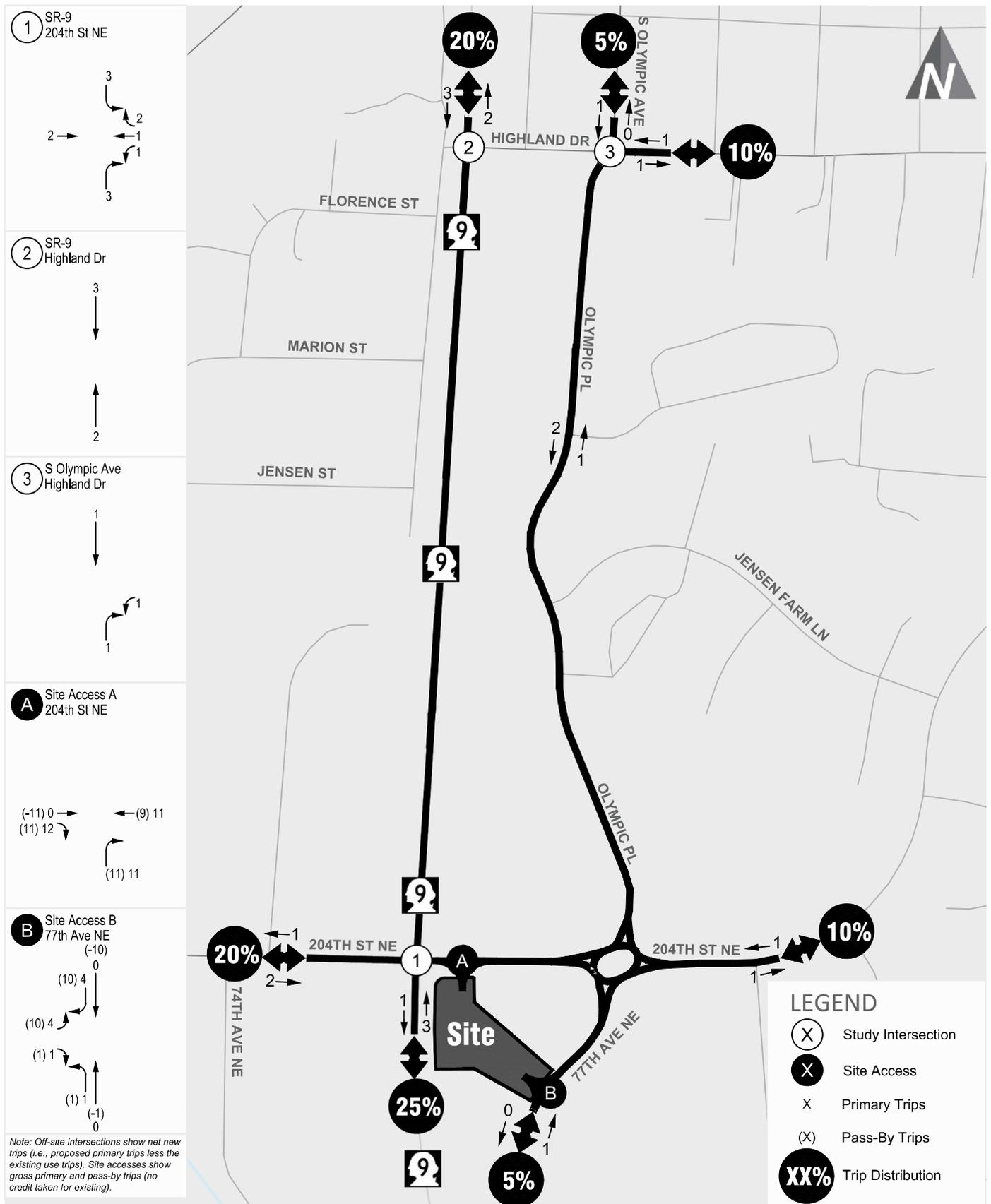
Prepared by:



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Kirkland, WA 98034  
Phone: 425-821-3665  
Fax: 425-825-8434  
[www.transpogroup.com](http://www.transpogroup.com)

1.23433.00

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Weekday PM Peak Hour Project Trip Distribution & Assignment FIGURE

1.23433.00 - Arlington Wet Rabbit

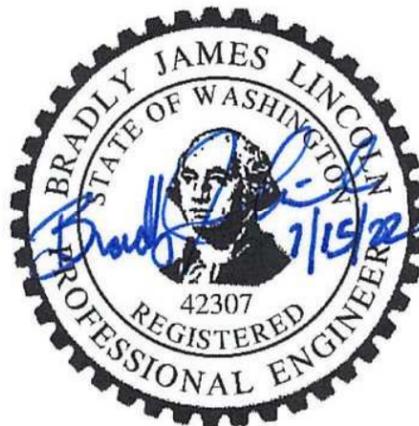
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425.339.8266

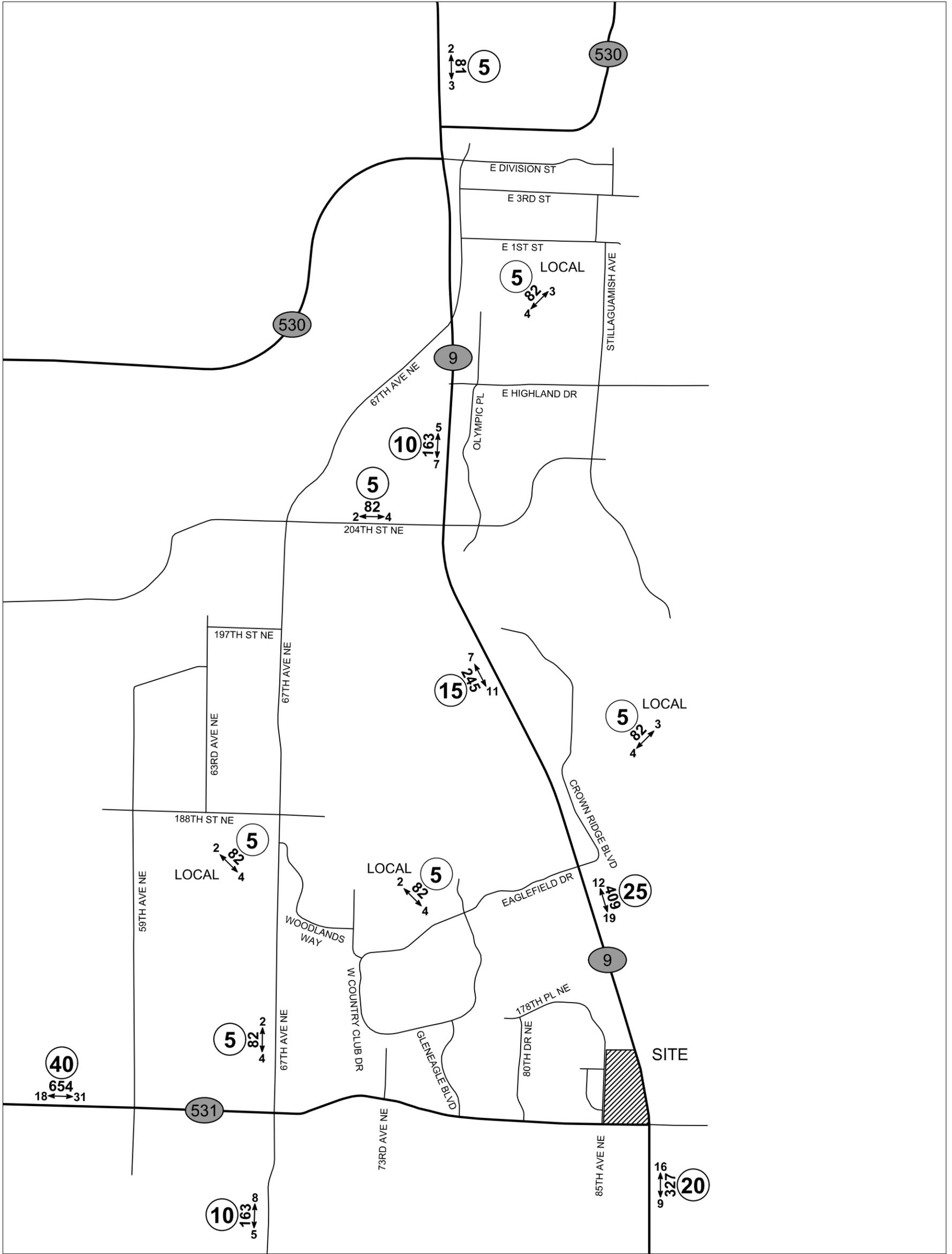
# Zahradnik Development Traffic Impact Analysis

Jurisdiction: City of Arlington

July 2022



090221216



ZAHRADNIK

CITY OF ARLINGTON

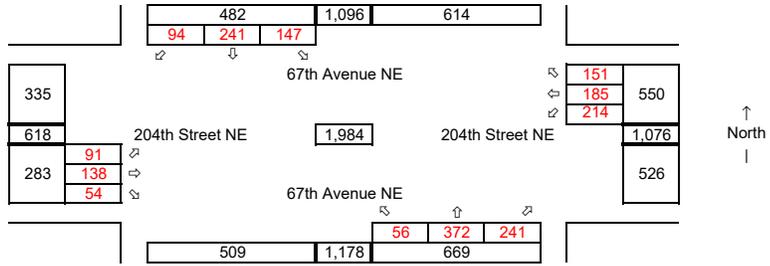
**LEGEND**

- AWDT** NEW DAILY TRAFFIC
- PM ← → PEAK** NEW PEAK-HOUR TRIPS
- (XX)** TRIP DISTRIBUTION

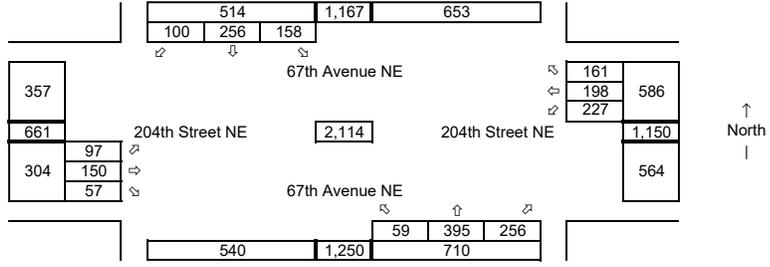
**FIGURE 3**  
 DEVELOPMENT  
 TRIP DISTRIBUTION  
 PM PEAK-HOUR

**APPENDIX C**  
**TURNING MOVEMENT CALCULATIONS**

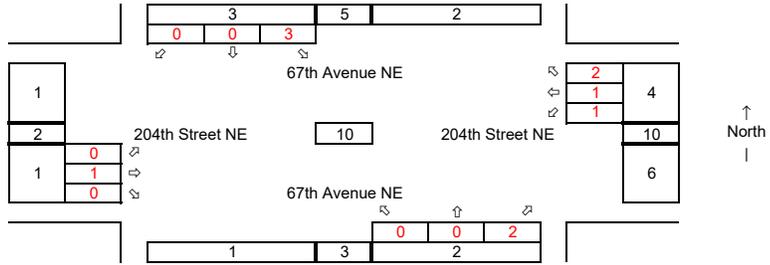
Synchro ID: 1  
**Existing**  
 Average Weekday  
 PM Peak-Hour  
 Year: 3/26/2024  
 Data Source: TDG



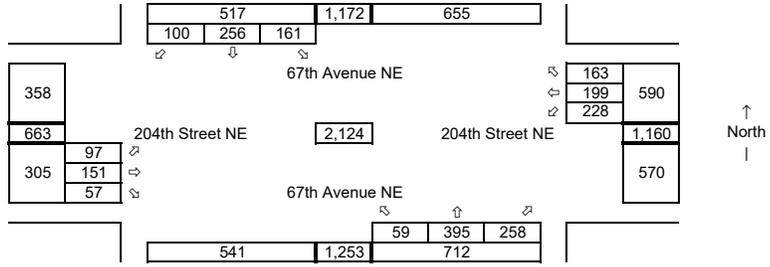
**Future without Development**  
 Average Weekday  
 PM Peak-Hour  
 Year: 2027  
 Growth Rate = 2.0%  
 Years of Growth = 3  
 Total Growth = 1.0612



**Total Development Trips**  
 Average Weekday  
 PM Peak-Hour

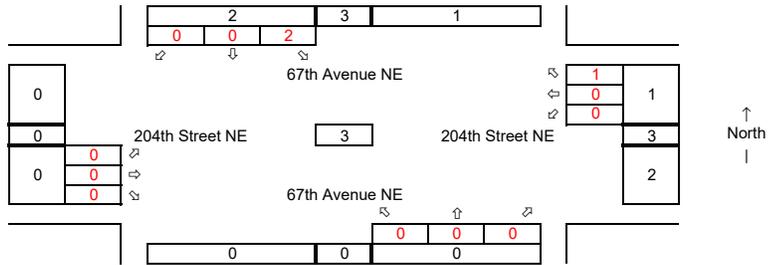


**Future with Development**  
 Average Weekday  
 PM Peak-Hour



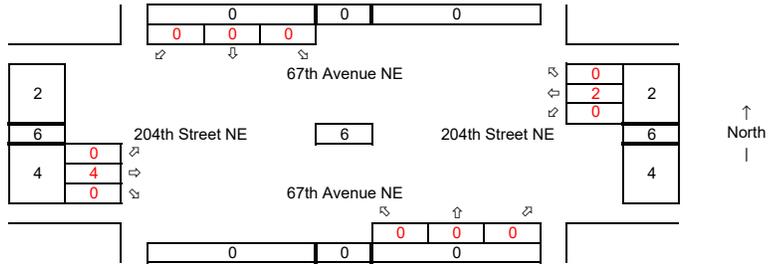
**Total Pipeline Project Trips**  
 Average Weekday  
 PM Peak-Hour

Wet Rabbit Car Wash

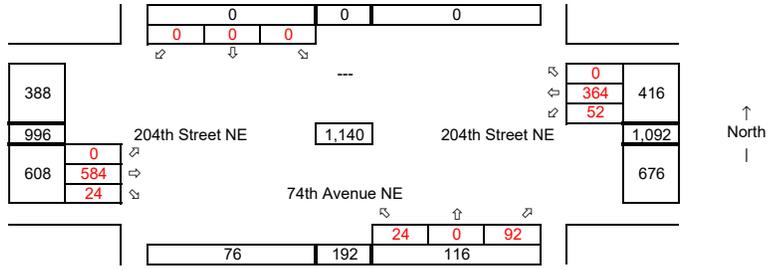


**Total Pipeline Project Trips**  
 Average Weekday  
 PM Peak-Hour

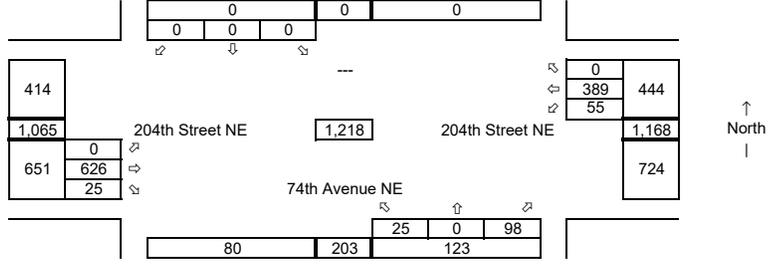
Zahradnik Development



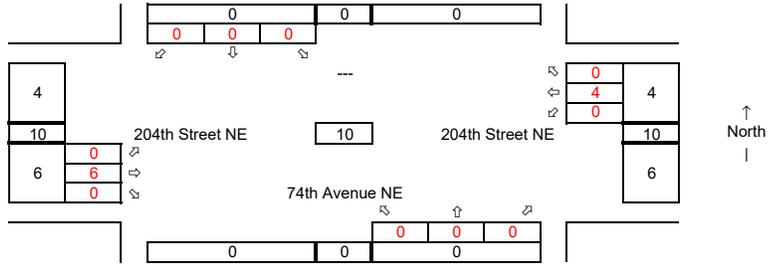
Synchro ID: 2  
**Existing**  
 Average Weekday  
 PM Peak-Hour  
 Year: **6/6/2024**  
 Data Source: **TDG**  
 Counts collected 06/06/2023  
 and grown to 2024  
 with 2.0% growth rate.  
 Two (2) WB U-turns added to  
 WB left-turns



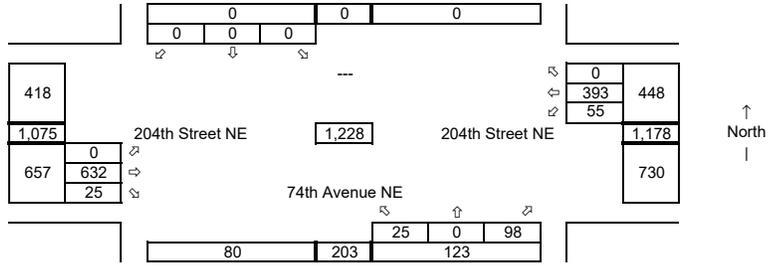
**Future without Development**  
 Average Weekday  
 PM Peak-Hour  
 Year: 2027  
 Growth Rate = 2.0%  
 Years of Growth = 3  
 Total Growth = 1.0612



**Total Development Trips**  
 Average Weekday  
 PM Peak-Hour

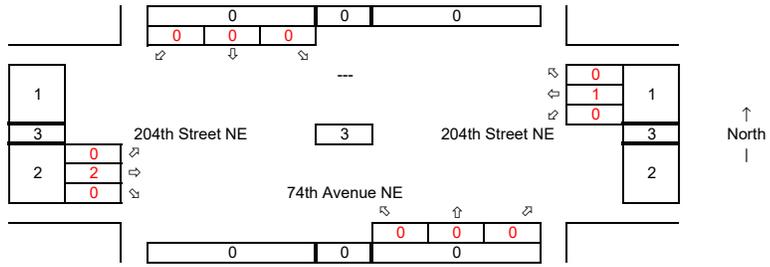


**Future with Development**  
 Average Weekday  
 PM Peak-Hour



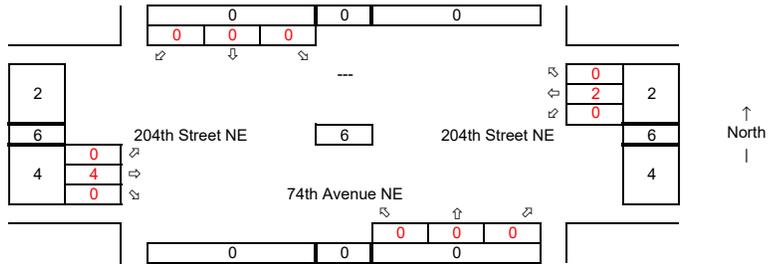
**Total Pipeline Project Trips**  
 Average Weekday  
 PM Peak-Hour

Wet Rabbit Car Wash



**Total Pipeline Project Trips**  
 Average Weekday  
 PM Peak-Hour

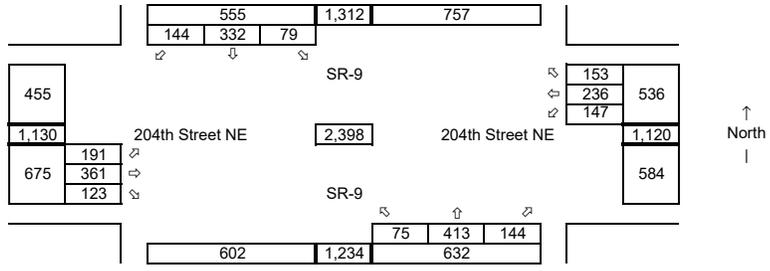
Zahradnik Development



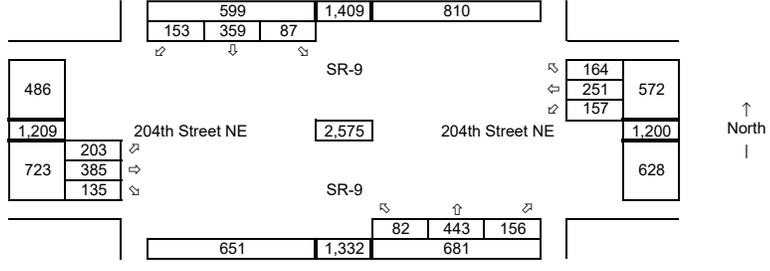
3 SR-9 @ 204th Ave NE

Weekday PM Peak-Hour

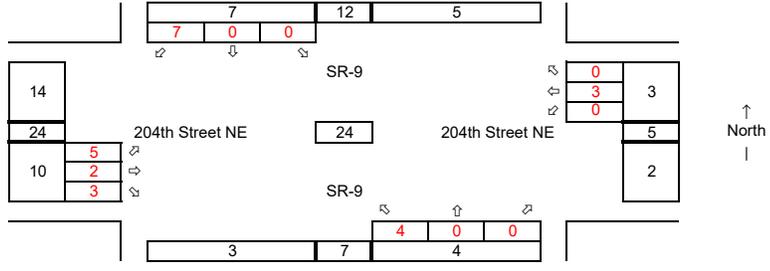
Synchro ID: 3  
**Existing**  
 Average Weekday  
 PM Peak-Hour  
 Year: **6/2/2024**  
 Data Source: **IDAX**  
 Counts collected 06/02/2022  
 and grown to 2024  
 with 2.0% growth rate.



