Master Traffic Impact Study

Fitzsimons Innovation Campus

Aurora, Colorado

Prepared for:

Fitzsimons Redevelopment Authority

Kimley»Horn

M A S T E R T R A F F I C I M P A C T S T U D Y

Fitzsimons Innovation Campus

Aurora, Colorado

Prepared for
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April 2023

TABLE OF CONTENTS

APPENDICES

LIST OF TABLES

LIST OF FIGURES

1.0 EXECUTIVE SUMMARY

Fitzsimons Innovation Campus (FIC) is a mixed-use master plan development located on the northeast corner of the Montview Boulevard and Peoria Street intersection in Aurora, Colorado. Fitzsimons Innovation Campus is currently developing and proposing to continue to develop the land area bounded by Fitzsimons Parkway to the north and east, Montview Boulevard to the south, and Peoria Street to the west.

The purpose of this study is to provide an update to the previous *City of Aurora Traffic Study of Fitzsimons Redevelopment Final Edition* completed by Felsburg, Holt, & Ullevig (FHU) in May 2017 which evaluated the same development area. The updated evaluation of Fitzsimons Innovation Campus is due to a change in proposed uses and having more defined user access information which can provide a more detailed intersection operations analysis. Further, with a portion of Fitzsimons Innovation Campus already developed, baseline traffic data was collected to determine existing traffic patterns and intersection operations. Of note, the FHU Fitzsimons Redevelopment Authority traffic study only provided intersection turning movement data estimates and operational level of service analysis for the external intersections along Fitzsimons Parkway, Montview Boulevard, and Peoria Street with exception of evaluation of the 23rd Avenue and Scranton Parkway intersection. Based on additional access information, this updated traffic evaluation of Fitzsimons Innovation Campus provides turning movements estimates and intersection operational level of service analysis for all key internal and external intersections which accounts for full buildout of the surrounding area. For purposes of this master traffic study, analysis was conducted for the 2040 horizon.

This study includes identifying potential traffic related impacts on the local street system and developing mitigation measures required for the identified impacts. The following existing and future intersections were incorporated into this master traffic study in accordance with City of Aurora standards and requirements:

- Fitzsimons Parkway & Peoria Street (Intersection #1) – Existing Count
- Fitzsimons Parkway & Quentin Street (#2) - Future
- Fitzsimons Parkway & Racine Street (#3) - Future
- Fitzsimons Parkway & Revere Street (#4) - Future
- Fitzsimons Parkway & Scranton Street (Southbound) (#5) - Future

- Fitzsimons Parkway & Scranton Street (Northbound) (#6) - Existing
- Fitzsimons Parkway & Ursula Street (#7) – Existing
- Fitzsimons Parkway & Victor Street (#8) – Existing Count
- 25th Avenue & Peoria Street (#9) – Existing Count
- 25th Avenue & Quentin Street (#10) – Future
- 25th Avenue & Racine Street (#11) – Future
- 25th Avenue & Revere Street (#12) – Future
- 25th Avenue & Scranton Street (Southbound) (#13) – Future
- 25th Avenue & Scranton Street (Northbound) (#14) – Existing
- 25th Avenue & Ursula Street (#15) – Existing
- 23rd Avenue & Peoria Street (#16) – Existing Count
- 23rd Avenue & Quentin Street (#17) – Future
- 23rd Avenue & Racine Street (#18) – Future
- 23rd Avenue & Revere Street (#19) – Future
- 23rd Avenue & Scranton Street (Southbound) (#20) - Future
- 23rd Avenue & Scranton Street (Northbound) (#21) – Existing
- 23rd Avenue & Ursula Street (#22) – Existing
- 23rd Avenue & Uvalda Court (#23) – Future
- 24th Avenue & Victor Street (#24) – Existing Count
- 23rd Avenue & Fitzsimons Parkway (#25) – Existing Count
- 22nd Avenue & Peoria Street (#26) – Future
- 22nd Avenue & Quentin Street (#27) – Future
- 22nd Avenue & Racine Street (#28) – Future
- 22nd Avenue & Revere Street (#29) – Future
- 22nd Avenue & Scranton Street (Southbound) (#30) – Future
- 22nd Ave. & Scranton Street (Northbound) (#31) – Existing Count (Two-Way)
- 22nd Avenue & Ursula Street (#32) – Existing Count
- 22nd Avenue & Uvalda Court (#33) – Existing
- 22nd Avenue & Victor Street (#34) – Future
- Montview Boulevard & Peoria Street (#35) – Existing Count
- Montview Boulevard & Quentin Street (#36) – Existing Count
- Montview Boulevard & Racine Street (#37) – Existing Count

- Montview Boulevard & Revere Street (#38) – Future
- Montview Boulevard & Scranton Street (#39) – Existing Count
- Montview Boulevard & W Ursula Street (Southbound) (#40) – Existing Count
- Montview Boulevard & E Ursula Street (Northbound) (#41) – Existing Count
- Montview Boulevard & Uvalda Court (#42) – Existing
- Montview Boulevard & Victor Street (#43) – Existing Count
- Montview Boulevard & Fitzsimons Parkway (#44) – Existing Count

Regional access to FIC is provided by Interstate 70 (I-70), Interstate 225 (I-225), and Colfax Avenue (US-40) while primary access is also provided from Fitzsimons Parkway, Peoria Street, Montview Boulevard, and Martin Luther King Jr Boulevard. Direct access will primarily be provided by Quentin Street, Racine Street, Revere Street, Scranton Street, Ursula Street, Victor Street, 22nd Avenue, 23rd Avenue, and 25th Avenue internal to campus.

Based on the analysis presented in this report, Kimley-Horn believes remaining development of Fitzsimons Innovation Campus will be successfully incorporated into the existing and future roadway network. Analysis of the existing street network and expected traffic volumes resulted in the following recommended intersection control, roadway segments, and improvements to the existing intersections as summarized in the tables below.

Fitzsimons Intersection Control & Lane Segment Recommendations

Control Type	Intersections	
Traffic Signals (12)	• Fitzsimons Pkwy & Peoria St (#1) • Fitzsimons Pkwy & Racine St (#3) • Fitzsimons Pkwy & Ursula St (#7) • Fitzsimons Pkwy & Victor St (#8) • 25th Ave & Peoria St (#9) • 23rd Ave & Peoria St (#16)	• Montview Blvd & Peoria St (#35) • Montview Blvd & Racine St (#37) • Montview Blvd & Scranton St (#39) • Montview Blvd & W Ursula Street (#40) • Montview Blvd & Victor St (#43) • Montview Blvd & Fitzsimons Pkwy (#44)
Two-Way Stop (28)	• Fitzsimons Pkwy & Quentin St (#2: Stop NB) • Fitzsimons Pkwy & Revere St (#4: NB) • Fitzsimons Pkwy & Scranton St (#5: None) • Fitzsimons Pkwy & Scranton St (#6: NB) • 25th Ave & Quentin St (#10: NB/SB) • 25th Ave & Racine St (#11: NB/SB) • 25th Ave & Revere St (#12: NB/SB) • 25th Ave & Scranton St (#13: EB/WB) • 25th Ave & Scranton St (#14: EB/WB) • 25th Ave & Ursula St (#15: EB) • 23rd Ave & Revere St (#19: NB) • 23rd Ave & Scranton St (#20: EB/WB) • 23rd Ave & Scranton St (#21: EB/WB) • 23rd Ave & Uvalda St (#23: NB)	• 23rd Ave & Fitzsimons Pkwy (#25: EB) • 22nd Ave & Peoria St (#26: WB) • 22nd Ave & Quentin St (#27: EB/WB) • 22nd Ave & Racine St (#28: EB/WB) • 22nd Ave & Revere St (#29: EB/WB) • 22nd Ave & Scranton St (#30: EB/WB) • 22nd Ave & Scranton St (#31: EB/WB) • 22nd Ave & Ursula St (#32 EB/WB) • 22nd Ave & Uvalda St (#33: NB/SB) • 22nd Ave & Victor St (#34: EB) • Montview Blvd & Quentin St (#36: NB/SB) • Montview Blvd & Revere St (#38: SB) • Montview Blvd & E Ursula St (#41: None) • Montview Blvd & Uvalda St (#42: SB)
All-Way Stop (2)	• 23rd Ave & Quentin St (#17)	• 23rd Avenue & Victor St (#24)
Roundabout (2)	• 23rd Ave & Racine St (#18)	• 23rd Ave & Ursula St (#22)
Lane Segments	**Roadway**	
2-Lane Segment (11)	• Quentin Street • Racine Street • Revere Street • Scranton Street • Ursula Street • Uvalda Street • Victor Street • 25th Avenue • 23rd Avenue • 22nd Avenue • Montview Boulevard from Racine Street to Uvalda Street	
4-Lane Segment (3)	• Fitzsimons Parkway • Montview Boulevard from Peoria Street to Racine Street, • Montview Boulevard from Uvalda Street to Fitzsimons Parkway	
6-Lane Segment (1)	• Peoria Street	

Black Text in Control Section = Existing Control Type; Blue Text in Control Section = Future Control Type

Fitzsimons Summary of Improvements to Existing Intersections

Intersection	Improvements
Fitzsimons Parkway & Peoria Street (#1)	• Three Northbound & Southbound Through Lanes • Provide Westbound Dual Left Turn Lanes
Fitzsimons Parkway & Ursula Street (#7)	• Install Traffic Signal • Provide Northbound Left Turn Lane and Shared Through/Right
Fitzsimons Parkway & Victor Street (#8)	• Install Traffic Signal
25th Avenue & Peoria Street (#9)	• New East Leg to 25th Avenue and Associated Movements
23rd Avenue & Peoria Street (#16)	• New East Leg to 23rd Avenue and Associated Movements • Install Traffic Signal

23rd Avenue & Victor Street (#24)	• Convert Two T-Intersections to One Four-Leg Intersection
	• New West Leg to 23rd Avenue and Associated Movements
	• Convert 23rd Avenue East Leg from a 4-Lane Section to a 3-Lane Section
	• Standard Intersection Configuration with All-Way Stop Control
	  • Provide Northbound and Southbound Left Turn Lanes
	  • Provide Northbound Right Turn Lane

23rd Avenue & Fitzsimons Parkway (#25)	• Provide Eastbound Free Right Turn Lane • Convert 23rd Avenue from a 4-Lane Section to a 3-Lane Section • Restrict Eastbound left turning vehicles as ¾ movement intersection
22nd Avenue & Scranton Street SB (#30)	• Convert Two-Way Scranton Street to One-Way Travel Southbound • Provide Stop Control on Eastbound and Westbound Approaches
22nd Avenue & Scranton Street NB (#31)	• Convert Two-Way Scranton Street to One-Way Travel Northbound • Provide Stop Control on Eastbound and Westbound Approaches
Montview Boulevard & Peoria Street (#35)	• Provide Exclusive Dual Left Turn Lanes on all Four Approaches • Provide Two Eastbound Through Lanes
Montview Boulevard & Quentin Street (#36)	• New North Leg to Quentin Street and Associated Movements • Provide Two Eastbound Through Lanes
Montview Boulevard & Racine Street (#37)	• New North Leg to Racine Street and Associated Movements • Install Traffic Signal • Provide Eastbound and Westbound Left Turn Lanes and Drop Eastbound Right Turn Lane
Montview Boulevard & Scranton Street (#39)	• Relocate Intersection to the West in Alignment with the SB Segment • Install Traffic Signal • Provide Designated Northbound and Southbound Left Turn Lanes
Montview Boulevard & W Ursula Street (#40)	• Install Traffic Signal
Montview Boulevard & Victor Street (#43)	• Install Traffic Signal • Provide Two Eastbound and Westbound Through Lanes • Provide Designated Left Turn Lanes on all Four Approaches
Montview Boulevard & Fitzsimons Parkway (#44)	• Provide Northbound Dual Left Turn Lanes • Provide Three Southbound Through Lanes

2.0 INTRODUCTION

Kimley-Horn and Associates, Inc. has prepared this report to document the results of an updated Master Traffic Impact Study of future traffic conditions associated with Fitzsimons Innovation Campus proposed to be located to the north of Montview Boulevard between Peoria Street and Fitzsimons Parkway in Aurora, Colorado. A vicinity map illustrating the Fitzsimons Innovation Campus development area is shown in **Figure 1**. **Figure 2** illustrates the existing site area and key intersections with turning movement counts collected at the specified intersections in coordination with the City of Aurora, while **Figure 3** shows the full buildout roadway network and configuration. A conceptual site plan is attached in **Appendix I**.

The purpose of this traffic study is to provide an update to the previous draft of the *Fitzsimons Innovation Campus Master Traffic Impact Study* completed by Kimley-Horn in January 2021, which had been updated from the *City of Aurora Traffic Study of Fitzsimons Redevelopment Final Edition* completed by Felsburg Holt and Ullevig (FHU) in May 2017, which evaluated the same development area. The updated evaluation addressed in this study is due to a change in proposed uses from the previous submittals in this area. The traffic study completed by FHU in this development area assessed a limited number of intersections, and with the additional access information provided for purposes of this study the evaluation conducted in this study includes turning movement estimates and intersection operational level of service analysis for all key internal and external intersections with full buildout of the surrounding area. For purposes of this master traffic study, analysis was conducted for the 2040 horizon.

Fitzsimons Innovation Campus is proposed to include a mix of multifamily housing, a hotel, general office space, research and development uses, some general light industrial, public park/open green space, and retail uses. Based on the most up-to-date development plan provided for this study at full project buildout, **Table 1** provides the proposed land uses assumed in this traffic study based on the site plan provided in **Appendix I**, with land uses already constructed and in use highlighted in blue. The APS and Compositive Schools are not yet at their proposed full capacity based on the latest information obtained in this study. Of note, a detailed comparison of the current land uses proposition to the previously proposed land uses assumed in the FHU 2017 study and Kimley-Horn 2021 study are provided in **Appendix D**.

Table 1 – Fitzsimons Innovation Campus Land Uses

Block	Land Use and ITE Code	Size
1	Office (ITE 710)	410,000 SF
2	Office (ITE 710)	120,000 SF
3	Office (ITE 710)	199,000 SF
4	Office (ITE 710)	195,000 SF
5	Office (ITE 710)	145,000 SF
6	Office (ITE 710)	126,800 SF
7-8	Office - UCH Peoria Lot Traffic Study	675,000 SF
9	Office (ITE 710)	235,000 SF
10	Industrial Park (ITE 130)	316,000 SF
11	Office (ITE 710)	235,000 SF
12	Office (ITE 710)	430,000 SF
13	Office (ITE 710)	200,000 SF
14	Office (ITE 710)	180,000 SF
15	Office/Research & Development Center - Bioscience 5 Traffic Study	90,000 SF
16	Office (ITE 710) Bioscience 4 Traffic Study	115,132 SF
	Research/Development Center (ITE 760) Bioscience 4 Traffic Study	115,131 SF
17	Office/Research & Development Center - Bioscience 3	118,874 SF
18	Office/Research & Development Center - Bioscience 1	90,000 SF
19	Office/Research & Development Center - Bioscience 2	112,000 SF
20	APS School Traffic Study (6th-8th Grade)	405 Students
	APS School Traffic Study (9th-12th Grade)	545 Students
21	Office (ITE 710)	175,000 SF
22	Office (ITE 710)	80,000 SF
	Strip Retail Plaza (ITE 822)	14,778 SF
23	Compositive School Traffic Study	140 Students
	Compositive School Traffic Study	140 Students
24	Multifamily Mid-Rise Housing (ITE 221)	204 Units
25	Multifamily Mid-Rise Housing (ITE 221)	204 Units
26	Multifamily Mid-Rise Housing (ITE 221)	210 Units
27	Fremont Apartments	232 Units
28	Hotel (ITE 310)	106 Rooms
29	Office (ITE 710)	25,000 SF
30	Office (ITE 710)	150,000 SF
31	Office (ITE 710)	200,000 SF
32	UPI Office Building	197,000 SF
33	Office (ITE 710)	25,000 SF
34	Fitzsimons Early Learning Center	24,371 SF
35	Aviva at Fitzsimons Recovery Center	68,285 SF
36	Fitzsimons Credit Union	14,638 SF
OS1-7	Public Park (ITE 411)	9.78 Acres

Blue highlight = land uses already constructed today

This study includes identifying project traffic generation characteristics to determine potential project traffic related impacts on the local street system and to develop the necessary mitigation measures required for the identified traffic impacts. The following intersections were incorporated into this traffic study in accordance with the City of Aurora standards and requirements:

- Martin Luther King Jr. (MLK) Boulevard/Fitzsimons Parkway & Peoria Street (#1) – Existing
- Fitzsimons Parkway & Quentin Street (#2) - Future
- Fitzsimons Parkway & Racine Street (#3) - Future
- Fitzsimons Parkway & Revere Street (#4) - Future
- Fitzsimons Parkway & Scranton Street (Southbound) (#5) - Future
- Fitzsimons Parkway & Scranton Street (Northbound) (#6) - Existing
- Fitzsimons Parkway & Ursula Street (#7) – Existing
- Fitzsimons Parkway & Victor Street (#8) – Existing
- 25th Avenue & Peoria Street (#9) – Existing
- 25th Avenue & Quentin Street (#10) – Future
- 25th Avenue & Racine Street (#11) – Future
- 25th Avenue & Revere Street (#12) – Future
- 25th Avenue & Scranton Street (Southbound) (#13) – Future
- 25th Avenue & Scranton Street (Northbound) (#14) – Existing
- 25th Avenue & Ursula Street (#15) – Existing
- 23rd Avenue & Peoria Street (#16) – Existing
- 23rd Avenue & Quentin Street (#17) – Future
- 23rd Avenue & Racine Street (#18) – Future
- 23rd Avenue & Revere Street (#19) – Future
- 23rd Avenue & Scranton Street (Southbound) (#20) - Future
- 23rd Avenue & Scranton Street (Northbound) (#21) – Existing
- 23rd Avenue & Ursula Street (#22) – Existing
- 23rd Avenue & Uvalda Court (#23) – Future
- 23rd Avenue & Victor Street (#24) – Existing
- 23rd Avenue & Fitzsimons Parkway (#25) – Existing
- 22nd Avenue & Peoria Street (#26) – Future
- 22nd Avenue & Quentin Street (#27) – Future
- 22nd Avenue & Racine Street (#28) – Future
- 22nd Avenue & Revere Street (#29) – Future
- 22nd Avenue & Scranton Street (Southbound) (#30) – Future
- 22nd Avenue & Scranton Street (Northbound) (#31) – Existing (Two-Way)
- 22nd Avenue & Ursula Street (#32) – Existing
- 22nd Avenue & Uvalda Court (#33) – Existing
- 22nd Avenue & Victor Street (#34) – Future
- Montview Boulevard & Peoria Street (#35) – Existing
- Montview Boulevard & Quentin Street (#36) – Existing
- Montview Boulevard & Racine Street (#37) – Existing
- Montview Boulevard & Revere Street (#38) – Future
- Montview Boulevard & Scranton Street (#39) – Existing
- Montview Boulevard & W Ursula Street (Southbound) (#40) – Existing

- Montview Boulevard & E Ursula Street (Northbound) (#41) – Existing
- Montview Boulevard & Uvalda Court (#42) – Existing
- Montview Boulevard & Victor Street (#43) – Existing
- Montview Boulevard & Fitzsimons Parkway (#44) – Existing

Regional access to Fitzsimons Innovation Campus is provided by Interstate 70 (I-70), Interstate 225 (I-225), and Colfax Avenue (US-40) while primary access is also provided from Fitzsimons Parkway, Peoria Street, Montview Boulevard, and Martin Luther King Jr. Boulevard. Direct access will primarily be provided by Quentin Street, Racine Street, Revere Street, Scranton Street, Ursula Street, Victor Street, 22nd Avenue, 23rd Avenue, and 25th Avenue internal to the campus.

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FITZSIMONS INNOVATION CAMPUS MASTER TRAFFIC IMPACT STUDY
VICINITY MAP

FIGURE 1

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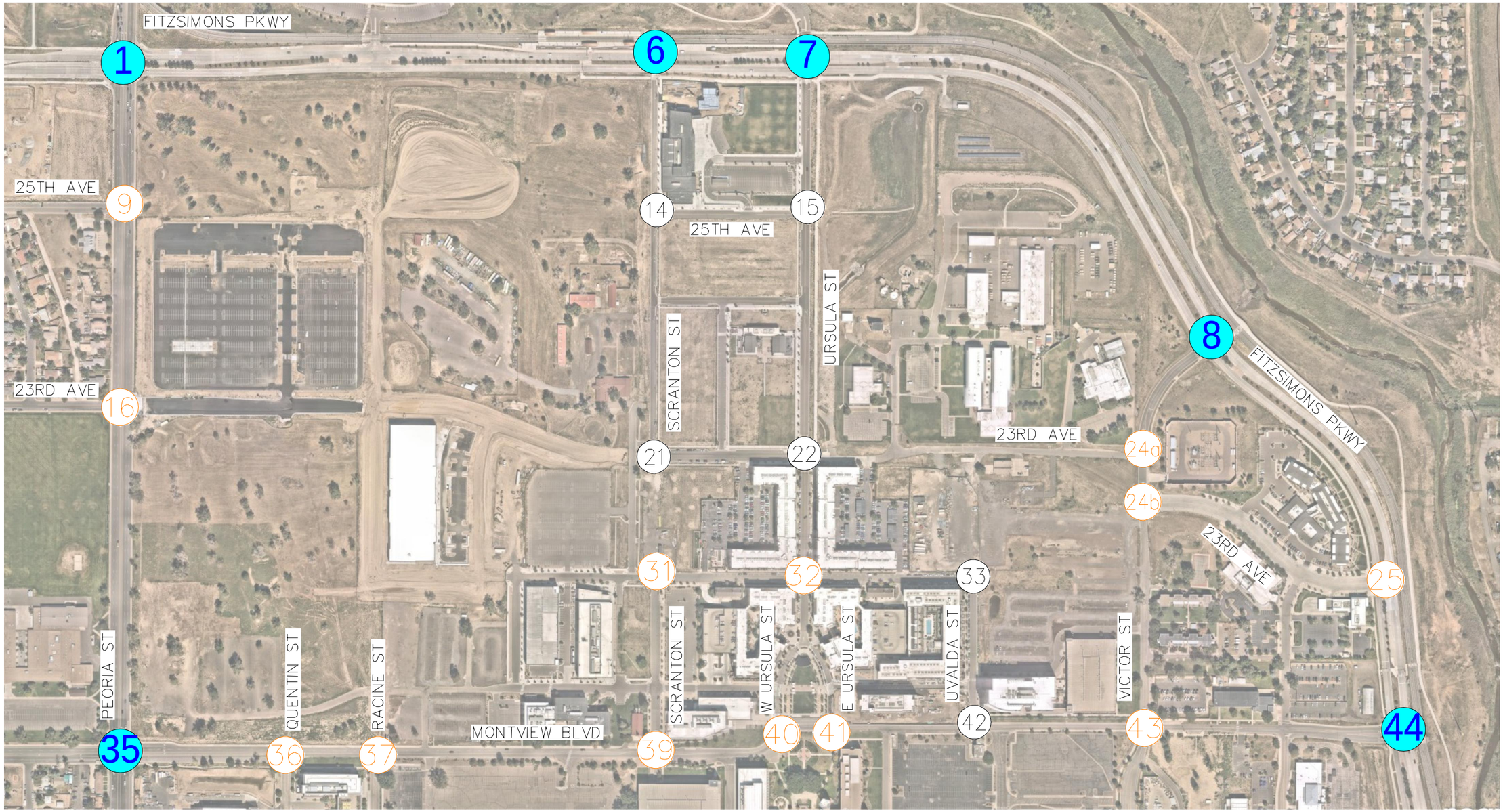

Note:
Intersections that were deemed necessary to be counted in this study in 2020 and recounted in 2022 were approved by City of Aurora staff.

LEGEND

- (X) Intersection Counted in 2020 & 2022
- (X) Intersection Counted in 2020
- (X) Existing Intersection Not Counted

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FITZSIMONS INNOVATION CAMPUS MASTER TRAFFIC IMPACT STUDY
EXISTING SITE AREA AND KEY INTERSECTIONS

FIGURE 2

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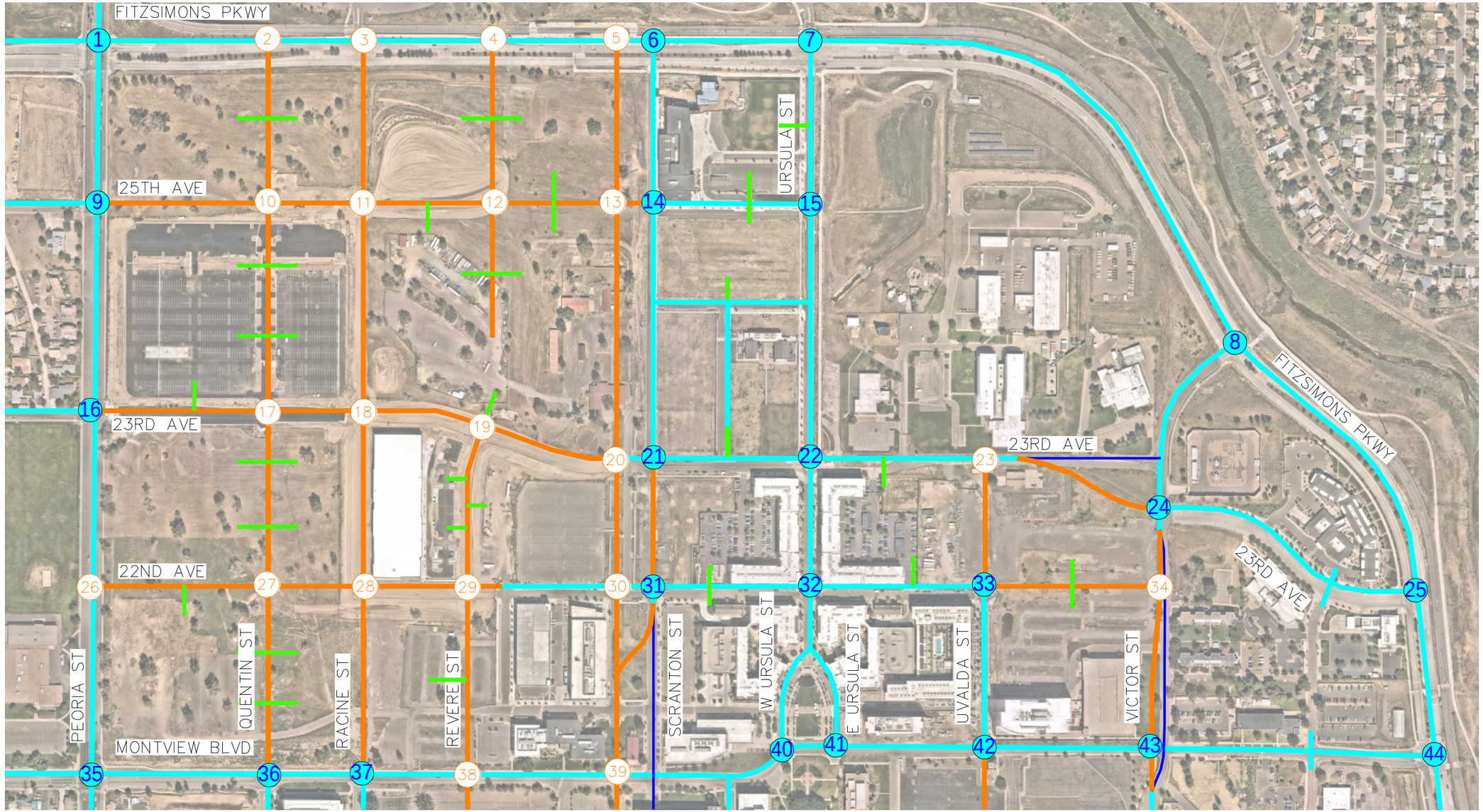

LEGEND

- Existing Study Area Key Intersection
- Future Study Area Key Intersection
- Existing Roadway
- Future Roadway
- Assumed Access Locations
- Existing Roadway to be Removed

FITZSIMONS INNOVATION CAMPUS MASTER TRAFFIC IMPACT STUDY
EXISTING AND FUTURE KEY INTERSECTIONS AND ROADWAYS

FIGURE 3

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3.0 EXISTING AND FUTURE CONDITIONS

3.1 Existing Study Area

The areas yet to be developed within Fitzsimons Innovation Campus consist mostly of vacant land which was a previous golf course. Existing development within the project area include office, research, residential, and commercial uses. The Army Reserve also incorporates the northeast quadrant of the project area. Several hospitals as well as the University of Colorado Anschutz Medical Campus are located to south in addition to residential, office, and medical uses. Single family residences are located in the extended area to the north, south, and west while I-225 is located to the east. The Fitzsimons RTD Light Rail Station and Sand Creek Park are located along Fitzsimons Parkway to the north of the project site.

3.2 Existing Roadway Network

Fitzsimons Parkway provides two lanes of travel in each direction with a raised median and a posted speed limit of 40 miles per hour within the project limits. Fitzsimons Parkway extends north-south in the east limits of the project while extending east-west in the north limits of the study area. Peoria Street extends northbound and southbound with three through lanes of travel in each direction from 25th Avenue to the south limits of the study area while providing two through lanes in each direction at Fitzsimons Parkway. Peoria Street provides a striped median and has a speed limit of 35 miles per hour within the study limits. Montview Boulevard extends eastbound and westbound primarily with one through lane in each direction from Peoria Street to Fitzsimons Parkway with a speed limit of 25 miles per hour. However, shortly west of Scranton Street, Montview Boulevard provides two through lanes in the westbound direction. Montview Boulevard provides two through lanes in each direction west of Peoria Street. Ursula Street is a two-lane roadway extending north-south with one through lane of travel in each direction. Several other two-lane roadways have recently been constructed within the study area with limited through connectivity due to minimal surrounding development at this time. Existing intersection lane configurations and control at study area key intersections are shown in **Figure 4**.

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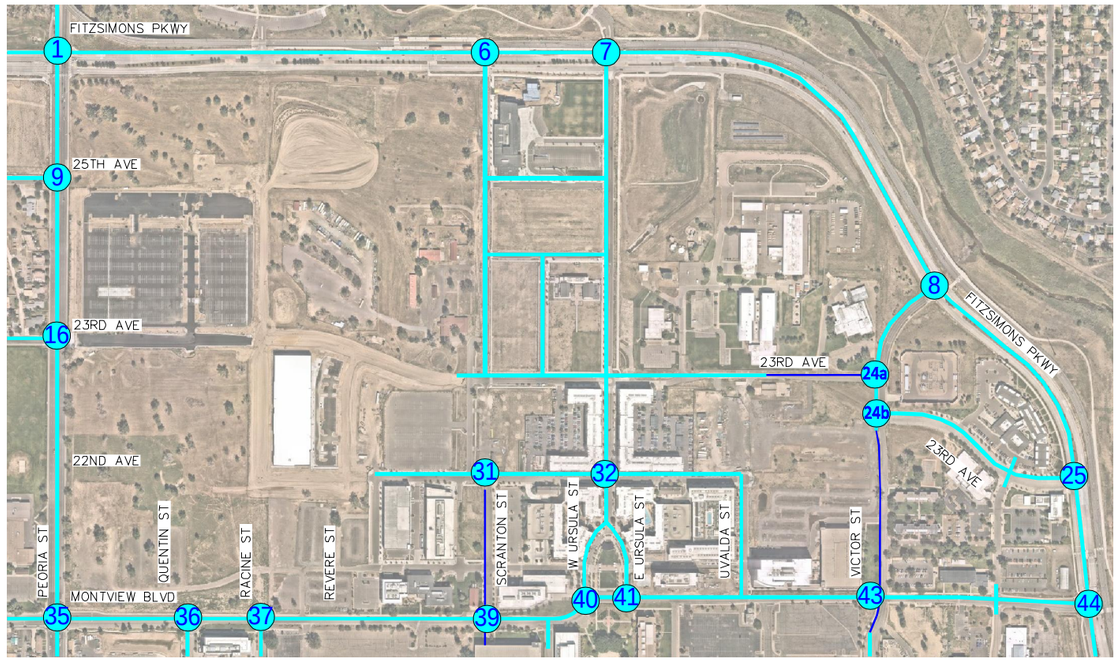

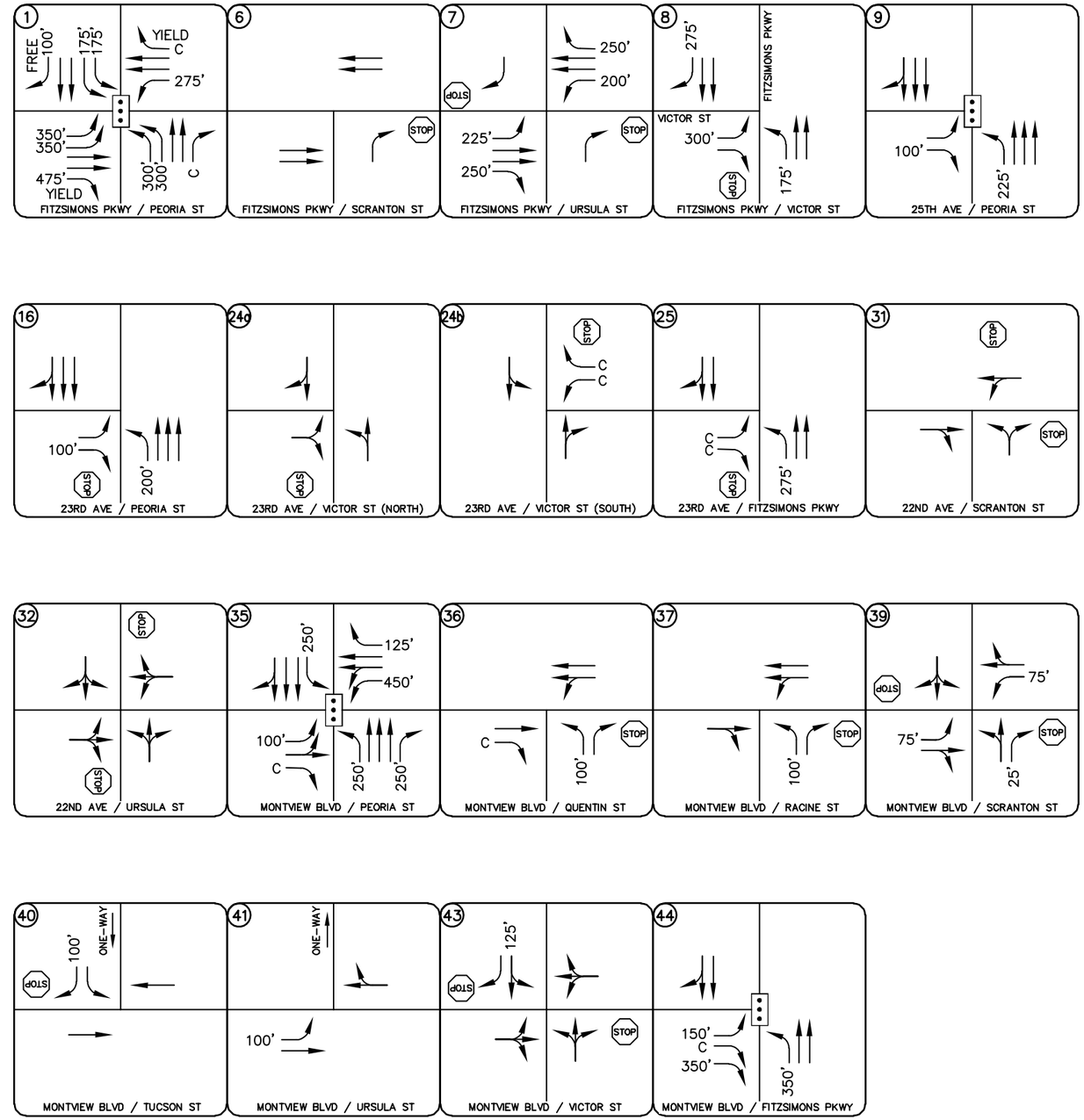

LEGEND

- X — Existing Study Area Key Intersection
- STOP — Stop Controlled Approach
- Signalized Intersection
- Existing Roadway
- Existing Roadway to be Removed
- C — Continuous Turn Lane
- 100' — Turn Lane Length (feet)

FITZSIMONS INNOVATION CAMPUS MASTER TRAFFIC IMPACT STUDY
2022 EXISTING GEOMETRY AND CONTROL

FIGURE 4

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3.3 Existing Traffic Volumes

Turning movement counts were collected at the following intersections on Tuesday, January 28, 2020, in association with the initial *Fitzsimons Innovation Campus Master Traffic Impact Study* prepared by Kimley-Horn:

- Fitzsimons Parkway and Peoria Street (#1)
- Fitzsimons Parkway and Victor Street (#8)
- 25th Avenue and Peoria Street (#9)
- 23rd Avenue and Peoria Street (#16)
- 23rd Avenue (north segment) and Victor Street (#24)
- 23rd Avenue and Fitzsimons Parkway (#25)
- 22nd Avenue and Ursula Street (#32)
- Montview Boulevard and Peoria Street (#35)
- Montview Boulevard and Quentin Street (#36)
- Montview Boulevard and Racine Street (#37)
- Montview Boulevard and W Ursula Street (#40)
- Montview Boulevard and E Ursula Street (#41)
- Montview Boulevard and Victor Street (#43)
- Montview Boulevard and Fitzsimons Parkway (#44)

Turning movement counts were also collected at the 23rd Avenue (south segment) and Victor Street (#24b) intersection on Thursday, January 30, 2020, as well as at the 22nd Avenue/Scranton Street (#31) and Montview Boulevard/Scranton Street (#39) intersections on Tuesday, May 7, 2019.

Based on discussion with City of Aurora staff, existing turning movement counts were conducted again at the following key study intersections on Tuesday, September 27, 2022, during the weekday morning and afternoon peak hours to provide a more up-to-date estimate of current traffic volumes:

- MLK Jr. Boulevard/Fitzsimons Parkway & Peoria Street (#1)
- Fitzsimons Parkway & Scranton Parkway (Northbound) (#6)
- Fitzsimons Parkway & Ursula Street (#7)
- Fitzsimons Parkway & Victor Street (#8)
- Montview Boulevard & Peoria Street (#35)
- Montview Boulevard & Fitzsimons Parkway (#44)

Each of these counts were conducted during the morning and afternoon peak hours of adjacent street traffic in 15-minute intervals from 7:00 AM to 9:00 AM and 4:00 PM to 6:00 PM on these count dates. The 2020 existing intersection traffic volumes are shown in **Figure 5**. Based on the 2022 turning movement counts collected at the six aforementioned intersections, estimated adjusted 2022 volumes at the remaining existing intersections were estimated as shown in **Figure 6**. Turning movement count sheets are provided in **Appendix A**.

3.4 Unspecified Development Traffic Growth

According to traffic projections from the Denver Regional Council of Governments (DRCOG) traffic model, the area surrounding the site is expected to have an average 30-year growth factor of 1.35. This growth factor equates to an annual growth rate of 1.0 percent. However, it is recognized that the proposed Fitzsimons Innovation Campus will account for a substantial portion of this traffic growth in the area, with approximately 51,615 daily trips anticipated to be generated by the proposed project. As such, the DRCOG estimates were assessed with the subtraction of the estimated trips generated by this project, which results in an average 30-year growth factor of 1.07. Based on this growth factor, the annual average growth rate in the area is only 0.23 percent. Future traffic volume projections and growth rate calculations are provided in **Appendix C**. However, to be conservative, a 0.5 percent annual growth rate was used to calculate future traffic volumes at the study area intersections. This annual growth rate was used to estimate short-term 2040 background traffic volume projections at the study area intersections. The calculated background traffic volumes at the external intersections along Fitzsimons Parkway, Peoria Street, and Montview Boulevard are provided in **Figure 7**. The assumed roadway network and traffic volume internal to the Fitzsimons Innovation Campus area is based on projects already constructed or currently being constructed today that will be completed before the 2040 horizon with all other projects assumed to be only within the 2040 background plus project traffic horizon.

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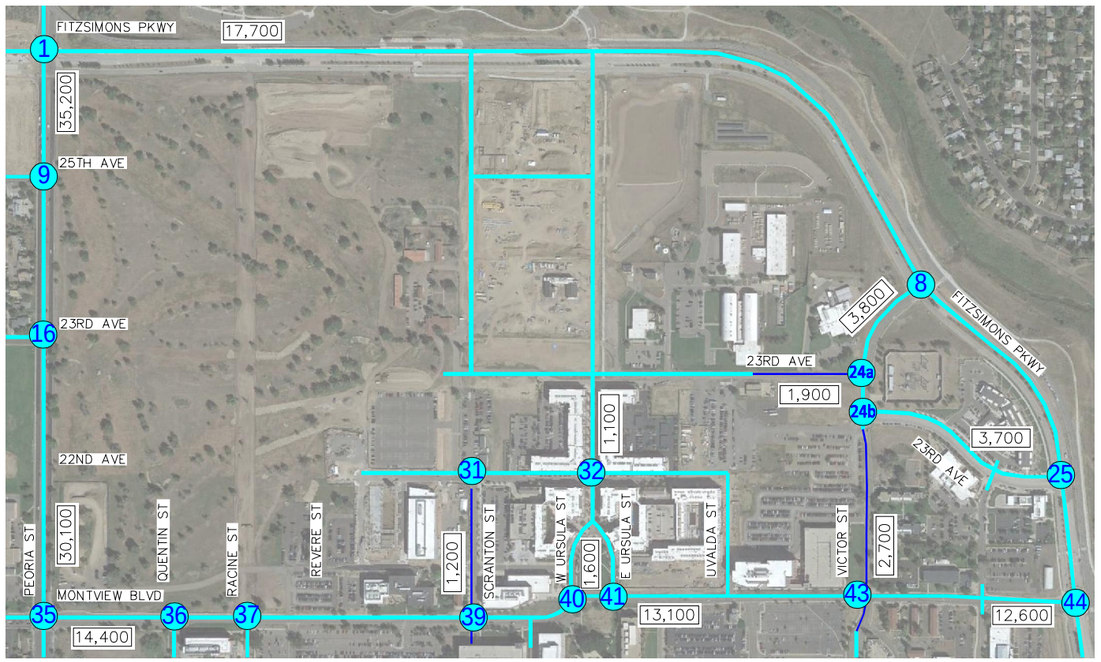


TUESDAY, JANUARY 28, 2020
7:15–8:15AM (4:30–5:30PM)

1

1295(1407)
308(414)
223(567)
224(583)
NEW WEST LEG:
NOT IN EXISTING
TRAFFIC COUNTS
872(1315)
325(207)
FITZSIMONS PKWY / PEORIA ST

TUESDAY, JANUARY 28, 2020
7:15–8:15AM (4:30–5:30PM)

8

133(25)
495(586)
FITZSIMONS PKWY
17(275)
8(63)
31(13)
437(867)
FITZSIMONS PKWY / VICTOR ST

TUESDAY, JANUARY 28, 2020
7:15–8:15AM (4:30–5:30PM)

9

322(451)
1178(1532)
404(322)
181(126)
79(122)
789(1209)
25TH AVE / PEORIA ST

TUESDAY, JANUARY 28, 2020
7:15–8:15AM (4:15–5:15PM)

16

69(128)
1314(1521)
52(20)
120(25)
32(148)
813(1317)
23RD AVE / PEORIA ST

TUESDAY, JANUARY 28, 2020
7:30–8:30AM (4:30–5:30PM)

24a

50(16)
113(20)
23(91)
23(64)
35(20)
8(241)
23RD AVE / VICTOR ST (NORTH)

THURSDAY, JANUARY 30, 2020
7:30–8:30AM (4:15–5:15PM)

24b

105(23)
31(40)
29(20)
121(9)
23(124)
17(153)
23RD AVE / VICTOR ST (SOUTH)

TUESDAY, JANUARY 28, 2020
7:15–8:15AM (4:45–5:45PM)

25

28(21)
480(654)
2(71)
35(251)
177(25)
468(822)
23RD AVE / FITZSIMONS PKWY

TUESDAY, MAY 7, 2019
8:00–9:00AM (4:15–5:15PM)

31

4(1)
26(16)
1(3)
7(25)
14(21)
21(51)
22ND AVE / SCRANTON ST

TUESDAY, JANUARY 28, 2020
7:45–8:45AM (4:45–5:45PM)

32

9(4)
31(18)
2(2)
5(6)
3(4)
15(15)
10(39)
1(11)
7(9)
5(15)
20(41)
12(22)
22ND AVE / URSULA ST

TUESDAY, JANUARY 28, 2020
7:15–8:15AM (4:30–5:30PM)

35

211(424)
815(1046)
381(82)
49(207)
179(726)
27(186)
164(307)
469(168)
327(290)
202(252)
645(937)
269(64)
MONTVIEW BLVD / PEORIA ST

TUESDAY, JANUARY 28, 2020
7:30–8:30AM (4:30–5:30PM)

36

212(1057)
25(14)
994(246)
139(65)
25(81)
34(87)
MONTVIEW BLVD / QUENTIN ST

TUESDAY, JANUARY 28, 2020
7:15–8:15AM (4:30–5:30PM)

37

250(994)
29(28)
972(306)
25(31)
9(70)
46(122)
MONTVIEW BLVD / RACINE ST

TUESDAY, MAY 7, 2019
7:15–8:15AM (4:00–5:00PM)

39

33(59)
3(16)
16(7)
310(695)
38(1)
35(34)
521(462)
143(6)
0(77)
0(1)
1(64)
MONTVIEW BLVD / SCRANTON ST

TUESDAY, JANUARY 28, 2020
7:15–8:15AM (4:15–5:15PM)

40

27(41)
29(20)
543(631)
525(621)
MONTVIEW BLVD / TUCSON ST

TUESDAY, JANUARY 28, 2020
7:15–8:15AM (4:30–5:30PM)

41

22(49)
537(602)
25(47)
518(658)
MONTVIEW BLVD / URSULA ST

TUESDAY, JANUARY 28, 2020
7:00–8:00AM (4:30–5:30PM)

43

16(67)
17(19)
4(22)
118(20)
577(378)
35(17)
54(72)
239(637)
112(25)
25(56)
6(67)
6(68)
MONTVIEW BLVD / VICTOR ST

TUESDAY, JANUARY 28, 2020
7:15–8:15AM (4:45–5:45PM)

44

108(30)
404(869)
12(259)
130(754)
656(217)
634(583)
MONTVIEW BLVD / FITZSIMONS PKWY

LEGEND

X — Existing Study Area Key Intersection

XXX(XXX) — Weekday AM(PM) Peak Hour Traffic Volumes

XX,X00 — Estimated Daily Traffic Volume

Existing Roadway

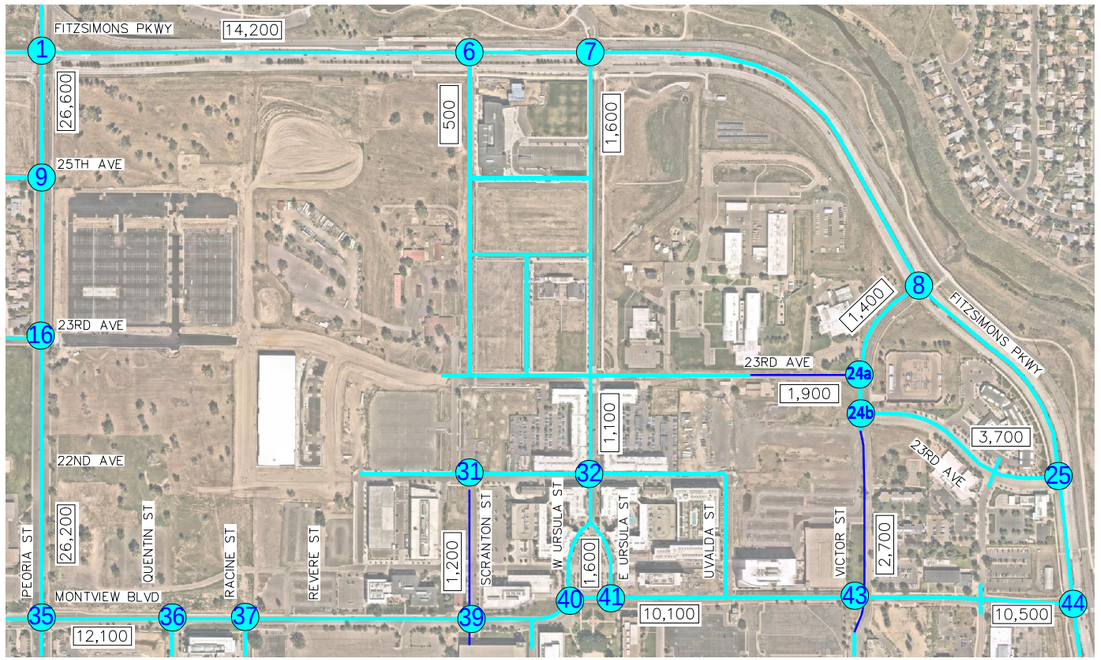
Existing Roadway to be Removed

FITZSIMONS INNOVATION CAMPUS MASTER TRAFFIC IMPACT STUDY
2020 TRAFFIC VOLUMES

FIGURE 5

Kimley»Horn

Kimley»Horn
NORTH
NTS 196203001



TUESDAY, SEPTEMBER 27, 2022 7:15–8:15AM (4:30–5:30PM)

1
183(213) 1120(1194) 205(330) ← 200(172) ← 332(427) ← 70(49)
242(127) → 526(399) → 140(165) → 91(246) ↑ 739(959) ↑ 113(46) ↑
FITZSIMONS PKWY / PEORIA ST

TUESDAY, SEPTEMBER 27, 2022 7:15–8:15AM (4:30–5:30PM)

6
← 616(665)
838(766) → 104(43) ↑
FITZSIMONS PKWY / PEORIA ST

TUESDAY, SEPTEMBER 27, 2022 7:15–8:15AM (4:30–5:30PM)

7
1(3) ← 1(1) ← 535(620) ← 112(18)
81(34) → 722(712) → 208(64) → 9(14) ↑ 111(63) ↑
FITZSIMONS PKWY / PEORIA ST

TUESDAY, SEPTEMBER 27, 2022 7:15–8:15AM (4:00–5:00PM)

8
129(13) 691(781) FITZSIMONS PKWY
20(75) → 18(47) → 50(4) ↑ 675(596) ↑
FITZSIMONS PKWY / VICTOR ST

TUESDAY, JANUARY 28, 2020 7:15–8:15AM (4:30–5:30PM)

9
139(238) 1191(1170)
99(149) → 91(63) → 40(61) ↑ 844(1102) ↑
25TH AVE / PEORIA ST

TUESDAY, JANUARY 28, 2020 7:15–8:15AM (4:15–5:15PM)

16
69(78) 1213(1155)
52(20) → 120(75) → 32(148) ↑ 832(1168) ↑
23RD AVE / PEORIA ST

TUESDAY, JANUARY 28, 2020 7:30–8:30AM (4:30–5:30PM)

24a
50(16) 113(20)
23(91) → 23(64) → 35(20) ↑ 8(241) ↑
23RD AVE / VICTOR ST (NORTH)

THURSDAY, JANUARY 30, 2020 7:30–8:30AM (4:15–5:15PM)

24b
105(23) 31(40) ← 29(20) ← 121(9)
23(124) ↑ 17(153) ↑
23RD AVE / VICTOR ST (SOUTH)

TUESDAY, JANUARY 28, 2020 7:15–8:15AM (4:45–5:45PM)

25
28(21) 705(628)
2(71) → 35(251) → 177(25) ↑ 596(566) ↑
23RD AVE / FITZSIMONS PKWY

TUESDAY, MAY 7, 2019 8:00–9:00AM (4:15–5:15PM)

31
← 4(1) ← 26(16)
1(3) → 7(25) → 14(21) ↑ 21(51) ↑
22ND AVE / SCRANTON ST

TUESDAY, JANUARY 28, 2020 7:45–8:45AM (4:45–5:45PM)

32
9(4) 31(18) 2(2) ← 5(6) ← 3(4) ← 15(15)
10(39) → 1(11) → 7(9) → 5(15) ↑ 20(41) ↑ 12(22) ↑
22ND AVE / URSULA ST

TUESDAY, SEPTEMBER 27, 2022 7:30–8:30AM (4:30–5:30PM)

35
181(186) 873(1003) 424(57) ← 38(268) ← 182(576) ← 81(111)
173(227) → 393(168) → 261(182) → 200(201) ↑ 618(883) ↑ 186(33) ↑
MONTVIEW BLVD / PEORIA ST

TUESDAY, JANUARY 28, 2020 7:30–8:30AM (4:30–5:30PM)

36
← 276(874) ← 25(14)
864(193) → 139(65) → 25(81) ↑ 34(87) ↑
MONTVIEW BLVD / QUENTIN ST

TUESDAY, JANUARY 28, 2020 7:15–8:15AM (4:30–5:30PM)

37
← 292(818) ← 29(28)
848(249) → 50(31) → 9(70) ↑ 46(122) ↑
MONTVIEW BLVD / RACINE ST

TUESDAY, MAY 7, 2019 7:15–8:15AM (4:00–5:00PM)

39
33(59) 3(16) ← 16(7) ← 310(620) ← 38(1)
35(34) → 516(331) → 143(6) → 0(77) ↑ 0(1) ↑ 1(64) ↑
MONTVIEW BLVD / SCRANTON ST

TUESDAY, JANUARY 28, 2020 7:15–8:15AM (4:15–5:15PM)

40
27(41) 29(20) ← 414(502)
470(486) →
MONTVIEW BLVD / TUCSON ST

TUESDAY, JANUARY 28, 2020 7:15–8:15AM (4:30–5:30PM)

41
← 22(49) ← 414(502)
25(47) → 474(459) →
MONTVIEW BLVD / URSULA ST

TUESDAY, JANUARY 28, 2020 7:00–8:00AM (4:30–5:30PM)

43
16(67) 17(19) 4(22) ← 118(20) ← 467(328) ← 35(17)
54(72) → 203(543) → 112(25) → 25(56) ↑ 6(67) ↑ 6(68) ↑
MONTVIEW BLVD / VICTOR ST

TUESDAY, SEPTEMBER 27, 2022 7:15–8:15AM (4:30–5:30PM)

44
74(17) 666(862)
9(84) → 144(699) → 493(245) ↑ 764(507) ↑
MONTVIEW BLVD / FITZSIMONS PKWY

LEGEND

- (X) Existing Study Area Key Intersection
- XXX(XXX) Weekday AM(PM) Peak Hour Traffic Volumes
- XX,X00 Estimated Daily Traffic Volume
- Existing Roadway
- Existing Roadway to be Removed

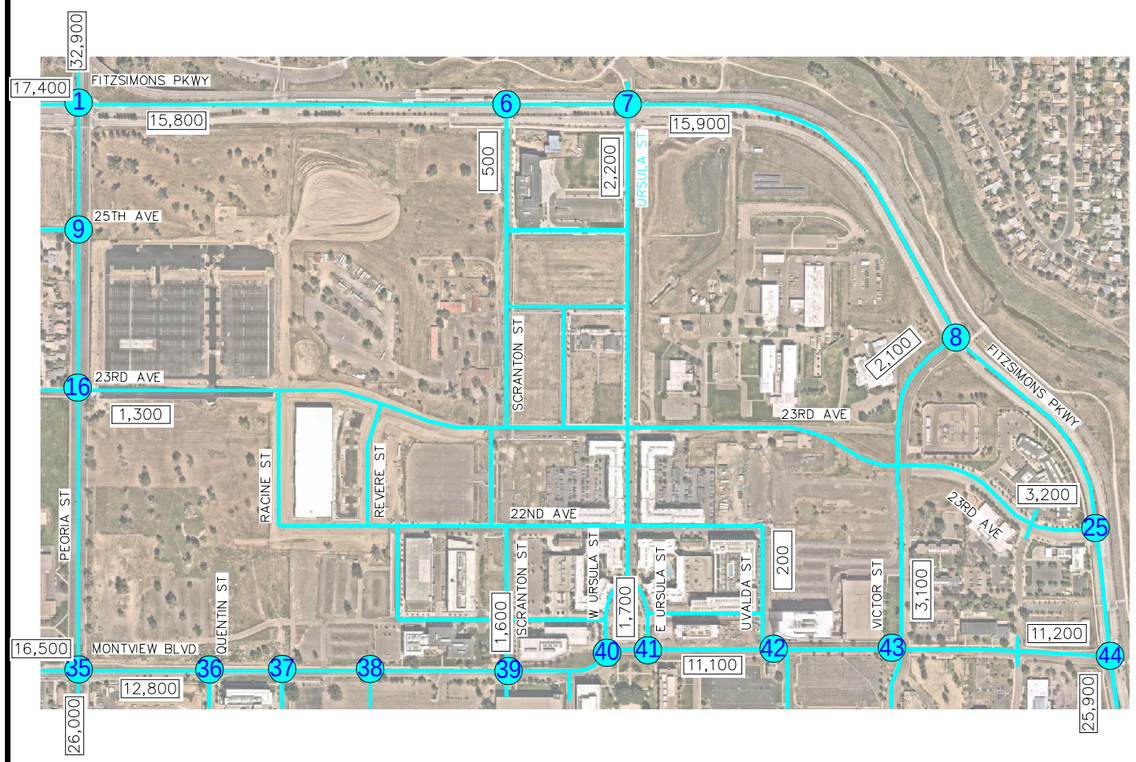
Note:
The volumes at the 6 intersections counted in 2022 are not adjusted.

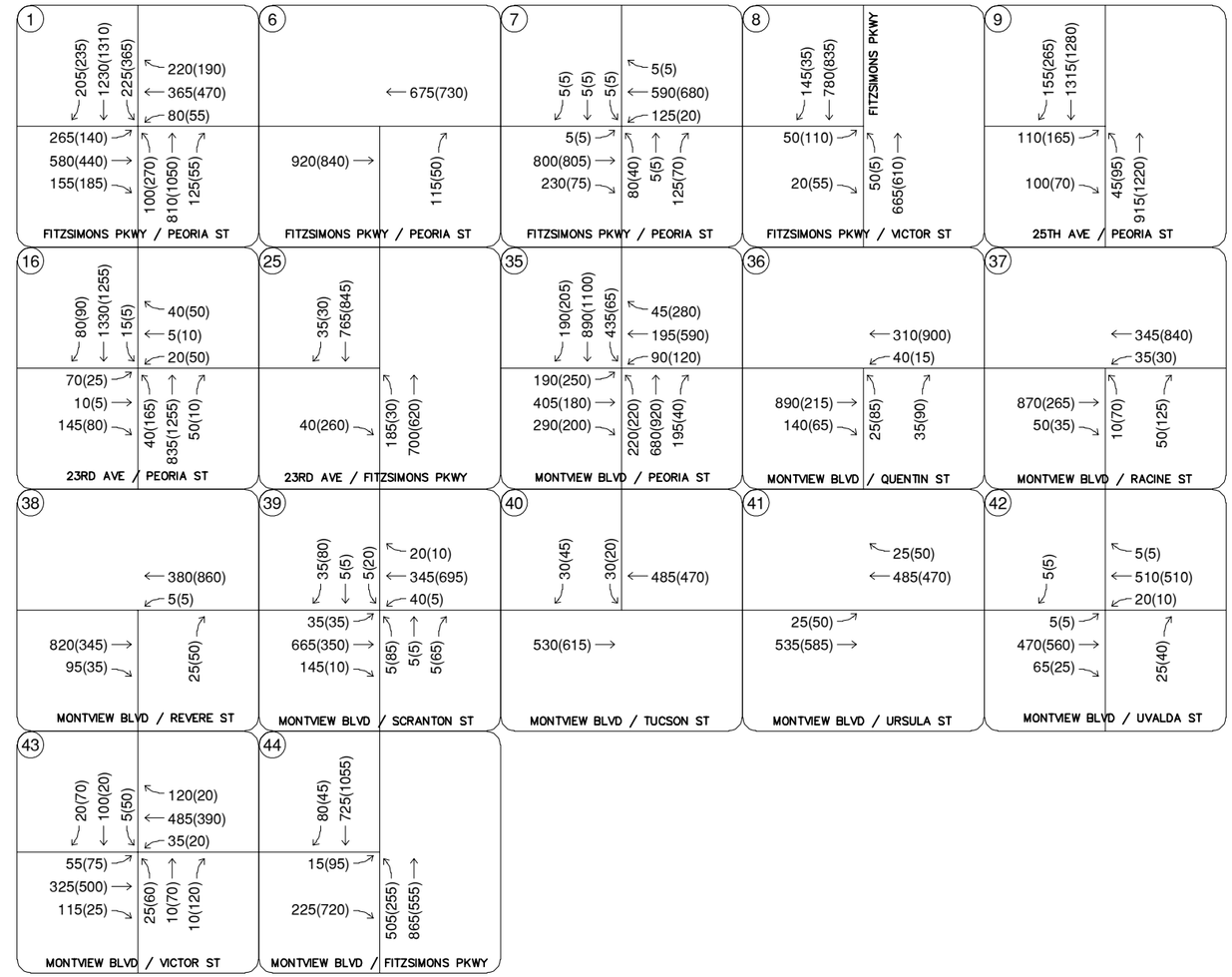
FITZSIMONS INNOVATION CAMPUS MASTER TRAFFIC IMPACT STUDY
2022 ADJUSTED EXISTING TRAFFIC VOLUMES

FIGURE 6

Kimley»Horn

Kimley»Horn
NORTH
NTS 196203001





LEGEND

X	Existing Study Area Key Intersection
XXX(XXX)	Weekday AM(PM) Peak Hour Traffic Volumes
XX,X00	Estimated Daily Traffic Volume
	Assumed 2040 Background Roadway Network

FITZSIMONS INNOVATION CAMPUS MASTER TRAFFIC IMPACT STUDY
2040 BACKGROUND TRAFFIC VOLUMES – EXTERNAL INTERSECTIONS

FIGURE 7

Kimley»Horn

4.0 PROJECT TRAFFIC CHARACTERISTICS

4.1 Trip Generation

Site-generated traffic estimates are determined through a process known as trip generation. Rates and equations are applied to the proposed land use to estimate traffic generated by the development during a specific time interval. The acknowledged source for trip generation rates is the *Trip Generation Manual*[1] published by the Institute of Transportation Engineers (ITE). ITE has established trip rates in nationwide studies of similar land uses.

Fitzsimons Innovation Campus is categorized with 37 blocks numbered 1 through 36 and OS1-7 (Open Space 1-7). Of note, blocks 17 through 19 represent Bioscience 3, 1, and 2, respectively, and are all operational and are assumed to be included in the existing traffic volumes. Additionally, block 20 is occupied by APS School with approximately 405 students (6th through 8th grade) currently attending, therefore, the total proposed full buildout enrollment of 950 students results in an additional 545 students (9th through 12th grade) added to the site before the 2040 full buildout horizon. The traffic generated by the 6th through 8th grade is assumed to be included in the existing background traffic while the additional traffic generated by the high school students is included in the project traffic generation estimates. Area 23 represents the existing Compositive School, which has approximately 140 students currently attending, with 140 additional students planned to attend by full buildout. The traffic generated by the current enrollment of the school is assumed to be included in the existing traffic volumes while the traffic generated by additional future enrollment is included in the project traffic generation. Finally, Areas 27 (Fremont Apartments), 32 (UPI Office Building), 34 (Fitzsimons Early Learning Center), 35 (Aviva at Fitzsimons Early Learning Center), and 36 (Fitzsimons Credit Union) all represent existing operational land uses and are assumed to be included in the existing traffic volumes. For purposes of this study, at full buildout, the project is anticipated to include approximately the following uses that are not yet operational or constructed:

- 3,970,000 Square Feet of Office
- 160,000 Square Feet of Research/Development Center
- 316,000 Square Feet of Industrial

[1] Institute of Transportation Engineers, *Trip Generation Manual*, Eleventh Edition, Washington DC, 2021.

- 618 Multifamily Residences
- Two (2) Existing Schools with 685 additional students
- 106 Room Hotel
- 15,000 Square Feet of Retail
- 9.78 Acres of Public Park/Open Space

For this study, Kimley-Horn used the 11th Edition of the ITE *Trip Generation Manual* average rates that apply to Industrial Park (ITE Code 130), Multifamily Mid-Rise Housing (ITE 221), Hotel (ITE 310), Public Park (ITE 411), General Office Building (ITE 710), Research and Development Center (ITE 760), and Strip Retail Plaza (ITE 822). Additionally, site generated trips from the following traffic studies were included in this study:

- *APS Science and Technology School at Fitzsimons Traffic Impact Study (Nov. 2018)*
- *Fitzsimons Compositive School Traffic Impact Study (Oct. 2018)*
- *UCH Lot 23rd Avenue and Peoria Street Transportation Impact Study (Jul. 2020)*
- *Fitzsimons Phase 3A Apartments and Hotel Traffic Impact Study Update (Aug. 2018)*
- *Bioscience 5 Traffic Impact Study (Aug. 2021)*
- *Bioscience 4 Traffic Study Letter (Nov. 2022)*

The trip generation worksheets/calculations and applicable trip generation documents from adjacent traffic studies are included in **Appendix D** and **Appendix B**, respectively, which also includes a block-by-block trip generation comparison to the previous master traffic studies completed for this area. Remaining development within Fitzsimons Innovation Campus not represented in existing traffic counts is expected to generate approximately 51,615 daily weekday trips with 6,758 of these trips occurring during the morning peak hour and 6,434 of these trips occurring during the afternoon peak hour. Since Fitzsimons Innovation Campus is proposed to contain a mix of uses and to be a walkable area, internal capture trips are expected to occur on site as well. These internal capture trips are shared trips from vehicles already within the internal street network. Ride sharing, flexible working hours, and multimodal usage are other factors to reduce trips to the Fitzsimons Innovation Campus, which, for purposes of this analysis, are included in the internal capture trip reduction calculations as was done in the 2017 Fitzsimons Redevelopment Authority traffic study. Of note, the 2017 study used a trip reduction rate of 49.5 percent and 27 percent for educational and hotel uses, respectively, but these uses were accounted for in adjacent development traffic impact studies and the full site-generated traffic

volumes from these school and hotel traffic studies are conservatively incorporated in this study. All other programmed trip reductions from the original 2017 study were utilized in the updated master traffic impact study and are as follows:

- Office: 22.5%
- Industrial: 9.0%
- Research: 27%
- Residential: 25%

Accounting for internal capture, Fitzsimons Innovation Campus is expected to generate approximately 40,590 daily weekday external trips with 5,345 of these trips occurring during the morning peak hour and 5,066 of these trips occurring during the afternoon peak hour. **Table 2** summarizes the estimated external trip generation for the proposed development. Calculations were based on the procedure and information provided in the ITE *Trip Generation Manual, 11th Edition – Volume 1: User's Guide and Handbook*, 2021.

Table 2 – Fitzsimons Innovation Campus External Project Traffic Generation

Block	Land Use and Size	Type of Trip	Weekday Vehicle Trips						
				AM Peak Hour			PM Peak Hour		
			Daily	In	Out	Total	In	Out	Total
1	General Office Building (ITE 710) - 410,000 SF	Total	4,446	548	75	623	100	490	590
		External	3,446	425	58	483	78	380	458
		Internal Cap.	1,000	123	17	140	22	110	132
2	General Office Building (ITE 710) - 120,000 SF	Total	1,302	160	22	182	29	144	173
		External	1,010	124	17	141	22	112	134
		Internal Cap.	292	36	5	41	7	32	39
3	General Office Building (ITE 710) - 199,000 SF	Total	2,158	266	36	302	49	238	287
		External	1,672	206	28	234	38	184	222
		Internal Cap.	486	60	8	68	11	54	65
4	General Office Building (ITE 710) - 195,000 SF	Total	2,114	260	36	296	48	233	281
		External	1,638	202	28	230	37	181	218
		Internal Cap.	476	58	8	66	11	52	63
5	General Office Building (ITE 710) - 145,000 SF	Total	1,572	194	26	220	36	173	209
		External	1,218	150	20	170	28	134	162
		Internal Cap.	354	44	6	50	8	39	47
6	General Office Building (ITE 710) - 126,800 SF	Total	1,376	170	23	193	31	152	183
		External	1,066	132	18	150	24	118	142
		Internal Cap.	310	38	5	43	7	34	41

Block	Land Use and Size	Type of Trip	Weekday Vehicle Trips						
				AM Peak Hour			PM Peak Hour		
			Daily	In	Out	Total	In	Out	Total
7-8*	General Office Building (ITE 710) - 675,000 SF UCH Peoria Lot Traffic Study	Total	6,763	673	110	783	124	652	776
		External	5,244	522	85	607	96	505	601
		Internal Cap.	1,519	151	25	176	28	147	175
9	General Office Building (ITE 710) - 235,000 SF	Total	2,548	314	43	357	57	281	338
		External	1,976	243	33	276	44	218	262
		Internal Cap.	572	71	10	81	13	63	76
10	Industrial Park (ITE 130) - 316,000 SF	Total	1,066	87	20	107	24	83	107
		External	970	79	18	97	22	76	98
		Internal Cap.	96	8	2	10	2	7	9
11	General Office Building (ITE 710) - 235,000 SF	Total	2,548	314	43	357	57	281	338
		External	1,976	243	33	276	44	218	262
		Internal Cap.	572	71	10	81	13	63	76
12	General Office Building (ITE 710) - 430,000 SF	Total	4,662	576	78	654	105	514	619
		External	3,614	446	60	506	81	398	479
		Internal Cap.	1,048	130	18	148	24	116	140
13	General Office Building (ITE 710) - 200,000 SF	Total	2,168	268	36	304	49	239	288
		External	1,680	208	28	236	38	185	223
		Internal Cap.	488	60	8	68	11	54	65
14	General Office Building (ITE 710) - 180,000 SF	Total	1,952	241	33	274	44	215	259
		External	1,514	187	26	213	34	167	201
		Internal Cap.	438	54	7	61	10	48	58
15*	General Office Building (ITE 710) - 45,000 SF Bioscience 5 (ITE 10th Ed.)	Total	490	59	10	69	8	45	53
		External	380	46	8	54	6	35	41
		Internal Cap.	110	13	2	15	2	10	12
	Research and Development Center (ITE 760) - 45,000 SF Bioscience 5 (ITE 10th Ed.)	Total	508	14	5	19	3	19	22
		External	372	10	4	14	2	14	16
		Internal Cap.	136	4	1	5	1	5	6
16*	General Office Building (ITE 710) - 93,175 SF, Bioscience 4	Total	1,250	154	21	175	28	138	166
		External	970	119	16	135	22	107	129
		Internal Cap.	280	35	5	40	6	31	37
	Research and Development Center (ITE 760) - 93,175 SF, Bioscience 4	Total	1,364	104	23	127	20	102	122
		External	996	76	17	93	15	74	89
		Internal Cap.	368	28	6	34	5	28	33
17	General Office Building (ITE 710) - 118,874 SF Bioscience 3	Total	Represented in Existing Traffic Counts						
		External							
		Internal Cap.							
18	General Office Building (ITE 710) - 90,000 SF Bioscience 1	Total	Represented in Existing Traffic Counts						
		External							
		Internal Cap.							
19	General Office Building (ITE 710) - 112,000 SF Bioscience 2	Total	Represented in Existing Traffic Counts						
		External							
		Internal Cap.							

Block	Land Use and Size	Type of Trip	Weekday Vehicle Trips						
				AM Peak Hour			PM Peak Hour		
			Daily	In	Out	Total	In	Out	Total
20*	High School (ITE 530, 10th Ed.) - 545 Students APS High School Study	Total	1,232	190	94	284	61	129	190
		External	1,232	190	94	284	61	129	190
		Internal Cap.	0	0	0	0	0	0	0
21	General Office Building (ITE 710) - 175,000 SF	Total	1,898	234	32	266	43	209	252
		External	1,472	181	25	206	33	162	195
		Internal Cap.	426	53	7	60	10	47	57
22	General Office Building (ITE 710) - 80,000 SF	Total	868	107	15	122	20	95	115
		External	674	83	12	95	16	74	90
		Internal Cap.	194	24	3	27	4	21	25
	Strip Retail Plaza (ITE 822) - 14,778 SF	Total	804	21	14	35	48	49	97
		External	624	16	11	27	37	38	75
		Internal Cap.	180	5	3	8	11	11	22
23*	Compositive School Traffic Study - 140 additional students	Total	526	68	56	124	40	47	87
		External	526	68	56	124	40	47	87
		Internal Cap.	0	0	0	0	0	0	0
24	Multifamily Mid-Rise Housing (ITE 221) - 204 Dwelling Units	Total	928	17	58	75	49	31	80
		External	696	13	44	57	37	23	60
		Internal Cap.	232	4	14	18	12	8	20
25	Multifamily Mid-Rise Housing (ITE 221) - 204 Dwelling Units	Total	928	17	58	75	49	31	80
		External	696	13	44	57	37	23	60
		Internal Cap.	232	4	14	18	12	8	20
26	Multifamily Mid-Rise Housing (ITE 221) - 210 Dwelling Units	Total	954	18	60	78	50	32	82
		External	716	14	45	59	38	24	62
		Internal Cap.	238	4	15	19	12	8	20
27	Multifamily Mid-Rise Housing (ITE 221) - 210 Dwelling Units Fremont Apartments	Total	Represented in Existing Traffic Counts						
		External							
		Internal Cap.							
28*	Hotel (ITE 310) - 106 Rooms Fitzsimons Phase 3A Traffic Study	Total	846	27	22	49	32	31	63
		External	846	27	22	49	32	31	63
		Internal Cap.	0	0	0	0	0	0	0
29-30,33	General Office Building (ITE 710) - 200,000 SF	Total	2,168	268	36	304	49	239	288
		External	1,680	208	28	236	38	185	223
		Internal Cap.	488	60	8	68	11	54	65
31	General Office Building (ITE 710) - 200,000 SF	Total	2,168	268	36	304	49	239	288
		External	1,680	208	28	236	38	185	223
		Internal Cap.	488	60	8	68	11	54	65
OS1-7	Public Park (ITE 411) - 9.78 Acres	Total	8	0	0	0	1	0	1
		External	6	0	0	0	1	0	1
		Internal Cap.	2	0	0	0	0	0	0
Total Site Generated Trips			**51,615**	**5,637**	**1,121**	**6,758**	**1,303**	**5,131**	**6,434**
Total External Trips			**40,590**	**4,439**	**906**	**5,345**	**1,039**	**4,027**	**5,066**
Total Internal Capture Trips			**11,025**	**1,198**	**215**	**1,413**	**264**	**1,104**	**1,368**

*** = trip generation volumes from background traffic study data**

4.2 Internal Street Network and Development Access

The notable internal roadway network will be served by seven (7) north/south collector streets and three (3) east/west collector streets. These 10 streets are categorized as primary collector streets or secondary collector streets. The primary collector streets are intended to contain higher traffic volumes than the secondary collectors and to facilitate traffic to the adjacent arterial roadways. The secondary collector streets are designed to provide access to parking for the proposed development and create a pedestrian friendly environment. Racine Street, Scranton Street, Ursula Street, Uvalda Street, and 23rd Avenue are designed as primary collector streets while Quentin Street, Revere Street, Victor Street, 25th Avenue, and 22nd Avenue are the notable secondary collector streets. Most of the primary and secondary internal collector streets will be new roadways to the Fitzsimons Innovation Campus while some are existing but will be extended beyond their existing limits with continued development within the Fitzsimons Innovation Campus. Scranton Street will be constructed as a couplet street with a wide center median with one-way travel northbound on the east side of the median and one-way travel southbound on the west side of the median.

4.3 Trip Distribution

Distribution of site traffic on the street system was based on the area street system characteristics, existing traffic patterns, existing and anticipated surrounding demographic (employment, school, and attraction) information, and the proposed access system for the project. The directional distribution of traffic is a means to quantify the percentage of site-generated traffic that approaches the site from a given direction and departs the site back to the original source.

Trip distribution in this study essentially remained the same from the original 2017 Fitzsimons Redevelopment Authority traffic study with exception of incorporating additional trips to and from the northwest area of the study limits. It is believed that the connection of Martin Luther King Jr. Boulevard to Peoria Street was underrepresented in the original traffic study. Further, with a portion of Fitzsimons Innovation Campus already developed, baseline traffic data was collected in this study to determine existing traffic patterns. With this traffic data and the close proximity to I-70, it is also believed that additional trips will travel to and from the north along Peoria Street. A trip distribution increase of 14 percent (35 percent total) was assigned to the northwest and removed from trips assigned to the southeast as compared to the original master traffic impact study. It should be noted that the trips expected to and from the southeast along Fitzsimons

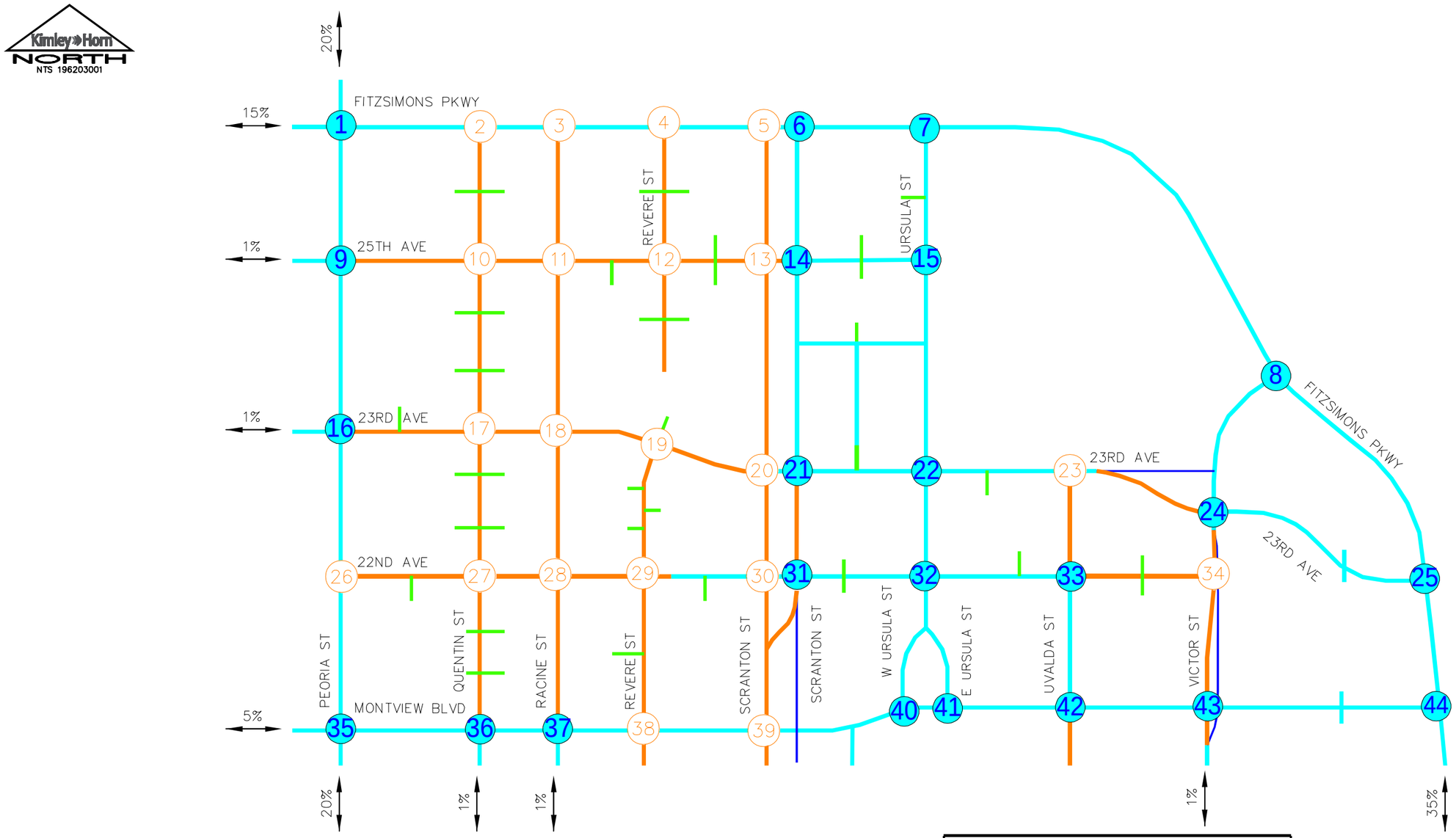
Parkway are still anticipated to be the highest trip distribution percentage even with this change. This trip distribution aligns well with the most recent traffic counts conducted in September 2022, which shows that the traffic volumes from the northwest area at MLK Jr. Boulevard/Fitzsimons Parkway & Peoria Street (#1) are very similar (if not slightly higher than) the traffic volumes from the southeast area near Montview Boulevard & Fitzsimons Parkway (#44). The opening of the west leg of MLK Jr. Boulevard at the intersection with Peoria Street (#1) that occurred between the 2020 and the 2022 turning movement counts confirm the reasoning for this trip distribution deviation from the 2017 Fitzsimons Redevelopment Authority traffic study. The external project trip distribution for the proposed development is illustrated in **Figure 8**. A detailed block-by-block trip distribution is provided in **Appendix E**.

4.4 Traffic Assignment

Fitzsimons Innovation Campus traffic assignment was obtained by applying the project trip distribution to the estimated traffic generation of the development shown in **Table 2**. Traffic assignment is shown in **Figures 9** and **10** for the northern and southern campus areas, respectively**.**

4.5 Total (Background Plus Project) Traffic

Site traffic volumes were added to the 2040 background volumes from **Figure 7** to represent estimated future traffic conditions for the long-term 2040 horizon. These total traffic volumes for the study area are illustrated for the northern and southern campus areas in **Figures 11** and **12**, respectively. These volumes were balanced (with some occasional minor differences between intersections of a few vehicles due to rounding) through the major external intersections where no driveways are anticipated to exist between intersections, which was conducted along Peoria Street, Fitzsimons Parkway, and Montview Boulevard.



LEGEND

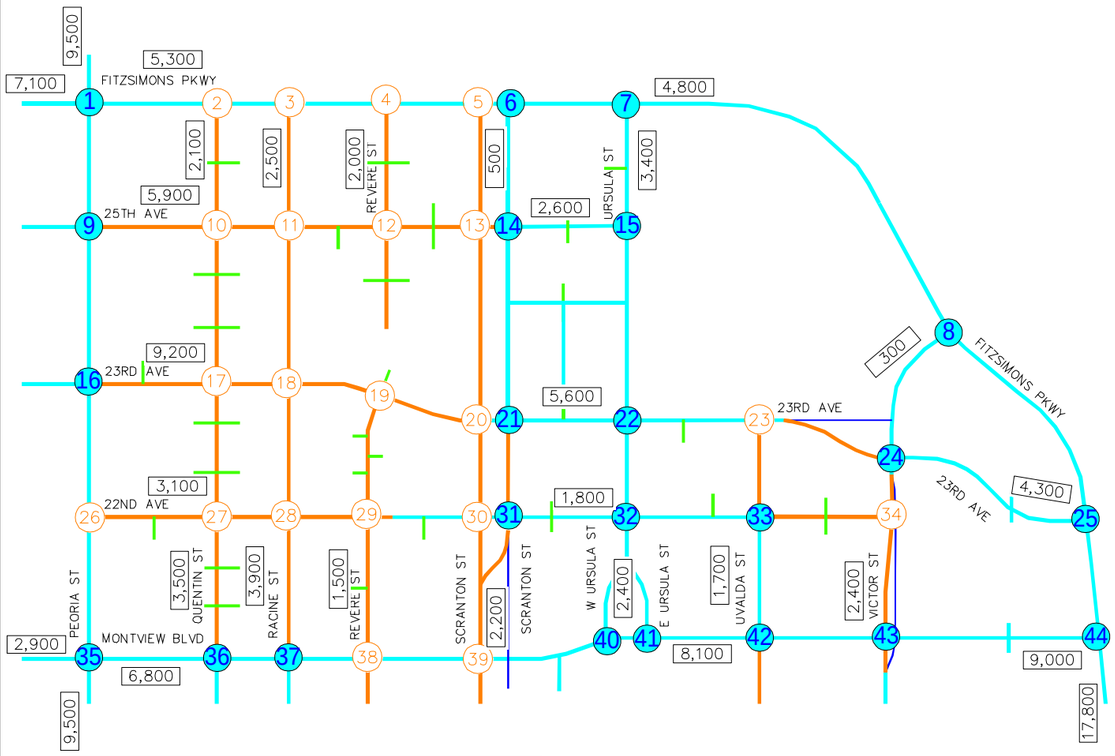
XX%	External Trip Distribution Percentage
X	Existing Study Area Key Intersection
X	Future Study Area Key Intersection
	Existing Roadway
	Future Roadway
	Assumed Access Locations
	Existing Roadway to be Removed

FITZSIMONS INNOVATION CAMPUS MASTER TRAFFIC IMPACT STUDY
PROJECT TRIP DISTRIBUTION

FIGURE 8

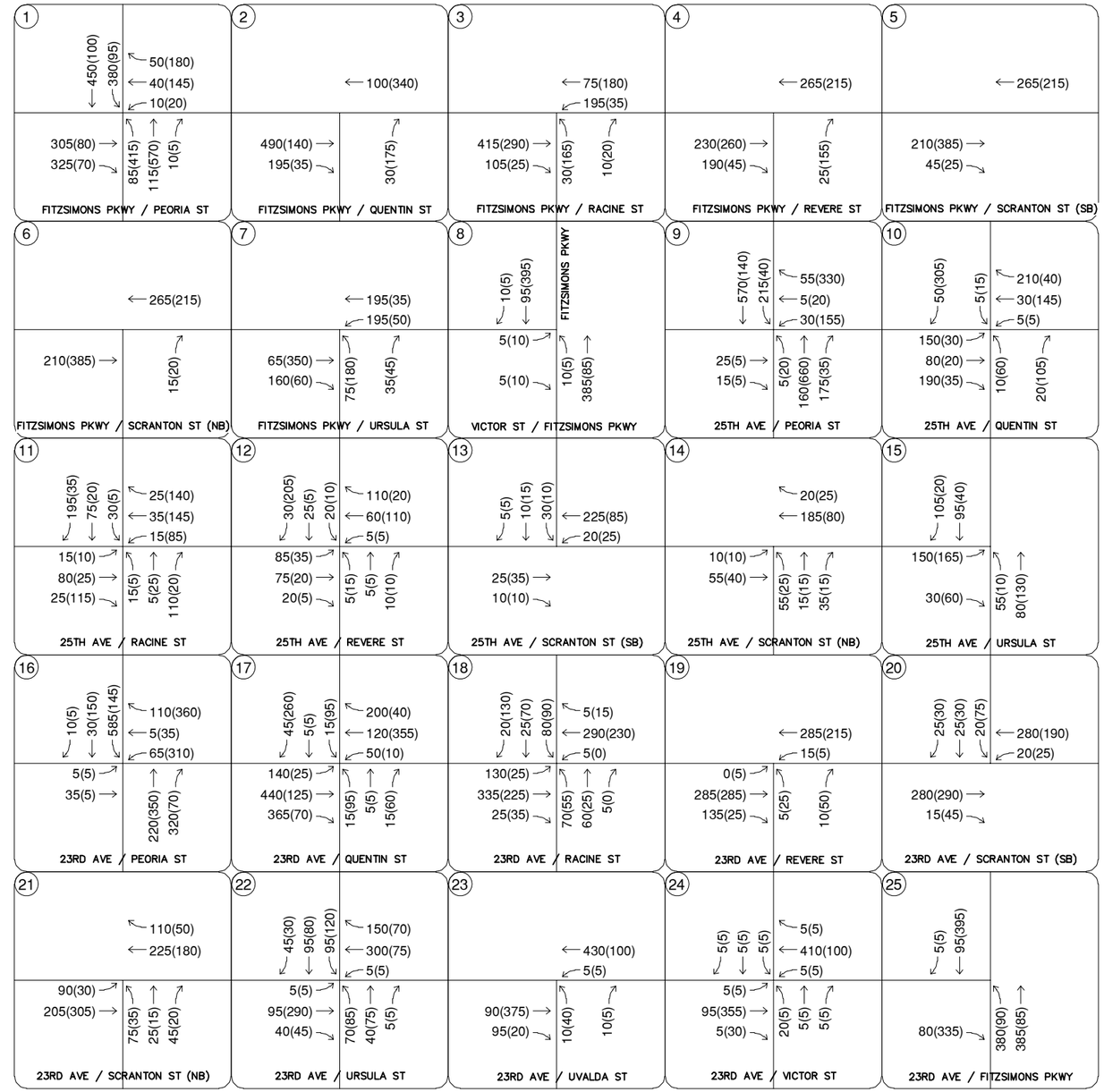
Kimley»Horn

Kimley»Horn
NORTH
NTS 196203001



LEGEND

- X — Existing Study Area Key Intersection
- X — Future Study Area Key Intersection
- XXX(XXX) — Weekday AM(PM) Peak Hour Traffic Volumes
- XX,X00 — Estimated Daily Traffic Volume
- Existing Roadway
- Future Roadway
- Assumed Access Locations
- Existing Roadway to be Removed

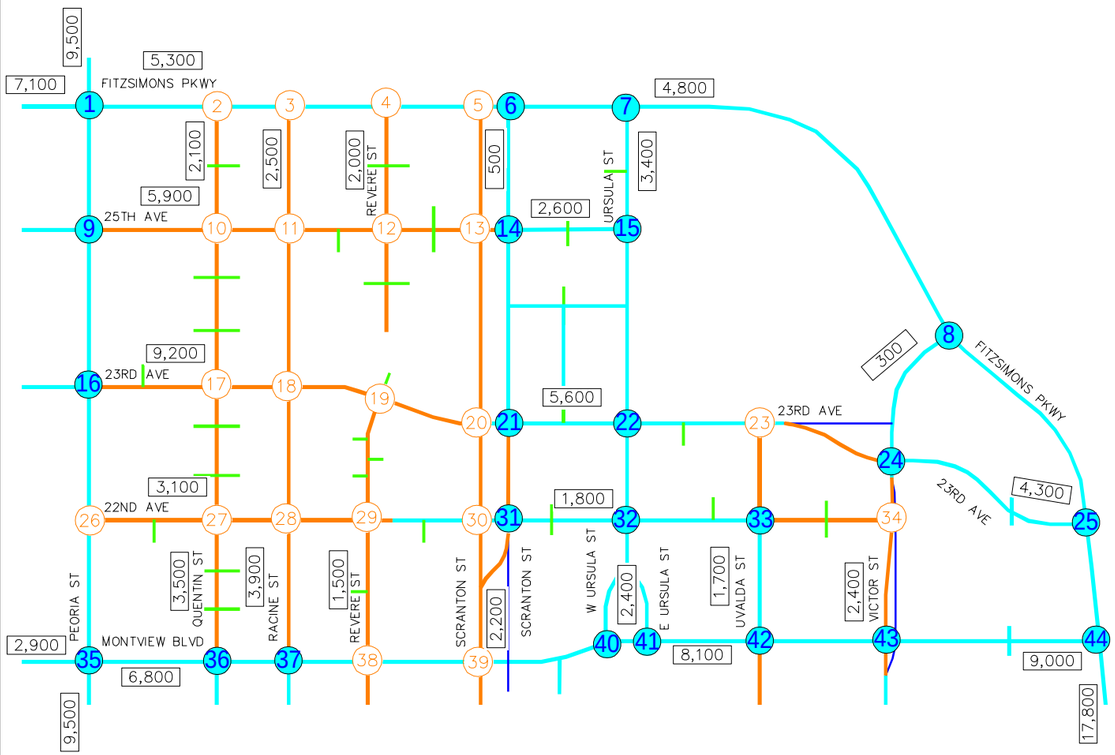


FITZSIMONS INNOVATION CAMPUS MASTER TRAFFIC IMPACT STUDY
PROJECT TRAFFIC ASSIGNMENT (NORTH)

FIGURE 9

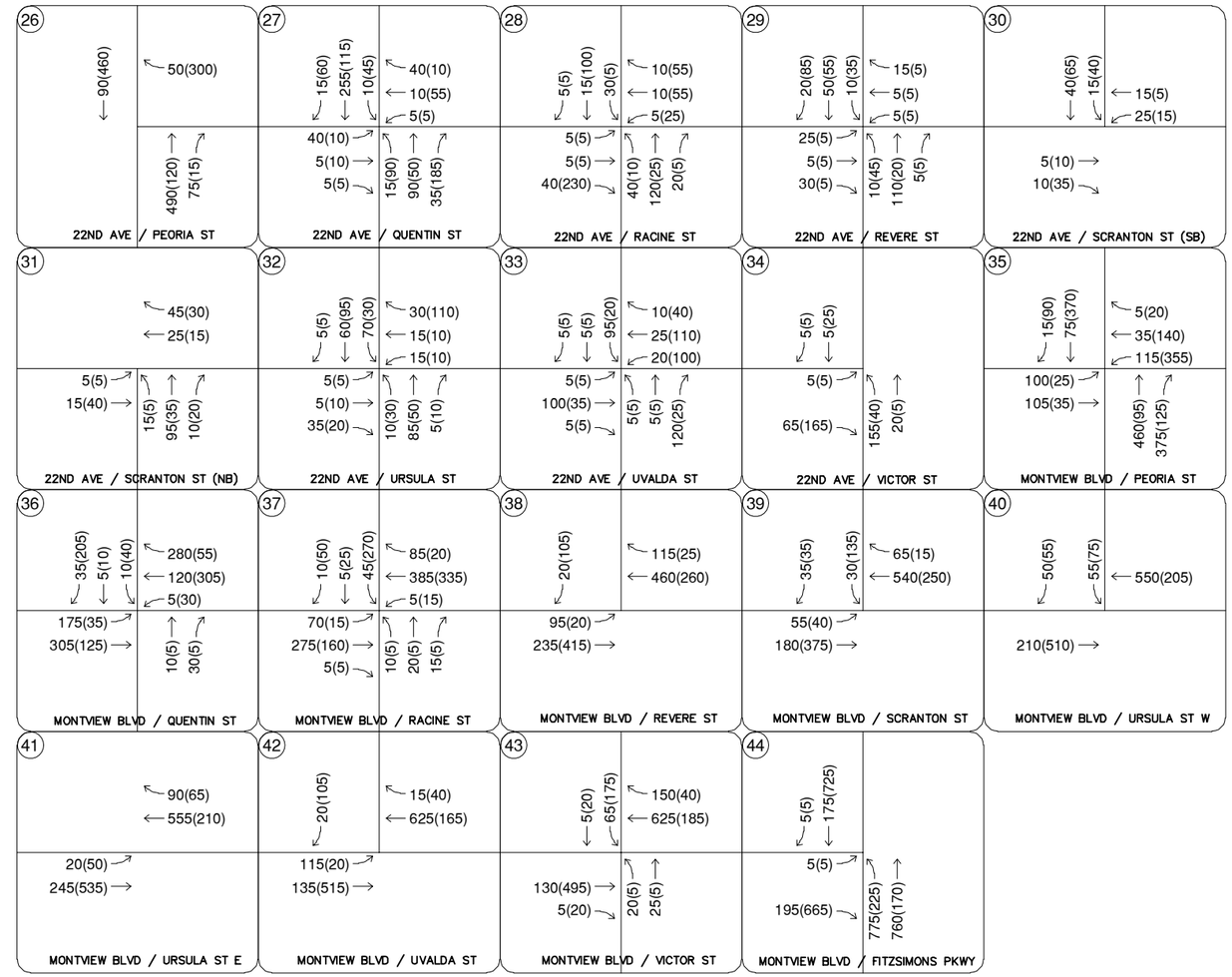
Kimley»Horn

Kimley»Horn
NORTH
NTS 196203001



LEGEND

- Existing Study Area Key Intersection
- Future Study Area Key Intersection
- XXX(XXX) Weekday AM(PM) Peak Hour Traffic Volumes
- XX,X00 Estimated Daily Traffic Volume
- Existing Roadway
- Future Roadway
- Assumed Access Locations
- Existing Roadway to be Removed

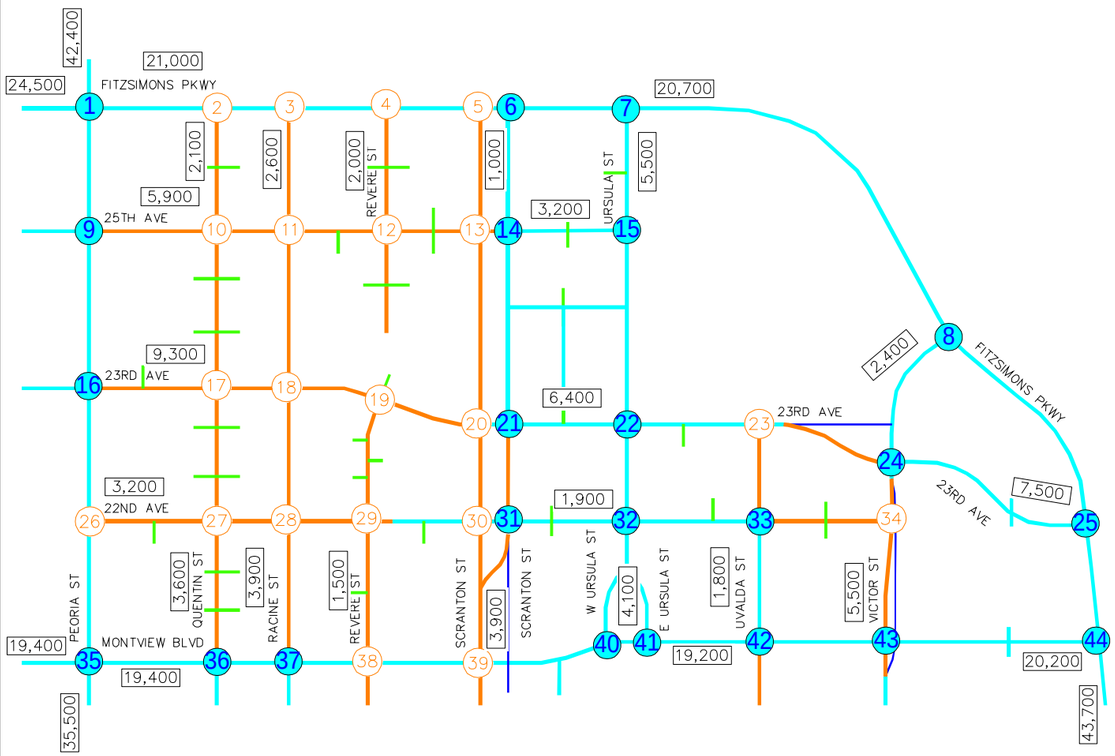


FITZSIMONS INNOVATION CAMPUS MASTER TRAFFIC IMPACT STUDY
PROJECT TRAFFIC ASSIGNMENT (SOUTH)

FIGURE 10

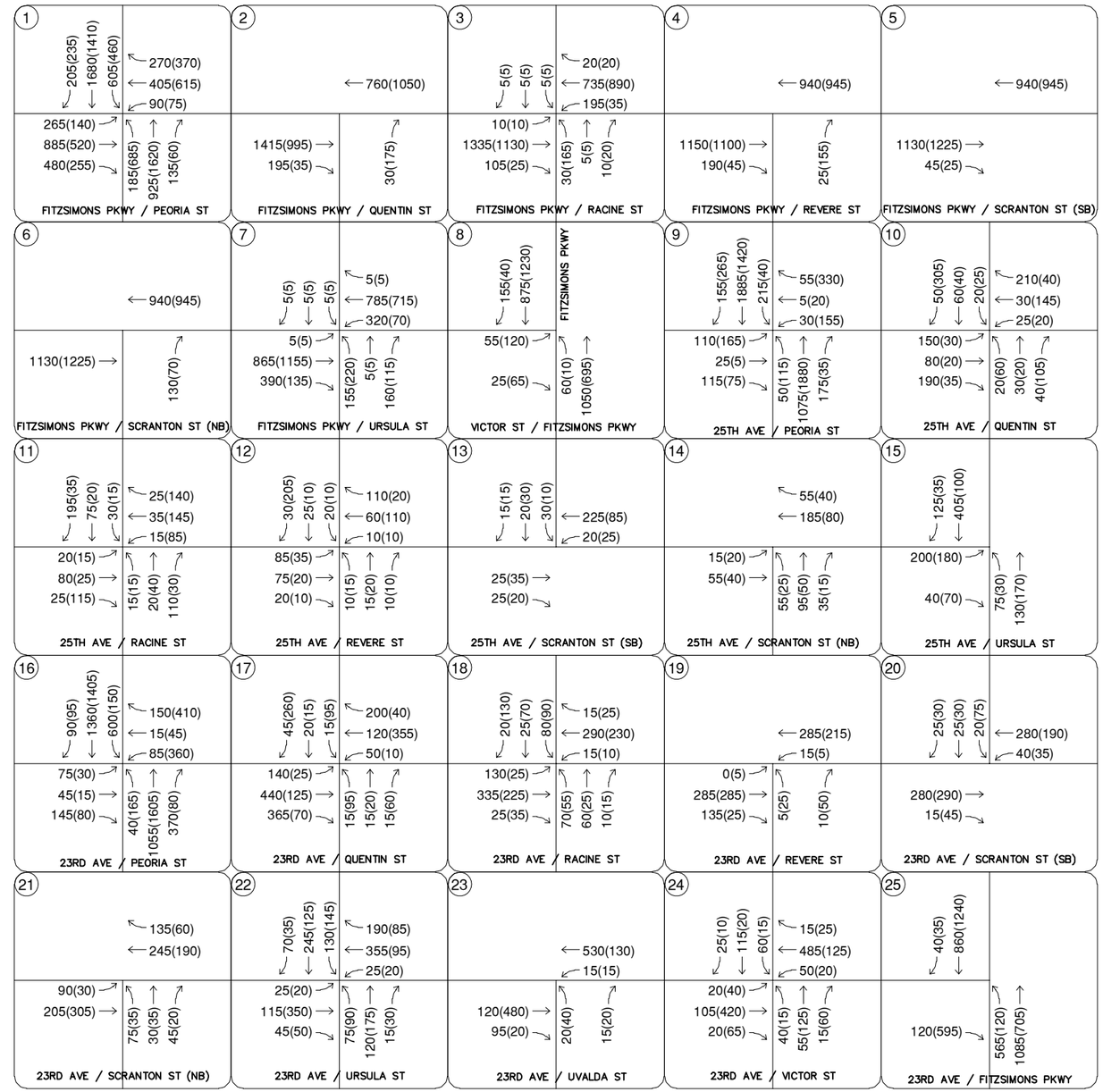
Kimley»Horn

Kimley»Horn
NORTH
NTS 196203001



LEGEND

- Existing Study Area Key Intersection
- Future Study Area Key Intersection
- XXX(XXX) Weekday AM(PM) Peak Hour Traffic Volumes
- XX,X00 Estimated Daily Traffic Volume
- Existing Roadway
- Future Roadway
- Assumed Access Locations
- Existing Roadway to be Removed

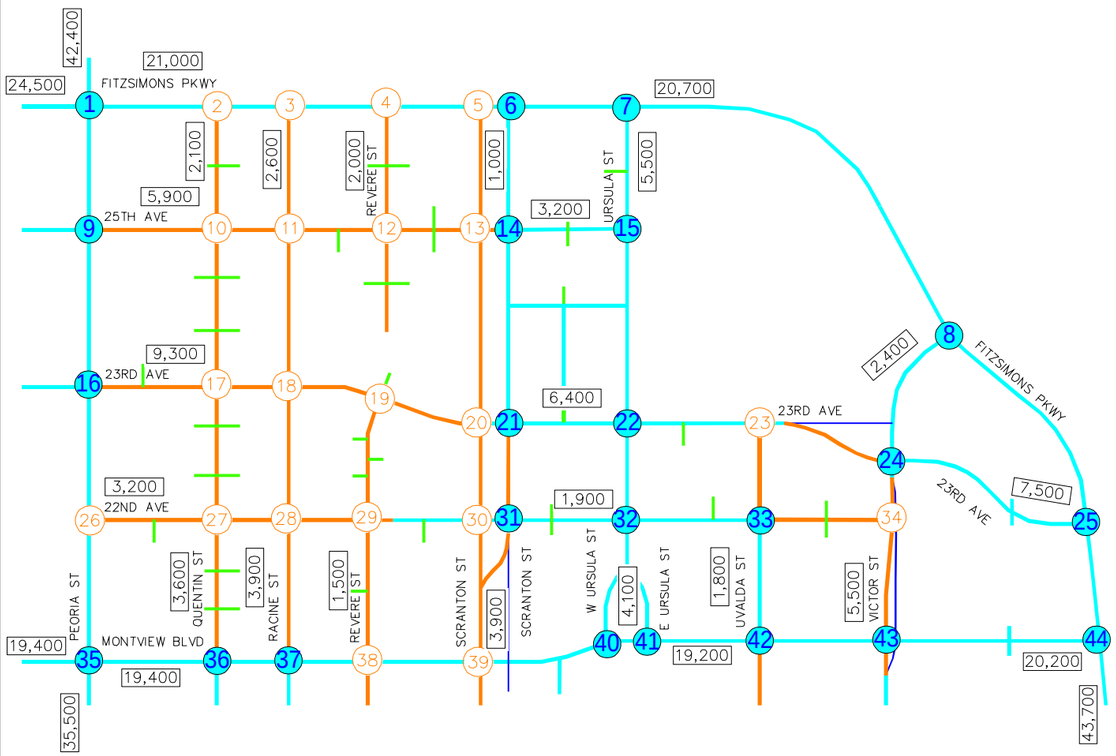


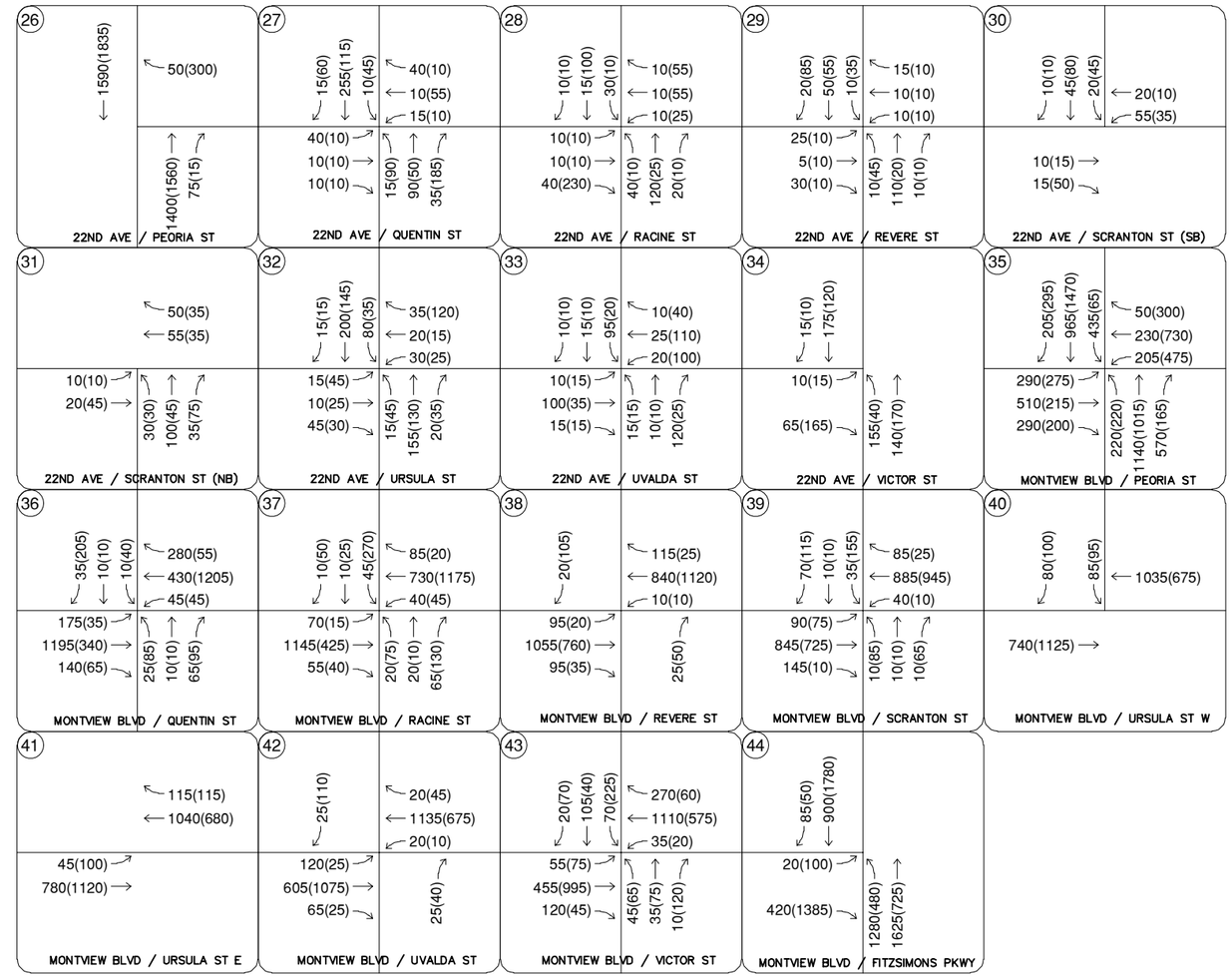
FITZSIMONS INNOVATION CAMPUS MASTER TRAFFIC IMPACT STUDY
2040 TOTAL TRAFFIC VOLUMES (NORTH)

FIGURE 11

Kimley»Horn

Kimley»Horn
NORTH
NTS 196203001





LEGEND

- (X) Existing Study Area Key Intersection
- (X) Future Study Area Key Intersection
- XXX(XXX) Weekday AM(PM) Peak Hour Traffic Volumes
- [XX,X00] Estimated Daily Traffic Volume
- Existing Roadway
- Future Roadway
- Assumed Access Locations
- Existing Roadway to be Removed

FITZSIMONS INNOVATION CAMPUS MASTER TRAFFIC IMPACT STUDY
2040 TOTAL TRAFFIC VOLUMES (SOUTH)

FIGURE 12

Kimley»Horn

5.0 TRAFFIC OPERATIONS ANALYSIS

Kimley-Horn's analysis of traffic operations in the site vicinity was conducted to determine potential capacity deficiencies in the 2040 development horizons at the identified key intersections. The acknowledged source for determining overall capacity is the 6th Edition of the *Highway Capacity Manual (HCM)*[2].

5.1 Analysis Methodology

Capacity analysis results are listed in terms of Level of Service (LOS). LOS is a qualitative term describing operating conditions a driver will experience while traveling on a particular street or highway during a specific time interval. It ranges from A (very little delay) to F (long delays and congestion). According to City of Aurora guidelines for signalized intersections, individual movements may be allowed to fall to LOS E, but in most cases the overall intersection must operate (or be projected to operate) at a LOS D or better during AM and PM peak periods. If the existing LOS for an intersection is worse than LOS D, potential alternatives to improve the intersection to achieve LOS D should be provided or maintain the existing critical lane volume with the addition of site generated traffic. Minor movements at unsignalized intersections, such as left turns onto a major arterial from a side street, may be allowed to fall below LOS D pending the specific conditions. Movements which have a light traffic demand, and a viable travel alternative may be allowed to fall below LOS D. **Table 3** shows the definition of level of service for signalized and unsignalized intersections.

Table 3 – Level of Service Definitions

Level of Service	Signalized Intersection Average Total Delay (sec/veh)	Unsignalized Intersection Average Total Delay (sec/veh)
A	≤ 10	≤ 10
B	> 10 and ≤ 20	> 10 and ≤ 15
C	> 20 and ≤ 35	> 15 and ≤ 25
D	> 35 and ≤ 55	> 25 and ≤ 35
E	> 55 and ≤ 80	> 35 and ≤ 50
F	> 80	> 50

Definitions provided from the Highway Capacity Manual, Sixth Edition, Transportation Research Board, 2016.

[2] Transportation Research Board, *Highway Capacity Manual*, Sixth Edition, Washington DC, 2016.

Study area intersection operations were determined based on average total delay for signalized and unsignalized intersections. Under the unsignalized analysis, the LOS for a two-way stop-controlled intersection is determined by the computed or measured control delay and is defined for each minor movement. LOS for a two-way stop-controlled intersection is not defined for the intersection as a whole. LOS for a signalized, roundabout, and four-way stop controlled intersection is defined for each approach and for the intersection. According to City of Aurora guidelines, if traffic signal warrants or a multiway stop warrant is met, then a roundabout shall also be considered at the intersection. For this study, all new traffic signals are proposed along high-volume arterial roadways which are not suitable for roundabout control; therefore, were not evaluated as such. However, all intersections warranting all-way stop control were also evaluated with roundabout control in this study.

5.2 Key Intersection Operational Analysis

Calculations for the operational level of service at the key intersections for the study area are provided in **Appendix F**. The existing year analysis is based on the lane geometry and intersection control shown in **Figure 4.** Existing peak hour factors were utilized in the existing horizon year while the HCM urban standard of 0.92 was used for the long-term 2040 horizon analysis. Synchro 11 traffic analysis software was used to analyze the signalized and unsignalized key intersections for HCM level of service. **Table 4** provides the level of service operational results for all study area intersections, which highlights by color for the type of control each intersection has during each period—green is for signalized intersections; yellow for two-way stop-controlled intersections; orange for roundabout-controlled intersections; blue for all-way stop-controlled intersections; and gray for intersections with no control.

Recommended improvements to mitigate current or future unacceptable operations were also incorporated into the analysis results and are identified in detail in **Table 5** and **Table 6**. Of note, the 2040 background scenario generally seeks to keep the same intersection configuration as the existing conditions scenario with the exception of providing background improvements where they would be needed without project construction. These background improvements used in the 2040 background horizon include signalization of Fitzsimons Parkway & Ursula Street (#7), Fitzsimons Parkway & Victor Street (#8), 23rd Avenue & Peoria Street (#16), Montview Boulevard & Scranton Street (#39), and Montview Boulevard & Victor Street (#43), in addition to some improvements to Montview Boulevard as needed that generally follow its ultimate proposed roadway geometry.

Of note, while the Montview roadway geometry construction plans show that the intersections of Montview Boulevard & Revere Street (#38) and Montview Boulevard & Uvalda Street (#42) would be full movement, the results of this traffic study show that a full movement intersection will not operate well at these intersections; as such, these two intersections are recommended to be restricted to three-quarter movement only. Additionally, these Montview plans show Victor Street as providing a left turn lane, two through lanes, and a right turn lane in the northbound direction and separate left, through, and right turn lanes in the southbound direction; however, the results of this study show that this geometry is not anticipated to be necessary and as such, this study conservatively analyzes each approach with a left turn lane and a shared through/right turn lane instead. If additional lanes are provided, this would only help the intersection perform better, so the results of this study are deemed to be conservative.

Table 4 – Existing and Future Level of Service

Control	Intersection Movement	2022 Existing				2040 Background				2040 Total			
		AM Peak Hour		PM Peak Hour		AM Peak Hour		PM Peak Hour		AM Peak Hour		PM Peak Hour	
		Delay	LOS	Delay	LOS	Delay	LOS	Delay	LOS	Delay	LOS	Delay	LOS
Fitzsimons Pkwy & Peoria St (#1)													
Signalized	**Overall**	**35.4**	**D**	**36.1**	**D**	**37.0**	**D**	**42.7**	**D**	**49.2**	**D**	**46.8**	**D**
	Eastbound Approach	57.4	E	52.2	D	67.5	E	68.2	E	59.7	E	49.3	E
	Eastbound Left	60.9	E	60.7	E	60.8	E	81.7	F	60.8	E	78.8	E
	Eastbound Through	55.8	E	49.5	D	70.5	E	63.9	E	68.2	E	53.0	E
	Eastbound Right	0.0	A	0.0	A	0.0	A	0.0	A	38.0	D	25.6	C
	Westbound Approach	47.8	D	51.3	D	46.0	D	70.4	E	44.4	D	56.9	E
	Westbound Left	42.1	D	40.4	D	60.8	E	81.3	F	61.9	E	76.0	E
	Westbound Through	49.0	D	52.6	D	42.8	D	69.2	E	50.8	D	64.1	E
	Westbound Right	0.0	A	0.0	A	0.0	A	0.0	A	29.1	D	41.0	D
	Northbound Approach	22.6	C	29.4	C	11.7	B	18.8	B	48.4	D	26.5	C
	Northbound Left	61.6	E	65.0	E	71.9	E	78.9	E	72.0	E	48.2	D
	Northbound Through	18.8	B	21.0	C	5.5	A	4.3	A	45.8	D	18.0	B
	Northbound Right	15.7	B	14.9	B	3.4	A	1.9	A	34.0	C	9.4	A
	Southbound Approach	26.0	C	30.6	C	34.5	C	44.7	D	44.7	D	63.5	E
	Southbound Left	61.7	E	64.0	E	67.4	E	82.3	F	59.7	E	78.1	E
	Southbound Through	19.4	B	21.4	C	28.5	C	34.3	C	42.5	D	63.1	E
	Southbound Right	0.0	A	0.0	A	0.0	A	0.0	A	18.8	B	37.3	D
Fitzsimons Pkwy & Quentin St (#2) (RI/RO)													
TWSC	Northbound Right	-	-	-	-	-	-	-	-	13.1	B	12.6	B

Control	Intersection Movement	2022 Existing				2040 Background				2040 Total			
		AM Peak Hour		PM Peak Hour		AM Peak Hour		PM Peak Hour		AM Peak Hour		PM Peak Hour	
		Delay	LOS	Delay	LOS	Delay	LOS	Delay	LOS	Delay	LOS	Delay	LOS
Fitzsimons Pkwy & Racine St (#3)													
Signalized	**Overall**	-	-	-	-	-	-	-	-	**7.4**	**A**	**13.6**	**B**
	Eastbound Approach	-	-	-	-	-	-	-	-	1.5	A	18.8	B
	Eastbound Left	-	-	-	-	-	-	-	-	8.4	A	11.0	B
	Eastbound Through	-	-	-	-	-	-	-	-	1.5	A	19.0	B
	Eastbound Right	-	-	-	-	-	-	-	-	0.2	A	11.8	B
	Westbound Approach	-	-	-	-	-	-	-	-	14.1	B	1.2	A
	Westbound Left	-	-	-	-	-	-	-	-	7.8	A	13.6	B
	Westbound Through	-	-	-	-	-	-	-	-	15.9	B	0.8	A
	Westbound Right	-	-	-	-	-	-	-	-	11.0	B	0.0	A
	Northbound Approach	-	-	-	-	-	-	-	-	44.8	D	41.4	D
	Northbound Left	-	-	-	-	-	-	-	-	45.0	D	42.3	D
	Northbound Through/Right	-	-	-	-	-	-	-	-	44.2	D	35.0	D
	Southbound Approach	-	-	-	-	-	-	-	-	43.7	D	34.5	C
Fitzsimons Pkwy & Revere St (#4) (RI/RO)													
TWSC	Northbound Right	-	-	-	-	-	-	-	-	11.2	B	12.7	B
Fitzsimons Pkwy & Scranton St SB (#5) Right-in only													
No Control	Eastbound Right	-	-	-	-	-	-	-	-	0.0	A	0.0	A
Fitzsimons Pkwy & Scranton St NB (#6) Right-out only													
TWSC	Northbound Right	18.8	C	11.8	B	11.1	B	10.3	B	12.7	B	12.1	B

Control	Intersection Movement	2022 Existing				2040 Background				2040 Total			
		AM Peak Hour		PM Peak Hour		AM Peak Hour		PM Peak Hour		AM Peak Hour		PM Peak Hour	
		Delay	LOS	Delay	LOS	Delay	LOS	Delay	LOS	Delay	LOS	Delay	LOS
Fitzsimons Pkwy & Ursula St (#7)													
TWSC	Northbound Right	14.6	B	11.6	B	-	-	-	-	-	-	-	-
TWSC	Eastbound Left	9.1	A	9.1	A	-	-	-	-	-	-	-	-
TWSC	Westbound Left	12.8	B	9.6	A	-	-	-	-	-	-	-	-
TWSC	Southbound Approach	10.1	B	10.5	B	-	-	-	-	-	-	-	-
Signalized	**Overall**	**-**	**-**	**-**	**-**	**9.2**	**A**	**7.8**	**A**	**27.1**	**C**	**12.0**	**B**
Signalized	Eastbound Approach	-	-	-	-	0.7	A	0.6	A	29.2	C	1.9	A
Signalized	Eastbound Left	-	-	-	-	10.5	B	9.1	A	14.1	B	13.9	B
Signalized	Eastbound Through	-	-	-	-	0.6	A	0.6	A	28.7	C	2.0	A
Signalized	Eastbound Right	-	-	-	-	0.7	A	0.2	A	30.2	C	0.5	A
Signalized	Westbound Approach	-	-	-	-	10.7	B	10.8	B	18.0	B	15.7	B
Signalized	Westbound Left	-	-	-	-	9.3	A	8.2	A	32.7	C	12.6	B
Signalized	Westbound Through	-	-	-	-	11.0	B	10.9	B	12.0	B	16.0	B
Signalized	Westbound Right	-	-	-	-	8.8	A	8.4	A	8.8	A	12.1	B
Signalized	Northbound Approach	-	-	-	-	43.9	D	41.2	D	50.2	D	41.0	D
Signalized	Northbound Left	-	-	-	-	42.9	D	39.9	D	52.7	D	44.0	D
Signalized	Northbound Through/Right	-	-	-	-	44.6	D	41.8	D	47.7	D	35.6	D
Signalized	Southbound Approach	-	-	-	-	37.7	D	38.4	D	37.9	D	31.5	C
Fitzsimons Pkwy & Victor St (#8)													
TWSC	Northbound Left	10.9	B	9.8	A	-	-	-	-	-	-	-	-
TWSC	Eastbound Left	21.4	C	22.8	C	-	-	-	-	-	-	-	-
TWSC	Eastbound Right	11.6	B	12.1	B	-	-	-	-	-	-	-	-
Signalized	**Overall**	**-**	**-**	**-**	**-**	**4.6**	**A**	**8.8**	**A**	**4.6**	**A**	**8.7**	**A**
Signalized	Eastbound Approach	-	-	-	-	64.2	E	59.3	E	63.4	E	59.1	E
Signalized	Eastbound Left	-	-	-	-	66.7	E	61.9	E	65.8	E	61.7	E
Signalized	Eastbound Right	-	-	-	-	58.1	E	54.2	D	58.0	E	54.3	D
Signalized	Northbound Approach	-	-	-	-	2.0	A	3.0	A	2.6	A	3.3	A
Signalized	Northbound Left	-	-	-	-	3.1	A	4.2	A	3.8	A	6.6	A
Signalized	Northbound Through	-	-	-	-	1.9	A	3.0	A	2.5	A	3.3	A
Signalized	Southbound Approach	-	-	-	-	2.0	A	3.3	A	2.2	A	4.4	A
Signalized	Southbound Through	-	-	-	-	2.1	A	3.4	A	2.3	A	4.4	A
Signalized	Southbound Right	-	-	-	-	1.7	A	2.4	A	1.8	A	2.5	A
25th Ave & Peoria St (#9)													
Signalized	**Overall**	**7.7**	**A**	**8.5**	**A**	**3.9**	**A**	**4.9**	**A**	**4.8**	**A**	**9.7**	**A**
Signalized	Eastbound Approach	50.5	D	47.6	D	60.0	E	75.2	E	52.6	D	53.5	D
Signalized	Eastbound Left	49.2	D	50.0	D	62.6	E	76.2	E	58.5	E	55.6	E
Signalized	Eastbound Through/Right	51.9	D	42.6	D	53.0	D	59.3	E	44.6	D	36.3	D
Signalized	Westbound Approach	-	-	-	-	-	-	-	-	61.3	E	70.9	E
Signalized	Westbound Left	-	-	-	-	-	-	-	-	55.5	E	60.3	E
Signalized	Westbound Through/Right	-	-	-	-	-	-	-	-	64.2	E	78.2	E
Signalized	Northbound Approach	2.1	A	3.0	A	0.3	A	0.5	A	0.6	A	1.3	A

Control	Intersection Movement	2022 Existing				2040 Background				2040 Total			
		AM Peak Hour		PM Peak Hour		AM Peak Hour		PM Peak Hour		AM Peak Hour		PM Peak Hour	
		Delay	LOS	Delay	LOS	Delay	LOS	Delay	LOS	Delay	LOS	Delay	LOS
	Northbound Left	3.3	A	4.3	A	3.4	A	4.7	A	8.3	A	15.0	B
	Northbound Through	2.0	A	2.9	A	0.1	A	0.2	A	0.2	A	0.4	A
	Northbound Right	-	-	-	-	-	-	-	-	0.4	A	0.7	A
	Southbound Approach	5.3	A	6.6	A	0.6	A	0.6	A	0.9	A	1.4	A
	Southbound Left	-	-	-	-	-	-	-	-	7.0	A	16.0	B
	Southbound Through	5.2	A	6.5	A	0.4	A	0.5	A	0.2	A	0.8	A
	Southbound Right	5.5	A	6.9	A	0.8	A	1.0	A	0.5	A	1.5	A
25th Ave & Quentin St (#10)													
TWSC	Northbound Left	-	-	-	-	-	-	-	-	23.6	C	23.1	C
	Northbound Through/Right	-	-	-	-	-	-	-	-	15.0	C	9.7	A
	Eastbound Left	-	-	-	-	-	-	-	-	8.2	A	7.7	A
	Westbound Left	-	-	-	-	-	-	-	-	7.9	A	7.4	A
	Southbound Left	-	-	-	-	-	-	-	-	20.7	C	13.1	B
	Southbound Through/Right	-	-	-	-	-	-	-	-	18.3	C	13.2	B
25th Ave & Racine St (#11)													
TWSC	Northbound Left	-	-	-	-	-	-	-	-	13.8	B	15.1	C
	Northbound Through/Right	-	-	-	-	-	-	-	-	9.6	A	13.3	B
	Eastbound Left	-	-	-	-	-	-	-	-	7.4	A	7.9	A
	Westbound Left	-	-	-	-	-	-	-	-	7.4	A	7.7	A
	Southbound Left	-	-	-	-	-	-	-	-	11.6	B	15.6	C
	Southbound Through/Right	-	-	-	-	-	-	-	-	11.1	B	12.0	B
25th Ave & Revere St (#12)													
TWSC	Northbound Approach	-	-	-	-	-	-	-	-	12.1	B	11.7	B
	Eastbound Left	-	-	-	-	-	-	-	-	7.8	A	7.6	A
	Westbound Left	-	-	-	-	-	-	-	-	7.4	A	7.3	A
	Southbound Approach	-	-	-	-	-	-	-	-	11.9	B	10.6	B
25th Ave & Scranton St SB (#13)													
TWSC	Eastbound Approach	-	-	-	-	-	-	-	-	9.2	A	9.3	A
	Westbound Left	-	-	-	-	-	-	-	-	9.6	A	9.4	A
	Westbound Through	-	-	-	-	-	-	-	-	11.6	B	10.0	B
25th Ave & Scranton St NB (#14)													
TWSC	Eastbound Left	-	-	-	-	-	-	-	-	14.0	B	10.4	B
	Eastbound Through	-	-	-	-	-	-	-	-	11.2	B	10.0	B
	Westbound Approach	-	-	-	-	-	-	-	-	13.0	B	10.1	B
25th Ave & Ursula St (#15)													
TWSC	Northbound Left	-	-	-	-	-	-	-	-	9.0	A	7.6	A
	Eastbound Left	-	-	-	-	-	-	-	-	19.8	C	12.8	B
	Eastbound Right	-	-	-	-	-	-	-	-	10.5	B	9.3	A

Control	Intersection Movement	2022 Existing				2040 Background				2040 Total			
		AM Peak Hour		PM Peak Hour		AM Peak Hour		PM Peak Hour		AM Peak Hour		PM Peak Hour	
		Delay	LOS	Delay	LOS	Delay	LOS	Delay	LOS	Delay	LOS	Delay	LOS
23rd Ave & Peoria St (#16)													
TWSC	Northbound Left	10.4	B	10.7	B	-	-	-	-	-	-	-	-
	Eastbound Left	18.4	C	18.5	C	-	-	-	-	-	-	-	-
	Eastbound Right	12.1	B	11.4	B	-	-	-	-	-	-	-	-
Signalized	**Overall**	**-**	**-**	**-**	**-**	**9.0**	**A**	**19.5**	**B**	**28.1**	**C**	**33.8**	**C**
	Eastbound Approach	-	-	-	-	54.2	D	65.6	E	51.7	D	23.1	C
	Eastbound Left	-	-	-	-	51.3	D	66.4	E	51.4	D	34.4	C
	Eastbound Through/Right	-	-	-	-	55.5	E	65.4	E	51.9	D	19.5	B
	Westbound Approach	-	-	-	-	50.1	D	67.3	E	54.3	D	44.2	D
	Westbound Left	-	-	-	-	57.8	E	72.3	E	68.0	D	52.4	D
	Westbound Through/Right	-	-	-	-	46.5	D	63.1	E	44.2	D	36.4	D
	Northbound Approach	-	-	-	-	7.7	A	2.1	A	45.9	D	38.6	D
	Northbound Left	-	-	-	-	5.7	A	14.2	B	25.7	C	24.8	C
	Northbound Through	-	-	-	-	7.7	A	0.4	A	42.6	D	36.8	D
	Northbound Right	-	-	-	-	7.9	A	0.7	A	54.4	D	45.9	D
	Southbound Approach	-	-	-	-	0.8	A	30.3	C	9.7	A	24.5	C
	Southbound Left	-	-	-	-	6.1	A	5.9	A	31.5	C	23.2	C
	Southbound Through	-	-	-	-	0.6	A	30.2	C	0.5	A	23.3	C
	Southbound Right	-	-	-	-	1.0	A	30.6	C	1.0	A	27.1	C
23rd Ave & Quentin St (#17)													
Roundabout	**Overall**	**-**	**-**	**-**	**-**	**-**	**-**	**-**	**-**	**15.1**	**C**	**7.7**	**A**
	Eastbound Approach	-	-	-	-	-	-	-	-	19.8	C	4.8	A
	Westbound Approach	-	-	-	-	-	-	-	-	6.8	A	6.9	A
	Northbound Approach	-	-	-	-	-	-	-	-	5.9	A	5.2	A
	Southbound Approach	-	-	-	-	-	-	-	-	3.9	A	11.4	B
AWSC	**Overall**	**-**	**-**	**-**	**-**	**-**	**-**	**-**	**-**	**21.1**	**C**	**27.8**	**D**
	Eastbound Approach	-	-	-	-	-	-	-	-	23.0	C	13.8	B
	Westbound Approach	-	-	-	-	-	-	-	-	19.4	C	49.3	E
	Northbound Approach	-	-	-	-	-	-	-	-	11.8	B	14.0	B
	Southbound Approach	-	-	-	-	-	-	-	-	12.1	B	19.1	C
23rd Ave & Racine St (#18)													
Roundabout	**Overall**	**-**	**-**	**-**	**-**	**-**	**-**	**-**	**-**	**7.3**	**A**	**6.0**	**A**
	Eastbound Approach	-	-	-	-	-	-	-	-	7.8	A	5.9	A
	Westbound Approach	-	-	-	-	-	-	-	-	7.1	A	5.1	A
	Northbound Approach	-	-	-	-	-	-	-	-	7.3	A	4.9	A
	Southbound Approach	-	-	-	-	-	-	-	-	5.6	A	7.1	A

Control	Intersection Movement	2022 Existing				2040 Background				2040 Total			
		AM Peak Hour		PM Peak Hour		AM Peak Hour		PM Peak Hour		AM Peak Hour		PM Peak Hour	
		Delay	LOS	Delay	LOS	Delay	LOS	Delay	LOS	Delay	LOS	Delay	LOS
23rd Ave & Revere St (#19)													
TWSC	Northbound Approach	-	-	-	-	-	-	-	-	12.4	B	12.2	B
	Eastbound Left	-	-	-	-	-	-	-	-	0.0	A	7.7	A
	Westbound Left	-	-	-	-	-	-	-	-	8.3	A	8.0	A
23rd Ave & Scranton St SB (#20)													
TWSC	Eastbound Approach	-	-	-	-	-	-	-	-	12.3	B	15.1	C
	Westbound Left	-	-	-	-	-	-	-	-	13.0	B	16.8	C
	Westbound Through	-	-	-	-	-	-	-	-	12.4	B	12.7	B
23rd Ave & Scranton St NB (#21)													
TWSC	Eastbound Left	-	-	-	-	-	-	-	-	21.3	C	12.5	B
	Eastbound Through	-	-	-	-	-	-	-	-	13.3	B	13.4	B
	Westbound Approach	-	-	-	-	-	-	-	-	15.1	C	11.6	B
23rd Ave & Ursula St (#22)													
Roundabout	**Overall**	-	-	-	-	-	-	-	-	**10.6**	**B**	**8.2**	**A**
	Eastbound Approach	-	-	-	-	-	-	-	-	6.6	A	9.2	A
	Westbound Approach	-	-	-	-	-	-	-	-	11.1	B	5.8	A
	Northbound Approach	-	-	-	-	-	-	-	-	5.8	A	10.4	B
	Southbound Approach	-	-	-	-	-	-	-	-	13.9	B	6.4	A
23rd Ave & Uvalda St (#23)													
TWSC	Northbound Approach	-	-	-	-	-	-	-	-	13.2	B	14.7	B
	Westbound Left	-	-	-	-	-	-	-	-	7.7	A	8.6	A
23rd Ave & Victor St (#24)													
Roundabout	**Overall**	-	-	-	-	-	-	-	-	**7.6**	**A**	**6.8**	**A**
	Eastbound Approach	-	-	-	-	-	-	-	-	4.8	A	7.3	A
	Westbound Approach	-	-	-	-	-	-	-	-	8.6	A	4.8	A
	Northbound Approach	-	-	-	-	-	-	-	-	4.2	A	7.6	A
	Southbound Approach	-	-	-	-	-	-	-	-	8.9	A	3.5	A
AWSC	**Overall**	-	-	-	-	-	-	-	-	**32.2**	**D**	**17.4**	**C**
	Eastbound Approach	-	-	-	-	-	-	-	-	11.9	B	22.0	C
	Westbound Approach	-	-	-	-	-	-	-	-	48.7	E	12.1	B
	Northbound Approach	-	-	-	-	-	-	-	-	11.6	B	11.4	B
	Southbound Approach	-	-	-	-	-	-	-	-	13.0	B	10.6	B
23rd Ave & Fitzsimons Pkwy (#25)													
TWSC	Northbound Left	11.1	B	9.3	A	11.3	B	10.3	B	35.2	E	15.0	C
	Eastbound Left	21.2	C	18.6	C	-	-	-	-	-	-	-	-
	Eastbound Right	11.6	B	16.8	C	11.9	B	19.0	C	0.0	A	0.0	A

Control	Intersection Movement	2022 Existing				2040 Background				2040 Total			
		AM Peak Hour		PM Peak Hour		AM Peak Hour		PM Peak Hour		AM Peak Hour		PM Peak Hour	
		Delay	LOS	Delay	LOS	Delay	LOS	Delay	LOS	Delay	LOS	Delay	LOS
22nd Ave & Peoria St (#26)													
TWSC	Westbound Right	-	-	-	-	-	-	-	-	11.8	B	21.2	C
22nd Ave & Quentin St (#27)													
TWSC	Northbound Left	-	-	-	-	-	-	-	-	7.9	A	7.8	A
	Eastbound Left	-	-	-	-	-	-	-	-	13.7	B	17.2	C
	Eastbound Through/Right	-	-	-	-	-	-	-	-	11.4	B	13.0	B
	Westbound Left	-	-	-	-	-	-	-	-	12.7	B	15.4	C
	Westbound Through/Right	-	-	-	-	-	-	-	-	9.9	A	16.3	C
	Southbound Left	-	-	-	-	-	-	-	-	7.5	A	7.9	A
22nd Ave & Racine St (#28)													
TWSC	Northbound Left	-	-	-	-	-	-	-	-	7.3	A	7.5	A
	Eastbound Approach	-	-	-	-	-	-	-	-	9.7	A	10.7	B
	Westbound Approach	-	-	-	-	-	-	-	-	10.9	B	11.3	B
	Southbound Left	-	-	-	-	-	-	-	-	7.6	A	7.3	A
22nd Ave & Revere St (#29)													
TWSC	Northbound Left	-	-	-	-	-	-	-	-	7.4	A	7.6	A
	Eastbound Approach	-	-	-	-	-	-	-	-	9.9	A	10.7	B
	Westbound Approach	-	-	-	-	-	-	-	-	10.1	B	10.7	B
	Southbound Left	-	-	-	-	-	-	-	-	7.5	A	7.3	A
22nd Ave & Scranton St SB (#30)													
TWSC	Eastbound Approach	-	-	-	-	-	-	-	-	9.1	A	9.4	A
	Westbound Left	-	-	-	-	-	-	-	-	9.6	A	10.6	B
	Westbound Through	-	-	-	-	-	-	-	-	9.7	A	10.2	B
22nd Ave & Scranton St NB (#31)													
TWSC	Eastbound Left	-	-	-	-	-	-	-	-	10.9	B	10.2	B
	Eastbound Through	-	-	-	-	-	-	-	-	10.4	B	10.5	B
	Westbound Approach	-	-	-	-	-	-	-	-	10.3	B	9.7	A
22nd Ave & Ursula St (#32)													
TWSC	Northbound Left	7.4	A	7.3	A	-	-	-	-	7.7	A	7.7	A
	Eastbound Approach	9.5	A	10.4	B	-	-	-	-	12.6	B	15.7	C
	Westbound Approach	9.6	A	10.1	B	-	-	-	-	14.8	B	12.0	B
	Southbound Left	7.3	A	7.5	A	-	-	-	-	7.8	A	7.6	A

Control	Intersection Movement	2022 Existing				2040 Background				2040 Total			
		AM Peak Hour		PM Peak Hour		AM Peak Hour		PM Peak Hour		AM Peak Hour		PM Peak Hour	
		Delay	LOS	Delay	LOS	Delay	LOS	Delay	LOS	Delay	LOS	Delay	LOS
22nd Ave & Uvalda St (#33)													
TWSC	Northbound Approach	-	-	-	-	-	-	-	-	10.0	B	11.2	B
	Eastbound Left	-	-	-	-	-	-	-	-	7.3	A	7.6	A
	Westbound Left	-	-	-	-	-	-	-	-	7.5	A	7.5	A
	Southbound Approach	-	-	-	-	-	-	-	-	12.8	B	12.5	B
22nd Ave & Victor St (#34)													
TWSC	Northbound Left	-	-	-	-	-	-	-	-	8.0	A	7.6	A
	Eastbound Approach	-	-	-	-	-	-	-	-	10.7	B	10.3	B
Montview Blvd & Peoria St (#35)													
Signalized	**Overall**	**47.9**	**D**	**48.2**	**D**	**63.5**	**E**	**58.4**	**E**	**47.4**	**D**	**45.1**	**D**
	Eastbound Approach	63.9	E	82.3	F	76.9	E	62.7	E	57.6	E	64.2	E
	Eastbound Left	55.3	E	89.9	F	65.7	E	94.9	F	60.1	E	79.2	E
	Eastbound Through	78.8	E	90.7	F	109.4	F	44.9	D	63.5	E	56.1	E
	Eastbound Right	47.3	D	65.5	E	28.9	C	28.3	C	41.3	D	47.2	D
	Westbound Approach	86.1	F	72.7	E	53.5	D	73.2	E	55.4	E	71.2	E
	Westbound Left	93.0	F	62.5	E	66.3	E	84.6	F	61.2	E	71.7	E
	Westbound Through	90.5	F	74.1	E	51.4	D	78.3	E	53.1	D	77.5	E
	Westbound Right	50.7	D	73.8	E	23.7	C	54.4	D	33.3	C	52.1	D
	Northbound Approach	39.7	D	25.4	C	50.3	D	45.3	D	37.5	D	35.3	D
	Northbound Left	32.9	C	27.9	C	83.1	F	97.1	F	62.4	E	78.7	E
	Northbound Through	41.2	D	25.0	C	43.3	D	32.4	C	33.2	C	28.7	C
	Northbound Right	42.0	D	20.7	C	33.6	C	0.0	A	36.1	D	11.6	B
	Southbound Approach	35.8	D	33.1	C	67.3	E	57.1	E	50.2	D	24.5	C
	Southbound Left	38.3	D	23.1	C	109.4	F	84.5	F	71.4	E	75.1	E
	Southbound Through	34.3	C	33.2	C	48.7	D	53.8	D	41.5	D	20.1	C
	Southbound Right	35.5	D	34.4	C	51.2	D	59.5	E	42.9	D	27.3	C
Montview Blvd & Quentin St (#36)													
TWSC	Northbound Left	18.4	C	13.3	B	11.6	B	14.0	B	33.8	D	35.2	E
	Northbound Through/Right	16.9	C	9.4	A	10.3	B	9.0	A	17.7	C	10.8	B
	Eastbound Left	-	-	-	-	-	-	-	-	9.4	A	9.3	A
	Westbound Left	12.5	B	7.6	A	9.0	A	7.6	A	9.8	A	7.8	A
	Southbound Left	-	-	-	-	-	-	-	-	18.4	C	20.4	C
	Southbound Through/Right	-	-	-	-	-	-	-	-	18.7	C	16.4	C

Control	Intersection Movement	2022 Existing				2040 Background				2040 Total			
		AM Peak Hour		PM Peak Hour		AM Peak Hour		PM Peak Hour		AM Peak Hour		PM Peak Hour	
		Delay	LOS	Delay	LOS	Delay	LOS	Delay	LOS	Delay	LOS	Delay	LOS
Montview Blvd & Racine St (#37)													
TWSC	Northbound Left	17.1	C	13.6	B	76.4	F	38.6	E	-	-	-	-
	Northbound Right	17.6	C	9.9	A	17.3	C	9.9	A	-	-	-	-
	Westbound Left	12.1	B	7.8	A	12.5	B	7.9	A	-	-	-	-
Signalized	**Overall**	-	-	-	-	-	-	-	-	**16.3**	**B**	**41.7**	**D**
	Eastbound Approach	-	-	-	-	-	-	-	-	9.6	A	11.8	B
	Eastbound Left	-	-	-	-	-	-	-	-	15.1	B	56.8	E
	Eastbound Through	-	-	-	-	-	-	-	-	9.7	A	10.6	B
	Eastbound Right	-	-	-	-	-	-	-	-	0.3	A	7.6	A
	Westbound Approach	-	-	-	-	-	-	-	-	20.8	C	43.6	D
	Westbound Left	-	-	-	-	-	-	-	-	15.6	B	1.7	A
	Westbound Through/Right	-	-	-	-	-	-	-	-	21.0	C	45.2	D
	Northbound Approach	-	-	-	-	-	-	-	-	47.6	D	40.3	D
	Northbound Left	-	-	-	-	-	-	-	-	45.9	D	42.6	D
	Northbound Through/Right	-	-	-	-	-	-	-	-	48.1	D	38.4	D
	Southbound Approach	-	-	-	-	-	-	-	-	47.9	D	76.9	E
	Southbound Left	-	-	-	-	-	-	-	-	49.7	D	88.0	F
	Southbound Through/Right	-	-	-	-	-	-	-	-	44.1	D	36.6	D
Montview Blvd & Revere St (#38)													
TWSC	Northbound Right	-	-	-	-	14.7	B	11.0	B	27.1	D	16.7	C
	Eastbound Left	-	-	-	-	-	-	-	-	14.3	B	11.7	B
	Westbound Left	-	-	-	-	11.8	B	8.2	A	19.1	C	9.7	A
	Southbound Right	-	-	-	-	-	-	-	-	15.3	C	38.9	E

Control	Intersection Movement	2022 Existing				2040 Background				2040 Total			
		AM Peak Hour		PM Peak Hour		AM Peak Hour		PM Peak Hour		AM Peak Hour		PM Peak Hour	
		Delay	LOS	Delay	LOS	Delay	LOS	Delay	LOS	Delay	LOS	Delay	LOS
Montview Blvd & Scranton St (#39)													
TWSC	Northbound Left/Through	0.0	A	94.6	F	-	-	-	-	-	-	-	-
	Northbound Right	11.2	B	10.0	B	-	-	-	-	-	-	-	-
	Eastbound Left	8.1	A	9.1	A	-	-	-	-	-	-	-	-
	Westbound Left	9.7	A	8.0	A	-	-	-	-	-	-	-	-
	Southbound Approach	12.4	B	22.3	C	-	-	-	-	-	-	-	-
Signalized	**Overall**	-	-	-	-	**6.2**	**A**	**19.8**	**B**	**17.2**	**B**	**26.5**	**C**
	Eastbound Approach	-	-	-	-	1.5	A	6.7	A	4.2	A	4.3	A
	Eastbound Left	-	-	-	-	6.8	A	10.9	B	24.2	C	23.9	C
	Eastbound Through	-	-	-	-	1.5	A	6.4	A	2.8	A	2.3	A
	Eastbound Right					0.3	A	4.7	A	0.5	A	0.5	A
	Westbound Approach	-	-	-	-	10.7	B	16.1	B	26.6	C	28.3	C
	Westbound Left	-	-	-	-	8.9	A	8.0	A	8.7	A	8.2	A
	Westbound Through/Right	-	-	-	-	10.9	B	16.1	B	27.3	C	28.5	C
	Northbound Approach	-	-	-	-	42.4	D	51.4	D	46.1	D	57.7	E
	Northbound Left	-	-	-	-	43.8	D	56.0	E	49.3	D	66.8	E
	Northbound Through/Right	-	-	-	-	41.7	D	45.8	D	44.5	D	47.4	D
	Southbound Approach	-	-	-	-	43.4	D	47.1	D	48.9	D	66.7	E
	Southbound Left	-	-	-	-	42.0	D	47.0	D	46.9	D	77.5	E
	Southbound Through/Right	-	-	-	-	43.6	D	47.1	D	49.8	D	53.3	D
Montview Blvd & W Ursula St (#40) – Exit Only													
TWSC	Southbound Left	19.3	C	24.5	C	22.9	C	24.0	C	-	-	-	-
	Southbound Right	11.3	B	12.9	B	11.9	B	12.0	B	-	-	-	-
Signalized	**Overall**	**-**	**-**	**-**	**-**	**-**	**-**	**-**	**-**	**10.4**	**B**	**22.1**	**C**
	Eastbound Approach	**-**	**-**	**-**	**-**	**-**	**-**	**-**	**-**	8.8	A	19.9	B
	Westbound Approach	**-**	**-**	**-**	**-**	**-**	**-**	**-**	**-**	5.2	A	17.3	B
	Southbound Approach	**-**	**-**	**-**	**-**	**-**	**-**	**-**	**-**	49.7	D	51.5	D
	Southbound Left	**-**	**-**	**-**	**-**	**-**	**-**	**-**	**-**	49.2	D	50.2	D
	Southbound Right	**-**	**-**	**-**	**-**	**-**	**-**	**-**	**-**	50.2	D	52.8	D
Montview Blvd & E Ursula St (#41) – Entrance Only													
No Control	Eastbound Left	8.5	A	9.0	A	8.6	A	8.8	A	12.1	B	10.4	B

Control	Intersection Movement	2022 Existing				2040 Background				2040 Total			
		AM Peak Hour		PM Peak Hour		AM Peak Hour		PM Peak Hour		AM Peak Hour		PM Peak Hour	
		Delay	LOS	Delay	LOS	Delay	LOS	Delay	LOS	Delay	LOS	Delay	LOS
Montview Blvd & Uvalda St (#42)													
TWSC	Northbound Right	-	-	-	-	12.1	B	13.1	B	13.7	B	34.7	D
	Eastbound Left	-	-	-	-	8.6	A	8.7	A	13.5	B	10.0	B
	Westbound Left	-	-	-	-	8.7	A	8.8	A	9.2	A	20.4	C
	Southbound Right	-	-	-	-	11.9	B	10.5	B	24.2	C	14.4	B
Montview Blvd & Victor St (#43)													
TWSC	Northbound Approach	47.7	E	>300	F	-	-	-	-	-	-	-	-
	Eastbound Left	9.2	A	8.4	A	-	-	-	-	-	-	-	-
	Westbound Left	8.1	A	9.4	A	-	-	-	-	-	-	-	-
	Southbound Left/Through	36.2	E	>300	F	-	-	-	-	-	-	-	-
	Southbound Right	12.3	B	11.2	B	-	-	-	-	-	-	-	-
Signalized	**Overall**	**-**	**-**	**-**	**-**	**17.6**	**B**	**23.3**	**C**	**15.5**	**B**	**20.1**	**C**
	Eastbound Approach	-	-	-	-	12.3	B	16.3	B	1.6	A	9.0	A
	Eastbound Left	-	-	-	-	10.4	B	11.4	B	11.9	B	18.2	B
	Eastbound Through	-	-	-	-	12.5	B	17.0	B	0.6	A	8.4	A
	Eastbound Right	-	-	-	-	12.5	B	17.0	B	0.6	A	8.3	A
	Westbound Approach	-	-	-	-	14.0	B	15.7	B	14.7	B	25.3	C
	Westbound Left	-	-	-	-	8.5	A	12.3	B	6.7	A	18.4	B
	Westbound Through	-	-	-	-	14.3	B	15.9	B	14.7	B	25.5	C
	Westbound Right	-	-	-	-	14.3	B	15.9	B	15.0	B	25.5	C
	Northbound Approach	-	-	-	-	45.8	D	43.3	D	49.7	D	29.1	C
	Northbound Left	-	-	-	-	49.3	D	42.4	D	54.9	D	29.9	C
	Northbound Through/Right	-	-	-	-	41.4	D	43.6	D	44.5	D	28.9	C
	Southbound Approach	-	-	-	-	47.0	D	42.4	D	50.5	D	40.6	D
	Southbound Left	-	-	-	-	41.7	D	49.3	D	50.3	D	46.8	D
	Southbound Through/Right	-	-	-	-	47.3	D	38.1	D	50.6	D	26.5	C
Montview Blvd & Fitzsimons Pkwy (#44)													
Signalized	**Overall**	**11.6**	**B**	**36.3**	**D**	**24.9**	**C**	**27.3**	**C**	**25.5**	**C**	**40.0**	**D**
	Eastbound Approach	48.7	D	84.2	F	26.1	C	37.0	D	16.8	B	55.2	E
	Eastbound Left	42.4	D	29.5	C	53.3	D	46.5	D	49.2	D	38.5	D
	Eastbound Right	49.1	D	90.7	F	23.8	C	35.3	D	15.0	B	56.8	E
	Northbound Approach	8.4	A	9.1	A	23.7	C	23.6	C	21.3	C	25.8	C
	Northbound Left	17.9	B	12.6	B	59.5	E	63.7	E	40.3	D	51.1	D
	Northbound Through	2.2	A	7.4	A	2.8	A	5.1	A	6.4	A	9.0	A
	Southbound Approach	9.3	A	17.7	B	26.8	C	24.6	C	41.5	D	40.1	D
	Southbound Through	9.3	A	17.7	B	26.8	C	24.7	C	40.5	D	38.2	D
	Southbound Right	9.3	A	17.6	B	26.7	C	24.6	C	43.6	D	43.5	D

RI/RO = Right-in/right-out intersection; Signalized; TWSC (Two-Way Stop-Controlled); AWSC (All-Way Stop-Controlled); Roundabout; No Control

5.3 Vehicle Queueing Analysis and Turn Lane Evaluation

A vehicle queueing analysis was conducted for the study area intersections. The queueing analysis was performed using Synchro presenting the results of the 95th percentile queue lengths. Results for all signalized intersections are shown in the following **Table 5** with calculations provided within the queue analysis sheets of **Appendix G** for signalized intersections.

As the roadways internal to the site are anticipated to operate as collector roadways, a minimum turn lane length of 100 feet is generally recommended within the Fitzsimons Innovation Campus study area where this length can be provided. Because Peoria Street and Fitzsimons Parkway operate with higher speeds than these internal collector roadways, where queues are anticipated to be minimal, a minimum turn lane length of 150 feet is provided. Some exceptions to this standard are based on available intersection spacing, such as the turn lanes recommended in between the northbound and southbound Scranton Street one-way roadways, which will provide 50-foot left turns lanes eastbound and westbound where applicable (Intersections #13, 14, 20, 21, 30, & 31). By 2040, the maximum possible left turn lane length of 475 feet may be needed at the southbound approach of the 23rd Avenue and Peoria Street (#16) intersection which would require reducing the northbound left turn lane at the 25th Avenue and Peoria Street (#9) intersection to a length of 125 feet. Of note, each of the turn lanes at unsignalized intersections in the study area are anticipated to have queues less than 100 feet through 2040 with the addition of project traffic, with the exception of the northbound left turn lane at 23rd Avenue & Fitzsimons Parkway (#25). As such, these turn lanes are recommended to provide a length of 100 feet. The northbound left turn queue at this intersection may be up to 275 feet in the morning peak hour if 2040 volumes are realized, but the existing turn lane length will provide sufficient length to accommodate this queue if it does occur. The queue calculations for unsignalized intersections are provided in the level of service operational sheets in **Appendix F**.

Per coordination with the City of Aurora, right turn lanes should generally be provided for turning movements that have greater than 100 turns per hour where the through movements in that same direction are also greater than 100 vehicles per hour and the same for applies for left turn lanes in sections designated as two-lane roadways instead of three-lane sections. Where this occurred throughout the roadway network, turn lanes were provided with the exception of the following locations:

- Westbound through/right at 25th Avenue & Racine Street (#11) – no right turn lane
- Southbound through/right at 25th Avenue & Ursula Street (#15) – no right turn lane
- Westbound through/right at 23rd Avenue & Quentin Street (#17) – no right turn lane
- Westbound left/through/right at 22nd Avenue & Uvalda Street (#33) – no left turn lane

It is believed these areas will not need turn lanes because the intersections operate well without them due to their relatively low volume as minor collector roadways, and in some cases, there are site constraints that would restrict further roadway expansion. Additionally, the intent of the Fitzsimons Innovation Campus area is to be a pedestrian- and bicycle-friendly space with low vehicle speeds and several traffic calming devices such as bulb-outs and crosswalks—particularly with the APS School, Compositive School, and several open/green space areas within the Campus. It is believed that providing excessive turn lanes will overbuild the roadways and increase speeds that will create an unsafe environment for pedestrians and bicyclists in the area.

Table 5 – Queueing Analysis at Signalized Intersections Results

Intersection Turn Lane	Existing Turn Lane Length (feet)	2040 Calculated Queue (feet)	2040 Recommended Length (feet)
MLK/Fitzsimons & Peoria (#1)			
Eastbound Left	350' DL	156'	350' DL
Eastbound Right	475' YIELD	371'	475'
Westbound Left	275'	71'	275' **DL**
Westbound Right	C YIELD	301'	**325'**
Northbound Left	300' DL	**466'**	300' DL
Northbound Right	C	1'	**150'**
Southbound Left	175' DL	**330'**	175' DL
Southbound Right	100' FREE	129'	**150'**
Fitzsimons & Racine (#3)			
Eastbound Left	200'	10'	200'
Eastbound Right	DNE	0'	**150'**
Westbound Left	200'	143'	200'
Westbound Right	375'	6'	375'
Northbound Left	DNE	197'	**200'**
Fitzsimons & Ursula (#7)			
Eastbound Left	225'	2'	225'
Eastbound Right	250'	181'	250'
Westbound Left	200'	201'	200'
Westbound Right	250'	0'	250'
Northbound Left	DNE	252'	**250'**

Intersection Turn Lane	Existing Turn Lane Length (feet)	2040 Calculated Queue (feet)	2040 Recommended Length (feet)
Fitzsimons & Victor (#8)			
Eastbound Left	300'	156'	300'
Eastbound Right	C	42'	C
Northbound Left	175'	135'	175'
Southbound Right	275'	0'	275'
25th & Peoria (#9)			
Eastbound Left	C	225'	**225'**
Westbound Left	DNE	229'	**225'**
Northbound Left	225'	127'	**125'**
Southbound Left	DNE	107'	**125'**
23rd & Peoria (#16)			
Eastbound Left	C	114'	**150'**
Westbound Left	DNE	353'	**C**
Northbound Left	200'	156'	200'
Southbound Left	DNE	462'	**475'**
Montview & Peoria (#35)			
Eastbound Left	100'	200'	**200' DL**
Eastbound Right	C	228'	**225'**
Westbound Left	450'	310'	**325' DL**
Westbound Right	125'	302'	**300'**
Northbound Left	250'	200'	**200' DL**
Northbound Right	250'	478'	**475'**
Southbound Left	250'	275'	**275' DL**
Montview & Racine (#37)			
Eastbound Left	DNE	29'	**100'**
Eastbound Right	DNE	13'	**C**
Westbound Left	DNE	24'	**100'**
Northbound Left	100'	99'	100'
Southbound Left	DNE	425'	**C**
Montview & Scranton (#39)			
Eastbound Left	75'	28'	**100'**
Eastbound Right	DNE	15'	**100'**
Westbound Left	75'	10'	**100'**
Northbound Left	DNE	122'	**125'**
Southbound Left	DNE	243'	**250'**
Montview & W Ursula (#40)			
Southbound Left	C	130'	C
Southbound Right	100'	52'	100'

Intersection Turn Lane	Existing Turn Lane Length (feet)	2040 Calculated Queue (feet)	2040 Recommended Length (feet)
Montview & Victor (#43)			
Eastbound Left	DNE	39'	**100'**
Westbound Left	DNE	27'	**100'**
Northbound Left	DNE	73'	**100'**
Southbound Left	DNE	251'	**250'**
Montview & Fitzsimons (#44)			
Eastbound Left	150'	135'	**C**
Eastbound Right	C/350'	288'	C/350'
Northbound Left	350'	**474'**	350' **DL**

DNE = Does Not Exist; C = Continuous Turn Lane; DL = Dual Left Turn Lane **Blue Text** = Recommendation; **Red Text** = Storage Deficiency

The vehicle queues are all anticipated to be accommodated within the existing or recommended storage lengths through 2040 with the exception of the northbound left turn and southbound left turn queues at the Martin Luther King Jr./Fitzsimons Parkway & Peoria Street (#1) intersection and the northbound left turn queue at Montview Boulevard & Fitzsimons Parkway (#44). The northbound left turn queue at the Martin Luther King Jr./Fitzsimons Parkway & Peoria Street (#1) intersection cannot be accommodated due to intersection spacing, with a 95th percentile northbound left turn queue of up to 466 feet and only approximately 300 feet of storage length available because of back-to-back left turn lanes with the 25th Avenue & Peoria Street (#9) intersection to the south. The southbound left turn queue at the Martin Luther King Jr. Boulevard/Fitzsimons Parkway & Peoria Street (#1) intersection may be up to 330 feet by the 2040 horizon, and because of existing constraints to the north of Martin Luther King Jr. Boulevard/Fitzsimons Parkway, this queue may not be able to be accommodated by the 2040 horizon if these volumes are realized. Of note, the existing bridge crossing Sand Creek to the north of Martin Luther King Jr. Boulevard/Fitzsimons Parkway provides only two lanes in each direction while most of Peoria Street in this area provides three through lanes in each direction. This bridge is a known bottleneck along Peoria Street today, and per discussion with the City of Aurora staff, this bridge is anticipated to be reconstructed in coming years to provide additional through lanes and multimodal facilities.

The northbound left turn queue at Montview Boulevard & Fitzsimons Parkway (#44) may be up to 474 feet by the 2040 horizon with only approximately 350 feet of storage available because of back-to-back left turn lanes with the southbound left turn lanes at 17th Place.

With the proposed back-to-back left turn lanes of the dual northbound left turn lanes at the Martin Luther King Jr. Boulevard/Fitzsimons Parkway & Peoria Street (#1) intersection, the southbound left turn lane at 25th Avenue & Peoria Street (#9) should provide 125 feet in length. The southbound left turn queue at 23rd Avenue & Peoria Street (#16) may be up to 462 feet by the 2040 horizon. With a total length of approximately 700 feet between 23rd Avenue and 25th Avenue, it is recommended this southbound left turn lane provide 475 feet in length and the northbound left turn lane at 25th Avenue & Peoria Street (#9) can be 125 feet in length with a 100-foot shared taper.

The eastbound left turn queue at the Montview Boulevard & Peoria Street (#35) intersection may be up to 200 feet by 2040. Because of this queue, the existing full movement T-intersection at Montview Boulevard and Paris Street to the west of Peoria Street may need to be considered for possible restriction to right-in/right-out turning movements only, which will improve the safety of this area while also allowing space for anticipated queues on the west leg of this intersection. The existing accesses between Paris Street and Peoria Street along Montview Boulevard would also likely need to be restricted to right-in/right-out turning movements only. The northbound right turn queue at this intersection may extend up to 478 feet by 2040. With the recommended turn lane length of 475 feet, this can be achieved by extending the existing northbound right turn lane further to the south. If this turn lane is extended to this length, the existing north access at the Veterans Community Living Center could be considered for possible restriction to right-in/right-out movements only if needed. Each of these queues should be monitored as development continues to occur in the area to assess whether these restrictions may be needed as traffic volumes increase.

5.4 Master Traffic Impact Study Comparison

Several iterations of master traffic impact studies have been conducted for this study area, including the 2017 *Fitzsimons Redevelopment Authority Traffic Study* completed by FHU in 2017, an updated iteration conducted by Kimley-Horn in January 2021 called *Fitzsimons Innovation Campus* and now with this updated study. This study is intended to provide a detailed analysis of projected land uses and the proposed roadway network to allow for future developments within this study area to develop based on traffic compliance to the recommendations proposed in this master study. Of note, the proposed roadway network in this study is in alignment with the January 2021 Kimley-Horn study with the exception of the lane configuration along Montview Boulevard

between Racine Street (#37) and Victor Street (#43) which has been modified to primarily provide only one through lane in each direction along Montview Boulevard rather than two through lanes to be in alignment with the *2018 Montview Boulevard Improvement Plans* provided by the City of Aurora. **Table 6** provides a comparison of the changes in the lane and intersection configuration in this study versus the 2017 *Fitzsimons Redevelopment Authority* study. A comparison of the changes in land uses and intensity as well as a trip generation comparison between the three studies is included in **Appendix D**.

Table 6 – Master Study Intersection Lane Configuration and Control Comparison

Intersection	2017 Study Recommendation	New Recommendation
External Intersection Changes (LOS and turning movements evaluated in original study)		
Fitzsimons Parkway/Martin Luther King Jr. Blvd & Racine Street (#1)	Was not evaluated in original 2017 study	
Fitzsimons Parkway & Racine Street (#3)	• **No North Leg** • NB: Dual Lefts	• **Addition of North Leg** • SB: Shared Left, Through, Right • NB: Single Left, Shared Through/Right
Fitzsimons Parkway & Ursula Street (#7)	• **No North Leg**	• **Addition of North Leg**
Fitzsimons Parkway & Victor Street (#8)	No Change	
25th Avenue & Peoria Street (#9)	• NB: Right Turn Lane • WB: Separate Through and Right Turn Lane	• NB: No Right Turn Lane • WB: Shared Through/Right
23rd Avenue & Peoria Street (#16)	• NB: Right Turn Lane • WB: Separate Through and Right Turn Lane	• NB: No Right Turn Lane • WB: Shared Through/Right Turn Lane
23rd Avenue & Scranton Street (SB) (#20)	No Change	
23rd Avenue & Scranton Street (NB) (#21)		
23rd Avenue & Fitzsimons Parkway (#25)	• NB: Dual Lefts • EB: Allow EB left turns	• NB: Single Left • EB: Restrict to ¾ access, no EB left turns
Montview Boulevard & Peoria Street (#35)	No Change	
Montview Boulevard & Quentin Street (#36)	• SB: Separate Through and Right Turn Lane	• SB: Shared Through/Right Turn Lane
Montview Boulevard & Racine Street (#37)	• NB: Dual Lefts	• NB: Single Left
Montview Boulevard & Revere Street (#38)	• Full movement NB and SB	• Restricted to ¾ movement NB and SB (no exiting left turns)
Montview Boulevard & Scranton Street (#39)	• EB: Two Through Lanes	• EB: One Through Lane

Intersection	2017 Study Recommendation	New Recommendation
Montview Boulevard & Ursula Street W (#40)	No Change	
Montview Boulevard & Ursula Street (#41)	• Signalized intersection	• Unsignalized intersection
Montview Boulevard & Uvalda Street (#42)	• SB: Shared Left/Through, Separate Right • NB: Separate Left, Shared Through/Right • WB: Shared Through/Right	• SB: Right Only • NB: Right Only • WB: Separate Through and Right Turn Lane
Montview Boulevard & Victor Street (#43)	• SB: Two Through Lanes • NB: Two Through Lanes	• SB: One Through Lane • NB: One Through Lane
Montview Boulevard & Fitzsimons Parkway (#44)	• SB: Two Through Lanes	• SB: Two Through Lanes and Shared Through/Right
Internal Intersection Control Changes (ADT and control evaluated in original traffic study)		
Fitzsimons Pkwy /Martin Luther King Jr Blvd & Peoria St (#1)	No Change	
Fitzsimons Pkwy & Quentin St (#2)	No Change	
Fitzsimons Pkwy & Revere St (#4)	No Change	
Fitzsimons Pkwy & Scranton St (SB) (#5)	No Change	
Fitzsimons Pkwy & Scranton St (NB) (#6)	No Change	
25th Ave & Quentin St (#10)	No Change	
25th Ave & Racine St (#11)	**Two Way Stop Control on E/W**	**Two Way Stop Control on N/S**
25th Ave & Revere St (#12)	No Change	
25th Ave & Scranton St (SB) (#13)	No Change	
25th Ave & Scranton St (NB) (#14)	No Change	
25th Ave & Ursula St (#15)	No Change	
23rd Ave & Quentin St (#17)	**Two Way Stop Control on N/S**	**All-Way Stop Control**
23rd Ave & Racine St (#18)	No Change	
23rd Ave & Revere St (#19)	No Change	
23rd Ave & Ursula St (#22)	No Change	
23rd Ave & Uvalda St (#23)	No Change	
23rd Ave & Victor St (#24)	**Two-Lane Roundabout**	**All-Way Stop Control**
22nd Ave & Peoria St (#26)	No Change	
22nd Ave & Quentin St (#27)	**All-Way Stop Control**	**Two Way Stop Control on E/W**
22nd Ave & Racine St (#28)	No Change	
22nd Ave & Revere St (#29)	**All-Way Stop Control**	**Two Way Stop Control on E/W**
22nd Ave & Scranton St (SB) (#30)	No Change	
22nd Ave & Scranton St (NB) (#31)	No Change	

Intersection	2017 Study Recommendation	New Recommendation
22nd Ave & Ursula St (#32)	No Change	
22nd Ave & Uvalda St (#33)	**All-Way Stop Control**	**Two Way Stop Control on N/S**
22nd Ave & Victor St (#34)	No Change	
Montview & Revere St (#38)	No Change	

5.5 Improvement Summary

Based on the analysis presented in this report, Kimley-Horn believes remaining development of Fitzsimons Innovation Campus and the surrounding area will be successfully incorporated into the existing and future roadway network. Analysis of the existing street network and expected traffic volumes resulted in the recommended intersection control and roadway segments summarized in **Table 7**. Based on the results of the intersection analysis, improvements were identified as being needed at key study intersections in the long-term 2040 planning horizon to provide an update to the Fitzsimons Redevelopment Authority master traffic study. These improvements are summarized in **Table 8** as well as **Figures 13** and **14** for the 2040 horizon for the northern and southern areas of campus, respectively. The roadway plan for the Fitzsimons Innovation Campus is illustrated in **Figure 15**. With the recommended improvements, all intersections are expected to operate acceptably during the peak hours in 2040. Because eastbound left turn movements at the 23rd Avenue & Fitzsimons Parkway (#25) intersection may experience long delays during both peak hours in 2040, it is recommended this intersection be restricted to ¾ movement at full project buildout, with no eastbound left turns permitted.

Roundabout control is recommended at the intersection of 23rd Avenue and Racine Street. Although roundabout control is expected to operate with lower vehicle delays and LOS at the intersections of 23rd Avenue/Quentin Street (#17) and 23rd Avenue/Victor Street (#24), all-way stop control has been recommended at these two intersections. All-way stop control warrants are expected to be met at the intersections of 23rd Avenue/Quentin Street (#17) and 23rd Avenue/Victor Street (#24) and are included in **Appendix H**. The intersection of 23rd Avenue and Quentin Street (#17) is recommended with all-way stop control due to the proximity of the proposed roundabout at the intersection of 23rd Avenue and Racine Street (#18). This will reduce the transitions of the deflection islands and allow more efficient use of pedestrian and bicycle facilities. The intent of the Fitzsimons Innovation Campus area is to be a pedestrian- and bicycle-friendly space with low vehicle speeds and several traffic calming devices such as bulb-outs/on-street park and crosswalks. The use of all-way stop control allows for additional bulb-outs and on-

street parking from the streets intersecting with 23rd Avenue. Based on the results of the intersection operational analysis, the key intersection recommended improvements and control are shown in **Figures 13** and **14** for the northern and southern campus areas, respectively.

Table 7 – Fitzsimons Intersection Control & Lane Segment Recommendations

Control Type	Intersections	
Traffic Signals (12)	• Fitzsimons Pkwy & Peoria St (#1) • Fitzsimons Pkwy & Racine St (#3) • Fitzsimons Pkwy & Ursula St (#7) • Fitzsimons Pkwy & Victor St (#8) • 25th Ave & Peoria St (#9) • 23rd Ave & Peoria St (#16)	• Montview Blvd & Peoria St (#35) • Montview Blvd & Racine St (#37) • Montview Blvd & Scranton St (#39) • Montview Blvd & W Ursula Street (#40) • Montview Blvd & Victor St (#43) • Montview Blvd & Fitzsimons Pkwy (#44)
Two-Way Stop (28)	• Fitzsimons Pkwy & Quentin St (#2: Stop NB) • Fitzsimons Pkwy & Revere St (#4: NB) • Fitzsimons Pkwy & Scranton St (#5: None) • Fitzsimons Pkwy & Scranton St (#6: NB) • 25th Ave & Quentin St (#10: NB/SB) • 25th Ave & Racine St (#11: NB/SB) • 25th Ave & Revere St (#12: NB/SB) • 25th Ave & Scranton St (#13: EB/WB) • 25th Ave & Scranton St (#14: EB/WB) • 25th Ave & Ursula St (#15: EB) • 23rd Ave & Revere St (#19: NB) • 23rd Ave & Scranton St (#20: EB/WB) • 23rd Ave & Scranton St (#21: EB/WB) • 23rd Ave & Uvalda St (#23: NB)	• 23rd Ave & Fitzsimons Pkwy (#25: EB) • 22nd Ave & Peoria St (#26: WB) • 22nd Ave & Quentin St (#27: EB/WB) • 22nd Ave & Racine St (#28: EB/WB) • 22nd Ave & Revere St (#29: EB/WB) • 22nd Ave & Scranton St (#30: EB/WB) • 22nd Ave & Scranton St (#31: EB/WB) • 22nd Ave & Ursula St (#32 EB/WB) • 22nd Ave & Uvalda St (#33: NB/SB) • 22nd Ave & Victor St (#34: EB) • Montview Blvd & Quentin St (#36: NB/SB) • Montview Blvd & Revere St (#38: SB) • Montview Blvd & E Ursula St (#41: None) • Montview Blvd & Uvalda St (#42: SB)
All-Way Stop (2)	• 23rd Ave & Quentin St (#17)	• 23rd Avenue & Victor St (#24)
Roundabout (2)	• 23rd Ave & Racine St (#18)	• 23rd Ave & Ursula St (#22)
Lane Segments	**Roadway**	
2-Lane Segment (11)	• Quentin Street • Racine Street • Revere Street • Scranton Street • Ursula Street • Uvalda Street • Victor Street • 25th Avenue • 23rd Avenue • 22nd Avenue • Montview Boulevard from Racine Street to Uvalda Street	
4-Lane Segment (3)	• Fitzsimons Parkway • Montview Boulevard from Peoria Street to Racine Street, • Montview Boulevard from Uvalda Street to Fitzsimons Parkway	
6-Lane Segment (1)	• Peoria Street	

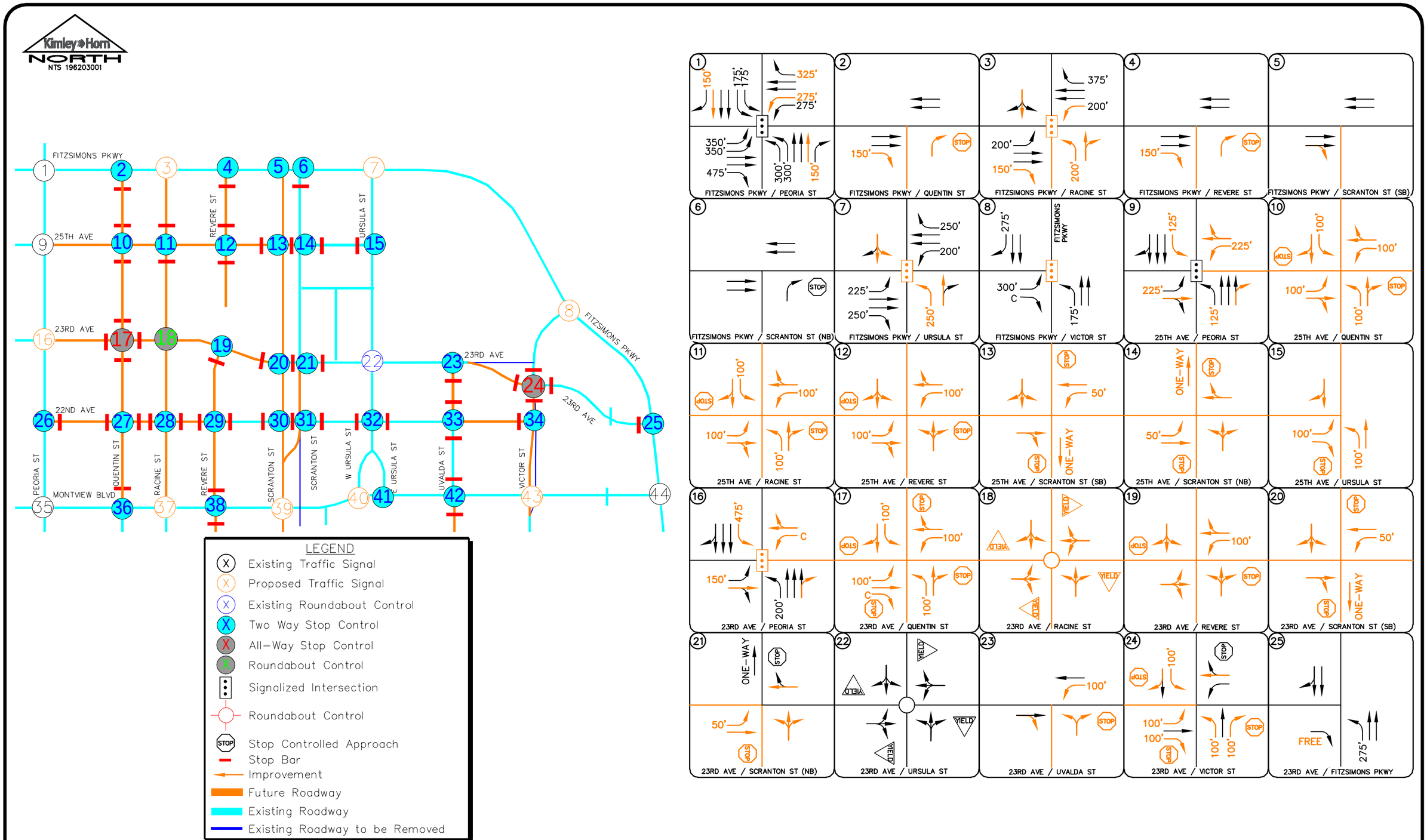
Black Text in Control Section = Existing Control Type; Blue Text in Control Section = Future Control Type

Table 8 – Fitzsimons Summary of Improvements to Existing Intersections

Intersection	Improvements
Fitzsimons Parkway & Peoria Street (#1)	• Three Northbound & Southbound Through Lanes • Provide Westbound Dual Left Turn Lanes
Fitzsimons Parkway & Ursula Street (#7)	• Install Traffic Signal • Provide Northbound Left Turn Lane and Shared Through/Right
Fitzsimons Parkway & Victor Street (#8)	• Install Traffic Signal
25th Avenue & Peoria Street (#9)	• New East Leg to 25th Avenue and Associated Movements
23rd Avenue & Peoria Street (#16)	• New East Leg to 23rd Avenue and Associated Movements • Install Traffic Signal

23rd Avenue & Victor Street (#24)	• Convert Two T-Intersections to One Four-Leg Intersection
	• New West Leg to 23rd Avenue and Associated Movements
	• Convert 23rd Avenue East Leg from a 4-Lane Section to a 3-Lane Section
	• Standard Intersection Configuration with All-Way Stop Control
	  • Provide Northbound and Southbound Left Turn Lanes
	  • Provide Northbound Right Turn Lane

23rd Avenue & Fitzsimons Parkway (#25)	• Provide Eastbound Free Right Turn Lane • Convert 23rd Avenue from a 4-Lane Section to a 3-Lane Section • Restrict Eastbound left turning vehicles as ¾ movement intersection
22nd Avenue & Scranton Street SB (#30)	• Convert Two-Way Scranton Street to One-Way Travel Southbound • Provide Stop Control on Eastbound and Westbound Approaches
22nd Avenue & Scranton Street NB (#31)	• Convert Two-Way Scranton Street to One-Way Travel Northbound • Provide Stop Control on Eastbound and Westbound Approaches
Montview Boulevard & Peoria Street (#35)	• Provide Exclusive Dual Left Turn Lanes on all Four Approaches • Provide Two Eastbound Through Lanes
Montview Boulevard & Quentin Street (#36)	• New North Leg to Quentin Street and Associated Movements • Provide Two Eastbound Through Lanes
Montview Boulevard & Racine Street (#37)	• New North Leg to Racine Street and Associated Movements • Install Traffic Signal • Provide Eastbound and Westbound Left Turn Lanes and Drop Eastbound Right Turn Lane
Montview Boulevard & Scranton Street (#39)	• Relocate Intersection to the West in Alignment with the SB Segment • Install Traffic Signal • Provide Designated Northbound and Southbound Left Turn Lanes
Montview Boulevard & W Ursula Street (#40)	• Install Traffic Signal
Montview Boulevard & Victor Street (#43)	• Install Traffic Signal • Provide Two Eastbound and Westbound Through Lanes • Provide Designated Left Turn Lanes on all Four Approaches
Montview Boulevard & Fitzsimons Parkway (#44)	• Provide Northbound Dual Left Turn Lanes • Provide Three Southbound Through Lanes



FITZSIMONS INNOVATION CAMPUS MASTER TRAFFIC IMPACT STUDY
2040 RECOMMENDED GEOMETRY AND CONTROL (NORTH)

FIGURE 13

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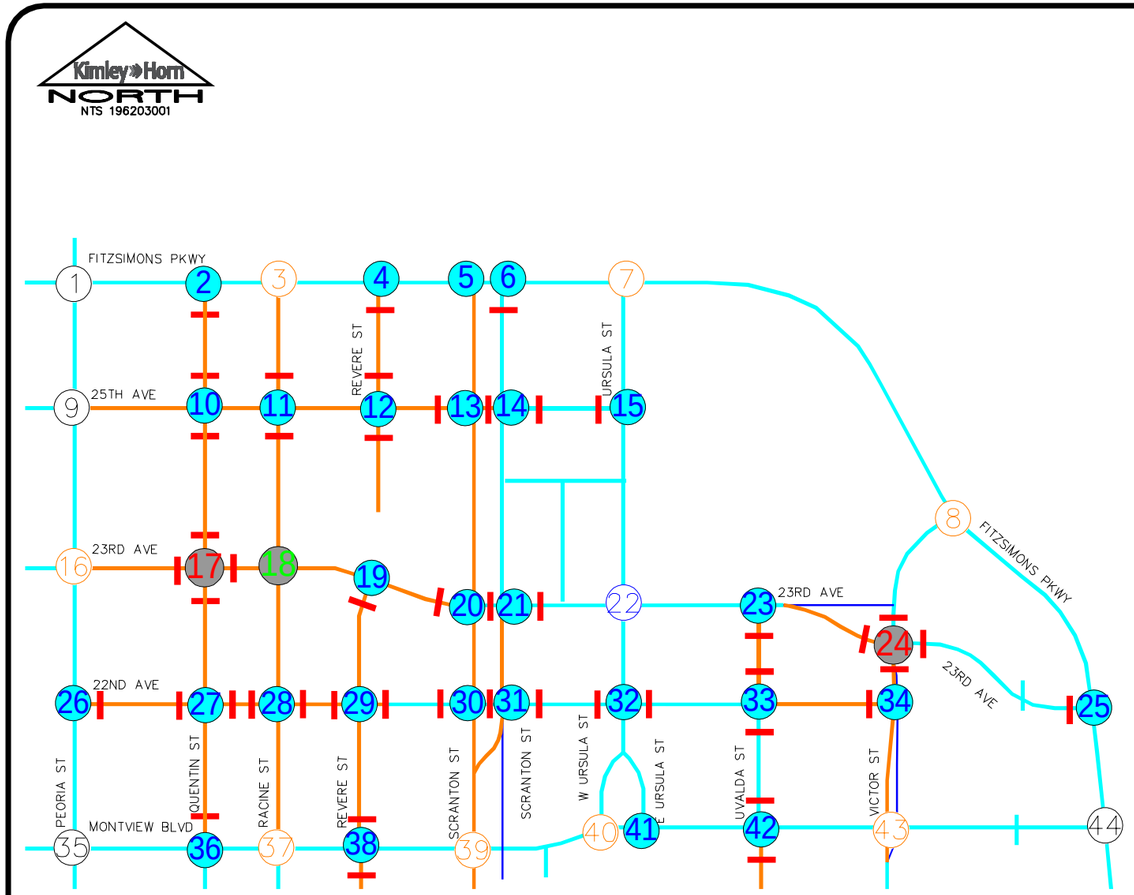
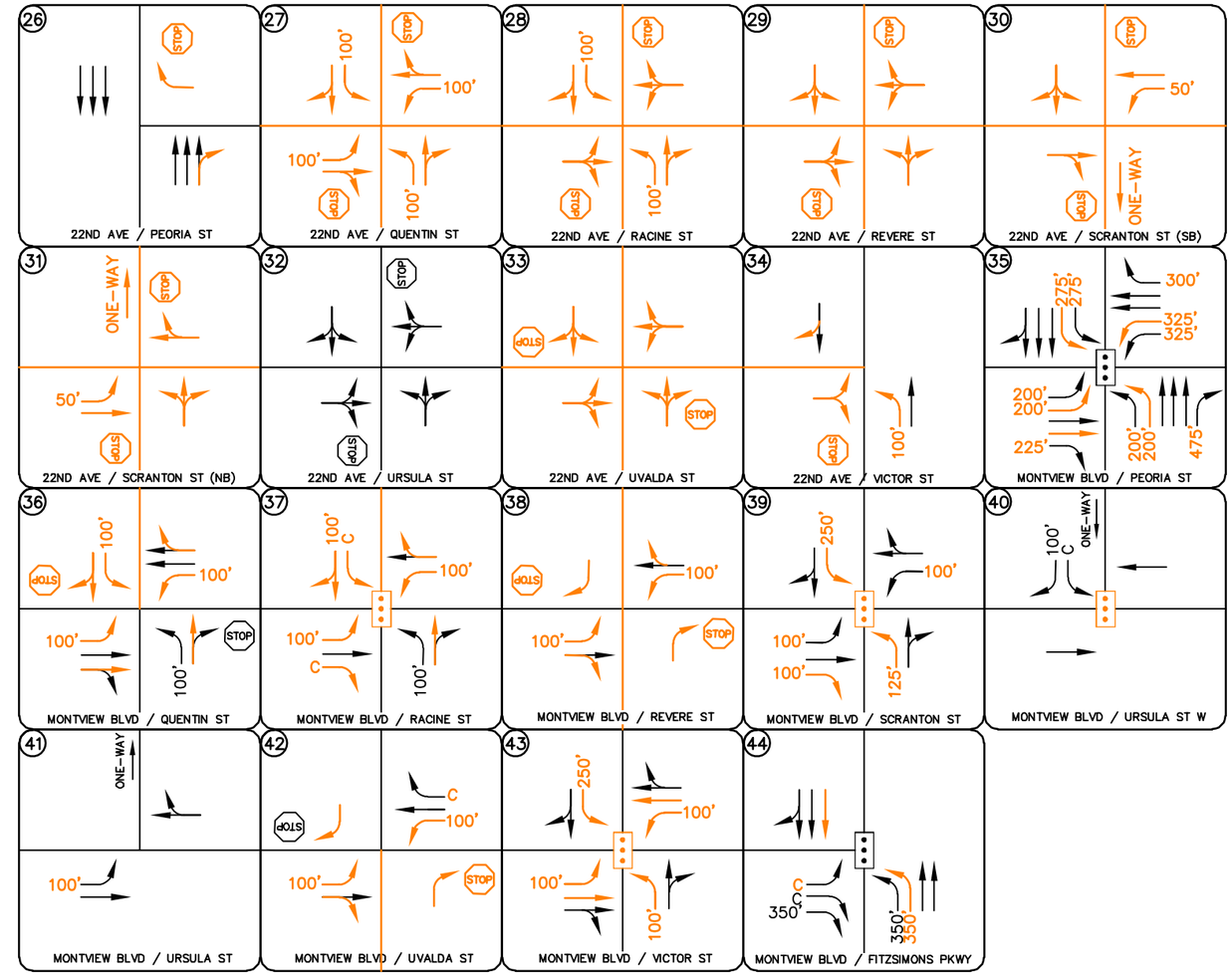




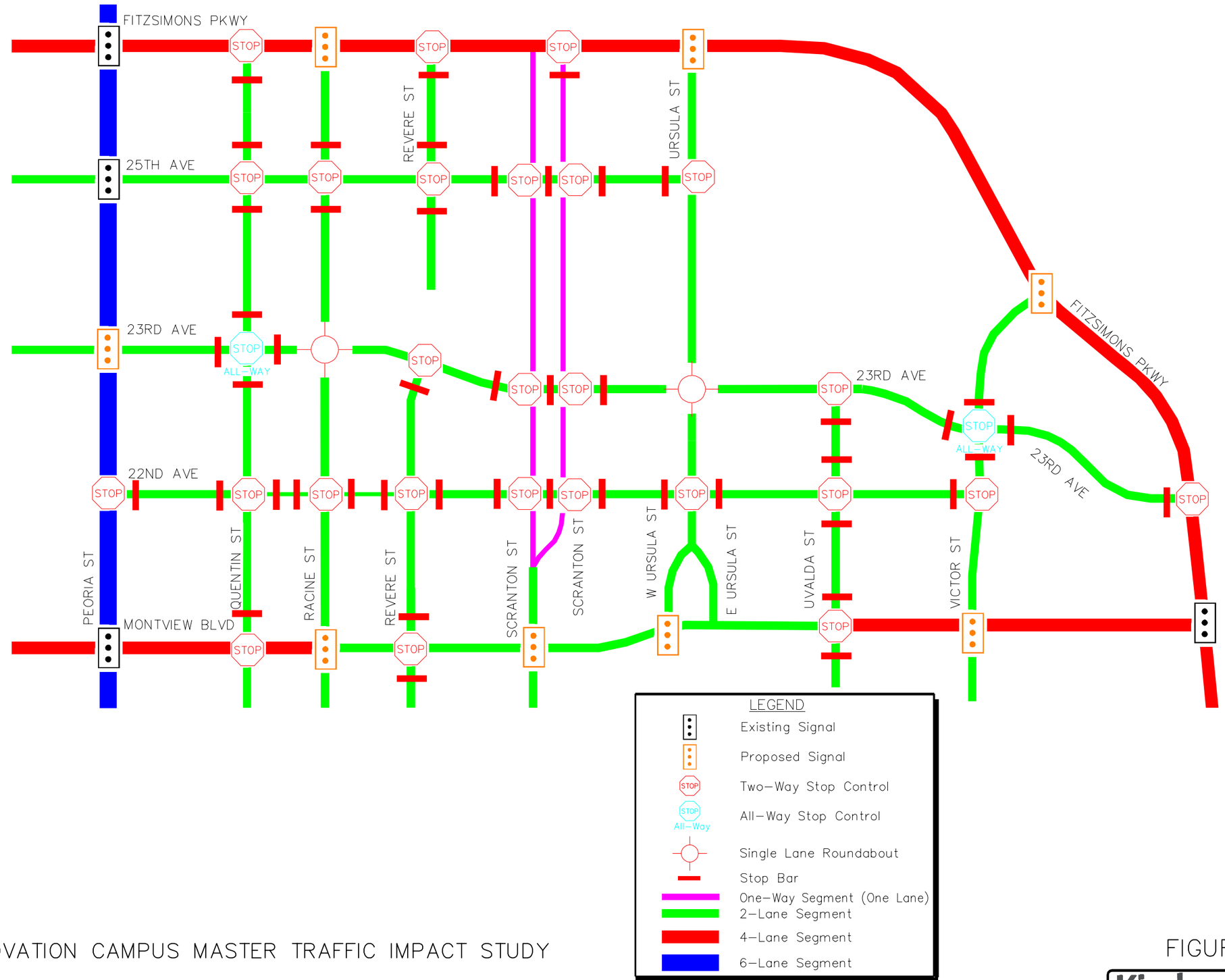
LEGEND

- Existing Traffic Signal
- Proposed Traffic Signal
- Existing Roundabout Control
- Two Way Stop Control
- All-Way Stop Control
- Roundabout Control
- Signalized Intersection
- Roundabout Control
- Stop Controlled Approach
- Stop Bar
- Improvement
- Future Roadway
- Existing Roadway
- Existing Roadway to be Removed

FITZSIMONS INNOVATION CAMPUS MASTER TRAFFIC IMPACT STUDY
2040 RECOMMENDED GEOMETRY AND CONTROL (SOUTH)

FIGURE 14

Kimley»Horn



FITZSIMONS INNOVATION CAMPUS MASTER TRAFFIC IMPACT STUDY
ROADWAY PLAN

FIGURE 15

Kimley»Horn

APPENDICES

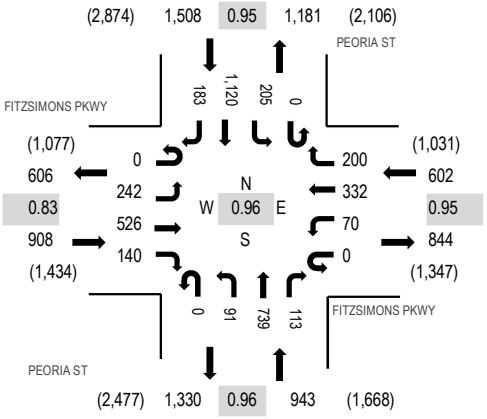
APPENDIX A

Intersection Count Sheets

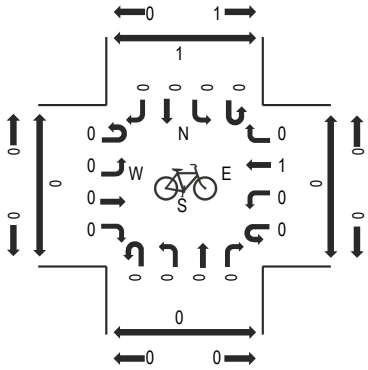
ALL TRAFFIC DATA SERVICES
(303) 216-2439
www.alltrafficdata.net

Location: 1 PEORIA ST & FITZSIMONS PKWY AM
Date: Tuesday, September 27, 2022
Peak Hour: 07:15 AM - 08:15 AM
Peak 15-Minutes: 07:45 AM - 08:00 AM

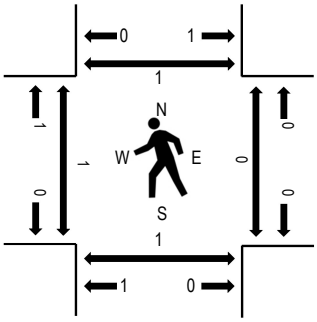
Peak Hour - Motorized Vehicles



Peak Hour - Bicycles



Peak Hour - Pedestrians



Note: Total study counts contained in parentheses.

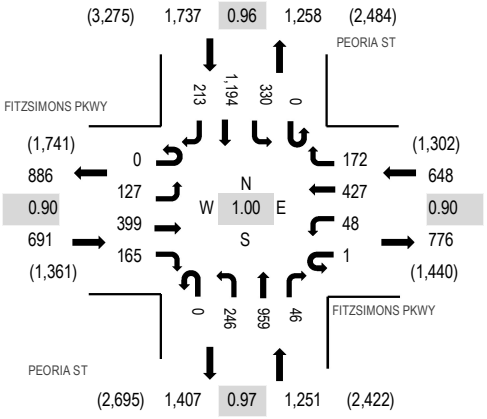
Traffic Counts - Motorized Vehicles

Interval Start Time	FITZSIMONS PKWY Eastbound				FITZSIMONS PKWY Westbound				PEORIA ST Northbound				PEORIA ST Southbound				Total	Rolling Hour	Pedestrian Crossings			
	U-Turn	Left	Thru	Right	U-Turn	Left	Thru	Right	U-Turn	Left	Thru	Right	U-Turn	Left	Thru	Right			West	East	South	North
7:00 AM	0	40	75	19	0	4	66	50	0	29	168	7	0	30	213	30	731	3,707	0	0	0	2
7:15 AM	0	43	105	33	0	16	89	51	0	28	186	26	0	51	244	60	932	3,961	1	0	0	0
7:30 AM	0	73	141	42	0	20	87	51	0	20	172	51	0	37	280	43	1,017	3,848	0	0	0	0
7:45 AM	0	77	154	41	0	18	85	54	0	15	177	22	0	58	281	45	1,027	3,642	0	0	0	1
8:00 AM	0	49	126	24	0	16	71	44	0	28	204	14	0	59	315	35	985	3,300	0	0	1	0
8:15 AM	0	51	92	23	0	9	72	28	0	13	141	10	0	52	296	32	819		0	0	0	0
8:30 AM	0	39	66	17	0	8	62	40	0	17	177	11	0	57	274	43	811		0	0	0	0
8:45 AM	0	34	57	13	0	7	57	26	0	17	131	4	0	42	264	33	685		0	0	0	0
Count Total	0	406	816	212	0	98	589	344	0	167	1,356	145	0	386	2,167	321	7,007		1	0	1	3
Peak Hour	0	242	526	140	0	70	332	200	0	91	739	113	0	205	1,120	183	3,961		1	0	1	1

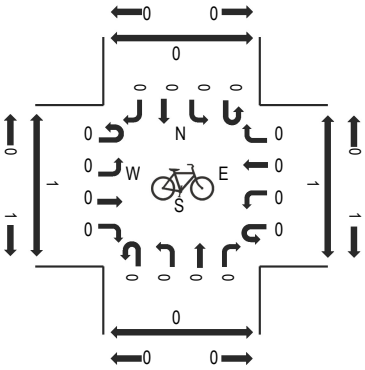
ALL TRAFFIC DATA SERVICES
(303) 216-2439
www.alltrafficdata.net

Location: 1 PEORIA ST & FITZSIMONS PKWY PM
Date: Tuesday, September 27, 2022
Peak Hour: 04:30 PM - 05:30 PM
Peak 15-Minutes: 04:30 PM - 04:45 PM

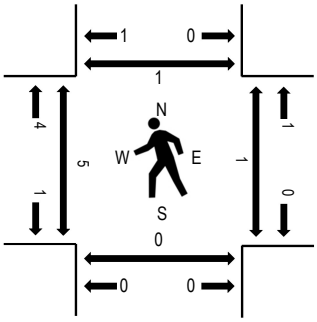
Peak Hour - Motorized Vehicles



Peak Hour - Bicycles



Peak Hour - Pedestrians



Note: Total study counts contained in parentheses.

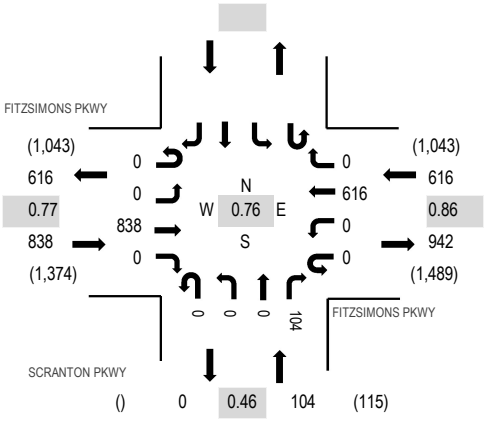
Traffic Counts - Motorized Vehicles

Interval Start Time	FITZSIMONS PKWY Eastbound				FITZSIMONS PKWY Westbound				PEORIA ST Northbound				PEORIA ST Southbound				Total	Rolling Hour	Pedestrian Crossings			
	U-Turn	Left	Thru	Right	U-Turn	Left	Thru	Right	U-Turn	Left	Thru	Right	U-Turn	Left	Thru	Right			West	East	South	North
4:00 PM	0	27	92	34	0	11	115	44	0	60	235	16	0	61	283	44	1,022	4,214	4	1	0	1
4:15 PM	0	49	93	39	0	14	118	36	0	57	241	14	0	58	244	62	1,025	4,273	0	0	0	0
4:30 PM	0	35	85	31	1	12	102	42	0	60	255	15	0	82	312	52	1,084	4,327	0	1	0	0
4:45 PM	0	31	107	40	0	10	123	37	0	56	260	10	0	76	288	45	1,083	4,285	0	0	0	1
5:00 PM	0	30	119	46	0	12	122	55	0	59	200	10	0	77	285	66	1,081	4,146	0	0	0	0
5:15 PM	0	31	88	48	0	14	80	38	0	71	244	11	0	95	309	50	1,079		5	0	0	0
5:30 PM	0	32	96	37	0	10	112	42	0	54	245	4	0	73	291	46	1,042		0	0	0	0
5:45 PM	0	41	94	36	0	18	100	34	0	34	200	11	0	52	271	53	944		0	0	0	0
Count Total	0	276	774	311	1	101	872	328	0	451	1,880	91	0	574	2,283	418	8,360		9	2	0	2
Peak Hour	0	127	399	165	1	48	427	172	0	246	959	46	0	330	1,194	213	4,327		5	1	0	1

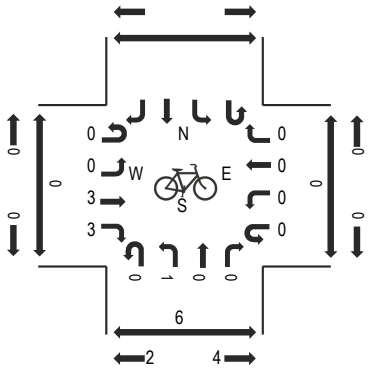
ALL TRAFFIC DATA SERVICES
(303) 216-2439
www.alltrafficdata.net

Location: 2 SCRANTON PKWY & FITZSIMONS PKWY AM
Date: Tuesday, September 27, 2022
Peak Hour: 07:15 AM - 08:15 AM
Peak 15-Minutes: 07:30 AM - 07:45 AM

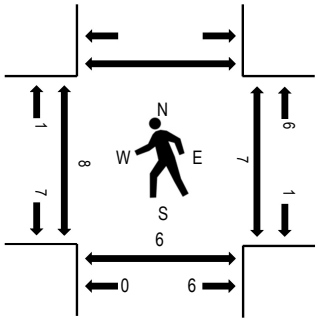
Peak Hour - Motorized Vehicles



Peak Hour - Bicycles



Peak Hour - Pedestrians



Note: Total study counts contained in parentheses.

