



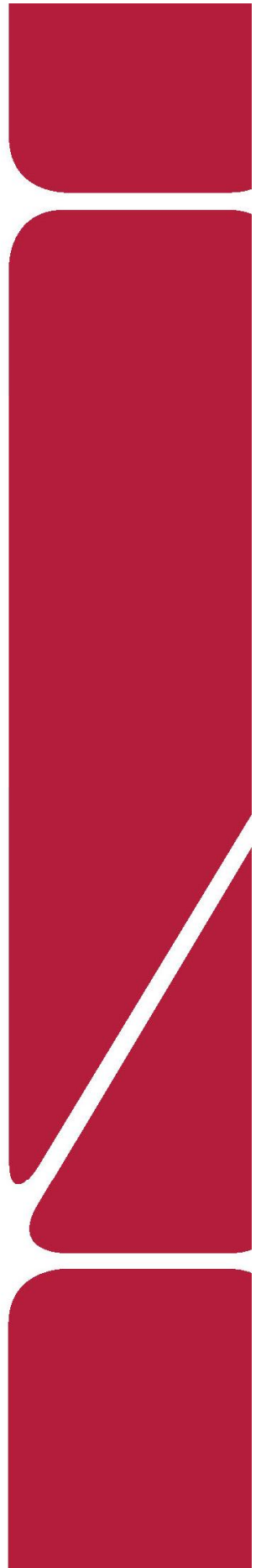
Traffic Impact Study

Jones District Redevelopment Centennial, Colorado

Prepared for:

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

Jones District Redevelopment

Centennial, Colorado

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1.0 EXECUTIVE SUMMARY

Jones District Redevelopment is a proposed mixed-use development to be located on both the north and south sides of Mineral Avenue between Chester Street and Interstate 25 (I-25) in Centennial, Colorado. For purposes of this study, the project is anticipated to include 1,500 multi-family housing units, a 200-room hotel, 3,000,000 square feet of office space, and 130,000 square feet of retail to be completed within the next 10 years. Therefore, analysis was conducted for the 2030 short term horizon as well as the 2040 long term horizon.

The purpose of this study is to identify project traffic generation characteristics, to identify potential project traffic related impacts on the local street system, and to develop mitigation measures required for identified impacts. The following intersections, labeled intersections 1 through 19, were incorporated into this traffic study in accordance with the City of Centennial and State of Colorado Department of Transportation (CDOT) standards and requirements:

1. Dry Creek Road and Yosemite Street
2. Dry Creek Road and Chester Street
3. Dry Creek Road and I-25 Southbound Ramp
4. Dry Creek Road and I-25 Northbound Ramp
5. Panorama Drive and Yosemite Street
6. Panorama Circle and Chester Street
7. Mineral Circle and Chester Street
8. Mineral Avenue and Chester Street
9. Mineral Avenue and Yosemite Street
10. Willow Way and Yosemite Street
11. Nichols Avenue and Yosemite Street
12. Nichols Avenue and Chester Street
13. Mineral Drive and Yosemite Street
14. Otero Avenue and Chester Street
15. County Line Road and Quebec Street
16. County Line Road and Yosemite Street
17. County Line Road and Chester Street
18. County Line Road and I-25 Southbound Ramp
19. County Line Road and I-25 Northbound Ramp

In addition, 11 future internal intersections, labeled intersections 20 through 30, surrounding and within the Jones District Development were also included for evaluation. Further, nine (9) proposed parking access intersections, labeled intersections 31 through 39, were studied.

Regional access will be provided by I-25, E-470, Dry Creek Road, County Line Road, and Yosemite Street. Primary access will be provided by Chester Street while direct access will be provided by nine (9) parking access entries and on-street parking.

The proposed mixed-use development is expected to generate approximately 28,556 daily external weekday trips, with 2,640 of these trips occurring during the morning peak hour and 2,859 of these trips occurring during the afternoon peak hour.

Based on the analysis presented in this report, Kimley-Horn believes the proposed Jones District Redevelopment will be successfully incorporated into the existing and future roadway network. The existing traffic volume analysis, proposed project development, and expected future traffic volumes resulted in the following conclusions and recommendations:

Existing Improvement Recommendations:

- The eastbound and westbound approaches of the County Line Road and Quebec Street intersection (Intersection #15) should provide three through lanes in each direction. Further, a northbound channelized free right turn lane should be constructed at this intersection. It should be noted that traffic counts at this intersection were performed while C-470 was under construction, and it is believed that a lot of traffic is currently utilizing County Line Road as a relief route. It is anticipated that this intersection may likely operate better than reported once construction of C-470 is complete.
- A southbound channelized free right turn lane should be provided at the intersection of County Line Road and Yosemite Street (#16).
- Southbound triple left turn lanes should be considered at the intersection of County Line Road and Chester Street (#17) due to existing vehicle queuing issues. It is recommended that the inside southbound through lane at this intersection be converted to a continuous left turn lane for a third left turn lane. Three receiving lanes currently exist on eastbound County Line Road for the implementation of triple left turn lanes. The northbound approach of this intersection should operate with protected lead or lag left turn phasing while the southbound approach operates with the opposite left turn (lag or

lead) phasing because the left turn movements on these approaches will cross paths if southbound triple left turn lanes are implemented.

- A southbound channelized free right turn lane is also recommended at the intersection of County Line Road and Chester Street (#17).

2022 Interim Improvement Recommendations:

External Intersections:

- The eastbound approach of the Dry Creek Road and Yosemite Street (#1) intersection should provide three through lanes.
- A westbound left turn lane should be striped with 100 feet of length at the intersection of Panorama Circle and Yosemite Street (#5). Sufficient pavement width exists, and this improvement only requires pavement striping.
- The substandard eastbound left turn lane at the Mineral Circle/Jones Drive and Chester Street (#7) intersection should be extended from 50 feet of length to 100 feet of length. The westbound left turn lane at this intersection (#7) should be extended to provide 150 feet of length.
- The 25-foot substandard eastbound left turn at the Mineral Avenue and Chester Street (#8) intersection should be extended to provide 75 feet of length.

Internal Intersections:

- With completion of the Jones District Redevelopment project, the site proposes 11 future internal intersections (labeled intersections #20-30) and nine (9) parking access intersections (labeled intersections #31-39). An internal roadway network will be provided to serve the development. The proposed east-west roadways include Road A, Jones Drive, Mineral Avenue, Road B, and Road C. The proposed north-west roadways include Panorama Circle, Dayton Street, and Street 1.
- The four major access roadways for the site will occur from the north using Panorama Circle, the south using Dayton Street, and from two locations from the west using

Mineral Avenue and Panorama Circle (named Jones Drive in this study). Panorama Circle is proposed to be realigned and extend south to Mineral Avenue (#25) while removing the curve located near the north side of the site. Panorama Circle will connect perpendicularly with Jones Drive (formally Panorama Circle). Likewise, the existing curve at the north side of Dayton Street and the east side of Mineral Avenue will be removed to create a four-legged intersection with Mineral Avenue and Dayton Street (#26).

- The intersections of Jones Drive/Panorama Circle, Jones Drive/Dayton Street, Mineral Avenue/Panorama Circle, Mineral Avenue/Dayton Street, and Road C/Dayton Street are recommended to provide all-way stop control (AWSC). The remaining six (6) proposed internal intersections and nine (9) parking access intersections are recommended to provide two-way stop control (TWSC).
- A southbound left turn lane should be provided at the intersection of Road A/Panorama Circle (#20). Eastbound and westbound left turn lanes should be provided along Jones Drive from Chester Street to Panorama Circle. Eastbound and westbound left turn lanes are also recommended along Mineral Avenue from Chester Street to Dayton Street. A westbound right turn lane and a southbound left turn lane should be provided at the intersection of Mineral Avenue/Panorama Circle (#25). Northbound and southbound left turn lanes should be provided along Dayton Street from Mineral Avenue to Road C.
- The existing north access to IKEA located along the east side of Dayton Street is proposed to realign to the north and share access with the proposed east leg of Road C at Dayton Street. The delivery access to IKEA for delivery trucks will be reconfigured and remain.
- All project parking accesses are recommended to have R1-1 "STOP" signs installed for the exiting approaches. One exiting lane should be sufficient at all project accesses while shared movement lanes should be sufficient for vehicles entering all parking access locations with exception of the Jones Drive West Parking Access (#32) which is recommended to include eastbound and westbound left turn lanes.

2025 Interim Improvement Recommendations:

- The northbound approach of the Dry Creek Road and Chester Street (#2) intersection should provide a channelized free right turn lane. An eastbound channelized free right turn lane and westbound triple left turn lanes should also be considered at this intersection of Dry Creek Road and Chester Street (#2). Four receiving lanes will be required on the south leg of this intersection with three for the triple left turns and one for the channelized free right turn. It is recommended that the existing raised median on the south leg of this intersection be modified to provide enough pavement width for an additional southbound lane. The outside of the northbound dual left turn lanes at the intersection of Dry Creek Road and Chester Street (#2) should be extended back to Panorama Circle as a continuous left turn lane.
- In association with the westbound to southbound triple left turn lanes at the Dry Creek Road and Chester Street intersection, southbound dual left turn lanes should be provided at the intersection of Panorama Circle and Chester Street (#6). The existing southbound left turn lane should be extended back to Dry Creek Road as a continuous lane while the inside left turn lane should be provided from within the existing raised median with 125 feet of length. The east leg of this intersection will need to provide two receiving lanes in order to accommodate the southbound dual left turn lanes.
- The following intersections are likely to warrant signalization and should be considered to provide signal control by 2025:
 - o Mineral Circle and Chester Street (#7)
 - o Mineral Avenue and Chester Street (#8)
 - o Otero Avenue and Chester Street (#14)

2030 Buildout Improvement Recommendations:

- The northbound left turn lane at the Dry Creek Road and Yosemite Street (#1) intersection should be restriped and extended from 175 feet of length to 375 feet of length.
- Side-by-side left turn lanes should be incorporated along the eastbound approach of the County Line Road and Yosemite Street (#16) intersection and the westbound approach

of the County Line Road and Willow Street intersection. The westbound dual left turn lanes should provide 400 feet of length per lane.

2040 Buildout Improvement Recommendations:

- The westbound approach of the Dry Creek Road and Yosemite Street (#1) intersection should provide three westbound through lanes. The proposed new westbound right turn lane recommended with the 2030 construction would be absorbed with the addition of the third through lane.

General Recommendations:

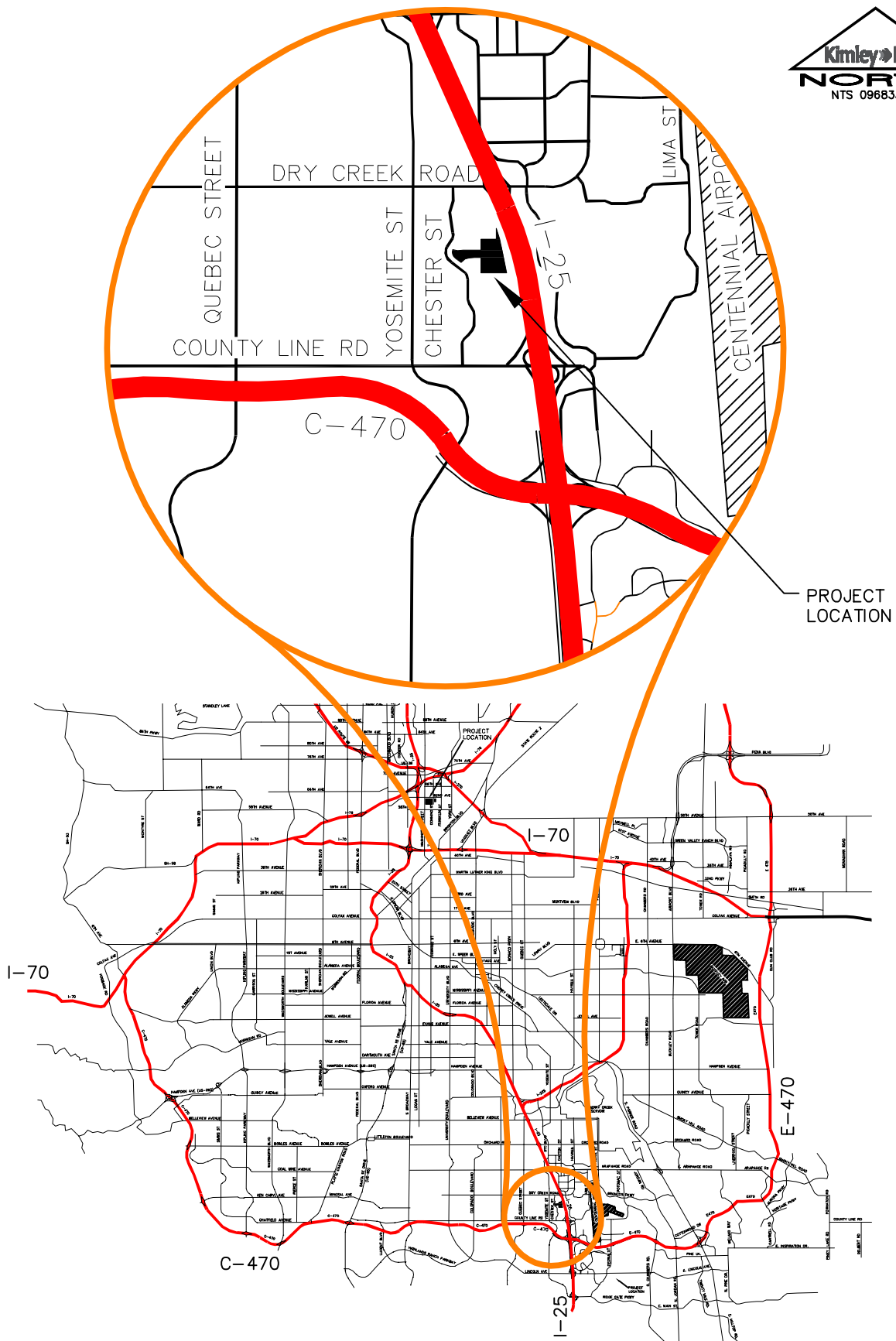
- Any on-site and off-site signing and striping improvements should be incorporated into the Civil Drawings and conform to the City of Centennial and CDOT standards as applicable as well as the Manual on Uniform Traffic Control Devices – 2009 Edition (MUTCD).

2.0 INTRODUCTION

Kimley-Horn and Associates, Inc. has prepared this report to document the results of a Traffic Impact Study of future traffic conditions associated with the proposed Jones District Redevelopment project to be located on both the north and south sides of Mineral Avenue between Chester Street and I-25 in Centennial, Colorado. A vicinity map illustrating the project location is shown in **Figure 1**. For purposes of this study, the project is anticipated to include 1,500 multi-family housing units, a 200-room hotel, 3,000,000 square feet of office space, and 130,000 square feet of retail. The proposed development is expected to be an approximate 10-year build; therefore, analysis was conducted for the 2030 short term horizon as well as the 2040 long term horizon. A conceptual site plan illustrating the development and access is shown in **Appendix H**.

The purpose of this study is to identify project traffic generation characteristics, to identify potential project traffic related impacts on the local street system, and to develop mitigation measures required for identified impacts. The following intersections were incorporated into this traffic study in accordance with the City of Centennial and State of Colorado Department of Transportation (CDOT) standards and requirements:

1. Dry Creek Road and Yosemite Street
2. Dry Creek Road and Chester Street
3. Dry Creek Road and I-25 Southbound Ramp
4. Dry Creek Road and I-25 Northbound Ramp
5. Panorama Drive and Yosemite Street
6. Panorama Circle and Chester Street
7. Mineral Circle and Chester Street
8. Mineral Avenue and Chester Street
9. Mineral Avenue and Yosemite Street
10. Willow Way and Yosemite Street
11. Nichols Avenue and Yosemite Street
12. Nichols Avenue and Chester Street
13. Mineral Drive and Yosemite Street
14. Otero Avenue and Chester Street
15. County Line Road and Quebec Street
16. County Line Road and Yosemite Street
17. County Line Road and Chester Street
18. County Line Road and I-25 Southbound Ramp
19. County Line Road and I-25 Northbound Ramp



JONES DISTRICT REDEVELOPMENT
 VICINITY MAP

FIGURE 1

Eleven future internal intersections, labeled intersections 20 through 30, surrounding and within the Jones District Development were also included for evaluation. Further, nine (9) proposed parking access intersections, labeled intersections 31 through 39, were studied.

Regional access will be provided by I-25, E-470, Dry Creek Road, County Line Road, and Yosemite Street. Primary access will be provided by Chester Street while direct access will be provided by nine (9) parking access entries and on-street parking.

3.0 EXISTING CONDITIONS

3.1 Existing Study Area

The existing project site is comprised of vacant land while the immediate surrounding area is mostly built out with exception of the parcel located immediately north of the proposed development. The surrounding area contains a mix of residential, office, hotel, and retail uses. I-25 borders the project area to the east. Directly north of the project site is a Comcast office building. The Dry Creek Denver RTD transit station is also located directly north of the project area. The extended area to the north and south includes a variety of mixed uses. Directly to the south is the existing IKEA. Park Meadows Mall is located further south along the south side of County Line Road. The extended area to the west, west of Yosemite Street, includes single family residences. The land uses and roadway network surrounding the site are shown in **Figure 2**.

3.2 Existing Roadway Network

Roadways

Dry Creek Road provides three through lanes in both the eastbound and westbound directions between the I-25 interchange and Yosemite Street intersection. Three lanes are provided in the westbound direction and two lanes in the eastbound direction west of Yosemite Street. Dry Creek Road has a posted speed limit of 40 miles per hour within the study area.

County Line Road provides three through lanes eastbound and westbound between the I-25 interchange and Willow Street intersection. Three through lanes are provided in the eastbound direction while two through lanes are provided in the westbound direction between the Willow Street and Quebec Street intersections. Separate left turn lanes are provided at major intersections. County Line Road has 45-mile per hour speed limit throughout the study area.

Quebec Street provides two through lanes in each direction at the intersection with County Line Road and has a posted speed limit of 40 miles per hour. Yosemite Street provides two through lanes in both the northbound and southbound directions throughout the study area with separate left turn lanes at major intersections. Yosemite Street has a 40-mile per hour posted speed limit.



JONES DISTRICT REDEVELOPMENT
SITE AREA

FIGURE 2

Chester Street provides two through lanes in both the northbound and southbound directions and has a 30 mile per hour speed limit within the study area. Dayton Street provides one through lane in the northbound and southbound directions with separate left turn lanes at major intersections. Panorama Drive extends east and west with one through lane in each direction and a posted speed limit of 25 miles per hour. Mineral Circle provides one through lane in both the eastbound and westbound directions with a 25-mile per hour speed limit throughout the study area. Mineral Avenue provides one through lane eastbound and westbound with a 25-mile per hour speed limit throughout the study area.

Willow Way provides one through lane in each direction with a speed limit of 30 miles per hour. Willow Way extends primarily north and south but connects with Yosemite Street as the west leg of a T-intersection. Nichols Avenue provides one through lane eastbound and westbound with separate left turn lanes at major intersections. A posted speed limit was not observed along this roadway. Mineral Drive provides one through lane in both the eastbound and westbound directions with a 30-mile per hour speed limit throughout the study area. Panorama Circle provides one through lane in each direction and has a 30-mile per hour posted speed limit sign. Otero Avenue is an unstriped roadway that extends with one through lane in the eastbound and westbound directions and has a 30-mile per hour speed limit.

Intersections

The Dry Creek Road and Yosemite Street (#1) intersection is signalized with protected-permitted left turn phasing on all four approaches. The eastbound Dry Creek Road approach provides a left turn lane and two through lanes with the outside lane being a shared through/right turn lane. The westbound Dry Creek Road and southbound Yosemite Street approaches provide a left turn lane, two through lanes, and a right turn lane. The northbound Yosemite Street approach provides a left turn lane, two through lanes, and a channelized free right turn lane.

The Dry Creek Road and Chester Street (#2) intersection is signalized with protected-permitted left turn phasing on the northbound, southbound, and eastbound approaches and with protected only left turn phasing on the westbound approach. The eastbound Dry Creek Road approach provides a left turn lane, three through lanes, and a right turn lane. The westbound Dry Creek Road approach provides dual left turn lanes, three through lanes, and a right turn lane. The northbound Chester Street approach provides dual left and right turn lanes and one through

lane. The southbound Chester Street provides dual left turn lanes and a shared through/right turn lane.

The Dry Creek Road and I-25 Southbound Ramp (#3) intersection is signalized with protected-only left turn phasing on the westbound approach. The eastbound Dry Creek Road approach provides four through lanes and a channelized free right turn lane for traffic entering the I-25 southbound on ramp. The westbound Dry Creek Road approach provides three through lanes and dual left turning lanes for traffic entering the I-25 southbound on ramp. On the south leg of the intersection three receiving lanes provide southbound access to I-25.

The Dry Creek Road and I-25 Northbound Ramp (#4) intersection is signalized with protected-only left turn phasing on the eastbound approach. The westbound Dry Creek Road approach provides four through lanes and a channelized free right turn lane for traffic entering the I-25 northbound on ramp. The eastbound Dry Creek Road provides three through lanes and dual left turning lanes for traffic entering the I-25 northbound on ramp. On the north leg of the intersection three receiving lanes provide northbound access to I-25.

The Panorama Drive and Yosemite Street (#5) intersection is unsignalized with stop control on the westbound Panorama Drive approach. The northbound approach provides two through lanes with the outside lane being a shared through/right turn lane. The southbound approach provides a left turn lane and two through lanes. The westbound approach is unstriped but has sufficient pavement width to currently simulate a separate left and right turn lane.

The Panorama Circle and Chester Street (#6) intersection is signalized with protected-permitted left turn phasing on all four approaches. The eastbound approach provides a left turn lane and a shared through/right turn lane. The westbound approach provides a left turn lane, one through lane, and a right turn lane. The northbound and southbound approaches provide a left turn lane and two through lanes with the outside lane being a shared through/right turn lane.

Mineral Circle and Chester Street (#7) intersection is unsignalized with stop control on the eastbound and westbound approaches. The eastbound and westbound approaches provide a left turn lane and a shared through/right turn lane. The northbound and southbound approaches provide a left turn lane and two through lanes with the outside lane being a shared through/right turn lane.

The Mineral Avenue and Chester Street (#8) intersection is unsignalized with stop control on the eastbound and westbound Mineral Avenue approaches. The eastbound and westbound approaches provide a left turn lane and a shared through/right turn lane. The northbound approach provides a left turn lane, two through lanes, and a right turn lane. The southbound approach provides a left turn lane two through lanes with the outside lane being a shared through/right turn lane.

The Mineral Avenue and Yosemite Street (#9) T-intersection is unsignalized with stop control on the westbound approach. The northbound approach provides two through lanes with the outside lane being a shared through/right turn lane. The southbound approach provides a left turn lane and two through lanes. The westbound approach provides a single lane for shared left and right movements.

The Willow Way and Yosemite Street (#10) T-intersection is unsignalized with stop control on the eastbound approach. The northbound approach provides a left turn lane and two through lanes. The southbound approach provides two through lanes with the outside lane being a shared through/right turn lane. The eastbound approach provides a single shared lane for left and right movements.

The Nichols Avenue and Yosemite (#11) Street T-intersection is signalized with protected-permitted left turn phasing on the southbound approach. The northbound approach provides two through lanes with the outside lane being a shared through/right turn lane. The southbound approach provides a left turn lane and two through lanes. The westbound approach provides a left turn lane and a right turn lane.

The Nichols Avenue and Chester Street (#12) intersection is signalized with protected-permitted left turn phasing on all four approaches. The eastbound and westbound approaches provide a left turn lane and a shared through/right turn lane. The northbound and southbound approaches provide a left turn lane and two through lanes with the outside lane being a shared through/right turn lane.

The Mineral Drive and Yosemite Street (#13) intersection is unsignalized with stop control on the eastbound Mineral Drive approach. The northbound approach provides a left turn lane and two through lanes. The southbound approach provides two through lanes with the outside lane

being a shared through/right turn lane. The eastbound approach provides a single shared lane for left and right movements.

The Otero Avenue and Chester Street (#14) intersection is unsignalized with stop control on the westbound Otero Avenue approach. The northbound approach provides two through lanes with the outside lane being a shared through/right turn lane. The southbound approach provides a left turn lane and two through lanes. The westbound approach provides a left turn lane and a right turn lane.

The County Line Road and Quebec Street (#15) intersection is signalized with protected-only left turn phasing on all four approaches. The eastbound approach provides dual left turn lanes, two through lanes, and a channelized free right turn lane. The westbound approach provides dual left turn lanes, two through lanes, and a right turn lane with signalized protected overlap phasing. The northbound approach provides dual left turn lanes, three through lanes, and a right turn lane with signalized protected overlap phasing. The southbound approach provides dual left turn lanes and three through lanes with the outside lane being a shared through/right turn lane.

The County Line Road and Yosemite Street (#16) intersection is signalized with protected-only left turn phasing on all four approaches. The eastbound and westbound approaches provide dual left turn lanes, three through lanes, and a right turn lane. The northbound approach provides dual left turn lanes, two through lanes, and a right turn lane. The southbound approach provides a left turn lane and two through lanes with the outside lane being a shared through/right turn lane.

The County Line Road and Chester Street (#17) intersection is signalized with protected-only left turn phasing on all four approaches. The eastbound approach provides dual left turn lanes, three through lanes, and a right turn lane. The westbound approach provides dual left turn lanes and four through lanes with the outside lane being a shared through/right turn lane. The northbound and southbound approaches provide dual left turn lanes, two through lanes, and a right turn lane.

The County Line Road and I-25 Southbound Ramp (#18) intersection is signalized with protected only right turn phasing on the northbound approach. The eastbound approach provides four through lanes and a right turn lane. The westbound approach provides three

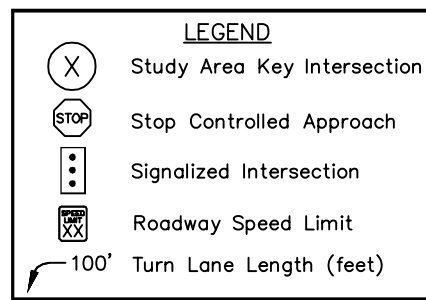
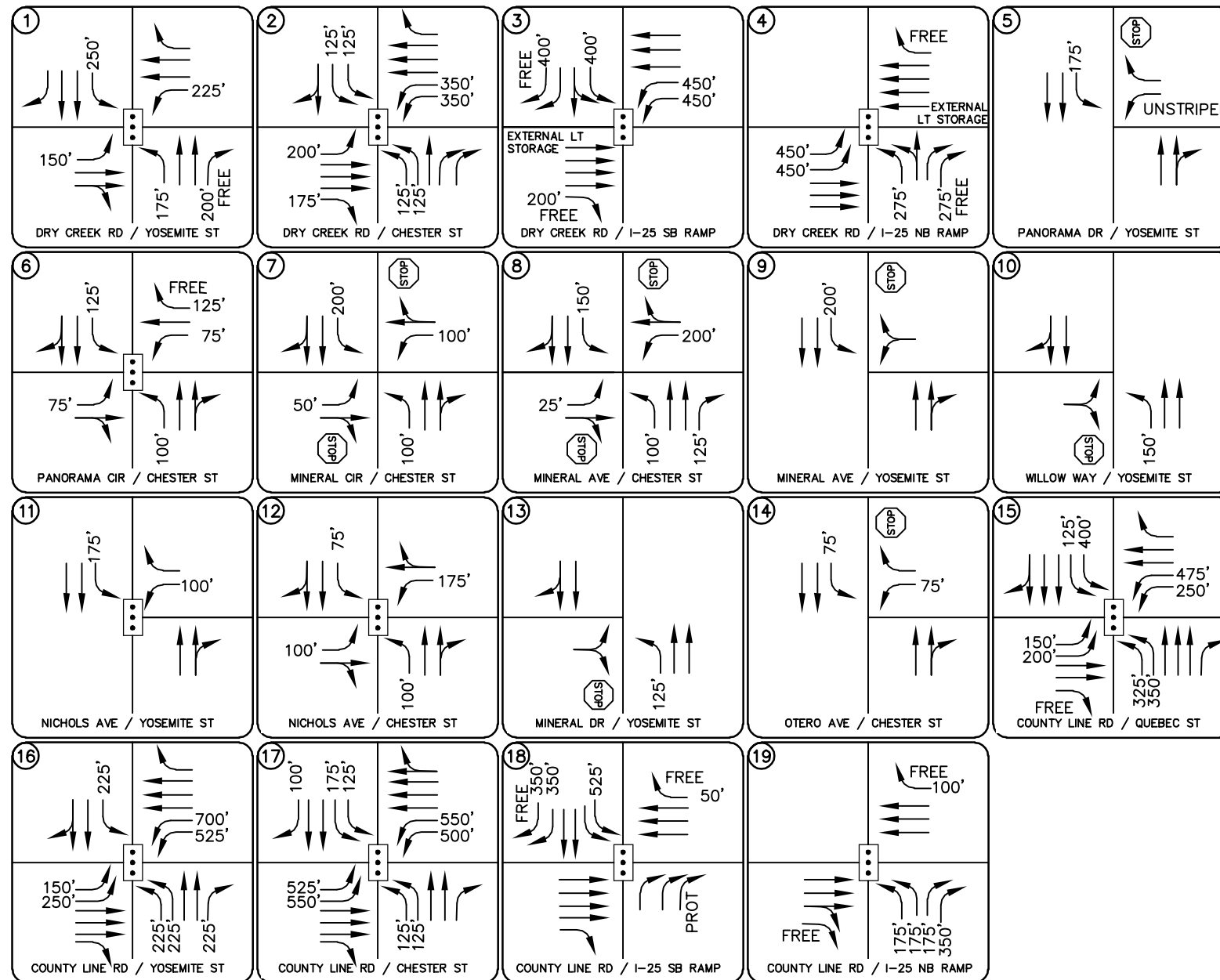
through lanes and a channelized free right turn lane. The southbound approach provides dual left turn lanes, two through lanes, and dual right turn lanes (one channelized free right turn lane). The northbound approach provides triple right turn lanes. On the north leg of the intersection, one receiving lane clover leaf interchange ramp provides access to southbound I-25.

The County Line Road and I-25 Northbound Ramp (#19) is signalized with permitted only left turn phasing on the northbound approach. The eastbound approach provides three through lanes with the outside lane being a shared through/right turn lane as well as a channelized free right turn lane for access onto northbound I-25. The westbound approach provides three through lanes and a channelized free right turn lane. The northbound approach provides dual left and right turn lanes.

Figure 3 shows the existing lane configuration and control for the study area key intersections.

3.3 Existing Traffic Volumes

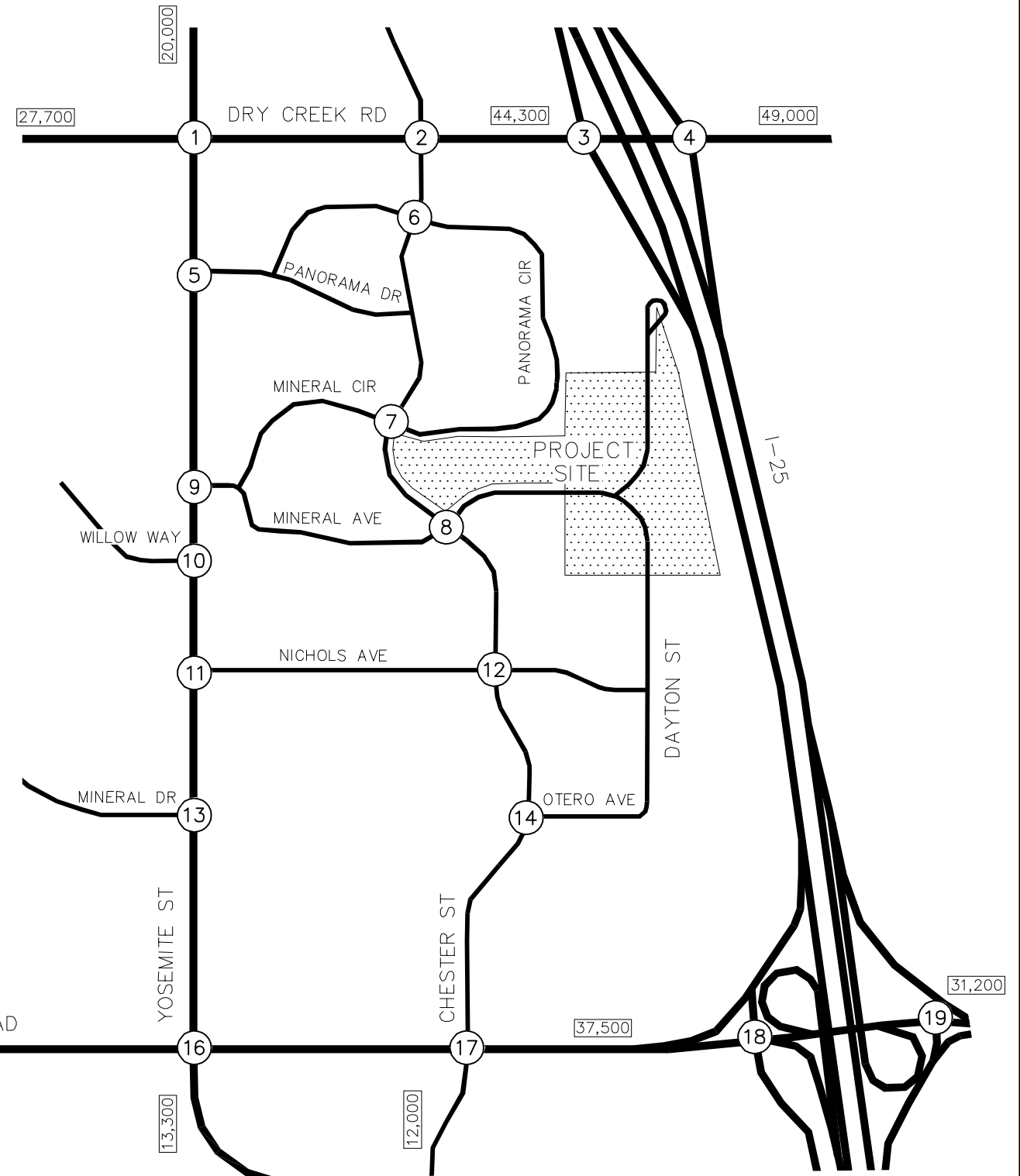
Existing peak hour turning movement counts were conducted at the study intersections of County Line Road/I-25 Southbound Ramp and County Line Road/I-25 Northbound Ramp on Thursday, February 1, 2018. Existing peak hour turning movement counts were conducted at the study intersections of Dry Creek Road/I-25 Southbound Ramp and Dry Creek Road/I-25 Northbound Ramp on Thursday, April 4, 2019. Existing peak hour turning movement counts were conducted at all other key study intersections on Tuesday, April 2, 2019. The counts were conducted in 15-minute intervals during the morning and afternoon peak hours of adjacent street traffic from 7:00 AM to 9:00 AM and 4:00 PM to 6:00 PM on these count dates. Existing turning movement counts are shown in **Figure 4** with count sheets provided in **Appendix A**.



JONES DISTRICT REDEVELOPMENT
EXISTING LANE CONFIGURATIONS AND CONTROL

FIGURE 3

1 48(280) 238(663) 142(194) 129(224) 476(1472) 193(230) 311(114) 1109(532) 135(105) 78(260) 687(519) 211(259) DRY CREEK RD / YOSEMITE ST Tuesday, April 2, 2019 AM 7:15-8:15 PM 4:30-5:30	2 32(71) 124(71) 124(358) 520(100) 768(1604) 960(283) 38(21) 1206(920) 172(56) 35(259) 52(79) 181(1062) DRY CREEK RD / CHESTER ST Tuesday, April 2, 2019 AM 7:30-8:30 PM 4:30-5:30	3 933(426) 2(8) 906(295) 1497(1728) 255(763) 1117(1629) 225(646) DRY CREEK RD / I-25 SB RAMP Thursday, April 4, 2019 AM 7:30-8:30 PM 4:30-5:30	4 274(598) 1254(2080) 252(586) 1780(1376) 523(405) 9(16) 1094(846) DRY CREEK RD / I-25 NB RAMP Thursday, April 4, 2019 AM 7:30-8:30 PM 4:15-5:15	5 498(993) 101(26) 24(171) 14(102) 963(847) 149(20) PANORAMA DR / YOSEMITE ST Tuesday, April 2, 2019 AM 7:30-8:30 PM 4:30-5:30
6 347(57) 423(325) 486(25) 50(567) 3(23) 3(137) 51(274) 17(9) 8(107) 45(13) 167(548) 106(4) PANORAMA CIR / CHESTER ST Tuesday, April 2, 2019 AM 7:30-8:30 PM 4:30-5:30	7 99(26) 289(606) 4(3) 0(6) 0(5) 0(72) 14(82) 8(1) 3(18) 33(4) 354(433) 120(7) MINERAL CIR / CHESTER ST Tuesday, April 2, 2019 AM 7:30-8:30 PM 4:30-5:30	8 56(25) 215(589) 24(88) 42(79) 3(4) 7(7) 20(43) 3(4) 21(127) 88(21) 449(323) 6(18) MINERAL AVE / CHESTER ST Tuesday, April 2, 2019 AM 7:30-8:30 PM 4:30-5:30	9 385(1037) 134(42) 51(192) 34(117) 1071(676) 170(38) MINERAL AVE / YOSEMITE ST Tuesday, April 2, 2019 AM 7:30-8:30 PM 4:30-5:30	10 35(44) 379(1107) 72(16) 81(26) 29(36) 1147(691) WILLOW WAY / YOSEMITE ST Tuesday, April 2, 2019 AM 7:30-8:30 PM 4:30-5:30
11 322(1078) 135(45) 21(200) 9(93) 1165(522) 101(25) NICHOLS AVE / YOSEMITE ST Tuesday, April 2, 2019 AM 7:30-8:30 PM 4:30-5:30	12 52(70) 113(634) 7(19) 3(23) 6(39) 3(77) 24(60) 24(14) 40(89) 51(60) 550(200) 64(1) NICHOLS AVE / CHESTER ST Tuesday, April 2, 2019 AM 7:15-8:15 PM 4:30-5:30	13 289(1090) 133(37) 69(37) 25(83) 1135(530) MINERAL DR / YOSEMITE ST Tuesday, April 2, 2019 AM 7:30-8:30 PM 4:30-5:30	14 84(979) 2(5) 0(7) 4(93) 873(185) 42(49) OTERO AVE / CHESTER ST Tuesday, April 2, 2019 AM 7:30-8:30 PM 4:30-5:30	15 111(205) 472(993) 131(184) 69(199) 465(1314) 128(580) 124(122) 1164(679) 444(569) 460(464) 1137(733) 619(223) COUNTY LINE RD / QUEBEC ST Tuesday, April 2, 2019 AM 7:30-8:30 PM 4:45-5:45
16 113(471) 168(545) 87(139) 99(157) 426(1701) 56(130) 643(174) 1205(730) 83(146) 84(210) 412(327) 30(60) COUNTY LINE RD / YOSEMITE ST Tuesday, April 2, 2019 AM 7:30-8:30 PM 4:45-5:45	17 30(352) 22(278) 42(507) 540(95) 624(1327) 128(347) 225(144) 1120(672) 20(56) 13(111) 189(172) 151(231) COUNTY LINE RD / CHESTER ST Tuesday, April 2, 2019 AM 7:30-8:30 PM 5:00-6:00	18 502(711) 236(574) 719(130) 53(415) 741(1635) 1207(1330) 7(65) 484(652) COUNTY LINE RD / I-25 SB RAMP Thursday, February 1, 2018 AM 7:30-8:30 PM 4:30-5:30	19 175(597) 406(1700) 1835(746) 470(765) 362(303) 383(72) COUNTY LINE RD / I-25 NB RAMP Thursday, February 1, 2018 AM 7:30-8:30 PM 4:30-5:30	



JONES DISTRICT REDEVELOPMENT
EXISTING TRAFFIC VOLUMES

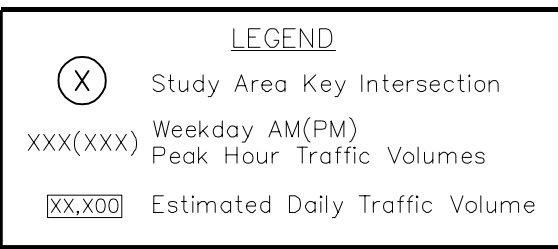
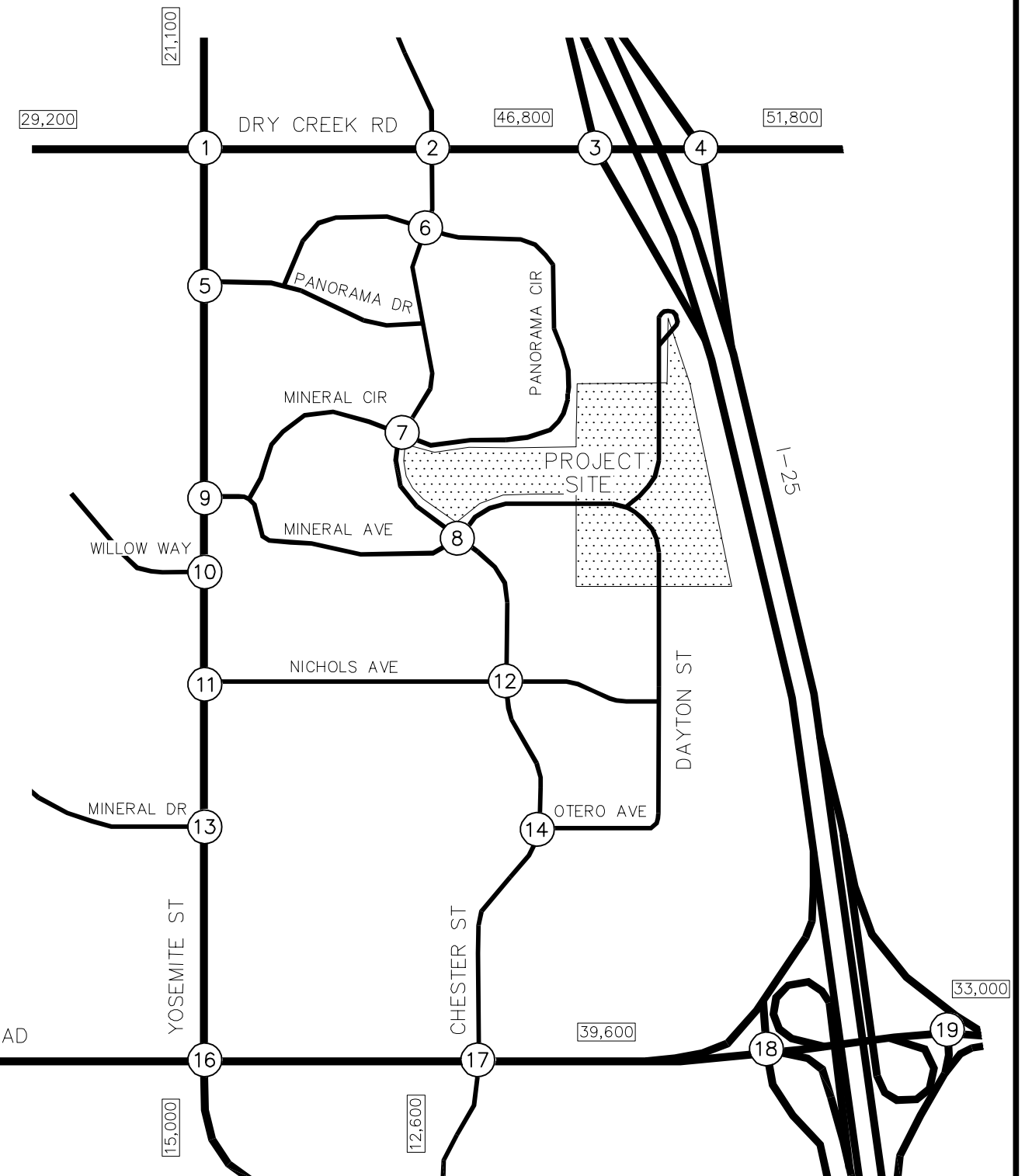
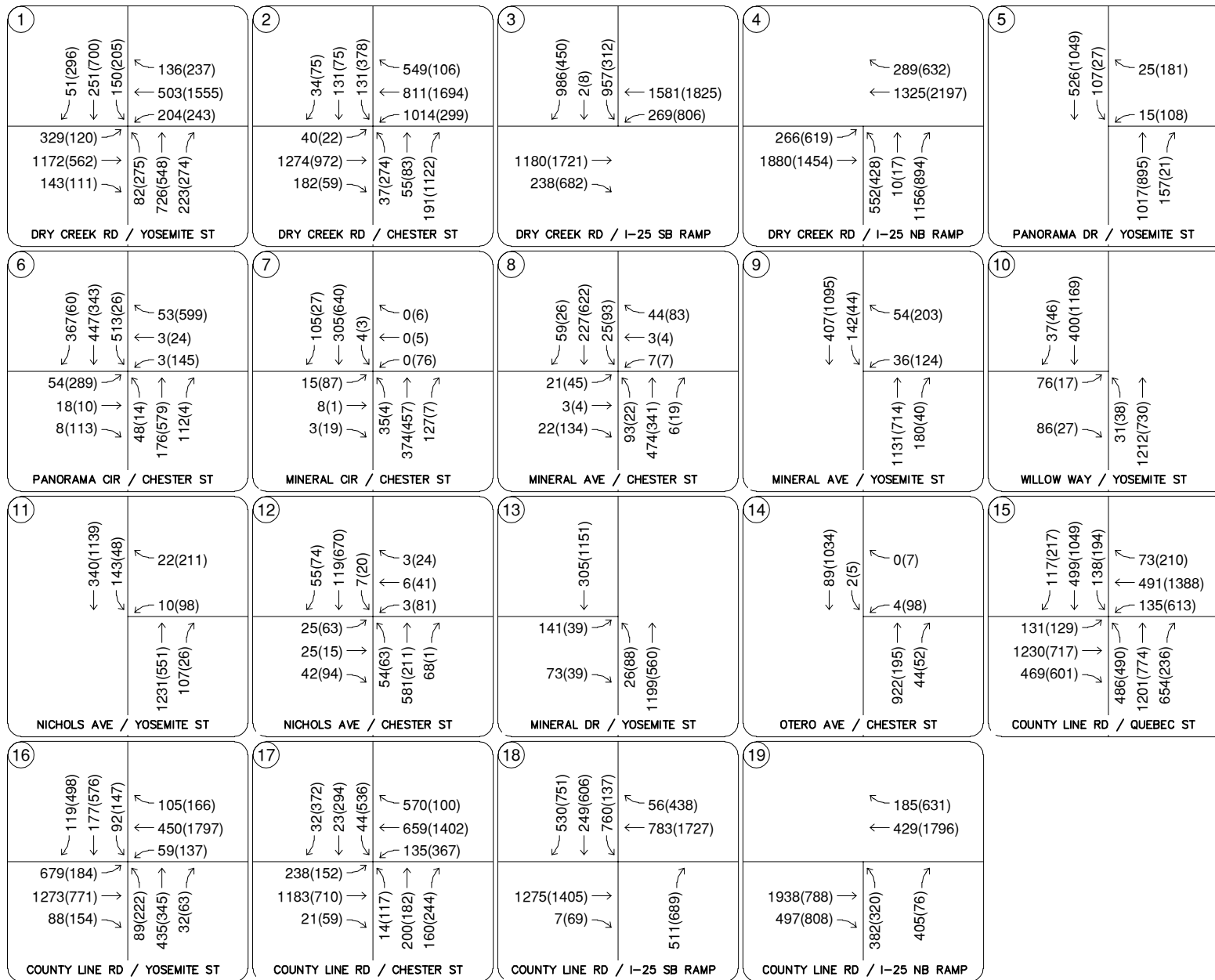
FIGURE 4

3.4 Unspecified Development Traffic Growth and Adjacent Studies

Existing and future projected traffic volumes provided within the Centennial Transportation Master Plan for Dry Creek Road and County Line Road were analyzed. From this data and information, it was determined that these roadways are anticipated to experience an average annual growth rate of approximately 1.2 percent per year within the project limits. Existing average daily traffic volumes and Centennial 2035 Baseline Traffic Forecasts are included in **Appendix B**.

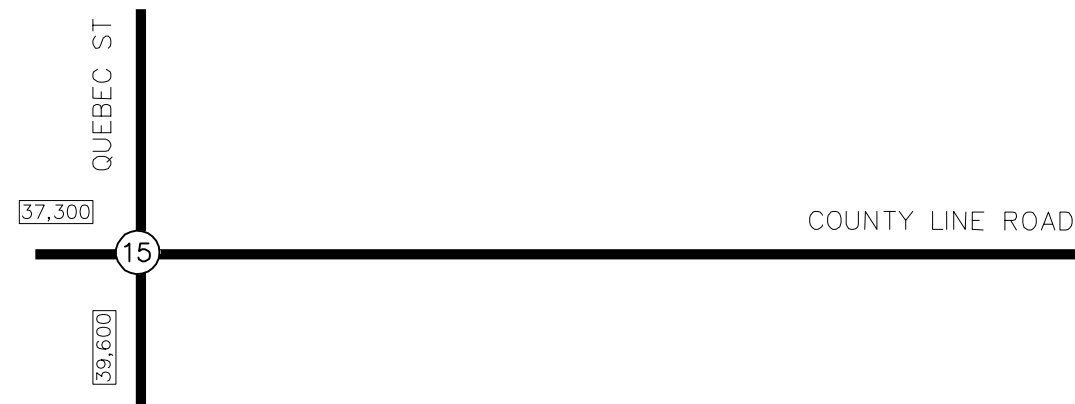
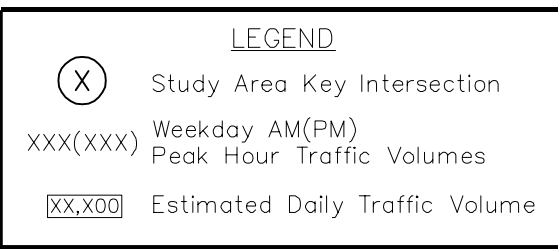
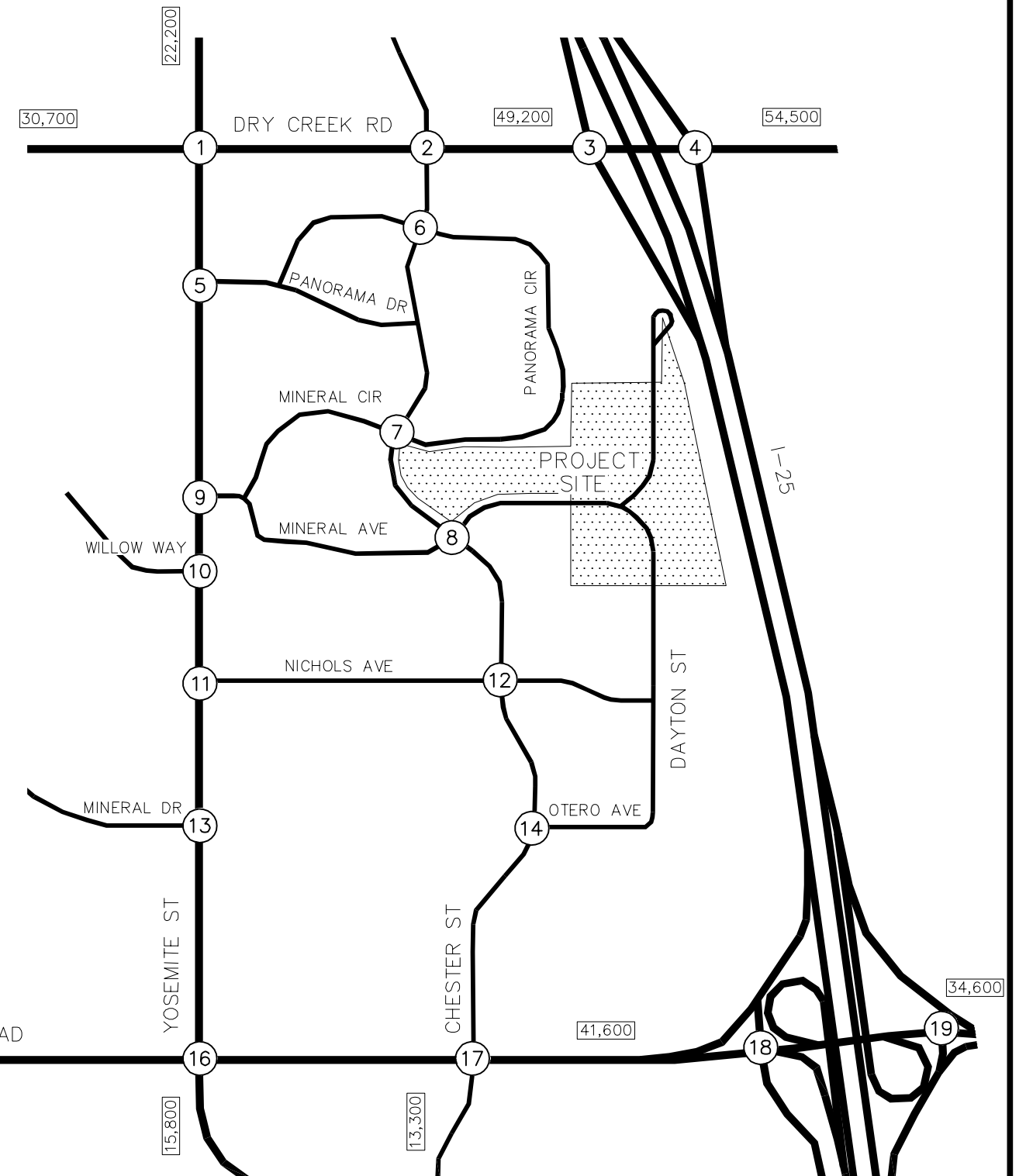
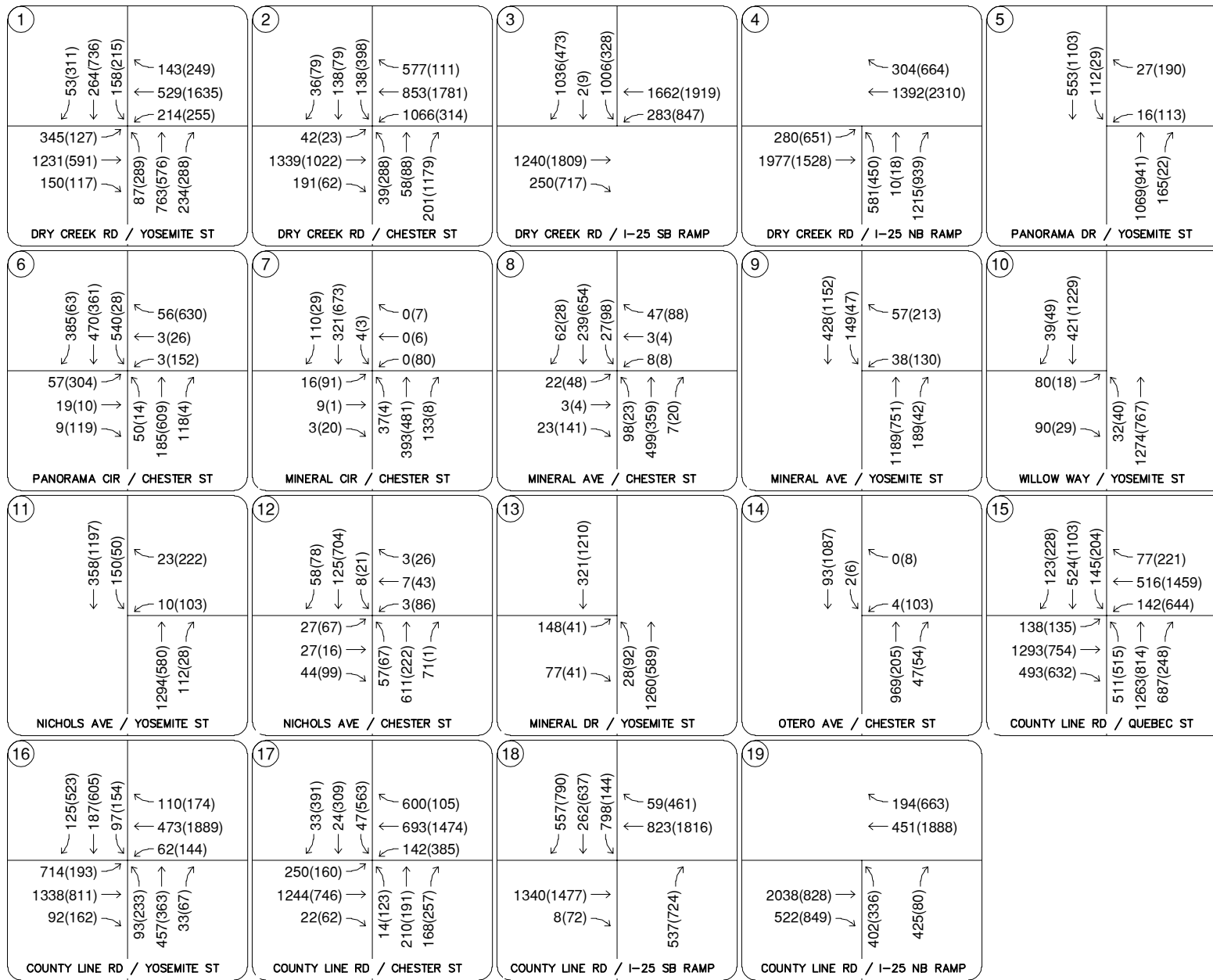
It should be noted that the 1.2 percent annual growth rate already considers the Jones District Redevelopment. The proposed project is expected to generate approximately 0.7 percent of the anticipated 1.2 percent growth per year, on average, along Dry Creek Road and County Line Road. Based on this and the surrounding area being primarily completely built out, an annual growth rate of 0.5 percent per year was applied to the existing traffic volumes at the study area intersections to calculate future traffic volumes. The annual growth rates within the study area were used to estimate short term 2030 and long term 2040 traffic volume projections at the key intersections. In addition to applying the prescribed growth rates, project traffic volumes from the proposed 160,000 square foot office development located directly north of project (on the northeast corner of the Panorama Circle and Chester Street intersection) was included as background traffic volumes. Background traffic volumes for 2030 and 2040 are shown in **Figure 5** and **Figure 6**, respectively.

The findings from the *I-25/Dry Creek Road Interchange and Corridor Study* were utilized for potential improvements in this study. The *Arapahoe County Bicycle-Pedestrian Master Plan* indicates future bike lanes along Chester Street extending within the project limits from Dry Creek Road to County Line Road. Likewise, bike lanes are proposed along Nichols Avenue from Yosemite Street to Chester Street.



JONES DISTRICT REDEVELOPMENT
2030 BACKGROUND TRAFFIC VOLUMES

FIGURE 5



JONES DISTRICT REDEVELOPMENT
2040 BACKGROUND TRAFFIC VOLUMES

FIGURE 6

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 Report average rate and fitted curve equations that apply to Mid-Rise Residential with 1st Floor Retail (ITE Code 231), Hotel (ITE Code 310), General Office Building (ITE Code 710), and Shopping Center (ITE Code 820) for traffic associated with the development. It should be noted that the retail attached to the residential uses was incorporated within Mid-Rise Residential with 1st Floor Retail use and the remaining retail was evaluated as shopping center, as defined by ITE.

With the Jones District Redevelopment project being constructed adjacent to the existing Dry Creek Road RTD commuter rail station, located within the southwest quadrant of the Dry Creek Road and I-25 interchange, it is assumed 20 percent of the development's residents, patrons, and office workers will use the light rail (and alternate modes of transportation). The standard transit-oriented development reduction rate has been found to be approximately 20 to 33 percent for developments within a half-mile distance of a transit station, such as Jones District to the RTD Dry Creek Road Lightrail Station. In fact, the northern areas of the Jones District project are only 400 feet away from the Dry Creek Road RTD Station. The TCRP Report 128 Effects of TOD on Housing, Parking, and Travel has been provided as the source used for determination of applicable reduction rates. To provide a more conservative analysis, a 20 percent TOD reduction has been applied, which is consistent with other studies conducted within the Denver Metro Area for transit-oriented developments. Since the trip generation is calculated for the overall development with the mix of uses, this transit reduction was applied to the overall external trips generated by the project.

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

Since the Jones District Redevelopment 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. These shared trips reduce the number of total external trips and were calculated directly per the ITE procedure.

Jones District Redevelopment is expected to generate approximately 28,556 daily weekday external vehicle trips with 2,640 of these trips occurring during the morning peak hour and 2,859 of these trips occurring during the afternoon peak hour. Calculations were based on the procedure and information provided in the *ITE Trip Generation Handbook, 3^d Edition, 2017*. **Table 1** summarizes the estimated trip generation for the proposed development. Trip generation worksheets are included in **Appendix C**.

Table 1 – Jones District Redevelopment Project Traffic Generation

Land Use and Quantity	Daily	AM Peak Hour			PM Peak Hour		
		In	Out	Total	In	Out	Total
Total Site Generated Trips							
Mid-Rise Residential with 1 st -Floor Retail (ITE 231) – 1,500 Units	5,160	126	324	450	378	162	540
Hotel (ITE 310) – 200 Rooms	1,832	56	39	95	63	61	124
Office (ITE 710) – 3,000,000 Square Feet	28,744	2,448	398	2,846	461	2,420	2,881
Shopping Center (ITE 820) – 75,000 Square Feet	2,832	44	27	71	137	149	286
Total Site Generated Trips	38,568	2,674	788	3,462	1,039	2,792	3,831
Net Trips after TOD Reduction (20%)	30,854	2,139	630	2,770	831	2,234	3,065
Net External Trips after TOD and Internal Capture	28,556	2,074	565	2,640	728	2,131	2,859

4.2 Trip Distribution

Distribution of project traffic on the street system was based on the area street system characteristics, existing traffic patterns, existing and anticipated surrounding development areas, 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

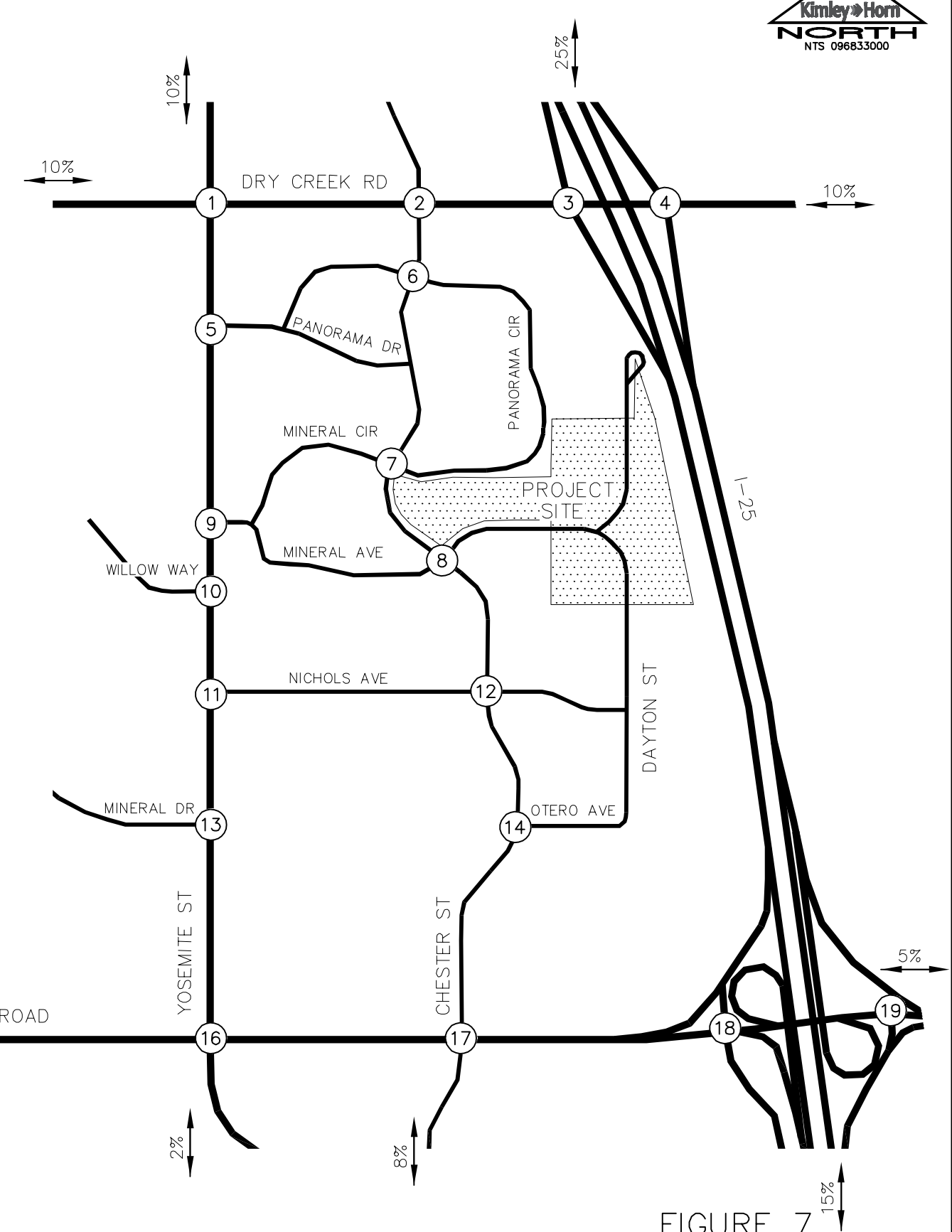
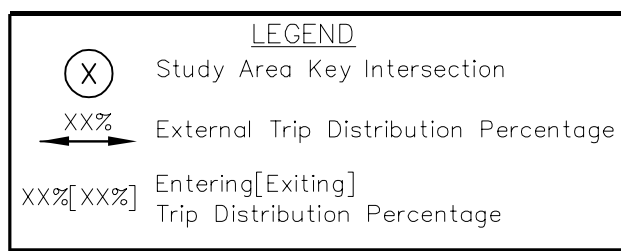
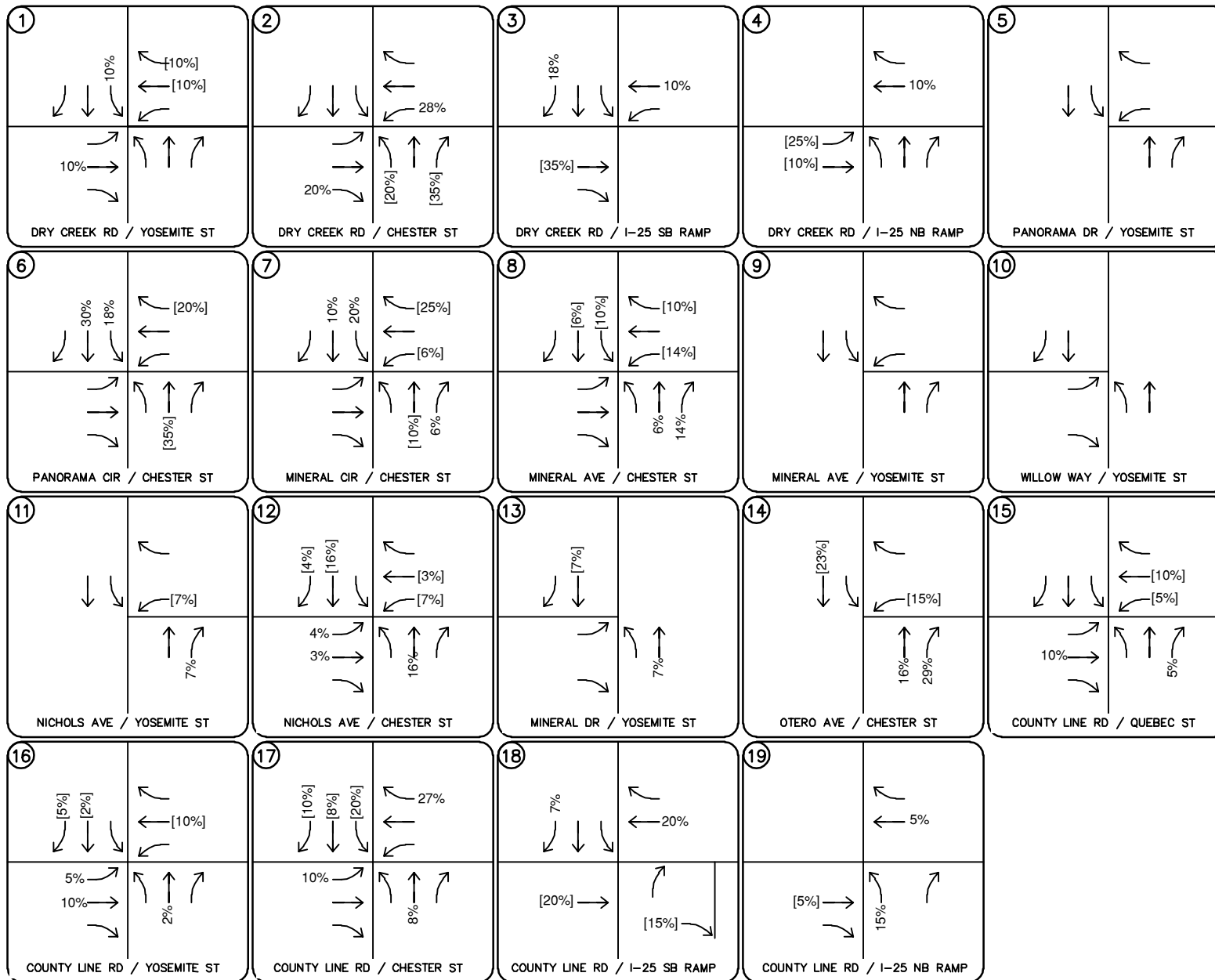
direction and departs the site back to the original source. The project trip distribution for the external street network is illustrated in **Figure 7** while the project trip distribution for the internal street network and parking entries is illustrated in **Figure 8**.

4.3 Traffic Assignment

Traffic assignment was obtained by applying the project trip distribution to the estimated traffic generation of the project shown in **Table 1**. The project traffic assignment for the external street network is illustrated in **Figure 9**. The project traffic assignment for the internal street network is illustrated in **Figure 10**.

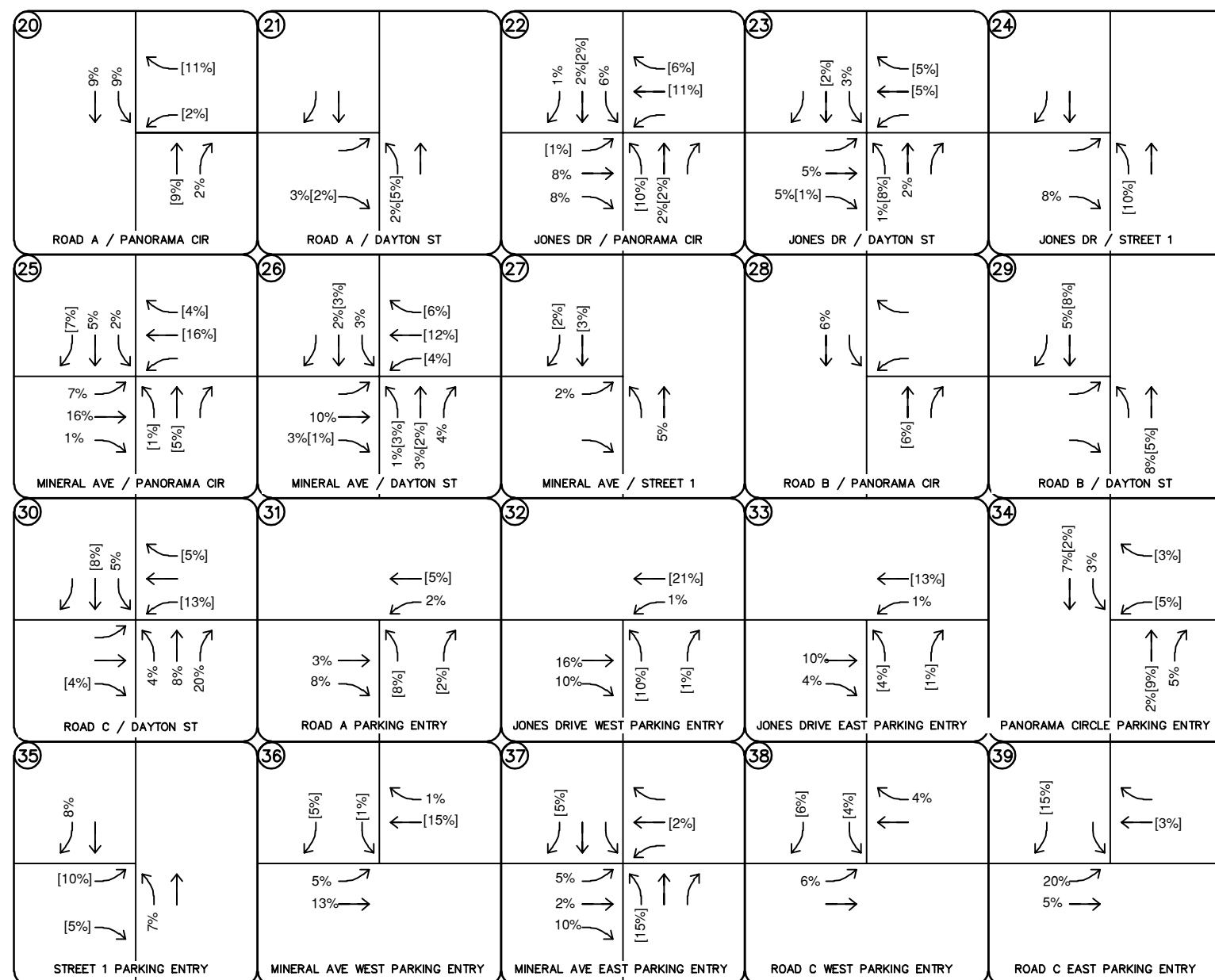
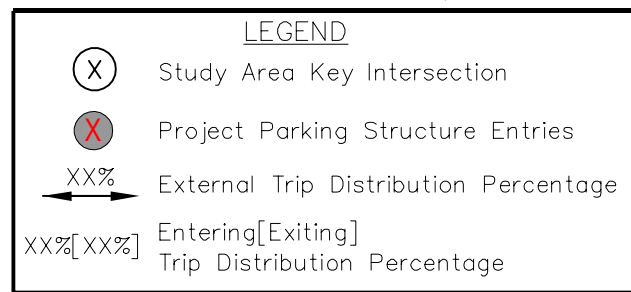
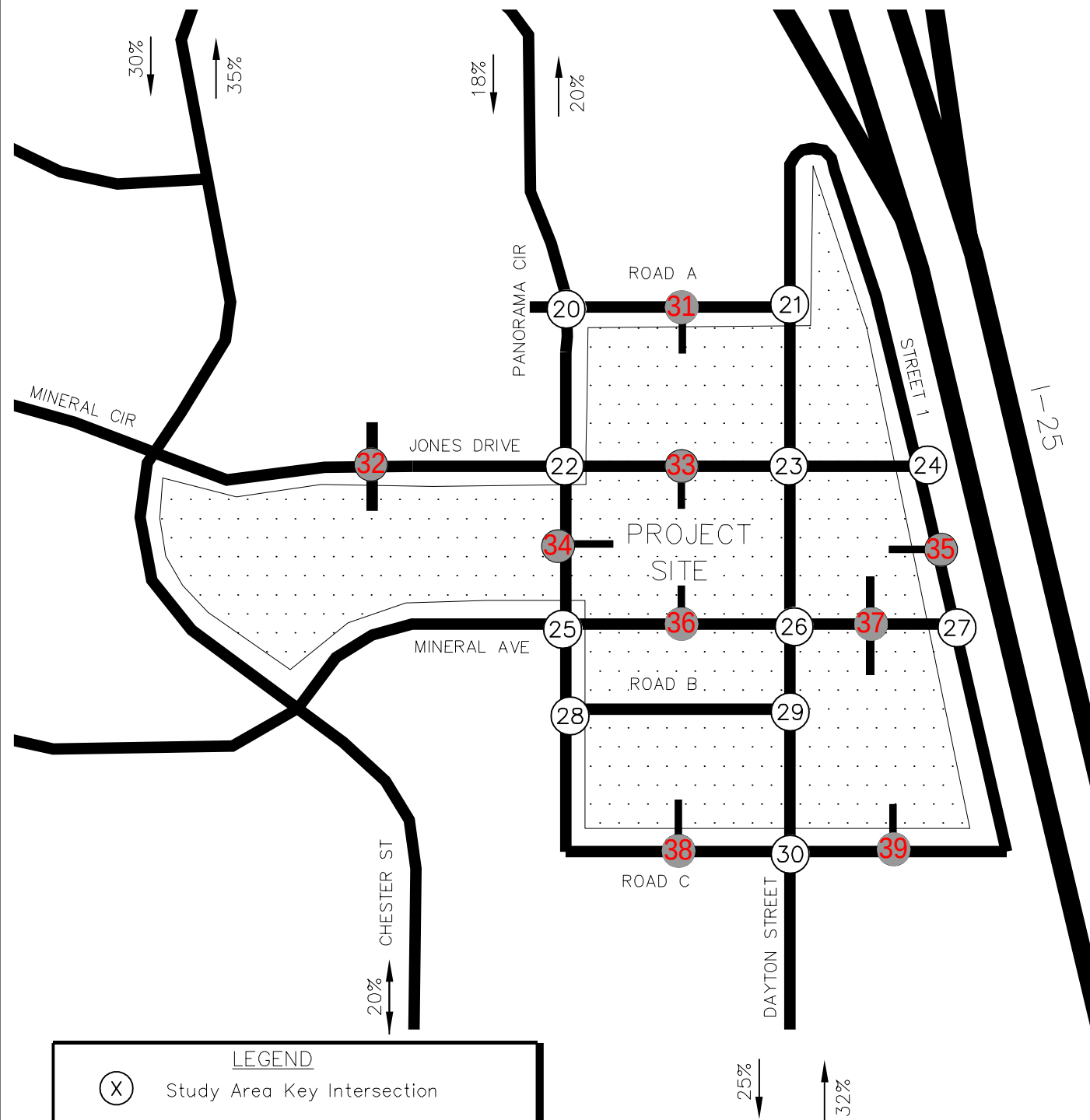
4.4 Total (Background Plus Project) Traffic

Project traffic volumes were added to the background volumes to represent estimated traffic conditions for the short term 2030 and long term 2040 horizons. These total traffic volumes for the external street network are illustrated for year 2030 in **Figure 11**. The 2030 total traffic volumes for the internal street network are shown in **Figure 12**. The 2040 total traffic volumes for the external street network are illustrated in **Figure 13**, while the 2040 total traffic volumes for the internal street network are shown in **Figure 14**.



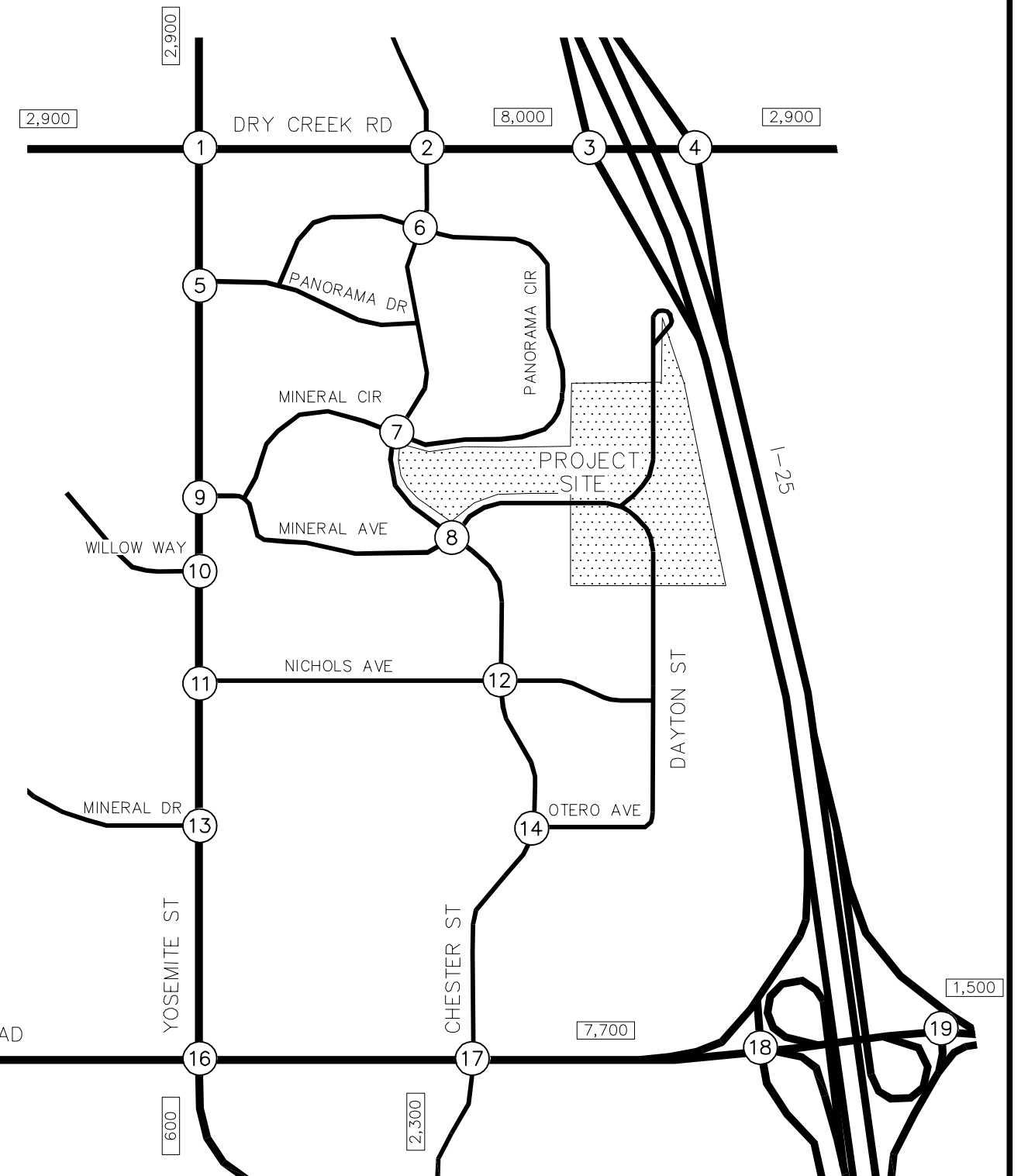
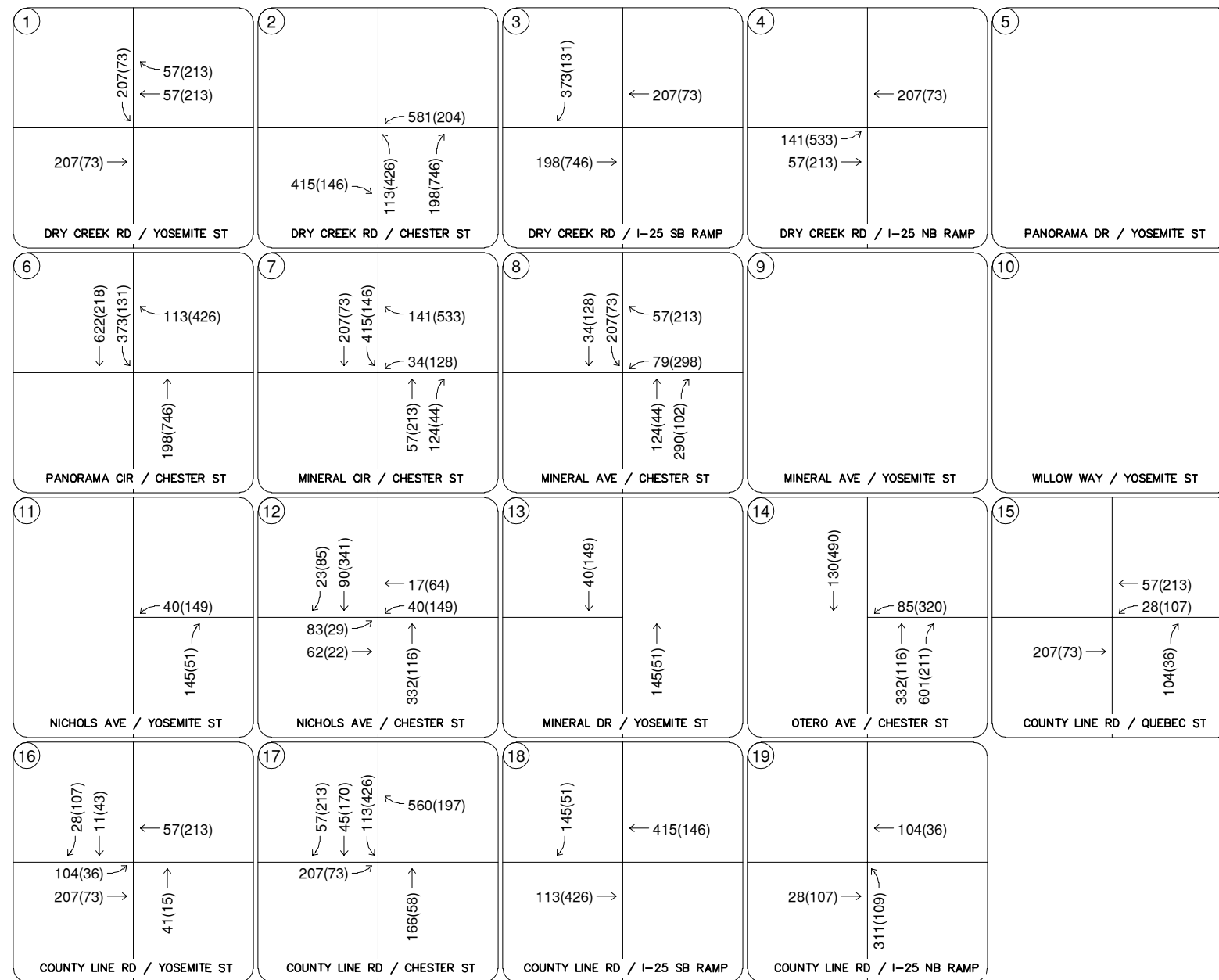
JONES DISTRICT REDEVELOPMENT
PROJECT TRIP DISTRIBUTION – EXTERNAL INTERSECTIONS

FIGURE 7



JONES DISTRICT REDEVELOPMENT
PROJECT TRIP DISTRIBUTION – INTERNAL INTERSECTIONS & GARAGE ENTRIES

FIGURE 8

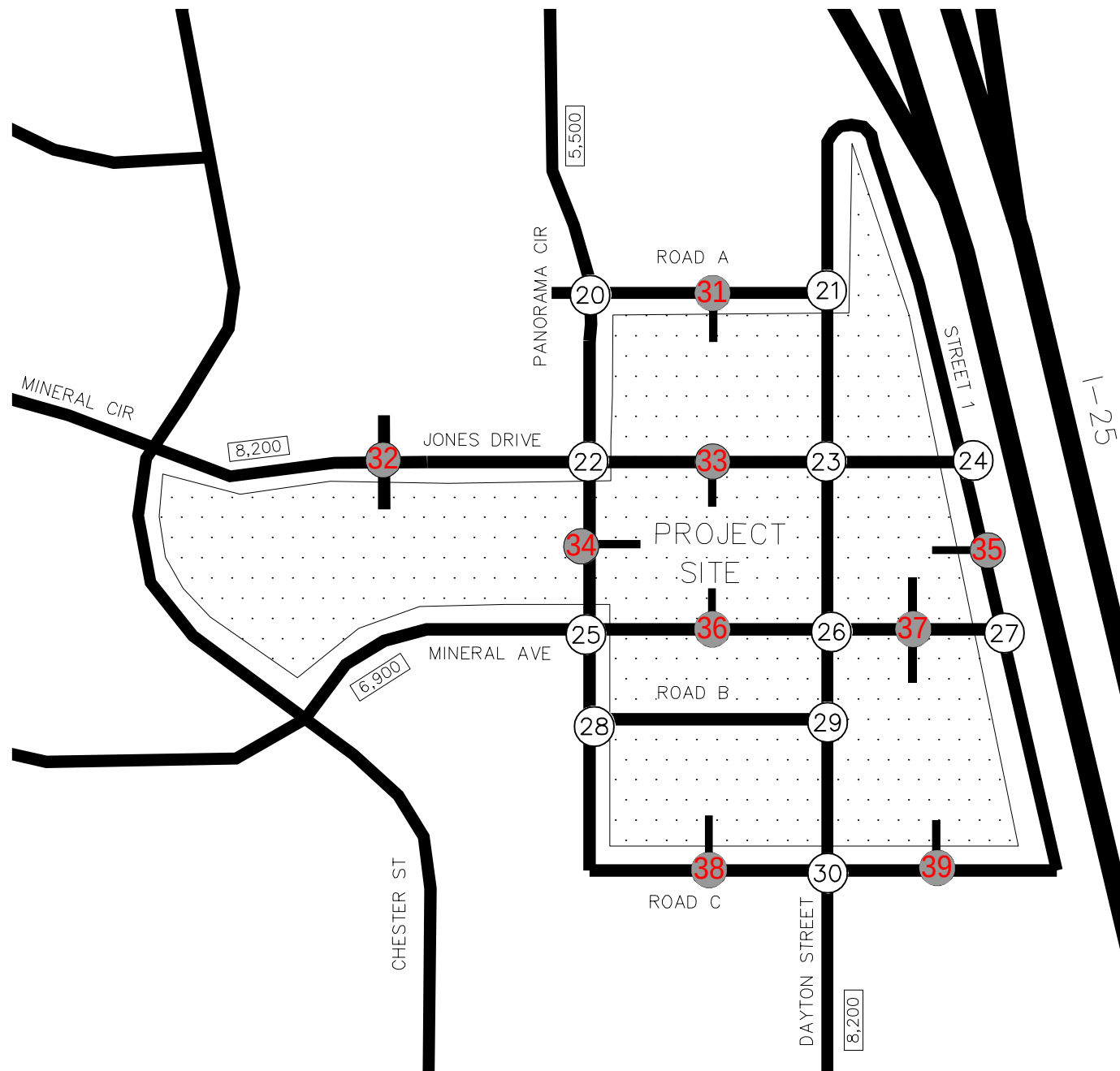


LEGEND

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

JONES DISTRICT REDEVELOPMENT
PROJECT TRAFFIC ASSIGNMENT – EXTERNAL INTERSECTIONS

FIGURE 9

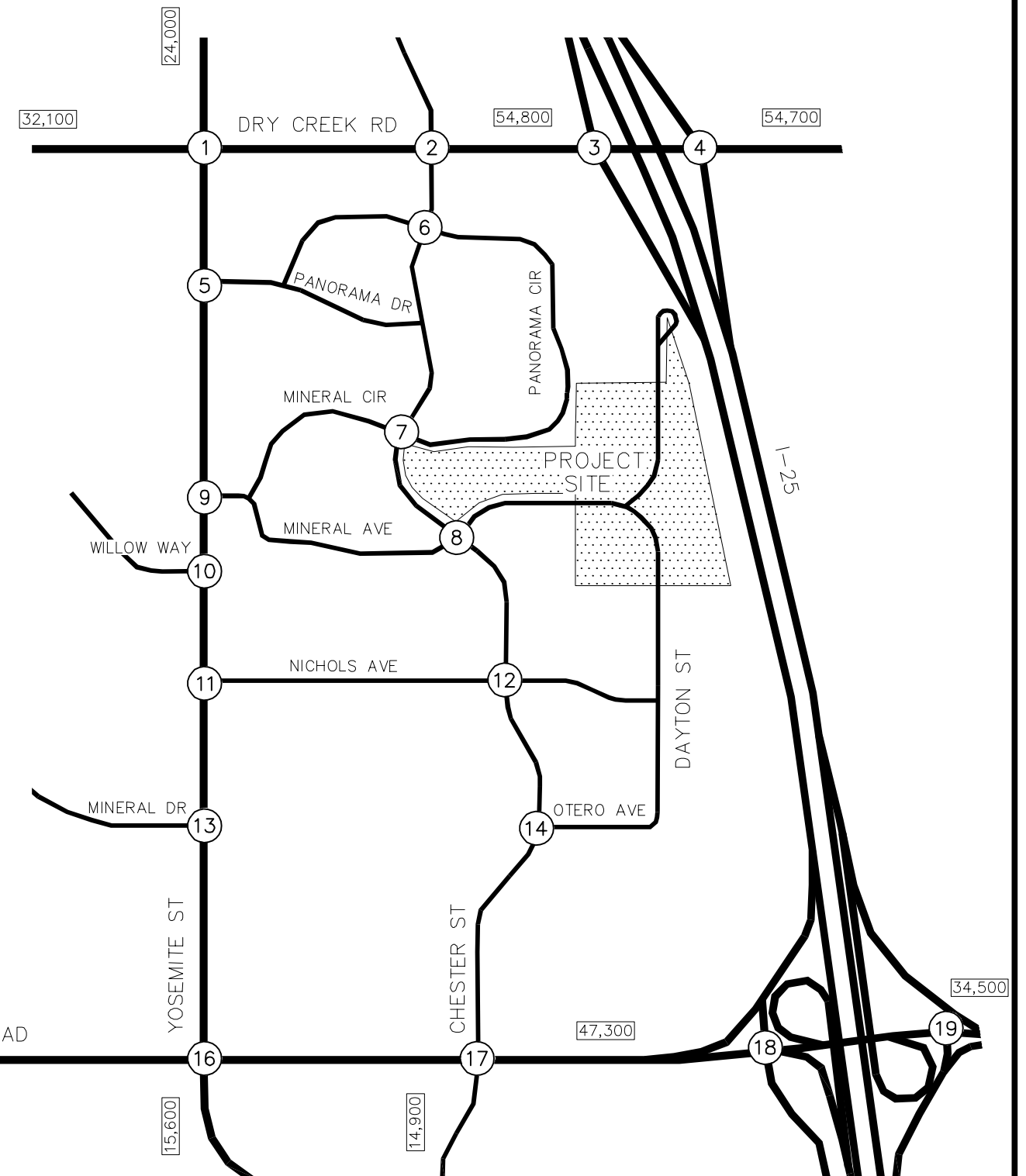
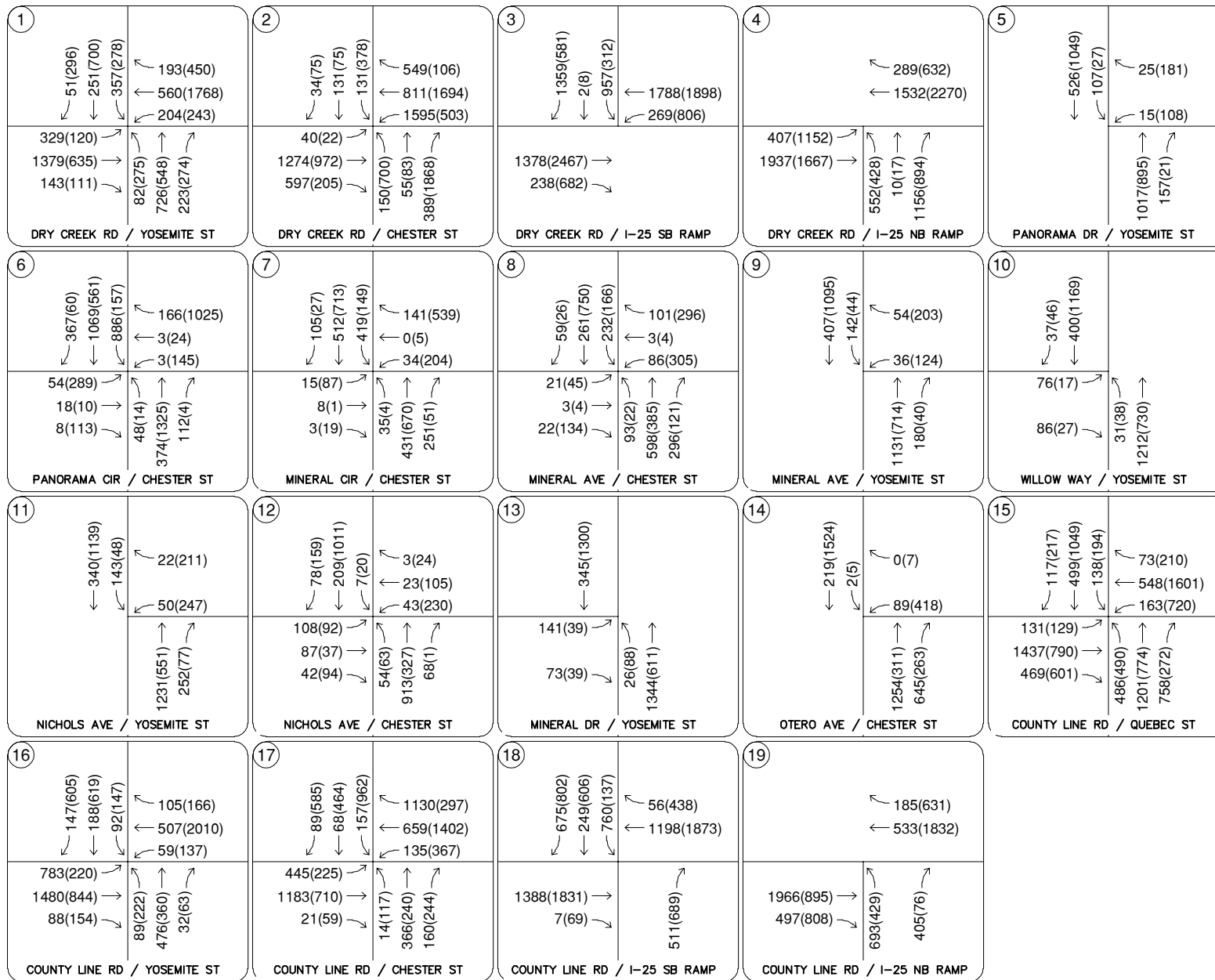


LEGEND	
(X)	Study Area Key Intersection
(X)	Project Parking Structure Entries
XXX(XXX)	Weekday AM(PM) Peak Hour Traffic Volumes
[XX,X00]	Estimated Daily Traffic Volume

20 ← 187(66) → 62(234) ← 11(43) → 51(192) → 41(15) → ROAD A / PANORAMA CIR	21 ← 1(1) → 2(2) 1(1) → 69(122) → 2(2) → 73(65) → ROAD A / DAYTON ST	22 ← 21(7) → 34(128) ← 52(58) → 62(234) ← 124(44) → 5(5) 6(21) → 57(213) → 52(58) → 5(5) → 166(58) → JONES DR / PANORAMA CIR	23 ← 5(5) → 28(107) ← 11(43) → 28(107) ← 62(22) → 2(2) 5(5) → 104(36) → 66(177) → 41(15) → 2(2) → 110(57) → JONES DR / DAYTON ST	24 ← 2(2) → 5(5) 5(5) → 166(58) → 57(213) → 2(2) → JONES DR / STREET 1
25 ← 40(149) → 23(85) ← 104(36) → 85(320) ← 41(15) → 2(2) 145(51) → 6(21) → 28(107) → 2(2) → 311(109) → MINERAL AVE / PANORAMA CIR	26 ← 5(5) → 34(128) ← 52(58) → 68(256) ← 62(22) → 23(85) 5(5) → 38(71) → 73(65) → 83(29) → 207(73) → MINERAL AVE / DAYTON ST	27 ← 11(43) → 17(64) 41(15) → 2(2) → 104(36) → 2(2) → MINERAL AVE / STREET 1	28 ← 124(44) → 2(2) 2(2) → 34(128) → 2(2) → ROAD B / PANORAMA CIR	29 ← 2(2) → 149(206) 2(2) → 2(2) → 194(165) → 2(2) → ROAD B / DAYTON ST
30 ← 2(2) → 28(107) ← 45(170) → 2(2) ← 104(36) → 73(277) 2(2) → 83(29) → 166(58) → 415(146) → 23(85) → ROAD C / DAYTON ST	31 ← 28(107) → 41(15) → 62(22) → 45(170) → 11(43) → 166(58) → ROAD A PARKING ENTRY	32 ← 119(448) → 21(7) → 332(116) → 57(213) → 6(21) → 207(73) → JONES DRIVE WEST PARKING ENTRY	33 ← 73(277) → 21(7) → 207(73) → 23(85) → 6(21) → 83(29) → JONES DRIVE EAST PARKING ENTRY	34 ← 156(94) → 17(64) ← 62(22) → 28(107) 92(207) → 104(36) → PANORAMA CIRCLE PARKING ENTRY
35 ← 166(58) → 5(5) 57(213) → 145(51) → 5(5) → 28(107) → STREET 1 PARKING ENTRY	36 ← 28(107) → 21(7) ← 6(21) → 85(320) 104(36) → 270(95) → MINERAL AVE WEST PARKING ENTRY	37 ← 28(107) → 2(2) ← 41(15) → 11(43) ← 85(320) → 2(2) → 104(36) → MINERAL AVE EAST PARKING ENTRY	38 ← 34(128) → 23(85) ← 83(29) → 2(2) 124(44) → 2(2) → ROAD C WEST PARKING ENTRY	39 ← 85(320) → 2(2) ← 17(64) → 415(146) → 104(36) → ROAD C EAST PARKING ENTRY

JONES DISTRICT REDEVELOPMENT
PROJECT TRAFFIC ASSIGNMENT – INTERNAL INTERSECTIONS & PARKING ENTRIES

FIGURE 10



X

Study Area Key Intersection

xxx(xxx)

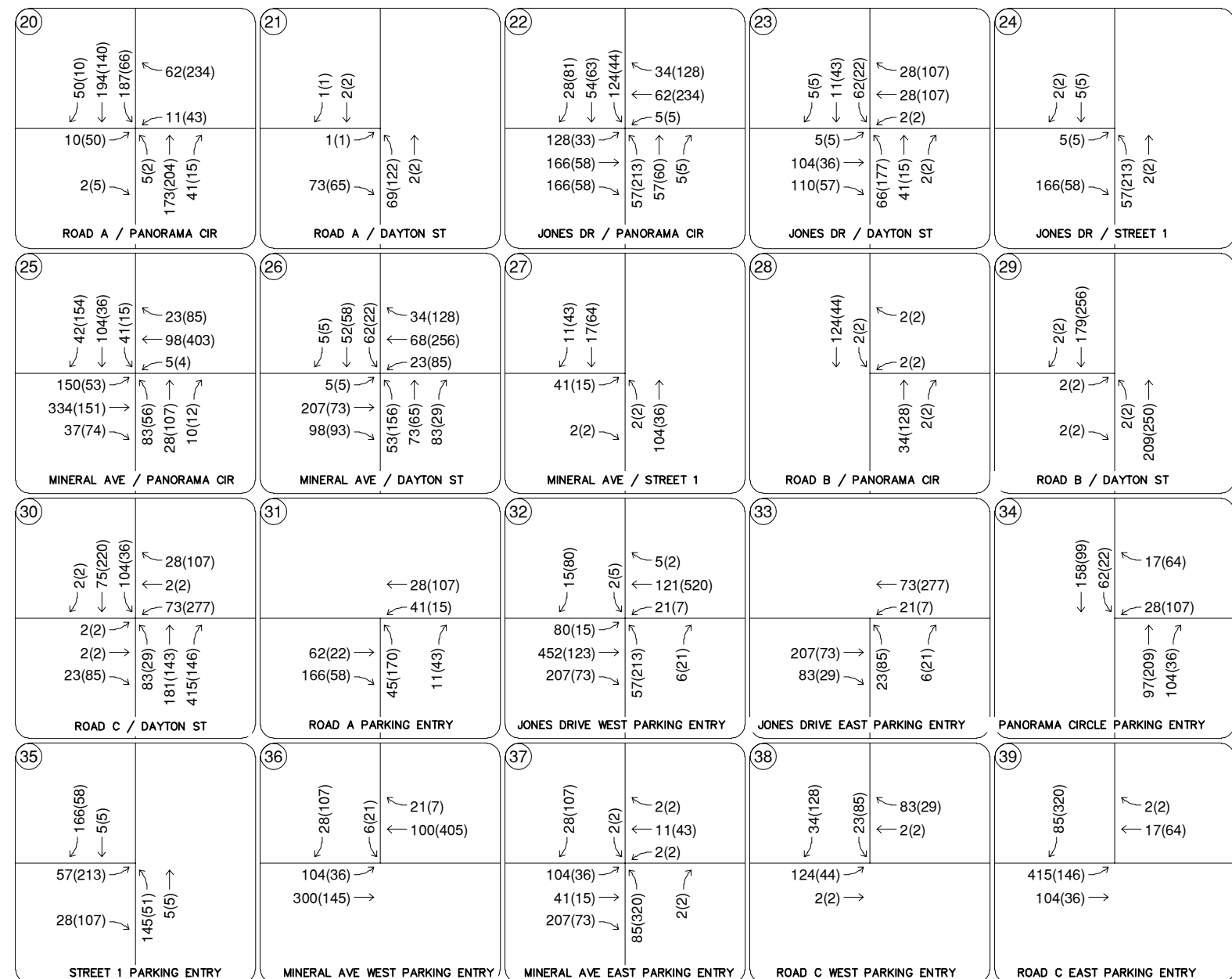
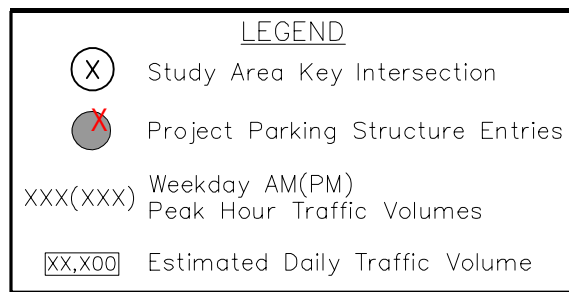
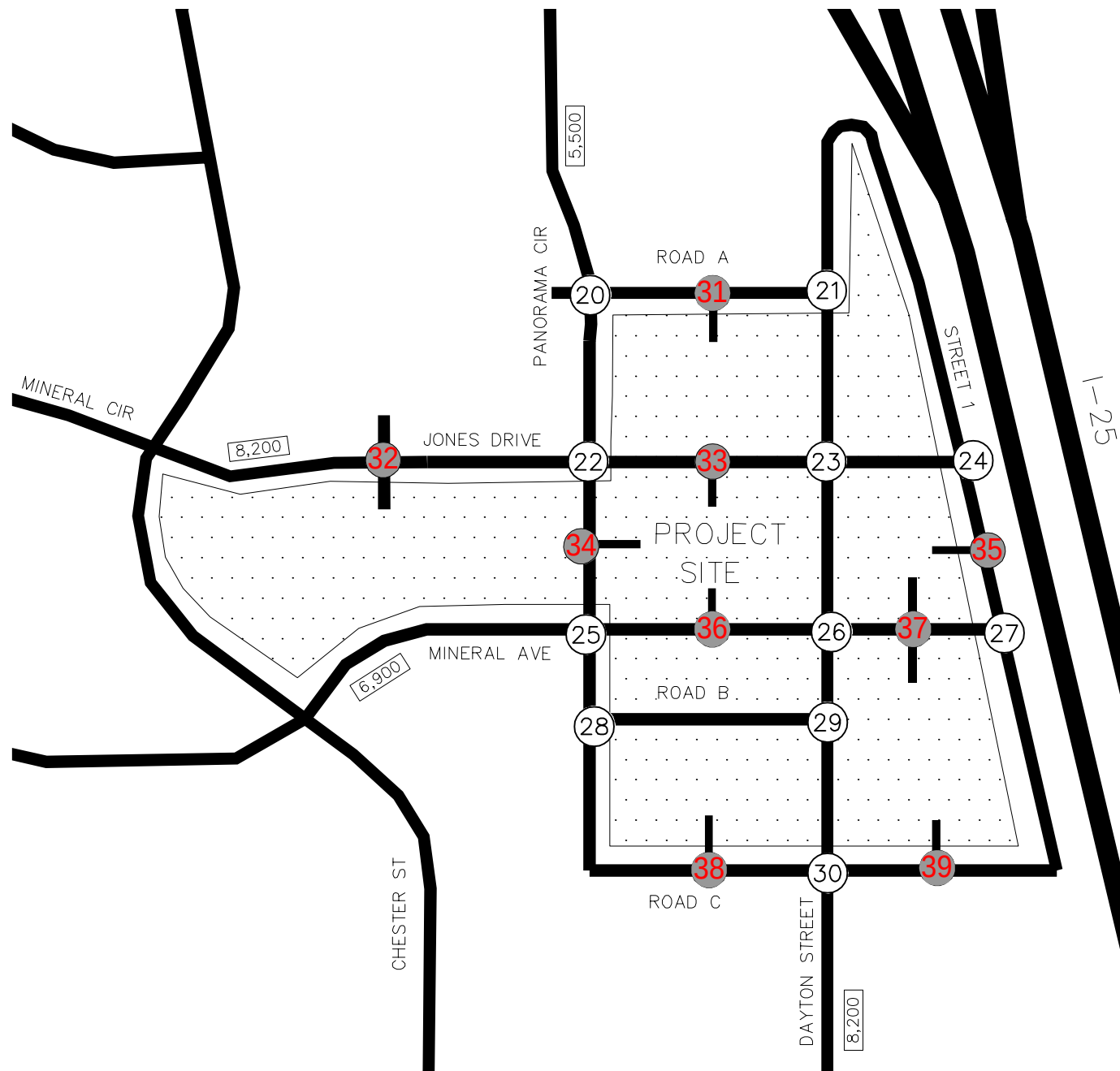
Weekday AM(PM)
Peak Hour Traffic Volumes

xx,x00

Estimated Daily Traffic Volume

JONES DISTRICT REDEVELOPMENT
2030 TOTAL TRAFFIC VOLUMES – EXTERNAL INTERSECTIONS

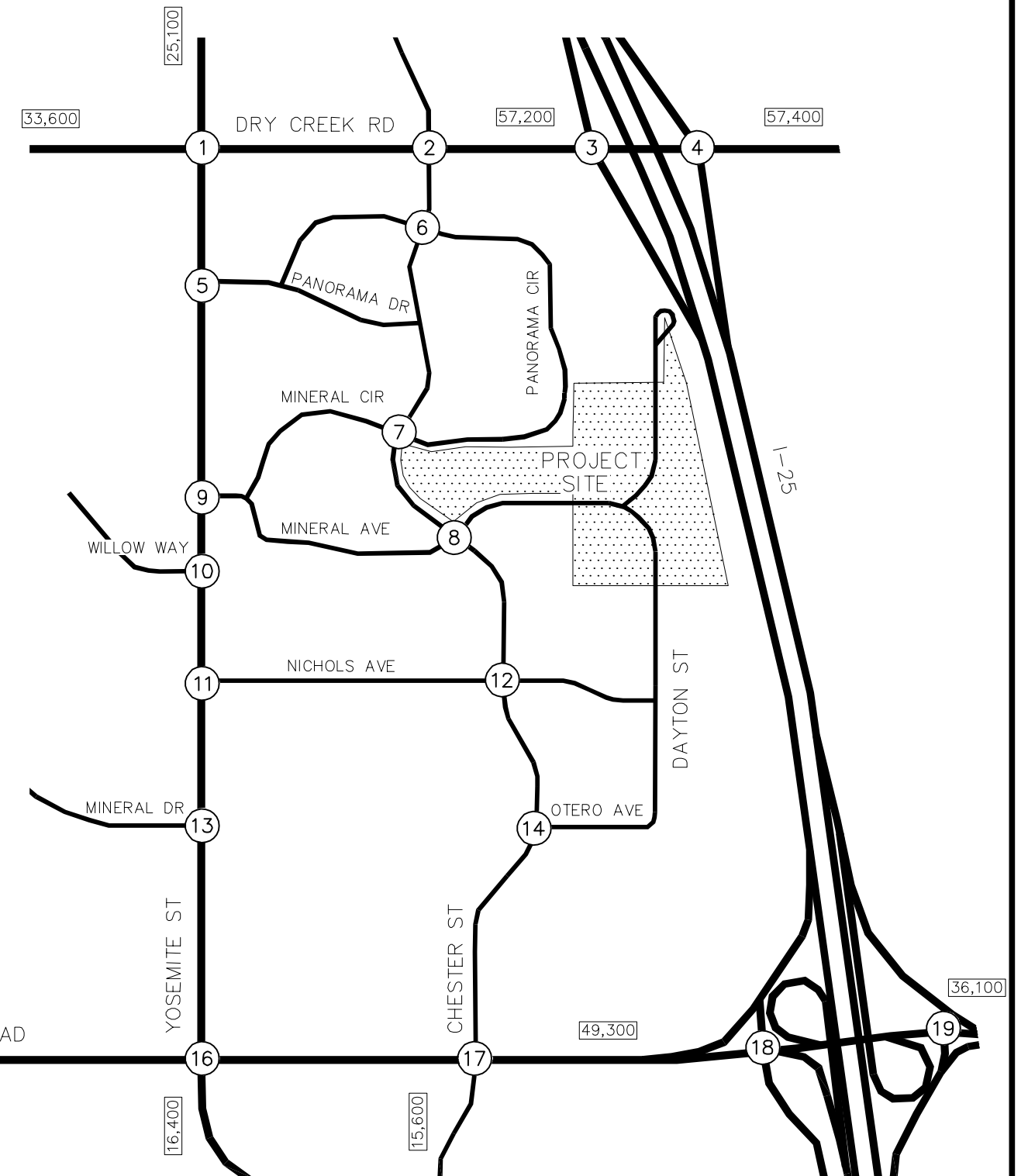
FIGURE 11



JONES DISTRICT REDEVELOPMENT
2030 TOTAL TRAFFIC VOLUMES – INTERNAL INTERSECTIONS & PARKING ENTRIES

FIGURE 12

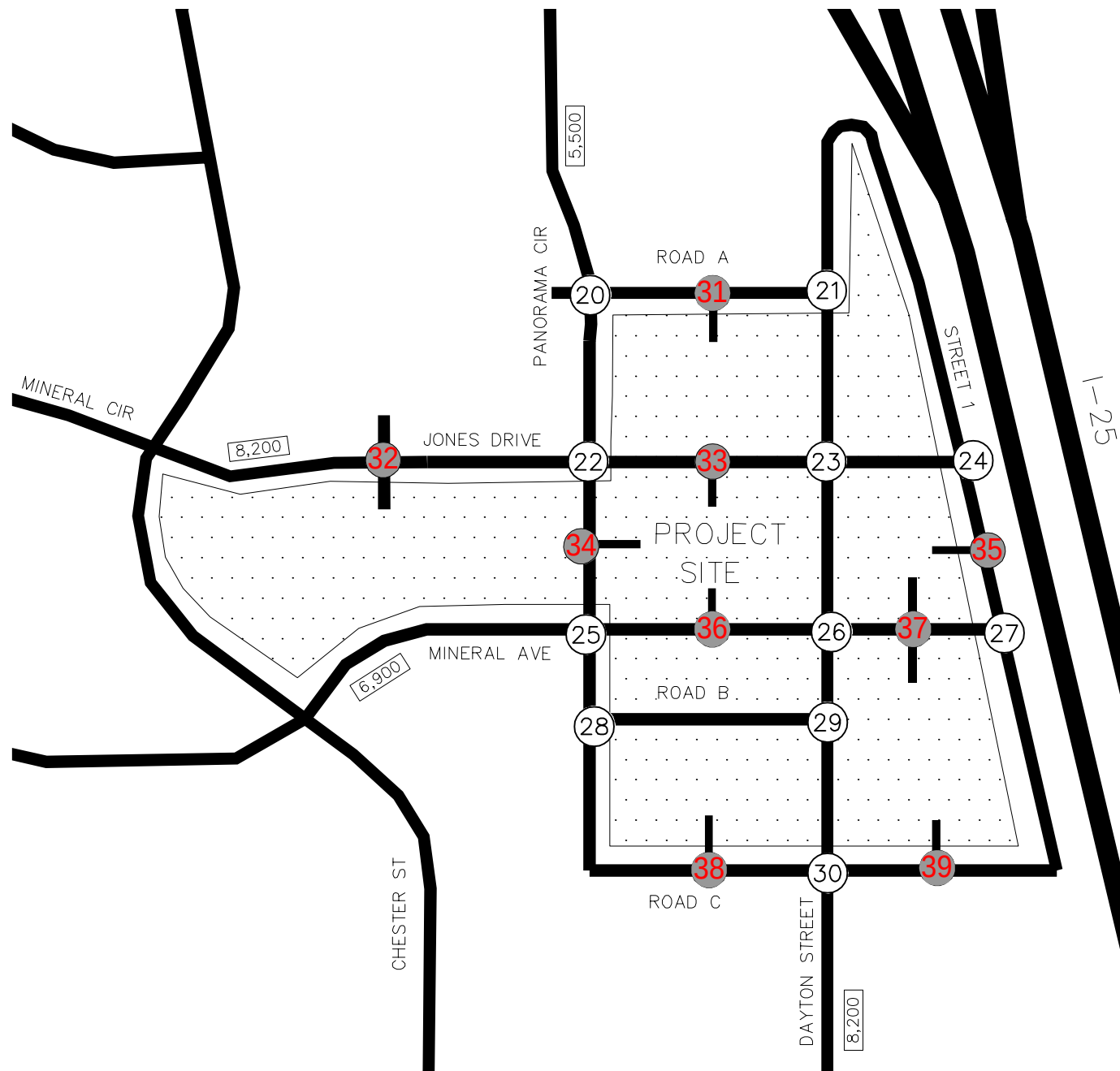
1 53(311) 264(736) 365(288) 200(462) 586(1848) 214(255) 345(127) 1438(664) 150(117) 87(289) 763(576) 234(288) DRY CREEK RD / YOSEMITE ST	2 36(79) 138(79) 138(398) 577(111) 853(1781) 1647(518) 42(23) 1339(1022) 606(208) 152(714) 58(88) 399(1925) DRY CREEK RD / CHESTER ST	3 1409(604) 2(9) 1006(328) 1869(1992) 283(847) 1438(2555) 250(717) DRY CREEK RD / I-25 SB RAMP	4 304(664) 1599(2383) 421(1184) 2034(1741) 581(450) 10(18) 1215(939) DRY CREEK RD / I-25 NB RAMP	5 553(1103) 112(29) 27(190) 16(113) 1069(941) 165(22) PANORAMA DR / YOSEMITE ST
6 385(63) 1092(579) 913(159) 169(1056) 3(26) 3(152) 57(304) 19(10) 9(119) 50(14) 383(1355) 118(4) PANORAMA CIR / CHESTER ST	7 110(29) 528(746) 419(149) 141(540) 0(6) 34(208) 16(91) 9(1) 3(20) 37(4) 450(694) 257(52) MINERAL CIR / CHESTER ST	8 62(28) 273(782) 234(171) 104(301) 3(4) 87(306) 22(48) 3(4) 23(141) 98(23) 623(403) 297(122) MINERAL AVE / CHESTER ST	9 428(1152) 149(47) 57(213) 38(130) 1189(751) 189(42) MINERAL AVE / YOSEMITE ST	10 39(49) 421(1229) 80(18) 90(29) 32(40) 1274(767) WILLOW WAY / YOSEMITE ST
11 358(1197) 150(50) 23(222) 50(252) 1294(580) 257(79) NICHOLS AVE / YOSEMITE ST	12 81(163) 215(1045) 8(21) 3(26) 24(107) 43(235) 110(96) 89(38) 44(99) 57(67) 943(338) 71(1) NICHOLS AVE / CHESTER ST	13 361(1359) 148(41) 77(41) 28(92) 1405(640) MINERAL DR / YOSEMITE ST	14 223(1577) 2(6) 0(8) 89(423) 1301(321) 648(265) OTERO AVE / CHESTER ST	15 123(228) 524(1103) 145(204) 77(221) 573(1672) 170(751) 138(135) 1500(827) 493(632) 511(515) 1263(814) 791(284) COUNTY LINE RD / QUEBEC ST
16 153(630) 198(648) 97(154) 110(174) 530(2102) 62(144) 818(229) 1545(884) 92(162) 93(233) 498(378) 33(67) COUNTY LINE RD / YOSEMITE ST	17 90(604) 69(479) 160(989) 1160(302) 693(1474) 142(385) 457(233) 1244(746) 22(62) 14(123) 376(249) 168(257) COUNTY LINE RD / CHESTER ST	18 702(841) 262(637) 798(144) 59(461) 1238(1962) 1453(1903) 8(72) 537(724) COUNTY LINE RD / I-25 SB RAMP	19 194(663) 555(1924) 2066(935) 522(849) 713(445) 425(80) COUNTY LINE RD / I-25 NB RAMP	



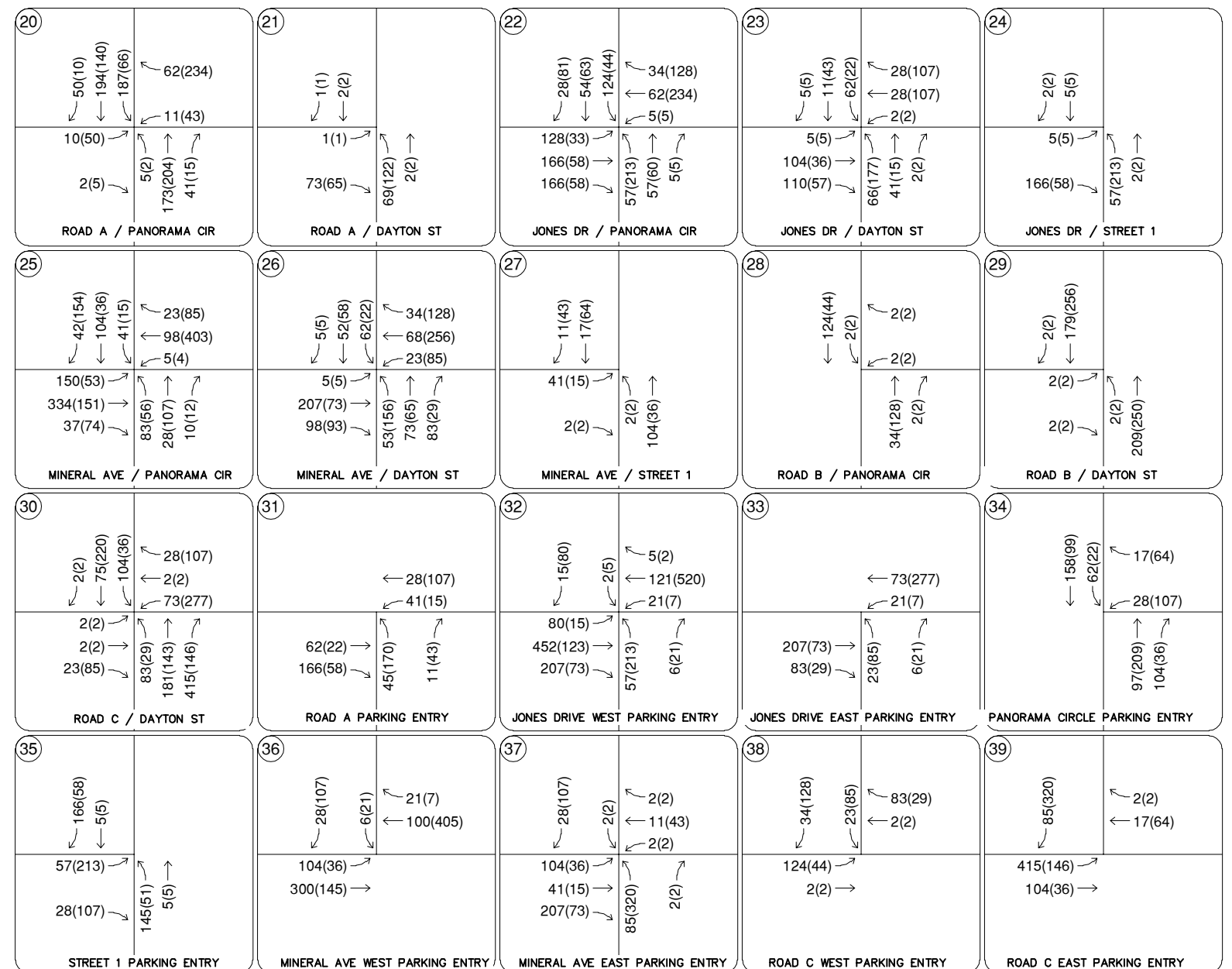
LEGEND	
(X)	Study Area Key Intersection
xxx(xxx)	Weekday AM(PM) Peak Hour Traffic Volumes
[xx,x00]	Estimated Daily Traffic Volume

JONES DISTRICT REDEVELOPMENT
2040 TOTAL TRAFFIC VOLUMES – EXTERNAL INTERSECTIONS

FIGURE 13



LEGEND	
(X)	Study Area Key Intersection
(X)	Project Parking Structure Entries
xxx(xxx)	Weekday AM(PM) Peak Hour Traffic Volumes
xx,x00	Estimated Daily Traffic Volume



JONES DISTRICT REDEVELOPMENT
2040 TOTAL TRAFFIC VOLUMES – INTERNAL INTERSECTIONS & PARKING ENTRIES

FIGURE 14

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 2030 and 2040 development horizons at the identified key intersection and access driveways. The acknowledged source for determining overall capacity is the current 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). For intersections and roadways in this study area, typical standard traffic engineering procedure recommends overall intersection LOS D and movement/approach LOS E as the minimum threshold for acceptable operations. **Table 2** shows the definition of level of service for signalized and unsignalized intersections.

Table 2 – 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.

Study area intersections were analyzed based on average total delay analysis for signalized and unsignalized intersections. Under the unsignalized analysis, the level of service (LOS) for a two-way stop-controlled intersection is determined by the computed or measured control delay and is defined for each minor movement. Level of service for a two-way stop-controlled intersection is not defined for the intersection as a whole. Level of service for a signalized and all-way stop controlled intersection is defined for each approach and for the intersection.

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

5.2 Key Intersection Operational Analysis

Calculations for the level of service at the key intersections and project access driveways for the study area are provided in **Appendix D**. The existing year analysis is based on the lane geometry and intersection control shown in **Figure 3**. The signalized intersections utilized the observed cycle lengths. Synchro traffic analysis software was used to analyze the study area intersections and access drives. The Synchro Highway Capacity Manual (HCM) methodology reports were used to analyze intersection delay and level of service.

Dry Creek Road and Yosemite Street (#1)

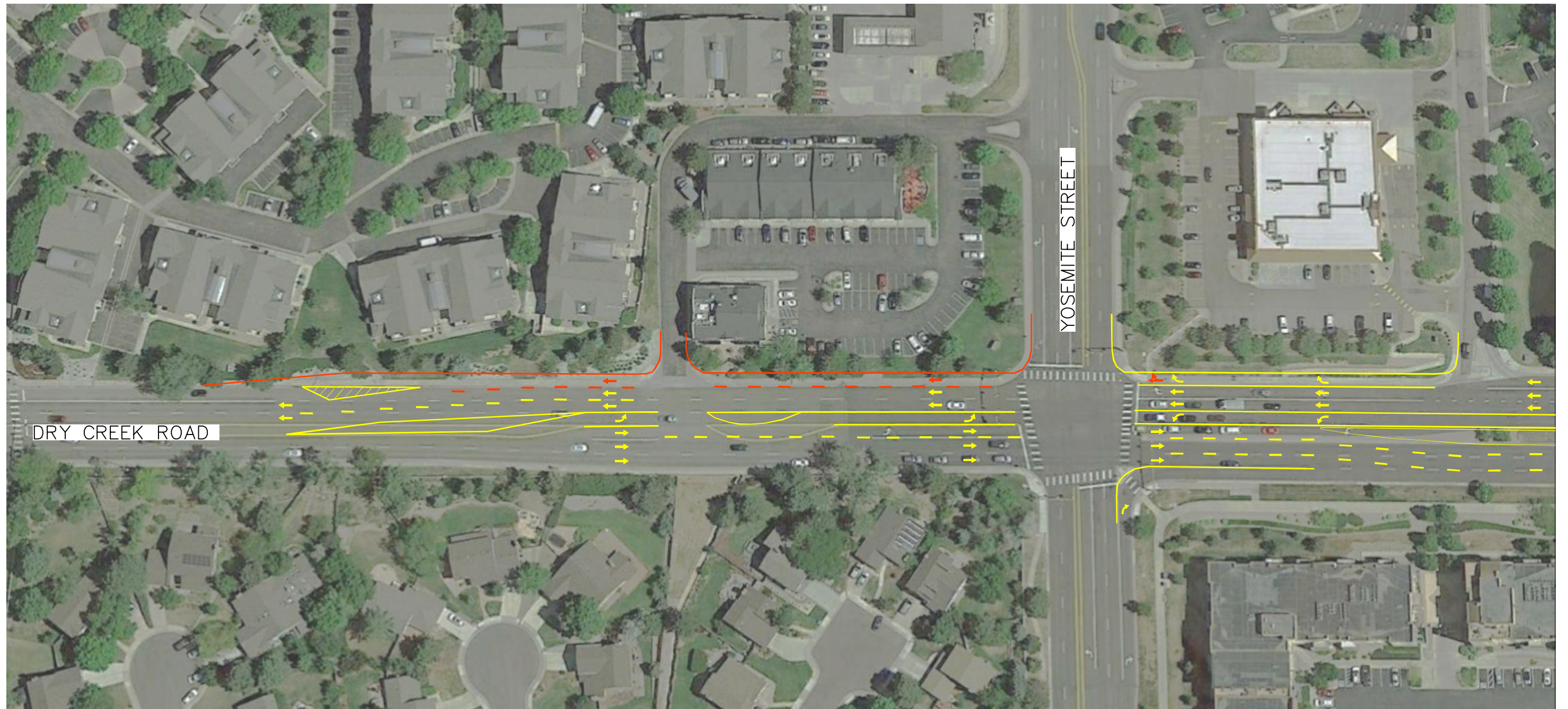
The Dry Creek Road and Yosemite Street intersection is signalized with protected-permitted left turn phasing on all four approaches. With this control and the existing configuration, the intersection currently operates acceptably with a LOS D during the morning and afternoon peak hours. With the addition of project traffic and the existing lane configurations, this intersection may operate unacceptably with a LOS E during the morning peak hour in the 2030 project buildout year. It is recommended that the eastbound approach of this intersection be reconstructed to include three through lanes with the outside lane being a shared through/right turn lane. With this improvement, this intersection is expected to operate acceptably at LOS D during the peak hours in 2030. It is important to recognize that instead of this improvement, the *I-25/Dry Creek Road Interchange and Corridor Study (Corridor Study)* instead recommends dual left turn lanes on all approaches. The left turn lane volumes are not greater than 300 vehicles per hour (with exception of the eastbound left turn during the morning peak hour at 329 vph) and they would need to operate protected only. So, this would only cause a small improvement to the intersection. By the year 2040, it is recommended that the westbound approach also be reconstructed to include three through lanes with the outside lane being a shared through/right turn lane. Three westbound through lanes were recommended from the *Corridor Study*, but a separate westbound right turn lane was also recommended. This separate right turn lane isn't needed if three eastbound through lanes are provided. With this improvement, this intersection is expected to operate acceptably with LOS D during the peak hours in 2040. A detailed improvement exhibit is provided in **Figure 15** which shows how these improvements can be implemented given the geometric constraints at the intersection. **Table 3** provides the results of the level of service analysis for this intersection.

Table 3 – Dry Creek Road and Yosemite Street (#1) LOS Results

Scenario	AM Peak Hour		PM Peak Hour	
	Delay (sec)	LOS	Delay (sec)	LOS
2019 Existing	45.0	D	46.8	D
2030 Background	46.4	D	47.2	D
2030 Background Plus Project	73.5	E	51.8	D
2030 Background Plus Project #	47.0	D	52.2	D
2040 Background	47.4	D	53.4	D
2040 Background Plus Project ##	52.3	D	54.2	D

= EB Three Through Lanes with Outside Lane Being Shared Through/Right Turn Lane

= WB Three Through Lanes with Outside Lane Being Shared Through/Right Turn Lane



JONES DISTRICT REDEVELOPMENT
DRY CREEK ROAD & YOSEMITE STREET
RECOMMENDED IMPROVEMENTS

LEGEND	
---	2030 Recommended Improvements
---	2040 Recommended Improvements

FIGURE 15

Dry Creek Road and Chester Street (#2)

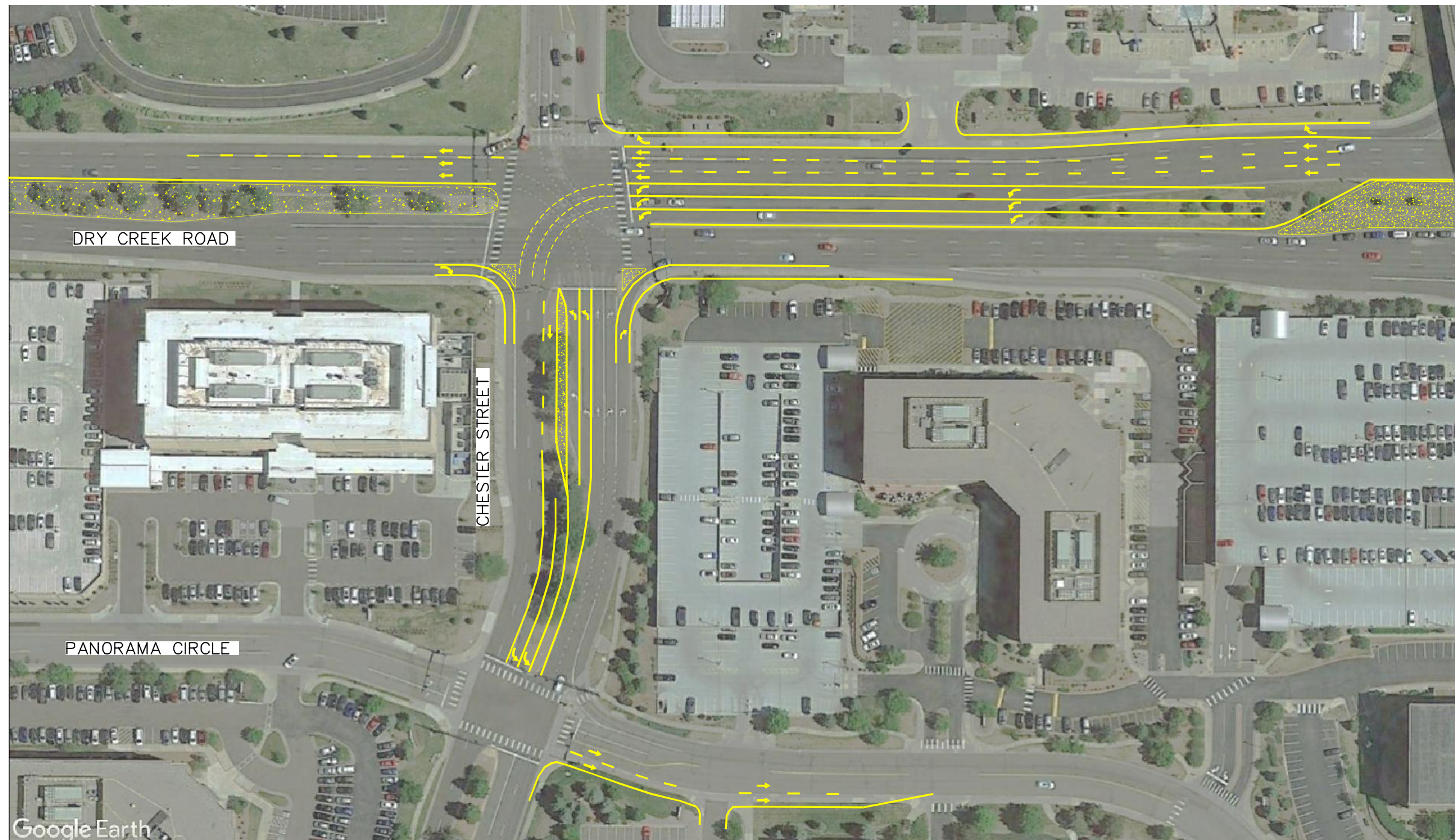
The Dry Creek Road and Chester Street intersection is signalized with protected-permitted left turn phasing on the northbound, southbound, and eastbound approaches and with protected-only left turn phasing on the westbound approach. This intersection currently operates acceptably with LOS C during the morning peak hour and LOS D during the afternoon peak hour. With the addition of project traffic and the existing lane configurations, this intersection is expected to experience long delays and unacceptable level of service during the peak hours in 2030. It is recommended that the eastbound and northbound approaches provide channelized free right turn movements while the westbound approach incorporates triple left turn lanes. As a result, four receiving lanes will be required on the south leg of this intersection with three being for the triple left turn lanes and one for the channelized free right lane. It is recommended that the existing raised median on the south leg of this intersection be modified to provide enough pavement width for an additional southbound lane to become a forced southbound left turn lane at the Panorama Circle and Chester Street intersection. Two eastbound receiving lanes are needed along Panorama Circle at this location as well. A detailed improvement exhibit is shown in **Figure 16** which shows the recommended lane configuration at this intersection.

Of note, the free eastbound right turn exists today, so improvements would be to just better define it. Also, the northbound right turn lane is identified in the *Corridor Study*. The *Corridor Study* also identifies southbound triple left turn lanes and pedestrian bridges, that if implemented, would further improve the intersection. Lastly, a three-quarter access with a left turn into the LRT parking access is also being explored to the east of this intersection. It is likely not feasible to implement a westbound left turn lane along Dry Creek Road for access to the RTD Dry Creek Station due to westbound triple left turn lanes being recommended with 600 feet of storage per lane at the intersection of Dry Creek Road and Chester Street. It is believed that the reduction of westbound to eastbound U-turns at the Dry Creek Road and Chester Street intersection due to the possible implementation of this left turn lane into the RTD Dry Creek Station will not be substantial enough while still providing adequate westbound left turn storage at the intersection of Dry Creek Road and Chester Street. It is recommended that these two intersections be studied further in the future to determine feasibility of a left turn lane along Dry Creek Road for access to the RTD Dry Creek Station. With the recommended intersection lane configuration and control, this intersection is anticipated to operate acceptably throughout the 2040 horizon. **Table 4** provides the results of the level of service analysis for this intersection.

Table 4 – Dry Creek Road and Chester Street (#2) LOS Results

Scenario	AM Peak Hour		PM Peak Hour	
	Delay (sec)	LOS	Delay (sec)	LOS
2019 Existing	27.0	C	41.3	D
2030 Background	27.4	C	42.8	D
2030 Background Plus Project	94.9	F	65.4	E
2030 Background Plus Project #	47.5	D	32.4	C
2040 Background	28.4	C	47.6	D
2040 Background Plus Project #	50.6	D	33.7	D

= EB & NB Channelized Free Right Turn Lane; WB Triple Left Turn Lanes



JONES DISTRICT REDEVELOPMENT
DRY CREEK ROAD & CHESTER STREET / PANORAMA CIRCLE & CHESTER STREET
RECOMMENDED IMPROVEMENTS

LEGEND

— 2030 Recommended Improvements

FIGURE 16

Dry Creek Road and I-25 Southbound Ramp (#3)

The Dry Creek Road and I-25 Southbound Ramp intersection is signalized with protected-only left turn phasing on the westbound approach. This intersection is currently operating acceptably with a LOS C during the morning and afternoon peak hours. With the addition of project traffic and the existing lane configuration and control, this intersection is expected to continue to operate acceptably with LOS C during the peak hours in 2030 and 2040. Therefore, no improvements are needed, however the *Corridor Study* identified southbound triple left turn lanes. **Table 5** provides the results of the level of service analysis for this intersection.

Table 5 – Dry Creek Road and I-25 Southbound Ramp (#3) LOS Results

Scenario	AM Peak Hour		PM Peak Hour	
	Delay (sec)	LOS	Delay (sec)	LOS
2019 Existing	29.8	C	24.8	C
2030 Background	25.2	C	25.0	C
2030 Background Plus Project	25.8	C	29.2	C
2040 Background	26.4	C	25.5	C
2040 Background Plus Project	30.9	C	31.4	C

Dry Creek Road and I-25 Northbound Ramp (#4)

The Dry Creek Road and I-25 Northbound Ramp intersection is signalized with protected-only left turn phasing on the eastbound approach. This intersection is currently operating acceptably with a LOS B during the morning peak hour and LOS C during the afternoon peak hour. With the addition of project traffic and the existing lane configuration and control, this intersection is expected to continue to operate acceptably with LOS D or better during the peak hours throughout the long term 2040 horizon. **Table 6** provides the results of the level of service analysis for this intersection.

Table 6 – Dry Creek Road and I-25 Northbound Ramp (#4) LOS Results

Scenario	AM Peak Hour		PM Peak Hour	
	Delay (sec)	LOS	Delay (sec)	LOS
2019 Existing	18.8	B	23.5	C
2030 Background	19.2	B	25.2	C
2030 Background Plus Project	22.0	C	31.8	C
2040 Background	20.4	C	24.3	C
2040 Background Plus Project	22.5	C	37.7	D

Panorama Drive and Yosemite Street (#5)

The Panorama Drive and Yosemite Street T-intersection is unsignalized with stop control on the westbound Panorama Drive approach. All movements at this intersection currently operate acceptably with LOS C or better during peak hours. With addition of the project traffic and the existing lane configurations, all movements are expected to continue to operate with LOS C or better during peak hours in 2030 as well as throughout the long term 2040 horizon. **Table 7** provides the results of the level of service at this intersection.

Table 7 – Panorama Drive and Yosemite Street (#5) LOS Results

Scenario	AM Peak Hour		PM Peak Hour	
	Delay (sec)	LOS	Delay (sec)	LOS
2019 Existing				
Westbound Left	20.8	C	16.7	C
Westbound Right	10.5	B	13.0	B
Southbound Left	11.2	B	8.4	A
2030 Background				
Westbound Left	22.0	C	18.3	C
Westbound Right	10.8	B	13.9	B
Southbound Left	11.7	B	8.5	A
2030 Background Plus Project				
Westbound Left	22.0	C	18.3	C
Westbound Right	10.8	B	13.9	B
Southbound Left	11.7	B	8.5	A
2040 Background				
Westbound Left	24.8	C	19.2	C
Westbound Right	10.8	B	12.5	B
Southbound Left	12.7	B	8.6	A
2040 Background Plus Project				
Westbound Left	24.8	C	19.5	C
Westbound Right	10.8	B	14.8	B
Southbound Left	12.7	B	8.7	A

Panorama Circle and Chester Street (#6)

The Panorama Circle and Chester Street intersection is signalized with protected-permitted left turn phasing on all four approaches. This intersection currently operates acceptably with LOS A during the morning peak hour and LOS C during the afternoon peak hour. It is recommended that southbound dual left turn lanes be provided at this intersection by 2030 due to potential vehicle queuing issues and need for triple westbound to southbound left turn lanes at the Dry Creek Road and Chester Street (#2) intersection to the north. The east leg of this intersection will need to provide two receiving lanes in order to accommodate the southbound dual left turn lanes. With this improvement, this intersection is expected to operate acceptably with LOS C or better during the peak hours throughout the 2040 horizon. A detailed improvement exhibit is shown in previously referenced **Figure 16** which shows the recommended lane configuration at this intersection. Additionally, the Arapahoe County Bicycle and Pedestrian Master Plan identified designated bike lanes along Chester Street through this intersection. **Table 8** provides the results of the level of service analysis for this intersection.

Table 8 – Panorama Circle and Chester Street (#6) LOS Results

Scenario	AM Peak Hour		PM Peak Hour	
	Delay (sec)	LOS	Delay (sec)	LOS
2019 Existing	7.4	A	25.5	C
2030 Background	7.2	A	22.3	C
2030 Background Plus Project	9.8	A	24.4	C
2030 Background Plus Project #	14.1	B	20.4	C
2040 Background	8.3	A	26.4	C
2040 Background Plus Project #	14.1	B	21.7	C

= SB Dual Right Turn Lanes

Mineral Circle and Chester Street (#7)

The Mineral Circle and Chester Street intersection is unsignalized with stop control on the eastbound and westbound approaches. With the existing lane configuration and control all movements at this intersection operate acceptably with LOS C or better during peak hours. With the addition of Jones District Redevelopment project traffic, long delays are expected along the eastbound and westbound minor approaches. Therefore, a four-hour vehicle volume signal warrant analysis was performed for the intersection of Mineral Circle and Chester Street to determine if signalization is appropriate control needed. The Four-Hour Vehicular Volume signal warrant condition is satisfied for the projected 2030 total traffic conditions at this intersection. All four of the hourly data points for 2030 which represent the vehicles per hour on the major street (total of both directions) and the corresponding vehicles per hour on the minor street approach are above the curve in Figure 4C-1 of the MUTCD for the existing combination of dual approach lanes and a single approach lane. The signal warrant analysis figure for this intersection is included in **Appendix E**. Therefore, a traffic signal is anticipated to be the appropriate control at this intersection with construction of the Jones District Redevelopment. Additionally, the Arapahoe County Bicycle and Pedestrian Master Plan identified designated bike lanes along Chester Street through this intersection. With the recommended signalized intersection control, it is anticipated that this intersection will operate acceptably with LOS C or better during the peak hours in 2030 and throughout the 2040 horizon. **Table 9** provides the results of the level of service analysis for this intersection.

Table 9 – Mineral Circle and Chester Street (#7) LOS Results

Scenario	AM Peak Hour		PM Peak Hour	
	Delay (sec)	LOS	Delay (sec)	LOS
2019 Existing				
Northbound Left	8.0	A	7.9	A
Eastbound Left	12.4	B	13.6	B
Eastbound Through/Right	12.7	B	10.2	B
Westbound Left	0.0	A	15.8	C
Westbound Through/Right	0.0	A	12.8	B
Southbound Left	8.4	A	8.5	A
2030 Background				
Northbound Left	8.0	A	8.0	A
Eastbound Left	12.6	B	14.2	B
Eastbound Through/Right	13.1	B	10.3	B
Westbound Left	0.0	A	16.4	C
Westbound Through/Right	0.0	A	13.2	B
Southbound Left	8.5	A	8.5	A
2030 Background Plus Project				
Northbound Left	8.1	A	8.0	A
Eastbound Left	146.8	F	0.0	A
Eastbound Through/Right	7.3	A	10.6	B
Westbound Left	89.0	F	65.1	F
Westbound Through/Right	12.4	B	61.2	F
Southbound Left	13.5	B	10.4	B
2030 Background Plus Project #	14.7	B	24.2	C
2040 Background				
Northbound Left	8.0	A	8.1	A
Eastbound Left	12.1	B	13.9	B
Eastbound Through/Right	13.7	B	9.7	A
Westbound Left	0.0	A	14.9	B
Westbound Through/Right	0.0	A	12.3	B
Southbound Left	8.6	A	8.5	A
2040 Background Plus Project #	14.7	B	24.7	C

= Signalized

Mineral Avenue and Chester Street (#8)

The Mineral Avenue and Chester Street intersection is unsignalized with stop control on the eastbound and westbound Mineral Avenue approaches. With the existing lane configuration and control, all movements at this intersection operate acceptably with LOS C or better during peak hours. With the addition of Jones District Redevelopment project traffic, long delays are expected along the eastbound and westbound minor street approaches.

Therefore, a four-hour vehicle volume signal warrant analysis was performed for the intersection of Mineral Avenue and Chester Street also to determine if signalized control is needed. It was found that the Four-Hour Vehicular Volume signal warrant condition is satisfied for the projected 2030 total traffic conditions at this intersection. All four of the hourly data points for 2030 which represent the vehicles per hour on the major street (total of both directions) and the corresponding vehicles per hour on the minor street approach are above the curve in Figure 4C-1 of the MUTCD for the existing combination of dual approach lanes and a single approach lane. The signal warrant analysis figure for this intersection is included in **Appendix E**. Therefore, a traffic signal is anticipated to be the appropriate control at this intersection with construction of the Jones District Redevelopment project. With the recommended signal control, it is anticipated that this intersection will operate acceptably with LOS B during the peak hours in 2030 and throughout the 2040 horizon. Additionally, the Arapahoe County Bicycle and Pedestrian Master Plan identified designated bike lanes along Chester Street through this intersection. **Table 10** provides the results of the level of service analysis for this intersection.

Table 10 – Mineral Avenue and Chester Street (#8) LOS Results

Scenario	AM Peak Hour		PM Peak Hour	
	Delay (sec)	LOS	Delay (sec)	LOS
2019 Existing				
Northbound Left	7.8	A	8.1	A
Eastbound Left	15.3	C	17.9	C
Eastbound Through/Right	10.5	B	10.4	B
Westbound Left	16.6	C	14.5	B
Westbound Through/Right	10.6	B	11.2	B
Southbound Left	8.5	A	8.4	A
2030 Background				
Northbound Left	7.9	A	8.1	A
Eastbound Left	15.9	C	18.3	C
Eastbound Through/Right	10.6	B	10.7	B
Westbound Left	17.4	C	14.8	B
Westbound Through/Right	10.8	B	11.3	B
Southbound Left	8.6	A	8.5	A
2030 Background Plus Project				
Northbound Left	7.9	A	8.3	A
Eastbound Left	43.9	E	34.3	D
Eastbound Through/Right	>300	F	11.2	B
Westbound Left	61.4	F	100.5	F
Westbound Through/Right	12.3	B	13.0	B
Southbound Left	12.8	B	9.3	A
2030 Background Plus Project #	12.8	B	17.1	B
2040 Background				
Northbound Left	7.8	A	8.1	A
Eastbound Left	15.8	C	17.6	C
Eastbound Through/Right	9.8	A	10.7	B
Westbound Left	17.4	C	14.5	B
Westbound Through/Right	10.8	B	10.5	B
Southbound Left	8.6	A	8.5	A
2040 Background Plus Project #	13.0	B	17.3	B

= Signalized

Mineral Avenue and Yosemite Street (#9)

The Mineral Avenue and Yosemite Street T-intersection is unsignalized with stop control on the westbound approach. All movements at the Mineral Avenue and Yosemite Street intersection currently operate acceptably with LOS C or better during peak hours. With addition of the project traffic and the existing lane configurations, all movements are expected to continue to operate acceptably with LOS C or better during peak hours in 2030 and throughout the long term 2040 horizon. **Table 11** provides the results of the level of service at this intersection.

Table 11 – Mineral Avenue and Yosemite Street (#9) LOS Results

Scenario	AM Peak Hour		PM Peak Hour	
	Delay (sec)	LOS	Delay (sec)	LOS
2019 Existing				
Westbound Approach	22.6	C	18.1	C
Southbound Left	13.8	B	8.3	A
2030 Background				
Westbound Approach	23.8	C	20.6	C
Southbound Left	14.5	B	8.3	A
2030 Background Plus Project				
Westbound Approach	23.8	C	22.0	C
Southbound Left	14.5	B	8.3	A
2040 Background				
Westbound Approach	27.3	D	24.0	C
Southbound Left	15.7	C	8.3	A
2040 Background Plus Project				
Westbound Approach	27.3	D	24.0	C
Southbound Left	15.7	C	8.3	A

Willow Way and Yosemite Street (#10)

The Willow Way and Yosemite Street T-intersection is unsignalized with stop control on the eastbound approach. All movements at the Willow Way and Yosemite Street intersection currently operate acceptably with LOS C or better during peak hours. With addition of the project traffic and the existing lane configurations, all movements are expected to continue to operate acceptably with LOS C or better during peak hours in 2030 and throughout the long term 2040 horizon. **Table 12** provides the results of the level of service at this intersection.

Table 12 – Willow Way and Yosemite Street (#10) LOS Results

Scenario	AM Peak Hour		PM Peak Hour	
	Delay (sec)	LOS	Delay (sec)	LOS
2019 Existing				
Northbound Left	8.0	A	9.0	A
Eastbound Approach	18.6	C	12.7	B
2030 Background				
Northbound Left	8.0	A	9.4	A
Eastbound Approach	20.9	C	13.6	B
2030 Background Plus Project				
Northbound Left	8.0	A	9.4	A
Eastbound Approach	20.9	C	13.6	B
2040 Background				
Northbound Left	8.0	A	9.6	A
Eastbound Approach	21.4	C	13.9	B
2040 Background Plus Project				
Northbound Left	8.0	A	9.6	A
Eastbound Approach	21.4	C	14.4	B

Nichols Avenue and Yosemite Street (#11)

The Nichols Avenue and Yosemite Street T-intersection is signalized with protected-permitted left turn phasing on the southbound approach. With the existing lane configuration and control, this intersection currently operates acceptably with LOS A during the morning peak hour and LOS B during the afternoon peak hour. With the existing lane configuration and control and the addition of project traffic, this intersection is anticipated to continue to operate with acceptable LOS B during peak hours in the 2030 project build out year and throughout the long term 2040 horizon. **Table 13** provides the results of the level of service analysis for this intersection.

Table 13 – Nichols Avenue and Yosemite Street (#11) LOS Results

Scenario	AM Peak Hour		PM Peak Hour	
	Delay (sec)	LOS	Delay (sec)	LOS
2019 Existing	6.5	A	10.9	B
2030 Background	6.7	A	11.1	B
2030 Background Plus Project	11.3	B	14.0	B
2040 Background	7.2	A	11.5	B
2040 Background Plus Project	12.1	B	14.1	B

Nichols Avenue and Chester Street (#12)

The Nichols Avenue and Chester Street intersection is signalized with protected-permitted left turn phasing on all four approaches. With the existing lane configuration and control, this intersection currently operates acceptably with LOS B during the morning and afternoon peak hours. With the existing lane configuration and control and the addition of project traffic, this intersection is anticipated to continue to operate with acceptable LOS C or better during peak hours throughout the long term 2040 horizon. **Table 14** provides the results of the level of service analysis for this intersection.

Table 14 – Nichols Avenue and Yosemite Street (#12) LOS Results

Scenario	AM Peak Hour		PM Peak Hour	
	Delay (sec)	LOS	Delay (sec)	LOS
2019 Existing	10.3	B	16.2	B
2030 Background	10.4	B	16.6	B
2030 Background Plus Project	14.6	B	24.0	C
2040 Background	10.6	B	16.9	B
2040 Background Plus Project	14.7	B	25.1	C

Mineral Drive and Yosemite Street (#13)

The Mineral Drive and Yosemite Street intersection is unsignalized with stop control on the eastbound Mineral Drive approach. All movements at this intersection currently operate acceptably with LOS C or better during morning and afternoon peak hours. With addition of the project traffic and the existing lane configurations, all movements are expected to continue to operate acceptably with LOS D or better during peak hours in 2030 and LOS E or better during the peak hours in 2040. **Table 15** provides the results of the level of service at this intersection.

Table 15 – Mineral Drive and Yosemite Street (#13) LOS Results

Scenario	AM Peak Hour		PM Peak Hour	
	Delay (sec)	LOS	Delay (sec)	LOS
2019 Existing				
Northbound Left	7.6	A	9.3	A
Eastbound Approach	23.5	C	16.0	C
2030 Background				
Northbound Left	7.7	A	9.5	A
Eastbound Approach	25.9	D	16.9	C
2030 Background Plus Project				
Northbound Left	7.8	A	10.3	B
Eastbound Approach	33.3	D	19.3	C
2040 Background				
Northbound Left	7.7	A	9.7	A
Eastbound Approach	30.7	D	17.1	C
2040 Background Plus Project				
Northbound Left	7.7	A	10.6	B
Eastbound Approach	40.5	E	20.8	C

Otero Avenue and Chester Street (#14)

The Otero Avenue and Chester Street intersection is unsignalized with stop control on the westbound Otero Avenue approach. All movements at this intersection currently operate acceptably with LOS C or better during morning and afternoon peak hours. With the addition of Jones District Redevelopment project traffic, the westbound minor approach is anticipated to experience long delays during both morning and afternoon peak hours in the 2030 project buildout year. Therefore, a four-hour vehicle volume signal warrant analysis was also performed for the intersection to determine if signal control is needed. The Four-Hour Vehicular Volume signal warrant condition is satisfied for the projected 2030 total traffic conditions at this intersection. The signal warrant analysis figure for this intersection is included in **Appendix E**.

Therefore, a traffic signal is anticipated to be the appropriate control at this intersection with construction of the Jones District Redevelopment. With the recommended intersection control it is anticipated that this intersection will operate acceptably with LOS A during the morning peak hour and LOS B during the afternoon peak hour in 2030 and throughout the 2040 horizon. **Table 16** provides the results of the level of service at this intersection.

Table 16 – Otero Avenue and Chester Street (#14) LOS Results

Scenario	AM Peak Hour		PM Peak Hour	
	Delay (sec)	LOS	Delay (sec)	LOS
2019 Existing				
Westbound Left	18.6	C	16.5	C
Westbound Right	0.0	A	9.1	A
Southbound Left	10.5	B	7.8	A
2030 Background				
Westbound Left	19.1	C	17.4	C
Westbound Right	0.0	A	9.1	A
Southbound Left	10.7	B	7.8	A
2030 Background Plus Project				
Westbound Left	101.6	F	347.1	F
Westbound Right	0.0	A	10.3	B
Southbound Left	18.6	C	8.8	A
2030 Background Plus Project #	7.5	A	18.7	B
2040 Background				
Westbound Left	19.6	C	17.5	C
Westbound Right	0.0	A	9.1	A
Southbound Left	10.9	B	7.8	A
2040 Background Plus Project #	7.8	A	19.4	B

= Signalized

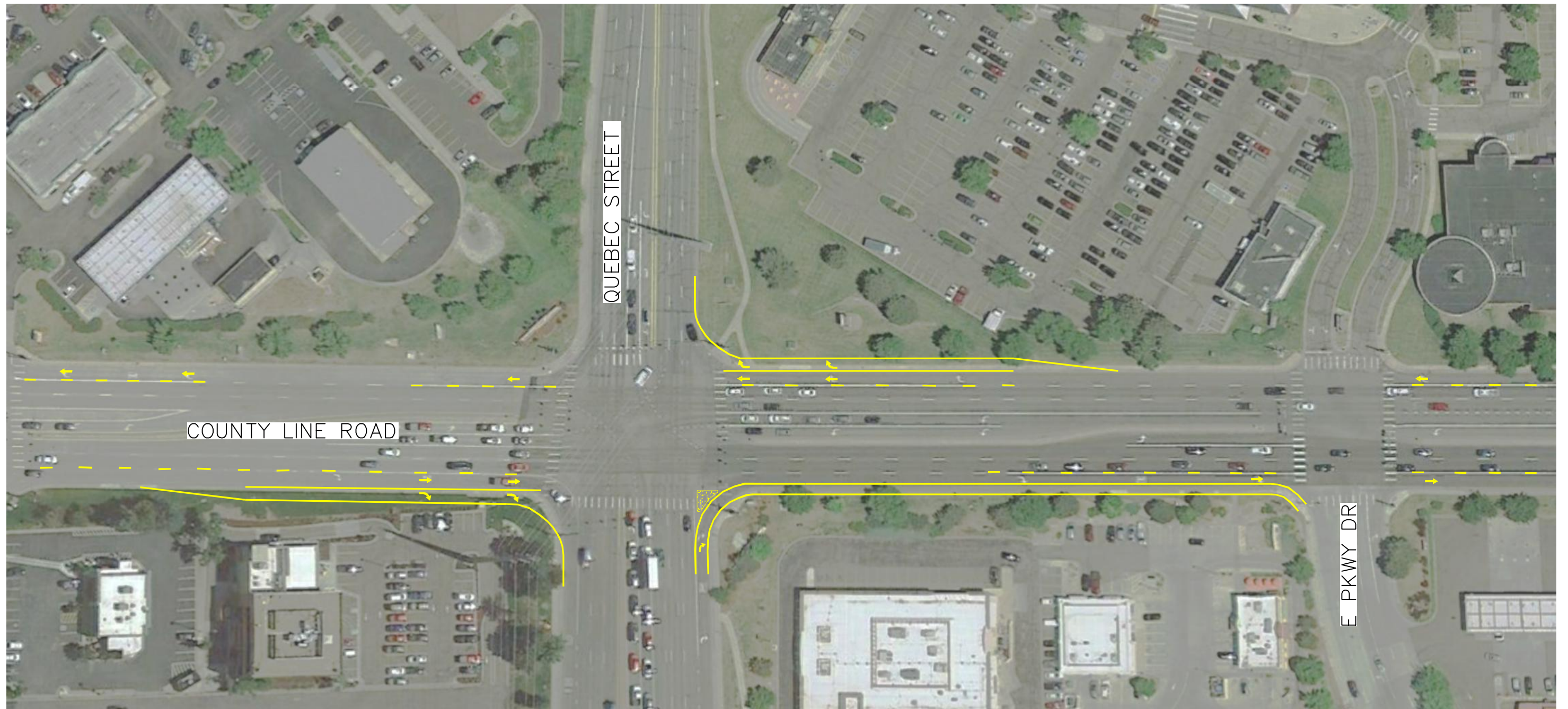
County Line Road and Quebec Street (#15)

The County Line Road and Quebec Street intersection is signalized with protected-only left turn phasing on all four approaches. This intersection currently operates acceptably with LOS D during the peak hours under existing conditions. With or without the addition project traffic, it is anticipated that this intersection will operate with LOS E during peak hours in the short-term 2030 horizon. It is recommended that the eastbound and westbound approaches be reconstructed to include three through lanes as well as a channelized free right turn lane on the northbound approach. It should be noted that traffic counts at this intersection were performed while C-470 was under construction, and it is believed that a lot of traffic is currently utilizing County Line Road as a relief route. It is anticipated that this intersection may likely operate better than reported once construction of C-470 is complete. A detailed improvement exhibit is shown in **Figure 17** which shows the recommended lane configuration at this intersection. With the recommended intersection lane configuration and control, this intersection is anticipated to operate acceptably during the peak hours throughout the 2040 horizon. **Table 17** provides the results of the level of service analysis for this intersection.