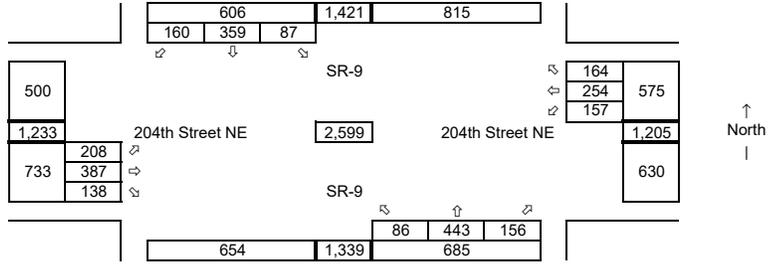
**Future without Development**  
 Average Weekday  
 PM Peak-Hour  
 Year: 2027  
 Growth Rate = 2.0%  
 Years of Growth = 3  
 Total Growth = 1.0612



**Total Development Trips**  
 Average Weekday  
 PM Peak-Hour

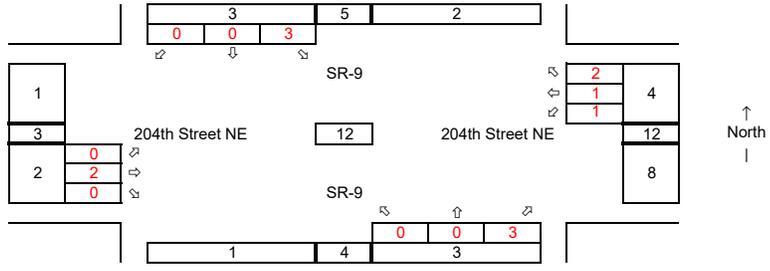


**Future with Development**  
 Average Weekday  
 PM Peak-Hour



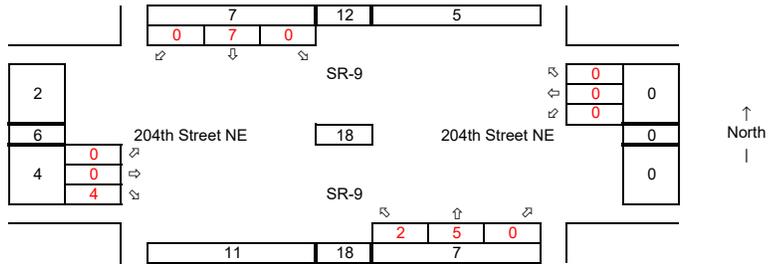
**Total Pipeline Project Trips**  
 Average Weekday  
 PM Peak-Hour

Wet Rabbit Car Wash



**Total Pipeline Project Trips**  
 Average Weekday  
 PM Peak-Hour

Zahradnik Development

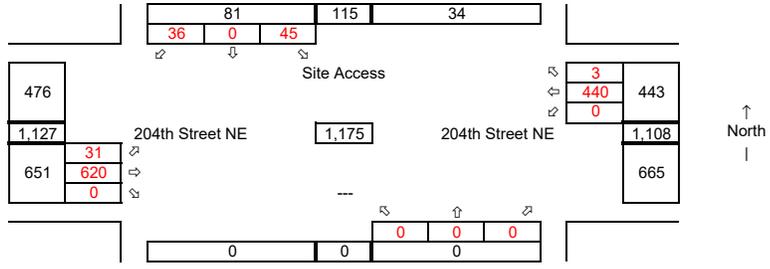




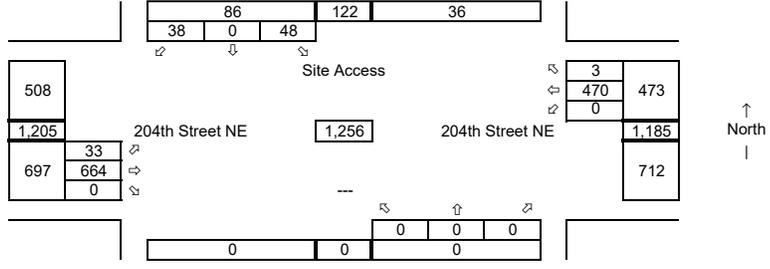
5 Site Access @ 204th St NE

Weekday PM Peak-Hour

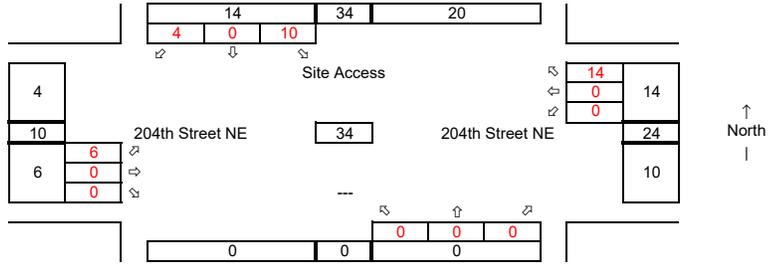
Synchro ID: 5  
**Existing**  
 Average Weekday  
 PM Peak-Hour  
 Year: 3/26/2024  
 Data Source: TDG



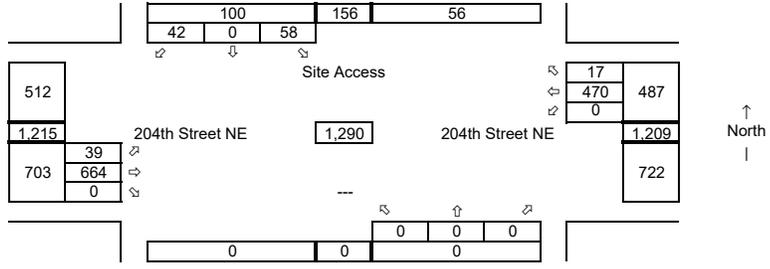
**Future without Development**  
 Average Weekday  
 PM Peak-Hour  
 Year: 2027  
 Growth Rate = 2.0%  
 Years of Growth = 3  
 Total Growth = 1.0612



**Total Development Trips**  
 Average Weekday  
 PM Peak-Hour

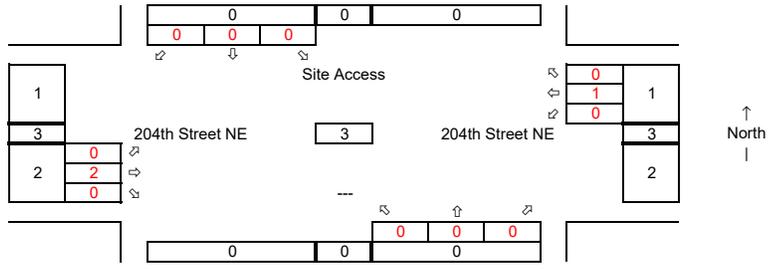


**Future with Development**  
 Average Weekday  
 PM Peak-Hour



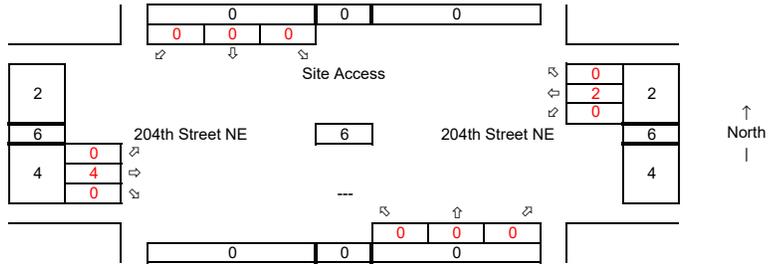
**Pipeline Project Trips**  
 Average Weekday  
 PM Peak-Hour

Wet Rabbit Car Wash



**Pipeline Project Trips**  
 Average Weekday  
 PM Peak-Hour

Zahradnik Development



**APPENDIX D**  
**LEVEL OF SERVICE ANALYSIS**

Lanes, Volumes, Timings  
1: 204th Street NE

2024 EXISTING CONDITIONS

| Lane Group              | EBL   | EBT   | EBR  | WBL   | WBT   | WBR  | NBL   | NBT   | NBR   | SBL   | SBT   | SBR  |
|-------------------------|-------|-------|------|-------|-------|------|-------|-------|-------|-------|-------|------|
| Lane Configurations     |       |       |      |       |       |      |       |       |       |       |       |      |
| Traffic Volume (vph)    | 91    | 138   | 54   | 214   | 185   | 151  | 56    | 372   | 241   | 147   | 241   | 94   |
| Future Volume (vph)     | 91    | 138   | 54   | 214   | 185   | 151  | 56    | 372   | 241   | 147   | 241   | 94   |
| Ideal Flow (vphpl)      | 1900  | 1900  | 1900 | 1900  | 1900  | 1900 | 1900  | 1900  | 1900  | 1900  | 1900  | 1900 |
| Storage Length (ft)     | 125   |       | 0    | 125   |       | 0    | 200   |       | 125   | 100   |       | 0    |
| Storage Lanes           | 1     |       | 0    | 1     |       | 0    | 1     |       | 1     | 1     |       | 0    |
| Taper Length (ft)       | 25    |       |      | 25    |       |      | 25    |       |       | 25    |       |      |
| Lane Util. Factor       | 1.00  | 1.00  | 1.00 | 1.00  | 1.00  | 1.00 | 1.00  | 1.00  | 1.00  | 1.00  | 1.00  | 1.00 |
| Frt                     |       | 0.958 |      |       | 0.933 |      |       |       | 0.850 |       | 0.958 |      |
| Flt Protected           | 0.950 |       |      | 0.950 |       |      | 0.950 |       |       | 0.950 |       |      |
| Satd. Flow (prot)       | 1770  | 1785  | 0    | 1770  | 1738  | 0    | 1770  | 1863  | 1583  | 1770  | 1785  | 0    |
| Flt Permitted           | 0.321 |       |      | 0.456 |       |      | 0.416 |       |       | 0.264 |       |      |
| Satd. Flow (perm)       | 598   | 1785  | 0    | 849   | 1738  | 0    | 775   | 1863  | 1583  | 492   | 1785  | 0    |
| Right Turn on Red       |       |       | Yes  |       |       | Yes  |       |       | Yes   |       |       | Yes  |
| Satd. Flow (RTOR)       |       | 18    |      |       | 37    |      |       |       | 214   |       |       | 21   |
| Link Speed (mph)        |       | 35    |      |       | 35    |      |       | 35    |       |       |       | 35   |
| Link Distance (ft)      |       | 1143  |      |       | 2192  |      |       | 650   |       |       |       | 1110 |
| Travel Time (s)         |       | 22.3  |      |       | 42.7  |      |       | 12.7  |       |       |       | 21.6 |
| Peak Hour Factor        | 0.92  | 0.92  | 0.92 | 0.92  | 0.92  | 0.92 | 0.92  | 0.92  | 0.92  | 0.92  | 0.92  | 0.92 |
| Shared Lane Traffic (%) |       |       |      |       |       |      |       |       |       |       |       |      |
| Lane Group Flow (vph)   | 99    | 209   | 0    | 233   | 365   | 0    | 61    | 404   | 262   | 160   | 364   | 0    |
| Turn Type               | pm+pt | NA    |      | pm+pt | NA    |      | pm+pt | NA    | Perm  | pm+pt | NA    |      |
| Protected Phases        | 7     | 4     |      | 3     | 8     |      | 5     | 2     |       | 1     | 6     |      |
| Permitted Phases        | 4     |       |      | 8     |       |      | 2     |       | 2     | 6     |       |      |
| Detector Phase          | 7     | 4     |      | 3     | 8     |      | 5     | 2     | 2     | 1     | 6     |      |
| Switch Phase            |       |       |      |       |       |      |       |       |       |       |       |      |
| Minimum Initial (s)     | 5.0   | 5.0   |      | 5.0   | 5.0   |      | 5.0   | 10.0  | 10.0  | 5.0   | 10.0  |      |
| Minimum Split (s)       | 10.2  | 38.2  |      | 10.2  | 34.2  |      | 10.5  | 35.5  | 35.5  | 10.5  | 28.5  |      |
| Total Split (s)         | 15.0  | 30.0  |      | 15.0  | 30.0  |      | 15.0  | 45.0  | 45.0  | 15.0  | 45.0  |      |
| Total Split (%)         | 14.3% | 28.6% |      | 14.3% | 28.6% |      | 14.3% | 42.9% | 42.9% | 14.3% | 42.9% |      |
| Yellow Time (s)         | 4.0   | 4.0   |      | 4.0   | 4.0   |      | 4.5   | 4.5   | 4.5   | 4.5   | 4.5   |      |
| All-Red Time (s)        | 1.2   | 1.2   |      | 1.2   | 1.2   |      | 1.0   | 1.0   | 1.0   | 1.0   | 1.0   |      |
| 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)     | 5.2   | 5.2   |      | 5.2   | 5.2   |      | 5.5   | 5.5   | 5.5   | 5.5   | 5.5   |      |
| Lead/Lag                | Lead  | Lag   |      | Lead  | Lag   |      | Lead  | Lag   | Lag   | Lead  | Lag   |      |
| Lead-Lag Optimize?      | Yes   | Yes   |      | Yes   | Yes   |      | Yes   | Yes   | Yes   | Yes   | Yes   |      |
| Recall Mode             | None  | None  |      | None  | None  |      | None  | None  | None  | None  | None  |      |
| Act Effect Green (s)    | 29.1  | 20.0  |      | 31.6  | 24.3  |      | 34.7  | 26.5  | 26.5  | 38.1  | 31.0  |      |
| Actuated g/C Ratio      | 0.33  | 0.23  |      | 0.36  | 0.28  |      | 0.39  | 0.30  | 0.30  | 0.43  | 0.35  |      |
| v/c Ratio               | 0.31  | 0.50  |      | 0.57  | 0.72  |      | 0.15  | 0.72  | 0.42  | 0.46  | 0.57  |      |
| Control Delay           | 21.6  | 32.6  |      | 26.9  | 38.5  |      | 14.4  | 35.7  | 7.9   | 18.6  | 27.7  |      |
| Queue Delay             | 0.0   | 0.0   |      | 0.0   | 0.0   |      | 0.0   | 0.0   | 0.0   | 0.0   | 0.0   |      |
| Total Delay             | 21.6  | 32.6  |      | 26.9  | 38.5  |      | 14.4  | 35.7  | 7.9   | 18.6  | 27.7  |      |
| LOS                     | C     | C     |      | C     | D     |      | B     | D     | A     | B     | C     |      |
| Approach Delay          |       | 29.1  |      |       | 34.0  |      |       | 23.9  |       |       | 25.0  |      |
| Approach LOS            |       | C     |      |       | C     |      |       | C     |       |       | C     |      |
| Queue Length 50th (ft)  | 34    | 92    |      | 87    | 177   |      | 19    | 213   | 20    | 54    | 173   |      |
| Queue Length 95th (ft)  | 80    | 183   |      | 174   | #366  |      | 41    | 313   | 76    | 92    | 268   |      |
| Internal Link Dist (ft) |       | 1063  |      |       | 2112  |      |       | 570   |       |       | 1030  |      |

Lanes, Volumes, Timings  
1: 204th Street NE

2024 EXISTING CONDITIONS

| Lane Group             | EBL  | EBT  | EBR | WBL  | WBT  | WBR | NBL  | NBT  | NBR  | SBL  | SBT  | SBR |
|------------------------|------|------|-----|------|------|-----|------|------|------|------|------|-----|
| Turn Bay Length (ft)   | 125  |      |     | 125  |      |     | 200  |      | 125  | 100  |      |     |
| Base Capacity (vph)    | 340  | 533  |     | 411  | 533  |     | 431  | 865  | 850  | 356  | 840  |     |
| Starvation Cap Reductn | 0    | 0    |     | 0    | 0    |     | 0    | 0    | 0    | 0    | 0    |     |
| Spillback Cap Reductn  | 0    | 0    |     | 0    | 0    |     | 0    | 0    | 0    | 0    | 0    |     |
| Storage Cap Reductn    | 0    | 0    |     | 0    | 0    |     | 0    | 0    | 0    | 0    | 0    |     |
| Reduced v/c Ratio      | 0.29 | 0.39 |     | 0.57 | 0.68 |     | 0.14 | 0.47 | 0.31 | 0.45 | 0.43 |     |