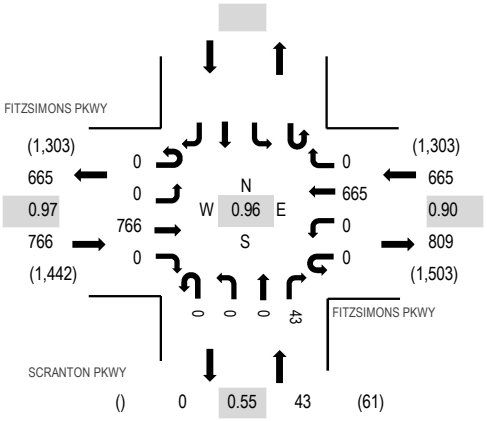
Traffic Counts - Motorized Vehicles

Interval Start Time	FITZSIMONS PKWY Eastbound				FITZSIMONS PKWY Westbound				SCRANTON PKWY Northbound				Southbound				Total	Rolling Hour	Pedestrian Crossings		
	U-Turn	Left	Thru	Right	U-Turn	Left	Thru	Right	U-Turn	Left	Thru	Right	U-Turn	Left	Thru	Right			West	East	South	North
7:00 AM	0	0	107	0	0	0	125	0	0	0	0	2					234	1,467	0	0	0	
7:15 AM	0	0	199	0	0	0	156	0	0	0	0	19					374	1,558	7	6	5	
7:30 AM	0	0	273	0	0	0	182	0	0	0	0	56					511	1,471	0	0	1	
7:45 AM	0	0	166	0	0	0	160	0	0	0	0	22					348	1,223	1	1	0	
8:00 AM	0	0	200	0	0	0	118	0	0	0	0	7					325	1,065	0	0	0	
8:15 AM	0	0	166	0	0	0	115	0	0	0	0	6					287		0	0	0	
8:30 AM	0	0	157	0	0	0	104	0	0	0	0	2					263		0	0	0	
8:45 AM	0	0	106	0	0	0	83	0	0	0	0	1					190		0	0	0	
Count Total	0	0	1,374	0	0	0	1,043	0	0	0	0	115					2,532		8	7	6	
Peak Hour	0	0	838	0	0	0	616	0	0	0	0	104					1,558		8	7	6	

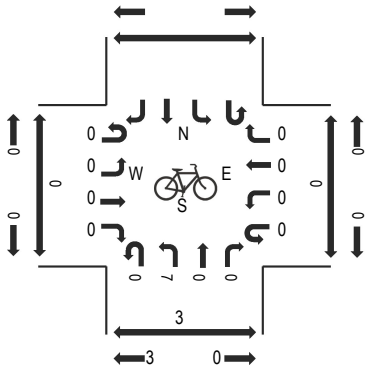
ALL TRAFFIC DATA SERVICES
(303) 216-2439
www.alltrafficdata.net

Location: 2 SCRANTON PKWY & FITZSIMONS PKWY PM
Date: Tuesday, September 27, 2022
Peak Hour: 04:30 PM - 05:30 PM
Peak 15-Minutes: 05:00 PM - 05:15 PM

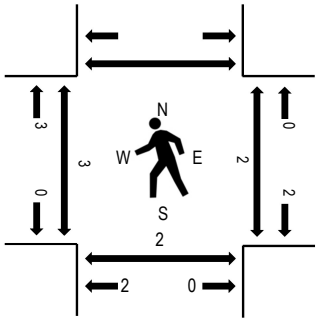
Peak Hour - Motorized Vehicles



Peak Hour - Bicycles



Peak Hour - Pedestrians



Note: Total study counts contained in parentheses.

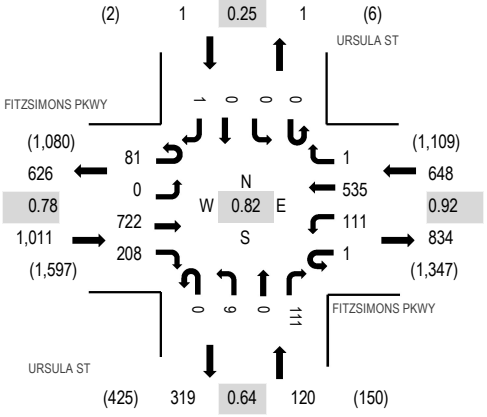
Traffic Counts - Motorized Vehicles

Interval Start Time	FITZSIMONS PKWY Eastbound				FITZSIMONS PKWY Westbound				SCRANTON PKWY Northbound				Southbound				Total	Rolling Hour	Pedestrian Crossings		
	U-Turn	Left	Thru	Right	U-Turn	Left	Thru	Right	U-Turn	Left	Thru	Right	U-Turn	Left	Thru	Right			West	East	South	North
4:00 PM	0	0	175	0	0	0	179	0	0	0	0	8					362	1,438	1	1	8	
4:15 PM	0	0	172	0	0	0	151	0	0	0	0	8					331	1,461	1	1	0	
4:30 PM	0	0	187	0	0	0	160	0	0	0	0	21					368	1,474	1	1	0	
4:45 PM	0	0	197	0	0	0	175	0	0	0	0	5					377	1,440	2	1	1	
5:00 PM	0	0	185	0	0	0	188	0	0	0	0	12					385	1,368	0	0	0	
5:15 PM	0	0	197	0	0	0	142	0	0	0	0	5					344		0	0	1	
5:30 PM	0	0	170	0	0	0	163	0	0	0	0	1					334		0	1	1	
5:45 PM	0	0	159	0	0	0	145	0	0	0	0	1					305		1	1	0	
Count Total	0	0	1,442	0	0	0	1,303	0	0	0	0	61					2,806		6	6	11	
Peak Hour	0	0	766	0	0	0	665	0	0	0	0	43					1,474		3	2	2	

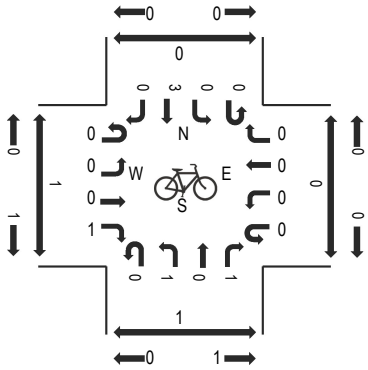
ALL TRAFFIC DATA SERVICES
(303) 216-2439
www.alltrafficdata.net

Location: 3 URSULA ST & FITZSIMONS PKWY AM
Date: Tuesday, September 27, 2022
Peak Hour: 07:15 AM - 08:15 AM
Peak 15-Minutes: 07:30 AM - 07:45 AM

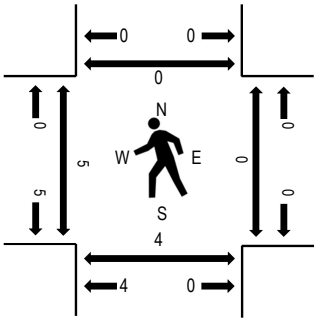
Peak Hour - Motorized Vehicles



Peak Hour - Bicycles



Peak Hour - Pedestrians



Note: Total study counts contained in parentheses.

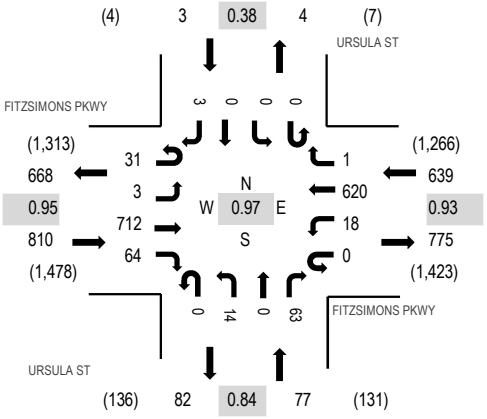
Traffic Counts - Motorized Vehicles

Interval Start Time	FITZSIMONS PKWY Eastbound				FITZSIMONS PKWY Westbound				URSULA ST Northbound				URSULA ST Southbound				Total	Rolling Hour	Pedestrian Crossings			
	U-Turn	Left	Thru	Right	U-Turn	Left	Thru	Right	U-Turn	Left	Thru	Right	U-Turn	Left	Thru	Right			West	East	South	North
7:00 AM	1	1	86	28	0	21	124	1	0	3	0	3	0	0	0	0	268	1,720	1	0	0	1
7:15 AM	11	0	137	49	0	38	143	0	0	0	0	18	0	0	0	1	397	1,780	1	0	0	0
7:30 AM	44	0	196	86	1	32	135	0	0	4	0	43	0	0	0	0	541	1,725	4	0	0	0
7:45 AM	21	0	228	53	0	33	139	0	0	2	0	38	0	0	0	0	514	1,438	0	0	4	0
8:00 AM	5	0	161	20	0	8	118	1	0	3	0	12	0	0	0	0	328	1,138	0	0	0	0
8:15 AM	7	1	170	21	0	6	121	1	0	5	0	9	0	0	0	1	342		2	0	0	0
8:30 AM	3	1	127	12	0	5	101	0	0	3	0	2	0	0	0	0	254		0	0	0	0
8:45 AM	1	0	114	13	0	0	81	0	0	3	0	2	0	0	0	0	214		1	0	0	2
Count Total	93	3	1,219	282	1	143	962	3	0	23	0	127	0	0	0	2	2,858		9	0	4	3
Peak Hour	81	0	722	208	1	111	535	1	0	9	0	111	0	0	0	1	1,780		5	0	4	0

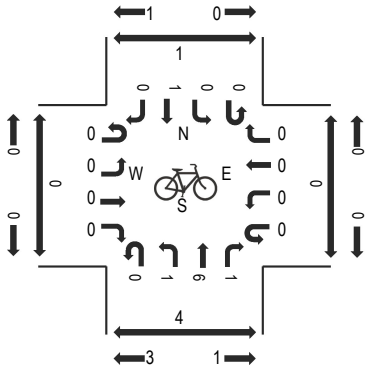
ALL TRAFFIC DATA SERVICES
(303) 216-2439
www.alltrafficdata.net

Location: 3 URSULA ST & FITZSIMONS PKWY PM
Date: Tuesday, September 27, 2022
Peak Hour: 04:30 PM - 05:30 PM
Peak 15-Minutes: 05:00 PM - 05:15 PM

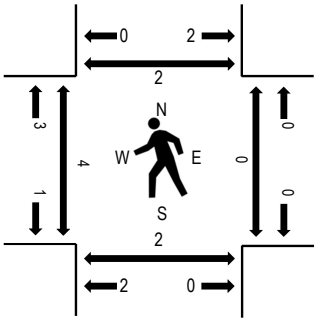
Peak Hour - Motorized Vehicles



Peak Hour - Bicycles



Peak Hour - Pedestrians



Note: Total study counts contained in parentheses.

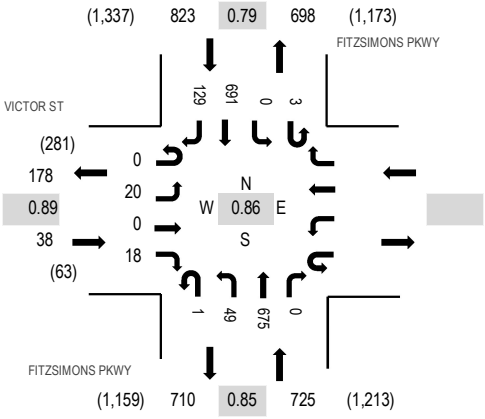
Traffic Counts - Motorized Vehicles

Interval Start Time	FITZSIMONS PKWY Eastbound				FITZSIMONS PKWY Westbound				URSULA ST Northbound				URSULA ST Southbound				Total	Rolling Hour	Pedestrian Crossings			
	U-Turn	Left	Thru	Right	U-Turn	Left	Thru	Right	U-Turn	Left	Thru	Right	U-Turn	Left	Thru	Right			West	East	South	North
4:00 PM	6	0	155	10	0	8	166	0	0	6	0	18	0	0	0	0	369	1,478	3	0	0	2
4:15 PM	6	0	151	16	0	6	149	1	0	4	1	10	0	0	0	1	345	1,503	1	1	0	0
4:30 PM	15	1	180	17	0	6	142	0	0	2	0	24	0	0	0	0	387	1,529	1	0	0	0
4:45 PM	4	1	160	23	0	6	160	1	0	6	0	16	0	0	0	0	377	1,480	0	0	0	0
5:00 PM	9	0	173	14	0	5	171	0	0	5	0	15	0	0	0	2	394	1,401	2	0	1	2
5:15 PM	3	1	199	10	0	1	147	0	0	1	0	8	0	0	0	1	371		1	0	1	0
5:30 PM	2	0	159	6	0	0	161	1	0	5	0	4	0	0	0	0	338		0	0	2	2
5:45 PM	1	0	149	7	0	1	134	0	0	4	0	2	0	0	0	0	298		1	0	1	1
Count Total	46	3	1,326	103	0	33	1,230	3	0	33	1	97	0	0	0	4	2,879		9	1	5	7
Peak Hour	31	3	712	64	0	18	620	1	0	14	0	63	0	0	0	3	1,529		4	0	2	2

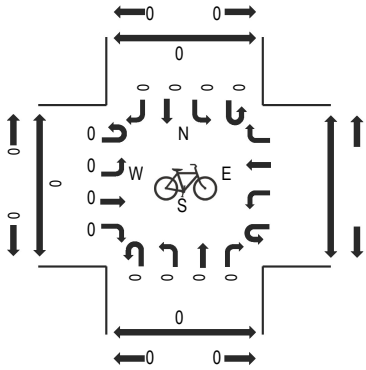
ALL TRAFFIC DATA SERVICES
(303) 216-2439
www.alltrafficdata.net

Location: 4 FITZSIMONS PKWY & VICTOR ST AM
Date: Tuesday, September 27, 2022
Peak Hour: 07:15 AM - 08:15 AM
Peak 15-Minutes: 07:30 AM - 07:45 AM

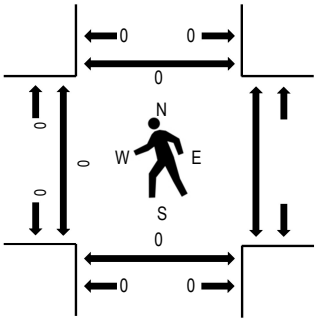
Peak Hour - Motorized Vehicles



Peak Hour - Bicycles



Peak Hour - Pedestrians



Note: Total study counts contained in parentheses.

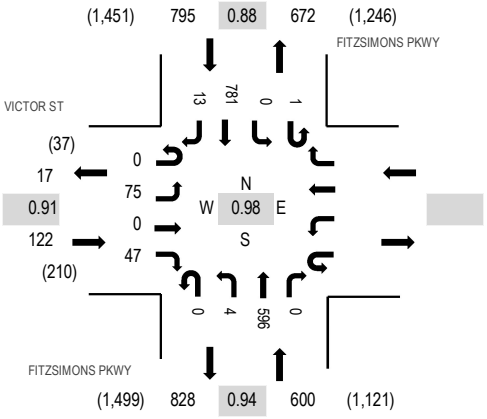
Traffic Counts - Motorized Vehicles

Interval Start Time	VICTOR ST Eastbound U-Turn	Eastbound Left	Eastbound Thru	Eastbound Right	Westbound U-Turn	Westbound Left	Westbound Thru	Westbound Right	FITZSIMONS PKWY Northbound U-Turn	Northbound Left	Northbound Thru	Northbound Right	FITZSIMONS PKWY Southbound U-Turn	Southbound Left	Southbound Thru	Southbound Right	Total	Rolling Hour	Pedestrian Crossings West	East	South	North
7:00 AM	0	0	0	0					0	3	144	0	0	0	88	10	245	1,522	1		0	0
7:15 AM	0	4	0	5					0	11	185	0	0	0	143	19	367	1,586	0		0	0
7:30 AM	0	6	0	5					0	19	198	0	0	0	195	36	459	1,518	0		0	0
7:45 AM	0	6	0	4					1	13	167	0	2	0	210	48	451	1,318	0		0	0
8:00 AM	0	4	0	4					0	6	125	0	1	0	143	26	309	1,091	0		0	0
8:15 AM	0	7	0	3					0	9	118	0	0	0	134	28	299		0		0	0
8:30 AM	0	4	0	2					0	10	106	0	0	0	116	21	259		0		0	0
8:45 AM	0	6	0	3					0	8	90	0	0	0	103	14	224		0		0	0
Count Total	0	37	0	26					1	79	1,133	0	3	0	1,132	202	2,613		1		0	0
Peak Hour	0	20	0	18					1	49	675	0	3	0	691	129	1,586		0		0	0

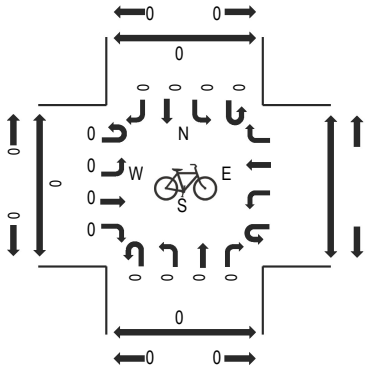
ALL TRAFFIC DATA SERVICES
(303) 216-2439
www.alltrafficdata.net

Location: 4 FITZSIMONS PKWY & VICTOR ST PM
Date: Tuesday, September 27, 2022
Peak Hour: 04:00 PM - 05:00 PM
Peak 15-Minutes: 04:00 PM - 04:15 PM

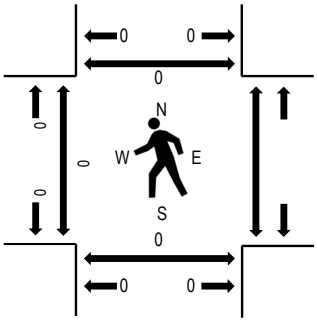
Peak Hour - Motorized Vehicles



Peak Hour - Bicycles



Peak Hour - Pedestrians



Note: Total study counts contained in parentheses.

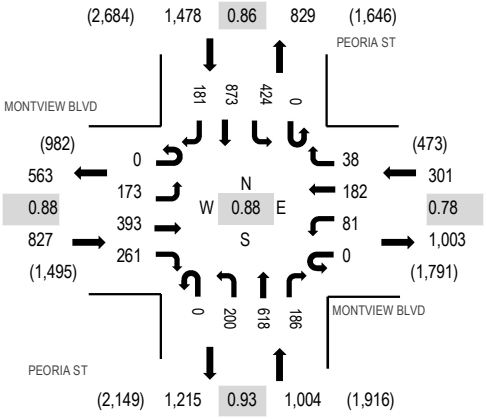
Traffic Counts - Motorized Vehicles

Interval Start Time	VICTOR ST Eastbound U-Turn	Eastbound Left	Eastbound Thru	Eastbound Right	Westbound U-Turn	Westbound Left	Westbound Thru	Westbound Right	FITZSIMONS PKWY Northbound U-Turn	Northbound Left	Northbound Thru	Northbound Right	FITZSIMONS PKWY Southbound U-Turn	Southbound Left	Southbound Thru	Southbound Right	Total	Rolling Hour	Pedestrian Crossings West	East	South	North
4:00 PM	0	14	0	12					0	2	133	0	0	0	224	2	387	1,517	0		0	0
4:15 PM	0	19	0	12					0	0	147	0	1	0	199	6	384	1,471	0		0	0
4:30 PM	0	18	0	13					0	1	157	0	0	0	179	2	370	1,441	0		0	0
4:45 PM	0	24	0	10					0	1	159	0	0	0	179	3	376	1,391	0		0	0
5:00 PM	0	16	0	10					1	2	124	0	0	0	184	4	341	1,265	0		0	0
5:15 PM	0	25	0	8					0	4	142	0	0	0	172	3	354		0		0	0
5:30 PM	0	7	0	3					0	1	144	0	0	0	163	2	320		0		0	0
5:45 PM	0	15	0	4					0	2	101	0	0	0	126	2	250		0		0	0
Count Total	0	138	0	72					1	13	1,107	0	1	0	1,426	24	2,782		0		0	0
Peak Hour	0	75	0	47					0	4	596	0	1	0	781	13	1,517		0		0	0

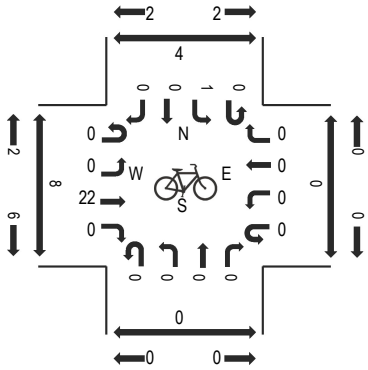
ALL TRAFFIC DATA SERVICES
(303) 216-2439
www.alltrafficdata.net

Location: 5 PEORIA ST & MONTVIEW BLVD AM
Date: Tuesday, September 27, 2022
Peak Hour: 07:30 AM - 08:30 AM
Peak 15-Minutes: 07:45 AM - 08:00 AM

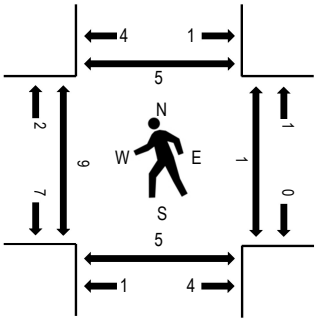
Peak Hour - Motorized Vehicles



Peak Hour - Bicycles



Peak Hour - Pedestrians



Note: Total study counts contained in parentheses.

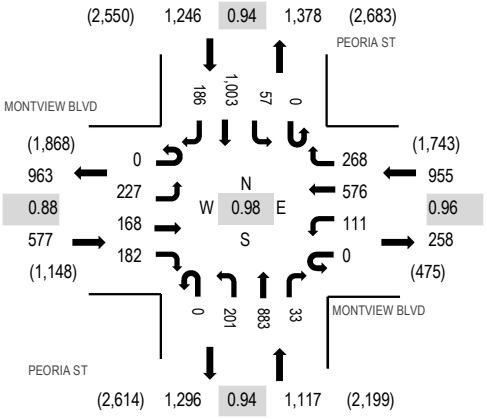
Traffic Counts - Motorized Vehicles

Interval Start Time	MONTVIEW BLVD Eastbound				MONTVIEW BLVD Westbound				PEORIA ST Northbound				PEORIA ST Southbound				Total	Rolling Hour	Pedestrian Crossings			
	U-Turn	Left	Thru	Right	U-Turn	Left	Thru	Right	U-Turn	Left	Thru	Right	U-Turn	Left	Thru	Right			West	East	South	North
7:00 AM	0	33	59	57	0	5	30	11	0	41	192	24	0	70	160	39	721	3,428	1	1	2	2
7:15 AM	0	49	78	56	0	9	32	12	0	47	166	20	0	80	175	40	764	3,566	3	0	2	1
7:30 AM	0	62	99	74	0	21	62	14	0	40	162	47	0	102	201	33	917	3,610	2	0	1	0
7:45 AM	0	39	112	79	0	38	37	9	0	45	173	62	0	120	265	47	1,026	3,479	5	0	3	3
8:00 AM	0	41	87	48	0	8	37	10	0	51	181	50	0	97	201	48	859	3,140	1	1	0	1
8:15 AM	0	31	95	60	0	14	46	5	0	64	102	27	0	105	206	53	808		1	0	1	1
8:30 AM	0	43	106	63	0	4	29	7	0	24	136	45	0	99	191	39	786		1	0	4	1
8:45 AM	0	22	68	34	0	5	19	9	0	38	137	42	0	97	175	41	687		0	0	0	1
Count Total	0	320	704	471	0	104	292	77	0	350	1,249	317	0	770	1,574	340	6,568		14	2	13	10
Peak Hour	0	173	393	261	0	81	182	38	0	200	618	186	0	424	873	181	3,610		9	1	5	5

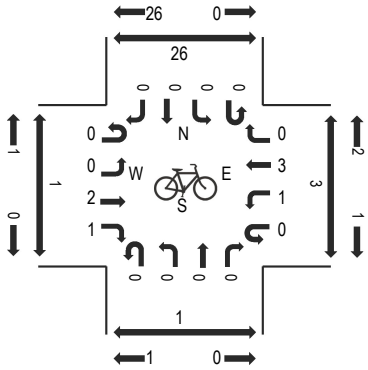
ALL TRAFFIC DATA SERVICES
(303) 216-2439
www.alltrafficdata.net

Location: 5 PEORIA ST & MONTVIEW BLVD PM
Date: Tuesday, September 27, 2022
Peak Hour: 04:30 PM - 05:30 PM
Peak 15-Minutes: 05:00 PM - 05:15 PM

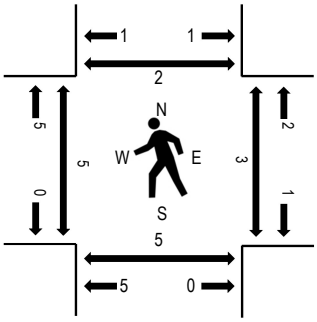
Peak Hour - Motorized Vehicles



Peak Hour - Bicycles



Peak Hour - Pedestrians



Note: Total study counts contained in parentheses.

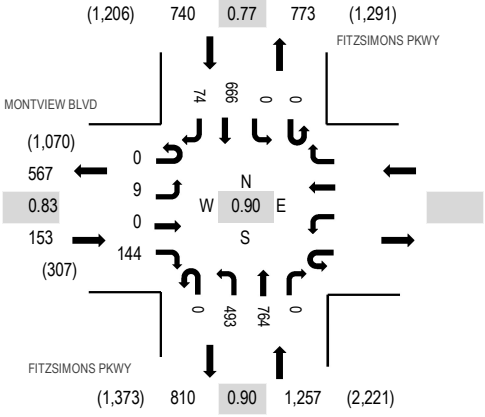
Traffic Counts - Motorized Vehicles

Interval Start Time	MONTVIEW BLVD Eastbound				MONTVIEW BLVD Westbound				PEORIA ST Northbound				PEORIA ST Southbound				Total	Rolling Hour	Pedestrian Crossings			
	U-Turn	Left	Thru	Right	U-Turn	Left	Thru	Right	U-Turn	Left	Thru	Right	U-Turn	Left	Thru	Right			West	East	South	North
4:00 PM	0	58	28	44	0	25	118	70	0	49	215	3	0	8	271	59	948	3,831	5	1	4	0
4:15 PM	0	46	36	56	0	23	120	64	0	57	235	15	0	11	237	56	956	3,872	2	1	2	1
4:30 PM	0	55	41	44	0	40	134	68	0	48	242	9	0	16	237	54	988	3,895	1	1	2	0
4:45 PM	0	55	35	49	0	28	156	59	0	42	195	10	0	15	241	54	939	3,873	0	2	1	1
5:00 PM	0	46	40	40	0	21	139	62	0	56	243	5	0	15	286	36	989	3,809	4	0	2	1
5:15 PM	0	71	52	49	0	22	147	79	0	55	203	9	0	11	239	42	979		0	0	0	0
5:30 PM	0	75	30	61	0	29	136	59	0	47	200	9	0	13	243	64	966		1	0	2	1
5:45 PM	0	52	33	52	0	15	88	41	0	51	190	11	0	20	262	60	875		1	0	1	0
Count Total	0	458	295	395	0	203	1,038	502	0	405	1,723	71	0	109	2,016	425	7,640		14	5	14	4
Peak Hour	0	227	168	182	0	111	576	268	0	201	883	33	0	57	1,003	186	3,895		5	3	5	2

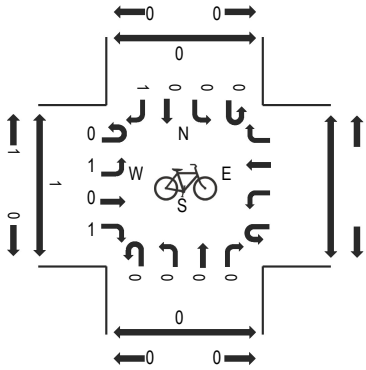
ALL TRAFFIC DATA SERVICES
(303) 216-2439
www.alltrafficdata.net

Location: 6 FITZSIMONS PKWY & MONTVIEW BLVD AM
Date: Tuesday, September 27, 2022
Peak Hour: 07:15 AM - 08:15 AM
Peak 15-Minutes: 07:30 AM - 07:45 AM

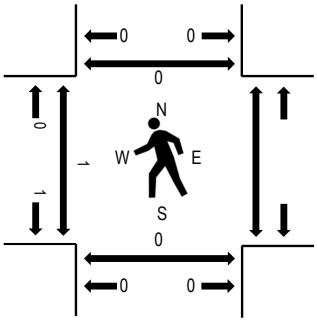
Peak Hour - Motorized Vehicles



Peak Hour - Bicycles



Peak Hour - Pedestrians



Note: Total study counts contained in parentheses.

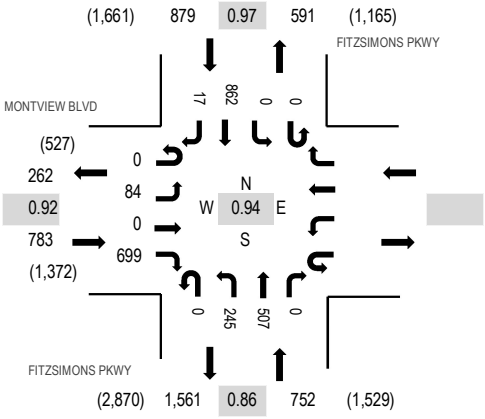
Traffic Counts - Motorized Vehicles

Interval Start Time	MONTVIEW BLVD Eastbound U-Turn	Eastbound Left	Eastbound Thru	Eastbound Right	Westbound U-Turn	Westbound Left	Westbound Thru	Westbound Right	FITZSIMONS PKWY Northbound U-Turn	Northbound Left	Northbound Thru	Northbound Right	FITZSIMONS PKWY Southbound U-Turn	Southbound Left	Southbound Thru	Southbound Right	Total	Rolling Hour	Pedestrian Crossings West	East	South	North
7:00 AM	0	1	0	38					0	98	151	0	0	0	78	12	378	2,088	1		0	0
7:15 AM	0	2	0	47					0	121	216	0	0	0	131	12	529	2,150	0		0	0
7:30 AM	0	4	0	35					0	119	229	0	0	0	195	16	598	2,050	1		0	0
7:45 AM	0	2	0	33					0	117	189	0	0	0	213	29	583	1,859	0		0	0
8:00 AM	0	1	0	29					0	136	130	0	0	0	127	17	440	1,646	0		0	0
8:15 AM	0	2	0	40					0	107	130	0	1	0	125	24	429		1		0	0
8:30 AM	0	3	0	36					1	127	122	0	0	0	110	8	407		3		0	0
8:45 AM	0	0	0	34					0	120	108	0	0	0	101	7	370		2		0	0
Count Total	0	15	0	292					1	945	1,275	0	1	0	1,080	125	3,734		8		0	0
Peak Hour	0	9	0	144					0	493	764	0	0	0	666	74	2,150		1		0	0

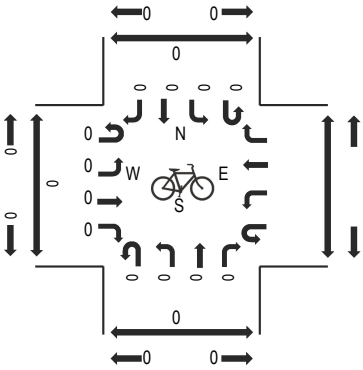
ALL TRAFFIC DATA SERVICES
(303) 216-2439
www.alltrafficdata.net

Location: 6 FITZSIMONS PKWY & MONTVIEW BLVD PM
Date: Tuesday, September 27, 2022
Peak Hour: 04:30 PM - 05:30 PM
Peak 15-Minutes: 04:30 PM - 04:45 PM

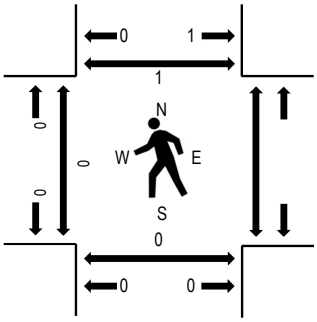
Peak Hour - Motorized Vehicles



Peak Hour - Bicycles



Peak Hour - Pedestrians



Note: Total study counts contained in parentheses.

Traffic Counts - Motorized Vehicles

Interval Start Time	MONTVIEW BLVD Eastbound U-Turn	Eastbound Left	Eastbound Thru	Eastbound Right	Westbound U-Turn	Westbound Left	Westbound Thru	Westbound Right	FITZSIMONS PKWY Northbound U-Turn	Northbound Left	Northbound Thru	Northbound Right	FITZSIMONS PKWY Southbound U-Turn	Southbound Left	Southbound Thru	Southbound Right	Total	Rolling Hour	Pedestrian Crossings West	East	South	North
4:00 PM	0	14	0	155					1	65	161	0	0	0	193	1	590	2,369	0		0	0
4:15 PM	0	16	0	154					0	57	112	0	0	0	211	2	552	2,406	0		0	0
4:30 PM	0	26	0	187					0	78	133	0	0	0	217	3	644	2,414	0		0	0
4:45 PM	0	26	0	169					0	47	124	0	0	0	211	6	583	2,320	0		0	0
5:00 PM	0	19	0	177					0	62	142	0	0	0	225	2	627	2,193	0		0	0
5:15 PM	0	13	0	166					0	58	108	0	0	0	209	6	560		0		0	1
5:30 PM	0	14	0	128					0	72	129	0	0	0	201	6	550		0		0	0
5:45 PM	0	6	0	102					0	59	121	0	1	0	164	3	456		0		0	0
Count Total	0	134	0	1,238					1	498	1,030	0	1	0	1,631	29	4,562		0		0	1
Peak Hour	0	84	0	699					0	245	507	0	0	0	862	17	2,414		0		0	1

Ridgeview Data Collection

Aurora, CO
Fitzsimons Innovation Campus
AM Peak
Fitzsimons Pkwy and Peoria St

File Name : Fitzsimons and Peoria AM
Site Code : IPO 486
Start Date : 1/28/2020
Page No : 1

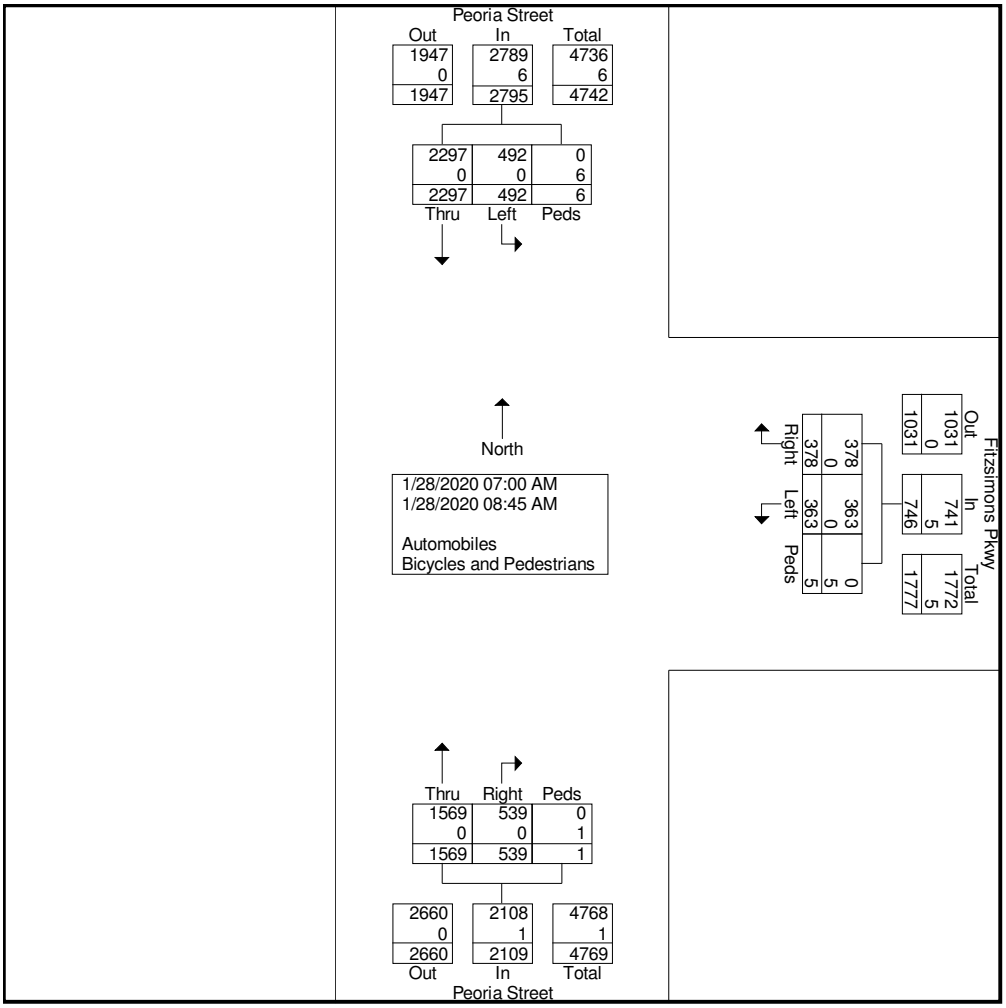
Groups Printed- Automobiles - Bicycles and Pedestrians

	Fitzsimons Pkwy Westbound				Peoria Street Northbound				Peoria Street Southbound				
Start Time	Left	Right	Peds	App. Total	Thru	Right	Peds	App. Total	Left	Thru	Peds	App. Total	Int. Total
07:00 AM	41	50	0	91	167	70	0	237	56	271	0	327	655
07:15 AM	46	45	0	91	222	73	0	295	73	290	0	363	749
07:30 AM	63	55	0	118	204	83	0	287	88	355	1	444	849
07:45 AM	65	74	1	140	231	86	0	317	80	354	0	434	891
Total	215	224	1	440	824	312	0	1136	297	1270	1	1568	3144
08:00 AM	50	49	1	100	215	83	0	298	67	296	1	364	762
08:15 AM	32	33	0	65	197	65	0	262	56	261	2	319	646
08:30 AM	44	46	3	93	175	49	1	225	30	237	2	269	587
08:45 AM	22	26	0	48	158	30	0	188	42	233	0	275	511
Total	148	154	4	306	745	227	1	973	195	1027	5	1227	2506
Grand Total	363	378	5	746	1569	539	1	2109	492	2297	6	2795	5650
Apprch %	48.7	50.7	0.7		74.4	25.6	0		17.6	82.2	0.2		
Total %	6.4	6.7	0.1	13.2	27.8	9.5	0	37.3	8.7	40.7	0.1	49.5	
Automobiles	363	378	0	741	1569	539	0	2108	492	2297	0	2789	5638
% Automobiles	100	100	0	99.3	100	100	0	100	100	100	0	99.8	99.8
Bicycles and Pedestrians	0	0	5	5	0	0	1	1	0	0	6	6	12
% Bicycles and Pedestrians	0	0	100	0.7	0	0	100	0	0	0	100	0.2	0.2

Ridgeview Data Collection

Aurora, CO
Fitzsimons Innovation Campus
AM Peak
Fitzsimons Pkwy and Peoria St

File Name : Fitzsimons and Peoria AM
Site Code : IPO 486
Start Date : 1/28/2020
Page No : 2

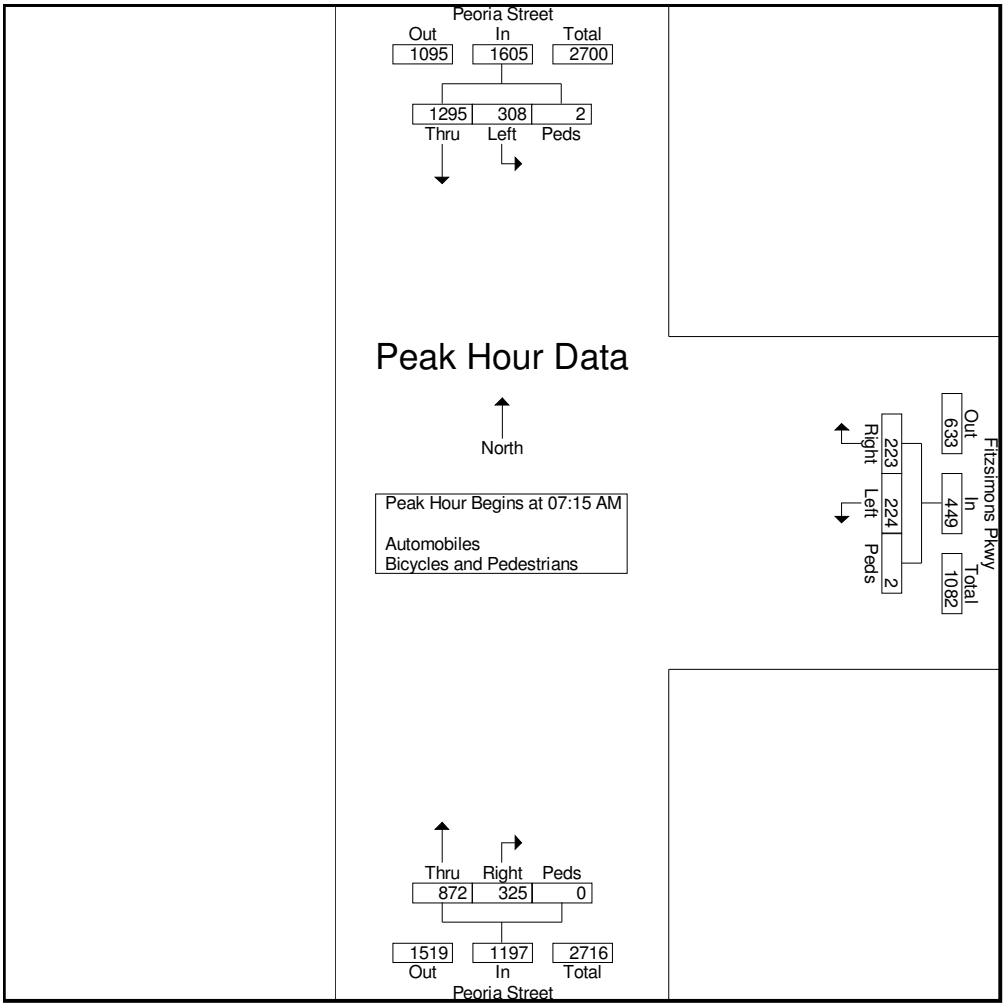


Ridgeview Data Collection

Aurora, CO
Fitzsimons Innovation Campus
AM Peak
Fitzsimons Pkwy and Peoria St

File Name : Fitzsimons and Peoria AM
Site Code : IPO 486
Start Date : 1/28/2020
Page No : 3

	Fitzsimons Pkwy Westbound				Peoria Street Northbound				Peoria Street Southbound				
Start Time	Left	Right	Peds	App. Total	Thru	Right	Peds	App. Total	Left	Thru	Peds	App. Total	Int. Total
Peak Hour Analysis From 07:00 AM to 08:45 AM - Peak 1 of 1													
Peak Hour for Entire Intersection Begins at 07:15 AM													
07:15 AM	46	45	0	91	222	73	0	295	73	290	0	363	749
07:30 AM	63	55	0	118	204	83	0	287	**88**	**355**	**1**	**444**	849
07:45 AM	**65**	**74**	**1**	**140**	**231**	**86**	0	**317**	80	354	0	434	**891**
08:00 AM	50	49	1	100	215	83	0	298	67	296	1	364	762
Total Volume	224	223	2	449	872	325	0	1197	308	1295	2	1605	3251
% App. Total	49.9	49.7	0.4		72.8	27.2	0		19.2	80.7	0.1		
PHF	.862	.753	.500	.802	.944	.945	.000	.944	.875	.912	.500	.904	.912



Ridgeview Data Collection

Aurora, CO
Fitzsimons Innovation Campus
PM Peak
Fitzsimons Pkwy and Peoria St

File Name : Fitzsimons and Peoria PM
Site Code : IPO 486
Start Date : 1/28/2020
Page No : 1

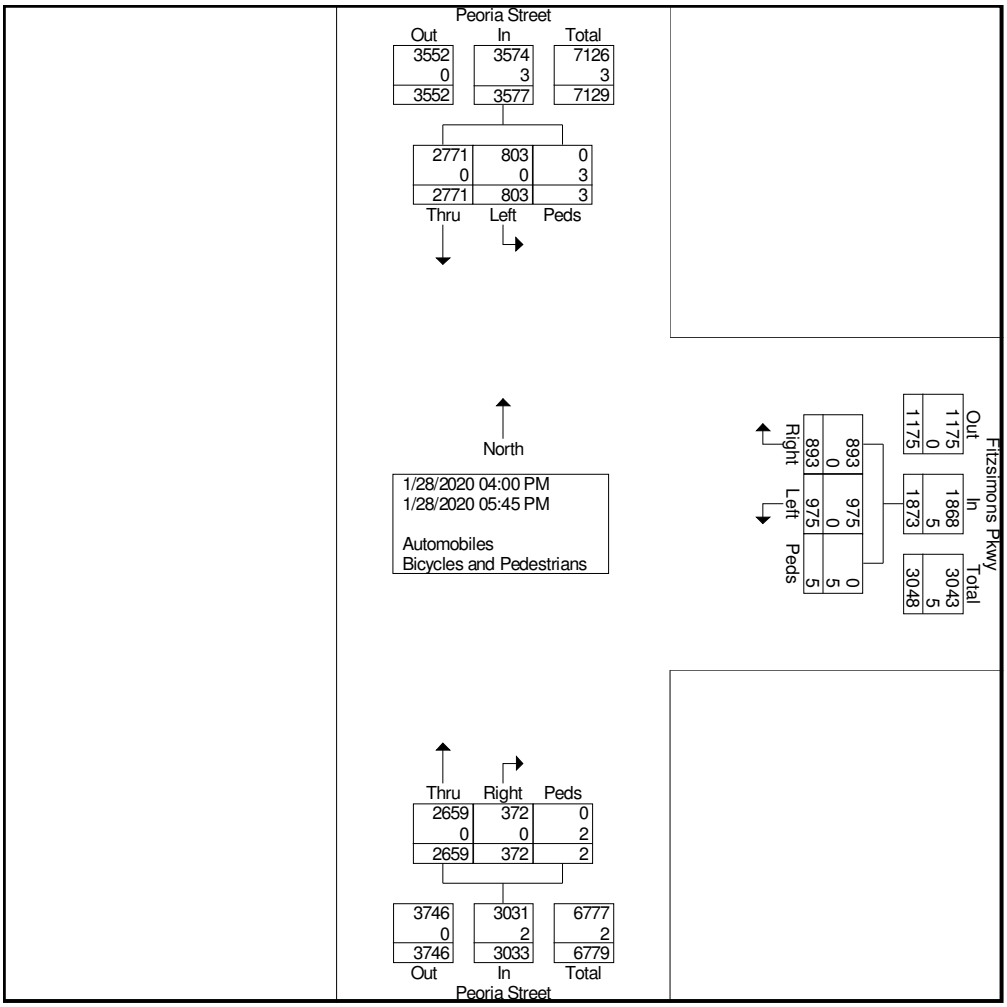
Groups Printed- Automobiles - Bicycles and Pedestrians

	Fitzsimons Pkwy Westbound				Peoria Street Northbound				Peoria Street Southbound				
Start Time	Left	Right	Peds	App. Total	Thru	Right	Peds	App. Total	Left	Thru	Peds	App. Total	Int. Total
04:00 PM	78	86	0	164	368	49	0	417	101	372	0	473	1054
04:15 PM	91	92	0	183	314	36	0	350	110	393	1	504	1037
04:30 PM	131	122	0	253	305	51	0	356	87	372	2	461	1070
04:45 PM	141	152	1	294	349	45	0	394	93	342	0	435	1123
Total	441	452	1	894	1336	181	0	1517	391	1479	3	1873	4284
05:00 PM	155	155	1	311	358	49	2	409	117	344	0	461	1181
05:15 PM	156	138	0	294	303	62	0	365	117	349	0	466	1125
05:30 PM	132	98	2	232	339	37	0	376	98	297	0	395	1003
05:45 PM	91	50	1	142	323	43	0	366	80	302	0	382	890
Total	534	441	4	979	1323	191	2	1516	412	1292	0	1704	4199
Grand Total	975	893	5	1873	2659	372	2	3033	803	2771	3	3577	8483
Apprch %	52.1	47.7	0.3		87.7	12.3	0.1		22.4	77.5	0.1		
Total %	11.5	10.5	0.1	22.1	31.3	4.4	0	35.8	9.5	32.7	0	42.2	
Automobiles	975	893	0	1868	2659	372	0	3031	803	2771	0	3574	8473
% Automobiles	100	100	0	99.7	100	100	0	99.9	100	100	0	99.9	99.9
Bicycles and Pedestrians	0	0	5	5	0	0	2	2	0	0	3	3	10
% Bicycles and Pedestrians	0	0	100	0.3	0	0	100	0.1	0	0	100	0.1	0.1

Ridgeview Data Collection

Aurora, CO
Fitzsimons Innovation Campus
PM Peak
Fitzsimons Pkwy and Peoria St

File Name : Fitzsimons and Peoria PM
Site Code : IPO 486
Start Date : 1/28/2020
Page No : 2

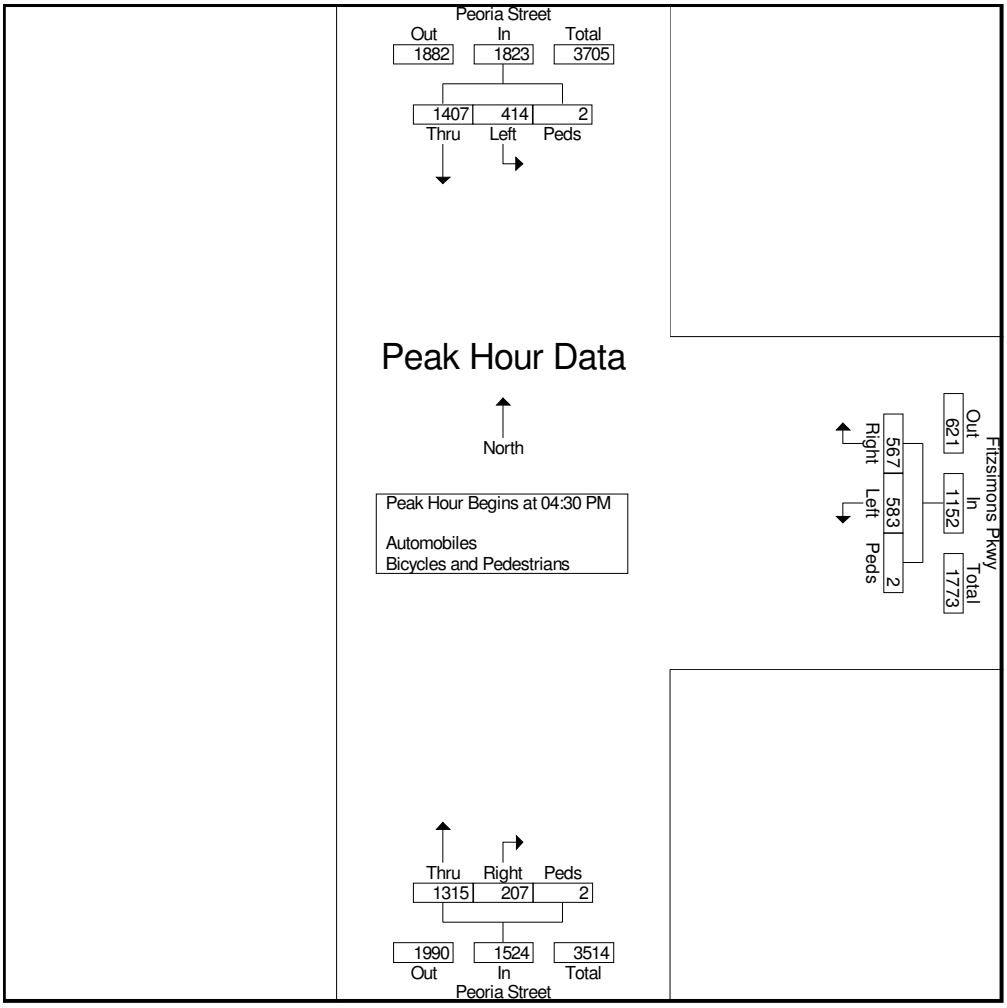


Ridgeview Data Collection

Aurora, CO
Fitzsimons Innovation Campus
PM Peak
Fitzsimons Pkwy and Peoria St

File Name : Fitzsimons and Peoria PM
Site Code : IPO 486
Start Date : 1/28/2020
Page No : 3

	Fitzsimons Pkwy Westbound				Peoria Street Northbound				Peoria Street Southbound				
Start Time	Left	Right	Peds	App. Total	Thru	Right	Peds	App. Total	Left	Thru	Peds	App. Total	Int. Total
Peak Hour Analysis From 04:00 PM to 05:45 PM - Peak 1 of 1													
Peak Hour for Entire Intersection Begins at 04:30 PM													
04:30 PM	131	122	0	253	305	51	0	356	87	**372**	**2**	461	1070
04:45 PM	141	152	**1**	294	349	45	0	394	93	342	0	435	1123
05:00 PM	155	**155**	1	**311**	**358**	49	**2**	**409**	**117**	344	0	461	**1181**
05:15 PM	**156**	138	0	294	303	**62**	0	365	117	349	0	**466**	1125
Total Volume	583	567	2	1152	1315	207	2	1524	414	1407	2	1823	4499
% App. Total	50.6	49.2	0.2		86.3	13.6	0.1		22.7	77.2	0.1		
PHF	.934	.915	.500	.926	.918	.835	.250	.932	.885	.946	.250	.978	.952



Ridgeview Data Collection

Aurora, CO
Fitzsimons Innovation Campus
AM Peak
Fitzsimons Pkwy and Victor St

File Name : Fitzsimons and Victor AM
Site Code : IPO 486
Start Date : 1/28/2020
Page No : 1

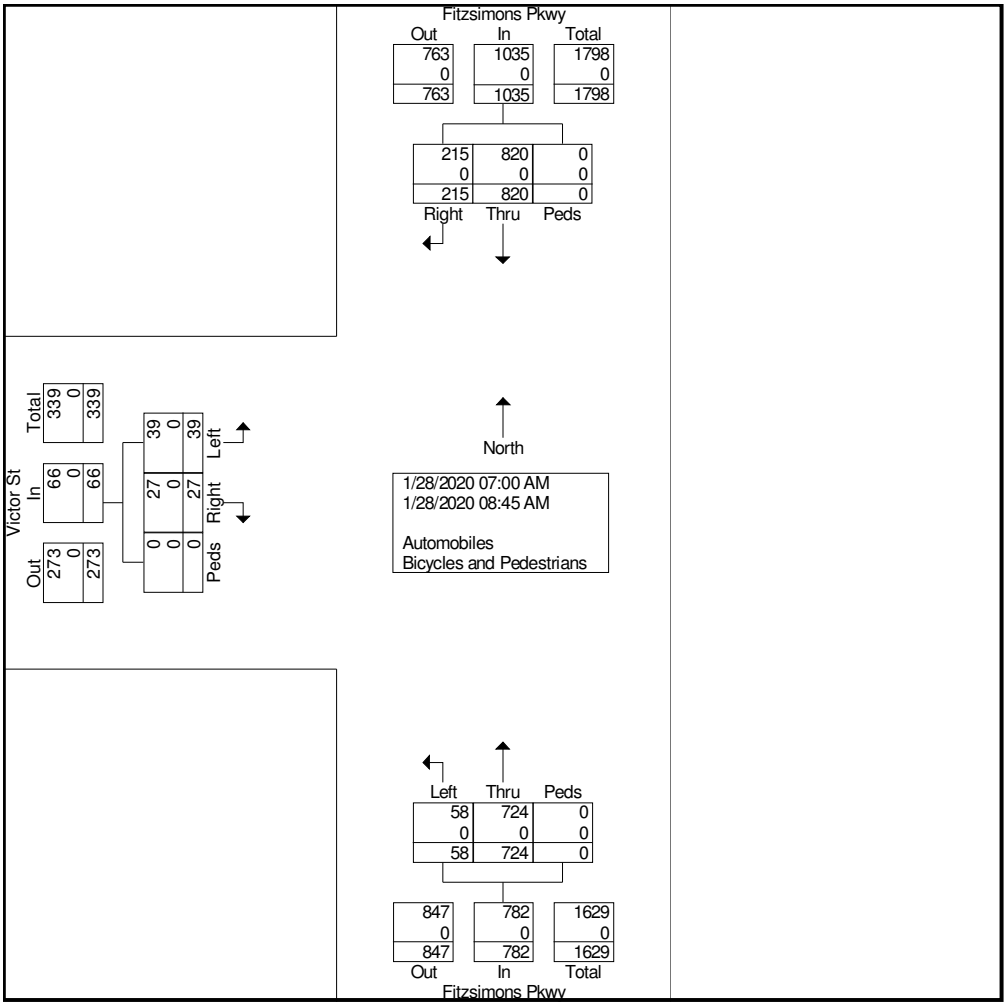
Groups Printed- Automobiles - Bicycles and Pedestrians

	Victor St Eastbound				Fitzsimons Pkwy Northbound				Fitzsimons Pkwy Southbound				
Start Time	Left	Right	Peds	App. Total	Left	Thru	Peds	App. Total	Thru	Right	Peds	App. Total	Int. Total
07:00 AM	5	8	0	13	6	93	0	99	99	24	0	123	235
07:15 AM	2	3	0	5	4	99	0	103	109	27	0	136	244
07:30 AM	5	3	0	8	8	115	0	123	138	28	0	166	297
07:45 AM	6	2	0	8	4	128	0	132	135	40	0	175	315
Total	18	16	0	34	22	435	0	457	481	119	0	600	1091
08:00 AM	4	0	0	4	15	95	0	110	113	38	0	151	265
08:15 AM	4	5	0	9	12	64	0	76	105	19	0	124	209
08:30 AM	12	4	0	16	3	77	0	80	65	21	0	86	182
08:45 AM	1	2	0	3	6	53	0	59	56	18	0	74	136
Total	21	11	0	32	36	289	0	325	339	96	0	435	792
Grand Total	39	27	0	66	58	724	0	782	820	215	0	1035	1883
Apprch %	59.1	40.9	0		7.4	92.6	0		79.2	20.8	0		
Total %	2.1	1.4	0	3.5	3.1	38.4	0	41.5	43.5	11.4	0	55	
Automobiles	39	27	0	66	58	724	0	782	820	215	0	1035	1883
% Automobiles	100	100	0	100	100	100	0	100	100	100	0	100	100
Bicycles and Pedestrians	0	0	0	0	0	0	0	0	0	0	0	0	0
% Bicycles and Pedestrians	0	0	0	0	0	0	0	0	0	0	0	0	0

Ridgeview Data Collection

Aurora, CO
Fitzsimons Innovation Campus
AM Peak
Fitzsimons Pkwy and Victor St

File Name : Fitzsimons and Victor AM
Site Code : IPO 486
Start Date : 1/28/2020
Page No : 2

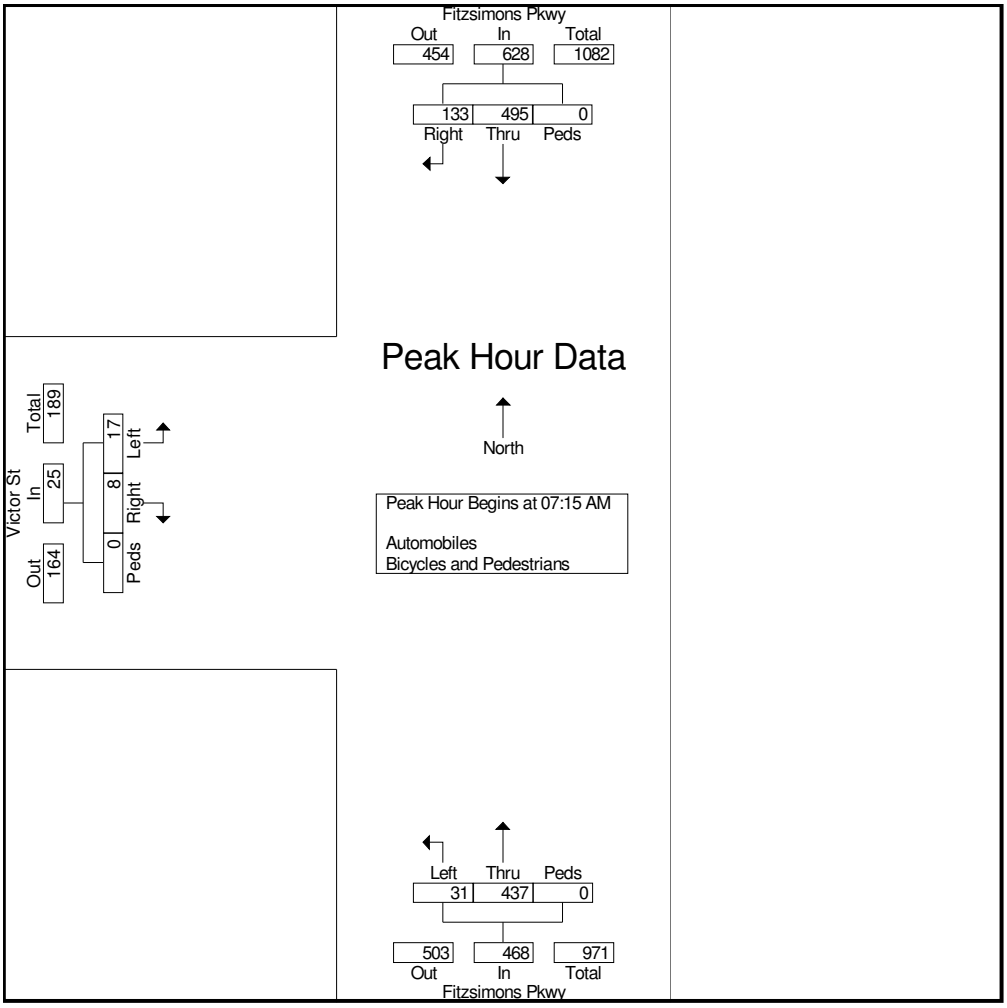


Ridgeview Data Collection

Aurora, CO
Fitzsimons Innovation Campus
AM Peak
Fitzsimons Pkwy and Victor St

File Name : Fitzsimons and Victor AM
Site Code : IPO 486
Start Date : 1/28/2020
Page No : 3

	Victor St Eastbound				Fitzsimons Pkwy Northbound				Fitzsimons Pkwy Southbound				
Start Time	Left	Right	Peds	App. Total	Left	Thru	Peds	App. Total	Thru	Right	Peds	App. Total	Int. Total
Peak Hour Analysis From 07:00 AM to 08:45 AM - Peak 1 of 1													
Peak Hour for Entire Intersection Begins at 07:15 AM													
07:15 AM	2	**3**	0	5	4	99	0	103	109	27	0	136	244
07:30 AM	5	3	0	**8**	8	115	0	123	**138**	28	0	166	297
07:45 AM	**6**	2	0	8	4	**128**	0	**132**	135	**40**	0	**175**	**315**
08:00 AM	4	0	0	4	**15**	95	0	110	113	38	0	151	265
Total Volume	17	8	0	25	31	437	0	468	495	133	0	628	1121
% App. Total	68	32	0		6.6	93.4	0		78.8	21.2	0		
PHF	.708	.667	.000	.781	.517	.854	.000	.886	.897	.831	.000	.897	.890



Ridgeview Data Collection

Aurora, CO
Fitzsimons Innovation Campus
PM Peak
Fitzsimons Pkwy and Victor St

File Name : Fitzsimons and Victor PM
Site Code : IPO 486
Start Date : 1/28/2020
Page No : 1

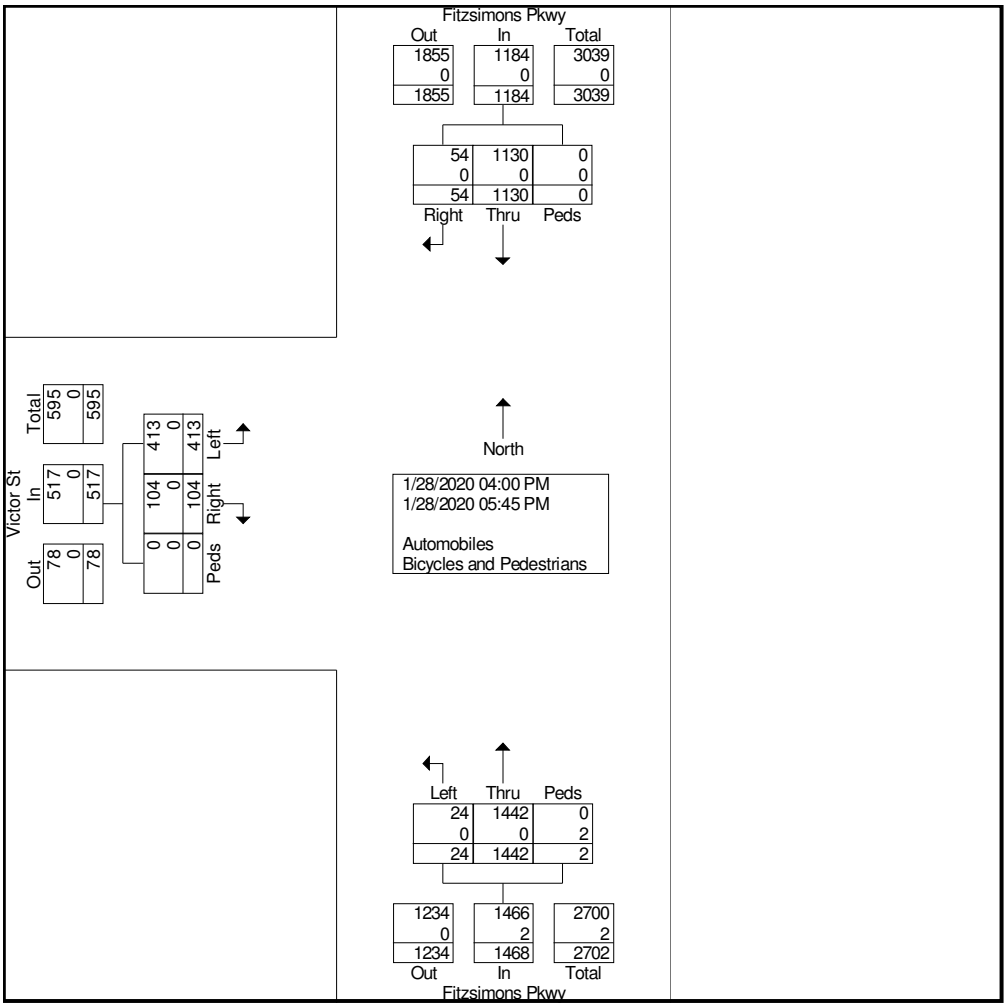
Groups Printed- Automobiles - Bicycles and Pedestrians

	Victor St Eastbound				Fitzsimons Pkwy Northbound				Fitzsimons Pkwy Southbound				
Start Time	Left	Right	Peds	App. Total	Left	Thru	Peds	App. Total	Thru	Right	Peds	App. Total	Int. Total
04:00 PM	44	20	0	64	2	128	0	130	153	6	0	159	353
04:15 PM	30	5	0	35	0	150	1	151	142	4	0	146	332
04:30 PM	63	8	0	71	3	181	0	184	123	9	0	132	387
04:45 PM	69	17	0	86	5	214	1	220	132	9	0	141	447
Total	206	50	0	256	10	673	2	685	550	28	0	578	1519
05:00 PM	82	23	0	105	3	242	0	245	158	3	0	161	511
05:15 PM	61	15	0	76	2	230	0	232	173	4	0	177	485
05:30 PM	38	13	0	51	4	184	0	188	137	8	0	145	384
05:45 PM	26	3	0	29	5	113	0	118	112	11	0	123	270
Total	207	54	0	261	14	769	0	783	580	26	0	606	1650
Grand Total	413	104	0	517	24	1442	2	1468	1130	54	0	1184	3169
Apprch %	79.9	20.1	0		1.6	98.2	0.1		95.4	4.6	0		
Total %	13	3.3	0	16.3	0.8	45.5	0.1	46.3	35.7	1.7	0	37.4	
Automobiles	413	104	0	517	24	1442	0	1466	1130	54	0	1184	3167
% Automobiles	100	100	0	100	100	100	0	99.9	100	100	0	100	99.9
Bicycles and Pedestrians	0	0	0	0	0	0	2	2	0	0	0	0	2
% Bicycles and Pedestrians	0	0	0	0	0	0	100	0.1	0	0	0	0	0.1

Ridgeview Data Collection

Aurora, CO
Fitzsimons Innovation Campus
PM Peak
Fitzsimons Pkwy and Victor St

File Name : Fitzsimons and Victor PM
Site Code : IPO 486
Start Date : 1/28/2020
Page No : 2

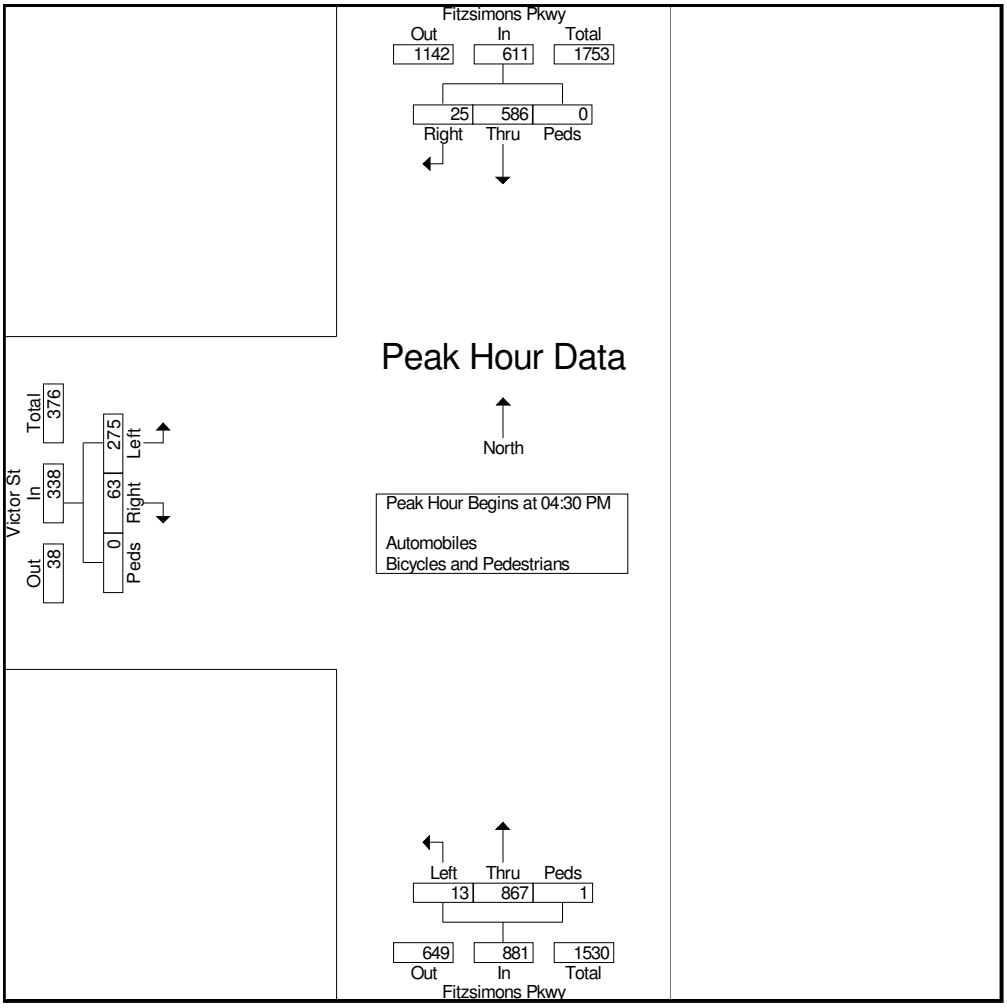


Ridgeview Data Collection

Aurora, CO
Fitzsimons Innovation Campus
PM Peak
Fitzsimons Pkwy and Victor St

File Name : Fitzsimons and Victor PM
Site Code : IPO 486
Start Date : 1/28/2020
Page No : 3

	Victor St Eastbound				Fitzsimons Pkwy Northbound				Fitzsimons Pkwy Southbound				
Start Time	Left	Right	Peds	App. Total	Left	Thru	Peds	App. Total	Thru	Right	Peds	App. Total	Int. Total
Peak Hour Analysis From 04:00 PM to 05:45 PM - Peak 1 of 1													
Peak Hour for Entire Intersection Begins at 04:30 PM													
04:30 PM	63	8	0	71	3	181	0	184	123	**9**	0	132	387
04:45 PM	69	17	0	86	**5**	214	**1**	220	132	9	0	141	447
05:00 PM	**82**	**23**	0	**105**	3	**242**	0	**245**	158	3	0	161	**511**
05:15 PM	61	15	0	76	2	230	0	232	**173**	4	0	**177**	485
Total Volume	275	63	0	338	13	867	1	881	586	25	0	611	1830
% App. Total	81.4	18.6	0		1.5	98.4	0.1		95.9	4.1	0		
PHF	.838	.685	.000	.805	.650	.896	.250	.899	.847	.694	.000	.863	.895



Ridgeview Data Collection

Aurora, CO
Fitzsimons Innovation Campus
AM Peak
25th Ave and Peoria St

File Name : 25th and Peoria AM
Site Code : IPO 486
Start Date : 1/28/2020
Page No : 1

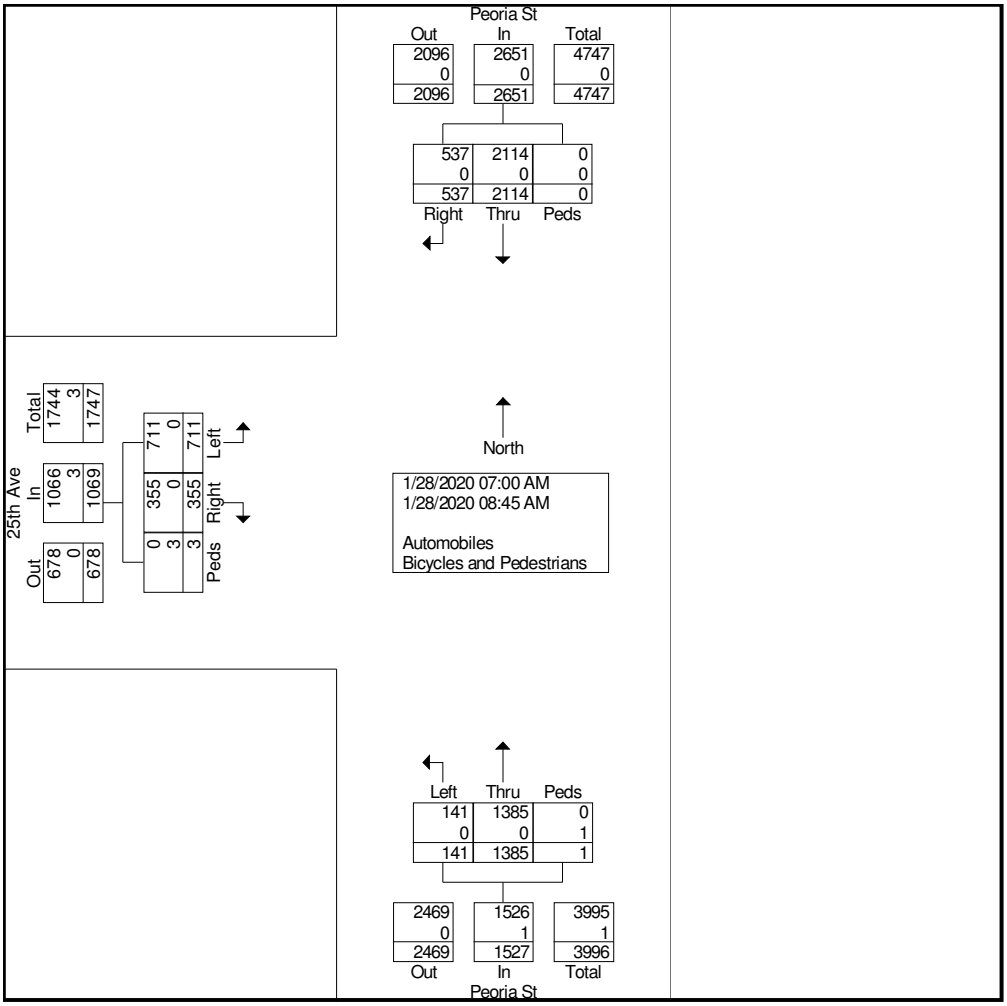
Groups Printed- Automobiles - Bicycles and Pedestrians

	25th Ave Eastbound				Peoria St Northbound				Peoria St Southbound				
Start Time	Left	Right	Peds	App. Total	Left	Thru	Peds	App. Total	Thru	Right	Peds	App. Total	Int. Total
07:00 AM	84	39	0	123	18	146	0	164	241	79	0	320	607
07:15 AM	100	44	0	144	18	201	1	220	249	75	0	324	688
07:30 AM	101	50	0	151	14	182	0	196	310	95	0	405	752
07:45 AM	96	36	1	133	26	205	0	231	337	79	0	416	780
Total	381	169	1	551	76	734	1	811	1137	328	0	1465	2827
08:00 AM	107	51	0	158	21	201	0	222	282	73	0	355	735
08:15 AM	106	47	1	154	14	153	0	167	257	42	0	299	620
08:30 AM	68	53	1	122	15	145	0	160	216	55	0	271	553
08:45 AM	49	35	0	84	15	152	0	167	222	39	0	261	512
Total	330	186	2	518	65	651	0	716	977	209	0	1186	2420
Grand Total	711	355	3	1069	141	1385	1	1527	2114	537	0	2651	5247
Apprch %	66.5	33.2	0.3		9.2	90.7	0.1		79.7	20.3	0		
Total %	13.6	6.8	0.1	20.4	2.7	26.4	0	29.1	40.3	10.2	0	50.5	
Automobiles	711	355	0	1066	141	1385	0	1526	2114	537	0	2651	5243
% Automobiles	100	100	0	99.7	100	100	0	99.9	100	100	0	100	99.9
Bicycles and Pedestrians	0	0	3	3	0	0	1	1	0	0	0	0	4
% Bicycles and Pedestrians	0	0	100	0.3	0	0	100	0.1	0	0	0	0	0.1

Ridgeview Data Collection

Aurora, CO
Fitzsimons Innovation Campus
AM Peak
25th Ave and Peoria St

File Name : 25th and Peoria AM
Site Code : IPO 486
Start Date : 1/28/2020
Page No : 2

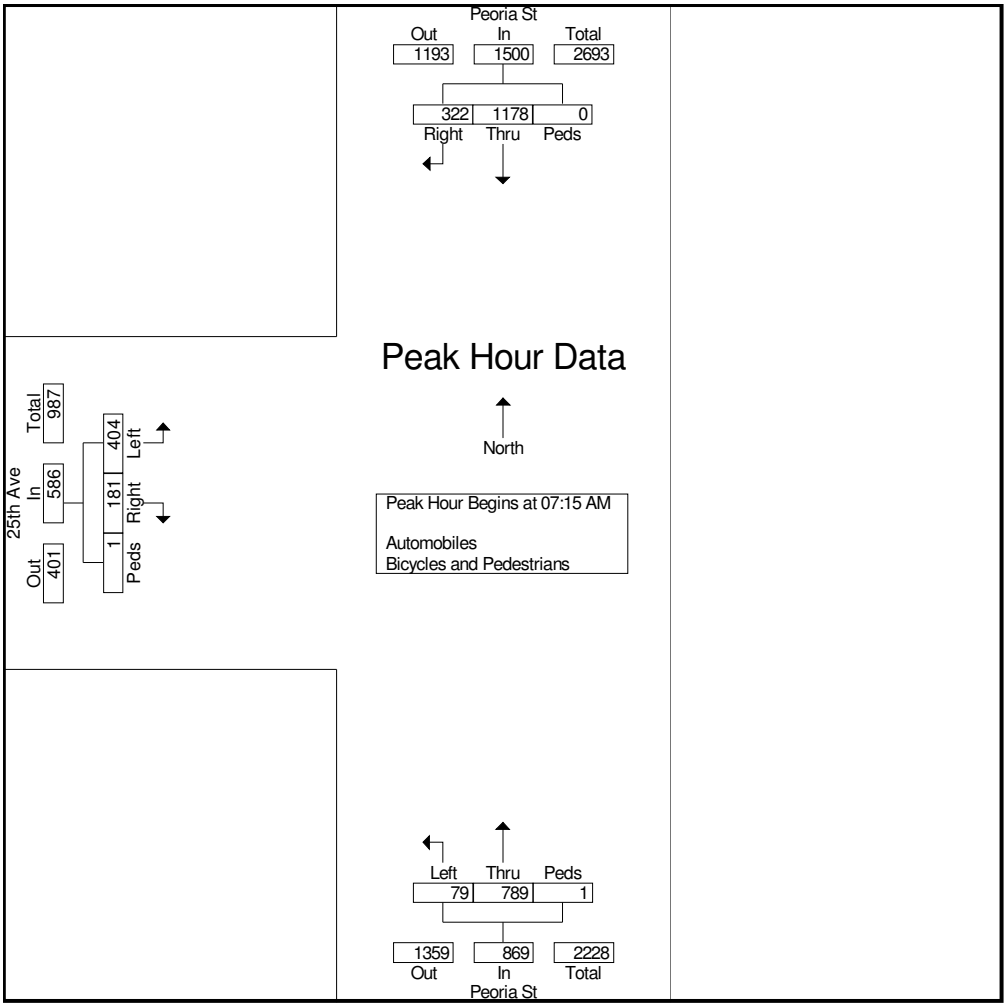


Ridgeview Data Collection

Aurora, CO
Fitzsimons Innovation Campus
AM Peak
25th Ave and Peoria St

File Name : 25th and Peoria AM
Site Code : IPO 486
Start Date : 1/28/2020
Page No : 3

	25th Ave Eastbound				Peoria St Northbound				Peoria St Southbound				
Start Time	Left	Right	Peds	App. Total	Left	Thru	Peds	App. Total	Thru	Right	Peds	App. Total	Int. Total
Peak Hour Analysis From 07:00 AM to 08:45 AM - Peak 1 of 1													
Peak Hour for Entire Intersection Begins at 07:15 AM													
07:15 AM	100	44	0	144	18	201	**1**	220	249	75	0	324	688
07:30 AM	101	50	0	151	14	182	0	196	310	**95**	0	405	752
07:45 AM	96	36	**1**	133	**26**	**205**	0	**231**	**337**	79	0	**416**	**780**
08:00 AM	**107**	**51**	0	**158**	21	201	0	222	282	73	0	355	735
Total Volume	404	181	1	586	79	789	1	869	1178	322	0	1500	2955
% App. Total	68.9	30.9	0.2		9.1	90.8	0.1		78.5	21.5	0		
PHF	.944	.887	.250	.927	.760	.962	.250	.940	.874	.847	.000	.901	.947



Ridgeview Data Collection

Aurora, CO
Fitzsimons Innovation Campus
PM Peak
25th Ave and Peoria St

File Name : 25th and Peoria PM
Site Code : IPO 486
Start Date : 1/28/2020
Page No : 1

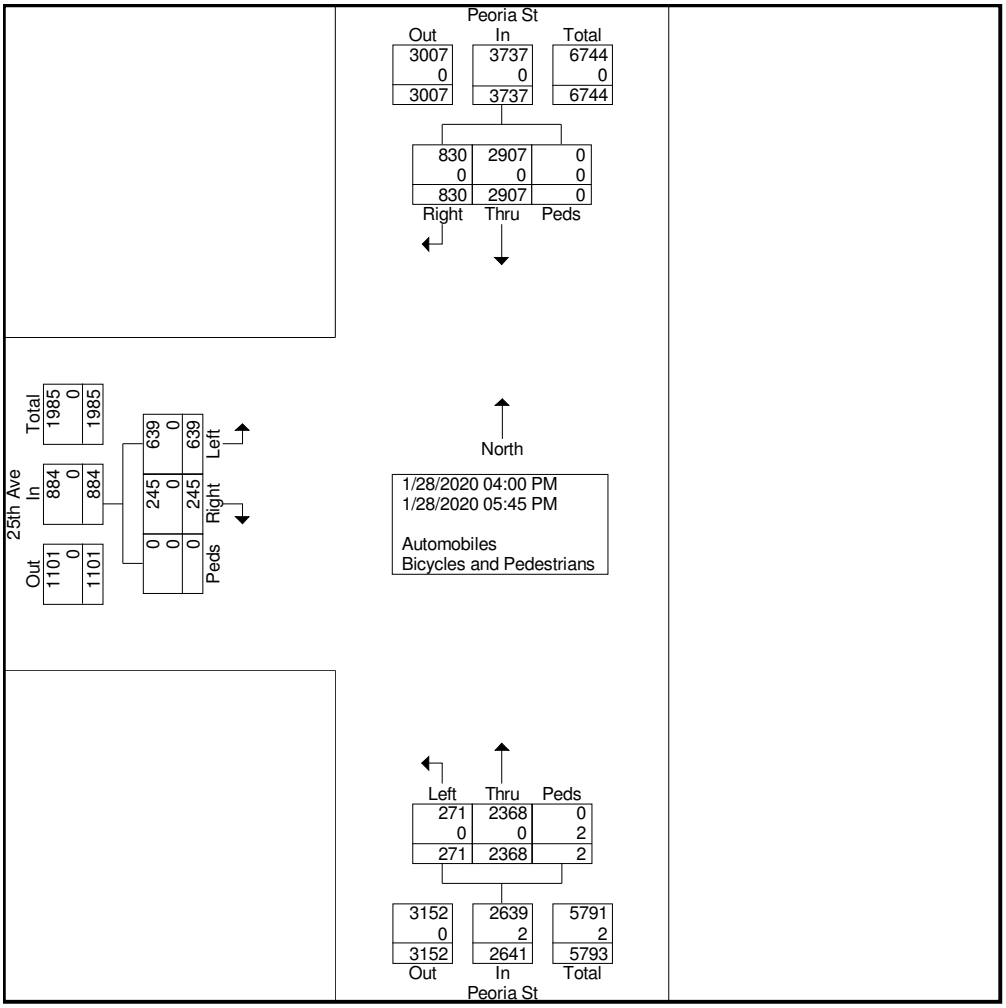
Groups Printed- Automobiles - Bicycles and Pedestrians

	25th Ave Eastbound				Peoria St Northbound				Peoria St Southbound				
Start Time	Left	Right	Peds	App. Total	Left	Thru	Peds	App. Total	Thru	Right	Peds	App. Total	Int. Total
04:00 PM	87	22	0	109	30	310	0	340	358	90	0	448	897
04:15 PM	73	35	0	108	31	270	1	302	386	84	0	470	880
04:30 PM	70	31	0	101	33	297	0	330	395	105	0	500	931
04:45 PM	84	25	0	109	25	309	1	335	381	96	0	477	921
Total	314	113	0	427	119	1186	2	1307	1520	375	0	1895	3629
05:00 PM	89	39	0	128	36	320	0	356	357	124	0	481	965
05:15 PM	79	31	0	110	28	283	0	311	399	126	0	525	946
05:30 PM	81	31	0	112	57	308	0	365	332	105	0	437	914
05:45 PM	76	31	0	107	31	271	0	302	299	100	0	399	808
Total	325	132	0	457	152	1182	0	1334	1387	455	0	1842	3633
Grand Total	639	245	0	884	271	2368	2	2641	2907	830	0	3737	7262
Apprch %	72.3	27.7	0		10.3	89.7	0.1		77.8	22.2	0		
Total %	8.8	3.4	0	12.2	3.7	32.6	0	36.4	40	11.4	0	51.5	
Automobiles	639	245	0	884	271	2368	0	2639	2907	830	0	3737	7260
% Automobiles	100	100	0	100	100	100	0	99.9	100	100	0	100	100
Bicycles and Pedestrians	0	0	0	0	0	0	2	2	0	0	0	0	2
% Bicycles and Pedestrians	0	0	0	0	0	0	100	0.1	0	0	0	0	0

Ridgeview Data Collection

Aurora, CO
Fitzsimons Innovation Campus
PM Peak
25th Ave and Peoria St

File Name : 25th and Peoria PM
Site Code : IPO 486
Start Date : 1/28/2020
Page No : 2

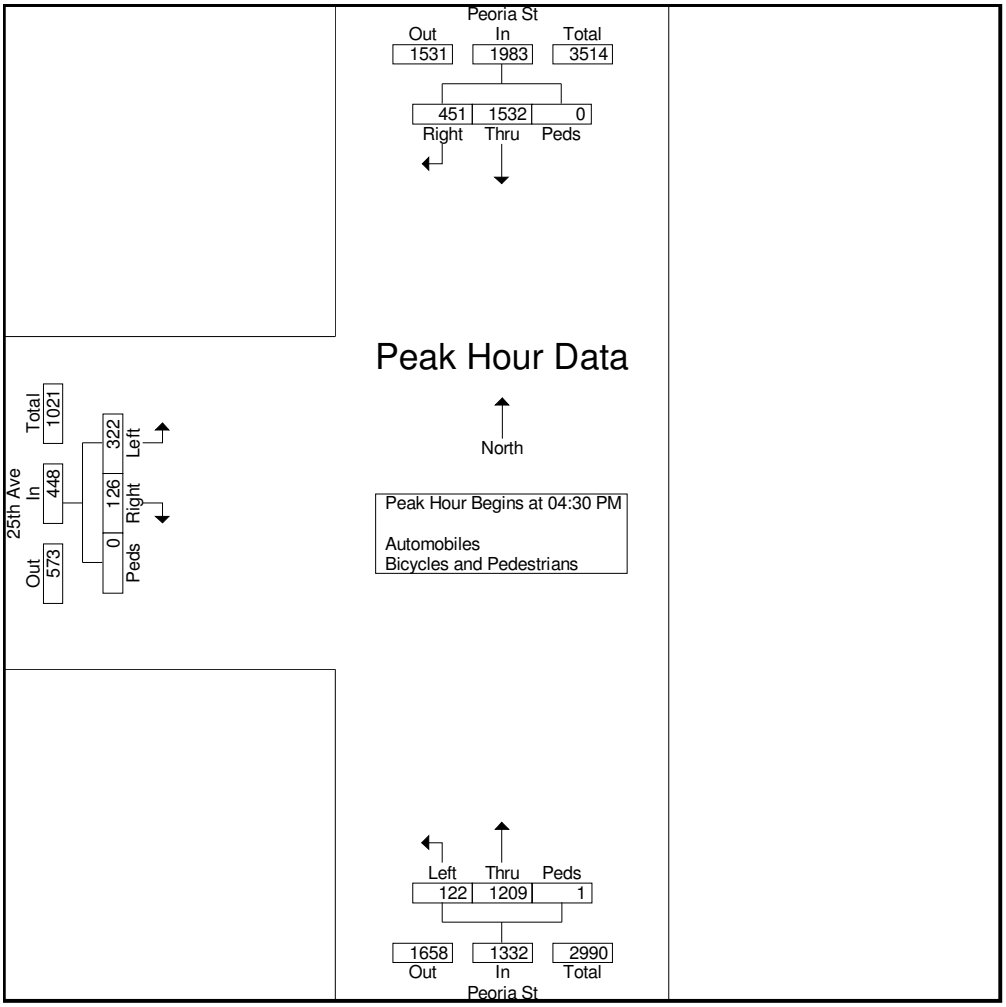


Ridgeview Data Collection

Aurora, CO
Fitzsimons Innovation Campus
PM Peak
25th Ave and Peoria St

File Name : 25th and Peoria PM
Site Code : IPO 486
Start Date : 1/28/2020
Page No : 3

	25th Ave Eastbound				Peoria St Northbound				Peoria St Southbound				
Start Time	Left	Right	Peds	App. Total	Left	Thru	Peds	App. Total	Thru	Right	Peds	App. Total	Int. Total
Peak Hour Analysis From 04:00 PM to 05:45 PM - Peak 1 of 1													
Peak Hour for Entire Intersection Begins at 04:30 PM													
04:30 PM	70	31	0	101	33	297	0	330	395	105	0	500	931
04:45 PM	84	25	0	109	25	309	**1**	335	381	96	0	477	921
05:00 PM	**89**	**39**	0	**128**	**36**	**320**	0	**356**	357	124	0	481	**965**
05:15 PM	79	31	0	110	28	283	0	311	**399**	**126**	0	**525**	946
Total Volume	322	126	0	448	122	1209	1	1332	1532	451	0	1983	3763
% App. Total	71.9	28.1	0		9.2	90.8	0.1		77.3	22.7	0		
PHF	.904	.808	.000	.875	.847	.945	.250	.935	.960	.895	.000	.944	.975



Ridgeview Data Collection

Aurora, CO
Fitzsimons Innovation Campus
AM Peak
23rd Ave & Peoria St

File Name : 23rd and Peoria AM
Site Code : IPO 486
Start Date : 1/28/2020
Page No : 1

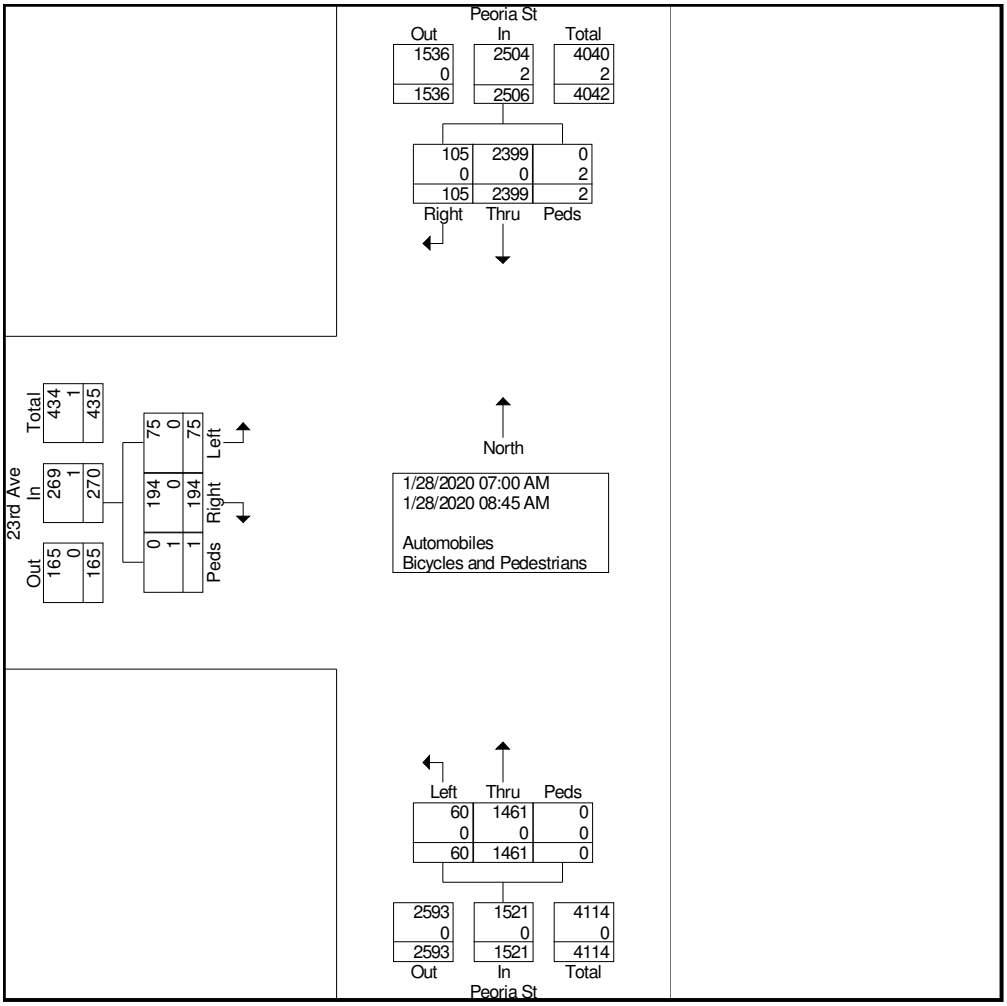
Groups Printed- Automobiles - Bicycles and Pedestrians

	23rd Ave Eastbound				Peoria St Northbound				Peoria St Southbound				
Start Time	Left	Right	Peds	App. Total	Left	Thru	Peds	App. Total	Thru	Right	Peds	App. Total	Int. Total
07:00 AM	6	12	0	18	9	160	0	169	270	7	0	277	464
07:15 AM	8	25	0	33	7	204	0	211	285	7	0	292	536
07:30 AM	11	34	0	45	10	191	0	201	352	17	0	369	615
07:45 AM	14	32	0	46	13	231	0	244	359	24	0	383	673
Total	39	103	0	142	39	786	0	825	1266	55	0	1321	2288
08:00 AM	19	29	0	48	2	187	0	189	318	21	2	341	578
08:15 AM	8	34	0	42	7	168	0	175	286	21	0	307	524
08:30 AM	8	16	1	25	8	158	0	166	271	4	0	275	466
08:45 AM	1	12	0	13	4	162	0	166	258	4	0	262	441
Total	36	91	1	128	21	675	0	696	1133	50	2	1185	2009
Grand Total	75	194	1	270	60	1461	0	1521	2399	105	2	2506	4297
Apprch %	27.8	71.9	0.4		3.9	96.1	0		95.7	4.2	0.1		
Total %	1.7	4.5	0	6.3	1.4	34	0	35.4	55.8	2.4	0	58.3	
Automobiles	75	194	0	269	60	1461	0	1521	2399	105	0	2504	4294
% Automobiles	100	100	0	99.6	100	100	0	100	100	100	0	99.9	99.9
Bicycles and Pedestrians	0	0	1	1	0	0	0	0	0	0	2	2	3
% Bicycles and Pedestrians	0	0	100	0.4	0	0	0	0	0	0	100	0.1	0.1

Ridgeview Data Collection

Aurora, CO
Fitzsimons Innovation Campus
AM Peak
23rd Ave & Peoria St

File Name : 23rd and Peoria AM
Site Code : IPO 486
Start Date : 1/28/2020
Page No : 2

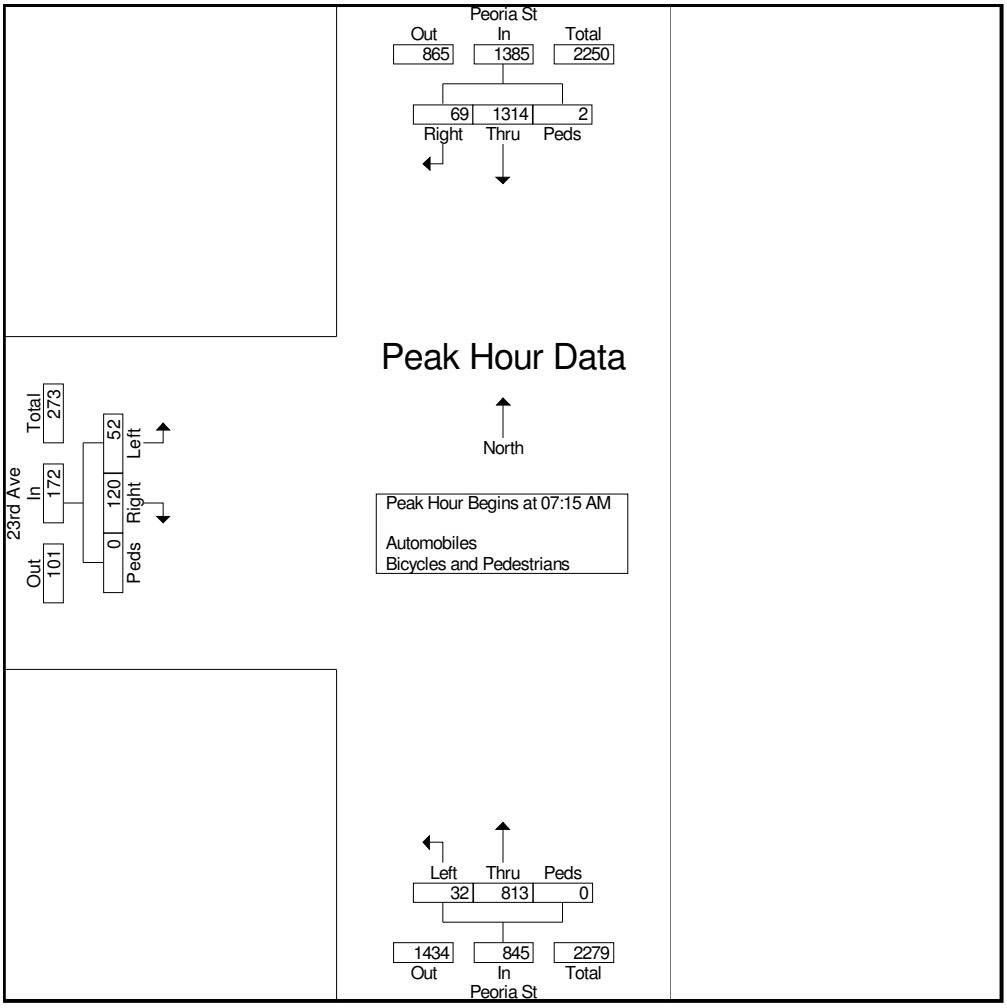


Ridgeview Data Collection

Aurora, CO
Fitzsimons Innovation Campus
AM Peak
23rd Ave & Peoria St

File Name : 23rd and Peoria AM
Site Code : IPO 486
Start Date : 1/28/2020
Page No : 3

	23rd Ave Eastbound				Peoria St Northbound				Peoria St Southbound				
Start Time	Left	Right	Peds	App. Total	Left	Thru	Peds	App. Total	Thru	Right	Peds	App. Total	Int. Total
Peak Hour Analysis From 07:00 AM to 08:45 AM - Peak 1 of 1													
Peak Hour for Entire Intersection Begins at 07:15 AM													
07:15 AM	8	25	0	33	7	204	0	211	285	7	0	292	536
07:30 AM	11	**34**	0	45	10	191	0	201	352	17	0	369	615
07:45 AM	14	32	0	46	**13**	**231**	0	**244**	**359**	**24**	0	**383**	**673**
08:00 AM	**19**	29	0	**48**	2	187	0	189	318	21	**2**	341	578
Total Volume	52	120	0	172	32	813	0	845	1314	69	2	1385	2402
% App. Total	30.2	69.8	0		3.8	96.2	0		94.9	5	0.1		
PHF	.684	.882	.000	.896	.615	.880	.000	.866	.915	.719	.250	.904	.892



Ridgeview Data Collection

Aurora, CO
Fitzsimons Innovation Campus
PM Peak
23rd Ave & Peoria St

File Name : 23rd and Peoria PM
Site Code : IPO 486
Start Date : 1/28/2020
Page No : 1

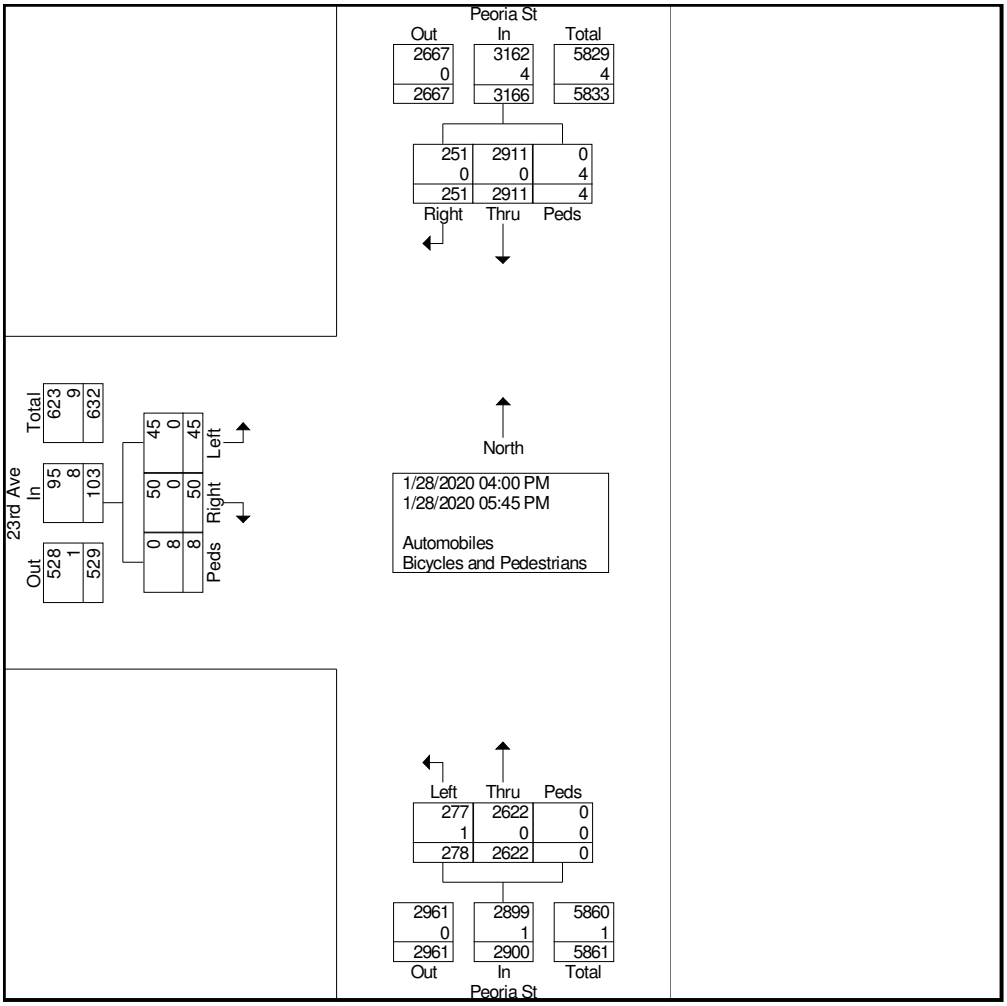
Groups Printed- Automobiles - Bicycles and Pedestrians

	23rd Ave Eastbound				Peoria St Northbound				Peoria St Southbound				
Start Time	Left	Right	Peds	App. Total	Left	Thru	Peds	App. Total	Thru	Right	Peds	App. Total	Int. Total
04:00 PM	5	10	2	17	26	337	0	363	374	20	2	396	776
04:15 PM	6	7	1	14	36	316	0	352	397	24	0	421	787
04:30 PM	2	7	0	9	30	331	0	361	387	38	0	425	795
04:45 PM	7	6	2	15	37	343	0	380	366	34	0	400	795
Total	20	30	5	55	129	1327	0	1456	1524	116	2	1642	3153
05:00 PM	5	5	0	10	45	327	0	372	371	32	0	403	785
05:15 PM	3	1	3	7	43	288	0	331	383	40	2	425	763
05:30 PM	11	13	0	24	36	365	0	401	320	33	0	353	778
05:45 PM	6	1	0	7	25	315	0	340	313	30	0	343	690
Total	25	20	3	48	149	1295	0	1444	1387	135	2	1524	3016
Grand Total	45	50	8	103	278	2622	0	2900	2911	251	4	3166	6169
Apprch %	43.7	48.5	7.8		9.6	90.4	0		91.9	7.9	0.1		
Total %	0.7	0.8	0.1	1.7	4.5	42.5	0	47	47.2	4.1	0.1	51.3	
Automobiles	45	50	0	95	277	2622	0	2899	2911	251	0	3162	6156
% Automobiles	100	100	0	92.2	99.6	100	0	100	100	100	0	99.9	99.8
Bicycles and Pedestrians	0	0	8	8	1	0	0	1	0	0	4	4	13
% Bicycles and Pedestrians	0	0	100	7.8	0.4	0	0	0	0	0	100	0.1	0.2

Ridgeview Data Collection

Aurora, CO
Fitzsimons Innovation Campus
PM Peak
23rd Ave & Peoria St

File Name : 23rd and Peoria PM
Site Code : IPO 486
Start Date : 1/28/2020
Page No : 2

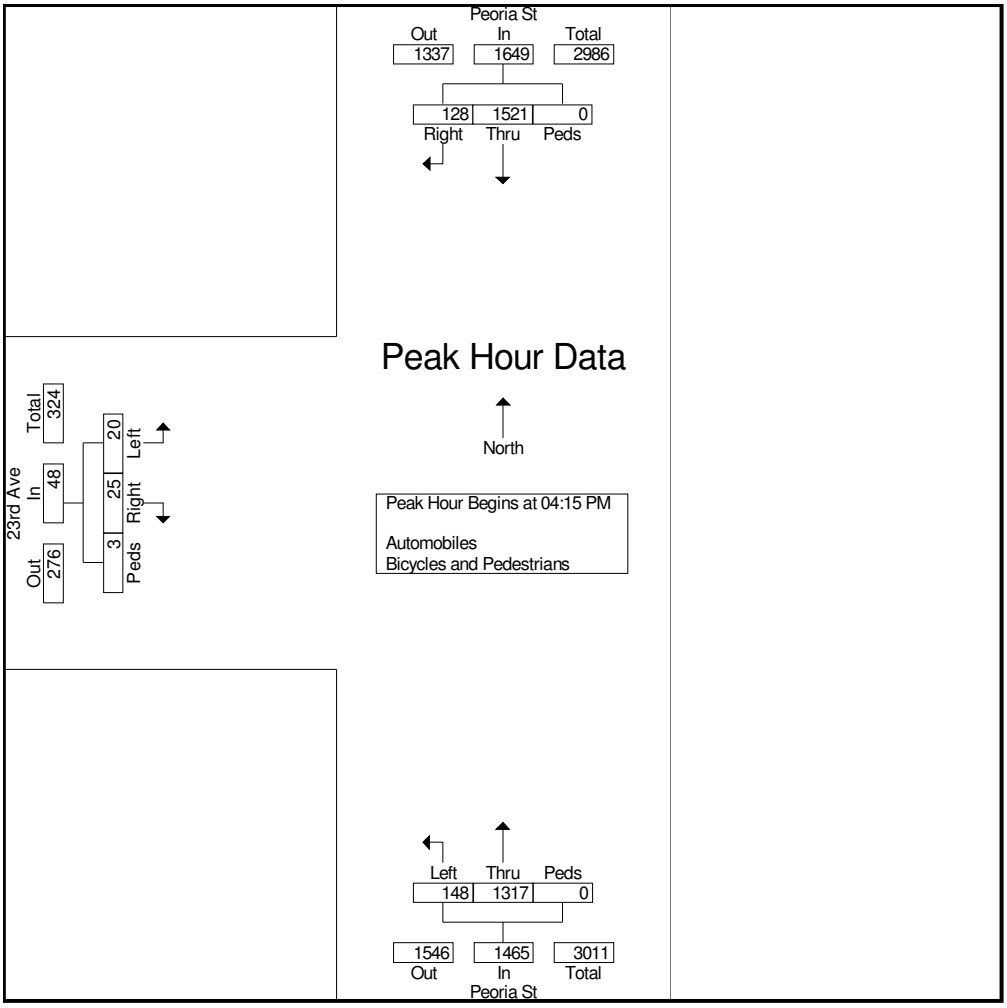


Ridgeview Data Collection

Aurora, CO
Fitzsimons Innovation Campus
PM Peak
23rd Ave & Peoria St

File Name : 23rd and Peoria PM
Site Code : IPO 486
Start Date : 1/28/2020
Page No : 3

	23rd Ave Eastbound				Peoria St Northbound				Peoria St Southbound				
Start Time	Left	Right	Peds	App. Total	Left	Thru	Peds	App. Total	Thru	Right	Peds	App. Total	Int. Total
Peak Hour Analysis From 04:00 PM to 05:45 PM - Peak 1 of 1													
Peak Hour for Entire Intersection Begins at 04:15 PM													
04:15 PM	6	**7**	1	14	36	316	0	352	**397**	24	0	421	787
04:30 PM	2	7	0	9	30	331	0	361	387	**38**	0	**425**	**795**
04:45 PM	**7**	6	**2**	**15**	37	**343**	0	**380**	366	34	0	400	795
05:00 PM	5	5	0	10	**45**	327	0	372	371	32	0	403	785
Total Volume	20	25	3	48	148	1317	0	1465	1521	128	0	1649	3162
% App. Total	41.7	52.1	6.2		10.1	89.9	0		92.2	7.8	0		
PHF	.714	.893	.375	.800	.822	.960	.000	.964	.958	.842	.000	.970	.994



Ridgeview Data Collection

Aurora, CO
Fitzsimons Innovation Campus
AM Peak
23rd Ave & Victor St North Intersection

File Name : 23rd and Victor North AM
Site Code : IPO 486
Start Date : 1/28/2020
Page No : 1

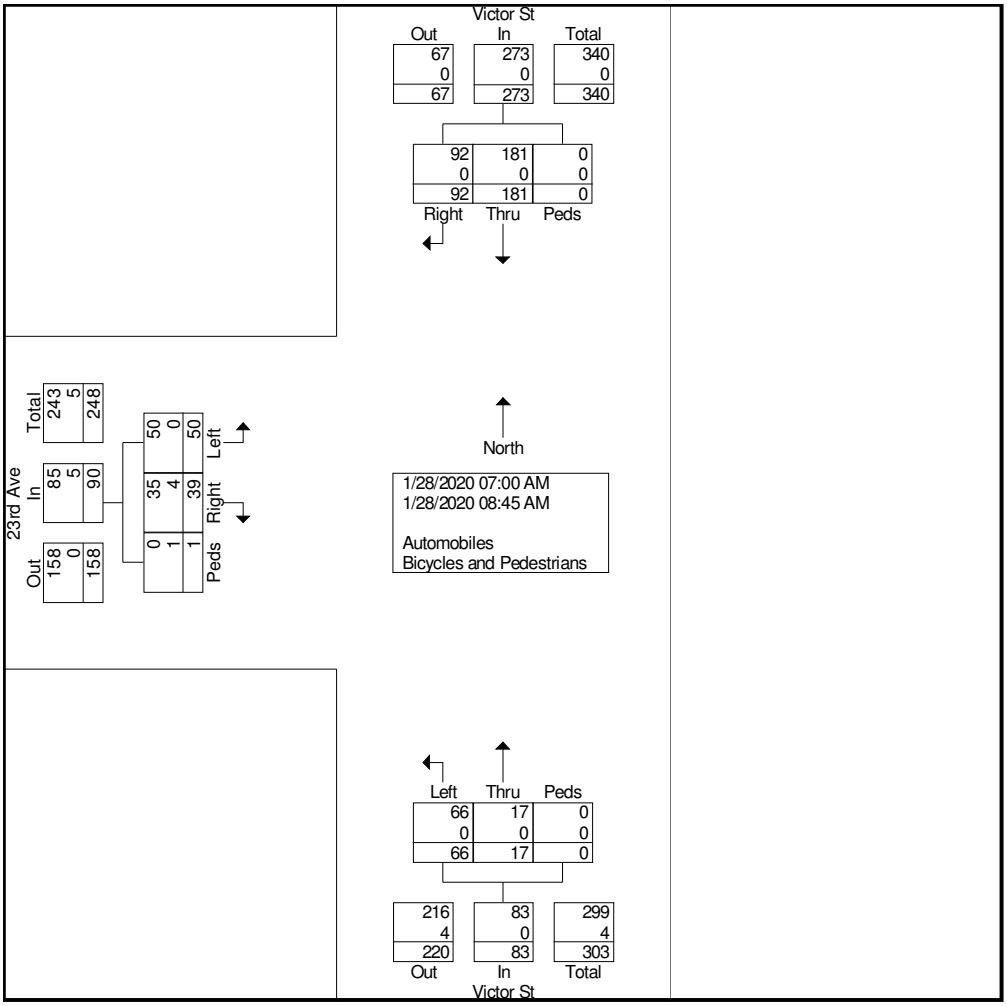
Groups Printed- Automobiles - Bicycles and Pedestrians

	23rd Ave Eastbound				Victor St Northbound				Victor St Southbound				
Start Time	Left	Right	Peds	App. Total	Left	Thru	Peds	App. Total	Thru	Right	Peds	App. Total	Int. Total
07:00 AM	11	2	0	13	7	2	0	9	18	12	0	30	52
07:15 AM	4	4	0	8	8	1	0	9	19	12	0	31	48
07:30 AM	6	6	0	12	4	3	0	7	31	5	0	36	55
07:45 AM	7	8	0	15	7	1	0	8	38	6	0	44	67
Total	28	20	0	48	26	7	0	33	106	35	0	141	222
08:00 AM	3	0	0	3	9	1	0	10	31	21	0	52	65
08:15 AM	7	9	0	16	15	3	0	18	13	18	0	31	65
08:30 AM	10	5	0	15	7	5	0	12	15	9	0	24	51
08:45 AM	2	5	1	8	9	1	0	10	16	9	0	25	43
Total	22	19	1	42	40	10	0	50	75	57	0	132	224
Grand Total	50	39	1	90	66	17	0	83	181	92	0	273	446
Apprch %	55.6	43.3	1.1		79.5	20.5	0		66.3	33.7	0		
Total %	11.2	8.7	0.2	20.2	14.8	3.8	0	18.6	40.6	20.6	0	61.2	
Automobiles	50	35	0	85	66	17	0	83	181	92	0	273	441
% Automobiles	100	89.7	0	94.4	100	100	0	100	100	100	0	100	98.9
Bicycles and Pedestrians	0	4	1	5	0	0	0	0	0	0	0	0	5
% Bicycles and Pedestrians	0	10.3	100	5.6	0	0	0	0	0	0	0	0	1.1

Ridgeview Data Collection

Aurora, CO
Fitzsimons Innovation Campus
AM Peak
23rd Ave & Victor St North Intersection

File Name : 23rd and Victor North AM
Site Code : IPO 486
Start Date : 1/28/2020
Page No : 2

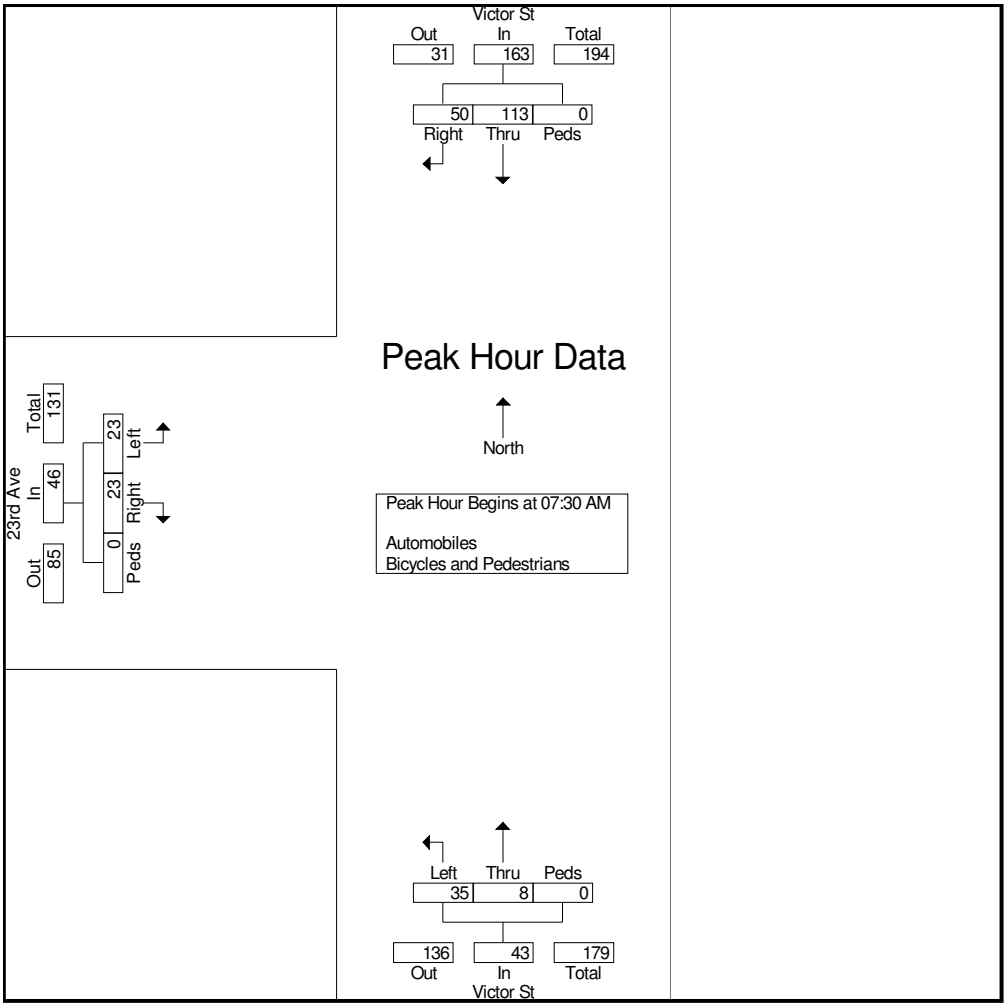


Ridgeview Data Collection

Aurora, CO
Fitzsimons Innovation Campus
AM Peak
23rd Ave & Victor St North Intersection

File Name : 23rd and Victor North AM
Site Code : IPO 486
Start Date : 1/28/2020
Page No : 3

	23rd Ave Eastbound				Victor St Northbound				Victor St Southbound				
Start Time	Left	Right	Peds	App. Total	Left	Thru	Peds	App. Total	Thru	Right	Peds	App. Total	Int. Total
Peak Hour Analysis From 07:00 AM to 08:45 AM - Peak 1 of 1													
Peak Hour for Entire Intersection Begins at 07:30 AM													
07:30 AM	6	6	0	12	4	**3**	0	7	31	5	0	36	55
07:45 AM	**7**	8	0	15	7	1	0	8	**38**	6	0	44	**67**
08:00 AM	3	0	0	3	9	1	0	10	31	**21**	0	**52**	65
08:15 AM	7	**9**	0	**16**	**15**	3	0	**18**	13	18	0	31	65
Total Volume	23	23	0	46	35	8	0	43	113	50	0	163	252
% App. Total	50	50	0		81.4	18.6	0		69.3	30.7	0		
PHF	.821	.639	.000	.719	.583	.667	.000	.597	.743	.595	.000	.784	.940



Ridgeview Data Collection

Aurora, CO
Fitzsimons Innovation Campus
PM Peak
23rd Ave & Victor St North Intersection

File Name : 23rd and Victor North PM
Site Code : IPO 486
Start Date : 1/28/2020
Page No : 1

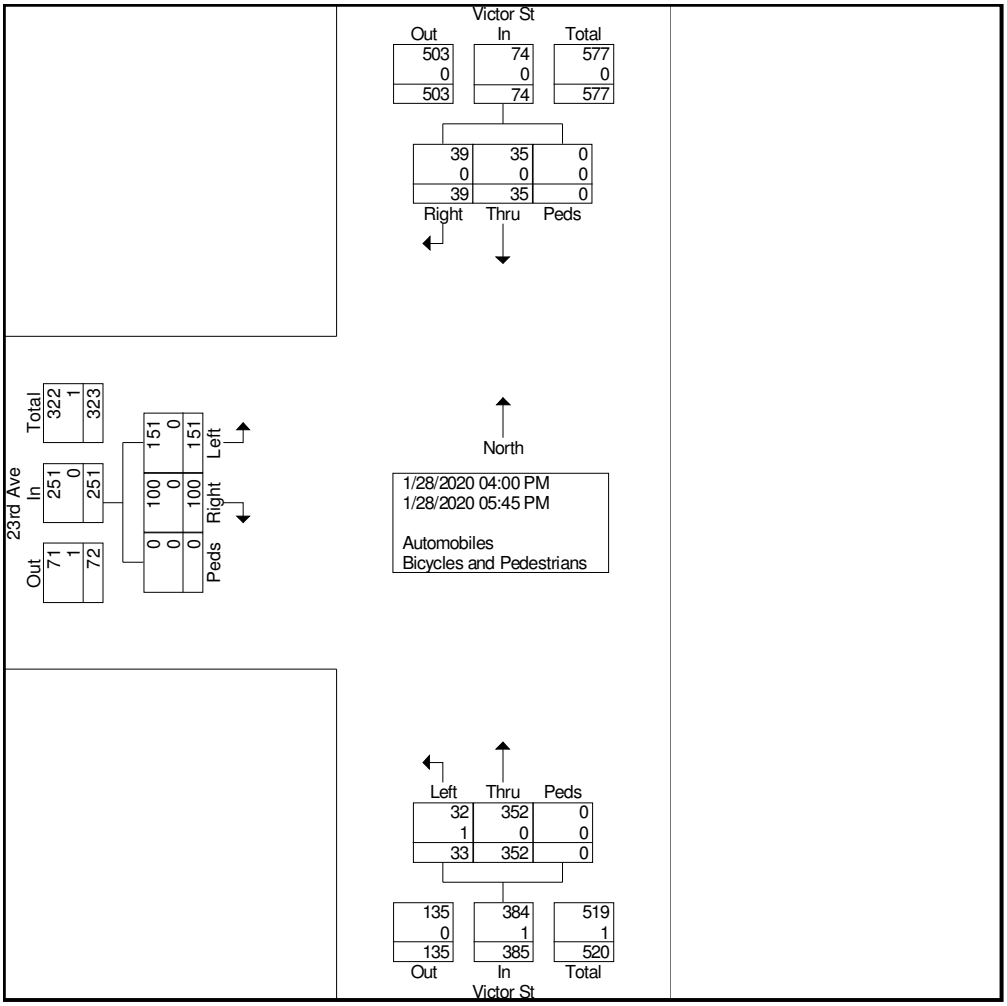
Groups Printed- Automobiles - Bicycles and Pedestrians

	23rd Ave Eastbound				Victor St Northbound				Victor St Southbound				
Start Time	Left	Right	Peds	App. Total	Left	Thru	Peds	App. Total	Thru	Right	Peds	App. Total	Int. Total
04:00 PM	24	12	0	36	3	34	0	37	3	5	0	8	81
04:15 PM	13	9	0	22	4	25	0	29	1	2	0	3	54
04:30 PM	16	6	0	22	3	59	0	62	6	6	0	12	96
04:45 PM	23	10	0	33	1	61	0	62	9	4	0	13	108
Total	76	37	0	113	11	179	0	190	19	17	0	36	339
05:00 PM	35	36	0	71	10	74	0	84	2	3	0	5	160
05:15 PM	17	12	0	29	6	47	0	53	3	3	0	6	88
05:30 PM	16	12	0	28	2	33	0	35	4	7	0	11	74
05:45 PM	7	3	0	10	4	19	0	23	7	9	0	16	49
Total	75	63	0	138	22	173	0	195	16	22	0	38	371
Grand Total	151	100	0	251	33	352	0	385	35	39	0	74	710
Apprch %	60.2	39.8	0		8.6	91.4	0		47.3	52.7	0		
Total %	21.3	14.1	0	35.4	4.6	49.6	0	54.2	4.9	5.5	0	10.4	
Automobiles	151	100	0	251	32	352	0	384	35	39	0	74	709
% Automobiles	100	100	0	100	97	100	0	99.7	100	100	0	100	99.9
Bicycles and Pedestrians	0	0	0	0	1	0	0	1	0	0	0	0	1
% Bicycles and Pedestrians	0	0	0	0	3	0	0	0.3	0	0	0	0	0.1

Ridgeview Data Collection

Aurora, CO
Fitzsimons Innovation Campus
PM Peak
23rd Ave & Victor St North Intersection

File Name : 23rd and Victor North PM
Site Code : IPO 486
Start Date : 1/28/2020
Page No : 2

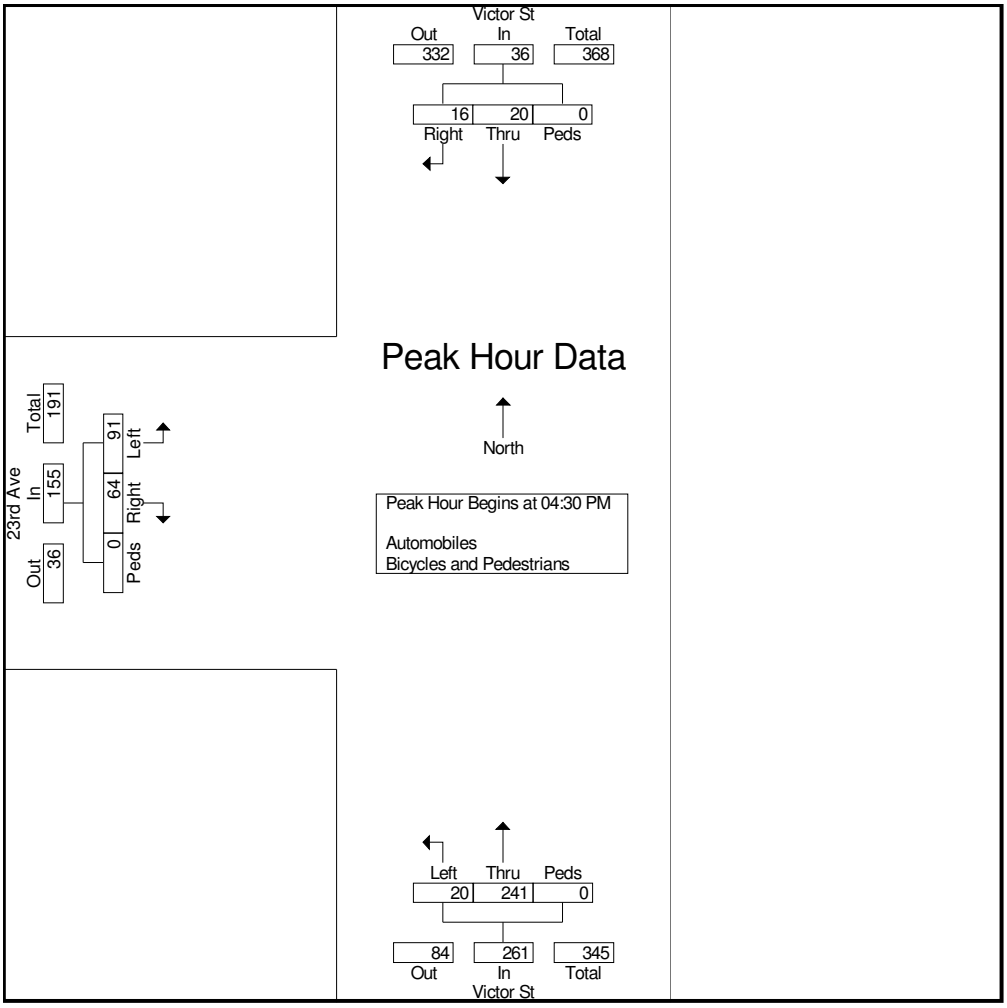


Ridgeview Data Collection

Aurora, CO
Fitzsimons Innovation Campus
PM Peak
23rd Ave & Victor St North Intersection

File Name : 23rd and Victor North PM
Site Code : IPO 486
Start Date : 1/28/2020
Page No : 3

	23rd Ave Eastbound				Victor St Northbound				Victor St Southbound				
Start Time	Left	Right	Peds	App. Total	Left	Thru	Peds	App. Total	Thru	Right	Peds	App. Total	Int. Total
Peak Hour Analysis From 04:00 PM to 05:45 PM - Peak 1 of 1													
Peak Hour for Entire Intersection Begins at 04:30 PM													
04:30 PM	16	6	0	22	3	59	0	62	6	**6**	0	12	96
04:45 PM	23	10	0	33	1	61	0	62	**9**	4	0	**13**	108
05:00 PM	**35**	**36**	0	**71**	**10**	**74**	0	**84**	2	3	0	5	**160**
05:15 PM	17	12	0	29	6	47	0	53	3	3	0	6	88
Total Volume	91	64	0	155	20	241	0	261	20	16	0	36	452
% App. Total	58.7	41.3	0		7.7	92.3	0		55.6	44.4	0		
PHF	.650	.444	.000	.546	.500	.814	.000	.777	.556	.667	.000	.692	.706



Ridgeview Data Collection

Aurora, CO
Fitzsimons Innovation Campus
AM Peak
23rd Ave & Victor St South Intersection

File Name : 23rd and Victor South AM
Site Code : IPO 486
Start Date : 1/30/2020
Page No : 1

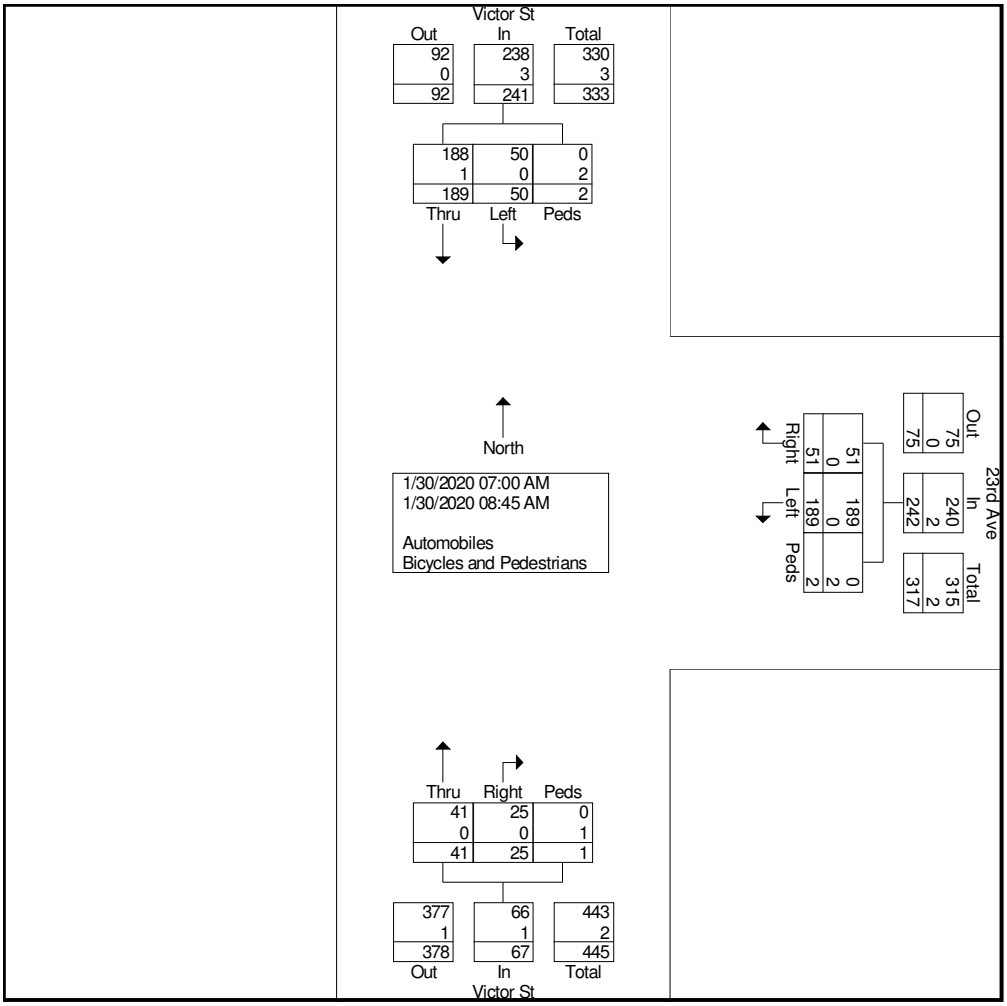
Groups Printed- Automobiles - Bicycles and Pedestrians

	23rd Ave Westbound				Victor St Northbound				Victor St Southbound				
Start Time	Left	Right	Peds	App. Total	Thru	Right	Peds	App. Total	Left	Thru	Peds	App. Total	Int. Total
07:00 AM	11	2	0	13	7	0	0	7	4	15	0	19	39
07:15 AM	19	5	0	24	3	1	0	4	3	26	0	29	57
07:30 AM	34	4	0	38	10	4	0	14	13	33	2	48	100
07:45 AM	43	3	0	46	2	7	0	9	9	34	0	43	98
Total	107	14	0	121	22	12	0	34	29	108	2	139	294
08:00 AM	26	16	2	44	4	2	0	6	4	18	0	22	72
08:15 AM	18	6	0	24	7	4	1	12	5	20	0	25	61
08:30 AM	18	10	0	28	3	3	0	6	8	24	0	32	66
08:45 AM	20	5	0	25	5	4	0	9	4	19	0	23	57
Total	82	37	2	121	19	13	1	33	21	81	0	102	256
Grand Total	189	51	2	242	41	25	1	67	50	189	2	241	550
Apprch %	78.1	21.1	0.8		61.2	37.3	1.5		20.7	78.4	0.8		
Total %	34.4	9.3	0.4	44	7.5	4.5	0.2	12.2	9.1	34.4	0.4	43.8	
Automobiles	189	51	0	240	41	25	0	66	50	188	0	238	544
% Automobiles	100	100	0	99.2	100	100	0	98.5	100	99.5	0	98.8	98.9
Bicycles and Pedestrians	0	0	2	2	0	0	1	1	0	1	2	3	6
% Bicycles and Pedestrians	0	0	100	0.8	0	0	100	1.5	0	0.5	100	1.2	1.1

Ridgeview Data Collection

Aurora, CO
Fitzsimons Innovation Campus
AM Peak
23rd Ave & Victor St South Intersection

File Name : 23rd and Victor South AM
Site Code : IPO 486
Start Date : 1/30/2020
Page No : 2

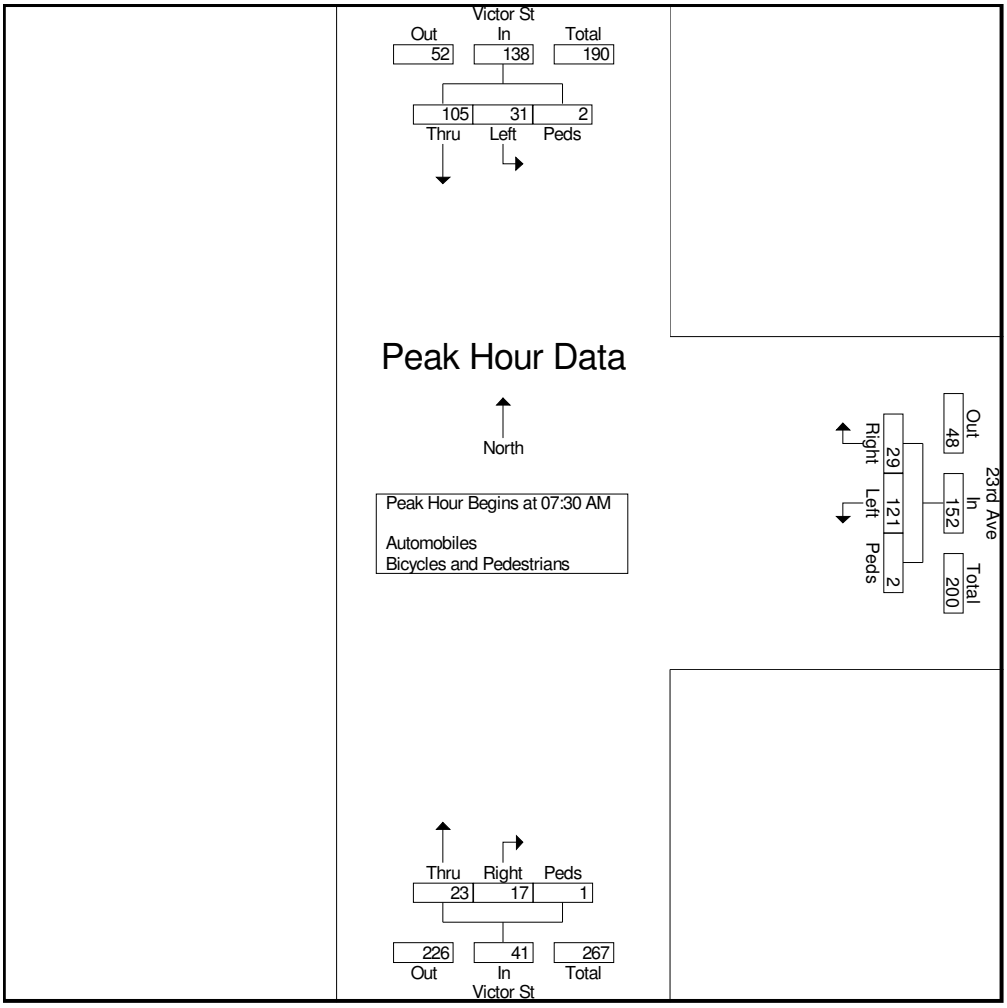


Ridgeview Data Collection

Aurora, CO
Fitzsimons Innovation Campus
AM Peak
23rd Ave & Victor St South Intersection

File Name : 23rd and Victor South AM
Site Code : IPO 486
Start Date : 1/30/2020
Page No : 3

	23rd Ave Westbound				Victor St Northbound				Victor St Southbound				
Start Time	Left	Right	Peds	App. Total	Thru	Right	Peds	App. Total	Left	Thru	Peds	App. Total	Int. Total
Peak Hour Analysis From 07:00 AM to 08:45 AM - Peak 1 of 1													
Peak Hour for Entire Intersection Begins at 07:30 AM													
07:30 AM	34	4	0	38	**10**	4	0	**14**	**13**	33	**2**	**48**	**100**
07:45 AM	**43**	3	0	**46**	2	**7**	0	9	9	**34**	0	43	98
08:00 AM	26	**16**	**2**	44	4	2	0	6	4	18	0	22	72
08:15 AM	18	6	0	24	7	4	**1**	12	5	20	0	25	61
Total Volume	121	29	2	152	23	17	1	41	31	105	2	138	331
% App. Total	79.6	19.1	1.3		56.1	41.5	2.4		22.5	76.1	1.4		
PHF	.703	.453	.250	.826	.575	.607	.250	.732	.596	.772	.250	.719	.828



Ridgeview Data Collection

Aurora, CO
Fitzsimons Innovation Campus
PM Peak
23rd Ave & Victor St South Intersection

File Name : 23rd and Victor South PM
Site Code : IPO 486
Start Date : 1/30/2020
Page No : 1

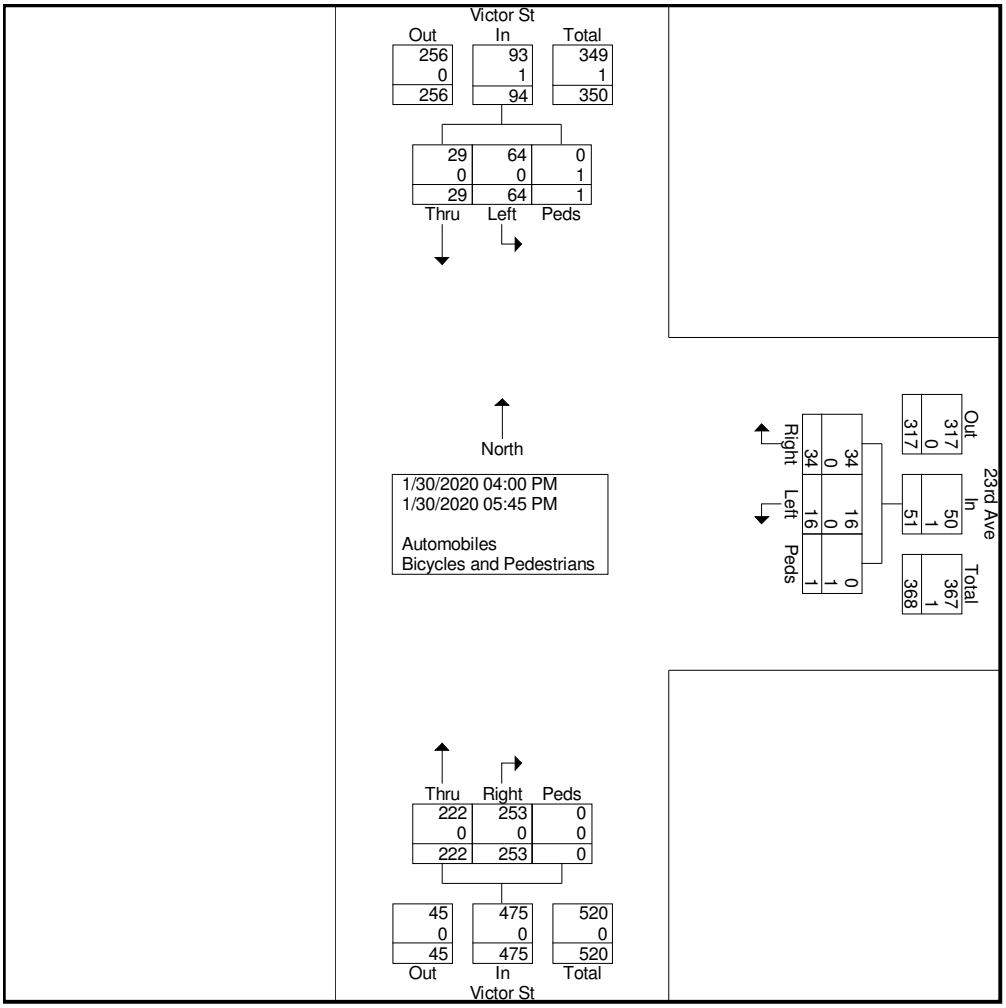
Groups Printed- Automobiles - Bicycles and Pedestrians

	23rd Ave Westbound				Victor St Northbound				Victor St Southbound				
Start Time	Left	Right	Peds	App. Total	Thru	Right	Peds	App. Total	Left	Thru	Peds	App. Total	Int. Total
04:00 PM	3	3	0	6	20	51	0	71	14	1	0	15	92
04:15 PM	3	6	0	9	26	33	0	59	8	5	0	13	81
04:30 PM	1	5	0	6	34	32	0	66	6	2	0	8	80
04:45 PM	2	4	1	7	31	45	0	76	10	8	1	19	102
Total	9	18	1	28	111	161	0	272	38	16	1	55	355
05:00 PM	3	5	0	8	33	43	0	76	16	8	0	24	108
05:15 PM	2	6	0	8	34	28	0	62	4	2	0	6	76
05:30 PM	2	5	0	7	22	11	0	33	2	2	0	4	44
05:45 PM	0	0	0	0	22	10	0	32	4	1	0	5	37
Total	7	16	0	23	111	92	0	203	26	13	0	39	265
Grand Total	16	34	1	51	222	253	0	475	64	29	1	94	620
Apprch %	31.4	66.7	2		46.7	53.3	0		68.1	30.9	1.1		
Total %	2.6	5.5	0.2	8.2	35.8	40.8	0	76.6	10.3	4.7	0.2	15.2	
Automobiles	16	34	0	50	222	253	0	475	64	29	0	93	618
% Automobiles	100	100	0	98	100	100	0	100	100	100	0	98.9	99.7
Bicycles and Pedestrians	0	0	1	1	0	0	0	0	0	0	1	1	2
% Bicycles and Pedestrians	0	0	100	2	0	0	0	0	0	0	100	1.1	0.3

Ridgeview Data Collection

Aurora, CO
Fitzsimons Innovation Campus
PM Peak
23rd Ave & Victor St South Intersection

File Name : 23rd and Victor South PM
Site Code : IPO 486
Start Date : 1/30/2020
Page No : 2

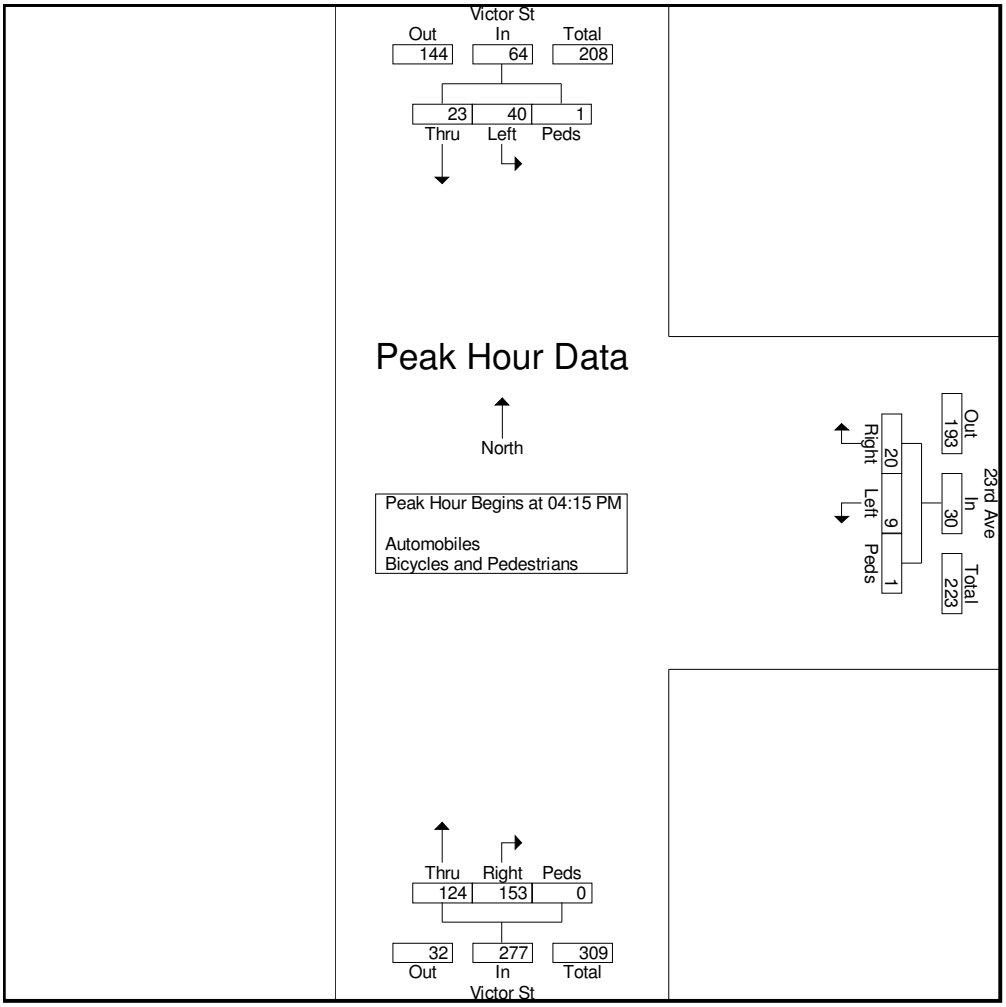


Ridgeview Data Collection

Aurora, CO
Fitzsimons Innovation Campus
PM Peak
23rd Ave & Victor St South Intersection

File Name : 23rd and Victor South PM
Site Code : IPO 486
Start Date : 1/30/2020
Page No : 3

	23rd Ave Westbound				Victor St Northbound				Victor St Southbound				
Start Time	Left	Right	Peds	App. Total	Thru	Right	Peds	App. Total	Left	Thru	Peds	App. Total	Int. Total
Peak Hour Analysis From 04:00 PM to 05:45 PM - Peak 1 of 1													
Peak Hour for Entire Intersection Begins at 04:15 PM													
04:15 PM	**3**	**6**	0	**9**	26	33	0	59	8	5	0	13	81
04:30 PM	1	5	0	6	**34**	32	0	66	6	2	0	8	80
04:45 PM	2	4	**1**	7	31	**45**	0	**76**	10	**8**	**1**	19	102
05:00 PM	3	5	0	8	33	43	0	76	**16**	8	0	**24**	**108**
Total Volume	9	20	1	30	124	153	0	277	40	23	1	64	371
% App. Total	30	66.7	3.3		44.8	55.2	0		62.5	35.9	1.6		
PHF	.750	.833	.250	.833	.912	.850	.000	.911	.625	.719	.250	.667	.859



Ridgeview Data Collection

Aurora, CO
Fitzsimons Innovation Campus
AM Peak
23rd Ave & Fitzsimons Pkwy

File Name : 23rd and Fitzsimons AM
Site Code : IPO 486
Start Date : 1/28/2020
Page No : 1

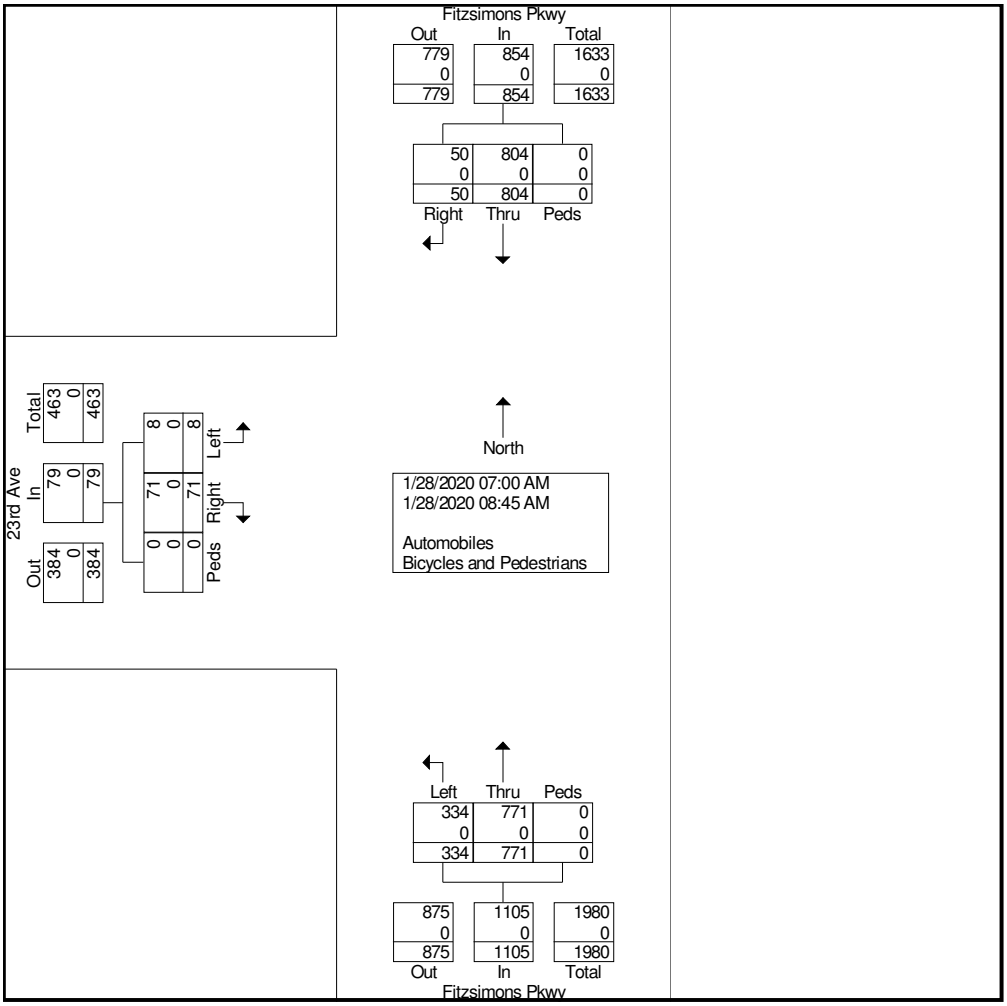
Groups Printed- Automobiles - Bicycles and Pedestrians

	23rd Ave Eastbound				Fitzsimons Pkwy Northbound				Fitzsimons Pkwy Southbound				
Start Time	Left	Right	Peds	App. Total	Left	Thru	Peds	App. Total	Thru	Right	Peds	App. Total	Int. Total
07:00 AM	1	5	0	6	33	96	0	129	105	1	0	106	241
07:15 AM	1	4	0	5	49	102	0	151	110	4	0	114	270
07:30 AM	1	10	0	11	36	119	0	155	131	7	0	138	304
07:45 AM	0	12	0	12	53	132	0	185	134	9	0	143	340
Total	3	31	0	34	171	449	0	620	480	21	0	501	1155
08:00 AM	0	9	0	9	39	115	0	154	105	8	0	113	276
08:15 AM	1	8	0	9	50	70	0	120	105	8	0	113	242
08:30 AM	3	11	0	14	32	77	0	109	60	9	0	69	192
08:45 AM	1	12	0	13	42	60	0	102	54	4	0	58	173
Total	5	40	0	45	163	322	0	485	324	29	0	353	883
Grand Total	8	71	0	79	334	771	0	1105	804	50	0	854	2038
Apprch %	10.1	89.9	0		30.2	69.8	0		94.1	5.9	0		
Total %	0.4	3.5	0	3.9	16.4	37.8	0	54.2	39.5	2.5	0	41.9	
Automobiles	8	71	0	79	334	771	0	1105	804	50	0	854	2038
% Automobiles	100	100	0	100	100	100	0	100	100	100	0	100	100
Bicycles and Pedestrians	0	0	0	0	0	0	0	0	0	0	0	0	0
% Bicycles and Pedestrians	0	0	0	0	0	0	0	0	0	0	0	0	0

Ridgeview Data Collection

Aurora, CO
Fitzsimons Innovation Campus
AM Peak
23rd Ave & Fitzsimons Pkwy

File Name : 23rd and Fitzsimons AM
Site Code : IPO 486
Start Date : 1/28/2020
Page No : 2

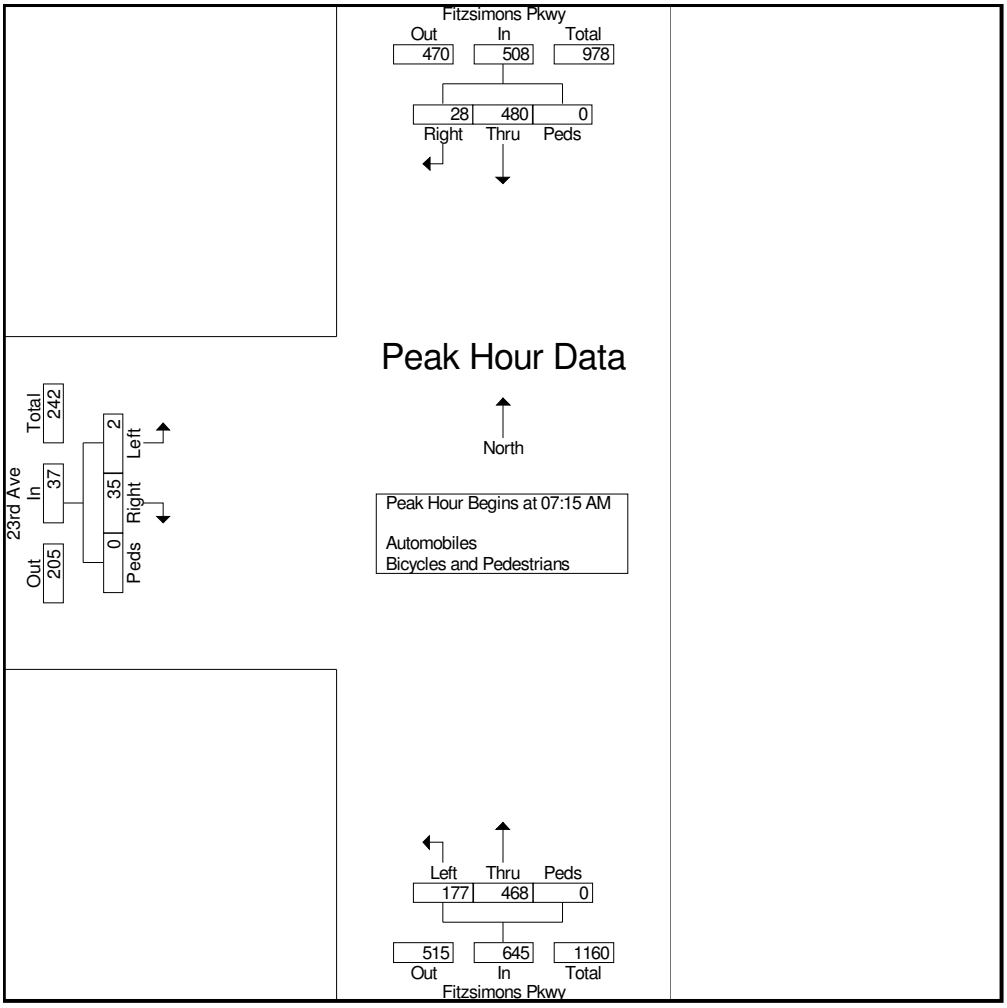


Ridgeview Data Collection

Aurora, CO
Fitzsimons Innovation Campus
AM Peak
23rd Ave & Fitzsimons Pkwy

File Name : 23rd and Fitzsimons AM
Site Code : IPO 486
Start Date : 1/28/2020
Page No : 3

	23rd Ave Eastbound				Fitzsimons Pkwy Northbound				Fitzsimons Pkwy Southbound				
Start Time	Left	Right	Peds	App. Total	Left	Thru	Peds	App. Total	Thru	Right	Peds	App. Total	Int. Total
Peak Hour Analysis From 07:00 AM to 08:45 AM - Peak 1 of 1													
Peak Hour for Entire Intersection Begins at 07:15 AM													
07:15 AM	**1**	4	0	5	49	102	0	151	110	4	0	114	270
07:30 AM	1	10	0	11	36	119	0	155	131	7	0	138	304
07:45 AM	0	**12**	0	**12**	**53**	**132**	0	**185**	**134**	**9**	0	**143**	**340**
08:00 AM	0	9	0	9	39	115	0	154	105	8	0	113	276
Total Volume	2	35	0	37	177	468	0	645	480	28	0	508	1190
% App. Total	5.4	94.6	0		27.4	72.6	0		94.5	5.5	0		
PHF	.500	.729	.000	.771	.835	.886	.000	.872	.896	.778	.000	.888	.875



Ridgeview Data Collection

Aurora, CO
Fitzsimons Innovation Campus
PM Peak
23rd Ave & Fitzsimons Pkwy

File Name : 23rd and Fitzsimons PM
Site Code : IPO 486
Start Date : 1/28/2020
Page No : 1

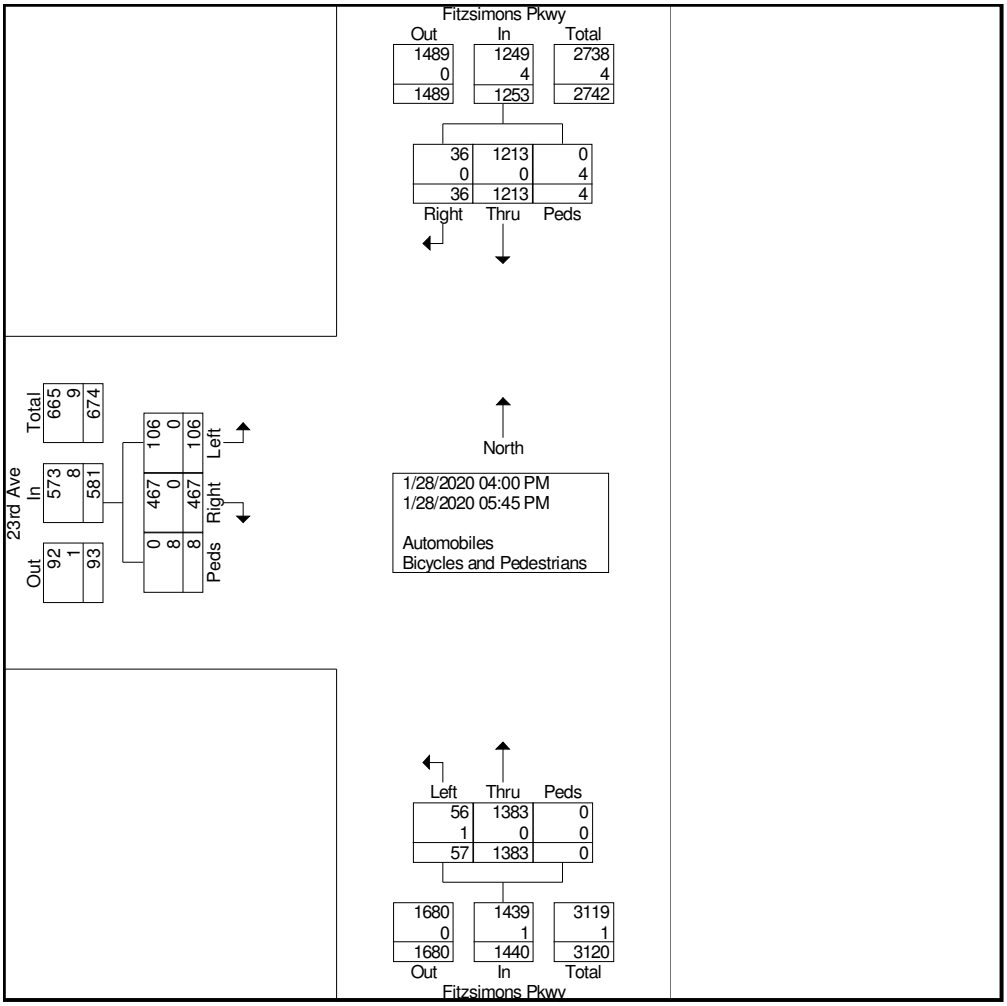
Groups Printed- Automobiles - Bicycles and Pedestrians

	23rd Ave Eastbound				Fitzsimons Pkwy Northbound				Fitzsimons Pkwy Southbound				
Start Time	Left	Right	Peds	App. Total	Left	Thru	Peds	App. Total	Thru	Right	Peds	App. Total	Int. Total
04:00 PM	8	69	2	79	12	125	0	137	169	5	2	176	392
04:15 PM	7	50	1	58	6	151	0	157	145	3	0	148	363
04:30 PM	9	69	0	78	10	172	0	182	129	5	0	134	394
04:45 PM	17	52	2	71	5	211	0	216	147	6	0	153	440
Total	41	240	5	286	33	659	0	692	590	19	2	611	1589
05:00 PM	28	83	0	111	9	219	0	228	173	8	0	181	520
05:15 PM	14	61	3	78	7	216	0	223	182	7	2	191	492
05:30 PM	12	55	0	67	4	176	0	180	152	0	0	152	399
05:45 PM	11	28	0	39	4	113	0	117	116	2	0	118	274
Total	65	227	3	295	24	724	0	748	623	17	2	642	1685
Grand Total	106	467	8	581	57	1383	0	1440	1213	36	4	1253	3274
Apprch %	18.2	80.4	1.4		4	96	0		96.8	2.9	0.3		
Total %	3.2	14.3	0.2	17.7	1.7	42.2	0	44	37	1.1	0.1	38.3	
Automobiles	106	467	0	573	56	1383	0	1439	1213	36	0	1249	3261
% Automobiles	100	100	0	98.6	98.2	100	0	99.9	100	100	0	99.7	99.6
Bicycles and Pedestrians	0	0	8	8	1	0	0	1	0	0	4	4	13
% Bicycles and Pedestrians	0	0	100	1.4	1.8	0	0	0.1	0	0	100	0.3	0.4

Ridgeview Data Collection

Aurora, CO
Fitzsimons Innovation Campus
PM Peak
23rd Ave & Fitzsimons Pkwy

File Name : 23rd and Fitzsimons PM
Site Code : IPO 486
Start Date : 1/28/2020
Page No : 2

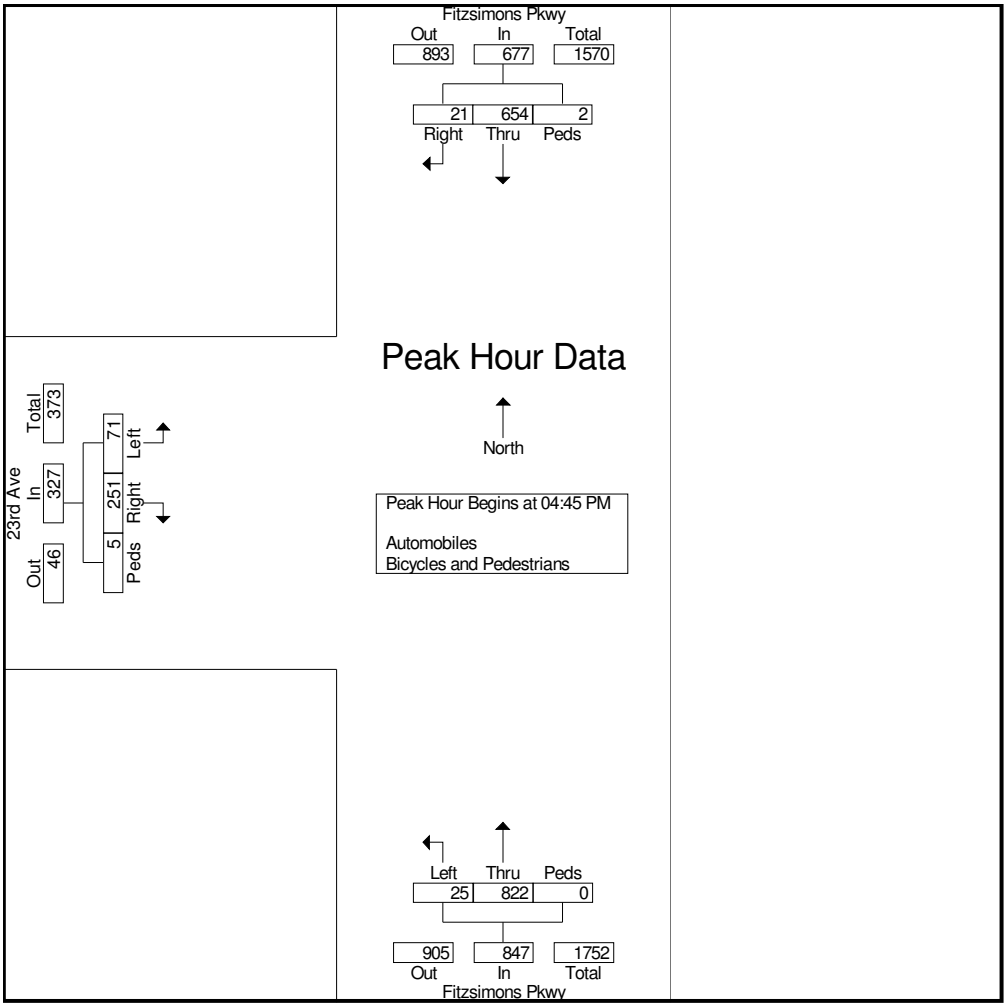


Ridgeview Data Collection

Aurora, CO
Fitzsimons Innovation Campus
PM Peak
23rd Ave & Fitzsimons Pkwy

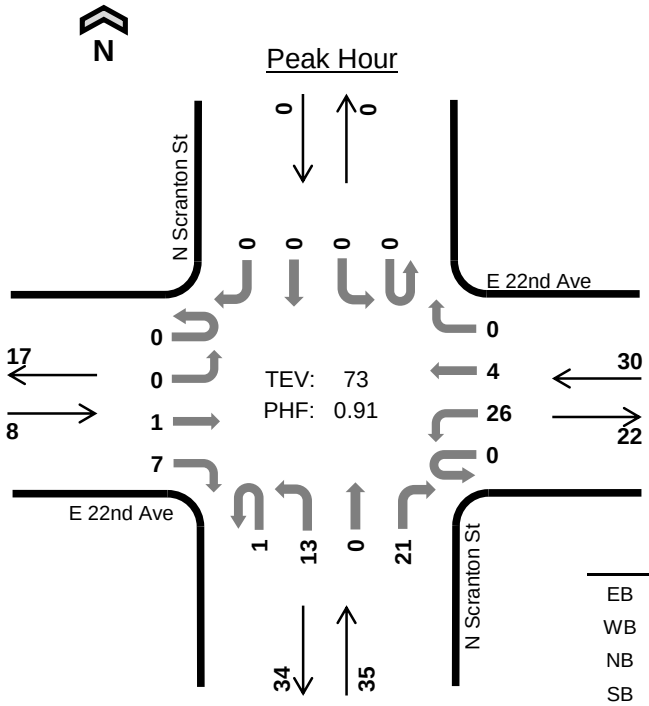
File Name : 23rd and Fitzsimons PM
Site Code : IPO 486
Start Date : 1/28/2020
Page No : 3

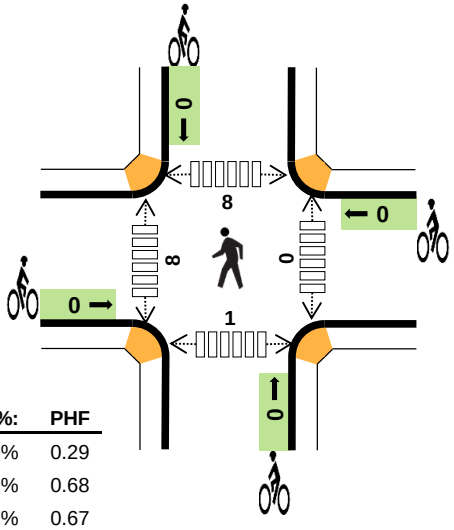
	23rd Ave Eastbound				Fitzsimons Pkwy Northbound				Fitzsimons Pkwy Southbound				
Start Time	Left	Right	Peds	App. Total	Left	Thru	Peds	App. Total	Thru	Right	Peds	App. Total	Int. Total
Peak Hour Analysis From 04:00 PM to 05:45 PM - Peak 1 of 1													
Peak Hour for Entire Intersection Begins at 04:45 PM													
04:45 PM	17	52	2	71	5	211	0	216	147	6	0	153	440
05:00 PM	**28**	**83**	0	**111**	**9**	**219**	0	**228**	173	**8**	0	181	**520**
05:15 PM	14	61	**3**	78	7	216	0	223	**182**	7	**2**	**191**	492
05:30 PM	12	55	0	67	4	176	0	180	152	0	0	152	399
Total Volume	71	251	5	327	25	822	0	847	654	21	2	677	1851
% App. Total	21.7	76.8	1.5		3	97	0		96.6	3.1	0.3		
PHF	.634	.756	.417	.736	.694	.938	.000	.929	.898	.656	.250	.886	.890



N Scranton St
E 22nd Ave

Date: Tue, May 07, 2019
Count Period: 7:00 AM to 9:00 AM
Peak Hour: 8:00 AM to 9:00 AM





	HV %:	PHF
EB	25.0%	0.29
WB	10.0%	0.68
NB	14.3%	0.67
SB	-	-
TOTAL	13.7%	0.91

Two-Hour Count Summaries

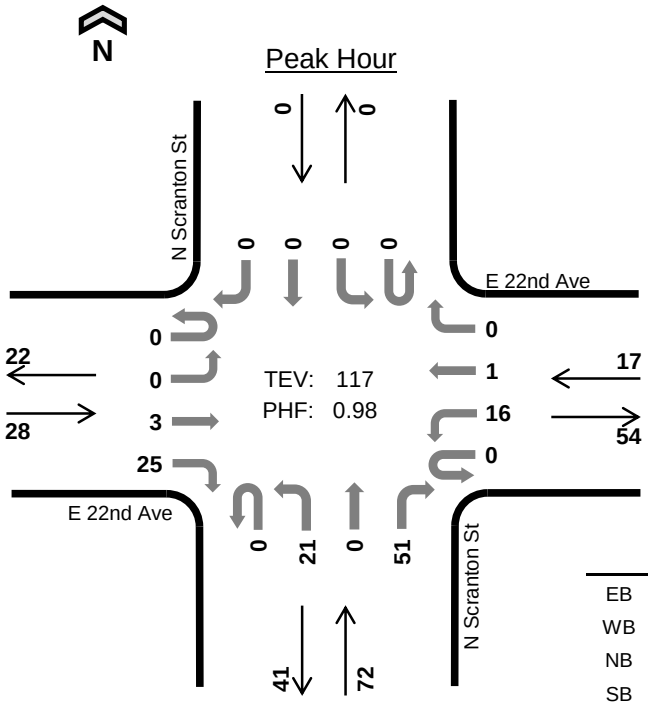
Interval Start	E 22nd Ave Eastbound				E 22nd Ave Westbound				N Scranton St Northbound				N Scranton St Southbound				15-min Total	Rolling One Hour
	UT	LT	TH	RT	UT	LT	TH	RT	UT	LT	TH	RT	UT	LT	TH	RT		
7:00 AM	0	0	0	1	0	3	1	0	0	5	0	4	0	0	0	0	14	0
7:15 AM	0	0	0	1	2	5	0	0	0	2	0	3	0	0	0	0	13	0
7:30 AM	0	0	0	2	0	5	0	0	0	2	0	4	0	0	0	0	13	0
7:45 AM	0	0	1	4	0	5	1	0	0	2	0	6	0	0	0	0	19	59
8:00 AM	**0**	**0**	**0**	**0**	**0**	**8**	**0**	**0**	**0**	**1**	**0**	**7**	**0**	**0**	**0**	**0**	**16**	61
8:15 AM	**0**	**0**	**1**	**6**	**0**	**5**	**0**	**0**	**0**	**5**	**0**	**1**	**0**	**0**	**0**	**0**	**18**	66
8:30 AM	**0**	**0**	**0**	**0**	**0**	**8**	**3**	**0**	**1**	**1**	**0**	**6**	**0**	**0**	**0**	**0**	**19**	72
8:45 AM	**0**	**0**	**0**	**1**	**0**	**5**	**1**	**0**	**0**	**6**	**0**	**7**	**0**	**0**	**0**	**0**	**20**	**73**
Count Total	0	0	2	15	2	44	6	0	1	24	0	38	0	0	0	0	132	0
Peak Hour	**0**	**0**	**1**	**7**	**0**	**26**	**4**	**0**	**1**	**13**	**0**	**21**	**0**	**0**	**0**	**0**	**73**	**0**

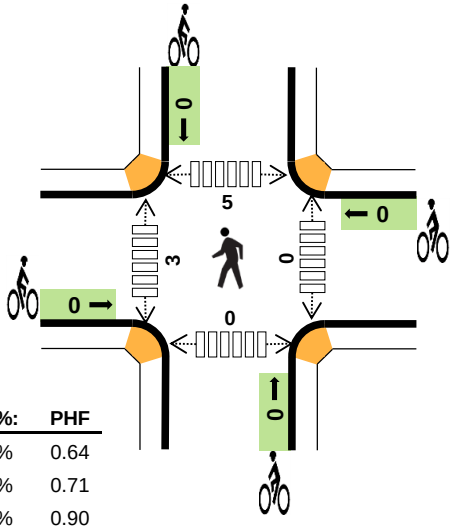
Note: Two-hour count summary volumes include heavy vehicles but exclude bicycles in overall count.