Table 17 – County Line Road and Quebec Street (#15) LOS Results

Scenario	AM Peak Hour		PM Peak Hour	
	Delay (sec)	LOS	Delay (sec)	LOS
2019 Existing	55.0	D	55.0	D
2030 Background	55.3	E	60.5	E
2030 Background Plus Project	57.3	E	68.9	E
2030 Background Plus Project #	45.7	D	53.7	D
2040 Background	69.4	E	71.1	E
2040 Background Plus Project #	47.1	D	54.8	D

= EB & WB Three Through Lanes & NB Channelized Free Right Turn Lane



JONES DISTRICT REDEVELOPMENT
COUNTY LINE ROAD & QUEBEC STREET
RECOMMENDED IMPROVEMENTS

LEGEND

— 2030 Recommended Improvements

FIGURE 17

County Line Road and Yosemite Street (#16)

The County Line Road and Yosemite Street intersection is signalized with protected-only left turn phasing on all four approaches. With the existing lane configuration and control, this intersection currently operates acceptably with LOS D during morning and afternoon peak hours. With the addition of project traffic, this intersection is anticipated to operate with LOS E during the afternoon peak hour in 2030. It is recommended that the southbound approach be reconstructed to include a channelized free right turn lane. A detailed improvement exhibit is shown in **Figure 18** which shows the recommended lane configuration at this intersection. Also shown are extended eastbound dual left turn lanes at the intersection which will require side-by-side left turn lanes for the westbound left turn lane for Willow Street to the west as discussed in the queueing section of this study. With the recommended intersection lane configuration and control, this intersection is anticipated to operate acceptably with LOS D or better during the peak hours throughout the 2040 horizon.

Of note, although not analyzed in this study, it is understood that southbound vehicle queues from the intersection of County Line Road and Yosemite Street extend past the intersection of 8250 S and Yosemite Street during peak hours. It would be beneficial to restrict movements at the intersection of 8250 S and Yosemite Street and signalize the intersection of Phillips Place and Yosemite Street. Traffic from the existing development on the northeast corner of the County Line Road and Yosemite Street intersection would orient to Phillips Place if this improvement were to occur. **Table 18** provides the results of the level of service analysis for this intersection.

Table 18 – County Line Road and Yosemite Street (#16) LOS Results

Scenario	AM Peak Hour		PM Peak Hour	
	Delay (sec)	LOS	Delay (sec)	LOS
2019 Existing	38.2	D	48.5	D
2030 Background	37.2	D	53.4	D
2030 Background Plus Project	37.4	D	59.4	E
2030 Background Plus Project #	36.2	D	28.1	C
2040 Background	37.9	D	54.9	C
2040 Background Plus Project #	37.0	D	29.8	C

SB Channelized Free Right Turn Lane



LEGEND

— 2030 Recommended Improvements

JONES DISTRICT REDEVELOPMENT
COUNTY LINE ROAD & YOSEMITE STREET
RECOMMENDED IMPROVEMENTS

FIGURE 18

County Line Road and Chester Street (#17)

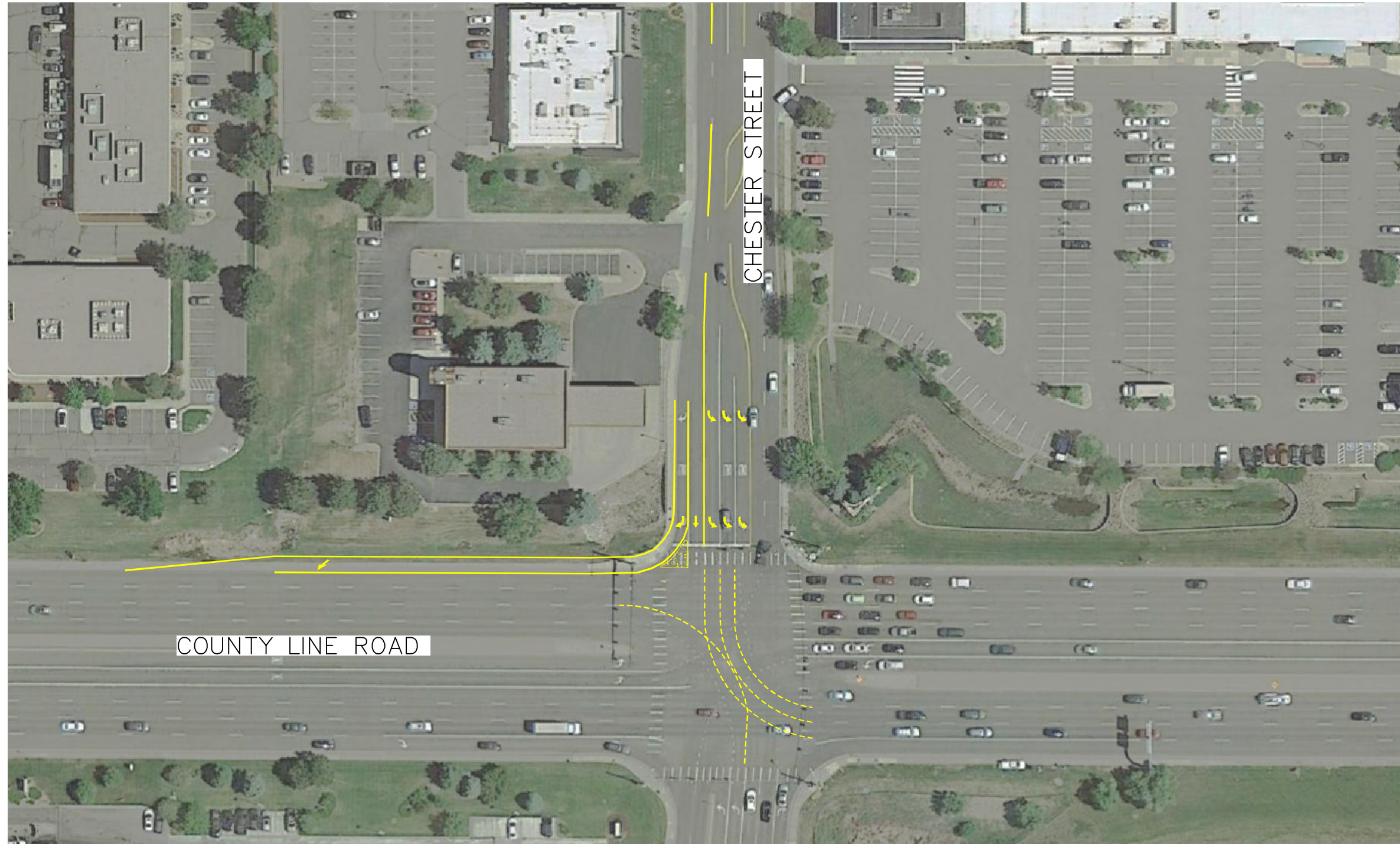
The County Line Road and Chester Street intersection is signalized with protected-only left turn phasing on all four approaches. With the existing lane configuration and control, this intersection currently operates acceptably with LOS D during morning and afternoon peak hours. With the addition of project traffic, this intersection is anticipated to operate with long delays during the peak hours in the 2030 project buildout year. Southbound triple left turn lanes should be considered at this intersection due to existing vehicle queuing issues. It is recommended that the inside southbound through lane at this intersection be converted to a continuous left turn lane while the northbound dual left turn lanes should remain with the existing configuration. Three receiving lanes currently exist on eastbound County Line Road. The northbound approach of this intersection should operate with protected lead or lag left turn phasing while the southbound approach operates with the opposite left turn phasing because the left turn movements on these approaches will overlap and cross paths if southbound triple left turn lanes are implemented. A southbound channelized free right turn lane is also recommended at this intersection. A detailed improvement exhibit is shown in **Figure 19** which illustrates the recommended lane configuration at this intersection. With the recommended intersection lane configuration and control, this intersection is anticipated to operate acceptably with LOS D during the peak hours in 2030 and throughout the long term 2040 horizon.

Of note, the intersection of 8200 S and Chester Street is expected to be clear of vehicle queues extending from the north leg of the County Line Road and Chester Street intersection. As such, the intersection of 8200 S and Chester Street is also expected to be operating acceptably during the peak hours. **Table 19** provides the results of the level of service analysis for this intersection.

Table 19 – County Line Road and Chester Street (#17) LOS Results

Scenario	AM Peak Hour		PM Peak Hour	
	Delay (sec)	LOS	Delay (sec)	LOS
2019 Existing	38.5	D	36.2	D
2030 Background	40.0	D	36.5	D
2030 Background Plus Project #	34.6	C	40.5	D
2040 Background	40.5	D	37.8	D
2040 Background Plus Project #	38.8	D	42.4	D

SB Triple Left Turn Lanes & Channelized Free Right Turn Lane



JONES DISTRICT REDEVELOPMENT
COUNTY LINE ROAD & CHESTER STREET
RECOMMENDED IMPROVEMENTS

LEGEND

— 2030 Recommended Improvements

FIGURE 19

County Line Road and I-25 Southbound Ramp (#18)

The County Line Road and I-25 Southbound Ramp intersection is signalized with protected only right turn phasing on the northbound approach. This intersection currently operates acceptably with LOS D during morning peak hour and LOS C during the afternoon peak hour. With the existing lane configurations and addition of project traffic, this intersection is anticipated to continue to operate acceptably with LOS D or better during peak hours in the 2030 project buildout year and throughout the long term 2040 horizon. **Table 20** provides the results of the level of service analysis for this intersection.

Table 20 – County Line Road and I-25 Southbound Ramp (#18) LOS Results

Scenario	AM Peak Hour		PM Peak Hour	
	Delay (sec)	LOS	Delay (sec)	LOS
2019 Existing	37.4	D	23.2	C
2030 Background	37.7	D	23.3	C
2030 Background Plus Project	38.9	D	25.6	C
2040 Background	38.6	D	23.3	C
2040 Background Plus Project	39.1	D	26.1	C

County Line Road and I-25 Northbound Ramp (#19)

The County Line Road and I-25 Northbound Ramp T-intersection is signalized and currently operates acceptably with LOS B during morning and afternoon peak hours. With the existing lane configurations and addition of project traffic, this intersection is anticipated to continue to operate acceptably with LOS B during peak hours throughout the 2040 horizon. **Table 21** provides the results of the level of service analysis for this intersection.

Table 21 – County Line Road and I-25 Northbound Ramp (#19) LOS Results

Scenario	AM Peak Hour		PM Peak Hour	
	Delay (sec)	LOS	Delay (sec)	LOS
2019 Existing	12.7	B	10.5	B
2030 Background	12.9	B	10.9	B
2030 Background Plus Project	18.5	B	12.0	B
2040 Background	13.0	B	11.4	B
2040 Background Plus Project	19.2	B	12.3	B

5.3 Internal Intersection and Parking Entry Analysis

With completion of the Jones District Redevelopment project, the site proposes 11 future internal intersections (labeled intersections #20-30) and nine (9) parking access intersections (labeled intersections #31-39). An internal roadway network will be provided to serve the development. The proposed east-west roadways include Road A, Jones Drive, Mineral Avenue, Road B, and Road C. The proposed north-west roadways include Panorama Circle, Dayton Street, and Street 1. The recommended lane configuration and control for all internal key study area intersections and the project parking structure entry accesses is shown in **Figure 21** as referenced later in **Section 5.5**.

Four major access roadways will be used by project traffic to access the site, which will occur from the north using Panorama Circle, the south using Dayton Street, and from the west along two roadways, Mineral Avenue and Panorama Circle (named Jones Drive in this study). Panorama Circle is proposed to be realigned and extended to the south to Mineral Avenue (#25) while removing the curve located near the north side of the site. Panorama Circle will connect perpendicularly at a four-leg intersection with Jones Drive (formally Panorama Circle). Likewise, the existing curve at the north side of Dayton Street and the east side of Mineral Avenue will be removed to create a four-legged perpendicular intersection with Mineral Avenue and Dayton Street (#26).

The intersections of Jones Drive/Panorama Circle, Jones Drive/Dayton Street, Mineral Avenue/Panorama Circle, Mineral Avenue/Dayton Street, and Road C/Dayton Street are recommended to provide all-way stop control (AWSC). The remaining six (6) proposed internal intersections and nine (9) parking access intersections are recommended to provide two-way stop control (TWSC).

The intersections of Road A/Panorama Circle (#20) and Jones Drive West Parking Access (#32) assumed a fourth intersection leg to provide access to the future adjacent development area located on the northwest corner of the Jones Drive and Panorama Circle intersection. A southbound left turn lane should be provided at the intersection of Road A/Panorama Circle (#20). Eastbound and westbound left turn lanes should be provided along Jones Drive from Chester Street to Panorama Circle. Eastbound and westbound left turn lanes are also recommended along Mineral Avenue from Chester Street to Dayton Street. A westbound right

turn lane and a southbound left turn lane should be provided at the intersection of Mineral Avenue/Panorama Circle (#25). Northbound and southbound left turn lanes should be provided along Dayton Street from Mineral Avenue to Road C.

The existing north access to IKEA located along the east side of Dayton Street is proposed to be realigned to the north and share access with the proposed east leg of Road C at Dayton Street. The existing north-south IKEA connections will extend north to Road C. It is anticipated that the IKEA delivery truck access will be reconfigured and remain in its existing location, while an east access connection to Road C will provide public access for passenger vehicles.

All project parking access drives are recommended to have R1-1 “STOP” signs installed for the exiting approaches. One exiting lane should be sufficient at all project accesses while shared movement lanes should be sufficient for vehicles entering all parking access locations with exception of the Jones Drive West Parking Access (#32) which is recommended to include eastbound and westbound left turn lanes. With the recommended lane configurations and control, all movements at the project accesses are expected to operate acceptably during the peak hours with full area build out. The operational analysis at the proposed project driveways is summarized in **Table 22**. Detailed results of the operational analysis are also provided in **Appendix D**.

Table 22 – Internal Intersection and Parking Entry LOS Results

Access and Movement	Total Traffic			
	AM Peak Hour		PM Peak Hour	
	Delay (sec/ veh)	LOS	Delay (sec/ veh)	LOS
Panorama Circle & Road A (#20)				
Northbound Left	7.8	A	7.5	A
Eastbound Approach	20.9	C	22.7	C
Westbound Left	11.8	B	13.7	B
Southbound Left	8.2	A	7.9	A
Dayton Street & Road A (#21)				
Northbound Left	7.3	A	7.4	A
Eastbound Approach	8.6	A	8.6	A
Jones Drive & Panorama Circle (#22)	12.4	B	16.6	C
Dayton Street & Jones Drive (#23)	8.6	A	9.4	A
Street 2 & Jones Drive (#24)				
Northbound Left	7.3	A	7.6	A
Eastbound Approach	9.1	A	9.0	A

Access and Movement	Total Traffic			
	AM Peak Hour		PM Peak Hour	
	Delay (sec/ veh)	LOS	Delay (sec/ veh)	LOS
Mineral Avenue & Panorama Circle (#25)	16.2	C	27.8	D
Dayton Street & Mineral Avenue (#26)	11.7	B	14.7	B
Street 1 & Mineral Avenue (#27)				
Northbound Left	7.3	A	7.5	A
Eastbound Approach	9.4	A	9.2	A
Panorama Circle & Road B (#28)				
Westbound Approach	9.0	A	9.3	A
Southbound Left	7.3	A	7.5	A
Road B & Dayton Street (#29)				
Northbound Left	7.6	A	7.8	A
Eastbound Approach	10.3	B	11.1	B
Dayton Street & Road C (#30)	20.1	C	17.8	C
Access & Road A (#31)				
Northbound Approach	10.5	B	11.2	B
Westbound Left	7.8	A	7.4	A
West Access & Jones Drive (#32)				
Northbound Approach	19.7	C	42.5	E
Eastbound Left	7.6	A	8.6	A
Westbound Left	9.2	A	7.7	A
Southbound Approach	10.1	B	13.5	B
East Access & Jones Drive (#33)				
Northbound Approach	11.0	B	11.8	B
Westbound Left	7.9	A	7.4	A
Panorama Circle & Access (#34)				
Westbound Approach	11.3	B	12.7	B
Southbound Left	7.8	A	7.8	A
Access & Street 2 (#35)				
Northbound Left	7.9	A	7.4	A
Southbound Approach	11.9	B	11.8	B
Mineral Avenue & West Access (#36)				
Eastbound Left	7.7	A	8.4	A
Eastbound Approach	10.1	B	13.4	B
East Access & Mineral Avenue (#37)				
Northbound Approach	13.9	B	18.2	C
Eastbound Left	7.4	A	7.4	A
Westbound Left	7.8	A	7.4	A
Southbound Approach	8.7	A	9.0	A
Road C & West Access (#38)				
Eastbound Left	7.6	A	7.4	A
Southbound Approach	9.8	A	9.9	A
Road C & East Access (#39)				
Eastbound Left	8.1	A	7.6	A
Southbound Approach	8.7	A	10.6	B

5.4 Vehicle Queuing Analysis

An intersection vehicle queuing analysis was performed for the study area intersections in 2030 and 2040. Queue analysis worksheets at the signalized intersections are provided in **Appendix F** while calculations for unsignalized intersections are provided within the level of service operational sheets provided in **Appendix D**. Results of the queuing analysis and recommendations at the study area intersections are provided in **Table 23**.

Table 23 – Queuing Analysis Results and Recommendations

Intersection Turn Lane	Existing Turn Lane Length (feet)	2030 Calculated Queue Length (feet)	2030 Recommended Turn Lane Length (feet)	2040 Calculated Queue Length (feet)	2040 Recommended Turn Lane Length (feet)
Dry Creek Rd / Yosemite St (#1)					
Eastbound Left	150'	292'	150'	397'	150'
Westbound Left	225'	206'	225'	229'	225'
Westbound Right	C	242'	C	-	C
Northbound Left	175'	367'	375'	370'	375'
Northbound Right	200'	25'	200'	25'	200'
Southbound Left	250'	491'	250'	471'	250'
Southbound Right	C	292'	C	313'	C
Dry Creek Rd / Chester St (#2)					
Eastbound Left	200'	25'	200'	25'	200'
Eastbound Right	175'	476'	175' FREE	426'	175' FREE
Westbound Dual Lefts	350'	592' TL	600' TL	613' TL	600' TL
Westbound Right	C	49'	C	39'	C
Northbound Dual Lefts	125'	329'	175'/C(375')	310'	175'/C(375')
Northbound Dual Rights	C	25'	C FREE	25'	C FREE
Southbound Dual Lefts	125'	157'	125'	165'	125'
Panorama Dr / Yosemite St (#5)					
Westbound Left	-	50'	100'	50'	100'
Southbound Left	175'	25'	175'	25'	175'
Panorama Cir / Chester St (#6)					
Eastbound Left	75'	233'	75'	240'	75'
Westbound Left	75'	116'	75'	118'	75'
Westbound Right	125'	25'	125'	25'	125'
Northbound Left	100'	29'	100'	31'	100'
Southbound Left	125'	238' DL	125'/C(375') DL	232' DL	125'/C(375') DL
Mineral Ave / Chester St (#7)					
Eastbound Left	50'	141'	100'	151'	100'
Westbound Left	100'	135'	150'	138'	150'
Northbound Left	100'	25'	100'	25'	100'
Southbound Left	200'	155'	200'	175'	200'
Mineral Cir / Chester St (#8)					
Eastbound Left	25'	60'	75'	62'	75'
Westbound Left	200'	208'	200'	207'	200'
Northbound Left	100'	55'	100'	61'	100'
Northbound Right	125'	76'	125'	82'	125'
Southbound Left	150'	78'	150'	79'	150'
Mineral Ave / Yosemite St (#9)					
	200'	50'	200'	50'	200'

Intersection Turn Lane	Existing Turn Lane Length (feet)	2030 Calculated Queue Length (feet)	2030 Recommended Turn Lane Length (feet)	2040 Calculated Queue Length (feet)	2040 Recommended Turn Lane Length (feet)
Southbound Left					
Willow Way / Yosemite St (#10)					
Northbound Left	150'	25'	150'	25'	150'
Nichols Ave / Yosemite St (#11)					
Westbound Left	100' TW	259'	100' TW	262'	100' TW
Southbound Left	175'	96'	175'	102'	175'
Nichols Ave / Chester St (#12)					
Eastbound Left	100'	62'	100'	65'	100'
Westbound Left	175'	140'	175'	165'	175'
Northbound Left	100'	35'	100'	34'	100'
Southbound Left	75'	25'	75'	25'	75'
Mineral Dr / Yosemite St (#13)					
Northbound Left	125'	25'	125'	25'	125'
Otero Ave / Chester St (#14)					
Westbound Left	75'	352'	75'	377'	75'
Southbound Left	75'	25'	75'	25'	75'
County Line Rd / Quebec St (#15)					
Eastbound Dual Lefts	150'/200'	138'	150'/200'	145'	150'/200'
Eastbound Right	C	25'	C	25'	C
Westbound Dual Lefts	250'/475'	431'	250'/475'	426'	250'/475'
Westbound Right	C	74'	C	77'	C
Northbound Dual Lefts	325'/350'	336'	325'/350'	351'	325'/350'
Northbound Right	C	1061'	C FREE	1119'	C FREE
Southbound Dual Lefts	125'/400'	137'	125'/400'	138'	125'/400'
County Line / Yosemite St (#16)					
Eastbound Dual Lefts	125'/250'	386'	400' DL	404'	400' DL
Eastbound Right	C	60'	C	64'	C
Westbound Dual Lefts	525'/700'	70'	525'/700'	71'	525'/700'
Westbound Right	C	88'	C	93'	C
Northbound Dual Lefts	225'	165'	225'	178'	225'
Northbound Right	225'	25'	225'	25'	225'
Southbound Left	225'	209'	225'	220'	225'
Southbound Right	DNE	25'	150' FREE	25'	150' FREE
County Line Rd / Chester St (#17)					
Eastbound Dual Lefts	525'/550'	326'	525'/550'	347'	525'/550'
Eastbound Right	C	38'	C	44'	C
Westbound Dual Lefts	500'/550'	204'	500'/550'	209'	500'/550'
Northbound Dual Lefts	125'	91'	125'	118'	125'
Northbound Right	C	83'	C	86'	C
Southbound Dual Lefts	125'/175'	359' TL	125'/175'/C TL	363' TL	125'/175'/C TL
Southbound Right	100'	443'	100' FREE	25'	100' FREE
Road A / Panorama Cir (#20)					
Southbound Left	DNE	25'	100'	25'	100'
Jones Dr / Panorama Cir (#22)					
Eastbound Left	DNE	25'	100'	25'	100'
Westbound Left	DNE	25'	100'	25'	100'
Mineral Ave / Panorama Cir (#25)					

Intersection Turn Lane	Existing Turn Lane Length (feet)	2030 Calculated Queue Length (feet)	2030 Recommended Turn Lane Length (feet)	2040 Calculated Queue Length (feet)	2040 Recommended Turn Lane Length (feet)
Eastbound Left	DNE	50'	100'	50'	100'
Westbound Left	DNE	25'	100'	25'	100'
Westbound Right	DNE	25'	100'	25'	100'
Southbound Left	DNE	25'	100'	25'	100'
Mineral Ave / Dayton St (#26)					
Eastbound Left	DNE	25'	100'	25'	100'
Westbound Left	DNE	25'	100'	25'	100'
Northbound Left	DNE	50'	100'	50'	100'
Southbound Left	DNE	25'	100'	25'	100'
Road C / Dayton St (#30)					
Northbound Left	DNE	25'	100'	25'	100'
Southbound Left	DNE	25'	100'	25'	100'
Jones Drive West Access (#32)					
Eastbound Left	DNE	25'	100'	25'	100'
Westbound Left	DNE	25'	100'	25'	100'

C = Continuous Turn Lane; DNE = Does Not Exist; TW = Two Way Left Turn Lane

The following provides a description of turn lane lengths that are possible to be extended from the information provided within the previous table:

- The northbound left turn lane at the Dry Creek Road and Yosemite Street (#1) intersection should be restriped and extended from 175 feet of length to 375 feet of length.
- Westbound triple left turn lanes may need to be implemented at the intersection of Dry Creek Road and Chester Street (#2) with 600 feet of length per lane. The south leg of this intersection will need to provide three receiving lanes for the westbound triple left turn lanes. The outside of the northbound dual left turn lanes at the intersection of Dry Creek Road and Chester Street (#2) should be extended back to Panorama Circle as a continuous left turn lane.
- Southbound dual left turn lanes should be provided at the intersection of Panorama Circle and Chester Street (#6). The existing southbound left turn lane should be extended back to Dry Creek Road as a continuous lane while the inside left turn lane should be provided from within the existing raised median with 125 feet of length.
- A westbound left turn lane should be striped with 100 feet of length at the intersection of Panorama Circle and Yosemite Street (#5). Sufficient pavement width exists, and this improvement only requires pavement striping.
- The substandard eastbound left turn lane at the Mineral Circle/Jones Drive and Chester Street (#7) intersection should be extended from 50 feet of length to 100 feet of length. The

westbound left turn lane at this intersection (#7) should be extended to provide 150 feet of length.

- The 25-foot substandard eastbound left turn at the Mineral Avenue and Chester Street (#8) intersection should be extended to provide 75 feet of length.
- Side by side left turn lanes should be incorporated along the eastbound approach of the County Line Road and Yosemite Street (#16) intersection and the westbound approach of the County Line Road and Willow Street intersection. This side by side left turn configuration is shown conceptually in the previously referenced **Figure 18**.
- The westbound dual left turn lanes should provide 400 feet of length per lane. A southbound channelized free right turn lane should be provided with 150 feet of length at the intersection of County Line Road and Yosemite Street (#16).
- The southbound approach of the County Line Road and Chester Street (#17) intersection should provide triple left turn lanes. The inside southbound through lane at this intersection should be converted to a continuous left turn lane.

The following provides a description of turn lane lengths that are not possible to be extended due to other constraints or issues:

- The eastbound and southbound left turn lanes at the intersection of Dry Creek Road and Yosemite Street (#1) cannot be extended due to existing back-to-back left turn lane constraints with adjacent intersections.
- The eastbound and westbound left turn lanes at the intersection of Panorama Circle and Chester Street (#6) cannot be extended due to back to back left turn lane constraints with adjacent intersections.
- The westbound left turn lane at the Otero Avenue and Chester Street (#14) intersection cannot be extended due an adjacent left turn lane at an access intersection to the east.

5.5 Transit, Pedestrian, and Bicycle Accessibility

The Arapahoe County Bicycle and Pedestrian Master Plan identified designated bike lanes along Chester Street through the study area. It is recommended that the project incorporate pedestrian and bicycle connections through the development to provide appropriate connections to the Dry Creek Road RTD Station for the Jones District and surrounding areas.

5.6 Crash Data Analysis

Crash data for the following study area intersections were provided by the City of Centennial and are provided in **Appendix G**. Supplied crash data is for the period between January 1, 2014 and January 1, 2019. The crash summary for each intersection detailing the five-year period is as follows:

Dry Creek Road and Yosemite Street (#1)

- 42 Total Crashes
- 4 Left Turn to Opposing Through Crashes
- 7 Rear-End Crashes (Most Frequent Type)
- 1 Crash Reporting an Injury
- No Fatal Crashes

Dry Creek Road and Chester Street (#2)

- 108 Total Crashes
- 5 Left Turn to Opposing Through Crashes
- 20 Rear-End Crashes (Most Frequent Type)
- 5 Crashes Reporting Injuries
- No Fatal Crashes

Panorama Circle and Chester Street (#6)

- 9 Total Crashes
- 1 Left Turn to Opposing Through Crash
- No Crashes Reporting Injuries
- No Fatal Crashes

Mineral Avenue and Chester Street (#8)

- 13 Total Crashes
- No Left Turn to Opposing Through Crashes
- 3 Eastbound to Northbound Crashes (Most Frequent Type)
- No Crashes Reporting Injuries
- No Fatal Crashes

Mineral Avenue and Yosemite Street (#9)

- 2 Total Crashes
- No Crashes Reporting Injuries
- No Fatal Crashes

Nichols Avenue and Yosemite Street (#11)

- 4 Total Crashes
- No Crashes Reporting Injuries
- No Fatal Crashes

Nichols Avenue and Chester Street (#12)

- 8 Total Crashes
- 1 Left Turn to Opposing Through Crashes
- 1 Crash Reporting an Injury
- No Fatal Crashes

Otero Avenue and Chester Street (#14)

- 7 Total Crashes
- 1 Left Turn to Opposing Through Crashes
- No Crashes Reporting Injuries
- No Fatal Crashes

County Line Road and Yosemite Street (#16)

- 28 Total Crashes
- 1 Left Turn to Opposing Through Crash
- 9 Rear-End Crashes (Most Frequent Type)
- No Crashes Reporting Injuries
- No Fatal Crashes

County Line Road and Chester Street (#17)

- 68 Total Crashes
- 7 Left Turn to Opposing Through Crashes
- 9 Rear-End Crashes (Most Frequent Type)
- No Crashes Reporting Injuries
- No Fatal Crashes

In summary, a total of 289 crashes were reported during the five-year crash analysis period at the 10 intersections with provided crash data. Rear-end collisions are the most frequent reported crash types within the study limits. A total of seven (7) crashes reported injury while no fatal crashes were reported at the studied intersections. Crash rates are expected to remain constant with the increase in future traffic volumes. However, implementation of protected only left turn phasing has been known to reduce left turn to opposing through movement collisions and improve traffic safety.

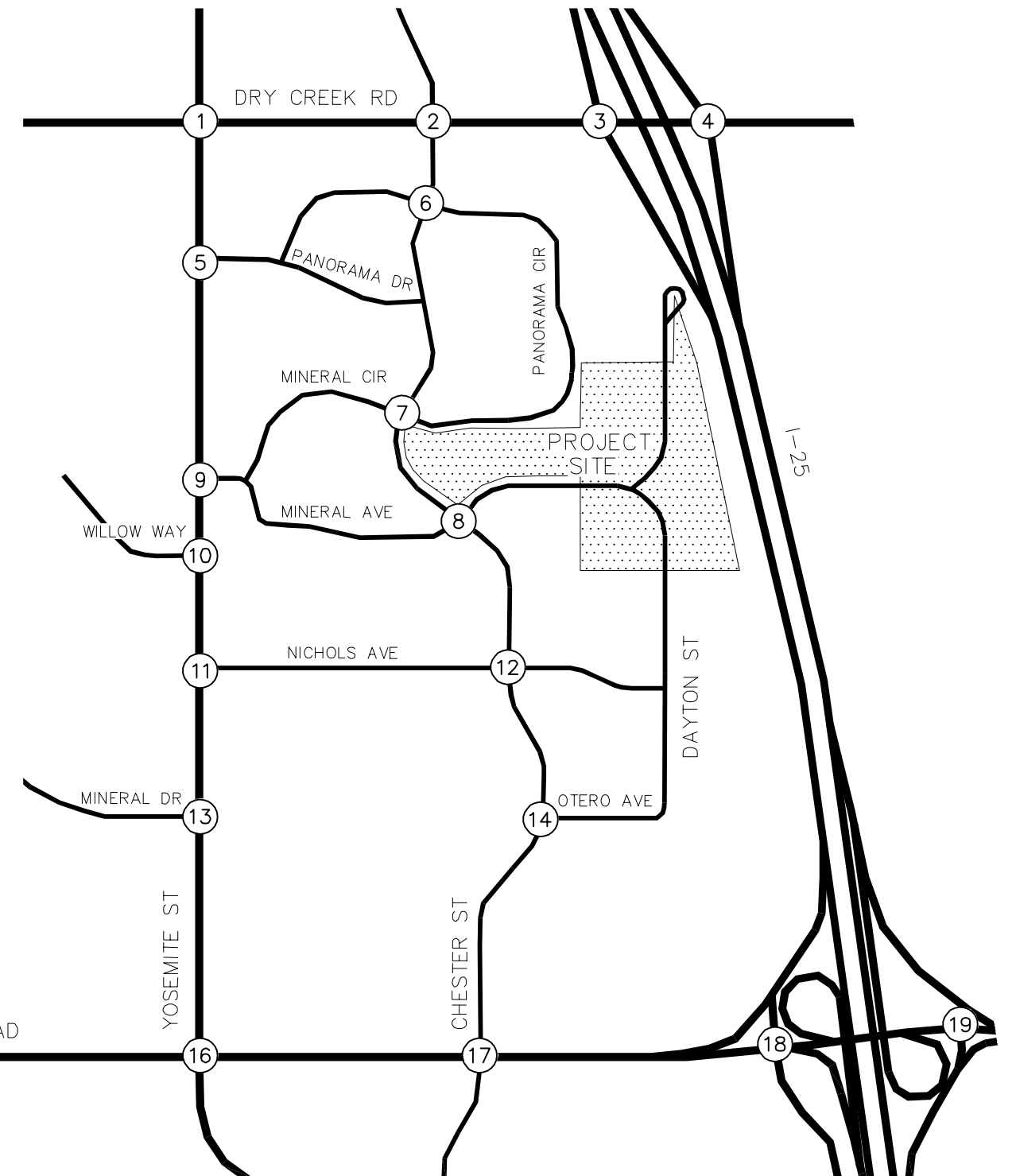
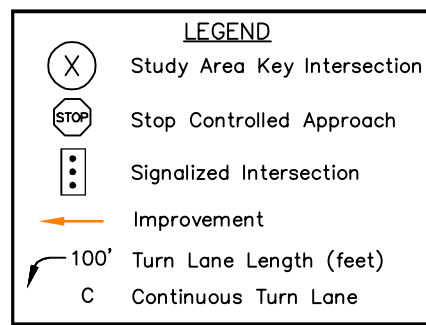
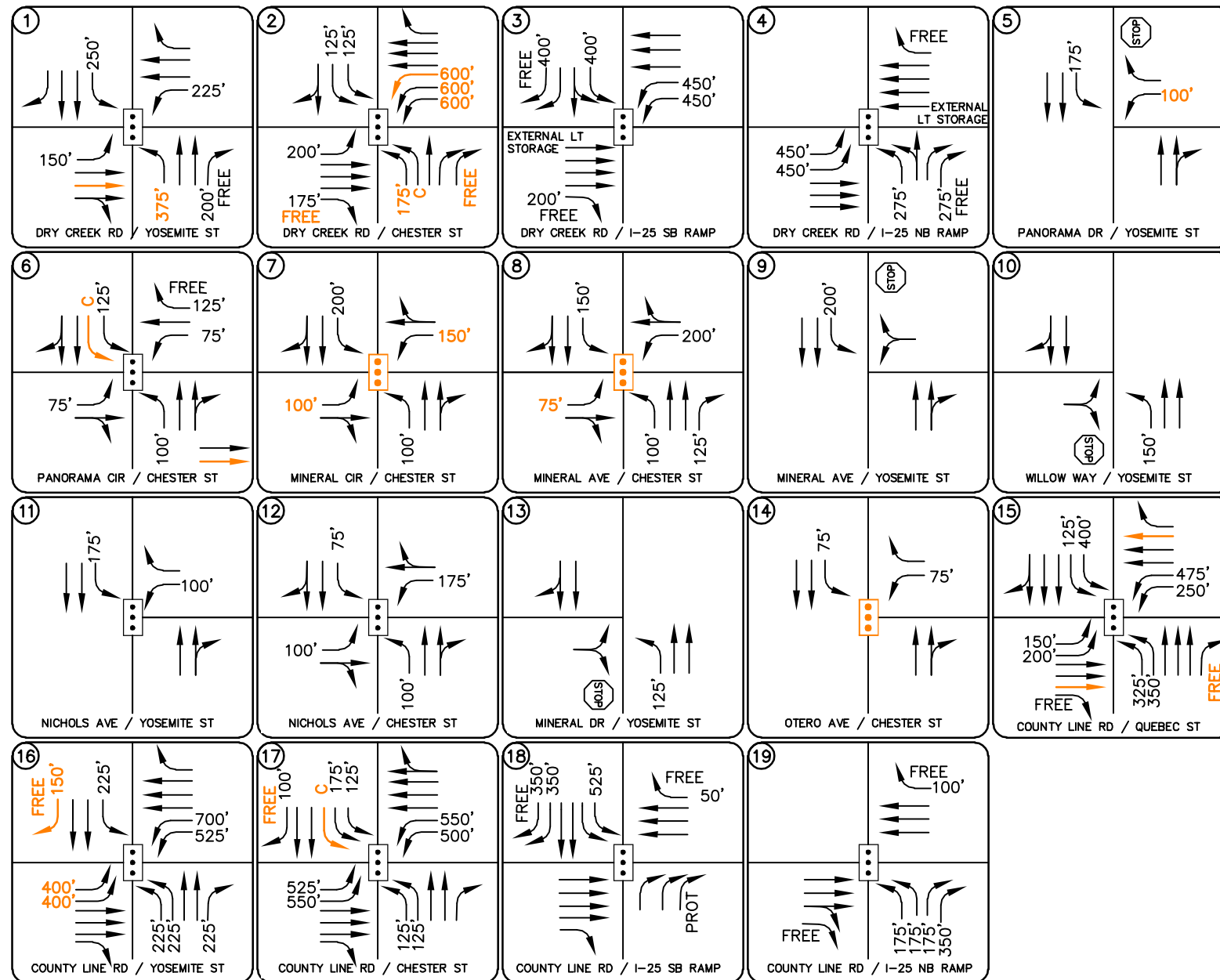
5.7 Intersection Improvements Summary

Intersection improvements were identified at the key study intersections for the existing (2020) condition and buildout year of 2030 as well as providing phased level of development in 2022 (25%), and 2025 (50%). The following **Table 24** summarizes the improvements needed for each intersection along with the recommended timeframe.

Table 24 – Summary of Intersection Improvements

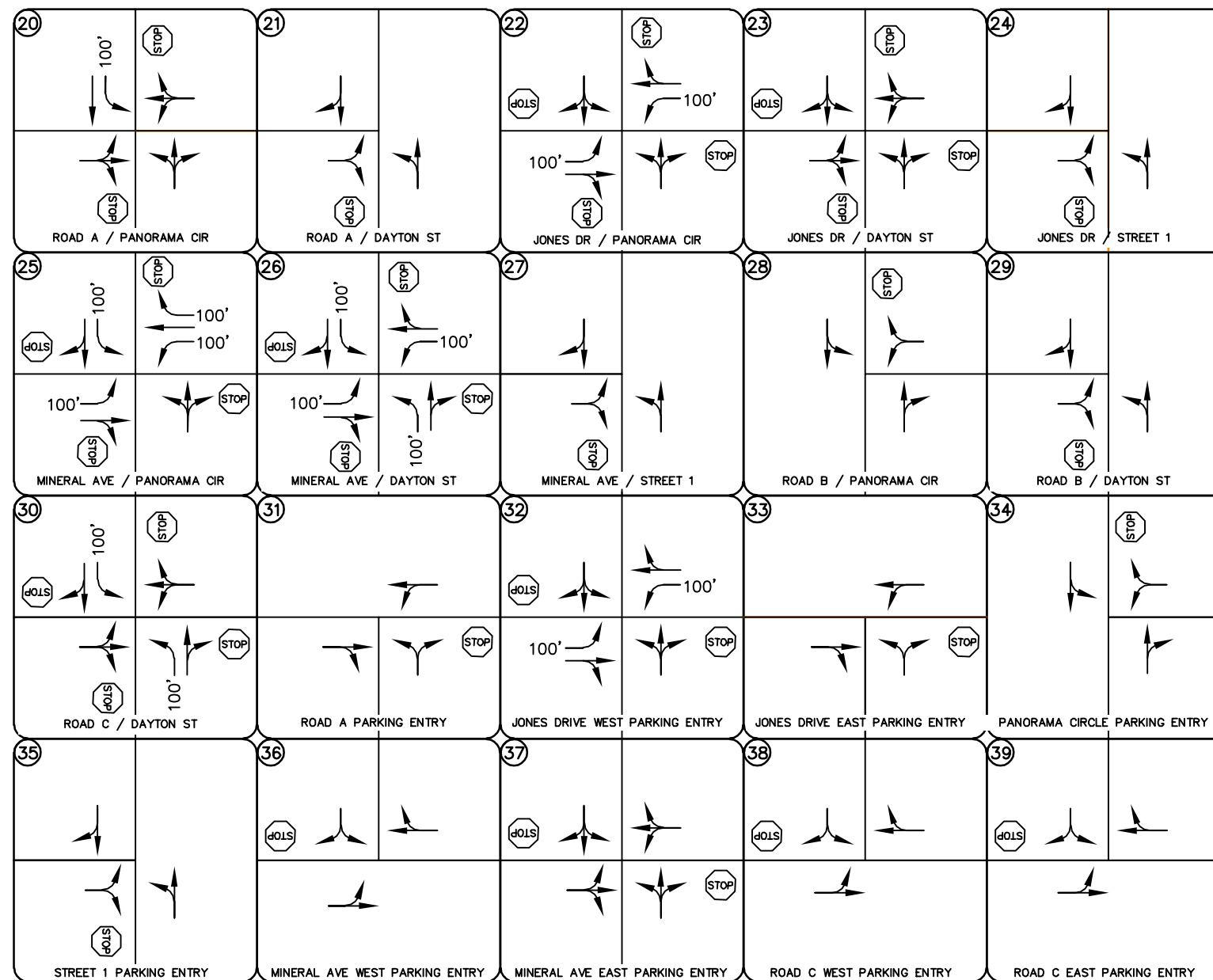
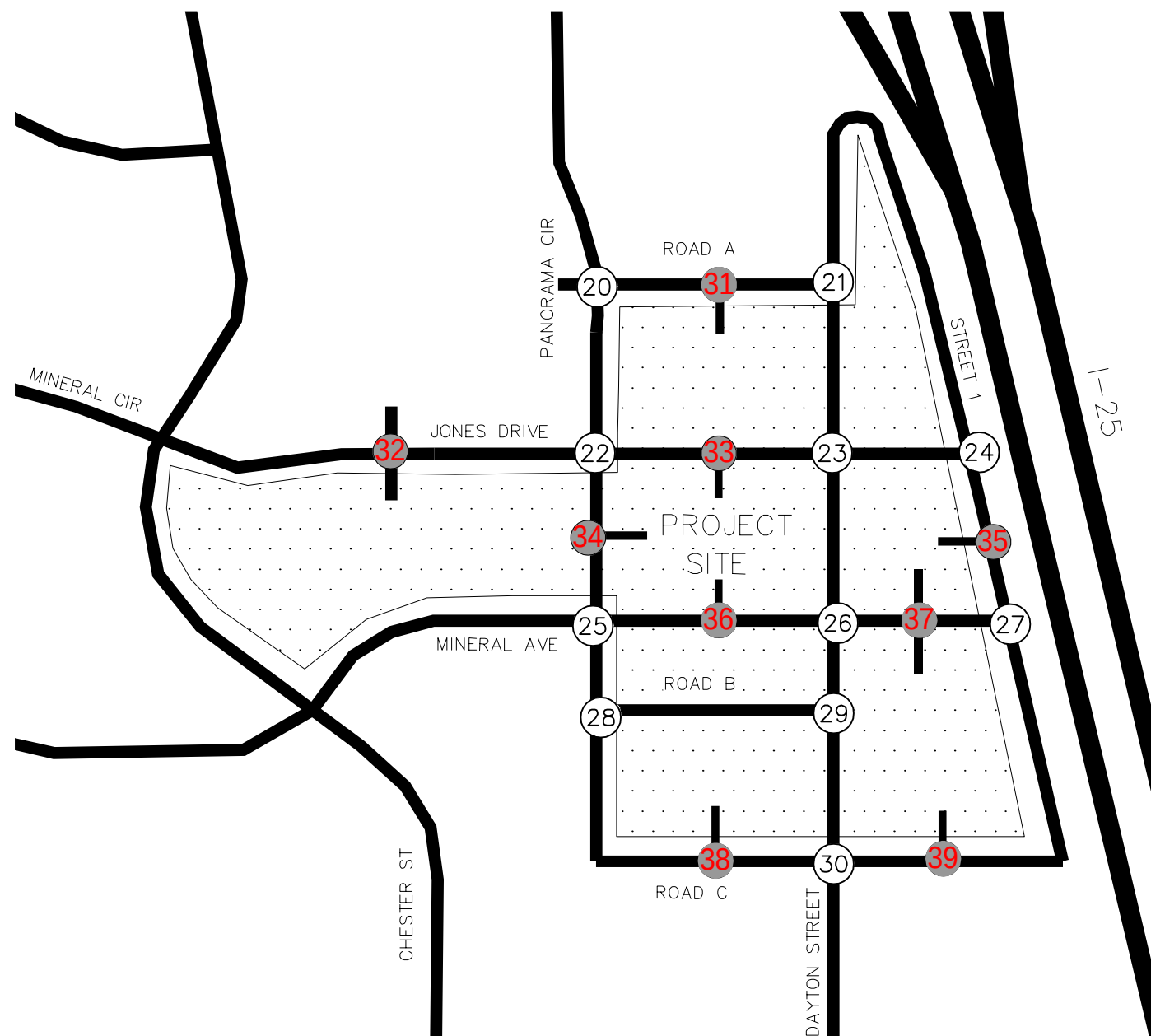
Intersection	Improvements	Planning Year Needed
Dry Creek Rd / Yosemite St (#1)	- Three Eastbound Through Lanes - Three Westbound Through Lanes	2022 2040
Dry Creek Rd / Chester St (#2)	- Westbound Triple Left Turn Lanes - Northbound Free Right Turn Lane - Eastbound Free Right Turn Lane	2025 2025 2025
Panorama Cir / Chester St (#6)	- Southbound Dual Left Turn Lanes (Coincides with Triple Lefts at Intersection #2) - East Leg includes Two Receiving Lanes	2025 2025
Mineral Cir / Chester St (#7)	Traffic Signal	2025
Mineral Ave / Chester St (#8)	Traffic Signal	2025
Otero Ave / Chester St (#14)	Traffic Signal	2025
County Line Rd / Quebec St (#15)	- Three EB and WB Through Lanes - Northbound Free Right Turn Lane	2020 2020
County Line Rd / Yosemite St (#16)	Southbound Free Right Turn Lane	2020
County Line Rd / Chester St (#17)	- Southbound Triple Left Turn Lanes - Southbound Free Right Turn Lane	2020 2020

Based on the operational level of service and queuing analysis results, the recommended lane configurations and control of the study key intersections are shown in **Figure 20** and **Figure 21** for 2030 and **Figure 22** for 2040. All on-site and off-site signing and striping improvements should be incorporated into the Civil Drawings, and conform to City of Centennial standards, as well as the Manual on Uniform Traffic Control Devices – 2009 Edition (MUTCD).



JONES DISTRICT REDEVELOPMENT
2030 RECOMMENDED LANE CONFIGURATIONS AND CONTROL – EXTERNAL INTERSECTIONS

FIGURE 20



LEGEND

- (X) Study Area Key Intersection
- (X) Project Parking Structure Entries
- (STOP) Stop Controlled Approach
- Lane Configurations
- ↪ 100' Turn Lane Length (feet)

JONES DISTRICT REDEVELOPMENT
RECOMMENDED LANE CONFIGURATION AND CONTROL – INTERNAL INTERSECTIONS & PARKING ENTRIES

FIGURE 21

6.0 CONCLUSIONS AND RECOMMENDATIONS

Based on the analysis presented in this report, Kimley-Horn believes the proposed Jones District Redevelopment will be successfully incorporated into the existing and future roadway network. The existing traffic volume analysis, proposed project development, and expected future traffic volumes resulted in the following conclusions and recommendations:

Existing Improvement Recommendations:

- The eastbound and westbound approaches of the County Line Road and Quebec Street intersection (Intersection #15) should provide three through lanes in each direction. Further, a northbound channelized free right turn lane should be constructed at this intersection. It should be noted that traffic counts at this intersection were performed while C-470 was under construction, and it is believed that a lot of traffic is currently utilizing County Line Road as a relief route. It is anticipated that this intersection may likely operate better than reported once construction of C-470 is complete.
- A southbound channelized free right turn lane should be provided at the intersection of County Line Road and Yosemite Street (#16).
- Southbound triple left turn lanes should be considered at the intersection of County Line Road and Chester Street (#17) due to existing vehicle queuing issues. It is recommended that the inside southbound through lane at this intersection be converted to a continuous left turn lane for a third left turn lane. Three receiving lanes currently exist on eastbound County Line Road for the implementation of triple left turn lanes. The northbound approach of this intersection should operate with protected lead or lag left turn phasing while the southbound approach operates with the opposite left turn (lag or lead) phasing because the left turn movements on these approaches will cross paths if southbound triple left turn lanes are implemented.
- A southbound channelized free right turn lane is also recommended at the intersection of County Line Road and Chester Street (#17).

2022 Interim Improvement Recommendations:

External Intersections:

- The eastbound approach of the Dry Creek Road and Yosemite Street (#1) intersection should provide three through lanes.
- A westbound left turn lane should be striped with 100 feet of length at the intersection of Panorama Circle and Yosemite Street (#5). Sufficient pavement width exists, and this improvement only requires pavement striping.
- The substandard eastbound left turn lane at the Mineral Circle/Jones Drive and Chester Street (#7) intersection should be extended from 50 feet of length to 100 feet of length. The westbound left turn lane at this intersection (#7) should be extended to provide 150 feet of length.
- The 25-foot substandard eastbound left turn at the Mineral Avenue and Chester Street (#8) intersection should be extended to provide 75 feet of length.

Internal Intersections:

- With completion of the Jones District Redevelopment project, the site proposes 11 future internal intersections (labeled intersections #20-30) and nine (9) parking access intersections (labeled intersections #31-39). An internal roadway network will be provided to serve the development. The proposed east-west roadways include Road A, Jones Drive, Mineral Avenue, Road B, and Road C. The proposed north-west roadways include Panorama Circle, Dayton Street, and Street 1.
- The four major access roadways for the site will occur from the north using Panorama Circle, the south using Dayton Street, and from two locations from the west using Mineral Avenue and Panorama Circle (named Jones Drive in this study). Panorama Circle is proposed to be realigned and extend south to Mineral Avenue (#25) while removing the curve located near the north side of the site. Panorama Circle will connect perpendicularly with Jones Drive (formally Panorama Circle). Likewise, the existing curve at the north side of Dayton Street and the east side of Mineral Avenue will be removed to create a four-legged intersection with Mineral Avenue and Dayton Street (#26).

- The intersections of Jones Drive/Panorama Circle, Jones Drive/Dayton Street, Mineral Avenue/Panorama Circle, Mineral Avenue/Dayton Street, and Road C/Dayton Street are recommended to provide all-way stop control (AWSC). The remaining six (6) proposed internal intersections and nine (9) parking access intersections are recommended to provide two-way stop control (TWSC).
- A southbound left turn lane should be provided at the intersection of Road A/Panorama Circle (#20). Eastbound and westbound left turn lanes should be provided along Jones Drive from Chester Street to Panorama Circle. Eastbound and westbound left turn lanes are also recommended along Mineral Avenue from Chester Street to Dayton Street. A westbound right turn lane and a southbound left turn lane should be provided at the intersection of Mineral Avenue/Panorama Circle (#25). Northbound and southbound left turn lanes should be provided along Dayton Street from Mineral Avenue to Road C.
- The existing north access to IKEA located along the east side of Dayton Street is proposed to realign to the north and share access with the proposed east leg of Road C at Dayton Street. The delivery access to IKEA for delivery trucks will be reconfigured and remain.
- All project parking accesses are recommended to have R1-1 "STOP" signs installed for the exiting approaches. One exiting lane should be sufficient at all project accesses while shared movement lanes should be sufficient for vehicles entering all parking access locations with exception of the Jones Drive West Parking Access (#32) which is recommended to include eastbound and westbound left turn lanes.

2025 Interim Improvement Recommendations:

- The northbound approach of the Dry Creek Road and Chester Street (#2) intersection should provide a channelized free right turn lane. An eastbound channelized free right turn lane and westbound triple left turn lanes should also be considered at this intersection of Dry Creek Road and Chester Street (#2). Four receiving lanes will be required on the south leg of this intersection with three for the triple left turns and one for the channelized free right turn. It is recommended that the existing raised median on the south leg of this intersection be modified to provide enough pavement width for an additional southbound lane. The outside of the northbound dual left turn lanes at the intersection of Dry Creek Road and

Chester Street (#2) should be extended back to Panorama Circle as a continuous left turn lane.

- In association with the westbound to southbound triple left turn lanes at the Dry Creek Road and Chester Street intersection, southbound dual left turn lanes should be provided at the intersection of Panorama Circle and Chester Street (#6). The existing southbound left turn lane should be extended back to Dry Creek Road as a continuous lane while the inside left turn lane should be provided from within the existing raised median with 125 feet of length. The east leg of this intersection will need to provide two receiving lanes in order to accommodate the southbound dual left turn lanes.
- The following intersections are likely to warrant signalization and should be considered to provide signal control by 2025:
 - Mineral Circle and Chester Street (#7)
 - Mineral Avenue and Chester Street (#8)
 - Otero Avenue and Chester Street (#14)

2030 Buildout Improvement Recommendations:

- The northbound left turn lane at the Dry Creek Road and Yosemite Street (#1) intersection should be restriped and extended from 175 feet of length to 375 feet of length.
- Side-by-side left turn lanes should be incorporated along the eastbound approach of the County Line Road and Yosemite Street (#16) intersection and the westbound approach of the County Line Road and Willow Street intersection. The westbound dual left turn lanes should provide 400 feet of length per lane.

2040 Buildout Improvement Recommendations:

- The westbound approach of the Dry Creek Road and Yosemite Street (#1) intersection should provide three westbound through lanes. The proposed new westbound right turn lane recommended with the 2030 construction would be absorbed with the addition of the third through lane.

General Recommendations:

Any on-site and off-site signing and striping improvements should be incorporated into the Civil Drawings and conform to the City of Centennial and CDOT standards as applicable as well as the Manual on Uniform Traffic Control Devices – 2009 Edition (MUTCD).

APPENDICES

APPENDIX A

Intersection Count Sheets



Ridgeview Data
Collection

Centennial, CO
Jones District Redevelopment
AM Peak
Dry Creek Rd and Yosemite St

File Name : Dry Creek and Yosemite AM
Site Code : IPO 427
Start Date : 4/2/2019
Page No : 1

Groups Printed- Automobiles

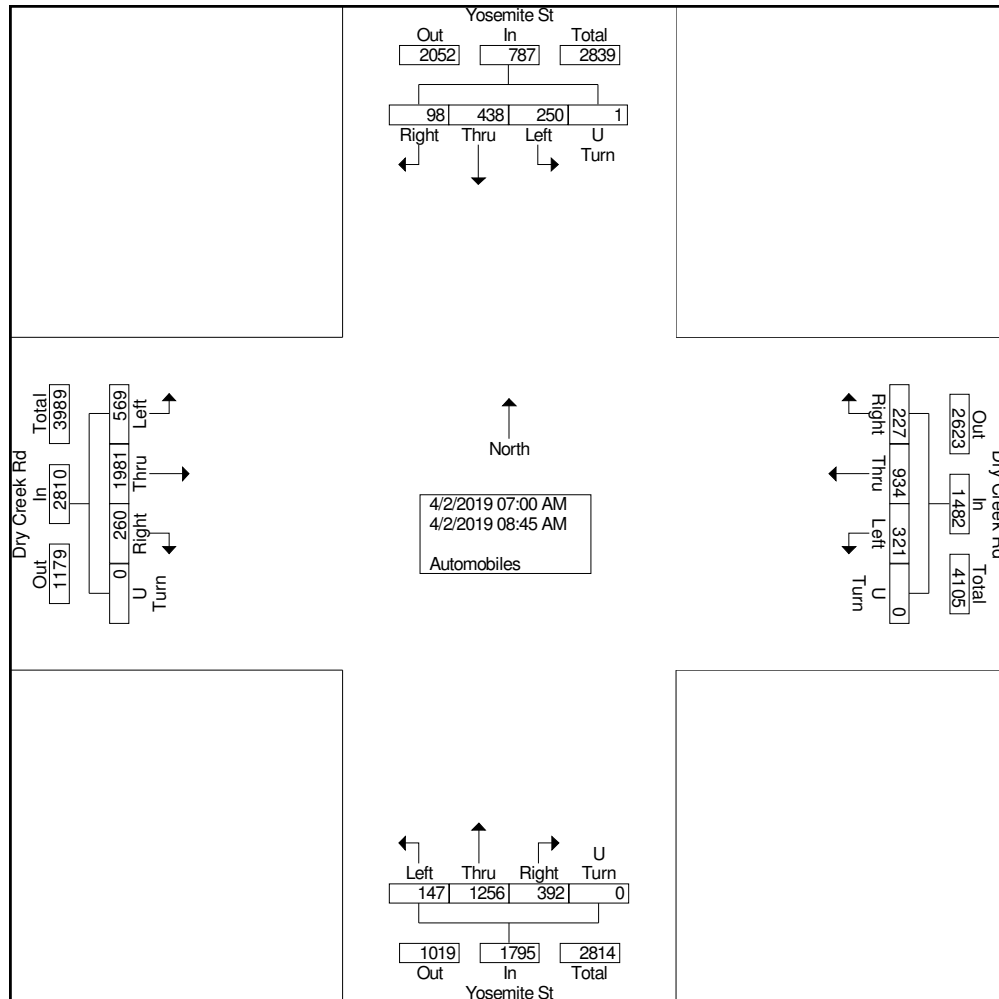
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07:00 AM	53	213	22	0	288	22	70	18	0	110	11	109	55	0	175	27	40	5	0	72	645
07:15 AM	101	309	32	0	442	25	110	27	0	162	11	125	43	0	179	29	45	12	0	86	869
07:30 AM	72	244	32	0	348	46	102	39	0	187	18	164	48	0	230	36	60	7	1	104	869
07:45 AM	71	293	30	0	394	61	156	31	0	248	23	204	68	0	295	51	73	16	0	140	1077
Total	297	1059	116	0	1472	154	438	115	0	707	63	602	214	0	879	143	218	40	1	402	3460
08:00 AM	67	263	41	0	371	61	108	32	0	201	26	194	52	0	272	26	60	13	0	99	943
08:15 AM	74	251	46	0	371	33	115	30	0	178	17	129	37	0	183	29	57	16	0	102	834
08:30 AM	59	203	21	0	283	36	139	23	0	198	27	137	49	0	213	31	51	14	0	96	790
08:45 AM	72	205	36	0	313	37	134	27	0	198	14	194	40	0	248	21	52	15	0	88	847
Total	272	922	144	0	1338	167	496	112	0	775	84	654	178	0	916	107	220	58	0	385	3414
Grand Total	569	1981	260	0	2810	321	934	227	0	1482	147	1256	392	0	1795	250	438	98	1	787	6874
Apprch %	20.2	70.5	9.3	0		21.7	63	15.3	0		8.2	70	21.8	0		31.8	55.7	12.5	0.1		
Total %	8.3	28.8	3.8	0	40.9	4.7	13.6	3.3	0	21.6	2.1	18.3	5.7	0	26.1	3.6	6.4	1.4	0	11.4	



Ridgeview Data
Collection

Centennial, CO
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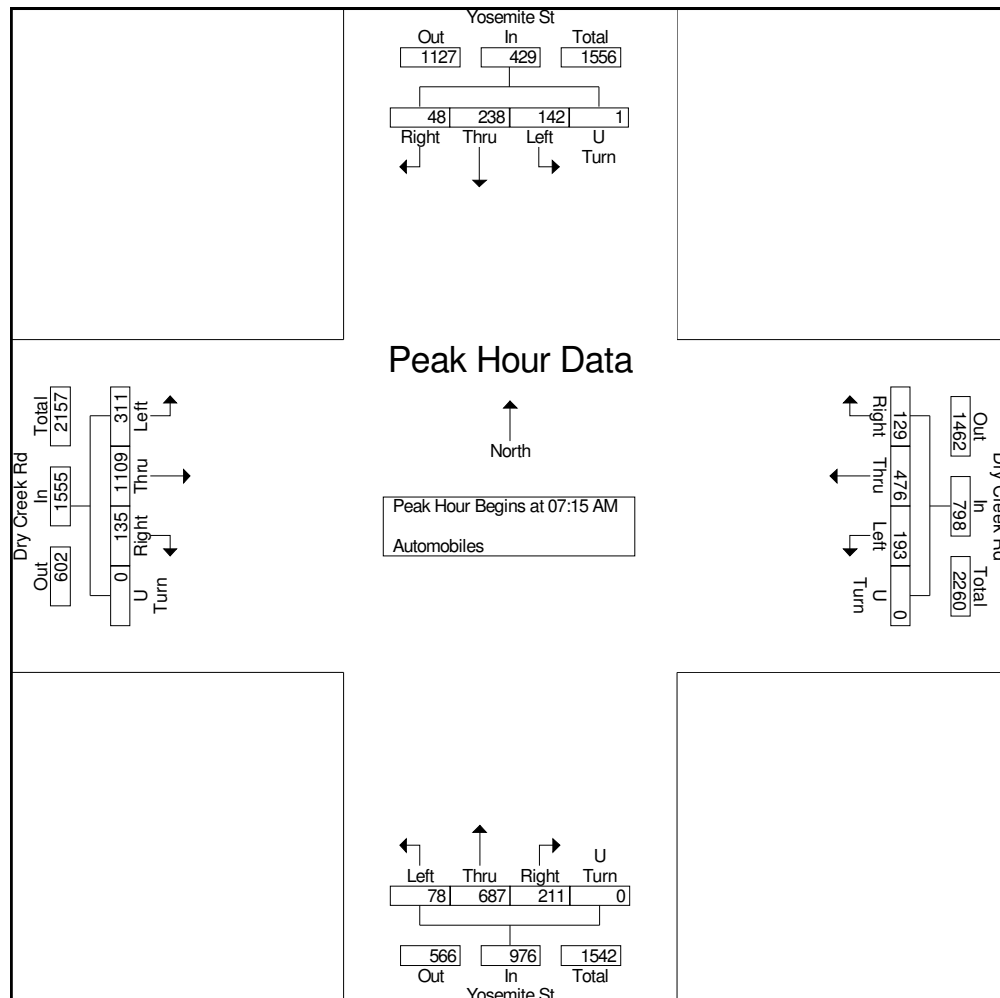


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Jones District Redevelopment
AM Peak
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Start Time	Left	Thru	Right	U Turn	App. Total	Left	Thru	Right	U Turn	App. Total	Left	Thru	Right	U Turn	App. Total	Left	Thru	Right	U Turn	App. Total	Int. Total
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	101	309	32	0	442	25	110	27	0	162	11	125	43	0	179	29	45	12	0	86	869
07:30 AM	72	244	32	0	348	46	102	39	0	187	18	164	48	0	230	36	60	7	1	104	869
07:45 AM	71	293	30	0	394	61	156	31	0	248	23	204	68	0	295	51	73	16	0	140	1077
08:00 AM	67	263	41	0	371	61	108	32	0	201	26	194	52	0	272	26	60	13	0	99	943
Total Volume	311	1109	135	0	1555	193	476	129	0	798	78	687	211	0	976	142	238	48	1	429	3758
% App. Total	20	71.3	8.7	0		24.2	59.6	16.2	0		8	70.4	21.6	0		33.1	55.5	11.2	0.2		
PHF	.770	.897	.823	.000	.880	.791	.763	.827	.000	.804	.750	.842	.776	.000	.827	.696	.815	.750	.250	.766	.872





Ridgeview Data
Collection

Centennial, CO
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PM Peak
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Groups Printed- Automobiles

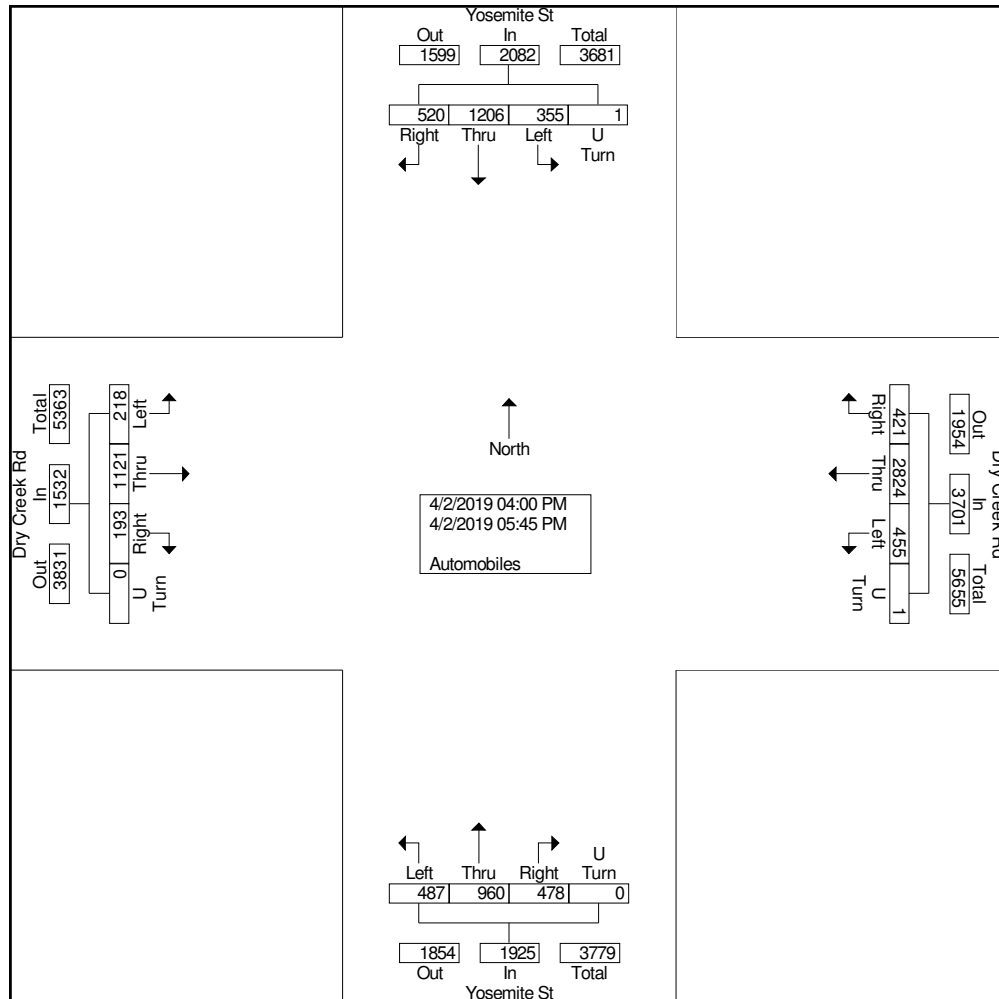
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04:00 PM	18	140	24	0	182	50	343	44	1	438	57	127	68	0	252	30	131	60	1	222	1094
04:15 PM	33	156	17	0	206	56	333	56	0	445	83	123	61	0	267	45	125	61	0	231	1149
04:30 PM	26	145	34	0	205	47	363	53	0	463	65	122	63	0	250	43	153	60	0	256	1174
04:45 PM	31	127	21	0	179	60	356	55	0	471	71	124	57	0	252	57	161	60	0	278	1180
Total	108	568	96	0	772	213	1395	208	1	1817	276	496	249	0	1021	175	570	241	1	987	4597
05:00 PM	28	133	25	0	186	61	367	57	0	485	61	152	80	0	293	43	183	88	0	314	1278
05:15 PM	29	127	25	0	181	62	386	59	0	507	63	121	59	0	243	51	166	72	0	289	1220
05:30 PM	26	155	27	0	208	57	353	52	0	462	47	107	47	0	201	48	155	72	0	275	1146
05:45 PM	27	138	20	0	185	62	323	45	0	430	40	84	43	0	167	38	132	47	0	217	999
Total	110	553	97	0	760	242	1429	213	0	1884	211	464	229	0	904	180	636	279	0	1095	4643
Grand Total	218	1121	193	0	1532	455	2824	421	1	3701	487	960	478	0	1925	355	1206	520	1	2082	9240
Apprch %	14.2	73.2	12.6	0		12.3	76.3	11.4	0		25.3	49.9	24.8	0		17.1	57.9	25	0		
Total %	2.4	12.1	2.1	0	16.6	4.9	30.6	4.6	0	40.1	5.3	10.4	5.2	0	20.8	3.8	13.1	5.6	0	22.5	



Ridgeview Data
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Centennial, CO
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PM Peak
Dry Creek Rd and Yosemite St

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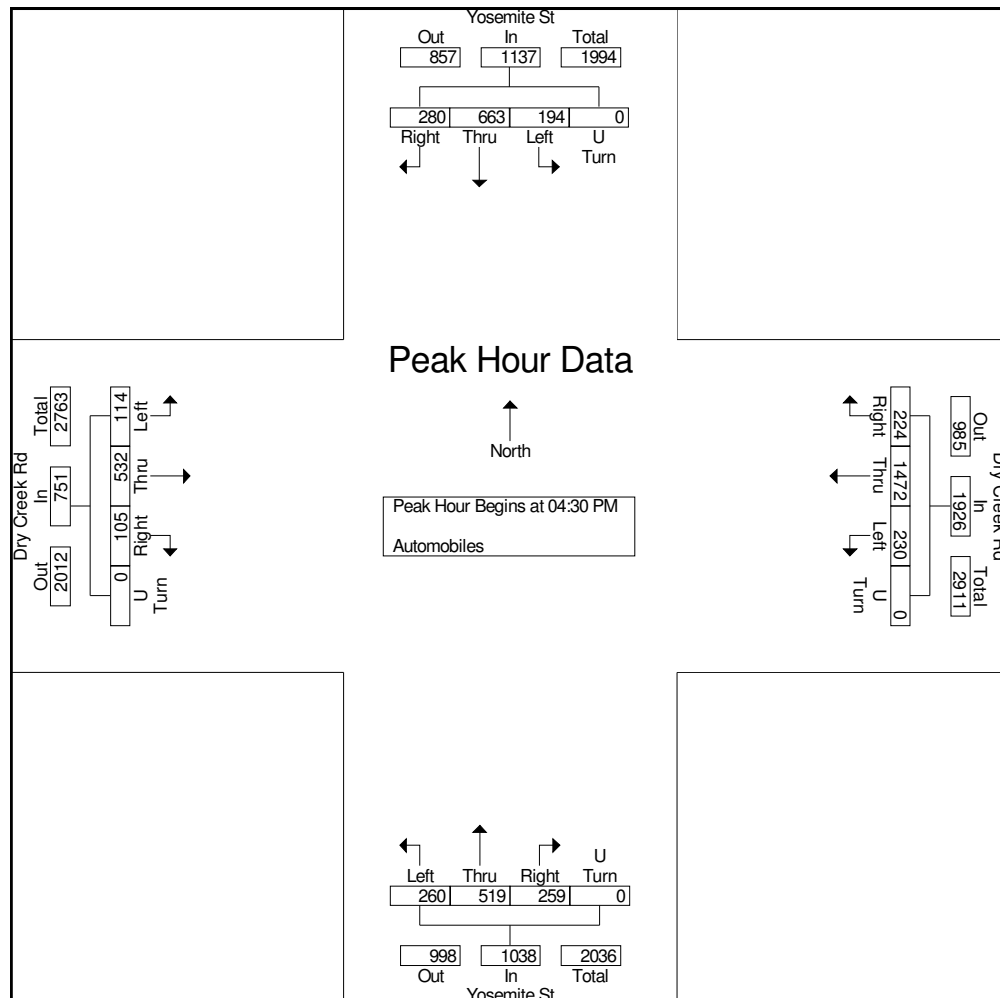


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Jones District Redevelopment
PM Peak
Dry Creek Rd and Yosemite St

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Start Time	Left	Thru	Right	U Turn	App. Total	Left	Thru	Right	U Turn	App. Total	Left	Thru	Right	U Turn	App. Total	Left	Thru	Right	U Turn	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	26	145	34	0	205	47	363	53	0	463	65	122	63	0	250	43	153	60	0	256	1174
04:45 PM	31	127	21	0	179	60	356	55	0	471	71	124	57	0	252	57	161	60	0	278	1180
05:00 PM	28	133	25	0	186	61	367	57	0	485	61	152	80	0	293	43	183	88	0	314	1278
05:15 PM	29	127	25	0	181	62	386	59	0	507	63	121	59	0	243	51	166	72	0	289	1220
Total Volume	114	532	105	0	751	230	1472	224	0	1926	260	519	259	0	1038	194	663	280	0	1137	4852
% App. Total	15.2	70.8	14	0		11.9	76.4	11.6	0		25	50	25	0		17.1	58.3	24.6	0		
PHF	.919	.917	.772	.000	.916	.927	.953	.949	.000	.950	.915	.854	.809	.000	.886	.851	.906	.795	.000	.905	.949





Ridgeview Data
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Jones District Redevelopment
AM Peak
Dry Creek Rd and Chester St

File Name : Dry Creek and Chester AM
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Groups Printed- Automobiles

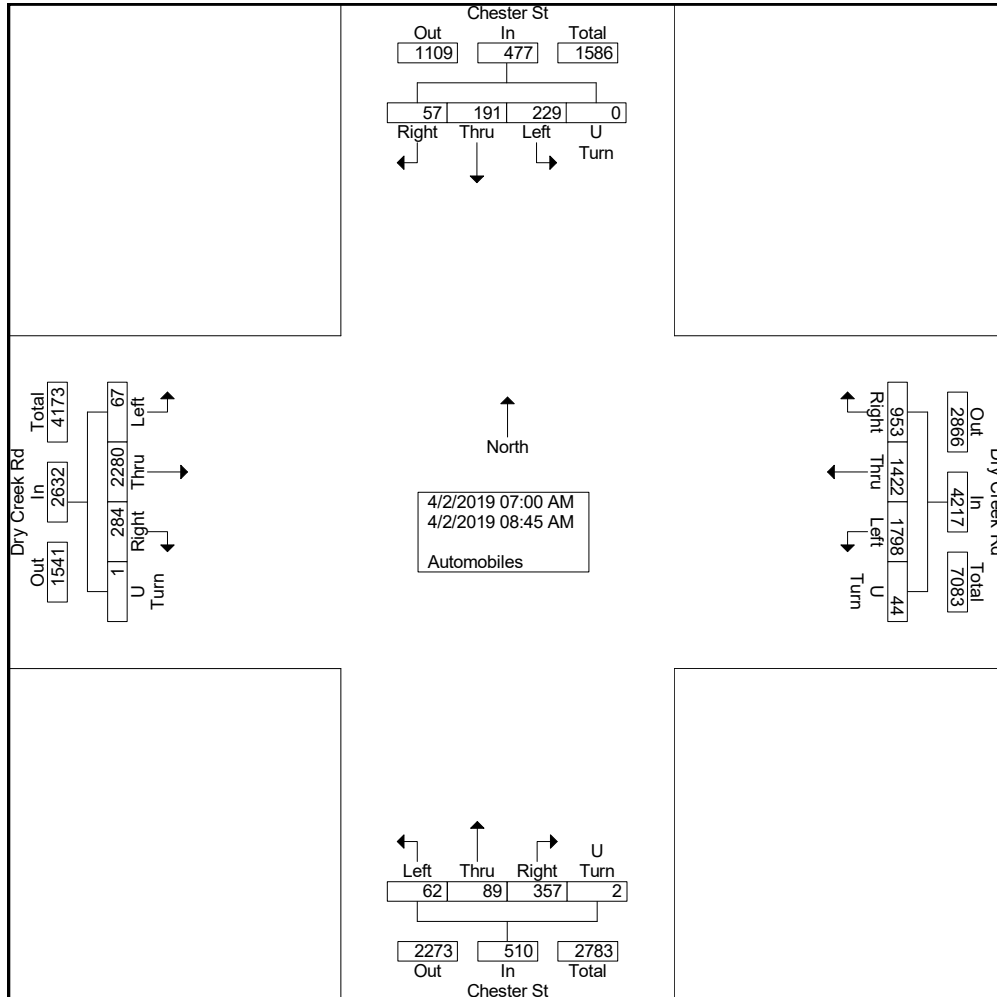
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07:15 AM	8	290	35	0	333	231	157	97	12	497	4	12	40	1	57	27	18	8	0	53	940
07:30 AM	5	324	36	0	365	211	195	114	4	524	6	9	46	0	61	28	24	9	0	61	1011
07:45 AM	12	328	49	0	389	233	206	137	6	582	11	17	54	1	83	42	41	9	0	92	1146
Total	30	1238	150	0	1418	863	670	445	30	2008	30	48	191	2	271	110	97	32	0	239	3936
08:00 AM	12	312	50	0	374	271	206	140	1	618	8	10	47	0	65	25	34	6	0	65	1122
08:15 AM	9	242	37	1	289	245	161	129	7	542	10	16	34	0	60	29	25	8	0	62	953
08:30 AM	8	273	31	0	312	197	198	100	4	499	9	7	42	0	58	30	19	5	0	54	923
08:45 AM	8	215	16	0	239	222	187	139	2	550	5	8	43	0	56	35	16	6	0	57	902
Total	37	1042	134	1	1214	935	752	508	14	2209	32	41	166	0	239	119	94	25	0	238	3900
Grand Total	67	2280	284	1	2632	1798	1422	953	44	4217	62	89	357	2	510	229	191	57	0	477	7836
Apprch %	2.5	86.6	10.8	0		42.6	33.7	22.6	1		12.2	17.5	70	0.4		48	40	11.9	0		
Total %	0.9	29.1	3.6	0	33.6	22.9	18.1	12.2	0.6	53.8	0.8	1.1	4.6	0	6.5	2.9	2.4	0.7	0	6.1	



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AM Peak
Dry Creek Rd and Chester St

File Name : Dry Creek and Chester AM
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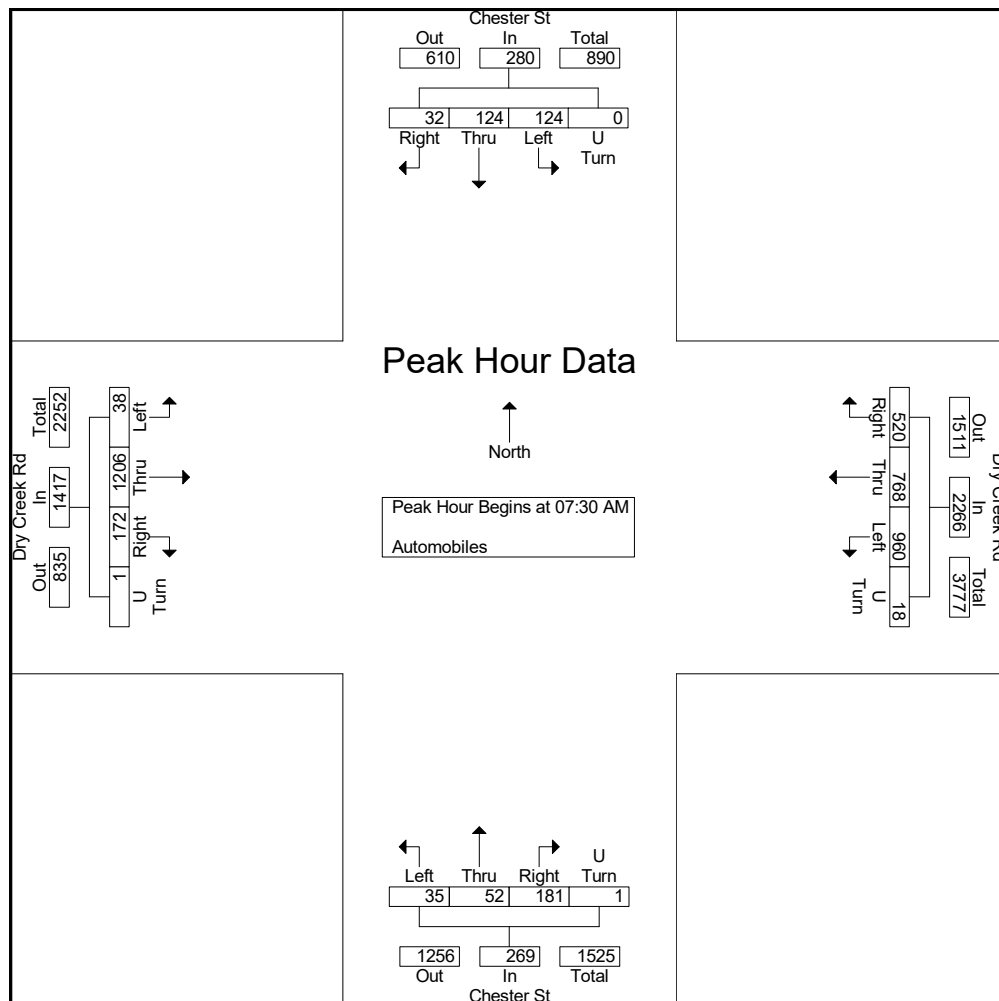


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AM Peak
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Peak Hour Analysis From 07:00 AM to 08:45 AM - Peak 1 of 1																					
Peak Hour for Entire Intersection Begins at 07:30 AM																					
07:30 AM	5	324	36	0	365	211	195	114	4	524	6	9	46	0	61	28	24	9	0	61	1011
07:45 AM	12	328	49	0	389	233	206	137	6	582	11	17	54	1	83	42	41	9	0	92	1146
08:00 AM	12	312	50	0	374	271	206	140	1	618	8	10	47	0	65	25	34	6	0	65	1122
08:15 AM	9	242	37	1	289	245	161	129	7	542	10	16	34	0	60	29	25	8	0	62	953
Total Volume	38	1206	172	1	1417	960	768	520	18	2266	35	52	181	1	269	124	124	32	0	280	4232
% App. Total	2.7	85.1	12.1	0.1		42.4	33.9	22.9	0.8		13	19.3	67.3	0.4		44.3	44.3	11.4	0		
PHF	.792	.919	.860	.250	.911	.886	.932	.929	.643	.917	.795	.765	.838	.250	.810	.738	.756	.889	.000	.761	.923





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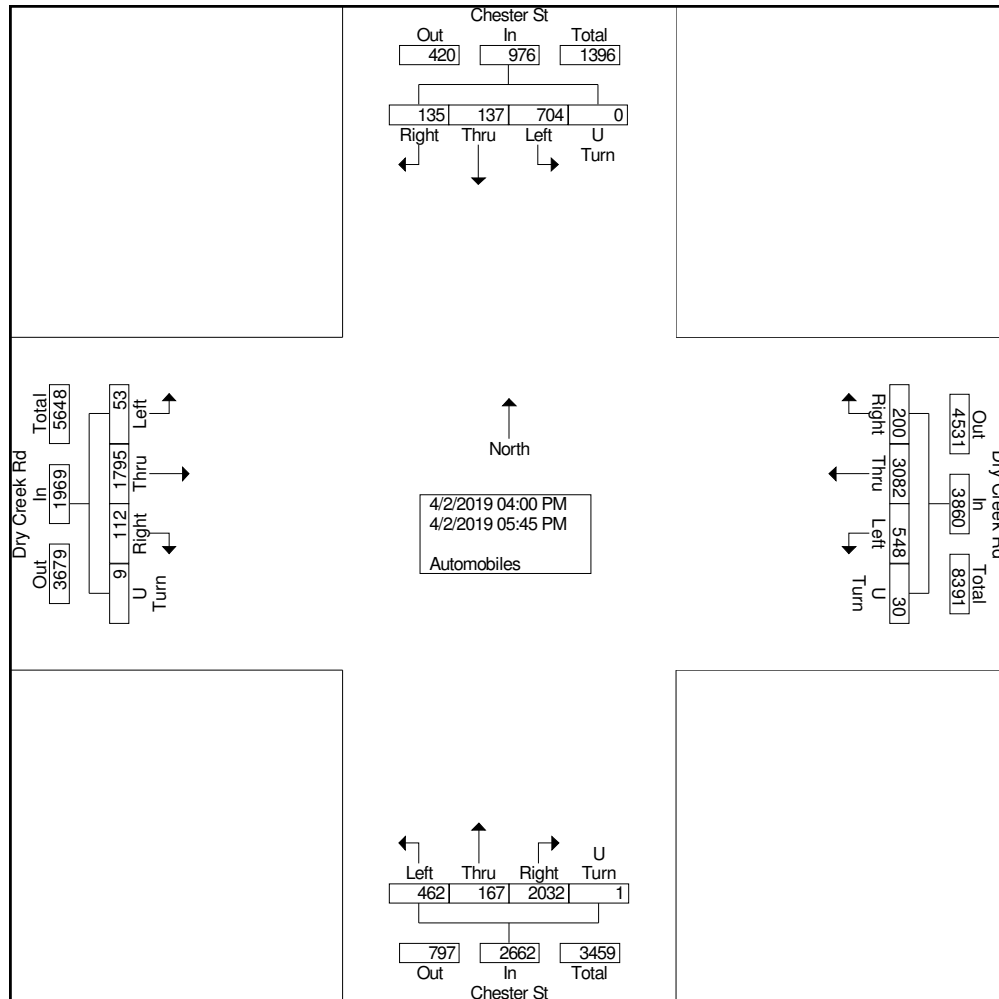
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04:00 PM	9	193	13	1	216	65	366	26	3	460	57	24	296	0	377	102	18	23	0	143	1196
04:15 PM	5	256	14	2	277	57	379	33	1	470	46	28	249	0	323	94	23	18	0	135	1205
04:30 PM	5	223	13	2	243	78	375	26	0	479	72	25	272	0	369	91	23	15	0	129	1220
04:45 PM	4	243	7	1	255	73	398	21	4	496	57	16	238	0	311	92	13	22	0	127	1189
Total	23	915	47	6	991	273	1518	106	8	1905	232	93	1055	0	1380	379	77	78	0	534	4810
05:00 PM	7	220	20	0	247	75	380	23	1	479	60	27	302	0	389	108	14	26	0	148	1263
05:15 PM	5	234	16	2	257	57	451	30	7	545	70	11	250	0	331	67	21	8	0	96	1229
05:30 PM	7	203	20	0	230	77	392	16	10	495	49	24	241	1	315	87	14	12	0	113	1153
05:45 PM	11	223	9	1	244	66	341	25	4	436	51	12	184	0	247	63	11	11	0	85	1012
Total	30	880	65	3	978	275	1564	94	22	1955	230	74	977	1	1282	325	60	57	0	442	4657
Grand Total	53	1795	112	9	1969	548	3082	200	30	3860	462	167	2032	1	2662	704	137	135	0	976	9467
Apprch %	2.7	91.2	5.7	0.5		14.2	79.8	5.2	0.8		17.4	6.3	76.3	0		72.1	14	13.8	0		
Total %	0.6	19	1.2	0.1	20.8	5.8	32.6	2.1	0.3	40.8	4.9	1.8	21.5	0	28.1	7.4	1.4	1.4	0	10.3	



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PM Peak
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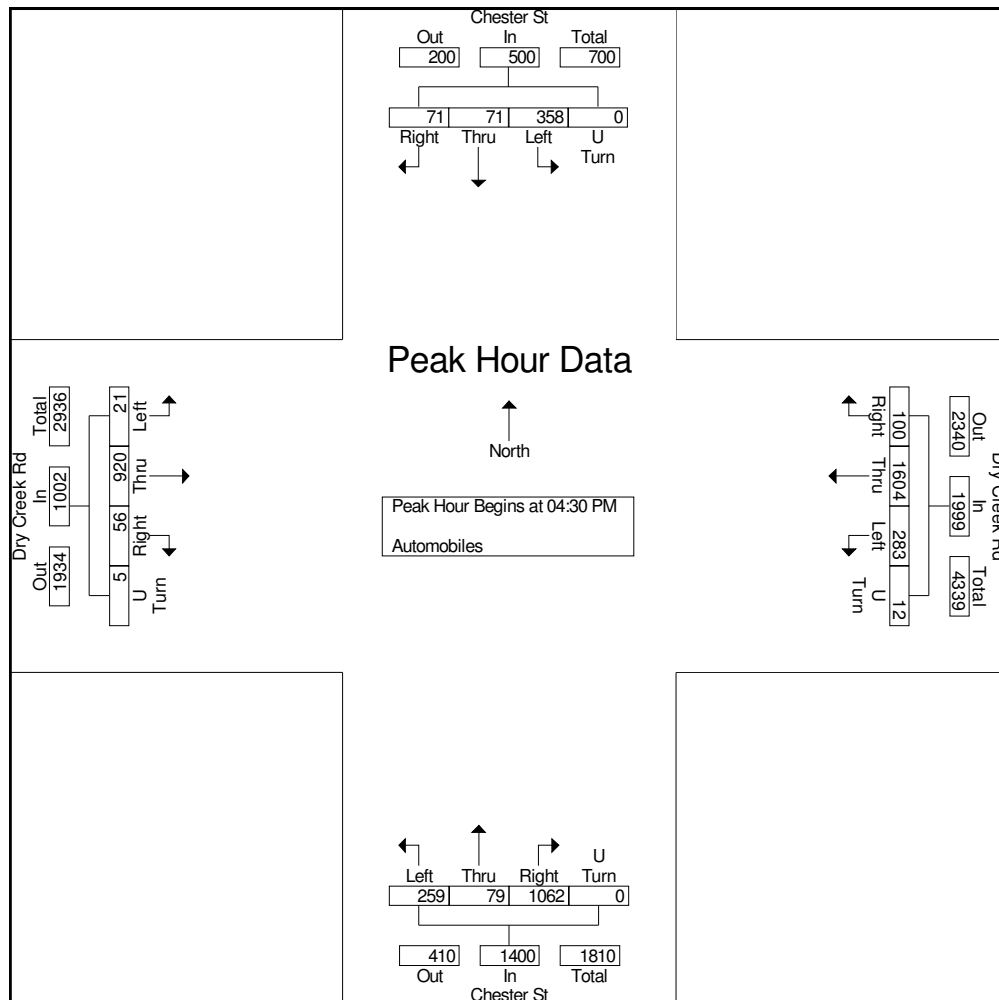


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Peak Hour Analysis From 04:00 PM to 05:45 PM - Peak 1 of 1																					
Peak Hour for Entire Intersection Begins at 04:30 PM																					
04:30 PM	5	223	13	2	243	78	375	26	0	479	72	25	272	0	369	91	23	15	0	129	1220
04:45 PM	4	243	7	1	255	73	398	21	4	496	57	16	238	0	311	92	13	22	0	127	1189
05:00 PM	7	220	20	0	247	75	380	23	1	479	60	27	302	0	389	108	14	26	0	148	1263
05:15 PM	5	234	16	2	257	57	451	30	7	545	70	11	250	0	331	67	21	8	0	96	1229
Total Volume	21	920	56	5	1002	283	1604	100	12	1999	259	79	1062	0	1400	358	71	71	0	500	4901
% App. Total	2.1	91.8	5.6	0.5		14.2	80.2	5	0.6		18.5	5.6	75.9	0		71.6	14.2	14.2	0		
PHF	.750	.947	.700	.625	.975	.907	.889	.833	.429	.917	.899	.731	.879	.000	.900	.829	.772	.683	.000	.845	.970





Ridgeview Data
Collection

Centennial, CO
Jones District Redevelopment
AM Peak
Dry Creek Rd and I-25 SB Ramp

File Name : Dry Creek and I-25 SB Ramp AM
Site Code : IPO 427
Start Date : 4/4/2019
Page No : 1

Groups Printed- Automobiles

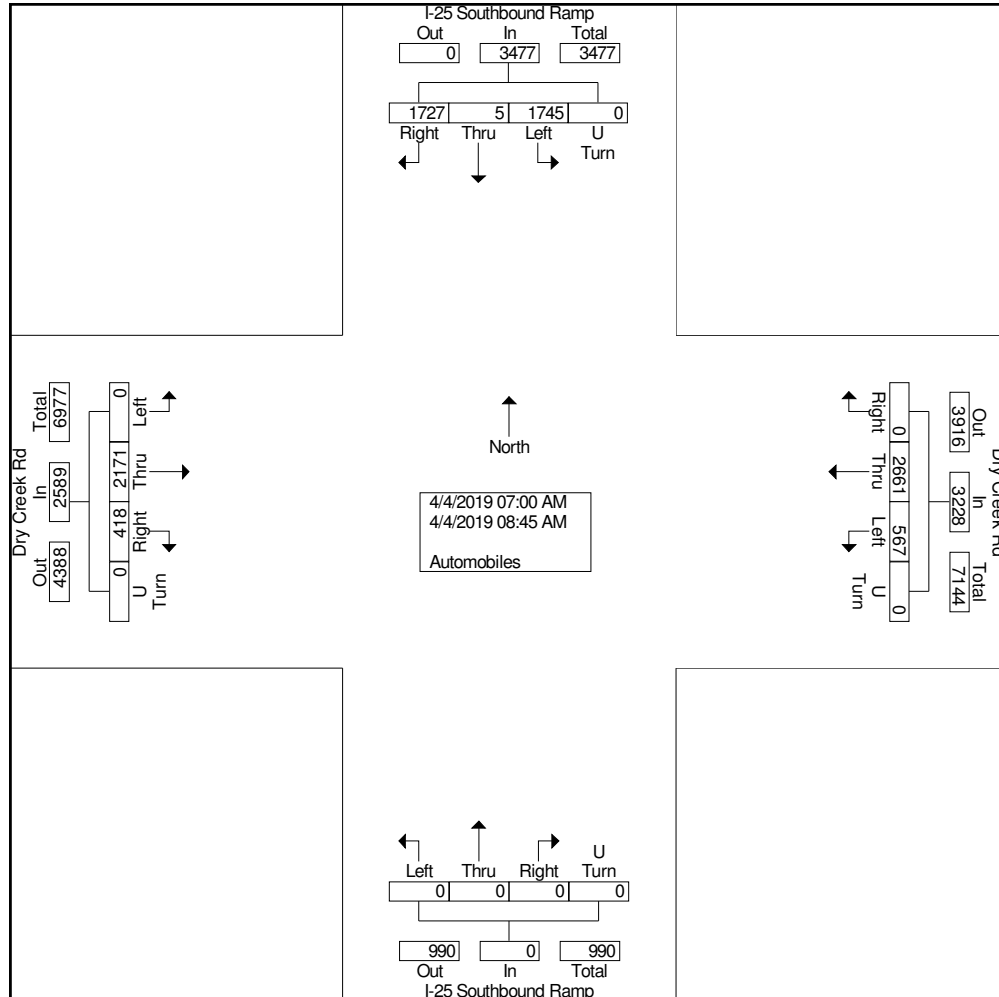
	Dry Creek Rd Eastbound					Dry Creek Rd Westbound					I-25 Southbound Ramp Northbound					I-25 Southbound Ramp Southbound					
Start Time	Left	Thru	Right	U Turn	App. Total	Left	Thru	Right	U Turn	App. Total	Left	Thru	Right	U Turn	App. Total	Left	Thru	Right	U Turn	App. Total	Int. Total
07:00 AM	0	280	31	0	311	49	238	0	0	287	0	0	0	0	0	232	0	198	0	430	1028
07:15 AM	0	271	53	0	324	64	263	0	0	327	0	0	0	0	0	204	0	187	0	391	1042
07:30 AM	0	304	52	0	356	61	367	0	0	428	0	0	0	0	0	250	0	236	0	486	1270
07:45 AM	0	246	62	0	308	76	405	0	0	481	0	0	0	0	0	229	0	260	0	489	1278
Total	0	1101	198	0	1299	250	1273	0	0	1523	0	0	0	0	0	915	0	881	0	1796	4618
08:00 AM	0	271	53	0	324	61	372	0	0	433	0	0	0	0	0	251	2	263	0	516	1273
08:15 AM	0	296	58	0	354	57	353	0	0	410	0	0	0	0	0	176	0	174	0	350	1114
08:30 AM	0	283	60	0	343	100	306	0	0	406	0	0	0	0	0	202	1	218	0	421	1170
08:45 AM	0	220	49	0	269	99	357	0	0	456	0	0	0	0	0	201	2	191	0	394	1119
Total	0	1070	220	0	1290	317	1388	0	0	1705	0	0	0	0	0	830	5	846	0	1681	4676
Grand Total	0	2171	418	0	2589	567	2661	0	0	3228	0	0	0	0	0	1745	5	1727	0	3477	9294
Apprch %	0	83.9	16.1	0		17.6	82.4	0	0		0	0	0	0		50.2	0.1	49.7	0		
Total %	0	23.4	4.5	0	27.9	6.1	28.6	0	0	34.7	0	0	0	0	0	18.8	0.1	18.6	0	37.4	



Ridgeview Data
Collection

Centennial, CO
Jones District Redevelopment
AM Peak
Dry Creek Rd and I-25 SB Ramp

File Name : Dry Creek and I-25 SB Ramp AM
Site Code : IPO 427
Start Date : 4/4/2019
Page No : 2



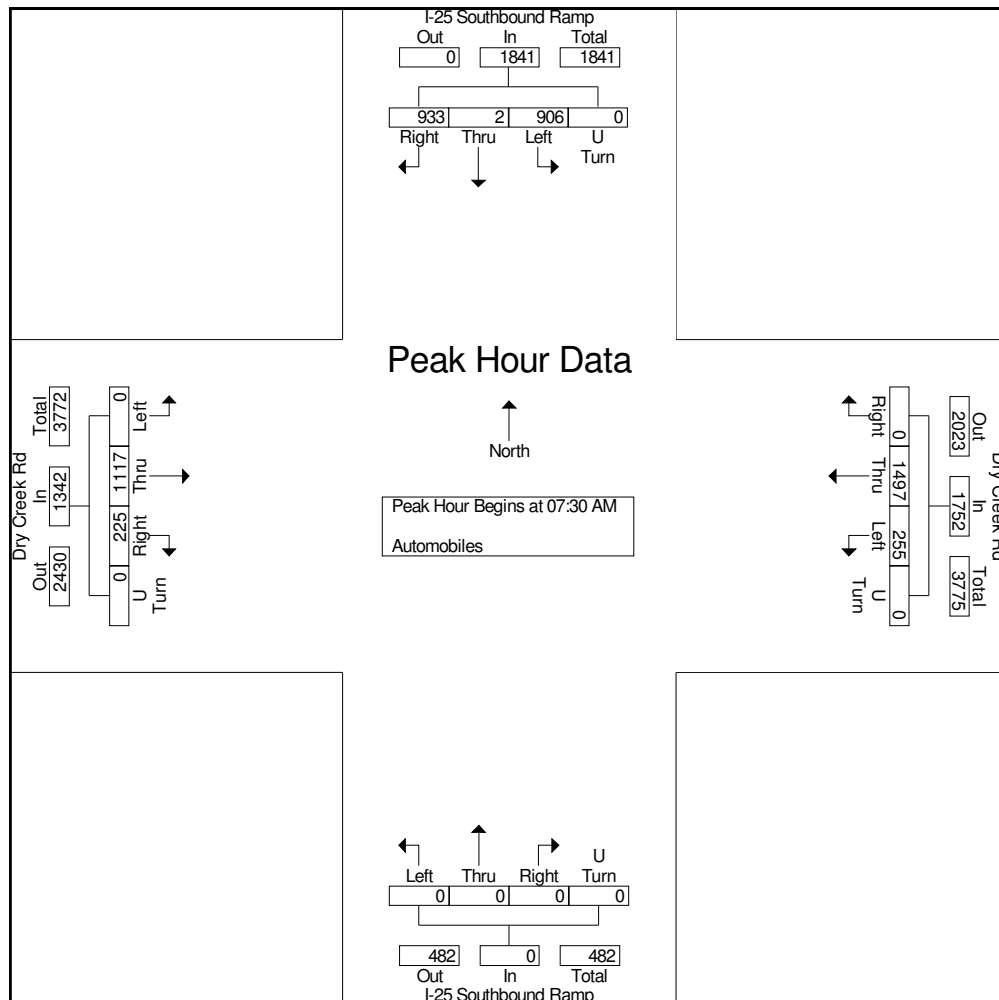


Ridgeview Data
Collection

Centennial, CO
Jones District Redevelopment
AM Peak
Dry Creek Rd and I-25 SB Ramp

File Name : Dry Creek and I-25 SB Ramp AM
Site Code : IPO 427
Start Date : 4/4/2019
Page No : 3

	Dry Creek Rd Eastbound					Dry Creek Rd Westbound					I-25 Southbound Ramp Northbound					I-25 Southbound Ramp Southbound					
Start Time	Left	Thru	Right	U Turn	App. Total	Left	Thru	Right	U Turn	App. Total	Left	Thru	Right	U Turn	App. Total	Left	Thru	Right	U Turn	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	0	304	52	0	356	61	367	0	0	428	0	0	0	0	0	250	0	236	0	486	1270
07:45 AM	0	246	62	0	308	76	405	0	0	481	0	0	0	0	0	229	0	260	0	489	1278
08:00 AM	0	271	53	0	324	61	372	0	0	433	0	0	0	0	0	251	2	263	0	516	1273
08:15 AM	0	296	58	0	354	57	353	0	0	410	0	0	0	0	0	176	0	174	0	350	1114
Total Volume	0	1117	225	0	1342	255	1497	0	0	1752	0	0	0	0	0	906	2	933	0	1841	4935
% App. Total	0	83.2	16.8	0		14.6	85.4	0	0		0	0	0	0		49.2	0.1	50.7	0		
PHF	.000	.919	.907	.000	.942	.839	.924	.000	.000	.911	.000	.000	.000	.000	.000	.902	.250	.887	.000	.892	.965





Ridgeview Data
Collection

Centennial, CO
Jones District Redevelopment
PM Peak
Dry Creek Rd and I-25 SB Ramp

File Name : Dry Creek and I-25 SB Ramp PM
Site Code : IPO 427
Start Date : 4/4/2019
Page No : 1

Groups Printed- Automobiles

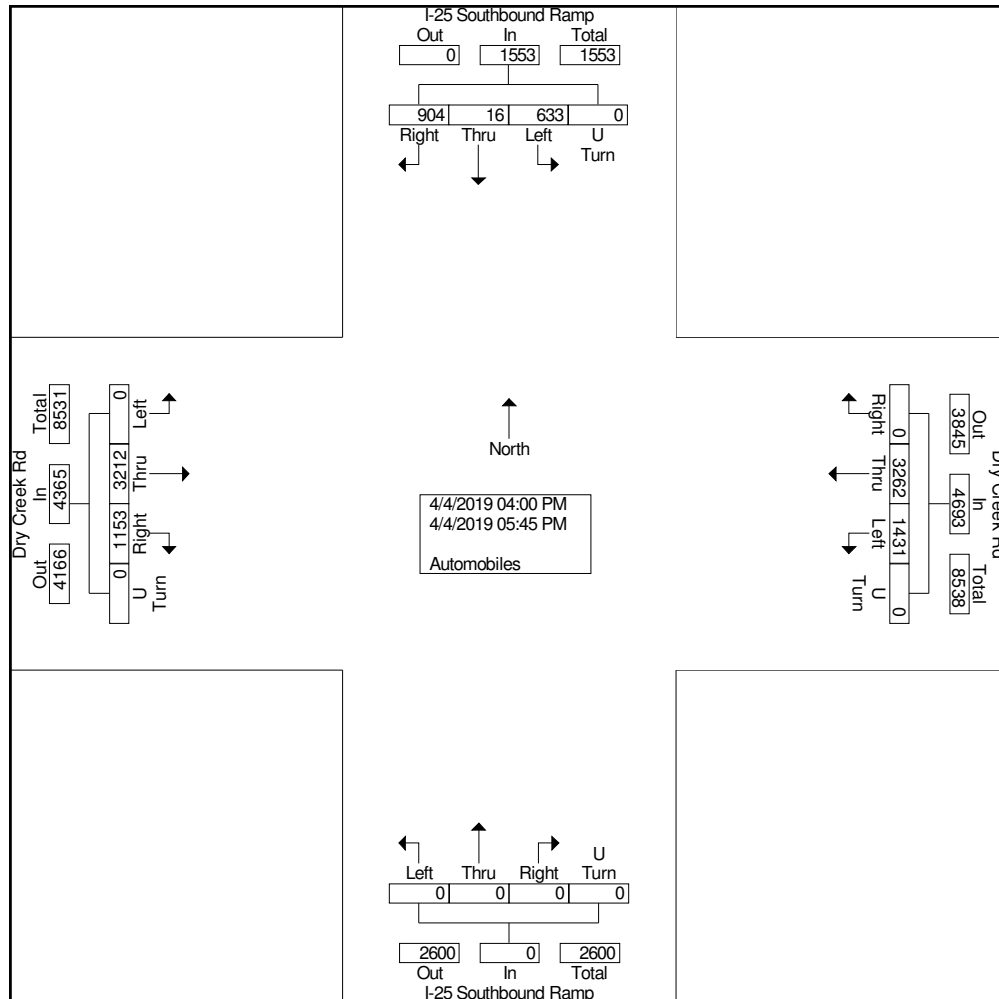
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Start Time	Left	Thru	Right	U Turn	App. Total	Left	Thru	Right	U Turn	App. Total	Left	Thru	Right	U Turn	App. Total	Left	Thru	Right	U Turn	App. Total	Int. Total
04:00 PM	0	477	127	0	604	178	398	0	0	576	0	0	0	0	0	84	1	114	0	199	1379
04:15 PM	0	377	126	0	503	152	441	0	0	593	0	0	0	0	0	74	4	123	0	201	1297
04:30 PM	0	437	143	0	580	215	463	0	0	678	0	0	0	0	0	81	4	104	0	189	1447
04:45 PM	0	368	150	0	518	197	410	0	0	607	0	0	0	0	0	79	0	104	0	183	1308
Total	0	1659	546	0	2205	742	1712	0	0	2454	0	0	0	0	0	318	9	445	0	772	5431
05:00 PM	0	436	176	0	612	179	433	0	0	612	0	0	0	0	0	69	2	110	0	181	1405
05:15 PM	0	388	177	0	565	172	422	0	0	594	0	0	0	0	0	66	2	108	0	176	1335
05:30 PM	0	397	137	0	534	204	389	0	0	593	0	0	0	0	0	76	1	126	0	203	1330
05:45 PM	0	332	117	0	449	134	306	0	0	440	0	0	0	0	0	104	2	115	0	221	1110
Total	0	1553	607	0	2160	689	1550	0	0	2239	0	0	0	0	0	315	7	459	0	781	5180
Grand Total	0	3212	1153	0	4365	1431	3262	0	0	4693	0	0	0	0	0	633	16	904	0	1553	10611
Apprch %	0	73.6	26.4	0		30.5	69.5	0	0		0	0	0	0		40.8	1	58.2	0		
Total %	0	30.3	10.9	0	41.1	13.5	30.7	0	0	44.2	0	0	0	0	0	6	0.2	8.5	0	14.6	



Ridgeview Data
Collection

Centennial, CO
Jones District Redevelopment
PM Peak
Dry Creek Rd and I-25 SB Ramp

File Name : Dry Creek and I-25 SB Ramp PM
Site Code : IPO 427
Start Date : 4/4/2019
Page No : 2



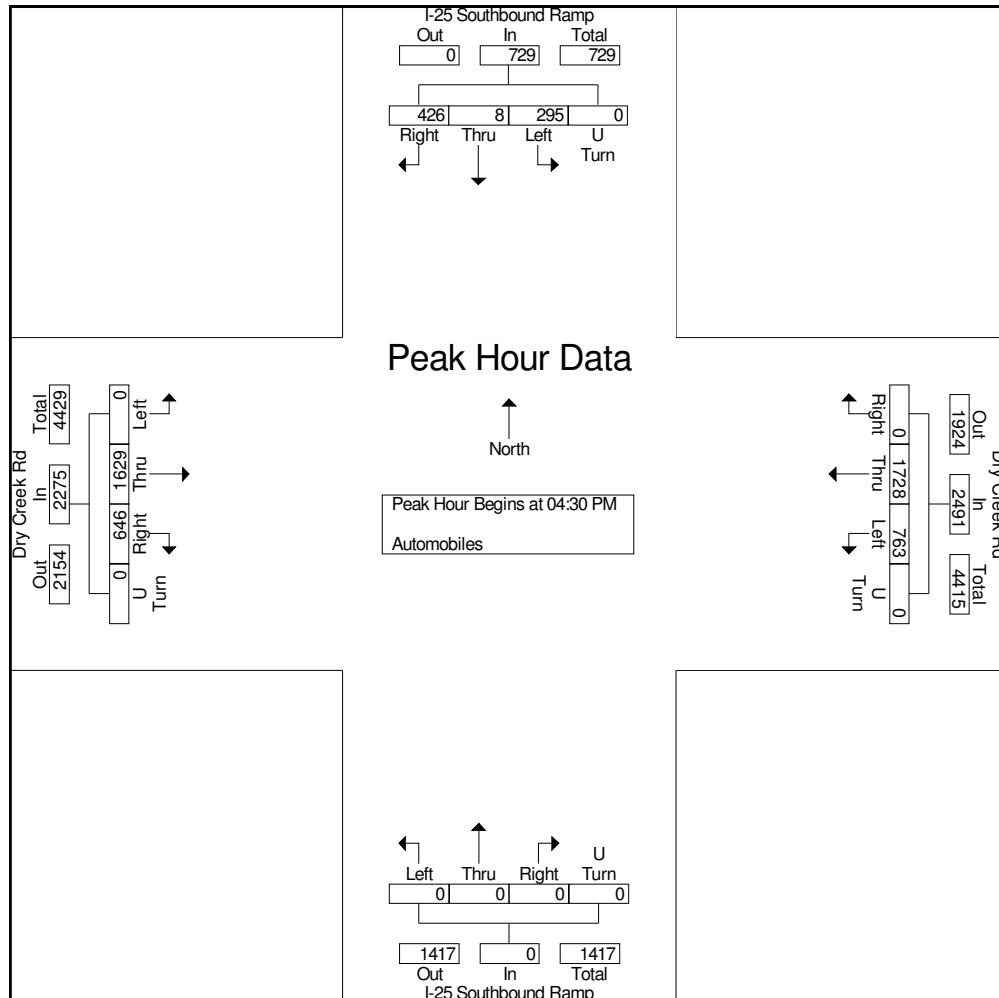


Ridgeview Data
Collection

Centennial, CO
Jones District Redevelopment
PM Peak
Dry Creek Rd and I-25 SB Ramp

File Name : Dry Creek and I-25 SB Ramp PM
Site Code : IPO 427
Start Date : 4/4/2019
Page No : 3

	Dry Creek Rd Eastbound					Dry Creek Rd Westbound					I-25 Southbound Ramp Northbound					I-25 Southbound Ramp Southbound					
Start Time	Left	Thru	Right	U Turn	App. Total	Left	Thru	Right	U Turn	App. Total	Left	Thru	Right	U Turn	App. Total	Left	Thru	Right	U Turn	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	0	437	143	0	580	215	463	0	0	678	0	0	0	0	0	81	4	104	0	189	1447
04:45 PM	0	368	150	0	518	197	410	0	0	607	0	0	0	0	0	79	0	104	0	183	1308
05:00 PM	0	436	176	0	612	179	433	0	0	612	0	0	0	0	0	69	2	110	0	181	1405
05:15 PM	0	388	177	0	565	172	422	0	0	594	0	0	0	0	0	66	2	108	0	176	1335
Total Volume	0	1629	646	0	2275	763	1728	0	0	2491	0	0	0	0	0	295	8	426	0	729	5495
% App. Total	0	71.6	28.4	0		30.6	69.4	0	0		0	0	0	0		40.5	1.1	58.4	0		
PHF	.000	.932	.912	.000	.929	.887	.933	.000	.000	.919	.000	.000	.000	.000	.000	.910	.500	.968	.000	.964	.949





Ridgeview Data
Collection

Centennial, CO
Jones District Redevelopment
AM Peak
Dry Creek Rd and I-25 NB Ramp

File Name : Dry Creek and I-25 NB Ramp AM
Site Code : IPO 427
Start Date : 4/4/2019
Page No : 1

Groups Printed- Automobiles

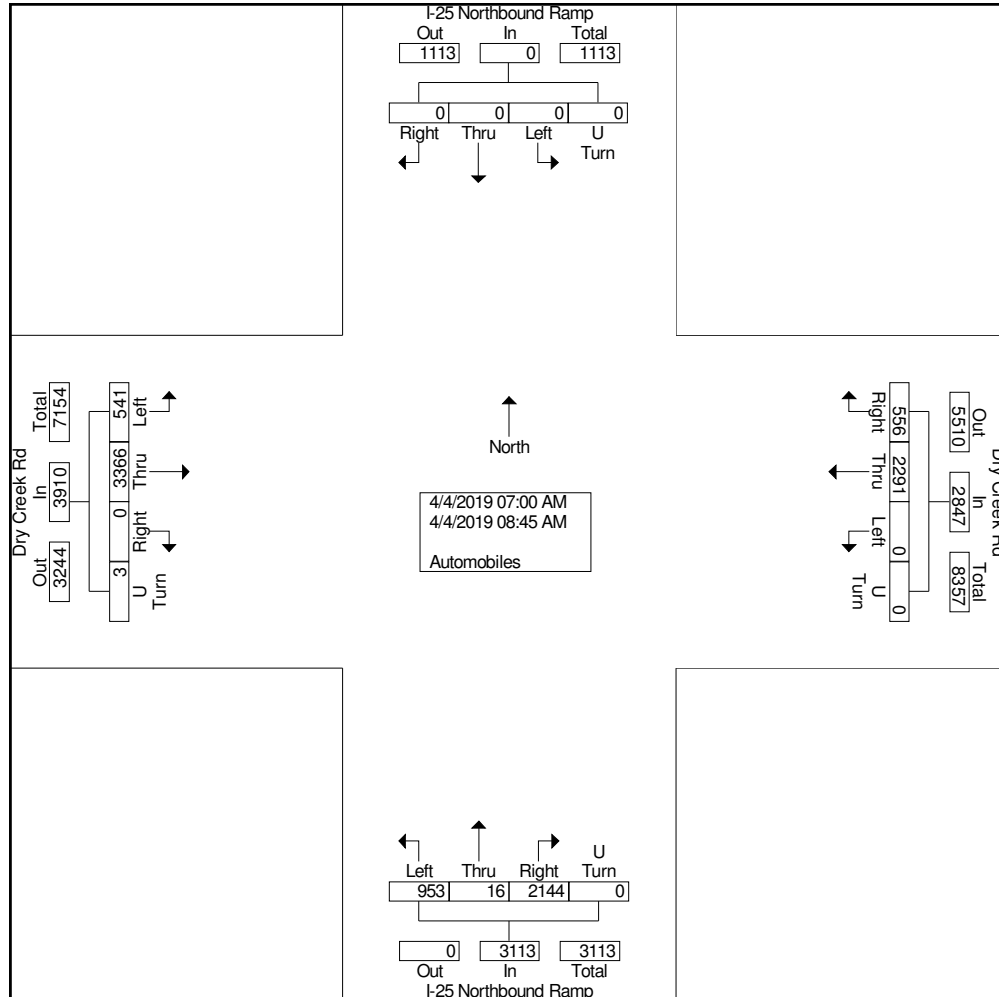
	Dry Creek Rd Eastbound					Dry Creek Rd Westbound					I-25 Northbound Ramp Northbound					I-25 Northbound Ramp Southbound					
Start Time	Left	Thru	Right	U Turn	App. Total	Left	Thru	Right	U Turn	App. Total	Left	Thru	Right	U Turn	App. Total	Left	Thru	Right	U Turn	App. Total	Int. Total
07:00 AM	88	409	0	1	498	0	209	66	0	275	85	1	241	0	327	0	0	0	0	0	1100
07:15 AM	79	399	0	0	478	0	241	86	0	327	104	0	253	0	357	0	0	0	0	0	1162
07:30 AM	65	463	0	0	528	0	300	68	0	368	122	0	274	0	396	0	0	0	0	0	1292
07:45 AM	45	464	0	1	510	0	371	73	0	444	140	8	283	0	431	0	0	0	0	0	1385
Total	277	1735	0	2	2014	0	1121	293	0	1414	451	9	1051	0	1511	0	0	0	0	0	4939
08:00 AM	72	433	0	0	505	0	304	70	0	374	115	0	254	0	369	0	0	0	0	0	1248
08:15 AM	70	420	0	0	490	0	279	63	0	342	146	1	283	0	430	0	0	0	0	0	1262
08:30 AM	63	416	0	1	480	0	298	63	0	361	93	3	273	0	369	0	0	0	0	0	1210
08:45 AM	59	362	0	0	421	0	289	67	0	356	148	3	283	0	434	0	0	0	0	0	1211
Total	264	1631	0	1	1896	0	1170	263	0	1433	502	7	1093	0	1602	0	0	0	0	0	4931
Grand Total	541	3366	0	3	3910	0	2291	556	0	2847	953	16	2144	0	3113	0	0	0	0	0	9870
Apprch %	13.8	86.1	0	0.1		0	80.5	19.5	0		30.6	0.5	68.9	0		0	0	0	0		
Total %	5.5	34.1	0	0	39.6	0	23.2	5.6	0	28.8	9.7	0.2	21.7	0	31.5	0	0	0	0	0	



Ridgeview Data
Collection

Centennial, CO
Jones District Redevelopment
AM Peak
Dry Creek Rd and I-25 NB Ramp

File Name : Dry Creek and I-25 NB Ramp AM
Site Code : IPO 427
Start Date : 4/4/2019
Page No : 2



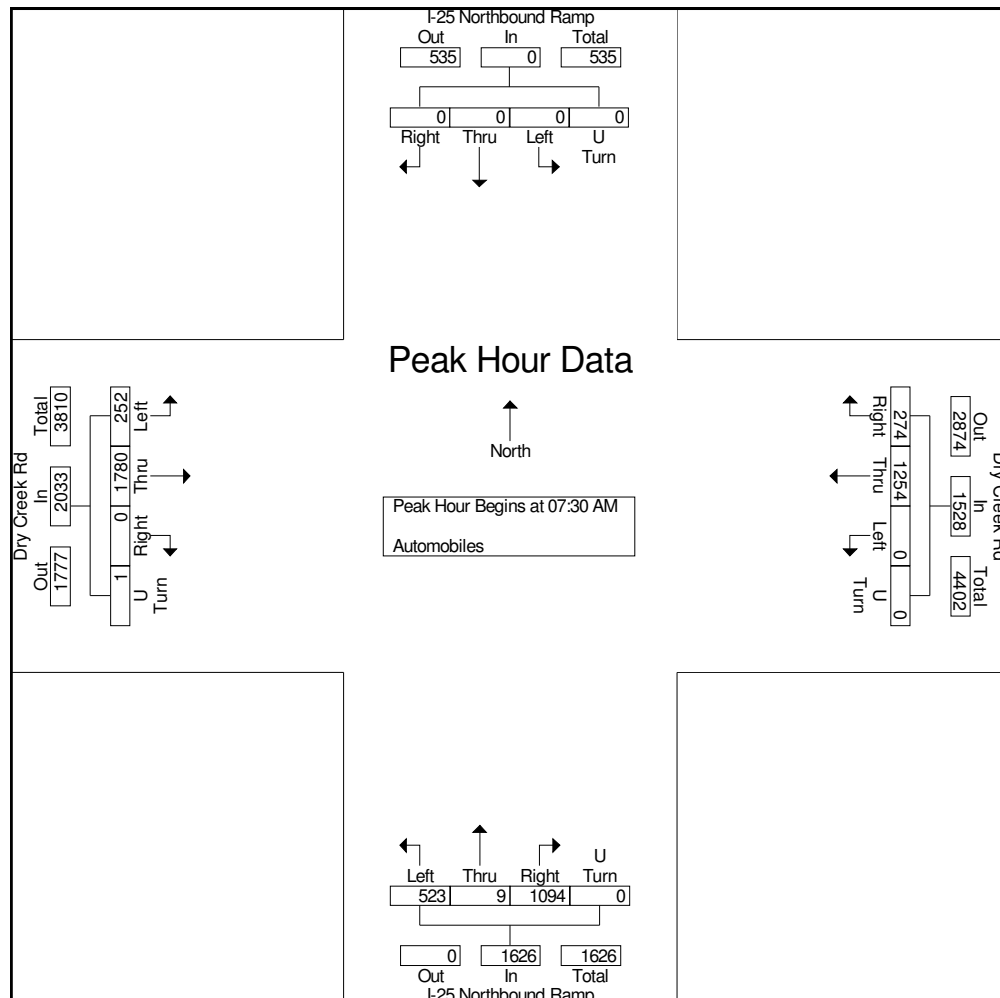


Ridgeview Data
Collection

Centennial, CO
Jones District Redevelopment
AM Peak
Dry Creek Rd and I-25 NB Ramp

File Name : Dry Creek and I-25 NB Ramp AM
Site Code : IPO 427
Start Date : 4/4/2019
Page No : 3

	Dry Creek Rd Eastbound					Dry Creek Rd Westbound					I-25 Northbound Ramp Northbound					I-25 Northbound Ramp Southbound					
Start Time	Left	Thru	Right	U Turn	App. Total	Left	Thru	Right	U Turn	App. Total	Left	Thru	Right	U Turn	App. Total	Left	Thru	Right	U Turn	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	65	463	0	0	528	0	300	68	0	368	122	0	274	0	396	0	0	0	0	0	1292
07:45 AM	45	464	0	1	510	0	371	73	0	444	140	8	283	0	431	0	0	0	0	0	1385
08:00 AM	72	433	0	0	505	0	304	70	0	374	115	0	254	0	369	0	0	0	0	0	1248
08:15 AM	70	420	0	0	490	0	279	63	0	342	146	1	283	0	430	0	0	0	0	0	1262
Total Volume	252	1780	0	1	2033	0	1254	274	0	1528	523	9	1094	0	1626	0	0	0	0	0	5187
% App. Total	12.4	87.6	0	0		0	82.1	17.9	0		32.2	0.6	67.3	0		0	0	0	0		
PHF	.875	.959	.000	.250	.963	.000	.845	.938	.000	.860	.896	.281	.966	.000	.943	.000	.000	.000	.000	.000	.936





Ridgeview Data
Collection

Centennial, CO
Jones District Redevelopment
PM Peak
Dry Creek Rd and I-25 NB Ramp

File Name : Dry Creek and I-25 NB Ramp PM
Site Code : IPO 427
Start Date : 4/4/2019
Page No : 1

Groups Printed- Automobiles

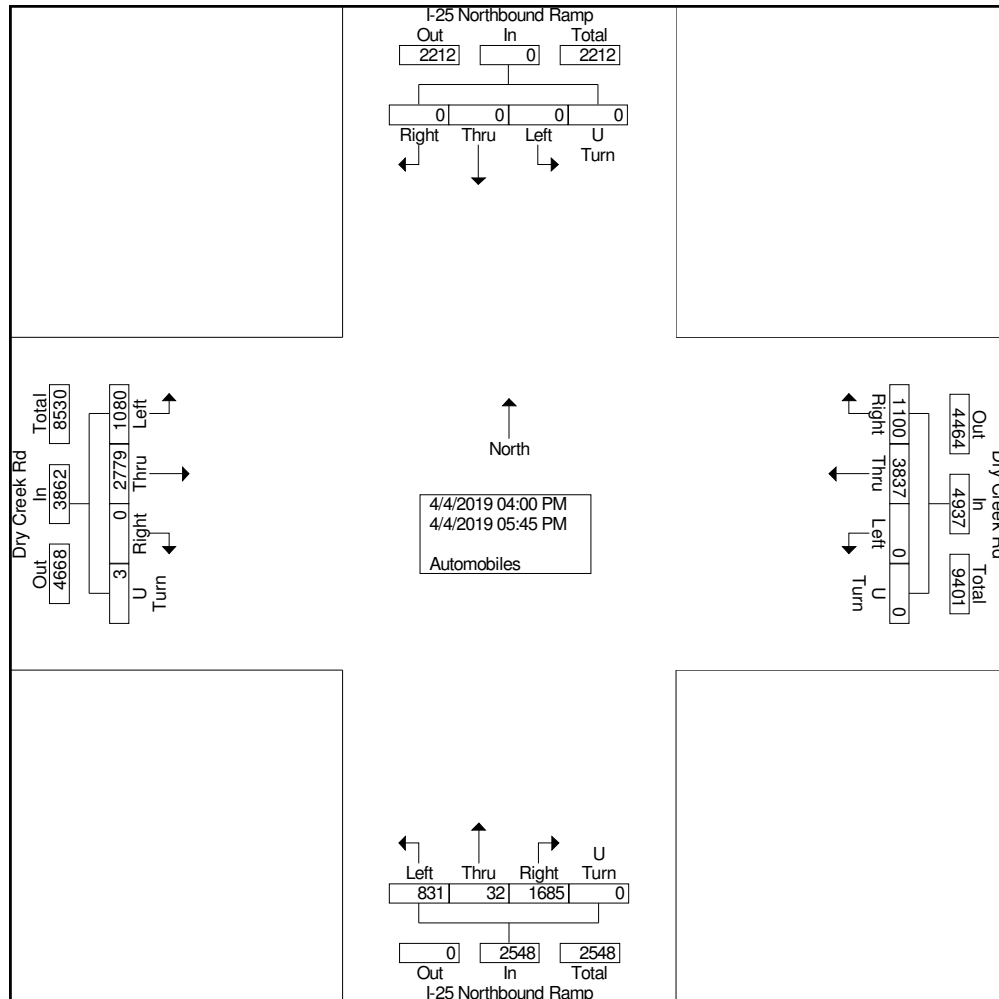
	Dry Creek Rd Eastbound					Dry Creek Rd Westbound					I-25 Northbound Ramp Northbound					I-25 Northbound Ramp Southbound					
Start Time	Left	Thru	Right	U Turn	App. Total	Left	Thru	Right	U Turn	App. Total	Left	Thru	Right	U Turn	App. Total	Left	Thru	Right	U Turn	App. Total	Int. Total
04:00 PM	169	351	0	0	520	0	469	198	0	667	79	1	168	0	248	0	0	0	0	0	1435
04:15 PM	167	334	0	0	501	0	529	163	0	692	118	6	196	0	320	0	0	0	0	0	1513
04:30 PM	134	351	0	0	485	0	510	171	0	681	96	1	208	0	305	0	0	0	0	0	1471
04:45 PM	138	337	0	1	476	0	508	118	0	626	104	3	209	0	316	0	0	0	0	0	1418
Total	608	1373	0	1	1982	0	2016	650	0	2666	397	11	781	0	1189	0	0	0	0	0	5837
05:00 PM	147	354	0	0	501	0	533	146	0	679	87	6	233	0	326	0	0	0	0	0	1506
05:15 PM	112	339	0	0	451	0	488	111	0	599	121	4	270	0	395	0	0	0	0	0	1445
05:30 PM	113	362	0	0	475	0	447	115	0	562	117	8	203	0	328	0	0	0	0	0	1365
05:45 PM	100	351	0	2	453	0	353	78	0	431	109	3	198	0	310	0	0	0	0	0	1194
Total	472	1406	0	2	1880	0	1821	450	0	2271	434	21	904	0	1359	0	0	0	0	0	5510
Grand Total	1080	2779	0	3	3862	0	3837	1100	0	4937	831	32	1685	0	2548	0	0	0	0	0	11347
Apprch %	28	72	0	0.1		0	77.7	22.3	0		32.6	1.3	66.1	0		0	0	0	0		
Total %	9.5	24.5	0	0	34	0	33.8	9.7	0	43.5	7.3	0.3	14.8	0	22.5	0	0	0	0	0	



Ridgeview Data
Collection

Centennial, CO
Jones District Redevelopment
PM Peak
Dry Creek Rd and I-25 NB Ramp

File Name : Dry Creek and I-25 NB Ramp PM
Site Code : IPO 427
Start Date : 4/4/2019
Page No : 2



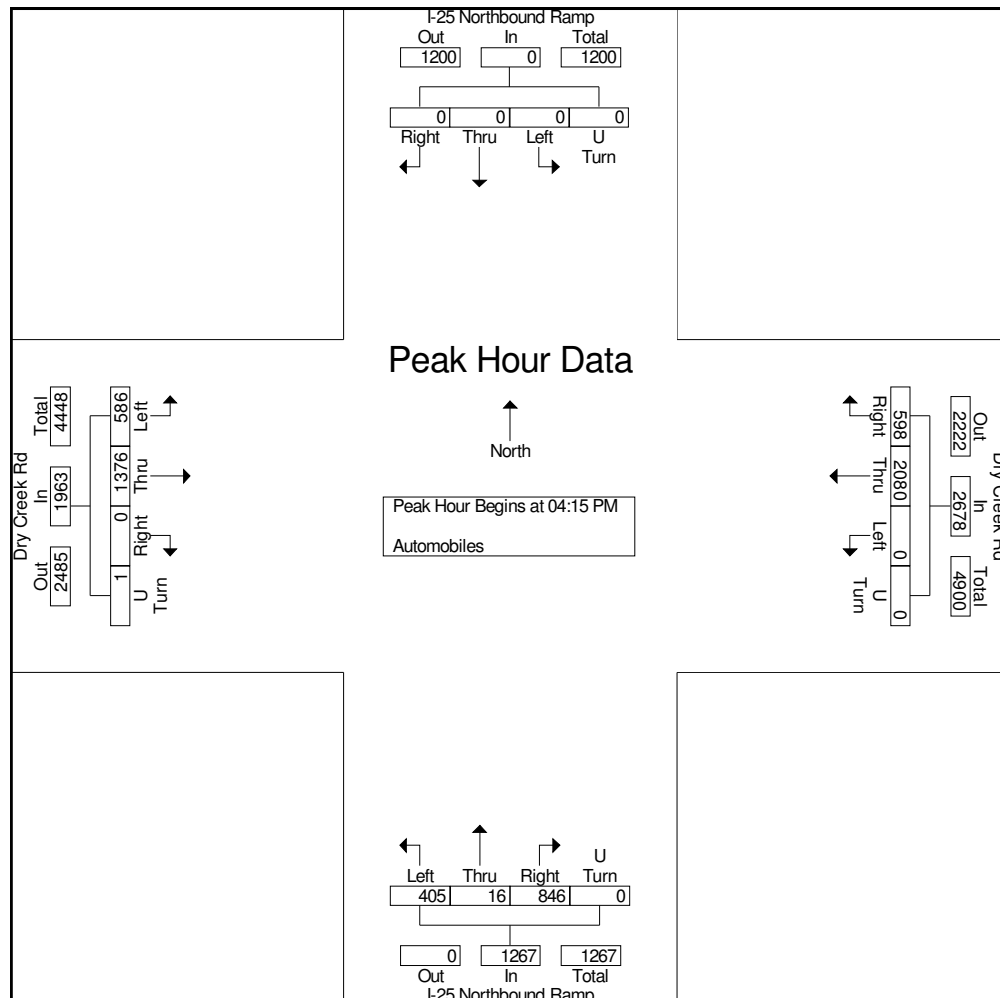


Ridgeview Data
Collection

Centennial, CO
Jones District Redevelopment
PM Peak
Dry Creek Rd and I-25 NB Ramp

File Name : Dry Creek and I-25 NB Ramp PM
Site Code : IPO 427
Start Date : 4/4/2019
Page No : 3

	Dry Creek Rd Eastbound					Dry Creek Rd Westbound					I-25 Northbound Ramp Northbound					I-25 Northbound Ramp Southbound					
Start Time	Left	Thru	Right	U Turn	App. Total	Left	Thru	Right	U Turn	App. Total	Left	Thru	Right	U Turn	App. Total	Left	Thru	Right	U Turn	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	167	334	0	0	501	0	529	163	0	692	118	6	196	0	320	0	0	0	0	0	1513
04:30 PM	134	351	0	0	485	0	510	171	0	681	96	1	208	0	305	0	0	0	0	0	1471
04:45 PM	138	337	0	1	476	0	508	118	0	626	104	3	209	0	316	0	0	0	0	0	1418
05:00 PM	147	354	0	0	501	0	533	146	0	679	87	6	233	0	326	0	0	0	0	0	1506
Total Volume	586	1376	0	1	1963	0	2080	598	0	2678	405	16	846	0	1267	0	0	0	0	0	5908
% App. Total	29.9	70.1	0	0.1		0	77.7	22.3	0		32	1.3	66.8	0		0	0	0	0		
PHF	.877	.972	.000	.250	.980	.000	.976	.874	.000	.967	.858	.667	.908	.000	.972	.000	.000	.000	.000	.000	.976





Ridgeview Data
Collection

Centennial, CO
Jones District Redevelopment
AM Peak
Panorama Dr and Yosemite St

File Name : Panorama Dr and Yosemite AM
Site Code : IPO 427
Start Date : 4/2/2019
Page No : 1

Groups Printed- Automobiles

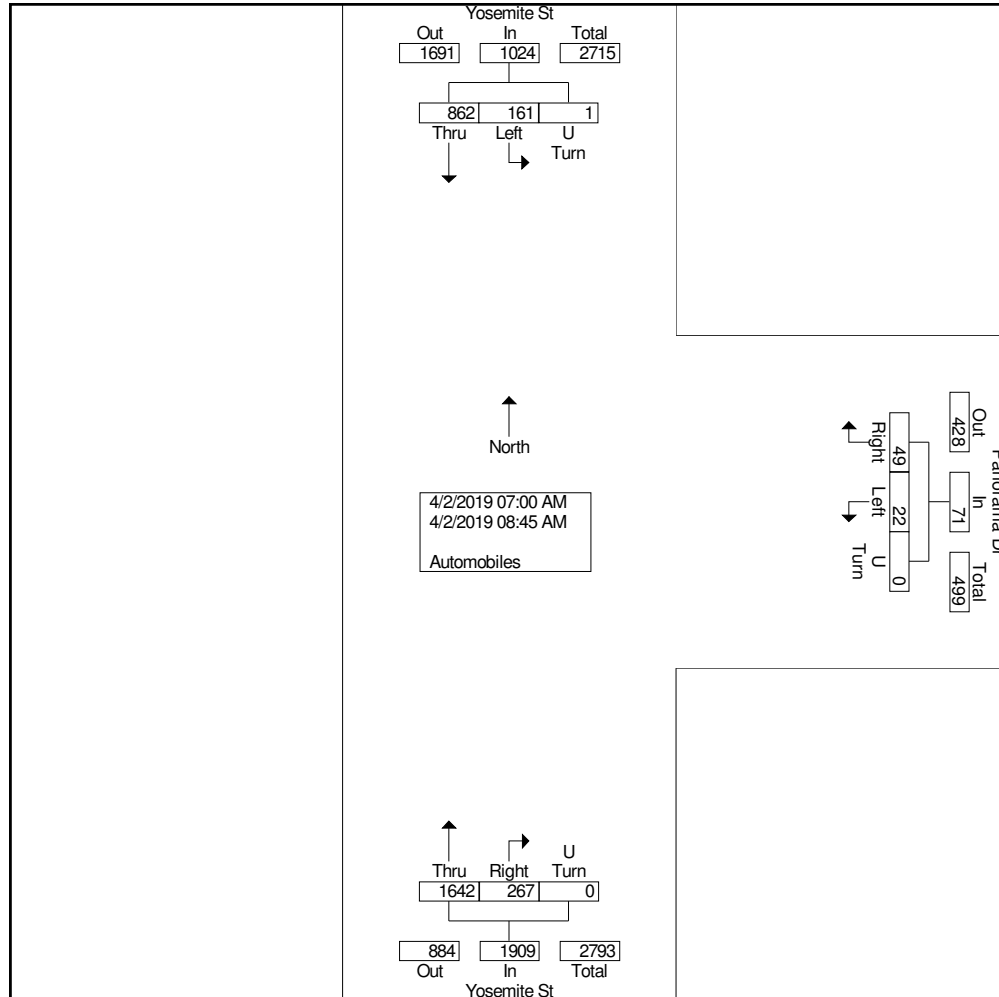
Start Time	Panorama Dr Westbound				Yosemite St Northbound				Yosemite St Southbound				Int. Total
	Left	Right	U Turn	App. Total	Thru	Right	U Turn	App. Total	Left	Thru	U Turn	App. Total	
07:00 AM	2	4	0	6	192	33	0	225	13	78	0	91	322
07:15 AM	2	6	0	8	164	31	0	195	11	85	0	96	299
07:30 AM	6	5	0	11	227	32	0	259	20	121	0	141	411
07:45 AM	2	6	0	8	299	49	0	348	27	139	0	166	522
Total	12	21	0	33	882	145	0	1027	71	423	0	494	1554
08:00 AM	2	8	0	10	229	28	0	257	29	130	0	159	426
08:15 AM	4	5	0	9	208	40	0	248	25	108	0	133	390
08:30 AM	1	11	0	12	171	26	0	197	13	94	0	107	316
08:45 AM	3	4	0	7	152	28	0	180	23	107	1	131	318
Total	10	28	0	38	760	122	0	882	90	439	1	530	1450
Grand Total	22	49	0	71	1642	267	0	1909	161	862	1	1024	3004
Apprch %	31	69	0		86	14	0		15.7	84.2	0.1		
Total %	0.7	1.6	0	2.4	54.7	8.9	0	63.5	5.4	28.7	0	34.1	



Ridgeview Data
Collection

Centennial, CO
Jones District Redevelopment
AM Peak
Panorama Dr and Yosemite St

File Name : Panorama Dr and Yosemite AM
Site Code : IPO 427
Start Date : 4/2/2019
Page No : 2



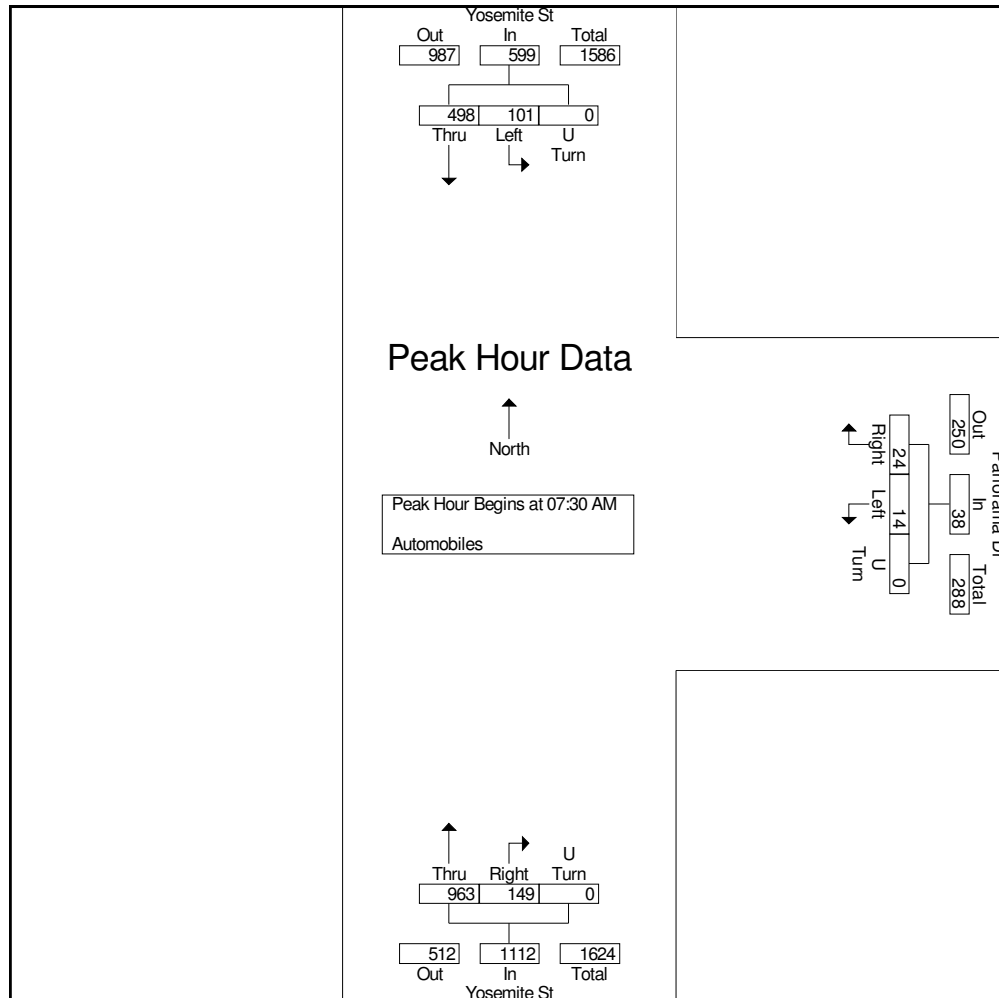


Ridgeview Data
Collection

Centennial, CO
Jones District Redevelopment
AM Peak
Panorama Dr and Yosemite St

File Name : Panorama Dr and Yosemite AM
Site Code : IPO 427
Start Date : 4/2/2019
Page No : 3

	Panorama Dr Westbound				Yosemite St Northbound				Yosemite St Southbound				
Start Time	Left	Right	U Turn	App. Total	Thru	Right	U Turn	App. Total	Left	Thru	U Turn	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	5	0	11	227	32	0	259	20	121	0	141	411
07:45 AM	2	6	0	8	299	49	0	348	27	139	0	166	522
08:00 AM	2	8	0	10	229	28	0	257	29	130	0	159	426
08:15 AM	4	5	0	9	208	40	0	248	25	108	0	133	390
Total Volume	14	24	0	38	963	149	0	1112	101	498	0	599	1749
% App. Total	36.8	63.2	0		86.6	13.4	0		16.9	83.1	0		
PHF	.583	.750	.000	.864	.805	.760	.000	.799	.871	.896	.000	.902	.838





Ridgeview Data
Collection

Centennial, CO
Jones District Redevelopment
PM Peak
Panorama Dr and Yosemite St

File Name : Panorama Dr and Yosemite PM
Site Code : IPO 427
Start Date : 4/2/2019
Page No : 1

Groups Printed- Automobiles

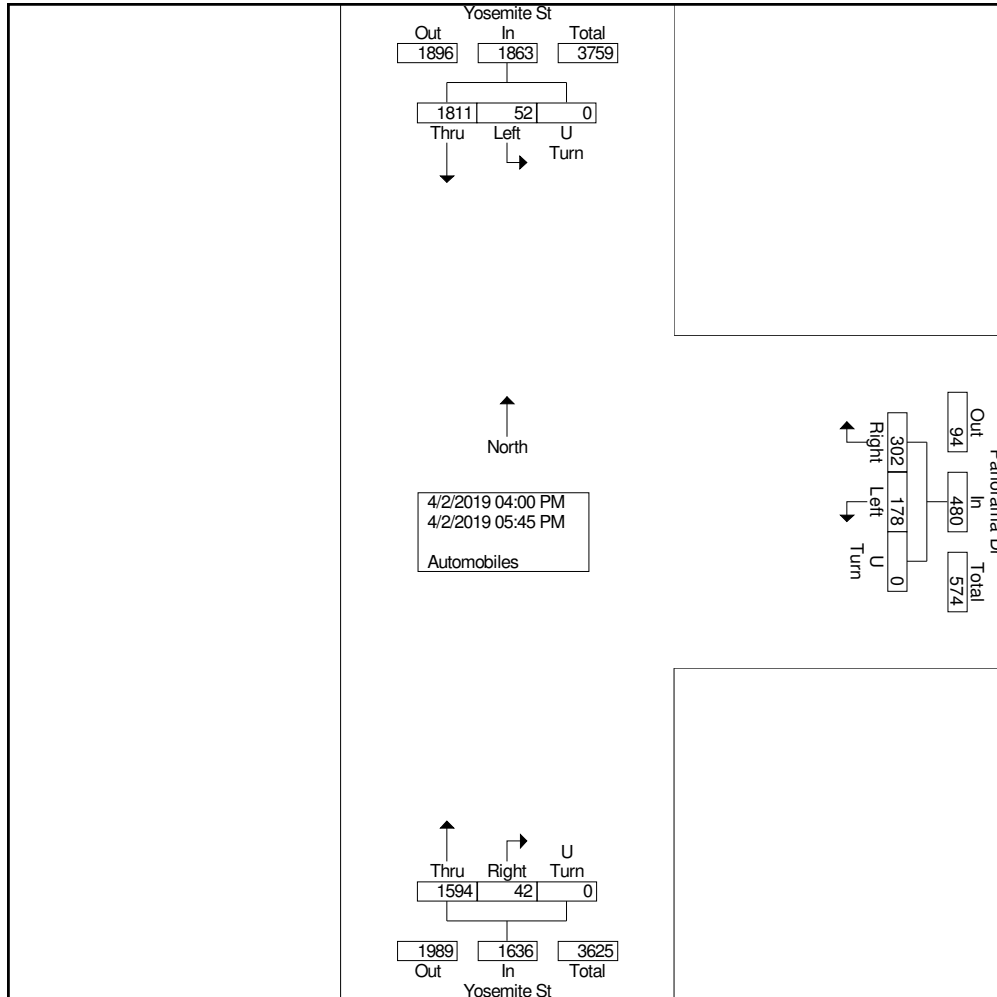
Start Time	Panorama Dr Westbound				Yosemite St Northbound				Yosemite St Southbound				Int. Total
	Left	Right	U Turn	App. Total	Thru	Right	U Turn	App. Total	Left	Thru	U Turn	App. Total	
04:00 PM	26	47	0	73	210	8	0	218	9	188	0	197	488
04:15 PM	14	41	0	55	218	2	0	220	7	201	0	208	483
04:30 PM	23	35	0	58	222	6	0	228	9	222	0	231	517
04:45 PM	27	39	0	66	208	6	0	214	9	255	0	264	544
Total	90	162	0	252	858	22	0	880	34	866	0	900	2032
05:00 PM	27	72	0	99	228	4	0	232	5	267	0	272	603
05:15 PM	25	25	0	50	189	4	0	193	3	249	0	252	495
05:30 PM	19	22	0	41	171	9	0	180	7	237	0	244	465
05:45 PM	17	21	0	38	148	3	0	151	3	192	0	195	384
Total	88	140	0	228	736	20	0	756	18	945	0	963	1947
Grand Total	178	302	0	480	1594	42	0	1636	52	1811	0	1863	3979
Apprch %	37.1	62.9	0		97.4	2.6	0		2.8	97.2	0		
Total %	4.5	7.6	0	12.1	40.1	1.1	0	41.1	1.3	45.5	0	46.8	



Ridgeview Data
Collection

Centennial, CO
Jones District Redevelopment
PM Peak
Panorama Dr and Yosemite St

File Name : Panorama Dr and Yosemite PM
Site Code : IPO 427
Start Date : 4/2/2019
Page No : 2



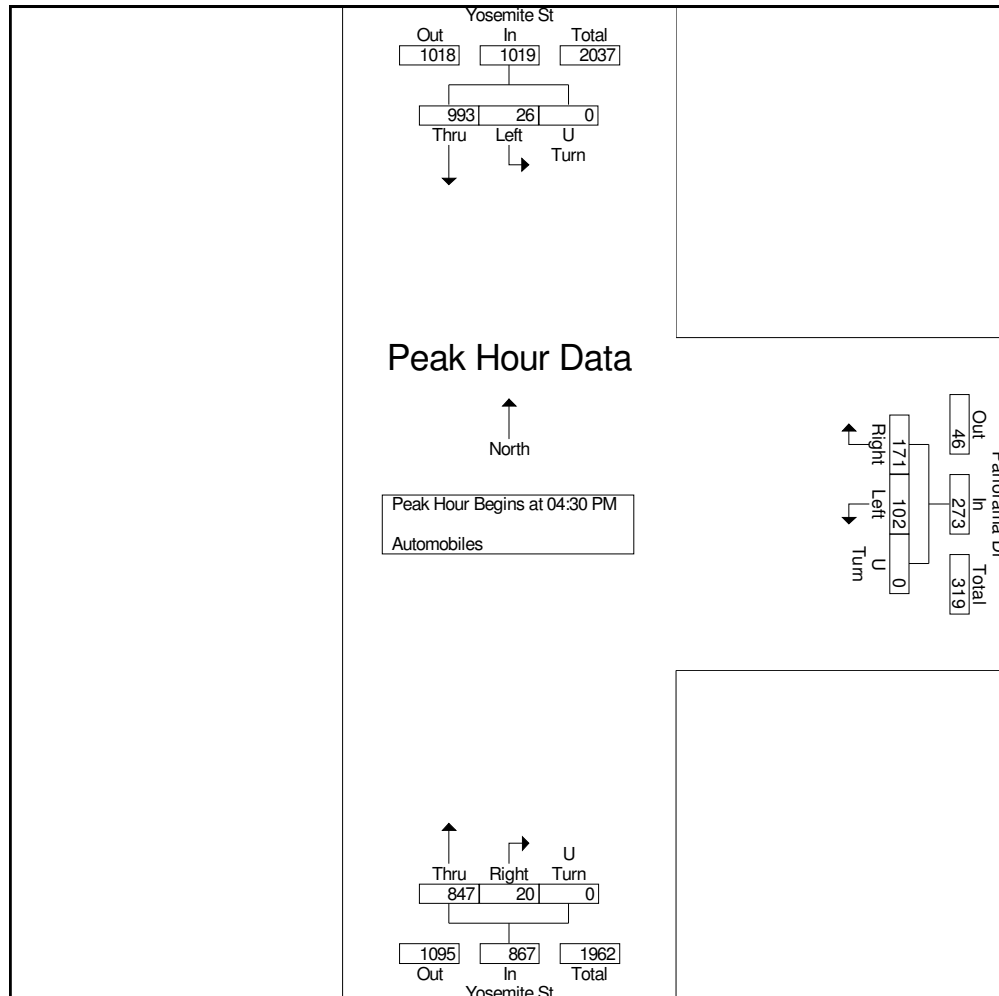


Ridgeview Data
Collection

Centennial, CO
Jones District Redevelopment
PM Peak
Panorama Dr and Yosemite St

File Name : Panorama Dr and Yosemite PM
Site Code : IPO 427
Start Date : 4/2/2019
Page No : 3

	Panorama Dr Westbound				Yosemite St Northbound				Yosemite St Southbound				
Start Time	Left	Right	U Turn	App. Total	Thru	Right	U Turn	App. Total	Left	Thru	U Turn	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	23	35	0	58	222	6	0	228	9	222	0	231	517
04:45 PM	27	39	0	66	208	6	0	214	9	255	0	264	544
05:00 PM	27	72	0	99	228	4	0	232	5	267	0	272	603
05:15 PM	25	25	0	50	189	4	0	193	3	249	0	252	495
Total Volume	102	171	0	273	847	20	0	867	26	993	0	1019	2159
% App. Total	37.4	62.6	0		97.7	2.3	0		2.6	97.4	0		
PHF	.944	.594	.000	.689	.929	.833	.000	.934	.722	.930	.000	.937	.895





Ridgeview Data
Collection

Centennial, CO
Jones District Redevelopment
AM Peak
Panorama Circle N and Chester St

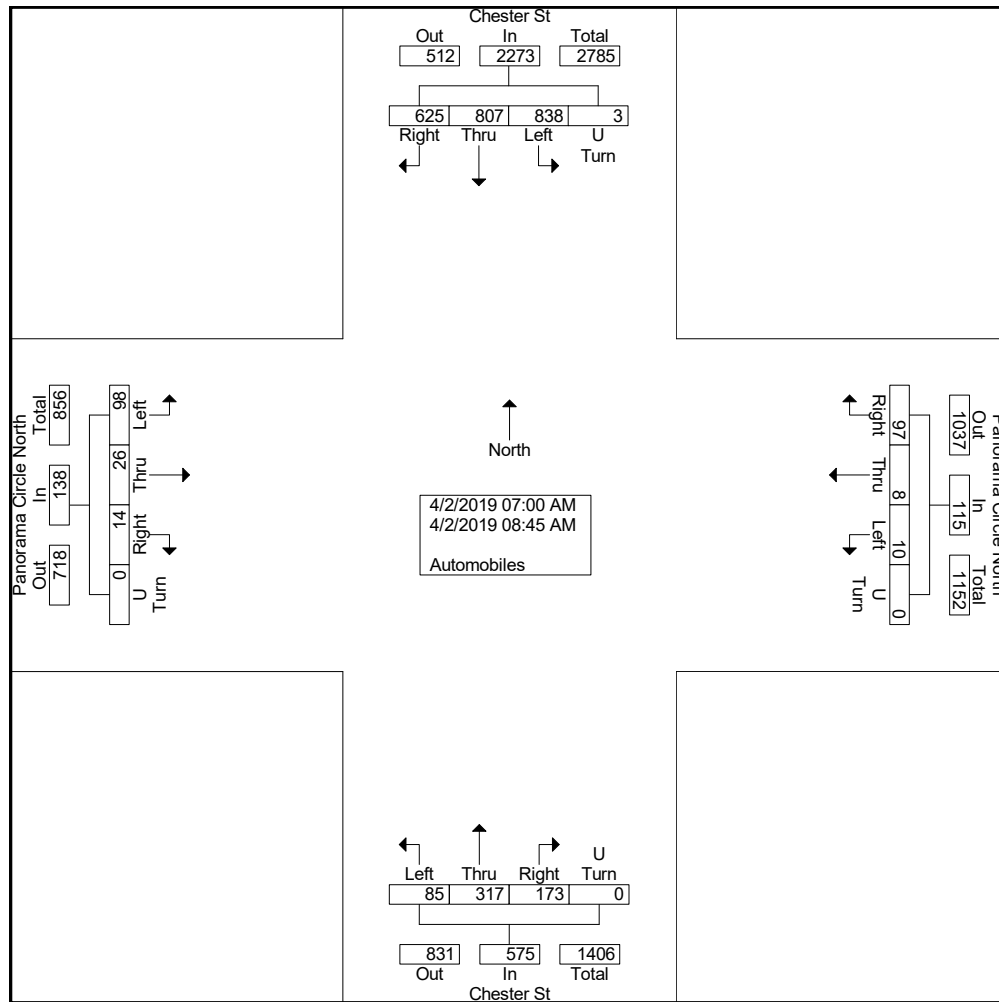
File Name : Panorama Cir N and Chester AM
Site Code : IPO 427
Start Date : 4/2/2019
Page No : 1

Groups Printed- Automobiles

	Panorama Circle North Eastbound					Panorama Circle North Westbound					Chester St Northbound					Chester St Southbound					
Start Time	Left	Thru	Right	U Turn	App. Total	Left	Thru	Right	U Turn	App. Total	Left	Thru	Right	U Turn	App. Total	Left	Thru	Right	U Turn	App. Total	Int. Total
07:00 AM	10	1	1	0	12	3	2	17	0	22	11	43	15	0	69	90	78	66	0	234	337
07:15 AM	8	3	4	0	15	1	1	10	0	12	9	40	30	0	79	103	104	77	0	284	390
07:30 AM	11	3	2	0	16	0	1	9	0	10	9	49	25	0	83	109	102	62	0	273	382
07:45 AM	18	9	0	0	27	1	1	19	0	21	18	36	31	0	85	130	95	91	0	316	449
Total	47	16	7	0	70	5	5	55	0	65	47	168	101	0	316	432	379	296	0	1107	1558
08:00 AM	16	1	1	0	18	1	0	9	0	10	11	43	21	0	75	141	116	105	2	364	467
08:15 AM	6	4	5	0	15	1	1	13	0	15	7	39	29	0	75	106	110	89	0	305	410
08:30 AM	11	3	1	0	15	1	2	8	0	11	16	38	17	0	71	90	107	49	1	247	344
08:45 AM	18	2	0	0	20	2	0	12	0	14	4	29	5	0	38	69	95	86	0	250	322
Total	51	10	7	0	68	5	3	42	0	50	38	149	72	0	259	406	428	329	3	1166	1543
Grand Total	98	26	14	0	138	10	8	97	0	115	85	317	173	0	575	838	807	625	3	2273	3101
Apprch %	71	18.8	10.1	0		8.7	7	84.3	0		14.8	55.1	30.1	0		36.9	35.5	27.5	0.1		
Total %	3.2	0.8	0.5	0	4.5	0.3	0.3	3.1	0	3.7	2.7	10.2	5.6	0	18.5	27	26	20.2	0.1	73.3	



File Name : Panorama Cir N and Chester AM
Site Code : IPO 427
Start Date : 4/2/2019
Page No : 2