**Intersection Summary**

Area Type: Other

Cycle Length: 105

Actuated Cycle Length: 87.9

Natural Cycle: 95

Control Type: Actuated-Uncoordinated

Maximum v/c Ratio: 0.72

Intersection Signal Delay: 27.7      Intersection LOS: C

Intersection Capacity Utilization 69.6%      ICU Level of Service C

Analysis Period (min) 15

# 95th percentile volume exceeds capacity, queue may be longer.  
Queue shown is maximum after two cycles.

Splits and Phases: 1: 204th Street NE



HCM 6th TWSC  
2: 74th Avenue NE & 204th Street NE

2024 EXISTING CONDITIONS

| Intersection             |      |      |      |      |      |      |
|--------------------------|------|------|------|------|------|------|
| Int Delay, s/veh         | 2    |      |      |      |      |      |
| Movement                 | EBT  | EBR  | WBL  | WBT  | NBL  | NBR  |
| Lane Configurations      | ↔    |      | ↔    | ↑    | ↔    | ↔    |
| Traffic Vol, veh/h       | 573  | 24   | 51   | 357  | 24   | 90   |
| Future Vol, veh/h        | 573  | 24   | 51   | 357  | 24   | 90   |
| Conflicting Peds, #/hr   | 0    | 0    | 0    | 0    | 0    | 0    |
| Sign Control             | Free | Free | Free | Free | Stop | Stop |
| RT Channelized           | -    | None | -    | None | -    | None |
| Storage Length           | -    | -    | 25   | -    | 75   | 0    |
| Veh in Median Storage, # | 0    | -    | -    | 0    | 0    | -    |
| Grade, %                 | 0    | -    | -    | 0    | 0    | -    |
| Peak Hour Factor         | 87   | 87   | 87   | 87   | 87   | 87   |
| Heavy Vehicles, %        | 3    | 3    | 3    | 3    | 3    | 3    |
| Mvmt Flow                | 659  | 28   | 59   | 410  | 28   | 103  |

| Major/Minor          | Major1 | Major2 | Minor1 |   |             |
|----------------------|--------|--------|--------|---|-------------|
| Conflicting Flow All | 0      | 0      | 687    | 0 | 1201 673    |
| Stage 1              | -      | -      | -      | - | 673 -       |
| Stage 2              | -      | -      | -      | - | 528 -       |
| Critical Hdwy        | -      | -      | 4.13   | - | 6.43 6.23   |
| Critical Hdwy Stg 1  | -      | -      | -      | - | 5.43 -      |
| Critical Hdwy Stg 2  | -      | -      | -      | - | 5.43 -      |
| Follow-up Hdwy       | -      | -      | 2.227  | - | 3.527 3.327 |
| Pot Cap-1 Maneuver   | -      | -      | 902    | - | 203 453     |
| Stage 1              | -      | -      | -      | - | 505 -       |
| Stage 2              | -      | -      | -      | - | 590 -       |
| Platoon blocked, %   | -      | -      | -      | - | -           |
| Mov Cap-1 Maneuver   | -      | -      | 902    | - | 190 453     |
| Mov Cap-2 Maneuver   | -      | -      | -      | - | 327 -       |
| Stage 1              | -      | -      | -      | - | 505 -       |
| Stage 2              | -      | -      | -      | - | 552 -       |

| Approach             | EB | WB  | NB   |
|----------------------|----|-----|------|
| HCM Control Delay, s | 0  | 1.2 | 15.7 |
| HCM LOS              |    |     | C    |

| Minor Lane/Major Mvmt | NBLn1 | NBLn2 | EBT | EBR | WBL   | WBT |
|-----------------------|-------|-------|-----|-----|-------|-----|
| Capacity (veh/h)      | 327   | 453   | -   | -   | 902   | -   |
| HCM Lane V/C Ratio    | 0.084 | 0.228 | -   | -   | 0.065 | -   |
| HCM Control Delay (s) | 17    | 15.3  | -   | -   | 9.3   | -   |
| HCM Lane LOS          | C     | C     | -   | -   | A     | -   |
| HCM 95th %tile Q(veh) | 0.3   | 0.9   | -   | -   | 0.2   | -   |

Lanes, Volumes, Timings  
3: SR-9 & 204th Street NE

2024 EXISTING CONDITIONS

|                         |  |  |  |  |  |  |   |  |  |  |  |  |
|-------------------------|---|---|---|---|---|---|---|---|---|---|---|---|
| Lane Group              | EBL   | EBT   | EBR   | WBL   | WBT   | WBR   | NBL   | NBT   | NBR   | SBL   | SBT   | SBR   |
| Lane Configurations     |  |  |  |  |  |  |  |  |  |  |  |  |
| Traffic Volume (vph)    | 191   | 361   | 123   | 147   | 236   | 153   | 75  | 413   | 144   | 79  | 332   | 144   |
| Future Volume (vph)     | 191   | 361   | 123   | 147   | 236   | 153   | 75  | 413   | 144   | 79  | 332   | 144   |
| Ideal Flow (vphpl)      | 1900  | 1900  | 1900  | 1900  | 1900  | 1900  | 1900  | 1900  | 1900  | 1900  | 1900  | 1900  |
| Storage Length (ft)     | 300   |   | 200   | 150   |   | 325   | 200   |   | 0   | 250   |   | 400   |
| Storage Lanes           | 1   |   | 1   | 1   |   | 1   | 1   |   | 0   | 1   |   | 1   |
| Taper Length (ft)       | 25  |   |   | 25  |   |   | 25  |   |   | 25  |   |   |
| Lane Util. Factor       | 1.00  | 1.00  | 1.00  | 1.00  | 1.00  | 1.00  | 1.00  | 1.00  | 1.00  | 1.00  | 1.00  | 1.00  |
| Frt                     |   |   | 0.850   |   |   | 0.850   |   | 0.961   |   |   |   | 0.850   |
| Flt Protected           | 0.950   |   |   | 0.950   |   |   | 0.950   |   |   | 0.950   |   |   |
| Satd. Flow (prot)       | 1770  | 1863  | 1583  | 1770  | 1863  | 1583  | 1770  | 1790  | 0   | 1770  | 1863  | 1583  |
| Flt Permitted           | 0.301   |   |   | 0.169   |   |   | 0.950   |   |   | 0.950   |   |   |
| Satd. Flow (perm)       | 561   | 1863  | 1583  | 315   | 1863  | 1583  | 1770  | 1790  | 0   | 1770  | 1863  | 1583  |
| Right Turn on Red       |   |   | Yes   |   |   | Yes   |   |   | Yes   |   |   | Yes   |
| Satd. Flow (RTOR)       |   |   | 111   |   |   | 166   |   | 15  |   |   |   | 157   |
| Link Speed (mph)        |   | 35  |   |   | 35  |   |   | 55  |   |   |   | 45  |
| Link Distance (ft)      |   | 450   |   |   | 630   |   |   | 637   |   |   |   | 2541  |
| Travel Time (s)         |   | 8.8   |   |   | 12.3  |   |   | 7.9   |   |   |   | 38.5  |
| Peak Hour Factor        | 0.92  | 0.92  | 0.92  | 0.92  | 0.92  | 0.92  | 0.92  | 0.92  | 0.92  | 0.92  | 0.92  | 0.92  |
| Shared Lane Traffic (%) |   |   |   |   |   |   |   |   |   |   |   |   |
| Lane Group Flow (vph)   | 208   | 392   | 134   | 160   | 257   | 166   | 82  | 606   | 0   | 86  | 361   | 157   |
| Turn Type               | pm+pt   | NA  | Perm  | pm+pt   | NA  | Perm  | Prot  | NA  |   | Prot  | NA  | Perm  |
| Protected Phases        | 7   | 4   |   | 3   | 8   |   | 5   | 2   |   | 1   | 6   |   |
| Permitted Phases        | 4   |   | 4   | 8   |   | 8   |   |   |   |   |   | 6   |
| Detector Phase          | 7   | 4   | 4   | 3   | 8   | 8   | 5   | 2   |   | 1   | 6   | 6   |
| Switch Phase            |   |   |   |   |   |   |   |   |   |   |   |   |
| Minimum Initial (s)     | 5.0   | 7.0   | 7.0   | 5.0   | 7.0   | 7.0   | 5.0   | 10.0  |   | 5.0   | 10.0  | 10.0  |
| Minimum Split (s)       | 10.5  | 37.1  | 37.1  | 10.5  | 38.9  | 38.9  | 10.5  | 41.7  |   | 29.5  | 42.7  | 42.7  |
| Total Split (s)         | 30.0  | 30.0  | 30.0  | 30.0  | 30.0  | 30.0  | 20.0  | 65.0  |   | 20.0  | 65.0  | 65.0  |
| Total Split (%)         | 20.7%   | 20.7%   | 20.7%   | 20.7%   | 20.7%   | 20.7%   | 13.8%   | 44.8%   |   | 13.8%   | 44.8%   | 44.8%   |
| Yellow Time (s)         | 3.5   | 3.1   | 3.1   | 3.5   | 3.9   | 3.9   | 3.5   | 4.7   |   | 3.5   | 4.7   | 4.7   |
| All-Red Time (s)        | 2.0   | 2.0   | 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   | 0.0   | 0.0   |
| Total Lost Time (s)     | 5.5   | 5.1   | 5.1   | 5.5   | 5.9   | 5.9   | 5.5   | 6.7   |   | 5.5   | 6.7   | 6.7   |
| Lead/Lag                | Lead  | Lag   | Lag   | Lead  | Lag   | Lag   | Lead  | Lag   |   | Lead  | Lag   | Lag   |
| Lead-Lag Optimize?      | Yes   | Yes   |   | Yes   | Yes   | Yes   |
| Recall Mode             | None  | None  |   | None  | None  | None  |
| Act Effect Green (s)    | 44.0  | 27.8  | 27.8  | 37.5  | 23.7  | 23.7  | 10.9  | 45.9  |   | 11.1  | 49.3  | 49.3  |
| Actuated g/C Ratio      | 0.36  | 0.23  | 0.23  | 0.31  | 0.19  | 0.19  | 0.09  | 0.38  |   | 0.09  | 0.41  | 0.41  |
| v/c Ratio               | 0.57  | 0.92  | 0.30  | 0.62  | 0.71  | 0.38  | 0.52  | 0.89  |   | 0.53  | 0.48  | 0.21  |
| Control Delay           | 35.2  | 76.2  | 14.3  | 40.6  | 61.2  | 10.0  | 69.5  | 51.0  |   | 69.8  | 30.9  | 4.6   |
| Queue Delay             | 0.0   | 0.0   | 0.0   | 0.0   | 0.0   | 0.0   | 0.0   | 0.0   |   | 0.0   | 0.0   | 0.0   |
| Total Delay             | 35.2  | 76.2  | 14.3  | 40.6  | 61.2  | 10.0  | 69.5  | 51.0  |   | 69.8  | 30.9  | 4.6   |
| LOS                     | D   | E   | B   | D   | E   | A   | E   | D   |   | E   | C   | A   |
| Approach Delay          |   | 53.3  |   |   | 41.0  |   |   | 53.2  |   |   |   | 29.6  |
| Approach LOS            |   | D   |   |   | D   |   |   | D   |   |   |   | C   |
| Queue Length 50th (ft)  | 117   | 308   | 15  | 87  | 195   | 0   | 64  | 435   |   | 67  | 217   | 0   |
| Queue Length 95th (ft)  | 206   | #614  | 78  | 164   | #380  | 66  | 132   | 671   |   | 138   | 347   | 45  |
| Internal Link Dist (ft) |   | 370   |   |   | 550   |   |   | 557   |   |   |   | 2461  |

Lanes, Volumes, Timings  
3: SR-9 & 204th Street NE

2024 EXISTING CONDITIONS



| Lane Group             | EBL  | EBT  | EBR  | WBL  | WBT  | WBR  | NBL  | NBT  | NBR | SBL  | SBT  | SBR  |
|------------------------|------|------|------|------|------|------|------|------|-----|------|------|------|
| Turn Bay Length (ft)   | 300  |      | 200  | 150  |      | 325  | 200  |      |     | 250  |      | 400  |
| Base Capacity (vph)    | 463  | 425  | 447  | 419  | 380  | 455  | 217  | 891  |     | 217  | 921  | 861  |
| Starvation Cap Reductn | 0    | 0    | 0    | 0    | 0    | 0    | 0    | 0    |     | 0    | 0    | 0    |
| Spillback Cap Reductn  | 0    | 0    | 0    | 0    | 0    | 0    | 0    | 0    |     | 0    | 0    | 0    |
| Storage Cap Reductn    | 0    | 0    | 0    | 0    | 0    | 0    | 0    | 0    |     | 0    | 0    | 0    |
| Reduced v/c Ratio      | 0.45 | 0.92 | 0.30 | 0.38 | 0.68 | 0.36 | 0.38 | 0.68 |     | 0.40 | 0.39 | 0.18 |

Intersection Summary

Area Type: Other  
 Cycle Length: 145  
 Actuated Cycle Length: 121.6  
 Natural Cycle: 125  
 Control Type: Actuated-Uncoordinated  
 Maximum v/c Ratio: 0.92  
 Intersection Signal Delay: 45.0  
 Intersection LOS: D  
 Intersection Capacity Utilization 81.0%  
 ICU Level of Service D  
 Analysis Period (min) 15  
 # 95th percentile volume exceeds capacity, queue may be longer.  
 Queue shown is maximum after two cycles.

Splits and Phases: 3: SR-9 & 204th Street NE

|      |      |      |      |
|------|------|------|------|
| Ø1   | Ø2   | Ø3   | Ø4   |
| 20 s | 65 s | 30 s | 30 s |
| Ø5   | Ø6   | Ø7   | Ø8   |
| 20 s | 65 s | 30 s | 30 s |

Lanes, Volumes, Timings  
4: SR-9 & Hazel Street/E Highland Drive

2024 EXISTING CONDITIONS

|                         |  |  |  |  |  |  |   |  |  |  |  |  |
|-------------------------|---|---|---|---|---|---|---|---|---|---|---|---|
| Lane Group              | EBL   | EBT   | EBR   | WBL   | WBT   | WBR   | NBL   | NBT   | NBR   | SBL   | SBT   | SBR   |
| Lane Configurations     |   |  |   |   |  |   |  |  |   |  |  |   |
| Traffic Volume (vph)    | 14  | 6   | 15  | 142   | 9   | 97  | 17  | 485   | 112   | 100   | 359   | 19  |
| Future Volume (vph)     | 14  | 6   | 15  | 142   | 9   | 97  | 17  | 485   | 112   | 100   | 359   | 19  |
| Ideal Flow (vphpl)      | 1900  | 1900  | 1900  | 1900  | 1900  | 1900  | 1900  | 1900  | 1900  | 1900  | 1900  | 1900  |
| Storage Length (ft)     | 0   |   | 0   | 0   |   | 0   | 300   |   | 0   | 275   |   | 0   |
| Storage Lanes           | 0   |   | 0   | 0   |   | 0   | 1   |   | 0   | 1   |   | 0   |
| Taper Length (ft)       | 25  |   |   | 25  |   |   | 25  |   |   | 25  |   |   |
| Lane Util. Factor       | 1.00  | 1.00  | 1.00  | 1.00  | 1.00  | 1.00  | 1.00  | 1.00  | 1.00  | 1.00  | 1.00  | 1.00  |
| Frt                     |   | 0.943   |   |   | 0.947   |   |   | 0.972   |   |   | 0.992   |   |
| Flt Protected           |   | 0.981   |   |   | 0.972   |   | 0.950   |   |   | 0.950   |   |   |
| Satd. Flow (prot)       | 0   | 1723  | 0   | 0   | 1715  | 0   | 1770  | 1811  | 0   | 1770  | 1848  | 0   |
| Flt Permitted           |   | 0.873   |   |   | 0.802   |   | 0.504   |   |   | 0.200   |   |   |
| Satd. Flow (perm)       | 0   | 1533  | 0   | 0   | 1415  | 0   | 939   | 1811  | 0   | 373   | 1848  | 0   |
| Right Turn on Red       |   |   | Yes   |   |   | Yes   |   |   | Yes   |   |   | Yes   |
| Satd. Flow (RTOR)       |   | 16  |   |   | 24  |   |   | 12  |   |   | 3   |   |
| Link Speed (mph)        |   | 25  |   |   | 25  |   |   | 45  |   |   | 30  |   |
| Link Distance (ft)      |   | 431   |   |   | 1082  |   |   | 2541  |   |   | 825   |   |
| Travel Time (s)         |   | 11.8  |   |   | 29.5  |   |   | 38.5  |   |   | 18.8  |   |
| Peak Hour Factor        | 0.92  | 0.92  | 0.92  | 0.92  | 0.92  | 0.92  | 0.92  | 0.92  | 0.92  | 0.92  | 0.92  | 0.92  |
| Shared Lane Traffic (%) |   |   |   |   |   |   |   |   |   |   |   |   |
| Lane Group Flow (vph)   | 0   | 38  | 0   | 0   | 269   | 0   | 18  | 649   | 0   | 109   | 411   | 0   |
| Turn Type               | Perm  | NA  |   | Perm  | NA  |   | pm+pt   | NA  |   | pm+pt   | NA  |   |
| Protected Phases        |   | 4   |   |   | 8   |   | 5   | 2   |   | 1   | 6   |   |
| Permitted Phases        | 4   |   |   | 8   |   |   | 2   |   |   | 6   |   |   |
| Detector Phase          | 4   | 4   |   | 8   | 8   |   | 5   | 2   |   | 1   | 6   |   |
| Switch Phase            |   |   |   |   |   |   |   |   |   |   |   |   |
| Minimum Initial (s)     | 5.0   | 5.0   |   | 5.0   | 5.0   |   | 3.0   | 7.0   |   | 3.0   | 7.0   |   |
| Minimum Split (s)       | 33.5  | 33.5  |   | 22.5  | 22.5  |   | 9.5   | 31.7  |   | 9.5   | 22.5  |   |
| Total Split (s)         | 35.0  | 35.0  |   | 35.0  | 35.0  |   | 25.0  | 65.0  |   | 25.0  | 65.0  |   |
| Total Split (%)         | 28.0%   | 28.0%   |   | 28.0%   | 28.0%   |   | 20.0%   | 52.0%   |   | 20.0%   | 52.0%   |   |
| Yellow Time (s)         | 3.1   | 3.1   |   | 3.1   | 3.1   |   | 3.5   | 4.7   |   | 3.5   | 4.7   |   |
| All-Red Time (s)        | 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   |   |
| Total Lost Time (s)     |   | 5.1   |   |   | 5.1   |   | 5.5   | 6.7   |   | 5.5   | 6.7   |   |
| Lead/Lag                |   |   |   |   |   |   | Lead  | Lag   |   | Lead  | Lag   |   |
| Lead-Lag Optimize?      |   |   |   |   |   |   | Yes   | Yes   |   | Yes   | Yes   |   |
| Recall Mode             | None  | None  |   | None  | None  |   | None  | None  |   | None  | None  |   |
| Act Effect Green (s)    |   | 21.5  |   |   | 21.5  |   | 42.9  | 37.1  |   | 47.8  | 43.5  |   |
| Actuated g/C Ratio      |   | 0.26  |   |   | 0.26  |   | 0.52  | 0.45  |   | 0.58  | 0.53  |   |
| v/c Ratio               |   | 0.09  |   |   | 0.69  |   | 0.03  | 0.79  |   | 0.30  | 0.42  |   |
| Control Delay           |   | 19.9  |   |   | 38.7  |   | 7.6   | 28.0  |   | 9.6   | 14.4  |   |
| Queue Delay             |   | 0.0   |   |   | 0.0   |   | 0.0   | 0.0   |   | 0.0   | 0.0   |   |
| Total Delay             |   | 19.9  |   |   | 38.7  |   | 7.6   | 28.0  |   | 9.6   | 14.4  |   |
| LOS                     |   | B   |   |   | D   |   | A   | C   |   | A   | B   |   |
| Approach Delay          |   | 19.9  |   |   | 38.7  |   |   | 27.5  |   |   | 13.4  |   |
| Approach LOS            |   | B   |   |   | D   |   |   | C   |   |   | B   |   |
| Queue Length 50th (ft)  |   | 9   |   |   | 116   |   | 3   | 281   |   | 21  | 100   |   |
| Queue Length 95th (ft)  |   | 40  |   |   | 261   |   | 13  | 499   |   | 50  | 251   |   |
| Internal Link Dist (ft) |   | 351   |   |   | 1002  |   |   | 2461  |   |   | 745   |   |