Interval Start	Heavy Vehicle Totals					Bicycles					Pedestrians (Crossing Leg)				
	EB	WB	NB	SB	Total	EB	WB	NB	SB	Total	East	West	North	South	Total
7:00 AM	0	0	0	0	*0*	0	0	0	0	*0*	0	8	4	0	*12*
7:15 AM	0	0	0	0	*0*	0	0	0	0	*0*	0	69	36	0	*105*
7:30 AM	0	0	3	0	*3*	0	0	0	0	*0*	0	24	24	0	*48*
7:45 AM	1	0	0	0	*1*	0	0	0	0	*0*	0	16	9	0	*25*
8:00 AM	**0**	**1**	**0**	**0**	***1***	**0**	**0**	**0**	**0**	***0***	**0**	**2**	**2**	**0**	*4*
8:15 AM	**2**	**0**	**1**	**0**	***3***	**0**	**0**	**0**	**0**	***0***	**0**	**3**	**3**	**0**	*6*
8:30 AM	**0**	**2**	**2**	**0**	***4***	**0**	**0**	**0**	**0**	***0***	**0**	**1**	**1**	**1**	*3*
8:45 AM	**0**	**0**	**2**	**0**	***2***	**0**	**0**	**0**	**0**	***0***	**0**	**2**	**2**	**0**	***4***
Count Total	3	3	8	0	*14*	0	0	0	0	*0*	0	125	81	1	*207*
Peak Hour	**2**	**3**	**5**	**0**	***10***	**0**	**0**	**0**	**0**	***0***	**0**	**8**	**8**	**1**	***17***

N Scranton St
E 22nd Ave

Date: Tue, May 07, 2019
Count Period: 4:00 PM to 6:00 PM
Peak Hour: 4:15 PM to 5:15 PM





	HV %:	PHF
EB	0.0%	0.64
WB	0.0%	0.71
NB	0.0%	0.90
SB	-	-
TOTAL	0.0%	0.98

Two-Hour Count Summaries

Interval Start	E 22nd Ave Eastbound				E 22nd Ave Westbound				N Scranton St Northbound				N Scranton St 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	0	0	4	0	5	0	0	0	2	0	11	0	0	0	0	22	0
4:15 PM	**0**	**0**	**2**	**9**	**0**	**1**	**0**	**0**	**0**	**7**	**0**	**11**	**0**	**0**	**0**	**0**	**30**	0
4:30 PM	**0**	**0**	**0**	**6**	**0**	**5**	**0**	**0**	**0**	**3**	**0**	**15**	**0**	**0**	**0**	**0**	**29**	0
4:45 PM	**0**	**0**	**0**	**6**	**0**	**6**	**0**	**0**	**0**	**4**	**0**	**12**	**0**	**0**	**0**	**0**	**28**	109
5:00 PM	**0**	**0**	**1**	**4**	**0**	**4**	**1**	**0**	**0**	**7**	**0**	**13**	**0**	**0**	**0**	**0**	**30**	**117**
5:15 PM	0	0	2	3	0	1	0	0	0	9	0	8	0	0	0	0	23	110
5:30 PM	0	0	0	2	0	7	0	0	0	1	0	11	0	0	0	0	21	102
5:45 PM	0	0	0	1	0	6	0	0	0	0	0	10	0	0	0	0	17	91
Count Total	0	0	5	35	0	35	1	0	0	33	0	91	0	0	0	0	200	0
Peak Hour	**0**	**0**	**3**	**25**	**0**	**16**	**1**	**0**	**0**	**21**	**0**	**51**	**0**	**0**	**0**	**0**	**117**	**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	0	0	0	0	*0*	0	0	0	0	*0*	0	1	1	0	*2*
4:15 PM	**0**	**0**	**0**	**0**	***0***	**0**	**0**	**0**	**0**	***0***	**0**	**3**	**5**	**0**	*8*
4:30 PM	**0**	**0**	**0**	**0**	***0***	**0**	**0**	**0**	**0**	***0***	**0**	**0**	**0**	**0**	*0*
4:45 PM	**0**	**0**	**0**	**0**	***0***	**0**	**0**	**0**	**0**	***0***	**0**	**0**	**0**	**0**	*0*
5:00 PM	**0**	**0**	**0**	**0**	***0***	**0**	**0**	**0**	**0**	***0***	**0**	**0**	**0**	**0**	***0***
5:15 PM	0	0	0	0	*0*	0	0	0	0	*0*	0	2	2	0	*4*
5:30 PM	0	0	0	0	*0*	0	1	0	0	*1*	0	0	0	0	*0*
5:45 PM	0	0	0	0	*0*	0	0	0	0	*0*	0	0	0	0	*0*
Count Total	0	0	0	0	*0*	0	1	0	0	*1*	0	6	8	0	*14*
Peak Hour	**0**	**0**	**0**	**0**	***0***	**0**	**0**	**0**	**0**	***0***	**0**	**3**	**5**	**0**	***8***

Ridgeview Data Collection

Aurora, CO
Fitzsimons Innovation Campus
AM Peak
22nd Ave and Ursula St

File Name : 22nd and Ursula AM
Site Code : IPO 486
Start Date : 1/28/2020
Page No : 1

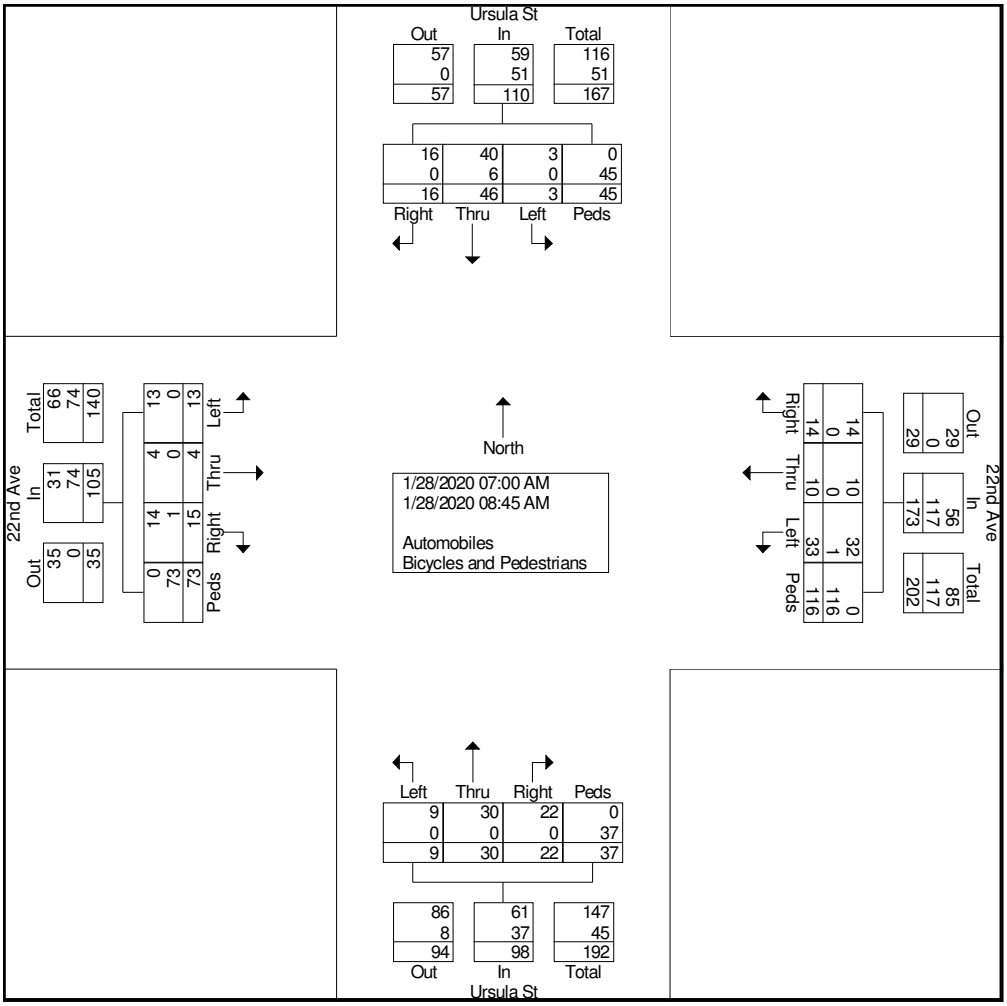
Groups Printed- Automobiles - Bicycles and Pedestrians

	22nd Ave Eastbound					22nd Ave Westbound					Ursula St Northbound					Ursula St Southbound					
Start Time	Left	Thru	Right	Peds	App. Total	Left	Thru	Right	Peds	App. Total	Left	Thru	Right	Peds	App. Total	Left	Thru	Right	Peds	App. Total	Int. Total
07:00 AM	1	2	2	3	8	6	2	3	7	18	2	3	3	0	8	0	1	1	7	9	43
07:15 AM	1	0	1	7	9	4	1	1	15	21	1	4	2	0	7	1	3	2	3	9	46
07:30 AM	1	1	4	12	18	5	3	4	13	25	0	3	2	2	7	0	4	2	8	14	64
07:45 AM	3	0	2	24	29	5	2	1	46	54	1	3	3	21	28	0	3	3	13	19	130
Total	6	3	9	46	64	20	8	9	81	118	4	13	10	23	50	1	11	8	31	51	283
08:00 AM	1	0	1	5	7	3	0	1	8	12	2	4	4	4	14	0	3	1	2	6	39
08:15 AM	4	0	2	8	14	2	0	1	2	5	1	4	3	0	8	0	16	3	0	19	46
08:30 AM	2	1	2	7	12	5	1	2	14	22	1	9	2	3	15	2	9	2	7	20	69
08:45 AM	0	0	1	7	8	3	1	1	11	16	1	0	3	7	11	0	7	2	5	14	49
Total	7	1	6	27	41	13	2	5	35	55	5	17	12	14	48	2	35	8	14	59	203
Grand Total	13	4	15	73	105	33	10	14	116	173	9	30	22	37	98	3	46	16	45	110	486
Apprch %	12.4	3.8	14.3	69.5		19.1	5.8	8.1	67.1		9.2	30.6	22.4	37.8		2.7	41.8	14.5	40.9		
Total %	2.7	0.8	3.1	15	21.6	6.8	2.1	2.9	23.9	35.6	1.9	6.2	4.5	7.6	20.2	0.6	9.5	3.3	9.3	22.6	
Automobiles	13	4	14	0	31	32	10	14	0	56	9	30	22	0	61	3	40	16	0	59	207
% Automobiles	100	100	93.3	0	29.5	97	100	100	0	32.4	100	100	100	0	62.2	100	87	100	0	53.6	42.6
Bicycles and Pedestrians	0	0	1	73	74	1	0	0	116	117	0	0	0	37	37	0	6	0	45	51	279
% Bicycles and Pedestrians	0	0	6.7	100	70.5	3	0	0	100	67.6	0	0	0	100	37.8	0	13	0	100	46.4	57.4

Ridgeview Data Collection

Aurora, CO
Fitzsimons Innovation Campus
AM Peak
22nd Ave and Ursula St

File Name : 22nd and Ursula AM
Site Code : IPO 486
Start Date : 1/28/2020
Page No : 2

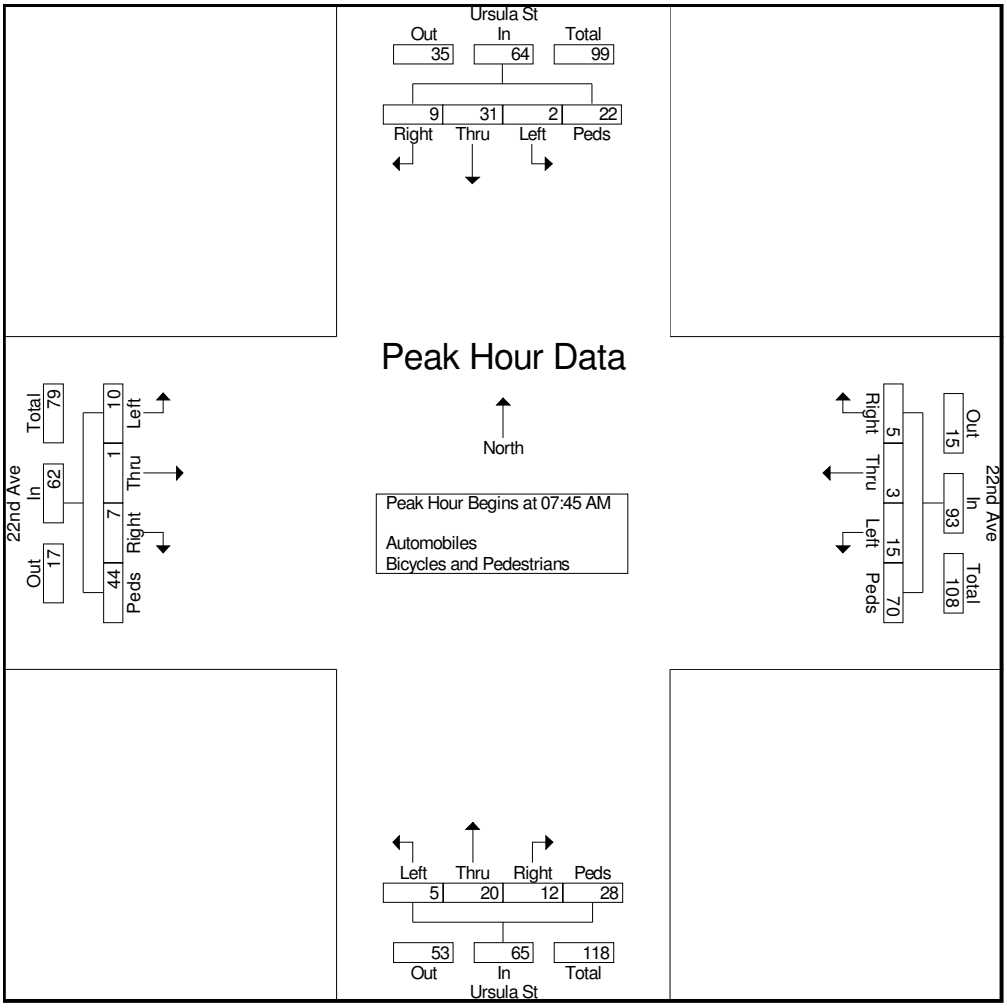


Ridgeview Data Collection

Aurora, CO
Fitzsimons Innovation Campus
AM Peak
22nd Ave and Ursula St

File Name : 22nd and Ursula AM
Site Code : IPO 486
Start Date : 1/28/2020
Page No : 3

	22nd Ave Eastbound					22nd Ave Westbound					Ursula St Northbound					Ursula St Southbound					
Start Time	Left	Thru	Right	Peds	App. Total	Left	Thru	Right	Peds	App. Total	Left	Thru	Right	Peds	App. Total	Left	Thru	Right	Peds	App. Total	Int. Total
Peak Hour Analysis From 07:00 AM to 08:45 AM - Peak 1 of 1																					
Peak Hour for Entire Intersection Begins at 07:45 AM																					
07:45 AM	3	0	**2**	**24**	**29**	**5**	**2**	1	**46**	**54**	1	3	3	**21**	**28**	0	3	**3**	**13**	19	**130**
08:00 AM	1	0	1	5	7	3	0	1	8	12	**2**	4	**4**	4	14	0	3	1	2	6	39
08:15 AM	**4**	0	2	8	14	2	0	1	2	5	1	4	3	0	8	0	**16**	3	0	19	46
08:30 AM	2	**1**	2	7	12	5	1	**2**	14	22	1	**9**	2	3	15	**2**	9	2	7	**20**	69
Total Volume	10	1	7	44	62	15	3	5	70	93	5	20	12	28	65	2	31	9	22	64	284
% App. Total	16.1	1.6	11.3	71		16.1	3.2	5.4	75.3		7.7	30.8	18.5	43.1		3.1	48.4	14.1	34.4		
PHF	.625	.250	.875	.458	.534	.750	.375	.625	.380	.431	.625	.556	.750	.333	.580	.250	.484	.750	.423	.800	.546



Ridgeview Data Collection

Aurora, CO
Fitzsimons Innovation Campus
PM Peak
22nd Ave and Ursula St

File Name : 22nd and Ursula PM
Site Code : IPO 486
Start Date : 1/28/2020
Page No : 1

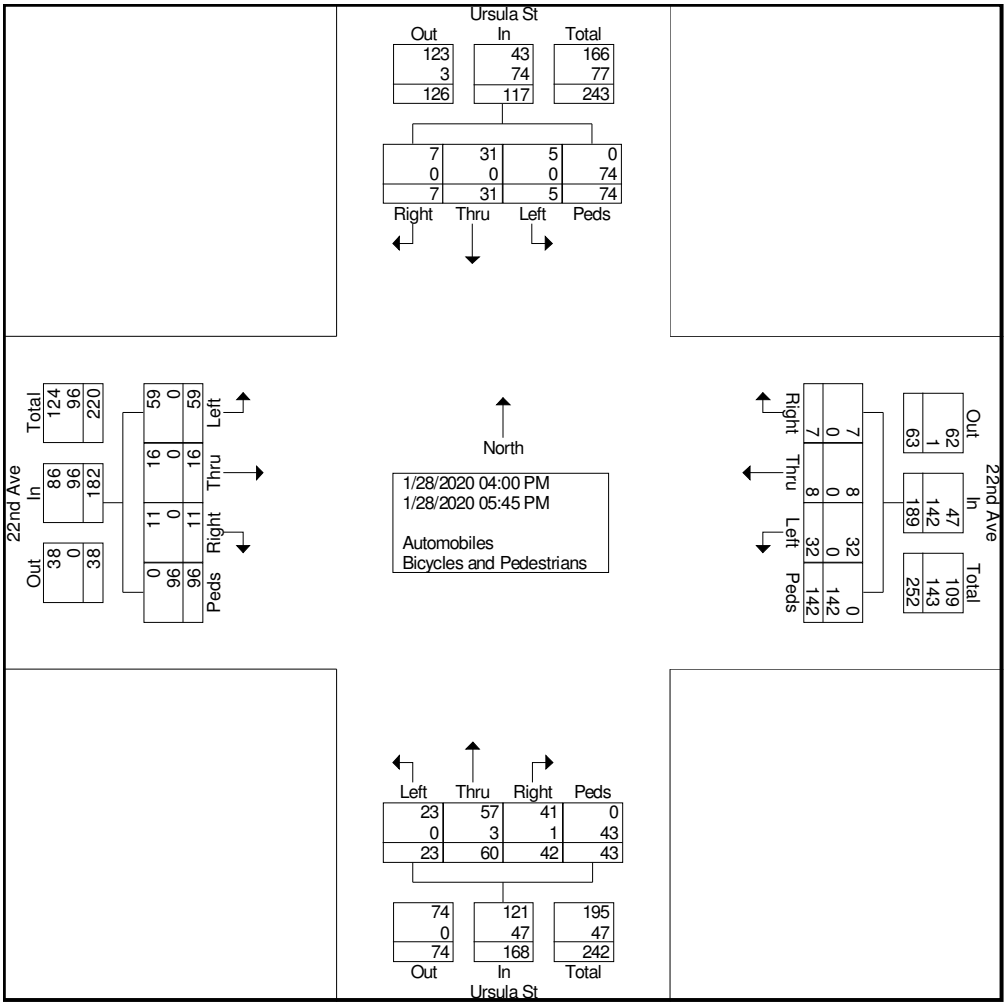
Groups Printed- Automobiles - Bicycles and Pedestrians

	22nd Ave Eastbound					22nd Ave Westbound					Ursula St Northbound					Ursula St Southbound					
Start Time	Left	Thru	Right	Peds	App. Total	Left	Thru	Right	Peds	App. Total	Left	Thru	Right	Peds	App. Total	Left	Thru	Right	Peds	App. Total	Int. Total
04:00 PM	4	2	0	11	17	6	1	0	15	22	1	2	4	5	12	0	7	1	9	17	68
04:15 PM	7	0	0	8	15	5	1	0	16	22	4	3	4	2	13	0	2	1	7	10	60
04:30 PM	6	1	1	16	24	2	0	1	17	20	0	10	2	5	17	1	1	1	9	12	73
04:45 PM	15	1	4	15	35	2	3	2	12	19	1	12	2	4	19	2	3	0	13	18	91
Total	32	4	5	50	91	15	5	3	60	83	6	27	12	16	61	3	13	3	38	57	292
05:00 PM	11	3	3	20	37	5	0	2	23	30	6	12	4	8	30	0	6	2	11	19	116
05:15 PM	8	3	0	6	17	4	1	0	22	27	5	11	5	7	28	0	6	2	6	14	86
05:30 PM	5	4	2	14	25	4	0	2	21	27	3	6	11	4	24	0	3	0	15	18	94
05:45 PM	3	2	1	6	12	4	2	0	16	22	3	4	10	8	25	2	3	0	4	9	68
Total	27	12	6	46	91	17	3	4	82	106	17	33	30	27	107	2	18	4	36	60	364
Grand Total	59	16	11	96	182	32	8	7	142	189	23	60	42	43	168	5	31	7	74	117	656
Apprch %	32.4	8.8	6	52.7		16.9	4.2	3.7	75.1		13.7	35.7	25	25.6		4.3	26.5	6	63.2		
Total %	9	2.4	1.7	14.6	27.7	4.9	1.2	1.1	21.6	28.8	3.5	9.1	6.4	6.6	25.6	0.8	4.7	1.1	11.3	17.8	
Automobiles	59	16	11	0	86	32	8	7	0	47	23	57	41	0	121	5	31	7	0	43	297
% Automobiles	100	100	100	0	47.3	100	100	100	0	24.9	100	95	97.6	0	72	100	100	100	0	36.8	45.3
Bicycles and Pedestrians	0	0	0	96	96	0	0	0	142	142	0	3	1	43	47	0	0	0	74	74	359
% Bicycles and Pedestrians	0	0	0	100	52.7	0	0	0	100	75.1	0	5	2.4	100	28	0	0	0	100	63.2	54.7

Ridgeview Data Collection

Aurora, CO
Fitzsimons Innovation Campus
PM Peak
22nd Ave and Ursula St

File Name : 22nd and Ursula PM
Site Code : IPO 486
Start Date : 1/28/2020
Page No : 2

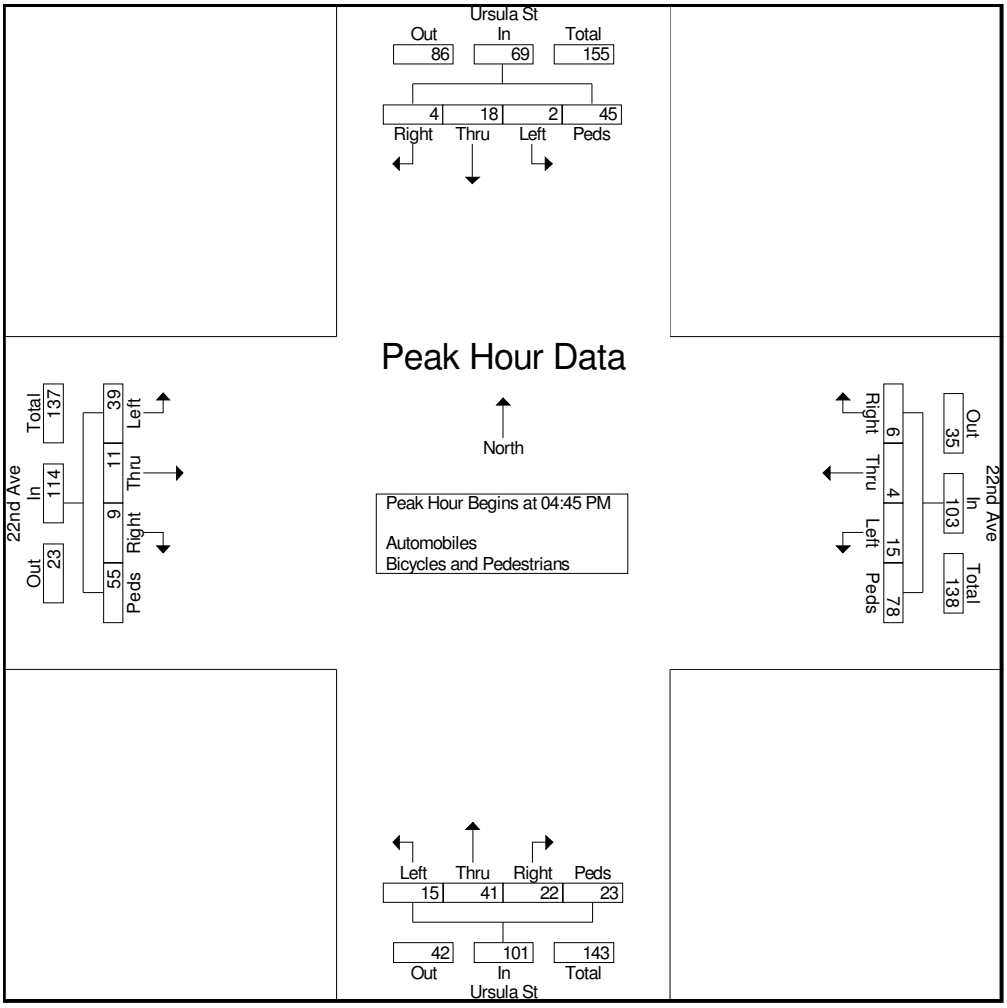


Ridgeview Data Collection

Aurora, CO
Fitzsimons Innovation Campus
PM Peak
22nd Ave and Ursula St

File Name : 22nd and Ursula PM
Site Code : IPO 486
Start Date : 1/28/2020
Page No : 3

	22nd Ave Eastbound					22nd Ave Westbound					Ursula St Northbound					Ursula St Southbound					
Start Time	Left	Thru	Right	Peds	App. Total	Left	Thru	Right	Peds	App. Total	Left	Thru	Right	Peds	App. Total	Left	Thru	Right	Peds	App. Total	Int. Total
Peak Hour Analysis From 04:00 PM to 05:45 PM - Peak 1 of 1																					
Peak Hour for Entire Intersection Begins at 04:45 PM																					
04:45 PM	**15**	1	**4**	15	35	2	**3**	**2**	12	19	1	**12**	2	4	19	**2**	3	0	13	18	91
05:00 PM	11	3	3	**20**	**37**	**5**	0	2	**23**	**30**	**6**	12	4	**8**	**30**	0	**6**	**2**	11	**19**	**116**
05:15 PM	8	3	0	6	17	4	1	0	22	27	5	11	5	7	28	0	6	2	6	14	86
05:30 PM	5	**4**	2	14	25	4	0	2	21	27	3	6	**11**	4	24	0	3	0	**15**	18	94
Total Volume	39	11	9	55	114	15	4	6	78	103	15	41	22	23	101	2	18	4	45	69	387
% App. Total	34.2	9.6	7.9	48.2		14.6	3.9	5.8	75.7		14.9	40.6	21.8	22.8		2.9	26.1	5.8	65.2		
PHF	.650	.688	.563	.688	.770	.750	.333	.750	.848	.858	.625	.854	.500	.719	.842	.250	.750	.500	.750	.908	.834



Ridgeview Data Collection

Aurora, CO
Fitzsimons Innovation Campus
AM Peak
Montview Blvd and Peoria St

File Name : Montview and Peoria AM
Site Code : IPO 486
Start Date : 1/28/2020
Page No : 1

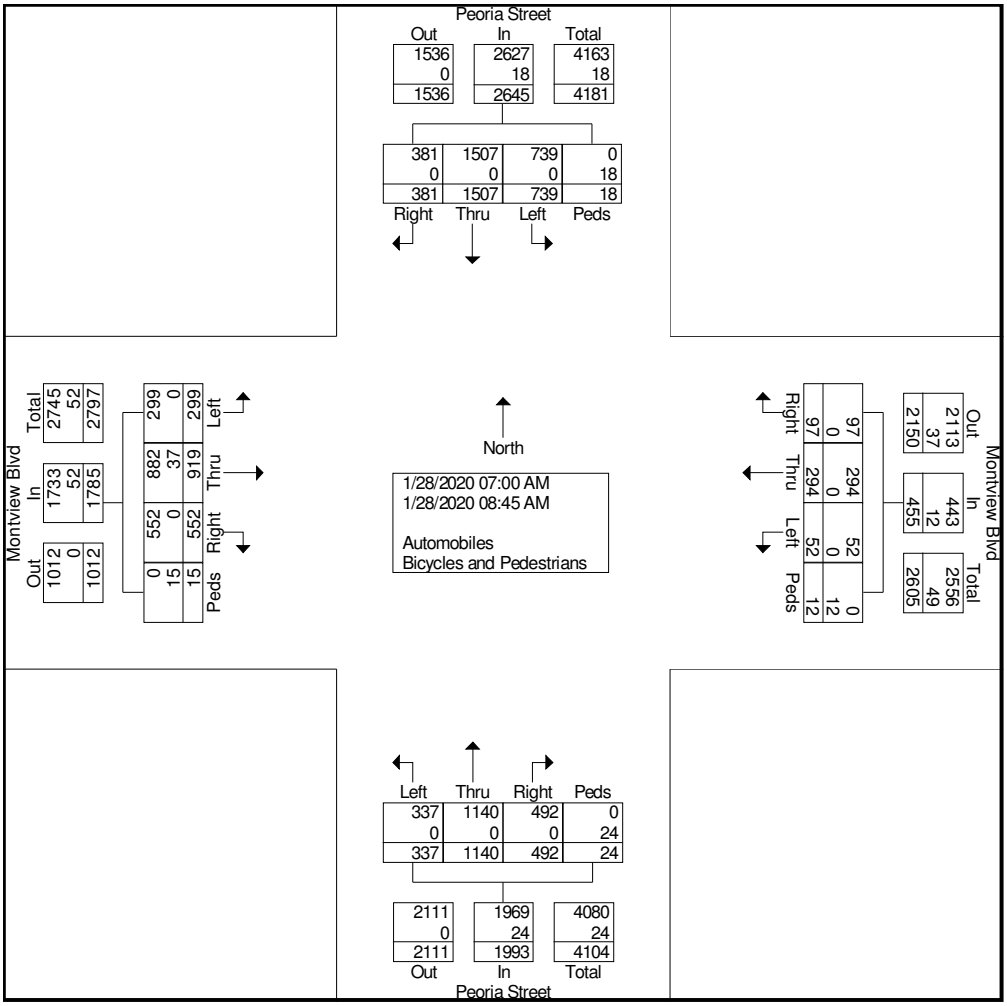
Groups Printed- Automobiles - Bicycles and Pedestrians

	Montview Blvd Eastbound					Montview Blvd Westbound					Peoria Street Northbound					Peoria Street Southbound					
Start Time	Left	Thru	Right	Peds	App. Total	Left	Thru	Right	Peds	App. Total	Left	Thru	Right	Peds	App. Total	Left	Thru	Right	Peds	App. Total	Int. Total
07:00 AM	29	91	55	2	177	5	21	11	1	38	36	139	40	2	217	110	178	41	1	330	762
07:15 AM	43	110	78	0	231	8	51	11	0	70	53	165	53	2	273	81	174	40	4	299	873
07:30 AM	35	111	82	1	229	9	53	16	1	79	50	147	65	1	263	105	231	45	2	383	954
07:45 AM	49	140	92	1	282	5	37	11	3	56	43	171	74	5	293	98	198	56	4	356	987
Total	156	452	307	4	919	27	162	49	5	243	182	622	232	10	1046	394	781	182	11	1368	3576
08:00 AM	37	108	75	6	226	5	38	11	2	56	56	162	77	5	300	97	212	70	0	379	961
08:15 AM	38	126	62	2	228	3	26	8	2	39	37	110	62	1	210	85	168	50	4	307	784
08:30 AM	34	134	62	3	233	12	43	15	1	71	22	126	71	3	222	72	175	35	1	283	809
08:45 AM	34	99	46	0	179	5	25	14	2	46	40	120	50	5	215	91	171	44	2	308	748
Total	143	467	245	11	866	25	132	48	7	212	155	518	260	14	947	345	726	199	7	1277	3302
Grand Total	299	919	552	15	1785	52	294	97	12	455	337	1140	492	24	1993	739	1507	381	18	2645	6878
Apprch %	16.8	51.5	30.9	0.8		11.4	64.6	21.3	2.6		16.9	57.2	24.7	1.2		27.9	57	14.4	0.7		
Total %	4.3	13.4	8	0.2	26	0.8	4.3	1.4	0.2	6.6	4.9	16.6	7.2	0.3	29	10.7	21.9	5.5	0.3	38.5	
Automobiles	299	882	552	0	1733	52	294	97	0	443	337	1140	492	0	1969	739	1507	381	0	2627	6772
% Automobiles	100	96	100	0	97.1	100	100	100	0	97.4	100	100	100	0	98.8	100	100	100	0	99.3	98.5
Bicycles and Pedestrians	0	37	0	15	52	0	0	0	12	12	0	0	0	24	24	0	0	0	18	18	106
% Bicycles and Pedestrians	0	4	0	100	2.9	0	0	0	100	2.6	0	0	0	100	1.2	0	0	0	100	0.7	1.5

Ridgeview Data Collection

Aurora, CO
Fitzsimons Innovation Campus
AM Peak
Montview Blvd and Peoria St

File Name : Montview and Peoria AM
Site Code : IPO 486
Start Date : 1/28/2020
Page No : 2

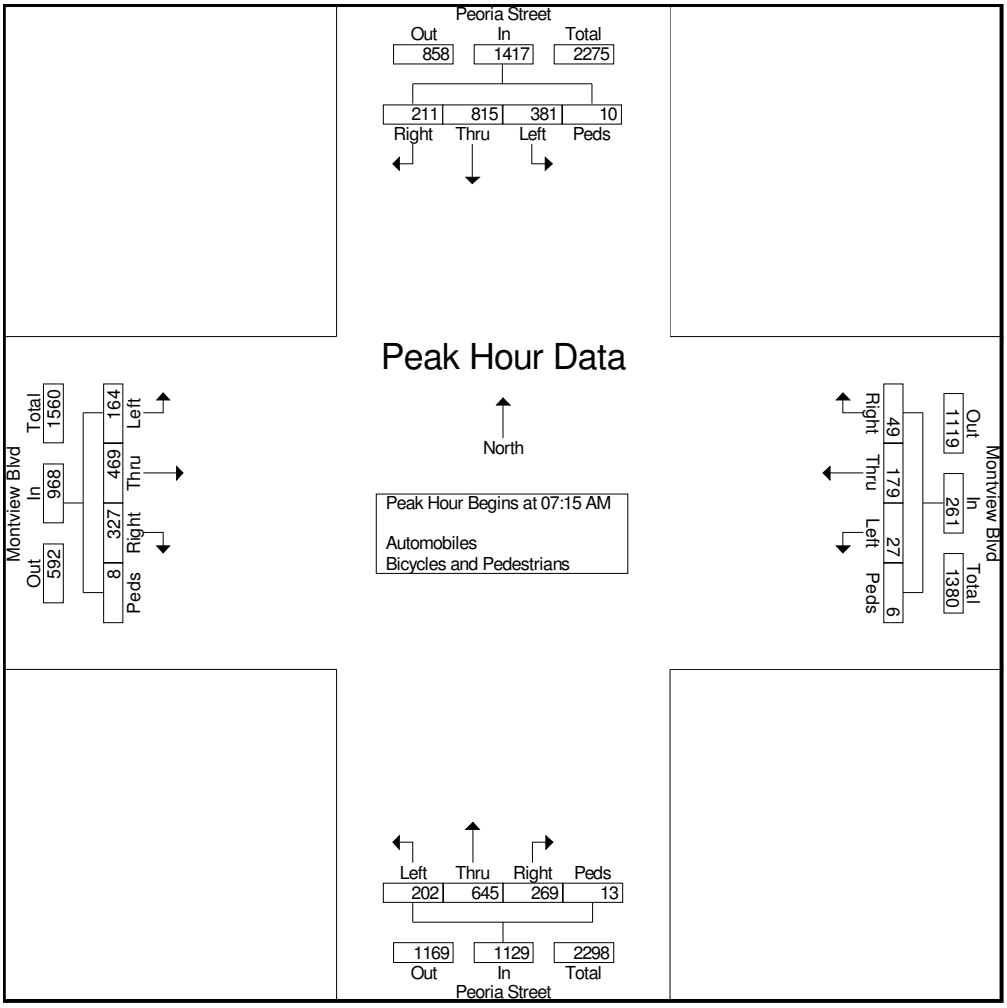


Ridgeview Data Collection

Aurora, CO
Fitzsimons Innovation Campus
AM Peak
Montview Blvd and Peoria St

File Name : Montview and Peoria AM
Site Code : IPO 486
Start Date : 1/28/2020
Page No : 3

	Montview Blvd Eastbound					Montview Blvd Westbound					Peoria Street Northbound					Peoria Street Southbound					
Start Time	Left	Thru	Right	Peds	App. Total	Left	Thru	Right	Peds	App. Total	Left	Thru	Right	Peds	App. Total	Left	Thru	Right	Peds	App. Total	Int. Total
Peak Hour Analysis From 07:00 AM to 08:45 AM - Peak 1 of 1																					
Peak Hour for Entire Intersection Begins at 07:15 AM																					
07:15 AM	43	110	78	0	231	8	51	11	0	70	53	165	53	2	273	81	174	40	**4**	299	873
07:30 AM	35	111	82	1	229	**9**	**53**	**16**	1	**79**	50	147	65	1	263	**105**	**231**	45	2	**383**	954
07:45 AM	**49**	**140**	**92**	1	**282**	5	37	11	**3**	56	43	**171**	74	**5**	293	98	198	56	4	356	**987**
08:00 AM	37	108	75	**6**	226	5	38	11	2	56	**56**	162	**77**	5	**300**	97	212	**70**	0	379	961
Total Volume	164	469	327	8	968	27	179	49	6	261	202	645	269	13	1129	381	815	211	10	1417	3775
% App. Total	16.9	48.5	33.8	0.8		10.3	68.6	18.8	2.3		17.9	57.1	23.8	1.2		26.9	57.5	14.9	0.7		
PHF	.837	.838	.889	.333	.858	.750	.844	.766	.500	.826	.902	.943	.873	.650	.941	.907	.882	.754	.625	.925	.956



Ridgeview Data Collection

Aurora, CO
Fitzsimons Innovation Campus
PM Peak
Montview Blvd and Peoria St

File Name : Montview and Peoria PM
Site Code : IPO 486
Start Date : 1/28/2020
Page No : 1

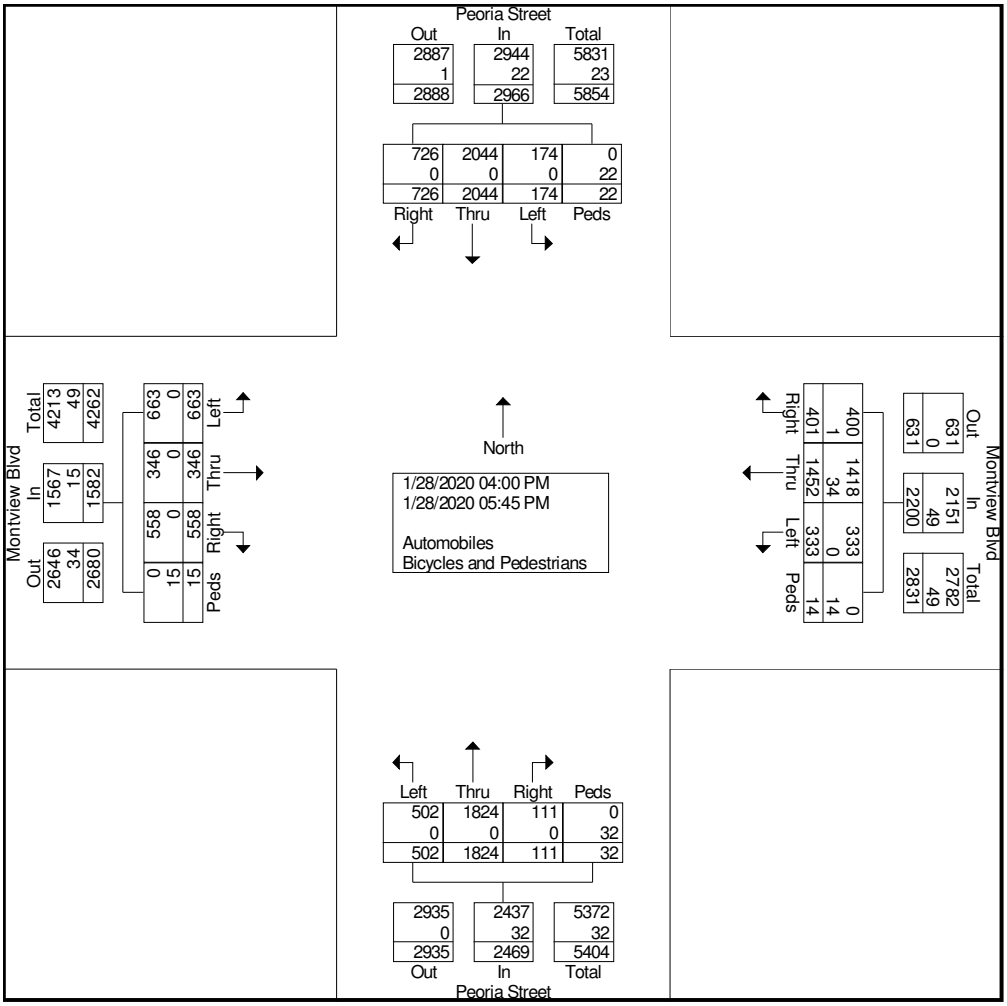
Groups Printed- Automobiles - Bicycles and Pedestrians

	Montview Blvd Eastbound					Montview Blvd Westbound					Peoria Street Northbound					Peoria Street Southbound					
Start Time	Left	Thru	Right	Peds	App. Total	Left	Thru	Right	Peds	App. Total	Left	Thru	Right	Peds	App. Total	Left	Thru	Right	Peds	App. Total	Int. Total
04:00 PM	82	43	69	0	194	38	186	63	0	287	62	221	14	3	300	18	296	69	4	387	1168
04:15 PM	96	42	67	1	206	40	170	42	2	254	68	210	12	6	296	25	277	83	1	386	1142
04:30 PM	74	36	69	5	184	42	184	52	3	281	56	244	19	6	325	17	270	95	0	382	1172
04:45 PM	80	42	82	4	208	45	193	48	1	287	67	231	22	5	325	26	247	112	2	387	1207
Total	332	163	287	10	792	165	733	205	6	1109	253	906	67	20	1246	86	1090	359	7	1542	4689
05:00 PM	81	39	65	4	189	56	173	59	1	289	63	241	12	1	317	16	274	122	5	417	1212
05:15 PM	72	51	74	0	197	43	176	48	1	268	66	221	11	3	301	23	255	95	4	377	1143
05:30 PM	88	40	73	1	202	38	190	49	0	277	67	247	12	3	329	27	199	93	5	324	1132
05:45 PM	90	53	59	0	202	31	180	40	6	257	53	209	9	5	276	22	226	57	1	306	1041
Total	331	183	271	5	790	168	719	196	8	1091	249	918	44	12	1223	88	954	367	15	1424	4528
Grand Total	663	346	558	15	1582	333	1452	401	14	2200	502	1824	111	32	2469	174	2044	726	22	2966	9217
Apprch %	41.9	21.9	35.3	0.9		15.1	66	18.2	0.6		20.3	73.9	4.5	1.3		5.9	68.9	24.5	0.7		
Total %	7.2	3.8	6.1	0.2	17.2	3.6	15.8	4.4	0.2	23.9	5.4	19.8	1.2	0.3	26.8	1.9	22.2	7.9	0.2	32.2	
Automobiles	663	346	558	0	1567	333	1418	400	0	2151	502	1824	111	0	2437	174	2044	726	0	2944	9099
% Automobiles	100	100	100	0	99.1	100	97.7	99.8	0	97.8	100	100	100	0	98.7	100	100	100	0	99.3	98.7
Bicycles and Pedestrians	0	0	0	15	15	0	34	1	14	49	0	0	0	32	32	0	0	0	22	22	118
% Bicycles and Pedestrians	0	0	0	100	0.9	0	2.3	0.2	100	2.2	0	0	0	100	1.3	0	0	0	100	0.7	1.3

Ridgeview Data Collection

Aurora, CO
Fitzsimons Innovation Campus
PM Peak
Montview Blvd and Peoria St

File Name : Montview and Peoria PM
Site Code : IPO 486
Start Date : 1/28/2020
Page No : 2

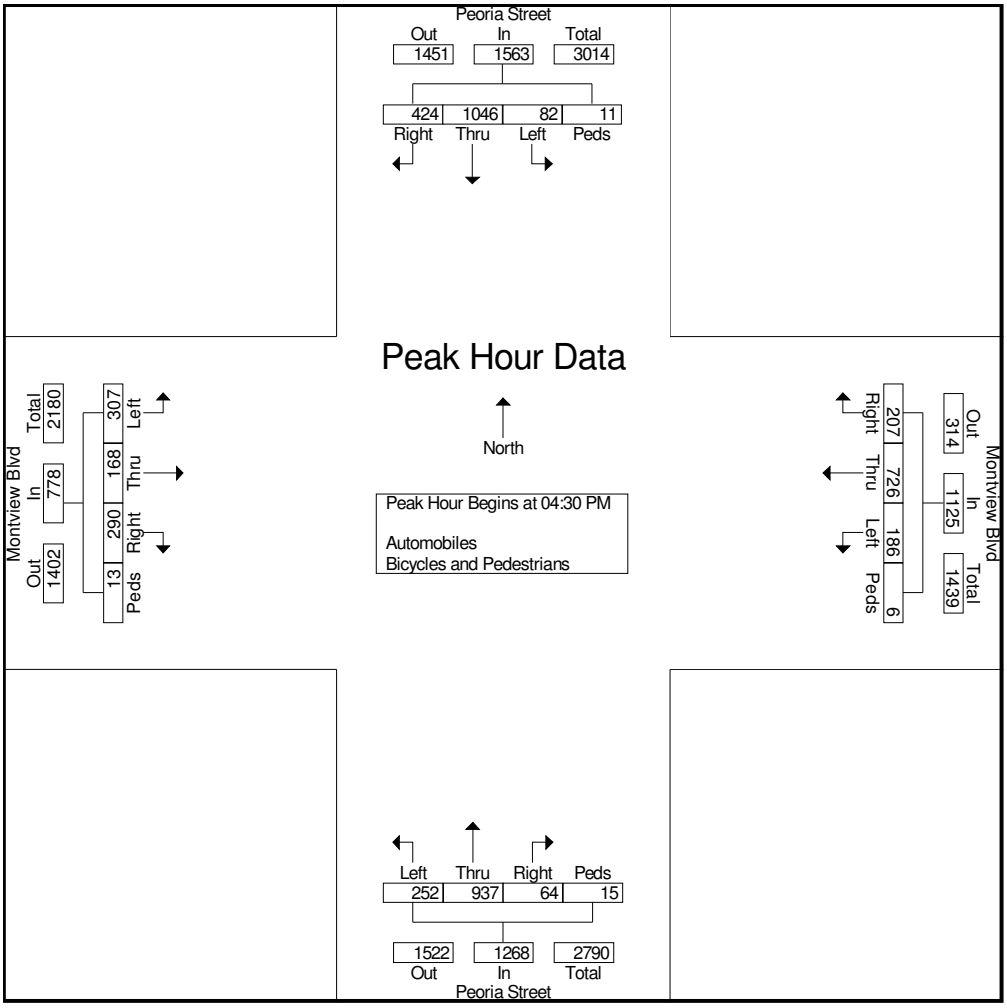


Ridgeview Data Collection

Aurora, CO
Fitzsimons Innovation Campus
PM Peak
Montview Blvd and Peoria St

File Name : Montview and Peoria PM
Site Code : IPO 486
Start Date : 1/28/2020
Page No : 3

	Montview Blvd Eastbound					Montview Blvd Westbound					Peoria Street Northbound					Peoria Street Southbound					
Start Time	Left	Thru	Right	Peds	App. Total	Left	Thru	Right	Peds	App. Total	Left	Thru	Right	Peds	App. Total	Left	Thru	Right	Peds	App. Total	Int. Total
Peak Hour Analysis From 04:00 PM to 05:45 PM - Peak 1 of 1																					
Peak Hour for Entire Intersection Begins at 04:30 PM																					
04:30 PM	74	36	69	**5**	184	42	184	52	**3**	281	56	**244**	19	**6**	**325**	17	270	95	0	382	1172
04:45 PM	80	42	**82**	4	**208**	45	**193**	48	1	287	**67**	231	**22**	5	325	**26**	247	112	2	387	1207
05:00 PM	**81**	39	65	4	189	**56**	173	**59**	1	**289**	63	241	12	1	317	16	**274**	**122**	**5**	**417**	**1212**
05:15 PM	72	**51**	74	0	197	43	176	48	1	268	66	221	11	3	301	23	255	95	4	377	1143
Total Volume	307	168	290	13	778	186	726	207	6	1125	252	937	64	15	1268	82	1046	424	11	1563	4734
% App. Total	39.5	21.6	37.3	1.7		16.5	64.5	18.4	0.5		19.9	73.9	5	1.2		5.2	66.9	27.1	0.7		
PHF	.948	.824	.884	.650	.935	.830	.940	.877	.500	.973	.940	.960	.727	.625	.975	.788	.954	.869	.550	.937	.976



Ridgeview Data Collection

Aurora, CO
Fitzsimons Innovation Campus
AM Peak
Montview Blvd and Quentin St

File Name : Montview and Quentin AM
Site Code : IPO 486
Start Date : 1/28/2020
Page No : 1

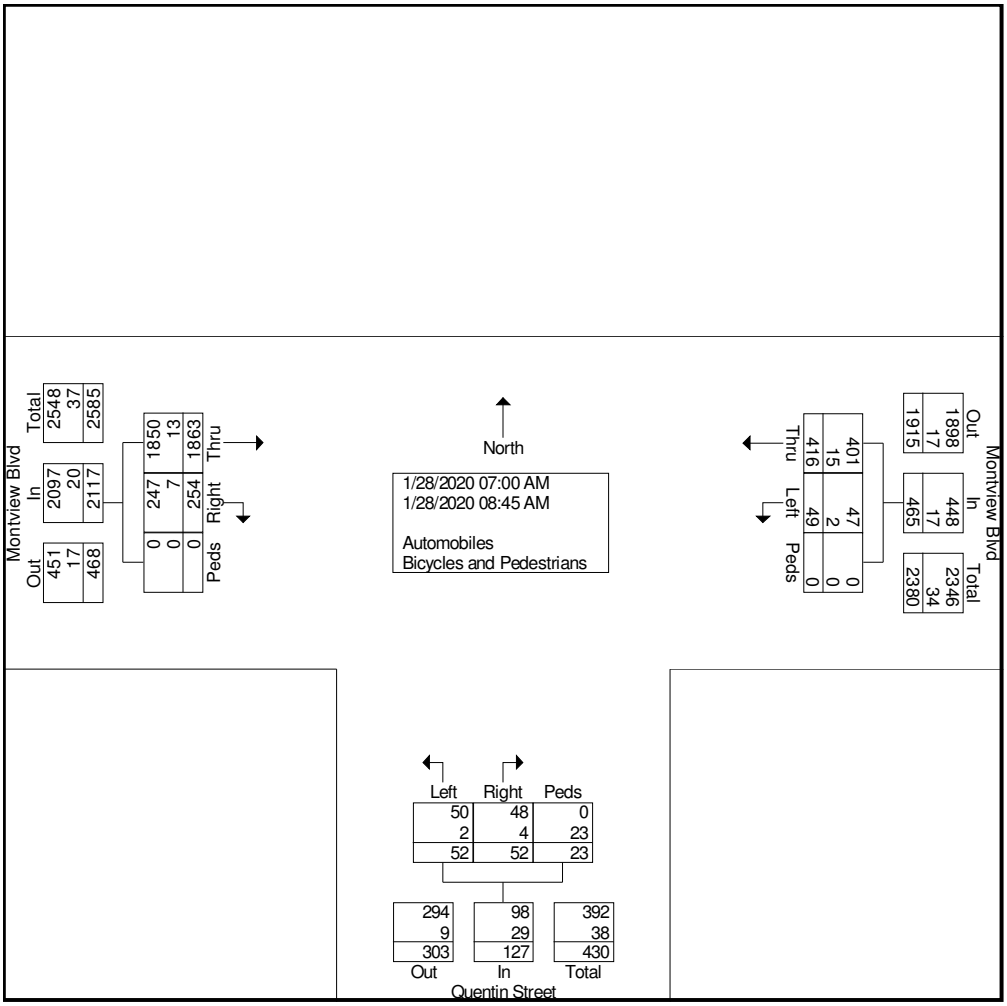
Groups Printed- Automobiles - Bicycles and Pedestrians

	Montview Blvd Eastbound				Montview Blvd Westbound				Quentin Street Northbound				
Start Time	Thru	Right	Peds	App. Total	Left	Thru	Peds	App. Total	Left	Right	Peds	App. Total	Int. Total
07:00 AM	187	38	0	225	5	45	0	50	4	0	1	5	280
07:15 AM	211	41	0	252	9	64	0	73	6	5	5	16	341
07:30 AM	230	43	0	273	10	69	0	79	6	9	2	17	369
07:45 AM	272	36	0	308	1	58	0	59	7	5	4	16	383
Total	900	158	0	1058	25	236	0	261	23	19	12	54	1373
08:00 AM	243	36	0	279	10	39	0	49	6	8	1	15	343
08:15 AM	249	24	0	273	4	46	0	50	6	12	1	19	342
08:30 AM	247	17	0	264	3	53	0	56	5	7	6	18	338
08:45 AM	224	19	0	243	7	42	0	49	12	6	3	21	313
Total	963	96	0	1059	24	180	0	204	29	33	11	73	1336
Grand Total	1863	254	0	2117	49	416	0	465	52	52	23	127	2709
Apprch %	88	12	0		10.5	89.5	0		40.9	40.9	18.1		
Total %	68.8	9.4	0	78.1	1.8	15.4	0	17.2	1.9	1.9	0.8	4.7	
Automobiles	1850	247	0	2097	47	401	0	448	50	48	0	98	2643
% Automobiles	99.3	97.2	0	99.1	95.9	96.4	0	96.3	96.2	92.3	0	77.2	97.6
Bicycles and Pedestrians	13	7	0	20	2	15	0	17	2	4	23	29	66
% Bicycles and Pedestrians	0.7	2.8	0	0.9	4.1	3.6	0	3.7	3.8	7.7	100	22.8	2.4

Ridgeview Data Collection

Aurora, CO
Fitzsimons Innovation Campus
AM Peak
Montview Blvd and Quentin St

File Name : Montview and Quentin AM
Site Code : IPO 486
Start Date : 1/28/2020
Page No : 2

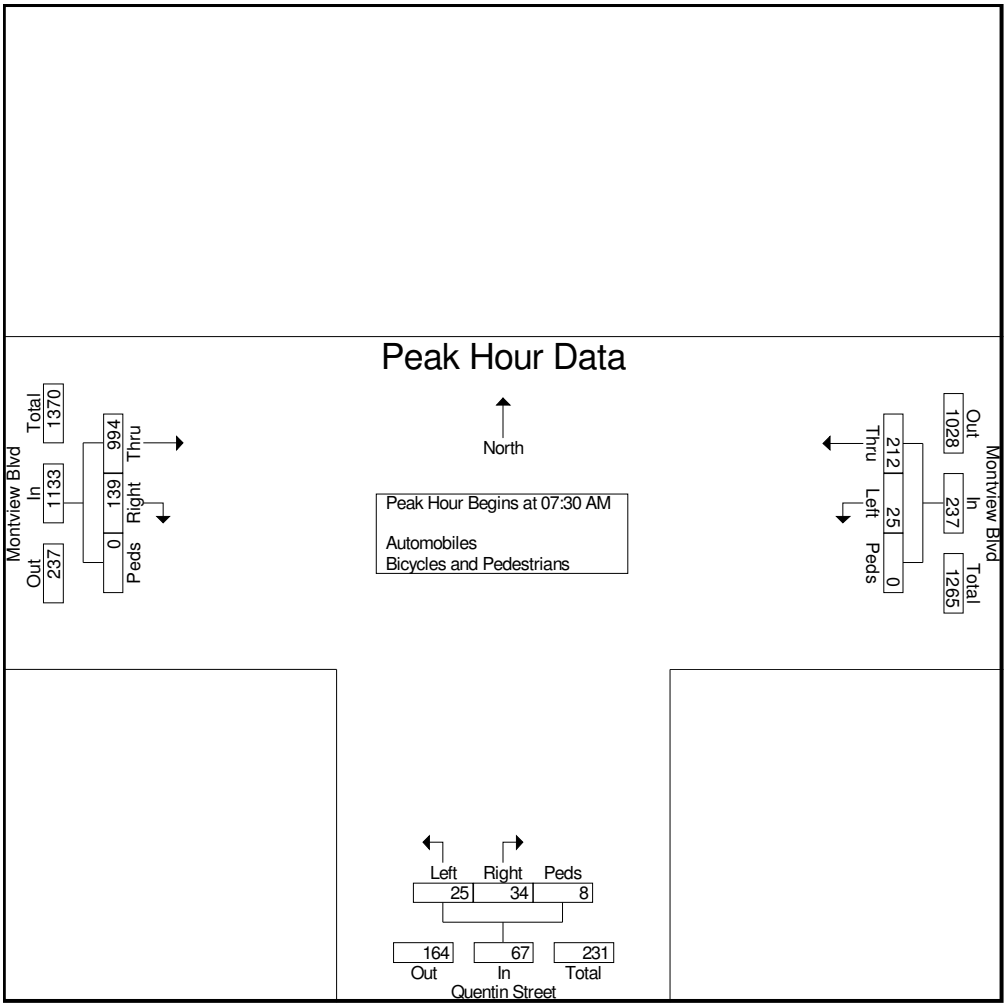


Ridgeview Data Collection

Aurora, CO
Fitzsimons Innovation Campus
AM Peak
Montview Blvd and Quentin St

File Name : Montview and Quentin AM
Site Code : IPO 486
Start Date : 1/28/2020
Page No : 3

	Montview Blvd Eastbound				Montview Blvd Westbound				Quentin Street Northbound				
Start Time	Thru	Right	Peds	App. Total	Left	Thru	Peds	App. Total	Left	Right	Peds	App. Total	Int. Total
Peak Hour Analysis From 07:00 AM to 08:45 AM - Peak 1 of 1													
Peak Hour for Entire Intersection Begins at 07:30 AM													
07:30 AM	230	**43**	0	273	**10**	**69**	0	**79**	6	9	2	17	369
07:45 AM	**272**	36	0	**308**	1	58	0	59	**7**	5	**4**	16	**383**
08:00 AM	243	36	0	279	10	39	0	49	6	8	1	15	343
08:15 AM	249	24	0	273	4	46	0	50	6	**12**	1	**19**	342
Total Volume	994	139	0	1133	25	212	0	237	25	34	8	67	1437
% App. Total	87.7	12.3	0		10.5	89.5	0		37.3	50.7	11.9		
PHF	.914	.808	.000	.920	.625	.768	.000	.750	.893	.708	.500	.882	.938



Ridgeview Data Collection

Aurora, CO
Fitzsimons Innovation Campus
PM Peak
Montview Blvd and Quentin St

File Name : Montview and Quentin PM
Site Code : IPO 486
Start Date : 1/28/2020
Page No : 1

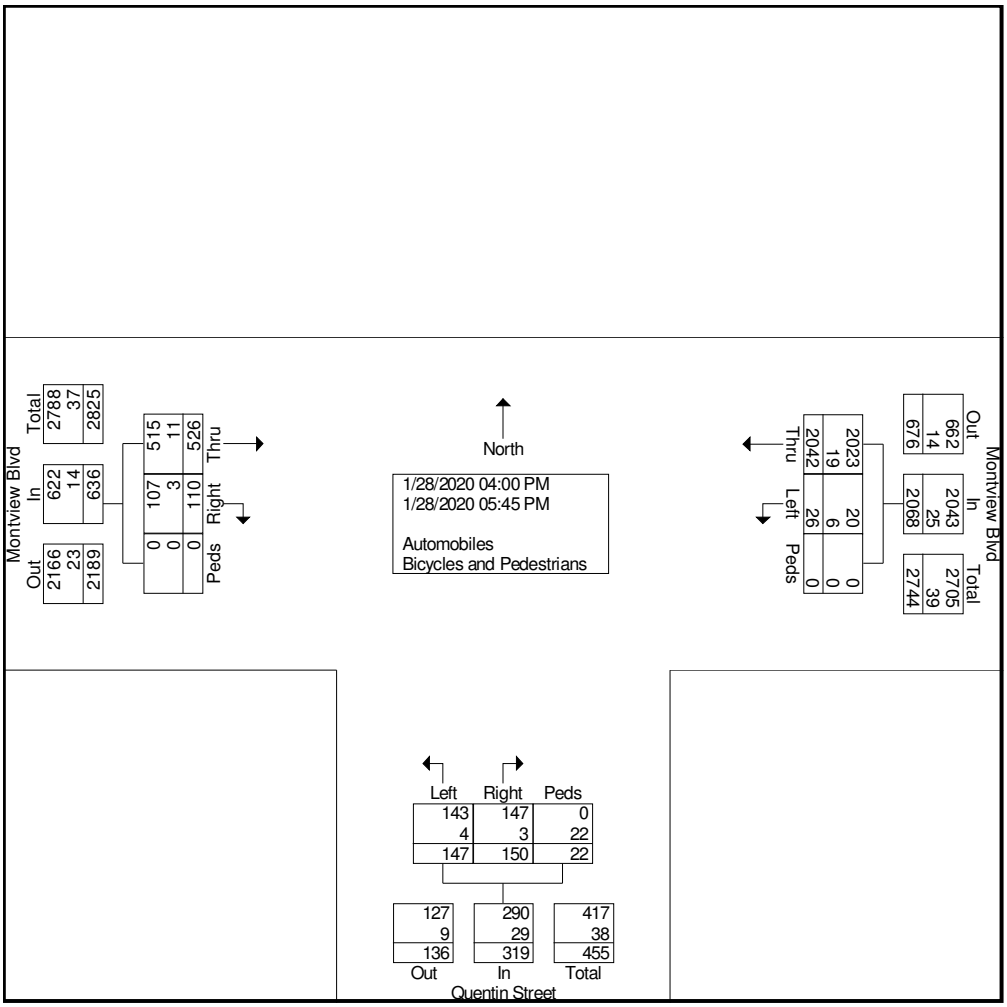
Groups Printed- Automobiles - Bicycles and Pedestrians

	Montview Blvd Eastbound				Montview Blvd Westbound				Quentin Street Northbound				
Start Time	Thru	Right	Peds	App. Total	Left	Thru	Peds	App. Total	Left	Right	Peds	App. Total	Int. Total
04:00 PM	62	11	0	73	3	259	0	262	31	11	2	44	379
04:15 PM	72	9	0	81	4	246	0	250	14	20	2	36	367
04:30 PM	60	11	0	71	3	259	0	262	12	18	3	33	366
04:45 PM	74	20	0	94	3	270	0	273	20	24	5	49	416
Total	268	51	0	319	13	1034	0	1047	77	73	12	162	1528
05:00 PM	51	13	0	64	4	253	0	257	29	22	3	54	375
05:15 PM	61	21	0	82	4	275	0	279	20	23	4	47	408
05:30 PM	81	11	0	92	3	236	0	239	7	17	2	26	357
05:45 PM	65	14	0	79	2	244	0	246	14	15	1	30	355
Total	258	59	0	317	13	1008	0	1021	70	77	10	157	1495
Grand Total	526	110	0	636	26	2042	0	2068	147	150	22	319	3023
Apprch %	82.7	17.3	0		1.3	98.7	0		46.1	47	6.9		
Total %	17.4	3.6	0	21	0.9	67.5	0	68.4	4.9	5	0.7	10.6	
Automobiles	515	107	0	622	20	2023	0	2043	143	147	0	290	2955
% Automobiles	97.9	97.3	0	97.8	76.9	99.1	0	98.8	97.3	98	0	90.9	97.8
Bicycles and Pedestrians	11	3	0	14	6	19	0	25	4	3	22	29	68
% Bicycles and Pedestrians	2.1	2.7	0	2.2	23.1	0.9	0	1.2	2.7	2	100	9.1	2.2

Ridgeview Data Collection

Aurora, CO
Fitzsimons Innovation Campus
PM Peak
Montview Blvd and Quentin St

File Name : Montview and Quentin PM
Site Code : IPO 486
Start Date : 1/28/2020
Page No : 2

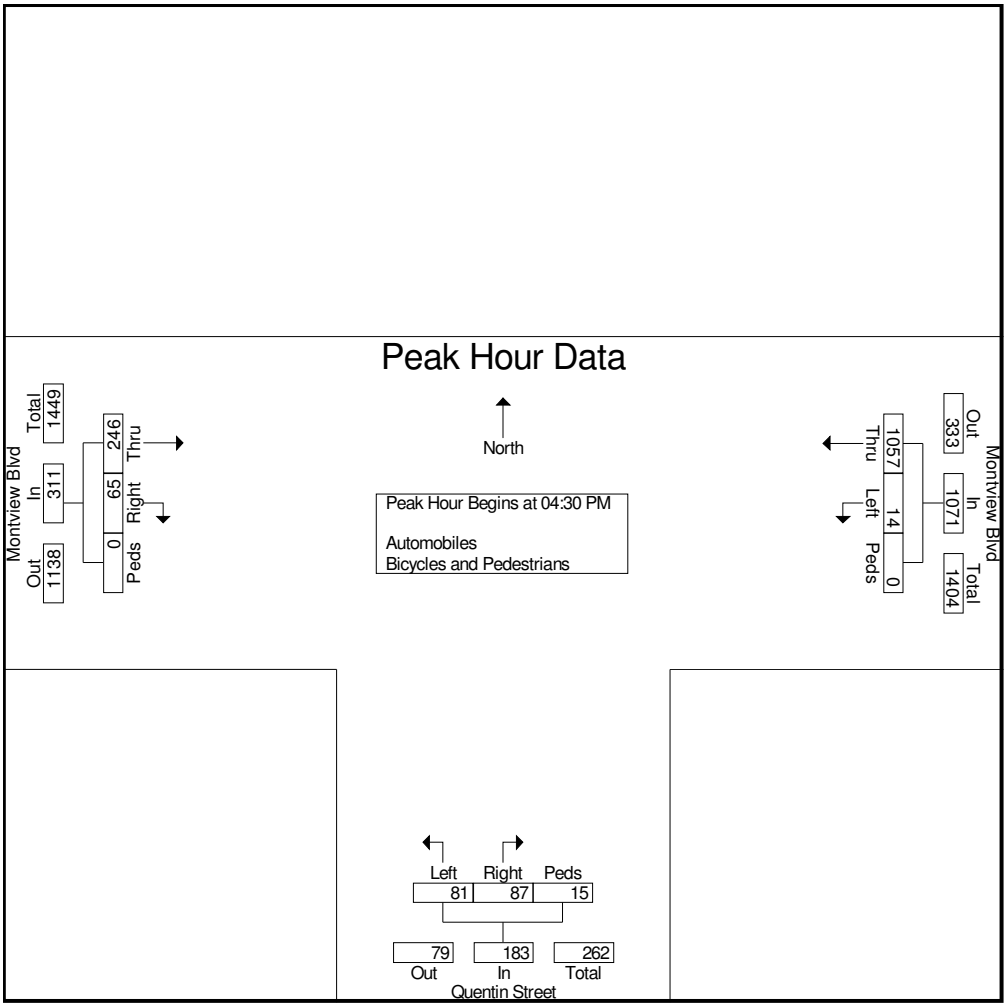


Ridgeview Data Collection

Aurora, CO
Fitzsimons Innovation Campus
PM Peak
Montview Blvd and Quentin St

File Name : Montview and Quentin PM
Site Code : IPO 486
Start Date : 1/28/2020
Page No : 3

	Montview Blvd Eastbound				Montview Blvd Westbound				Quentin Street Northbound				
Start Time	Thru	Right	Peds	App. Total	Left	Thru	Peds	App. Total	Left	Right	Peds	App. Total	Int. Total
Peak Hour Analysis From 04:00 PM to 05:45 PM - Peak 1 of 1													
Peak Hour for Entire Intersection Begins at 04:30 PM													
04:30 PM	60	11	0	71	3	259	0	262	12	18	3	33	366
04:45 PM	**74**	20	0	**94**	3	270	0	273	20	**24**	**5**	49	**416**
05:00 PM	51	13	0	64	**4**	253	0	257	**29**	22	3	**54**	375
05:15 PM	61	**21**	0	82	4	**275**	0	**279**	20	23	4	47	408
Total Volume	246	65	0	311	14	1057	0	1071	81	87	15	183	1565
% App. Total	79.1	20.9	0		1.3	98.7	0		44.3	47.5	8.2		
PHF	.831	.774	.000	.827	.875	.961	.000	.960	.698	.906	.750	.847	.941



Ridgeview Data Collection

Aurora, CO
Fitzsimons Innovation Campus
AM Peak
Montview Blvd and Racine St

File Name : Montview and Racine AM
Site Code : IPO 486
Start Date : 1/28/2020
Page No : 1

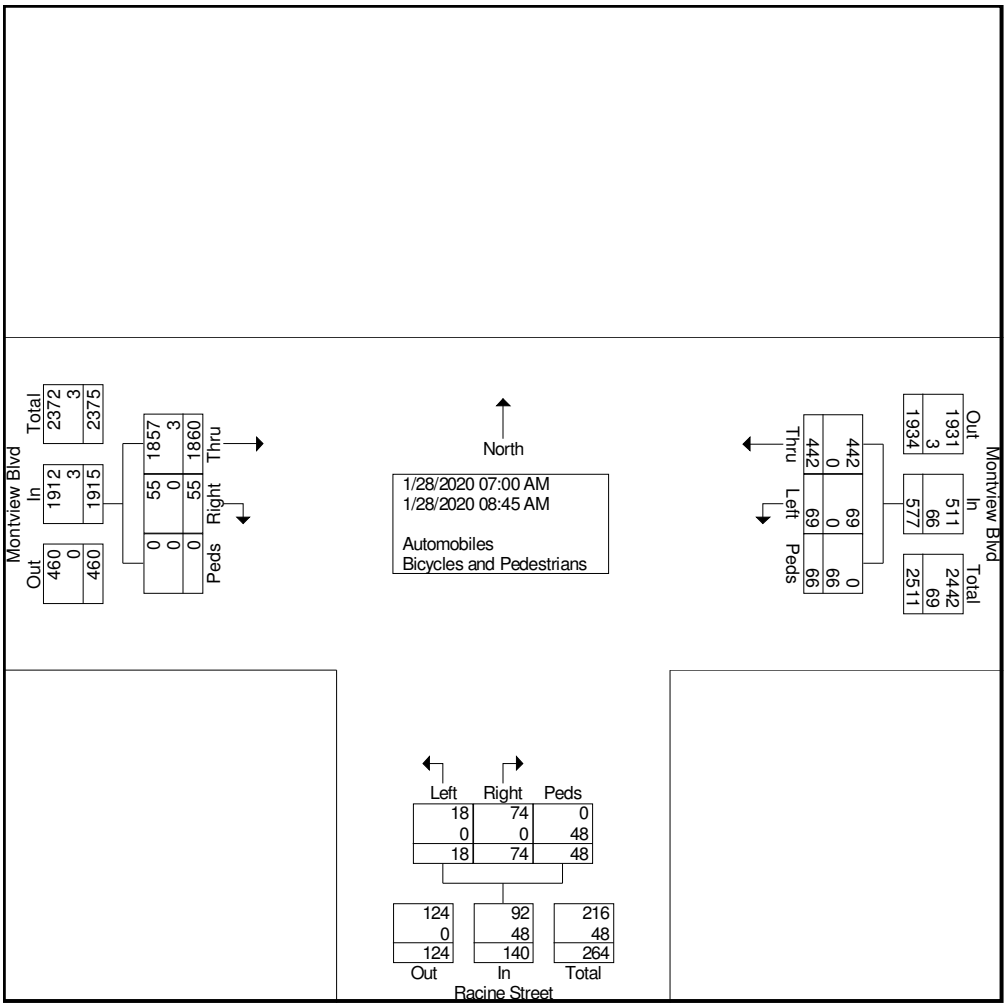
Groups Printed- Automobiles - Bicycles and Pedestrians

	Montview Blvd Eastbound				Montview Blvd Westbound				Racine Street Northbound				
Start Time	Thru	Right	Peds	App. Total	Left	Thru	Peds	App. Total	Left	Right	Peds	App. Total	Int. Total
07:00 AM	179	13	0	192	16	46	12	74	4	9	3	16	282
07:15 AM	204	8	0	212	4	76	12	92	0	7	8	15	319
07:30 AM	246	9	0	255	8	72	6	86	3	10	5	18	359
07:45 AM	271	3	0	274	7	48	8	63	2	20	9	31	368
Total	900	33	0	933	35	242	38	315	9	46	25	80	1328
08:00 AM	251	5	0	256	10	54	8	72	4	9	4	17	345
08:15 AM	237	8	0	245	6	43	4	53	3	7	5	15	313
08:30 AM	262	5	0	267	8	59	6	73	0	7	7	14	354
08:45 AM	210	4	0	214	10	44	10	64	2	5	7	14	292
Total	960	22	0	982	34	200	28	262	9	28	23	60	1304
Grand Total	1860	55	0	1915	69	442	66	577	18	74	48	140	2632
Apprch %	97.1	2.9	0		12	76.6	11.4		12.9	52.9	34.3		
Total %	70.7	2.1	0	72.8	2.6	16.8	2.5	21.9	0.7	2.8	1.8	5.3	
Automobiles	1857	55	0	1912	69	442	0	511	18	74	0	92	2515
% Automobiles	99.8	100	0	99.8	100	100	0	88.6	100	100	0	65.7	95.6
Bicycles and Pedestrians	3	0	0	3	0	0	66	66	0	0	48	48	117
% Bicycles and Pedestrians	0.2	0	0	0.2	0	0	100	11.4	0	0	100	34.3	4.4

Ridgeview Data Collection

Aurora, CO
Fitzsimons Innovation Campus
AM Peak
Montview Blvd and Racine St

File Name : Montview and Racine AM
Site Code : IPO 486
Start Date : 1/28/2020
Page No : 2

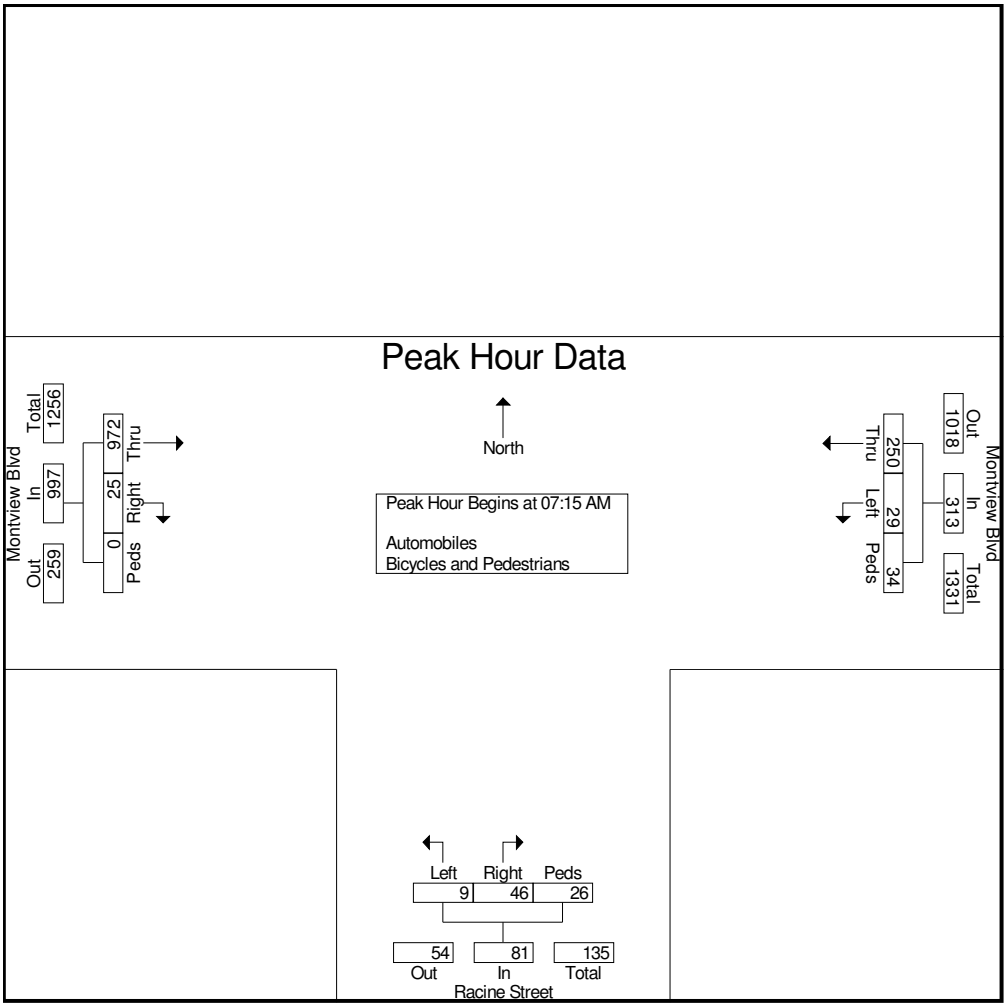


Ridgeview Data Collection

Aurora, CO
Fitzsimons Innovation Campus
AM Peak
Montview Blvd and Racine St

File Name : Montview and Racine AM
Site Code : IPO 486
Start Date : 1/28/2020
Page No : 3

	Montview Blvd Eastbound				Montview Blvd Westbound				Racine Street Northbound				
Start Time	Thru	Right	Peds	App. Total	Left	Thru	Peds	App. Total	Left	Right	Peds	App. Total	Int. Total
Peak Hour Analysis From 07:00 AM to 08:45 AM - Peak 1 of 1													
Peak Hour for Entire Intersection Begins at 07:15 AM													
07:15 AM	204	8	0	212	4	**76**	**12**	**92**	0	7	8	15	319
07:30 AM	246	**9**	0	255	8	72	6	86	3	10	5	18	359
07:45 AM	**271**	3	0	**274**	7	48	8	63	2	**20**	**9**	**31**	**368**
08:00 AM	251	5	0	256	**10**	54	8	72	**4**	9	4	17	345
Total Volume	972	25	0	997	29	250	34	313	9	46	26	81	1391
% App. Total	97.5	2.5	0		9.3	79.9	10.9		11.1	56.8	32.1		
PHF	.897	.694	.000	.910	.725	.822	.708	.851	.563	.575	.722	.653	.945



Ridgeview Data Collection

Aurora, CO
Fitzsimons Innovation Campus
PM Peak
Montview Blvd and Racine St

File Name : Montview and Racine PM
Site Code : IPO 486
Start Date : 1/28/2020
Page No : 1

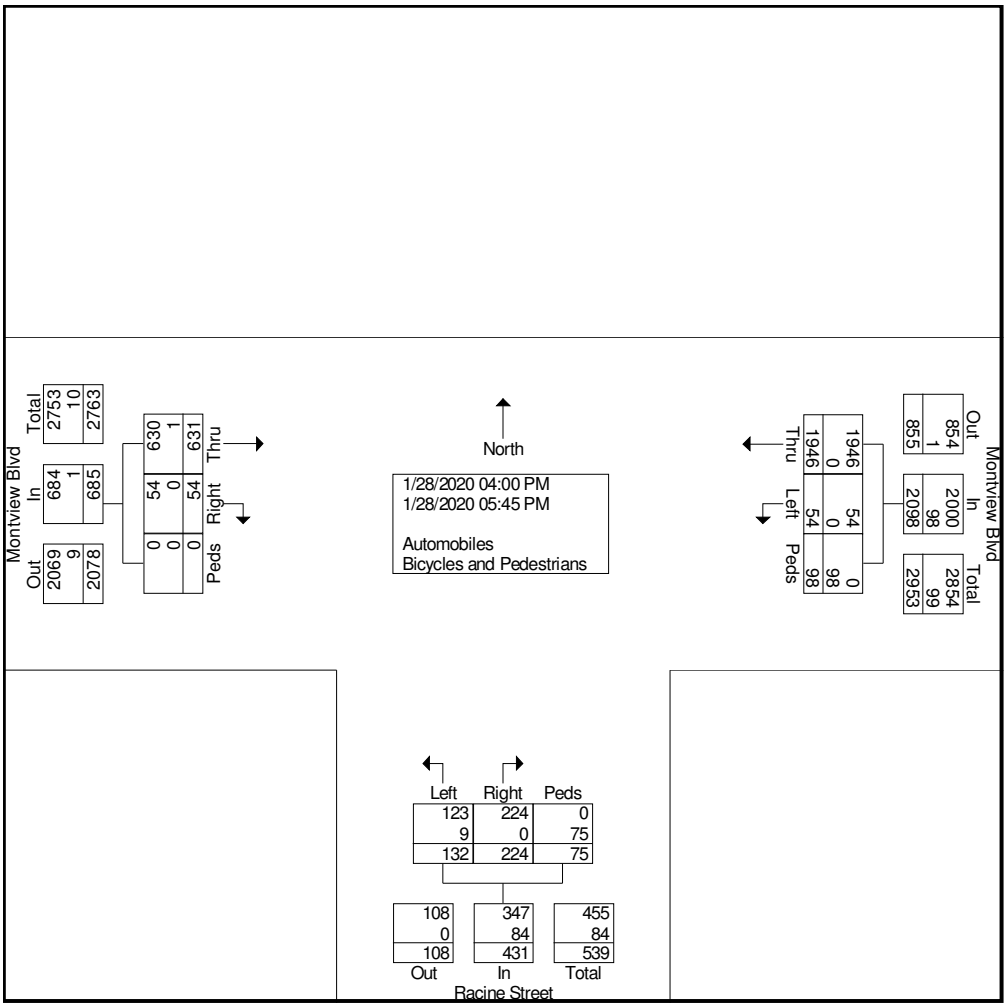
Groups Printed- Automobiles - Bicycles and Pedestrians

	Montview Blvd Eastbound				Montview Blvd Westbound				Racine Street Northbound				
Start Time	Thru	Right	Peds	App. Total	Left	Thru	Peds	App. Total	Left	Right	Peds	App. Total	Int. Total
04:00 PM	66	4	0	70	3	257	19	279	19	25	8	52	401
04:15 PM	83	11	0	94	9	239	9	257	14	29	10	53	404
04:30 PM	72	6	0	78	5	245	19	269	15	34	12	61	408
04:45 PM	86	8	0	94	10	257	13	280	13	22	13	48	422
Total	307	29	0	336	27	998	60	1085	61	110	43	214	1635
05:00 PM	76	9	0	85	9	244	8	261	18	29	15	62	408
05:15 PM	72	8	0	80	4	248	13	265	24	37	7	68	413
05:30 PM	93	5	0	98	5	240	6	251	14	31	1	46	395
05:45 PM	83	3	0	86	9	216	11	236	15	17	9	41	363
Total	324	25	0	349	27	948	38	1013	71	114	32	217	1579
Grand Total	631	54	0	685	54	1946	98	2098	132	224	75	431	3214
Apprch %	92.1	7.9	0		2.6	92.8	4.7		30.6	52	17.4		
Total %	19.6	1.7	0	21.3	1.7	60.5	3	65.3	4.1	7	2.3	13.4	
Automobiles	630	54	0	684	54	1946	0	2000	123	224	0	347	3031
% Automobiles	99.8	100	0	99.9	100	100	0	95.3	93.2	100	0	80.5	94.3
Bicycles and Pedestrians	1	0	0	1	0	0	98	98	9	0	75	84	183
% Bicycles and Pedestrians	0.2	0	0	0.1	0	0	100	4.7	6.8	0	100	19.5	5.7

Ridgeview Data Collection

Aurora, CO
Fitzsimons Innovation Campus
PM Peak
Montview Blvd and Racine St

File Name : Montview and Racine PM
Site Code : IPO 486
Start Date : 1/28/2020
Page No : 2

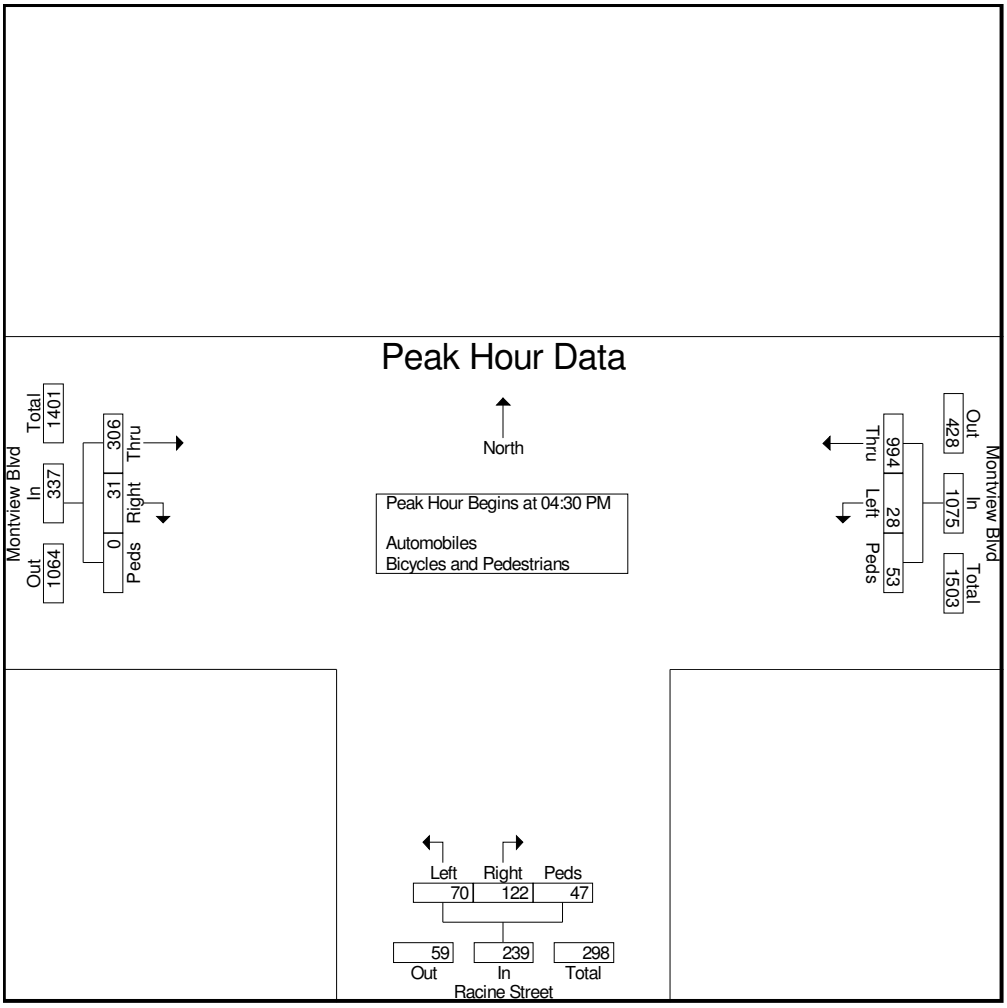


Ridgeview Data Collection

Aurora, CO
Fitzsimons Innovation Campus
PM Peak
Montview Blvd and Racine St

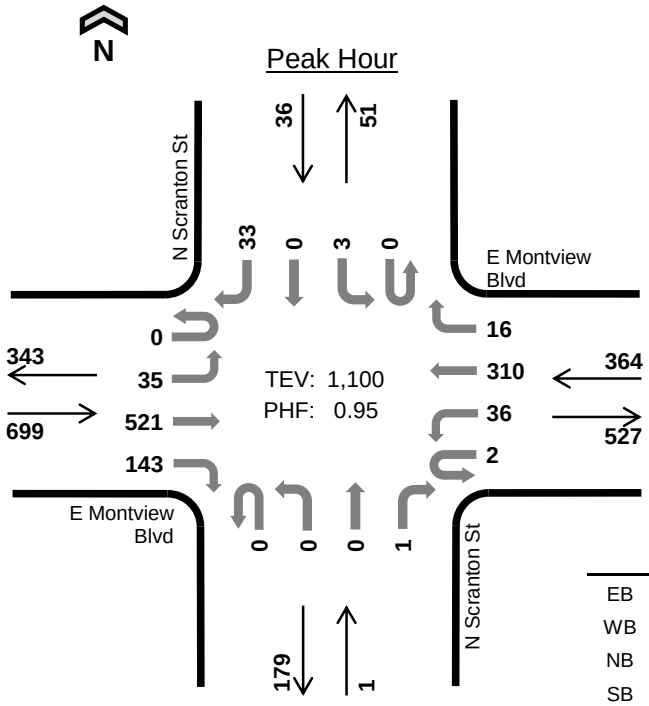
File Name : Montview and Racine PM
Site Code : IPO 486
Start Date : 1/28/2020
Page No : 3

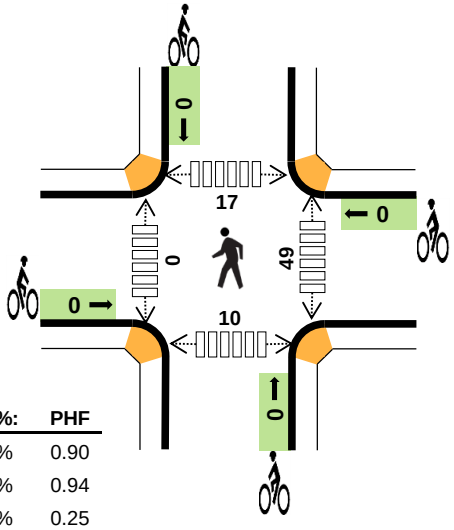
	Montview Blvd Eastbound				Montview Blvd Westbound				Racine Street Northbound				
Start Time	Thru	Right	Peds	App. Total	Left	Thru	Peds	App. Total	Left	Right	Peds	App. Total	Int. Total
Peak Hour Analysis From 04:00 PM to 05:45 PM - Peak 1 of 1													
Peak Hour for Entire Intersection Begins at 04:30 PM													
04:30 PM	72	6	0	78	5	245	**19**	269	15	34	12	61	408
04:45 PM	**86**	8	0	**94**	**10**	**257**	13	**280**	13	22	13	48	**422**
05:00 PM	76	**9**	0	85	9	244	8	261	18	29	**15**	62	408
05:15 PM	72	8	0	80	4	248	13	265	**24**	**37**	7	**68**	413
Total Volume	306	31	0	337	28	994	53	1075	70	122	47	239	1651
% App. Total	90.8	9.2	0		2.6	92.5	4.9		29.3	51	19.7		
PHF	.890	.861	.000	.896	.700	.967	.697	.960	.729	.824	.783	.879	.978



N Scranton St
E Montview Blvd

Date: Tue, May 07, 2019
Count Period: 7:00 AM to 9:00 AM
Peak Hour: 7:15 AM to 8:15 AM





	HV %:	PHF
EB	2.4%	0.90
WB	1.1%	0.94
NB	0.0%	0.25
SB	2.8%	0.90
TOTAL	2.0%	0.95

Two-Hour Count Summaries

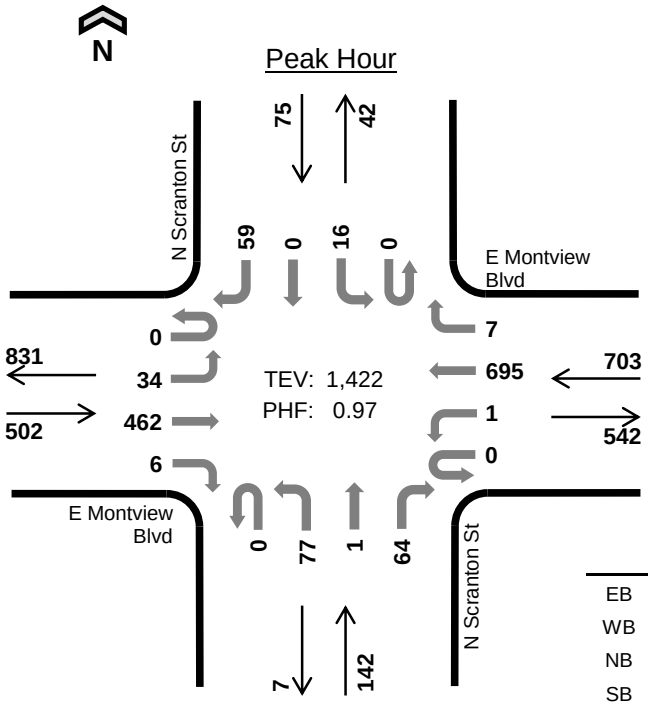
Interval Start	E Montview Blvd				E Montview Blvd				N Scranton St				N Scranton St				15-min Total	Rolling One Hour
	Eastbound				Westbound				Northbound				Southbound					
	UT	LT	TH	RT	UT	LT	TH	RT	UT	LT	TH	RT	UT	LT	TH	RT		
7:00 AM	0	8	102	23	0	12	61	0	0	0	0	0	0	0	0	4	210	0
7:15 AM	**0**	**6**	**120**	**30**	**2**	**8**	**74**	**3**	**0**	**0**	**0**	**0**	**0**	**1**	**0**	**9**	**253**	0
7:30 AM	**0**	**7**	**131**	**33**	**0**	**10**	**85**	**2**	**0**	**0**	**0**	**1**	**0**	**1**	**0**	**7**	**277**	0
7:45 AM	**0**	**12**	**138**	**45**	**0**	**11**	**71**	**1**	**0**	**0**	**0**	**0**	**0**	**1**	**0**	**9**	**288**	1,028
8:00 AM	**0**	**10**	**132**	**35**	**0**	**7**	**80**	**10**	**0**	**0**	**0**	**0**	**0**	**0**	**0**	**8**	**282**	**1,100**
8:15 AM	0	8	125	38	0	2	59	8	0	0	0	0	0	0	0	10	250	1,097
8:30 AM	0	14	124	29	0	5	58	3	0	2	0	1	2	0	0	7	245	1,065
8:45 AM	0	14	121	36	0	12	64	11	0	0	0	0	0	0	0	5	263	1,040
Count Total	0	79	993	269	2	67	552	38	0	2	0	2	2	3	0	59	2,068	0
Peak Hour	**0**	**35**	**521**	**143**	**2**	**36**	**310**	**16**	**0**	**0**	**0**	**1**	**0**	**3**	**0**	**33**	**1,100**	**0**

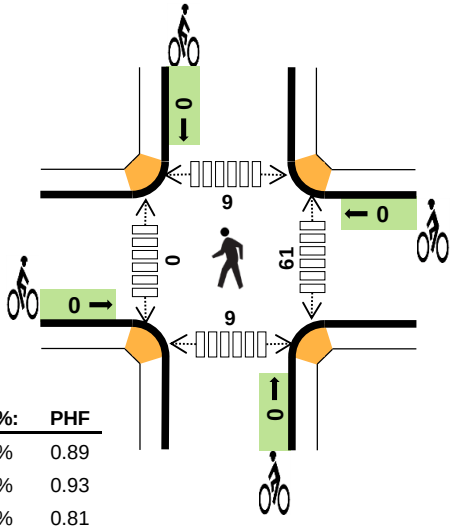
Note: Two-hour count summary volumes include heavy vehicles but exclude bicycles in overall count.

Interval Start	Heavy Vehicle Totals					Bicycles					Pedestrians (Crossing Leg)				
	EB	WB	NB	SB	Total	EB	WB	NB	SB	Total	East	West	North	South	Total
7:00 AM	1	0	0	0	*1*	0	0	0	0	*0*	5	0	0	2	*7*
7:15 AM	**6**	**0**	**0**	**0**	***6***	**0**	**0**	**0**	**0**	***0***	**12**	**0**	**8**	**1**	*21*
7:30 AM	**4**	**0**	**0**	**0**	***4***	**0**	**0**	**0**	**0**	***0***	**11**	**0**	**1**	**4**	*16*
7:45 AM	**4**	**3**	**0**	**1**	***8***	**0**	**0**	**0**	**0**	***0***	**16**	**0**	**3**	**3**	*22*
8:00 AM	**3**	**1**	**0**	**0**	***4***	**0**	**0**	**0**	**0**	***0***	**10**	**0**	**5**	**2**	***17***
8:15 AM	5	0	0	0	*5*	0	0	0	0	*0*	17	0	2	9	*28*
8:30 AM	3	1	0	2	*6*	1	0	0	0	*1*	17	0	3	5	*25*
8:45 AM	3	2	0	0	*5*	0	0	0	0	*0*	15	0	3	5	*23*
Count Total	29	7	0	3	*39*	1	0	0	0	*1*	103	0	25	31	*159*
Peak Hour	**17**	**4**	**0**	**1**	***22***	**0**	**0**	**0**	**0**	***0***	**49**	**0**	**17**	**10**	***76***

N Scranton St
E Montview Blvd

Date: Tue, May 07, 2019
Count Period: 4:00 PM to 6:00 PM
Peak Hour: 4:00 PM to 5:00 PM





	HV %:	PHF
EB	3.6%	0.89
WB	0.4%	0.93
NB	0.0%	0.81
SB	0.0%	0.82
TOTAL	1.5%	0.97

Two-Hour Count Summaries

Interval Start	E Montview Blvd Eastbound				E Montview Blvd Westbound				N Scranton St Northbound				N Scranton St 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**	**7**	**117**	**1**	**0**	**0**	**172**	**2**	**0**	**21**	**1**	**17**	**0**	**5**	**0**	**13**	**356**	0
4:15 PM	**0**	**12**	**113**	**1**	**0**	**0**	**162**	**0**	**0**	**11**	**0**	**14**	**0**	**5**	**0**	**15**	**333**	0
4:30 PM	**0**	**5**	**103**	**2**	**0**	**0**	**186**	**3**	**0**	**27**	**0**	**17**	**0**	**4**	**0**	**19**	**366**	0
4:45 PM	**0**	**10**	**129**	**2**	**0**	**1**	**175**	**2**	**0**	**18**	**0**	**16**	**0**	**2**	**0**	**12**	**367**	**1,422**
5:00 PM	0	7	116	2	0	0	168	7	0	18	0	18	0	2	0	12	350	1,416
5:15 PM	0	16	92	0	0	0	170	3	0	17	0	12	0	1	0	12	323	1,406
5:30 PM	0	6	80	2	0	1	135	9	0	13	0	10	0	5	0	13	274	1,314
5:45 PM	0	11	62	2	0	0	110	3	0	16	0	2	0	2	0	9	217	1,164
Count Total	0	74	812	12	0	2	1,278	29	0	141	1	106	0	26	0	105	2,586	0
Peak Hour	**0**	**34**	**462**	**6**	**0**	**1**	**695**	**7**	**0**	**77**	**1**	**64**	**0**	**16**	**0**	**59**	**1,422**	**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	**3**	**1**	**0**	**0**	***4***	**0**	**0**	**0**	**0**	***0***	**16**	**0**	**2**	**1**	*19*
4:15 PM	**6**	**2**	**0**	**0**	***8***	**0**	**0**	**0**	**0**	***0***	**9**	**0**	**1**	**0**	*10*
4:30 PM	**5**	**0**	**0**	**0**	***5***	**0**	**0**	**0**	**0**	***0***	**21**	**0**	**4**	**4**	*29*
4:45 PM	**4**	**0**	**0**	**0**	***4***	**0**	**0**	**0**	**0**	***0***	**15**	**0**	**2**	**4**	***21***
5:00 PM	4	1	0	0	*5*	0	1	0	0	*1*	7	0	3	2	*12*
5:15 PM	3	0	0	0	*3*	0	0	0	0	*0*	10	1	2	5	*18*
5:30 PM	4	3	0	0	*7*	0	0	0	0	*0*	8	0	2	1	*11*
5:45 PM	4	0	0	0	*4*	0	0	0	0	*0*	4	0	0	2	*6*
Count Total	33	7	0	0	*40*	0	1	0	0	*1*	90	1	16	19	*126*
Peak Hour	**18**	**3**	**0**	**0**	***21***	**0**	**0**	**0**	**0**	***0***	**61**	**0**	**9**	**9**	***79***

Ridgeview Data Collection

Aurora, CO
Fitzsimons Innovation Campus
AM Peak
Montview Blvd and Tucson Way

File Name : Montview and Tucson AM
Site Code : IPO 486
Start Date : 1/28/2020
Page No : 1

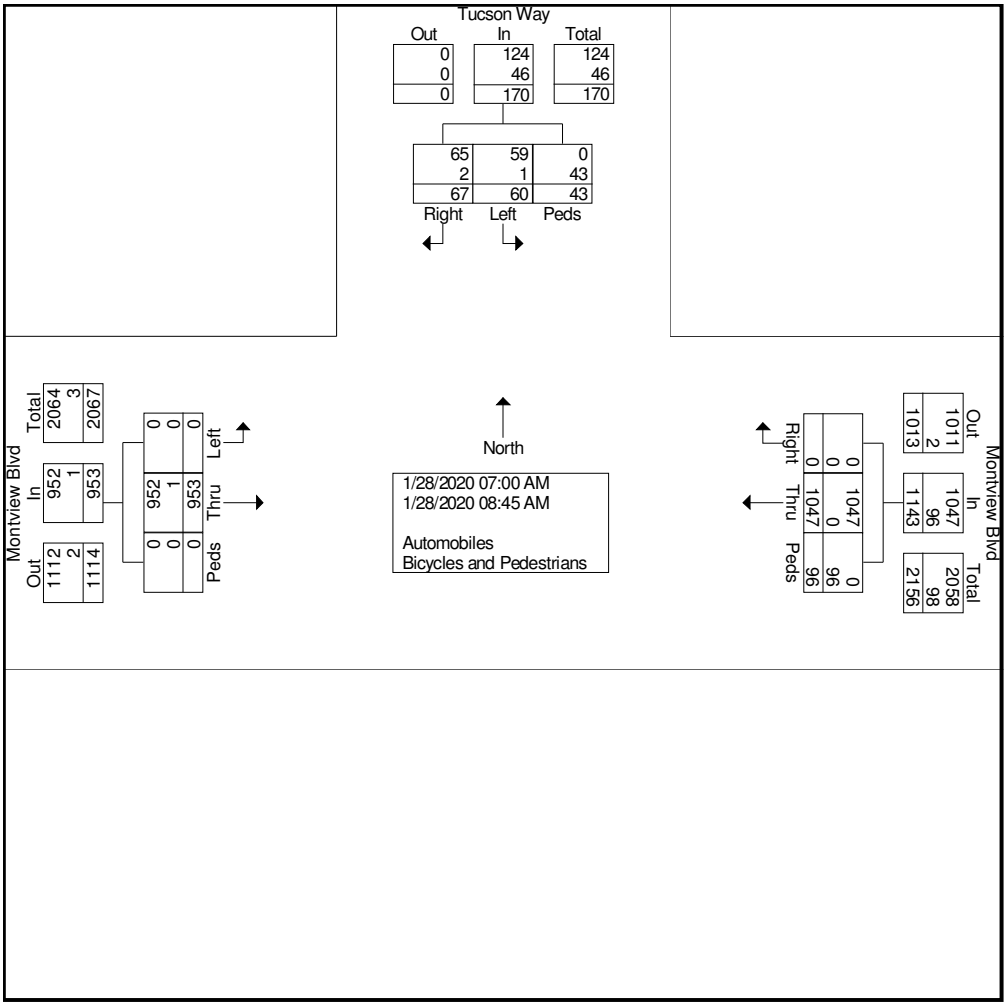
Groups Printed- Automobiles - Bicycles and Pedestrians

	Montview Blvd Eastbound				Montview Blvd Westbound				Tucson Way Southbound				
Start Time	Left	Thru	Peds	App. Total	Thru	Right	Peds	App. Total	Left	Right	Peds	App. Total	Int. Total
07:00 AM	0	119	0	119	135	0	6	141	9	3	2	14	274
07:15 AM	0	119	0	119	135	0	7	142	7	9	3	19	280
07:30 AM	0	136	0	136	130	0	13	143	10	4	6	20	299
07:45 AM	0	135	0	135	129	0	15	144	7	9	11	27	306
Total	0	509	0	509	529	0	41	570	33	25	22	80	1159
08:00 AM	0	135	0	135	149	0	12	161	5	5	4	14	310
08:15 AM	0	100	0	100	109	0	12	121	12	18	3	33	254
08:30 AM	0	121	0	121	137	0	11	148	4	15	8	27	296
08:45 AM	0	88	0	88	123	0	20	143	6	4	6	16	247
Total	0	444	0	444	518	0	55	573	27	42	21	90	1107
Grand Total	0	953	0	953	1047	0	96	1143	60	67	43	170	2266
Apprch %	0	100	0		91.6	0	8.4		35.3	39.4	25.3		
Total %	0	42.1	0	42.1	46.2	0	4.2	50.4	2.6	3	1.9	7.5	
Automobiles	0	952	0	952	1047	0	0	1047	59	65	0	124	2123
% Automobiles	0	99.9	0	99.9	100	0	0	91.6	98.3	97	0	72.9	93.7
Bicycles and Pedestrians	0	1	0	1	0	0	96	96	1	2	43	46	143
% Bicycles and Pedestrians	0	0.1	0	0.1	0	0	100	8.4	1.7	3	100	27.1	6.3

Ridgeview Data Collection

Aurora, CO
Fitzsimons Innovation Campus
AM Peak
Montview Blvd and Tucson Way

File Name : Montview and Tucson AM
Site Code : IPO 486
Start Date : 1/28/2020
Page No : 2

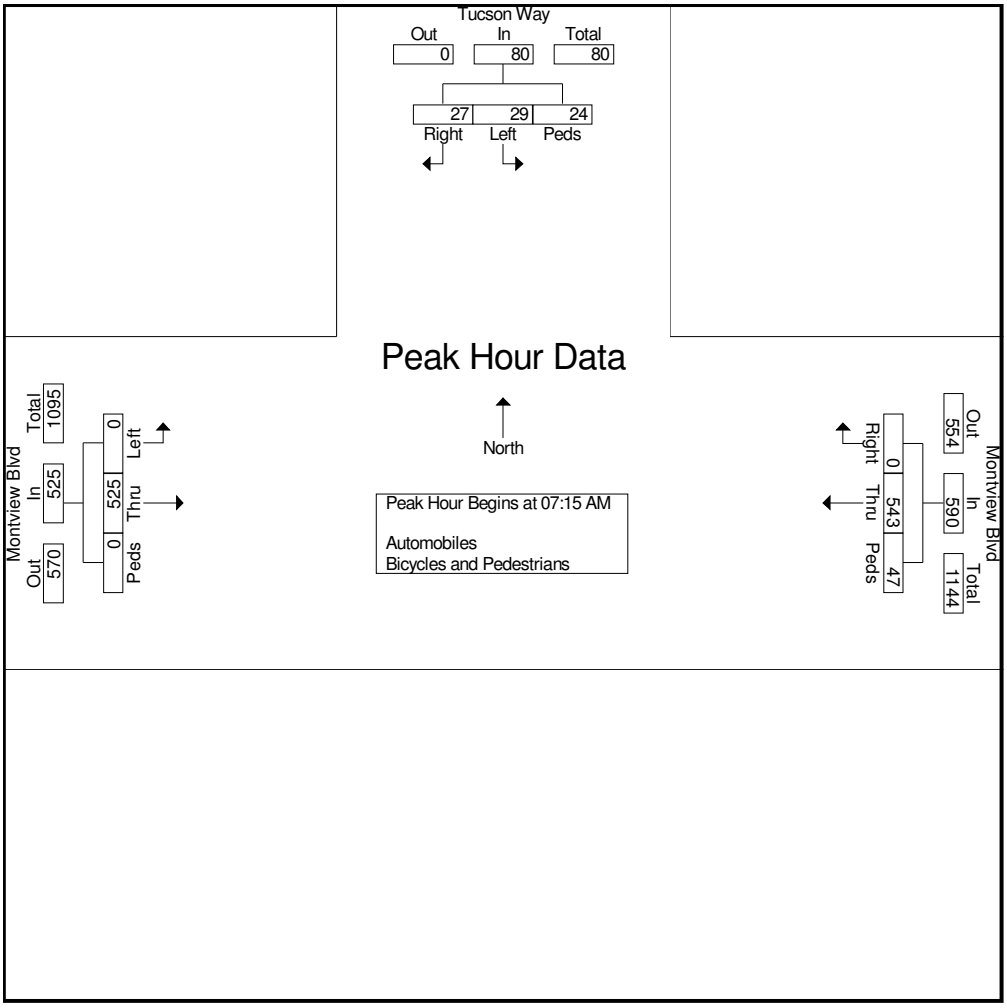


Ridgeview Data Collection

Aurora, CO
Fitzsimons Innovation Campus
AM Peak
Montview Blvd and Tucson Way

File Name : Montview and Tucson AM
Site Code : IPO 486
Start Date : 1/28/2020
Page No : 3

	Montview Blvd Eastbound				Montview Blvd Westbound				Tucson Way Southbound				
Start Time	Left	Thru	Peds	App. Total	Thru	Right	Peds	App. Total	Left	Right	Peds	App. Total	Int. Total
Peak Hour Analysis From 07:00 AM to 08:45 AM - Peak 1 of 1													
Peak Hour for Entire Intersection Begins at 07:15 AM													
07:15 AM	0	119	0	119	135	0	7	142	7	**9**	3	19	280
07:30 AM	0	**136**	0	**136**	130	0	13	143	**10**	4	6	20	299
07:45 AM	0	135	0	135	129	0	**15**	144	7	9	**11**	**27**	306
08:00 AM	0	135	0	135	**149**	0	12	**161**	5	5	4	14	**310**
Total Volume	0	525	0	525	543	0	47	590	29	27	24	80	1195
% App. Total	0	100	0		92	0	8		36.2	33.8	30		
PHF	.000	.965	.000	.965	.911	.000	.783	.916	.725	.750	.545	.741	.964



Ridgeview Data Collection

Aurora, CO
Fitzsimons Innovation Campus
PM Peak
Montview Blvd and Tucson Way

File Name : Montview and Tucson PM
Site Code : IPO 486
Start Date : 1/28/2020
Page No : 1

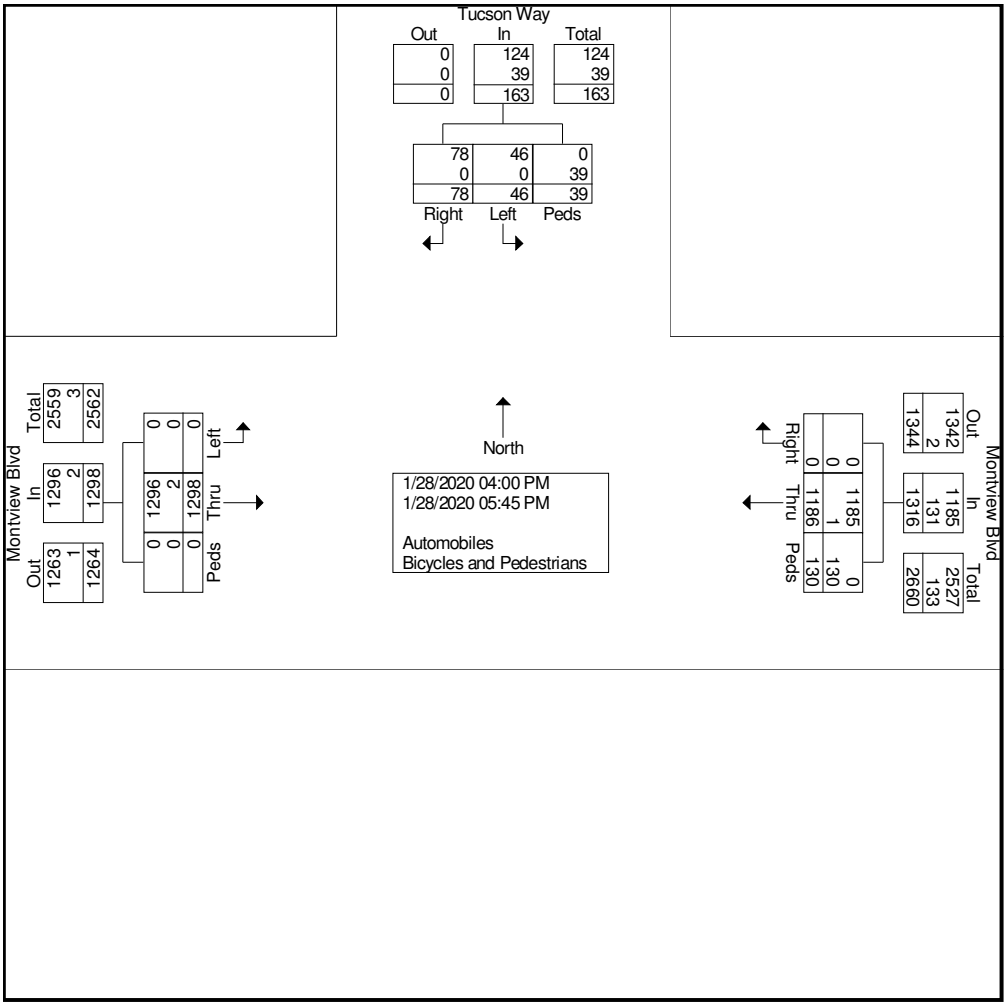
Groups Printed- Automobiles - Bicycles and Pedestrians

	Montview Blvd Eastbound				Montview Blvd Westbound				Tucson Way Southbound				
Start Time	Left	Thru	Peds	App. Total	Thru	Right	Peds	App. Total	Left	Right	Peds	App. Total	Int. Total
04:00 PM	0	162	0	162	147	0	12	159	5	11	3	19	340
04:15 PM	0	156	0	156	180	0	13	193	2	16	4	22	371
04:30 PM	0	187	0	187	160	0	23	183	2	5	9	16	386
04:45 PM	0	135	0	135	133	0	22	155	8	7	8	23	313
Total	0	640	0	640	620	0	70	690	17	39	24	80	1410
05:00 PM	0	143	0	143	158	0	21	179	8	13	4	25	347
05:15 PM	0	197	0	197	140	0	10	150	7	12	5	24	371
05:30 PM	0	172	0	172	150	0	13	163	9	8	4	21	356
05:45 PM	0	146	0	146	118	0	16	134	5	6	2	13	293
Total	0	658	0	658	566	0	60	626	29	39	15	83	1367
Grand Total	0	1298	0	1298	1186	0	130	1316	46	78	39	163	2777
Apprch %	0	100	0		90.1	0	9.9		28.2	47.9	23.9		
Total %	0	46.7	0	46.7	42.7	0	4.7	47.4	1.7	2.8	1.4	5.9	
Automobiles	0	1296	0	1296	1185	0	0	1185	46	78	0	124	2605
% Automobiles	0	99.8	0	99.8	99.9	0	0	90	100	100	0	76.1	93.8
Bicycles and Pedestrians	0	2	0	2	1	0	130	131	0	0	39	39	172
% Bicycles and Pedestrians	0	0.2	0	0.2	0.1	0	100	10	0	0	100	23.9	6.2

Ridgeview Data Collection

Aurora, CO
Fitzsimons Innovation Campus
PM Peak
Montview Blvd and Tucson Way

File Name : Montview and Tucson PM
Site Code : IPO 486
Start Date : 1/28/2020
Page No : 2

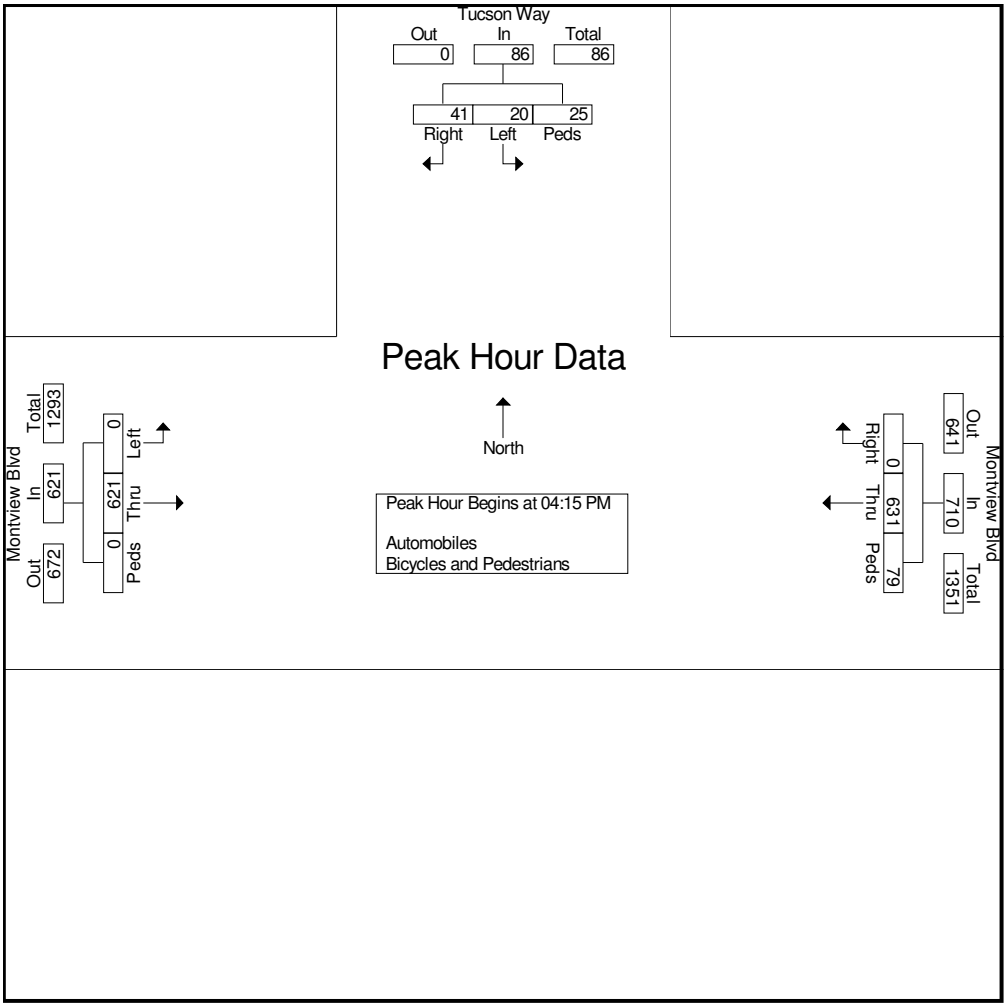


Ridgeview Data Collection

Aurora, CO
Fitzsimons Innovation Campus
PM Peak
Montview Blvd and Tucson Way

File Name : Montview and Tucson PM
Site Code : IPO 486
Start Date : 1/28/2020
Page No : 3

	Montview Blvd Eastbound				Montview Blvd Westbound				Tucson Way Southbound				
Start Time	Left	Thru	Peds	App. Total	Thru	Right	Peds	App. Total	Left	Right	Peds	App. Total	Int. Total
Peak Hour Analysis From 04:00 PM to 05:45 PM - Peak 1 of 1													
Peak Hour for Entire Intersection Begins at 04:15 PM													
04:15 PM	0	156	0	156	**180**	0	13	**193**	2	**16**	4	22	371
04:30 PM	0	**187**	0	**187**	160	0	**23**	183	2	5	**9**	16	**386**
04:45 PM	0	135	0	135	133	0	22	155	**8**	7	8	23	313
05:00 PM	0	143	0	143	158	0	21	179	8	13	4	**25**	347
Total Volume	0	621	0	621	631	0	79	710	20	41	25	86	1417
% App. Total	0	100	0		88.9	0	11.1		23.3	47.7	29.1		
PHF	.000	.830	.000	.830	.876	.000	.859	.920	.625	.641	.694	.860	.918



Ridgeview Data Collection

Aurora, CO
Fitzsimons Innovation Campus
AM Peak
Montview Blvd and Ursula St

File Name : Montview and Ursula AM
Site Code : IPO 486
Start Date : 1/28/2020
Page No : 1

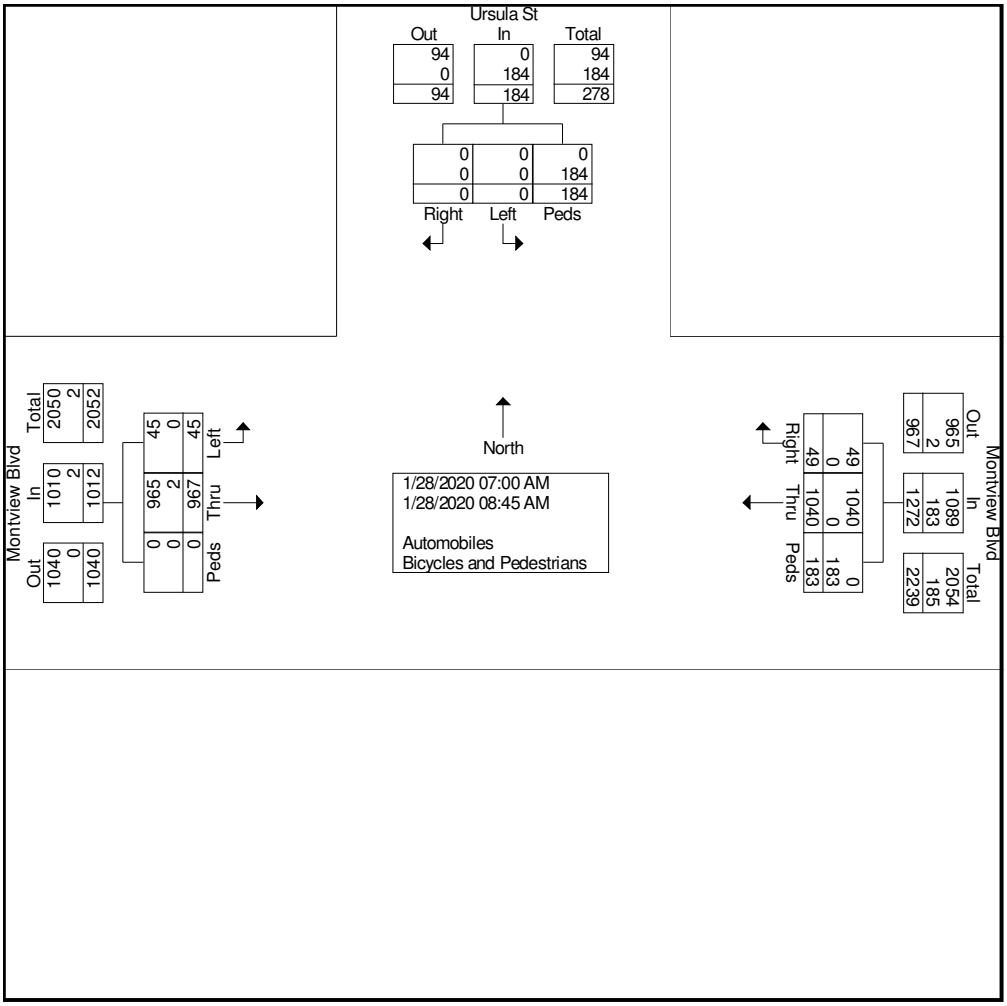
Groups Printed- Automobiles - Bicycles and Pedestrians

	Montview Blvd Eastbound				Montview Blvd Westbound				Ursula St Southbound				
Start Time	Left	Thru	Peds	App. Total	Thru	Right	Peds	App. Total	Left	Right	Peds	App. Total	Int. Total
07:00 AM	3	126	0	129	132	6	6	144	0	0	8	8	281
07:15 AM	6	120	0	126	136	5	20	161	0	0	21	21	308
07:30 AM	4	142	0	146	131	3	25	159	0	0	24	24	329
07:45 AM	4	138	0	142	127	11	87	225	0	0	85	85	452
Total	17	526	0	543	526	25	138	689	0	0	138	138	1370
08:00 AM	11	118	0	129	143	3	14	160	0	0	14	14	303
08:15 AM	8	116	0	124	116	11	9	136	0	0	9	9	269
08:30 AM	7	118	0	125	136	5	8	149	0	0	9	9	283
08:45 AM	2	89	0	91	119	5	14	138	0	0	14	14	243
Total	28	441	0	469	514	24	45	583	0	0	46	46	1098
Grand Total	45	967	0	1012	1040	49	183	1272	0	0	184	184	2468
Apprch %	4.4	95.6	0		81.8	3.9	14.4		0	0	100		
Total %	1.8	39.2	0	41	42.1	2	7.4	51.5	0	0	7.5	7.5	
Automobiles	45	965	0	1010	1040	49	0	1089	0	0	0	0	2099
% Automobiles	100	99.8	0	99.8	100	100	0	85.6	0	0	0	0	85
Bicycles and Pedestrians	0	2	0	2	0	0	183	183	0	0	184	184	369
% Bicycles and Pedestrians	0	0.2	0	0.2	0	0	100	14.4	0	0	100	100	15

Ridgeview Data Collection

Aurora, CO
Fitzsimons Innovation Campus
AM Peak
Montview Blvd and Ursula St

File Name : Montview and Ursula AM
Site Code : IPO 486
Start Date : 1/28/2020
Page No : 2

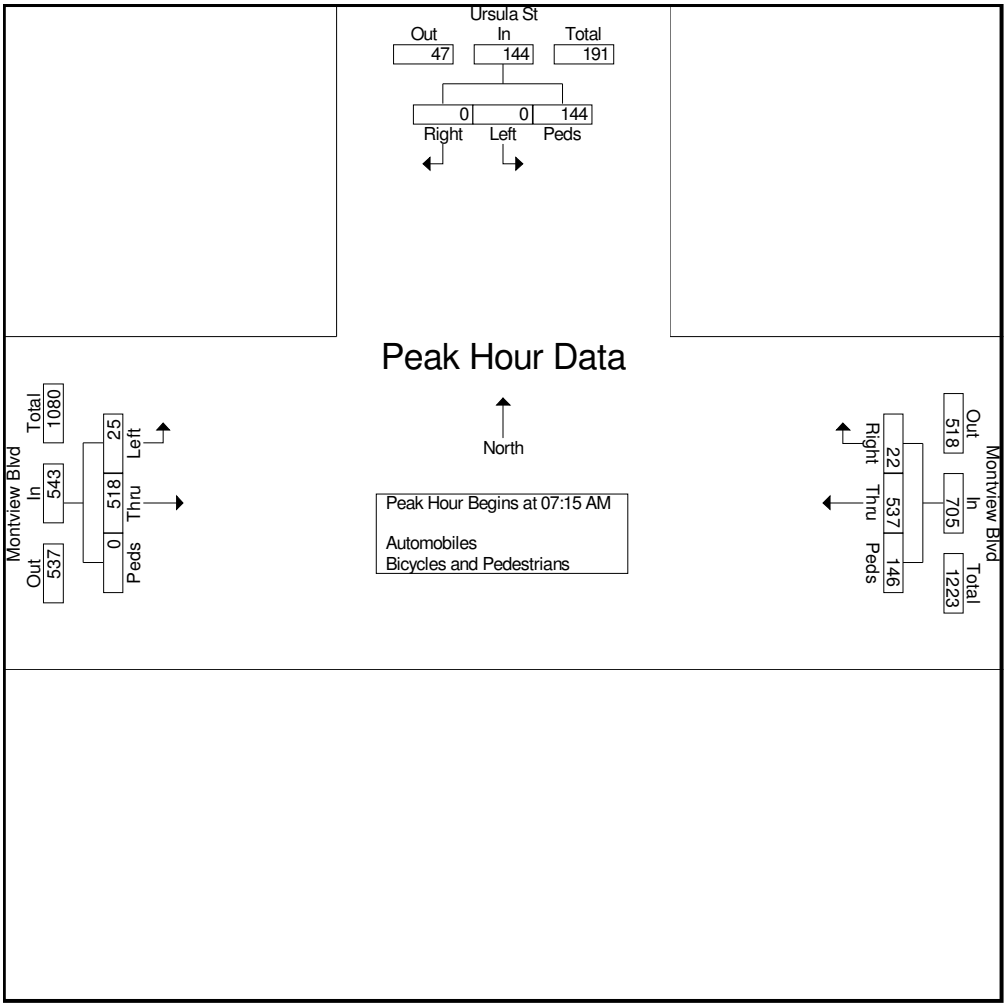


Ridgeview Data Collection

Aurora, CO
Fitzsimons Innovation Campus
AM Peak
Montview Blvd and Ursula St

File Name : Montview and Ursula AM
Site Code : IPO 486
Start Date : 1/28/2020
Page No : 3

	Montview Blvd Eastbound				Montview Blvd Westbound				Ursula St Southbound				
Start Time	Left	Thru	Peds	App. Total	Thru	Right	Peds	App. Total	Left	Right	Peds	App. Total	Int. Total
Peak Hour Analysis From 07:00 AM to 08:45 AM - Peak 1 of 1													
Peak Hour for Entire Intersection Begins at 07:15 AM													
07:15 AM	6	120	0	126	136	5	20	161	0	0	21	21	308
07:30 AM	4	**142**	0	**146**	131	3	25	159	0	0	24	24	329
07:45 AM	4	138	0	142	127	**11**	**87**	**225**	0	0	**85**	**85**	**452**
08:00 AM	**11**	118	0	129	**143**	3	14	160	0	0	14	14	303
Total Volume	25	518	0	543	537	22	146	705	0	0	144	144	1392
% App. Total	4.6	95.4	0		76.2	3.1	20.7		0	0	100		
PHF	.568	.912	.000	.930	.939	.500	.420	.783	.000	.000	.424	.424	.770



Ridgeview Data Collection

Aurora, CO
Fitzsimons Innovation Campus
PM Peak
Montview Blvd and Ursula St

File Name : Montview and Ursula PM
Site Code : IPO 486
Start Date : 1/28/2020
Page No : 1

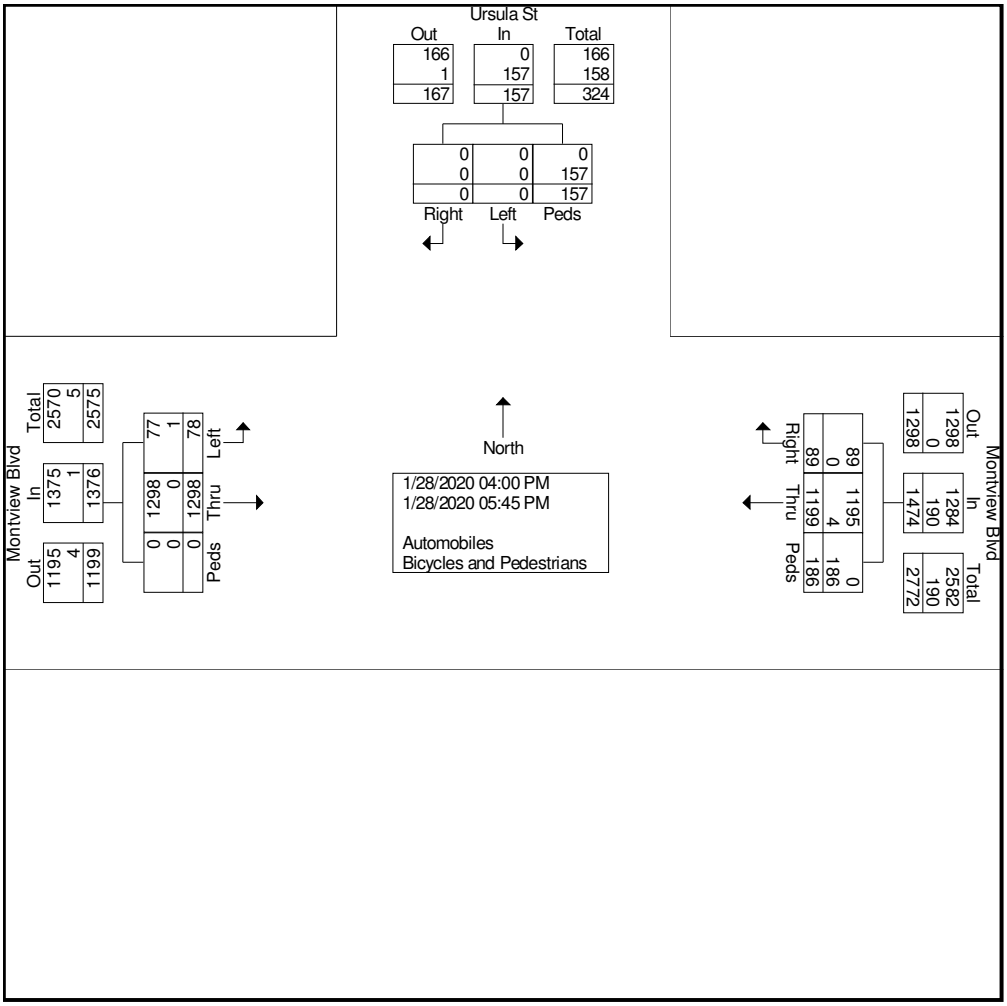
Groups Printed- Automobiles - Bicycles and Pedestrians

	Montview Blvd Eastbound				Montview Blvd Westbound				Ursula St Southbound				
Start Time	Left	Thru	Peds	App. Total	Thru	Right	Peds	App. Total	Left	Right	Peds	App. Total	Int. Total
04:00 PM	3	157	0	160	148	7	24	179	0	0	20	20	359
04:15 PM	10	152	0	162	177	9	13	199	0	0	11	11	372
04:30 PM	9	180	0	189	164	13	31	208	0	0	26	26	423
04:45 PM	10	143	0	153	137	6	47	190	0	0	39	39	382
Total	32	632	0	664	626	35	115	776	0	0	96	96	1536
05:00 PM	17	136	0	153	160	16	23	199	0	0	24	24	376
05:15 PM	11	199	0	210	141	14	26	181	0	0	25	25	416
05:30 PM	11	171	0	182	153	12	15	180	0	0	5	5	367
05:45 PM	7	160	0	167	119	12	7	138	0	0	7	7	312
Total	46	666	0	712	573	54	71	698	0	0	61	61	1471
Grand Total	78	1298	0	1376	1199	89	186	1474	0	0	157	157	3007
Apprch %	5.7	94.3	0		81.3	6	12.6		0	0	100		
Total %	2.6	43.2	0	45.8	39.9	3	6.2	49	0	0	5.2	5.2	
Automobiles	77	1298	0	1375	1195	89	0	1284	0	0	0	0	2659
% Automobiles	98.7	100	0	99.9	99.7	100	0	87.1	0	0	0	0	88.4
Bicycles and Pedestrians	1	0	0	1	4	0	186	190	0	0	157	157	348
% Bicycles and Pedestrians	1.3	0	0	0.1	0.3	0	100	12.9	0	0	100	100	11.6

Ridgeview Data Collection

Aurora, CO
Fitzsimons Innovation Campus
PM Peak
Montview Blvd and Ursula St

File Name : Montview and Ursula PM
Site Code : IPO 486
Start Date : 1/28/2020
Page No : 2

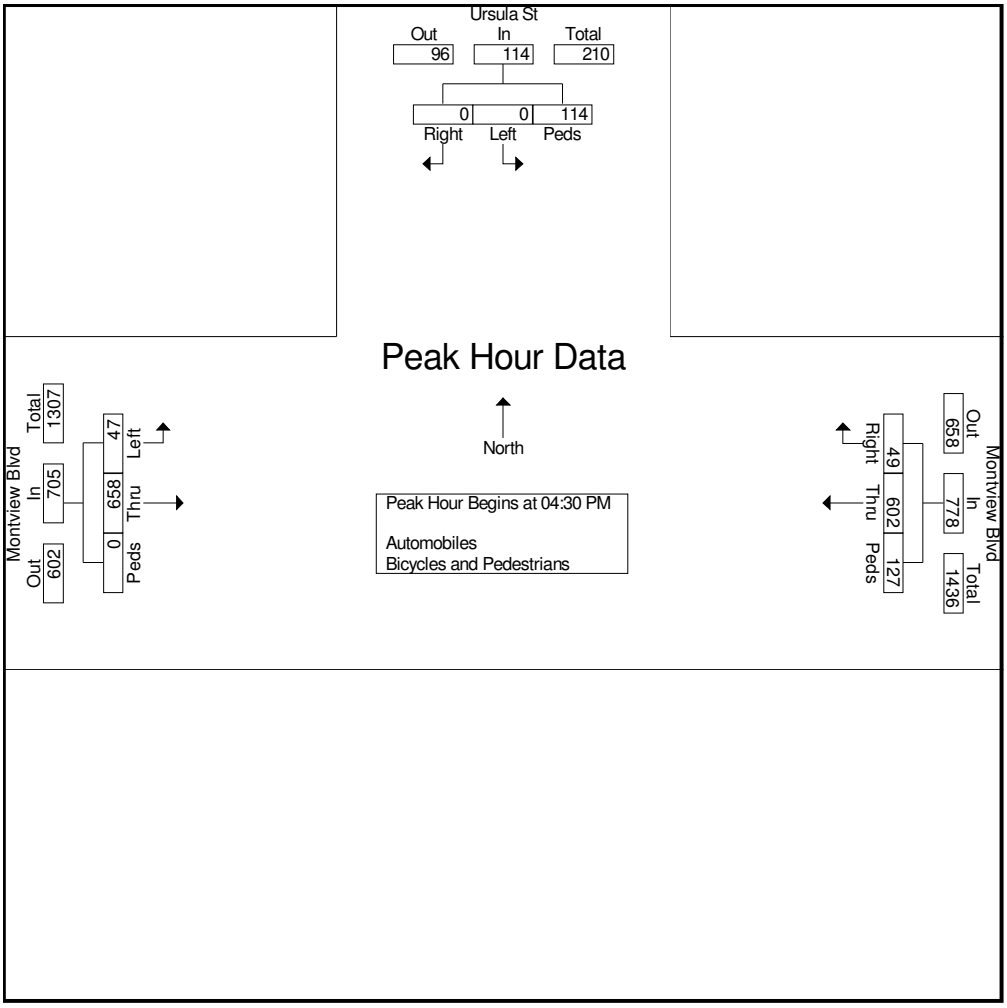


Ridgeview Data Collection

Aurora, CO
Fitzsimons Innovation Campus
PM Peak
Montview Blvd and Ursula St

File Name : Montview and Ursula PM
Site Code : IPO 486
Start Date : 1/28/2020
Page No : 3

	Montview Blvd Eastbound				Montview Blvd Westbound				Ursula St Southbound				
Start Time	Left	Thru	Peds	App. Total	Thru	Right	Peds	App. Total	Left	Right	Peds	App. Total	Int. Total
Peak Hour Analysis From 04:00 PM to 05:45 PM - Peak 1 of 1													
Peak Hour for Entire Intersection Begins at 04:30 PM													
04:30 PM	9	180	0	189	**164**	13	31	**208**	0	0	26	26	**423**
04:45 PM	10	143	0	153	137	6	**47**	190	0	0	**39**	**39**	382
05:00 PM	**17**	136	0	153	160	**16**	23	199	0	0	24	24	376
05:15 PM	11	**199**	0	**210**	141	14	26	181	0	0	25	25	416
Total Volume	47	658	0	705	602	49	127	778	0	0	114	114	1597
% App. Total	6.7	93.3	0		77.4	6.3	16.3		0	0	100		
PHF	.691	.827	.000	.839	.918	.766	.676	.935	.000	.000	.731	.731	.944



Ridgeview Data Collection

Aurora, CO
Fitzsimons Innovation Campus
AM Peak
Montview Blvd and Victor St

File Name : Montview and Victor AM
Site Code : IPO 486
Start Date : 1/28/2020
Page No : 1

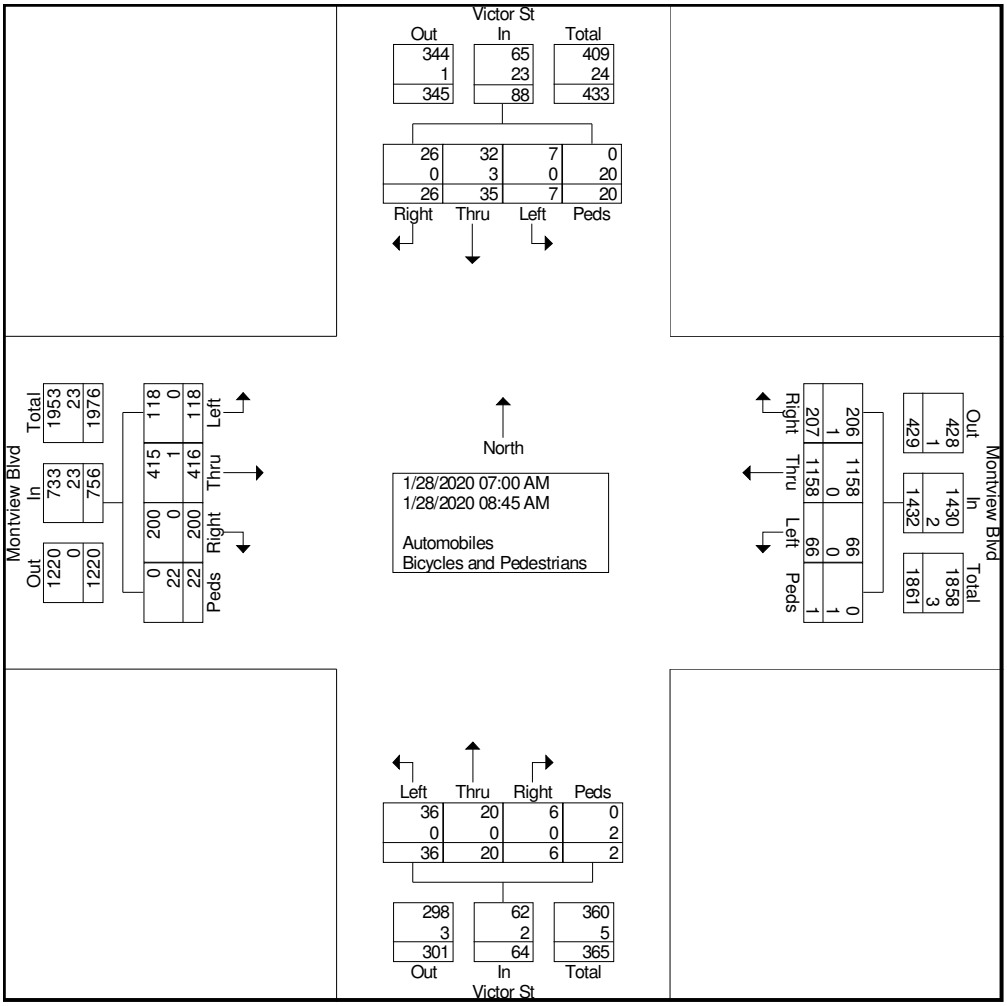
Groups Printed- Automobiles - Bicycles and Pedestrians

	Montview Blvd Eastbound					Montview Blvd Westbound					Victor St Northbound					Victor St Southbound					
Start Time	Left	Thru	Right	Peds	App. Total	Left	Thru	Right	Peds	App. Total	Left	Thru	Right	Peds	App. Total	Left	Thru	Right	Peds	App. Total	Int. Total
07:00 AM	16	63	21	2	102	4	138	30	0	172	2	1	1	2	6	1	5	4	0	10	290
07:15 AM	6	62	29	2	99	8	145	21	0	174	12	2	4	0	18	1	3	2	1	7	298
07:30 AM	20	56	29	5	110	15	136	35	1	187	7	0	0	0	7	0	3	5	3	11	315
07:45 AM	12	58	33	4	107	8	158	32	0	198	4	3	1	0	8	2	6	5	4	17	330
Total	54	239	112	13	418	35	577	118	1	731	25	6	6	2	39	4	17	16	8	45	1233
08:00 AM	15	43	24	3	85	11	140	21	0	172	4	5	0	0	9	1	7	4	1	13	279
08:15 AM	16	50	30	4	100	4	146	23	0	173	2	7	0	0	9	1	5	3	5	14	296
08:30 AM	16	43	22	2	83	5	151	26	0	182	2	1	0	0	3	1	2	1	4	8	276
08:45 AM	17	41	12	0	70	11	144	19	0	174	3	1	0	0	4	0	4	2	2	8	256
Total	64	177	88	9	338	31	581	89	0	701	11	14	0	0	25	3	18	10	12	43	1107
Grand Total	118	416	200	22	756	66	1158	207	1	1432	36	20	6	2	64	7	35	26	20	88	2340
Apprch %	15.6	55	26.5	2.9		4.6	80.9	14.5	0.1		56.2	31.2	9.4	3.1		8	39.8	29.5	22.7		
Total %	5	17.8	8.5	0.9	32.3	2.8	49.5	8.8	0	61.2	1.5	0.9	0.3	0.1	2.7	0.3	1.5	1.1	0.9	3.8	
Automobiles	118	415	200	0	733	66	1158	206	0	1430	36	20	6	0	62	7	32	26	0	65	2290
% Automobiles	100	99.8	100	0	97	100	100	99.5	0	99.9	100	100	100	0	96.9	100	91.4	100	0	73.9	97.9
Bicycles and Pedestrians	0	1	0	22	23	0	0	1	1	2	0	0	0	2	2	0	3	0	20	23	50
% Bicycles and Pedestrians	0	0.2	0	100	3	0	0	0.5	100	0.1	0	0	0	100	3.1	0	8.6	0	100	26.1	2.1

Ridgeview Data Collection

Aurora, CO
Fitzsimons Innovation Campus
AM Peak
Montview Blvd and Victor St

File Name : Montview and Victor AM
Site Code : IPO 486
Start Date : 1/28/2020
Page No : 2

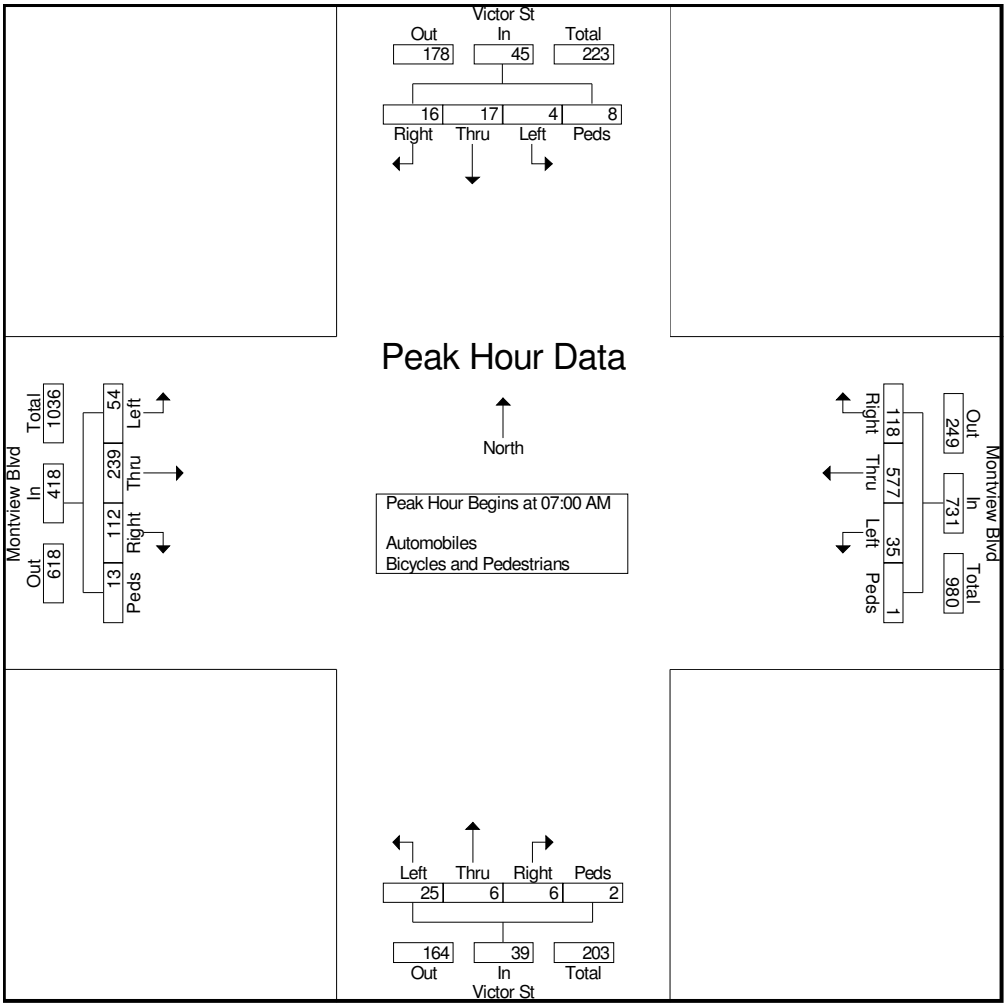


Ridgeview Data Collection

Aurora, CO
Fitzsimons Innovation Campus
AM Peak
Montview Blvd and Victor St

File Name : Montview and Victor AM
Site Code : IPO 486
Start Date : 1/28/2020
Page No : 3

	Montview Blvd Eastbound					Montview Blvd Westbound					Victor St Northbound					Victor St Southbound					
Start Time	Left	Thru	Right	Peds	App. Total	Left	Thru	Right	Peds	App. Total	Left	Thru	Right	Peds	App. Total	Left	Thru	Right	Peds	App. Total	Int. Total
Peak Hour Analysis From 07:00 AM to 08:45 AM - Peak 1 of 1																					
Peak Hour for Entire Intersection Begins at 07:00 AM																					
07:00 AM	16	**63**	21	2	102	4	138	30	0	172	2	1	1	**2**	6	1	5	4	0	10	290
07:15 AM	6	62	29	2	99	8	145	21	0	174	**12**	2	**4**	0	**18**	1	3	2	1	7	298
07:30 AM	**20**	56	29	**5**	**110**	**15**	136	**35**	**1**	187	7	0	0	0	7	0	3	**5**	3	11	315
07:45 AM	12	58	**33**	4	107	8	**158**	32	0	**198**	4	**3**	1	0	8	**2**	**6**	5	**4**	**17**	**330**
Total Volume	54	239	112	13	418	35	577	118	1	731	25	6	6	2	39	4	17	16	8	45	1233
% App. Total	12.9	57.2	26.8	3.1		4.8	78.9	16.1	0.1		64.1	15.4	15.4	5.1		8.9	37.8	35.6	17.8		
PHF	.675	.948	.848	.650	.950	.583	.913	.843	.250	.923	.521	.500	.375	.250	.542	.500	.708	.800	.500	.662	.934



Ridgeview Data Collection

Aurora, CO
Fitzsimons Innovation Campus
PM Peak
Montview Blvd and Victor St

File Name : Montview and Victor PM
Site Code : IPO 486
Start Date : 1/28/2020
Page No : 1

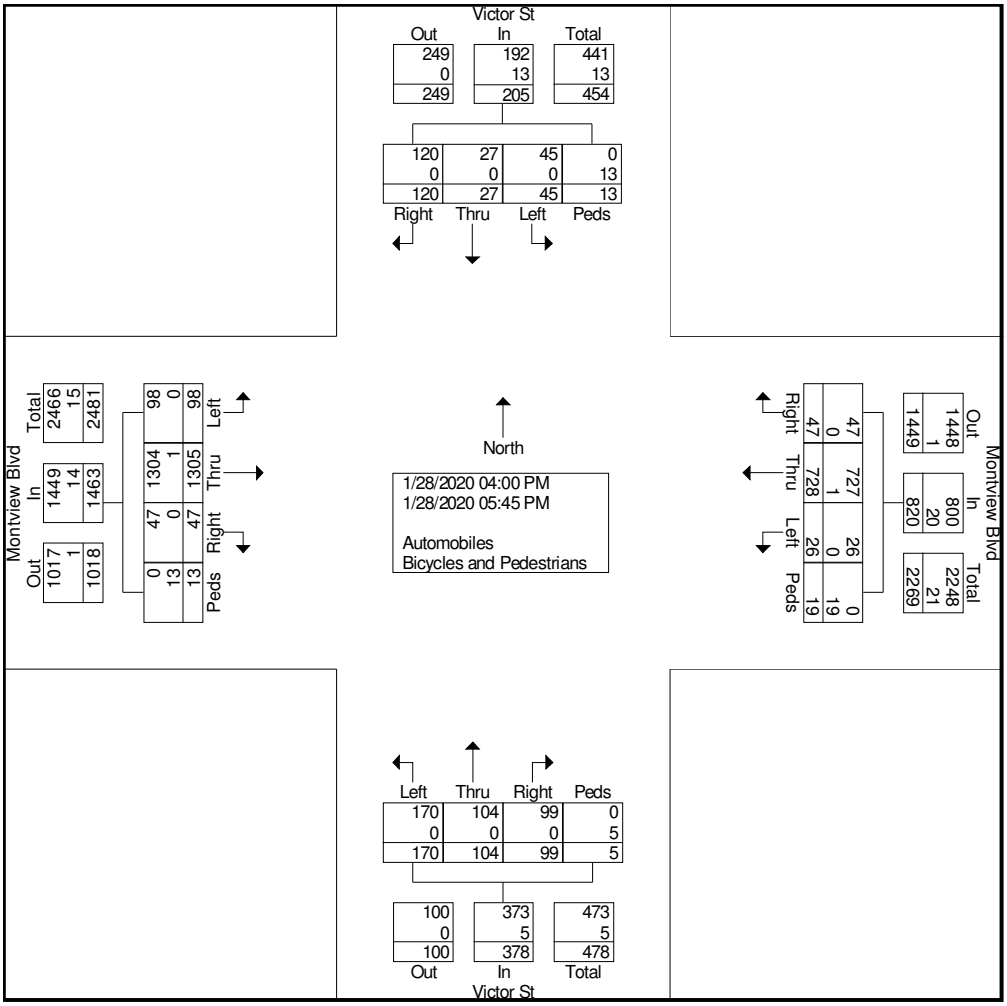
Groups Printed- Automobiles - Bicycles and Pedestrians

	Montview Blvd Eastbound					Montview Blvd Westbound					Victor St Northbound					Victor St Southbound					
Start Time	Left	Thru	Right	Peds	App. Total	Left	Thru	Right	Peds	App. Total	Left	Thru	Right	Peds	App. Total	Left	Thru	Right	Peds	App. Total	Int. Total
04:00 PM	7	178	6	1	192	5	89	8	7	109	18	8	9	0	35	6	1	12	3	22	358
04:15 PM	11	151	6	0	168	3	110	11	2	126	28	13	13	2	56	4	3	20	3	30	380
04:30 PM	15	145	11	0	171	5	103	2	4	114	14	23	16	1	54	6	7	19	0	32	371
04:45 PM	24	141	6	2	173	8	93	8	1	110	11	14	11	1	37	8	6	14	0	28	348
Total	57	615	29	3	704	21	395	29	14	459	71	58	49	4	182	24	17	65	6	112	1457
05:00 PM	19	142	2	6	169	2	109	4	1	116	19	11	17	1	48	6	3	19	3	31	364
05:15 PM	14	209	6	3	232	2	73	6	3	84	12	19	24	0	55	2	3	15	4	24	395
05:30 PM	5	185	5	1	196	1	77	3	1	82	35	9	6	0	50	8	2	14	0	24	352
05:45 PM	3	154	5	0	162	0	74	5	0	79	33	7	3	0	43	5	2	7	0	14	298
Total	41	690	18	10	759	5	333	18	5	361	99	46	50	1	196	21	10	55	7	93	1409
Grand Total	98	1305	47	13	1463	26	728	47	19	820	170	104	99	5	378	45	27	120	13	205	2866
Apprch %	6.7	89.2	3.2	0.9		3.2	88.8	5.7	2.3		45	27.5	26.2	1.3		22	13.2	58.5	6.3		
Total %	3.4	45.5	1.6	0.5	51	0.9	25.4	1.6	0.7	28.6	5.9	3.6	3.5	0.2	13.2	1.6	0.9	4.2	0.5	7.2	
Automobiles	98	1304	47	0	1449	26	727	47	0	800	170	104	99	0	373	45	27	120	0	192	2814
% Automobiles	100	99.9	100	0	99	100	99.9	100	0	97.6	100	100	100	0	98.7	100	100	100	0	93.7	98.2
Bicycles and Pedestrians	0	1	0	13	14	0	1	0	19	20	0	0	0	5	5	0	0	0	13	13	52
% Bicycles and Pedestrians	0	0.1	0	100	1	0	0.1	0	100	2.4	0	0	0	100	1.3	0	0	0	100	6.3	1.8

Ridgeview Data Collection

Aurora, CO
Fitzsimons Innovation Campus
PM Peak
Montview Blvd and Victor St

File Name : Montview and Victor PM
Site Code : IPO 486
Start Date : 1/28/2020
Page No : 2

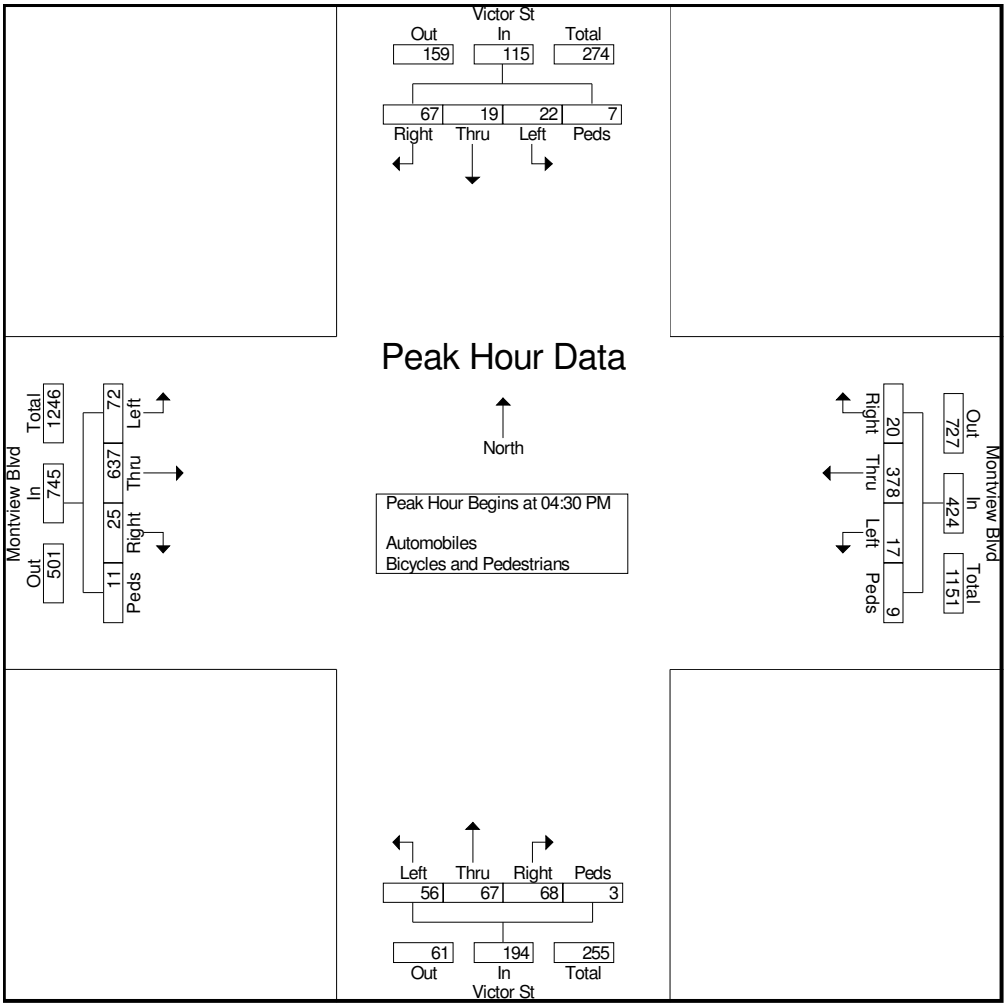


Ridgeview Data Collection

Aurora, CO
Fitzsimons Innovation Campus
PM Peak
Montview Blvd and Victor St

File Name : Montview and Victor PM
Site Code : IPO 486
Start Date : 1/28/2020
Page No : 3

	Montview Blvd Eastbound					Montview Blvd Westbound					Victor St Northbound					Victor St Southbound					
Start Time	Left	Thru	Right	Peds	App. Total	Left	Thru	Right	Peds	App. Total	Left	Thru	Right	Peds	App. Total	Left	Thru	Right	Peds	App. Total	Int. Total
Peak Hour Analysis From 04:00 PM to 05:45 PM - Peak 1 of 1																					
Peak Hour for Entire Intersection Begins at 04:30 PM																					
04:30 PM	15	145	**11**	0	171	5	103	2	**4**	114	14	**23**	16	**1**	54	6	**7**	**19**	0	**32**	371
04:45 PM	**24**	141	6	2	173	**8**	93	**8**	1	110	11	14	11	1	37	**8**	6	14	0	28	348
05:00 PM	19	142	2	**6**	169	2	**109**	4	1	**116**	**19**	11	17	1	48	6	3	19	3	31	364
05:15 PM	14	**209**	6	3	**232**	2	73	6	3	84	12	19	**24**	0	**55**	2	3	15	**4**	24	**395**
Total Volume	72	637	25	11	745	17	378	20	9	424	56	67	68	3	194	22	19	67	7	115	1478
% App. Total	9.7	85.5	3.4	1.5		4	89.2	4.7	2.1		28.9	34.5	35.1	1.5		19.1	16.5	58.3	6.1		
PHF	.750	.762	.568	.458	.803	.531	.867	.625	.563	.914	.737	.728	.708	.750	.882	.688	.679	.882	.438	.898	.935



Ridgeview Data Collection

Aurora, CO
Fitzsimons Innovation Campus
AM Peak
Montview Blvd and Fitzsimons Pkwy

File Name : Montview and Fitzsimons AM
Site Code : IPO 486
Start Date : 1/28/2020
Page No : 1

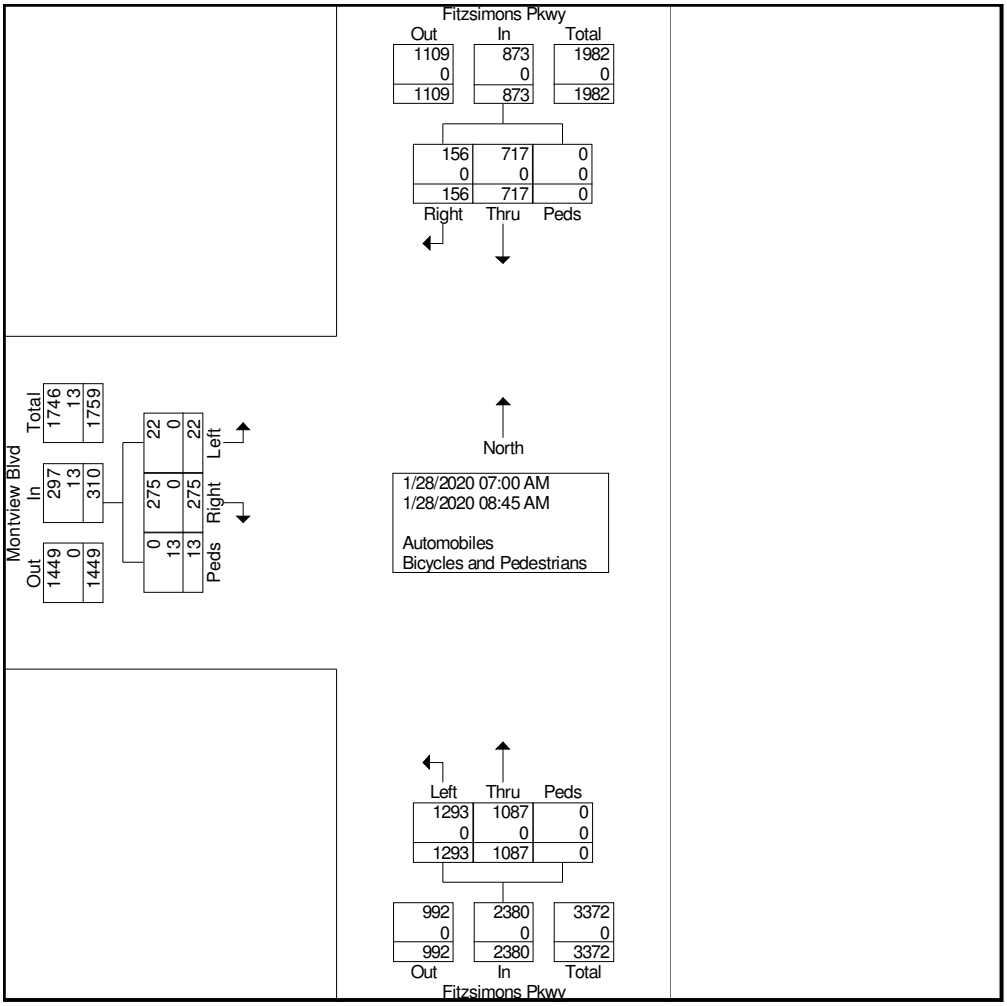
Groups Printed- Automobiles - Bicycles and Pedestrians

	Montview Blvd Eastbound				Fitzsimons Pkwy Northbound				Fitzsimons Pkwy Southbound				
Start Time	Left	Right	Peds	App. Total	Left	Thru	Peds	App. Total	Thru	Right	Peds	App. Total	Int. Total
07:00 AM	3	53	0	56	165	133	0	298	92	15	0	107	461
07:15 AM	4	26	0	30	158	146	0	304	86	27	0	113	447
07:30 AM	4	41	0	45	165	153	0	318	116	22	0	138	501
07:45 AM	0	32	1	33	172	186	0	358	104	39	0	143	534
Total	11	152	1	164	660	618	0	1278	398	103	0	501	1943
08:00 AM	4	31	1	36	161	149	0	310	98	20	0	118	464
08:15 AM	5	33	5	43	155	111	0	266	88	18	0	106	415
08:30 AM	0	27	6	33	166	112	0	278	76	4	0	80	391
08:45 AM	2	32	0	34	151	97	0	248	57	11	0	68	350
Total	11	123	12	146	633	469	0	1102	319	53	0	372	1620
Grand Total	22	275	13	310	1293	1087	0	2380	717	156	0	873	3563
Apprch %	7.1	88.7	4.2		54.3	45.7	0		82.1	17.9	0		
Total %	0.6	7.7	0.4	8.7	36.3	30.5	0	66.8	20.1	4.4	0	24.5	
Automobiles	22	275	0	297	1293	1087	0	2380	717	156	0	873	3550
% Automobiles	100	100	0	95.8	100	100	0	100	100	100	0	100	99.6
Bicycles and Pedestrians	0	0	13	13	0	0	0	0	0	0	0	0	13
% Bicycles and Pedestrians	0	0	100	4.2	0	0	0	0	0	0	0	0	0.4

Ridgeview Data Collection

Aurora, CO
Fitzsimons Innovation Campus
AM Peak
Montview Blvd and Fitzsimons Pkwy

File Name : Montview and Fitzsimons AM
Site Code : IPO 486
Start Date : 1/28/2020
Page No : 2

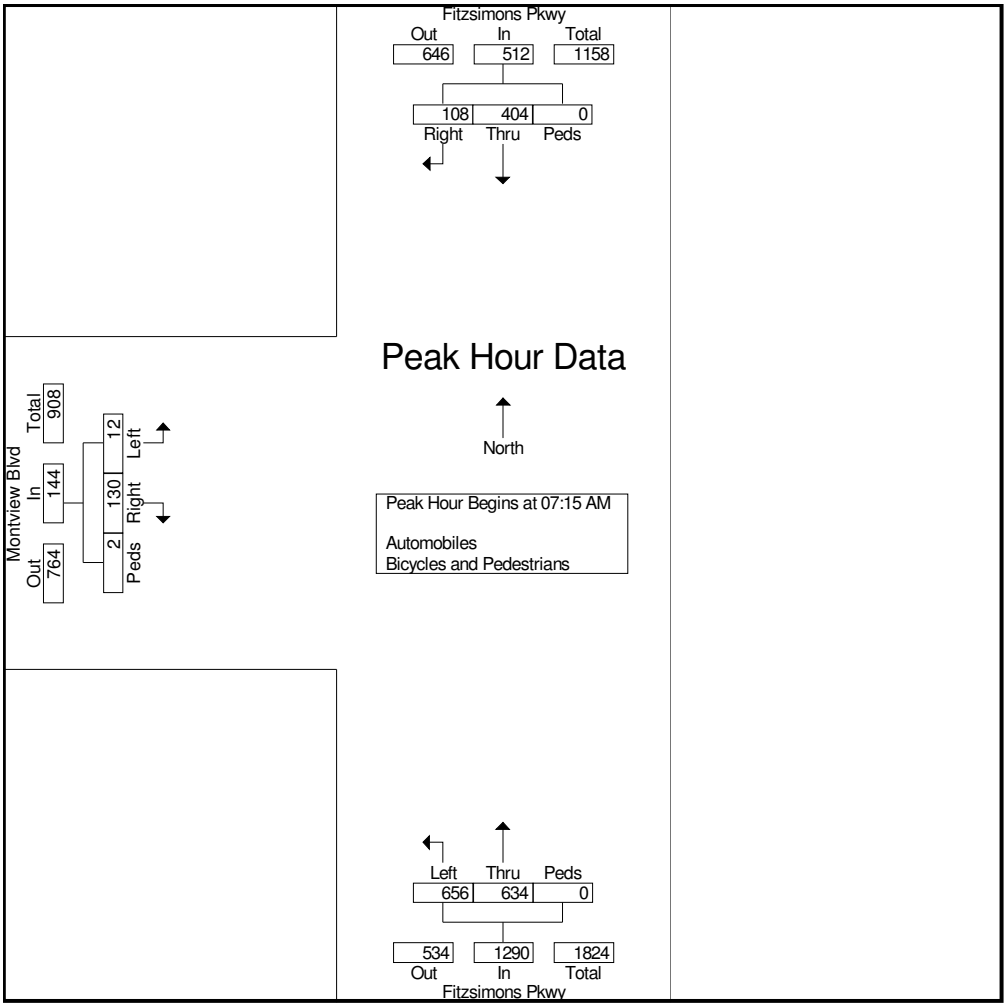


Ridgeview Data Collection

Aurora, CO
Fitzsimons Innovation Campus
AM Peak
Montview Blvd and Fitzsimons Pkwy

File Name : Montview and Fitzsimons AM
Site Code : IPO 486
Start Date : 1/28/2020
Page No : 3

	Montview Blvd Eastbound				Fitzsimons Pkwy Northbound				Fitzsimons Pkwy Southbound				
Start Time	Left	Right	Peds	App. Total	Left	Thru	Peds	App. Total	Thru	Right	Peds	App. Total	Int. Total
Peak Hour Analysis From 07:00 AM to 08:45 AM - Peak 1 of 1													
Peak Hour for Entire Intersection Begins at 07:15 AM													
07:15 AM	**4**	26	0	30	158	146	0	304	86	27	0	113	447
07:30 AM	4	**41**	0	**45**	165	153	0	318	**116**	22	0	138	501
07:45 AM	0	32	**1**	33	**172**	**186**	0	**358**	104	**39**	0	**143**	**534**
08:00 AM	4	31	1	36	161	149	0	310	98	20	0	118	464
Total Volume	12	130	2	144	656	634	0	1290	404	108	0	512	1946
% App. Total	8.3	90.3	1.4		50.9	49.1	0		78.9	21.1	0		
PHF	.750	.793	.500	.800	.953	.852	.000	.901	.871	.692	.000	.895	.911



Ridgeview Data Collection

Aurora, CO
Fitzsimons Innovation Campus
PM Peak
Montview Blvd and Fitzsimons Pkwy

File Name : Montview and Fitzsimons PM
Site Code : IPO 486
Start Date : 1/28/2020
Page No : 1

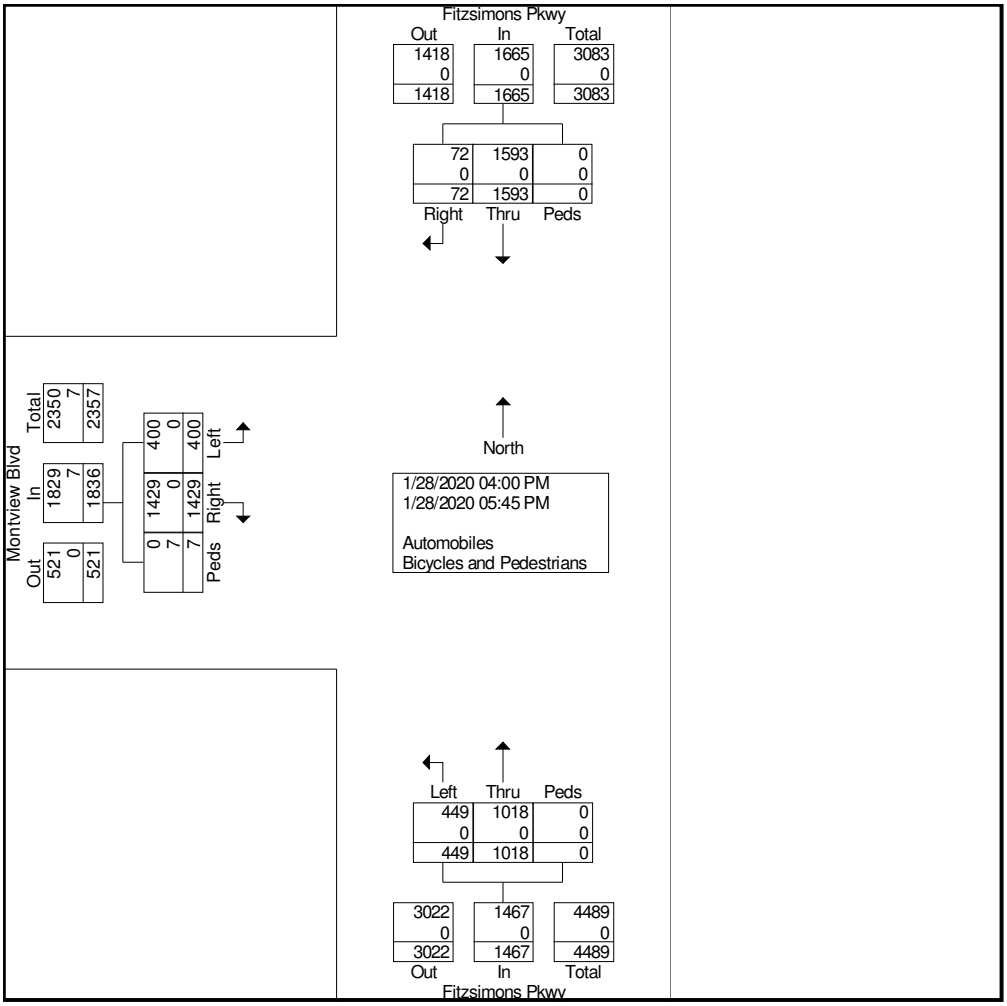
Groups Printed- Automobiles - Bicycles and Pedestrians

	Montview Blvd Eastbound				Fitzsimons Pkwy Northbound				Fitzsimons Pkwy Southbound				
Start Time	Left	Right	Peds	App. Total	Left	Thru	Peds	App. Total	Thru	Right	Peds	App. Total	Int. Total
04:00 PM	29	192	6	227	56	105	0	161	207	14	0	221	609
04:15 PM	39	179	0	218	69	113	0	182	187	12	0	199	599
04:30 PM	53	147	0	200	56	128	0	184	177	14	0	191	575
04:45 PM	70	166	0	236	60	146	0	206	165	16	0	181	623
Total	191	684	6	881	241	492	0	733	736	56	0	792	2406
05:00 PM	67	157	0	224	56	159	0	215	251	5	0	256	695
05:15 PM	72	230	0	302	54	142	0	196	250	8	0	258	756
05:30 PM	50	201	1	252	47	136	0	183	203	1	0	204	639
05:45 PM	20	157	0	177	51	89	0	140	153	2	0	155	472
Total	209	745	1	955	208	526	0	734	857	16	0	873	2562
Grand Total	400	1429	7	1836	449	1018	0	1467	1593	72	0	1665	4968
Apprch %	21.8	77.8	0.4		30.6	69.4	0		95.7	4.3	0		
Total %	8.1	28.8	0.1	37	9	20.5	0	29.5	32.1	1.4	0	33.5	
Automobiles	400	1429	0	1829	449	1018	0	1467	1593	72	0	1665	4961
% Automobiles	100	100	0	99.6	100	100	0	100	100	100	0	100	99.9
Bicycles and Pedestrians	0	0	7	7	0	0	0	0	0	0	0	0	7
% Bicycles and Pedestrians	0	0	100	0.4	0	0	0	0	0	0	0	0	0.1

Ridgeview Data Collection

Aurora, CO
Fitzsimons Innovation Campus
PM Peak
Montview Blvd and Fitzsimons Pkwy

File Name : Montview and Fitzsimons PM
Site Code : IPO 486
Start Date : 1/28/2020
Page No : 2

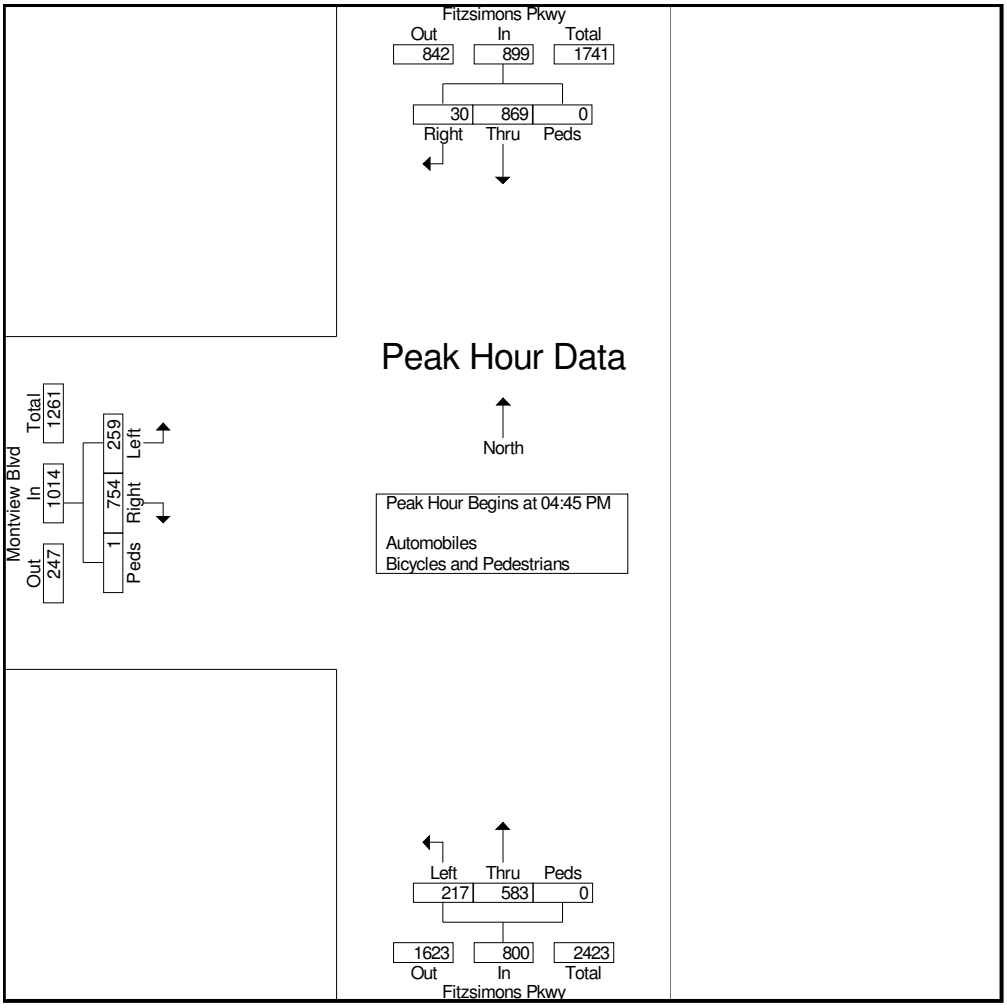


Ridgeview Data Collection

Aurora, CO
Fitzsimons Innovation Campus
PM Peak
Montview Blvd and Fitzsimons Pkwy

File Name : Montview and Fitzsimons PM
Site Code : IPO 486
Start Date : 1/28/2020
Page No : 3

	Montview Blvd Eastbound				Fitzsimons Pkwy Northbound				Fitzsimons Pkwy Southbound				
Start Time	Left	Right	Peds	App. Total	Left	Thru	Peds	App. Total	Thru	Right	Peds	App. Total	Int. Total
Peak Hour Analysis From 04:00 PM to 05:45 PM - Peak 1 of 1													
Peak Hour for Entire Intersection Begins at 04:45 PM													
04:45 PM	70	166	0	236	**60**	146	0	206	165	**16**	0	181	623
05:00 PM	67	157	0	224	56	**159**	0	**215**	**251**	5	0	256	695
05:15 PM	**72**	**230**	0	**302**	54	142	0	196	250	8	0	**258**	**756**
05:30 PM	50	201	**1**	252	47	136	0	183	203	1	0	204	639
Total Volume	259	754	1	1014	217	583	0	800	869	30	0	899	2713
% App. Total	25.5	74.4	0.1		27.1	72.9	0		96.7	3.3	0		
PHF	.899	.820	.250	.839	.904	.917	.000	.930	.866	.469	.000	.871	.897



APPENDIX B

Adjacent Traffic Study Documents

CITY OF AURORA TRAFFIC STUDY OF FITZSIMONS REDEVELOPMENT FINAL EDITION

Prepared for:

City of Aurora
Public Works Department
15151 East Alameda Parkway, Suite 3200
Aurora, CO 80012

Prepared by:

Felsburg Holt & Ullevig
6300 South Syracuse Way, Suite 600
Centennial, CO 80111
303/721-1440

Project Manager: Christopher J. Fasching, PE, PTOE
Project Planner: Shea Suski

FHU Reference No. 113257-11

May 2017

III. TRAFFIC DEMAND MODEL

As indicated, the traffic demand model required a variety of inputs, with the final result being assigned trips onto the road network. The following section documents the inputs, assumptions, and output of the model.

A. Land Use

Two sources provided the land use used in this study: the 2012 *Anschutz Medical Campus Facilities Master Plan* and the FRA. The *Anschutz Medical Campus Facilities Master Plan* provided existing and planned land use for the area south of Montview Boulevard as was determined at that time (2012). This effort updates the FRA land use (covering much of the area north of Montview Boulevard) given their current master planning effort. The travel demand model incorporated both.

Land use from both sources was organized into Transportation Analysis Zones (TAZs). This process allows for the land use quantities to be grouped geographically and clustered according to the means of access onto the roadway network. The effort has focused on AM and PM peak hour traffic projections.

Figure 1 displays all of the TAZs for the Fitzsimons campus, with TAZs being updated through the FRA's master planning shown in the color teal and all remaining TAZs using land use from the *Anschutz Medical Campus Facilities Master Plan* in yellow. Modeling refinement is evident for FRA in that the TAZs north of Montview Boulevard are smaller in size than those to the south.

Land uses for the FRA TAZs are shown below in **Table 1. Appendix A** show land use information for non-FRA zones within the Fitzsimons/Anschutz square mile.

Table 1. FRA Land Use by TAZ

TAZ	Land Use	Quantity	
1	Office	260,000	SF
2	Office	120,000	SF
3	Office	280,000	SF
4	Office	300,000	SF
5	Residential	290	Units
6	Residential	250	Units
7	Office	360,000	SF
8	Office	320,000	SF
9	Office	280,000	SF
10	Office	260,000	SF
11	Residential	250	Units
12	Residential	250	Units
13	Park	-	-
14	Residential	108	Units
15	Office	320,000	SF
16	Office	272,000	SF
17	Office	215,000	SF
18	Office	217,000	SF

TAZ	Land Use	Quantity	
19	Residential	63	Units
20	Residential	54	Units
21	Medical Office	150,000	SF
22	Office	0	SF
23	Office	0	SF
24	Office	330,000	SF
25	Hotel	56	Rooms
26	Innovation/Research	110,000	SF
27	Innovation/Research	110,000	SF
28	Residential	78	Units
29	Hotel	56	Rooms
30	Medical Office	100,000	SF
31	Hotel	140	Rooms
32	Innovation/Research	110,000	SF
33	Innovation/Research*	90,000	SF
34	Innovation/Research*	112,000	SF
35	Hotel	140	Rooms
	Commercial	12,000	SF

* Land use currently exists

FRA Land uses total approximately 4.1 million square feet of non-residential uses, 1343 multi-family units, and 336 hotel units. This compares with other past planning efforts with respect to the area north of Montview Boulevard. The Fitzsimons Area Wide Multimodal Transportation Study (Fehr & Peers, June 2009) incorporated approximately 6.5 million square feet of building space and 402 dwelling units (DU's), based in part on planning work completed by Forest City for much of the property. The current plan tends to represent an increase in residential use and a decrease in non-residential uses compared to this past planning effort.

B. Trip Generation

The Institute of Transportation Engineers' (ITE) *Trip Generation Manual: 9th Edition* provides the vehicle trip generation rates for different types of land uses based on data collected from around the country. The ITE trip manual was used to convert FRA land uses into AM and PM peak hour vehicle trips for each TAZ individually. This conversion then allows for trips to be assigned onto the road network, a process commonly referred to as trip assignment. Trip generation rates and total trips for the FRA TAZs are provided later in this section.

Trip Reductions

ITE's trip generation rates are based on studies accumulated from around the country (often in suburban areas) and do not account for unique circumstances. Factors such as high density, internal trip making, flexible work hours/irregular shifts, increased transit use, and other transportation demand management (TDM) strategies – all of which are present on the Fitzsimons campus – result in reduced vehicle-trip making. In particular, internal trip making between the related dense uses and the addition of light rail mass transit planned to serve the campus (which is planned to opened in late 2016) are expected to reduce the demand of vehicle trips generated by the campus as a whole. **Table 2** lists the reductions applied to each land use type programmed for the campus.

Table 2. Peak Hour Trip Reduction Factors

Land Use	Ride Sharing	Transit	Flex Hours	Bike/Walk	Internal Trips	Total Peak Hour Reduction
Office	6.0%	7.0%	1.5%	1.5%	6.5%	22.5%
Medical/Clinic	4.0%	6.0%	0.8%	0.3%	16.0%	27.0%
Industrial	2.0%	3.5%	0.5%	0.0%	3.0%	9.0%
Education	1.5%	0.5%	1.0%	2.0%	44.5%	49.5%
Library	1.5%	2.0%	1.0%	2.0%	61.0%	67.5%
Hospital	4.0%	3.7%	4.0%	0.6%	14.7%	27.0%
Research/Biotech	4.8%	8.5%	2.8%	0.6%	10.4%	27.0%
Residential	1.5%	6.5%	0.0%	1.0%	16.0%	25.0%
Gym	2.0%	1.0%	0.0%	0.0%	55.5%	58.5%
Retail	0.5%	0.5%	0.0%	0.0%	57.5%	58.5%
Hotel	2.0%	2.5%	1.5%	0.3%	20.7%	27.0%
Day Care	1.5%	0.5%	0.0%	0.0%	47.5%	49.5%
Nursing Home	2.0%	1.0%	1.0%	0.0%	23.0%	27.0%

Trips by TAZ

Trip generation estimates were calculated for each TAZ using ITE trip generation rates and reduced using the reductions presented in **Table 2**. **Table 3** provides the trip generation categories, rates, and totals for each FRA TAZ.

Table 3. FRA Trip Generation by TAZ with Reductions Applied

TAZ	ITE Category	ITE Code	Peak Hour Trip Rate		Total Peak Hour Trips (Reduced)	
			AM	*PM*	*AM*	*PM*
1	General Office Building	710	1.56	1.49	315	301
2	General Office Building	710	1.56	1.49	145	138
3	General Office Building	710	1.56	1.49	338	323
4	General Office Building	710	1.56	1.49	363	346
5	Apartment	220	0.51	0.62	111	135
6	Apartment	220	0.51	0.62	96	116
7	General Office Building	710	1.56	1.49	435	415
8	General Office Building	710	1.56	1.49	387	370
9	General Office Building	710	1.56	1.49	338	323
10	General Office Building	710	1.56	1.49	315	301
11	Apartment	220	0.51	0.62	96	116
12	Apartment	220	0.51	0.62	96	116
13	N/A (neighborhood park)	-	-	-	-	-
14	Apartment	220	0.51	0.62	41	50
15	General Office Building	710	1.56	1.49	387	370
16	General Office Building	710	1.56	1.49	329	314
17	General Office Building	710	1.56	1.49	260	248
18	General Office Building	710	1.56	1.49	263	250
19	Apartment	220	0.51	0.62	24	29
20	Apartment	220	0.51	0.62	21	26
21	General Office Building*	710	1.56	1.49	181	174
22	General Office Building	710	1.56	1.49	-	-
23	General Office Building	710	1.56	1.49	-	-
24	General Office Building	710	1.56	1.49	399	381
25	Business Hotel	312	0.58	0.62	23	26
26	Research & Development	760	1.22	1.07	98	86
27	Research & Development	760	1.22	1.07	98	86
28	Apartment	220	0.51	0.62	30	36
29	Business Hotel	312	0.58	0.62	23	26
30	General Office Building*	710	1.56	1.49	121	115
31	Business Hotel	312	0.58	0.62	59	64
32	Research & Development	760	1.22	1.07	98	86
33	Research & Development	760	1.22	1.07	80	70
34	Research & Development	760	1.22	1.07	99	88
35	Business Hotel	312	0.58	0.62	59	64
	Shopping Center	820	0.96	3.71	5	18
Total					**5,733**	**5,607**

* Although programmed as Medical Office by the FRA, stakeholders noted these uses would be traditional offices for medical industry employees, not offices with patient visits.

Table 5. Distribution by Entry/Exit Point

Entry/Exit Point	Direction	Percent Distribution
I-225	N	7%
	S	17%
Colfax Avenue	E	15%
	W	8%
Peoria Street	N	12%
	S	9%
MLK Jr Boulevard	W	9%
25th Avenue	W	1%
23rd Avenue	W	1%
Montview Boulevard	W	6%
17th Avenue	W	3%
Potomac Street	S	8%
Xanadu Street	S	3%
Ursula Street	S	1%

Table 6. Overarching Directional Distribution

		North		
		19%		
West	28%		15%	**East**
		38%		
		South		

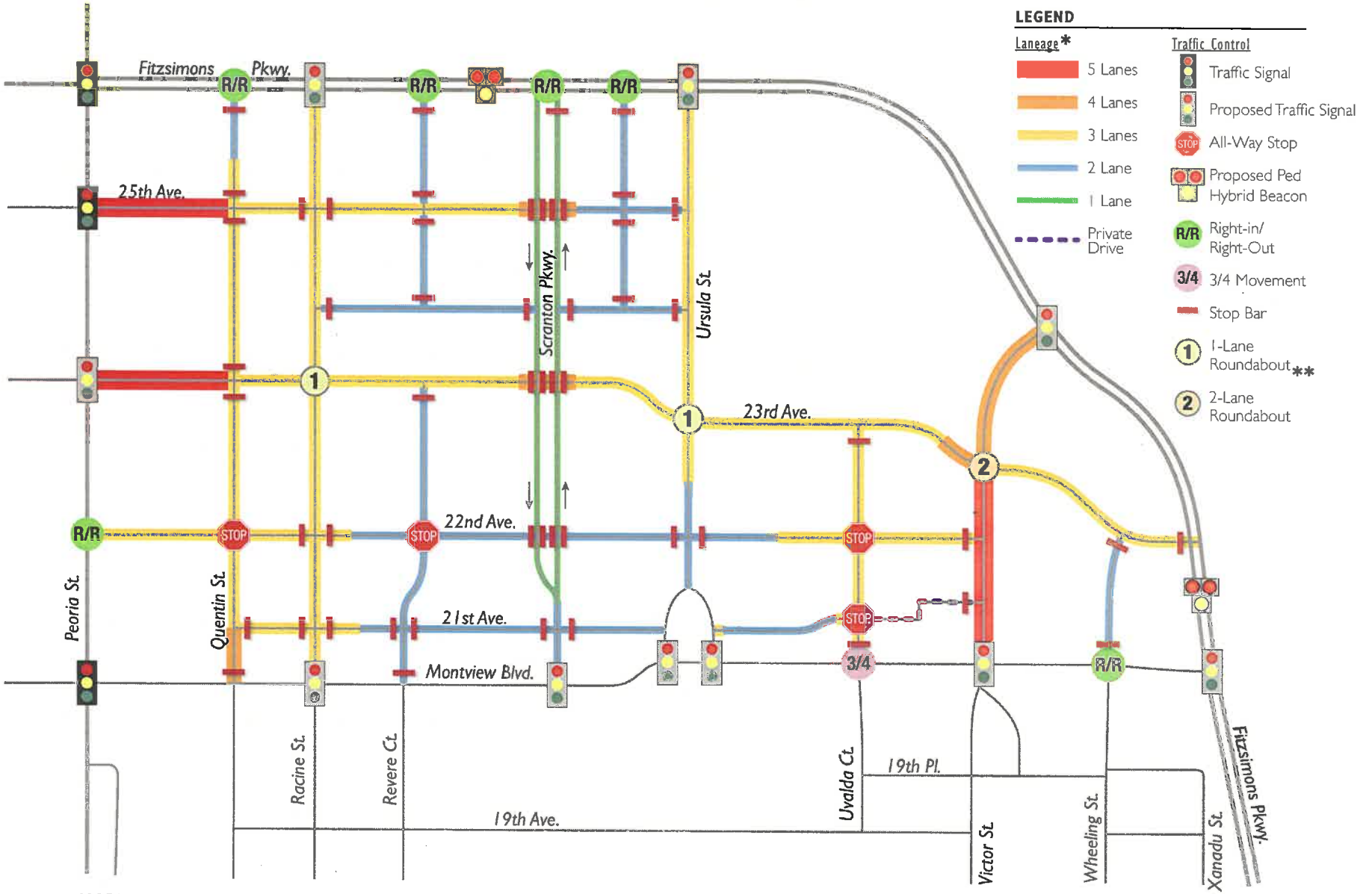
The external points expected to experience the largest distribution percentages are along facilities that are the most regional in nature. I-225 to the south will serve the largest portion of external campus traffic, estimated to accommodate 17 percent, followed by Colfax Avenue to the east planned to accommodate 15 percent. Peoria Street and Martin Luther King Junior Boulevard also have large portions. Overall, most trips are estimated to access the campus from the south (38 percent) and the west (28 percent).

D. Trip Assignment

The final step in the modeling process entails assigning generated trips to the roadway network using the traffic demand model. As described earlier, the VISUM modeling software was used that incorporated the trip generation estimates for each TAZ, the trip distribution percentages, and network characteristics to assign the trips onto the road network. The following describes these factors and the process used.

Link Characteristics

Travel time is one of the most important factors in the model relative to determining the routing of trips. Existing and planned roadways were entered in the model to scale, ensuring their physical characteristics were accounted. Roadway travel speed was then coded, usually as their posted speed limit (with adjustments made based on stakeholder input).



NOTE:

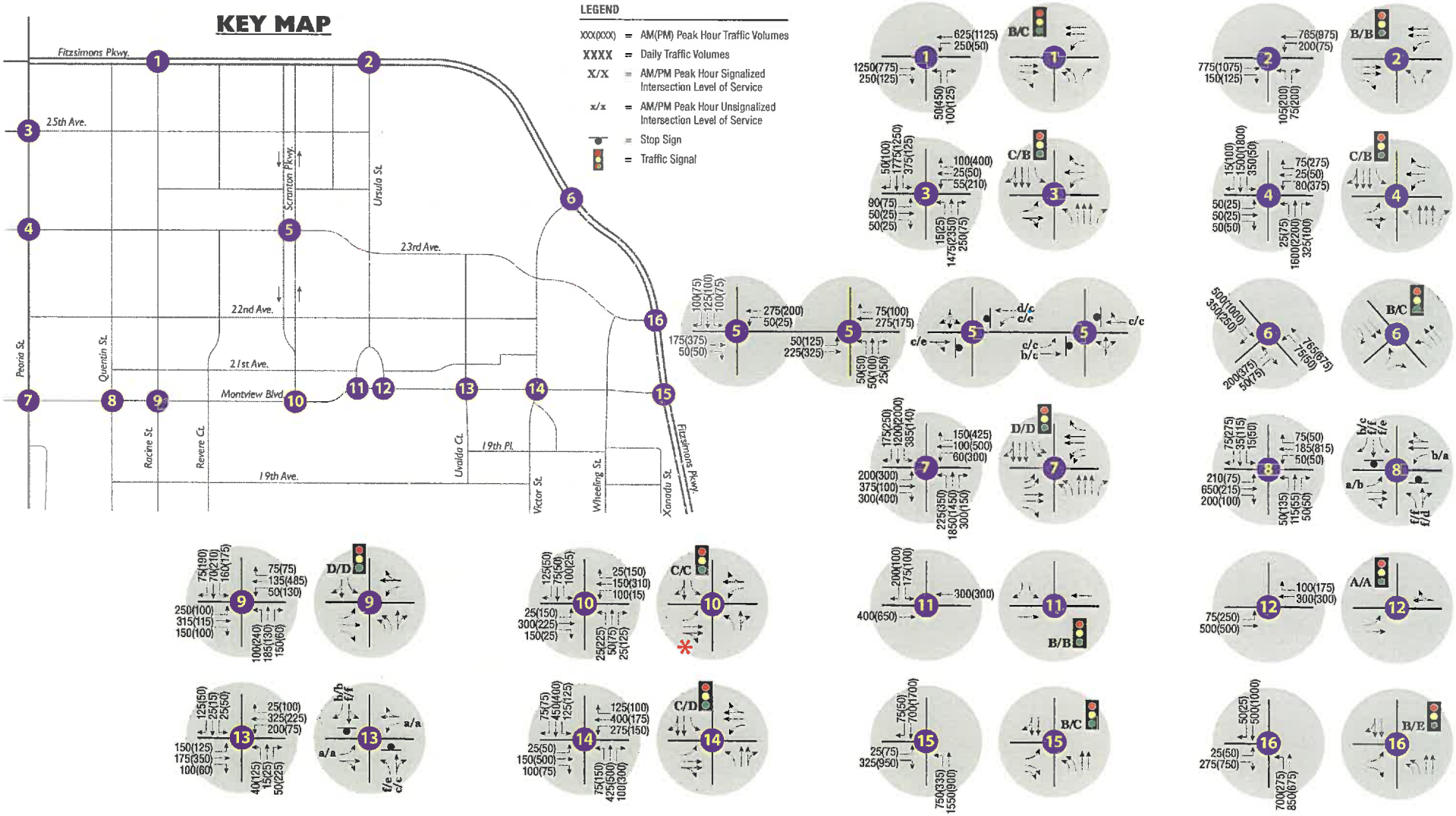
* 2-lane segments allowed additional laneage depending on developmental needs; 3+-lanes can include any combination of through, turn, and parking lanes

** May partially be 2-lanes, actual configuration TBD

Figure 8

Recommended FRA Roadway Plan

FELSBURG HOLT & ULLEVIG



* The EB approach curb lane may be converted to right turn only pending the relocation of the CU parking structure access point from Montview Blvd. to Scranton St.

Figure 9
Buildout Traffic Conditions

FELSBURG HOLT & ULLEVIG

2014-2016 Aurora Fitzsimons 13-257-11 05/26/2016

Stapleton Redevelopment Project

Martin Luther King, Jr. Boulevard Extension

Traffic Analysis

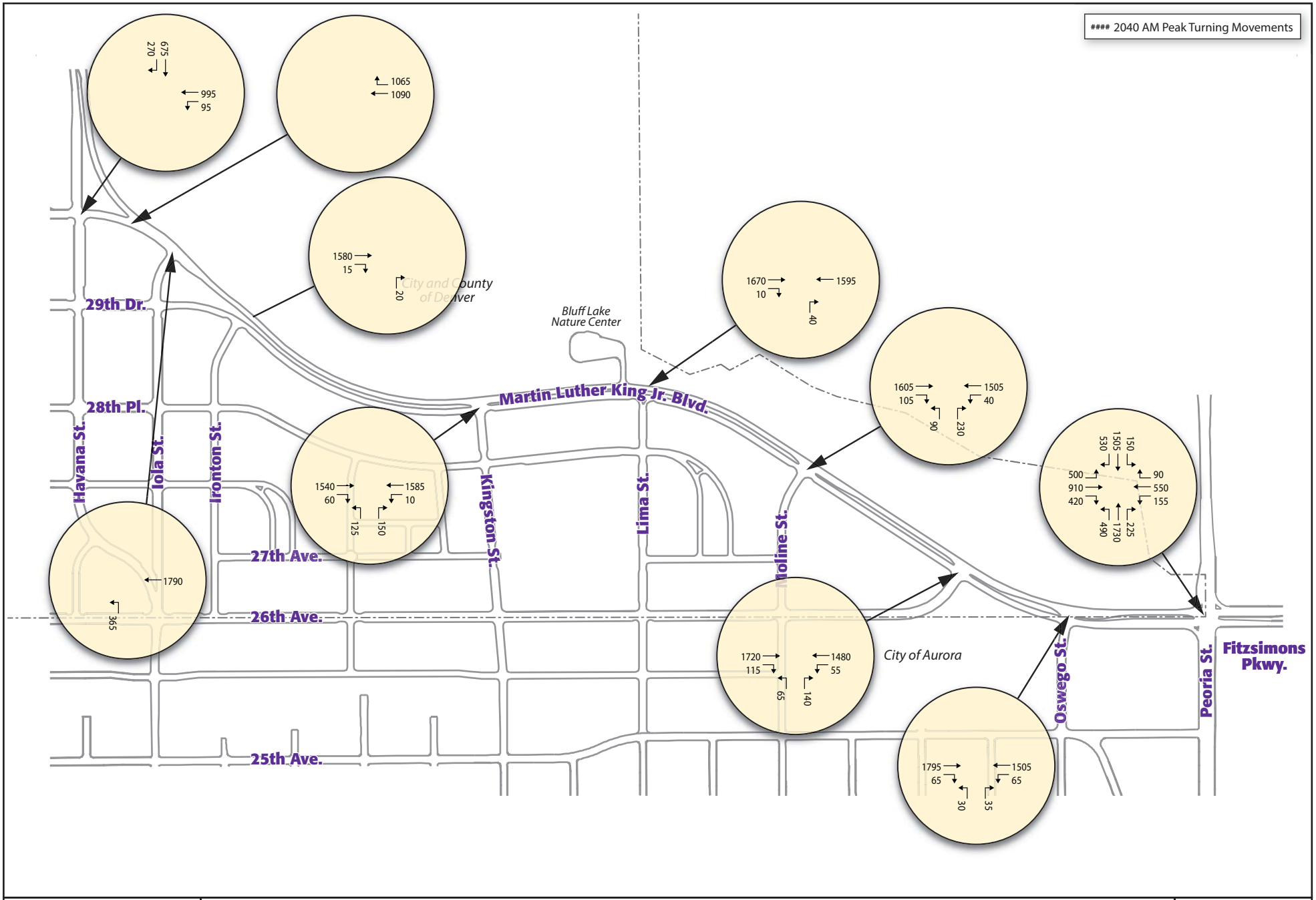
Prepared for:

City and County of Denver
City of Aurora
Park Creek Metropolitan District

Prepared by:

AECOM
6200 South Quebec Street
Greenwood Village, CO 80111

January 2018

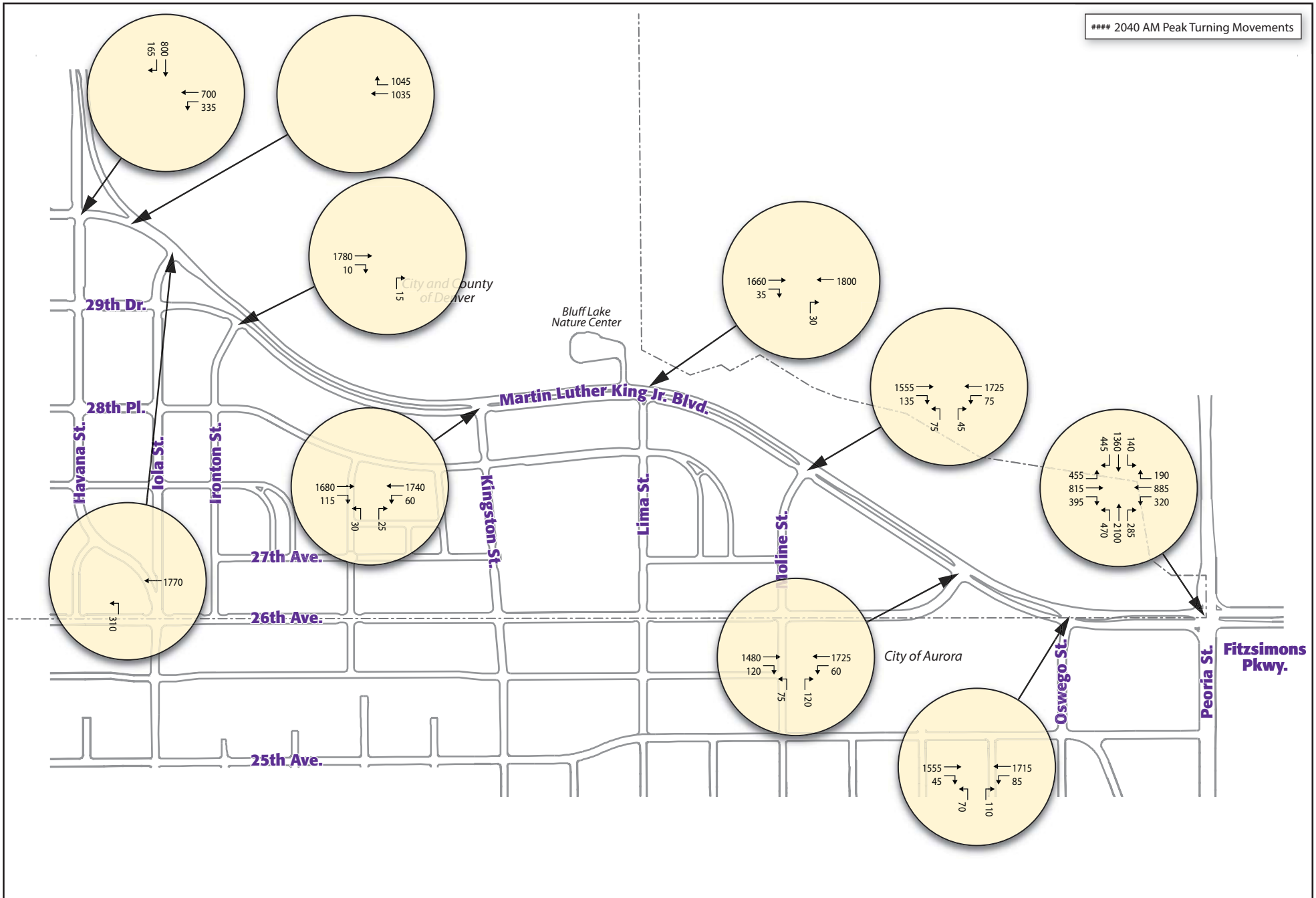


STAPLETON
MLK JR BLVD. EXTENSION

Figure 2-5
2040 AM Peak Hour Turning Movements

(not to scale)

PARK CREEK METROPOLITAN DISTRICT
STAPLETON DEVELOPMENT CORP.
AECOM



STAPLETON
MLK JR BLVD. EXTENSION

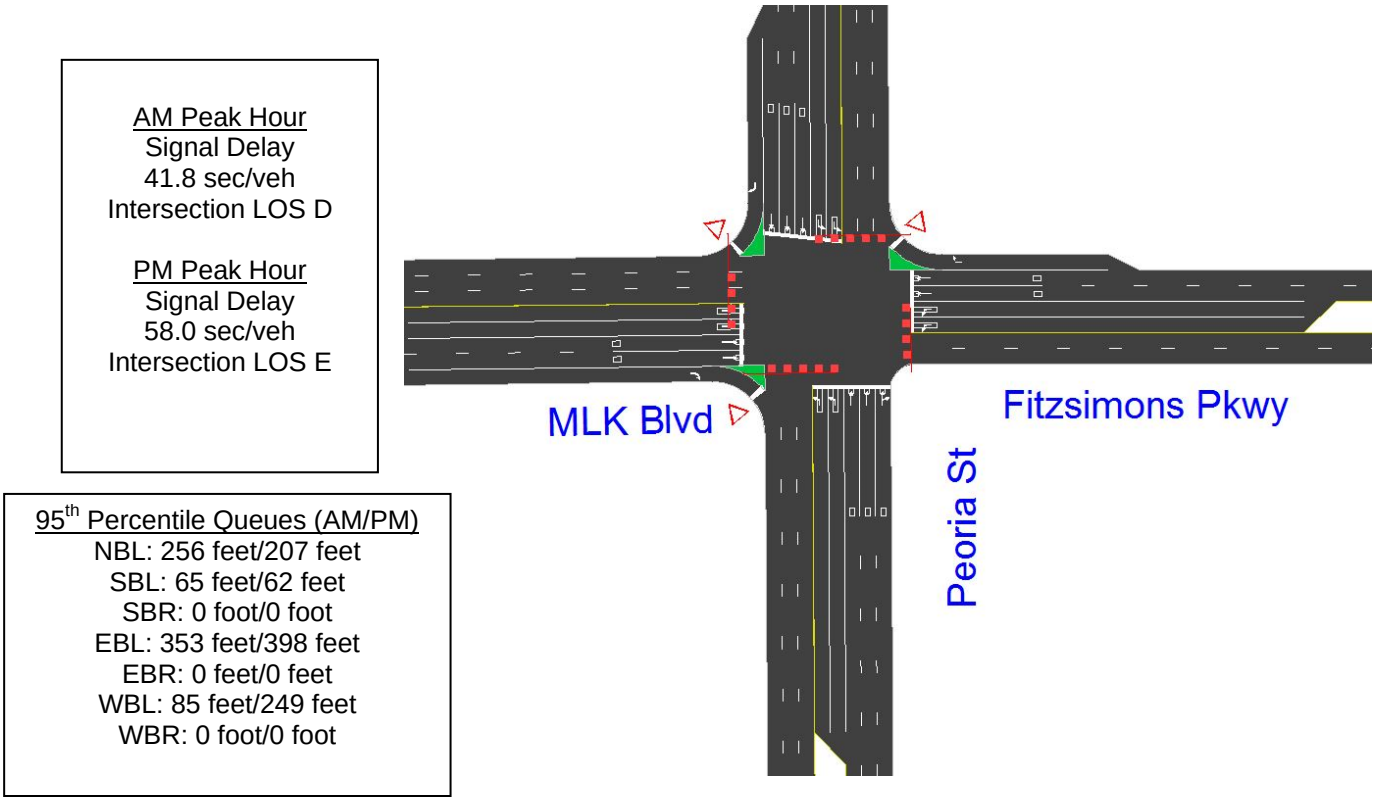
Figure 2-6
2040 PM Peak Hour Turning Movements

(not to scale)

PARK CREEK METROPOLITAN DISTRICT
STAPLETON DEVELOPMENT TEAM
AECOM

2.5.3 MLK Boulevard-Fitzsimons Parkway/Peoria Street (2040)

Future mitigation north of Peoria Street is a potential future third southbound through lane for the southbound approach (constructed by the City of Aurora or others). MLK Boulevard-Fitzsimons Parkway provides two lanes in each direction with dual eastbound and westbound left turn lanes. Peoria Street provides three lanes in each direction with two northbound and two southbound left turn lanes. The intersection provides channelized eastbound, westbound and southbound right-turn lanes.



Source: AECOM, 2017.

The intersection is forecast to operate at LOS D during the AM peak hour and LOS E during the PM peak hour. The intersection results are consistent with the MLK Boulevard Extension Environmental Assessment (July, 2011) and the MLK Boulevard Extension Environmental Assessment Reevaluation (December, 2015).

The intersection provides 250 feet of vehicle storage for the northbound left turn lanes, 300 feet of vehicle storage for the eastbound and westbound left turn lanes, and 175 feet of vehicle storage for the southbound left turn lane. The intersection provides 300 feet of vehicle storage for the northbound and eastbound right turn lanes, and 150 feet of vehicle storage for the westbound and southbound right turn lanes.

The 95th percentile queue lengths are forecast to be served by the planned storage lengths with the exception of northbound left during the AM peak hour and eastbound left during both peak hours. Some of queue lengths are shorter than Opening Year because the cycle length changed to 150 seconds at this intersection.