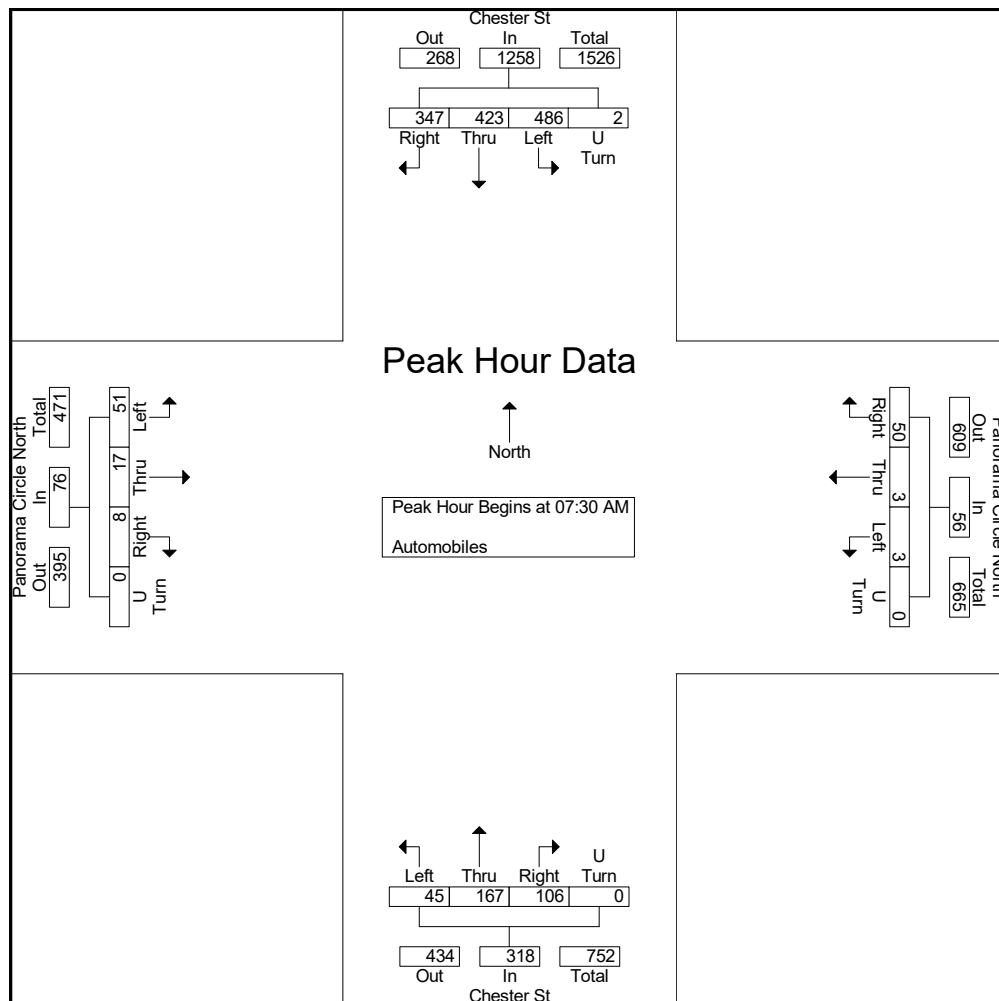


Ridgeview Data
Collection

Centennial, CO
Jones District Redevelopment
AM Peak
Panorama Circle N and Chester St

File Name : Panorama Cir N and Chester AM
Site Code : IPO 427
Start Date : 4/2/2019
Page No : 3

	Panorama Circle North Eastbound					Panorama Circle North Westbound					Chester St Northbound					Chester St Southbound					
Start Time	Left	Thru	Right	U Turn	App. Total	Left	Thru	Right	U Turn	App. Total	Left	Thru	Right	U Turn	App. Total	Left	Thru	Right	U Turn	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	11	3	2	0	16	0	1	9	0	10	9	49	25	0	83	109	102	62	0	273	382
07:45 AM	18	9	0	0	27	1	1	19	0	21	18	36	31	0	85	130	95	91	0	316	449
08:00 AM	16	1	1	0	18	1	0	9	0	10	11	43	21	0	75	141	116	105	2	364	467
08:15 AM	6	4	5	0	15	1	1	13	0	15	7	39	29	0	75	106	110	89	0	305	410
Total Volume	51	17	8	0	76	3	3	50	0	56	45	167	106	0	318	486	423	347	2	1258	1708
% App. Total	67.1	22.4	10.5	0		5.4	5.4	89.3	0		14.2	52.5	33.3	0		38.6	33.6	27.6	0.2		
PHF	.708	.472	.400	.000	.704	.750	.750	.658	.000	.667	.625	.852	.855	.000	.935	.862	.912	.826	.250	.864	.914





Ridgeview Data
Collection

Centennial, CO
Jones District Redevelopment
PM Peak
Panorama Circle N and Chester St

File Name : Panorama Cir N and Chester PM
Site Code : IPO 427
Start Date : 4/2/2019
Page No : 1

Groups Printed- Automobiles

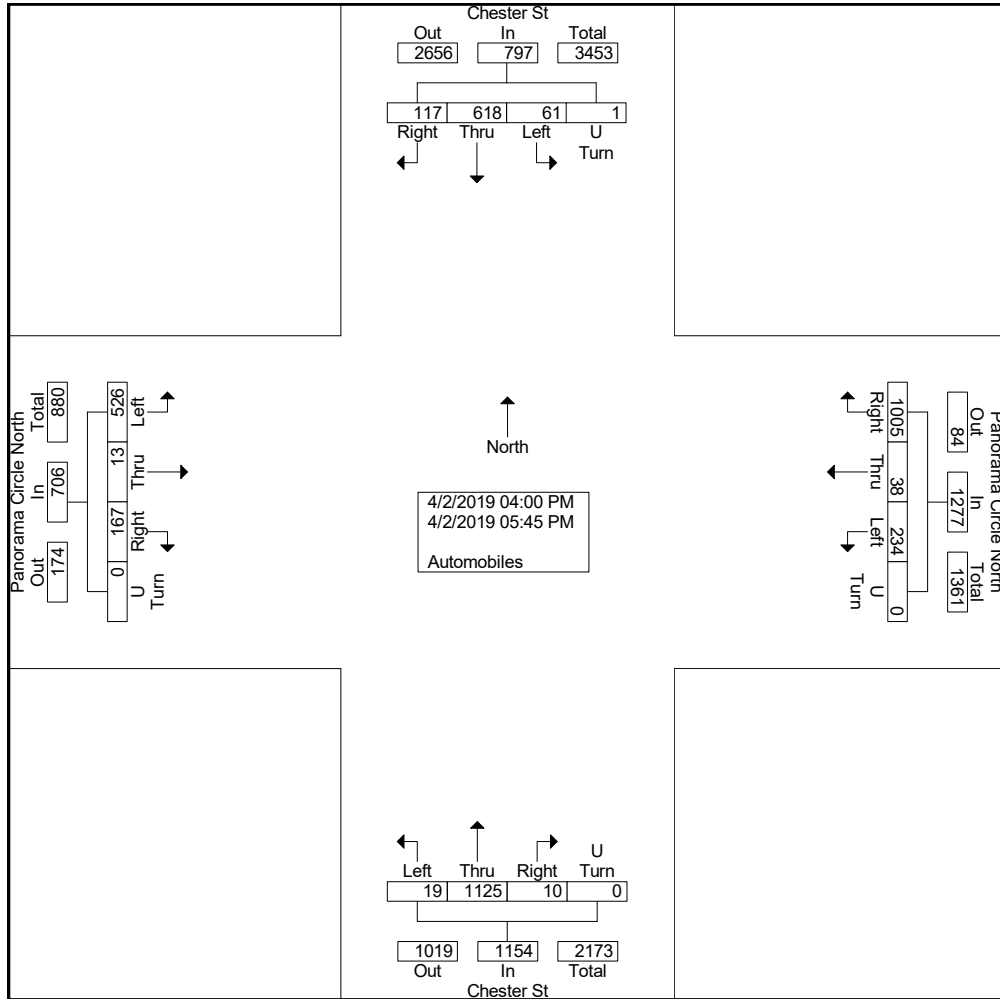
	Panorama Circle North Eastbound					Panorama Circle North Westbound					Chester St Northbound					Chester St Southbound					
Start Time	Left	Thru	Right	U Turn	App. Total	Left	Thru	Right	U Turn	App. Total	Left	Thru	Right	U Turn	App. Total	Left	Thru	Right	U Turn	App. Total	Int. Total
04:00 PM	88	3	21	0	112	23	5	127	0	155	4	178	0	0	182	8	73	13	0	94	543
04:15 PM	59	1	18	0	78	27	4	107	0	138	1	159	1	0	161	7	77	12	0	96	473
04:30 PM	57	2	29	0	88	33	4	136	0	173	2	147	0	0	149	10	84	18	0	112	522
04:45 PM	63	2	33	0	98	34	7	140	0	181	0	124	0	0	124	8	70	14	0	92	495
Total	267	8	101	0	376	117	20	510	0	647	7	608	1	0	616	33	304	57	0	394	2033
05:00 PM	80	3	27	0	110	43	8	164	0	215	8	143	4	0	155	3	93	14	0	110	590
05:15 PM	74	2	18	0	94	27	4	127	0	158	3	134	0	0	137	4	78	11	0	93	482
05:30 PM	58	0	10	0	68	33	1	109	0	143	1	135	3	0	139	9	82	18	1	110	460
05:45 PM	47	0	11	0	58	14	5	95	0	114	0	105	2	0	107	12	61	17	0	90	369
Total	259	5	66	0	330	117	18	495	0	630	12	517	9	0	538	28	314	60	1	403	1901
Grand Total	526	13	167	0	706	234	38	1005	0	1277	19	1125	10	0	1154	61	618	117	1	797	3934
Apprch %	74.5	1.8	23.7	0		18.3	3	78.7	0		1.6	97.5	0.9	0		7.7	77.5	14.7	0.1		
Total %	13.4	0.3	4.2	0	17.9	5.9	1	25.5	0	32.5	0.5	28.6	0.3	0	29.3	1.6	15.7	3	0	20.3	



Ridgeview Data
Collection

Centennial, CO
Jones District Redevelopment
PM Peak
Panorama Circle N and Chester St

File Name : Panorama Cir N and Chester PM
Site Code : IPO 427
Start Date : 4/2/2019
Page No : 2



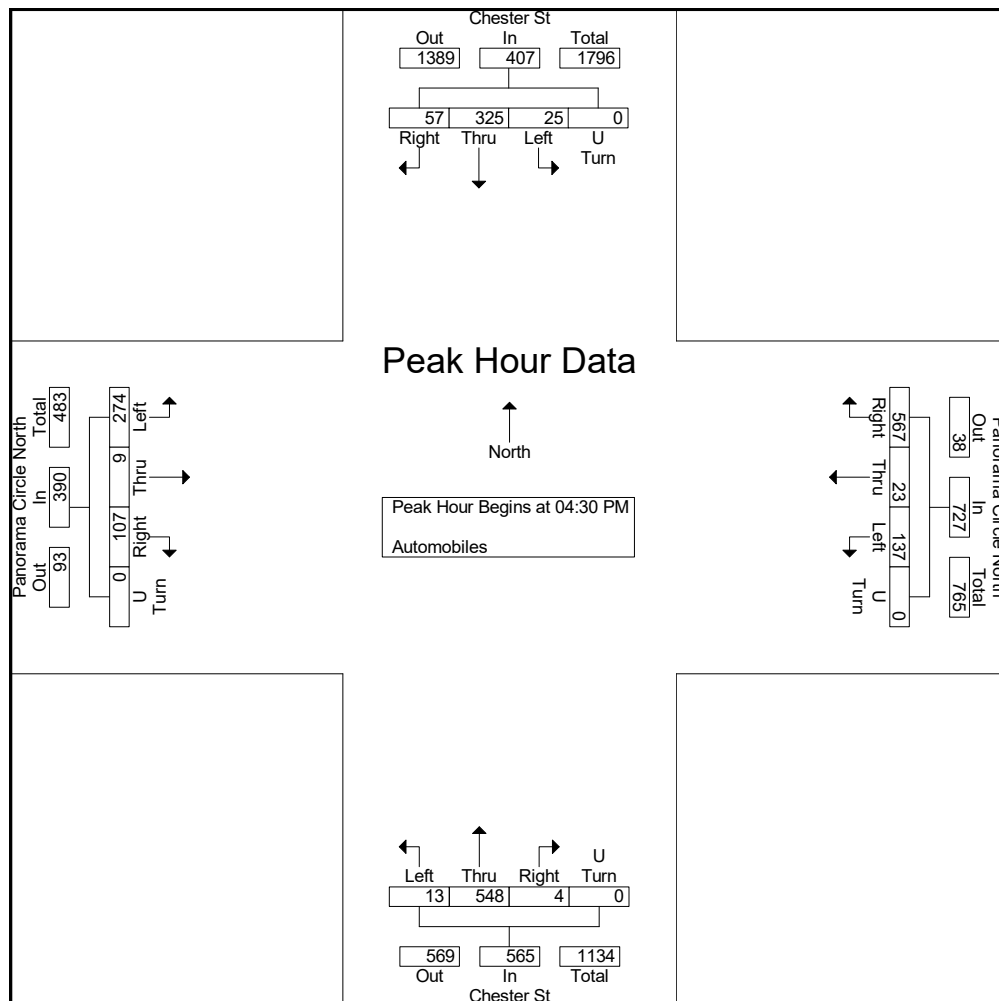


Ridgeview Data
Collection

Centennial, CO
Jones District Redevelopment
PM Peak
Panorama Circle N and Chester St

File Name : Panorama Cir N and Chester PM
Site Code : IPO 427
Start Date : 4/2/2019
Page No : 3

	Panorama Circle North Eastbound					Panorama Circle North Westbound					Chester St Northbound					Chester St Southbound					
Start Time	Left	Thru	Right	U Turn	App. Total	Left	Thru	Right	U Turn	App. Total	Left	Thru	Right	U Turn	App. Total	Left	Thru	Right	U Turn	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	57	2	29	0	88	33	4	136	0	173	2	147	0	0	149	10	84	18	0	112	522
04:45 PM	63	2	33	0	98	34	7	140	0	181	0	124	0	0	124	8	70	14	0	92	495
05:00 PM	80	3	27	0	110	43	8	164	0	215	8	143	4	0	155	3	93	14	0	110	590
05:15 PM	74	2	18	0	94	27	4	127	0	158	3	134	0	0	137	4	78	11	0	93	482
Total Volume	274	9	107	0	390	137	23	567	0	727	13	548	4	0	565	25	325	57	0	407	2089
% App. Total	70.3	2.3	27.4	0		18.8	3.2	78	0		2.3	97	0.7	0		6.1	79.9	14	0		
PHF	.856	.750	.811	.000	.886	.797	.719	.864	.000	.845	.406	.932	.250	.000	.911	.625	.874	.792	.000	.908	.885





Ridgeview Data
Collection

Centennial, CO
Jones District Redevelopment
AM Peak
Panorama Circle S and Chester St

File Name : Panorama Cir S and Chester AM
Site Code : IPO 427
Start Date : 4/2/2019
Page No : 1

Groups Printed- Automobiles

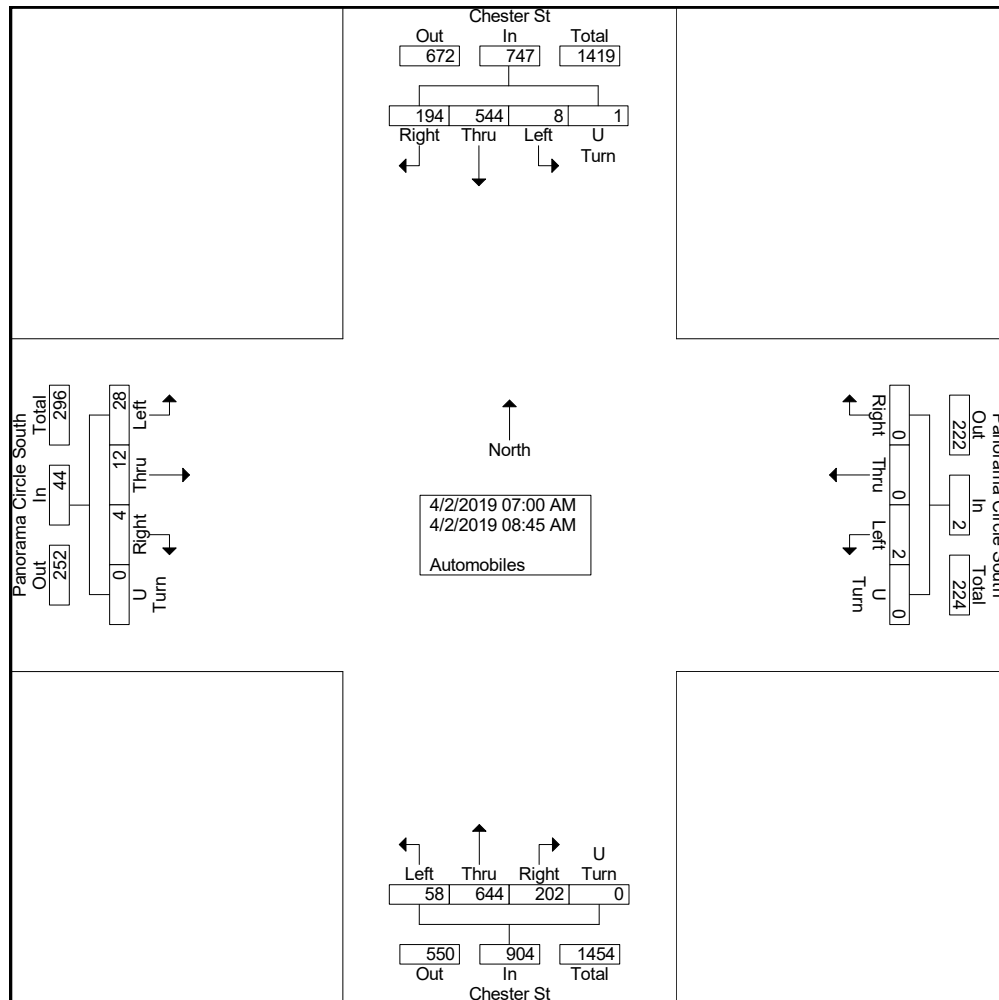
Start Time	Panorama Circle South Eastbound					Panorama Circle South Westbound					Chester St Northbound					Chester St Southbound					Int. Total
	Left	Thru	Right	U Turn	App. Total	Left	Thru	Right	U Turn	App. Total	Left	Thru	Right	U Turn	App. Total	Left	Thru	Right	U Turn	App. Total	
07:00 AM	4	1	0	0	5	1	0	0	0	1	2	72	26	0	100	0	56	19	1	76	182
07:15 AM	4	2	0	0	6	0	0	0	0	0	8	90	25	0	123	0	69	18	0	87	216
07:30 AM	3	3	0	0	6	0	0	0	0	0	5	90	30	0	125	0	83	20	0	103	234
07:45 AM	3	3	0	0	6	0	0	0	0	0	6	92	29	0	127	1	63	20	0	84	217
Total	14	9	0	0	23	1	0	0	0	1	21	344	110	0	475	1	271	77	1	350	849
08:00 AM	7	1	1	0	9	0	0	0	0	0	13	79	32	0	124	1	80	28	0	109	242
08:15 AM	1	1	2	0	4	0	0	0	0	0	9	93	29	0	131	2	63	31	0	96	231
08:30 AM	4	1	0	0	5	1	0	0	0	1	8	73	15	0	96	1	66	29	0	96	198
08:45 AM	2	0	1	0	3	0	0	0	0	0	7	55	16	0	78	3	64	29	0	96	177
Total	14	3	4	0	21	1	0	0	0	1	37	300	92	0	429	7	273	117	0	397	848
Grand Total	28	12	4	0	44	2	0	0	0	2	58	644	202	0	904	8	544	194	1	747	1697
Apprch %	63.6	27.3	9.1	0		100	0	0	0		6.4	71.2	22.3	0		1.1	72.8	26	0.1		
Total %	1.6	0.7	0.2	0	2.6	0.1	0	0	0	0.1	3.4	37.9	11.9	0	53.3	0.5	32.1	11.4	0.1	44	



Ridgeview Data
Collection

Centennial, CO
Jones District Redevelopment
AM Peak
Panorama Circle S and Chester St

File Name : Panorama Cir S and Chester AM
Site Code : IPO 427
Start Date : 4/2/2019
Page No : 2



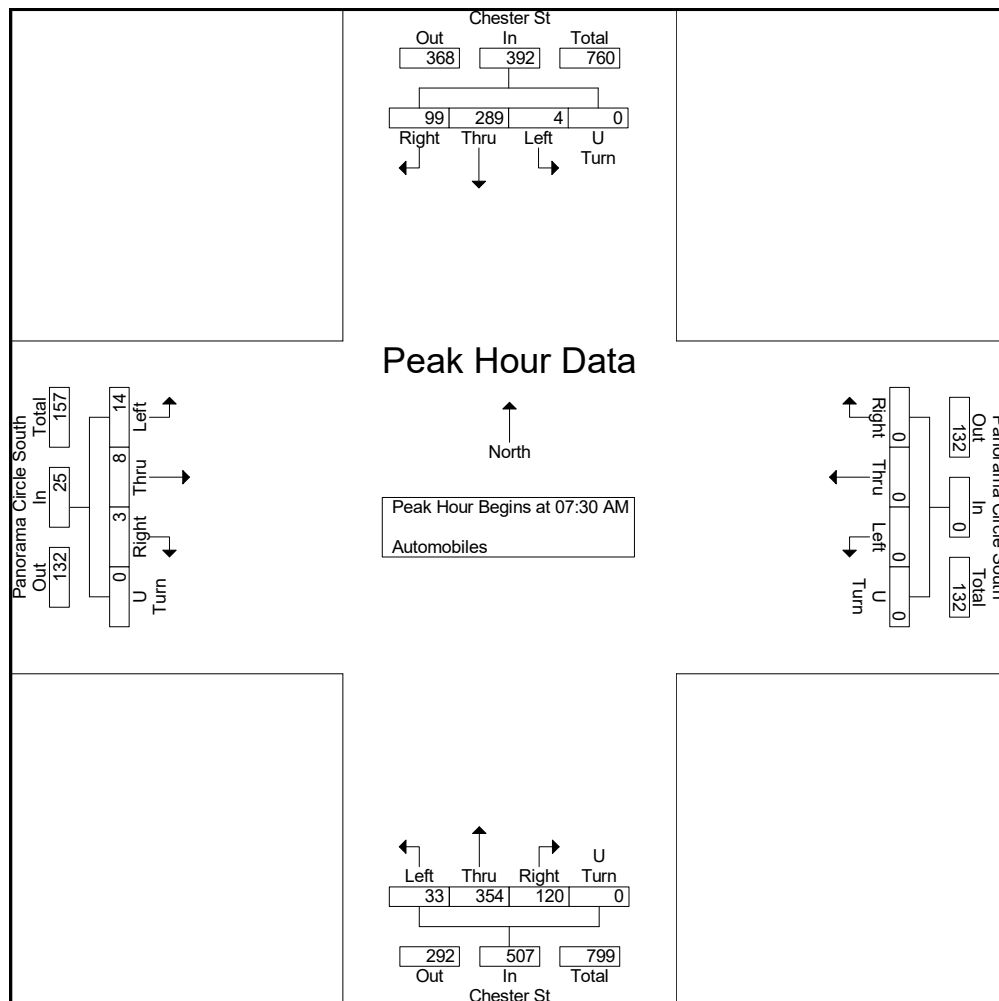


Ridgeview Data
Collection

Centennial, CO
Jones District Redevelopment
AM Peak
Panorama Circle S and Chester St

File Name : Panorama Cir S and Chester AM
Site Code : IPO 427
Start Date : 4/2/2019
Page No : 3

	Panorama Circle South Eastbound					Panorama Circle South Westbound					Chester St Northbound					Chester St Southbound					
Start Time	Left	Thru	Right	U Turn	App. Total	Left	Thru	Right	U Turn	App. Total	Left	Thru	Right	U Turn	App. Total	Left	Thru	Right	U Turn	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	3	3	0	0	6	0	0	0	0	0	5	90	30	0	125	0	83	20	0	103	234
07:45 AM	3	3	0	0	6	0	0	0	0	0	6	92	29	0	127	1	63	20	0	84	217
08:00 AM	7	1	1	0	9	0	0	0	0	0	13	79	32	0	124	1	80	28	0	109	242
08:15 AM	1	1	2	0	4	0	0	0	0	0	9	93	29	0	131	2	63	31	0	96	231
Total Volume	14	8	3	0	25	0	0	0	0	0	33	354	120	0	507	4	289	99	0	392	924
% App. Total	56	32	12	0		0	0	0	0		6.5	69.8	23.7	0		1	73.7	25.3	0		
PHF	.500	.667	.375	.000	.694	.000	.000	.000	.000	.000	.635	.952	.938	.000	.968	.500	.870	.798	.000	.899	.955





Ridgeview Data
Collection

Centennial, CO
Jones District Redevelopment
PM Peak
Panorama Circle S and Chester St

File Name : Panorama Cir S and Chester PM
Site Code : IPO 427
Start Date : 4/2/2019
Page No : 1

Groups Printed- Automobiles

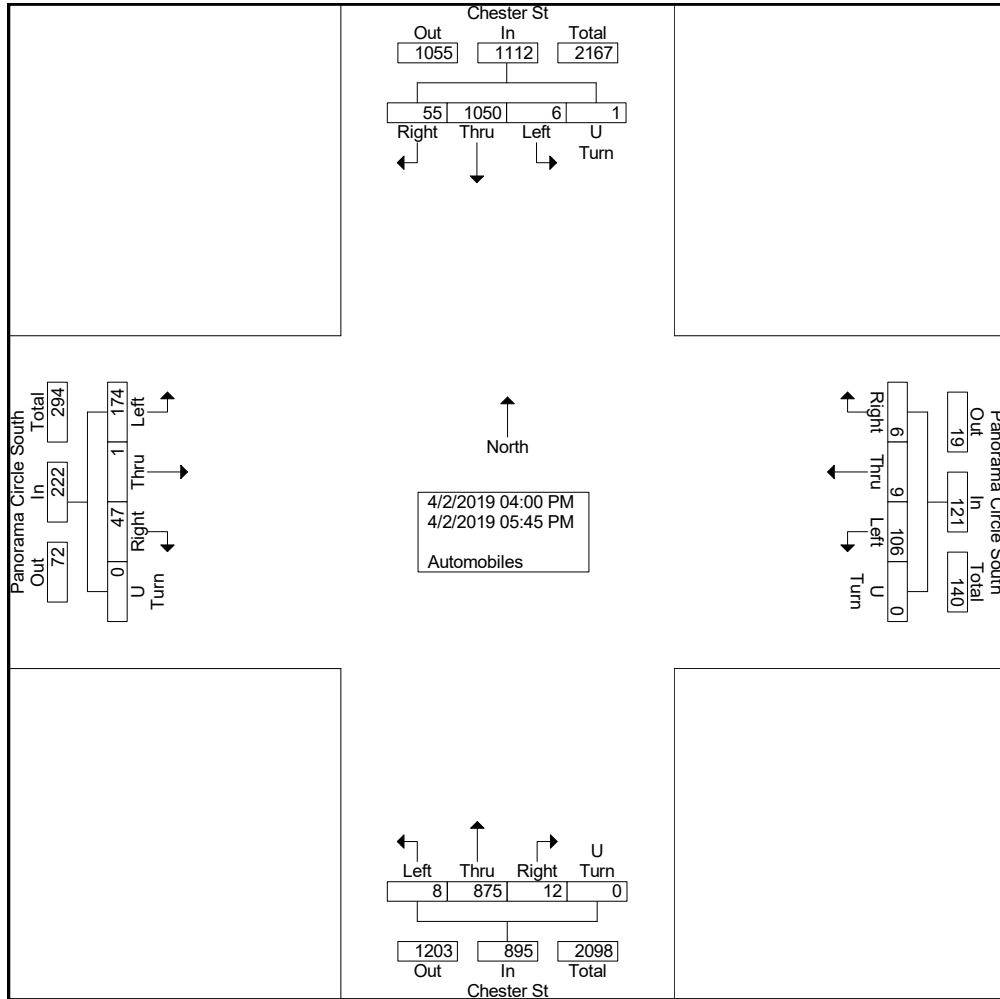
Start Time	Panorama Circle South Eastbound					Panorama Circle South Westbound					Chester St Northbound					Chester St Southbound					Int. Total
	Left	Thru	Right	U Turn	App. Total	Left	Thru	Right	U Turn	App. Total	Left	Thru	Right	U Turn	App. Total	Left	Thru	Right	U Turn	App. Total	
04:00 PM	37	0	11	0	48	10	0	0	0	10	2	141	2	0	145	1	105	11	0	117	320
04:15 PM	21	0	7	0	28	7	2	0	0	9	1	116	2	0	119	1	125	11	0	137	293
04:30 PM	20	0	4	0	24	13	1	1	0	15	3	111	2	0	116	1	144	6	0	151	306
04:45 PM	26	0	4	0	30	10	1	1	0	12	0	86	2	0	88	1	141	5	0	147	277
Total	104	0	26	0	130	40	4	2	0	46	6	454	8	0	468	4	515	33	0	552	1196
05:00 PM	21	1	6	0	28	28	0	2	0	30	1	126	0	0	127	1	161	10	1	173	358
05:15 PM	15	0	4	0	19	21	3	2	0	26	0	110	3	0	113	0	160	5	0	165	323
05:30 PM	16	0	7	0	23	10	1	0	0	11	0	106	0	0	106	0	121	2	0	123	263
05:45 PM	18	0	4	0	22	7	1	0	0	8	1	79	1	0	81	1	93	5	0	99	210
Total	70	1	21	0	92	66	5	4	0	75	2	421	4	0	427	2	535	22	1	560	1154
Grand Total	174	1	47	0	222	106	9	6	0	121	8	875	12	0	895	6	1050	55	1	1112	2350
Apprch %	78.4	0.5	21.2	0		87.6	7.4	5	0		0.9	97.8	1.3	0		0.5	94.4	4.9	0.1		
Total %	7.4	0	2	0	9.4	4.5	0.4	0.3	0	5.1	0.3	37.2	0.5	0	38.1	0.3	44.7	2.3	0	47.3	



Ridgeview Data
Collection

Centennial, CO
Jones District Redevelopment
PM Peak
Panorama Circle S and Chester St

File Name : Panorama Cir S and Chester PM
Site Code : IPO 427
Start Date : 4/2/2019
Page No : 2



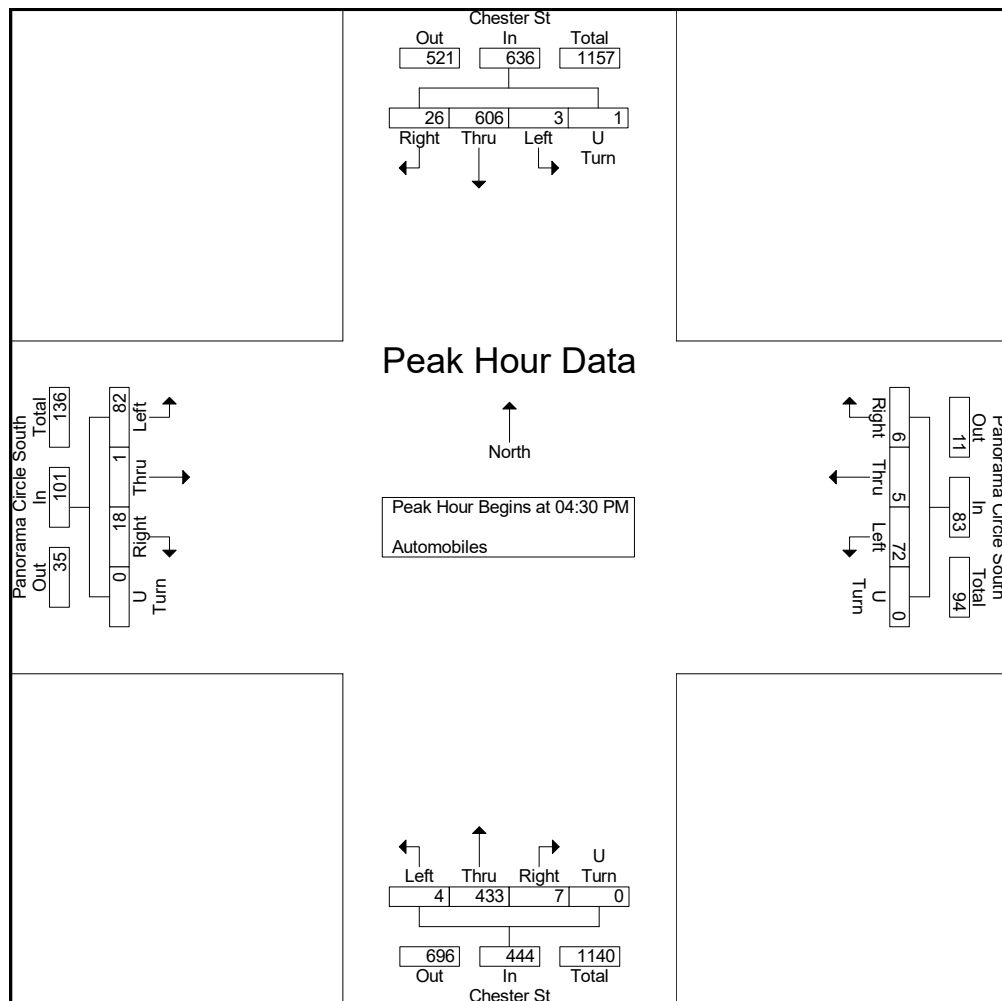


Ridgeview Data
Collection

Centennial, CO
Jones District Redevelopment
PM Peak
Panorama Circle S and Chester St

File Name : Panorama Cir S and Chester PM
Site Code : IPO 427
Start Date : 4/2/2019
Page No : 3

	Panorama Circle South Eastbound					Panorama Circle South Westbound					Chester St Northbound					Chester St Southbound					
Start Time	Left	Thru	Right	U Turn	App. Total	Left	Thru	Right	U Turn	App. Total	Left	Thru	Right	U Turn	App. Total	Left	Thru	Right	U Turn	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	20	0	4	0	24	13	1	1	0	15	3	111	2	0	116	1	144	6	0	151	306
04:45 PM	26	0	4	0	30	10	1	1	0	12	0	86	2	0	88	1	141	5	0	147	277
05:00 PM	21	1	6	0	28	28	0	2	0	30	1	126	0	0	127	1	161	10	1	173	358
05:15 PM	15	0	4	0	19	21	3	2	0	26	0	110	3	0	113	0	160	5	0	165	323
Total Volume	82	1	18	0	101	72	5	6	0	83	4	433	7	0	444	3	606	26	1	636	1264
% App. Total	81.2	1	17.8	0		86.7	6	7.2	0		0.9	97.5	1.6	0		0.5	95.3	4.1	0.2		
PHF	.788	.250	.750	.000	.842	.643	.417	.750	.000	.692	.333	.859	.583	.000	.874	.750	.941	.650	.250	.919	.883





Ridgeview Data
Collection

Centennial, CO
Jones District Redevelopment
AM Peak
Mineral Ave and Chester St

File Name : Mineral and Chester AM
Site Code : IPO 427
Start Date : 4/2/2019
Page No : 1

Groups Printed- Automobiles

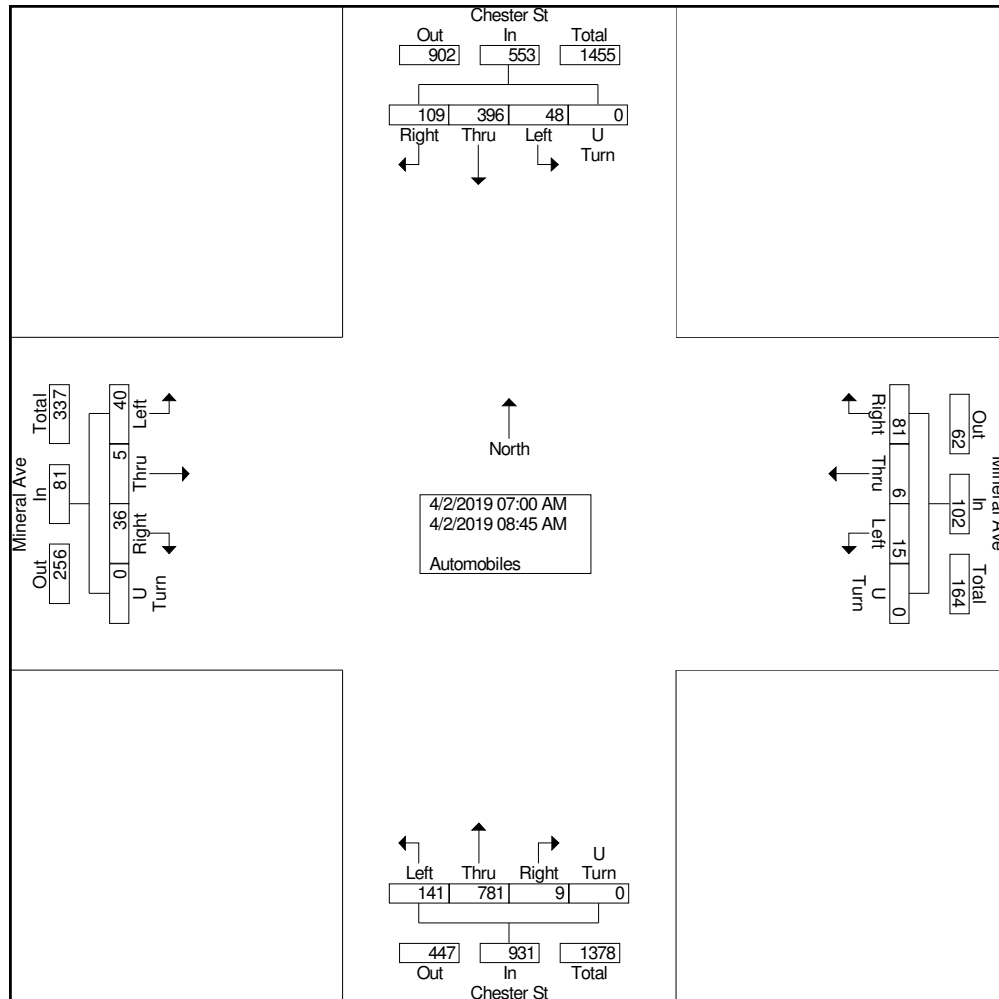
	Mineral Ave Eastbound					Mineral Ave Westbound					Chester St Northbound					Chester St Southbound					
Start Time	Left	Thru	Right	U Turn	App. Total	Left	Thru	Right	U Turn	App. Total	Left	Thru	Right	U Turn	App. Total	Left	Thru	Right	U Turn	App. Total	Int. Total
07:00 AM	5	1	5	0	11	4	0	13	0	17	14	80	0	0	94	5	35	13	0	53	175
07:15 AM	2	0	2	0	4	1	3	10	0	14	16	108	1	0	125	7	53	12	0	72	215
07:30 AM	5	1	1	0	7	2	1	10	0	13	24	107	0	0	131	6	61	18	0	85	236
07:45 AM	5	0	8	0	13	4	1	12	0	17	26	112	1	0	139	6	42	13	0	61	230
Total	17	2	16	0	35	11	5	45	0	61	80	407	2	0	489	24	191	56	0	271	856
08:00 AM	7	2	6	0	15	0	1	12	0	13	23	110	5	0	138	5	62	13	0	80	246
08:15 AM	3	0	6	0	9	1	0	8	0	9	15	120	0	0	135	7	50	12	0	69	222
08:30 AM	6	0	4	0	10	1	0	9	0	10	10	81	0	0	91	8	43	15	0	66	177
08:45 AM	7	1	4	0	12	2	0	7	0	9	13	63	2	0	78	4	50	13	0	67	166
Total	23	3	20	0	46	4	1	36	0	41	61	374	7	0	442	24	205	53	0	282	811
Grand Total	40	5	36	0	81	15	6	81	0	102	141	781	9	0	931	48	396	109	0	553	1667
Apprch %	49.4	6.2	44.4	0		14.7	5.9	79.4	0		15.1	83.9	1	0		8.7	71.6	19.7	0		
Total %	2.4	0.3	2.2	0	4.9	0.9	0.4	4.9	0	6.1	8.5	46.9	0.5	0	55.8	2.9	23.8	6.5	0	33.2	



Ridgeview Data
Collection

Centennial, CO
Jones District Redevelopment
AM Peak
Mineral Ave and Chester St

File Name : Mineral and Chester AM
Site Code : IPO 427
Start Date : 4/2/2019
Page No : 2



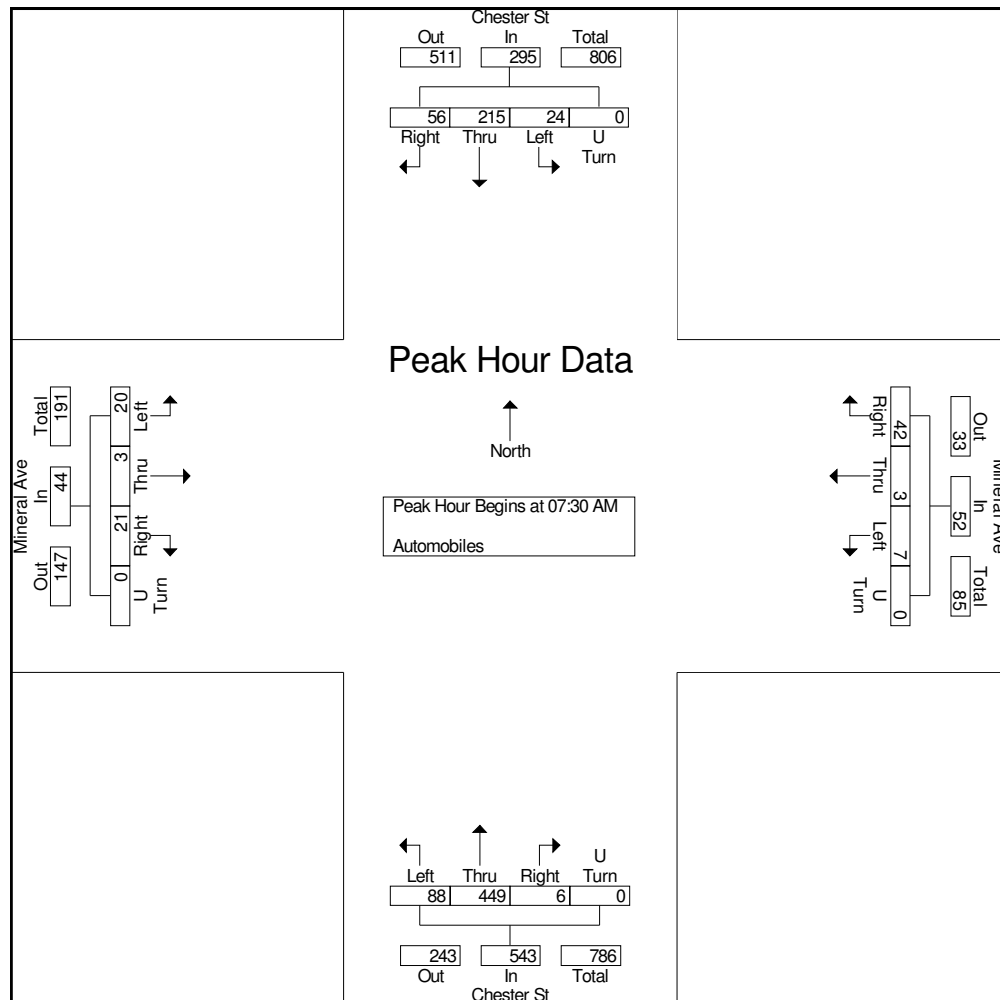


Ridgeview Data
Collection

Centennial, CO
Jones District Redevelopment
AM Peak
Mineral Ave and Chester St

File Name : Mineral and Chester AM
Site Code : IPO 427
Start Date : 4/2/2019
Page No : 3

	Mineral Ave Eastbound					Mineral Ave Westbound					Chester St Northbound					Chester St Southbound					
Start Time	Left	Thru	Right	U Turn	App. Total	Left	Thru	Right	U Turn	App. Total	Left	Thru	Right	U Turn	App. Total	Left	Thru	Right	U Turn	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	5	1	1	0	7	2	1	10	0	13	24	107	0	0	131	6	61	18	0	85	236
07:45 AM	5	0	8	0	13	4	1	12	0	17	26	112	1	0	139	6	42	13	0	61	230
08:00 AM	7	2	6	0	15	0	1	12	0	13	23	110	5	0	138	5	62	13	0	80	246
08:15 AM	3	0	6	0	9	1	0	8	0	9	15	120	0	0	135	7	50	12	0	69	222
Total Volume	20	3	21	0	44	7	3	42	0	52	88	449	6	0	543	24	215	56	0	295	934
% App. Total	45.5	6.8	47.7	0		13.5	5.8	80.8	0		16.2	82.7	1.1	0		8.1	72.9	19	0		
PHF	.714	.375	.656	.000	.733	.438	.750	.875	.000	.765	.846	.935	.300	.000	.977	.857	.867	.778	.000	.868	.949





Ridgeview Data
Collection

Centennial, CO
Jones District Redevelopment
PM Peak
Mineral Ave and Chester St

File Name : Mineral and Chester PM
Site Code : IPO 427
Start Date : 4/2/2019
Page No : 1

Groups Printed- Automobiles

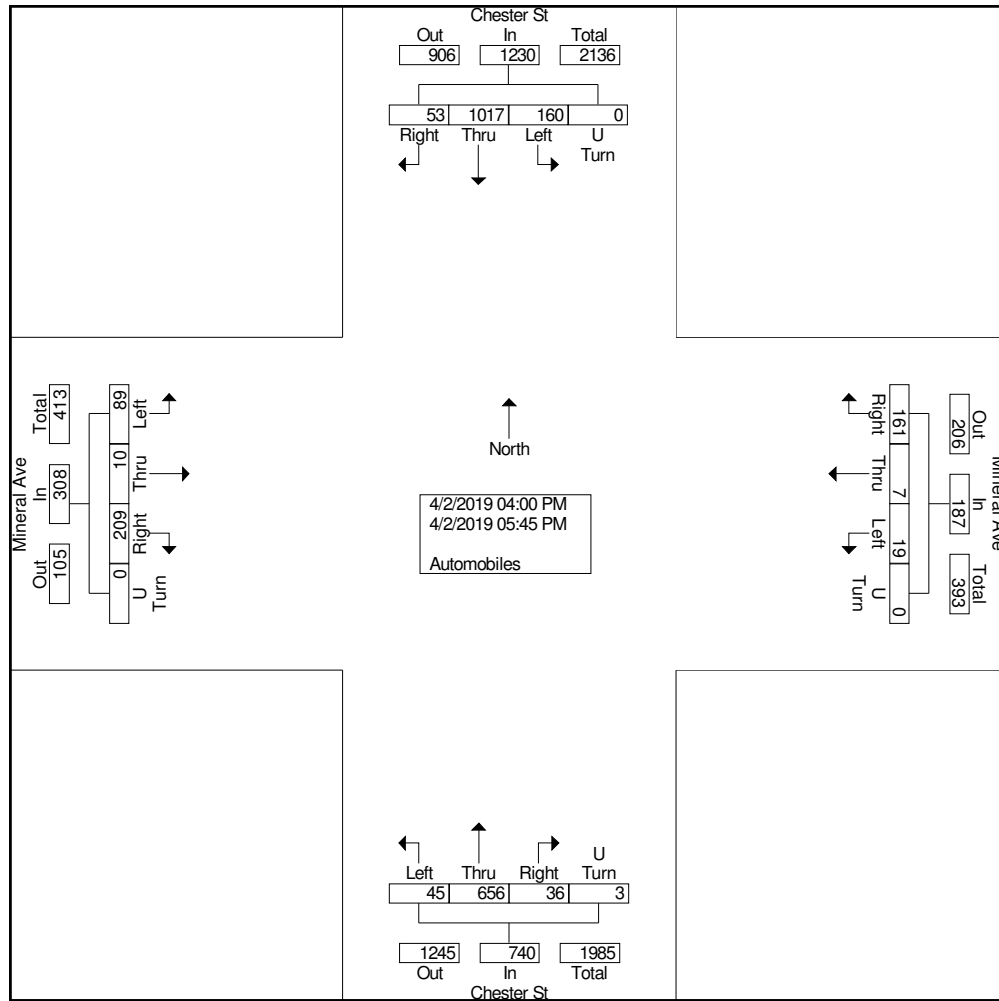
	Mineral Ave Eastbound					Mineral Ave Westbound					Chester St Northbound					Chester St Southbound					
Start Time	Left	Thru	Right	U Turn	App. Total	Left	Thru	Right	U Turn	App. Total	Left	Thru	Right	U Turn	App. Total	Left	Thru	Right	U Turn	App. Total	Int. Total
04:00 PM	14	2	31	0	47	1	1	26	0	28	2	111	7	0	120	14	112	6	0	132	327
04:15 PM	17	2	31	0	50	3	0	23	0	26	4	84	4	1	93	24	115	2	0	141	310
04:30 PM	8	1	37	0	46	2	3	21	0	26	8	88	5	0	101	20	137	7	0	164	337
04:45 PM	8	1	33	0	42	3	0	20	0	23	5	60	3	0	68	22	135	6	0	163	296
Total	47	6	132	0	185	9	4	90	0	103	19	343	19	1	382	80	499	21	0	600	1270
05:00 PM	12	1	27	0	40	1	1	17	0	19	6	95	7	0	108	22	166	6	0	194	361
05:15 PM	15	1	30	0	46	1	0	21	0	22	2	80	3	0	85	24	151	6	0	181	334
05:30 PM	8	0	7	0	15	5	0	12	0	17	14	83	3	2	102	13	119	13	0	145	279
05:45 PM	7	2	13	0	22	3	2	21	0	26	4	55	4	0	63	21	82	7	0	110	221
Total	42	4	77	0	123	10	3	71	0	84	26	313	17	2	358	80	518	32	0	630	1195
Grand Total	89	10	209	0	308	19	7	161	0	187	45	656	36	3	740	160	1017	53	0	1230	2465
Apprch %	28.9	3.2	67.9	0		10.2	3.7	86.1	0		6.1	88.6	4.9	0.4		13	82.7	4.3	0		
Total %	3.6	0.4	8.5	0	12.5	0.8	0.3	6.5	0	7.6	1.8	26.6	1.5	0.1	30	6.5	41.3	2.2	0	49.9	



Ridgeview Data
Collection

Centennial, CO
Jones District Redevelopment
PM Peak
Mineral Ave and Chester St

File Name : Mineral and Chester PM
Site Code : IPO 427
Start Date : 4/2/2019
Page No : 2



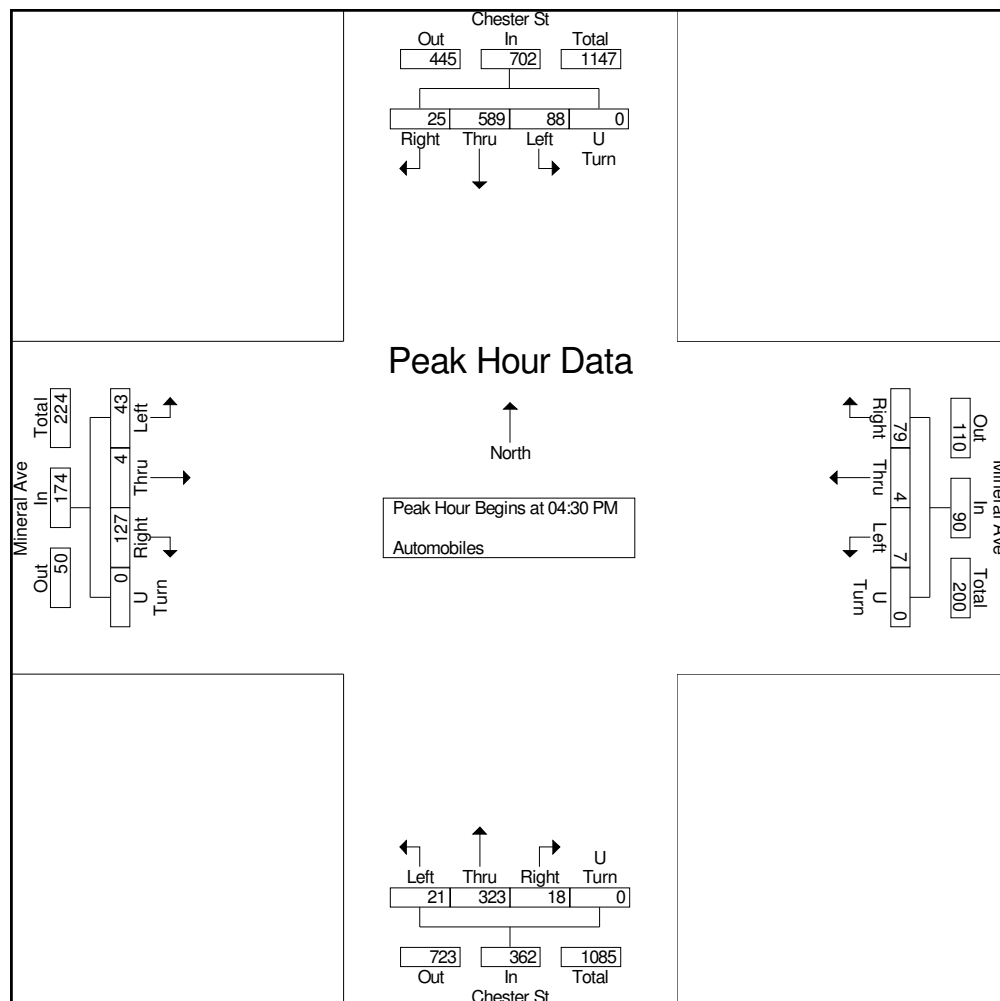


Ridgeview Data
Collection

Centennial, CO
Jones District Redevelopment
PM Peak
Mineral Ave and Chester St

File Name : Mineral and Chester PM
Site Code : IPO 427
Start Date : 4/2/2019
Page No : 3

	Mineral Ave Eastbound					Mineral Ave Westbound					Chester St Northbound					Chester St Southbound					
Start Time	Left	Thru	Right	U Turn	App. Total	Left	Thru	Right	U Turn	App. Total	Left	Thru	Right	U Turn	App. Total	Left	Thru	Right	U Turn	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	8	1	37	0	46	2	3	21	0	26	8	88	5	0	101	20	137	7	0	164	337
04:45 PM	8	1	33	0	42	3	0	20	0	23	5	60	3	0	68	22	135	6	0	163	296
05:00 PM	12	1	27	0	40	1	1	17	0	19	6	95	7	0	108	22	166	6	0	194	361
05:15 PM	15	1	30	0	46	1	0	21	0	22	2	80	3	0	85	24	151	6	0	181	334
Total Volume	43	4	127	0	174	7	4	79	0	90	21	323	18	0	362	88	589	25	0	702	1328
% App. Total	24.7	2.3	73	0		7.8	4.4	87.8	0		5.8	89.2	5	0		12.5	83.9	3.6	0		
PHF	.717	1.0 0	.858	.000	.946	.583	.333	.940	.000	.865	.656	.850	.643	.000	.838	.917	.887	.893	.000	.905	.920





Ridgeview Data
Collection

Centennial, CO
Jones District Redevelopment
AM Peak
Mineral Ave and Yosemite St

File Name : Mineral Ave and Yosemite AM
Site Code : IPO 427
Start Date : 4/2/2019
Page No : 1

Groups Printed- Automobiles

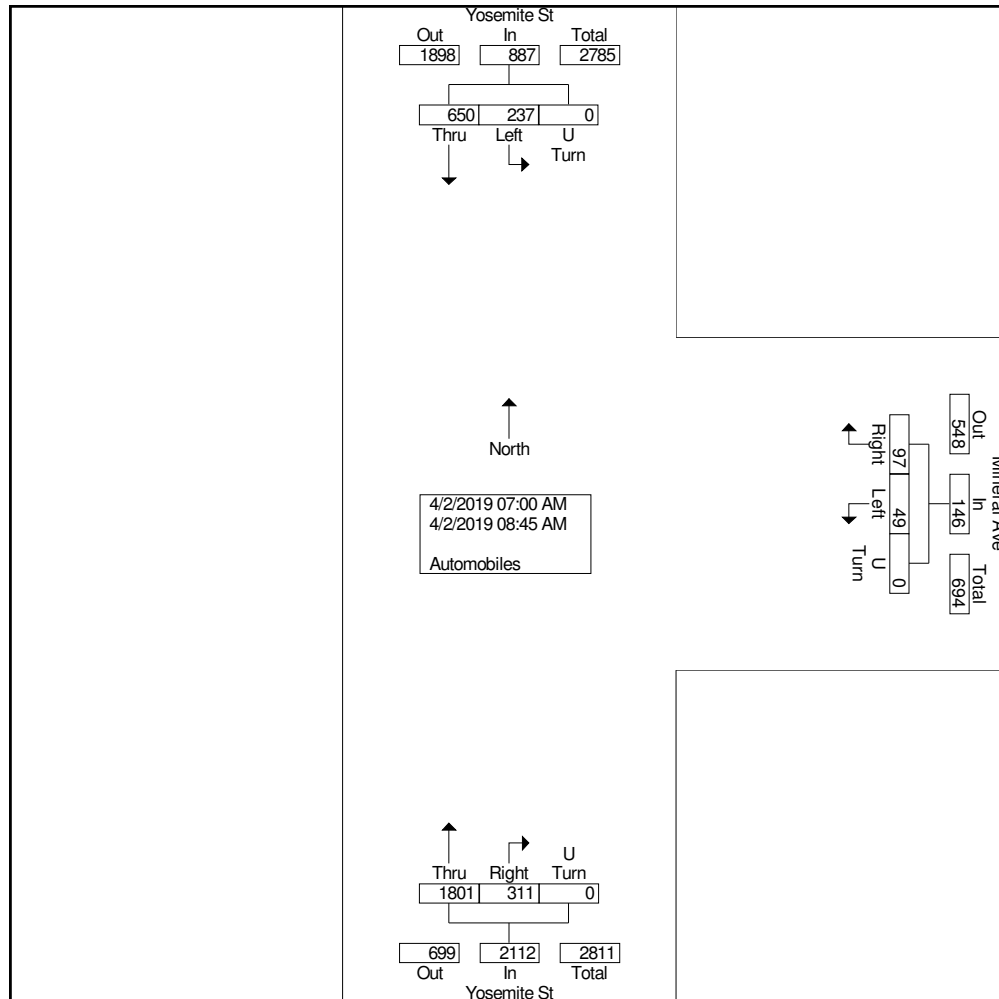
Start Time	Mineral Ave Westbound				Yosemite St Northbound				Yosemite St Southbound				Int. Total
	Left	Right	U Turn	App. Total	Thru	Right	U Turn	App. Total	Left	Thru	U Turn	App. Total	
07:00 AM	5	12	0	17	191	27	0	218	13	56	0	69	304
07:15 AM	1	8	0	9	192	43	0	235	44	52	0	96	340
07:30 AM	6	14	0	20	261	42	0	303	30	100	0	130	453
07:45 AM	8	13	0	21	333	56	0	389	42	101	0	143	553
Total	20	47	0	67	977	168	0	1145	129	309	0	438	1650
08:00 AM	9	9	0	18	240	37	0	277	33	102	0	135	430
08:15 AM	11	15	0	26	237	35	0	272	29	82	0	111	409
08:30 AM	6	12	0	18	182	46	0	228	23	70	0	93	339
08:45 AM	3	14	0	17	165	25	0	190	23	87	0	110	317
Total	29	50	0	79	824	143	0	967	108	341	0	449	1495
Grand Total	49	97	0	146	1801	311	0	2112	237	650	0	887	3145
Apprch %	33.6	66.4	0		85.3	14.7	0		26.7	73.3	0		
Total %	1.6	3.1	0	4.6	57.3	9.9	0	67.2	7.5	20.7	0	28.2	



Ridgeview Data
Collection

Centennial, CO
Jones District Redevelopment
AM Peak
Mineral Ave and Yosemite St

File Name : Mineral Ave and Yosemite AM
Site Code : IPO 427
Start Date : 4/2/2019
Page No : 2



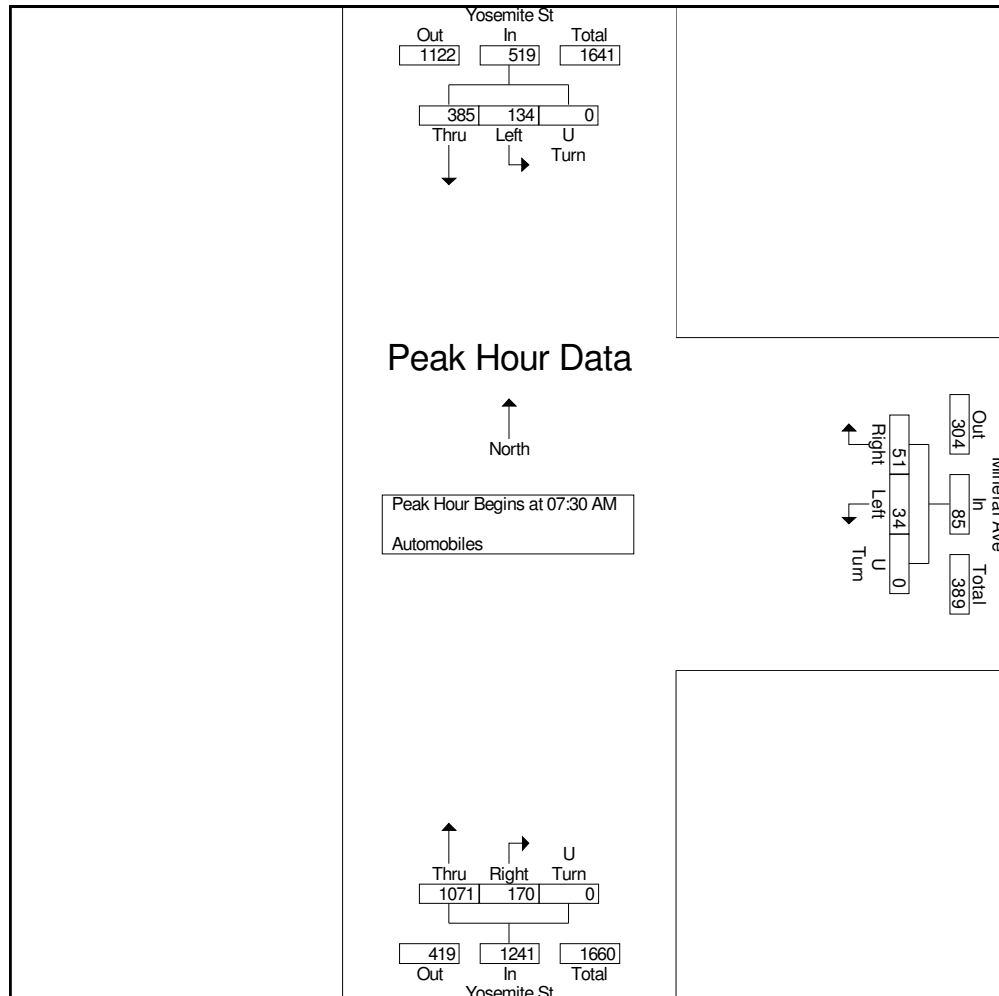


Ridgeview Data
Collection

Centennial, CO
Jones District Redevelopment
AM Peak
Mineral Ave and Yosemite St

File Name : Mineral Ave and Yosemite AM
Site Code : IPO 427
Start Date : 4/2/2019
Page No : 3

	Mineral Ave Westbound				Yosemite St Northbound				Yosemite St Southbound				
Start Time	Left	Right	U Turn	App. Total	Thru	Right	U Turn	App. Total	Left	Thru	U Turn	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	14	0	20	261	42	0	303	30	100	0	130	453
07:45 AM	8	13	0	21	333	56	0	389	42	101	0	143	553
08:00 AM	9	9	0	18	240	37	0	277	33	102	0	135	430
08:15 AM	11	15	0	26	237	35	0	272	29	82	0	111	409
Total Volume	34	51	0	85	1071	170	0	1241	134	385	0	519	1845
% App. Total	40	60	0		86.3	13.7	0		25.8	74.2	0		
PHF	.773	.850	.000	.817	.804	.759	.000	.798	.798	.944	.000	.907	.834





Ridgeview Data
Collection

Centennial, CO
Jones District Redevelopment
PM Peak
Mineral Ave and Yosemite St

File Name : Mineral Ave and Yosemite PM
Site Code : IPO 427
Start Date : 4/2/2019
Page No : 1

Groups Printed- Automobiles

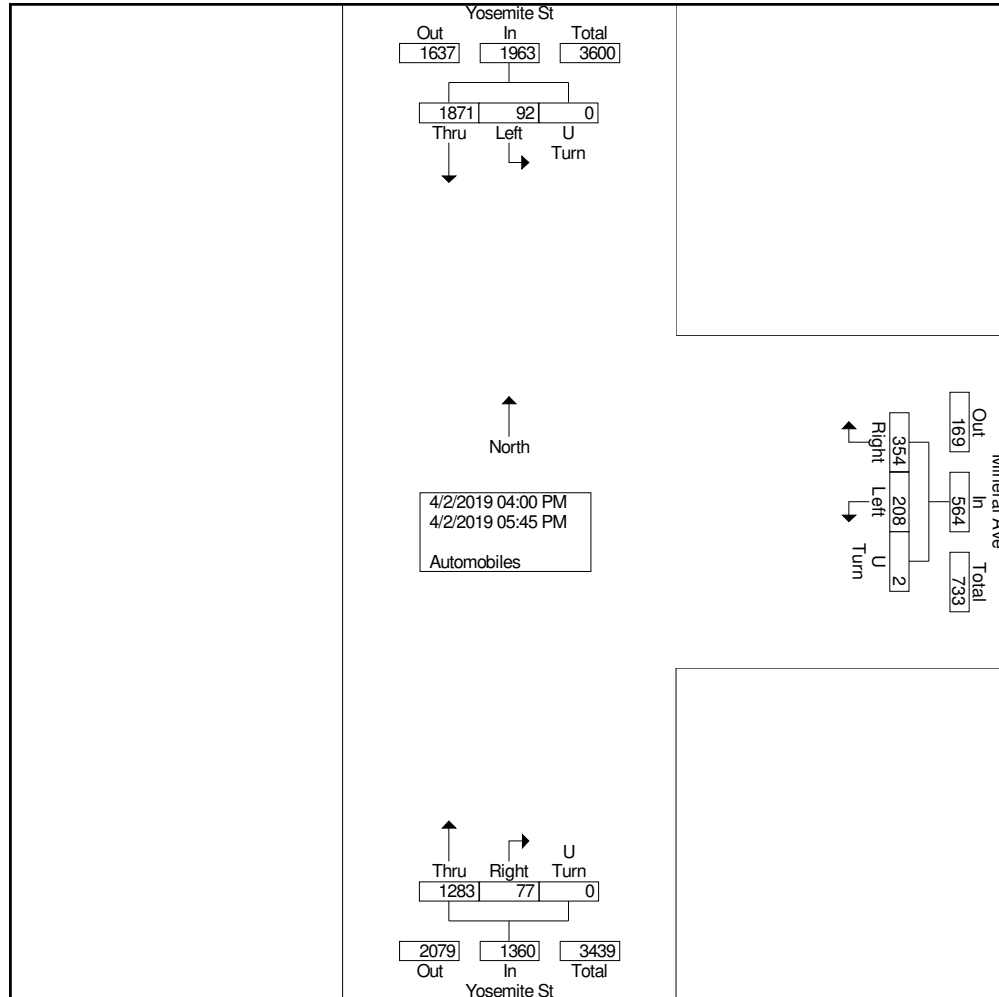
Start Time	Mineral Ave Westbound				Yosemite St Northbound				Yosemite St Southbound				Int. Total
	Left	Right	U Turn	App. Total	Thru	Right	U Turn	App. Total	Left	Thru	U Turn	App. Total	
04:00 PM	34	56	0	90	179	17	0	196	12	207	0	219	505
04:15 PM	30	53	1	84	157	11	0	168	16	191	0	207	459
04:30 PM	34	52	0	86	179	16	0	195	15	242	0	257	538
04:45 PM	32	53	0	85	155	8	0	163	8	251	0	259	507
Total	130	214	1	345	670	52	0	722	51	891	0	942	2009
05:00 PM	23	51	1	75	183	8	0	191	7	283	0	290	556
05:15 PM	28	36	0	64	159	6	0	165	12	261	0	273	502
05:30 PM	13	36	0	49	145	8	0	153	14	233	0	247	449
05:45 PM	14	17	0	31	126	3	0	129	8	203	0	211	371
Total	78	140	1	219	613	25	0	638	41	980	0	1021	1878
Grand Total	208	354	2	564	1283	77	0	1360	92	1871	0	1963	3887
Apprch %	36.9	62.8	0.4		94.3	5.7	0		4.7	95.3	0		
Total %	5.4	9.1	0.1	14.5	33	2	0	35	2.4	48.1	0	50.5	



Ridgeview Data
Collection

Centennial, CO
Jones District Redevelopment
PM Peak
Mineral Ave and Yosemite St

File Name : Mineral Ave and Yosemite PM
Site Code : IPO 427
Start Date : 4/2/2019
Page No : 2



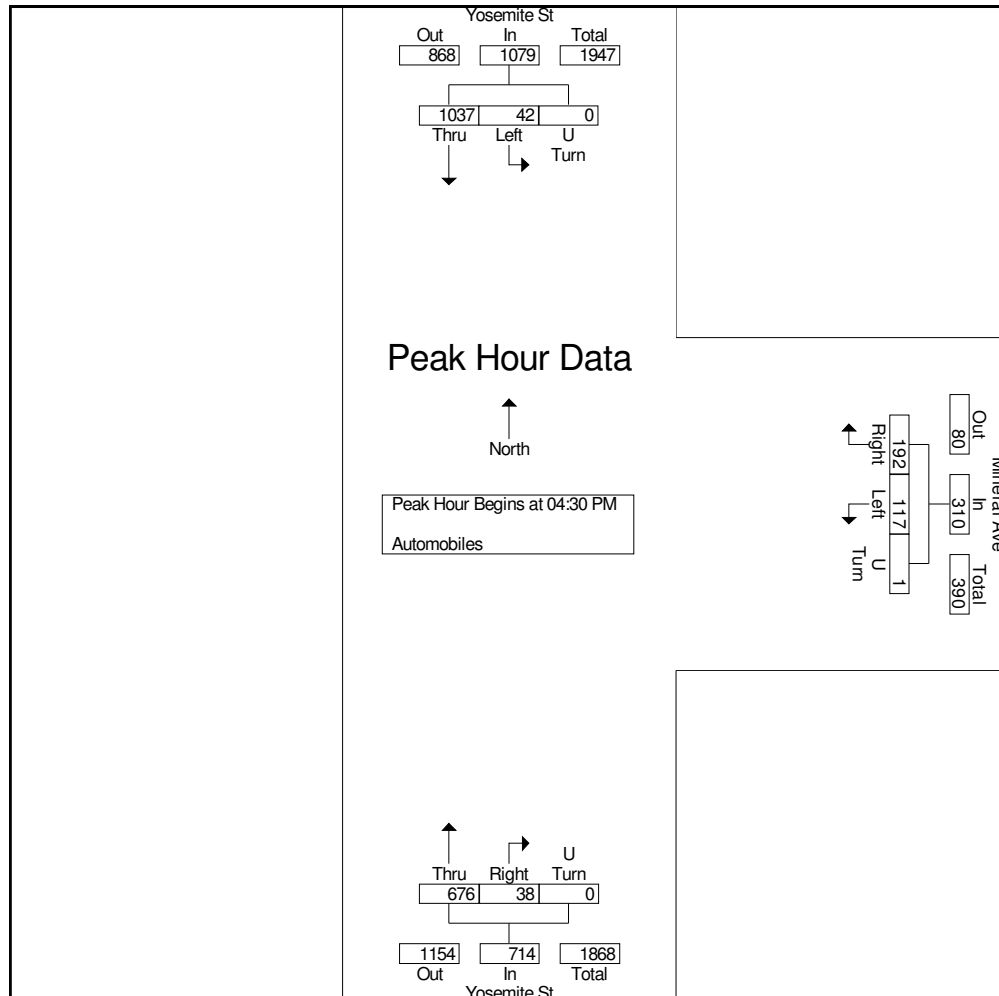


Ridgeview Data
Collection

Centennial, CO
Jones District Redevelopment
PM Peak
Mineral Ave and Yosemite St

File Name : Mineral Ave and Yosemite PM
Site Code : IPO 427
Start Date : 4/2/2019
Page No : 3

	Mineral Ave Westbound				Yosemite St Northbound				Yosemite St Southbound				
Start Time	Left	Right	U Turn	App. Total	Thru	Right	U Turn	App. Total	Left	Thru	U Turn	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	34	52	0	86	179	16	0	195	15	242	0	257	538
04:45 PM	32	53	0	85	155	8	0	163	8	251	0	259	507
05:00 PM	23	51	1	75	183	8	0	191	7	283	0	290	556
05:15 PM	28	36	0	64	159	6	0	165	12	261	0	273	502
Total Volume	117	192	1	310	676	38	0	714	42	1037	0	1079	2103
% App. Total	37.7	61.9	0.3		94.7	5.3	0		3.9	96.1	0		
PHF	.860	.906	.250	.901	.923	.594	.000	.915	.700	.916	.000	.930	.946





Ridgeview Data
Collection

Centennial, CO
Jones District Redevelopment
AM Peak
Willow Way and Yosemite St

File Name : Willow and Yosemite AM
Site Code : IPO 427
Start Date : 4/2/2019
Page No : 1

Groups Printed- Automobiles

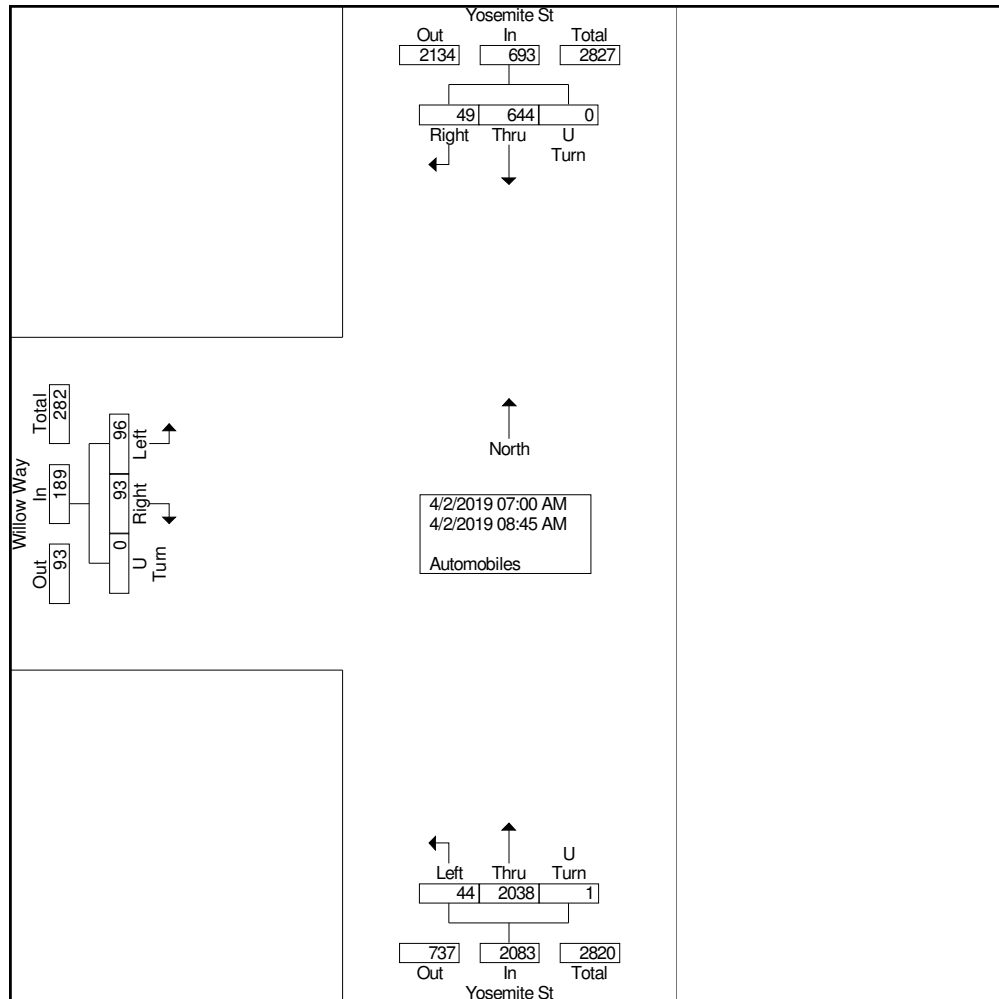
Start Time	Willow Way Eastbound				Yosemite St Northbound				Yosemite St Southbound				Int. Total
	Left	Right	U Turn	App. Total	Left	Thru	U Turn	App. Total	Thru	Right	U Turn	App. Total	
07:00 AM	14	2	0	16	2	219	0	221	58	4	0	62	299
07:15 AM	4	4	0	8	5	227	0	232	47	5	0	52	292
07:30 AM	15	6	0	21	8	273	0	281	82	12	0	94	396
07:45 AM	29	40	0	69	19	358	1	378	97	16	0	113	560
Total	62	52	0	114	34	1077	1	1112	284	37	0	321	1547
08:00 AM	22	25	0	47	1	277	0	278	109	4	0	113	438
08:15 AM	6	10	0	16	1	239	0	240	91	3	0	94	350
08:30 AM	5	3	0	8	5	249	0	254	73	3	0	76	338
08:45 AM	1	3	0	4	3	196	0	199	87	2	0	89	292
Total	34	41	0	75	10	961	0	971	360	12	0	372	1418
Grand Total	96	93	0	189	44	2038	1	2083	644	49	0	693	2965
Apprch %	50.8	49.2	0		2.1	97.8	0		92.9	7.1	0		
Total %	3.2	3.1	0	6.4	1.5	68.7	0	70.3	21.7	1.7	0	23.4	



Ridgeview Data
Collection

Centennial, CO
Jones District Redevelopment
AM Peak
Willow Way and Yosemite St

File Name : Willow and Yosemite AM
Site Code : IPO 427
Start Date : 4/2/2019
Page No : 2



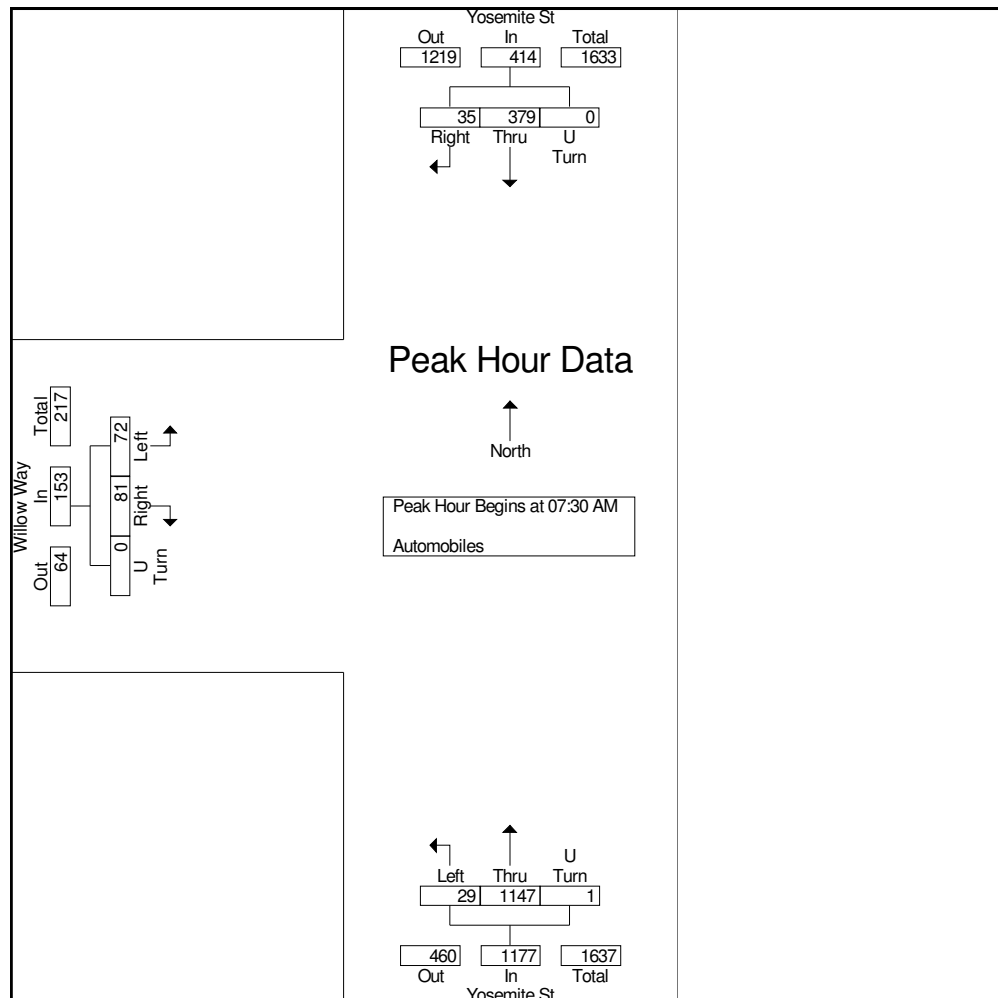


Ridgeview Data
Collection

Centennial, CO
Jones District Redevelopment
AM Peak
Willow Way and Yosemite St

File Name : Willow and Yosemite AM
Site Code : IPO 427
Start Date : 4/2/2019
Page No : 3

	Willow Way Eastbound				Yosemite St Northbound				Yosemite St Southbound				
Start Time	Left	Right	U Turn	App. Total	Left	Thru	U Turn	App. Total	Thru	Right	U Turn	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	15	6	0	21	8	273	0	281	82	12	0	94	396
07:45 AM	29	40	0	69	19	358	1	378	97	16	0	113	560
08:00 AM	22	25	0	47	1	277	0	278	109	4	0	113	438
08:15 AM	6	10	0	16	1	239	0	240	91	3	0	94	350
Total Volume	72	81	0	153	29	1147	1	1177	379	35	0	414	1744
% App. Total	47.1	52.9	0		2.5	97.5	0.1		91.5	8.5	0		
PHF	.621	.506	.000	.554	.382	.801	.250	.778	.869	.547	.000	.916	.779





Ridgeview Data
Collection

Centennial, CO
Jones District Redevelopment
PM Peak
Willow Way and Yosemite St

File Name : Willow and Yosemite PM
Site Code : IPO 427
Start Date : 4/2/2019
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Groups Printed- Automobiles

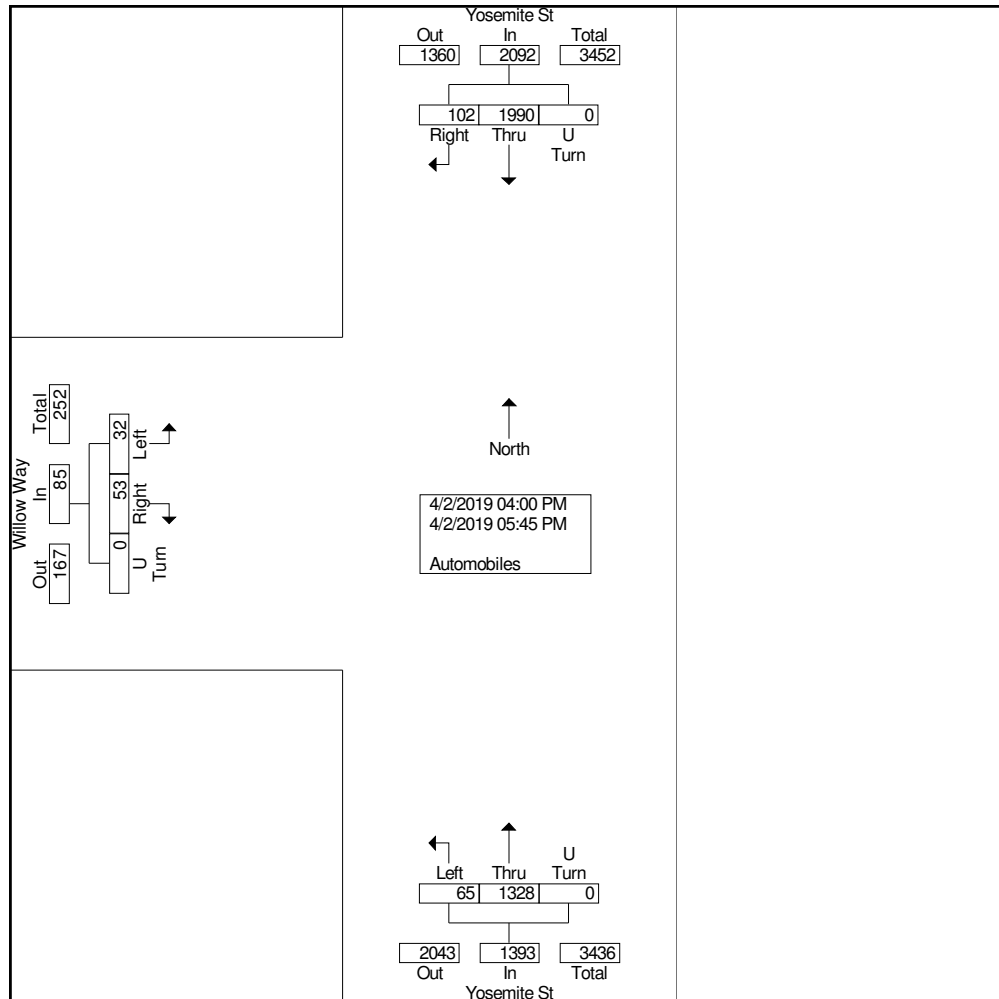
Start Time	Willow Way Eastbound				Yosemite St Northbound				Yosemite St Southbound				Int. Total
	Left	Right	U Turn	App. Total	Left	Thru	U Turn	App. Total	Thru	Right	U Turn	App. Total	
04:00 PM	3	6	0	9	6	179	0	185	226	15	0	241	435
04:15 PM	4	12	0	16	5	177	0	182	205	14	0	219	417
04:30 PM	2	5	0	7	6	182	0	188	260	10	0	270	465
04:45 PM	5	6	0	11	9	167	0	176	268	11	0	279	466
Total	14	29	0	43	26	705	0	731	959	50	0	1009	1783
05:00 PM	6	5	0	11	11	184	0	195	299	9	0	308	514
05:15 PM	3	10	0	13	10	158	0	168	280	14	0	294	475
05:30 PM	4	5	0	9	9	154	0	163	236	15	0	251	423
05:45 PM	5	4	0	9	9	127	0	136	216	14	0	230	375
Total	18	24	0	42	39	623	0	662	1031	52	0	1083	1787
Grand Total	32	53	0	85	65	1328	0	1393	1990	102	0	2092	3570
Apprch %	37.6	62.4	0		4.7	95.3	0		95.1	4.9	0		
Total %	0.9	1.5	0	2.4	1.8	37.2	0	39	55.7	2.9	0	58.6	



Ridgeview Data
Collection

Centennial, CO
Jones District Redevelopment
PM Peak
Willow Way and Yosemite St

File Name : Willow and Yosemite PM
Site Code : IPO 427
Start Date : 4/2/2019
Page No : 2



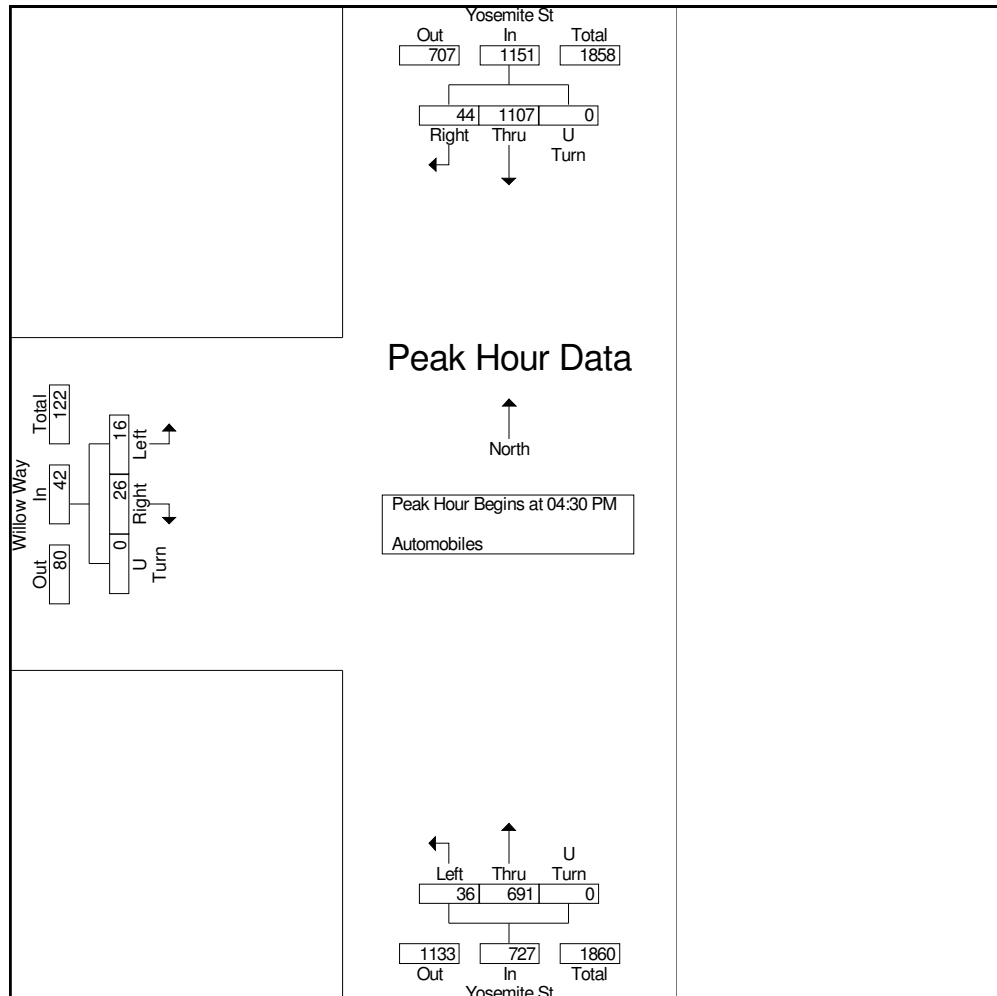


Ridgeview Data
Collection

Centennial, CO
Jones District Redevelopment
PM Peak
Willow Way and Yosemite St

File Name : Willow and Yosemite PM
Site Code : IPO 427
Start Date : 4/2/2019
Page No : 3

	Willow Way Eastbound				Yosemite St Northbound				Yosemite St Southbound				
Start Time	Left	Right	U Turn	App. Total	Left	Thru	U Turn	App. Total	Thru	Right	U Turn	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	2	5	0	7	6	182	0	188	260	10	0	270	465
04:45 PM	5	6	0	11	9	167	0	176	268	11	0	279	466
05:00 PM	6	5	0	11	11	184	0	195	299	9	0	308	514
05:15 PM	3	10	0	13	10	158	0	168	280	14	0	294	475
Total Volume	16	26	0	42	36	691	0	727	1107	44	0	1151	1920
% App. Total	38.1	61.9	0		5	95	0		96.2	3.8	0		
PHF	.667	.650	.000	.808	.818	.939	.000	.932	.926	.786	.000	.934	.934





Ridgeview Data
Collection

Centennial, CO
Jones District Redevelopment
AM Peak
Nichols Ave and Yosemite St

File Name : Nichols and Yosemite AM
Site Code : IPO 427
Start Date : 4/2/2019
Page No : 1

Groups Printed- Automobiles

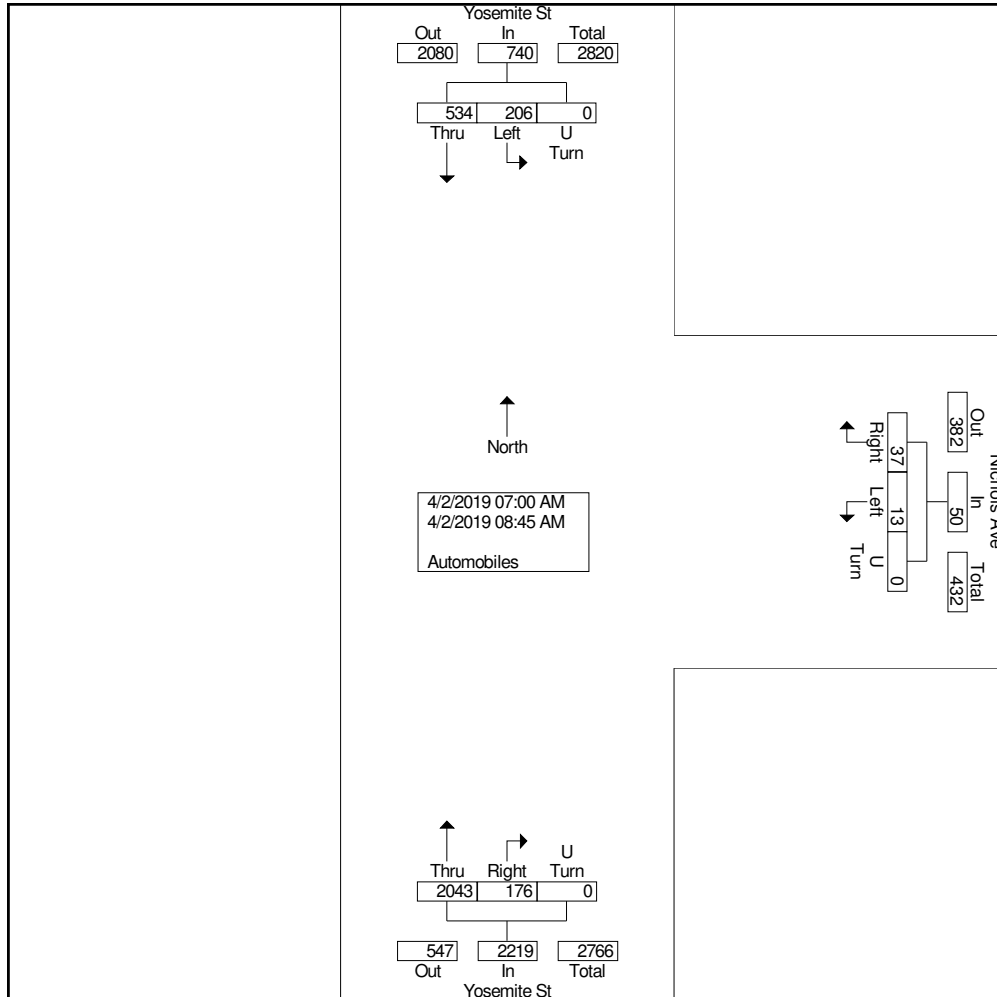
Start Time	Nichols Ave Westbound				Yosemite St Northbound				Yosemite St Southbound				Int. Total
	Left	Right	U Turn	App. Total	Thru	Right	U Turn	App. Total	Left	Thru	U Turn	App. Total	
07:00 AM	1	2	0	3	217	17	0	234	17	42	0	59	296
07:15 AM	1	3	0	4	219	21	0	240	15	38	0	53	297
07:30 AM	1	3	0	4	289	24	0	313	29	48	0	77	394
07:45 AM	7	6	0	13	356	30	0	386	33	105	0	138	537
Total	10	14	0	24	1081	92	0	1173	94	233	0	327	1524
08:00 AM	0	5	0	5	283	24	0	307	41	92	0	133	445
08:15 AM	1	7	0	8	237	23	0	260	32	77	0	109	377
08:30 AM	0	7	0	7	246	18	0	264	17	59	0	76	347
08:45 AM	2	4	0	6	196	19	0	215	22	73	0	95	316
Total	3	23	0	26	962	84	0	1046	112	301	0	413	1485
Grand Total	13	37	0	50	2043	176	0	2219	206	534	0	740	3009
Apprch %	26	74	0		92.1	7.9	0		27.8	72.2	0		
Total %	0.4	1.2	0	1.7	67.9	5.8	0	73.7	6.8	17.7	0	24.6	



Ridgeview Data
Collection

Centennial, CO
Jones District Redevelopment
AM Peak
Nichols Ave and Yosemite St

File Name : Nichols and Yosemite AM
Site Code : IPO 427
Start Date : 4/2/2019
Page No : 2



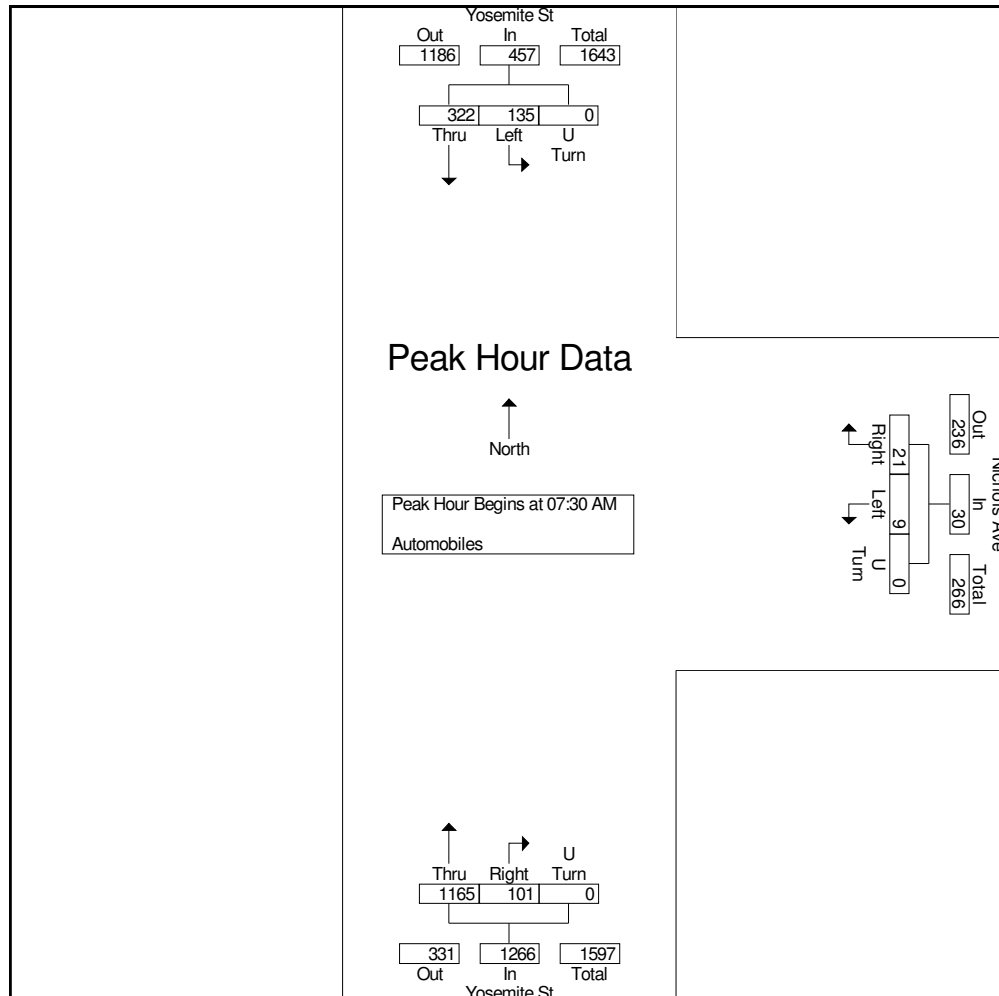


Ridgeview Data
Collection

Centennial, CO
Jones District Redevelopment
AM Peak
Nichols Ave and Yosemite St

File Name : Nichols and Yosemite AM
Site Code : IPO 427
Start Date : 4/2/2019
Page No : 3

	Nichols Ave Westbound				Yosemite St Northbound				Yosemite St Southbound				
Start Time	Left	Right	U Turn	App. Total	Thru	Right	U Turn	App. Total	Left	Thru	U Turn	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	1	3	0	4	289	24	0	313	29	48	0	77	394
07:45 AM	7	6	0	13	356	30	0	386	33	105	0	138	537
08:00 AM	0	5	0	5	283	24	0	307	41	92	0	133	445
08:15 AM	1	7	0	8	237	23	0	260	32	77	0	109	377
Total Volume	9	21	0	30	1165	101	0	1266	135	322	0	457	1753
% App. Total	30	70	0		92	8	0		29.5	70.5	0		
PHF	.321	.750	.000	.577	.818	.842	.000	.820	.823	.767	.000	.828	.816





Ridgeview Data
Collection

Centennial, CO
Jones District Redevelopment
PM Peak
Nichols Ave and Yosemite St

File Name : Nichols and Yosemite PM
Site Code : IPO 427
Start Date : 4/2/2019
Page No : 1

Groups Printed- Automobiles

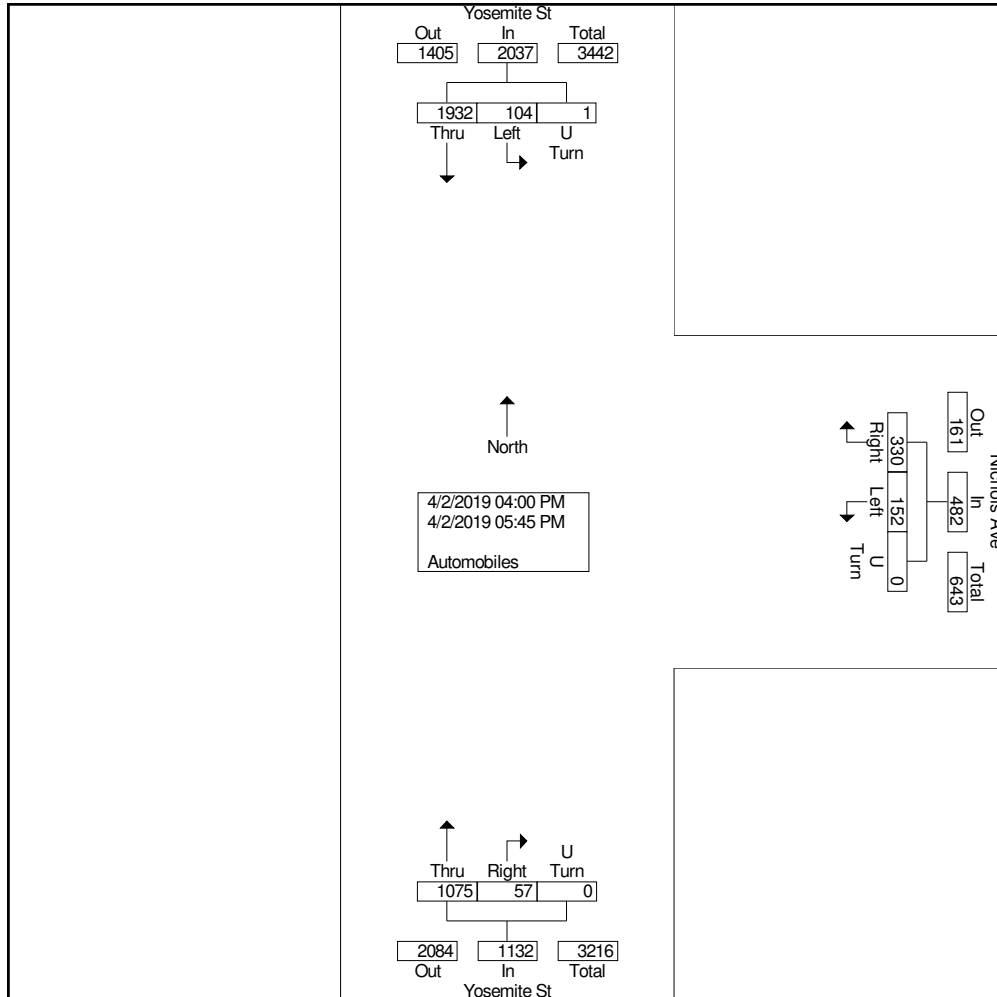
Start Time	Nichols Ave Westbound				Yosemite St Northbound				Yosemite St Southbound				Int. Total
	Left	Right	U Turn	App. Total	Thru	Right	U Turn	App. Total	Left	Thru	U Turn	App. Total	
04:00 PM	15	49	0	64	142	6	0	148	13	217	0	230	442
04:15 PM	18	35	0	53	148	12	0	160	20	199	1	220	433
04:30 PM	29	55	0	84	133	8	0	141	14	235	0	249	474
04:45 PM	19	45	0	64	127	5	0	132	8	278	0	286	482
Total	81	184	0	265	550	31	0	581	55	929	1	985	1831
05:00 PM	23	52	0	75	142	7	0	149	9	276	0	285	509
05:15 PM	22	48	0	70	120	5	0	125	14	289	0	303	498
05:30 PM	15	28	0	43	141	6	0	147	15	232	0	247	437
05:45 PM	11	18	0	29	122	8	0	130	11	206	0	217	376
Total	71	146	0	217	525	26	0	551	49	1003	0	1052	1820
Grand Total	152	330	0	482	1075	57	0	1132	104	1932	1	2037	3651
Apprch %	31.5	68.5	0		95	5	0		5.1	94.8	0		
Total %	4.2	9	0	13.2	29.4	1.6	0	31	2.8	52.9	0	55.8	



Ridgeview Data
Collection

Centennial, CO
Jones District Redevelopment
PM Peak
Nichols Ave and Yosemite St

File Name : Nichols and Yosemite PM
Site Code : IPO 427
Start Date : 4/2/2019
Page No : 2



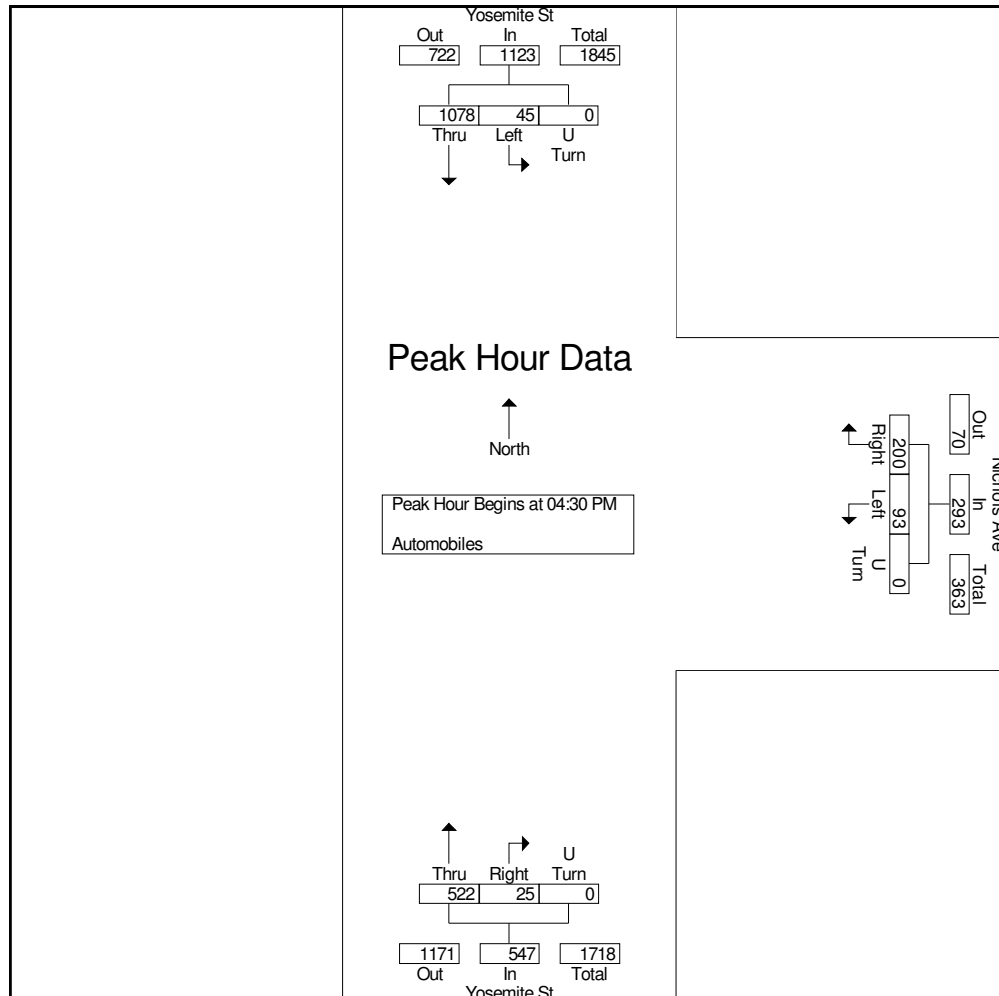


Ridgeview Data
Collection

Centennial, CO
Jones District Redevelopment
PM Peak
Nichols Ave and Yosemite St

File Name : Nichols and Yosemite PM
Site Code : IPO 427
Start Date : 4/2/2019
Page No : 3

	Nichols Ave Westbound				Yosemite St Northbound				Yosemite St Southbound				
Start Time	Left	Right	U Turn	App. Total	Thru	Right	U Turn	App. Total	Left	Thru	U Turn	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	29	55	0	84	133	8	0	141	14	235	0	249	474
04:45 PM	19	45	0	64	127	5	0	132	8	278	0	286	482
05:00 PM	23	52	0	75	142	7	0	149	9	276	0	285	509
05:15 PM	22	48	0	70	120	5	0	125	14	289	0	303	498
Total Volume	93	200	0	293	522	25	0	547	45	1078	0	1123	1963
% App. Total	31.7	68.3	0		95.4	4.6	0		4	96	0		
PHF	.802	.909	.000	.872	.919	.781	.000	.918	.804	.933	.000	.927	.964





Ridgeview Data
Collection

Centennial, CO
Jones District Redevelopment
AM Peak
Nichols Ave and Chester St

File Name : Nichols and Chester AM
Site Code : IPO 427
Start Date : 4/2/2019
Page No : 1

Groups Printed- Automobiles

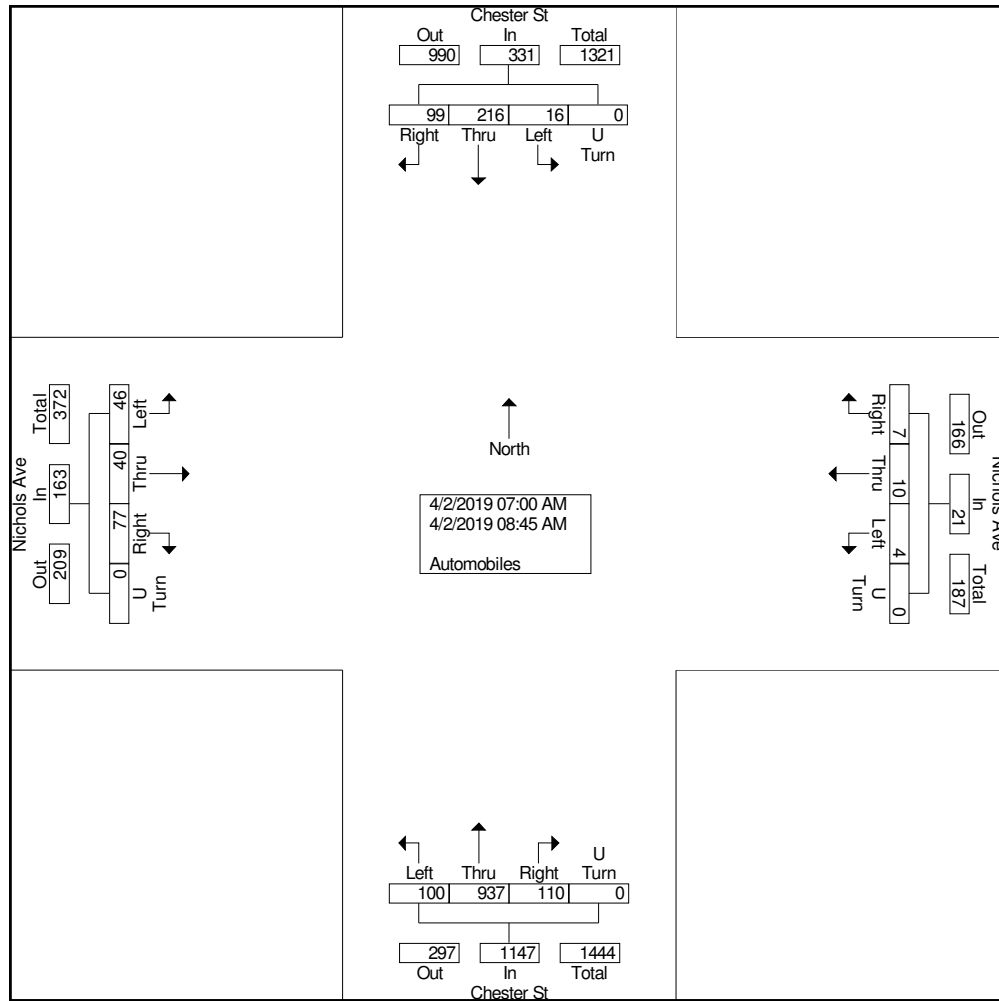
	Nichols Ave Eastbound					Nichols Ave Westbound					Chester St Northbound					Chester St Southbound					
Start Time	Left	Thru	Right	U Turn	App. Total	Left	Thru	Right	U Turn	App. Total	Left	Thru	Right	U Turn	App. Total	Left	Thru	Right	U Turn	App. Total	Int. Total
07:00 AM	8	6	8	0	22	0	1	0	0	1	7	103	24	0	134	0	17	6	0	23	180
07:15 AM	7	9	4	0	20	0	2	0	0	2	9	138	11	0	158	2	29	9	0	40	220
07:30 AM	5	4	11	0	20	1	3	1	0	5	8	134	24	0	166	2	23	13	0	38	229
07:45 AM	5	5	14	0	24	2	0	1	0	3	17	150	16	0	183	1	29	12	0	42	252
Total	25	24	37	0	86	3	6	2	0	11	41	525	75	0	641	5	98	40	0	143	881
08:00 AM	7	6	11	0	24	0	1	1	0	2	17	128	13	0	158	2	32	18	0	52	236
08:15 AM	4	4	11	0	19	1	0	0	0	1	14	127	4	0	145	2	31	19	0	52	217
08:30 AM	8	1	10	0	19	0	2	2	0	4	18	92	7	0	117	1	23	12	0	36	176
08:45 AM	2	5	8	0	15	0	1	2	0	3	10	65	11	0	86	6	32	10	0	48	152
Total	21	16	40	0	77	1	4	5	0	10	59	412	35	0	506	11	118	59	0	188	781
Grand Total	46	40	77	0	163	4	10	7	0	21	100	937	110	0	1147	16	216	99	0	331	1662
Apprch %	28.2	24.5	47.2	0		19	47.6	33.3	0		8.7	81.7	9.6	0		4.8	65.3	29.9	0		
Total %	2.8	2.4	4.6	0	9.8	0.2	0.6	0.4	0	1.3	6	56.4	6.6	0	69	1	13	6	0	19.9	



Ridgeview Data
Collection

Centennial, CO
Jones District Redevelopment
AM Peak
Nichols Ave and Chester St

File Name : Nichols and Chester AM
Site Code : IPO 427
Start Date : 4/2/2019
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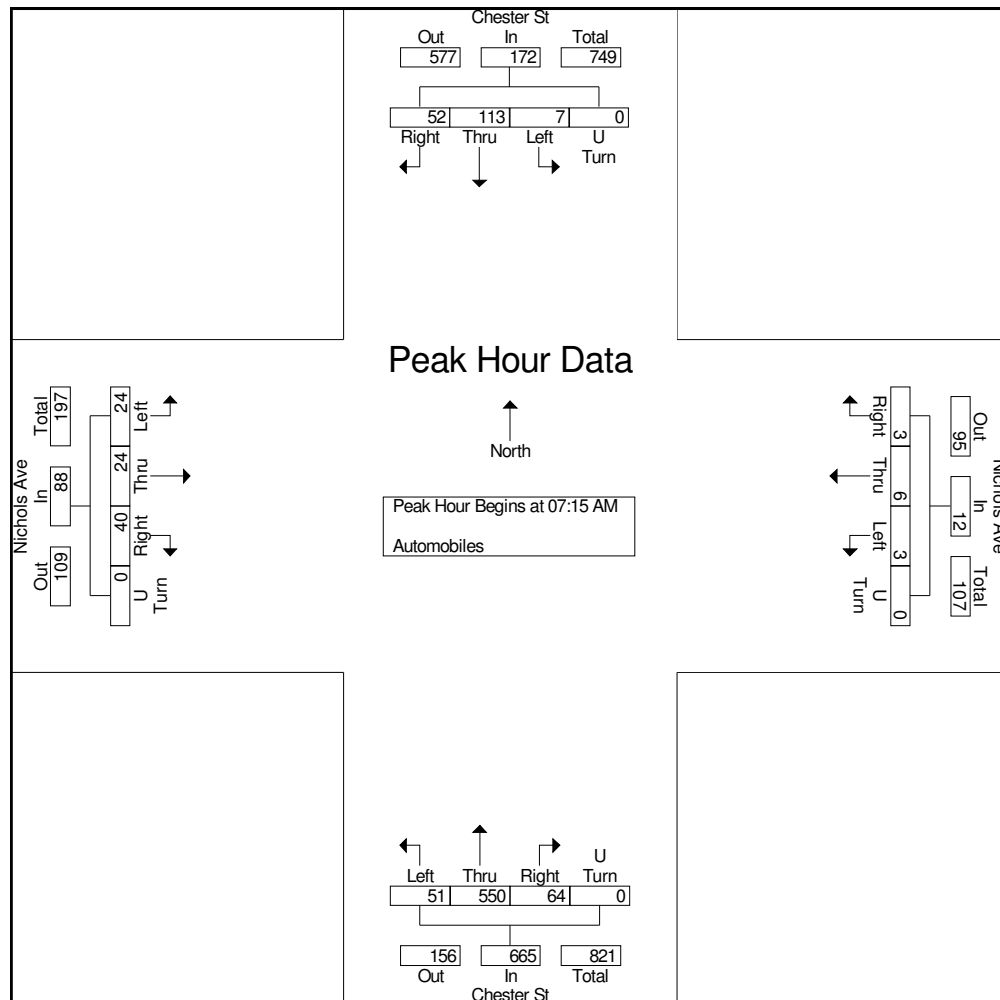


Ridgeview Data
Collection

Centennial, CO
Jones District Redevelopment
AM Peak
Nichols Ave and Chester St

File Name : Nichols and Chester AM
Site Code : IPO 427
Start Date : 4/2/2019
Page No : 3

	Nichols Ave Eastbound					Nichols Ave Westbound					Chester St Northbound					Chester St Southbound					
Start Time	Left	Thru	Right	U Turn	App. Total	Left	Thru	Right	U Turn	App. Total	Left	Thru	Right	U Turn	App. Total	Left	Thru	Right	U Turn	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	7	9	4	0	20	0	2	0	0	2	9	138	11	0	158	2	29	9	0	40	220
07:30 AM	5	4	11	0	20	1	3	1	0	5	8	134	24	0	166	2	23	13	0	38	229
07:45 AM	5	5	14	0	24	2	0	1	0	3	17	150	16	0	183	1	29	12	0	42	252
08:00 AM	7	6	11	0	24	0	1	1	0	2	17	128	13	0	158	2	32	18	0	52	236
Total Volume	24	24	40	0	88	3	6	3	0	12	51	550	64	0	665	7	113	52	0	172	937
% App. Total	27.3	27.3	45.5	0		25	50	25	0		7.7	82.7	9.6	0		4.1	65.7	30.2	0		
PHF	.857	.667	.714	.000	.917	.375	.500	.750	.000	.600	.750	.917	.667	.000	.908	.875	.883	.722	.000	.827	.930





Ridgeview Data
Collection

Centennial, CO
Jones District Redevelopment
PM Peak
Nichols Ave and Chester St

File Name : Nichols and Chester PM
Site Code : IPO 427
Start Date : 4/2/2019
Page No : 1

Groups Printed- Automobiles

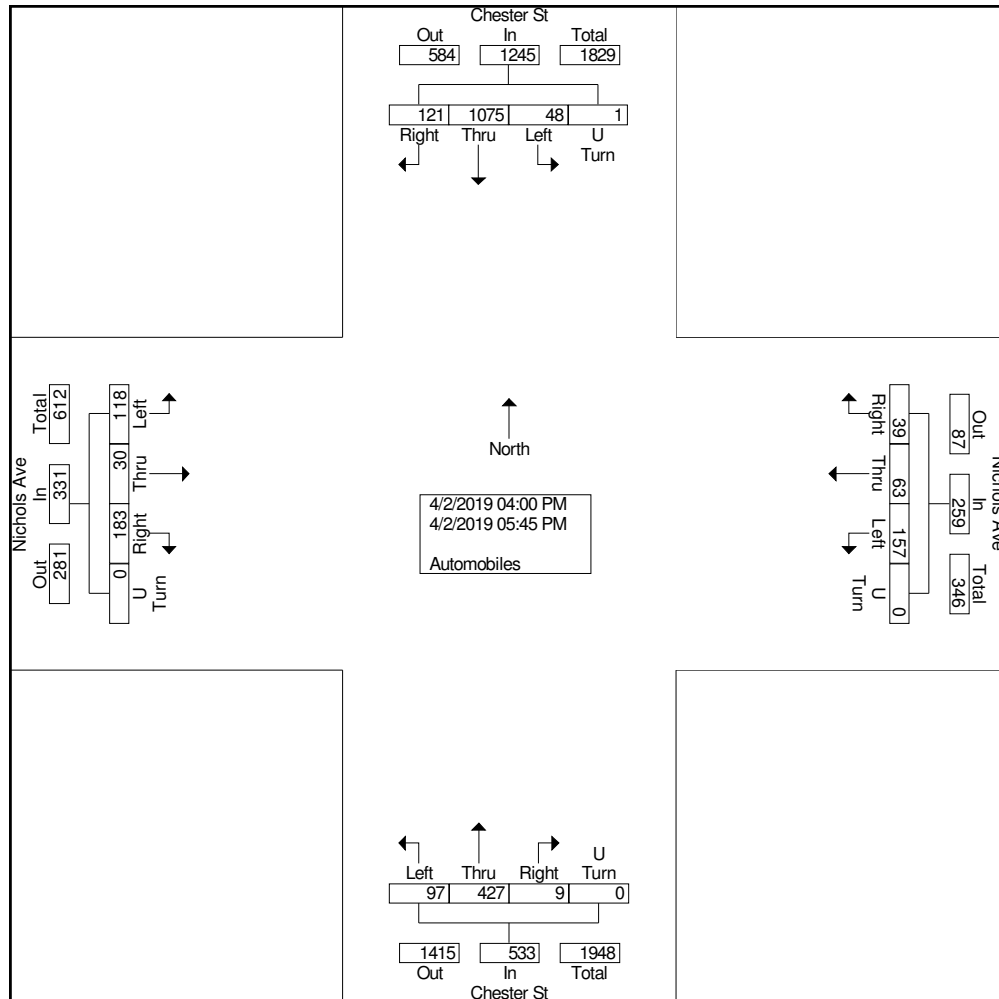
	Nichols Ave Eastbound					Nichols Ave Westbound					Chester St Northbound					Chester St Southbound					
Start Time	Left	Thru	Right	U Turn	App. Total	Left	Thru	Right	U Turn	App. Total	Left	Thru	Right	U Turn	App. Total	Left	Thru	Right	U Turn	App. Total	Int. Total
04:00 PM	29	8	16	0	53	27	8	5	0	40	12	55	2	0	69	4	122	11	0	137	299
04:15 PM	16	1	36	0	53	22	6	5	0	33	10	54	3	0	67	11	127	13	0	151	304
04:30 PM	15	3	25	0	43	17	10	5	0	32	14	50	0	0	64	2	147	24	0	173	312
04:45 PM	14	6	18	0	38	14	6	7	0	27	10	34	0	0	44	6	154	14	0	174	283
Total	74	18	95	0	187	80	30	22	0	132	46	193	5	0	244	23	550	62	0	635	1198
05:00 PM	16	1	24	0	41	28	14	6	0	48	15	64	0	0	79	4	159	17	0	180	348
05:15 PM	15	4	22	0	41	18	9	5	0	32	21	52	1	0	74	7	174	15	0	196	343
05:30 PM	10	1	27	0	38	19	5	4	0	28	9	64	2	0	75	8	111	14	1	134	275
05:45 PM	3	6	15	0	24	12	5	2	0	19	6	54	1	0	61	6	81	13	0	100	204
Total	44	12	88	0	144	77	33	17	0	127	51	234	4	0	289	25	525	59	1	610	1170
Grand Total	118	30	183	0	331	157	63	39	0	259	97	427	9	0	533	48	1075	121	1	1245	2368
Apprch %	35.6	9.1	55.3	0		60.6	24.3	15.1	0		18.2	80.1	1.7	0		3.9	86.3	9.7	0.1		
Total %	5	1.3	7.7	0	14	6.6	2.7	1.6	0	10.9	4.1	18	0.4	0	22.5	2	45.4	5.1	0	52.6	



Ridgeview Data
Collection

Centennial, CO
Jones District Redevelopment
PM Peak
Nichols Ave and Chester St

File Name : Nichols and Chester PM
Site Code : IPO 427
Start Date : 4/2/2019
Page No : 2



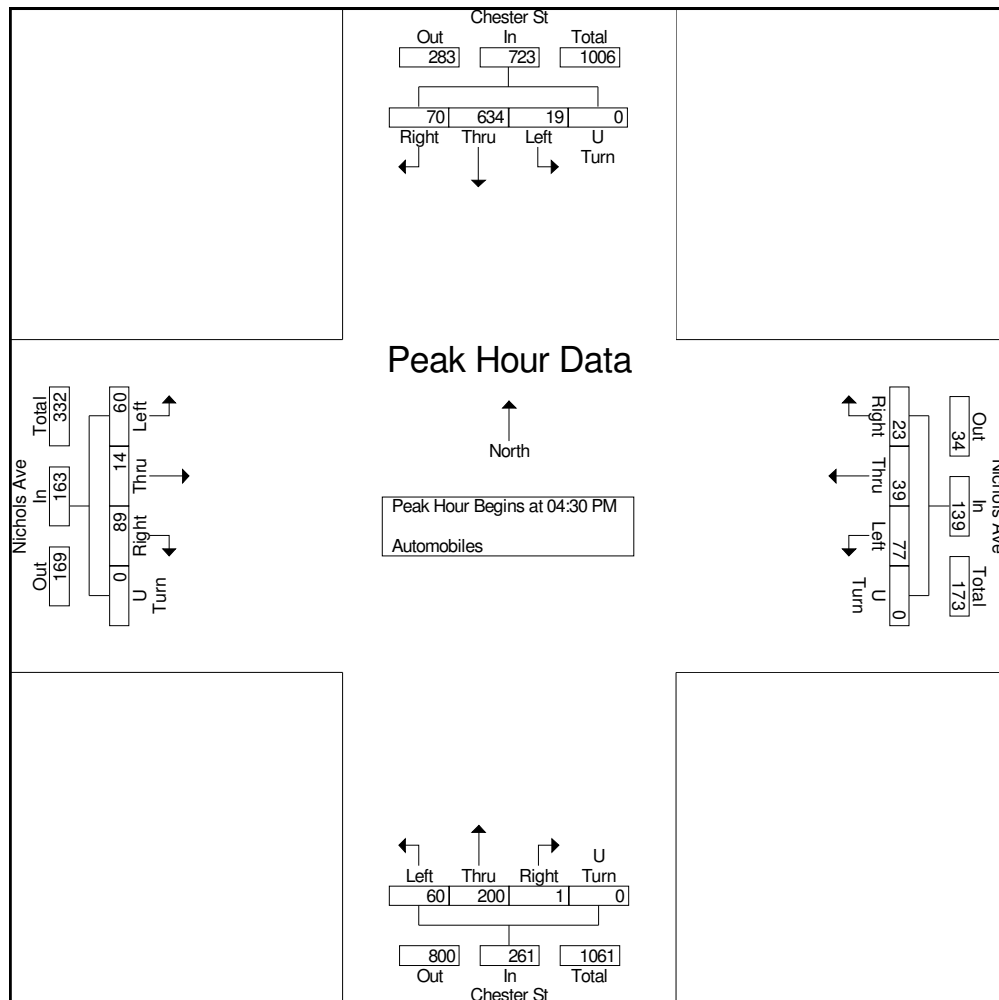


Ridgeview Data
Collection

Centennial, CO
Jones District Redevelopment
PM Peak
Nichols Ave and Chester St

File Name : Nichols and Chester PM
Site Code : IPO 427
Start Date : 4/2/2019
Page No : 3

	Nichols Ave Eastbound					Nichols Ave Westbound					Chester St Northbound					Chester St Southbound					
Start Time	Left	Thru	Right	U Turn	App. Total	Left	Thru	Right	U Turn	App. Total	Left	Thru	Right	U Turn	App. Total	Left	Thru	Right	U Turn	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	3	25	0	43	17	10	5	0	32	14	50	0	0	64	2	147	24	0	173	312
04:45 PM	14	6	18	0	38	14	6	7	0	27	10	34	0	0	44	6	154	14	0	174	283
05:00 PM	16	1	24	0	41	28	14	6	0	48	15	64	0	0	79	4	159	17	0	180	348
05:15 PM	15	4	22	0	41	18	9	5	0	32	21	52	1	0	74	7	174	15	0	196	343
Total Volume	60	14	89	0	163	77	39	23	0	139	60	200	1	0	261	19	634	70	0	723	1286
% App. Total	36.8	8.6	54.6	0		55.4	28.1	16.5	0		23	76.6	0.4	0		2.6	87.7	9.7	0		
PHF	.938	.583	.890	.000	.948	.688	.696	.821	.000	.724	.714	.781	.250	.000	.826	.679	.911	.729	.000	.922	.924





Ridgeview Data
Collection

Centennial, CO
Jones District Redevelopment
AM Peak
Mineral Dr and Yosemite St

File Name : Mineral Dr and Yosemite AM
Site Code : IPO 427
Start Date : 4/2/2019
Page No : 1

Groups Printed- Automobiles

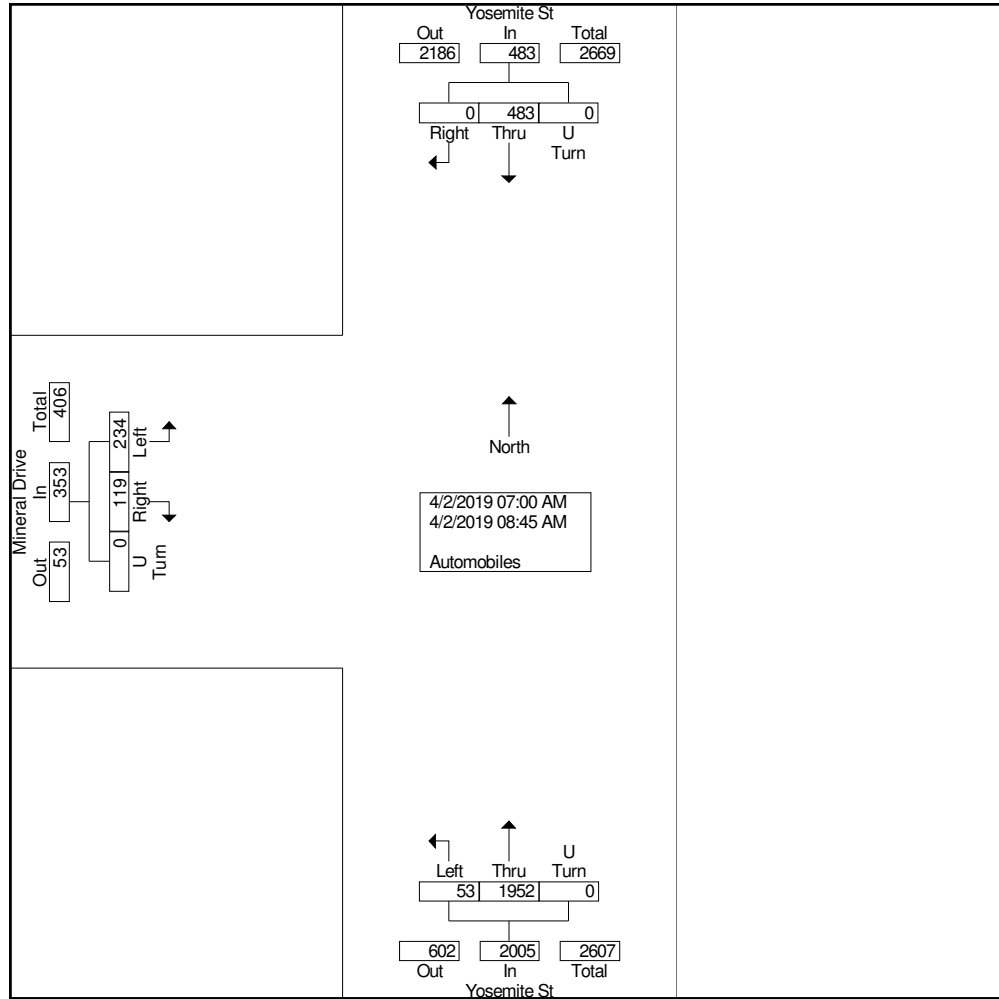
Start Time	Mineral Drive Eastbound				Yosemite St Northbound				Yosemite St Southbound				Int. Total
	Left	Right	U Turn	App. Total	Left	Thru	U Turn	App. Total	Thru	Right	U Turn	App. Total	
07:00 AM	23	11	0	34	3	200	0	203	37	0	0	37	274
07:15 AM	24	15	0	39	7	225	0	232	36	0	0	36	307
07:30 AM	34	12	0	46	6	282	0	288	55	0	0	55	389
07:45 AM	48	22	0	70	12	350	0	362	85	0	0	85	517
Total	129	60	0	189	28	1057	0	1085	213	0	0	213	1487
08:00 AM	28	18	0	46	4	246	0	250	81	0	0	81	377
08:15 AM	23	17	0	40	3	257	0	260	68	0	0	68	368
08:30 AM	29	10	0	39	8	215	0	223	54	0	0	54	316
08:45 AM	25	14	0	39	10	177	0	187	67	0	0	67	293
Total	105	59	0	164	25	895	0	920	270	0	0	270	1354
Grand Total	234	119	0	353	53	1952	0	2005	483	0	0	483	2841
Apprch %	66.3	33.7	0		2.6	97.4	0		100	0	0		
Total %	8.2	4.2	0	12.4	1.9	68.7	0	70.6	17	0	0	17	



Ridgeview Data
Collection

Centennial, CO
Jones District Redevelopment
AM Peak
Mineral Dr and Yosemite St

File Name : Mineral Dr and Yosemite AM
Site Code : IPO 427
Start Date : 4/2/2019
Page No : 2



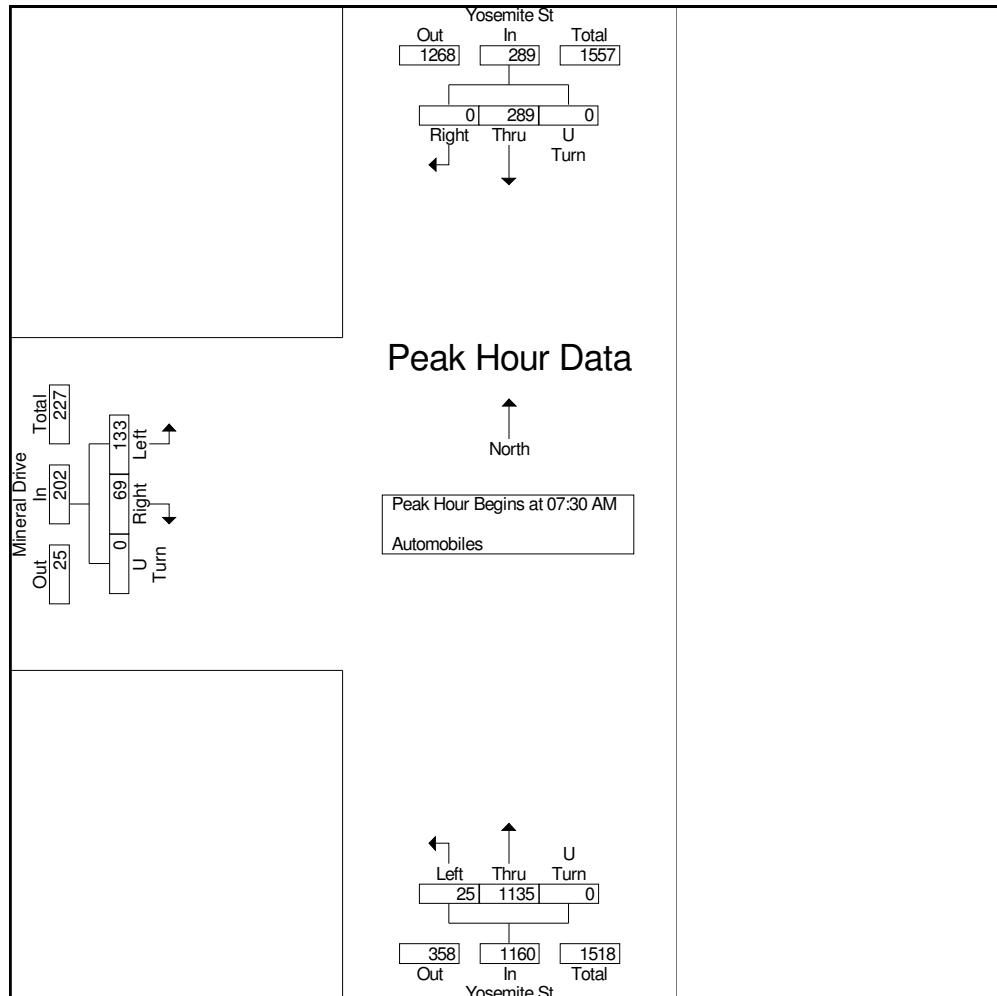


Ridgeview Data
Collection

Centennial, CO
Jones District Redevelopment
AM Peak
Mineral Dr and Yosemite St

File Name : Mineral Dr and Yosemite AM
Site Code : IPO 427
Start Date : 4/2/2019
Page No : 3

	Mineral Drive Eastbound				Yosemite St Northbound				Yosemite St Southbound				
Start Time	Left	Right	U Turn	App. Total	Left	Thru	U Turn	App. Total	Thru	Right	U Turn	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	12	0	46	6	282	0	288	55	0	0	55	389
07:45 AM	48	22	0	70	12	350	0	362	85	0	0	85	517
08:00 AM	28	18	0	46	4	246	0	250	81	0	0	81	377
08:15 AM	23	17	0	40	3	257	0	260	68	0	0	68	368
Total Volume	133	69	0	202	25	1135	0	1160	289	0	0	289	1651
% App. Total	65.8	34.2	0		2.2	97.8	0		100	0	0		
PHF	.693	.784	.000	.721	.521	.811	.000	.801	.850	.000	.000	.850	.798





Ridgeview Data
Collection

Centennial, CO
Jones District Redevelopment
PM Peak
Mineral Dr and Yosemite St

File Name : Mineral Dr and Yosemite PM
Site Code : IPO 427
Start Date : 4/2/2019
Page No : 1

Groups Printed- Automobiles

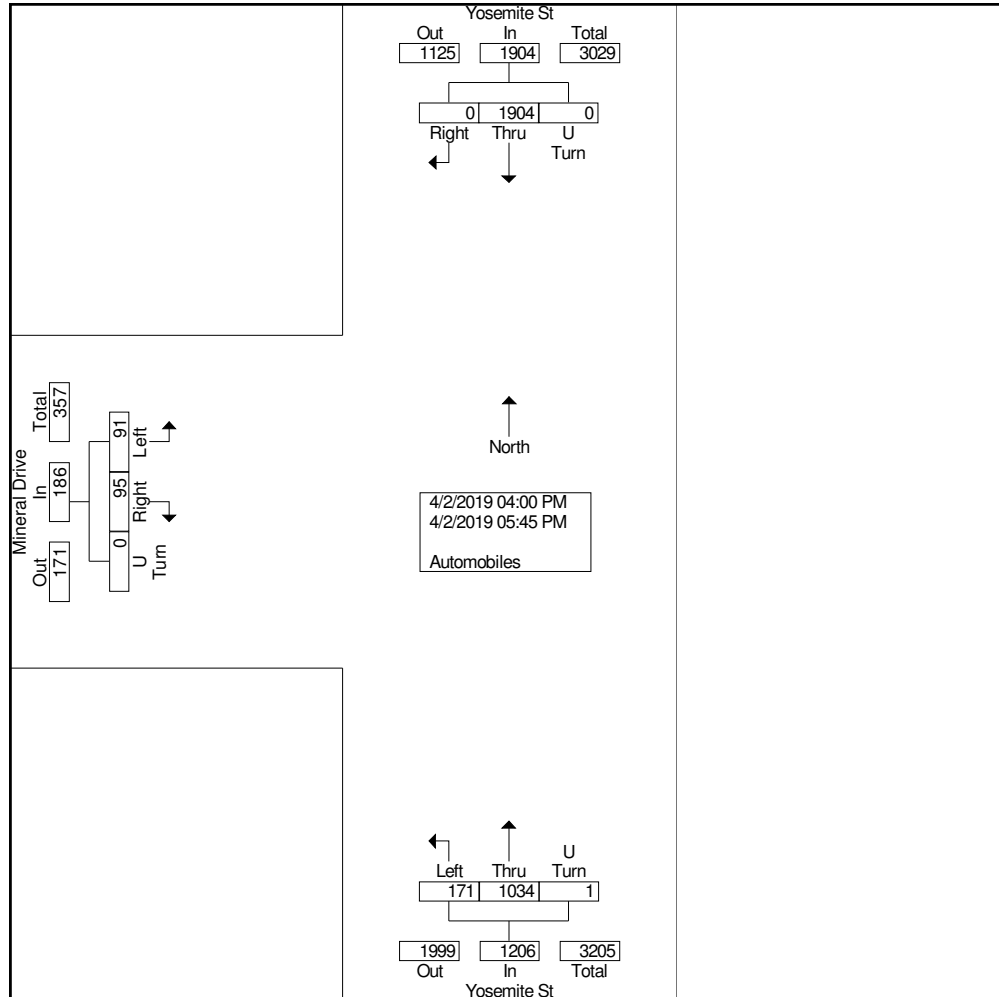
Start Time	Mineral Drive Eastbound				Yosemite St Northbound				Yosemite St Southbound				Int. Total
	Left	Right	U Turn	App. Total	Left	Thru	U Turn	App. Total	Thru	Right	U Turn	App. Total	
04:00 PM	20	13	0	33	18	132	1	151	203	0	0	203	387
04:15 PM	12	18	0	30	25	132	0	157	205	0	0	205	392
04:30 PM	10	12	0	22	24	142	0	166	253	0	0	253	441
04:45 PM	7	6	0	13	16	123	0	139	283	0	0	283	435
Total	49	49	0	98	83	529	1	613	944	0	0	944	1655
05:00 PM	8	10	0	18	18	147	0	165	282	0	0	282	465
05:15 PM	12	9	0	21	25	118	0	143	272	0	0	272	436
05:30 PM	8	13	0	21	23	139	0	162	210	0	0	210	393
05:45 PM	14	14	0	28	22	101	0	123	196	0	0	196	347
Total	42	46	0	88	88	505	0	593	960	0	0	960	1641
Grand Total	91	95	0	186	171	1034	1	1206	1904	0	0	1904	3296
Apprch %	48.9	51.1	0		14.2	85.7	0.1		100	0	0		
Total %	2.8	2.9	0	5.6	5.2	31.4	0	36.6	57.8	0	0	57.8	



Ridgeview Data
Collection

Centennial, CO
Jones District Redevelopment
PM Peak
Mineral Dr and Yosemite St

File Name : Mineral Dr and Yosemite PM
Site Code : IPO 427
Start Date : 4/2/2019
Page No : 2



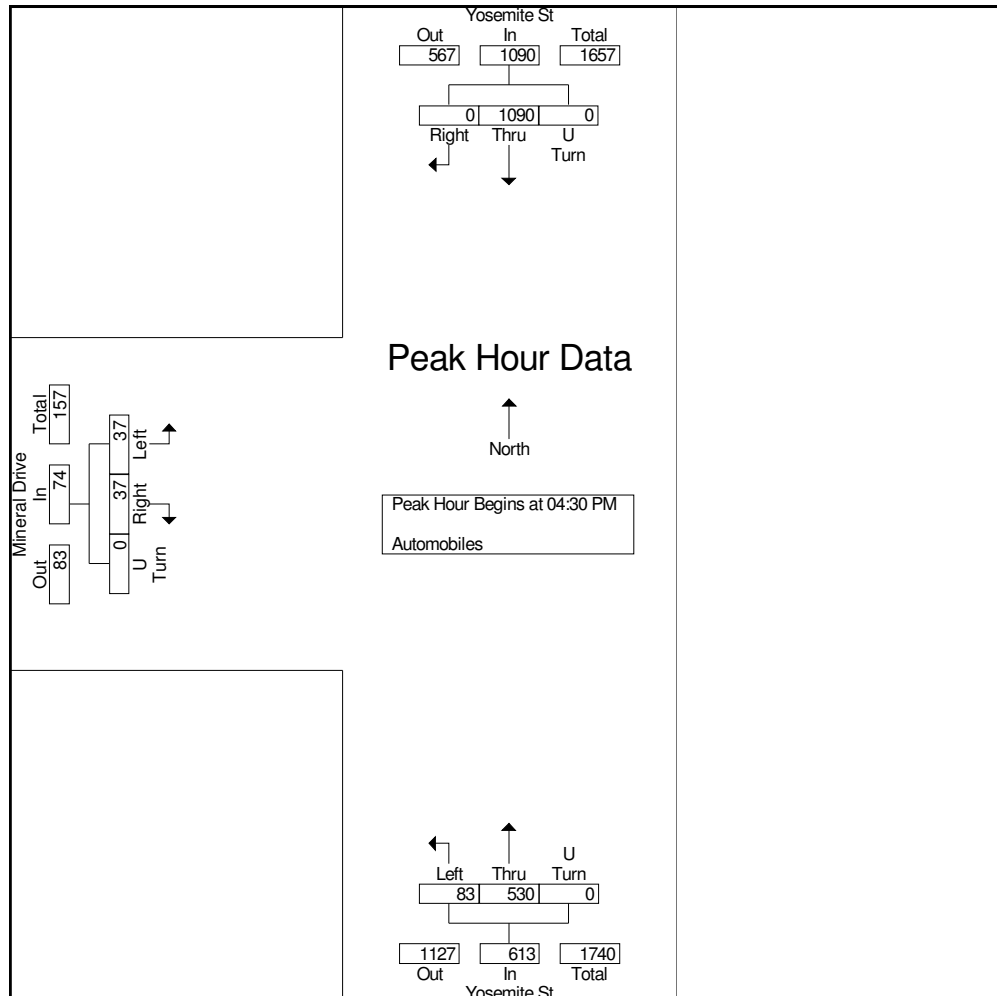


Ridgeview Data
Collection

Centennial, CO
Jones District Redevelopment
PM Peak
Mineral Dr and Yosemite St

File Name : Mineral Dr and Yosemite PM
Site Code : IPO 427
Start Date : 4/2/2019
Page No : 3

	Mineral Drive Eastbound				Yosemite St Northbound				Yosemite St Southbound				
Start Time	Left	Right	U Turn	App. Total	Left	Thru	U Turn	App. Total	Thru	Right	U Turn	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	10	12	0	22	24	142	0	166	253	0	0	253	441
04:45 PM	7	6	0	13	16	123	0	139	283	0	0	283	435
05:00 PM	8	10	0	18	18	147	0	165	282	0	0	282	465
05:15 PM	12	9	0	21	25	118	0	143	272	0	0	272	436
Total Volume	37	37	0	74	83	530	0	613	1090	0	0	1090	1777
% App. Total	50	50	0		13.5	86.5	0		100	0	0		
PHF	.771	.771	.000	.841	.830	.901	.000	.923	.963	.000	.000	.963	.955





Ridgeview Data
Collection

Centennial, CO
Jones District Redevelopment
AM Peak
Otero Ave and Chester St

File Name : Otero and Chester AM
Site Code : IPO 427
Start Date : 4/2/2019
Page No : 1

Groups Printed- Automobiles

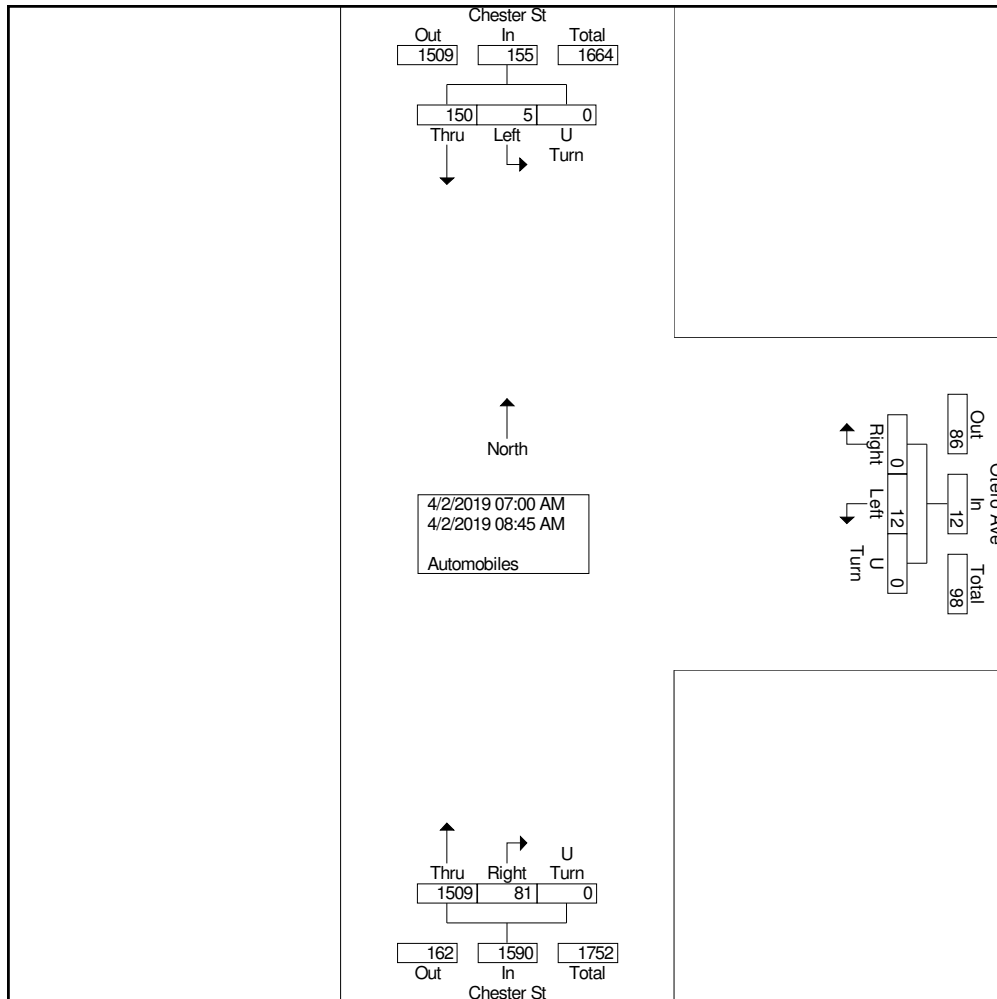
Start Time	Otero Ave Westbound				Chester St Northbound				Chester St Southbound				Int. Total
	Left	Right	U Turn	App. Total	Thru	Right	U Turn	App. Total	Left	Thru	U Turn	App. Total	
07:00 AM	1	0	0	1	158	11	0	169	1	12	0	13	183
07:15 AM	3	0	0	3	193	7	0	200	0	8	0	8	211
07:30 AM	1	0	0	1	203	8	0	211	1	16	0	17	229
07:45 AM	1	0	0	1	248	9	0	257	1	22	0	23	281
Total	6	0	0	6	802	35	0	837	3	58	0	61	904
08:00 AM	1	0	0	1	235	17	0	252	0	24	0	24	277
08:15 AM	1	0	0	1	187	8	0	195	0	22	0	22	218
08:30 AM	3	0	0	3	152	10	0	162	2	21	0	23	188
08:45 AM	1	0	0	1	133	11	0	144	0	25	0	25	170
Total	6	0	0	6	707	46	0	753	2	92	0	94	853
Grand Total	12	0	0	12	1509	81	0	1590	5	150	0	155	1757
Apprch %	100	0	0		94.9	5.1	0		3.2	96.8	0		
Total %	0.7	0	0	0.7	85.9	4.6	0	90.5	0.3	8.5	0	8.8	



Ridgeview Data
Collection

Centennial, CO
Jones District Redevelopment
AM Peak
Otero Ave and Chester St

File Name : Otero and Chester AM
Site Code : IPO 427
Start Date : 4/2/2019
Page No : 2



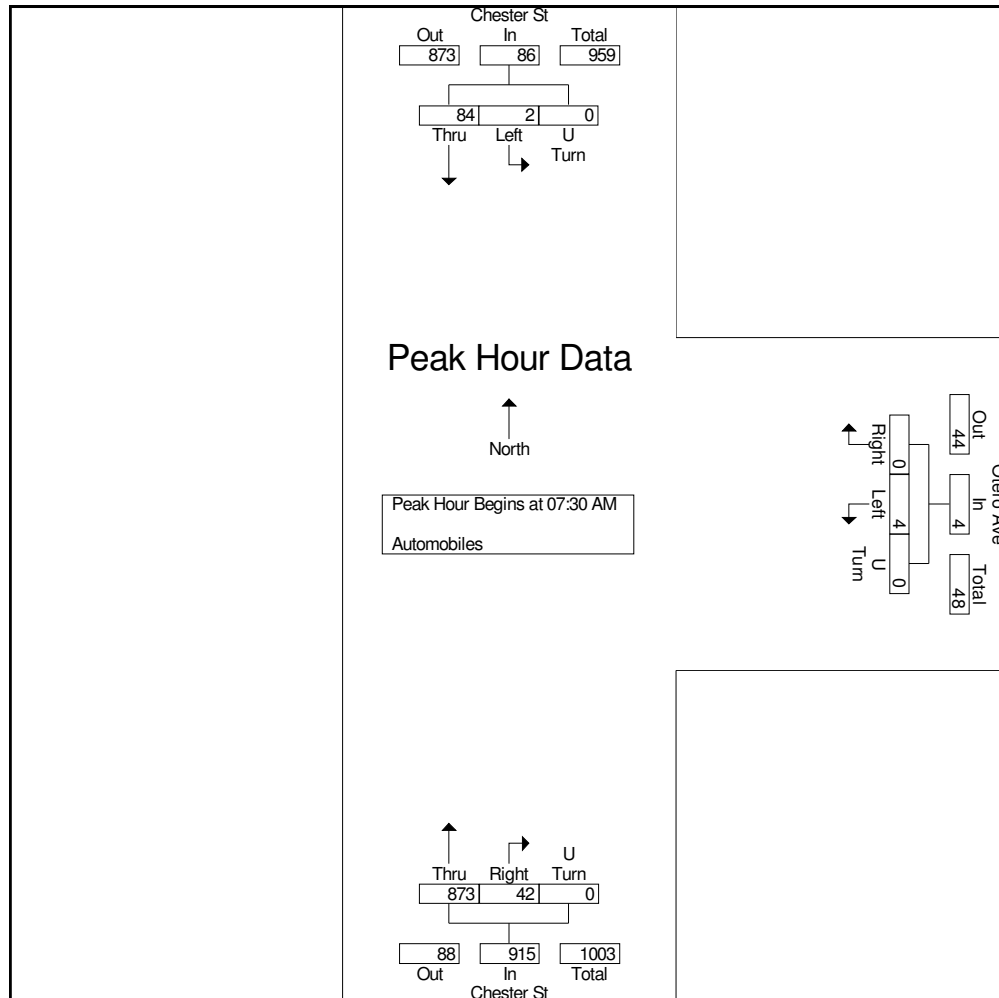


Ridgeview Data
Collection

Centennial, CO
Jones District Redevelopment
AM Peak
Otero Ave and Chester St

File Name : Otero and Chester AM
Site Code : IPO 427
Start Date : 4/2/2019
Page No : 3

	Otero Ave Westbound				Chester St Northbound				Chester St Southbound				
Start Time	Left	Right	U Turn	App. Total	Thru	Right	U Turn	App. Total	Left	Thru	U Turn	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	1	0	0	1	203	8	0	211	1	16	0	17	229
07:45 AM	1	0	0	1	248	9	0	257	1	22	0	23	281
08:00 AM	1	0	0	1	235	17	0	252	0	24	0	24	277
08:15 AM	1	0	0	1	187	8	0	195	0	22	0	22	218
Total Volume	4	0	0	4	873	42	0	915	2	84	0	86	1005
% App. Total	100	0	0		95.4	4.6	0		2.3	97.7	0		
PHF	1.00	.000	.000	1.00	.880	.618	.000	.890	.500	.875	.000	.896	.894





Ridgeview Data
Collection

Centennial, CO
Jones District Redevelopment
PM Peak
Otero Ave and Chester St

File Name : Otero and Chester PM
Site Code : IPO 427
Start Date : 4/2/2019
Page No : 1

Groups Printed- Automobiles

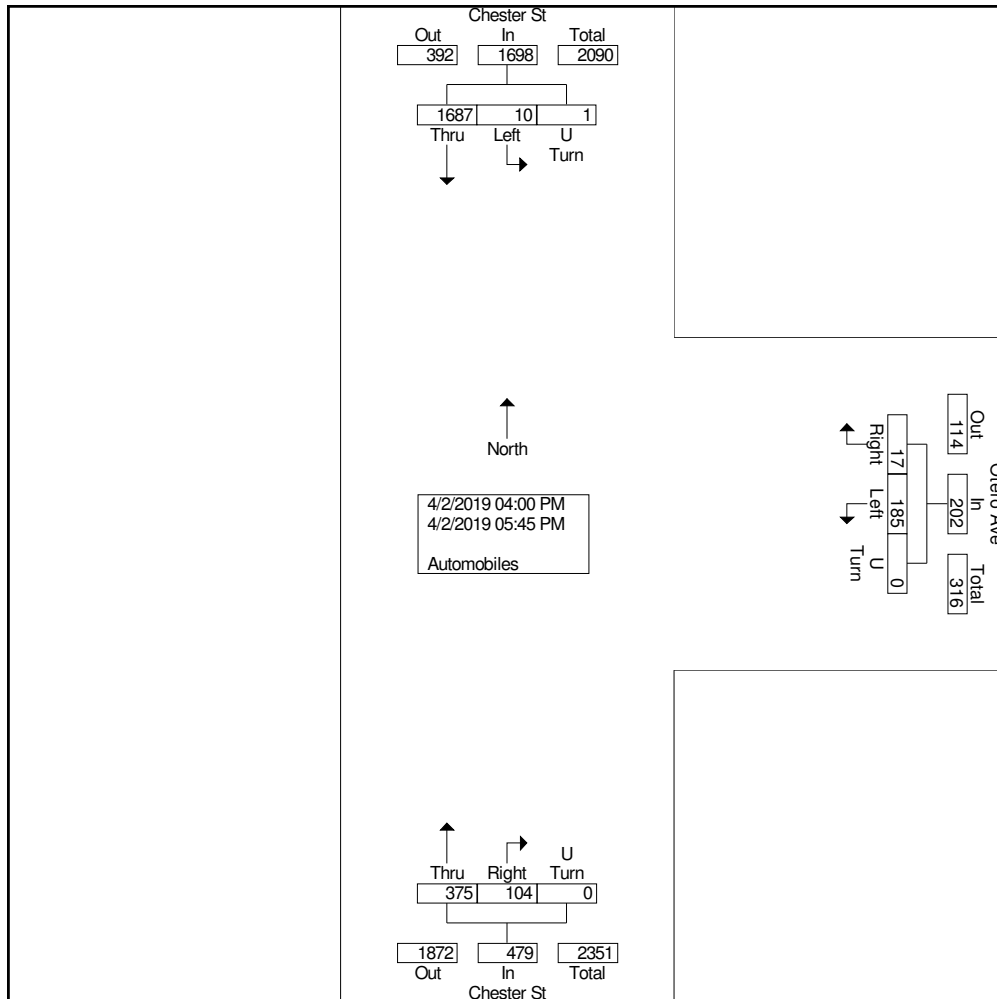
Start Time	Otero Ave Westbound				Chester St Northbound				Chester St Southbound				Int. Total
	Left	Right	U Turn	App. Total	Thru	Right	U Turn	App. Total	Left	Thru	U Turn	App. Total	
04:00 PM	31	2	0	33	44	15	0	59	1	204	0	205	297
04:15 PM	21	1	0	22	43	16	0	59	3	216	0	219	300
04:30 PM	26	3	0	29	48	12	0	60	0	244	0	244	333
04:45 PM	20	1	0	21	39	15	0	54	1	205	0	206	281
Total	98	7	0	105	174	58	0	232	5	869	0	874	1211
05:00 PM	24	1	0	25	50	11	0	61	3	275	0	278	364
05:15 PM	23	2	0	25	48	11	0	59	1	255	0	256	340
05:30 PM	25	7	0	32	48	11	0	59	0	174	0	174	265
05:45 PM	15	0	0	15	55	13	0	68	1	114	1	116	199
Total	87	10	0	97	201	46	0	247	5	818	1	824	1168
Grand Total	185	17	0	202	375	104	0	479	10	1687	1	1698	2379
Apprch %	91.6	8.4	0		78.3	21.7	0		0.6	99.4	0.1		
Total %	7.8	0.7	0	8.5	15.8	4.4	0	20.1	0.4	70.9	0	71.4	