Lanes, Volumes, Timings  
 4: SR-9 & Hazel Street/E Highland Drive

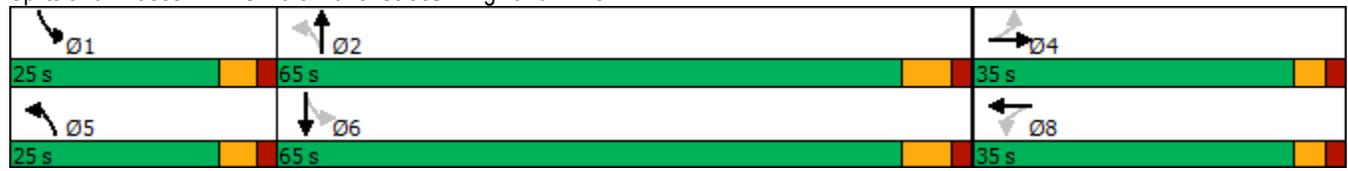
2024 EXISTING CONDITIONS

| Lane Group             | EBL | EBT  | EBR | WBL | WBT  | WBR | NBL  | NBT  | NBR | SBL  | SBT  | SBR |
|------------------------|-----|------|-----|-----|------|-----|------|------|-----|------|------|-----|
| Turn Bay Length (ft)   |     |      |     |     |      |     | 300  |      |     | 275  |      |     |
| Base Capacity (vph)    |     | 632  |     |     | 589  |     | 777  | 1319 |     | 591  | 1349 |     |
| Starvation Cap Reductn |     | 0    |     |     | 0    |     | 0    | 0    |     | 0    | 0    |     |
| Spillback Cap Reductn  |     | 0    |     |     | 0    |     | 0    | 0    |     | 0    | 0    |     |
| Storage Cap Reductn    |     | 0    |     |     | 0    |     | 0    | 0    |     | 0    | 0    |     |
| Reduced v/c Ratio      |     | 0.06 |     |     | 0.46 |     | 0.02 | 0.49 |     | 0.18 | 0.30 |     |

Intersection Summary

|                                    |                        |
|------------------------------------|------------------------|
| Area Type:                         | Other                  |
| Cycle Length:                      | 125                    |
| Actuated Cycle Length:             | 81.9                   |
| Natural Cycle:                     | 80                     |
| Control Type:                      | Actuated-Uncoordinated |
| Maximum v/c Ratio:                 | 0.79                   |
| Intersection Signal Delay:         | 24.4                   |
| Intersection LOS:                  | C                      |
| Intersection Capacity Utilization: | 73.2%                  |
| ICU Level of Service:              | D                      |
| Analysis Period (min):             | 15                     |

Splits and Phases: 4: SR-9 & Hazel Street/E Highland Drive



HCM 6th TWSC  
5: 204th Street NE & Site Access

2024 EXISTING CONDITIONS

| Intersection             |      |      |      |      |      |      |
|--------------------------|------|------|------|------|------|------|
| Int Delay, s/veh         | 1.3  |      |      |      |      |      |
| Movement                 | EBL  | EBT  | WBT  | WBR  | SBL  | SBR  |
| Lane Configurations      |      |      |      |      |      |      |
| Traffic Vol, veh/h       | 31   | 620  | 440  | 3    | 45   | 36   |
| Future Vol, veh/h        | 31   | 620  | 440  | 3    | 45   | 36   |
| Conflicting Peds, #/hr   | 0    | 0    | 0    | 0    | 0    | 0    |
| Sign Control             | Free | Free | Free | Free | Stop | Stop |
| RT Channelized           | -    | None | -    | None | -    | None |
| Storage Length           | 25   | -    | -    | -    | 0    | -    |
| Veh in Median Storage, # | -    | 0    | 0    | -    | 0    | -    |
| Grade, %                 | -    | 0    | 0    | -    | 0    | -    |
| Peak Hour Factor         | 92   | 92   | 92   | 92   | 92   | 92   |
| Heavy Vehicles, %        | 2    | 2    | 2    | 2    | 2    | 2    |
| Mvmt Flow                | 34   | 674  | 478  | 3    | 49   | 39   |

| Major/Minor          | Major1 | Major2 | Minor2 |   |             |
|----------------------|--------|--------|--------|---|-------------|
| Conflicting Flow All | 481    | 0      | -      | 0 | 1222 480    |
| Stage 1              | -      | -      | -      | - | 480 -       |
| Stage 2              | -      | -      | -      | - | 742 -       |
| Critical Hdwy        | 4.12   | -      | -      | - | 6.42 6.22   |
| Critical Hdwy Stg 1  | -      | -      | -      | - | 5.42 -      |
| Critical Hdwy Stg 2  | -      | -      | -      | - | 5.42 -      |
| Follow-up Hdwy       | 2.218  | -      | -      | - | 3.518 3.318 |
| Pot Cap-1 Maneuver   | 1082   | -      | -      | - | 198 586     |
| Stage 1              | -      | -      | -      | - | 622 -       |
| Stage 2              | -      | -      | -      | - | 471 -       |
| Platoon blocked, %   |        | -      | -      | - |             |
| Mov Cap-1 Maneuver   | 1082   | -      | -      | - | 192 586     |
| Mov Cap-2 Maneuver   | -      | -      | -      | - | 327 -       |
| Stage 1              | -      | -      | -      | - | 603 -       |
| Stage 2              | -      | -      | -      | - | 471 -       |

| Approach             | EB  | WB | SB   |
|----------------------|-----|----|------|
| HCM Control Delay, s | 0.4 | 0  | 16.3 |
| HCM LOS              |     |    | C    |

| Minor Lane/Major Mvmt | EBL   | EBT | WBT | WBR | SBLn1 |
|-----------------------|-------|-----|-----|-----|-------|
| Capacity (veh/h)      | 1082  | -   | -   | -   | 407   |
| HCM Lane V/C Ratio    | 0.031 | -   | -   | -   | 0.216 |
| HCM Control Delay (s) | 8.4   | -   | -   | -   | 16.3  |
| HCM Lane LOS          | A     | -   | -   | -   | C     |
| HCM 95th %tile Q(veh) | 0.1   | -   | -   | -   | 0.8   |

Lanes, Volumes, Timings  
1: 204th Street NE

2027 NO-BUILD CONDITIONS

| Lane Group              | EBL   | EBT   | EBR  | WBL   | WBT   | WBR  | NBL   | NBT   | NBR   | SBL   | SBT   | SBR  |
|-------------------------|-------|-------|------|-------|-------|------|-------|-------|-------|-------|-------|------|
| Lane Configurations     |       |       |      |       |       |      |       |       |       |       |       |      |
| Traffic Volume (vph)    | 97    | 150   | 57   | 227   | 198   | 161  | 59    | 395   | 256   | 158   | 256   | 100  |
| Future Volume (vph)     | 97    | 150   | 57   | 227   | 198   | 161  | 59    | 395   | 256   | 158   | 256   | 100  |
| Ideal Flow (vphpl)      | 1900  | 1900  | 1900 | 1900  | 1900  | 1900 | 1900  | 1900  | 1900  | 1900  | 1900  | 1900 |
| Storage Length (ft)     | 125   |       | 0    | 125   |       | 0    | 200   |       | 125   | 100   |       | 0    |
| Storage Lanes           | 1     |       | 0    | 1     |       | 0    | 1     |       | 1     | 1     |       | 0    |
| Taper Length (ft)       | 25    |       |      | 25    |       |      | 25    |       |       | 25    |       |      |
| Lane Util. Factor       | 1.00  | 1.00  | 1.00 | 1.00  | 1.00  | 1.00 | 1.00  | 1.00  | 1.00  | 1.00  | 1.00  | 1.00 |
| Frt                     |       | 0.959 |      |       | 0.933 |      |       |       | 0.850 |       | 0.958 |      |
| Flt Protected           | 0.950 |       |      | 0.950 |       |      | 0.950 |       |       | 0.950 |       |      |
| Satd. Flow (prot)       | 1770  | 1786  | 0    | 1770  | 1738  | 0    | 1770  | 1863  | 1583  | 1770  | 1785  | 0    |
| Flt Permitted           | 0.271 |       |      | 0.427 |       |      | 0.391 |       |       | 0.249 |       |      |
| Satd. Flow (perm)       | 505   | 1786  | 0    | 795   | 1738  | 0    | 728   | 1863  | 1583  | 464   | 1785  | 0    |
| Right Turn on Red       |       |       | Yes  |       |       | Yes  |       |       | Yes   |       |       | Yes  |
| Satd. Flow (RTOR)       |       | 17    |      |       | 37    |      |       |       | 214   |       |       | 22   |
| Link Speed (mph)        |       | 35    |      |       | 35    |      |       | 35    |       |       |       | 35   |
| Link Distance (ft)      |       | 1143  |      |       | 2192  |      |       | 650   |       |       |       | 1110 |
| Travel Time (s)         |       | 22.3  |      |       | 42.7  |      |       | 12.7  |       |       |       | 21.6 |
| Peak Hour Factor        | 0.92  | 0.92  | 0.92 | 0.92  | 0.92  | 0.92 | 0.92  | 0.92  | 0.92  | 0.92  | 0.92  | 0.92 |
| Shared Lane Traffic (%) |       |       |      |       |       |      |       |       |       |       |       |      |
| Lane Group Flow (vph)   | 105   | 225   | 0    | 247   | 390   | 0    | 64    | 429   | 278   | 172   | 387   | 0    |
| Turn Type               | pm+pt | NA    |      | pm+pt | NA    |      | pm+pt | NA    | Perm  | pm+pt | NA    |      |
| Protected Phases        | 7     | 4     |      | 3     | 8     |      | 5     | 2     |       | 1     | 6     |      |
| Permitted Phases        | 4     |       |      | 8     |       |      | 2     |       | 2     | 6     |       |      |
| Detector Phase          | 7     | 4     |      | 3     | 8     |      | 5     | 2     | 2     | 1     | 6     |      |
| Switch Phase            |       |       |      |       |       |      |       |       |       |       |       |      |
| Minimum Initial (s)     | 5.0   | 5.0   |      | 5.0   | 5.0   |      | 5.0   | 10.0  | 10.0  | 5.0   | 10.0  |      |
| Minimum Split (s)       | 10.2  | 38.2  |      | 10.2  | 34.2  |      | 10.5  | 35.5  | 35.5  | 10.5  | 28.5  |      |
| Total Split (s)         | 15.0  | 30.0  |      | 15.0  | 30.0  |      | 15.0  | 45.0  | 45.0  | 15.0  | 45.0  |      |
| Total Split (%)         | 14.3% | 28.6% |      | 14.3% | 28.6% |      | 14.3% | 42.9% | 42.9% | 14.3% | 42.9% |      |
| Yellow Time (s)         | 4.0   | 4.0   |      | 4.0   | 4.0   |      | 4.5   | 4.5   | 4.5   | 4.5   | 4.5   |      |
| All-Red Time (s)        | 1.2   | 1.2   |      | 1.2   | 1.2   |      | 1.0   | 1.0   | 1.0   | 1.0   | 1.0   |      |
| 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)     | 5.2   | 5.2   |      | 5.2   | 5.2   |      | 5.5   | 5.5   | 5.5   | 5.5   | 5.5   |      |
| Lead/Lag                | Lead  | Lag   |      | Lead  | Lag   |      | Lead  | Lag   | Lag   | Lead  | Lag   |      |
| Lead-Lag Optimize?      | Yes   | Yes   |      | Yes   | Yes   |      | Yes   | Yes   | Yes   | Yes   | Yes   |      |
| Recall Mode             | None  | None  |      | None  | None  |      | None  | None  | None  | None  | None  |      |
| Act Effect Green (s)    | 30.1  | 20.9  |      | 32.5  | 25.1  |      | 37.1  | 28.9  | 28.9  | 40.5  | 33.3  |      |
| Actuated g/C Ratio      | 0.33  | 0.23  |      | 0.36  | 0.28  |      | 0.41  | 0.32  | 0.32  | 0.44  | 0.37  |      |
| v/c Ratio               | 0.36  | 0.53  |      | 0.63  | 0.77  |      | 0.16  | 0.73  | 0.43  | 0.51  | 0.58  |      |
| Control Delay           | 23.0  | 34.5  |      | 30.4  | 42.3  |      | 14.5  | 35.9  | 8.6   | 19.7  | 28.1  |      |
| Queue Delay             | 0.0   | 0.0   |      | 0.0   | 0.0   |      | 0.0   | 0.0   | 0.0   | 0.0   | 0.0   |      |
| Total Delay             | 23.0  | 34.5  |      | 30.4  | 42.3  |      | 14.5  | 35.9  | 8.6   | 19.7  | 28.1  |      |
| LOS                     | C     | C     |      | C     | D     |      | B     | D     | A     | B     | C     |      |
| Approach Delay          |       | 30.9  |      |       | 37.7  |      |       | 24.3  |       |       | 25.5  |      |
| Approach LOS            |       | C     |      |       | D     |      |       | C     |       |       | C     |      |
| Queue Length 50th (ft)  | 38    | 106   |      | 99    | 202   |      | 21    | 230   | 28    | 59    | 188   |      |
| Queue Length 95th (ft)  | 84    | 199   |      | #189  | #406  |      | 42    | 336   | 88    | 98    | 288   |      |
| Internal Link Dist (ft) |       | 1063  |      |       | 2112  |      |       | 570   |       |       | 1030  |      |

Lanes, Volumes, Timings  
1: 204th Street NE

2027 NO-BUILD CONDITIONS

| Lane Group             | EBL  | EBT  | EBR | WBL  | WBT  | WBR | NBL  | NBT  | NBR  | SBL  | SBT  | SBR |
|------------------------|------|------|-----|------|------|-----|------|------|------|------|------|-----|
| Turn Bay Length (ft)   | 125  |      |     | 125  |      |     | 200  |      | 125  | 100  |      |     |
| Base Capacity (vph)    | 310  | 510  |     | 390  | 511  |     | 419  | 827  | 822  | 345  | 805  |     |
| Starvation Cap Reductn | 0    | 0    |     | 0    | 0    |     | 0    | 0    | 0    | 0    | 0    |     |
| Spillback Cap Reductn  | 0    | 0    |     | 0    | 0    |     | 0    | 0    | 0    | 0    | 0    |     |
| Storage Cap Reductn    | 0    | 0    |     | 0    | 0    |     | 0    | 0    | 0    | 0    | 0    |     |
| Reduced v/c Ratio      | 0.34 | 0.44 |     | 0.63 | 0.76 |     | 0.15 | 0.52 | 0.34 | 0.50 | 0.48 |     |

Intersection Summary

Area Type: Other  
 Cycle Length: 105  
 Actuated Cycle Length: 91.2  
 Natural Cycle: 95  
 Control Type: Actuated-Uncoordinated  
 Maximum v/c Ratio: 0.77  
 Intersection Signal Delay: 29.2      Intersection LOS: C  
 Intersection Capacity Utilization 73.0%      ICU Level of Service D  
 Analysis Period (min) 15  
 # 95th percentile volume exceeds capacity, queue may be longer.  
 Queue shown is maximum after two cycles.