APS SCIENCE AND TECHNOLOGY SCHOOL AT FITZSIMONS

TRAFFIC IMPACT STUDY

Prepared for:

Aurora Public Schools
1369 Airport Boulevard
Aurora, CO 80011

Prepared by:

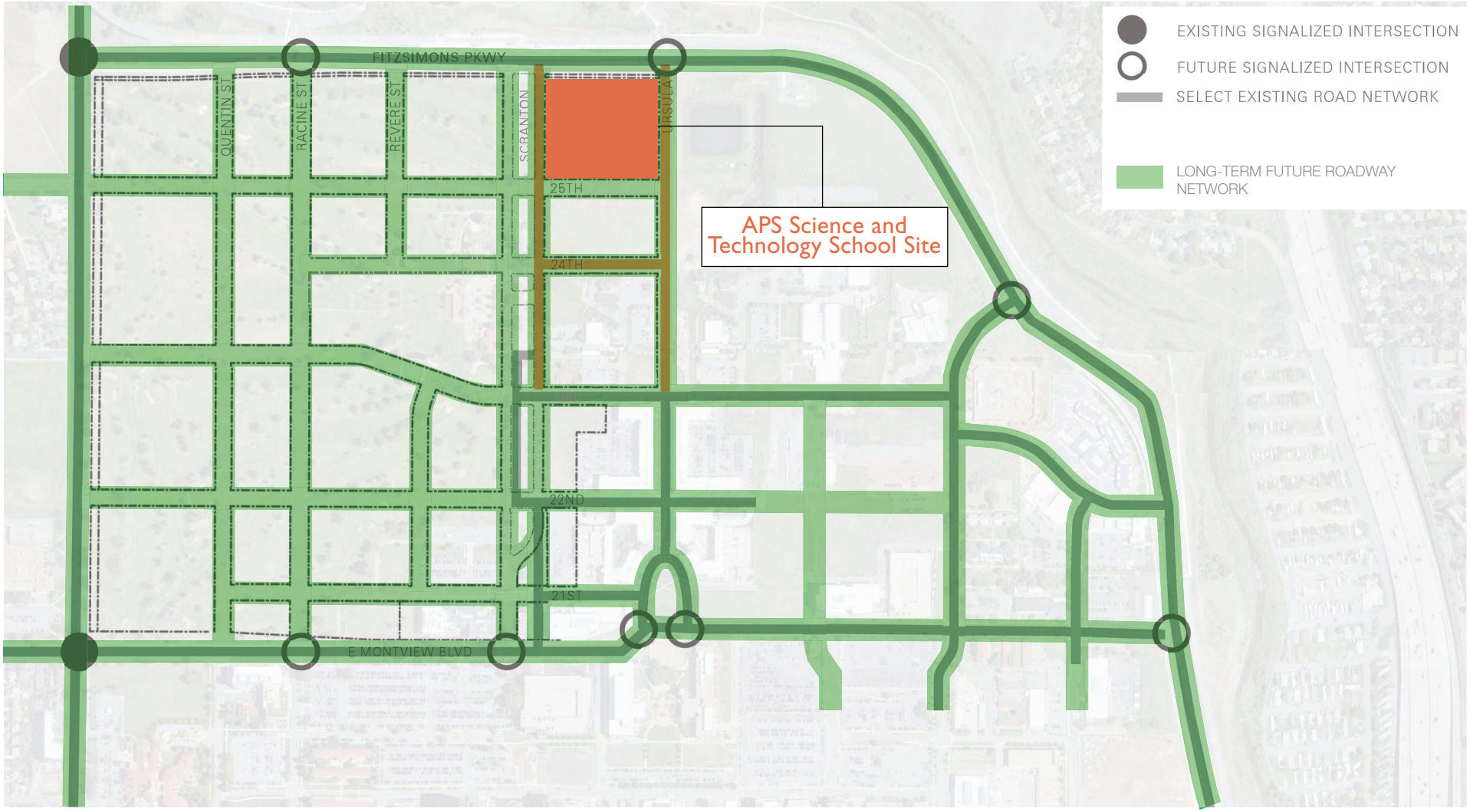
Felsburg Holt & Ullevig
6300 South Syracuse Way, Suite 600
Centennial, CO 80111
303.721.1440

Project Manager: Christopher J. Fasching, PE, PTOE
Project Engineer: Philip Dunham, PE

FELSBURG HOLT & ULLEVIG
connecting & enhancing communities

FHU Reference No. 118411-01

November 2018



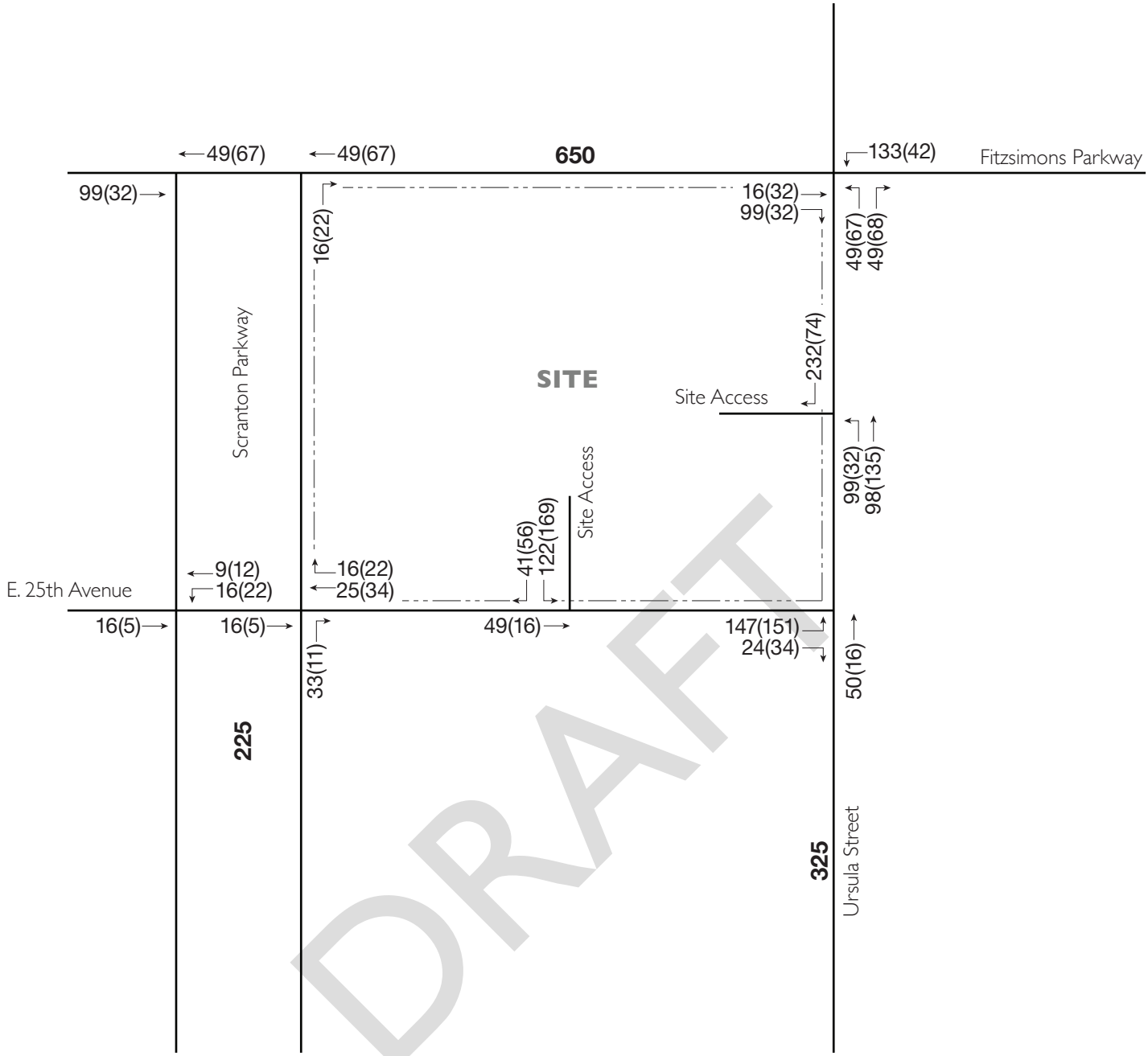
NORTH

FELSBURG HOLT & ULLEVIG

Future Roadway Network

Fitzsimons 6-12 APS School Traffic Study 18-411 11/1/18

FIGURE 3



LEGEND

XXX(XXX) = AM(PM) Peak Hour Traffic Volumes

XXX = Average Daily Traffic Volumes

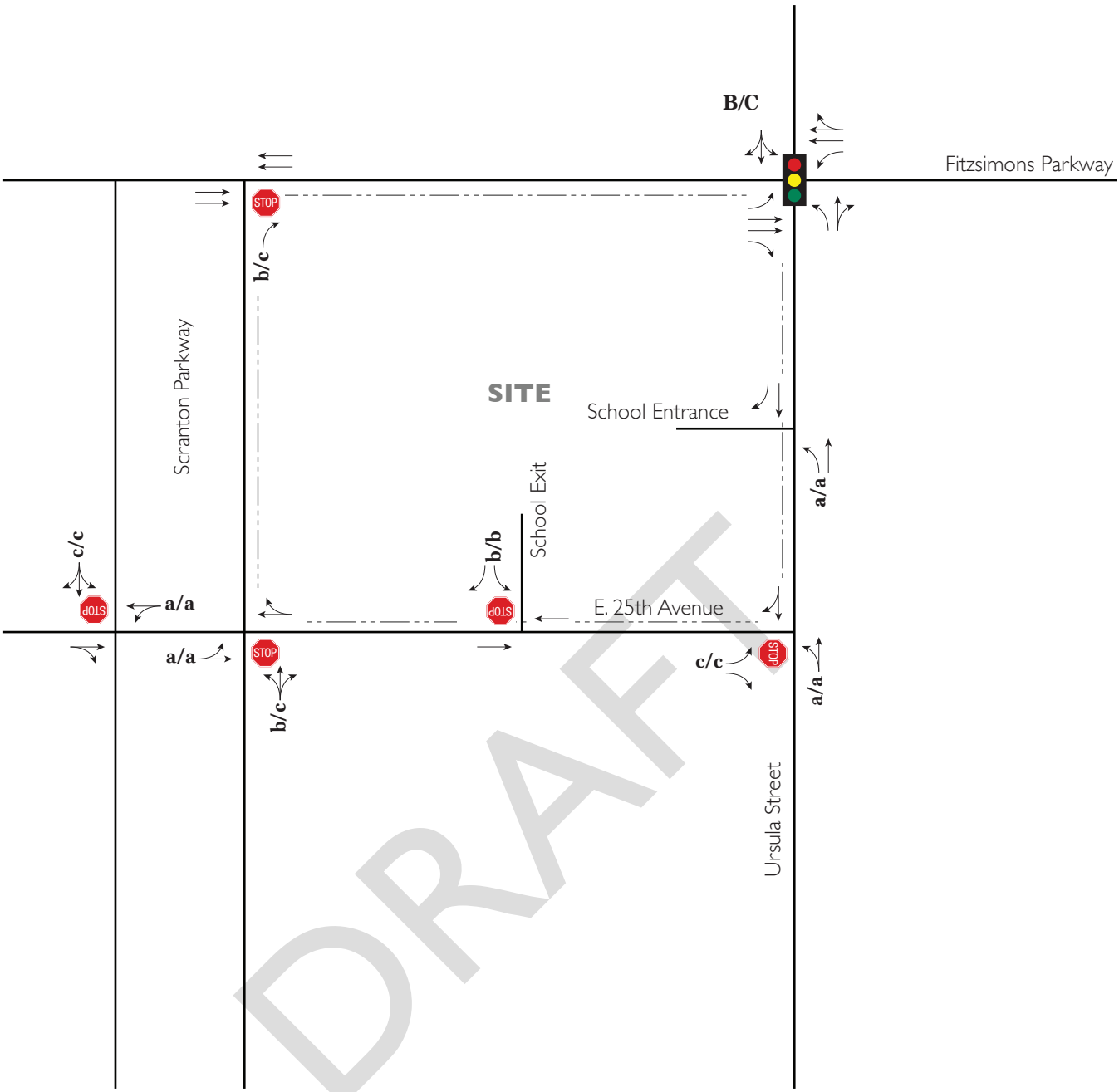
NORTH

FELSBURG HOLT & ULLEVIG

Long-Term Site Generated Traffic

Fitzsimons 6-12 APS School Traffic Study 18-411 11/1/18

FIGURE 6



LEGEND

X/X	=	AM/PM Peak Hour Signalized Intersection Level of Service
x/x	=	AM/PM Peak Hour Unsignalized Intersection Level of Service
STOP	=	Stop Sign
	=	Traffic Signal

NORTH

FELSBURG HOLT & ULLEVIG

Long-Term Total Traffic Operations

Fitzsimons 6-12 APS School Traffic Study 18-411 11/1/18

FIGURE 12

FITZSIMONS COMPOSITIVE SCHOOL

TRAFFIC IMPACT STUDY

Prepared for:

Tryba Architects
1620 Logan Street
Denver, CO 80203

Prepared by:

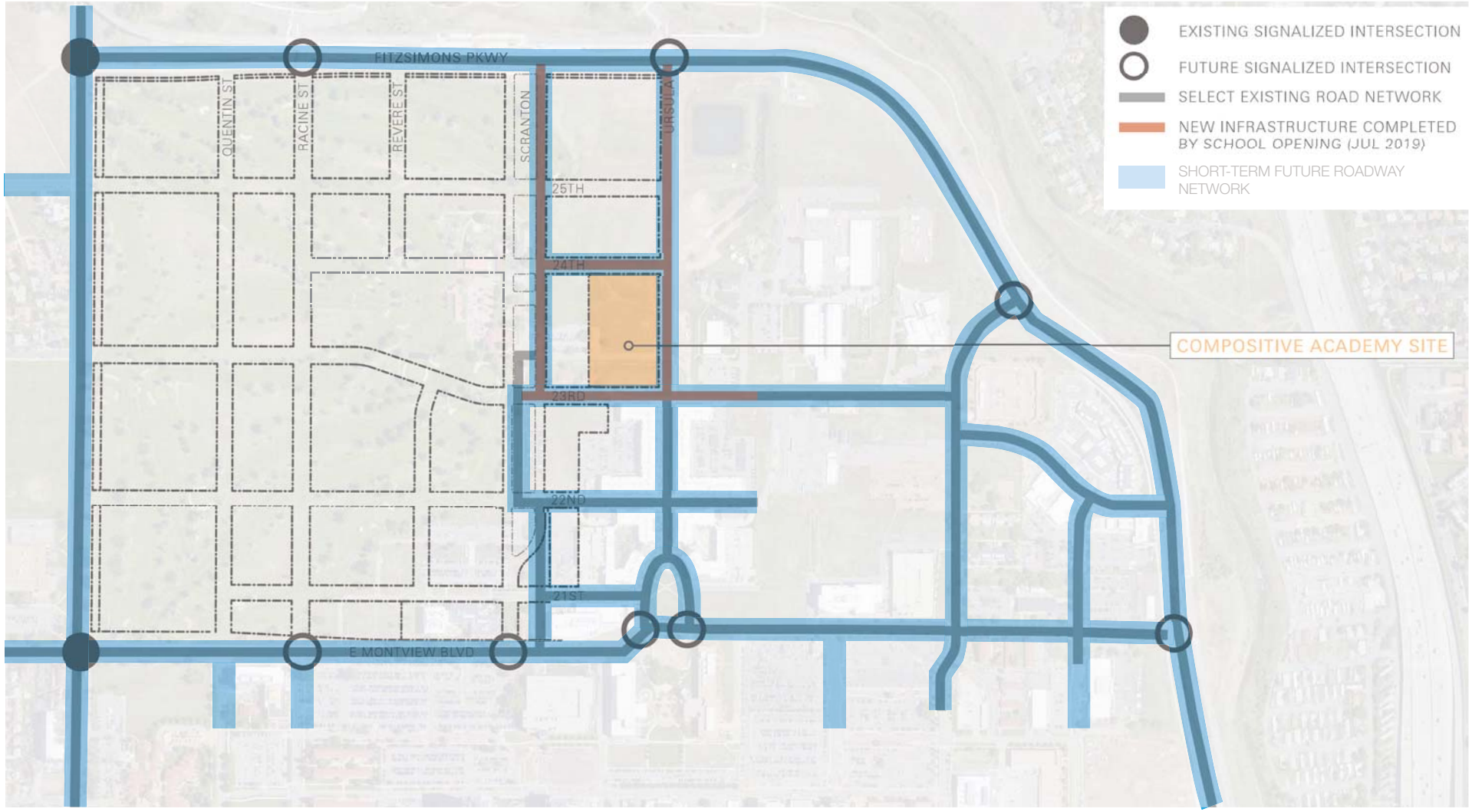
Felsburg Holt & Ullevig
6300 South Syracuse Way, Suite 600
Centennial, CO 80111
303.721.1440

Project Manager: Christopher J. Fasching, PE, PTOE
Project Engineer: Philip Dunham, PE

FELSBURG HOLT & ULLEVIG
connecting & enhancing communities

FHU Reference No. 118198-01

October 2018



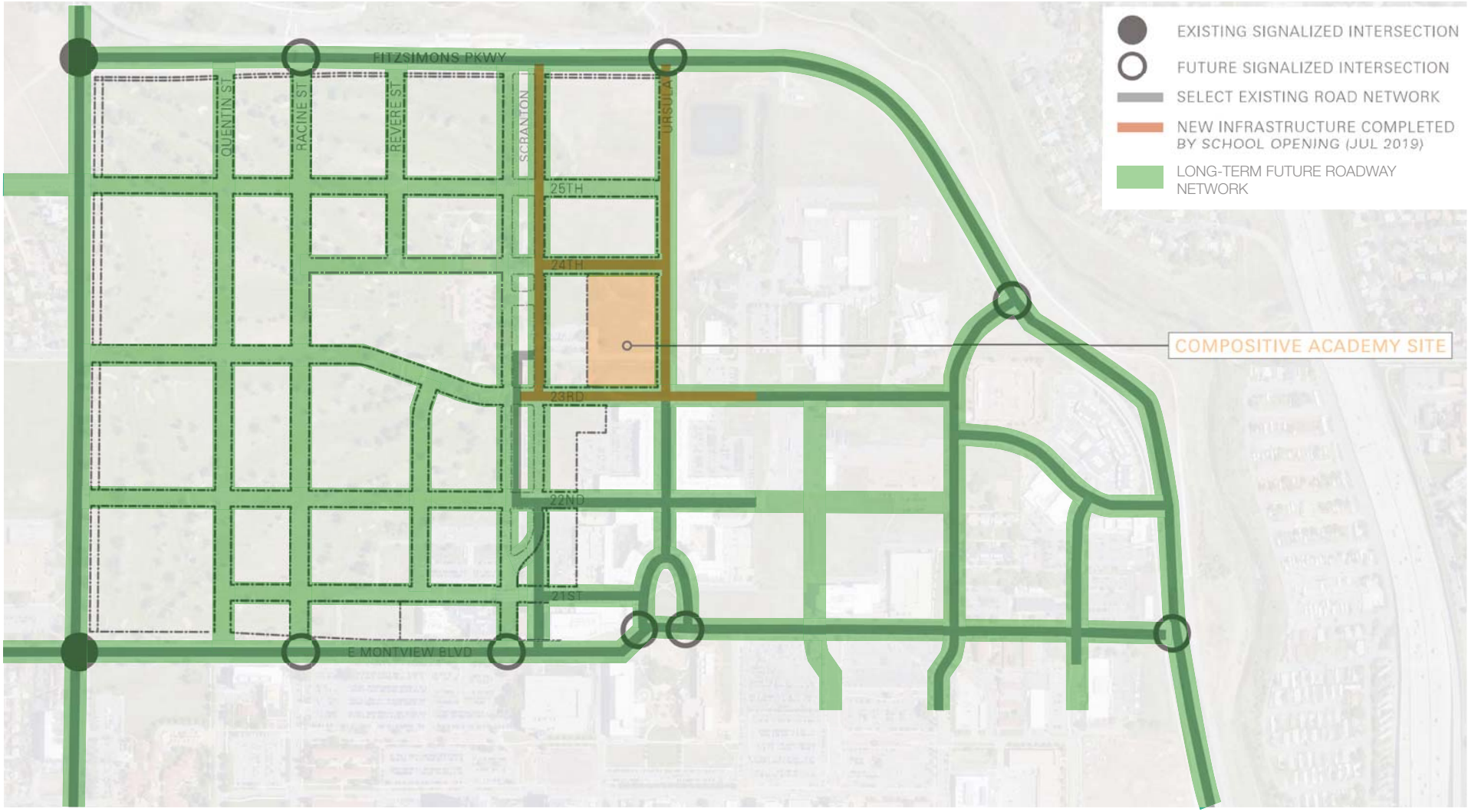
NORTH

FELSBURG HOLT & ULLEVIG

Short-Term Future Roadway Network

Fitzsimons Compositive Elementary School - UPDATE 18-198 08/21/2018

FIGURE 3



NORTH

FELSBURG HOLT & ULLEVIG

Long-Term Future Roadway Network

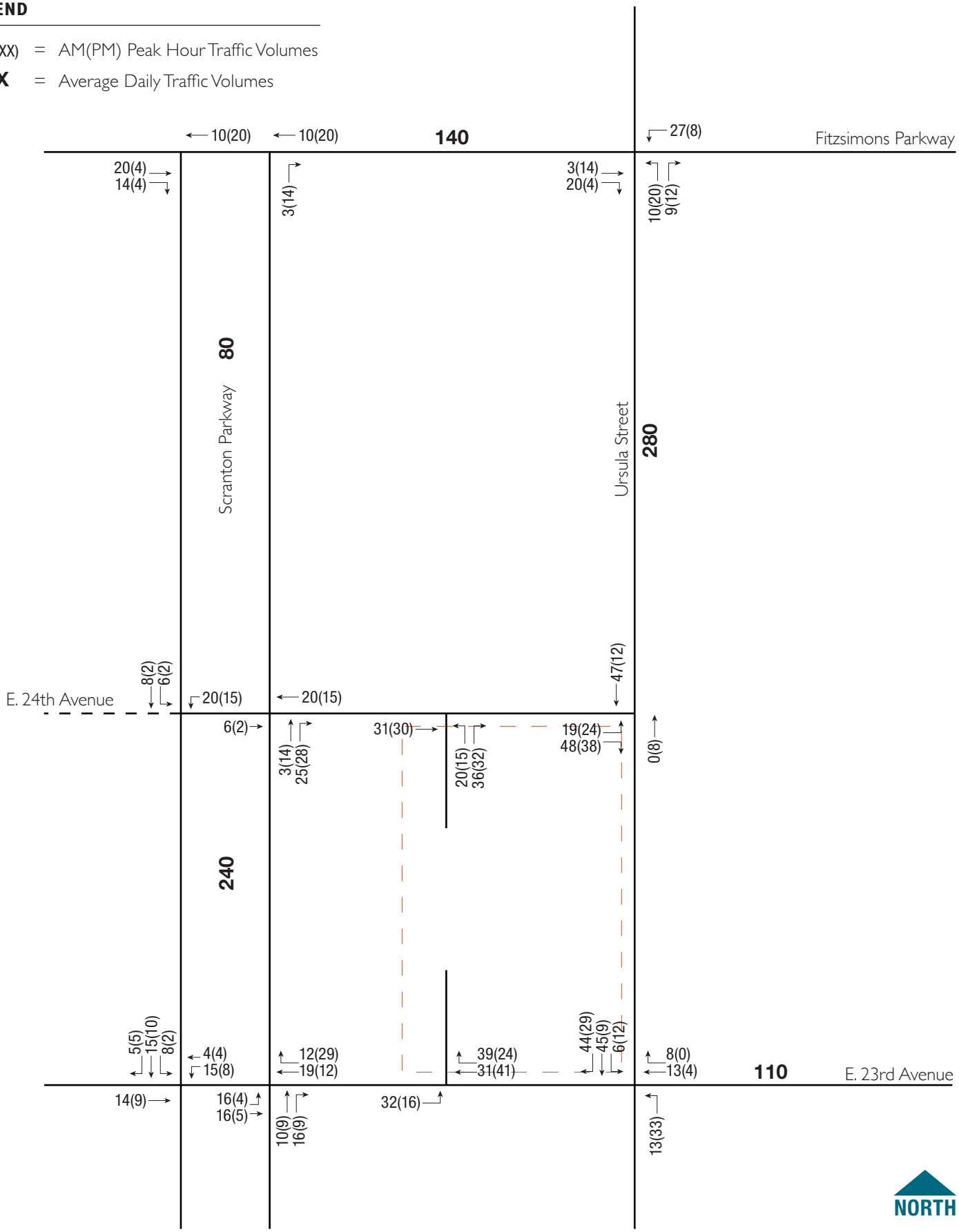
Fitzsimons Compositive Elementary School - UPDATE 18-198 08/21/2018

FIGURE 4

LEGEND

XXX(XXX) = AM(PM) Peak Hour Traffic Volumes

XXX = Average Daily Traffic Volumes

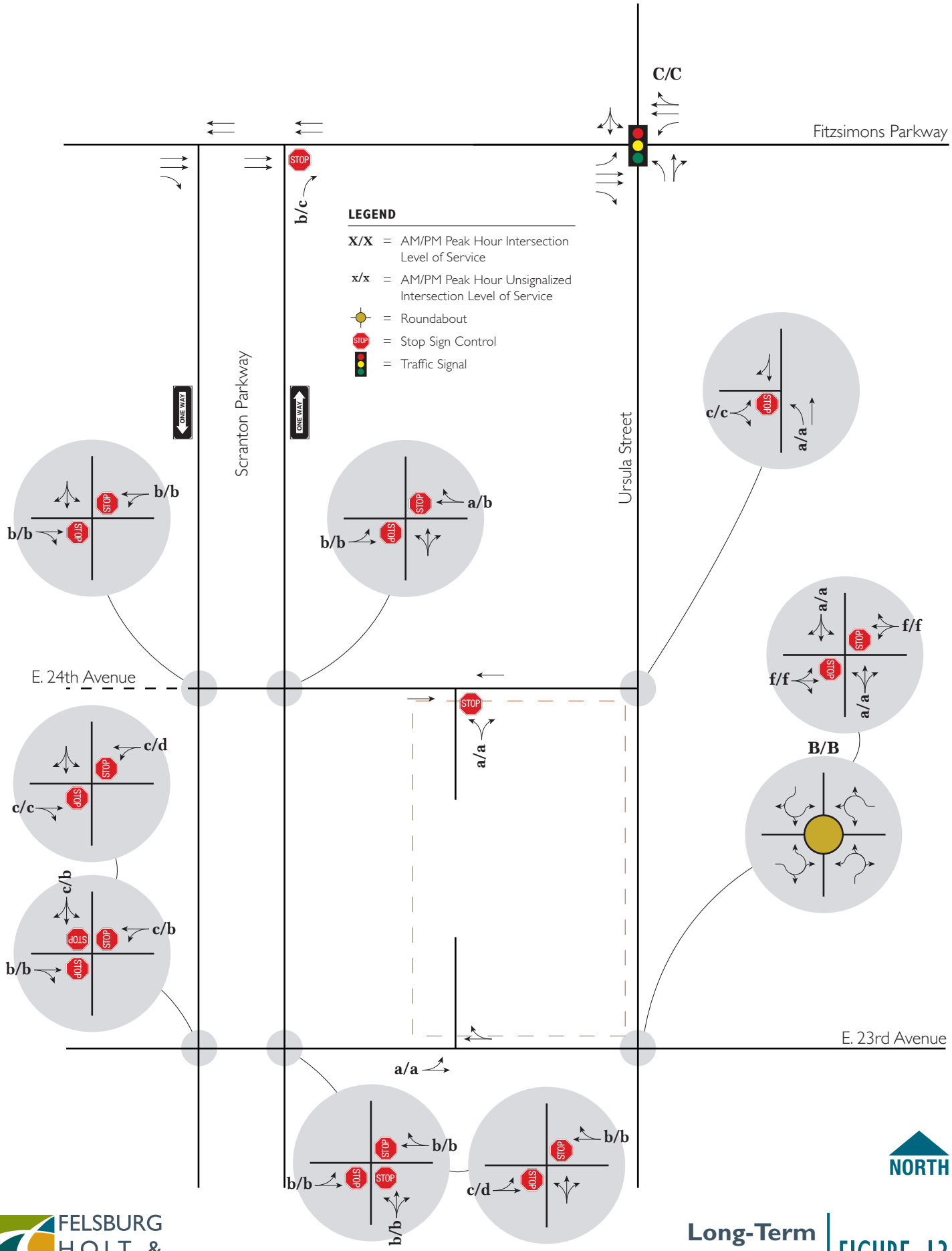


FELSBURG HOLT & ULLEVIG

Long-Term Site Generated Traffic

Fitzsimons Compositive Elementary School - UPDATE 18-198 08/22/2018

FIGURE 7



FELSBURG HOLT & ULLEVIG

Long-Term Traffic Operations

FIGURE 13

Fitzsimons Compositive Elementary School - UPDATE 18-198 10/24/2018

TRANSPORTATION IMPACT STUDY

UCH Lot

23rd Avenue and Peoria Street

Prepared for:

Martin/Martin Consulting Engineers
12499 W Colfax Avenue
Lakewood, CO 80215

Prepared by:

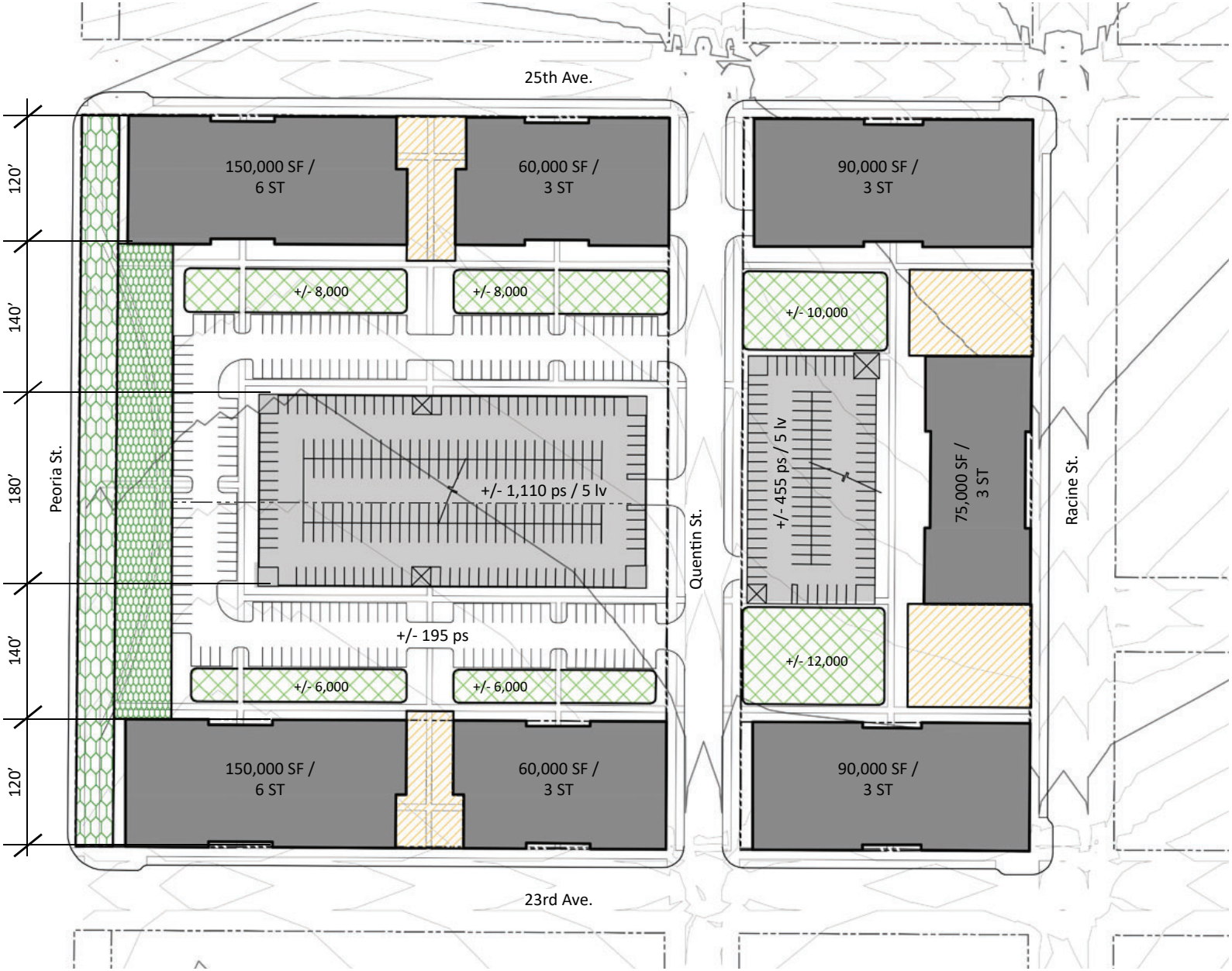
Felsburg Holt & Ullevig
6300 South Syracuse Way, Suite 600
Centennial, CO 80111
303.721.1440

Principal: Lyle E. DeVries, PE, PTOE
Project Manager: Philip Dunham, PE, PTOE

FELSBURG HOLT & ULLEVIG
connecting & enhancing communities

FHU Reference No. 120229-01

July 2020



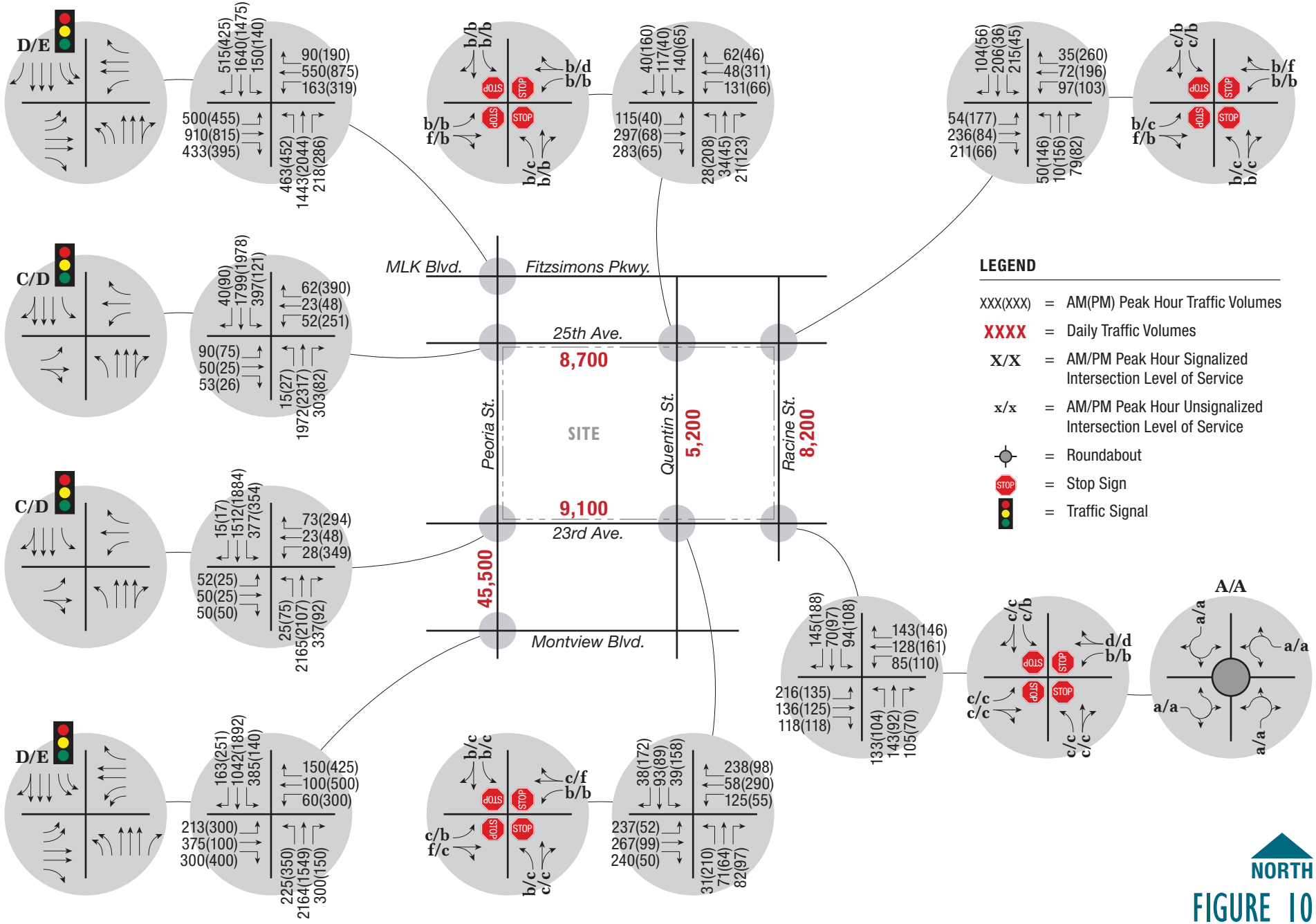
NORTH

FELSBURG HOLT & ULLEVIG

FIGURE 3

Conceptual Site Plan - Office

UHC FIC 23rd/Peoria Parking Lot 20-229-01 6/23/20



FELSBURG HOLT & ULLEVIG

NOTE: Drawing Not to Scale

NORTH

FIGURE 10

Long-Term Future (2040) Total Traffic Conditions

UHC FIC 23rd/Peoria Parking Lot 20-229-01 7/8/20

Fitzsimons Phase 3A Apartments and Hotel

TRAFFIC IMPACT STUDY UPDATE

Prepared for:

Tryba Architects
1620 Logan Street
Denver, CO 80203

Prepared by:

Felsburg Holt & Ullevig
6300 S. Syracuse Way, Suite 600
Centennial, CO 80111
(303) 721-1440

Project Manager: Christopher J. Fasching, PE, PTOE
Project Engineer: Philip Dunham, PE

FHU Reference No. 117228-02

August 2018

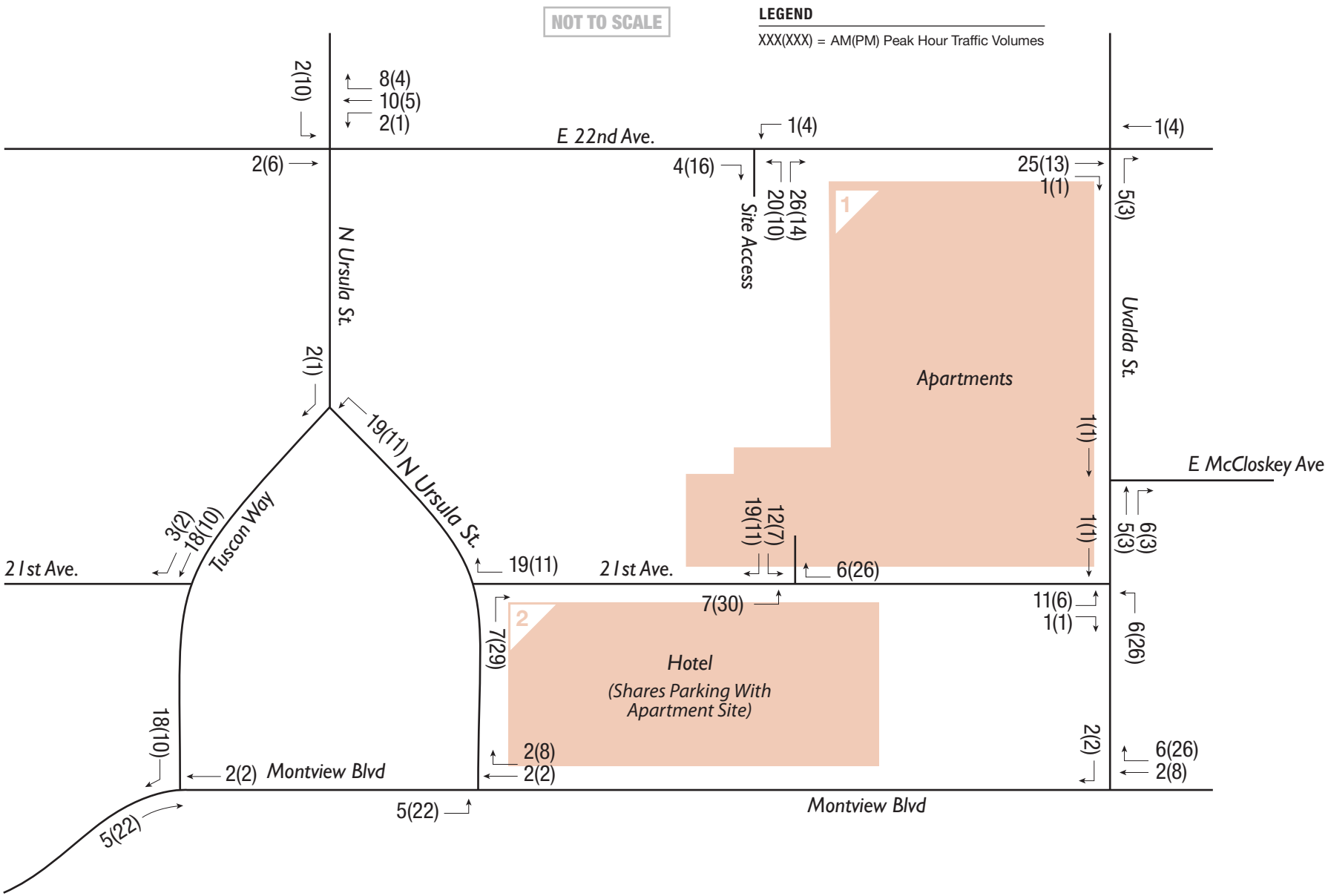


Figure 9

Buildout Site Generated Traffic (Apartments)

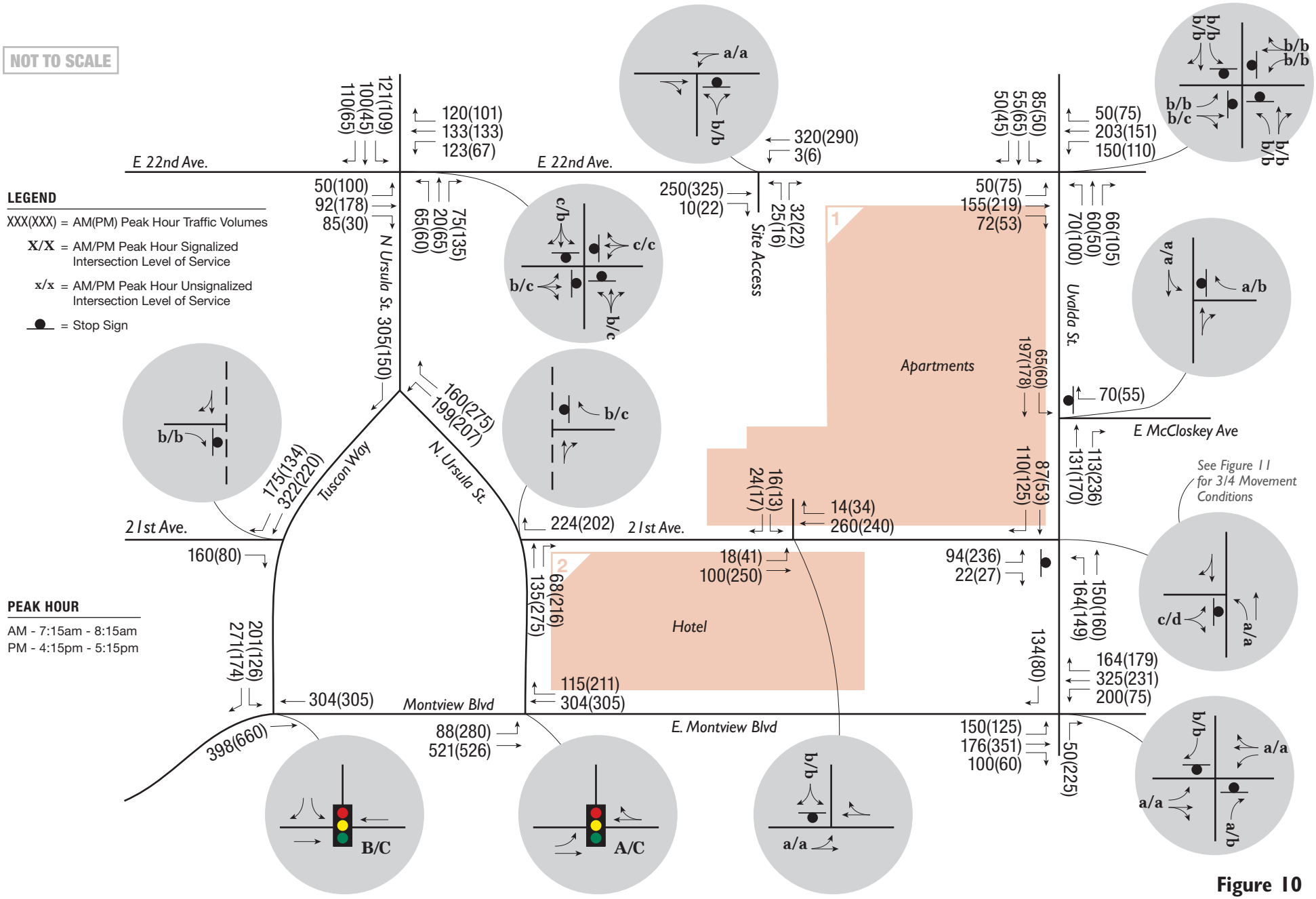


Figure 10
Long Term Total Traffic & LOS

T R A F F I C I M P A C T S T U D Y

Bioscience 5 (Fitzsimons)

Aurora, Colorado

Prepared for
Fitzsimons Redevelopment Authority
12635 E. Montview Boulevard
Suite 100
Aurora, CO 80045

Prepared by
Kimley-Horn and Associates, Inc.
4582 South Ulster Street
Suite 1500
Denver, Colorado 80237
(303) 228-2300

August 2021

4.0 PROJECT TRAFFIC CHARACTERISTICS

4.1 Trip Generation

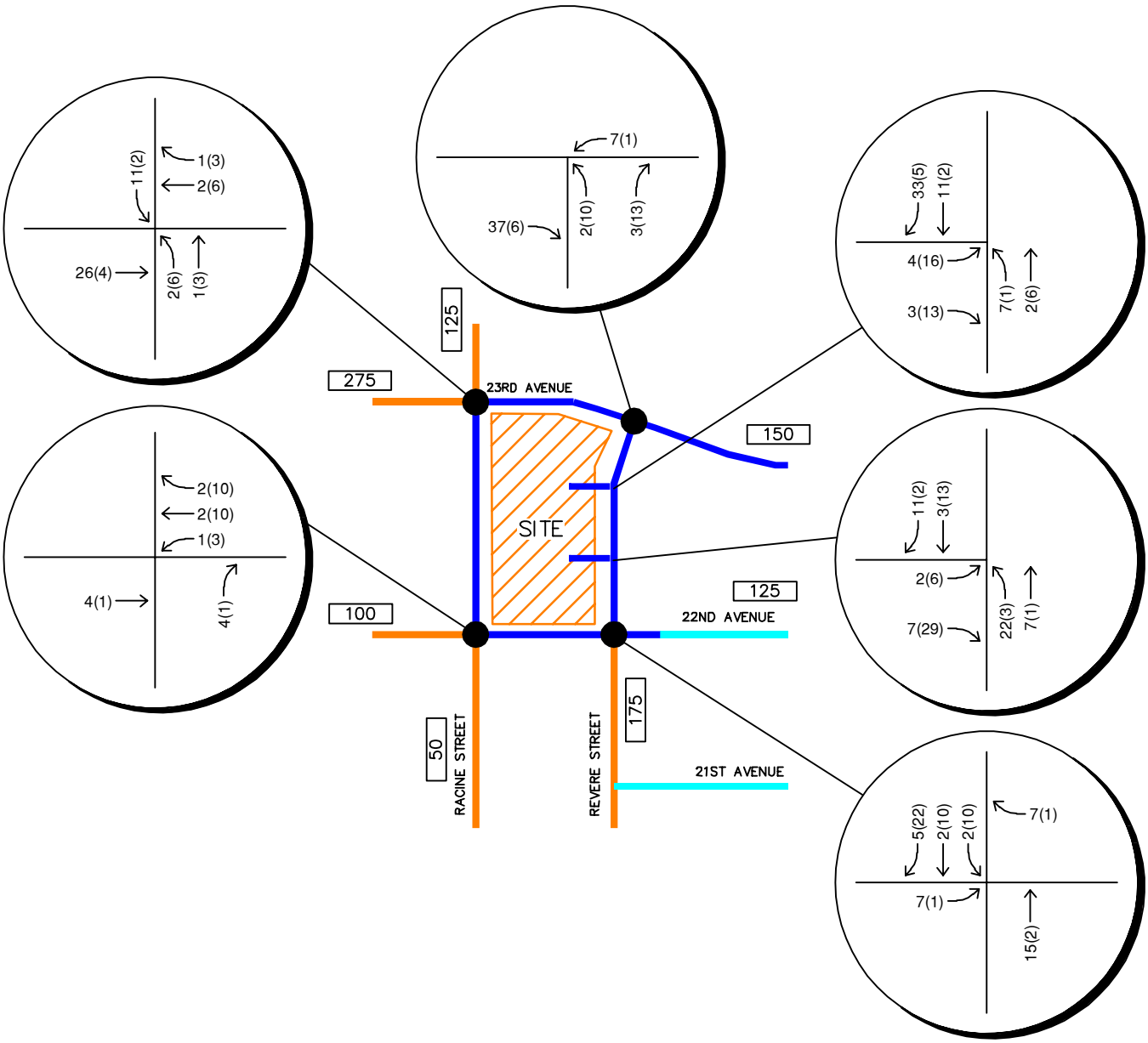
Site-generated traffic estimates are determined through a process known as trip generation. Rates and equations are applied to the proposed land uses to estimate traffic generated by the development during a specific time interval. The acknowledged source for trip generation rates is the *Trip Generation Manual*[1] published by the Institute of Transportation Engineers (ITE). ITE has established trip rates in nationwide studies of similar land uses. For this study, Kimley-Horn used the ITE Trip Generation fitted curve equations and average rates that apply to General Office (ITE Code 710) and Research and Development Center (ITE 760) for traffic associated with the development. For the purposes of this analysis, it is anticipated that project will include approximately 45,000 square feet of office and 45,000 square feet of research/laboratory use.

The Bioscience 5 project is expected to generate approximately 998 daily weekday trips with 88 of these trips expected to occur during the morning peak hour and 75 trips occurring during the afternoon peak hour. Calculations were based on the procedure and information provided in the ITE *Trip Generation Manual, 10th Edition – Volume 1: User's Guide and Handbook*, 2017. **Table 1** summarizes the estimated trip generation for the proposed development. The trip generation worksheet is included in **Appendix C**.

Table 1 – Bioscience 5 Project Traffic Generation

Land Use	Weekday Vehicle Trips						
	Daily	AM Peak Hour			PM Peak Hour		
		In	Out	Total	In	Out	Total
General Office (ITE 710) – 45,000 Square Feet	490	59	10	69	8	45	53
Research Development Center (ITE 760) – 45,000 Square Feet	508	14	5	19	3	19	22
Total Site Generated Trips	**998**	**73**	**15**	**88**	**11**	**64**	**75**

[1] Institute of Transportation Engineers, *Trip Generation Manual*, Tenth Edition, Washington DC, 2017.



BIOSCIENCE 5 – FITZSIMONS
PROJECT TRAFFIC ASSIGNMENT (2040)

FIGURE 10

Kimley»Horn

Kimley»Horn

November 22, 2022

Tryba Architects
1620 Logan Street
Denver, CO 80203

Attn: Ms. Kathleen Dahlberg Fogler, AIA
Associate Principal

Re: Bioscience 4 Traffic Study Letter
Aurora, Colorado

Dear Ms. Fogler,

This letter documents the results of a traffic evaluation including trip generation, trip distribution, and traffic assignment for the proposed Bioscience 4 project to be located on the northwest corner of the 22nd Avenue and Scranton Street intersection in Aurora, Colorado. It is anticipated that Bioscience 4 will be used for general office and research uses with a total of approximately 230,263 square feet building space. A vicinity map is attached in **Figure 1** while a conceptual site plan for the project is also attached.

It is expected that the project will be completed in the next several years. It is known that several roadway improvements nearby the project site will occur as development continues to take place in the area. Therefore, trip distribution and assignment analysis are included for the 2025 opening year horizon with a modified trip distribution and assignment based on the assumption of the proposed full buildout of the Fitzsimons Innovation Campus roadway network in the long-term 2045 horizon. It is understood that the current update to the overall Fitzsimons Innovation Campus Master Traffic Impact Study is ongoing and additional traffic analysis for Bioscience 4 may be necessary upon completion of the overall master traffic study and future site development plan submittals for this project. Applicable documents from the draft Fitzsimons Innovation Campus Master Traffic Impact Study are attached.

Regional access to Bioscience 4 is provided by Interstate 70 (I-70), Interstate 225 (I-225), and Colfax Avenue (US-40) while primary access is also provided from Fitzsimons Parkway, Peoria Street, Montview Boulevard, and Martin Luther King Jr. Boulevard. Direct access to the site will be provided by a proposed full movement access along the future extension of Revere Street along the west side of the site, with the access located approximately 275 feet to the south of the future extension of 23rd Avenue, measured center to center.

EXISTING AND FUTURE ROADWAY NETWORK

Peoria Street extends in the north/south direction with three through lanes of travel in each direction within the study area with a posted speed limit of 35 miles per hour. Montview Boulevard extends in the east/west direction with primarily one through lane in each direction, while two through lanes currently exist in the westbound direction from Peoria Street to just west of Scranton Street. Scranton Street extends northbound and southbound with a posted speed limit of 25 miles per hour and one through lane in each direction. 22nd Avenue and 23rd

Avenue each extend eastbound and westbound and provide one through lane in each direction with a posted speed limit of 25 miles per hour.

Racine Street and Revere Street are proposed future north/south roadways with one lane in each direction that will be to the west of Scranton Street. Revere Street and Racine Street will both be constructed from 22nd Avenue to 23rd Avenue as part of the adjacent Bioscience 5 project. Likewise, 23rd Avenue will be extended from Racine Street to Scranton Street as part of the Bioscience 5 project. 23rd Avenue is currently being constructed from Peoria Street to Racine Street as part of the UCH 23rd Avenue and Peoria Street Parking Lot project.

TRIP GENERATION

Site-generated traffic estimates are determined through a process known as trip generation. Rates and equations are applied to the proposed land use to estimate traffic generated by the development during a specific time interval. The acknowledged source for trip generation rates is the *Trip Generation Manual*[1] published by the Institute of Transportation Engineers (ITE). ITE has established trip rates in nationwide studies of similar land uses. For this study, Kimley-Horn used the ITE Trip Generation Manual average rates that apply to General Office Building (ITE Code 710) and the fitted curve equations that apply to Research and Development Center (ITE Code 760) for traffic associated with this development. For purposes of this analysis, it is expected that approximately 50 percent of site will be utilized as office while the remaining 50 percent will be used as a research/laboratory facility. Therefore, 115,132 square feet was designated for office space and 115,131 square feet was designated for research/laboratory uses of the overall 230,263 square foot building. The following **Table 1** summarizes the estimated trip generation for traffic associated with the development (calculations attached).

Table 1 – Bioscience 4 Traffic Generation

Land Use and Size	Weekday Vehicles Trips						
	Daily	AM Peak Hour			PM Peak Hour		
		In	Out	Total	In	Out	Total
General Office Building (ITE 710) – 115,132 Square Feet	1,250	154	21	175	28	138	166
Research/Development Center (ITE 760) – 115,131 Square Feet	1,364	104	23	127	20	102	122
Total Trips	**2,614**	**258**	**44**	**302**	**48**	**240**	**288**

As shown in the table and based on ITE Trip Generation calculations, this project is anticipated to generate approximately 2,614 weekday daily trips, with 302 of these trips occurring during the morning peak hour and 288 of these trips during the afternoon peak hour.

1 Institute of Transportation Engineers, *Trip Generation Manual*, Eleventh Edition, Washington DC, 2021.

TRIP DISTRIBUTION AND TRAFFIC ASSIGNMENT

Distribution of site traffic on the street system was based on the area street system characteristics, existing traffic patterns, existing and anticipated surrounding demographic information, and the proposed access system for the project. The directional distribution of traffic is a means to quantify the percentage of site-generated traffic that approaches the site from a given direction and departs the site back to the original source. The traffic assignment was obtained by applying the project trip distribution to the estimated traffic generation of the development shown in **Table 1**.

Figure 2 illustrates the trip distribution in the 2025 horizon with **Figure 3** as the 2025 project traffic assignment. **Figure 4** illustrates 2045 project trip distribution with the assumed full buildout of the Fitzsimons Innovation Campus area, while the 2045 project traffic assignment is shown in **Figure 5**.

CONCLUSIONS AND RECOMMENDATIONS

Based on the traffic analysis presented in this report, Kimley-Horn and Associates, Inc. believes Bioscience 4 will be successfully incorporated into the existing and future roadway network. It is understood that the current update to the overall Fitzsimons Innovation Campus Master Traffic Impact Study is ongoing and additional traffic analysis for Bioscience 4 may be necessary upon completion of the overall master traffic study and future site development plan submittals for this project. The following outlines the initial conclusions and recommendations from our traffic analysis:

- Access to Bioscience 4 is proposed to be located along the west side of the proposed future extension of Revere Street between 22nd Avenue and 23rd Avenue, approximately 275 feet to the south of the future 23rd Avenue extension, measured center to center.
- Bioscience 4 is proposed to include approximately 230,263 square feet of general office and research uses. The project is anticipated to generate approximately 2,614 weekday daily trips with 302 of these trips occurring during the morning peak hour and 288 of these trips occurring during the afternoon peak hour.

If you have any questions or require anything further, please feel free to call me at (720) 943-9962.

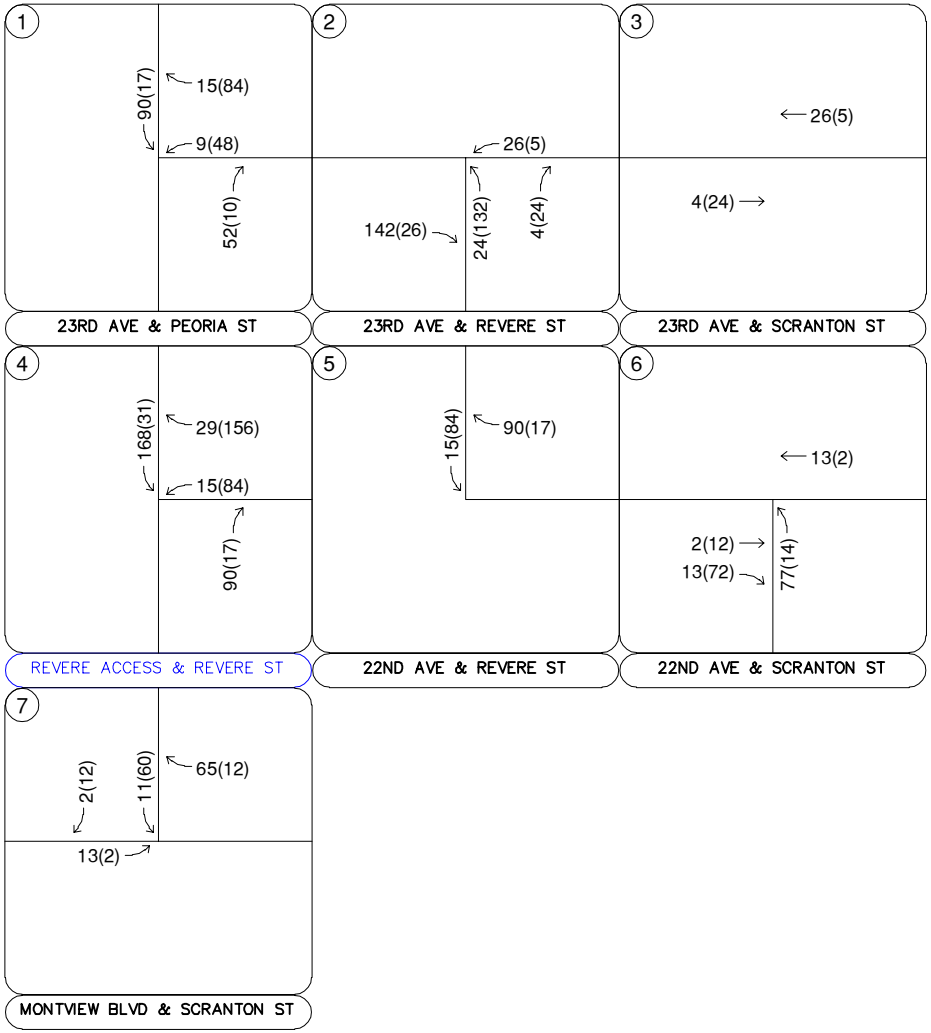
Sincerely,

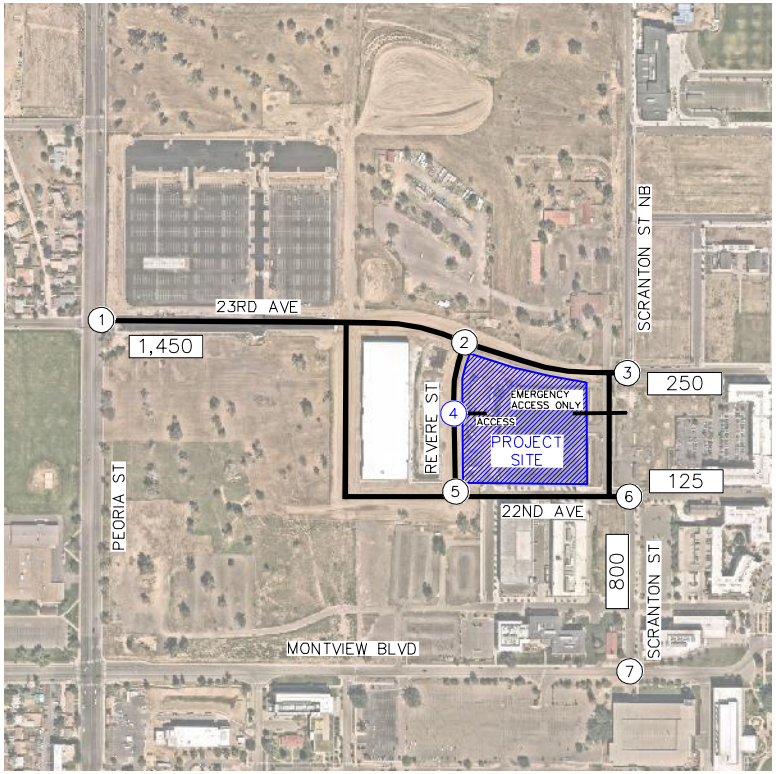
KIMLEY-HORN AND ASSOCIATES, INC.

Jeffrey R. Planck

Jeffrey R. Planck, P.E.
Project Manager

COLORADO REGISTERED
JEFFREY RANDOLPH PLANCK
53006
11/22/2022
PROFESSIONAL ENGINEER





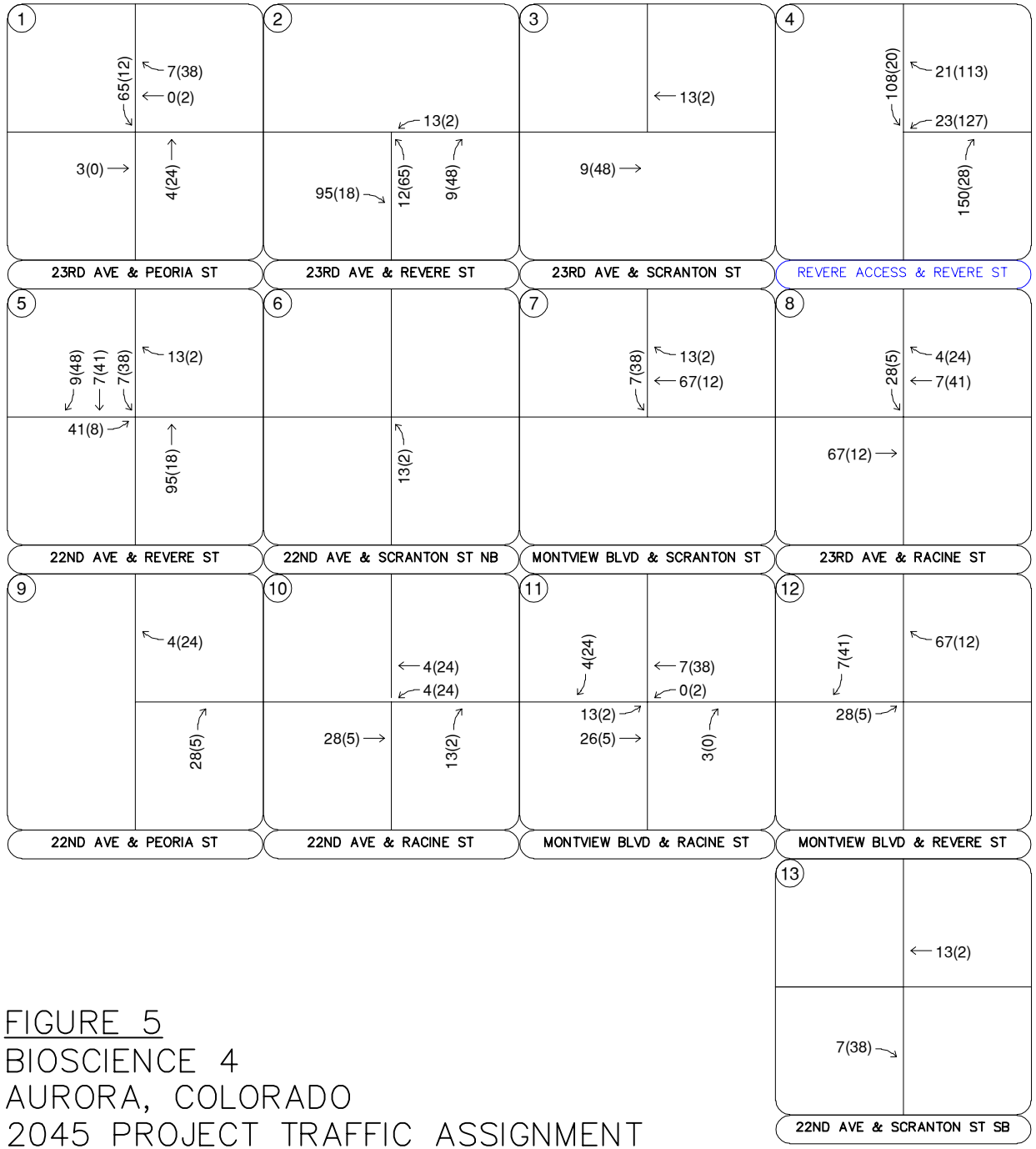
Kimley»Horn
NORTH
NTS 096579006

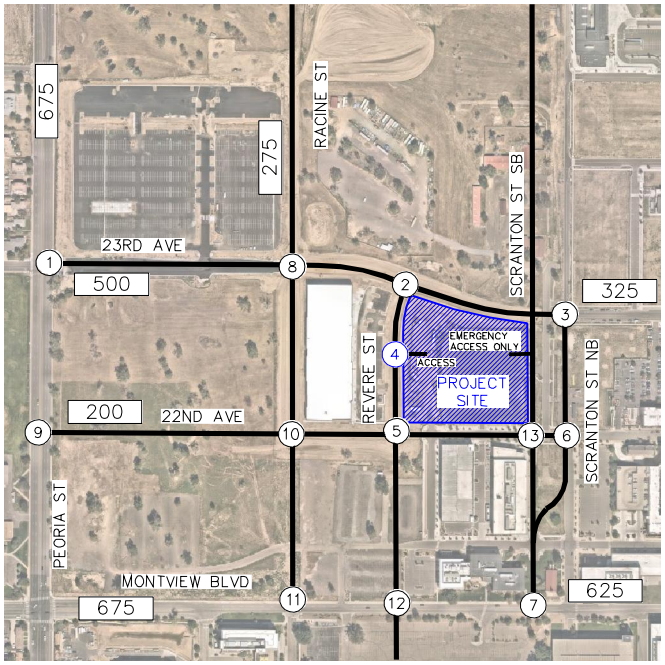
LEGEND

(X)	Study Area Key Intersection
(X)	Project Access Intersection
XXX(XXX)	Weekday AM(PM) Peak Hour Traffic Volumes
XX,X00	Estimated Daily Traffic Volume

FIGURE 3
BIOSCIENCE 4
AURORA, COLORADO
2025 PROJECT TRAFFIC ASSIGNMENT

Kimley»Horn





LEGEND

(X)	Study Area Key Intersection
(X)	Project Access Intersection
XXX(XXX)	Weekday AM(PM) Peak Hour Traffic Volumes
XX,X00	Estimated Daily Traffic Volume

FIGURE 5
BIOSCIENCE 4
AURORA, COLORADO
2045 PROJECT TRAFFIC ASSIGNMENT

Kimley»Horn NORTH
NTS 096579006

Kimley»Horn

Kimley»Horn

Project	Bioscience 4				
Subject	Trip Generation for General Office Building				
Designed by	TJD	*Date*	November 17, 2022	*Job No.*	
Checked by		*Date*		*Sheet No.*	*of*

TRIP GENERATION MANUAL TECHNIQUES

ITE Trip Generation Manual 11th Edition, Average Rates

Land Use Code - General Office Building (710)

Independent Variable - 1000 Square Feet (X)
SF = 115,132
X = 115.132
T = Average Vehicle Trip Ends

Peak Hour of Adjacent Street Traffic, One Hour Between 7 and 9 a.m. (700 Series Page 710)

Directional Distribution: 88% ent. 12% exit.
(T) = 1.52 (X) T = 175 Average Vehicle Trip Ends
(T) = 1.52 * (115.1) 154 entering 21 exiting

154 + 21 = 175

Peak Hour of Adjacent Street Traffic, One Hour Between 4 and 6 p.m. (700 Series Page 711)

Directional Distribution: 17% ent. 83% exit.
(T) = 1.44 (X) T = 166 Average Vehicle Trip Ends
(T) = 1.44 * (115.1) 28 entering 138 exiting

28 + 138 = 166

Weekday (700 Series Page 709)

Directional Distribution: 50% ent. 50% exit.
(T) = 10.84 (X) T = 1250 Average Vehicle Trip Ends
(T) = 10.84 * (115.1) 625 entering 625 exiting

625 + 625 = 1250

Kimley»Horn

Project Bioscience 4
Subject Trip Generation for Research and Development Center
Designed by TJD *Date* November 17, 2022 *Job No.*
Checked by *Sheet No.* *of*

TRIP GENERATION MANUAL TECHNIQUES

ITE Trip Generation Manual 11th Edition, Fitted Curve Equations

Land Use Code - Research and Development Center (760)

Independent Variable - 1000 Square Feet (X)
SF = 115,131
X = 115.131
T = Average Vehicle Trip Ends

Peak Hour of Adjacent Street Traffic, One Hour Between 7 and 9 a.m. (700 Series Page 856)

Directional Distribution: 82% ent. 18% exit.

(T) = 0.89 (X) +24.54
(T) = 0.89 * (115.1) + 24.54

T = 127 Average Vehicle Trip Ends
104 entering 23 exiting

104 + 23 = 127

Peak Hour of Adjacent Street Traffic, One Hour Between 4 and 6 p.m. (700 Series Page 857)

Directional Distribution: 16% ent. 84% exit.

(T) = 0.84 (X) +25.08
(T) = 0.84 * (115.1) + 25.08

T = 122 Average Vehicle Trip Ends
20 entering 102 exiting

20 + 102 = 122

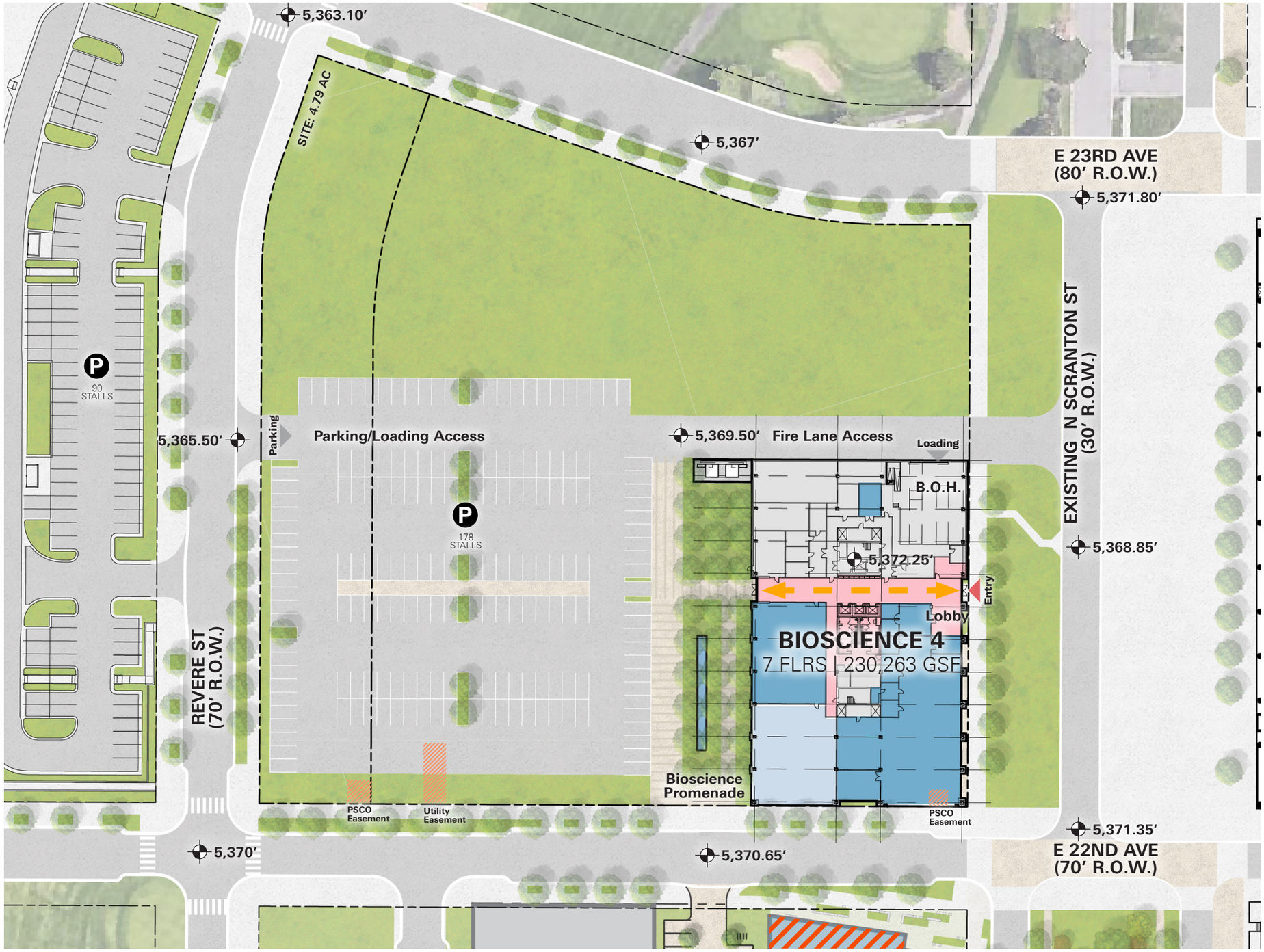
Weekday (700 Series Page 855)

Directional Distribution: 50% entering, 50% exiting

(T) = 9.70 (X) + 247.71
(T) = 9.70 * (115.1) + 247.71

T = 1364 Average Vehicle Trip Ends
682 entering 682 exiting

682 + 682 = 1364



View of site oriented South towards Research Quad

Bioscience 4
Area Calculations

Bioscience 4 (7 Floors) 230,263 GSF

Level 01 | 33,276 GSF
Level 02 | 31,390 GSF
Level 03-06 | 33,128 GSF
Level 07 | 29,994 GSF

Parking

Proposed Surface Parking | 178 Stalls

TOTAL	**178 Stalls**
Parking Req'd (2 Stalls:1000 SF)	460 Stalls
Parking Provided	436 Stalls
Existing Structured Parking	*258 Stalls*

Bioscience Block
Phase 1A Development

Fitzsimons - Bioscience 4

FRA • AIMCO • TRYBA ARCHITECTS • CRB

0 35' 70'

N

APPENDIX C

Future Traffic Projections

DRCOG Traffic Projections: Fitzsimons Innovation Campus

Location	2020	2050	Growth Factor	Annual Growth
MLK Blvd W/O Peoria St	17,000	26,000	1.53	1.43%
Fitzsimons Pkwy E/O Peoria St	10,000	15,000	1.50	1.36%
Peoria St N/O MLK/Fitzsimons	41,000	55,000	1.34	0.98%
Peoria St S/O MLK/Fitzsimons	44,000	57,000	1.30	0.87%
23rd Ave W/O Peoria St	2,000	3,000	1.50	1.36%
Montview Blvd W/O Peoria St	9,000	15,000	1.67	1.72%
Montview Blvd E/O Peoria St	18,000	22,000	1.22	0.67%
Colfax Ave W/O Peoria St	33,000	41,000	1.24	0.73%
Colfax Ave E/O Peoria St	45,000	58,000	1.29	0.85%
Fitzsimons Pkwy S/O Montview Blvd	13,000	21,000	1.62	1.61%
Total	232,000	313,000	1.35	**1.00%**

APPENDIX D

Trip Generation Worksheets,
Land Use Comparison,
and Trip Generation Comparison

Kimley»Horn

Project	Fitzsimons Innovation Campus (2022 MTIS) - Block Area 1				
Subject	Trip Generation for General Office Building				
Designed by	TJD	*Date*	October 20, 2022	*Job No.*	196203001
Checked by		*Date*		*Sheet No.*	1 *of* 1

TRIP GENERATION MANUAL TECHNIQUES

ITE Trip Generation Manual 11th Edition, Average Rates

Land Use Code - General Office Building (710)

Independent Variable - 1000 Square Feet (X)
SF = 410,000
X = 410.000
T = Average Vehicle Trip Ends

Peak Hour of Adjacent Street Traffic, One Hour Between 7 and 9 a.m. (700 Series Page 710)

Directional Distribution: 88% ent. 12% exit.
(T) = 1.52 (X) T = 623 Average Vehicle Trip Ends
(T) = 1.52 * (410.0) 548 entering 75 exiting

548 + 75 = 623

Peak Hour of Adjacent Street Traffic, One Hour Between 4 and 6 p.m. (700 Series Page 711)

Directional Distribution: 17% ent. 83% exit.
(T) = 1.44 (X) T = 590 Average Vehicle Trip Ends
(T) = 1.44 * (410.0) 100 entering 490 exiting

100 + 490 = 590

Weekday (700 Series Page 709)

Directional Distribution: 50% ent. 50% exit.
(T) = 10.84 (X) T = 4446 Average Vehicle Trip Ends
(T) = 10.84 * (410.0) 2223 entering 2223 exiting

2223 + 2223 = 4446

Kimley»Horn

Project	Fitzsimons Innovation Campus (2022 MTIS) - Block Area 2				
Subject	Trip Generation for General Office Building				
Designed by	TJD	*Date*	October 20, 2022	*Job No.*	196203001
Checked by		*Date*		*Sheet No.*	1 *of* 1

TRIP GENERATION MANUAL TECHNIQUES

ITE Trip Generation Manual 11th Edition, Average Rates

Land Use Code - General Office Building (710)

Independent Variable - 1000 Square Feet (X)
SF = 120,000
X = 120.000
T = Average Vehicle Trip Ends

Peak Hour of Adjacent Street Traffic, One Hour Between 7 and 9 a.m. (700 Series Page 710)

Directional Distribution: 88% ent. 12% exit.
(T) = 1.52 (X) T = 182 Average Vehicle Trip Ends
(T) = 1.52 * (120.0) 160 entering 22 exiting

160 + 22 = 182

Peak Hour of Adjacent Street Traffic, One Hour Between 4 and 6 p.m. (700 Series Page 711)

Directional Distribution: 17% ent. 83% exit.
(T) = 1.44 (X) T = 173 Average Vehicle Trip Ends
(T) = 1.44 * (120.0) 29 entering 144 exiting

29 + 144 = 173

Weekday (700 Series Page 709)

Directional Distribution: 50% ent. 50% exit.
(T) = 10.84 (X) T = 1302 Average Vehicle Trip Ends
(T) = 10.84 * (120.0) 651 entering 651 exiting

651 + 651 = 1302

Kimley»Horn

Project	Fitzsimons Innovation Campus (2022 MTIS) - Block Area 3				
Subject	Trip Generation for General Office Building				
Designed by	TJD	*Date*	October 20, 2022	*Job No.*	196203001
Checked by		*Date*		*Sheet No.*	1 *of* 1

TRIP GENERATION MANUAL TECHNIQUES

ITE Trip Generation Manual 11th Edition, Average Rates

Land Use Code - General Office Building (710)

Independent Variable - 1000 Square Feet (X)
SF = 199,000
X = 199.000
T = Average Vehicle Trip Ends

Peak Hour of Adjacent Street Traffic, One Hour Between 7 and 9 a.m. (700 Series Page 710)

Directional Distribution: 88% ent. 12% exit.
(T) = 1.52 (X) T = 302 Average Vehicle Trip Ends
(T) = 1.52 * (199.0) 266 entering 36 exiting

266 + 36 = 302

Peak Hour of Adjacent Street Traffic, One Hour Between 4 and 6 p.m. (700 Series Page 711)

Directional Distribution: 17% ent. 83% exit.
(T) = 1.44 (X) T = 287 Average Vehicle Trip Ends
(T) = 1.44 * (199.0) 49 entering 238 exiting

49 + 238 = 287

Weekday (700 Series Page 709)

Directional Distribution: 50% ent. 50% exit.
(T) = 10.84 (X) T = 2158 Average Vehicle Trip Ends
(T) = 10.84 * (199.0) 1079 entering 1079 exiting

1079 + 1079 = 2158

Kimley»Horn

Project	Fitzsimons Innovation Campus (2022 MTIS) - Block Area 4				
Subject	Trip Generation for General Office Building				
Designed by	TJD	*Date*	October 20, 2022	*Job No.*	196203001
Checked by		*Date*		*Sheet No.*	1 *of* 1

TRIP GENERATION MANUAL TECHNIQUES

ITE Trip Generation Manual 11th Edition, Average Rates

Land Use Code - General Office Building (710)

Independent Variable - 1000 Square Feet (X)
SF = 195,000
X = 195.000
T = Average Vehicle Trip Ends

Peak Hour of Adjacent Street Traffic, One Hour Between 7 and 9 a.m. (700 Series Page 710)

Directional Distribution: 88% ent. 12% exit.
(T) = 1.52 (X) T = 296 Average Vehicle Trip Ends
(T) = 1.52 * (195.0) 260 entering 36 exiting

260 + 36 = 296

Peak Hour of Adjacent Street Traffic, One Hour Between 4 and 6 p.m. (700 Series Page 711)

Directional Distribution: 17% ent. 83% exit.
(T) = 1.44 (X) T = 281 Average Vehicle Trip Ends
(T) = 1.44 * (195.0) 48 entering 233 exiting

48 + 233 = 281

Weekday (700 Series Page 709)

Directional Distribution: 50% ent. 50% exit.
(T) = 10.84 (X) T = 2114 Average Vehicle Trip Ends
(T) = 10.84 * (195.0) 1057 entering 1057 exiting

1057 + 1057 = 2114

Kimley»Horn

Project	Fitzsimons Innovation Campus (2022 MTIS) - Block Area 5				
Subject	Trip Generation for General Office Building				
Designed by	TJD	*Date*	October 20, 2022	*Job No.*	196203001
Checked by		*Date*		*Sheet No.*	1 *of* 1

TRIP GENERATION MANUAL TECHNIQUES

ITE Trip Generation Manual 11th Edition, Average Rates

Land Use Code - General Office Building (710)

Independent Variable - 1000 Square Feet (X)
SF = 145,000
X = 145.000
T = Average Vehicle Trip Ends

Peak Hour of Adjacent Street Traffic, One Hour Between 7 and 9 a.m. (700 Series Page 710)

Directional Distribution: 88% ent. 12% exit.
(T) = 1.52 (X) T = 220 Average Vehicle Trip Ends
(T) = 1.52 * (145.0) 194 entering 26 exiting

194 + 26 = 220

Peak Hour of Adjacent Street Traffic, One Hour Between 4 and 6 p.m. (700 Series Page 711)

Directional Distribution: 17% ent. 83% exit.
(T) = 1.44 (X) T = 209 Average Vehicle Trip Ends
(T) = 1.44 * (145.0) 36 entering 173 exiting

36 + 173 = 209

Weekday (700 Series Page 709)

Directional Distribution: 50% ent. 50% exit.
(T) = 10.84 (X) T = 1572 Average Vehicle Trip Ends
(T) = 10.84 * (145.0) 786 entering 786 exiting

786 + 786 = 1572

Kimley»Horn

Project	Fitzsimons Innovation Campus (2022 MTIS) - Block Area 6				
Subject	Trip Generation for General Office Building				
Designed by	TJD	*Date*	October 20, 2022	*Job No.*	196203001
Checked by		*Date*		*Sheet No.*	1 *of* 1

TRIP GENERATION MANUAL TECHNIQUES

ITE Trip Generation Manual 11th Edition, Average Rates

Land Use Code - General Office Building (710)

Independent Variable - 1000 Square Feet (X)
SF = 126,800
X = 126.800
T = Average Vehicle Trip Ends

Peak Hour of Adjacent Street Traffic, One Hour Between 7 and 9 a.m. (700 Series Page 710)

Directional Distribution: 88% ent. 12% exit.
(T) = 1.52 (X) T = 193 Average Vehicle Trip Ends
(T) = 1.52 * (126.8) 170 entering 23 exiting

170 + 23 = 193

Peak Hour of Adjacent Street Traffic, One Hour Between 4 and 6 p.m. (700 Series Page 711)

Directional Distribution: 17% ent. 83% exit.
(T) = 1.44 (X) T = 183 Average Vehicle Trip Ends
(T) = 1.44 * (126.8) 31 entering 152 exiting

31 + 152 = 183

Weekday (700 Series Page 709)

Directional Distribution: 50% ent. 50% exit.
(T) = 10.84 (X) T = 1376 Average Vehicle Trip Ends
(T) = 10.84 * (126.8) 688 entering 688 exiting

688 + 688 = 1376

Kimley»Horn

Project	Fitzsimons Innovation Campus (2022 MTIS) - Block Area 9				
Subject	Trip Generation for General Office Building				
Designed by	TJD	*Date*	October 20, 2022	*Job No.*	196203001
Checked by		*Date*		*Sheet No.*	1 *of* 1

TRIP GENERATION MANUAL TECHNIQUES

ITE Trip Generation Manual 11th Edition, Average Rates

Land Use Code - General Office Building (710)

Independent Variable - 1000 Square Feet (X)
SF = 235,000
X = 235.000
T = Average Vehicle Trip Ends

Peak Hour of Adjacent Street Traffic, One Hour Between 7 and 9 a.m. (700 Series Page 710)

Directional Distribution: 88% ent. 12% exit.
(T) = 1.52 (X) T = 357 Average Vehicle Trip Ends
(T) = 1.52 * (235.0) 314 entering 43 exiting

314 + 43 = 357

Peak Hour of Adjacent Street Traffic, One Hour Between 4 and 6 p.m. (700 Series Page 711)

Directional Distribution: 17% ent. 83% exit.
(T) = 1.44 (X) T = 338 Average Vehicle Trip Ends
(T) = 1.44 * (235.0) 57 entering 281 exiting

57 + 281 = 338

Weekday (700 Series Page 709)

Directional Distribution: 50% ent. 50% exit.
(T) = 10.84 (X) T = 2548 Average Vehicle Trip Ends
(T) = 10.84 * (235.0) 1274 entering 1274 exiting

1274 + 1274 = 2548

Kimley»Horn

Project	Fitzsimons Innovation Campus (2022 MTIS) - Block Area 10				
Subject	Trip Generation for Industrial Park				
Designed by	TJD	*Date*	October 20, 2022	*Job No.*	196203001
Checked by		*Date*		*Sheet No.*	1 *of* 1

TRIP GENERATION MANUAL TECHNIQUES

ITE Trip Generation Manual 11th Edition, Average Rates

Land Use Code - Industrial Park (130)

Independent Variable - 1000 Square Feet (X)
SF = 316,000
X = 316.000
T = Average Vehicle Trip Ends

Peak Hour of Adjacent Street Traffic, One Hour Between 7 and 9 a.m. (100 Series Page 49)

Directional Distribution: 81% ent. 19% exit.
(T) = 0.34 (X) T = 107 Average Vehicle Trip Ends
(T) = 0.34 * (316.0) 87 entering 20 exiting

87 + 20 = 107

Peak Hour of Adjacent Street Traffic, One Hour Between 4 and 6 p.m. (100 Series Page 50)

Directional Distribution: 22% ent. 78% exit.
(T) = 0.34 (X) T = 107 Average Vehicle Trip Ends
(T) = 0.34 * (316.0) 24 entering 83 exiting

24 + 83 = 107

Weekday (100 Series Page 48)

Average Weekday Directional Distribution: 50% ent. 50% exit.
(T) = 3.37 (X) T = 1066 Average Vehicle Trip Ends
(T) = 3.37 * (316.0) 533 entering 533 exiting

533 + 533 = 1066

Kimley»Horn

Project	Fitzsimons Innovation Campus (2022 MTIS) - Block Area 11				
Subject	Trip Generation for General Office Building				
Designed by	TJD	*Date*	October 20, 2022	*Job No.*	196203001
Checked by		*Date*		*Sheet No.*	1 *of* 1

TRIP GENERATION MANUAL TECHNIQUES

ITE Trip Generation Manual 11th Edition, Average Rates

Land Use Code - General Office Building (710)

Independent Variable - 1000 Square Feet (X)
SF = 235,000
X = 235.000
T = Average Vehicle Trip Ends

Peak Hour of Adjacent Street Traffic, One Hour Between 7 and 9 a.m. (700 Series Page 710)

Directional Distribution: 88% ent. 12% exit.
(T) = 1.52 (X) T = 357 Average Vehicle Trip Ends
(T) = 1.52 * (235.0) 314 entering 43 exiting

314 + 43 = 357

Peak Hour of Adjacent Street Traffic, One Hour Between 4 and 6 p.m. (700 Series Page 711)

Directional Distribution: 17% ent. 83% exit.
(T) = 1.44 (X) T = 338 Average Vehicle Trip Ends
(T) = 1.44 * (235.0) 57 entering 281 exiting

57 + 281 = 338

Weekday (700 Series Page 709)

Directional Distribution: 50% ent. 50% exit.
(T) = 10.84 (X) T = 2548 Average Vehicle Trip Ends
(T) = 10.84 * (235.0) 1274 entering 1274 exiting

1274 + 1274 = 2548

Kimley»Horn

Project	Fitzsimons Innovation Campus (2022 MTIS) - Block Area 12				
Subject	Trip Generation for General Office Building				
Designed by	TJD	*Date*	October 20, 2022	*Job No.*	196203001
Checked by		*Date*		*Sheet No.*	1 *of* 1

TRIP GENERATION MANUAL TECHNIQUES

ITE Trip Generation Manual 11th Edition, Average Rates

Land Use Code - General Office Building (710)

Independent Variable - 1000 Square Feet (X)
SF = 430,000
X = 430.000
T = Average Vehicle Trip Ends

Peak Hour of Adjacent Street Traffic, One Hour Between 7 and 9 a.m. (700 Series Page 710)

Directional Distribution: 88% ent. 12% exit.
(T) = 1.52 (X) T = 654 Average Vehicle Trip Ends
(T) = 1.52 * (430.0) 576 entering 78 exiting

576 + 78 = 654

Peak Hour of Adjacent Street Traffic, One Hour Between 4 and 6 p.m. (700 Series Page 711)

Directional Distribution: 17% ent. 83% exit.
(T) = 1.44 (X) T = 619 Average Vehicle Trip Ends
(T) = 1.44 * (430.0) 105 entering 514 exiting

105 + 514 = 619

Weekday (700 Series Page 709)

Directional Distribution: 50% ent. 50% exit.
(T) = 10.84 (X) T = 4662 Average Vehicle Trip Ends
(T) = 10.84 * (430.0) 2331 entering 2331 exiting

2331 + 2331 = 4662

Kimley»Horn

Project	Fitzsimons Innovation Campus (2022 MTIS) - Block Area 13				
Subject	Trip Generation for General Office Building				
Designed by	TJD	*Date*	October 20, 2022	*Job No.*	196203001
Checked by		*Date*		*Sheet No.*	1 *of* 1

TRIP GENERATION MANUAL TECHNIQUES

ITE Trip Generation Manual 11th Edition, Average Rates

Land Use Code - General Office Building (710)

Independent Variable - 1000 Square Feet (X)
SF = 200,000
X = 200.000
T = Average Vehicle Trip Ends

Peak Hour of Adjacent Street Traffic, One Hour Between 7 and 9 a.m. (700 Series Page 710)

Directional Distribution: 88% ent. 12% exit.
(T) = 1.52 (X) T = 304 Average Vehicle Trip Ends
(T) = 1.52 * (200.0) 268 entering 36 exiting

268 + 36 = 304

Peak Hour of Adjacent Street Traffic, One Hour Between 4 and 6 p.m. (700 Series Page 711)

Directional Distribution: 17% ent. 83% exit.
(T) = 1.44 (X) T = 288 Average Vehicle Trip Ends
(T) = 1.44 * (200.0) 49 entering 239 exiting

49 + 239 = 288

Weekday (700 Series Page 709)

Directional Distribution: 50% ent. 50% exit.
(T) = 10.84 (X) T = 2168 Average Vehicle Trip Ends
(T) = 10.84 * (200.0) 1084 entering 1084 exiting

1084 + 1084 = 2168

Kimley»Horn

Project	Fitzsimons Innovation Campus (2022 MTIS) - Block Area 14				
Subject	Trip Generation for General Office Building				
Designed by	TJD	*Date*	October 20, 2022	*Job No.*	196203001
Checked by		*Date*		*Sheet No.*	1 *of* 1

TRIP GENERATION MANUAL TECHNIQUES

ITE Trip Generation Manual 11th Edition, Average Rates

Land Use Code - General Office Building (710)

Independent Variable - 1000 Square Feet (X)
SF = 180,000
X = 180.000
T = Average Vehicle Trip Ends

Peak Hour of Adjacent Street Traffic, One Hour Between 7 and 9 a.m. (700 Series Page 710)

Directional Distribution: 88% ent. 12% exit.
(T) = 1.52 (X) T = 274 Average Vehicle Trip Ends
(T) = 1.52 * (180.0) 241 entering 33 exiting

241 + 33 = 274

Peak Hour of Adjacent Street Traffic, One Hour Between 4 and 6 p.m. (700 Series Page 711)

Directional Distribution: 17% ent. 83% exit.
(T) = 1.44 (X) T = 259 Average Vehicle Trip Ends
(T) = 1.44 * (180.0) 44 entering 215 exiting

44 + 215 = 259

Weekday (700 Series Page 709)

Directional Distribution: 50% ent. 50% exit.
(T) = 10.84 (X) T = 1952 Average Vehicle Trip Ends
(T) = 10.84 * (180.0) 976 entering 976 exiting

976 + 976 = 1952

Kimley»Horn

Project	Fitzsimons Innovation Campus (2022 MTIS) - Block Area 21				
Subject	Trip Generation for General Office Building				
Designed by	TJD	*Date*	October 20, 2022	*Job No.*	196203001
Checked by		*Date*		*Sheet No.*	1 *of* 1

TRIP GENERATION MANUAL TECHNIQUES

ITE Trip Generation Manual 11th Edition, Average Rates

Land Use Code - General Office Building (710)

Independent Variable - 1000 Square Feet (X)
SF = 175,000
X = 175.000
T = Average Vehicle Trip Ends

Peak Hour of Adjacent Street Traffic, One Hour Between 7 and 9 a.m. (700 Series Page 710)

Directional Distribution: 88% ent. 12% exit.
(T) = 1.52 (X) T = 266 Average Vehicle Trip Ends
(T) = 1.52 * (175.0) 234 entering 32 exiting

234 + 32 = 266

Peak Hour of Adjacent Street Traffic, One Hour Between 4 and 6 p.m. (700 Series Page 711)

Directional Distribution: 17% ent. 83% exit.
(T) = 1.44 (X) T = 252 Average Vehicle Trip Ends
(T) = 1.44 * (175.0) 43 entering 209 exiting

43 + 209 = 252

Weekday (700 Series Page 709)

Directional Distribution: 50% ent. 50% exit.
(T) = 10.84 (X) T = 1898 Average Vehicle Trip Ends
(T) = 10.84 * (175.0) 949 entering 949 exiting

949 + 949 = 1898

Kimley»Horn

Project	Fitzsimons Innovation Campus (2022 MTIS) - Block Area 22				
Subject	Trip Generation for General Office Building				
Designed by	TJD	*Date*	October 20, 2022	*Job No.*	196203001
Checked by		*Date*		*Sheet No.*	1 *of* 1

TRIP GENERATION MANUAL TECHNIQUES

ITE Trip Generation Manual 11th Edition, Average Rates

Land Use Code - General Office Building (710)

Independent Variable - 1000 Square Feet (X)
SF = 80,000
X = 80.000
T = Average Vehicle Trip Ends

Peak Hour of Adjacent Street Traffic, One Hour Between 7 and 9 a.m. (700 Series Page 710)

Directional Distribution: 88% ent. 12% exit.
(T) = 1.52 (X) T = 122 Average Vehicle Trip Ends
(T) = 1.52 * (80.0) 107 entering 15 exiting

107 + 15 = 122

Peak Hour of Adjacent Street Traffic, One Hour Between 4 and 6 p.m. (700 Series Page 711)

Directional Distribution: 17% ent. 83% exit.
(T) = 1.44 (X) T = 115 Average Vehicle Trip Ends
(T) = 1.44 * (80.0) 20 entering 95 exiting

20 + 95 = 115

Weekday (700 Series Page 709)

Directional Distribution: 50% ent. 50% exit.
(T) = 10.84 (X) T = 868 Average Vehicle Trip Ends
(T) = 10.84 * (80.0) 434 entering 434 exiting

434 + 434 = 868

Kimley»Horn

Project	Fitzsimons Innovation Campus (2022 MTIS) - Block Area 22				
Subject	Trip Generation for Strip Retail Plaza (<40k)				
Designed by	TJD	*Date*	October 20, 2022	*Job No.*	196203001
Checked by		*Date*		*Sheet No.*	1 of 1

TRIP GENERATION MANUAL TECHNIQUES

ITE Trip Generation Manual 11th Edition, Average Rate Equations

Land Use Code - Strip Retail Plaza (<40k) (822)

Independent Variable - 1000 Square Feet Gross Leasable Area (X)

Gross Leasable Area = 14,778 Square Feet
X = 14.778
T = Average Vehicle Trip Ends

Peak Hour of Adjacent Street Traffic, One Hour Between 7 and 9 a.m. (800 Series Page 230)

Average Weekday — Directional Distribution: 60% ent. 40% exit.
T = 2.36 * (X) — T = 35 Average Vehicle Trip Ends
T = 2.36 * 14.778 — 21 entering 14 exiting

21 + 14 = 35

Peak Hour of Adjacent Street Traffic, One Hour Between 4 and 6 p.m. (800 Series page 231)

Average Weekday — Directional Distribution: 50% ent. 50% exit.
T = 6.59 * (X) — T = 97 Average Vehicle Trip Ends
T = 6.59 * 14.778 — 48 entering 49 exiting

48 + 49 = 97

Weekday (800 Series page 229)

Average Weekday — Directional Distribution: 50% entering, 50% exiting
T = 54.45 * (X) — T = 804 Average Vehicle Trip Ends
T = 54.45 * 14.778 — 402 entering 402 exiting

402 + 402 = 804

Non Pass-By Trip Volumes (Per ITE Trip Generation Manual, 11th Edition)

AM Peak Hour = 60% Non-Pass By — PM Peak Hour = 60% Non-Pass By

	IN	Out	Total	
				Pass-By Rates from ITE 821
AM Peak	13	8	21	PM Peak Hour Rate Applied to AM Peak Hour
PM Peak	29	29	59	
Daily	241	241	482	PM Peak Hour Rate Applied to Daily

Pass-By Trip Volumes (Per ITE Trip Generation Manual, 11th Edition)

AM Peak Hour = 40% Pass By — PM Peak Hour = 40% Pass By

	IN	Out	Total	
AM Peak	8	6	14	PM Peak Hour Rate Applied to AM Peak Hour
PM Peak	19	20	39	
Daily	161	161	322	PM Peak Hour Rate Applied to Daily

Kimley»Horn

Project	Fitzsimons Innovation Campus (MTIS 2022) - Block Area 24				
Subject	Trip Generation for Multifamily Housing (Mid-Rise)				
Designed by	TJD	*Date*	October 20, 2022	*Job No.*	196203001
Checked by		*Date*		*Sheet No.*	1 *of* 1

TRIP GENERATION MANUAL TECHNIQUES

ITE Trip Generation Manual 11th Edition, Average Rate Equations

Land Use Code - Multifamily Housing (Mid-Rise) (221)

Independent Variable - Dwelling Units (X)

X = 204
T = Average Vehicle Trip Ends

Peak Hour of Adjacent Street Traffic, One Hour Between 7 and 9 a.m. (200 Series Page 275)

Average Weekday
(T) = 0.37 (X)
(T) = 0.37 * (204.0)

Directional Distribution: 23% ent. 77% exit.
T = 75 Average Vehicle Trip Ends
17 entering 58 exiting

17 + 58 = 75

Peak Hour of Adjacent Street Traffic, One Hour Between 4 and 6 p.m. (200 Series Page 276)

Average Weekday
(T) = 0.39(X)
(T) = 0.39 * (204.0)

Directional Distribution: 61% ent. 39% exit.
T = 80 Average Vehicle Trip Ends
49 entering 31 exiting

49 + 31 = 80

Weekday (200 Series Page 274)

Average Weekday
(T) = 4.54 (X)
(T) = 4.54 * (204.0)

Directional Distribution: 50% entering, 50% exiting
T = 928 Average Vehicle Trip Ends
464 entering 464 exiting

464 + 464 = 928

Kimley»Horn

Project	Fitzsimons Innovation Campus (MTIS 2022) - Block Area 25				
Subject	Trip Generation for Multifamily Housing (Mid-Rise)				
Designed by	TJD	*Date*	October 20, 2022	*Job No.*	196203001
Checked by		*Date*		*Sheet No.*	1 *of* 1

TRIP GENERATION MANUAL TECHNIQUES

ITE Trip Generation Manual 11th Edition, Average Rate Equations

Land Use Code - Multifamily Housing (Mid-Rise) (221)

Independent Variable - Dwelling Units (X)

X = 204
T = Average Vehicle Trip Ends

Peak Hour of Adjacent Street Traffic, One Hour Between 7 and 9 a.m. (200 Series Page 275)

Average Weekday
(T) = 0.37 (X)
(T) = 0.37 * (204.0)

Directional Distribution: 23% ent. 77% exit.
T = 75 Average Vehicle Trip Ends
17 entering 58 exiting

17 + 58 = 75

Peak Hour of Adjacent Street Traffic, One Hour Between 4 and 6 p.m. (200 Series Page 276)

Average Weekday
(T) = 0.39(X)
(T) = 0.39 * (204.0)

Directional Distribution: 61% ent. 39% exit.
T = 80 Average Vehicle Trip Ends
49 entering 31 exiting

49 + 31 = 80

Weekday (200 Series Page 274)

Average Weekday
(T) = 4.54 (X)
(T) = 4.54 * (204.0)

Directional Distribution: 50% entering, 50% exiting
T = 928 Average Vehicle Trip Ends
464 entering 464 exiting

464 + 464 = 928

Kimley»Horn

Project	Fitzsimons Innovation Campus (MTIS 2022) - Block Area 26				
Subject	Trip Generation for Multifamily Housing (Mid-Rise)				
Designed by	TJD	*Date*	October 20, 2022	*Job No.*	196203001
Checked by		*Date*		*Sheet No.*	1 *of* 1

TRIP GENERATION MANUAL TECHNIQUES

ITE Trip Generation Manual 11th Edition, Average Rate Equations

Land Use Code - Multifamily Housing (Mid-Rise) (221)

Independent Variable - Dwelling Units (X)

X = 210
T = Average Vehicle Trip Ends

Peak Hour of Adjacent Street Traffic, One Hour Between 7 and 9 a.m. (200 Series Page 275)

Average Weekday
(T) = 0.37 (X)
(T) = 0.37 * (210.0)

Directional Distribution: 23% ent. 77% exit.
T = 78 Average Vehicle Trip Ends
18 entering 60 exiting

18 + 60 = 78

Peak Hour of Adjacent Street Traffic, One Hour Between 4 and 6 p.m. (200 Series Page 276)

Average Weekday
(T) = 0.39(X)
(T) = 0.39 * (210.0)

Directional Distribution: 61% ent. 39% exit.
T = 82 Average Vehicle Trip Ends
50 entering 32 exiting

50 + 32 = 82

Weekday (200 Series Page 274)

Average Weekday
(T) = 4.54 (X)
(T) = 4.54 * (210.0)

Directional Distribution: 50% entering, 50% exiting
T = 954 Average Vehicle Trip Ends
477 entering 477 exiting

477 + 477 = 954

Kimley»Horn

Project	Fitzsimons Innovation Campus (2022 MTIS) - Block Area 28				
Subject	Trip Generation for Hotel				
Designed by	TJD	*Date*	October 20, 2022	*Job No.*	196203001
Checked by				*Sheet No.*	1 *of* 1

TRIP GENERATION MANUAL TECHNIQUES

ITE Trip Generation Manual 11th Edition, Average Rate Equations

Land Use Code - Hotel (310)

Independent Variable - Rooms (X)

X = 106
T = Average Vehicle Trip Ends

Peak Hour of Adjacent Street Traffic, One Hour Between 7 and 9 a.m. (Page 501)

Directional Distribution: 56% ent. 44% exit.

(T) = 0.46 (X) — T = 49 Average Vehicle Trip Ends
(T) = 0.46 * (106.0) — 27 entering 22 exiting

27 + 22 = 49

Peak Hour of Adjacent Street Traffic, One Hour Between 4 and 6 p.m. (Page 502)

Directional Distribution: 51% ent. 49% exit.

T = 0.59 X — T = 63 Average Vehicle Trip Ends
T = 0.59 * 106 — 32 entering 31 exiting

32 + 31 = 63

Weekday (Page 500)

Average Weekday — Directional Distribution: 50% entering, 50% exiting
(T) = 7.99 (X) — T = 846 Average Vehicle Trip Ends
(T) = 7.99 * (106.0) — 423 entering 423 exiting

423 + 423 = 846

Saturday (Page 505)

Directional Distribution: 50% ent. 50% exit.

T = 8.07 X — T = 856 Average Vehicle Trip Ends
T = 8.07 * 106 — 428 entering 428 exiting

428 + 428 = 856

Saturday Peak Hour of Generator (Page 506)

Average Weekday — Directional Distribution: 56% entering, 44% exiting
(T) = 0.72 (X) — T = 76 Average Vehicle Trip Ends
(T) = 0.72 * (106.0) — 43 entering 33 exiting

43 + 33 = 76

Kimley»Horn

Project	Fitzsimons Innovation Campus (2022 MTIS) - Block Area 29,30,33				
Subject	Trip Generation for General Office Building				
Designed by	TJD	*Date*	October 20, 2022	*Job No.*	196203001
Checked by		*Date*		*Sheet No.*	1 *of* 1

TRIP GENERATION MANUAL TECHNIQUES

ITE Trip Generation Manual 11th Edition, Average Rates

Land Use Code - General Office Building (710)

Independent Variable - 1000 Square Feet (X)
SF = 200,000
X = 200.000
T = Average Vehicle Trip Ends

Peak Hour of Adjacent Street Traffic, One Hour Between 7 and 9 a.m. (700 Series Page 710)

Directional Distribution: 88% ent. 12% exit.
(T) = 1.52 (X) T = 304 Average Vehicle Trip Ends
(T) = 1.52 * (200.0) 268 entering 36 exiting

268 + 36 = 304

Peak Hour of Adjacent Street Traffic, One Hour Between 4 and 6 p.m. (700 Series Page 711)

Directional Distribution: 17% ent. 83% exit.
(T) = 1.44 (X) T = 288 Average Vehicle Trip Ends
(T) = 1.44 * (200.0) 49 entering 239 exiting

49 + 239 = 288

Weekday (700 Series Page 709)

Directional Distribution: 50% ent. 50% exit.
(T) = 10.84 (X) T = 2168 Average Vehicle Trip Ends
(T) = 10.84 * (200.0) 1084 entering 1084 exiting

1084 + 1084 = 2168

Kimley»Horn

Project	Fitzsimons Innovation Campus (2022 MTIS) - Block Area 31				
Subject	Trip Generation for General Office Building				
Designed by	TJD	*Date*	October 20, 2022	*Job No.*	196203001
Checked by		*Date*		*Sheet No.*	1 *of* 1

TRIP GENERATION MANUAL TECHNIQUES

ITE Trip Generation Manual 11th Edition, Average Rates

Land Use Code - General Office Building (710)

Independent Variable - 1000 Square Feet (X)
SF = 200,000
X = 200.000
T = Average Vehicle Trip Ends

Peak Hour of Adjacent Street Traffic, One Hour Between 7 and 9 a.m. (700 Series Page 710)

Directional Distribution: 88% ent. 12% exit.
(T) = 1.52 (X) T = 304 Average Vehicle Trip Ends
(T) = 1.52 * (200.0) 268 entering 36 exiting

268 + 36 = 304

Peak Hour of Adjacent Street Traffic, One Hour Between 4 and 6 p.m. (700 Series Page 711)

Directional Distribution: 17% ent. 83% exit.
(T) = 1.44 (X) T = 288 Average Vehicle Trip Ends
(T) = 1.44 * (200.0) 49 entering 239 exiting

49 + 239 = 288

Weekday (700 Series Page 709)

Directional Distribution: 50% ent. 50% exit.
(T) = 10.84 (X) T = 2168 Average Vehicle Trip Ends
(T) = 10.84 * (200.0) 1084 entering 1084 exiting

1084 + 1084 = 2168

Kimley»Horn

Project	Fitzsimons Innovation Campus (2022 MTIS)				
Subject	Trip Generation - Public Park				
Designed by	TJD	*Date*	October 20, 2022	*Job No.*	196203001
Checked by		*Date*		*Sheet No.*	1 of 1

TRIP GENERATION MANUAL TECHNIQUES

ITE Trip Generation Manual 11th Edition, Average Rate Equations
Land Use Code - Public Park (411)
Independent Variable - Acres (X)

Acres 9.78
X = 9.78
T = Average Vehicle Trip Ends

Peak Hour of Adjacent Street Traffic, One Hour Between 7 and 9 a.m. (400 Series Page 3)

Directional Distribution: 59% ent. 41% exit.
(T) = 0.02 (X)
T = 0 Average Vehicle Trip Ends
(T) = 0.02 * (9.8)
0 entering 0 exiting
0 + 0 = 0

Peak Hour of Adjacent Street Traffic, One Hour Between 4 and 6 p.m. (400 Series Page 4)

Directional Distribution: 55% ent. 45% exit.
(T) = 0.11 (X)
T = 1 Average Vehicle Trip Ends
(T) = 0.11 * (9.8)
1 entering 0 exiting
1 + 0 = 1

Weekday (400 Series page 2)

Average Weekday
Directional Distribution: 50% entering, 50% exiting
T = 0.78* (X)
T = 8 Average Vehicle Trip Ends
T = 0.78 * 10
4 entering 4 exiting

4 + 4 = 8

Summary of Land Uses and Intensities of the Three Iterations

Land Use	2017 Study	2021 Study	2023 Study
Office	3,784,000 SF	4,288,410 SF	4,117,932 SF
Residential	1,343 DU	859 DU	850 DU
Hotel	392 Rooms	120 Rooms	106 Rooms
Research	532,000 SF	343,874 SF	526,005 SF
Commercial	12,000 SF	0 SF	29,416 SF
School	0 Students	1,230 Students	1,230 Students
Industrial	0 SF	271,000 SF	316,000 SF
Park	0 Acres	6 Acres	10 Acres

The values represented in this table are the sum of the entire development area, including uses already constructed prior to each study's existing horizon at the time

Original Traffic Study (2017) - ITE 9th Edition, After Internal Capture Reduction				Previous Traffic Study (2021) - ITE 10th Edition, After Internal Capture Reduction										Current Traffic Study (2023) - ITE 11th Edition, After Internal Capture Reduction									
		Weekday Vehicle Trips*				Weekday Vehicle Trips										Weekday Vehicle Trips							
		AM Peak Hour	PM Peak Hour				AM Peak Hour			PM Peak Hour							AM Peak Hour			PM Peak Hour			
Block	Land Use (no size given)	Total	Total	Block	Land Use and Size	Daily	In	Out	Total	In	Out	Total	Block	Land Use and Size	Daily	In	Out	Total	In	Out	Total
1	General Office Building (ITE 710)	315	301	A	General Office Building (ITE 710) - 410,000 Square Feet	3,232	274	45	319	54	283	337	1	General Office Building (ITE 710) - 410,000 Square Feet	3,446	425	58	483	78	380	458
2	General Office Building (ITE 710)	145	138	B	General Office Building (ITE 710) - 120,000 Square Feet	982	93	15	108	17	88	105	2	General Office Building (ITE 710) - 120,000 Square Feet	1,010	124	17	141	22	112	134
3	General Office Building (ITE 710)	338	323	C	General Office Building (ITE 710) - 333,000 Square Feet	2,642	226	37	263	44	233	277	3	General Office Building (ITE 710) - 199,000 Square Feet	1,672	206	28	234	38	184	222
4	General Office Building (ITE 710)	363	346	D	General Office Building (ITE 710) - 416,360 Square Feet	3,280	278	46	324	55	287	342	4	General Office Building (ITE 710) - 195,000 Square Feet	1,638	202	28	230	37	181	218
9	General Office Building (ITE 710)	338	323	I	General Office Building (ITE 710) - 174,600 Square Feet	1,414	127	21	148	24	126	150	5	General Office Building (ITE 710) - 145,000 Square Feet	1,218	150	20	170	28	134	162
10	General Office Building (ITE 710)	315	301	J	General Office Building (ITE 710) - 138,000 Square Feet	1,124	104	17	121	19	101	120	6	General Office Building (ITE 710) - 126,800 Square Feet	1,066	132	18	150	24	118	142
7-8	General Office Building (ITE 710)	822	785	G-H	General Office Building (ITE 710) - 675,000 SF	5,244	522	85	607	96	505	601	7-8	General Office Building (ITE 710) - 675,000 SF	5,244	522	85	607	96	505	601
15N	General Office Building (ITE 710)	194	185	S	General Office Building (ITE 710) - 235,000 Square Feet	1,846	156	26	182	31	161	192	9	General Office Building (ITE 710) - 235,000 Square Feet	1,976	243	33	276	44	218	262
16	General Office Building (ITE 710)	329	314	T	Industrial Park (ITE 130) - 271,000 Square Feet	832	79	19	98	21	78	99	10	Industrial Park (ITE 130) - 316,000 Square Feet	970	79	18	97	22	76	98
15S	General Office Building (ITE 710)	193	185	S	General Office Building (ITE 710) - 235,000 Square Feet	1,846	156	26	182	31	161	192	11	General Office Building (ITE 710) - 235,000 Square Feet	1,976	243	33	276	44	218	262
24	General Office Building (ITE 710)	399	381	W	General Office Building (ITE 710) - 430,000 Square Feet	3,386	288	47	335	57	296	353	12	General Office Building (ITE 710) - 430,000 Square Feet	3,614	446	60	506	81	398	479
25,31	Business Hotel (ITE 312)	82	90	X	General Office Building (ITE 710) - 160,000 Square Feet	1,298	118	19	137	22	116	138	13	General Office Building (ITE 710) - 200,000 Square Feet	1,680	208	28	236	38	185	223
26,32	Research and Development Center (ITE 760)	196	172	Y-Z-AA	Research and Development Center (ITE 760) - 180,000 Square Feet	1,482	41	14	55	9	55	64	14	General Office Building (ITE 710) - 180,000 Square Feet	1,514	187	26	213	34	167	201
17	General Office Building (ITE 710)	260	248	U	General Office Building (ITE 710) - 45,000 Square Feet	380	46	8	54	6	35	41	15	General Office Building (ITE 710) - 45,000 Square Feet	380	46	8	54	6	35	41
					Research and Development Center (ITE 760) - 45,000 Square Feet	372	10	4	14	2	14	16		Research and Development Center (ITE 760) - 45,000 Square Feet	372	10	4	14	2	14	16
18	General Office Building (ITE 710)	263	250	V	General Office Building (ITE 710) - 194,650 Square Feet	1,570	140	22	162	26	140	166	16	General Office Building (ITE 710) - 115,132 Square Feet	970	119	16	135	22	107	129
														Research and Development Center (ITE 760) - 115,131 Square Feet	996	76	17	93	15	74	89
27	Research and Development Center (ITE 760)	98	86	BB	Research and Development Center (ITE 760) - 118,874 Square Feet	980	26	10	36	7	36	43	17	BioScience3 - 118,874 Square Feet	Represented in Existing Traffic Counts						
33	Research and Development Center (ITE 760)	80	70	CC	BioScience1 - 90,000 Square Feet	Represented in Existing Traffic Counts							18	BioScience1 - 90,000 Square Feet	Represented in Existing Traffic Counts						
34	Research and Development Center (ITE 760)	99	88	DD	BioScience2 - 112,000 Square Feet	Represented in Existing Traffic Counts							19	BioScience2 - 112,000 Square Feet	Represented in Existing Traffic Counts						
5,6	Multifamily Low-Rise Apartment (ITE 220)	207	251	E-F	High School (ITE 530, 10th Ed.) - 950 Students	2,146	331	163	494	106	225	331	20	High School (ITE 530, 10th Ed.) - 545 Students	1,232	190	94	284	61	129	190
11,12	Multifamily Low-Rise Apartment (ITE 220)	192	232	N-O	General Office Building (ITE 710) - 321,800 Square Feet	2,604	238	38	276	44	232	276	21	General Office Building (ITE 710) - 175,000 Square Feet	1,472	181	25	206	33	162	195
14W	Multifamily Low-Rise Apartment (ITE 220)	21	25	N-O									22	General Office Building (ITE 710) - 80,000 Square Feet	674	83	12	95	16	74	90
														Strip Retail Plaza (ITE 822) - 14,778 Square Feet	624	16	11	27	37	38	75
14E	Multifamily Low-Rise Apartment (ITE 220)	20	25	P	Compositive School (Traffic Study) - 280 Students	1,050	135	112	247	80	93	173	23	Compositive School (Traffic Study) - 140 additional students (140 already)	526	68	56	124	40	47	87
19	Multifamily Low-Rise Apartment (ITE 220)	24	29	Q	Multifamily Mid-Rise Housing (ITE 221) - 200 Dwelling Units	818	14	37	51	39	26	65	24	Multifamily Mid-Rise Housing (ITE 221) - 204 Dwelling Units	696	13	44	57	37	23	60
28	Multifamily Low-Rise Apartment (ITE 220)	30	36	R	Multifamily Mid-Rise Housing (ITE 221) - 200 Dwelling Units	818	14	37	51	39	26	65	25	Multifamily Mid-Rise Housing (ITE 221) - 204 Dwelling Units	696	13	44	57	37	23	60
20	Multifamily Low-Rise Apartment (ITE 220)	21	26	FF	Multifamily Mid-Rise Housing (ITE 221) - 206 Dwelling Units	842	14	38	52	41	26	67	26	Multifamily Mid-Rise Housing (ITE 221) - 210 Dwelling Units	716	14	45	59	38	24	62
29	Business Hotel (ITE 312)	23	26	HH	Multifamily Mid-Rise Housing (ITE 221) - 253 Dwelling Units	1,247	18	78	95	76	42	118	27	Multifamily Mid-Rise Housing (ITE 221) - 210 Dwelling Units	Represented in Existing Traffic Counts						
35	Business Hotel (ITE 312), Shopping Center (820)	64	82	JJ-KK	Hotel (ITE 310) - 120 Rooms	715	27	20	47	26	26	53	28	Hotel (ITE 310) - 106 Rooms	846	27	22	49	32	31	63
21,22, 23	General Office Building (ITE 710)	181	174	GG	General Office Building (ITE 710) - 200,000 Square Feet	1,612	143	23	166	27	143	170	29,30, 33	General Office Building (ITE 710) - 200,000 Square Feet	1,680	208	28	236	38	185	223
30	General Office Building (ITE 710)	121	115	ii	General Office Building (ITE 710) - 200,000 Square Feet	1,612	143	23	166	27	143	170	31	General Office Building (ITE 710) - 200,000 Square Feet	1,680	208	28	236	38	185	223
13	Neighborhood Park (no ITE)	0	0	K-L	Public Park (ITE 411) - 6 Acres	4	0	0	0	1	0	1	OS1-7	Public Park (ITE 411) - 9.78 Acres	6	0	0	0	1	0	1
	Total Trips after Internal Capture	**5,733**	**5,607**		**Total Trips after Internal Capture**	**45,378**	**3,761**	**1,030**	**4,790**	**1,027**	**3,697**	**4,725**		**Total Trips after Internal Capture**	**40,590**	**4,439**	**906**	**5,345**	**1,039**	**4,027**	**5,066**

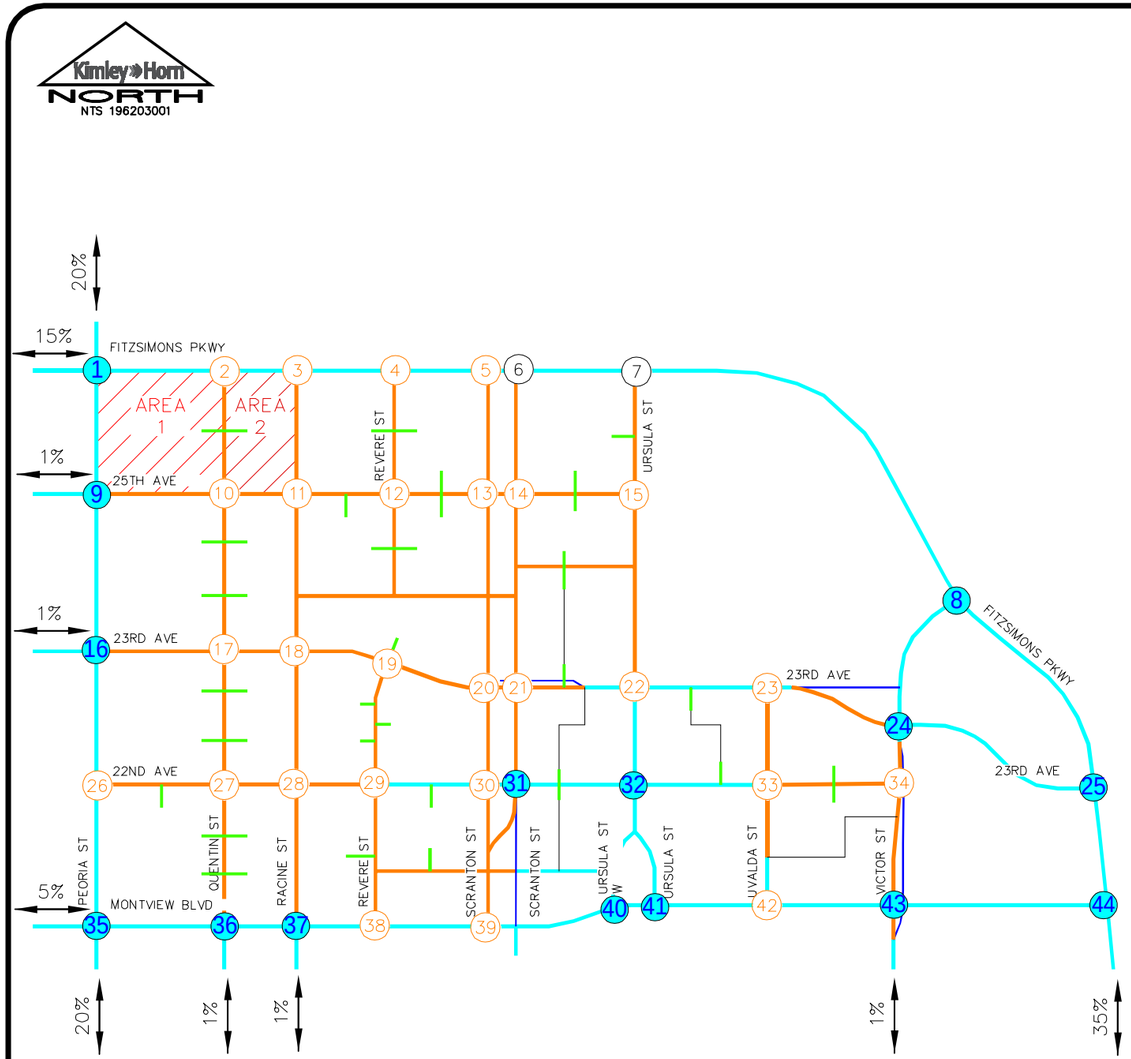
* = 2017 Study did not include daily trips or AM/PM peak hour in/out trips by use area

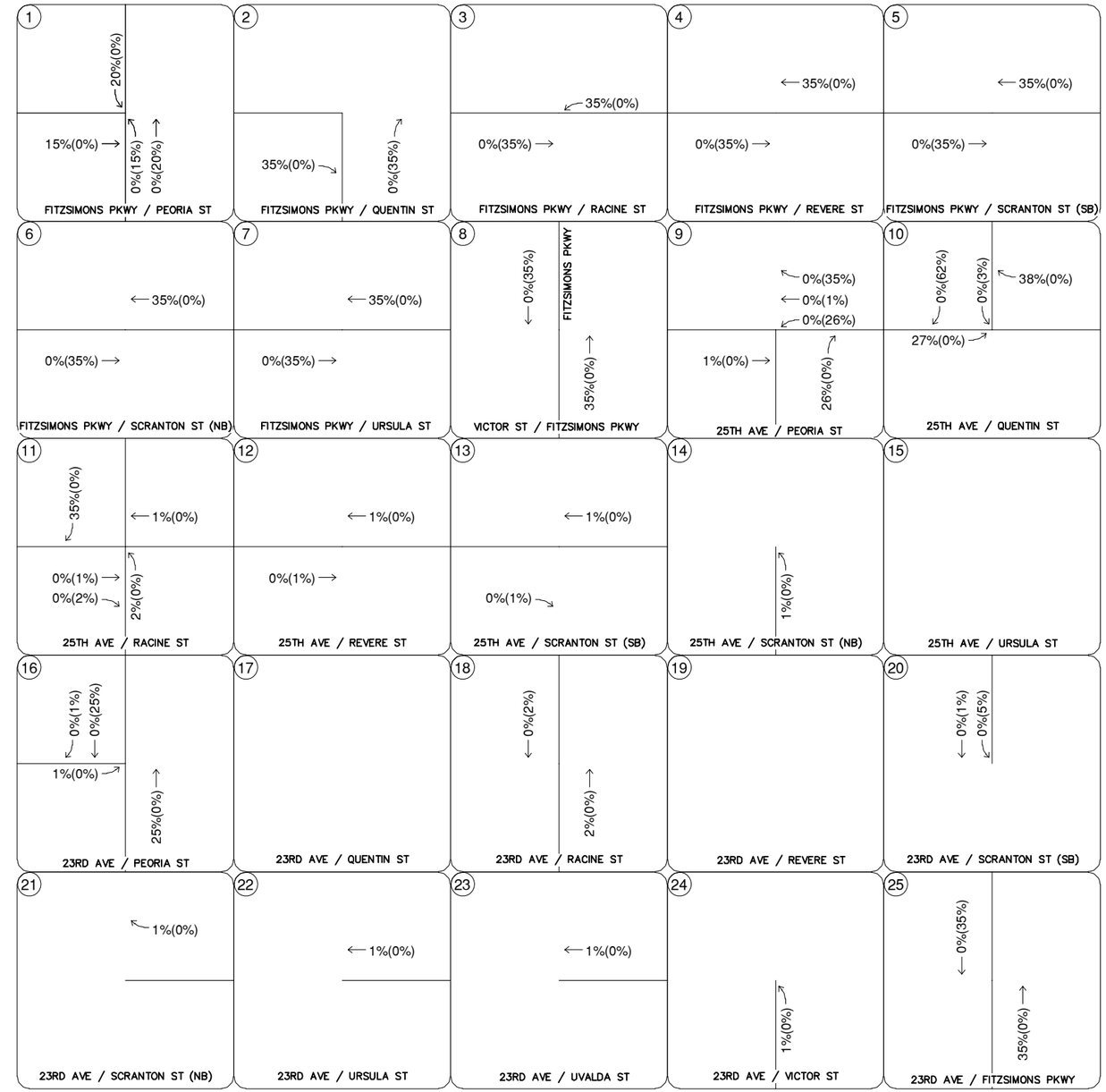
Yellow highlight = background traffic study data

Total Trips Summary (after Internal Capture Reduction)			
Year	Daily Trips	AM Peak Hour	PM Peak Hour
2017	N/A	5,733	5,607
2021	45,378	4,790	4,725
2023	40,590	5,345	5,066

APPENDIX E

Trip Distribution by Block Area





FITZSIMONS INNOVATION CAMPUS MASTER TRAFFIC IMPACT STUDY
PROJECT TRIP DISTRIBUTION – AREA 1 & 2 (NORTH)

FIGURE AREA 1 & 2 (N)

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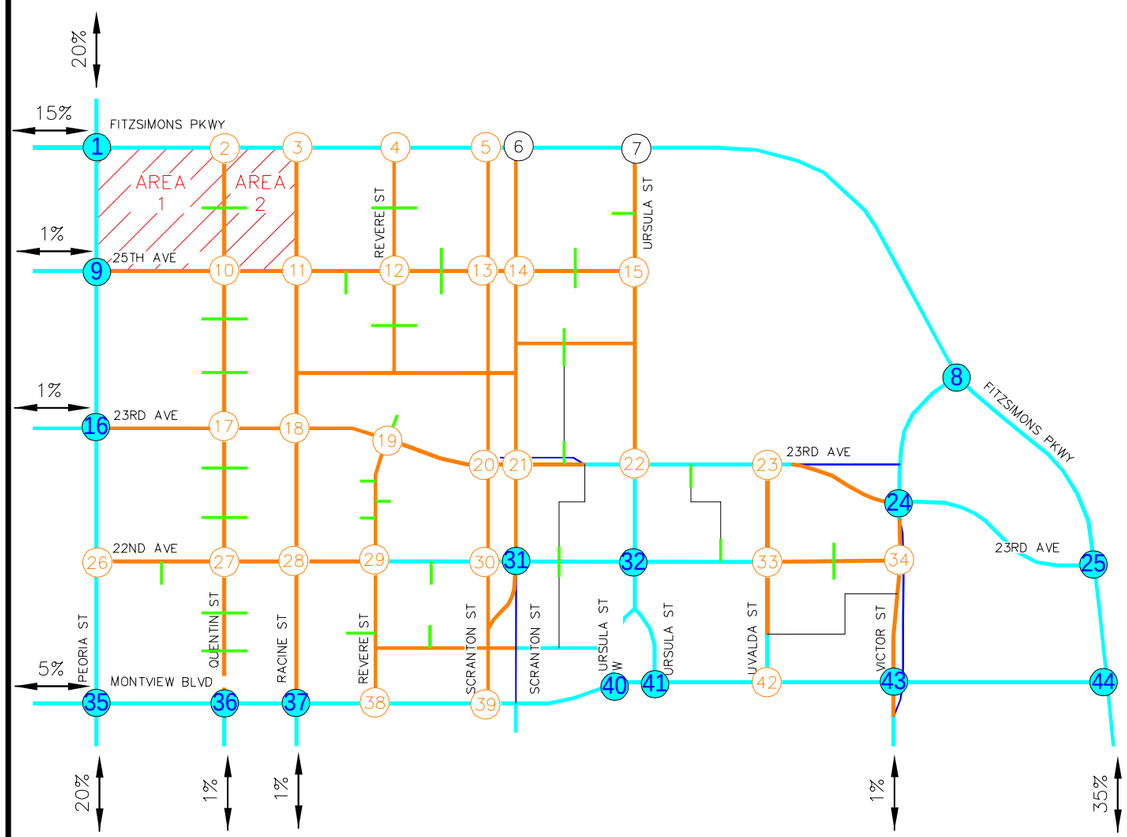
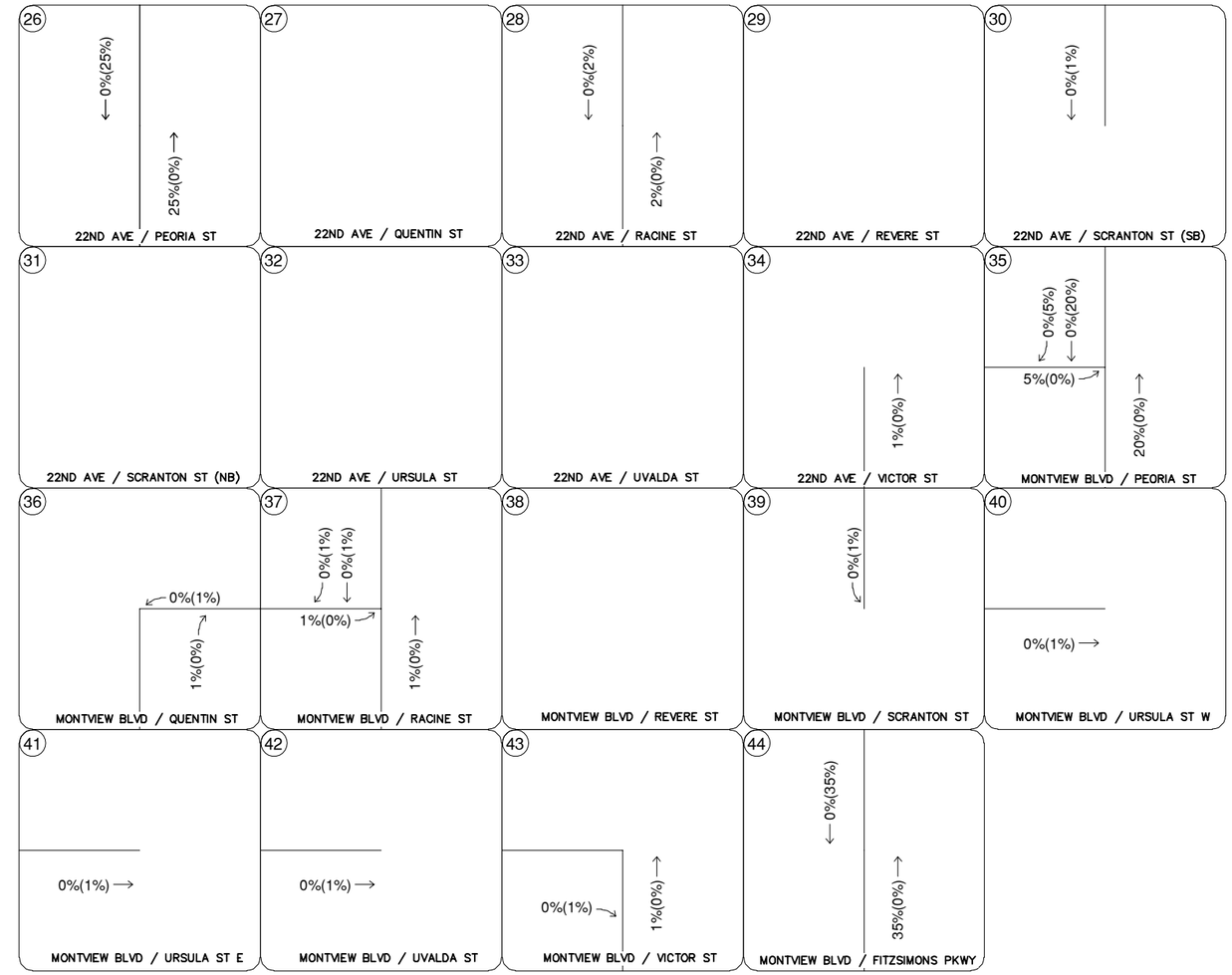
NTS 196203001





FITZSIMONS INNOVATION CAMPUS MASTER TRAFFIC IMPACT STUDY
PROJECT TRIP DISTRIBUTION – AREA 1 & 2 (SOUTH)

FIGURE AREA 1 & 2 (S)

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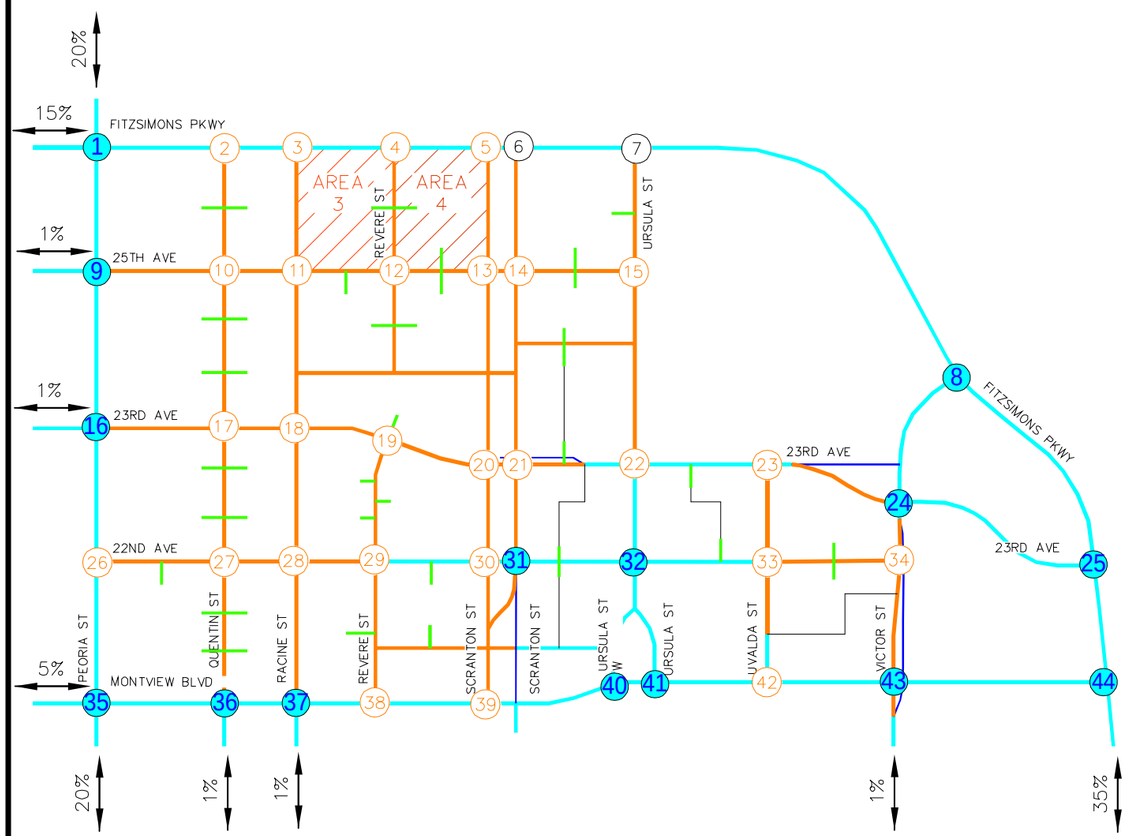
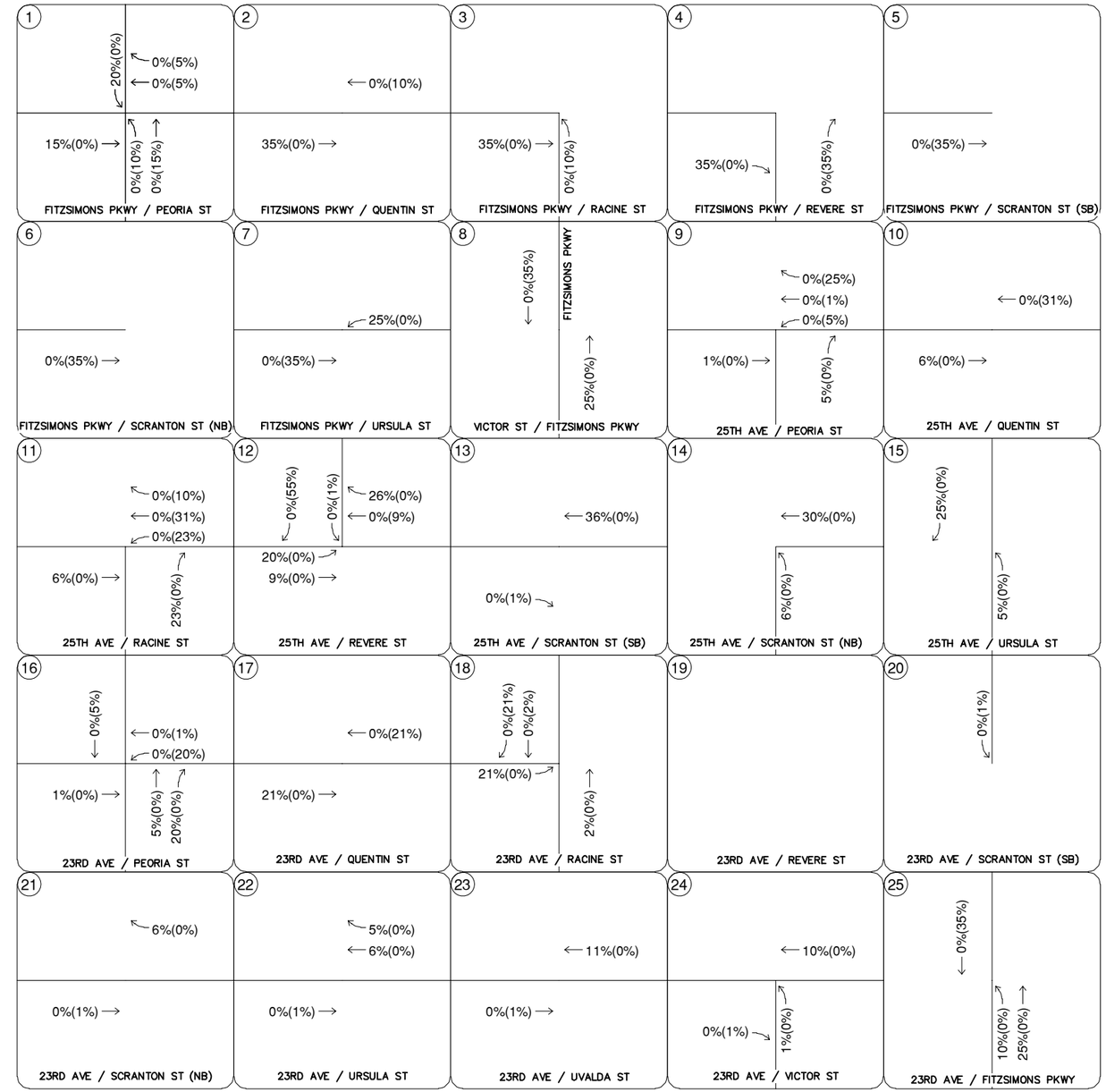
NORTH
NTS 196203001

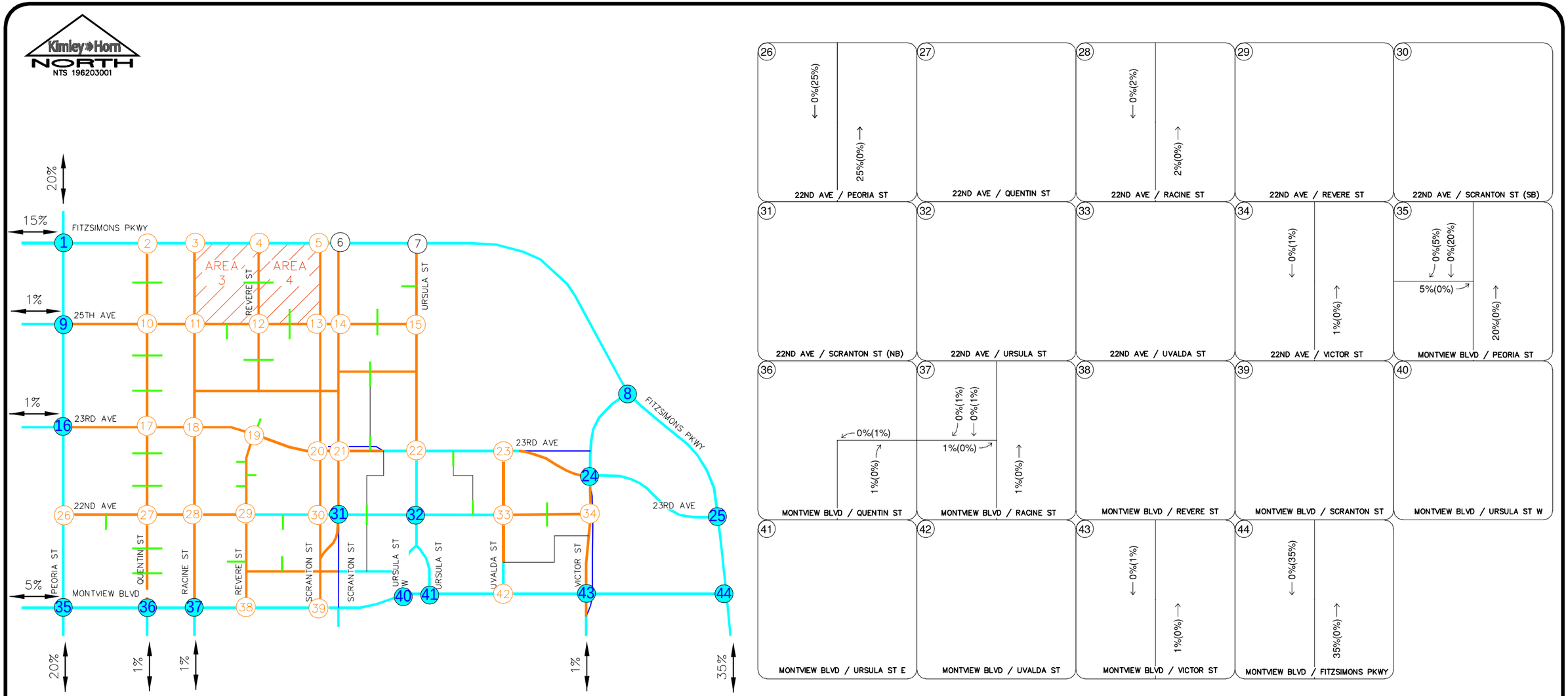




FITZSIMONS INNOVATION CAMPUS MASTER TRAFFIC IMPACT STUDY
PROJECT TRIP DISTRIBUTION – AREA 3 & 4 (NORTH)

FIGURE AREA 3 & 4 (N)

Kimley»Horn



FITZSIMONS INNOVATION CAMPUS MASTER TRAFFIC IMPACT STUDY
PROJECT TRIP DISTRIBUTION – AREA 3 & 4 (SOUTH)

FIGURE AREA 3 & 4 (S)

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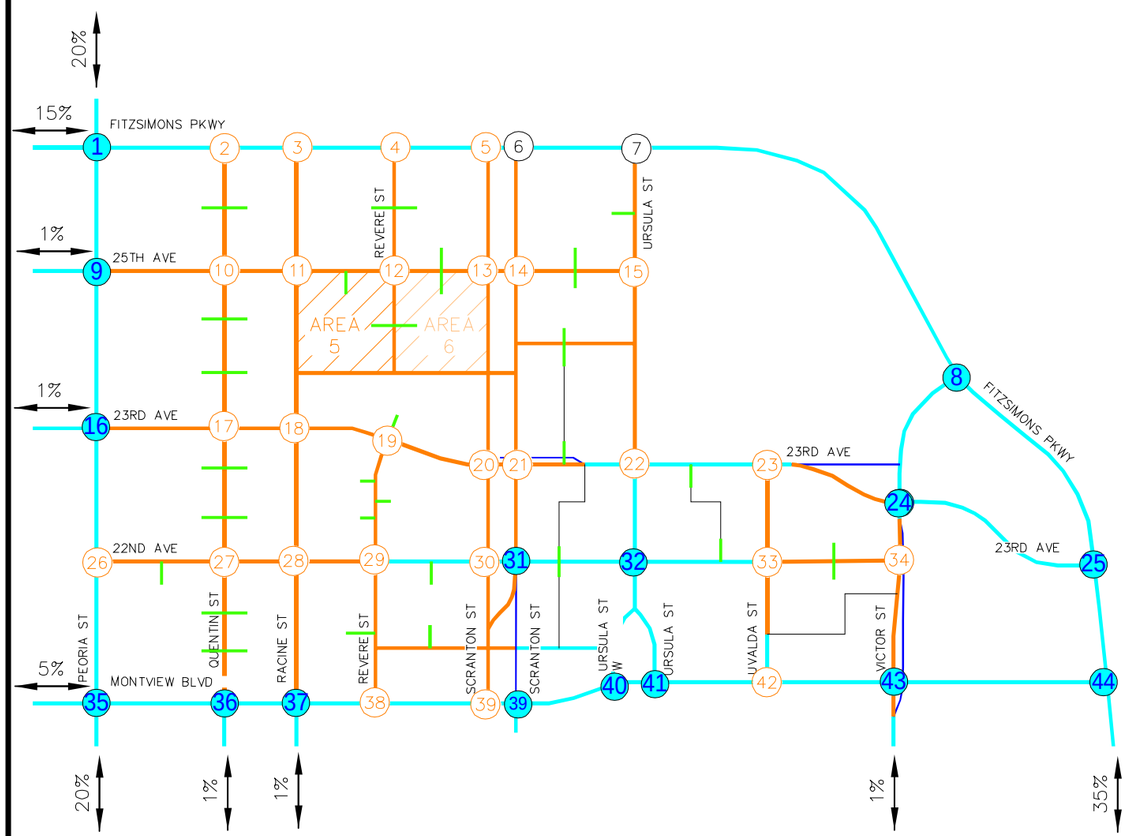
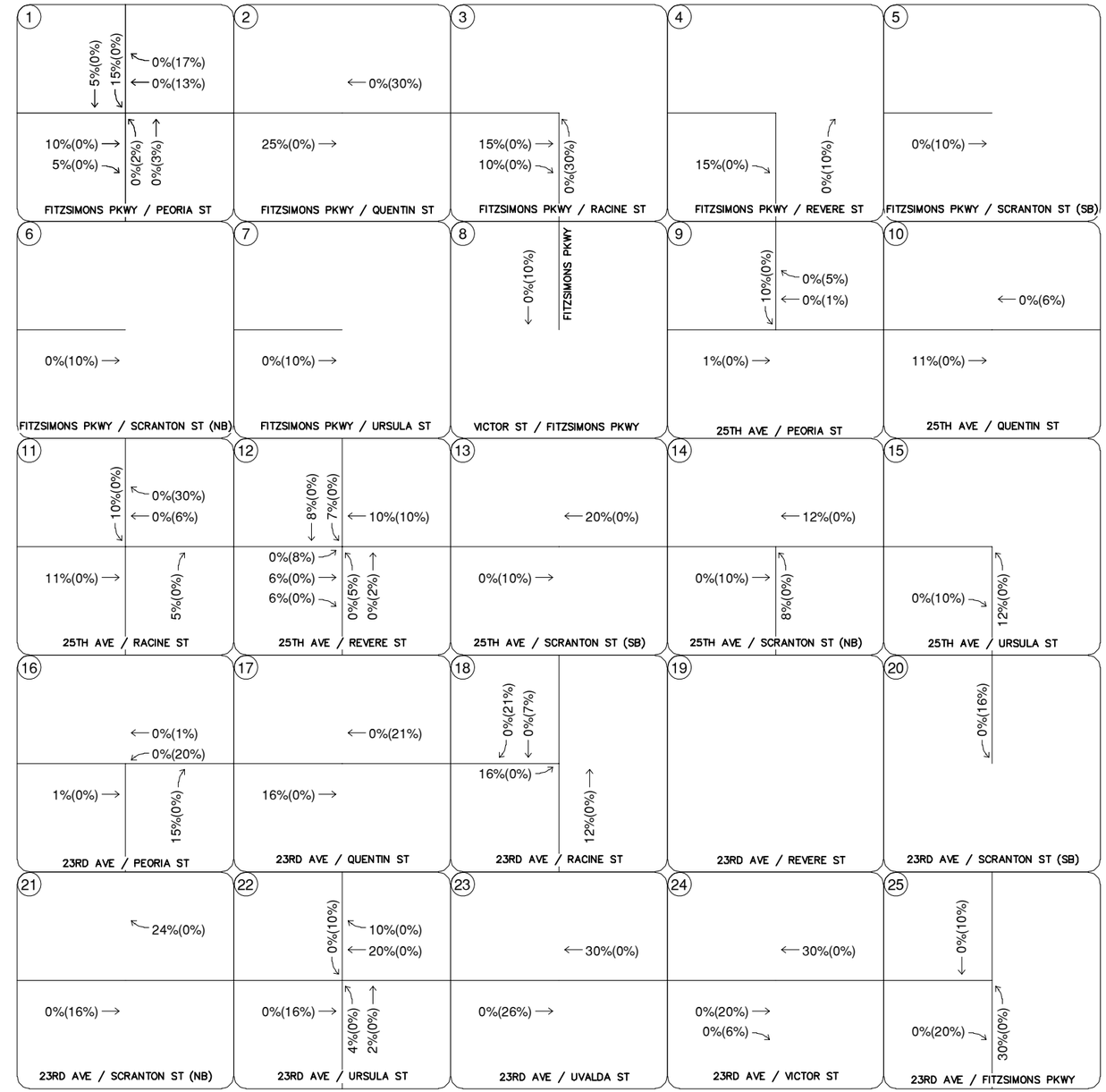
NTS 196203001

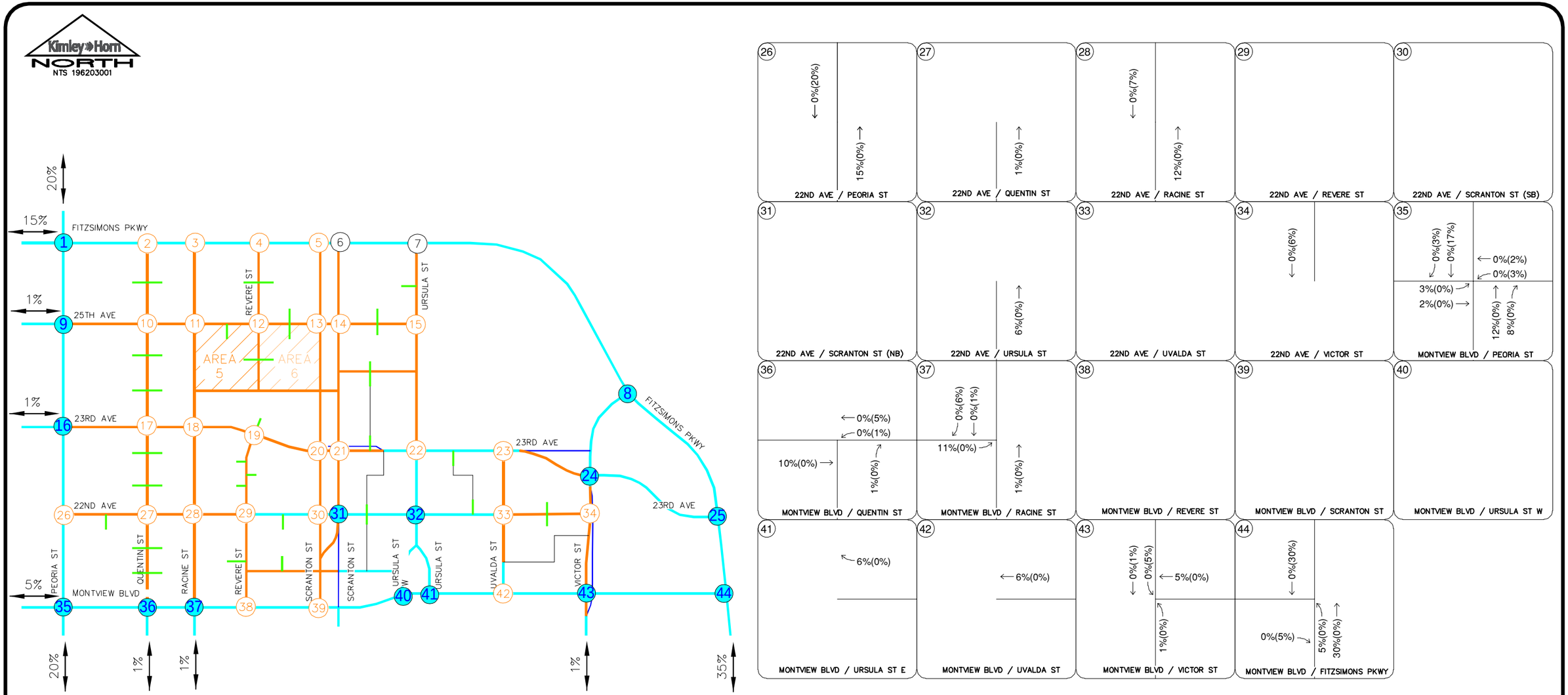




FITZSIMONS INNOVATION CAMPUS MASTER TRAFFIC IMPACT STUDY
PROJECT TRIP DISTRIBUTION – AREA 5 & 6 (NORTH)

FIGURE AREA 5 & 6 (N)

Kimley»Horn



FITZSIMONS INNOVATION CAMPUS MASTER TRAFFIC IMPACT STUDY
PROJECT TRIP DISTRIBUTION – AREA 5 & 6 (SOUTH)

FIGURE AREA 5 & 6 (S)

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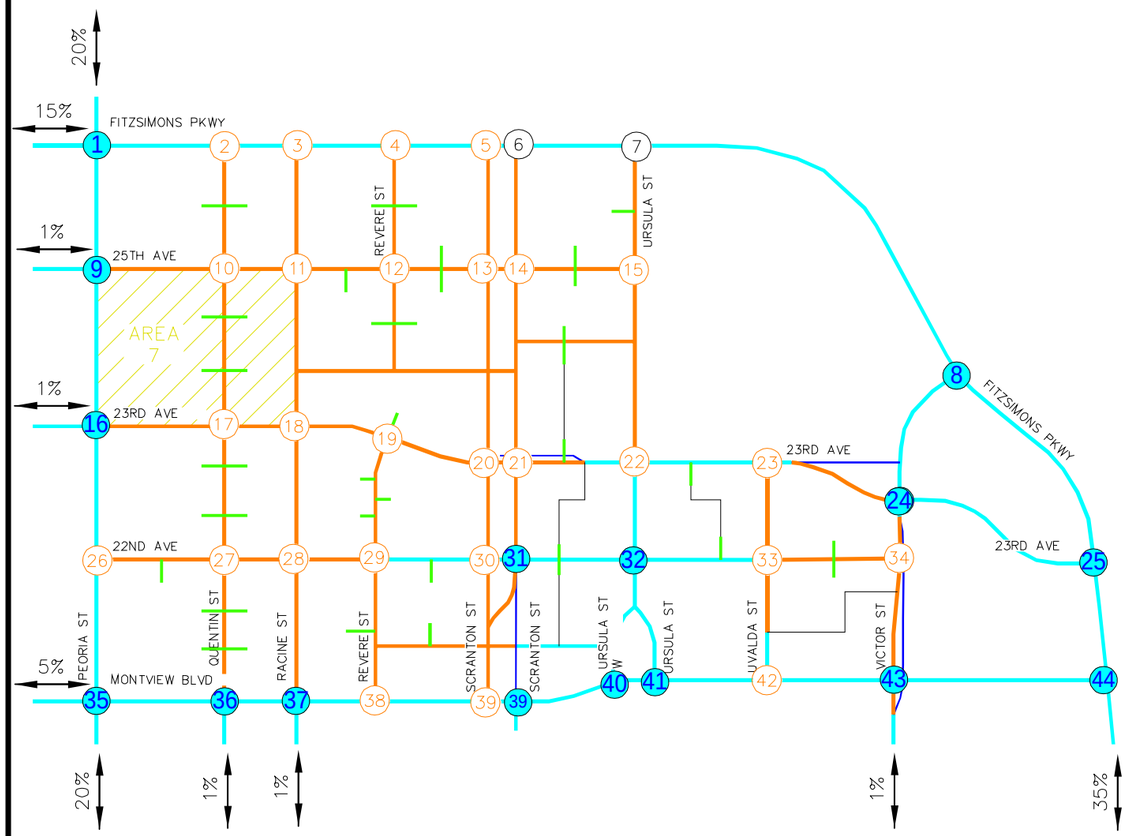
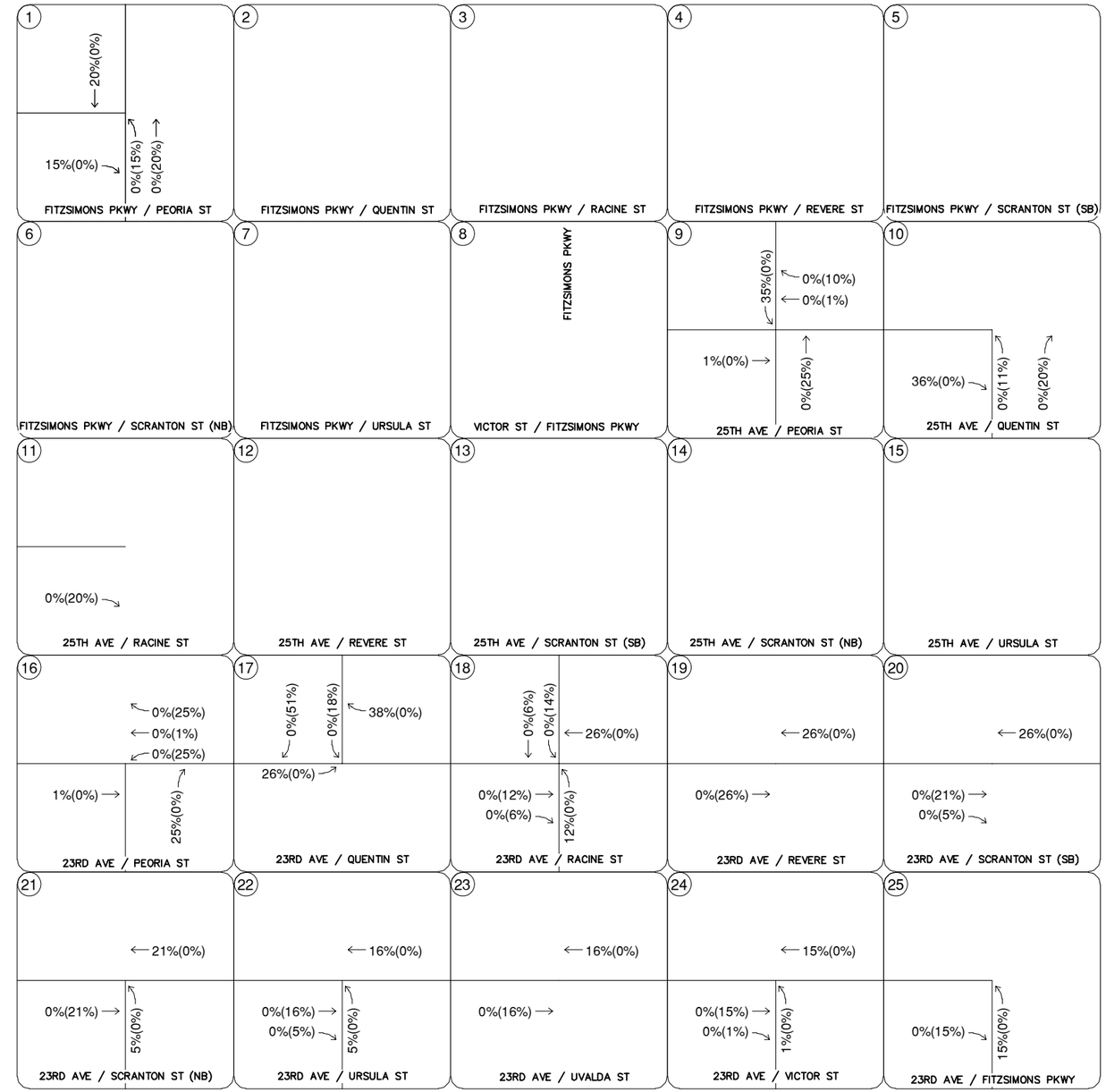
NTS 196203001

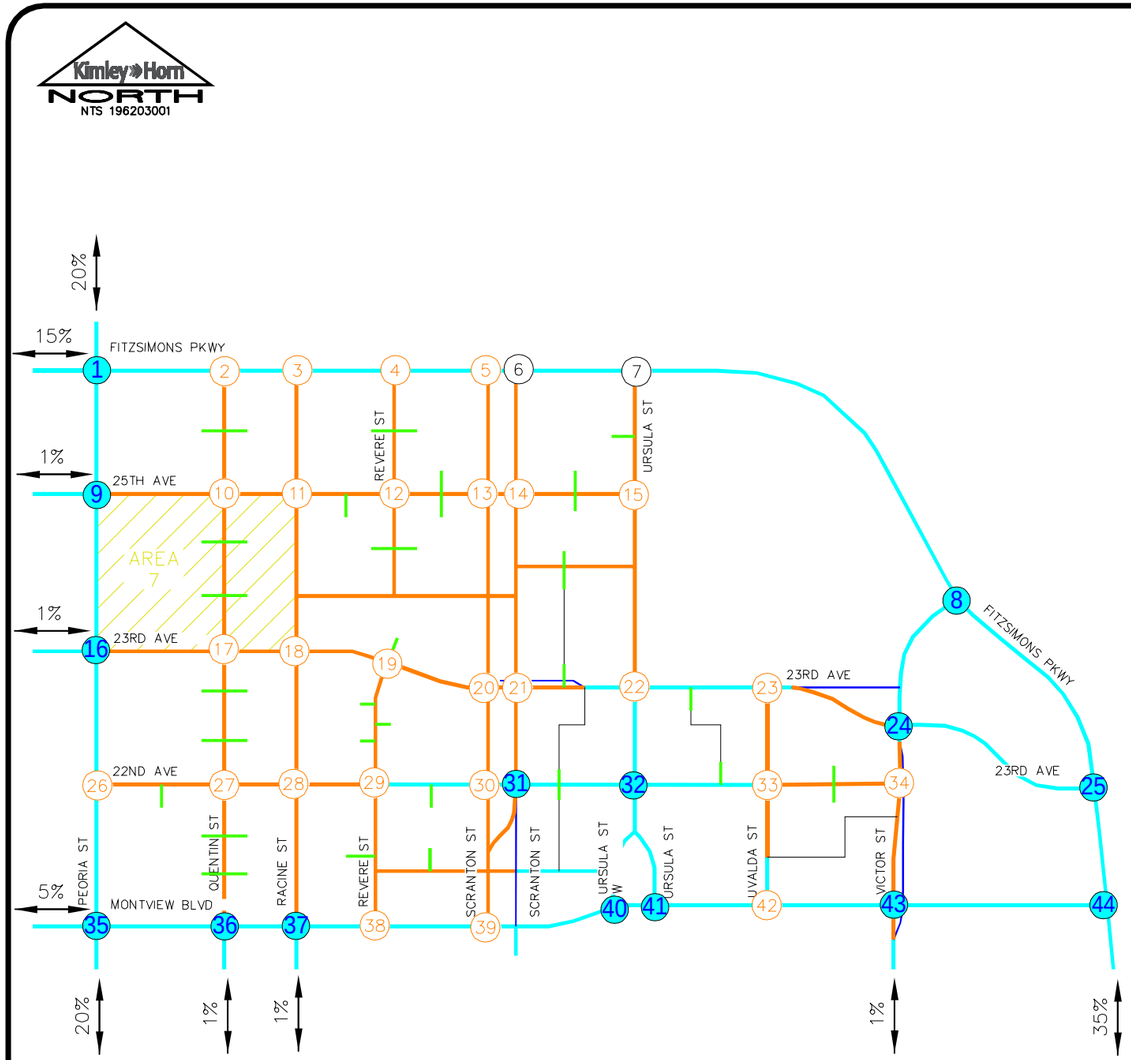


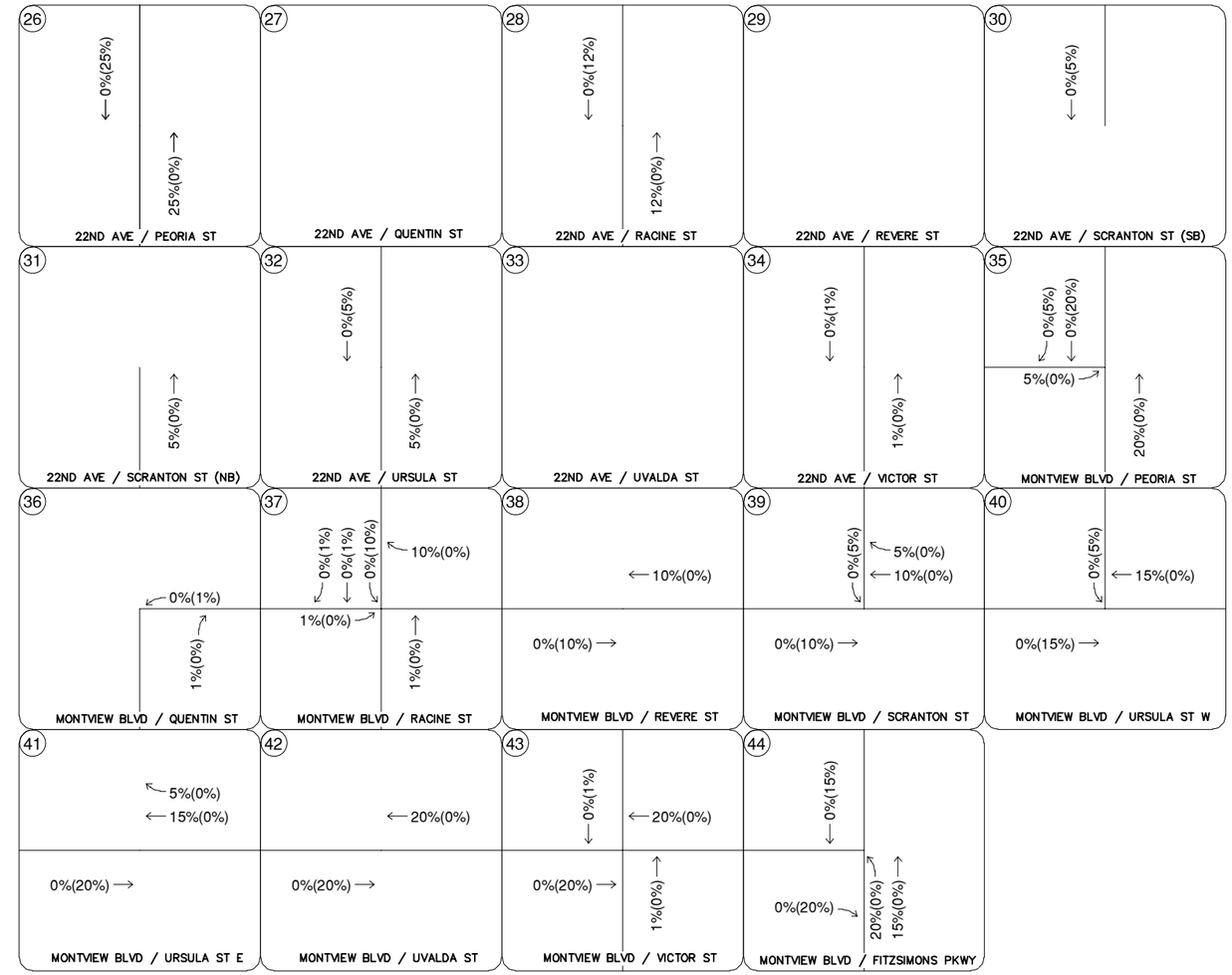


FITZSIMONS INNOVATION CAMPUS MASTER TRAFFIC IMPACT STUDY
PROJECT TRIP DISTRIBUTION – AREA 7 (NORTH)

FIGURE AREA 7 (N)

Kimley»Horn





FITZSIMONS INNOVATION CAMPUS MASTER TRAFFIC IMPACT STUDY
PROJECT TRIP DISTRIBUTION – AREA 7 (SOUTH)

FIGURE AREA 7 (S)

Kimley»Horn

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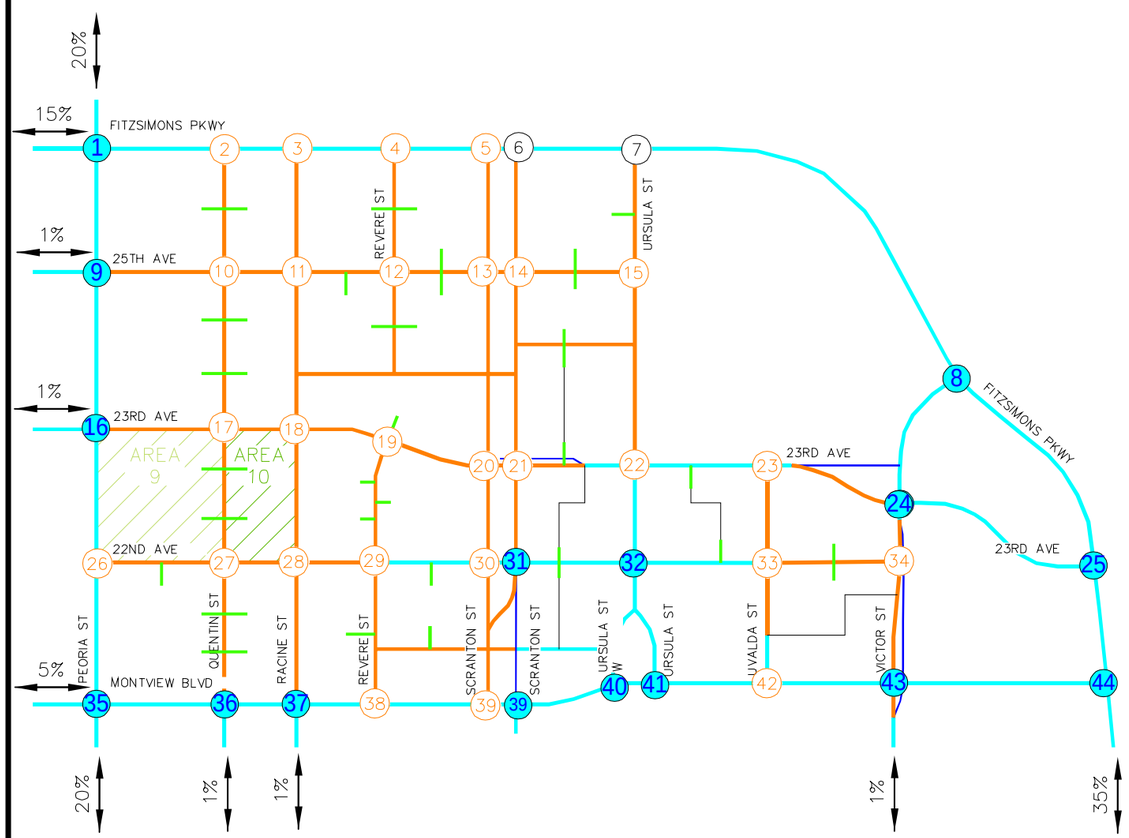
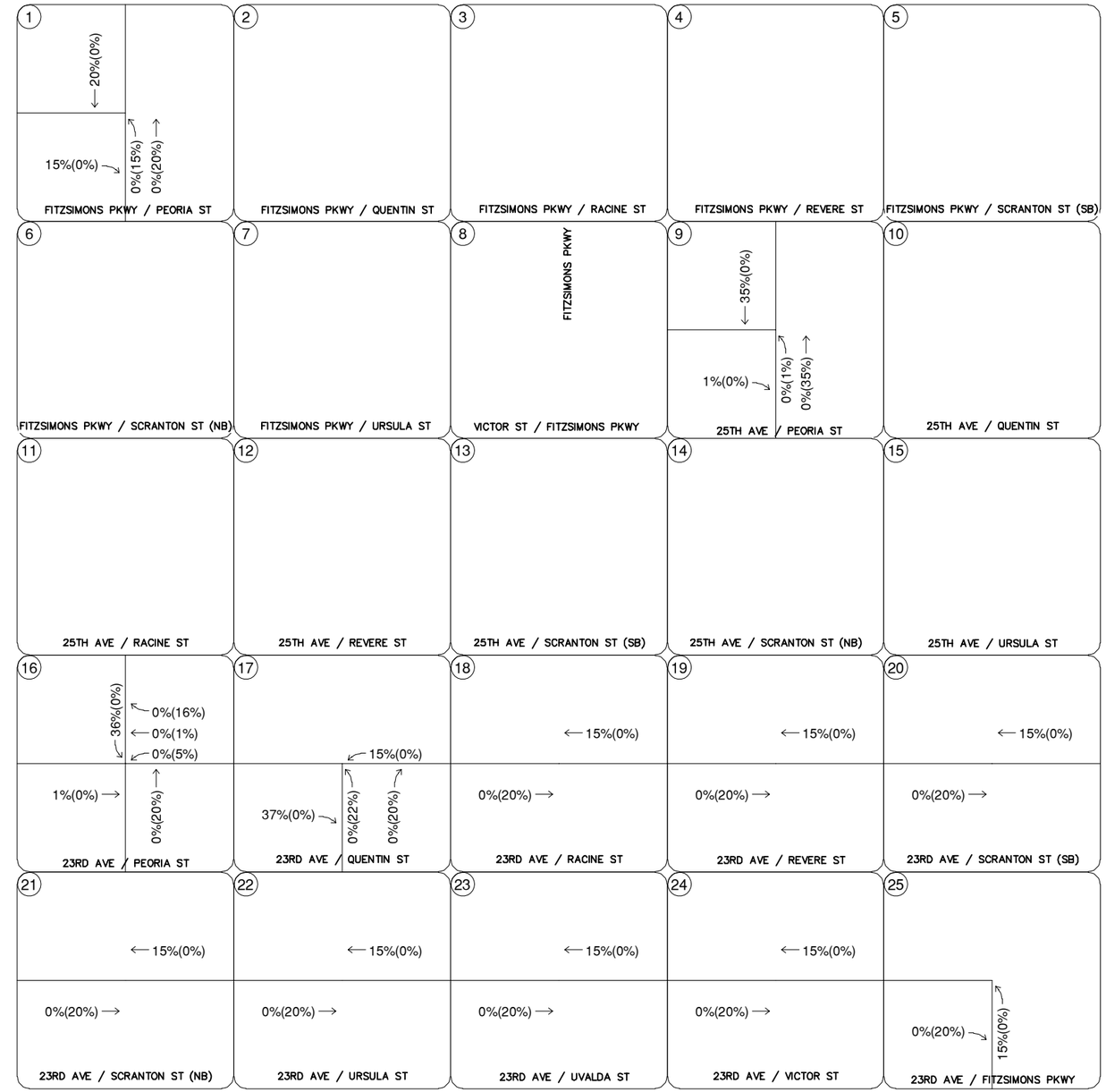
NORTH
NTS 196203001

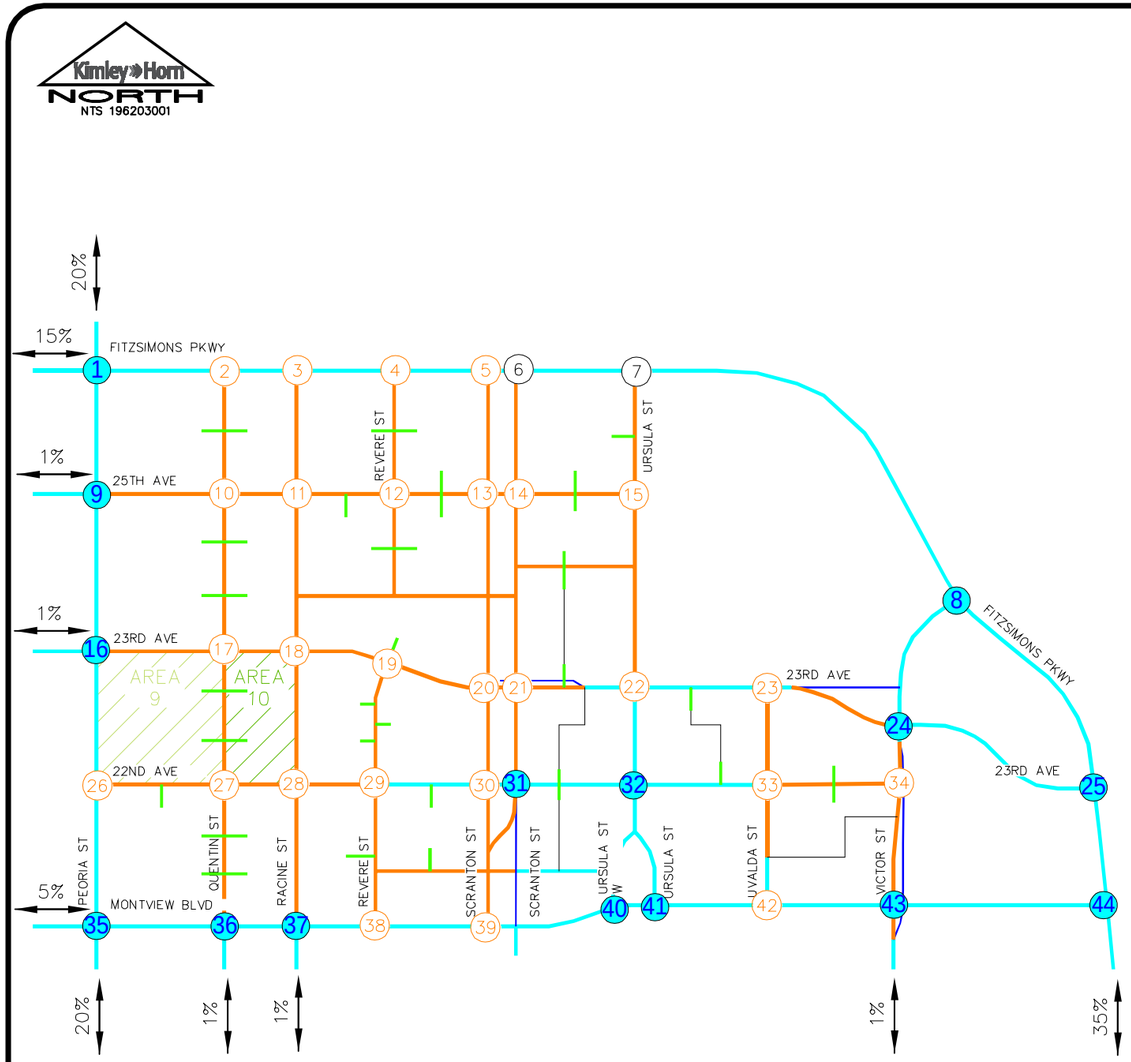


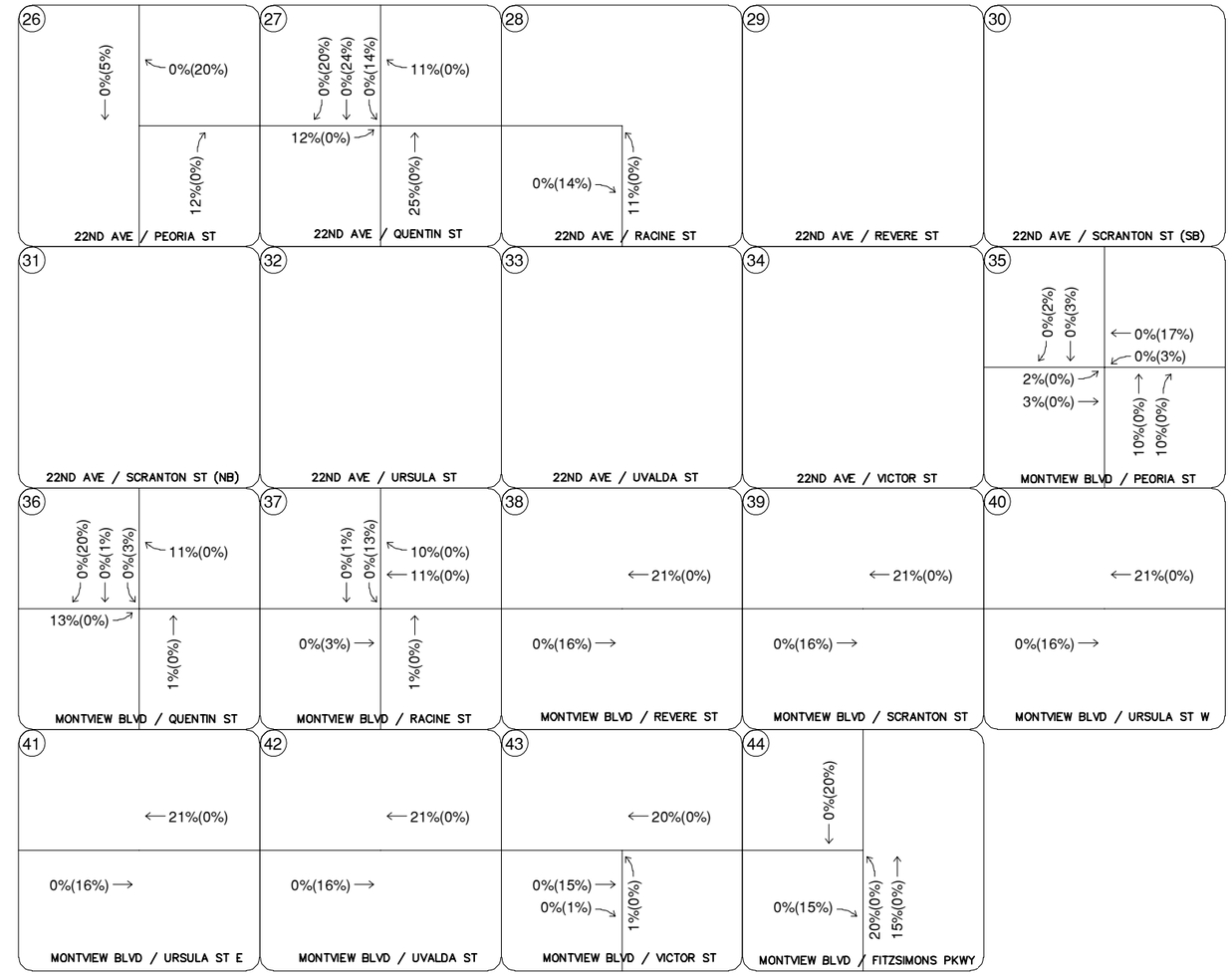


FITZSIMONS INNOVATION CAMPUS MASTER TRAFFIC IMPACT STUDY
PROJECT TRIP DISTRIBUTION – AREA 9 & 10 (NORTH)

FIGURE AREA 9 & 10 (N)

Kimley»Horn

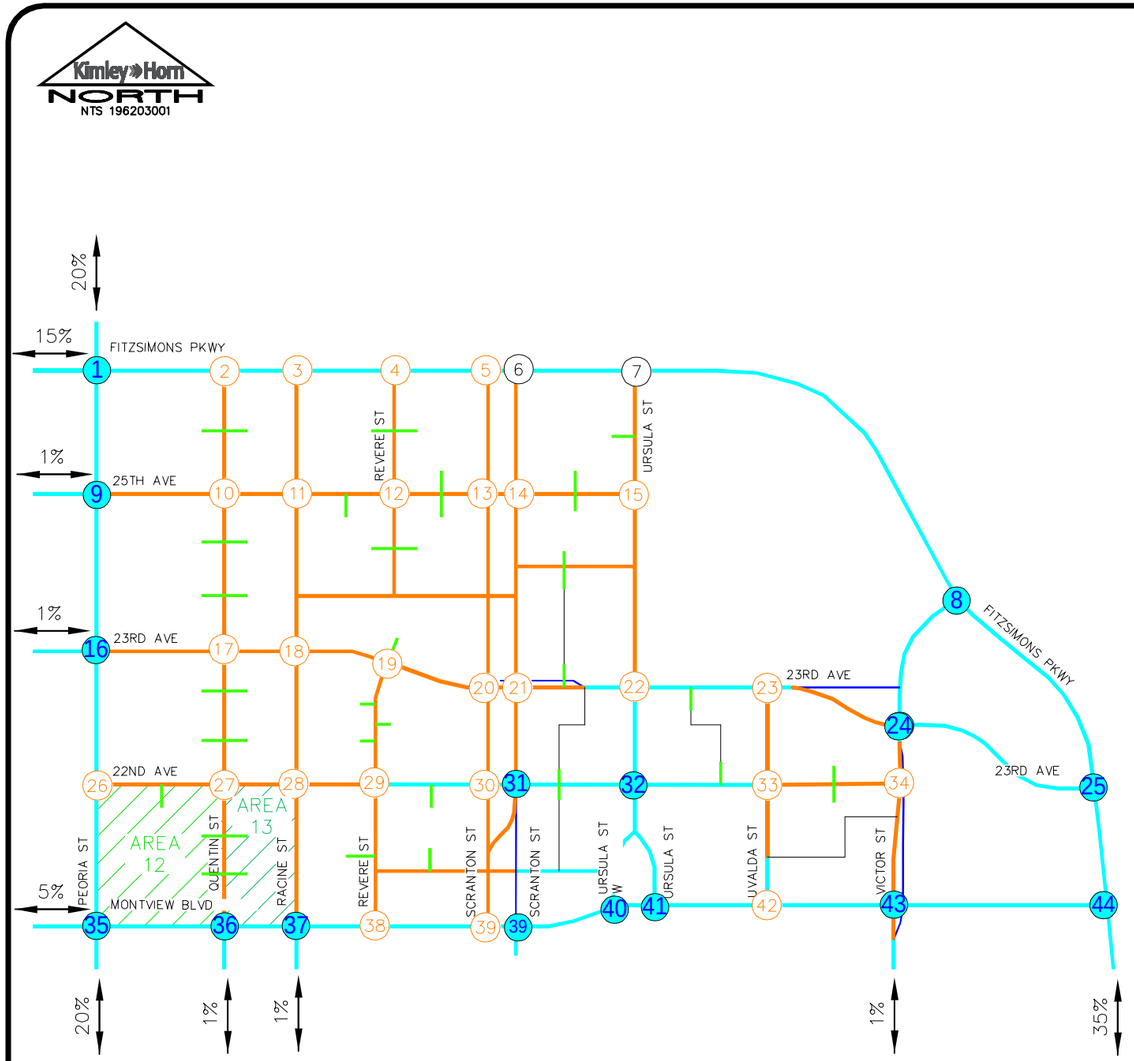


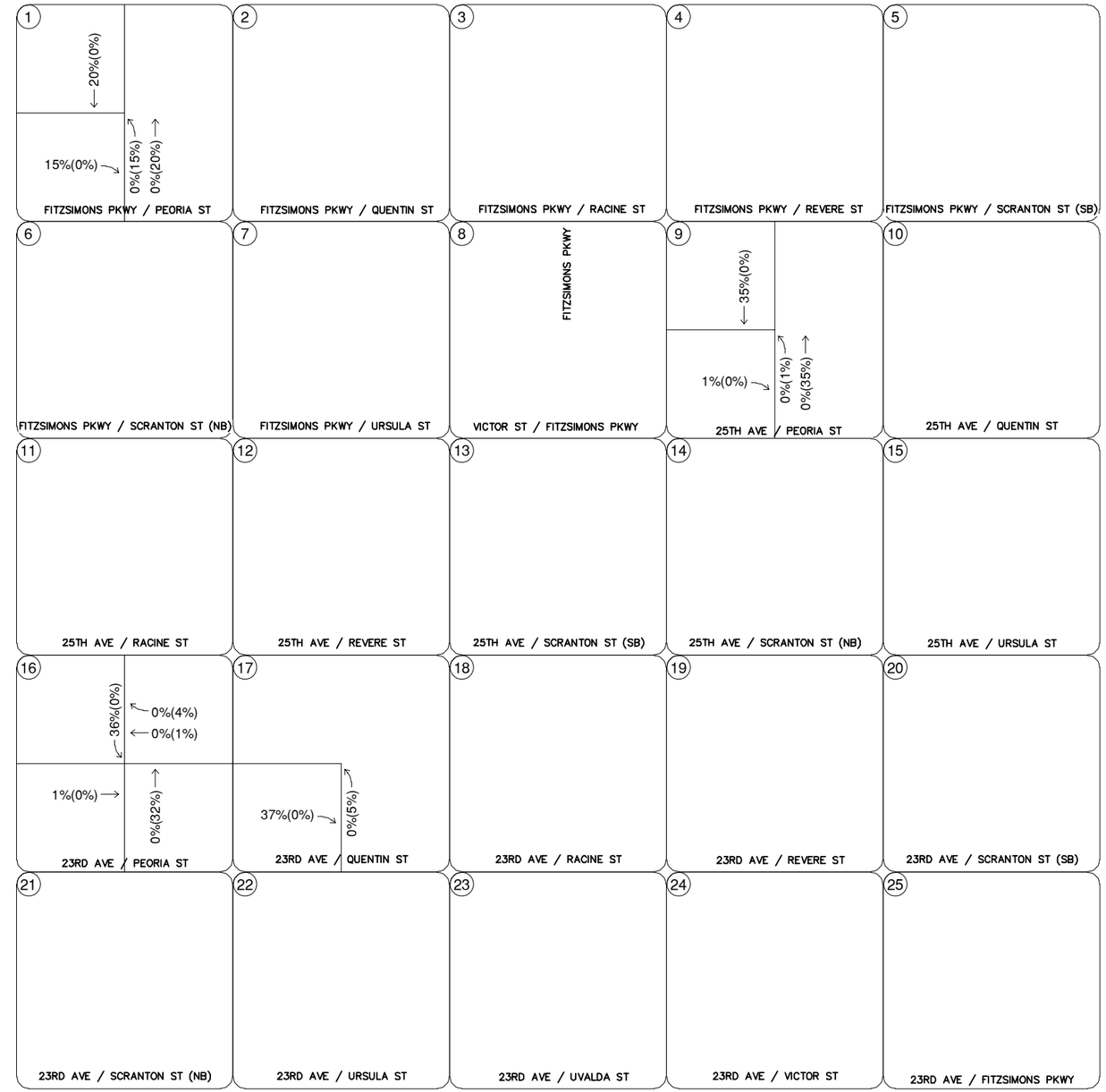


FITZSIMONS INNOVATION CAMPUS MASTER TRAFFIC IMPACT STUDY
PROJECT TRIP DISTRIBUTION – AREA 9 & 10 (SOUTH)

FIGURE AREA 9 & 10 (S)

Kimley»Horn

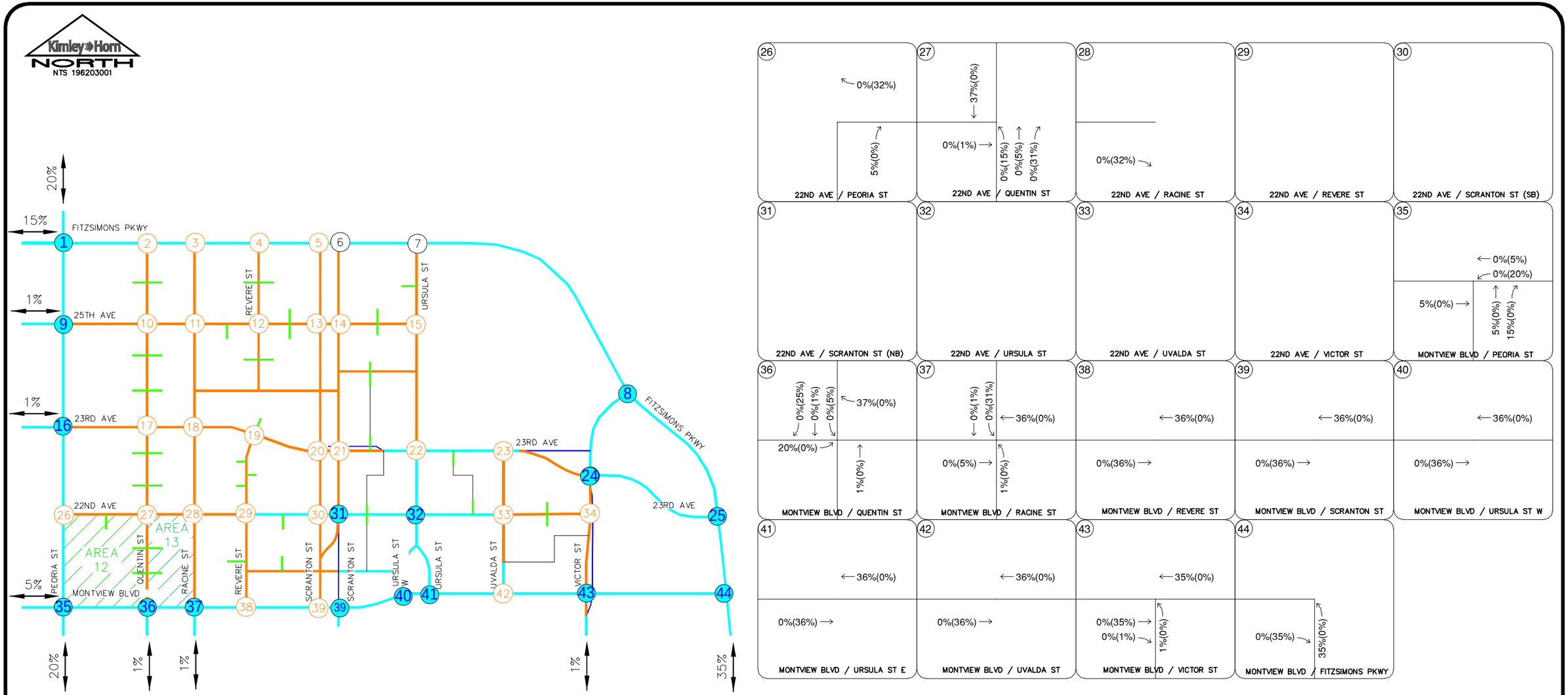




FITZSIMONS INNOVATION CAMPUS MASTER TRAFFIC IMPACT STUDY
PROJECT TRIP DISTRIBUTION – AREA 12 & 13 (NORTH)

FIGURE AREA 12 & 13 (N)

Kimley»Horn

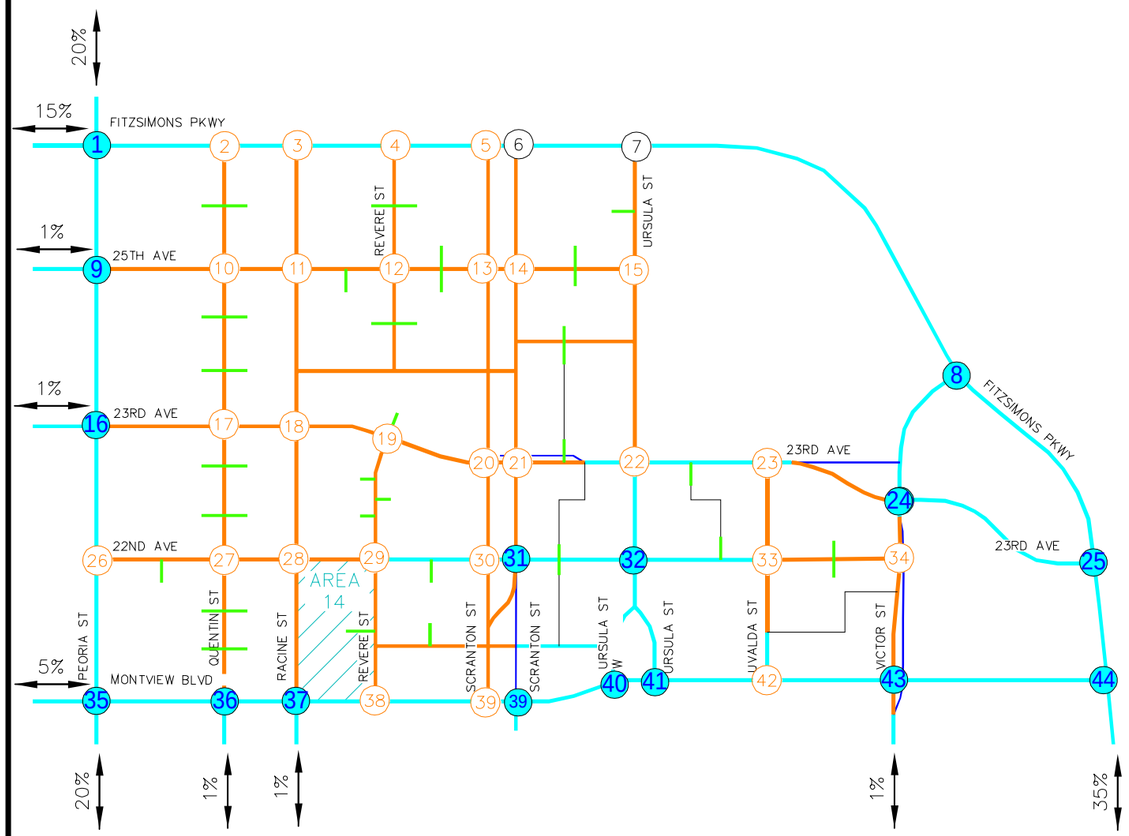


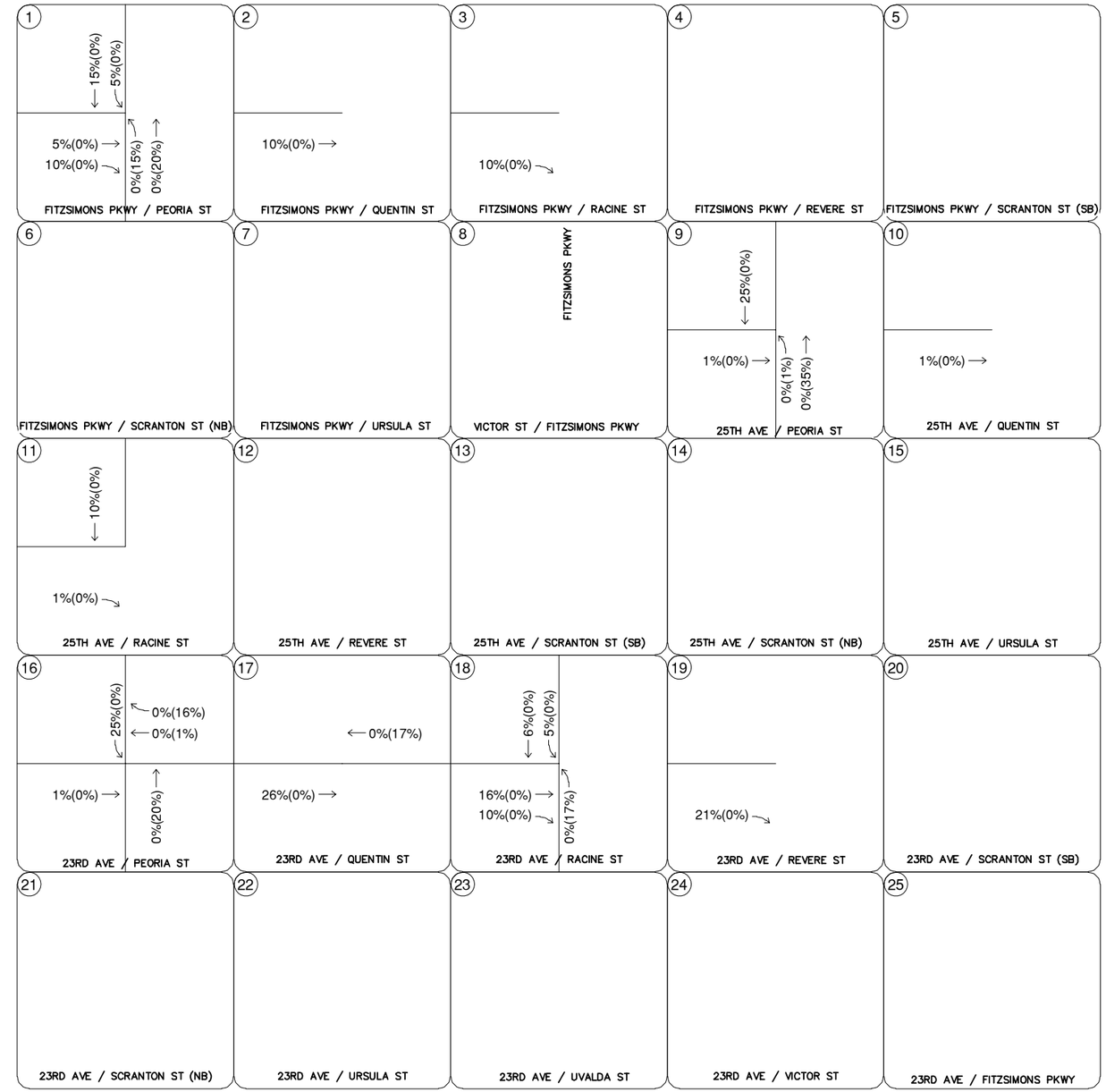
FITZSIMONS INNOVATION CAMPUS MASTER TRAFFIC IMPACT STUDY
PROJECT TRIP DISTRIBUTION – AREA 12 & 13 (SOUTH)

FIGURE AREA 12 & 13 (S)

Kimley»Horn

Kimley»Horn
NORTH
NTS 196203001





FITZSIMONS INNOVATION CAMPUS MASTER TRAFFIC IMPACT STUDY
PROJECT TRIP DISTRIBUTION – AREA 14 (NORTH)

FIGURE AREA 14 (N)

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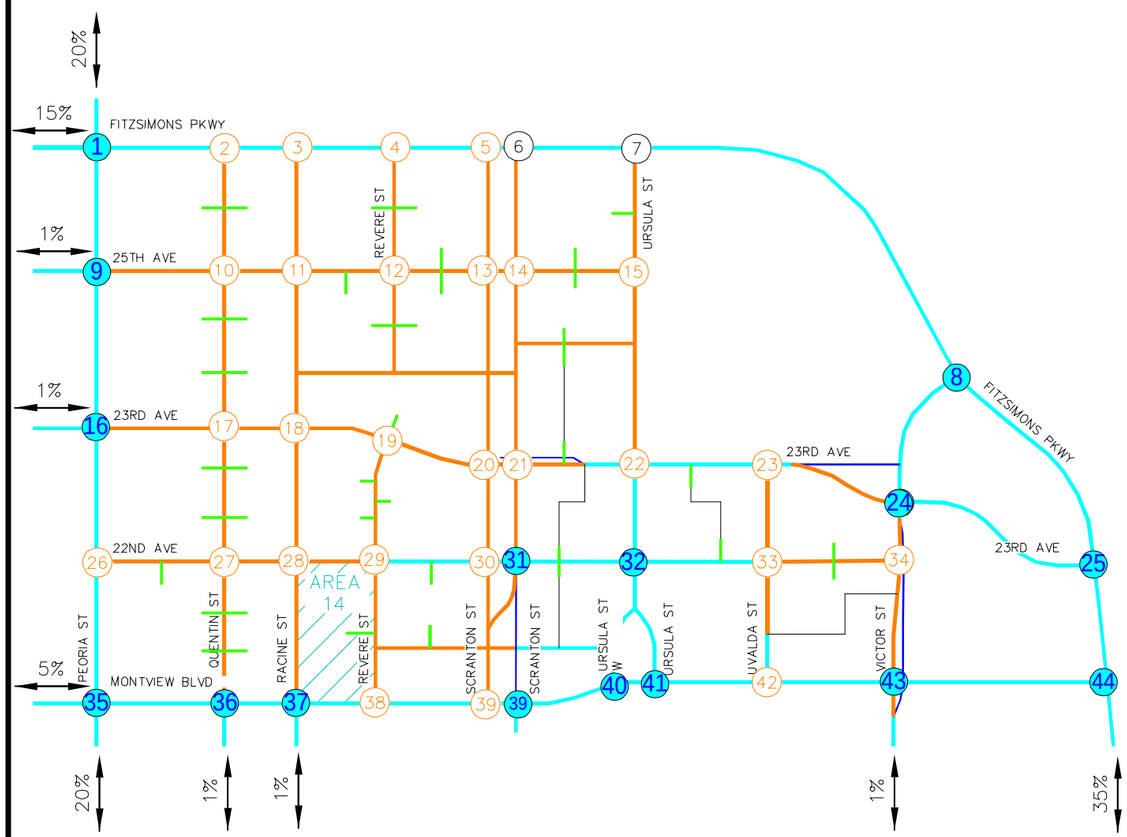
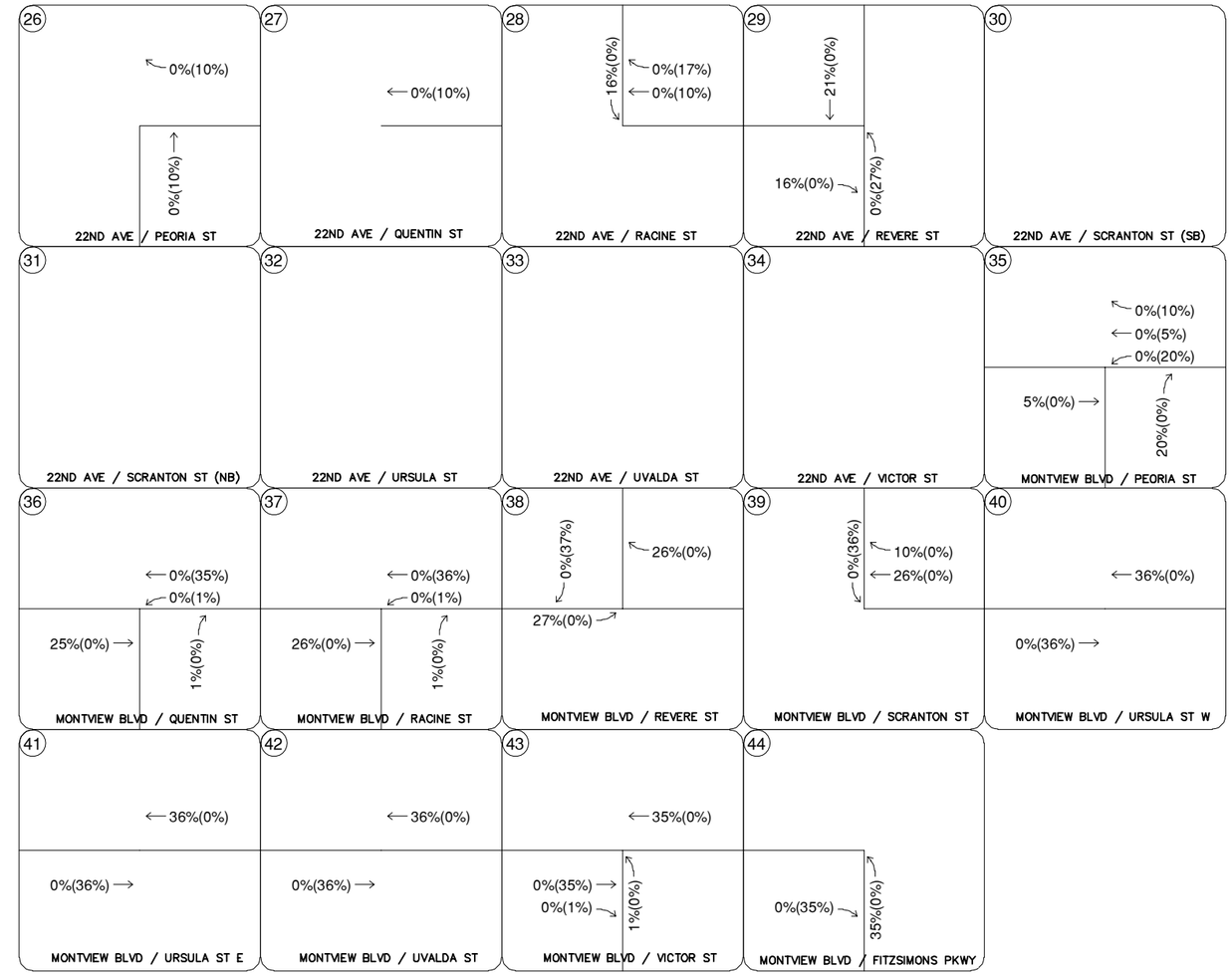
NTS 196203001