Ridgeview Data
Collection

Centennial, CO
Jones District Redevelopment
PM Peak
Otero Ave and Chester St

File Name : Otero and Chester PM
Site Code : IPO 427
Start Date : 4/2/2019
Page No : 2



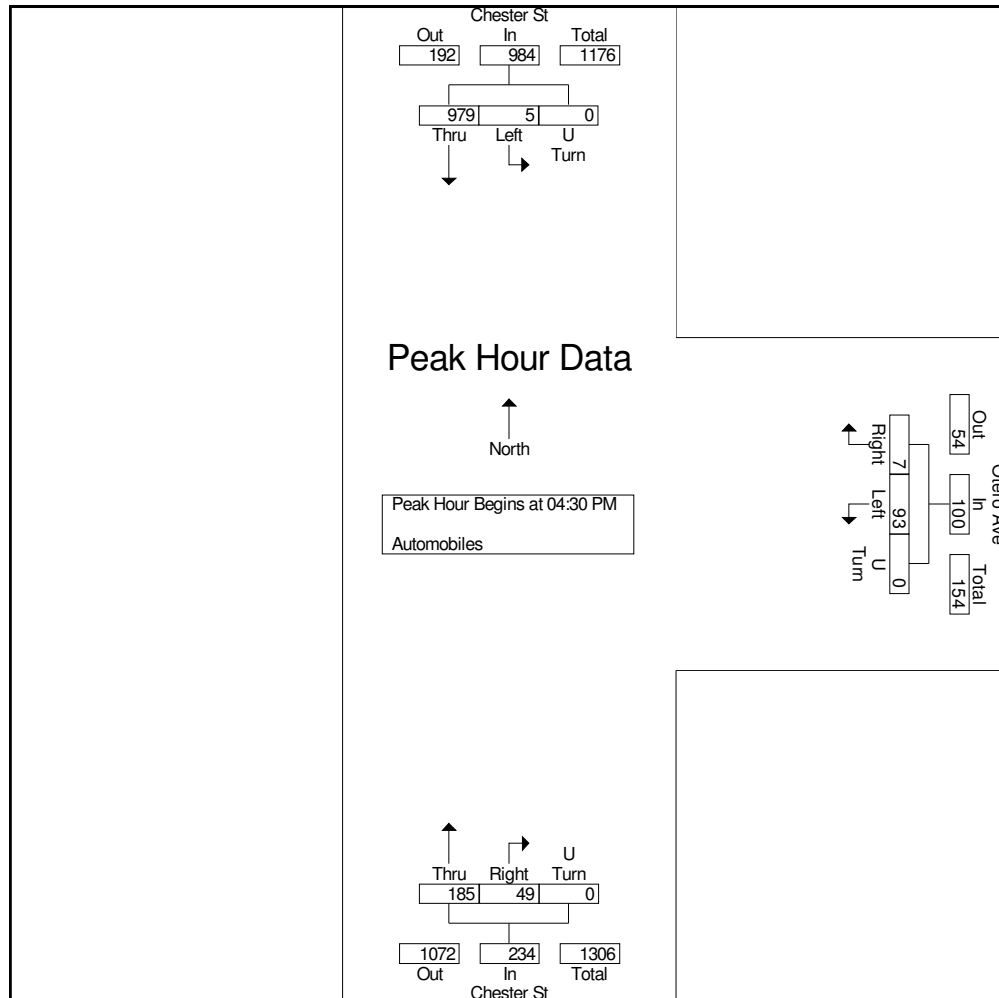


Ridgeview Data
Collection

Centennial, CO
Jones District Redevelopment
PM Peak
Otero Ave and Chester St

File Name : Otero and Chester PM
Site Code : IPO 427
Start Date : 4/2/2019
Page No : 3

	Otero Ave Westbound				Chester St Northbound				Chester St Southbound				
Start Time	Left	Right	U Turn	App. Total	Thru	Right	U Turn	App. Total	Left	Thru	U Turn	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	26	3	0	29	48	12	0	60	0	244	0	244	333
04:45 PM	20	1	0	21	39	15	0	54	1	205	0	206	281
05:00 PM	24	1	0	25	50	11	0	61	3	275	0	278	364
05:15 PM	23	2	0	25	48	11	0	59	1	255	0	256	340
Total Volume	93	7	0	100	185	49	0	234	5	979	0	984	1318
% App. Total	93	7	0		79.1	20.9	0		0.5	99.5	0		
PHF	.894	.583	.000	.862	.925	.817	.000	.959	.417	.890	.000	.885	.905





Ridgeview Data
Collection

Centennial, CO
Jones District Redevelopment
AM Peak
County Line Rd and Quebec St

File Name : County Line and Quebec AM
Site Code : IPO 427
Start Date : 4/2/2019
Page No : 1

Groups Printed- Automobiles

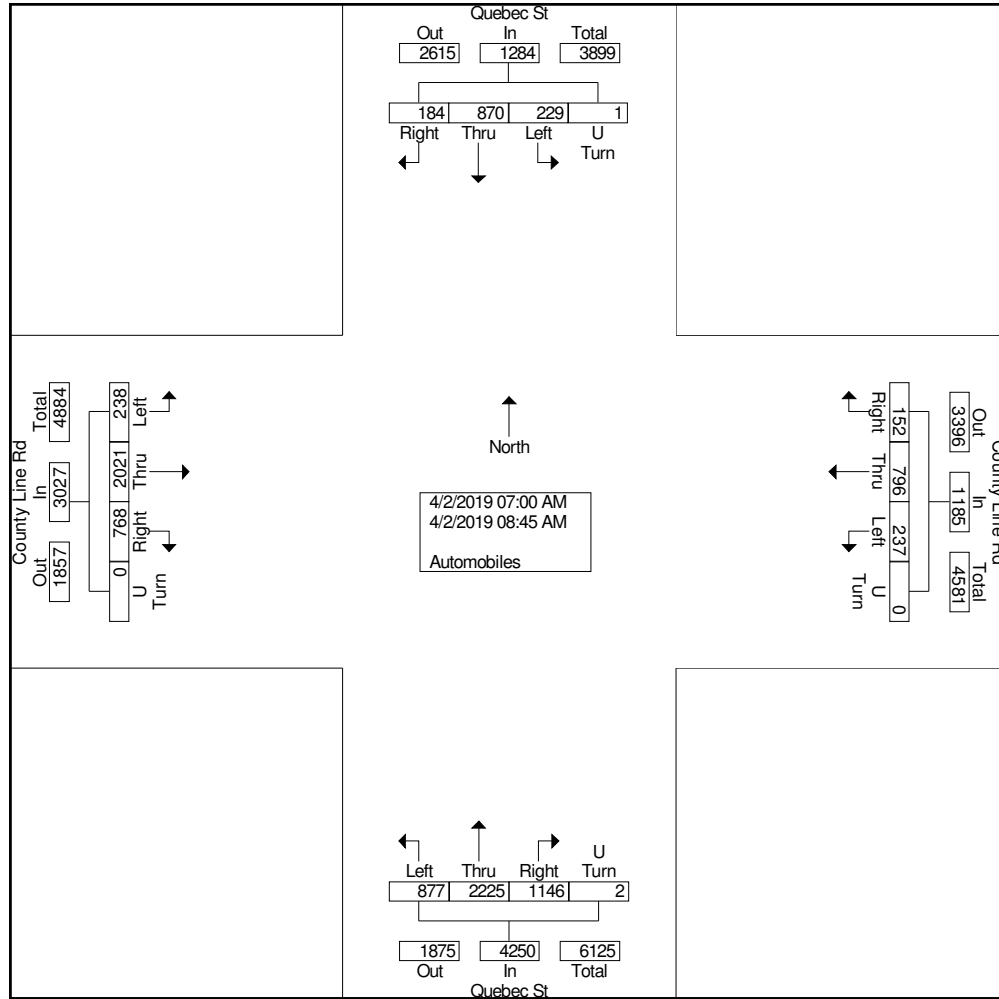
	County Line Rd Eastbound					County Line Rd Westbound					Quebec St Northbound					Quebec St Southbound					
Start Time	Left	Thru	Right	U Turn	App. Total	Left	Thru	Right	U Turn	App. Total	Left	Thru	Right	U Turn	App. Total	Left	Thru	Right	U Turn	App. Total	Int. Total
07:00 AM	25	145	57	0	227	22	54	17	0	93	64	242	130	0	436	22	95	21	0	138	894
07:15 AM	19	264	77	0	360	18	79	18	0	115	98	262	125	0	485	21	103	11	0	135	1095
07:30 AM	32	309	126	0	467	35	106	18	0	159	93	314	139	0	546	28	139	27	0	194	1366
07:45 AM	24	291	110	0	425	31	102	14	0	147	124	278	157	0	559	44	114	27	0	185	1316
Total	100	1009	370	0	1479	106	341	67	0	514	379	1096	551	0	2026	115	451	86	0	652	4671
08:00 AM	29	294	103	0	426	31	125	18	0	174	124	256	168	1	549	35	111	25	0	171	1320
08:15 AM	39	270	105	0	414	31	132	19	0	182	119	289	155	1	564	24	108	32	0	164	1324
08:30 AM	39	209	106	0	354	35	98	30	0	163	126	297	122	0	545	32	108	21	0	161	1223
08:45 AM	31	239	84	0	354	34	100	18	0	152	129	287	150	0	566	23	92	20	1	136	1208
Total	138	1012	398	0	1548	131	455	85	0	671	498	1129	595	2	2224	114	419	98	1	632	5075
Grand Total	238	2021	768	0	3027	237	796	152	0	1185	877	2225	1146	2	4250	229	870	184	1	1284	9746
Apprch %	7.9	66.8	25.4	0		20	67.2	12.8	0		20.6	52.4	27	0		17.8	67.8	14.3	0.1		
Total %	2.4	20.7	7.9	0	31.1	2.4	8.2	1.6	0	12.2	9	22.8	11.8	0	43.6	2.3	8.9	1.9	0	13.2	



Ridgeview Data
Collection

Centennial, CO
Jones District Redevelopment
AM Peak
County Line Rd and Quebec St

File Name : County Line and Quebec AM
Site Code : IPO 427
Start Date : 4/2/2019
Page No : 2



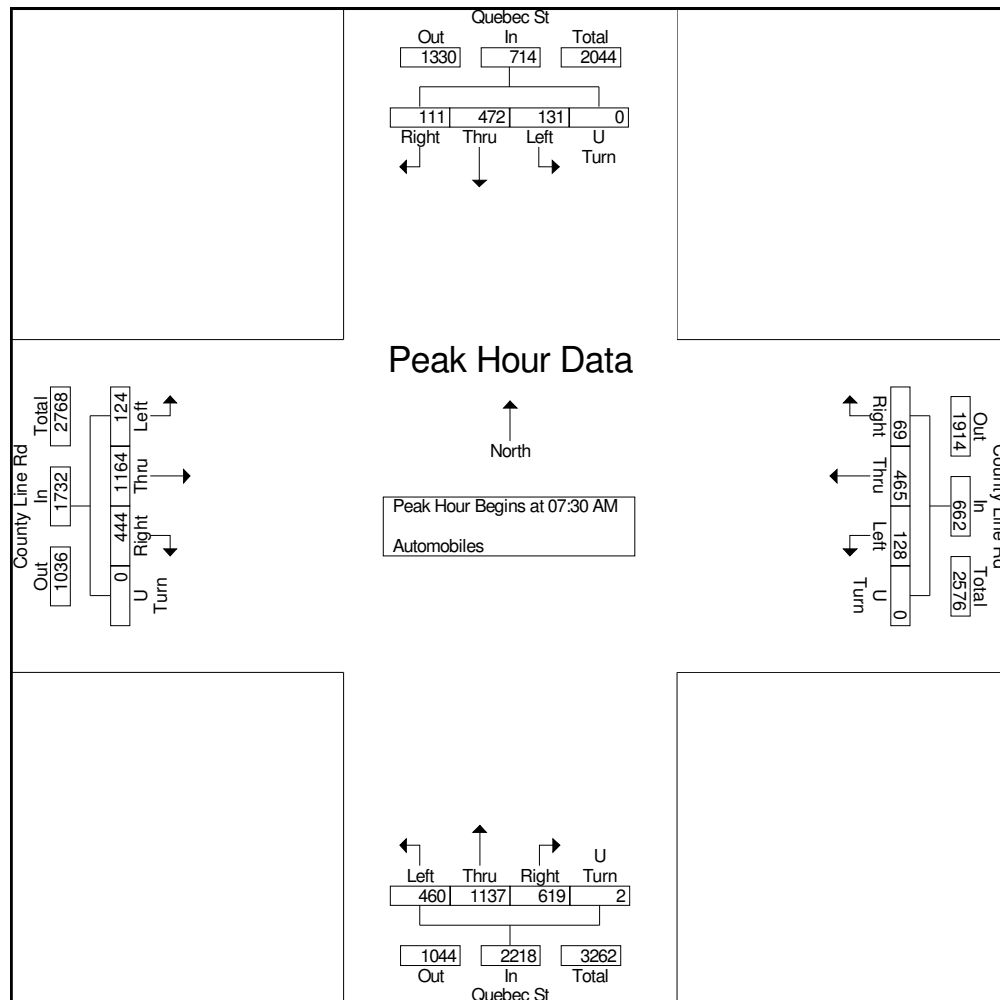


Ridgeview Data
Collection

Centennial, CO
Jones District Redevelopment
AM Peak
County Line Rd and Quebec St

File Name : County Line and Quebec AM
Site Code : IPO 427
Start Date : 4/2/2019
Page No : 3

	County Line Rd Eastbound					County Line Rd Westbound					Quebec St Northbound					Quebec St Southbound					
Start Time	Left	Thru	Right	U Turn	App. Total	Left	Thru	Right	U Turn	App. Total	Left	Thru	Right	U Turn	App. Total	Left	Thru	Right	U Turn	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	32	309	126	0	467	35	106	18	0	159	93	314	139	0	546	28	139	27	0	194	1366
07:45 AM	24	291	110	0	425	31	102	14	0	147	124	278	157	0	559	44	114	27	0	185	1316
08:00 AM	29	294	103	0	426	31	125	18	0	174	124	256	168	1	549	35	111	25	0	171	1320
08:15 AM	39	270	105	0	414	31	132	19	0	182	119	289	155	1	564	24	108	32	0	164	1324
Total Volume	124	1164	444	0	1732	128	465	69	0	662	460	1137	619	2	2218	131	472	111	0	714	5326
% App. Total	7.2	67.2	25.6	0		19.3	70.2	10.4	0		20.7	51.3	27.9	0.1		18.3	66.1	15.5	0		
PHF	.795	.942	.881	.000	.927	.914	.881	.908	.000	.909	.927	.905	.921	.500	.983	.744	.849	.867	.000	.920	.975





Ridgeview Data
Collection

Centennial, CO
Jones District Redevelopment
PM Peak
County Line Rd and Quebec St

File Name : County Line and Quebec PM
Site Code : IPO 427
Start Date : 4/2/2019
Page No : 1

Groups Printed- Automobiles

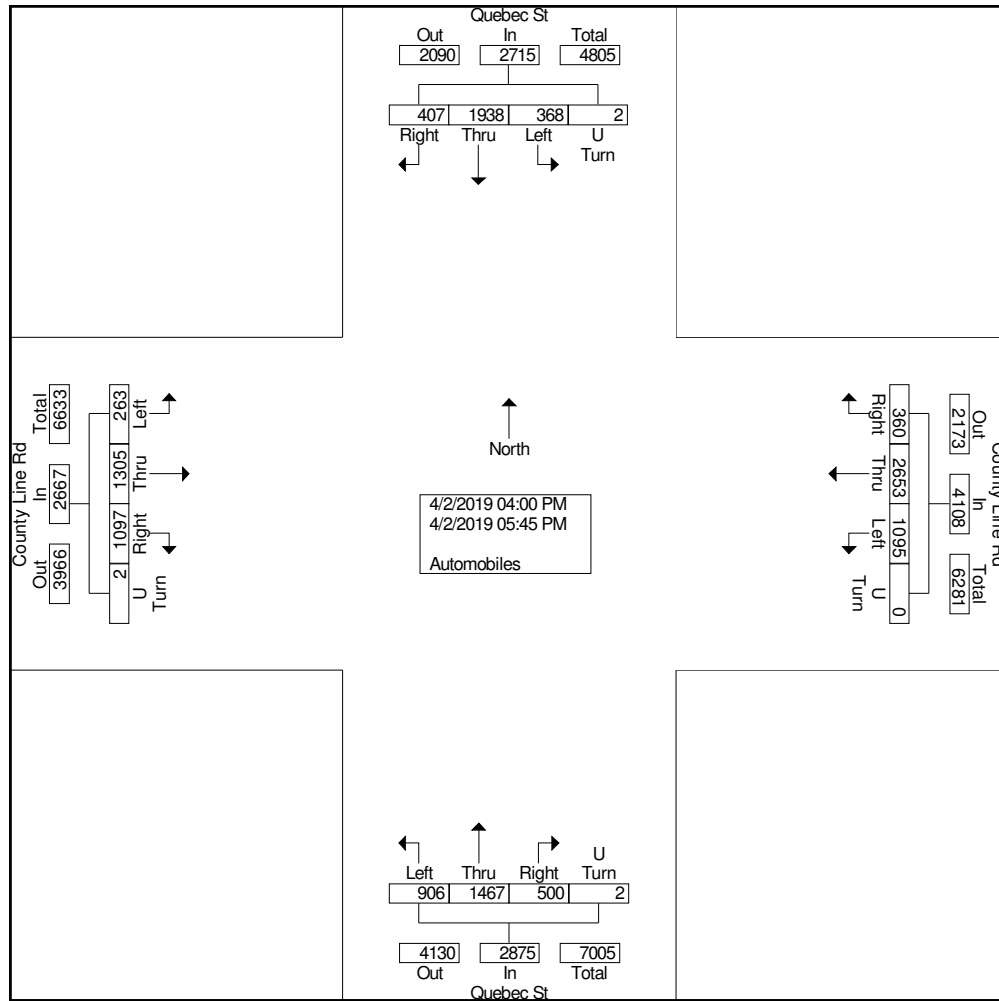
	County Line Rd Eastbound					County Line Rd Westbound					Quebec St Northbound					Quebec St Southbound					
Start Time	Left	Thru	Right	U Turn	App. Total	Left	Thru	Right	U Turn	App. Total	Left	Thru	Right	U Turn	App. Total	Left	Thru	Right	U Turn	App. Total	Int. Total
04:00 PM	26	162	123	0	311	136	355	32	0	523	123	176	76	0	375	39	201	47	0	287	1496
04:15 PM	41	152	140	0	333	118	304	53	0	475	123	219	75	0	417	47	257	60	0	364	1589
04:30 PM	40	143	147	0	330	137	343	42	0	522	89	163	68	0	320	50	259	56	0	365	1537
04:45 PM	29	178	135	1	343	147	334	48	0	529	102	192	59	0	353	55	206	56	1	318	1543
Total	136	635	545	1	1317	538	1336	175	0	2049	437	750	278	0	1465	191	923	219	1	1334	6165
05:00 PM	36	134	116	0	286	148	332	54	0	534	113	192	56	1	362	46	275	54	0	375	1557
05:15 PM	28	178	163	0	369	154	335	49	0	538	128	151	48	1	328	47	241	38	0	326	1561
05:30 PM	29	189	155	1	374	131	313	48	0	492	121	198	60	0	379	36	271	57	1	365	1610
05:45 PM	34	169	118	0	321	124	337	34	0	495	107	176	58	0	341	48	228	39	0	315	1472
Total	127	670	552	1	1350	557	1317	185	0	2059	469	717	222	2	1410	177	1015	188	1	1381	6200
Grand Total	263	1305	1097	2	2667	1095	2653	360	0	4108	906	1467	500	2	2875	368	1938	407	2	2715	12365
Apprch %	9.9	48.9	41.1	0.1		26.7	64.6	8.8	0		31.5	51	17.4	0.1		13.6	71.4	15	0.1		
Total %	2.1	10.6	8.9	0	21.6	8.9	21.5	2.9	0	33.2	7.3	11.9	4	0	23.3	3	15.7	3.3	0	22	



Ridgeview Data
Collection

Centennial, CO
Jones District Redevelopment
PM Peak
County Line Rd and Quebec St

File Name : County Line and Quebec PM
Site Code : IPO 427
Start Date : 4/2/2019
Page No : 2



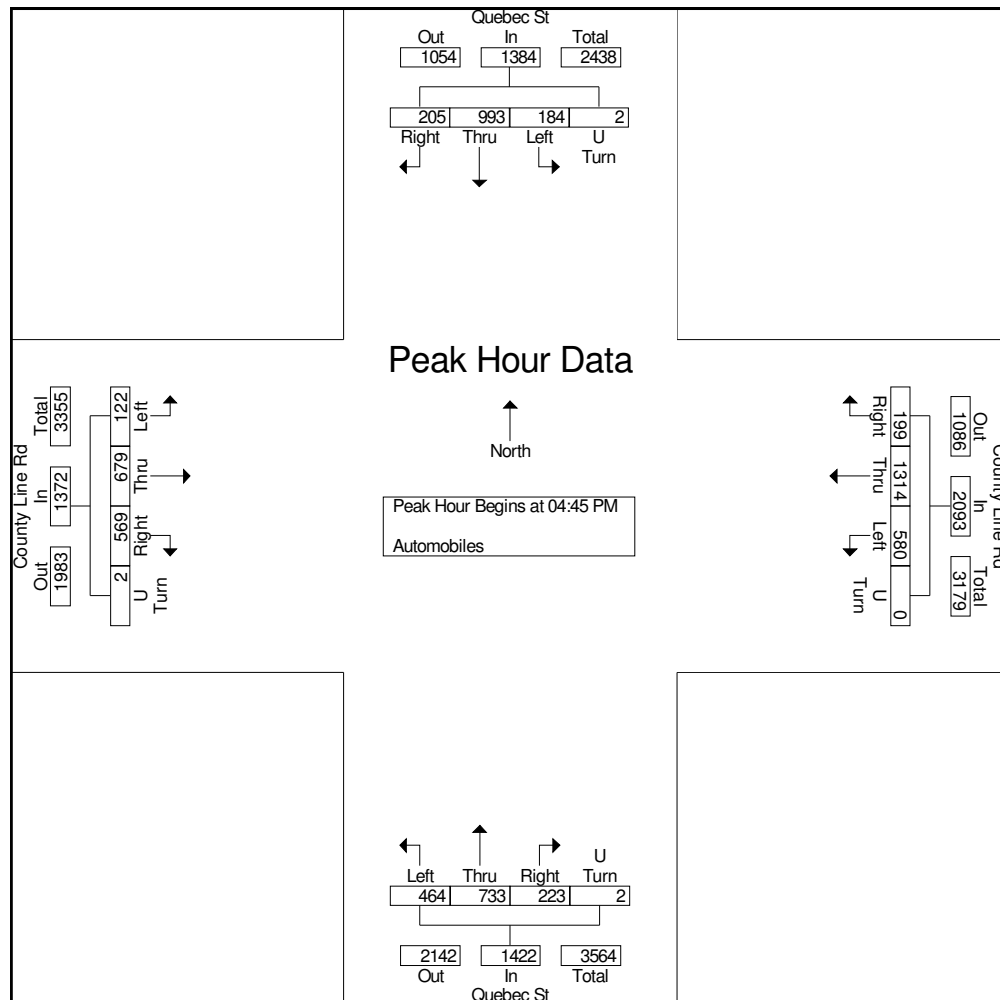


Ridgeview Data
Collection

Centennial, CO
Jones District Redevelopment
PM Peak
County Line Rd and Quebec St

File Name : County Line and Quebec PM
Site Code : IPO 427
Start Date : 4/2/2019
Page No : 3

	County Line Rd Eastbound					County Line Rd Westbound					Quebec St Northbound					Quebec St Southbound					
Start Time	Left	Thru	Right	U Turn	App. Total	Left	Thru	Right	U Turn	App. Total	Left	Thru	Right	U Turn	App. Total	Left	Thru	Right	U Turn	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	29	178	135	1	343	147	334	48	0	529	102	192	59	0	353	55	206	56	1	318	1543
05:00 PM	36	134	116	0	286	148	332	54	0	534	113	192	56	1	362	46	275	54	0	375	1557
05:15 PM	28	178	163	0	369	154	335	49	0	538	128	151	48	1	328	47	241	38	0	326	1561
05:30 PM	29	189	155	1	374	131	313	48	0	492	121	198	60	0	379	36	271	57	1	365	1610
Total Volume	122	679	569	2	1372	580	1314	199	0	2093	464	733	223	2	1422	184	993	205	2	1384	6271
% App. Total	8.9	49.5	41.5	0.1		27.7	62.8	9.5	0		32.6	51.5	15.7	0.1		13.3	71.7	14.8	0.1		
PHF	.847	.898	.873	.500	.917	.942	.981	.921	.000	.973	.906	.926	.929	.500	.938	.836	.903	.899	.500	.923	.974





Ridgeview Data
Collection

Centennial, CO
Jones District Redevelopment
AM Peak
County Line Rd and Yosemite St

File Name : County Line and Yosemite AM
Site Code : IPO 427
Start Date : 4/2/2019
Page No : 1

Groups Printed- Automobiles

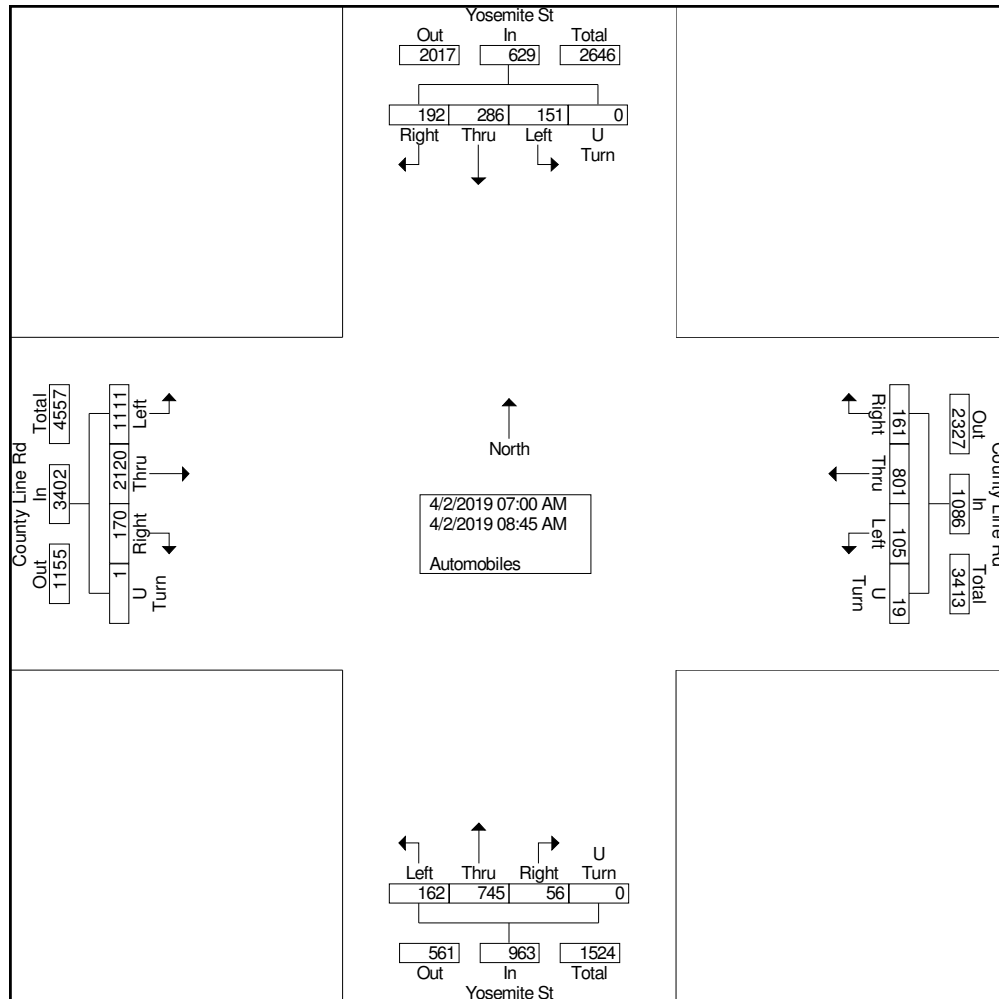
	County Line Rd Eastbound					County Line Rd Westbound					Yosemite St Northbound					Yosemite St Southbound					
Start Time	Left	Thru	Right	U Turn	App. Total	Left	Thru	Right	U Turn	App. Total	Left	Thru	Right	U Turn	App. Total	Left	Thru	Right	U Turn	App. Total	Int. Total
07:00 AM	113	228	7	0	348	12	72	12	3	99	15	73	4	0	92	12	20	19	0	51	590
07:15 AM	129	231	19	0	379	12	90	13	2	117	14	93	8	0	115	16	22	19	0	57	668
07:30 AM	169	283	20	0	472	10	103	22	1	136	15	97	8	0	120	21	38	18	0	77	805
07:45 AM	199	326	25	0	550	13	110	37	0	160	24	119	6	0	149	20	39	29	0	88	947
Total	610	1068	71	0	1749	47	375	84	6	512	68	382	26	0	476	69	119	85	0	273	3010
08:00 AM	136	292	21	0	449	14	105	24	3	146	23	102	6	0	131	30	49	32	0	111	837
08:15 AM	139	304	17	0	460	12	108	16	3	139	22	94	10	0	126	16	42	34	0	92	817
08:30 AM	123	233	30	1	387	15	111	20	2	148	29	87	8	0	124	15	32	22	0	69	728
08:45 AM	103	223	31	0	357	17	102	17	5	141	20	80	6	0	106	21	44	19	0	84	688
Total	501	1052	99	1	1653	58	426	77	13	574	94	363	30	0	487	82	167	107	0	356	3070
Grand Total	1111	2120	170	1	3402	105	801	161	19	1086	162	745	56	0	963	151	286	192	0	629	6080
Apprch %	32.7	62.3	5	0		9.7	73.8	14.8	1.7		16.8	77.4	5.8	0		24	45.5	30.5	0		
Total %	18.3	34.9	2.8	0	56	1.7	13.2	2.6	0.3	17.9	2.7	12.3	0.9	0	15.8	2.5	4.7	3.2	0	10.3	



Ridgeview Data
Collection

Centennial, CO
Jones District Redevelopment
AM Peak
County Line Rd and Yosemite St

File Name : County Line and Yosemite AM
Site Code : IPO 427
Start Date : 4/2/2019
Page No : 2



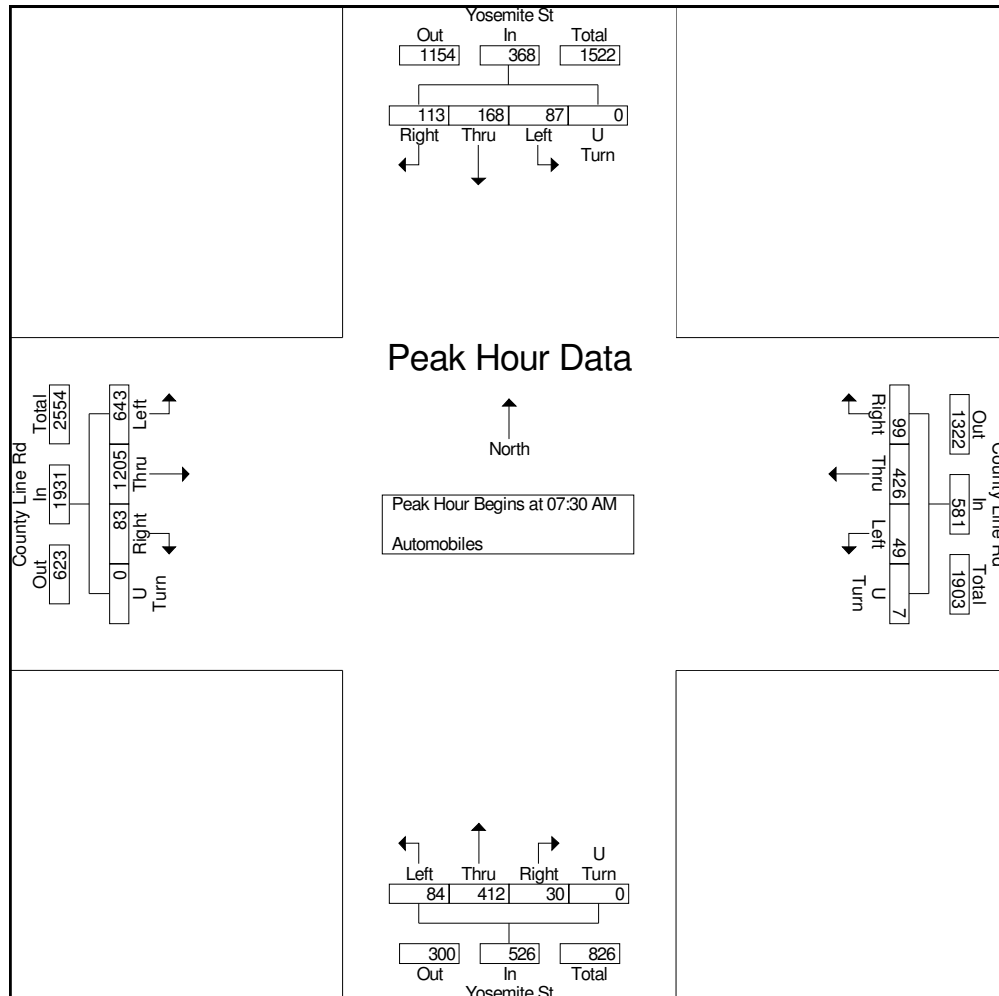


Ridgeview Data
Collection

Centennial, CO
Jones District Redevelopment
AM Peak
County Line Rd and Yosemite St

File Name : County Line and Yosemite AM
Site Code : IPO 427
Start Date : 4/2/2019
Page No : 3

	County Line Rd Eastbound					County Line Rd Westbound					Yosemite St Northbound					Yosemite St Southbound					
Start Time	Left	Thru	Right	U Turn	App. Total	Left	Thru	Right	U Turn	App. Total	Left	Thru	Right	U Turn	App. Total	Left	Thru	Right	U Turn	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	169	283	20	0	472	10	103	22	1	136	15	97	8	0	120	21	38	18	0	77	805
07:45 AM	199	326	25	0	550	13	110	37	0	160	24	119	6	0	149	20	39	29	0	88	947
08:00 AM	136	292	21	0	449	14	105	24	3	146	23	102	6	0	131	30	49	32	0	111	837
08:15 AM	139	304	17	0	460	12	108	16	3	139	22	94	10	0	126	16	42	34	0	92	817
Total Volume	643	1205	83	0	1931	49	426	99	7	581	84	412	30	0	526	87	168	113	0	368	3406
% App. Total	33.3	62.4	4.3	0		8.4	73.3	17	1.2		16	78.3	5.7	0		23.6	45.7	30.7	0		
PHF	.808	.924	.830	.000	.878	.875	.968	.669	.583	.908	.875	.866	.750	.000	.883	.725	.857	.831	.000	.829	.899





Ridgeview Data
Collection

Centennial, CO
Jones District Redevelopment
PM Peak
County Line Rd and Yosemite St

File Name : County Line and Yosemite PM
Site Code : IPO 427
Start Date : 4/2/2019
Page No : 1

Groups Printed- Automobiles

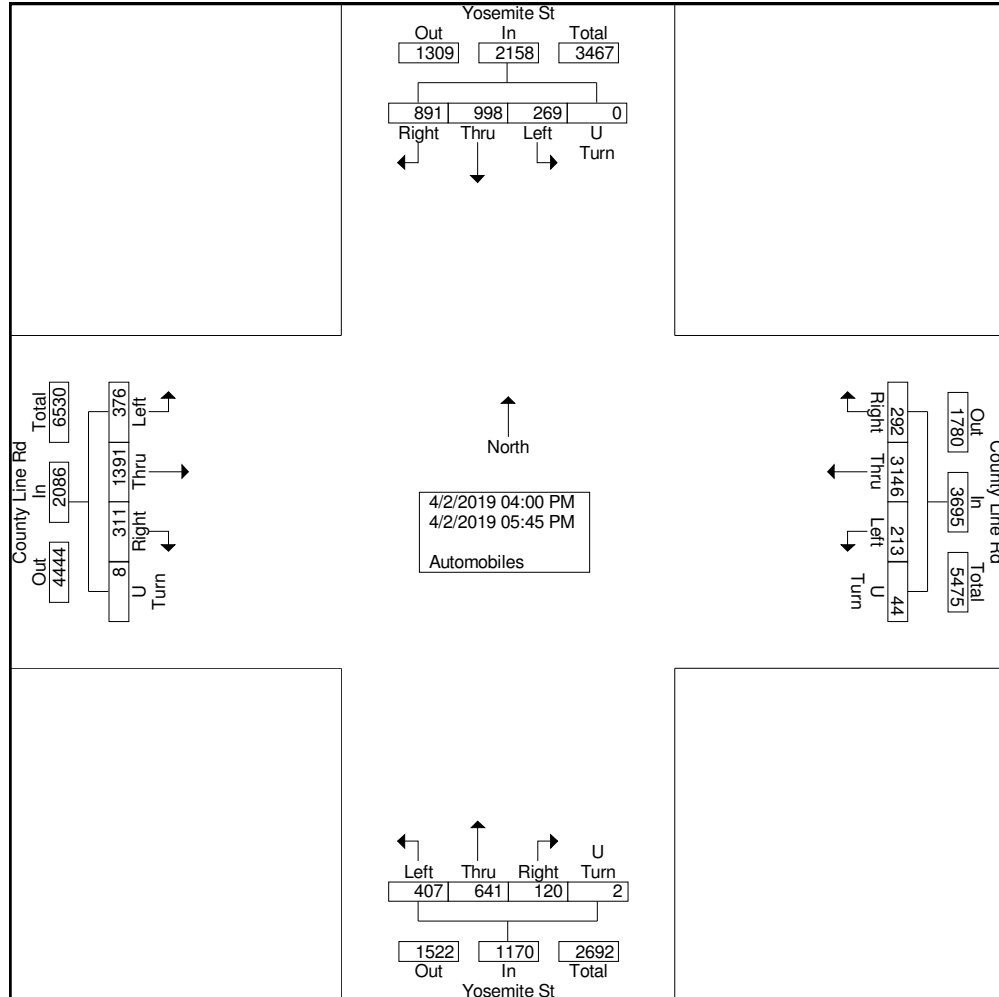
Start Time	County Line Rd Eastbound					County Line Rd Westbound					Yosemite St Northbound					Yosemite St Southbound					Int. Total
	Left	Thru	Right	U Turn	App. Total	Left	Thru	Right	U Turn	App. Total	Left	Thru	Right	U Turn	App. Total	Left	Thru	Right	U Turn	App. Total	
04:00 PM	61	165	49	2	277	18	342	37	5	402	50	67	14	0	131	28	103	98	0	229	1039
04:15 PM	44	165	31	2	242	32	435	32	4	503	53	85	20	0	158	32	116	100	0	248	1151
04:30 PM	50	146	38	0	234	21	342	38	9	410	48	94	12	0	154	38	135	111	0	284	1082
04:45 PM	41	191	34	0	266	26	456	47	4	533	35	76	9	0	120	28	136	116	0	280	1199
Total	196	667	152	4	1019	97	1575	154	22	1848	186	322	55	0	563	126	490	425	0	1041	4471
05:00 PM	40	177	44	2	263	30	436	38	2	506	65	88	15	0	168	44	151	120	0	315	1252
05:15 PM	49	183	36	0	268	26	436	44	5	511	55	77	18	0	150	35	132	138	0	305	1234
05:30 PM	44	179	32	1	256	34	373	28	11	446	55	86	18	0	159	32	126	97	0	255	1116
05:45 PM	47	185	47	1	280	26	326	28	4	384	46	68	14	2	130	32	99	111	0	242	1036
Total	180	724	159	4	1067	116	1571	138	22	1847	221	319	65	2	607	143	508	466	0	1117	4638
Grand Total	376	1391	311	8	2086	213	3146	292	44	3695	407	641	120	2	1170	269	998	891	0	2158	9109
Apprch %	18	66.7	14.9	0.4		5.8	85.1	7.9	1.2		34.8	54.8	10.3	0.2		12.5	46.2	41.3	0		
Total %	4.1	15.3	3.4	0.1	22.9	2.3	34.5	3.2	0.5	40.6	4.5	7	1.3	0	12.8	3	11	9.8	0	23.7	



Ridgeview Data
Collection

Centennial, CO
Jones District Redevelopment
PM Peak
County Line Rd and Yosemite St

File Name : County Line and Yosemite PM
Site Code : IPO 427
Start Date : 4/2/2019
Page No : 2



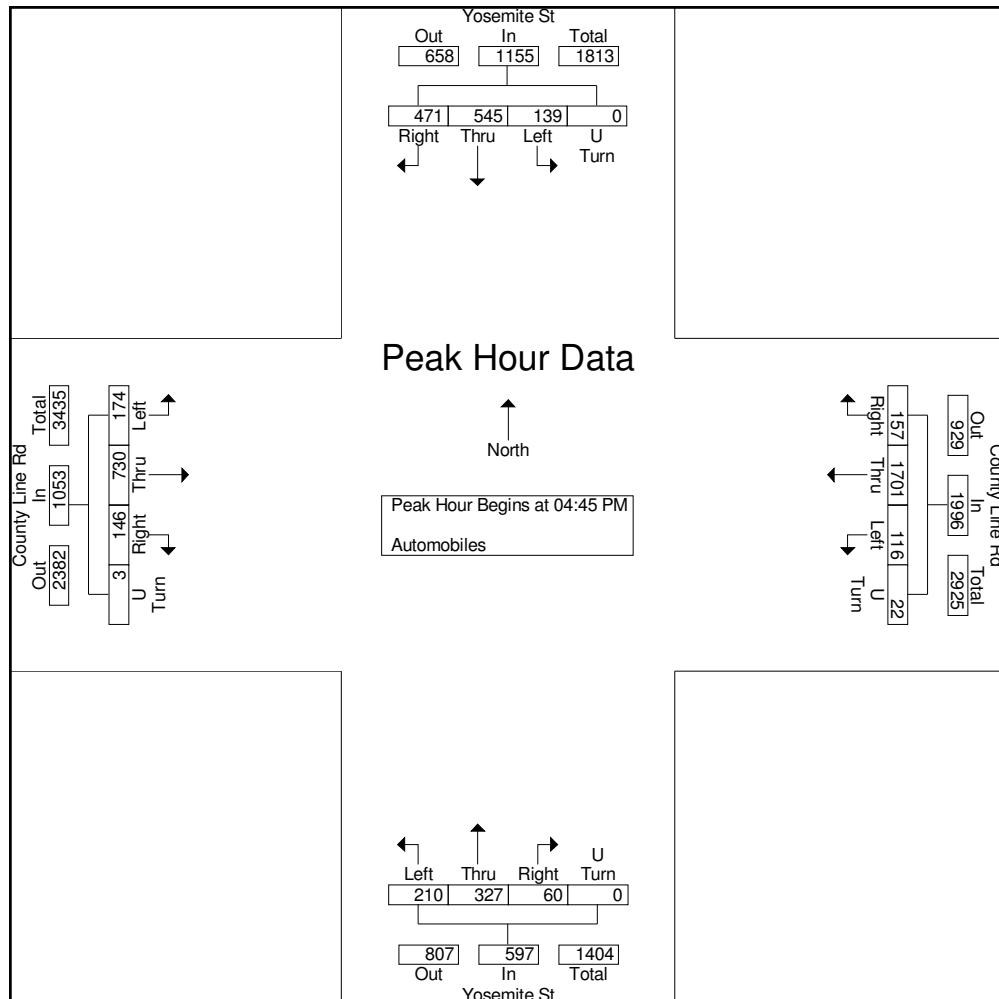


Ridgeview Data
Collection

Centennial, CO
Jones District Redevelopment
PM Peak
County Line Rd and Yosemite St

File Name : County Line and Yosemite PM
Site Code : IPO 427
Start Date : 4/2/2019
Page No : 3

	County Line Rd Eastbound					County Line Rd Westbound					Yosemite St Northbound					Yosemite St Southbound					
Start Time	Left	Thru	Right	U Turn	App. Total	Left	Thru	Right	U Turn	App. Total	Left	Thru	Right	U Turn	App. Total	Left	Thru	Right	U Turn	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	41	191	34	0	266	26	456	47	4	533	35	76	9	0	120	28	136	116	0	280	1199
05:00 PM	40	177	44	2	263	30	436	38	2	506	65	88	15	0	168	44	151	120	0	315	1252
05:15 PM	49	183	36	0	268	26	436	44	5	511	55	77	18	0	150	35	132	138	0	305	1234
05:30 PM	44	179	32	1	256	34	373	28	11	446	55	86	18	0	159	32	126	97	0	255	1116
Total Volume	174	730	146	3	1053	116	1701	157	22	1996	210	327	60	0	597	139	545	471	0	1155	4801
% App. Total	16.5	69.3	13.9	0.3		5.8	85.2	7.9	1.1		35.2	54.8	10.1	0		12	47.2	40.8	0		
PHF	.888	.955	.830	.375	.982	.853	.933	.835	.500	.936	.808	.929	.833	.000	.888	.790	.902	.853	.000	.917	.959





Ridgeview Data
Collection

Centennial, CO
Jones District Redevelopment
AM Peak
Dry Creek Rd and Chester St

File Name : Dry Creek and Chester AM
Site Code : IPO 427
Start Date : 4/2/2019
Page No : 1

Groups Printed- Automobiles

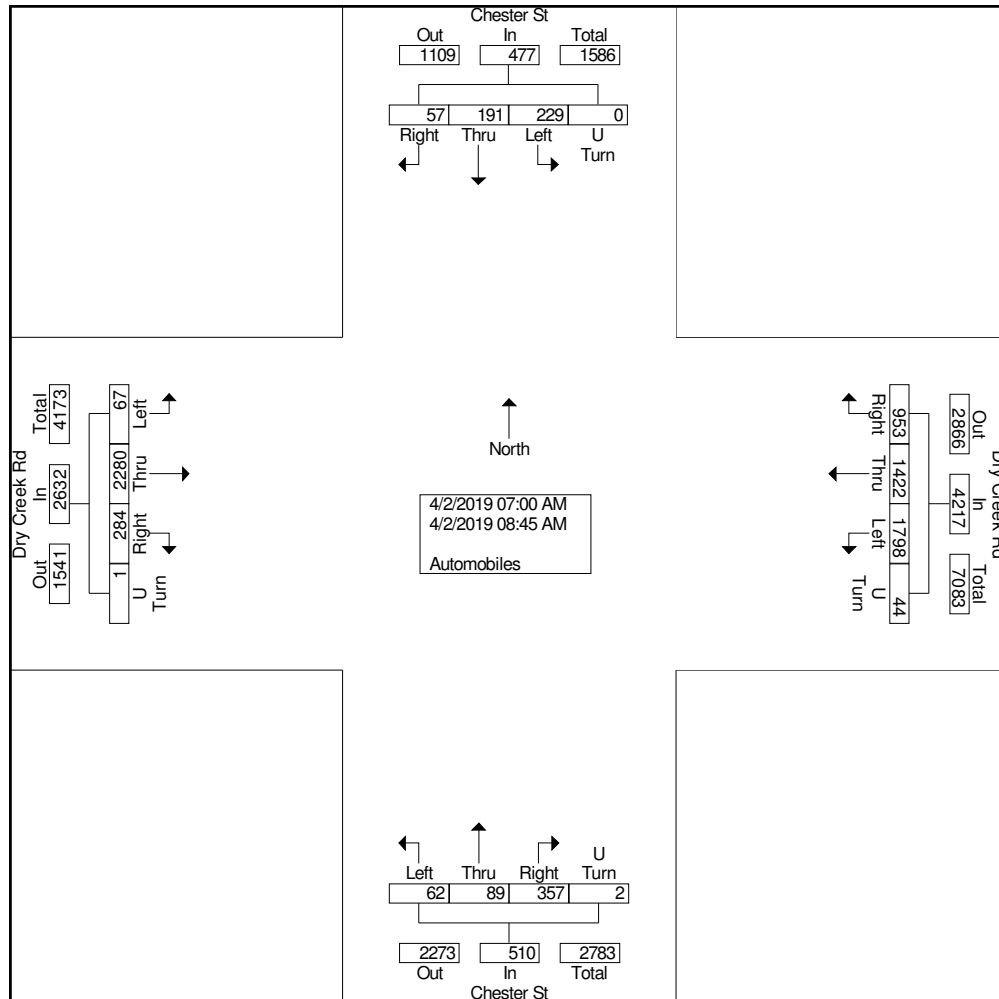
	Dry Creek Rd Eastbound					Dry Creek Rd Westbound					Chester St Northbound					Chester St Southbound					
Start Time	Left	Thru	Right	U Turn	App. Total	Left	Thru	Right	U Turn	App. Total	Left	Thru	Right	U Turn	App. Total	Left	Thru	Right	U Turn	App. Total	Int. Total
07:00 AM	5	296	30	0	331	188	112	97	8	405	9	10	51	0	70	13	14	6	0	33	839
07:15 AM	8	290	35	0	333	231	157	97	12	497	4	12	40	1	57	27	18	8	0	53	940
07:30 AM	5	324	36	0	365	211	195	114	4	524	6	9	46	0	61	28	24	9	0	61	1011
07:45 AM	12	328	49	0	389	233	206	137	6	582	11	17	54	1	83	42	41	9	0	92	1146
Total	30	1238	150	0	1418	863	670	445	30	2008	30	48	191	2	271	110	97	32	0	239	3936
08:00 AM	12	312	50	0	374	271	206	140	1	618	8	10	47	0	65	25	34	6	0	65	1122
08:15 AM	9	242	37	1	289	245	161	129	7	542	10	16	34	0	60	29	25	8	0	62	953
08:30 AM	8	273	31	0	312	197	198	100	4	499	9	7	42	0	58	30	19	5	0	54	923
08:45 AM	8	215	16	0	239	222	187	139	2	550	5	8	43	0	56	35	16	6	0	57	902
Total	37	1042	134	1	1214	935	752	508	14	2209	32	41	166	0	239	119	94	25	0	238	3900
Grand Total	67	2280	284	1	2632	1798	1422	953	44	4217	62	89	357	2	510	229	191	57	0	477	7836
Apprch %	2.5	86.6	10.8	0		42.6	33.7	22.6	1		12.2	17.5	70	0.4		48	40	11.9	0		
Total %	0.9	29.1	3.6	0	33.6	22.9	18.1	12.2	0.6	53.8	0.8	1.1	4.6	0	6.5	2.9	2.4	0.7	0	6.1	



Ridgeview Data
Collection

Centennial, CO
Jones District Redevelopment
AM Peak
Dry Creek Rd and Chester St

File Name : Dry Creek and Chester AM
Site Code : IPO 427
Start Date : 4/2/2019
Page No : 2



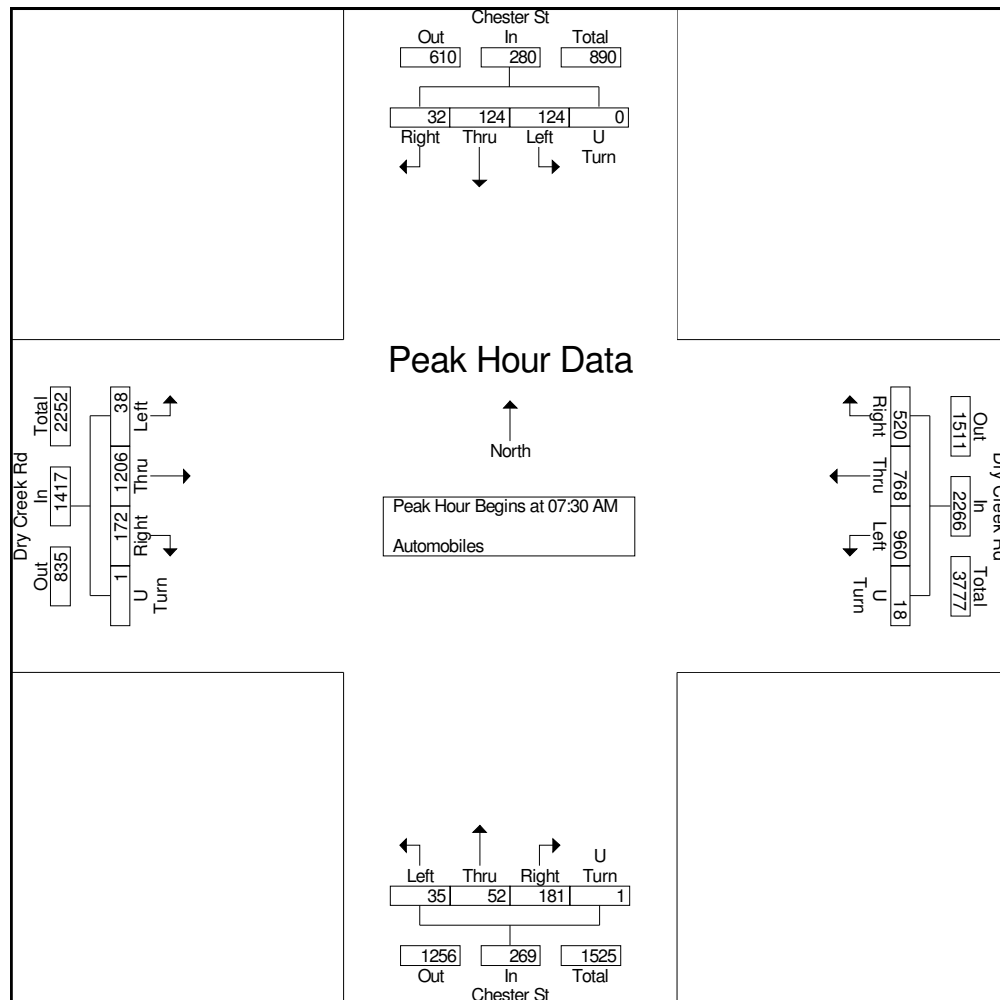


Ridgeview Data
Collection

Centennial, CO
Jones District Redevelopment
AM Peak
Dry Creek Rd and Chester St

File Name : Dry Creek and Chester AM
Site Code : IPO 427
Start Date : 4/2/2019
Page No : 3

	Dry Creek Rd Eastbound					Dry Creek Rd Westbound					Chester St Northbound					Chester St Southbound					
Start Time	Left	Thru	Right	U Turn	App. Total	Left	Thru	Right	U Turn	App. Total	Left	Thru	Right	U Turn	App. Total	Left	Thru	Right	U Turn	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	5	324	36	0	365	211	195	114	4	524	6	9	46	0	61	28	24	9	0	61	1011
07:45 AM	12	328	49	0	389	233	206	137	6	582	11	17	54	1	83	42	41	9	0	92	1146
08:00 AM	12	312	50	0	374	271	206	140	1	618	8	10	47	0	65	25	34	6	0	65	1122
08:15 AM	9	242	37	1	289	245	161	129	7	542	10	16	34	0	60	29	25	8	0	62	953
Total Volume	38	1206	172	1	1417	960	768	520	18	2266	35	52	181	1	269	124	124	32	0	280	4232
% App. Total	2.7	85.1	12.1	0.1		42.4	33.9	22.9	0.8		13	19.3	67.3	0.4		44.3	44.3	11.4	0		
PHF	.792	.919	.860	.250	.911	.886	.932	.929	.643	.917	.795	.765	.838	.250	.810	.738	.756	.889	.000	.761	.923





Ridgeview Data
Collection

Centennial, CO
Jones District Redevelopment
PM Peak
County Line Rd and Chester St

File Name : County Line and Chester PM
Site Code : IPO 427
Start Date : 4/2/2019
Page No : 1

Groups Printed- Automobiles

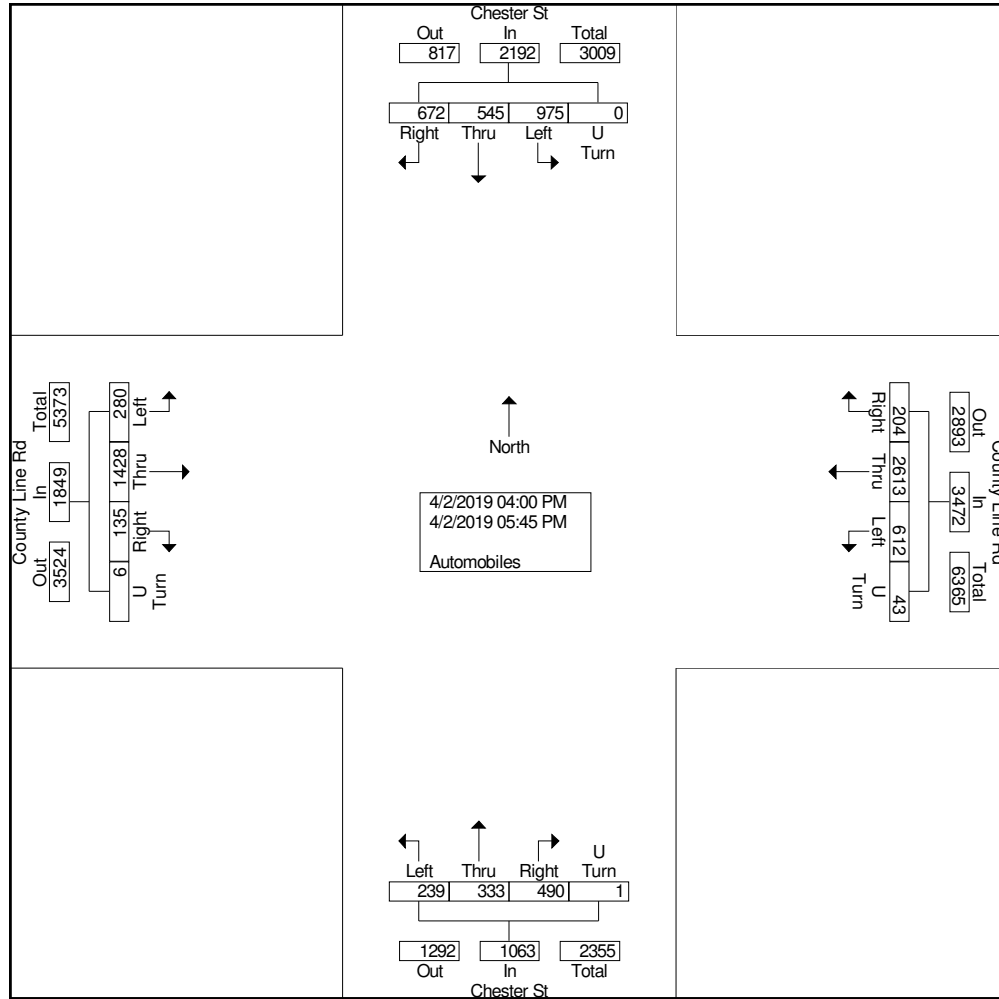
	County Line Rd Eastbound					County Line Rd Westbound					Chester St Northbound					Chester St Southbound					
Start Time	Left	Thru	Right	U Turn	App. Total	Left	Thru	Right	U Turn	App. Total	Left	Thru	Right	U Turn	App. Total	Left	Thru	Right	U Turn	App. Total	Int. Total
04:00 PM	27	184	20	2	233	73	367	21	0	461	35	41	77	1	154	160	77	100	0	337	1185
04:15 PM	30	199	13	1	243	82	359	28	1	470	24	34	68	0	126	141	74	78	0	293	1132
04:30 PM	40	179	27	0	246	86	278	17	7	388	29	49	48	0	126	108	69	80	0	257	1017
04:45 PM	39	194	19	0	252	54	282	43	5	384	40	37	66	0	143	59	47	62	0	168	947
Total	136	756	79	3	974	295	1286	109	13	1703	128	161	259	1	549	468	267	320	0	1055	4281
05:00 PM	34	171	13	2	220	70	329	21	8	428	32	40	57	0	129	127	67	86	0	280	1057
05:15 PM	26	169	17	0	212	83	312	28	5	428	32	35	66	0	133	134	56	90	0	280	1053
05:30 PM	44	158	10	1	213	78	315	19	9	421	23	52	55	0	130	142	87	87	0	316	1080
05:45 PM	40	174	16	0	230	86	371	27	8	492	24	45	53	0	122	104	68	89	0	261	1105
Total	144	672	56	3	875	317	1327	95	30	1769	111	172	231	0	514	507	278	352	0	1137	4295
Grand Total	280	1428	135	6	1849	612	2613	204	43	3472	239	333	490	1	1063	975	545	672	0	2192	8576
Apprch %	15.1	77.2	7.3	0.3		17.6	75.3	5.9	1.2		22.5	31.3	46.1	0.1		44.5	24.9	30.7	0		
Total %	3.3	16.7	1.6	0.1	21.6	7.1	30.5	2.4	0.5	40.5	2.8	3.9	5.7	0	12.4	11.4	6.4	7.8	0	25.6	



Ridgeview Data
Collection

Centennial, CO
Jones District Redevelopment
PM Peak
County Line Rd and Chester St

File Name : County Line and Chester PM
Site Code : IPO 427
Start Date : 4/2/2019
Page No : 2



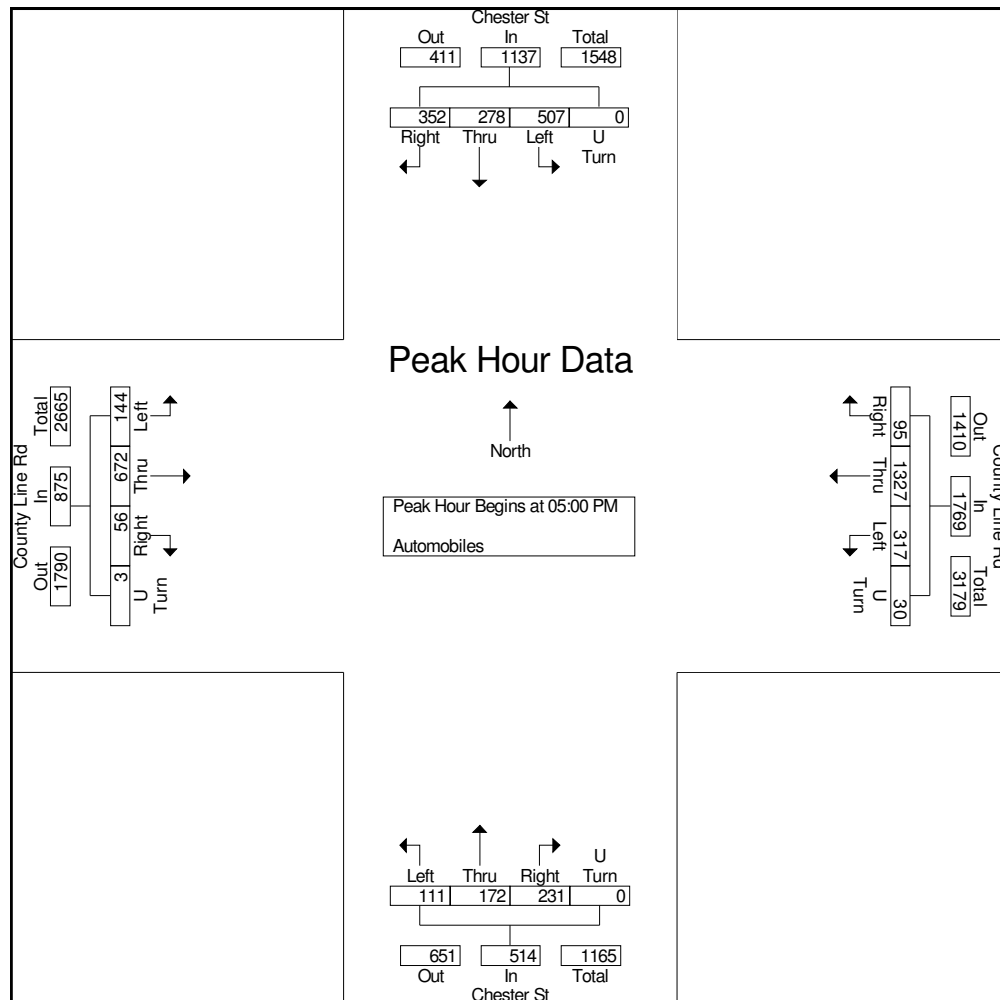


Ridgeview Data
Collection

Centennial, CO
Jones District Redevelopment
PM Peak
County Line Rd and Chester St

File Name : County Line and Chester PM
Site Code : IPO 427
Start Date : 4/2/2019
Page No : 3

	County Line Rd Eastbound					County Line Rd Westbound					Chester St Northbound					Chester St Southbound					
Start Time	Left	Thru	Right	U Turn	App. Total	Left	Thru	Right	U Turn	App. Total	Left	Thru	Right	U Turn	App. Total	Left	Thru	Right	U Turn	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 05:00 PM																					
05:00 PM	34	171	13	2	220	70	329	21	8	428	32	40	57	0	129	127	67	86	0	280	1057
05:15 PM	26	169	17	0	212	83	312	28	5	428	32	35	66	0	133	134	56	90	0	280	1053
05:30 PM	44	158	10	1	213	78	315	19	9	421	23	52	55	0	130	142	87	87	0	316	1080
05:45 PM	40	174	16	0	230	86	371	27	8	492	24	45	53	0	122	104	68	89	0	261	1105
Total Volume	144	672	56	3	875	317	1327	95	30	1769	111	172	231	0	514	507	278	352	0	1137	4295
% App. Total	16.5	76.8	6.4	0.3		17.9	75	5.4	1.7		21.6	33.5	44.9	0		44.6	24.5	31	0		
PHF	.818	.966	.824	.375	.951	.922	.894	.848	.833	.899	.867	.827	.875	.000	.966	.893	.799	.978	.000	.900	.972





Morrison, CO 80465

Douglas County, CO
 Meridian International Business Center
 AM Peak
 County Line Rd and I-25 SB Off Ramp

File Name : County Line I-25 SB Off Ramp AM
 Site Code : IPO 303
 Start Date : 2/1/2018
 Page No : 1

Groups Printed- Automobiles

Start Time	County Line Road Eastbound					County Line Road Westbound					Park Meadows Center Dr Northbound					I-25 Southbound Ramp Southbound					Int. Total
	Left	Thru	Right	U Turn	App. Total	Left	Thru	Right	U Turn	App. Total	Left	Thru	Right	U Turn	App. Total	Left	Thru	Right	U Turn	App. Total	
07:00 AM	0	174	0	0	174	0	143	0	0	143	0	0	148	0	148	159	48	91	0	298	763
07:15 AM	0	258	0	0	258	0	141	0	0	141	0	0	135	0	135	157	49	109	0	315	849
07:30 AM	0	267	0	0	267	0	161	0	0	161	0	0	133	0	133	184	52	111	0	347	908
07:45 AM	0	318	0	0	318	0	229	0	0	229	0	0	105	0	105	181	73	131	0	385	1037
Total	0	1017	0	0	1017	0	674	0	0	674	0	0	521	0	521	681	222	442	0	1345	3557
08:00 AM	0	339	0	0	339	0	181	0	0	181	0	0	114	0	114	162	52	129	0	343	977
08:15 AM	0	283	0	0	283	1	170	0	0	171	0	0	132	0	132	192	59	131	0	382	968
08:30 AM	0	213	3	0	216	0	177	0	0	177	0	0	123	0	123	162	74	129	0	365	881
08:45 AM	0	260	5	0	265	0	186	0	0	186	0	0	120	0	120	152	77	139	0	368	939
Total	0	1095	8	0	1103	1	714	0	0	715	0	0	489	0	489	668	262	528	0	1458	3765
Grand Total	0	2112	8	0	2120	1	1388	0	0	1389	0	0	1010	0	1010	1349	484	970	0	2803	7322
Apprch %	0	99.6	0.4	0		0.1	99.9	0	0		0	0	100	0		48.1	17.3	34.6	0		
Total %	0	28.8	0.1	0	29	0	19	0	0	19	0	0	13.8	0	13.8	18.4	6.6	13.2	0	38.3	

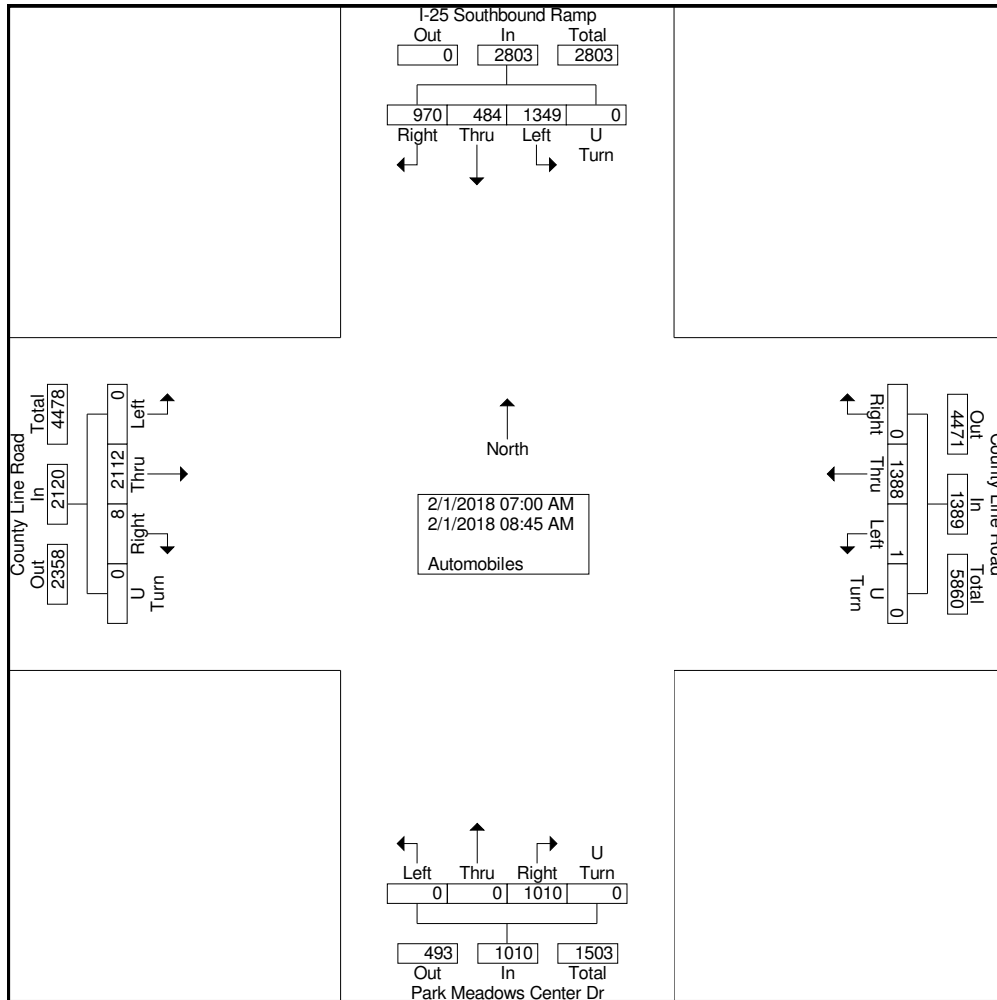


Ridgeview Data
Collection

Morrison, CO 80465

Douglas County, CO
Meridian International Business Center
AM Peak
County Line Rd and I-25 SB Off Ramp

File Name : County Line I-25 SB Off Ramp AM
Site Code : IPO 303
Start Date : 2/1/2018
Page No : 2





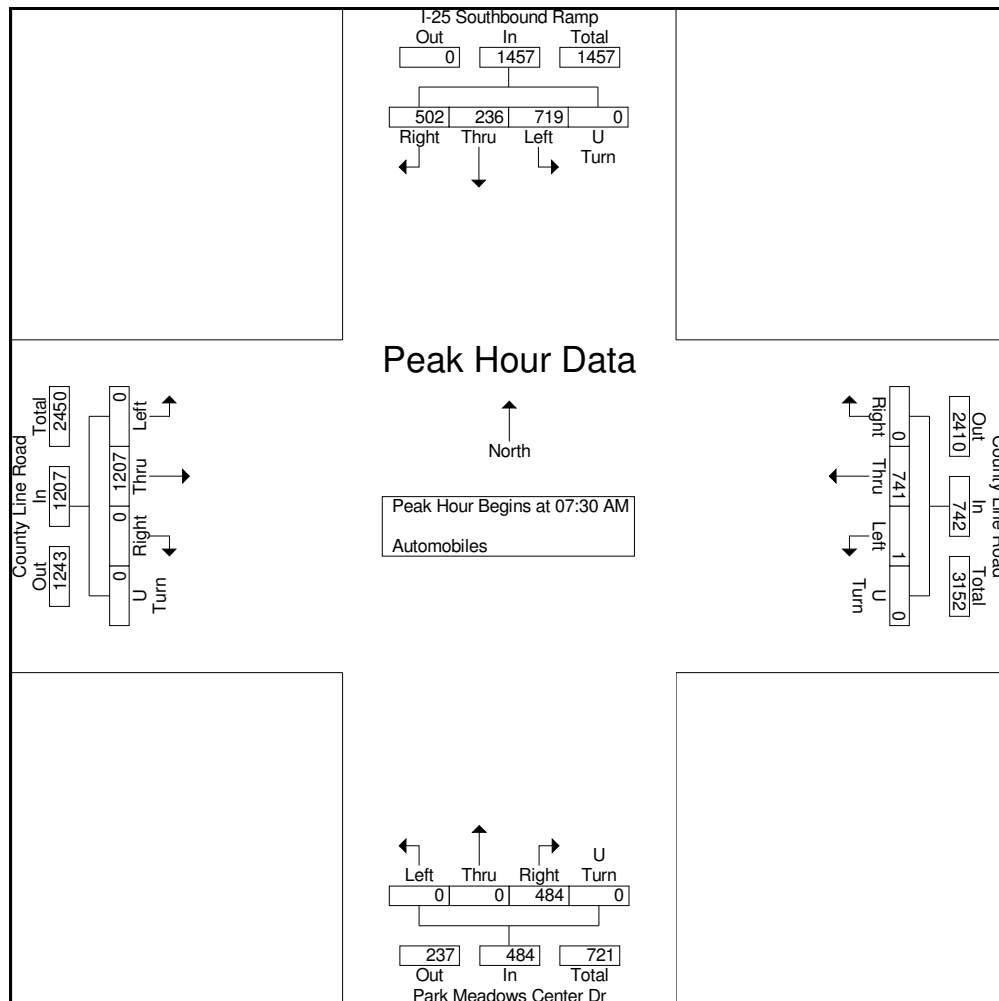
Ridgeview Data
Collection

Morrison, CO 80465

Douglas County, CO
Meridian International Business Center
AM Peak
County Line Rd and I-25 SB Off Ramp

File Name : County Line I-25 SB Off Ramp AM
Site Code : IPO 303
Start Date : 2/1/2018
Page No : 3

	County Line Road Eastbound					County Line Road Westbound					Park Meadows Center Dr Northbound					I-25 Southbound Ramp Southbound					
Start Time	Left	Thru	Right	U Turn	App. Total	Left	Thru	Right	U Turn	App. Total	Left	Thru	Right	U Turn	App. Total	Left	Thru	Right	U Turn	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	0	267	0	0	267	0	161	0	0	161	0	0	133	0	133	184	52	111	0	347	908
07:45 AM	0	318	0	0	318	0	229	0	0	229	0	0	105	0	105	181	73	131	0	385	1037
08:00 AM	0	339	0	0	339	0	181	0	0	181	0	0	114	0	114	162	52	129	0	343	977
08:15 AM	0	283	0	0	283	1	170	0	0	171	0	0	132	0	132	192	59	131	0	382	968
Total Volume	0	1207	0	0	1207	1	741	0	0	742	0	0	484	0	484	719	236	502	0	1457	3890
% App. Total	0	100	0	0		0.1	99.9	0	0		0	0	100	0		49.3	16.2	34.5	0		
PHF	.000	.890	.000	.000	.890	.250	.809	.000	.000	.810	.000	.000	.910	.000	.910	.936	.808	.958	.000	.946	.938





Morrison, CO 80465

Douglas County, CO
Meridian International Business Center
PM Peak
County Line Rd and I-25 SB Off Ramp

File Name : County Line I-25 SB Off Ramp PM
Site Code : IPO 303
Start Date : 2/1/2018
Page No : 1

Groups Printed- Automobiles

Start Time	County Line Road Eastbound					County Line Road Westbound					Park Meadows Center Dr Northbound					I-25 Southbound Ramp Southbound					Int. Total
	Left	Thru	Right	U Turn	App. Total	Left	Thru	Right	U Turn	App. Total	Left	Thru	Right	U Turn	App. Total	Left	Thru	Right	U Turn	App. Total	
04:00 PM	0	392	0	0	392	0	356	0	0	356	0	0	177	0	177	28	124	171	0	323	1248
04:15 PM	0	313	0	0	313	0	336	0	0	336	0	0	159	0	159	49	152	183	0	384	1192
04:30 PM	0	309	0	0	309	0	411	0	0	411	0	0	167	0	167	27	142	190	0	359	1246
04:45 PM	0	299	0	0	299	1	338	0	0	339	0	0	161	0	161	42	164	180	0	386	1185
Total	0	1313	0	0	1313	1	1441	0	0	1442	0	0	664	0	664	146	582	724	0	1452	4871
05:00 PM	0	387	0	0	387	0	476	0	0	476	0	0	171	0	171	30	122	183	0	335	1369
05:15 PM	0	335	0	0	335	1	410	0	0	411	0	0	153	0	153	31	146	158	0	335	1234
05:30 PM	0	348	0	0	348	0	316	0	0	316	0	0	139	0	139	27	147	163	0	337	1140
05:45 PM	0	279	0	0	279	1	294	0	0	295	0	0	167	0	167	25	145	165	0	335	1076
Total	0	1349	0	0	1349	2	1496	0	0	1498	0	0	630	0	630	113	560	669	0	1342	4819
Grand Total	0	2662	0	0	2662	3	2937	0	0	2940	0	0	1294	0	1294	259	1142	1393	0	2794	9690
Apprch %	0	100	0	0		0.1	99.9	0	0		0	0	100	0		9.3	40.9	49.9	0		
Total %	0	27.5	0	0	27.5	0	30.3	0	0	30.3	0	0	13.4	0	13.4	2.7	11.8	14.4	0	28.8	

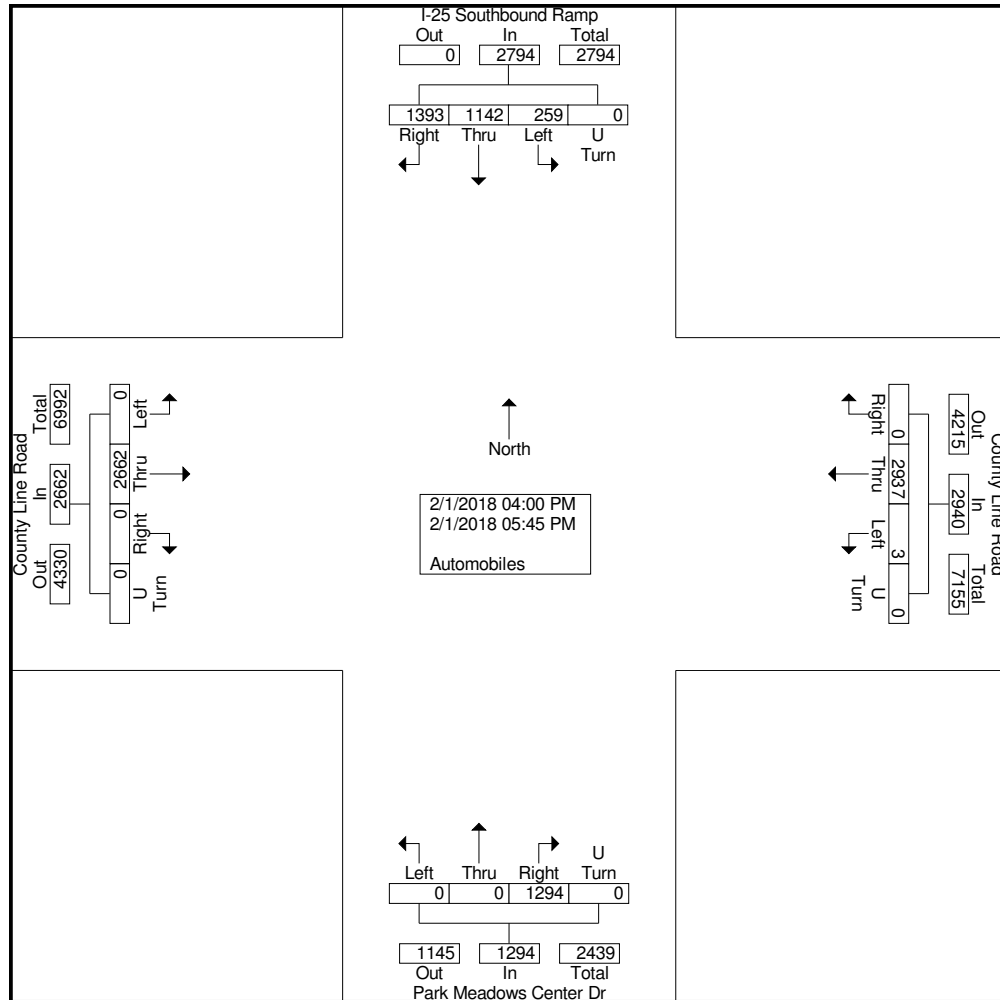


Ridgeview Data
Collection

Morrison, CO 80465

Douglas County, CO
Meridian International Business Center
PM Peak
County Line Rd and I-25 SB Off Ramp

File Name : County Line I-25 SB Off Ramp PM
Site Code : IPO 303
Start Date : 2/1/2018
Page No : 2



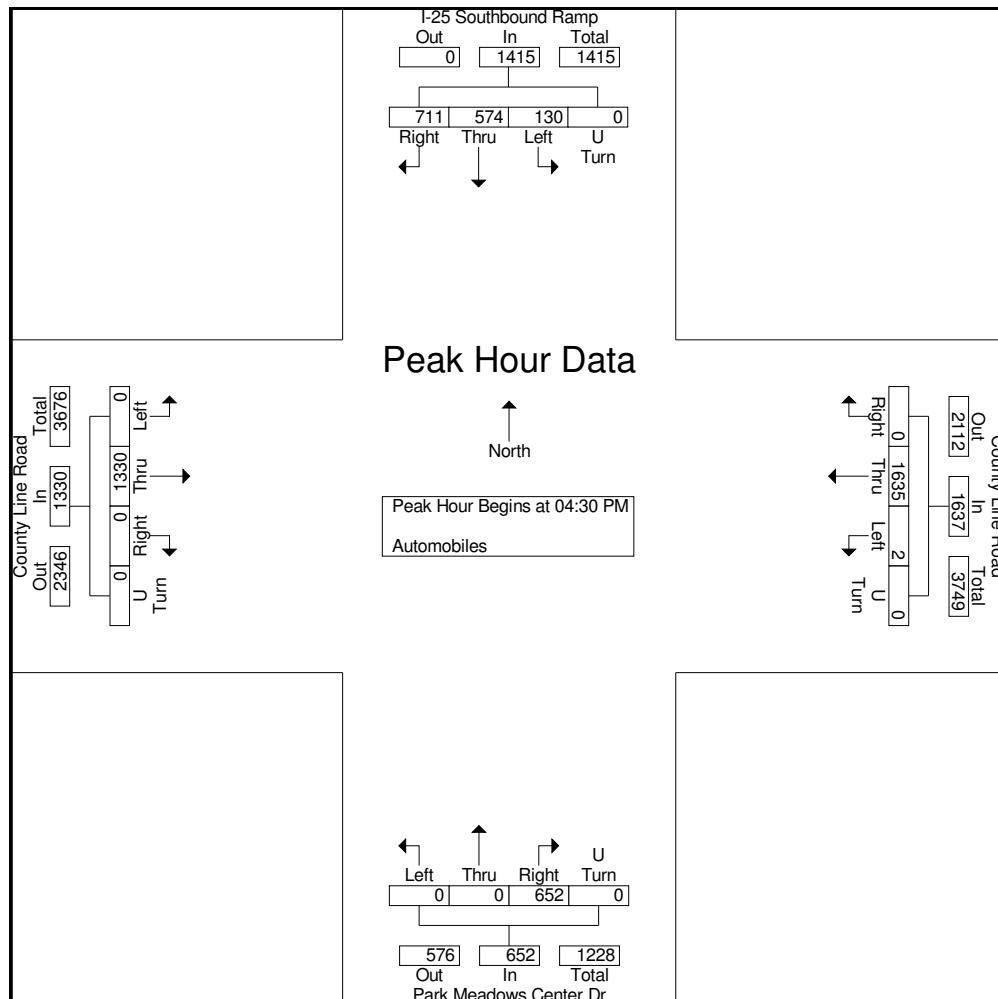


Morrison, CO 80465

Douglas County, CO
Meridian International Business Center
PM Peak
County Line Rd and I-25 SB Off Ramp

File Name : County Line I-25 SB Off Ramp PM
Site Code : IPO 303
Start Date : 2/1/2018
Page No : 3

	County Line Road Eastbound					County Line Road Westbound					Park Meadows Center Dr Northbound					I-25 Southbound Ramp Southbound					
Start Time	Left	Thru	Right	U Turn	App. Total	Left	Thru	Right	U Turn	App. Total	Left	Thru	Right	U Turn	App. Total	Left	Thru	Right	U Turn	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	0	309	0	0	309	0	411	0	0	411	0	0	167	0	167	27	142	190	0	359	1246
04:45 PM	0	299	0	0	299	1	338	0	0	339	0	0	161	0	161	42	164	180	0	386	1185
05:00 PM	0	387	0	0	387	0	476	0	0	476	0	0	171	0	171	30	122	183	0	335	1369
05:15 PM	0	335	0	0	335	1	410	0	0	411	0	0	153	0	153	31	146	158	0	335	1234
Total Volume	0	1330	0	0	1330	2	1635	0	0	1637	0	0	652	0	652	130	574	711	0	1415	5034
% App. Total	0	100	0	0		0.1	99.9	0	0		0	0	100	0		9.2	40.6	50.2	0		
PHF	.000	.859	.000	.000	.859	.500	.859	.000	.000	.860	.000	.000	.953	.000	.953	.774	.875	.936	.000	.916	.919





File Name : County Line I-25 SB On Ramps AM
Site Code : IPO 303
Start Date : 2/1/2018
Page No : 1

[illegible]

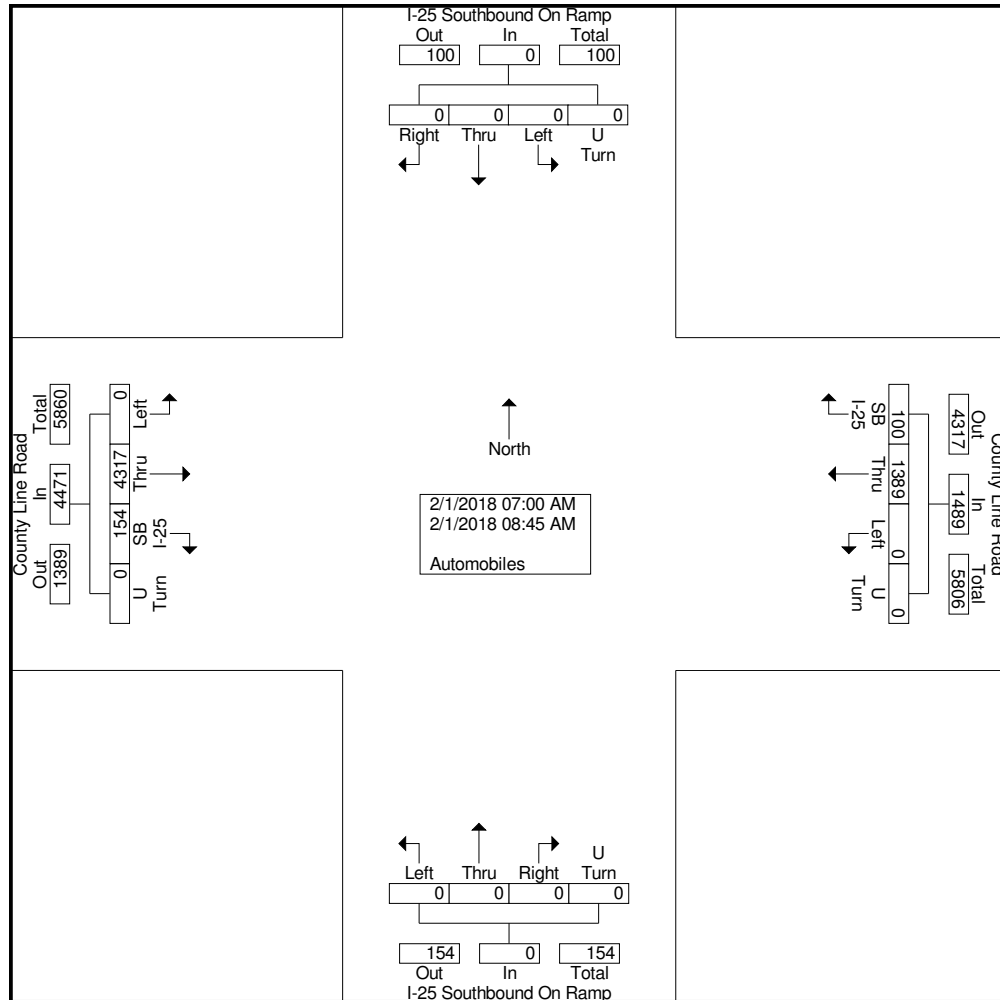


Ridgeview Data
Collection

Morrison, CO 80465

Douglas County, CO
Meridian International Business Center
AM Peak
County Line Rd and I-25 SB On Ramp

File Name : County Line I-25 SB On Ramps AM
Site Code : IPO 303
Start Date : 2/1/2018
Page No : 2



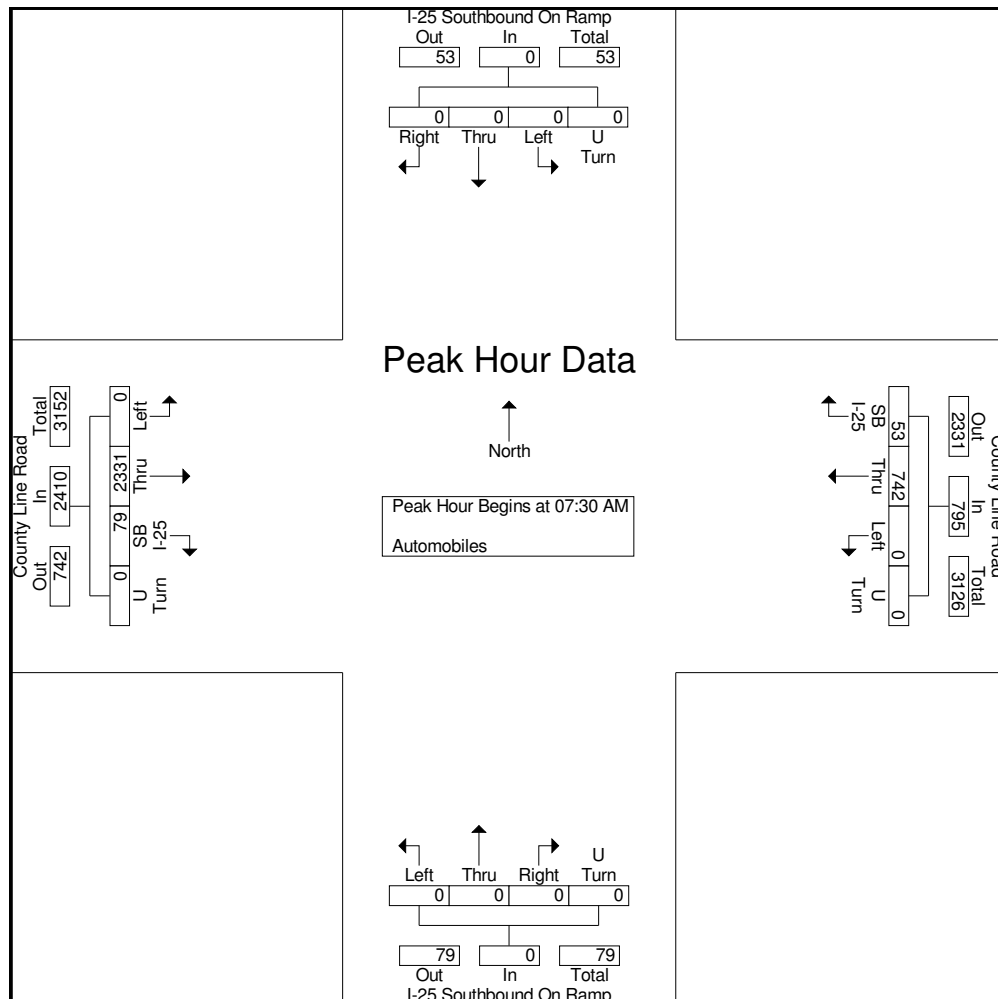


Morrison, CO 80465

Douglas County, CO
Meridian International Business Center
AM Peak
County Line Rd and I-25 SB On Ramp

File Name : County Line I-25 SB On Ramps AM
Site Code : IPO 303
Start Date : 2/1/2018
Page No : 3

	County Line Road Eastbound					County Line Road Westbound					I-25 Southbound On Ramp Northbound					I-25 Southbound On Ramp Southbound					
Start Time	Left	Thru	SB I-25	U Turn	App. Total	Left	Thru	SB I-25	U Turn	App. Total	Left	Thru	Right	U Turn	App. Total	Left	Thru	Right	U Turn	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	0	567	17	0	584	0	161	10	0	171	0	0	0	0	0	0	0	0	0	0	755
07:45 AM	0	583	21	0	604	0	229	10	0	239	0	0	0	0	0	0	0	0	0	0	843
08:00 AM	0	599	16	0	615	0	181	16	0	197	0	0	0	0	0	0	0	0	0	0	812
08:15 AM	0	582	25	0	607	0	171	17	0	188	0	0	0	0	0	0	0	0	0	0	795
Total Volume	0	2331	79	0	2410	0	742	53	0	795	0	0	0	0	0	0	0	0	0	0	3205
% App. Total	0	96.7	3.3	0		0	93.3	6.7	0		0	0	0	0	0	0	0	0	0	0	
PHF	.000	.973	.790	.000	.980	.000	.810	.779	.000	.832	.000	.000	.000	.000	.000	.000	.000	.000	.000	.000	.950





File Name : County Line I-25 SB On Ramps PM
Site Code : IPO 303
Start Date : 2/1/2018
Page No : 1

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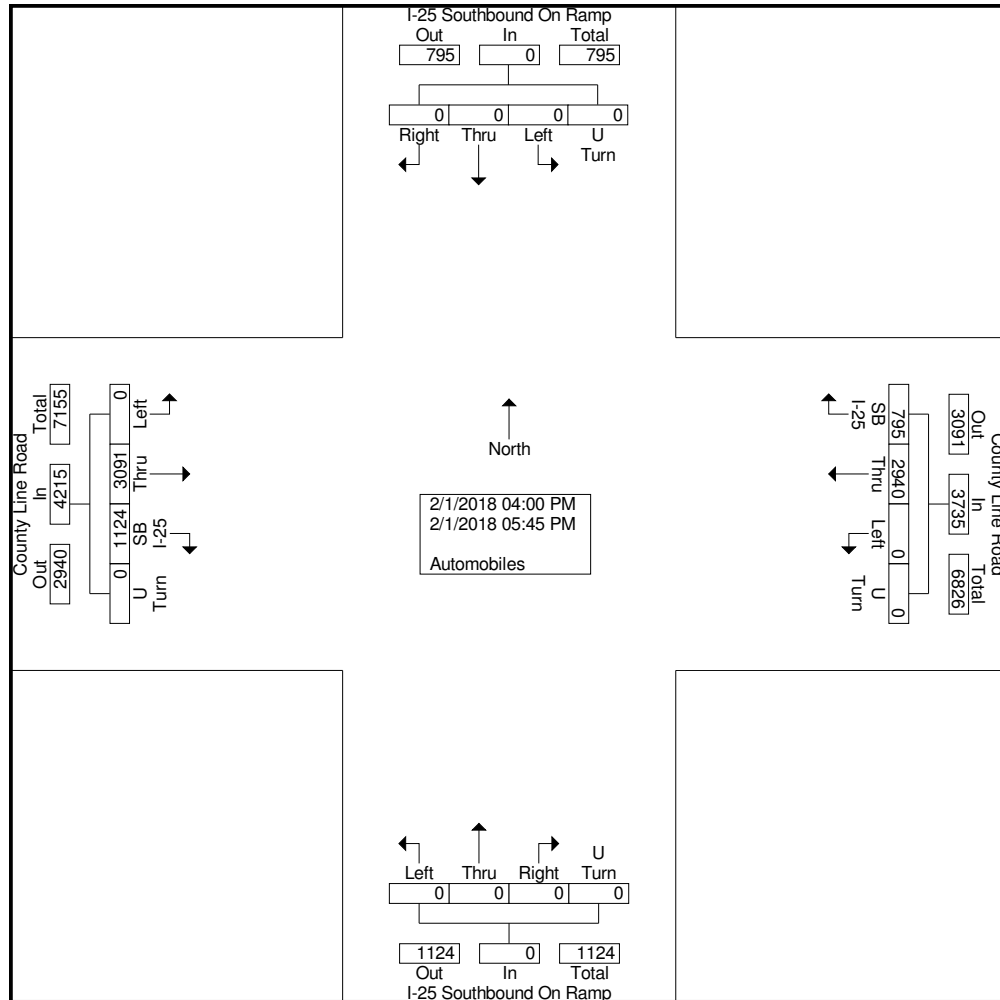


Ridgeview Data
Collection

Morrison, CO 80465

Douglas County, CO
Meridian International Business Center
PM Peak
County Line Rd and I-25 SB On Ramp

File Name : County Line I-25 SB On Ramps PM
Site Code : IPO 303
Start Date : 2/1/2018
Page No : 2



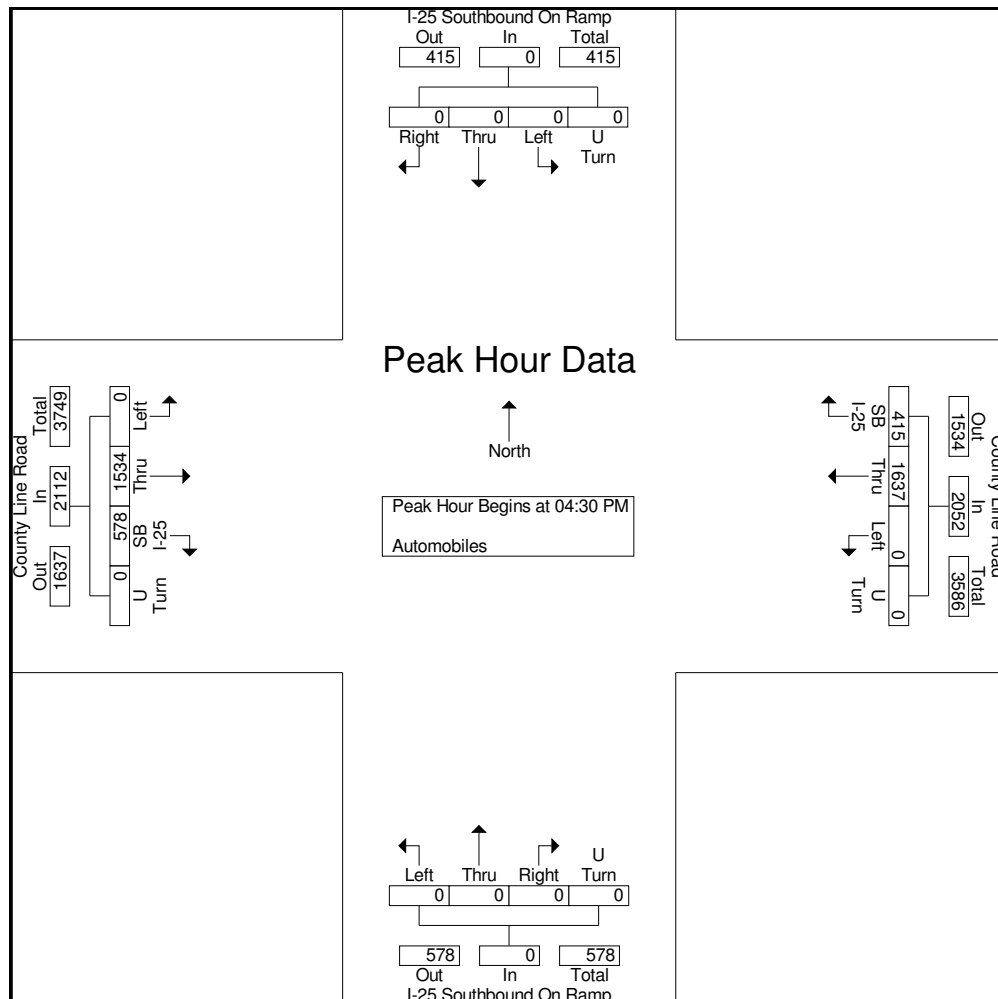


Morrison, CO 80465

Douglas County, CO
Meridian International Business Center
PM Peak
County Line Rd and I-25 SB On Ramp

File Name : County Line I-25 SB On Ramps PM
Site Code : IPO 303
Start Date : 2/1/2018
Page No : 3

	County Line Road Eastbound					County Line Road Westbound					I-25 Southbound On Ramp Northbound					I-25 Southbound On Ramp Southbound					
Start Time	Left	Thru	SB I-25	U Turn	App. Total	Left	Thru	SB I-25	U Turn	App. Total	Left	Thru	Right	U Turn	App. Total	Left	Thru	Right	U Turn	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	0	371	132	0	503	0	411	109	0	520	0	0	0	0	0	0	0	0	0	0	1023
04:45 PM	0	356	146	0	502	0	339	95	0	434	0	0	0	0	0	0	0	0	0	0	936
05:00 PM	0	429	159	0	588	0	476	119	0	595	0	0	0	0	0	0	0	0	0	0	1183
05:15 PM	0	378	141	0	519	0	411	92	0	503	0	0	0	0	0	0	0	0	0	0	1022
Total Volume	0	1534	578	0	2112	0	1637	415	0	2052	0	0	0	0	0	0	0	0	0	0	4164
% App. Total	0	72.6	27.4	0		0	79.8	20.2	0		0	0	0	0	0	0	0	0	0	0	
PHF	.000	.894	.909	.000	.898	.000	.860	.872	.000	.862	.000	.000	.000	.000	.000	.000	.000	.000	.000	.000	.880





Morrison, CO 80465

Douglas County, CO
 Meridian International Business Center
 AM Peak
 County Line Rd and I-25 NB Ramp

File Name : County Line I-25 NB Ramp AM
 Site Code : IPO 303
 Start Date : 2/1/2018
 Page No : 1

Groups Printed- Automobiles

Start Time	County Line Road Eastbound					County Line Road Westbound					I-25 Northbound Ramp Northbound					I-25 Northbound Ramp Southbound					Int. Total
	Left	Thru	NB I-25	U Turn	App. Total	Left	Thru	NB I-25	U Turn	App. Total	Left	Thru	Right	U Turn	App. Total	Left	Thru	Right	U Turn	App. Total	
07:00 AM	0	317	136	0	453	0	65	38	0	103	76	0	70	0	146	0	0	0	0	0	702
07:15 AM	0	385	142	0	527	0	70	34	0	104	61	0	83	0	144	0	0	0	0	0	775
07:30 AM	0	416	135	0	551	0	92	40	0	132	89	0	105	0	194	0	0	0	0	0	877
07:45 AM	0	458	92	0	550	0	101	37	0	138	113	0	112	0	225	0	0	0	0	0	913
Total	0	1576	505	0	2081	0	328	149	0	477	339	0	370	0	709	0	0	0	0	0	3267
08:00 AM	0	517	109	0	626	0	117	43	0	160	65	0	94	0	159	0	0	0	0	0	945
08:15 AM	0	444	134	0	578	0	96	55	0	151	95	0	72	0	167	0	0	0	0	0	896
08:30 AM	0	353	130	0	483	0	79	40	0	119	83	0	60	0	143	0	0	0	0	0	745
08:45 AM	0	399	104	0	503	0	114	29	0	143	80	0	78	0	158	0	0	0	0	0	804
Total	0	1713	477	0	2190	0	406	167	0	573	323	0	304	0	627	0	0	0	0	0	3390
Grand Total	0	3289	982	0	4271	0	734	316	0	1050	662	0	674	0	1336	0	0	0	0	0	6657
Approch %	0	77	23	0		0	69.9	30.1	0		49.6	0	50.4	0		0	0	0	0	0	
Total %	0	49.4	14.8	0	64.2	0	11	4.7	0	15.8	9.9	0	10.1	0	20.1	0	0	0	0	0	

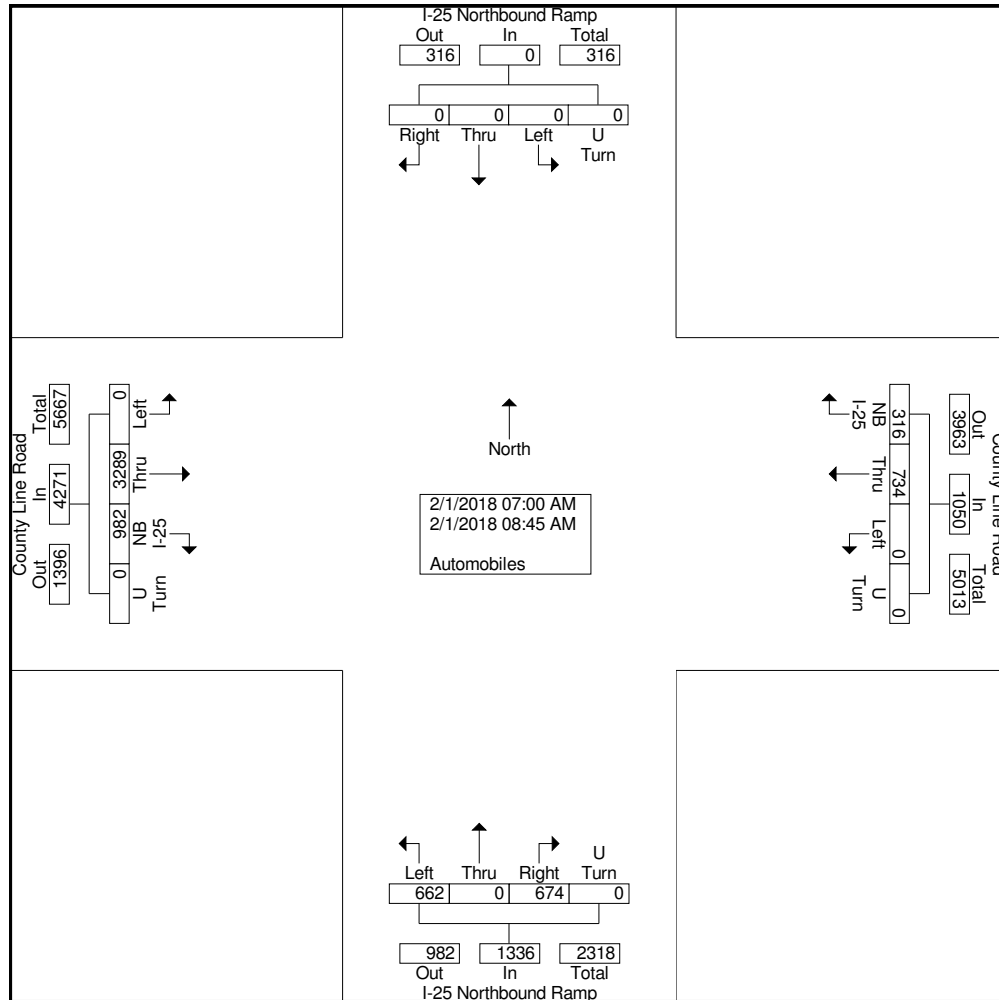


Ridgeview Data
Collection

Morrison, CO 80465

Douglas County, CO
Meridian International Business Center
AM Peak
County Line Rd and I-25 NB Ramp

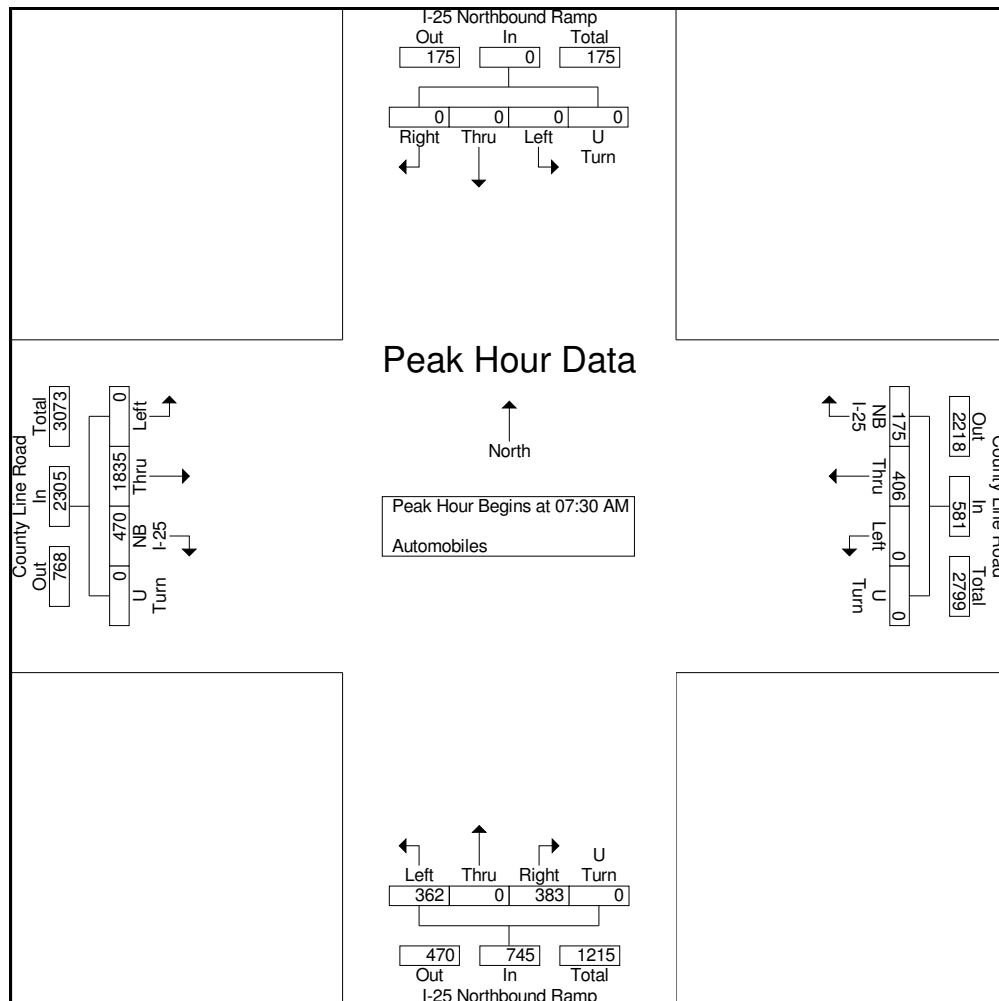
File Name : County Line I-25 NB Ramp AM
Site Code : IPO 303
Start Date : 2/1/2018
Page No : 2



Douglas County, CO
Meridian International Business Center
AM Peak
County Line Rd and I-25 NB Ramp

File Name : County Line I-25 NB Ramp AM
Site Code : IPO 303
Start Date : 2/1/2018
Page No : 3

	County Line Road Eastbound					County Line Road Westbound					I-25 Northbound Ramp Northbound					I-25 Northbound Ramp Southbound					
Start Time	Left	Thru	NB I-25	U Turn	App. Total	Left	Thru	NB I-25	U Turn	App. Total	Left	Thru	Right	U Turn	App. Total	Left	Thru	Right	U Turn	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	0	416	135	0	551	0	92	40	0	132	89	0	105	0	194	0	0	0	0	0	877
07:45 AM	0	458	92	0	550	0	101	37	0	138	113	0	112	0	225	0	0	0	0	0	913
08:00 AM	0	517	109	0	626	0	117	43	0	160	65	0	94	0	159	0	0	0	0	0	945
08:15 AM	0	444	134	0	578	0	96	55	0	151	95	0	72	0	167	0	0	0	0	0	896
Total Volume	0	1835	470	0	2305	0	406	175	0	581	362	0	383	0	745	0	0	0	0	0	3631
% App. Total	0	79.6	20.4	0		0	69.9	30.1	0		48.6	0	51.4	0		0	0	0	0	0	
PHF	.000	.887	.870	.000	.921	.000	.868	.795	.000	.908	.801	.000	.855	.000	.828	.000	.000	.000	.000	.000	.961





Morrison, CO 80465

Douglas County, CO
Meridian International Business Center
PM Peak
County Line Rd and I-25 NB Ramp

File Name : County Line I-25 NB Ramp PM
Site Code : IPO 303
Start Date : 2/1/2018
Page No : 1

Groups Printed- Automobiles

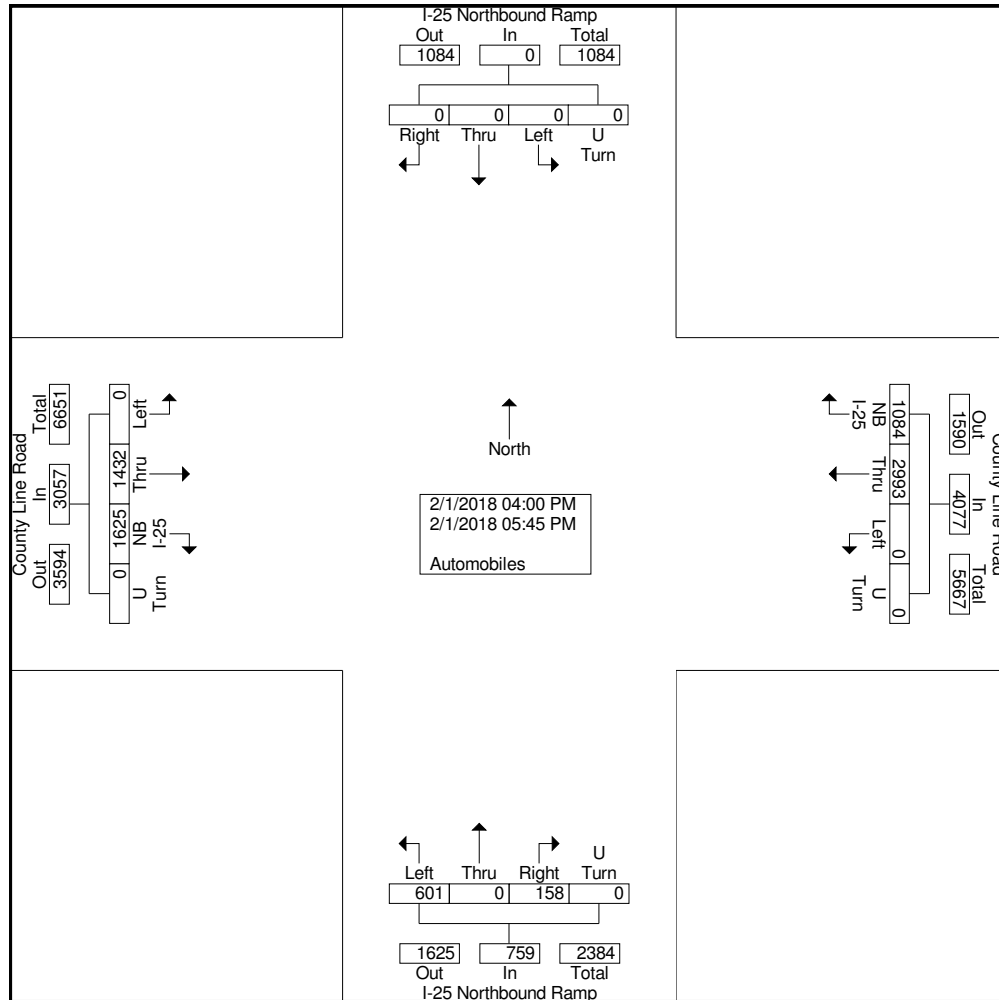
Start Time	County Line Road Eastbound					County Line Road Westbound					I-25 Northbound Ramp Northbound					I-25 Northbound Ramp Southbound					Int. Total
	Left	Thru	NB I-25	U Turn	App. Total	Left	Thru	NB I-25	U Turn	App. Total	Left	Thru	Right	U Turn	App. Total	Left	Thru	Right	U Turn	App. Total	
04:00 PM	0	163	261	0	424	0	318	186	0	504	64	0	19	0	83	0	0	0	0	0	1011
04:15 PM	0	186	220	0	406	0	355	131	0	486	69	0	33	0	102	0	0	0	0	0	994
04:30 PM	0	178	180	0	358	0	426	195	0	621	52	0	12	0	64	0	0	0	0	0	1043
04:45 PM	0	175	184	0	359	0	383	139	0	522	85	0	20	0	105	0	0	0	0	0	986
Total	0	702	845	0	1547	0	1482	651	0	2133	270	0	84	0	354	0	0	0	0	0	4034
05:00 PM	0	199	211	0	410	0	484	158	0	642	75	0	16	0	91	0	0	0	0	0	1143
05:15 PM	0	194	190	0	384	0	407	105	0	512	91	0	24	0	115	0	0	0	0	0	1011
05:30 PM	0	170	200	0	370	0	345	84	0	429	73	0	19	0	92	0	0	0	0	0	891
05:45 PM	0	167	179	0	346	0	275	86	0	361	92	0	15	0	107	0	0	0	0	0	814
Total	0	730	780	0	1510	0	1511	433	0	1944	331	0	74	0	405	0	0	0	0	0	3859
Grand Total	0	1432	1625	0	3057	0	2993	1084	0	4077	601	0	158	0	759	0	0	0	0	0	7893
Apprch %	0	46.8	53.2	0		0	73.4	26.6	0		79.2	0	20.8	0		0	0	0	0	0	
Total %	0	18.1	20.6	0	38.7	0	37.9	13.7	0	51.7	7.6	0	2	0	9.6	0	0	0	0	0	



Morrison, CO 80465

Douglas County, CO
Meridian International Business Center
PM Peak
County Line Rd and I-25 NB Ramp

File Name : County Line I-25 NB Ramp PM
Site Code : IPO 303
Start Date : 2/1/2018
Page No : 2



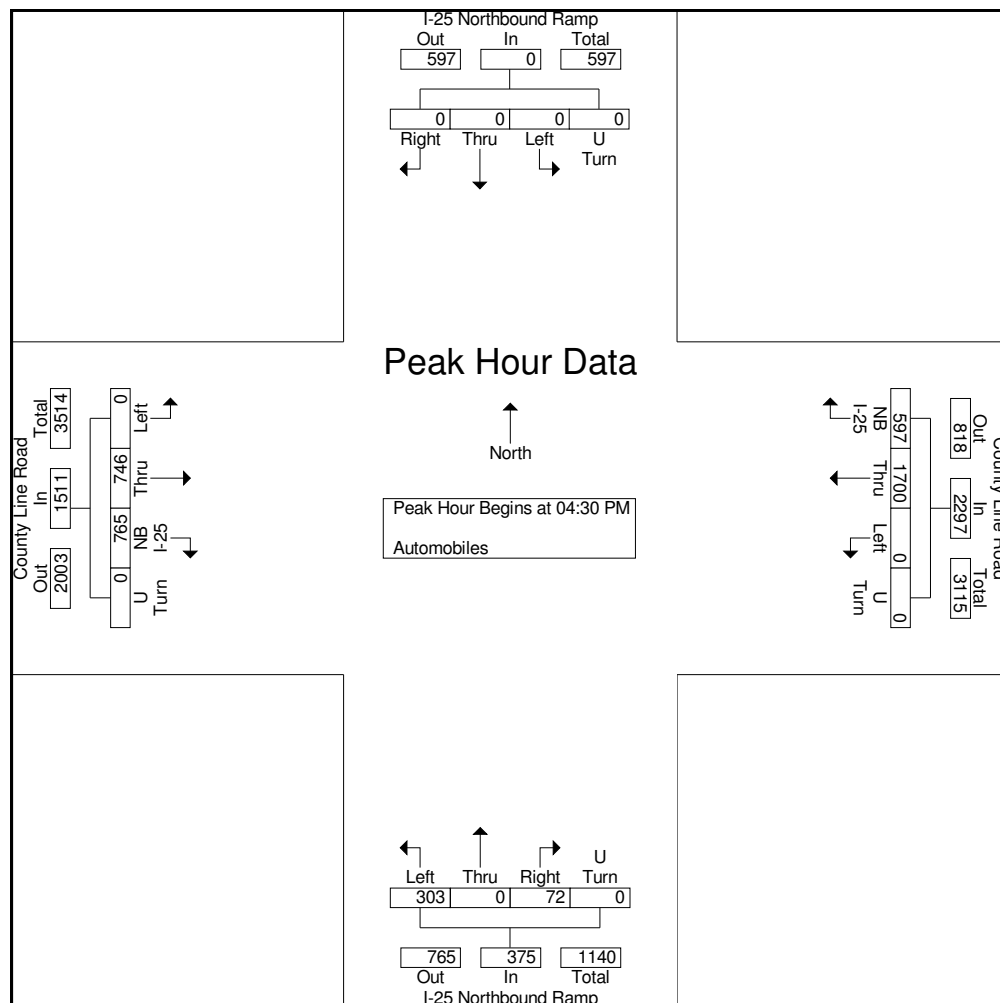


Morrison, CO 80465

Douglas County, CO
Meridian International Business Center
PM Peak
County Line Rd and I-25 NB Ramp

File Name : County Line I-25 NB Ramp PM
Site Code : IPO 303
Start Date : 2/1/2018
Page No : 3

	County Line Road Eastbound					County Line Road Westbound					I-25 Northbound Ramp Northbound					I-25 Northbound Ramp Southbound					
Start Time	Left	Thru	NB I-25	U Turn	App. Total	Left	Thru	NB I-25	U Turn	App. Total	Left	Thru	Right	U Turn	App. Total	Left	Thru	Right	U Turn	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	0	178	180	0	358	0	426	195	0	621	52	0	12	0	64	0	0	0	0	0	1043
04:45 PM	0	175	184	0	359	0	383	139	0	522	85	0	20	0	105	0	0	0	0	0	986
05:00 PM	0	199	211	0	410	0	484	158	0	642	75	0	16	0	91	0	0	0	0	0	1143
05:15 PM	0	194	190	0	384	0	407	105	0	512	91	0	24	0	115	0	0	0	0	0	1011
Total Volume	0	746	765	0	1511	0	1700	597	0	2297	303	0	72	0	375	0	0	0	0	0	4183
% App. Total	0	49.4	50.6	0		0	74	26	0		80.8	0	19.2	0		0	0	0	0	0	
PHF	.000	.937	.906	.000	.921	.000	.878	.765	.000	.894	.832	.000	.750	.000	.815	.000	.000	.000	.000	.000	.915





Ridgeview Data
Collection

Centennial, CO
Jones District Redevelopment
AM Peak
Mineral Ave Residential Access

File Name : Mineral Residential Access AM
Site Code : IPO 427
Start Date : 4/2/2019
Page No : 1

Groups Printed- Automobiles

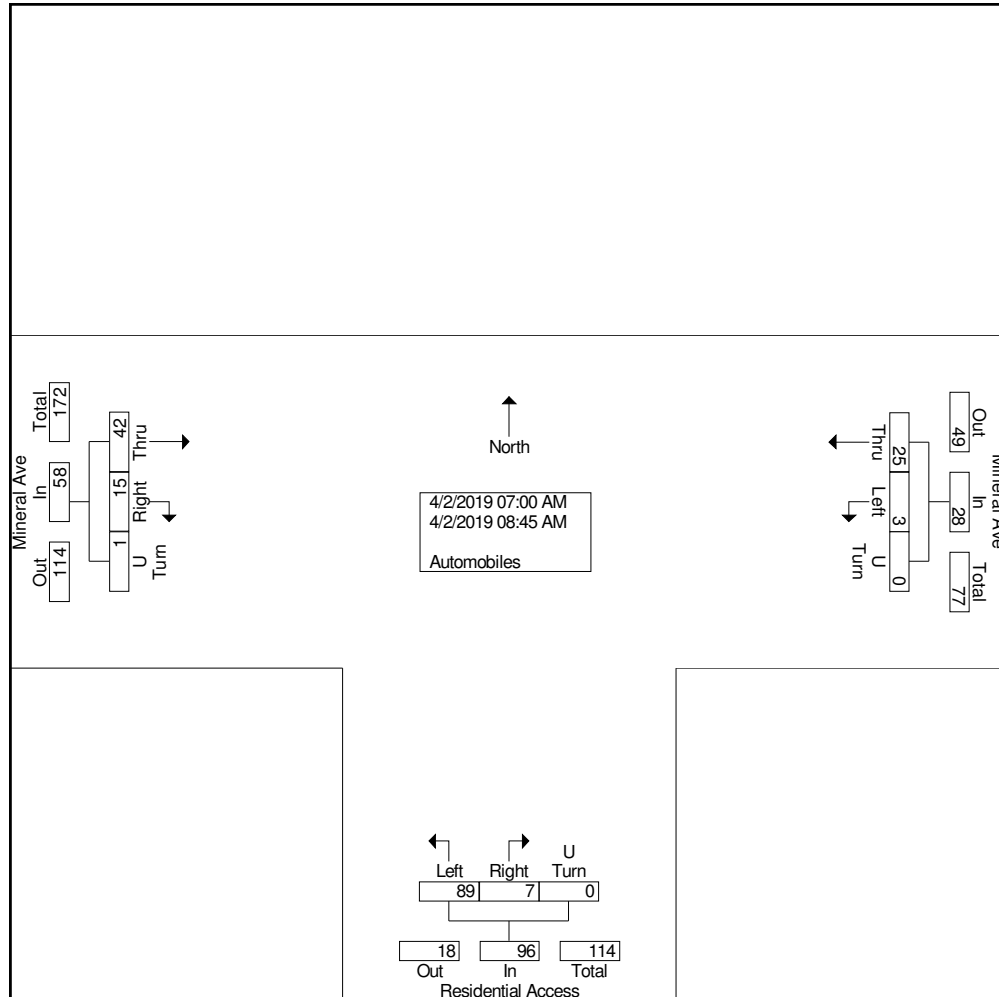
Start Time	Mineral Ave Eastbound				Mineral Ave Westbound				Residential Access Northbound				Int. Total
	Thru	Right	U Turn	App. Total	Left	Thru	U Turn	App. Total	Left	Right	U Turn	App. Total	
07:00 AM	2	1	0	3	0	1	0	1	16	0	0	16	20
07:15 AM	5	2	1	8	1	2	0	3	14	1	0	15	26
07:30 AM	7	1	0	8	0	5	0	5	10	3	0	13	26
07:45 AM	5	1	0	6	0	2	0	2	14	1	0	15	23
Total	19	5	1	25	1	10	0	11	54	5	0	59	95
08:00 AM	6	6	0	12	1	4	0	5	10	0	0	10	27
08:15 AM	4	3	0	7	1	3	0	4	8	1	0	9	20
08:30 AM	3	0	0	3	0	2	0	2	11	1	0	12	17
08:45 AM	10	1	0	11	0	6	0	6	6	0	0	6	23
Total	23	10	0	33	2	15	0	17	35	2	0	37	87
Grand Total	42	15	1	58	3	25	0	28	89	7	0	96	182
Apprch %	72.4	25.9	1.7		10.7	89.3	0		92.7	7.3	0		
Total %	23.1	8.2	0.5	31.9	1.6	13.7	0	15.4	48.9	3.8	0	52.7	



Ridgeview Data
Collection

Centennial, CO
Jones District Redevelopment
AM Peak
Mineral Ave Residential Access

File Name : Mineral Residential Access AM
Site Code : IPO 427
Start Date : 4/2/2019
Page No : 2



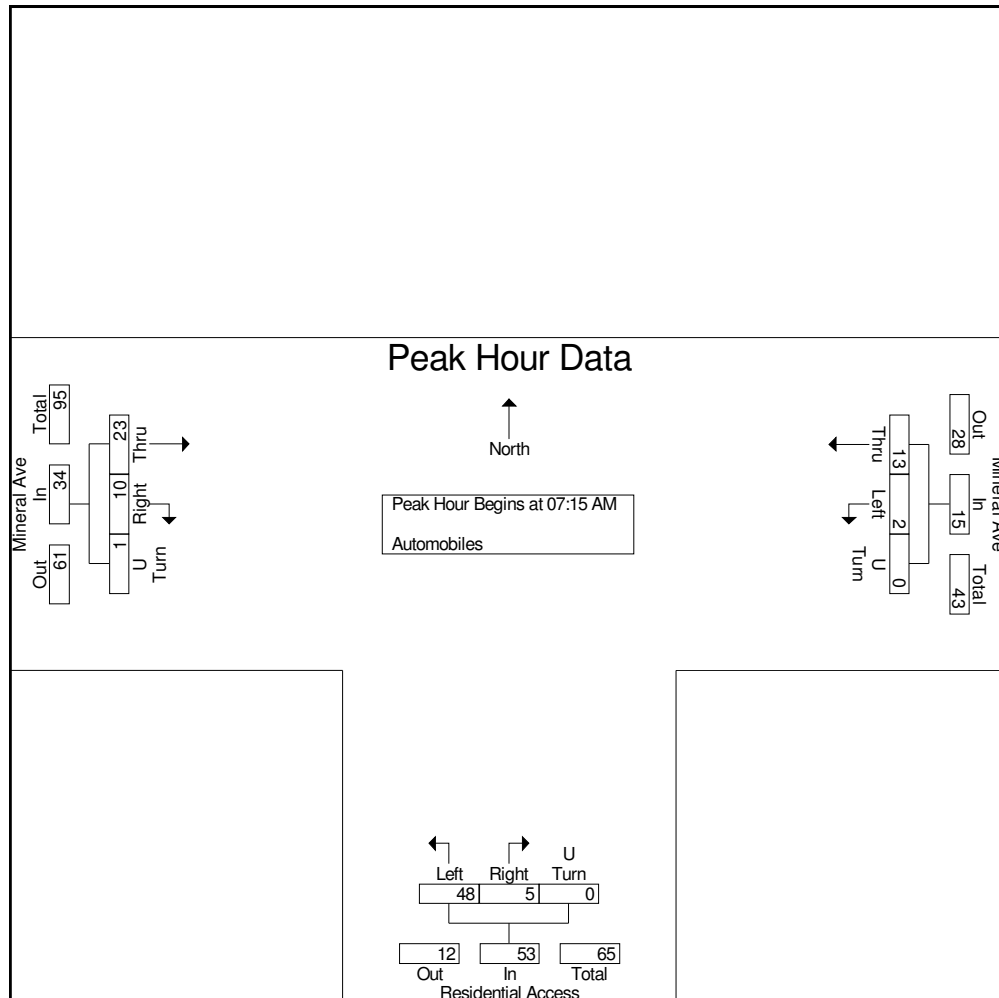


Ridgeview Data
Collection

Centennial, CO
Jones District Redevelopment
AM Peak
Mineral Ave Residential Access

File Name : Mineral Residential Access AM
Site Code : IPO 427
Start Date : 4/2/2019
Page No : 3

	Mineral Ave Eastbound				Mineral Ave Westbound				Residential Access Northbound				
Start Time	Thru	Right	U Turn	App. Total	Left	Thru	U Turn	App. Total	Left	Right	U Turn	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	5	2	1	8	1	2	0	3	14	1	0	15	26
07:30 AM	7	1	0	8	0	5	0	5	10	3	0	13	26
07:45 AM	5	1	0	6	0	2	0	2	14	1	0	15	23
08:00 AM	6	6	0	12	1	4	0	5	10	0	0	10	27
Total Volume	23	10	1	34	2	13	0	15	48	5	0	53	102
% App. Total	67.6	29.4	2.9		13.3	86.7	0		90.6	9.4	0		
PHF	.821	.417	.250	.708	.500	.650	.000	.750	.857	.417	.000	.883	.944





Ridgeview Data
Collection

Centennial, CO
Jones District Redevelopment
PM Peak
Mineral Ave Residential Access

File Name : Mineral Residential Access PM
Site Code : IPO 427
Start Date : 4/2/2019
Page No : 1

Groups Printed- Automobiles

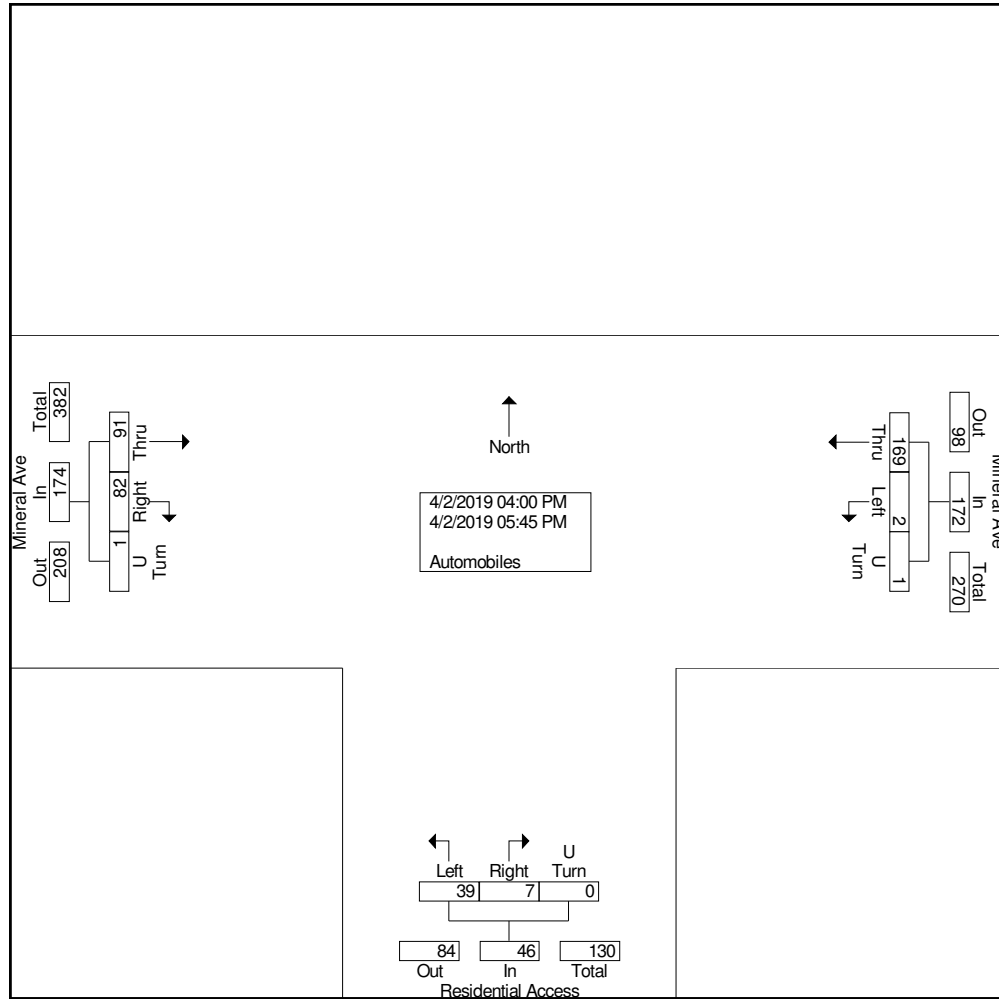
Start Time	Mineral Ave Eastbound				Mineral Ave Westbound				Residential Access Northbound				Int. Total
	Thru	Right	U Turn	App. Total	Left	Thru	U Turn	App. Total	Left	Right	U Turn	App. Total	
04:00 PM	15	10	0	25	1	25	0	26	1	1	0	2	53
04:15 PM	14	9	0	23	0	27	0	27	3	0	0	3	53
04:30 PM	9	12	0	21	1	22	1	24	3	3	0	6	51
04:45 PM	11	6	0	17	0	17	0	17	2	2	0	4	38
Total	49	37	0	86	2	91	1	94	9	6	0	15	195
05:00 PM	9	12	0	21	0	21	0	21	11	1	0	12	54
05:15 PM	13	12	0	25	0	23	0	23	6	0	0	6	54
05:30 PM	8	9	1	18	0	17	0	17	7	0	0	7	42
05:45 PM	12	12	0	24	0	17	0	17	6	0	0	6	47
Total	42	45	1	88	0	78	0	78	30	1	0	31	197
Grand Total	91	82	1	174	2	169	1	172	39	7	0	46	392
Apprch %	52.3	47.1	0.6		1.2	98.3	0.6		84.8	15.2	0		
Total %	23.2	20.9	0.3	44.4	0.5	43.1	0.3	43.9	9.9	1.8	0	11.7	



Ridgeview Data
Collection

Centennial, CO
Jones District Redevelopment
PM Peak
Mineral Ave Residential Access

File Name : Mineral Residential Access PM
Site Code : IPO 427
Start Date : 4/2/2019
Page No : 2



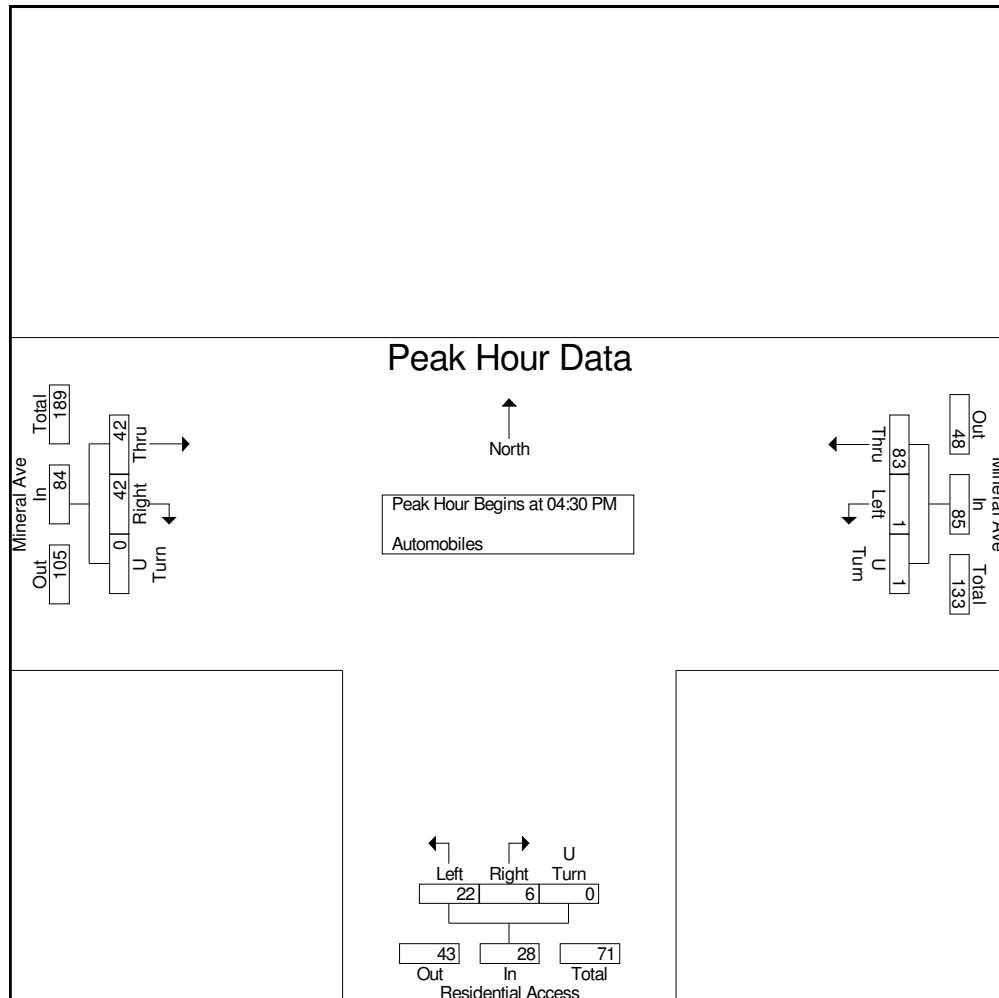


Ridgeview Data
Collection

Centennial, CO
Jones District Redevelopment
PM Peak
Mineral Ave Residential Access

File Name : Mineral Residential Access PM
Site Code : IPO 427
Start Date : 4/2/2019
Page No : 3

	Mineral Ave Eastbound				Mineral Ave Westbound				Residential Access Northbound				
Start Time	Thru	Right	U Turn	App. Total	Left	Thru	U Turn	App. Total	Left	Right	U Turn	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	12	0	21	1	22	1	24	3	3	0	6	51
04:45 PM	11	6	0	17	0	17	0	17	2	2	0	4	38
05:00 PM	9	12	0	21	0	21	0	21	11	1	0	12	54
05:15 PM	13	12	0	25	0	23	0	23	6	0	0	6	54
Total Volume	42	42	0	84	1	83	1	85	22	6	0	28	197
% App. Total	50	50	0		1.2	97.6	1.2		78.6	21.4	0		
PHF	.808	.875	.000	.840	.250	.902	.250	.885	.500	.500	.000	.583	.912



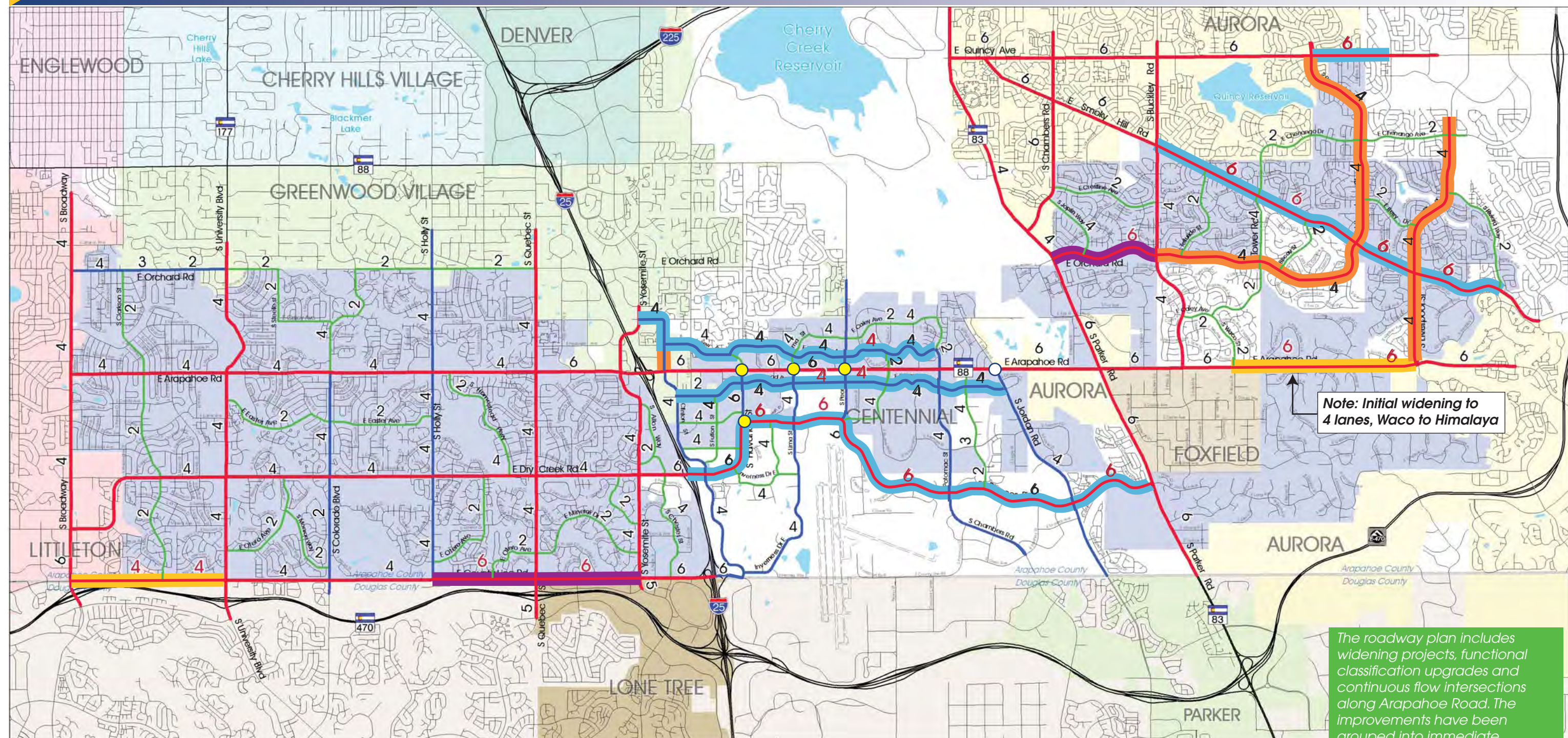
APPENDIX B

Centennial Traffic Projections and Master Plan Documents

Jones District Redevelopment Traffic Projections

Roadway	2008 Volume	2035 Projection	Growth Factor	Annual Growth
Dry Creek Rd W/O Yosemite St	19,800	24,500	1.24	0.79%
Dry Creek Rd E/O Yosemite St	25,600	37,700	1.47	1.44%
County Line Rd E/O Quebec St	32,600	43,500	1.33	1.07%
County Line Rd E/O Yosemite St	27,000	39,500	1.46	1.42%
Average				1.18%

Roadway	Project Assignment	Adjusted ADT Projection w/ Assignment	Adjusted Growth Factor	Adjusted Annual Growth
Dry Creek Rd W/O Yosemite St	3,000	21,500	1.09	0.31%
Dry Creek Rd E/O Yosemite St	9,600	28,100	1.10	0.35%
County Line Rd E/O Quebec St	4,500	39,000	1.20	0.67%
County Line Rd E/O Yosemite St	6,500	33,000	1.22	0.75%
Average				0.52%

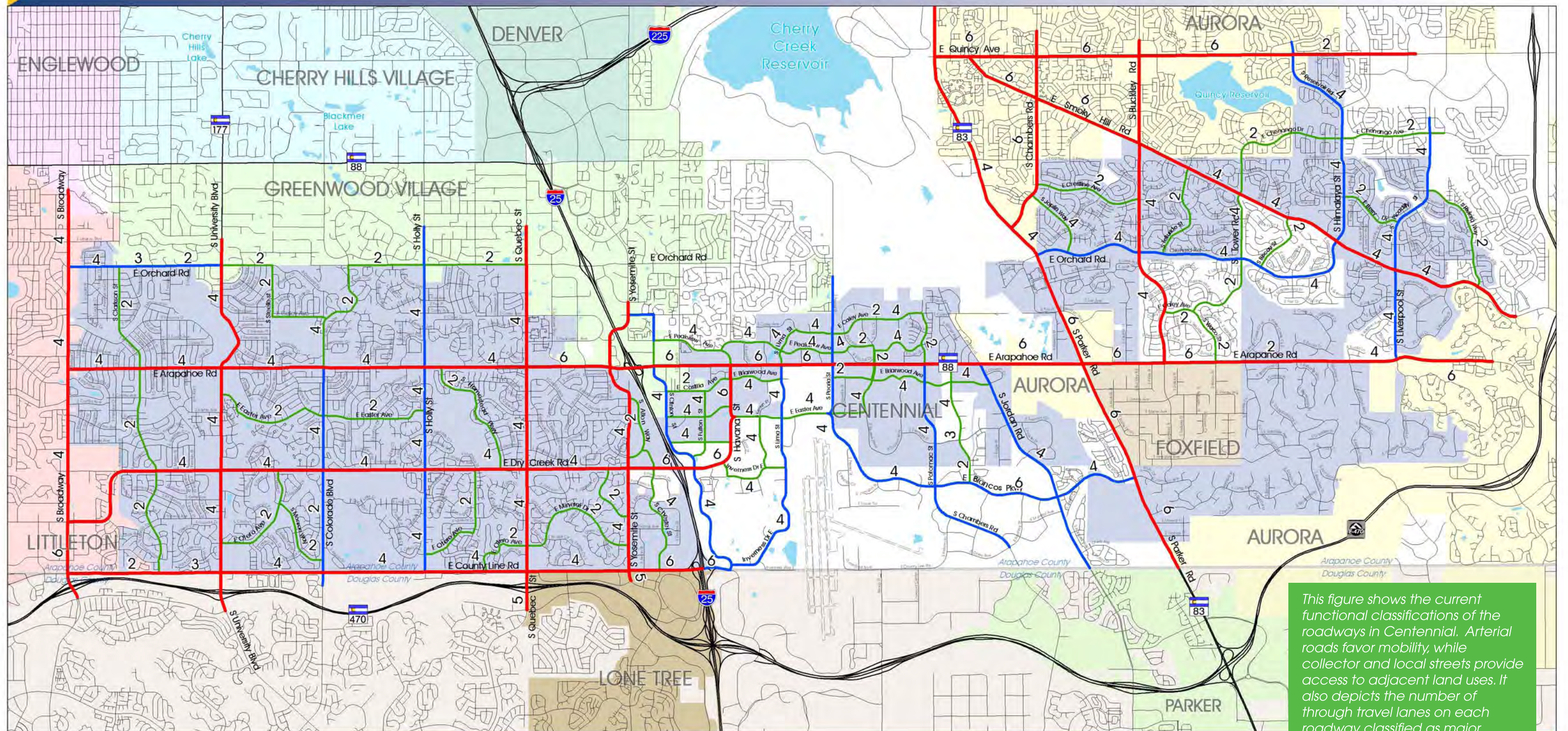


Note: Initial widening to 4 lanes, Waco to Himalaya

The roadway plan includes widening projects, functional classification upgrades and continuous flow intersections along Arapahoe Road. The improvements have been grouped into immediate, mid-term, and long-range needs.

LEGEND

- Change in Roadway Classification Only
- Immediate Needs
- Mid-Term Needs
- Long-Range Needs
- Roadway Widening
- Continuous Flow Intersection
- Other Intersection Improvement
- Major Arterial
- Minor Arterial
- Major Collector
- Local Streets
- Through Lanes
- City Limits
- Lakes

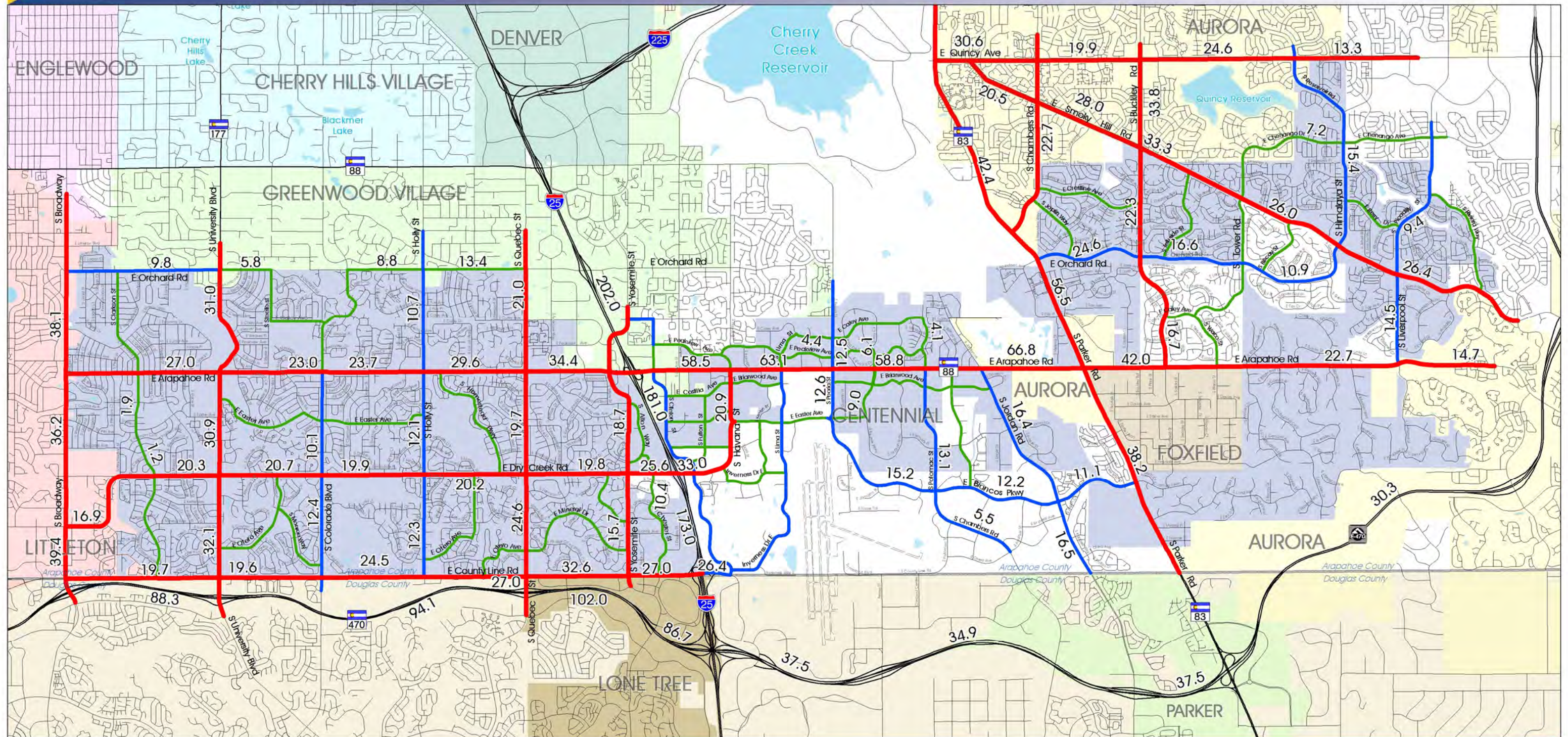


This figure shows the current functional classifications of the roadways in Centennial. Arterial roads favor mobility, while collector and local streets provide access to adjacent land uses. It also depicts the number of through travel lanes on each roadway classified as major collector or higher.