Splits and Phases: 1: 204th Street NE



HCM 6th TWSC  
 2: 74th Avenue NE & 204th Street NE

2027 NO-BUILD CONDITIONS

| Intersection             |      |      |      |      |      |      |
|--------------------------|------|------|------|------|------|------|
| Int Delay, s/veh         | 2.2  |      |      |      |      |      |
| Movement                 | EBT  | EBR  | WBL  | WBT  | NBL  | NBR  |
| Lane Configurations      |      |      |      |      |      |      |
| Traffic Vol, veh/h       | 622  | 26   | 55   | 387  | 26   | 97   |
| Future Vol, veh/h        | 622  | 26   | 55   | 387  | 26   | 97   |
| Conflicting Peds, #/hr   | 0    | 0    | 0    | 0    | 0    | 0    |
| Sign Control             | Free | Free | Free | Free | Stop | Stop |
| RT Channelized           | -    | None | -    | None | -    | None |
| Storage Length           | -    | -    | 25   | -    | 75   | 0    |
| Veh in Median Storage, # | 0    | -    | -    | 0    | 0    | -    |
| Grade, %                 | 0    | -    | -    | 0    | 0    | -    |
| Peak Hour Factor         | 87   | 87   | 87   | 87   | 87   | 87   |
| Heavy Vehicles, %        | 3    | 3    | 3    | 3    | 3    | 3    |
| Mvmt Flow                | 715  | 30   | 63   | 445  | 30   | 111  |

| Major/Minor          | Major1 | Major2 | Minor1 | Minor2 | Minor3 |
|----------------------|--------|--------|--------|--------|--------|
| Conflicting Flow All | 0      | 0      | 745    | 0      | 1301   |
| Stage 1              | -      | -      | -      | -      | 730    |
| Stage 2              | -      | -      | -      | -      | 571    |
| Critical Hdwy        | -      | -      | 4.13   | -      | 6.43   |
| Critical Hdwy Stg 1  | -      | -      | -      | -      | 5.43   |
| Critical Hdwy Stg 2  | -      | -      | -      | -      | 5.43   |
| Follow-up Hdwy       | -      | -      | 2.227  | -      | 3.527  |
| Pot Cap-1 Maneuver   | -      | -      | 858    | -      | 177    |
| Stage 1              | -      | -      | -      | -      | 475    |
| Stage 2              | -      | -      | -      | -      | 563    |
| Platoon blocked, %   | -      | -      | -      | -      | -      |
| Mov Cap-1 Maneuver   | -      | -      | 858    | -      | 164    |
| Mov Cap-2 Maneuver   | -      | -      | -      | -      | 302    |
| Stage 1              | -      | -      | -      | -      | 475    |
| Stage 2              | -      | -      | -      | -      | 522    |

| Approach             | EB | WB  | NB   |
|----------------------|----|-----|------|
| HCM Control Delay, s | 0  | 1.2 | 16.9 |
| HCM LOS              |    |     | C    |

| Minor Lane/Major Mvmt | NBLn1 | NBLn2 | EBT | EBR | WBL   | WBT |
|-----------------------|-------|-------|-----|-----|-------|-----|
| Capacity (veh/h)      | 302   | 421   | -   | -   | 858   | -   |
| HCM Lane V/C Ratio    | 0.099 | 0.265 | -   | -   | 0.074 | -   |
| HCM Control Delay (s) | 18.2  | 16.6  | -   | -   | 9.5   | -   |
| HCM Lane LOS          | C     | C     | -   | -   | A     | -   |
| HCM 95th %tile Q(veh) | 0.3   | 1.1   | -   | -   | 0.2   | -   |

Lanes, Volumes, Timings  
2: 74th Avenue NE & 204th Street NE

2027 NO-BUILD CONDITIONS - SIGNAL IMPROVEMENT

|                         | →     | ↘    | ↙     | ←     | ↖     | ↗     |
|-------------------------|-------|------|-------|-------|-------|-------|
| Lane Group              | EBT   | EBR  | WBL   | WBT   | NBL   | NBR   |
| Lane Configurations     | ↗     |      | ↖     | ↗     | ↖     | ↗     |
| Traffic Volume (vph)    | 626   | 25   | 55    | 389   | 25    | 98    |
| Future Volume (vph)     | 626   | 25   | 55    | 389   | 25    | 98    |
| Ideal Flow (vphp)       | 1900  | 1900 | 1900  | 1900  | 1900  | 1900  |
| Storage Length (ft)     |       | 0    | 25    |       | 75    | 0     |
| Storage Lanes           |       | 0    | 1     |       | 1     | 1     |
| Taper Length (ft)       |       |      | 25    |       | 25    |       |
| Lane Util. Factor       | 1.00  | 1.00 | 1.00  | 1.00  | 1.00  | 1.00  |
| Frt                     | 0.995 |      |       |       |       | 0.850 |
| Flt Protected           |       |      | 0.950 |       | 0.950 |       |
| Satd. Flow (prot)       | 1835  | 0    | 1752  | 1845  | 1752  | 1568  |
| Flt Permitted           |       |      | 0.257 |       | 0.950 |       |
| Satd. Flow (perm)       | 1835  | 0    | 474   | 1845  | 1752  | 1568  |
| Right Turn on Red       |       | Yes  |       |       |       | Yes   |
| Satd. Flow (RTOR)       | 5     |      |       |       |       | 113   |
| Link Speed (mph)        | 35    |      |       | 35    | 35    |       |
| Link Distance (ft)      | 2192  |      |       | 140   | 620   |       |
| Travel Time (s)         | 42.7  |      |       | 2.7   | 12.1  |       |
| Peak Hour Factor        | 0.87  | 0.87 | 0.87  | 0.87  | 0.87  | 0.87  |
| Heavy Vehicles (%)      | 3%    | 3%   | 3%    | 3%    | 3%    | 3%    |
| Shared Lane Traffic (%) |       |      |       |       |       |       |
| Lane Group Flow (vph)   | 749   | 0    | 63    | 447   | 29    | 113   |
| Turn Type               | NA    |      | Perm  | NA    | Prot  | Perm  |
| Protected Phases        | 4     |      |       | 8     | 2     |       |
| Permitted Phases        |       |      | 8     |       |       | 2     |
| Detector Phase          | 4     |      | 8     | 8     | 2     | 2     |
| Switch Phase            |       |      |       |       |       |       |
| Minimum Initial (s)     | 5.0   |      | 5.0   | 5.0   | 5.0   | 5.0   |
| Minimum Split (s)       | 22.5  |      | 22.5  | 22.5  | 22.5  | 22.5  |
| Total Split (s)         | 64.0  |      | 64.0  | 64.0  | 26.0  | 26.0  |
| Total Split (%)         | 71.1% |      | 71.1% | 71.1% | 28.9% | 28.9% |
| Yellow Time (s)         | 3.5   |      | 3.5   | 3.5   | 3.5   | 3.5   |
| All-Red Time (s)        | 1.0   |      | 1.0   | 1.0   | 1.0   | 1.0   |
| Lost Time Adjust (s)    | 0.0   |      | 0.0   | 0.0   | 0.0   | 0.0   |
| Total Lost Time (s)     | 4.5   |      | 4.5   | 4.5   | 4.5   | 4.5   |
| Lead/Lag                |       |      |       |       |       |       |
| Lead-Lag Optimize?      |       |      |       |       |       |       |
| Recall Mode             | None  |      | None  | None  | Min   | Min   |
| Act Effect Green (s)    | 20.5  |      | 20.5  | 20.5  | 6.7   | 6.7   |
| Actuated g/C Ratio      | 0.56  |      | 0.56  | 0.56  | 0.18  | 0.18  |
| v/c Ratio               | 0.72  |      | 0.23  | 0.43  | 0.09  | 0.29  |
| Control Delay (s/veh)   | 10.5  |      | 6.3   | 5.8   | 16.0  | 7.0   |
| Queue Delay             | 0.0   |      | 0.0   | 0.0   | 0.0   | 0.0   |
| Total Delay (s/veh)     | 10.5  |      | 6.3   | 5.8   | 16.0  | 7.0   |
| LOS                     | B     |      | A     | A     | B     | A     |
| Approach Delay (s/veh)  | 10.5  |      |       | 6.0   | 8.9   |       |
| Approach LOS            | B     |      |       | A     | A     |       |
| Queue Length 50th (ft)  | 80    |      | 5     | 38    | 5     | 0     |
| Queue Length 95th (ft)  | 175   |      | 19    | 83    | 23    | 30    |

Lanes, Volumes, Timings  
 2: 74th Avenue NE & 204th Street NE

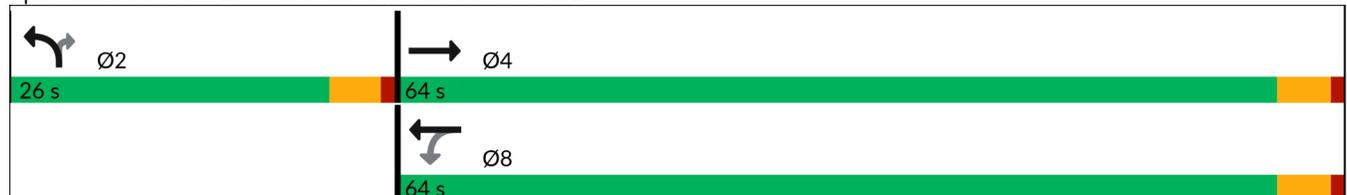
2027 NO-BUILD CONDITIONS - SIGNAL IMPROVEMENT



| Lane Group              | EBT  | EBR | WBL  | WBT  | NBL  | NBR  |
|-------------------------|------|-----|------|------|------|------|
| Internal Link Dist (ft) | 2112 |     |      | 60   | 540  |      |
| Turn Bay Length (ft)    |      |     | 25   |      | 75   |      |
| Base Capacity (vph)     | 1835 |     | 474  | 1845 | 1073 | 1004 |
| Starvation Cap Reductn  | 0    |     | 0    | 0    | 0    | 0    |
| Spillback Cap Reductn   | 0    |     | 0    | 0    | 0    | 0    |
| Storage Cap Reductn     | 0    |     | 0    | 0    | 0    | 0    |
| Reduced v/c Ratio       | 0.41 |     | 0.13 | 0.24 | 0.03 | 0.11 |

| Intersection Summary               |                        |
|------------------------------------|------------------------|
| Area Type:                         | Other                  |
| Cycle Length:                      | 90                     |
| Actuated Cycle Length:             | 36.6                   |
| Natural Cycle:                     | 60                     |
| Control Type:                      | Actuated-Uncoordinated |
| Maximum v/c Ratio:                 | 0.73                   |
| Intersection Signal Delay (s/veh): | 8.7                    |
| Intersection LOS:                  | A                      |
| Intersection Capacity Utilization: | 54.0%                  |
| ICU Level of Service:              | A                      |
| Analysis Period (min):             | 15                     |

Splits and Phases: 2: 74th Avenue NE & 204th Street NE



Lanes, Volumes, Timings  
3: SR-9 & 204th Street NE

2027 NO-BUILD CONDITIONS

|                         |  |  |  |  |  |  |   |  |  |  |  |  |
|-------------------------|---|---|---|---|---|---|---|---|---|---|---|---|
| Lane Group              | EBL   | EBT   | EBR   | WBL   | WBT   | WBR   | NBL   | NBT   | NBR   | SBL   | SBT   | SBR   |
| Lane Configurations     |  |  |  |  |  |  |  |  |  |  |  |  |
| Traffic Volume (vph)    | 203   | 385   | 135   | 157   | 251   | 164   | 82  | 443   | 156   | 87  | 359   | 153   |
| Future Volume (vph)     | 203   | 385   | 135   | 157   | 251   | 164   | 82  | 443   | 156   | 87  | 359   | 153   |
| Ideal Flow (vphpl)      | 1900  | 1900  | 1900  | 1900  | 1900  | 1900  | 1900  | 1900  | 1900  | 1900  | 1900  | 1900  |
| Storage Length (ft)     | 300   |   | 200   | 150   |   | 325   | 200   |   | 0   | 250   |   | 400   |
| Storage Lanes           | 1   |   | 1   | 1   |   | 1   | 1   |   | 0   | 1   |   | 1   |
| Taper Length (ft)       | 25  |   |   | 25  |   |   | 25  |   |   | 25  |   |   |
| Lane Util. Factor       | 1.00  | 1.00  | 1.00  | 1.00  | 1.00  | 1.00  | 1.00  | 1.00  | 1.00  | 1.00  | 1.00  | 1.00  |
| Frt                     |   |   | 0.850   |   |   | 0.850   |   | 0.961   |   |   |   | 0.850   |
| Flt Protected           | 0.950   |   |   | 0.950   |   |   | 0.950   |   |   | 0.950   |   |   |
| Satd. Flow (prot)       | 1770  | 1863  | 1583  | 1770  | 1863  | 1583  | 1770  | 1790  | 0   | 1770  | 1863  | 1583  |
| Flt Permitted           | 0.253   |   |   | 0.168   |   |   | 0.950   |   |   | 0.950   |   |   |
| Satd. Flow (perm)       | 471   | 1863  | 1583  | 313   | 1863  | 1583  | 1770  | 1790  | 0   | 1770  | 1863  | 1583  |
| Right Turn on Red       |   |   | Yes   |   |   | Yes   |   |   | Yes   |   |   | Yes   |
| Satd. Flow (RTOR)       |   |   | 111   |   |   | 178   |   | 15  |   |   |   | 166   |
| Link Speed (mph)        |   | 35  |   |   | 35  |   |   | 55  |   |   |   | 45  |
| Link Distance (ft)      |   | 450   |   |   | 630   |   |   | 637   |   |   |   | 2541  |
| Travel Time (s)         |   | 8.8   |   |   | 12.3  |   |   | 7.9   |   |   |   | 38.5  |
| Peak Hour Factor        | 0.92  | 0.92  | 0.92  | 0.92  | 0.92  | 0.92  | 0.92  | 0.92  | 0.92  | 0.92  | 0.92  | 0.92  |
| Shared Lane Traffic (%) |   |   |   |   |   |   |   |   |   |   |   |   |
| Lane Group Flow (vph)   | 221   | 418   | 147   | 171   | 273   | 178   | 89  | 652   | 0   | 95  | 390   | 166   |
| Turn Type               | pm+pt   | NA  | Perm  | pm+pt   | NA  | Perm  | Prot  | NA  |   | Prot  | NA  | Perm  |
| Protected Phases        | 7   | 4   |   | 3   | 8   |   | 5   | 2   |   | 1   | 6   |   |
| Permitted Phases        | 4   |   | 4   | 8   |   | 8   |   |   |   |   |   | 6   |
| Detector Phase          | 7   | 4   | 4   | 3   | 8   | 8   | 5   | 2   |   | 1   | 6   | 6   |
| Switch Phase            |   |   |   |   |   |   |   |   |   |   |   |   |
| Minimum Initial (s)     | 5.0   | 7.0   | 7.0   | 5.0   | 7.0   | 7.0   | 5.0   | 10.0  |   | 5.0   | 10.0  | 10.0  |
| Minimum Split (s)       | 10.5  | 37.1  | 37.1  | 10.5  | 38.9  | 38.9  | 10.5  | 41.7  |   | 29.5  | 42.7  | 42.7  |
| Total Split (s)         | 30.0  | 30.0  | 30.0  | 30.0  | 30.0  | 30.0  | 20.0  | 65.0  |   | 20.0  | 65.0  | 65.0  |
| Total Split (%)         | 20.7%   | 20.7%   | 20.7%   | 20.7%   | 20.7%   | 20.7%   | 13.8%   | 44.8%   |   | 13.8%   | 44.8%   | 44.8%   |
| Yellow Time (s)         | 3.5   | 3.1   | 3.1   | 3.5   | 3.9   | 3.9   | 3.5   | 4.7   |   | 3.5   | 4.7   | 4.7   |
| All-Red Time (s)        | 2.0   | 2.0   | 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   | 0.0   | 0.0   |
| Total Lost Time (s)     | 5.5   | 5.1   | 5.1   | 5.5   | 5.9   | 5.9   | 5.5   | 6.7   |   | 5.5   | 6.7   | 6.7   |
| Lead/Lag                | Lead  | Lag   | Lag   | Lead  | Lag   | Lag   | Lead  | Lag   |   | Lead  | Lag   | Lag   |
| Lead-Lag Optimize?      | Yes   | Yes   |   | Yes   | Yes   | Yes   |
| Recall Mode             | None  | None  |   | None  | None  | None  |
| Act Effect Green (s)    | 45.3  | 27.9  | 27.9  | 38.7  | 23.8  | 23.8  | 11.5  | 50.7  |   | 11.7  | 50.9  | 50.9  |
| Actuated g/C Ratio      | 0.35  | 0.22  | 0.22  | 0.30  | 0.19  | 0.19  | 0.09  | 0.40  |   | 0.09  | 0.40  | 0.40  |
| v/c Ratio               | 0.64  | 1.03  | 0.34  | 0.66  | 0.79  | 0.41  | 0.56  | 0.91  |   | 0.59  | 0.53  | 0.23  |
| Control Delay           | 39.7  | 102.7   | 17.0  | 44.1  | 69.6  | 10.1  | 73.5  | 54.2  |   | 74.6  | 33.0  | 4.6   |
| Queue Delay             | 0.0   | 0.0   | 0.0   | 0.0   | 0.0   | 0.0   | 0.0   | 0.0   |   | 0.0   | 0.0   | 0.0   |
| Total Delay             | 39.7  | 102.7   | 17.0  | 44.1  | 69.6  | 10.1  | 73.5  | 54.2  |   | 74.6  | 33.0  | 4.6   |
| LOS                     | D   | F   | B   | D   | E   | B   | E   | D   |   | E   | C   | A   |
| Approach Delay          |   | 68.9  |   |   | 45.5  |   |   | 56.5  |   |   | 31.8  |   |
| Approach LOS            |   | E   |   |   | D   |   |   | E   |   |   | C   |   |
| Queue Length 50th (ft)  | 143   | ~407  | 26  | 107   | 236   | 0   | 77  | 506   |   | 82  | 248   | 0   |
| Queue Length 95th (ft)  | 220   | #684  | 93  | 175   | #416  | 67  | 141   | #797  |   | 150   | 380   | 47  |
| Internal Link Dist (ft) |   | 370   |   |   | 550   |   |   | 557   |   |   | 2461  |   |

Lanes, Volumes, Timings  
3: SR-9 & 204th Street NE

2027 NO-BUILD CONDITIONS

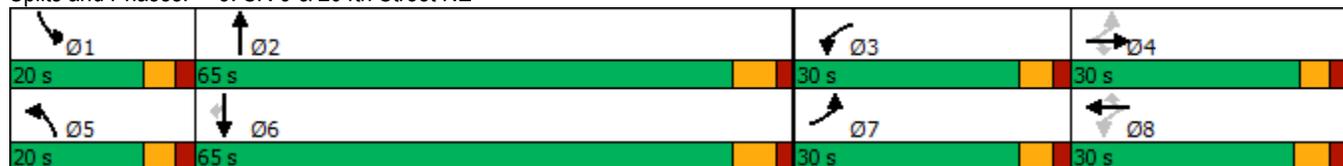


| Lane Group             | EBL  | EBT  | EBR  | WBL  | WBT  | WBR  | NBL  | NBT  | NBR | SBL  | SBT  | SBR  |
|------------------------|------|------|------|------|------|------|------|------|-----|------|------|------|
| Turn Bay Length (ft)   | 300  |      | 200  | 150  |      | 325  | 200  |      |     | 250  |      | 400  |
| Base Capacity (vph)    | 427  | 406  | 432  | 397  | 357  | 448  | 204  | 840  |     | 204  | 866  | 824  |
| Starvation Cap Reductn | 0    | 0    | 0    | 0    | 0    | 0    | 0    | 0    |     | 0    | 0    | 0    |
| Spillback Cap Reductn  | 0    | 0    | 0    | 0    | 0    | 0    | 0    | 0    |     | 0    | 0    | 0    |
| Storage Cap Reductn    | 0    | 0    | 0    | 0    | 0    | 0    | 0    | 0    |     | 0    | 0    | 0    |
| Reduced v/c Ratio      | 0.52 | 1.03 | 0.34 | 0.43 | 0.76 | 0.40 | 0.44 | 0.78 |     | 0.47 | 0.45 | 0.20 |

Intersection Summary

Area Type: Other  
 Cycle Length: 145  
 Actuated Cycle Length: 128.1  
 Natural Cycle: 135  
 Control Type: Actuated-Uncoordinated  
 Maximum v/c Ratio: 1.03  
 Intersection Signal Delay: 51.8      Intersection LOS: D  
 Intersection Capacity Utilization 85.6%      ICU Level of Service E  
 Analysis Period (min) 15  
 ~ Volume exceeds capacity, queue is theoretically infinite.  
 Queue shown is maximum after two cycles.  
 # 95th percentile volume exceeds capacity, queue may be longer.  
 Queue shown is maximum after two cycles.