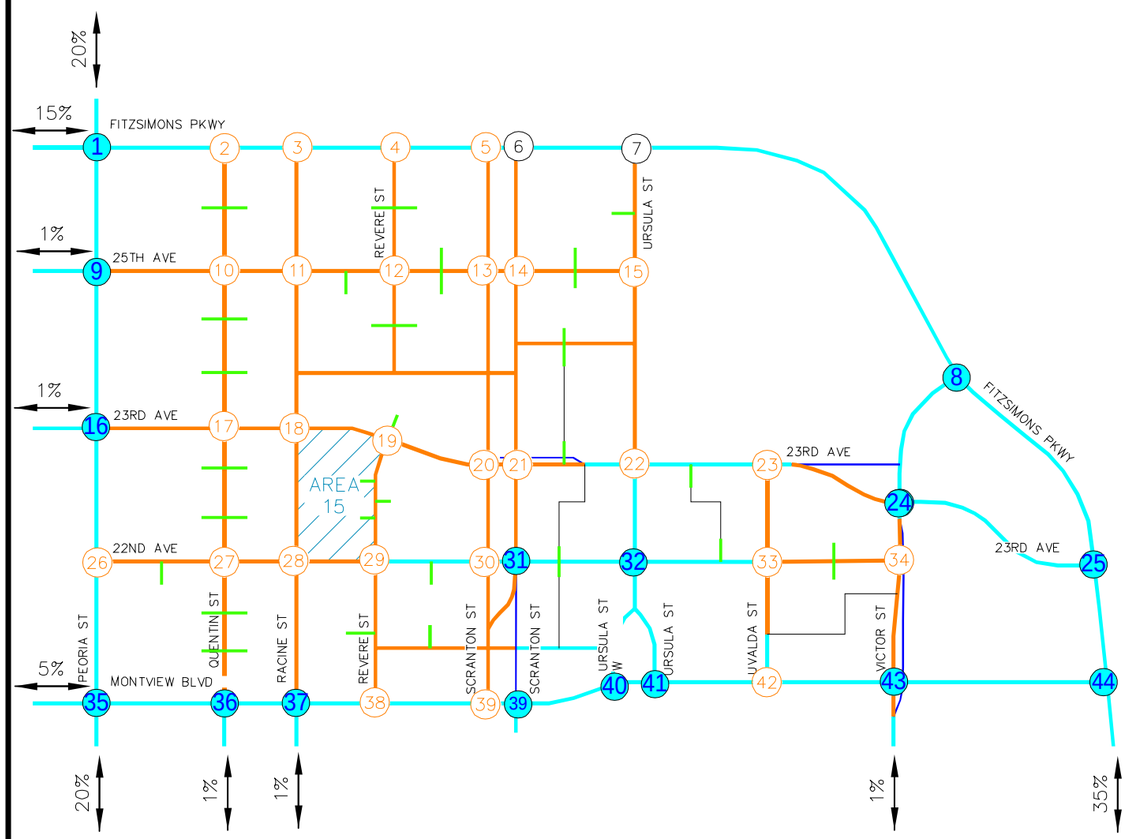


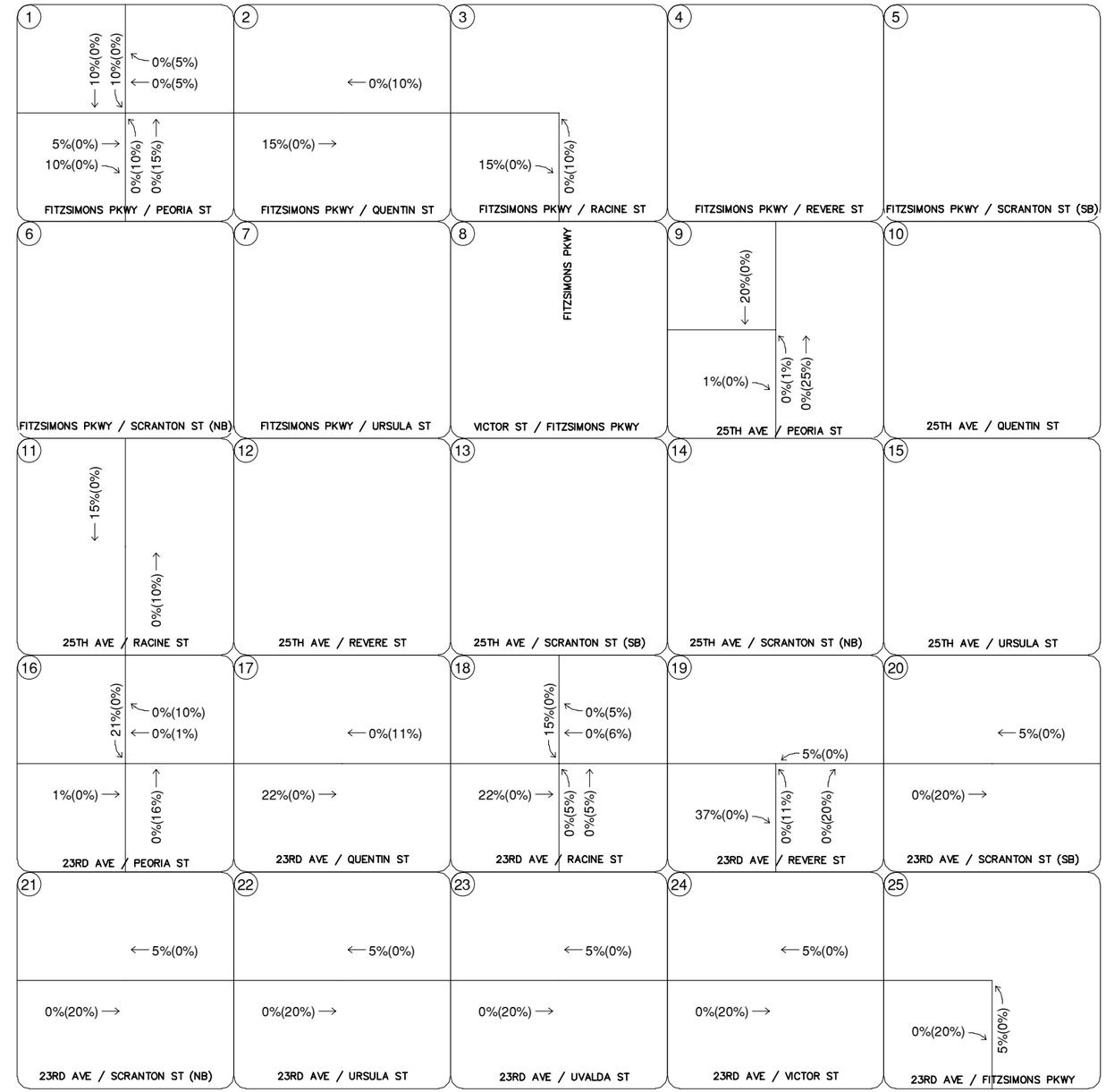
FITZSIMONS INNOVATION CAMPUS MASTER TRAFFIC IMPACT STUDY
PROJECT TRIP DISTRIBUTION – AREA 14 (SOUTH)

FIGURE AREA 14 (S)

Kimley»Horn

Kimley»Horn
NORTH
NTS 196203001





FITZSIMONS INNOVATION CAMPUS MASTER TRAFFIC IMPACT STUDY
PROJECT TRIP DISTRIBUTION – AREA 15 (NORTH)

FIGURE AREA 15 (N)

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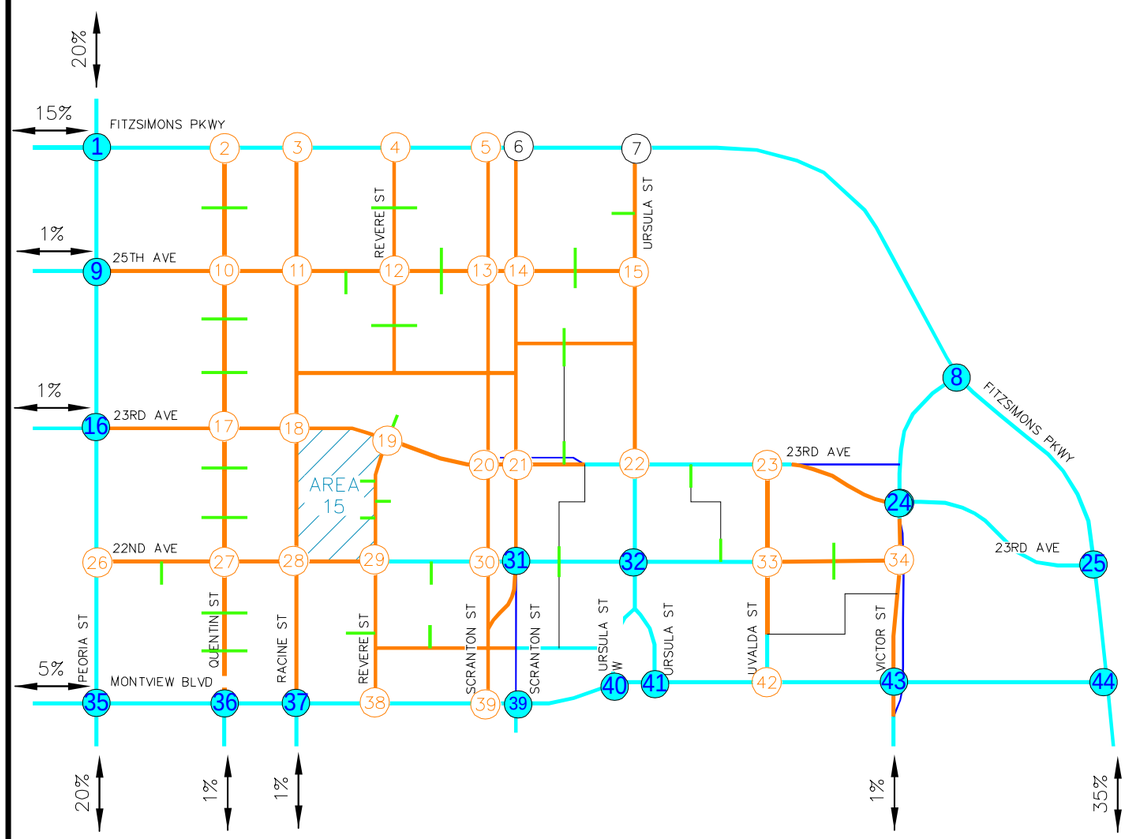
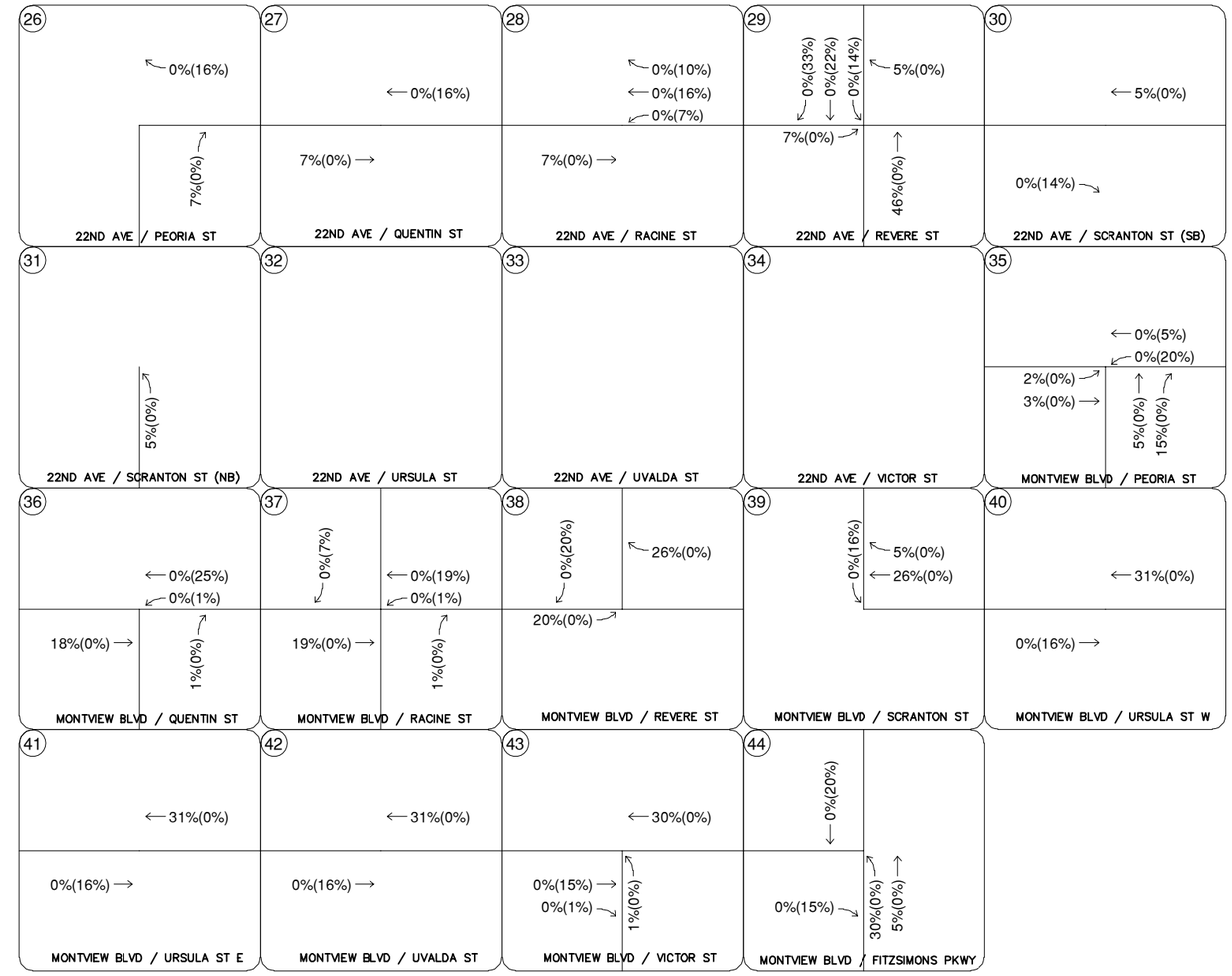
Kimley»Horn
NORTH
NTS 196203001





FITZSIMONS INNOVATION CAMPUS MASTER TRAFFIC IMPACT STUDY
PROJECT TRIP DISTRIBUTION – AREA 15 (SOUTH)

FIGURE AREA 15 (S)

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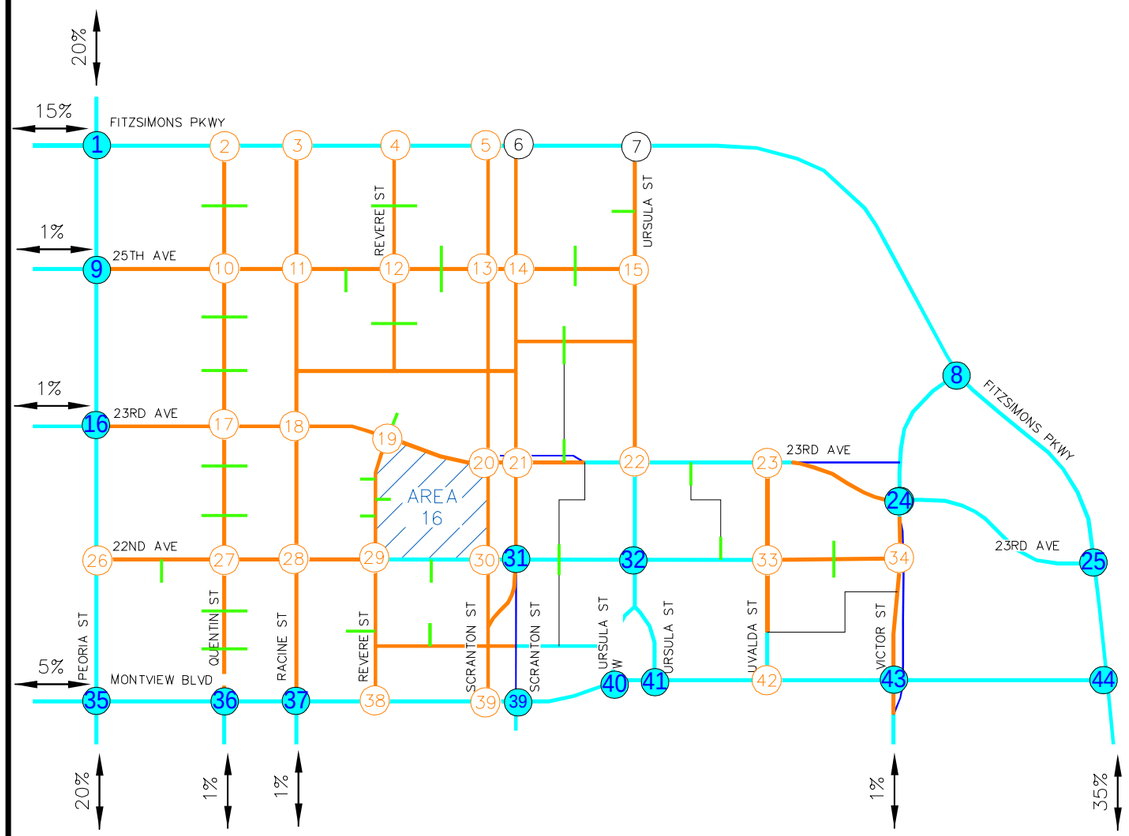
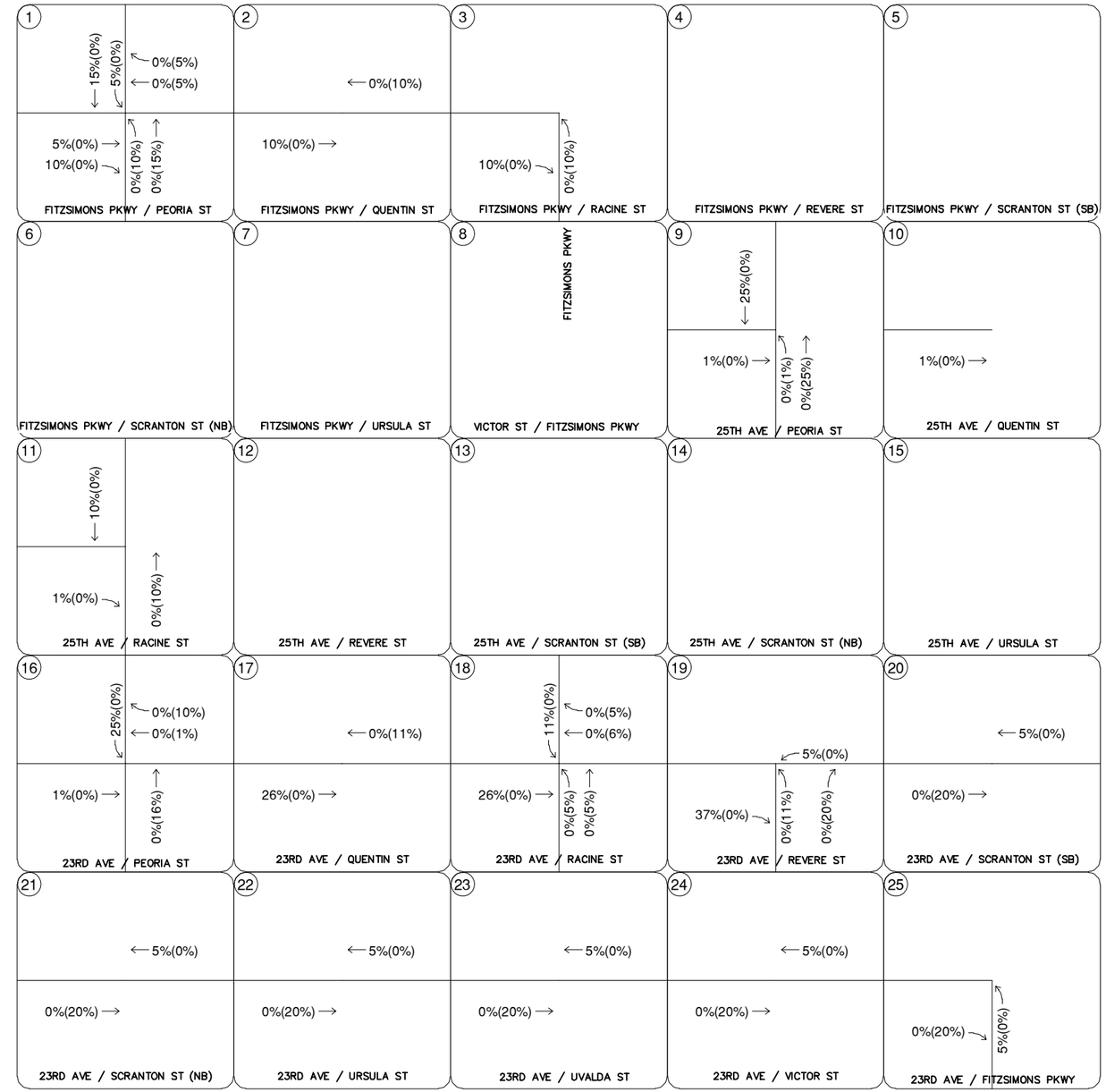
Kimley»Horn
NORTH
NTS 196203001



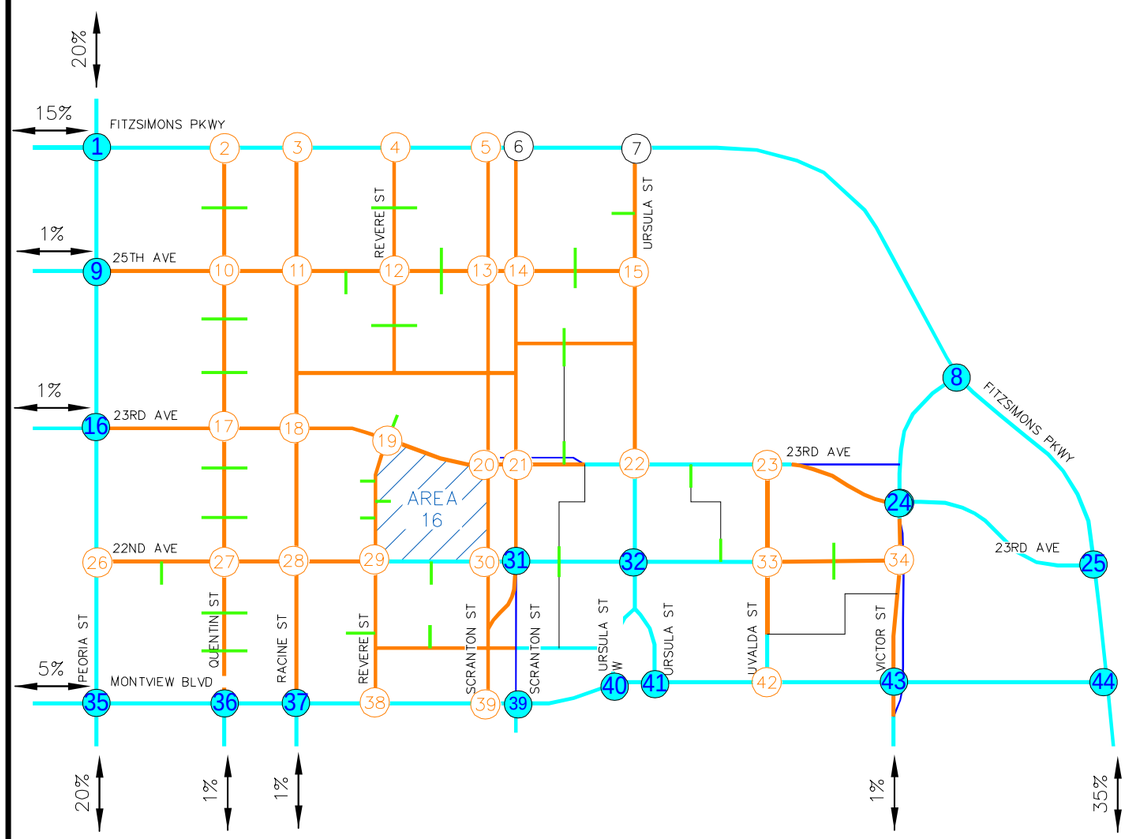


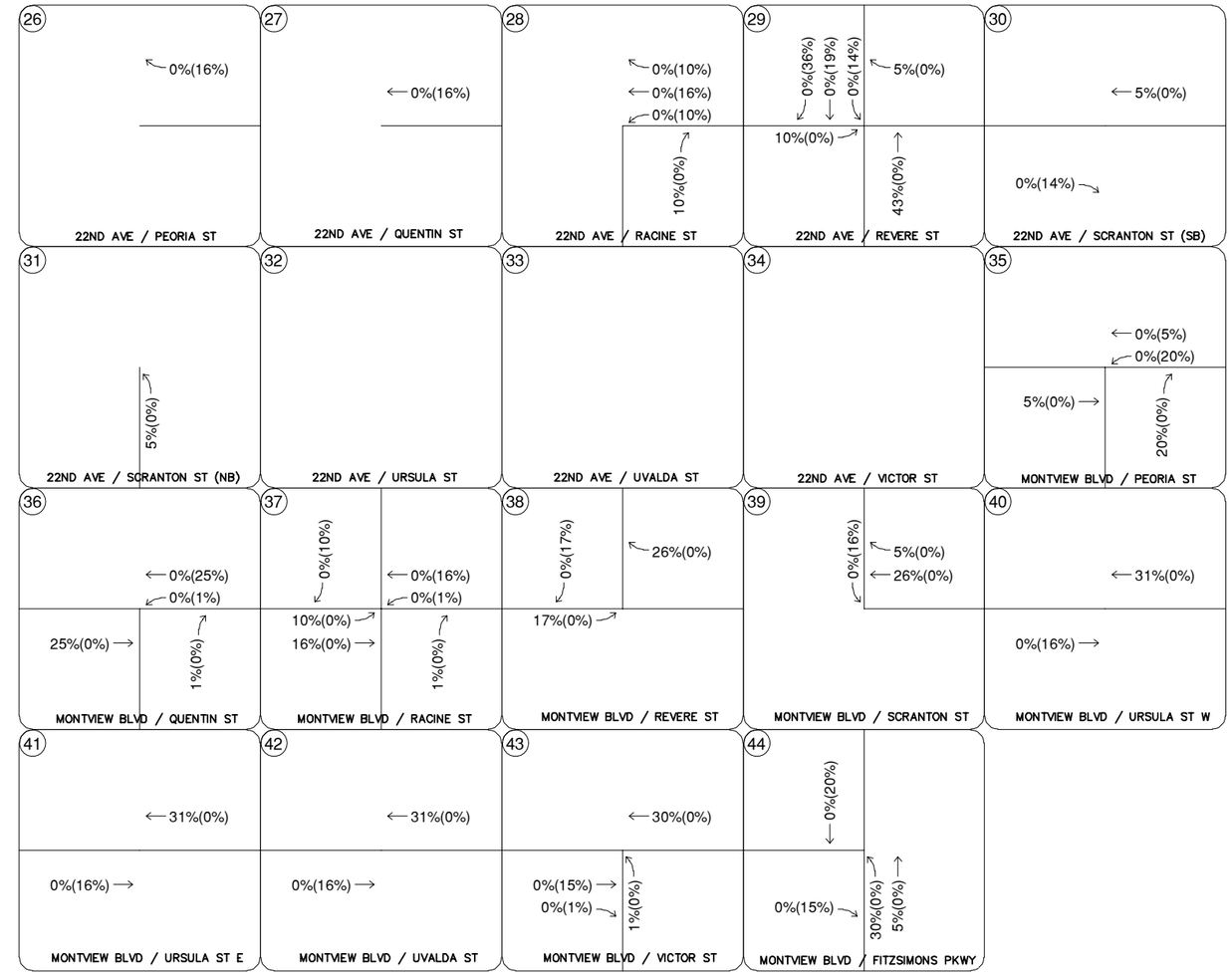
FITZSIMONS INNOVATION CAMPUS MASTER TRAFFIC IMPACT STUDY
PROJECT TRIP DISTRIBUTION – AREA 16 (NORTH)

FIGURE AREA 16 (N)

Kimley»Horn

Kimley»Horn
NORTH
NTS 196203001



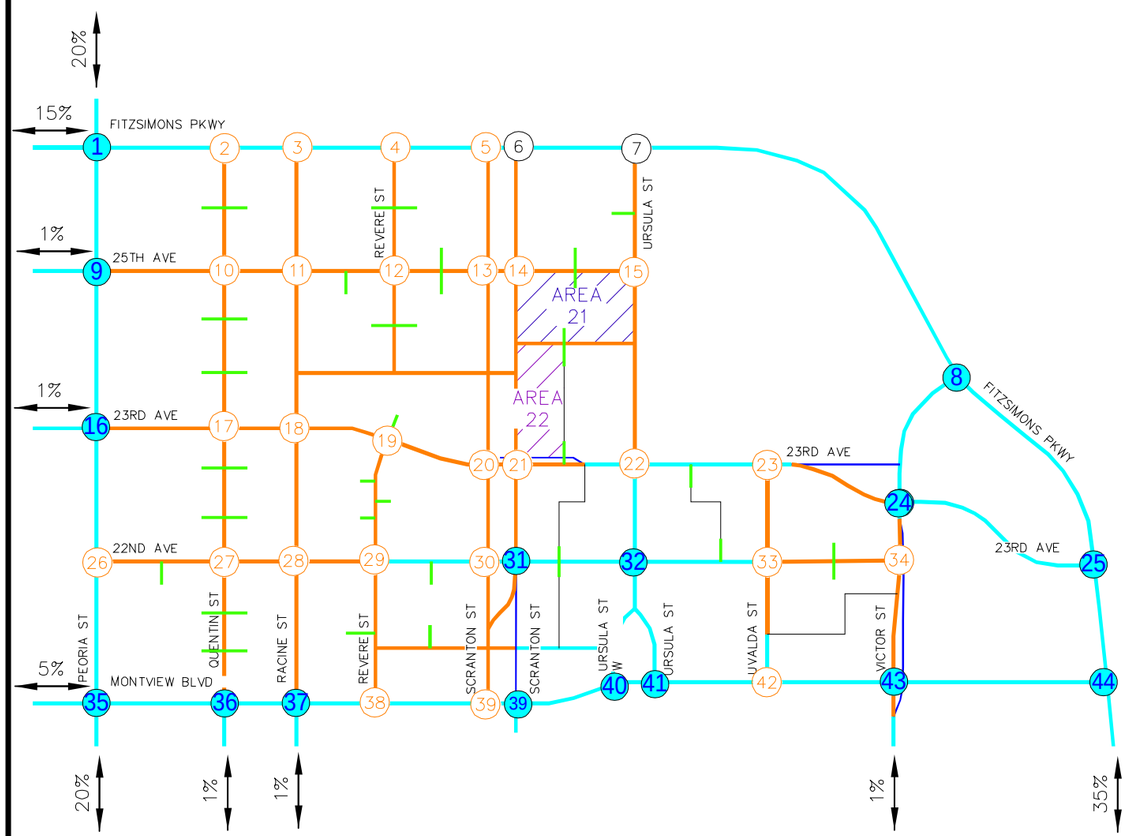


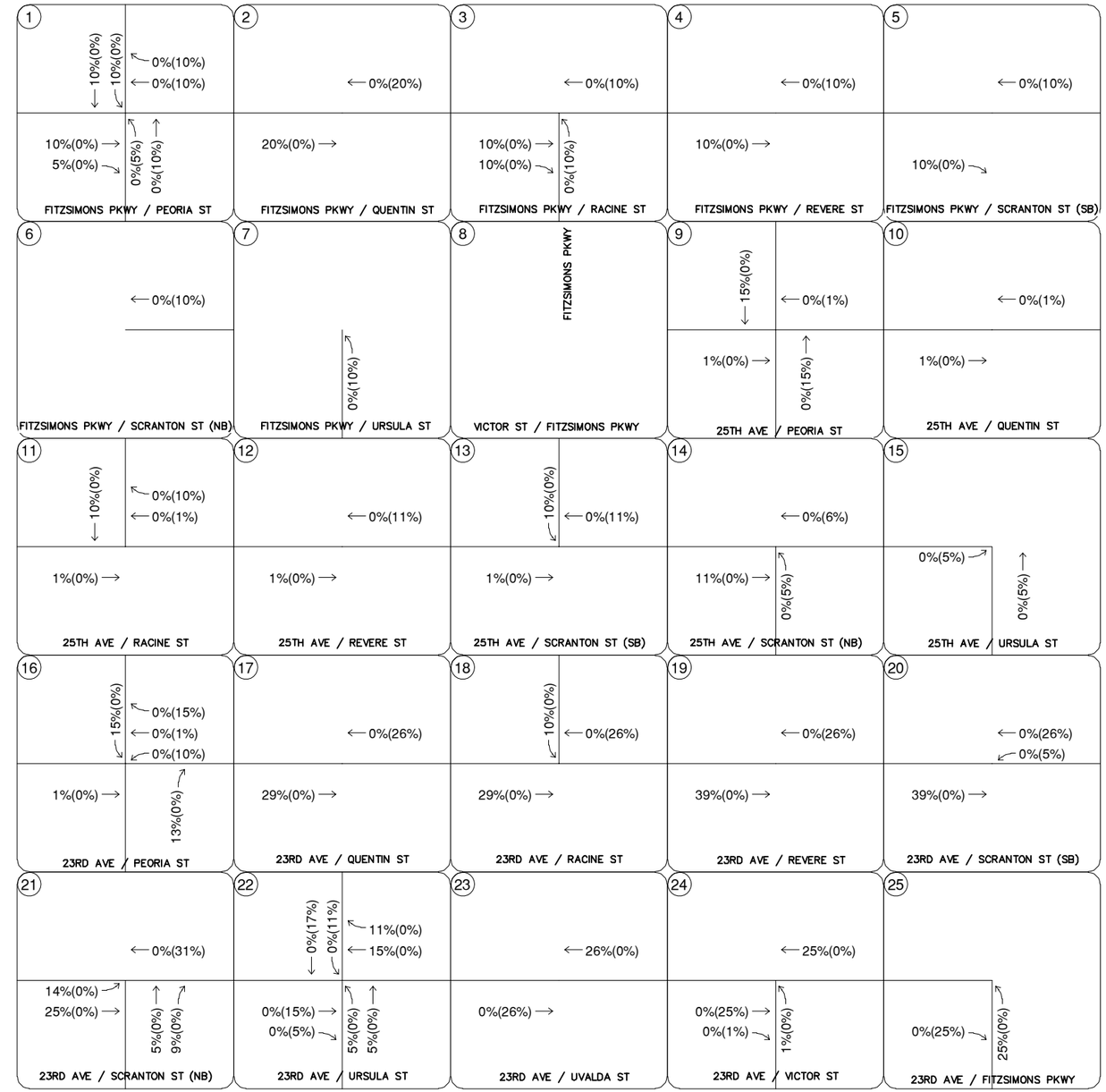
FITZSIMONS INNOVATION CAMPUS MASTER TRAFFIC IMPACT STUDY
PROJECT TRIP DISTRIBUTION – AREA 16 (SOUTH)

FIGURE AREA 16 (S)

Kimley»Horn

Kimley»Horn
NORTH
NTS 196203001



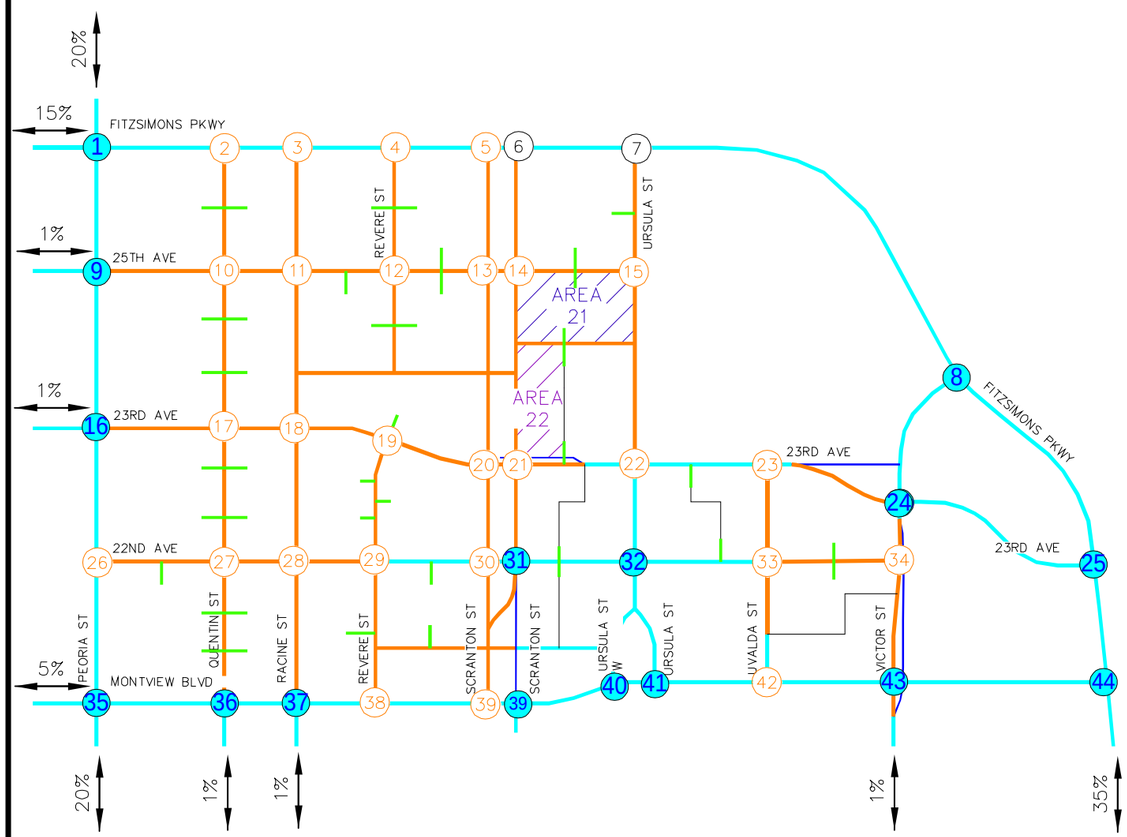


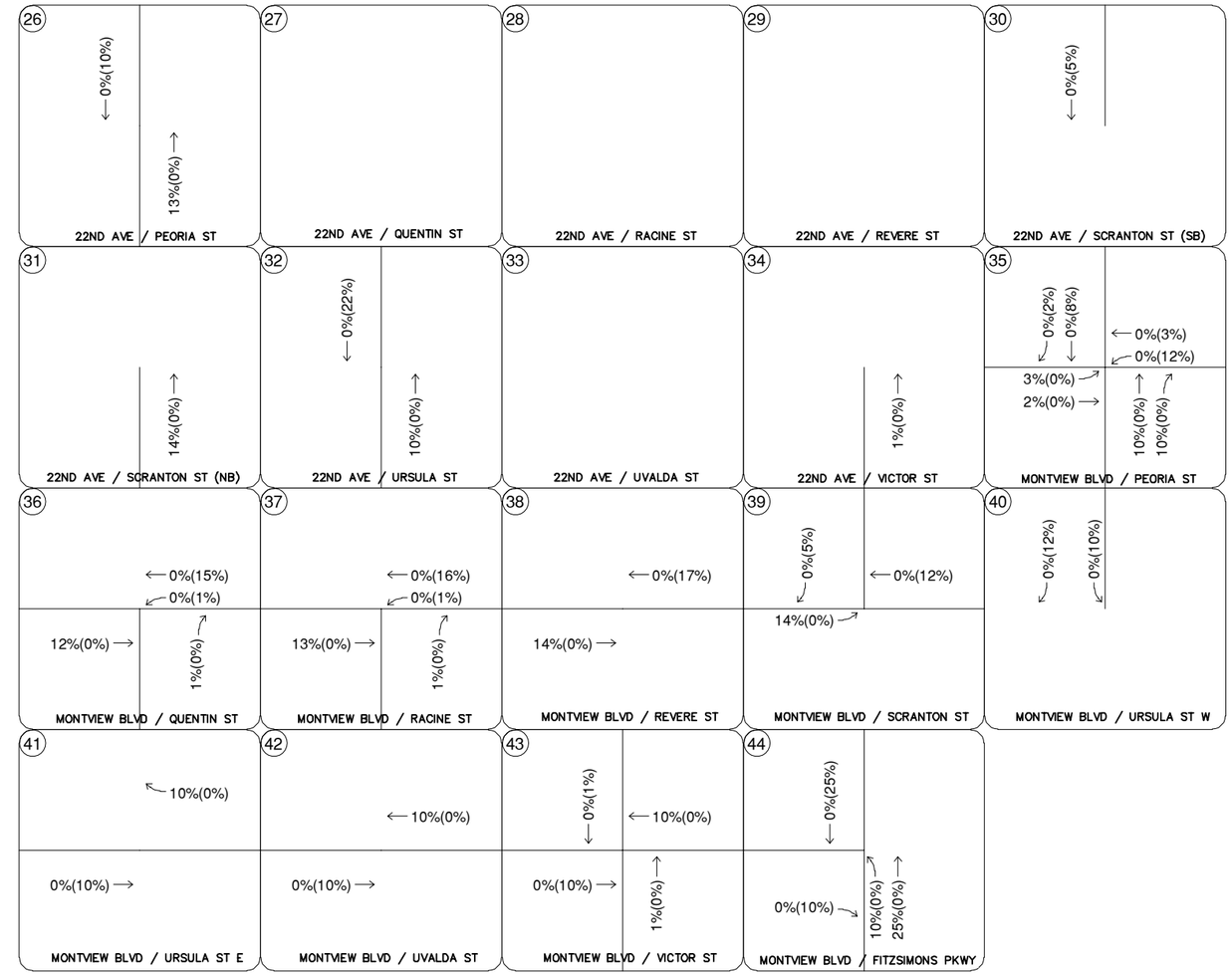
FITZSIMONS INNOVATION CAMPUS MASTER TRAFFIC IMPACT STUDY
PROJECT TRIP DISTRIBUTION – AREA 21 & 22 (NORTH)

FIGURE AREA 21 & 22 (N)

Kimley»Horn

Kimley»Horn
NORTH
NTS 196203001

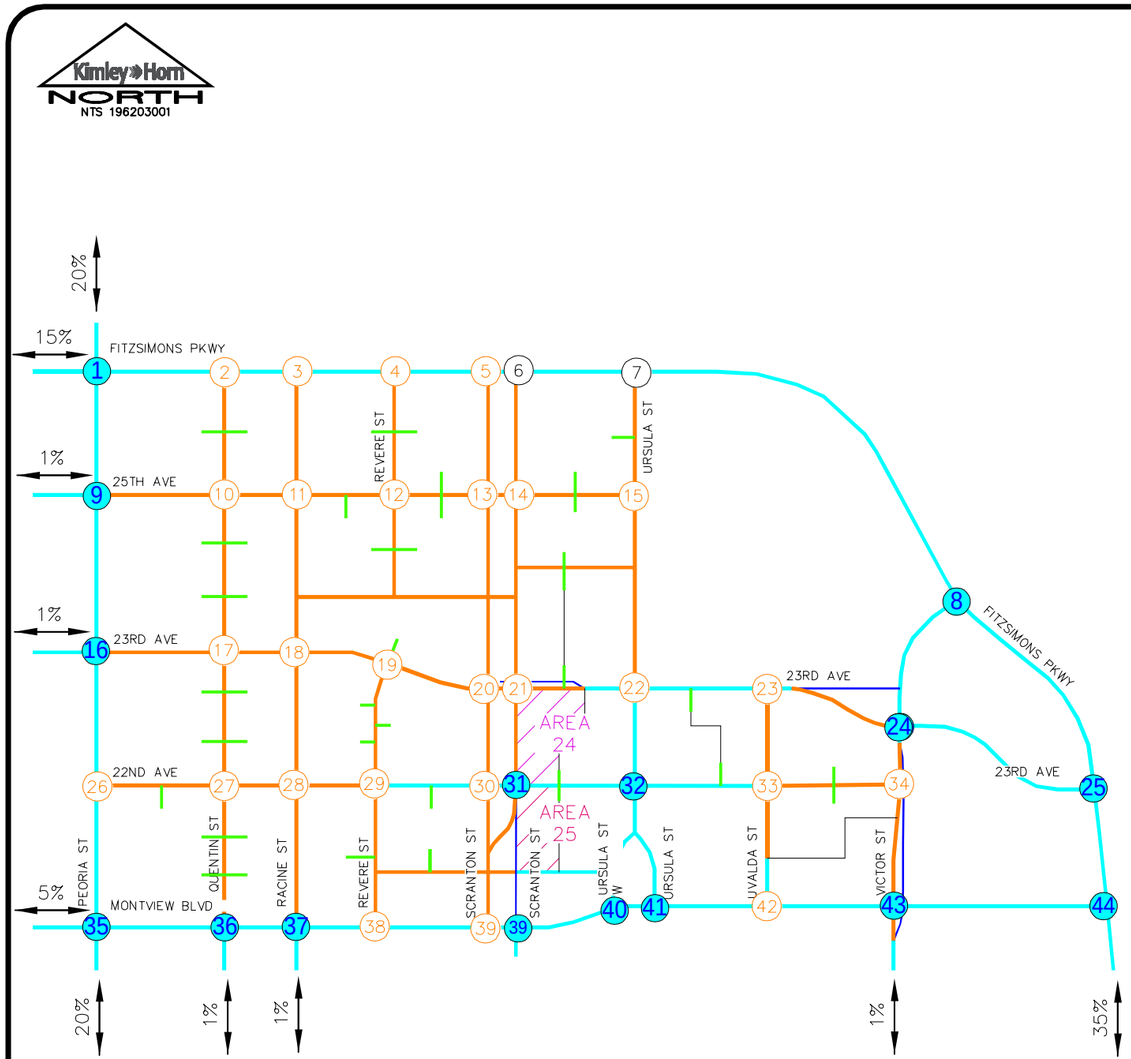


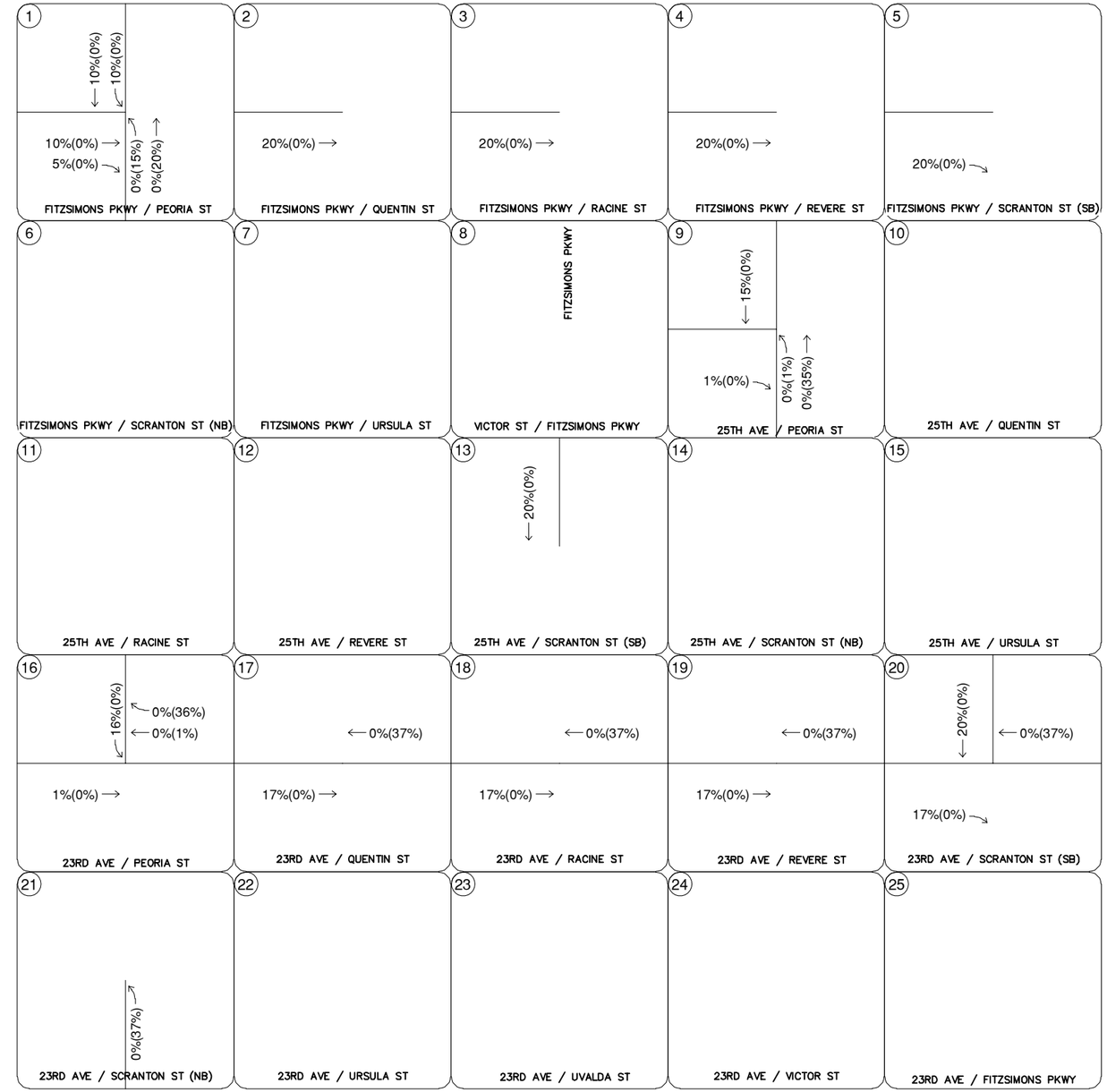


FITZSIMONS INNOVATION CAMPUS MASTER TRAFFIC IMPACT STUDY
PROJECT TRIP DISTRIBUTION – AREA 21 & 22 (SOUTH)

FIGURE AREA 21 & 22 (S)

Kimley»Horn

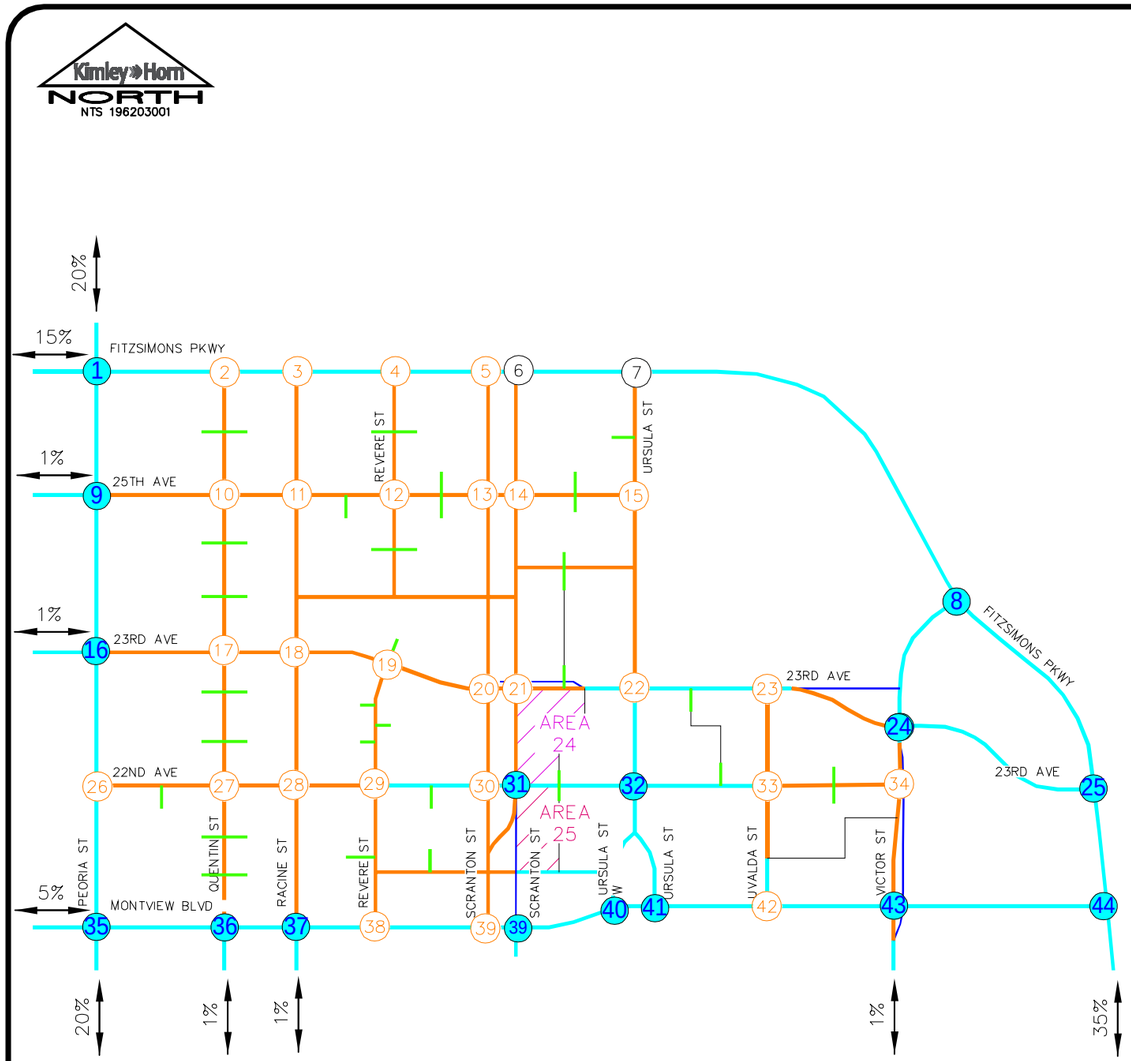


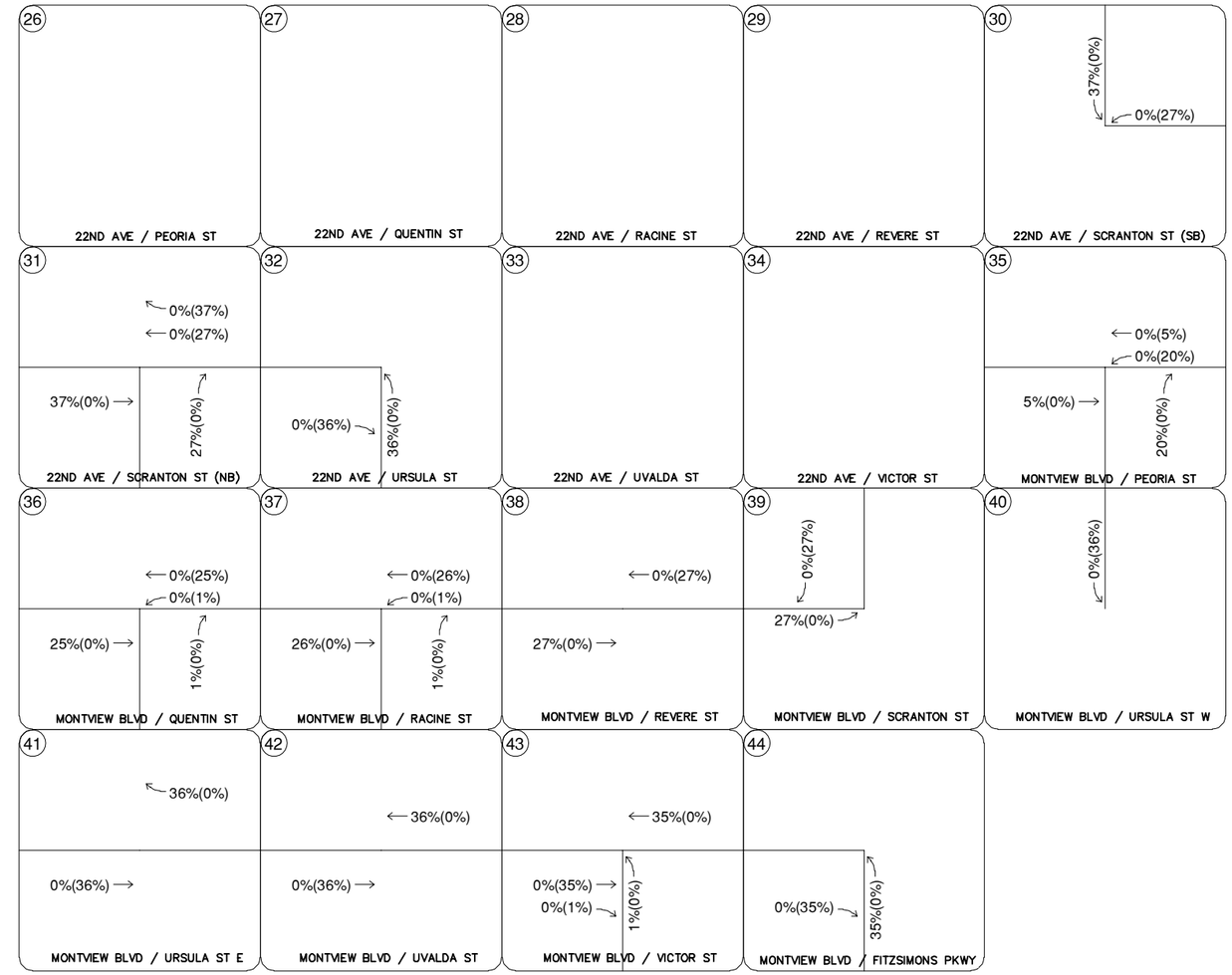


FITZSIMONS INNOVATION CAMPUS MASTER TRAFFIC IMPACT STUDY
PROJECT TRIP DISTRIBUTION – AREA 24 & 25 (NORTH)

FIGURE AREA 24 & 25 (N)

Kimley»Horn





FITZSIMONS INNOVATION CAMPUS MASTER TRAFFIC IMPACT STUDY
PROJECT TRIP DISTRIBUTION – AREA 24 & 25 (SOUTH)

FIGURE AREA 24 & 25 (S)

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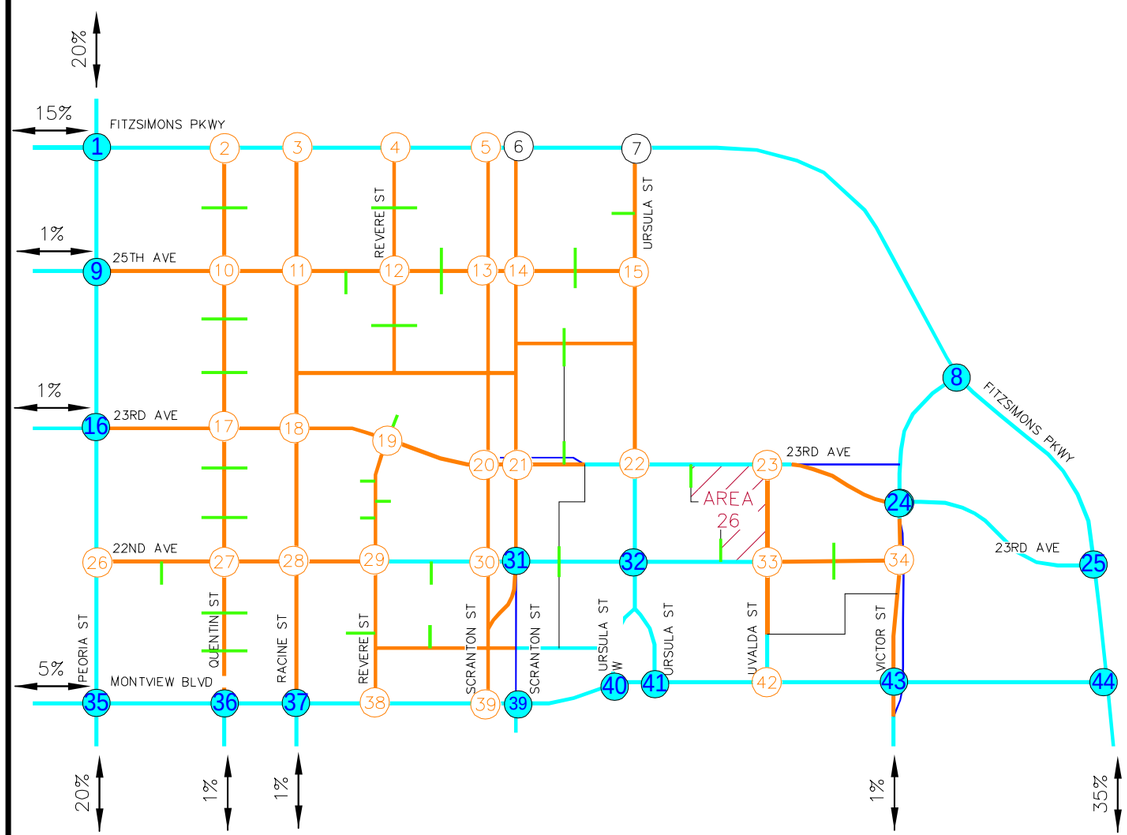
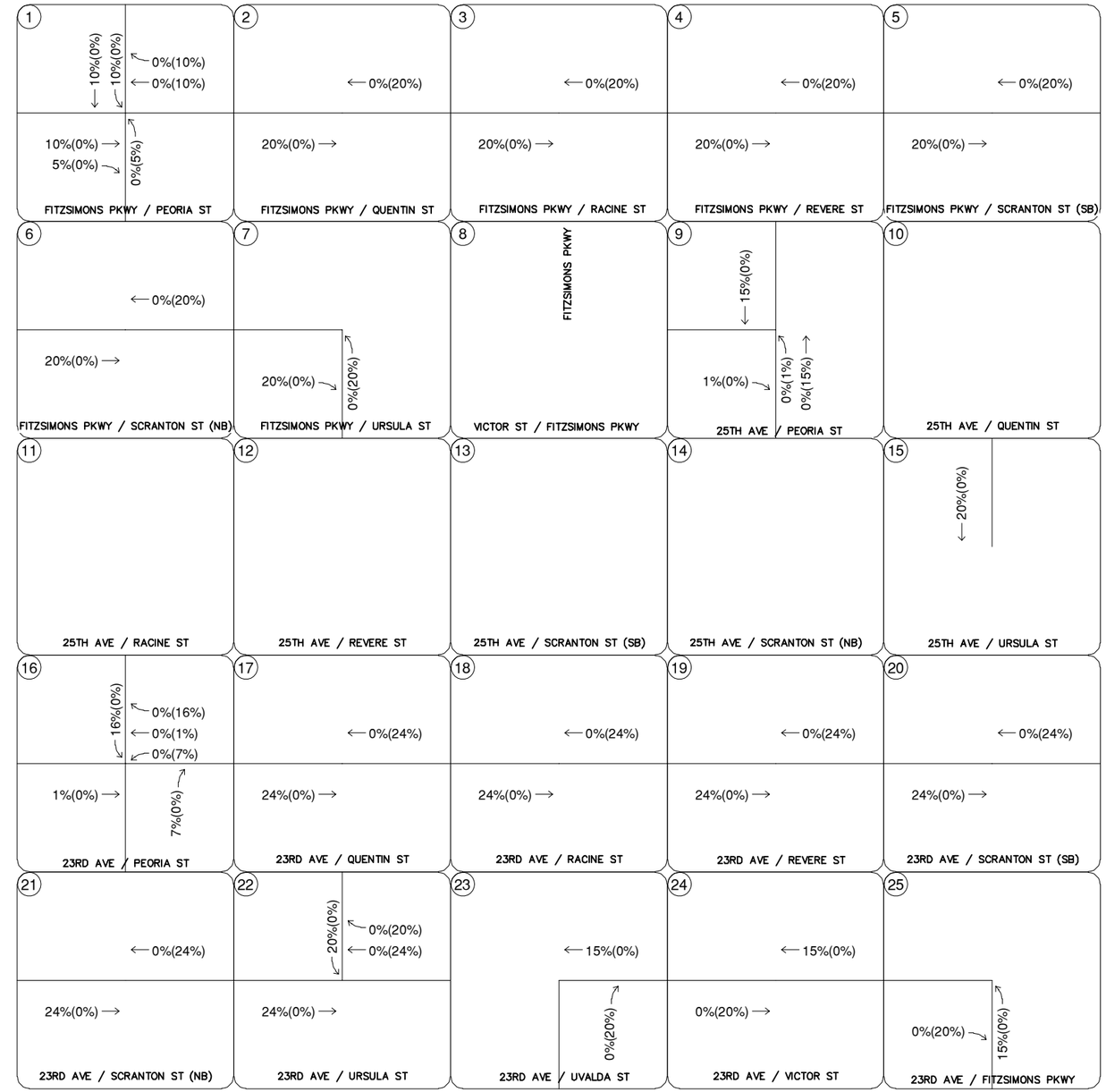
Kimley»Horn
NORTH
NTS 196203001

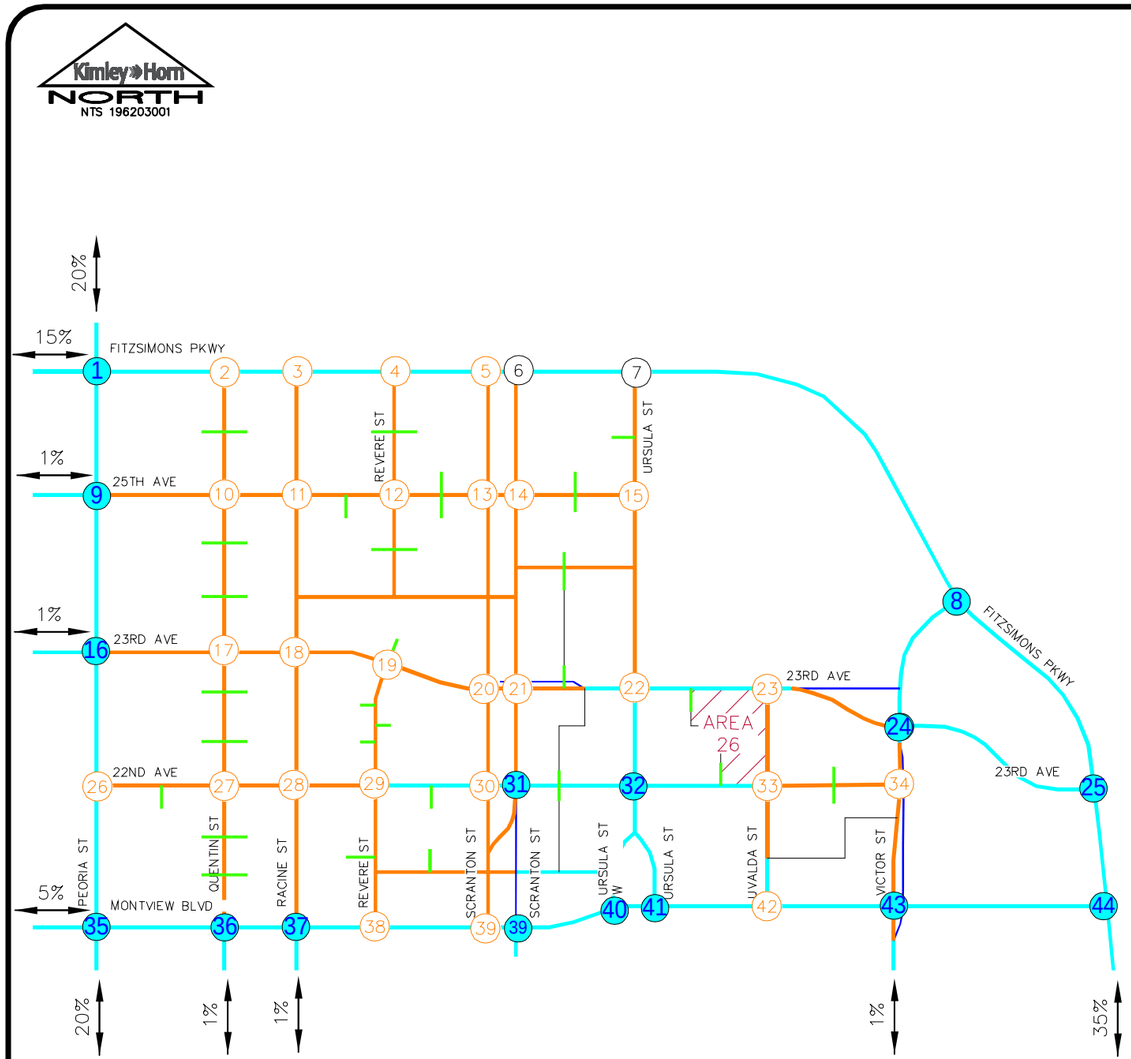


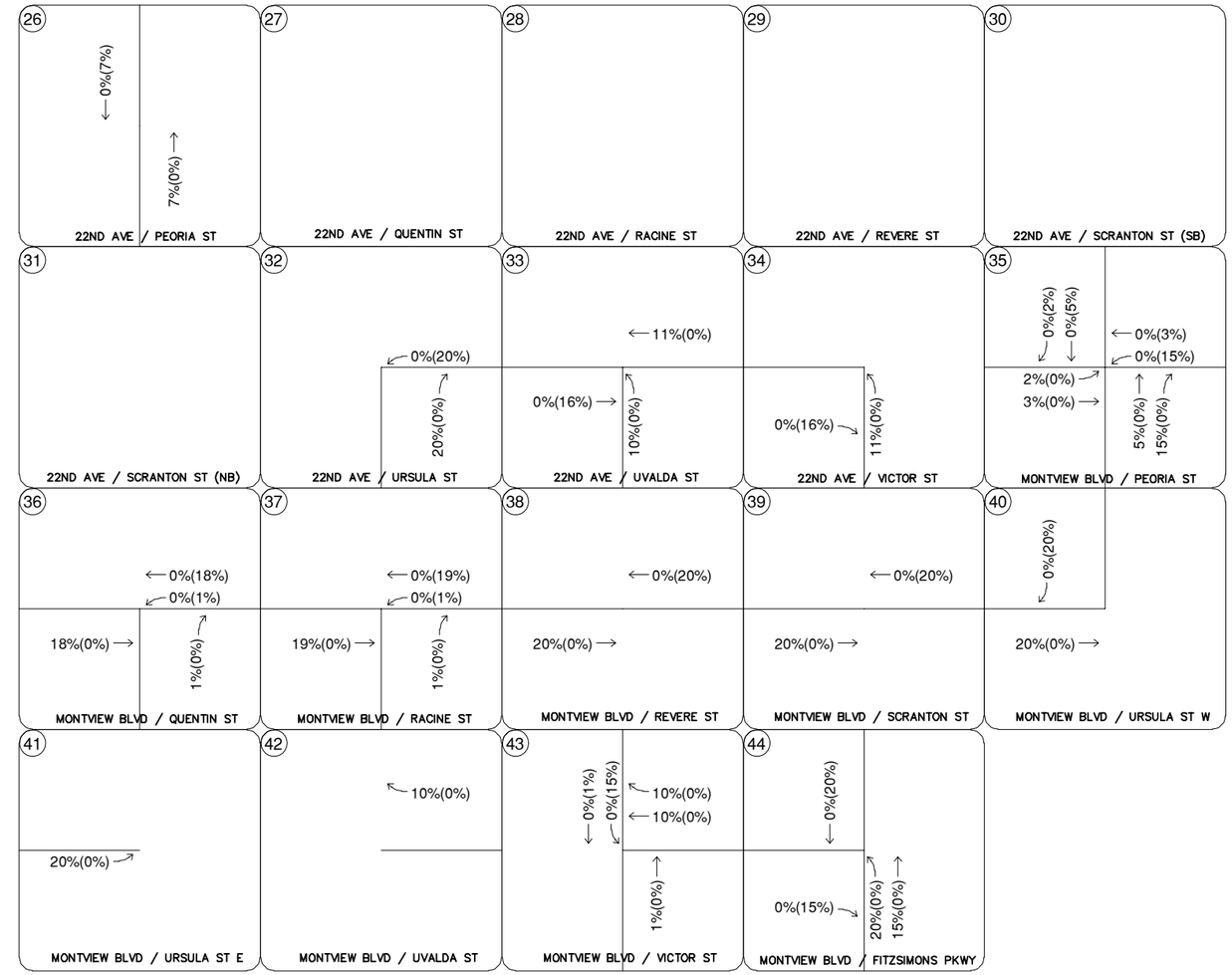


FITZSIMONS INNOVATION CAMPUS MASTER TRAFFIC IMPACT STUDY
PROJECT TRIP DISTRIBUTION – AREA 26 (NORTH)

FIGURE AREA 26 (N)

Kimley»Horn

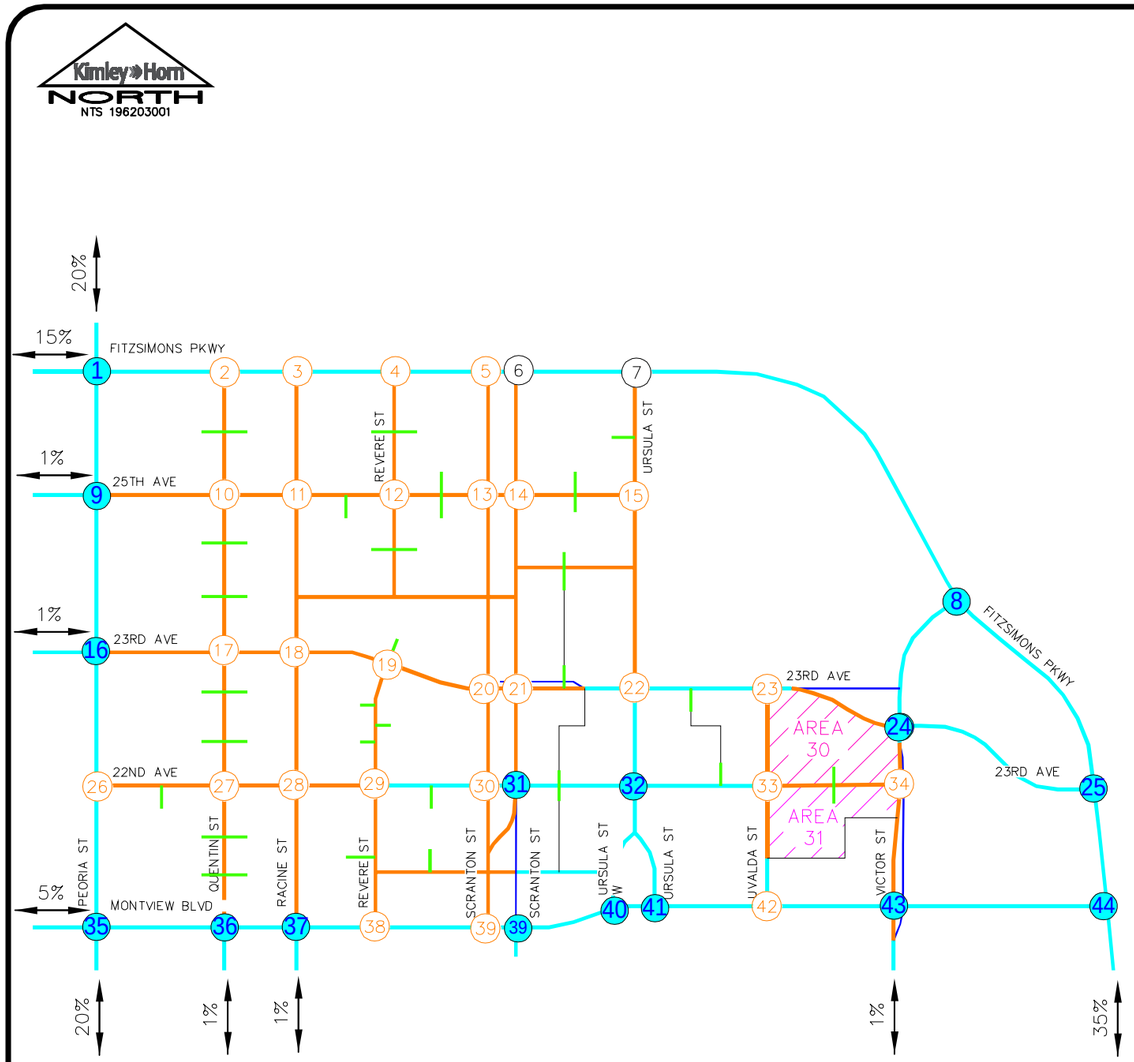


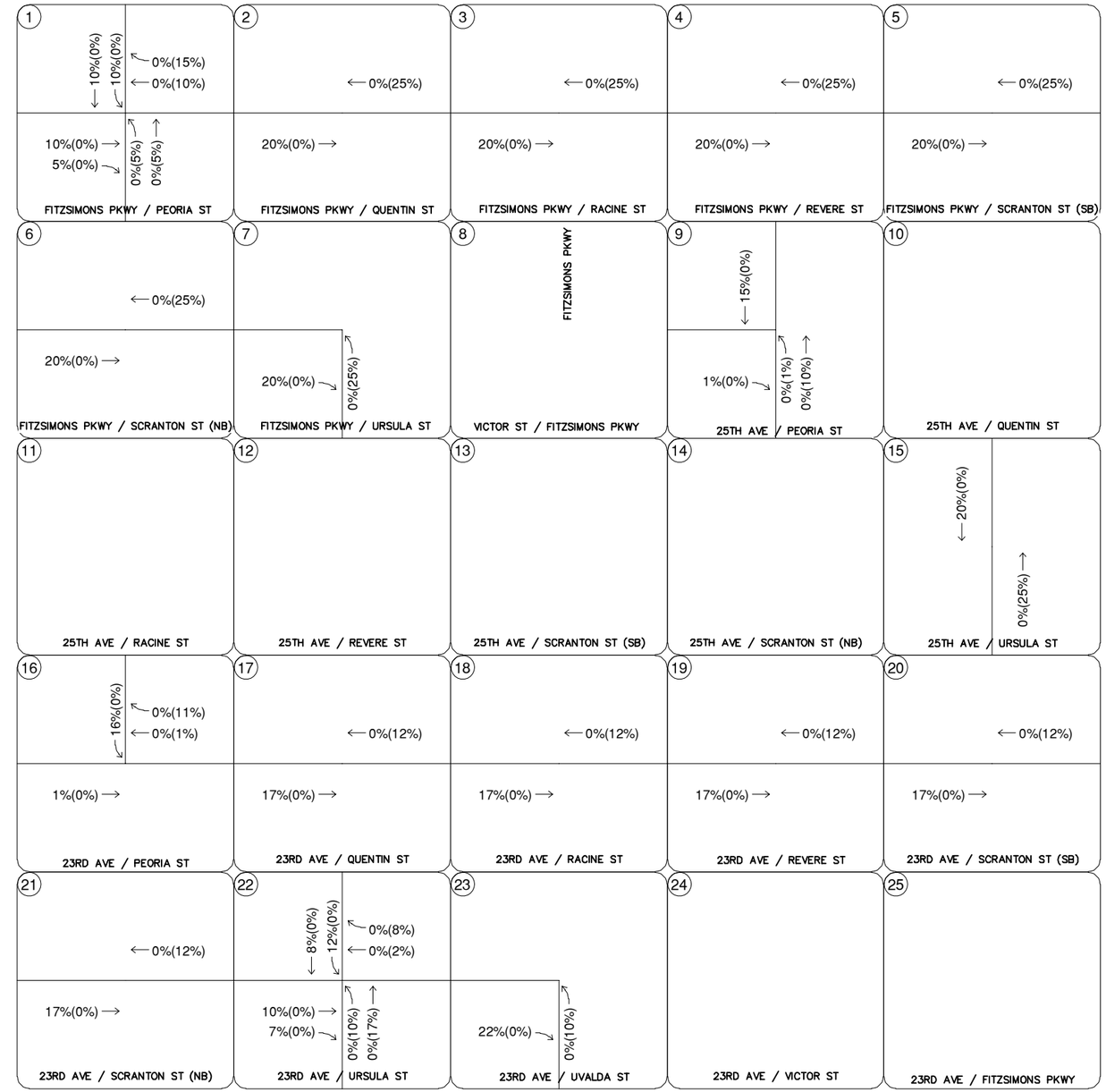


FITZSIMONS INNOVATION CAMPUS MASTER TRAFFIC IMPACT STUDY
PROJECT TRIP DISTRIBUTION – AREA 26 (SOUTH)

FIGURE AREA 26 (S)

Kimley»Horn

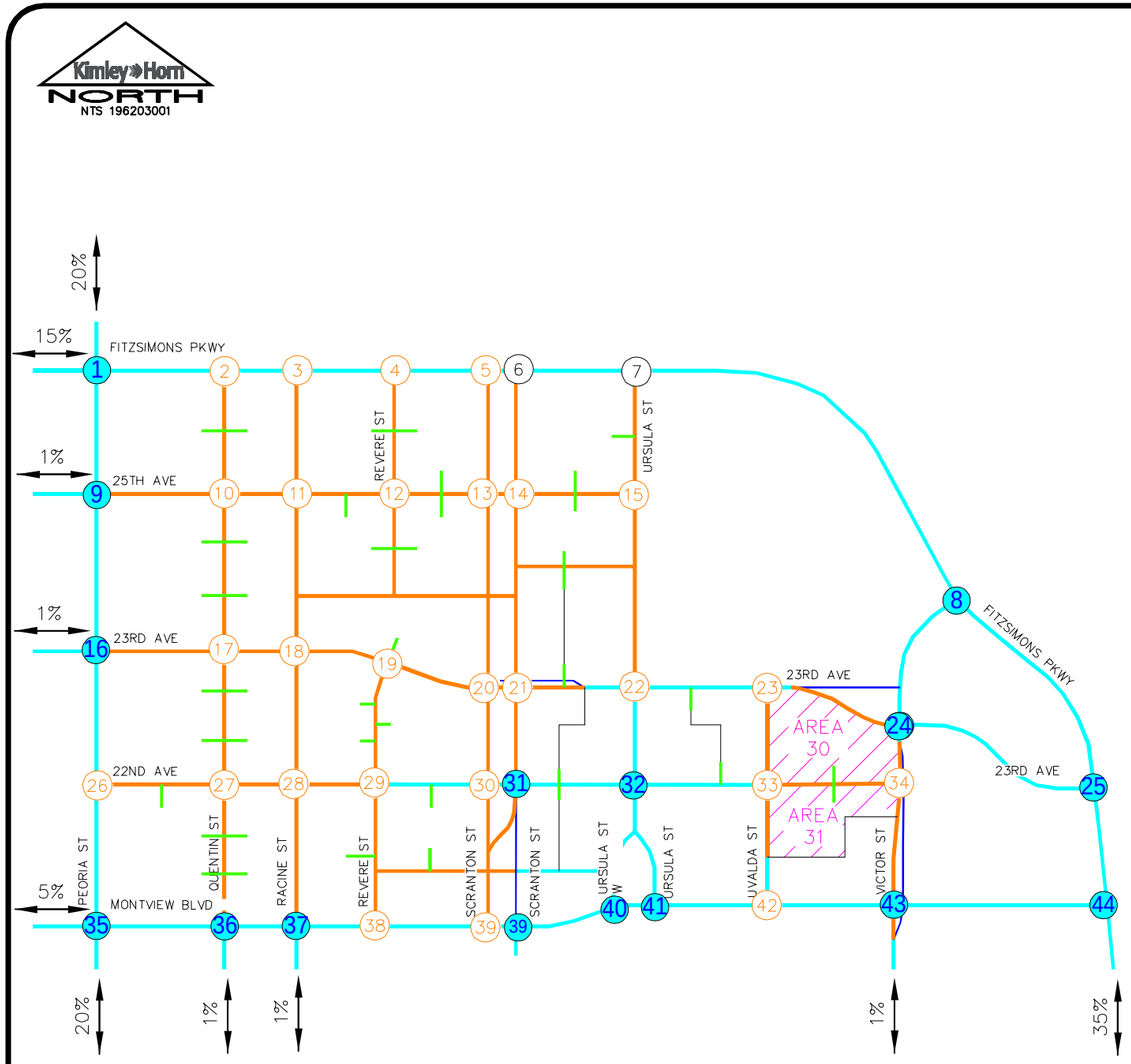


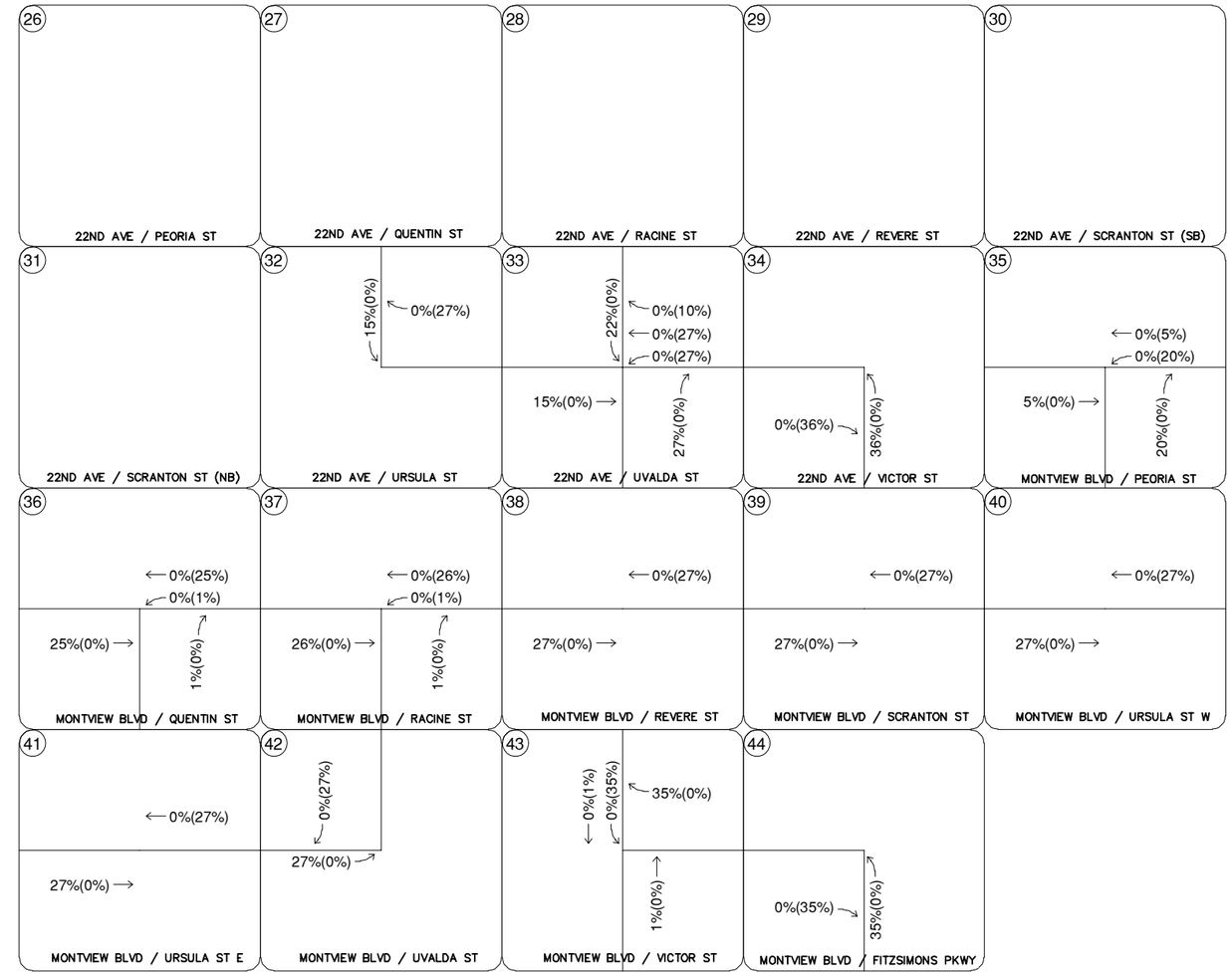


FITZSIMONS INNOVATION CAMPUS MASTER TRAFFIC IMPACT STUDY
PROJECT TRIP DISTRIBUTION – AREA 30 & 31 (NORTH)

FIGURE AREA 30 & 31 (N)

Kimley»Horn



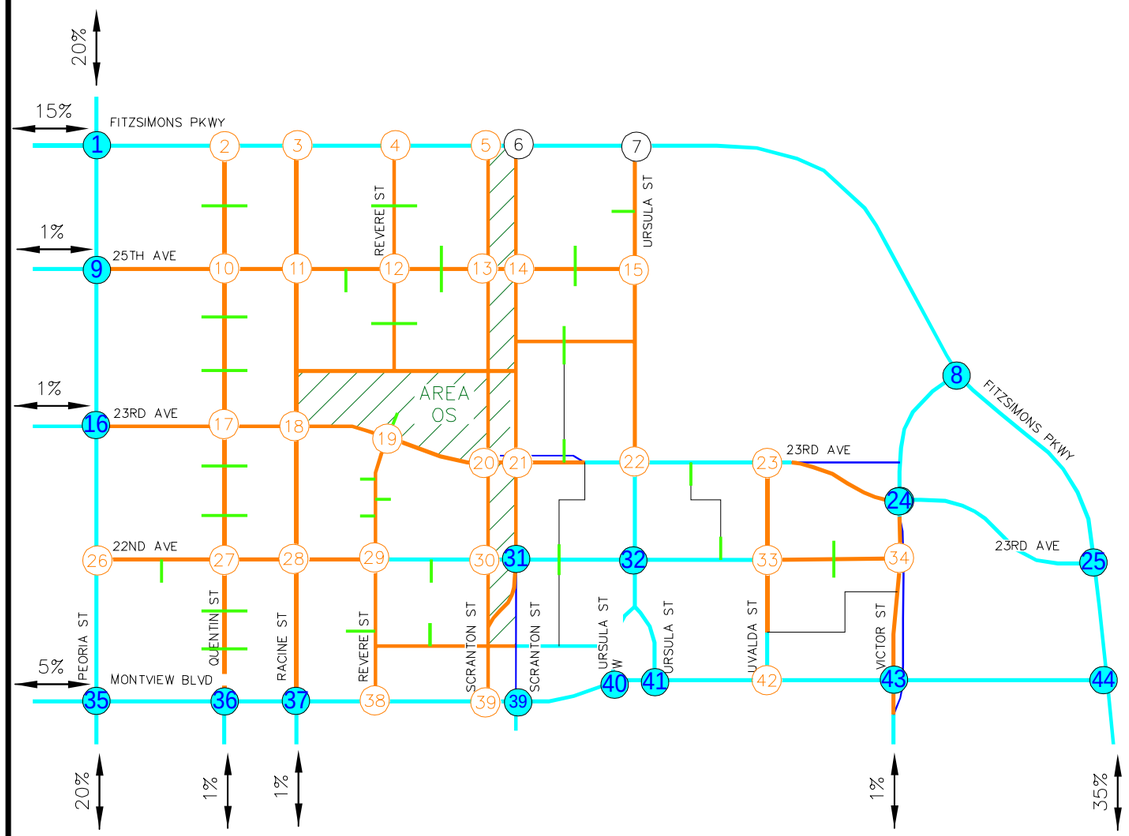


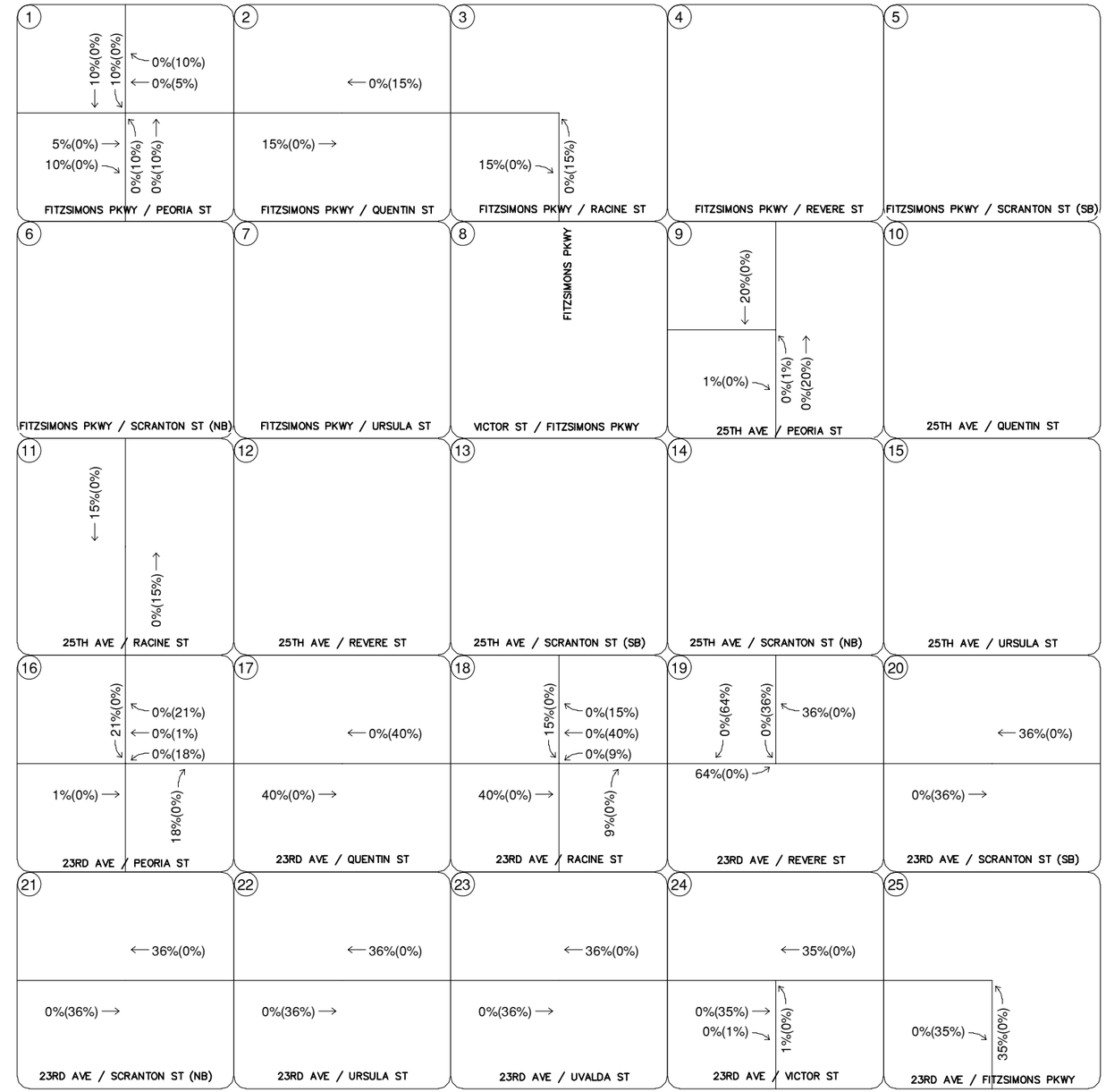
FITZSIMONS INNOVATION CAMPUS MASTER TRAFFIC IMPACT STUDY
PROJECT TRIP DISTRIBUTION – AREA 30 & 31 (SOUTH)

FIGURE AREA 30 & 31 (S)

Kimley»Horn

Kimley»Horn
NORTH
NTS 196203001

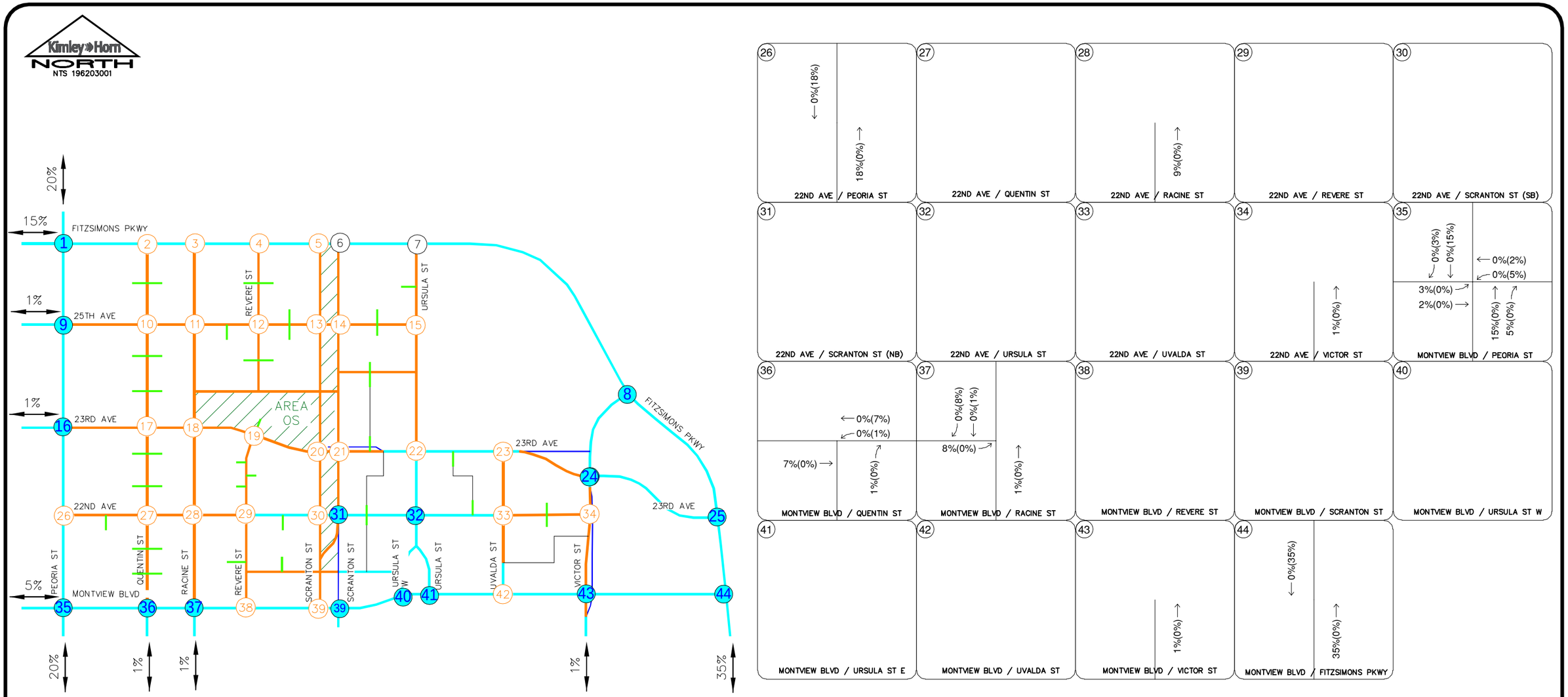




FITZSIMONS INNOVATION CAMPUS MASTER TRAFFIC IMPACT STUDY
PROJECT TRIP DISTRIBUTION – AREA OS (NORTH)

FIGURE AREA OS (N)

Kimley»Horn



FITZSIMONS INNOVATION CAMPUS MASTER TRAFFIC IMPACT STUDY
PROJECT TRIP DISTRIBUTION – AREA OS (SOUTH)

FIGURE AREA OS (S)

Kimley»Horn

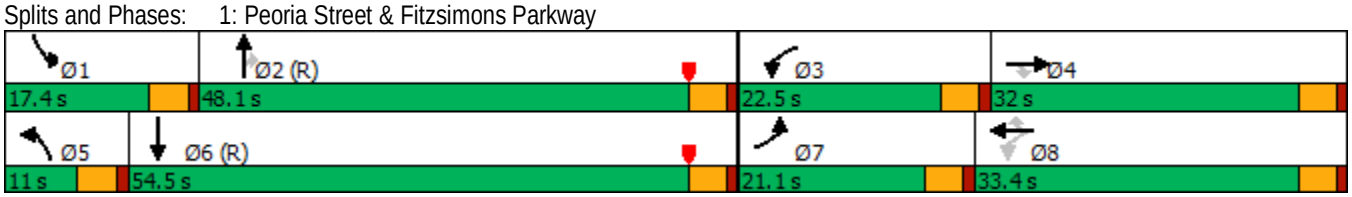
APPENDIX F

Intersection Analysis Worksheets

Lane Group	EBL	EBT	EBR	WBL	WBT	WBR	NBL	NBT	NBR	SBL	SBT	SBR
Lane Configurations												
Traffic Volume (vph)	242	526	140	70	332	200	91	739	113	205	1120	183
Future Volume (vph)	242	526	140	70	332	200	91	739	113	205	1120	183
Turn Type	Prot	NA	Perm	pm+pt	NA	Perm	Prot	NA	Perm	Prot	NA	Free
Protected Phases	7	4		3	8		5	2		1	6	
Permitted Phases			4	8		8			2			Free
Detector Phase	7	4	4	3	8	8	5	2	2	1	6	
Switch Phase												
Minimum Initial (s)	5.0	5.0	5.0	5.0	5.0	5.0	5.0	5.0	5.0	5.0	5.0	
Minimum Split (s)	9.5	22.5	22.5	22.5	22.5	22.5	9.5	22.5	22.5	9.5	22.5	
Total Split (s)	21.1	32.0	32.0	22.5	33.4	33.4	11.0	48.1	48.1	17.4	54.5	
Total Split (%)	17.6%	26.7%	26.7%	18.8%	27.8%	27.8%	9.2%	40.1%	40.1%	14.5%	45.4%	
Yellow Time (s)	3.5	3.5	3.5	3.5	3.5	3.5	3.5	3.5	3.5	3.5	3.5	
All-Red Time (s)	1.0	1.0	1.0	1.0	1.0	1.0	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	0.0	0.0	
Total Lost Time (s)	4.5	4.5	4.5	4.5	4.5	4.5	4.5	4.5	4.5	4.5	4.5	
Lead/Lag	Lead	Lag	Lag	Lead	Lag	Lag	Lead	Lag	Lag	Lead	Lag	
Lead-Lag Optimize?	Yes	Yes	Yes	Yes	Yes	Yes	Yes	Yes	Yes	Yes	Yes	
Recall Mode	None	None	None	None	None	None	None	C-Max	C-Max	None	C-Max	
Act Effct Green (s)	14.7	29.8	29.8	30.5	21.7	21.7	7.8	53.4	53.4	12.1	57.8	120.0
Actuated g/C Ratio	0.12	0.25	0.25	0.25	0.18	0.18	0.06	0.44	0.44	0.10	0.48	1.00
v/c Ratio	0.69	0.72	0.33	0.35	0.55	0.48	0.43	0.49	0.15	0.62	0.69	0.12
Control Delay	59.4	46.3	6.6	29.9	47.1	11.3	60.1	26.6	3.4	59.8	28.5	0.2
Queue Delay	0.0	0.0	0.0	0.0	0.0	0.0	0.0	0.0	0.0	0.0	0.0	0.0
Total Delay	59.4	46.3	6.6	29.9	47.1	11.3	60.1	26.6	3.4	59.8	28.5	0.2
LOS	E	D	A	C	D	B	E	C	A	E	C	A
Approach Delay		43.7			33.1			27.1			29.3	
Approach LOS		D			C			C			C	

Intersection Summary	
Cycle Length: 120	
Actuated Cycle Length: 120	
Offset: 0 (0%), Referenced to phase 2:NBT and 6:SBT, Start of Yellow	
Natural Cycle: 90	
Control Type: Actuated-Coordinated	
Maximum v/c Ratio: 0.72	
Intersection Signal Delay: 33.0	Intersection LOS: C
Intersection Capacity Utilization 68.8%	ICU Level of Service C
Analysis Period (min) 15	

Splits and Phases: 1: Peoria Street & Fitzsimons Parkway



Movement	EBL	EBT	EBR	WBL	WBT	WBR	NBL	NBT	NBR	SBL	SBT	SBR
Lane Configurations												
Traffic Volume (veh/h)	242	526	140	70	332	200	91	739	113	205	1120	183
Future Volume (veh/h)	242	526	140	70	332	200	91	739	113	205	1120	183
Initial Q (Qb), veh	0	0	0	0	0	0	0	0	0	0	0	0
Ped-Bike Adj(A_pbT)	1.00		1.00	1.00		1.00	1.00		1.00	1.00		1.00
Parking Bus, Adj	1.00	1.00	1.00	1.00	1.00	1.00	1.00	1.00	1.00	1.00	1.00	1.00
Work Zone On Approach		No			No			No			No	
Adj Sat Flow, veh/h/ln	1870	1870	1870	1870	1870	1870	1870	1870	1870	1870	1870	1870
Adj Flow Rate, veh/h	292	634	0	74	349	0	95	770	118	216	1179	0
Peak Hour Factor	0.83	0.83	0.83	0.95	0.95	0.95	0.96	0.96	0.96	0.95	0.95	0.95
Percent Heavy Veh, %	2	2	2	2	2	2	2	2	2	2	2	2
Cap, veh/h	356	726		178	545		146	1826	814	276	1960	
Arrive On Green	0.10	0.20	0.00	0.05	0.15	0.00	0.04	0.51	0.51	0.08	0.55	0.00
Sat Flow, veh/h	3456	3554	1585	1781	3554	1585	3456	3554	1585	3456	3554	1585
Grp Volume(v), veh/h	292	634	0	74	349	0	95	770	118	216	1179	0
Grp Sat Flow(s),veh/h/ln	1728	1777	1585	1781	1777	1585	1728	1777	1585	1728	1777	1585
Q Serve(g_s), s	9.9	20.7	0.0	4.1	11.1	0.0	3.2	16.1	4.7	7.4	26.7	0.0
Cycle Q Clear(g_c), s	9.9	20.7	0.0	4.1	11.1	0.0	3.2	16.1	4.7	7.4	26.7	0.0
Prop In Lane	1.00		1.00	1.00		1.00	1.00		1.00	1.00		1.00
Lane Grp Cap(c), veh/h	356	726		178	545		146	1826	814	276	1960	
V/C Ratio(X)	0.82	0.87		0.42	0.64		0.65	0.42	0.14	0.78	0.60	
Avail Cap(c_a), veh/h	478	814		352	856		187	1826	814	371	1960	
HCM Platoon Ratio	1.00	1.00	1.00	1.00	1.00	1.00	1.00	1.00	1.00	1.00	1.00	1.00
Upstream Filter(I)	1.00	1.00	0.00	1.00	1.00	0.00	0.98	0.98	0.98	1.00	1.00	0.00
Uniform Delay (d), s/veh	52.7	46.2	0.0	40.5	47.7	0.0	56.6	18.1	15.3	54.2	18.1	0.0
Incr Delay (d2), s/veh	8.1	9.5	0.0	1.6	1.3	0.0	5.0	0.7	0.4	7.5	1.4	0.0
Initial Q Delay(d3),s/veh	0.0	0.0	0.0	0.0	0.0	0.0	0.0	0.0	0.0	0.0	0.0	0.0
%ile BackOfQ(50%),veh/ln	4.7	10.1	0.0	1.9	5.0	0.0	1.5	6.7	1.8	3.5	11.0	0.0
Unsig. Movement Delay, s/veh												
LnGrp Delay(d),s/veh	60.9	55.8	0.0	42.1	49.0	0.0	61.6	18.8	15.7	61.7	19.4	0.0
LnGrp LOS	E	E		D	D		E	B	B	E	B	
Approach Vol, veh/h		926			423			983			1395	
Approach Delay, s/veh		57.4			47.8			22.6			26.0	
Approach LOS		E			D			C			C	

Timer - Assigned Phs	1	2	3	4	5	6	7	8
Phs Duration (G+Y+Rc), s	14.1	66.2	10.7	29.0	9.6	70.7	16.9	22.9
Change Period (Y+Rc), s	4.5	4.5	4.5	4.5	4.5	4.5	4.5	4.5
Max Green Setting (Gmax), s	12.9	43.6	18.0	27.5	6.5	50.0	16.6	28.9
Max Q Clear Time (g_c+I1), s	9.4	18.1	6.1	22.7	5.2	28.7	11.9	13.1
Green Ext Time (p_c), s	0.2	6.3	0.1	1.8	0.0	9.2	0.4	2.0

Intersection Summary	
HCM 6th Ctrl Delay	35.4
HCM 6th LOS	D

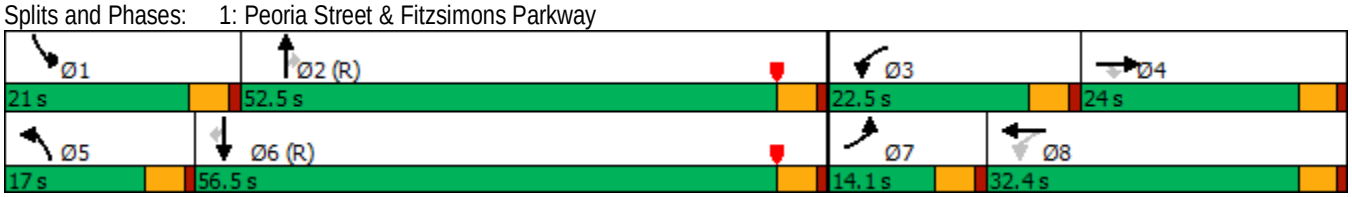
Notes

Unsignalized Delay for [EBR, WBR, SBR] is excluded from calculations of the approach delay and intersection delay.

Lane Group	EBL	EBT	EBR	WBL	WBT	WBR	NBL	NBT	NBR	SBL	SBT	SBR
Lane Configurations												
Traffic Volume (vph)	127	399	165	49	427	172	246	959	46	330	1194	213
Future Volume (vph)	127	399	165	49	427	172	246	959	46	330	1194	213
Turn Type	Prot	NA	Perm	pm+pt	NA	Free	Prot	NA	Perm	Prot	NA	Perm
Protected Phases	7	4		3	8		5	2		1	6	
Permitted Phases			4	8		Free			2			6
Detector Phase	7	4	4	3	8		5	2	2	1	6	6
Switch Phase												
Minimum Initial (s)	5.0	5.0	5.0	5.0	5.0		5.0	5.0	5.0	5.0	5.0	5.0
Minimum Split (s)	9.5	22.5	22.5	22.5	22.5		9.5	22.5	22.5	9.5	22.5	22.5
Total Split (s)	14.1	24.0	24.0	22.5	32.4		17.0	52.5	52.5	21.0	56.5	56.5
Total Split (%)	11.8%	20.0%	20.0%	18.8%	27.0%		14.2%	43.8%	43.8%	17.5%	47.1%	47.1%
Yellow Time (s)	3.5	3.5	3.5	3.5	3.5		3.5	3.5	3.5	3.5	3.5	3.5
All-Red Time (s)	1.0	1.0	1.0	1.0	1.0		1.0	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	0.0	0.0
Total Lost Time (s)	4.5	4.5	4.5	4.5	4.5		4.5	4.5	4.5	4.5	4.5	4.5
Lead/Lag	Lead	Lag	Lag	Lead	Lag		Lead	Lag	Lag	Lead	Lag	Lag
Lead-Lag Optimize?	Yes	Yes	Yes	Yes	Yes		Yes	Yes	Yes	Yes	Yes	Yes
Recall Mode	None	None	None	None	None		None	C-Max	C-Max	None	C-Max	C-Max
Act Effct Green (s)	9.1	24.9	24.9	30.0	21.9	120.0	13.1	54.9	54.9	16.2	58.0	58.0
Actuated g/C Ratio	0.08	0.21	0.21	0.25	0.18	1.00	0.11	0.46	0.46	0.14	0.48	0.48
v/c Ratio	0.54	0.60	0.39	0.23	0.73	0.12	0.68	0.61	0.06	0.74	0.73	0.27
Control Delay	61.6	47.0	8.0	31.4	53.1	0.2	61.1	27.8	0.2	60.3	29.0	9.0
Queue Delay	0.0	0.0	0.0	0.0	0.0	0.0	0.0	0.6	0.0	0.0	0.0	0.0
Total Delay	61.6	47.0	8.0	31.4	53.1	0.2	61.1	28.3	0.2	60.3	29.0	9.0
LOS	E	D	A	C	D	A	E	C	A	E	C	A
Approach Delay		40.4			37.4			33.8			32.5	
Approach LOS		D			D			C			C	

Intersection Summary	
Cycle Length: 120	
Actuated Cycle Length: 120	
Offset: 0 (0%), Referenced to phase 2:NBT and 6:SBT, Start of Yellow	
Natural Cycle: 90	
Control Type: Actuated-Coordinated	
Maximum v/c Ratio: 0.74	
Intersection Signal Delay: 34.9	Intersection LOS: C
Intersection Capacity Utilization 71.0%	ICU Level of Service C
Analysis Period (min) 15	

Splits and Phases: 1: Peoria Street & Fitzsimons Parkway



Movement	EBL	EBT	EBR	WBL	WBT	WBR	NBL	NBT	NBR	SBL	SBT	SBR
Lane Configurations												
Traffic Volume (veh/h)	127	399	165	49	427	172	246	959	46	330	1194	213
Future Volume (veh/h)	127	399	165	49	427	172	246	959	46	330	1194	213
Initial Q (Qb), veh	0	0	0	0	0	0	0	0	0	0	0	0
Ped-Bike Adj(A_pbT)	1.00		1.00	1.00		1.00	1.00		1.00	1.00		1.00
Parking Bus, Adj	1.00	1.00	1.00	1.00	1.00	1.00	1.00	1.00	1.00	1.00	1.00	1.00
Work Zone On Approach		No			No			No			No	
Adj Sat Flow, veh/h/ln	1870	1870	1870	1870	1870	1870	1870	1870	1870	1870	1870	1870
Adj Flow Rate, veh/h	141	443	0	54	474	0	254	989	47	344	1244	0
Peak Hour Factor	0.90	0.90	0.90	0.90	0.90	0.90	0.97	0.97	0.97	0.96	0.96	0.96
Percent Heavy Veh, %	2	2	2	2	2	2	2	2	2	2	2	2
Cap, veh/h	197	637		194	584		312	1818	811	405	1914	
Arrive On Green	0.06	0.18	0.00	0.04	0.16	0.00	0.09	0.51	0.51	0.12	0.54	0.00
Sat Flow, veh/h	3456	3554	1585	1781	3554	1585	3456	3554	1585	3456	3554	1585
Grp Volume(v), veh/h	141	443	0	54	474	0	254	989	47	344	1244	0
Grp Sat Flow(s),veh/h/ln	1728	1777	1585	1781	1777	1585	1728	1777	1585	1728	1777	1585
Q Serve(g_s), s	4.8	14.0	0.0	3.0	15.4	0.0	8.7	22.6	1.8	11.7	29.8	0.0
Cycle Q Clear(g_c), s	4.8	14.0	0.0	3.0	15.4	0.0	8.7	22.6	1.8	11.7	29.8	0.0
Prop In Lane	1.00		1.00	1.00		1.00	1.00		1.00	1.00		1.00
Lane Grp Cap(c), veh/h	197	637		194	584		312	1818	811	405	1914	
V/C Ratio(X)	0.71	0.70		0.28	0.81		0.81	0.54	0.06	0.85	0.65	
Avail Cap(c_a), veh/h	276	637		386	826		360	1818	811	475	1914	
HCM Platoon Ratio	1.00	1.00	1.00	1.00	1.00	1.00	1.00	1.00	1.00	1.00	1.00	1.00
Upstream Filter(I)	1.00	1.00	0.00	1.00	1.00	0.00	0.95	0.95	0.95	1.00	1.00	0.00
Uniform Delay (d), s/veh	55.6	46.2	0.0	39.6	48.4	0.0	53.6	19.8	14.8	51.9	19.7	0.0
Incr Delay (d2), s/veh	5.1	3.3	0.0	0.8	4.2	0.0	11.4	1.1	0.1	12.0	1.7	0.0
Initial Q Delay(d3),s/veh	0.0	0.0	0.0	0.0	0.0	0.0	0.0	0.0	0.0	0.0	0.0	0.0
%ile BackOfQ(50%),veh/ln	2.2	6.5	0.0	1.4	7.2	0.0	4.3	9.5	0.7	5.7	12.4	0.0
Unsig. Movement Delay, s/veh												
LnGrp Delay(d),s/veh	60.7	49.5	0.0	40.4	52.6	0.0	65.0	21.0	14.9	64.0	21.4	0.0
LnGrp LOS	E	D		D	D		E	C	B	E	C	
Approach Vol, veh/h		584			528			1290			1588	
Approach Delay, s/veh		52.2			51.3			29.4			30.6	
Approach LOS		D			D			C			C	

Timer - Assigned Phs	1	2	3	4	5	6	7	8
Phs Duration (G+Y+Rc), s	18.6	65.9	9.5	26.0	15.3	69.1	11.4	24.2
Change Period (Y+Rc), s	4.5	4.5	4.5	4.5	4.5	4.5	4.5	4.5
Max Green Setting (Gmax), s	16.5	48.0	18.0	19.5	12.5	52.0	9.6	27.9
Max Q Clear Time (g_c+I1), s	13.7	24.6	5.0	16.0	10.7	31.8	6.8	17.4
Green Ext Time (p_c), s	0.4	7.9	0.1	0.9	0.2	9.5	0.1	2.3

Intersection Summary	
HCM 6th Ctrl Delay	36.1
HCM 6th LOS	D

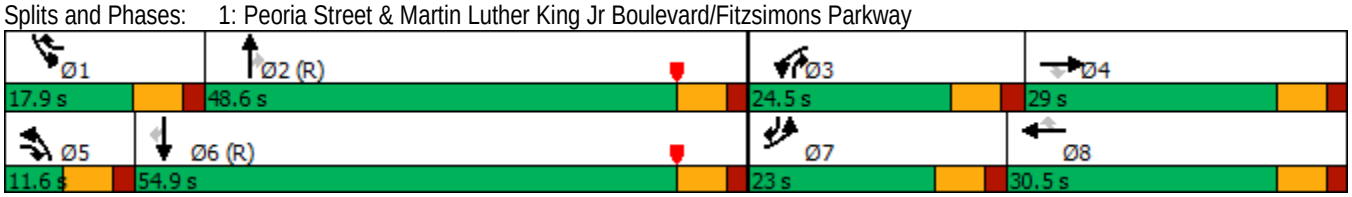
Notes

Unsignalized Delay for [EBR, WBR, SBR] is excluded from calculations of the approach delay and intersection delay.

Lane Group	EBL	EBT	EBR	WBL	WBT	WBR	NBL	NBT	NBR	SBL	SBT	SBR
Lane Configurations												
Traffic Volume (vph)	265	580	155	80	365	220	100	810	125	225	1230	205
Future Volume (vph)	265	580	155	80	365	220	100	810	125	225	1230	205
Turn Type	Prot	NA	pm+ov	Prot	NA	pm+ov	Prot	NA	pm+ov	Prot	NA	pm+ov
Protected Phases	7	4	5	3	8	1	5	2	3	1	6	7
Permitted Phases			4			8			2			6
Detector Phase	7	4	5	3	8	1	5	2	3	1	6	7
Switch Phase												
Minimum Initial (s)	5.0	5.0	5.0	5.0	5.0	5.0	5.0	5.0	5.0	5.0	5.0	5.0
Minimum Split (s)	11.5	24.5	11.5	24.5	24.5	11.5	11.5	24.5	24.5	11.5	24.5	11.5
Total Split (s)	23.0	29.0	11.6	24.5	30.5	17.9	11.6	48.6	24.5	17.9	54.9	23.0
Total Split (%)	19.2%	24.2%	9.7%	20.4%	25.4%	14.9%	9.7%	40.5%	20.4%	14.9%	45.8%	19.2%
Yellow Time (s)	4.5	4.5	4.5	4.5	4.5	4.5	4.5	4.5	4.5	4.5	4.5	4.5
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	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	0.0
Total Lost Time (s)	6.5	6.5	6.5	6.5	6.5	6.5	6.5	6.5	6.5	6.5	6.5	6.5
Lead/Lag	Lead	Lag	Lead	Lead	Lag	Lead	Lead	Lag	Lead	Lead	Lag	Lead
Lead-Lag Optimize?	Yes	Yes	Yes	Yes	Yes	Yes	Yes	Yes	Yes	Yes	Yes	Yes
Recall Mode	None	None	None	None	None	None	None	C-Max	None	None	C-Max	None
Act Effct Green (s)	14.6	26.3	39.0	11.2	22.9	40.9	6.2	45.0	62.7	11.4	50.3	71.4
Actuated g/C Ratio	0.12	0.22	0.32	0.09	0.19	0.34	0.05	0.38	0.52	0.10	0.42	0.60
v/c Ratio	0.69	0.81	0.27	0.53	0.59	0.40	0.62	0.66	0.16	0.75	0.90	0.23
Control Delay	59.3	53.7	7.1	56.2	40.3	15.4	65.2	61.9	5.1	67.8	42.8	7.2
Queue Delay	0.0	0.0	0.0	0.0	0.0	0.0	0.0	0.1	0.0	0.0	0.0	0.0
Total Delay	59.3	53.7	7.1	56.2	40.3	15.4	65.2	62.0	5.1	67.8	42.8	7.2
LOS	E	D	A	E	D	B	E	E	A	E	D	A
Approach Delay		48.0			34.0			55.4			41.8	
Approach LOS		D			C			E			D	

Intersection Summary	
Cycle Length: 120	
Actuated Cycle Length: 120	
Offset: 116 (97%), Referenced to phase 2:NBT and 6:SBT, Start of Yellow	
Natural Cycle: 105	
Control Type: Actuated-Coordinated	
Maximum v/c Ratio: 0.90	
Intersection Signal Delay: 45.3	Intersection LOS: D
Intersection Capacity Utilization 80.3%	ICU Level of Service D
Analysis Period (min) 15	

Splits and Phases: 1: Peoria Street & Martin Luther King Jr Boulevard/Fitzsimons Parkway



Movement	EBL	EBT	EBR	WBL	WBT	WBR	NBL	NBT	NBR	SBL	SBT	SBR
Lane Configurations												
Traffic Volume (veh/h)	265	580	155	80	365	220	100	810	125	225	1230	205
Future Volume (veh/h)	265	580	155	80	365	220	100	810	125	225	1230	205
Initial Q (Qb), veh	0	0	0	0	0	0	0	0	0	0	0	0
Ped-Bike Adj(A_pbT)	1.00		1.00	1.00		1.00	1.00		1.00	1.00		1.00
Parking Bus, Adj	1.00	1.00	1.00	1.00	1.00	1.00	1.00	1.00	1.00	1.00	1.00	1.00
Work Zone On Approach		No			No			No			No	
Adj Sat Flow, veh/h/ln	1870	1870	1870	1870	1870	1870	1870	1870	1870	1870	1870	1870
Adj Flow Rate, veh/h	288	630	0	87	397	0	109	880	136	245	1337	0
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
Percent Heavy Veh, %	2	2	2	2	2	2	2	2	2	2	2	2
Cap, veh/h	352	666		115	534		147	1578	806	301	1736	
Arrive On Green	0.10	0.19	0.00	0.13	0.30	0.00	0.09	0.89	0.89	0.09	0.49	0.00
Sat Flow, veh/h	3456	3554	1585	1781	3554	1585	3456	3554	1585	3456	3554	1585
Grp Volume(v), veh/h	288	630	0	87	397	0	109	880	136	245	1337	0
Grp Sat Flow(s),veh/h/ln	1728	1777	1585	1781	1777	1585	1728	1777	1585	1728	1777	1585
Q Serve(g_s), s	9.8	21.0	0.0	5.7	12.1	0.0	3.7	6.6	1.2	8.4	37.0	0.0
Cycle Q Clear(g_c), s	9.8	21.0	0.0	5.7	12.1	0.0	3.7	6.6	1.2	8.4	37.0	0.0
Prop In Lane	1.00		1.00	1.00		1.00	1.00		1.00	1.00		1.00
Lane Grp Cap(c), veh/h	352	666		115	534		147	1578	806	301	1736	
V/C Ratio(X)	0.82	0.95		0.75	0.74		0.74	0.56	0.17	0.81	0.77	
Avail Cap(c_a), veh/h	475	666		267	711		147	1578	806	328	1736	
HCM Platoon Ratio	1.00	1.00	1.00	2.00	2.00	2.00	2.00	2.00	2.00	1.00	1.00	1.00
Upstream Filter(I)	1.00	1.00	0.00	1.00	1.00	0.00	0.97	0.97	0.97	1.00	1.00	0.00
Uniform Delay (d), s/veh	52.8	48.1	0.0	51.3	39.9	0.0	54.3	4.1	3.0	53.8	25.2	0.0
Incr Delay (d2), s/veh	8.0	22.4	0.0	9.5	2.9	0.0	17.7	1.4	0.4	13.6	3.4	0.0
Initial Q Delay(d3),s/veh	0.0	0.0	0.0	0.0	0.0	0.0	0.0	0.0	0.0	0.0	0.0	0.0
%ile BackOfQ(50%),veh/ln	4.6	11.3	0.0	2.7	4.8	0.0	1.9	1.8	0.5	4.2	16.0	0.0
Unsig. Movement Delay, s/veh												
LnGrp Delay(d),s/veh	60.8	70.5	0.0	60.8	42.8	0.0	71.9	5.5	3.4	67.4	28.5	0.0
LnGrp LOS	E	E		E	D		E	A	A	E	C	
Approach Vol, veh/h		918			484			1125			1582	
Approach Delay, s/veh		67.5			46.0			11.7			34.5	
Approach LOS		E			D			B			C	

Timer - Assigned Phs	1	2	3	4	5	6	7	8
Phs Duration (G+Y+Rc), s	16.9	59.8	14.3	29.0	11.6	65.1	18.7	24.5
Change Period (Y+Rc), s	6.5	6.5	6.5	6.5	6.5	6.5	6.5	6.5
Max Green Setting (Gmax), s	11.4	42.1	18.0	22.5	5.1	48.4	16.5	24.0
Max Q Clear Time (g_c+I1), s	10.4	8.6	7.7	23.0	5.7	39.0	11.8	14.1
Green Ext Time (p_c), s	0.1	8.0	0.1	0.0	0.0	6.1	0.4	1.8

Intersection Summary	
HCM 6th Ctrl Delay	37.0
HCM 6th LOS	D

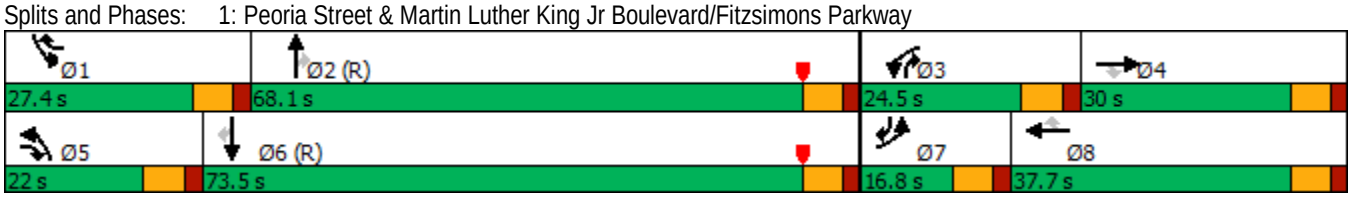
Notes

Unsignalized Delay for [EBR, WBR, SBR] is excluded from calculations of the approach delay and intersection delay.

Lane Group	EBL	EBT	EBR	WBL	WBT	WBR	NBL	NBT	NBR	SBL	SBT	SBR
Lane Configurations												
Traffic Volume (vph)	140	440	185	55	470	190	270	1050	55	365	1310	235
Future Volume (vph)	140	440	185	55	470	190	270	1050	55	365	1310	235
Turn Type	Prot	NA	pm+ov	Prot	NA	pm+ov	Prot	NA	pm+ov	Prot	NA	pm+ov
Protected Phases	7	4	5	3	8	1	5	2	3	1	6	7
Permitted Phases			4			8			2			6
Detector Phase	7	4	5	3	8	1	5	2	3	1	6	7
Switch Phase												
Minimum Initial (s)	5.0	5.0	5.0	5.0	5.0	5.0	5.0	5.0	5.0	5.0	5.0	5.0
Minimum Split (s)	11.5	24.5	11.5	24.5	24.5	11.5	11.5	24.5	24.5	11.5	24.5	11.5
Total Split (s)	16.8	30.0	22.0	24.5	37.7	27.4	22.0	68.1	24.5	27.4	73.5	16.8
Total Split (%)	11.2%	20.0%	14.7%	16.3%	25.1%	18.3%	14.7%	45.4%	16.3%	18.3%	49.0%	11.2%
Yellow Time (s)	4.5	4.5	4.5	4.5	4.5	4.5	4.5	4.5	4.5	4.5	4.5	4.5
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	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	0.0
Total Lost Time (s)	6.5	6.5	6.5	6.5	6.5	6.5	6.5	6.5	6.5	6.5	6.5	6.5
Lead/Lag	Lead	Lag	Lead	Lead	Lag	Lead	Lead	Lag	Lead	Lead	Lag	Lead
Lead-Lag Optimize?	Yes	Yes	Yes	Yes	Yes	Yes	Yes	Yes	Yes	Yes	Yes	Yes
Recall Mode	None	None	None	None	None	None	None	C-Max	None	None	C-Max	None
Act Effct Green (s)	10.0	26.5	49.1	10.4	27.0	54.2	16.1	66.3	83.3	20.7	71.0	87.4
Actuated g/C Ratio	0.07	0.18	0.33	0.07	0.18	0.36	0.11	0.44	0.56	0.14	0.47	0.58
v/c Ratio	0.67	0.76	0.34	0.49	0.80	0.33	0.80	0.73	0.07	0.84	0.85	0.26
Control Delay	83.0	67.5	16.4	79.7	69.0	22.6	78.2	33.3	3.9	79.0	41.7	9.1
Queue Delay	0.0	0.0	0.0	0.0	0.0	0.0	0.0	0.6	0.0	0.0	0.0	0.0
Total Delay	83.0	67.5	16.4	79.7	69.0	22.6	78.2	33.9	3.9	79.0	41.7	9.1
LOS	F	E	B	E	E	C	E	C	A	E	D	A
Approach Delay		58.0			57.5			41.4			44.8	
Approach LOS		E			E			D			D	

Intersection Summary	
Cycle Length: 150	
Actuated Cycle Length: 150	
Offset: 127 (85%), Referenced to phase 2:NBT and 6:SBT, Start of Yellow	
Natural Cycle: 115	
Control Type: Actuated-Coordinated	
Maximum v/c Ratio: 0.85	
Intersection Signal Delay: 47.8	Intersection LOS: D
Intersection Capacity Utilization 82.7%	ICU Level of Service E
Analysis Period (min) 15	

Splits and Phases: 1: Peoria Street & Martin Luther King Jr Boulevard/Fitzsimons Parkway



Movement	EBL	EBT	EBR	WBL	WBT	WBR	NBL	NBT	NBR	SBL	SBT	SBR
Lane Configurations												
Traffic Volume (veh/h)	140	440	185	55	470	190	270	1050	55	365	1310	235
Future Volume (veh/h)	140	440	185	55	470	190	270	1050	55	365	1310	235
Initial Q (Qb), veh	0	0	0	0	0	0	0	0	0	0	0	0
Ped-Bike Adj(A_pbT)	1.00		1.00	1.00		1.00	1.00		1.00	1.00		1.00
Parking Bus, Adj	1.00	1.00	1.00	1.00	1.00	1.00	1.00	1.00	1.00	1.00	1.00	1.00
Work Zone On Approach		No			No			No			No	
Adj Sat Flow, veh/h/ln	1870	1870	1870	1870	1870	1870	1870	1870	1870	1870	1870	1870
Adj Flow Rate, veh/h	152	478	0	60	511	0	293	1141	60	397	1424	0
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
Percent Heavy Veh, %	2	2	2	2	2	2	2	2	2	2	2	2
Cap, veh/h	197	630		84	595		334	1683	825	444	1797	
Arrive On Green	0.06	0.18	0.00	0.05	0.17	0.00	0.19	0.95	0.95	0.13	0.51	0.00
Sat Flow, veh/h	3456	3554	1585	1781	3554	1585	3456	3554	1585	3456	3554	1585
Grp Volume(v), veh/h	152	478	0	60	511	0	293	1141	60	397	1424	0
Grp Sat Flow(s),veh/h/ln	1728	1777	1585	1781	1777	1585	1728	1777	1585	1728	1777	1585
Q Serve(g_s), s	6.5	19.2	0.0	5.0	21.0	0.0	12.4	7.1	0.3	17.0	49.6	0.0
Cycle Q Clear(g_c), s	6.5	19.2	0.0	5.0	21.0	0.0	12.4	7.1	0.3	17.0	49.6	0.0
Prop In Lane	1.00		1.00	1.00		1.00	1.00		1.00	1.00		1.00
Lane Grp Cap(c), veh/h	197	630		84	595		334	1683	825	444	1797	
V/C Ratio(X)	0.77	0.76		0.72	0.86		0.88	0.68	0.07	0.89	0.79	
Avail Cap(c_a), veh/h	237	630		214	739		357	1683	825	481	1797	
HCM Platoon Ratio	1.00	1.00	1.00	1.00	1.00	1.00	2.00	2.00	2.00	1.00	1.00	1.00
Upstream Filter(I)	1.00	1.00	0.00	1.00	1.00	0.00	0.93	0.93	0.93	1.00	1.00	0.00
Uniform Delay (d), s/veh	69.7	58.6	0.0	70.5	60.7	0.0	59.7	2.3	1.7	64.4	30.6	0.0
Incr Delay (d2), s/veh	12.0	5.3	0.0	10.8	8.4	0.0	19.2	2.1	0.2	18.0	3.7	0.0
Initial Q Delay(d3),s/veh	0.0	0.0	0.0	0.0	0.0	0.0	0.0	0.0	0.0	0.0	0.0	0.0
%ile BackOfQ(50%),veh/ln	3.2	9.1	0.0	2.5	10.2	0.0	5.8	1.6	0.1	8.6	22.0	0.0
Unsig. Movement Delay, s/veh												
LnGrp Delay(d),s/veh	81.7	63.9	0.0	81.3	69.2	0.0	78.9	4.3	1.9	82.3	34.3	0.0
LnGrp LOS	F	E		F	E		E	A	A	F	C	
Approach Vol, veh/h		630			571			1494			1821	
Approach Delay, s/veh		68.2			70.4			18.8			44.7	
Approach LOS		E			E			B			D	

Timer - Assigned Phs	1	2	3	4	5	6	7	8
Phs Duration (G+Y+Rc), s	25.8	77.6	13.6	33.1	21.0	82.3	15.1	31.6
Change Period (Y+Rc), s	6.5	6.5	6.5	6.5	6.5	6.5	6.5	6.5
Max Green Setting (Gmax), s	20.9	61.6	18.0	23.5	15.5	67.0	10.3	31.2
Max Q Clear Time (g_c+I1), s	19.0	9.1	7.0	21.2	14.4	51.6	8.5	23.0
Green Ext Time (p_c), s	0.3	11.9	0.1	0.7	0.1	9.3	0.1	2.1

Intersection Summary	
HCM 6th Ctrl Delay	42.7
HCM 6th LOS	D

Notes

Unsignalized Delay for [EBR, WBR, SBR] is excluded from calculations of the approach delay and intersection delay.

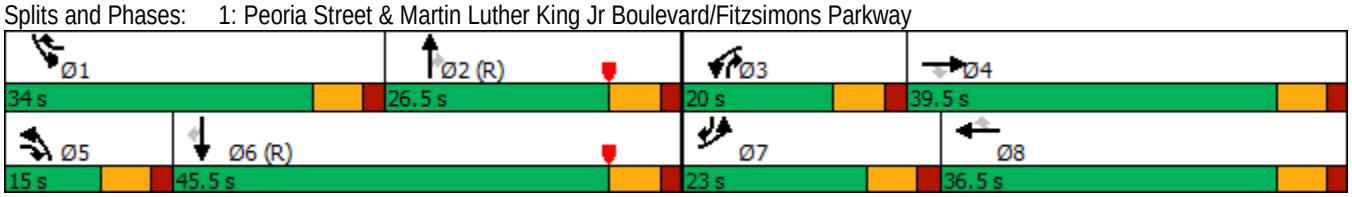
1: Peoria Street & Martin Luther King Jr Boulevard/Fitzsimons Parkway

Lane Group	EBL	EBT	EBR	WBL	WBT	WBR	NBL	NBT	NBR	SBL	SBT	SBR
Lane Configurations												
Traffic Volume (vph)	265	885	480	90	405	270	185	925	135	605	1680	205
Future Volume (vph)	265	885	480	90	405	270	185	925	135	605	1680	205
Turn Type	Prot	NA	pm+ov	Prot	NA	pm+ov	Prot	NA	pm+ov	Prot	NA	pm+ov
Protected Phases	7	4	5	3	8	1	5	2	3	1	6	7
Permitted Phases			4			8			2			6
Detector Phase	7	4	5	3	8	1	5	2	3	1	6	7
Switch Phase												
Minimum Initial (s)	5.0	5.0	5.0	5.0	5.0	5.0	5.0	5.0	5.0	5.0	5.0	5.0
Minimum Split (s)	11.5	24.5	11.5	24.5	24.5	11.5	11.5	24.5	24.5	11.5	24.5	11.5
Total Split (s)	23.0	39.5	15.0	20.0	36.5	34.0	15.0	26.5	20.0	34.0	45.5	23.0
Total Split (%)	19.2%	32.9%	12.5%	16.7%	30.4%	28.3%	12.5%	22.1%	16.7%	28.3%	37.9%	19.2%
Yellow Time (s)	4.5	4.5	4.5	4.5	4.5	4.5	4.5	4.5	4.5	4.5	4.5	4.5
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	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	0.0
Total Lost Time (s)	6.5	6.5	6.5	6.5	6.5	6.5	6.5	6.5	6.5	6.5	6.5	6.5
Lead/Lag	Lead	Lag	Lead	Lead	Lag	Lead	Lead	Lag	Lead	Lead	Lag	Lead
Lead-Lag Optimize?	Yes	Yes	Yes	Yes	Yes	Yes	Yes	Yes	Yes	Yes	Yes	Yes
Recall Mode	None	None	None	None	None	None	None	C-Max	None	None	C-Max	None
Act Effct Green (s)	14.6	37.1	52.3	8.8	31.3	64.1	8.7	21.8	37.1	26.3	39.4	60.5
Actuated g/C Ratio	0.12	0.31	0.44	0.07	0.26	0.53	0.07	0.18	0.31	0.22	0.33	0.50
v/c Ratio	0.69	0.88	0.67	0.39	0.48	0.33	0.81	1.09	0.25	0.88	1.10	0.26
Control Delay	59.3	49.9	24.0	63.1	38.6	6.7	93.9	86.6	2.5	58.9	91.3	10.4
Queue Delay	0.0	0.0	0.0	0.0	0.0	0.0	0.0	0.0	0.0	0.0	0.0	0.0
Total Delay	59.3	49.9	24.0	63.1	38.6	6.7	93.9	86.6	2.5	58.9	91.3	10.4
LOS	E	D	C	E	D	A	F	F	A	E	F	B
Approach Delay		43.8			30.2			78.5			76.8	
Approach LOS		D			C			E			E	

Intersection Summary

Cycle Length: 120
Actuated Cycle Length: 120
Offset: 0 (0%), Referenced to phase 2:NBT and 6:SBT, Start of Yellow
Natural Cycle: 145
Control Type: Actuated-Coordinated
Maximum v/c Ratio: 1.10
Intersection Signal Delay: 62.6 — Intersection LOS: E
Intersection Capacity Utilization 88.0% — ICU Level of Service E
Analysis Period (min) 15

Splits and Phases: 1: Peoria Street & Martin Luther King Jr Boulevard/Fitzsimons Parkway



Movement	EBL	EBT	EBR	WBL	WBT	WBR	NBL	NBT	NBR	SBL	SBT	SBR
Lane Configurations												
Traffic Volume (veh/h)	265	885	480	90	405	270	185	925	135	605	1680	205
Future Volume (veh/h)	265	885	480	90	405	270	185	925	135	605	1680	205
Initial Q (Qb), veh	0	0	0	0	0	0	0	0	0	0	0	0
Ped-Bike Adj(A_pbT)	1.00		1.00	1.00		1.00	1.00		1.00	1.00		1.00
Parking Bus, Adj	1.00	1.00	1.00	1.00	1.00	1.00	1.00	1.00	1.00	1.00	1.00	1.00
Work Zone On Approach		No			No			No			No	
Adj Sat Flow, veh/h/ln	1870	1870	1870	1870	1870	1870	1870	1870	1870	1870	1870	1870
Adj Flow Rate, veh/h	288	962	386	98	440	293	201	1005	147	658	1826	223
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
Percent Heavy Veh, %	2	2	2	2	2	2	2	2	2	2	2	2
Cap, veh/h	352	977	548	159	779	680	245	1289	473	725	1999	782
Arrive On Green	0.10	0.28	0.28	0.02	0.07	0.07	0.07	0.25	0.25	0.21	0.39	0.39
Sat Flow, veh/h	3456	3554	1585	3456	3554	1585	3456	5106	1585	3456	5106	1585
Grp Volume(v), veh/h	288	962	386	98	440	293	201	1005	147	658	1826	223
Grp Sat Flow(s),veh/h/ln	1728	1777	1585	1728	1777	1585	1728	1702	1585	1728	1702	1585
Q Serve(g_s), s	9.8	32.3	25.3	3.4	14.4	16.0	6.9	22.0	8.6	22.3	40.7	10.0
Cycle Q Clear(g_c), s	9.8	32.3	25.3	3.4	14.4	16.0	6.9	22.0	8.6	22.3	40.7	10.0
Prop In Lane	1.00		1.00	1.00		1.00	1.00		1.00	1.00		1.00
Lane Grp Cap(c), veh/h	352	977	548	159	779	680	245	1289	473	725	1999	782
V/C Ratio(X)	0.82	0.98	0.70	0.62	0.56	0.43	0.82	0.78	0.31	0.91	0.91	0.29
Avail Cap(c_a), veh/h	475	977	548	389	888	729	245	1289	473	792	1999	782
HCM Platoon Ratio	1.00	1.00	1.00	0.33	0.33	0.33	1.00	1.00	1.00	1.00	1.00	1.00
Upstream Filter(I)	1.00	1.00	1.00	1.00	1.00	1.00	0.85	0.85	0.85	1.00	1.00	1.00
Uniform Delay (d), s/veh	52.8	43.2	33.9	58.0	50.1	28.7	55.0	41.8	32.6	46.3	34.6	17.9
Incr Delay (d2), s/veh	8.0	24.9	4.1	3.8	0.6	0.4	17.0	4.0	1.5	13.5	7.9	0.9
Initial Q Delay(d3),s/veh	0.0	0.0	0.0	0.0	0.0	0.0	0.0	0.0	0.0	0.0	0.0	0.0
%ile BackOfQ(50%),veh/ln	4.6	17.4	10.3	1.6	6.9	6.8	3.6	9.7	3.5	10.9	18.0	3.8
Unsig. Movement Delay, s/veh												
LnGrp Delay(d),s/veh	60.8	68.2	38.0	61.9	50.8	29.1	72.0	45.8	34.0	59.7	42.5	18.8
LnGrp LOS	E	E	D	E	D	C	E	D	C	E	D	B
Approach Vol, veh/h		1636			831			1353			2707	
Approach Delay, s/veh		59.7			44.4			48.4			44.7	
Approach LOS		E			D			D			D	

Timer - Assigned Phs	1	2	3	4	5	6	7	8
Phs Duration (G+Y+Rc), s	31.7	36.8	12.0	39.5	15.0	53.5	18.7	32.8
Change Period (Y+Rc), s	6.5	6.5	6.5	6.5	6.5	6.5	6.5	6.5
Max Green Setting (Gmax), s	27.5	20.0	13.5	33.0	8.5	39.0	16.5	30.0
Max Q Clear Time (g_c+I1), s	24.3	24.0	5.4	34.3	8.9	42.7	11.8	18.0
Green Ext Time (p_c), s	0.9	0.0	0.1	0.0	0.0	0.0	0.4	3.2

Intersection Summary	
HCM 6th Ctrl Delay	49.2
HCM 6th LOS	D

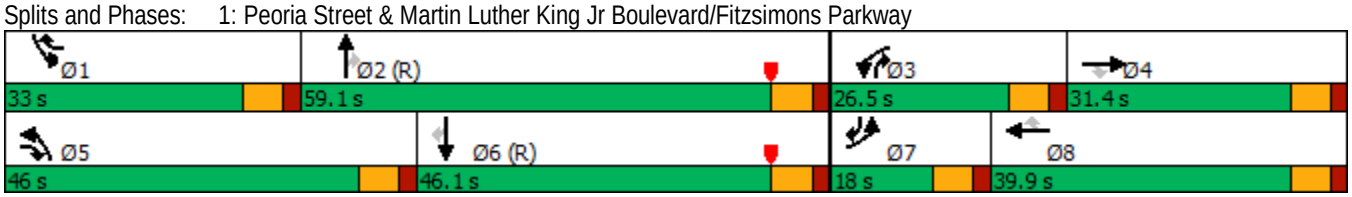
1: Peoria Street & Martin Luther King Jr Boulevard/Fitzsimons Parkway

Lane Group	EBL	EBT	EBR	WBL	WBT	WBR	NBL	NBT	NBR	SBL	SBT	SBR
Lane Configurations												
Traffic Volume (vph)	140	520	255	75	615	370	685	1620	60	460	1410	235
Future Volume (vph)	140	520	255	75	615	370	685	1620	60	460	1410	235
Turn Type	Prot	NA	pm+ov	Prot	NA	pm+ov	Prot	NA	pm+ov	Prot	NA	pm+ov
Protected Phases	7	4	5	3	8	1	5	2	3	1	6	7
Permitted Phases			4			8			2			6
Detector Phase	7	4	5	3	8	1	5	2	3	1	6	7
Switch Phase												
Minimum Initial (s)	5.0	5.0	5.0	5.0	5.0	5.0	5.0	5.0	5.0	5.0	5.0	5.0
Minimum Split (s)	11.5	24.5	11.5	24.5	24.5	11.5	11.5	24.5	24.5	11.5	24.5	11.5
Total Split (s)	18.0	31.4	46.0	26.5	39.9	33.0	46.0	59.1	26.5	33.0	46.1	18.0
Total Split (%)	12.0%	20.9%	30.7%	17.7%	26.6%	22.0%	30.7%	39.4%	17.7%	22.0%	30.7%	12.0%
Yellow Time (s)	4.5	4.5	4.5	4.5	4.5	4.5	4.5	4.5	4.5	4.5	4.5	4.5
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	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	0.0
Total Lost Time (s)	6.5	6.5	6.5	6.5	6.5	6.5	6.5	6.5	6.5	6.5	6.5	6.5
Lead/Lag	Lead	Lag	Lead	Lead	Lag	Lead	Lead	Lag	Lead	Lead	Lag	Lead
Lead-Lag Optimize?	Yes	Yes	Yes	Yes	Yes	Yes	Yes	Yes	Yes	Yes	Yes	Yes
Recall Mode	None	None	None	None	None	None	None	C-Max	None	None	C-Max	None
Act Effct Green (s)	10.8	33.8	77.2	9.0	32.0	63.8	37.0	56.0	71.5	25.3	44.3	61.5
Actuated g/C Ratio	0.07	0.23	0.51	0.06	0.21	0.43	0.25	0.37	0.48	0.17	0.30	0.41
v/c Ratio	0.62	0.71	0.32	0.40	0.89	0.54	0.88	0.93	0.08	0.87	1.02	0.34
Control Delay	78.8	59.1	11.4	73.2	71.5	24.4	84.5	42.6	0.8	76.4	79.8	12.3
Queue Delay	0.0	0.0	0.0	0.0	0.0	0.0	0.0	7.8	0.0	0.0	0.0	0.0
Total Delay	78.8	59.1	11.4	73.2	71.5	24.4	84.5	50.3	0.8	76.4	79.8	12.3
LOS	E	E	B	E	E	C	F	D	A	E	E	B
Approach Delay		48.8			55.2			59.0			71.6	
Approach LOS		D			E			E			E	

Intersection Summary

Cycle Length: 150
Actuated Cycle Length: 150
Offset: 141 (94%), Referenced to phase 2:NBT and 6:SBT, Start of Yellow
Natural Cycle: 145
Control Type: Actuated-Coordinated
Maximum v/c Ratio: 1.02
Intersection Signal Delay: 61.0 — Intersection LOS: E
Intersection Capacity Utilization 89.6% — ICU Level of Service E
Analysis Period (min) 15

Splits and Phases: 1: Peoria Street & Martin Luther King Jr Boulevard/Fitzsimons Parkway



Movement	EBL	EBT	EBR	WBL	WBT	WBR	NBL	NBT	NBR	SBL	SBT	SBR
Lane Configurations												
Traffic Volume (veh/h)	140	520	255	75	615	370	685	1620	60	460	1410	235
Future Volume (veh/h)	140	520	255	75	615	370	685	1620	60	460	1410	235
Initial Q (Qb), veh	0	0	0	0	0	0	0	0	0	0	0	0
Ped-Bike Adj(A_pbT)	1.00		1.00	1.00		1.00	1.00		1.00	1.00		1.00
Parking Bus, Adj	1.00	1.00	1.00	1.00	1.00	1.00	1.00	1.00	1.00	1.00	1.00	1.00
Work Zone On Approach		No			No			No			No	
Adj Sat Flow, veh/h/ln	1870	1870	1870	1870	1870	1870	1870	1870	1870	1870	1870	1870
Adj Flow Rate, veh/h	152	565	277	82	668	402	745	1761	65	500	1533	255
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
Percent Heavy Veh, %	2	2	2	2	2	2	2	2	2	2	2	2
Cap, veh/h	198	861	748	131	791	606	794	1975	673	552	1617	593
Arrive On Green	0.06	0.24	0.24	0.04	0.22	0.22	0.46	0.77	0.77	0.16	0.32	0.32
Sat Flow, veh/h	3456	3554	1585	3456	3554	1585	3456	5106	1585	3456	5106	1585
Grp Volume(v), veh/h	152	565	277	82	668	402	745	1761	65	500	1533	255
Grp Sat Flow(s),veh/h/ln	1728	1777	1585	1728	1777	1585	1728	1702	1585	1728	1702	1585
Q Serve(g_s), s	6.5	21.5	16.8	3.5	27.0	31.5	30.7	37.7	1.4	21.3	44.0	18.0
Cycle Q Clear(g_c), s	6.5	21.5	16.8	3.5	27.0	31.5	30.7	37.7	1.4	21.3	44.0	18.0
Prop In Lane	1.00		1.00	1.00		1.00	1.00		1.00	1.00		1.00
Lane Grp Cap(c), veh/h	198	861	748	131	791	606	794	1975	673	552	1617	593
V/C Ratio(X)	0.77	0.66	0.37	0.63	0.84	0.66	0.94	0.89	0.10	0.91	0.95	0.43
Avail Cap(c_a), veh/h	265	861	748	461	791	606	910	1975	673	611	1617	593
HCM Platoon Ratio	1.00	1.00	1.00	1.00	1.00	1.00	2.00	2.00	2.00	1.00	1.00	1.00
Upstream Filter(I)	1.00	1.00	1.00	1.00	1.00	1.00	0.47	0.47	0.47	1.00	1.00	1.00
Uniform Delay (d), s/veh	69.7	51.2	25.3	71.1	55.8	38.3	39.5	14.7	9.3	61.9	50.0	35.0
Incr Delay (d2), s/veh	9.1	1.8	0.3	4.9	8.3	2.7	8.7	3.3	0.1	16.2	13.0	2.3
Initial Q Delay(d3),s/veh	0.0	0.0	0.0	0.0	0.0	0.0	0.0	0.0	0.0	0.0	0.0	0.0
%ile BackOfQ(50%),veh/ln	3.1	9.9	6.5	1.7	13.0	12.8	11.9	7.5	0.5	10.6	20.6	7.4
Unsig. Movement Delay, s/veh												
LnGrp Delay(d),s/veh	78.8	53.0	25.6	76.0	64.1	41.0	48.2	18.0	9.4	78.1	63.1	37.3
LnGrp LOS	E	D	C	E	E	D	D	B	A	E	E	D
Approach Vol, veh/h		994			1152			2571			2288	
Approach Delay, s/veh		49.3			56.9			26.5			63.5	
Approach LOS		D			E			C			E	

Timer - Assigned Phs	1	2	3	4	5	6	7	8
Phs Duration (G+Y+Rc), s	30.5	64.5	12.2	42.8	41.0	54.0	15.1	39.9
Change Period (Y+Rc), s	6.5	6.5	6.5	6.5	6.5	6.5	6.5	6.5
Max Green Setting (Gmax), s	26.5	52.6	20.0	24.9	39.5	39.6	11.5	33.4
Max Q Clear Time (g_c+I1), s	23.3	39.7	5.5	23.5	32.7	46.0	8.5	33.5
Green Ext Time (p_c), s	0.6	9.6	0.2	0.7	1.8	0.0	0.1	0.0

Intersection Summary	
HCM 6th Ctrl Delay	46.8
HCM 6th LOS	D

Intersection	
Int Delay, s/veh	0.2

Movement	EBT	EBR	WBL	WBT	NBL	NBR
Lane Configurations	↑↑	↱		↑↑		↱
Traffic Vol, veh/h	1415	195	0	760	0	30
Future Vol, veh/h	1415	195	0	760	0	30
Conflicting Peds, #/hr	0	0	0	0	0	0
Sign Control	Free	Free	Free	Free	Stop	Stop
RT Channelized	-	None	-	None	-	None
Storage Length	-	150	-	-	-	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	1538	212	0	826	0	33

Major/Minor	Major1		Major2		Minor1	
Conflicting Flow All	0	0	-	-	-	769
Stage 1	-	-	-	-	-	-
Stage 2	-	-	-	-	-	-
Critical Hdwy	-	-	-	-	-	6.94
Critical Hdwy Stg 1	-	-	-	-	-	-
Critical Hdwy Stg 2	-	-	-	-	-	-
Follow-up Hdwy	-	-	-	-	-	3.32
Pot Cap-1 Maneuver	-	-	0	-	0	*476
Stage 1	-	-	0	-	0	-
Stage 2	-	-	0	-	0	-
Platoon blocked, %	-	-		-		1
Mov Cap-1 Maneuver	-	-	-	-	-	*476
Mov Cap-2 Maneuver	-	-	-	-	-	-
Stage 1	-	-	-	-	-	-
Stage 2	-	-	-	-	-	-

Approach	EB	WB	NB
HCM Control Delay, s	0	0	13.1
HCM LOS			B

Minor Lane/Major Mvmt	NBLn1	EBT	EBR	WBT
Capacity (veh/h)	476	-	-	-
HCM Lane V/C Ratio	0.069	-	-	-
HCM Control Delay (s)	13.1	-	-	-
HCM Lane LOS	B	-	-	-
HCM 95th %tile Q(veh)	0.2	-	-	-

Notes

~: Volume exceeds capacity $: Delay exceeds 300s +: Computation Not Defined *: All major volume in platoon

Intersection	
Int Delay, s/veh	1

Movement	EBT	EBR	WBL	WBT	NBL	NBR
Lane Configurations	↑↑	↱		↑↑		↱
Traffic Vol, veh/h	995	35	0	1050	0	175
Future Vol, veh/h	995	35	0	1050	0	175
Conflicting Peds, #/hr	0	0	0	0	0	0
Sign Control	Free	Free	Free	Free	Stop	Stop
RT Channelized	-	None	-	None	-	None
Storage Length	-	150	-	-	-	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	1082	38	0	1141	0	190

Major/Minor	Major1		Major2		Minor1	
Conflicting Flow All	0	0	-	-	-	541
Stage 1	-	-	-	-	-	-
Stage 2	-	-	-	-	-	-
Critical Hdwy	-	-	-	-	-	6.94
Critical Hdwy Stg 1	-	-	-	-	-	-
Critical Hdwy Stg 2	-	-	-	-	-	-
Follow-up Hdwy	-	-	-	-	-	3.32
Pot Cap-1 Maneuver	-	-	0	-	0	*660
Stage 1	-	-	0	-	0	-
Stage 2	-	-	0	-	0	-
Platoon blocked, %	-	-		-		1
Mov Cap-1 Maneuver	-	-	-	-	-	*660
Mov Cap-2 Maneuver	-	-	-	-	-	-
Stage 1	-	-	-	-	-	-
Stage 2	-	-	-	-	-	-

Approach	EB	WB	NB
HCM Control Delay, s	0	0	12.6
HCM LOS			B

Minor Lane/Major Mvmt	NBLn1	EBT	EBR	WBT
Capacity (veh/h)	660	-	-	-
HCM Lane V/C Ratio	0.288	-	-	-
HCM Control Delay (s)	12.6	-	-	-
HCM Lane LOS	B	-	-	-
HCM 95th %tile Q(veh)	1.2	-	-	-

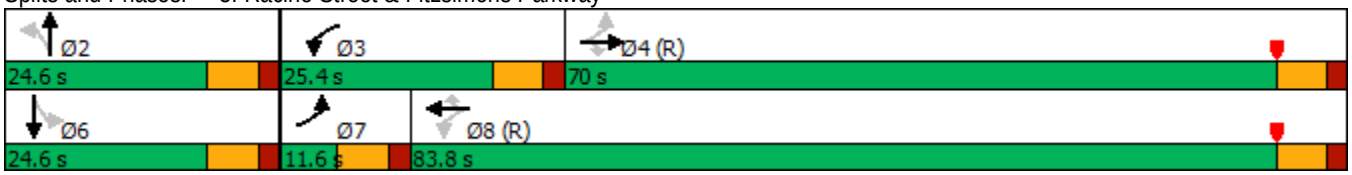
Notes

~: Volume exceeds capacity $: Delay exceeds 300s +: Computation Not Defined *: All major volume in platoon

Lane Group	EBL	EBT	EBR	WBL	WBT	WBR	NBL	NBT	SBL	SBT
Lane Configurations										
Traffic Volume (vph)	10	1335	105	195	735	20	30	5	5	5
Future Volume (vph)	10	1335	105	195	735	20	30	5	5	5
Turn Type	pm+pt	NA	Perm	pm+pt	NA	Perm	Perm	NA	Perm	NA
Protected Phases	7	4		3	8			2		6
Permitted Phases	4		4	8		8	2		6	
Detector Phase	7	4	4	3	8	8	2	2	6	6
Switch Phase										
Minimum Initial (s)	5.0	5.0	5.0	5.0	5.0	5.0	5.0	5.0	5.0	5.0
Minimum Split (s)	11.5	24.5	24.5	11.5	24.5	24.5	24.5	24.5	24.5	24.5
Total Split (s)	11.6	70.0	70.0	25.4	83.8	83.8	24.6	24.6	24.6	24.6
Total Split (%)	9.7%	58.3%	58.3%	21.2%	69.8%	69.8%	20.5%	20.5%	20.5%	20.5%
Yellow Time (s)	4.5	4.5	4.5	4.5	4.5	4.5	4.5	4.5	4.5	4.5
All-Red Time (s)	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
Total Lost Time (s)	6.5	6.5	6.5	6.5	6.5	6.5	6.5	6.5		6.5
Lead/Lag	Lead	Lag	Lag	Lead	Lag	Lag				
Lead-Lag Optimize?	Yes	Yes	Yes	Yes	Yes	Yes				
Recall Mode	None	C-Max	C-Max	None	C-Max	C-Max	Max	Max	None	None
Act Effct Green (s)	74.1	69.0	69.0	88.9	86.6	86.6	18.1	18.1		18.1
Actuated g/C Ratio	0.62	0.58	0.58	0.74	0.72	0.72	0.15	0.15		0.15
v/c Ratio	0.02	0.71	0.12	0.70	0.31	0.02	0.16	0.06		0.06
Control Delay	1.1	4.2	0.1	28.9	11.5	1.4	46.5	26.7		34.9
Queue Delay	0.0	0.0	0.0	0.0	0.0	0.0	0.0	0.0		0.0
Total Delay	1.1	4.2	0.1	28.9	11.5	1.4	46.5	26.7		34.9
LOS	A	A	A	C	B	A	D	C		C
Approach Delay		3.9			14.8			40.1		34.9
Approach LOS		A			B			D		C

Intersection Summary	
Cycle Length: 120	
Actuated Cycle Length: 120	
Offset: 108 (90%), Referenced to phase 4:EBTL and 8:WBTL, Start of Yellow	
Natural Cycle: 90	
Control Type: Actuated-Coordinated	
Maximum v/c Ratio: 0.71	
Intersection Signal Delay: 9.0	Intersection LOS: A
Intersection Capacity Utilization 69.2%	ICU Level of Service C
Analysis Period (min) 15	

Splits and Phases: 3: Racine Street & Fitzsimons Parkway



Movement	EBL	EBT	EBR	WBL	WBT	WBR	NBL	NBT	NBR	SBL	SBT	SBR
Lane Configurations												
Traffic Volume (veh/h)	10	1335	105	195	735	20	30	5	10	5	5	5
Future Volume (veh/h)	10	1335	105	195	735	20	30	5	10	5	5	5
Initial Q (Qb), veh	0	0	0	0	0	0	0	0	0	0	0	0
Ped-Bike Adj(A_pbT)	1.00		1.00	1.00		1.00	1.00		1.00	1.00		1.00
Parking Bus, Adj	1.00	1.00	1.00	1.00	1.00	1.00	1.00	1.00	1.00	1.00	1.00	1.00
Work Zone On Approach		No			No			No			No	
Adj Sat Flow, veh/h/ln	1870	1870	1870	1870	1870	1870	1870	1870	1870	1870	1870	1870
Adj Flow Rate, veh/h	11	1451	114	212	799	22	33	5	11	5	5	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
Percent Heavy Veh, %	2	2	2	2	2	2	2	2	2	2	2	2
Cap, veh/h	435	2225	993	374	2395	1068	275	78	173	103	101	82
Arrive On Green	0.03	1.00	1.00	0.04	0.45	0.45	0.15	0.15	0.15	0.15	0.15	0.15
Sat Flow, veh/h	1781	3554	1585	1781	3554	1585	1405	520	1144	417	670	544
Grp Volume(v), veh/h	11	1451	114	212	799	22	33	0	16	15	0	0
Grp Sat Flow(s),veh/h/ln	1781	1777	1585	1781	1777	1585	1405	0	1664	1631	0	0
Q Serve(g_s), s	0.3	0.0	0.0	4.8	17.4	0.9	1.3	0.0	1.0	0.0	0.0	0.0
Cycle Q Clear(g_c), s	0.3	0.0	0.0	4.8	17.4	0.9	2.2	0.0	1.0	0.9	0.0	0.0
Prop In Lane	1.00		1.00	1.00		1.00	1.00		0.69	0.33		0.33
Lane Grp Cap(c), veh/h	435	2225	993	374	2395	1068	275	0	251	286	0	0
V/C Ratio(X)	0.03	0.65	0.11	0.57	0.33	0.02	0.12	0.00	0.06	0.05	0.00	0.00
Avail Cap(c_a), veh/h	488	2225	993	546	2395	1068	275	0	251	286	0	0
HCM Platoon Ratio	2.00	2.00	2.00	0.67	0.67	0.67	1.00	1.00	1.00	1.00	1.00	1.00
Upstream Filter(I)	1.00	1.00	1.00	1.00	1.00	1.00	1.00	0.00	1.00	1.00	0.00	0.00
Uniform Delay (d), s/veh	8.3	0.0	0.0	6.4	15.5	11.0	44.1	0.0	43.7	43.6	0.0	0.0
Incr Delay (d2), s/veh	0.0	1.5	0.2	1.4	0.4	0.0	0.9	0.0	0.5	0.1	0.0	0.0
Initial Q Delay(d3),s/veh	0.0	0.0	0.0	0.0	0.0	0.0	0.0	0.0	0.0	0.0	0.0	0.0
%ile BackOfQ(50%),veh/ln	0.1	0.5	0.1	1.9	7.8	0.3	0.9	0.0	0.4	0.4	0.0	0.0
Unsig. Movement Delay, s/veh												
LnGrp Delay(d),s/veh	8.4	1.5	0.2	7.8	15.9	11.0	45.0	0.0	44.2	43.7	0.0	0.0
LnGrp LOS	A	A	A	A	B	B	D	A	D	D	A	A
Approach Vol, veh/h		1576			1033			49			15	
Approach Delay, s/veh		1.5			14.1			44.8			43.7	
Approach LOS		A			B			D			D	

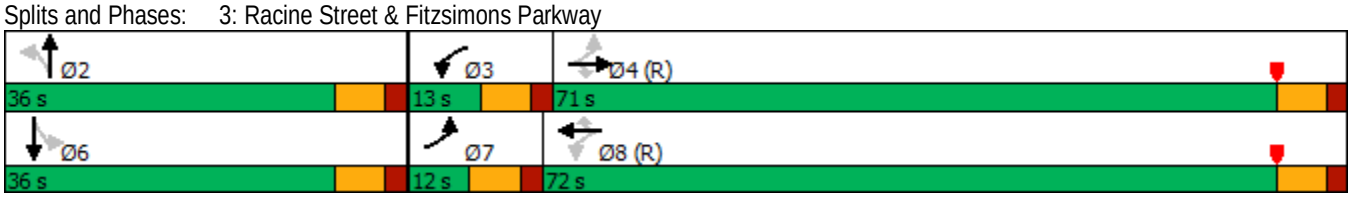
Timer - Assigned Phs		2	3	4		6	7	8				
Phs Duration (G+Y+Rc), s		24.6	13.8	81.6		24.6	8.0	87.4				
Change Period (Y+Rc), s		6.5	6.5	6.5		6.5	6.5	6.5				
Max Green Setting (Gmax), s		18.1	18.9	63.5		18.1	5.1	77.3				
Max Q Clear Time (g_c+I1), s		4.2	6.8	2.0		2.9	2.3	19.4				
Green Ext Time (p_c), s		0.1	0.5	18.9		0.0	0.0	7.0				

Intersection Summary	
HCM 6th Ctrl Delay	7.4
HCM 6th LOS	A

Lane Group	EBL	EBT	EBR	WBL	WBT	WBR	NBL	NBT	SBL	SBT
Lane Configurations										
Traffic Volume (vph)	10	1130	25	35	890	20	165	5	5	5
Future Volume (vph)	10	1130	25	35	890	20	165	5	5	5
Turn Type	pm+pt	NA	Perm	pm+pt	NA	Perm	Perm	NA	Perm	NA
Protected Phases	7	4		3	8			2		6
Permitted Phases	4		4	8		8	2		6	
Detector Phase	7	4	4	3	8	8	2	2	6	6
Switch Phase										
Minimum Initial (s)	5.0	5.0	5.0	5.0	5.0	5.0	5.0	5.0	5.0	5.0
Minimum Split (s)	11.5	24.5	24.5	11.5	24.5	24.5	24.5	24.5	24.5	24.5
Total Split (s)	12.0	71.0	71.0	13.0	72.0	72.0	36.0	36.0	36.0	36.0
Total Split (%)	10.0%	59.2%	59.2%	10.8%	60.0%	60.0%	30.0%	30.0%	30.0%	30.0%
Yellow Time (s)	4.5	4.5	4.5	4.5	4.5	4.5	4.5	4.5	4.5	4.5
All-Red Time (s)	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
Total Lost Time (s)	6.5	6.5	6.5	6.5	6.5	6.5	6.5	6.5		6.5
Lead/Lag	Lead	Lag	Lag	Lead	Lag	Lag				
Lead-Lag Optimize?	Yes	Yes	Yes	Yes	Yes	Yes				
Recall Mode	None	C-Max	C-Max	None	C-Max	C-Max	Max	Max	None	None
Act Effct Green (s)	73.0	69.7	69.7	76.4	75.1	75.1	29.5	29.5		29.5
Actuated g/C Ratio	0.61	0.58	0.58	0.64	0.63	0.63	0.25	0.25		0.25
v/c Ratio	0.03	0.60	0.03	0.15	0.44	0.02	0.52	0.06		0.04
Control Delay	8.1	18.6	0.0	10.6	13.5	0.7	45.6	16.2		27.3
Queue Delay	0.0	0.0	0.0	0.0	0.0	0.0	0.0	0.0		0.0
Total Delay	8.1	18.6	0.0	10.6	13.5	0.7	45.6	16.2		27.3
LOS	A	B	A	B	B	A	D	B		C
Approach Delay		18.1			13.1			41.8		27.3
Approach LOS		B			B			D		C

Intersection Summary	
Cycle Length: 120	
Actuated Cycle Length: 120	
Offset: 15 (13%), Referenced to phase 4:EBTL and 8:WBTL, Start of Yellow	
Natural Cycle: 70	
Control Type: Actuated-Coordinated	
Maximum v/c Ratio: 0.60	
Intersection Signal Delay: 18.1	Intersection LOS: B
Intersection Capacity Utilization 57.9%	ICU Level of Service B
Analysis Period (min) 15	

Splits and Phases: 3: Racine Street & Fitzsimons Parkway



Movement	EBL	EBT	EBR	WBL	WBT	WBR	NBL	NBT	NBR	SBL	SBT	SBR
Lane Configurations												
Traffic Volume (veh/h)	10	1130	25	35	890	20	165	5	20	5	5	5
Future Volume (veh/h)	10	1130	25	35	890	20	165	5	20	5	5	5
Initial Q (Qb), veh	0	0	0	0	0	0	0	0	0	0	0	0
Ped-Bike Adj(A_pbT)	1.00		1.00	1.00		1.00	1.00		1.00	1.00		1.00
Parking Bus, Adj	1.00	1.00	1.00	1.00	1.00	1.00	1.00	1.00	1.00	1.00	1.00	1.00
Work Zone On Approach		No			No			No			No	
Adj Sat Flow, veh/h/ln	1870	1870	1870	1870	1870	1870	1870	1870	1870	1870	1870	1870
Adj Flow Rate, veh/h	11	1228	27	38	967	22	179	5	22	5	5	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
Percent Heavy Veh, %	2	2	2	2	2	2	2	2	2	2	2	2
Cap, veh/h	409	1996	890	259	2057	918	408	74	327	153	152	132
Arrive On Green	0.01	0.56	0.56	0.06	1.00	1.00	0.25	0.25	0.25	0.25	0.25	0.25
Sat Flow, veh/h	1781	3554	1585	1781	3554	1585	1405	302	1329	458	617	537
Grp Volume(v), veh/h	11	1228	27	38	967	22	179	0	27	15	0	0
Grp Sat Flow(s),veh/h/ln	1781	1777	1585	1781	1777	1585	1405	0	1631	1612	0	0
Q Serve(g_s), s	0.3	27.8	0.9	1.1	0.0	0.0	12.2	0.0	1.5	0.0	0.0	0.0
Cycle Q Clear(g_c), s	0.3	27.8	0.9	1.1	0.0	0.0	13.0	0.0	1.5	0.8	0.0	0.0
Prop In Lane	1.00		1.00	1.00		1.00	1.00		0.81	0.33		0.33
Lane Grp Cap(c), veh/h	409	1996	890	259	2057	918	408	0	401	436	0	0
V/C Ratio(X)	0.03	0.62	0.03	0.15	0.47	0.02	0.44	0.00	0.07	0.03	0.00	0.00
Avail Cap(c_a), veh/h	468	1996	890	303	2057	918	408	0	401	436	0	0
HCM Platoon Ratio	1.00	1.00	1.00	2.00	2.00	2.00	1.00	1.00	1.00	1.00	1.00	1.00
Upstream Filter(I)	1.00	1.00	1.00	1.00	1.00	1.00	1.00	0.00	1.00	1.00	0.00	0.00
Uniform Delay (d), s/veh	10.9	17.6	11.7	13.3	0.0	0.0	38.9	0.0	34.7	34.4	0.0	0.0
Incr Delay (d2), s/veh	0.0	1.4	0.1	0.3	0.8	0.0	3.4	0.0	0.3	0.0	0.0	0.0
Initial Q Delay(d3),s/veh	0.0	0.0	0.0	0.0	0.0	0.0	0.0	0.0	0.0	0.0	0.0	0.0
%ile BackOfQ(50%),veh/ln	0.1	11.4	0.3	0.4	0.2	0.0	4.9	0.0	0.6	0.3	0.0	0.0
Unsig. Movement Delay, s/veh												
LnGrp Delay(d),s/veh	11.0	19.0	11.8	13.6	0.8	0.0	42.3	0.0	35.0	34.5	0.0	0.0
LnGrp LOS	B	B	B	B	A	A	D	A	D	C	A	A
Approach Vol, veh/h		1266			1027			206			15	
Approach Delay, s/veh		18.8			1.2			41.4			34.5	
Approach LOS		B			A			D			C	

Timer - Assigned Phs		2	3	4		6	7	8				
Phs Duration (G+Y+Rc), s		36.0	10.1	73.9		36.0	8.0	76.0				
Change Period (Y+Rc), s		6.5	6.5	6.5		6.5	6.5	6.5				
Max Green Setting (Gmax), s		29.5	6.5	64.5		29.5	5.5	65.5				
Max Q Clear Time (g_c+I1), s		15.0	3.1	29.8		2.8	2.3	2.0				
Green Ext Time (p_c), s		0.5	0.0	11.9		0.0	0.0	9.2				

Intersection Summary	
HCM 6th Ctrl Delay	13.6
HCM 6th LOS	B

Intersection	
Int Delay, s/veh	0.1

Movement	EBT	EBR	WBL	WBT	NBL	NBR
Lane Configurations	↑↑	↱		↑↑		↱
Traffic Vol, veh/h	1150	190	0	940	0	25
Future Vol, veh/h	1150	190	0	940	0	25
Conflicting Peds, #/hr	0	0	0	0	0	0
Sign Control	Free	Free	Free	Free	Stop	Stop
RT Channelized	-	None	-	None	-	None
Storage Length	-	150	-	-	-	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	1250	207	0	1022	0	27

Major/Minor	Major1		Major2		Minor1	
Conflicting Flow All	0	0	-	-	-	625
Stage 1	-	-	-	-	-	-
Stage 2	-	-	-	-	-	-
Critical Hdwy	-	-	-	-	-	6.94
Critical Hdwy Stg 1	-	-	-	-	-	-
Critical Hdwy Stg 2	-	-	-	-	-	-
Follow-up Hdwy	-	-	-	-	-	3.32
Pot Cap-1 Maneuver	-	-	0	-	0	*607
Stage 1	-	-	0	-	0	-
Stage 2	-	-	0	-	0	-
Platoon blocked, %	-	-		-		1
Mov Cap-1 Maneuver	-	-	-	-	-	*607
Mov Cap-2 Maneuver	-	-	-	-	-	-
Stage 1	-	-	-	-	-	-
Stage 2	-	-	-	-	-	-

Approach	EB	WB	NB
HCM Control Delay, s	0	0	11.2
HCM LOS			B

Minor Lane/Major Mvmt	NBLn1	EBT	EBR	WBT
Capacity (veh/h)	607	-	-	-
HCM Lane V/C Ratio	0.045	-	-	-
HCM Control Delay (s)	11.2	-	-	-
HCM Lane LOS	B	-	-	-
HCM 95th %tile Q(veh)	0.1	-	-	-

Notes

~: Volume exceeds capacity $: Delay exceeds 300s +: Computation Not Defined *: All major volume in platoon

Intersection	
Int Delay, s/veh	0.9

Movement	EBT	EBR	WBL	WBT	NBL	NBR
Lane Configurations	↑↑	↱		↑↑		↱
Traffic Vol, veh/h	1100	45	0	945	0	155
Future Vol, veh/h	1100	45	0	945	0	155
Conflicting Peds, #/hr	0	0	0	0	0	0
Sign Control	Free	Free	Free	Free	Stop	Stop
RT Channelized	-	None	-	None	-	None
Storage Length	-	150	-	-	-	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	1196	49	0	1027	0	168

Major/Minor	Major1		Major2		Minor1	
Conflicting Flow All	0	0	-	-	-	598
Stage 1	-	-	-	-	-	-
Stage 2	-	-	-	-	-	-
Critical Hdwy	-	-	-	-	-	6.94
Critical Hdwy Stg 1	-	-	-	-	-	-
Critical Hdwy Stg 2	-	-	-	-	-	-
Follow-up Hdwy	-	-	-	-	-	3.32
Pot Cap-1 Maneuver	-	-	0	-	0	*633
Stage 1	-	-	0	-	0	-
Stage 2	-	-	0	-	0	-
Platoon blocked, %	-	-		-		1
Mov Cap-1 Maneuver	-	-	-	-	-	*633
Mov Cap-2 Maneuver	-	-	-	-	-	-
Stage 1	-	-	-	-	-	-
Stage 2	-	-	-	-	-	-

Approach	EB	WB	NB
HCM Control Delay, s	0	0	12.7
HCM LOS			B

Minor Lane/Major Mvmt	NBLn1	EBT	EBR	WBT
Capacity (veh/h)	633	-	-	-
HCM Lane V/C Ratio	0.266	-	-	-
HCM Control Delay (s)	12.7	-	-	-
HCM Lane LOS	B	-	-	-
HCM 95th %tile Q(veh)	1.1	-	-	-

Notes

~: Volume exceeds capacity $: Delay exceeds 300s +: Computation Not Defined *: All major volume in platoon

Intersection	
Int Delay, s/veh	0

Movement	EBT	EBR	WBL	WBT	NBL	NBR
Lane Configurations						
Traffic Vol, veh/h	1130	45	0	940	0	0
Future Vol, veh/h	1130	45	0	940	0	0
Conflicting Peds, #/hr	0	0	0	0	0	0
Sign Control	Free	Free	Free	Free	Stop	Stop
RT Channelized	-	None	-	None	-	None
Storage Length	-	-	-	-	-	0
Veh in Median Storage, #	0	-	-	0	0	-
Grade, %	0	-	-	0	0	-
Peak Hour Factor	92	92	92	92	92	92
Heavy Vehicles, %	2	2	2	2	2	2
Mvmt Flow	1228	49	0	1022	0	0

Major/Minor	Major1		Major2		Minor1	
Conflicting Flow All	0	0	-	-	-	639
Stage 1	-	-	-	-	-	-
Stage 2	-	-	-	-	-	-
Critical Hdwy	-	-	-	-	-	6.94
Critical Hdwy Stg 1	-	-	-	-	-	-
Critical Hdwy Stg 2	-	-	-	-	-	-
Follow-up Hdwy	-	-	-	-	-	3.32
Pot Cap-1 Maneuver	-	-	0	-	0	419
Stage 1	-	-	0	-	0	-
Stage 2	-	-	0	-	0	-
Platoon blocked, %	-	-		-		
Mov Cap-1 Maneuver	-	-	-	-	-	419
Mov Cap-2 Maneuver	-	-	-	-	-	-
Stage 1	-	-	-	-	-	-
Stage 2	-	-	-	-	-	-

Approach	EB	WB	NB
HCM Control Delay, s	0	0	0
HCM LOS			A

Minor Lane/Major Mvmt	NBLn1	EBT	EBR	WBT
Capacity (veh/h)	-	-	-	-
HCM Lane V/C Ratio	-	-	-	-
HCM Control Delay (s)	0	-	-	-
HCM Lane LOS	A	-	-	-
HCM 95th %tile Q(veh)	-	-	-	-

Intersection	
Int Delay, s/veh	0

Movement	EBT	EBR	WBL	WBT	NBL	NBR
Lane Configurations						
Traffic Vol, veh/h	1225	25	0	945	0	0
Future Vol, veh/h	1225	25	0	945	0	0
Conflicting Peds, #/hr	0	0	0	0	0	0
Sign Control	Free	Free	Free	Free	Stop	Stop
RT Channelized	-	None	-	None	-	None
Storage Length	-	-	-	-	-	0
Veh in Median Storage, #	0	-	-	0	0	-
Grade, %	0	-	-	0	0	-
Peak Hour Factor	92	92	92	92	92	92
Heavy Vehicles, %	2	2	2	2	2	2
Mvmt Flow	1332	27	0	1027	0	0

Major/Minor	Major1		Major2		Minor1	
Conflicting Flow All	0	0	-	-	-	680
Stage 1	-	-	-	-	-	-
Stage 2	-	-	-	-	-	-
Critical Hdwy	-	-	-	-	-	6.94
Critical Hdwy Stg 1	-	-	-	-	-	-
Critical Hdwy Stg 2	-	-	-	-	-	-
Follow-up Hdwy	-	-	-	-	-	3.32
Pot Cap-1 Maneuver	-	-	0	-	0	393
Stage 1	-	-	0	-	0	-
Stage 2	-	-	0	-	0	-
Platoon blocked, %	-	-		-		
Mov Cap-1 Maneuver	-	-	-	-	-	393
Mov Cap-2 Maneuver	-	-	-	-	-	-
Stage 1	-	-	-	-	-	-
Stage 2	-	-	-	-	-	-

Approach	EB	WB	NB
HCM Control Delay, s	0	0	0
HCM LOS			A

Minor Lane/Major Mvmt	NBLn1	EBT	EBR	WBT
Capacity (veh/h)	-	-	-	-
HCM Lane V/C Ratio	-	-	-	-
HCM Control Delay (s)	0	-	-	-
HCM Lane LOS	A	-	-	-
HCM 95th %tile Q(veh)	-	-	-	-

Intersection	
Int Delay, s/veh	2.1

Movement	EBT	EBR	WBL	WBT	NBL	NBR
Lane Configurations	↑↑			↑↑		↱
Traffic Vol, veh/h	838	0	0	616	0	104
Future Vol, veh/h	838	0	0	616	0	104
Conflicting Peds, #/hr	0	0	0	0	0	0
Sign Control	Free	Free	Free	Free	Stop	Stop
RT Channelized	-	None	-	None	-	None
Storage Length	-	-	-	-	-	0
Veh in Median Storage, #	0	-	-	0	0	-
Grade, %	0	-	-	0	0	-
Peak Hour Factor	77	77	86	86	46	46
Heavy Vehicles, %	2	2	2	2	2	2
Mvmt Flow	1088	0	0	716	0	226

Major/Minor	Major1		Major2		Minor1	
Conflicting Flow All	0	-	-	-	-	544
Stage 1	-	-	-	-	-	-
Stage 2	-	-	-	-	-	-
Critical Hdwy	-	-	-	-	-	6.94
Critical Hdwy Stg 1	-	-	-	-	-	-
Critical Hdwy Stg 2	-	-	-	-	-	-
Follow-up Hdwy	-	-	-	-	-	3.32
Pot Cap-1 Maneuver	-	0	0	-	0	483
Stage 1	-	0	0	-	0	-
Stage 2	-	0	0	-	0	-
Platoon blocked, %	-			-		
Mov Cap-1 Maneuver	-	-	-	-	-	483
Mov Cap-2 Maneuver	-	-	-	-	-	-
Stage 1	-	-	-	-	-	-
Stage 2	-	-	-	-	-	-

Approach	EB	WB	NB
HCM Control Delay, s	0	0	18.8
HCM LOS			C

Minor Lane/Major Mvmt	NBLn1	EBT	WBT
Capacity (veh/h)	483	-	-
HCM Lane V/C Ratio	0.468	-	-
HCM Control Delay (s)	18.8	-	-
HCM Lane LOS	C	-	-
HCM 95th %tile Q(veh)	2.5	-	-

Intersection	
Int Delay, s/veh	0.6

Movement	EBT	EBR	WBL	WBT	NBL	NBR
Lane Configurations	↑↑			↑↑		↱
Traffic Vol, veh/h	766	0	0	665	0	43
Future Vol, veh/h	766	0	0	665	0	43
Conflicting Peds, #/hr	0	0	0	0	0	0
Sign Control	Free	Free	Free	Free	Stop	Stop
RT Channelized	-	None	-	None	-	None
Storage Length	-	-	-	-	-	0
Veh in Median Storage, #	0	-	-	0	0	-
Grade, %	0	-	-	0	0	-
Peak Hour Factor	97	97	90	90	55	55
Heavy Vehicles, %	2	2	2	2	2	2
Mvmt Flow	790	0	0	739	0	78

Major/Minor	Major1		Major2		Minor1	
Conflicting Flow All	0	-	-	-	-	395
Stage 1	-	-	-	-	-	-
Stage 2	-	-	-	-	-	-
Critical Hdwy	-	-	-	-	-	6.94
Critical Hdwy Stg 1	-	-	-	-	-	-
Critical Hdwy Stg 2	-	-	-	-	-	-
Follow-up Hdwy	-	-	-	-	-	3.32
Pot Cap-1 Maneuver	-	0	0	-	0	604
Stage 1	-	0	0	-	0	-
Stage 2	-	0	0	-	0	-
Platoon blocked, %	-			-		
Mov Cap-1 Maneuver	-	-	-	-	-	604
Mov Cap-2 Maneuver	-	-	-	-	-	-
Stage 1	-	-	-	-	-	-
Stage 2	-	-	-	-	-	-

Approach	EB	WB	NB
HCM Control Delay, s	0	0	11.8
HCM LOS			B

Minor Lane/Major Mvmt	NBLn1	EBT	WBT
Capacity (veh/h)	604	-	-
HCM Lane V/C Ratio	0.129	-	-
HCM Control Delay (s)	11.8	-	-
HCM Lane LOS	B	-	-
HCM 95th %tile Q(veh)	0.4	-	-

Intersection	
Int Delay, s/veh	0.7

Movement	EBT	EBR	WBL	WBT	NBL	NBR
Lane Configurations	↑↑			↑↑		↱
Traffic Vol, veh/h	920	0	0	675	0	115
Future Vol, veh/h	920	0	0	675	0	115
Conflicting Peds, #/hr	0	0	0	0	0	0
Sign Control	Free	Free	Free	Free	Stop	Stop
RT Channelized	-	None	-	None	-	None
Storage Length	-	-	-	-	-	0
Veh in Median Storage, #	0	-	-	0	0	-
Grade, %	0	-	-	0	0	-
Peak Hour Factor	92	92	92	92	92	92
Heavy Vehicles, %	2	2	2	2	2	2
Mvmt Flow	1000	0	0	734	0	125

Major/Minor	Major1		Major2		Minor1	
Conflicting Flow All	0	-	-	-	-	500
Stage 1	-	-	-	-	-	-
Stage 2	-	-	-	-	-	-
Critical Hdwy	-	-	-	-	-	6.94
Critical Hdwy Stg 1	-	-	-	-	-	-
Critical Hdwy Stg 2	-	-	-	-	-	-
Follow-up Hdwy	-	-	-	-	-	3.32
Pot Cap-1 Maneuver	-	0	0	-	0	*711
Stage 1	-	0	0	-	0	-
Stage 2	-	0	0	-	0	-
Platoon blocked, %	-			-		1
Mov Cap-1 Maneuver	-	-	-	-	-	*711
Mov Cap-2 Maneuver	-	-	-	-	-	-
Stage 1	-	-	-	-	-	-
Stage 2	-	-	-	-	-	-

Approach	EB	WB	NB
HCM Control Delay, s	0	0	11.1
HCM LOS			B

Minor Lane/Major Mvmt	NBLn1	EBT	WBT
Capacity (veh/h)	711	-	-
HCM Lane V/C Ratio	0.176	-	-
HCM Control Delay (s)	11.1	-	-
HCM Lane LOS	B	-	-
HCM 95th %tile Q(veh)	0.6	-	-

Notes

~: Volume exceeds capacity $: Delay exceeds 300s +: Computation Not Defined *: All major volume in platoon

Intersection	
Int Delay, s/veh	0.3

Movement	EBT	EBR	WBL	WBT	NBL	NBR
Lane Configurations	↑↑			↑↑		↱
Traffic Vol, veh/h	840	0	0	730	0	50
Future Vol, veh/h	840	0	0	730	0	50
Conflicting Peds, #/hr	0	0	0	0	0	0
Sign Control	Free	Free	Free	Free	Stop	Stop
RT Channelized	-	None	-	None	-	None
Storage Length	-	-	-	-	-	0
Veh in Median Storage, #	0	-	-	0	0	-
Grade, %	0	-	-	0	0	-
Peak Hour Factor	92	92	92	92	92	92
Heavy Vehicles, %	2	2	2	2	2	2
Mvmt Flow	913	0	0	793	0	54

Major/Minor	Major1		Major2		Minor1	
Conflicting Flow All	0	-	-	-	-	457
Stage 1	-	-	-	-	-	-
Stage 2	-	-	-	-	-	-
Critical Hdwy	-	-	-	-	-	6.94
Critical Hdwy Stg 1	-	-	-	-	-	-
Critical Hdwy Stg 2	-	-	-	-	-	-
Follow-up Hdwy	-	-	-	-	-	3.32
Pot Cap-1 Maneuver	-	0	0	-	0	*737
Stage 1	-	0	0	-	0	-
Stage 2	-	0	0	-	0	-
Platoon blocked, %	-			-		1
Mov Cap-1 Maneuver	-	-	-	-	-	*737
Mov Cap-2 Maneuver	-	-	-	-	-	-
Stage 1	-	-	-	-	-	-
Stage 2	-	-	-	-	-	-

Approach	EB	WB	NB
HCM Control Delay, s	0	0	10.3
HCM LOS			B

Minor Lane/Major Mvmt	NBLn1	EBT	WBT
Capacity (veh/h)	737	-	-
HCM Lane V/C Ratio	0.074	-	-
HCM Control Delay (s)	10.3	-	-
HCM Lane LOS	B	-	-
HCM 95th %tile Q(veh)	0.2	-	-

Notes

~: Volume exceeds capacity $: Delay exceeds 300s +: Computation Not Defined *: All major volume in platoon

Intersection	
Int Delay, s/veh	0.8

Movement	EBT	EBR	WBL	WBT	NBL	NBR
Lane Configurations	↑↑			↑↑		↱
Traffic Vol, veh/h	1130	0	0	940	0	130
Future Vol, veh/h	1130	0	0	940	0	130
Conflicting Peds, #/hr	0	0	0	0	0	0
Sign Control	Free	Free	Free	Free	Stop	Stop
RT Channelized	-	None	-	None	-	None
Storage Length	-	-	-	-	-	0
Veh in Median Storage, #	0	-	-	0	0	-
Grade, %	0	-	-	0	0	-
Peak Hour Factor	92	92	92	92	92	92
Heavy Vehicles, %	2	2	2	2	2	2
Mvmt Flow	1228	0	0	1022	0	141

Major/Minor	Major1		Major2		Minor1	
Conflicting Flow All	0	-	-	-	-	614
Stage 1	-	-	-	-	-	-
Stage 2	-	-	-	-	-	-
Critical Hdwy	-	-	-	-	-	6.94
Critical Hdwy Stg 1	-	-	-	-	-	-
Critical Hdwy Stg 2	-	-	-	-	-	-
Follow-up Hdwy	-	-	-	-	-	3.32
Pot Cap-1 Maneuver	-	0	0	-	0	*607
Stage 1	-	0	0	-	0	-
Stage 2	-	0	0	-	0	-
Platoon blocked, %	-			-		1
Mov Cap-1 Maneuver	-	-	-	-	-	*607
Mov Cap-2 Maneuver	-	-	-	-	-	-
Stage 1	-	-	-	-	-	-
Stage 2	-	-	-	-	-	-

Approach	EB	WB	NB
HCM Control Delay, s	0	0	12.7
HCM LOS			B

Minor Lane/Major Mvmt	NBLn1	EBT	WBT
Capacity (veh/h)	607	-	-
HCM Lane V/C Ratio	0.233	-	-
HCM Control Delay (s)	12.7	-	-
HCM Lane LOS	B	-	-
HCM 95th %tile Q(veh)	0.9	-	-

Notes

~: Volume exceeds capacity $: Delay exceeds 300s +: Computation Not Defined *: All major volume in platoon

Intersection	
Int Delay, s/veh	0.4

Movement	EBT	EBR	WBL	WBT	NBL	NBR
Lane Configurations	↑↑			↑↑		↱
Traffic Vol, veh/h	1225	0	0	945	0	70
Future Vol, veh/h	1225	0	0	945	0	70
Conflicting Peds, #/hr	0	0	0	0	0	0
Sign Control	Free	Free	Free	Free	Stop	Stop
RT Channelized	-	None	-	None	-	None
Storage Length	-	-	-	-	-	0
Veh in Median Storage, #	0	-	-	0	0	-
Grade, %	0	-	-	0	0	-
Peak Hour Factor	92	92	92	92	92	92
Heavy Vehicles, %	2	2	2	2	2	2
Mvmt Flow	1332	0	0	1027	0	76

Major/Minor	Major1		Major2		Minor1	
Conflicting Flow All	0	-	-	-	-	666
Stage 1	-	-	-	-	-	-
Stage 2	-	-	-	-	-	-
Critical Hdwy	-	-	-	-	-	6.94
Critical Hdwy Stg 1	-	-	-	-	-	-
Critical Hdwy Stg 2	-	-	-	-	-	-
Follow-up Hdwy	-	-	-	-	-	3.32
Pot Cap-1 Maneuver	-	0	0	-	0	*580
Stage 1	-	0	0	-	0	-
Stage 2	-	0	0	-	0	-
Platoon blocked, %	-			-		1
Mov Cap-1 Maneuver	-	-	-	-	-	*580
Mov Cap-2 Maneuver	-	-	-	-	-	-
Stage 1	-	-	-	-	-	-
Stage 2	-	-	-	-	-	-

Approach	EB	WB	NB
HCM Control Delay, s	0	0	12.1
HCM LOS			B

Minor Lane/Major Mvmt	NBLn1	EBT	WBT
Capacity (veh/h)	580	-	-
HCM Lane V/C Ratio	0.131	-	-
HCM Control Delay (s)	12.1	-	-
HCM Lane LOS	B	-	-
HCM 95th %tile Q(veh)	0.5	-	-

Notes

~: Volume exceeds capacity $: Delay exceeds 300s +: Computation Not Defined *: All major volume in platoon

Intersection	
Int Delay, s/veh	2.4

Movement	EBL	EBT	EBR	WBL	WBT	WBR	NBL	NBT	NBR	SBL	SBT	SBR
Lane Configurations												
Traffic Vol, veh/h	81	722	208	112	535	1	9	0	111	0	0	1
Future Vol, veh/h	81	722	208	112	535	1	9	0	111	0	0	1
Conflicting Peds, #/hr	0	0	0	0	0	0	0	0	0	0	0	0
Sign Control	Free	Free	Free	Free	Free	Free	Stop	Stop	Stop	Stop	Stop	Stop
RT Channelized	-	-	None	-	-	None	-	-	None	-	-	None
Storage Length	250	-	250	250	-	275	-	-	0	-	-	0
Veh in Median Storage, #	-	0	-	-	0	-	-	0	-	-	0	-
Grade, %	-	0	-	-	0	-	-	0	-	-	0	-
Peak Hour Factor	78	78	78	92	92	92	64	64	64	64	64	64
Heavy Vehicles, %	2	2	2	2	2	2	2	2	2	2	2	2
Mvmt Flow	104	926	267	122	582	1	14	0	173	0	0	2

Major/Minor	Major1			Major2			Minor1			Minor2		
Conflicting Flow All	583	0	0	1193	0	0	1669	-	463	-	-	291
Stage 1	-	-	-	-	-	-	1134	-	-	-	-	-
Stage 2	-	-	-	-	-	-	535	-	-	-	-	-
Critical Hdwy	4.14	-	-	4.14	-	-	7.54	-	6.94	-	-	6.94
Critical Hdwy Stg 1	-	-	-	-	-	-	6.54	-	-	-	-	-
Critical Hdwy Stg 2	-	-	-	-	-	-	6.54	-	-	-	-	-
Follow-up Hdwy	2.22	-	-	2.22	-	-	3.52	-	3.32	-	-	3.32
Pot Cap-1 Maneuver	987	-	-	581	-	-	63	0	546	0	0	706
Stage 1	-	-	-	-	-	-	216	0	-	0	0	-
Stage 2	-	-	-	-	-	-	497	0	-	0	0	-
Platoon blocked, %		-	-		-	-						
Mov Cap-1 Maneuver	987	-	-	581	-	-	49	-	546	-	-	706
Mov Cap-2 Maneuver	-	-	-	-	-	-	49	-	-	-	-	-
Stage 1	-	-	-	-	-	-	193	-	-	-	-	-
Stage 2	-	-	-	-	-	-	392	-	-	-	-	-

Approach	EB	WB	NB	SB
HCM Control Delay, s	0.7	2.2	14.6	10.1
HCM LOS			B	B

Minor Lane/Major Mvmt	NBLn1	EBL	EBT	EBR	WBL	WBT	WBR	SBLn1
Capacity (veh/h)	546	987	-	-	581	-	-	706
HCM Lane V/C Ratio	0.318	0.105	-	-	0.21	-	-	0.002
HCM Control Delay (s)	14.6	9.1	-	-	12.8	-	-	10.1
HCM Lane LOS	B	A	-	-	B	-	-	B
HCM 95th %tile Q(veh)	1.4	0.4	-	-	0.8	-	-	0

Intersection	
Int Delay, s/veh	1

Movement	EBL	EBT	EBR	WBL	WBT	WBR	NBL	NBT	NBR	SBL	SBT	SBR
Lane Configurations												
Traffic Vol, veh/h	34	712	64	18	620	1	14	0	63	0	0	3
Future Vol, veh/h	34	712	64	18	620	1	14	0	63	0	0	3
Conflicting Peds, #/hr	0	0	0	0	0	0	0	0	0	0	0	0
Sign Control	Free	Free	Free	Free	Free	Free	Stop	Stop	Stop	Stop	Stop	Stop
RT Channelized	-	-	None	-	-	None	-	-	None	-	-	None
Storage Length	250	-	250	250	-	275	-	-	0	-	-	0
Veh in Median Storage, #	-	0	-	-	0	-	-	0	-	-	0	-
Grade, %	-	0	-	-	0	-	-	0	-	-	0	-
Peak Hour Factor	95	95	95	93	93	93	84	84	84	84	84	84
Heavy Vehicles, %	2	2	2	2	2	2	2	2	2	2	2	2
Mvmt Flow	36	749	67	19	667	1	17	0	75	0	0	4

Major/Minor	Major1			Major2			Minor1			Minor2		
Conflicting Flow All	668	0	0	816	0	0	1193	-	375	-	-	334
Stage 1	-	-	-	-	-	-	821	-	-	-	-	-
Stage 2	-	-	-	-	-	-	372	-	-	-	-	-
Critical Hdwy	4.14	-	-	4.14	-	-	7.54	-	6.94	-	-	6.94
Critical Hdwy Stg 1	-	-	-	-	-	-	6.54	-	-	-	-	-
Critical Hdwy Stg 2	-	-	-	-	-	-	6.54	-	-	-	-	-
Follow-up Hdwy	2.22	-	-	2.22	-	-	3.52	-	3.32	-	-	3.32
Pot Cap-1 Maneuver	918	-	-	807	-	-	142	0	623	0	0	662
Stage 1	-	-	-	-	-	-	335	0	-	0	0	-
Stage 2	-	-	-	-	-	-	621	0	-	0	0	-
Platoon blocked, %		-	-		-	-						
Mov Cap-1 Maneuver	918	-	-	807	-	-	135	-	623	-	-	662
Mov Cap-2 Maneuver	-	-	-	-	-	-	135	-	-	-	-	-
Stage 1	-	-	-	-	-	-	322	-	-	-	-	-
Stage 2	-	-	-	-	-	-	603	-	-	-	-	-

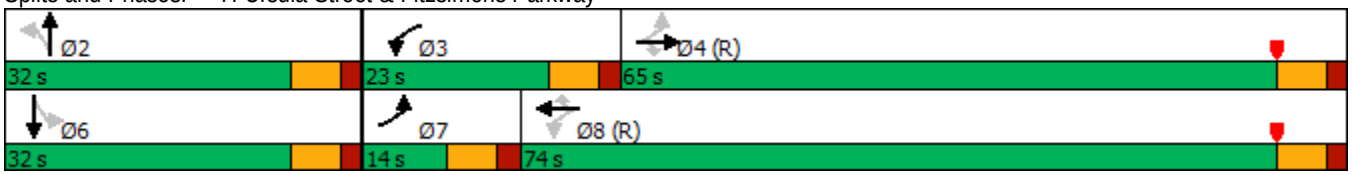
Approach	EB	WB	NB	SB
HCM Control Delay, s	0.4	0.3	11.6	10.5
HCM LOS			B	B

Minor Lane/Major Mvmt	NBLn1	EBL	EBT	EBR	WBL	WBT	WBR	SBLn1
Capacity (veh/h)	623	918	-	-	807	-	-	662
HCM Lane V/C Ratio	0.12	0.039	-	-	0.024	-	-	0.005
HCM Control Delay (s)	11.6	9.1	-	-	9.6	-	-	10.5
HCM Lane LOS	B	A	-	-	A	-	-	B
HCM 95th %tile Q(veh)	0.4	0.1	-	-	0.1	-	-	0

Lane Group	EBL	EBT	EBR	WBL	WBT	WBR	NBL	NBT	SBL	SBT
Lane Configurations										
Traffic Volume (vph)	5	800	230	125	590	5	80	5	5	5
Future Volume (vph)	5	800	230	125	590	5	80	5	5	5
Turn Type	pm+pt	NA	Perm	pm+pt	NA	Perm	Perm	NA	Perm	NA
Protected Phases	7	4		3	8			2		6
Permitted Phases	4		4	8		8	2		6	
Detector Phase	7	4	4	3	8	8	2	2	6	6
Switch Phase										
Minimum Initial (s)	5.0	5.0	5.0	5.0	5.0	5.0	5.0	5.0	5.0	5.0
Minimum Split (s)	11.5	24.5	24.5	11.5	24.5	24.5	24.5	24.5	24.5	24.5
Total Split (s)	14.0	65.0	65.0	23.0	74.0	74.0	32.0	32.0	32.0	32.0
Total Split (%)	11.7%	54.2%	54.2%	19.2%	61.7%	61.7%	26.7%	26.7%	26.7%	26.7%
Yellow Time (s)	4.5	4.5	4.5	4.5	4.5	4.5	4.5	4.5	4.5	4.5
All-Red Time (s)	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
Total Lost Time (s)	6.5	6.5	6.5	6.5	6.5	6.5	6.5	6.5		6.5
Lead/Lag	Lead	Lag	Lag	Lead	Lag	Lag				
Lead-Lag Optimize?	Yes	Yes	Yes	Yes	Yes	Yes				
Recall Mode	None	C-Max	C-Max	None	C-Max	C-Max	Max	Max	None	None
Act Effct Green (s)	71.9	66.3	66.3	81.2	79.0	79.0	25.5	25.5		25.5
Actuated g/C Ratio	0.60	0.55	0.55	0.68	0.66	0.66	0.21	0.21		0.21
v/c Ratio	0.01	0.45	0.26	0.34	0.28	0.00	0.29	0.32		0.04
Control Delay	1.6	3.5	0.6	7.6	8.3	0.0	42.9	9.2		29.8
Queue Delay	0.0	0.0	0.0	0.0	0.0	0.0	0.0	0.0		0.0
Total Delay	1.6	3.5	0.6	7.6	8.3	0.0	42.9	9.2		29.8
LOS	A	A	A	A	A	A	D	A		C
Approach Delay		2.8			8.1			22.1		29.8
Approach LOS		A			A			C		C