LEGEND

- Major Arterial
- Minor Arterial
- Major Collector
- Local Streets
- XX Through Lanes
- City Limits
- Lakes

Figure 9
Existing Traffic Volumes



LEGEND

XX.X 2008/2009 Daily Traffic Volumes
(In Thousands)

- Major Arterial
- Minor Arterial
- Major Collector
- Local Streets

- City Limits
- Lakes

APPENDIX C

Trip Generation Calculations

Project Jones District Redevelopment
 Subject Trip Generation for Mid-Rise Residential with 1st-Floor Commercial
 Designed by JRP Date April 24, 2019 Job No. 096833000
 Checked by _____ Sheet No. 1 of 1

TRIP GENERATION MANUAL TECHNIQUES

ITE Trip Generation Manual 10th Edition, Average Rate Equations

Land Use Code - Mid-Rise Residential with 1st-Floor Retail (231)

Independant Variable - Dwelling Units (X)

$$X = 1,500$$

T = Average Vehicle Trip Ends

Peak Hour of Adjacent Street Traffic, One Hour Between 7 and 9 a.m. (Series 200 Page 74)

		Directional Distribution: 28% ent. 72% exit.			
T = 0.30 * X		T =	450	Average Vehicle Trip Ends	
T = 0.30 *	1500.0	126	entering	324	exiting
		126	+	324	= 450

Peak Hour of Adjacent Street Traffic, One Hour Between 4 and 6 p.m. (Series 200 page 75)

		Directional Distribution: 70% ent. 30% exit.			
T = 0.36 * X		T =	540	Average Vehicle Trip Ends	
T = 0.36 *	1500.0	378	entering	162	exiting
		378	+	162	= 540

Weekday (Series 200 Page 73)

		Directional Distribution: 50% entering, 50% exiting			
Daily Weekday		T =	5160	Average Vehicle Trip Ends	
T = 3.44 * X		2580	entering	2580	exiting
T = 3.44*	1500.0	2580	+	2580	= 5160

Peak Hour of Generator, Saturday (Series 200 Page 79)

		Directional Distribution: 50% ent. 50% exit.			
Daily Weekday		T =	1290	Average Vehicle Trip Ends	
T = 0.86 * X		645	entering	645	exiting
T = 0.86 *	1500.0	645	+	645	= 1290

Project Jones District Redevelopment
 Subject Trip Generation for Hotel
 Designed by JRP Date April 24, 2019 Job No. 096833000
 Checked by _____ Sheet No. 1 of 1

TRIP GENERATION MANUAL TECHNIQUES

ITE Trip Generation Manual 10th Edition, Fitted Curve

Land Use Code -Hotel (310)

Independant Variable - Rooms (X)

$$X = 200$$

T = Average Vehicle Trip Ends

Peak Hour of Adjacent Street Traffic, One Hour Between 7 and 9 a.m. (Series 300 Page 3)

	Directional Distribution:	59% ent.	41% exit.
(T) = 0.50 (X) - 5.34	T = 95	Average Vehicle Trip Ends	
(T) = 0.50 * (200.0) - 5.34	56 entering	39	exiting
	56 + 39 = 95		

Peak Hour of Adjacent Street Traffic, One Hour Between 4 and 6 p.m. (Series 300 page 4)

	Directional Distribution:	51% ent.	49% exit.
T = 0.75 (X) - 26.02	T = 124	Average Vehicle Trip Ends	
T = 0.75 * 200 - 26.02	63 entering	61	exiting
	63 + 61 = 124		

Weekday (Series 300 Page 2)

Average Weekday	Directional Distribution:	50% entering, 50% exiting
(T) = 11.29 (X) - 426.97	T = 1832	Average Vehicle Trip Ends
(T) = 11.29 * (200.0) - 426.97	916 entering	916 exiting
	916 + 916 = 1832	

Project Jones District Redevelopment
 Subject Trip Generation for Office Building
 Designed by JRP Date April 24, 2019 Job No. 096833000
 Checked by _____ Sheet No. 1 of 1

TRIP GENERATION MANUAL TECHNIQUES

ITE Trip Generation Manual 10th Edition, Fitted Curve Equations

Land Use Code - General Office Building (710)

Independent Variable - 1000 Square Feet (X)

SF = 3,000,000

X = 3000.000

T = Average Vehicle Trip Ends

Peak Hour of Adjacent Street Traffic, One Hour Between 7 and 9 a.m. (700 Series Page 4)

	Directional Distribution:	86% ent.	14% exit.
T = 0.94 (X) + 26.49	T = 2846	Average Vehicle Trip Ends	
T = 0.94 * (3000.0) + 26.49	2448 entering	398 exiting	
	2448 + 398 = 2846		

Peak Hour of Adjacent Street Traffic, One Hour Between 4 and 6 p.m. (700 Series Page 5)

	Directional Distribution:	16% ent.	84% exit.
Ln(T) = 0.95 Ln(X) + 0.36	T = 2881	Average Vehicle Trip Ends	
Ln(T) = 0.95 * Ln(3000.0) + 0.36	461 entering	2420 exiting	
	461 + 2420 = 2881		

Weekday (700 Series Page 3)

Average Weekday	Directional Distribution:	50% entering, 50% exiting
Ln(T) = 0.97 Ln(X) + 2.50	T = 28744	Average Vehicle Trip Ends
Ln(T) = 0.97 * Ln(3000.0) + 2.50	14372 entering	14372 exiting
	14372 + 14372 = 28744	

Project Jones District Redevelopment
 Subject Trip Generation for Shopping Center
 Designed by JRP Date April 24, 2019 Job No. 096833000
 Checked by _____ Date _____ Sheet No. 1 of 1

TRIP GENERATION MANUAL TECHNIQUES

ITE Trip Generation Manual 10th Edition, Average Rate Equations

Land Use Code - Shopping Center (820)

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

Gross Leasable Area = **75,000** Square Feet

X = 75.000

T = Average Vehicle Trip Ends

Peak Hour of Adjacent Street Traffic, One Hour Between 7 and 9 a.m. (800 Series Page 139)

Average Weekday	Directional Distribution:	62% ent.	38% exit.
T = 0.94 * (X)	T = 71	Average Vehicle Trip Ends	
T = 0.94 * 75	44 entering	27	exiting
	44 + 27 = 71		

Peak Hour of Adjacent Street Traffic, One Hour Between 4 and 6 p.m. (800 Series page 140)

Average Weekday	Directional Distribution:	48% ent.	52% exit.
T = 3.81 * (X)	T = 286	Average Vehicle Trip Ends	
T = 3.81 * 75	137 entering	149	exiting
	137 + 149 = 286		

Weekday (800 Series page 138)

Average Weekday	Directional Distribution:	50% entering, 50% exiting
T = 37.75 * (X)	T = 2832	Average Vehicle Trip Ends
T = 37.75 * 75	1416 entering	1416 exiting
	1416 + 1416 = 2832	

Non Pass-By Trip Volumes (Per ITE Trip Generation Handbook, 3rd Edition September 2017-Page 190)

AM Peak Hour = 66% Non-Pass By	PM Peak Hour = 66% Non-Pass By
IN Out Total	
AM Peak 29 18 47	
PM Peak 90 98 189	
Daily 935 935 1870	PM Peak Hour Rate Applied to Daily

Pass-By Trip Volumes (Per ITE Trip Generation Handbook, 3rd Edition September 2017 -Page 190)

AM Peak Hour = 34% Pass By	PM Peak Hour = 34% Pass By
IN Out Total	
AM Peak 15 9 25	
PM Peak 47 51 97	
Daily 481 481 962	PM Peak Hour Rate Applied to Daily

Jones District Trip Generation Summary

Land Use	Vehicle Trips						
	Daily	Weekday AM Peak Hour			Weekday PM Peak Hour		
		In	Out	Total	In	Out	Total
Total Site Generated Trips	38,568	2,674	788	3,462	1,039	2,792	3,831
Net Trips after TOD Reduction (20%)	30,854	2,139	630	2,770	831	2,234	3,065
Net Trips after TOD and Internal Capture	28,556	2,074	565	2,640	728	2,131	2,859

Kim

Jones District Redevelopment
096833000

4/24/2019
1:50 PM
Planner Sheet

NCHRP 684 Internal Trip Capture Estimation Tool			
Project Name:		Organization:	Kimley-Horn and Associates, Inc.
Project Location:		Performed By:	
Scenario Description:		Date:	
Analysis Year:		Checked By:	
Analysis Period:	AM Street Peak Hour	Date:	

Table 1-A: Base Vehicle-Trip Generation Estimates (Single-Use Site Estimate)						
Land Use	Development Data (For Information Only)			Estimated Vehicle-Trips ³		
	ITE LUCs ¹	Quantity	Units	Total	Entering	Exiting
Office		3,000	1,000 Sq Ft	2,846	2,448	398
Retail		75	1,000 Sq Ft	71	44	27
Restaurant		-	1,000 Sq Ft	0	0	0
Cinema/Entertainment		-	Screen(s)	0	0	0
Residential		1,500	Dwelling Unit(s)	450	126	324
Hotel		200	Room(s)	95	56	39
All Other Land Uses ²		-	0	0	0	0
				3,462	2,674	788

Table 2-A: Mode Split and Vehicle Occupancy Estimates						
Land Use	Entering Trips			Exiting Trips		
	Veh. Occ. ⁴	% Transit	% Non-Motorized	Veh. Occ. ⁴	% Transit	% Non-Motorized
Office	1.00	0%	0%	1.00	0%	0%
Retail	1.00	0%	0%	1.00	0%	0%
Restaurant	1.00	0%	0%	1.00	0%	0%
Cinema/Entertainment	1.00	0%	0%	1.00	0%	0%
Residential	1.00	0%	0%	1.00	0%	0%
Hotel	1.00	0%	0%	1.00	0%	0%
All Other Land Uses ²	1.00	0%	0%	1.00	0%	0%

Table 3-A: Average Land Use Interchange Distances (Feet Walking Distance)						
Origin (From)	Destination (To)					
	Office	Retail	Restaurant	Cinema/Entertainment	Residential	Hotel
Office						
Retail						
Restaurant						
Cinema/Entertainment						
Residential						
Hotel						

Table 4-A: Internal Person-Trip Origin-Destination Matrix*						
Origin (From)	Destination (To)					
	Office	Retail	Restaurant	Cinema/Entertainment	Residential	Hotel
Office		14	0	0	0	0
Retail	8		0	0	3	0
Restaurant	0	0		0	0	0
Cinema/Entertainment	0	0	0		0	0
Residential	6	3	0	0		0
Hotel	29	2	0	0	0	

Table 5-A: Computations Summary			
	Total	Entering	Exiting
All Person-Trips	3,462	2,674	788
Internal Capture Percentage	4%	2%	8%
External Vehicle-Trips ⁵	3,332	2,609	723
External Transit-Trips ⁶	0	0	0
External Non-Motorized Trips ⁶	0	0	0

Table 6-A: Internal Trip Capture Percentages by Land Use		
Land Use	Entering Trips	Exiting Trips
Office	2%	4%
Retail	43%	41%
Restaurant	N/A	N/A
Cinema/Entertainment	N/A	N/A
Residential	2%	3%
Hotel	0%	79%

¹Land Use Codes (LUCs) from *Trip Generation Manual*, published by the Institute of Transportation Engineers.

²Total estimate for all other land uses at mixed-use development site is not subject to internal trip capture computations in this estimator.

³Enter trips assuming no transit or non-motorized trips (as assumed in ITE *Trip Generation Manual*).

⁴Enter vehicle occupancy assumed in Table 1-A vehicle trips. If vehicle occupancy changes for proposed mixed-use project, manual adjustments must be made to Tables 5-A, 9-A (O and D). Enter transit, non-motorized percentages that will result with proposed mixed-use project complete.

⁵Vehicle-trips computed using the mode split and vehicle occupancy values provided in Table 2-A.

⁶Person-Trips

*Indicates computation that has been rounded to the nearest whole number.

Estimation Tool Developed by the Texas A&M Transportation Institute - Version 2013.1

Project Name:	0
Analysis Period:	AM Street Peak Hour

Table 7-A: Conversion of Vehicle-Trip Ends to Person-Trip Ends						
Land Use	Table 7-A (D): Entering Trips			Table 7-A (O): Exiting Trips		
	Veh. Occ.	Vehicle-Trips	Person-Trips*	Veh. Occ.	Vehicle-Trips	Person-Trips*
Office	1.00	2448	2448	1.00	398.49	398
Retail	1.00	44	44	1.00	27	27
Restaurant	1.00	0	0	1.00	0	0
Cinema/Entertainment	1.00	0	0	1.00	0	0
Residential	1.00	126	126	1.00	324	324
Hotel	1.00	56	56	1.00	38.66	39

Table 8-A (O): Internal Person-Trip Origin-Destination Matrix (Computed at Origin)						
Origin (From)	Destination (To)					
	Office	Retail	Restaurant	Cinema/Entertainment	Residential	Hotel
Office		111	251	0	4	0
Retail	8		4	0	4	0
Restaurant	0	0		0	0	0
Cinema/Entertainment	0	0	0		0	0
Residential	6	3	65	0		0
Hotel	29	5	4	0	0	

Table 8-A (D): Internal Person-Trip Origin-Destination Matrix (Computed at Destination)						
Origin (From)	Destination (To)					
	Office	Retail	Restaurant	Cinema/Entertainment	Residential	Hotel
Office		14	0	0	0	0
Retail	98		0	0	3	0
Restaurant	343	4		0	6	2
Cinema/Entertainment	0	0	0		0	0
Residential	73	7	0	0		0
Hotel	73	2	0	0	0	

Table 9-A (D): Internal and External Trips Summary (Entering Trips)						
Destination Land Use	Person-Trip Estimates			External Trips by Mode*		
	Internal	External	Total	Vehicles ¹	Transit ²	Non-Motorized ²
Office	43	2405	2448	2405	0	0
Retail	19	25	44	25	0	0
Restaurant	0	0	0	0	0	0
Cinema/Entertainment	0	0	0	0	0	0
Residential	3	123	126	123	0	0
Hotel	0	56	56	56	0	0
All Other Land Uses ³	0	0	0	0	0	0

Table 9-A (O): Internal and External Trips Summary (Exiting Trips)						
Origin Land Use	Person-Trip Estimates			External Trips by Mode*		
	Internal	External	Total	Vehicles ¹	Transit ²	Non-Motorized ²
Office	14	384	398	384	0	0
Retail	11	16	27	16	0	0
Restaurant	0	0	0	0	0	0
Cinema/Entertainment	0	0	0	0	0	0
Residential	9	315	324	315	0	0
Hotel	31	8	39	8	0	0
All Other Land Uses ³	0	0	0	0	0	0

¹Vehicle-trips computed using the mode split and vehicle occupancy values provided in Table 2-A

²Person-Trips

³Total estimate for all other land uses at mixed-use development site is not subject to internal trip capture computations in this estimator

*Indicates computation that has been rounded to the nearest whole number.

NCHRP 684 Internal Trip Capture Estimation Tool			
Project Name:		Organization:	Kimley-Horn and Associates, Inc.
Project Location:		Performed By:	
Scenario Description:		Date:	
Analysis Year:		Checked By:	
Analysis Period:	PM Street Peak Hour	Date:	

Land Use	Development Data (For Information Only)			Estimated Vehicle-Trips ³		
	ITE LUCs ¹	Quantity	Units	Total	Entering	Exiting
Office		3,000	1,000 Sq Ft	2,881	461	2,420
Retail		75	1,000 Sq Ft	286	137	149
Restaurant		-	1,000 Sq Ft	0	0	0
Cinema/Entertainment		-	Screen(s)	0	0	0
Residential		1,500	Dwelling Unit(s)	540	378	162
Hotel		200	Room(s)	124	63	61
All Other Land Uses ²		-	0	0	0	0
				3,831	1,039	2,792

Land Use	Entering Trips			Exiting Trips		
	Veh. Occ. ⁴	% Transit	% Non-Motorized	Veh. Occ. ⁴	% Transit	% Non-Motorized
Office	1.00	0%	0%	1.00	0%	0%
Retail	1.00	0%	0%	1.00	0%	0%
Restaurant	1.00	0%	0%	1.00	0%	0%
Cinema/Entertainment	1.00	0%	0%	1.00	0%	0%
Residential	1.00	0%	0%	1.00	0%	0%
Hotel	1.00	0%	0%	1.00	0%	0%
All Other Land Uses ²	1.00	0%	0%	1.00	0%	0%

Origin (From)	Destination (To)					
	Office	Retail	Restaurant	Cinema/Entertainment	Residential	Hotel
Office						
Retail						
Restaurant						
Cinema/Entertainment						
Residential						
Hotel						

Origin (From)	Destination (To)					
	Office	Retail	Restaurant	Cinema/Entertainment	Residential	Hotel
Office		11	0	0	15	0
Retail	3		0	0	39	7
Restaurant	0	0		0	0	0
Cinema/Entertainment	0	0	0		0	0
Residential	6	14	0	0		5
Hotel	0	3	0	0	0	

	Total	Entering	Exiting
All Person-Trips	3,831	1,039	2,792
Internal Capture Percentage	5%	10%	4%
External Vehicle-Trips ⁵	3,625	936	2,689
External Transit-Trips ⁶	0	0	0
External Non-Motorized Trips ⁶	0	0	0

Land Use	Entering Trips	Exiting Trips
Office	2%	1%
Retail	20%	33%
Restaurant	N/A	N/A
Cinema/Entertainment	N/A	N/A
Residential	14%	15%
Hotel	19%	5%

¹Land Use Codes (LUCs) from *Trip Generation Manual*, published by the Institute of Transportation Engineers.

²Total estimate for all other land uses at mixed-use development site is not subject to internal trip capture computations in this estimator.

³Enter trips assuming no transit or non-motorized trips (as assumed in ITE *Trip Generation Manual*).

⁴Enter vehicle occupancy assumed in Table 1-P vehicle trips. If vehicle occupancy changes for proposed mixed-use project, manual adjustments must be made.

⁵Vehicle-trips computed using the mode split and vehicle occupancy values provided in Table 2-P.

⁶Person-Trips

*Indicates computation that has been rounded to the nearest whole number.

Estimation Tool Developed by the Texas A&M Transportation Institute - Version 2013.1

Project Name:	0
Analysis Period:	PM Street Peak Hour

Table 7-P: Conversion of Vehicle-Trip Ends to Person-Trip Ends						
Land Use	Table 7-P (D): Entering Trips			Table 7-P (O): Exiting Trips		
	Veh. Occ.	Vehicle-Trips	Person-Trips*	Veh. Occ.	Vehicle-Trips	Person-Trips*
Office	1.00	461	461	1.00	2420.45078	2420
Retail	1.00	137	137	1.00	149	149
Restaurant	1.00	0	0	1.00	0	0
Cinema/Entertainment	1.00	0	0	1.00	0	0
Residential	1.00	378	378	1.00	162	162
Hotel	1.00	63	63	1.00	60.98	61

Table 8-P (O): Internal Person-Trip Origin-Destination Matrix (Computed at Origin)						
Origin (From)	Destination (To)					
	Office	Retail	Restaurant	Cinema/Entertainment	Residential	Hotel
Office		484	97	0	48	0
Retail	3		43	6	39	7
Restaurant	0	0		0	0	0
Cinema/Entertainment	0	0	0		0	0
Residential	6	68	34	0		5
Hotel	0	10	41	0	1	

Table 8-P (D): Internal Person-Trip Origin-Destination Matrix (Computed at Destination)						
Origin (From)	Destination (To)					
	Office	Retail	Restaurant	Cinema/Entertainment	Residential	Hotel
Office		11	0	0	15	0
Retail	143		0	0	174	11
Restaurant	138	69		0	60	45
Cinema/Entertainment	28	5	0		15	1
Residential	263	14	0	0		8
Hotel	0	3	0	0	0	

Table 9-P (D): Internal and External Trips Summary (Entering Trips)						
Destination Land Use	Person-Trip Estimates			External Trips by Mode*		
	Internal	External	Total	Vehicles ¹	Transit ²	Non-Motorized ²
Office	9	452	461	452	0	0
Retail	28	109	137	109	0	0
Restaurant	0	0	0	0	0	0
Cinema/Entertainment	0	0	0	0	0	0
Residential	54	324	378	324	0	0
Hotel	12	51	63	51	0	0
All Other Land Uses ³	0	0	0	0	0	0

Table 9-P (O): Internal and External Trips Summary (Exiting Trips)						
Origin Land Use	Person-Trip Estimates			External Trips by Mode*		
	Internal	External	Total	Vehicles ¹	Transit ²	Non-Motorized ²
Office	26	2394	2420	2394	0	0
Retail	49	100	149	100	0	0
Restaurant	0	0	0	0	0	0
Cinema/Entertainment	0	0	0	0	0	0
Residential	25	137	162	137	0	0
Hotel	3	58	61	58	0	0
All Other Land Uses ³	0	0	0	0	0	0

¹Vehicle-trips computed using the mode split and vehicle occupancy values provided in Table 2-P

²Person-Trips

³Total estimate for all other land uses at mixed-use development site is not subject to internal trip capture computations in this estimator

*Indicates computation that has been rounded to the nearest whole number.

APPENDIX D

Intersection Analysis Worksheets

HCM 6th Signalized Intersection Summary

2019 Existing AM.syn

1: Yosemite Street & Dry Creek Road

04/24/2019

												
Movement	EBL	EBT	EBR	WBL	WBT	WBR	NBL	NBT	NBR	SBL	SBT	SBR
Lane Configurations												
Traffic Volume (veh/h)	311	1109	135	193	476	129	78	687	211	142	238	48
Future Volume (veh/h)	311	1109	135	193	476	129	78	687	211	142	238	48
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	404	1232	165	244	626	155	104	818	0	203	294	64
Peak Hour Factor	0.77	0.90	0.82	0.79	0.76	0.83	0.75	0.84	0.78	0.70	0.81	0.75
Percent Heavy Veh, %	2	2	2	2	2	2	2	2	2	2	2	2
Cap, veh/h	546	1317	176	267	1299	579	361	844		222	992	442
Arrive On Green	0.16	0.42	0.42	0.21	0.73	0.73	0.05	0.24	0.00	0.09	0.28	0.28
Sat Flow, veh/h	1781	3151	420	1781	3554	1585	1781	3554	1585	1781	3554	1585
Grp Volume(v), veh/h	404	692	705	244	626	155	104	818	0	203	294	64
Grp Sat Flow(s),veh/h/ln	1781	1777	1795	1781	1777	1585	1781	1777	1585	1781	1777	1585
Q Serve(g_s), s	16.1	44.6	45.2	10.7	8.8	3.9	5.3	27.4	0.0	10.2	7.8	3.6
Cycle Q Clear(g_c), s	16.1	44.6	45.2	10.7	8.8	3.9	5.3	27.4	0.0	10.2	7.8	3.6
Prop In Lane	1.00		0.23	1.00		1.00	1.00		1.00	1.00		1.00
Lane Grp Cap(c), veh/h	546	742	750	267	1299	579	361	844		222	992	442
V/C Ratio(X)	0.74	0.93	0.94	0.91	0.48	0.27	0.29	0.97		0.91	0.30	0.14
Avail Cap(c_a), veh/h	700	742	750	291	1299	579	361	844		222	992	442
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	0.98	0.98	0.98	1.00	1.00	0.00	1.00	1.00	1.00
Uniform Delay (d), s/veh	17.5	33.3	33.5	24.8	11.4	10.8	32.8	45.3	0.0	33.2	34.0	32.5
Incr Delay (d2), s/veh	3.1	20.1	21.1	29.7	1.3	1.1	0.4	24.3	0.0	37.6	0.8	0.7
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	6.9	22.9	23.6	5.9	2.8	1.4	2.4	14.8	0.0	6.7	3.5	1.5
Unsig. Movement Delay, s/veh												
LnGrp Delay(d),s/veh	20.5	53.5	54.5	54.4	12.7	11.9	33.2	69.7	0.0	70.8	34.8	33.2
LnGrp LOS	C	D	D	D	B	B	C	E		E	C	C
Approach Vol, veh/h	1801			1025				922		A		561
Approach Delay, s/veh	46.5			22.5				65.5				47.6
Approach LOS	D			C				E				D
Timer - Assigned Phs	1	2	3	4	5	6	7	8				
Phs Duration (G+Y+Rc), s	15.0	33.0	17.4	54.6	10.0	38.0	23.6	48.4				
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	10.5	28.5	14.5	48.5	5.5	33.5	29.5	33.5				
Max Q Clear Time (g_c+I1), s	12.2	29.4	12.7	47.2	7.3	9.8	18.1	10.8				
Green Ext Time (p_c), s	0.0	0.0	0.1	1.1	0.0	2.1	1.0	5.0				
Intersection Summary												
HCM 6th Ctrl Delay			45.0									
HCM 6th LOS			D									
Notes												

HCM 6th Signalized Intersection Summary

2019 Existing PM.syn

1: Yosemite Street & Dry Creek Road

04/24/2019

													
Movement	EBL	EBT	EBR	WBL	WBT	WBR	NBL	NBT	NBR	SBL	SBT	SBR	
Lane Configurations													
Traffic Volume (veh/h)	114	532	105	230	1472	224	260	519	259	194	663	280	
Future Volume (veh/h)	114	532	105	230	1472	224	260	519	259	194	663	280	
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	124	578	136	247	1549	236	283	611	0	228	729	350	
Peak Hour Factor	0.92	0.92	0.77	0.93	0.95	0.95	0.92	0.85	0.81	0.85	0.91	0.80	
Percent Heavy Veh, %	2	2	2	2	2	2	2	2	2	2	2	2	
Cap, veh/h	159	1167	274	425	1632	728	296	809		314	761	339	
Arrive On Green	0.05	0.41	0.41	0.13	0.61	0.61	0.04	0.08	0.00	0.12	0.21	0.21	
Sat Flow, veh/h	1781	2856	670	1781	3554	1585	1781	3554	1585	1781	3554	1585	
Grp Volume(v), veh/h	124	359	355	247	1549	236	283	611	0	228	729	350	
Grp Sat Flow(s),veh/h/ln	1781	1777	1750	1781	1777	1585	1781	1777	1585	1781	1777	1585	
Q Serve(g_s), s	4.9	18.0	18.1	9.4	48.5	8.7	14.6	20.2	0.0	11.8	24.3	25.7	
Cycle Q Clear(g_c), s	4.9	18.0	18.1	9.4	48.5	8.7	14.6	20.2	0.0	11.8	24.3	25.7	
Prop In Lane	1.00		0.38	1.00		1.00	1.00		1.00	1.00		1.00	
Lane Grp Cap(c), veh/h	159	726	715	425	1632	728	296	809		314	761	339	
V/C Ratio(X)	0.78	0.49	0.50	0.58	0.95	0.32	0.96	0.76		0.73	0.96	1.03	
Avail Cap(c_a), veh/h	159	726	715	516	1632	728	296	809		332	761	339	
HCM Platoon Ratio	1.00	1.00	1.00	1.33	1.33	1.33	0.33	0.33	0.33	1.00	1.00	1.00	
Upstream Filter(I)	1.00	1.00	1.00	0.58	0.58	0.58	1.00	1.00	0.00	1.00	1.00	1.00	
Uniform Delay (d), s/veh	28.7	26.3	26.3	17.7	22.1	14.3	36.9	52.2	0.0	32.9	46.6	47.1	
Incr Delay (d2), s/veh	21.3	2.4	2.5	0.7	8.7	0.7	40.4	6.5	0.0	7.3	23.8	57.1	
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	3.0	8.1	8.0	3.7	18.8	3.0	10.2	10.4	0.0	5.7	13.2	15.4	
Unsig. Movement Delay, s/veh													
LnGrp Delay(d),s/veh	50.0	28.7	28.8	18.4	30.7	15.0	77.4	58.7	0.0	40.2	70.4	104.2	
LnGrp LOS	D	C	C	B	C	B	E	E		D	E	F	
Approach Vol, veh/h	838			2032			894			A			1307
Approach Delay, s/veh	31.9			27.4			64.6			74.2			
Approach LOS	C			C			E			E			
Timer - Assigned Phs	1	2	3	4	5	6	7	8					
Phs Duration (G+Y+Rc), s	18.4	31.8	16.3	53.5	20.0	30.2	10.2	59.6					
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	15.1	26.1	17.9	42.9	15.5	25.7	5.7	55.1					
Max Q Clear Time (g_c+I1), s	13.8	22.2	11.4	20.1	16.6	27.7	6.9	50.5					
Green Ext Time (p_c), s	0.1	1.5	0.4	4.7	0.0	0.0	0.0	3.8					

Intersection Summary

HCM 6th Ctrl Delay 46.8

HCM 6th LOS D

Notes

Unsignalized Delay for [NBR] is excluded from calculations of the approach delay and intersection delay.

HCM 6th Signalized Intersection Summary

2030 Background AM.syn

1: Yosemite Street & Dry Creek Road

04/24/2019

												
Movement	EBL	EBT	EBR	WBL	WBT	WBR	NBL	NBT	NBR	SBL	SBT	SBR
Lane Configurations												
Traffic Volume (veh/h)	329	1172	143	204	503	136	82	726	223	150	251	51
Future Volume (veh/h)	329	1172	143	204	503	136	82	726	223	150	251	51
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	358	1274	155	222	547	148	89	789	0	163	273	55
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	521	1343	163	184	1189	531	420	1023		259	1140	509
Arrive On Green	0.15	0.42	0.42	0.13	0.67	0.67	0.05	0.29	0.00	0.08	0.32	0.32
Sat Flow, veh/h	1781	3191	386	1781	3554	1585	1781	3554	1585	1781	3554	1585
Grp Volume(v), veh/h	358	707	722	222	547	148	89	789	0	163	273	55
Grp Sat Flow(s),veh/h/ln	1781	1777	1801	1781	1777	1585	1781	1777	1585	1781	1777	1585
Q Serve(g_s), s	15.1	45.9	46.5	7.5	8.8	4.6	4.2	24.4	0.0	7.5	6.8	2.9
Cycle Q Clear(g_c), s	15.1	45.9	46.5	7.5	8.8	4.6	4.2	24.4	0.0	7.5	6.8	2.9
Prop In Lane	1.00		0.21	1.00		1.00	1.00		1.00	1.00		1.00
Lane Grp Cap(c), veh/h	521	748	758	184	1189	531	420	1023		259	1140	509
V/C Ratio(X)	0.69	0.95	0.95	1.21	0.46	0.28	0.21	0.77		0.63	0.24	0.11
Avail Cap(c_a), veh/h	634	748	758	184	1189	531	420	1023		259	1140	509
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	0.97	0.97	0.97	1.00	1.00	0.00	1.00	1.00	1.00
Uniform Delay (d), s/veh	19.7	33.4	33.6	32.2	14.7	14.0	28.1	39.1	0.0	29.1	30.0	28.7
Incr Delay (d2), s/veh	2.4	22.0	23.0	132.7	1.2	1.3	0.2	5.6	0.0	4.8	0.5	0.4
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	6.5	23.8	24.6	10.0	3.0	1.7	1.8	11.4	0.0	3.5	3.0	1.2
Unsig. Movement Delay, s/veh												
LnGrp Delay(d),s/veh	22.1	55.4	56.6	164.9	15.9	15.2	28.3	44.8	0.0	34.0	30.5	29.1
LnGrp LOS	C	E	E	F	B	B	C	D		C	C	C
Approach Vol, veh/h	1787			917			878			A		
Approach Delay, s/veh	49.2			51.9			43.1			31.5		
Approach LOS	D			D			D			C		
Timer - Assigned Phs	1	2	3	4	5	6	7	8				
Phs Duration (G+Y+Rc), s	14.0	39.0	12.0	55.0	10.0	43.0	22.3	44.7				
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	9.5	34.5	7.5	50.5	5.5	38.5	25.5	32.5				
Max Q Clear Time (g_c+l1), s	9.5	26.4	9.5	48.5	6.2	8.8	17.1	10.8				
Green Ext Time (p_c), s	0.0	3.3	0.0	1.6	0.0	2.0	0.7	4.2				

Intersection Summary

HCM 6th Ctrl Delay 46.4

HCM 6th LOS D

Notes

Unsignalized Delay for [NBR] is excluded from calculations of the approach delay and intersection delay.

HCM 6th Signalized Intersection Summary

2030 Background PM.syn

1: Yosemite Street & Dry Creek Road

04/24/2019

												
Movement	EBL	EBT	EBR	WBL	WBT	WBR	NBL	NBT	NBR	SBL	SBT	SBR
Lane Configurations												
Traffic Volume (veh/h)	120	562	111	243	1555	237	275	548	274	205	700	296
Future Volume (veh/h)	120	562	111	243	1555	237	275	548	274	205	700	296
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	130	611	121	261	1637	249	299	596	0	223	761	322
Peak Hour Factor	0.92	0.92	0.92	0.93	0.95	0.95	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	164	1203	238	432	1618	721	290	789		311	737	329
Arrive On Green	0.06	0.41	0.41	0.21	0.91	0.91	0.04	0.07	0.00	0.11	0.21	0.21
Sat Flow, veh/h	1781	2958	584	1781	3554	1585	1781	3554	1585	1781	3554	1585
Grp Volume(v), veh/h	130	367	365	261	1637	249	299	596	0	223	761	322
Grp Sat Flow(s),veh/h/ln	1781	1777	1765	1781	1777	1585	1781	1777	1585	1781	1777	1585
Q Serve(g_s), s	5.1	18.5	18.6	10.3	54.6	2.5	15.5	19.7	0.0	11.6	24.9	24.2
Cycle Q Clear(g_c), s	5.1	18.5	18.6	10.3	54.6	2.5	15.5	19.7	0.0	11.6	24.9	24.2
Prop In Lane	1.00		0.33	1.00		1.00	1.00		1.00	1.00		1.00
Lane Grp Cap(c), veh/h	164	722	718	432	1618	721	290	789		311	737	329
V/C Ratio(X)	0.79	0.51	0.51	0.60	1.01	0.35	1.03	0.76		0.72	1.03	0.98
Avail Cap(c_a), veh/h	171	722	718	561	1618	721	290	789		337	737	329
HCM Platoon Ratio	1.00	1.00	1.00	2.00	2.00	2.00	0.33	0.33	0.33	1.00	1.00	1.00
Upstream Filter(I)	1.00	1.00	1.00	0.56	0.56	0.56	1.00	1.00	0.00	1.00	1.00	1.00
Uniform Delay (d), s/veh	28.5	26.6	26.6	16.1	5.4	3.0	39.4	52.4	0.0	33.4	47.5	47.3
Incr Delay (d2), s/veh	21.5	2.5	2.6	0.8	19.8	0.7	61.0	6.6	0.0	6.5	41.6	44.6
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	3.1	8.3	8.3	3.4	6.6	0.8	12.3	10.2	0.0	5.6	15.2	13.6
Unsig. Movement Delay, s/veh												
LnGrp Delay(d),s/veh	50.0	29.2	29.2	16.8	25.1	3.8	100.4	59.0	0.0	39.9	89.2	91.9
LnGrp LOS	D	C	C	B	F	A	F	E		D	F	F
Approach Vol, veh/h		862			2147			895	A		1306	
Approach Delay, s/veh		32.3			21.7			72.9			81.4	
Approach LOS		C			C			E			F	
Timer - Assigned Phs	1	2	3	4	5	6	7	8				
Phs Duration (G+Y+Rc), s	18.3	31.1	17.3	53.3	20.0	29.4	11.5	59.1				
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	15.5	24.9	21.5	40.1	15.5	24.9	7.5	54.1				
Max Q Clear Time (g_c+I1), s	13.6	21.7	12.3	20.6	17.5	26.9	7.1	56.6				
Green Ext Time (p_c), s	0.1	1.2	0.5	4.6	0.0	0.0	0.0	0.0				

Intersection Summary

HCM 6th Ctrl Delay 47.2

HCM 6th LOS D

Notes

Unsignalized Delay for [NBR] is excluded from calculations of the approach delay and intersection delay.

HCM 6th Signalized Intersection Summary

2030 Total AM.syn

1: Yosemite Street & Dry Creek Road

04/24/2019

												
Movement	EBL	EBT	EBR	WBL	WBT	WBR	NBL	NBT	NBR	SBL	SBT	SBR
Lane Configurations												
Traffic Volume (veh/h)	329	1379	143	204	560	193	82	726	223	357	251	51
Future Volume (veh/h)	329	1379	143	204	560	193	82	726	223	357	251	51
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	358	1499	122	222	609	210	89	789	0	388	273	55
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	463	1429	116	156	1318	588	391	844		304	1140	509
Arrive On Green	0.11	0.43	0.43	0.11	0.74	0.74	0.05	0.24	0.00	0.13	0.32	0.32
Sat Flow, veh/h	1781	3329	269	1781	3554	1585	1781	3554	1585	1781	3554	1585
Grp Volume(v), veh/h	358	796	825	222	609	210	89	789	0	388	273	55
Grp Sat Flow(s),veh/h/ln	1781	1777	1822	1781	1777	1585	1781	1777	1585	1781	1777	1585
Q Serve(g_s), s	13.5	51.5	51.5	6.5	8.1	5.6	4.5	26.1	0.0	15.5	6.8	2.9
Cycle Q Clear(g_c), s	13.5	51.5	51.5	6.5	8.1	5.6	4.5	26.1	0.0	15.5	6.8	2.9
Prop In Lane	1.00		0.15	1.00		1.00	1.00		1.00	1.00		1.00
Lane Grp Cap(c), veh/h	463	763	782	156	1318	588	391	844		304	1140	509
V/C Ratio(X)	0.77	1.04	1.06	1.42	0.46	0.36	0.23	0.93		1.28	0.24	0.11
Avail Cap(c_a), veh/h	463	763	782	156	1318	588	391	844		304	1140	509
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	0.96	0.96	0.96	1.00	1.00	0.00	1.00	1.00	1.00
Uniform Delay (d), s/veh	21.0	34.3	34.3	29.9	10.8	10.5	32.4	44.8	0.0	32.4	30.0	28.7
Incr Delay (d2), s/veh	7.9	44.5	47.9	220.4	1.1	1.6	0.3	18.7	0.0	147.9	0.5	0.4
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	7.2	31.0	32.5	12.2	2.6	1.9	2.0	13.6	0.0	19.1	3.0	1.2
Unsig. Movement Delay, s/veh												
LnGrp Delay(d),s/veh	28.9	78.7	82.1	250.2	11.9	12.1	32.7	63.5	0.0	180.2	30.5	29.1
LnGrp LOS	C	F	F	F	B	B	C	E		F	C	C
Approach Vol, veh/h	1979			1041			878			A716		
Approach Delay, s/veh	71.1			62.8			60.4			111.5		
Approach LOS	E			E			E			F		
Timer - Assigned Phs	1	2	3	4	5	6	7	8				
Phs Duration (G+Y+Rc), s	20.0	33.0	11.0	56.0	10.0	43.0	18.0	49.0				
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	15.5	28.5	6.5	51.5	5.5	38.5	13.5	44.5				
Max Q Clear Time (g_c+I1), s	17.5	28.1	8.5	53.5	6.5	8.8	15.5	10.1				
Green Ext Time (p_c), s	0.0	0.2	0.0	0.0	0.0	2.0	0.0	5.5				

Intersection Summary

HCM 6th Ctrl Delay 73.5

HCM 6th LOS E

Notes

Unsignalized Delay for [NBR] is excluded from calculations of the approach delay and intersection delay.

HCM 6th Signalized Intersection Summary

2030 Total PM.syn

1: Yosemite Street & Dry Creek Road

04/24/2019

												
Movement	EBL	EBT	EBR	WBL	WBT	WBR	NBL	NBT	NBR	SBL	SBT	SBR
Lane Configurations												
Traffic Volume (veh/h)	120	635	111	243	1768	450	275	548	274	278	700	296
Future Volume (veh/h)	120	635	111	243	1768	450	275	548	274	278	700	296
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	130	690	121	261	1861	474	299	596	0	302	761	322
Peak Hour Factor	0.92	0.92	0.92	0.93	0.95	0.95	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	202	1330	233	426	1777	793	220	666		292	785	350
Arrive On Green	0.04	0.44	0.44	0.20	1.00	1.00	0.03	0.06	0.00	0.12	0.22	0.22
Sat Flow, veh/h	1781	3022	530	1781	3554	1585	1781	3554	1585	1781	3554	1585
Grp Volume(v), veh/h	130	405	406	261	1861	474	299	596	0	302	761	322
Grp Sat Flow(s),veh/h/ln	1781	1777	1775	1781	1777	1585	1781	1777	1585	1781	1777	1585
Q Serve(g_s), s	4.9	19.9	19.9	9.7	0.0	0.0	10.5	20.0	0.0	14.5	25.5	23.8
Cycle Q Clear(g_c), s	4.9	19.9	19.9	9.7	0.0	0.0	10.5	20.0	0.0	14.5	25.5	23.8
Prop In Lane	1.00		0.30	1.00		1.00	1.00		1.00	1.00		1.00
Lane Grp Cap(c), veh/h	202	782	781	426	1777	793	220	666		292	785	350
V/C Ratio(X)	0.64	0.52	0.52	0.61	1.05	0.60	1.36	0.89		1.03	0.97	0.92
Avail Cap(c_a), veh/h	202	782	781	534	1777	793	220	666		292	785	350
HCM Platoon Ratio	1.00	1.00	1.00	2.00	2.00	2.00	0.33	0.33	0.33	1.00	1.00	1.00
Upstream Filter(I)	1.00	1.00	1.00	0.35	0.35	0.35	1.00	1.00	0.00	1.00	1.00	1.00
Uniform Delay (d), s/veh	17.4	24.4	24.4	15.0	0.0	0.0	42.4	55.1	0.0	36.9	46.4	45.7
Incr Delay (d2), s/veh	6.8	2.5	2.5	0.5	27.4	1.2	187.4	16.9	0.0	61.3	25.5	31.5
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	2.4	8.8	8.8	3.2	6.8	0.3	12.9	11.1	0.0	11.9	14.0	12.4
Unsig. Movement Delay, s/veh												
LnGrp Delay(d),s/veh	24.1	26.8	26.9	15.5	27.4	1.2	229.8	72.0	0.0	98.3	71.9	77.2
LnGrp LOS	C	C	C	B	F	A	F	E		F	E	E
Approach Vol, veh/h		941			2596			895	A		1385	
Approach Delay, s/veh		26.5			21.4			124.7			78.9	
Approach LOS		C			C			F			E	
Timer - Assigned Phs	1	2	3	4	5	6	7	8				
Phs Duration (G+Y+Rc), s	19.0	27.0	16.7	57.3	15.0	31.0	9.5	64.5				
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	14.5	22.5	19.5	45.5	10.5	26.5	5.0	60.0				
Max Q Clear Time (g_c+I1), s	16.5	22.0	11.7	21.9	12.5	27.5	6.9	2.0				
Green Ext Time (p_c), s	0.0	0.2	0.5	5.5	0.0	0.0	0.0	33.3				

Intersection Summary

HCM 6th Ctrl Delay 51.8

HCM 6th LOS D

Notes

Unsignalized Delay for [NBR] is excluded from calculations of the approach delay and intersection delay.

HCM 6th Signalized Intersection Summary

2030 Total AM_Imp.syn

1: Yosemite Street & Dry Creek Road

04/24/2019

												
Movement	EBL	EBT	EBR	WBL	WBT	WBR	NBL	NBT	NBR	SBL	SBT	SBR
Lane Configurations		  			 			 			 	
Traffic Volume (veh/h)	329	1379	143	204	560	193	82	726	223	357	251	51
Future Volume (veh/h)	329	1379	143	204	560	193	82	726	223	357	251	51
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	358	1499	122	222	609	210	89	789	0	388	273	55
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	421	1865	152	235	1377	614	400	874		326	1199	535
Arrive On Green	0.08	0.39	0.39	0.16	0.77	0.77	0.05	0.25	0.00	0.14	0.34	0.34
Sat Flow, veh/h	1781	4812	392	1781	3554	1585	1781	3554	1585	1781	3554	1585
Grp Volume(v), veh/h	358	1060	561	222	609	210	89	789	0	388	273	55
Grp Sat Flow(s),veh/h/ln	1781	1702	1800	1781	1777	1585	1781	1777	1585	1781	1777	1585
Q Serve(g_s), s	9.5	33.2	33.3	9.5	7.0	4.9	4.5	25.8	0.0	16.5	6.6	2.9
Cycle Q Clear(g_c), s	9.5	33.2	33.3	9.5	7.0	4.9	4.5	25.8	0.0	16.5	6.6	2.9
Prop In Lane	1.00		0.22	1.00		1.00	1.00		1.00	1.00		1.00
Lane Grp Cap(c), veh/h	421	1319	697	235	1377	614	400	874		326	1199	535
V/C Ratio(X)	0.85	0.80	0.80	0.94	0.44	0.34	0.22	0.90		1.19	0.23	0.10
Avail Cap(c_a), veh/h	421	1319	697	235	1377	614	400	874		326	1199	535
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	0.96	0.96	0.96	1.00	1.00	0.00	1.00	1.00	1.00
Uniform Delay (d), s/veh	27.7	32.7	32.7	25.7	9.1	8.8	31.7	43.9	0.0	31.7	28.5	27.3
Incr Delay (d2), s/veh	15.3	5.3	9.6	42.0	1.0	1.5	0.3	14.4	0.0	112.1	0.4	0.4
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	6.7	14.5	16.1	6.1	2.3	1.7	2.0	13.0	0.0	17.2	2.9	1.1
Unsig. Movement Delay, s/veh												
LnGrp Delay(d),s/veh	43.0	38.0	42.3	67.7	10.1	10.3	32.0	58.3	0.0	143.8	29.0	27.7
LnGrp LOS	D	D	D	E	B	B	C	E		F	C	C
Approach Vol, veh/h	1979			1041			878		A		716	
Approach Delay, s/veh	40.1			22.4			55.6				91.1	
Approach LOS	D			C			E				F	
Timer - Assigned Phs	1	2	3	4	5	6	7	8				
Phs Duration (G+Y+Rc), s	21.0	34.0	14.0	51.0	10.0	45.0	14.0	51.0				
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	29.5	9.5	46.5	5.5	40.5	9.5	46.5				
Max Q Clear Time (g_c+I1), s	18.5	27.8	11.5	35.3	6.5	8.6	11.5	9.0				
Green Ext Time (p_c), s	0.0	0.9	0.0	7.8	0.0	2.0	0.0	5.6				
Intersection Summary												
HCM 6th Ctrl Delay	47.0											
HCM 6th LOS	D											
Notes												

HCM 6th Signalized Intersection Summary

2030 Total PM_Imp.syn

1: Yosemite Street & Dry Creek Road

04/24/2019

												
Movement	EBL	EBT	EBR	WBL	WBT	WBR	NBL	NBT	NBR	SBL	SBT	SBR
Lane Configurations		  			 			 			 	
Traffic Volume (veh/h)	120	635	111	243	1768	450	275	548	274	278	700	296
Future Volume (veh/h)	120	635	111	243	1768	450	275	548	274	278	700	296
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	130	690	121	261	1861	474	299	596	0	302	761	322
Peak Hour Factor	0.92	0.92	0.92	0.93	0.95	0.95	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	202	1928	334	465	1777	793	220	666		292	785	350
Arrive On Green	0.04	0.44	0.44	0.20	1.00	1.00	0.03	0.06	0.00	0.12	0.22	0.22
Sat Flow, veh/h	1781	4379	759	1781	3554	1585	1781	3554	1585	1781	3554	1585
Grp Volume(v), veh/h	130	535	276	261	1861	474	299	596	0	302	761	322
Grp Sat Flow(s),veh/h/ln	1781	1702	1734	1781	1777	1585	1781	1777	1585	1781	1777	1585
Q Serve(g_s), s	4.9	12.5	12.7	9.7	0.0	0.0	10.5	20.0	0.0	14.5	25.5	23.8
Cycle Q Clear(g_c), s	4.9	12.5	12.7	9.7	0.0	0.0	10.5	20.0	0.0	14.5	25.5	23.8
Prop In Lane	1.00		0.44	1.00		1.00	1.00		1.00	1.00		1.00
Lane Grp Cap(c), veh/h	202	1499	763	465	1777	793	220	666		292	785	350
V/C Ratio(X)	0.64	0.36	0.36	0.56	1.05	0.60	1.36	0.89		1.03	0.97	0.92
Avail Cap(c_a), veh/h	202	1499	763	559	1777	793	220	666		292	785	350
HCM Platoon Ratio	1.00	1.00	1.00	2.00	2.00	2.00	0.33	0.33	0.33	1.00	1.00	1.00
Upstream Filter(I)	1.00	1.00	1.00	0.56	0.56	0.56	1.00	1.00	0.00	1.00	1.00	1.00
Uniform Delay (d), s/veh	17.4	22.3	22.4	13.5	0.0	0.0	42.4	55.1	0.0	36.9	46.4	45.7
Incr Delay (d2), s/veh	6.7	0.7	1.3	0.6	30.2	1.9	187.4	16.9	0.0	61.3	25.5	31.5
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	2.4	5.1	5.5	3.2	7.4	0.4	12.9	11.1	0.0	11.9	14.0	12.4
Unsig. Movement Delay, s/veh												
LnGrp Delay(d),s/veh	24.1	23.0	23.7	14.1	30.2	1.9	229.8	72.0	0.0	98.3	71.9	77.2
LnGrp LOS	C	C	C	B	F	A	F	E		F	E	E
Approach Vol, veh/h		941			2596			895	A		1385	
Approach Delay, s/veh		23.3			23.4			124.7			78.9	
Approach LOS		C			C			F			E	
Timer - Assigned Phs	1	2	3	4	5	6	7	8				
Phs Duration (G+Y+Rc), s	19.0	27.0	16.7	57.3	15.0	31.0	9.5	64.5				
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	14.5	22.5	18.5	46.5	10.5	26.5	5.0	60.0				
Max Q Clear Time (g_c+I1), s	16.5	22.0	11.7	14.7	12.5	27.5	6.9	2.0				
Green Ext Time (p_c), s	0.0	0.2	0.4	6.2	0.0	0.0	0.0	33.3				
Intersection Summary												
HCM 6th Ctrl Delay			52.2									
HCM 6th LOS			D									
Notes												
Unsignalized Delay for [NBR] is excluded from calculations of the approach delay and intersection delay.												

HCM 6th Signalized Intersection Summary

2040 Background AM.syn

1: Yosemite Street & Dry Creek Road

04/25/2019

												
Movement	EBL	EBT	EBR	WBL	WBT	WBR	NBL	NBT	NBR	SBL	SBT	SBR
Lane Configurations												
Traffic Volume (veh/h)	345	1231	150	214	529	143	87	763	234	158	264	53
Future Volume (veh/h)	345	1231	150	214	529	143	87	763	234	158	264	53
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	375	1338	163	233	575	155	95	829	0	172	287	58
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	565	1380	167	253	1400	624	354	847		196	930	415
Arrive On Green	0.14	0.43	0.43	0.21	0.79	0.79	0.05	0.24	0.00	0.07	0.26	0.26
Sat Flow, veh/h	1781	3191	386	1781	3554	1585	1781	3554	1585	1781	3554	1585
Grp Volume(v), veh/h	375	741	760	233	575	155	95	829	0	172	287	58
Grp Sat Flow(s),veh/h/ln	1781	1777	1801	1781	1777	1585	1781	1777	1585	1781	1777	1585
Q Serve(g_s), s	14.3	48.8	49.7	10.7	6.1	3.1	4.8	27.8	0.0	8.8	7.8	3.4
Cycle Q Clear(g_c), s	14.3	48.8	49.7	10.7	6.1	3.1	4.8	27.8	0.0	8.8	7.8	3.4
Prop In Lane	1.00		0.21	1.00		1.00	1.00		1.00	1.00		1.00
Lane Grp Cap(c), veh/h	565	768	779	253	1400	624	354	847		196	930	415
V/C Ratio(X)	0.66	0.96	0.98	0.92	0.41	0.25	0.27	0.98		0.88	0.31	0.14
Avail Cap(c_a), veh/h	738	768	779	253	1400	624	354	847		196	930	415
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	0.97	0.97	0.97	1.00	1.00	0.00	1.00	1.00	1.00
Uniform Delay (d), s/veh	15.7	33.2	33.4	28.0	8.4	8.0	32.1	45.4	0.0	34.6	35.6	34.0
Incr Delay (d2), s/veh	1.4	24.9	26.8	34.9	0.9	0.9	0.4	26.2	0.0	32.7	0.9	0.7
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	5.9	25.7	26.9	6.2	2.0	1.1	2.1	15.2	0.0	5.6	3.5	1.4
Unsig. Movement Delay, s/veh												
LnGrp Delay(d),s/veh	17.1	58.1	60.2	62.9	9.2	9.0	32.5	71.6	0.0	67.3	36.4	34.7
LnGrp LOS	B	E	E	E	A	A	C	E		E	D	C
Approach Vol, veh/h	1876			963			924			A		
Approach Delay, s/veh	50.7			22.2			67.6			46.5		
Approach LOS	D			C			E			D		
Timer - Assigned Phs	1	2	3	4	5	6	7	8				
Phs Duration (G+Y+Rc), s	13.4	33.1	17.1	56.4	10.6	35.9	21.7	51.8				
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	8.9	28.6	12.6	51.9	6.1	31.4	28.9	35.6				
Max Q Clear Time (g_c+I1), s	10.8	29.8	12.7	51.7	6.8	9.8	16.3	8.1				
Green Ext Time (p_c), s	0.0	0.0	0.0	0.2	0.0	2.0	1.0	4.8				

Intersection Summary

HCM 6th Ctrl Delay 47.4

HCM 6th LOS D

Notes

Unsignalized Delay for [NBR] is excluded from calculations of the approach delay and intersection delay.

HCM 6th Signalized Intersection Summary

2040 Background PM.syn

1: Yosemite Street & Dry Creek Road

04/25/2019

												
Movement	EBL	EBT	EBR	WBL	WBT	WBR	NBL	NBT	NBR	SBL	SBT	SBR
Lane Configurations												
Traffic Volume (veh/h)	127	591	117	255	1635	249	289	576	288	215	736	311
Future Volume (veh/h)	127	591	117	255	1635	249	289	576	288	215	736	311
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	138	642	127	274	1721	262	314	626	0	234	800	338
Peak Hour Factor	0.92	0.92	0.92	0.93	0.95	0.95	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	142	1141	225	414	1614	720	290	844		316	785	350
Arrive On Green	0.05	0.39	0.39	0.23	0.91	0.91	0.09	0.16	0.00	0.11	0.22	0.22
Sat Flow, veh/h	1781	2958	584	1781	3554	1585	1781	3554	1585	1781	3554	1585
Grp Volume(v), veh/h	138	385	384	274	1721	262	314	626	0	234	800	338
Grp Sat Flow(s),veh/h/ln	1781	1777	1765	1781	1777	1585	1781	1777	1585	1781	1777	1585
Q Serve(g_s), s	5.5	20.4	20.5	11.2	54.5	2.7	15.5	20.2	0.0	12.1	26.5	25.3
Cycle Q Clear(g_c), s	5.5	20.4	20.5	11.2	54.5	2.7	15.5	20.2	0.0	12.1	26.5	25.3
Prop In Lane	1.00		0.33	1.00		1.00	1.00		1.00	1.00		1.00
Lane Grp Cap(c), veh/h	142	686	681	414	1614	720	290	844		316	785	350
V/C Ratio(X)	0.97	0.56	0.56	0.66	1.07	0.36	1.08	0.74		0.74	1.02	0.97
Avail Cap(c_a), veh/h	142	686	681	515	1614	720	290	844		316	785	350
HCM Platoon Ratio	1.00	1.00	1.00	2.00	2.00	2.00	0.67	0.67	0.67	1.00	1.00	1.00
Upstream Filter(I)	1.00	1.00	1.00	0.49	0.49	0.49	1.00	1.00	0.00	1.00	1.00	1.00
Uniform Delay (d), s/veh	31.0	28.9	28.9	17.4	5.5	3.1	37.1	46.9	0.0	32.6	46.8	46.3
Incr Delay (d2), s/veh	67.6	3.3	3.4	1.1	36.9	0.7	76.6	5.8	0.0	9.0	37.1	40.2
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	5.1	9.3	9.3	3.8	10.5	0.8	13.2	9.9	0.0	6.0	15.7	13.8
Unsig. Movement Delay, s/veh												
LnGrp Delay(d),s/veh	98.5	32.2	32.3	18.5	42.4	3.8	113.6	52.8	0.0	41.6	83.8	86.5
LnGrp LOS	F	C	C	B	F	A	F	D		D	F	F
Approach Vol, veh/h		907			2257			940	A		1372	
Approach Delay, s/veh		42.3			35.0			73.1			77.3	
Approach LOS		D			D			E			E	
Timer - Assigned Phs	1	2	3	4	5	6	7	8				
Phs Duration (G+Y+Rc), s	18.0	33.0	18.2	50.8	20.0	31.0	10.0	59.0				
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	13.5	28.5	20.5	39.5	15.5	26.5	5.5	54.5				
Max Q Clear Time (g_c+I1), s	14.1	22.2	13.2	22.5	17.5	28.5	7.5	56.5				
Green Ext Time (p_c), s	0.0	2.2	0.5	4.6	0.0	0.0	0.0	0.0				

Intersection Summary

HCM 6th Ctrl Delay 53.4

HCM 6th LOS D

Notes

Unsignalized Delay for [NBR] is excluded from calculations of the approach delay and intersection delay.

HCM 6th Signalized Intersection Summary

2040 Total AM.syn

1: Yosemite Street & Dry Creek Road

04/25/2019

												
Movement	EBL	EBT	EBR	WBL	WBT	WBR	NBL	NBT	NBR	SBL	SBT	SBR
Lane Configurations		  			  			 			 	
Traffic Volume (veh/h)	345	1438	150	214	586	200	87	763	234	365	264	53
Future Volume (veh/h)	345	1438	150	214	586	200	87	763	234	365	264	53
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	375	1563	130	233	637	217	95	829	0	397	287	58
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	425	1781	148	235	1340	448	405	903		323	1229	548
Arrive On Green	0.10	0.37	0.37	0.17	0.71	0.71	0.05	0.25	0.00	0.14	0.35	0.35
Sat Flow, veh/h	1781	4803	399	1781	3783	1264	1781	3554	1585	1781	3554	1585
Grp Volume(v), veh/h	375	1107	586	233	572	282	95	829	0	397	287	58
Grp Sat Flow(s),veh/h/ln	1781	1702	1798	1781	1702	1643	1781	1777	1585	1781	1777	1585
Q Serve(g_s), s	12.5	36.4	36.5	10.5	8.9	9.1	4.7	27.2	0.0	16.5	6.9	3.0
Cycle Q Clear(g_c), s	12.5	36.4	36.5	10.5	8.9	9.1	4.7	27.2	0.0	16.5	6.9	3.0
Prop In Lane	1.00		0.22	1.00		0.77	1.00		1.00	1.00		1.00
Lane Grp Cap(c), veh/h	425	1262	667	235	1206	582	405	903		323	1229	548
V/C Ratio(X)	0.88	0.88	0.88	0.99	0.47	0.48	0.23	0.92		1.23	0.23	0.11
Avail Cap(c_a), veh/h	425	1262	667	235	1206	582	405	903		323	1229	548
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	0.96	0.96	0.96	1.00	1.00	0.00	1.00	1.00	1.00
Uniform Delay (d), s/veh	27.9	35.2	35.2	26.5	12.6	12.6	31.1	43.5	0.0	32.5	27.9	26.7
Incr Delay (d2), s/veh	19.0	8.8	15.2	54.6	1.3	2.8	0.3	15.6	0.0	127.4	0.4	0.4
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	6.4	16.4	18.5	7.3	2.8	3.0	2.1	13.8	0.0	18.0	3.0	1.2
Unsig. Movement Delay, s/veh												
LnGrp Delay(d),s/veh	46.9	44.0	50.4	81.1	13.9	15.4	31.4	59.2	0.0	159.9	28.4	27.0
LnGrp LOS	D	D	D	F	B	B	C	E		F	C	C
Approach Vol, veh/h		2068			1087			924	A		742	
Approach Delay, s/veh		46.3			28.7			56.3			98.6	
Approach LOS		D			C			E			F	
Timer - Assigned Phs	1	2	3	4	5	6	7	8				
Phs Duration (G+Y+Rc), s	21.0	35.0	15.0	49.0	10.0	46.0	17.0	47.0				
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	30.5	10.5	44.5	5.5	41.5	12.5	42.5				
Max Q Clear Time (g_c+I1), s	18.5	29.2	12.5	38.5	6.7	8.9	14.5	11.1				
Green Ext Time (p_c), s	0.0	0.7	0.0	4.8	0.0	2.2	0.0	6.6				

Intersection Summary

HCM 6th Ctrl Delay 52.3

HCM 6th LOS D

Notes

Unsignalized Delay for [NBR] is excluded from calculations of the approach delay and intersection delay.

HCM 6th Signalized Intersection Summary

2040 Total PM.syn

1: Yosemite Street & Dry Creek Road

04/25/2019

																
Movement	EBL	EBT	EBR	WBL	WBT	WBR	NBL	NBT	NBR	SBL	SBT	SBR				
Lane Configurations		  			  			 			 					
Traffic Volume (veh/h)	127	664	117	255	1848	462	289	576	288	288	736	311				
Future Volume (veh/h)	127	664	117	255	1848	462	289	576	288	288	736	311				
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	138	722	127	274	1945	360	314	626	0	313	800	338				
Peak Hour Factor	0.92	0.92	0.92	0.93	0.95	0.95	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	147	1799	313	438	2046	371	239	726		314	844	376				
Arrive On Green	0.05	0.41	0.41	0.14	0.63	0.63	0.03	0.07	0.00	0.13	0.24	0.24				
Sat Flow, veh/h	1781	4375	762	1781	4344	788	1781	3554	1585	1781	3554	1585				
Grp Volume(v), veh/h	138	560	289	274	1515	790	314	626	0	313	800	338				
Grp Sat Flow(s),veh/h/ln	1781	1702	1733	1781	1702	1729	1781	1777	1585	1781	1777	1585				
Q Serve(g_s), s	5.5	13.9	14.1	10.4	49.0	52.2	11.5	20.9	0.0	15.5	26.6	24.8				
Cycle Q Clear(g_c), s	5.5	13.9	14.1	10.4	49.0	52.2	11.5	20.9	0.0	15.5	26.6	24.8				
Prop In Lane	1.00		0.44	1.00		0.46	1.00		1.00	1.00		1.00				
Lane Grp Cap(c), veh/h	147	1400	713	438	1603	814	239	726		314	844	376				
V/C Ratio(X)	0.94	0.40	0.41	0.63	0.95	0.97	1.32	0.86		1.00	0.95	0.90				
Avail Cap(c_a), veh/h	147	1400	713	481	1603	814	239	726		314	844	376				
HCM Platoon Ratio	1.00	1.00	1.00	1.33	1.33	1.33	0.33	0.33	0.33	1.00	1.00	1.00				
Upstream Filter(I)	1.00	1.00	1.00	0.50	0.50	0.50	1.00	1.00	0.00	1.00	1.00	1.00				
Uniform Delay (d), s/veh	29.2	24.9	25.0	16.6	21.0	21.6	40.4	54.3	0.0	35.1	45.0	44.3				
Incr Delay (d2), s/veh	55.3	0.9	1.7	1.1	7.5	16.3	168.7	12.9	0.0	50.0	20.6	26.6				
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	4.5	5.8	6.1	4.0	17.7	21.0	12.7	11.3	0.0	11.5	14.0	12.5				
Unsig. Movement Delay, s/veh																
LnGrp Delay(d),s/veh	84.5	25.8	26.7	17.8	28.5	37.9	209.1	67.2	0.0	85.1	65.7	71.0				
LnGrp LOS	F	C	C	B	C	D	F	E		F	E	E				
Approach Vol, veh/h	987				2579				940							
Approach Delay, s/veh	34.2				30.2				114.6							
Approach LOS	C				C				F							
Timer - Assigned Phs	1	2	3	4	5	6	7	8								
Phs Duration (G+Y+Rc), s	20.0	29.0	17.2	53.8	16.0	33.0	10.0	61.0								
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	15.5	24.5	15.5	46.5	11.5	28.5	5.5	56.5								
Max Q Clear Time (g_c+I1), s	17.5	22.9	12.4	16.1	13.5	28.6	7.5	54.2								
Green Ext Time (p_c), s	0.0	0.7	0.3	6.5	0.0	0.0	0.0	2.2								
Intersection Summary																
HCM 6th Ctrl Delay	54.2															
HCM 6th LOS	D															
Notes																
Unsignalized Delay for [NBR] is excluded from calculations of the approach delay and intersection delay.																

HCM 6th Signalized Intersection Summary

2: Chester Street & Dry Creek Road

2019 Existing AM.syn

04/24/2019

												
Movement	EBL	EBT	EBR	WBL	WBT	WBR	NBL	NBT	NBR	SBL	SBT	SBR
Lane Configurations												
Traffic Volume (veh/h)	38	1206	172	960	768	520	35	52	181	124	124	32
Future Volume (veh/h)	38	1206	172	960	768	520	35	52	181	124	124	32
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	48	1311	200	1079	826	559	44	68	215	168	163	36
Peak Hour Factor	0.79	0.92	0.86	0.89	0.93	0.93	0.80	0.77	0.84	0.74	0.76	0.89
Percent Heavy Veh, %	2	2	2	2	2	2	2	2	2	2	2	2
Cap, veh/h	248	1681	522	1137	3192	991	359	281	418	509	237	52
Arrive On Green	0.04	0.44	0.44	0.55	1.00	1.00	0.01	0.05	0.05	0.04	0.16	0.16
Sat Flow, veh/h	1781	5106	1585	3456	5106	1585	3456	1870	2790	3456	1484	328
Grp Volume(v), veh/h	48	1311	200	1079	826	559	44	68	215	168	0	199
Grp Sat Flow(s),veh/h/ln	1781	1702	1585	1728	1702	1585	1728	1870	1395	1728	0	1811
Q Serve(g_s), s	2.1	26.3	10.2	35.3	0.0	0.0	1.3	4.2	9.0	5.0	0.0	12.4
Cycle Q Clear(g_c), s	2.1	26.3	10.2	35.3	0.0	0.0	1.3	4.2	9.0	5.0	0.0	12.4
Prop In Lane	1.00		1.00	1.00		1.00	1.00		1.00	1.00		0.18
Lane Grp Cap(c), veh/h	248	1681	522	1137	3192	991	359	281	418	509	0	289
V/C Ratio(X)	0.19	0.78	0.38	0.95	0.26	0.56	0.12	0.24	0.51	0.33	0.00	0.69
Avail Cap(c_a), veh/h	264	1681	522	1224	3192	991	392	281	418	509	0	289
HCM Platoon Ratio	1.33	1.33	1.33	1.67	1.67	1.67	0.33	0.33	0.33	1.00	1.00	1.00
Upstream Filter(I)	0.40	0.40	0.40	0.80	0.80	0.80	0.98	0.98	0.98	1.00	0.00	1.00
Uniform Delay (d), s/veh	24.8	30.0	25.5	26.1	0.0	0.0	42.1	50.5	52.8	41.3	0.0	47.6
Incr Delay (d2), s/veh	0.2	1.5	0.9	12.4	0.2	1.9	0.1	2.0	4.4	0.4	0.0	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	0.9	10.1	3.8	13.4	0.0	0.5	0.6	2.2	3.6	2.1	0.0	6.6
Unsig. Movement Delay, s/veh												
LnGrp Delay(d),s/veh	24.9	31.5	26.4	38.5	0.2	1.9	42.3	52.5	57.1	41.7	0.0	60.2
LnGrp LOS	C	C	C	D	A	A	D	D	E	D	A	E
Approach Vol, veh/h	1559			2464			327			367		
Approach Delay, s/veh	30.6			17.3			54.2			51.7		
Approach LOS	C			B			D			D		
Timer - Assigned Phs	1	2	3	4	5	6	7	8				
Phs Duration (G+Y+Rc), s	9.5	22.5	44.0	44.0	8.3	23.7	8.5	79.5				
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	5.0	18.0	42.5	36.5	5.0	18.0	5.1	73.9				
Max Q Clear Time (g_c+l1), s	7.0	11.0	37.3	28.3	3.3	14.4	4.1	2.0				
Green Ext Time (p_c), s	0.0	0.7	2.2	5.6	0.0	0.3	0.0	10.9				
Intersection Summary												
HCM 6th Ctrl Delay	27.0											
HCM 6th LOS	C											

HCM 6th Signalized Intersection Summary 2: Chester Street & Dry Creek Road

2019 Existing PM.syn

04/24/2019

												
Movement	EBL	EBT	EBR	WBL	WBT	WBR	NBL	NBT	NBR	SBL	SBT	SBR
Lane Configurations		  		 	  		 		 	 		
Traffic Volume (veh/h)	21	920	56	283	1604	100	259	79	1062	358	71	71
Future Volume (veh/h)	21	920	56	283	1604	100	259	79	1062	358	71	71
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	28	968	80	311	1802	120	288	108	980	431	92	104
Peak Hour Factor	0.75	0.95	0.70	0.91	0.89	0.83	0.90	0.73	0.88	0.83	0.77	0.68
Percent Heavy Veh, %	2	2	2	2	2	2	2	2	2	2	2	2
Cap, veh/h	128	1700	528	376	2126	660	927	673	1004	610	286	324
Arrive On Green	0.01	0.11	0.11	0.11	0.42	0.42	0.05	0.36	0.36	0.05	0.36	0.36
Sat Flow, veh/h	1781	5106	1585	3456	5106	1585	3456	1870	2790	3456	801	906
Grp Volume(v), veh/h	28	968	80	311	1802	120	288	108	980	431	0	196
Grp Sat Flow(s),veh/h/ln	1781	1702	1585	1728	1702	1585	1728	1870	1395	1728	0	1707
Q Serve(g_s), s	1.2	21.6	5.5	10.6	38.2	5.7	6.1	4.7	41.6	5.8	0.0	10.0
Cycle Q Clear(g_c), s	1.2	21.6	5.5	10.6	38.2	5.7	6.1	4.7	41.6	5.8	0.0	10.0
Prop In Lane	1.00		1.00	1.00		1.00	1.00		1.00	1.00		0.53
Lane Grp Cap(c), veh/h	128	1700	528	376	2126	660	927	673	1004	610	0	610
V/C Ratio(X)	0.22	0.57	0.15	0.83	0.85	0.18	0.31	0.16	0.98	0.71	0.00	0.32
Avail Cap(c_a), veh/h	157	1700	528	498	2126	660	927	673	1004	610	0	610
HCM Platoon Ratio	0.33	0.33	0.33	1.00	1.00	1.00	1.00	1.00	1.00	1.00	1.00	1.00
Upstream Filter(I)	0.86	0.86	0.86	0.91	0.91	0.91	0.69	0.69	0.69	1.00	0.00	1.00
Uniform Delay (d), s/veh	29.4	45.2	38.1	52.4	31.6	22.1	23.8	26.1	37.9	28.7	0.0	28.0
Incr Delay (d2), s/veh	0.7	1.2	0.5	7.8	4.0	0.6	0.1	0.4	18.5	3.7	0.0	1.4
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	10.1	2.3	5.0	16.2	2.2	2.6	2.2	16.5	2.9	0.0	4.3
Unsig. Movement Delay, s/veh												
LnGrp Delay(d),s/veh	30.1	46.4	38.6	60.2	35.6	22.7	23.9	26.4	56.4	32.4	0.0	29.4
LnGrp LOS	C	D	D	E	D	C	C	C	E	C	A	C
Approach Vol, veh/h		1076			2233			1376			627	
Approach Delay, s/veh		45.4			38.3			47.2			31.5	
Approach LOS		D			D			D			C	
Timer - Assigned Phs	1	2	3	4	5	6	7	8				
Phs Duration (G+Y+Rc), s	10.3	47.7	17.6	44.4	10.6	47.4	7.5	54.5				
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	5.8	43.2	17.3	35.7	6.1	42.9	5.0	48.0				
Max Q Clear Time (g_c+l1), s	7.8	43.6	12.6	23.6	8.1	12.0	3.2	40.2				
Green Ext Time (p_c), s	0.0	0.0	0.5	5.5	0.0	1.2	0.0	6.4				
Intersection Summary												
HCM 6th Ctrl Delay			41.3									
HCM 6th LOS			D									

HCM 6th Signalized Intersection Summary

2: Chester Street & Dry Creek Road

2030 Background AM.syn

04/24/2019

												
Movement	EBL	EBT	EBR	WBL	WBT	WBR	NBL	NBT	NBR	SBL	SBT	SBR
Lane Configurations		  		 	  		 		 	 	 	
Traffic Volume (veh/h)	40	1274	182	1014	811	549	37	55	191	131	131	34
Future Volume (veh/h)	40	1274	182	1014	811	549	37	55	191	131	131	34
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	43	1385	198	1102	872	590	40	60	208	142	142	37
Peak Hour Factor	0.92	0.92	0.92	0.92	0.93	0.93	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	232	1621	503	1149	3157	980	408	288	430	544	242	63
Arrive On Green	0.04	0.42	0.42	0.56	1.00	1.00	0.01	0.05	0.05	0.05	0.17	0.17
Sat Flow, veh/h	1781	5106	1585	3456	5106	1585	3456	1870	2790	3456	1431	373
Grp Volume(v), veh/h	43	1385	198	1102	872	590	40	60	208	142	0	179
Grp Sat Flow(s),veh/h/ln	1781	1702	1585	1728	1702	1585	1728	1870	1395	1728	0	1803
Q Serve(g_s), s	1.9	29.4	10.4	36.4	0.0	0.0	1.2	3.7	8.7	4.1	0.0	11.0
Cycle Q Clear(g_c), s	1.9	29.4	10.4	36.4	0.0	0.0	1.2	3.7	8.7	4.1	0.0	11.0
Prop In Lane	1.00		1.00	1.00		1.00	1.00		1.00	1.00		0.21
Lane Grp Cap(c), veh/h	232	1621	503	1149	3157	980	408	288	430	544	0	305
V/C Ratio(X)	0.19	0.85	0.39	0.96	0.28	0.60	0.10	0.21	0.48	0.26	0.00	0.59
Avail Cap(c_a), veh/h	257	1621	503	1195	3157	980	460	288	430	544	0	305
HCM Platoon Ratio	1.33	1.33	1.33	1.67	1.67	1.67	0.33	0.33	0.33	1.00	1.00	1.00
Upstream Filter(I)	0.42	0.42	0.42	0.77	0.77	0.77	0.98	0.98	0.98	1.00	0.00	1.00
Uniform Delay (d), s/veh	25.8	32.2	26.7	25.9	0.0	0.0	41.6	49.9	52.3	40.1	0.0	46.0
Incr Delay (d2), s/veh	0.2	2.6	1.0	14.0	0.2	2.1	0.1	1.6	3.8	0.3	0.0	8.0
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	0.8	11.5	3.9	14.0	0.0	0.6	0.5	1.9	3.4	1.8	0.0	5.6
Unsig. Movement Delay, s/veh												
LnGrp Delay(d),s/veh	25.9	34.8	27.6	39.9	0.2	2.1	41.7	51.5	56.1	40.4	0.0	54.0
LnGrp LOS	C	C	C	D	A	A	D	D	E	D	A	D
Approach Vol, veh/h		1626			2564			308			321	
Approach Delay, s/veh		33.7			17.7			53.3			48.0	
Approach LOS		C			B			D			D	
Timer - Assigned Phs	1	2	3	4	5	6	7	8				
Phs Duration (G+Y+Rc), s	10.0	23.0	44.4	42.6	8.2	24.8	8.3	78.7				
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	5.5	18.5	41.5	36.5	5.5	18.5	5.5	72.5				
Max Q Clear Time (g_c+l1), s	6.1	10.7	38.4	31.4	3.2	13.0	3.9	2.0				
Green Ext Time (p_c), s	0.0	0.7	1.5	3.8	0.0	0.4	0.0	11.9				
Intersection Summary												
HCM 6th Ctrl Delay			27.4									
HCM 6th LOS			C									

HCM 6th Signalized Intersection Summary

2: Chester Street & Dry Creek Road

2030 Background PM.syn

04/24/2019

												
Movement	EBL	EBT	EBR	WBL	WBT	WBR	NBL	NBT	NBR	SBL	SBT	SBR
Lane Configurations		  		 	  		 		 	 		
Traffic Volume (veh/h)	22	972	59	299	1694	106	274	83	1122	378	75	75
Future Volume (veh/h)	22	972	59	299	1694	106	274	83	1122	378	75	75
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	24	1023	64	325	1841	115	298	90	1003	411	82	82
Peak Hour Factor	0.92	0.95	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	121	1680	521	389	2138	664	982	673	1004	615	307	307
Arrive On Green	0.01	0.11	0.11	0.11	0.42	0.42	0.05	0.36	0.36	0.05	0.36	0.36
Sat Flow, veh/h	1781	5106	1585	3456	5106	1585	3456	1870	2790	3456	858	858
Grp Volume(v), veh/h	24	1023	64	325	1841	115	298	90	1003	411	0	164
Grp Sat Flow(s),veh/h/ln	1781	1702	1585	1728	1702	1585	1728	1870	1395	1728	0	1716
Q Serve(g_s), s	1.1	22.9	4.4	11.1	39.3	5.5	6.1	3.9	43.1	5.8	0.0	8.1
Cycle Q Clear(g_c), s	1.1	22.9	4.4	11.1	39.3	5.5	6.1	3.9	43.1	5.8	0.0	8.1
Prop In Lane	1.00		1.00	1.00		1.00	1.00		1.00	1.00		0.50
Lane Grp Cap(c), veh/h	121	1680	521	389	2138	664	982	673	1004	615	0	613
V/C Ratio(X)	0.20	0.61	0.12	0.83	0.86	0.17	0.30	0.13	1.00	0.67	0.00	0.27
Avail Cap(c_a), veh/h	155	1680	521	498	2138	664	982	673	1004	615	0	613
HCM Platoon Ratio	0.33	0.33	0.33	1.00	1.00	1.00	1.00	1.00	1.00	1.00	1.00	1.00
Upstream Filter(I)	0.86	0.86	0.86	0.89	0.89	0.89	0.71	0.71	0.71	1.00	0.00	1.00
Uniform Delay (d), s/veh	29.8	46.1	37.8	52.1	31.7	21.9	23.8	25.8	38.4	27.4	0.0	27.4
Incr Delay (d2), s/veh	0.7	1.4	0.4	8.5	4.3	0.5	0.1	0.3	23.6	2.8	0.0	1.1
Initial Q Delay(d3),s/veh	0.0	0.0	0.0	0.0	0.0	0.0	0.0	0.0	0.0	0.0	0.0	0.0
%ile BackOfQ(50%),veh/ln	0.5	10.7	1.8	5.2	16.7	2.1	2.8	1.8	17.7	2.3	0.0	3.5
Unsig. Movement Delay, s/veh												
LnGrp Delay(d),s/veh	30.5	47.5	38.3	60.6	36.0	22.4	23.9	26.1	62.0	30.2	0.0	28.5
LnGrp LOS	C	D	D	E	D	C	C	C	E	C	A	C
Approach Vol, veh/h		1111			2281			1391			575	
Approach Delay, s/veh		46.6			38.9			51.5			29.7	
Approach LOS		D			D			D			C	
Timer - Assigned Phs	1	2	3	4	5	6	7	8				
Phs Duration (G+Y+Rc), s	10.3	47.7	18.0	44.0	10.6	47.4	7.3	54.7				
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	5.8	43.2	17.3	35.7	6.1	42.9	5.0	48.0				
Max Q Clear Time (g_c+l1), s	7.8	45.1	13.1	24.9	8.1	10.1	3.1	41.3				
Green Ext Time (p_c), s	0.0	0.0	0.5	5.3	0.0	1.0	0.0	5.6				
Intersection Summary												
HCM 6th Ctrl Delay			42.8									
HCM 6th LOS			D									

HCM 6th Signalized Intersection Summary

2: Chester Street & Dry Creek Road

2030 Total AM.syn

04/24/2019

												
Movement	EBL	EBT	EBR	WBL	WBT	WBR	NBL	NBT	NBR	SBL	SBT	SBR
Lane Configurations		  		 	  		 		 	 		
Traffic Volume (veh/h)	40	1274	597	1595	811	549	150	55	389	131	131	34
Future Volume (veh/h)	40	1274	597	1595	811	549	150	55	389	131	131	34
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	43	1385	649	1734	872	590	163	60	423	142	142	37
Peak Hour Factor	0.92	0.92	0.92	0.92	0.93	0.93	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	215	1383	429	1339	3199	993	396	281	418	475	215	56
Arrive On Green	0.03	0.27	0.27	0.65	1.00	1.00	0.01	0.05	0.05	0.04	0.15	0.15
Sat Flow, veh/h	1781	5106	1585	3456	5106	1585	3456	1870	2790	3456	1431	373
Grp Volume(v), veh/h	43	1385	649	1734	872	590	163	60	423	142	0	179
Grp Sat Flow(s),veh/h/ln	1781	1702	1585	1728	1702	1585	1728	1870	1395	1728	0	1803
Q Serve(g_s), s	2.1	32.5	32.5	46.5	0.0	0.0	4.8	3.7	18.0	4.2	0.0	11.2
Cycle Q Clear(g_c), s	2.1	32.5	32.5	46.5	0.0	0.0	4.8	3.7	18.0	4.2	0.0	11.2
Prop In Lane	1.00		1.00	1.00		1.00	1.00		1.00	1.00		0.21
Lane Grp Cap(c), veh/h	215	1383	429	1339	3199	993	396	281	418	475	0	270
V/C Ratio(X)	0.20	1.00	1.51	1.29	0.27	0.59	0.41	0.21	1.01	0.30	0.00	0.66
Avail Cap(c_a), veh/h	240	1383	429	1339	3199	993	396	281	418	475	0	270
HCM Platoon Ratio	1.00	1.00	1.00	1.67	1.67	1.67	0.33	0.33	0.33	1.00	1.00	1.00
Upstream Filter(I)	0.09	0.09	0.09	0.68	0.68	0.68	0.58	0.58	0.58	1.00	0.00	1.00
Uniform Delay (d), s/veh	29.9	43.7	43.7	21.2	0.0	0.0	42.9	50.2	57.0	40.9	0.0	48.1
Incr Delay (d2), s/veh	0.0	7.6	231.4	136.6	0.1	1.8	0.4	1.0	36.2	0.3	0.0	12.1
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	0.9	14.5	40.2	38.6	0.0	0.5	2.1	1.8	8.9	1.8	0.0	6.0
Unsig. Movement Delay, s/veh												
LnGrp Delay(d),s/veh	29.9	51.4	275.2	157.8	0.1	1.8	43.3	51.2	93.3	41.3	0.0	60.2
LnGrp LOS	C	F	F	F	A	A	D	D	F	D	A	E
Approach Vol, veh/h		2077			3196			646			321	
Approach Delay, s/veh		120.9			86.0			76.8			51.8	
Approach LOS		F			F			E			D	
Timer - Assigned Phs	1	2	3	4	5	6	7	8				
Phs Duration (G+Y+Rc), s	9.5	22.5	51.0	37.0	9.5	22.5	8.3	79.7				
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	5.0	18.0	46.5	32.5	5.0	18.0	5.5	73.5				
Max Q Clear Time (g_c+l1), s	6.2	20.0	48.5	34.5	6.8	13.2	4.1	2.0				
Green Ext Time (p_c), s	0.0	0.0	0.0	0.0	0.0	0.4	0.0	11.9				
Intersection Summary												
HCM 6th Ctrl Delay			94.9									
HCM 6th LOS			F									

HCM 6th Signalized Intersection Summary
2: Chester Street & Dry Creek Road

2030 Total PM.syn

04/24/2019

												
Movement	EBL	EBT	EBR	WBL	WBT	WBR	NBL	NBT	NBR	SBL	SBT	SBR
Lane Configurations		  		 	  		 		 	 	 	
Traffic Volume (veh/h)	22	972	205	503	1694	106	700	83	1868	378	75	75
Future Volume (veh/h)	22	972	205	503	1694	106	700	83	1868	378	75	75
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	24	1023	223	547	1841	115	761	90	1378	411	82	82
Peak Hour Factor	0.92	0.95	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	101	1085	337	590	1840	571	1207	787	1174	509	282	282
Arrive On Green	0.01	0.07	0.07	0.17	0.36	0.36	0.14	0.42	0.42	0.05	0.33	0.33
Sat Flow, veh/h	1781	5106	1585	3456	5106	1585	3456	1870	2790	3456	858	858
Grp Volume(v), veh/h	24	1023	223	547	1841	115	761	90	1378	411	0	164
Grp Sat Flow(s),veh/h/ln	1781	1702	1585	1728	1702	1585	1728	1870	1395	1728	0	1716
Q Serve(g_s), s	1.3	23.9	16.5	18.7	43.2	6.0	16.5	3.5	50.5	5.5	0.0	8.5
Cycle Q Clear(g_c), s	1.3	23.9	16.5	18.7	43.2	6.0	16.5	3.5	50.5	5.5	0.0	8.5
Prop In Lane	1.00		1.00	1.00		1.00	1.00		1.00	1.00		0.50
Lane Grp Cap(c), veh/h	101	1085	337	590	1840	571	1207	787	1174	509	0	565
V/C Ratio(X)	0.24	0.94	0.66	0.93	1.00	0.20	0.63	0.11	1.17	0.81	0.00	0.29
Avail Cap(c_a), veh/h	142	1085	337	590	1840	571	1207	787	1174	509	0	565
HCM Platoon Ratio	0.33	0.33	0.33	1.00	1.00	1.00	1.00	1.00	1.00	1.00	1.00	1.00
Upstream Filter(I)	0.78	0.78	0.78	0.89	0.89	0.89	0.09	0.09	0.09	1.00	0.00	1.00
Uniform Delay (d), s/veh	38.9	55.1	51.6	49.0	38.4	26.5	21.7	21.1	34.8	32.6	0.0	29.9
Incr Delay (d2), s/veh	0.9	13.9	7.8	19.2	19.9	0.7	0.1	0.0	79.1	9.4	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	0.6	12.4	7.8	9.6	21.1	2.4	7.0	1.6	29.5	4.0	0.0	3.7
Unsig. Movement Delay, s/veh												
LnGrp Delay(d),s/veh	39.8	68.9	59.4	68.2	58.3	27.2	21.8	21.2	113.9	42.0	0.0	31.2
LnGrp LOS	D	E	E	E	F	C	C	C	F	D	A	C
Approach Vol, veh/h		1270			2503			2229			575	
Approach Delay, s/veh		66.7			59.0			78.7			38.9	
Approach LOS		E			E			E			D	
Timer - Assigned Phs	1	2	3	4	5	6	7	8				
Phs Duration (G+Y+Rc), s	10.0	55.0	25.0	30.0	21.0	44.0	7.3	47.7				
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	5.5	50.5	20.5	25.5	16.5	39.5	5.5	40.5				
Max Q Clear Time (g_c+l1), s	7.5	52.5	20.7	25.9	18.5	10.5	3.3	45.2				
Green Ext Time (p_c), s	0.0	0.0	0.0	0.0	0.0	1.0	0.0	0.0				
Intersection Summary												
HCM 6th Ctrl Delay			65.4									
HCM 6th LOS			E									

HCM 6th Signalized Intersection Summary

2: Chester Street & Dry Creek Road

2030 Total AM_Imp.syn

04/24/2019

												
Movement	EBL	EBT	EBR	WBL	WBT	WBR	NBL	NBT	NBR	SBL	SBT	SBR
Lane Configurations		  		  	  		 		 	 	 	
Traffic Volume (veh/h)	40	1274	597	1595	811	549	150	55	389	131	131	34
Future Volume (veh/h)	40	1274	597	1595	811	549	150	55	389	131	131	34
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	43	1385	649	1734	872	590	163	60	0	142	142	37
Peak Hour Factor	0.92	0.92	0.92	0.92	0.93	0.93	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	231	1617	502	1695	3178	987	407	288		585	221	57
Arrive On Green	0.04	0.42	0.42	0.56	1.00	1.00	0.01	0.05	0.00	0.04	0.15	0.15
Sat Flow, veh/h	1781	5106	1585	5023	5106	1585	3456	1870	2790	3456	1431	373
Grp Volume(v), veh/h	43	1385	649	1734	872	590	163	60	0	142	0	179
Grp Sat Flow(s),veh/h/ln	1781	1702	1585	1674	1702	1585	1728	1870	1395	1728	0	1803
Q Serve(g_s), s	1.9	29.5	38.0	40.5	0.0	0.0	4.8	3.7	0.0	4.1	0.0	11.2
Cycle Q Clear(g_c), s	1.9	29.5	38.0	40.5	0.0	0.0	4.8	3.7	0.0	4.1	0.0	11.2
Prop In Lane	1.00		1.00	1.00		1.00	1.00		1.00	1.00		0.21
Lane Grp Cap(c), veh/h	231	1617	502	1695	3178	987	407	288		585	0	278
V/C Ratio(X)	0.19	0.86	1.29	1.02	0.27	0.60	0.40	0.21		0.24	0.00	0.64
Avail Cap(c_a), veh/h	249	1617	502	1695	3178	987	407	288		585	0	278
HCM Platoon Ratio	1.33	1.33	1.33	1.67	1.67	1.67	0.33	0.33	0.33	1.00	1.00	1.00
Upstream Filter(I)	0.42	0.42	0.42	0.68	0.68	0.68	0.90	0.90	0.00	1.00	0.00	1.00
Uniform Delay (d), s/veh	25.8	32.3	34.7	26.2	0.0	0.0	42.5	49.9	0.0	40.5	0.0	47.7
Incr Delay (d2), s/veh	0.2	2.7	138.2	24.1	0.1	1.8	0.6	1.5	0.0	0.2	0.0	11.0
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	0.8	11.6	32.7	16.3	0.0	0.5	2.1	1.9	0.0	1.8	0.0	5.9
Unsig. Movement Delay, s/veh												
LnGrp Delay(d),s/veh	26.0	34.9	172.9	50.2	0.1	1.8	43.1	51.4	0.0	40.7	0.0	58.6
LnGrp LOS	C	C	F	F	A	A	D	D		D	A	E
Approach Vol, veh/h		2077			3196			223	A		321	
Approach Delay, s/veh		77.9			27.6			45.3			50.7	
Approach LOS		E			C			D			D	
Timer - Assigned Phs	1	2	3	4	5	6	7	8				
Phs Duration (G+Y+Rc), s	9.5	23.0	45.0	42.5	9.5	23.0	8.3	79.2				
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	5.0	18.5	40.5	38.0	5.0	18.5	5.0	73.5				
Max Q Clear Time (g_c+I1), s	6.1	5.7	42.5	40.0	6.8	13.2	3.9	2.0				
Green Ext Time (p_c), s	0.0	0.2	0.0	0.0	0.0	0.4	0.0	11.9				
Intersection Summary												
HCM 6th Ctrl Delay			47.5									
HCM 6th LOS			D									
Notes												
Unsignalized Delay for [NBR] is excluded from calculations of the approach delay and intersection delay.												

HCM 6th Signalized Intersection Summary

2: Chester Street & Dry Creek Road

2030 Total PM_Imp.syn

04/24/2019

												
Movement	EBL	EBT	EBR	WBL	WBT	WBR	NBL	NBT	NBR	SBL	SBT	SBR
Lane Configurations		  		  	  		 		 	 	 	
Traffic Volume (veh/h)	22	972	205	503	1694	106	700	83	1868	378	75	75
Future Volume (veh/h)	22	972	205	503	1694	106	700	83	1868	378	75	75
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	24	1023	223	547	1841	115	761	90	0	411	82	82
Peak Hour Factor	0.92	0.95	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	158	1946	604	680	2521	783	893	429		871	132	132
Arrive On Green	0.01	0.13	0.13	0.18	0.66	0.66	0.18	0.23	0.00	0.10	0.15	0.15
Sat Flow, veh/h	1781	5106	1585	5023	5106	1585	3456	1870	2790	3456	858	858
Grp Volume(v), veh/h	24	1023	223	547	1841	115	761	90	0	411	0	164
Grp Sat Flow(s),veh/h/ln	1781	1702	1585	1674	1702	1585	1728	1870	1395	1728	0	1716
Q Serve(g_s), s	1.0	22.5	15.5	12.5	28.5	3.3	21.5	4.7	0.0	12.0	0.0	10.7
Cycle Q Clear(g_c), s	1.0	22.5	15.5	12.5	28.5	3.3	21.5	4.7	0.0	12.0	0.0	10.7
Prop In Lane	1.00		1.00	1.00		1.00	1.00		1.00	1.00		0.50
Lane Grp Cap(c), veh/h	158	1946	604	680	2521	783	893	429		871	0	265
V/C Ratio(X)	0.15	0.53	0.37	0.80	0.73	0.15	0.85	0.21		0.47	0.00	0.62
Avail Cap(c_a), veh/h	199	1946	604	1109	2521	783	893	429		871	0	265
HCM Platoon Ratio	0.33	0.33	0.33	1.33	1.33	1.33	1.00	1.00	1.00	1.00	1.00	1.00
Upstream Filter(I)	0.86	0.86	0.86	0.89	0.89	0.89	0.09	0.09	0.00	1.00	0.00	1.00
Uniform Delay (d), s/veh	23.0	42.3	39.2	47.7	15.3	11.0	33.8	37.5	0.0	37.5	0.0	47.5
Incr Delay (d2), s/veh	0.4	0.9	1.5	2.0	1.7	0.4	0.8	0.1	0.0	0.4	0.0	10.5
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	0.4	10.5	6.8	5.1	9.4	1.2	9.2	2.2	0.0	5.1	0.0	5.4
Unsig. Movement Delay, s/veh												
LnGrp Delay(d),s/veh	23.4	43.2	40.7	49.7	17.0	11.4	34.6	37.6	0.0	37.9	0.0	57.9
LnGrp LOS	C	D	D	D	B	B	C	D		D	A	E
Approach Vol, veh/h		1270			2503			851	A		575	
Approach Delay, s/veh		42.4			23.9			34.9			43.6	
Approach LOS		D			C			C			D	
Timer - Assigned Phs	1	2	3	4	5	6	7	8				
Phs Duration (G+Y+Rc), s	17.0	32.0	20.8	50.2	26.0	23.0	7.3	63.7				
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	12.5	27.5	26.5	35.5	21.5	18.5	5.5	56.5				
Max Q Clear Time (g_c+I1), s	14.0	6.7	14.5	24.5	23.5	12.7	3.0	30.5				
Green Ext Time (p_c), s	0.0	0.4	1.7	5.8	0.0	0.4	0.0	16.9				

Intersection Summary

HCM 6th Ctrl Delay 32.4

HCM 6th LOS C

Notes

User approved pedestrian interval to be less than phase max green.

Unsignalized Delay for [NBR] is excluded from calculations of the approach delay and intersection delay.

HCM 6th Signalized Intersection Summary

2: Chester Street & Dry Creek Road

2040 Background AM.syn

04/25/2019

												
Movement	EBL	EBT	EBR	WBL	WBT	WBR	NBL	NBT	NBR	SBL	SBT	SBR
Lane Configurations		  		 	  		 		 	 	 	
Traffic Volume (veh/h)	42	1339	191	1066	853	577	39	58	201	138	138	36
Future Volume (veh/h)	42	1339	191	1066	853	577	39	58	201	138	138	36
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	46	1455	208	1159	917	620	42	63	218	150	150	39
Peak Hour Factor	0.92	0.92	0.92	0.92	0.93	0.93	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	223	1592	494	1198	3195	992	372	281	418	515	229	60
Arrive On Green	0.04	0.41	0.41	0.58	1.00	1.00	0.01	0.05	0.05	0.04	0.16	0.16
Sat Flow, veh/h	1781	5106	1585	3456	5106	1585	3456	1870	2790	3456	1431	372
Grp Volume(v), veh/h	46	1455	208	1159	917	620	42	63	218	150	0	189
Grp Sat Flow(s),veh/h/ln	1781	1702	1585	1728	1702	1585	1728	1870	1395	1728	0	1803
Q Serve(g_s), s	2.1	32.2	11.2	38.5	0.0	0.0	1.2	3.9	9.1	4.4	0.0	11.8
Cycle Q Clear(g_c), s	2.1	32.2	11.2	38.5	0.0	0.0	1.2	3.9	9.1	4.4	0.0	11.8
Prop In Lane	1.00		1.00	1.00		1.00	1.00		1.00	1.00		0.21
Lane Grp Cap(c), veh/h	223	1592	494	1198	3195	992	372	281	418	515	0	289
V/C Ratio(X)	0.21	0.91	0.42	0.97	0.29	0.63	0.11	0.22	0.52	0.29	0.00	0.65
Avail Cap(c_a), veh/h	241	1592	494	1224	3195	992	408	281	418	515	0	289
HCM Platoon Ratio	1.33	1.33	1.33	1.67	1.67	1.67	0.33	0.33	0.33	1.00	1.00	1.00
Upstream Filter(I)	0.37	0.37	0.37	0.74	0.74	0.74	0.99	0.99	0.99	1.00	0.00	1.00
Uniform Delay (d), s/veh	26.2	33.6	27.4	24.6	0.0	0.0	42.1	50.3	52.8	41.1	0.0	47.3
Incr Delay (d2), s/veh	0.2	4.0	1.0	15.0	0.2	2.2	0.1	1.8	4.5	0.3	0.0	11.0
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	0.9	12.8	4.1	14.6	0.0	0.6	0.5	2.0	3.7	1.9	0.0	6.2
Unsig. Movement Delay, s/veh												
LnGrp Delay(d),s/veh	26.3	37.6	28.4	39.6	0.2	2.2	42.2	52.2	57.4	41.4	0.0	58.3
LnGrp LOS	C	D	C	D	A	A	D	D	E	D	A	E
Approach Vol, veh/h		1709			2696			323			339	
Approach Delay, s/veh		36.2			17.6			54.4			50.8	
Approach LOS		D			B			D			D	
Timer - Assigned Phs	1	2	3	4	5	6	7	8				
Phs Duration (G+Y+Rc), s	9.5	22.5	46.1	41.9	8.3	23.7	8.4	79.6				
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	5.0	18.0	42.5	36.5	5.0	18.0	5.1	73.9				
Max Q Clear Time (g_c+l1), s	6.4	11.1	40.5	34.2	3.2	13.8	4.1	2.0				
Green Ext Time (p_c), s	0.0	0.6	1.1	1.9	0.0	0.3	0.0	13.0				
Intersection Summary												
HCM 6th Ctrl Delay			28.4									
HCM 6th LOS			C									

HCM 6th Signalized Intersection Summary

2: Chester Street & Dry Creek Road

2040 Background PM.syn

04/25/2019

												
Movement	EBL	EBT	EBR	WBL	WBT	WBR	NBL	NBT	NBR	SBL	SBT	SBR
Lane Configurations		  		 	  		 		 	 	 	
Traffic Volume (veh/h)	23	1022	62	314	1781	111	288	88	1179	398	79	79
Future Volume (veh/h)	23	1022	62	314	1781	111	288	88	1179	398	79	79
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	25	1076	67	341	1936	121	313	96	1065	433	86	86
Peak Hour Factor	0.92	0.95	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	115	1658	515	404	2135	663	968	673	1004	592	307	307
Arrive On Green	0.01	0.11	0.11	0.12	0.42	0.42	0.05	0.36	0.36	0.05	0.36	0.36
Sat Flow, veh/h	1781	5106	1585	3456	5106	1585	3456	1870	2790	3456	858	858
Grp Volume(v), veh/h	25	1076	67	341	1936	121	313	96	1065	433	0	172
Grp Sat Flow(s),veh/h/ln	1781	1702	1585	1728	1702	1585	1728	1870	1395	1728	0	1716
Q Serve(g_s), s	1.1	24.3	4.6	11.6	42.6	5.8	6.1	4.2	43.2	5.8	0.0	8.6
Cycle Q Clear(g_c), s	1.1	24.3	4.6	11.6	42.6	5.8	6.1	4.2	43.2	5.8	0.0	8.6
Prop In Lane	1.00		1.00	1.00		1.00	1.00		1.00	1.00		0.50
Lane Grp Cap(c), veh/h	115	1658	515	404	2135	663	968	673	1004	592	0	613
V/C Ratio(X)	0.22	0.65	0.13	0.84	0.91	0.18	0.32	0.14	1.06	0.73	0.00	0.28
Avail Cap(c_a), veh/h	147	1658	515	498	2135	663	968	673	1004	592	0	613
HCM Platoon Ratio	0.33	0.33	0.33	1.00	1.00	1.00	1.00	1.00	1.00	1.00	1.00	1.00
Upstream Filter(I)	0.82	0.82	0.82	0.88	0.88	0.88	0.65	0.65	0.65	1.00	0.00	1.00
Uniform Delay (d), s/veh	31.1	47.0	38.2	51.9	32.7	22.0	24.3	25.9	38.4	29.0	0.0	27.5
Incr Delay (d2), s/veh	0.8	1.6	0.4	9.4	6.3	0.5	0.1	0.3	40.8	4.6	0.0	1.1
Initial Q Delay(d3),s/veh	0.0	0.0	0.0	0.0	0.0	0.0	0.0	0.0	0.0	0.0	0.0	0.0
%ile BackOfQ(50%),veh/ln	0.5	11.4	1.9	5.5	18.4	2.3	2.9	1.9	20.2	3.1	0.0	3.7
Unsig. Movement Delay, s/veh												
LnGrp Delay(d),s/veh	31.8	48.6	38.7	61.3	39.0	22.5	24.4	26.2	79.2	33.6	0.0	28.7
LnGrp LOS	C	D	D	E	D	C	C	C	F	C	A	C
Approach Vol, veh/h	1168		2398			1474			605			
Approach Delay, s/veh	47.7		41.3			64.1			32.2			
Approach LOS	D		D			E			C			
Timer - Assigned Phs	1	2	3	4	5	6	7	8				
Phs Duration (G+Y+Rc), s	10.3	47.7	18.5	43.5	10.6	47.4	7.3	54.7				
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	5.8	43.2	17.3	35.7	6.1	42.9	5.0	48.0				
Max Q Clear Time (g_c+l1), s	7.8	45.2	13.6	26.3	8.1	10.6	3.1	44.6				
Green Ext Time (p_c), s	0.0	0.0	0.4	5.1	0.0	1.1	0.0	3.0				
Intersection Summary												
HCM 6th Ctrl Delay			47.6									
HCM 6th LOS			D									

HCM 6th Signalized Intersection Summary

2: Chester Street & Dry Creek Road

2040 Total AM.syn

04/25/2019

												
Movement	EBL	EBT	EBR	WBL	WBT	WBR	NBL	NBT	NBR	SBL	SBT	SBR
Lane Configurations		  		  	  		 		 	 		
Traffic Volume (veh/h)	42	1339	606	1647	853	577	152	58	399	138	138	36
Future Volume (veh/h)	42	1339	606	1647	853	577	152	58	399	138	138	36
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	46	1455	659	1790	917	620	165	63	0	150	150	39
Peak Hour Factor	0.92	0.92	0.92	0.92	0.93	0.93	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	222	1574	489	1737	3173	985	392	288		580	221	57
Arrive On Green	0.04	0.41	0.41	0.58	1.00	1.00	0.01	0.05	0.00	0.04	0.15	0.15
Sat Flow, veh/h	1781	5106	1585	5023	5106	1585	3456	1870	2790	3456	1431	372
Grp Volume(v), veh/h	46	1455	659	1790	917	620	165	63	0	150	0	189
Grp Sat Flow(s),veh/h/ln	1781	1702	1585	1674	1702	1585	1728	1870	1395	1728	0	1803
Q Serve(g_s), s	2.1	32.5	37.0	41.5	0.0	0.0	4.8	3.9	0.0	4.4	0.0	11.9
Cycle Q Clear(g_c), s	2.1	32.5	37.0	41.5	0.0	0.0	4.8	3.9	0.0	4.4	0.0	11.9
Prop In Lane	1.00		1.00	1.00		1.00	1.00		1.00	1.00		0.21
Lane Grp Cap(c), veh/h	222	1574	489	1737	3173	985	392	288		580	0	278
V/C Ratio(X)	0.21	0.92	1.35	1.03	0.29	0.63	0.42	0.22		0.26	0.00	0.68
Avail Cap(c_a), veh/h	238	1574	489	1737	3173	985	392	288		580	0	278
HCM Platoon Ratio	1.33	1.33	1.33	1.67	1.67	1.67	0.33	0.33	0.33	1.00	1.00	1.00
Upstream Filter(I)	0.30	0.30	0.30	0.64	0.64	0.64	0.90	0.90	0.00	1.00	0.00	1.00
Uniform Delay (d), s/veh	26.4	34.1	35.4	25.3	0.0	0.0	42.6	50.0	0.0	40.6	0.0	48.0
Incr Delay (d2), s/veh	0.1	3.8	160.9	25.7	0.1	2.0	0.6	1.6	0.0	0.2	0.0	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	0.9	12.9	34.9	16.8	0.0	0.5	2.2	2.0	0.0	1.9	0.0	6.3
Unsig. Movement Delay, s/veh												
LnGrp Delay(d),s/veh	26.6	37.8	196.3	51.0	0.1	2.0	43.2	51.6	0.0	40.9	0.0	60.6
LnGrp LOS	C	D	F	F	A	A	D	D		D	A	E
Approach Vol, veh/h		2160			3327			228	A		339	
Approach Delay, s/veh		86.0			27.8			45.5			51.9	
Approach LOS		F			C			D			D	
Timer - Assigned Phs	1	2	3	4	5	6	7	8				
Phs Duration (G+Y+Rc), s	9.5	23.0	46.0	41.5	9.5	23.0	8.4	79.1				
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	5.0	18.5	41.5	37.0	5.0	18.5	5.0	73.5				
Max Q Clear Time (g_c+l1), s	6.4	5.9	43.5	39.0	6.8	13.9	4.1	2.0				
Green Ext Time (p_c), s	0.0	0.2	0.0	0.0	0.0	0.4	0.0	13.0				
Intersection Summary												
HCM 6th Ctrl Delay			50.6									
HCM 6th LOS			D									
Notes												
Unsignalized Delay for [NBR] is excluded from calculations of the approach delay and intersection delay.												

HCM 6th Signalized Intersection Summary

2: Chester Street & Dry Creek Road

2040 Total PM.syn

04/25/2019

												
Movement	EBL	EBT	EBR	WBL	WBT	WBR	NBL	NBT	NBR	SBL	SBT	SBR
Lane Configurations		  		  	  		 		 	 	 	
Traffic Volume (veh/h)	23	1022	208	518	1781	111	714	88	1925	398	79	79
Future Volume (veh/h)	23	1022	208	518	1781	111	714	88	1925	398	79	79
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	25	1076	226	563	1936	121	776	96	0	433	86	86
Peak Hour Factor	0.92	0.95	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	149	1930	599	697	2518	782	880	429		869	132	132
Arrive On Green	0.01	0.12	0.12	0.18	0.66	0.66	0.18	0.23	0.00	0.10	0.15	0.15
Sat Flow, veh/h	1781	5106	1585	5023	5106	1585	3456	1870	2790	3456	858	858
Grp Volume(v), veh/h	25	1076	226	563	1936	121	776	96	0	433	0	172
Grp Sat Flow(s),veh/h/ln	1781	1702	1585	1674	1702	1585	1728	1870	1395	1728	0	1716
Q Serve(g_s), s	1.0	23.8	15.7	12.9	31.6	3.5	21.5	5.0	0.0	12.5	0.0	11.3
Cycle Q Clear(g_c), s	1.0	23.8	15.7	12.9	31.6	3.5	21.5	5.0	0.0	12.5	0.0	11.3
Prop In Lane	1.00		1.00	1.00		1.00	1.00		1.00	1.00		0.50
Lane Grp Cap(c), veh/h	149	1930	599	697	2518	782	880	429		869	0	265
V/C Ratio(X)	0.17	0.56	0.38	0.81	0.77	0.15	0.88	0.22		0.50	0.00	0.65
Avail Cap(c_a), veh/h	188	1930	599	1109	2518	782	880	429		869	0	265
HCM Platoon Ratio	0.33	0.33	0.33	1.33	1.33	1.33	1.00	1.00	1.00	1.00	1.00	1.00
Upstream Filter(I)	0.85	0.85	0.85	0.88	0.88	0.88	0.48	0.48	0.00	1.00	0.00	1.00
Uniform Delay (d), s/veh	23.7	43.1	39.5	47.4	15.9	11.1	34.4	37.6	0.0	37.7	0.0	47.7
Incr Delay (d2), s/veh	0.4	1.0	1.5	2.1	2.1	0.4	5.4	0.6	0.0	0.4	0.0	11.8
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	0.5	11.1	6.9	5.3	10.4	1.3	10.0	2.4	0.0	5.4	0.0	5.7
Unsig. Movement Delay, s/veh												
LnGrp Delay(d),s/veh	24.1	44.1	41.1	49.5	18.0	11.4	39.8	38.2	0.0	38.2	0.0	59.5
LnGrp LOS	C	D	D	D	B	B	D	D		D	A	E
Approach Vol, veh/h		1327			2620			872	A		605	
Approach Delay, s/veh		43.2			24.4			39.6			44.2	
Approach LOS		D			C			D			D	
Timer - Assigned Phs	1	2	3	4	5	6	7	8				
Phs Duration (G+Y+Rc), s	17.0	32.0	21.2	49.8	26.0	23.0	7.3	63.7				
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	12.5	27.5	26.5	35.5	21.5	18.5	5.5	56.5				
Max Q Clear Time (g_c+I1), s	14.5	7.0	14.9	25.8	23.5	13.3	3.0	33.6				
Green Ext Time (p_c), s	0.0	0.4	1.8	5.5	0.0	0.4	0.0	16.3				

Intersection Summary

HCM 6th Ctrl Delay	33.7
HCM 6th LOS	C

Notes

User approved pedestrian interval to be less than phase max green.

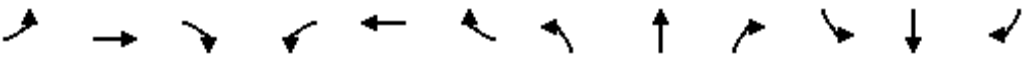
Unsignalized Delay for [NBR] is excluded from calculations of the approach delay and intersection delay.

HCM 6th Signalized Intersection Summary

3: Dry Creek Road & I-25 Southbound Ramp

2019 Existing AM.syn

04/24/2019

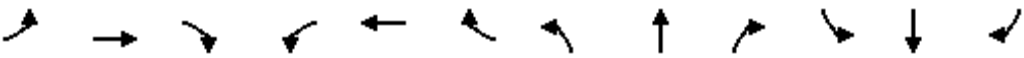
												
Movement	EBL	EBT	EBR	WBL	WBT	WBR	NBL	NBT	NBR	SBL	SBT	SBR
Lane Configurations		↑↑↑	↗	↖	↑↑↑					↖	↗	↗
Traffic Volume (veh/h)	0	1117	225	255	1497	0	0	0	0	906	2	933
Future Volume (veh/h)	0	1117	225	255	1497	0	0	0	0	906	2	933
Initial Q (Qb), veh	0	0	0	0	0	0				0	0	0
Ped-Bike Adj(A_pbT)	1.00		1.00	1.00		1.00				1.00		1.00
Parking Bus, Adj	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	
Adj Sat Flow, veh/h/ln	0	1870	1870	1870	1870	0				1870	1870	1870
Adj Flow Rate, veh/h	0	1214	0	304	1627	0				1013	0	0
Peak Hour Factor	0.92	0.92	0.91	0.84	0.92	0.92				0.90	0.25	0.89
Percent Heavy Veh, %	0	2	2	2	2	0				2	2	2
Cap, veh/h	0	2039		373	2362	0				1648	0	
Arrive On Green	0.00	0.63	0.00	0.07	0.31	0.00				0.46	0.00	0.00
Sat Flow, veh/h	0	6696	1585	3456	5274	0				3563	0	3170
Grp Volume(v), veh/h	0	1214	0	304	1627	0				1013	0	0
Grp Sat Flow(s),veh/h/ln	0	1609	1585	1728	1702	0				1781	0	1585
Q Serve(g_s), s	0.0	13.3	0.0	10.4	33.6	0.0				25.6	0.0	0.0
Cycle Q Clear(g_c), s	0.0	13.3	0.0	10.4	33.6	0.0				25.6	0.0	0.0
Prop In Lane	0.00		1.00	1.00		0.00				1.00		1.00
Lane Grp Cap(c), veh/h	0	2039		373	2362	0				1648	0	
V/C Ratio(X)	0.00	0.60		0.81	0.69	0.00				0.61	0.00	
Avail Cap(c_a), veh/h	0	2039		533	2362	0				1648	0	
HCM Platoon Ratio	1.00	2.00	2.00	0.67	0.67	1.00				1.00	1.00	1.00
Upstream Filter(I)	0.00	0.64	0.00	0.81	0.81	0.00				1.00	0.00	0.00
Uniform Delay (d), s/veh	0.0	17.4	0.0	54.5	33.8	0.0				24.2	0.0	0.0
Incr Delay (d2), s/veh	0.0	0.8	0.0	5.3	1.4	0.0				1.7	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
%ile BackOfQ(50%),veh/ln	0.0	3.7	0.0	4.9	14.8	0.0				11.0	0.0	0.0
Unsig. Movement Delay, s/veh												
LnGrp Delay(d),s/veh	0.0	18.3	0.0	59.7	35.2	0.0				25.9	0.0	0.0
LnGrp LOS	A	B		E	D	A				C	A	
Approach Vol, veh/h		1214	A		1931						1013	A
Approach Delay, s/veh		18.3			39.1						25.9	
Approach LOS		B			D						C	
Timer - Assigned Phs			3	4		6		8				
Phs Duration (G+Y+Rc), s			17.5	42.5		60.0		60.0				
Change Period (Y+Rc), s			4.5	4.5		4.5		4.5				
Max Green Setting (Gmax), s			18.5	32.5		55.5		55.5				
Max Q Clear Time (g_c+l1), s			12.4	15.3		27.6		35.6				
Green Ext Time (p_c), s			0.6	8.2		4.4		12.2				
Intersection Summary												
HCM 6th Ctrl Delay			29.8									
HCM 6th LOS			C									
Notes												
User approved volume balancing among the lanes for turning movement.												
Unsignalized Delay for [EBR, SBR] is excluded from calculations of the approach delay and intersection delay.												

HCM 6th Signalized Intersection Summary

3: Dry Creek Road & I-25 Southbound Ramp

2019 Existing PM.syn

04/24/2019

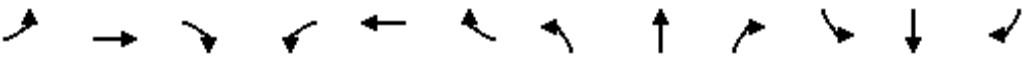
												
Movement	EBL	EBT	EBR	WBL	WBT	WBR	NBL	NBT	NBR	SBL	SBT	SBR
Lane Configurations		↑↑↑	↗	↖	↑↑↑					↘	↖	↗
Traffic Volume (veh/h)	0	1629	646	763	1728	0	0	0	0	295	8	426
Future Volume (veh/h)	0	1629	646	763	1728	0	0	0	0	295	8	426
Initial Q (Qb), veh	0	0	0	0	0	0				0	0	0
Ped-Bike Adj(A_pbT)	1.00		1.00	1.00		1.00				1.00		1.00
Parking Bus, Adj	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	
Adj Sat Flow, veh/h/ln	0	1870	1870	1870	1870	0				1870	1870	1870
Adj Flow Rate, veh/h	0	1752	0	857	1858	0				335	0	0
Peak Hour Factor	0.92	0.93	0.91	0.89	0.93	0.92				0.91	0.50	0.97
Percent Heavy Veh, %	0	2	2	2	2	0				2	2	2
Cap, veh/h	0	2831		927	3808	0				638	0	
Arrive On Green	0.00	0.15	0.00	0.54	1.00	0.00				0.18	0.00	0.00
Sat Flow, veh/h	0	6696	1585	3456	5274	0				3563	0	3170
Grp Volume(v), veh/h	0	1752	0	857	1858	0				335	0	0
Grp Sat Flow(s),veh/h/ln	0	1609	1585	1728	1702	0				1781	0	1585
Q Serve(g_s), s	0.0	30.7	0.0	27.4	0.0	0.0				10.2	0.0	0.0
Cycle Q Clear(g_c), s	0.0	30.7	0.0	27.4	0.0	0.0				10.2	0.0	0.0
Prop In Lane	0.00		1.00	1.00		0.00				1.00		1.00
Lane Grp Cap(c), veh/h	0	2831		927	3808	0				638	0	
V/C Ratio(X)	0.00	0.62		0.92	0.49	0.00				0.52	0.00	
Avail Cap(c_a), veh/h	0	2831		1195	3808	0				638	0	
HCM Platoon Ratio	1.00	0.33	0.33	2.00	2.00	1.00				1.00	1.00	1.00
Upstream Filter(I)	0.00	0.63	0.00	0.58	0.58	0.00				1.00	0.00	0.00
Uniform Delay (d), s/veh	0.0	41.8	0.0	26.7	0.0	0.0				44.6	0.0	0.0
Incr Delay (d2), s/veh	0.0	0.6	0.0	6.4	0.3	0.0				3.1	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
%ile BackOfQ(50%),veh/ln	0.0	13.4	0.0	9.0	0.1	0.0				4.8	0.0	0.0
Unsig. Movement Delay, s/veh												
LnGrp Delay(d),s/veh	0.0	42.5	0.0	33.1	0.3	0.0				47.7	0.0	0.0
LnGrp LOS	A	D		C	A	A				D	A	
Approach Vol, veh/h		1752	A		2715						335	A
Approach Delay, s/veh		42.5			10.6						47.7	
Approach LOS		D			B						D	
Timer - Assigned Phs			3	4		6		8				
Phs Duration (G+Y+Rc), s			36.7	57.3		26.0		94.0				
Change Period (Y+Rc), s			4.5	4.5		4.5		4.5				
Max Green Setting (Gmax), s			41.5	43.5		21.5		89.5				
Max Q Clear Time (g_c+I1), s			29.4	32.7		12.2		2.0				
Green Ext Time (p_c), s			2.8	8.2		0.8		28.7				
Intersection Summary												
HCM 6th Ctrl Delay			24.8									
HCM 6th LOS			C									
Notes												
User approved volume balancing among the lanes for turning movement.												
Unsignalized Delay for [EBR, SBR] is excluded from calculations of the approach delay and intersection delay.												

HCM 6th Signalized Intersection Summary

3: Dry Creek Road & I-25 Southbound Ramp

2030 Background AM.syn

04/29/2019

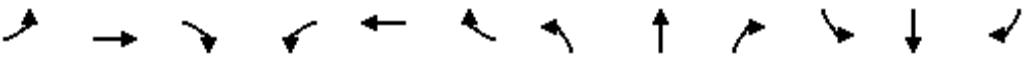
												
Movement	EBL	EBT	EBR	WBL	WBT	WBR	NBL	NBT	NBR	SBL	SBT	SBR
Lane Configurations		↑↑↑	↗	↗↗	↑↑↑					↗	↗	↗↗
Traffic Volume (veh/h)	0	1180	238	269	1581	0	0	0	0	957	2	986
Future Volume (veh/h)	0	1180	238	269	1581	0	0	0	0	957	2	986
Initial Q (Qb), veh	0	0	0	0	0	0				0	0	0
Ped-Bike Adj(A_pbT)	1.00		1.00	1.00		1.00				1.00		1.00
Parking Bus, Adj	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	
Adj Sat Flow, veh/h/ln	0	1870	1870	1870	1870	0				1870	1870	1870
Adj Flow Rate, veh/h	0	1283	0	292	1718	0				1041	0	0
Peak Hour Factor	0.92	0.92	0.92	0.92	0.92	0.92				0.92	0.92	0.92
Percent Heavy Veh, %	0	2	2	2	2	0				2	2	2
Cap, veh/h	0	2233		356	2489	0				1559	0	
Arrive On Green	0.00	0.69	0.00	0.10	0.49	0.00				0.44	0.00	0.00
Sat Flow, veh/h	0	6696	1585	3456	5274	0				3563	0	3170
Grp Volume(v), veh/h	0	1283	0	292	1718	0				1041	0	0
Grp Sat Flow(s),veh/h/ln	0	1609	1585	1728	1702	0				1781	0	1585
Q Serve(g_s), s	0.0	12.2	0.0	9.9	31.2	0.0				27.9	0.0	0.0
Cycle Q Clear(g_c), s	0.0	12.2	0.0	9.9	31.2	0.0				27.9	0.0	0.0
Prop In Lane	0.00		1.00	1.00		0.00				1.00		1.00
Lane Grp Cap(c), veh/h	0	2233		356	2489	0				1559	0	
V/C Ratio(X)	0.00	0.57		0.82	0.69	0.00				0.67	0.00	
Avail Cap(c_a), veh/h	0	2233		475	2489	0				1559	0	
HCM Platoon Ratio	1.00	2.00	2.00	1.00	1.00	1.00				1.00	1.00	1.00
Upstream Filter(I)	0.00	0.56	0.00	0.82	0.82	0.00				1.00	0.00	0.00
Uniform Delay (d), s/veh	0.0	13.9	0.0	52.7	23.8	0.0				26.8	0.0	0.0
Incr Delay (d2), s/veh	0.0	0.6	0.0	6.9	1.3	0.0				2.3	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
%ile BackOfQ(50%),veh/ln	0.0	3.2	0.0	4.6	12.6	0.0				12.1	0.0	0.0
Unsig. Movement Delay, s/veh												
LnGrp Delay(d),s/veh	0.0	14.5	0.0	59.6	25.1	0.0				29.1	0.0	0.0
LnGrp LOS	A	B		E	C	A				C	A	
Approach Vol, veh/h		1283	A		2010						1041	A
Approach Delay, s/veh		14.5			30.1						29.1	
Approach LOS		B			C						C	
Timer - Assigned Phs			3	4		6		8				
Phs Duration (G+Y+Rc), s			16.9	46.1		57.0		63.0				
Change Period (Y+Rc), s			4.5	4.5		4.5		4.5				
Max Green Setting (Gmax), s			16.5	37.5		52.5		58.5				
Max Q Clear Time (g_c+l1), s			11.9	14.2		29.9		33.2				
Green Ext Time (p_c), s			0.4	10.2		4.4		15.0				
Intersection Summary												
HCM 6th Ctrl Delay			25.2									
HCM 6th LOS			C									
Notes												
User approved volume balancing among the lanes for turning movement.												
Unsignalized Delay for [EBR, SBR] is excluded from calculations of the approach delay and intersection delay.												

HCM 6th Signalized Intersection Summary

3: Dry Creek Road & I-25 Southbound Ramp

2030 Background PM.syn

04/24/2019

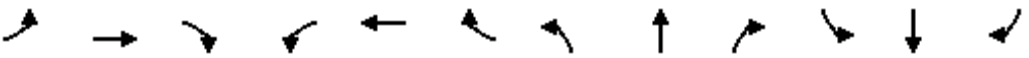
												
Movement	EBL	EBT	EBR	WBL	WBT	WBR	NBL	NBT	NBR	SBL	SBT	SBR
Lane Configurations		↑↑↑	↗	↗↗	↑↑↑					↗	↗	↗↗
Traffic Volume (veh/h)	0	1721	682	806	1825	0	0	0	0	312	8	450
Future Volume (veh/h)	0	1721	682	806	1825	0	0	0	0	312	8	450
Initial Q (Qb), veh	0	0	0	0	0	0				0	0	0
Ped-Bike Adj(A_pbT)	1.00		1.00	1.00		1.00				1.00		1.00
Parking Bus, Adj	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	
Adj Sat Flow, veh/h/ln	0	1870	1870	1870	1870	0				1870	1870	1870
Adj Flow Rate, veh/h	0	1851	0	876	1962	0				345	0	0
Peak Hour Factor	0.92	0.93	0.92	0.92	0.93	0.92				0.92	0.92	0.97
Percent Heavy Veh, %	0	2	2	2	2	0				2	2	2
Cap, veh/h	0	2798		945	3808	0				638	0	
Arrive On Green	0.00	0.14	0.00	0.55	1.00	0.00				0.18	0.00	0.00
Sat Flow, veh/h	0	6696	1585	3456	5274	0				3563	0	3170
Grp Volume(v), veh/h	0	1851	0	876	1962	0				345	0	0
Grp Sat Flow(s),veh/h/ln	0	1609	1585	1728	1702	0				1781	0	1585
Q Serve(g_s), s	0.0	32.7	0.0	28.0	0.0	0.0				10.6	0.0	0.0
Cycle Q Clear(g_c), s	0.0	32.7	0.0	28.0	0.0	0.0				10.6	0.0	0.0
Prop In Lane	0.00		1.00	1.00		0.00				1.00		1.00
Lane Grp Cap(c), veh/h	0	2798		945	3808	0				638	0	
V/C Ratio(X)	0.00	0.66		0.93	0.52	0.00				0.54	0.00	
Avail Cap(c_a), veh/h	0	2798		1195	3808	0				638	0	
HCM Platoon Ratio	1.00	0.33	0.33	2.00	2.00	1.00				1.00	1.00	1.00
Upstream Filter(l)	0.00	0.60	0.00	0.48	0.48	0.00				1.00	0.00	0.00
Uniform Delay (d), s/veh	0.0	43.0	0.0	26.1	0.0	0.0				44.8	0.0	0.0
Incr Delay (d2), s/veh	0.0	0.8	0.0	5.8	0.2	0.0				3.3	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
%ile BackOfQ(50%),veh/ln	0.0	14.3	0.0	9.0	0.1	0.0				5.0	0.0	0.0
Unsig. Movement Delay, s/veh												
LnGrp Delay(d),s/veh	0.0	43.8	0.0	31.8	0.2	0.0				48.0	0.0	0.0
LnGrp LOS	A	D		C	A	A				D	A	
Approach Vol, veh/h		1851	A		2838						345	A
Approach Delay, s/veh		43.8			10.0						48.0	
Approach LOS		D			A						D	
Timer - Assigned Phs			3	4		6		8				
Phs Duration (G+Y+Rc), s			37.3	56.7		26.0		94.0				
Change Period (Y+Rc), s			4.5	4.5		4.5		4.5				
Max Green Setting (Gmax), s			41.5	43.5		21.5		89.5				
Max Q Clear Time (g_c+l1), s			30.0	34.7		12.6		2.0				
Green Ext Time (p_c), s			2.9	7.1		0.8		32.3				
Intersection Summary												
HCM 6th Ctrl Delay			25.0									
HCM 6th LOS			C									
Notes												
User approved volume balancing among the lanes for turning movement.												
Unsignalized Delay for [EBR, SBR] is excluded from calculations of the approach delay and intersection delay.												

HCM 6th Signalized Intersection Summary

3: Dry Creek Road & I-25 Southbound Ramp

2030 Total AM.syn

04/24/2019

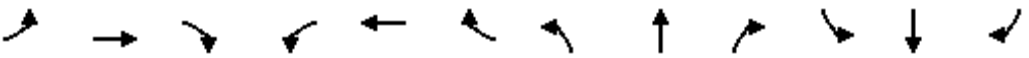
												
Movement	EBL	EBT	EBR	WBL	WBT	WBR	NBL	NBT	NBR	SBL	SBT	SBR
Lane Configurations		↑↑↑	↗	↖	↑↑↑					↖	↗	↗
Traffic Volume (veh/h)	0	1378	238	269	1788	0	0	0	0	957	2	1359
Future Volume (veh/h)	0	1378	238	269	1788	0	0	0	0	957	2	1359
Initial Q (Qb), veh	0	0	0	0	0	0				0	0	0
Ped-Bike Adj(A_pbT)	1.00		1.00	1.00		1.00				1.00		1.00
Parking Bus, Adj	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	
Adj Sat Flow, veh/h/ln	0	1870	1870	1870	1870	0				1870	1870	1870
Adj Flow Rate, veh/h	0	1498	0	292	1943	0				1041	0	0
Peak Hour Factor	0.92	0.92	0.92	0.92	0.92	0.92				0.92	0.92	0.92
Percent Heavy Veh, %	0	2	2	2	2	0				2	2	2
Cap, veh/h	0	2232		356	2489	0				1559	0	
Arrive On Green	0.00	0.69	0.00	0.10	0.49	0.00				0.44	0.00	0.00
Sat Flow, veh/h	0	6696	1585	3456	5274	0				3563	0	3170
Grp Volume(v), veh/h	0	1498	0	292	1943	0				1041	0	0
Grp Sat Flow(s),veh/h/ln	0	1609	1585	1728	1702	0				1781	0	1585
Q Serve(g_s), s	0.0	16.0	0.0	9.9	37.8	0.0				27.9	0.0	0.0
Cycle Q Clear(g_c), s	0.0	16.0	0.0	9.9	37.8	0.0				27.9	0.0	0.0
Prop In Lane	0.00		1.00	1.00		0.00				1.00		1.00
Lane Grp Cap(c), veh/h	0	2232		356	2489	0				1559	0	
V/C Ratio(X)	0.00	0.67		0.82	0.78	0.00				0.67	0.00	
Avail Cap(c_a), veh/h	0	2232		478	2489	0				1559	0	
HCM Platoon Ratio	1.00	2.00	2.00	1.00	1.00	1.00				1.00	1.00	1.00
Upstream Filter(I)	0.00	0.41	0.00	0.73	0.73	0.00				1.00	0.00	0.00
Uniform Delay (d), s/veh	0.0	14.4	0.0	52.7	25.4	0.0				26.8	0.0	0.0
Incr Delay (d2), s/veh	0.0	0.7	0.0	6.1	1.8	0.0				2.3	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
%ile BackOfQ(50%),veh/ln	0.0	3.8	0.0	4.6	15.2	0.0				12.1	0.0	0.0
Unsig. Movement Delay, s/veh												
LnGrp Delay(d),s/veh	0.0	15.1	0.0	58.8	27.3	0.0				29.1	0.0	0.0
LnGrp LOS	A	B		E	C	A				C	A	
Approach Vol, veh/h		1498	A		2235						1041	A
Approach Delay, s/veh		15.1			31.4						29.1	
Approach LOS		B			C						C	
Timer - Assigned Phs			3	4		6		8				
Phs Duration (G+Y+Rc), s			16.9	46.1		57.0		63.0				
Change Period (Y+Rc), s			4.5	4.5		4.5		4.5				
Max Green Setting (Gmax), s			16.6	37.4		52.5		58.5				
Max Q Clear Time (g_c+I1), s			11.9	18.0		29.9		39.8				
Green Ext Time (p_c), s			0.4	11.0		4.4		13.7				
Intersection Summary												
HCM 6th Ctrl Delay			25.8									
HCM 6th LOS			C									
Notes												
User approved volume balancing among the lanes for turning movement.												
Unsignalized Delay for [EBR, SBR] is excluded from calculations of the approach delay and intersection delay.												

HCM 6th Signalized Intersection Summary

3: Dry Creek Road & I-25 Southbound Ramp

2030 Total PM.syn

04/24/2019

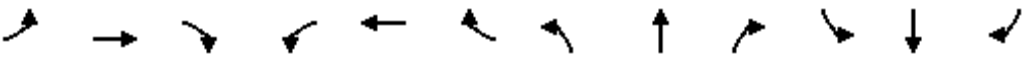
												
Movement	EBL	EBT	EBR	WBL	WBT	WBR	NBL	NBT	NBR	SBL	SBT	SBR
Lane Configurations		↑↑↑	↗	↗↗	↑↑↑					↗	↗	↗↗
Traffic Volume (veh/h)	0	2467	682	806	1898	0	0	0	0	312	8	581
Future Volume (veh/h)	0	2467	682	806	1898	0	0	0	0	312	8	581
Initial Q (Qb), veh	0	0	0	0	0	0				0	0	0
Ped-Bike Adj(A_pbT)	1.00		1.00	1.00		1.00				1.00		1.00
Parking Bus, Adj	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	
Adj Sat Flow, veh/h/ln	0	1870	1870	1870	1870	0				1870	1870	1870
Adj Flow Rate, veh/h	0	2653	0	876	2041	0				345	0	0
Peak Hour Factor	0.92	0.93	0.92	0.92	0.93	0.92				0.92	0.92	0.97
Percent Heavy Veh, %	0	2	2	2	2	0				2	2	2
Cap, veh/h	0	3024		924	3957	0				534	0	
Arrive On Green	0.00	0.16	0.00	0.53	1.00	0.00				0.15	0.00	0.00
Sat Flow, veh/h	0	6696	1585	3456	5274	0				3563	0	3170
Grp Volume(v), veh/h	0	2653	0	876	2041	0				345	0	0
Grp Sat Flow(s),veh/h/ln	0	1609	1585	1728	1702	0				1781	0	1585
Q Serve(g_s), s	0.0	48.4	0.0	28.7	0.0	0.0				10.9	0.0	0.0
Cycle Q Clear(g_c), s	0.0	48.4	0.0	28.7	0.0	0.0				10.9	0.0	0.0
Prop In Lane	0.00		1.00	1.00		0.00				1.00		1.00
Lane Grp Cap(c), veh/h	0	3024		924	3957	0				534	0	
V/C Ratio(X)	0.00	0.88		0.95	0.52	0.00				0.65	0.00	
Avail Cap(c_a), veh/h	0	3024		994	3957	0				534	0	
HCM Platoon Ratio	1.00	0.33	0.33	2.00	2.00	1.00				1.00	1.00	1.00
Upstream Filter(I)	0.00	0.09	0.00	0.18	0.18	0.00				1.00	0.00	0.00
Uniform Delay (d), s/veh	0.0	47.3	0.0	27.1	0.0	0.0				48.0	0.0	0.0
Incr Delay (d2), s/veh	0.0	0.4	0.0	4.4	0.1	0.0				5.9	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
%ile BackOfQ(50%),veh/ln	0.0	21.0	0.0	9.2	0.0	0.0				5.3	0.0	0.0
Unsig. Movement Delay, s/veh												
LnGrp Delay(d),s/veh	0.0	47.7	0.0	31.5	0.1	0.0				53.9	0.0	0.0
LnGrp LOS	A	D		C	A	A				D	A	
Approach Vol, veh/h		2653	A		2917						345	A
Approach Delay, s/veh		47.7			9.5						53.9	
Approach LOS		D			A						D	
Timer - Assigned Phs			3	4		6		8				
Phs Duration (G+Y+Rc), s			36.6	60.9		22.5		97.5				
Change Period (Y+Rc), s			4.5	4.5		4.5		4.5				
Max Green Setting (Gmax), s			34.5	54.0		18.0		93.0				
Max Q Clear Time (g_c+I1), s			30.7	50.4		12.9		2.0				
Green Ext Time (p_c), s			1.4	3.5		0.6		35.6				
Intersection Summary												
HCM 6th Ctrl Delay			29.2									
HCM 6th LOS			C									
Notes												
User approved volume balancing among the lanes for turning movement.												
Unsignalized Delay for [EBR, SBR] is excluded from calculations of the approach delay and intersection delay.												

HCM 6th Signalized Intersection Summary

3: Dry Creek Road & I-25 Southbound Ramp

2040 Background AM.syn

04/29/2019

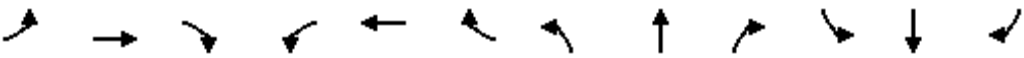
												
Movement	EBL	EBT	EBR	WBL	WBT	WBR	NBL	NBT	NBR	SBL	SBT	SBR
Lane Configurations		↑↑↑	↗	↖	↑↑↑					↖	↗	↗
Traffic Volume (veh/h)	0	1240	250	283	1662	0	0	0	0	1006	2	1036
Future Volume (veh/h)	0	1240	250	283	1662	0	0	0	0	1006	2	1036
Initial Q (Qb), veh	0	0	0	0	0	0				0	0	0
Ped-Bike Adj(A_pbT)	1.00		1.00	1.00		1.00				1.00		1.00
Parking Bus, Adj	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	
Adj Sat Flow, veh/h/ln	0	1870	1870	1870	1870	0				1870	1870	1870
Adj Flow Rate, veh/h	0	1348	0	308	1807	0				1094	0	0
Peak Hour Factor	0.92	0.92	0.92	0.92	0.92	0.92				0.92	0.92	0.92
Percent Heavy Veh, %	0	2	2	2	2	0				2	2	2
Cap, veh/h	0	2147		373	2447	0				1588	0	
Arrive On Green	0.00	0.67	0.00	0.11	0.48	0.00				0.45	0.00	0.00
Sat Flow, veh/h	0	6696	1585	3456	5274	0				3563	0	3170
Grp Volume(v), veh/h	0	1348	0	308	1807	0				1094	0	0
Grp Sat Flow(s),veh/h/ln	0	1609	1585	1728	1702	0				1781	0	1585
Q Serve(g_s), s	0.0	14.4	0.0	10.5	34.2	0.0				29.5	0.0	0.0
Cycle Q Clear(g_c), s	0.0	14.4	0.0	10.5	34.2	0.0				29.5	0.0	0.0
Prop In Lane	0.00		1.00	1.00		0.00				1.00		1.00
Lane Grp Cap(c), veh/h	0	2147		373	2447	0				1588	0	
V/C Ratio(X)	0.00	0.63		0.82	0.74	0.00				0.69	0.00	
Avail Cap(c_a), veh/h	0	2147		504	2447	0				1588	0	
HCM Platoon Ratio	1.00	2.00	2.00	1.00	1.00	1.00				1.00	1.00	1.00
Upstream Filter(I)	0.00	0.48	0.00	0.80	0.80	0.00				1.00	0.00	0.00
Uniform Delay (d), s/veh	0.0	15.7	0.0	52.4	25.2	0.0				26.6	0.0	0.0
Incr Delay (d2), s/veh	0.0	0.7	0.0	6.5	1.6	0.0				2.5	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
%ile BackOfQ(50%),veh/ln	0.0	3.7	0.0	4.9	13.9	0.0				12.8	0.0	0.0
Unsig. Movement Delay, s/veh												
LnGrp Delay(d),s/veh	0.0	16.4	0.0	59.0	26.8	0.0				29.1	0.0	0.0
LnGrp LOS	A	B		E	C	A				C	A	
Approach Vol, veh/h		1348	A		2115						1094	A
Approach Delay, s/veh		16.4			31.5						29.1	
Approach LOS		B			C						C	
Timer - Assigned Phs			3	4		6		8				
Phs Duration (G+Y+Rc), s			17.5	44.5		58.0		62.0				
Change Period (Y+Rc), s			4.5	4.5		4.5		4.5				
Max Green Setting (Gmax), s			17.5	35.5		53.5		57.5				
Max Q Clear Time (g_c+I1), s			12.5	16.4		31.5		36.2				
Green Ext Time (p_c), s			0.5	9.7		4.7		14.1				
Intersection Summary												
HCM 6th Ctrl Delay			26.4									
HCM 6th LOS			C									
Notes												
User approved volume balancing among the lanes for turning movement.												
Unsignalized Delay for [EBR, SBR] is excluded from calculations of the approach delay and intersection delay.												

HCM 6th Signalized Intersection Summary

3: Dry Creek Road & I-25 Southbound Ramp

2040 Background PM.syn

04/25/2019

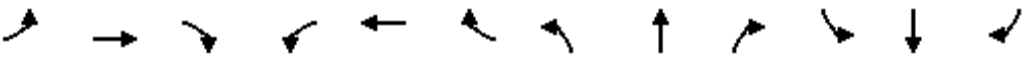
												
Movement	EBL	EBT	EBR	WBL	WBT	WBR	NBL	NBT	NBR	SBL	SBT	SBR
Lane Configurations		↑↑↑	↗	↗↘	↑↑↑					↗	↗	↗↘
Traffic Volume (veh/h)	0	1809	717	847	1919	0	0	0	0	328	9	473
Future Volume (veh/h)	0	1809	717	847	1919	0	0	0	0	328	9	473
Initial Q (Qb), veh	0	0	0	0	0	0				0	0	0
Ped-Bike Adj(A_pbT)	1.00		1.00	1.00		1.00				1.00		1.00
Parking Bus, Adj	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	
Adj Sat Flow, veh/h/ln	0	1870	1870	1870	1870	0				1870	1870	1870
Adj Flow Rate, veh/h	0	1945	0	921	2063	0				364	0	0
Peak Hour Factor	0.92	0.93	0.92	0.92	0.93	0.92				0.92	0.92	0.97
Percent Heavy Veh, %	0	2	2	2	2	0				2	2	2
Cap, veh/h	0	2779		984	3851	0				609	0	
Arrive On Green	0.00	0.14	0.00	0.57	1.00	0.00				0.17	0.00	0.00
Sat Flow, veh/h	0	6696	1585	3456	5274	0				3563	0	3170
Grp Volume(v), veh/h	0	1945	0	921	2063	0				364	0	0
Grp Sat Flow(s),veh/h/ln	0	1609	1585	1728	1702	0				1781	0	1585
Q Serve(g_s), s	0.0	34.6	0.0	29.5	0.0	0.0				11.3	0.0	0.0
Cycle Q Clear(g_c), s	0.0	34.6	0.0	29.5	0.0	0.0				11.3	0.0	0.0
Prop In Lane	0.00		1.00	1.00		0.00				1.00		1.00
Lane Grp Cap(c), veh/h	0	2779		984	3851	0				609	0	
V/C Ratio(X)	0.00	0.70		0.94	0.54	0.00				0.60	0.00	
Avail Cap(c_a), veh/h	0	2779		1166	3851	0				609	0	
HCM Platoon Ratio	1.00	0.33	0.33	2.00	2.00	1.00				1.00	1.00	1.00
Upstream Filter(I)	0.00	0.54	0.00	0.47	0.47	0.00				1.00	0.00	0.00
Uniform Delay (d), s/veh	0.0	44.0	0.0	24.8	0.0	0.0				45.9	0.0	0.0
Incr Delay (d2), s/veh	0.0	0.8	0.0	6.8	0.3	0.0				4.3	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
%ile BackOfQ(50%),veh/ln	0.0	15.1	0.0	9.4	0.1	0.0				5.4	0.0	0.0
Unsig. Movement Delay, s/veh												
LnGrp Delay(d),s/veh	0.0	44.8	0.0	31.7	0.3	0.0				50.2	0.0	0.0
LnGrp LOS	A	D		C	A	A				D	A	
Approach Vol, veh/h		1945	A		2984						364	A
Approach Delay, s/veh		44.8			9.9						50.2	
Approach LOS		D			A						D	
Timer - Assigned Phs			3	4		6		8				
Phs Duration (G+Y+Rc), s			38.7	56.3		25.0		95.0				
Change Period (Y+Rc), s			4.5	4.5		4.5		4.5				
Max Green Setting (Gmax), s			40.5	45.5		20.5		90.5				
Max Q Clear Time (g_c+I1), s			31.5	36.6		13.3		2.0				
Green Ext Time (p_c), s			2.7	7.4		0.8		36.2				
Intersection Summary												
HCM 6th Ctrl Delay			25.5									
HCM 6th LOS			C									
Notes												
User approved volume balancing among the lanes for turning movement.												
Unsignalized Delay for [EBR, SBR] is excluded from calculations of the approach delay and intersection delay.												

HCM 6th Signalized Intersection Summary

3: Dry Creek Road & I-25 Southbound Ramp

2040 Total AM.syn

04/25/2019

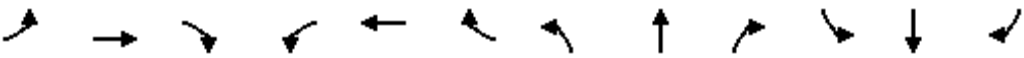
												
Movement	EBL	EBT	EBR	WBL	WBT	WBR	NBL	NBT	NBR	SBL	SBT	SBR
Lane Configurations		↑↑↑	↗	↗↗	↑↑↑					↗	↗	↗↗
Traffic Volume (veh/h)	0	1438	250	283	1869	0	0	0	0	1006	2	1409
Future Volume (veh/h)	0	1438	250	283	1869	0	0	0	0	1006	2	1409
Initial Q (Qb), veh	0	0	0	0	0	0				0	0	0
Ped-Bike Adj(A_pbT)	1.00		1.00	1.00		1.00				1.00		1.00
Parking Bus, Adj	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	
Adj Sat Flow, veh/h/ln	0	1870	1870	1870	1870	0				1870	1870	1870
Adj Flow Rate, veh/h	0	1563	0	308	2032	0				1094	0	0
Peak Hour Factor	0.92	0.92	0.92	0.92	0.92	0.92				0.92	0.92	0.92
Percent Heavy Veh, %	0	2	2	2	2	0				2	2	2
Cap, veh/h	0	2204		372	2489	0				1559	0	
Arrive On Green	0.00	0.46	0.00	0.11	0.49	0.00				0.44	0.00	0.00
Sat Flow, veh/h	0	6696	1585	3456	5274	0				3563	0	3170
Grp Volume(v), veh/h	0	1563	0	308	2032	0				1094	0	0
Grp Sat Flow(s),veh/h/ln	0	1609	1585	1728	1702	0				1781	0	1585
Q Serve(g_s), s	0.0	23.4	0.0	10.5	40.7	0.0				29.9	0.0	0.0
Cycle Q Clear(g_c), s	0.0	23.4	0.0	10.5	40.7	0.0				29.9	0.0	0.0
Prop In Lane	0.00		1.00	1.00		0.00				1.00		1.00
Lane Grp Cap(c), veh/h	0	2204		372	2489	0				1559	0	
V/C Ratio(X)	0.00	0.71		0.83	0.82	0.00				0.70	0.00	
Avail Cap(c_a), veh/h	0	2204		478	2489	0				1559	0	
HCM Platoon Ratio	1.00	1.33	1.33	1.00	1.00	1.00				1.00	1.00	1.00
Upstream Filter(I)	0.00	0.63	0.00	0.69	0.69	0.00				1.00	0.00	0.00
Uniform Delay (d), s/veh	0.0	27.9	0.0	52.5	26.2	0.0				27.4	0.0	0.0
Incr Delay (d2), s/veh	0.0	1.2	0.0	6.6	2.2	0.0				2.7	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
%ile BackOfQ(50%),veh/ln	0.0	8.5	0.0	4.9	16.5	0.0				13.1	0.0	0.0
Unsig. Movement Delay, s/veh												
LnGrp Delay(d),s/veh	0.0	29.1	0.0	59.1	28.3	0.0				30.1	0.0	0.0
LnGrp LOS	A	C		E	C	A				C	A	
Approach Vol, veh/h		1563	A		2340						1094	A
Approach Delay, s/veh		29.1			32.4						30.1	
Approach LOS		C			C						C	
Timer - Assigned Phs			3	4		6		8				
Phs Duration (G+Y+Rc), s			17.4	45.6		57.0		63.0				
Change Period (Y+Rc), s			4.5	4.5		4.5		4.5				
Max Green Setting (Gmax), s			16.6	37.4		52.5		58.5				
Max Q Clear Time (g_c+I1), s			12.5	25.4		31.9		42.7				
Green Ext Time (p_c), s			0.4	8.1		4.6		12.4				
Intersection Summary												
HCM 6th Ctrl Delay			30.9									
HCM 6th LOS			C									
Notes												
User approved volume balancing among the lanes for turning movement.												
Unsignalized Delay for [EBR, SBR] is excluded from calculations of the approach delay and intersection delay.												

HCM 6th Signalized Intersection Summary

3: Dry Creek Road & I-25 Southbound Ramp

2040 Total PM.syn

04/25/2019

												
Movement	EBL	EBT	EBR	WBL	WBT	WBR	NBL	NBT	NBR	SBL	SBT	SBR
Lane Configurations		↑↑↑	↗	↖	↑↑↑					↖	↗	↗
Traffic Volume (veh/h)	0	2555	717	847	1992	0	0	0	0	328	9	604
Future Volume (veh/h)	0	2555	717	847	1992	0	0	0	0	328	9	604
Initial Q (Qb), veh	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
Parking Bus, Adj	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	
Adj Sat Flow, veh/h/ln	0	1870	1870	1870	1870	0				1870	1870	1870
Adj Flow Rate, veh/h	0	2747	0	921	2142	0				364	0	0
Peak Hour Factor	0.92	0.93	0.92	0.92	0.93	0.92				0.92	0.92	0.97
Percent Heavy Veh, %	0	2	2	2	2	0				2	2	2
Cap, veh/h	0	2958		960	3957	0				534	0	
Arrive On Green	0.00	0.15	0.00	0.56	1.00	0.00				0.15	0.00	0.00
Sat Flow, veh/h	0	6696	1585	3456	5274	0				3563	0	3170
Grp Volume(v), veh/h	0	2747	0	921	2142	0				364	0	0
Grp Sat Flow(s),veh/h/ln	0	1609	1585	1728	1702	0				1781	0	1585
Q Serve(g_s), s	0.0	50.6	0.0	30.4	0.0	0.0				11.6	0.0	0.0
Cycle Q Clear(g_c), s	0.0	50.6	0.0	30.4	0.0	0.0				11.6	0.0	0.0
Prop In Lane	0.00		1.00	1.00		0.00				1.00		1.00
Lane Grp Cap(c), veh/h	0	2958		960	3957	0				534	0	
V/C Ratio(X)	0.00	0.93		0.96	0.54	0.00				0.68	0.00	
Avail Cap(c_a), veh/h	0	2958		994	3957	0				534	0	
HCM Platoon Ratio	1.00	0.33	0.33	2.00	2.00	1.00				1.00	1.00	1.00
Upstream Filter(I)	0.00	0.67	0.00	0.09	0.09	0.00				1.00	0.00	0.00
Uniform Delay (d), s/veh	0.0	49.0	0.0	26.0	0.0	0.0				48.3	0.0	0.0
Incr Delay (d2), s/veh	0.0	4.6	0.0	3.0	0.0	0.0				6.9	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
%ile BackOfQ(50%),veh/ln	0.0	22.8	0.0	9.3	0.0	0.0				5.7	0.0	0.0
Unsig. Movement Delay, s/veh												
LnGrp Delay(d),s/veh	0.0	53.6	0.0	29.1	0.0	0.0				55.2	0.0	0.0
LnGrp LOS	A	D		C	A	A				E	A	
Approach Vol, veh/h		2747	A		3063						364	A
Approach Delay, s/veh		53.6			8.8						55.2	
Approach LOS		D			A						E	
Timer - Assigned Phs			3	4		6		8				
Phs Duration (G+Y+Rc), s			37.8	59.7		22.5		97.5				
Change Period (Y+Rc), s			4.5	4.5		4.5		4.5				
Max Green Setting (Gmax), s			34.5	54.0		18.0		93.0				
Max Q Clear Time (g_c+I1), s			32.4	52.6		13.6		2.0				
Green Ext Time (p_c), s			0.9	1.4		0.6		39.6				
Intersection Summary												
HCM 6th Ctrl Delay			31.4									
HCM 6th LOS			C									
Notes												
User approved volume balancing among the lanes for turning movement.												
Unsignalized Delay for [EBR, SBR] is excluded from calculations of the approach delay and intersection delay.												

HCM 6th Signalized Intersection Summary

4: I-25 Northbound Ramp & Dry Creek Road

2019 Existing AM.syn

04/29/2019

												
Movement	EBL	EBT	EBR	WBL	WBT	WBR	NBL	NBT	NBR	SBL	SBT	SBR
Lane Configurations												
Traffic Volume (veh/h)	252	1780	0	0	1254	274	523	9	1094	0	0	0
Future Volume (veh/h)	252	1780	0	0	1254	274	523	9	1094	0	0	0
Initial Q (Qb), veh	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			
Parking Bus, Adj	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					
Adj Sat Flow, veh/h/ln	1870	1870	0	0	1870	1870	1870	1870	1870			
Adj Flow Rate, veh/h	286	1854	0	0	1493	0	604	0	0			
Peak Hour Factor	0.88	0.96	0.92	0.92	0.84	0.94	0.90	0.28	0.97			
Percent Heavy Veh, %	2	2	0	0	2	2	2	2	2			
Cap, veh/h	359	3213	0	0	3138		1054	0				
Arrive On Green	0.14	0.84	0.00	0.00	0.49	0.00	0.30	0.00	0.00			
Sat Flow, veh/h	3456	5274	0	0	6696	1585	3563	0	3170			
Grp Volume(v), veh/h	286	1854	0	0	1493	0	604	0	0			
Grp Sat Flow(s),veh/h/ln	1728	1702	0	0	1609	1585	1781	0	1585			
Q Serve(g_s), s	9.6	13.8	0.0	0.0	18.6	0.0	17.3	0.0	0.0			
Cycle Q Clear(g_c), s	9.6	13.8	0.0	0.0	18.6	0.0	17.3	0.0	0.0			
Prop In Lane	1.00		0.00	0.00		1.00	1.00		1.00			
Lane Grp Cap(c), veh/h	359	3213	0	0	3138		1054	0				
V/C Ratio(X)	0.80	0.58	0.00	0.00	0.48		0.57	0.00				
Avail Cap(c_a), veh/h	763	3213	0	0	3138		1054	0				
HCM Platoon Ratio	1.33	1.33	1.00	1.00	1.00	1.00	1.00	1.00	1.00			
Upstream Filter(I)	0.72	0.72	0.00	0.00	1.00	0.00	1.00	0.00	0.00			
Uniform Delay (d), s/veh	50.5	4.8	0.0	0.0	20.5	0.0	35.8	0.0	0.0			
Incr Delay (d2), s/veh	3.0	0.5	0.0	0.0	0.5	0.0	2.3	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			
%ile BackOfQ(50%),veh/ln	4.2	3.2	0.0	0.0	7.0	0.0	7.8	0.0	0.0			
Unsig. Movement Delay, s/veh												
LnGrp Delay(d),s/veh	53.4	5.3	0.0	0.0	21.0	0.0	38.1	0.0	0.0			
LnGrp LOS	D	A	A	A	C		D	A				
Approach Vol, veh/h	2140			1493			604			A		
Approach Delay, s/veh	11.7			21.0			38.1					
Approach LOS	B			C			D					
Timer - Assigned Phs	2			4			7			8		
Phs Duration (G+Y+Rc), s	40.0			80.0			17.0			63.0		
Change Period (Y+Rc), s	4.5			4.5			4.5			4.5		
Max Green Setting (Gmax), s	35.5			75.5			26.5			44.5		
Max Q Clear Time (g_c+l1), s	19.3			15.8			11.6			20.6		
Green Ext Time (p_c), s	2.1			25.6			0.8			12.4		
Intersection Summary												
HCM 6th Ctrl Delay	18.8											
HCM 6th LOS	B											

HCM 6th Signalized Intersection Summary

4: I-25 Northbound Ramp & Dry Creek Road

2019 Existing PM.syn
04/24/2019

												
Movement	EBL	EBT	EBR	WBL	WBT	WBR	NBL	NBT	NBR	SBL	SBT	SBR
Lane Configurations	 	  			  			 	 			
Traffic Volume (veh/h)	586	1376	0	0	2080	598	405	16	846	0	0	0
Future Volume (veh/h)	586	1376	0	0	2080	598	405	16	846	0	0	0
Initial Q (Qb), veh	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			
Parking Bus, Adj	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					
Adj Sat Flow, veh/h/ln	1870	1870	0	0	1870	1870	1870	1870	1870			
Adj Flow Rate, veh/h	666	1419	0	0	2122	0	488	0	0			
Peak Hour Factor	0.88	0.97	0.92	0.92	0.98	0.87	0.86	0.67	0.91			
Percent Heavy Veh, %	2	2	0	0	2	2	2	2	2			
Cap, veh/h	731	3596	0	0	2928		787	0				
Arrive On Green	0.42	1.00	0.00	0.00	0.46	0.00	0.22	0.00	0.00			
Sat Flow, veh/h	3456	5274	0	0	6696	1585	3563	0	3170			
Grp Volume(v), veh/h	666	1419	0	0	2122	0	488	0	0			
Grp Sat Flow(s),veh/h/ln	1728	1702	0	0	1609	1585	1781	0	1585			
Q Serve(g_s), s	21.7	0.0	0.0	0.0	32.2	0.0	14.8	0.0	0.0			
Cycle Q Clear(g_c), s	21.7	0.0	0.0	0.0	32.2	0.0	14.8	0.0	0.0			
Prop In Lane	1.00		0.00	0.00		1.00	1.00		1.00			
Lane Grp Cap(c), veh/h	731	3596	0	0	2928		787	0				
V/C Ratio(X)	0.91	0.39	0.00	0.00	0.72		0.62	0.00				
Avail Cap(c_a), veh/h	907	3596	0	0	2928		787	0				
HCM Platoon Ratio	2.00	2.00	1.00	1.00	1.00	1.00	1.00	1.00	1.00			
Upstream Filter(I)	0.71	0.71	0.00	0.00	1.00	0.00	1.00	0.00	0.00			
Uniform Delay (d), s/veh	33.5	0.0	0.0	0.0	26.6	0.0	42.2	0.0	0.0			
Incr Delay (d2), s/veh	8.6	0.2	0.0	0.0	1.6	0.0	3.7	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			
%ile BackOfQ(50%),veh/ln	8.2	0.1	0.0	0.0	12.4	0.0	6.9	0.0	0.0			
Unsig. Movement Delay, s/veh												
LnGrp Delay(d),s/veh	42.1	0.2	0.0	0.0	28.2	0.0	45.9	0.0	0.0			
LnGrp LOS	D	A	A	A	C		D	A				
Approach Vol, veh/h	2085			2122			A	488			A	
Approach Delay, s/veh	13.6			28.2				45.9				
Approach LOS	B			C				D				
Timer - Assigned Phs	2			4			7		8			
Phs Duration (G+Y+Rc), s	31.0			89.0			29.9		59.1			
Change Period (Y+Rc), s	4.5			4.5			4.5		4.5			
Max Green Setting (Gmax), s	26.5			84.5			31.5		48.5			
Max Q Clear Time (g_c+l1), s	16.8			2.0			23.7		34.2			
Green Ext Time (p_c), s	1.3			16.6			1.7		11.8			
Intersection Summary												
HCM 6th Ctrl Delay	23.5											
HCM 6th LOS	C											
Notes												
User approved volume balancing among the lanes for turning movement.												
Unsignalized Delay for [NBR, WBR] is excluded from calculations of the approach delay and intersection delay.												

HCM 6th Signalized Intersection Summary

4: I-25 Northbound Ramp & Dry Creek Road

2030 Background AM.syn

04/29/2019

												
Movement	EBL	EBT	EBR	WBL	WBT	WBR	NBL	NBT	NBR	SBL	SBT	SBR
Lane Configurations												
Traffic Volume (veh/h)	266	1880	0	0	1325	289	552	10	1156	0	0	0
Future Volume (veh/h)	266	1880	0	0	1325	289	552	10	1156	0	0	0
Initial Q (Qb), veh	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			
Parking Bus, Adj	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					
Adj Sat Flow, veh/h/ln	1870	1870	0	0	1870	1870	1870	1870	1870			
Adj Flow Rate, veh/h	289	1958	0	0	1440	0	608	0	0			
Peak Hour Factor	0.92	0.96	0.92	0.92	0.92	0.94	0.92	0.92	0.97			
Percent Heavy Veh, %	2	2	0	0	2	2	2	2	2			
Cap, veh/h	361	3127	0	0	3027		1113	0				
Arrive On Green	0.14	0.81	0.00	0.00	0.47	0.00	0.31	0.00	0.00			
Sat Flow, veh/h	3456	5274	0	0	6696	1585	3563	0	3170			
Grp Volume(v), veh/h	289	1958	0	0	1440	0	608	0	0			
Grp Sat Flow(s),veh/h/ln	1728	1702	0	0	1609	1585	1781	0	1585			
Q Serve(g_s), s	9.7	17.4	0.0	0.0	18.3	0.0	17.0	0.0	0.0			
Cycle Q Clear(g_c), s	9.7	17.4	0.0	0.0	18.3	0.0	17.0	0.0	0.0			
Prop In Lane	1.00		0.00	0.00		1.00	1.00		1.00			
Lane Grp Cap(c), veh/h	361	3127	0	0	3027		1113	0				
V/C Ratio(X)	0.80	0.63	0.00	0.00	0.48		0.55	0.00				
Avail Cap(c_a), veh/h	734	3127	0	0	3027		1113	0				
HCM Platoon Ratio	1.33	1.33	1.00	1.00	1.00	1.00	1.00	1.00	1.00			
Upstream Filter(I)	0.73	0.73	0.00	0.00	1.00	0.00	1.00	0.00	0.00			
Uniform Delay (d), s/veh	50.4	5.9	0.0	0.0	21.7	0.0	34.2	0.0	0.0			
Incr Delay (d2), s/veh	3.0	0.7	0.0	0.0	0.5	0.0	1.9	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			
%ile BackOfQ(50%),veh/ln	4.2	4.0	0.0	0.0	7.0	0.0	7.6	0.0	0.0			
Unsig. Movement Delay, s/veh												
LnGrp Delay(d),s/veh	53.5	6.6	0.0	0.0	22.2	0.0	36.1	0.0	0.0			
LnGrp LOS	D	A	A	A	C		D	A				
Approach Vol, veh/h	2247			1440			A	608			A	
Approach Delay, s/veh	12.6			22.2				36.1				
Approach LOS	B			C				D				
Timer - Assigned Phs	2			4			7		8			
Phs Duration (G+Y+Rc), s	42.0			78.0			17.1		60.9			
Change Period (Y+Rc), s	4.5			4.5			4.5		4.5			
Max Green Setting (Gmax), s	37.5			73.5			25.5		43.5			
Max Q Clear Time (g_c+l1), s	19.0			19.4			11.7		20.3			
Green Ext Time (p_c), s	2.2			27.1			0.8		11.7			
Intersection Summary												
HCM 6th Ctrl Delay	19.2											
HCM 6th LOS	B											
Notes												
User approved volume balancing among the lanes for turning movement.												
Unsignalized Delay for [NBR, WBR] is excluded from calculations of the approach delay and intersection delay.												