Splits and Phases: 3: SR-9 & 204th Street NE



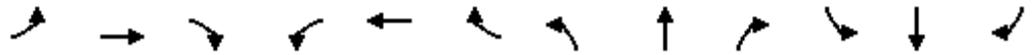
Lanes, Volumes, Timings  
4: SR-9 & Hazel Street/E Highland Drive

2027 NO-BUILD CONDITIONS

|                         |  |  |  |  |  |  |   |  |  |  |  |  |
|-------------------------|---|---|---|---|---|---|---|---|---|---|---|---|
| Lane Group              | EBL   | EBT   | EBR   | WBL   | WBT   | WBR   | NBL   | NBT   | NBR   | SBL   | SBT   | SBR   |
| Lane Configurations     |   |  |   |   |  |   |  |  |   |  |  |   |
| Traffic Volume (vph)    | 15  | 6   | 16  | 155   | 10  | 103   | 18  | 519   | 122   | 106   | 387   | 20  |
| Future Volume (vph)     | 15  | 6   | 16  | 155   | 10  | 103   | 18  | 519   | 122   | 106   | 387   | 20  |
| Ideal Flow (vphpl)      | 1900  | 1900  | 1900  | 1900  | 1900  | 1900  | 1900  | 1900  | 1900  | 1900  | 1900  | 1900  |
| Storage Length (ft)     | 0   |   | 0   | 0   |   | 0   | 300   |   | 0   | 275   |   | 0   |
| Storage Lanes           | 0   |   | 0   | 0   |   | 0   | 1   |   | 0   | 1   |   | 0   |
| Taper Length (ft)       | 25  |   |   | 25  |   |   | 25  |   |   | 25  |   |   |
| Lane Util. Factor       | 1.00  | 1.00  | 1.00  | 1.00  | 1.00  | 1.00  | 1.00  | 1.00  | 1.00  | 1.00  | 1.00  | 1.00  |
| Frt                     |   | 0.943   |   |   | 0.948   |   |   | 0.971   |   |   | 0.993   |   |
| Flt Protected           |   | 0.980   |   |   | 0.972   |   | 0.950   |   |   | 0.950   |   |   |
| Satd. Flow (prot)       | 0   | 1721  | 0   | 0   | 1716  | 0   | 1770  | 1809  | 0   | 1770  | 1850  | 0   |
| Flt Permitted           |   | 0.865   |   |   | 0.799   |   | 0.493   |   |   | 0.164   |   |   |
| Satd. Flow (perm)       | 0   | 1519  | 0   | 0   | 1411  | 0   | 918   | 1809  | 0   | 305   | 1850  | 0   |
| Right Turn on Red       |   |   | Yes   |   |   | Yes   |   |   | Yes   |   |   | Yes   |
| Satd. Flow (RTOR)       |   | 17  |   |   | 24  |   |   | 13  |   |   | 3   |   |
| Link Speed (mph)        |   | 25  |   |   | 25  |   |   | 45  |   |   | 30  |   |
| Link Distance (ft)      |   | 431   |   |   | 1082  |   |   | 2541  |   |   | 825   |   |
| Travel Time (s)         |   | 11.8  |   |   | 29.5  |   |   | 38.5  |   |   | 18.8  |   |
| Peak Hour Factor        | 0.92  | 0.92  | 0.92  | 0.92  | 0.92  | 0.92  | 0.92  | 0.92  | 0.92  | 0.92  | 0.92  | 0.92  |
| Shared Lane Traffic (%) |   |   |   |   |   |   |   |   |   |   |   |   |
| Lane Group Flow (vph)   | 0   | 40  | 0   | 0   | 291   | 0   | 20  | 697   | 0   | 115   | 443   | 0   |
| Turn Type               | Perm  | NA  |   | Perm  | NA  |   | pm+pt   | NA  |   | pm+pt   | NA  |   |
| Protected Phases        |   | 4   |   |   | 8   |   | 5   | 2   |   | 1   | 6   |   |
| Permitted Phases        | 4   |   |   | 8   |   |   | 2   |   |   | 6   |   |   |
| Detector Phase          | 4   | 4   |   | 8   | 8   |   | 5   | 2   |   | 1   | 6   |   |
| Switch Phase            |   |   |   |   |   |   |   |   |   |   |   |   |
| Minimum Initial (s)     | 5.0   | 5.0   |   | 5.0   | 5.0   |   | 3.0   | 7.0   |   | 3.0   | 7.0   |   |
| Minimum Split (s)       | 33.5  | 33.5  |   | 22.5  | 22.5  |   | 9.5   | 31.7  |   | 9.5   | 22.5  |   |
| Total Split (s)         | 35.0  | 35.0  |   | 35.0  | 35.0  |   | 25.0  | 65.0  |   | 25.0  | 65.0  |   |
| Total Split (%)         | 28.0%   | 28.0%   |   | 28.0%   | 28.0%   |   | 20.0%   | 52.0%   |   | 20.0%   | 52.0%   |   |
| Yellow Time (s)         | 3.1   | 3.1   |   | 3.1   | 3.1   |   | 3.5   | 4.7   |   | 3.5   | 4.7   |   |
| All-Red Time (s)        | 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   |   |
| Total Lost Time (s)     |   | 5.1   |   |   | 5.1   |   | 5.5   | 6.7   |   | 5.5   | 6.7   |   |
| Lead/Lag                |   |   |   |   |   |   | Lead  | Lag   |   | Lead  | Lag   |   |
| Lead-Lag Optimize?      |   |   |   |   |   |   | Yes   | Yes   |   | Yes   | Yes   |   |
| Recall Mode             | None  | None  |   | None  | None  |   | None  | None  |   | None  | None  |   |
| Act Effect Green (s)    |   | 23.6  |   |   | 23.6  |   | 48.8  | 41.2  |   | 55.8  | 51.4  |   |
| Actuated g/C Ratio      |   | 0.26  |   |   | 0.26  |   | 0.53  | 0.45  |   | 0.61  | 0.56  |   |
| v/c Ratio               |   | 0.10  |   |   | 0.76  |   | 0.04  | 0.85  |   | 0.36  | 0.43  |   |
| Control Delay           |   | 20.7  |   |   | 45.1  |   | 7.8   | 33.0  |   | 10.8  | 14.7  |   |
| Queue Delay             |   | 0.0   |   |   | 0.0   |   | 0.0   | 0.0   |   | 0.0   | 0.0   |   |
| Total Delay             |   | 20.7  |   |   | 45.1  |   | 7.8   | 33.0  |   | 10.8  | 14.7  |   |
| LOS                     |   | C   |   |   | D   |   | A   | C   |   | B   | B   |   |
| Approach Delay          |   | 20.7  |   |   | 45.1  |   |   | 32.3  |   |   | 13.9  |   |
| Approach LOS            |   | C   |   |   | D   |   |   | C   |   |   | B   |   |
| Queue Length 50th (ft)  |   | 10  |   |   | 145   |   | 4   | 348   |   | 26  | 126   |   |
| Queue Length 95th (ft)  |   | 41  |   |   | #314  |   | 14  | 558   |   | 52  | 274   |   |
| Internal Link Dist (ft) |   | 351   |   |   | 1002  |   |   | 2461  |   |   | 745   |   |

Lanes, Volumes, Timings  
 4: SR-9 & Hazel Street/E Highland Drive

2027 NO-BUILD CONDITIONS

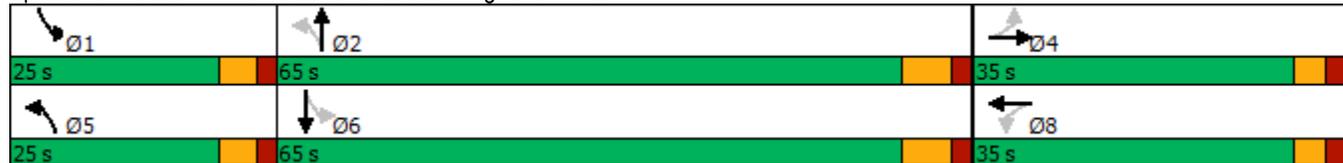


| Lane Group             | EBL | EBT  | EBR | WBL | WBT  | WBR | NBL  | NBT  | NBR | SBL  | SBT  | SBR |
|------------------------|-----|------|-----|-----|------|-----|------|------|-----|------|------|-----|
| Turn Bay Length (ft)   |     |      |     |     |      |     | 300  |      |     | 275  |      |     |
| Base Capacity (vph)    |     | 534  |     |     | 502  |     | 760  | 1220 |     | 518  | 1256 |     |
| Starvation Cap Reductn |     | 0    |     |     | 0    |     | 0    | 0    |     | 0    | 0    |     |
| Spillback Cap Reductn  |     | 0    |     |     | 0    |     | 0    | 0    |     | 0    | 0    |     |
| Storage Cap Reductn    |     | 0    |     |     | 0    |     | 0    | 0    |     | 0    | 0    |     |
| Reduced v/c Ratio      |     | 0.07 |     |     | 0.58 |     | 0.03 | 0.57 |     | 0.22 | 0.35 |     |

Intersection Summary

Area Type: Other  
 Cycle Length: 125  
 Actuated Cycle Length: 91.4  
 Natural Cycle: 90  
 Control Type: Actuated-Uncoordinated  
 Maximum v/c Ratio: 0.85  
 Intersection Signal Delay: 27.9  
 Intersection LOS: C  
 Intersection Capacity Utilization 77.1%  
 ICU Level of Service D  
 Analysis Period (min) 15  
 # 95th percentile volume exceeds capacity, queue may be longer.  
 Queue shown is maximum after two cycles.

Splits and Phases: 4: SR-9 & Hazel Street/E Highland Drive



HCM 6th TWSC  
5: 204th Street NE & Site Access

2027 NO-BUILD CONDITIONS

| Intersection             |      |      |      |      |      |      |
|--------------------------|------|------|------|------|------|------|
| Int Delay, s/veh         | 1.4  |      |      |      |      |      |
| Movement                 | EBL  | EBT  | WBT  | WBR  | SBL  | SBR  |
| Lane Configurations      | ↙    | ↑    | ↘    |      | ↙    |      |
| Traffic Vol, veh/h       | 33   | 660  | 468  | 3    | 48   | 38   |
| Future Vol, veh/h        | 33   | 660  | 468  | 3    | 48   | 38   |
| Conflicting Peds, #/hr   | 0    | 0    | 0    | 0    | 0    | 0    |
| Sign Control             | Free | Free | Free | Free | Stop | Stop |
| RT Channelized           | -    | None | -    | None | -    | None |
| Storage Length           | 25   | -    | -    | -    | 0    | -    |
| Veh in Median Storage, # | -    | 0    | 0    | -    | 0    | -    |
| Grade, %                 | -    | 0    | 0    | -    | 0    | -    |
| Peak Hour Factor         | 92   | 92   | 92   | 92   | 92   | 92   |
| Heavy Vehicles, %        | 2    | 2    | 2    | 2    | 2    | 2    |
| Mvmt Flow                | 36   | 717  | 509  | 3    | 52   | 41   |

| Major/Minor          | Major1 | Major2 | Minor2 |   |             |
|----------------------|--------|--------|--------|---|-------------|
| Conflicting Flow All | 512    | 0      | -      | 0 | 1300 511    |
| Stage 1              | -      | -      | -      | - | 511 -       |
| Stage 2              | -      | -      | -      | - | 789 -       |
| Critical Hdwy        | 4.12   | -      | -      | - | 6.42 6.22   |
| Critical Hdwy Stg 1  | -      | -      | -      | - | 5.42 -      |
| Critical Hdwy Stg 2  | -      | -      | -      | - | 5.42 -      |
| Follow-up Hdwy       | 2.218  | -      | -      | - | 3.518 3.318 |
| Pot Cap-1 Maneuver   | 1053   | -      | -      | - | 178 563     |
| Stage 1              | -      | -      | -      | - | 602 -       |
| Stage 2              | -      | -      | -      | - | 448 -       |
| Platoon blocked, %   |        | -      | -      | - |             |
| Mov Cap-1 Maneuver   | 1053   | -      | -      | - | 172 563     |
| Mov Cap-2 Maneuver   | -      | -      | -      | - | 308 -       |
| Stage 1              | -      | -      | -      | - | 582 -       |
| Stage 2              | -      | -      | -      | - | 448 -       |

| Approach             | EB  | WB | SB   |
|----------------------|-----|----|------|
| HCM Control Delay, s | 0.4 | 0  | 17.3 |
| HCM LOS              |     |    | C    |

| Minor Lane/Major Mvmt | EBL   | EBT | WBT | WBR | SBLn1 |
|-----------------------|-------|-----|-----|-----|-------|
| Capacity (veh/h)      | 1053  | -   | -   | -   | 385   |
| HCM Lane V/C Ratio    | 0.034 | -   | -   | -   | 0.243 |
| HCM Control Delay (s) | 8.5   | -   | -   | -   | 17.3  |
| HCM Lane LOS          | A     | -   | -   | -   | C     |
| HCM 95th %tile Q(veh) | 0.1   | -   | -   | -   | 0.9   |

Lanes, Volumes, Timings  
1: 204th Street NE

2027 FULL-BUILD CONDITIONS

| Lane Group              | EBL   | EBT   | EBR  | WBL   | WBT   | WBR  | NBL   | NBT   | NBR   | SBL   | SBT   | SBR  |
|-------------------------|-------|-------|------|-------|-------|------|-------|-------|-------|-------|-------|------|
| Lane Configurations     |       |       |      |       |       |      |       |       |       |       |       |      |
| Traffic Volume (vph)    | 97    | 151   | 57   | 228   | 199   | 163  | 59    | 395   | 258   | 161   | 256   | 100  |
| Future Volume (vph)     | 97    | 151   | 57   | 228   | 199   | 163  | 59    | 395   | 258   | 161   | 256   | 100  |
| Ideal Flow (vphpl)      | 1900  | 1900  | 1900 | 1900  | 1900  | 1900 | 1900  | 1900  | 1900  | 1900  | 1900  | 1900 |
| Storage Length (ft)     | 125   |       | 0    | 125   |       | 0    | 200   |       | 125   | 100   |       | 0    |
| Storage Lanes           | 1     |       | 0    | 1     |       | 0    | 1     |       | 1     | 1     |       | 0    |
| Taper Length (ft)       | 25    |       |      | 25    |       |      | 25    |       |       | 25    |       |      |
| Lane Util. Factor       | 1.00  | 1.00  | 1.00 | 1.00  | 1.00  | 1.00 | 1.00  | 1.00  | 1.00  | 1.00  | 1.00  | 1.00 |
| Frt                     |       | 0.959 |      |       | 0.932 |      |       |       | 0.850 |       | 0.958 |      |
| Flt Protected           | 0.950 |       |      | 0.950 |       |      | 0.950 |       |       | 0.950 |       |      |
| Satd. Flow (prot)       | 1770  | 1786  | 0    | 1770  | 1736  | 0    | 1770  | 1863  | 1583  | 1770  | 1785  | 0    |
| Flt Permitted           | 0.267 |       |      | 0.425 |       |      | 0.391 |       |       | 0.249 |       |      |
| Satd. Flow (perm)       | 497   | 1786  | 0    | 792   | 1736  | 0    | 728   | 1863  | 1583  | 464   | 1785  | 0    |
| Right Turn on Red       |       |       | Yes  |       |       | Yes  |       |       | Yes   |       |       | Yes  |
| Satd. Flow (RTOR)       |       | 17    |      |       | 37    |      |       |       | 215   |       |       | 22   |
| Link Speed (mph)        |       | 35    |      |       | 35    |      |       | 35    |       |       |       | 35   |
| Link Distance (ft)      |       | 1143  |      |       | 2192  |      |       | 650   |       |       | 1110  |      |
| Travel Time (s)         |       | 22.3  |      |       | 42.7  |      |       | 12.7  |       |       | 21.6  |      |
| Peak Hour Factor        | 0.92  | 0.92  | 0.92 | 0.92  | 0.92  | 0.92 | 0.92  | 0.92  | 0.92  | 0.92  | 0.92  | 0.92 |
| Shared Lane Traffic (%) |       |       |      |       |       |      |       |       |       |       |       |      |
| Lane Group Flow (vph)   | 105   | 226   | 0    | 248   | 393   | 0    | 64    | 429   | 280   | 175   | 387   | 0    |
| Turn Type               | pm+pt | NA    |      | pm+pt | NA    |      | pm+pt | NA    | Perm  | pm+pt | NA    |      |
| Protected Phases        | 7     | 4     |      | 3     | 8     |      | 5     | 2     |       | 1     | 6     |      |
| Permitted Phases        | 4     |       |      | 8     |       |      | 2     |       | 2     | 6     |       |      |
| Detector Phase          | 7     | 4     |      | 3     | 8     |      | 5     | 2     | 2     | 1     | 6     |      |
| Switch Phase            |       |       |      |       |       |      |       |       |       |       |       |      |
| Minimum Initial (s)     | 5.0   | 5.0   |      | 5.0   | 5.0   |      | 5.0   | 10.0  | 10.0  | 5.0   | 10.0  |      |
| Minimum Split (s)       | 10.2  | 38.2  |      | 10.2  | 34.2  |      | 10.5  | 35.5  | 35.5  | 10.5  | 28.5  |      |
| Total Split (s)         | 15.0  | 30.0  |      | 15.0  | 30.0  |      | 15.0  | 45.0  | 45.0  | 15.0  | 45.0  |      |
| Total Split (%)         | 14.3% | 28.6% |      | 14.3% | 28.6% |      | 14.3% | 42.9% | 42.9% | 14.3% | 42.9% |      |
| Yellow Time (s)         | 4.0   | 4.0   |      | 4.0   | 4.0   |      | 4.5   | 4.5   | 4.5   | 4.5   | 4.5   |      |
| All-Red Time (s)        | 1.2   | 1.2   |      | 1.2   | 1.2   |      | 1.0   | 1.0   | 1.0   | 1.0   | 1.0   |      |
| 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)     | 5.2   | 5.2   |      | 5.2   | 5.2   |      | 5.5   | 5.5   | 5.5   | 5.5   | 5.5   |      |
| Lead/Lag                | Lead  | Lag   |      | Lead  | Lag   |      | Lead  | Lag   | Lag   | Lead  | Lag   |      |
| Lead-Lag Optimize?      | Yes   | Yes   |      | Yes   | Yes   |      | Yes   | Yes   | Yes   | Yes   | Yes   |      |
| Recall Mode             | None  | None  |      | None  | None  |      | None  | None  | None  | None  | None  |      |
| Act Effect Green (s)    | 30.2  | 21.0  |      | 32.6  | 25.2  |      | 37.2  | 28.9  | 28.9  | 40.5  | 33.4  |      |
| Actuated g/C Ratio      | 0.33  | 0.23  |      | 0.36  | 0.28  |      | 0.41  | 0.32  | 0.32  | 0.44  | 0.37  |      |
| v/c Ratio               | 0.36  | 0.53  |      | 0.64  | 0.78  |      | 0.16  | 0.73  | 0.43  | 0.51  | 0.58  |      |
| Control Delay           | 23.1  | 34.5  |      | 30.5  | 42.7  |      | 14.5  | 35.9  | 8.7   | 19.9  | 28.1  |      |
| Queue Delay             | 0.0   | 0.0   |      | 0.0   | 0.0   |      | 0.0   | 0.0   | 0.0   | 0.0   | 0.0   |      |
| Total Delay             | 23.1  | 34.5  |      | 30.5  | 42.7  |      | 14.5  | 35.9  | 8.7   | 19.9  | 28.1  |      |
| LOS                     | C     | C     |      | C     | D     |      | B     | D     | A     | B     | C     |      |
| Approach Delay          |       | 30.9  |      |       | 38.0  |      |       | 24.3  |       |       | 25.5  |      |
| Approach LOS            |       | C     |      |       | D     |      |       | C     |       |       | C     |      |
| Queue Length 50th (ft)  | 38    | 106   |      | 99    | 204   |      | 21    | 230   | 28    | 60    | 188   |      |
| Queue Length 95th (ft)  | 84    | 200   |      | #193  | #413  |      | 42    | 336   | 88    | 99    | 288   |      |
| Internal Link Dist (ft) |       | 1063  |      |       | 2112  |      |       | 570   |       |       | 1030  |      |