Intersection Summary	
Cycle Length: 120	
Actuated Cycle Length: 120	
Offset: 17 (14%), Referenced to phase 4:EBTL and 8:WBTL, Start of Yellow	
Natural Cycle: 65	
Control Type: Actuated-Coordinated	
Maximum v/c Ratio: 0.45	
Intersection Signal Delay: 7.0	Intersection LOS: A
Intersection Capacity Utilization 56.4%	ICU Level of Service B
Analysis Period (min) 15	

Splits and Phases: 7: Ursula Street & Fitzsimons Parkway



Movement	EBL	EBT	EBR	WBL	WBT	WBR	NBL	NBT	NBR	SBL	SBT	SBR
Lane Configurations												
Traffic Volume (veh/h)	5	800	230	125	590	5	80	5	125	5	5	5
Future Volume (veh/h)	5	800	230	125	590	5	80	5	125	5	5	5
Initial Q (Qb), veh	0	0	0	0	0	0	0	0	0	0	0	0
Ped-Bike Adj(A_pbT)	1.00		1.00	1.00		1.00	1.00		1.00	1.00		1.00
Parking Bus, Adj	1.00	1.00	1.00	1.00	1.00	1.00	1.00	1.00	1.00	1.00	1.00	1.00
Work Zone On Approach		No			No			No			No	
Adj Sat Flow, veh/h/ln	1870	1870	1870	1870	1870	1870	1870	1870	1870	1870	1870	1870
Adj Flow Rate, veh/h	5	870	250	136	641	5	87	5	136	5	5	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
Percent Heavy Veh, %	2	2	2	2	2	2	2	2	2	2	2	2
Cap, veh/h	491	2048	913	437	2198	981	325	12	327	109	108	89
Arrive On Green	0.01	1.00	1.00	0.05	0.62	0.62	0.21	0.21	0.21	0.21	0.21	0.21
Sat Flow, veh/h	1781	3554	1585	1781	3554	1585	1405	57	1537	326	509	417
Grp Volume(v), veh/h	5	870	250	136	641	5	87	0	141	15	0	0
Grp Sat Flow(s),veh/h/ln	1781	1777	1585	1781	1777	1585	1405	0	1594	1252	0	0
Q Serve(g_s), s	0.1	0.0	0.0	3.7	10.1	0.1	0.1	0.0	9.2	0.1	0.0	0.0
Cycle Q Clear(g_c), s	0.1	0.0	0.0	3.7	10.1	0.1	9.3	0.0	9.2	9.2	0.0	0.0
Prop In Lane	1.00		1.00	1.00		1.00	1.00		0.96	0.33		0.33
Lane Grp Cap(c), veh/h	491	2048	913	437	2198	981	325	0	339	306	0	0
V/C Ratio(X)	0.01	0.42	0.27	0.31	0.29	0.01	0.27	0.00	0.42	0.05	0.00	0.00
Avail Cap(c_a), veh/h	591	2048	913	595	2198	981	325	0	339	306	0	0
HCM Platoon Ratio	2.00	2.00	2.00	1.00	1.00	1.00	1.00	1.00	1.00	1.00	1.00	1.00
Upstream Filter(I)	1.00	1.00	1.00	1.00	1.00	1.00	1.00	0.00	1.00	1.00	0.00	0.00
Uniform Delay (d), s/veh	10.5	0.0	0.0	8.9	10.6	8.8	40.9	0.0	40.8	37.6	0.0	0.0
Incr Delay (d2), s/veh	0.0	0.6	0.7	0.4	0.3	0.0	2.0	0.0	3.7	0.1	0.0	0.0
Initial Q Delay(d3),s/veh	0.0	0.0	0.0	0.0	0.0	0.0	0.0	0.0	0.0	0.0	0.0	0.0
%ile BackOfQ(50%),veh/ln	0.1	0.2	0.2	1.4	3.9	0.1	2.4	0.0	4.0	0.4	0.0	0.0
Unsig. Movement Delay, s/veh												
LnGrp Delay(d),s/veh	10.5	0.6	0.7	9.3	11.0	8.8	42.9	0.0	44.6	37.7	0.0	0.0
LnGrp LOS	B	A	A	A	B	A	D	A	D	D	A	A
Approach Vol, veh/h		1125			782			228			15	
Approach Delay, s/veh		0.7			10.7			43.9			37.7	
Approach LOS		A			B			D			D	

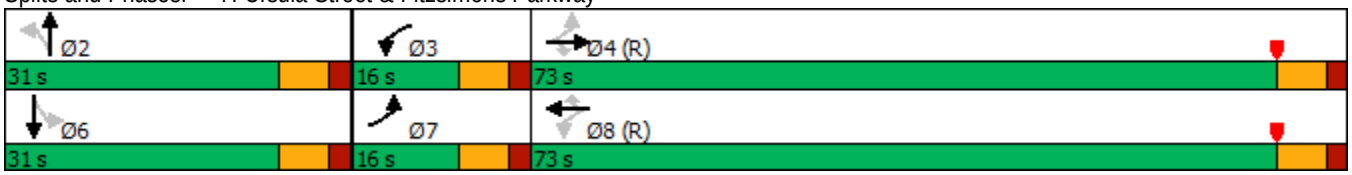
Timer - Assigned Phs		2	3	4		6	7	8				
Phs Duration (G+Y+Rc), s		32.0	12.3	75.7		32.0	7.3	80.7				
Change Period (Y+Rc), s		6.5	6.5	6.5		6.5	6.5	6.5				
Max Green Setting (Gmax), s		25.5	16.5	58.5		25.5	7.5	67.5				
Max Q Clear Time (g_c+I1), s		11.3	5.7	2.0		11.2	2.1	12.1				
Green Ext Time (p_c), s		0.9	0.2	9.1		0.0	0.0	5.2				

Intersection Summary	
HCM 6th Ctrl Delay	9.2
HCM 6th LOS	A

Lane Group	EBL	EBT	EBR	WBL	WBT	WBR	NBL	NBT	SBL	SBT
Lane Configurations										
Traffic Volume (vph)	5	805	75	20	680	5	40	5	5	5
Future Volume (vph)	5	805	75	20	680	5	40	5	5	5
Turn Type	pm+pt	NA	Perm	pm+pt	NA	Perm	Perm	NA	Perm	NA
Protected Phases	7	4		3	8			2		6
Permitted Phases	4		4	8		8	2		6	
Detector Phase	7	4	4	3	8	8	2	2	6	6
Switch Phase										
Minimum Initial (s)	5.0	5.0	5.0	5.0	5.0	5.0	5.0	5.0	5.0	5.0
Minimum Split (s)	11.5	24.5	24.5	11.5	24.5	24.5	24.5	24.5	24.5	24.5
Total Split (s)	16.0	73.0	73.0	16.0	73.0	73.0	31.0	31.0	31.0	31.0
Total Split (%)	13.3%	60.8%	60.8%	13.3%	60.8%	60.8%	25.8%	25.8%	25.8%	25.8%
Yellow Time (s)	4.5	4.5	4.5	4.5	4.5	4.5	4.5	4.5	4.5	4.5
All-Red Time (s)	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
Total Lost Time (s)	6.5	6.5	6.5	6.5	6.5	6.5	6.5	6.5		6.5
Lead/Lag	Lead	Lag	Lag	Lead	Lag	Lag				
Lead-Lag Optimize?	Yes	Yes	Yes	Yes	Yes	Yes				
Recall Mode	None	C-Max	C-Max	None	C-Max	C-Max	Max	Max	None	None
Act Effct Green (s)	78.3	74.8	74.8	81.4	80.0	80.0	24.5	24.5		24.5
Actuated g/C Ratio	0.65	0.62	0.62	0.68	0.67	0.67	0.20	0.20		0.20
v/c Ratio	0.01	0.40	0.08	0.05	0.31	0.00	0.15	0.21		0.04
Control Delay	6.4	12.4	2.1	4.5	6.9	0.0	41.0	11.3		30.4
Queue Delay	0.0	0.0	0.0	0.0	0.0	0.0	0.0	0.0		0.0
Total Delay	6.4	12.4	2.1	4.5	6.9	0.0	41.0	11.3		30.4
LOS	A	B	A	A	A	A	D	B		C
Approach Delay		11.5			6.8			21.6		30.4
Approach LOS		B			A			C		C

Intersection Summary	
Cycle Length: 120	
Actuated Cycle Length: 120	
Offset: 29 (24%), Referenced to phase 4:EBTL and 8:WBTL, Start of Yellow	
Natural Cycle: 65	
Control Type: Actuated-Coordinated	
Maximum v/c Ratio: 0.40	
Intersection Signal Delay: 10.4	Intersection LOS: B
Intersection Capacity Utilization 38.6%	ICU Level of Service A
Analysis Period (min) 15	

Splits and Phases: 7: Ursula Street & Fitzsimons Parkway



Movement	EBL	EBT	EBR	WBL	WBT	WBR	NBL	NBT	NBR	SBL	SBT	SBR
Lane Configurations												
Traffic Volume (veh/h)	5	805	75	20	680	5	40	5	70	5	5	5
Future Volume (veh/h)	5	805	75	20	680	5	40	5	70	5	5	5
Initial Q (Qb), veh	0	0	0	0	0	0	0	0	0	0	0	0
Ped-Bike Adj(A_pbT)	1.00		1.00	1.00		1.00	1.00		1.00	1.00		1.00
Parking Bus, Adj	1.00	1.00	1.00	1.00	1.00	1.00	1.00	1.00	1.00	1.00	1.00	1.00
Work Zone On Approach		No			No			No			No	
Adj Sat Flow, veh/h/ln	1870	1870	1870	1870	1870	1870	1870	1870	1870	1870	1870	1870
Adj Flow Rate, veh/h	5	875	82	22	739	5	43	5	76	5	5	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
Percent Heavy Veh, %	2	2	2	2	2	2	2	2	2	2	2	2
Cap, veh/h	452	2174	970	457	2228	994	348	20	307	124	123	104
Arrive On Green	0.01	1.00	1.00	0.02	0.63	0.63	0.20	0.20	0.20	0.20	0.20	0.20
Sat Flow, veh/h	1781	3554	1585	1781	3554	1585	1405	99	1501	412	602	507
Grp Volume(v), veh/h	5	875	82	22	739	5	43	0	81	15	0	0
Grp Sat Flow(s),veh/h/ln	1781	1777	1585	1781	1777	1585	1405	0	1600	1521	0	0
Q Serve(g_s), s	0.1	0.0	0.0	0.6	11.8	0.1	0.0	0.0	5.1	0.0	0.0	0.0
Cycle Q Clear(g_c), s	0.1	0.0	0.0	0.6	11.8	0.1	3.0	0.0	5.1	5.1	0.0	0.0
Prop In Lane	1.00		1.00	1.00		1.00	1.00		0.94	0.33		0.33
Lane Grp Cap(c), veh/h	452	2174	970	457	2228	994	348	0	327	351	0	0
V/C Ratio(X)	0.01	0.40	0.08	0.05	0.33	0.01	0.12	0.00	0.25	0.04	0.00	0.00
Avail Cap(c_a), veh/h	582	2174	970	560	2228	994	348	0	327	351	0	0
HCM Platoon Ratio	2.00	2.00	2.00	1.00	1.00	1.00	1.00	1.00	1.00	1.00	1.00	1.00
Upstream Filter(I)	1.00	1.00	1.00	1.00	1.00	1.00	1.00	0.00	1.00	1.00	0.00	0.00
Uniform Delay (d), s/veh	9.1	0.0	0.0	8.2	10.5	8.4	39.2	0.0	40.0	38.3	0.0	0.0
Incr Delay (d2), s/veh	0.0	0.6	0.2	0.0	0.4	0.0	0.7	0.0	1.8	0.0	0.0	0.0
Initial Q Delay(d3),s/veh	0.0	0.0	0.0	0.0	0.0	0.0	0.0	0.0	0.0	0.0	0.0	0.0
%ile BackOfQ(50%),veh/ln	0.0	0.2	0.0	0.2	4.6	0.1	1.1	0.0	2.2	0.4	0.0	0.0
Unsig. Movement Delay, s/veh												
LnGrp Delay(d),s/veh	9.1	0.6	0.2	8.2	10.9	8.4	39.9	0.0	41.8	38.4	0.0	0.0
LnGrp LOS	A	A	A	A	B	A	D	A	D	D	A	A
Approach Vol, veh/h		962			766			124			15	
Approach Delay, s/veh		0.6			10.8			41.2			38.4	
Approach LOS		A			B			D			D	

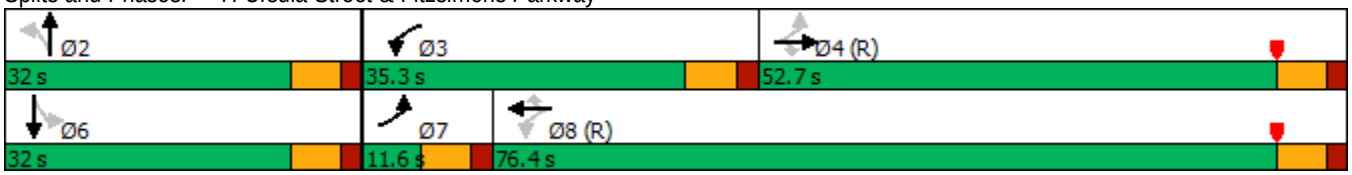
Timer - Assigned Phs		2	3	4		6	7	8				
Phs Duration (G+Y+Rc), s		31.0	9.1	79.9		31.0	7.3	81.7				
Change Period (Y+Rc), s		6.5	6.5	6.5		6.5	6.5	6.5				
Max Green Setting (Gmax), s		24.5	9.5	66.5		24.5	9.5	66.5				
Max Q Clear Time (g_c+I1), s		7.1	2.6	2.0		7.1	2.1	13.8				
Green Ext Time (p_c), s		0.5	0.0	8.2		0.0	0.0	6.2				

Intersection Summary	
HCM 6th Ctrl Delay	7.8
HCM 6th LOS	A

Lane Group	EBL	EBT	EBR	WBL	WBT	WBR	NBL	NBT	SBL	SBT
Lane Configurations										
Traffic Volume (vph)	5	865	390	320	785	5	155	5	5	5
Future Volume (vph)	5	865	390	320	785	5	155	5	5	5
Turn Type	pm+pt	NA	Perm	pm+pt	NA	Perm	Perm	NA	Perm	NA
Protected Phases	7	4		3	8			2		6
Permitted Phases	4		4	8		8	2		6	
Detector Phase	7	4	4	3	8	8	2	2	6	6
Switch Phase										
Minimum Initial (s)	5.0	5.0	5.0	5.0	5.0	5.0	5.0	5.0	5.0	5.0
Minimum Split (s)	11.5	24.5	24.5	11.5	24.5	24.5	24.5	24.5	24.5	24.5
Total Split (s)	11.6	52.7	52.7	35.3	76.4	76.4	32.0	32.0	32.0	32.0
Total Split (%)	9.7%	43.9%	43.9%	29.4%	63.7%	63.7%	26.7%	26.7%	26.7%	26.7%
Yellow Time (s)	4.5	4.5	4.5	4.5	4.5	4.5	4.5	4.5	4.5	4.5
All-Red Time (s)	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
Total Lost Time (s)	6.5	6.5	6.5	6.5	6.5	6.5	6.5	6.5		6.5
Lead/Lag	Lead	Lag	Lag	Lead	Lag	Lag				
Lead-Lag Optimize?	Yes	Yes	Yes	Yes	Yes	Yes				
Recall Mode	None	C-Max	C-Max	None	C-Max	C-Max	Max	Max	None	None
Act Effct Green (s)	61.0	55.9	55.9	81.5	79.2	79.2	25.5	25.5		25.5
Actuated g/C Ratio	0.51	0.47	0.47	0.68	0.66	0.66	0.21	0.21		0.21
v/c Ratio	0.01	0.57	0.47	0.75	0.37	0.00	0.57	0.38		0.04
Control Delay	4.2	8.7	4.2	28.3	8.3	0.0	50.9	8.7		29.8
Queue Delay	0.0	0.0	0.0	0.0	0.0	0.0	0.0	0.0		0.0
Total Delay	4.2	8.7	4.2	28.3	8.3	0.0	50.9	8.7		29.8
LOS	A	A	A	C	A	A	D	A		C
Approach Delay		7.3			14.0			29.1		29.8
Approach LOS		A			B			C		C

Intersection Summary	
Cycle Length: 120	
Actuated Cycle Length: 120	
Offset: 28 (23%), Referenced to phase 4:EBTL and 8:WBTL, Start of Yellow	
Natural Cycle: 75	
Control Type: Actuated-Coordinated	
Maximum v/c Ratio: 0.75	
Intersection Signal Delay: 12.8	Intersection LOS: B
Intersection Capacity Utilization 73.1%	ICU Level of Service D
Analysis Period (min) 15	

Splits and Phases: 7: Ursula Street & Fitzsimons Parkway



Movement	EBL	EBT	EBR	WBL	WBT	WBR	NBL	NBT	NBR	SBL	SBT	SBR
Lane Configurations												
Traffic Volume (veh/h)	5	865	390	320	785	5	155	5	160	5	5	5
Future Volume (veh/h)	5	865	390	320	785	5	155	5	160	5	5	5
Initial Q (Qb), veh	0	0	0	0	0	0	0	0	0	0	0	0
Ped-Bike Adj(A_pbT)	1.00		1.00	1.00		1.00	1.00		1.00	1.00		1.00
Parking Bus, Adj	1.00	1.00	1.00	1.00	1.00	1.00	1.00	1.00	1.00	1.00	1.00	1.00
Work Zone On Approach		No			No			No			No	
Adj Sat Flow, veh/h/ln	1870	1870	1870	1870	1870	1870	1870	1870	1870	1870	1870	1870
Adj Flow Rate, veh/h	5	940	424	348	853	5	168	5	174	5	5	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
Percent Heavy Veh, %	2	2	2	2	2	2	2	2	2	2	2	2
Cap, veh/h	392	1814	809	383	2198	981	302	9	329	96	95	76
Arrive On Green	0.00	0.34	0.34	0.11	0.62	0.62	0.21	0.21	0.21	0.21	0.21	0.21
Sat Flow, veh/h	1781	3554	1585	1781	3554	1585	1405	44	1547	266	449	358
Grp Volume(v), veh/h	5	940	424	348	853	5	168	0	179	15	0	0
Grp Sat Flow(s),veh/h/ln	1781	1777	1585	1781	1777	1585	1405	0	1592	1073	0	0
Q Serve(g_s), s	0.2	25.4	25.7	10.8	14.5	0.1	6.3	0.0	12.0	0.1	0.0	0.0
Cycle Q Clear(g_c), s	0.2	25.4	25.7	10.8	14.5	0.1	18.3	0.0	12.0	12.1	0.0	0.0
Prop In Lane	1.00		1.00	1.00		1.00	1.00		0.97	0.33		0.33
Lane Grp Cap(c), veh/h	392	1814	809	383	2198	981	302	0	338	268	0	0
V/C Ratio(X)	0.01	0.52	0.52	0.91	0.39	0.01	0.56	0.00	0.53	0.06	0.00	0.00
Avail Cap(c_a), veh/h	456	1814	809	607	2198	981	302	0	338	268	0	0
HCM Platoon Ratio	0.67	0.67	0.67	1.00	1.00	1.00	1.00	1.00	1.00	1.00	1.00	1.00
Upstream Filter(I)	1.00	1.00	1.00	1.00	1.00	1.00	1.00	0.00	1.00	1.00	0.00	0.00
Uniform Delay (d), s/veh	14.1	27.7	27.8	20.8	11.5	8.8	45.5	0.0	41.9	37.8	0.0	0.0
Incr Delay (d2), s/veh	0.0	1.1	2.4	11.9	0.5	0.0	7.2	0.0	5.8	0.1	0.0	0.0
Initial Q Delay(d3),s/veh	0.0	0.0	0.0	0.0	0.0	0.0	0.0	0.0	0.0	0.0	0.0	0.0
%ile BackOfQ(50%),veh/ln	0.1	11.7	10.9	6.4	5.7	0.1	5.3	0.0	5.3	0.4	0.0	0.0
Unsig. Movement Delay, s/veh												
LnGrp Delay(d),s/veh	14.1	28.7	30.2	32.7	12.0	8.8	52.7	0.0	47.7	37.9	0.0	0.0
LnGrp LOS	B	C	C	C	B	A	D	A	D	D	A	A
Approach Vol, veh/h		1369			1206			347			15	
Approach Delay, s/veh		29.2			18.0			50.2			37.9	
Approach LOS		C			B			D			D	

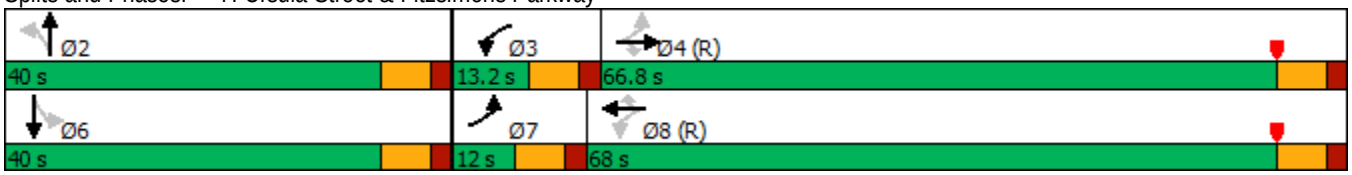
Timer - Assigned Phs		2	3	4		6	7	8				
Phs Duration (G+Y+Rc), s		32.0	20.3	67.7		32.0	7.3	80.7				
Change Period (Y+Rc), s		6.5	6.5	6.5		6.5	6.5	6.5				
Max Green Setting (Gmax), s		25.5	28.8	46.2		25.5	5.1	69.9				
Max Q Clear Time (g_c+I1), s		20.3	12.8	27.7		14.1	2.2	16.5				
Green Ext Time (p_c), s		0.7	1.0	8.2		0.0	0.0	7.5				

Intersection Summary	
HCM 6th Ctrl Delay	27.1
HCM 6th LOS	C

Lane Group	EBL	EBT	EBR	WBL	WBT	WBR	NBL	NBT	SBL	SBT
Lane Configurations										
Traffic Volume (vph)	5	1155	135	70	715	5	220	5	5	5
Future Volume (vph)	5	1155	135	70	715	5	220	5	5	5
Turn Type	pm+pt	NA	Perm	pm+pt	NA	Perm	Perm	NA	Perm	NA
Protected Phases	7	4		3	8			2		6
Permitted Phases	4		4	8		8	2		6	
Detector Phase	7	4	4	3	8	8	2	2	6	6
Switch Phase										
Minimum Initial (s)	5.0	5.0	5.0	5.0	5.0	5.0	5.0	5.0	5.0	5.0
Minimum Split (s)	11.5	24.5	24.5	11.5	24.5	24.5	24.5	24.5	24.5	24.5
Total Split (s)	12.0	66.8	66.8	13.2	68.0	68.0	40.0	40.0	40.0	40.0
Total Split (%)	10.0%	55.7%	55.7%	11.0%	56.7%	56.7%	33.3%	33.3%	33.3%	33.3%
Yellow Time (s)	4.5	4.5	4.5	4.5	4.5	4.5	4.5	4.5	4.5	4.5
All-Red Time (s)	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
Total Lost Time (s)	6.5	6.5	6.5	6.5	6.5	6.5	6.5	6.5		6.5
Lead/Lag	Lead	Lag	Lag	Lead	Lag	Lag				
Lead-Lag Optimize?	Yes	Yes	Yes	Yes	Yes	Yes				
Recall Mode	None	C-Max	C-Max	None	C-Max	C-Max	Max	Max	None	None
Act Effct Green (s)	67.3	62.9	62.9	72.4	71.1	71.1	33.5	33.5		33.5
Actuated g/C Ratio	0.56	0.52	0.52	0.60	0.59	0.59	0.28	0.28		0.28
v/c Ratio	0.01	0.68	0.17	0.36	0.37	0.01	0.62	0.24		0.03
Control Delay	7.4	13.5	2.9	12.9	11.9	0.0	45.7	7.5		24.9
Queue Delay	0.0	0.0	0.0	0.0	0.0	0.0	0.0	0.0		0.0
Total Delay	7.4	13.5	2.9	12.9	11.9	0.0	45.7	7.5		24.9
LOS	A	B	A	B	B	A	D	A		C
Approach Delay		12.4			12.0			32.2		24.9
Approach LOS		B			B			C		C

Intersection Summary	
Cycle Length: 120	
Actuated Cycle Length: 120	
Offset: 29 (24%), Referenced to phase 4:EBTL and 8:WBTL, Start of Yellow	
Natural Cycle: 70	
Control Type: Actuated-Coordinated	
Maximum v/c Ratio: 0.68	
Intersection Signal Delay: 15.1	Intersection LOS: B
Intersection Capacity Utilization 71.2%	ICU Level of Service C
Analysis Period (min) 15	

Splits and Phases: 7: Ursula Street & Fitzsimons Parkway



Movement	EBL	EBT	EBR	WBL	WBT	WBR	NBL	NBT	NBR	SBL	SBT	SBR
Lane Configurations												
Traffic Volume (veh/h)	5	1155	135	70	715	5	220	5	115	5	5	5
Future Volume (veh/h)	5	1155	135	70	715	5	220	5	115	5	5	5
Initial Q (Qb), veh	0	0	0	0	0	0	0	0	0	0	0	0
Ped-Bike Adj(A_pbT)	1.00		1.00	1.00		1.00	1.00		1.00	1.00		1.00
Parking Bus, Adj	1.00	1.00	1.00	1.00	1.00	1.00	1.00	1.00	1.00	1.00	1.00	1.00
Work Zone On Approach		No			No			No			No	
Adj Sat Flow, veh/h/ln	1870	1870	1870	1870	1870	1870	1870	1870	1870	1870	1870	1870
Adj Flow Rate, veh/h	5	1255	147	76	777	5	239	5	125	5	5	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
Percent Heavy Veh, %	2	2	2	2	2	2	2	2	2	2	2	2
Cap, veh/h	368	1848	824	328	1961	875	431	17	428	150	149	129
Arrive On Green	0.01	1.00	1.00	0.04	0.55	0.55	0.28	0.28	0.28	0.28	0.28	0.28
Sat Flow, veh/h	1781	3554	1585	1781	3554	1585	1405	61	1533	393	534	464
Grp Volume(v), veh/h	5	1255	147	76	777	5	239	0	130	15	0	0
Grp Sat Flow(s),veh/h/ln	1781	1777	1585	1781	1777	1585	1405	0	1594	1391	0	0
Q Serve(g_s), s	0.2	0.0	0.0	2.4	15.0	0.2	12.2	0.0	7.7	0.0	0.0	0.0
Cycle Q Clear(g_c), s	0.2	0.0	0.0	2.4	15.0	0.2	19.9	0.0	7.7	7.7	0.0	0.0
Prop In Lane	1.00		1.00	1.00		1.00	1.00		0.96	0.33		0.33
Lane Grp Cap(c), veh/h	368	1848	824	328	1961	875	431	0	445	428	0	0
V/C Ratio(X)	0.01	0.68	0.18	0.23	0.40	0.01	0.55	0.00	0.29	0.04	0.00	0.00
Avail Cap(c_a), veh/h	438	1848	824	359	1961	875	431	0	445	428	0	0
HCM Platoon Ratio	2.00	2.00	2.00	1.00	1.00	1.00	1.00	1.00	1.00	1.00	1.00	1.00
Upstream Filter(I)	1.00	1.00	1.00	1.00	1.00	1.00	1.00	0.00	1.00	1.00	0.00	0.00
Uniform Delay (d), s/veh	13.9	0.0	0.0	12.2	15.4	12.1	38.9	0.0	33.9	31.5	0.0	0.0
Incr Delay (d2), s/veh	0.0	2.0	0.5	0.4	0.6	0.0	5.1	0.0	1.7	0.0	0.0	0.0
Initial Q Delay(d3),s/veh	0.0	0.0	0.0	0.0	0.0	0.0	0.0	0.0	0.0	0.0	0.0	0.0
%ile BackOfQ(50%),veh/ln	0.1	0.5	0.1	1.0	6.2	0.1	6.8	0.0	3.2	0.3	0.0	0.0
Unsig. Movement Delay, s/veh												
LnGrp Delay(d),s/veh	13.9	2.0	0.5	12.6	16.0	12.1	44.0	0.0	35.6	31.5	0.0	0.0
LnGrp LOS	B	A	A	B	B	B	D	A	D	C	A	A
Approach Vol, veh/h		1407			858			369			15	
Approach Delay, s/veh		1.9			15.7			41.0			31.5	
Approach LOS		A			B			D			C	

Timer - Assigned Phs		2	3	4		6	7	8				
Phs Duration (G+Y+Rc), s		40.0	11.1	68.9		40.0	7.3	72.7				
Change Period (Y+Rc), s		6.5	6.5	6.5		6.5	6.5	6.5				
Max Green Setting (Gmax), s		33.5	6.7	60.3		33.5	5.5	61.5				
Max Q Clear Time (g_c+I1), s		21.9	4.4	2.0		9.7	2.2	17.0				
Green Ext Time (p_c), s		1.2	0.0	14.7		0.0	0.0	6.6				

Intersection Summary	
HCM 6th Ctrl Delay	12.0
HCM 6th LOS	B

Intersection	
Int Delay, s/veh	0.7

Movement	EBL	EBR	NBL	NBT	SBT	SBR
Lane Configurations						
Traffic Vol, veh/h	20	18	50	675	691	129
Future Vol, veh/h	20	18	50	675	691	129
Conflicting Peds, #/hr	0	0	0	0	0	0
Sign Control	Stop	Stop	Free	Free	Free	Free
RT Channelized	-	None	-	None	-	None
Storage Length	300	0	175	-	-	250
Veh in Median Storage, #	1	-	-	0	0	-
Grade, %	0	-	-	0	0	-
Peak Hour Factor	89	89	85	85	79	79
Heavy Vehicles, %	2	2	2	2	2	2
Mvmt Flow	22	20	59	794	875	163

Major/Minor	Minor2		Major1		Major2	
Conflicting Flow All	1390	438	1038	0	-	0
Stage 1	875	-	-	-	-	-
Stage 2	515	-	-	-	-	-
Critical Hdwy	6.84	6.94	4.14	-	-	-
Critical Hdwy Stg 1	5.84	-	-	-	-	-
Critical Hdwy Stg 2	5.84	-	-	-	-	-
Follow-up Hdwy	3.52	3.32	2.22	-	-	-
Pot Cap-1 Maneuver	133	567	665	-	-	-
Stage 1	368	-	-	-	-	-
Stage 2	565	-	-	-	-	-
Platoon blocked, %				-	-	-
Mov Cap-1 Maneuver	121	567	665	-	-	-
Mov Cap-2 Maneuver	242	-	-	-	-	-
Stage 1	335	-	-	-	-	-
Stage 2	565	-	-	-	-	-

Approach	EB	NB	SB
HCM Control Delay, s	16.8	0.8	0
HCM LOS	C		

Minor Lane/Major Mvmt	NBL	NBT	EBLn1	EBLn2	SBT	SBR
Capacity (veh/h)	665	-	242	567	-	-
HCM Lane V/C Ratio	0.088	-	0.093	0.036	-	-
HCM Control Delay (s)	10.9	-	21.4	11.6	-	-
HCM Lane LOS	B	-	C	B	-	-
HCM 95th %tile Q(veh)	0.3	-	0.3	0.1	-	-

Intersection	
Int Delay, s/veh	1.5

Movement	EBL	EBR	NBL	NBT	SBT	SBR
Lane Configurations						
Traffic Vol, veh/h	75	47	4	596	781	13
Future Vol, veh/h	75	47	4	596	781	13
Conflicting Peds, #/hr	0	0	0	0	0	0
Sign Control	Stop	Stop	Free	Free	Free	Free
RT Channelized	-	None	-	None	-	None
Storage Length	300	0	175	-	-	250
Veh in Median Storage, #	1	-	-	0	0	-
Grade, %	0	-	-	0	0	-
Peak Hour Factor	91	91	94	94	88	88
Heavy Vehicles, %	2	2	2	2	2	2
Mvmt Flow	82	52	4	634	888	15

Major/Minor	Minor2		Major1		Major2	
Conflicting Flow All	1213	444	903	0	-	0
Stage 1	888	-	-	-	-	-
Stage 2	325	-	-	-	-	-
Critical Hdwy	6.84	6.94	4.14	-	-	-
Critical Hdwy Stg 1	5.84	-	-	-	-	-
Critical Hdwy Stg 2	5.84	-	-	-	-	-
Follow-up Hdwy	3.52	3.32	2.22	-	-	-
Pot Cap-1 Maneuver	174	561	749	-	-	-
Stage 1	362	-	-	-	-	-
Stage 2	705	-	-	-	-	-
Platoon blocked, %				-	-	-
Mov Cap-1 Maneuver	173	561	749	-	-	-
Mov Cap-2 Maneuver	284	-	-	-	-	-
Stage 1	360	-	-	-	-	-
Stage 2	705	-	-	-	-	-

Approach	EB	NB	SB
HCM Control Delay, s	18.7	0.1	0
HCM LOS	C		

Minor Lane/Major Mvmt	NBL	NBT	EBLn1	EBLn2	SBT	SBR
Capacity (veh/h)	749	-	284	561	-	-
HCM Lane V/C Ratio	0.006	-	0.29	0.092	-	-
HCM Control Delay (s)	9.8	-	22.8	12.1	-	-
HCM Lane LOS	A	-	C	B	-	-
HCM 95th %tile Q(veh)	0	-	1.2	0.3	-	-

Lane Group	EBL	EBR	NBL	NBT	SBT	SBR
Lane Configurations						
Traffic Volume (vph)	50	20	50	665	780	145
Future Volume (vph)	50	20	50	665	780	145
Turn Type	Prot	Perm	Perm	NA	NA	Perm
Protected Phases	4			2	6	
Permitted Phases		4	2			6
Detector Phase	4	4	2	2	6	6
Switch Phase						
Minimum Initial (s)	5.0	5.0	5.0	5.0	5.0	5.0
Minimum Split (s)	24.5	24.5	24.5	24.5	24.5	24.5
Total Split (s)	34.0	34.0	86.0	86.0	86.0	86.0
Total Split (%)	28.3%	28.3%	71.7%	71.7%	71.7%	71.7%
Yellow Time (s)	4.5	4.5	4.5	4.5	4.5	4.5
All-Red Time (s)	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)	6.5	6.5	6.5	6.5	6.5	6.5
Lead/Lag						
Lead-Lag Optimize?						
Recall Mode	None	None	C-Max	C-Max	C-Max	C-Max
Act Effct Green (s)	9.0	9.0	101.7	101.7	101.7	101.7
Actuated g/C Ratio	0.08	0.08	0.85	0.85	0.85	0.85
v/c Ratio	0.41	0.16	0.10	0.24	0.28	0.12
Control Delay	61.2	21.2	3.0	2.6	0.5	0.2
Queue Delay	0.0	0.0	0.0	0.0	0.0	0.0
Total Delay	61.2	21.2	3.0	2.6	0.5	0.2
LOS	E	C	A	A	A	A
Approach Delay	49.6			2.6	0.4	
Approach LOS	D			A	A	

Intersection Summary	
Cycle Length: 120	
Actuated Cycle Length: 120	
Offset: 20 (17%), Referenced to phase 2:NBTL and 6:SBT, Start of Green	
Natural Cycle: 50	
Control Type: Actuated-Coordinated	
Maximum v/c Ratio: 0.41	
Intersection Signal Delay: 3.4	Intersection LOS: A
Intersection Capacity Utilization 46.1%	ICU Level of Service A
Analysis Period (min) 15	

Splits and Phases: 8: Fitzsimons Parkway & Victor Street

Movement	EBL	EBR	NBL	NBT	SBT	SBR
Lane Configurations						
Traffic Volume (veh/h)	50	20	50	665	780	145
Future Volume (veh/h)	50	20	50	665	780	145
Initial Q (Qb), veh	0	0	0	0	0	0
Ped-Bike Adj(A_pbT)	1.00	1.00	1.00			1.00
Parking Bus, Adj	1.00	1.00	1.00	1.00	1.00	1.00
Work Zone On Approach	No			No	No	
Adj Sat Flow, veh/h/ln	1870	1870	1870	1870	1870	1870
Adj Flow Rate, veh/h	54	22	54	723	848	158
Peak Hour Factor	0.92	0.92	0.92	0.92	0.92	0.92
Percent Heavy Veh, %	2	2	2	2	2	2
Cap, veh/h	79	70	508	3012	3012	1343
Arrive On Green	0.04	0.04	0.85	0.85	0.85	0.85
Sat Flow, veh/h	1781	1585	560	3647	3647	1585
Grp Volume(v), veh/h	54	22	54	723	848	158
Grp Sat Flow(s),veh/h/ln	1781	1585	560	1777	1777	1585
Q Serve(g_s), s	3.6	1.6	2.6	4.7	5.7	2.0
Cycle Q Clear(g_c), s	3.6	1.6	8.3	4.7	5.7	2.0
Prop In Lane	1.00	1.00	1.00			1.00
Lane Grp Cap(c), veh/h	79	70	508	3012	3012	1343
V/C Ratio(X)	0.69	0.31	0.11	0.24	0.28	0.12
Avail Cap(c_a), veh/h	408	363	508	3012	3012	1343
HCM Platoon Ratio	1.00	1.00	1.00	1.00	1.00	1.00
Upstream Filter(I)	1.00	1.00	1.00	1.00	1.00	1.00
Uniform Delay (d), s/veh	56.5	55.6	2.7	1.8	1.8	1.5
Incr Delay (d2), s/veh	10.1	2.5	0.4	0.2	0.2	0.2
Initial Q Delay(d3),s/veh	0.0	0.0	0.0	0.0	0.0	0.0
%ile BackOfQ(50%),veh/ln	1.8	0.7	0.3	1.1	1.3	0.4
Unsig. Movement Delay, s/veh						
LnGrp Delay(d),s/veh	66.7	58.1	3.1	1.9	2.1	1.7
LnGrp LOS	E	E	A	A	A	A
Approach Vol, veh/h	76			777	1006	
Approach Delay, s/veh	64.2			2.0	2.0	
Approach LOS	E			A	A	

Timer - Assigned Phs		2		4		6
Phs Duration (G+Y+Rc), s		108.2		11.8		108.2
Change Period (Y+Rc), s		6.5		6.5		6.5
Max Green Setting (Gmax), s		79.5		27.5		79.5
Max Q Clear Time (g_c+I1), s		10.3		5.6		7.7
Green Ext Time (p_c), s		7.0		0.2		8.3

Intersection Summary	
HCM 6th Ctrl Delay	4.6
HCM 6th LOS	A

Lane Group	EBL	EBR	NBL	NBT	SBT	SBR
Lane Configurations						
Traffic Volume (vph)	110	55	5	610	835	35
Future Volume (vph)	110	55	5	610	835	35
Turn Type	Prot	Perm	Perm	NA	NA	Perm
Protected Phases	4			2	6	
Permitted Phases		4	2			6
Detector Phase	4	4	2	2	6	6
Switch Phase						
Minimum Initial (s)	5.0	5.0	5.0	5.0	5.0	5.0
Minimum Split (s)	24.5	24.5	24.5	24.5	24.5	24.5
Total Split (s)	39.0	39.0	81.0	81.0	81.0	81.0
Total Split (%)	32.5%	32.5%	67.5%	67.5%	67.5%	67.5%
Yellow Time (s)	4.5	4.5	4.5	4.5	4.5	4.5
All-Red Time (s)	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)	6.5	6.5	6.5	6.5	6.5	6.5
Lead/Lag						
Lead-Lag Optimize?						
Recall Mode	None	None	C-Max	C-Max	C-Max	C-Max
Act Effct Green (s)	13.5	13.5	93.5	93.5	93.5	93.5
Actuated g/C Ratio	0.11	0.11	0.78	0.78	0.78	0.78
v/c Ratio	0.60	0.26	0.01	0.24	0.33	0.03
Control Delay	62.8	14.1	3.6	3.4	8.7	3.5
Queue Delay	0.0	0.0	0.0	0.0	0.0	0.0
Total Delay	62.8	14.1	3.6	3.4	8.7	3.5
LOS	E	B	A	A	A	A
Approach Delay	46.5			3.4	8.4	
Approach LOS	D			A	A	

Intersection Summary	
Cycle Length: 120	
Actuated Cycle Length: 120	
Offset: 44 (37%), Referenced to phase 2:NBTL and 6:SBT, Start of Green	
Natural Cycle: 50	
Control Type: Actuated-Coordinated	
Maximum v/c Ratio: 0.60	
Intersection Signal Delay: 10.4	Intersection LOS: B
Intersection Capacity Utilization 40.0%	ICU Level of Service A
Analysis Period (min) 15	

Splits and Phases: 8: Fitzsimons Parkway & Victor Street

Movement	EBL	EBR	NBL	NBT	SBT	SBR
Lane Configurations						
Traffic Volume (veh/h)	110	55	5	610	835	35
Future Volume (veh/h)	110	55	5	610	835	35
Initial Q (Qb), veh	0	0	0	0	0	0
Ped-Bike Adj(A_pbT)	1.00	1.00	1.00			1.00
Parking Bus, Adj	1.00	1.00	1.00	1.00	1.00	1.00
Work Zone On Approach	No			No	No	
Adj Sat Flow, veh/h/ln	1870	1870	1870	1870	1870	1870
Adj Flow Rate, veh/h	120	60	5	663	908	38
Peak Hour Factor	0.92	0.92	0.92	0.92	0.92	0.92
Percent Heavy Veh, %	2	2	2	2	2	2
Cap, veh/h	154	137	498	2861	2861	1276
Arrive On Green	0.09	0.09	0.81	0.81	0.81	0.81
Sat Flow, veh/h	1781	1585	593	3647	3647	1585
Grp Volume(v), veh/h	120	60	5	663	908	38
Grp Sat Flow(s),veh/h/ln	1781	1585	593	1777	1777	1585
Q Serve(g_s), s	7.9	4.3	0.3	5.4	8.0	0.6
Cycle Q Clear(g_c), s	7.9	4.3	8.3	5.4	8.0	0.6
Prop In Lane	1.00	1.00	1.00			1.00
Lane Grp Cap(c), veh/h	154	137	498	2861	2861	1276
V/C Ratio(X)	0.78	0.44	0.01	0.23	0.32	0.03
Avail Cap(c_a), veh/h	482	429	498	2861	2861	1276
HCM Platoon Ratio	1.00	1.00	1.00	1.00	1.00	1.00
Upstream Filter(I)	1.00	1.00	1.00	1.00	1.00	1.00
Uniform Delay (d), s/veh	53.7	52.0	4.1	2.8	3.1	2.3
Incr Delay (d2), s/veh	8.2	2.2	0.0	0.2	0.3	0.0
Initial Q Delay(d3),s/veh	0.0	0.0	0.0	0.0	0.0	0.0
%ile BackOfQ(50%),veh/ln	3.9	1.8	0.0	1.5	2.3	0.2
Unsig. Movement Delay, s/veh						
LnGrp Delay(d),s/veh	61.9	54.2	4.2	3.0	3.4	2.4
LnGrp LOS	E	D	A	A	A	A
Approach Vol, veh/h	180			668	946	
Approach Delay, s/veh	59.3			3.0	3.3	
Approach LOS	E			A	A	

Timer - Assigned Phs		2		4		6
Phs Duration (G+Y+Rc), s		103.1		16.9		103.1
Change Period (Y+Rc), s		6.5		6.5		6.5
Max Green Setting (Gmax), s		74.5		32.5		74.5
Max Q Clear Time (g_c+I1), s		10.3		9.9		10.0
Green Ext Time (p_c), s		5.5		0.5		8.5

Intersection Summary	
HCM 6th Ctrl Delay	8.8
HCM 6th LOS	A

Lane Group	EBL	EBR	NBL	NBT	SBT	SBR
Lane Configurations						
Traffic Volume (vph)	55	25	60	1050	875	155
Future Volume (vph)	55	25	60	1050	875	155
Turn Type	Prot	Perm	Perm	NA	NA	Perm
Protected Phases	4			2	6	
Permitted Phases		4	2			6
Detector Phase	4	4	2	2	6	6
Switch Phase						
Minimum Initial (s)	5.0	5.0	5.0	5.0	5.0	5.0
Minimum Split (s)	24.5	24.5	24.5	24.5	24.5	24.5
Total Split (s)	30.0	30.0	90.0	90.0	90.0	90.0
Total Split (%)	25.0%	25.0%	75.0%	75.0%	75.0%	75.0%
Yellow Time (s)	4.5	4.5	4.5	4.5	4.5	4.5
All-Red Time (s)	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)	6.5	6.5	6.5	6.5	6.5	6.5
Lead/Lag						
Lead-Lag Optimize?						
Recall Mode	None	None	C-Max	C-Max	C-Max	C-Max
Act Effct Green (s)	9.4	9.4	101.3	101.3	101.3	101.3
Actuated g/C Ratio	0.08	0.08	0.84	0.84	0.84	0.84
v/c Ratio	0.43	0.18	0.14	0.38	0.32	0.12
Control Delay	61.6	20.1	3.4	3.1	2.1	0.4
Queue Delay	0.0	0.0	0.0	0.0	0.0	0.0
Total Delay	61.6	20.1	3.4	3.1	2.1	0.4
LOS	E	C	A	A	A	A
Approach Delay	48.7			3.1	1.8	
Approach LOS	D			A	A	

Intersection Summary	
Cycle Length: 120	
Actuated Cycle Length: 120	
Offset: 43 (36%), Referenced to phase 2:NBTL and 6:SBT, Start of Green	
Natural Cycle: 55	
Control Type: Actuated-Coordinated	
Maximum v/c Ratio: 0.43	
Intersection Signal Delay: 4.2	Intersection LOS: A
Intersection Capacity Utilization 48.8%	ICU Level of Service A
Analysis Period (min) 15	

Splits and Phases: 8: Fitzsimons Parkway & Victor Street

Movement	EBL	EBR	NBL	NBT	SBT	SBR
Lane Configurations						
Traffic Volume (veh/h)	55	25	60	1050	875	155
Future Volume (veh/h)	55	25	60	1050	875	155
Initial Q (Qb), veh	0	0	0	0	0	0
Ped-Bike Adj(A_pbT)	1.00	1.00	1.00			1.00
Parking Bus, Adj	1.00	1.00	1.00	1.00	1.00	1.00
Work Zone On Approach	No			No	No	
Adj Sat Flow, veh/h/ln	1870	1870	1870	1870	1870	1870
Adj Flow Rate, veh/h	60	27	65	1141	951	168
Peak Hour Factor	0.92	0.92	0.92	0.92	0.92	0.92
Percent Heavy Veh, %	2	2	2	2	2	2
Cap, veh/h	86	77	456	2996	2996	1337
Arrive On Green	0.05	0.05	0.84	0.84	0.84	0.84
Sat Flow, veh/h	1781	1585	503	3647	3647	1585
Grp Volume(v), veh/h	60	27	65	1141	951	168
Grp Sat Flow(s),veh/h/ln	1781	1585	503	1777	1777	1585
Q Serve(g_s), s	4.0	2.0	3.8	8.9	6.9	2.2
Cycle Q Clear(g_c), s	4.0	2.0	10.7	8.9	6.9	2.2
Prop In Lane	1.00	1.00	1.00			1.00
Lane Grp Cap(c), veh/h	86	77	456	2996	2996	1337
V/C Ratio(X)	0.69	0.35	0.14	0.38	0.32	0.13
Avail Cap(c_a), veh/h	349	310	456	2996	2996	1337
HCM Platoon Ratio	1.00	1.00	1.00	1.00	1.00	1.00
Upstream Filter(I)	1.00	1.00	1.00	1.00	1.00	1.00
Uniform Delay (d), s/veh	56.2	55.3	3.2	2.2	2.0	1.7
Incr Delay (d2), s/veh	9.6	2.7	0.7	0.4	0.3	0.2
Initial Q Delay(d3),s/veh	0.0	0.0	0.0	0.0	0.0	0.0
%ile BackOfQ(50%),veh/ln	2.0	0.8	0.4	2.1	1.6	0.5
Unsig. Movement Delay, s/veh						
LnGrp Delay(d),s/veh	65.8	58.0	3.8	2.5	2.3	1.8
LnGrp LOS	E	E	A	A	A	A
Approach Vol, veh/h	87			1206	1119	
Approach Delay, s/veh	63.4			2.6	2.2	
Approach LOS	E			A	A	

Timer - Assigned Phs		2		4		6
Phs Duration (G+Y+Rc), s		107.7		12.3		107.7
Change Period (Y+Rc), s		6.5		6.5		6.5
Max Green Setting (Gmax), s		83.5		23.5		83.5
Max Q Clear Time (g_c+I1), s		12.7		6.0		8.9
Green Ext Time (p_c), s		13.6		0.2		9.8

Intersection Summary	
HCM 6th Ctrl Delay	4.6
HCM 6th LOS	A

Lane Group	EBL	EBR	NBL	NBT	SBT	SBR
Lane Configurations						
Traffic Volume (vph)	120	65	10	695	1230	40
Future Volume (vph)	120	65	10	695	1230	40
Turn Type	Prot	Perm	Perm	NA	NA	Perm
Protected Phases	4			2	6	
Permitted Phases		4	2			6
Detector Phase	4	4	2	2	6	6
Switch Phase						
Minimum Initial (s)	5.0	5.0	5.0	5.0	5.0	5.0
Minimum Split (s)	24.5	24.5	24.5	24.5	24.5	24.5
Total Split (s)	32.0	32.0	88.0	88.0	88.0	88.0
Total Split (%)	26.7%	26.7%	73.3%	73.3%	73.3%	73.3%
Yellow Time (s)	4.5	4.5	4.5	4.5	4.5	4.5
All-Red Time (s)	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)	6.5	6.5	6.5	6.5	6.5	6.5
Lead/Lag						
Lead-Lag Optimize?						
Recall Mode	None	None	C-Max	C-Max	C-Max	C-Max
Act Effct Green (s)	14.1	14.1	92.9	92.9	92.9	92.9
Actuated g/C Ratio	0.12	0.12	0.77	0.77	0.77	0.77
v/c Ratio	0.62	0.29	0.04	0.28	0.49	0.03
Control Delay	63.1	13.2	4.1	3.8	1.5	0.1
Queue Delay	0.0	0.0	0.0	0.0	0.0	0.0
Total Delay	63.1	13.2	4.1	3.8	1.5	0.1
LOS	E	B	A	A	A	A
Approach Delay	45.5			3.8	1.5	
Approach LOS	D			A	A	

Intersection Summary	
Cycle Length: 120	
Actuated Cycle Length: 120	
Offset: 31 (26%), Referenced to phase 2:NBTL and 6:SBT, Start of Green	
Natural Cycle: 60	
Control Type: Actuated-Coordinated	
Maximum v/c Ratio: 0.63	
Intersection Signal Delay: 6.0	Intersection LOS: A
Intersection Capacity Utilization 51.5%	ICU Level of Service A
Analysis Period (min) 15	

Splits and Phases: 8: Fitzsimons Parkway & Victor Street

Movement	EBL	EBR	NBL	NBT	SBT	SBR
Lane Configurations						
Traffic Volume (veh/h)	120	65	10	695	1230	40
Future Volume (veh/h)	120	65	10	695	1230	40
Initial Q (Qb), veh	0	0	0	0	0	0
Ped-Bike Adj(A_pbT)	1.00	1.00	1.00			1.00
Parking Bus, Adj	1.00	1.00	1.00	1.00	1.00	1.00
Work Zone On Approach	No			No	No	
Adj Sat Flow, veh/h/ln	1870	1870	1870	1870	1870	1870
Adj Flow Rate, veh/h	130	71	11	755	1337	43
Peak Hour Factor	0.92	0.92	0.92	0.92	0.92	0.92
Percent Heavy Veh, %	2	2	2	2	2	2
Cap, veh/h	164	146	326	2842	2842	1267
Arrive On Green	0.09	0.09	0.80	0.80	0.80	0.80
Sat Flow, veh/h	1781	1585	393	3647	3647	1585
Grp Volume(v), veh/h	130	71	11	755	1337	43
Grp Sat Flow(s),veh/h/ln	1781	1585	393	1777	1777	1585
Q Serve(g_s), s	8.6	5.1	1.1	6.5	14.5	0.7
Cycle Q Clear(g_c), s	8.6	5.1	15.6	6.5	14.5	0.7
Prop In Lane	1.00	1.00	1.00			1.00
Lane Grp Cap(c), veh/h	164	146	326	2842	2842	1267
V/C Ratio(X)	0.79	0.49	0.03	0.27	0.47	0.03
Avail Cap(c_a), veh/h	379	337	326	2842	2842	1267
HCM Platoon Ratio	1.00	1.00	1.00	1.00	1.00	1.00
Upstream Filter(I)	1.00	1.00	1.00	1.00	1.00	1.00
Uniform Delay (d), s/veh	53.4	51.8	6.4	3.1	3.9	2.5
Incr Delay (d2), s/veh	8.3	2.5	0.2	0.2	0.6	0.0
Initial Q Delay(d3),s/veh	0.0	0.0	0.0	0.0	0.0	0.0
%ile BackOfQ(50%),veh/ln	4.2	2.1	0.1	1.9	4.3	0.2
Unsig. Movement Delay, s/veh						
LnGrp Delay(d),s/veh	61.7	54.3	6.6	3.3	4.4	2.5
LnGrp LOS	E	D	A	A	A	A
Approach Vol, veh/h	201			766	1380	
Approach Delay, s/veh	59.1			3.3	4.4	
Approach LOS	E			A	A	

Timer - Assigned Phs		2		4		6
Phs Duration (G+Y+Rc), s		102.5		17.5		102.5
Change Period (Y+Rc), s		6.5		6.5		6.5
Max Green Setting (Gmax), s		81.5		25.5		81.5
Max Q Clear Time (g_c+I1), s		17.6		10.6		16.5
Green Ext Time (p_c), s		6.7		0.5		15.9

Intersection Summary	
HCM 6th Ctrl Delay	8.7
HCM 6th LOS	A

Lane Group	EBL	EBR	NBL	NBT	SBT
Lane Configurations					
Traffic Volume (vph)	99	91	40	844	1191
Future Volume (vph)	99	91	40	844	1191
Turn Type	Prot	Perm	pm+pt	NA	NA
Protected Phases	4		5	2	6
Permitted Phases		4	2		
Detector Phase	4	4	5	2	6
Switch Phase					
Minimum Initial (s)	5.0	5.0	5.0	5.0	5.0
Minimum Split (s)	22.5	22.5	9.5	22.5	22.5
Total Split (s)	27.0	27.0	13.0	73.0	60.0
Total Split (%)	27.0%	27.0%	13.0%	73.0%	60.0%
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
Lead-Lag Optimize?			Yes		Yes
Recall Mode	None	None	None	C-Max	C-Max
Act Effct Green (s)	11.3	11.3	79.7	79.7	71.1
Actuated g/C Ratio	0.11	0.11	0.80	0.80	0.71
v/c Ratio	0.53	0.38	0.19	0.22	0.43
Control Delay	50.7	12.2	4.1	2.8	7.1
Queue Delay	0.0	0.0	0.0	0.0	0.0
Total Delay	50.7	12.2	4.1	2.8	7.1
LOS	D	B	A	A	A
Approach Delay	31.7			2.9	7.1
Approach LOS	C			A	A

Intersection Summary	
Cycle Length: 100	
Actuated Cycle Length: 100	
Offset: 0 (0%), Referenced to phase 2:NBTL and 6:SBT, Start of Yellow	
Natural Cycle: 60	
Control Type: Actuated-Coordinated	
Maximum v/c Ratio: 0.53	
Intersection Signal Delay: 7.6	Intersection LOS: A
Intersection Capacity Utilization 46.2%	ICU Level of Service A
Analysis Period (min) 15	

Splits and Phases: 9: 25th Avenue & Peoria Street

Movement	EBL	EBR	NBL	NBT	SBT	SBR
Lane Configurations						
Traffic Volume (veh/h)	99	91	40	844	1191	139
Future Volume (veh/h)	99	91	40	844	1191	139
Initial Q (Qb), veh	0	0	0	0	0	0
Ped-Bike Adj(A_pbT)	1.00	1.00	1.00			1.00
Parking Bus, Adj	1.00	1.00	1.00	1.00	1.00	1.00
Work Zone On Approach	No			No	No	
Adj Sat Flow, veh/h/ln	1870	1870	1870	1870	1870	1870
Adj Flow Rate, veh/h	105	102	53	879	1369	164
Peak Hour Factor	0.94	0.89	0.76	0.96	0.87	0.85
Percent Heavy Veh, %	2	2	2	2	2	2
Cap, veh/h	156	139	354	4200	3415	409
Arrive On Green	0.09	0.09	0.04	0.82	0.74	0.74
Sat Flow, veh/h	1781	1585	1781	5274	4790	554
Grp Volume(v), veh/h	105	102	53	879	1008	525
Grp Sat Flow(s),veh/h/ln	1781	1585	1781	1702	1702	1771
Q Serve(g_s), s	5.7	6.3	0.6	3.7	11.0	11.0
Cycle Q Clear(g_c), s	5.7	6.3	0.6	3.7	11.0	11.0
Prop In Lane	1.00	1.00	1.00			0.31
Lane Grp Cap(c), veh/h	156	139	354	4200	2516	1309
V/C Ratio(X)	0.67	0.74	0.15	0.21	0.40	0.40
Avail Cap(c_a), veh/h	401	357	437	4200	2516	1309
HCM Platoon Ratio	1.00	1.00	1.00	1.00	1.00	1.00
Upstream Filter(I)	1.00	1.00	1.00	1.00	0.76	0.76
Uniform Delay (d), s/veh	44.2	44.5	3.1	1.9	4.8	4.8
Incr Delay (d2), s/veh	5.0	7.4	0.2	0.1	0.4	0.7
Initial Q Delay(d3),s/veh	0.0	0.0	0.0	0.0	0.0	0.0
%ile BackOfQ(50%),veh/ln	2.7	5.7	0.2	0.8	3.3	3.5
Unsig. Movement Delay, s/veh						
LnGrp Delay(d),s/veh	49.2	51.9	3.3	2.0	5.2	5.5
LnGrp LOS	D	D	A	A	A	A
Approach Vol, veh/h	207			932	1533	
Approach Delay, s/veh	50.5			2.1	5.3	
Approach LOS	D			A	A	

Timer - Assigned Phs		2		4	5	6
Phs Duration (G+Y+Rc), s		86.8		13.2	8.4	78.4
Change Period (Y+Rc), s		4.5		4.5	4.5	4.5
Max Green Setting (Gmax), s		68.5		22.5	8.5	55.5
Max Q Clear Time (g_c+I1), s		5.7		8.3	2.6	13.0
Green Ext Time (p_c), s		7.8		0.5	0.0	15.7

Intersection Summary	
HCM 6th Ctrl Delay	7.7
HCM 6th LOS	A

Lane Group	EBL	EBR	NBL	NBT	SBT
Lane Configurations					
Traffic Volume (vph)	149	63	61	1102	1170
Future Volume (vph)	149	63	61	1102	1170
Turn Type	Prot	Perm	pm+pt	NA	NA
Protected Phases	4		5	2	6
Permitted Phases		4	2		
Detector Phase	4	4	5	2	6
Switch Phase					
Minimum Initial (s)	5.0	5.0	5.0	5.0	5.0
Minimum Split (s)	22.5	22.5	9.5	22.5	22.5
Total Split (s)	29.0	29.0	14.0	71.0	57.0
Total Split (%)	29.0%	29.0%	14.0%	71.0%	57.0%
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
Lead-Lag Optimize?			Yes		Yes
Recall Mode	None	None	None	C-Max	C-Max
Act Effct Green (s)	14.6	14.6	76.4	76.4	67.3
Actuated g/C Ratio	0.15	0.15	0.76	0.76	0.67
v/c Ratio	0.64	0.26	0.25	0.30	0.44
Control Delay	51.0	10.5	5.7	4.2	8.7
Queue Delay	0.0	0.0	0.0	0.0	0.0
Total Delay	51.0	10.5	5.7	4.2	8.7
LOS	D	B	A	A	A
Approach Delay	38.1			4.3	8.7
Approach LOS	D			A	A

Intersection Summary	
Cycle Length: 100	
Actuated Cycle Length: 100	
Offset: 0 (0%), Referenced to phase 2:NBTL and 6:SBT, Start of Yellow	
Natural Cycle: 60	
Control Type: Actuated-Coordinated	
Maximum v/c Ratio: 0.64	
Intersection Signal Delay: 9.3	Intersection LOS: A
Intersection Capacity Utilization 51.6%	ICU Level of Service A
Analysis Period (min) 15	

Splits and Phases: 9: 25th Avenue & Peoria Street

Movement	EBL	EBR	NBL	NBT	SBT	SBR
Lane Configurations						
Traffic Volume (veh/h)	149	63	61	1102	1170	238
Future Volume (veh/h)	149	63	61	1102	1170	238
Initial Q (Qb), veh	0	0	0	0	0	0
Ped-Bike Adj(A_pbT)	1.00	1.00	1.00			1.00
Parking Bus, Adj	1.00	1.00	1.00	1.00	1.00	1.00
Work Zone On Approach	No			No	No	
Adj Sat Flow, veh/h/ln	1870	1870	1870	1870	1870	1870
Adj Flow Rate, veh/h	166	78	72	1172	1219	264
Peak Hour Factor	0.90	0.81	0.85	0.94	0.96	0.90
Percent Heavy Veh, %	2	2	2	2	2	2
Cap, veh/h	208	185	357	4052	2963	642
Arrive On Green	0.12	0.12	0.04	0.79	0.71	0.71
Sat Flow, veh/h	1781	1585	1781	5274	4369	910
Grp Volume(v), veh/h	166	78	72	1172	988	495
Grp Sat Flow(s),veh/h/ln	1781	1585	1781	1702	1702	1707
Q Serve(g_s), s	9.1	4.6	1.0	6.2	12.0	12.0
Cycle Q Clear(g_c), s	9.1	4.6	1.0	6.2	12.0	12.0
Prop In Lane	1.00	1.00	1.00			0.53
Lane Grp Cap(c), veh/h	208	185	357	4052	2401	1204
V/C Ratio(X)	0.80	0.42	0.20	0.29	0.41	0.41
Avail Cap(c_a), veh/h	436	388	449	4052	2401	1204
HCM Platoon Ratio	1.00	1.00	1.00	1.00	1.00	1.00
Upstream Filter(I)	1.00	1.00	1.00	1.00	0.75	0.75
Uniform Delay (d), s/veh	43.0	41.0	4.0	2.8	6.1	6.1
Incr Delay (d2), s/veh	7.0	1.5	0.3	0.2	0.4	0.8
Initial Q Delay(d3),s/veh	0.0	0.0	0.0	0.0	0.0	0.0
%ile BackOfQ(50%),veh/ln	4.4	4.2	0.3	1.5	3.8	4.0
Unsig. Movement Delay, s/veh						
LnGrp Delay(d),s/veh	50.0	42.6	4.3	2.9	6.5	6.9
LnGrp LOS	D	D	A	A	A	A
Approach Vol, veh/h	244			1244	1483	
Approach Delay, s/veh	47.6			3.0	6.6	
Approach LOS	D			A	A	

Timer - Assigned Phs		2		4	5	6
Phs Duration (G+Y+Rc), s		83.9		16.1	8.8	75.0
Change Period (Y+Rc), s		4.5		4.5	4.5	4.5
Max Green Setting (Gmax), s		66.5		24.5	9.5	52.5
Max Q Clear Time (g_c+I1), s		8.2		11.1	3.0	14.0
Green Ext Time (p_c), s		11.7		0.6	0.1	14.6

Intersection Summary	
HCM 6th Ctrl Delay	8.5
HCM 6th LOS	A

Lane Group	EBL	EBR	NBL	NBT	SBT
Lane Configurations					
Traffic Volume (vph)	110	100	45	915	1315
Future Volume (vph)	110	100	45	915	1315
Turn Type	pm+pt	Perm	pm+pt	NA	NA
Protected Phases	7		5	2	6
Permitted Phases	4	4	2		
Detector Phase	7	4	5	2	6
Switch Phase					
Minimum Initial (s)	5.0	5.0	5.0	5.0	5.0
Minimum Split (s)	11.5	24.5	11.5	24.5	24.5
Total Split (s)	30.0	30.0	16.0	90.0	74.0
Total Split (%)	25.0%	25.0%	13.3%	75.0%	61.7%
Yellow Time (s)	4.5	4.5	4.5	4.5	4.5
All-Red Time (s)	2.0	2.0	2.0	2.0	2.0
Lost Time Adjust (s)	0.0	0.0	0.0	0.0	0.0
Total Lost Time (s)	6.5	6.5	6.5	6.5	6.5
Lead/Lag			Lead		Lag
Lead-Lag Optimize?			Yes		Yes
Recall Mode	None	None	None	C-Max	C-Max
Act Effct Green (s)	13.5	13.5	93.5	93.5	83.1
Actuated g/C Ratio	0.11	0.11	0.78	0.78	0.69
v/c Ratio	0.61	0.40	0.20	0.25	0.46
Control Delay	62.9	12.9	4.8	0.6	1.4
Queue Delay	0.0	0.0	0.0	0.0	0.2
Total Delay	62.9	12.9	4.8	0.6	1.7
LOS	E	B	A	A	A
Approach Delay	39.1			0.8	1.7
Approach LOS	D			A	A

Intersection Summary	
Cycle Length: 120	
Actuated Cycle Length: 120	
Offset: 36 (30%), Referenced to phase 2:NBTL and 6:SBT, Start of Yellow	
Natural Cycle: 65	
Control Type: Actuated-Coordinated	
Maximum v/c Ratio: 0.61	
Intersection Signal Delay: 4.3	Intersection LOS: A
Intersection Capacity Utilization 54.3%	ICU Level of Service A
Analysis Period (min) 15	

Splits and Phases: 9: 25th Avenue & Peoria Street

Movement	EBL	EBR	NBL	NBT	SBT	SBR
Lane Configurations						
Traffic Volume (veh/h)	110	100	45	915	1315	155
Future Volume (veh/h)	110	100	45	915	1315	155
Initial Q (Qb), veh	0	0	0	0	0	0
Ped-Bike Adj(A_pbT)	1.00	1.00	1.00			1.00
Parking Bus, Adj	1.00	1.00	1.00	1.00	1.00	1.00
Work Zone On Approach	No			No	No	
Adj Sat Flow, veh/h/ln	1870	1870	1870	1870	1870	1870
Adj Flow Rate, veh/h	120	44	49	995	1429	168
Peak Hour Factor	0.92	0.92	0.92	0.92	0.92	0.92
Percent Heavy Veh, %	2	2	2	2	2	2
Cap, veh/h	152	135	349	4117	3329	391
Arrive On Green	0.09	0.09	0.07	1.00	1.00	1.00
Sat Flow, veh/h	1781	1585	1781	5274	4800	544
Grp Volume(v), veh/h	120	44	49	995	1050	547
Grp Sat Flow(s),veh/h/ln	1781	1585	1781	1702	1702	1772
Q Serve(g_s), s	7.9	3.1	0.8	0.0	0.0	0.0
Cycle Q Clear(g_c), s	7.9	3.1	0.8	0.0	0.0	0.0
Prop In Lane	1.00	1.00	1.00			0.31
Lane Grp Cap(c), veh/h	152	135	349	4117	2446	1274
V/C Ratio(X)	0.79	0.33	0.14	0.24	0.43	0.43
Avail Cap(c_a), veh/h	349	310	430	4117	2446	1274
HCM Platoon Ratio	1.00	1.00	2.00	2.00	2.00	2.00
Upstream Filter(I)	1.00	1.00	0.97	0.97	0.79	0.79
Uniform Delay (d), s/veh	53.8	51.6	3.2	0.0	0.0	0.0
Incr Delay (d2), s/veh	8.8	1.4	0.2	0.1	0.4	0.8
Initial Q Delay(d3),s/veh	0.0	0.0	0.0	0.0	0.0	0.0
%ile BackOfQ(50%),veh/ln	3.9	2.9	0.2	0.1	0.1	0.3
Unsig. Movement Delay, s/veh						
LnGrp Delay(d),s/veh	62.6	53.0	3.4	0.1	0.4	0.8
LnGrp LOS	E	D	A	A	A	A
Approach Vol, veh/h	164			1044	1597	
Approach Delay, s/veh	60.0			0.3	0.6	
Approach LOS	E			A	A	

Timer - Assigned Phs		2		4	5	6
Phs Duration (G+Y+Rc), s		103.3		16.7	10.5	92.7
Change Period (Y+Rc), s		6.5		6.5	6.5	6.5
Max Green Setting (Gmax), s		83.5		23.5	9.5	67.5
Max Q Clear Time (g_c+I1), s		2.0		9.9	2.8	2.0
Green Ext Time (p_c), s		9.3		0.4	0.0	18.8

Intersection Summary	
HCM 6th Ctrl Delay	3.9
HCM 6th LOS	A

Lane Group	EBL	EBR	NBL	NBT	SBT
Lane Configurations					
Traffic Volume (vph)	165	70	95	1220	1280
Future Volume (vph)	165	70	95	1220	1280
Turn Type	pm+pt	Perm	pm+pt	NA	NA
Protected Phases	7		5	2	6
Permitted Phases	4	4	2		
Detector Phase	7	4	5	2	6
Switch Phase					
Minimum Initial (s)	5.0	5.0	5.0	5.0	5.0
Minimum Split (s)	11.5	24.5	11.5	24.5	24.5
Total Split (s)	39.0	39.0	24.0	111.0	87.0
Total Split (%)	26.0%	26.0%	16.0%	74.0%	58.0%
Yellow Time (s)	4.5	4.5	4.5	4.5	4.5
All-Red Time (s)	2.0	2.0	2.0	2.0	2.0
Lost Time Adjust (s)	0.0	0.0	0.0	0.0	0.0
Total Lost Time (s)	6.5	6.5	6.5	6.5	6.5
Lead/Lag			Lead		Lag
Lead-Lag Optimize?			Yes		Yes
Recall Mode	None	None	None	C-Max	C-Max
Act Effct Green (s)	20.5	20.5	116.5	116.5	102.1
Actuated g/C Ratio	0.14	0.14	0.78	0.78	0.68
v/c Ratio	0.74	0.27	0.44	0.34	0.50
Control Delay	79.9	13.0	11.6	3.3	3.8
Queue Delay	0.0	0.0	0.0	0.0	0.0
Total Delay	79.9	13.0	11.6	3.3	3.8
LOS	E	B	B	A	A
Approach Delay	60.0			3.9	3.8
Approach LOS	E			A	A

Intersection Summary	
Cycle Length: 150	
Actuated Cycle Length: 150	
Offset: 140 (93%), Referenced to phase 2:NBTL and 6:SBT, Start of Yellow	
Natural Cycle: 65	
Control Type: Actuated-Coordinated	
Maximum v/c Ratio: 0.74	
Intersection Signal Delay: 8.1	Intersection LOS: A
Intersection Capacity Utilization 61.3%	ICU Level of Service B
Analysis Period (min) 15	

Splits and Phases: 9: 25th Avenue & Peoria Street

Movement	EBL	EBR	NBL	NBT	SBT	SBR
Lane Configurations						
Traffic Volume (veh/h)	165	70	95	1220	1280	265
Future Volume (veh/h)	165	70	95	1220	1280	265
Initial Q (Qb), veh	0	0	0	0	0	0
Ped-Bike Adj(A_pbT)	1.00	1.00	1.00			1.00
Parking Bus, Adj	1.00	1.00	1.00	1.00	1.00	1.00
Work Zone On Approach	No			No	No	
Adj Sat Flow, veh/h/ln	1870	1870	1870	1870	1870	1870
Adj Flow Rate, veh/h	179	11	103	1326	1391	288
Peak Hour Factor	0.92	0.92	0.92	0.92	0.92	0.92
Percent Heavy Veh, %	2	2	2	2	2	2
Cap, veh/h	205	182	319	4076	3061	633
Arrive On Green	0.12	0.12	0.07	1.00	1.00	1.00
Sat Flow, veh/h	1781	1585	1781	5274	4408	877
Grp Volume(v), veh/h	179	11	103	1326	1116	563
Grp Sat Flow(s),veh/h/ln	1781	1585	1781	1702	1702	1713
Q Serve(g_s), s	14.8	0.9	2.2	0.0	0.0	0.0
Cycle Q Clear(g_c), s	14.8	0.9	2.2	0.0	0.0	0.0
Prop In Lane	1.00	1.00	1.00			0.51
Lane Grp Cap(c), veh/h	205	182	319	4076	2458	1236
V/C Ratio(X)	0.87	0.06	0.32	0.33	0.45	0.46
Avail Cap(c_a), veh/h	386	343	468	4076	2458	1236
HCM Platoon Ratio	1.00	1.00	2.00	2.00	2.00	2.00
Upstream Filter(I)	1.00	1.00	0.95	0.95	0.80	0.80
Uniform Delay (d), s/veh	65.3	59.1	4.2	0.0	0.0	0.0
Incr Delay (d2), s/veh	10.9	0.1	0.6	0.2	0.5	1.0
Initial Q Delay(d3),s/veh	0.0	0.0	0.0	0.0	0.0	0.0
%ile BackOfQ(50%),veh/ln	7.4	0.9	0.8	0.1	0.2	0.3
Unsig. Movement Delay, s/veh						
LnGrp Delay(d),s/veh	76.2	59.3	4.7	0.2	0.5	1.0
LnGrp LOS	E	E	A	A	A	A
Approach Vol, veh/h	190			1429	1679	
Approach Delay, s/veh	75.2			0.5	0.6	
Approach LOS	E			A	A	

Timer - Assigned Phs		2		4	5	6
Phs Duration (G+Y+Rc), s		126.2		23.8	11.4	114.8
Change Period (Y+Rc), s		6.5		6.5	6.5	6.5
Max Green Setting (Gmax), s		104.5		32.5	17.5	80.5
Max Q Clear Time (g_c+I1), s		2.0		16.8	4.2	2.0
Green Ext Time (p_c), s		14.8		0.4	0.2	21.5

Intersection Summary	
HCM 6th Ctrl Delay	4.9
HCM 6th LOS	A

Lane Group	EBL	EBT	WBL	WBT	NBL	NBT	SBL	SBT
Lane Configurations								
Traffic Volume (vph)	110	25	30	5	50	1075	215	1885
Future Volume (vph)	110	25	30	5	50	1075	215	1885
Turn Type	pm+pt	NA	Perm	NA	pm+pt	NA	pm+pt	NA
Protected Phases	7	4		8	5	2	1	6
Permitted Phases	4		8		2		6	
Detector Phase	7	4	8	8	5	2	1	6
Switch Phase								
Minimum Initial (s)	5.0	5.0	5.0	5.0	5.0	5.0	5.0	5.0
Minimum Split (s)	11.5	24.5	24.5	24.5	11.5	24.5	11.5	24.5
Total Split (s)	13.0	37.6	24.6	24.6	12.0	53.6	28.8	70.4
Total Split (%)	10.8%	31.3%	20.5%	20.5%	10.0%	44.7%	24.0%	58.7%
Yellow Time (s)	4.5	4.5	4.5	4.5	4.5	4.5	4.5	4.5
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	0.0	0.0
Total Lost Time (s)	6.5	6.5	6.5	6.5	6.5	6.5	6.5	6.5
Lead/Lag	Lead		Lag	Lag	Lead	Lag	Lead	Lag
Lead-Lag Optimize?	Yes		Yes	Yes	Yes	Yes	Yes	Yes
Recall Mode	None	None	None	None	None	C-Max	None	C-Max
Act Effct Green (s)	19.3	19.3	8.7	8.7	72.8	66.2	87.5	76.9
Actuated g/C Ratio	0.16	0.16	0.07	0.07	0.61	0.55	0.73	0.64
v/c Ratio	0.70	0.44	0.37	0.38	0.34	0.49	0.63	0.69
Control Delay	65.3	20.0	63.6	21.0	38.6	18.1	31.6	6.9
Queue Delay	0.0	0.0	0.0	0.0	0.0	0.0	0.0	0.2
Total Delay	65.3	20.0	63.6	21.0	38.6	18.1	31.6	7.1
LOS	E	C	E	C	D	B	C	A
Approach Delay		40.0		35.4		18.9		9.4
Approach LOS		D		D		B		A

Intersection Summary	
Cycle Length: 120	
Actuated Cycle Length: 120	
Offset: 18 (15%), Referenced to phase 2:NBTL and 6:SBTL, Start of Yellow	
Natural Cycle: 90	
Control Type: Actuated-Coordinated	
Maximum v/c Ratio: 0.70	
Intersection Signal Delay: 15.1	Intersection LOS: B
Intersection Capacity Utilization 78.3%	ICU Level of Service D
Analysis Period (min) 15	

Splits and Phases: 9: 25th Avenue & Peoria Street

Movement	EBL	EBT	EBR	WBL	WBT	WBR	NBL	NBT	NBR	SBL	SBT	SBR
Lane Configurations												
Traffic Volume (veh/h)	110	25	115	30	5	55	50	1075	175	215	1885	155
Future Volume (veh/h)	110	25	115	30	5	55	50	1075	175	215	1885	155
Initial Q (Qb), veh	0	0	0	0	0	0	0	0	0	0	0	0
Ped-Bike Adj(A_pbT)	1.00		1.00	1.00		1.00	1.00		1.00	1.00		1.00
Parking Bus, Adj	1.00	1.00	1.00	1.00	1.00	1.00	1.00	1.00	1.00	1.00	1.00	1.00
Work Zone On Approach		No			No			No			No	
Adj Sat Flow, veh/h/ln	1870	1870	1870	1870	1870	1870	1870	1870	1870	1870	1870	1870
Adj Flow Rate, veh/h	120	27	60	33	5	60	54	1168	190	234	2049	168
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
Percent Heavy Veh, %	2	2	2	2	2	2	2	2	2	2	2	2
Cap, veh/h	182	86	191	137	7	87	226	2637	429	432	3060	249
Arrive On Green	0.05	0.17	0.17	0.06	0.06	0.06	0.07	1.00	1.00	0.15	1.00	1.00
Sat Flow, veh/h	1781	516	1147	1310	123	1480	1781	4425	720	1781	4812	392
Grp Volume(v), veh/h	120	0	87	33	0	65	54	898	460	234	1445	772
Grp Sat Flow(s),veh/h/ln	1781	0	1664	1310	0	1604	1781	1702	1741	1781	1702	1800
Q Serve(g_s), s	6.5	0.0	5.5	2.9	0.0	4.8	1.4	0.0	0.0	6.4	0.0	0.0
Cycle Q Clear(g_c), s	6.5	0.0	5.5	2.9	0.0	4.8	1.4	0.0	0.0	6.4	0.0	0.0
Prop In Lane	1.00		0.69	1.00		0.92	1.00		0.41	1.00		0.22
Lane Grp Cap(c), veh/h	182	0	278	137	0	94	226	2028	1037	432	2165	1144
V/C Ratio(X)	0.66	0.00	0.31	0.24	0.00	0.69	0.24	0.44	0.44	0.54	0.67	0.67
Avail Cap(c_a), veh/h	182	0	431	258	0	242	245	2028	1037	630	2165	1144
HCM Platoon Ratio	1.00	1.00	1.00	1.00	1.00	1.00	2.00	2.00	2.00	2.00	2.00	2.00
Upstream Filter(I)	1.00	0.00	1.00	1.00	0.00	1.00	0.32	0.32	0.32	0.14	0.14	0.14
Uniform Delay (d), s/veh	49.9	0.0	43.9	54.6	0.0	55.4	8.1	0.0	0.0	6.9	0.0	0.0
Incr Delay (d2), s/veh	8.6	0.0	0.6	0.9	0.0	8.8	0.2	0.2	0.4	0.1	0.2	0.5
Initial Q Delay(d3),s/veh	0.0	0.0	0.0	0.0	0.0	0.0	0.0	0.0	0.0	0.0	0.0	0.0
%ile BackOfQ(50%),veh/ln	0.8	0.0	2.3	1.0	0.0	2.2	0.5	0.1	0.1	2.0	0.1	0.1
Unsig. Movement Delay, s/veh												
LnGrp Delay(d),s/veh	58.5	0.0	44.6	55.5	0.0	64.2	8.3	0.2	0.4	7.0	0.2	0.5
LnGrp LOS	E	A	D	E	A	E	A	A	A	A	A	A
Approach Vol, veh/h		207			98			1412			2451	
Approach Delay, s/veh		52.6			61.3			0.6			0.9	
Approach LOS		D			E			A			A	

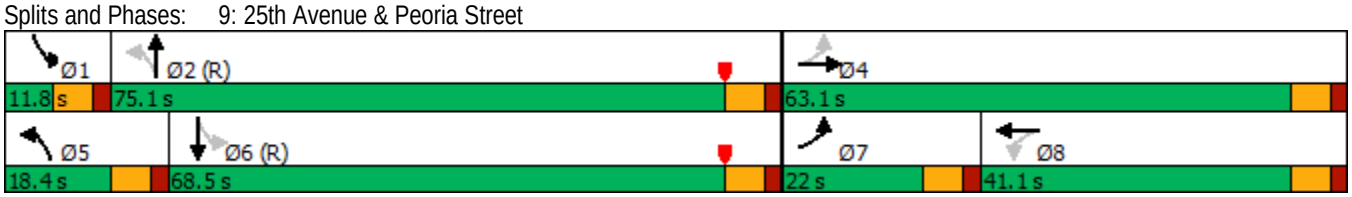
Timer - Assigned Phs	1	2		4	5	6	7	8
Phs Duration (G+Y+Rc), s	15.5	78.0		26.5	10.7	82.8	13.0	13.5
Change Period (Y+Rc), s	6.5	6.5		6.5	6.5	6.5	6.5	6.5
Max Green Setting (Gmax), s	22.3	47.1		31.1	5.5	63.9	6.5	18.1
Max Q Clear Time (g_c+I1), s	8.4	2.0		7.5	3.4	2.0	8.5	6.8
Green Ext Time (p_c), s	0.6	13.3		0.4	0.0	33.8	0.0	0.3

Intersection Summary	
HCM 6th Ctrl Delay	4.8
HCM 6th LOS	A

Lane Group	EBL	EBT	WBL	WBT	NBL	NBT	SBL	SBT
Lane Configurations								
Traffic Volume (vph)	165	5	155	20	115	1880	40	1420
Future Volume (vph)	165	5	155	20	115	1880	40	1420
Turn Type	pm+pt	NA	Perm	NA	pm+pt	NA	pm+pt	NA
Protected Phases	7	4		8	5	2	1	6
Permitted Phases	4		8		2		6	
Detector Phase	7	4	8	8	5	2	1	6
Switch Phase								
Minimum Initial (s)	5.0	5.0	5.0	5.0	5.0	5.0	5.0	5.0
Minimum Split (s)	11.5	24.5	24.5	24.5	11.5	24.5	11.5	24.5
Total Split (s)	22.0	63.1	41.1	41.1	18.4	75.1	11.8	68.5
Total Split (%)	14.7%	42.1%	27.4%	27.4%	12.3%	50.1%	7.9%	45.7%
Yellow Time (s)	4.5	4.5	4.5	4.5	4.5	4.5	4.5	4.5
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	0.0	0.0
Total Lost Time (s)	6.5	6.5	6.5	6.5	6.5	6.5	6.5	6.5
Lead/Lag	Lead		Lag	Lag	Lead	Lag	Lead	Lag
Lead-Lag Optimize?	Yes		Yes	Yes	Yes	Yes	Yes	Yes
Recall Mode	None	None	None	None	None	C-Max	None	C-Max
Act Effct Green (s)	52.4	52.4	30.7	30.7	83.8	74.9	73.3	67.7
Actuated g/C Ratio	0.35	0.35	0.20	0.20	0.56	0.50	0.49	0.45
v/c Ratio	0.79	0.14	0.63	0.92	0.73	0.82	0.37	0.81
Control Delay	60.2	7.3	64.6	70.0	39.8	36.8	38.7	21.4
Queue Delay	0.0	0.0	0.0	0.4	0.0	1.0	0.0	0.0
Total Delay	60.2	7.3	64.6	70.4	39.8	37.7	38.7	21.4
LOS	E	A	E	E	D	D	D	C
Approach Delay		42.9		68.6		37.8		21.8
Approach LOS		D		E		D		C

Intersection Summary	
Cycle Length: 150	
Actuated Cycle Length: 150	
Offset: 4 (3%), Referenced to phase 2:NBTL and 6:SBTL, Start of Yellow	
Natural Cycle: 90	
Control Type: Actuated-Coordinated	
Maximum v/c Ratio: 0.92	
Intersection Signal Delay: 35.4	Intersection LOS: D
Intersection Capacity Utilization 93.5%	ICU Level of Service F
Analysis Period (min) 15	

Splits and Phases: 9: 25th Avenue & Peoria Street



Movement	EBL	EBT	EBR	WBL	WBT	WBR	NBL	NBT	NBR	SBL	SBT	SBR
Lane Configurations												
Traffic Volume (veh/h)	165	5	75	155	20	330	115	1880	35	40	1420	265
Future Volume (veh/h)	165	5	75	155	20	330	115	1880	35	40	1420	265
Initial Q (Qb), veh	0	0	0	0	0	0	0	0	0	0	0	0
Ped-Bike Adj(A_pbT)	1.00		1.00	1.00		1.00	1.00		1.00	1.00		1.00
Parking Bus, Adj	1.00	1.00	1.00	1.00	1.00	1.00	1.00	1.00	1.00	1.00	1.00	1.00
Work Zone On Approach		No			No			No			No	
Adj Sat Flow, veh/h/ln	1870	1870	1870	1870	1870	1870	1870	1870	1870	1870	1870	1870
Adj Flow Rate, veh/h	179	5	17	168	22	223	125	2043	38	43	1543	288
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
Percent Heavy Veh, %	2	2	2	2	2	2	2	2	2	2	2	2
Cap, veh/h	242	116	393	287	25	252	263	2748	51	199	2216	412
Arrive On Green	0.09	0.31	0.31	0.17	0.17	0.17	0.10	1.00	1.00	0.06	1.00	1.00
Sat Flow, veh/h	1781	373	1269	1390	144	1463	1781	5161	96	1781	4325	804
Grp Volume(v), veh/h	179	0	22	168	0	245	125	1347	734	43	1213	618
Grp Sat Flow(s),veh/h/ln	1781	0	1642	1390	0	1607	1781	1702	1853	1781	1702	1726
Q Serve(g_s), s	12.1	0.0	1.4	17.1	0.0	22.3	5.1	0.0	0.0	1.7	0.0	0.0
Cycle Q Clear(g_c), s	12.1	0.0	1.4	17.1	0.0	22.3	5.1	0.0	0.0	1.7	0.0	0.0
Prop In Lane	1.00		0.77	1.00		0.91	1.00		0.05	1.00		0.47
Lane Grp Cap(c), veh/h	242	0	509	287	0	277	263	1813	987	199	1744	884
V/C Ratio(X)	0.74	0.00	0.04	0.58	0.00	0.89	0.47	0.74	0.74	0.22	0.70	0.70
Avail Cap(c_a), veh/h	259	0	620	369	0	371	319	1813	987	213	1744	884
HCM Platoon Ratio	1.00	1.00	1.00	1.00	1.00	1.00	2.00	2.00	2.00	2.00	2.00	2.00
Upstream Filter(I)	1.00	0.00	1.00	1.00	0.00	1.00	0.14	0.14	0.14	0.33	0.33	0.33
Uniform Delay (d), s/veh	45.6	0.0	36.2	58.5	0.0	60.6	14.8	0.0	0.0	15.8	0.0	0.0
Incr Delay (d2), s/veh	10.0	0.0	0.0	1.9	0.0	17.5	0.2	0.4	0.7	0.2	0.8	1.5
Initial Q Delay(d3),s/veh	0.0	0.0	0.0	0.0	0.0	0.0	0.0	0.0	0.0	0.0	0.0	0.0
%ile BackOfQ(50%),veh/ln	6.1	0.0	0.6	6.2	0.0	10.5	2.0	0.1	0.2	0.7	0.2	0.4
Unsig. Movement Delay, s/veh												
LnGrp Delay(d),s/veh	55.6	0.0	36.3	60.3	0.0	78.2	15.0	0.4	0.7	16.0	0.8	1.5
LnGrp LOS	E	A	D	E	A	E	B	A	A	B	A	A
Approach Vol, veh/h		201			413			2206			1874	
Approach Delay, s/veh		53.5			70.9			1.3			1.4	
Approach LOS		D			E			A			A	

Timer - Assigned Phs	1	2		4	5	6	7	8
Phs Duration (G+Y+Rc), s	10.7	86.4		53.0	13.7	83.4	20.6	32.3
Change Period (Y+Rc), s	6.5	6.5		6.5	6.5	6.5	6.5	6.5
Max Green Setting (Gmax), s	5.3	68.6		56.6	11.9	62.0	15.5	34.6
Max Q Clear Time (g_c+I1), s	3.7	2.0		3.4	7.1	2.0	14.1	24.3
Green Ext Time (p_c), s	0.0	30.8		0.1	0.1	23.9	0.1	1.5

Intersection Summary		
HCM 6th Ctrl Delay		9.7
HCM 6th LOS		A

Intersection	
Int Delay, s/veh	5.9

Movement	EBL	EBT	EBR	WBL	WBT	WBR	NBL	NBT	NBR	SBL	SBT	SBR
Lane Configurations												
Traffic Vol, veh/h	150	80	190	25	30	210	20	30	40	20	60	50
Future Vol, veh/h	150	80	190	25	30	210	20	30	40	20	60	50
Conflicting Peds, #/hr	0	0	0	0	0	0	0	0	0	0	0	0
Sign Control	Free	Free	Free	Free	Free	Free	Stop	Stop	Stop	Stop	Stop	Stop
RT Channelized	-	-	None	-	-	None	-	-	None	-	-	None
Storage Length	100	-	-	100	-	-	100	-	-	100	-	-
Veh in Median Storage, #	-	0	-	-	0	-	-	0	-	-	0	-
Grade, %	-	0	-	-	0	-	-	0	-	-	0	-
Peak Hour Factor	92	92	92	92	92	92	92	92	92	92	92	92
Heavy Vehicles, %	2	2	2	2	2	2	2	2	2	2	2	2
Mvmt Flow	163	87	207	27	33	228	22	33	43	22	65	54

Major/Minor	Major1			Major2			Minor1			Minor2		
Conflicting Flow All	261	0	0	294	0	0	778	832	191	756	821	147
Stage 1	-	-	-	-	-	-	517	517	-	201	201	-
Stage 2	-	-	-	-	-	-	261	315	-	555	620	-
Critical Hdwy	4.12	-	-	4.12	-	-	7.12	6.52	6.22	7.12	6.52	6.22
Critical Hdwy Stg 1	-	-	-	-	-	-	6.12	5.52	-	6.12	5.52	-
Critical Hdwy Stg 2	-	-	-	-	-	-	6.12	5.52	-	6.12	5.52	-
Follow-up Hdwy	2.218	-	-	2.218	-	-	3.518	4.018	3.318	3.518	4.018	3.318
Pot Cap-1 Maneuver	1303	-	-	1271	-	-	317	303	886	328	308	900
Stage 1	-	-	-	-	-	-	549	535	-	801	735	-
Stage 2	-	-	-	-	-	-	744	656	-	523	478	-
Platoon blocked, %		-	-	1	-	-	1	1	1	1	1	
Mov Cap-1 Maneuver	1303	-	-	1271	-	-	215	260	886	251	264	900
Mov Cap-2 Maneuver	-	-	-	-	-	-	215	260	-	251	264	-
Stage 1	-	-	-	-	-	-	480	468	-	701	720	-
Stage 2	-	-	-	-	-	-	622	642	-	404	418	-

Approach	EB	WB	NB	SB
HCM Control Delay, s	2.9	0.7	16.9	18.7
HCM LOS			C	C

Minor Lane/Major Mvmt	NBLn1	NBLn2	EBL	EBT	EBR	WBL	WBT	WBR	SBLn1	SBLn2
Capacity (veh/h)	215	436	1303	-	-	1271	-	-	251	389
HCM Lane V/C Ratio	0.101	0.175	0.125	-	-	0.021	-	-	0.087	0.307
HCM Control Delay (s)	23.6	15	8.2	-	-	7.9	-	-	20.7	18.3
HCM Lane LOS	C	C	A	-	-	A	-	-	C	C
HCM 95th %tile Q(veh)	0.3	0.6	0.4	-	-	0.1	-	-	0.3	1.3

Intersection	
Int Delay, s/veh	9.3

Movement	EBL	EBT	EBR	WBL	WBT	WBR	NBL	NBT	NBR	SBL	SBT	SBR
Lane Configurations												
Traffic Vol, veh/h	30	20	35	20	145	40	60	20	105	25	40	305
Future Vol, veh/h	30	20	35	20	145	40	60	20	105	25	40	305
Conflicting Peds, #/hr	0	0	0	0	0	0	0	0	0	0	0	0
Sign Control	Free	Free	Free	Free	Free	Free	Stop	Stop	Stop	Stop	Stop	Stop
RT Channelized	-	-	None	-	-	None	-	-	None	-	-	None
Storage Length	100	-	-	100	-	-	100	-	-	100	-	-
Veh in Median Storage, #	-	0	-	-	0	-	-	0	-	-	0	-
Grade, %	-	0	-	-	0	-	-	0	-	-	0	-
Peak Hour Factor	92	92	92	92	92	92	92	92	92	92	92	92
Heavy Vehicles, %	2	2	2	2	2	2	2	2	2	2	2	2
Mvmt Flow	33	22	38	22	158	43	65	22	114	27	43	332

Major/Minor	Major1			Major2			Minor1			Minor2		
Conflicting Flow All	201	0	0	60	0	0	518	352	41	399	350	180
Stage 1	-	-	-	-	-	-	107	107	-	224	224	-
Stage 2	-	-	-	-	-	-	411	245	-	175	126	-
Critical Hdwy	4.12	-	-	4.12	-	-	7.12	6.52	6.22	7.12	6.52	6.22
Critical Hdwy Stg 1	-	-	-	-	-	-	6.12	5.52	-	6.12	5.52	-
Critical Hdwy Stg 2	-	-	-	-	-	-	6.12	5.52	-	6.12	5.52	-
Follow-up Hdwy	2.218	-	-	2.218	-	-	3.518	4.018	3.318	3.518	4.018	3.318
Pot Cap-1 Maneuver	1371	-	-	1545	-	-	469	574	1035	564	576	863
Stage 1	-	-	-	-	-	-	902	808	-	779	718	-
Stage 2	-	-	-	-	-	-	618	703	-	829	794	-
Platoon blocked, %		-	-	1	-	-	1	1	1	1	1	
Mov Cap-1 Maneuver	1371	-	-	1545	-	-	264	552	1035	473	554	863
Mov Cap-2 Maneuver	-	-	-	-	-	-	264	552	-	473	554	-
Stage 1	-	-	-	-	-	-	880	789	-	760	708	-
Stage 2	-	-	-	-	-	-	352	693	-	700	775	-

Approach	EB	WB	NB	SB
HCM Control Delay, s	2.7	0.7	14	13.2
HCM LOS			B	B

Minor Lane/Major Mvmt	NBLn1	NBLn2	EBL	EBT	EBR	WBL	WBT	WBR	SBLn1	SBLn2
Capacity (veh/h)	264	908	1371	-	-	1545	-	-	473	811
HCM Lane V/C Ratio	0.247	0.15	0.024	-	-	0.014	-	-	0.057	0.462
HCM Control Delay (s)	23.1	9.7	7.7	-	-	7.4	-	-	13.1	13.2
HCM Lane LOS	C	A	A	-	-	A	-	-	B	B
HCM 95th %tile Q(veh)	0.9	0.5	0.1	-	-	0	-	-	0.2	2.5

Intersection	
Int Delay, s/veh	7.8

Movement	EBL	EBT	EBR	WBL	WBT	WBR	NBL	NBT	NBR	SBL	SBT	SBR
Lane Configurations												
Traffic Vol, veh/h	20	80	25	15	35	25	15	20	110	30	75	195
Future Vol, veh/h	20	80	25	15	35	25	15	20	110	30	75	195
Conflicting Peds, #/hr	0	0	0	0	0	0	0	0	0	0	0	0
Sign Control	Free	Free	Free	Free	Free	Free	Stop	Stop	Stop	Stop	Stop	Stop
RT Channelized	-	-	None	-	-	None	-	-	None	-	-	None
Storage Length	100	-	-	100	-	-	100	-	-	100	-	-
Veh in Median Storage, #	-	0	-	-	0	-	-	0	-	-	0	-
Grade, %	-	0	-	-	0	-	-	0	-	-	0	-
Peak Hour Factor	92	92	92	92	92	92	92	92	92	92	92	92
Heavy Vehicles, %	2	2	2	2	2	2	2	2	2	2	2	2
Mvmt Flow	22	87	27	16	38	27	16	22	120	33	82	212

Major/Minor	Major1			Major2			Minor1			Minor2		
Conflicting Flow All	65	0	0	114	0	0	376	242	101	300	242	52
Stage 1	-	-	-	-	-	-	145	145	-	84	84	-
Stage 2	-	-	-	-	-	-	231	97	-	216	158	-
Critical Hdwy	4.12	-	-	4.12	-	-	7.12	6.52	6.22	7.12	6.52	6.22
Critical Hdwy Stg 1	-	-	-	-	-	-	6.12	5.52	-	6.12	5.52	-
Critical Hdwy Stg 2	-	-	-	-	-	-	6.12	5.52	-	6.12	5.52	-
Follow-up Hdwy	2.218	-	-	2.218	-	-	3.518	4.018	3.318	3.518	4.018	3.318
Pot Cap-1 Maneuver	1537	-	-	1492	-	-	607	684	1001	685	684	1016
Stage 1	-	-	-	-	-	-	892	794	-	924	825	-
Stage 2	-	-	-	-	-	-	772	815	-	815	783	-
Platoon blocked, %		-	-	1	-	-	1	1	1	1	1	
Mov Cap-1 Maneuver	1537	-	-	1492	-	-	427	667	1001	577	667	1016
Mov Cap-2 Maneuver	-	-	-	-	-	-	427	667	-	577	667	-
Stage 1	-	-	-	-	-	-	880	783	-	911	816	-
Stage 2	-	-	-	-	-	-	544	806	-	687	772	-

Approach	EB	WB	NB	SB
HCM Control Delay, s	1.2	1.5	10	11.1
HCM LOS			B	B

Minor Lane/Major Mvmt	NBLn1	NBLn2	EBL	EBT	EBR	WBL	WBT	WBR	SBLn1	SBLn2
Capacity (veh/h)	427	929	1537	-	-	1492	-	-	577	887
HCM Lane V/C Ratio	0.038	0.152	0.014	-	-	0.011	-	-	0.057	0.331
HCM Control Delay (s)	13.8	9.6	7.4	-	-	7.4	-	-	11.6	11.1
HCM Lane LOS	B	A	A	-	-	A	-	-	B	B
HCM 95th %tile Q(veh)	0.1	0.5	0	-	-	0	-	-	0.2	1.5

Intersection	
Int Delay, s/veh	4.2

Movement	EBL	EBT	EBR	WBL	WBT	WBR	NBL	NBT	NBR	SBL	SBT	SBR
Lane Configurations												
Traffic Vol, veh/h	15	25	115	85	145	140	15	40	30	15	20	35
Future Vol, veh/h	15	25	115	85	145	140	15	40	30	15	20	35
Conflicting Peds, #/hr	0	0	0	0	0	0	0	0	0	0	0	0
Sign Control	Free	Free	Free	Free	Free	Free	Stop	Stop	Stop	Stop	Stop	Stop
RT Channelized	-	-	None	-	-	None	-	-	None	-	-	None
Storage Length	100	-	-	100	-	-	100	-	-	100	-	-
Veh in Median Storage, #	-	0	-	-	0	-	-	0	-	-	0	-
Grade, %	-	0	-	-	0	-	-	0	-	-	0	-
Peak Hour Factor	92	92	92	92	92	92	92	92	92	92	92	92
Heavy Vehicles, %	2	2	2	2	2	2	2	2	2	2	2	2
Mvmt Flow	16	27	125	92	158	152	16	43	33	16	22	38

Major/Minor	Major1			Major2			Minor1			Minor2		
Conflicting Flow All	310	0	0	152	0	0	570	616	90	578	602	234
Stage 1	-	-	-	-	-	-	122	122	-	418	418	-
Stage 2	-	-	-	-	-	-	448	494	-	160	184	-
Critical Hdwy	4.12	-	-	4.12	-	-	7.12	6.52	6.22	7.12	6.52	6.22
Critical Hdwy Stg 1	-	-	-	-	-	-	6.12	5.52	-	6.12	5.52	-
Critical Hdwy Stg 2	-	-	-	-	-	-	6.12	5.52	-	6.12	5.52	-
Follow-up Hdwy	2.218	-	-	2.218	-	-	3.518	4.018	3.318	3.518	4.018	3.318
Pot Cap-1 Maneuver	1250	-	-	1430	-	-	434	407	973	428	414	805
Stage 1	-	-	-	-	-	-	886	797	-	612	591	-
Stage 2	-	-	-	-	-	-	590	546	-	845	749	-
Platoon blocked, %		-	-	1	-	-	1	1	1	1	1	
Mov Cap-1 Maneuver	1250	-	-	1430	-	-	372	376	973	355	382	805
Mov Cap-2 Maneuver	-	-	-	-	-	-	372	376	-	355	382	-
Stage 1	-	-	-	-	-	-	875	786	-	604	553	-
Stage 2	-	-	-	-	-	-	505	511	-	762	739	-

Approach	EB	WB	NB	SB
HCM Control Delay, s	0.8	1.8	13.6	12.8
HCM LOS			B	B

Minor Lane/Major Mvmt	NBLn1	NBLn2	EBL	EBT	EBR	WBL	WBT	WBR	SBLn1	SBLn2
Capacity (veh/h)	372	510	1250	-	-	1430	-	-	355	574
HCM Lane V/C Ratio	0.044	0.149	0.013	-	-	0.065	-	-	0.046	0.104
HCM Control Delay (s)	15.1	13.3	7.9	-	-	7.7	-	-	15.6	12
HCM Lane LOS	C	B	A	-	-	A	-	-	C	B
HCM 95th %tile Q(veh)	0.1	0.5	0	-	-	0.2	-	-	0.1	0.3

Intersection	
Int Delay, s/veh	4.4

Movement	EBL	EBT	EBR	WBL	WBT	WBR	NBL	NBT	NBR	SBL	SBT	SBR
Lane Configurations												
Traffic Vol, veh/h	85	75	20	10	60	110	10	15	10	20	25	30
Future Vol, veh/h	85	75	20	10	60	110	10	15	10	20	25	30
Conflicting Peds, #/hr	0	0	0	0	0	0	0	0	0	0	0	0
Sign Control	Free	Free	Free	Free	Free	Free	Stop	Stop	Stop	Stop	Stop	Stop
RT Channelized	-	-	None	-	-	None	-	-	None	-	-	None
Storage Length	100	-	-	100	-	-	-	-	-	-	-	-
Veh in Median Storage, #	-	0	-	-	0	-	-	0	-	-	0	-
Grade, %	-	0	-	-	0	-	-	0	-	-	0	-
Peak Hour Factor	92	92	92	92	92	92	92	92	92	92	92	92
Heavy Vehicles, %	2	2	2	2	2	2	2	2	2	2	2	2
Mvmt Flow	92	82	22	11	65	120	11	16	11	22	27	33

Major/Minor	Major1			Major2			Minor1			Minor2		
Conflicting Flow All	185	0	0	104	0	0	454	484	93	438	435	125
Stage 1	-	-	-	-	-	-	277	277	-	147	147	-
Stage 2	-	-	-	-	-	-	177	207	-	291	288	-
Critical Hdwy	4.12	-	-	4.12	-	-	7.12	6.52	6.22	7.12	6.52	6.22
Critical Hdwy Stg 1	-	-	-	-	-	-	6.12	5.52	-	6.12	5.52	-
Critical Hdwy Stg 2	-	-	-	-	-	-	6.12	5.52	-	6.12	5.52	-
Follow-up Hdwy	2.218	-	-	2.218	-	-	3.518	4.018	3.318	3.518	4.018	3.318
Pot Cap-1 Maneuver	1390	-	-	1505	-	-	535	492	1011	549	526	926
Stage 1	-	-	-	-	-	-	752	691	-	856	775	-
Stage 2	-	-	-	-	-	-	825	731	-	739	683	-
Platoon blocked, %		-	-	1	-	-	1	1	1	1	1	
Mov Cap-1 Maneuver	1390	-	-	1505	-	-	467	456	1011	499	488	926
Mov Cap-2 Maneuver	-	-	-	-	-	-	467	456	-	499	488	-
Stage 1	-	-	-	-	-	-	703	645	-	800	770	-
Stage 2	-	-	-	-	-	-	762	726	-	665	638	-

Approach	EB	WB	NB	SB
HCM Control Delay, s	3.7	0.4	12.1	11.9
HCM LOS			B	B

Minor Lane/Major Mvmt	NBLn1	EBL	EBT	EBR	WBL	WBT	WBR	SBLn1
Capacity (veh/h)	545	1390	-	-	1505	-	-	606
HCM Lane V/C Ratio	0.07	0.066	-	-	0.007	-	-	0.135
HCM Control Delay (s)	12.1	7.8	-	-	7.4	-	-	11.9
HCM Lane LOS	B	A	-	-	A	-	-	B
HCM 95th %tile Q(veh)	0.2	0.2	-	-	0	-	-	0.5

Intersection	
Int Delay, s/veh	6.8

Movement	EBL	EBT	EBR	WBL	WBT	WBR	NBL	NBT	NBR	SBL	SBT	SBR
Lane Configurations												
Traffic Vol, veh/h	35	20	10	10	110	20	15	20	10	10	10	205
Future Vol, veh/h	35	20	10	10	110	20	15	20	10	10	10	205
Conflicting Peds, #/hr	0	0	0	0	0	0	0	0	0	0	0	0
Sign Control	Free	Free	Free	Free	Free	Free	Stop	Stop	Stop	Stop	Stop	Stop
RT Channelized	-	-	None	-	-	None	-	-	None	-	-	None
Storage Length	100	-	-	100	-	-	-	-	-	-	-	-
Veh in Median Storage, #	-	0	-	-	0	-	-	0	-	-	0	-
Grade, %	-	0	-	-	0	-	-	0	-	-	0	-
Peak Hour Factor	92	92	92	92	92	92	92	92	92	92	92	92
Heavy Vehicles, %	2	2	2	2	2	2	2	2	2	2	2	2
Mvmt Flow	38	22	11	11	120	22	16	22	11	11	11	223

Major/Minor	Major1			Major2			Minor1			Minor2		
Conflicting Flow All	142	0	0	33	0	0	374	268	28	273	262	131
Stage 1	-	-	-	-	-	-	104	104	-	153	153	-
Stage 2	-	-	-	-	-	-	270	164	-	120	109	-
Critical Hdwy	4.12	-	-	4.12	-	-	7.12	6.52	6.22	7.12	6.52	6.22
Critical Hdwy Stg 1	-	-	-	-	-	-	6.12	5.52	-	6.12	5.52	-
Critical Hdwy Stg 2	-	-	-	-	-	-	6.12	5.52	-	6.12	5.52	-
Follow-up Hdwy	2.218	-	-	2.218	-	-	3.518	4.018	3.318	3.518	4.018	3.318
Pot Cap-1 Maneuver	1441	-	-	1581	-	-	586	640	1052	683	645	919
Stage 1	-	-	-	-	-	-	905	810	-	849	771	-
Stage 2	-	-	-	-	-	-	736	762	-	888	806	-
Platoon blocked, %		-	-	1	-	-	1	1	1	1	1	
Mov Cap-1 Maneuver	1441	-	-	1581	-	-	427	619	1052	642	624	919
Mov Cap-2 Maneuver	-	-	-	-	-	-	427	619	-	642	624	-
Stage 1	-	-	-	-	-	-	881	789	-	827	766	-
Stage 2	-	-	-	-	-	-	546	757	-	832	786	-

Approach	EB	WB	NB	SB
HCM Control Delay, s	4.1	0.5	11.7	10.6
HCM LOS			B	B

Minor Lane/Major Mvmt	NBLn1	EBL	EBT	EBR	WBL	WBT	WBR	SBLn1
Capacity (veh/h)	585	1441	-	-	1581	-	-	883
HCM Lane V/C Ratio	0.084	0.026	-	-	0.007	-	-	0.277
HCM Control Delay (s)	11.7	7.6	-	-	7.3	-	-	10.6
HCM Lane LOS	B	A	-	-	A	-	-	B
HCM 95th %tile Q(veh)	0.3	0.1	-	-	0	-	-	1.1

Intersection	
Int Delay, s/veh	9

Movement	EBL	EBT	EBR	WBL	WBT	WBR	NBL	NBT	NBR	SBL	SBT	SBR
Lane Configurations												
Traffic Vol, veh/h	0	25	25	20	225	0	0	0	0	30	20	15
Future Vol, veh/h	0	25	25	20	225	0	0	0	0	30	20	15
Conflicting Peds, #/hr	0	0	0	0	0	0	0	0	0	0	0	0
Sign Control	Stop	Stop	Stop	Stop	Stop	Stop	Free	Free	Free	Free	Free	Free
RT Channelized	-	-	None	-	-	None	-	-	None	-	-	None
Storage Length	-	-	-	25	-	-	-	-	-	-	-	-
Veh in Median Storage, #	-	0	-	-	0	-	-	0	-	-	0	-
Grade, %	-	0	-	-	0	-	-	0	-	-	0	-
Peak Hour Factor	92	92	92	92	92	92	92	92	92	92	92	92
Heavy Vehicles, %	2	2	2	2	2	2	2	2	2	2	2	2
Mvmt Flow	0	27	27	22	245	0	0	0	0	33	22	16

Major/Minor	Minor2			Minor1					Major2		
Conflicting Flow All	-	96	30	123	104	-			0	0	0
Stage 1	-	96	-	0	0	-			-	-	-
Stage 2	-	0	-	123	104	-			-	-	-
Critical Hdwy	-	6.52	6.22	7.12	6.52	-			4.12	-	-
Critical Hdwy Stg 1	-	5.52	-	-	-	-			-	-	-
Critical Hdwy Stg 2	-	-	-	6.12	5.52	-			-	-	-
Follow-up Hdwy	-	4.018	3.318	3.518	4.018	-			2.218	-	-
Pot Cap-1 Maneuver	0	794	1044	852	786	0			-	-	-
Stage 1	0	815	-	-	-	0			-	-	-
Stage 2	0	-	-	881	809	0			-	-	-
Platoon blocked, %										-	-
Mov Cap-1 Maneuver	-	794	1044	809	786	-			-	-	-
Mov Cap-2 Maneuver	-	794	-	809	786	-			-	-	-
Stage 1	-	815	-	-	-	-			-	-	-
Stage 2	-	-	-	829	809	-			-	-	-

Approach	EB	WB	SB
HCM Control Delay, s	9.2	11.4	
HCM LOS	A	B	

Minor Lane/Major Mvmt	EBLn1	WBLn1	WBLn2	SBL	SBT	SBR
Capacity (veh/h)	902	809	786	-	-	-
HCM Lane V/C Ratio	0.06	0.027	0.311	-	-	-
HCM Control Delay (s)	9.2	9.6	11.6	-	-	-
HCM Lane LOS	A	A	B	-	-	-
HCM 95th %tile Q(veh)	0.2	0.1	1.3	-	-	-

Intersection	
Int Delay, s/veh	7.3

Movement	EBL	EBT	EBR	WBL	WBT	WBR	NBL	NBT	NBR	SBL	SBT	SBR
Lane Configurations												
Traffic Vol, veh/h	0	35	20	25	85	0	0	0	0	10	30	15
Future Vol, veh/h	0	35	20	25	85	0	0	0	0	10	30	15
Conflicting Peds, #/hr	0	0	0	0	0	0	0	0	0	0	0	0
Sign Control	Stop	Stop	Stop	Stop	Stop	Stop	Free	Free	Free	Free	Free	Free
RT Channelized	-	-	None	-	-	None	-	-	None	-	-	None
Storage Length	-	-	-	25	-	-	-	-	-	-	-	-
Veh in Median Storage, #	-	0	-	-	0	-	-	0	-	-	0	-
Grade, %	-	0	-	-	0	-	-	0	-	-	0	-
Peak Hour Factor	92	92	92	92	92	92	92	92	92	92	92	92
Heavy Vehicles, %	2	2	2	2	2	2	2	2	2	2	2	2
Mvmt Flow	0	38	22	27	92	0	0	0	0	11	33	16

Major/Minor	Minor2			Minor1					Major2		
Conflicting Flow All	-	63	41	93	71	-			0	0	0
Stage 1	-	63	-	0	0	-			-	-	-
Stage 2	-	0	-	93	71	-			-	-	-
Critical Hdwy	-	6.52	6.22	7.12	6.52	-			4.12	-	-
Critical Hdwy Stg 1	-	5.52	-	-	-	-			-	-	-
Critical Hdwy Stg 2	-	-	-	6.12	5.52	-			-	-	-
Follow-up Hdwy	-	4.018	3.318	3.518	4.018	-			2.218	-	-
Pot Cap-1 Maneuver	0	828	1030	891	819	0			-	-	-
Stage 1	0	842	-	-	-	0			-	-	-
Stage 2	0	-	-	914	836	0			-	-	-
Platoon blocked, %										-	-
Mov Cap-1 Maneuver	-	828	1030	842	819	-			-	-	-
Mov Cap-2 Maneuver	-	828	-	842	819	-			-	-	-
Stage 1	-	842	-	-	-	-			-	-	-
Stage 2	-	-	-	854	836	-			-	-	-

Approach	EB	WB	SB
HCM Control Delay, s	9.3	9.9	
HCM LOS	A	A	

Minor Lane/Major Mvmt	EBLn1	WBLn1	WBLn2	SBL	SBT	SBR
Capacity (veh/h)	892	842	819	-	-	-
HCM Lane V/C Ratio	0.067	0.032	0.113	-	-	-
HCM Control Delay (s)	9.3	9.4	10	-	-	-
HCM Lane LOS	A	A	B	-	-	-
HCM 95th %tile Q(veh)	0.2	0.1	0.4	-	-	-

Intersection	
Int Delay, s/veh	8

Movement	EBL	EBT	EBR	WBL	WBT	WBR	NBL	NBT	NBR	SBL	SBT	SBR
Lane Configurations												
Traffic Vol, veh/h	15	55	0	0	185	55	55	95	35	0	0	0
Future Vol, veh/h	15	55	0	0	185	55	55	95	35	0	0	0
Conflicting Peds, #/hr	0	0	0	0	0	0	0	0	0	0	0	0
Sign Control	Stop	Stop	Stop	Stop	Stop	Stop	Free	Free	Free	Free	Free	Free
RT Channelized	-	-	None	-	-	None	-	-	None	-	-	None
Storage Length	25	-	-	-	-	-	-	-	-	-	-	-
Veh in Median Storage, #	-	0	-	-	0	-	-	0	-	1084	160000	-
Grade, %	-	0	-	-	0	-	-	0	-	-	0	-
Peak Hour Factor	92	92	92	92	92	92	92	92	92	92	92	92
Heavy Vehicles, %	2	2	2	2	2	2	2	2	2	2	2	2
Mvmt Flow	16	60	0	0	201	60	60	103	38	0	0	0

Major/Minor	Minor2			Minor1			Major1		
Conflicting Flow All	373	261	-	-	242	122	0	0	0
Stage 1	0	0	-	-	242	-	-	-	-
Stage 2	373	261	-	-	0	-	-	-	-
Critical Hdwy	7.12	6.52	-	-	6.52	6.22	4.12	-	-
Critical Hdwy Stg 1	-	-	-	-	5.52	-	-	-	-
Critical Hdwy Stg 2	6.12	5.52	-	-	-	-	-	-	-
Follow-up Hdwy	3.518	4.018	-	-	4.018	3.318	2.218	-	-
Pot Cap-1 Maneuver	584	644	0	0	660	929	-	-	-
Stage 1	-	-	0	0	705	-	-	-	-
Stage 2	648	692	0	0	-	-	-	-	-
Platoon blocked, %								-	-
Mov Cap-1 Maneuver	418	644	-	-	660	929	-	-	-
Mov Cap-2 Maneuver	418	644	-	-	660	-	-	-	-
Stage 1	-	-	-	-	705	-	-	-	-
Stage 2	433	692	-	-	-	-	-	-	-

Approach	EB	WB	NB
HCM Control Delay, s	11.8	13	
HCM LOS	B	B	

Minor Lane/Major Mvmt	NBL	NBT	NBR	EBLn1	EBLn2	WBLn1
Capacity (veh/h)	-	-	-	418	644	707
HCM Lane V/C Ratio	-	-	-	0.039	0.093	0.369
HCM Control Delay (s)	-	-	-	14	11.2	13
HCM Lane LOS	-	-	-	B	B	B
HCM 95th %tile Q(veh)	-	-	-	0.1	0.3	1.7

Intersection	
Int Delay, s/veh	6.7

Movement	EBL	EBT	EBR	WBL	WBT	WBR	NBL	NBT	NBR	SBL	SBT	SBR
Lane Configurations												
Traffic Vol, veh/h	20	40	0	0	80	40	25	50	15	0	0	0
Future Vol, veh/h	20	40	0	0	80	40	25	50	15	0	0	0
Conflicting Peds, #/hr	0	0	0	0	0	0	0	0	0	0	0	0
Sign Control	Stop	Stop	Stop	Stop	Stop	Stop	Free	Free	Free	Free	Free	Free
RT Channelized	-	-	None	-	-	None	-	-	None	-	-	None
Storage Length	25	-	-	-	-	-	-	-	-	-	-	-
Veh in Median Storage, #	-	0	-	-	0	-	-	0	-	1084	1600	00 -
Grade, %	-	0	-	-	0	-	-	0	-	-	0	-
Peak Hour Factor	92	92	92	92	92	92	92	92	92	92	92	92
Heavy Vehicles, %	2	2	2	2	2	2	2	2	2	2	2	2
Mvmt Flow	22	43	0	0	87	43	27	54	16	0	0	0

Major/Minor	Minor2			Minor1			Major1		
Conflicting Flow All	181	124	-	-	116	62	0	0	0
Stage 1	0	0	-	-	116	-	-	-	-
Stage 2	181	124	-	-	0	-	-	-	-
Critical Hdwy	7.12	6.52	-	-	6.52	6.22	4.12	-	-
Critical Hdwy Stg 1	-	-	-	-	5.52	-	-	-	-
Critical Hdwy Stg 2	6.12	5.52	-	-	-	-	-	-	-
Follow-up Hdwy	3.518	4.018	-	-	4.018	3.318	2.218	-	-
Pot Cap-1 Maneuver	781	766	0	0	774	1003	-	-	-
Stage 1	-	-	0	0	800	-	-	-	-
Stage 2	821	793	0	0	-	-	-	-	-
Platoon blocked, %								-	-
Mov Cap-1 Maneuver	683	766	-	-	774	1003	-	-	-
Mov Cap-2 Maneuver	683	766	-	-	774	-	-	-	-
Stage 1	-	-	-	-	800	-	-	-	-
Stage 2	700	793	-	-	-	-	-	-	-

Approach	EB	WB	NB
HCM Control Delay, s	10.1	10.1	
HCM LOS	B	B	

Minor Lane/Major Mvmt	NBL	NBT	NBR	EBLn1	EBLn2	WBLn1
Capacity (veh/h)	-	-	-	683	766	838
HCM Lane V/C Ratio	-	-	-	0.032	0.057	0.156
HCM Control Delay (s)	-	-	-	10.4	10	10.1
HCM Lane LOS	-	-	-	B	B	B
HCM 95th %tile Q(veh)	-	-	-	0.1	0.2	0.6

Intersection	
Int Delay, s/veh	5.2

Movement	EBL	EBR	NBL	NBT	SBT	SBR
Lane Configurations						
Traffic Vol, veh/h	200	40	75	130	405	125
Future Vol, veh/h	200	40	75	130	405	125
Conflicting Peds, #/hr	0	0	0	0	0	0
Sign Control	Stop	Stop	Free	Free	Free	Free
RT Channelized	-	None	-	None	-	None
Storage Length	100	0	100	-	-	-
Veh in Median Storage, #	1	-	-	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	217	43	82	141	440	136

Major/Minor	Minor2		Major1		Major2	
Conflicting Flow All	813	508	576	0	-	0
Stage 1	508	-	-	-	-	-
Stage 2	305	-	-	-	-	-
Critical Hdwy	6.42	6.22	4.12	-	-	-
Critical Hdwy Stg 1	5.42	-	-	-	-	-
Critical Hdwy Stg 2	5.42	-	-	-	-	-
Follow-up Hdwy	3.518	3.318	2.218	-	-	-
Pot Cap-1 Maneuver	365	700	980	-	-	-
Stage 1	667	-	-	-	-	-
Stage 2	748	-	-	-	-	-
Platoon blocked, %	1	1	1	-	-	-
Mov Cap-1 Maneuver	335	700	980	-	-	-
Mov Cap-2 Maneuver	457	-	-	-	-	-
Stage 1	611	-	-	-	-	-
Stage 2	748	-	-	-	-	-

Approach	EB	NB	SB
HCM Control Delay, s	18.3	3.3	0
HCM LOS	C		

Minor Lane/Major Mvmt	NBL	NBT	EBLn1	EBLn2	SBT	SBR
Capacity (veh/h)	980	-	457	700	-	-
HCM Lane V/C Ratio	0.083	-	0.476	0.062	-	-
HCM Control Delay (s)	9	-	19.8	10.5	-	-
HCM Lane LOS	A	-	C	B	-	-
HCM 95th %tile Q(veh)	0.3	-	2.5	0.2	-	-

Intersection	
Int Delay, s/veh	5.4

Movement	EBL	EBR	NBL	NBT	SBT	SBR
Lane Configurations						
Traffic Vol, veh/h	180	70	30	170	100	35
Future Vol, veh/h	180	70	30	170	100	35
Conflicting Peds, #/hr	0	0	0	0	0	0
Sign Control	Stop	Stop	Free	Free	Free	Free
RT Channelized	-	None	-	None	-	None
Storage Length	100	0	100	-	-	-
Veh in Median Storage, #	1	-	-	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	196	76	33	185	109	38

Major/Minor	Minor2		Major1		Major2	
Conflicting Flow All	379	128	147	0	-	0
Stage 1	128	-	-	-	-	-
Stage 2	251	-	-	-	-	-
Critical Hdwy	6.42	6.22	4.12	-	-	-
Critical Hdwy Stg 1	5.42	-	-	-	-	-
Critical Hdwy Stg 2	5.42	-	-	-	-	-
Follow-up Hdwy	3.518	3.318	2.218	-	-	-
Pot Cap-1 Maneuver	623	922	1435	-	-	-
Stage 1	898	-	-	-	-	-
Stage 2	791	-	-	-	-	-
Platoon blocked, %				-	-	-
Mov Cap-1 Maneuver	609	922	1435	-	-	-
Mov Cap-2 Maneuver	655	-	-	-	-	-
Stage 1	877	-	-	-	-	-
Stage 2	791	-	-	-	-	-

Approach	EB	NB	SB
HCM Control Delay, s	11.8	1.1	0
HCM LOS	B		

Minor Lane/Major Mvmt	NBL	NBT	EBLn1	EBLn2	SBT	SBR
Capacity (veh/h)	1435	-	655	922	-	-
HCM Lane V/C Ratio	0.023	-	0.299	0.083	-	-
HCM Control Delay (s)	7.6	-	12.8	9.3	-	-
HCM Lane LOS	A	-	B	A	-	-
HCM 95th %tile Q(veh)	0.1	-	1.3	0.3	-	-

Intersection	
Int Delay, s/veh	1.4

Movement	EBL	EBR	NBL	NBT	SBT	SBR
Lane Configurations						
Traffic Vol, veh/h	52	120	32	832	1213	69
Future Vol, veh/h	52	120	32	832	1213	69
Conflicting Peds, #/hr	0	0	0	0	0	0
Sign Control	Stop	Stop	Free	Free	Free	Free
RT Channelized	-	None	-	None	-	None
Storage Length	0	100	200	-	-	-
Veh in Median Storage, #	1	-	-	0	0	-
Grade, %	0	-	-	0	0	-
Peak Hour Factor	68	88	61	88	92	72
Heavy Vehicles, %	2	2	2	2	2	2
Mvmt Flow	76	136	52	945	1318	96

Major/Minor	Minor2		Major1		Major2	
Conflicting Flow All	1848	707	1414	0	-	0
Stage 1	1366	-	-	-	-	-
Stage 2	482	-	-	-	-	-
Critical Hdwy	5.74	7.14	5.34	-	-	-
Critical Hdwy Stg 1	6.64	-	-	-	-	-
Critical Hdwy Stg 2	6.04	-	-	-	-	-
Follow-up Hdwy	3.82	3.92	3.12	-	-	-
Pot Cap-1 Maneuver	*113	*645	722	-	-	-
Stage 1	*627	-	-	-	-	-
Stage 2	*740	-	-	-	-	-
Platoon blocked, %		1	1	-	-	-
Mov Cap-1 Maneuver	*105	*645	722	-	-	-
Mov Cap-2 Maneuver	*344	-	-	-	-	-
Stage 1	*582	-	-	-	-	-
Stage 2	*740	-	-	-	-	-

Approach	EB	NB	SB
HCM Control Delay, s	14.4	0.5	0
HCM LOS	B		

Minor Lane/Major Mvmt	NBL	NBT	EBLn1	EBLn2	SBT	SBR
Capacity (veh/h)	722	-	344	645	-	-
HCM Lane V/C Ratio	0.073	-	0.222	0.211	-	-
HCM Control Delay (s)	10.4	-	18.4	12.1	-	-
HCM Lane LOS	B	-	C	B	-	-
HCM 95th %tile Q(veh)	0.2	-	0.8	0.8	-	-

Notes

~: Volume exceeds capacity $: Delay exceeds 300s +: Computation Not Defined *: All major volume in platoon

Intersection	
Int Delay, s/veh	1.2

Movement	EBL	EBR	NBL	NBT	SBT	SBR
Lane Configurations						
Traffic Vol, veh/h	20	75	148	1168	1155	78
Future Vol, veh/h	20	75	148	1168	1155	78
Conflicting Peds, #/hr	0	0	0	0	0	0
Sign Control	Stop	Stop	Free	Free	Free	Free
RT Channelized	-	None	-	None	-	None
Storage Length	0	100	200	-	-	-
Veh in Median Storage, #	1	-	-	0	0	-
Grade, %	0	-	-	0	0	-
Peak Hour Factor	71	89	82	96	96	84
Heavy Vehicles, %	2	2	2	2	2	2
Mvmt Flow	28	84	180	1217	1203	93

Major/Minor	Minor2		Major1		Major2	
Conflicting Flow All	2097	648	1296	0	-	0
Stage 1	1250	-	-	-	-	-
Stage 2	847	-	-	-	-	-
Critical Hdwy	5.74	7.14	5.34	-	-	-
Critical Hdwy Stg 1	6.64	-	-	-	-	-
Critical Hdwy Stg 2	6.04	-	-	-	-	-
Follow-up Hdwy	3.82	3.92	3.12	-	-	-
Pot Cap-1 Maneuver	*83	*645	*811	-	-	-
Stage 1	*662	-	-	-	-	-
Stage 2	*665	-	-	-	-	-
Platoon blocked, %		1	1	-	-	-
Mov Cap-1 Maneuver	*65	*645	*811	-	-	-
Mov Cap-2 Maneuver	*294	-	-	-	-	-
Stage 1	*515	-	-	-	-	-
Stage 2	*665	-	-	-	-	-

Approach	EB	NB	SB
HCM Control Delay, s	13.2	1.4	0
HCM LOS	B		

Minor Lane/Major Mvmt	NBL	NBT	EBLn1	EBLn2	SBT	SBR
Capacity (veh/h)	* 811	-	294	645	-	-
HCM Lane V/C Ratio	0.223	-	0.096	0.131	-	-
HCM Control Delay (s)	10.7	-	18.5	11.4	-	-
HCM Lane LOS	B	-	C	B	-	-
HCM 95th %tile Q(veh)	0.8	-	0.3	0.4	-	-

Notes

~: Volume exceeds capacity $: Delay exceeds 300s +: Computation Not Defined *: All major volume in platoon

Lane Group	EBL	EBT	WBL	WBT	NBL	NBT	SBL	SBT
Lane Configurations								
Traffic Volume (vph)	70	10	20	5	40	835	15	1330
Future Volume (vph)	70	10	20	5	40	835	15	1330
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	5.0	5.0	5.0	5.0
Minimum Split (s)	24.5	24.5	24.5	24.5	11.5	24.5	11.5	24.5
Total Split (s)	32.0	32.0	32.0	32.0	16.0	74.0	14.0	72.0
Total Split (%)	26.7%	26.7%	26.7%	26.7%	13.3%	61.7%	11.7%	60.0%
Yellow Time (s)	4.5	4.5	4.5	4.5	4.5	4.5	4.5	4.5
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	0.0	0.0
Total Lost Time (s)	6.5	6.5	6.5	6.5	6.5	6.5	6.5	6.5
Lead/Lag					Lead	Lag	Lead	Lag
Lead-Lag Optimize?					Yes	Yes	Yes	Yes
Recall Mode	None	None	None	None	None	C-Max	None	C-Max
Act Effct Green (s)	12.1	12.1	12.1	12.1	92.6	89.9	89.3	84.6
Actuated g/C Ratio	0.10	0.10	0.10	0.10	0.77	0.75	0.74	0.70
v/c Ratio	0.56	0.59	0.30	0.24	0.16	0.25	0.04	0.43
Control Delay	66.0	21.1	58.4	18.9	4.9	2.4	0.9	1.5
Queue Delay	0.0	0.0	0.0	0.0	0.0	0.0	0.0	0.0
Total Delay	66.0	21.1	58.4	18.9	4.9	2.4	0.9	1.5
LOS	E	C	E	B	A	A	A	A
Approach Delay		35.0		31.3		2.5		1.5
Approach LOS		D		C		A		A

Intersection Summary	
Cycle Length: 120	
Actuated Cycle Length: 120	
Offset: 38 (32%), Referenced to phase 2:NBTL and 6:SBTL, Start of Yellow	
Natural Cycle: 65	
Control Type: Actuated-Coordinated	
Maximum v/c Ratio: 0.59	
Intersection Signal Delay: 5.5	Intersection LOS: A
Intersection Capacity Utilization 60.7%	ICU Level of Service B
Analysis Period (min) 15	

Splits and Phases: 16: Peoria Street & 23rd Avenue

Movement	EBL	EBT	EBR	WBL	WBT	WBR	NBL	NBT	NBR	SBL	SBT	SBR
Lane Configurations												
Traffic Volume (veh/h)	70	10	145	20	5	40	40	835	50	15	1330	80
Future Volume (veh/h)	70	10	145	20	5	40	40	835	50	15	1330	80
Initial Q (Qb), veh	0	0	0	0	0	0	0	0	0	0	0	0
Ped-Bike Adj(A_pbT)	1.00		1.00	1.00		1.00	1.00		1.00	1.00		1.00
Parking Bus, Adj	1.00	1.00	1.00	1.00	1.00	1.00	1.00	1.00	1.00	1.00	1.00	1.00
Work Zone On Approach		No			No			No			No	
Adj Sat Flow, veh/h/ln	1870	1870	1870	1870	1870	1870	1870	1870	1870	1870	1870	1870
Adj Flow Rate, veh/h	76	11	158	22	5	43	43	908	54	16	1446	87
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
Percent Heavy Veh, %	2	2	2	2	2	2	2	2	2	2	2	2
Cap, veh/h	211	14	206	103	23	198	343	3366	200	447	3291	198
Arrive On Green	0.14	0.14	0.14	0.14	0.14	0.14	0.03	0.68	0.68	0.03	1.00	1.00
Sat Flow, veh/h	1357	104	1497	1216	168	1443	1781	4929	292	1781	4925	296
Grp Volume(v), veh/h	76	0	169	22	0	48	43	626	336	16	999	534
Grp Sat Flow(s),veh/h/ln	1357	0	1601	1216	0	1611	1781	1702	1818	1781	1702	1817
Q Serve(g_s), s	6.3	0.0	12.2	2.1	0.0	3.2	0.9	8.6	8.6	0.3	0.0	0.0
Cycle Q Clear(g_c), s	9.5	0.0	12.2	14.3	0.0	3.2	0.9	8.6	8.6	0.3	0.0	0.0
Prop In Lane	1.00		0.93	1.00		0.90	1.00		0.16	1.00		0.16
Lane Grp Cap(c), veh/h	211	0	220	103	0	221	343	2324	1241	447	2275	1214
V/C Ratio(X)	0.36	0.00	0.77	0.21	0.00	0.22	0.13	0.27	0.27	0.04	0.44	0.44
Avail Cap(c_a), veh/h	312	0	340	195	0	342	428	2324	1241	528	2275	1214
HCM Platoon Ratio	1.00	1.00	1.00	1.00	1.00	1.00	1.00	1.00	1.00	2.00	2.00	2.00
Upstream Filter(I)	1.00	0.00	1.00	1.00	0.00	1.00	1.00	1.00	1.00	0.89	0.89	0.89
Uniform Delay (d), s/veh	50.2	0.0	49.9	56.8	0.0	46.0	5.5	7.4	7.4	6.1	0.0	0.0
Incr Delay (d2), s/veh	1.0	0.0	5.6	1.0	0.0	0.5	0.2	0.3	0.5	0.0	0.6	1.0
Initial Q Delay(d3),s/veh	0.0	0.0	0.0	0.0	0.0	0.0	0.0	0.0	0.0	0.0	0.0	0.0
%ile BackOfQ(50%),veh/ln	2.2	0.0	5.2	0.7	0.0	1.3	0.3	3.0	3.3	0.1	0.2	0.3
Unsig. Movement Delay, s/veh												
LnGrp Delay(d),s/veh	51.3	0.0	55.5	57.8	0.0	46.5	5.7	7.7	7.9	6.1	0.6	1.0
LnGrp LOS	D	A	E	E	A	D	A	A	A	A	A	A
Approach Vol, veh/h		245			70			1005			1549	
Approach Delay, s/veh		54.2			50.1			7.7			0.8	
Approach LOS		D			D			A			A	

Timer - Assigned Phs	1	2		4	5	6		8
Phs Duration (G+Y+Rc), s	8.6	88.4		23.0	10.3	86.7		23.0
Change Period (Y+Rc), s	6.5	6.5		6.5	6.5	6.5		6.5
Max Green Setting (Gmax), s	7.5	67.5		25.5	9.5	65.5		25.5
Max Q Clear Time (g_c+I1), s	2.3	10.6		14.2	2.9	2.0		16.3
Green Ext Time (p_c), s	0.0	8.1		0.9	0.0	17.2		0.1

Intersection Summary			
HCM 6th Ctrl Delay			9.0
HCM 6th LOS			A

Lane Group	EBL	EBT	WBL	WBT	NBL	NBT	SBL	SBT
Lane Configurations								
Traffic Volume (vph)	25	5	50	10	165	1255	5	1255
Future Volume (vph)	25	5	50	10	165	1255	5	1255
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	5.0	5.0	5.0	5.0
Minimum Split (s)	24.5	24.5	24.5	24.5	11.5	24.5	11.5	24.5
Total Split (s)	31.0	31.0	31.0	31.0	36.0	105.0	14.0	83.0
Total Split (%)	20.7%	20.7%	20.7%	20.7%	24.0%	70.0%	9.3%	55.3%
Yellow Time (s)	4.5	4.5	4.5	4.5	4.5	4.5	4.5	4.5
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	0.0	0.0
Total Lost Time (s)	6.5	6.5	6.5	6.5	6.5	6.5	6.5	6.5
Lead/Lag					Lead	Lag	Lead	Lag
Lead-Lag Optimize?					Yes	Yes	Yes	Yes
Recall Mode	None	None	None	None	None	C-Max	None	C-Max
Act Effct Green (s)	11.7	11.7	11.7	11.7	125.3	122.9	114.8	109.2
Actuated g/C Ratio	0.08	0.08	0.08	0.08	0.84	0.82	0.77	0.73
v/c Ratio	0.26	0.45	0.59	0.37	0.56	0.33	0.02	0.40
Control Delay	69.5	20.6	90.2	26.0	19.1	2.7	0.4	2.5
Queue Delay	0.0	0.0	0.0	0.0	0.0	0.0	0.0	0.0
Total Delay	69.5	20.6	90.2	26.0	19.1	2.7	0.4	2.5
LOS	E	C	F	C	B	A	A	A
Approach Delay		31.7		55.2		4.6		2.5
Approach LOS		C		E		A		A

Intersection Summary	
Cycle Length: 150	
Actuated Cycle Length: 150	
Offset: 35 (23%), Referenced to phase 2:NBTL and 6:SBTL, Start of Yellow	
Natural Cycle: 65	
Control Type: Actuated-Coordinated	
Maximum v/c Ratio: 0.59	
Intersection Signal Delay: 6.5	Intersection LOS: A
Intersection Capacity Utilization 61.1%	ICU Level of Service B
Analysis Period (min) 15	

Splits and Phases: 16: Peoria Street & 23rd Avenue

Movement	EBL	EBT	EBR	WBL	WBT	WBR	NBL	NBT	NBR	SBL	SBT	SBR
Lane Configurations												
Traffic Volume (veh/h)	25	5	80	50	10	50	165	1255	10	5	1255	90
Future Volume (veh/h)	25	5	80	50	10	50	165	1255	10	5	1255	90
Initial Q (Qb), veh	0	0	0	0	0	0	0	0	0	0	0	0
Ped-Bike Adj(A_pbT)	1.00		1.00	1.00		1.00	1.00		1.00	1.00		1.00
Parking Bus, Adj	1.00	1.00	1.00	1.00	1.00	1.00	1.00	1.00	1.00	1.00	1.00	1.00
Work Zone On Approach		No			No			No			No	
Adj Sat Flow, veh/h/ln	1870	1870	1870	1870	1870	1870	1870	1870	1870	1870	1870	1870
Adj Flow Rate, veh/h	27	5	87	54	11	54	179	1364	11	5	1364	98
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
Percent Heavy Veh, %	2	2	2	2	2	2	2	2	2	2	2	2
Cap, veh/h	146	10	166	121	30	149	301	3937	32	341	3479	250
Arrive On Green	0.11	0.11	0.11	0.11	0.11	0.11	0.09	1.00	1.00	0.00	0.24	0.24
Sat Flow, veh/h	1337	87	1511	1304	275	1352	1781	5225	42	1781	4862	349
Grp Volume(v), veh/h	27	0	92	54	0	65	179	889	486	5	955	507
Grp Sat Flow(s),veh/h/ln	1337	0	1598	1304	0	1627	1781	1702	1863	1781	1702	1807
Q Serve(g_s), s	2.9	0.0	8.2	6.1	0.0	5.6	4.2	0.0	0.0	0.1	35.4	35.4
Cycle Q Clear(g_c), s	8.4	0.0	8.2	14.3	0.0	5.6	4.2	0.0	0.0	0.1	35.4	35.4
Prop In Lane	1.00		0.95	1.00		0.83	1.00		0.02	1.00		0.19
Lane Grp Cap(c), veh/h	146	0	176	121	0	179	301	2565	1404	341	2436	1293
V/C Ratio(X)	0.19	0.00	0.52	0.45	0.00	0.36	0.59	0.35	0.35	0.01	0.39	0.39
Avail Cap(c_a), veh/h	217	0	261	190	0	266	572	2565	1404	419	2436	1293
HCM Platoon Ratio	1.00	1.00	1.00	1.00	1.00	1.00	2.00	2.00	2.00	0.33	0.33	0.33
Upstream Filter(I)	1.00	0.00	1.00	1.00	0.00	1.00	1.00	1.00	1.00	0.87	0.87	0.87
Uniform Delay (d), s/veh	65.8	0.0	63.0	69.8	0.0	61.9	12.4	0.0	0.0	5.8	29.8	29.8
Incr Delay (d2), s/veh	0.6	0.0	2.4	2.6	0.0	1.2	1.9	0.4	0.7	0.0	0.4	0.8
Initial Q Delay(d3),s/veh	0.0	0.0	0.0	0.0	0.0	0.0	0.0	0.0	0.0	0.0	0.0	0.0
%ile BackOfQ(50%),veh/ln	1.0	0.0	3.5	2.1	0.0	2.4	2.5	0.1	0.3	0.0	16.4	17.5
Unsig. Movement Delay, s/veh												
LnGrp Delay(d),s/veh	66.4	0.0	65.4	72.3	0.0	63.1	14.2	0.4	0.7	5.9	30.2	30.6
LnGrp LOS	E	A	E	E	A	E	B	A	A	A	C	C
Approach Vol, veh/h		119			119			1554			1467	
Approach Delay, s/veh		65.6			67.3			2.1			30.3	
Approach LOS		E			E			A			C	

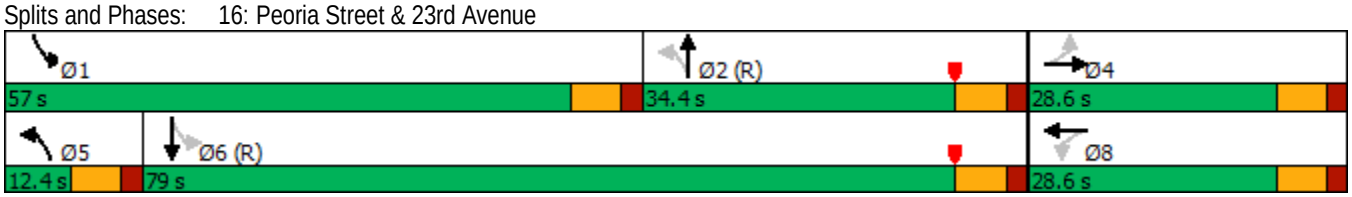
Timer - Assigned Phs	1	2		4	5	6		8				
Phs Duration (G+Y+Rc), s	7.4	119.5		23.0	13.1	113.8		23.0				
Change Period (Y+Rc), s	6.5	6.5		6.5	6.5	6.5		6.5				
Max Green Setting (Gmax), s	7.5	98.5		24.5	29.5	76.5		24.5				
Max Q Clear Time (g_c+I1), s	2.1	2.0		10.4	6.2	37.4		16.3				
Green Ext Time (p_c), s	0.0	14.4		0.4	0.5	14.2		0.3				

Intersection Summary												
HCM 6th Ctrl Delay			19.5									
HCM 6th LOS			B									

Lane Group	EBL	EBT	WBL	WBT	NBL	NBT	SBL	SBT
Lane Configurations								
Traffic Volume (vph)	75	45	85	15	40	1055	600	1360
Future Volume (vph)	75	45	85	15	40	1055	600	1360
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	5.0	5.0	5.0	5.0
Minimum Split (s)	24.5	24.5	24.5	24.5	11.5	24.5	11.5	24.5
Total Split (s)	28.6	28.6	28.6	28.6	12.4	34.4	57.0	79.0
Total Split (%)	23.8%	23.8%	23.8%	23.8%	10.3%	28.7%	47.5%	65.8%
Yellow Time (s)	4.5	4.5	4.5	4.5	4.5	4.5	4.5	4.5
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	0.0	0.0
Total Lost Time (s)	6.5	6.5	6.5	6.5	6.5	6.5	6.5	6.5
Lead/Lag					Lead	Lag	Lead	Lag
Lead-Lag Optimize?					Yes	Yes	Yes	Yes
Recall Mode	None	None	None	None	None	C-Max	None	C-Max
Act Effct Green (s)	17.3	17.3	17.3	17.3	46.5	40.6	89.7	79.8
Actuated g/C Ratio	0.14	0.14	0.14	0.14	0.39	0.34	0.75	0.66
v/c Ratio	0.66	0.61	0.90	0.48	0.24	0.91	0.94	0.47
Control Delay	72.0	27.8	116.3	13.0	8.9	32.3	33.8	11.3
Queue Delay	0.0	0.0	0.0	0.0	0.0	0.0	0.2	0.0
Total Delay	72.0	27.8	116.3	13.0	8.9	32.3	34.1	11.3
LOS	E	C	F	B	A	C	C	B
Approach Delay		40.3		48.1		31.6		17.9
Approach LOS		D		D		C		B

Intersection Summary	
Cycle Length: 120	
Actuated Cycle Length: 120	
Offset: 72 (60%), Referenced to phase 2:NBTL and 6:SBTL, Start of Yellow	
Natural Cycle: 100	
Control Type: Actuated-Coordinated	
Maximum v/c Ratio: 0.94	
Intersection Signal Delay: 26.3	Intersection LOS: C
Intersection Capacity Utilization 99.6%	ICU Level of Service F
Analysis Period (min) 15	

Splits and Phases: 16: Peoria Street & 23rd Avenue



Movement	EBL	EBT	EBR	WBL	WBT	WBR	NBL	NBT	NBR	SBL	SBT	SBR
Lane Configurations												
Traffic Volume (veh/h)	75	45	145	85	15	150	40	1055	370	600	1360	90
Future Volume (veh/h)	75	45	145	85	15	150	40	1055	370	600	1360	90
Initial Q (Qb), veh	0	0	0	0	0	0	0	0	0	0	0	0
Ped-Bike Adj(A_pbT)	1.00		1.00	1.00		1.00	1.00		1.00	1.00		1.00
Parking Bus, Adj	1.00	1.00	1.00	1.00	1.00	1.00	1.00	1.00	1.00	1.00	1.00	1.00
Work Zone On Approach		No			No			No			No	
Adj Sat Flow, veh/h/ln	1870	1870	1870	1870	1870	1870	1870	1870	1870	1870	1870	1870
Adj Flow Rate, veh/h	82	49	158	92	16	109	43	1147	402	652	1478	98
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
Percent Heavy Veh, %	2	2	2	2	2	2	2	2	2	2	2	2
Cap, veh/h	207	72	231	138	38	260	220	1182	414	668	3041	202
Arrive On Green	0.18	0.18	0.18	0.18	0.18	0.18	0.06	0.63	0.63	0.67	1.00	1.00
Sat Flow, veh/h	1266	389	1255	1175	207	1410	1781	3732	1307	1781	4892	324
Grp Volume(v), veh/h	82	0	207	92	0	125	43	1046	503	652	1028	548
Grp Sat Flow(s),veh/h/ln	1266	0	1644	1175	0	1617	1781	1702	1635	1781	1702	1812
Q Serve(g_s), s	7.3	0.0	14.1	8.0	0.0	8.2	1.9	35.1	35.1	36.5	0.0	0.0
Cycle Q Clear(g_c), s	15.6	0.0	14.1	22.1	0.0	8.2	1.9	35.1	35.1	36.5	0.0	0.0
Prop In Lane	1.00		0.76	1.00		0.87	1.00		0.80	1.00		0.18
Lane Grp Cap(c), veh/h	207	0	303	138	0	298	220	1078	518	668	2116	1126
V/C Ratio(X)	0.40	0.00	0.68	0.67	0.00	0.42	0.20	0.97	0.97	0.98	0.49	0.49
Avail Cap(c_a), veh/h	207	0	303	138	0	298	251	1078	518	818	2116	1126
HCM Platoon Ratio	1.00	1.00	1.00	1.00	1.00	1.00	2.00	2.00	2.00	2.00	2.00	2.00
Upstream Filter(I)	1.00	0.00	1.00	1.00	0.00	1.00	1.00	1.00	1.00	0.67	0.67	0.67
Uniform Delay (d), s/veh	50.2	0.0	45.7	56.6	0.0	43.3	25.2	21.5	21.5	12.9	0.0	0.0
Incr Delay (d2), s/veh	1.2	0.0	6.2	11.4	0.0	0.9	0.4	21.2	33.0	18.6	0.5	1.0
Initial Q Delay(d3),s/veh	0.0	0.0	0.0	0.0	0.0	0.0	0.0	0.0	0.0	0.0	0.0	0.0
%ile BackOfQ(50%),veh/ln	2.4	0.0	6.3	3.2	0.0	3.4	0.8	11.9	13.1	10.5	0.2	0.3
Unsig. Movement Delay, s/veh												
LnGrp Delay(d),s/veh	51.4	0.0	51.9	68.0	0.0	44.2	25.7	42.6	54.4	31.5	0.5	1.0
LnGrp LOS	D	A	D	E	A	D	C	D	D	C	A	A
Approach Vol, veh/h		289			217			1592			2228	
Approach Delay, s/veh		51.7			54.3			45.9			9.7	
Approach LOS		D			D			D			A	

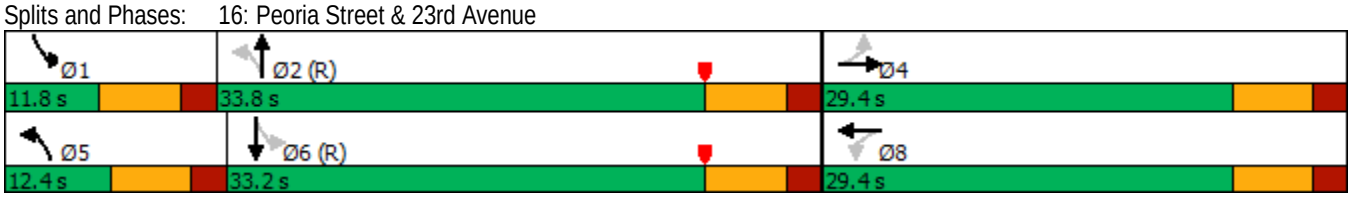
Timer - Assigned Phs	1	2		4	5	6		8
Phs Duration (G+Y+Rc), s	46.9	44.5		28.6	10.3	81.1		28.6
Change Period (Y+Rc), s	6.5	6.5		6.5	6.5	6.5		6.5
Max Green Setting (Gmax), s	50.5	27.9		22.1	5.9	72.5		22.1
Max Q Clear Time (g_c+I1), s	38.5	37.1		17.6	3.9	2.0		24.1
Green Ext Time (p_c), s	1.9	0.0		0.6	0.0	18.4		0.0

Intersection Summary			
HCM 6th Ctrl Delay			28.1
HCM 6th LOS			C

Lane Group	EBL	EBT	WBL	WBT	NBL	NBT	SBL	SBT
Lane Configurations								
Traffic Volume (vph)	30	15	360	45	165	1605	150	1405
Future Volume (vph)	30	15	360	45	165	1605	150	1405
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	5.0	5.0	5.0	5.0
Minimum Split (s)	24.5	24.5	24.5	24.5	11.5	24.5	11.5	24.5
Total Split (s)	29.4	29.4	29.4	29.4	12.4	33.8	11.8	33.2
Total Split (%)	39.2%	39.2%	39.2%	39.2%	16.5%	45.1%	15.7%	44.3%
Yellow Time (s)	4.5	4.5	4.5	4.5	4.5	4.5	4.5	4.5
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	0.0	0.0
Total Lost Time (s)	6.5	6.5	6.5	6.5	6.5	6.5	6.5	6.5
Lead/Lag					Lead	Lag	Lead	Lag
Lead-Lag Optimize?					Yes	Yes	Yes	Yes
Recall Mode	None	None	None	None	None	C-Max	None	C-Max
Act Effct Green (s)	22.9	22.9	22.9	22.9	33.2	27.3	32.0	26.7
Actuated g/C Ratio	0.31	0.31	0.31	0.31	0.44	0.36	0.43	0.36
v/c Ratio	0.29	0.19	1.00	0.80	0.75	0.99	0.73	0.90
Control Delay	27.9	7.2	74.3	26.7	43.0	41.3	37.8	28.5
Queue Delay	0.0	0.0	0.0	0.0	0.0	1.4	0.0	0.0
Total Delay	27.9	7.2	74.3	26.7	43.0	42.7	37.8	28.5
LOS	C	A	E	C	D	D	D	C
Approach Delay		12.2		47.7		42.8		29.4
Approach LOS		B		D		D		C

Intersection Summary	
Cycle Length: 75	
Actuated Cycle Length: 75	
Offset: 0 (0%), Referenced to phase 2:NBTL and 6:SBTL, Start of Yellow	
Natural Cycle: 80	
Control Type: Actuated-Coordinated	
Maximum v/c Ratio: 1.00	
Intersection Signal Delay: 37.8	Intersection LOS: D
Intersection Capacity Utilization 85.0%	ICU Level of Service E
Analysis Period (min) 15	

Splits and Phases: 16: Peoria Street & 23rd Avenue



Movement	EBL	EBT	EBR	WBL	WBT	WBR	NBL	NBT	NBR	SBL	SBT	SBR
Lane Configurations												
Traffic Volume (veh/h)	30	15	80	360	45	410	165	1605	80	150	1405	95
Future Volume (veh/h)	30	15	80	360	45	410	165	1605	80	150	1405	95
Initial Q (Qb), veh	0	0	0	0	0	0	0	0	0	0	0	0
Ped-Bike Adj(A_pbT)	1.00		1.00	1.00		1.00	1.00		1.00	1.00		1.00
Parking Bus, Adj	1.00	1.00	1.00	1.00	1.00	1.00	1.00	1.00	1.00	1.00	1.00	1.00
Work Zone On Approach		No			No			No			No	
Adj Sat Flow, veh/h/ln	1870	1870	1870	1870	1870	1870	1870	1870	1870	1870	1870	1870
Adj Flow Rate, veh/h	33	16	87	391	49	364	179	1745	87	163	1527	103
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
Percent Heavy Veh, %	2	2	2	2	2	2	2	2	2	2	2	2
Cap, veh/h	161	77	419	430	58	434	259	1813	90	228	1739	117
Arrive On Green	0.31	0.31	0.31	0.31	0.31	0.31	0.10	0.48	0.48	0.09	0.47	0.47
Sat Flow, veh/h	973	252	1371	1291	192	1423	1781	4982	248	1781	4886	329
Grp Volume(v), veh/h	33	0	103	391	0	413	179	1192	640	163	1064	566
Grp Sat Flow(s),veh/h/ln	973	0	1624	1291	0	1614	1781	1702	1826	1781	1702	1811
Q Serve(g_s), s	2.5	0.0	3.5	19.4	0.0	17.9	4.8	25.4	25.4	4.4	21.1	21.1
Cycle Q Clear(g_c), s	20.4	0.0	3.5	22.9	0.0	17.9	4.8	25.4	25.4	4.4	21.1	21.1
Prop In Lane	1.00		0.84	1.00		0.88	1.00		0.14	1.00		0.18
Lane Grp Cap(c), veh/h	161	0	496	430	0	493	259	1239	665	228	1212	645
V/C Ratio(X)	0.21	0.00	0.21	0.91	0.00	0.84	0.69	0.96	0.96	0.71	0.88	0.88
Avail Cap(c_a), veh/h	161	0	496	430	0	493	259	1239	665	228	1212	645
HCM Platoon Ratio	1.00	1.00	1.00	1.00	1.00	1.00	1.33	1.33	1.33	1.33	1.33	1.33
Upstream Filter(I)	1.00	0.00	1.00	1.00	0.00	1.00	1.00	1.00	1.00	0.51	0.51	0.51
Uniform Delay (d), s/veh	33.8	0.0	19.3	29.2	0.0	24.3	17.2	18.8	18.9	17.8	18.3	18.3
Incr Delay (d2), s/veh	0.6	0.0	0.2	23.2	0.0	12.1	7.6	17.9	27.0	5.3	5.0	8.8
Initial Q Delay(d3),s/veh	0.0	0.0	0.0	0.0	0.0	0.0	0.0	0.0	0.0	0.0	0.0	0.0
%ile BackOfQ(50%),veh/ln	0.6	0.0	1.3	9.8	0.0	8.1	2.3	10.8	13.3	1.9	7.3	8.5
Unsig. Movement Delay, s/veh												
LnGrp Delay(d),s/veh	34.4	0.0	19.5	52.4	0.0	36.4	24.8	36.8	45.9	23.2	23.3	27.1
LnGrp LOS	C	A	B	D	A	D	C	D	D	C	C	C
Approach Vol, veh/h		136			804			2011			1793	
Approach Delay, s/veh		23.1			44.2			38.6			24.5	
Approach LOS		C			D			D			C	

Timer - Assigned Phs	1	2		4	5	6		8
Phs Duration (G+Y+Rc), s	11.8	33.8		29.4	12.4	33.2		29.4
Change Period (Y+Rc), s	6.5	6.5		6.5	6.5	6.5		6.5
Max Green Setting (Gmax), s	5.3	27.3		22.9	5.9	26.7		22.9
Max Q Clear Time (g_c+I1), s	6.4	27.4		22.4	6.8	23.1		24.9
Green Ext Time (p_c), s	0.0	0.0		0.0	0.0	2.9		0.0

Intersection Summary		
HCM 6th Ctrl Delay		33.8
HCM 6th LOS		C

Intersection	
Intersection Delay, s/veh	15.1
Intersection LOS	C

Approach	EB	WB	NB	SB
Entry Lanes	1	1	1	1
Conflicting Circle Lanes	1	1	1	1
Adj Approach Flow, veh/h	1027	401	48	87
Demand Flow Rate, veh/h	1048	409	48	88
Vehicles Circulating, veh/h	93	187	659	204
Vehicles Exiting, veh/h	199	520	482	392
Ped Vol Crossing Leg, #/h	0	0	0	0
Ped Cap Adj	1.000	1.000	1.000	1.000
Approach Delay, s/veh	19.8	6.8	5.9	3.9
Approach LOS	C	A	A	A

Lane	Left	Left	Left	Left
Designated Moves	LTR	LTR	LTR	LTR
Assumed Moves	LTR	LTR	LTR	LTR
RT Channelized				
Lane Util	1.000	1.000	1.000	1.000
Follow-Up Headway, s	2.609	2.609	2.609	2.609
Critical Headway, s	4.976	4.976	4.976	4.976
Entry Flow, veh/h	1048	409	48	88
Cap Entry Lane, veh/h	1255	1140	705	1121
Entry HV Adj Factor	0.980	0.981	0.993	0.984
Flow Entry, veh/h	1027	401	48	87
Cap Entry, veh/h	1230	1119	700	1102
V/C Ratio	0.835	0.359	0.068	0.079
Control Delay, s/veh	19.8	6.8	5.9	3.9
LOS	C	A	A	A
95th %tile Queue, veh	11	2	0	0

Intersection	
Intersection Delay, s/veh	21.1
Intersection LOS	C

Movement	EBL	EBT	EBR	WBL	WBT	WBR	NBL	NBT	NBR	SBL	SBT	SBR
Lane Configurations												
Traffic Vol, veh/h	140	440	365	50	120	200	15	15	15	15	20	45
Future Vol, veh/h	140	440	365	50	120	200	15	15	15	15	20	45
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
Heavy Vehicles, %	2	2	2	2	2	2	2	2	2	2	2	2
Mvmt Flow	152	478	397	54	130	217	16	16	16	16	22	49
Number of Lanes	1	1	1	1	1	0	1	1	0	1	1	0

Approach	EB	WB	NB	SB
Opposing Approach	WB	EB	SB	NB
Opposing Lanes	2	3	2	2
Conflicting Approach Left	SB	NB	EB	WB
Conflicting Lanes Left	2	2	3	2
Conflicting Approach Right	NB	SB	WB	EB
Conflicting Lanes Right	2	2	2	3
HCM Control Delay	23	19.4	11.8	12.1
HCM LOS	C	C	B	B

Lane	NBLn1	NBLn2	EBLn1	EBLn2	EBLn3	WBLn1	WBLn2	SBLn1	SBLn2
Vol Left, %	100%	0%	100%	0%	0%	100%	0%	100%	0%
Vol Thru, %	0%	50%	0%	100%	0%	0%	38%	0%	31%
Vol Right, %	0%	50%	0%	0%	100%	0%	62%	0%	69%
Sign Control	Stop	Stop	Stop	Stop	Stop	Stop	Stop	Stop	Stop
Traffic Vol by Lane	15	30	140	440	365	50	320	15	65
LT Vol	15	0	140	0	0	50	0	15	0
Through Vol	0	15	0	440	0	0	120	0	20
RT Vol	0	15	0	0	365	0	200	0	45
Lane Flow Rate	16	33	152	478	397	54	348	16	71
Geometry Grp	8	8	8	8	8	8	8	8	8
Degree of Util (X)	0.041	0.074	0.284	0.824	0.606	0.115	0.642	0.04	0.155
Departure Headway (Hd)	9.071	8.203	6.711	6.206	5.5	7.592	6.646	8.915	7.911
Convergence, Y/N	Yes	Yes	Yes	Yes	Yes	Yes	Yes	Yes	Yes
Cap	397	439	533	579	651	469	539	404	456
Service Time	6.775	5.907	4.489	3.983	3.276	5.385	4.438	6.617	5.613
HCM Lane V/C Ratio	0.04	0.075	0.285	0.826	0.61	0.115	0.646	0.04	0.156
HCM Control Delay	12.2	11.6	12.2	31.8	16.5	11.4	20.7	12	12.1
HCM Lane LOS	B	B	B	D	C	B	C	B	B
HCM 95th-tile Q	0.1	0.2	1.2	8.4	4.1	0.4	4.5	0.1	0.5

Intersection	
Intersection Delay, s/veh	7.7
Intersection LOS	A

Approach	EB	WB	NB	SB
Entry Lanes	1	1	1	1
Conflicting Circle Lanes	1	1	1	1
Adj Approach Flow, veh/h	239	440	190	402
Demand Flow Rate, veh/h	245	449	193	410
Vehicles Circulating, veh/h	132	155	272	510
Vehicles Exiting, veh/h	788	310	105	94
Ped Vol Crossing Leg, #/h	0	0	0	0
Ped Cap Adj	1.000	1.000	1.000	1.000
Approach Delay, s/veh	4.8	6.9	5.2	11.4
Approach LOS	A	A	A	B

Lane	Left	Left	Left	Left
Designated Moves	LTR	LTR	LTR	LTR
Assumed Moves	LTR	LTR	LTR	LTR
RT Channelized				
Lane Util	1.000	1.000	1.000	1.000
Follow-Up Headway, s	2.609	2.609	2.609	2.609
Critical Headway, s	4.976	4.976	4.976	4.976
Entry Flow, veh/h	245	449	193	410
Cap Entry Lane, veh/h	1206	1178	1046	820
Entry HV Adj Factor	0.977	0.981	0.982	0.980
Flow Entry, veh/h	239	440	190	402
Cap Entry, veh/h	1178	1155	1027	804
V/C Ratio	0.203	0.381	0.185	0.500
Control Delay, s/veh	4.8	6.9	5.2	11.4
LOS	A	A	A	B
95th %tile Queue, veh	1	2	1	3

Intersection	
Intersection Delay, s/veh	27.8
Intersection LOS	D

Movement	EBL	EBT	EBR	WBL	WBT	WBR	NBL	NBT	NBR	SBL	SBT	SBR
Lane Configurations												
Traffic Vol, veh/h	25	125	70	10	355	40	95	20	60	95	15	260
Future Vol, veh/h	25	125	70	10	355	40	95	20	60	95	15	260
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
Heavy Vehicles, %	2	2	2	2	2	2	2	2	2	2	2	2
Mvmt Flow	27	136	76	11	386	43	103	22	65	103	16	283
Number of Lanes	1	1	1	1	1	0	1	1	0	1	1	0

Approach	EB	WB	NB	SB
Opposing Approach	WB	EB	SB	NB
Opposing Lanes	2	3	2	2
Conflicting Approach Left	SB	NB	EB	WB
Conflicting Lanes Left	2	2	3	2
Conflicting Approach Right	NB	SB	WB	EB
Conflicting Lanes Right	2	2	2	3
HCM Control Delay	13.8	49.3	14	19.1
HCM LOS	B	E	B	C

Lane	NBLn1	NBLn2	EBLn1	EBLn2	EBLn3	WBLn1	WBLn2	SBLn1	SBLn2
Vol Left, %	100%	0%	100%	0%	0%	100%	0%	100%	0%
Vol Thru, %	0%	25%	0%	100%	0%	0%	90%	0%	5%
Vol Right, %	0%	75%	0%	0%	100%	0%	10%	0%	95%
Sign Control	Stop	Stop	Stop	Stop	Stop	Stop	Stop	Stop	Stop
Traffic Vol by Lane	95	80	25	125	70	10	395	95	275
LT Vol	95	0	25	0	0	10	0	95	0
Through Vol	0	20	0	125	0	0	355	0	15
RT Vol	0	60	0	0	70	0	40	0	260
Lane Flow Rate	103	87	27	136	76	11	429	103	299
Geometry Grp	8	8	8	8	8	8	8	8	8
Degree of Util (X)	0.261	0.194	0.068	0.318	0.163	0.025	0.913	0.244	0.608
Departure Headway (Hd)	9.103	8.049	8.943	8.427	7.705	8.245	7.658	8.512	7.326
Convergence, Y/N	Yes	Yes	Yes	Yes	Yes	Yes	Yes	Yes	Yes
Cap	394	445	401	427	466	436	477	423	493
Service Time	6.856	5.802	6.693	6.177	5.455	5.964	5.378	6.236	5.049
HCM Lane V/C Ratio	0.261	0.196	0.067	0.319	0.163	0.025	0.899	0.243	0.606
HCM Control Delay	15.1	12.7	12.3	15.1	12	11.2	50.3	14	20.8
HCM Lane LOS	C	B	B	C	B	B	F	B	C
HCM 95th-tile Q	1	0.7	0.2	1.3	0.6	0.1	10.4	0.9	4

Intersection	
Intersection Delay, s/veh	7.3
Intersection LOS	A

Approach	EB	WB	NB	SB
Entry Lanes	1	1	1	1
Conflicting Circle Lanes	1	1	1	1
Adj Approach Flow, veh/h	532	347	152	136
Demand Flow Rate, veh/h	543	353	155	139
Vehicles Circulating, veh/h	133	288	604	415
Vehicles Exiting, veh/h	421	471	72	226
Ped Vol Crossing Leg, #/h	0	0	0	0
Ped Cap Adj	1.000	1.000	1.000	1.000
Approach Delay, s/veh	7.8	7.1	7.3	5.6
Approach LOS	A	A	A	A

Lane	Left	Left	Left	Left
Designated Moves	LTR	LTR	LTR	LTR
Assumed Moves	LTR	LTR	LTR	LTR
RT Channelized				
Lane Util	1.000	1.000	1.000	1.000
Follow-Up Headway, s	2.609	2.609	2.609	2.609
Critical Headway, s	4.976	4.976	4.976	4.976
Entry Flow, veh/h	543	353	155	139
Cap Entry Lane, veh/h	1205	1029	745	904
Entry HV Adj Factor	0.979	0.982	0.979	0.982
Flow Entry, veh/h	532	347	152	136
Cap Entry, veh/h	1180	1010	729	887
V/C Ratio	0.451	0.343	0.208	0.154
Control Delay, s/veh	7.8	7.1	7.3	5.6
LOS	A	A	A	A
95th %tile Queue, veh	2	2	1	1

Intersection	
Intersection Delay, s/veh	6.0
Intersection LOS	A

Approach	EB	WB	NB	SB
Entry Lanes	1	1	1	1
Conflicting Circle Lanes	1	1	1	1
Adj Approach Flow, veh/h	310	288	103	315
Demand Flow Rate, veh/h	317	294	105	322
Vehicles Circulating, veh/h	189	117	378	327
Vehicles Exiting, veh/h	460	366	128	84
Ped Vol Crossing Leg, #/h	0	0	0	0
Ped Cap Adj	1.000	1.000	1.000	1.000
Approach Delay, s/veh	5.9	5.1	4.9	7.1
Approach LOS	A	A	A	A

Lane	Left	Left	Left	Left
Designated Moves	LTR	LTR	LTR	LTR
Assumed Moves	LTR	LTR	LTR	LTR
RT Channelized				
Lane Util	1.000	1.000	1.000	1.000
Follow-Up Headway, s	2.609	2.609	2.609	2.609
Critical Headway, s	4.976	4.976	4.976	4.976
Entry Flow, veh/h	317	294	105	322
Cap Entry Lane, veh/h	1138	1225	938	989
Entry HV Adj Factor	0.978	0.980	0.985	0.980
Flow Entry, veh/h	310	288	103	315
Cap Entry, veh/h	1113	1200	925	968
V/C Ratio	0.279	0.240	0.112	0.326
Control Delay, s/veh	5.9	5.1	4.9	7.1
LOS	A	A	A	A
95th %tile Queue, veh	1	1	0	1

Intersection	
Int Delay, s/veh	0.4

Movement	EBL	EBT	EBR	WBL	WBT	WBR	NBL	NBT	NBR	SBL	SBT	SBR
Lane Configurations												
Traffic Vol, veh/h	0	285	135	15	285	0	5	0	10	0	0	0
Future Vol, veh/h	0	285	135	15	285	0	5	0	10	0	0	0
Conflicting Peds, #/hr	0	0	0	0	0	0	0	0	0	0	0	0
Sign Control	Free	Free	Free	Free	Free	Free	Stop	Stop	Stop	Stop	Stop	Stop
RT Channelized	-	-	None	-	-	None	-	-	None	-	-	None
Storage Length	-	-	-	100	-	-	-	-	-	-	-	-
Veh in Median Storage, #	-	0	-	-	0	-	-	0	-	-	0	-
Grade, %	-	0	-	-	0	-	-	0	-	-	0	-
Peak Hour Factor	92	92	92	92	92	92	92	92	92	92	92	92
Heavy Vehicles, %	2	2	2	2	2	2	2	2	2	2	2	2
Mvmt Flow	0	310	147	16	310	0	5	0	11	0	0	0

Major/Minor	Major1			Major2			Minor1			Minor2		
Conflicting Flow All	310	0	0	457	0	0	726	726	384	731	799	310
Stage 1	-	-	-	-	-	-	384	384	-	342	342	-
Stage 2	-	-	-	-	-	-	342	342	-	389	457	-
Critical Hdwy	4.12	-	-	4.12	-	-	7.12	6.52	6.22	7.12	6.52	6.22
Critical Hdwy Stg 1	-	-	-	-	-	-	6.12	5.52	-	6.12	5.52	-
Critical Hdwy Stg 2	-	-	-	-	-	-	6.12	5.52	-	6.12	5.52	-
Follow-up Hdwy	2.218	-	-	2.218	-	-	3.518	4.018	3.318	3.518	4.018	3.318
Pot Cap-1 Maneuver	1250	-	-	1104	-	-	340	351	664	337	319	730
Stage 1	-	-	-	-	-	-	639	611	-	673	638	-
Stage 2	-	-	-	-	-	-	673	638	-	635	568	-
Platoon blocked, %		-	-		-	-						
Mov Cap-1 Maneuver	1250	-	-	1104	-	-	336	346	664	328	315	730
Mov Cap-2 Maneuver	-	-	-	-	-	-	336	346	-	328	315	-
Stage 1	-	-	-	-	-	-	639	611	-	673	629	-
Stage 2	-	-	-	-	-	-	663	629	-	625	568	-

Approach	EB	WB	NB	SB
HCM Control Delay, s	0	0.4	12.4	0
HCM LOS			B	A

Minor Lane/Major Mvmt	NBLn1	EBL	EBT	EBR	WBL	WBT	WBR	SBLn1
Capacity (veh/h)	501	1250	-	-	1104	-	-	-
HCM Lane V/C Ratio	0.033	-	-	-	0.015	-	-	-
HCM Control Delay (s)	12.4	0	-	-	8.3	-	-	0
HCM Lane LOS	B	A	-	-	A	-	-	A
HCM 95th %tile Q(veh)	0.1	0	-	-	0	-	-	-

Intersection	
Int Delay, s/veh	1.6

Movement	EBL	EBT	EBR	WBL	WBT	WBR	NBL	NBT	NBR	SBL	SBT	SBR
Lane Configurations												
Traffic Vol, veh/h	5	285	25	5	215	0	25	0	50	0	0	0
Future Vol, veh/h	5	285	25	5	215	0	25	0	50	0	0	0
Conflicting Peds, #/hr	0	0	0	0	0	0	0	0	0	0	0	0
Sign Control	Free	Free	Free	Free	Free	Free	Stop	Stop	Stop	Stop	Stop	Stop
RT Channelized	-	-	None	-	-	None	-	-	None	-	-	None
Storage Length	-	-	-	100	-	-	-	-	-	-	-	-
Veh in Median Storage, #	-	0	-	-	0	-	-	0	-	-	0	-
Grade, %	-	0	-	-	0	-	-	0	-	-	0	-
Peak Hour Factor	92	92	92	92	92	92	92	92	92	92	92	92
Heavy Vehicles, %	2	2	2	2	2	2	2	2	2	2	2	2
Mvmt Flow	5	310	27	5	234	0	27	0	54	0	0	0

Major/Minor	Major1			Major2			Minor1			Minor2		
Conflicting Flow All	234	0	0	337	0	0	578	578	324	605	591	234
Stage 1	-	-	-	-	-	-	334	334	-	244	244	-
Stage 2	-	-	-	-	-	-	244	244	-	361	347	-
Critical Hdwy	4.12	-	-	4.12	-	-	7.12	6.52	6.22	7.12	6.52	6.22
Critical Hdwy Stg 1	-	-	-	-	-	-	6.12	5.52	-	6.12	5.52	-
Critical Hdwy Stg 2	-	-	-	-	-	-	6.12	5.52	-	6.12	5.52	-
Follow-up Hdwy	2.218	-	-	2.218	-	-	3.518	4.018	3.318	3.518	4.018	3.318
Pot Cap-1 Maneuver	1333	-	-	1222	-	-	427	427	717	410	420	805
Stage 1	-	-	-	-	-	-	680	643	-	760	704	-
Stage 2	-	-	-	-	-	-	760	704	-	657	635	-
Platoon blocked, %		-	-		-	-						
Mov Cap-1 Maneuver	1333	-	-	1222	-	-	424	423	717	376	416	805
Mov Cap-2 Maneuver	-	-	-	-	-	-	424	423	-	376	416	-
Stage 1	-	-	-	-	-	-	677	640	-	756	701	-
Stage 2	-	-	-	-	-	-	757	701	-	604	632	-

Approach	EB	WB	NB	SB
HCM Control Delay, s	0.1	0.2	12.2	0
HCM LOS			B	A

Minor Lane/Major Mvmt	NBLn1	EBL	EBT	EBR	WBL	WBT	WBR	SBLn1
Capacity (veh/h)	583	1333	-	-	1222	-	-	-
HCM Lane V/C Ratio	0.14	0.004	-	-	0.004	-	-	-
HCM Control Delay (s)	12.2	7.7	0	-	8	-	-	0
HCM Lane LOS	B	A	A	-	A	-	-	A
HCM 95th %tile Q(veh)	0.5	0	-	-	0	-	-	-

Intersection	
Int Delay, s/veh	11.1

Movement	EBL	EBT	EBR	WBL	WBT	WBR	NBL	NBT	NBR	SBL	SBT	SBR
Lane Configurations												
Traffic Vol, veh/h	0	280	15	40	280	0	0	0	0	20	25	25
Future Vol, veh/h	0	280	15	40	280	0	0	0	0	20	25	25
Conflicting Peds, #/hr	0	0	0	0	0	0	0	0	0	0	0	0
Sign Control	Stop	Stop	Stop	Stop	Stop	Stop	Free	Free	Free	Free	Free	Free
RT Channelized	-	-	None	-	-	None	-	-	None	-	-	None
Storage Length	-	-	-	25	-	-	-	-	-	-	-	-
Veh in Median Storage, #	-	0	-	-	0	-	-	0	-	-	0	-
Grade, %	-	0	-	-	0	-	-	0	-	-	0	-
Peak Hour Factor	92	92	92	92	92	92	92	92	92	92	92	92
Heavy Vehicles, %	2	2	2	2	2	2	2	2	2	2	2	2
Mvmt Flow	0	304	16	43	304	0	0	0	0	22	27	27

Major/Minor	Minor2			Minor1					Major2		
Conflicting Flow All	-	85	41	245	98	-			0	0	0
Stage 1	-	85	-	0	0	-			-	-	-
Stage 2	-	0	-	245	98	-			-	-	-
Critical Hdwy	-	6.52	6.22	7.12	6.52	-			4.12	-	-
Critical Hdwy Stg 1	-	5.52	-	-	-	-			-	-	-
Critical Hdwy Stg 2	-	-	-	6.12	5.52	-			-	-	-
Follow-up Hdwy	-	4.018	3.318	3.518	4.018	-			2.218	-	-
Pot Cap-1 Maneuver	0	805	1030	709	792	0			-	-	-
Stage 1	0	824	-	-	-	0			-	-	-
Stage 2	0	-	-	759	814	0			-	-	-
Platoon blocked, %										-	-
Mov Cap-1 Maneuver	-	805	1030	493	792	-			-	-	-
Mov Cap-2 Maneuver	-	805	-	493	792	-			-	-	-
Stage 1	-	824	-	-	-	-			-	-	-
Stage 2	-	-	-	471	814	-			-	-	-

Approach	EB	WB	SB
HCM Control Delay, s	12.3	12.5	
HCM LOS	B	B	

Minor Lane/Major Mvmt	EBLn1	WBLn1	WBLn2	SBL	SBT	SBR
Capacity (veh/h)	814	493	792	-	-	-
HCM Lane V/C Ratio	0.394	0.088	0.384	-	-	-
HCM Control Delay (s)	12.3	13	12.4	-	-	-
HCM Lane LOS	B	B	B	-	-	-
HCM 95th %tile Q(veh)	1.9	0.3	1.8	-	-	-

Intersection	
Int Delay, s/veh	11.6

Movement	EBL	EBT	EBR	WBL	WBT	WBR	NBL	NBT	NBR	SBL	SBT	SBR
Lane Configurations												
Traffic Vol, veh/h	0	290	45	35	190	0	0	0	0	75	30	30
Future Vol, veh/h	0	290	45	35	190	0	0	0	0	75	30	30
Conflicting Peds, #/hr	0	0	0	0	0	0	0	0	0	0	0	0
Sign Control	Stop	Stop	Stop	Stop	Stop	Stop	Free	Free	Free	Free	Free	Free
RT Channelized	-	-	None	-	-	None	-	-	None	-	-	None
Storage Length	-	-	-	25	-	-	-	-	-	-	-	-
Veh in Median Storage, #	-	0	-	-	0	-	-	0	-	-	0	-
Grade, %	-	0	-	-	0	-	-	0	-	-	0	-
Peak Hour Factor	92	92	92	92	92	92	92	92	92	92	92	92
Heavy Vehicles, %	2	2	2	2	2	2	2	2	2	2	2	2
Mvmt Flow	0	315	49	38	207	0	0	0	0	82	33	33

Major/Minor	Minor2			Minor1					Major2		
Conflicting Flow All	-	214	50	396	230	-			0	0	0
Stage 1	-	214	-	0	0	-			-	-	-
Stage 2	-	0	-	396	230	-			-	-	-
Critical Hdwy	-	6.52	6.22	7.12	6.52	-			4.12	-	-
Critical Hdwy Stg 1	-	5.52	-	-	-	-			-	-	-
Critical Hdwy Stg 2	-	-	-	6.12	5.52	-			-	-	-
Follow-up Hdwy	-	4.018	3.318	3.518	4.018	-			2.218	-	-
Pot Cap-1 Maneuver	0	684	1018	564	670	0			-	-	-
Stage 1	0	725	-	-	-	0			-	-	-
Stage 2	0	-	-	629	714	0			-	-	-
Platoon blocked, %										-	-
Mov Cap-1 Maneuver	-	684	1018	343	670	-			-	-	-
Mov Cap-2 Maneuver	-	684	-	343	670	-			-	-	-
Stage 1	-	725	-	-	-	-			-	-	-
Stage 2	-	-	-	338	714	-			-	-	-

Approach	EB	WB	SB
HCM Control Delay, s	15.1	13.3	
HCM LOS	C	B	

Minor Lane/Major Mvmt	EBLn1	WBLn1	WBLn2	SBL	SBT	SBR
Capacity (veh/h)	716	343	670	-	-	-
HCM Lane V/C Ratio	0.509	0.111	0.308	-	-	-
HCM Control Delay (s)	15.1	16.8	12.7	-	-	-
HCM Lane LOS	C	C	B	-	-	-
HCM 95th %tile Q(veh)	2.9	0.4	1.3	-	-	-

Intersection	
Int Delay, s/veh	12.6

Movement	EBL	EBT	EBR	WBL	WBT	WBR	NBL	NBT	NBR	SBL	SBT	SBR
Lane Configurations												
Traffic Vol, veh/h	90	205	0	0	245	135	75	30	45	0	0	0
Future Vol, veh/h	90	205	0	0	245	135	75	30	45	0	0	0
Conflicting Peds, #/hr	0	0	0	0	0	0	0	0	0	0	0	0
Sign Control	Stop	Stop	Stop	Stop	Stop	Stop	Free	Free	Free	Free	Free	Free
RT Channelized	-	-	None	-	-	None	-	-	None	-	-	None
Storage Length	25	-	-	-	-	-	-	-	-	-	-	-
Veh in Median Storage, #	-	0	-	-	0	-	-	0	-	1083	0	74560
Grade, %	-	0	-	-	0	-	-	0	-	-	0	-
Peak Hour Factor	92	92	92	92	92	92	92	92	92	92	92	92
Heavy Vehicles, %	2	2	2	2	2	2	2	2	2	2	2	2
Mvmt Flow	98	223	0	0	266	147	82	33	49	0	0	0

Major/Minor	Minor2			Minor1			Major1		
Conflicting Flow All	428	246	-	-	222	58	0	0	0
Stage 1	0	0	-	-	222	-	-	-	-
Stage 2	428	246	-	-	0	-	-	-	-
Critical Hdwy	7.12	6.52	-	-	6.52	6.22	4.12	-	-
Critical Hdwy Stg 1	-	-	-	-	5.52	-	-	-	-
Critical Hdwy Stg 2	6.12	5.52	-	-	-	-	-	-	-
Follow-up Hdwy	3.518	4.018	-	-	4.018	3.318	2.218	-	-
Pot Cap-1 Maneuver	537	656	0	0	677	1008	-	-	-
Stage 1	-	-	0	0	720	-	-	-	-
Stage 2	605	703	0	0	-	-	-	-	-
Platoon blocked, %								-	-
Mov Cap-1 Maneuver	318	656	-	-	677	1008	-	-	-
Mov Cap-2 Maneuver	318	656	-	-	677	-	-	-	-
Stage 1	-	-	-	-	720	-	-	-	-
Stage 2	326	703	-	-	-	-	-	-	-

Approach	EB	WB	NB
HCM Control Delay, s	15.7	15.1	
HCM LOS	C	C	

Minor Lane/Major Mvmt	NBL	NBT	NBR	EBLn1	EBLn2	WBLn1
Capacity (veh/h)	-	-	-	318	656	766
HCM Lane V/C Ratio	-	-	-	0.308	0.34	0.539
HCM Control Delay (s)	-	-	-	21.3	13.3	15.1
HCM Lane LOS	-	-	-	C	B	C
HCM 95th %tile Q(veh)	-	-	-	1.3	1.5	3.3

Intersection	
Int Delay, s/veh	10.9

Movement	EBL	EBT	EBR	WBL	WBT	WBR	NBL	NBT	NBR	SBL	SBT	SBR
Lane Configurations												
Traffic Vol, veh/h	30	305	0	0	190	60	35	35	20	0	0	0
Future Vol, veh/h	30	305	0	0	190	60	35	35	20	0	0	0
Conflicting Peds, #/hr	0	0	0	0	0	0	0	0	0	0	0	0
Sign Control	Stop	Stop	Stop	Stop	Stop	Stop	Free	Free	Free	Free	Free	Free
RT Channelized	-	-	None	-	-	None	-	-	None	-	-	None
Storage Length	25	-	-	-	-	-	-	-	-	-	-	-
Veh in Median Storage, #	-	0	-	-	0	-	-	0	-	1083	0	74560
Grade, %	-	0	-	-	0	-	-	0	-	-	0	-
Peak Hour Factor	92	92	92	92	92	92	92	92	92	92	92	92
Heavy Vehicles, %	2	2	2	2	2	2	2	2	2	2	2	2
Mvmt Flow	33	332	0	0	207	65	38	38	22	0	0	0

Major/Minor	Minor2			Minor1			Major1		
Conflicting Flow All	261	136	-	-	125	49	0	0	0
Stage 1	0	0	-	-	125	-	-	-	-
Stage 2	261	136	-	-	0	-	-	-	-
Critical Hdwy	7.12	6.52	-	-	6.52	6.22	4.12	-	-
Critical Hdwy Stg 1	-	-	-	-	5.52	-	-	-	-
Critical Hdwy Stg 2	6.12	5.52	-	-	-	-	-	-	-
Follow-up Hdwy	3.518	4.018	-	-	4.018	3.318	2.218	-	-
Pot Cap-1 Maneuver	692	755	0	0	765	1020	-	-	-
Stage 1	-	-	0	0	792	-	-	-	-
Stage 2	744	784	0	0	-	-	-	-	-
Platoon blocked, %								-	-
Mov Cap-1 Maneuver	513	755	-	-	765	1020	-	-	-
Mov Cap-2 Maneuver	513	755	-	-	765	-	-	-	-
Stage 1	-	-	-	-	792	-	-	-	-
Stage 2	515	784	-	-	-	-	-	-	-

Approach	EB	WB	NB
HCM Control Delay, s	13.3	11.6	
HCM LOS	B	B	

Minor Lane/Major Mvmt	NBL	NBT	NBR	EBLn1	EBLn2	WBLn1
Capacity (veh/h)	-	-	-	513	755	814
HCM Lane V/C Ratio	-	-	-	0.064	0.439	0.334
HCM Control Delay (s)	-	-	-	12.5	13.4	11.6
HCM Lane LOS	-	-	-	B	B	B
HCM 95th %tile Q(veh)	-	-	-	0.2	2.3	1.5

Intersection	
Intersection Delay, s/veh	10.6
Intersection LOS	B

Approach	EB	WB	NB	SB
Entry Lanes	1	1	1	1
Conflicting Circle Lanes	1	1	1	1
Adj Approach Flow, veh/h	201	620	228	483
Demand Flow Rate, veh/h	206	633	233	493
Vehicles Circulating, veh/h	443	245	299	506
Vehicles Exiting, veh/h	556	287	349	372
Ped Vol Crossing Leg, #/h	0	0	0	0
Ped Cap Adj	1.000	1.000	1.000	1.000
Approach Delay, s/veh	6.6	11.1	5.8	13.9
Approach LOS	A	B	A	B

Lane	Left	Left	Left	Left
Designated Moves	LTR	LTR	LTR	LTR
Assumed Moves	LTR	LTR	LTR	LTR
RT Channelized				
Lane Util	1.000	1.000	1.000	1.000
Follow-Up Headway, s	2.609	2.609	2.609	2.609
Critical Headway, s	4.976	4.976	4.976	4.976
Entry Flow, veh/h	206	633	233	493
Cap Entry Lane, veh/h	878	1075	1017	824
Entry HV Adj Factor	0.978	0.980	0.980	0.979
Flow Entry, veh/h	201	620	228	483
Cap Entry, veh/h	859	1053	997	806
V/C Ratio	0.235	0.589	0.229	0.599
Control Delay, s/veh	6.6	11.1	5.8	13.9
LOS	A	B	A	B
95th %tile Queue, veh	1	4	1	4

Intersection	
Intersection Delay, s/veh	8.2
Intersection LOS	A

Approach	EB	WB	NB	SB
Entry Lanes	1	1	1	1
Conflicting Circle Lanes	1	1	1	1
Adj Approach Flow, veh/h	456	217	321	332
Demand Flow Rate, veh/h	465	221	328	339
Vehicles Circulating, veh/h	322	316	571	227
Vehicles Exiting, veh/h	244	583	216	310
Ped Vol Crossing Leg, #/h	0	0	0	0
Ped Cap Adj	1.000	1.000	1.000	1.000
Approach Delay, s/veh	9.2	5.8	10.4	6.4
Approach LOS	A	A	B	A

Lane	Left	Left	Left	Left
Designated Moves	LTR	LTR	LTR	LTR
Assumed Moves	LTR	LTR	LTR	LTR
RT Channelized				
Lane Util	1.000	1.000	1.000	1.000
Follow-Up Headway, s	2.609	2.609	2.609	2.609
Critical Headway, s	4.976	4.976	4.976	4.976
Entry Flow, veh/h	465	221	328	339
Cap Entry Lane, veh/h	994	1000	771	1095
Entry HV Adj Factor	0.981	0.982	0.979	0.980
Flow Entry, veh/h	456	217	321	332
Cap Entry, veh/h	975	981	755	1073
V/C Ratio	0.468	0.221	0.426	0.310
Control Delay, s/veh	9.2	5.8	10.4	6.4
LOS	A	A	B	A
95th %tile Queue, veh	3	1	2	1

Intersection	
Int Delay, s/veh	0.7

Movement	EBT	EBR	WBL	WBT	NBL	NBR
Lane Configurations						
Traffic Vol, veh/h	120	95	15	530	20	15
Future Vol, veh/h	120	95	15	530	20	15
Conflicting Peds, #/hr	0	0	0	0	0	0
Sign Control	Free	Free	Free	Free	Stop	Stop
RT Channelized	-	None	-	None	-	None
Storage Length	-	-	100	-	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	130	103	16	576	22	16

Major/Minor	Major1		Major2		Minor1	
Conflicting Flow All	0	0	233	0	790	182
Stage 1	-	-	-	-	182	-
Stage 2	-	-	-	-	608	-
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	-	-	1335	-	359	861
Stage 1	-	-	-	-	849	-
Stage 2	-	-	-	-	543	-
Platoon blocked, %	-	-		-		
Mov Cap-1 Maneuver	-	-	1335	-	355	861
Mov Cap-2 Maneuver	-	-	-	-	355	-
Stage 1	-	-	-	-	849	-
Stage 2	-	-	-	-	536	-

Approach	EB	WB	NB
HCM Control Delay, s	0	0.2	13.2
HCM LOS			B

Minor Lane/Major Mvmt	NBLn1	EBT	EBR	WBL	WBT
Capacity (veh/h)	475	-	-	1335	-
HCM Lane V/C Ratio	0.08	-	-	0.012	-
HCM Control Delay (s)	13.2	-	-	7.7	-
HCM Lane LOS	B	-	-	A	-
HCM 95th %tile Q(veh)	0.3	-	-	0	-

Intersection	
Int Delay, s/veh	1.4

Movement	EBT	EBR	WBL	WBT	NBL	NBR
Lane Configurations						
Traffic Vol, veh/h	480	20	15	130	40	20
Future Vol, veh/h	480	20	15	130	40	20
Conflicting Peds, #/hr	0	0	0	0	0	0
Sign Control	Free	Free	Free	Free	Stop	Stop
RT Channelized	-	None	-	None	-	None
Storage Length	-	-	100	-	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	522	22	16	141	43	22

Major/Minor	Major1		Major2		Minor1	
Conflicting Flow All	0	0	544	0	706	533
Stage 1	-	-	-	-	533	-
Stage 2	-	-	-	-	173	-
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	-	-	1025	-	402	547
Stage 1	-	-	-	-	588	-
Stage 2	-	-	-	-	857	-
Platoon blocked, %	-	-		-		
Mov Cap-1 Maneuver	-	-	1025	-	396	547
Mov Cap-2 Maneuver	-	-	-	-	396	-
Stage 1	-	-	-	-	588	-
Stage 2	-	-	-	-	843	-

Approach	EB	WB	NB
HCM Control Delay, s	0	0.9	14.7
HCM LOS			B

Minor Lane/Major Mvmt	NBLn1	EBT	EBR	WBL	WBT
Capacity (veh/h)	436	-	-	1025	-
HCM Lane V/C Ratio	0.15	-	-	0.016	-
HCM Control Delay (s)	14.7	-	-	8.6	-
HCM Lane LOS	B	-	-	A	-
HCM 95th %tile Q(veh)	0.5	-	-	0	-

Intersection	
Intersection Delay, s/veh	7.6
Intersection LOS	A

Approach	EB	WB	NB	SB
Entry Lanes	1	1	1	1
Conflicting Circle Lanes	1	1	1	1
Adj Approach Flow, veh/h	158	597	119	217
Demand Flow Rate, veh/h	160	609	121	222
Vehicles Circulating, veh/h	248	127	204	637
Vehicles Exiting, veh/h	610	198	204	99
Ped Vol Crossing Leg, #/h	0	0	0	0
Ped Cap Adj	1.000	1.000	1.000	1.000
Approach Delay, s/veh	4.8	8.6	4.2	8.9
Approach LOS	A	A	A	A

Lane	Left	Left	Left	Left
Designated Moves	LTR	LTR	LTR	LTR
Assumed Moves	LTR	LTR	LTR	LTR
RT Channelized				
Lane Util	1.000	1.000	1.000	1.000
Follow-Up Headway, s	2.609	2.609	2.609	2.609
Critical Headway, s	4.976	4.976	4.976	4.976
Entry Flow, veh/h	160	609	121	222
Cap Entry Lane, veh/h	1071	1212	1121	721
Entry HV Adj Factor	0.986	0.981	0.982	0.980
Flow Entry, veh/h	158	597	119	217
Cap Entry, veh/h	1056	1189	1100	706
V/C Ratio	0.149	0.502	0.108	0.308
Control Delay, s/veh	4.8	8.6	4.2	8.9
LOS	A	A	A	A
95th %tile Queue, veh	1	3	0	1

Intersection	
Intersection Delay, s/veh	32.2
Intersection LOS	D

Movement	EBL	EBT	EBR	WBL	WBT	WBR	NBL	NBT	NBR	SBL	SBT	SBR
Lane Configurations												
Traffic Vol, veh/h	20	105	20	50	485	15	40	55	15	60	115	25
Future Vol, veh/h	20	105	20	50	485	15	40	55	15	60	115	25
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
Heavy Vehicles, %	2	2	2	2	2	2	2	2	2	2	2	2
Mvmt Flow	22	114	22	54	527	16	43	60	16	65	125	27
Number of Lanes	1	1	1	1	1	0	1	1	1	1	1	0

Approach	EB	WB	NB	SB
Opposing Approach	WB	EB	SB	NB
Opposing Lanes	2	3	2	3
Conflicting Approach Left	SB	NB	EB	WB
Conflicting Lanes Left	2	3	3	2
Conflicting Approach Right	NB	SB	WB	EB
Conflicting Lanes Right	3	2	2	3
HCM Control Delay	11.9	48.7	11.6	13
HCM LOS	B	E	B	B

Lane	NBLn1	NBLn2	NBLn3	EBLn1	EBLn2	EBLn3	WBLn1	WBLn2	SBLn1	SBLn2
Vol Left, %	100%	0%	0%	100%	0%	0%	100%	0%	100%	0%
Vol Thru, %	0%	100%	0%	0%	100%	0%	0%	97%	0%	82%
Vol Right, %	0%	0%	100%	0%	0%	100%	0%	3%	0%	18%
Sign Control	Stop	Stop	Stop	Stop	Stop	Stop	Stop	Stop	Stop	Stop
Traffic Vol by Lane	40	55	15	20	105	20	50	500	60	140
LT Vol	40	0	0	20	0	0	50	0	60	0
Through Vol	0	55	0	0	105	0	0	485	0	115
RT Vol	0	0	15	0	0	20	0	15	0	25
Lane Flow Rate	43	60	16	22	114	22	54	543	65	152
Geometry Grp	8	8	8	8	8	8	8	8	8	8
Degree of Util (X)	0.1	0.129	0.032	0.048	0.236	0.041	0.104	0.957	0.144	0.31
Departure Headway (Hd)	8.289	7.78	7.067	7.956	7.447	6.734	6.867	6.342	7.963	7.329
Convergence, Y/N	Yes	Yes	Yes	Yes	Yes	Yes	Yes	Yes	Yes	Yes
Cap	432	461	506	450	483	532	525	576	451	490
Service Time	6.039	5.53	4.817	5.701	5.191	4.478	4.567	4.042	5.707	5.073
HCM Lane V/C Ratio	0.1	0.13	0.032	0.049	0.236	0.041	0.103	0.943	0.144	0.31
HCM Control Delay	12	11.7	10.1	11.1	12.5	9.8	10.4	52.5	12	13.4
HCM Lane LOS	B	B	B	B	B	A	B	F	B	B
HCM 95th-tile Q	0.3	0.4	0.1	0.2	0.9	0.1	0.3	12.8	0.5	1.3

Intersection	
Intersection Delay, s/veh	6.8
Intersection LOS	A

Approach	EB	WB	NB	SB
Entry Lanes	1	1	1	1
Conflicting Circle Lanes	1	1	1	1
Adj Approach Flow, veh/h	571	185	217	49
Demand Flow Rate, veh/h	582	189	221	49
Vehicles Circulating, veh/h	60	199	526	177
Vehicles Exiting, veh/h	166	548	116	211
Ped Vol Crossing Leg, #/h	0	0	0	0
Ped Cap Adj	1.000	1.000	1.000	1.000
Approach Delay, s/veh	7.3	4.8	7.6	3.5
Approach LOS	A	A	A	A

Lane	Left	Left	Left	Left
Designated Moves	LTR	LTR	LTR	LTR
Assumed Moves	LTR	LTR	LTR	LTR
RT Channelized				
Lane Util	1.000	1.000	1.000	1.000
Follow-Up Headway, s	2.609	2.609	2.609	2.609
Critical Headway, s	4.976	4.976	4.976	4.976
Entry Flow, veh/h	582	189	221	49
Cap Entry Lane, veh/h	1298	1126	807	1152
Entry HV Adj Factor	0.981	0.980	0.983	0.991
Flow Entry, veh/h	571	185	217	49
Cap Entry, veh/h	1273	1104	793	1142
V/C Ratio	0.448	0.168	0.274	0.043
Control Delay, s/veh	7.3	4.8	7.6	3.5
LOS	A	A	A	A
95th %tile Queue, veh	2	1	1	0

Intersection	
Intersection Delay, s/veh	17.4
Intersection LOS	C

Movement	EBL	EBT	EBR	WBL	WBT	WBR	NBL	NBT	NBR	SBL	SBT	SBR
Lane Configurations												
Traffic Vol, veh/h	40	420	65	20	125	25	15	125	60	15	20	10
Future Vol, veh/h	40	420	65	20	125	25	15	125	60	15	20	10
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
Heavy Vehicles, %	2	2	2	2	2	2	2	2	2	2	2	2
Mvmt Flow	43	457	71	22	136	27	16	136	65	16	22	11
Number of Lanes	1	1	1	1	1	0	1	1	1	1	1	0

Approach	EB	WB	NB	SB
Opposing Approach	WB	EB	SB	NB
Opposing Lanes	2	3	2	3
Conflicting Approach Left	SB	NB	EB	WB
Conflicting Lanes Left	2	3	3	2
Conflicting Approach Right	NB	SB	WB	EB
Conflicting Lanes Right	3	2	2	3
HCM Control Delay	22	12.1	11.4	10.6
HCM LOS	C	B	B	B

Lane	NBLn1	NBLn2	NBLn3	EBLn1	EBLn2	EBLn3	WBLn1	WBLn2	SBLn1	SBLn2
Vol Left, %	100%	0%	0%	100%	0%	0%	100%	0%	100%	0%
Vol Thru, %	0%	100%	0%	0%	100%	0%	0%	83%	0%	67%
Vol Right, %	0%	0%	100%	0%	0%	100%	0%	17%	0%	33%
Sign Control	Stop	Stop	Stop	Stop	Stop	Stop	Stop	Stop	Stop	Stop
Traffic Vol by Lane	15	125	60	40	420	65	20	150	15	30
LT Vol	15	0	0	40	0	0	20	0	15	0
Through Vol	0	125	0	0	420	0	0	125	0	20
RT Vol	0	0	60	0	0	65	0	25	0	10
Lane Flow Rate	16	136	65	43	457	71	22	163	16	33
Geometry Grp	8	8	8	8	8	8	8	8	8	8
Degree of Util (X)	0.034	0.262	0.113	0.078	0.759	0.104	0.044	0.301	0.036	0.065
Departure Headway (Hd)	7.453	6.948	6.241	6.49	5.987	5.283	7.258	6.636	7.902	7.157
Convergence, Y/N	Yes	Yes	Yes	Yes	Yes	Yes	Yes	Yes	Yes	Yes
Cap	479	515	571	551	603	676	492	540	451	498
Service Time	5.226	4.721	4.014	4.242	3.739	3.035	5.026	4.404	5.687	4.942
HCM Lane V/C Ratio	0.033	0.264	0.114	0.078	0.758	0.105	0.045	0.302	0.035	0.066
HCM Control Delay	10.5	12.2	9.8	9.8	25.2	8.7	10.4	12.3	11	10.4
HCM Lane LOS	B	B	A	A	D	A	B	B	B	B
HCM 95th-tile Q	0.1	1	0.4	0.3	6.8	0.3	0.1	1.3	0.1	0.2