HCM 6th Signalized Intersection Summary

4: I-25 Northbound Ramp & Dry Creek Road

2030 Background PM.syn

04/24/2019

												
Movement	EBL	EBT	EBR	WBL	WBT	WBR	NBL	NBT	NBR	SBL	SBT	SBR
Lane Configurations												
Traffic Volume (veh/h)	619	1454	0	0	2197	632	428	17	894	0	0	0
Future Volume (veh/h)	619	1454	0	0	2197	632	428	17	894	0	0	0
Initial Q (Qb), veh	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			
Parking Bus, Adj	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					
Adj Sat Flow, veh/h/ln	1870	1870	0	0	1870	1870	1870	1870	1870			
Adj Flow Rate, veh/h	673	1499	0	0	2242	0	478	0	0			
Peak Hour Factor	0.92	0.97	0.92	0.92	0.98	0.92	0.92	0.92	0.92			
Percent Heavy Veh, %	2	2	0	0	2	2	2	2	2			
Cap, veh/h	729	3468	0	0	2772		876	0				
Arrive On Green	0.42	1.00	0.00	0.00	0.43	0.00	0.25	0.00	0.00			
Sat Flow, veh/h	3456	5274	0	0	6696	1585	3563	0	3170			
Grp Volume(v), veh/h	673	1499	0	0	2242	0	478	0	0			
Grp Sat Flow(s),veh/h/ln	1728	1702	0	0	1609	1585	1781	0	1585			
Q Serve(g_s), s	22.1	0.0	0.0	0.0	36.5	0.0	14.0	0.0	0.0			
Cycle Q Clear(g_c), s	22.1	0.0	0.0	0.0	36.5	0.0	14.0	0.0	0.0			
Prop In Lane	1.00		0.00	0.00		1.00	1.00		1.00			
Lane Grp Cap(c), veh/h	729	3468	0	0	2772		876	0				
V/C Ratio(X)	0.92	0.43	0.00	0.00	0.81		0.55	0.00				
Avail Cap(c_a), veh/h	821	3468	0	0	2772		876	0				
HCM Platoon Ratio	2.00	2.00	1.00	1.00	1.00	1.00	1.00	1.00	1.00			
Upstream Filter(I)	0.65	0.65	0.00	0.00	1.00	0.00	1.00	0.00	0.00			
Uniform Delay (d), s/veh	33.8	0.0	0.0	0.0	29.8	0.0	39.4	0.0	0.0			
Incr Delay (d2), s/veh	10.6	0.3	0.0	0.0	2.7	0.0	2.4	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			
%ile BackOfQ(50%),veh/ln	8.5	0.1	0.0	0.0	14.4	0.0	6.4	0.0	0.0			
Unsig. Movement Delay, s/veh												
LnGrp Delay(d),s/veh	44.4	0.3	0.0	0.0	32.5	0.0	41.9	0.0	0.0			
LnGrp LOS	D	A	A	A	C		D	A				
Approach Vol, veh/h	2172			2242			A			478		
Approach Delay, s/veh	13.9			32.5			41.9					
Approach LOS	B			C			D					
Timer - Assigned Phs	2			4			7			8		
Phs Duration (G+Y+Rc), s	34.0			86.0			29.8			56.2		
Change Period (Y+Rc), s	4.5			4.5			4.5			4.5		
Max Green Setting (Gmax), s	29.5			81.5			28.5			48.5		
Max Q Clear Time (g_c+l1), s	16.0			2.0			24.1			38.5		
Green Ext Time (p_c), s	1.5			18.3			1.2			8.8		

Intersection Summary

HCM 6th Ctrl Delay	25.2
HCM 6th LOS	C

Notes

User approved volume balancing among the lanes for turning movement.

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

HCM 6th Signalized Intersection Summary

4: I-25 Northbound Ramp & Dry Creek Road

2030 Total AM.syn

04/24/2019

												
Movement	EBL	EBT	EBR	WBL	WBT	WBR	NBL	NBT	NBR	SBL	SBT	SBR
Lane Configurations												
Traffic Volume (veh/h)	407	1937	0	0	1532	289	552	10	1156	0	0	0
Future Volume (veh/h)	407	1937	0	0	1532	289	552	10	1156	0	0	0
Initial Q (Qb), veh	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			
Parking Bus, Adj	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					
Adj Sat Flow, veh/h/ln	1870	1870	0	0	1870	1870	1870	1870	1870			
Adj Flow Rate, veh/h	442	2018	0	0	1665	0	608	0	0			
Peak Hour Factor	0.92	0.96	0.92	0.92	0.92	0.94	0.92	0.92	0.97			
Percent Heavy Veh, %	2	2	0	0	2	2	2	2	2			
Cap, veh/h	516	3127	0	0	2738		1113	0				
Arrive On Green	0.20	0.81	0.00	0.00	0.43	0.00	0.31	0.00	0.00			
Sat Flow, veh/h	3456	5274	0	0	6696	1585	3563	0	3170			
Grp Volume(v), veh/h	442	2018	0	0	1665	0	608	0	0			
Grp Sat Flow(s),veh/h/ln	1728	1702	0	0	1609	1585	1781	0	1585			
Q Serve(g_s), s	14.8	18.5	0.0	0.0	24.1	0.0	17.0	0.0	0.0			
Cycle Q Clear(g_c), s	14.8	18.5	0.0	0.0	24.1	0.0	17.0	0.0	0.0			
Prop In Lane	1.00		0.00	0.00		1.00	1.00		1.00			
Lane Grp Cap(c), veh/h	516	3127	0	0	2738		1113	0				
V/C Ratio(X)	0.86	0.65	0.00	0.00	0.61		0.55	0.00				
Avail Cap(c_a), veh/h	734	3127	0	0	2738		1113	0				
HCM Platoon Ratio	1.33	1.33	1.00	1.00	1.00	1.00	1.00	1.00	1.00			
Upstream Filter(I)	0.63	0.63	0.00	0.00	1.00	0.00	1.00	0.00	0.00			
Uniform Delay (d), s/veh	46.8	6.0	0.0	0.0	26.7	0.0	34.2	0.0	0.0			
Incr Delay (d2), s/veh	4.6	0.7	0.0	0.0	1.0	0.0	1.9	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			
%ile BackOfQ(50%),veh/ln	6.4	4.2	0.0	0.0	9.3	0.0	7.6	0.0	0.0			
Unsig. Movement Delay, s/veh												
LnGrp Delay(d),s/veh	51.4	6.7	0.0	0.0	27.7	0.0	36.1	0.0	0.0			
LnGrp LOS	D	A	A	A	C		D	A				
Approach Vol, veh/h	2460			1665			608			A		
Approach Delay, s/veh	14.7			27.7			36.1					
Approach LOS	B			C			D					
Timer - Assigned Phs	2			4			7			8		
Phs Duration (G+Y+Rc), s	42.0			78.0			22.4			55.6		
Change Period (Y+Rc), s	4.5			4.5			4.5			4.5		
Max Green Setting (Gmax), s	37.5			73.5			25.5			43.5		
Max Q Clear Time (g_c+l1), s	19.0			20.5			16.8			26.1		
Green Ext Time (p_c), s	2.2			28.2			1.1			11.3		
Intersection Summary												
HCM 6th Ctrl Delay	22.0											
HCM 6th LOS	C											
Notes												
User approved volume balancing among the lanes for turning movement.												
Unsignalized Delay for [NBR, WBR] is excluded from calculations of the approach delay and intersection delay.												

HCM 6th Signalized Intersection Summary
4: I-25 Northbound Ramp & Dry Creek Road

2030 Total PM.syn

04/24/2019

												
Movement	EBL	EBT	EBR	WBL	WBT	WBR	NBL	NBT	NBR	SBL	SBT	SBR
Lane Configurations												
Traffic Volume (veh/h)	1152	1667	0	0	2270	632	428	17	894	0	0	0
Future Volume (veh/h)	1152	1667	0	0	2270	632	428	17	894	0	0	0
Initial Q (Qb), veh	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			
Parking Bus, Adj	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					
Adj Sat Flow, veh/h/ln	1870	1870	0	0	1870	1870	1870	1870	1870			
Adj Flow Rate, veh/h	1252	1719	0	0	2316	0	478	0	0			
Peak Hour Factor	0.92	0.97	0.92	0.92	0.98	0.92	0.92	0.92	0.92			
Percent Heavy Veh, %	2	2	0	0	2	2	2	2	2			
Cap, veh/h	1253	3957	0	0	2413		534	0				
Arrive On Green	0.73	1.00	0.00	0.00	0.38	0.00	0.15	0.00	0.00			
Sat Flow, veh/h	3456	5274	0	0	6696	1585	3563	0	3170			
Grp Volume(v), veh/h	1252	1719	0	0	2316	0	478	0	0			
Grp Sat Flow(s),veh/h/ln	1728	1702	0	0	1609	1585	1781	0	1585			
Q Serve(g_s), s	43.4	0.0	0.0	0.0	42.2	0.0	15.8	0.0	0.0			
Cycle Q Clear(g_c), s	43.4	0.0	0.0	0.0	42.2	0.0	15.8	0.0	0.0			
Prop In Lane	1.00		0.00	0.00		1.00	1.00		1.00			
Lane Grp Cap(c), veh/h	1253	3957	0	0	2413		534	0				
V/C Ratio(X)	1.00	0.43	0.00	0.00	0.96		0.89	0.00				
Avail Cap(c_a), veh/h	1253	3957	0	0	2413		534	0				
HCM Platoon Ratio	2.00	2.00	1.00	1.00	1.00	1.00	1.00	1.00	1.00			
Upstream Filter(I)	0.34	0.34	0.00	0.00	1.00	0.00	1.00	0.00	0.00			
Uniform Delay (d), s/veh	16.5	0.0	0.0	0.0	36.6	0.0	50.1	0.0	0.0			
Incr Delay (d2), s/veh	14.7	0.1	0.0	0.0	11.1	0.0	20.1	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			
%ile BackOfQ(50%),veh/ln	10.2	0.0	0.0	0.0	18.1	0.0	8.5	0.0	0.0			
Unsig. Movement Delay, s/veh												
LnGrp Delay(d),s/veh	31.2	0.1	0.0	0.0	47.7	0.0	70.1	0.0	0.0			
LnGrp LOS	C	A	A	A	D		E	A				
Approach Vol, veh/h	2971			2316			A			A		
Approach Delay, s/veh	13.2			47.7			70.1					
Approach LOS	B			D			E					
Timer - Assigned Phs												
	2			4			7			8		
Phs Duration (G+Y+Rc), s												
	22.5			97.5			48.0			49.5		
Change Period (Y+Rc), s												
	4.5			4.5			4.5			4.5		
Max Green Setting (Gmax), s												
	18.0			93.0			43.5			45.0		
Max Q Clear Time (g_c+l1), s												
	17.8			2.0			45.4			44.2		
Green Ext Time (p_c), s												
	0.0			24.5			0.0			0.8		
Intersection Summary												
HCM 6th Ctrl Delay												
31.8												
HCM 6th LOS												
C												
Notes												
User approved volume balancing among the lanes for turning movement.												
Unsignalized Delay for [NBR, WBR] is excluded from calculations of the approach delay and intersection delay.												

HCM 6th Signalized Intersection Summary

4: I-25 Northbound Ramp & Dry Creek Road

2040 Background AM.syn

04/29/2019

												
Movement	EBL	EBT	EBR	WBL	WBT	WBR	NBL	NBT	NBR	SBL	SBT	SBR
Lane Configurations												
Traffic Volume (veh/h)	280	1977	0	0	1392	304	581	10	1215	0	0	0
Future Volume (veh/h)	280	1977	0	0	1392	304	581	10	1215	0	0	0
Initial Q (Qb), veh	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			
Parking Bus, Adj	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					
Adj Sat Flow, veh/h/ln	1870	1870	0	0	1870	1870	1870	1870	1870			
Adj Flow Rate, veh/h	304	2059	0	0	1513	0	640	0	0			
Peak Hour Factor	0.92	0.96	0.92	0.92	0.92	0.94	0.92	0.92	0.97			
Percent Heavy Veh, %	2	2	0	0	2	2	2	2	2			
Cap, veh/h	373	3042	0	0	2897		1173	0				
Arrive On Green	0.14	0.79	0.00	0.00	0.45	0.00	0.33	0.00	0.00			
Sat Flow, veh/h	3456	5274	0	0	6696	1585	3563	0	3170			
Grp Volume(v), veh/h	304	2059	0	0	1513	0	640	0	0			
Grp Sat Flow(s),veh/h/ln	1728	1702	0	0	1609	1585	1781	0	1585			
Q Serve(g_s), s	10.2	21.7	0.0	0.0	20.3	0.0	17.6	0.0	0.0			
Cycle Q Clear(g_c), s	10.2	21.7	0.0	0.0	20.3	0.0	17.6	0.0	0.0			
Prop In Lane	1.00		0.00	0.00		1.00	1.00		1.00			
Lane Grp Cap(c), veh/h	373	3042	0	0	2897		1173	0				
V/C Ratio(X)	0.81	0.68	0.00	0.00	0.52		0.55	0.00				
Avail Cap(c_a), veh/h	619	3042	0	0	2897		1173	0				
HCM Platoon Ratio	1.33	1.33	1.00	1.00	1.00	1.00	1.00	1.00	1.00			
Upstream Filter(I)	0.67	0.67	0.00	0.00	1.00	0.00	1.00	0.00	0.00			
Uniform Delay (d), s/veh	50.2	7.3	0.0	0.0	23.7	0.0	32.9	0.0	0.0			
Incr Delay (d2), s/veh	3.0	0.8	0.0	0.0	0.7	0.0	1.8	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			
%ile BackOfQ(50%),veh/ln	4.4	4.9	0.0	0.0	7.8	0.0	7.9	0.0	0.0			
Unsig. Movement Delay, s/veh												
LnGrp Delay(d),s/veh	53.2	8.1	0.0	0.0	24.4	0.0	34.7	0.0	0.0			
LnGrp LOS	D	A	A	A	C		C	A				
Approach Vol, veh/h	2363			1513			640			A		
Approach Delay, s/veh	13.9			24.4			34.7					
Approach LOS	B			C			C					
Timer - Assigned Phs	2			4			7			8		
Phs Duration (G+Y+Rc), s	44.0			76.0			17.5			58.5		
Change Period (Y+Rc), s	4.5			4.5			4.5			4.5		
Max Green Setting (Gmax), s	39.5			71.5			21.5			45.5		
Max Q Clear Time (g_c+l1), s	19.6			23.7			12.2			22.3		
Green Ext Time (p_c), s	2.4			27.5			0.7			12.4		
Intersection Summary												
HCM 6th Ctrl Delay			20.4									
HCM 6th LOS			C									
Notes												

HCM 6th Signalized Intersection Summary

4: I-25 Northbound Ramp & Dry Creek Road

2040 Background PM.syn

04/25/2019

												
Movement	EBL	EBT	EBR	WBL	WBT	WBR	NBL	NBT	NBR	SBL	SBT	SBR
Lane Configurations												
Traffic Volume (veh/h)	651	1528	0	0	2310	664	450	18	939	0	0	0
Future Volume (veh/h)	651	1528	0	0	2310	664	450	18	939	0	0	0
Initial Q (Qb), veh	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			
Parking Bus, Adj	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					
Adj Sat Flow, veh/h/ln	1870	1870	0	0	1870	1870	1870	1870	1870			
Adj Flow Rate, veh/h	708	1575	0	0	2357	0	503	0	0			
Peak Hour Factor	0.92	0.97	0.92	0.92	0.98	0.92	0.92	0.92	0.92			
Percent Heavy Veh, %	2	2	0	0	2	2	2	2	2			
Cap, veh/h	766	3681	0	0	2970		727	0				
Arrive On Green	0.44	1.00	0.00	0.00	0.46	0.00	0.20	0.00	0.00			
Sat Flow, veh/h	3456	5274	0	0	6696	1585	3563	0	3170			
Grp Volume(v), veh/h	708	1575	0	0	2357	0	503	0	0			
Grp Sat Flow(s),veh/h/ln	1728	1702	0	0	1609	1585	1781	0	1585			
Q Serve(g_s), s	23.2	0.0	0.0	0.0	37.4	0.0	15.7	0.0	0.0			
Cycle Q Clear(g_c), s	23.2	0.0	0.0	0.0	37.4	0.0	15.7	0.0	0.0			
Prop In Lane	1.00		0.00	0.00		1.00	1.00		1.00			
Lane Grp Cap(c), veh/h	766	3681	0	0	2970		727	0				
V/C Ratio(X)	0.92	0.43	0.00	0.00	0.79		0.69	0.00				
Avail Cap(c_a), veh/h	878	3681	0	0	2970		727	0				
HCM Platoon Ratio	2.00	2.00	1.00	1.00	1.00	1.00	1.00	1.00	1.00			
Upstream Filter(I)	0.60	0.60	0.00	0.00	1.00	0.00	1.00	0.00	0.00			
Uniform Delay (d), s/veh	32.4	0.0	0.0	0.0	27.4	0.0	44.2	0.0	0.0			
Incr Delay (d2), s/veh	9.4	0.2	0.0	0.0	2.3	0.0	5.3	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			
%ile BackOfQ(50%),veh/ln	8.6	0.1	0.0	0.0	14.5	0.0	7.5	0.0	0.0			
Unsig. Movement Delay, s/veh												
LnGrp Delay(d),s/veh	41.8	0.2	0.0	0.0	29.7	0.0	49.6	0.0	0.0			
LnGrp LOS	D	A	A	A	C		D	A				
Approach Vol, veh/h	2283			2357			503			A		
Approach Delay, s/veh	13.1			29.7			49.6					
Approach LOS	B			C			D					
Timer - Assigned Phs	2			4			7			8		
Phs Duration (G+Y+Rc), s	29.0			91.0			31.1			59.9		
Change Period (Y+Rc), s	4.5			4.5			4.5			4.5		
Max Green Setting (Gmax), s	24.5			86.5			30.5			51.5		
Max Q Clear Time (g_c+l1), s	17.7			2.0			25.2			39.4		
Green Ext Time (p_c), s	1.1			20.3			1.4			10.8		

Intersection Summary

HCM 6th Ctrl Delay	24.3
HCM 6th LOS	C

Notes

User approved volume balancing among the lanes for turning movement.

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

HCM 6th Signalized Intersection Summary

4: I-25 Northbound Ramp & Dry Creek Road

2040 Total AM.syn

04/25/2019

												
Movement	EBL	EBT	EBR	WBL	WBT	WBR	NBL	NBT	NBR	SBL	SBT	SBR
Lane Configurations												
Traffic Volume (veh/h)	421	2034	0	0	1599	304	581	10	1215	0	0	0
Future Volume (veh/h)	421	2034	0	0	1599	304	581	10	1215	0	0	0
Initial Q (Qb), veh	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			
Parking Bus, Adj	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					
Adj Sat Flow, veh/h/ln	1870	1870	0	0	1870	1870	1870	1870	1870			
Adj Flow Rate, veh/h	458	2119	0	0	1738	0	640	0	0			
Peak Hour Factor	0.92	0.96	0.92	0.92	0.92	0.94	0.92	0.92	0.97			
Percent Heavy Veh, %	2	2	0	0	2	2	2	2	2			
Cap, veh/h	532	3127	0	0	2709		1113	0				
Arrive On Green	0.20	0.81	0.00	0.00	0.42	0.00	0.31	0.00	0.00			
Sat Flow, veh/h	3456	5274	0	0	6696	1585	3563	0	3170			
Grp Volume(v), veh/h	458	2119	0	0	1738	0	640	0	0			
Grp Sat Flow(s),veh/h/ln	1728	1702	0	0	1609	1585	1781	0	1585			
Q Serve(g_s), s	15.4	20.6	0.0	0.0	25.7	0.0	18.1	0.0	0.0			
Cycle Q Clear(g_c), s	15.4	20.6	0.0	0.0	25.7	0.0	18.1	0.0	0.0			
Prop In Lane	1.00		0.00	0.00		1.00	1.00		1.00			
Lane Grp Cap(c), veh/h	532	3127	0	0	2709		1113	0				
V/C Ratio(X)	0.86	0.68	0.00	0.00	0.64		0.57	0.00				
Avail Cap(c_a), veh/h	734	3127	0	0	2709		1113	0				
HCM Platoon Ratio	1.33	1.33	1.00	1.00	1.00	1.00	1.00	1.00	1.00			
Upstream Filter(I)	0.58	0.58	0.00	0.00	1.00	0.00	1.00	0.00	0.00			
Uniform Delay (d), s/veh	46.5	6.2	0.0	0.0	27.6	0.0	34.6	0.0	0.0			
Incr Delay (d2), s/veh	4.6	0.7	0.0	0.0	1.2	0.0	2.2	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			
%ile BackOfQ(50%),veh/ln	6.6	4.4	0.0	0.0	10.0	0.0	8.1	0.0	0.0			
Unsig. Movement Delay, s/veh												
LnGrp Delay(d),s/veh	51.1	6.9	0.0	0.0	28.7	0.0	36.7	0.0	0.0			
LnGrp LOS	D	A	A	A	C		D	A				
Approach Vol, veh/h	2577			1738			640			A		
Approach Delay, s/veh	14.8			28.7			36.7					
Approach LOS	B			C			D					
Timer - Assigned Phs	2			4			7			8		
Phs Duration (G+Y+Rc), s	42.0			78.0			23.0			55.0		
Change Period (Y+Rc), s	4.5			4.5			4.5			4.5		
Max Green Setting (Gmax), s	37.5			73.5			25.5			43.5		
Max Q Clear Time (g_c+l1), s	20.1			22.6			17.4			27.7		
Green Ext Time (p_c), s	2.3			29.8			1.1			11.0		
Intersection Summary												
HCM 6th Ctrl Delay	22.5											
HCM 6th LOS	C											
Notes												
User approved volume balancing among the lanes for turning movement.												
Unsignalized Delay for [NBR, WBR] is excluded from calculations of the approach delay and intersection delay.												

HCM 6th Signalized Intersection Summary

4: I-25 Northbound Ramp & Dry Creek Road

2040 Total PM.syn

04/25/2019

												
Movement	EBL	EBT	EBR	WBL	WBT	WBR	NBL	NBT	NBR	SBL	SBT	SBR
Lane Configurations												
Traffic Volume (veh/h)	1184	1741	0	0	2383	664	450	18	939	0	0	0
Future Volume (veh/h)	1184	1741	0	0	2383	664	450	18	939	0	0	0
Initial Q (Qb), veh	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			
Parking Bus, Adj	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					
Adj Sat Flow, veh/h/ln	1870	1870	0	0	1870	1870	1870	1870	1870			
Adj Flow Rate, veh/h	1287	1795	0	0	2432	0	503	0	0			
Peak Hour Factor	0.92	0.97	0.92	0.92	0.98	0.92	0.92	0.92	0.92			
Percent Heavy Veh, %	2	2	0	0	2	2	2	2	2			
Cap, veh/h	1253	3957	0	0	2413		534	0				
Arrive On Green	0.73	1.00	0.00	0.00	0.38	0.00	0.15	0.00	0.00			
Sat Flow, veh/h	3456	5274	0	0	6696	1585	3563	0	3170			
Grp Volume(v), veh/h	1287	1795	0	0	2432	0	503	0	0			
Grp Sat Flow(s),veh/h/ln	1728	1702	0	0	1609	1585	1781	0	1585			
Q Serve(g_s), s	43.5	0.0	0.0	0.0	45.0	0.0	16.8	0.0	0.0			
Cycle Q Clear(g_c), s	43.5	0.0	0.0	0.0	45.0	0.0	16.8	0.0	0.0			
Prop In Lane	1.00		0.00	0.00		1.00	1.00		1.00			
Lane Grp Cap(c), veh/h	1253	3957	0	0	2413		534	0				
V/C Ratio(X)	1.03	0.45	0.00	0.00	1.01		0.94	0.00				
Avail Cap(c_a), veh/h	1253	3957	0	0	2413		534	0				
HCM Platoon Ratio	2.00	2.00	1.00	1.00	1.00	1.00	1.00	1.00	1.00			
Upstream Filter(I)	0.25	0.25	0.00	0.00	1.00	0.00	1.00	0.00	0.00			
Uniform Delay (d), s/veh	16.5	0.0	0.0	0.0	37.5	0.0	50.5	0.0	0.0			
Incr Delay (d2), s/veh	20.4	0.1	0.0	0.0	20.3	0.0	26.8	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			
%ile BackOfQ(50%),veh/ln	11.2	0.0	0.0	0.0	20.7	0.0	9.4	0.0	0.0			
Unsig. Movement Delay, s/veh												
LnGrp Delay(d),s/veh	36.9	0.1	0.0	0.0	57.8	0.0	77.3	0.0	0.0			
LnGrp LOS	F	A	A	A	F		E	A				
Approach Vol, veh/h	3082			2432			503			A		
Approach Delay, s/veh	15.5			57.8			77.3					
Approach LOS	B			E			E					
Timer - Assigned Phs	2			4			7			8		
Phs Duration (G+Y+Rc), s	22.5			97.5			48.0			49.5		
Change Period (Y+Rc), s	4.5			4.5			4.5			4.5		
Max Green Setting (Gmax), s	18.0			93.0			43.5			45.0		
Max Q Clear Time (g_c+I1), s	18.8			2.0			45.5			47.0		
Green Ext Time (p_c), s	0.0			26.9			0.0			0.0		
Intersection Summary												
HCM 6th Ctrl Delay	37.7											
HCM 6th LOS	D											
Notes												
User approved volume balancing among the lanes for turning movement.												
Unsignalized Delay for [NBR, WBR] is excluded from calculations of the approach delay and intersection delay.												

Intersection						
Int Delay, s/veh	1					
Movement	WBL	WBR	NBT	NBR	SBL	SBT
Lane Configurations						
Traffic Vol, veh/h	14	24	963	149	101	498
Future Vol, veh/h	14	24	963	149	101	498
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	-	-	175	-
Veh in Median Storage, #	1	-	0	-	-	0
Grade, %	0	-	0	-	-	0
Peak Hour Factor	58	75	81	76	87	90
Heavy Vehicles, %	2	2	2	2	2	2
Mvmt Flow	24	32	1189	196	116	553
Major/Minor	Minor1	Major1		Major2		
Conflicting Flow All	1796	693	0	0	1385	0
Stage 1	1287	-	-	-	-	-
Stage 2	509	-	-	-	-	-
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	*72	*691	-	-	695	-
Stage 1	*455	-	-	-	-	-
Stage 2	*843	-	-	-	-	-
Platoon blocked, %		1	-	-	1	-
Mov Cap-1 Maneuver	*60	*691	-	-	695	-
Mov Cap-2 Maneuver	*252	-	-	-	-	-
Stage 1	*379	-	-	-	-	-
Stage 2	*843	-	-	-	-	-
Approach	WB	NB		SB		
HCM Control Delay, s	14.9	0		1.9		
HCM LOS	B					
Minor Lane/Major Mvmt	NBT	NBR	WBLn1	WBLn2	SBL	SBT
Capacity (veh/h)	-	-	252	691	695	-
HCM Lane V/C Ratio	-	-	0.096	0.046	0.167	-
HCM Control Delay (s)	-	-	20.8	10.5	11.2	-
HCM Lane LOS	-	-	C	B	B	-
HCM 95th %tile Q(veh)	-	-	0.3	0.1	0.6	-
Notes						
~: Volume exceeds capacity		\$: Delay exceeds 300s		+: Computation Not Defined		*: All major volume in platoon

HCM 6th TWSC
5: Yosemite Street & Panorama Drive

2019 Existing PM.syn

04/24/2019

Intersection						
Int Delay, s/veh	2.4					
Movement	WBL	WBR	NBT	NBR	SBL	SBT
Lane Configurations						
Traffic Vol, veh/h	102	171	847	20	26	993
Future Vol, veh/h	102	171	847	20	26	993
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	-	-	175	-
Veh in Median Storage, #	1	-	0	-	-	0
Grade, %	0	-	0	-	-	0
Peak Hour Factor	94	59	93	83	72	93
Heavy Vehicles, %	2	2	2	2	2	2
Mvmt Flow	109	290	911	24	36	1068
Major/Minor	Minor1	Major1		Major2		
Conflicting Flow All	1529	468	0	0	935	0
Stage 1	923	-	-	-	-	-
Stage 2	606	-	-	-	-	-
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	*295	*737	-	-	*1102	-
Stage 1	*695	-	-	-	-	-
Stage 2	*622	-	-	-	-	-
Platoon blocked, %	1	1	-	-	1	-
Mov Cap-1 Maneuver	*285	*737	-	-	*1102	-
Mov Cap-2 Maneuver	*415	-	-	-	-	-
Stage 1	*672	-	-	-	-	-
Stage 2	*622	-	-	-	-	-
Approach	WB	NB		SB		
HCM Control Delay, s	14	0		0.3		
HCM LOS	B					
Minor Lane/Major Mvmt	NBT	NBR	WBLn1	WBLn2	SBL	SBT
Capacity (veh/h)	-	-	415	737	* 1102	-
HCM Lane V/C Ratio	-	-	0.261	0.393	0.033	-
HCM Control Delay (s)	-	-	16.7	13	8.4	-
HCM Lane LOS	-	-	C	B	A	-
HCM 95th %tile Q(veh)	-	-	1	1.9	0.1	-
Notes						
~: Volume exceeds capacity		\$: Delay exceeds 300s		+: Computation Not Defined		*: All major volume in platoon

Intersection						
Int Delay, s/veh	1.1					
Movement	WBL	WBR	NBT	NBR	SBL	SBT
Lane Configurations						
Traffic Vol, veh/h	15	25	1017	157	107	526
Future Vol, veh/h	15	25	1017	157	107	526
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	-	-	175	-
Veh in Median Storage, #	1	-	0	-	-	0
Grade, %	0	-	0	-	-	0
Peak Hour Factor	58	75	81	76	87	90
Heavy Vehicles, %	2	2	2	2	2	2
Mvmt Flow	26	33	1256	207	123	584
Major/Minor	Minor1	Major1		Major2		
Conflicting Flow All	1898	732	0	0	1463	0
Stage 1	1360	-	-	-	-	-
Stage 2	538	-	-	-	-	-
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	*61	*656	-	-	663	-
Stage 1	*443	-	-	-	-	-
Stage 2	*818	-	-	-	-	-
Platoon blocked, %		1	-	-	1	-
Mov Cap-1 Maneuver	*50	*656	-	-	663	-
Mov Cap-2 Maneuver	*237	-	-	-	-	-
Stage 1	*361	-	-	-	-	-
Stage 2	*818	-	-	-	-	-
Approach	WB	NB		SB		
HCM Control Delay, s	15.7	0		2		
HCM LOS	C					
Minor Lane/Major Mvmt	NBT	NBR	WBLn1	WBLn2	SBL	SBT
Capacity (veh/h)	-	-	237	656	663	-
HCM Lane V/C Ratio	-	-	0.109	0.051	0.186	-
HCM Control Delay (s)	-	-	22	10.8	11.7	-
HCM Lane LOS	-	-	C	B	B	-
HCM 95th %tile Q(veh)	-	-	0.4	0.2	0.7	-
Notes						
~: Volume exceeds capacity		\$: Delay exceeds 300s		+: Computation Not Defined		*: All major volume in platoon

Intersection						
Int Delay, s/veh	2.6					
Movement	WBL	WBR	NBT	NBR	SBL	SBT
Lane Configurations						
Traffic Vol, veh/h	108	181	895	21	27	1049
Future Vol, veh/h	108	181	895	21	27	1049
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	-	-	175	-
Veh in Median Storage, #	1	-	0	-	-	0
Grade, %	0	-	0	-	-	0
Peak Hour Factor	94	59	93	83	72	93
Heavy Vehicles, %	2	2	2	2	2	2
Mvmt Flow	115	307	962	25	38	1128
Major/Minor	Minor1	Major1		Major2		
Conflicting Flow All	1615	494	0	0	987	0
Stage 1	975	-	-	-	-	-
Stage 2	640	-	-	-	-	-
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	*254	*711	-	-	*1063	-
Stage 1	*671	-	-	-	-	-
Stage 2	*597	-	-	-	-	-
Platoon blocked, %	1	1	-	-	1	-
Mov Cap-1 Maneuver	*245	*711	-	-	*1063	-
Mov Cap-2 Maneuver	*385	-	-	-	-	-
Stage 1	*647	-	-	-	-	-
Stage 2	*597	-	-	-	-	-
Approach	WB	NB		SB		
HCM Control Delay, s	15.1	0		0.3		
HCM LOS	C					
Minor Lane/Major Mvmt	NBT	NBR	WBLn1	WBLn2	SBL	SBT
Capacity (veh/h)	-	-	385	711	* 1063	-
HCM Lane V/C Ratio	-	-	0.298	0.431	0.035	-
HCM Control Delay (s)	-	-	18.3	13.9	8.5	-
HCM Lane LOS	-	-	C	B	A	-
HCM 95th %tile Q(veh)	-	-	1.2	2.2	0.1	-
Notes						
~: Volume exceeds capacity		\$: Delay exceeds 300s		+: Computation Not Defined		*: All major volume in platoon

Intersection						
Int Delay, s/veh	1.1					
Movement	WBL	WBR	NBT	NBR	SBL	SBT
Lane Configurations						
Traffic Vol, veh/h	15	25	1017	157	107	526
Future Vol, veh/h	15	25	1017	157	107	526
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	-	-	175	-
Veh in Median Storage, #	1	-	0	-	-	0
Grade, %	0	-	0	-	-	0
Peak Hour Factor	58	75	81	76	87	90
Heavy Vehicles, %	2	2	2	2	2	2
Mvmt Flow	26	33	1256	207	123	584
Major/Minor	Minor1	Major1		Major2		
Conflicting Flow All	1898	732	0	0	1463	0
Stage 1	1360	-	-	-	-	-
Stage 2	538	-	-	-	-	-
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	*61	*656	-	-	663	-
Stage 1	*443	-	-	-	-	-
Stage 2	*818	-	-	-	-	-
Platoon blocked, %		1	-	-	1	-
Mov Cap-1 Maneuver	*50	*656	-	-	663	-
Mov Cap-2 Maneuver	*237	-	-	-	-	-
Stage 1	*361	-	-	-	-	-
Stage 2	*818	-	-	-	-	-
Approach	WB	NB		SB		
HCM Control Delay, s	15.7	0		2		
HCM LOS	C					
Minor Lane/Major Mvmt	NBT	NBR	WBLn1	WBLn2	SBL	SBT
Capacity (veh/h)	-	-	237	656	663	-
HCM Lane V/C Ratio	-	-	0.109	0.051	0.186	-
HCM Control Delay (s)	-	-	22	10.8	11.7	-
HCM Lane LOS	-	-	C	B	B	-
HCM 95th %tile Q(veh)	-	-	0.4	0.2	0.7	-
Notes						
~: Volume exceeds capacity		\$: Delay exceeds 300s		+: Computation Not Defined		*: All major volume in platoon

HCM 6th TWSC
5: Yosemite Street & Panorama Drive

2030 Total PM.syn
04/24/2019

Intersection						
Int Delay, s/veh	2.6					
Movement	WBL	WBR	NBT	NBR	SBL	SBT
Lane Configurations						
Traffic Vol, veh/h	108	181	895	21	27	1049
Future Vol, veh/h	108	181	895	21	27	1049
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	-	-	175	-
Veh in Median Storage, #	1	-	0	-	-	0
Grade, %	0	-	0	-	-	0
Peak Hour Factor	94	59	93	83	72	93
Heavy Vehicles, %	2	2	2	2	2	2
Mvmt Flow	115	307	962	25	38	1128
Major/Minor	Minor1	Major1		Major2		
Conflicting Flow All	1615	494	0	0	987	0
Stage 1	975	-	-	-	-	-
Stage 2	640	-	-	-	-	-
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	*254	*711	-	-	*1063	-
Stage 1	*671	-	-	-	-	-
Stage 2	*597	-	-	-	-	-
Platoon blocked, %	1	1	-	-	1	-
Mov Cap-1 Maneuver	*245	*711	-	-	*1063	-
Mov Cap-2 Maneuver	*385	-	-	-	-	-
Stage 1	*647	-	-	-	-	-
Stage 2	*597	-	-	-	-	-
Approach	WB	NB		SB		
HCM Control Delay, s	15.1	0		0.3		
HCM LOS	C					
Minor Lane/Major Mvmt	NBT	NBR	WBLn1	WBLn2	SBL	SBT
Capacity (veh/h)	-	-	385	711	* 1063	-
HCM Lane V/C Ratio	-	-	0.298	0.431	0.035	-
HCM Control Delay (s)	-	-	18.3	13.9	8.5	-
HCM Lane LOS	-	-	C	B	A	-
HCM 95th %tile Q(veh)	-	-	1.2	2.2	0.1	-
Notes						
~: Volume exceeds capacity		\$: Delay exceeds 300s		+: Computation Not Defined		*: All major volume in platoon

Intersection						
Int Delay, s/veh	1.2					
Movement	WBL	WBR	NBT	NBR	SBL	SBT
Lane Configurations						
Traffic Vol, veh/h	16	27	1069	165	112	553
Future Vol, veh/h	16	27	1069	165	112	553
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	-	-	175	-
Veh in Median Storage, #	1	-	0	-	-	0
Grade, %	0	-	0	-	-	0
Peak Hour Factor	58	75	81	76	87	90
Heavy Vehicles, %	2	2	2	2	2	2
Mvmt Flow	28	36	1320	217	129	614
Major/Minor	Minor1	Major1		Major2		
Conflicting Flow All	1994	769	0	0	1537	0
Stage 1	1429	-	-	-	-	-
Stage 2	565	-	-	-	-	-
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	*53	*656	-	-	597	-
Stage 1	*388	-	-	-	-	-
Stage 2	*818	-	-	-	-	-
Platoon blocked, %		1	-	-	1	-
Mov Cap-1 Maneuver	*42	*656	-	-	597	-
Mov Cap-2 Maneuver	*209	-	-	-	-	-
Stage 1	*304	-	-	-	-	-
Stage 2	*818	-	-	-	-	-
Approach	WB	NB		SB		
HCM Control Delay, s	16.9	0		2.2		
HCM LOS	C					
Minor Lane/Major Mvmt	NBT	NBR	WBLn1	WBLn2	SBL	SBT
Capacity (veh/h)	-	-	209	656	597	-
HCM Lane V/C Ratio	-	-	0.132	0.055	0.216	-
HCM Control Delay (s)	-	-	24.8	10.8	12.7	-
HCM Lane LOS	-	-	C	B	B	-
HCM 95th %tile Q(veh)	-	-	0.4	0.2	0.8	-
Notes						
~: Volume exceeds capacity		\$: Delay exceeds 300s		+: Computation Not Defined		*: All major volume in platoon

Intersection						
Int Delay, s/veh	2					
Movement	WBL	WBR	NBT	NBR	SBL	SBT
Lane Configurations						
Traffic Vol, veh/h	113	190	941	22	29	1103
Future Vol, veh/h	113	190	941	22	29	1103
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	-	-	175	-
Veh in Median Storage, #	1	-	0	-	-	0
Grade, %	0	-	0	-	-	0
Peak Hour Factor	94	92	93	92	92	93
Heavy Vehicles, %	2	2	2	2	2	2
Mvmt Flow	120	207	1012	24	32	1186
Major/Minor	Minor1	Major1		Major2		
Conflicting Flow All	1681	518	0	0	1036	0
Stage 1	1024	-	-	-	-	-
Stage 2	657	-	-	-	-	-
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	*229	*685	-	-	*1024	-
Stage 1	*646	-	-	-	-	-
Stage 2	*597	-	-	-	-	-
Platoon blocked, %	1	1	-	-	1	-
Mov Cap-1 Maneuver	*222	*685	-	-	*1024	-
Mov Cap-2 Maneuver	*372	-	-	-	-	-
Stage 1	*626	-	-	-	-	-
Stage 2	*597	-	-	-	-	-
Approach	WB	NB		SB		
HCM Control Delay, s	15	0		0.2		
HCM LOS	C					
Minor Lane/Major Mvmt	NBT	NBR	WBLn1	WBLn2	SBL	SBT
Capacity (veh/h)	-	-	372	685	* 1024	-
HCM Lane V/C Ratio	-	-	0.323	0.301	0.031	-
HCM Control Delay (s)	-	-	19.2	12.5	8.6	-
HCM Lane LOS	-	-	C	B	A	-
HCM 95th %tile Q(veh)	-	-	1.4	1.3	0.1	-
Notes						
~: Volume exceeds capacity		\$: Delay exceeds 300s		+: Computation Not Defined		*: All major volume in platoon

Intersection						
Int Delay, s/veh	1.2					
Movement	WBL	WBR	NBT	NBR	SBL	SBT
Lane Configurations						
Traffic Vol, veh/h	16	27	1069	165	112	553
Future Vol, veh/h	16	27	1069	165	112	553
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	-	-	175	-
Veh in Median Storage, #	1	-	0	-	-	0
Grade, %	0	-	0	-	-	0
Peak Hour Factor	58	75	81	76	87	90
Heavy Vehicles, %	2	2	2	2	2	2
Mvmt Flow	28	36	1320	217	129	614
Major/Minor	Minor1	Major1		Major2		
Conflicting Flow All	1994	769	0	0	1537	0
Stage 1	1429	-	-	-	-	-
Stage 2	565	-	-	-	-	-
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	*53	*656	-	-	597	-
Stage 1	*388	-	-	-	-	-
Stage 2	*818	-	-	-	-	-
Platoon blocked, %		1	-	-	1	-
Mov Cap-1 Maneuver	*42	*656	-	-	597	-
Mov Cap-2 Maneuver	*209	-	-	-	-	-
Stage 1	*304	-	-	-	-	-
Stage 2	*818	-	-	-	-	-
Approach	WB	NB		SB		
HCM Control Delay, s	16.9	0		2.2		
HCM LOS	C					
Minor Lane/Major Mvmt	NBT	NBR	WBLn1	WBLn2	SBL	SBT
Capacity (veh/h)	-	-	209	656	597	-
HCM Lane V/C Ratio	-	-	0.132	0.055	0.216	-
HCM Control Delay (s)	-	-	24.8	10.8	12.7	-
HCM Lane LOS	-	-	C	B	B	-
HCM 95th %tile Q(veh)	-	-	0.4	0.2	0.8	-
Notes						
~: Volume exceeds capacity		\$: Delay exceeds 300s		+: Computation Not Defined		*: All major volume in platoon

Intersection						
Int Delay, s/veh	2.8					
Movement	WBL	WBR	NBT	NBR	SBL	SBT
Lane Configurations						
Traffic Vol, veh/h	113	190	941	22	29	1103
Future Vol, veh/h	113	190	941	22	29	1103
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	-	-	175	-
Veh in Median Storage, #	1	-	0	-	-	0
Grade, %	0	-	0	-	-	0
Peak Hour Factor	94	59	93	83	72	93
Heavy Vehicles, %	2	2	2	2	2	2
Mvmt Flow	120	322	1012	27	40	1186
Major/Minor	Minor1	Major1		Major2		
Conflicting Flow All	1699	520	0	0	1039	0
Stage 1	1026	-	-	-	-	-
Stage 2	673	-	-	-	-	-
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	*229	*685	-	-	*1024	-
Stage 1	*646	-	-	-	-	-
Stage 2	*597	-	-	-	-	-
Platoon blocked, %	1	1	-	-	1	-
Mov Cap-1 Maneuver	*220	*685	-	-	*1024	-
Mov Cap-2 Maneuver	*368	-	-	-	-	-
Stage 1	*621	-	-	-	-	-
Stage 2	*597	-	-	-	-	-
Approach	WB	NB		SB		
HCM Control Delay, s	16.1	0		0.3		
HCM LOS	C					
Minor Lane/Major Mvmt	NBT	NBR	WBLn1	WBLn2	SBL	SBT
Capacity (veh/h)	-	-	368	685	* 1024	-
HCM Lane V/C Ratio	-	-	0.327	0.47	0.039	-
HCM Control Delay (s)	-	-	19.5	14.8	8.7	-
HCM Lane LOS	-	-	C	B	A	-
HCM 95th %tile Q(veh)	-	-	1.4	2.5	0.1	-
Notes						
~: Volume exceeds capacity		\$: Delay exceeds 300s		+: Computation Not Defined		*: All major volume in platoon

HCM 6th Signalized Intersection Summary

6: Chester Street & Panorama Circle

2019 Existing AM.syn

04/25/2019

												
Movement	EBL	EBT	EBR	WBL	WBT	WBR	NBL	NBT	NBR	SBL	SBT	SBR
Lane Configurations												
Traffic Volume (veh/h)	51	17	8	3	3	50	45	167	106	486	423	347
Future Volume (veh/h)	51	17	8	3	3	50	45	167	106	486	423	347
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	72	36	20	4	4	0	73	196	125	565	465	418
Peak Hour Factor	0.71	0.47	0.40	0.75	0.75	0.66	0.62	0.85	0.85	0.86	0.91	0.83
Percent Heavy Veh, %	2	2	2	2	2	2	2	2	2	2	2	2
Cap, veh/h	197	92	51	119	69		516	1310	796	931	1289	1150
Arrive On Green	0.05	0.08	0.08	0.01	0.04	0.00	0.04	0.62	0.62	0.20	0.97	0.97
Sat Flow, veh/h	1781	1130	628	1781	1870	1585	1781	2124	1291	1781	1777	1585
Grp Volume(v), veh/h	72	0	56	4	4	0	73	162	159	565	465	418
Grp Sat Flow(s),veh/h/ln	1781	0	1757	1781	1870	1585	1781	1777	1638	1781	1777	1585
Q Serve(g_s), s	4.5	0.0	3.6	0.3	0.2	0.0	1.8	4.6	4.9	13.6	1.7	1.7
Cycle Q Clear(g_c), s	4.5	0.0	3.6	0.3	0.2	0.0	1.8	4.6	4.9	13.6	1.7	1.7
Prop In Lane	1.00		0.36	1.00		1.00	1.00		0.79	1.00		1.00
Lane Grp Cap(c), veh/h	197	0	143	119	69		516	1096	1010	931	1289	1150
V/C Ratio(X)	0.36	0.00	0.39	0.03	0.06		0.14	0.15	0.16	0.61	0.36	0.36
Avail Cap(c_a), veh/h	220	0	315	191	304		574	1096	1010	1434	1289	1150
HCM Platoon Ratio	1.00	1.00	1.00	1.00	1.00	1.00	1.00	1.00	1.00	1.33	1.33	1.33
Upstream Filter(I)	1.00	0.00	1.00	1.00	1.00	0.00	1.00	1.00	1.00	0.50	0.50	0.50
Uniform Delay (d), s/veh	50.3	0.0	52.3	55.2	55.8	0.0	7.5	9.7	9.8	4.5	0.6	0.6
Incr Delay (d2), s/veh	1.1	0.0	1.8	0.1	0.3	0.0	0.1	0.3	0.3	0.3	0.4	0.4
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	2.1	0.0	1.7	0.1	0.1	0.0	0.7	1.9	1.8	3.4	0.5	0.5
Unsig. Movement Delay, s/veh												
LnGrp Delay(d),s/veh	51.5	0.0	54.1	55.3	56.1	0.0	7.6	10.0	10.1	4.8	1.0	1.0
LnGrp LOS	D	A	D	E	E		A	A	B	A	A	A
Approach Vol, veh/h	128					8	A	394		1448		
Approach Delay, s/veh	52.6					55.7		9.6		2.5		
Approach LOS	D					E		A		A		
Timer - Assigned Phs	1	2	3	4	5	6	7	8				
Phs Duration (G+Y+Rc), s	22.1	78.5	5.1	14.2	9.1	91.6	10.5	8.9				
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	51.5	23.5	5.5	21.5	8.5	66.5	7.5	19.5				
Max Q Clear Time (g_c+I1), s	15.6	6.9	2.3	5.6	3.8	3.7	6.5	2.2				
Green Ext Time (p_c), s	2.0	1.7	0.0	0.2	0.0	7.5	0.0	0.0				
Intersection Summary												
HCM 6th Ctrl Delay	7.4											
HCM 6th LOS	A											
Notes												

HCM 6th Signalized Intersection Summary
6: Chester Street & Panorama Circle

2019 Existing PM.syn

04/25/2019

												
Movement	EBL	EBT	EBR	WBL	WBT	WBR	NBL	NBT	NBR	SBL	SBT	SBR
Lane Configurations												
Traffic Volume (veh/h)	274	9	107	137	23	567	13	548	4	25	325	57
Future Volume (veh/h)	274	9	107	137	23	567	13	548	4	25	325	57
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	319	12	132	171	32	0	32	589	16	40	374	72
Peak Hour Factor	0.86	0.75	0.81	0.80	0.72	0.86	0.41	0.93	0.25	0.62	0.87	0.79
Percent Heavy Veh, %	2	2	2	2	2	2	2	2	2	2	2	2
Cap, veh/h	356	16	175	248	197		623	2028	55	541	1722	328
Arrive On Green	0.09	0.12	0.12	0.07	0.11	0.00	0.03	0.57	0.57	0.04	0.58	0.58
Sat Flow, veh/h	1781	134	1472	1781	1870	1585	1781	3534	96	1781	2977	568
Grp Volume(v), veh/h	319	0	144	171	32	0	32	296	309	40	222	224
Grp Sat Flow(s),veh/h/ln	1781	0	1605	1781	1870	1585	1781	1777	1853	1781	1777	1768
Q Serve(g_s), s	7.7	0.0	7.8	6.5	1.4	0.0	0.7	7.7	7.7	0.8	5.4	5.5
Cycle Q Clear(g_c), s	7.7	0.0	7.8	6.5	1.4	0.0	0.7	7.7	7.7	0.8	5.4	5.5
Prop In Lane	1.00		0.92	1.00		1.00	1.00		0.05	1.00		0.32
Lane Grp Cap(c), veh/h	356	0	191	248	197		623	1020	1064	541	1028	1023
V/C Ratio(X)	0.90	0.00	0.76	0.69	0.16		0.05	0.29	0.29	0.07	0.22	0.22
Avail Cap(c_a), veh/h	356	0	673	248	759		667	1020	1064	579	1028	1023
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	1.00	1.00	0.00	1.00	1.00	1.00	0.86	0.86	0.86
Uniform Delay (d), s/veh	37.1	0.0	38.4	35.1	36.6	0.0	7.3	9.8	9.8	7.4	9.1	9.2
Incr Delay (d2), s/veh	24.0	0.0	6.0	7.8	0.4	0.0	0.0	0.7	0.7	0.0	0.4	0.4
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	5.6	0.0	3.3	1.0	0.7	0.0	0.2	3.0	3.1	0.3	2.1	2.1
Unsig. Movement Delay, s/veh												
LnGrp Delay(d),s/veh	61.1	0.0	44.4	42.8	37.0	0.0	7.4	10.5	10.5	7.4	9.6	9.6
LnGrp LOS	E	A	D	D	D		A	B	B	A	A	A
Approach Vol, veh/h		463			203	A		637			486	
Approach Delay, s/veh		55.9			41.9			10.4			9.4	
Approach LOS		E			D			B			A	
Timer - Assigned Phs	1	2	3	4	5	6	7	8				
Phs Duration (G+Y+Rc), s	7.7	56.2	11.0	15.2	7.3	56.6	12.2	14.0				
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	5.1	22.7	6.5	37.7	5.0	22.8	7.7	36.5				
Max Q Clear Time (g_c+I1), s	2.8	9.7	8.5	9.8	2.7	7.5	9.7	3.4				
Green Ext Time (p_c), s	0.0	3.0	0.0	0.9	0.0	2.3	0.0	0.1				
Intersection Summary												
HCM 6th Ctrl Delay			25.5									
HCM 6th LOS			C									
Notes												
Unsignalized Delay for [WBR] is excluded from calculations of the approach delay and intersection delay.												

HCM 6th Signalized Intersection Summary

6: Chester Street & Panorama Circle

2030 Background AM.syn

04/25/2019

												
Movement	EBL	EBT	EBR	WBL	WBT	WBR	NBL	NBT	NBR	SBL	SBT	SBR
Lane Configurations												
Traffic Volume (veh/h)	54	18	8	3	3	53	48	176	112	513	447	367
Future Volume (veh/h)	54	18	8	3	3	53	48	176	112	513	447	367
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	72	36	16	4	4	0	74	207	132	570	486	432
Peak Hour Factor	0.75	0.50	0.50	0.75	0.75	0.70	0.65	0.85	0.85	0.90	0.92	0.85
Percent Heavy Veh, %	2	2	2	2	2	2	2	2	2	2	2	2
Cap, veh/h	196	99	44	118	67		503	1307	797	920	1293	1149
Arrive On Green	0.05	0.08	0.08	0.01	0.04	0.00	0.04	0.62	0.62	0.20	0.97	0.97
Sat Flow, veh/h	1781	1227	545	1781	1870	1585	1781	2121	1293	1781	1781	1582
Grp Volume(v), veh/h	72	0	52	4	4	0	74	172	167	570	485	433
Grp Sat Flow(s),veh/h/ln	1781	0	1772	1781	1870	1585	1781	1777	1638	1781	1777	1586
Q Serve(g_s), s	4.5	0.0	3.3	0.3	0.2	0.0	1.8	4.9	5.2	13.8	1.7	1.8
Cycle Q Clear(g_c), s	4.5	0.0	3.3	0.3	0.2	0.0	1.8	4.9	5.2	13.8	1.7	1.8
Prop In Lane	1.00		0.31	1.00		1.00	1.00		0.79	1.00		1.00
Lane Grp Cap(c), veh/h	196	0	142	118	67		503	1095	1009	920	1291	1152
V/C Ratio(X)	0.37	0.00	0.37	0.03	0.06		0.15	0.16	0.17	0.62	0.38	0.38
Avail Cap(c_a), veh/h	204	0	303	190	304		561	1095	1009	1421	1291	1152
HCM Platoon Ratio	1.00	1.00	1.00	1.00	1.00	1.00	1.00	1.00	1.00	1.33	1.33	1.33
Upstream Filter(I)	1.00	0.00	1.00	1.00	1.00	0.00	1.00	1.00	1.00	0.47	0.47	0.47
Uniform Delay (d), s/veh	50.4	0.0	52.3	55.3	55.9	0.0	7.5	9.8	9.8	4.6	0.6	0.6
Incr Delay (d2), s/veh	1.1	0.0	1.6	0.1	0.4	0.0	0.1	0.3	0.4	0.3	0.4	0.4
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	2.1	0.0	1.5	0.1	0.1	0.0	0.7	2.0	1.9	3.5	0.5	0.5
Unsig. Movement Delay, s/veh												
LnGrp Delay(d),s/veh	51.6	0.0	53.8	55.4	56.2	0.0	7.6	10.1	10.2	4.9	1.0	1.0
LnGrp LOS	D	A	D	E	E		A	B	B	A	A	A
Approach Vol, veh/h		124			8	A		413			1488	
Approach Delay, s/veh		52.5			55.8			9.7			2.5	
Approach LOS		D			E			A			A	
Timer - Assigned Phs	1	2	3	4	5	6	7	8				
Phs Duration (G+Y+Rc), s	22.3	78.4	5.1	14.1	9.1	91.7	10.4	8.8				
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	51.5	24.5	5.5	20.5	8.5	67.5	6.5	19.5				
Max Q Clear Time (g_c+I1), s	15.8	7.2	2.3	5.3	3.8	3.8	6.5	2.2				
Green Ext Time (p_c), s	2.0	1.8	0.0	0.1	0.1	7.9	0.0	0.0				
Intersection Summary												
HCM 6th Ctrl Delay			7.2									
HCM 6th LOS			A									
Notes												
Unsignalized Delay for [WBR] is excluded from calculations of the approach delay and intersection delay.												

HCM 6th Signalized Intersection Summary

6: Chester Street & Panorama Circle

2030 Background PM.syn

04/29/2019

												
Movement	EBL	EBT	EBR	WBL	WBT	WBR	NBL	NBT	NBR	SBL	SBT	SBR
Lane Configurations												
Traffic Volume (veh/h)	289	10	113	145	24	599	14	579	4	26	343	60
Future Volume (veh/h)	289	10	113	145	24	599	14	579	4	26	343	60
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	314	11	123	158	26	0	15	623	4	28	373	65
Peak Hour Factor	0.92	0.92	0.92	0.92	0.92	0.92	0.92	0.93	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	386	15	165	287	209		602	2048	13	510	1747	302
Arrive On Green	0.09	0.11	0.11	0.09	0.11	0.00	0.02	0.57	0.57	0.03	0.58	0.58
Sat Flow, veh/h	1781	132	1473	1781	1870	1585	1781	3620	23	1781	3030	523
Grp Volume(v), veh/h	314	0	134	158	26	0	15	306	321	28	217	221
Grp Sat Flow(s),veh/h/ln	1781	0	1605	1781	1870	1585	1781	1777	1866	1781	1777	1776
Q Serve(g_s), s	8.5	0.0	7.3	7.0	1.1	0.0	0.3	8.1	8.1	0.6	5.3	5.4
Cycle Q Clear(g_c), s	8.5	0.0	7.3	7.0	1.1	0.0	0.3	8.1	8.1	0.6	5.3	5.4
Prop In Lane	1.00		0.92	1.00		1.00	1.00		0.01	1.00		0.29
Lane Grp Cap(c), veh/h	386	0	179	287	209		602	1006	1056	510	1024	1024
V/C Ratio(X)	0.81	0.00	0.75	0.55	0.12		0.02	0.30	0.30	0.05	0.21	0.22
Avail Cap(c_a), veh/h	386	0	615	287	717		680	1006	1056	569	1024	1024
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	1.00	1.00	0.00	1.00	1.00	1.00	0.85	0.85	0.85
Uniform Delay (d), s/veh	35.4	0.0	38.7	31.5	36.0	0.0	8.0	10.2	10.2	7.9	9.2	9.2
Incr Delay (d2), s/veh	12.6	0.0	6.1	2.2	0.3	0.0	0.0	0.8	0.7	0.0	0.4	0.4
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	3.9	0.0	3.1	3.1	0.5	0.0	0.1	3.2	3.3	0.2	2.0	2.1
Unsig. Movement Delay, s/veh												
LnGrp Delay(d),s/veh	48.0	0.0	44.8	33.7	36.3	0.0	8.0	11.0	11.0	8.0	9.6	9.6
LnGrp LOS	D	A	D	C	D		A	B	B	A	A	A
Approach Vol, veh/h		448			184	A		642			466	
Approach Delay, s/veh		47.1			34.1			10.9			9.5	
Approach LOS		D			C			B			A	
Timer - Assigned Phs	1	2	3	4	5	6	7	8				
Phs Duration (G+Y+Rc), s	7.0	55.4	13.0	14.6	6.1	56.4	13.0	14.6				
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	5.5	23.5	8.5	34.5	5.5	23.5	8.5	34.5				
Max Q Clear Time (g_c+I1), s	2.6	10.1	9.0	9.3	2.3	7.4	10.5	3.1				
Green Ext Time (p_c), s	0.0	3.2	0.0	0.8	0.0	2.3	0.0	0.1				
Intersection Summary												
HCM 6th Ctrl Delay			22.3									
HCM 6th LOS			C									
Notes												
Unsignalized Delay for [WBR] is excluded from calculations of the approach delay and intersection delay.												

HCM 6th Signalized Intersection Summary

6: Chester Street & Panorama Circle

2030 Total AM.syn

04/25/2019

												
Movement	EBL	EBT	EBR	WBL	WBT	WBR	NBL	NBT	NBR	SBL	SBT	SBR
Lane Configurations												
Traffic Volume (veh/h)	54	18	8	3	3	166	48	374	112	886	1069	367
Future Volume (veh/h)	54	18	8	3	3	166	48	374	112	886	1069	367
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	59	20	9	3	3	0	52	407	122	963	1162	399
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	172	81	36	107	54		222	826	245	1063	1947	655
Arrive On Green	0.04	0.07	0.07	0.00	0.03	0.00	0.03	0.31	0.31	0.79	1.00	1.00
Sat Flow, veh/h	1781	1222	550	1781	1870	1585	1781	2702	801	1781	2611	878
Grp Volume(v), veh/h	59	0	29	3	3	0	52	266	263	963	783	778
Grp Sat Flow(s),veh/h/ln	1781	0	1771	1781	1870	1585	1781	1777	1726	1781	1777	1712
Q Serve(g_s), s	3.8	0.0	1.9	0.2	0.2	0.0	2.4	14.7	15.0	53.7	0.0	0.0
Cycle Q Clear(g_c), s	3.8	0.0	1.9	0.2	0.2	0.0	2.4	14.7	15.0	53.7	0.0	0.0
Prop In Lane	1.00		0.31	1.00		1.00	1.00		0.46	1.00		0.51
Lane Grp Cap(c), veh/h	172	0	117	107	54		222	543	528	1063	1325	1277
V/C Ratio(X)	0.34	0.00	0.25	0.03	0.06		0.23	0.49	0.50	0.91	0.59	0.61
Avail Cap(c_a), veh/h	174	0	270	175	285		284	543	528	1087	1325	1277
HCM Platoon Ratio	1.00	1.00	1.00	1.00	1.00	1.00	1.00	1.00	1.00	1.67	1.67	1.67
Upstream Filter(I)	1.00	0.00	1.00	1.00	1.00	0.00	1.00	1.00	1.00	0.09	0.09	0.09
Uniform Delay (d), s/veh	51.8	0.0	53.2	56.2	56.7	0.0	26.9	34.0	34.1	4.0	0.0	0.0
Incr Delay (d2), s/veh	1.2	0.0	1.1	0.1	0.4	0.0	0.5	3.1	3.3	1.2	0.2	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	1.7	0.0	0.9	0.1	0.1	0.0	1.1	6.8	6.8	2.2	0.1	0.1
Unsig. Movement Delay, s/veh												
LnGrp Delay(d),s/veh	53.0	0.0	54.3	56.3	57.1	0.0	27.5	37.2	37.5	5.1	0.2	0.2
LnGrp LOS	D	A	D	E	E		C	D	D	A	A	A
Approach Vol, veh/h	88			6			A			581		
Approach Delay, s/veh	53.4			56.7			36.4			2.1		
Approach LOS	D			E			D			A		
Timer - Assigned Phs	1	2	3	4	5	6	7	8				
Phs Duration (G+Y+Rc), s	61.4	41.2	5.0	12.4	8.6	94.0	9.5	7.9				
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	58.5	20.1	5.1	18.3	8.3	70.3	5.1	18.3				
Max Q Clear Time (g_c+I1), s	55.7	17.0	2.2	3.9	4.4	2.0	5.8	2.2				
Green Ext Time (p_c), s	1.3	1.0	0.0	0.1	0.0	20.0	0.0	0.0				
Intersection Summary												
HCM 6th Ctrl Delay	9.8											
HCM 6th LOS	A											

HCM 6th Signalized Intersection Summary

6: Chester Street & Panorama Circle

2030 Total PM.syn

04/25/2019

												
Movement	EBL	EBT	EBR	WBL	WBT	WBR	NBL	NBT	NBR	SBL	SBT	SBR
Lane Configurations												
Traffic Volume (veh/h)	289	10	113	145	24	1025	14	1325	4	157	561	60
Future Volume (veh/h)	289	10	113	145	24	1025	14	1325	4	157	561	60
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	314	11	123	158	26	0	15	1425	4	171	610	65
Peak Hour Factor	0.92	0.92	0.92	0.92	0.92	0.92	0.92	0.93	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	333	15	164	247	240		497	2038	6	283	1941	206
Arrive On Green	0.06	0.11	0.11	0.07	0.13	0.00	0.02	0.56	0.56	0.06	0.60	0.60
Sat Flow, veh/h	1781	132	1473	1781	1870	1585	1781	3635	10	1781	3240	345
Grp Volume(v), veh/h	314	0	134	158	26	0	15	696	733	171	334	341
Grp Sat Flow(s),veh/h/ln	1781	0	1605	1781	1870	1585	1781	1777	1869	1781	1777	1808
Q Serve(g_s), s	5.0	0.0	7.3	6.5	1.1	0.0	0.3	25.5	25.5	3.6	8.4	8.4
Cycle Q Clear(g_c), s	5.0	0.0	7.3	6.5	1.1	0.0	0.3	25.5	25.5	3.6	8.4	8.4
Prop In Lane	1.00		0.92	1.00		1.00	1.00		0.01	1.00		0.19
Lane Grp Cap(c), veh/h	333	0	179	247	240		497	996	1048	283	1064	1083
V/C Ratio(X)	0.94	0.00	0.75	0.64	0.11		0.03	0.70	0.70	0.60	0.31	0.31
Avail Cap(c_a), veh/h	333	0	589	247	717		565	996	1048	283	1064	1083
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	1.00	1.00	0.00	1.00	1.00	1.00	0.64	0.64	0.64
Uniform Delay (d), s/veh	38.6	0.0	38.8	33.9	34.7	0.0	8.2	14.3	14.3	14.1	8.9	8.9
Incr Delay (d2), s/veh	34.4	0.0	6.1	5.4	0.2	0.0	0.0	4.1	3.9	2.3	0.5	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	7.7	0.0	3.1	3.4	0.5	0.0	0.1	10.4	10.9	1.6	3.1	3.1
Unsig. Movement Delay, s/veh												
LnGrp Delay(d),s/veh	73.0	0.0	44.9	39.3	34.9	0.0	8.2	18.4	18.2	16.4	9.4	9.4
LnGrp LOS	E	A	D	D	C		A	B	B	B	A	A
Approach Vol, veh/h	448			184			1444			846		
Approach Delay, s/veh	64.6			38.7			18.2			10.8		
Approach LOS	E			D			B			B		
Timer - Assigned Phs	1	2	3	4	5	6	7	8				
Phs Duration (G+Y+Rc), s	9.5	55.0	11.0	14.5	6.1	58.4	9.5	16.0				
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	5.0	27.5	6.5	33.0	5.0	27.5	5.0	34.5				
Max Q Clear Time (g_c+l1), s	5.6	27.5	8.5	9.3	2.3	10.4	7.0	3.1				
Green Ext Time (p_c), s	0.0	0.0	0.0	0.8	0.0	3.9	0.0	0.1				
Intersection Summary												
HCM 6th Ctrl Delay			24.4									
HCM 6th LOS			C									
Notes												

HCM 6th Signalized Intersection Summary 6: Chester Street & Panorama Circle

2030 Total AM_Imp.syn
04/25/2019

												
Movement	EBL	EBT	EBR	WBL	WBT	WBR	NBL	NBT	NBR	SBL	SBT	SBR
Lane Configurations												
Traffic Volume (veh/h)	54	18	8	3	3	166	48	374	112	886	1069	367
Future Volume (veh/h)	54	18	8	3	3	166	48	374	112	886	1069	367
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	59	20	9	3	3	0	52	407	122	963	1162	399
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	172	81	36	107	54		279	1291	383	1045	1947	655
Arrive On Green	0.04	0.07	0.07	0.00	0.03	0.00	0.03	0.48	0.48	0.50	1.00	1.00
Sat Flow, veh/h	1781	1222	550	1781	1870	1585	1781	2702	801	3456	2611	878
Grp Volume(v), veh/h	59	0	29	3	3	0	52	266	263	963	783	778
Grp Sat Flow(s),veh/h/ln	1781	0	1771	1781	1870	1585	1781	1777	1726	1728	1777	1712
Q Serve(g_s), s	3.8	0.0	1.9	0.2	0.2	0.0	1.8	11.0	11.3	31.0	0.0	0.0
Cycle Q Clear(g_c), s	3.8	0.0	1.9	0.2	0.2	0.0	1.8	11.0	11.3	31.0	0.0	0.0
Prop In Lane	1.00		0.31	1.00		1.00	1.00		0.46	1.00		0.51
Lane Grp Cap(c), veh/h	172	0	117	107	54		279	849	825	1045	1325	1277
V/C Ratio(X)	0.34	0.00	0.25	0.03	0.06		0.19	0.31	0.32	0.92	0.59	0.61
Avail Cap(c_a), veh/h	180	0	279	175	288		314	849	825	1310	1325	1277
HCM Platoon Ratio	1.00	1.00	1.00	1.00	1.00	1.00	1.00	1.00	1.00	1.67	1.67	1.67
Upstream Filter(I)	1.00	0.00	1.00	1.00	1.00	0.00	0.93	0.93	0.93	0.09	0.09	0.09
Uniform Delay (d), s/veh	51.8	0.0	53.2	56.2	56.7	0.0	14.7	19.2	19.3	28.4	0.0	0.0
Incr Delay (d2), s/veh	1.2	0.0	1.1	0.1	0.4	0.0	0.3	0.9	0.9	1.0	0.2	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	1.7	0.0	0.9	0.1	0.1	0.0	0.7	4.8	4.7	10.7	0.1	0.1
Unsig. Movement Delay, s/veh												
LnGrp Delay(d),s/veh	53.0	0.0	54.3	56.3	57.1	0.0	15.0	20.1	20.3	29.4	0.2	0.2
LnGrp LOS	D	A	D	E	E		B	C	C	C	A	A
Approach Vol, veh/h	88			6			A			2524		
Approach Delay, s/veh	53.4			56.7			19.7			11.3		
Approach LOS	D			E			B			B		
Timer - Assigned Phs	1	2	3	4	5	6	7	8				
Phs Duration (G+Y+Rc), s	40.8	61.8	5.0	12.4	8.6	94.0	9.5	7.9				
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	45.5	32.5	5.1	18.9	6.5	71.5	5.5	18.5				
Max Q Clear Time (g_c+I1), s	33.0	13.3	2.2	3.9	3.8	2.0	5.8	2.2				
Green Ext Time (p_c), s	3.3	3.1	0.0	0.1	0.0	20.1	0.0	0.0				
Intersection Summary												
HCM 6th Ctrl Delay	14.1											
HCM 6th LOS	B											

HCM 6th Signalized Intersection Summary

6: Chester Street & Panorama Circle

2030 Total PM_Imp.syn

04/25/2019

												
Movement	EBL	EBT	EBR	WBL	WBT	WBR	NBL	NBT	NBR	SBL	SBT	SBR
Lane Configurations												
Traffic Volume (veh/h)	289	10	113	145	24	1025	14	1325	4	157	561	60
Future Volume (veh/h)	289	10	113	145	24	1025	14	1325	4	157	561	60
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	314	11	123	158	26	0	15	1425	4	171	610	65
Peak Hour Factor	0.92	0.92	0.92	0.92	0.92	0.92	0.92	0.93	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	333	15	164	247	240		497	2038	6	192	1941	206
Arrive On Green	0.06	0.11	0.11	0.07	0.13	0.00	0.03	1.00	1.00	0.06	0.60	0.60
Sat Flow, veh/h	1781	132	1473	1781	1870	1585	1781	3635	10	3456	3240	345
Grp Volume(v), veh/h	314	0	134	158	26	0	15	696	733	171	334	341
Grp Sat Flow(s),veh/h/ln	1781	0	1605	1781	1870	1585	1781	1777	1869	1728	1777	1808
Q Serve(g_s), s	5.0	0.0	7.3	6.5	1.1	0.0	0.3	0.0	0.0	4.4	8.4	8.4
Cycle Q Clear(g_c), s	5.0	0.0	7.3	6.5	1.1	0.0	0.3	0.0	0.0	4.4	8.4	8.4
Prop In Lane	1.00		0.92	1.00		1.00	1.00		0.01	1.00		0.19
Lane Grp Cap(c), veh/h	333	0	179	247	240		497	996	1048	192	1064	1083
V/C Ratio(X)	0.94	0.00	0.75	0.64	0.11		0.03	0.70	0.70	0.89	0.31	0.31
Avail Cap(c_a), veh/h	333	0	589	247	717		565	996	1048	192	1064	1083
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	0.00	1.00	1.00	1.00	0.00	0.78	0.78	0.78	0.78	0.78	0.78
Uniform Delay (d), s/veh	38.6	0.0	38.8	33.9	34.7	0.0	8.1	0.0	0.0	42.2	8.9	8.9
Incr Delay (d2), s/veh	34.4	0.0	6.1	5.4	0.2	0.0	0.0	3.2	3.0	30.5	0.6	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	7.7	0.0	3.1	3.4	0.5	0.0	0.1	0.9	0.9	2.7	3.1	3.2
Unsig. Movement Delay, s/veh												
LnGrp Delay(d),s/veh	73.0	0.0	44.9	39.3	34.9	0.0	8.1	3.2	3.0	72.7	9.5	9.5
LnGrp LOS	E	A	D	D	C		A	A	A	E	A	A
Approach Vol, veh/h	448			184			1444			846		
Approach Delay, s/veh	64.6			38.7			3.2			22.3		
Approach LOS	E			D			A			C		
Timer - Assigned Phs	1	2	3	4	5	6	7	8				
Phs Duration (G+Y+Rc), s	9.5	55.0	11.0	14.5	6.1	58.4	9.5	16.0				
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	5.0	27.5	6.5	33.0	5.0	27.5	5.0	34.5				
Max Q Clear Time (g_c+l1), s	6.4	2.0	8.5	9.3	2.3	10.4	7.0	3.1				
Green Ext Time (p_c), s	0.0	11.9	0.0	0.8	0.0	3.9	0.0	0.1				
Intersection Summary												
HCM 6th Ctrl Delay	20.4											
HCM 6th LOS	C											

HCM 6th Signalized Intersection Summary

6: Chester Street & Panorama Circle

2040 Background AM.syn

04/29/2019

												
Movement	EBL	EBT	EBR	WBL	WBT	WBR	NBL	NBT	NBR	SBL	SBT	SBR
Lane Configurations												
Traffic Volume (veh/h)	57	19	9	3	3	56	50	185	118	540	470	385
Future Volume (veh/h)	57	19	9	3	3	56	50	185	118	540	470	385
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	62	21	10	3	3	0	54	201	128	587	511	418
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	177	82	39	108	55		509	1363	829	934	1378	1127
Arrive On Green	0.04	0.07	0.07	0.00	0.03	0.00	0.03	0.64	0.64	0.14	0.74	0.74
Sat Flow, veh/h	1781	1197	570	1781	1870	1585	1781	2124	1291	1781	1856	1518
Grp Volume(v), veh/h	62	0	31	3	3	0	54	167	162	587	489	440
Grp Sat Flow(s),veh/h/ln	1781	0	1768	1781	1870	1585	1781	1777	1638	1781	1777	1597
Q Serve(g_s), s	3.9	0.0	2.0	0.2	0.2	0.0	1.2	4.4	4.7	12.2	11.7	11.7
Cycle Q Clear(g_c), s	3.9	0.0	2.0	0.2	0.2	0.0	1.2	4.4	4.7	12.2	11.7	11.7
Prop In Lane	1.00		0.32	1.00		1.00	1.00		0.79	1.00		0.95
Lane Grp Cap(c), veh/h	177	0	122	108	55		509	1141	1052	934	1319	1186
V/C Ratio(X)	0.35	0.00	0.25	0.03	0.05		0.11	0.15	0.15	0.63	0.37	0.37
Avail Cap(c_a), veh/h	181	0	287	182	304		558	1141	1052	1398	1319	1186
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	1.00	1.00	0.00	1.00	1.00	1.00	0.43	0.43	0.43
Uniform Delay (d), s/veh	51.6	0.0	53.0	56.1	56.6	0.0	6.5	8.5	8.5	4.2	5.5	5.5
Incr Delay (d2), s/veh	1.2	0.0	1.1	0.1	0.4	0.0	0.1	0.3	0.3	0.3	0.3	0.4
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	1.8	0.0	0.9	0.1	0.1	0.0	0.4	1.7	1.7	3.5	4.0	3.6
Unsig. Movement Delay, s/veh												
LnGrp Delay(d),s/veh	52.8	0.0	54.0	56.2	57.0	0.0	6.6	8.8	8.8	4.5	5.8	5.9
LnGrp LOS	D	A	D	E	E		A	A	A	A	A	A
Approach Vol, veh/h	93			6			A			1516		
Approach Delay, s/veh	53.2			56.6			8.5			5.3		
Approach LOS	D			E			A			A		
Timer - Assigned Phs	1	2	3	4	5	6	7	8				
Phs Duration (G+Y+Rc), s	20.7	81.5	5.0	12.8	8.7	93.6	9.7	8.0				
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	47.5	29.5	5.5	19.5	7.5	69.5	5.5	19.5				
Max Q Clear Time (g_c+I1), s	14.2	6.7	2.2	4.0	3.2	13.7	5.9	2.2				
Green Ext Time (p_c), s	2.1	2.0	0.0	0.1	0.0	8.0	0.0	0.0				
Intersection Summary												
HCM 6th Ctrl Delay	8.3											
HCM 6th LOS	A											
Notes												

HCM 6th Signalized Intersection Summary

6: Chester Street & Panorama Circle

2040 Background PM.syn

04/25/2019

												
Movement	EBL	EBT	EBR	WBL	WBT	WBR	NBL	NBT	NBR	SBL	SBT	SBR
Lane Configurations												
Traffic Volume (veh/h)	304	10	119	152	26	630	14	609	4	28	361	63
Future Volume (veh/h)	304	10	119	152	26	630	14	609	4	28	361	63
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	330	11	129	165	28	0	15	655	4	30	392	68
Peak Hour Factor	0.92	0.92	0.92	0.92	0.92	0.92	0.92	0.93	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	353	15	172	244	184		610	2117	13	514	1808	311
Arrive On Green	0.09	0.12	0.12	0.07	0.10	0.00	0.02	0.58	0.58	0.03	0.60	0.60
Sat Flow, veh/h	1781	126	1478	1781	1870	1585	1781	3621	22	1781	3032	522
Grp Volume(v), veh/h	330	0	140	165	28	0	15	321	338	30	228	232
Grp Sat Flow(s),veh/h/ln	1781	0	1604	1781	1870	1585	1781	1777	1866	1781	1777	1776
Q Serve(g_s), s	7.9	0.0	7.6	6.3	1.2	0.0	0.3	8.3	8.3	0.6	5.4	5.4
Cycle Q Clear(g_c), s	7.9	0.0	7.6	6.3	1.2	0.0	0.3	8.3	8.3	0.6	5.4	5.4
Prop In Lane	1.00		0.92	1.00		1.00	1.00		0.01	1.00		0.29
Lane Grp Cap(c), veh/h	353	0	186	244	184		610	1039	1091	514	1060	1060
V/C Ratio(X)	0.93	0.00	0.75	0.68	0.15		0.02	0.31	0.31	0.06	0.22	0.22
Avail Cap(c_a), veh/h	353	0	679	244	759		678	1039	1091	561	1060	1060
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	1.00	1.00	0.00	1.00	1.00	1.00	0.83	0.83	0.83
Uniform Delay (d), s/veh	37.6	0.0	38.5	35.6	37.1	0.0	7.3	9.5	9.5	7.2	8.4	8.4
Incr Delay (d2), s/veh	31.4	0.0	6.0	7.2	0.4	0.0	0.0	0.8	0.7	0.0	0.4	0.4
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	6.5	0.0	3.3	1.0	0.6	0.0	0.1	3.2	3.3	0.2	2.0	2.0
Unsig. Movement Delay, s/veh												
LnGrp Delay(d),s/veh	68.9	0.0	44.5	42.8	37.5	0.0	7.3	10.3	10.2	7.3	8.8	8.8
LnGrp LOS	E	A	D	D	D		A	B	B	A	A	A
Approach Vol, veh/h	470				193		A		674		490	
Approach Delay, s/veh	61.7				42.0				10.2		8.7	
Approach LOS	E				D				B		A	
Timer - Assigned Phs	1	2	3	4	5	6	7	8				
Phs Duration (G+Y+Rc), s	7.1	57.1	10.8	15.0	6.1	58.2	12.4	13.4				
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	5.0	22.6	6.3	38.1	5.0	22.6	7.9	36.5				
Max Q Clear Time (g_c+I1), s	2.6	10.3	8.3	9.6	2.3	7.4	9.9	3.2				
Green Ext Time (p_c), s	0.0	3.3	0.0	0.9	0.0	2.4	0.0	0.1				
Intersection Summary												
HCM 6th Ctrl Delay	26.4											
HCM 6th LOS	C											

HCM 6th Signalized Intersection Summary

6: Chester Street & Panorama Circle

2040 Total AM.syn

04/25/2019

												
Movement	EBL	EBT	EBR	WBL	WBT	WBR	NBL	NBT	NBR	SBL	SBT	SBR
Lane Configurations												
Traffic Volume (veh/h)	57	19	9	3	3	169	50	383	118	913	1092	385
Future Volume (veh/h)	57	19	9	3	3	169	50	383	118	913	1092	385
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	62	21	10	3	3	0	54	416	128	992	1187	418
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	177	82	39	108	55		270	1253	382	1072	1927	662
Arrive On Green	0.04	0.07	0.07	0.00	0.03	0.00	0.03	0.47	0.47	0.52	1.00	1.00
Sat Flow, veh/h	1781	1197	570	1781	1870	1585	1781	2683	817	3456	2595	891
Grp Volume(v), veh/h	62	0	31	3	3	0	54	274	270	992	803	802
Grp Sat Flow(s),veh/h/ln	1781	0	1768	1781	1870	1585	1781	1777	1723	1728	1777	1710
Q Serve(g_s), s	3.9	0.0	2.0	0.2	0.2	0.0	1.9	11.7	11.9	31.9	0.0	0.0
Cycle Q Clear(g_c), s	3.9	0.0	2.0	0.2	0.2	0.0	1.9	11.7	11.9	31.9	0.0	0.0
Prop In Lane	1.00		0.32	1.00		1.00	1.00		0.47	1.00		0.52
Lane Grp Cap(c), veh/h	177	0	122	108	55		270	830	805	1072	1319	1270
V/C Ratio(X)	0.35	0.00	0.25	0.03	0.05		0.20	0.33	0.34	0.93	0.61	0.63
Avail Cap(c_a), veh/h	181	0	278	176	288		304	830	805	1310	1319	1270
HCM Platoon Ratio	1.00	1.00	1.00	1.00	1.00	1.00	1.00	1.00	1.00	1.67	1.67	1.67
Upstream Filter(I)	1.00	0.00	1.00	1.00	1.00	0.00	0.92	0.92	0.92	0.09	0.09	0.09
Uniform Delay (d), s/veh	51.6	0.0	53.0	56.1	56.6	0.0	15.3	20.1	20.2	27.7	0.0	0.0
Incr Delay (d2), s/veh	1.2	0.0	1.1	0.1	0.4	0.0	0.3	1.0	1.0	1.1	0.2	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	1.8	0.0	0.9	0.1	0.1	0.0	0.8	5.0	5.0	10.9	0.1	0.1
Unsig. Movement Delay, s/veh												
LnGrp Delay(d),s/veh	52.8	0.0	54.0	56.2	57.0	0.0	15.7	21.1	21.2	28.8	0.2	0.2
LnGrp LOS	D	A	D	E	E		B	C	C	C	A	A
Approach Vol, veh/h	93			6			A			2597		
Approach Delay, s/veh	53.2			56.6			20.7			11.1		
Approach LOS	D			E			C			B		
Timer - Assigned Phs	1	2	3	4	5	6	7	8				
Phs Duration (G+Y+Rc), s	41.7	60.6	5.0	12.8	8.7	93.6	9.7	8.0				
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	45.5	32.5	5.1	18.9	6.5	71.5	5.5	18.5				
Max Q Clear Time (g_c+I1), s	33.9	13.9	2.2	4.0	3.9	2.0	5.9	2.2				
Green Ext Time (p_c), s	3.3	3.2	0.0	0.1	0.0	21.4	0.0	0.0				
Intersection Summary												
HCM 6th Ctrl Delay	14.1											
HCM 6th LOS	B											

HCM 6th Signalized Intersection Summary

6: Chester Street & Panorama Circle

2040 Total PM.syn

04/25/2019

												
Movement	EBL	EBT	EBR	WBL	WBT	WBR	NBL	NBT	NBR	SBL	SBT	SBR
Lane Configurations												
Traffic Volume (veh/h)	304	10	119	152	26	1056	14	1355	4	159	579	63
Future Volume (veh/h)	304	10	119	152	26	1056	14	1355	4	159	579	63
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	330	11	129	165	28	0	15	1457	4	173	629	68
Peak Hour Factor	0.92	0.92	0.92	0.92	0.92	0.92	0.92	0.93	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	339	15	171	247	247		483	2024	6	192	1924	208
Arrive On Green	0.06	0.12	0.12	0.07	0.13	0.00	0.03	1.00	1.00	0.06	0.59	0.59
Sat Flow, veh/h	1781	126	1478	1781	1870	1585	1781	3635	10	3456	3235	349
Grp Volume(v), veh/h	330	0	140	165	28	0	15	712	749	173	345	352
Grp Sat Flow(s),veh/h/ln	1781	0	1604	1781	1870	1585	1781	1777	1869	1728	1777	1807
Q Serve(g_s), s	5.0	0.0	7.6	6.5	1.2	0.0	0.3	0.0	0.0	4.5	8.8	8.8
Cycle Q Clear(g_c), s	5.0	0.0	7.6	6.5	1.2	0.0	0.3	0.0	0.0	4.5	8.8	8.8
Prop In Lane	1.00		0.92	1.00		1.00	1.00		0.01	1.00		0.19
Lane Grp Cap(c), veh/h	339	0	185	247	247		483	989	1040	192	1057	1075
V/C Ratio(X)	0.97	0.00	0.76	0.67	0.11		0.03	0.72	0.72	0.90	0.33	0.33
Avail Cap(c_a), veh/h	339	0	588	247	717		551	989	1040	192	1057	1075
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	0.00	1.00	1.00	1.00	0.00	0.75	0.75	0.75	0.77	0.77	0.77
Uniform Delay (d), s/veh	38.6	0.0	38.6	34.0	34.4	0.0	8.2	0.0	0.0	42.3	9.2	9.2
Incr Delay (d2), s/veh	41.9	0.0	6.1	6.7	0.2	0.0	0.0	3.4	3.3	32.2	0.6	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	8.8	0.0	3.3	3.6	0.5	0.0	0.1	0.9	0.9	2.7	3.3	3.4
Unsig. Movement Delay, s/veh												
LnGrp Delay(d),s/veh	80.5	0.0	44.7	40.7	34.6	0.0	8.3	3.4	3.3	74.5	9.8	9.8
LnGrp LOS	F	A	D	D	C		A	A	A	E	A	A
Approach Vol, veh/h	470				193		A		1476		870	
Approach Delay, s/veh	69.8				39.8				3.4		22.7	
Approach LOS	E				D				A		C	
Timer - Assigned Phs	1	2	3	4	5	6	7	8				
Phs Duration (G+Y+Rc), s	9.5	54.6	11.0	14.9	6.1	58.0	9.5	16.4				
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	5.0	27.5	6.5	33.0	5.0	27.5	5.0	34.5				
Max Q Clear Time (g_c+l1), s	6.5	2.0	8.5	9.6	2.3	10.8	7.0	3.2				
Green Ext Time (p_c), s	0.0	12.2	0.0	0.8	0.0	4.0	0.0	0.1				
Intersection Summary												
HCM 6th Ctrl Delay	21.7											
HCM 6th LOS	C											

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	14	8	3	0	0	0	33	354	120	4	289	99
Future Vol, veh/h	14	8	3	0	0	0	33	354	120	4	289	99
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	75	-	-	100	-	-	125	-	-	125	-	-
Veh in Median Storage, #	-	1	-	-	1	-	-	0	-	-	0	-
Grade, %	-	0	-	-	0	-	-	0	-	-	0	-
Peak Hour Factor	50	67	38	92	92	92	64	95	94	50	87	80
Heavy Vehicles, %	2	2	2	2	2	2	2	2	2	2	2	2
Mvmt Flow	28	12	8	0	0	0	52	373	128	8	332	124
Major/Minor	Minor2		Minor1			Major1			Major2			
Conflicting Flow All	701	1015	228	729	1013	251	456	0	0	501	0	0
Stage 1	410	410	-	541	541	-	-	-	-	-	-	-
Stage 2	291	605	-	188	472	-	-	-	-	-	-	-
Critical Hdwy	7.54	6.54	6.94	7.54	6.54	6.94	4.14	-	-	4.14	-	-
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	3.52	4.02	3.32	3.52	4.02	3.32	2.22	-	-	2.22	-	-
Pot Cap-1 Maneuver	452	289	*971	*429	290	749	1267	-	-	1059	-	-
Stage 1	790	719	-	*493	519	-	-	-	-	-	-	-
Stage 2	693	486	-	*916	671	-	-	-	-	-	-	-
Platoon blocked, %	1	1	1	1	1	1	1	-	-	-	-	-
Mov Cap-1 Maneuver	435	275	*971	*400	275	749	1267	-	-	1059	-	-
Mov Cap-2 Maneuver	517	369	-	*422	374	-	-	-	-	-	-	-
Stage 1	758	714	-	*473	498	-	-	-	-	-	-	-
Stage 2	665	466	-	*886	665	-	-	-	-	-	-	-
Approach	EB		WB			NB			SB			
HCM Control Delay, s	12.5		0			0.7			0.1			
HCM LOS	B		A									
Minor Lane/Major Mvmt	NBL	NBT	NBR	EBLn1	EBLn2	WBLn1	WBLn2	SBL	SBT	SBR		
Capacity (veh/h)	1267	-	-	517	490	-	-	1059	-	-		
HCM Lane V/C Ratio	0.041	-	-	0.054	0.04	-	-	0.008	-	-		
HCM Control Delay (s)	8	-	-	12.4	12.7	0	0	8.4	-	-		
HCM Lane LOS	A	-	-	B	B	A	A	A	-	-		
HCM 95th %tile Q(veh)	0.1	-	-	0.2	0.1	-	-	0	-	-		
Notes												
~: Volume exceeds capacity		\$: Delay exceeds 300s			+: Computation Not Defined				*: All major volume in platoon			

Intersection												
Int Delay, s/veh	2.6											
Movement	EBL	EBT	EBR	WBL	WBT	WBR	NBL	NBT	NBR	SBL	SBT	SBR
Lane Configurations												
Traffic Vol, veh/h	82	1	18	72	5	6	4	433	7	3	606	26
Future Vol, veh/h	82	1	18	72	5	6	4	433	7	3	606	26
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	75	-	-	100	-	-	125	-	-	125	-	-
Veh in Median Storage, #	-	1	-	-	1	-	-	0	-	-	0	-
Grade, %	-	0	-	-	0	-	-	0	-	-	0	-
Peak Hour Factor	79	25	75	64	42	75	33	86	58	75	94	65
Heavy Vehicles, %	2	2	2	2	2	2	2	2	2	2	2	2
Mvmt Flow	104	4	24	113	12	8	12	503	12	4	645	40
Major/Minor	Minor2		Minor1			Major1			Major2			
Conflicting Flow All	955	1212	343	866	1226	258	685	0	0	515	0	0
Stage 1	673	673	-	533	533	-	-	-	-	-	-	-
Stage 2	282	539	-	333	693	-	-	-	-	-	-	-
Critical Hdwy	7.54	6.54	6.94	7.54	6.54	6.94	4.14	-	-	4.14	-	-
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	3.52	4.02	3.32	3.52	4.02	3.32	2.22	-	-	2.22	-	-
Pot Cap-1 Maneuver	*458	*290	*830	*554	*283	741	*1241	-	-	1047	-	-
Stage 1	*782	*686	-	*498	*523	-	-	-	-	-	-	-
Stage 2	*701	*520	-	*782	*686	-	-	-	-	-	-	-
Platoon blocked, %	1	1	1	1	1	1	1	-	-	-	-	-
Mov Cap-1 Maneuver	*438	*286	*830	*528	*279	741	*1241	-	-	1047	-	-
Mov Cap-2 Maneuver	*524	*392	-	*444	*390	-	-	-	-	-	-	-
Stage 1	*774	*683	-	*493	*518	-	-	-	-	-	-	-
Stage 2	*671	*515	-	*752	*683	-	-	-	-	-	-	-
Approach	EB		WB			NB			SB			
HCM Control Delay, s	12.9		15.3			0.2			0			
HCM LOS	B		C									
Minor Lane/Major Mvmt	NBL	NBT	NBR	EBLn1	EBLn2	WBLn1	WBLn2	SBL	SBT	SBR		
Capacity (veh/h)	* 1241	-	-	524	716	444	482	1047	-	-		
HCM Lane V/C Ratio	0.01	-	-	0.198	0.039	0.253	0.041	0.004	-	-		
HCM Control Delay (s)	7.9	-	-	13.6	10.2	15.8	12.8	8.5	-	-		
HCM Lane LOS	A	-	-	B	B	C	B	A	-	-		
HCM 95th %tile Q(veh)	0	-	-	0.7	0.1	1	0.1	0	-	-		
Notes												
~: Volume exceeds capacity		\$: Delay exceeds 300s			+: Computation Not Defined				*: All major volume in platoon			

Intersection												
Int Delay, s/veh	0.9											
Movement	EBL	EBT	EBR	WBL	WBT	WBR	NBL	NBT	NBR	SBL	SBT	SBR
Lane Configurations												
Traffic Vol, veh/h	15	8	3	0	0	0	35	374	127	4	305	105
Future Vol, veh/h	15	8	3	0	0	0	35	374	127	4	305	105
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	75	-	-	100	-	-	125	-	-	125	-	-
Veh in Median Storage, #	-	1	-	-	1	-	-	0	-	-	0	-
Grade, %	-	0	-	-	0	-	-	0	-	-	0	-
Peak Hour Factor	50	75	50	92	92	92	70	95	94	50	87	80
Heavy Vehicles, %	2	2	2	2	2	2	2	2	2	2	2	2
Mvmt Flow	30	11	6	0	0	0	50	394	135	8	351	131
Major/Minor	Minor2			Minor1			Major1			Major2		
Conflicting Flow All	730	1062	241	759	1060	265	482	0	0	529	0	0
Stage 1	433	433	-	562	562	-	-	-	-	-	-	-
Stage 2	297	629	-	197	498	-	-	-	-	-	-	-
Critical Hdwy	7.54	6.54	6.94	7.54	6.54	6.94	4.14	-	-	4.14	-	-
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	3.52	4.02	3.32	3.52	4.02	3.32	2.22	-	-	2.22	-	-
Pot Cap-1 Maneuver	429	269	*971	*406	270	733	1236	-	-	1034	-	-
Stage 1	763	701	-	*479	508	-	-	-	-	-	-	-
Stage 2	687	474	-	*916	652	-	-	-	-	-	-	-
Platoon blocked, %	1	1	1	1	1	1	-	-	-	-	-	-
Mov Cap-1 Maneuver	413	256	*971	*380	257	733	1236	-	-	1034	-	-
Mov Cap-2 Maneuver	502	355	-	*409	360	-	-	-	-	-	-	-
Stage 1	733	696	-	*460	488	-	-	-	-	-	-	-
Stage 2	659	455	-	*889	647	-	-	-	-	-	-	-
Approach	EB			WB			NB			SB		
HCM Control Delay, s	12.8			0			0.7			0.1		
HCM LOS	B			A								
Minor Lane/Major Mvmt	NBL	NBT	NBR	EBLn1	EBLn2	WBLn1	WBLn2	SBL	SBT	SBR		
Capacity (veh/h)	1236	-	-	502	460	-	-	1034	-	-		
HCM Lane V/C Ratio	0.04	-	-	0.06	0.036	-	-	0.008	-	-		
HCM Control Delay (s)	8	-	-	12.6	13.1	0	0	8.5	-	-		
HCM Lane LOS	A	-	-	B	B	A	A	A	-	-		
HCM 95th %tile Q(veh)	0.1	-	-	0.2	0.1	-	-	0	-	-		
Notes												
~: Volume exceeds capacity \$: Delay exceeds 300s +: Computation Not Defined *: All major volume in platoon												

Intersection												
Int Delay, s/veh	2.7											
Movement	EBL	EBT	EBR	WBL	WBT	WBR	NBL	NBT	NBR	SBL	SBT	SBR
Lane Configurations												
Traffic Vol, veh/h	87	1	19	76	5	6	4	457	7	3	640	27
Future Vol, veh/h	87	1	19	76	5	6	4	457	7	3	640	27
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	75	-	-	100	-	-	125	-	-	125	-	-
Veh in Median Storage, #	-	1	-	-	1	-	-	0	-	-	0	-
Grade, %	-	0	-	-	0	-	-	0	-	-	0	-
Peak Hour Factor	79	25	75	64	42	75	33	86	58	75	94	65
Heavy Vehicles, %	2	2	2	2	2	2	2	2	2	2	2	2
Mvmt Flow	110	4	25	119	12	8	12	531	12	4	681	42
Major/Minor	Minor2			Minor1			Major1			Major2		
Conflicting Flow All	1006	1277	362	912	1292	272	723	0	0	543	0	0
Stage 1	710	710	-	561	561	-	-	-	-	-	-	-
Stage 2	296	567	-	351	731	-	-	-	-	-	-	-
Critical Hdwy	7.54	6.54	6.94	7.54	6.54	6.94	4.14	-	-	4.14	-	-
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	3.52	4.02	3.32	3.52	4.02	3.32	2.22	-	-	2.22	-	-
Pot Cap-1 Maneuver	411	259	*830	*503	252	726	1213	-	-	1022	-	-
Stage 1	772	679	-	*480	508	-	-	-	-	-	-	-
Stage 2	688	505	-	*782	660	-	-	-	-	-	-	-
Platoon blocked, %	1	1	1	1	1	1	-	-	-	-	-	-
Mov Cap-1 Maneuver	393	255	*830	*478	249	726	1213	-	-	1022	-	-
Mov Cap-2 Maneuver	499	373	-	*434	369	-	-	-	-	-	-	-
Stage 1	764	676	-	*475	503	-	-	-	-	-	-	-
Stage 2	658	500	-	*751	658	-	-	-	-	-	-	-
Approach	EB			WB			NB			SB		
HCM Control Delay, s	13.4			15.9			0.2			0		
HCM LOS	B			C								
Minor Lane/Major Mvmt	NBL	NBT	NBR	EBLn1	EBLn2	WBLn1	WBLn2	SBL	SBT	SBR		
Capacity (veh/h)	1213	-	-	499	711	434	460	1022	-	-		
HCM Lane V/C Ratio	0.01	-	-	0.221	0.041	0.274	0.043	0.004	-	-		
HCM Control Delay (s)	8	-	-	14.2	10.3	16.4	13.2	8.5	-	-		
HCM Lane LOS	A	-	-	B	B	C	B	A	-	-		
HCM 95th %tile Q(veh)	0	-	-	0.8	0.1	1.1	0.1	0	-	-		
Notes												
~: Volume exceeds capacity		\$: Delay exceeds 300s			+: Computation Not Defined				*: All major volume in platoon			

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	15	8	3	34	0	141	35	431	251	419	512	105
Future Vol, veh/h	15	8	3	34	0	141	35	431	251	419	512	105
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	75	-	-	100	-	-	125	-	-	125	-	-
Veh in Median Storage, #	-	1	-	-	1	-	-	0	-	-	0	-
Grade, %	-	0	-	-	0	-	-	0	-	-	0	-
Peak Hour Factor	92	92	92	92	92	92	92	95	94	92	92	92
Heavy Vehicles, %	2	2	2	2	2	2	2	2	2	2	2	2
Mvmt Flow	16	9	3	37	0	153	38	454	267	455	557	114
Major/Minor	Minor2		Minor1		Major1		Major2					
Conflicting Flow All	1827	2321	336	1857	2245	361	671	0	0	721	0	0
Stage 1	1524	1524	-	664	664	-	-	-	-	-	-	-
Stage 2	303	797	-	1193	1581	-	-	-	-	-	-	-
Critical Hdwy	7.54	6.54	6.94	7.54	6.54	6.94	4.14	-	-	4.14	-	-
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	3.52	4.02	3.32	3.52	4.02	3.32	2.22	-	-	2.22	-	-
Pot Cap-1 Maneuver	63	38	*867	59	43	636	1203	-	-	877	-	-
Stage 1	167	215	-	416	456	-	-	-	-	-	-	-
Stage 2	681	397	-	299	199	-	-	-	-	-	-	-
Platoon blocked, %	1	1	1	1	1	1	1	-	-	-	-	-
Mov Cap-1 Maneuver	28	18	*867	~ 34	20	636	1203	-	-	877	-	-
Mov Cap-2 Maneuver	40	2325	-	77	50	-	-	-	-	-	-	-
Stage 1	162	104	-	403	441	-	-	-	-	-	-	-
Stage 2	501	384	-	131	96	-	-	-	-	-	-	-
Approach	EB		WB		NB		SB					
HCM Control Delay, s	87.8		27.3		0.4		5.4					
HCM LOS	F		D									
Minor Lane/Major Mvmt	NBL	NBT	NBR	EBLn1	EBLn2	WBLn1	WBLn2	SBL	SBT	SBR		
Capacity (veh/h)	1203	-	-	40	1594	77	636	877	-	-		
HCM Lane V/C Ratio	0.032	-	-	0.408	0.008	0.48	0.241	0.519	-	-		
HCM Control Delay (s)	8.1	-	-	146.8	7.3	89	12.4	13.5	-	-		
HCM Lane LOS	A	-	-	F	A	F	B	B	-	-		
HCM 95th %tile Q(veh)	0.1	-	-	1.4	0	2	0.9	3.1	-	-		
Notes												
~: Volume exceeds capacity		\$: Delay exceeds 300s			+: Computation Not Defined				*: All major volume in platoon			

Intersection												
Int Delay, s/veh	19.6											
Movement	EBL	EBT	EBR	WBL	WBT	WBR	NBL	NBT	NBR	SBL	SBT	SBR
Lane Configurations												
Traffic Vol, veh/h	87	1	19	204	5	539	4	670	51	149	713	27
Future Vol, veh/h	87	1	19	204	5	539	4	670	51	149	713	27
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	75	-	-	100	-	-	125	-	-	125	-	-
Veh in Median Storage, #	-	1	-	-	1	-	-	0	-	-	0	-
Grade, %	-	0	-	-	0	-	-	0	-	-	0	-
Peak Hour Factor	92	92	92	92	92	92	92	92	92	92	94	92
Heavy Vehicles, %	2	2	2	2	2	2	2	2	2	2	2	2
Mvmt Flow	95	1	21	222	5	586	4	728	55	162	759	29

Major/Minor	Minor2		Minor1		Major1		Major2					
Conflicting Flow All	1473	1889	394	1468	1876	392	788	0	0	783	0	0
Stage 1	1098	1098	-	764	764	-	-	-	-	-	-	-
Stage 2	375	791	-	704	1112	-	-	-	-	-	-	-
Critical Hdwy	7.54	6.54	6.94	7.54	6.54	6.94	4.14	-	-	4.14	-	-
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	3.52	4.02	3.32	3.52	4.02	3.32	2.22	-	-	2.22	-	-
Pot Cap-1 Maneuver	166	90	*795 *~	167	93	607	*1189	-	-	831	-	-
Stage 1	433	436	-	*362	411	-	-	-	-	-	-	-
Stage 2	618	399	-	*750	428	-	-	-	-	-	-	-
Platoon blocked, %	1	1	1	1	1	1	-	-	-	-	-	-
Mov Cap-1 Maneuver	~ 5	73	*795 *~	138	74	607	*1189	-	-	831	-	-
Mov Cap-2 Maneuver ~ -198	160	-	*261	203	-	-	-	-	-	-	-	-
Stage 1	432	351	-	*361	410	-	-	-	-	-	-	-
Stage 2	~ 21	398	-	*586	345	-	-	-	-	-	-	-

Approach	EB	WB	NB	SB
HCM Control Delay, s		62.3	0	1.8
HCM LOS	-	F		

Minor Lane/Major Mvmt	NBL	NBT	NBR	EBLn1	EBLn2	WBLn1	WBLn2	SBL	SBT	SBR
Capacity (veh/h)	* 1189	-	-	+	663	261	596	831	-	-
HCM Lane V/C Ratio	0.004	-	-	-	0.033	0.85	0.992	0.195	-	-
HCM Control Delay (s)	8	-	-	-	10.6	65.1	61.2	10.4	-	-
HCM Lane LOS	A	-	-	-	B	F	F	B	-	-
HCM 95th %tile Q(veh)	0	-	-	-	0.1	7	14.6	0.7	-	-

Notes			
~: Volume exceeds capacity	\$: Delay exceeds 300s	+: Computation Not Defined	*: All major volume in platoon

HCM 6th Signalized Intersection Summary
7: Chester Street & Mineral Circle

2030 Total AM_Imp.syn
04/24/2019

												
Movement	EBL	EBT	EBR	WBL	WBT	WBR	NBL	NBT	NBR	SBL	SBT	SBR
Lane Configurations												
Traffic Volume (veh/h)	15	8	3	34	0	141	35	431	251	419	512	105
Future Volume (veh/h)	15	8	3	34	0	141	35	431	251	419	512	105
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	9	3	37	0	153	38	454	267	455	557	114
Peak Hour Factor	0.92	0.92	0.92	0.92	0.92	0.92	0.92	0.95	0.94	0.92	0.92	0.92
Percent Heavy Veh, %	2	2	2	2	2	2	2	2	2	2	2	2
Cap, veh/h	133	139	46	266	0	187	551	1185	692	626	1915	391
Arrive On Green	0.02	0.10	0.10	0.03	0.00	0.12	0.03	0.55	0.55	0.14	0.65	0.65
Sat Flow, veh/h	1781	1342	447	1781	0	1585	1781	2159	1261	1781	2940	600
Grp Volume(v), veh/h	16	0	12	37	0	153	38	373	348	455	336	335
Grp Sat Flow(s),veh/h/ln	1781	0	1790	1781	0	1585	1781	1777	1643	1781	1777	1762
Q Serve(g_s), s	0.8	0.0	0.6	1.8	0.0	9.4	0.9	12.0	12.1	10.2	8.1	8.2
Cycle Q Clear(g_c), s	0.8	0.0	0.6	1.8	0.0	9.4	0.9	12.0	12.1	10.2	8.1	8.2
Prop In Lane	1.00		0.25	1.00		1.00	1.00		0.77	1.00		0.34
Lane Grp Cap(c), veh/h	133	0	186	266	0	187	551	975	902	626	1158	1148
V/C Ratio(X)	0.12	0.00	0.06	0.14	0.00	0.82	0.07	0.38	0.39	0.73	0.29	0.29
Avail Cap(c_a), veh/h	192	0	328	300	0	290	583	975	902	928	1158	1148
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	1.00	0.00	1.00	0.97	0.97	0.97	0.74	0.74	0.74
Uniform Delay (d), s/veh	39.2	0.0	40.4	38.1	0.0	43.1	9.0	12.9	12.9	8.5	7.5	7.5
Incr Delay (d2), s/veh	0.4	0.0	0.1	0.2	0.0	10.0	0.1	1.1	1.2	1.2	0.5	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	0.4	0.0	0.3	0.8	0.0	4.2	0.3	4.9	4.6	3.4	3.0	3.0
Unsig. Movement Delay, s/veh												
LnGrp Delay(d),s/veh	39.6	0.0	40.6	38.4	0.0	53.0	9.0	14.0	14.1	9.7	8.0	8.0
LnGrp LOS	D	A	D	D	A	D	A	B	B	A	A	A
Approach Vol, veh/h	28			190			759			1126		
Approach Delay, s/veh	40.0			50.2			13.8			8.7		
Approach LOS	D			D			B			A		
Timer - Assigned Phs	1	2	3	4	5	6	7	8				
Phs Duration (G+Y+Rc), s	18.0	59.4	7.7	14.9	7.8	69.6	6.3	16.3				
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	30.5	27.6	5.1	18.3	5.1	53.0	5.1	18.3				
Max Q Clear Time (g_c+I1), s	12.2	14.1	3.8	2.6	2.9	10.2	2.8	11.4				
Green Ext Time (p_c), s	1.4	3.9	0.0	0.0	0.0	4.8	0.0	0.4				
Intersection Summary												
HCM 6th Ctrl Delay	14.7											
HCM 6th LOS	B											

HCM 6th Signalized Intersection Summary
7: Chester Street & Mineral Circle

2030 Total PM_Imp.syn
04/24/2019

													
Movement	EBL	EBT	EBR	WBL	WBT	WBR	NBL	NBT	NBR	SBL	SBT	SBR	
Lane Configurations													
Traffic Volume (veh/h)	87	1	19	204	5	539	4	670	51	149	713	27	
Future Volume (veh/h)	87	1	19	204	5	539	4	670	51	149	713	27	
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	95	1	21	222	5	586	4	728	55	162	759	29	
Peak Hour Factor	0.92	0.92	0.92	0.92	0.92	0.92	0.92	0.92	0.92	0.92	0.94	0.92	
Percent Heavy Veh, %	2	2	2	2	2	2	2	2	2	2	2	2	
Cap, veh/h	138	20	415	612	6	656	294	1195	90	387	1687	64	
Arrive On Green	0.27	0.27	0.27	0.09	0.42	0.42	0.71	0.71	0.71	0.05	0.32	0.32	
Sat Flow, veh/h	826	73	1524	1781	13	1574	687	3349	253	1781	3490	133	
Grp Volume(v), veh/h	95	0	22	222	0	591	4	386	397	162	386	402	
Grp Sat Flow(s),veh/h/ln	826	0	1596	1781	0	1587	687	1777	1825	1781	1777	1846	
Q Serve(g_s), s	6.4	0.0	0.9	7.8	0.0	31.1	0.2	9.9	9.9	4.9	15.5	15.5	
Cycle Q Clear(g_c), s	24.5	0.0	0.9	7.8	0.0	31.1	4.3	9.9	9.9	4.9	15.5	15.5	
Prop In Lane	1.00		0.95	1.00		0.99	1.00		0.14	1.00		0.07	
Lane Grp Cap(c), veh/h	138	0	434	612	0	661	294	634	651	387	859	892	
V/C Ratio(X)	0.69	0.00	0.05	0.36	0.00	0.89	0.01	0.61	0.61	0.42	0.45	0.45	
Avail Cap(c_a), veh/h	138	0	434	612	0	661	294	634	651	458	859	892	
HCM Platoon Ratio	1.00	1.00	1.00	1.00	1.00	1.00	2.00	2.00	2.00	0.67	0.67	0.67	
Upstream Filter(I)	1.00	0.00	1.00	1.00	0.00	1.00	0.96	0.96	0.96	0.89	0.89	0.89	
Uniform Delay (d), s/veh	43.1	0.0	24.2	19.3	0.0	24.4	9.7	9.7	9.7	16.1	21.0	21.0	
Incr Delay (d2), s/veh	13.3	0.0	0.0	0.4	0.0	14.6	0.1	4.1	4.0	0.6	1.5	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	2.6	0.0	0.3	3.2	0.0	13.7	0.0	3.2	3.3	2.0	7.1	7.4	
Unsig. Movement Delay, s/veh													
LnGrp Delay(d),s/veh	56.4	0.0	24.2	19.6	0.0	39.0	9.8	13.9	13.8	16.8	22.5	22.4	
LnGrp LOS	E	A	C	B	A	D	A	B	B	B	C	C	
Approach Vol, veh/h	117			813				787				950	
Approach Delay, s/veh	50.3			33.7				13.8				21.5	
Approach LOS	D			C				B				C	
Timer - Assigned Phs	1	2	3	4	6				8				
Phs Duration (G+Y+Rc), s	11.4	36.6	13.0	29.0	48.0				42.0				
Change Period (Y+Rc), s	4.5	4.5	4.5	4.5	4.5				4.5				
Max Green Setting (Gmax), s	10.5	28.5	8.5	24.5	43.5				37.5				
Max Q Clear Time (g_c+l1), s	6.9	11.9	9.8	26.5	17.5				33.1				
Green Ext Time (p_c), s	0.1	4.6	0.0	0.0	5.4				1.7				
Intersection Summary													
HCM 6th Ctrl Delay	24.2												
HCM 6th LOS	C												

Intersection												
Int Delay, s/veh	0.7											
Movement	EBL	EBT	EBR	WBL	WBT	WBR	NBL	NBT	NBR	SBL	SBT	SBR
Lane Configurations												
Traffic Vol, veh/h	16	9	3	0	0	0	37	393	133	4	321	110
Future Vol, veh/h	16	9	3	0	0	0	37	393	133	4	321	110
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	75	-	-	100	-	-	125	-	-	125	-	-
Veh in Median Storage, #	-	1	-	-	1	-	-	0	-	-	0	-
Grade, %	-	0	-	-	0	-	-	0	-	-	0	-
Peak Hour Factor	92	92	92	92	92	92	92	95	94	92	92	92
Heavy Vehicles, %	2	2	2	2	2	2	2	2	2	2	2	2
Mvmt Flow	17	10	3	0	0	0	40	414	141	4	349	120

Major/Minor	Minor2		Minor1		Major1		Major2					
Conflicting Flow All	704	1052	235	753	1042	278	469	0	0	555	0	0
Stage 1	417	417	-	565	565	-	-	-	-	-	-	-
Stage 2	287	635	-	188	477	-	-	-	-	-	-	-
Critical Hdwy	7.54	6.54	6.94	7.54	6.54	6.94	4.14	-	-	4.14	-	-
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	3.52	4.02	3.32	3.52	4.02	3.32	2.22	-	-	2.22	-	-
Pot Cap-1 Maneuver	449	274	*971	*411	278	719	1251	-	-	1011	-	-
Stage 1	782	714	-	*477	506	-	-	-	-	-	-	-
Stage 2	696	471	-	*916	667	-	-	-	-	-	-	-
Platoon blocked, %	1	1	1	1	1	1	-	-	-	-	-	-
Mov Cap-1 Maneuver	437	264	*971	*390	268	719	1251	-	-	1011	-	-
Mov Cap-2 Maneuver	522	362	-	*413	370	-	-	-	-	-	-	-
Stage 1	757	711	-	*462	490	-	-	-	-	-	-	-
Stage 2	674	456	-	*896	665	-	-	-	-	-	-	-

Approach	EB	WB	NB	SB
HCM Control Delay, s	12.8	0	0.5	0.1
HCM LOS	B	A		

Minor Lane/Major Mvmt	NBL	NBT	NBR	EBLn1	EBLn2	WBLn1	WBLn2	SBL	SBT	SBR
Capacity (veh/h)	1251	-	-	522	429	-	-	1011	-	-
HCM Lane V/C Ratio	0.032	-	-	0.033	0.03	-	-	0.004	-	-
HCM Control Delay (s)	8	-	-	12.1	13.7	0	0	8.6	-	-
HCM Lane LOS	A	-	-	B	B	A	A	A	-	-
HCM 95th %tile Q(veh)	0.1	-	-	0.1	0.1	-	-	0	-	-

Notes												
~: Volume exceeds capacity		\$: Delay exceeds 300s		+: Computation Not Defined		*: All major volume in platoon						

Intersection												
Int Delay, s/veh	2.1											
Movement	EBL	EBT	EBR	WBL	WBT	WBR	NBL	NBT	NBR	SBL	SBT	SBR
Lane Configurations												
Traffic Vol, veh/h	91	1	20	80	6	7	4	481	8	3	673	29
Future Vol, veh/h	91	1	20	80	6	7	4	481	8	3	673	29
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	75	-	-	100	-	-	125	-	-	125	-	-
Veh in Median Storage, #	-	1	-	-	1	-	-	0	-	-	0	-
Grade, %	-	0	-	-	0	-	-	0	-	-	0	-
Peak Hour Factor	92	92	92	92	92	92	92	92	92	92	94	92
Heavy Vehicles, %	2	2	2	2	2	2	2	2	2	2	2	2
Mvmt Flow	99	1	22	87	7	8	4	523	9	3	716	32
Major/Minor	Minor2		Minor1			Major1			Major2			
Conflicting Flow All	1011	1278	374	901	1290	266	748	0	0	532	0	0
Stage 1	738	738	-	536	536	-	-	-	-	-	-	-
Stage 2	273	540	-	365	754	-	-	-	-	-	-	-
Critical Hdwy	7.54	6.54	6.94	7.54	6.54	6.94	4.14	-	-	4.14	-	-
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	3.52	4.02	3.32	3.52	4.02	3.32	2.22	-	-	2.22	-	-
Pot Cap-1 Maneuver	407	258	*830	*514	253	732	1180	-	-	1032	-	-
Stage 1	736	654	-	*496	522	-	-	-	-	-	-	-
Stage 2	710	519	-	*782	641	-	-	-	-	-	-	-
Platoon blocked, %	1	1	1	1	1	1	1	-	-	-	-	-
Mov Cap-1 Maneuver	395	257	*830	*497	251	732	1180	-	-	1032	-	-
Mov Cap-2 Maneuver	504	377	-	*452	374	-	-	-	-	-	-	-
Stage 1	733	652	-	*495	520	-	-	-	-	-	-	-
Stage 2	691	517	-	*758	639	-	-	-	-	-	-	-
Approach	EB		WB			NB			SB			
HCM Control Delay, s	13.1		14.5			0.1			0			
HCM LOS	B		B									
Minor Lane/Major Mvmt	NBL	NBT	NBR	EBLn1	EBLn2	WBLn1	WBLn2	SBL	SBT	SBR		
Capacity (veh/h)	1180	-	-	504	785	452	508	1032	-	-		
HCM Lane V/C Ratio	0.004	-	-	0.196	0.029	0.192	0.028	0.003	-	-		
HCM Control Delay (s)	8.1	-	-	13.9	9.7	14.9	12.3	8.5	-	-		
HCM Lane LOS	A	-	-	B	A	B	B	A	-	-		
HCM 95th %tile Q(veh)	0	-	-	0.7	0.1	0.7	0.1	0	-	-		
Notes												
~: Volume exceeds capacity		\$: Delay exceeds 300s			+: Computation Not Defined				*: All major volume in platoon			

HCM 6th Signalized Intersection Summary

7: Chester Street & Mineral Circle

2040 Total AM.syn

04/25/2019

												
Movement	EBL	EBT	EBR	WBL	WBT	WBR	NBL	NBT	NBR	SBL	SBT	SBR
Lane Configurations												
Traffic Volume (veh/h)	16	9	3	34	0	141	37	450	257	419	528	110
Future Volume (veh/h)	16	9	3	34	0	141	37	450	257	419	528	110
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	17	10	3	37	0	153	40	474	273	455	574	120
Peak Hour Factor	0.92	0.92	0.92	0.92	0.92	0.92	0.92	0.95	0.94	0.92	0.92	0.92
Percent Heavy Veh, %	2	2	2	2	2	2	2	2	2	2	2	2
Cap, veh/h	147	147	44	280	0	191	528	1118	640	610	1829	381
Arrive On Green	0.02	0.11	0.11	0.03	0.00	0.12	0.04	0.51	0.51	0.15	0.62	0.62
Sat Flow, veh/h	1781	1381	414	1781	0	1585	1781	2176	1247	1781	2927	610
Grp Volume(v), veh/h	17	0	13	37	0	153	40	387	360	455	348	346
Grp Sat Flow(s),veh/h/ln	1781	0	1796	1781	0	1585	1781	1777	1646	1781	1777	1761
Q Serve(g_s), s	0.8	0.0	0.6	1.6	0.0	8.5	0.9	12.2	12.3	9.8	8.2	8.3
Cycle Q Clear(g_c), s	0.8	0.0	0.6	1.6	0.0	8.5	0.9	12.2	12.3	9.8	8.2	8.3
Prop In Lane	1.00		0.23	1.00		1.00	1.00		0.76	1.00		0.35
Lane Grp Cap(c), veh/h	147	0	191	280	0	191	528	913	845	610	1110	1100
V/C Ratio(X)	0.12	0.00	0.07	0.13	0.00	0.80	0.08	0.42	0.43	0.75	0.31	0.31
Avail Cap(c_a), veh/h	222	0	369	329	0	326	574	913	845	933	1110	1100
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	1.00	0.00	1.00	0.96	0.96	0.96	0.78	0.78	0.78
Uniform Delay (d), s/veh	35.0	0.0	36.2	34.0	0.0	38.5	9.4	13.6	13.6	9.2	7.9	7.9
Incr Delay (d2), s/veh	0.3	0.0	0.1	0.2	0.0	7.5	0.1	1.4	1.5	1.4	0.6	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	0.3	0.0	0.3	0.7	0.0	3.6	0.3	4.9	4.6	3.3	3.0	3.0
Unsig. Movement Delay, s/veh												
LnGrp Delay(d),s/veh	35.4	0.0	36.3	34.2	0.0	46.0	9.4	15.0	15.1	10.7	8.4	8.5
LnGrp LOS	D	A	D	C	A	D	A	B	B	B	A	A
Approach Vol, veh/h	30			190			787			1149		
Approach Delay, s/veh	35.8			43.7			14.8			9.3		
Approach LOS	D			D			B			A		
Timer - Assigned Phs	1	2	3	4	5	6	7	8				
Phs Duration (G+Y+Rc), s	17.7	50.7	7.5	14.1	7.7	60.7	6.2	15.4				
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	29.5	18.5	5.5	18.5	5.5	42.5	5.5	18.5				
Max Q Clear Time (g_c+l1), s	11.8	14.3	3.6	2.6	2.9	10.3	2.8	10.5				
Green Ext Time (p_c), s	1.4	1.8	0.0	0.0	0.0	4.9	0.0	0.5				
Intersection Summary												
HCM 6th Ctrl Delay	14.7											
HCM 6th LOS	B											

HCM 6th Signalized Intersection Summary

7: Chester Street & Mineral Circle

2040 Total PM.syn

04/25/2019

												
Movement	EBL	EBT	EBR	WBL	WBT	WBR	NBL	NBT	NBR	SBL	SBT	SBR
Lane Configurations												
Traffic Volume (veh/h)	91	1	20	208	6	540	4	694	52	149	746	29
Future Volume (veh/h)	91	1	20	208	6	540	4	694	52	149	746	29
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	99	1	22	226	7	587	4	754	57	162	794	32
Peak Hour Factor	0.92	0.92	0.92	0.92	0.92	0.92	0.92	0.92	0.92	0.92	0.94	0.92
Percent Heavy Veh, %	2	2	2	2	2	2	2	2	2	2	2	2
Cap, veh/h	136	19	415	611	8	654	280	1195	90	377	1683	68
Arrive On Green	0.27	0.27	0.27	0.09	0.42	0.42	0.71	0.71	0.71	0.05	0.32	0.32
Sat Flow, veh/h	823	69	1526	1781	19	1569	663	3349	253	1781	3482	140
Grp Volume(v), veh/h	99	0	23	226	0	594	4	400	411	162	405	421
Grp Sat Flow(s),veh/h/ln	823	0	1596	1781	0	1588	663	1777	1825	1781	1777	1845
Q Serve(g_s), s	6.1	0.0	1.0	8.0	0.0	31.4	0.2	10.6	10.6	4.9	16.4	16.4
Cycle Q Clear(g_c), s	24.5	0.0	1.0	8.0	0.0	31.4	5.2	10.6	10.6	4.9	16.4	16.4
Prop In Lane	1.00		0.96	1.00		0.99	1.00		0.14	1.00		0.08
Lane Grp Cap(c), veh/h	136	0	434	611	0	662	280	634	651	377	859	892
V/C Ratio(X)	0.73	0.00	0.05	0.37	0.00	0.90	0.01	0.63	0.63	0.43	0.47	0.47
Avail Cap(c_a), veh/h	136	0	434	611	0	662	280	634	651	449	859	892
HCM Platoon Ratio	1.00	1.00	1.00	1.00	1.00	1.00	2.00	2.00	2.00	0.67	0.67	0.67
Upstream Filter(I)	1.00	0.00	1.00	1.00	0.00	1.00	0.95	0.95	0.95	0.93	0.93	0.93
Uniform Delay (d), s/veh	43.3	0.0	24.2	19.3	0.0	24.5	10.0	9.8	9.8	16.3	21.3	21.3
Incr Delay (d2), s/veh	17.7	0.0	0.1	0.4	0.0	15.1	0.1	4.5	4.4	0.7	1.7	1.7
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	2.9	0.0	0.4	3.3	0.0	13.9	0.0	3.4	3.5	2.0	7.6	7.8
Unsig. Movement Delay, s/veh												
LnGrp Delay(d),s/veh	61.0	0.0	24.2	19.7	0.0	39.6	10.1	14.3	14.2	17.0	23.0	22.9
LnGrp LOS	E	A	C	B	A	D	B	B	B	B	C	C
Approach Vol, veh/h	122			820			815			988		
Approach Delay, s/veh	54.1			34.1			14.2			22.0		
Approach LOS	D			C			B			C		
Timer - Assigned Phs	1	2	3	4	6			8				
Phs Duration (G+Y+Rc), s	11.4	36.6	13.0	29.0	48.0			42.0				
Change Period (Y+Rc), s	4.5	4.5	4.5	4.5	4.5			4.5				
Max Green Setting (Gmax), s	10.5	28.5	8.5	24.5	43.5			37.5				
Max Q Clear Time (g_c+l1), s	6.9	12.6	10.0	26.5	18.4			33.4				
Green Ext Time (p_c), s	0.1	4.7	0.0	0.0	5.7			1.6				
Intersection Summary												
HCM 6th Ctrl Delay	24.7											
HCM 6th LOS	C											

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	3	21	7	3	42	88	449	6	24	215	56
Future Vol, veh/h	20	3	21	7	3	42	88	449	6	24	215	56
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	-	-	175	-	-	100	-	125	150	-	-
Veh in Median Storage, #	-	1	-	-	1	-	-	0	-	-	0	-
Grade, %	-	0	-	-	0	-	-	0	-	-	0	-
Peak Hour Factor	71	38	66	44	75	88	85	94	30	86	87	78
Heavy Vehicles, %	2	2	2	2	2	2	2	2	2	2	2	2
Mvmt Flow	28	8	32	16	4	48	104	478	20	28	247	72

Major/Minor	Minor2		Minor1		Major1		Major2					
Conflicting Flow All	788	1045	160	870	1061	239	319	0	0	498	0	0
Stage 1	339	339	-	686	686	-	-	-	-	-	-	-
Stage 2	449	706	-	184	375	-	-	-	-	-	-	-
Critical Hdwy	7.54	6.54	6.94	7.54	6.54	6.94	4.14	-	-	4.14	-	-
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	3.52	4.02	3.32	3.52	4.02	3.32	2.22	-	-	2.22	-	-
Pot Cap-1 Maneuver	355	262	*997	*307	257	762	1386	-	-	1062	-	-
Stage 1	813	739	-	*404	446	-	-	-	-	-	-	-
Stage 2	559	437	-	*940	712	-	-	-	-	-	-	-
Platoon blocked, %	1	1	1	1	1	1	-	-	-	-	-	-
Mov Cap-1 Maneuver	305	236	*997	*269	231	762	1386	-	-	1062	-	-
Mov Cap-2 Maneuver	379	315	-	*325	321	-	-	-	-	-	-	-
Stage 1	752	720	-	*374	413	-	-	-	-	-	-	-
Stage 2	480	404	-	*877	693	-	-	-	-	-	-	-

Approach	EB		WB		NB		SB	
HCM Control Delay, s	12.5		12		1.3		0.7	
HCM LOS	B		B					

Minor Lane/Major Mvmt	NBL	NBT	NBR	EBLn1	EBLn2	WBLn1	WBLn2	SBL	SBT	SBR
Capacity (veh/h)	1386	-	-	379	697	325	689	1062	-	-
HCM Lane V/C Ratio	0.075	-	-	0.074	0.057	0.049	0.075	0.026	-	-
HCM Control Delay (s)	7.8	-	-	15.3	10.5	16.6	10.6	8.5	-	-
HCM Lane LOS	A	-	-	C	B	C	B	A	-	-
HCM 95th %tile Q(veh)	0.2	-	-	0.2	0.2	0.2	0.2	0.1	-	-

Notes												
~: Volume exceeds capacity		\$: Delay exceeds 300s		+: Computation Not Defined		*: All major volume in platoon						

Intersection												
Int Delay, s/veh	3.2											
Movement	EBL	EBT	EBR	WBL	WBT	WBR	NBL	NBT	NBR	SBL	SBT	SBR
Lane Configurations												
Traffic Vol, veh/h	43	4	127	7	4	79	21	323	18	88	589	25
Future Vol, veh/h	43	4	127	7	4	79	21	323	18	88	589	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	-	-	175	-	-	100	-	125	150	-	-
Veh in Median Storage, #	-	1	-	-	1	-	-	0	-	-	0	-
Grade, %	-	0	-	-	0	-	-	0	-	-	0	-
Peak Hour Factor	72	100	86	58	33	94	66	85	64	92	89	89
Heavy Vehicles, %	2	2	2	2	2	2	2	2	2	2	2	2
Mvmt Flow	60	4	148	12	12	84	32	380	28	96	662	28
Major/Minor	Minor2		Minor1		Major1		Major2					
Conflicting Flow All	1128	1340	345	969	1326	190	690	0	0	408	0	0
Stage 1	868	868	-	444	444	-	-	-	-	-	-	-
Stage 2	260	472	-	525	882	-	-	-	-	-	-	-
Critical Hdwy	7.54	6.54	6.94	7.54	6.54	6.94	4.14	-	-	4.14	-	-
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	3.52	4.02	3.32	3.52	4.02	3.32	2.22	-	-	2.22	-	-
Pot Cap-1 Maneuver	280	215	*865	*390	220	820	1184	-	-	1147	-	-
Stage 1	525	515	-	*563	574	-	-	-	-	-	-	-
Stage 2	722	557	-	*815	505	-	-	-	-	-	-	-
Platoon blocked, %	1	1	1	1	1	1	1	-	-	-	-	-
Mov Cap-1 Maneuver	224	191	*865	*293	196	820	1184	-	-	1147	-	-
Mov Cap-2 Maneuver	338	296	-	*391	309	-	-	-	-	-	-	-
Stage 1	511	472	-	*548	559	-	-	-	-	-	-	-
Stage 2	617	542	-	*614	463	-	-	-	-	-	-	-
Approach	EB		WB		NB		SB					
HCM Control Delay, s	12.5		11.6		0.6		1					
HCM LOS	B		B									
Minor Lane/Major Mvmt	NBL	NBT	NBR	EBLn1	EBLn2	WBLn1	WBLn2	SBL	SBT	SBR		
Capacity (veh/h)	1184	-	-	338	823	391	679	1147	-	-		
HCM Lane V/C Ratio	0.027	-	-	0.177	0.184	0.031	0.142	0.083	-	-		
HCM Control Delay (s)	8.1	-	-	17.9	10.4	14.5	11.2	8.4	-	-		
HCM Lane LOS	A	-	-	C	B	B	B	A	-	-		
HCM 95th %tile Q(veh)	0.1	-	-	0.6	0.7	0.1	0.5	0.3	-	-		
Notes												
~: Volume exceeds capacity		\$: Delay exceeds 300s			+: Computation Not Defined				*: All major volume in platoon			

Intersection												
Int Delay, s/veh	2.6											
Movement	EBL	EBT	EBR	WBL	WBT	WBR	NBL	NBT	NBR	SBL	SBT	SBR
Lane Configurations												
Traffic Vol, veh/h	21	3	22	7	3	44	93	474	6	25	227	59
Future Vol, veh/h	21	3	22	7	3	44	93	474	6	25	227	59
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	-	-	175	-	-	100	-	125	150	-	-
Veh in Median Storage, #	-	1	-	-	1	-	-	0	-	-	0	-
Grade, %	-	0	-	-	0	-	-	0	-	-	0	-
Peak Hour Factor	71	38	66	44	75	88	85	94	30	86	87	78
Heavy Vehicles, %	2	2	2	2	2	2	2	2	2	2	2	2
Mvmt Flow	30	8	33	16	4	50	109	504	20	29	261	76
Major/Minor	Minor2		Minor1		Major1		Major2					
Conflicting Flow All	829	1099	169	915	1117	252	337	0	0	524	0	0
Stage 1	357	357	-	722	722	-	-	-	-	-	-	-
Stage 2	472	742	-	193	395	-	-	-	-	-	-	-
Critical Hdwy	7.54	6.54	6.94	7.54	6.54	6.94	4.14	-	-	4.14	-	-
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	3.52	4.02	3.32	3.52	4.02	3.32	2.22	-	-	2.22	-	-
Pot Cap-1 Maneuver	331	243	*997	*283	237	748	1363	-	-	1039	-	-
Stage 1	792	726	-	*384	429	-	-	-	-	-	-	-
Stage 2	542	420	-	*940	696	-	-	-	-	-	-	-
Platoon blocked, %	1	1	1	1	1	1	-	-	-	-	-	-
Mov Cap-1 Maneuver	281	217	*997	*246	212	748	1363	-	-	1039	-	-
Mov Cap-2 Maneuver	360	297	-	*306	304	-	-	-	-	-	-	-
Stage 1	729	705	-	*353	395	-	-	-	-	-	-	-
Stage 2	461	386	-	*874	677	-	-	-	-	-	-	-
Approach	EB		WB		NB		SB					
HCM Control Delay, s	12.8		12.3		1.4		0.7					
HCM LOS	B		B									
Minor Lane/Major Mvmt	NBL	NBT	NBR	EBLn1	EBLn2	WBLn1	WBLn2	SBL	SBT	SBR		
Capacity (veh/h)	1363	-	-	360	687	306	675	1039	-	-		
HCM Lane V/C Ratio	0.08	-	-	0.082	0.06	0.052	0.08	0.028	-	-		
HCM Control Delay (s)	7.9	-	-	15.9	10.6	17.4	10.8	8.6	-	-		
HCM Lane LOS	A	-	-	C	B	C	B	A	-	-		
HCM 95th %tile Q(veh)	0.3	-	-	0.3	0.2	0.2	0.3	0.1	-	-		
Notes												
~: Volume exceeds capacity		\$: Delay exceeds 300s			+: Computation Not Defined				*: All major volume in platoon			

Intersection												
Int Delay, s/veh	3.2											
Movement	EBL	EBT	EBR	WBL	WBT	WBR	NBL	NBT	NBR	SBL	SBT	SBR
Lane Configurations												
Traffic Vol, veh/h	45	4	134	7	4	83	22	341	19	93	622	26
Future Vol, veh/h	45	4	134	7	4	83	22	341	19	93	622	26
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	-	-	175	-	-	100	-	125	150	-	-
Veh in Median Storage, #	-	1	-	-	1	-	-	0	-	-	0	-
Grade, %	-	0	-	-	0	-	-	0	-	-	0	-
Peak Hour Factor	72	100	86	58	33	94	66	85	64	92	89	89
Heavy Vehicles, %	2	2	2	2	2	2	2	2	2	2	2	2
Mvmt Flow	63	4	156	12	12	88	33	401	30	101	699	29
Major/Minor	Minor2		Minor1		Major1		Major2					
Conflicting Flow All	1189	1413	364	1021	1397	201	728	0	0	431	0	0
Stage 1	916	916	-	467	467	-	-	-	-	-	-	-
Stage 2	273	497	-	554	930	-	-	-	-	-	-	-
Critical Hdwy	7.54	6.54	6.94	7.54	6.54	6.94	4.14	-	-	4.14	-	-
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	3.52	4.02	3.32	3.52	4.02	3.32	2.22	-	-	2.22	-	-
Pot Cap-1 Maneuver	277	204	*830	*398	210	806	1207	-	-	1125	-	-
Stage 1	539	519	-	*545	560	-	-	-	-	-	-	-
Stage 2	710	543	-	*782	510	-	-	-	-	-	-	-
Platoon blocked, %	1	1	1	1	1	1	-	-	-	-	-	-
Mov Cap-1 Maneuver	219	180	*830	*292	186	806	1207	-	-	1125	-	-
Mov Cap-2 Maneuver	333	287	-	*378	303	-	-	-	-	-	-	-
Stage 1	524	473	-	*530	545	-	-	-	-	-	-	-
Stage 2	601	528	-	*574	464	-	-	-	-	-	-	-
Approach	EB		WB		NB		SB					
HCM Control Delay, s	12.8		11.7		0.6		1					
HCM LOS	B		B									
Minor Lane/Major Mvmt	NBL	NBT	NBR	EBLn1	EBLn2	WBLn1	WBLn2	SBL	SBT	SBR		
Capacity (veh/h)	1207	-	-	333	792	378	671	1125	-	-		
HCM Lane V/C Ratio	0.028	-	-	0.188	0.202	0.032	0.15	0.09	-	-		
HCM Control Delay (s)	8.1	-	-	18.3	10.7	14.8	11.3	8.5	-	-		
HCM Lane LOS	A	-	-	C	B	B	B	A	-	-		
HCM 95th %tile Q(veh)	0.1	-	-	0.7	0.8	0.1	0.5	0.3	-	-		
Notes												
~: Volume exceeds capacity \$: Delay exceeds 300s +: Computation Not Defined *: All major volume in platoon												

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	21	3	22	86	3	101	93	598	296	232	261	59
Future Vol, veh/h	21	3	22	86	3	101	93	598	296	232	261	59
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	-	-	175	-	-	100	-	125	150	-	-
Veh in Median Storage, #	-	1	-	-	1	-	-	0	-	-	0	-
Grade, %	-	0	-	-	0	-	-	0	-	-	0	-
Peak Hour Factor	92	92	92	92	92	92	92	94	92	92	92	92
Heavy Vehicles, %	2	2	2	2	2	2	2	2	2	2	2	2
Mvmt Flow	23	3	24	93	3	110	101	636	322	252	284	64
Major/Minor	Minor2		Minor1			Major1			Major2			
Conflicting Flow All	1342	1980	174	1486	1690	318	348	0	0	958	0	0
Stage 1	820	820	-	838	838	-	-	-	-	-	-	-
Stage 2	522	1160	-	648	852	-	-	-	-	-	-	-
Critical Hdwy	7.54	6.54	6.94	7.54	6.54	6.94	4.14	-	-	4.14	-	-
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	3.52	4.02	3.32	3.52	4.02	3.32	2.22	-	-	2.22	-	-
Pot Cap-1 Maneuver	130	64	*997	99	99	678	1349	-	-	714	-	-
Stage 1	401	435	-	327	380	-	-	-	-	-	-	-
Stage 2	506	268	-	517	419	-	-	-	-	-	-	-
Platoon blocked, %	1	1	1	1	1	1	-	-	-	-	-	-
Mov Cap-1 Maneuver	73	38	*997	~ 79	59	678	1349	-	-	714	-	-
Mov Cap-2 Maneuver	115	~ -12	-	151	127	-	-	-	-	-	-	-
Stage 1	371	281	-	302	352	-	-	-	-	-	-	-
Stage 2	389	248	-	322	271	-	-	-	-	-	-	-
Approach	EB		WB			NB			SB			
HCM Control Delay, s			34.5			0.8			5.4			
HCM LOS	-		D									
Minor Lane/Major Mvmt	NBL	NBT	NBR	EBLn1	EBLn2	WBLn1	WBLn2	SBL	SBT	SBR		
Capacity (veh/h)	1349	-	-	115	+	151	603	714	-	-		
HCM Lane V/C Ratio	0.075	-	-	0.198	-	0.619	0.187	0.353	-	-		
HCM Control Delay (s)	7.9	-	-	43.9	-	61.4	12.3	12.8	-	-		
HCM Lane LOS	A	-	-	E	-	F	B	B	-	-		
HCM 95th %tile Q(veh)	0.2	-	-	0.7	-	3.3	0.7	1.6	-	-		
Notes												
~: Volume exceeds capacity		\$: Delay exceeds 300s			+: Computation Not Defined				*: All major volume in platoon			

Intersection												
Int Delay, s/veh	17.4											
Movement	EBL	EBT	EBR	WBL	WBT	WBR	NBL	NBT	NBR	SBL	SBT	SBR
Lane Configurations												
Traffic Vol, veh/h	45	4	134	305	4	296	22	385	121	166	750	26
Future Vol, veh/h	45	4	134	305	4	296	22	385	121	166	750	26
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	-	-	175	-	-	100	-	125	150	-	-
Veh in Median Storage, #	-	1	-	-	1	-	-	0	-	-	0	-
Grade, %	-	0	-	-	0	-	-	0	-	-	0	-
Peak Hour Factor	92	100	92	92	92	94	92	92	92	92	92	92
Heavy Vehicles, %	2	2	2	2	2	2	2	2	2	2	2	2
Mvmt Flow	49	4	146	332	4	315	24	418	132	180	815	28
Major/Minor	Minor2		Minor1		Major1		Major2					
Conflicting Flow All	1448	1787	422	1236	1669	209	843	0	0	550	0	0
Stage 1	1189	1189	-	466	466	-	-	-	-	-	-	-
Stage 2	259	598	-	770	1203	-	-	-	-	-	-	-
Critical Hdwy	7.54	6.54	6.94	7.54	6.54	6.94	4.14	-	-	4.14	-	-
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	3.52	4.02	3.32	3.52	4.02	3.32	2.22	-	-	2.22	-	-
Pot Cap-1 Maneuver	175	110	*795 *~	284	137	797	1130	-	-	1016	-	-
Stage 1	366	384	-	*546	561	-	-	-	-	-	-	-
Stage 2	723	489	-	*750	377	-	-	-	-	-	-	-
Platoon blocked, %	1	1	1	1	1	1	-	-	-	-	-	-
Mov Cap-1 Maneuver	89	89	*795 *~	194	111	797	1130	-	-	1016	-	-
Mov Cap-2 Maneuver	171	181	- *~	317	216	-	-	-	-	-	-	-
Stage 1	358	316	-	*535	549	-	-	-	-	-	-	-
Stage 2	425	479	-	*497	310	-	-	-	-	-	-	-
Approach	EB		WB		NB		SB					
HCM Control Delay, s	16.9		57.6		0.3		1.6					
HCM LOS	C		F									
Minor Lane/Major Mvmt	NBL	NBT	NBR	EBLn1	EBLn2	WBLn1	WBLn2	SBL	SBT	SBR		
Capacity (veh/h)	1130	-	-	171	729	317	769	1016	-	-		
HCM Lane V/C Ratio	0.021	-	-	0.286	0.205	1.046	0.415	0.178	-	-		
HCM Control Delay (s)	8.3	-	-	34.3	11.2	100.5	13	9.3	-	-		
HCM Lane LOS	A	-	-	D	B	F	B	A	-	-		
HCM 95th %tile Q(veh)	0.1	-	-	1.1	0.8	12.1	2.1	0.6	-	-		
Notes												
~: Volume exceeds capacity		\$: Delay exceeds 300s			+: Computation Not Defined				*: All major volume in platoon			

HCM 6th Signalized Intersection Summary
8: Chester Street & Mineral Avenue

2030 Total AM_Imp.syn
04/24/2019

												
Movement	EBL	EBT	EBR	WBL	WBT	WBR	NBL	NBT	NBR	SBL	SBT	SBR
Lane Configurations												
Traffic Volume (veh/h)	21	3	22	86	3	101	93	598	296	232	261	59
Future Volume (veh/h)	21	3	22	86	3	101	93	598	296	232	261	59
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	23	3	24	93	3	110	101	636	322	252	284	64
Peak Hour Factor	0.92	0.92	0.92	0.92	0.92	0.92	0.92	0.94	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	157	10	81	249	4	148	778	2132	951	523	1819	403
Arrive On Green	0.02	0.06	0.06	0.06	0.10	0.10	0.05	0.60	0.60	0.08	0.63	0.63
Sat Flow, veh/h	1781	179	1433	1781	42	1549	1781	3554	1585	1781	2891	641
Grp Volume(v), veh/h	23	0	27	93	0	113	101	636	322	252	173	175
Grp Sat Flow(s),veh/h/ln	1781	0	1612	1781	0	1591	1781	1777	1585	1781	1777	1755
Q Serve(g_s), s	1.1	0.0	1.4	4.3	0.0	6.2	1.9	7.8	9.2	4.7	3.6	3.7
Cycle Q Clear(g_c), s	1.1	0.0	1.4	4.3	0.0	6.2	1.9	7.8	9.2	4.7	3.6	3.7
Prop In Lane	1.00		0.89	1.00		0.97	1.00		1.00	1.00		0.37
Lane Grp Cap(c), veh/h	157	0	91	249	0	152	778	2132	951	523	1118	1104
V/C Ratio(X)	0.15	0.00	0.30	0.37	0.00	0.74	0.13	0.30	0.34	0.48	0.15	0.16
Avail Cap(c_a), veh/h	223	0	331	265	0	345	816	2132	951	707	1118	1104
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	1.00	0.00	1.00	1.00	1.00	1.00	0.98	0.98	0.98
Uniform Delay (d), s/veh	38.6	0.0	40.7	35.9	0.0	39.6	5.8	8.8	9.0	5.9	6.9	6.9
Incr Delay (d2), s/veh	0.4	0.0	1.8	0.9	0.0	7.0	0.1	0.4	1.0	0.7	0.3	0.3
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	0.5	0.0	0.6	1.9	0.0	2.7	0.6	2.9	3.1	1.6	1.3	1.3
Unsig. Movement Delay, s/veh												
LnGrp Delay(d),s/veh	39.0	0.0	42.5	36.8	0.0	46.6	5.9	9.1	10.0	6.6	7.1	7.2
LnGrp LOS	D	A	D	D	A	D	A	A	B	A	A	A
Approach Vol, veh/h	50			206			1059			600		
Approach Delay, s/veh	40.9			42.2			9.1			6.9		
Approach LOS	D			D			A			A		
Timer - Assigned Phs	1	2	3	4	5	6	7	8				
Phs Duration (G+Y+Rc), s	11.7	58.5	10.2	9.6	9.1	61.1	6.7	13.1				
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	30.5	6.5	18.5	6.5	40.5	5.5	19.5				
Max Q Clear Time (g_c+I1), s	6.7	11.2	6.3	3.4	3.9	5.7	3.1	8.2				
Green Ext Time (p_c), s	0.5	5.5	0.0	0.1	0.0	2.2	0.0	0.4				
Intersection Summary												
HCM 6th Ctrl Delay	12.8											
HCM 6th LOS	B											

HCM 6th Signalized Intersection Summary

8: Chester Street & Mineral Avenue

2030 Total PM_Imp.syn

04/24/2019

												
Movement	EBL	EBT	EBR	WBL	WBT	WBR	NBL	NBT	NBR	SBL	SBT	SBR
Lane Configurations												
Traffic Volume (veh/h)	45	4	134	305	4	296	22	385	121	166	750	26
Future Volume (veh/h)	45	4	134	305	4	296	22	385	121	166	750	26
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	49	4	146	332	4	315	24	418	132	180	815	28
Peak Hour Factor	0.92	1.00	0.92	0.92	0.92	0.94	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	208	5	187	437	7	550	399	1495	667	514	1662	57
Arrive On Green	0.12	0.12	0.12	0.18	0.35	0.35	0.03	0.42	0.42	0.16	0.95	0.95
Sat Flow, veh/h	1061	42	1549	1781	20	1568	1781	3554	1585	1781	3505	120
Grp Volume(v), veh/h	49	0	150	332	0	319	24	418	132	180	413	430
Grp Sat Flow(s),veh/h/ln	1061	0	1592	1781	0	1588	1781	1777	1585	1781	1777	1849
Q Serve(g_s), s	3.8	0.0	8.2	14.0	0.0	14.7	0.7	6.9	4.7	5.0	2.0	2.0
Cycle Q Clear(g_c), s	3.8	0.0	8.2	14.0	0.0	14.7	0.7	6.9	4.7	5.0	2.0	2.0
Prop In Lane	1.00		0.97	1.00		0.99	1.00		1.00	1.00		0.07
Lane Grp Cap(c), veh/h	208	0	192	437	0	557	399	1495	667	514	842	876
V/C Ratio(X)	0.24	0.00	0.78	0.76	0.00	0.57	0.06	0.28	0.20	0.35	0.49	0.49
Avail Cap(c_a), veh/h	293	0	320	482	0	725	456	1495	667	578	842	876
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	0.91	0.91	0.91
Uniform Delay (d), s/veh	36.5	0.0	38.4	26.1	0.0	23.7	14.0	17.1	16.5	11.0	1.3	1.3
Incr Delay (d2), s/veh	0.6	0.0	6.8	6.3	0.0	0.9	0.1	0.5	0.7	0.4	1.9	1.8
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	6.5	0.0	5.5	0.3	2.8	1.8	1.7	0.9	0.9
Unsig. Movement Delay, s/veh												
LnGrp Delay(d),s/veh	37.1	0.0	45.2	32.4	0.0	24.7	14.1	17.6	17.1	11.4	3.1	3.1
LnGrp LOS	D	A	D	C	A	C	B	B	B	B	A	A
Approach Vol, veh/h	199			651			574			1023		
Approach Delay, s/veh	43.2			28.6			17.3			4.6		
Approach LOS	D			C			B			A		
Timer - Assigned Phs	1	2	3	4	5	6	8					
Phs Duration (G+Y+Rc), s	11.6	42.4	20.7	15.3	6.8	47.2	36.1					
Change Period (Y+Rc), s	4.5	4.5	4.5	4.5	4.5	4.5	4.5					
Max Green Setting (Gmax), s	10.3	25.1	18.5	18.1	5.1	30.3	41.1					
Max Q Clear Time (g_c+l1), s	7.0	8.9	16.0	10.2	2.7	4.0	16.7					
Green Ext Time (p_c), s	0.1	2.9	0.3	0.6	0.0	5.9	2.2					
Intersection Summary												
HCM 6th Ctrl Delay	17.1											
HCM 6th LOS	B											

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	22	3	23	8	3	47	98	499	7	27	239	62
Future Vol, veh/h	22	3	23	8	3	47	98	499	7	27	239	62
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	-	-	175	-	-	100	-	125	150	-	-
Veh in Median Storage, #	-	1	-	-	1	-	-	0	-	-	0	-
Grade, %	-	0	-	-	0	-	-	0	-	-	0	-
Peak Hour Factor	92	92	92	92	92	92	92	94	92	92	92	92
Heavy Vehicles, %	2	2	2	2	2	2	2	2	2	2	2	2
Mvmt Flow	24	3	25	9	3	51	107	531	8	29	260	67
Major/Minor	Minor2		Minor1			Major1			Major2			
Conflicting Flow All	833	1105	164	935	1130	266	327	0	0	539	0	0
Stage 1	352	352	-	745	745	-	-	-	-	-	-	-
Stage 2	481	753	-	190	385	-	-	-	-	-	-	-
Critical Hdwy	7.54	6.54	6.94	7.54	6.54	6.94	4.14	-	-	4.14	-	-
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	3.52	4.02	3.32	3.52	4.02	3.32	2.22	-	-	2.22	-	-
Pot Cap-1 Maneuver	328	240	*997	*273	232	732	1376	-	-	1025	-	-
Stage 1	797	729	-	*372	419	-	-	-	-	-	-	-
Stage 2	535	416	-	*940	704	-	-	-	-	-	-	-
Platoon blocked, %	1	1	1	1	1	1	1	-	-	-	-	-
Mov Cap-1 Maneuver	278	215	*997	*243	208	732	1376	-	-	1025	-	-
Mov Cap-2 Maneuver	356	296	-	*299	299	-	-	-	-	-	-	-
Stage 1	735	709	-	*343	386	-	-	-	-	-	-	-
Stage 2	455	384	-	*887	684	-	-	-	-	-	-	-
Approach	EB		WB			NB			SB			
HCM Control Delay, s	12.6		11.7			1.3			0.7			
HCM LOS	B		B									
Minor Lane/Major Mvmt	NBL	NBT	NBR	EBLn1	EBLn2	WBLn1	WBLn2	SBL	SBT	SBR		
Capacity (veh/h)	1376	-	-	356	783	299	673	1025	-	-		
HCM Lane V/C Ratio	0.077	-	-	0.067	0.036	0.029	0.081	0.029	-	-		
HCM Control Delay (s)	7.8	-	-	15.8	9.8	17.4	10.8	8.6	-	-		
HCM Lane LOS	A	-	-	C	A	C	B	A	-	-		
HCM 95th %tile Q(veh)	0.3	-	-	0.2	0.1	0.1	0.3	0.1	-	-		
Notes												
~: Volume exceeds capacity		\$: Delay exceeds 300s			+: Computation Not Defined				*: All major volume in platoon			

Intersection												
Int Delay, s/veh	3.1											
Movement	EBL	EBT	EBR	WBL	WBT	WBR	NBL	NBT	NBR	SBL	SBT	SBR
Lane Configurations												
Traffic Vol, veh/h	48	4	141	8	4	88	23	359	20	98	654	28
Future Vol, veh/h	48	4	141	8	4	88	23	359	20	98	654	28
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	-	-	175	-	-	100	-	125	150	-	-
Veh in Median Storage, #	-	1	-	-	1	-	-	0	-	-	0	-
Grade, %	-	0	-	-	0	-	-	0	-	-	0	-
Peak Hour Factor	92	100	92	92	92	94	92	92	92	92	92	92
Heavy Vehicles, %	2	2	2	2	2	2	2	2	2	2	2	2
Mvmt Flow	52	4	153	9	4	94	25	390	22	107	711	30
Major/Minor	Minor2		Minor1		Major1		Major2					
Conflicting Flow All	1187	1402	371	1012	1395	195	741	0	0	412	0	0
Stage 1	940	940	-	440	440	-	-	-	-	-	-	-
Stage 2	247	462	-	572	955	-	-	-	-	-	-	-
Critical Hdwy	7.54	6.54	6.94	7.54	6.54	6.94	4.14	-	-	4.14	-	-
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	3.52	4.02	3.32	3.52	4.02	3.32	2.22	-	-	2.22	-	-
Pot Cap-1 Maneuver	279	208	*830	*406	211	814	1189	-	-	1143	-	-
Stage 1	516	503	-	*566	576	-	-	-	-	-	-	-
Stage 2	735	563	-	*782	493	-	-	-	-	-	-	-
Platoon blocked, %	1	1	1	1	1	1	1	-	-	-	-	-
Mov Cap-1 Maneuver	223	184	*830	*299	187	814	1189	-	-	1143	-	-
Mov Cap-2 Maneuver	337	289	-	*388	303	-	-	-	-	-	-	-
Stage 1	506	456	-	*554	564	-	-	-	-	-	-	-
Stage 2	632	551	-	*573	447	-	-	-	-	-	-	-
Approach	EB		WB		NB		SB					
HCM Control Delay, s	12.4		10.8		0.5		1.1					
HCM LOS	B		B									
Minor Lane/Major Mvmt	NBL	NBT	NBR	EBLn1	EBLn2	WBLn1	WBLn2	SBL	SBT	SBR		
Capacity (veh/h)	1189	-	-	337	792	388	757	1143	-	-		
HCM Lane V/C Ratio	0.021	-	-	0.155	0.199	0.022	0.129	0.093	-	-		
HCM Control Delay (s)	8.1	-	-	17.6	10.7	14.5	10.5	8.5	-	-		
HCM Lane LOS	A	-	-	C	B	B	B	A	-	-		
HCM 95th %tile Q(veh)	0.1	-	-	0.5	0.7	0.1	0.4	0.3	-	-		
Notes												
~: Volume exceeds capacity		\$: Delay exceeds 300s			+: Computation Not Defined				*: All major volume in platoon			

HCM 6th Signalized Intersection Summary

8: Chester Street & Mineral Avenue

2040 Total AM.syn

04/25/2019

												
Movement	EBL	EBT	EBR	WBL	WBT	WBR	NBL	NBT	NBR	SBL	SBT	SBR
Lane Configurations												
Traffic Volume (veh/h)	22	3	23	87	3	104	98	623	297	234	273	62
Future Volume (veh/h)	22	3	23	87	3	104	98	623	297	234	273	62
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	24	3	25	95	3	113	107	663	323	254	297	67
Peak Hour Factor	0.92	0.92	0.92	0.92	0.92	0.92	0.92	0.94	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	158	10	84	252	4	151	765	2119	945	512	1808	402
Arrive On Green	0.03	0.06	0.06	0.06	0.10	0.10	0.05	0.60	0.60	0.08	0.63	0.63
Sat Flow, veh/h	1781	173	1439	1781	41	1550	1781	3554	1585	1781	2889	642
Grp Volume(v), veh/h	24	0	28	95	0	116	107	663	323	254	181	183
Grp Sat Flow(s),veh/h/ln	1781	0	1611	1781	0	1591	1781	1777	1585	1781	1777	1755
Q Serve(g_s), s	1.1	0.0	1.5	4.4	0.0	6.4	2.0	8.3	9.3	4.8	3.8	3.9
Cycle Q Clear(g_c), s	1.1	0.0	1.5	4.4	0.0	6.4	2.0	8.3	9.3	4.8	3.8	3.9
Prop In Lane	1.00		0.89	1.00		0.97	1.00		1.00	1.00		0.37
Lane Grp Cap(c), veh/h	158	0	94	252	0	155	765	2119	945	512	1112	1098
V/C Ratio(X)	0.15	0.00	0.30	0.38	0.00	0.75	0.14	0.31	0.34	0.50	0.16	0.17
Avail Cap(c_a), veh/h	223	0	331	266	0	345	801	2119	945	694	1112	1098
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	1.00	0.00	1.00	1.00	1.00	1.00	0.97	0.97	0.97
Uniform Delay (d), s/veh	38.4	0.0	40.6	35.7	0.0	39.5	5.9	9.0	9.2	6.1	7.0	7.0
Incr Delay (d2), s/veh	0.4	0.0	1.8	0.9	0.0	7.0	0.1	0.4	1.0	0.7	0.3	0.3
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	0.5	0.0	0.6	1.9	0.0	2.8	0.7	3.1	3.2	1.6	1.4	1.4
Unsig. Movement Delay, s/veh												
LnGrp Delay(d),s/veh	38.8	0.0	42.4	36.6	0.0	46.5	6.0	9.4	10.2	6.8	7.3	7.4
LnGrp LOS	D	A	D	D	A	D	A	A	B	A	A	A
Approach Vol, veh/h	52		211				1093			618		
Approach Delay, s/veh	40.7		42.1				9.3			7.1		
Approach LOS	D		D				A			A		
Timer - Assigned Phs	1	2	3	4	5	6	7	8				
Phs Duration (G+Y+Rc), s	11.8	58.2	10.3	9.7	9.2	60.8	6.8	13.3				
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	30.5	6.5	18.5	6.5	40.5	5.5	19.5				
Max Q Clear Time (g_c+I1), s	6.8	11.3	6.4	3.5	4.0	5.9	3.1	8.4				
Green Ext Time (p_c), s	0.5	5.7	0.0	0.1	0.1	2.3	0.0	0.4				
Intersection Summary												
HCM 6th Ctrl Delay	13.0											
HCM 6th LOS	B											