Lanes, Volumes, Timings

1: 204th Street NE

2027 FULL-BUILD CONDITIONS

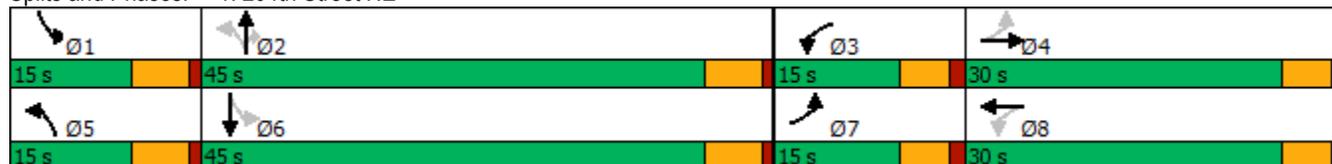


| Lane Group             | EBL  | EBT  | EBR | WBL  | WBT  | WBR | NBL  | NBT  | NBR  | SBL  | SBT  | SBR |
|------------------------|------|------|-----|------|------|-----|------|------|------|------|------|-----|
| Turn Bay Length (ft)   | 125  |      |     | 125  |      |     | 200  |      | 125  | 100  |      |     |
| Base Capacity (vph)    | 308  | 509  |     | 390  | 511  |     | 419  | 825  | 821  | 345  | 803  |     |
| Starvation Cap Reductn | 0    | 0    |     | 0    | 0    |     | 0    | 0    | 0    | 0    | 0    |     |
| Spillback Cap Reductn  | 0    | 0    |     | 0    | 0    |     | 0    | 0    | 0    | 0    | 0    |     |
| Storage Cap Reductn    | 0    | 0    |     | 0    | 0    |     | 0    | 0    | 0    | 0    | 0    |     |
| Reduced v/c Ratio      | 0.34 | 0.44 |     | 0.64 | 0.77 |     | 0.15 | 0.52 | 0.34 | 0.51 | 0.48 |     |

Intersection Summary

Area Type: Other  
 Cycle Length: 105  
 Actuated Cycle Length: 91.3  
 Natural Cycle: 95  
 Control Type: Actuated-Uncoordinated  
 Maximum v/c Ratio: 0.78  
 Intersection Signal Delay: 29.4  
 Intersection LOS: C  
 Intersection Capacity Utilization 73.3%  
 ICU Level of Service D  
 Analysis Period (min) 15  
 # 95th percentile volume exceeds capacity, queue may be longer.  
 Queue shown is maximum after two cycles.

Splits and Phases: 1: 204th Street NE



HCM 6th TWSC  
2: 74th Avenue NE & 204th Street NE

2027 FULL-BUILD CONDITIONS

| Intersection             |      |      |      |      |      |      |
|--------------------------|------|------|------|------|------|------|
| Int Delay, s/veh         | 2.2  |      |      |      |      |      |
| Movement                 | EBT  | EBR  | WBL  | WBT  | NBL  | NBR  |
| Lane Configurations      | ↔    |      | ↔    | ↑    | ↔    | ↔    |
| Traffic Vol, veh/h       | 628  | 26   | 55   | 391  | 26   | 97   |
| Future Vol, veh/h        | 628  | 26   | 55   | 391  | 26   | 97   |
| Conflicting Peds, #/hr   | 0    | 0    | 0    | 0    | 0    | 0    |
| Sign Control             | Free | Free | Free | Free | Stop | Stop |
| RT Channelized           | -    | None | -    | None | -    | None |
| Storage Length           | -    | -    | 25   | -    | 75   | 0    |
| Veh in Median Storage, # | 0    | -    | -    | 0    | 0    | -    |
| Grade, %                 | 0    | -    | -    | 0    | 0    | -    |
| Peak Hour Factor         | 87   | 87   | 87   | 87   | 87   | 87   |
| Heavy Vehicles, %        | 3    | 3    | 3    | 3    | 3    | 3    |
| Mvmt Flow                | 722  | 30   | 63   | 449  | 30   | 111  |

| Major/Minor          | Major1 | Major2 | Minor1 |   |             |
|----------------------|--------|--------|--------|---|-------------|
| Conflicting Flow All | 0      | 0      | 752    | 0 | 1312 737    |
| Stage 1              | -      | -      | -      | - | 737 -       |
| Stage 2              | -      | -      | -      | - | 575 -       |
| Critical Hdwy        | -      | -      | 4.13   | - | 6.43 6.23   |
| Critical Hdwy Stg 1  | -      | -      | -      | - | 5.43 -      |
| Critical Hdwy Stg 2  | -      | -      | -      | - | 5.43 -      |
| Follow-up Hdwy       | -      | -      | 2.227  | - | 3.527 3.327 |
| Pot Cap-1 Maneuver   | -      | -      | 853    | - | 174 417     |
| Stage 1              | -      | -      | -      | - | 472 -       |
| Stage 2              | -      | -      | -      | - | 561 -       |
| Platoon blocked, %   | -      | -      | -      | - | -           |
| Mov Cap-1 Maneuver   | -      | -      | 853    | - | 161 417     |
| Mov Cap-2 Maneuver   | -      | -      | -      | - | 299 -       |
| Stage 1              | -      | -      | -      | - | 472 -       |
| Stage 2              | -      | -      | -      | - | 519 -       |

| Approach             | EB | WB  | NB   |
|----------------------|----|-----|------|
| HCM Control Delay, s | 0  | 1.2 | 17.1 |
| HCM LOS              |    |     | C    |

| Minor Lane/Major Mvmt | NBLn1 | NBLn2 | EBT | EBR | WBL   | WBT |
|-----------------------|-------|-------|-----|-----|-------|-----|
| Capacity (veh/h)      | 299   | 417   | -   | -   | 853   | -   |
| HCM Lane V/C Ratio    | 0.1   | 0.267 | -   | -   | 0.074 | -   |
| HCM Control Delay (s) | 18.4  | 16.8  | -   | -   | 9.6   | -   |
| HCM Lane LOS          | C     | C     | -   | -   | A     | -   |
| HCM 95th %tile Q(veh) | 0.3   | 1.1   | -   | -   | 0.2   | -   |

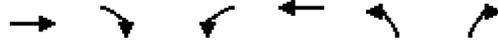
Lanes, Volumes, Timings  
2: 74th Avenue NE & 204th Street NE

2027 FULL-BUILD CONDITIONS - SIGNAL IMPROVEMENT

|                         |  |  |  |  |  |  |
|-------------------------|---|---|---|---|---|---|
| Lane Group              | EBT   | EBR   | WBL   | WBT   | NBL   | NBR   |
| Lane Configurations     |  |   |  |  |  |  |
| Traffic Volume (vph)    | 632   | 25  | 55  | 393   | 25  | 98  |
| Future Volume (vph)     | 632   | 25  | 55  | 393   | 25  | 98  |
| Ideal Flow (vphpl)      | 1900  | 1900  | 1900  | 1900  | 1900  | 1900  |
| Storage Length (ft)     |   | 0   | 25  |   | 75  | 0   |
| Storage Lanes           |   | 0   | 1   |   | 1   | 1   |
| Taper Length (ft)       |   |   | 25  |   | 25  |   |
| Lane Util. Factor       | 1.00  | 1.00  | 1.00  | 1.00  | 1.00  | 1.00  |
| Frt                     | 0.995   |   |   |   |   | 0.850   |
| Flt Protected           |   |   | 0.950   |   | 0.950   |   |
| Satd. Flow (prot)       | 1835  | 0   | 1752  | 1845  | 1752  | 1568  |
| Flt Permitted           |   |   | 0.256   |   | 0.950   |   |
| Satd. Flow (perm)       | 1835  | 0   | 472   | 1845  | 1752  | 1568  |
| Right Turn on Red       |   | Yes   |   |   |   | Yes   |
| Satd. Flow (RTOR)       | 5   |   |   |   |   | 113   |
| Link Speed (mph)        | 35  |   |   | 35  | 35  |   |
| Link Distance (ft)      | 2192  |   |   | 140   | 620   |   |
| Travel Time (s)         | 42.7  |   |   | 2.7   | 12.1  |   |
| Peak Hour Factor        | 0.87  | 0.87  | 0.87  | 0.87  | 0.87  | 0.87  |
| Heavy Vehicles (%)      | 3%  | 3%  | 3%  | 3%  | 3%  | 3%  |
| Shared Lane Traffic (%) |   |   |   |   |   |   |
| Lane Group Flow (vph)   | 755   | 0   | 63  | 452   | 29  | 113   |
| Turn Type               | NA  |   | Perm  | NA  | Prot  | Perm  |
| Protected Phases        | 4   |   |   | 8   | 2   |   |
| Permitted Phases        |   |   | 8   |   |   | 2   |
| Detector Phase          | 4   |   | 8   | 8   | 2   | 2   |
| Switch Phase            |   |   |   |   |   |   |
| Minimum Initial (s)     | 5.0   |   | 5.0   | 5.0   | 5.0   | 5.0   |
| Minimum Split (s)       | 22.5  |   | 22.5  | 22.5  | 22.5  | 22.5  |
| Total Split (s)         | 64.0  |   | 64.0  | 64.0  | 26.0  | 26.0  |
| Total Split (%)         | 71.1%   |   | 71.1%   | 71.1%   | 28.9%   | 28.9%   |
| Yellow Time (s)         | 3.5   |   | 3.5   | 3.5   | 3.5   | 3.5   |
| All-Red Time (s)        | 1.0   |   | 1.0   | 1.0   | 1.0   | 1.0   |
| Lost Time Adjust (s)    | 0.0   |   | 0.0   | 0.0   | 0.0   | 0.0   |
| Total Lost Time (s)     | 4.5   |   | 4.5   | 4.5   | 4.5   | 4.5   |
| Lead/Lag                |   |   |   |   |   |   |
| Lead-Lag Optimize?      |   |   |   |   |   |   |
| Recall Mode             | None  |   | None  | None  | Min   | Min   |
| Act Effct Green (s)     | 21.1  |   | 21.1  | 21.1  | 6.7   | 6.7   |
| Actuated g/C Ratio      | 0.57  |   | 0.57  | 0.57  | 0.18  | 0.18  |
| v/c Ratio               | 0.72  |   | 0.23  | 0.43  | 0.09  | 0.30  |
| Control Delay (s/veh)   | 10.4  |   | 6.2   | 5.8   | 16.6  | 7.2   |
| Queue Delay             | 0.0   |   | 0.0   | 0.0   | 0.0   | 0.0   |
| Total Delay (s/veh)     | 10.4  |   | 6.2   | 5.8   | 16.6  | 7.2   |
| LOS                     | B   |   | A   | A   | B   | A   |
| Approach Delay (s/veh)  | 10.4  |   |   | 5.9   | 9.2   |   |
| Approach LOS            | B   |   |   | A   | A   |   |
| Queue Length 50th (ft)  | 82  |   | 5   | 38  | 5   | 0   |
| Queue Length 95th (ft)  | 178   |   | 19  | 84  | 24  | 31  |

Lanes, Volumes, Timings  
 2: 74th Avenue NE & 204th Street NE

2027 FULL-BUILD CONDITIONS - SIGNAL IMPROVEMENT



| Lane Group              | EBT  | EBR | WBL  | WBT  | NBL  | NBR  |
|-------------------------|------|-----|------|------|------|------|
| Internal Link Dist (ft) | 2112 |     |      | 60   | 540  |      |
| Turn Bay Length (ft)    |      |     | 25   |      | 75   |      |
| Base Capacity (vph)     | 1835 |     | 472  | 1845 | 1061 | 994  |
| Starvation Cap Reductn  | 0    |     | 0    | 0    | 0    | 0    |
| Spillback Cap Reductn   | 0    |     | 0    | 0    | 0    | 0    |
| Storage Cap Reductn     | 0    |     | 0    | 0    | 0    | 0    |
| Reduced v/c Ratio       | 0.41 |     | 0.13 | 0.24 | 0.03 | 0.11 |

| Intersection Summary               |                        |
|------------------------------------|------------------------|
| Area Type:                         | Other                  |
| Cycle Length:                      | 90                     |
| Actuated Cycle Length:             | 37.2                   |
| Natural Cycle:                     | 60                     |
| Control Type:                      | Actuated-Uncoordinated |
| Maximum v/c Ratio:                 | 0.73                   |
| Intersection Signal Delay (s/veh): | 8.6                    |
| Intersection LOS:                  | A                      |
| Intersection Capacity Utilization: | 54.4%                  |
| ICU Level of Service:              | A                      |
| Analysis Period (min):             | 15                     |

Splits and Phases: 2: 74th Avenue NE & 204th Street NE



Lanes, Volumes, Timings  
3: SR-9 & 204th Street NE

2027 FULL-BUILD CONDITIONS

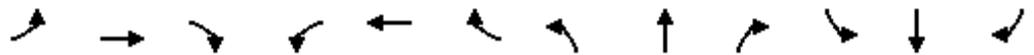
| Lane Group              | EBL   | EBT   | EBR   | WBL   | WBT   | WBR   | NBL   | NBT   | NBR  | SBL   | SBT   | SBR   |
|-------------------------|-------|-------|-------|-------|-------|-------|-------|-------|------|-------|-------|-------|
| Lane Configurations     |       |       |       |       |       |       |       |       |      |       |       |       |
| Traffic Volume (vph)    | 208   | 387   | 138   | 157   | 254   | 164   | 86    | 443   | 156  | 87    | 359   | 160   |
| Future Volume (vph)     | 208   | 387   | 138   | 157   | 254   | 164   | 86    | 443   | 156  | 87    | 359   | 160   |
| Ideal Flow (vphpl)      | 1900  | 1900  | 1900  | 1900  | 1900  | 1900  | 1900  | 1900  | 1900 | 1900  | 1900  | 1900  |
| Storage Length (ft)     | 300   |       | 200   | 150   |       | 325   | 200   |       | 0    | 250   |       | 400   |
| Storage Lanes           | 1     |       | 1     | 1     |       | 1     | 1     |       | 0    | 1     |       | 1     |
| Taper Length (ft)       | 25    |       |       | 25    |       |       | 25    |       |      | 25    |       |       |
| Lane Util. Factor       | 1.00  | 1.00  | 1.00  | 1.00  | 1.00  | 1.00  | 1.00  | 1.00  | 1.00 | 1.00  | 1.00  | 1.00  |
| Frt                     |       |       | 0.850 |       |       | 0.850 |       | 0.961 |      |       |       | 0.850 |
| Flt Protected           | 0.950 |       |       | 0.950 |       |       | 0.950 |       |      | 0.950 |       |       |
| Satd. Flow (prot)       | 1770  | 1863  | 1583  | 1770  | 1863  | 1583  | 1770  | 1790  | 0    | 1770  | 1863  | 1583  |
| Flt Permitted           | 0.244 |       |       | 0.168 |       |       | 0.950 |       |      | 0.950 |       |       |
| Satd. Flow (perm)       | 455   | 1863  | 1583  | 313   | 1863  | 1583  | 1770  | 1790  | 0    | 1770  | 1863  | 1583  |
| Right Turn on Red       |       |       | Yes   |       |       | Yes   |       |       | Yes  |       |       | Yes   |
| Satd. Flow (RTOR)       |       |       | 111   |       |       | 178   |       | 15    |      |       |       | 174   |
| Link Speed (mph)        |       | 35    |       |       | 35    |       |       | 55    |      |       |       | 45    |
| Link Distance (ft)      |       | 450   |       |       | 630   |       |       | 637   |      |       |       | 2541  |
| Travel Time (s)         |       | 8.8   |       |       | 12.3  |       |       | 7.9   |      |       |       | 38.5  |
| Peak Hour Factor        | 0.92  | 0.92  | 0.92  | 0.92  | 0.92  | 0.92  | 0.92  | 0.92  | 0.92 | 0.92  | 0.92  | 0.92  |
| Shared Lane Traffic (%) |       |       |       |       |       |       |       |       |      |       |       |       |
| Lane Group Flow (vph)   | 226   | 421   | 150   | 171   | 276   | 178   | 93    | 652   | 0    | 95    | 390   | 174   |
| Turn Type               | pm+pt | NA    | Perm  | pm+pt | NA    | Perm  | Prot  | NA    |      | Prot  | NA    | Perm  |
| Protected Phases        | 7     | 4     |       | 3     | 8     |       | 5     | 2     |      | 1     | 6     |       |
| Permitted Phases        | 4     |       | 4     | 8     |       | 8     |       |       |      |       |       | 6     |
| Detector Phase          | 7     | 4     | 4     | 3     | 8     | 8     | 5     | 2     |      | 1     | 6     | 6     |
| Switch Phase            |       |       |       |       |       |       |       |       |      |       |       |       |
| Minimum Initial (s)     | 5.0   | 7.0   | 7.0   | 5.0   | 7.0   | 7.0   | 5.0   | 10.0  |      | 5.0   | 10.0  | 10.0  |
| Minimum Split (s)       | 10.5  | 37.1  | 37.1  | 10.5  | 38.9  | 38.9  | 10.5  | 41.7  |      | 29.5  | 42.7  | 42.7  |
| Total Split (s)         | 30.0  | 30.0  | 30.0  | 30.0  | 30.0  | 30.0  | 20.0  | 65.0  |      | 20.0  | 65.0  | 65.0  |
| Total Split (%)         | 20.7% | 20.7% | 20.7% | 20.7% | 20.7% | 20.7% | 13.8% | 44.8% |      | 13.8% | 44.8% | 44.8% |
| Yellow Time (s)         | 3.5   | 3.1   | 3.1   | 3.5   | 3.9   | 3.9   | 3.5   | 4.7   |      | 3.5   | 4.7   | 4.7   |
| All-Red Time (s)        | 2.0   | 2.0   | 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   | 0.0   | 0.0   |
| Total Lost Time (s)     | 5.5   | 5.1   | 5.1   | 5.5   | 5.9   | 5.9   | 5.5   | 6.7   |      | 5.5   | 6.7   | 6.7   |
| Lead/Lag                | Lead  | Lag   | Lag   | Lead  | Lag   | Lag   | Lead  | Lag   |      | Lead  | Lag   | Lag   |
| Lead-Lag Optimize?      | Yes   |      | Yes   | Yes   | Yes   |
| Recall Mode             | None  |      | None  | None  | None  |
| Act Effect Green (s)    | 45.9  | 28.2  | 28.2  | 38.8  | 23.8  | 23.8  | 11.6  | 50.8  |      | 11.7  | 50.8  | 50.8  |
| Actuated g/C Ratio      | 0.36  | 0.22  | 0.22  | 0.30  | 0.19  | 0.19  | 0.09  | 0.40  |      | 0.09  | 0.40  | 0.40  |
| v/c Ratio               | 0.65  | 1.03  | 0.35  | 0.66  | 0.80  | 0.41  | 0.58  | 0.91  |      | 0.59  | 0.53  | 0.24  |
| Control Delay           | 40.2  | 102.4 | 17.5  | 44.2  | 70.6  | 10.1  | 74.5  | 54.6  |      | 74.8  | 33.4  | 4.5   |
| Queue Delay             | 0.0   | 0.0   | 0.0   | 0.0   | 0.0   | 0.0   | 0.0   | 0.0   |      | 0.0   | 0.0   | 0.0   |
| Total Delay             | 40.2  | 102.4 | 17.5  | 44.2  | 70.6  | 10.1  | 74.5  | 54.6  |      | 74.8  | 33.4  | 4.5   |
| LOS                     | D     | F     | B     | D     | E     | B     | E     | D     |      | E     | C     | A     |
| Approach Delay          |       | 68.8  |       |       | 46.1  |       |       | 57.1  |      |       | 31.7  |       |
| Approach LOS            |       | E     |       |       | D     |       |       | E     |      |       | C     |       |
| Queue Length 50th (ft)  | 147   | ~413  | 28    | 108   | 240   | 0     | 81    | 510   |      | 82    | 251   | 0     |
| Queue Length 95th (ft)  | 224   | #690  | 97    | 175   | #424  | 67    | 147   | #797  |      | 150   | 380   | 47    |
| Internal Link Dist (ft) |       | 370   |       |       | 550   |       |       | 557   |      |       | 2461  |       |