Intersection	
Int Delay, s/veh	1.7

Movement	EBL	EBR	NBL	NBT	SBT	SBR
Lane Configurations						
Traffic Vol, veh/h	2	35	177	596	705	28
Future Vol, veh/h	2	35	177	596	705	28
Conflicting Peds, #/hr	0	0	0	0	0	0
Sign Control	Stop	Stop	Free	Free	Free	Free
RT Channelized	-	None	-	None	-	None
Storage Length	0	0	225	-	-	-
Veh in Median Storage, #	1	-	-	0	0	-
Grade, %	0	-	-	0	0	-
Peak Hour Factor	50	73	83	89	90	78
Heavy Vehicles, %	2	2	2	2	2	2
Mvmt Flow	4	48	213	670	783	36

Major/Minor	Minor2		Major1		Major2	
Conflicting Flow All	1562	410	819	0	-	0
Stage 1	801	-	-	-	-	-
Stage 2	761	-	-	-	-	-
Critical Hdwy	6.84	6.94	4.14	-	-	-
Critical Hdwy Stg 1	5.84	-	-	-	-	-
Critical Hdwy Stg 2	5.84	-	-	-	-	-
Follow-up Hdwy	3.52	3.32	2.22	-	-	-
Pot Cap-1 Maneuver	144	591	805	-	-	-
Stage 1	402	-	-	-	-	-
Stage 2	670	-	-	-	-	-
Platoon blocked, %	1			-	-	-
Mov Cap-1 Maneuver	106	591	805	-	-	-
Mov Cap-2 Maneuver	226	-	-	-	-	-
Stage 1	295	-	-	-	-	-
Stage 2	670	-	-	-	-	-

Approach	EB	NB	SB
HCM Control Delay, s	12.3	2.7	0
HCM LOS	B		

Minor Lane/Major Mvmt	NBL	NBT	EBLn1	EBLn2	SBT	SBR
Capacity (veh/h)	805	-	226	591	-	-
HCM Lane V/C Ratio	0.265	-	0.018	0.081	-	-
HCM Control Delay (s)	11.1	-	21.2	11.6	-	-
HCM Lane LOS	B	-	C	B	-	-
HCM 95th %tile Q(veh)	1.1	-	0.1	0.3	-	-

Intersection	
Int Delay, s/veh	4.4

Movement	EBL	EBR	NBL	NBT	SBT	SBR
Lane Configurations						
Traffic Vol, veh/h	71	251	25	566	628	21
Future Vol, veh/h	71	251	25	566	628	21
Conflicting Peds, #/hr	0	0	0	0	0	0
Sign Control	Stop	Stop	Free	Free	Free	Free
RT Channelized	-	None	-	None	-	None
Storage Length	0	0	225	-	-	-
Veh in Median Storage, #	1	-	-	0	0	-
Grade, %	0	-	-	0	0	-
Peak Hour Factor	63	76	69	94	90	66
Heavy Vehicles, %	2	2	2	2	2	2
Mvmt Flow	113	330	36	602	698	32

Major/Minor	Minor2		Major1		Major2	
Conflicting Flow All	1087	365	730	0	-	0
Stage 1	714	-	-	-	-	-
Stage 2	373	-	-	-	-	-
Critical Hdwy	6.84	6.94	4.14	-	-	-
Critical Hdwy Stg 1	5.84	-	-	-	-	-
Critical Hdwy Stg 2	5.84	-	-	-	-	-
Follow-up Hdwy	3.52	3.32	2.22	-	-	-
Pot Cap-1 Maneuver	*353	632	870	-	-	-
Stage 1	*446	-	-	-	-	-
Stage 2	*807	-	-	-	-	-
Platoon blocked, %	1			-	-	-
Mov Cap-1 Maneuver	*338	632	870	-	-	-
Mov Cap-2 Maneuver	*377	-	-	-	-	-
Stage 1	*428	-	-	-	-	-
Stage 2	*807	-	-	-	-	-

Approach	EB	NB	SB
HCM Control Delay, s	17.3	0.5	0
HCM LOS	C		

Minor Lane/Major Mvmt	NBL	NBT	EBLn1	EBLn2	SBT	SBR
Capacity (veh/h)	870	-	377	632	-	-
HCM Lane V/C Ratio	0.042	-	0.299	0.523	-	-
HCM Control Delay (s)	9.3	-	18.6	16.8	-	-
HCM Lane LOS	A	-	C	C	-	-
HCM 95th %tile Q(veh)	0.1	-	1.2	3	-	-

Notes

~: Volume exceeds capacity $: Delay exceeds 300s +: Computation Not Defined *: All major volume in platoon

Intersection	
Int Delay, s/veh	1.5

Movement	EBL	EBR	NBL	NBT	SBT	SBR
Lane Configurations						
Traffic Vol, veh/h	0	40	185	700	765	35
Future Vol, veh/h	0	40	185	700	765	35
Conflicting Peds, #/hr	0	0	0	0	0	0
Sign Control	Stop	Stop	Free	Free	Free	Free
RT Channelized	-	None	-	None	-	None
Storage Length	-	0	225	-	-	-
Veh in Median Storage, #	2	-	-	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	0	43	201	761	832	38

Major/Minor	Minor2		Major1		Major2	
Conflicting Flow All	-	435	870	0	-	0
Stage 1	-	-	-	-	-	-
Stage 2	-	-	-	-	-	-
Critical Hdwy	-	6.94	4.14	-	-	-
Critical Hdwy Stg 1	-	-	-	-	-	-
Critical Hdwy Stg 2	-	-	-	-	-	-
Follow-up Hdwy	-	3.32	2.22	-	-	-
Pot Cap-1 Maneuver	0	569	770	-	-	-
Stage 1	0	-	-	-	-	-
Stage 2	0	-	-	-	-	-
Platoon blocked, %				-	-	-
Mov Cap-1 Maneuver	-	569	770	-	-	-
Mov Cap-2 Maneuver	-	-	-	-	-	-
Stage 1	-	-	-	-	-	-
Stage 2	-	-	-	-	-	-

Approach	EB	NB	SB
HCM Control Delay, s	11.9	2.4	0
HCM LOS	B		

Minor Lane/Major Mvmt	NBL	NBT	EBLn1	SBT	SBR
Capacity (veh/h)	770	-	569	-	-
HCM Lane V/C Ratio	0.261	-	0.076	-	-
HCM Control Delay (s)	11.3	-	11.9	-	-
HCM Lane LOS	B	-	B	-	-
HCM 95th %tile Q(veh)	1	-	0.2	-	-

Intersection	
Int Delay, s/veh	2.9

Movement	EBL	EBR	NBL	NBT	SBT	SBR
Lane Configurations						
Traffic Vol, veh/h	0	260	30	620	845	30
Future Vol, veh/h	0	260	30	620	845	30
Conflicting Peds, #/hr	0	0	0	0	0	0
Sign Control	Stop	Stop	Free	Free	Free	Free
RT Channelized	-	None	-	None	-	None
Storage Length	-	0	225	-	-	-
Veh in Median Storage, #	2	-	-	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	0	283	33	674	918	33

Major/Minor	Minor2		Major1		Major2	
Conflicting Flow All	-	476	951	0	-	0
Stage 1	-	-	-	-	-	-
Stage 2	-	-	-	-	-	-
Critical Hdwy	-	6.94	4.14	-	-	-
Critical Hdwy Stg 1	-	-	-	-	-	-
Critical Hdwy Stg 2	-	-	-	-	-	-
Follow-up Hdwy	-	3.32	2.22	-	-	-
Pot Cap-1 Maneuver	0	535	718	-	-	-
Stage 1	0	-	-	-	-	-
Stage 2	0	-	-	-	-	-
Platoon blocked, %				-	-	-
Mov Cap-1 Maneuver	-	535	718	-	-	-
Mov Cap-2 Maneuver	-	-	-	-	-	-
Stage 1	-	-	-	-	-	-
Stage 2	-	-	-	-	-	-

Approach	EB	NB	SB
HCM Control Delay, s	19	0.5	0
HCM LOS	C		

Minor Lane/Major Mvmt	NBL	NBT	EBLn1	SBT	SBR
Capacity (veh/h)	718	-	535	-	-
HCM Lane V/C Ratio	0.045	-	0.528	-	-
HCM Control Delay (s)	10.3	-	19	-	-
HCM Lane LOS	B	-	C	-	-
HCM 95th %tile Q(veh)	0.1	-	3.1	-	-

Intersection	
Int Delay, s/veh	7.8

Movement	EBL	EBR	NBL	NBT	SBT	SBR
Lane Configurations						
Traffic Vol, veh/h	0	120	565	1085	860	40
Future Vol, veh/h	0	120	565	1085	860	40
Conflicting Peds, #/hr	0	0	0	0	0	0
Sign Control	Stop	Stop	Free	Free	Free	Free
RT Channelized	-	Free	-	None	-	None
Storage Length	-	0	225	-	-	-
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	0	130	614	1179	935	43

Major/Minor	Minor2		Major1		Major2	
Conflicting Flow All	-	-	978	0	-	0
Stage 1	-	-	-	-	-	-
Stage 2	-	-	-	-	-	-
Critical Hdwy	-	-	4.14	-	-	-
Critical Hdwy Stg 1	-	-	-	-	-	-
Critical Hdwy Stg 2	-	-	-	-	-	-
Follow-up Hdwy	-	-	2.22	-	-	-
Pot Cap-1 Maneuver	0	0	701	-	-	-
Stage 1	0	0	-	-	-	-
Stage 2	0	0	-	-	-	-
Platoon blocked, %				-	-	-
Mov Cap-1 Maneuver	-	-	701	-	-	-
Mov Cap-2 Maneuver	-	-	-	-	-	-
Stage 1	-	-	-	-	-	-
Stage 2	-	-	-	-	-	-

Approach	EB	NB	SB
HCM Control Delay, s	0	12	0
HCM LOS	A		

Minor Lane/Major Mvmt	NBL	NBT	EBLn1	SBT	SBR
Capacity (veh/h)	701	-	-	-	-
HCM Lane V/C Ratio	0.876	-	-	-	-
HCM Control Delay (s)	35.2	-	0	-	-
HCM Lane LOS	E	-	A	-	-
HCM 95th %tile Q(veh)	10.7	-	-	-	-

Intersection	
Int Delay, s/veh	0.9

Movement	EBL	EBR	NBL	NBT	SBT	SBR
Lane Configurations						
Traffic Vol, veh/h	0	595	120	705	1240	35
Future Vol, veh/h	0	595	120	705	1240	35
Conflicting Peds, #/hr	0	0	0	0	0	0
Sign Control	Stop	Stop	Free	Free	Free	Free
RT Channelized	-	Free	-	None	-	None
Storage Length	-	0	225	-	-	-
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	0	647	130	766	1348	38

Major/Minor	Minor2		Major1		Major2	
Conflicting Flow All	-	-	1386	0	-	0
Stage 1	-	-	-	-	-	-
Stage 2	-	-	-	-	-	-
Critical Hdwy	-	-	4.14	-	-	-
Critical Hdwy Stg 1	-	-	-	-	-	-
Critical Hdwy Stg 2	-	-	-	-	-	-
Follow-up Hdwy	-	-	2.22	-	-	-
Pot Cap-1 Maneuver	0	0	490	-	-	-
Stage 1	0	0	-	-	-	-
Stage 2	0	0	-	-	-	-
Platoon blocked, %				-	-	-
Mov Cap-1 Maneuver	-	-	490	-	-	-
Mov Cap-2 Maneuver	-	-	-	-	-	-
Stage 1	-	-	-	-	-	-
Stage 2	-	-	-	-	-	-

Approach	EB	NB	SB
HCM Control Delay, s	0	2.2	0
HCM LOS	A		

Minor Lane/Major Mvmt	NBL	NBT	EBLn1	SBT	SBR
Capacity (veh/h)	490	-	-	-	-
HCM Lane V/C Ratio	0.266	-	-	-	-
HCM Control Delay (s)	15	-	0	-	-
HCM Lane LOS	B	-	A	-	-
HCM 95th %tile Q(veh)	1.1	-	-	-	-

Intersection	
Int Delay, s/veh	0.2

Movement	WBL	WBR	NBT	NBR	SBL	SBT
Lane Configurations						
Traffic Vol, veh/h	0	50	1400	75	0	1590
Future Vol, veh/h	0	50	1400	75	0	1590
Conflicting Peds, #/hr	0	0	0	0	0	0
Sign Control	Stop	Stop	Free	Free	Free	Free
RT Channelized	-	None	-	None	-	None
Storage Length	-	0	-	-	-	-
Veh in Median Storage, #	0	-	0	-	-	0
Grade, %	0	-	0	-	-	0
Peak Hour Factor	92	92	92	92	92	92
Heavy Vehicles, %	2	2	2	2	2	2
Mvmt Flow	0	54	1522	82	0	1728

Major/Minor	Minor1		Major1		Major2	
Conflicting Flow All	-	802	0	0	-	-
Stage 1	-	-	-	-	-	-
Stage 2	-	-	-	-	-	-
Critical Hdwy	-	7.14	-	-	-	-
Critical Hdwy Stg 1	-	-	-	-	-	-
Critical Hdwy Stg 2	-	-	-	-	-	-
Follow-up Hdwy	-	3.92	-	-	-	-
Pot Cap-1 Maneuver	0	*580	-	-	0	-
Stage 1	0	-	-	-	0	-
Stage 2	0	-	-	-	0	-
Platoon blocked, %		1	-	-		-
Mov Cap-1 Maneuver	-	*580	-	-	-	-
Mov Cap-2 Maneuver	-	-	-	-	-	-
Stage 1	-	-	-	-	-	-
Stage 2	-	-	-	-	-	-

Approach	WB	NB	SB
HCM Control Delay, s	11.8	0	0
HCM LOS	B		

Minor Lane/Major Mvmt	NBT	NBR	WBLn1	SBT
Capacity (veh/h)	-	-	580	-
HCM Lane V/C Ratio	-	-	0.094	-
HCM Control Delay (s)	-	-	11.8	-
HCM Lane LOS	-	-	B	-
HCM 95th %tile Q(veh)	-	-	0.3	-

Notes

~: Volume exceeds capacity $: Delay exceeds 300s +: Computation Not Defined *: All major volume in platoon

Intersection	
Int Delay, s/veh	1.7

Movement	WBL	WBR	NBT	NBR	SBL	SBT
Lane Configurations						
Traffic Vol, veh/h	0	300	1560	15	0	1835
Future Vol, veh/h	0	300	1560	15	0	1835
Conflicting Peds, #/hr	0	0	0	0	0	0
Sign Control	Stop	Stop	Free	Free	Free	Free
RT Channelized	-	None	-	None	-	None
Storage Length	-	0	-	-	-	-
Veh in Median Storage, #	0	-	0	-	-	0
Grade, %	0	-	0	-	-	0
Peak Hour Factor	92	92	92	92	92	92
Heavy Vehicles, %	2	2	2	2	2	2
Mvmt Flow	0	326	1696	16	0	1995

Major/Minor	Minor1		Major1		Major2	
Conflicting Flow All	-	856	0	0	-	-
Stage 1	-	-	-	-	-	-
Stage 2	-	-	-	-	-	-
Critical Hdwy	-	7.14	-	-	-	-
Critical Hdwy Stg 1	-	-	-	-	-	-
Critical Hdwy Stg 2	-	-	-	-	-	-
Follow-up Hdwy	-	3.92	-	-	-	-
Pot Cap-1 Maneuver	0	*541	-	-	0	-
Stage 1	0	-	-	-	0	-
Stage 2	0	-	-	-	0	-
Platoon blocked, %		1	-	-		-
Mov Cap-1 Maneuver	-	*541	-	-	-	-
Mov Cap-2 Maneuver	-	-	-	-	-	-
Stage 1	-	-	-	-	-	-
Stage 2	-	-	-	-	-	-

Approach	WB	NB	SB
HCM Control Delay, s	21.2	0	0
HCM LOS	C		

Minor Lane/Major Mvmt	NBT	NBR	WBLn1	SBT
Capacity (veh/h)	-	-	541	-
HCM Lane V/C Ratio	-	-	0.603	-
HCM Control Delay (s)	-	-	21.2	-
HCM Lane LOS	-	-	C	-
HCM 95th %tile Q(veh)	-	-	4	-

Notes

~: Volume exceeds capacity $: Delay exceeds 300s +: Computation Not Defined *: All major volume in platoon

Intersection	
Int Delay, s/veh	3

Movement	EBL	EBT	EBR	WBL	WBT	WBR	NBL	NBT	NBR	SBL	SBT	SBR
Lane Configurations												
Traffic Vol, veh/h	40	10	10	15	10	40	15	90	35	10	255	15
Future Vol, veh/h	40	10	10	15	10	40	15	90	35	10	255	15
Conflicting Peds, #/hr	0	0	0	0	0	0	0	0	0	0	0	0
Sign Control	Stop	Stop	Stop	Stop	Stop	Stop	Free	Free	Free	Free	Free	Free
RT Channelized	-	-	None	-	-	None	-	-	None	-	-	None
Storage Length	100	-	-	100	-	-	100	-	-	100	-	-
Veh in Median Storage, #	-	0	-	-	0	-	-	0	-	-	0	-
Grade, %	-	0	-	-	0	-	-	0	-	-	0	-
Peak Hour Factor	92	92	92	92	92	92	92	92	92	92	92	92
Heavy Vehicles, %	2	2	2	2	2	2	2	2	2	2	2	2
Mvmt Flow	43	11	11	16	11	43	16	98	38	11	277	16

Major/Minor	Minor2			Minor1			Major1			Major2		
Conflicting Flow All	483	475	285	467	464	117	293	0	0	136	0	0
Stage 1	307	307	-	149	149	-	-	-	-	-	-	-
Stage 2	176	168	-	318	315	-	-	-	-	-	-	-
Critical Hdwy	7.12	6.52	6.22	7.12	6.52	6.22	4.12	-	-	4.12	-	-
Critical Hdwy Stg 1	6.12	5.52	-	6.12	5.52	-	-	-	-	-	-	-
Critical Hdwy Stg 2	6.12	5.52	-	6.12	5.52	-	-	-	-	-	-	-
Follow-up Hdwy	3.518	4.018	3.318	3.518	4.018	3.318	2.218	-	-	2.218	-	-
Pot Cap-1 Maneuver	494	488	754	506	495	935	1269	-	-	1448	-	-
Stage 1	703	661	-	854	774	-	-	-	-	-	-	-
Stage 2	826	759	-	693	656	-	-	-	-	-	-	-
Platoon blocked, %								-	-		-	-
Mov Cap-1 Maneuver	456	478	754	483	485	935	1269	-	-	1448	-	-
Mov Cap-2 Maneuver	456	478	-	483	485	-	-	-	-	-	-	-
Stage 1	694	656	-	843	764	-	-	-	-	-	-	-
Stage 2	767	749	-	667	651	-	-	-	-	-	-	-

Approach	EB	WB	NB	SB
HCM Control Delay, s	12.9	10.5	0.8	0.3
HCM LOS	B	B		

Minor Lane/Major Mvmt	NBL	NBT	NBR	EBLn1	EBLn2	WBLn1	WBLn2	SBL	SBT	SBR
Capacity (veh/h)	1269	-	-	456	585	483	789	1448	-	-
HCM Lane V/C Ratio	0.013	-	-	0.095	0.037	0.034	0.069	0.008	-	-
HCM Control Delay (s)	7.9	-	-	13.7	11.4	12.7	9.9	7.5	-	-
HCM Lane LOS	A	-	-	B	B	B	A	A	-	-
HCM 95th %tile Q(veh)	0	-	-	0.3	0.1	0.1	0.2	0	-	-

Intersection	
Int Delay, s/veh	4.2

Movement	EBL	EBT	EBR	WBL	WBT	WBR	NBL	NBT	NBR	SBL	SBT	SBR
Lane Configurations												
Traffic Vol, veh/h	10	10	10	10	55	10	90	50	185	45	115	60
Future Vol, veh/h	10	10	10	10	55	10	90	50	185	45	115	60
Conflicting Peds, #/hr	0	0	0	0	0	0	0	0	0	0	0	0
Sign Control	Stop	Stop	Stop	Stop	Stop	Stop	Free	Free	Free	Free	Free	Free
RT Channelized	-	-	None	-	-	None	-	-	None	-	-	None
Storage Length	100	-	-	100	-	-	100	-	-	100	-	-
Veh in Median Storage, #	-	0	-	-	0	-	-	0	-	-	0	-
Grade, %	-	0	-	-	0	-	-	0	-	-	0	-
Peak Hour Factor	92	92	92	92	92	92	92	92	92	92	92	92
Heavy Vehicles, %	2	2	2	2	2	2	2	2	2	2	2	2
Mvmt Flow	11	11	11	11	60	11	98	54	201	49	125	65

Major/Minor	Minor2			Minor1			Major1			Major2		
Conflicting Flow All	642	707	158	618	639	155	190	0	0	255	0	0
Stage 1	256	256	-	351	351	-	-	-	-	-	-	-
Stage 2	386	451	-	267	288	-	-	-	-	-	-	-
Critical Hdwy	7.12	6.52	6.22	7.12	6.52	6.22	4.12	-	-	4.12	-	-
Critical Hdwy Stg 1	6.12	5.52	-	6.12	5.52	-	-	-	-	-	-	-
Critical Hdwy Stg 2	6.12	5.52	-	6.12	5.52	-	-	-	-	-	-	-
Follow-up Hdwy	3.518	4.018	3.318	3.518	4.018	3.318	2.218	-	-	2.218	-	-
Pot Cap-1 Maneuver	387	360	887	402	394	891	1384	-	-	1310	-	-
Stage 1	749	696	-	666	632	-	-	-	-	-	-	-
Stage 2	637	571	-	738	674	-	-	-	-	-	-	-
Platoon blocked, %								-	-		-	-
Mov Cap-1 Maneuver	307	322	887	356	353	891	1384	-	-	1310	-	-
Mov Cap-2 Maneuver	307	322	-	356	353	-	-	-	-	-	-	-
Stage 1	696	670	-	619	587	-	-	-	-	-	-	-
Stage 2	525	530	-	690	649	-	-	-	-	-	-	-

Approach	EB	WB	NB	SB
HCM Control Delay, s	14.4	16.2	2.2	1.6
HCM LOS	B	C		

Minor Lane/Major Mvmt	NBL	NBT	NBR	EBLn1	EBLn2	WBLn1	WBLn2	SBL	SBT	SBR
Capacity (veh/h)	1384	-	-	307	472	356	389	1310	-	-
HCM Lane V/C Ratio	0.071	-	-	0.035	0.046	0.031	0.182	0.037	-	-
HCM Control Delay (s)	7.8	-	-	17.2	13	15.4	16.3	7.9	-	-
HCM Lane LOS	A	-	-	C	B	C	C	A	-	-
HCM 95th %tile Q(veh)	0.2	-	-	0.1	0.1	0.1	0.7	0.1	-	-

Intersection	
Int Delay, s/veh	4.4

Movement	EBL	EBT	EBR	WBL	WBT	WBR	NBL	NBT	NBR	SBL	SBT	SBR
Lane Configurations												
Traffic Vol, veh/h	10	10	40	10	10	10	40	120	20	30	15	10
Future Vol, veh/h	10	10	40	10	10	10	40	120	20	30	15	10
Conflicting Peds, #/hr	0	0	0	0	0	0	0	0	0	0	0	0
Sign Control	Stop	Stop	Stop	Stop	Stop	Stop	Free	Free	Free	Free	Free	Free
RT Channelized	-	-	None	-	-	None	-	-	None	-	-	None
Storage Length	-	-	-	-	-	-	100	-	-	100	-	-
Veh in Median Storage, #	-	0	-	-	0	-	-	0	-	-	0	-
Grade, %	-	0	-	-	0	-	-	0	-	-	0	-
Peak Hour Factor	92	92	92	92	92	92	92	92	92	92	92	92
Heavy Vehicles, %	2	2	2	2	2	2	2	2	2	2	2	2
Mvmt Flow	11	11	43	11	11	11	43	130	22	33	16	11

Major/Minor	Minor2			Minor1			Major1			Major2		
Conflicting Flow All	326	326	22	342	320	141	27	0	0	152	0	0
Stage 1	88	88	-	227	227	-	-	-	-	-	-	-
Stage 2	238	238	-	115	93	-	-	-	-	-	-	-
Critical Hdwy	7.12	6.52	6.22	7.12	6.52	6.22	4.12	-	-	4.12	-	-
Critical Hdwy Stg 1	6.12	5.52	-	6.12	5.52	-	-	-	-	-	-	-
Critical Hdwy Stg 2	6.12	5.52	-	6.12	5.52	-	-	-	-	-	-	-
Follow-up Hdwy	3.518	4.018	3.318	3.518	4.018	3.318	2.218	-	-	2.218	-	-
Pot Cap-1 Maneuver	627	592	1055	612	597	907	1587	-	-	1429	-	-
Stage 1	920	822	-	776	716	-	-	-	-	-	-	-
Stage 2	765	708	-	890	818	-	-	-	-	-	-	-
Platoon blocked, %								-	-		-	-
Mov Cap-1 Maneuver	587	563	1055	556	568	907	1587	-	-	1429	-	-
Mov Cap-2 Maneuver	587	563	-	556	568	-	-	-	-	-	-	-
Stage 1	895	803	-	755	697	-	-	-	-	-	-	-
Stage 2	724	689	-	822	799	-	-	-	-	-	-	-

Approach	EB	WB	NB	SB
HCM Control Delay, s	9.7	10.9	1.6	4.1
HCM LOS	A	B		

Minor Lane/Major Mvmt	NBL	NBT	NBR	EBLn1	WBLn1	SBL	SBT	SBR
Capacity (veh/h)	1587	-	-	825	644	1429	-	-
HCM Lane V/C Ratio	0.027	-	-	0.079	0.051	0.023	-	-
HCM Control Delay (s)	7.3	-	-	9.7	10.9	7.6	-	-
HCM Lane LOS	A	-	-	A	B	A	-	-
HCM 95th %tile Q(veh)	0.1	-	-	0.3	0.2	0.1	-	-

Intersection	
Int Delay, s/veh	7.9

Movement	EBL	EBT	EBR	WBL	WBT	WBR	NBL	NBT	NBR	SBL	SBT	SBR
Lane Configurations												
Traffic Vol, veh/h	10	10	230	25	55	55	10	25	10	10	100	10
Future Vol, veh/h	10	10	230	25	55	55	10	25	10	10	100	10
Conflicting Peds, #/hr	0	0	0	0	0	0	0	0	0	0	0	0
Sign Control	Stop	Stop	Stop	Stop	Stop	Stop	Free	Free	Free	Free	Free	Free
RT Channelized	-	-	None	-	-	None	-	-	None	-	-	None
Storage Length	-	-	-	-	-	-	100	-	-	100	-	-
Veh in Median Storage, #	-	0	-	-	0	-	-	0	-	-	0	-
Grade, %	-	0	-	-	0	-	-	0	-	-	0	-
Peak Hour Factor	92	92	92	92	92	92	92	92	92	92	92	92
Heavy Vehicles, %	2	2	2	2	2	2	2	2	2	2	2	2
Mvmt Flow	11	11	250	27	60	60	11	27	11	11	109	11

Major/Minor	Minor2			Minor1			Major1			Major2		
Conflicting Flow All	252	197	115	322	197	33	120	0	0	38	0	0
Stage 1	137	137	-	55	55	-	-	-	-	-	-	-
Stage 2	115	60	-	267	142	-	-	-	-	-	-	-
Critical Hdwy	7.12	6.52	6.22	7.12	6.52	6.22	4.12	-	-	4.12	-	-
Critical Hdwy Stg 1	6.12	5.52	-	6.12	5.52	-	-	-	-	-	-	-
Critical Hdwy Stg 2	6.12	5.52	-	6.12	5.52	-	-	-	-	-	-	-
Follow-up Hdwy	3.518	4.018	3.318	3.518	4.018	3.318	2.218	-	-	2.218	-	-
Pot Cap-1 Maneuver	701	699	937	631	699	1041	1468	-	-	1572	-	-
Stage 1	866	783	-	957	849	-	-	-	-	-	-	-
Stage 2	890	845	-	738	779	-	-	-	-	-	-	-
Platoon blocked, %								-	-		-	-
Mov Cap-1 Maneuver	610	689	937	452	689	1041	1468	-	-	1572	-	-
Mov Cap-2 Maneuver	610	689	-	452	689	-	-	-	-	-	-	-
Stage 1	860	778	-	950	843	-	-	-	-	-	-	-
Stage 2	774	839	-	530	774	-	-	-	-	-	-	-

Approach	EB	WB	NB	SB
HCM Control Delay, s	10.7	11.3	1.7	0.6
HCM LOS	B	B		

Minor Lane/Major Mvmt	NBL	NBT	NBR	EBLn1	WBLn1	SBL	SBT	SBR
Capacity (veh/h)	1468	-	-	905	718	1572	-	-
HCM Lane V/C Ratio	0.007	-	-	0.3	0.204	0.007	-	-
HCM Control Delay (s)	7.5	-	-	10.7	11.3	7.3	-	-
HCM Lane LOS	A	-	-	B	B	A	-	-
HCM 95th %tile Q(veh)	0	-	-	1.3	0.8	0	-	-

Intersection	
Int Delay, s/veh	3.6

Movement	EBL	EBT	EBR	WBL	WBT	WBR	NBL	NBT	NBR	SBL	SBT	SBR
Lane Configurations												
Traffic Vol, veh/h	25	5	30	10	10	15	10	110	10	10	50	20
Future Vol, veh/h	25	5	30	10	10	15	10	110	10	10	50	20
Conflicting Peds, #/hr	0	0	0	0	0	0	0	0	0	0	0	0
Sign Control	Stop	Stop	Stop	Stop	Stop	Stop	Free	Free	Free	Free	Free	Free
RT Channelized	-	-	None	-	-	None	-	-	None	-	-	None
Storage Length	-	-	-	-	-	-	-	-	-	-	-	-
Veh in Median Storage, #	-	0	-	-	0	-	-	0	-	-	0	-
Grade, %	-	0	-	-	0	-	-	0	-	-	0	-
Peak Hour Factor	92	92	92	92	92	92	92	92	92	92	92	92
Heavy Vehicles, %	2	2	2	2	2	2	2	2	2	2	2	2
Mvmt Flow	27	5	33	11	11	16	11	120	11	11	54	22

Major/Minor	Minor2			Minor1			Major1			Major2		
Conflicting Flow All	248	240	65	254	246	126	76	0	0	131	0	0
Stage 1	87	87	-	148	148	-	-	-	-	-	-	-
Stage 2	161	153	-	106	98	-	-	-	-	-	-	-
Critical Hdwy	7.12	6.52	6.22	7.12	6.52	6.22	4.12	-	-	4.12	-	-
Critical Hdwy Stg 1	6.12	5.52	-	6.12	5.52	-	-	-	-	-	-	-
Critical Hdwy Stg 2	6.12	5.52	-	6.12	5.52	-	-	-	-	-	-	-
Follow-up Hdwy	3.518	4.018	3.318	3.518	4.018	3.318	2.218	-	-	2.218	-	-
Pot Cap-1 Maneuver	706	661	999	699	656	924	1523	-	-	1454	-	-
Stage 1	921	823	-	855	775	-	-	-	-	-	-	-
Stage 2	841	771	-	900	814	-	-	-	-	-	-	-
Platoon blocked, %								-	-		-	-
Mov Cap-1 Maneuver	676	650	999	664	646	924	1523	-	-	1454	-	-
Mov Cap-2 Maneuver	676	650	-	664	646	-	-	-	-	-	-	-
Stage 1	914	816	-	848	769	-	-	-	-	-	-	-
Stage 2	808	765	-	858	807	-	-	-	-	-	-	-

Approach	EB	WB	NB	SB
HCM Control Delay, s	9.9	10.1	0.6	0.9
HCM LOS	A	B		

Minor Lane/Major Mvmt	NBL	NBT	NBR	EBLn1	WBLn1	SBL	SBT	SBR
Capacity (veh/h)	1523	-	-	803	748	1454	-	-
HCM Lane V/C Ratio	0.007	-	-	0.081	0.051	0.007	-	-
HCM Control Delay (s)	7.4	0	-	9.9	10.1	7.5	0	-
HCM Lane LOS	A	A	-	A	B	A	A	-
HCM 95th %tile Q(veh)	0	-	-	0.3	0.2	0	-	-

Intersection	
Int Delay, s/veh	4

Movement	EBL	EBT	EBR	WBL	WBT	WBR	NBL	NBT	NBR	SBL	SBT	SBR
Lane Configurations												
Traffic Vol, veh/h	10	10	10	10	10	10	45	20	10	35	55	85
Future Vol, veh/h	10	10	10	10	10	10	45	20	10	35	55	85
Conflicting Peds, #/hr	0	0	0	0	0	0	0	0	0	0	0	0
Sign Control	Stop	Stop	Stop	Stop	Stop	Stop	Free	Free	Free	Free	Free	Free
RT Channelized	-	-	None	-	-	None	-	-	None	-	-	None
Storage Length	-	-	-	-	-	-	-	-	-	-	-	-
Veh in Median Storage, #	-	0	-	-	0	-	-	0	-	-	0	-
Grade, %	-	0	-	-	0	-	-	0	-	-	0	-
Peak Hour Factor	92	92	92	92	92	92	92	92	92	92	92	92
Heavy Vehicles, %	2	2	2	2	2	2	2	2	2	2	2	2
Mvmt Flow	11	11	11	11	11	11	49	22	11	38	60	92

Major/Minor	Minor2			Minor1			Major1			Major2		
Conflicting Flow All	319	313	106	319	354	28	152	0	0	33	0	0
Stage 1	182	182	-	126	126	-	-	-	-	-	-	-
Stage 2	137	131	-	193	228	-	-	-	-	-	-	-
Critical Hdwy	7.12	6.52	6.22	7.12	6.52	6.22	4.12	-	-	4.12	-	-
Critical Hdwy Stg 1	6.12	5.52	-	6.12	5.52	-	-	-	-	-	-	-
Critical Hdwy Stg 2	6.12	5.52	-	6.12	5.52	-	-	-	-	-	-	-
Follow-up Hdwy	3.518	4.018	3.318	3.518	4.018	3.318	2.218	-	-	2.218	-	-
Pot Cap-1 Maneuver	634	602	948	634	571	1047	1429	-	-	1579	-	-
Stage 1	820	749	-	878	792	-	-	-	-	-	-	-
Stage 2	866	788	-	809	715	-	-	-	-	-	-	-
Platoon blocked, %								-	-		-	-
Mov Cap-1 Maneuver	589	565	948	589	536	1047	1429	-	-	1579	-	-
Mov Cap-2 Maneuver	589	565	-	589	536	-	-	-	-	-	-	-
Stage 1	791	729	-	847	764	-	-	-	-	-	-	-
Stage 2	815	760	-	767	696	-	-	-	-	-	-	-

Approach	EB	WB	NB	SB
HCM Control Delay, s	10.7	10.7	4.6	1.5
HCM LOS	B	B		

Minor Lane/Major Mvmt	NBL	NBT	NBR	EBLn1	WBLn1	SBL	SBT	SBR
Capacity (veh/h)	1429	-	-	663	664	1579	-	-
HCM Lane V/C Ratio	0.034	-	-	0.049	0.049	0.024	-	-
HCM Control Delay (s)	7.6	0	-	10.7	10.7	7.3	0	-
HCM Lane LOS	A	A	-	B	B	A	A	-
HCM 95th %tile Q(veh)	0.1	-	-	0.2	0.2	0.1	-	-

Intersection	
Int Delay, s/veh	5.4

Movement	EBL	EBT	EBR	WBL	WBT	WBR	NBL	NBT	NBR	SBL	SBT	SBR
Lane Configurations												
Traffic Vol, veh/h	0	10	15	55	20	0	0	0	0	20	45	10
Future Vol, veh/h	0	10	15	55	20	0	0	0	0	20	45	10
Conflicting Peds, #/hr	0	0	0	0	0	0	0	0	0	0	0	0
Sign Control	Stop	Stop	Stop	Stop	Stop	Stop	Free	Free	Free	Free	Free	Free
RT Channelized	-	-	None	-	-	None	-	-	None	-	-	None
Storage Length	-	-	-	25	-	-	-	-	-	-	-	-
Veh in Median Storage, #	-	0	-	-	0	-	-	0	-	-	0	-
Grade, %	-	0	-	-	0	-	-	0	-	-	0	-
Peak Hour Factor	92	92	92	92	92	92	92	92	92	92	92	92
Heavy Vehicles, %	2	2	2	2	2	2	2	2	2	2	2	2
Mvmt Flow	0	11	16	60	22	0	0	0	0	22	49	11

Major/Minor	Minor2			Minor1					Major2		
Conflicting Flow All	-	99	55	112	104	-			0	0	0
Stage 1	-	99	-	0	0	-			-	-	-
Stage 2	-	0	-	112	104	-			-	-	-
Critical Hdwy	-	6.52	6.22	7.12	6.52	-			4.12	-	-
Critical Hdwy Stg 1	-	5.52	-	-	-	-			-	-	-
Critical Hdwy Stg 2	-	-	-	6.12	5.52	-			-	-	-
Follow-up Hdwy	-	4.018	3.318	3.518	4.018	-			2.218	-	-
Pot Cap-1 Maneuver	0	791	1012	866	786	0			-	-	-
Stage 1	0	813	-	-	-	0			-	-	-
Stage 2	0	-	-	893	809	0			-	-	-
Platoon blocked, %										-	-
Mov Cap-1 Maneuver	-	791	1012	843	786	-			-	-	-
Mov Cap-2 Maneuver	-	791	-	843	786	-			-	-	-
Stage 1	-	813	-	-	-	-			-	-	-
Stage 2	-	-	-	867	809	-			-	-	-

Approach	EB	WB	SB
HCM Control Delay, s	9.1	9.6	
HCM LOS	A	A	

Minor Lane/Major Mvmt	EBLn1	WBLn1	WBLn2	SBL	SBT	SBR
Capacity (veh/h)	910	843	786	-	-	-
HCM Lane V/C Ratio	0.03	0.071	0.028	-	-	-
HCM Control Delay (s)	9.1	9.6	9.7	-	-	-
HCM Lane LOS	A	A	A	-	-	-
HCM 95th %tile Q(veh)	0.1	0.2	0.1	-	-	-

Intersection	
Int Delay, s/veh	4.4

Movement	EBL	EBT	EBR	WBL	WBT	WBR	NBL	NBT	NBR	SBL	SBT	SBR
Lane Configurations												
Traffic Vol, veh/h	0	15	50	35	10	0	0	0	0	45	80	10
Future Vol, veh/h	0	15	50	35	10	0	0	0	0	45	80	10
Conflicting Peds, #/hr	0	0	0	0	0	0	0	0	0	0	0	0
Sign Control	Stop	Stop	Stop	Stop	Stop	Stop	Free	Free	Free	Free	Free	Free
RT Channelized	-	-	None	-	-	None	-	-	None	-	-	None
Storage Length	-	-	-	25	-	-	-	-	-	-	-	-
Veh in Median Storage, #	-	0	-	-	0	-	-	0	-	-	0	-
Grade, %	-	0	-	-	0	-	-	0	-	-	0	-
Peak Hour Factor	92	92	92	92	92	92	92	92	92	92	92	92
Heavy Vehicles, %	2	2	2	2	2	2	2	2	2	2	2	2
Mvmt Flow	0	16	54	38	11	0	0	0	0	49	87	11

Major/Minor	Minor2			Minor1					Major2		
Conflicting Flow All	-	191	93	226	196	-			0	0	0
Stage 1	-	191	-	0	0	-			-	-	-
Stage 2	-	0	-	226	196	-			-	-	-
Critical Hdwy	-	6.52	6.22	7.12	6.52	-			4.12	-	-
Critical Hdwy Stg 1	-	5.52	-	-	-	-			-	-	-
Critical Hdwy Stg 2	-	-	-	6.12	5.52	-			-	-	-
Follow-up Hdwy	-	4.018	3.318	3.518	4.018	-			2.218	-	-
Pot Cap-1 Maneuver	0	704	964	729	699	0			-	-	-
Stage 1	0	742	-	-	-	0			-	-	-
Stage 2	0	-	-	777	739	0			-	-	-
Platoon blocked, %										-	-
Mov Cap-1 Maneuver	-	704	964	676	699	-			-	-	-
Mov Cap-2 Maneuver	-	704	-	676	699	-			-	-	-
Stage 1	-	742	-	-	-	-			-	-	-
Stage 2	-	-	-	717	739	-			-	-	-

Approach	EB	WB	SB
HCM Control Delay, s	9.4	10.5	
HCM LOS	A	B	

Minor Lane/Major Mvmt	EBLn1	WBLn1	WBLn2	SBL	SBT	SBR
Capacity (veh/h)	888	676	699	-	-	-
HCM Lane V/C Ratio	0.08	0.056	0.016	-	-	-
HCM Control Delay (s)	9.4	10.6	10.2	-	-	-
HCM Lane LOS	A	B	B	-	-	-
HCM 95th %tile Q(veh)	0.3	0.2	0	-	-	-

Intersection	
Int Delay, s/veh	4.7

Movement	EBL	EBT	EBR	WBL	WBT	WBR	NBL	NBT	NBR	SBL	SBT	SBR
Lane Configurations												
Traffic Vol, veh/h	10	20	0	0	55	50	30	100	35	0	0	0
Future Vol, veh/h	10	20	0	0	55	50	30	100	35	0	0	0
Conflicting Peds, #/hr	0	0	0	0	0	0	0	0	0	0	0	0
Sign Control	Stop	Stop	Stop	Stop	Stop	Stop	Free	Free	Free	Free	Free	Free
RT Channelized	-	-	None	-	-	None	-	-	None	-	-	None
Storage Length	25	-	-	-	-	-	-	-	-	-	-	-
Veh in Median Storage, #	-	0	-	-	0	-	-	0	-	1081	745	408	-
Grade, %	-	0	-	-	0	-	-	0	-	-	0	-
Peak Hour Factor	92	92	92	92	92	92	92	92	92	92	92	92
Heavy Vehicles, %	2	2	2	2	2	2	2	2	2	2	2	2
Mvmt Flow	11	22	0	0	60	54	33	109	38	0	0	0

Major/Minor	Minor2			Minor1			Major1		
Conflicting Flow All	251	213	-	-	194	128	0	0	0
Stage 1	0	0	-	-	194	-	-	-	-
Stage 2	251	213	-	-	0	-	-	-	-
Critical Hdwy	7.12	6.52	-	-	6.52	6.22	4.12	-	-
Critical Hdwy Stg 1	-	-	-	-	5.52	-	-	-	-
Critical Hdwy Stg 2	6.12	5.52	-	-	-	-	-	-	-
Follow-up Hdwy	3.518	4.018	-	-	4.018	3.318	2.218	-	-
Pot Cap-1 Maneuver	702	684	0	0	701	922	-	-	-
Stage 1	-	-	0	0	740	-	-	-	-
Stage 2	753	726	0	0	-	-	-	-	-
Platoon blocked, %								-	-
Mov Cap-1 Maneuver	618	684	-	-	701	922	-	-	-
Mov Cap-2 Maneuver	618	684	-	-	701	-	-	-	-
Stage 1	-	-	-	-	740	-	-	-	-
Stage 2	651	726	-	-	-	-	-	-	-

Approach	EB	WB	NB
HCM Control Delay, s	10.6	10.3	
HCM LOS	B	B	

Minor Lane/Major Mvmt	NBL	NBT	NBR	EBLn1	EBLn2	WBLn1
Capacity (veh/h)	-	-	-	618	684	791
HCM Lane V/C Ratio	-	-	-	0.018	0.032	0.144
HCM Control Delay (s)	-	-	-	10.9	10.4	10.3
HCM Lane LOS	-	-	-	B	B	B
HCM 95th %tile Q(veh)	-	-	-	0.1	0.1	0.5

Intersection	
Int Delay, s/veh	4.5

Movement	EBL	EBT	EBR	WBL	WBT	WBR	NBL	NBT	NBR	SBL	SBT	SBR
Lane Configurations												
Traffic Vol, veh/h	10	45	0	0	35	35	30	45	75	0	0	0
Future Vol, veh/h	10	45	0	0	35	35	30	45	75	0	0	0
Conflicting Peds, #/hr	0	0	0	0	0	0	0	0	0	0	0	0
Sign Control	Stop	Stop	Stop	Stop	Stop	Stop	Free	Free	Free	Free	Free	Free
RT Channelized	-	-	None	-	-	None	-	-	None	-	-	None
Storage Length	25	-	-	-	-	-	-	-	-	-	-	-
Veh in Median Storage, #	-	0	-	-	0	-	-	0	-	1081	745	408	-
Grade, %	-	0	-	-	0	-	-	0	-	-	0	-
Peak Hour Factor	92	92	92	92	92	92	92	92	92	92	92	92
Heavy Vehicles, %	2	2	2	2	2	2	2	2	2	2	2	2
Mvmt Flow	11	49	0	0	38	38	33	49	82	0	0	0

Major/Minor	Minor2			Minor1			Major1		
Conflicting Flow All	194	197	-	-	156	90	0	0	0
Stage 1	0	0	-	-	156	-	-	-	-
Stage 2	194	197	-	-	0	-	-	-	-
Critical Hdwy	7.12	6.52	-	-	6.52	6.22	4.12	-	-
Critical Hdwy Stg 1	-	-	-	-	5.52	-	-	-	-
Critical Hdwy Stg 2	6.12	5.52	-	-	-	-	-	-	-
Follow-up Hdwy	3.518	4.018	-	-	4.018	3.318	2.218	-	-
Pot Cap-1 Maneuver	765	699	0	0	736	968	-	-	-
Stage 1	-	-	0	0	769	-	-	-	-
Stage 2	808	738	0	0	-	-	-	-	-
Platoon blocked, %								-	-
Mov Cap-1 Maneuver	706	699	-	-	736	968	-	-	-
Mov Cap-2 Maneuver	706	699	-	-	736	-	-	-	-
Stage 1	-	-	-	-	769	-	-	-	-
Stage 2	738	738	-	-	-	-	-	-	-

Approach	EB	WB	NB
HCM Control Delay, s	10.4	9.7	
HCM LOS	B	A	

Minor Lane/Major Mvmt	NBL	NBT	NBR	EBLn1	EBLn2	WBLn1
Capacity (veh/h)	-	-	-	706	699	836
HCM Lane V/C Ratio	-	-	-	0.015	0.07	0.091
HCM Control Delay (s)	-	-	-	10.2	10.5	9.7
HCM Lane LOS	-	-	-	B	B	A
HCM 95th %tile Q(veh)	-	-	-	0	0.2	0.3

Intersection	
Int Delay, s/veh	3.5

Movement	EBL	EBT	EBR	WBL	WBT	WBR	NBL	NBT	NBR	SBL	SBT	SBR
Lane Configurations												
Traffic Vol, veh/h	10	1	7	15	3	5	5	20	12	2	31	9
Future Vol, veh/h	10	1	7	15	3	5	5	20	12	2	31	9
Conflicting Peds, #/hr	0	0	0	0	0	0	0	0	0	0	0	0
Sign Control	Stop	Stop	Stop	Stop	Stop	Stop	Free	Free	Free	Free	Free	Free
RT Channelized	-	-	None	-	-	None	-	-	None	-	-	None
Storage Length	-	-	-	-	-	-	-	-	-	-	-	-
Veh in Median Storage, #	-	0	-	-	0	-	-	0	-	-	0	-
Grade, %	-	0	-	-	0	-	-	0	-	-	0	-
Peak Hour Factor	62	25	88	75	38	62	62	56	75	25	48	75
Heavy Vehicles, %	2	2	2	2	2	2	2	2	2	2	2	2
Mvmt Flow	16	4	8	20	8	8	8	36	16	8	65	12

Major/Minor	Minor2			Minor1			Major1			Major2		
Conflicting Flow All	155	155	71	153	153	44	77	0	0	52	0	0
Stage 1	87	87	-	60	60	-	-	-	-	-	-	-
Stage 2	68	68	-	93	93	-	-	-	-	-	-	-
Critical Hdwy	7.12	6.52	6.22	7.12	6.52	6.22	4.12	-	-	4.12	-	-
Critical Hdwy Stg 1	6.12	5.52	-	6.12	5.52	-	-	-	-	-	-	-
Critical Hdwy Stg 2	6.12	5.52	-	6.12	5.52	-	-	-	-	-	-	-
Follow-up Hdwy	3.518	4.018	3.318	3.518	4.018	3.318	2.218	-	-	2.218	-	-
Pot Cap-1 Maneuver	812	737	991	814	739	1026	1522	-	-	1554	-	-
Stage 1	921	823	-	951	845	-	-	-	-	-	-	-
Stage 2	942	838	-	914	818	-	-	-	-	-	-	-
Platoon blocked, %								-	-		-	-
Mov Cap-1 Maneuver	793	730	991	798	732	1026	1522	-	-	1554	-	-
Mov Cap-2 Maneuver	793	730	-	798	732	-	-	-	-	-	-	-
Stage 1	916	819	-	946	841	-	-	-	-	-	-	-
Stage 2	921	834	-	898	814	-	-	-	-	-	-	-

Approach	EB	WB	NB	SB
HCM Control Delay, s	9.5	9.6	1	0.7
HCM LOS	A	A		

Minor Lane/Major Mvmt	NBL	NBT	NBR	EBLn1	WBLn1	SBL	SBT	SBR
Capacity (veh/h)	1522	-	-	830	823	1554	-	-
HCM Lane V/C Ratio	0.005	-	-	0.034	0.044	0.005	-	-
HCM Control Delay (s)	7.4	0	-	9.5	9.6	7.3	0	-
HCM Lane LOS	A	A	-	A	A	A	A	-
HCM 95th %tile Q(veh)	0	-	-	0.1	0.1	0	-	-

Intersection	
Int Delay, s/veh	5.2

Movement	EBL	EBT	EBR	WBL	WBT	WBR	NBL	NBT	NBR	SBL	SBT	SBR
Lane Configurations												
Traffic Vol, veh/h	39	11	9	15	4	6	15	41	22	2	18	4
Future Vol, veh/h	39	11	9	15	4	6	15	41	22	2	18	4
Conflicting Peds, #/hr	0	0	0	0	0	0	0	0	0	0	0	0
Sign Control	Stop	Stop	Stop	Stop	Stop	Stop	Free	Free	Free	Free	Free	Free
RT Channelized	-	-	None	-	-	None	-	-	None	-	-	None
Storage Length	-	-	-	-	-	-	-	-	-	-	-	-
Veh in Median Storage, #	-	0	-	-	0	-	-	0	-	-	0	-
Grade, %	-	0	-	-	0	-	-	0	-	-	0	-
Peak Hour Factor	65	69	56	75	33	75	62	58	50	25	75	50
Heavy Vehicles, %	2	2	2	2	2	2	2	2	2	2	2	2
Mvmt Flow	60	16	16	20	12	8	24	71	44	8	24	8

Major/Minor	Minor2			Minor1			Major1			Major2		
Conflicting Flow All	195	207	28	201	189	93	32	0	0	115	0	0
Stage 1	44	44	-	141	141	-	-	-	-	-	-	-
Stage 2	151	163	-	60	48	-	-	-	-	-	-	-
Critical Hdwy	7.12	6.52	6.22	7.12	6.52	6.22	4.12	-	-	4.12	-	-
Critical Hdwy Stg 1	6.12	5.52	-	6.12	5.52	-	-	-	-	-	-	-
Critical Hdwy Stg 2	6.12	5.52	-	6.12	5.52	-	-	-	-	-	-	-
Follow-up Hdwy	3.518	4.018	3.318	3.518	4.018	3.318	2.218	-	-	2.218	-	-
Pot Cap-1 Maneuver	764	690	1047	757	706	964	1580	-	-	1474	-	-
Stage 1	970	858	-	862	780	-	-	-	-	-	-	-
Stage 2	851	763	-	951	855	-	-	-	-	-	-	-
Platoon blocked, %								-	-		-	-
Mov Cap-1 Maneuver	735	675	1047	720	690	964	1580	-	-	1474	-	-
Mov Cap-2 Maneuver	735	675	-	720	690	-	-	-	-	-	-	-
Stage 1	954	853	-	848	768	-	-	-	-	-	-	-
Stage 2	817	751	-	913	850	-	-	-	-	-	-	-

Approach	EB	WB	NB	SB
HCM Control Delay, s	10.4	10.1	1.3	1.5
HCM LOS	B	B		

Minor Lane/Major Mvmt	NBL	NBT	NBR	EBLn1	WBLn1	SBL	SBT	SBR
Capacity (veh/h)	1580	-	-	763	748	1474	-	-
HCM Lane V/C Ratio	0.015	-	-	0.121	0.054	0.005	-	-
HCM Control Delay (s)	7.3	0	-	10.4	10.1	7.5	0	-
HCM Lane LOS	A	A	-	B	B	A	A	-
HCM 95th %tile Q(veh)	0	-	-	0.4	0.2	0	-	-

Intersection	
Int Delay, s/veh	4.5

Movement	EBL	EBT	EBR	WBL	WBT	WBR	NBL	NBT	NBR	SBL	SBT	SBR
Lane Configurations												
Traffic Vol, veh/h	15	10	45	30	20	35	15	155	20	80	200	15
Future Vol, veh/h	15	10	45	30	20	35	15	155	20	80	200	15
Conflicting Peds, #/hr	0	0	0	0	0	0	0	0	0	0	0	0
Sign Control	Stop	Stop	Stop	Stop	Stop	Stop	Free	Free	Free	Free	Free	Free
RT Channelized	-	-	None	-	-	None	-	-	None	-	-	None
Storage Length	-	-	-	-	-	-	-	-	-	-	-	-
Veh in Median Storage, #	-	0	-	-	0	-	-	0	-	-	0	-
Grade, %	-	0	-	-	0	-	-	0	-	-	0	-
Peak Hour Factor	92	92	92	92	92	92	92	92	92	92	92	92
Heavy Vehicles, %	2	2	2	2	2	2	2	2	2	2	2	2
Mvmt Flow	16	11	49	33	22	38	16	168	22	87	217	16

Major/Minor	Minor2			Minor1			Major1			Major2		
Conflicting Flow All	640	621	225	640	618	179	233	0	0	190	0	0
Stage 1	399	399	-	211	211	-	-	-	-	-	-	-
Stage 2	241	222	-	429	407	-	-	-	-	-	-	-
Critical Hdwy	7.12	6.52	6.22	7.12	6.52	6.22	4.12	-	-	4.12	-	-
Critical Hdwy Stg 1	6.12	5.52	-	6.12	5.52	-	-	-	-	-	-	-
Critical Hdwy Stg 2	6.12	5.52	-	6.12	5.52	-	-	-	-	-	-	-
Follow-up Hdwy	3.518	4.018	3.318	3.518	4.018	3.318	2.218	-	-	2.218	-	-
Pot Cap-1 Maneuver	388	403	814	388	405	864	1335	-	-	1384	-	-
Stage 1	627	602	-	791	728	-	-	-	-	-	-	-
Stage 2	762	720	-	604	597	-	-	-	-	-	-	-
Platoon blocked, %								-	-		-	-
Mov Cap-1 Maneuver	332	369	814	334	371	864	1335	-	-	1384	-	-
Mov Cap-2 Maneuver	332	369	-	334	371	-	-	-	-	-	-	-
Stage 1	619	559	-	781	719	-	-	-	-	-	-	-
Stage 2	697	711	-	517	554	-	-	-	-	-	-	-

Approach	EB	WB	NB	SB
HCM Control Delay, s	12.6	14.8	0.6	2.1
HCM LOS	B	B		

Minor Lane/Major Mvmt	NBL	NBT	NBR	EBLn1	WBLn1	SBL	SBT	SBR
Capacity (veh/h)	1335	-	-	549	461	1384	-	-
HCM Lane V/C Ratio	0.012	-	-	0.139	0.2	0.063	-	-
HCM Control Delay (s)	7.7	0	-	12.6	14.8	7.8	0	-
HCM Lane LOS	A	A	-	B	B	A	A	-
HCM 95th %tile Q(veh)	0	-	-	0.5	0.7	0.2	-	-

Intersection	
Int Delay, s/veh	6.2

Movement	EBL	EBT	EBR	WBL	WBT	WBR	NBL	NBT	NBR	SBL	SBT	SBR
Lane Configurations												
Traffic Vol, veh/h	45	25	30	25	15	120	45	130	35	35	145	15
Future Vol, veh/h	45	25	30	25	15	120	45	130	35	35	145	15
Conflicting Peds, #/hr	0	0	0	0	0	0	0	0	0	0	0	0
Sign Control	Stop	Stop	Stop	Stop	Stop	Stop	Free	Free	Free	Free	Free	Free
RT Channelized	-	-	None	-	-	None	-	-	None	-	-	None
Storage Length	-	-	-	-	-	-	-	-	-	-	-	-
Veh in Median Storage, #	-	0	-	-	0	-	-	0	-	-	0	-
Grade, %	-	0	-	-	0	-	-	0	-	-	0	-
Peak Hour Factor	92	92	92	92	92	92	92	92	92	92	92	92
Heavy Vehicles, %	2	2	2	2	2	2	2	2	2	2	2	2
Mvmt Flow	49	27	33	27	16	130	49	141	38	38	158	16

Major/Minor	Minor2			Minor1			Major1			Major2		
Conflicting Flow All	573	519	166	530	508	160	174	0	0	179	0	0
Stage 1	242	242	-	258	258	-	-	-	-	-	-	-
Stage 2	331	277	-	272	250	-	-	-	-	-	-	-
Critical Hdwy	7.12	6.52	6.22	7.12	6.52	6.22	4.12	-	-	4.12	-	-
Critical Hdwy Stg 1	6.12	5.52	-	6.12	5.52	-	-	-	-	-	-	-
Critical Hdwy Stg 2	6.12	5.52	-	6.12	5.52	-	-	-	-	-	-	-
Follow-up Hdwy	3.518	4.018	3.318	3.518	4.018	3.318	2.218	-	-	2.218	-	-
Pot Cap-1 Maneuver	430	461	878	460	468	885	1403	-	-	1397	-	-
Stage 1	762	705	-	747	694	-	-	-	-	-	-	-
Stage 2	682	681	-	734	700	-	-	-	-	-	-	-
Platoon blocked, %								-	-		-	-
Mov Cap-1 Maneuver	338	430	878	400	436	885	1403	-	-	1397	-	-
Mov Cap-2 Maneuver	338	430	-	400	436	-	-	-	-	-	-	-
Stage 1	732	684	-	718	667	-	-	-	-	-	-	-
Stage 2	545	654	-	658	679	-	-	-	-	-	-	-

Approach	EB	WB	NB	SB
HCM Control Delay, s	15.7	12	1.6	1.4
HCM LOS	C	B		

Minor Lane/Major Mvmt	NBL	NBT	NBR	EBLn1	WBLn1	SBL	SBT	SBR
Capacity (veh/h)	1403	-	-	444	688	1397	-	-
HCM Lane V/C Ratio	0.035	-	-	0.245	0.253	0.027	-	-
HCM Control Delay (s)	7.7	0	-	15.7	12	7.6	0	-
HCM Lane LOS	A	A	-	C	B	A	A	-
HCM 95th %tile Q(veh)	0.1	-	-	1	1	0.1	-	-

Intersection	
Int Delay, s/veh	7.2

Movement	EBL	EBT	EBR	WBL	WBT	WBR	NBL	NBT	NBR	SBL	SBT	SBR
Lane Configurations												
Traffic Vol, veh/h	10	100	15	20	25	10	15	10	120	95	15	10
Future Vol, veh/h	10	100	15	20	25	10	15	10	120	95	15	10
Conflicting Peds, #/hr	0	0	0	0	0	0	0	0	0	0	0	0
Sign Control	Free	Free	Free	Free	Free	Free	Stop	Stop	Stop	Stop	Stop	Stop
RT Channelized	-	-	None	-	-	None	-	-	None	-	-	None
Storage Length	-	-	-	-	-	-	-	-	-	-	-	-
Veh in Median Storage, #	-	0	-	-	0	-	-	0	-	-	0	-
Grade, %	-	0	-	-	0	-	-	0	-	-	0	-
Peak Hour Factor	92	92	92	92	92	92	92	92	92	92	92	92
Heavy Vehicles, %	2	2	2	2	2	2	2	2	2	2	2	2
Mvmt Flow	11	109	16	22	27	11	16	11	130	103	16	11

Major/Minor	Major1			Major2			Minor1			Minor2		
Conflicting Flow All	38	0	0	125	0	0	229	221	117	287	224	33
Stage 1	-	-	-	-	-	-	139	139	-	77	77	-
Stage 2	-	-	-	-	-	-	90	82	-	210	147	-
Critical Hdwy	4.12	-	-	4.12	-	-	7.12	6.52	6.22	7.12	6.52	6.22
Critical Hdwy Stg 1	-	-	-	-	-	-	6.12	5.52	-	6.12	5.52	-
Critical Hdwy Stg 2	-	-	-	-	-	-	6.12	5.52	-	6.12	5.52	-
Follow-up Hdwy	2.218	-	-	2.218	-	-	3.518	4.018	3.318	3.518	4.018	3.318
Pot Cap-1 Maneuver	1572	-	-	1462	-	-	726	678	935	665	675	1041
Stage 1	-	-	-	-	-	-	864	782	-	932	831	-
Stage 2	-	-	-	-	-	-	917	827	-	792	775	-
Platoon blocked, %		-	-		-	-						
Mov Cap-1 Maneuver	1572	-	-	1462	-	-	693	662	935	555	659	1041
Mov Cap-2 Maneuver	-	-	-	-	-	-	693	662	-	555	659	-
Stage 1	-	-	-	-	-	-	857	776	-	925	819	-
Stage 2	-	-	-	-	-	-	876	815	-	667	769	-

Approach	EB	WB	NB	SB
HCM Control Delay, s	0.6	2.7	10	12.8
HCM LOS			B	B

Minor Lane/Major Mvmt	NBLn1	EBL	EBT	EBR	WBL	WBT	WBR	SBLn1
Capacity (veh/h)	878	1572	-	-	1462	-	-	590
HCM Lane V/C Ratio	0.18	0.007	-	-	0.015	-	-	0.221
HCM Control Delay (s)	10	7.3	0	-	7.5	0	-	12.8
HCM Lane LOS	B	A	A	-	A	A	-	B
HCM 95th %tile Q(veh)	0.7	0	-	-	0	-	-	0.8

Intersection	
Int Delay, s/veh	4.7

Movement	EBL	EBT	EBR	WBL	WBT	WBR	NBL	NBT	NBR	SBL	SBT	SBR
Lane Configurations												
Traffic Vol, veh/h	15	35	15	100	110	40	15	10	25	20	10	10
Future Vol, veh/h	15	35	15	100	110	40	15	10	25	20	10	10
Conflicting Peds, #/hr	0	0	0	0	0	0	0	0	0	0	0	0
Sign Control	Free	Free	Free	Free	Free	Free	Stop	Stop	Stop	Stop	Stop	Stop
RT Channelized	-	-	None	-	-	None	-	-	None	-	-	None
Storage Length	-	-	-	-	-	-	-	-	-	-	-	-
Veh in Median Storage, #	-	0	-	-	0	-	-	0	-	-	0	-
Grade, %	-	0	-	-	0	-	-	0	-	-	0	-
Peak Hour Factor	92	92	92	92	92	92	92	92	92	92	92	92
Heavy Vehicles, %	2	2	2	2	2	2	2	2	2	2	2	2
Mvmt Flow	16	38	16	109	120	43	16	11	27	22	11	11

Major/Minor	Major1			Major2			Minor1			Minor2		
Conflicting Flow All	163	0	0	54	0	0	449	459	46	457	446	142
Stage 1	-	-	-	-	-	-	78	78	-	360	360	-
Stage 2	-	-	-	-	-	-	371	381	-	97	86	-
Critical Hdwy	4.12	-	-	4.12	-	-	7.12	6.52	6.22	7.12	6.52	6.22
Critical Hdwy Stg 1	-	-	-	-	-	-	6.12	5.52	-	6.12	5.52	-
Critical Hdwy Stg 2	-	-	-	-	-	-	6.12	5.52	-	6.12	5.52	-
Follow-up Hdwy	2.218	-	-	2.218	-	-	3.518	4.018	3.318	3.518	4.018	3.318
Pot Cap-1 Maneuver	1416	-	-	1551	-	-	520	499	1023	514	507	906
Stage 1	-	-	-	-	-	-	931	830	-	658	626	-
Stage 2	-	-	-	-	-	-	649	613	-	910	824	-
Platoon blocked, %		-	-		-	-						
Mov Cap-1 Maneuver	1416	-	-	1551	-	-	470	455	1023	458	462	906
Mov Cap-2 Maneuver	-	-	-	-	-	-	470	455	-	458	462	-
Stage 1	-	-	-	-	-	-	920	820	-	650	577	-
Stage 2	-	-	-	-	-	-	580	565	-	864	814	-

Approach	EB	WB	NB	SB
HCM Control Delay, s	1.7	3	11.2	12.5
HCM LOS			B	B

Minor Lane/Major Mvmt	NBLn1	EBL	EBT	EBR	WBL	WBT	WBR	SBLn1
Capacity (veh/h)	638	1416	-	-	1551	-	-	524
HCM Lane V/C Ratio	0.085	0.012	-	-	0.07	-	-	0.083
HCM Control Delay (s)	11.2	7.6	0	-	7.5	0	-	12.5
HCM Lane LOS	B	A	A	-	A	A	-	B
HCM 95th %tile Q(veh)	0.3	0	-	-	0.2	-	-	0.3

Intersection	
Int Delay, s/veh	3.6

Movement	EBL	EBR	NBL	NBT	SBT	SBR
Lane Configurations						
Traffic Vol, veh/h	10	65	155	140	175	15
Future Vol, veh/h	10	65	155	140	175	15
Conflicting Peds, #/hr	0	0	0	0	0	0
Sign Control	Stop	Stop	Free	Free	Free	Free
RT Channelized	-	None	-	None	-	None
Storage Length	0	-	150	-	-	-
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	11	71	168	152	190	16

Major/Minor	Minor2		Major1		Major2	
Conflicting Flow All	686	198	206	0	-	0
Stage 1	198	-	-	-	-	-
Stage 2	488	-	-	-	-	-
Critical Hdwy	6.42	6.22	4.12	-	-	-
Critical Hdwy Stg 1	5.42	-	-	-	-	-
Critical Hdwy Stg 2	5.42	-	-	-	-	-
Follow-up Hdwy	3.518	3.318	2.218	-	-	-
Pot Cap-1 Maneuver	413	843	1365	-	-	-
Stage 1	835	-	-	-	-	-
Stage 2	617	-	-	-	-	-
Platoon blocked, %				-	-	-
Mov Cap-1 Maneuver	362	843	1365	-	-	-
Mov Cap-2 Maneuver	362	-	-	-	-	-
Stage 1	732	-	-	-	-	-
Stage 2	617	-	-	-	-	-

Approach	EB	NB	SB
HCM Control Delay, s	10.7	4.2	0
HCM LOS	B		

Minor Lane/Major Mvmt	NBL	NBT	EBLn1	SBT	SBR
Capacity (veh/h)	1365	-	716	-	-
HCM Lane V/C Ratio	0.123	-	0.114	-	-
HCM Control Delay (s)	8	-	10.7	-	-
HCM Lane LOS	A	-	B	-	-
HCM 95th %tile Q(veh)	0.4	-	0.4	-	-

Intersection	
Int Delay, s/veh	4.1

Movement	EBL	EBR	NBL	NBT	SBT	SBR
Lane Configurations						
Traffic Vol, veh/h	15	165	40	170	120	10
Future Vol, veh/h	15	165	40	170	120	10
Conflicting Peds, #/hr	0	0	0	0	0	0
Sign Control	Stop	Stop	Free	Free	Free	Free
RT Channelized	-	None	-	None	-	None
Storage Length	0	-	150	-	-	-
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	16	179	43	185	130	11

Major/Minor	Minor2		Major1		Major2	
Conflicting Flow All	407	136	141	0	-	0
Stage 1	136	-	-	-	-	-
Stage 2	271	-	-	-	-	-
Critical Hdwy	6.42	6.22	4.12	-	-	-
Critical Hdwy Stg 1	5.42	-	-	-	-	-
Critical Hdwy Stg 2	5.42	-	-	-	-	-
Follow-up Hdwy	3.518	3.318	2.218	-	-	-
Pot Cap-1 Maneuver	600	913	1442	-	-	-
Stage 1	890	-	-	-	-	-
Stage 2	775	-	-	-	-	-
Platoon blocked, %				-	-	-
Mov Cap-1 Maneuver	582	913	1442	-	-	-
Mov Cap-2 Maneuver	582	-	-	-	-	-
Stage 1	863	-	-	-	-	-
Stage 2	775	-	-	-	-	-

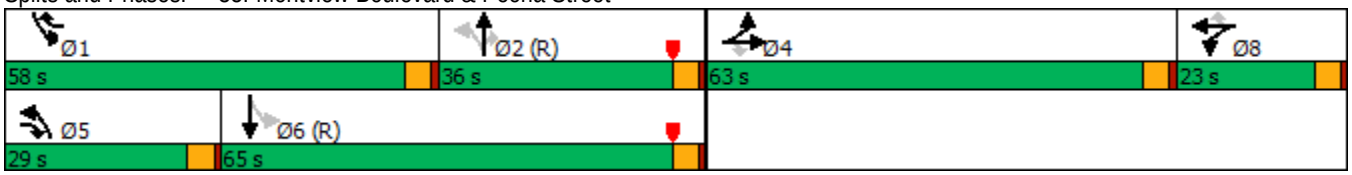
Approach	EB	NB	SB
HCM Control Delay, s	10.3	1.4	0
HCM LOS	B		

Minor Lane/Major Mvmt	NBL	NBT	EBLn1	SBT	SBR
Capacity (veh/h)	1442	-	872	-	-
HCM Lane V/C Ratio	0.03	-	0.224	-	-
HCM Control Delay (s)	7.6	-	10.3	-	-
HCM Lane LOS	A	-	B	-	-
HCM 95th %tile Q(veh)	0.1	-	0.9	-	-

Lane Group	EBL	EBT	EBR	WBL	WBT	WBR	NBL	NBT	NBR	SBL	SBT
Lane Configurations											
Traffic Volume (vph)	173	393	261	81	182	38	200	618	186	424	873
Future Volume (vph)	173	393	261	81	182	38	200	618	186	424	873
Turn Type	Split	NA	pm+ov	Split	NA	pm+ov	pm+pt	NA	Perm	pm+pt	NA
Protected Phases	4	4	5	8	8	1	5	2		1	6
Permitted Phases			4			8	2		2	6	
Detector Phase	4	4	5	8	8	1	5	2	2	1	6
Switch Phase											
Minimum Initial (s)	5.0	5.0	5.0	5.0	5.0	5.0	5.0	5.0	5.0	5.0	5.0
Minimum Split (s)	22.5	22.5	9.5	22.5	22.5	9.5	9.5	22.5	22.5	9.5	22.5
Total Split (s)	63.0	63.0	29.0	23.0	23.0	58.0	29.0	36.0	36.0	58.0	65.0
Total Split (%)	35.0%	35.0%	16.1%	12.8%	12.8%	32.2%	16.1%	20.0%	20.0%	32.2%	36.1%
Yellow Time (s)	3.5	3.5	3.5	3.5	3.5	3.5	3.5	3.5	3.5	3.5	3.5
All-Red Time (s)	1.0	1.0	1.0	1.0	1.0	1.0	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	0.0	0.0
Total Lost Time (s)	4.5	4.5	4.5	4.5	4.5	4.5	4.5	4.5	4.5	4.5	4.5
Lead/Lag			Lead			Lead	Lead	Lag	Lag	Lead	Lag
Lead-Lag Optimize?			Yes			Yes	Yes	Yes	Yes	Yes	Yes
Recall Mode	None	None	None	None	None	None	None	C-Max	C-Max	None	C-Max
Act Effct Green (s)	52.5	52.5	71.3	17.0	17.0	68.4	64.4	45.6	45.6	97.0	73.7
Actuated g/C Ratio	0.29	0.29	0.40	0.09	0.09	0.38	0.36	0.25	0.25	0.54	0.41
v/c Ratio	0.36	0.91	0.44	0.62	0.76	0.08	0.77	0.52	0.36	0.85	0.60
Control Delay	51.7	83.3	18.3	96.2	95.3	7.2	55.3	62.3	9.2	48.8	44.2
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	51.7	83.3	18.3	96.2	95.3	7.2	55.3	62.3	9.2	48.8	44.2
LOS	D	F	B	F	F	A	E	E	A	D	D
Approach Delay		56.8			84.3			51.1			45.6
Approach LOS		E			F			D			D

Intersection Summary	
Cycle Length: 180	
Actuated Cycle Length: 180	
Offset: 0 (0%), Referenced to phase 2:NBTL and 6:SBTL, Start of Yellow	
Natural Cycle: 110	
Control Type: Actuated-Coordinated	
Maximum v/c Ratio: 0.91	
Intersection Signal Delay: 53.2	Intersection LOS: D
Intersection Capacity Utilization 76.1%	ICU Level of Service D
Analysis Period (min) 15	

Splits and Phases: 35: Montview Boulevard & Peoria Street



Movement	EBL	EBT	EBR	WBL	WBT	WBR	NBL	NBT	NBR	SBL	SBT	SBR
Lane Configurations												
Traffic Volume (veh/h)	173	393	261	81	182	38	200	618	186	424	873	181
Future Volume (veh/h)	173	393	261	81	182	38	200	618	186	424	873	181
Initial Q (Qb), veh	0	0	0	0	0	0	0	0	0	0	0	0
Ped-Bike Adj(A_pbT)	1.00		1.00	1.00		1.00	1.00		1.00	1.00		1.00
Parking Bus, Adj	1.00	1.00	1.00	1.00	1.00	1.00	1.00	1.00	1.00	1.00	1.00	1.00
Work Zone On Approach		No			No			No			No	
Adj Sat Flow, veh/h/ln	1870	1870	1870	1870	1870	1870	1870	1870	1870	1870	1870	1870
Adj Flow Rate, veh/h	197	447	297	104	233	49	215	665	200	493	1015	210
Peak Hour Factor	0.88	0.88	0.88	0.78	0.78	0.78	0.93	0.93	0.93	0.86	0.86	0.86
Percent Heavy Veh, %	2	2	2	2	2	2	2	2	2	2	2	2
Cap, veh/h	471	495	558	138	290	416	334	1905	591	548	1995	412
Arrive On Green	0.26	0.26	0.26	0.08	0.08	0.08	0.09	0.37	0.37	0.18	0.47	0.47
Sat Flow, veh/h	1781	1870	1585	1781	3741	1585	1781	5106	1585	1781	4241	876
Grp Volume(v), veh/h	197	447	297	104	233	49	215	665	200	493	814	411
Grp Sat Flow(s),veh/h/ln	1781	1870	1585	1781	1870	1585	1781	1702	1585	1781	1702	1713
Q Serve(g_s), s	16.5	41.6	26.9	10.3	11.0	4.2	13.3	16.9	16.3	29.7	30.0	30.1
Cycle Q Clear(g_c), s	16.5	41.6	26.9	10.3	11.0	4.2	13.3	16.9	16.3	29.7	30.0	30.1
Prop In Lane	1.00		1.00	1.00		1.00	1.00		1.00	1.00		0.51
Lane Grp Cap(c), veh/h	471	495	558	138	290	416	334	1905	591	548	1602	806
V/C Ratio(X)	0.42	0.90	0.53	0.75	0.80	0.12	0.64	0.35	0.34	0.90	0.51	0.51
Avail Cap(c_a), veh/h	579	608	654	183	384	456	421	1905	591	748	1602	806
HCM Platoon Ratio	1.00	1.00	1.00	1.00	1.00	1.00	1.00	1.00	1.00	1.00	1.00	1.00
Upstream Filter(I)	1.00	1.00	1.00	1.00	1.00	1.00	1.00	1.00	1.00	1.00	1.00	1.00
Uniform Delay (d), s/veh	54.7	64.0	46.5	81.3	81.7	50.5	30.6	40.7	40.5	27.3	33.2	33.2
Incr Delay (d2), s/veh	0.6	14.8	0.8	11.6	8.8	0.1	2.2	0.5	1.5	11.0	1.2	2.3
Initial Q Delay(d3),s/veh	0.0	0.0	0.0	0.0	0.0	0.0	0.0	0.0	0.0	0.0	0.0	0.0
%ile BackOfQ(50%),veh/ln	7.6	21.9	10.9	5.2	5.7	1.7	6.1	7.3	6.8	14.4	12.9	13.3
Unsig. Movement Delay, s/veh												
LnGrp Delay(d),s/veh	55.3	78.8	47.3	93.0	90.5	50.7	32.9	41.2	42.0	38.3	34.3	35.5
LnGrp LOS	E	E	D	F	F	D	C	D	D	D	C	D
Approach Vol, veh/h		941			386			1080			1718	
Approach Delay, s/veh		63.9			86.1			39.7			35.8	
Approach LOS		E			F			D			D	

Timer - Assigned Phs	1	2		4	5	6		8
Phs Duration (G+Y+Rc), s	37.8	71.6		52.1	20.2	89.2		18.4
Change Period (Y+Rc), s	4.5	4.5		4.5	4.5	4.5		4.5
Max Green Setting (Gmax), s	53.5	31.5		58.5	24.5	60.5		18.5
Max Q Clear Time (g_c+I1), s	31.7	18.9		43.6	15.3	32.1		13.0
Green Ext Time (p_c), s	1.6	4.3		4.1	0.4	10.1		0.9

Intersection Summary	
HCM 6th Ctrl Delay	47.9
HCM 6th LOS	D

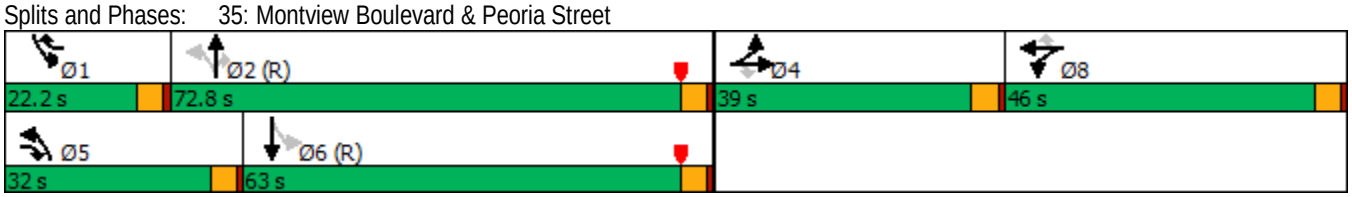
Notes

User approved volume balancing among the lanes for turning movement.

Lane Group	EBL	EBT	EBR	WBL	WBT	WBR	NBL	NBT	NBR	SBL	SBT
Lane Configurations											
Traffic Volume (vph)	227	168	182	111	576	268	201	883	33	57	1003
Future Volume (vph)	227	168	182	111	576	268	201	883	33	57	1003
Turn Type	Split	NA	pm+ov	Split	NA	pm+ov	pm+pt	NA	Perm	pm+pt	NA
Protected Phases	4	4	5	8	8	1	5	2		1	6
Permitted Phases			4			8	2		2	6	
Detector Phase	4	4	5	8	8	1	5	2	2	1	6
Switch Phase											
Minimum Initial (s)	5.0	5.0	5.0	5.0	5.0	5.0	5.0	5.0	5.0	5.0	5.0
Minimum Split (s)	22.5	22.5	9.5	22.5	22.5	9.5	9.5	22.5	22.5	9.5	22.5
Total Split (s)	39.0	39.0	32.0	46.0	46.0	22.2	32.0	72.8	72.8	22.2	63.0
Total Split (%)	21.7%	21.7%	17.8%	25.6%	25.6%	12.3%	17.8%	40.4%	40.4%	12.3%	35.0%
Yellow Time (s)	3.5	3.5	3.5	3.5	3.5	3.5	3.5	3.5	3.5	3.5	3.5
All-Red Time (s)	1.0	1.0	1.0	1.0	1.0	1.0	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	0.0	0.0
Total Lost Time (s)	4.5	4.5	4.5	4.5	4.5	4.5	4.5	4.5	4.5	4.5	4.5
Lead/Lag			Lead			Lead	Lead	Lag	Lag	Lead	Lag
Lead-Lag Optimize?			Yes			Yes	Yes	Yes	Yes	Yes	Yes
Recall Mode	None	None	None	None	None	None	None	C-Max	C-Max	None	C-Max
Act Effct Green (s)	28.3	28.3	48.6	38.2	38.2	51.2	100.0	87.0	87.0	83.7	75.2
Actuated g/C Ratio	0.16	0.16	0.27	0.21	0.21	0.28	0.56	0.48	0.48	0.46	0.42
v/c Ratio	0.83	0.83	0.36	0.30	0.85	0.54	0.73	0.38	0.04	0.21	0.61
Control Delay	97.8	97.6	4.1	61.4	80.2	39.1	43.2	31.5	1.0	23.7	44.1
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	97.8	97.6	4.1	61.4	80.2	39.1	43.2	31.5	1.0	23.7	44.1
LOS	F	F	A	E	F	D	D	C	A	C	D
Approach Delay		68.2			66.7			32.7			43.2
Approach LOS		E			E			C			D

Intersection Summary	
Cycle Length: 180	
Actuated Cycle Length: 180	
Offset: 0 (0%), Referenced to phase 2:NBTL and 6:SBTL, Start of Yellow	
Natural Cycle: 90	
Control Type: Actuated-Coordinated	
Maximum v/c Ratio: 0.85	
Intersection Signal Delay: 49.8	Intersection LOS: D
Intersection Capacity Utilization 76.3%	ICU Level of Service D
Analysis Period (min) 15	

Splits and Phases: 35: Montview Boulevard & Peoria Street



Movement	EBL	EBT	EBR	WBL	WBT	WBR	NBL	NBT	NBR	SBL	SBT	SBR
Lane Configurations												
Traffic Volume (veh/h)	227	168	182	111	576	268	201	883	33	57	1003	186
Future Volume (veh/h)	227	168	182	111	576	268	201	883	33	57	1003	186
Initial Q (Qb), veh	0	0	0	0	0	0	0	0	0	0	0	0
Ped-Bike Adj(A_pbT)	1.00		1.00	1.00		1.00	1.00		1.00	1.00		1.00
Parking Bus, Adj	1.00	1.00	1.00	1.00	1.00	1.00	1.00	1.00	1.00	1.00	1.00	1.00
Work Zone On Approach		No			No			No			No	
Adj Sat Flow, veh/h/ln	1870	1870	1870	1870	1870	1870	1870	1870	1870	1870	1870	1870
Adj Flow Rate, veh/h	224	238	207	116	600	279	214	939	35	61	1067	198
Peak Hour Factor	0.88	0.88	0.88	0.96	0.96	0.96	0.94	0.94	0.94	0.94	0.94	0.94
Percent Heavy Veh, %	2	2	2	2	2	2	2	2	2	2	2	2
Cap, veh/h	262	275	349	353	740	357	307	2692	836	332	2085	386
Arrive On Green	0.15	0.15	0.15	0.20	0.20	0.20	0.07	0.53	0.53	0.03	0.48	0.48
Sat Flow, veh/h	1781	1870	1585	1781	3741	1585	1781	5106	1585	1781	4328	802
Grp Volume(v), veh/h	224	238	207	116	600	279	214	939	35	61	839	426
Grp Sat Flow(s),veh/h/ln	1781	1870	1585	1781	1870	1585	1781	1702	1585	1781	1702	1726
Q Serve(g_s), s	22.1	22.4	21.1	10.1	27.6	29.8	10.7	19.2	1.9	3.1	30.5	30.6
Cycle Q Clear(g_c), s	22.1	22.4	21.1	10.1	27.6	29.8	10.7	19.2	1.9	3.1	30.5	30.6
Prop In Lane	1.00		1.00	1.00		1.00	1.00		1.00	1.00		0.46
Lane Grp Cap(c), veh/h	262	275	349	353	740	357	307	2692	836	332	1640	831
V/C Ratio(X)	0.85	0.86	0.59	0.33	0.81	0.78	0.70	0.35	0.04	0.18	0.51	0.51
Avail Cap(c_a), veh/h	341	358	420	411	862	409	449	2692	836	458	1640	831
HCM Platoon Ratio	1.00	1.00	1.00	1.00	1.00	1.00	1.00	1.00	1.00	1.00	1.00	1.00
Upstream Filter(I)	1.00	1.00	1.00	1.00	1.00	1.00	1.00	1.00	1.00	1.00	1.00	1.00
Uniform Delay (d), s/veh	74.9	75.0	62.9	61.9	69.0	65.5	25.0	24.6	20.6	22.8	32.1	32.1
Incr Delay (d2), s/veh	15.1	15.7	1.6	0.5	5.1	8.3	2.9	0.4	0.1	0.3	1.1	2.3
Initial Q Delay(d3),s/veh	0.0	0.0	0.0	0.0	0.0	0.0	0.0	0.0	0.0	0.0	0.0	0.0
%ile BackOfQ(50%),veh/ln	11.3	12.0	8.7	4.7	13.8	13.0	4.8	8.0	0.8	1.4	13.1	13.5
Unsig. Movement Delay, s/veh												
LnGrp Delay(d),s/veh	89.9	90.7	64.5	62.5	74.1	73.8	27.9	25.0	20.7	23.1	33.2	34.4
LnGrp LOS	F	F	E	E	E	E	C	C	C	C	C	C
Approach Vol, veh/h		669			995			1188			1326	
Approach Delay, s/veh		82.3			72.7			25.4			33.1	
Approach LOS		F			E			C			C	

Timer - Assigned Phs	1	2		4	5	6		8
Phs Duration (G+Y+Rc), s	9.5	99.4		31.0	17.7	91.2		40.1
Change Period (Y+Rc), s	4.5	4.5		4.5	4.5	4.5		4.5
Max Green Setting (Gmax), s	17.7	68.3		34.5	27.5	58.5		41.5
Max Q Clear Time (g_c+I1), s	5.1	21.2		24.4	12.7	32.6		31.8
Green Ext Time (p_c), s	0.1	8.5		2.1	0.5	10.1		3.8

Intersection Summary	
HCM 6th Ctrl Delay	48.2
HCM 6th LOS	D

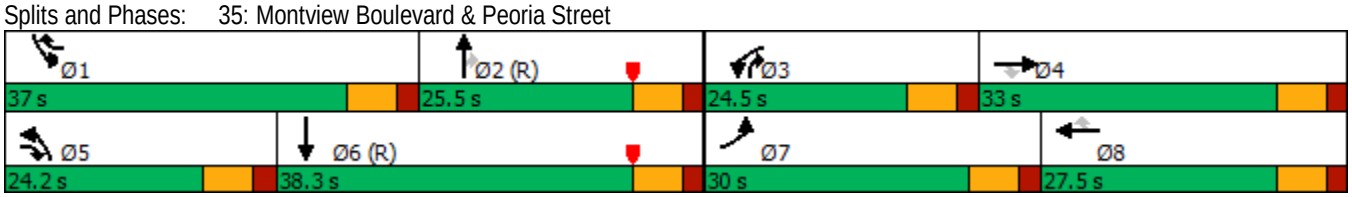
Notes

User approved volume balancing among the lanes for turning movement.

Lane Group	EBL	EBT	EBR	WBL	WBT	WBR	NBL	NBT	NBR	SBL	SBT
Lane Configurations											
Traffic Volume (vph)	190	405	290	90	195	45	220	680	195	435	890
Future Volume (vph)	190	405	290	90	195	45	220	680	195	435	890
Turn Type	Prot	NA	pm+ov	Prot	NA	pm+ov	Prot	NA	pm+ov	Prot	NA
Protected Phases	7	4	5	3	8	1	5	2	3	1	6
Permitted Phases			4			8			2		
Detector Phase	7	4	5	3	8	1	5	2	3	1	6
Switch Phase											
Minimum Initial (s)	5.0	5.0	5.0	5.0	5.0	5.0	5.0	5.0	5.0	5.0	5.0
Minimum Split (s)	24.5	24.5	11.5	24.5	24.5	11.5	11.5	24.5	24.5	11.5	24.5
Total Split (s)	30.0	33.0	24.2	24.5	27.5	37.0	24.2	25.5	24.5	37.0	38.3
Total Split (%)	25.0%	27.5%	20.2%	20.4%	22.9%	30.8%	20.2%	21.3%	20.4%	30.8%	31.9%
Yellow Time (s)	4.5	4.5	4.5	4.5	4.5	4.5	4.5	4.5	4.5	4.5	4.5
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)	6.5	6.5	6.5	6.5	6.5	6.5	6.5	6.5	6.5	6.5	6.5
Lead/Lag	Lead	Lag	Lead	Lead	Lag	Lead	Lead	Lag	Lead	Lead	Lag
Lead-Lag Optimize?	Yes	Yes	Yes	Yes	Yes	Yes	Yes	Yes	Yes	Yes	Yes
Recall Mode	None	None	None	None	None	None	None	C-Max	None	None	C-Max
Act Effct Green (s)	18.7	32.5	56.6	12.0	25.8	62.8	17.6	19.0	37.5	30.5	31.9
Actuated g/C Ratio	0.16	0.27	0.47	0.10	0.22	0.52	0.15	0.16	0.31	0.25	0.27
v/c Ratio	0.75	0.87	0.37	0.56	0.28	0.06	0.92	0.92	0.36	1.05	0.87
Control Delay	64.9	61.4	8.9	65.2	30.8	3.6	90.3	67.0	11.2	83.1	39.8
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	64.9	61.4	8.9	65.2	30.8	3.6	90.3	67.0	11.2	83.1	39.8
LOS	E	E	A	E	C	A	F	E	B	F	D
Approach Delay		45.0			36.5			61.8			52.2
Approach LOS		D			D			E			D

Intersection Summary	
Cycle Length: 120	
Actuated Cycle Length: 120	
Offset: 78 (65%), Referenced to phase 2:NBT and 6:SBT, Start of Yellow	
Natural Cycle: 125	
Control Type: Actuated-Coordinated	
Maximum v/c Ratio: 1.05	
Intersection Signal Delay: 51.9	Intersection LOS: D
Intersection Capacity Utilization 85.2%	ICU Level of Service E
Analysis Period (min) 15	

Splits and Phases: 35: Montview Boulevard & Peoria Street



Movement	EBL	EBT	EBR	WBL	WBT	WBR	NBL	NBT	NBR	SBL	SBT	SBR
Lane Configurations												
Traffic Volume (veh/h)	190	405	290	90	195	45	220	680	195	435	890	190
Future Volume (veh/h)	190	405	290	90	195	45	220	680	195	435	890	190
Initial Q (Qb), veh	0	0	0	0	0	0	0	0	0	0	0	0
Ped-Bike Adj(A_pbT)	1.00		1.00	1.00		1.00	1.00		1.00	1.00		1.00
Parking Bus, Adj	1.00	1.00	1.00	1.00	1.00	1.00	1.00	1.00	1.00	1.00	1.00	1.00
Work Zone On Approach		No			No			No			No	
Adj Sat Flow, veh/h/ln	1870	1870	1870	1870	1870	1870	1870	1870	1870	1870	1870	1870
Adj Flow Rate, veh/h	207	440	250	98	212	27	239	739	158	473	967	153
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
Percent Heavy Veh, %	2	2	2	2	2	2	2	2	2	2	2	2
Cap, veh/h	238	413	584	129	568	656	263	1204	489	453	1523	240
Arrive On Green	0.13	0.22	0.22	0.02	0.05	0.05	0.15	0.24	0.24	0.08	0.11	0.11
Sat Flow, veh/h	1781	1870	1585	1781	3554	1585	1781	5106	1585	1781	4447	702
Grp Volume(v), veh/h	207	440	250	98	212	27	239	739	158	473	740	380
Grp Sat Flow(s),veh/h/ln	1781	1870	1585	1781	1777	1585	1781	1702	1585	1781	1702	1744
Q Serve(g_s), s	13.7	26.5	14.2	6.6	6.9	1.4	15.9	15.5	9.2	30.5	24.9	25.0
Cycle Q Clear(g_c), s	13.7	26.5	14.2	6.6	6.9	1.4	15.9	15.5	9.2	30.5	24.9	25.0
Prop In Lane	1.00		1.00	1.00		1.00	1.00		1.00	1.00		0.40
Lane Grp Cap(c), veh/h	238	413	584	129	568	656	263	1204	489	453	1166	597
V/C Ratio(X)	0.87	1.07	0.43	0.76	0.37	0.04	0.91	0.61	0.32	1.04	0.63	0.64
Avail Cap(c_a), veh/h	349	413	584	267	622	680	263	1204	489	453	1166	597
HCM Platoon Ratio	1.00	1.00	1.00	0.33	0.33	0.33	1.00	1.00	1.00	0.33	0.33	0.33
Upstream Filter(I)	1.00	1.00	1.00	1.00	1.00	1.00	1.00	1.00	1.00	1.00	1.00	1.00
Uniform Delay (d), s/veh	51.0	46.7	28.4	57.5	51.0	23.7	50.4	41.0	31.9	55.0	46.0	46.1
Incr Delay (d2), s/veh	14.7	62.7	0.5	8.8	0.4	0.0	32.8	2.3	1.7	54.5	2.6	5.1
Initial Q Delay(d3),s/veh	0.0	0.0	0.0	0.0	0.0	0.0	0.0	0.0	0.0	0.0	0.0	0.0
%ile BackOfQ(50%),veh/ln	7.1	19.4	5.5	3.4	3.3	0.5	9.4	6.8	3.8	21.5	11.8	12.6
Unsig. Movement Delay, s/veh												
LnGrp Delay(d),s/veh	65.7	109.4	28.9	66.3	51.4	23.7	83.1	43.3	33.6	109.4	48.7	51.2
LnGrp LOS	E	F	C	E	D	C	F	D	C	F	D	D
Approach Vol, veh/h		897			337			1136			1593	
Approach Delay, s/veh		76.9			53.5			50.3			67.3	
Approach LOS		E			D			D			E	

Timer - Assigned Phs	1	2	3	4	5	6	7	8
Phs Duration (G+Y+Rc), s	37.0	34.8	15.2	33.0	24.2	47.6	22.5	25.7
Change Period (Y+Rc), s	6.5	6.5	6.5	6.5	6.5	6.5	6.5	6.5
Max Green Setting (Gmax), s	30.5	19.0	18.0	26.5	17.7	31.8	23.5	21.0
Max Q Clear Time (g_c+I1), s	32.5	17.5	8.6	28.5	17.9	27.0	15.7	8.9
Green Ext Time (p_c), s	0.0	0.8	0.1	0.0	0.0	2.9	0.3	1.0

Intersection Summary	
HCM 6th Ctrl Delay	63.5
HCM 6th LOS	E

Lane Group	EBL	EBT	EBR	WBL	WBT	WBR	NBL	NBT	NBR	SBL	SBT
Lane Configurations											
Traffic Volume (vph)	250	180	200	120	590	280	220	920	40	65	1100
Future Volume (vph)	250	180	200	120	590	280	220	920	40	65	1100
Turn Type	Prot	NA	pm+ov	Prot	NA	pm+ov	Prot	NA	pm+ov	Prot	NA
Protected Phases	7	4	5	3	8	1	5	2	3	1	6
Permitted Phases			4			8			2		
Detector Phase	7	4	5	3	8	1	5	2	3	1	6
Switch Phase											
Minimum Initial (s)	5.0	5.0	5.0	5.0	5.0	5.0	5.0	5.0	5.0	5.0	5.0
Minimum Split (s)	24.5	24.5	11.5	24.5	24.5	11.5	11.5	24.5	24.5	11.5	24.5
Total Split (s)	32.0	42.4	29.0	25.6	36.0	23.6	29.0	58.4	25.6	23.6	53.0
Total Split (%)	21.3%	28.3%	19.3%	17.1%	24.0%	15.7%	19.3%	38.9%	17.1%	15.7%	35.3%
Yellow Time (s)	4.5	4.5	4.5	4.5	4.5	4.5	4.5	4.5	4.5	4.5	4.5
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)	6.5	6.5	6.5	6.5	6.5	6.5	6.5	6.5	6.5	6.5	6.5
Lead/Lag	Lead	Lag	Lead	Lead	Lag	Lead	Lead	Lag	Lead	Lead	Lag
Lead-Lag Optimize?	Yes	Yes	Yes	Yes	Yes	Yes	Yes	Yes	Yes	Yes	Yes
Recall Mode	None	None	None	None	None	None	None	C-Max	None	None	C-Max
Act Effct Green (s)	24.8	38.4	66.8	15.7	29.2	47.1	22.0	58.6	80.8	11.4	48.0
Actuated g/C Ratio	0.17	0.26	0.45	0.10	0.19	0.31	0.15	0.39	0.54	0.08	0.32
v/c Ratio	0.93	0.41	0.29	0.71	0.93	0.56	0.92	0.50	0.05	0.53	0.88
Control Delay	98.8	50.1	16.5	84.7	80.1	35.7	101.9	36.4	1.0	99.1	30.5
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	98.8	50.1	16.5	84.7	80.1	35.7	101.9	36.4	1.0	99.1	30.5
LOS	F	D	B	F	F	D	F	D	A	F	C
Approach Delay		58.8			68.1			47.4			33.7
Approach LOS		E			E			D			C

Intersection Summary

Cycle Length: 150
Actuated Cycle Length: 150
Offset: 37 (25%), Referenced to phase 2:NBT and 6:SBT, Start of Yellow
Natural Cycle: 115
Control Type: Actuated-Coordinated
Maximum v/c Ratio: 0.93
Intersection Signal Delay: 49.5 — Intersection LOS: D
Intersection Capacity Utilization 89.8% — ICU Level of Service E
Analysis Period (min) 15

Splits and Phases: 35: Montview Boulevard & Peoria Street

Movement	EBL	EBT	EBR	WBL	WBT	WBR	NBL	NBT	NBR	SBL	SBT	SBR
Lane Configurations												
Traffic Volume (veh/h)	250	180	200	120	590	280	220	920	40	65	1100	205
Future Volume (veh/h)	250	180	200	120	590	280	220	920	40	65	1100	205
Initial Q (Qb), veh	0	0	0	0	0	0	0	0	0	0	0	0
Ped-Bike Adj(A_pbT)	1.00		1.00	1.00		1.00	1.00		1.00	1.00		1.00
Parking Bus, Adj	1.00	1.00	1.00	1.00	1.00	1.00	1.00	1.00	1.00	1.00	1.00	1.00
Work Zone On Approach		No			No			No			No	
Adj Sat Flow, veh/h/ln	1870	1870	1870	1870	1870	1870	1870	1870	1870	1870	1870	1870
Adj Flow Rate, veh/h	272	196	152	130	641	250	239	1000	-11	71	1196	169
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
Percent Heavy Veh, %	2	2	2	2	2	2	2	2	2	2	2	2
Cap, veh/h	293	509	663	154	689	388	260	2133	799	90	1457	206
Arrive On Green	0.16	0.27	0.27	0.09	0.19	0.19	0.15	0.42	0.00	0.05	0.32	0.32
Sat Flow, veh/h	1781	1870	1585	1781	3554	1585	1781	5106	1585	1781	4521	639
Grp Volume(v), veh/h	272	196	152	130	641	250	239	1000	-11	71	901	464
Grp Sat Flow(s),veh/h/ln	1781	1870	1585	1781	1777	1585	1781	1702	1585	1781	1702	1755
Q Serve(g_s), s	22.6	12.8	9.3	10.8	26.6	21.2	19.9	21.3	0.0	5.9	36.6	36.6
Cycle Q Clear(g_c), s	22.6	12.8	9.3	10.8	26.6	21.2	19.9	21.3	0.0	5.9	36.6	36.6
Prop In Lane	1.00		1.00	1.00		1.00	1.00		1.00	1.00		0.36
Lane Grp Cap(c), veh/h	293	509	663	154	689	388	260	2133	799	90	1097	566
V/C Ratio(X)	0.93	0.39	0.23	0.85	0.93	0.65	0.92	0.47	-0.01	0.79	0.82	0.82
Avail Cap(c_a), veh/h	303	509	663	227	699	392	267	2133	799	203	1097	566
HCM Platoon Ratio	1.00	1.00	1.00	1.00	1.00	1.00	1.00	1.00	1.00	1.00	1.00	1.00
Upstream Filter(I)	1.00	1.00	1.00	1.00	1.00	1.00	1.00	1.00	0.00	1.00	1.00	1.00
Uniform Delay (d), s/veh	61.8	44.4	28.1	67.5	59.4	50.8	63.2	31.6	0.0	70.4	46.8	46.9
Incr Delay (d2), s/veh	33.1	0.5	0.2	17.1	18.9	3.6	33.9	0.7	0.0	14.1	6.9	12.6
Initial Q Delay(d3),s/veh	0.0	0.0	0.0	0.0	0.0	0.0	0.0	0.0	0.0	0.0	0.0	0.0
%ile BackOfQ(50%),veh/ln	12.9	6.1	3.6	5.7	13.8	8.9	11.5	9.0	0.0	3.1	16.6	18.0
Unsig. Movement Delay, s/veh												
LnGrp Delay(d),s/veh	94.9	44.9	28.3	84.6	78.3	54.4	97.1	32.4	0.0	84.5	53.8	59.5
LnGrp LOS	F	D	C	F	E	D	F	C	A	F	D	E
Approach Vol, veh/h		620			1021			1228			1436	
Approach Delay, s/veh		62.7			73.2			45.3			57.1	
Approach LOS		E			E			D			E	

Timer - Assigned Phs	1	2	3	4	5	6	7	8
Phs Duration (G+Y+Rc), s	14.1	69.2	19.4	47.3	28.4	54.8	31.2	35.6
Change Period (Y+Rc), s	6.5	6.5	6.5	6.5	6.5	6.5	6.5	6.5
Max Green Setting (Gmax), s	17.1	51.9	19.1	35.9	22.5	46.5	25.5	29.5
Max Q Clear Time (g_c+I1), s	7.9	23.3	12.8	14.8	21.9	38.6	24.6	28.6
Green Ext Time (p_c), s	0.1	8.2	0.2	1.6	0.0	5.2	0.1	0.5

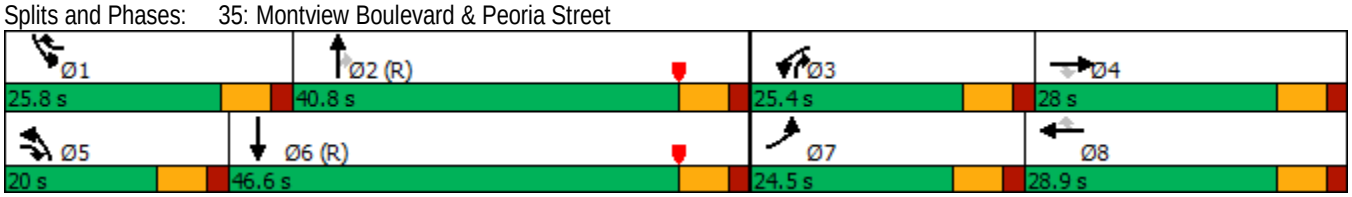
Intersection Summary	
HCM 6th Ctrl Delay	58.4
HCM 6th LOS	E

Lane Group	EBL	EBT	EBR	WBL	WBT	WBR	NBL	NBT	NBR	SBL	SBT
Lane Configurations											
Traffic Volume (vph)	290	510	290	205	230	50	220	1140	570	435	965
Future Volume (vph)	290	510	290	205	230	50	220	1140	570	435	965
Turn Type	Prot	NA	pm+ov	Prot	NA	pm+ov	Prot	NA	pm+ov	Prot	NA
Protected Phases	7	4	5	3	8	1	5	2	3	1	6
Permitted Phases			4			8			2		
Detector Phase	7	4	5	3	8	1	5	2	3	1	6
Switch Phase											
Minimum Initial (s)	5.0	5.0	5.0	5.0	5.0	5.0	5.0	5.0	5.0	5.0	5.0
Minimum Split (s)	24.5	24.5	11.5	24.5	24.5	11.5	11.5	24.5	24.5	11.5	24.5
Total Split (s)	24.5	28.0	20.0	25.4	28.9	25.8	20.0	40.8	25.4	25.8	46.6
Total Split (%)	20.4%	23.3%	16.7%	21.2%	24.1%	21.5%	16.7%	34.0%	21.2%	21.5%	38.8%
Yellow Time (s)	4.5	4.5	4.5	4.5	4.5	4.5	4.5	4.5	4.5	4.5	4.5
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)	6.5	6.5	6.5	6.5	6.5	6.5	6.5	6.5	6.5	6.5	6.5
Lead/Lag	Lead	Lag	Lead	Lead	Lag	Lead	Lead	Lag	Lead	Lead	Lag
Lead-Lag Optimize?	Yes	Yes	Yes	Yes	Yes	Yes	Yes	Yes	Yes	Yes	Yes
Recall Mode	None	None	None	None	None	None	None	C-Max	None	None	C-Max
Act Effct Green (s)	15.7	22.1	41.2	14.8	21.2	47.0	12.5	37.8	59.1	19.2	44.6
Actuated g/C Ratio	0.13	0.18	0.34	0.12	0.18	0.39	0.10	0.32	0.49	0.16	0.37
v/c Ratio	0.70	0.85	0.52	0.53	0.40	0.08	0.67	0.77	0.75	0.86	0.68
Control Delay	58.6	60.6	25.2	37.0	36.2	6.7	61.2	42.0	27.8	75.3	28.3
Queue Delay	0.0	0.0	0.0	0.0	0.0	0.0	0.0	0.0	1.0	0.0	0.0
Total Delay	58.6	60.6	25.2	37.0	36.2	6.7	61.2	42.0	28.7	75.3	28.3
LOS	E	E	C	D	D	A	E	D	C	E	C
Approach Delay		50.6			33.5			40.3			41.0
Approach LOS		D			C			D			D

Intersection Summary

Cycle Length: 120
Actuated Cycle Length: 120
Offset: 49 (41%), Referenced to phase 2:NBT and 6:SBT, Start of Yellow
Natural Cycle: 95
Control Type: Actuated-Coordinated
Maximum v/c Ratio: 0.86
Intersection Signal Delay: 42.1 — Intersection LOS: D
Intersection Capacity Utilization 78.1% — ICU Level of Service D
Analysis Period (min) 15

Splits and Phases: 35: Montview Boulevard & Peoria Street



Movement	EBL	EBT	EBR	WBL	WBT	WBR	NBL	NBT	NBR	SBL	SBT	SBR
Lane Configurations												
Traffic Volume (veh/h)	290	510	290	205	230	50	220	1140	570	435	965	205
Future Volume (veh/h)	290	510	290	205	230	50	220	1140	570	435	965	205
Initial Q (Qb), veh	0	0	0	0	0	0	0	0	0	0	0	0
Ped-Bike Adj(A_pbT)	1.00		1.00	1.00		1.00	1.00		1.00	1.00		1.00
Parking Bus, Adj	1.00	1.00	1.00	1.00	1.00	1.00	1.00	1.00	1.00	1.00	1.00	1.00
Work Zone On Approach		No			No			No			No	
Adj Sat Flow, veh/h/ln	1870	1870	1870	1870	1870	1870	1870	1870	1870	1870	1870	1870
Adj Flow Rate, veh/h	315	554	250	223	250	32	239	1239	566	473	1049	169
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
Percent Heavy Veh, %	2	2	2	2	2	2	2	2	2	2	2	2
Cap, veh/h	381	619	413	293	528	480	299	1889	721	534	1941	312
Arrive On Green	0.11	0.17	0.17	0.03	0.05	0.05	0.09	0.37	0.37	0.05	0.14	0.14
Sat Flow, veh/h	3456	3554	1585	3456	3554	1585	3456	5106	1585	3456	4433	713
Grp Volume(v), veh/h	315	554	250	223	250	32	239	1239	566	473	805	413
Grp Sat Flow(s),veh/h/ln	1728	1777	1585	1728	1777	1585	1728	1702	1585	1728	1702	1742
Q Serve(g_s), s	10.7	18.3	16.6	7.7	8.2	1.9	8.1	24.2	36.3	16.3	26.3	26.4
Cycle Q Clear(g_c), s	10.7	18.3	16.6	7.7	8.2	1.9	8.1	24.2	36.3	16.3	26.3	26.4
Prop In Lane	1.00		1.00	1.00		1.00	1.00		1.00	1.00		0.41
Lane Grp Cap(c), veh/h	381	619	413	293	528	480	299	1889	721	534	1490	763
V/C Ratio(X)	0.83	0.90	0.60	0.76	0.47	0.07	0.80	0.66	0.79	0.89	0.54	0.54
Avail Cap(c_a), veh/h	518	637	421	544	663	541	389	1889	721	556	1490	763
HCM Platoon Ratio	1.00	1.00	1.00	0.33	0.33	0.33	1.00	1.00	1.00	0.33	0.33	0.33
Upstream Filter(I)	1.00	1.00	1.00	1.00	1.00	1.00	1.00	1.00	1.00	1.00	1.00	1.00
Uniform Delay (d), s/veh	52.3	48.5	38.9	57.1	52.5	33.3	53.8	31.4	27.7	55.9	40.1	40.1
Incr Delay (d2), s/veh	7.9	15.0	2.4	4.1	0.7	0.1	8.6	1.8	8.4	15.5	1.4	2.7
Initial Q Delay(d3),s/veh	0.0	0.0	0.0	0.0	0.0	0.0	0.0	0.0	0.0	0.0	0.0	0.0
%ile BackOfQ(50%),veh/ln	5.1	9.4	6.7	3.7	3.9	0.8	3.9	10.2	15.1	8.7	12.3	12.9
Unsig. Movement Delay, s/veh												
LnGrp Delay(d),s/veh	60.1	63.5	41.3	61.2	53.1	33.3	62.4	33.2	36.1	71.4	41.5	42.9
LnGrp LOS	E	E	D	E	D	C	E	C	D	E	D	D
Approach Vol, veh/h		1119			505			2044			1691	
Approach Delay, s/veh		57.6			55.4			37.5			50.2	
Approach LOS		E			E			D			D	

Timer - Assigned Phs	1	2	3	4	5	6	7	8
Phs Duration (G+Y+Rc), s	25.0	50.9	16.7	27.4	16.9	59.0	19.7	24.3
Change Period (Y+Rc), s	6.5	6.5	6.5	6.5	6.5	6.5	6.5	6.5
Max Green Setting (Gmax), s	19.3	34.3	18.9	21.5	13.5	40.1	18.0	22.4
Max Q Clear Time (g_c+I1), s	18.3	38.3	9.7	20.3	10.1	28.4	12.7	10.2
Green Ext Time (p_c), s	0.2	0.0	0.5	0.6	0.3	6.3	0.5	1.3

Intersection Summary	
HCM 6th Ctrl Delay	47.4
HCM 6th LOS	D

Lane Group	EBL	EBT	EBR	WBL	WBT	WBR	NBL	NBT	NBR	SBL	SBT
Lane Configurations											
Traffic Volume (vph)	275	215	200	475	730	300	220	1015	165	65	1470
Future Volume (vph)	275	215	200	475	730	300	220	1015	165	65	1470
Turn Type	Prot	NA	pm+ov	Prot	NA	pm+ov	Prot	NA	pm+ov	Prot	NA
Protected Phases	7	4	5	3	8	1	5	2	3	1	6
Permitted Phases			4			8			2		
Detector Phase	7	4	5	3	8	1	5	2	3	1	6
Switch Phase											
Minimum Initial (s)	5.0	5.0	5.0	5.0	5.0	5.0	5.0	5.0	5.0	5.0	5.0
Minimum Split (s)	24.5	24.5	11.5	24.5	24.5	11.5	11.5	24.5	24.5	11.5	24.5
Total Split (s)	25.4	28.3	23.0	38.7	41.6	24.0	23.0	59.0	38.7	24.0	60.0
Total Split (%)	16.9%	18.9%	15.3%	25.8%	27.7%	16.0%	15.3%	39.3%	25.8%	16.0%	40.0%
Yellow Time (s)	4.5	4.5	4.5	4.5	4.5	4.5	4.5	4.5	4.5	4.5	4.5
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)	6.5	6.5	6.5	6.5	6.5	6.5	6.5	6.5	6.5	6.5	6.5
Lead/Lag	Lead	Lag	Lead	Lead	Lag	Lead	Lead	Lag	Lead	Lead	Lag
Lead-Lag Optimize?	Yes	Yes	Yes	Yes	Yes	Yes	Yes	Yes	Yes	Yes	Yes
Recall Mode	None	None	None	None	None	None	None	C-Max	None	None	C-Max
Act Effct Green (s)	17.2	25.4	46.7	27.5	35.7	50.7	14.8	62.6	96.6	8.5	56.3
Actuated g/C Ratio	0.11	0.17	0.31	0.18	0.24	0.34	0.10	0.42	0.64	0.06	0.38
v/c Ratio	0.76	0.39	0.38	0.82	0.94	0.56	0.71	0.52	0.17	0.37	1.02
Control Delay	77.2	58.3	19.6	69.9	75.6	34.9	77.0	34.0	1.6	74.1	64.3
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	77.2	58.3	19.6	69.9	75.6	34.9	77.0	34.0	1.6	74.1	64.3
LOS	E	E	B	E	E	C	E	C	A	E	E
Approach Delay		54.6			65.7			37.0			64.6
Approach LOS		D			E			D			E

Intersection Summary	
Cycle Length: 150	
Actuated Cycle Length: 150	
Offset: 148 (99%), Referenced to phase 2:NBT and 6:SBT, Start of Yellow	
Natural Cycle: 145	
Control Type: Actuated-Coordinated	
Maximum v/c Ratio: 1.02	
Intersection Signal Delay: 56.5	Intersection LOS: E
Intersection Capacity Utilization 90.9%	ICU Level of Service E
Analysis Period (min) 15	

Splits and Phases: 35: Montview Boulevard & Peoria Street

Movement	EBL	EBT	EBR	WBL	WBT	WBR	NBL	NBT	NBR	SBL	SBT	SBR
Lane Configurations												
Traffic Volume (veh/h)	275	215	200	475	730	300	220	1015	165	65	1470	295
Future Volume (veh/h)	275	215	200	475	730	300	220	1015	165	65	1470	295
Initial Q (Qb), veh	0	0	0	0	0	0	0	0	0	0	0	0
Ped-Bike Adj(A_pbT)	1.00		1.00	1.00		1.00	1.00		1.00	1.00		1.00
Parking Bus, Adj	1.00	1.00	1.00	1.00	1.00	1.00	1.00	1.00	1.00	1.00	1.00	1.00
Work Zone On Approach		No			No			No			No	
Adj Sat Flow, veh/h/ln	1870	1870	1870	1870	1870	1870	1870	1870	1870	1870	1870	1870
Adj Flow Rate, veh/h	299	234	152	516	793	272	239	1103	125	71	1598	267
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
Percent Heavy Veh, %	2	2	2	2	2	2	2	2	2	2	2	2
Cap, veh/h	350	593	397	581	831	422	289	2345	994	112	1800	299
Arrive On Green	0.10	0.17	0.17	0.17	0.23	0.23	0.08	0.46	0.46	0.06	0.82	0.82
Sat Flow, veh/h	3456	3554	1585	3456	3554	1585	3456	5106	1585	3456	4409	734
Grp Volume(v), veh/h	299	234	152	516	793	272	239	1103	125	71	1232	633
Grp Sat Flow(s),veh/h/ln	1728	1777	1585	1728	1777	1585	1728	1702	1585	1728	1702	1738
Q Serve(g_s), s	12.8	8.8	11.9	21.9	33.0	22.8	10.2	22.3	4.8	3.0	36.1	36.9
Cycle Q Clear(g_c), s	12.8	8.8	11.9	21.9	33.0	22.8	10.2	22.3	4.8	3.0	36.1	36.9
Prop In Lane	1.00		1.00	1.00		1.00	1.00		1.00	1.00		0.42
Lane Grp Cap(c), veh/h	350	593	397	581	831	422	289	2345	994	112	1389	710
V/C Ratio(X)	0.86	0.39	0.38	0.89	0.95	0.64	0.83	0.47	0.13	0.63	0.89	0.89
Avail Cap(c_a), veh/h	435	593	397	742	832	422	380	2345	994	403	1389	710
HCM Platoon Ratio	1.00	1.00	1.00	1.00	1.00	1.00	1.00	1.00	1.00	2.00	2.00	2.00
Upstream Filter(I)	1.00	1.00	1.00	1.00	1.00	1.00	1.00	1.00	1.00	1.00	1.00	1.00
Uniform Delay (d), s/veh	66.3	55.7	46.6	61.0	56.7	48.7	67.7	28.0	11.3	69.3	11.5	11.5
Incr Delay (d2), s/veh	12.9	0.4	0.6	10.7	20.9	3.3	11.0	0.7	0.3	5.8	8.7	15.8
Initial Q Delay(d3),s/veh	0.0	0.0	0.0	0.0	0.0	0.0	0.0	0.0	0.0	0.0	0.0	0.0
%ile BackOfQ(50%),veh/ln	6.3	4.0	4.8	10.5	17.2	9.5	5.0	9.4	1.8	1.4	6.4	7.9
Unsig. Movement Delay, s/veh												
LnGrp Delay(d),s/veh	79.2	56.1	47.2	71.7	77.5	52.1	78.7	28.7	11.6	75.1	20.1	27.3
LnGrp LOS	E	E	D	E	E	D	E	C	B	E	C	C
Approach Vol, veh/h		685			1581			1467			1936	
Approach Delay, s/veh		64.2			71.2			35.3			24.5	
Approach LOS		E			E			D			C	

Timer - Assigned Phs	1	2	3	4	5	6	7	8
Phs Duration (G+Y+Rc), s	11.4	75.4	31.7	31.5	19.0	67.7	21.7	41.6
Change Period (Y+Rc), s	6.5	6.5	6.5	6.5	6.5	6.5	6.5	6.5
Max Green Setting (Gmax), s	17.5	52.5	32.2	21.8	16.5	53.5	18.9	35.1
Max Q Clear Time (g_c+I1), s	5.0	24.3	23.9	13.9	12.2	38.9	14.8	35.0
Green Ext Time (p_c), s	0.1	9.8	1.3	1.2	0.3	10.7	0.4	0.1

Intersection Summary	
HCM 6th Ctrl Delay	45.1
HCM 6th LOS	D

Intersection	
Int Delay, s/veh	1.3

Movement	EBT	EBR	WBL	WBT	NBL	NBR
Lane Configurations	↑	↱		↰↑	↰	↱
Traffic Vol, veh/h	864	139	25	276	25	34
Future Vol, veh/h	864	139	25	276	25	34
Conflicting Peds, #/hr	0	0	0	0	0	0
Sign Control	Free	Free	Free	Free	Stop	Stop
RT Channelized	-	None	-	None	-	None
Storage Length	-	0	-	-	100	0
Veh in Median Storage, #	0	-	-	0	0	-
Grade, %	0	-	-	0	0	-
Peak Hour Factor	91	81	62	77	89	71
Heavy Vehicles, %	2	2	2	2	2	2
Mvmt Flow	949	172	40	358	28	48

Major/Minor	Major1		Major2		Minor1	
Conflicting Flow All	0	0	1121	0	1208	949
Stage 1	-	-	-	-	949	-
Stage 2	-	-	-	-	259	-
Critical Hdwy	-	-	4.13	-	6.63	6.23
Critical Hdwy Stg 1	-	-	-	-	5.43	-
Critical Hdwy Stg 2	-	-	-	-	5.83	-
Follow-up Hdwy	-	-	2.219	-	3.519	3.319
Pot Cap-1 Maneuver	-	-	*522	-	*329	*349
Stage 1	-	-	-	-	*329	-
Stage 2	-	-	-	-	*761	-
Platoon blocked, %	-	-	1	-	1	1
Mov Cap-1 Maneuver	-	-	*522	-	*297	*349
Mov Cap-2 Maneuver	-	-	-	-	*297	-
Stage 1	-	-	-	-	*329	-
Stage 2	-	-	-	-	*688	-

Approach	EB	WB	NB
HCM Control Delay, s	0	1.7	17.5
HCM LOS			C

Minor Lane/Major Mvmt	NBLn1	NBLn2	EBT	EBR	WBL	WBT
Capacity (veh/h)	297	349	-	-	* 522	-
HCM Lane V/C Ratio	0.095	0.137	-	-	0.077	-
HCM Control Delay (s)	18.4	16.9	-	-	12.5	0.5
HCM Lane LOS	C	C	-	-	B	A
HCM 95th %tile Q(veh)	0.3	0.5	-	-	0.2	-

Notes

~: Volume exceeds capacity $: Delay exceeds 300s +: Computation Not Defined *: All major volume in platoon

Intersection	
Int Delay, s/veh	1.8

Movement	EBT	EBR	WBL	WBT	NBL	NBR
Lane Configurations	↑	↱		↰↑	↰	↱
Traffic Vol, veh/h	193	65	14	874	81	87
Future Vol, veh/h	193	65	14	874	81	87
Conflicting Peds, #/hr	0	0	0	0	0	0
Sign Control	Free	Free	Free	Free	Stop	Stop
RT Channelized	-	None	-	None	-	None
Storage Length	-	0	-	-	100	0
Veh in Median Storage, #	0	-	-	0	0	-
Grade, %	0	-	-	0	0	-
Peak Hour Factor	83	77	88	96	70	91
Heavy Vehicles, %	2	2	2	2	2	2
Mvmt Flow	233	84	16	910	116	96

Major/Minor	Major1		Major2		Minor1	
Conflicting Flow All	0	0	317	0	720	233
Stage 1	-	-	-	-	233	-
Stage 2	-	-	-	-	487	-
Critical Hdwy	-	-	4.13	-	6.63	6.23
Critical Hdwy Stg 1	-	-	-	-	5.43	-
Critical Hdwy Stg 2	-	-	-	-	5.83	-
Follow-up Hdwy	-	-	2.219	-	3.519	3.319
Pot Cap-1 Maneuver	-	-	*1380	-	*562	*922
Stage 1	-	-	-	-	*870	-
Stage 2	-	-	-	-	*584	-
Platoon blocked, %	-	-	1	-	1	1
Mov Cap-1 Maneuver	-	-	*1380	-	*549	*922
Mov Cap-2 Maneuver	-	-	-	-	*549	-
Stage 1	-	-	-	-	*870	-
Stage 2	-	-	-	-	*571	-

Approach	EB	WB	NB
HCM Control Delay, s	0	0.2	11.5
HCM LOS			B

Minor Lane/Major Mvmt	NBLn1	NBLn2	EBT	EBR	WBL	WBT
Capacity (veh/h)	549	922	-	-	* 1380	-
HCM Lane V/C Ratio	0.211	0.104	-	-	0.012	-
HCM Control Delay (s)	13.3	9.4	-	-	7.6	0.1
HCM Lane LOS	B	A	-	-	A	A
HCM 95th %tile Q(veh)	0.8	0.3	-	-	0	-

Notes

~: Volume exceeds capacity $: Delay exceeds 300s +: Computation Not Defined *: All major volume in platoon

Intersection	
Int Delay, s/veh	0.7

Movement	EBT	EBR	WBL	WBT	NBL	NBR
Lane Configurations						
Traffic Vol, veh/h	890	140	40	310	25	35
Future Vol, veh/h	890	140	40	310	25	35
Conflicting Peds, #/hr	0	0	0	0	0	0
Sign Control	Free	Free	Free	Free	Stop	Stop
RT Channelized	-	None	-	None	-	None
Storage Length	-	-	100	-	100	0
Veh in Median Storage, #	0	-	-	0	1	-
Grade, %	0	-	-	0	0	-
Peak Hour Factor	92	92	92	92	92	92
Heavy Vehicles, %	2	2	2	2	2	2
Mvmt Flow	967	152	43	337	27	38

Major/Minor	Major1		Major2		Minor1	
Conflicting Flow All	0	0	1119	0	1298	560
Stage 1	-	-	-	-	1043	-
Stage 2	-	-	-	-	255	-
Critical Hdwy	-	-	4.14	-	6.84	6.94
Critical Hdwy Stg 1	-	-	-	-	5.84	-
Critical Hdwy Stg 2	-	-	-	-	5.84	-
Follow-up Hdwy	-	-	2.22	-	3.52	3.32
Pot Cap-1 Maneuver	-	-	950	-	*571	*711
Stage 1	-	-	-	-	*658	-
Stage 2	-	-	-	-	*917	-
Platoon blocked, %	-	-	1	-	1	1
Mov Cap-1 Maneuver	-	-	950	-	*545	*711
Mov Cap-2 Maneuver	-	-	-	-	*574	-
Stage 1	-	-	-	-	*658	-
Stage 2	-	-	-	-	*875	-

Approach	EB	WB	NB
HCM Control Delay, s	0	1	10.8
HCM LOS			B

Minor Lane/Major Mvmt	NBLn1	NBLn2	EBT	EBR	WBL	WBT
Capacity (veh/h)	574	711	-	-	950	-
HCM Lane V/C Ratio	0.047	0.054	-	-	0.046	-
HCM Control Delay (s)	11.6	10.3	-	-	9	-
HCM Lane LOS	B	B	-	-	A	-
HCM 95th %tile Q(veh)	0.1	0.2	-	-	0.1	-

Notes

~: Volume exceeds capacity $: Delay exceeds 300s +: Computation Not Defined *: All major volume in platoon

Intersection	
Int Delay, s/veh	1.5

Movement	EBT	EBR	WBL	WBT	NBL	NBR
Lane Configurations						
Traffic Vol, veh/h	215	65	15	900	85	90
Future Vol, veh/h	215	65	15	900	85	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	-	-	100	-	100	0
Veh in Median Storage, #	0	-	-	0	1	-
Grade, %	0	-	-	0	0	-
Peak Hour Factor	92	92	92	92	92	92
Heavy Vehicles, %	2	2	2	2	2	2
Mvmt Flow	234	71	16	978	92	98

Major/Minor	Major1		Major2		Minor1	
Conflicting Flow All	0	0	305	0	791	153
Stage 1	-	-	-	-	270	-
Stage 2	-	-	-	-	521	-
Critical Hdwy	-	-	4.14	-	6.84	6.94
Critical Hdwy Stg 1	-	-	-	-	5.84	-
Critical Hdwy Stg 2	-	-	-	-	5.84	-
Follow-up Hdwy	-	-	2.22	-	3.52	3.32
Pot Cap-1 Maneuver	-	-	1411	-	*327	*994
Stage 1	-	-	-	-	*913	-
Stage 2	-	-	-	-	*671	-
Platoon blocked, %	-	-	1	-		1
Mov Cap-1 Maneuver	-	-	1411	-	*323	*994
Mov Cap-2 Maneuver	-	-	-	-	*492	-
Stage 1	-	-	-	-	*913	-
Stage 2	-	-	-	-	*663	-

Approach	EB	WB	NB
HCM Control Delay, s	0	0.1	11.4
HCM LOS			B

Minor Lane/Major Mvmt	NBLn1	NBLn2	EBT	EBR	WBL	WBT
Capacity (veh/h)	492	994	-	-	1411	-
HCM Lane V/C Ratio	0.188	0.098	-	-	0.012	-
HCM Control Delay (s)	14	9	-	-	7.6	-
HCM Lane LOS	B	A	-	-	A	-
HCM 95th %tile Q(veh)	0.7	0.3	-	-	0	-

Notes

~: Volume exceeds capacity $: Delay exceeds 300s +: Computation Not Defined *: All major volume in platoon

Intersection	
Int Delay, s/veh	2.2

Movement	EBL	EBT	EBR	WBL	WBT	WBR	NBL	NBT	NBR	SBL	SBT	SBR
Lane Configurations												
Traffic Vol, veh/h	175	1195	140	45	430	280	25	10	65	10	10	35
Future Vol, veh/h	175	1195	140	45	430	280	25	10	65	10	10	35
Conflicting Peds, #/hr	0	0	0	0	0	0	0	0	0	0	0	0
Sign Control	Free	Free	Free	Free	Free	Free	Stop	Stop	Stop	Stop	Stop	Stop
RT Channelized	-	-	None	-	-	None	-	-	None	-	-	None
Storage Length	100	-	-	100	-	-	100	-	-	100	-	-
Veh in Median Storage, #	-	0	-	-	0	-	-	1	-	-	1	-
Grade, %	-	0	-	-	0	-	-	0	-	-	0	-
Peak Hour Factor	92	92	92	92	92	92	92	92	92	92	92	92
Heavy Vehicles, %	2	2	2	2	2	2	2	2	2	2	2	2
Mvmt Flow	190	1299	152	49	467	304	27	11	71	11	11	38

Major/Minor	Major1			Major2			Minor1			Minor2		
Conflicting Flow All	771	0	0	1451	0	0	2092	2624	726	1752	2548	386
Stage 1	-	-	-	-	-	-	1755	1755	-	717	717	-
Stage 2	-	-	-	-	-	-	337	869	-	1035	1831	-
Critical Hdwy	4.14	-	-	4.14	-	-	7.54	6.54	6.94	7.54	6.54	6.94
Critical Hdwy Stg 1	-	-	-	-	-	-	6.54	5.54	-	6.54	5.54	-
Critical Hdwy Stg 2	-	-	-	-	-	-	6.54	5.54	-	6.54	5.54	-
Follow-up Hdwy	2.22	-	-	2.22	-	-	3.52	4.02	3.32	3.52	4.02	3.32
Pot Cap-1 Maneuver	1002	-	-	792	-	-	*138	22	*580	*393	29	*919
Stage 1	-	-	-	-	-	-	*219	241	-	*573	558	-
Stage 2	-	-	-	-	-	-	*867	464	-	*547	207	-
Platoon blocked, %	1	-	-	1	-	-	1	1	1	1	1	1
Mov Cap-1 Maneuver	1002	-	-	792	-	-	*99	17	*580	*260	22	*919
Mov Cap-2 Maneuver	-	-	-	-	-	-	*152	107	-	*279	94	-
Stage 1	-	-	-	-	-	-	*178	195	-	*464	523	-
Stage 2	-	-	-	-	-	-	*763	435	-	*368	168	-

Approach	EB	WB	NB	SB
HCM Control Delay, s	1.1	0.6	21.7	18.6
HCM LOS			C	C

Minor Lane/Major Mvmt	NBLn1	NBLn2	EBL	EBT	EBR	WBL	WBT	WBR	SBLn1	SBLn2
Capacity (veh/h)	152	365	1002	-	-	792	-	-	279	311
HCM Lane V/C Ratio	0.179	0.223	0.19	-	-	0.062	-	-	0.039	0.157
HCM Control Delay (s)	33.8	17.7	9.4	-	-	9.8	-	-	18.4	18.7
HCM Lane LOS	D	C	A	-	-	A	-	-	C	C
HCM 95th %tile Q(veh)	0.6	0.8	0.7	-	-	0.2	-	-	0.1	0.6

Notes

~: Volume exceeds capacity $: Delay exceeds 300s +: Computation Not Defined *: All major volume in platoon

Intersection	
Int Delay, s/veh	4.2

Movement	EBL	EBT	EBR	WBL	WBT	WBR	NBL	NBT	NBR	SBL	SBT	SBR
Lane Configurations												
Traffic Vol, veh/h	35	340	65	45	1205	55	85	10	95	40	10	205
Future Vol, veh/h	35	340	65	45	1205	55	85	10	95	40	10	205
Conflicting Peds, #/hr	0	0	0	0	0	0	0	0	0	0	0	0
Sign Control	Free	Free	Free	Free	Free	Free	Stop	Stop	Stop	Stop	Stop	Stop
RT Channelized	-	-	None	-	-	None	-	-	None	-	-	None
Storage Length	100	-	-	100	-	-	100	-	-	100	-	-
Veh in Median Storage, #	-	0	-	-	0	-	-	1	-	-	1	-
Grade, %	-	0	-	-	0	-	-	0	-	-	0	-
Peak Hour Factor	92	92	92	92	92	92	92	92	92	92	92	92
Heavy Vehicles, %	2	2	2	2	2	2	2	2	2	2	2	2
Mvmt Flow	38	370	71	49	1310	60	92	11	103	43	11	223

Major/Minor	Major1			Major2			Minor1			Minor2		
Conflicting Flow All	1370	0	0	441	0	0	1241	1950	221	1705	1955	685
Stage 1	-	-	-	-	-	-	482	482	-	1438	1438	-
Stage 2	-	-	-	-	-	-	759	1468	-	267	517	-
Critical Hdwy	4.14	-	-	4.14	-	-	7.54	6.54	6.94	7.54	6.54	6.94
Critical Hdwy Stg 1	-	-	-	-	-	-	6.54	5.54	-	6.54	5.54	-
Critical Hdwy Stg 2	-	-	-	-	-	-	6.54	5.54	-	6.54	5.54	-
Follow-up Hdwy	2.22	-	-	2.22	-	-	3.52	4.02	3.32	3.52	4.02	3.32
Pot Cap-1 Maneuver	*868	-	-	1323	-	-	*131	64	*952	*59	63	*580
Stage 1	-	-	-	-	-	-	*751	689	-	*489	441	-
Stage 2	-	-	-	-	-	-	*547	417	-	*897	662	-
Platoon blocked, %	1	-	-	1	-	-			1			1
Mov Cap-1 Maneuver	*868	-	-	1323	-	-	*~ 73	59	*952	*48	58	*580
Mov Cap-2 Maneuver	-	-	-	-	-	-	*209	238	-	*277	250	-
Stage 1	-	-	-	-	-	-	*718	659	-	*467	425	-
Stage 2	-	-	-	-	-	-	*316	402	-	*752	633	-

Approach	EB	WB	NB	SB
HCM Control Delay, s	0.7	0.3	21.7	17
HCM LOS			C	C

Minor Lane/Major Mvmt	NBLn1	NBLn2	EBL	EBT	EBR	WBL	WBT	WBR	SBLn1	SBLn2
Capacity (veh/h)	209	740	* 868	-	-	1323	-	-	277	546
HCM Lane V/C Ratio	0.442	0.154	0.044	-	-	0.037	-	-	0.157	0.428
HCM Control Delay (s)	35.2	10.8	9.3	-	-	7.8	-	-	20.4	16.4
HCM Lane LOS	E	B	A	-	-	A	-	-	C	C
HCM 95th %tile Q(veh)	2.1	0.5	0.1	-	-	0.1	-	-	0.5	2.1

Notes

~: Volume exceeds capacity $: Delay exceeds 300s +: Computation Not Defined *: All major volume in platoon

Intersection	
Int Delay, s/veh	1.5

Movement	EBT	EBR	WBL	WBT	NBL	NBR
Lane Configurations						
Traffic Vol, veh/h	848	50	29	292	9	46
Future Vol, veh/h	848	50	29	292	9	46
Conflicting Peds, #/hr	0	0	0	0	0	0
Sign Control	Free	Free	Free	Free	Stop	Stop
RT Channelized	-	None	-	None	-	None
Storage Length	-	-	-	-	100	0
Veh in Median Storage, #	0	-	-	0	0	-
Grade, %	0	-	-	0	0	-
Peak Hour Factor	90	69	72	82	56	57
Heavy Vehicles, %	2	2	2	2	2	2
Mvmt Flow	942	72	40	356	16	81

Major/Minor	Major1		Major2		Minor1	
Conflicting Flow All	0	0	1014	0	1236	978
Stage 1	-	-	-	-	978	-
Stage 2	-	-	-	-	258	-
Critical Hdwy	-	-	4.13	-	6.63	6.23
Critical Hdwy Stg 1	-	-	-	-	5.43	-
Critical Hdwy Stg 2	-	-	-	-	5.83	-
Follow-up Hdwy	-	-	2.219	-	3.519	3.319
Pot Cap-1 Maneuver	-	-	*548	-	*345	*366
Stage 1	-	-	-	-	*345	-
Stage 2	-	-	-	-	*762	-
Platoon blocked, %	-	-	1	-	1	1
Mov Cap-1 Maneuver	-	-	*548	-	*314	*366
Mov Cap-2 Maneuver	-	-	-	-	*314	-
Stage 1	-	-	-	-	*345	-
Stage 2	-	-	-	-	*693	-

Approach	EB	WB	NB
HCM Control Delay, s	0	1.6	17.5
HCM LOS			C

Minor Lane/Major Mvmt	NBLn1	NBLn2	EBT	EBR	WBL	WBT
Capacity (veh/h)	314	366	-	-	* 548	-
HCM Lane V/C Ratio	0.051	0.22	-	-	0.073	-
HCM Control Delay (s)	17.1	17.6	-	-	12.1	0.4
HCM Lane LOS	C	C	-	-	B	A
HCM 95th %tile Q(veh)	0.2	0.8	-	-	0.2	-

Notes

~: Volume exceeds capacity $: Delay exceeds 300s +: Computation Not Defined *: All major volume in platoon

Intersection	
Int Delay, s/veh	2.2

Movement	EBT	EBR	WBL	WBT	NBL	NBR
Lane Configurations						
Traffic Vol, veh/h	249	31	28	818	70	122
Future Vol, veh/h	249	31	28	818	70	122
Conflicting Peds, #/hr	0	0	0	0	0	0
Sign Control	Free	Free	Free	Free	Stop	Stop
RT Channelized	-	None	-	None	-	None
Storage Length	-	-	-	-	100	0
Veh in Median Storage, #	0	-	-	0	0	-
Grade, %	0	-	-	0	0	-
Peak Hour Factor	89	86	70	97	73	82
Heavy Vehicles, %	2	2	2	2	2	2
Mvmt Flow	280	36	40	843	96	149

Major/Minor	Major1		Major2		Minor1	
Conflicting Flow All	0	0	316	0	800	298
Stage 1	-	-	-	-	298	-
Stage 2	-	-	-	-	502	-
Critical Hdwy	-	-	4.13	-	6.63	6.23
Critical Hdwy Stg 1	-	-	-	-	5.43	-
Critical Hdwy Stg 2	-	-	-	-	5.83	-
Follow-up Hdwy	-	-	2.219	-	3.519	3.319
Pot Cap-1 Maneuver	-	-	*1328	-	*546	*887
Stage 1	-	-	-	-	*837	-
Stage 2	-	-	-	-	*574	-
Platoon blocked, %	-	-	1	-	1	1
Mov Cap-1 Maneuver	-	-	*1328	-	*515	*887
Mov Cap-2 Maneuver	-	-	-	-	*515	-
Stage 1	-	-	-	-	*837	-
Stage 2	-	-	-	-	*541	-

Approach	EB	WB	NB
HCM Control Delay, s	0	0.5	11.4
HCM LOS			B

Minor Lane/Major Mvmt	NBLn1	NBLn2	EBT	EBR	WBL	WBT
Capacity (veh/h)	515	887	-	-	* 1328	-
HCM Lane V/C Ratio	0.186	0.168	-	-	0.03	-
HCM Control Delay (s)	13.6	9.9	-	-	7.8	0.2
HCM Lane LOS	B	A	-	-	A	A
HCM 95th %tile Q(veh)	0.7	0.6	-	-	0.1	-

Notes

~: Volume exceeds capacity $: Delay exceeds 300s +: Computation Not Defined *: All major volume in platoon

Intersection	
Int Delay, s/veh	1.5

Movement	EBT	EBR	WBL	WBT	NBL	NBR
Lane Configurations	↑	↱	↰	↑	↰	↱
Traffic Vol, veh/h	870	50	35	345	10	50
Future Vol, veh/h	870	50	35	345	10	50
Conflicting Peds, #/hr	0	0	0	0	0	0
Sign Control	Free	Free	Free	Free	Stop	Stop
RT Channelized	-	None	-	None	-	None
Storage Length	-	0	100	-	100	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	946	54	38	375	11	54

Major/Minor	Major1		Major2		Minor1	
Conflicting Flow All	0	0	1000	0	1397	946
Stage 1	-	-	-	-	946	-
Stage 2	-	-	-	-	451	-
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	-	-	*518	-	*66	*346
Stage 1	-	-	-	-	*327	-
Stage 2	-	-	-	-	*701	-
Platoon blocked, %	-	-	1	-	1	1
Mov Cap-1 Maneuver	-	-	*518	-	*61	*346
Mov Cap-2 Maneuver	-	-	-	-	*61	-
Stage 1	-	-	-	-	*327	-
Stage 2	-	-	-	-	*650	-

Approach	EB	WB	NB
HCM Control Delay, s	0	1.2	27.2
HCM LOS			D

Minor Lane/Major Mvmt	NBLn1	NBLn2	EBT	EBR	WBL	WBT
Capacity (veh/h)	61	346	-	-	* 518	-
HCM Lane V/C Ratio	0.178	0.157	-	-	0.073	-
HCM Control Delay (s)	76.4	17.3	-	-	12.5	-
HCM Lane LOS	F	C	-	-	B	-
HCM 95th %tile Q(veh)	0.6	0.6	-	-	0.2	-

Notes

~: Volume exceeds capacity $: Delay exceeds 300s +: Computation Not Defined *: All major volume in platoon

Intersection	
Int Delay, s/veh	3.1

Movement	EBT	EBR	WBL	WBT	NBL	NBR
Lane Configurations	↑	↱	↰	↑	↰	↱
Traffic Vol, veh/h	265	35	30	840	70	125
Future Vol, veh/h	265	35	30	840	70	125
Conflicting Peds, #/hr	0	0	0	0	0	0
Sign Control	Free	Free	Free	Free	Stop	Stop
RT Channelized	-	None	-	None	-	None
Storage Length	-	0	100	-	100	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	288	38	33	913	76	136

Major/Minor	Major1		Major2		Minor1	
Conflicting Flow All	0	0	326	0	1267	288
Stage 1	-	-	-	-	288	-
Stage 2	-	-	-	-	979	-
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	-	-	1263	-	*186	*869
Stage 1	-	-	-	-	*820	-
Stage 2	-	-	-	-	*351	-
Platoon blocked, %	-	-	1	-		1
Mov Cap-1 Maneuver	-	-	1263	-	*181	*869
Mov Cap-2 Maneuver	-	-	-	-	*181	-
Stage 1	-	-	-	-	*820	-
Stage 2	-	-	-	-	*342	-

Approach	EB	WB	NB
HCM Control Delay, s	0	0.3	20.2
HCM LOS			C

Minor Lane/Major Mvmt	NBLn1	NBLn2	EBT	EBR	WBL	WBT
Capacity (veh/h)	181	869	-	-	1263	-
HCM Lane V/C Ratio	0.42	0.156	-	-	0.026	-
HCM Control Delay (s)	38.6	9.9	-	-	7.9	-
HCM Lane LOS	E	A	-	-	A	-
HCM 95th %tile Q(veh)	1.9	0.6	-	-	0.1	-

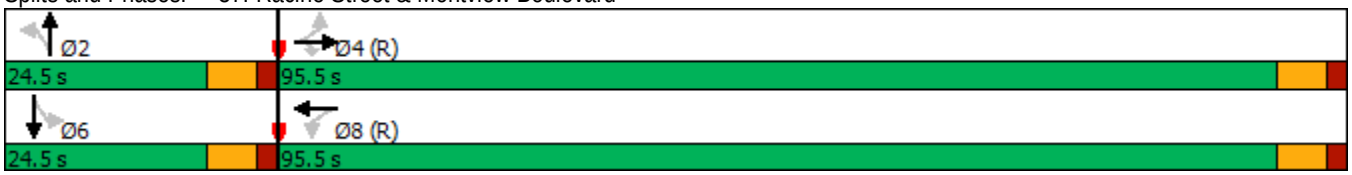
Notes

~: Volume exceeds capacity $: Delay exceeds 300s +: Computation Not Defined *: All major volume in platoon

Lane Group	EBL	EBT	EBR	WBL	WBT	NBL	NBT	SBL	SBT
Lane Configurations									
Traffic Volume (vph)	70	1145	55	40	730	20	20	45	10
Future Volume (vph)	70	1145	55	40	730	20	20	45	10
Turn Type	Perm	NA	Perm	Perm	NA	Perm	NA	Perm	NA
Protected Phases		4			8		2		6
Permitted Phases	4		4	8		2		6	
Detector Phase	4	4	4	8	8	2	2	6	6
Switch Phase									
Minimum Initial (s)	5.0	5.0	5.0	5.0	5.0	5.0	5.0	5.0	5.0
Minimum Split (s)	24.5	24.5	24.5	24.5	24.5	24.5	24.5	24.5	24.5
Total Split (s)	95.5	95.5	95.5	95.5	95.5	24.5	24.5	24.5	24.5
Total Split (%)	79.6%	79.6%	79.6%	79.6%	79.6%	20.4%	20.4%	20.4%	20.4%
Yellow Time (s)	4.5	4.5	4.5	4.5	4.5	4.5	4.5	4.5	4.5
All-Red Time (s)	2.0	2.0	2.0	2.0	2.0	2.0	2.0	2.0	2.0
Lost Time Adjust (s)	0.0	0.0	0.0	0.0	0.0	0.0	0.0	0.0	0.0
Total Lost Time (s)	6.5	6.5	6.5	6.5	6.5	6.5	6.5	6.5	6.5
Lead/Lag									
Lead-Lag Optimize?									
Recall Mode	C-Max	C-Max	C-Max	C-Max	C-Max	Max	Max	None	None
Act Effct Green (s)	89.0	89.0	89.0	89.0	89.0	18.0	18.0	18.0	18.0
Actuated g/C Ratio	0.74	0.74	0.74	0.74	0.74	0.15	0.15	0.15	0.15
v/c Ratio	0.22	0.90	0.05	0.45	0.65	0.11	0.30	0.25	0.08
Control Delay	6.6	27.8	1.8	23.2	16.6	45.6	18.3	49.0	29.4
Queue Delay	0.0	8.1	0.0	0.0	0.0	0.0	0.7	1.1	0.0
Total Delay	6.6	35.8	1.8	23.2	16.6	45.6	19.0	50.1	29.4
LOS	A	D	A	C	B	D	B	D	C
Approach Delay		32.7			16.9		24.1		43.7
Approach LOS		C			B		C		D

Intersection Summary	
Cycle Length: 120	
Actuated Cycle Length: 120	
Offset: 0 (0%), Referenced to phase 4:EBTL and 8:WBTL, Start of Green	
Natural Cycle: 90	
Control Type: Actuated-Coordinated	
Maximum v/c Ratio: 0.90	
Intersection Signal Delay: 26.8	Intersection LOS: C
Intersection Capacity Utilization 80.3%	ICU Level of Service D
Analysis Period (min) 15	

Splits and Phases: 37: Racine Street & Montview Boulevard



Movement	EBL	EBT	EBR	WBL	WBT	WBR	NBL	NBT	NBR	SBL	SBT	SBR
Lane Configurations												
Traffic Volume (veh/h)	70	1145	55	40	730	85	20	20	65	45	10	10
Future Volume (veh/h)	70	1145	55	40	730	85	20	20	65	45	10	10
Initial Q (Qb), veh	0	0	0	0	0	0	0	0	0	0	0	0
Ped-Bike Adj(A_pbT)	1.00		1.00	1.00		1.00	1.00		1.00	1.00		1.00
Parking Bus, Adj	1.00	1.00	1.00	1.00	1.00	1.00	1.00	1.00	1.00	1.00	1.00	1.00
Work Zone On Approach		No			No			No			No	
Adj Sat Flow, veh/h/ln	1870	1870	1870	1870	1870	1870	1870	1870	1870	1870	1870	1870
Adj Flow Rate, veh/h	76	1245	60	43	793	92	22	22	49	49	11	11
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
Percent Heavy Veh, %	2	2	2	2	2	2	2	2	2	2	2	2
Cap, veh/h	301	1387	1176	340	1220	142	253	77	172	209	129	129
Arrive On Green	0.99	0.99	0.99	0.50	0.50	0.50	0.15	0.15	0.15	0.15	0.15	0.15
Sat Flow, veh/h	628	1870	1585	422	1645	191	1390	516	1148	1329	858	858
Grp Volume(v), veh/h	76	1245	60	43	0	885	22	0	71	49	0	22
Grp Sat Flow(s),veh/h/ln	628	1870	1585	422	0	1836	1390	0	1664	1329	0	1716
Q Serve(g_s), s	8.5	9.5	0.1	7.3	0.0	43.0	1.7	0.0	4.5	4.1	0.0	1.3
Cycle Q Clear(g_c), s	51.5	9.5	0.1	16.8	0.0	43.0	3.0	0.0	4.5	8.6	0.0	1.3
Prop In Lane	1.00		1.00	1.00		0.10	1.00		0.69	1.00		0.50
Lane Grp Cap(c), veh/h	301	1387	1176	340	0	1362	253	0	250	209	0	257
V/C Ratio(X)	0.25	0.90	0.05	0.13	0.00	0.65	0.09	0.00	0.28	0.23	0.00	0.09
Avail Cap(c_a), veh/h	301	1387	1176	340	0	1362	253	0	250	209	0	257
HCM Platoon Ratio	1.33	1.33	1.33	0.67	0.67	0.67	1.00	1.00	1.00	1.00	1.00	1.00
Upstream Filter(I)	1.00	1.00	1.00	1.00	0.00	1.00	1.00	0.00	1.00	1.00	0.00	1.00
Uniform Delay (d), s/veh	13.1	0.3	0.2	14.8	0.0	18.6	45.2	0.0	45.3	49.1	0.0	43.9
Incr Delay (d2), s/veh	2.0	9.4	0.1	0.8	0.0	2.4	0.7	0.0	2.8	0.6	0.0	0.1
Initial Q Delay(d3),s/veh	0.0	0.0	0.0	0.0	0.0	0.0	0.0	0.0	0.0	0.0	0.0	0.0
%ile BackOfQ(50%),veh/ln	1.3	4.0	0.0	0.8	0.0	20.3	0.6	0.0	2.1	1.4	0.0	0.6
Unsig. Movement Delay, s/veh												
LnGrp Delay(d),s/veh	15.1	9.7	0.3	15.6	0.0	21.0	45.9	0.0	48.1	49.7	0.0	44.1
LnGrp LOS	B	A	A	B	A	C	D	A	D	D	A	D
Approach Vol, veh/h		1381			928			93			71	
Approach Delay, s/veh		9.6			20.8			47.6			47.9	
Approach LOS		A			C			D			D	

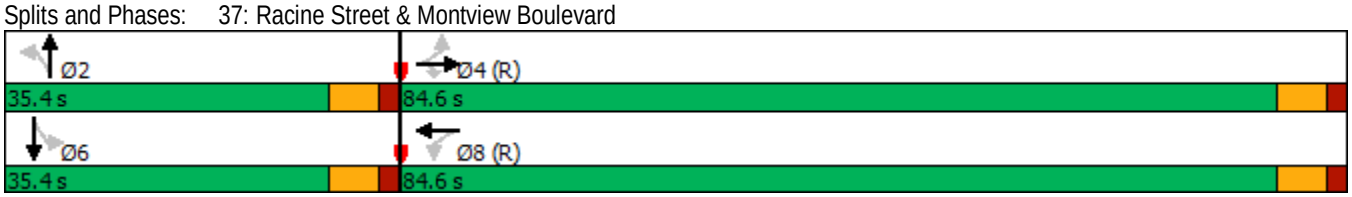
Timer - Assigned Phs		2		4		6		8				
Phs Duration (G+Y+Rc), s		24.5		95.5		24.5		95.5				
Change Period (Y+Rc), s		6.5		6.5		6.5		6.5				
Max Green Setting (Gmax), s		18.0		89.0		18.0		89.0				
Max Q Clear Time (g_c+I1), s		6.5		53.5		10.6		45.0				
Green Ext Time (p_c), s		0.3		18.1		0.1		10.0				

Intersection Summary												
HCM 6th Ctrl Delay			16.3									
HCM 6th LOS			B									

Lane Group	EBL	EBT	EBR	WBL	WBT	NBL	NBT	SBL	SBT
Lane Configurations									
Traffic Volume (vph)	15	425	40	45	1175	75	10	270	25
Future Volume (vph)	15	425	40	45	1175	75	10	270	25
Turn Type	Perm	NA	Perm	Perm	NA	Perm	NA	Perm	NA
Protected Phases		4			8		2		6
Permitted Phases	4		4	8		2		6	
Detector Phase	4	4	4	8	8	2	2	6	6
Switch Phase									
Minimum Initial (s)	5.0	5.0	5.0	5.0	5.0	5.0	5.0	5.0	5.0
Minimum Split (s)	24.5	24.5	24.5	24.5	24.5	24.5	24.5	24.5	24.5
Total Split (s)	84.6	84.6	84.6	84.6	84.6	35.4	35.4	35.4	35.4
Total Split (%)	70.5%	70.5%	70.5%	70.5%	70.5%	29.5%	29.5%	29.5%	29.5%
Yellow Time (s)	4.5	4.5	4.5	4.5	4.5	4.5	4.5	4.5	4.5
All-Red Time (s)	2.0	2.0	2.0	2.0	2.0	2.0	2.0	2.0	2.0
Lost Time Adjust (s)	0.0	0.0	0.0	0.0	0.0	0.0	0.0	0.0	0.0
Total Lost Time (s)	6.5	6.5	6.5	6.5	6.5	6.5	6.5	6.5	6.5
Lead/Lag									
Lead-Lag Optimize?									
Recall Mode	C-Max	C-Max	C-Max	C-Max	C-Max	Max	Max	None	None
Act Effct Green (s)	78.1	78.1	78.1	78.1	78.1	28.9	28.9	28.9	28.9
Actuated g/C Ratio	0.65	0.65	0.65	0.65	0.65	0.24	0.24	0.24	0.24
v/c Ratio	0.26	0.38	0.04	0.09	1.08	0.26	0.31	1.06	0.18
Control Delay	21.7	10.8	2.3	9.7	63.8	39.6	9.1	115.5	16.1
Queue Delay	0.0	0.0	0.0	0.0	0.0	0.0	0.0	0.0	0.0
Total Delay	21.7	10.8	2.3	9.7	63.8	39.6	9.1	115.5	16.1
LOS	C	B	A	A	E	D	A	F	B
Approach Delay		10.5			61.8		19.8		94.0
Approach LOS		B			E		B		F

Intersection Summary	
Cycle Length: 120	
Actuated Cycle Length: 120	
Offset: 0 (0%), Referenced to phase 4:EBTL and 8:WBTL, Start of Green	
Natural Cycle: 140	
Control Type: Actuated-Coordinated	
Maximum v/c Ratio: 1.08	
Intersection Signal Delay: 51.9	Intersection LOS: D
Intersection Capacity Utilization 102.8%	ICU Level of Service G
Analysis Period (min) 15	

Splits and Phases: 37: Racine Street & Montview Boulevard



Movement	EBL	EBT	EBR	WBL	WBT	WBR	NBL	NBT	NBR	SBL	SBT	SBR
Lane Configurations												
Traffic Volume (veh/h)	15	425	40	45	1175	20	75	10	130	270	25	50
Future Volume (veh/h)	15	425	40	45	1175	20	75	10	130	270	25	50
Initial Q (Qb), veh	0	0	0	0	0	0	0	0	0	0	0	0
Ped-Bike Adj(A_pbT)	1.00		1.00	1.00		1.00	1.00		1.00	1.00		1.00
Parking Bus, Adj	1.00	1.00	1.00	1.00	1.00	1.00	1.00	1.00	1.00	1.00	1.00	1.00
Work Zone On Approach		No			No			No			No	
Adj Sat Flow, veh/h/ln	1870	1870	1870	1870	1870	1870	1870	1870	1870	1870	1870	1870
Adj Flow Rate, veh/h	16	462	43	49	1277	17	82	11	87	293	27	54
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
Percent Heavy Veh, %	2	2	2	2	2	2	2	2	2	2	2	2
Cap, veh/h	94	1217	1032	539	1198	16	326	44	345	309	134	268
Arrive On Green	0.65	0.65	0.65	1.00	1.00	1.00	0.24	0.24	0.24	0.24	0.24	0.24
Sat Flow, veh/h	426	1870	1585	894	1841	25	1317	181	1432	1297	557	1113
Grp Volume(v), veh/h	16	462	43	49	0	1294	82	0	98	293	0	81
Grp Sat Flow(s),veh/h/ln	426	1870	1585	894	0	1866	1317	0	1613	1297	0	1670
Q Serve(g_s), s	4.3	13.7	1.2	1.3	0.0	68.6	6.4	0.0	5.9	23.0	0.0	4.6
Cycle Q Clear(g_c), s	72.9	13.7	1.2	15.0	0.0	68.6	11.0	0.0	5.9	28.9	0.0	4.6
Prop In Lane	1.00		1.00	1.00		0.01	1.00		0.89	1.00		0.67
Lane Grp Cap(c), veh/h	94	1217	1032	539	0	1214	326	0	388	309	0	402
V/C Ratio(X)	0.17	0.38	0.04	0.09	0.00	1.07	0.25	0.00	0.25	0.95	0.00	0.20
Avail Cap(c_a), veh/h	94	1217	1032	539	0	1214	326	0	388	309	0	402
HCM Platoon Ratio	1.00	1.00	1.00	2.00	2.00	2.00	1.00	1.00	1.00	1.00	1.00	1.00
Upstream Filter(I)	1.00	1.00	1.00	1.00	0.00	1.00	1.00	0.00	1.00	1.00	0.00	1.00
Uniform Delay (d), s/veh	52.9	9.7	7.5	1.3	0.0	0.0	40.7	0.0	36.8	50.2	0.0	36.3
Incr Delay (d2), s/veh	3.9	0.9	0.1	0.3	0.0	45.2	1.8	0.0	1.6	37.8	0.0	0.2
Initial Q Delay(d3),s/veh	0.0	0.0	0.0	0.0	0.0	0.0	0.0	0.0	0.0	0.0	0.0	0.0
%ile BackOfQ(50%),veh/ln	0.6	5.7	0.4	0.1	0.0	15.3	2.2	0.0	2.5	12.2	0.0	1.9
Unsig. Movement Delay, s/veh												
LnGrp Delay(d),s/veh	56.8	10.6	7.6	1.7	0.0	45.2	42.6	0.0	38.4	88.0	0.0	36.6
LnGrp LOS	E	B	A	A	A	F	D	A	D	F	A	D
Approach Vol, veh/h		521			1343			180			374	
Approach Delay, s/veh		11.8			43.6			40.3			76.9	
Approach LOS		B			D			D			E	

Timer - Assigned Phs	2	4	6	8
Phs Duration (G+Y+Rc), s	35.4	84.6	35.4	84.6
Change Period (Y+Rc), s	6.5	6.5	6.5	6.5
Max Green Setting (Gmax), s	28.9	78.1	28.9	78.1
Max Q Clear Time (g_c+I1), s	13.0	74.9	30.9	70.6
Green Ext Time (p_c), s	0.7	1.0	0.0	5.9

Intersection Summary	
HCM 6th Ctrl Delay	41.7
HCM 6th LOS	D

Intersection	
Int Delay, s/veh	0.3

Movement	EBT	EBR	WBL	WBT	NBL	NBR
Lane Configurations						
Traffic Vol, veh/h	820	95	5	380	0	25
Future Vol, veh/h	820	95	5	380	0	25
Conflicting Peds, #/hr	0	0	0	0	0	0
Sign Control	Free	Free	Free	Free	Stop	Stop
RT Channelized	-	None	-	None	-	None
Storage Length	-	-	100	-	-	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	891	103	5	413	0	27

Major/Minor	Major1		Major2		Minor1	
Conflicting Flow All	0	0	994	0	-	943
Stage 1	-	-	-	-	-	-
Stage 2	-	-	-	-	-	-
Critical Hdwy	-	-	4.12	-	-	6.22
Critical Hdwy Stg 1	-	-	-	-	-	-
Critical Hdwy Stg 2	-	-	-	-	-	-
Follow-up Hdwy	-	-	2.218	-	-	3.318
Pot Cap-1 Maneuver	-	-	538	-	0	*398
Stage 1	-	-	-	-	0	-
Stage 2	-	-	-	-	0	-
Platoon blocked, %	-	-	1	-		1
Mov Cap-1 Maneuver	-	-	538	-	-	*398
Mov Cap-2 Maneuver	-	-	-	-	-	-
Stage 1	-	-	-	-	-	-
Stage 2	-	-	-	-	-	-

Approach	EB	WB	NB
HCM Control Delay, s	0	0.2	14.7
HCM LOS			B

Minor Lane/Major Mvmt	NBLn1	EBT	EBR	WBL	WBT
Capacity (veh/h)	398	-	-	538	-
HCM Lane V/C Ratio	0.068	-	-	0.01	-
HCM Control Delay (s)	14.7	-	-	11.8	-
HCM Lane LOS	B	-	-	B	-
HCM 95th %tile Q(veh)	0.2	-	-	0	-

Notes

~: Volume exceeds capacity $: Delay exceeds 300s +: Computation Not Defined *: All major volume in platoon

Intersection	
Int Delay, s/veh	0.4

Movement	EBT	EBR	WBL	WBT	NBL	NBR
Lane Configurations						
Traffic Vol, veh/h	345	35	5	860	0	50
Future Vol, veh/h	345	35	5	860	0	50
Conflicting Peds, #/hr	0	0	0	0	0	0
Sign Control	Free	Free	Free	Free	Stop	Stop
RT Channelized	-	None	-	None	-	None
Storage Length	-	-	100	-	-	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	375	38	5	935	0	54

Major/Minor	Major1		Major2		Minor1	
Conflicting Flow All	0	0	413	0	-	394
Stage 1	-	-	-	-	-	-
Stage 2	-	-	-	-	-	-
Critical Hdwy	-	-	4.12	-	-	6.22
Critical Hdwy Stg 1	-	-	-	-	-	-
Critical Hdwy Stg 2	-	-	-	-	-	-
Follow-up Hdwy	-	-	2.218	-	-	3.318
Pot Cap-1 Maneuver	-	-	1146	-	0	655
Stage 1	-	-	-	-	0	-
Stage 2	-	-	-	-	0	-
Platoon blocked, %	-	-		-		
Mov Cap-1 Maneuver	-	-	1146	-	-	655
Mov Cap-2 Maneuver	-	-	-	-	-	-
Stage 1	-	-	-	-	-	-
Stage 2	-	-	-	-	-	-

Approach	EB	WB	NB
HCM Control Delay, s	0	0	11
HCM LOS			B

Minor Lane/Major Mvmt	NBLn1	EBT	EBR	WBL	WBT
Capacity (veh/h)	655	-	-	1146	-
HCM Lane V/C Ratio	0.083	-	-	0.005	-
HCM Control Delay (s)	11	-	-	8.2	-
HCM Lane LOS	B	-	-	A	-
HCM 95th %tile Q(veh)	0.3	-	-	0	-

Intersection	
Int Delay, s/veh	1.1

Movement	EBL	EBT	EBR	WBL	WBT	WBR	NBL	NBT	NBR	SBL	SBT	SBR
Lane Configurations												
Traffic Vol, veh/h	95	1055	95	10	840	115	0	0	25	0	0	20
Future Vol, veh/h	95	1055	95	10	840	115	0	0	25	0	0	20
Conflicting Peds, #/hr	0	0	0	0	0	0	0	0	0	0	0	0
Sign Control	Free	Free	Free	Free	Free	Free	Stop	Stop	Stop	Stop	Stop	Stop
RT Channelized	-	-	None	-	-	None	-	-	None	-	-	None
Storage Length	100	-	-	100	-	-	-	-	0	-	-	0
Veh in Median Storage, #	-	0	-	-	0	-	-	0	-	-	1	-
Grade, %	-	0	-	-	0	-	-	0	-	-	0	-
Peak Hour Factor	92	92	92	92	92	92	92	92	92	92	92	92
Heavy Vehicles, %	2	2	2	2	2	2	2	2	2	2	2	2
Mvmt Flow	103	1147	103	11	913	125	0	0	27	0	0	22

Major/Minor	Major1			Major2			Minor1			Minor2		
Conflicting Flow All	1038	0	0	1250	0	0	-	-	1199	-	-	976
Stage 1	-	-	-	-	-	-	-	-	-	-	-	-
Stage 2	-	-	-	-	-	-	-	-	-	-	-	-
Critical Hdwy	4.12	-	-	4.12	-	-	-	-	6.22	-	-	6.22
Critical Hdwy Stg 1	-	-	-	-	-	-	-	-	-	-	-	-
Critical Hdwy Stg 2	-	-	-	-	-	-	-	-	-	-	-	-
Follow-up Hdwy	2.218	-	-	2.218	-	-	-	-	3.318	-	-	3.318
Pot Cap-1 Maneuver	490	-	-	267	-	-	0	0	*190	0	0	*372
Stage 1	-	-	-	-	-	-	0	0	-	0	0	-
Stage 2	-	-	-	-	-	-	0	0	-	0	0	-
Platoon blocked, %	1	-	-	1	-	-			1			1
Mov Cap-1 Maneuver	490	-	-	267	-	-	-	-	*190	-	-	*372
Mov Cap-2 Maneuver	-	-	-	-	-	-	-	-	-	-	-	-
Stage 1	-	-	-	-	-	-	-	-	-	-	-	-
Stage 2	-	-	-	-	-	-	-	-	-	-	-	-

Approach	EB	WB	NB	SB
HCM Control Delay, s	1.1	0.2	27.1	15.3
HCM LOS			D	C

Minor Lane/Major Mvmt	NBLn1	EBL	EBT	EBR	WBL	WBT	WBR	SBLn1
Capacity (veh/h)	190	490	-	-	267	-	-	372
HCM Lane V/C Ratio	0.143	0.211	-	-	0.041	-	-	0.058
HCM Control Delay (s)	27.1	14.3	-	-	19.1	-	-	15.3
HCM Lane LOS	D	B	-	-	C	-	-	C
HCM 95th %tile Q(veh)	0.5	0.8	-	-	0.1	-	-	0.2

Notes

~: Volume exceeds capacity $: Delay exceeds 300s +: Computation Not Defined *: All major volume in platoon

Intersection	
Int Delay, s/veh	2.5

Movement	EBL	EBT	EBR	WBL	WBT	WBR	NBL	NBT	NBR	SBL	SBT	SBR
Lane Configurations												
Traffic Vol, veh/h	20	760	35	10	1120	25	0	0	50	0	0	105
Future Vol, veh/h	20	760	35	10	1120	25	0	0	50	0	0	105
Conflicting Peds, #/hr	0	0	0	0	0	0	0	0	0	0	0	0
Sign Control	Free	Free	Free	Free	Free	Free	Stop	Stop	Stop	Stop	Stop	Stop
RT Channelized	-	-	None	-	-	None	-	-	None	-	-	None
Storage Length	100	-	-	100	-	-	-	-	0	-	-	0
Veh in Median Storage, #	-	0	-	-	0	-	-	0	-	-	1	-
Grade, %	-	0	-	-	0	-	-	0	-	-	0	-
Peak Hour Factor	92	92	92	92	92	92	92	92	92	92	92	92
Heavy Vehicles, %	2	2	2	2	2	2	2	2	2	2	2	2
Mvmt Flow	22	826	38	11	1217	27	0	0	54	0	0	114

Major/Minor	Major1			Major2			Minor1			Minor2		
Conflicting Flow All	1244	0	0	864	0	0	-	-	845	-	-	1231
Stage 1	-	-	-	-	-	-	-	-	-	-	-	-
Stage 2	-	-	-	-	-	-	-	-	-	-	-	-
Critical Hdwy	4.12	-	-	4.12	-	-	-	-	6.22	-	-	6.22
Critical Hdwy Stg 1	-	-	-	-	-	-	-	-	-	-	-	-
Critical Hdwy Stg 2	-	-	-	-	-	-	-	-	-	-	-	-
Follow-up Hdwy	2.218	-	-	2.218	-	-	-	-	3.318	-	-	3.318
Pot Cap-1 Maneuver	560	-	-	779	-	-	0	0	363	0	0	216
Stage 1	-	-	-	-	-	-	0	0	-	0	0	-
Stage 2	-	-	-	-	-	-	0	0	-	0	0	-
Platoon blocked, %		-	-		-	-						
Mov Cap-1 Maneuver	560	-	-	779	-	-	-	-	363	-	-	216
Mov Cap-2 Maneuver	-	-	-	-	-	-	-	-	-	-	-	-
Stage 1	-	-	-	-	-	-	-	-	-	-	-	-
Stage 2	-	-	-	-	-	-	-	-	-	-	-	-

Approach	EB	WB	NB	SB
HCM Control Delay, s	0.3	0.1	16.7	38.9
HCM LOS			C	E

Minor Lane/Major Mvmt	NBLn1	EBL	EBT	EBR	WBL	WBT	WBR	SBLn1
Capacity (veh/h)	363	560	-	-	779	-	-	216
HCM Lane V/C Ratio	0.15	0.039	-	-	0.014	-	-	0.528
HCM Control Delay (s)	16.7	11.7	-	-	9.7	-	-	38.9
HCM Lane LOS	C	B	-	-	A	-	-	E
HCM 95th %tile Q(veh)	0.5	0.1	-	-	0	-	-	2.8

Intersection	
Int Delay, s/veh	1

Movement	EBL	EBT	EBR	WBL	WBT	WBR	NBL	NBT	NBR	SBL	SBT	SBR
Lane Configurations												
Traffic Vol, veh/h	35	516	143	38	310	16	0	0	1	3	0	33
Future Vol, veh/h	35	516	143	38	310	16	0	0	1	3	0	33
Conflicting Peds, #/hr	0	0	0	0	0	0	0	0	0	0	0	0
Sign Control	Free	Free	Free	Free	Free	Free	Stop	Stop	Stop	Stop	Stop	Stop
RT Channelized	-	-	None	-	-	None	-	-	None	-	-	None
Storage Length	75	-	-	50	-	-	-	-	25	-	-	-
Veh in Median Storage, #	-	0	-	-	0	-	-	0	-	-	0	-
Grade, %	-	0	-	-	0	-	-	0	-	-	0	-
Peak Hour Factor	90	90	90	94	94	94	92	92	25	90	90	90
Heavy Vehicles, %	2	2	2	2	2	2	2	2	2	2	2	2
Mvmt Flow	39	573	159	40	330	17	0	0	4	3	0	37

Major/Minor	Major1			Major2			Minor1			Minor2		
Conflicting Flow All	347	0	0	732	0	0	1168	1158	653	1152	1229	339
Stage 1	-	-	-	-	-	-	731	731	-	419	419	-
Stage 2	-	-	-	-	-	-	437	427	-	733	810	-
Critical Hdwy	4.12	-	-	4.12	-	-	7.12	6.52	6.22	7.12	6.52	6.22
Critical Hdwy Stg 1	-	-	-	-	-	-	6.12	5.52	-	6.12	5.52	-
Critical Hdwy Stg 2	-	-	-	-	-	-	6.12	5.52	-	6.12	5.52	-
Follow-up Hdwy	2.218	-	-	2.218	-	-	3.518	4.018	3.318	3.518	4.018	3.318
Pot Cap-1 Maneuver	1212	-	-	810	-	-	144	160	586	151	136	703
Stage 1	-	-	-	-	-	-	473	435	-	612	590	-
Stage 2	-	-	-	-	-	-	598	585	-	471	380	-
Platoon blocked, %		-	-	1	-	-	1	1	1	1	1	
Mov Cap-1 Maneuver	1212	-	-	810	-	-	129	147	586	141	125	703
Mov Cap-2 Maneuver	-	-	-	-	-	-	129	147	-	141	125	-
Stage 1	-	-	-	-	-	-	458	421	-	592	561	-
Stage 2	-	-	-	-	-	-	539	556	-	453	368	-

Approach	EB	WB	NB	SB
HCM Control Delay, s	0.4	1	11.2	12.4
HCM LOS			B	B

Minor Lane/Major Mvmt	NBLn1	NBLn2	EBL	EBT	EBR	WBL	WBT	WBR	SBLn1
Capacity (veh/h)	-	586	1212	-	-	810	-	-	528
HCM Lane V/C Ratio	-	0.007	0.032	-	-	0.05	-	-	0.076
HCM Control Delay (s)	0	11.2	8.1	-	-	9.7	-	-	12.4
HCM Lane LOS	A	B	A	-	-	A	-	-	B
HCM 95th %tile Q(veh)	-	0	0.1	-	-	0.2	-	-	0.2

Intersection	
Int Delay, s/veh	9

Movement	EBL	EBT	EBR	WBL	WBT	WBR	NBL	NBT	NBR	SBL	SBT	SBR
Lane Configurations												
Traffic Vol, veh/h	34	331	6	1	620	7	77	1	64	16	0	59
Future Vol, veh/h	34	331	6	1	620	7	77	1	64	16	0	59
Conflicting Peds, #/hr	0	0	0	0	0	0	0	0	0	0	0	0
Sign Control	Free	Free	Free	Free	Free	Free	Stop	Stop	Stop	Stop	Stop	Stop
RT Channelized	-	-	None	-	-	None	-	-	None	-	-	None
Storage Length	75	-	-	50	-	-	-	-	25	-	-	-
Veh in Median Storage, #	-	0	-	-	0	-	-	0	-	-	0	-
Grade, %	-	0	-	-	0	-	-	0	-	-	0	-
Peak Hour Factor	89	89	89	93	93	93	81	81	81	82	82	82
Heavy Vehicles, %	2	2	2	2	2	2	2	2	2	2	2	2
Mvmt Flow	38	372	7	1	667	8	95	1	79	20	0	72

Major/Minor	Major1			Major2			Minor1			Minor2		
Conflicting Flow All	675	0	0	379	0	0	1161	1129	376	1165	1128	671
Stage 1	-	-	-	-	-	-	452	452	-	673	673	-
Stage 2	-	-	-	-	-	-	709	677	-	492	455	-
Critical Hdwy	4.12	-	-	4.12	-	-	7.12	6.52	6.22	7.12	6.52	6.22
Critical Hdwy Stg 1	-	-	-	-	-	-	6.12	5.52	-	6.12	5.52	-
Critical Hdwy Stg 2	-	-	-	-	-	-	6.12	5.52	-	6.12	5.52	-
Follow-up Hdwy	2.218	-	-	2.218	-	-	3.518	4.018	3.318	3.518	4.018	3.318
Pot Cap-1 Maneuver	916	-	-	*1198	-	-	154	180	*801	152	180	456
Stage 1	-	-	-	-	-	-	685	611	-	445	454	-
Stage 2	-	-	-	-	-	-	425	452	-	641	609	-
Platoon blocked, %		-	-	1	-	-	1	1	1	1	1	
Mov Cap-1 Maneuver	916	-	-	*1198	-	-	125	173	*801	132	173	456
Mov Cap-2 Maneuver	-	-	-	-	-	-	125	173	-	132	173	-
Stage 1	-	-	-	-	-	-	657	586	-	427	454	-
Stage 2	-	-	-	-	-	-	358	452	-	553	584	-

Approach	EB	WB	NB	SB
HCM Control Delay, s	0.8	0	56.5	22.3
HCM LOS			F	C

Minor Lane/Major Mvmt	NBLn1	NBLn2	EBL	EBT	EBR	WBL	WBT	WBR	SBLn1
Capacity (veh/h)	125	801	916	-	-	* 1198	-	-	299
HCM Lane V/C Ratio	0.77	0.099	0.042	-	-	0.001	-	-	0.306
HCM Control Delay (s)	94.6	10	9.1	-	-	8	-	-	22.3
HCM Lane LOS	F	B	A	-	-	A	-	-	C
HCM 95th %tile Q(veh)	4.5	0.3	0.1	-	-	0	-	-	1.3

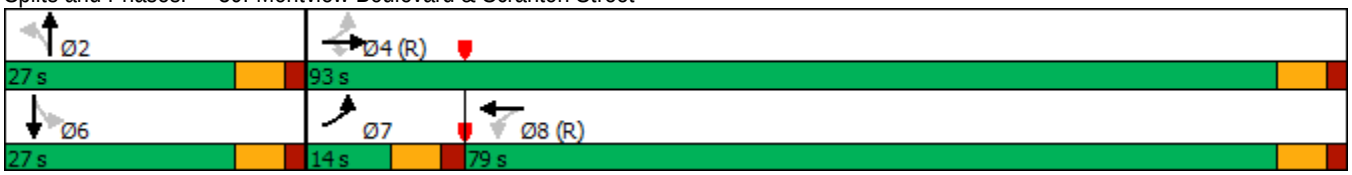
Notes

~: Volume exceeds capacity $: Delay exceeds 300s +: Computation Not Defined *: All major volume in platoon

Lane Group	EBL	EBT	EBR	WBL	WBT	NBL	NBT	SBL	SBT
Lane Configurations									
Traffic Volume (vph)	35	665	145	40	345	5	5	5	5
Future Volume (vph)	35	665	145	40	345	5	5	5	5
Turn Type	pm+pt	NA	Perm	Perm	NA	Perm	NA	Perm	NA
Protected Phases	7	4			8		2		6
Permitted Phases	4		4	8		2		6	
Detector Phase	7	4	4	8	8	2	2	6	6
Switch Phase									
Minimum Initial (s)	5.0	5.0	5.0	5.0	5.0	5.0	5.0	5.0	5.0
Minimum Split (s)	11.5	24.5	24.5	24.5	24.5	24.5	24.5	24.5	24.5
Total Split (s)	14.0	93.0	93.0	79.0	79.0	27.0	27.0	27.0	27.0
Total Split (%)	11.7%	77.5%	77.5%	65.8%	65.8%	22.5%	22.5%	22.5%	22.5%
Yellow Time (s)	4.5	4.5	4.5	4.5	4.5	4.5	4.5	4.5	4.5
All-Red Time (s)	2.0	2.0	2.0	2.0	2.0	2.0	2.0	2.0	2.0
Lost Time Adjust (s)	0.0	0.0	0.0	0.0	0.0	0.0	0.0	0.0	0.0
Total Lost Time (s)	6.5	6.5	6.5	6.5	6.5	6.5	6.5	6.5	6.5
Lead/Lag	Lead			Lag	Lag				
Lead-Lag Optimize?	Yes			Yes	Yes				
Recall Mode	None	C-Max	C-Max	C-Max	C-Max	Max	Max	Max	Max
Act Effct Green (s)	86.5	86.5	86.5	78.6	78.6	20.5	20.5	20.5	20.5
Actuated g/C Ratio	0.72	0.72	0.72	0.66	0.66	0.17	0.17	0.17	0.17
v/c Ratio	0.06	0.54	0.13	0.10	0.33	0.02	0.03	0.02	0.14
Control Delay	2.5	3.4	0.2	4.3	4.4	41.8	31.2	41.8	16.5
Queue Delay	0.0	0.0	0.0	0.0	0.0	0.0	0.0	0.0	0.0
Total Delay	2.5	3.4	0.2	4.3	4.4	41.8	31.2	41.8	16.5
LOS	A	A	A	A	A	D	C	D	B
Approach Delay		2.8			4.4		34.7		19.1
Approach LOS		A			A		C		B

Intersection Summary	
Cycle Length: 120	
Actuated Cycle Length: 120	
Offset: 34 (28%), Referenced to phase 4:EBTL and 8:WBTL, Start of Green	
Natural Cycle: 65	
Control Type: Actuated-Coordinated	
Maximum v/c Ratio: 0.54	
Intersection Signal Delay: 4.2	Intersection LOS: A
Intersection Capacity Utilization 50.0%	ICU Level of Service A
Analysis Period (min) 15	

Splits and Phases: 39: Montview Boulevard & Scranton Street



Movement	EBL	EBT	EBR	WBL	WBT	WBR	NBL	NBT	NBR	SBL	SBT	SBR
Lane Configurations												
Traffic Volume (veh/h)	35	665	145	40	345	20	5	5	5	5	5	35
Future Volume (veh/h)	35	665	145	40	345	20	5	5	5	5	5	35
Initial Q (Qb), veh	0	0	0	0	0	0	0	0	0	0	0	0
Ped-Bike Adj(A_pbT)	1.00		1.00	1.00		1.00	1.00		1.00	1.00		1.00
Parking Bus, Adj	1.00	1.00	1.00	1.00	1.00	1.00	1.00	1.00	1.00	1.00	1.00	1.00
Work Zone On Approach		No			No			No			No	
Adj Sat Flow, veh/h/ln	1870	1870	1870	1870	1870	1870	1870	1870	1870	1870	1870	1870
Adj Flow Rate, veh/h	38	723	158	43	375	22	5	5	5	5	5	38
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
Percent Heavy Veh, %	2	2	2	2	2	2	2	2	2	2	2	2
Cap, veh/h	644	1348	1143	461	1114	65	262	147	147	293	32	244
Arrive On Green	0.06	1.00	1.00	0.64	0.64	0.64	0.17	0.17	0.17	0.17	0.17	0.17
Sat Flow, veh/h	1781	1870	1585	630	1749	103	1364	858	858	1405	188	1426
Grp Volume(v), veh/h	38	723	158	43	0	397	5	0	10	5	0	43
Grp Sat Flow(s),veh/h/ln	1781	1870	1585	630	0	1852	1364	0	1716	1405	0	1614
Q Serve(g_s), s	0.8	0.0	0.0	3.2	0.0	11.9	0.4	0.0	0.6	0.4	0.0	2.7
Cycle Q Clear(g_c), s	0.8	0.0	0.0	3.2	0.0	11.9	3.1	0.0	0.6	0.9	0.0	2.7
Prop In Lane	1.00		1.00	1.00		0.06	1.00		0.50	1.00		0.88
Lane Grp Cap(c), veh/h	644	1348	1143	461	0	1179	262	0	293	293	0	276
V/C Ratio(X)	0.06	0.54	0.14	0.09	0.00	0.34	0.02	0.00	0.03	0.02	0.00	0.16
Avail Cap(c_a), veh/h	702	1348	1143	461	0	1179	262	0	293	293	0	276
HCM Platoon Ratio	2.00	2.00	2.00	1.00	1.00	1.00	1.00	1.00	1.00	1.00	1.00	1.00
Upstream Filter(I)	1.00	1.00	1.00	1.00	0.00	1.00	1.00	0.00	1.00	1.00	0.00	1.00
Uniform Delay (d), s/veh	6.8	0.0	0.0	8.5	0.0	10.1	43.7	0.0	41.5	41.9	0.0	42.4
Incr Delay (d2), s/veh	0.0	1.5	0.3	0.4	0.0	0.8	0.1	0.0	0.2	0.1	0.0	1.2
Initial Q Delay(d3),s/veh	0.0	0.0	0.0	0.0	0.0	0.0	0.0	0.0	0.0	0.0	0.0	0.0
%ile BackOfQ(50%),veh/ln	0.3	0.6	0.1	0.5	0.0	4.9	0.1	0.0	0.3	0.1	0.0	1.2
Unsig. Movement Delay, s/veh												
LnGrp Delay(d),s/veh	6.8	1.5	0.3	8.9	0.0	10.9	43.8	0.0	41.7	42.0	0.0	43.6
LnGrp LOS	A	A	A	A	A	B	D	A	D	D	A	D
Approach Vol, veh/h		919			440			15			48	
Approach Delay, s/veh		1.5			10.7			42.4			43.4	
Approach LOS		A			B			D			D	

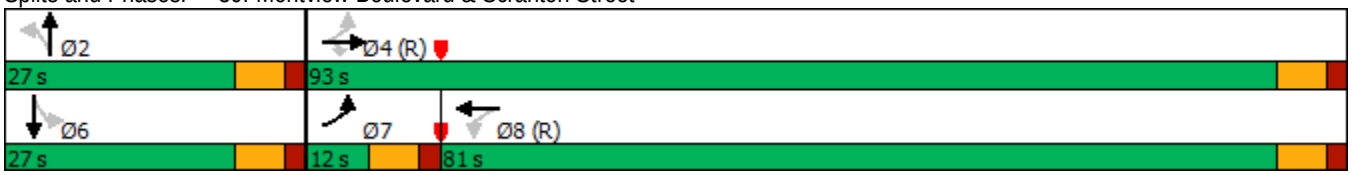
Timer - Assigned Phs		2		4		6	7	8				
Phs Duration (G+Y+Rc), s		27.0		93.0		27.0	10.1	82.9				
Change Period (Y+Rc), s		6.5		6.5		6.5	6.5	6.5				
Max Green Setting (Gmax), s		20.5		86.5		20.5	7.5	72.5				
Max Q Clear Time (g_c+I1), s		5.1		2.0		4.7	2.8	13.9				
Green Ext Time (p_c), s		0.0		7.0		0.1	0.0	3.3				

Intersection Summary												
HCM 6th Ctrl Delay			6.2									
HCM 6th LOS			A									

Lane Group	EBL	EBT	EBR	WBL	WBT	NBL	NBT	SBL	SBT
Lane Configurations									
Traffic Volume (vph)	35	350	10	5	695	85	5	20	5
Future Volume (vph)	35	350	10	5	695	85	5	20	5
Turn Type	pm+pt	NA	Perm	Perm	NA	Perm	NA	Perm	NA
Protected Phases	7	4			8		2		6
Permitted Phases	4		4	8		2		6	
Detector Phase	7	4	4	8	8	2	2	6	6
Switch Phase									
Minimum Initial (s)	5.0	5.0	5.0	5.0	5.0	5.0	5.0	5.0	5.0
Minimum Split (s)	11.5	24.5	24.5	24.5	24.5	24.5	24.5	24.5	24.5
Total Split (s)	12.0	93.0	93.0	81.0	81.0	27.0	27.0	27.0	27.0
Total Split (%)	10.0%	77.5%	77.5%	67.5%	67.5%	22.5%	22.5%	22.5%	22.5%
Yellow Time (s)	4.5	4.5	4.5	4.5	4.5	4.5	4.5	4.5	4.5
All-Red Time (s)	2.0	2.0	2.0	2.0	2.0	2.0	2.0	2.0	2.0
Lost Time Adjust (s)	0.0	0.0	0.0	0.0	0.0	0.0	0.0	0.0	0.0
Total Lost Time (s)	6.5	6.5	6.5	6.5	6.5	6.5	6.5	6.5	6.5
Lead/Lag	Lead			Lag	Lag				
Lead-Lag Optimize?	Yes			Yes	Yes				
Recall Mode	None	C-Max	C-Max	C-Max	C-Max	Max	Max	Max	Max
Act Effct Green (s)	86.5	86.5	86.5	79.3	79.3	20.5	20.5	20.5	20.5
Actuated g/C Ratio	0.72	0.72	0.72	0.66	0.66	0.17	0.17	0.17	0.17
v/c Ratio	0.10	0.28	0.01	0.01	0.62	0.42	0.23	0.10	0.27
Control Delay	5.4	6.5	0.1	7.6	11.0	51.0	12.9	43.4	12.1
Queue Delay	0.0	0.0	0.0	0.0	0.0	0.0	0.0	0.0	0.0
Total Delay	5.4	6.5	0.1	7.6	11.0	51.0	12.9	43.4	12.1
LOS	A	A	A	A	B	D	B	D	B
Approach Delay		6.2			10.9		33.8		18.2
Approach LOS		A			B		C		B

Intersection Summary	
Cycle Length: 120	
Actuated Cycle Length: 120	
Offset: 57 (48%), Referenced to phase 4:EBTL and 8:WBTL, Start of Green	
Natural Cycle: 80	
Control Type: Actuated-Coordinated	
Maximum v/c Ratio: 0.62	
Intersection Signal Delay: 12.7	Intersection LOS: B
Intersection Capacity Utilization 59.4%	ICU Level of Service B
Analysis Period (min) 15	

Splits and Phases: 39: Montview Boulevard & Scranton Street



Movement	EBL	EBT	EBR	WBL	WBT	WBR	NBL	NBT	NBR	SBL	SBT	SBR
Lane Configurations												
Traffic Volume (veh/h)	35	350	10	5	695	10	85	5	65	20	5	80
Future Volume (veh/h)	35	350	10	5	695	10	85	5	65	20	5	80
Initial Q (Qb), veh	0	0	0	0	0	0	0	0	0	0	0	0
Ped-Bike Adj(A_pbT)	1.00		1.00	1.00		1.00	1.00		1.00	1.00		1.00
Parking Bus, Adj	1.00	1.00	1.00	1.00	1.00	1.00	1.00	1.00	1.00	1.00	1.00	1.00
Work Zone On Approach		No			No			No			No	
Adj Sat Flow, veh/h/ln	1870	1870	1870	1870	1870	1870	1870	1870	1870	1870	1870	1870
Adj Flow Rate, veh/h	38	380	11	5	755	11	92	5	71	22	5	87
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
Percent Heavy Veh, %	2	2	2	2	2	2	2	2	2	2	2	2
Cap, veh/h	382	1348	1143	692	1171	17	217	18	256	231	15	258
Arrive On Green	0.03	0.72	0.72	0.64	0.64	0.64	0.17	0.17	0.17	0.17	0.17	0.17
Sat Flow, veh/h	1781	1870	1585	993	1839	27	1304	105	1496	1323	87	1511
Grp Volume(v), veh/h	38	380	11	5	0	766	92	0	76	22	0	92
Grp Sat Flow(s),veh/h/ln	1781	1870	1585	993	0	1866	1304	0	1601	1323	0	1598
Q Serve(g_s), s	0.8	8.5	0.2	0.2	0.0	30.4	8.0	0.0	5.0	1.8	0.0	6.1
Cycle Q Clear(g_c), s	0.8	8.5	0.2	0.2	0.0	30.4	14.1	0.0	5.0	6.7	0.0	6.1
Prop In Lane	1.00		1.00	1.00		0.01	1.00		0.93	1.00		0.95
Lane Grp Cap(c), veh/h	382	1348	1143	692	0	1188	217	0	274	231	0	273
V/C Ratio(X)	0.10	0.28	0.01	0.01	0.00	0.64	0.42	0.00	0.28	0.10	0.00	0.34
Avail Cap(c_a), veh/h	411	1348	1143	692	0	1188	217	0	274	231	0	273
HCM Platoon Ratio	1.00	1.00	1.00	1.00	1.00	1.00	1.00	1.00	1.00	1.00	1.00	1.00
Upstream Filter(I)	1.00	1.00	1.00	1.00	0.00	1.00	1.00	0.00	1.00	1.00	0.00	1.00
Uniform Delay (d), s/veh	10.8	5.9	4.7	8.0	0.0	13.4	50.0	0.0	43.3	46.2	0.0	43.8
Incr Delay (d2), s/veh	0.1	0.5	0.0	0.0	0.0	2.7	6.0	0.0	2.5	0.8	0.0	3.3
Initial Q Delay(d3),s/veh	0.0	0.0	0.0	0.0	0.0	0.0	0.0	0.0	0.0	0.0	0.0	0.0
%ile BackOfQ(50%),veh/ln	0.3	3.2	0.1	0.0	0.0	12.9	3.0	0.0	2.2	0.6	0.0	2.7
Unsig. Movement Delay, s/veh												
LnGrp Delay(d),s/veh	10.9	6.4	4.7	8.0	0.0	16.1	56.0	0.0	45.8	47.0	0.0	47.1
LnGrp LOS	B	A	A	A	A	B	E	A	D	D	A	D
Approach Vol, veh/h		429			771			168			114	
Approach Delay, s/veh		6.7			16.1			51.4			47.1	
Approach LOS		A			B			D			D	

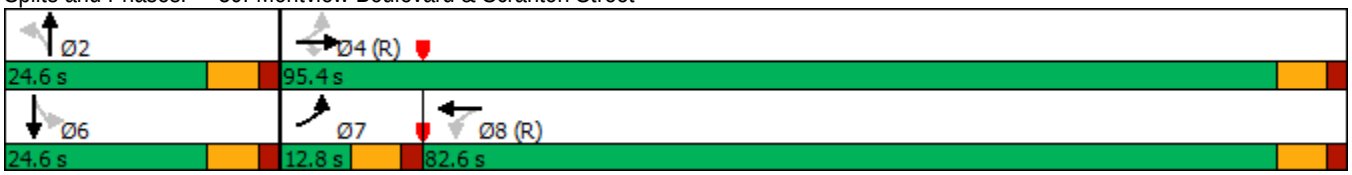
Timer - Assigned Phs		2		4		6	7	8				
Phs Duration (G+Y+Rc), s		27.0		93.0		27.0	10.1	82.9				
Change Period (Y+Rc), s		6.5		6.5		6.5	6.5	6.5				
Max Green Setting (Gmax), s		20.5		86.5		20.5	5.5	74.5				
Max Q Clear Time (g_c+I1), s		16.1		10.5		8.7	2.8	32.4				
Green Ext Time (p_c), s		0.2		2.7		0.4	0.0	6.8				

Intersection Summary												
HCM 6th Ctrl Delay			19.8									
HCM 6th LOS			B									

Lane Group	EBL	EBT	EBR	WBL	WBT	NBL	NBT	SBL	SBT
Lane Configurations									
Traffic Volume (vph)	90	845	145	40	885	10	10	35	10
Future Volume (vph)	90	845	145	40	885	10	10	35	10
Turn Type	pm+pt	NA	Perm	Perm	NA	Perm	NA	Perm	NA
Protected Phases	7	4			8		2		6
Permitted Phases	4		4	8		2		6	
Detector Phase	7	4	4	8	8	2	2	6	6
Switch Phase									
Minimum Initial (s)	5.0	5.0	5.0	5.0	5.0	5.0	5.0	5.0	5.0
Minimum Split (s)	11.5	24.5	24.5	24.5	24.5	24.5	24.5	24.5	24.5
Total Split (s)	12.8	95.4	95.4	82.6	82.6	24.6	24.6	24.6	24.6
Total Split (%)	10.7%	79.5%	79.5%	68.8%	68.8%	20.5%	20.5%	20.5%	20.5%
Yellow Time (s)	4.5	4.5	4.5	4.5	4.5	4.5	4.5	4.5	4.5
All-Red Time (s)	2.0	2.0	2.0	2.0	2.0	2.0	2.0	2.0	2.0
Lost Time Adjust (s)	0.0	0.0	0.0	0.0	0.0	0.0	0.0	0.0	0.0
Total Lost Time (s)	6.5	6.5	6.5	6.5	6.5	6.5	6.5	6.5	6.5
Lead/Lag	Lead			Lag	Lag				
Lead-Lag Optimize?	Yes			Yes	Yes				
Recall Mode	None	C-Max	C-Max	C-Max	C-Max	Max	Max	Max	Max
Act Effct Green (s)	88.9	88.9	88.9	76.2	76.2	18.1	18.1	18.1	18.1
Actuated g/C Ratio	0.74	0.74	0.74	0.64	0.64	0.15	0.15	0.15	0.15
v/c Ratio	0.53	0.67	0.13	0.14	0.90	0.06	0.08	0.18	0.28
Control Delay	16.2	18.8	2.4	5.5	14.0	44.7	29.4	47.1	15.2
Queue Delay	0.0	0.0	0.0	0.0	3.7	0.0	0.0	0.0	0.0
Total Delay	16.2	18.8	2.4	5.5	17.7	44.7	29.4	47.1	15.2
LOS	B	B	A	A	B	D	C	D	B
Approach Delay		16.4			17.2		34.5		24.9
Approach LOS		B			B		C		C

Intersection Summary	
Cycle Length: 120	
Actuated Cycle Length: 120	
Offset: 72 (60%), Referenced to phase 4:EBTL and 8:WBTL, Start of Green	
Natural Cycle: 100	
Control Type: Actuated-Coordinated	
Maximum v/c Ratio: 0.90	
Intersection Signal Delay: 17.4	Intersection LOS: B
Intersection Capacity Utilization 81.6%	ICU Level of Service D
Analysis Period (min) 15	

Splits and Phases: 39: Montview Boulevard & Scranton Street



Movement	EBL	EBT	EBR	WBL	WBT	WBR	NBL	NBT	NBR	SBL	SBT	SBR
Lane Configurations												
Traffic Volume (veh/h)	90	845	145	40	885	85	10	10	10	35	10	70
Future Volume (veh/h)	90	845	145	40	885	85	10	10	10	35	10	70
Initial Q (Qb), veh	0	0	0	0	0	0	0	0	0	0	0	0
Ped-Bike Adj(A_pbT)	1.00		1.00	1.00		1.00	1.00		1.00	1.00		1.00
Parking Bus, Adj	1.00	1.00	1.00	1.00	1.00	1.00	1.00	1.00	1.00	1.00	1.00	1.00
Work Zone On Approach		No			No			No			No	
Adj Sat Flow, veh/h/ln	1870	1870	1870	1870	1870	1870	1870	1870	1870	1870	1870	1870
Adj Flow Rate, veh/h	98	918	158	43	962	92	11	11	11	38	11	76
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
Percent Heavy Veh, %	2	2	2	2	2	2	2	2	2	2	2	2
Cap, veh/h	224	1386	1174	399	1087	104	194	129	129	254	31	213
Arrive On Green	0.05	0.99	0.99	0.65	0.65	0.65	0.15	0.15	0.15	0.15	0.15	0.15
Sat Flow, veh/h	1781	1870	1585	524	1681	161	1310	858	858	1390	204	1412
Grp Volume(v), veh/h	98	918	158	43	0	1054	11	0	22	38	0	87
Grp Sat Flow(s),veh/h/ln	1781	1870	1585	524	0	1841	1310	0	1716	1390	0	1616
Q Serve(g_s), s	2.1	2.5	0.2	3.8	0.0	56.8	0.9	0.0	1.3	2.9	0.0	5.8
Cycle Q Clear(g_c), s	2.1	2.5	0.2	3.8	0.0	56.8	6.7	0.0	1.3	4.2	0.0	5.8
Prop In Lane	1.00		1.00	1.00		0.09	1.00		0.50	1.00		0.87
Lane Grp Cap(c), veh/h	224	1386	1174	399	0	1191	194	0	259	254	0	244
V/C Ratio(X)	0.44	0.66	0.13	0.11	0.00	0.89	0.06	0.00	0.09	0.15	0.00	0.36
Avail Cap(c_a), veh/h	246	1386	1174	399	0	1191	194	0	259	254	0	244
HCM Platoon Ratio	1.33	1.33	1.33	1.00	1.00	1.00	1.00	1.00	1.00	1.00	1.00	1.00
Upstream Filter(I)	1.00	1.00	1.00	1.00	0.00	1.00	1.00	0.00	1.00	1.00	0.00	1.00
Uniform Delay (d), s/veh	22.8	0.2	0.2	8.2	0.0	17.5	48.7	0.0	43.8	45.6	0.0	45.7
Incr Delay (d2), s/veh	1.3	2.5	0.2	0.5	0.0	9.8	0.6	0.0	0.6	1.2	0.0	4.0
Initial Q Delay(d3),s/veh	0.0	0.0	0.0	0.0	0.0	0.0	0.0	0.0	0.0	0.0	0.0	0.0
%ile BackOfQ(50%),veh/ln	1.7	1.3	0.1	0.5	0.0	25.2	0.3	0.0	0.6	1.1	0.0	2.6
Unsig. Movement Delay, s/veh												
LnGrp Delay(d),s/veh	24.2	2.8	0.5	8.7	0.0	27.3	49.3	0.0	44.5	46.9	0.0	49.8
LnGrp LOS	C	A	A	A	A	C	D	A	D	D	A	D
Approach Vol, veh/h		1174			1097			33			125	
Approach Delay, s/veh		4.2			26.6			46.1			48.9	
Approach LOS		A			C			D			D	

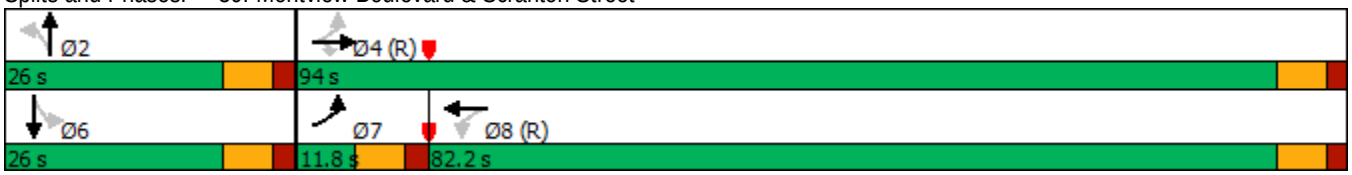
Timer - Assigned Phs		2		4		6	7	8				
Phs Duration (G+Y+Rc), s		24.6		95.4		24.6	11.3	84.1				
Change Period (Y+Rc), s		6.5		6.5		6.5	6.5	6.5				
Max Green Setting (Gmax), s		18.1		88.9		18.1	6.3	76.1				
Max Q Clear Time (g_c+I1), s		8.7		4.5		7.8	4.1	58.8				
Green Ext Time (p_c), s		0.0		10.7		0.3	0.0	8.9				

Intersection Summary												
HCM 6th Ctrl Delay			17.2									
HCM 6th LOS			B									