HCM 6th Signalized Intersection Summary

8: Chester Street & Mineral Avenue

2040 Total PM.syn

04/25/2019

												
Movement	EBL	EBT	EBR	WBL	WBT	WBR	NBL	NBT	NBR	SBL	SBT	SBR
Lane Configurations												
Traffic Volume (veh/h)	48	4	141	306	4	301	23	403	122	171	782	28
Future Volume (veh/h)	48	4	141	306	4	301	23	403	122	171	782	28
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	52	4	153	333	4	320	25	438	133	186	850	30
Peak Hour Factor	0.92	1.00	0.92	0.92	0.92	0.94	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	212	5	194	437	7	557	387	1471	656	503	1643	58
Arrive On Green	0.12	0.12	0.12	0.18	0.35	0.35	0.03	0.41	0.41	0.16	0.94	0.94
Sat Flow, veh/h	1056	41	1551	1781	20	1568	1781	3554	1585	1781	3501	124
Grp Volume(v), veh/h	52	0	157	333	0	324	25	438	133	186	431	449
Grp Sat Flow(s),veh/h/ln	1056	0	1591	1781	0	1588	1781	1777	1585	1781	1777	1848
Q Serve(g_s), s	4.1	0.0	8.6	13.9	0.0	14.9	0.7	7.4	4.8	5.2	2.6	2.6
Cycle Q Clear(g_c), s	4.1	0.0	8.6	13.9	0.0	14.9	0.7	7.4	4.8	5.2	2.6	2.6
Prop In Lane	1.00		0.97	1.00		0.99	1.00		1.00	1.00		0.07
Lane Grp Cap(c), veh/h	212	0	199	437	0	564	387	1471	656	503	834	867
V/C Ratio(X)	0.25	0.00	0.79	0.76	0.00	0.57	0.06	0.30	0.20	0.37	0.52	0.52
Avail Cap(c_a), veh/h	292	0	320	482	0	725	442	1471	656	563	834	867
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	0.90	0.90	0.90
Uniform Delay (d), s/veh	36.2	0.0	38.2	25.9	0.0	23.5	14.3	17.6	16.9	11.3	1.6	1.6
Incr Delay (d2), s/veh	0.6	0.0	6.8	6.4	0.0	0.9	0.1	0.5	0.7	0.4	2.1	2.0
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	1.1	0.0	3.7	6.5	0.0	5.5	0.3	3.0	1.8	1.8	1.0	1.0
Unsig. Movement Delay, s/veh												
LnGrp Delay(d),s/veh	36.8	0.0	45.1	32.3	0.0	24.4	14.4	18.1	17.6	11.7	3.6	3.5
LnGrp LOS	D	A	D	C	A	C	B	B	B	B	A	A
Approach Vol, veh/h	209			657			596			1066		
Approach Delay, s/veh	43.0			28.4			17.9			5.0		
Approach LOS	D			C			B			A		
Timer - Assigned Phs	1	2	3	4	5	6	8					
Phs Duration (G+Y+Rc), s	11.8	41.8	20.7	15.7	6.8	46.7	36.4					
Change Period (Y+Rc), s	4.5	4.5	4.5	4.5	4.5	4.5	4.5					
Max Green Setting (Gmax), s	10.3	25.1	18.5	18.1	5.1	30.3	41.1					
Max Q Clear Time (g_c+l1), s	7.2	9.4	15.9	10.6	2.7	4.6	16.9					
Green Ext Time (p_c), s	0.1	3.0	0.3	0.6	0.0	6.2	2.2					
Intersection Summary												
HCM 6th Ctrl Delay	17.3											
HCM 6th LOS	B											

Intersection						
Int Delay, s/veh	2.1					
Movement	WBL	WBR	NBT	NBR	SBL	SBT
Lane Configurations						
Traffic Vol, veh/h	34	51	1071	170	134	385
Future Vol, veh/h	34	51	1071	170	134	385
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	-	-	-	200	-
Veh in Median Storage, #	1	-	0	-	-	0
Grade, %	0	-	0	-	-	0
Peak Hour Factor	77	85	80	76	80	94
Heavy Vehicles, %	2	2	2	2	2	2
Mvmt Flow	44	60	1339	224	168	410
Major/Minor	Minor1	Major1		Major2		
Conflicting Flow All	1992	782	0	0	1563	0
Stage 1	1451	-	-	-	-	-
Stage 2	541	-	-	-	-	-
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	53	*656	-	-	576	-
Stage 1	372	-	-	-	-	-
Stage 2	724	-	-	-	-	-
Platoon blocked, %		1	-	-	1	-
Mov Cap-1 Maneuver	~ 38	*656	-	-	576	-
Mov Cap-2 Maneuver	178	-	-	-	-	-
Stage 1	263	-	-	-	-	-
Stage 2	724	-	-	-	-	-
Approach	WB	NB		SB		
HCM Control Delay, s	22.6	0		4		
HCM LOS	C					
Minor Lane/Major Mvmt	NBT	NBRWBLn1		SBL	SBT	
Capacity (veh/h)	-	-	307	576	-	
HCM Lane V/C Ratio	-	-	0.339	0.291	-	
HCM Control Delay (s)	-	-	22.6	13.8	-	
HCM Lane LOS	-	-	C	B	-	
HCM 95th %tile Q(veh)	-	-	1.5	1.2	-	
Notes						
~: Volume exceeds capacity		\$: Delay exceeds 300s		+: Computation Not Defined		*: All major volume in platoon

HCM 6th TWSC
9: Yosemite Street & Mineral Avenue

2019 Existing PM.syn

04/24/2019

Intersection						
Int Delay, s/veh	2.9					
Movement	WBL	WBR	NBT	NBR	SBL	SBT
Lane Configurations						
Traffic Vol, veh/h	117	192	676	38	42	1037
Future Vol, veh/h	117	192	676	38	42	1037
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	-	-	-	200	-
Veh in Median Storage, #	1	-	0	-	-	0
Grade, %	0	-	0	-	-	0
Peak Hour Factor	86	91	92	59	70	92
Heavy Vehicles, %	2	2	2	2	2	2
Mvmt Flow	136	211	735	64	60	1127
Major/Minor	Minor1	Major1		Major2		
Conflicting Flow All	1451	400	0	0	799	0
Stage 1	767	-	-	-	-	-
Stage 2	684	-	-	-	-	-
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	*385	*815	-	-	1145	-
Stage 1	*742	-	-	-	-	-
Stage 2	*622	-	-	-	-	-
Platoon blocked, %	1	1	-	-	1	-
Mov Cap-1 Maneuver	*365	*815	-	-	1145	-
Mov Cap-2 Maneuver	*447	-	-	-	-	-
Stage 1	*703	-	-	-	-	-
Stage 2	*622	-	-	-	-	-
Approach	WB	NB		SB		
HCM Control Delay, s	18.1	0		0.4		
HCM LOS	C					
Minor Lane/Major Mvmt	NBT	NBRWBLn1		SBL	SBT	
Capacity (veh/h)	-	-	616	1145	-	
HCM Lane V/C Ratio	-	-	0.563	0.052	-	
HCM Control Delay (s)	-	-	18.1	8.3	-	
HCM Lane LOS	-	-	C	A	-	
HCM 95th %tile Q(veh)	-	-	3.5	0.2	-	
Notes						
~: Volume exceeds capacity		\$: Delay exceeds 300s		+: Computation Not Defined		*: All major volume in platoon

Intersection						
Int Delay, s/veh	2.1					
Movement	WBL	WBR	NBT	NBR	SBL	SBT
Lane Configurations						
Traffic Vol, veh/h	36	54	1131	180	142	407
Future Vol, veh/h	36	54	1131	180	142	407
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	-	-	-	200	-
Veh in Median Storage, #	1	-	0	-	-	0
Grade, %	0	-	0	-	-	0
Peak Hour Factor	80	85	80	80	85	94
Heavy Vehicles, %	2	2	2	2	2	2
Mvmt Flow	45	64	1414	225	167	433
Major/Minor	Minor1	Major1		Major2		
Conflicting Flow All	2078	820	0	0	1639	0
Stage 1	1527	-	-	-	-	-
Stage 2	551	-	-	-	-	-
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	46	*621	-	-	545	-
Stage 1	357	-	-	-	-	-
Stage 2	762	-	-	-	-	-
Platoon blocked, %		1	-	-	1	-
Mov Cap-1 Maneuver	~ 32	*621	-	-	545	-
Mov Cap-2 Maneuver	172	-	-	-	-	-
Stage 1	248	-	-	-	-	-
Stage 2	762	-	-	-	-	-
Approach	WB	NB		SB		
HCM Control Delay, s	23.8	0		4		
HCM LOS	C					
Minor Lane/Major Mvmt	NBT	NBRWBLn1	SBL	SBT		
Capacity (veh/h)	-	-	298	545	-	
HCM Lane V/C Ratio	-	-	0.364	0.307	-	
HCM Control Delay (s)	-	-	23.8	14.5	-	
HCM Lane LOS	-	-	C	B	-	
HCM 95th %tile Q(veh)	-	-	1.6	1.3	-	
Notes						
~: Volume exceeds capacity		\$: Delay exceeds 300s		+: Computation Not Defined		*: All major volume in platoon

Intersection						
Int Delay, s/veh	3.3					
Movement	WBL	WBR	NBT	NBR	SBL	SBT
Lane Configurations						
Traffic Vol, veh/h	124	203	714	40	44	1095
Future Vol, veh/h	124	203	714	40	44	1095
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	-	-	-	200	-
Veh in Median Storage, #	1	-	0	-	-	0
Grade, %	0	-	0	-	-	0
Peak Hour Factor	86	91	92	59	70	92
Heavy Vehicles, %	2	2	2	2	2	2
Mvmt Flow	144	223	776	68	63	1190
Major/Minor	Minor1	Major1		Major2		
Conflicting Flow All	1531	422	0	0	844	0
Stage 1	810	-	-	-	-	-
Stage 2	721	-	-	-	-	-
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	*360	*789	-	-	1142	-
Stage 1	*744	-	-	-	-	-
Stage 2	*597	-	-	-	-	-
Platoon blocked, %	1	1	-	-	1	-
Mov Cap-1 Maneuver	*340	*789	-	-	1142	-
Mov Cap-2 Maneuver	*426	-	-	-	-	-
Stage 1	*704	-	-	-	-	-
Stage 2	*597	-	-	-	-	-
Approach	WB	NB		SB		
HCM Control Delay, s	20.6	0		0.4		
HCM LOS	C					
Minor Lane/Major Mvmt	NBT	NBRWBLn1		SBL	SBT	
Capacity (veh/h)	-	-	591	1142	-	
HCM Lane V/C Ratio	-	-	0.621	0.055	-	
HCM Control Delay (s)	-	-	20.6	8.3	-	
HCM Lane LOS	-	-	C	A	-	
HCM 95th %tile Q(veh)	-	-	4.3	0.2	-	
Notes						
~: Volume exceeds capacity		\$: Delay exceeds 300s		+: Computation Not Defined		*: All major volume in platoon

HCM 6th TWSC
9: Yosemite Street & Mineral Avenue

2030 Total AM.syn
04/29/2019

Intersection						
Int Delay, s/veh	2.1					
Movement	WBL	WBR	NBT	NBR	SBL	SBT
Lane Configurations						
Traffic Vol, veh/h	36	54	1131	180	142	407
Future Vol, veh/h	36	54	1131	180	142	407
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	-	-	-	200	-
Veh in Median Storage, #	1	-	0	-	-	0
Grade, %	0	-	0	-	-	0
Peak Hour Factor	80	85	80	80	85	94
Heavy Vehicles, %	2	2	2	2	2	2
Mvmt Flow	45	64	1414	225	167	433
Major/Minor	Minor1	Major1		Major2		
Conflicting Flow All	2078	820	0	0	1639	0
Stage 1	1527	-	-	-	-	-
Stage 2	551	-	-	-	-	-
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	46	*621	-	-	545	-
Stage 1	357	-	-	-	-	-
Stage 2	762	-	-	-	-	-
Platoon blocked, %		1	-	-	1	-
Mov Cap-1 Maneuver	~ 32	*621	-	-	545	-
Mov Cap-2 Maneuver	172	-	-	-	-	-
Stage 1	248	-	-	-	-	-
Stage 2	762	-	-	-	-	-
Approach	WB	NB		SB		
HCM Control Delay, s	23.8	0		4		
HCM LOS	C					
Minor Lane/Major Mvmt	NBT	NBRWBLn1		SBL	SBT	
Capacity (veh/h)	-	-	298	545	-	
HCM Lane V/C Ratio	-	-	0.364	0.307	-	
HCM Control Delay (s)	-	-	23.8	14.5	-	
HCM Lane LOS	-	-	C	B	-	
HCM 95th %tile Q(veh)	-	-	1.6	1.3	-	
Notes						
~: Volume exceeds capacity		\$: Delay exceeds 300s		+: Computation Not Defined		*: All major volume in platoon

HCM 6th TWSC
9: Yosemite Street & Mineral Avenue

2030 Total PM.syn
04/24/2019

Intersection						
Int Delay, s/veh	3.3					
Movement	WBL	WBR	NBT	NBR	SBL	SBT
Lane Configurations						
Traffic Vol, veh/h	124	203	714	40	44	1095
Future Vol, veh/h	124	203	714	40	44	1095
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	-	-	-	200	-
Veh in Median Storage, #	1	-	0	-	-	0
Grade, %	0	-	0	-	-	0
Peak Hour Factor	86	91	92	59	70	92
Heavy Vehicles, %	2	2	2	2	2	2
Mvmt Flow	144	223	776	68	63	1190
Major/Minor	Minor1	Major1		Major2		
Conflicting Flow All	1531	422	0	0	844	0
Stage 1	810	-	-	-	-	-
Stage 2	721	-	-	-	-	-
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	*360	*789	-	-	1142	-
Stage 1	*744	-	-	-	-	-
Stage 2	*597	-	-	-	-	-
Platoon blocked, %	1	1	-	-	1	-
Mov Cap-1 Maneuver	*340	*789	-	-	1142	-
Mov Cap-2 Maneuver	*426	-	-	-	-	-
Stage 1	*704	-	-	-	-	-
Stage 2	*597	-	-	-	-	-
Approach	WB	NB		SB		
HCM Control Delay, s	20.6	0		0.4		
HCM LOS	C					
Minor Lane/Major Mvmt	NBT	NBRWBLn1		SBL	SBT	
Capacity (veh/h)	-	-	591	1142	-	
HCM Lane V/C Ratio	-	-	0.621	0.055	-	
HCM Control Delay (s)	-	-	20.6	8.3	-	
HCM Lane LOS	-	-	C	A	-	
HCM 95th %tile Q(veh)	-	-	4.3	0.2	-	
Notes						
~: Volume exceeds capacity		\$: Delay exceeds 300s		+: Computation Not Defined		*: All major volume in platoon

Intersection						
Int Delay, s/veh	2.4					
Movement	WBL	WBR	NBT	NBR	SBL	SBT
Lane Configurations						
Traffic Vol, veh/h	38	57	1189	189	149	428
Future Vol, veh/h	38	57	1189	189	149	428
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	-	-	-	200	-
Veh in Median Storage, #	1	-	0	-	-	0
Grade, %	0	-	0	-	-	0
Peak Hour Factor	80	85	80	80	85	94
Heavy Vehicles, %	2	2	2	2	2	2
Mvmt Flow	48	67	1486	236	175	455
Major/Minor	Minor1	Major1		Major2		
Conflicting Flow All	2182	861	0	0	1722	0
Stage 1	1604	-	-	-	-	-
Stage 2	578	-	-	-	-	-
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	~ 39	*587	-	-	509	-
Stage 1	341	-	-	-	-	-
Stage 2	735	-	-	-	-	-
Platoon blocked, %		1	-	-	1	-
Mov Cap-1 Maneuver	~ 26	*587	-	-	509	-
Mov Cap-2 Maneuver	156	-	-	-	-	-
Stage 1	224	-	-	-	-	-
Stage 2	735	-	-	-	-	-
Approach	WB	NB		SB		
HCM Control Delay, s	27.3	0		4.4		
HCM LOS	D					
Minor Lane/Major Mvmt	NBT	NBR	WBLn1	SBL	SBT	
Capacity (veh/h)	-	-	274	509	-	
HCM Lane V/C Ratio	-	-	0.418	0.344	-	
HCM Control Delay (s)	-	-	27.3	15.7	-	
HCM Lane LOS	-	-	D	C	-	
HCM 95th %tile Q(veh)	-	-	2	1.5	-	
Notes						
~: Volume exceeds capacity		\$: Delay exceeds 300s		+: Computation Not Defined		*: All major volume in platoon

Intersection						
Int Delay, s/veh	3.4					
Movement	WBL	WBR	NBT	NBR	SBL	SBT
Lane Configurations						
Traffic Vol, veh/h	130	213	751	42	47	1152
Future Vol, veh/h	130	213	751	42	47	1152
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	-	-	-	200	-
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	141	232	816	46	51	1252
Major/Minor	Minor1	Major1		Major2		
Conflicting Flow All	1567	431	0	0	862	0
Stage 1	839	-	-	-	-	-
Stage 2	728	-	-	-	-	-
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	*336	*763	-	-	*1141	-
Stage 1	*720	-	-	-	-	-
Stage 2	*572	-	-	-	-	-
Platoon blocked, %	1	1	-	-	1	-
Mov Cap-1 Maneuver	*320	*763	-	-	*1141	-
Mov Cap-2 Maneuver	*411	-	-	-	-	-
Stage 1	*687	-	-	-	-	-
Stage 2	*572	-	-	-	-	-
Approach	WB	NB		SB		
HCM Control Delay, s	22	0		0.3		
HCM LOS	C					
Minor Lane/Major Mvmt	NBT	NBRWBLn1		SBL	SBT	
Capacity (veh/h)	-	-	576	* 1141	-	
HCM Lane V/C Ratio	-	-	0.647	0.045	-	
HCM Control Delay (s)	-	-	22	8.3	-	
HCM Lane LOS	-	-	C	A	-	
HCM 95th %tile Q(veh)	-	-	4.7	0.1	-	
Notes						
~: Volume exceeds capacity		\$: Delay exceeds 300s		+: Computation Not Defined		*: All major volume in platoon

Intersection						
Int Delay, s/veh	2.4					
Movement	WBL	WBR	NBT	NBR	SBL	SBT
Lane Configurations						
Traffic Vol, veh/h	38	57	1189	189	149	428
Future Vol, veh/h	38	57	1189	189	149	428
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	-	-	-	200	-
Veh in Median Storage, #	1	-	0	-	-	0
Grade, %	0	-	0	-	-	0
Peak Hour Factor	80	85	80	80	85	94
Heavy Vehicles, %	2	2	2	2	2	2
Mvmt Flow	48	67	1486	236	175	455
Major/Minor	Minor1	Major1		Major2		
Conflicting Flow All	2182	861	0	0	1722	0
Stage 1	1604	-	-	-	-	-
Stage 2	578	-	-	-	-	-
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	~ 39	*587	-	-	509	-
Stage 1	341	-	-	-	-	-
Stage 2	735	-	-	-	-	-
Platoon blocked, %		1	-	-	1	-
Mov Cap-1 Maneuver	~ 26	*587	-	-	509	-
Mov Cap-2 Maneuver	156	-	-	-	-	-
Stage 1	224	-	-	-	-	-
Stage 2	735	-	-	-	-	-
Approach	WB	NB		SB		
HCM Control Delay, s	27.3	0		4.4		
HCM LOS	D					
Minor Lane/Major Mvmt	NBT	NBRWBLn1		SBL	SBT	
Capacity (veh/h)	-	-	274	509	-	
HCM Lane V/C Ratio	-	-	0.418	0.344	-	
HCM Control Delay (s)	-	-	27.3	15.7	-	
HCM Lane LOS	-	-	D	C	-	
HCM 95th %tile Q(veh)	-	-	2	1.5	-	
Notes						
~: Volume exceeds capacity		\$: Delay exceeds 300s		+: Computation Not Defined		*: All major volume in platoon

Intersection						
Int Delay, s/veh	3.8					
Movement	WBL	WBR	NBT	NBR	SBL	SBT
Lane Configurations						
Traffic Vol, veh/h	130	213	751	42	47	1152
Future Vol, veh/h	130	213	751	42	47	1152
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	-	-	-	200	-
Veh in Median Storage, #	1	-	0	-	-	0
Grade, %	0	-	0	-	-	0
Peak Hour Factor	86	91	92	59	70	92
Heavy Vehicles, %	2	2	2	2	2	2
Mvmt Flow	151	234	816	71	67	1252
Major/Minor	Minor1	Major1		Major2		
Conflicting Flow All	1612	444	0	0	887	0
Stage 1	852	-	-	-	-	-
Stage 2	760	-	-	-	-	-
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	*336	*763	-	-	1142	-
Stage 1	*720	-	-	-	-	-
Stage 2	*572	-	-	-	-	-
Platoon blocked, %	1	1	-	-	1	-
Mov Cap-1 Maneuver	*316	*763	-	-	1142	-
Mov Cap-2 Maneuver	*402	-	-	-	-	-
Stage 1	*677	-	-	-	-	-
Stage 2	*572	-	-	-	-	-
Approach	WB	NB		SB		
HCM Control Delay, s	24	0		0.4		
HCM LOS	C					
Minor Lane/Major Mvmt	NBT	NBRWBLn1		SBL	SBT	
Capacity (veh/h)	-	-	564	1142	-	
HCM Lane V/C Ratio	-	-	0.683	0.059	-	
HCM Control Delay (s)	-	-	24	8.3	-	
HCM Lane LOS	-	-	C	A	-	
HCM 95th %tile Q(veh)	-	-	5.2	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	EBR	NBL	NBT	SBT	SBR
Lane Configurations						
Traffic Vol, veh/h	72	81	29	1147	379	35
Future Vol, veh/h	72	81	29	1147	379	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	-	150	-	-	-
Veh in Median Storage, #	1	-	-	0	0	-
Grade, %	0	-	-	0	0	-
Peak Hour Factor	62	51	38	80	87	55
Heavy Vehicles, %	2	2	2	2	2	2
Mvmt Flow	116	159	76	1434	436	64
Major/Minor	Minor2	Major1		Major2		
Conflicting Flow All	1337	250	500	0	-	0
Stage 1	468	-	-	-	-	-
Stage 2	869	-	-	-	-	-
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	*145	*945	1262	-	-	-
Stage 1	*798	-	-	-	-	-
Stage 2	*586	-	-	-	-	-
Platoon blocked, %		1	1	-	-	-
Mov Cap-1 Maneuver	*136	*945	1262	-	-	-
Mov Cap-2 Maneuver	*336	-	-	-	-	-
Stage 1	*750	-	-	-	-	-
Stage 2	*586	-	-	-	-	-
Approach	EB	NB		SB		
HCM Control Delay, s	18.6	0.4		0		
HCM LOS	C					
Minor Lane/Major Mvmt	NBL	NBT	EBLn1	SBT	SBR	
Capacity (veh/h)	1262	-	535	-	-	
HCM Lane V/C Ratio	0.06	-	0.514	-	-	
HCM Control Delay (s)	8	-	18.6	-	-	
HCM Lane LOS	A	-	C	-	-	
HCM 95th %tile Q(veh)	0.2	-	2.9	-	-	
Notes						
~: Volume exceeds capacity		\$: Delay exceeds 300s		+: Computation Not Defined		*: All major volume in platoon

Intersection						
Int Delay, s/veh	0.6					
Movement	EBL	EBR	NBL	NBT	SBT	SBR
Lane Configurations						
Traffic Vol, veh/h	16	26	36	691	1107	44
Future Vol, veh/h	16	26	36	691	1107	44
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, #	1	-	-	0	0	-
Grade, %	0	-	-	0	0	-
Peak Hour Factor	67	65	82	94	93	79
Heavy Vehicles, %	2	2	2	2	2	2
Mvmt Flow	24	40	44	735	1190	56

Major/Minor	Minor2	Major1	Major2			
Conflicting Flow All	1674	623	1246	0	-	0
Stage 1	1218	-	-	-	-	-
Stage 2	456	-	-	-	-	-
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	*319	*633	*946	-	-	-
Stage 1	*597	-	-	-	-	-
Stage 2	*744	-	-	-	-	-
Platoon blocked, %	1	1	1	-	-	-
Mov Cap-1 Maneuver	*304	*633	*946	-	-	-
Mov Cap-2 Maneuver	*422	-	-	-	-	-
Stage 1	*569	-	-	-	-	-
Stage 2	*744	-	-	-	-	-

Approach	EB	NB	SB
HCM Control Delay, s	12.7	0.5	0
HCM LOS	B		

Minor Lane/Major Mvmt	NBL	NBT	EBLn1	SBT	SBR
Capacity (veh/h)	* 946	-	533	-	-
HCM Lane V/C Ratio	0.046	-	0.12	-	-
HCM Control Delay (s)	9	-	12.7	-	-
HCM Lane LOS	A	-	B	-	-
HCM 95th %tile Q(veh)	0.1	-	0.4	-	-

Notes			
~: Volume exceeds capacity	\$: Delay exceeds 300s	+: Computation Not Defined	*: All major volume in platoon

Intersection						
Int Delay, s/veh	2.8					
Movement	EBL	EBR	NBL	NBT	SBT	SBR
Lane Configurations						
Traffic Vol, veh/h	76	86	31	1212	400	37
Future Vol, veh/h	76	86	31	1212	400	37
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, #	1	-	-	0	0	-
Grade, %	0	-	-	0	0	-
Peak Hour Factor	62	51	38	80	87	55
Heavy Vehicles, %	2	2	2	2	2	2
Mvmt Flow	123	169	82	1515	460	67
Major/Minor	Minor2	Major1		Major2		
Conflicting Flow All	1416	264	527	0	-	0
Stage 1	494	-	-	-	-	-
Stage 2	922	-	-	-	-	-
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	*128	*919	1280	-	-	-
Stage 1	*822	-	-	-	-	-
Stage 2	*554	-	-	-	-	-
Platoon blocked, %		1	1	-	-	-
Mov Cap-1 Maneuver *~	120	*919	1280	-	-	-
Mov Cap-2 Maneuver	*318	-	-	-	-	-
Stage 1	*770	-	-	-	-	-
Stage 2	*554	-	-	-	-	-
Approach	EB	NB		SB		
HCM Control Delay, s	20.9	0.4		0		
HCM LOS	C					
Minor Lane/Major Mvmt	NBL	NBT	EBLn1	SBT	SBR	
Capacity (veh/h)	1280	-	512	-	-	
HCM Lane V/C Ratio	0.064	-	0.569	-	-	
HCM Control Delay (s)	8	-	20.9	-	-	
HCM Lane LOS	A	-	C	-	-	
HCM 95th %tile Q(veh)	0.2	-	3.5	-	-	
Notes						
~: Volume exceeds capacity		\$: Delay exceeds 300s		+: Computation Not Defined		*: All major volume in platoon

Intersection						
Int Delay, s/veh	0.6					
Movement	EBL	EBR	NBL	NBT	SBT	SBR
Lane Configurations						
Traffic Vol, veh/h	17	27	38	730	1169	46
Future Vol, veh/h	17	27	38	730	1169	46
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, #	1	-	-	0	0	-
Grade, %	0	-	-	0	0	-
Peak Hour Factor	67	65	82	94	93	79
Heavy Vehicles, %	2	2	2	2	2	2
Mvmt Flow	25	42	46	777	1257	58
Major/Minor	Minor2		Major1		Major2	
Conflicting Flow All	1767	658	1315	0	-	0
Stage 1	1286	-	-	-	-	-
Stage 2	481	-	-	-	-	-
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	*270	*580	*868	-	-	-
Stage 1	*548	-	-	-	-	-
Stage 2	*744	-	-	-	-	-
Platoon blocked, %	1	1	1	-	-	-
Mov Cap-1 Maneuver	*256	*580	*868	-	-	-
Mov Cap-2 Maneuver	*384	-	-	-	-	-
Stage 1	*519	-	-	-	-	-
Stage 2	*744	-	-	-	-	-
Approach	EB		NB		SB	
HCM Control Delay, s	13.6		0.5		0	
HCM LOS	B					
Minor Lane/Major Mvmt	NBL		NBT	EBLn1	SBT	SBR
Capacity (veh/h)	* 868		-	486	-	-
HCM Lane V/C Ratio	0.053		-	0.138	-	-
HCM Control Delay (s)	9.4		-	13.6	-	-
HCM Lane LOS	A		-	B	-	-
HCM 95th %tile Q(veh)	0.2		-	0.5	-	-
Notes						
~: Volume exceeds capacity		\$: Delay exceeds 300s		+: Computation Not Defined		*: All major volume in platoon

HCM 6th TWSC
10: Yosemite Street & Willow Way

2030 Total AM.syn

04/29/2019

Intersection						
Int Delay, s/veh	2.8					
Movement	EBL	EBR	NBL	NBT	SBT	SBR
Lane Configurations						
Traffic Vol, veh/h	76	86	31	1212	400	37
Future Vol, veh/h	76	86	31	1212	400	37
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, #	1	-	-	0	0	-
Grade, %	0	-	-	0	0	-
Peak Hour Factor	62	51	38	80	87	55
Heavy Vehicles, %	2	2	2	2	2	2
Mvmt Flow	123	169	82	1515	460	67
Major/Minor	Minor2	Major1		Major2		
Conflicting Flow All	1416	264	527	0	-	0
Stage 1	494	-	-	-	-	-
Stage 2	922	-	-	-	-	-
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	*128	*919	1280	-	-	-
Stage 1	*822	-	-	-	-	-
Stage 2	*554	-	-	-	-	-
Platoon blocked, %		1	1	-	-	-
Mov Cap-1 Maneuver *~	120	*919	1280	-	-	-
Mov Cap-2 Maneuver	*318	-	-	-	-	-
Stage 1	*770	-	-	-	-	-
Stage 2	*554	-	-	-	-	-
Approach	EB	NB		SB		
HCM Control Delay, s	20.9	0.4		0		
HCM LOS	C					
Minor Lane/Major Mvmt	NBL	NBT	EBLn1	SBT	SBR	
Capacity (veh/h)	1280	-	512	-	-	
HCM Lane V/C Ratio	0.064	-	0.569	-	-	
HCM Control Delay (s)	8	-	20.9	-	-	
HCM Lane LOS	A	-	C	-	-	
HCM 95th %tile Q(veh)	0.2	-	3.5	-	-	
Notes						
~: Volume exceeds capacity		\$: Delay exceeds 300s		+: Computation Not Defined		*: All major volume in platoon

HCM 6th TWSC
10: Yosemite Street & Willow Way

2030 Total PM.syn
04/24/2019

Intersection						
Int Delay, s/veh	0.6					
Movement	EBL	EBR	NBL	NBT	SBT	SBR
Lane Configurations						
Traffic Vol, veh/h	17	27	38	730	1169	46
Future Vol, veh/h	17	27	38	730	1169	46
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, #	1	-	-	0	0	-
Grade, %	0	-	-	0	0	-
Peak Hour Factor	67	65	82	94	93	79
Heavy Vehicles, %	2	2	2	2	2	2
Mvmt Flow	25	42	46	777	1257	58
Major/Minor	Minor2	Major1		Major2		
Conflicting Flow All	1767	658	1315	0	-	0
Stage 1	1286	-	-	-	-	-
Stage 2	481	-	-	-	-	-
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	*270	*580	*868	-	-	-
Stage 1	*548	-	-	-	-	-
Stage 2	*744	-	-	-	-	-
Platoon blocked, %	1	1	1	-	-	-
Mov Cap-1 Maneuver	*256	*580	*868	-	-	-
Mov Cap-2 Maneuver	*384	-	-	-	-	-
Stage 1	*519	-	-	-	-	-
Stage 2	*744	-	-	-	-	-
Approach	EB	NB		SB		
HCM Control Delay, s	13.6	0.5		0		
HCM LOS	B					
Minor Lane/Major Mvmt	NBL	NBT	EBLn1	SBT	SBR	
Capacity (veh/h)	* 868	-	486	-	-	
HCM Lane V/C Ratio	0.053	-	0.138	-	-	
HCM Control Delay (s)	9.4	-	13.6	-	-	
HCM Lane LOS	A	-	B	-	-	
HCM 95th %tile Q(veh)	0.2	-	0.5	-	-	
Notes						
~: Volume exceeds capacity		\$: Delay exceeds 300s		+: Computation Not Defined		*: All major volume in platoon

Intersection						
Int Delay, s/veh	2.6					
Movement	EBL	EBR	NBL	NBT	SBT	SBR
Lane Configurations						
Traffic Vol, veh/h	80	90	32	1274	421	39
Future Vol, veh/h	80	90	32	1274	421	39
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, #	1	-	-	0	0	-
Grade, %	0	-	-	0	0	-
Peak Hour Factor	65	60	50	80	87	60
Heavy Vehicles, %	2	2	2	2	2	2
Mvmt Flow	123	150	64	1593	484	65
Major/Minor	Minor2	Major1		Major2		
Conflicting Flow All	1442	275	549	0	-	0
Stage 1	517	-	-	-	-	-
Stage 2	925	-	-	-	-	-
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	*~ 123	*919	1252	-	-	-
Stage 1	*798	-	-	-	-	-
Stage 2	*521	-	-	-	-	-
Platoon blocked, %		1	1	-	-	-
Mov Cap-1 Maneuver	*~ 117	*919	1252	-	-	-
Mov Cap-2 Maneuver	*310	-	-	-	-	-
Stage 1	*757	-	-	-	-	-
Stage 2	*521	-	-	-	-	-
Approach	EB	NB		SB		
HCM Control Delay, s	21.4	0.3		0		
HCM LOS	C					
Minor Lane/Major Mvmt	NBL	NBT	EBLn1	SBT	SBR	
Capacity (veh/h)	1252	-	487	-	-	
HCM Lane V/C Ratio	0.051	-	0.561	-	-	
HCM Control Delay (s)	8	-	21.4	-	-	
HCM Lane LOS	A	-	C	-	-	
HCM 95th %tile Q(veh)	0.2	-	3.4	-	-	
Notes						
~: Volume exceeds capacity		\$: Delay exceeds 300s		+: Computation Not Defined		*: All major volume in platoon

Intersection						
Int Delay, s/veh	0.5					
Movement	EBL	EBR	NBL	NBT	SBT	SBR
Lane Configurations						
Traffic Vol, veh/h	18	29	40	767	1229	49
Future Vol, veh/h	18	29	40	767	1229	49
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, #	1	-	-	0	0	-
Grade, %	0	-	-	0	0	-
Peak Hour Factor	92	92	92	94	93	92
Heavy Vehicles, %	2	2	2	2	2	2
Mvmt Flow	20	32	43	816	1322	53
Major/Minor	Minor2	Major1		Major2		
Conflicting Flow All	1843	688	1375	0	-	0
Stage 1	1349	-	-	-	-	-
Stage 2	494	-	-	-	-	-
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	*221	*554	*829	-	-	-
Stage 1	*523	-	-	-	-	-
Stage 2	*720	-	-	-	-	-
Platoon blocked, %	1	1	1	-	-	-
Mov Cap-1 Maneuver	*209	*554	*829	-	-	-
Mov Cap-2 Maneuver	*353	-	-	-	-	-
Stage 1	*496	-	-	-	-	-
Stage 2	*720	-	-	-	-	-
Approach	EB	NB		SB		
HCM Control Delay, s	13.9	0.5		0		
HCM LOS	B					
Minor Lane/Major Mvmt	NBL	NBT	EBLn1	SBT	SBR	
Capacity (veh/h)	* 829	-	455	-	-	
HCM Lane V/C Ratio	0.052	-	0.112	-	-	
HCM Control Delay (s)	9.6	-	13.9	-	-	
HCM Lane LOS	A	-	B	-	-	
HCM 95th %tile Q(veh)	0.2	-	0.4	-	-	
Notes						
~: Volume exceeds capacity		\$: Delay exceeds 300s		+: Computation Not Defined		*: All major volume in platoon

Intersection						
Int Delay, s/veh	2.6					
Movement	EBL	EBR	NBL	NBT	SBT	SBR
Lane Configurations						
Traffic Vol, veh/h	80	90	32	1274	421	39
Future Vol, veh/h	80	90	32	1274	421	39
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, #	1	-	-	0	0	-
Grade, %	0	-	-	0	0	-
Peak Hour Factor	65	60	50	80	87	60
Heavy Vehicles, %	2	2	2	2	2	2
Mvmt Flow	123	150	64	1593	484	65
Major/Minor	Minor2	Major1		Major2		
Conflicting Flow All	1442	275	549	0	-	0
Stage 1	517	-	-	-	-	-
Stage 2	925	-	-	-	-	-
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 *~	123	*919	1252	-	-	-
Stage 1	*798	-	-	-	-	-
Stage 2	*521	-	-	-	-	-
Platoon blocked, %		1	1	-	-	-
Mov Cap-1 Maneuver *~	117	*919	1252	-	-	-
Mov Cap-2 Maneuver	*310	-	-	-	-	-
Stage 1	*757	-	-	-	-	-
Stage 2	*521	-	-	-	-	-
Approach	EB	NB		SB		
HCM Control Delay, s	21.4	0.3		0		
HCM LOS	C					
Minor Lane/Major Mvmt	NBL	NBT	EBLn1	SBT	SBR	
Capacity (veh/h)	1252	-	487	-	-	
HCM Lane V/C Ratio	0.051	-	0.561	-	-	
HCM Control Delay (s)	8	-	21.4	-	-	
HCM Lane LOS	A	-	C	-	-	
HCM 95th %tile Q(veh)	0.2	-	3.4	-	-	
Notes						
~: Volume exceeds capacity		\$: Delay exceeds 300s		+: Computation Not Defined		*: All major volume in platoon

Intersection						
Int Delay, s/veh	0.6					
Movement	EBL	EBR	NBL	NBT	SBT	SBR
Lane Configurations						
Traffic Vol, veh/h	18	29	40	767	1229	49
Future Vol, veh/h	18	29	40	767	1229	49
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, #	1	-	-	0	0	-
Grade, %	0	-	-	0	0	-
Peak Hour Factor	67	65	82	94	93	79
Heavy Vehicles, %	2	2	2	2	2	2
Mvmt Flow	27	45	49	816	1322	62
Major/Minor	Minor2	Major1		Major2		
Conflicting Flow All	1859	692	1384	0	-	0
Stage 1	1353	-	-	-	-	-
Stage 2	506	-	-	-	-	-
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	*221	*554	*829	-	-	-
Stage 1	*523	-	-	-	-	-
Stage 2	*720	-	-	-	-	-
Platoon blocked, %	1	1	1	-	-	-
Mov Cap-1 Maneuver	*208	*554	*829	-	-	-
Mov Cap-2 Maneuver	*351	-	-	-	-	-
Stage 1	*492	-	-	-	-	-
Stage 2	*720	-	-	-	-	-
Approach	EB	NB		SB		
HCM Control Delay, s	14.4	0.5		0		
HCM LOS	B					
Minor Lane/Major Mvmt	NBL	NBT	EBLn1	SBT	SBR	
Capacity (veh/h)	* 829	-	455	-	-	
HCM Lane V/C Ratio	0.059	-	0.157	-	-	
HCM Control Delay (s)	9.6	-	14.4	-	-	
HCM Lane LOS	A	-	B	-	-	
HCM 95th %tile Q(veh)	0.2	-	0.6	-	-	
Notes						
~: Volume exceeds capacity		\$: Delay exceeds 300s		+: Computation Not Defined		*: All major volume in platoon

HCM 6th Signalized Intersection Summary
11: Yosemite Street & Nichols Avenue

2019 Existing AM.syn

04/24/2019

						
Movement	WBL	WBR	NBT	NBR	SBL	SBT
Lane Configurations						
Traffic Volume (veh/h)	9	21	1165	101	135	322
Future Volume (veh/h)	9	21	1165	101	135	322
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	28	28	1421	120	165	418
Peak Hour Factor	0.32	0.75	0.82	0.84	0.82	0.77
Percent Heavy Veh, %	2	2	2	2	2	2
Cap, veh/h	75	66	2500	210	368	3050
Arrive On Green	0.04	0.04	0.75	0.75	0.05	0.86
Sat Flow, veh/h	1781	1585	3412	279	1781	3647
Grp Volume(v), veh/h	28	28	758	783	165	418
Grp Sat Flow(s),veh/h/ln	1781	1585	1777	1820	1781	1777
Q Serve(g_s), s	1.4	1.6	16.5	16.8	1.6	1.7
Cycle Q Clear(g_c), s	1.4	1.6	16.5	16.8	1.6	1.7
Prop In Lane	1.00	1.00		0.15	1.00	
Lane Grp Cap(c), veh/h	75	66	1339	1371	368	3050
V/C Ratio(X)	0.38	0.42	0.57	0.57	0.45	0.14
Avail Cap(c_a), veh/h	358	319	1339	1371	479	3050
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	42.0	42.1	4.8	4.8	5.3	1.0
Incr Delay (d2), s/veh	3.1	4.2	1.7	1.7	0.9	0.1
Initial Q Delay(d3),s/veh	0.0	0.0	0.0	0.0	0.0	0.0
%ile BackOfQ(50%),veh/ln	0.7	0.7	5.0	5.2	0.8	0.2
Unsig. Movement Delay, s/veh						
LnGrp Delay(d),s/veh	45.1	46.3	6.5	6.5	6.1	1.1
LnGrp LOS	D	D	A	A	A	A
Approach Vol, veh/h	56		1541			583
Approach Delay, s/veh	45.7		6.5			2.5
Approach LOS	D		A			A
Timer - Assigned Phs	1	2			6	8
Phs Duration (G+Y+Rc), s	9.4	72.3			81.7	8.3
Change Period (Y+Rc), s	4.5	4.5			4.5	4.5
Max Green Setting (Gmax), s	10.5	47.9			62.9	18.1
Max Q Clear Time (g_c+l1), s	3.6	18.8			3.7	3.6
Green Ext Time (p_c), s	0.2	14.2			3.1	0.1
Intersection Summary						
HCM 6th Ctrl Delay			6.5			
HCM 6th LOS			A			

HCM 6th Signalized Intersection Summary

11: Yosemite Street & Nichols Avenue

2019 Existing PM.syn
04/24/2019



Movement	WBL	WBR	NBT	NBR	SBL	SBT
Lane Configurations						
Traffic Volume (veh/h)	93	200	522	25	45	1078
Future Volume (veh/h)	93	200	522	25	45	1078
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	116	220	567	32	56	1159
Peak Hour Factor	0.80	0.91	0.92	0.78	0.80	0.93
Percent Heavy Veh, %	2	2	2	2	2	2
Cap, veh/h	285	253	2368	133	640	2719
Arrive On Green	0.16	0.16	0.69	0.69	0.07	1.00
Sat Flow, veh/h	1781	1585	3513	193	1781	3647
Grp Volume(v), veh/h	116	220	294	305	56	1159
Grp Sat Flow(s),veh/h/ln	1781	1585	1777	1836	1781	1777
Q Serve(g_s), s	7.0	16.3	7.3	7.3	1.0	0.0
Cycle Q Clear(g_c), s	7.0	16.3	7.3	7.3	1.0	0.0
Prop In Lane	1.00	1.00		0.10	1.00	
Lane Grp Cap(c), veh/h	285	253	1230	1271	640	2719
V/C Ratio(X)	0.41	0.87	0.24	0.24	0.09	0.43
Avail Cap(c_a), veh/h	482	429	1230	1271	704	2719
HCM Platoon Ratio	1.00	1.00	1.00	1.00	2.00	2.00
Upstream Filter(l)	0.98	0.98	1.00	1.00	1.00	1.00
Uniform Delay (d), s/veh	45.3	49.2	6.8	6.8	4.3	0.0
Incr Delay (d2), s/veh	0.9	9.4	0.5	0.4	0.1	0.5
Initial Q Delay(d3),s/veh	0.0	0.0	0.0	0.0	0.0	0.0
%ile BackOfQ(50%),veh/ln	3.2	7.1	2.7	2.8	0.3	0.2
Unsig. Movement Delay, s/veh						
LnGrp Delay(d),s/veh	46.2	58.6	7.3	7.2	4.3	0.5
LnGrp LOS	D	E	A	A	A	A
Approach Vol, veh/h	336		599			1215
Approach Delay, s/veh	54.3		7.3			0.7
Approach LOS	D		A			A
Timer - Assigned Phs	1	2			6	8
Phs Duration (G+Y+Rc), s	8.7	87.6			96.3	23.7
Change Period (Y+Rc), s	4.5	4.5			4.5	4.5
Max Green Setting (Gmax), s	8.5	65.5			78.5	32.5
Max Q Clear Time (g_c+l1), s	3.0	9.3			2.0	18.3
Green Ext Time (p_c), s	0.0	4.2			12.2	0.9
Intersection Summary						
HCM 6th Ctrl Delay			10.9			
HCM 6th LOS			B			

HCM 6th Signalized Intersection Summary

11: Yosemite Street & Nichols Avenue

2030 Background AM.syn

04/29/2019



Movement	WBL	WBR	NBT	NBR	SBL	SBT
Lane Configurations						
Traffic Volume (veh/h)	10	22	1231	107	143	340
Future Volume (veh/h)	10	22	1231	107	143	340
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	20	29	1501	126	168	425
Peak Hour Factor	0.50	0.75	0.82	0.85	0.85	0.80
Percent Heavy Veh, %	2	2	2	2	2	2
Cap, veh/h	70	62	2510	209	348	3059
Arrive On Green	0.04	0.04	0.76	0.76	0.05	0.86
Sat Flow, veh/h	1781	1585	3414	277	1781	3647
Grp Volume(v), veh/h	20	29	799	828	168	425
Grp Sat Flow(s),veh/h/ln	1781	1585	1777	1821	1781	1777
Q Serve(g_s), s	1.0	1.6	17.9	18.3	1.6	1.7
Cycle Q Clear(g_c), s	1.0	1.6	17.9	18.3	1.6	1.7
Prop In Lane	1.00	1.00		0.15	1.00	
Lane Grp Cap(c), veh/h	70	62	1343	1376	348	3059
V/C Ratio(X)	0.29	0.47	0.59	0.60	0.48	0.14
Avail Cap(c_a), veh/h	358	319	1343	1376	459	3059
HCM Platoon Ratio	1.00	1.00	1.00	1.00	1.00	1.00
Upstream Filter(l)	1.00	1.00	1.00	1.00	1.00	1.00
Uniform Delay (d), s/veh	42.0	42.3	4.9	4.9	6.4	1.0
Incr Delay (d2), s/veh	2.2	5.3	1.9	2.0	1.0	0.1
Initial Q Delay(d3),s/veh	0.0	0.0	0.0	0.0	0.0	0.0
%ile BackOfQ(50%),veh/ln	0.5	0.7	5.4	5.6	1.1	0.2
Unsig. Movement Delay, s/veh						
LnGrp Delay(d),s/veh	44.2	47.7	6.8	6.9	7.4	1.1
LnGrp LOS	D	D	A	A	A	A
Approach Vol, veh/h	49		1627			593
Approach Delay, s/veh	46.3		6.8			2.9
Approach LOS	D		A			A
Timer - Assigned Phs	1	2			6	8
Phs Duration (G+Y+Rc), s	9.4	72.5			82.0	8.0
Change Period (Y+Rc), s	4.5	4.5			4.5	4.5
Max Green Setting (Gmax), s	10.5	47.9			62.9	18.1
Max Q Clear Time (g_c+l1), s	3.6	20.3			3.7	3.6
Green Ext Time (p_c), s	0.2	15.0			3.2	0.1
Intersection Summary						
HCM 6th Ctrl Delay			6.7			
HCM 6th LOS			A			

HCM 6th Signalized Intersection Summary

11: Yosemite Street & Nichols Avenue

2030 Background PM.syn

04/24/2019



Movement	WBL	WBR	NBT	NBR	SBL	SBT
Lane Configurations						
Traffic Volume (veh/h)	98	211	551	26	48	1139
Future Volume (veh/h)	98	211	551	26	48	1139
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	122	232	599	33	60	1225
Peak Hour Factor	0.80	0.91	0.92	0.78	0.80	0.93
Percent Heavy Veh, %	2	2	2	2	2	2
Cap, veh/h	298	265	2343	129	615	2692
Arrive On Green	0.17	0.17	0.68	0.68	0.07	1.00
Sat Flow, veh/h	1781	1585	3518	188	1781	3647
Grp Volume(v), veh/h	122	232	310	322	60	1225
Grp Sat Flow(s),veh/h/ln	1781	1585	1777	1836	1781	1777
Q Serve(g_s), s	7.3	17.1	8.0	8.0	1.1	0.0
Cycle Q Clear(g_c), s	7.3	17.1	8.0	8.0	1.1	0.0
Prop In Lane	1.00	1.00		0.10	1.00	
Lane Grp Cap(c), veh/h	298	265	1215	1256	615	2692
V/C Ratio(X)	0.41	0.87	0.26	0.26	0.10	0.46
Avail Cap(c_a), veh/h	482	429	1215	1256	677	2692
HCM Platoon Ratio	1.00	1.00	1.00	1.00	2.00	2.00
Upstream Filter(l)	0.97	0.97	1.00	1.00	1.00	1.00
Uniform Delay (d), s/veh	44.7	48.7	7.3	7.3	4.6	0.0
Incr Delay (d2), s/veh	0.9	10.7	0.5	0.5	0.1	0.6
Initial Q Delay(d3),s/veh	0.0	0.0	0.0	0.0	0.0	0.0
%ile BackOfQ(50%),veh/ln	3.3	7.5	3.1	3.2	0.4	0.2
Unsig. Movement Delay, s/veh						
LnGrp Delay(d),s/veh	45.5	59.5	7.8	7.8	4.6	0.6
LnGrp LOS	D	E	A	A	A	A
Approach Vol, veh/h	354		632			1285
Approach Delay, s/veh	54.7		7.8			0.7
Approach LOS	D		A			A
Timer - Assigned Phs	1	2			6	8
Phs Duration (G+Y+Rc), s	8.8	86.6			95.4	24.6
Change Period (Y+Rc), s	4.5	4.5			4.5	4.5
Max Green Setting (Gmax), s	8.5	65.5			78.5	32.5
Max Q Clear Time (g_c+l1), s	3.1	10.0			2.0	19.1
Green Ext Time (p_c), s	0.0	4.5			13.5	1.0
Intersection Summary						
HCM 6th Ctrl Delay			11.1			
HCM 6th LOS			B			

HCM 6th Signalized Intersection Summary

11: Yosemite Street & Nichols Avenue

2030 Total AM.syn

04/24/2019

						
Movement	WBL	WBR	NBT	NBR	SBL	SBT
Lane Configurations						
Traffic Volume (veh/h)	50	22	1231	252	143	340
Future Volume (veh/h)	50	22	1231	252	143	340
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	100	29	1501	296	168	425
Peak Hour Factor	0.50	0.75	0.82	0.85	0.85	0.80
Percent Heavy Veh, %	2	2	2	2	2	2
Cap, veh/h	136	121	2136	411	287	2926
Arrive On Green	0.08	0.08	0.72	0.72	0.05	0.82
Sat Flow, veh/h	1781	1585	3065	572	1781	3647
Grp Volume(v), veh/h	100	29	883	914	168	425
Grp Sat Flow(s),veh/h/ln	1781	1585	1777	1767	1781	1777
Q Serve(g_s), s	4.9	1.5	25.0	27.1	1.9	2.2
Cycle Q Clear(g_c), s	4.9	1.5	25.0	27.1	1.9	2.2
Prop In Lane	1.00	1.00		0.32	1.00	
Lane Grp Cap(c), veh/h	136	121	1277	1270	287	2926
V/C Ratio(X)	0.73	0.24	0.69	0.72	0.59	0.15
Avail Cap(c_a), veh/h	358	319	1277	1270	397	2926
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	40.7	39.1	7.1	7.4	14.5	1.6
Incr Delay (d2), s/veh	7.4	1.0	3.1	3.5	1.9	0.1
Initial Q Delay(d3),s/veh	0.0	0.0	0.0	0.0	0.0	0.0
%ile BackOfQ(50%),veh/ln	2.4	0.6	8.4	9.1	2.6	0.4
Unsig. Movement Delay, s/veh						
LnGrp Delay(d),s/veh	48.1	40.1	10.2	10.9	16.4	1.7
LnGrp LOS	D	D	B	B	B	A
Approach Vol, veh/h	129		1797			593
Approach Delay, s/veh	46.3		10.5			5.9
Approach LOS	D		B			A
Timer - Assigned Phs	1	2			6	8
Phs Duration (G+Y+Rc), s	9.4	69.2			78.6	11.4
Change Period (Y+Rc), s	4.5	4.5			4.5	4.5
Max Green Setting (Gmax), s	10.5	47.9			62.9	18.1
Max Q Clear Time (g_c+l1), s	3.9	29.1			4.2	6.9
Green Ext Time (p_c), s	0.2	13.2			3.2	0.2
Intersection Summary						
HCM 6th Ctrl Delay			11.3			
HCM 6th LOS			B			

HCM 6th Signalized Intersection Summary

11: Yosemite Street & Nichols Avenue

2030 Total PM.syn
04/24/2019



Movement	WBL	WBR	NBT	NBR	SBL	SBT
Lane Configurations						
Traffic Volume (veh/h)	247	211	551	77	48	1139
Future Volume (veh/h)	247	211	551	77	48	1139
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	309	232	599	99	60	1225
Peak Hour Factor	0.80	0.91	0.92	0.78	0.80	0.93
Percent Heavy Veh, %	2	2	2	2	2	2
Cap, veh/h	354	315	1992	329	548	2580
Arrive On Green	0.20	0.20	0.65	0.65	0.07	1.00
Sat Flow, veh/h	1781	1585	3147	503	1781	3647
Grp Volume(v), veh/h	309	232	348	350	60	1225
Grp Sat Flow(s),veh/h/ln	1781	1585	1777	1780	1781	1777
Q Serve(g_s), s	20.2	16.5	10.2	10.2	1.2	0.0
Cycle Q Clear(g_c), s	20.2	16.5	10.2	10.2	1.2	0.0
Prop In Lane	1.00	1.00		0.28	1.00	
Lane Grp Cap(c), veh/h	354	315	1160	1161	548	2580
V/C Ratio(X)	0.87	0.74	0.30	0.30	0.11	0.47
Avail Cap(c_a), veh/h	616	548	1160	1161	596	2580
HCM Platoon Ratio	1.00	1.00	1.00	1.00	2.00	2.00
Upstream Filter(l)	0.93	0.93	1.00	1.00	1.00	1.00
Uniform Delay (d), s/veh	46.6	45.1	9.0	9.0	5.8	0.0
Incr Delay (d2), s/veh	6.3	3.1	0.7	0.7	0.1	0.6
Initial Q Delay(d3),s/veh	0.0	0.0	0.0	0.0	0.0	0.0
%ile BackOfQ(50%),veh/ln	9.5	6.7	4.0	4.0	0.4	0.2
Unsig. Movement Delay, s/veh						
LnGrp Delay(d),s/veh	52.9	48.2	9.7	9.7	5.9	0.6
LnGrp LOS	D	D	A	A	A	A
Approach Vol, veh/h	541		698			1285
Approach Delay, s/veh	50.9		9.7			0.9
Approach LOS	D		A			A
Timer - Assigned Phs	1	2			6	8
Phs Duration (G+Y+Rc), s	8.8	82.8			91.6	28.4
Change Period (Y+Rc), s	4.5	4.5			4.5	4.5
Max Green Setting (Gmax), s	7.5	57.5			69.5	41.5
Max Q Clear Time (g_c+l1), s	3.2	12.2			2.0	22.2
Green Ext Time (p_c), s	0.0	5.1			13.4	1.7
Intersection Summary						
HCM 6th Ctrl Delay			14.0			
HCM 6th LOS			B			

HCM 6th Signalized Intersection Summary

11: Yosemite Street & Nichols Avenue

2040 Background AM.syn

04/29/2019



Movement	WBL	WBR	NBT	NBR	SBL	SBT
Lane Configurations						
Traffic Volume (veh/h)	10	23	1294	112	150	358
Future Volume (veh/h)	10	23	1294	112	150	358
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	20	31	1578	132	176	448
Peak Hour Factor	0.50	0.75	0.82	0.85	0.85	0.80
Percent Heavy Veh, %	2	2	2	2	2	2
Cap, veh/h	71	63	2508	208	329	3056
Arrive On Green	0.04	0.04	0.76	0.76	0.05	0.86
Sat Flow, veh/h	1781	1585	3415	276	1781	3647
Grp Volume(v), veh/h	20	31	838	872	176	448
Grp Sat Flow(s),veh/h/ln	1781	1585	1777	1821	1781	1777
Q Serve(g_s), s	1.0	1.7	19.7	20.3	1.7	1.8
Cycle Q Clear(g_c), s	1.0	1.7	19.7	20.3	1.7	1.8
Prop In Lane	1.00	1.00		0.15	1.00	
Lane Grp Cap(c), veh/h	71	63	1342	1375	329	3056
V/C Ratio(X)	0.28	0.49	0.62	0.63	0.53	0.15
Avail Cap(c_a), veh/h	366	326	1342	1375	439	3056
HCM Platoon Ratio	1.00	1.00	1.00	1.00	1.00	1.00
Upstream Filter(l)	1.00	1.00	1.00	1.00	1.00	1.00
Uniform Delay (d), s/veh	41.9	42.3	5.1	5.2	8.6	1.0
Incr Delay (d2), s/veh	2.1	5.7	2.2	2.2	1.3	0.1
Initial Q Delay(d3),s/veh	0.0	0.0	0.0	0.0	0.0	0.0
%ile BackOfQ(50%),veh/ln	0.5	0.8	6.0	6.3	1.6	0.2
Unsig. Movement Delay, s/veh						
LnGrp Delay(d),s/veh	44.1	48.0	7.3	7.4	9.9	1.1
LnGrp LOS	D	D	A	A	A	A
Approach Vol, veh/h	51		1710			624
Approach Delay, s/veh	46.5		7.4			3.6
Approach LOS	D		A			A
Timer - Assigned Phs	1	2			6	8
Phs Duration (G+Y+Rc), s	9.4	72.5			81.9	8.1
Change Period (Y+Rc), s	4.5	4.5			4.5	4.5
Max Green Setting (Gmax), s	10.5	47.5			62.5	18.5
Max Q Clear Time (g_c+l1), s	3.7	22.3			3.8	3.7
Green Ext Time (p_c), s	0.2	15.2			3.4	0.1
Intersection Summary						
HCM 6th Ctrl Delay			7.2			
HCM 6th LOS			A			

HCM 6th Signalized Intersection Summary

11: Yosemite Street & Nichols Avenue

2040 Background PM.syn

04/29/2019

Movement	WBL	WBR	NBT	NBR	SBL	SBT
Lane Configurations						
Traffic Volume (veh/h)	103	222	580	28	50	1197
Future Volume (veh/h)	103	222	580	28	50	1197
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	112	241	630	30	54	1287
Peak Hour Factor	0.92	0.92	0.92	0.92	0.92	0.93
Percent Heavy Veh, %	2	2	2	2	2	2
Cap, veh/h	306	272	2352	112	594	2677
Arrive On Green	0.17	0.17	0.68	0.68	0.07	1.00
Sat Flow, veh/h	1781	1585	3547	164	1781	3647
Grp Volume(v), veh/h	112	241	324	336	54	1287
Grp Sat Flow(s),veh/h/ln	1781	1585	1777	1841	1781	1777
Q Serve(g_s), s	6.7	17.8	8.5	8.5	1.0	0.0
Cycle Q Clear(g_c), s	6.7	17.8	8.5	8.5	1.0	0.0
Prop In Lane	1.00	1.00		0.09	1.00	
Lane Grp Cap(c), veh/h	306	272	1210	1254	594	2677
V/C Ratio(X)	0.37	0.89	0.27	0.27	0.09	0.48
Avail Cap(c_a), veh/h	423	376	1210	1254	658	2677
HCM Platoon Ratio	1.00	1.00	1.00	1.00	2.00	2.00
Upstream Filter(l)	0.98	0.98	1.00	1.00	1.00	1.00
Uniform Delay (d), s/veh	43.9	48.5	7.5	7.5	4.7	0.0
Incr Delay (d2), s/veh	0.7	16.6	0.5	0.5	0.1	0.6
Initial Q Delay(d3),s/veh	0.0	0.0	0.0	0.0	0.0	0.0
%ile BackOfQ(50%),veh/ln	3.0	8.3	3.3	3.4	0.3	0.2
Unsig. Movement Delay, s/veh						
LnGrp Delay(d),s/veh	44.6	65.1	8.0	8.0	4.8	0.6
LnGrp LOS	D	E	A	A	A	A
Approach Vol, veh/h	353		660			1341
Approach Delay, s/veh	58.6		8.0			0.8
Approach LOS	E		A			A
Timer - Assigned Phs	1	2			6	8
Phs Duration (G+Y+Rc), s	8.7	86.2			94.9	25.1
Change Period (Y+Rc), s	4.5	4.5			4.5	4.5
Max Green Setting (Gmax), s	8.5	69.5			82.5	28.5
Max Q Clear Time (g_c+l1), s	3.0	10.5			2.0	19.8
Green Ext Time (p_c), s	0.0	4.7			14.8	0.8
Intersection Summary						
HCM 6th Ctrl Delay			11.5			
HCM 6th LOS			B			

HCM 6th Signalized Intersection Summary

11: Yosemite Street & Nichols Avenue

2040 Total AM.syn

04/25/2019

Movement	WBL	WBR	NBT	NBR	SBL	SBT
Lane Configurations						
Traffic Volume (veh/h)	50	23	1294	257	150	358
Future Volume (veh/h)	50	23	1294	257	150	358
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	100	31	1578	302	176	448
Peak Hour Factor	0.50	0.75	0.82	0.85	0.85	0.80
Percent Heavy Veh, %	2	2	2	2	2	2
Cap, veh/h	137	122	2148	400	271	2926
Arrive On Green	0.08	0.08	0.72	0.72	0.05	0.82
Sat Flow, veh/h	1781	1585	3084	557	1781	3647
Grp Volume(v), veh/h	100	31	919	961	176	448
Grp Sat Flow(s),veh/h/ln	1781	1585	1777	1770	1781	1777
Q Serve(g_s), s	4.9	1.7	27.2	30.1	2.0	2.3
Cycle Q Clear(g_c), s	4.9	1.7	27.2	30.1	2.0	2.3
Prop In Lane	1.00	1.00		0.31	1.00	
Lane Grp Cap(c), veh/h	137	122	1277	1272	271	2926
V/C Ratio(X)	0.73	0.25	0.72	0.76	0.65	0.15
Avail Cap(c_a), veh/h	358	319	1277	1272	381	2926
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	40.6	39.1	7.4	7.8	17.6	1.6
Incr Delay (d2), s/veh	7.3	1.1	3.5	4.2	2.6	0.1
Initial Q Delay(d3),s/veh	0.0	0.0	0.0	0.0	0.0	0.0
%ile BackOfQ(50%),veh/ln	2.4	0.7	9.2	10.2	2.9	0.4
Unsig. Movement Delay, s/veh						
LnGrp Delay(d),s/veh	48.0	40.2	10.9	12.0	20.3	1.7
LnGrp LOS	D	D	B	B	C	A
Approach Vol, veh/h	131		1880			624
Approach Delay, s/veh	46.1		11.5			6.9
Approach LOS	D		B			A
Timer - Assigned Phs	1	2			6	8
Phs Duration (G+Y+Rc), s	9.4	69.2			78.6	11.4
Change Period (Y+Rc), s	4.5	4.5			4.5	4.5
Max Green Setting (Gmax), s	10.5	47.9			62.9	18.1
Max Q Clear Time (g_c+l1), s	4.0	32.1			4.3	6.9
Green Ext Time (p_c), s	0.2	12.1			3.4	0.2
Intersection Summary						
HCM 6th Ctrl Delay			12.1			
HCM 6th LOS			B			

HCM 6th Signalized Intersection Summary

11: Yosemite Street & Nichols Avenue

2040 Total PM.syn

04/25/2019

						
Movement	WBL	WBR	NBT	NBR	SBL	SBT
Lane Configurations						
Traffic Volume (veh/h)	252	222	580	79	50	1197
Future Volume (veh/h)	252	222	580	79	50	1197
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	315	244	630	101	62	1287
Peak Hour Factor	0.80	0.91	0.92	0.78	0.80	0.93
Percent Heavy Veh, %	2	2	2	2	2	2
Cap, veh/h	361	321	1990	318	529	2567
Arrive On Green	0.20	0.20	0.65	0.65	0.07	1.00
Sat Flow, veh/h	1781	1585	3161	491	1781	3647
Grp Volume(v), veh/h	315	244	364	367	62	1287
Grp Sat Flow(s),veh/h/ln	1781	1585	1777	1782	1781	1777
Q Serve(g_s), s	20.6	17.4	10.9	10.9	1.3	0.0
Cycle Q Clear(g_c), s	20.6	17.4	10.9	10.9	1.3	0.0
Prop In Lane	1.00	1.00		0.28	1.00	
Lane Grp Cap(c), veh/h	361	321	1152	1156	529	2567
V/C Ratio(X)	0.87	0.76	0.32	0.32	0.12	0.50
Avail Cap(c_a), veh/h	616	548	1152	1156	575	2567
HCM Platoon Ratio	1.00	1.00	1.00	1.00	2.00	2.00
Upstream Filter(l)	0.92	0.92	1.00	1.00	1.00	1.00
Uniform Delay (d), s/veh	46.3	45.1	9.3	9.3	6.1	0.0
Incr Delay (d2), s/veh	6.6	3.4	0.7	0.7	0.1	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	9.7	7.1	4.3	4.3	0.4	0.3
Unsig. Movement Delay, s/veh						
LnGrp Delay(d),s/veh	53.0	48.5	10.0	10.1	6.2	0.7
LnGrp LOS	D	D	B	B	A	A
Approach Vol, veh/h	559		731			1349
Approach Delay, s/veh	51.0		10.0			1.0
Approach LOS	D		B			A
Timer - Assigned Phs	1	2			6	8
Phs Duration (G+Y+Rc), s	8.9	82.3			91.2	28.8
Change Period (Y+Rc), s	4.5	4.5			4.5	4.5
Max Green Setting (Gmax), s	7.5	57.5			69.5	41.5
Max Q Clear Time (g_c+l1), s	3.3	12.9			2.0	22.6
Green Ext Time (p_c), s	0.0	5.4			14.6	1.8
Intersection Summary						
HCM 6th Ctrl Delay			14.1			
HCM 6th LOS			B			

HCM 6th Signalized Intersection Summary
12: Chester Street & Nichols Avenue

2019 Existing AM.syn
04/24/2019

												
Movement	EBL	EBT	EBR	WBL	WBT	WBR	NBL	NBT	NBR	SBL	SBT	SBR
Lane Configurations												
Traffic Volume (veh/h)	24	24	40	3	6	3	51	550	64	7	113	52
Future Volume (veh/h)	24	24	40	3	6	3	51	550	64	7	113	52
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	28	36	56	8	12	4	68	598	96	8	128	72
Peak Hour Factor	0.86	0.67	0.71	0.38	0.50	0.75	0.75	0.92	0.67	0.88	0.88	0.72
Percent Heavy Veh, %	2	2	2	2	2	2	2	2	2	2	2	2
Cap, veh/h	200	51	79	128	79	26	925	2157	345	571	1498	795
Arrive On Green	0.03	0.08	0.08	0.01	0.06	0.06	0.05	0.70	0.70	0.01	0.67	0.67
Sat Flow, veh/h	1781	660	1026	1781	1342	447	1781	3067	491	1781	2243	1190
Grp Volume(v), veh/h	28	0	92	8	0	16	68	346	348	8	100	100
Grp Sat Flow(s),veh/h/ln	1781	0	1686	1781	0	1790	1781	1777	1782	1781	1777	1656
Q Serve(g_s), s	1.3	0.0	4.8	0.4	0.0	0.8	1.0	6.5	6.5	0.1	1.8	1.9
Cycle Q Clear(g_c), s	1.3	0.0	4.8	0.4	0.0	0.8	1.0	6.5	6.5	0.1	1.8	1.9
Prop In Lane	1.00		0.61	1.00		0.25	1.00		0.28	1.00		0.72
Lane Grp Cap(c), veh/h	200	0	129	128	0	105	925	1249	1253	571	1187	1106
V/C Ratio(X)	0.14	0.00	0.71	0.06	0.00	0.15	0.07	0.28	0.28	0.01	0.08	0.09
Avail Cap(c_a), veh/h	279	0	403	239	0	428	993	1249	1253	682	1187	1106
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)	0.86	0.00	0.86	1.00	0.00	1.00	1.00	1.00	1.00	1.00	1.00	1.00
Uniform Delay (d), s/veh	38.1	0.0	40.6	39.3	0.0	40.2	3.7	4.9	4.9	4.8	5.3	5.3
Incr Delay (d2), s/veh	0.3	0.0	6.1	0.2	0.0	0.7	0.0	0.6	0.6	0.0	0.1	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	0.0	2.2	0.2	0.0	0.4	0.3	2.1	2.2	0.0	0.6	0.6
Unsig. Movement Delay, s/veh												
LnGrp Delay(d),s/veh	38.4	0.0	46.7	39.5	0.0	40.9	3.7	5.5	5.5	4.8	5.4	5.4
LnGrp LOS	D	A	D	D	A	D	A	A	A	A	A	A
Approach Vol, veh/h	120			24			762			208		
Approach Delay, s/veh	44.8			40.4			5.3			5.4		
Approach LOS	D			D			A			A		
Timer - Assigned Phs	1	2	3	4	5	6	7	8				
Phs Duration (G+Y+Rc), s	5.4	67.8	5.4	11.4	8.6	64.6	7.0	9.8				
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	6.5	37.5	6.5	21.5	7.5	36.5	6.5	21.5				
Max Q Clear Time (g_c+l1), s	2.1	8.5	2.4	6.8	3.0	3.9	3.3	2.8				
Green Ext Time (p_c), s	0.0	4.8	0.0	0.3	0.0	1.2	0.0	0.0				
Intersection Summary												
HCM 6th Ctrl Delay	10.3											
HCM 6th LOS	B											

HCM 6th Signalized Intersection Summary 12: Chester Street & Nichols Avenue

2019 Existing PM.syn
04/24/2019

												
Movement	EBL	EBT	EBR	WBL	WBT	WBR	NBL	NBT	NBR	SBL	SBT	SBR
Lane Configurations												
Traffic Volume (veh/h)	60	14	89	77	39	23	60	200	1	19	634	70
Future Volume (veh/h)	60	14	89	77	39	23	60	200	1	19	634	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	64	24	100	112	56	28	85	256	4	28	697	96
Peak Hour Factor	0.94	0.58	0.89	0.69	0.70	0.82	0.71	0.78	0.25	0.68	0.91	0.73
Percent Heavy Veh, %	2	2	2	2	2	2	2	2	2	2	2	2
Cap, veh/h	297	33	139	268	153	77	461	1974	31	727	1649	227
Arrive On Green	0.05	0.11	0.11	0.07	0.13	0.13	0.06	0.55	0.55	0.03	0.53	0.53
Sat Flow, veh/h	1781	316	1317	1781	1176	588	1781	3581	56	1781	3138	432
Grp Volume(v), veh/h	64	0	124	112	0	84	85	127	133	28	394	399
Grp Sat Flow(s),veh/h/ln	1781	0	1633	1781	0	1764	1781	1777	1860	1781	1777	1793
Q Serve(g_s), s	2.4	0.0	5.5	4.1	0.0	3.3	1.6	2.6	2.6	0.5	10.2	10.2
Cycle Q Clear(g_c), s	2.4	0.0	5.5	4.1	0.0	3.3	1.6	2.6	2.6	0.5	10.2	10.2
Prop In Lane	1.00		0.81	1.00		0.33	1.00		0.03	1.00		0.24
Lane Grp Cap(c), veh/h	297	0	172	268	0	230	461	980	1026	727	934	942
V/C Ratio(X)	0.22	0.00	0.72	0.42	0.00	0.37	0.18	0.13	0.13	0.04	0.42	0.42
Avail Cap(c_a), veh/h	331	0	394	281	0	449	517	980	1026	796	934	942
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	1.00	0.00	1.00	1.00	1.00	1.00	1.00	1.00	1.00
Uniform Delay (d), s/veh	27.8	0.0	32.5	27.2	0.0	29.8	7.7	8.1	8.1	7.6	10.9	10.9
Incr Delay (d2), s/veh	0.4	0.0	5.6	1.0	0.0	1.0	0.2	0.3	0.3	0.0	1.4	1.4
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	2.4	1.8	0.0	1.4	0.5	1.0	1.0	0.2	3.9	4.0
Unsig. Movement Delay, s/veh												
LnGrp Delay(d),s/veh	28.2	0.0	38.0	28.2	0.0	30.8	7.9	8.4	8.4	7.6	12.3	12.3
LnGrp LOS	C	A	D	C	A	C	A	A	A	A	B	B
Approach Vol, veh/h	188			196			345			821		
Approach Delay, s/veh	34.7			29.3			8.3			12.1		
Approach LOS	C			C			A			B		
Timer - Assigned Phs	1	2	3	4	5	6	7	8				
Phs Duration (G+Y+Rc), s	6.7	45.8	10.0	12.4	8.6	43.9	8.2	14.3				
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	5.1	27.7	6.1	18.1	6.5	26.3	5.1	19.1				
Max Q Clear Time (g_c+l1), s	2.5	4.6	6.1	7.5	3.6	12.2	4.4	5.3				
Green Ext Time (p_c), s	0.0	1.4	0.0	0.4	0.0	4.4	0.0	0.3				
Intersection Summary												
HCM 6th Ctrl Delay	16.2											
HCM 6th LOS	B											

HCM 6th Signalized Intersection Summary 12: Chester Street & Nichols Avenue

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Movement	EBL	EBT	EBR	WBL	WBT	WBR	NBL	NBT	NBR	SBL	SBT	SBR
Lane Configurations												
Traffic Volume (veh/h)	25	25	42	3	6	3	54	581	68	7	119	55
Future Volume (veh/h)	25	25	42	3	6	3	54	581	68	7	119	55
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	29	37	59	8	12	4	72	632	101	8	135	76
Peak Hour Factor	0.86	0.67	0.71	0.38	0.50	0.75	0.75	0.92	0.67	0.88	0.88	0.72
Percent Heavy Veh, %	2	2	2	2	2	2	2	2	2	2	2	2
Cap, veh/h	204	52	82	129	82	27	913	2150	343	548	1488	791
Arrive On Green	0.03	0.08	0.08	0.01	0.06	0.06	0.05	0.70	0.70	0.01	0.66	0.66
Sat Flow, veh/h	1781	649	1035	1781	1342	447	1781	3069	490	1781	2241	1191
Grp Volume(v), veh/h	29	0	96	8	0	16	72	365	368	8	105	106
Grp Sat Flow(s),veh/h/ln	1781	0	1684	1781	0	1790	1781	1777	1782	1781	1777	1656
Q Serve(g_s), s	1.4	0.0	5.0	0.4	0.0	0.8	1.1	7.0	7.0	0.1	1.9	2.1
Cycle Q Clear(g_c), s	1.4	0.0	5.0	0.4	0.0	0.8	1.1	7.0	7.0	0.1	1.9	2.1
Prop In Lane	1.00		0.61	1.00		0.25	1.00		0.27	1.00		0.72
Lane Grp Cap(c), veh/h	204	0	134	129	0	109	913	1245	1248	548	1180	1100
V/C Ratio(X)	0.14	0.00	0.72	0.06	0.00	0.15	0.08	0.29	0.29	0.01	0.09	0.10
Avail Cap(c_a), veh/h	282	0	402	240	0	428	979	1245	1248	659	1180	1100
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)	0.84	0.00	0.84	1.00	0.00	1.00	1.00	1.00	1.00	1.00	1.00	1.00
Uniform Delay (d), s/veh	37.9	0.0	40.4	39.1	0.0	40.0	3.7	5.1	5.1	4.9	5.4	5.4
Incr Delay (d2), s/veh	0.3	0.0	5.9	0.2	0.0	0.6	0.0	0.6	0.6	0.0	0.1	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	0.0	2.3	0.2	0.0	0.4	0.3	2.3	2.3	0.0	0.7	0.7
Unsig. Movement Delay, s/veh												
LnGrp Delay(d),s/veh	38.2	0.0	46.4	39.3	0.0	40.7	3.8	5.7	5.7	4.9	5.5	5.6
LnGrp LOS	D	A	D	D	A	D	A	A	A	A	A	A
Approach Vol, veh/h	125			24			805			219		
Approach Delay, s/veh	44.5			40.2			5.5			5.5		
Approach LOS	D			D			A			A		
Timer - Assigned Phs	1	2	3	4	5	6	7	8				
Phs Duration (G+Y+Rc), s	5.4	67.5	5.4	11.6	8.7	64.3	7.1	10.0				
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	6.5	37.5	6.5	21.5	7.5	36.5	6.5	21.5				
Max Q Clear Time (g_c+l1), s	2.1	9.0	2.4	7.0	3.1	4.1	3.4	2.8				
Green Ext Time (p_c), s	0.0	5.1	0.0	0.4	0.0	1.3	0.0	0.0				
Intersection Summary												
HCM 6th Ctrl Delay	10.4											
HCM 6th LOS	B											

HCM 6th Signalized Intersection Summary
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Movement	EBL	EBT	EBR	WBL	WBT	WBR	NBL	NBT	NBR	SBL	SBT	SBR
Lane Configurations												
Traffic Volume (veh/h)	63	15	94	81	41	24	63	211	1	20	670	74
Future Volume (veh/h)	63	15	94	81	41	24	63	211	1	20	670	74
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	67	26	106	117	59	29	89	271	4	29	736	101
Peak Hour Factor	0.94	0.58	0.89	0.69	0.70	0.82	0.71	0.78	0.25	0.68	0.91	0.73
Percent Heavy Veh, %	2	2	2	2	2	2	2	2	2	2	2	2
Cap, veh/h	305	36	145	273	162	80	438	1946	29	708	1622	222
Arrive On Green	0.05	0.11	0.11	0.08	0.14	0.14	0.06	0.54	0.54	0.03	0.52	0.52
Sat Flow, veh/h	1781	322	1312	1781	1184	582	1781	3585	53	1781	3139	431
Grp Volume(v), veh/h	67	0	132	117	0	88	89	134	141	29	416	421
Grp Sat Flow(s),veh/h/ln	1781	0	1634	1781	0	1766	1781	1777	1861	1781	1777	1793
Q Serve(g_s), s	2.5	0.0	5.9	4.3	0.0	3.4	1.7	2.8	2.8	0.6	11.1	11.1
Cycle Q Clear(g_c), s	2.5	0.0	5.9	4.3	0.0	3.4	1.7	2.8	2.8	0.6	11.1	11.1
Prop In Lane	1.00		0.80	1.00		0.33	1.00		0.03	1.00		0.24
Lane Grp Cap(c), veh/h	305	0	181	273	0	242	438	964	1010	708	918	926
V/C Ratio(X)	0.22	0.00	0.73	0.43	0.00	0.36	0.20	0.14	0.14	0.04	0.45	0.45
Avail Cap(c_a), veh/h	337	0	394	282	0	450	492	964	1010	775	918	926
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	1.00	0.00	1.00	1.00	1.00	1.00	1.00	1.00	1.00
Uniform Delay (d), s/veh	27.5	0.0	32.3	26.8	0.0	29.4	8.2	8.5	8.5	7.8	11.4	11.4
Incr Delay (d2), s/veh	0.4	0.0	5.6	1.1	0.0	0.9	0.2	0.3	0.3	0.0	1.6	1.6
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	1.0	0.0	2.5	1.8	0.0	1.5	0.6	1.0	1.1	0.2	4.3	4.4
Unsig. Movement Delay, s/veh												
LnGrp Delay(d),s/veh	27.8	0.0	37.9	27.8	0.0	30.3	8.4	8.8	8.8	7.9	13.1	13.0
LnGrp LOS	C	A	D	C	A	C	A	A	A	A	B	B
Approach Vol, veh/h		199			205			364			866	
Approach Delay, s/veh		34.5			28.9			8.7			12.9	
Approach LOS		C			C			A			B	
Timer - Assigned Phs	1	2	3	4	5	6	7	8				
Phs Duration (G+Y+Rc), s	6.8	45.2	10.2	12.8	8.7	43.3	8.3	14.8				
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	5.1	27.7	6.1	18.1	6.5	26.3	5.1	19.1				
Max Q Clear Time (g_c+l1), s	2.6	4.8	6.3	7.9	3.7	13.1	4.5	5.4				
Green Ext Time (p_c), s	0.0	1.5	0.0	0.5	0.0	4.5	0.0	0.3				
Intersection Summary												
HCM 6th Ctrl Delay			16.6									
HCM 6th LOS			B									

HCM 6th Signalized Intersection Summary 12: Chester Street & Nichols Avenue

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Movement	EBL	EBT	EBR	WBL	WBT	WBR	NBL	NBT	NBR	SBL	SBT	SBR
Lane Configurations												
Traffic Volume (veh/h)	108	87	42	43	23	3	54	913	68	7	209	78
Future Volume (veh/h)	108	87	42	43	23	3	54	913	68	7	209	78
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	117	95	46	47	25	3	59	992	74	8	227	85
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	288	126	61	183	118	14	769	2165	161	361	1565	569
Arrive On Green	0.07	0.11	0.11	0.04	0.07	0.07	0.04	0.65	0.65	0.01	0.61	0.61
Sat Flow, veh/h	1781	1190	576	1781	1638	197	1781	3352	250	1781	2552	928
Grp Volume(v), veh/h	117	0	141	47	0	28	59	526	540	8	156	156
Grp Sat Flow(s),veh/h/ln	1781	0	1767	1781	0	1835	1781	1777	1825	1781	1777	1703
Q Serve(g_s), s	5.4	0.0	7.0	2.2	0.0	1.3	1.0	13.4	13.4	0.2	3.4	3.5
Cycle Q Clear(g_c), s	5.4	0.0	7.0	2.2	0.0	1.3	1.0	13.4	13.4	0.2	3.4	3.5
Prop In Lane	1.00		0.33	1.00		0.11	1.00		0.14	1.00		0.54
Lane Grp Cap(c), veh/h	288	0	187	183	0	132	769	1148	1179	361	1089	1044
V/C Ratio(X)	0.41	0.00	0.76	0.26	0.00	0.21	0.08	0.46	0.46	0.02	0.14	0.15
Avail Cap(c_a), veh/h	288	0	422	244	0	438	841	1148	1179	472	1089	1044
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)	0.73	0.00	0.73	1.00	0.00	1.00	1.00	1.00	1.00	1.00	1.00	1.00
Uniform Delay (d), s/veh	34.8	0.0	39.1	36.7	0.0	39.4	5.4	8.0	8.0	7.0	7.4	7.4
Incr Delay (d2), s/veh	0.7	0.0	4.5	0.7	0.0	0.8	0.0	1.3	1.3	0.0	0.3	0.3
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	2.3	0.0	3.2	1.0	0.0	0.6	0.3	4.9	5.0	0.1	1.2	1.3
Unsig. Movement Delay, s/veh												
LnGrp Delay(d),s/veh	35.5	0.0	43.6	37.4	0.0	40.2	5.5	9.3	9.3	7.1	7.7	7.7
LnGrp LOS	D	A	D	D	A	D	A	A	A	A	A	A
Approach Vol, veh/h	258			75			1125			320		
Approach Delay, s/veh	39.9			38.4			9.1			7.7		
Approach LOS	D			D			A			A		
Timer - Assigned Phs	1	2	3	4	5	6	7	8				
Phs Duration (G+Y+Rc), s	5.4	62.6	8.0	14.0	8.4	59.7	11.0	11.0				
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	6.5	37.5	6.5	21.5	7.5	36.5	6.5	21.5				
Max Q Clear Time (g_c+l1), s	2.2	15.4	4.2	9.0	3.0	5.5	7.4	3.3				
Green Ext Time (p_c), s	0.0	7.6	0.0	0.5	0.0	1.9	0.0	0.1				
Intersection Summary												
HCM 6th Ctrl Delay	14.6											
HCM 6th LOS	B											

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Movement	EBL	EBT	EBR	WBL	WBT	WBR	NBL	NBT	NBR	SBL	SBT	SBR
Lane Configurations												
Traffic Volume (veh/h)	92	37	94	230	105	24	63	327	1	20	1011	159
Future Volume (veh/h)	92	37	94	230	105	24	63	327	1	20	1011	159
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	40	102	250	114	26	68	355	1	22	1099	173
Peak Hour Factor	0.94	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	275	54	138	268	184	42	296	1986	6	649	1601	251
Arrive On Green	0.06	0.12	0.12	0.07	0.12	0.12	0.05	0.55	0.55	0.02	0.52	0.52
Sat Flow, veh/h	1781	467	1190	1781	1474	336	1781	3635	10	1781	3077	483
Grp Volume(v), veh/h	98	0	142	250	0	140	68	173	183	22	633	639
Grp Sat Flow(s),veh/h/ln	1781	0	1656	1781	0	1810	1781	1777	1869	1781	1777	1783
Q Serve(g_s), s	3.6	0.0	6.2	5.5	0.0	5.5	1.3	3.7	3.7	0.4	19.9	20.1
Cycle Q Clear(g_c), s	3.6	0.0	6.2	5.5	0.0	5.5	1.3	3.7	3.7	0.4	19.9	20.1
Prop In Lane	1.00		0.72	1.00		0.19	1.00		0.01	1.00		0.27
Lane Grp Cap(c), veh/h	275	0	192	268	0	225	296	971	1021	649	924	928
V/C Ratio(X)	0.36	0.00	0.74	0.93	0.00	0.62	0.23	0.18	0.18	0.03	0.69	0.69
Avail Cap(c_a), veh/h	281	0	397	268	0	444	327	971	1021	724	924	928
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	1.00	0.00	1.00	1.00	1.00	1.00	1.00	1.00	1.00
Uniform Delay (d), s/veh	26.8	0.0	32.1	31.3	0.0	31.2	10.4	8.6	8.6	7.9	13.4	13.4
Incr Delay (d2), s/veh	0.8	0.0	5.5	37.5	0.0	2.8	0.4	0.4	0.4	0.0	4.1	4.2
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	1.5	0.0	2.7	4.6	0.0	2.5	0.5	1.4	1.4	0.1	8.0	8.1
Unsig. Movement Delay, s/veh												
LnGrp Delay(d),s/veh	27.6	0.0	37.6	68.9	0.0	33.9	10.8	9.0	8.9	7.9	17.5	17.6
LnGrp LOS	C	A	D	E	A	C	B	A	A	A	B	B
Approach Vol, veh/h	240			390			424			1294		
Approach Delay, s/veh	33.5			56.3			9.2			17.4		
Approach LOS	C			E			A			B		
Timer - Assigned Phs	1	2	3	4	5	6	7	8				
Phs Duration (G+Y+Rc), s	6.3	45.5	10.0	13.2	8.3	43.5	9.4	13.8				
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	5.0	28.5	5.5	18.0	5.1	28.4	5.1	18.4				
Max Q Clear Time (g_c+l1), s	2.4	5.7	7.5	8.2	3.3	22.1	5.6	7.5				
Green Ext Time (p_c), s	0.0	2.0	0.0	0.5	0.0	4.1	0.0	0.5				
Intersection Summary												
HCM 6th Ctrl Delay	24.0											
HCM 6th LOS	C											

HCM 6th Signalized Intersection Summary
12: Chester Street & Nichols Avenue

2040 Background AM.syn

04/29/2019

												
Movement	EBL	EBT	EBR	WBL	WBT	WBR	NBL	NBT	NBR	SBL	SBT	SBR
Lane Configurations												
Traffic Volume (veh/h)	27	27	44	3	7	3	57	611	71	8	125	58
Future Volume (veh/h)	27	27	44	3	7	3	57	611	71	8	125	58
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	31	40	62	8	14	4	76	664	106	9	142	81
Peak Hour Factor	0.86	0.67	0.71	0.38	0.50	0.75	0.75	0.92	0.67	0.88	0.88	0.72
Percent Heavy Veh, %	2	2	2	2	2	2	2	2	2	2	2	2
Cap, veh/h	209	55	85	129	89	25	899	2135	340	527	1470	792
Arrive On Green	0.03	0.08	0.08	0.01	0.06	0.06	0.05	0.70	0.70	0.01	0.66	0.66
Sat Flow, veh/h	1781	661	1025	1781	1399	400	1781	3070	489	1781	2229	1202
Grp Volume(v), veh/h	31	0	102	8	0	18	76	384	386	9	112	111
Grp Sat Flow(s),veh/h/ln	1781	0	1686	1781	0	1798	1781	1777	1782	1781	1777	1654
Q Serve(g_s), s	1.4	0.0	5.3	0.4	0.0	0.9	1.1	7.6	7.6	0.2	2.1	2.2
Cycle Q Clear(g_c), s	1.4	0.0	5.3	0.4	0.0	0.9	1.1	7.6	7.6	0.2	2.1	2.2
Prop In Lane	1.00		0.61	1.00		0.22	1.00		0.27	1.00		0.73
Lane Grp Cap(c), veh/h	209	0	141	129	0	114	899	1236	1239	527	1172	1091
V/C Ratio(X)	0.15	0.00	0.73	0.06	0.00	0.16	0.08	0.31	0.31	0.02	0.10	0.10
Avail Cap(c_a), veh/h	284	0	384	240	0	410	944	1236	1239	636	1172	1091
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)	0.79	0.00	0.79	1.00	0.00	1.00	1.00	1.00	1.00	1.00	1.00	1.00
Uniform Delay (d), s/veh	37.6	0.0	40.2	38.9	0.0	39.9	3.9	5.3	5.3	5.0	5.6	5.6
Incr Delay (d2), s/veh	0.3	0.0	5.5	0.2	0.0	0.6	0.0	0.7	0.7	0.0	0.2	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	0.0	2.4	0.2	0.0	0.4	0.3	2.6	2.6	0.0	0.7	0.7
Unsig. Movement Delay, s/veh												
LnGrp Delay(d),s/veh	37.9	0.0	45.8	39.1	0.0	40.5	3.9	6.0	6.0	5.0	5.7	5.8
LnGrp LOS	D	A	D	D	A	D	A	A	A	A	A	A
Approach Vol, veh/h	133			26			846			232		
Approach Delay, s/veh	43.9			40.1			5.8			5.7		
Approach LOS	D			D			A			A		
Timer - Assigned Phs	1	2	3	4	5	6	7	8				
Phs Duration (G+Y+Rc), s	5.5	67.1	5.4	12.0	8.8	63.8	7.2	10.2				
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	6.5	38.5	6.5	20.5	6.5	38.5	6.5	20.5				
Max Q Clear Time (g_c+l1), s	2.2	9.6	2.4	7.3	3.1	4.2	3.4	2.9				
Green Ext Time (p_c), s	0.0	5.4	0.0	0.4	0.0	1.4	0.0	0.0				
Intersection Summary												
HCM 6th Ctrl Delay	10.6											
HCM 6th LOS	B											

HCM 6th Signalized Intersection Summary
12: Chester Street & Nichols Avenue

2040 Background PM.syn

04/29/2019

												
Movement	EBL	EBT	EBR	WBL	WBT	WBR	NBL	NBT	NBR	SBL	SBT	SBR
Lane Configurations												
Traffic Volume (veh/h)	67	16	99	86	43	26	67	222	1	21	704	78
Future Volume (veh/h)	67	16	99	86	43	26	67	222	1	21	704	78
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	71	28	111	125	61	32	94	285	4	31	774	107
Peak Hour Factor	0.94	0.58	0.89	0.69	0.70	0.82	0.71	0.78	0.25	0.68	0.91	0.73
Percent Heavy Veh, %	2	2	2	2	2	2	2	2	2	2	2	2
Cap, veh/h	304	38	150	268	158	83	422	1937	27	698	1613	223
Arrive On Green	0.05	0.12	0.12	0.07	0.14	0.14	0.06	0.54	0.54	0.03	0.51	0.51
Sat Flow, veh/h	1781	329	1306	1781	1155	606	1781	3588	50	1781	3136	433
Grp Volume(v), veh/h	71	0	139	125	0	93	94	141	148	31	439	442
Grp Sat Flow(s),veh/h/ln	1781	0	1635	1781	0	1761	1781	1777	1861	1781	1777	1792
Q Serve(g_s), s	2.6	0.0	6.2	4.6	0.0	3.6	1.8	3.0	3.0	0.6	11.9	11.9
Cycle Q Clear(g_c), s	2.6	0.0	6.2	4.6	0.0	3.6	1.8	3.0	3.0	0.6	11.9	11.9
Prop In Lane	1.00		0.80	1.00		0.34	1.00		0.03	1.00		0.24
Lane Grp Cap(c), veh/h	304	0	188	268	0	241	422	959	1005	698	914	922
V/C Ratio(X)	0.23	0.00	0.74	0.47	0.00	0.39	0.22	0.15	0.15	0.04	0.48	0.48
Avail Cap(c_a), veh/h	342	0	403	268	0	434	450	959	1005	772	914	922
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	1.00	0.00	1.00	1.00	1.00	1.00	1.00	1.00	1.00
Uniform Delay (d), s/veh	27.2	0.0	32.1	26.8	0.0	29.5	8.4	8.6	8.6	7.9	11.7	11.7
Incr Delay (d2), s/veh	0.4	0.0	5.6	1.3	0.0	1.0	0.3	0.3	0.3	0.0	1.8	1.8
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	1.1	0.0	2.7	2.0	0.0	1.6	0.6	1.1	1.2	0.2	4.7	4.7
Unsig. Movement Delay, s/veh												
LnGrp Delay(d),s/veh	27.5	0.0	37.6	28.1	0.0	30.5	8.7	8.9	8.9	7.9	13.6	13.5
LnGrp LOS	C	A	D	C	A	C	A	A	A	A	B	B
Approach Vol, veh/h		210			218			383			912	
Approach Delay, s/veh		34.2			29.1			8.9			13.4	
Approach LOS		C			C			A			B	
Timer - Assigned Phs	1	2	3	4	5	6	7	8				
Phs Duration (G+Y+Rc), s	6.9	45.0	10.0	13.1	8.8	43.1	8.4	14.8				
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	5.5	27.5	5.5	18.5	5.5	27.5	5.5	18.5				
Max Q Clear Time (g_c+l1), s	2.6	5.0	6.6	8.2	3.8	13.9	4.6	5.6				
Green Ext Time (p_c), s	0.0	1.6	0.0	0.5	0.0	4.8	0.0	0.3				
Intersection Summary												
HCM 6th Ctrl Delay			16.9									
HCM 6th LOS			B									

HCM 6th Signalized Intersection Summary
12: Chester Street & Nichols Avenue

2040 Total AM.syn

04/25/2019

												
Movement	EBL	EBT	EBR	WBL	WBT	WBR	NBL	NBT	NBR	SBL	SBT	SBR
Lane Configurations												
Traffic Volume (veh/h)	110	89	44	43	24	3	57	943	71	8	215	81
Future Volume (veh/h)	110	89	44	43	24	3	57	943	71	8	215	81
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	97	48	47	26	3	62	1025	77	9	234	88
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	291	128	63	184	122	14	760	2152	162	348	1554	568
Arrive On Green	0.07	0.11	0.11	0.04	0.07	0.07	0.04	0.64	0.64	0.01	0.61	0.61
Sat Flow, veh/h	1781	1181	584	1781	1646	190	1781	3350	252	1781	2548	931
Grp Volume(v), veh/h	120	0	145	47	0	29	62	544	558	9	161	161
Grp Sat Flow(s),veh/h/ln	1781	0	1765	1781	0	1836	1781	1777	1825	1781	1777	1703
Q Serve(g_s), s	5.5	0.0	7.2	2.2	0.0	1.3	1.1	14.2	14.2	0.2	3.5	3.7
Cycle Q Clear(g_c), s	5.5	0.0	7.2	2.2	0.0	1.3	1.1	14.2	14.2	0.2	3.5	3.7
Prop In Lane	1.00		0.33	1.00		0.10	1.00		0.14	1.00		0.55
Lane Grp Cap(c), veh/h	291	0	191	184	0	136	760	1141	1172	348	1083	1038
V/C Ratio(X)	0.41	0.00	0.76	0.26	0.00	0.21	0.08	0.48	0.48	0.03	0.15	0.15
Avail Cap(c_a), veh/h	291	0	422	244	0	439	830	1141	1172	457	1083	1038
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)	0.71	0.00	0.71	1.00	0.00	1.00	1.00	1.00	1.00	1.00	1.00	1.00
Uniform Delay (d), s/veh	34.7	0.0	39.0	36.5	0.0	39.2	5.5	8.3	8.3	7.2	7.5	7.6
Incr Delay (d2), s/veh	0.7	0.0	4.4	0.7	0.0	0.8	0.0	1.4	1.4	0.0	0.3	0.3
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	2.4	0.0	3.3	1.0	0.0	0.6	0.4	5.2	5.3	0.1	1.3	1.3
Unsig. Movement Delay, s/veh												
LnGrp Delay(d),s/veh	35.3	0.0	43.4	37.2	0.0	40.0	5.6	9.7	9.7	7.2	7.8	7.9
LnGrp LOS	D	A	D	D	A	D	A	A	A	A	A	A
Approach Vol, veh/h		265			76			1164			331	
Approach Delay, s/veh		39.8			38.3			9.5			7.8	
Approach LOS		D			D			A			A	
Timer - Assigned Phs	1	2	3	4	5	6	7	8				
Phs Duration (G+Y+Rc), s	5.5	62.3	8.0	14.2	8.4	59.4	11.0	11.2				
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	6.5	37.5	6.5	21.5	7.5	36.5	6.5	21.5				
Max Q Clear Time (g_c+l1), s	2.2	16.2	4.2	9.2	3.1	5.7	7.5	3.3				
Green Ext Time (p_c), s	0.0	7.8	0.0	0.5	0.0	2.0	0.0	0.1				
Intersection Summary												
HCM 6th Ctrl Delay			14.7									
HCM 6th LOS			B									

HCM 6th Signalized Intersection Summary
12: Chester Street & Nichols Avenue

2040 Total PM.syn

04/25/2019

												
Movement	EBL	EBT	EBR	WBL	WBT	WBR	NBL	NBT	NBR	SBL	SBT	SBR
Lane Configurations												
Traffic Volume (veh/h)	96	38	99	235	107	26	67	338	1	21	1045	163
Future Volume (veh/h)	96	38	99	235	107	26	67	338	1	21	1045	163
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	102	41	108	255	116	28	73	367	1	23	1136	177
Peak Hour Factor	0.94	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	279	55	144	268	184	45	285	1967	5	637	1585	246
Arrive On Green	0.07	0.12	0.12	0.07	0.13	0.13	0.05	0.54	0.54	0.03	0.51	0.51
Sat Flow, veh/h	1781	455	1199	1781	1456	351	1781	3636	10	1781	3082	479
Grp Volume(v), veh/h	102	0	149	255	0	144	73	179	189	23	653	660
Grp Sat Flow(s),veh/h/ln	1781	0	1654	1781	0	1807	1781	1777	1869	1781	1777	1784
Q Serve(g_s), s	3.7	0.0	6.5	5.5	0.0	5.7	1.4	3.9	3.9	0.5	21.2	21.4
Cycle Q Clear(g_c), s	3.7	0.0	6.5	5.5	0.0	5.7	1.4	3.9	3.9	0.5	21.2	21.4
Prop In Lane	1.00		0.72	1.00		0.19	1.00		0.01	1.00		0.27
Lane Grp Cap(c), veh/h	279	0	199	268	0	229	285	961	1011	637	914	917
V/C Ratio(X)	0.37	0.00	0.75	0.95	0.00	0.63	0.26	0.19	0.19	0.04	0.72	0.72
Avail Cap(c_a), veh/h	281	0	397	268	0	443	313	961	1011	711	914	917
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	1.00	0.00	1.00	1.00	1.00	1.00	1.00	1.00	1.00
Uniform Delay (d), s/veh	26.5	0.0	31.9	31.3	0.0	31.1	11.0	8.8	8.8	8.1	14.0	14.0
Incr Delay (d2), s/veh	0.8	0.0	5.5	41.9	0.0	2.8	0.5	0.4	0.4	0.0	4.8	4.8
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	1.6	0.0	2.8	5.0	0.0	2.6	0.5	1.4	1.5	0.2	8.7	8.8
Unsig. Movement Delay, s/veh												
LnGrp Delay(d),s/veh	27.3	0.0	37.4	73.2	0.0	33.9	11.5	9.2	9.2	8.1	18.8	18.9
LnGrp LOS	C	A	D	E	A	C	B	A	A	A	B	B
Approach Vol, veh/h	251		399				441		1336			
Approach Delay, s/veh	33.3		59.0				9.6		18.6			
Approach LOS	C		E				A		B			
Timer - Assigned Phs	1	2	3	4	5	6	7	8				
Phs Duration (G+Y+Rc), s	6.4	45.1	10.0	13.5	8.4	43.1	9.5	14.0				
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	5.0	28.5	5.5	18.0	5.1	28.4	5.1	18.4				
Max Q Clear Time (g_c+l1), s	2.5	5.9	7.5	8.5	3.4	23.4	5.7	7.7				
Green Ext Time (p_c), s	0.0	2.1	0.0	0.5	0.0	3.5	0.0	0.5				
Intersection Summary												
HCM 6th Ctrl Delay			25.1									
HCM 6th LOS			C									

HCM 6th TWSC
13: Yosemite Street & Mineral Drive

2019 Existing AM.syn
04/24/2019

Intersection						
Int Delay, s/veh	3.4					
Movement	EBL	EBR	NBL	NBT	SBT	SBR
Lane Configurations						
Traffic Vol, veh/h	133	69	25	1135	289	0
Future Vol, veh/h	133	69	25	1135	289	0
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	-	-	-
Veh in Median Storage, #	1	-	-	0	0	-
Grade, %	0	-	-	0	0	-
Peak Hour Factor	69	78	52	81	85	92
Heavy Vehicles, %	2	2	2	2	2	2
Mvmt Flow	193	88	48	1401	340	0
Major/Minor	Minor2	Major1		Major2		
Conflicting Flow All	1137	170	340	0	-	0
Stage 1	340	-	-	-	-	-
Stage 2	797	-	-	-	-	-
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	*195	*969	1419	-	-	-
Stage 1	*888	-	-	-	-	-
Stage 2	*579	-	-	-	-	-
Platoon blocked, %		1	1	-	-	-
Mov Cap-1 Maneuver *~	188	*969	1419	-	-	-
Mov Cap-2 Maneuver	*379	-	-	-	-	-
Stage 1	*858	-	-	-	-	-
Stage 2	*579	-	-	-	-	-
Approach	EB	NB		SB		
HCM Control Delay, s	23.5	0.3		0		
HCM LOS	C					
Minor Lane/Major Mvmt	NBL	NBT	EBLn1	SBT	SBR	
Capacity (veh/h)	1419	-	469	-	-	
HCM Lane V/C Ratio	0.034	-	0.6	-	-	
HCM Control Delay (s)	7.6	-	23.5	-	-	
HCM Lane LOS	A	-	C	-	-	
HCM 95th %tile Q(veh)	0.1	-	3.9	-	-	
Notes						
~: Volume exceeds capacity		\$: Delay exceeds 300s		+: Computation Not Defined		*: All major volume in platoon

Intersection						
Int Delay, s/veh	1.3					
Movement	EBL	EBR	NBL	NBT	SBT	SBR
Lane Configurations						
Traffic Vol, veh/h	37	37	83	530	1090	0
Future Vol, veh/h	37	37	83	530	1090	0
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	-	-	-
Veh in Median Storage, #	1	-	-	0	0	-
Grade, %	0	-	-	0	0	-
Peak Hour Factor	77	77	83	90	96	92
Heavy Vehicles, %	2	2	2	2	2	2
Mvmt Flow	48	48	100	589	1135	0
Major/Minor	Minor2	Major1		Major2		
Conflicting Flow All	1630	568	1135	0	-	0
Stage 1	1135	-	-	-	-	-
Stage 2	495	-	-	-	-	-
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	*92	*633	*946	-	-	-
Stage 1	*597	-	-	-	-	-
Stage 2	*819	-	-	-	-	-
Platoon blocked, %		1	1	-	-	-
Mov Cap-1 Maneuver	*82	*633	*946	-	-	-
Mov Cap-2 Maneuver	*316	-	-	-	-	-
Stage 1	*534	-	-	-	-	-
Stage 2	*819	-	-	-	-	-
Approach	EB	NB		SB		
HCM Control Delay, s	16	1.3		0		
HCM LOS	C					
Minor Lane/Major Mvmt	NBL	NBT	EBLn1	SBT	SBR	
Capacity (veh/h)	* 946	-	422	-	-	
HCM Lane V/C Ratio	0.106	-	0.228	-	-	
HCM Control Delay (s)	9.3	-	16	-	-	
HCM Lane LOS	A	-	C	-	-	
HCM 95th %tile Q(veh)	0.4	-	0.9	-	-	
Notes						
~: Volume exceeds capacity		\$: Delay exceeds 300s		+: Computation Not Defined		*: All major volume in platoon

Intersection						
Int Delay, s/veh	3.7					
Movement	EBL	EBR	NBL	NBT	SBT	SBR
Lane Configurations						
Traffic Vol, veh/h	141	73	26	1199	305	0
Future Vol, veh/h	141	73	26	1199	305	0
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	-	-	-
Veh in Median Storage, #	1	-	-	0	0	-
Grade, %	0	-	-	0	0	-
Peak Hour Factor	70	80	60	85	85	92
Heavy Vehicles, %	2	2	2	2	2	2
Mvmt Flow	201	91	43	1411	359	0
Major/Minor	Minor2	Major1		Major2		
Conflicting Flow All	1151	180	359	0	-	0
Stage 1	359	-	-	-	-	-
Stage 2	792	-	-	-	-	-
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	*~ 191	*969	1394	-	-	-
Stage 1	*867	-	-	-	-	-
Stage 2	*557	-	-	-	-	-
Platoon blocked, %		1	1	-	-	-
Mov Cap-1 Maneuver	*~ 185	*969	1394	-	-	-
Mov Cap-2 Maneuver	*369	-	-	-	-	-
Stage 1	*840	-	-	-	-	-
Stage 2	*557	-	-	-	-	-
Approach	EB	NB		SB		
HCM Control Delay, s	25.9	0.2		0		
HCM LOS	D					
Minor Lane/Major Mvmt	NBL	NBT	EBLn1	SBT	SBR	
Capacity (veh/h)	1394	-	457	-	-	
HCM Lane V/C Ratio	0.031	-	0.64	-	-	
HCM Control Delay (s)	7.7	-	25.9	-	-	
HCM Lane LOS	A	-	D	-	-	
HCM 95th %tile Q(veh)	0.1	-	4.4	-	-	
Notes						
~: Volume exceeds capacity		\$: Delay exceeds 300s		+: Computation Not Defined		*: All major volume in platoon

Intersection						
Int Delay, s/veh	1.3					
Movement	EBL	EBR	NBL	NBT	SBT	SBR
Lane Configurations						
Traffic Vol, veh/h	39	39	88	560	1151	0
Future Vol, veh/h	39	39	88	560	1151	0
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	-	-	-
Veh in Median Storage, #	1	-	-	0	0	-
Grade, %	0	-	-	0	0	-
Peak Hour Factor	77	77	83	90	96	92
Heavy Vehicles, %	2	2	2	2	2	2
Mvmt Flow	51	51	106	622	1199	0
Major/Minor	Minor2	Major1		Major2		
Conflicting Flow All	1722	600	1199	0	-	0
Stage 1	1199	-	-	-	-	-
Stage 2	523	-	-	-	-	-
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	*80	*607	*907	-	-	-
Stage 1	*572	-	-	-	-	-
Stage 2	*819	-	-	-	-	-
Platoon blocked, %		1	1	-	-	-
Mov Cap-1 Maneuver	*71	*607	*907	-	-	-
Mov Cap-2 Maneuver	*301	-	-	-	-	-
Stage 1	*505	-	-	-	-	-
Stage 2	*819	-	-	-	-	-
Approach	EB	NB		SB		
HCM Control Delay, s	16.9	1.4		0		
HCM LOS	C					
Minor Lane/Major Mvmt	NBL	NBT	EBLn1	SBT	SBR	
Capacity (veh/h)	* 907	-	402	-	-	
HCM Lane V/C Ratio	0.117	-	0.252	-	-	
HCM Control Delay (s)	9.5	-	16.9	-	-	
HCM Lane LOS	A	-	C	-	-	
HCM 95th %tile Q(veh)	0.4	-	1	-	-	
Notes						
~: Volume exceeds capacity		\$: Delay exceeds 300s		+: Computation Not Defined		*: All major volume in platoon

Intersection						
Int Delay, s/veh	4.3					
Movement	EBL	EBR	NBL	NBT	SBT	SBR
Lane Configurations						
Traffic Vol, veh/h	141	73	26	1344	345	0
Future Vol, veh/h	141	73	26	1344	345	0
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	-	-	-
Veh in Median Storage, #	1	-	-	0	0	-
Grade, %	0	-	-	0	0	-
Peak Hour Factor	70	80	60	85	85	92
Heavy Vehicles, %	2	2	2	2	2	2
Mvmt Flow	201	91	43	1581	406	0
Major/Minor	Minor2	Major1		Major2		
Conflicting Flow All	1283	203	406	0	-	0
Stage 1	406	-	-	-	-	-
Stage 2	877	-	-	-	-	-
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	*~ 157	*969	1333	-	-	-
Stage 1	*817	-	-	-	-	-
Stage 2	*491	-	-	-	-	-
Platoon blocked, %		1	1	-	-	-
Mov Cap-1 Maneuver	*~ 152	*969	1333	-	-	-
Mov Cap-2 Maneuver	*323	-	-	-	-	-
Stage 1	*791	-	-	-	-	-
Stage 2	*491	-	-	-	-	-
Approach	EB	NB		SB		
HCM Control Delay, s	33.3	0.2		0		
HCM LOS	D					
Minor Lane/Major Mvmt	NBL	NBT	EBLn1	SBT	SBR	
Capacity (veh/h)	1333	-	408	-	-	
HCM Lane V/C Ratio	0.033	-	0.717	-	-	
HCM Control Delay (s)	7.8	-	33.3	-	-	
HCM Lane LOS	A	-	D	-	-	
HCM 95th %tile Q(veh)	0.1	-	5.5	-	-	
Notes						
~: Volume exceeds capacity		\$: Delay exceeds 300s		+: Computation Not Defined		*: All major volume in platoon

Intersection						
Int Delay, s/veh	1.4					
Movement	EBL	EBR	NBL	NBT	SBT	SBR
Lane Configurations						
Traffic Vol, veh/h	39	39	88	611	1300	0
Future Vol, veh/h	39	39	88	611	1300	0
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	-	-	-
Veh in Median Storage, #	1	-	-	0	0	-
Grade, %	0	-	-	0	0	-
Peak Hour Factor	77	77	83	90	96	92
Heavy Vehicles, %	2	2	2	2	2	2
Mvmt Flow	51	51	106	679	1354	0
Major/Minor	Minor2	Major1		Major2		
Conflicting Flow All	1906	677	1354	0	-	0
Stage 1	1354	-	-	-	-	-
Stage 2	552	-	-	-	-	-
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	*60	*528	*790	-	-	-
Stage 1	*499	-	-	-	-	-
Stage 2	*797	-	-	-	-	-
Platoon blocked, %		1	1	-	-	-
Mov Cap-1 Maneuver	*52	*528	*790	-	-	-
Mov Cap-2 Maneuver	*265	-	-	-	-	-
Stage 1	*432	-	-	-	-	-
Stage 2	*797	-	-	-	-	-
Approach	EB	NB		SB		
HCM Control Delay, s	19.3	1.4		0		
HCM LOS	C					
Minor Lane/Major Mvmt	NBL	NBT	EBLn1	SBT	SBR	
Capacity (veh/h)	* 790	-	353	-	-	
HCM Lane V/C Ratio	0.134	-	0.287	-	-	
HCM Control Delay (s)	10.3	-	19.3	-	-	
HCM Lane LOS	B	-	C	-	-	
HCM 95th %tile Q(veh)	0.5	-	1.2	-	-	
Notes						
~: Volume exceeds capacity		\$: Delay exceeds 300s		+: Computation Not Defined		*: All major volume in platoon

Intersection						
Int Delay, s/veh	4.4					
Movement	EBL	EBR	NBL	NBT	SBT	SBR
Lane Configurations						
Traffic Vol, veh/h	148	77	28	1260	321	0
Future Vol, veh/h	148	77	28	1260	321	0
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	-	-	-
Veh in Median Storage, #	1	-	-	0	0	-
Grade, %	0	-	-	0	0	-
Peak Hour Factor	70	80	60	85	85	92
Heavy Vehicles, %	2	2	2	2	2	2
Mvmt Flow	211	96	47	1482	378	0
Major/Minor	Minor2	Major1		Major2		
Conflicting Flow All	1213	189	378	0	-	0
Stage 1	378	-	-	-	-	-
Stage 2	835	-	-	-	-	-
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	*969	1369	-	-	-
Stage 1	*846	-	-	-	-	-
Stage 2	*535	-	-	-	-	-
Platoon blocked, %		1	1	-	-	-
Mov Cap-1 Maneuver	*~ 168	*969	1369	-	-	-
Mov Cap-2 Maneuver	*349	-	-	-	-	-
Stage 1	*817	-	-	-	-	-
Stage 2	*535	-	-	-	-	-
Approach	EB	NB		SB		
HCM Control Delay, s	30.7	0.2		0		
HCM LOS	D					
Minor Lane/Major Mvmt	NBL	NBT	EBLn1	SBT	SBR	
Capacity (veh/h)	1369	-	436	-	-	
HCM Lane V/C Ratio	0.034	-	0.706	-	-	
HCM Control Delay (s)	7.7	-	30.7	-	-	
HCM Lane LOS	A	-	D	-	-	
HCM 95th %tile Q(veh)	0.1	-	5.4	-	-	
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	41	41	92	589	1210	0
Future Vol, veh/h	41	41	92	589	1210	0
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	-	-	-
Veh in Median Storage, #	1	-	-	0	0	-
Grade, %	0	-	-	0	0	-
Peak Hour Factor	92	92	92	92	96	92
Heavy Vehicles, %	2	2	2	2	2	2
Mvmt Flow	45	45	100	640	1260	0
Major/Minor	Minor2	Major1		Major2		
Conflicting Flow All	1780	630	1260	0	-	0
Stage 1	1260	-	-	-	-	-
Stage 2	520	-	-	-	-	-
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	*73	*580	*868	-	-	-
Stage 1	*548	-	-	-	-	-
Stage 2	*797	-	-	-	-	-
Platoon blocked, %		1	1	-	-	-
Mov Cap-1 Maneuver	*65	*580	*868	-	-	-
Mov Cap-2 Maneuver	*290	-	-	-	-	-
Stage 1	*485	-	-	-	-	-
Stage 2	*797	-	-	-	-	-
Approach	EB	NB		SB		
HCM Control Delay, s	17.1	1.3		0		
HCM LOS	C					
Minor Lane/Major Mvmt	NBL	NBT	EBLn1	SBT	SBR	
Capacity (veh/h)	* 868	-	387	-	-	
HCM Lane V/C Ratio	0.115	-	0.23	-	-	
HCM Control Delay (s)	9.7	-	17.1	-	-	
HCM Lane LOS	A	-	C	-	-	
HCM 95th %tile Q(veh)	0.4	-	0.9	-	-	
Notes						
~: Volume exceeds capacity		\$: Delay exceeds 300s		+: Computation Not Defined		*: All major volume in platoon

Intersection						
Int Delay, s/veh	5.3					
Movement	EBL	EBR	NBL	NBT	SBT	SBR
Lane Configurations						
Traffic Vol, veh/h	148	77	28	1405	361	0
Future Vol, veh/h	148	77	28	1405	361	0
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	-	-	-
Veh in Median Storage, #	1	-	-	0	0	-
Grade, %	0	-	-	0	0	-
Peak Hour Factor	70	80	60	85	85	92
Heavy Vehicles, %	2	2	2	2	2	2
Mvmt Flow	211	96	47	1653	425	0
Major/Minor	Minor2	Major1		Major2		
Conflicting Flow All	1346	213	425	0	-	0
Stage 1	425	-	-	-	-	-
Stage 2	921	-	-	-	-	-
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	*~ 143	*934	1382	-	-	-
Stage 1	*868	-	-	-	-	-
Stage 2	*469	-	-	-	-	-
Platoon blocked, %		1	1	-	-	-
Mov Cap-1 Maneuver	*~ 138	*934	1382	-	-	-
Mov Cap-2 Maneuver	*310	-	-	-	-	-
Stage 1	*838	-	-	-	-	-
Stage 2	*469	-	-	-	-	-
Approach	EB	NB		SB		
HCM Control Delay, s	40.5	0.2		0		
HCM LOS	E					
Minor Lane/Major Mvmt	NBL	NBT	EBLn1	SBT	SBR	
Capacity (veh/h)	1382	-	392	-	-	
HCM Lane V/C Ratio	0.034	-	0.785	-	-	
HCM Control Delay (s)	7.7	-	40.5	-	-	
HCM Lane LOS	A	-	E	-	-	
HCM 95th %tile Q(veh)	0.1	-	6.7	-	-	
Notes						
~: Volume exceeds capacity		\$: Delay exceeds 300s		+: Computation Not Defined		*: All major volume in platoon

Intersection						
Int Delay, s/veh	1.4					
Movement	EBL	EBR	NBL	NBT	SBT	SBR
Lane Configurations						
Traffic Vol, veh/h	41	41	92	640	1359	0
Future Vol, veh/h	41	41	92	640	1359	0
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	-	-	-
Veh in Median Storage, #	1	-	-	0	0	-
Grade, %	0	-	-	0	0	-
Peak Hour Factor	77	77	83	90	96	92
Heavy Vehicles, %	2	2	2	2	2	2
Mvmt Flow	53	53	111	711	1416	0
Major/Minor	Minor2	Major1		Major2		
Conflicting Flow All	1994	708	1416	0	-	0
Stage 1	1416	-	-	-	-	-
Stage 2	578	-	-	-	-	-
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	*~ 53	*502	*751	-	-	-
Stage 1	*474	-	-	-	-	-
Stage 2	*775	-	-	-	-	-
Platoon blocked, %		1	1	-	-	-
Mov Cap-1 Maneuver	*~ 45	*502	*751	-	-	-
Mov Cap-2 Maneuver	*249	-	-	-	-	-
Stage 1	*404	-	-	-	-	-
Stage 2	*775	-	-	-	-	-
Approach	EB	NB		SB		
HCM Control Delay, s	20.8	1.4		0		
HCM LOS	C					
Minor Lane/Major Mvmt	NBL	NBT	EBLn1	SBT	SBR	
Capacity (veh/h)	* 751	-	333	-	-	
HCM Lane V/C Ratio	0.148	-	0.32	-	-	
HCM Control Delay (s)	10.6	-	20.8	-	-	
HCM Lane LOS	B	-	C	-	-	
HCM 95th %tile Q(veh)	0.5	-	1.3	-	-	
Notes						
~: Volume exceeds capacity		\$: Delay exceeds 300s		+: Computation Not Defined		*: All major volume in platoon

Intersection						
Int Delay, s/veh	0.1					
Movement	WBL	WBR	NBT	NBR	SBL	SBT
Lane Configurations						
Traffic Vol, veh/h	4	0	873	42	2	84
Future Vol, veh/h	4	0	873	42	2	84
Conflicting Peds, #/hr	0	0	0	0	0	0
Sign Control	Stop	Stop	Free	Free	Free	Free
RT Channelized	-	None	-	None	-	None
Storage Length	75	0	-	-	75	-
Veh in Median Storage, #	1	-	0	-	-	0
Grade, %	0	-	0	-	-	0
Peak Hour Factor	100	92	88	62	50	88
Heavy Vehicles, %	2	2	2	2	2	2
Mvmt Flow	4	0	992	68	4	95
Major/Minor	Minor1	Major1	Major2			
Conflicting Flow All	1082	530	0	0	1060	0
Stage 1	1026	-	-	-	-	-
Stage 2	56	-	-	-	-	-
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	212	493	-	-	653	-
Stage 1	307	-	-	-	-	-
Stage 2	960	-	-	-	-	-
Platoon blocked, %			-	-		-
Mov Cap-1 Maneuver	211	493	-	-	653	-
Mov Cap-2 Maneuver	269	-	-	-	-	-
Stage 1	305	-	-	-	-	-
Stage 2	960	-	-	-	-	-
Approach	WB	NB	SB			
HCM Control Delay, s	18.6	0	0.4			
HCM LOS	C					
Minor Lane/Major Mvmt	NBT	NBRWBLn1WBLn2	SBL	SBT		
Capacity (veh/h)	-	- 269	- 653	-		
HCM Lane V/C Ratio	-	- 0.015	- 0.006	-		
HCM Control Delay (s)	-	- 18.6	0 10.5	-		
HCM Lane LOS	-	- C	A B	-		
HCM 95th %tile Q(veh)	-	- 0	- 0	-		

Intersection						
Int Delay, s/veh	1.3					
Movement	WBL	WBR	NBT	NBR	SBL	SBT
Lane Configurations						
Traffic Vol, veh/h	93	7	185	49	5	979
Future Vol, veh/h	93	7	185	49	5	979
Conflicting Peds, #/hr	0	0	0	0	0	0
Sign Control	Stop	Stop	Free	Free	Free	Free
RT Channelized	-	None	-	None	-	None
Storage Length	75	0	-	-	75	-
Veh in Median Storage, #	1	-	0	-	-	0
Grade, %	0	-	0	-	-	0
Peak Hour Factor	89	58	93	82	42	89
Heavy Vehicles, %	2	2	2	2	2	2
Mvmt Flow	104	12	199	60	12	1100
Major/Minor	Minor1	Major1		Major2		
Conflicting Flow All	803	130	0	0	259	0
Stage 1	229	-	-	-	-	-
Stage 2	574	-	-	-	-	-
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	321	896	-	-	1303	-
Stage 1	787	-	-	-	-	-
Stage 2	527	-	-	-	-	-
Platoon blocked, %			-	-		-
Mov Cap-1 Maneuver	318	896	-	-	1303	-
Mov Cap-2 Maneuver	416	-	-	-	-	-
Stage 1	780	-	-	-	-	-
Stage 2	527	-	-	-	-	-
Approach	WB	NB		SB		
HCM Control Delay, s	15.7	0		0.1		
HCM LOS	C					
Minor Lane/Major Mvmt	NBT	NBRWBLn1WBLn2		SBL	SBT	
Capacity (veh/h)	-	-	416	896	1303	-
HCM Lane V/C Ratio	-	-	0.251	0.013	0.009	-
HCM Control Delay (s)	-	-	16.5	9.1	7.8	-
HCM Lane LOS	-	-	C	A	A	-
HCM 95th %tile Q(veh)	-	-	1	0	0	-

Intersection						
Int Delay, s/veh	0.1					
Movement	WBL	WBR	NBT	NBR	SBL	SBT
Lane Configurations						
Traffic Vol, veh/h	4	0	922	44	2	89
Future Vol, veh/h	4	0	922	44	2	89
Conflicting Peds, #/hr	0	0	0	0	0	0
Sign Control	Stop	Stop	Free	Free	Free	Free
RT Channelized	-	None	-	None	-	None
Storage Length	75	0	-	-	75	-
Veh in Median Storage, #	1	-	0	-	-	0
Grade, %	0	-	0	-	-	0
Peak Hour Factor	100	92	90	70	50	92
Heavy Vehicles, %	2	2	2	2	2	2
Mvmt Flow	4	0	1024	63	4	97
Major/Minor	Minor1	Major1	Major2			
Conflicting Flow All	1113	544	0	0	1087	0
Stage 1	1056	-	-	-	-	-
Stage 2	57	-	-	-	-	-
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	203	483	-	-	638	-
Stage 1	296	-	-	-	-	-
Stage 2	959	-	-	-	-	-
Platoon blocked, %			-	-		-
Mov Cap-1 Maneuver	202	483	-	-	638	-
Mov Cap-2 Maneuver	259	-	-	-	-	-
Stage 1	294	-	-	-	-	-
Stage 2	959	-	-	-	-	-
Approach	WB	NB	SB			
HCM Control Delay, s	19.1	0	0.4			
HCM LOS	C					
Minor Lane/Major Mvmt	NBT	NBRWBLn1WBLn2	SBL	SBT		
Capacity (veh/h)	-	- 259	- 638	-		
HCM Lane V/C Ratio	-	- 0.015	- 0.006	-		
HCM Control Delay (s)	-	- 19.1	0 10.7	-		
HCM Lane LOS	-	- C	A B	-		
HCM 95th %tile Q(veh)	-	- 0	- 0	-		

Intersection						
Int Delay, s/veh	1.4					
Movement	WBL	WBR	NBT	NBR	SBL	SBT
Lane Configurations						
Traffic Vol, veh/h	98	7	195	52	5	1034
Future Vol, veh/h	98	7	195	52	5	1034
Conflicting Peds, #/hr	0	0	0	0	0	0
Sign Control	Stop	Stop	Free	Free	Free	Free
RT Channelized	-	None	-	None	-	None
Storage Length	75	0	-	-	75	-
Veh in Median Storage, #	1	-	0	-	-	0
Grade, %	0	-	0	-	-	0
Peak Hour Factor	89	58	93	82	42	89
Heavy Vehicles, %	2	2	2	2	2	2
Mvmt Flow	110	12	210	63	12	1162
Major/Minor	Minor1	Major1	Major2			
Conflicting Flow All	847	137	0	0	273	0
Stage 1	242	-	-	-	-	-
Stage 2	605	-	-	-	-	-
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	301	886	-	-	1287	-
Stage 1	776	-	-	-	-	-
Stage 2	508	-	-	-	-	-
Platoon blocked, %			-	-		-
Mov Cap-1 Maneuver	298	886	-	-	1287	-
Mov Cap-2 Maneuver	399	-	-	-	-	-
Stage 1	769	-	-	-	-	-
Stage 2	508	-	-	-	-	-
Approach	WB	NB	SB			
HCM Control Delay, s	16.6	0	0.1			
HCM LOS	C					
Minor Lane/Major Mvmt	NBT	NBRWBLn1WBLn2	SBL	SBT		
Capacity (veh/h)	-	- 399 886	1287	-		
HCM Lane V/C Ratio	-	- 0.276 0.014	0.009	-		
HCM Control Delay (s)	-	- 17.4 9.1	7.8	-		
HCM Lane LOS	-	- C A	A	-		
HCM 95th %tile Q(veh)	-	- 1.1 0	0	-		

HCM 6th TWSC
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Intersection						
Int Delay, s/veh	3.8					
Movement	WBL	WBR	NBT	NBR	SBL	SBT
Lane Configurations						
Traffic Vol, veh/h	89	0	1254	645	2	219
Future Vol, veh/h	89	0	1254	645	2	219
Conflicting Peds, #/hr	0	0	0	0	0	0
Sign Control	Stop	Stop	Free	Free	Free	Free
RT Channelized	-	None	-	None	-	None
Storage Length	75	0	-	-	75	-
Veh in Median Storage, #	1	-	0	-	-	0
Grade, %	0	-	0	-	-	0
Peak Hour Factor	100	92	92	92	92	92
Heavy Vehicles, %	2	2	2	2	2	2
Mvmt Flow	89	0	1363	701	2	238
Major/Minor	Minor1	Major1		Major2		
Conflicting Flow All	1837	1032	0	0	2064	0
Stage 1	1714	-	-	-	-	-
Stage 2	123	-	-	-	-	-
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	~ 67	230	-	-	267	-
Stage 1	131	-	-	-	-	-
Stage 2	889	-	-	-	-	-
Platoon blocked, %			-	-		-
Mov Cap-1 Maneuver	~ 67	230	-	-	267	-
Mov Cap-2 Maneuver	115	-	-	-	-	-
Stage 1	130	-	-	-	-	-
Stage 2	889	-	-	-	-	-
Approach	WB	NB		SB		
HCM Control Delay, s	101.6	0		0.2		
HCM LOS	F					
Minor Lane/Major Mvmt	NBT	NBRWBLn1WBLn2		SBL	SBT	
Capacity (veh/h)	-	-	115	-	267	-
HCM Lane V/C Ratio	-	-	0.774	-	0.008	-
HCM Control Delay (s)	-	-	101.6	0	18.6	-
HCM Lane LOS	-	-	F	A	C	-
HCM 95th %tile Q(veh)	-	-	4.4	-	0	-
Notes						
~: Volume exceeds capacity		\$: Delay exceeds 300s		+: Computation Not Defined		*: All major volume in platoon

Intersection						
Int Delay, s/veh	57.5					
Movement	WBL	WBR	NBT	NBR	SBL	SBT
Lane Configurations						
Traffic Vol, veh/h	418	7	311	263	5	1524
Future Vol, veh/h	418	7	311	263	5	1524
Conflicting Peds, #/hr	0	0	0	0	0	0
Sign Control	Stop	Stop	Free	Free	Free	Free
RT Channelized	-	None	-	None	-	None
Storage Length	75	0	-	-	75	-
Veh in Median Storage, #	1	-	0	-	-	0
Grade, %	0	-	0	-	-	0
Peak Hour Factor	92	92	93	92	92	92
Heavy Vehicles, %	2	2	2	2	2	2
Mvmt Flow	454	8	334	286	5	1657
Major/Minor	Minor1	Major1		Major2		
Conflicting Flow All	1316	310	0	0	620	0
Stage 1	477	-	-	-	-	-
Stage 2	839	-	-	-	-	-
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	~ 149	686	-	-	956	-
Stage 1	590	-	-	-	-	-
Stage 2	~ 384	-	-	-	-	-
Platoon blocked, %			-	-		-
Mov Cap-1 Maneuver	~ 148	686	-	-	956	-
Mov Cap-2 Maneuver	~ 273	-	-	-	-	-
Stage 1	587	-	-	-	-	-
Stage 2	~ 384	-	-	-	-	-
Approach	WB	NB		SB		
HCM Control Delay, \$	341.6	0		0		
HCM LOS	F					
Minor Lane/Major Mvmt	NBT	NBR	WBLn1	WBLn2	SBL	SBT
Capacity (veh/h)	-	-	273	686	956	-
HCM Lane V/C Ratio	-	-	1.664	0.011	0.006	-
HCM Control Delay (s)	-	-	\$ 347.1	10.3	8.8	-
HCM Lane LOS	-	-	F	B	A	-
HCM 95th %tile Q(veh)	-	-	28.6	0	0	-
Notes						
~: Volume exceeds capacity		\$: Delay exceeds 300s		+: Computation Not Defined		*: All major volume in platoon

HCM 6th Signalized Intersection Summary
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Movement	WBL	WBR	NBT	NBR	SBL	SBT
Lane Configurations						
Traffic Volume (veh/h)	89	0	1254	645	2	219
Future Volume (veh/h)	89	0	1254	645	2	219
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	89	0	1363	701	2	238
Peak Hour Factor	1.00	0.92	0.92	0.92	0.92	0.92
Percent Heavy Veh, %	2	2	2	2	2	2
Cap, veh/h	116	103	1955	924	191	2967
Arrive On Green	0.07	0.00	0.83	0.83	0.83	0.83
Sat Flow, veh/h	1781	1585	2435	1107	202	3647
Grp Volume(v), veh/h	89	0	1006	1058	2	238
Grp Sat Flow(s),veh/h/ln	1781	1585	1777	1671	202	1777
Q Serve(g_s), s	4.4	0.0	19.4	25.7	0.4	1.1
Cycle Q Clear(g_c), s	4.4	0.0	19.4	25.7	26.1	1.1
Prop In Lane	1.00	1.00		0.66	1.00	
Lane Grp Cap(c), veh/h	116	103	1484	1395	191	2967
V/C Ratio(X)	0.77	0.00	0.68	0.76	0.01	0.08
Avail Cap(c_a), veh/h	362	322	1484	1395	191	2967
HCM Platoon Ratio	1.00	1.00	1.00	1.00	1.00	1.00
Upstream Filter(I)	1.00	0.00	1.00	1.00	1.00	1.00
Uniform Delay (d), s/veh	41.4	0.0	2.8	3.3	9.2	1.3
Incr Delay (d2), s/veh	10.1	0.0	2.5	3.9	0.1	0.1
Initial Q Delay(d3),s/veh	0.0	0.0	0.0	0.0	0.0	0.0
%ile BackOfQ(50%),veh/ln	2.2	0.0	3.9	5.1	0.0	0.2
Unsig. Movement Delay, s/veh						
LnGrp Delay(d),s/veh	51.5	0.0	5.3	7.3	9.3	1.4
LnGrp LOS	D	A	A	A	A	A
Approach Vol, veh/h	89		2064			240
Approach Delay, s/veh	51.5		6.3			1.4
Approach LOS	D		A			A
Timer - Assigned Phs	2		6		8	
Phs Duration (G+Y+Rc), s	79.6		79.6		10.4	
Change Period (Y+Rc), s	4.5		4.5		4.5	
Max Green Setting (Gmax), s	62.7		62.7		18.3	
Max Q Clear Time (g_c+l1), s	27.7		28.1		6.4	
Green Ext Time (p_c), s	25.1		1.7		0.1	
Intersection Summary						
HCM 6th Ctrl Delay			7.5			
HCM 6th LOS			A			

HCM 6th Signalized Intersection Summary
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Movement	WBL	WBR	NBT	NBR	SBL	SBT
Lane Configurations						
Traffic Volume (veh/h)	418	7	311	263	5	1524
Future Volume (veh/h)	418	7	311	263	5	1524
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	454	8	334	286	5	1657
Peak Hour Factor	0.92	0.92	0.93	0.92	0.92	0.92
Percent Heavy Veh, %	2	2	2	2	2	2
Cap, veh/h	496	442	1138	956	510	2208
Arrive On Green	0.28	0.28	0.62	0.62	0.62	0.62
Sat Flow, veh/h	1781	1585	1925	1539	804	3647
Grp Volume(v), veh/h	454	8	324	296	5	1657
Grp Sat Flow(s),veh/h/ln	1781	1585	1777	1593	804	1777
Q Serve(g_s), s	22.2	0.3	7.6	7.8	0.3	29.8
Cycle Q Clear(g_c), s	22.2	0.3	7.6	7.8	8.0	29.8
Prop In Lane	1.00	1.00		0.97	1.00	
Lane Grp Cap(c), veh/h	496	442	1104	990	510	2208
V/C Ratio(X)	0.91	0.02	0.29	0.30	0.01	0.75
Avail Cap(c_a), veh/h	604	537	1104	990	510	2208
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	31.4	23.5	7.9	7.9	9.8	12.1
Incr Delay (d2), s/veh	16.6	0.0	0.7	0.8	0.0	2.4
Initial Q Delay(d3),s/veh	0.0	0.0	0.0	0.0	0.0	0.0
%ile BackOfQ(50%),veh/ln	11.5	0.1	2.8	2.6	0.0	11.0
Unsig. Movement Delay, s/veh						
LnGrp Delay(d),s/veh	48.0	23.6	8.6	8.7	9.8	14.5
LnGrp LOS	D	C	A	A	A	B
Approach Vol, veh/h	462		620			1662
Approach Delay, s/veh	47.6		8.6			14.5
Approach LOS	D		A			B
Timer - Assigned Phs	2		6		8	
Phs Duration (G+Y+Rc), s	60.4		60.4		29.6	
Change Period (Y+Rc), s	4.5		4.5		4.5	
Max Green Setting (Gmax), s	50.5		50.5		30.5	
Max Q Clear Time (g_c+l1), s	9.8		31.8		24.2	
Green Ext Time (p_c), s	4.6		12.4		0.9	
Intersection Summary						
HCM 6th Ctrl Delay			18.7			
HCM 6th LOS			B			

Intersection						
Int Delay, s/veh	0.1					
Movement	WBL	WBR	NBT	NBR	SBL	SBT
Lane Configurations						
Traffic Vol, veh/h	4	0	969	47	2	93
Future Vol, veh/h	4	0	969	47	2	93
Conflicting Peds, #/hr	0	0	0	0	0	0
Sign Control	Stop	Stop	Free	Free	Free	Free
RT Channelized	-	None	-	None	-	None
Storage Length	75	0	-	-	75	-
Veh in Median Storage, #	1	-	0	-	-	0
Grade, %	0	-	0	-	-	0
Peak Hour Factor	100	92	92	70	50	92
Heavy Vehicles, %	2	2	2	2	2	2
Mvmt Flow	4	0	1053	67	4	101

Major/Minor	Minor1	Major1	Major2		
Conflicting Flow All	1146	560	0	0	1120
Stage 1	1087	-	-	-	-
Stage 2	59	-	-	-	-
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	193	472	-	-	619
Stage 1	285	-	-	-	-
Stage 2	956	-	-	-	-
Platoon blocked, %			-	-	-
Mov Cap-1 Maneuver	192	472	-	-	619
Mov Cap-2 Maneuver	250	-	-	-	-
Stage 1	283	-	-	-	-
Stage 2	956	-	-	-	-

Approach	WB	NB	SB
HCM Control Delay, s	19.6	0	0.4
HCM LOS	C		

Minor Lane/Major Mvmt	NBT	NBRWBLn1WBLn2	SBL	SBT
Capacity (veh/h)	-	- 250	-	619
HCM Lane V/C Ratio	-	- 0.016	-	0.006
HCM Control Delay (s)	-	- 19.6	0	10.9
HCM Lane LOS	-	- C	A	B
HCM 95th %tile Q(veh)	-	- 0	-	0

Intersection						
Int Delay, s/veh	1.3					
Movement	WBL	WBR	NBT	NBR	SBL	SBT
Lane Configurations						
Traffic Vol, veh/h	103	8	205	54	6	1087
Future Vol, veh/h	103	8	205	54	6	1087
Conflicting Peds, #/hr	0	0	0	0	0	0
Sign Control	Stop	Stop	Free	Free	Free	Free
RT Channelized	-	None	-	None	-	None
Storage Length	75	0	-	-	75	-
Veh in Median Storage, #	1	-	0	-	-	0
Grade, %	0	-	0	-	-	0
Peak Hour Factor	92	92	93	92	92	92
Heavy Vehicles, %	2	2	2	2	2	2
Mvmt Flow	112	9	220	59	7	1182
Major/Minor	Minor1	Major1	Major2			
Conflicting Flow All	855	140	0	0	279	0
Stage 1	250	-	-	-	-	-
Stage 2	605	-	-	-	-	-
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	297	882	-	-	1281	-
Stage 1	768	-	-	-	-	-
Stage 2	508	-	-	-	-	-
Platoon blocked, %			-	-		-
Mov Cap-1 Maneuver	296	882	-	-	1281	-
Mov Cap-2 Maneuver	400	-	-	-	-	-
Stage 1	764	-	-	-	-	-
Stage 2	508	-	-	-	-	-
Approach	WB	NB	SB			
HCM Control Delay, s	16.9	0	0			
HCM LOS	C					
Minor Lane/Major Mvmt	NBT	NBRWBLn1WBLn2	SBL	SBT		
Capacity (veh/h)	-	- 400	882	1281	-	
HCM Lane V/C Ratio	-	- 0.28	0.01	0.005	-	
HCM Control Delay (s)	-	- 17.5	9.1	7.8	-	
HCM Lane LOS	-	- C	A	A	-	
HCM 95th %tile Q(veh)	-	- 1.1	0	0	-	

HCM 6th Signalized Intersection Summary
14: Chester Street & Otero Avenue

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Movement	WBL	WBR	NBT	NBR	SBL	SBT
Lane Configurations						
Traffic Volume (veh/h)	89	0	1301	648	2	223
Future Volume (veh/h)	89	0	1301	648	2	223
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	89	0	1414	704	2	242
Peak Hour Factor	1.00	0.92	0.92	0.92	0.92	0.92
Percent Heavy Veh, %	2	2	2	2	2	2
Cap, veh/h	116	103	1976	906	182	2967
Arrive On Green	0.07	0.00	0.83	0.83	0.83	0.83
Sat Flow, veh/h	1781	1585	2460	1086	192	3647
Grp Volume(v), veh/h	89	0	1032	1086	2	242
Grp Sat Flow(s),veh/h/ln	1781	1585	1777	1675	192	1777
Q Serve(g_s), s	4.4	0.0	20.6	27.4	0.4	1.1
Cycle Q Clear(g_c), s	4.4	0.0	20.6	27.4	27.8	1.1
Prop In Lane	1.00	1.00		0.65	1.00	
Lane Grp Cap(c), veh/h	116	103	1484	1399	182	2967
V/C Ratio(X)	0.77	0.00	0.70	0.78	0.01	0.08
Avail Cap(c_a), veh/h	362	322	1484	1399	182	2967
HCM Platoon Ratio	1.00	1.00	1.00	1.00	1.00	1.00
Upstream Filter(I)	1.00	0.00	1.00	1.00	1.00	1.00
Uniform Delay (d), s/veh	41.4	0.0	2.9	3.5	10.0	1.3
Incr Delay (d2), s/veh	10.1	0.0	2.7	4.3	0.1	0.1
Initial Q Delay(d3),s/veh	0.0	0.0	0.0	0.0	0.0	0.0
%ile BackOfQ(50%),veh/ln	2.2	0.0	4.2	5.5	0.0	0.2
Unsig. Movement Delay, s/veh						
LnGrp Delay(d),s/veh	51.5	0.0	5.6	7.8	10.1	1.4
LnGrp LOS	D	A	A	A	B	A
Approach Vol, veh/h	89		2118			244
Approach Delay, s/veh	51.5		6.7			1.4
Approach LOS	D		A			A
Timer - Assigned Phs	2		6		8	
Phs Duration (G+Y+Rc), s	79.6		79.6		10.4	
Change Period (Y+Rc), s	4.5		4.5		4.5	
Max Green Setting (Gmax), s	62.7		62.7		18.3	
Max Q Clear Time (g_c+l1), s	29.4		29.8		6.4	
Green Ext Time (p_c), s	25.0		1.7		0.1	
Intersection Summary						
HCM 6th Ctrl Delay			7.8			
HCM 6th LOS			A			

HCM 6th Signalized Intersection Summary
14: Chester Street & Otero Avenue

2040 Total PM.syn
04/25/2019

						
Movement	WBL	WBR	NBT	NBR	SBL	SBT
Lane Configurations						
Traffic Volume (veh/h)	423	8	321	265	6	1577
Future Volume (veh/h)	423	8	321	265	6	1577
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	460	9	345	288	7	1714
Peak Hour Factor	0.92	0.92	0.93	0.92	0.92	0.92
Percent Heavy Veh, %	2	2	2	2	2	2
Cap, veh/h	502	447	1146	940	500	2197
Arrive On Green	0.28	0.28	0.62	0.62	0.62	0.62
Sat Flow, veh/h	1781	1585	1947	1520	794	3647
Grp Volume(v), veh/h	460	9	331	302	7	1714
Grp Sat Flow(s),veh/h/ln	1781	1585	1777	1597	794	1777
Q Serve(g_s), s	22.5	0.4	7.9	8.0	0.4	32.0
Cycle Q Clear(g_c), s	22.5	0.4	7.9	8.0	8.4	32.0
Prop In Lane	1.00	1.00		0.95	1.00	
Lane Grp Cap(c), veh/h	502	447	1098	987	500	2197
V/C Ratio(X)	0.92	0.02	0.30	0.31	0.01	0.78
Avail Cap(c_a), veh/h	604	537	1098	987	500	2197
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	31.3	23.3	8.1	8.1	10.1	12.7
Incr Delay (d2), s/veh	17.0	0.0	0.7	0.8	0.1	2.8
Initial Q Delay(d3),s/veh	0.0	0.0	0.0	0.0	0.0	0.0
%ile BackOfQ(50%),veh/ln	11.7	0.1	2.9	2.7	0.1	11.9
Unsig. Movement Delay, s/veh						
LnGrp Delay(d),s/veh	48.3	23.4	8.8	8.9	10.1	15.5
LnGrp LOS	D	C	A	A	B	B
Approach Vol, veh/h	469		633			1721
Approach Delay, s/veh	47.8		8.8			15.5
Approach LOS	D		A			B
Timer - Assigned Phs	2		6		8	
Phs Duration (G+Y+Rc), s	60.1		60.1		29.9	
Change Period (Y+Rc), s	4.5		4.5		4.5	
Max Green Setting (Gmax), s	50.5		50.5		30.5	
Max Q Clear Time (g_c+l1), s	10.0		34.0		24.5	
Green Ext Time (p_c), s	4.7		11.7		0.9	
Intersection Summary						
HCM 6th Ctrl Delay			19.4			
HCM 6th LOS			B			

HCM 6th Signalized Intersection Summary

15: Quebec Street & County Line Road

2019 Existing AM.syn

04/24/2019

														
Movement	EBL	EBT	EBR	WBL	WBT	WBR	NBL	NBT	NBR	SBL	SBT	SBR		
Lane Configurations	 	 		 	 		 	  		 				
Traffic Volume (veh/h)	124	1164	444	128	465	69	460	1137	619	131	472	111		
Future Volume (veh/h)	124	1164	444	128	465	69	460	1137	619	131	472	111		
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	155	1238	0	141	528	76	495	1249	673	177	555	128		
Peak Hour Factor	0.80	0.94	0.88	0.91	0.88	0.91	0.93	0.91	0.92	0.74	0.85	0.87		
Percent Heavy Veh, %	2	2	2	2	2	2	2	2	2	2	2	2		
Cap, veh/h	205	1512		194	1500	757	570	1683	611	192	917	207		
Arrive On Green	0.06	0.43	0.00	0.06	0.42	0.42	0.16	0.33	0.33	0.06	0.22	0.22		
Sat Flow, veh/h	3456	3554	1585	3456	3554	1585	3456	5106	1585	3456	4165	940		
Grp Volume(v), veh/h	155	1238	0	141	528	76	495	1249	673	177	451	232		
Grp Sat Flow(s),veh/h/ln	1728	1777	1585	1728	1777	1585	1728	1702	1585	1728	1702	1701		
Q Serve(g_s), s	6.0	41.5	0.0	5.4	13.6	3.6	18.8	29.3	44.5	6.9	16.1	16.6		
Cycle Q Clear(g_c), s	6.0	41.5	0.0	5.4	13.6	3.6	18.8	29.3	44.5	6.9	16.1	16.6		
Prop In Lane	1.00		1.00	1.00		1.00	1.00		1.00	1.00		0.55		
Lane Grp Cap(c), veh/h	205	1512		194	1500	757	570	1683	611	192	750	375		
V/C Ratio(X)	0.76	0.82		0.73	0.35	0.10	0.87	0.74	1.10	0.92	0.60	0.62		
Avail Cap(c_a), veh/h	243	1512		346	1500	757	806	1683	611	192	750	375		
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	0.84	0.84	0.84	1.00	1.00	1.00	1.00	1.00	1.00		
Uniform Delay (d), s/veh	62.5	34.2	0.0	62.7	26.5	19.3	54.9	40.2	41.5	63.5	47.3	47.5		
Incr Delay (d2), s/veh	10.7	5.1	0.0	4.3	0.5	0.2	7.3	3.0	67.1	43.4	3.6	7.4		
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	2.9	18.8	0.0	2.5	5.9	1.4	8.8	12.7	31.4	4.2	7.2	7.8		
Unsig. Movement Delay, s/veh														
LnGrp Delay(d),s/veh	73.2	39.3	0.0	67.0	27.0	19.6	62.3	43.2	108.5	106.9	50.9	54.9		
LnGrp LOS	E	D		E	C	B	E	D	F	F	D	D		
Approach Vol, veh/h	1393		A	745			2417			860				
Approach Delay, s/veh	43.1			33.8			65.3			63.5				
Approach LOS	D			C			E			E				
Timer - Assigned Phs	1	2	3	4	5	6	7	8						
Phs Duration (G+Y+Rc), s	12.0	49.0	12.1	61.9	26.8	34.2	12.5	61.5						
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	7.5	44.5	13.5	51.5	31.5	20.5	9.5	55.5						
Max Q Clear Time (g_c+l1), s	8.9	46.5	7.4	43.5	20.8	18.6	8.0	15.6						
Green Ext Time (p_c), s	0.0	0.0	0.2	5.1	1.4	0.9	0.1	4.3						

Intersection Summary

HCM 6th Ctrl Delay 55.0

HCM 6th LOS D

Notes

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

HCM 6th Signalized Intersection Summary

15: Quebec Street & County Line Road

2019 Existing PM.syn

04/24/2019

												
Movement	EBL	EBT	EBR	WBL	WBT	WBR	NBL	NBT	NBR	SBL	SBT	SBR
Lane Configurations												
Traffic Volume (veh/h)	122	679	569	580	1314	199	464	733	223	184	993	205
Future Volume (veh/h)	122	679	569	580	1314	199	464	733	223	184	993	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	144	754	0	617	1341	216	510	788	240	219	1103	228
Peak Hour Factor	0.85	0.90	0.87	0.94	0.98	0.92	0.91	0.93	0.93	0.84	0.90	0.90
Percent Heavy Veh, %	2	2	2	2	2	2	2	2	2	2	2	2
Cap, veh/h	166	882		653	1382	743	525	1787	854	276	1178	243
Arrive On Green	0.05	0.25	0.00	0.19	0.39	0.39	0.15	0.35	0.35	0.08	0.28	0.28
Sat Flow, veh/h	3456	3554	1585	3456	3554	1585	3456	5106	1585	3456	4241	876
Grp Volume(v), veh/h	144	754	0	617	1341	216	510	788	240	219	885	446
Grp Sat Flow(s),veh/h/ln	1728	1777	1585	1728	1777	1585	1728	1702	1585	1728	1702	1713
Q Serve(g_s), s	5.6	27.3	0.0	23.8	50.0	8.2	19.8	16.0	11.1	8.4	34.3	34.3
Cycle Q Clear(g_c), s	5.6	27.3	0.0	23.8	50.0	8.2	19.8	16.0	11.1	8.4	34.3	34.3
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	166	882		653	1382	743	525	1787	854	276	946	476
V/C Ratio(X)	0.87	0.86		0.95	0.97	0.29	0.97	0.44	0.28	0.79	0.94	0.94
Avail Cap(c_a), veh/h	166	882		653	1382	743	525	1787	854	422	946	476
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	0.10	0.10	0.10	1.00	1.00	1.00	1.00	1.00	1.00
Uniform Delay (d), s/veh	63.8	48.4	0.0	54.1	40.5	12.0	57.0	33.7	16.9	61.0	47.6	47.6
Incr Delay (d2), s/veh	34.8	10.4	0.0	3.8	3.4	0.1	32.1	0.8	0.8	5.8	17.4	28.2
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	3.3	13.4	0.0	10.7	22.2	2.9	11.0	6.8	4.3	3.9	16.8	18.3
Unsig. Movement Delay, s/veh												
LnGrp Delay(d),s/veh	98.7	58.8	0.0	57.8	43.9	12.1	89.0	34.5	17.7	66.9	65.0	75.8
LnGrp LOS	F	E		E	D	B	F	C	B	E	E	E
Approach Vol, veh/h	898		A		2174		1538				1550	
Approach Delay, s/veh	65.2				44.7		50.0				68.4	
Approach LOS	E				D		D				E	
Timer - Assigned Phs	1	2	3	4	5	6	7	8				
Phs Duration (G+Y+Rc), s	15.3	51.7	30.0	38.0	25.0	42.0	11.0	57.0				
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	41.5	25.5	33.5	20.5	37.5	6.5	52.5				
Max Q Clear Time (g_c+l1), s	10.4	18.0	25.8	29.3	21.8	36.3	7.6	52.0				
Green Ext Time (p_c), s	0.4	6.8	0.0	1.9	0.0	0.9	0.0	0.4				

Intersection Summary

HCM 6th Ctrl Delay 55.0

HCM 6th LOS D

Notes

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

HCM 6th Signalized Intersection Summary

15: Quebec Street & County Line Road

2030 Background AM.syn

04/24/2019

												
Movement	EBL	EBT	EBR	WBL	WBT	WBR	NBL	NBT	NBR	SBL	SBT	SBR
Lane Configurations												
Traffic Volume (veh/h)	131	1230	469	135	491	73	486	1201	654	138	499	117
Future Volume (veh/h)	131	1230	469	135	491	73	486	1201	654	138	499	117
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	142	1309	0	147	534	79	523	1305	711	150	542	127
Peak Hour Factor	0.92	0.94	0.92	0.92	0.92	0.92	0.93	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	190	1358		197	1365	700	569	1889	677	199	1092	250
Arrive On Green	0.06	0.38	0.00	0.06	0.38	0.38	0.16	0.37	0.37	0.06	0.26	0.26
Sat Flow, veh/h	3456	3554	1585	3456	3554	1585	3456	5106	1585	3456	4152	951
Grp Volume(v), veh/h	142	1309	0	147	534	79	523	1305	711	150	442	227
Grp Sat Flow(s),veh/h/ln	1728	1777	1585	1728	1777	1585	1728	1702	1585	1728	1702	1699
Q Serve(g_s), s	5.5	48.6	0.0	5.7	14.7	4.0	20.1	29.2	49.9	5.8	14.9	15.3
Cycle Q Clear(g_c), s	5.5	48.6	0.0	5.7	14.7	4.0	20.1	29.2	49.9	5.8	14.9	15.3
Prop In Lane	1.00		1.00	1.00		1.00	1.00		1.00	1.00		0.56
Lane Grp Cap(c), veh/h	190	1358		197	1365	700	569	1889	677	199	895	447
V/C Ratio(X)	0.75	0.96		0.75	0.39	0.11	0.92	0.69	1.05	0.75	0.49	0.51
Avail Cap(c_a), veh/h	192	1358		243	1365	700	576	1889	677	218	895	447
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	0.74	0.74	0.74	1.00	1.00	1.00	1.00	1.00	1.00
Uniform Delay (d), s/veh	62.9	40.8	0.0	62.7	30.1	22.1	55.5	36.0	38.7	62.7	42.1	42.3
Incr Delay (d2), s/veh	14.6	17.2	0.0	7.1	0.6	0.2	20.0	2.1	48.7	12.7	1.9	4.1
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	2.8	24.3	0.0	2.7	6.5	1.5	10.3	12.5	31.1	2.9	6.5	7.0
Unsig. Movement Delay, s/veh												
LnGrp Delay(d),s/veh	77.5	58.0	0.0	69.8	30.8	22.4	75.5	38.1	87.3	75.4	44.1	46.4
LnGrp LOS	E	E		E	C	C	E	D	F	E	D	D
Approach Vol, veh/h	1451		A	760			2539			819		
Approach Delay, s/veh	59.9			37.4			59.6			50.5		
Approach LOS	E			D			E			D		
Timer - Assigned Phs	1	2	3	4	5	6	7	8				
Phs Duration (G+Y+Rc), s	12.3	54.4	12.2	56.1	26.7	40.0	11.9	56.4				
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	8.5	49.5	9.5	49.5	22.5	35.5	7.5	51.5				
Max Q Clear Time (g_c+l1), s	7.8	51.9	7.7	50.6	22.1	17.3	7.5	16.7				
Green Ext Time (p_c), s	0.0	0.0	0.1	0.0	0.1	4.2	0.0	4.3				

Intersection Summary

HCM 6th Ctrl Delay 55.3

HCM 6th LOS E

Notes

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

HCM 6th Signalized Intersection Summary

15: Quebec Street & County Line Road

2030 Background PM.syn

04/24/2019

												
Movement	EBL	EBT	EBR	WBL	WBT	WBR	NBL	NBT	NBR	SBL	SBT	SBR
Lane Configurations												
Traffic Volume (veh/h)	129	717	601	613	1388	210	490	774	236	194	1049	217
Future Volume (veh/h)	129	717	601	613	1388	210	490	774	236	194	1049	217
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	140	779	0	652	1416	228	533	832	254	211	1140	236
Peak Hour Factor	0.92	0.92	0.92	0.94	0.98	0.92	0.92	0.93	0.93	0.92	0.92	0.92
Percent Heavy Veh, %	2	2	2	2	2	2	2	2	2	2	2	2
Cap, veh/h	166	908		678	1435	762	525	1724	846	266	1115	231
Arrive On Green	0.05	0.26	0.00	0.20	0.40	0.40	0.15	0.34	0.34	0.08	0.26	0.26
Sat Flow, veh/h	3456	3554	1585	3456	3554	1585	3456	5106	1585	3456	4239	877
Grp Volume(v), veh/h	140	779	0	652	1416	228	533	832	254	211	915	461
Grp Sat Flow(s),veh/h/ln	1728	1777	1585	1728	1777	1585	1728	1702	1585	1728	1702	1712
Q Serve(g_s), s	5.4	28.2	0.0	25.2	53.3	8.4	20.5	17.4	12.0	8.1	35.5	35.5
Cycle Q Clear(g_c), s	5.4	28.2	0.0	25.2	53.3	8.4	20.5	17.4	12.0	8.1	35.5	35.5
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	166	908		678	1435	762	525	1724	846	266	895	450
V/C Ratio(X)	0.84	0.86		0.96	0.99	0.30	1.02	0.48	0.30	0.79	1.02	1.02
Avail Cap(c_a), veh/h	166	908		678	1435	762	525	1724	846	397	895	450
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	0.09	0.09	0.09	1.00	1.00	1.00	1.00	1.00	1.00
Uniform Delay (d), s/veh	63.7	47.9	0.0	53.7	39.9	11.4	57.3	35.4	17.5	61.2	49.7	49.8
Incr Delay (d2), s/veh	30.3	10.3	0.0	4.4	4.7	0.1	43.3	1.0	0.9	6.4	35.9	48.4
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	13.8	0.0	11.4	23.9	3.0	12.1	7.4	4.6	3.8	19.5	21.2
Unsig. Movement Delay, s/veh												
LnGrp Delay(d),s/veh	94.0	58.2	0.0	58.2	44.6	11.5	100.5	36.3	18.4	67.6	85.7	98.1
LnGrp LOS	F	E		E	D	B	F	D	B	E	F	F
Approach Vol, veh/h	919		A		2296		1619				1587	
Approach Delay, s/veh	63.7				45.2		54.7				86.9	
Approach LOS	E				D		D				F	
Timer - Assigned Phs	1	2	3	4	5	6	7	8				
Phs Duration (G+Y+Rc), s	14.9	50.1	31.0	39.0	25.0	40.0	11.0	59.0				
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	15.5	40.5	26.5	34.5	20.5	35.5	6.5	54.5				
Max Q Clear Time (g_c+I1), s	10.1	19.4	27.2	30.2	22.5	37.5	7.4	55.3				
Green Ext Time (p_c), s	0.3	7.0	0.0	2.0	0.0	0.0	0.0	0.0				
Intersection Summary												
HCM 6th Ctrl Delay	60.5											
HCM 6th LOS	E											
Notes												

HCM 6th Signalized Intersection Summary

15: Quebec Street & County Line Road

2030 Total AM.syn

04/24/2019

												
Movement	EBL	EBT	EBR	WBL	WBT	WBR	NBL	NBT	NBR	SBL	SBT	SBR
Lane Configurations												
Traffic Volume (veh/h)	131	1437	469	163	548	73	486	1201	758	138	499	117
Future Volume (veh/h)	131	1437	469	163	548	73	486	1201	758	138	499	117
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	142	1529	0	177	596	79	523	1305	531	150	542	94
Peak Hour Factor	0.92	0.94	0.92	0.92	0.92	0.92	0.93	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	192	1457		229	1495	758	569	1698	632	200	992	169
Arrive On Green	0.06	0.41	0.00	0.07	0.42	0.42	0.16	0.33	0.33	0.06	0.23	0.23
Sat Flow, veh/h	3456	3554	1585	3456	3554	1585	3456	5106	1585	3456	4392	748
Grp Volume(v), veh/h	142	1529	0	177	596	79	523	1305	531	150	418	218
Grp Sat Flow(s),veh/h/ln	1728	1777	1585	1728	1777	1585	1728	1702	1585	1728	1702	1736
Q Serve(g_s), s	5.5	55.4	0.0	6.8	15.8	3.7	20.1	30.9	40.9	5.8	14.6	15.0
Cycle Q Clear(g_c), s	5.5	55.4	0.0	6.8	15.8	3.7	20.1	30.9	40.9	5.8	14.6	15.0
Prop In Lane	1.00		1.00	1.00		1.00	1.00		1.00	1.00		0.43
Lane Grp Cap(c), veh/h	192	1457		229	1495	758	569	1698	632	200	769	392
V/C Ratio(X)	0.74	1.05		0.77	0.40	0.10	0.92	0.77	0.84	0.75	0.54	0.56
Avail Cap(c_a), veh/h	243	1457		294	1495	758	576	1698	632	243	769	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	1.00	0.00	0.83	0.83	0.83	1.00	1.00	1.00	1.00	1.00	1.00
Uniform Delay (d), s/veh	62.8	39.8	0.0	62.0	27.2	19.3	55.5	40.4	36.7	62.6	46.1	46.3
Incr Delay (d2), s/veh	8.6	37.7	0.0	7.8	0.7	0.2	20.0	3.4	12.7	9.9	2.7	5.6
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	2.6	31.4	0.0	3.2	6.9	1.4	10.3	13.5	17.9	2.8	6.5	7.1
Unsig. Movement Delay, s/veh												
LnGrp Delay(d),s/veh	71.4	77.5	0.0	69.8	27.9	19.5	75.5	43.8	49.4	72.5	48.9	51.9
LnGrp LOS	E	F		E	C	B	E	D	D	E	D	D
Approach Vol, veh/h	1671		A	852		2359		786				
Approach Delay, s/veh	77.0			35.8		52.1		54.2				
Approach LOS	E		D		D		D					
Timer - Assigned Phs	1	2	3	4	5	6	7	8				
Phs Duration (G+Y+Rc), s	12.3	49.4	13.4	59.9	26.7	35.0	12.0	61.3				
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	9.5	43.5	11.5	52.5	22.5	30.5	9.5	54.5				
Max Q Clear Time (g_c+l1), s	7.8	42.9	8.8	57.4	22.1	17.0	7.5	17.8				
Green Ext Time (p_c), s	0.1	0.5	0.1	0.0	0.1	3.5	0.1	4.9				

Intersection Summary

HCM 6th Ctrl Delay 57.3

HCM 6th LOS E

Notes

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

HCM 6th Signalized Intersection Summary

15: Quebec Street & County Line Road

2030 Total PM.syn

04/24/2019

												
Movement	EBL	EBT	EBR	WBL	WBT	WBR	NBL	NBT	NBR	SBL	SBT	SBR
Lane Configurations												
Traffic Volume (veh/h)	129	790	601	720	1601	210	490	774	272	194	1049	217
Future Volume (veh/h)	129	790	601	720	1601	210	490	774	272	194	1049	217
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	140	859	0	766	1634	228	533	832	292	211	1140	171
Peak Hour Factor	0.92	0.92	0.92	0.94	0.98	0.92	0.92	0.93	0.93	0.92	0.92	0.92
Percent Heavy Veh, %	2	2	2	2	2	2	2	2	2	2	2	2
Cap, veh/h	141	934		781	1593	832	474	1537	835	265	1079	162
Arrive On Green	0.04	0.26	0.00	0.23	0.45	0.45	0.14	0.30	0.30	0.08	0.24	0.24
Sat Flow, veh/h	3456	3554	1585	3456	3554	1585	3456	5106	1585	3456	4482	672
Grp Volume(v), veh/h	140	859	0	766	1634	228	533	832	292	211	866	445
Grp Sat Flow(s),veh/h/ln	1728	1777	1585	1728	1777	1585	1728	1702	1585	1728	1702	1749
Q Serve(g_s), s	5.5	31.7	0.0	29.8	60.5	7.6	18.5	18.4	14.4	8.1	32.5	32.5
Cycle Q Clear(g_c), s	5.5	31.7	0.0	29.8	60.5	7.6	18.5	18.4	14.4	8.1	32.5	32.5
Prop In Lane	1.00		1.00	1.00		1.00	1.00		1.00	1.00		0.38
Lane Grp Cap(c), veh/h	141	934		781	1593	832	474	1537	835	265	819	421
V/C Ratio(X)	0.99	0.92		0.98	1.03	0.27	1.13	0.54	0.35	0.80	1.06	1.06
Avail Cap(c_a), veh/h	141	934		781	1593	832	474	1537	835	371	819	421
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	0.09	0.09	0.09	1.00	1.00	1.00	1.00	1.00	1.00
Uniform Delay (d), s/veh	64.7	48.4	0.0	52.0	37.3	9.2	58.2	39.4	18.5	61.3	51.2	51.3
Incr Delay (d2), s/veh	74.1	15.4	0.0	6.1	14.9	0.1	80.4	1.4	1.2	7.8	47.4	59.8
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	3.9	16.0	0.0	13.5	29.0	2.6	13.4	7.9	5.6	3.9	19.2	21.2
Unsig. Movement Delay, s/veh												
LnGrp Delay(d),s/veh	138.8	63.8	0.0	58.1	52.1	9.3	138.7	40.8	19.7	69.1	98.7	111.0
LnGrp LOS	F	E		E	F	A	F	D	B	E	F	F
Approach Vol, veh/h		999	A		2628			1657			1522	
Approach Delay, s/veh		74.3			50.1			68.5			98.2	
Approach LOS		E			D			E			F	
Timer - Assigned Phs	1	2	3	4	5	6	7	8				
Phs Duration (G+Y+Rc), s	14.9	45.1	35.0	40.0	23.0	37.0	10.0	65.0				
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	14.5	36.5	30.5	35.5	18.5	32.5	5.5	60.5				
Max Q Clear Time (g_c+I1), s	10.1	20.4	31.8	33.7	20.5	34.5	7.5	62.5				
Green Ext Time (p_c), s	0.3	6.3	0.0	1.0	0.0	0.0	0.0	0.0				
Intersection Summary												
HCM 6th Ctrl Delay			68.9									
HCM 6th LOS			E									
Notes												
Unsignalized Delay for [EBR] is excluded from calculations of the approach delay and intersection delay.												