HARMONY AT ARLINGTON  
KIMLEY-HORN & ASSOCIATES, INC [JMM 090221278]

PM PEAK-HOUR

Lanes, Volumes, Timings  
3: SR-9 & 204th Street NE

2027 FULL-BUILD CONDITIONS

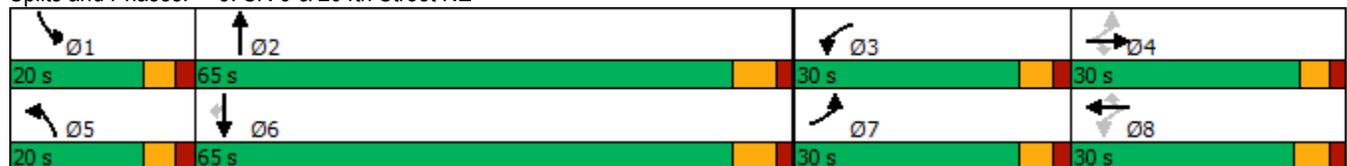


| Lane Group             | EBL  | EBT  | EBR  | WBL  | WBT  | WBR  | NBL  | NBT  | NBR | SBL  | SBT  | SBR  |
|------------------------|------|------|------|------|------|------|------|------|-----|------|------|------|
| Turn Bay Length (ft)   | 300  |      | 200  | 150  |      | 325  | 200  |      |     | 250  |      | 400  |
| Base Capacity (vph)    | 424  | 409  | 434  | 396  | 356  | 447  | 203  | 837  |     | 203  | 863  | 827  |
| Starvation Cap Reductn | 0    | 0    | 0    | 0    | 0    | 0    | 0    | 0    |     | 0    | 0    | 0    |
| Spillback Cap Reductn  | 0    | 0    | 0    | 0    | 0    | 0    | 0    | 0    |     | 0    | 0    | 0    |
| Storage Cap Reductn    | 0    | 0    | 0    | 0    | 0    | 0    | 0    | 0    |     | 0    | 0    | 0    |
| Reduced v/c Ratio      | 0.53 | 1.03 | 0.35 | 0.43 | 0.78 | 0.40 | 0.46 | 0.78 |     | 0.47 | 0.45 | 0.21 |

Intersection Summary

Area Type: Other  
 Cycle Length: 145  
 Actuated Cycle Length: 128.5  
 Natural Cycle: 135  
 Control Type: Actuated-Uncoordinated  
 Maximum v/c Ratio: 1.03  
 Intersection Signal Delay: 52.1      Intersection LOS: D  
 Intersection Capacity Utilization 85.7%      ICU Level of Service E  
 Analysis Period (min) 15  
 ~ Volume exceeds capacity, queue is theoretically infinite.  
 Queue shown is maximum after two cycles.  
 # 95th percentile volume exceeds capacity, queue may be longer.  
 Queue shown is maximum after two cycles.

Splits and Phases: 3: SR-9 & 204th Street NE



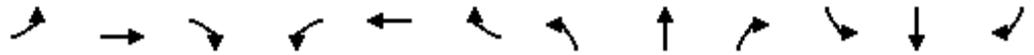
Lanes, Volumes, Timings  
4: SR-9 & Hazel Street/E Highland Drive

2027 FULL-BUILD CONDITIONS

|                         |  |  |  |  |  |  |   |  |  |  |  |  |
|-------------------------|---|---|---|---|---|---|---|---|---|---|---|---|
| Lane Group              | EBL   | EBT   | EBR   | WBL   | WBT   | WBR   | NBL   | NBT   | NBR   | SBL   | SBT   | SBR   |
| Lane Configurations     |   |  |   |   |  |   |  |  |   |  |  |   |
| Traffic Volume (vph)    | 15  | 6   | 16  | 157   | 10  | 103   | 18  | 523   | 123   | 106   | 392   | 20  |
| Future Volume (vph)     | 15  | 6   | 16  | 157   | 10  | 103   | 18  | 523   | 123   | 106   | 392   | 20  |
| Ideal Flow (vphpl)      | 1900  | 1900  | 1900  | 1900  | 1900  | 1900  | 1900  | 1900  | 1900  | 1900  | 1900  | 1900  |
| Storage Length (ft)     | 0   |   | 0   | 0   |   | 0   | 300   |   | 0   | 275   |   | 0   |
| Storage Lanes           | 0   |   | 0   | 0   |   | 0   | 1   |   | 0   | 1   |   | 0   |
| Taper Length (ft)       | 25  |   |   | 25  |   |   | 25  |   |   | 25  |   |   |
| Lane Util. Factor       | 1.00  | 1.00  | 1.00  | 1.00  | 1.00  | 1.00  | 1.00  | 1.00  | 1.00  | 1.00  | 1.00  | 1.00  |
| Frt                     |   | 0.943   |   |   | 0.949   |   |   | 0.971   |   |   | 0.993   |   |
| Flt Protected           |   | 0.980   |   |   | 0.972   |   | 0.950   |   |   | 0.950   |   |   |
| Satd. Flow (prot)       | 0   | 1721  | 0   | 0   | 1718  | 0   | 1770  | 1809  | 0   | 1770  | 1850  | 0   |
| Flt Permitted           |   | 0.864   |   |   | 0.798   |   | 0.488   |   |   | 0.162   |   |   |
| Satd. Flow (perm)       | 0   | 1518  | 0   | 0   | 1411  | 0   | 909   | 1809  | 0   | 302   | 1850  | 0   |
| Right Turn on Red       |   |   | Yes   |   |   | Yes   |   |   | Yes   |   |   | Yes   |
| Satd. Flow (RTOR)       |   | 17  |   |   | 23  |   |   | 13  |   |   | 3   |   |
| Link Speed (mph)        |   | 25  |   |   | 25  |   |   | 45  |   |   | 30  |   |
| Link Distance (ft)      |   | 431   |   |   | 1082  |   |   | 2541  |   |   | 825   |   |
| Travel Time (s)         |   | 11.8  |   |   | 29.5  |   |   | 38.5  |   |   | 18.8  |   |
| Peak Hour Factor        | 0.92  | 0.92  | 0.92  | 0.92  | 0.92  | 0.92  | 0.92  | 0.92  | 0.92  | 0.92  | 0.92  | 0.92  |
| Shared Lane Traffic (%) |   |   |   |   |   |   |   |   |   |   |   |   |
| Lane Group Flow (vph)   | 0   | 40  | 0   | 0   | 294   | 0   | 20  | 702   | 0   | 115   | 448   | 0   |
| Turn Type               | Perm  | NA  |   | Perm  | NA  |   | pm+pt   | NA  |   | pm+pt   | NA  |   |
| Protected Phases        |   | 4   |   |   | 8   |   | 5   | 2   |   | 1   | 6   |   |
| Permitted Phases        | 4   |   |   | 8   |   |   | 2   |   |   | 6   |   |   |
| Detector Phase          | 4   | 4   |   | 8   | 8   |   | 5   | 2   |   | 1   | 6   |   |
| Switch Phase            |   |   |   |   |   |   |   |   |   |   |   |   |
| Minimum Initial (s)     | 5.0   | 5.0   |   | 5.0   | 5.0   |   | 3.0   | 7.0   |   | 3.0   | 7.0   |   |
| Minimum Split (s)       | 33.5  | 33.5  |   | 22.5  | 22.5  |   | 9.5   | 31.7  |   | 9.5   | 22.5  |   |
| Total Split (s)         | 35.0  | 35.0  |   | 35.0  | 35.0  |   | 25.0  | 65.0  |   | 25.0  | 65.0  |   |
| Total Split (%)         | 28.0%   | 28.0%   |   | 28.0%   | 28.0%   |   | 20.0%   | 52.0%   |   | 20.0%   | 52.0%   |   |
| Yellow Time (s)         | 3.1   | 3.1   |   | 3.1   | 3.1   |   | 3.5   | 4.7   |   | 3.5   | 4.7   |   |
| All-Red Time (s)        | 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   |   |
| Total Lost Time (s)     |   | 5.1   |   |   | 5.1   |   | 5.5   | 6.7   |   | 5.5   | 6.7   |   |
| Lead/Lag                |   |   |   |   |   |   | Lead  | Lag   |   | Lead  | Lag   |   |
| Lead-Lag Optimize?      |   |   |   |   |   |   | Yes   | Yes   |   | Yes   | Yes   |   |
| Recall Mode             | None  | None  |   | None  | None  |   | None  | None  |   | None  | None  |   |
| Act Effect Green (s)    |   | 23.9  |   |   | 23.9  |   | 49.3  | 41.8  |   | 56.4  | 52.0  |   |
| Actuated g/C Ratio      |   | 0.26  |   |   | 0.26  |   | 0.53  | 0.45  |   | 0.61  | 0.56  |   |
| v/c Ratio               |   | 0.10  |   |   | 0.77  |   | 0.04  | 0.85  |   | 0.36  | 0.43  |   |
| Control Delay           |   | 20.8  |   |   | 45.9  |   | 7.8   | 33.3  |   | 10.9  | 14.8  |   |
| Queue Delay             |   | 0.0   |   |   | 0.0   |   | 0.0   | 0.0   |   | 0.0   | 0.0   |   |
| Total Delay             |   | 20.8  |   |   | 45.9  |   | 7.8   | 33.3  |   | 10.9  | 14.8  |   |
| LOS                     |   | C   |   |   | D   |   | A   | C   |   | B   | B   |   |
| Approach Delay          |   | 20.8  |   |   | 45.9  |   |   | 32.6  |   |   | 14.0  |   |
| Approach LOS            |   | C   |   |   | D   |   |   | C   |   |   | B   |   |
| Queue Length 50th (ft)  |   | 10  |   |   | 149   |   | 4   | 357   |   | 26  | 130   |   |
| Queue Length 95th (ft)  |   | 41  |   |   | #321  |   | 14  | 565   |   | 52  | 278   |   |
| Internal Link Dist (ft) |   | 351   |   |   | 1002  |   |   | 2461  |   |   | 745   |   |

Lanes, Volumes, Timings  
 4: SR-9 & Hazel Street/E Highland Drive

2027 FULL-BUILD CONDITIONS

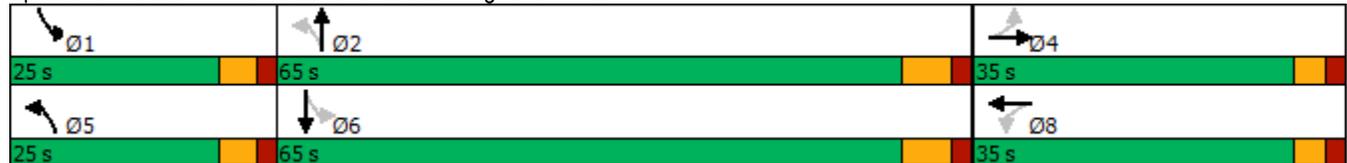


| Lane Group             | EBL | EBT  | EBR | WBL | WBT  | WBR | NBL  | NBT  | NBR | SBL  | SBT  | SBR |
|------------------------|-----|------|-----|-----|------|-----|------|------|-----|------|------|-----|
| Turn Bay Length (ft)   |     |      |     |     |      |     | 300  |      |     | 275  |      |     |
| Base Capacity (vph)    |     | 528  |     |     | 496  |     | 755  | 1206 |     | 513  | 1242 |     |
| Starvation Cap Reductn |     | 0    |     |     | 0    |     | 0    | 0    |     | 0    | 0    |     |
| Spillback Cap Reductn  |     | 0    |     |     | 0    |     | 0    | 0    |     | 0    | 0    |     |
| Storage Cap Reductn    |     | 0    |     |     | 0    |     | 0    | 0    |     | 0    | 0    |     |
| Reduced v/c Ratio      |     | 0.08 |     |     | 0.59 |     | 0.03 | 0.58 |     | 0.22 | 0.36 |     |

Intersection Summary

Area Type: Other  
 Cycle Length: 125  
 Actuated Cycle Length: 92.3  
 Natural Cycle: 90  
 Control Type: Actuated-Uncoordinated  
 Maximum v/c Ratio: 0.85  
 Intersection Signal Delay: 28.2  
 Intersection LOS: C  
 Intersection Capacity Utilization 77.5%  
 ICU Level of Service D  
 Analysis Period (min) 15  
 # 95th percentile volume exceeds capacity, queue may be longer.  
 Queue shown is maximum after two cycles.

Splits and Phases: 4: SR-9 & Hazel Street/E Highland Drive



| Intersection             |      |      |      |      |      |      |
|--------------------------|------|------|------|------|------|------|
| Int Delay, s/veh         | 1.7  |      |      |      |      |      |
| Movement                 | EBL  | EBT  | WBT  | WBR  | SBL  | SBR  |
| Lane Configurations      |      |      |      |      |      |      |
| Traffic Vol, veh/h       | 39   | 660  | 468  | 17   | 58   | 42   |
| Future Vol, veh/h        | 39   | 660  | 468  | 17   | 58   | 42   |
| Conflicting Peds, #/hr   | 0    | 0    | 0    | 0    | 0    | 0    |
| Sign Control             | Free | Free | Free | Free | Stop | Stop |
| RT Channelized           | -    | None | -    | None | -    | None |
| Storage Length           | 25   | -    | -    | -    | 0    | -    |
| Veh in Median Storage, # | -    | 0    | 0    | -    | 0    | -    |
| Grade, %                 | -    | 0    | 0    | -    | 0    | -    |
| Peak Hour Factor         | 92   | 92   | 92   | 92   | 92   | 92   |
| Heavy Vehicles, %        | 2    | 2    | 2    | 2    | 2    | 2    |
| Mvmt Flow                | 42   | 717  | 509  | 18   | 63   | 46   |

| Major/Minor          | Major1 | Major2 | Minor2 |   |             |
|----------------------|--------|--------|--------|---|-------------|
| Conflicting Flow All | 527    | 0      | -      | 0 | 1319 518    |
| Stage 1              | -      | -      | -      | - | 518 -       |
| Stage 2              | -      | -      | -      | - | 801 -       |
| Critical Hdwy        | 4.12   | -      | -      | - | 6.42 6.22   |
| Critical Hdwy Stg 1  | -      | -      | -      | - | 5.42 -      |
| Critical Hdwy Stg 2  | -      | -      | -      | - | 5.42 -      |
| Follow-up Hdwy       | 2.218  | -      | -      | - | 3.518 3.318 |
| Pot Cap-1 Maneuver   | 1040   | -      | -      | - | 173 558     |
| Stage 1              | -      | -      | -      | - | 598 -       |
| Stage 2              | -      | -      | -      | - | 442 -       |
| Platoon blocked, %   |        | -      | -      | - |             |
| Mov Cap-1 Maneuver   | 1040   | -      | -      | - | 166 558     |
| Mov Cap-2 Maneuver   | -      | -      | -      | - | 302 -       |
| Stage 1              | -      | -      | -      | - | 574 -       |
| Stage 2              | -      | -      | -      | - | 442 -       |

| Approach             | EB  | WB | SB   |
|----------------------|-----|----|------|
| HCM Control Delay, s | 0.5 | 0  | 18.5 |
| HCM LOS              |     |    | C    |

| Minor Lane/Major Mvmt | EBL   | EBT | WBT | WBR | SBLn1 |
|-----------------------|-------|-----|-----|-----|-------|
| Capacity (veh/h)      | 1040  | -   | -   | -   | 374   |
| HCM Lane V/C Ratio    | 0.041 | -   | -   | -   | 0.291 |
| HCM Control Delay (s) | 8.6   | -   | -   | -   | 18.5  |
| HCM Lane LOS          | A     | -   | -   | -   | C     |
| HCM 95th %tile Q(veh) | 0.1   | -   | -   | -   | 1.2   |