Lane Group	EBL	EBT	EBR	WBL	WBT	NBL	NBT	SBL	SBT
Lane Configurations									
Traffic Volume (vph)	75	725	10	10	945	85	10	155	10
Future Volume (vph)	75	725	10	10	945	85	10	155	10
Turn Type	pm+pt	NA	Perm	Perm	NA	Perm	NA	Perm	NA
Protected Phases	7	4			8		2		6
Permitted Phases	4		4	8		2		6	
Detector Phase	7	4	4	8	8	2	2	6	6
Switch Phase									
Minimum Initial (s)	5.0	5.0	5.0	5.0	5.0	5.0	5.0	5.0	5.0
Minimum Split (s)	11.5	24.5	24.5	24.5	24.5	24.5	24.5	24.5	24.5
Total Split (s)	11.8	94.0	94.0	82.2	82.2	26.0	26.0	26.0	26.0
Total Split (%)	9.8%	78.3%	78.3%	68.5%	68.5%	21.7%	21.7%	21.7%	21.7%
Yellow Time (s)	4.5	4.5	4.5	4.5	4.5	4.5	4.5	4.5	4.5
All-Red Time (s)	2.0	2.0	2.0	2.0	2.0	2.0	2.0	2.0	2.0
Lost Time Adjust (s)	0.0	0.0	0.0	0.0	0.0	0.0	0.0	0.0	0.0
Total Lost Time (s)	6.5	6.5	6.5	6.5	6.5	6.5	6.5	6.5	6.5
Lead/Lag	Lead			Lag	Lag				
Lead-Lag Optimize?	Yes			Yes	Yes				
Recall Mode	None	C-Max	C-Max	C-Max	C-Max	Max	Max	Max	Max
Act Effct Green (s)	87.5	87.5	87.5	78.1	78.1	19.5	19.5	19.5	19.5
Actuated g/C Ratio	0.73	0.73	0.73	0.65	0.65	0.16	0.16	0.16	0.16
v/c Ratio	0.47	0.58	0.01	0.03	0.87	0.50	0.25	0.79	0.37
Control Delay	15.2	6.9	0.0	5.7	23.1	56.3	15.0	74.2	12.6
Queue Delay	0.0	0.2	0.0	0.0	35.5	0.0	0.0	0.6	0.4
Total Delay	15.2	7.1	0.0	5.7	58.5	56.3	15.0	74.8	13.0
LOS	B	A	A	A	E	E	B	E	B
Approach Delay		7.7			58.0		36.8		47.2
Approach LOS		A			E		D		D

Intersection Summary	
Cycle Length: 120	
Actuated Cycle Length: 120	
Offset: 0 (0%), Referenced to phase 4:EBTL and 8:WBTL, Start of Green	
Natural Cycle: 90	
Control Type: Actuated-Coordinated	
Maximum v/c Ratio: 0.87	
Intersection Signal Delay: 36.8	Intersection LOS: D
Intersection Capacity Utilization 90.2%	ICU Level of Service E
Analysis Period (min) 15	

Splits and Phases: 39: Montview Boulevard & Scranton Street



Movement	EBL	EBT	EBR	WBL	WBT	WBR	NBL	NBT	NBR	SBL	SBT	SBR
Lane Configurations												
Traffic Volume (veh/h)	75	725	10	10	945	25	85	10	65	155	10	115
Future Volume (veh/h)	75	725	10	10	945	25	85	10	65	155	10	115
Initial Q (Qb), veh	0	0	0	0	0	0	0	0	0	0	0	0
Ped-Bike Adj(A_pbT)	1.00		1.00	1.00		1.00	1.00		1.00	1.00		1.00
Parking Bus, Adj	1.00	1.00	1.00	1.00	1.00	1.00	1.00	1.00	1.00	1.00	1.00	1.00
Work Zone On Approach		No			No			No			No	
Adj Sat Flow, veh/h/ln	1870	1870	1870	1870	1870	1870	1870	1870	1870	1870	1870	1870
Adj Flow Rate, veh/h	82	788	11	11	1027	27	92	11	71	168	11	125
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
Percent Heavy Veh, %	2	2	2	2	2	2	2	2	2	2	2	2
Cap, veh/h	216	1364	1156	493	1154	30	166	35	228	215	21	240
Arrive On Green	0.05	0.97	0.97	0.64	0.64	0.64	0.16	0.16	0.16	0.16	0.16	0.16
Sat Flow, veh/h	1781	1870	1585	680	1814	48	1253	217	1401	1316	130	1475
Grp Volume(v), veh/h	82	788	11	11	0	1054	92	0	82	168	0	136
Grp Sat Flow(s),veh/h/ln	1781	1870	1585	680	0	1862	1253	0	1618	1316	0	1605
Q Serve(g_s), s	1.8	3.5	0.0	0.7	0.0	57.0	8.7	0.0	5.4	14.1	0.0	9.3
Cycle Q Clear(g_c), s	1.8	3.5	0.0	0.7	0.0	57.0	18.0	0.0	5.4	19.5	0.0	9.3
Prop In Lane	1.00		1.00	1.00		0.03	1.00		0.87	1.00		0.92
Lane Grp Cap(c), veh/h	216	1364	1156	493	0	1184	166	0	263	215	0	261
V/C Ratio(X)	0.38	0.58	0.01	0.02	0.00	0.89	0.55	0.00	0.31	0.78	0.00	0.52
Avail Cap(c_a), veh/h	225	1364	1156	493	0	1184	166	0	263	215	0	261
HCM Platoon Ratio	1.33	1.33	1.33	1.00	1.00	1.00	1.00	1.00	1.00	1.00	1.00	1.00
Upstream Filter(I)	1.00	1.00	1.00	1.00	0.00	1.00	1.00	0.00	1.00	1.00	0.00	1.00
Uniform Delay (d), s/veh	22.8	0.5	0.5	8.1	0.0	18.3	54.2	0.0	44.3	53.5	0.0	46.0
Incr Delay (d2), s/veh	1.1	1.8	0.0	0.1	0.0	10.2	12.6	0.0	3.1	24.0	0.0	7.3
Initial Q Delay(d3),s/veh	0.0	0.0	0.0	0.0	0.0	0.0	0.0	0.0	0.0	0.0	0.0	0.0
%ile BackOfQ(50%),veh/ln	1.4	1.2	0.0	0.1	0.0	25.8	3.3	0.0	2.4	6.5	0.0	4.2
Unsig. Movement Delay, s/veh												
LnGrp Delay(d),s/veh	23.9	2.3	0.5	8.2	0.0	28.5	66.8	0.0	47.4	77.5	0.0	53.3
LnGrp LOS	C	A	A	A	A	C	E	A	D	E	A	D
Approach Vol, veh/h		881			1065			174			304	
Approach Delay, s/veh		4.3			28.3			57.7			66.7	
Approach LOS		A			C			E			E	

Timer - Assigned Phs		2		4		6	7	8				
Phs Duration (G+Y+Rc), s		26.0		94.0		26.0	11.2	82.8				
Change Period (Y+Rc), s		6.5		6.5		6.5	6.5	6.5				
Max Green Setting (Gmax), s		19.5		87.5		19.5	5.3	75.7				
Max Q Clear Time (g_c+I1), s		20.0		5.5		21.5	3.8	59.0				
Green Ext Time (p_c), s		0.0		7.4		0.0	0.0	8.3				

Intersection Summary												
HCM 6th Ctrl Delay			26.5									
HCM 6th LOS			C									

Intersection	
Int Delay, s/veh	1.2

Movement	EBL	EBT	WBT	WBR	SBL	SBR
Lane Configurations		↑	↑		↖	↗
Traffic Vol, veh/h	0	470	414	0	29	27
Future Vol, veh/h	0	470	414	0	29	27
Conflicting Peds, #/hr	0	0	0	0	0	0
Sign Control	Free	Free	Free	Free	Stop	Stop
RT Channelized	-	None	-	None	-	None
Storage Length	-	-	-	-	75	0
Veh in Median Storage, #	-	0	0	-	0	-
Grade, %	-	0	0	-	0	-
Peak Hour Factor	92	96	91	92	72	75
Heavy Vehicles, %	2	2	2	2	2	2
Mvmt Flow	0	490	455	0	40	36

Major/Minor	Major1		Major2		Minor2	
Conflicting Flow All	-	0	-	0	945	455
Stage 1	-	-	-	-	455	-
Stage 2	-	-	-	-	490	-
Critical Hdwy	-	-	-	-	6.42	6.22
Critical Hdwy Stg 1	-	-	-	-	5.42	-
Critical Hdwy Stg 2	-	-	-	-	5.42	-
Follow-up Hdwy	-	-	-	-	3.518	3.318
Pot Cap-1 Maneuver	0	-	-	0	291	605
Stage 1	0	-	-	0	639	-
Stage 2	0	-	-	0	616	-
Platoon blocked, %		-	-			
Mov Cap-1 Maneuver	-	-	-	-	291	605
Mov Cap-2 Maneuver	-	-	-	-	291	-
Stage 1	-	-	-	-	639	-
Stage 2	-	-	-	-	616	-

Approach	EB	WB	SB
HCM Control Delay, s	0	0	15.5
HCM LOS			C

Minor Lane/Major Mvmt	EBT	WBT	SBLn1	SBLn2
Capacity (veh/h)	-	-	291	605
HCM Lane V/C Ratio	-	-	0.138	0.06
HCM Control Delay (s)	-	-	19.3	11.3
HCM Lane LOS	-	-	C	B
HCM 95th %tile Q(veh)	-	-	0.5	0.2

Intersection	
Int Delay, s/veh	1.3

Movement	EBL	EBT	WBT	WBR	SBL	SBR
Lane Configurations		↑	↑		↖	↗
Traffic Vol, veh/h	0	486	502	0	20	41
Future Vol, veh/h	0	486	502	0	20	41
Conflicting Peds, #/hr	0	0	0	0	0	0
Sign Control	Free	Free	Free	Free	Stop	Stop
RT Channelized	-	None	-	None	-	None
Storage Length	-	-	-	-	75	0
Veh in Median Storage, #	-	0	0	-	0	-
Grade, %	-	0	0	-	0	-
Peak Hour Factor	92	83	88	92	62	64
Heavy Vehicles, %	2	2	2	2	2	2
Mvmt Flow	0	586	570	0	32	64

Major/Minor	Major1		Major2		Minor2	
Conflicting Flow All	-	0	-	0	1156	570
Stage 1	-	-	-	-	570	-
Stage 2	-	-	-	-	586	-
Critical Hdwy	-	-	-	-	6.42	6.22
Critical Hdwy Stg 1	-	-	-	-	5.42	-
Critical Hdwy Stg 2	-	-	-	-	5.42	-
Follow-up Hdwy	-	-	-	-	3.518	3.318
Pot Cap-1 Maneuver	0	-	-	0	217	521
Stage 1	0	-	-	0	566	-
Stage 2	0	-	-	0	556	-
Platoon blocked, %		-	-			
Mov Cap-1 Maneuver	-	-	-	-	217	521
Mov Cap-2 Maneuver	-	-	-	-	217	-
Stage 1	-	-	-	-	566	-
Stage 2	-	-	-	-	556	-

Approach	EB	WB	SB
HCM Control Delay, s	0	0	16.8
HCM LOS			C

Minor Lane/Major Mvmt	EBT	WBT	SBLn1	SBLn2
Capacity (veh/h)	-	-	217	521
HCM Lane V/C Ratio	-	-	0.149	0.123
HCM Control Delay (s)	-	-	24.5	12.9
HCM Lane LOS	-	-	C	B
HCM 95th %tile Q(veh)	-	-	0.5	0.4

Intersection	
Int Delay, s/veh	1

Movement	EBL	EBT	WBT	WBR	SBL	SBR
Lane Configurations		↑	↑		↖	↗
Traffic Vol, veh/h	0	530	485	0	30	30
Future Vol, veh/h	0	530	485	0	30	30
Conflicting Peds, #/hr	0	0	0	0	0	0
Sign Control	Free	Free	Free	Free	Stop	Stop
RT Channelized	-	None	-	None	-	None
Storage Length	-	-	-	-	75	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	0	576	527	0	33	33

Major/Minor	Major1		Major2		Minor2	
Conflicting Flow All	-	0	-	0	1103	527
Stage 1	-	-	-	-	527	-
Stage 2	-	-	-	-	576	-
Critical Hdwy	-	-	-	-	6.42	6.22
Critical Hdwy Stg 1	-	-	-	-	5.42	-
Critical Hdwy Stg 2	-	-	-	-	5.42	-
Follow-up Hdwy	-	-	-	-	3.518	3.318
Pot Cap-1 Maneuver	0	-	-	0	234	551
Stage 1	0	-	-	0	592	-
Stage 2	0	-	-	0	562	-
Platoon blocked, %		-	-			
Mov Cap-1 Maneuver	-	-	-	-	234	551
Mov Cap-2 Maneuver	-	-	-	-	234	-
Stage 1	-	-	-	-	592	-
Stage 2	-	-	-	-	562	-

Approach	EB	WB	SB
HCM Control Delay, s	0	0	17.4
HCM LOS			C

Minor Lane/Major Mvmt	EBT	WBT	SBLn1	SBLn2
Capacity (veh/h)	-	-	234	551
HCM Lane V/C Ratio	-	-	0.139	0.059
HCM Control Delay (s)	-	-	22.9	11.9
HCM Lane LOS	-	-	C	B
HCM 95th %tile Q(veh)	-	-	0.5	0.2

Intersection	
Int Delay, s/veh	0.9

Movement	EBL	EBT	WBT	WBR	SBL	SBR
Lane Configurations		↑	↑		↖	↗
Traffic Vol, veh/h	0	615	470	0	20	45
Future Vol, veh/h	0	615	470	0	20	45
Conflicting Peds, #/hr	0	0	0	0	0	0
Sign Control	Free	Free	Free	Free	Stop	Stop
RT Channelized	-	None	-	None	-	None
Storage Length	-	-	-	-	75	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	0	668	511	0	22	49

Major/Minor	Major1		Major2		Minor2	
Conflicting Flow All	-	0	-	0	1179	511
Stage 1	-	-	-	-	511	-
Stage 2	-	-	-	-	668	-
Critical Hdwy	-	-	-	-	6.42	6.22
Critical Hdwy Stg 1	-	-	-	-	5.42	-
Critical Hdwy Stg 2	-	-	-	-	5.42	-
Follow-up Hdwy	-	-	-	-	3.518	3.318
Pot Cap-1 Maneuver	0	-	-	0	211	563
Stage 1	0	-	-	0	602	-
Stage 2	0	-	-	0	510	-
Platoon blocked, %		-	-			
Mov Cap-1 Maneuver	-	-	-	-	211	563
Mov Cap-2 Maneuver	-	-	-	-	211	-
Stage 1	-	-	-	-	602	-
Stage 2	-	-	-	-	510	-

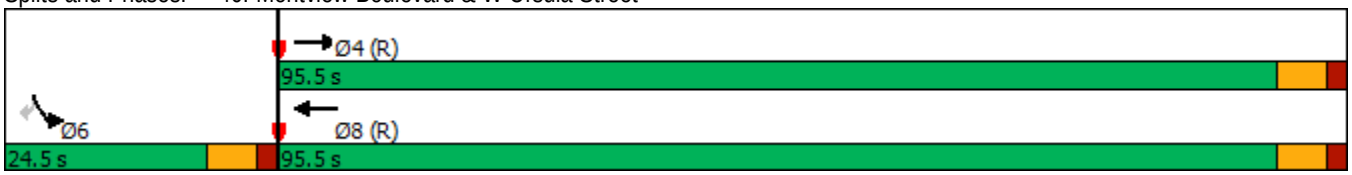
Approach	EB	WB	SB
HCM Control Delay, s	0	0	15.7
HCM LOS			C

Minor Lane/Major Mvmt	EBT	WBT	SBLn1	SBLn2
Capacity (veh/h)	-	-	211	563
HCM Lane V/C Ratio	-	-	0.103	0.087
HCM Control Delay (s)	-	-	24	12
HCM Lane LOS	-	-	C	B
HCM 95th %tile Q(veh)	-	-	0.3	0.3

Lane Group	EBT	WBT	SBL	SBR
Lane Configurations				
Traffic Volume (vph)	740	1035	85	80
Future Volume (vph)	740	1035	85	80
Turn Type	NA	NA	Prot	Perm
Protected Phases	4	8	6	
Permitted Phases				6
Detector Phase	4	8	6	6
Switch Phase				
Minimum Initial (s)	5.0	5.0	5.0	5.0
Minimum Split (s)	24.5	24.5	24.5	24.5
Total Split (s)	95.5	95.5	24.5	24.5
Total Split (%)	79.6%	79.6%	20.4%	20.4%
Yellow Time (s)	4.5	4.5	4.5	4.5
All-Red Time (s)	2.0	2.0	2.0	2.0
Lost Time Adjust (s)	0.0	0.0	0.0	0.0
Total Lost Time (s)	6.5	6.5	6.5	6.5
Lead/Lag				
Lead-Lag Optimize?				
Recall Mode	C-Max	C-Max	Max	Max
Act Effct Green (s)	89.0	89.0	18.0	18.0
Actuated g/C Ratio	0.74	0.74	0.15	0.15
v/c Ratio	0.58	0.81	0.35	0.28
Control Delay	3.2	12.1	49.9	11.7
Queue Delay	0.7	0.6	0.0	0.0
Total Delay	4.0	12.8	49.9	11.8
LOS	A	B	D	B
Approach Delay	4.0	12.8	31.4	
Approach LOS	A	B	C	

Intersection Summary	
Cycle Length: 120	
Actuated Cycle Length: 120	
Offset: 65 (54%), Referenced to phase 4:EBT and 8:WBT, Start of Green	
Natural Cycle: 90	
Control Type: Actuated-Coordinated	
Maximum v/c Ratio: 0.81	
Intersection Signal Delay: 11.0	Intersection LOS: B
Intersection Capacity Utilization 70.3%	ICU Level of Service C
Analysis Period (min) 15	

Splits and Phases: 40: Montview Boulevard & W Ursula Street



Movement	EBL	EBT	WBT	WBR	SBL	SBR
Lane Configurations						
Traffic Volume (veh/h)	0	740	1035	0	85	80
Future Volume (veh/h)	0	740	1035	0	85	80
Initial Q (Qb), veh	0	0	0	0	0	0
Ped-Bike Adj(A_pbT)	1.00			1.00	1.00	1.00
Parking Bus, Adj	1.00	1.00	1.00	1.00	1.00	1.00
Work Zone On Approach		No	No		No	
Adj Sat Flow, veh/h/ln	0	1870	1870	0	1870	1870
Adj Flow Rate, veh/h	0	804	1125	0	92	87
Peak Hour Factor	0.92	0.92	0.92	0.92	0.92	0.92
Percent Heavy Veh, %	0	2	2	0	2	2
Cap, veh/h	0	1387	1387	0	267	238
Arrive On Green	0.00	0.74	1.00	0.00	0.15	0.15
Sat Flow, veh/h	0	1870	1870	0	1781	1585
Grp Volume(v), veh/h	0	804	1125	0	92	87
Grp Sat Flow(s),veh/h/ln	0	1870	1870	0	1781	1585
Q Serve(g_s), s	0.0	23.4	0.0	0.0	5.6	5.9
Cycle Q Clear(g_c), s	0.0	23.4	0.0	0.0	5.6	5.9
Prop In Lane	0.00			0.00	1.00	1.00
Lane Grp Cap(c), veh/h	0	1387	1387	0	267	238
V/C Ratio(X)	0.00	0.58	0.81	0.00	0.34	0.37
Avail Cap(c_a), veh/h	0	1387	1387	0	267	238
HCM Platoon Ratio	1.00	1.00	2.00	1.00	1.00	1.00
Upstream Filter(I)	0.00	1.00	1.00	0.00	1.00	1.00
Uniform Delay (d), s/veh	0.0	7.0	0.0	0.0	45.7	45.9
Incr Delay (d2), s/veh	0.0	1.8	5.2	0.0	3.5	4.3
Initial Q Delay(d3),s/veh	0.0	0.0	0.0	0.0	0.0	0.0
%ile BackOfQ(50%),veh/ln	0.0	8.7	2.0	0.0	2.7	2.6
Unsig. Movement Delay, s/veh						
LnGrp Delay(d),s/veh	0.0	8.8	5.2	0.0	49.2	50.2
LnGrp LOS	A	A	A	A	D	D
Approach Vol, veh/h		804	1125		179	
Approach Delay, s/veh		8.8	5.2		49.7	
Approach LOS		A	A		D	

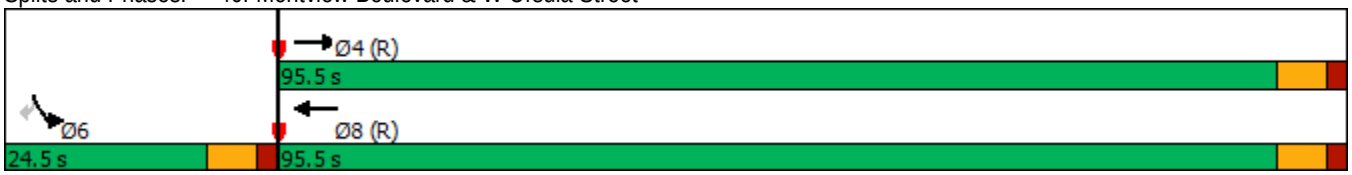
Timer - Assigned Phs	4	6	8
Phs Duration (G+Y+Rc), s	95.5	24.5	95.5
Change Period (Y+Rc), s	6.5	6.5	6.5
Max Green Setting (Gmax), s	89.0	18.0	89.0
Max Q Clear Time (g_c+I1), s	25.4	7.9	2.0
Green Ext Time (p_c), s	7.6	0.3	16.1

Intersection Summary	
HCM 6th Ctrl Delay	10.4
HCM 6th LOS	B

Lane Group	EBT	WBT	SBL	SBR
Lane Configurations				
Traffic Volume (vph)	1125	675	95	100
Future Volume (vph)	1125	675	95	100
Turn Type	NA	NA	Prot	Perm
Protected Phases	4	8	6	
Permitted Phases				6
Detector Phase	4	8	6	6
Switch Phase				
Minimum Initial (s)	5.0	5.0	5.0	5.0
Minimum Split (s)	24.5	24.5	24.5	24.5
Total Split (s)	95.5	95.5	24.5	24.5
Total Split (%)	79.6%	79.6%	20.4%	20.4%
Yellow Time (s)	4.5	4.5	4.5	4.5
All-Red Time (s)	2.0	2.0	2.0	2.0
Lost Time Adjust (s)	0.0	0.0	0.0	0.0
Total Lost Time (s)	6.5	6.5	6.5	6.5
Lead/Lag				
Lead-Lag Optimize?				
Recall Mode	C-Max	C-Max	Max	Max
Act Effct Green (s)	89.0	89.0	18.0	18.0
Actuated g/C Ratio	0.74	0.74	0.15	0.15
v/c Ratio	0.89	0.53	0.39	0.33
Control Delay	17.3	14.0	50.9	11.2
Queue Delay	0.0	0.7	0.0	0.1
Total Delay	17.3	14.7	50.9	11.3
LOS	B	B	D	B
Approach Delay	17.3	14.7	30.6	
Approach LOS	B	B	C	

Intersection Summary	
Cycle Length: 120	
Actuated Cycle Length: 120	
Offset: 101 (84%), Referenced to phase 4:EBT and 8:WBT, Start of Green	
Natural Cycle: 90	
Control Type: Actuated-Coordinated	
Maximum v/c Ratio: 0.89	
Intersection Signal Delay: 17.7	Intersection LOS: B
Intersection Capacity Utilization 75.3%	ICU Level of Service D
Analysis Period (min) 15	

Splits and Phases: 40: Montview Boulevard & W Ursula Street



Movement	EBL	EBT	WBT	WBR	SBL	SBR
Lane Configurations						
Traffic Volume (veh/h)	0	1125	675	0	95	100
Future Volume (veh/h)	0	1125	675	0	95	100
Initial Q (Qb), veh	0	0	0	0	0	0
Ped-Bike Adj(A_pbT)	1.00			1.00	1.00	1.00
Parking Bus, Adj	1.00	1.00	1.00	1.00	1.00	1.00
Work Zone On Approach		No	No		No	
Adj Sat Flow, veh/h/ln	0	1870	1870	0	1870	1870
Adj Flow Rate, veh/h	0	1223	734	0	103	109
Peak Hour Factor	0.92	0.92	0.92	0.92	0.92	0.92
Percent Heavy Veh, %	0	2	2	0	2	2
Cap, veh/h	0	1387	1387	0	267	238
Arrive On Green	0.00	0.74	0.50	0.00	0.15	0.15
Sat Flow, veh/h	0	1870	1870	0	1781	1585
Grp Volume(v), veh/h	0	1223	734	0	103	109
Grp Sat Flow(s),veh/h/ln	0	1870	1870	0	1781	1585
Q Serve(g_s), s	0.0	58.6	32.1	0.0	6.3	7.5
Cycle Q Clear(g_c), s	0.0	58.6	32.1	0.0	6.3	7.5
Prop In Lane	0.00			0.00	1.00	1.00
Lane Grp Cap(c), veh/h	0	1387	1387	0	267	238
V/C Ratio(X)	0.00	0.88	0.53	0.00	0.39	0.46
Avail Cap(c_a), veh/h	0	1387	1387	0	267	238
HCM Platoon Ratio	1.00	1.00	0.67	1.00	1.00	1.00
Upstream Filter(I)	0.00	1.00	1.00	0.00	1.00	1.00
Uniform Delay (d), s/veh	0.0	11.6	15.9	0.0	46.0	46.6
Incr Delay (d2), s/veh	0.0	8.4	1.4	0.0	4.2	6.2
Initial Q Delay(d3),s/veh	0.0	0.0	0.0	0.0	0.0	0.0
%ile BackOfQ(50%),veh/ln	0.0	23.4	15.3	0.0	3.1	3.4
Unsig. Movement Delay, s/veh						
LnGrp Delay(d),s/veh	0.0	19.9	17.3	0.0	50.2	52.8
LnGrp LOS	A	B	B	A	D	D
Approach Vol, veh/h		1223	734		212	
Approach Delay, s/veh		19.9	17.3		51.5	
Approach LOS		B	B		D	

Timer - Assigned Phs		4		6		8
Phs Duration (G+Y+Rc), s		95.5		24.5		95.5
Change Period (Y+Rc), s		6.5		6.5		6.5
Max Green Setting (Gmax), s		89.0		18.0		89.0
Max Q Clear Time (g_c+I1), s		60.6		9.5		34.1
Green Ext Time (p_c), s		14.4		0.4		6.5

Intersection Summary	
HCM 6th Ctrl Delay	22.1
HCM 6th LOS	C

Intersection	
Int Delay, s/veh	0.4

Movement	EBL	EBT	WBT	WBR	SBL	SBR
Lane Configurations						
Traffic Vol, veh/h	25	474	414	22	0	0
Future Vol, veh/h	25	474	414	22	0	0
Conflicting Peds, #/hr	0	0	0	0	0	0
Sign Control	Free	Free	Free	Free	Stop	Stop
RT Channelized	-	None	-	None	-	None
Storage Length	100	-	-	-	0	-
Veh in Median Storage, #	-	0	0	-	0	-
Grade, %	-	0	0	-	0	-
Peak Hour Factor	57	91	94	50	92	92
Heavy Vehicles, %	2	2	2	2	2	2
Mvmt Flow	44	521	440	44	0	0

Major/Minor	Major1		Major2		Minor2	
Conflicting Flow All	484	0	-	0	1071	462
Stage 1	-	-	-	-	462	-
Stage 2	-	-	-	-	609	-
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	1079	-	-	-	244	600
Stage 1	-	-	-	-	634	-
Stage 2	-	-	-	-	543	-
Platoon blocked, %		-	-	-		
Mov Cap-1 Maneuver	1079	-	-	-	234	600
Mov Cap-2 Maneuver	-	-	-	-	234	-
Stage 1	-	-	-	-	608	-
Stage 2	-	-	-	-	543	-

Approach	EB	WB	SB
HCM Control Delay, s	0.7	0	0
HCM LOS			A

Minor Lane/Major Mvmt	EBL	EBT	WBT	WBR	SBLn1
Capacity (veh/h)	1079	-	-	-	-
HCM Lane V/C Ratio	0.041	-	-	-	-
HCM Control Delay (s)	8.5	-	-	-	0
HCM Lane LOS	A	-	-	-	A
HCM 95th %tile Q(veh)	0.1	-	-	-	-

Intersection	
Int Delay, s/veh	0.5

Movement	EBL	EBT	WBT	WBR	SBL	SBR
Lane Configurations						
Traffic Vol, veh/h	47	459	502	49	0	0
Future Vol, veh/h	47	459	502	49	0	0
Conflicting Peds, #/hr	0	0	0	0	0	0
Sign Control	Free	Free	Free	Free	Stop	Stop
RT Channelized	-	None	-	None	-	None
Storage Length	100	-	-	-	0	-
Veh in Median Storage, #	-	0	0	-	0	-
Grade, %	-	0	0	-	0	-
Peak Hour Factor	69	83	92	77	92	92
Heavy Vehicles, %	2	2	2	2	2	2
Mvmt Flow	68	553	546	64	0	0

Major/Minor	Major1		Major2		Minor2	
Conflicting Flow All	610	0	-	0	1267	578
Stage 1	-	-	-	-	578	-
Stage 2	-	-	-	-	689	-
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	969	-	-	-	186	516
Stage 1	-	-	-	-	561	-
Stage 2	-	-	-	-	498	-
Platoon blocked, %		-	-	-		
Mov Cap-1 Maneuver	969	-	-	-	173	516
Mov Cap-2 Maneuver	-	-	-	-	173	-
Stage 1	-	-	-	-	522	-
Stage 2	-	-	-	-	498	-

Approach	EB	WB	SB
HCM Control Delay, s	1	0	0
HCM LOS			A

Minor Lane/Major Mvmt	EBL	EBT	WBT	WBR	SBLn1
Capacity (veh/h)	969	-	-	-	-
HCM Lane V/C Ratio	0.07	-	-	-	-
HCM Control Delay (s)	9	-	-	-	0
HCM Lane LOS	A	-	-	-	A
HCM 95th %tile Q(veh)	0.2	-	-	-	-

Intersection	
Int Delay, s/veh	0.2

Movement	EBL	EBT	WBT	WBR	SBL	SBR
Lane Configurations						
Traffic Vol, veh/h	25	535	485	25	0	0
Future Vol, veh/h	25	535	485	25	0	0
Conflicting Peds, #/hr	0	0	0	0	0	0
Sign Control	Free	Free	Free	Free	Stop	Stop
RT Channelized	-	None	-	None	-	None
Storage Length	100	-	-	-	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	27	582	527	27	0	0

Major/Minor	Major1		Major2		Minor2	
Conflicting Flow All	554	0	-	0	1177	541
Stage 1	-	-	-	-	541	-
Stage 2	-	-	-	-	636	-
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	1016	-	-	-	211	541
Stage 1	-	-	-	-	583	-
Stage 2	-	-	-	-	527	-
Platoon blocked, %		-	-	-		
Mov Cap-1 Maneuver	1016	-	-	-	205	541
Mov Cap-2 Maneuver	-	-	-	-	205	-
Stage 1	-	-	-	-	567	-
Stage 2	-	-	-	-	527	-

Approach	EB	WB	SB
HCM Control Delay, s	0.4	0	0
HCM LOS			A

Minor Lane/Major Mvmt	EBL	EBT	WBT	WBR	SBLn1
Capacity (veh/h)	1016	-	-	-	-
HCM Lane V/C Ratio	0.027	-	-	-	-
HCM Control Delay (s)	8.6	-	-	-	0
HCM Lane LOS	A	-	-	-	A
HCM 95th %tile Q(veh)	0.1	-	-	-	-

Intersection	
Int Delay, s/veh	0.4

Movement	EBL	EBT	WBT	WBR	SBL	SBR
Lane Configurations						
Traffic Vol, veh/h	50	585	470	50	0	0
Future Vol, veh/h	50	585	470	50	0	0
Conflicting Peds, #/hr	0	0	0	0	0	0
Sign Control	Free	Free	Free	Free	Stop	Stop
RT Channelized	-	None	-	None	-	None
Storage Length	100	-	-	-	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	54	636	511	54	0	0

Major/Minor	Major1		Major2		Minor2	
Conflicting Flow All	565	0	-	0	1282	538
Stage 1	-	-	-	-	538	-
Stage 2	-	-	-	-	744	-
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	1007	-	-	-	182	543
Stage 1	-	-	-	-	585	-
Stage 2	-	-	-	-	470	-
Platoon blocked, %		-	-	-		
Mov Cap-1 Maneuver	1007	-	-	-	172	543
Mov Cap-2 Maneuver	-	-	-	-	172	-
Stage 1	-	-	-	-	553	-
Stage 2	-	-	-	-	470	-

Approach	EB	WB	SB
HCM Control Delay, s	0.7	0	0
HCM LOS			A

Minor Lane/Major Mvmt	EBL	EBT	WBT	WBR	SBLn1
Capacity (veh/h)	1007	-	-	-	-
HCM Lane V/C Ratio	0.054	-	-	-	-
HCM Control Delay (s)	8.8	-	-	-	0
HCM Lane LOS	A	-	-	-	A
HCM 95th %tile Q(veh)	0.2	-	-	-	-

Intersection	
Int Delay, s/veh	0.3

Movement	EBL	EBT	WBT	WBR	SBL	SBR
Lane Configurations						
Traffic Vol, veh/h	45	780	1040	115	0	0
Future Vol, veh/h	45	780	1040	115	0	0
Conflicting Peds, #/hr	0	0	0	0	0	0
Sign Control	Free	Free	Free	Free	Stop	Stop
RT Channelized	-	None	-	None	-	None
Storage Length	100	-	-	-	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	49	848	1130	125	0	0

Major/Minor	Major1		Major2		Minor2	
Conflicting Flow All	1255	0	-	0	2139	1193
Stage 1	-	-	-	-	1193	-
Stage 2	-	-	-	-	946	-
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	554	-	-	-	54	228
Stage 1	-	-	-	-	288	-
Stage 2	-	-	-	-	377	-
Platoon blocked, %		-	-	-		
Mov Cap-1 Maneuver	554	-	-	-	49	228
Mov Cap-2 Maneuver	-	-	-	-	49	-
Stage 1	-	-	-	-	263	-
Stage 2	-	-	-	-	377	-

Approach	EB	WB	SB
HCM Control Delay, s	0.7	0	0
HCM LOS			A

Minor Lane/Major Mvmt	EBL	EBT	WBT	WBR	SBLn1
Capacity (veh/h)	554	-	-	-	-
HCM Lane V/C Ratio	0.088	-	-	-	-
HCM Control Delay (s)	12.1	-	-	-	0
HCM Lane LOS	B	-	-	-	A
HCM 95th %tile Q(veh)	0.3	-	-	-	-

Intersection	
Int Delay, s/veh	0.5

Movement	EBL	EBT	WBT	WBR	SBL	SBR
Lane Configurations						
Traffic Vol, veh/h	100	1120	680	115	0	0
Future Vol, veh/h	100	1120	680	115	0	0
Conflicting Peds, #/hr	0	0	0	0	0	0
Sign Control	Free	Free	Free	Free	Stop	Stop
RT Channelized	-	None	-	None	-	None
Storage Length	100	-	-	-	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	109	1217	739	125	0	0

Major/Minor	Major1		Major2		Minor2	
Conflicting Flow All	864	0	-	0	2237	802
Stage 1	-	-	-	-	802	-
Stage 2	-	-	-	-	1435	-
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	779	-	-	-	47	384
Stage 1	-	-	-	-	441	-
Stage 2	-	-	-	-	219	-
Platoon blocked, %		-	-	-		
Mov Cap-1 Maneuver	779	-	-	-	40	384
Mov Cap-2 Maneuver	-	-	-	-	40	-
Stage 1	-	-	-	-	379	-
Stage 2	-	-	-	-	219	-

Approach	EB	WB	SB
HCM Control Delay, s	0.8	0	0
HCM LOS			A

Minor Lane/Major Mvmt	EBL	EBT	WBT	WBR	SBLn1
Capacity (veh/h)	779	-	-	-	-
HCM Lane V/C Ratio	0.14	-	-	-	-
HCM Control Delay (s)	10.4	-	-	-	0
HCM Lane LOS	B	-	-	-	A
HCM 95th %tile Q(veh)	0.5	-	-	-	-

Intersection	
Int Delay, s/veh	0.5

Movement	EBL	EBT	EBR	WBL	WBT	WBR	NBL	NBT	NBR	SBL	SBT	SBR
Lane Configurations												
Traffic Vol, veh/h	5	470	65	20	510	5	0	0	25	0	0	5
Future Vol, veh/h	5	470	65	20	510	5	0	0	25	0	0	5
Conflicting Peds, #/hr	0	0	0	0	0	0	0	0	0	0	0	0
Sign Control	Free	Free	Free	Free	Free	Free	Stop	Stop	Stop	Stop	Stop	Stop
RT Channelized	-	-	None	-	-	None	-	-	None	-	-	None
Storage Length	100	-	-	100	-	-	-	-	0	-	-	0
Veh in Median Storage, #	-	0	-	-	0	-	-	0	-	-	0	-
Grade, %	-	0	-	-	0	-	-	0	-	-	0	-
Peak Hour Factor	92	92	92	92	92	92	92	92	92	92	92	92
Heavy Vehicles, %	2	2	2	2	2	2	2	2	2	2	2	2
Mvmt Flow	5	511	71	22	554	5	0	0	27	0	0	5

Major/Minor	Major1			Major2			Minor1			Minor2		
Conflicting Flow All	559	0	0	582	0	0	-	-	547	-	-	557
Stage 1	-	-	-	-	-	-	-	-	-	-	-	-
Stage 2	-	-	-	-	-	-	-	-	-	-	-	-
Critical Hdwy	4.12	-	-	4.12	-	-	-	-	6.22	-	-	6.22
Critical Hdwy Stg 1	-	-	-	-	-	-	-	-	-	-	-	-
Critical Hdwy Stg 2	-	-	-	-	-	-	-	-	-	-	-	-
Follow-up Hdwy	2.218	-	-	2.218	-	-	-	-	3.318	-	-	3.318
Pot Cap-1 Maneuver	1012	-	-	992	-	-	0	0	537	0	0	530
Stage 1	-	-	-	-	-	-	0	0	-	0	0	-
Stage 2	-	-	-	-	-	-	0	0	-	0	0	-
Platoon blocked, %		-	-		-	-						
Mov Cap-1 Maneuver	1012	-	-	992	-	-	-	-	537	-	-	530
Mov Cap-2 Maneuver	-	-	-	-	-	-	-	-	-	-	-	-
Stage 1	-	-	-	-	-	-	-	-	-	-	-	-
Stage 2	-	-	-	-	-	-	-	-	-	-	-	-

Approach	EB	WB	NB	SB
HCM Control Delay, s	0.1	0.3	12.1	11.9
HCM LOS			B	B

Minor Lane/Major Mvmt	NBLn1	EBL	EBT	EBR	WBL	WBT	WBR	SBLn1
Capacity (veh/h)	537	1012	-	-	992	-	-	530
HCM Lane V/C Ratio	0.051	0.005	-	-	0.022	-	-	0.01
HCM Control Delay (s)	12.1	8.6	-	-	8.7	-	-	11.9
HCM Lane LOS	B	A	-	-	A	-	-	B
HCM 95th %tile Q(veh)	0.2	0	-	-	0.1	-	-	0

Intersection	
Int Delay, s/veh	0.6

Movement	EBL	EBT	EBR	WBL	WBT	WBR	NBL	NBT	NBR	SBL	SBT	SBR
Lane Configurations												
Traffic Vol, veh/h	5	560	25	10	510	5	0	0	40	0	0	5
Future Vol, veh/h	5	560	25	10	510	5	0	0	40	0	0	5
Conflicting Peds, #/hr	0	0	0	0	0	0	0	0	0	0	0	0
Sign Control	Free	Free	Free	Free	Free	Free	Stop	Stop	Stop	Stop	Stop	Stop
RT Channelized	-	-	None	-	-	None	-	-	None	-	-	None
Storage Length	100	-	-	100	-	-	-	-	0	-	-	0
Veh in Median Storage, #	-	0	-	-	0	-	-	0	-	-	0	-
Grade, %	-	0	-	-	0	-	-	0	-	-	0	-
Peak Hour Factor	92	92	92	92	92	92	92	92	92	92	92	92
Heavy Vehicles, %	2	2	2	2	2	2	2	2	2	2	2	2
Mvmt Flow	5	609	27	11	554	5	0	0	43	0	0	5

Major/Minor	Major1			Major2			Minor1			Minor2		
Conflicting Flow All	559	0	0	636	0	0	-	-	623	-	-	557
Stage 1	-	-	-	-	-	-	-	-	-	-	-	-
Stage 2	-	-	-	-	-	-	-	-	-	-	-	-
Critical Hdwy	4.12	-	-	4.12	-	-	-	-	6.22	-	-	6.22
Critical Hdwy Stg 1	-	-	-	-	-	-	-	-	-	-	-	-
Critical Hdwy Stg 2	-	-	-	-	-	-	-	-	-	-	-	-
Follow-up Hdwy	2.218	-	-	2.218	-	-	-	-	3.318	-	-	3.318
Pot Cap-1 Maneuver	*986	-	-	947	-	-	0	0	486	0	0	*659
Stage 1	-	-	-	-	-	-	0	0	-	0	0	-
Stage 2	-	-	-	-	-	-	0	0	-	0	0	-
Platoon blocked, %	1	-	-		-	-						1
Mov Cap-1 Maneuver	*986	-	-	947	-	-	-	-	486	-	-	*659
Mov Cap-2 Maneuver	-	-	-	-	-	-	-	-	-	-	-	-
Stage 1	-	-	-	-	-	-	-	-	-	-	-	-
Stage 2	-	-	-	-	-	-	-	-	-	-	-	-

Approach	EB	WB	NB	SB
HCM Control Delay, s	0.1	0.2	13.1	10.5
HCM LOS			B	B

Minor Lane/Major Mvmt	NBLn1	EBL	EBT	EBR	WBL	WBT	WBR	SBLn1
Capacity (veh/h)	486	* 986	-	-	947	-	-	659
HCM Lane V/C Ratio	0.089	0.006	-	-	0.011	-	-	0.008
HCM Control Delay (s)	13.1	8.7	-	-	8.8	-	-	10.5
HCM Lane LOS	B	A	-	-	A	-	-	B
HCM 95th %tile Q(veh)	0.3	0	-	-	0	-	-	0

Notes

~: Volume exceeds capacity $: Delay exceeds 300s +: Computation Not Defined *: All major volume in platoon

Intersection	
Int Delay, s/veh	1.4

Movement	EBL	EBT	EBR	WBL	WBT	WBR	NBL	NBT	NBR	SBL	SBT	SBR
Lane Configurations												
Traffic Vol, veh/h	120	605	65	20	1135	20	0	0	25	0	0	25
Future Vol, veh/h	120	605	65	20	1135	20	0	0	25	0	0	25
Conflicting Peds, #/hr	0	0	0	0	0	0	0	0	0	0	0	0
Sign Control	Free	Free	Free	Free	Free	Free	Stop	Stop	Stop	Stop	Stop	Stop
RT Channelized	-	-	None	-	-	None	-	-	None	-	-	None
Storage Length	100	-	-	100	-	0	-	-	0	-	-	0
Veh in Median Storage, #	-	0	-	-	0	-	-	0	-	-	0	-
Grade, %	-	0	-	-	0	-	-	0	-	-	0	-
Peak Hour Factor	92	92	92	92	92	92	92	92	92	92	92	92
Heavy Vehicles, %	2	2	2	2	2	2	2	2	2	2	2	2
Mvmt Flow	130	658	71	22	1234	22	0	0	27	0	0	27

Major/Minor	Major1			Major2			Minor1			Minor2		
Conflicting Flow All	1256	0	0	729	0	0	-	-	694	-	-	1234
Stage 1	-	-	-	-	-	-	-	-	-	-	-	-
Stage 2	-	-	-	-	-	-	-	-	-	-	-	-
Critical Hdwy	4.12	-	-	4.12	-	-	-	-	6.22	-	-	6.22
Critical Hdwy Stg 1	-	-	-	-	-	-	-	-	-	-	-	-
Critical Hdwy Stg 2	-	-	-	-	-	-	-	-	-	-	-	-
Follow-up Hdwy	2.218	-	-	2.218	-	-	-	-	3.318	-	-	3.318
Pot Cap-1 Maneuver	554	-	-	875	-	-	0	0	443	0	0	215
Stage 1	-	-	-	-	-	-	0	0	-	0	0	-
Stage 2	-	-	-	-	-	-	0	0	-	0	0	-
Platoon blocked, %		-	-		-	-						
Mov Cap-1 Maneuver	554	-	-	875	-	-	-	-	443	-	-	215
Mov Cap-2 Maneuver	-	-	-	-	-	-	-	-	-	-	-	-
Stage 1	-	-	-	-	-	-	-	-	-	-	-	-
Stage 2	-	-	-	-	-	-	-	-	-	-	-	-

Approach	EB	WB	NB	SB
HCM Control Delay, s	2	0.2	13.7	24.2
HCM LOS			B	C

Minor Lane/Major Mvmt	NBLn1	EBL	EBT	EBR	WBL	WBT	WBR	SBLn1
Capacity (veh/h)	443	554	-	-	875	-	-	215
HCM Lane V/C Ratio	0.061	0.235	-	-	0.025	-	-	0.126
HCM Control Delay (s)	13.7	13.5	-	-	9.2	-	-	24.2
HCM Lane LOS	B	B	-	-	A	-	-	C
HCM 95th %tile Q(veh)	0.2	0.9	-	-	0.1	-	-	0.4

Intersection	
Int Delay, s/veh	1.7

Movement	EBL	EBT	EBR	WBL	WBT	WBR	NBL	NBT	NBR	SBL	SBT	SBR
Lane Configurations												
Traffic Vol, veh/h	25	1075	25	10	675	45	0	0	40	0	0	110
Future Vol, veh/h	25	1075	25	10	675	45	0	0	40	0	0	110
Conflicting Peds, #/hr	0	0	0	0	0	0	0	0	0	0	0	0
Sign Control	Free	Free	Free	Free	Free	Free	Stop	Stop	Stop	Stop	Stop	Stop
RT Channelized	-	-	None	-	-	None	-	-	None	-	-	None
Storage Length	100	-	-	100	-	0	-	-	0	-	-	0
Veh in Median Storage, #	-	0	-	-	0	-	-	0	-	-	0	-
Grade, %	-	0	-	-	0	-	-	0	-	-	0	-
Peak Hour Factor	92	92	92	92	92	92	92	92	92	92	92	92
Heavy Vehicles, %	2	2	2	2	2	2	2	2	2	2	2	2
Mvmt Flow	27	1168	27	11	734	49	0	0	43	0	0	120

Major/Minor	Major1			Major2			Minor1			Minor2		
Conflicting Flow All	783	0	0	1195	0	0	-	-	1182	-	-	734
Stage 1	-	-	-	-	-	-	-	-	-	-	-	-
Stage 2	-	-	-	-	-	-	-	-	-	-	-	-
Critical Hdwy	4.12	-	-	4.12	-	-	-	-	6.22	-	-	6.22
Critical Hdwy Stg 1	-	-	-	-	-	-	-	-	-	-	-	-
Critical Hdwy Stg 2	-	-	-	-	-	-	-	-	-	-	-	-
Follow-up Hdwy	2.218	-	-	2.218	-	-	-	-	3.318	-	-	3.318
Pot Cap-1 Maneuver	*752	-	-	*245	-	-	0	0	*164	0	0	*503
Stage 1	-	-	-	-	-	-	0	0	-	0	0	-
Stage 2	-	-	-	-	-	-	0	0	-	0	0	-
Platoon blocked, %	1	-	-	1	-	-			1			1
Mov Cap-1 Maneuver	*752	-	-	*245	-	-	-	-	*164	-	-	*503
Mov Cap-2 Maneuver	-	-	-	-	-	-	-	-	-	-	-	-
Stage 1	-	-	-	-	-	-	-	-	-	-	-	-
Stage 2	-	-	-	-	-	-	-	-	-	-	-	-

Approach	EB	WB	NB	SB
HCM Control Delay, s	0.2	0.3	34.7	14.4
HCM LOS			D	B

Minor Lane/Major Mvmt	NBLn1	EBL	EBT	EBR	WBL	WBT	WBR	SBLn1
Capacity (veh/h)	164	* 752	-	-	* 245	-	-	503
HCM Lane V/C Ratio	0.265	0.036	-	-	0.044	-	-	0.238
HCM Control Delay (s)	34.7	10	-	-	20.4	-	-	14.4
HCM Lane LOS	D	A	-	-	C	-	-	B
HCM 95th %tile Q(veh)	1	0.1	-	-	0.1	-	-	0.9

Notes

~: Volume exceeds capacity $: Delay exceeds 300s +: Computation Not Defined *: All major volume in platoon

Intersection	
Int Delay, s/veh	4.9

Movement	EBL	EBT	EBR	WBL	WBT	WBR	NBL	NBT	NBR	SBL	SBT	SBR
Lane Configurations												
Traffic Vol, veh/h	54	203	112	35	467	118	25	6	6	4	17	16
Future Vol, veh/h	54	203	112	35	467	118	25	6	6	4	17	16
Conflicting Peds, #/hr	0	0	0	0	0	0	0	0	0	0	0	0
Sign Control	Free	Free	Free	Free	Free	Free	Stop	Stop	Stop	Stop	Stop	Stop
RT Channelized	-	-	None	-	-	None	-	-	None	-	-	None
Storage Length	-	-	-	-	-	-	-	-	-	-	-	125
Veh in Median Storage, #	-	0	-	-	0	-	-	0	-	-	0	-
Grade, %	-	0	-	-	0	-	-	0	-	-	0	-
Peak Hour Factor	68	95	85	58	91	84	52	50	38	50	71	80
Heavy Vehicles, %	2	2	2	2	2	2	2	2	2	2	2	2
Mvmt Flow	79	214	132	60	513	140	48	12	16	8	24	20

Major/Minor	Major1			Major2			Minor1			Minor2		
Conflicting Flow All	653	0	0	346	0	0	1163	1211	280	1155	1207	583
Stage 1	-	-	-	-	-	-	438	438	-	703	703	-
Stage 2	-	-	-	-	-	-	725	773	-	452	504	-
Critical Hdwy	4.12	-	-	4.12	-	-	7.12	6.52	6.22	7.12	6.52	6.22
Critical Hdwy Stg 1	-	-	-	-	-	-	6.12	5.52	-	6.12	5.52	-
Critical Hdwy Stg 2	-	-	-	-	-	-	6.12	5.52	-	6.12	5.52	-
Follow-up Hdwy	2.218	-	-	2.218	-	-	3.518	4.018	3.318	3.518	4.018	3.318
Pot Cap-1 Maneuver	934	-	-	1213	-	-	172	182	759	174	183	512
Stage 1	-	-	-	-	-	-	597	579	-	428	440	-
Stage 2	-	-	-	-	-	-	416	409	-	587	541	-
Platoon blocked, %		-	-		-	-						
Mov Cap-1 Maneuver	934	-	-	1213	-	-	126	150	759	138	150	512
Mov Cap-2 Maneuver	-	-	-	-	-	-	126	150	-	138	150	-
Stage 1	-	-	-	-	-	-	533	517	-	382	405	-
Stage 2	-	-	-	-	-	-	346	376	-	501	483	-

Approach	EB	WB	NB	SB
HCM Control Delay, s	1.7	0.7	47.7	27
HCM LOS			E	D

Minor Lane/Major Mvmt	NBLn1	EBL	EBT	EBR	WBL	WBT	WBR	SBLn1	SBLn2
Capacity (veh/h)	157	934	-	-	1213	-	-	147	512
HCM Lane V/C Ratio	0.483	0.085	-	-	0.05	-	-	0.217	0.039
HCM Control Delay (s)	47.7	9.2	0	-	8.1	0	-	36.2	12.3
HCM Lane LOS	E	A	A	-	A	A	-	E	B
HCM 95th %tile Q(veh)	2.3	0.3	-	-	0.2	-	-	0.8	0.1

Intersection	
Int Delay, s/veh	113

Movement	EBL	EBT	EBR	WBL	WBT	WBR	NBL	NBT	NBR	SBL	SBT	SBR
Lane Configurations												
Traffic Vol, veh/h	72	543	25	17	328	20	56	67	68	22	19	67
Future Vol, veh/h	72	543	25	17	328	20	56	67	68	22	19	67
Conflicting Peds, #/hr	0	0	0	0	0	0	0	0	0	0	0	0
Sign Control	Free	Free	Free	Free	Free	Free	Stop	Stop	Stop	Stop	Stop	Stop
RT Channelized	-	-	None	-	-	None	-	-	None	-	-	None
Storage Length	-	-	-	-	-	-	-	-	-	-	-	125
Veh in Median Storage, #	-	0	-	-	0	-	-	0	-	-	0	-
Grade, %	-	0	-	-	0	-	-	0	-	-	0	-
Peak Hour Factor	75	76	57	53	87	62	74	73	71	69	68	88
Heavy Vehicles, %	2	2	2	2	2	2	2	2	2	2	2	2
Mvmt Flow	96	714	44	32	377	32	76	92	96	32	28	76

Major/Minor	Major1			Major2			Minor1			Minor2		
Conflicting Flow All	409	0	0	758	0	0	1437	1401	736	1479	1407	393
Stage 1	-	-	-	-	-	-	928	928	-	457	457	-
Stage 2	-	-	-	-	-	-	509	473	-	1022	950	-
Critical Hdwy	4.12	-	-	4.12	-	-	7.12	6.52	6.22	7.12	6.52	6.22
Critical Hdwy Stg 1	-	-	-	-	-	-	6.12	5.52	-	6.12	5.52	-
Critical Hdwy Stg 2	-	-	-	-	-	-	6.12	5.52	-	6.12	5.52	-
Follow-up Hdwy	2.218	-	-	2.218	-	-	3.518	4.018	3.318	3.518	4.018	3.318
Pot Cap-1 Maneuver	1150	-	-	853	-	-	111	140	419	104	139	656
Stage 1	-	-	-	-	-	-	321	347	-	583	568	-
Stage 2	-	-	-	-	-	-	547	558	-	285	339	-
Platoon blocked, %		-	-		-	-						
Mov Cap-1 Maneuver	1150	-	-	853	-	-	~ 68	114	419	~ 23	113	656
Mov Cap-2 Maneuver	-	-	-	-	-	-	~ 68	114	-	~ 23	113	-
Stage 1	-	-	-	-	-	-	274	297	-	498	540	-
Stage 2	-	-	-	-	-	-	436	531	-	130	290	-

Approach	EB	WB	NB	SB
HCM Control Delay, s	0.9	0.7	$ 597.4	244.4
HCM LOS			F	F

Minor Lane/Major Mvmt	NBLn1	EBL	EBT	EBR	WBL	WBT	WBR	SBLn1	SBLn2
Capacity (veh/h)	123	1150	-	-	853	-	-	37	656
HCM Lane V/C Ratio	2.14	0.083	-	-	0.038	-	-	1.617	0.116
HCM Control Delay (s)	$ 597.4	8.4	0	-	9.4	0	-	$ 541.2	11.2
HCM Lane LOS	F	A	A	-	A	A	-	F	B
HCM 95th %tile Q(veh)	22	0.3	-	-	0.1	-	-	6.4	0.4

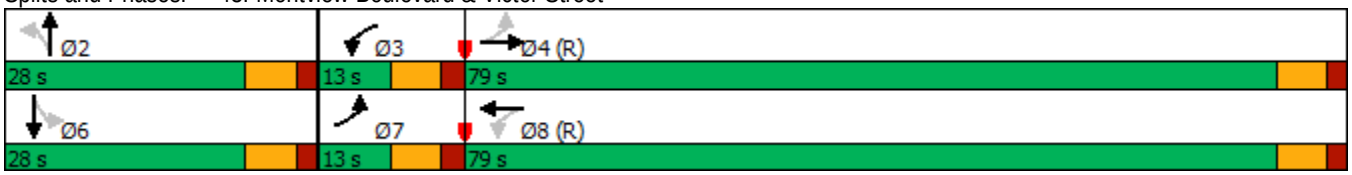
Notes

~: Volume exceeds capacity $: Delay exceeds 300s +: Computation Not Defined *: All major volume in platoon

Lane Group	EBL	EBT	WBL	WBT	NBL	NBT	SBL	SBT
Lane Configurations								
Traffic Volume (vph)	55	325	35	485	25	10	5	100
Future Volume (vph)	55	325	35	485	25	10	5	100
Turn Type	pm+pt	NA	pm+pt	NA	Perm	NA	Perm	NA
Protected Phases	7	4	3	8		2		6
Permitted Phases	4		8		2		6	
Detector Phase	7	4	3	8	2	2	6	6
Switch Phase								
Minimum Initial (s)	5.0	5.0	5.0	5.0	5.0	5.0	5.0	5.0
Minimum Split (s)	11.5	24.5	11.5	24.5	24.5	24.5	24.5	24.5
Total Split (s)	13.0	79.0	13.0	79.0	28.0	28.0	28.0	28.0
Total Split (%)	10.8%	65.8%	10.8%	65.8%	23.3%	23.3%	23.3%	23.3%
Yellow Time (s)	4.5	4.5	4.5	4.5	4.5	4.5	4.5	4.5
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	0.0	0.0
Total Lost Time (s)	6.5	6.5	6.5	6.5	6.5	6.5	6.5	6.5
Lead/Lag	Lead	Lag	Lead	Lag				
Lead-Lag Optimize?	Yes	Yes	Yes	Yes				
Recall Mode	None	C-Max	None	C-Max	Max	Max	Max	Max
Act Effct Green (s)	81.7	77.8	80.2	75.2	21.5	21.5	21.5	21.5
Actuated g/C Ratio	0.68	0.65	0.67	0.63	0.18	0.18	0.18	0.18
v/c Ratio	0.14	0.41	0.06	0.58	0.13	0.07	0.02	0.40
Control Delay	6.7	16.0	5.3	9.1	43.3	27.3	41.0	45.2
Queue Delay	0.0	0.0	0.0	0.0	0.0	0.0	0.0	0.0
Total Delay	6.7	16.0	5.3	9.1	43.3	27.3	41.0	45.2
LOS	A	B	A	A	D	C	D	D
Approach Delay		15.0		8.9		36.1		45.1
Approach LOS		B		A		D		D

Intersection Summary	
Cycle Length: 120	
Actuated Cycle Length: 120	
Offset: 108 (90%), Referenced to phase 4:EBTL and 8:WBTL, Start of Green	
Natural Cycle: 70	
Control Type: Actuated-Coordinated	
Maximum v/c Ratio: 0.58	
Intersection Signal Delay: 15.6	Intersection LOS: B
Intersection Capacity Utilization 61.3%	ICU Level of Service B
Analysis Period (min) 15	

Splits and Phases: 43: Montview Boulevard & Victor Street



Movement	EBL	EBT	EBR	WBL	WBT	WBR	NBL	NBT	NBR	SBL	SBT	SBR
Lane Configurations												
Traffic Volume (veh/h)	55	325	115	35	485	120	25	10	10	5	100	20
Future Volume (veh/h)	55	325	115	35	485	120	25	10	10	5	100	20
Initial Q (Qb), veh	0	0	0	0	0	0	0	0	0	0	0	0
Ped-Bike Adj(A_pbT)	1.00		1.00	1.00		1.00	1.00		1.00	1.00		1.00
Parking Bus, Adj	1.00	1.00	1.00	1.00	1.00	1.00	1.00	1.00	1.00	1.00	1.00	1.00
Work Zone On Approach		No			No			No			No	
Adj Sat Flow, veh/h/ln	1870	1870	1870	1870	1870	1870	1870	1870	1870	1870	1870	1870
Adj Flow Rate, veh/h	60	353	125	38	527	130	27	11	11	5	109	22
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
Percent Heavy Veh, %	2	2	2	2	2	2	2	2	2	2	2	2
Cap, veh/h	440	829	294	565	902	222	205	154	154	294	271	55
Arrive On Green	0.04	0.63	0.63	0.03	0.62	0.62	0.18	0.18	0.18	0.18	0.18	0.18
Sat Flow, veh/h	1781	1319	467	1781	1449	357	1259	858	858	1390	1511	305
Grp Volume(v), veh/h	60	0	478	38	0	657	27	0	22	5	0	131
Grp Sat Flow(s),veh/h/ln	1781	0	1786	1781	0	1806	1259	0	1716	1390	0	1815
Q Serve(g_s), s	1.4	0.0	16.3	0.9	0.0	25.9	2.3	0.0	1.3	0.4	0.0	7.7
Cycle Q Clear(g_c), s	1.4	0.0	16.3	0.9	0.0	25.9	10.0	0.0	1.3	1.6	0.0	7.7
Prop In Lane	1.00		0.26	1.00		0.20	1.00		0.50	1.00		0.17
Lane Grp Cap(c), veh/h	440	0	1123	565	0	1124	205	0	307	294	0	325
V/C Ratio(X)	0.14	0.00	0.43	0.07	0.00	0.58	0.13	0.00	0.07	0.02	0.00	0.40
Avail Cap(c_a), veh/h	472	0	1123	608	0	1124	205	0	307	294	0	325
HCM Platoon Ratio	1.00	1.00	1.00	1.00	1.00	1.00	1.00	1.00	1.00	1.00	1.00	1.00
Upstream Filter(I)	1.00	0.00	1.00	0.38	0.00	0.38	1.00	0.00	1.00	1.00	0.00	1.00
Uniform Delay (d), s/veh	10.3	0.0	11.3	8.5	0.0	13.5	48.0	0.0	41.0	41.6	0.0	43.6
Incr Delay (d2), s/veh	0.1	0.0	1.2	0.0	0.0	0.9	1.3	0.0	0.5	0.1	0.0	3.7
Initial Q Delay(d3),s/veh	0.0	0.0	0.0	0.0	0.0	0.0	0.0	0.0	0.0	0.0	0.0	0.0
%ile BackOfQ(50%),veh/ln	0.5	0.0	6.6	0.3	0.0	10.3	0.8	0.0	0.6	0.1	0.0	3.8
Unsig. Movement Delay, s/veh												
LnGrp Delay(d),s/veh	10.4	0.0	12.5	8.5	0.0	14.3	49.3	0.0	41.4	41.7	0.0	47.3
LnGrp LOS	B	A	B	A	A	B	D	A	D	D	A	D
Approach Vol, veh/h		538			695			49			136	
Approach Delay, s/veh		12.3			14.0			45.8			47.0	
Approach LOS		B			B			D			D	

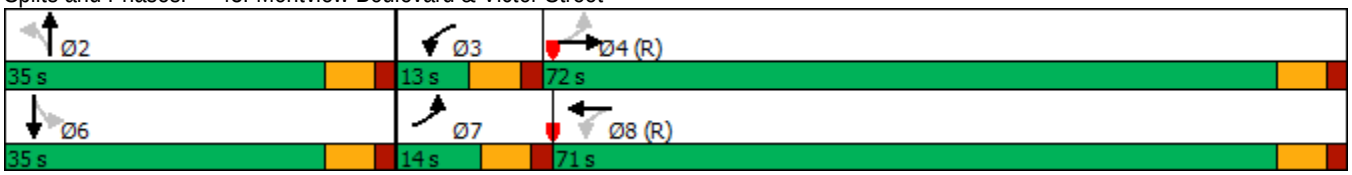
Timer - Assigned Phs		2	3	4		6	7	8				
Phs Duration (G+Y+Rc), s		28.0	10.1	81.9		28.0	10.8	81.2				
Change Period (Y+Rc), s		6.5	6.5	6.5		6.5	6.5	6.5				
Max Green Setting (Gmax), s		21.5	6.5	72.5		21.5	6.5	72.5				
Max Q Clear Time (g_c+I1), s		12.0	2.9	18.3		9.7	3.4	27.9				
Green Ext Time (p_c), s		0.1	0.0	3.6		0.5	0.0	5.5				

Intersection Summary	
HCM 6th Ctrl Delay	17.6
HCM 6th LOS	B

Lane Group	EBL	EBT	WBL	WBT	NBL	NBT	SBL	SBT
Lane Configurations								
Traffic Volume (vph)	75	500	20	390	60	70	50	20
Future Volume (vph)	75	500	20	390	60	70	50	20
Turn Type	pm+pt	NA	pm+pt	NA	Perm	NA	Perm	NA
Protected Phases	7	4	3	8		2		6
Permitted Phases	4		8		2		6	
Detector Phase	7	4	3	8	2	2	6	6
Switch Phase								
Minimum Initial (s)	5.0	5.0	5.0	5.0	5.0	5.0	5.0	5.0
Minimum Split (s)	11.5	24.5	11.5	24.5	24.5	24.5	24.5	24.5
Total Split (s)	14.0	72.0	13.0	71.0	35.0	35.0	35.0	35.0
Total Split (%)	11.7%	60.0%	10.8%	59.2%	29.2%	29.2%	29.2%	29.2%
Yellow Time (s)	4.5	4.5	4.5	4.5	4.5	4.5	4.5	4.5
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	0.0	0.0
Total Lost Time (s)	6.5	6.5	6.5	6.5	6.5	6.5	6.5	6.5
Lead/Lag	Lead	Lag	Lead	Lag				
Lead-Lag Optimize?	Yes	Yes	Yes	Yes				
Recall Mode	None	C-Max	None	C-Max	Max	Max	Max	Max
Act Effct Green (s)	75.3	70.8	72.3	67.4	28.5	28.5	28.5	28.5
Actuated g/C Ratio	0.63	0.59	0.60	0.56	0.24	0.24	0.24	0.24
v/c Ratio	0.15	0.52	0.05	0.43	0.21	0.46	0.24	0.22
Control Delay	12.5	24.5	4.5	8.4	39.0	29.7	40.5	13.3
Queue Delay	0.0	0.0	0.0	0.0	0.0	0.0	0.0	0.0
Total Delay	12.5	24.5	4.5	8.4	39.0	29.7	40.5	13.3
LOS	B	C	A	A	D	C	D	B
Approach Delay		23.0		8.2		31.9		23.0
Approach LOS		C		A		C		C

Intersection Summary	
Cycle Length: 120	
Actuated Cycle Length: 120	
Offset: 26 (22%), Referenced to phase 4:EBTL and 8:WBTL, Start of Green	
Natural Cycle: 65	
Control Type: Actuated-Coordinated	
Maximum v/c Ratio: 0.52	
Intersection Signal Delay: 20.1	Intersection LOS: C
Intersection Capacity Utilization 68.9%	ICU Level of Service C
Analysis Period (min) 15	

Splits and Phases: 43: Montview Boulevard & Victor Street



Movement	EBL	EBT	EBR	WBL	WBT	WBR	NBL	NBT	NBR	SBL	SBT	SBR
Lane Configurations												
Traffic Volume (veh/h)	75	500	25	20	390	20	60	70	120	50	20	70
Future Volume (veh/h)	75	500	25	20	390	20	60	70	120	50	20	70
Initial Q (Qb), veh	0	0	0	0	0	0	0	0	0	0	0	0
Ped-Bike Adj(A_pbT)	1.00		1.00	1.00		1.00	1.00		1.00	1.00		1.00
Parking Bus, Adj	1.00	1.00	1.00	1.00	1.00	1.00	1.00	1.00	1.00	1.00	1.00	1.00
Work Zone On Approach		No			No			No			No	
Adj Sat Flow, veh/h/ln	1870	1870	1870	1870	1870	1870	1870	1870	1870	1870	1870	1870
Adj Flow Rate, veh/h	82	543	16	22	424	11	65	76	119	54	22	65
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
Percent Heavy Veh, %	2	2	2	2	2	2	2	2	2	2	2	2
Cap, veh/h	537	1045	31	436	1018	26	316	156	244	224	99	293
Arrive On Green	0.04	0.58	0.58	0.02	0.56	0.56	0.24	0.24	0.24	0.24	0.24	0.24
Sat Flow, veh/h	1781	1808	53	1781	1815	47	1310	657	1028	1188	417	1232
Grp Volume(v), veh/h	82	0	559	22	0	435	65	0	195	54	0	87
Grp Sat Flow(s),veh/h/ln	1781	0	1861	1781	0	1862	1310	0	1685	1188	0	1649
Q Serve(g_s), s	2.3	0.0	21.7	0.6	0.0	16.1	5.0	0.0	12.0	4.9	0.0	5.1
Cycle Q Clear(g_c), s	2.3	0.0	21.7	0.6	0.0	16.1	10.1	0.0	12.0	16.9	0.0	5.1
Prop In Lane	1.00		0.03	1.00		0.03	1.00		0.61	1.00		0.75
Lane Grp Cap(c), veh/h	537	0	1076	436	0	1045	316	0	400	224	0	392
V/C Ratio(X)	0.15	0.00	0.52	0.05	0.00	0.42	0.21	0.00	0.49	0.24	0.00	0.22
Avail Cap(c_a), veh/h	579	0	1076	494	0	1045	316	0	400	224	0	392
HCM Platoon Ratio	1.00	1.00	1.00	1.00	1.00	1.00	1.00	1.00	1.00	1.00	1.00	1.00
Upstream Filter(I)	1.00	0.00	1.00	0.65	0.00	0.65	1.00	0.00	1.00	1.00	0.00	1.00
Uniform Delay (d), s/veh	11.2	0.0	15.2	12.2	0.0	15.1	40.9	0.0	39.4	46.7	0.0	36.8
Incr Delay (d2), s/veh	0.1	0.0	1.8	0.0	0.0	0.8	1.5	0.0	4.2	2.5	0.0	1.3
Initial Q Delay(d3),s/veh	0.0	0.0	0.0	0.0	0.0	0.0	0.0	0.0	0.0	0.0	0.0	0.0
%ile BackOfQ(50%),veh/ln	0.9	0.0	9.4	0.2	0.0	6.9	1.8	0.0	5.4	1.6	0.0	2.2
Unsig. Movement Delay, s/veh												
LnGrp Delay(d),s/veh	11.4	0.0	17.0	12.3	0.0	15.9	42.4	0.0	43.6	49.3	0.0	38.1
LnGrp LOS	B	A	B	B	A	B	D	A	D	D	A	D
Approach Vol, veh/h		641			457			260			141	
Approach Delay, s/veh		16.3			15.7			43.3			42.4	
Approach LOS		B			B			D			D	

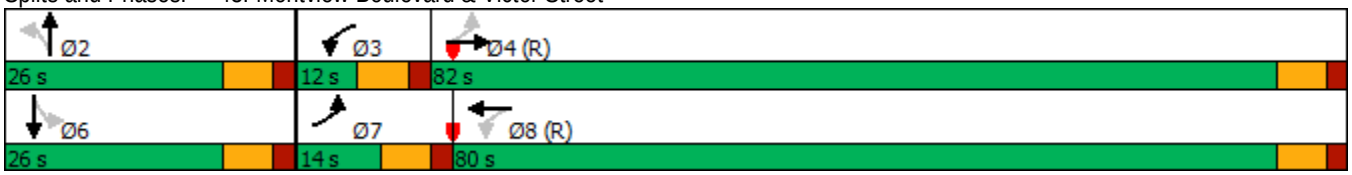
Timer - Assigned Phs		2	3	4		6	7	8				
Phs Duration (G+Y+Rc), s		35.0	9.1	75.9		35.0	11.2	73.8				
Change Period (Y+Rc), s		6.5	6.5	6.5		6.5	6.5	6.5				
Max Green Setting (Gmax), s		28.5	6.5	65.5		28.5	7.5	64.5				
Max Q Clear Time (g_c+I1), s		14.0	2.6	23.7		18.9	4.3	18.1				
Green Ext Time (p_c), s		1.1	0.0	4.3		0.4	0.0	3.1				

Intersection Summary	
HCM 6th Ctrl Delay	23.3
HCM 6th LOS	C

Lane Group	EBL	EBT	WBL	WBT	NBL	NBT	SBL	SBT
Lane Configurations								
Traffic Volume (vph)	55	455	35	1110	45	35	70	105
Future Volume (vph)	55	455	35	1110	45	35	70	105
Turn Type	pm+pt	NA	pm+pt	NA	Perm	NA	Perm	NA
Protected Phases	7	4	3	8		2		6
Permitted Phases	4		8		2		6	
Detector Phase	7	4	3	8	2	2	6	6
Switch Phase								
Minimum Initial (s)	5.0	5.0	5.0	5.0	5.0	5.0	5.0	5.0
Minimum Split (s)	11.5	24.5	11.5	24.5	24.5	24.5	24.5	24.5
Total Split (s)	14.0	82.0	12.0	80.0	26.0	26.0	26.0	26.0
Total Split (%)	11.7%	68.3%	10.0%	66.7%	21.7%	21.7%	21.7%	21.7%
Yellow Time (s)	4.5	4.5	4.5	4.5	4.5	4.5	4.5	4.5
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	0.0	0.0
Total Lost Time (s)	6.5	6.5	6.5	6.5	6.5	6.5	6.5	6.5
Lead/Lag	Lead	Lag	Lead	Lag				
Lead-Lag Optimize?	Yes	Yes	Yes	Yes				
Recall Mode	None	C-Max	None	C-Max	Max	Max	Max	Max
Act Effct Green (s)	84.5	80.3	81.2	76.8	19.5	19.5	19.5	19.5
Actuated g/C Ratio	0.70	0.67	0.68	0.64	0.16	0.16	0.16	0.16
v/c Ratio	0.27	0.27	0.07	0.68	0.27	0.16	0.35	0.45
Control Delay	9.0	12.3	1.3	3.8	48.4	37.7	49.7	48.5
Queue Delay	0.0	0.0	0.0	0.0	0.0	0.0	0.0	0.0
Total Delay	9.0	12.3	1.3	3.8	48.4	37.7	49.7	48.5
LOS	A	B	A	A	D	D	D	D
Approach Delay		12.1		3.7		43.0		48.9
Approach LOS		B		A		D		D

Intersection Summary	
Cycle Length: 120	
Actuated Cycle Length: 120	
Offset: 35 (29%), Referenced to phase 4:EBTL and 8:WBTL, Start of Green	
Natural Cycle: 80	
Control Type: Actuated-Coordinated	
Maximum v/c Ratio: 0.68	
Intersection Signal Delay: 11.3	Intersection LOS: B
Intersection Capacity Utilization 72.9%	ICU Level of Service C
Analysis Period (min) 15	

Splits and Phases: 43: Montview Boulevard & Victor Street



Movement	EBL	EBT	EBR	WBL	WBT	WBR	NBL	NBT	NBR	SBL	SBT	SBR
Lane Configurations												
Traffic Volume (veh/h)	55	455	120	35	1110	270	45	35	10	70	105	20
Future Volume (veh/h)	55	455	120	35	1110	270	45	35	10	70	105	20
Initial Q (Qb), veh	0	0	0	0	0	0	0	0	0	0	0	0
Ped-Bike Adj(A_pbT)	1.00		1.00	1.00		1.00	1.00		1.00	1.00		1.00
Parking Bus, Adj	1.00	1.00	1.00	1.00	1.00	1.00	1.00	1.00	1.00	1.00	1.00	1.00
Work Zone On Approach		No			No			No			No	
Adj Sat Flow, veh/h/ln	1870	1870	1870	1870	1870	1870	1870	1870	1870	1870	1870	1870
Adj Flow Rate, veh/h	60	495	130	38	1207	293	49	38	11	76	114	22
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
Percent Heavy Veh, %	2	2	2	2	2	2	2	2	2	2	2	2
Cap, veh/h	253	1799	470	624	1816	436	179	227	66	249	248	48
Arrive On Green	0.07	1.00	1.00	0.03	0.64	0.64	0.16	0.16	0.16	0.16	0.16	0.16
Sat Flow, veh/h	1781	2788	728	1781	2843	682	1253	1394	404	1356	1523	294
Grp Volume(v), veh/h	60	314	311	38	749	751	49	0	49	76	0	136
Grp Sat Flow(s),veh/h/ln	1781	1777	1739	1781	1777	1748	1253	0	1798	1356	0	1817
Q Serve(g_s), s	1.4	0.0	0.0	0.9	31.6	32.7	4.4	0.0	2.8	6.1	0.0	8.1
Cycle Q Clear(g_c), s	1.4	0.0	0.0	0.9	31.6	32.7	12.5	0.0	2.8	8.9	0.0	8.1
Prop In Lane	1.00		0.42	1.00		0.39	1.00		0.22	1.00		0.16
Lane Grp Cap(c), veh/h	253	1146	1122	624	1135	1117	179	0	292	249	0	295
V/C Ratio(X)	0.24	0.27	0.28	0.06	0.66	0.67	0.27	0.00	0.17	0.31	0.00	0.46
Avail Cap(c_a), veh/h	300	1146	1122	653	1135	1117	179	0	292	249	0	295
HCM Platoon Ratio	2.00	2.00	2.00	1.00	1.00	1.00	1.00	1.00	1.00	1.00	1.00	1.00
Upstream Filter(I)	1.00	1.00	1.00	0.39	0.39	0.39	1.00	0.00	1.00	1.00	0.00	1.00
Uniform Delay (d), s/veh	11.4	0.0	0.0	6.7	13.5	13.7	51.2	0.0	43.3	47.1	0.0	45.5
Incr Delay (d2), s/veh	0.5	0.6	0.6	0.0	1.2	1.3	3.8	0.0	1.2	3.2	0.0	5.1
Initial Q Delay(d3),s/veh	0.0	0.0	0.0	0.0	0.0	0.0	0.0	0.0	0.0	0.0	0.0	0.0
%ile BackOfQ(50%),veh/ln	0.5	0.2	0.2	0.3	12.2	12.5	1.6	0.0	1.4	2.3	0.0	4.1
Unsig. Movement Delay, s/veh												
LnGrp Delay(d),s/veh	11.9	0.6	0.6	6.7	14.7	15.0	54.9	0.0	44.5	50.3	0.0	50.6
LnGrp LOS	B	A	A	A	B	B	D	A	D	D	A	D
Approach Vol, veh/h		685			1538			98			212	
Approach Delay, s/veh		1.6			14.7			49.7			50.5	
Approach LOS		A			B			D			D	

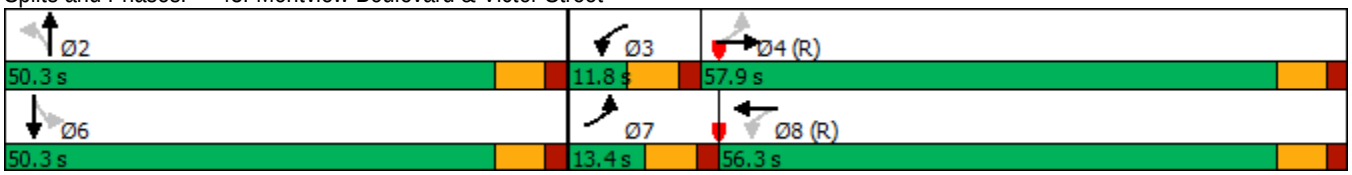
Timer - Assigned Phs		2	3	4		6	7	8				
Phs Duration (G+Y+Rc), s		26.0	10.1	83.9		26.0	10.8	83.2				
Change Period (Y+Rc), s		6.5	6.5	6.5		6.5	6.5	6.5				
Max Green Setting (Gmax), s		19.5	5.5	75.5		19.5	7.5	73.5				
Max Q Clear Time (g_c+I1), s		14.5	2.9	2.0		10.9	3.4	34.7				
Green Ext Time (p_c), s		0.1	0.0	4.5		0.6	0.0	15.7				

Intersection Summary												
HCM 6th Ctrl Delay			15.5									
HCM 6th LOS			B									

Lane Group	EBL	EBT	WBL	WBT	NBL	NBT	SBL	SBT
Lane Configurations								
Traffic Volume (vph)	75	995	20	575	65	75	225	40
Future Volume (vph)	75	995	20	575	65	75	225	40
Turn Type	pm+pt	NA	pm+pt	NA	Perm	NA	Perm	NA
Protected Phases	7	4	3	8		2		6
Permitted Phases	4		8		2		6	
Detector Phase	7	4	3	8	2	2	6	6
Switch Phase								
Minimum Initial (s)	5.0	5.0	5.0	5.0	5.0	5.0	5.0	5.0
Minimum Split (s)	11.5	24.5	11.5	24.5	24.5	24.5	24.5	24.5
Total Split (s)	13.4	57.9	11.8	56.3	50.3	50.3	50.3	50.3
Total Split (%)	11.2%	48.3%	9.8%	46.9%	41.9%	41.9%	41.9%	41.9%
Yellow Time (s)	4.5	4.5	4.5	4.5	4.5	4.5	4.5	4.5
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	0.0	0.0
Total Lost Time (s)	6.5	6.5	6.5	6.5	6.5	6.5	6.5	6.5
Lead/Lag	Lead	Lag	Lead	Lag				
Lead-Lag Optimize?	Yes	Yes	Yes	Yes				
Recall Mode	None	C-Max	None	C-Max	Max	Max	Max	Max
Act Effct Green (s)	60.3	56.1	56.7	52.5	43.8	43.8	43.8	43.8
Actuated g/C Ratio	0.50	0.47	0.47	0.44	0.36	0.36	0.36	0.36
v/c Ratio	0.24	0.69	0.12	0.45	0.15	0.32	0.63	0.18
Control Delay	16.8	25.4	21.0	25.8	26.8	18.8	40.1	11.3
Queue Delay	0.0	0.0	0.0	0.0	0.0	0.0	0.0	0.0
Total Delay	16.8	25.4	21.0	25.8	26.8	18.8	40.1	11.3
LOS	B	C	C	C	C	B	D	B
Approach Delay		24.9		25.7		20.8		30.7
Approach LOS		C		C		C		C

Intersection Summary	
Cycle Length: 120	
Actuated Cycle Length: 120	
Offset: 11 (9%), Referenced to phase 4:EBTL and 8:WBTL, Start of Green	
Natural Cycle: 70	
Control Type: Actuated-Coordinated	
Maximum v/c Ratio: 0.69	
Intersection Signal Delay: 25.5	Intersection LOS: C
Intersection Capacity Utilization 78.5%	ICU Level of Service D
Analysis Period (min) 15	

Splits and Phases: 43: Montview Boulevard & Victor Street



Movement	EBL	EBT	EBR	WBL	WBT	WBR	NBL	NBT	NBR	SBL	SBT	SBR
Lane Configurations												
Traffic Volume (veh/h)	75	995	45	20	575	60	65	75	120	225	40	70
Future Volume (veh/h)	75	995	45	20	575	60	65	75	120	225	40	70
Initial Q (Qb), veh	0	0	0	0	0	0	0	0	0	0	0	0
Ped-Bike Adj(A_pbT)	1.00		1.00	1.00		1.00	1.00		1.00	1.00		1.00
Parking Bus, Adj	1.00	1.00	1.00	1.00	1.00	1.00	1.00	1.00	1.00	1.00	1.00	1.00
Work Zone On Approach		No			No			No			No	
Adj Sat Flow, veh/h/ln	1870	1870	1870	1870	1870	1870	1870	1870	1870	1870	1870	1870
Adj Flow Rate, veh/h	82	1082	38	22	625	54	71	82	119	245	43	65
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
Percent Heavy Veh, %	2	2	2	2	2	2	2	2	2	2	2	2
Cap, veh/h	359	1579	55	285	1432	124	473	252	365	390	245	371
Arrive On Green	0.08	0.90	0.90	0.02	0.43	0.43	0.36	0.36	0.36	0.36	0.36	0.36
Sat Flow, veh/h	1781	3502	123	1781	3310	286	1286	690	1001	1181	672	1016
Grp Volume(v), veh/h	82	549	571	22	335	344	71	0	201	245	0	108
Grp Sat Flow(s),veh/h/ln	1781	1777	1848	1781	1777	1819	1286	0	1690	1181	0	1688
Q Serve(g_s), s	3.1	9.5	9.5	0.8	15.8	15.9	4.8	0.0	10.3	22.6	0.0	5.2
Cycle Q Clear(g_c), s	3.1	9.5	9.5	0.8	15.8	15.9	10.0	0.0	10.3	32.9	0.0	5.2
Prop In Lane	1.00		0.07	1.00		0.16	1.00		0.59	1.00		0.60
Lane Grp Cap(c), veh/h	359	801	833	285	769	787	473	0	617	390	0	616
V/C Ratio(X)	0.23	0.69	0.69	0.08	0.44	0.44	0.15	0.00	0.33	0.63	0.00	0.18
Avail Cap(c_a), veh/h	391	801	833	325	769	787	473	0	617	390	0	616
HCM Platoon Ratio	2.00	2.00	2.00	1.00	1.00	1.00	1.00	1.00	1.00	1.00	1.00	1.00
Upstream Filter(I)	1.00	1.00	1.00	0.95	0.95	0.95	1.00	0.00	1.00	1.00	0.00	1.00
Uniform Delay (d), s/veh	17.9	3.7	3.7	18.3	23.8	23.8	29.2	0.0	27.5	39.3	0.0	25.8
Incr Delay (d2), s/veh	0.3	4.7	4.6	0.1	1.7	1.7	0.7	0.0	1.4	7.5	0.0	0.6
Initial Q Delay(d3),s/veh	0.0	0.0	0.0	0.0	0.0	0.0	0.0	0.0	0.0	0.0	0.0	0.0
%ile BackOfQ(50%),veh/ln	1.2	2.7	2.7	0.3	7.0	7.2	1.6	0.0	4.4	7.3	0.0	2.2
Unsig. Movement Delay, s/veh												
LnGrp Delay(d),s/veh	18.2	8.4	8.3	18.4	25.5	25.5	29.9	0.0	28.9	46.8	0.0	26.5
LnGrp LOS	B	A	A	B	C	C	C	A	C	D	A	C
Approach Vol, veh/h		1202			701			272			353	
Approach Delay, s/veh		9.0			25.3			29.1			40.6	
Approach LOS		A			C			C			D	

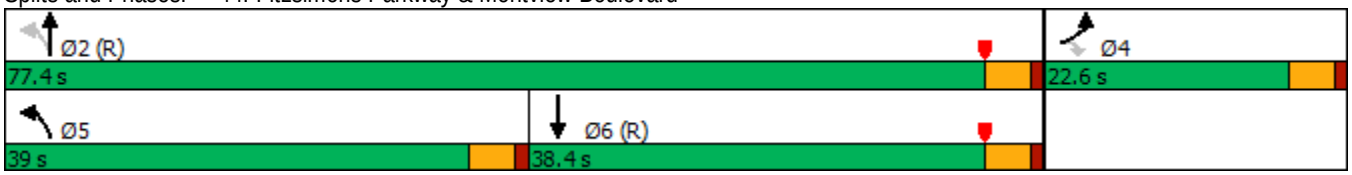
Timer - Assigned Phs		2	3	4		6	7	8				
Phs Duration (G+Y+Rc), s		50.3	9.1	60.6		50.3	11.3	58.4				
Change Period (Y+Rc), s		6.5	6.5	6.5		6.5	6.5	6.5				
Max Green Setting (Gmax), s		43.8	5.3	51.4		43.8	6.9	49.8				
Max Q Clear Time (g_c+I1), s		12.3	2.8	11.5		34.9	5.1	17.9				
Green Ext Time (p_c), s		1.5	0.0	9.6		1.0	0.0	4.7				

Intersection Summary	
HCM 6th Ctrl Delay	20.1
HCM 6th LOS	C

Lane Group	EBL	EBR	NBL	NBT	SBT
Lane Configurations					
Traffic Volume (vph)	9	144	493	764	666
Future Volume (vph)	9	144	493	764	666
Turn Type	Prot	Perm	pm+pt	NA	NA
Protected Phases	4		5	2	6
Permitted Phases		4	2		
Detector Phase	4	4	5	2	6
Switch Phase					
Minimum Initial (s)	5.0	5.0	5.0	5.0	5.0
Minimum Split (s)	22.5	22.5	9.5	22.5	22.5
Total Split (s)	22.6	22.6	39.0	77.4	38.4
Total Split (%)	22.6%	22.6%	39.0%	77.4%	38.4%
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
Lead-Lag Optimize?			Yes		Yes
Recall Mode	None	None	None	C-Max	C-Max
Act Effct Green (s)	6.7	6.7	84.3	84.3	50.0
Actuated g/C Ratio	0.07	0.07	0.84	0.84	0.50
v/c Ratio	0.09	0.50	0.76	0.28	0.55
Control Delay	44.6	12.2	18.9	2.0	20.3
Queue Delay	0.0	0.0	0.0	0.0	0.0
Total Delay	44.6	12.2	18.9	2.0	20.3
LOS	D	B	B	A	C
Approach Delay	14.1			8.6	20.3
Approach LOS	B			A	C

Intersection Summary	
Cycle Length: 100	
Actuated Cycle Length: 100	
Offset: 0 (0%), Referenced to phase 2:NBTL and 6:SBT, Start of Yellow	
Natural Cycle: 80	
Control Type: Actuated-Coordinated	
Maximum v/c Ratio: 0.76	
Intersection Signal Delay: 13.4	Intersection LOS: B
Intersection Capacity Utilization 63.5%	ICU Level of Service B
Analysis Period (min) 15	

Splits and Phases: 44: Fitzsimons Parkway & Montview Boulevard



Movement	EBL	EBR	NBL	NBT	SBT	SBR
Lane Configurations						
Traffic Volume (veh/h)	9	144	493	764	666	74
Future Volume (veh/h)	9	144	493	764	666	74
Initial Q (Qb), veh	0	0	0	0	0	0
Ped-Bike Adj(A_pbT)	1.00	1.00	1.00			1.00
Parking Bus, Adj	1.00	1.00	1.00	1.00	1.00	1.00
Work Zone On Approach	No			No	No	
Adj Sat Flow, veh/h/ln	1870	1870	1870	1870	1870	1870
Adj Flow Rate, veh/h	11	173	548	849	865	96
Peak Hour Factor	0.83	0.83	0.90	0.90	0.77	0.77
Percent Heavy Veh, %	2	2	2	2	2	2
Cap, veh/h	150	235	606	2934	2108	234
Arrive On Green	0.08	0.08	0.13	0.83	0.65	0.65
Sat Flow, veh/h	1781	2790	1781	3647	3318	358
Grp Volume(v), veh/h	11	173	548	849	477	484
Grp Sat Flow(s),veh/h/ln	1781	1395	1781	1777	1777	1806
Q Serve(g_s), s	0.6	6.1	8.9	5.5	12.7	12.7
Cycle Q Clear(g_c), s	0.6	6.1	8.9	5.5	12.7	12.7
Prop In Lane	1.00	1.00	1.00			0.20
Lane Grp Cap(c), veh/h	150	235	606	2934	1161	1180
V/C Ratio(X)	0.07	0.73	0.90	0.29	0.41	0.41
Avail Cap(c_a), veh/h	322	505	994	2934	1161	1180
HCM Platoon Ratio	1.00	1.00	1.00	1.00	1.00	1.00
Upstream Filter(I)	1.00	1.00	1.00	1.00	1.00	1.00
Uniform Delay (d), s/veh	42.2	44.7	10.8	2.0	8.2	8.2
Incr Delay (d2), s/veh	0.2	4.4	7.1	0.2	1.1	1.1
Initial Q Delay(d3),s/veh	0.0	0.0	0.0	0.0	0.0	0.0
%ile BackOfQ(50%),veh/ln	0.3	4.7	9.9	1.2	4.7	4.8
Unsig. Movement Delay, s/veh						
LnGrp Delay(d),s/veh	42.4	49.1	17.9	2.2	9.3	9.3
LnGrp LOS	D	D	B	A	A	A
Approach Vol, veh/h	184			1397	961	
Approach Delay, s/veh	48.7			8.4	9.3	
Approach LOS	D			A	A	

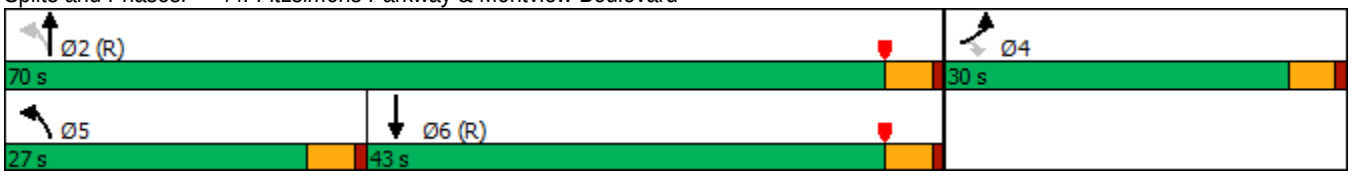
Timer - Assigned Phs		2		4	5	6
Phs Duration (G+Y+Rc), s		87.1		12.9	17.2	69.9
Change Period (Y+Rc), s		4.5		4.5	4.5	4.5
Max Green Setting (Gmax), s		72.9		18.1	34.5	33.9
Max Q Clear Time (g_c+I1), s		7.5		8.1	10.9	14.7
Green Ext Time (p_c), s		7.5		0.4	1.8	6.3

Intersection Summary	
HCM 6th Ctrl Delay	11.6
HCM 6th LOS	B

Lane Group	EBL	EBR	NBL	NBT	SBT
Lane Configurations					
Traffic Volume (vph)	84	699	245	507	862
Future Volume (vph)	84	699	245	507	862
Turn Type	Prot	Perm	pm+pt	NA	NA
Protected Phases	4		5	2	6
Permitted Phases		4	2		
Detector Phase	4	4	5	2	6
Switch Phase					
Minimum Initial (s)	5.0	5.0	5.0	5.0	5.0
Minimum Split (s)	22.5	22.5	9.5	22.5	22.5
Total Split (s)	30.0	30.0	27.0	70.0	43.0
Total Split (%)	30.0%	30.0%	27.0%	70.0%	43.0%
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
Lead-Lag Optimize?			Yes		Yes
Recall Mode	None	None	None	C-Max	C-Max
Act Effct Green (s)	11.6	11.6	79.4	79.4	63.4
Actuated g/C Ratio	0.12	0.12	0.79	0.79	0.63
v/c Ratio	0.44	0.76	0.55	0.21	0.41
Control Delay	46.7	8.6	7.1	3.1	11.1
Queue Delay	0.0	0.0	0.0	0.0	0.0
Total Delay	46.7	8.6	7.1	3.1	11.1
LOS	D	A	A	A	B
Approach Delay	12.7			4.4	11.1
Approach LOS	B			A	B

Intersection Summary	
Cycle Length: 100	
Actuated Cycle Length: 100	
Offset: 0 (0%), Referenced to phase 2:NBTL and 6:SBT, Start of Yellow	
Natural Cycle: 60	
Control Type: Actuated-Coordinated	
Maximum v/c Ratio: 0.76	
Intersection Signal Delay: 9.4	Intersection LOS: A
Intersection Capacity Utilization 56.3%	ICU Level of Service B
Analysis Period (min) 15	

Splits and Phases: 44: Fitzsimons Parkway & Montview Boulevard



Movement	EBL	EBR	NBL	NBT	SBT	SBR
Lane Configurations						
Traffic Volume (veh/h)	84	699	245	507	862	17
Future Volume (veh/h)	84	699	245	507	862	17
Initial Q (Qb), veh	0	0	0	0	0	0
Ped-Bike Adj(A_pbT)	1.00	1.00	1.00			1.00
Parking Bus, Adj	1.00	1.00	1.00	1.00	1.00	1.00
Work Zone On Approach	No			No	No	
Adj Sat Flow, veh/h/ln	1870	1870	1870	1870	1870	1870
Adj Flow Rate, veh/h	91	760	285	590	889	18
Peak Hour Factor	0.92	0.92	0.86	0.86	0.97	0.97
Percent Heavy Veh, %	2	2	2	2	2	2
Cap, veh/h	454	711	461	2328	1826	37
Arrive On Green	0.25	0.25	0.10	0.65	0.51	0.51
Sat Flow, veh/h	1781	2790	1781	3647	3656	72
Grp Volume(v), veh/h	91	760	285	590	443	464
Grp Sat Flow(s),veh/h/ln	1781	1395	1781	1777	1777	1857
Q Serve(g_s), s	4.0	25.5	7.0	6.9	16.2	16.2
Cycle Q Clear(g_c), s	4.0	25.5	7.0	6.9	16.2	16.2
Prop In Lane	1.00	1.00	1.00			0.04
Lane Grp Cap(c), veh/h	454	711	461	2328	911	952
V/C Ratio(X)	0.20	1.07	0.62	0.25	0.49	0.49
Avail Cap(c_a), veh/h	454	711	688	2328	911	952
HCM Platoon Ratio	1.00	1.00	1.00	1.00	1.00	1.00
Upstream Filter(I)	1.00	1.00	1.00	1.00	1.00	1.00
Uniform Delay (d), s/veh	29.2	37.3	11.2	7.1	15.8	15.8
Incr Delay (d2), s/veh	0.2	53.5	1.4	0.3	1.9	1.8
Initial Q Delay(d3),s/veh	0.0	0.0	0.0	0.0	0.0	0.0
%ile BackOfQ(50%),veh/ln	1.7	22.5	2.7	2.4	6.8	7.1
Unsig. Movement Delay, s/veh						
LnGrp Delay(d),s/veh	29.5	90.7	12.6	7.4	17.7	17.6
LnGrp LOS	C	F	B	A	B	B
Approach Vol, veh/h	851			875	907	
Approach Delay, s/veh	84.2			9.1	17.7	
Approach LOS	F			A	B	

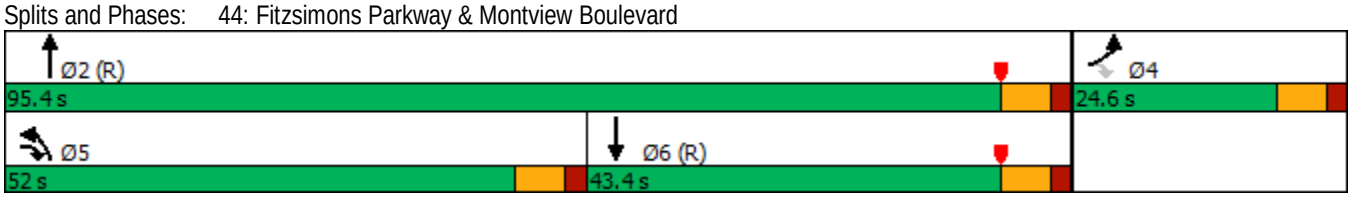
Timer - Assigned Phs		2		4	5	6
Phs Duration (G+Y+Rc), s		70.0		30.0	14.2	55.8
Change Period (Y+Rc), s		4.5		4.5	4.5	4.5
Max Green Setting (Gmax), s		65.5		25.5	22.5	38.5
Max Q Clear Time (g_c+I1), s		8.9		27.5	9.0	18.2
Green Ext Time (p_c), s		4.7		0.0	0.7	5.9

Intersection Summary	
HCM 6th Ctrl Delay	36.3
HCM 6th LOS	D

Lane Group	EBL	EBR	NBL	NBT	SBT
Lane Configurations					
Traffic Volume (vph)	15	225	505	865	725
Future Volume (vph)	15	225	505	865	725
Turn Type	Prot	pm+ov	Prot	NA	NA
Protected Phases	4	5	5	2	6
Permitted Phases		4			
Detector Phase	4	5	5	2	6
Switch Phase					
Minimum Initial (s)	5.0	5.0	5.0	5.0	5.0
Minimum Split (s)	24.5	11.5	11.5	24.5	24.5
Total Split (s)	24.6	52.0	52.0	95.4	43.4
Total Split (%)	20.5%	43.3%	43.3%	79.5%	36.2%
Yellow Time (s)	4.5	4.5	4.5	4.5	4.5
All-Red Time (s)	2.0	2.0	2.0	2.0	2.0
Lost Time Adjust (s)	0.0	0.0	0.0	0.0	0.0
Total Lost Time (s)	6.5	6.5	6.5	6.5	6.5
Lead/Lag		Lead	Lead		Lag
Lead-Lag Optimize?		Yes	Yes		Yes
Recall Mode	None	None	None	C-Max	C-Max
Act Effct Green (s)	6.7	48.8	43.0	111.7	58.2
Actuated g/C Ratio	0.06	0.41	0.36	0.93	0.48
v/c Ratio	0.16	0.21	0.87	0.29	0.52
Control Delay	83.6	6.5	49.8	1.4	10.5
Queue Delay	0.0	0.0	0.0	0.0	0.0
Total Delay	83.6	6.5	49.8	1.4	10.5
LOS	F	A	D	A	B
Approach Delay	11.3			19.3	10.5
Approach LOS	B			B	B

Intersection Summary	
Cycle Length: 120	
Actuated Cycle Length: 120	
Offset: 103 (86%), Referenced to phase 2:NBT and 6:SBT, Start of Yellow	
Natural Cycle: 90	
Control Type: Actuated-Coordinated	
Maximum v/c Ratio: 0.87	
Intersection Signal Delay: 15.6	Intersection LOS: B
Intersection Capacity Utilization 71.0%	ICU Level of Service C
Analysis Period (min) 15	

Splits and Phases: 44: Fitzsimons Parkway & Montview Boulevard



Movement	EBL	EBR	NBL	NBT	SBT	SBR
Lane Configurations						
Traffic Volume (veh/h)	15	225	505	865	725	80
Future Volume (veh/h)	15	225	505	865	725	80
Initial Q (Qb), veh	0	0	0	0	0	0
Ped-Bike Adj(A_pbT)	1.00	1.00	1.00			1.00
Parking Bus, Adj	1.00	1.00	1.00	1.00	1.00	1.00
Work Zone On Approach	No			No	No	
Adj Sat Flow, veh/h/ln	1870	1870	1870	1870	1870	1870
Adj Flow Rate, veh/h	16	191	549	940	788	65
Peak Hour Factor	0.92	0.92	0.92	0.92	0.92	0.92
Percent Heavy Veh, %	2	2	2	2	2	2
Cap, veh/h	117	1095	582	2935	1479	122
Arrive On Green	0.07	0.07	0.33	0.83	0.45	0.45
Sat Flow, veh/h	1781	2790	1781	3647	3417	274
Grp Volume(v), veh/h	16	191	549	940	421	432
Grp Sat Flow(s),veh/h/ln	1781	1395	1781	1777	1777	1821
Q Serve(g_s), s	1.0	5.4	36.0	7.5	20.7	20.7
Cycle Q Clear(g_c), s	1.0	5.4	36.0	7.5	20.7	20.7
Prop In Lane	1.00	1.00	1.00			0.15
Lane Grp Cap(c), veh/h	117	1095	582	2935	791	810
V/C Ratio(X)	0.14	0.17	0.94	0.32	0.53	0.53
Avail Cap(c_a), veh/h	269	1332	675	2935	791	810
HCM Platoon Ratio	1.00	1.00	1.00	1.00	1.00	1.00
Upstream Filter(I)	0.92	0.92	1.00	1.00	1.00	1.00
Uniform Delay (d), s/veh	52.9	23.8	39.3	2.5	24.2	24.2
Incr Delay (d2), s/veh	0.5	0.1	20.2	0.3	2.6	2.5
Initial Q Delay(d3),s/veh	0.0	0.0	0.0	0.0	0.0	0.0
%ile BackOfQ(50%),veh/ln	0.5	5.1	18.8	2.0	9.2	9.4
Unsig. Movement Delay, s/veh						
LnGrp Delay(d),s/veh	53.3	23.8	59.5	2.8	26.8	26.7
LnGrp LOS	D	C	E	A	C	C
Approach Vol, veh/h	207			1489	853	
Approach Delay, s/veh	26.1			23.7	26.8	
Approach LOS	C			C	C	

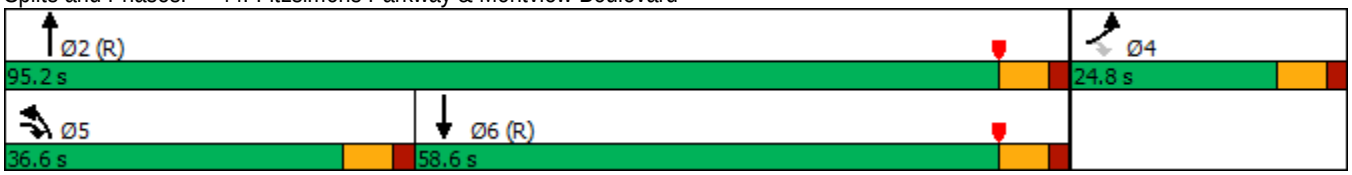
Timer - Assigned Phs		2		4	5	6
Phs Duration (G+Y+Rc), s		105.6		14.4	45.7	59.9
Change Period (Y+Rc), s		6.5		6.5	6.5	6.5
Max Green Setting (Gmax), s		88.9		18.1	45.5	36.9
Max Q Clear Time (g_c+I1), s		9.5		7.4	38.0	22.7
Green Ext Time (p_c), s		8.8		0.5	1.2	4.7

Intersection Summary	
HCM 6th Ctrl Delay	24.9
HCM 6th LOS	C

Lane Group	EBL	EBR	NBL	NBT	SBT
Lane Configurations					
Traffic Volume (vph)	95	720	255	555	1055
Future Volume (vph)	95	720	255	555	1055
Turn Type	Prot	pm+ov	Prot	NA	NA
Protected Phases	4	5	5	2	6
Permitted Phases		4			
Detector Phase	4	5	5	2	6
Switch Phase					
Minimum Initial (s)	5.0	5.0	5.0	5.0	5.0
Minimum Split (s)	24.5	11.5	11.5	24.5	24.5
Total Split (s)	24.8	36.6	36.6	95.2	58.6
Total Split (%)	20.7%	30.5%	30.5%	79.3%	48.8%
Yellow Time (s)	4.5	4.5	4.5	4.5	4.5
All-Red Time (s)	2.0	2.0	2.0	2.0	2.0
Lost Time Adjust (s)	0.0	0.0	0.0	0.0	0.0
Total Lost Time (s)	6.5	6.5	6.5	6.5	6.5
Lead/Lag		Lead	Lead		Lag
Lead-Lag Optimize?		Yes	Yes		Yes
Recall Mode	None	None	None	C-Max	C-Max
Act Effct Green (s)	12.3	45.6	26.8	94.7	61.4
Actuated g/C Ratio	0.10	0.38	0.22	0.79	0.51
v/c Ratio	0.57	0.72	0.70	0.22	0.66
Control Delay	62.8	40.2	52.8	3.7	12.1
Queue Delay	0.0	0.0	0.0	0.0	0.0
Total Delay	62.8	40.2	52.8	3.7	12.1
LOS	E	D	D	A	B
Approach Delay	42.8			19.1	12.1
Approach LOS	D			B	B

Intersection Summary	
Cycle Length: 120	
Actuated Cycle Length: 120	
Offset: 0 (0%), Referenced to phase 2:NBT and 6:SBT, Start of Yellow	
Natural Cycle: 90	
Control Type: Actuated-Coordinated	
Maximum v/c Ratio: 0.72	
Intersection Signal Delay: 23.3	Intersection LOS: C
Intersection Capacity Utilization 66.6%	ICU Level of Service C
Analysis Period (min) 15	

Splits and Phases: 44: Fitzsimons Parkway & Montview Boulevard



Movement	EBL	EBR	NBL	NBT	SBT	SBR
Lane Configurations						
Traffic Volume (veh/h)	95	720	255	555	1055	45
Future Volume (veh/h)	95	720	255	555	1055	45
Initial Q (Qb), veh	0	0	0	0	0	0
Ped-Bike Adj(A_pbT)	1.00	1.00	1.00			1.00
Parking Bus, Adj	1.00	1.00	1.00	1.00	1.00	1.00
Work Zone On Approach	No			No	No	
Adj Sat Flow, veh/h/ln	1870	1870	1870	1870	1870	1870
Adj Flow Rate, veh/h	103	566	277	603	1147	38
Peak Hour Factor	0.92	0.92	0.92	0.92	0.92	0.92
Percent Heavy Veh, %	2	2	2	2	2	2
Cap, veh/h	272	910	309	2627	1795	59
Arrive On Green	0.15	0.15	0.17	0.74	0.51	0.51
Sat Flow, veh/h	1781	2790	1781	3647	3604	116
Grp Volume(v), veh/h	103	566	277	603	580	605
Grp Sat Flow(s),veh/h/ln	1781	1395	1781	1777	1777	1849
Q Serve(g_s), s	6.2	18.3	18.3	6.4	28.5	28.5
Cycle Q Clear(g_c), s	6.2	18.3	18.3	6.4	28.5	28.5
Prop In Lane	1.00	1.00	1.00			0.06
Lane Grp Cap(c), veh/h	272	910	309	2627	909	946
V/C Ratio(X)	0.38	0.62	0.90	0.23	0.64	0.64
Avail Cap(c_a), veh/h	272	910	447	2627	909	946
HCM Platoon Ratio	1.00	1.00	1.00	1.00	1.00	1.00
Upstream Filter(I)	0.86	0.86	1.00	1.00	1.00	1.00
Uniform Delay (d), s/veh	45.7	34.2	48.5	4.9	21.3	21.3
Incr Delay (d2), s/veh	0.7	1.1	15.2	0.2	3.4	3.3
Initial Q Delay(d3),s/veh	0.0	0.0	0.0	0.0	0.0	0.0
%ile BackOfQ(50%),veh/ln	2.8	15.9	9.4	2.2	12.4	12.9
Unsig. Movement Delay, s/veh						
LnGrp Delay(d),s/veh	46.5	35.3	63.7	5.1	24.7	24.6
LnGrp LOS	D	D	E	A	C	C
Approach Vol, veh/h	669			880	1185	
Approach Delay, s/veh	37.0			23.6	24.6	
Approach LOS	D			C	C	

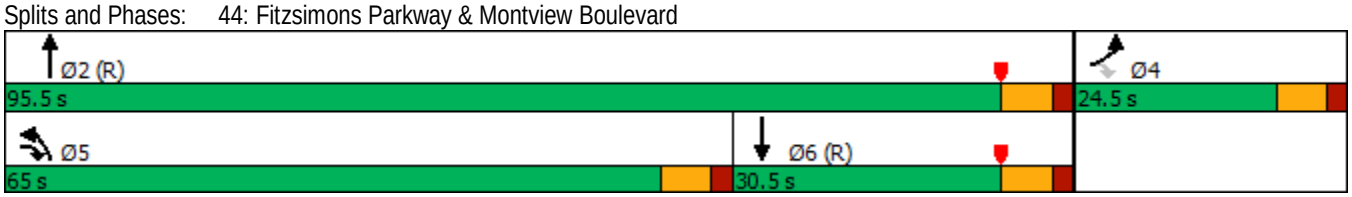
Timer - Assigned Phs		2		4	5	6
Phs Duration (G+Y+Rc), s		95.2		24.8	27.3	67.9
Change Period (Y+Rc), s		6.5		6.5	6.5	6.5
Max Green Setting (Gmax), s		88.7		18.3	30.1	52.1
Max Q Clear Time (g_c+I1), s		8.4		20.3	20.3	30.5
Green Ext Time (p_c), s		4.8		0.0	0.6	8.5

Intersection Summary	
HCM 6th Ctrl Delay	27.3
HCM 6th LOS	C

Lane Group	EBL	EBR	NBL	NBT	SBT
Lane Configurations					
Traffic Volume (vph)	20	420	1280	1625	900
Future Volume (vph)	20	420	1280	1625	900
Turn Type	Prot	pm+ov	Prot	NA	NA
Protected Phases	4	5	5	2	6
Permitted Phases		4			
Detector Phase	4	5	5	2	6
Switch Phase					
Minimum Initial (s)	5.0	5.0	5.0	5.0	5.0
Minimum Split (s)	24.5	11.5	11.5	24.5	24.5
Total Split (s)	24.5	65.0	65.0	95.5	30.5
Total Split (%)	20.4%	54.2%	54.2%	79.6%	25.4%
Yellow Time (s)	4.5	4.5	4.5	4.5	4.5
All-Red Time (s)	2.0	2.0	2.0	2.0	2.0
Lost Time Adjust (s)	0.0	0.0	0.0	0.0	0.0
Total Lost Time (s)	6.5	6.5	6.5	6.5	6.5
Lead/Lag		Lead	Lead		Lag
Lead-Lag Optimize?		Yes	Yes		Yes
Recall Mode	None	None	None	C-Max	C-Max
Act Effct Green (s)	7.1	66.4	57.7	107.4	40.6
Actuated g/C Ratio	0.06	0.55	0.48	0.90	0.34
v/c Ratio	0.21	0.30	0.84	0.56	0.63
Control Delay	61.7	6.2	32.3	3.3	18.8
Queue Delay	0.0	0.0	0.0	0.0	0.0
Total Delay	61.7	6.2	32.3	3.3	18.8
LOS	E	A	C	A	B
Approach Delay	8.7			16.1	18.8
Approach LOS	A			B	B

Intersection Summary	
Cycle Length: 120	
Actuated Cycle Length: 120	
Offset: 116 (97%), Referenced to phase 2:NBT and 6:SBT, Start of Yellow	
Natural Cycle: 100	
Control Type: Actuated-Coordinated	
Maximum v/c Ratio: 0.84	
Intersection Signal Delay: 16.0	Intersection LOS: B
Intersection Capacity Utilization 76.2%	ICU Level of Service D
Analysis Period (min) 15	

Splits and Phases: 44: Fitzsimons Parkway & Montview Boulevard



Movement	EBL	EBR	NBL	NBT	SBT	SBR
Lane Configurations						
Traffic Volume (veh/h)	20	420	1280	1625	900	85
Future Volume (veh/h)	20	420	1280	1625	900	85
Initial Q (Qb), veh	0	0	0	0	0	0
Ped-Bike Adj(A_pbT)	1.00	1.00	1.00			1.00
Parking Bus, Adj	1.00	1.00	1.00	1.00	1.00	1.00
Work Zone On Approach	No			No	No	
Adj Sat Flow, veh/h/ln	1870	1870	1870	1870	1870	1870
Adj Flow Rate, veh/h	22	403	1391	1766	978	70
Peak Hour Factor	0.92	0.92	0.92	0.92	0.92	0.92
Percent Heavy Veh, %	2	2	2	2	2	2
Cap, veh/h	183	1503	1507	2804	1453	104
Arrive On Green	0.10	0.10	0.44	0.79	0.30	0.30
Sat Flow, veh/h	1781	2790	3456	3647	5033	348
Grp Volume(v), veh/h	22	403	1391	1766	684	364
Grp Sat Flow(s),veh/h/ln	1781	1395	1728	1777	1702	1808
Q Serve(g_s), s	1.3	9.3	45.6	25.0	21.2	21.2
Cycle Q Clear(g_c), s	1.3	9.3	45.6	25.0	21.2	21.2
Prop In Lane	1.00	1.00	1.00			0.19
Lane Grp Cap(c), veh/h	183	1503	1507	2804	1017	540
V/C Ratio(X)	0.12	0.27	0.92	0.63	0.67	0.67
Avail Cap(c_a), veh/h	267	1635	1685	2804	1017	540
HCM Platoon Ratio	1.00	1.00	1.00	1.00	1.00	1.00
Upstream Filter(I)	0.97	0.97	1.00	1.00	1.00	1.00
Uniform Delay (d), s/veh	48.9	14.9	31.9	5.3	36.9	37.0
Incr Delay (d2), s/veh	0.3	0.1	8.4	1.1	3.6	6.6
Initial Q Delay(d3),s/veh	0.0	0.0	0.0	0.0	0.0	0.0
%ile BackOfQ(50%),veh/ln	0.6	9.8	20.3	7.7	9.3	10.3
Unsig. Movement Delay, s/veh						
LnGrp Delay(d),s/veh	49.2	15.0	40.3	6.4	40.5	43.6
LnGrp LOS	D	B	D	A	D	D
Approach Vol, veh/h	425			3157	1048	
Approach Delay, s/veh	16.8			21.3	41.5	
Approach LOS	B			C	D	

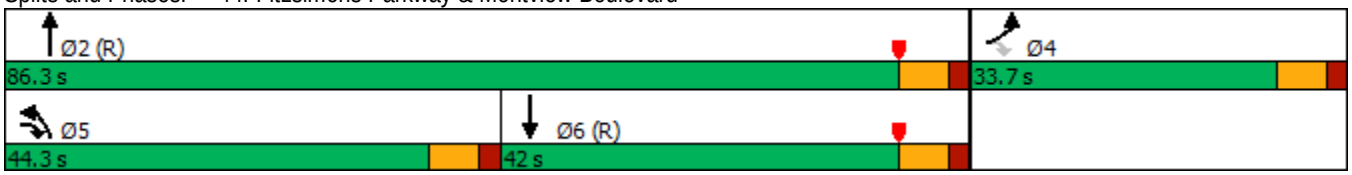
Timer - Assigned Phs		2		4	5	6
Phs Duration (G+Y+Rc), s		101.2		18.8	58.8	42.3
Change Period (Y+Rc), s		6.5		6.5	6.5	6.5
Max Green Setting (Gmax), s		89.0		18.0	58.5	24.0
Max Q Clear Time (g_c+I1), s		27.0		11.3	47.6	23.2
Green Ext Time (p_c), s		26.1		1.0	4.7	0.5

Intersection Summary	
HCM 6th Ctrl Delay	25.5
HCM 6th LOS	C

Lane Group	EBL	EBR	NBL	NBT	SBT
Lane Configurations					
Traffic Volume (vph)	100	1385	480	725	1780
Future Volume (vph)	100	1385	480	725	1780
Turn Type	Prot	pm+ov	Prot	NA	NA
Protected Phases	4	5	5	2	6
Permitted Phases		4			
Detector Phase	4	5	5	2	6
Switch Phase					
Minimum Initial (s)	5.0	5.0	5.0	5.0	5.0
Minimum Split (s)	24.5	11.5	11.5	24.5	24.5
Total Split (s)	33.7	44.3	44.3	86.3	42.0
Total Split (%)	28.1%	36.9%	36.9%	71.9%	35.0%
Yellow Time (s)	4.5	4.5	4.5	4.5	4.5
All-Red Time (s)	2.0	2.0	2.0	2.0	2.0
Lost Time Adjust (s)	0.0	0.0	0.0	0.0	0.0
Total Lost Time (s)	6.5	6.5	6.5	6.5	6.5
Lead/Lag		Lead	Lead		Lag
Lead-Lag Optimize?		Yes	Yes		Yes
Recall Mode	None	None	None	C-Max	C-Max
Act Effct Green (s)	12.7	70.5	51.3	94.3	36.5
Actuated g/C Ratio	0.11	0.59	0.43	0.79	0.30
v/c Ratio	0.58	0.92	0.36	0.28	1.29
Control Delay	74.6	22.6	24.4	4.1	162.2
Queue Delay	0.0	0.0	0.0	0.0	0.0
Total Delay	74.6	22.6	24.4	4.1	162.2
LOS	E	C	C	A	F
Approach Delay	26.1			12.2	162.2
Approach LOS	C			B	F

Intersection Summary	
Cycle Length: 120	
Actuated Cycle Length: 120	
Offset: 0 (0%), Referenced to phase 2:NBT and 6:SBT, Start of Yellow	
Natural Cycle: 130	
Control Type: Actuated-Coordinated	
Maximum v/c Ratio: 1.29	
Intersection Signal Delay: 77.5	Intersection LOS: E
Intersection Capacity Utilization 94.8%	ICU Level of Service F
Analysis Period (min) 15	

Splits and Phases: 44: Fitzsimons Parkway & Montview Boulevard



Movement	EBL	EBR	NBL	NBT	SBT	SBR
Lane Configurations						
Traffic Volume (veh/h)	100	1385	480	725	1780	50
Future Volume (veh/h)	100	1385	480	725	1780	50
Initial Q (Qb), veh	0	0	0	0	0	0
Ped-Bike Adj(A_pbT)	1.00	1.00	1.00			1.00
Parking Bus, Adj	1.00	1.00	1.00	1.00	1.00	1.00
Work Zone On Approach	No			No	No	
Adj Sat Flow, veh/h/ln	1870	1870	1870	1870	1870	1870
Adj Flow Rate, veh/h	109	1125	522	788	1935	43
Peak Hour Factor	0.92	0.92	0.92	0.92	0.92	0.92
Percent Heavy Veh, %	2	2	2	2	2	2
Cap, veh/h	404	1129	616	2363	2224	49
Arrive On Green	0.23	0.23	0.18	0.67	0.43	0.43
Sat Flow, veh/h	1781	2790	3456	3647	5308	114
Grp Volume(v), veh/h	109	1125	522	788	1281	697
Grp Sat Flow(s),veh/h/ln	1781	1395	1728	1777	1702	1850
Q Serve(g_s), s	6.0	27.2	17.5	11.5	41.1	41.2
Cycle Q Clear(g_c), s	6.0	27.2	17.5	11.5	41.1	41.2
Prop In Lane	1.00	1.00	1.00			0.06
Lane Grp Cap(c), veh/h	404	1129	616	2363	1473	800
V/C Ratio(X)	0.27	1.00	0.85	0.33	0.87	0.87
Avail Cap(c_a), veh/h	404	1129	1089	2363	1473	800
HCM Platoon Ratio	1.00	1.00	1.00	1.00	1.00	1.00
Upstream Filter(I)	0.68	0.68	1.00	1.00	1.00	1.00
Uniform Delay (d), s/veh	38.2	35.6	47.7	8.7	31.0	31.0
Incr Delay (d2), s/veh	0.2	21.2	3.4	0.4	7.3	12.5
Initial Q Delay(d3),s/veh	0.0	0.0	0.0	0.0	0.0	0.0
%ile BackOfQ(50%),veh/ln	2.7	33.2	7.8	4.3	17.9	20.7
Unsig. Movement Delay, s/veh						
LnGrp Delay(d),s/veh	38.5	56.8	51.1	9.0	38.2	43.5
LnGrp LOS	D	E	D	A	D	D
Approach Vol, veh/h	1234			1310	1978	
Approach Delay, s/veh	55.2			25.8	40.1	
Approach LOS	E			C	D	

Timer - Assigned Phs		2		4	5	6
Phs Duration (G+Y+Rc), s		86.3		33.7	27.9	58.4
Change Period (Y+Rc), s		6.5		6.5	6.5	6.5
Max Green Setting (Gmax), s		79.8		27.2	37.8	35.5
Max Q Clear Time (g_c+I1), s		13.5		29.2	19.5	43.2
Green Ext Time (p_c), s		6.8		0.0	1.8	0.0

Intersection Summary	
HCM 6th Ctrl Delay	40.0
HCM 6th LOS	D

APPENDIX G

Queueing Analysis Worksheets

Lane Group	EBL	EBT	EBR	WBL	WBT	WBR	NBL	NBT	NBR	SBL	SBT	SBR
Lane Group Flow (vph)	288	962	522	98	440	293	201	1005	147	658	1826	223
v/c Ratio	0.69	0.88	0.67	0.39	0.48	0.33	0.81	1.09	0.25	0.88	1.10	0.26
Control Delay	59.3	49.9	24.0	63.1	38.6	6.7	93.9	86.6	2.5	58.9	91.3	10.4
Queue Delay	0.0	0.0	0.0	0.0	0.0	0.0	0.0	0.0	0.0	0.0	0.0	0.0
Total Delay	59.3	49.9	24.0	63.1	38.6	6.7	93.9	86.6	2.5	58.9	91.3	10.4
Queue Length 50th (ft)	111	368	227	37	101	17	86	~341	21	252	~590	53
Queue Length 95th (ft)	156	#505	371	71	198	33	m#150	#419	m0	#330	#687	100
Internal Link Dist (ft)		346			540			480			562	
Turn Bay Length (ft)	300		250	300		250	300			300		250
Base Capacity (vph)	472	1094	775	386	923	902	249	922	648	786	1667	866
Starvation Cap Reductn	0	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	0
Storage Cap Reductn	0	0	0	0	0	0	0	0	0	0	0	0
Reduced v/c Ratio	0.61	0.88	0.67	0.25	0.48	0.32	0.81	1.09	0.23	0.84	1.10	0.26

Intersection Summary

~ 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.

m Volume for 95th percentile queue is metered by upstream signal.

Lane Group	EBL	EBT	EBR	WBL	WBT	WBR	NBL	NBT	NBR	SBL	SBT	SBR
Lane Group Flow (vph)	152	565	277	82	668	402	745	1761	65	500	1533	255
v/c Ratio	0.62	0.71	0.32	0.40	0.89	0.54	0.88	0.93	0.08	0.87	1.02	0.34
Control Delay	78.8	59.1	11.4	73.2	71.5	24.4	83.6	44.9	0.7	76.4	79.8	12.3
Queue Delay	0.0	0.0	0.0	0.0	0.0	0.0	0.0	7.8	0.0	0.0	0.0	0.0
Total Delay	78.8	59.1	11.4	73.2	71.5	24.4	83.6	52.7	0.7	76.4	79.8	12.3
Queue Length 50th (ft)	75	265	73	40	333	197	398	490	1	246	~635	56
Queue Length 95th (ft)	114	340	136	69	409	301	466	#728	m1	#317	#737	129
Internal Link Dist (ft)		346			540			480			562	
Turn Bay Length (ft)	300		250	300		250	300			300		250
Base Capacity (vph)	263	796	900	457	788	753	904	1897	903	606	1501	754
Starvation Cap Reductn	0	0	0	0	0	0	0	131	0	0	0	0
Spillback Cap Reductn	0	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	0
Reduced v/c Ratio	0.58	0.71	0.31	0.18	0.85	0.53	0.82	1.00	0.07	0.83	1.02	0.34

Intersection Summary

~ 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.

m Volume for 95th percentile queue is metered by upstream signal.

Lane Group	EBL	EBT	EBR	WBL	WBT	WBR	NBL	NBT	SBT
Lane Group Flow (vph)	11	1451	114	212	799	22	33	16	15
v/c Ratio	0.02	0.71	0.12	0.70	0.31	0.02	0.16	0.06	0.06
Control Delay	1.1	4.2	0.1	28.9	11.5	1.4	46.5	26.7	34.9
Queue Delay	0.0	0.0	0.0	0.0	0.0	0.0	0.0	0.0	0.0
Total Delay	1.1	4.2	0.1	28.9	11.5	1.4	46.5	26.7	34.9
Queue Length 50th (ft)	1	53	0	73	115	0	21	3	7
Queue Length 95th (ft)	m0	m55	m0	143	269	m6	m53	m22	27
Internal Link Dist (ft)		260			390			474	188
Turn Bay Length (ft)	200		150	150		300	150		
Base Capacity (vph)	450	2034	974	378	2553	1167	210	261	253
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	0.02	0.71	0.12	0.56	0.31	0.02	0.16	0.06	0.06

Intersection Summary

m Volume for 95th percentile queue is metered by upstream signal.

Lane Group	EBL	EBT	EBR	WBL	WBT	WBR	NBL	NBT	SBT
Lane Group Flow (vph)	11	1228	27	38	967	22	179	27	15
v/c Ratio	0.03	0.60	0.03	0.15	0.44	0.02	0.52	0.06	0.04
Control Delay	8.1	18.6	0.0	10.6	13.5	0.7	45.6	16.2	27.3
Queue Delay	0.0	0.0	0.0	0.0	0.0	0.0	0.0	0.0	0.0
Total Delay	8.1	18.6	0.0	10.6	13.5	0.7	45.6	16.2	27.3
Queue Length 50th (ft)	3	339	0	9	143	0	121	3	6
Queue Length 95th (ft)	10	414	0	m31	324	m2	197	27	24
Internal Link Dist (ft)		260			390			474	188
Turn Bay Length (ft)	200		150	150		300	150		
Base Capacity (vph)	343	2056	957	252	2214	1024	342	418	416
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	0.03	0.60	0.03	0.15	0.44	0.02	0.52	0.06	0.04

Intersection Summary

m Volume for 95th percentile queue is metered by upstream signal.

Lane Group	EBL	EBT	EBR	WBL	WBT	WBR	NBL	NBT	SBT
Lane Group Flow (vph)	5	940	424	348	853	5	168	179	15
v/c Ratio	0.01	0.57	0.47	0.75	0.37	0.00	0.57	0.38	0.04
Control Delay	4.2	8.7	4.2	28.3	8.3	0.0	50.9	8.7	29.8
Queue Delay	0.0	0.0	0.0	0.0	0.0	0.0	0.0	0.0	0.0
Total Delay	4.2	8.7	4.2	28.3	8.3	0.0	50.9	8.7	29.8
Queue Length 50th (ft)	1	166	45	122	106	0	117	3	6
Queue Length 95th (ft)	m2	320	181	201	126	m0	194	63	25
Internal Link Dist (ft)		500			1074			491	146
Turn Bay Length (ft)	225		150	150		225	150		
Base Capacity (vph)	363	1648	893	576	2335	1075	296	475	347
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	0.01	0.57	0.47	0.60	0.37	0.00	0.57	0.38	0.04

Intersection Summary

m Volume for 95th percentile queue is metered by upstream signal.

Lane Group	EBL	EBT	EBR	WBL	WBT	WBR	NBL	NBT	SBT
Lane Group Flow (vph)	5	1255	147	76	777	5	239	130	15
v/c Ratio	0.01	0.68	0.17	0.36	0.37	0.01	0.62	0.24	0.03
Control Delay	7.4	13.5	2.9	12.9	11.9	0.0	45.7	7.5	24.9
Queue Delay	0.0	0.0	0.0	0.0	0.0	0.0	0.0	0.0	0.0
Total Delay	7.4	13.5	2.9	12.9	11.9	0.0	45.7	7.5	24.9
Queue Length 50th (ft)	1	145	7	15	163	0	161	3	6
Queue Length 95th (ft)	m2	167	18	30	220	m0	252	50	23
Internal Link Dist (ft)		500			1074			491	146
Turn Bay Length (ft)	225		150	150		225	150		
Base Capacity (vph)	396	1856	875	215	2096	974	388	535	465
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	0.01	0.68	0.17	0.35	0.37	0.01	0.62	0.24	0.03

Intersection Summary

m Volume for 95th percentile queue is metered by upstream signal.

Lane Group	EBL	EBR	NBL	NBT	SBT	SBR
Lane Group Flow (vph)	60	27	65	1141	951	168
v/c Ratio	0.43	0.18	0.14	0.38	0.32	0.12
Control Delay	61.6	20.1	3.4	3.1	2.1	0.4
Queue Delay	0.0	0.0	0.0	0.0	0.0	0.0
Total Delay	61.6	20.1	3.4	3.1	2.1	0.4
Queue Length 50th (ft)	45	0	8	98	29	0
Queue Length 95th (ft)	88	29	m20	135	8	0
Internal Link Dist (ft)	321			355	1048	
Turn Bay Length (ft)	300		175			250
Base Capacity (vph)	346	331	465	2988	2988	1363
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	0.17	0.08	0.14	0.38	0.32	0.12

Intersection Summary

m Volume for 95th percentile queue is metered by upstream signal.

Lane Group	EBL	EBR	NBL	NBT	SBT	SBR
Lane Group Flow (vph)	130	71	11	755	1337	43
v/c Ratio	0.62	0.29	0.04	0.28	0.49	0.03
Control Delay	63.1	13.2	4.1	3.8	1.5	0.1
Queue Delay	0.0	0.0	0.0	0.0	0.0	0.0
Total Delay	63.1	13.2	4.1	3.8	1.5	0.1
Queue Length 50th (ft)	97	0	2	63	10	0
Queue Length 95th (ft)	156	42	7	99	10	m0
Internal Link Dist (ft)	321			355	1048	
Turn Bay Length (ft)	300		175			250
Base Capacity (vph)	376	392	260	2739	2739	1234
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	0.35	0.18	0.04	0.28	0.49	0.03

Intersection Summary

m Volume for 95th percentile queue is metered by upstream signal.

Lane Group	EBL	EBT	WBL	WBT	NBL	NBT	SBL	SBT
Lane Group Flow (vph)	120	152	33	65	54	1358	234	2217
v/c Ratio	0.70	0.44	0.37	0.38	0.34	0.49	0.63	0.69
Control Delay	65.3	20.0	63.6	21.0	38.6	18.1	31.6	6.9
Queue Delay	0.0	0.0	0.0	0.0	0.0	0.0	0.0	0.2
Total Delay	65.3	20.0	63.6	21.0	38.6	18.1	31.6	7.1
Queue Length 50th (ft)	83	35	25	4	17	366	105	131
Queue Length 95th (ft)	136	94	58	47	m34	m434	m107	m130
Internal Link Dist (ft)		481		540		680		480
Turn Bay Length (ft)	225		225		175		250	
Base Capacity (vph)	172	497	185	293	161	2761	464	3230
Starvation Cap Reductn	0	0	0	0	0	0	0	280
Spillback Cap Reductn	0	0	0	0	0	0	0	0
Storage Cap Reductn	0	0	0	0	0	0	0	0
Reduced v/c Ratio	0.70	0.31	0.18	0.22	0.34	0.49	0.50	0.75

Intersection Summary

m Volume for 95th percentile queue is metered by upstream signal.

Lane Group	EBL	EBT	WBL	WBT	NBL	NBT	SBL	SBT
Lane Group Flow (vph)	179	87	168	381	125	2081	43	1831
v/c Ratio	0.79	0.14	0.63	0.92	0.73	0.82	0.37	0.81
Control Delay	60.2	7.3	64.6	70.0	71.2	16.8	38.7	21.4
Queue Delay	0.0	0.0	0.0	0.4	0.0	1.0	0.0	0.0
Total Delay	60.2	7.3	64.6	70.4	71.2	17.8	38.7	21.4
Queue Length 50th (ft)	121	3	147	268	89	198	12	176
Queue Length 95th (ft)	#225	41	229	#439	m127	227	m20	m179
Internal Link Dist (ft)		481		540		680		480
Turn Bay Length (ft)	225		225		175		250	
Base Capacity (vph)	232	654	301	451	189	2531	116	2256
Starvation Cap Reductn	0	0	0	0	0	29	0	11
Spillback Cap Reductn	0	0	0	4	0	211	0	0
Storage Cap Reductn	0	0	0	0	0	0	0	0
Reduced v/c Ratio	0.77	0.13	0.56	0.85	0.66	0.90	0.37	0.82

Intersection Summary

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

m Volume for 95th percentile queue is metered by upstream signal.

Lane Group	EBL	EBT	WBL	WBT	NBL	NBT	SBL	SBT
Lane Group Flow (vph)	82	207	92	179	43	1549	652	1576
v/c Ratio	0.66	0.61	0.90	0.48	0.24	0.91	0.94	0.47
Control Delay	72.0	27.8	116.3	13.0	8.9	32.3	33.8	11.3
Queue Delay	0.0	0.0	0.0	0.0	0.0	0.0	0.2	0.0
Total Delay	72.0	27.8	116.3	13.0	8.9	32.3	34.1	11.3
Queue Length 50th (ft)	60	62	70	11	9	120	138	301
Queue Length 95th (ft)	114	138	#153	74	m18	#622	#462	430
Internal Link Dist (ft)		456		541		531		680
Turn Bay Length (ft)	150		150		175		475	
Base Capacity (vph)	159	400	130	429	182	1699	796	3355
Starvation Cap Reductn	0	0	0	0	0	0	10	0
Spillback Cap Reductn	0	0	0	0	0	0	0	0
Storage Cap Reductn	0	0	0	0	0	0	0	0
Reduced v/c Ratio	0.52	0.52	0.71	0.42	0.24	0.91	0.83	0.47

Intersection Summary

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

m Volume for 95th percentile queue is metered by upstream signal.

Lane Group	EBL	EBT	WBL	WBT	NBL	NBT	SBL	SBT
Lane Group Flow (vph)	33	103	391	495	179	1832	163	1630
v/c Ratio	0.29	0.19	1.00	0.80	0.75	0.99	0.73	0.90
Control Delay	27.9	7.2	74.3	26.7	43.0	41.3	37.8	28.5
Queue Delay	0.0	0.0	0.0	0.0	0.0	1.4	0.0	0.0
Total Delay	27.9	7.2	74.3	26.7	43.0	42.7	37.8	28.5
Queue Length 50th (ft)	12	5	180	134	65	395	78	257
Queue Length 95th (ft)	37	38	#353	#296	#156	#522	m117	322
Internal Link Dist (ft)		456		541		531		680
Turn Bay Length (ft)	150		150		175		475	
Base Capacity (vph)	115	556	392	618	238	1845	224	1804
Starvation Cap Reductn	0	0	0	0	0	0	0	0
Spillback Cap Reductn	0	0	0	0	0	12	0	0
Storage Cap Reductn	0	0	0	0	0	0	0	0
Reduced v/c Ratio	0.29	0.19	1.00	0.80	0.75	1.00	0.73	0.90

Intersection Summary

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

m Volume for 95th percentile queue is metered by upstream signal.

Lane Group	EBL	EBT	EBR	WBL	WBT	WBR	NBL	NBT	NBR	SBL	SBT
Lane Group Flow (vph)	315	554	315	223	250	54	239	1239	620	473	1272
v/c Ratio	0.70	0.85	0.52	0.53	0.40	0.08	0.67	0.77	0.75	0.86	0.68
Control Delay	58.6	60.6	25.2	37.0	36.2	6.7	61.2	42.0	27.8	75.3	28.3
Queue Delay	0.0	0.0	0.0	0.0	0.0	0.0	0.0	0.0	1.0	0.0	0.0
Total Delay	58.6	60.6	25.2	37.0	36.2	6.7	61.2	42.0	28.7	75.3	28.3
Queue Length 50th (ft)	121	213	128	74	104	4	92	332	352	197	171
Queue Length 95th (ft)	168	#315	228	110	136	m16	135	391	478	m#275	232
Internal Link Dist (ft)		1000			533			622			633
Turn Bay Length (ft)	300			300		125	250		250	225	
Base Capacity (vph)	514	666	615	540	665	680	387	1603	877	563	1865
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	88	0	0
Storage Cap Reductn	0	0	0	0	0	0	0	0	0	0	0
Reduced v/c Ratio	0.61	0.83	0.51	0.41	0.38	0.08	0.62	0.77	0.79	0.84	0.68

Intersection Summary

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

m Volume for 95th percentile queue is metered by upstream signal.

Lane Group	EBL	EBT	EBR	WBL	WBT	WBR	NBL	NBT	NBR	SBL	SBT
Lane Group Flow (vph)	299	234	217	516	793	326	239	1103	179	71	1919
v/c Ratio	0.77	0.40	0.40	0.82	0.95	0.56	0.87	0.51	0.16	0.37	0.96
Control Delay	78.9	58.8	21.5	70.5	77.2	35.1	96.7	33.5	1.6	73.6	49.4
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	78.9	58.8	21.5	70.5	77.2	35.1	96.7	33.5	1.6	73.6	49.4
Queue Length 50th (ft)	147	108	72	253	406	204	121	292	0	37	336
Queue Length 95th (ft)	200	157	156	310	#537	302	#200	348	27	m48	#761
Internal Link Dist (ft)		1000			533			622			633
Turn Bay Length (ft)	300			300		125	250		250	225	
Base Capacity (vph)	414	587	543	718	836	670	275	2143	1125	400	1992
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	0.72	0.40	0.40	0.72	0.95	0.49	0.87	0.51	0.16	0.18	0.96

Intersection Summary

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

m Volume for 95th percentile queue is metered by upstream signal.

Lane Group	EBL	EBT	EBR	WBL	WBT	NBL	NBT	SBL	SBT
Lane Group Flow (vph)	76	1245	60	43	885	22	93	49	22
v/c Ratio	0.22	0.90	0.05	0.45	0.65	0.11	0.30	0.25	0.08
Control Delay	6.6	27.8	1.8	23.2	16.6	45.6	18.3	49.0	29.4
Queue Delay	0.0	8.1	0.0	0.0	0.0	0.0	0.7	1.1	0.0
Total Delay	6.6	35.8	1.8	23.2	16.6	45.6	19.0	50.1	29.4
Queue Length 50th (ft)	22	916	6	17	661	15	15	34	7
Queue Length 95th (ft)	m29	#1166	m7	m24	m768	40	64	73	32
Internal Link Dist (ft)		270			310		323		610
Turn Bay Length (ft)	100			100		100		100	
Base Capacity (vph)	341	1381	1189	96	1362	207	307	194	267
Starvation Cap Reductn	0	121	0	0	0	0	0	0	0
Spillback Cap Reductn	0	0	0	0	0	0	68	54	0
Storage Cap Reductn	0	0	0	0	0	0	0	0	0
Reduced v/c Ratio	0.22	0.99	0.05	0.45	0.65	0.11	0.39	0.35	0.08

Intersection Summary

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

m Volume for 95th percentile queue is metered by upstream signal.

Lane Group	EBL	EBT	EBR	WBL	WBT	NBL	NBT	SBL	SBT
Lane Group Flow (vph)	16	462	43	49	1299	82	152	293	81
v/c Ratio	0.26	0.38	0.04	0.09	1.08	0.26	0.31	1.06	0.18
Control Delay	21.7	10.8	2.3	9.7	63.8	39.6	9.1	115.5	16.1
Queue Delay	0.0	0.0	0.0	0.0	0.0	0.0	0.0	0.0	0.0
Total Delay	21.7	10.8	2.3	9.7	63.8	39.6	9.1	115.5	16.1
Queue Length 50th (ft)	5	153	0	15	~1142	52	7	~249	16
Queue Length 95th (ft)	23	215	13	m20	#1379	99	60	#425	58
Internal Link Dist (ft)		270			310		323		610
Turn Bay Length (ft)	100			100		100		100	
Base Capacity (vph)	61	1212	1045	542	1208	315	493	276	444
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	0.26	0.38	0.04	0.09	1.08	0.26	0.31	1.06	0.18

Intersection Summary

~ 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.

m Volume for 95th percentile queue is metered by upstream signal.

Lane Group	EBL	EBT	EBR	WBL	WBT	NBL	NBT	SBL	SBT
Lane Group Flow (vph)	98	918	158	43	1054	11	22	38	87
v/c Ratio	0.53	0.67	0.13	0.14	0.90	0.06	0.08	0.18	0.28
Control Delay	16.2	18.8	2.2	5.5	14.0	44.7	29.4	47.1	15.2
Queue Delay	0.0	0.0	0.0	0.0	3.7	0.0	0.0	0.0	0.0
Total Delay	16.2	18.8	2.2	5.5	17.7	44.7	29.4	47.1	15.2
Queue Length 50th (ft)	26	659	14	3	72	7	7	26	7
Queue Length 95th (ft)	m28	m712	m15	m10	#1001	25	32	60	55
Internal Link Dist (ft)		603			139		210		179
Turn Bay Length (ft)	160		160	100		100		100	
Base Capacity (vph)	185	1380	1210	317	1170	196	269	208	308
Starvation Cap Reductn	0	0	0	0	66	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	0.53	0.67	0.13	0.14	0.95	0.06	0.08	0.18	0.28

Intersection Summary

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

m Volume for 95th percentile queue is metered by upstream signal.

Lane Group	EBL	EBT	EBR	WBL	WBT	NBL	NBT	SBL	SBT
Lane Group Flow (vph)	82	788	11	11	1054	92	82	168	136
v/c Ratio	0.47	0.58	0.01	0.03	0.87	0.50	0.25	0.79	0.37
Control Delay	15.2	6.9	0.0	5.7	23.1	56.3	15.0	74.2	12.6
Queue Delay	0.0	0.2	0.0	0.0	35.5	0.0	0.0	0.6	0.4
Total Delay	15.2	7.1	0.0	5.7	58.5	56.3	15.0	74.8	13.0
Queue Length 50th (ft)	11	154	0	1	547	66	7	126	7
Queue Length 95th (ft)	m15	m273	m0	m5	#992	122	53	#243	64
Internal Link Dist (ft)		603			139		210		179
Turn Bay Length (ft)	160		160	100		100		100	
Base Capacity (vph)	176	1358	1162	398	1207	184	322	213	365
Starvation Cap Reductn	0	0	0	0	0	0	0	3	46
Spillback Cap Reductn	0	112	0	0	222	0	4	0	14
Storage Cap Reductn	0	0	0	0	0	0	0	0	0
Reduced v/c Ratio	0.47	0.63	0.01	0.03	1.07	0.50	0.26	0.80	0.43

Intersection Summary

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

m Volume for 95th percentile queue is metered by upstream signal.

Lane Group	EBT	WBT	SBL	SBR
Lane Group Flow (vph)	804	1125	92	87
v/c Ratio	0.58	0.81	0.35	0.28
Control Delay	3.2	12.1	49.9	11.7
Queue Delay	0.7	0.6	0.0	0.0
Total Delay	4.0	12.8	49.9	11.8
Queue Length 50th (ft)	61	245	65	0
Queue Length 95th (ft)	71	238	117	47
Internal Link Dist (ft)	28	140	232	
Turn Bay Length (ft)			75	
Base Capacity (vph)	1381	1381	265	311
Starvation Cap Reductn	270	0	0	0
Spillback Cap Reductn	0	63	0	2
Storage Cap Reductn	0	0	0	0
Reduced v/c Ratio	0.72	0.85	0.35	0.28

Intersection Summary

Lane Group	EBT	WBT	SBL	SBR
Lane Group Flow (vph)	1223	734	103	109
v/c Ratio	0.89	0.53	0.39	0.33
Control Delay	17.3	14.0	50.9	11.2
Queue Delay	0.0	0.7	0.0	0.1
Total Delay	17.3	14.7	50.9	11.3
Queue Length 50th (ft)	700	313	73	0
Queue Length 95th (ft)	#1100	312	130	52
Internal Link Dist (ft)	28	140	232	
Turn Bay Length (ft)			75	
Base Capacity (vph)	1381	1381	265	330
Starvation Cap Reductn	0	0	0	0
Spillback Cap Reductn	0	320	0	18
Storage Cap Reductn	0	0	0	0
Reduced v/c Ratio	0.89	0.69	0.39	0.35

Intersection Summary

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

Lane Group	EBL	EBT	WBL	WBT	NBL	NBT	SBL	SBT
Lane Group Flow (vph)	60	625	38	1500	49	49	76	136
v/c Ratio	0.27	0.27	0.07	0.68	0.27	0.16	0.35	0.45
Control Delay	9.0	12.3	1.3	3.8	48.4	37.7	49.7	48.5
Queue Delay	0.0	0.0	0.0	0.0	0.0	0.0	0.0	0.0
Total Delay	9.0	12.3	1.3	3.8	48.4	37.7	49.7	48.5
Queue Length 50th (ft)	16	157	1	28	34	26	53	91
Queue Length 95th (ft)	m25	160	m2	45	73	63	103	156
Internal Link Dist (ft)		561		918		212		469
Turn Bay Length (ft)	150		150		100		100	
Base Capacity (vph)	236	2312	564	2217	184	300	219	301
Starvation Cap Reductn	0	0	0	0	0	0	0	0
Spillback Cap Reductn	0	0	0	0	0	0	0	0
Storage Cap Reductn	0	0	0	0	0	0	0	0
Reduced v/c Ratio	0.25	0.27	0.07	0.68	0.27	0.16	0.35	0.45

Intersection Summary

m Volume for 95th percentile queue is metered by upstream signal.

Lane Group	EBL	EBT	WBL	WBT	NBL	NBT	SBL	SBT
Lane Group Flow (vph)	82	1131	22	690	71	212	245	119
v/c Ratio	0.24	0.69	0.12	0.45	0.15	0.32	0.63	0.18
Control Delay	16.8	25.4	21.0	25.8	26.8	18.8	40.1	11.3
Queue Delay	0.0	0.0	0.0	0.0	0.0	0.0	0.0	0.0
Total Delay	16.8	25.4	21.0	25.8	26.8	18.8	40.1	11.3
Queue Length 50th (ft)	29	300	6	134	37	73	155	22
Queue Length 95th (ft)	m39	m415	m27	m250	72	136	251	62
Internal Link Dist (ft)		561		918		212		469
Turn Bay Length (ft)	150		150		100		100	
Base Capacity (vph)	344	1647	184	1532	463	664	389	662
Starvation Cap Reductn	0	0	0	0	0	0	0	0
Spillback Cap Reductn	0	0	0	0	0	0	0	0
Storage Cap Reductn	0	0	0	0	0	0	0	0
Reduced v/c Ratio	0.24	0.69	0.12	0.45	0.15	0.32	0.63	0.18

Intersection Summary

m Volume for 95th percentile queue is metered by upstream signal.

Lane Group	EBL	EBR	NBL	NBT	SBT
Lane Group Flow (vph)	22	457	1391	1766	1070
v/c Ratio	0.21	0.30	0.84	0.56	0.63
Control Delay	61.7	6.2	32.3	3.3	18.8
Queue Delay	0.0	0.0	0.0	0.0	0.0
Total Delay	61.7	6.2	32.3	3.3	18.8
Queue Length 50th (ft)	16	23	471	180	232
Queue Length 95th (ft)	43	31	474	251	#420
Internal Link Dist (ft)	918			690	477
Turn Bay Length (ft)	150	350	350		
Base Capacity (vph)	265	1605	1729	3168	1707
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	0.08	0.28	0.80	0.56	0.63

Intersection Summary

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

Lane Group	EBL	EBR	NBL	NBT	SBT
Lane Group Flow (vph)	109	1505	522	788	1989
v/c Ratio	0.58	0.92	0.36	0.28	1.29
Control Delay	74.6	22.6	24.4	4.1	162.2
Queue Delay	0.0	0.0	0.0	0.0	0.0
Total Delay	74.6	22.6	24.4	4.1	162.2
Queue Length 50th (ft)	89	223	136	73	~735
Queue Length 95th (ft)	m135	#288	193	114	#824
Internal Link Dist (ft)	918			690	477
Turn Bay Length (ft)	150	350	350		
Base Capacity (vph)	401	1637	1468	2781	1541
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	0.27	0.92	0.36	0.28	1.29

Intersection Summary

~ Volume exceeds capacity, queue is theoretically infinite.
Queue shown is maximum after two cycles.

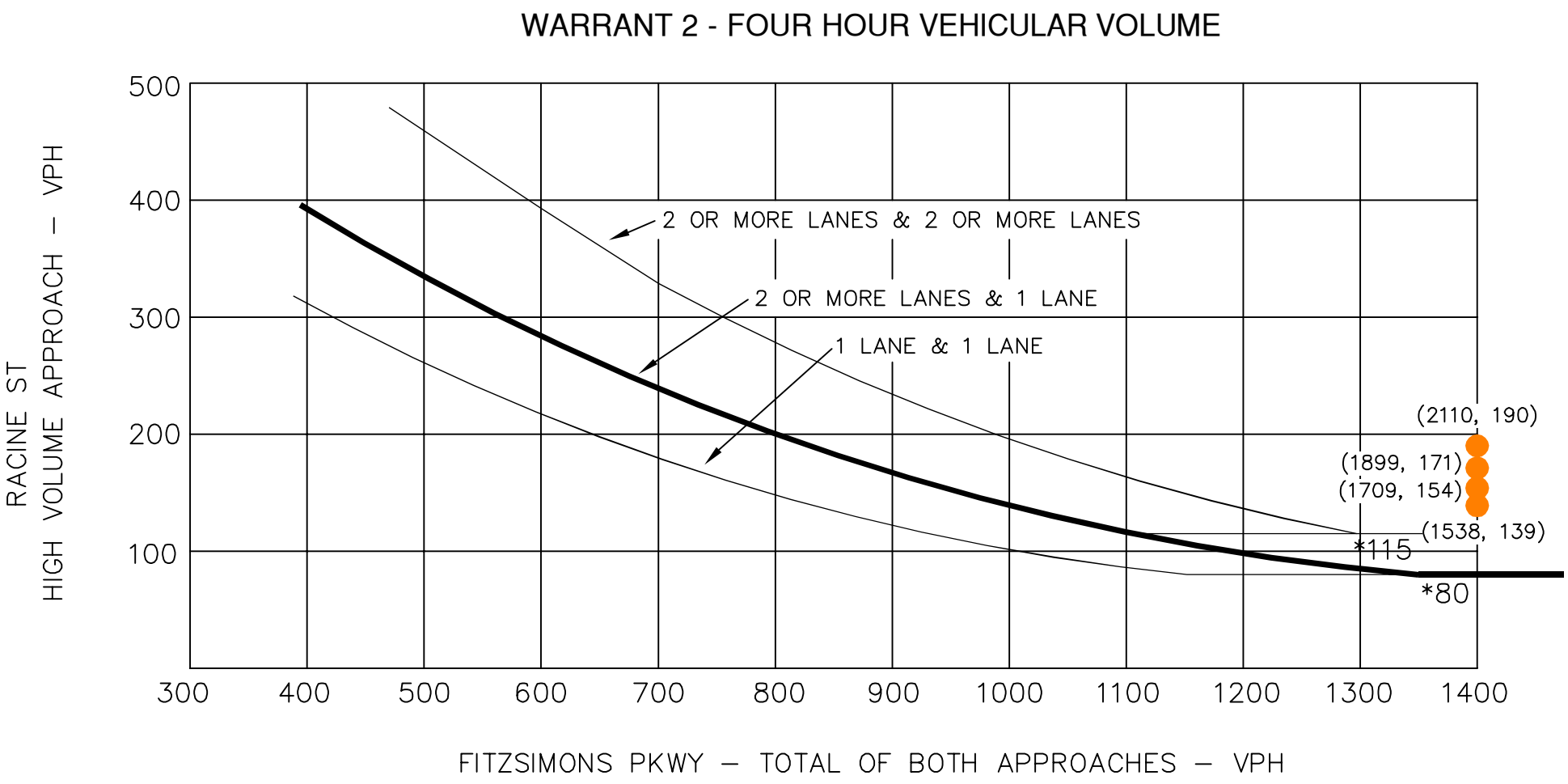
95th percentile volume exceeds capacity, queue may be longer.
Queue shown is maximum after two cycles.

m Volume for 95th percentile queue is metered by upstream signal.

APPENDIX H

Signal Warrant and

All-Way Stop Control Warrants



* NOTE: 115 VPH APPLIES AS THE LOWER THRESHOLD VOLUME FOR A MINOR STREET APPROACH WITH TWO OR MORE LANES AND 80 VPH APPLIES AS THE LOWER THRESHOLD VOLUME FOR A MINOR STREET APPROACHING WITH ONE LANE.

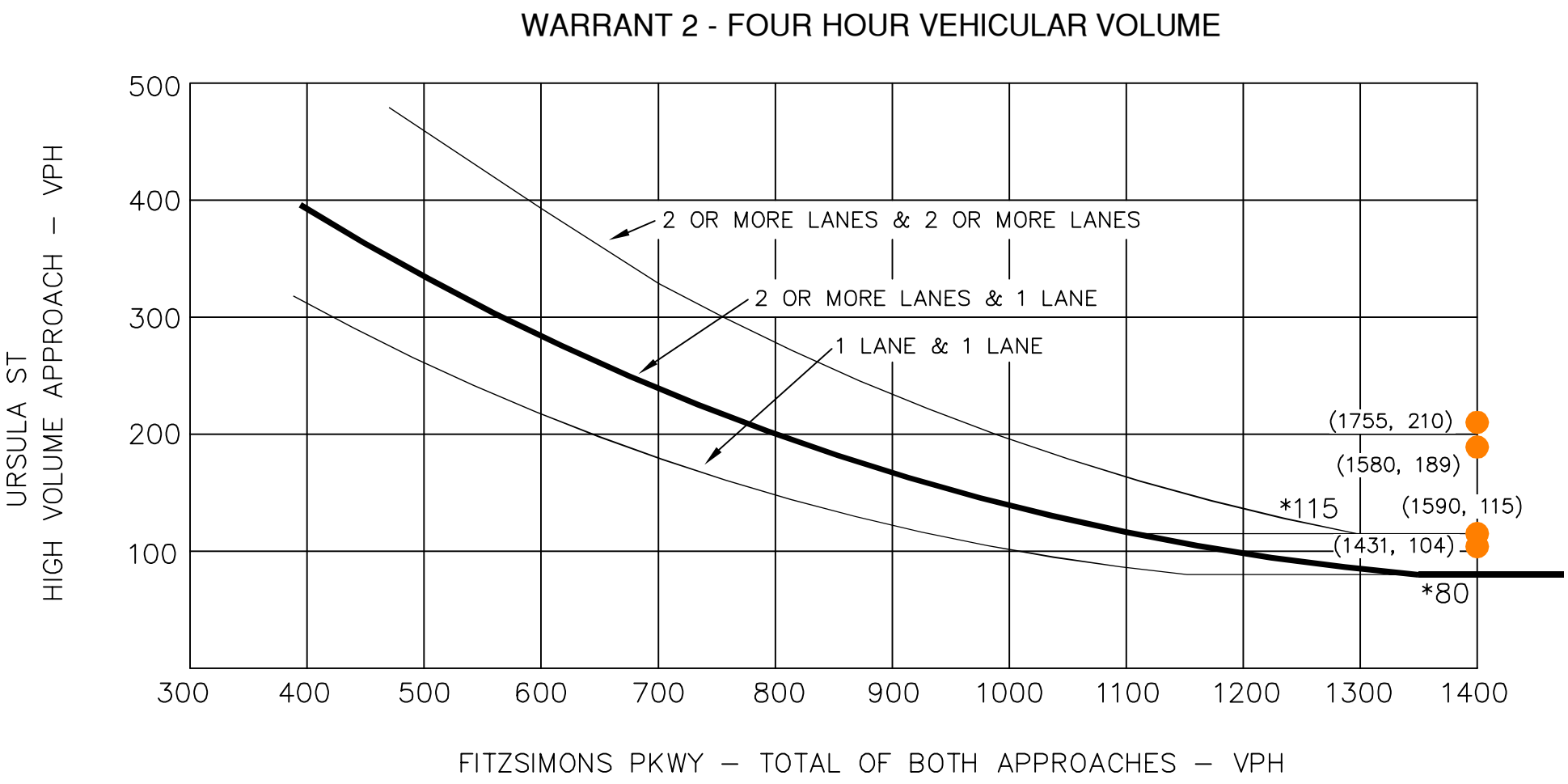
FITZSIMONS PKWY & RACINE ST (#3)
SIGNAL WARRANT ANALYSIS
FOUR HOUR VOLUME WARRANT

● 2040 TOTAL TRAFFIC DATA POINT

FIGURE 1

Source: Manual of Uniform Traffic Control Devices 2009

Kimley»Horn



* NOTE: 115 VPH APPLIES AS THE LOWER THRESHOLD VOLUME FOR A MINOR STREET APPROACH WITH TWO OR MORE LANES AND 80 VPH APPLIES AS THE LOWER THRESHOLD VOLUME FOR A MINOR STREET APPROACHING WITH ONE LANE.

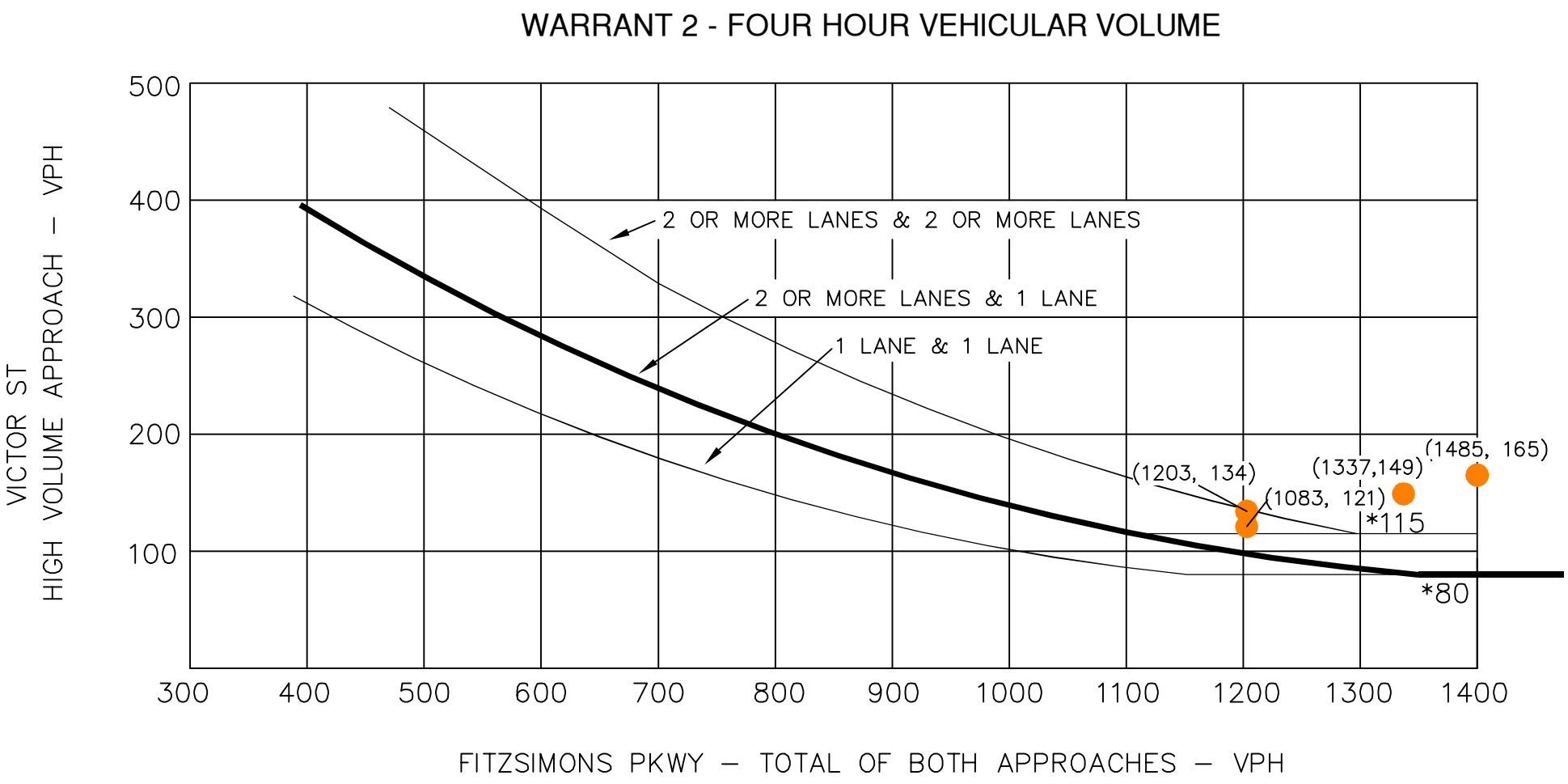
FITZSIMONS PKWY & URSULA ST (#7)
SIGNAL WARRANT ANALYSIS
FOUR HOUR VOLUME WARRANT

● 2040 BACKGROUND TRAFFIC DATA POINT

FIGURE 2

Source: Manual of Uniform Traffic Control Devices 2009

Kimley»Horn



* NOTE: 115 VPH APPLIES AS THE LOWER THRESHOLD VOLUME FOR A MINOR STREET APPROACH WITH TWO OR MORE LANES AND 80 VPH APPLIES AS THE LOWER THRESHOLD VOLUME FOR A MINOR STREET APPROACHING WITH ONE LANE.

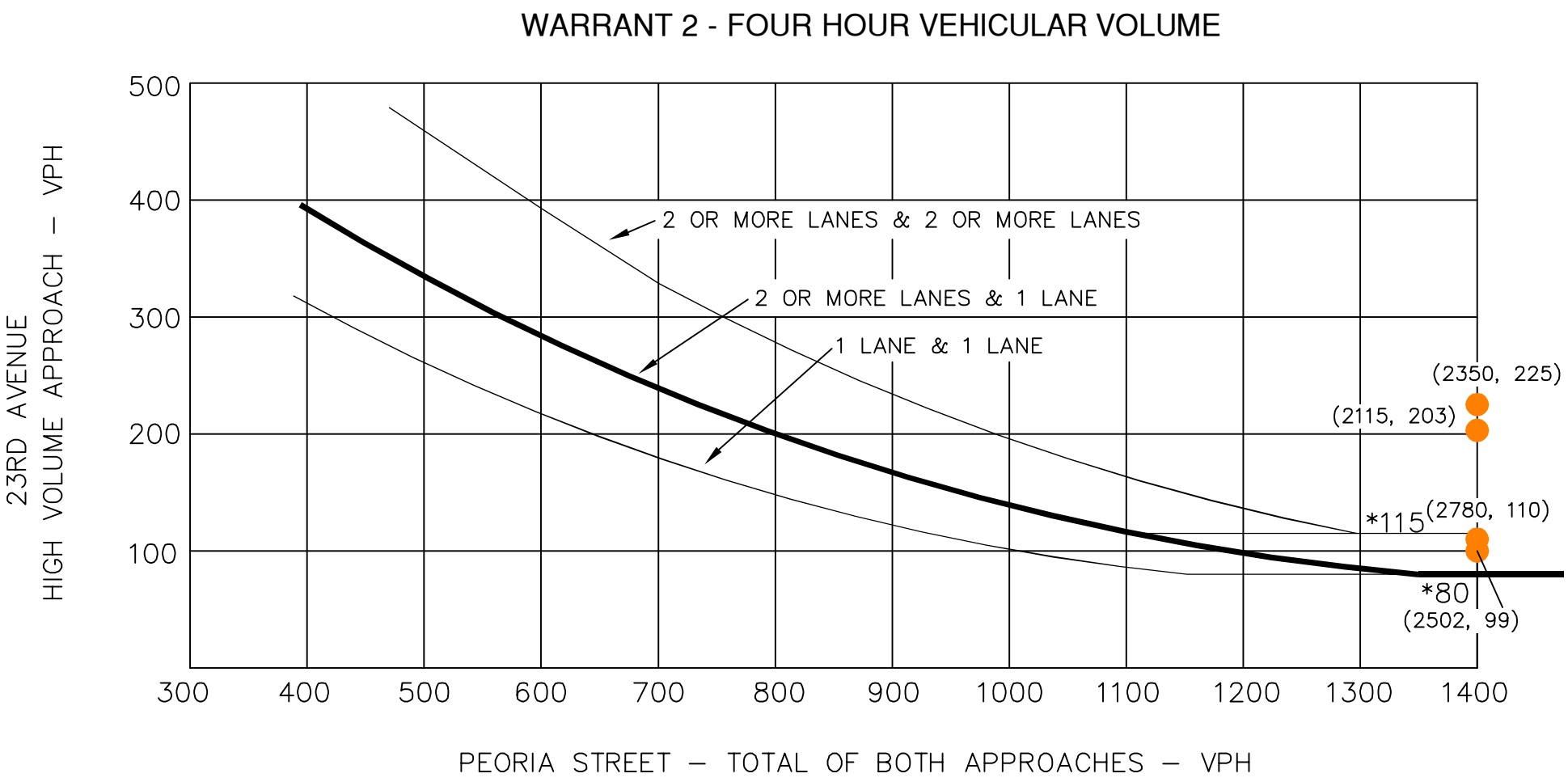
FITZSIMONS PKWY & VICTOR ST (#8)
SIGNAL WARRANT ANALYSIS
FOUR HOUR VOLUME WARRANT

● 2040 BACKGROUND TRAFFIC DATA POINT

FIGURE 3

Source: Manual of Uniform Traffic Control Devices 2009

Kimley»Horn



* NOTE: 115 VPH APPLIES AS THE LOWER THRESHOLD VOLUME FOR A MINOR STREET APPROACH WITH TWO OR MORE LANES AND 80 VPH APPLIES AS THE LOWER THRESHOLD VOLUME FOR A MINOR STREET APPROACHING WITH ONE LANE.

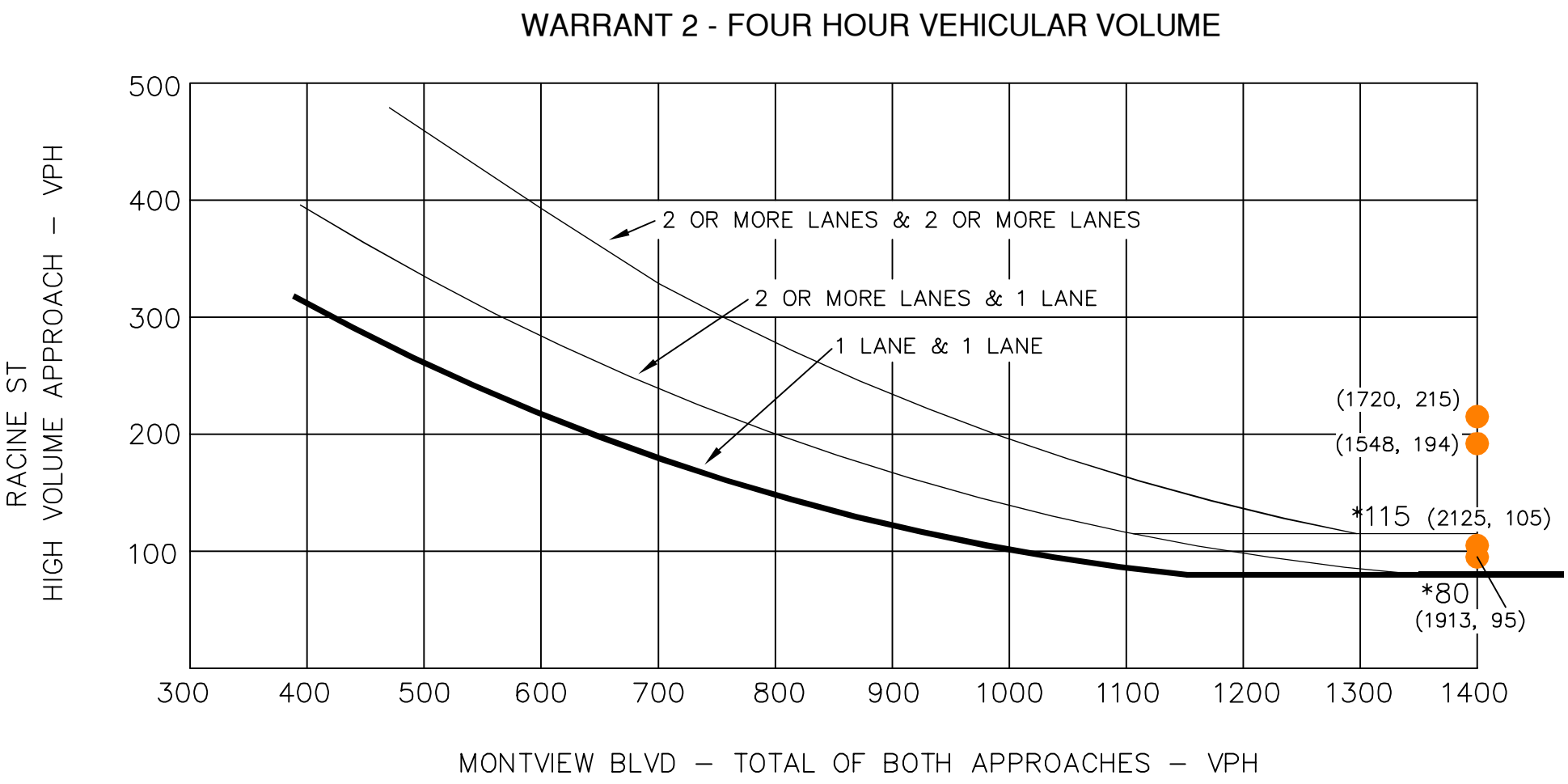
23RD AVE & PEORIA ST (#16)
SIGNAL WARRANT ANALYSIS
FOUR HOUR VOLUME WARRANT

● 2040 BACKGROUND TRAFFIC DATA POINT

FIGURE 4

Source: Manual of Uniform Traffic Control Devices 2009

Kimley»Horn



* NOTE: 115 VPH APPLIES AS THE LOWER THRESHOLD VOLUME FOR A MINOR STREET APPROACH WITH TWO OR MORE LANES AND 80 VPH APPLIES AS THE LOWER THRESHOLD VOLUME FOR A MINOR STREET APPROACHING WITH ONE LANE.

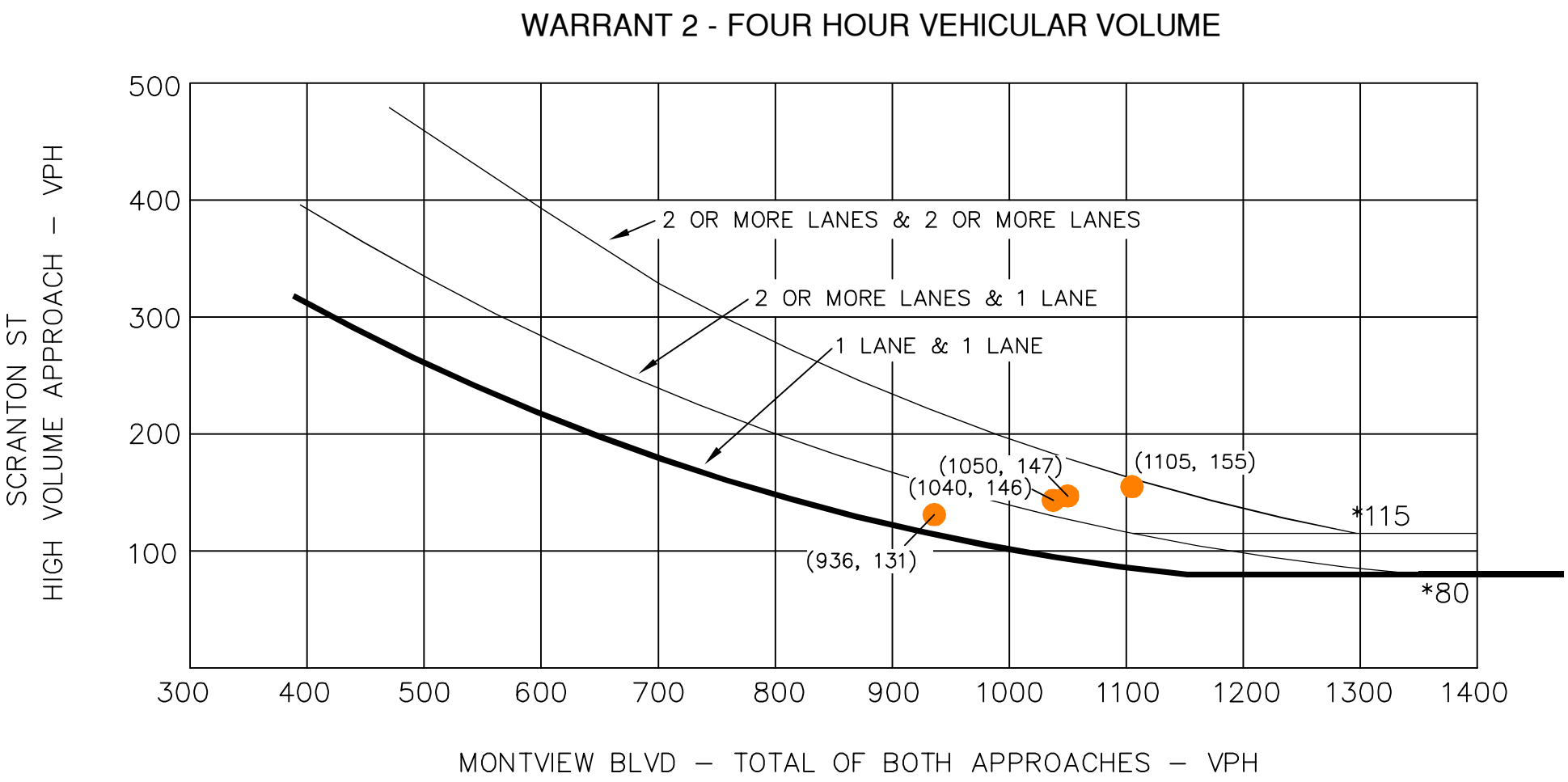
MONTVIEW BLVD & RACINE ST (#37)
SIGNAL WARRANT ANALYSIS
FOUR HOUR VOLUME WARRANT

● 2040 TOTAL TRAFFIC DATA POINT

FIGURE 5

Source: Manual of Uniform Traffic Control Devices 2009

Kimley»Horn



* NOTE: 115 VPH APPLIES AS THE LOWER THRESHOLD VOLUME FOR A MINOR STREET APPROACH WITH TWO OR MORE LANES AND 80 VPH APPLIES AS THE LOWER THRESHOLD VOLUME FOR A MINOR STREET APPROACHING WITH ONE LANE.

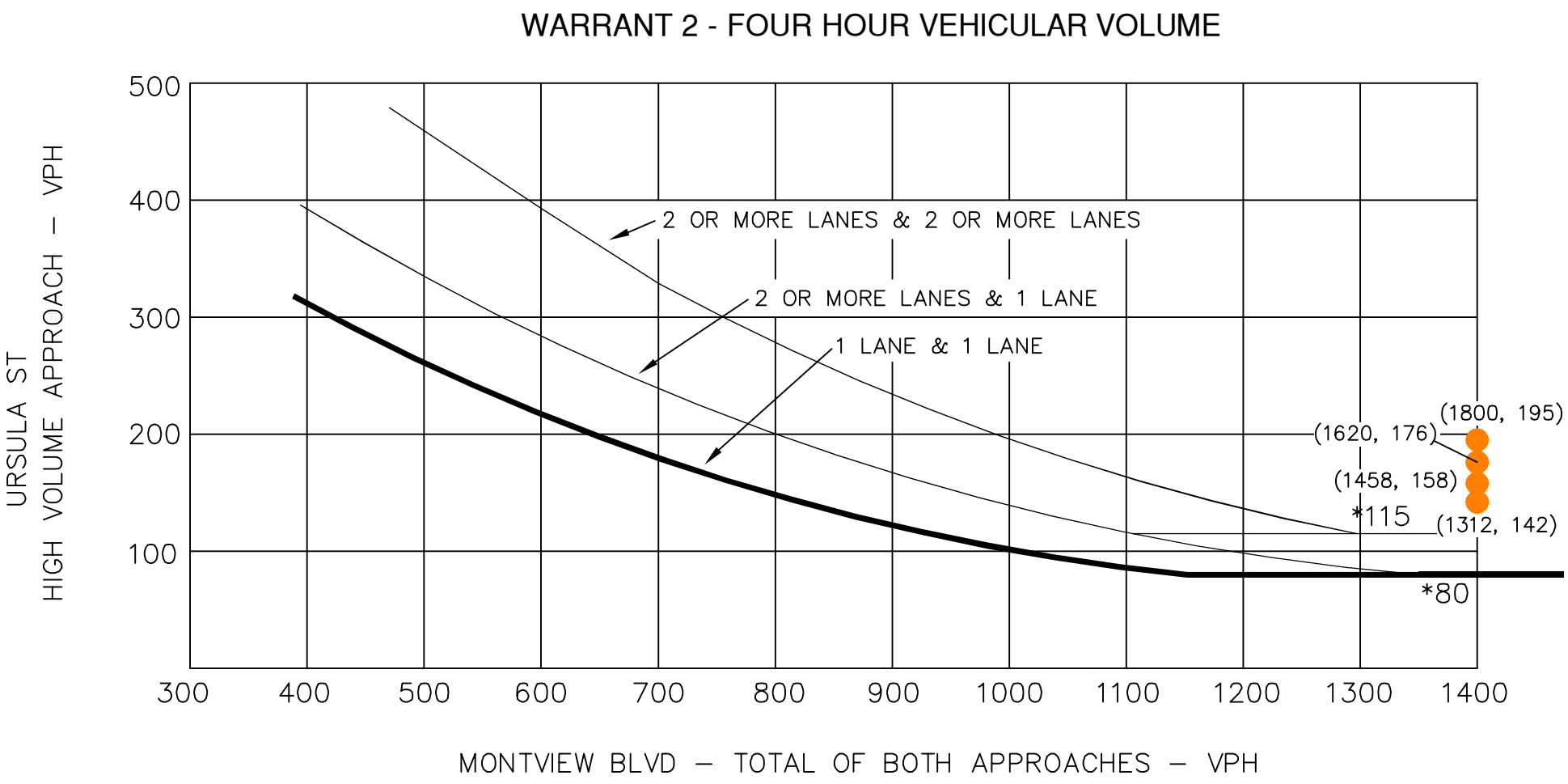
MONTVIEW BLVD & SCRANTON ST (#39)
SIGNAL WARRANT ANALYSIS
FOUR HOUR VOLUME WARRANT

● 2040 BACKGROUND TRAFFIC DATA POINT

FIGURE 6

Source: Manual of Uniform Traffic Control Devices 2009

Kimley»Horn



* NOTE: 115 VPH APPLIES AS THE LOWER THRESHOLD VOLUME FOR A MINOR STREET APPROACH WITH TWO OR MORE LANES AND 80 VPH APPLIES AS THE LOWER THRESHOLD VOLUME FOR A MINOR STREET APPROACHING WITH ONE LANE.

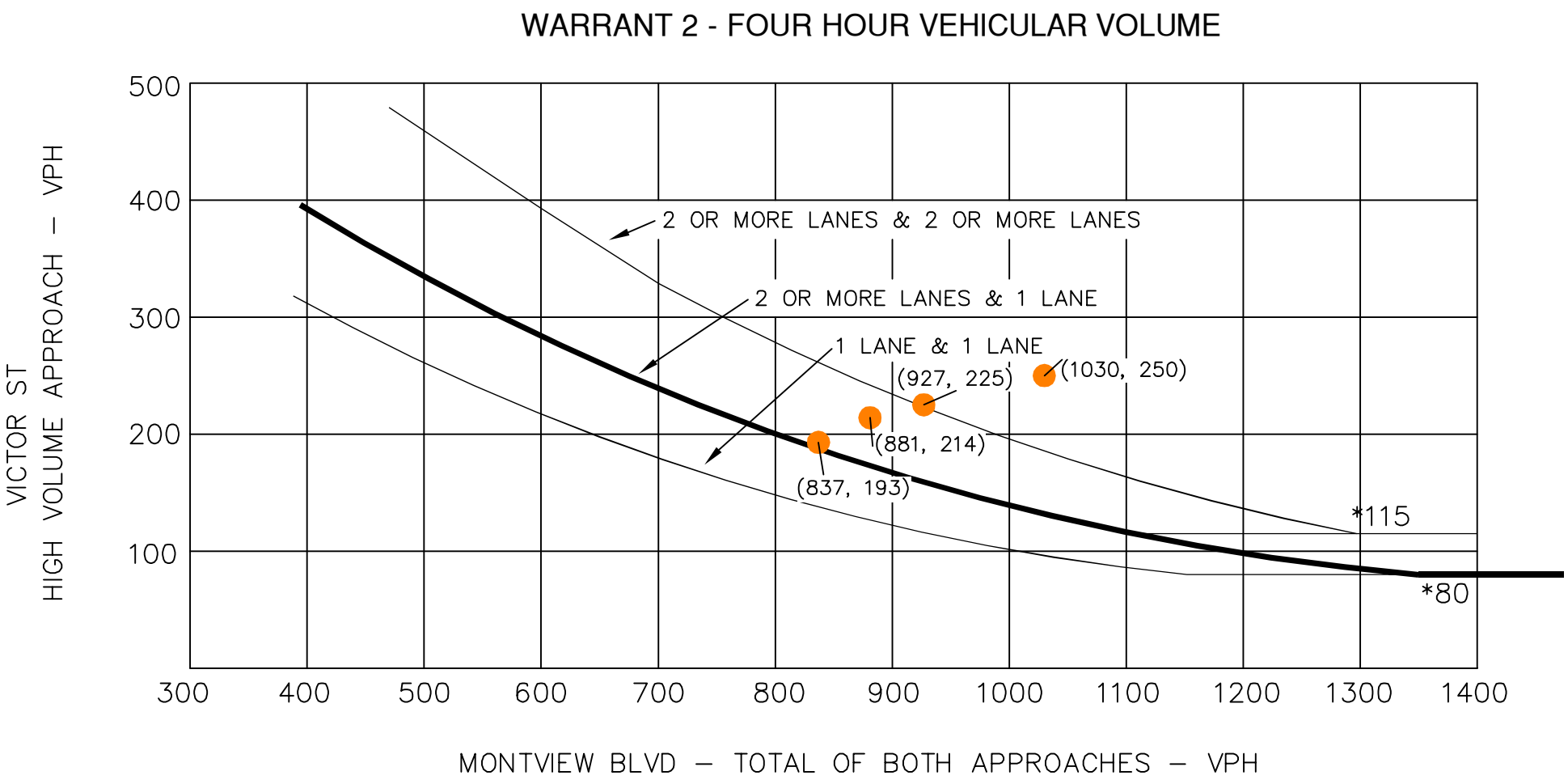
MONTVIEW BLVD & URSULA ST (#40)
SIGNAL WARRANT ANALYSIS
FOUR HOUR VOLUME WARRANT

● 2040 TOTAL TRAFFIC DATA POINT

FIGURE 7

Source: Manual of Uniform Traffic Control Devices 2009

Kimley»Horn



* NOTE: 115 VPH APPLIES AS THE LOWER THRESHOLD VOLUME FOR A MINOR STREET APPROACH WITH TWO OR MORE LANES AND 80 VPH APPLIES AS THE LOWER THRESHOLD VOLUME FOR A MINOR STREET APPROACHING WITH ONE LANE.

MONTVIEW BLVD & VICTOR ST (#43)
SIGNAL WARRANT ANALYSIS
FOUR HOUR VOLUME WARRANT

● 2040 BACKGROUND TRAFFIC DATA POINT

FIGURE 8

Source: Manual of Uniform Traffic Control Devices 2009

Kimley»Horn

ALL-WAY STOP CONTROL WARRANTS

	23rd Ave (East-West Street)		Quentin St (North-South Street)	
	Total Volumes Both Approaches	Average Over 8 hours	Total Volumes Both Approaches	Average Over 8 hours
6 AM - 7 AM	1066		82	
7 AM - 8 AM	1184	1006	91	116
8 AM - 9 AM	1315	930	100	153
9 AM - 10 AM	1184	845	91	195
10 AM - 11 AM	1066	751	82	241
11 AM - 12 PM	959	681	74	294
12 PM - 1 PM	863	618	66	343
1 PM - 2 PM	410	562	342	386
2 PM - 3 PM	456	511	380	425
3 PM - 4 PM	507		422	
4 PM - 5 PM	563		468	
5 PM - 6 PM	625		520	
6 PM - 7 PM	563		468	
7 PM - 8 PM	507		422	
8 PM - 9 PM	456		380	
9 PM - 10 PM	410		342	
Total Volume	12134		4330	

> 300 vehicles per hour for any 8 hours of an average day on major street **YES**

> 200 vehicles per hour for any 8 hours of an average day on minor street **YES**

Therefore, this intersection is anticipated to meet warrants for all-way stop control based upon traffic volumes

ALL-WAY STOP CONTROL WARRANTS

	23rd Ave (East-West Street)		Victor St (North-South Street)	
	Total Volumes Both Approaches	Average Over 8 hours	Total Volumes Both Approaches	Average Over 8 hours
6 AM - 7 AM	576		251	
7 AM - 8 AM	640	573	279	245
8 AM - 9 AM	710	564	310	236
9 AM - 10 AM	640	555	279	226
10 AM - 11 AM	576	544	251	215
11 AM - 12 PM	518	551	226	211
12 PM - 1 PM	466	557	203	207
1 PM - 2 PM	457	563	161	204
2 PM - 3 PM	507	568	179	201
3 PM - 4 PM	564		199	
4 PM - 5 PM	626		221	
5 PM - 6 PM	695		245	
6 PM - 7 PM	626		221	
7 PM - 8 PM	564		199	
8 PM - 9 PM	507		179	
9 PM - 10 PM	457		161	
Total Volume	9129		3564	

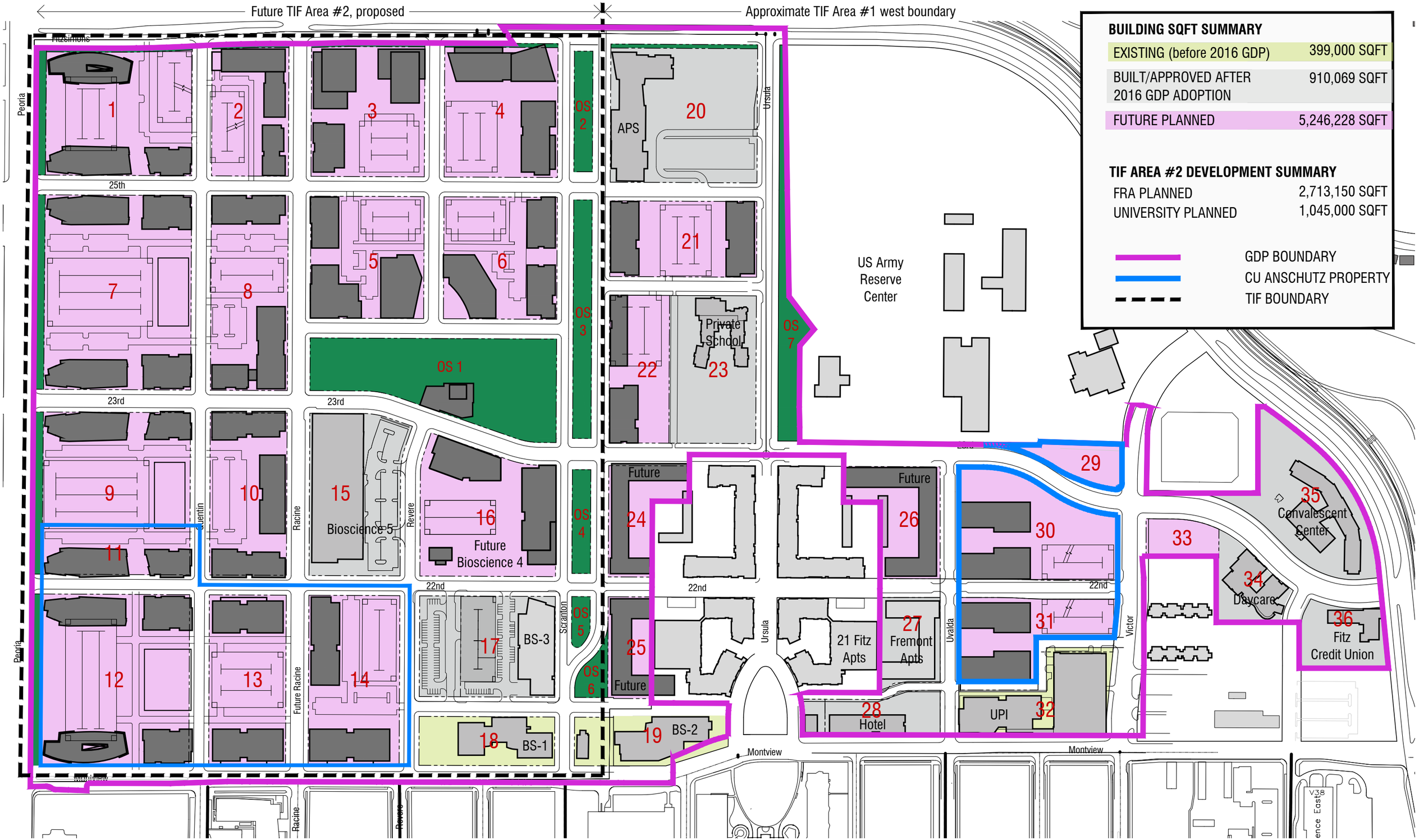
> 300 vehicles per hour for any 8 hours of an average day on major street **YES**

> 200 vehicles per hour for any 8 hours of an average day on minor street **YES**

Therefore, this intersection is anticipated to meet warrants for all-way stop control based upon traffic volumes

APPENDIX I

Conceptual Site Plan



FITZSIMONS INNOVATION COMMUNITY | CONCEPTUAL BUILD-OUT SCENARIO

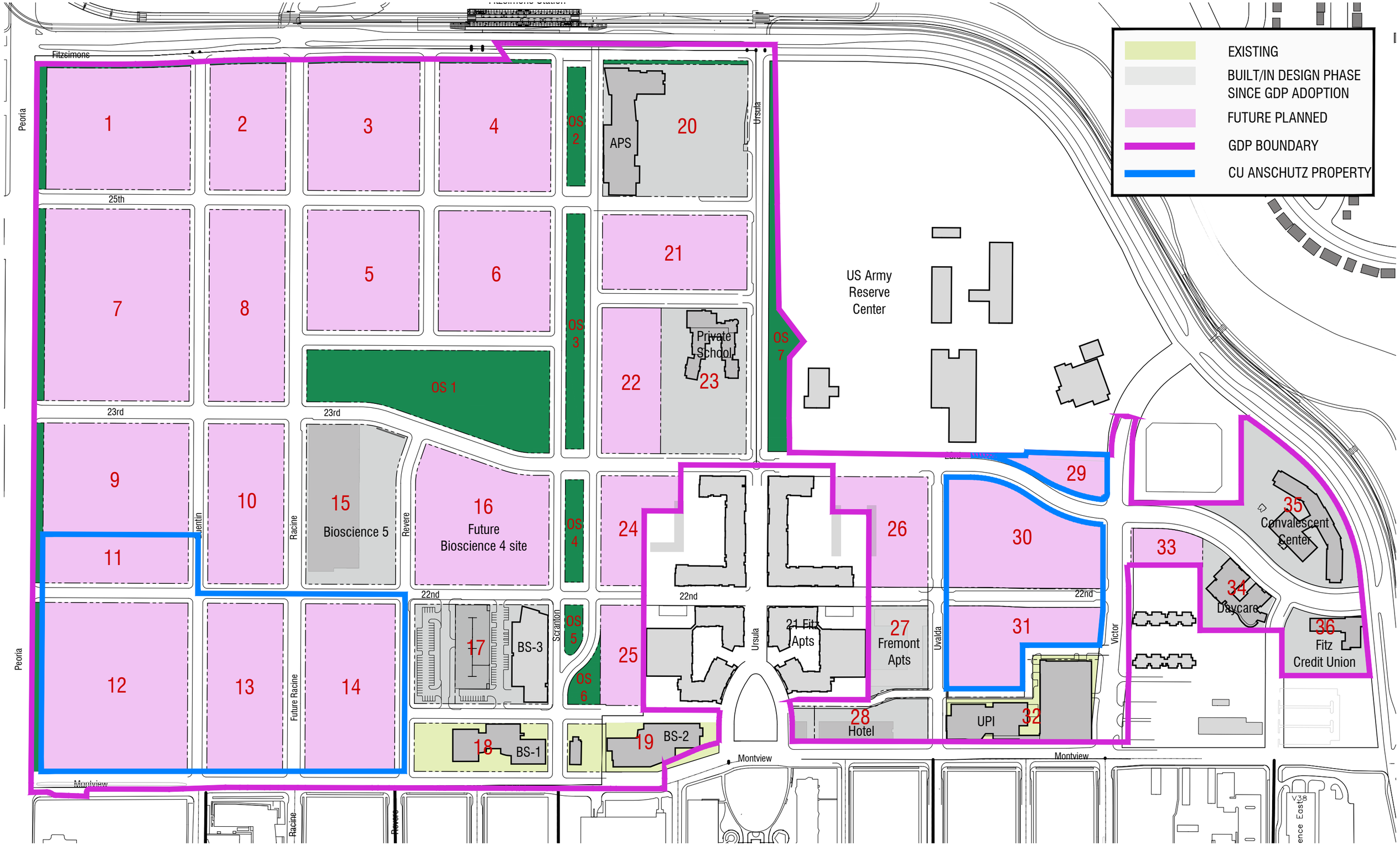
10/26/2022

0 150 300ft

N

SCALE: 1"=300'

CIVITAS



FITZSIMONS INNOVATION COMMUNITY | BLOCK PLAN AND OWNERSHIP

10/26/2022

0 150 300ft

N

SCALE: 1"=300'

CIVITAS

Fitzsimons Innovation Community Redevelopment
Updated: 10/26/2021

Development Summary

		Commercial						Residential				School	Parking		
	Developable Acres(Net)	Retail (sf)	Office (sf)	*FAR	Hotel (rm)	Hotel (sf)	Employees	Res. (du)	Res. (sf)	**DU/AC Net	Population	School (sf)	Required	Provided	Delta
Totals	**120.16**	**27,037**	**5,132,152**	**1.25**	**106**	**84,344**	**17,195**	**850**	**1,168,310**	**124**	**2,091**	**143,454**	**18,089**	**17,215**	**-874**
Percentage of total SF		0%	80%			1%			18%						
			4,060,858												

Site Summary

Gross Site (acre)	**183.55**
Net* Developable Site (acre)	**120.16**
R.O.W. (acre)	**53.61**
Open Space (acre)	**9.78**
Gross Building (sq. ft.)	**6,555,297**
Net* FAR	**1.25**

*does not include ROW or Open Space

FRA

TIF AREA # 2

Block #	Use	Net Acre	Commercial: Retail SF	Office SF	Office FAR*	Hotel Rooms	Hotel SF	Employees	Residential: DU**	Res. SF	DU/AC Net	Population	School SF	Parking: Required	Provided	Delta
1	Office	5.16	-	410,000	1.82	-	-	1,367	-	0	-	0		1,353	1,250	-103
2	Flex-Office	2.81	-	120,000	0.98	-	-	400	-	0	-	0		396	510	114
3	Flex-Office	4.20	-	199,000	1.09	-	-	663	-	0	-	0		657	630	-27
4	Flex-Office	4.20	-	195,000	1.07	-	-	650	-	0	-	0		644	750	107
5	Flex-Office	3.95	-	145,000	0.84	-	-	483	-	0	-	0		479	400	-79
6	Flex-Office	3.95	-	126,800	0.74	-	-	423	-	0	-	0		418	401	-17
7	Office	8.15	-	510,000	1.44	-	-	1,700	-	0	-	0		1,683	2,290	607
8	Flex-Office	4.27	-	270,000	1.45	-	-	900	-	0		0		891	600	-291
9	Office	4.75	-	235,000	1.14	-	-	783	-	0	-	0		776	2,170	1395
10	Office/Industiral	3.56	-	316,000	2.04	-	-	1,053	-	0	-	0		1,043	120	-923
11	Office (University)	2.08	-	235,000	2.59	-	-	783	-	0	-	0		776	45	-731
12	Office (University)	7.23	-	430,000	1.37	-	-	1,433	-	0	-	0		1,419	1,350	-69
13	Office (University)	3.74		200,000	1.23			667						660	750	90
14	Office (University)	4.40		180,000	0.94			600						594	562	-32
15	Bio Science 5	4.25	-	93,834	0.51	-	-	313	-	0	-	0		self parked		
16	Office	4.79	8,300	186,350	0.93	-	-	629	-	0	-	0		648	384	-264
17	Bio Science 3	3.91	-	118,874	0.70	-	-	396	-	0	-	0		392	540	148
18	Bio Science 1	1.89	-	90,000	1.09	-	-	300	-	0	-	0		297	183	-114
19	Bio Science 2	1.46	-	112,000	1.76	-	-	373	-	0	-	0		370	112	-258
20	Aurora Science and Tech	5.79	-	-	0.00	-	-	-			-	0	114,697	self parked		
21	Office	3.17		175,000	1.27	-	-	583	-	0	-	0		578	580	3
22	Office/Retail	2.53	14,778	80,000	0.86			281						323	387	64
23	Compositive School	3.66	-	-	0.00	-	-	-					28,757	self parked		
24	Residential	1.77	-	-	3.50	-	-	-	204	270,000	115	502		306	306	0
25	Residential	1.27	-	-	4.88	-	-	-	204	270,000	161	502		306	306	0
26	Residential	2.29	-	-	2.71	-	-	-	210	270,000	-	517		315	315	0
27	Apartment	1.50	-	-	5.48	-	-	-	232	358,310	155	571		348	352	4
28	Hotel / Restaurant	1.51	3,959		1.34	106	84,344	64	-	0	-	0		95	30	-65
29	Office (University)	0.91	-	-	0.00	-	-	-	-	0	-	0		-	-	0
30	Office (University)	4.20	-	200,000	1.09	-	-	667	-	0	-	0		660	500	-160
31	Office (University)	2.72	-	200,000	1.69	-	-	667	-	0	-	0		660	500	-160
32	UPI Building	2.66	-	197,000	1.70	-	-	657	-	0	-	0		650	650	0
33	Office	0.77	-	-	0.00	-	-	-	-	0	-	0		-	-	0
34	Child Care Center	1.35	-	24,371	0.41	-	-	81	-	0	-	0		80	65	-15
35	Convalescent Center	3.83	-	68,285	0.41	-	-	228	-	0	-	0		225	100	-125
36	FITZ Credit Union	1.48	-	14,638	0.23	-	-	49	-	0	-	0		48	77	29
OS 1	Fitzsimons Park	5.20														
OS 2-6	Scranton Park	3.07														
OS 7	Ursula Park	1.51														
Right of Way	R.O.W.	53.61	-	-	-	-	-	-	-	0	-	0		0	0	

ASSUMPTIONS

Office	300 SF Per Employee
Retail	1000 SF Per Employee
Hotel	0.57 Employee Per Room
Hotel	625 sf per room (includes guest room support public space and back of house)
Residential	1000 sf per DU (average)
Population	2.46 persons per household per DRCOG Regional Average Household Size (March 2014)

PARKING ASSUMPTIONS

Use	Ratio	Required
Res.	1.5/DU	1.5
Office	3.3/1000sf	3.3
Restaurant	10/1000sf	10
Retail	4/1000sf	4
Industrial	2.5/1000	2.5
Hotel	.75/room	0.75

Notes:
*FAR based on total development over total NET acreage
**DU/AC based on total NET acreage of blocks containing Residential
***Land Use yields assumes a mix of Residential and Office uses
All CYAN text represents projects that have been built or approved as of October 26, 2022