HCM 6th Signalized Intersection Summary 15: Quebec Street & County Line Road

2030 Total AM_Imp.syn
04/24/2019

												
Movement	EBL	EBT	EBR	WBL	WBT	WBR	NBL	NBT	NBR	SBL	SBT	SBR
Lane Configurations												
Traffic Volume (veh/h)	131	1437	469	163	548	73	486	1201	758	138	499	117
Future Volume (veh/h)	131	1437	469	163	548	73	486	1201	758	138	499	117
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	142	1529	0	177	596	79	523	1305	531	150	542	94
Peak Hour Factor	0.92	0.94	0.92	0.92	0.92	0.92	0.93	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	191	2056		229	2111	747	569	1736	644	200	1025	175
Arrive On Green	0.06	0.40	0.00	0.07	0.41	0.41	0.16	0.34	0.34	0.06	0.23	0.23
Sat Flow, veh/h	3456	5106	1585	3456	5106	1585	3456	5106	1585	3456	4392	748
Grp Volume(v), veh/h	142	1529	0	177	596	79	523	1305	531	150	418	218
Grp Sat Flow(s),veh/h/ln	1728	1702	1585	1728	1702	1585	1728	1702	1585	1728	1702	1736
Q Serve(g_s), s	5.5	34.5	0.0	6.8	10.5	3.7	20.1	30.6	40.4	5.8	14.5	14.9
Cycle Q Clear(g_c), s	5.5	34.5	0.0	6.8	10.5	3.7	20.1	30.6	40.4	5.8	14.5	14.9
Prop In Lane	1.00		1.00	1.00		1.00	1.00		1.00	1.00		0.43
Lane Grp Cap(c), veh/h	191	2056		229	2111	747	569	1736	644	200	794	405
V/C Ratio(X)	0.74	0.74		0.77	0.28	0.11	0.92	0.75	0.82	0.75	0.53	0.54
Avail Cap(c_a), veh/h	218	2056		294	2111	747	576	1736	644	243	794	405
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	0.92	0.92	0.92	1.00	1.00	1.00	1.00	1.00	1.00
Uniform Delay (d), s/veh	62.8	34.4	0.0	62.0	26.3	19.9	55.5	39.5	35.8	62.6	45.2	45.4
Incr Delay (d2), s/veh	11.3	2.5	0.0	8.6	0.3	0.3	20.0	3.1	11.5	9.9	2.5	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	2.7	14.7	0.0	3.3	4.4	1.5	10.3	13.3	17.5	2.8	6.4	7.0
Unsig. Movement Delay, s/veh												
LnGrp Delay(d),s/veh	74.1	36.9	0.0	70.6	26.6	20.1	75.5	42.6	47.3	72.5	47.7	50.4
LnGrp LOS	E	D		E	C	C	E	D	D	E	D	D
Approach Vol, veh/h	1671		A	852			2359			786		
Approach Delay, s/veh	40.0			35.1			50.9			53.2		
Approach LOS	D			D			D			D		
Timer - Assigned Phs	1	2	3	4	5	6	7	8				
Phs Duration (G+Y+Rc), s	12.3	50.4	13.4	58.9	26.7	36.0	12.0	60.3				
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	9.5	44.5	11.5	51.5	22.5	31.5	8.5	54.5				
Max Q Clear Time (g_c+l1), s	7.8	42.4	8.8	36.5	22.1	16.9	7.5	12.5				
Green Ext Time (p_c), s	0.1	1.8	0.1	9.4	0.1	3.6	0.0	5.0				

Intersection Summary

HCM 6th Ctrl Delay	45.7
HCM 6th LOS	D

Notes

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

HCM 6th Signalized Intersection Summary

15: Quebec Street & County Line Road

2030 Total PM_Imp.syn

04/24/2019

												
Movement	EBL	EBT	EBR	WBL	WBT	WBR	NBL	NBT	NBR	SBL	SBT	SBR
Lane Configurations												
Traffic Volume (veh/h)	129	790	601	720	1601	210	490	774	272	194	1049	217
Future Volume (veh/h)	129	790	601	720	1601	210	490	774	272	194	1049	217
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	140	859	0	766	1634	228	533	832	292	211	1140	171
Peak Hour Factor	0.92	0.92	0.92	0.94	0.98	0.92	0.92	0.93	0.93	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	1011		781	1872	702	598	1872	939	263	1209	181
Arrive On Green	0.06	0.20	0.00	0.23	0.37	0.37	0.17	0.37	0.37	0.08	0.27	0.27
Sat Flow, veh/h	3456	5106	1585	3456	5106	1585	3456	5106	1585	3456	4482	672
Grp Volume(v), veh/h	140	859	0	766	1634	228	533	832	292	211	866	445
Grp Sat Flow(s),veh/h/ln	1728	1702	1585	1728	1702	1585	1728	1702	1585	1728	1702	1749
Q Serve(g_s), s	5.4	21.9	0.0	29.8	40.2	9.1	20.4	16.6	12.4	8.1	33.6	33.7
Cycle Q Clear(g_c), s	5.4	21.9	0.0	29.8	40.2	9.1	20.4	16.6	12.4	8.1	33.6	33.7
Prop In Lane	1.00		1.00	1.00		1.00	1.00		1.00	1.00		0.38
Lane Grp Cap(c), veh/h	198	1011		781	1872	702	598	1872	939	263	918	472
V/C Ratio(X)	0.71	0.85		0.98	0.87	0.32	0.89	0.44	0.31	0.80	0.94	0.94
Avail Cap(c_a), veh/h	198	1011		781	1872	702	704	1872	939	320	918	472
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	0.51	0.51	0.51	1.00	1.00	1.00	1.00	1.00	1.00
Uniform Delay (d), s/veh	62.5	52.2	0.0	52.0	39.8	13.3	54.6	32.3	13.7	61.4	48.3	48.3
Incr Delay (d2), s/veh	11.0	8.9	0.0	18.6	3.2	0.6	12.2	0.8	0.9	11.5	18.7	29.5
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	2.7	10.2	0.0	14.9	17.3	3.3	9.9	7.0	4.7	4.0	16.6	18.5
Unsig. Movement Delay, s/veh												
LnGrp Delay(d),s/veh	73.5	61.1	0.0	70.6	43.0	13.9	66.8	33.1	14.6	72.9	67.0	77.8
LnGrp LOS	E	E		E	D	B	E	C	B	E	E	E
Approach Vol, veh/h	999		A	2628		1657		1522				
Approach Delay, s/veh	62.8			48.5		40.7		71.0				
Approach LOS	E			D		D		E				
Timer - Assigned Phs	1	2	3	4	5	6	7	8				
Phs Duration (G+Y+Rc), s	14.8	54.0	35.0	31.2	27.9	40.9	12.2	54.0				
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	12.5	49.5	30.5	24.5	27.5	34.5	5.5	49.5				
Max Q Clear Time (g_c+I1), s	10.1	18.6	31.8	23.9	22.4	35.7	7.4	42.2				
Green Ext Time (p_c), s	0.2	8.0	0.0	0.4	1.0	0.0	0.0	5.8				

Intersection Summary

HCM 6th Ctrl Delay 53.7

HCM 6th LOS D

Notes

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

HCM 6th Signalized Intersection Summary

15: Quebec Street & County Line Road

2040 Background AM.syn

04/25/2019

												
Movement	EBL	EBT	EBR	WBL	WBT	WBR	NBL	NBT	NBR	SBL	SBT	SBR
Lane Configurations												
Traffic Volume (veh/h)	138	1293	493	142	516	77	511	1263	687	145	524	123
Future Volume (veh/h)	138	1293	493	142	516	77	511	1263	687	145	524	123
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	150	1376	0	154	561	84	549	1373	747	158	570	134
Peak Hour Factor	0.92	0.94	0.92	0.92	0.92	0.92	0.93	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	199	1582		209	1593	806	594	1535	573	208	783	180
Arrive On Green	0.06	0.45	0.00	0.06	0.45	0.45	0.17	0.30	0.30	0.06	0.19	0.19
Sat Flow, veh/h	3456	3554	1585	3456	3554	1585	3456	5106	1585	3456	4147	955
Grp Volume(v), veh/h	150	1376	0	154	561	84	549	1373	747	158	466	238
Grp Sat Flow(s),veh/h/ln	1728	1777	1585	1728	1777	1585	1728	1702	1585	1728	1702	1698
Q Serve(g_s), s	5.8	47.3	0.0	5.9	14.0	3.7	21.1	34.7	40.6	6.1	17.4	17.9
Cycle Q Clear(g_c), s	5.8	47.3	0.0	5.9	14.0	3.7	21.1	34.7	40.6	6.1	17.4	17.9
Prop In Lane	1.00		1.00	1.00		1.00	1.00		1.00	1.00		0.56
Lane Grp Cap(c), veh/h	199	1582		209	1593	806	594	1535	573	208	643	321
V/C Ratio(X)	0.75	0.87		0.74	0.35	0.10	0.92	0.89	1.30	0.76	0.72	0.74
Avail Cap(c_a), veh/h	218	1582		422	1593	806	602	1535	573	243	643	321
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	0.83	0.83	0.83	1.00	1.00	1.00	1.00	1.00	1.00
Uniform Delay (d), s/veh	62.7	33.9	0.0	62.4	24.4	17.2	55.0	45.1	43.1	62.5	51.4	51.7
Incr Delay (d2), s/veh	12.7	6.8	0.0	4.2	0.5	0.2	20.0	8.4	149.4	11.2	7.0	14.4
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	2.9	21.6	0.0	2.7	6.0	1.4	10.8	15.8	42.6	3.0	8.0	8.9
Unsig. Movement Delay, s/veh												
LnGrp Delay(d),s/veh	75.4	40.7	0.0	66.5	24.9	17.4	75.0	53.6	192.5	73.7	58.4	66.1
LnGrp LOS	E	D		E	C	B	E	D	F	E	E	E
Approach Vol, veh/h		1526	A		799			2669			862	
Approach Delay, s/veh		44.1			32.1			96.9			63.3	
Approach LOS		D			C			F			E	
Timer - Assigned Phs	1	2	3	4	5	6	7	8				
Phs Duration (G+Y+Rc), s	12.6	45.1	12.7	64.6	27.7	30.0	12.3	65.0				
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	9.5	39.5	16.5	51.5	23.5	25.5	8.5	59.5				
Max Q Clear Time (g_c+l1), s	8.1	42.6	7.9	49.3	23.1	19.9	7.8	16.0				
Green Ext Time (p_c), s	0.1	0.0	0.3	1.7	0.1	2.2	0.0	4.7				
Intersection Summary												
HCM 6th Ctrl Delay			69.4									
HCM 6th LOS			E									
Notes												
Unsignalized Delay for [EBR] is excluded from calculations of the approach delay and intersection delay.												

HCM 6th Signalized Intersection Summary
15: Quebec Street & County Line Road

2040 Background PM.syn

04/25/2019

												
Movement	EBL	EBT	EBR	WBL	WBT	WBR	NBL	NBT	NBR	SBL	SBT	SBR
Lane Configurations												
Traffic Volume (veh/h)	135	754	632	644	1459	221	515	814	248	204	1103	228
Future Volume (veh/h)	135	754	632	644	1459	221	515	814	248	204	1103	228
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	147	820	0	685	1489	240	560	875	267	222	1199	248
Peak Hour Factor	0.92	0.92	0.92	0.94	0.98	0.92	0.92	0.93	0.93	0.92	0.92	0.92
Percent Heavy Veh, %	2	2	2	2	2	2	2	2	2	2	2	2
Cap, veh/h	141	908		678	1461	779	550	1708	841	277	1083	224
Arrive On Green	0.04	0.26	0.00	0.20	0.41	0.41	0.16	0.33	0.33	0.08	0.26	0.26
Sat Flow, veh/h	3456	3554	1585	3456	3554	1585	3456	5106	1585	3456	4240	877
Grp Volume(v), veh/h	147	820	0	685	1489	240	560	875	267	222	963	484
Grp Sat Flow(s),veh/h/ln	1728	1777	1585	1728	1777	1585	1728	1702	1585	1728	1702	1713
Q Serve(g_s), s	5.5	30.1	0.0	26.5	55.5	8.9	21.5	18.6	12.8	8.5	34.5	34.5
Cycle Q Clear(g_c), s	5.5	30.1	0.0	26.5	55.5	8.9	21.5	18.6	12.8	8.5	34.5	34.5
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	141	908		678	1461	779	550	1708	841	277	870	438
V/C Ratio(X)	1.04	0.90		1.01	1.02	0.31	1.02	0.51	0.32	0.80	1.11	1.11
Avail Cap(c_a), veh/h	141	908		678	1461	779	550	1708	841	397	870	438
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	0.09	0.09	0.09	1.00	1.00	1.00	1.00	1.00	1.00
Uniform Delay (d), s/veh	64.8	48.6	0.0	54.2	39.8	11.2	56.8	36.1	17.9	61.0	50.2	50.3
Incr Delay (d2), s/veh	88.1	14.0	0.0	12.9	12.7	0.1	42.8	1.1	1.0	7.4	64.1	75.2
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	4.1	15.1	0.0	12.7	26.4	3.1	12.6	7.9	5.0	4.0	22.4	23.9
Unsig. Movement Delay, s/veh												
LnGrp Delay(d),s/veh	152.8	62.6	0.0	67.1	52.4	11.3	99.6	37.2	18.9	68.5	114.3	125.5
LnGrp LOS	F	E		F	F	B	F	D	B	E	F	F
Approach Vol, veh/h	967		A	2414		1702		1669				
Approach Delay, s/veh	76.3			52.5		54.8		111.5				
Approach LOS	E			D		D		F				
Timer - Assigned Phs	1	2	3	4	5	6	7	8				
Phs Duration (G+Y+Rc), s	15.3	49.7	31.0	39.0	26.0	39.0	10.0	60.0				
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	15.5	40.5	26.5	34.5	21.5	34.5	5.5	55.5				
Max Q Clear Time (g_c+I1), s	10.5	20.6	28.5	32.1	23.5	36.5	7.5	57.5				
Green Ext Time (p_c), s	0.3	7.2	0.0	1.3	0.0	0.0	0.0	0.0				

Intersection Summary

HCM 6th Ctrl Delay 71.1

HCM 6th LOS E

Notes

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

HCM 6th Signalized Intersection Summary 15: Quebec Street & County Line Road

2040 Total AM.syn

04/25/2019

												
Movement	EBL	EBT	EBR	WBL	WBT	WBR	NBL	NBT	NBR	SBL	SBT	SBR
Lane Configurations												
Traffic Volume (veh/h)	138	1500	493	170	573	77	511	1263	791	145	524	123
Future Volume (veh/h)	138	1500	493	170	573	77	511	1263	791	145	524	123
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	150	1596	0	185	623	84	549	1373	567	158	570	101
Peak Hour Factor	0.92	0.94	0.92	0.92	0.92	0.92	0.93	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	199	2006		236	2062	735	594	1762	656	208	1021	178
Arrive On Green	0.06	0.39	0.00	0.07	0.40	0.40	0.17	0.35	0.35	0.06	0.23	0.23
Sat Flow, veh/h	3456	5106	1585	3456	5106	1585	3456	5106	1585	3456	4375	762
Grp Volume(v), veh/h	150	1596	0	185	623	84	549	1373	567	158	441	230
Grp Sat Flow(s),veh/h/ln	1728	1702	1585	1728	1702	1585	1728	1702	1585	1728	1702	1733
Q Serve(g_s), s	5.8	37.3	0.0	7.1	11.2	4.0	21.1	32.5	44.1	6.1	15.4	15.8
Cycle Q Clear(g_c), s	5.8	37.3	0.0	7.1	11.2	4.0	21.1	32.5	44.1	6.1	15.4	15.8
Prop In Lane	1.00		1.00	1.00		1.00	1.00		1.00	1.00		0.44
Lane Grp Cap(c), veh/h	199	2006		236	2062	735	594	1762	656	208	794	404
V/C Ratio(X)	0.75	0.80		0.78	0.30	0.11	0.92	0.78	0.86	0.76	0.56	0.57
Avail Cap(c_a), veh/h	218	2006		294	2062	735	602	1762	656	243	794	404
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	0.91	0.91	0.91	1.00	1.00	1.00	1.00	1.00	1.00
Uniform Delay (d), s/veh	62.7	36.2	0.0	61.9	27.3	20.5	55.0	39.6	36.1	62.5	45.6	45.7
Incr Delay (d2), s/veh	12.7	3.4	0.0	9.5	0.3	0.3	20.0	3.5	14.2	11.2	2.8	5.7
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	2.9	16.0	0.0	3.4	4.7	1.6	10.8	14.1	19.5	3.0	6.9	7.5
Unsig. Movement Delay, s/veh												
LnGrp Delay(d),s/veh	75.4	39.6	0.0	71.4	27.7	20.8	75.0	43.1	50.4	73.7	48.4	51.4
LnGrp LOS	E	D		E	C	C	E	D	D	E	D	D
Approach Vol, veh/h		1746	A		892			2489			829	
Approach Delay, s/veh		42.6			36.1			51.8			54.0	
Approach LOS		D			D			D			D	
Timer - Assigned Phs	1	2	3	4	5	6	7	8				
Phs Duration (G+Y+Rc), s	12.6	51.1	13.7	57.5	27.7	36.0	12.3	59.0				
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	9.5	45.5	11.5	50.5	23.5	31.5	8.5	53.5				
Max Q Clear Time (g_c+I1), s	8.1	46.1	9.1	39.3	23.1	17.8	7.8	13.2				
Green Ext Time (p_c), s	0.1	0.0	0.1	7.9	0.1	3.7	0.0	5.3				

Intersection Summary

HCM 6th Ctrl Delay 47.1

HCM 6th LOS D

Notes

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

HCM 6th Signalized Intersection Summary 15: Quebec Street & County Line Road

2040 Total PM.syn
04/25/2019

												
Movement	EBL	EBT	EBR	WBL	WBT	WBR	NBL	NBT	NBR	SBL	SBT	SBR
Lane Configurations												
Traffic Volume (veh/h)	135	827	632	751	1672	221	515	814	284	204	1103	228
Future Volume (veh/h)	135	827	632	751	1672	221	515	814	284	204	1103	228
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	147	899	0	799	1706	240	560	875	305	222	1199	74
Peak Hour Factor	0.92	0.92	0.92	0.94	0.98	0.92	0.92	0.93	0.93	0.92	0.92	0.92
Percent Heavy Veh, %	2	2	2	2	2	2	2	2	2	2	2	2
Cap, veh/h	180	947		806	1872	709	614	1874	952	280	1329	82
Arrive On Green	0.05	0.19	0.00	0.23	0.37	0.37	0.18	0.37	0.37	0.08	0.27	0.27
Sat Flow, veh/h	3456	5106	1585	3456	5106	1585	3456	5106	1585	3456	4916	303
Grp Volume(v), veh/h	147	899	0	799	1706	240	560	875	305	222	830	443
Grp Sat Flow(s),veh/h/ln	1728	1702	1585	1728	1702	1585	1728	1702	1585	1728	1702	1816
Q Serve(g_s), s	5.7	23.5	0.0	31.1	42.9	9.6	21.5	17.7	12.9	8.5	31.8	31.8
Cycle Q Clear(g_c), s	5.7	23.5	0.0	31.1	42.9	9.6	21.5	17.7	12.9	8.5	31.8	31.8
Prop In Lane	1.00		1.00	1.00		1.00	1.00		1.00	1.00		0.17
Lane Grp Cap(c), veh/h	180	947		806	1872	709	614	1874	952	280	920	491
V/C Ratio(X)	0.82	0.95		0.99	0.91	0.34	0.91	0.47	0.32	0.79	0.90	0.90
Avail Cap(c_a), veh/h	180	947		806	1872	709	653	1874	952	448	920	491
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	0.44	0.44	0.44	1.00	1.00	1.00	1.00	1.00	1.00
Uniform Delay (d), s/veh	63.4	54.4	0.0	51.6	40.7	13.3	54.5	32.6	13.3	60.9	47.5	47.5
Incr Delay (d2), s/veh	24.6	19.4	0.0	18.8	4.0	0.6	16.7	0.8	0.9	5.1	13.7	22.4
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	11.8	0.0	15.5	18.5	3.5	10.8	7.5	4.8	3.9	15.2	17.4
Unsig. Movement Delay, s/veh												
LnGrp Delay(d),s/veh	87.9	73.7	0.0	70.4	44.6	13.9	71.2	33.5	14.2	66.0	61.2	70.0
LnGrp LOS	F	E		E	D	B	E	C	B	E	E	E
Approach Vol, veh/h		1046	A		2745			1740			1495	
Approach Delay, s/veh		75.7			49.4			42.2			64.5	
Approach LOS		E			D			D			E	
Timer - Assigned Phs	1	2	3	4	5	6	7	8				
Phs Duration (G+Y+Rc), s	15.4	54.1	36.0	29.5	28.5	41.0	11.5	54.0				
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	17.5	44.5	31.5	23.5	25.5	36.5	5.5	49.5				
Max Q Clear Time (g_c+I1), s	10.5	19.7	33.1	25.5	23.5	33.8	7.7	44.9				
Green Ext Time (p_c), s	0.4	8.0	0.0	0.0	0.5	1.9	0.0	3.9				
Intersection Summary												
HCM 6th Ctrl Delay			54.8									
HCM 6th LOS			D									
Notes												
Unsignalized Delay for [EBR] is excluded from calculations of the approach delay and intersection delay.												

HCM 6th Signalized Intersection Summary
16: Yosemite Street & County Line Road

2019 Existing AM.syn
04/24/2019

												
Movement	EBL	EBT	EBR	WBL	WBT	WBR	NBL	NBT	NBR	SBL	SBT	SBR
Lane Configurations												
Traffic Volume (veh/h)	643	1205	83	56	426	99	84	412	30	87	168	113
Future Volume (veh/h)	643	1205	83	56	426	99	84	412	30	87	168	113
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	794	1310	100	64	439	148	95	474	40	121	195	136
Peak Hour Factor	0.81	0.92	0.83	0.88	0.97	0.67	0.88	0.87	0.75	0.72	0.86	0.83
Percent Heavy Veh, %	2	2	2	2	2	2	2	2	2	2	2	2
Cap, veh/h	1291	2549	791	116	813	252	143	895	399	146	599	397
Arrive On Green	0.37	0.50	0.50	0.01	0.05	0.05	0.04	0.25	0.25	0.08	0.29	0.29
Sat Flow, veh/h	3456	5106	1585	3456	5106	1585	3456	3554	1585	1781	2046	1357
Grp Volume(v), veh/h	794	1310	100	64	439	148	95	474	40	121	168	163
Grp Sat Flow(s),veh/h/ln	1728	1702	1585	1728	1702	1585	1728	1777	1585	1781	1777	1626
Q Serve(g_s), s	25.2	23.3	4.6	2.5	11.3	10.1	3.7	15.5	2.6	9.0	10.0	10.6
Cycle Q Clear(g_c), s	25.2	23.3	4.6	2.5	11.3	10.1	3.7	15.5	2.6	9.0	10.0	10.6
Prop In Lane	1.00		1.00	1.00		1.00	1.00		1.00	1.00		0.83
Lane Grp Cap(c), veh/h	1291	2549	791	116	813	252	143	895	399	146	520	476
V/C Ratio(X)	0.62	0.51	0.13	0.55	0.54	0.59	0.67	0.53	0.10	0.83	0.32	0.34
Avail Cap(c_a), veh/h	1291	2549	791	166	813	252	243	895	399	257	520	476
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)	0.31	0.31	0.31	0.86	0.86	0.86	1.00	1.00	1.00	1.00	1.00	1.00
Uniform Delay (d), s/veh	34.4	22.8	18.1	65.7	59.1	40.4	63.8	43.6	38.8	61.0	37.3	37.5
Incr Delay (d2), s/veh	0.3	0.2	0.1	3.5	2.2	8.3	5.3	2.2	0.5	11.2	1.6	2.0
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	10.7	9.4	1.7	1.2	5.4	4.9	1.7	7.2	1.1	4.5	4.6	4.5
Unsig. Movement Delay, s/veh												
LnGrp Delay(d),s/veh	34.7	23.0	18.2	69.2	61.3	48.7	69.1	45.8	39.3	72.2	38.9	39.5
LnGrp LOS	C	C	B	E	E	D	E	D	D	E	D	D
Approach Vol, veh/h	2204			651			609			452		
Approach Delay, s/veh	27.0			59.2			49.0			48.0		
Approach LOS	C			E			D			D		
Timer - Assigned Phs	1	2	3	4	5	6	7	8				
Phs Duration (G+Y+Rc), s	15.6	38.5	9.0	71.9	10.1	44.0	54.9	26.0				
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	19.5	29.5	6.5	61.5	9.5	39.5	46.5	21.5				
Max Q Clear Time (g_c+1), s	11.0	17.5	4.5	25.3	5.7	12.6	27.2	13.3				
Green Ext Time (p_c), s	0.2	2.6	0.0	13.1	0.1	2.1	3.0	2.2				
Intersection Summary												
HCM 6th Ctrl Delay	38.2											
HCM 6th LOS	D											

HCM 6th Signalized Intersection Summary
16: Yosemite Street & County Line Road

2019 Existing PM.syn
04/24/2019

												
Movement	EBL	EBT	EBR	WBL	WBT	WBR	NBL	NBT	NBR	SBL	SBT	SBR
Lane Configurations												
Traffic Volume (veh/h)	174	730	146	130	1701	157	210	327	60	139	545	471
Future Volume (veh/h)	174	730	146	130	1701	157	210	327	60	139	545	471
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	196	768	176	153	1829	189	259	352	72	176	606	554
Peak Hour Factor	0.89	0.95	0.83	0.85	0.93	0.83	0.81	0.93	0.83	0.79	0.90	0.85
Percent Heavy Veh, %	2	2	2	2	2	2	2	2	2	2	2	2
Cap, veh/h	246	1759	546	307	1849	574	308	1135	506	203	612	546
Arrive On Green	0.07	0.34	0.34	0.18	0.72	0.72	0.09	0.32	0.32	0.11	0.34	0.34
Sat Flow, veh/h	3456	5106	1585	3456	5106	1585	3456	3554	1585	1781	1777	1585
Grp Volume(v), veh/h	196	768	176	153	1829	189	259	352	72	176	606	554
Grp Sat Flow(s),veh/h/ln	1728	1702	1585	1728	1702	1585	1728	1777	1585	1781	1777	1585
Q Serve(g_s), s	7.5	15.7	8.4	5.4	47.0	5.8	10.0	10.1	3.4	13.1	45.8	46.5
Cycle Q Clear(g_c), s	7.5	15.7	8.4	5.4	47.0	5.8	10.0	10.1	3.4	13.1	45.8	46.5
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	246	1759	546	307	1849	574	308	1135	506	203	612	546
V/C Ratio(X)	0.80	0.44	0.32	0.50	0.99	0.33	0.84	0.31	0.14	0.87	0.99	1.01
Avail Cap(c_a), veh/h	269	1759	546	307	1849	574	320	1135	506	310	612	546
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)	0.65	0.65	0.65	0.70	0.70	0.70	1.00	1.00	1.00	1.00	1.00	1.00
Uniform Delay (d), s/veh	61.7	34.1	19.0	52.8	18.4	12.7	60.6	34.7	19.5	58.8	44.0	44.3
Incr Delay (d2), s/veh	9.8	0.5	1.0	0.9	15.1	1.1	17.5	0.7	0.6	14.9	34.1	42.3
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	3.7	6.6	3.3	2.3	12.4	2.0	5.1	4.5	1.8	6.8	25.7	24.5
Unsig. Movement Delay, s/veh												
LnGrp Delay(d),s/veh	71.5	34.7	20.0	53.7	33.5	13.7	78.1	35.4	20.1	73.7	78.1	86.5
LnGrp LOS	E	C	B	D	C	B	E	D	C	E	E	F
Approach Vol, veh/h		1140			2171			683			1336	
Approach Delay, s/veh		38.7			33.2			50.0			81.0	
Approach LOS		D			C			D			F	
Timer - Assigned Phs	1	2	3	4	5	6	7	8				
Phs Duration (G+Y+Rc), s	19.9	47.6	16.5	51.0	16.5	51.0	14.1	53.4				
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	23.5	35.5	11.5	46.5	12.5	46.5	10.5	47.5				
Max Q Clear Time (g_c+I1), s	15.1	12.1	7.4	17.7	12.0	48.5	9.5	49.0				
Green Ext Time (p_c), s	0.3	2.5	0.2	6.7	0.1	0.0	0.1	0.0				
Intersection Summary												
HCM 6th Ctrl Delay			48.5									
HCM 6th LOS			D									

HCM 6th Signalized Intersection Summary
16: Yosemite Street & County Line Road

2030 Background AM.syn

04/29/2019

												
Movement	EBL	EBT	EBR	WBL	WBT	WBR	NBL	NBT	NBR	SBL	SBT	SBR
Lane Configurations												
Traffic Volume (veh/h)	679	1273	88	59	450	105	89	435	32	92	177	119
Future Volume (veh/h)	679	1273	88	59	450	105	89	435	32	92	177	119
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	738	1384	96	64	464	114	97	473	35	100	192	129
Peak Hour Factor	0.92	0.92	0.92	0.92	0.97	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	1289	2621	814	116	889	276	145	889	397	124	578	369
Arrive On Green	0.37	0.51	0.51	0.01	0.06	0.06	0.04	0.25	0.25	0.07	0.28	0.28
Sat Flow, veh/h	3456	5106	1585	3456	5106	1585	3456	3554	1585	1781	2079	1329
Grp Volume(v), veh/h	738	1384	96	64	464	114	97	473	35	100	163	158
Grp Sat Flow(s),veh/h/ln	1728	1702	1585	1728	1702	1585	1728	1777	1585	1781	1777	1631
Q Serve(g_s), s	23.0	24.4	4.2	2.5	11.9	7.8	3.7	15.5	2.3	7.5	9.8	10.5
Cycle Q Clear(g_c), s	23.0	24.4	4.2	2.5	11.9	7.8	3.7	15.5	2.3	7.5	9.8	10.5
Prop In Lane	1.00		1.00	1.00		1.00	1.00		1.00	1.00		0.81
Lane Grp Cap(c), veh/h	1289	2621	814	116	889	276	145	889	397	124	494	453
V/C Ratio(X)	0.57	0.53	0.12	0.55	0.52	0.41	0.67	0.53	0.09	0.81	0.33	0.35
Avail Cap(c_a), veh/h	1289	2621	814	218	889	276	243	889	397	244	494	453
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)	0.19	0.19	0.19	0.83	0.83	0.83	1.00	1.00	1.00	1.00	1.00	1.00
Uniform Delay (d), s/veh	33.8	21.9	17.0	65.7	58.2	39.7	63.8	43.8	38.8	61.9	38.8	39.0
Incr Delay (d2), s/veh	0.1	0.1	0.1	3.3	1.8	3.8	5.3	2.3	0.4	11.6	1.8	2.1
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	9.7	9.8	1.6	1.2	5.6	3.5	1.8	7.2	1.0	3.8	4.6	4.5
Unsig. Movement Delay, s/veh												
LnGrp Delay(d),s/veh	33.9	22.1	17.1	69.1	60.0	43.5	69.0	46.1	39.2	73.6	40.5	41.1
LnGrp LOS	C	C	B	E	E	D	E	D	D	E	D	D
Approach Vol, veh/h	2218			642			605			421		
Approach Delay, s/veh	25.8			58.0			49.3			48.6		
Approach LOS	C			E			D			D		
Timer - Assigned Phs	1	2	3	4	5	6	7	8				
Phs Duration (G+Y+Rc), s	13.9	38.3	9.0	73.8	10.2	42.0	54.8	28.0				
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	18.5	28.5	8.5	61.5	9.5	37.5	46.5	23.5				
Max Q Clear Time (g_c+1), s	9.5	17.5	4.5	26.4	5.7	12.5	25.0	13.9				
Green Ext Time (p_c), s	0.1	2.4	0.0	13.9	0.1	2.0	2.8	2.4				
Intersection Summary												
HCM 6th Ctrl Delay	37.2											
HCM 6th LOS	D											

HCM 6th Signalized Intersection Summary
16: Yosemite Street & County Line Road

2030 Background PM.syn

04/24/2019

												
Movement	EBL	EBT	EBR	WBL	WBT	WBR	NBL	NBT	NBR	SBL	SBT	SBR
Lane Configurations												
Traffic Volume (veh/h)	184	771	154	137	1797	166	222	345	63	147	576	498
Future Volume (veh/h)	184	771	154	137	1797	166	222	345	63	147	576	498
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	200	812	167	149	1932	180	241	371	68	160	626	541
Peak Hour Factor	0.92	0.95	0.92	0.92	0.93	0.92	0.92	0.93	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	243	1721	534	323	1839	571	291	1177	525	187	637	547
Arrive On Green	0.07	0.34	0.34	0.19	0.72	0.72	0.08	0.33	0.33	0.10	0.35	0.35
Sat Flow, veh/h	3456	5106	1585	3456	5106	1585	3456	3554	1585	1781	1811	1556
Grp Volume(v), veh/h	200	812	167	149	1932	180	241	371	68	160	614	553
Grp Sat Flow(s),veh/h/ln	1728	1702	1585	1728	1702	1585	1728	1777	1585	1781	1777	1590
Q Serve(g_s), s	7.7	16.9	8.1	5.2	48.6	5.5	9.3	10.5	3.1	11.9	46.2	46.6
Cycle Q Clear(g_c), s	7.7	16.9	8.1	5.2	48.6	5.5	9.3	10.5	3.1	11.9	46.2	46.6
Prop In Lane	1.00		1.00	1.00		1.00	1.00		1.00	1.00		0.98
Lane Grp Cap(c), veh/h	243	1721	534	323	1839	571	291	1177	525	187	625	560
V/C Ratio(X)	0.82	0.47	0.31	0.46	1.05	0.32	0.83	0.32	0.13	0.86	0.98	0.99
Avail Cap(c_a), veh/h	243	1721	534	323	1839	571	320	1177	525	310	625	560
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)	0.65	0.65	0.65	0.69	0.69	0.69	1.00	1.00	1.00	1.00	1.00	1.00
Uniform Delay (d), s/veh	61.9	35.3	19.8	51.8	18.9	12.8	60.9	33.7	18.2	59.4	43.3	43.5
Incr Delay (d2), s/veh	13.7	0.6	1.0	0.7	32.5	1.0	15.2	0.7	0.5	11.7	31.9	35.2
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	3.9	7.2	3.2	2.2	15.8	1.9	4.7	4.7	1.6	6.0	25.6	23.6
Unsig. Movement Delay, s/veh												
LnGrp Delay(d),s/veh	75.6	35.9	20.8	52.6	51.4	13.8	76.1	34.4	18.8	71.1	75.2	78.7
LnGrp LOS	E	D	C	D	F	B	E	C	B	E	E	E
Approach Vol, veh/h	1179			2261			680			1327		
Approach Delay, s/veh	40.5			48.5			47.6			76.2		
Approach LOS	D			D			D			E		
Timer - Assigned Phs	1	2	3	4	5	6	7	8				
Phs Duration (G+Y+Rc), s	18.7	49.2	17.1	50.0	15.9	52.0	14.0	53.1				
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	23.5	36.5	11.5	45.5	12.5	47.5	9.5	47.5				
Max Q Clear Time (g_c+l1), s	13.9	12.5	7.2	18.9	11.3	48.6	9.7	50.6				
Green Ext Time (p_c), s	0.3	2.7	0.2	6.9	0.1	0.0	0.0	0.0				
Intersection Summary												
HCM 6th Ctrl Delay	53.4											
HCM 6th LOS	D											

HCM 6th Signalized Intersection Summary
16: Yosemite Street & County Line Road

2030 Total AM.syn

04/24/2019

												
Movement	EBL	EBT	EBR	WBL	WBT	WBR	NBL	NBT	NBR	SBL	SBT	SBR
Lane Configurations	 	  		 	  		 	 			 	
Traffic Volume (veh/h)	783	1480	88	59	507	105	89	476	32	92	188	147
Future Volume (veh/h)	783	1480	88	59	507	105	89	476	32	92	188	147
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	851	1609	96	64	523	114	97	517	35	100	204	160
Peak Hour Factor	0.92	0.92	0.92	0.92	0.97	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	1314	2734	849	116	964	299	145	811	362	123	496	370
Arrive On Green	0.38	0.54	0.54	0.01	0.06	0.06	0.04	0.23	0.23	0.07	0.26	0.26
Sat Flow, veh/h	3456	5106	1585	3456	5106	1585	3456	3554	1585	1781	1941	1446
Grp Volume(v), veh/h	851	1609	96	64	523	114	97	517	35	100	186	178
Grp Sat Flow(s),veh/h/ln	1728	1702	1585	1728	1702	1585	1728	1777	1585	1781	1777	1610
Q Serve(g_s), s	27.3	28.8	4.0	2.5	13.4	7.8	3.7	17.7	2.4	7.5	11.7	12.5
Cycle Q Clear(g_c), s	27.3	28.8	4.0	2.5	13.4	7.8	3.7	17.7	2.4	7.5	11.7	12.5
Prop In Lane	1.00		1.00	1.00		1.00	1.00		1.00	1.00		0.90
Lane Grp Cap(c), veh/h	1314	2734	849	116	964	299	145	811	362	123	454	411
V/C Ratio(X)	0.65	0.59	0.11	0.55	0.54	0.38	0.67	0.64	0.10	0.81	0.41	0.43
Avail Cap(c_a), veh/h	1314	2734	849	218	964	299	243	811	362	218	454	411
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)	0.09	0.09	0.09	0.74	0.74	0.74	1.00	1.00	1.00	1.00	1.00	1.00
Uniform Delay (d), s/veh	34.4	21.3	15.5	65.7	57.6	38.6	63.8	47.1	41.1	61.9	41.8	42.1
Incr Delay (d2), s/veh	0.1	0.1	0.0	3.0	1.6	2.7	5.3	3.8	0.5	11.8	2.7	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	11.5	11.4	1.5	1.2	6.3	3.4	1.8	8.3	1.0	3.8	5.5	5.4
Unsig. Movement Delay, s/veh												
LnGrp Delay(d),s/veh	34.5	21.3	15.5	68.7	59.3	41.3	69.0	50.9	41.7	73.7	44.5	45.4
LnGrp LOS	C	C	B	E	E	D	E	D	D	E	D	D
Approach Vol, veh/h	2556			701			649			464		
Approach Delay, s/veh	25.5			57.2			53.1			51.1		
Approach LOS	C			E			D			D		
Timer - Assigned Phs	1	2	3	4	5	6	7	8				
Phs Duration (G+Y+Rc), s	13.9	35.3	9.0	76.8	10.2	39.0	55.8	30.0				
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	27.5	8.5	64.5	9.5	34.5	47.5	25.5				
Max Q Clear Time (g_c+l1), s	9.5	19.7	4.5	30.8	5.7	14.5	29.3	15.4				
Green Ext Time (p_c), s	0.1	2.2	0.0	16.7	0.1	2.1	3.2	2.8				
Intersection Summary												
HCM 6th Ctrl Delay	37.4											
HCM 6th LOS	D											

HCM 6th Signalized Intersection Summary
16: Yosemite Street & County Line Road

2030 Total PM.syn
04/24/2019

												
Movement	EBL	EBT	EBR	WBL	WBT	WBR	NBL	NBT	NBR	SBL	SBT	SBR
Lane Configurations	 	  		 	  		 	 				
Traffic Volume (veh/h)	220	844	154	137	2010	166	222	360	63	147	619	605
Future Volume (veh/h)	220	844	154	137	2010	166	222	360	63	147	619	605
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	239	888	167	149	2161	180	241	387	68	160	673	549
Peak Hour Factor	0.92	0.95	0.92	0.92	0.93	0.92	0.92	0.93	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	192	2061	640	218	2099	652	218	1050	468	186	629	509
Arrive On Green	0.06	0.40	0.40	0.13	0.82	0.82	0.06	0.30	0.30	0.10	0.34	0.34
Sat Flow, veh/h	3456	5106	1585	3456	5106	1585	3456	3554	1585	1781	1867	1509
Grp Volume(v), veh/h	239	888	167	149	2161	180	241	387	68	160	640	582
Grp Sat Flow(s),veh/h/ln	1728	1702	1585	1728	1702	1585	1728	1777	1585	1781	1777	1599
Q Serve(g_s), s	7.5	16.9	7.4	5.6	55.5	3.5	8.5	11.6	3.5	11.9	45.5	45.5
Cycle Q Clear(g_c), s	7.5	16.9	7.4	5.6	55.5	3.5	8.5	11.6	3.5	11.9	45.5	45.5
Prop In Lane	1.00		1.00	1.00		1.00	1.00		1.00	1.00		0.94
Lane Grp Cap(c), veh/h	192	2061	640	218	2099	652	218	1050	468	186	599	539
V/C Ratio(X)	1.24	0.43	0.26	0.68	1.03	0.28	1.11	0.37	0.15	0.86	1.07	1.08
Avail Cap(c_a), veh/h	192	2061	640	218	2099	652	218	1050	468	284	599	539
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)	0.58	0.58	0.58	0.33	0.33	0.33	1.00	1.00	1.00	1.00	1.00	1.00
Uniform Delay (d), s/veh	63.8	29.1	16.4	57.7	12.0	7.4	63.3	37.6	23.3	59.5	44.8	44.8
Incr Delay (d2), s/veh	133.1	0.4	0.6	2.9	19.9	0.3	92.8	1.0	0.7	15.0	56.7	62.0
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	6.9	7.0	2.8	2.4	8.5	1.1	6.5	5.3	1.7	6.2	29.3	27.1
Unsig. Movement Delay, s/veh												
LnGrp Delay(d),s/veh	196.8	29.4	17.0	60.7	31.9	7.7	156.1	38.6	24.0	74.4	101.4	106.7
LnGrp LOS	F	C	B	E	F	A	F	D	C	E	F	F
Approach Vol, veh/h	1294		2490				696		1382			
Approach Delay, s/veh	58.8		31.8				77.9		100.5			
Approach LOS	E		C				E		F			
Timer - Assigned Phs	1	2	3	4	5	6	7	8				
Phs Duration (G+Y+Rc), s	18.6	44.4	13.0	59.0	13.0	50.0	12.0	60.0				
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	21.5	32.5	8.5	54.5	8.5	45.5	7.5	55.5				
Max Q Clear Time (g_c+l1), s	13.9	13.6	7.6	18.9	10.5	47.5	9.5	57.5				
Green Ext Time (p_c), s	0.2	2.6	0.0	8.2	0.0	0.0	0.0	0.0				
Intersection Summary												
HCM 6th Ctrl Delay			59.4									
HCM 6th LOS			E									

HCM 6th Signalized Intersection Summary
16: Yosemite Street & County Line Road

2030 Total AM_Imp.syn
04/24/2019

												
Movement	EBL	EBT	EBR	WBL	WBT	WBR	NBL	NBT	NBR	SBL	SBT	SBR
Lane Configurations												
Traffic Volume (veh/h)	783	1480	88	59	507	105	89	476	32	92	188	147
Future Volume (veh/h)	783	1480	88	59	507	105	89	476	32	92	188	147
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	851	1609	96	64	523	114	97	517	35	100	204	0
Peak Hour Factor	0.92	0.92	0.92	0.92	0.97	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	1416	2960	919	116	1040	323	146	654	292	123	750	
Arrive On Green	0.41	0.58	0.58	0.01	0.07	0.07	0.04	0.18	0.18	0.07	0.21	0.00
Sat Flow, veh/h	3456	5106	1585	3456	5106	1585	3456	3554	1585	1781	3554	1585
Grp Volume(v), veh/h	851	1609	96	64	523	114	97	517	35	100	204	0
Grp Sat Flow(s),veh/h/ln	1728	1702	1585	1728	1702	1585	1728	1777	1585	1781	1777	1585
Q Serve(g_s), s	26.0	26.1	3.7	2.5	13.3	7.7	3.7	18.8	2.5	7.5	6.5	0.0
Cycle Q Clear(g_c), s	26.0	26.1	3.7	2.5	13.3	7.7	3.7	18.8	2.5	7.5	6.5	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	1416	2960	919	116	1040	323	146	654	292	123	750	
V/C Ratio(X)	0.60	0.54	0.10	0.55	0.50	0.35	0.67	0.79	0.12	0.81	0.27	
Avail Cap(c_a), veh/h	1416	2960	919	218	1040	323	294	654	292	218	750	
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)	0.34	0.34	0.34	0.74	0.74	0.74	1.00	1.00	1.00	1.00	1.00	0.00
Uniform Delay (d), s/veh	31.2	17.4	12.7	65.7	56.4	37.4	63.7	52.6	46.0	61.9	44.6	0.0
Incr Delay (d2), s/veh	0.2	0.2	0.1	3.0	1.3	2.2	5.2	9.5	0.8	11.8	0.9	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	10.9	10.2	1.3	1.2	6.3	3.4	1.8	9.2	1.1	3.8	3.0	0.0
Unsig. Movement Delay, s/veh												
LnGrp Delay(d),s/veh	31.4	17.7	12.8	68.7	57.7	39.7	68.9	62.1	46.8	73.7	45.5	0.0
LnGrp LOS	C	B	B	E	E	D	E	E	D	E	D	
Approach Vol, veh/h		2556			701			649			304	A
Approach Delay, s/veh		22.1			55.7			62.3			54.8	
Approach LOS		C			E			E			D	
Timer - Assigned Phs	1	2	3	4	5	6	7	8				
Phs Duration (G+Y+Rc), s	13.9	29.3	9.0	82.8	10.2	33.0	59.8	32.0				
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	23.5	8.5	68.5	11.5	28.5	49.5	27.5				
Max Q Clear Time (g_c+l1), s	9.5	20.8	4.5	28.1	5.7	8.5	28.0	15.3				
Green Ext Time (p_c), s	0.1	0.9	0.0	18.2	0.1	1.2	3.4	3.1				
Intersection Summary												
HCM 6th Ctrl Delay			36.2									
HCM 6th LOS			D									
Notes												
Unsignalized Delay for [SBR] is excluded from calculations of the approach delay and intersection delay.												

HCM 6th Signalized Intersection Summary
16: Yosemite Street & County Line Road

2030 Total PM_Imp.syn
04/25/2019

													
Movement	EBL	EBT	EBR	WBL	WBT	WBR	NBL	NBT	NBR	SBL	SBT	SBR	
Lane Configurations													
Traffic Volume (veh/h)	220	844	154	137	2010	166	222	360	63	147	619	605	
Future Volume (veh/h)	220	844	154	137	2010	166	222	360	63	147	619	605	
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	239	888	167	149	2161	180	241	387	68	160	673	0	
Peak Hour Factor	0.92	0.95	0.92	0.92	0.93	0.92	0.92	0.93	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	289	2440	757	298	2452	761	291	705	314	186	777		
Arrive On Green	0.08	0.48	0.48	0.17	0.96	0.96	0.08	0.20	0.20	0.10	0.22	0.00	
Sat Flow, veh/h	3456	5106	1585	3456	5106	1585	3456	3554	1585	1781	3554	1585	
Grp Volume(v), veh/h	239	888	167	149	2161	180	241	387	68	160	673	0	
Grp Sat Flow(s),veh/h/ln	1728	1702	1585	1728	1702	1585	1728	1777	1585	1781	1777	1585	
Q Serve(g_s), s	9.2	14.8	5.9	5.3	14.7	0.8	9.3	13.2	3.9	11.9	24.6	0.0	
Cycle Q Clear(g_c), s	9.2	14.8	5.9	5.3	14.7	0.8	9.3	13.2	3.9	11.9	24.6	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	289	2440	757	298	2452	761	291	705	314	186	777		
V/C Ratio(X)	0.83	0.36	0.22	0.50	0.88	0.24	0.83	0.55	0.22	0.86	0.87		
Avail Cap(c_a), veh/h	320	2440	757	298	2452	761	320	705	314	270	777		
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)	0.57	0.57	0.57	0.33	0.33	0.33	1.00	1.00	1.00	1.00	1.00	0.00	
Uniform Delay (d), s/veh	60.9	22.3	10.4	53.2	1.7	1.4	60.9	48.7	29.7	59.5	50.9	0.0	
Incr Delay (d2), s/veh	9.1	0.2	0.4	0.4	1.7	0.2	15.2	3.1	1.6	16.8	12.5	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	4.4	6.0	3.1	2.2	1.3	0.3	4.7	6.2	2.0	6.3	12.3	0.0	
Unsig. Movement Delay, s/veh													
LnGrp Delay(d),s/veh	70.0	22.5	10.8	53.7	3.4	1.6	76.1	51.8	31.3	76.3	63.3	0.0	
LnGrp LOS	E	C	B	D	A	A	E	D	C	E	E		
Approach Vol, veh/h	1294			2490			696			833			A
Approach Delay, s/veh	29.8			6.3			58.2			65.8			
Approach LOS	C			A			E			E			
Timer - Assigned Phs	1	2	3	4	5	6	7	8					
Phs Duration (G+Y+Rc), s	18.6	31.3	16.1	69.0	15.9	34.0	15.8	69.3					
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	20.5	21.5	10.5	64.5	12.5	29.5	12.5	62.5					
Max Q Clear Time (g_c+I1), s	13.9	15.2	7.3	16.8	11.3	26.6	11.2	16.7					
Green Ext Time (p_c), s	0.2	1.4	0.1	8.6	0.1	1.2	0.1	30.1					

Intersection Summary

HCM 6th Ctrl Delay	28.1
HCM 6th LOS	C

Notes

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

HCM 6th Signalized Intersection Summary
16: Yosemite Street & County Line Road

2040 Background AM.syn

04/25/2019

												
Movement	EBL	EBT	EBR	WBL	WBT	WBR	NBL	NBT	NBR	SBL	SBT	SBR
Lane Configurations												
Traffic Volume (veh/h)	714	1338	92	62	473	110	93	457	33	97	187	125
Future Volume (veh/h)	714	1338	92	62	473	110	93	457	33	97	187	125
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	776	1454	100	67	488	120	101	497	36	105	203	136
Peak Hour Factor	0.92	0.92	0.92	0.92	0.97	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	1259	2575	799	118	889	276	149	910	406	129	593	379
Arrive On Green	0.36	0.50	0.50	0.01	0.06	0.06	0.04	0.26	0.26	0.07	0.29	0.29
Sat Flow, veh/h	3456	5106	1585	3456	5106	1585	3456	3554	1585	1781	2080	1329
Grp Volume(v), veh/h	776	1454	100	67	488	120	101	497	36	105	172	167
Grp Sat Flow(s),veh/h/ln	1728	1702	1585	1728	1702	1585	1728	1777	1585	1781	1777	1631
Q Serve(g_s), s	24.9	26.6	4.5	2.6	12.6	8.2	3.9	16.3	2.3	7.8	10.3	11.0
Cycle Q Clear(g_c), s	24.9	26.6	4.5	2.6	12.6	8.2	3.9	16.3	2.3	7.8	10.3	11.0
Prop In Lane	1.00		1.00	1.00		1.00	1.00		1.00	1.00		0.81
Lane Grp Cap(c), veh/h	1259	2575	799	118	889	276	149	910	406	129	507	465
V/C Ratio(X)	0.62	0.56	0.13	0.57	0.55	0.43	0.68	0.55	0.09	0.81	0.34	0.36
Avail Cap(c_a), veh/h	1259	2575	799	192	889	276	243	910	406	231	507	465
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)	0.11	0.11	0.11	0.85	0.85	0.85	1.00	1.00	1.00	1.00	1.00	1.00
Uniform Delay (d), s/veh	35.2	23.2	17.7	65.8	58.5	39.6	63.7	43.4	38.2	61.7	38.2	38.4
Incr Delay (d2), s/veh	0.1	0.1	0.0	3.7	2.1	4.2	5.3	2.4	0.4	11.6	1.8	2.2
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	10.5	10.7	1.7	1.2	5.9	3.7	1.8	7.5	1.0	4.0	4.8	4.7
Unsig. Movement Delay, s/veh												
LnGrp Delay(d),s/veh	35.3	23.3	17.7	69.4	60.5	43.8	68.9	45.8	38.7	73.3	40.0	40.6
LnGrp LOS	D	C	B	E	E	D	E	D	D	E	D	D
Approach Vol, veh/h		2330			675			634			444	
Approach Delay, s/veh		27.0			58.4			49.1			48.1	
Approach LOS		C			E			D			D	
Timer - Assigned Phs	1	2	3	4	5	6	7	8				
Phs Duration (G+Y+Rc), s	14.3	39.1	9.1	72.6	10.3	43.0	53.7	28.0				
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	17.5	30.5	7.5	61.5	9.5	38.5	45.5	23.5				
Max Q Clear Time (g_c+l1), s	9.8	18.3	4.6	28.6	5.9	13.0	26.9	14.6				
Green Ext Time (p_c), s	0.1	2.7	0.0	14.5	0.1	2.1	2.9	2.5				
Intersection Summary												
HCM 6th Ctrl Delay				37.9								
HCM 6th LOS				D								

HCM 6th Signalized Intersection Summary
16: Yosemite Street & County Line Road

2040 Background PM.syn

04/25/2019

												
Movement	EBL	EBT	EBR	WBL	WBT	WBR	NBL	NBT	NBR	SBL	SBT	SBR
Lane Configurations												
Traffic Volume (veh/h)	193	811	162	144	1889	174	233	363	67	154	605	523
Future Volume (veh/h)	193	811	162	144	1889	174	233	363	67	154	605	523
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	210	854	176	157	2031	189	253	390	73	167	658	568
Peak Hour Factor	0.92	0.95	0.92	0.92	0.93	0.92	0.92	0.93	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	192	1948	605	243	2024	628	243	1086	485	194	625	535
Arrive On Green	0.06	0.38	0.38	0.14	0.79	0.79	0.07	0.31	0.31	0.11	0.34	0.34
Sat Flow, veh/h	3456	5106	1585	3456	5106	1585	3456	3554	1585	1781	1816	1552
Grp Volume(v), veh/h	210	854	176	157	2031	189	253	390	73	167	644	582
Grp Sat Flow(s),veh/h/ln	1728	1702	1585	1728	1702	1585	1728	1777	1585	1781	1777	1591
Q Serve(g_s), s	7.5	16.8	8.1	5.8	53.5	4.4	9.5	11.6	3.6	12.4	46.5	46.5
Cycle Q Clear(g_c), s	7.5	16.8	8.1	5.8	53.5	4.4	9.5	11.6	3.6	12.4	46.5	46.5
Prop In Lane	1.00		1.00	1.00		1.00	1.00		1.00	1.00		0.98
Lane Grp Cap(c), veh/h	192	1948	605	243	2024	628	243	1086	485	194	612	548
V/C Ratio(X)	1.09	0.44	0.29	0.65	1.00	0.30	1.04	0.36	0.15	0.86	1.05	1.06
Avail Cap(c_a), veh/h	192	1948	605	243	2024	628	243	1086	485	336	612	548
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)	0.60	0.60	0.60	0.64	0.64	0.64	1.00	1.00	1.00	1.00	1.00	1.00
Uniform Delay (d), s/veh	63.8	31.0	17.6	56.4	14.0	8.9	62.8	36.5	22.0	59.1	44.2	44.3
Incr Delay (d2), s/veh	77.8	0.4	0.7	3.7	16.9	0.8	68.7	0.9	0.7	10.5	50.7	56.1
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	5.4	7.0	3.1	2.5	9.6	1.5	6.5	5.2	1.8	6.2	28.9	26.7
Unsig. Movement Delay, s/veh												
LnGrp Delay(d),s/veh	141.6	31.4	18.3	60.2	30.9	9.7	131.4	37.5	22.6	69.6	95.0	100.4
LnGrp LOS	F	C	B	E	F	A	F	D	C	E	F	F
Approach Vol, veh/h		1240			2377			716			1393	
Approach Delay, s/veh		48.2			31.1			69.2			94.2	
Approach LOS		D			C			E			F	
Timer - Assigned Phs	1	2	3	4	5	6	7	8				
Phs Duration (G+Y+Rc), s	19.2	45.8	14.0	56.0	14.0	51.0	12.0	58.0				
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	25.5	30.5	9.5	51.5	9.5	46.5	7.5	53.5				
Max Q Clear Time (g_c+I1), s	14.4	13.6	7.8	18.8	11.5	48.5	9.5	55.5				
Green Ext Time (p_c), s	0.3	2.6	0.1	7.8	0.0	0.0	0.0	0.0				
Intersection Summary												
HCM 6th Ctrl Delay				54.9								
HCM 6th LOS				D								

HCM 6th Signalized Intersection Summary
16: Yosemite Street & County Line Road

2040 Total AM.syn
04/25/2019

												
Movement	EBL	EBT	EBR	WBL	WBT	WBR	NBL	NBT	NBR	SBL	SBT	SBR
Lane Configurations												
Traffic Volume (veh/h)	818	1545	92	62	530	110	93	498	33	97	198	153
Future Volume (veh/h)	818	1545	92	62	530	110	93	498	33	97	198	153
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	889	1679	100	67	546	120	101	541	36	105	215	0
Peak Hour Factor	0.92	0.92	0.92	0.92	0.97	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	1411	2952	916	118	1040	323	150	648	289	129	750	
Arrive On Green	0.41	0.58	0.58	0.01	0.07	0.07	0.04	0.18	0.18	0.07	0.21	0.00
Sat Flow, veh/h	3456	5106	1585	3456	5106	1585	3456	3554	1585	1781	3554	1585
Grp Volume(v), veh/h	889	1679	100	67	546	120	101	541	36	105	215	0
Grp Sat Flow(s),veh/h/ln	1728	1702	1585	1728	1702	1585	1728	1777	1585	1781	1777	1585
Q Serve(g_s), s	27.7	27.9	3.8	2.6	14.0	8.1	3.9	19.8	2.6	7.8	6.9	0.0
Cycle Q Clear(g_c), s	27.7	27.9	3.8	2.6	14.0	8.1	3.9	19.8	2.6	7.8	6.9	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	1411	2952	916	118	1040	323	150	648	289	129	750	
V/C Ratio(X)	0.63	0.57	0.11	0.57	0.52	0.37	0.67	0.84	0.12	0.81	0.29	
Avail Cap(c_a), veh/h	1411	2952	916	218	1040	323	294	648	289	218	750	
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)	0.25	0.25	0.25	0.71	0.71	0.71	1.00	1.00	1.00	1.00	1.00	0.00
Uniform Delay (d), s/veh	31.8	17.9	12.8	65.8	56.6	37.3	63.6	53.2	46.2	61.7	44.7	0.0
Incr Delay (d2), s/veh	0.2	0.2	0.1	3.1	1.3	2.3	5.2	12.1	0.9	11.7	1.0	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	11.6	10.8	1.4	1.2	6.5	3.6	1.8	10.0	1.1	4.0	3.2	0.0
Unsig. Movement Delay, s/veh												
LnGrp Delay(d),s/veh	32.0	18.1	12.9	68.8	58.0	39.6	68.8	65.4	47.1	73.4	45.7	0.0
LnGrp LOS	C	B	B	E	E	D	E	E	D	E	D	
Approach Vol, veh/h		2668			733			678			320	A
Approach Delay, s/veh		22.5			56.0			64.9			54.8	
Approach LOS		C			E			E			D	
Timer - Assigned Phs	1	2	3	4	5	6	7	8				
Phs Duration (G+Y+Rc), s	14.3	29.1	9.1	82.5	10.4	33.0	59.6	32.0				
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	23.5	8.5	68.5	11.5	28.5	49.5	27.5				
Max Q Clear Time (g_c+I1), s	9.8	21.8	4.6	29.9	5.9	8.9	29.7	16.0				
Green Ext Time (p_c), s	0.1	0.6	0.0	19.0	0.1	1.2	3.5	3.2				
Intersection Summary												
HCM 6th Ctrl Delay			37.0									
HCM 6th LOS			D									
Notes												
Unsignalized Delay for [SBR] is excluded from calculations of the approach delay and intersection delay.												

HCM 6th Signalized Intersection Summary 16: Yosemite Street & County Line Road

2040 Total PM.syn
04/25/2019

													
Movement	EBL	EBT	EBR	WBL	WBT	WBR	NBL	NBT	NBR	SBL	SBT	SBR	
Lane Configurations													
Traffic Volume (veh/h)	229	884	162	144	2102	174	233	378	67	154	648	630	
Future Volume (veh/h)	229	884	162	144	2102	174	233	378	67	154	648	630	
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	249	931	176	157	2260	189	253	406	73	167	704	0	
Peak Hour Factor	0.92	0.95	0.92	0.92	0.93	0.92	0.92	0.93	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	298	2440	757	287	2422	752	302	705	314	192	777		
Arrive On Green	0.09	0.48	0.48	0.17	0.95	0.95	0.09	0.20	0.20	0.11	0.22	0.00	
Sat Flow, veh/h	3456	5106	1585	3456	5106	1585	3456	3554	1585	1781	3554	1585	
Grp Volume(v), veh/h	249	931	176	157	2260	189	253	406	73	167	704	0	
Grp Sat Flow(s),veh/h/ln	1728	1702	1585	1728	1702	1585	1728	1777	1585	1781	1777	1585	
Q Serve(g_s), s	9.6	15.7	6.2	5.6	26.7	1.1	9.7	14.0	4.2	12.5	26.1	0.0	
Cycle Q Clear(g_c), s	9.6	15.7	6.2	5.6	26.7	1.1	9.7	14.0	4.2	12.5	26.1	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	298	2440	757	287	2422	752	302	705	314	192	777		
V/C Ratio(X)	0.83	0.38	0.23	0.55	0.93	0.25	0.84	0.58	0.23	0.87	0.91		
Avail Cap(c_a), veh/h	320	2440	757	287	2422	752	320	705	314	218	777		
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)	0.50	0.50	0.50	0.25	0.25	0.25	1.00	1.00	1.00	1.00	1.00	0.00	
Uniform Delay (d), s/veh	60.7	22.5	10.3	54.0	2.5	1.8	60.7	49.0	30.1	59.3	51.4	0.0	
Incr Delay (d2), s/veh	8.8	0.2	0.4	0.6	2.4	0.2	16.8	3.4	1.7	27.5	16.2	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	6.4	3.3	2.4	1.8	0.4	5.0	6.6	2.2	7.1	13.3	0.0	
Unsig. Movement Delay, s/veh													
LnGrp Delay(d),s/veh	69.6	22.7	10.6	54.5	4.9	2.0	77.4	52.4	31.8	86.8	67.6	0.0	
LnGrp LOS	E	C	B	D	A	A	E	D	C	F	E		
Approach Vol, veh/h	1356			2606			732			871			A
Approach Delay, s/veh	29.8			7.7			59.0			71.3			
Approach LOS	C			A			E			E			
Timer - Assigned Phs	1	2	3	4	5	6	7	8					
Phs Duration (G+Y+Rc), s	19.0	31.3	15.7	69.0	16.3	34.0	16.2	68.5					
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	25.5	10.5	64.5	12.5	29.5	12.5	62.5					
Max Q Clear Time (g_c+I1), s	14.5	16.0	7.6	17.7	11.7	28.1	11.6	28.7					
Green Ext Time (p_c), s	0.1	2.0	0.1	9.1	0.1	0.7	0.1	25.6					

Intersection Summary

HCM 6th Ctrl Delay	29.8
HCM 6th LOS	C

Notes

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

HCM 6th Signalized Intersection Summary
17: Chester Street & County Line Road

2019 Existing AM.syn

04/24/2019

												
Movement	EBL	EBT	EBR	WBL	WBT	WBR	NBL	NBT	NBR	SBL	SBT	SBR
Lane Configurations												
Traffic Volume (veh/h)	225	1120	20	128	624	540	13	189	151	42	22	30
Future Volume (veh/h)	225	1120	20	128	624	540	13	189	151	42	22	30
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	245	1179	32	152	650	628	24	242	204	56	44	44
Peak Hour Factor	0.92	0.95	0.62	0.84	0.96	0.86	0.54	0.78	0.74	0.75	0.50	0.68
Percent Heavy Veh, %	2	2	2	2	2	2	2	2	2	2	2	2
Cap, veh/h	718	2775	861	209	1912	628	76	818	365	112	856	382
Arrive On Green	0.42	1.00	1.00	0.02	0.13	0.13	0.02	0.23	0.23	0.03	0.24	0.24
Sat Flow, veh/h	3456	5106	1585	3456	4826	1585	3456	3554	1585	3456	3554	1585
Grp Volume(v), veh/h	245	1179	32	152	650	628	24	242	204	56	44	44
Grp Sat Flow(s),veh/h/ln	1728	1702	1585	1728	1609	1585	1728	1777	1585	1728	1777	1585
Q Serve(g_s), s	6.5	0.0	0.0	5.9	16.5	53.5	0.9	7.6	15.4	2.2	1.3	1.9
Cycle Q Clear(g_c), s	6.5	0.0	0.0	5.9	16.5	53.5	0.9	7.6	15.4	2.2	1.3	1.9
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	718	2775	861	209	1912	628	76	818	365	112	856	382
V/C Ratio(X)	0.34	0.42	0.04	0.73	0.34	1.00	0.32	0.30	0.56	0.50	0.05	0.12
Avail Cap(c_a), veh/h	718	2775	861	448	1912	628	192	818	365	243	856	382
HCM Platoon Ratio	2.00	2.00	2.00	0.33	0.33	0.33	1.00	1.00	1.00	1.00	1.00	1.00
Upstream Filter(I)	0.82	0.82	0.82	0.91	0.91	0.91	1.00	1.00	1.00	1.00	1.00	1.00
Uniform Delay (d), s/veh	33.2	0.0	0.0	65.0	42.6	58.7	65.0	42.9	45.9	64.2	39.4	16.3
Incr Delay (d2), s/veh	0.2	0.4	0.1	4.3	0.4	34.2	2.3	0.9	6.1	3.4	0.1	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	2.6	0.1	0.0	2.8	7.3	28.8	0.4	3.5	6.7	1.0	0.6	1.2
Unsig. Movement Delay, s/veh												
LnGrp Delay(d),s/veh	33.4	0.4	0.1	69.4	43.1	92.9	67.4	43.8	52.0	67.6	39.5	16.9
LnGrp LOS	C	A	A	E	D	F	E	D	D	E	D	B
Approach Vol, veh/h	1456				1430				470			
Approach Delay, s/veh	5.9				67.7				48.6			
Approach LOS	A				E				D			
Timer - Assigned Phs	1	2	3	4	5	6	7	8				
Phs Duration (G+Y+Rc), s	8.9	35.6	12.7	77.9	7.5	37.0	32.5	58.0				
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	9.5	30.5	17.5	59.5	7.5	32.5	23.5	53.5				
Max Q Clear Time (g_c+l1), s	4.2	17.4	7.9	2.0	2.9	3.9	8.5	55.5				
Green Ext Time (p_c), s	0.0	1.8	0.3	12.0	0.0	0.4	0.7	0.0				
Intersection Summary												
HCM 6th Ctrl Delay	38.5											
HCM 6th LOS	D											

HCM 6th Signalized Intersection Summary
17: Chester Street & County Line Road

2019 Existing PM.syn
04/24/2019

												
Movement	EBL	EBT	EBR	WBL	WBT	WBR	NBL	NBT	NBR	SBL	SBT	SBR
Lane Configurations												
Traffic Volume (veh/h)	144	672	56	347	1327	95	111	172	231	507	278	352
Future Volume (veh/h)	144	672	56	347	1327	95	111	172	231	507	278	352
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	176	693	68	377	1491	112	128	207	262	570	348	359
Peak Hour Factor	0.82	0.97	0.82	0.92	0.89	0.85	0.87	0.83	0.88	0.89	0.80	0.98
Percent Heavy Veh, %	2	2	2	2	2	2	2	2	2	2	2	2
Cap, veh/h	231	1381	429	692	2482	186	179	742	331	647	1224	546
Arrive On Green	0.02	0.09	0.09	0.40	0.81	0.81	0.05	0.21	0.21	0.19	0.34	0.34
Sat Flow, veh/h	3456	5106	1585	3456	6151	462	3456	3554	1585	3456	3554	1585
Grp Volume(v), veh/h	176	693	68	377	1169	434	128	207	262	570	348	359
Grp Sat Flow(s),veh/h/ln	1728	1702	1585	1728	1609	1787	1728	1777	1585	1728	1777	1585
Q Serve(g_s), s	6.8	17.5	4.5	11.3	12.2	12.3	4.9	6.6	14.0	21.7	9.6	25.9
Cycle Q Clear(g_c), s	6.8	17.5	4.5	11.3	12.2	12.3	4.9	6.6	14.0	21.7	9.6	25.9
Prop In Lane	1.00		1.00	1.00		0.26	1.00		1.00	1.00		1.00
Lane Grp Cap(c), veh/h	231	1381	429	692	1947	721	179	742	331	647	1224	546
V/C Ratio(X)	0.76	0.50	0.16	0.54	0.60	0.60	0.72	0.28	0.79	0.88	0.28	0.66
Avail Cap(c_a), veh/h	346	1381	429	692	1947	721	269	742	331	858	1224	546
HCM Platoon Ratio	0.33	0.33	0.33	2.00	2.00	2.00	1.00	1.00	1.00	1.00	1.00	1.00
Upstream Filter(I)	0.88	0.88	0.88	0.79	0.79	0.79	1.00	1.00	1.00	1.00	1.00	1.00
Uniform Delay (d), s/veh	64.9	52.8	33.2	35.8	8.9	8.9	63.0	44.9	22.2	53.4	32.2	37.5
Incr Delay (d2), s/veh	4.8	1.2	0.7	0.7	1.1	2.9	5.3	0.9	17.4	8.4	0.6	6.1
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	3.3	8.2	2.3	4.2	2.9	3.6	2.3	3.0	6.9	10.2	4.3	11.0
Unsig. Movement Delay, s/veh												
LnGrp Delay(d),s/veh	69.7	54.0	33.9	36.5	10.0	11.9	68.3	45.8	39.6	61.8	32.7	43.6
LnGrp LOS	E	D	C	D	B	B	E	D	D	E	C	D
Approach Vol, veh/h	937		1980				597		1277			
Approach Delay, s/veh	55.5		15.5				47.9		48.8			
Approach LOS	E		B				D		D			
Timer - Assigned Phs	1	2	3	4	5	6	7	8				
Phs Duration (G+Y+Rc), s	29.8	32.7	31.5	41.0	11.5	51.0	13.5	59.0				
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	33.5	23.5	23.5	36.5	10.5	46.5	13.5	46.5				
Max Q Clear Time (g_c+1), s	23.7	16.0	13.3	19.5	6.9	27.9	8.8	14.3				
Green Ext Time (p_c), s	1.6	1.4	1.0	4.7	0.1	3.5	0.2	14.8				
Intersection Summary												
HCM 6th Ctrl Delay	36.2											
HCM 6th LOS	D											

HCM 6th Signalized Intersection Summary
17: Chester Street & County Line Road

2030 Background AM.syn

04/24/2019

												
Movement	EBL	EBT	EBR	WBL	WBT	WBR	NBL	NBT	NBR	SBL	SBT	SBR
Lane Configurations												
Traffic Volume (veh/h)	238	1183	21	135	659	570	14	200	160	44	23	32
Future Volume (veh/h)	238	1183	21	135	659	570	14	200	160	44	23	32
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	259	1245	23	147	686	620	15	217	174	48	25	35
Peak Hour Factor	0.92	0.95	0.92	0.92	0.96	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	738	2701	838	203	1805	593	55	882	393	107	935	417
Arrive On Green	0.43	1.00	1.00	0.02	0.12	0.12	0.02	0.25	0.25	0.03	0.26	0.26
Sat Flow, veh/h	3456	5106	1585	3456	4826	1585	3456	3554	1585	3456	3554	1585
Grp Volume(v), veh/h	259	1245	23	147	686	620	15	217	174	48	25	35
Grp Sat Flow(s),veh/h/ln	1728	1702	1585	1728	1609	1585	1728	1777	1585	1728	1777	1585
Q Serve(g_s), s	6.8	0.0	0.0	5.7	17.7	50.5	0.6	6.6	12.5	1.8	0.7	1.4
Cycle Q Clear(g_c), s	6.8	0.0	0.0	5.7	17.7	50.5	0.6	6.6	12.5	1.8	0.7	1.4
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	738	2701	838	203	1805	593	55	882	393	107	935	417
V/C Ratio(X)	0.35	0.46	0.03	0.72	0.38	1.05	0.27	0.25	0.44	0.45	0.03	0.08
Avail Cap(c_a), veh/h	738	2701	838	397	1805	593	192	882	393	243	935	417
HCM Platoon Ratio	2.00	2.00	2.00	0.33	0.33	0.33	1.00	1.00	1.00	1.00	1.00	1.00
Upstream Filter(I)	0.78	0.78	0.78	0.93	0.93	0.93	1.00	1.00	1.00	1.00	1.00	1.00
Uniform Delay (d), s/veh	32.4	0.0	0.0	65.1	44.8	59.2	65.7	40.6	42.9	64.3	36.9	14.4
Incr Delay (d2), s/veh	0.2	0.4	0.0	4.5	0.6	48.1	2.6	0.7	3.6	2.9	0.1	0.4
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	2.7	0.1	0.0	2.7	7.8	29.5	0.3	3.0	5.3	0.9	0.3	0.9
Unsig. Movement Delay, s/veh												
LnGrp Delay(d),s/veh	32.6	0.4	0.0	69.6	45.3	107.3	68.3	41.3	46.4	67.2	37.0	14.8
LnGrp LOS	C	A	A	E	D	F	E	D	D	E	D	B
Approach Vol, veh/h		1527			1453			406			108	
Approach Delay, s/veh		5.9			74.2			44.5			43.2	
Approach LOS		A			E			D			D	
Timer - Assigned Phs	1	2	3	4	5	6	7	8				
Phs Duration (G+Y+Rc), s	8.7	38.0	12.4	75.9	6.7	40.0	33.3	55.0				
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	9.5	33.5	15.5	58.5	7.5	35.5	23.5	50.5				
Max Q Clear Time (g_c+l1), s	3.8	14.5	7.7	2.0	2.6	3.4	8.8	52.5				
Green Ext Time (p_c), s	0.0	1.8	0.2	13.0	0.0	0.2	0.7	0.0				
Intersection Summary												
HCM 6th Ctrl Delay			40.0									
HCM 6th LOS			D									

HCM 6th Signalized Intersection Summary
17: Chester Street & County Line Road

2030 Background PM.syn

04/24/2019

												
Movement	EBL	EBT	EBR	WBL	WBT	WBR	NBL	NBT	NBR	SBL	SBT	SBR
Lane Configurations												
Traffic Volume (veh/h)	152	710	59	367	1402	100	117	182	244	536	294	372
Future Volume (veh/h)	152	710	59	367	1402	100	117	182	244	536	294	372
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	165	732	64	399	1524	109	127	198	265	583	320	380
Peak Hour Factor	0.92	0.97	0.92	0.92	0.92	0.92	0.92	0.92	0.92	0.92	0.92	0.98
Percent Heavy Veh, %	2	2	2	2	2	2	2	2	2	2	2	2
Cap, veh/h	220	1381	429	693	2514	180	178	728	325	660	1224	546
Arrive On Green	0.02	0.09	0.09	0.40	0.81	0.81	0.05	0.20	0.20	0.19	0.34	0.34
Sat Flow, veh/h	3456	5106	1585	3456	6175	441	3456	3554	1585	3456	3554	1585
Grp Volume(v), veh/h	165	732	64	399	1191	442	127	198	265	583	320	380
Grp Sat Flow(s),veh/h/ln	1728	1702	1585	1728	1609	1791	1728	1777	1585	1728	1777	1585
Q Serve(g_s), s	6.4	18.5	4.2	12.1	12.2	12.2	4.9	6.3	14.3	22.2	8.8	27.9
Cycle Q Clear(g_c), s	6.4	18.5	4.2	12.1	12.2	12.2	4.9	6.3	14.3	22.2	8.8	27.9
Prop In Lane	1.00		1.00	1.00		0.25	1.00		1.00	1.00		1.00
Lane Grp Cap(c), veh/h	220	1381	429	693	1965	729	178	728	325	660	1224	546
V/C Ratio(X)	0.75	0.53	0.15	0.58	0.61	0.61	0.72	0.27	0.82	0.88	0.26	0.70
Avail Cap(c_a), veh/h	346	1381	429	693	1965	729	269	728	325	858	1224	546
HCM Platoon Ratio	0.33	0.33	0.33	2.00	2.00	2.00	1.00	1.00	1.00	1.00	1.00	1.00
Upstream Filter(I)	0.87	0.87	0.87	0.76	0.76	0.76	1.00	1.00	1.00	1.00	1.00	1.00
Uniform Delay (d), s/veh	65.0	53.3	33.1	36.0	8.6	8.6	63.1	45.2	22.6	53.2	31.9	38.2
Incr Delay (d2), s/veh	4.4	1.3	0.6	0.9	1.1	2.8	5.3	0.9	19.8	8.8	0.5	7.2
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	3.1	8.7	2.1	4.5	2.8	3.5	2.3	2.9	7.2	10.4	3.9	11.9
Unsig. Movement Delay, s/veh												
LnGrp Delay(d),s/veh	69.4	54.6	33.8	36.9	9.6	11.4	68.4	46.1	42.4	62.0	32.4	45.3
LnGrp LOS	E	D	C	D	A	B	E	D	D	E	C	D
Approach Vol, veh/h	961				2032				590			
Approach Delay, s/veh	55.7				15.4				49.2			
Approach LOS	E				B				D			
Timer - Assigned Phs	1	2	3	4	5	6	7	8				
Phs Duration (G+Y+Rc), s	30.3	32.2	31.6	41.0	11.4	51.0	13.1	59.5				
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	33.5	23.5	23.5	36.5	10.5	46.5	13.5	46.5				
Max Q Clear Time (g_c+l1), s	24.2	16.3	14.1	20.5	6.9	29.9	8.4	14.2				
Green Ext Time (p_c), s	1.6	1.3	1.0	4.8	0.1	3.2	0.2	15.1				
Intersection Summary												
HCM 6th Ctrl Delay	36.5											
HCM 6th LOS	D											

HCM 6th Signalized Intersection Summary
17: Chester Street & County Line Road

2030 Total AM_Imp.syn
04/25/2019

												
Movement	EBL	EBT	EBR	WBL	WBT	WBR	NBL	NBT	NBR	SBL	SBT	SBR
Lane Configurations												
Traffic Volume (veh/h)	445	1183	21	135	659	1130	14	366	160	157	68	89
Future Volume (veh/h)	445	1183	21	135	659	1130	14	366	160	157	68	89
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	484	1245	23	147	686	902	15	398	141	171	74	0
Peak Hour Factor	0.92	0.95	0.92	0.92	0.96	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	525	3226	1001	197	2591	851	55	487	217	205	303	
Arrive On Green	0.30	1.00	1.00	0.10	0.90	0.90	0.02	0.14	0.14	0.04	0.16	0.00
Sat Flow, veh/h	3456	5106	1585	3456	4826	1585	3456	3554	1585	5023	1870	1585
Grp Volume(v), veh/h	484	1245	23	147	686	902	15	398	141	171	74	0
Grp Sat Flow(s),veh/h/ln	1728	1702	1585	1728	1609	1585	1728	1777	1585	1674	1870	1585
Q Serve(g_s), s	18.3	0.0	0.0	5.6	2.6	72.5	0.6	14.7	11.4	4.6	4.7	0.0
Cycle Q Clear(g_c), s	18.3	0.0	0.0	5.6	2.6	72.5	0.6	14.7	11.4	4.6	4.7	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	525	3226	1001	197	2591	851	55	487	217	205	303	
V/C Ratio(X)	0.92	0.39	0.02	0.75	0.26	1.06	0.27	0.82	0.65	0.84	0.24	
Avail Cap(c_a), veh/h	525	3226	1001	294	2591	851	141	487	217	205	303	
HCM Platoon Ratio	2.00	2.00	2.00	1.67	1.67	1.67	1.00	1.00	1.00	1.00	1.00	1.00
Upstream Filter(I)	0.78	0.78	0.78	0.82	0.82	0.82	1.00	1.00	1.00	1.00	1.00	0.00
Uniform Delay (d), s/veh	46.2	0.0	0.0	60.1	3.4	7.0	65.7	56.6	55.2	64.3	49.4	0.0
Incr Delay (d2), s/veh	18.3	0.3	0.0	4.6	0.2	45.2	2.6	14.1	14.1	24.8	1.9	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	8.2	0.1	0.0	2.5	0.8	13.8	0.3	7.6	5.4	2.4	2.4	0.0
Unsig. Movement Delay, s/veh												
LnGrp Delay(d),s/veh	64.5	0.3	0.0	64.7	3.6	52.1	68.3	70.7	69.3	89.1	51.3	0.0
LnGrp LOS	E	A	A	E	A	F	E	E	E	F	D	
Approach Vol, veh/h	1752			1735			554			245		
Approach Delay, s/veh	18.0			34.0			70.3			77.7		
Approach LOS	B			C			E			E		
Timer - Assigned Phs	1	2	3	4	5	6	7	8				
Phs Duration (G+Y+Rc), s	10.0	23.0	12.2	89.8	6.7	26.3	25.0	77.0				
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	5.5	18.5	11.5	81.5	5.5	18.5	20.5	72.5				
Max Q Clear Time (g_c+I1), s	6.6	16.7	7.6	2.0	2.6	6.7	20.3	74.5				
Green Ext Time (p_c), s	0.0	0.6	0.1	13.3	0.0	0.2	0.0	0.0				
Intersection Summary												
HCM 6th Ctrl Delay				34.6								
HCM 6th LOS				C								
Notes												
User approved pedestrian interval to be less than phase max green.												
Unsignalized Delay for [SBR] is excluded from calculations of the approach delay and intersection delay.												

HCM 6th Signalized Intersection Summary
17: Chester Street & County Line Road

2030 Total PM_Imp.syn
04/25/2019

													
Movement	EBL	EBT	EBR	WBL	WBT	WBR	NBL	NBT	NBR	SBL	SBT	SBR	
Lane Configurations													
Traffic Volume (veh/h)	225	710	59	367	1402	297	117	240	244	962	464	585	
Future Volume (veh/h)	225	710	59	367	1402	297	117	240	244	962	464	585	
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	245	732	64	399	1524	258	127	261	200	1046	504	0	
Peak Hour Factor	0.92	0.97	0.92	0.92	0.92	0.92	0.92	0.92	0.92	0.92	0.92	0.98	
Percent Heavy Veh, %	2	2	2	2	2	2	2	2	2	2	2	2	
Cap, veh/h	303	1494	464	668	2223	376	177	520	232	1177	617		
Arrive On Green	0.03	0.10	0.10	0.39	0.80	0.80	0.05	0.15	0.15	0.23	0.33	0.00	
Sat Flow, veh/h	3456	5106	1585	3456	5582	944	3456	3554	1585	5023	1870	1585	
Grp Volume(v), veh/h	245	732	64	399	1317	465	127	261	200	1046	504	0	
Grp Sat Flow(s),veh/h/ln	1728	1702	1585	1728	1609	1700	1728	1777	1585	1674	1870	1585	
Q Serve(g_s), s	9.5	18.4	4.2	12.4	16.5	16.5	4.9	9.1	11.6	27.2	33.4	0.0	
Cycle Q Clear(g_c), s	9.5	18.4	4.2	12.4	16.5	16.5	4.9	9.1	11.6	27.2	33.4	0.0	
Prop In Lane	1.00		1.00	1.00		0.56	1.00		1.00	1.00		1.00	
Lane Grp Cap(c), veh/h	303	1494	464	668	1922	677	177	520	232	1177	617		
V/C Ratio(X)	0.81	0.49	0.14	0.60	0.69	0.69	0.72	0.50	0.86	0.89	0.82		
Avail Cap(c_a), veh/h	397	1494	464	668	1922	677	243	520	232	1321	617		
HCM Platoon Ratio	0.33	0.33	0.33	2.00	2.00	2.00	1.00	1.00	1.00	1.00	1.00	1.00	
Upstream Filter(I)	0.92	0.92	0.92	0.75	0.75	0.75	1.00	1.00	1.00	1.00	1.00	0.00	
Uniform Delay (d), s/veh	64.4	51.4	31.5	37.2	9.9	9.9	63.1	53.1	27.2	50.0	41.5	0.0	
Incr Delay (d2), s/veh	8.5	1.1	0.6	1.1	1.5	4.2	6.2	3.4	32.0	7.2	11.5	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	4.8	8.6	2.1	4.7	3.5	4.2	2.3	4.4	6.5	12.2	17.3	0.0	
Unsig. Movement Delay, s/veh													
LnGrp Delay(d),s/veh	72.9	52.5	32.1	38.3	11.5	14.2	69.3	56.5	59.2	57.1	53.0	0.0	
LnGrp LOS	E	D	C	D	B	B	E	E	E	E	D		
Approach Vol, veh/h	1041			2181			588			1550			A
Approach Delay, s/veh	56.0			16.9			60.2			55.8			
Approach LOS	E			B			E			E			
Timer - Assigned Phs	1	2	3	4	5	6	7	8					
Phs Duration (G+Y+Rc), s	36.1	24.3	30.6	44.0	11.4	49.0	16.3	58.3					
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	35.5	18.5	23.5	39.5	9.5	44.5	15.5	47.5					
Max Q Clear Time (g_c+I1), s	29.2	13.6	14.4	20.4	6.9	35.4	11.5	18.5					
Green Ext Time (p_c), s	2.5	1.1	1.0	5.2	0.1	2.2	0.3	16.1					
Intersection Summary													
HCM 6th Ctrl Delay	40.5												
HCM 6th LOS	D												
Notes													

HCM 6th Signalized Intersection Summary
17: Chester Street & County Line Road

2040 Background AM.syn

04/29/2019

												
Movement	EBL	EBT	EBR	WBL	WBT	WBR	NBL	NBT	NBR	SBL	SBT	SBR
Lane Configurations												
Traffic Volume (veh/h)	250	1244	22	142	693	600	14	210	168	47	24	33
Future Volume (veh/h)	250	1244	22	142	693	600	14	210	168	47	24	33
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	1309	24	154	722	652	15	228	183	51	26	36
Peak Hour Factor	0.92	0.95	0.92	0.92	0.96	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	736	2762	857	210	1877	616	55	829	370	109	885	395
Arrive On Green	0.43	1.00	1.00	0.02	0.13	0.13	0.02	0.23	0.23	0.03	0.25	0.25
Sat Flow, veh/h	3456	5106	1585	3456	4826	1585	3456	3554	1585	3456	3554	1585
Grp Volume(v), veh/h	272	1309	24	154	722	652	15	228	183	51	26	36
Grp Sat Flow(s),veh/h/ln	1728	1702	1585	1728	1609	1585	1728	1777	1585	1728	1777	1585
Q Serve(g_s), s	7.2	0.0	0.0	6.0	18.5	52.5	0.6	7.1	13.5	2.0	0.7	1.5
Cycle Q Clear(g_c), s	7.2	0.0	0.0	6.0	18.5	52.5	0.6	7.1	13.5	2.0	0.7	1.5
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	736	2762	857	210	1877	616	55	829	370	109	885	395
V/C Ratio(X)	0.37	0.47	0.03	0.73	0.38	1.06	0.27	0.27	0.49	0.47	0.03	0.09
Avail Cap(c_a), veh/h	736	2762	857	397	1877	616	192	829	370	218	885	395
HCM Platoon Ratio	2.00	2.00	2.00	0.33	0.33	0.33	1.00	1.00	1.00	1.00	1.00	1.00
Upstream Filter(I)	0.78	0.78	0.78	0.91	0.91	0.91	1.00	1.00	1.00	1.00	1.00	1.00
Uniform Delay (d), s/veh	32.6	0.0	0.0	65.1	44.0	58.8	65.7	42.4	44.9	64.3	38.4	15.4
Incr Delay (d2), s/veh	0.2	0.5	0.0	4.4	0.5	50.9	2.6	0.8	4.7	3.1	0.1	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	2.8	0.1	0.0	2.9	8.1	31.1	0.3	3.2	5.8	0.9	0.3	1.0
Unsig. Movement Delay, s/veh												
LnGrp Delay(d),s/veh	32.8	0.5	0.0	69.5	44.6	109.7	68.3	43.2	49.5	67.3	38.4	15.8
LnGrp LOS	C	A	A	E	D	F	E	D	D	E	D	B
Approach Vol, veh/h	1605			1528			426			113		
Approach Delay, s/veh	5.9			74.9			46.8			44.3		
Approach LOS	A			E			D			D		
Timer - Assigned Phs	1	2	3	4	5	6	7	8				
Phs Duration (G+Y+Rc), s	8.8	36.0	12.7	77.5	6.7	38.1	33.2	57.0				
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	8.5	31.5	15.5	61.5	7.5	32.5	24.5	52.5				
Max Q Clear Time (g_c+I1), s	4.0	15.5	8.0	2.0	2.6	3.5	9.2	54.5				
Green Ext Time (p_c), s	0.0	1.8	0.3	14.1	0.0	0.2	0.8	0.0				
Intersection Summary												
HCM 6th Ctrl Delay	40.5											
HCM 6th LOS	D											

HCM 6th Signalized Intersection Summary
17: Chester Street & County Line Road

2040 Background PM.syn

04/25/2019

												
Movement	EBL	EBT	EBR	WBL	WBT	WBR	NBL	NBT	NBR	SBL	SBT	SBR
Lane Configurations												
Traffic Volume (veh/h)	160	746	62	385	1474	105	123	191	257	563	309	391
Future Volume (veh/h)	160	746	62	385	1474	105	123	191	257	563	309	391
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	174	769	67	418	1602	114	134	208	279	612	336	399
Peak Hour Factor	0.92	0.97	0.92	0.92	0.92	0.92	0.92	0.92	0.92	0.92	0.92	0.98
Percent Heavy Veh, %	2	2	2	2	2	2	2	2	2	2	2	2
Cap, veh/h	229	1381	429	686	2486	177	185	707	315	688	1224	546
Arrive On Green	0.02	0.09	0.09	0.40	0.80	0.80	0.05	0.20	0.20	0.20	0.34	0.34
Sat Flow, veh/h	3456	5106	1585	3456	6177	439	3456	3554	1585	3456	3554	1585
Grp Volume(v), veh/h	174	769	67	418	1251	465	134	208	279	612	336	399
Grp Sat Flow(s),veh/h/ln	1728	1702	1585	1728	1609	1791	1728	1777	1585	1728	1777	1585
Q Serve(g_s), s	6.8	19.5	4.4	13.0	14.2	14.2	5.2	6.7	15.5	23.3	9.2	29.8
Cycle Q Clear(g_c), s	6.8	19.5	4.4	13.0	14.2	14.2	5.2	6.7	15.5	23.3	9.2	29.8
Prop In Lane	1.00		1.00	1.00		0.25	1.00		1.00	1.00		1.00
Lane Grp Cap(c), veh/h	229	1381	429	686	1942	721	185	707	315	688	1224	546
V/C Ratio(X)	0.76	0.56	0.16	0.61	0.64	0.64	0.73	0.29	0.88	0.89	0.27	0.73
Avail Cap(c_a), veh/h	346	1381	429	686	1942	721	269	707	315	858	1224	546
HCM Platoon Ratio	0.33	0.33	0.33	2.00	2.00	2.00	1.00	1.00	1.00	1.00	1.00	1.00
Upstream Filter(I)	0.89	0.89	0.89	0.76	0.76	0.76	1.00	1.00	1.00	1.00	1.00	1.00
Uniform Delay (d), s/veh	64.9	53.7	33.0	36.6	9.3	9.3	62.9	46.0	23.5	52.6	32.0	38.8
Incr Delay (d2), s/veh	4.7	1.4	0.7	1.2	1.3	3.4	5.3	1.1	28.3	9.8	0.6	8.4
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	2.2	4.8	3.1	3.9	2.4	3.1	8.3	11.0	4.1	12.8
Unsig. Movement Delay, s/veh												
LnGrp Delay(d),s/veh	69.6	55.2	33.7	37.8	10.5	12.6	68.2	47.1	51.9	62.4	32.6	47.1
LnGrp LOS	E	E	C	D	B	B	E	D	D	E	C	D
Approach Vol, veh/h		1010			2134			621			1347	
Approach Delay, s/veh		56.2			16.3			53.8			50.4	
Approach LOS		E			B			D			D	
Timer - Assigned Phs	1	2	3	4	5	6	7	8				
Phs Duration (G+Y+Rc), s	31.4	31.4	31.3	41.0	11.7	51.0	13.5	58.8				
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	33.5	23.5	23.5	36.5	10.5	46.5	13.5	46.5				
Max Q Clear Time (g_c+I1), s	25.3	17.5	15.0	21.5	7.2	31.8	8.8	16.2				
Green Ext Time (p_c), s	1.6	1.2	1.0	4.9	0.1	3.3	0.2	15.6				
Intersection Summary												
HCM 6th Ctrl Delay			37.8									
HCM 6th LOS			D									

HCM 6th Signalized Intersection Summary 17: Chester Street & County Line Road

2040 Total AM.syn
04/25/2019

													
Movement	EBL	EBT	EBR	WBL	WBT	WBR	NBL	NBT	NBR	SBL	SBT	SBR	
Lane Configurations													
Traffic Volume (veh/h)	457	1244	22	142	693	1160	14	376	168	160	69	90	
Future Volume (veh/h)	457	1244	22	142	693	1160	14	376	168	160	69	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	497	1309	24	154	722	935	15	409	150	174	75	0	
Peak Hour Factor	0.92	0.95	0.92	0.92	0.96	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	521	3172	985	204	2556	839	55	487	217	247	319		
Arrive On Green	0.30	1.00	1.00	0.10	0.88	0.88	0.02	0.14	0.14	0.05	0.17	0.00	
Sat Flow, veh/h	3456	5106	1585	3456	4826	1585	3456	3554	1585	5023	1870	1585	
Grp Volume(v), veh/h	497	1309	24	154	722	935	15	409	150	174	75	0	
Grp Sat Flow(s),veh/h/ln	1728	1702	1585	1728	1609	1585	1728	1777	1585	1674	1870	1585	
Q Serve(g_s), s	19.0	0.0	0.0	5.9	3.1	71.5	0.6	15.2	12.2	4.6	4.7	0.0	
Cycle Q Clear(g_c), s	19.0	0.0	0.0	5.9	3.1	71.5	0.6	15.2	12.2	4.6	4.7	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	521	3172	985	204	2556	839	55	487	217	247	319		
V/C Ratio(X)	0.95	0.41	0.02	0.75	0.28	1.11	0.27	0.84	0.69	0.70	0.24		
Avail Cap(c_a), veh/h	521	3172	985	294	2556	839	141	487	217	279	319		
HCM Platoon Ratio	2.00	2.00	2.00	1.67	1.67	1.67	1.00	1.00	1.00	1.00	1.00	1.00	
Upstream Filter(I)	0.75	0.75	0.75	0.80	0.80	0.80	1.00	1.00	1.00	1.00	1.00	0.00	
Uniform Delay (d), s/veh	46.7	0.0	0.0	59.9	3.8	7.8	65.7	56.8	55.5	63.2	48.4	0.0	
Incr Delay (d2), s/veh	23.4	0.3	0.0	5.2	0.2	64.5	2.6	15.9	16.5	6.7	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	8.8	0.1	0.0	2.6	1.0	18.5	0.3	7.9	5.9	2.1	2.4	0.0	
Unsig. Movement Delay, s/veh													
LnGrp Delay(d),s/veh	70.1	0.3	0.0	65.1	4.1	72.3	68.3	72.7	72.1	69.9	50.1	0.0	
LnGrp LOS	E	A	A	E	A	F	E	E	E	E	D		
Approach Vol, veh/h	1830			1811			574			249			A
Approach Delay, s/veh	19.2			44.5			72.4			64.0			
Approach LOS	B			D			E			E			
Timer - Assigned Phs	1	2	3	4	5	6	7	8					
Phs Duration (G+Y+Rc), s	11.1	23.0	12.5	88.4	6.7	27.5	24.9	76.0					
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	7.5	18.5	11.5	79.5	5.5	20.5	19.5	71.5					
Max Q Clear Time (g_c+I1), s	6.6	17.2	7.9	2.0	2.6	6.7	21.0	73.5					
Green Ext Time (p_c), s	0.1	0.5	0.1	14.5	0.0	0.2	0.0	0.0					
Intersection Summary													
HCM 6th Ctrl Delay			38.8										
HCM 6th LOS			D										
Notes													

HCM 6th Signalized Intersection Summary
17: Chester Street & County Line Road

2040 Total PM.syn

04/25/2019

													
Movement	EBL	EBT	EBR	WBL	WBT	WBR	NBL	NBT	NBR	SBL	SBT	SBR	
Lane Configurations													
Traffic Volume (veh/h)	233	746	62	385	1474	302	123	249	257	989	479	604	
Future Volume (veh/h)	233	746	62	385	1474	302	123	249	257	989	479	604	
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	253	769	67	418	1602	263	134	271	214	1075	521	0	
Peak Hour Factor	0.92	0.97	0.92	0.92	0.92	0.92	0.92	0.92	0.92	0.92	0.92	0.98	
Percent Heavy Veh, %	2	2	2	2	2	2	2	2	2	2	2	2	
Cap, veh/h	307	1343	417	653	2037	334	166	613	273	1217	686		
Arrive On Green	0.03	0.09	0.09	0.38	0.73	0.73	0.05	0.17	0.17	0.24	0.37	0.00	
Sat Flow, veh/h	3456	5106	1585	3456	5609	921	3456	3554	1585	5023	1870	1585	
Grp Volume(v), veh/h	253	769	67	418	1378	487	134	271	214	1075	521	0	
Grp Sat Flow(s),veh/h/ln	1728	1702	1585	1728	1609	1705	1728	1777	1585	1674	1870	1585	
Q Serve(g_s), s	9.8	19.5	5.3	13.4	24.6	24.6	5.2	9.2	12.1	27.8	33.0	0.0	
Cycle Q Clear(g_c), s	9.8	19.5	5.3	13.4	24.6	24.6	5.2	9.2	12.1	27.8	33.0	0.0	
Prop In Lane	1.00		1.00	1.00		0.54	1.00		1.00	1.00		1.00	
Lane Grp Cap(c), veh/h	307	1343	417	653	1752	619	166	613	273	1217	686		
V/C Ratio(X)	0.83	0.57	0.16	0.64	0.79	0.79	0.81	0.44	0.78	0.88	0.76		
Avail Cap(c_a), veh/h	346	1343	417	653	1752	619	166	613	273	1395	686		
HCM Platoon Ratio	0.33	0.33	0.33	2.00	2.00	2.00	1.00	1.00	1.00	1.00	1.00	1.00	
Upstream Filter(I)	0.90	0.90	0.90	0.72	0.72	0.72	1.00	1.00	1.00	1.00	1.00	0.00	
Uniform Delay (d), s/veh	64.5	54.4	47.8	38.2	15.1	15.1	63.6	50.0	25.5	49.3	37.5	0.0	
Incr Delay (d2), s/veh	12.5	1.6	0.7	1.5	2.7	7.2	24.3	2.3	19.7	6.4	7.7	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	5.1	9.2	2.3	5.0	5.2	6.3	2.8	4.3	6.1	12.4	16.5	0.0	
Unsig. Movement Delay, s/veh													
LnGrp Delay(d),s/veh	77.0	56.0	48.6	39.8	17.8	22.3	88.0	52.3	45.3	55.7	45.3	0.0	
LnGrp LOS	E	E	D	D	B	C	F	D	D	E	D		
Approach Vol, veh/h	1089			2283			619			1596			A
Approach Delay, s/veh	60.4			22.8			57.6			52.3			
Approach LOS	E			C			E			D			
Timer - Assigned Phs	1	2	3	4	5	6	7	8					
Phs Duration (G+Y+Rc), s	37.2	27.8	30.0	40.0	11.0	54.0	16.5	53.5					
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	37.5	18.5	25.5	35.5	6.5	49.5	13.5	47.5					
Max Q Clear Time (g_c+l1), s	29.8	14.1	15.4	21.5	7.2	35.0	11.8	26.6					
Green Ext Time (p_c), s	2.9	1.0	1.1	4.7	0.0	2.9	0.1	13.7					

Intersection Summary

HCM 6th Ctrl Delay 42.4

HCM 6th LOS D

Notes

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

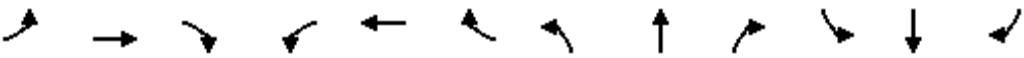
HCM Signalized Intersection Capacity Analysis 18: County Line Road & I-25 Southbound Ramp

2019 Existing AM.syn
04/24/2019

												
Movement	EBL	EBT	EBR	WBL	WBT	WBR	NBL	NBT	NBR	SBL	SBT	SBR
Lane Configurations		↑↑↑	↗		↑↑↑	↗			↗↗↗	↗↗	↑↑	↗↗
Traffic Volume (vph)	0	1207	7	0	741	53	0	0	484	719	236	502
Future Volume (vph)	0	1207	7	0	741	53	0	0	484	719	236	502
Ideal Flow (vphpl)	1900	1900	1900	1900	1900	1900	1900	1900	1900	1900	1900	1900
Total Lost time (s)		4.5	4.5		4.5	4.0			4.5	4.5	4.5	4.0
Lane Util. Factor		0.86	1.00		0.91	1.00			0.76	0.97	0.95	0.88
Frt		1.00	0.85		1.00	0.85			0.85	1.00	1.00	0.85
Flt Protected		1.00	1.00		1.00	1.00			1.00	0.95	1.00	1.00
Satd. Flow (prot)		6408	1583		5085	1583			3610	3433	3539	2787
Flt Permitted		1.00	1.00		1.00	1.00			1.00	0.95	1.00	1.00
Satd. Flow (perm)		6408	1583		5085	1583			3610	3433	3539	2787
Peak-hour factor, PHF	0.92	0.89	0.92	0.92	0.81	0.92	0.92	0.92	0.91	0.94	0.81	0.96
Adj. Flow (vph)	0	1356	8	0	915	58	0	0	532	765	291	523
RTOR Reduction (vph)	0	0	5	0	0	0	0	0	48	0	0	0
Lane Group Flow (vph)	0	1356	3	0	915	58	0	0	484	765	291	523
Turn Type		NA	Perm		NA	Free			Perm	Prot	NA	Free
Protected Phases		4			8					1		6
Permitted Phases			4			Free			2			Free
Actuated Green, G (s)		44.5	44.5		44.5	135.0			40.9	36.1	81.5	135.0
Effective Green, g (s)		44.5	44.5		44.5	135.0			40.9	36.1	81.5	135.0
Actuated g/C Ratio		0.33	0.33		0.33	1.00			0.30	0.27	0.60	1.00
Clearance Time (s)		4.5	4.5		4.5				4.5	4.5	4.5	
Vehicle Extension (s)		3.0	3.0		3.0				3.0	3.0	3.0	
Lane Grp Cap (vph)		2112	521		1676	1583			1093	918	2136	2787
v/s Ratio Prot		c0.21			0.18					c0.22	0.08	
v/s Ratio Perm			0.00			0.04			c0.13			0.19
v/c Ratio		0.64	0.01		0.55	0.04			0.44	0.83	0.14	0.19
Uniform Delay, d1		38.5	30.4		37.0	0.0			37.9	46.6	11.6	0.0
Progression Factor		1.24	1.00		1.00	1.00			1.00	1.00	1.00	1.00
Incremental Delay, d2		1.4	0.0		1.3	0.0			0.3	6.6	0.1	0.1
Delay (s)		49.0	30.4		38.3	0.0			38.2	53.2	11.7	0.1
Level of Service		D	C		D	A			D	D	B	A
Approach Delay (s)		48.9			36.0			38.2			28.0	
Approach LOS		D			D			D			C	
Intersection Summary												
HCM 2000 Control Delay			37.4			HCM 2000 Level of Service				D		
HCM 2000 Volume to Capacity ratio			0.63									
Actuated Cycle Length (s)			135.0			Sum of lost time (s)			13.5			
Intersection Capacity Utilization			60.5%			ICU Level of Service			B			
Analysis Period (min)			15									
c Critical Lane Group												

HCM Signalized Intersection Capacity Analysis 18: County Line Road & I-25 Southbound Ramp

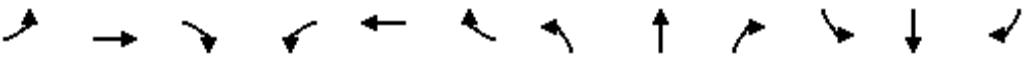
2019 Existing PM.syn
04/24/2019

												
Movement	EBL	EBT	EBR	WBL	WBT	WBR	NBL	NBT	NBR	SBL	SBT	SBR
Lane Configurations		↑↑↑	↗		↑↑↑	↗			↗↗↗	↗↗	↑↑	↗↗
Traffic Volume (vph)	0	1330	65	0	1635	415	0	0	652	130	574	711
Future Volume (vph)	0	1330	65	0	1635	415	0	0	652	130	574	711
Ideal Flow (vphpl)	1900	1900	1900	1900	1900	1900	1900	1900	1900	1900	1900	1900
Total Lost time (s)		4.5	4.5		4.5	4.0			4.5	4.5	4.5	4.0
Lane Util. Factor		0.86	1.00		0.91	1.00			0.76	0.97	0.95	0.88
Frt		1.00	0.85		1.00	0.85			0.85	1.00	1.00	0.85
Flt Protected		1.00	1.00		1.00	1.00			1.00	0.95	1.00	1.00
Satd. Flow (prot)		6408	1583		5085	1583			3610	3433	3539	2787
Flt Permitted		1.00	1.00		1.00	1.00			1.00	0.95	1.00	1.00
Satd. Flow (perm)		6408	1583		5085	1583			3610	3433	3539	2787
Peak-hour factor, PHF	0.92	0.86	0.92	0.92	0.86	0.92	0.92	0.92	0.95	0.77	0.88	0.94
Adj. Flow (vph)	0	1547	71	0	1901	451	0	0	686	169	652	756
RTOR Reduction (vph)	0	0	33	0	0	0	0	0	59	0	0	0
Lane Group Flow (vph)	0	1547	38	0	1901	451	0	0	627	169	652	756
Turn Type		NA	Perm		NA	Free			Perm	Prot	NA	Free
Protected Phases		4			8					1		6
Permitted Phases			4			Free			2			Free
Actuated Green, G (s)		71.5	71.5		71.5	135.0			38.4	11.6	54.5	135.0
Effective Green, g (s)		71.5	71.5		71.5	135.0			38.4	11.6	54.5	135.0
Actuated g/C Ratio		0.53	0.53		0.53	1.00			0.28	0.09	0.40	1.00
Clearance Time (s)		4.5	4.5		4.5				4.5	4.5	4.5	
Vehicle Extension (s)		3.0	3.0		3.0				3.0	3.0	3.0	
Lane Grp Cap (vph)		3393	838		2693	1583			1026	294	1428	2787
v/s Ratio Prot		0.24			c0.37					c0.05	0.18	
v/s Ratio Perm			0.02			0.28			c0.17			0.27
v/c Ratio		0.46	0.04		0.71	0.28			0.61	0.57	0.46	0.27
Uniform Delay, d1		19.7	15.3		23.9	0.0			41.8	59.3	29.4	0.0
Progression Factor		1.08	2.22		1.00	1.00			1.00	1.00	1.00	1.00
Incremental Delay, d2		0.4	0.1		1.6	0.5			1.1	2.7	1.1	0.2
Delay (s)		21.6	34.1		25.4	0.5			42.9	62.0	30.5	0.2
Level of Service		C	C		C	A			D	E	C	A
Approach Delay (s)		22.1			20.6			42.9			19.4	
Approach LOS		C			C			D			B	
Intersection Summary												
HCM 2000 Control Delay			23.2									HCM 2000 Level of Service C
HCM 2000 Volume to Capacity ratio			0.66									
Actuated Cycle Length (s)			135.0									Sum of lost time (s) 13.5
Intersection Capacity Utilization			55.0%									ICU Level of Service A
Analysis Period (min)			15									
c Critical Lane Group												

HCM Signalized Intersection Capacity Analysis 18: County Line Road & I-25 Southbound Ramp

2030 Background AM.syn

04/24/2019

												
Movement	EBL	EBT	EBR	WBL	WBT	WBR	NBL	NBT	NBR	SBL	SBT	SBR
Lane Configurations		↑↑↑	↗		↑↑↑	↗			↗↗↗	↗↗	↑↑	↗↗
Traffic Volume (vph)	0	1275	7	0	783	56	0	0	511	760	249	530
Future Volume (vph)	0	1275	7	0	783	56	0	0	511	760	249	530
Ideal Flow (vphpl)	1900	1900	1900	1900	1900	1900	1900	1900	1900	1900	1900	1900
Total Lost time (s)		4.5	4.5		4.5	4.0			4.5	4.5	4.5	4.0
Lane Util. Factor		0.86	1.00		0.91	1.00			0.76	0.97	0.95	0.88
Frt		1.00	0.85		1.00	0.85			0.85	1.00	1.00	0.85
Flt Protected		1.00	1.00		1.00	1.00			1.00	0.95	1.00	1.00
Satd. Flow (prot)		6408	1583		5085	1583			3610	3433	3539	2787
Flt Permitted		1.00	1.00		1.00	1.00			1.00	0.95	1.00	1.00
Satd. Flow (perm)		6408	1583		5085	1583			3610	3433	3539	2787
Peak-hour factor, PHF	0.92	0.92	0.92	0.92	0.92	0.92	0.92	0.92	0.92	0.94	0.92	0.96
Adj. Flow (vph)	0	1386	8	0	851	61	0	0	555	809	271	552
RTOR Reduction (vph)	0	0	5	0	0	0	0	0	41	0	0	0
Lane Group Flow (vph)	0	1386	3	0	851	61	0	0	514	809	271	552
Turn Type		NA	Perm		NA	Free			Perm	Prot	NA	Free
Protected Phases		4			8					1		6
Permitted Phases			4			Free			2			Free
Actuated Green, G (s)		43.5	43.5		43.5	135.0			40.0	38.0	82.5	135.0
Effective Green, g (s)		43.5	43.5		43.5	135.0			40.0	38.0	82.5	135.0
Actuated g/C Ratio		0.32	0.32		0.32	1.00			0.30	0.28	0.61	1.00
Clearance Time (s)		4.5	4.5		4.5				4.5	4.5	4.5	
Vehicle Extension (s)		3.0	3.0		3.0				3.0	3.0	3.0	
Lane Grp Cap (vph)		2064	510		1638	1583			1069	966	2162	2787
v/s Ratio Prot		c0.22			0.17					c0.24	0.08	
v/s Ratio Perm			0.00			0.04			c0.14			0.20
v/c Ratio		0.67	0.01		0.52	0.04			0.48	0.84	0.13	0.20
Uniform Delay, d1		39.6	31.1		37.2	0.0			39.0	45.6	11.1	0.0
Progression Factor		1.23	1.00		1.00	1.00			1.00	1.00	1.00	1.00
Incremental Delay, d2		1.6	0.0		1.2	0.0			0.3	6.4	0.1	0.2
Delay (s)		50.1	31.1		38.4	0.0			39.3	52.0	11.2	0.2
Level of Service		D	C		D	A			D	D	B	A
Approach Delay (s)		50.0			35.9			39.3			27.7	
Approach LOS		D			D			D			C	
Intersection Summary												
HCM 2000 Control Delay			37.7									HCM 2000 Level of Service D
HCM 2000 Volume to Capacity ratio			0.66									
Actuated Cycle Length (s)			135.0									Sum of lost time (s) 13.5
Intersection Capacity Utilization			63.3%									ICU Level of Service B
Analysis Period (min)			15									
c Critical Lane Group												

HCM Signalized Intersection Capacity Analysis

18: County Line Road & I-25 Southbound Ramp

2030 Background PM.syn

04/24/2019

												
Movement	EBL	EBT	EBR	WBL	WBT	WBR	NBL	NBT	NBR	SBL	SBT	SBR
Lane Configurations		↑↑↑	↗		↑↑↑	↗			↗↗↗	↗↗	↑↑	↗↗
Traffic Volume (vph)	0	1405	69	0	1727	438	0	0	689	137	606	751
Future Volume (vph)	0	1405	69	0	1727	438	0	0	689	137	606	751
Ideal Flow (vphpl)	1900	1900	1900	1900	1900	1900	1900	1900	1900	1900	1900	1900
Total Lost time (s)		4.5	4.5		4.5	4.0			4.5	4.5	4.5	4.0
Lane Util. Factor		0.86	1.00		0.91	1.00			0.76	0.97	0.95	0.88
Frt		1.00	0.85		1.00	0.85			0.85	1.00	1.00	0.85
Flt Protected		1.00	1.00		1.00	1.00			1.00	0.95	1.00	1.00
Satd. Flow (prot)		6408	1583		5085	1583			3610	3433	3539	2787
Flt Permitted		1.00	1.00		1.00	1.00			1.00	0.95	1.00	1.00
Satd. Flow (perm)		6408	1583		5085	1583			3610	3433	3539	2787
Peak-hour factor, PHF	0.92	0.92	0.92	0.92	0.92	0.92	0.92	0.92	0.95	0.92	0.92	0.94
Adj. Flow (vph)	0	1527	75	0	1877	476	0	0	725	149	659	799
RTOR Reduction (vph)	0	0	38	0	0	0	0	0	60	0	0	0
Lane Group Flow (vph)	0	1527	37	0	1877	476	0	0	665	149	659	799
Turn Type		NA	Perm		NA	Free			Perm	Prot	NA	Free
Protected Phases		4			8					1		6
Permitted Phases			4			Free			2			Free
Actuated Green, G (s)		66.5	66.5		66.5	135.0			44.0	11.0	59.5	135.0
Effective Green, g (s)		66.5	66.5		66.5	135.0			44.0	11.0	59.5	135.0
Actuated g/C Ratio		0.49	0.49		0.49	1.00			0.33	0.08	0.44	1.00
Clearance Time (s)		4.5	4.5		4.5				4.5	4.5	4.5	
Vehicle Extension (s)		3.0	3.0		3.0				3.0	3.0	3.0	
Lane Grp Cap (vph)		3156	779		2504	1583			1176	279	1559	2787
v/s Ratio Prot		0.24			c0.37					c0.04	0.19	
v/s Ratio Perm			0.02			0.30			c0.18			0.29
v/c Ratio		0.48	0.05		0.75	0.30			0.57	0.53	0.42	0.29
Uniform Delay, d1		22.8	17.8		27.6	0.0			37.6	59.5	25.9	0.0
Progression Factor		0.93	1.96		1.00	1.00			1.00	1.00	1.00	1.00
Incremental Delay, d2		0.4	0.1		2.1	0.5			0.6	2.0	0.8	0.3
Delay (s)		21.6	35.0		29.7	0.5			38.2	61.5	26.8	0.3
Level of Service		C	C		C	A			D	E	C	A
Approach Delay (s)		22.2			23.8			38.2			16.8	
Approach LOS		C			C			D			B	
Intersection Summary												
HCM 2000 Control Delay			23.3									C
HCM 2000 Volume to Capacity ratio			0.66									
Actuated Cycle Length (s)			135.0									
Intersection Capacity Utilization			57.6%									B
Analysis Period (min)			15									
c Critical Lane Group												

HCM Signalized Intersection Capacity Analysis

18: County Line Road & I-25 Southbound Ramp

2030 Total AM.syn

04/24/2019

Movement	EBL	EBT	EBR	WBL	WBT	WBR	NBL	NBT	NBR	SBL	SBT	SBR
Lane Configurations		↑↑↑	↗		↑↑↑	↗			↗↗↗	↗↗	↑↑	↗↗
Traffic Volume (vph)	0	1388	7	0	1198	56	0	0	511	760	249	675
Future Volume (vph)	0	1388	7	0	1198	56	0	0	511	760	249	675
Ideal Flow (vphpl)	1900	1900	1900	1900	1900	1900	1900	1900	1900	1900	1900	1900
Total Lost time (s)		4.5	4.5		4.5	4.0			4.5	4.5	4.5	4.0
Lane Util. Factor		0.86	1.00		0.91	1.00			0.76	0.97	0.95	0.88
Frt		1.00	0.85		1.00	0.85			0.85	1.00	1.00	0.85
Flt Protected		1.00	1.00		1.00	1.00			1.00	0.95	1.00	1.00
Satd. Flow (prot)		6408	1583		5085	1583			3610	3433	3539	2787
Flt Permitted		1.00	1.00		1.00	1.00			1.00	0.95	1.00	1.00
Satd. Flow (perm)		6408	1583		5085	1583			3610	3433	3539	2787
Peak-hour factor, PHF	0.92	0.92	0.92	0.92	0.92	0.92	0.92	0.92	0.92	0.94	0.92	0.96
Adj. Flow (vph)	0	1509	8	0	1302	61	0	0	555	809	271	703
RTOR Reduction (vph)	0	0	5	0	0	0	0	0	35	0	0	0
Lane Group Flow (vph)	0	1509	3	0	1302	61	0	0	520	809	271	703
Turn Type		NA	Perm		NA	Free			Perm	Prot	NA	Free
Protected Phases		4			8					1		6
Permitted Phases			4			Free			2			Free
Actuated Green, G (s)		48.5	48.5		48.5	135.0			35.3	37.7	77.5	135.0
Effective Green, g (s)		48.5	48.5		48.5	135.0			35.3	37.7	77.5	135.0
Actuated g/C Ratio		0.36	0.36		0.36	1.00			0.26	0.28	0.57	1.00
Clearance Time (s)		4.5	4.5		4.5				4.5	4.5	4.5	
Vehicle Extension (s)		3.0	3.0		3.0				3.0	3.0	3.0	
Lane Grp Cap (vph)		2302	568		1826	1583			943	958	2031	2787
v/s Ratio Prot		0.24			c0.26					c0.24	0.08	
v/s Ratio Perm			0.00			0.04			c0.14			0.25
v/c Ratio		0.66	0.01		0.71	0.04			0.55	0.84	0.13	0.25
Uniform Delay, d1		36.2	27.8		37.3	0.0			43.0	45.9	13.3	0.0
Progression Factor		1.43	1.00		1.00	1.00			1.00	1.00	1.00	1.00
Incremental Delay, d2		1.3	0.0		2.4	0.0			0.7	6.9	0.1	0.2
Delay (s)		53.3	27.8		39.7	0.0			43.7	52.8	13.4	0.2
Level of Service		D	C		D	A			D	D	B	A
Approach Delay (s)		53.1			37.9			43.7			26.1	
Approach LOS		D			D			D			C	
Intersection Summary												
HCM 2000 Control Delay			38.9				HCM 2000 Level of Service			D		
HCM 2000 Volume to Capacity ratio			0.71									
Actuated Cycle Length (s)			135.0				Sum of lost time (s)			13.5		
Intersection Capacity Utilization			65.0%				ICU Level of Service			C		
Analysis Period (min)			15									
c Critical Lane Group												

HCM Signalized Intersection Capacity Analysis

18: County Line Road & I-25 Southbound Ramp

2030 Total PM.syn

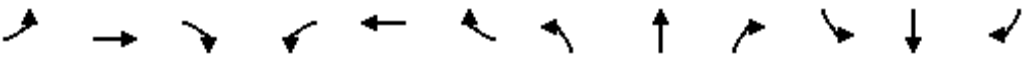
04/24/2019

												
Movement	EBL	EBT	EBR	WBL	WBT	WBR	NBL	NBT	NBR	SBL	SBT	SBR
Lane Configurations		↑↑↑	↗		↑↑↑	↗			↗↗↗	↗↗	↑↑	↗↗
Traffic Volume (vph)	0	1831	69	0	1873	438	0	0	689	137	606	802
Future Volume (vph)	0	1831	69	0	1873	438	0	0	689	137	606	802
Ideal Flow (vphpl)	1900	1900	1900	1900	1900	1900	1900	1900	1900	1900	1900	1900
Total Lost time (s)		4.5	4.5		4.5	4.0			4.5	4.5	4.5	4.0
Lane Util. Factor		0.86	1.00		0.91	1.00			0.76	0.97	0.95	0.88
Frt		1.00	0.85		1.00	0.85			0.85	1.00	1.00	0.85
Flt Protected		1.00	1.00		1.00	1.00			1.00	0.95	1.00	1.00
Satd. Flow (prot)		6408	1583		5085	1583			3610	3433	3539	2787
Flt Permitted		1.00	1.00		1.00	1.00			1.00	0.95	1.00	1.00
Satd. Flow (perm)		6408	1583		5085	1583			3610	3433	3539	2787
Peak-hour factor, PHF	0.92	0.92	0.92	0.92	0.92	0.92	0.92	0.92	0.95	0.92	0.92	0.94
Adj. Flow (vph)	0	1990	75	0	2036	476	0	0	725	149	659	853
RTOR Reduction (vph)	0	0	35	0	0	0	0	0	34	0	0	0
Lane Group Flow (vph)	0	1990	40	0	2036	476	0	0	691	149	659	853
Turn Type		NA	Perm		NA	Free			Perm	Prot	NA	Free
Protected Phases		4			8					1		6
Permitted Phases			4			Free			2			Free
Actuated Green, G (s)		72.5	72.5		72.5	135.0			38.6	10.4	53.5	135.0
Effective Green, g (s)		72.5	72.5		72.5	135.0			38.6	10.4	53.5	135.0
Actuated g/C Ratio		0.54	0.54		0.54	1.00			0.29	0.08	0.40	1.00
Clearance Time (s)		4.5	4.5		4.5				4.5	4.5	4.5	
Vehicle Extension (s)		3.0	3.0		3.0				3.0	3.0	3.0	
Lane Grp Cap (vph)		3441	850		2730	1583			1032	264	1402	2787
v/s Ratio Prot		0.31			c0.40					c0.04	0.19	
v/s Ratio Perm			0.03			0.30			c0.19			0.31
v/c Ratio		0.58	0.05		0.75	0.30			0.67	0.56	0.47	0.31
Uniform Delay, d1		21.0	14.8		24.1	0.0			42.6	60.1	30.2	0.0
Progression Factor		1.40	2.84		1.00	1.00			1.00	1.00	1.00	1.00
Incremental Delay, d2		0.5	0.1		1.9	0.5			1.7	2.8	1.1	0.3
Delay (s)		29.8	42.2		26.0	0.5			44.2	62.9	31.4	0.3
Level of Service		C	D		C	A			D	E	C	A
Approach Delay (s)		30.2			21.2			44.2			18.2	
Approach LOS		C			C			D			B	
Intersection Summary												
HCM 2000 Control Delay			25.6									HCM 2000 Level of Service C
HCM 2000 Volume to Capacity ratio			0.71									
Actuated Cycle Length (s)			135.0									Sum of lost time (s) 13.5
Intersection Capacity Utilization			60.4%									ICU Level of Service B
Analysis Period (min)			15									
c Critical Lane Group												

HCM Signalized Intersection Capacity Analysis 18: County Line Road & I-25 Southbound Ramp

2040 Background AM.syn

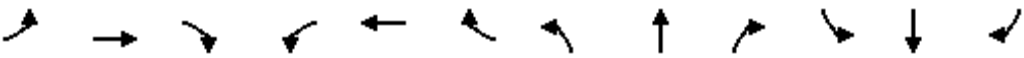
04/25/2019

												
Movement	EBL	EBT	EBR	WBL	WBT	WBR	NBL	NBT	NBR	SBL	SBT	SBR
Lane Configurations		↑↑↑	↗		↑↑↑	↗			↗↗↗	↗↗	↑↑	↗↗
Traffic Volume (vph)	0	1340	8	0	823	59	0	0	537	798	262	557
Future Volume (vph)	0	1340	8	0	823	59	0	0	537	798	262	557
Ideal Flow (vphpl)	1900	1900	1900	1900	1900	1900	1900	1900	1900	1900	1900	1900
Total Lost time (s)		4.5	4.5		4.5	4.0			4.5	4.5	4.5	4.0
Lane Util. Factor		0.86	1.00		0.91	1.00			0.76	0.97	0.95	0.88
Frt		1.00	0.85		1.00	0.85			0.85	1.00	1.00	0.85
Flt Protected		1.00	1.00		1.00	1.00			1.00	0.95	1.00	1.00
Satd. Flow (prot)		6408	1583		5085	1583			3610	3433	3539	2787
Flt Permitted		1.00	1.00		1.00	1.00			1.00	0.95	1.00	1.00
Satd. Flow (perm)		6408	1583		5085	1583			3610	3433	3539	2787
Peak-hour factor, PHF	0.92	0.92	0.92	0.92	0.92	0.92	0.92	0.92	0.92	0.94	0.92	0.96
Adj. Flow (vph)	0	1457	9	0	895	64	0	0	584	849	285	580
RTOR Reduction (vph)	0	0	6	0	0	0	0	0	37	0	0	0
Lane Group Flow (vph)	0	1457	3	0	895	64	0	0	547	849	285	580
Turn Type		NA	Perm		NA	Free			Perm	Prot	NA	Free
Protected Phases		4			8					1		6
Permitted Phases			4			Free			2			Free
Actuated Green, G (s)		43.5	43.5		43.5	135.0			38.4	39.6	82.5	135.0
Effective Green, g (s)		43.5	43.5		43.5	135.0			38.4	39.6	82.5	135.0
Actuated g/C Ratio		0.32	0.32		0.32	1.00			0.28	0.29	0.61	1.00
Clearance Time (s)		4.5	4.5		4.5				4.5	4.5	4.5	
Vehicle Extension (s)		3.0	3.0		3.0				3.0	3.0	3.0	
Lane Grp Cap (vph)		2064	510		1638	1583			1026	1007	2162	2787
v/s Ratio Prot		c0.23			0.18					c0.25	0.08	
v/s Ratio Perm			0.00			0.04			c0.15			0.21
v/c Ratio		0.71	0.01		0.55	0.04			0.53	0.84	0.13	0.21
Uniform Delay, d1		40.1	31.1		37.6	0.0			40.7	44.8	11.1	0.0
Progression Factor		1.26	1.00		1.00	1.00			1.00	1.00	1.00	1.00
Incremental Delay, d2		1.8	0.0		1.3	0.0			0.5	6.5	0.1	0.2
Delay (s)		52.4	31.1		38.9	0.0			41.3	51.3	11.2	0.2
Level of Service		D	C		D	A			D	D	B	A
Approach Delay (s)		52.3			36.4			41.3			27.3	
Approach LOS		D			D			D			C	
Intersection Summary												
HCM 2000 Control Delay			38.6									HCM 2000 Level of Service D
HCM 2000 Volume to Capacity ratio			0.70									
Actuated Cycle Length (s)			135.0									Sum of lost time (s) 13.5
Intersection Capacity Utilization			66.0%									ICU Level of Service C
Analysis Period (min)			15									
c Critical Lane Group												

HCM Signalized Intersection Capacity Analysis 18: County Line Road & I-25 Southbound Ramp

2040 Background PM.syn

04/25/2019

												
Movement	EBL	EBT	EBR	WBL	WBT	WBR	NBL	NBT	NBR	SBL	SBT	SBR
Lane Configurations		↑↑↑	↗		↑↑↑	↗			↗↗↗	↗↗	↑↑	↗↗
Traffic Volume (vph)	0	1477	72	0	1816	461	0	0	724	144	637	790
Future Volume (vph)	0	1477	72	0	1816	461	0	0	724	144	637	790
Ideal Flow (vphpl)	1900	1900	1900	1900	1900	1900	1900	1900	1900	1900	1900	1900
Total Lost time (s)		4.5	4.5		4.5	4.0			4.5	4.5	4.5	4.0
Lane Util. Factor		0.86	1.00		0.91	1.00			0.76	0.97	0.95	0.88
Frt		1.00	0.85		1.00	0.85			0.85	1.00	1.00	0.85
Flt Protected		1.00	1.00		1.00	1.00			1.00	0.95	1.00	1.00
Satd. Flow (prot)		6408	1583		5085	1583			3610	3433	3539	2787
Flt Permitted		1.00	1.00		1.00	1.00			1.00	0.95	1.00	1.00
Satd. Flow (perm)		6408	1583		5085	1583			3610	3433	3539	2787
Peak-hour factor, PHF	0.92	0.92	0.92	0.92	0.92	0.92	0.92	0.92	0.95	0.92	0.92	0.94
Adj. Flow (vph)	0	1605	78	0	1974	501	0	0	762	157	692	840
RTOR Reduction (vph)	0	0	37	0	0	0	0	0	52	0	0	0
Lane Group Flow (vph)	0	1605	41	0	1974	501	0	0	710	157	692	840
Turn Type		NA	Perm		NA	Free			Perm	Prot	NA	Free
Protected Phases		4			8					1		6
Permitted Phases			4			Free			2			Free
Actuated Green, G (s)		71.5	71.5		71.5	135.0			39.0	11.0	54.5	135.0
Effective Green, g (s)		71.5	71.5		71.5	135.0			39.0	11.0	54.5	135.0
Actuated g/C Ratio		0.53	0.53		0.53	1.00			0.29	0.08	0.40	1.00
Clearance Time (s)		4.5	4.5		4.5				4.5	4.5	4.5	
Vehicle Extension (s)		3.0	3.0		3.0				3.0	3.0	3.0	
Lane Grp Cap (vph)		3393	838		2693	1583			1042	279	1428	2787
v/s Ratio Prot		0.25			c0.39					0.05	c0.20	
v/s Ratio Perm			0.03			0.32			c0.20			0.30
v/c Ratio		0.47	0.05		0.73	0.32			0.68	0.56	0.48	0.30
Uniform Delay, d1		19.9	15.3		24.4	0.0			42.5	59.7	29.8	0.0
Progression Factor		1.04	2.23		1.00	1.00			1.00	1.00	1.00	1.00
Incremental Delay, d2		0.4	0.1		1.8	0.5			1.9	2.6	1.2	0.3
Delay (s)		21.1	34.2		26.2	0.5			44.4	62.3	31.0	0.3
Level of Service		C	C		C	A			D	E	C	A
Approach Delay (s)		21.7			21.0			44.4			18.6	
Approach LOS		C			C			D			B	
Intersection Summary												
HCM 2000 Control Delay			23.3									HCM 2000 Level of Service C
HCM 2000 Volume to Capacity ratio			0.70									
Actuated Cycle Length (s)			135.0									Sum of lost time (s) 13.5
Intersection Capacity Utilization			60.2%									ICU Level of Service B
Analysis Period (min)			15									
c Critical Lane Group												

HCM Signalized Intersection Capacity Analysis

18: County Line Road & I-25 Southbound Ramp

2040 Total AM.syn

04/25/2019

												
Movement	EBL	EBT	EBR	WBL	WBT	WBR	NBL	NBT	NBR	SBL	SBT	SBR
Lane Configurations		↑↑↑	↗		↑↑↑	↗			↗↗↗	↗↗	↑↑	↗↗
Traffic Volume (vph)	0	1453	8	0	1238	59	0	0	537	798	262	702
Future Volume (vph)	0	1453	8	0	1238	59	0	0	537	798	262	702
Ideal Flow (vphpl)	1900	1900	1900	1900	1900	1900	1900	1900	1900	1900	1900	1900
Total Lost time (s)		4.5	4.5		4.5	4.0			4.5	4.5	4.5	4.0
Lane Util. Factor		0.86	1.00		0.91	1.00			0.76	0.97	0.95	0.88
Frt		1.00	0.85		1.00	0.85			0.85	1.00	1.00	0.85
Flt Protected		1.00	1.00		1.00	1.00			1.00	0.95	1.00	1.00
Satd. Flow (prot)		6408	1583		5085	1583			3610	3433	3539	2787
Flt Permitted		1.00	1.00		1.00	1.00			1.00	0.95	1.00	1.00
Satd. Flow (perm)		6408	1583		5085	1583			3610	3433	3539	2787
Peak-hour factor, PHF	0.92	0.92	0.92	0.92	0.92	0.92	0.92	0.92	0.92	0.94	0.92	0.96
Adj. Flow (vph)	0	1579	9	0	1346	64	0	0	584	849	285	731
RTOR Reduction (vph)	0	0	6	0	0	0	0	0	36	0	0	0
Lane Group Flow (vph)	0	1579	3	0	1346	64	0	0	548	849	285	731
Turn Type		NA	Perm		NA	Free			Perm	Prot	NA	Free
Protected Phases		4			8					1		6
Permitted Phases			4			Free			2			Free
Actuated Green, G (s)		48.5	48.5		48.5	135.0			34.1	38.9	77.5	135.0
Effective Green, g (s)		48.5	48.5		48.5	135.0			34.1	38.9	77.5	135.0
Actuated g/C Ratio		0.36	0.36		0.36	1.00			0.25	0.29	0.57	1.00
Clearance Time (s)		4.5	4.5		4.5				4.5	4.5	4.5	
Vehicle Extension (s)		3.0	3.0		3.0				3.0	3.0	3.0	
Lane Grp Cap (vph)		2302	568		1826	1583			911	989	2031	2787
v/s Ratio Prot		0.25			c0.26					c0.25	0.08	
v/s Ratio Perm			0.00			0.04			c0.15			0.26
v/c Ratio		0.69	0.01		0.74	0.04			0.60	0.86	0.14	0.26
Uniform Delay, d1		36.8	27.8		37.7	0.0			44.5	45.4	13.3	0.0
Progression Factor		1.39	1.00		1.00	1.00			1.00	1.00	1.00	1.00
Incremental Delay, d2		1.5	0.0		2.7	0.0			1.1	7.5	0.1	0.2
Delay (s)		52.5	27.8		40.4	0.0			45.6	53.0	13.5	0.2
Level of Service		D	C		D	A			D	D	B	A
Approach Delay (s)		52.4			38.6			45.6			26.3	
Approach LOS		D			D			D			C	
Intersection Summary												
HCM 2000 Control Delay			39.1				HCM 2000 Level of Service			D		
HCM 2000 Volume to Capacity ratio			0.74									
Actuated Cycle Length (s)			135.0				Sum of lost time (s)			13.5		
Intersection Capacity Utilization			67.6%				ICU Level of Service			C		
Analysis Period (min)			15									
c Critical Lane Group												

HCM Signalized Intersection Capacity Analysis

18: County Line Road & I-25 Southbound Ramp

2040 Total PM.syn

04/25/2019

												
Movement	EBL	EBT	EBR	WBL	WBT	WBR	NBL	NBT	NBR	SBL	SBT	SBR
Lane Configurations		↑↑↑	↗		↑↑↑	↗			↗↗↗	↗↗	↑↑	↗↗
Traffic Volume (vph)	0	1903	72	0	1962	461	0	0	724	144	637	841
Future Volume (vph)	0	1903	72	0	1962	461	0	0	724	144	637	841
Ideal Flow (vphpl)	1900	1900	1900	1900	1900	1900	1900	1900	1900	1900	1900	1900
Total Lost time (s)		4.5	4.5		4.5	4.0			4.5	4.5	4.5	4.0
Lane Util. Factor		0.86	1.00		0.91	1.00			0.76	0.97	0.95	0.88
Frt		1.00	0.85		1.00	0.85			0.85	1.00	1.00	0.85
Flt Protected		1.00	1.00		1.00	1.00			1.00	0.95	1.00	1.00
Satd. Flow (prot)		6408	1583		5085	1583			3610	3433	3539	2787
Flt Permitted		1.00	1.00		1.00	1.00			1.00	0.95	1.00	1.00
Satd. Flow (perm)		6408	1583		5085	1583			3610	3433	3539	2787
Peak-hour factor, PHF	0.92	0.92	0.92	0.92	0.92	0.92	0.92	0.92	0.95	0.92	0.92	0.94
Adj. Flow (vph)	0	2068	78	0	2133	501	0	0	762	157	692	895
RTOR Reduction (vph)	0	0	36	0	0	0	0	0	34	0	0	0
Lane Group Flow (vph)	0	2068	42	0	2133	501	0	0	728	157	692	895
Turn Type		NA	Perm		NA	Free			Perm	Prot	NA	Free
Protected Phases		4			8					1		6
Permitted Phases			4			Free			2			Free
Actuated Green, G (s)		72.5	72.5		72.5	135.0			38.4	10.6	53.5	135.0
Effective Green, g (s)		72.5	72.5		72.5	135.0			38.4	10.6	53.5	135.0
Actuated g/C Ratio		0.54	0.54		0.54	1.00			0.28	0.08	0.40	1.00
Clearance Time (s)		4.5	4.5		4.5				4.5	4.5	4.5	
Vehicle Extension (s)		3.0	3.0		3.0				3.0	3.0	3.0	
Lane Grp Cap (vph)		3441	850		2730	1583			1026	269	1402	2787
v/s Ratio Prot		0.32			c0.42					0.05	c0.20	
v/s Ratio Perm			0.03			0.32			c0.20			0.32
v/c Ratio		0.60	0.05		0.78	0.32			0.71	0.58	0.49	0.32
Uniform Delay, d1		21.4	14.9		24.9	0.0			43.3	60.1	30.6	0.0
Progression Factor		1.37	2.73		1.00	1.00			1.00	1.00	1.00	1.00
Incremental Delay, d2		0.5	0.1		2.3	0.5			2.3	3.2	1.2	0.3
Delay (s)		29.8	40.6		27.2	0.5			45.6	63.3	31.8	0.3
Level of Service		C	D		C	A			D	E	C	A
Approach Delay (s)		30.2			22.1			45.6			18.5	
Approach LOS		C			C			D			B	
Intersection Summary												
HCM 2000 Control Delay			26.1				HCM 2000 Level of Service			C		
HCM 2000 Volume to Capacity ratio			0.74									
Actuated Cycle Length (s)			135.0				Sum of lost time (s)			13.5		
Intersection Capacity Utilization			63.0%				ICU Level of Service			B		
Analysis Period (min)			15									
c Critical Lane Group												

HCM Signalized Intersection Capacity Analysis

19: I-25 Northbound Ramp & County Line Road

2019 Existing AM.syn

04/24/2019

												
Movement	EBL	EBT	EBR	WBL	WBT	WBR	NBL	NBT	NBR	SBL	SBT	SBR
Lane Configurations		↑↑↑	↑		↑↑↑	↑	↑↑		↑↑			
Traffic Volume (vph)	0	1835	470	0	406	175	362	0	383	0	0	0
Future Volume (vph)	0	1835	470	0	406	175	362	0	383	0	0	0
Ideal Flow (vphpl)	1900	1900	1900	1900	1900	1900	1900	1900	1900	1900	1900	1900
Total Lost time (s)		4.5	4.0		4.5	4.0	4.5		4.0			
Lane Util. Factor		0.86	0.86		0.91	1.00	0.97		0.88			
Frt		1.00	0.85		1.00	0.85	1.00		0.85			
Flt Protected		1.00	1.00		1.00	1.00	0.95		1.00			
Satd. Flow (prot)		4787	1362		5085	1583	3433		2787			
Flt Permitted		1.00	1.00		1.00	1.00	0.95		1.00			
Satd. Flow (perm)		4787	1362		5085	1583	3433		2787			
Peak-hour factor, PHF	0.92	0.89	0.87	0.92	0.87	0.80	0.80	0.92	0.85	0.92	0.92	0.92
Adj. Flow (vph)	0	2062	540	0	467	219	452	0	451	0	0	0
RTOR Reduction (vph)	0	2	0	0	0	0	0	0	0	0	0	0
Lane Group Flow (vph)	0	2114	486	0	467	219	453	0	451	0	0	0
Parking (#/hr)	0											
Turn Type		NA	Free		NA	Free	Perm		Free			
Protected Phases		4			8							
Permitted Phases			Free			Free	2		Free			
Actuated Green, G (s)		91.5	135.0		91.5	135.0	34.5		135.0			
Effective Green, g (s)		91.5	135.0		91.5	135.0	34.5		135.0			
Actuated g/C Ratio		0.68	1.00		0.68	1.00	0.26		1.00			
Clearance Time (s)		4.5			4.5		4.5					
Vehicle Extension (s)		3.0			3.0		3.0					
Lane Grp Cap (vph)		3244	1362		3446	1583	877		2787			
v/s Ratio Prot		c0.44			0.09							
v/s Ratio Perm			0.36			0.14	c0.13		0.16			
v/c Ratio		0.65	0.36		0.14	0.14	0.52		0.16			
Uniform Delay, d1		12.6	0.0		7.7	0.0	43.1		0.0			
Progression Factor		1.00	1.00		1.00	1.00	1.00		1.00			
Incremental Delay, d2		1.0	0.7		0.1	0.2	2.2		0.1			
Delay (s)		13.6	0.7		7.8	0.2	45.3		0.1			
Level of Service		B	A		A	A	D		A			
Approach Delay (s)		11.2			5.4			22.7			0.0	
Approach LOS		B			A			C			A	
Intersection Summary												
HCM 2000 Control Delay			12.7		HCM 2000 Level of Service				B			
HCM 2000 Volume to Capacity ratio			0.61									
Actuated Cycle Length (s)			135.0		Sum of lost time (s)				9.0			
Intersection Capacity Utilization			56.4%		ICU Level of Service				B			
Analysis Period (min)			15									
c Critical Lane Group												

HCM Signalized Intersection Capacity Analysis

19: I-25 Northbound Ramp & County Line Road

2019 Existing PM.syn

04/24/2019

												
Movement	EBL	EBT	EBR	WBL	WBT	WBR	NBL	NBT	NBR	SBL	SBT	SBR
Lane Configurations												
Traffic Volume (vph)	0	746	765	0	1700	597	303	0	72	0	0	0
Future Volume (vph)	0	746	765	0	1700	597	303	0	72	0	0	0
Ideal Flow (vphpl)	1900	1900	1900	1900	1900	1900	1900	1900	1900	1900	1900	1900
Total Lost time (s)		4.5	4.0		4.5	4.0	4.5		4.0			
Lane Util. Factor		0.86	0.86		0.91	1.00	0.97		0.88			
Frt		0.95	0.85		1.00	0.85	1.00		0.85			
Flt Protected		1.00	1.00		1.00	1.00	0.95		1.00			
Satd. Flow (prot)		4556	1362		5085	1583	3433		2787			
Flt Permitted		1.00	1.00		1.00	1.00	0.95		1.00			
Satd. Flow (perm)		4556	1362		5085	1583	3433		2787			
Peak-hour factor, PHF	0.92	0.94	0.91	0.92	0.88	0.77	0.83	0.92	0.75	0.92	0.92	0.92
Adj. Flow (vph)	0	794	841	0	1932	775	365	0	96	0	0	0
RTOR Reduction (vph)	0	71	0	0	0	0	0	0	0	0	0	0
Lane Group Flow (vph)	0	1144	420	0	1932	775	365	0	96	0	0	0
Parking (#/hr)								0				
Turn Type		NA	Free		NA	Free	Perm		Free			
Protected Phases		4			8							
Permitted Phases			Free			Free	2		Free			
Actuated Green, G (s)		92.5	135.0		92.5	135.0	33.5		135.0			
Effective Green, g (s)		92.5	135.0		92.5	135.0	33.5		135.0			
Actuated g/C Ratio		0.69	1.00		0.69	1.00	0.25		1.00			
Clearance Time (s)		4.5			4.5		4.5					
Vehicle Extension (s)		3.0			3.0		3.0					
Lane Grp Cap (vph)		3121	1362		3484	1583	851		2787			
v/s Ratio Prot		0.25			0.38							
v/s Ratio Perm			0.31			0.49	0.11		0.03			
v/c Ratio		0.37	0.31		0.55	0.49	0.43		0.03			
Uniform Delay, d1		8.9	0.0		10.8	0.0	42.7		0.0			
Progression Factor		1.00	1.00		1.00	1.00	1.00		1.00			
Incremental Delay, d2		0.3	0.6		0.6	1.1	1.6		0.0			
Delay (s)		9.3	0.6		11.4	1.1	44.3		0.0			
Level of Service		A	A		B	A	D		A			
Approach Delay (s)		7.0			8.5			35.1			0.0	
Approach LOS		A			A			D			A	
Intersection Summary												
HCM 2000 Control Delay			10.5				HCM 2000 Level of Service		B			
HCM 2000 Volume to Capacity ratio			0.55									
Actuated Cycle Length (s)			135.0				Sum of lost time (s)		9.0			
Intersection Capacity Utilization			48.6%				ICU Level of Service		A			
Analysis Period (min)			15									
c Critical Lane Group												

HCM Signalized Intersection Capacity Analysis

19: I-25 Northbound Ramp & County Line Road

2030 Background AM.syn

04/24/2019

												
Movement	EBL	EBT	EBR	WBL	WBT	WBR	NBL	NBT	NBR	SBL	SBT	SBR
Lane Configurations												
Traffic Volume (vph)	0	1938	497	0	429	185	382	0	405	0	0	0
Future Volume (vph)	0	1938	497	0	429	185	382	0	405	0	0	0
Ideal Flow (vphpl)	1900	1900	1900	1900	1900	1900	1900	1900	1900	1900	1900	1900
Total Lost time (s)		4.5	4.0		4.5	4.0	4.5		4.0			
Lane Util. Factor		0.86	0.86		0.91	1.00	0.97		0.88			
Frt		1.00	0.85		1.00	0.85	1.00		0.85			
Flt Protected		1.00	1.00		1.00	1.00	0.95		1.00			
Satd. Flow (prot)		4788	1362		5085	1583	3433		2787			
Flt Permitted		1.00	1.00		1.00	1.00	0.95		1.00			
Satd. Flow (perm)		4788	1362		5085	1583	3433		2787			
Peak-hour factor, PHF	0.92	0.92	0.92	0.92	0.92	0.92	0.92	0.92	0.92	0.92	0.92	0.92
Adj. Flow (vph)	0	2107	540	0	466	201	415	0	440	0	0	0
RTOR Reduction (vph)	0	2	0	0	0	0	0	0	0	0	0	0
Lane Group Flow (vph)	0	2159	486	0	466	201	415	0	440	0	0	0
Parking (#/hr)								0				
Turn Type		NA	Free		NA	Free	Perm		Free			
Protected Phases		4			8							
Permitted Phases			Free			Free	2		Free			
Actuated Green, G (s)		90.5	135.0		90.5	135.0	35.5		135.0			
Effective Green, g (s)		90.5	135.0		90.5	135.0	35.5		135.0			
Actuated g/C Ratio		0.67	1.00		0.67	1.00	0.26		1.00			
Clearance Time (s)		4.5			4.5		4.5					
Vehicle Extension (s)		3.0			3.0		3.0					
Lane Grp Cap (vph)		3209	1362		3408	1583	902		2787			
v/s Ratio Prot		c0.45			0.09							
v/s Ratio Perm			0.36			0.13	c0.12		0.16			
v/c Ratio		0.67	0.36		0.14	0.13	0.46		0.16			
Uniform Delay, d1		13.4	0.0		8.1	0.0	41.7		0.0			
Progression Factor		1.00	1.00		1.00	1.00	1.00		1.00			
Incremental Delay, d2		1.1	0.7		0.1	0.2	1.7		0.1			
Delay (s)		14.5	0.7		8.2	0.2	43.4		0.1			
Level of Service		B	A		A	A	D		A			
Approach Delay (s)		12.0			5.7			21.1			0.0	
Approach LOS		B			A			C			A	
Intersection Summary												
HCM 2000 Control Delay			12.9				HCM 2000 Level of Service				B	
HCM 2000 Volume to Capacity ratio			0.61									
Actuated Cycle Length (s)			135.0				Sum of lost time (s)				9.0	
Intersection Capacity Utilization			59.1%				ICU Level of Service				B	
Analysis Period (min)			15									
c Critical Lane Group												

HCM Signalized Intersection Capacity Analysis

19: I-25 Northbound Ramp & County Line Road

2030 Background PM.syn

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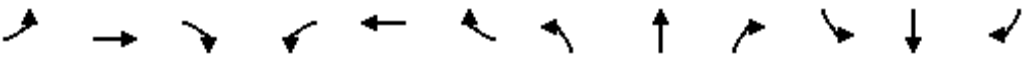
												
Movement	EBL	EBT	EBR	WBL	WBT	WBR	NBL	NBT	NBR	SBL	SBT	SBR
Lane Configurations												
Traffic Volume (vph)	0	788	808	0	1796	631	320	0	76	0	0	0
Future Volume (vph)	0	788	808	0	1796	631	320	0	76	0	0	0
Ideal Flow (vphpl)	1900	1900	1900	1900	1900	1900	1900	1900	1900	1900	1900	1900
Total Lost time (s)		4.5	4.0		4.5	4.0	4.5		4.0			
Lane Util. Factor		0.86	0.86		0.91	1.00	0.97		0.88			
Frt		0.95	0.85		1.00	0.85	1.00		0.85			
Flt Protected		1.00	1.00		1.00	1.00	0.95		1.00			
Satd. Flow (prot)		4558	1362		5085	1583	3433		2787			
Flt Permitted		1.00	1.00		1.00	1.00	0.95		1.00			
Satd. Flow (perm)		4558	1362		5085	1583	3433		2787			
Peak-hour factor, PHF	0.92	0.94	0.92	0.92	0.92	0.92	0.92	0.92	0.92	0.92	0.92	0.92
Adj. Flow (vph)	0	838	878	0	1952	686	348	0	83	0	0	0
RTOR Reduction (vph)	0	70	0	0	0	0	0	0	0	0	0	0
Lane Group Flow (vph)	0	1207	439	0	1952	686	348	0	83	0	0	0
Parking (#/hr)								0				
Turn Type		NA	Free		NA	Free	Perm		Free			
Protected Phases		4			8							
Permitted Phases			Free			Free	2		Free			
Actuated Green, G (s)		91.5	135.0		91.5	135.0	34.5		135.0			
Effective Green, g (s)		91.5	135.0		91.5	135.0	34.5		135.0			
Actuated g/C Ratio		0.68	1.00		0.68	1.00	0.26		1.00			
Clearance Time (s)		4.5			4.5		4.5					
Vehicle Extension (s)		3.0			3.0		3.0					
Lane Grp Cap (vph)		3089	1362		3446	1583	877		2787			
v/s Ratio Prot		0.26			0.38							
v/s Ratio Perm			0.32			0.43	0.10		0.03			
v/c Ratio		0.39	0.32		0.57	0.43	0.40		0.03			
Uniform Delay, d1		9.5	0.0		11.4	0.0	41.6		0.0			
Progression Factor		1.00	1.00		1.00	1.00	1.00		1.00			
Incremental Delay, d2		0.4	0.6		0.7	0.9	1.3		0.0			
Delay (s)		9.9	0.6		12.1	0.9	43.0		0.0			
Level of Service		A	A		B	A	D		A			
Approach Delay (s)		7.5			9.1			34.7			0.0	
Approach LOS		A			A			C			A	
Intersection Summary												
HCM 2000 Control Delay		10.9			HCM 2000 Level of Service				B			
HCM 2000 Volume to Capacity ratio		0.55										
Actuated Cycle Length (s)		135.0			Sum of lost time (s)				9.0			
Intersection Capacity Utilization		50.9%			ICU Level of Service				A			
Analysis Period (min)		15										
c Critical Lane Group												

HCM Signalized Intersection Capacity Analysis

19: I-25 Northbound Ramp & County Line Road

2030 Total AM.syn

04/24/2019

												
Movement	EBL	EBT	EBR	WBL	WBT	WBR	NBL	NBT	NBR	SBL	SBT	SBR
Lane Configurations		↑↑↑	↑		↑↑↑	↑	↑↑		↑↑			
Traffic Volume (vph)	0	1966	497	0	533	185	693	0	405	0	0	0
Future Volume (vph)	0	1966	497	0	533	185	693	0	405	0	0	0
Ideal Flow (vphpl)	1900	1900	1900	1900	1900	1900	1900	1900	1900	1900	1900	1900
Total Lost time (s)		4.5	4.0		4.5	4.0	4.5		4.0			
Lane Util. Factor		0.86	0.86		0.91	1.00	0.97		0.88			
Frt		1.00	0.85		1.00	0.85	1.00		0.85			
Flt Protected		1.00	1.00		1.00	1.00	0.95		1.00			
Satd. Flow (prot)		4788	1362		5085	1583	3433		2787			
Flt Permitted		1.00	1.00		1.00	1.00	0.95		1.00			
Satd. Flow (perm)		4788	1362		5085	1583	3433		2787			
Peak-hour factor, PHF	0.92	0.92	0.92	0.92	0.92	0.92	0.92	0.92	0.92	0.92	0.92	0.92
Adj. Flow (vph)	0	2137	540	0	579	201	753	0	440	0	0	0
RTOR Reduction (vph)	0	2	0	0	0	0	0	0	0	0	0	0
Lane Group Flow (vph)	0	2189	486	0	579	201	753	0	440	0	0	0
Parking (#/hr)								0				
Turn Type		NA	Free		NA	Free	Perm		Free			
Protected Phases		4			8							
Permitted Phases			Free			Free	2		Free			
Actuated Green, G (s)		81.5	135.0		81.5	135.0	44.5		135.0			
Effective Green, g (s)		81.5	135.0		81.5	135.0	44.5		135.0			
Actuated g/C Ratio		0.60	1.00		0.60	1.00	0.33		1.00			
Clearance Time (s)		4.5			4.5		4.5					
Vehicle Extension (s)		3.0			3.0		3.0					
Lane Grp Cap (vph)		2890	1362		3069	1583	1131		2787			
v/s Ratio Prot		c0.46			0.11							
v/s Ratio Perm			0.36			0.13	c0.22		0.16			
v/c Ratio		0.76	0.36		0.19	0.13	0.67		0.16			
Uniform Delay, d1		19.5	0.0		12.0	0.0	38.9		0.0			
Progression Factor		1.00	1.00		1.00	1.00	1.00		1.00			
Incremental Delay, d2		1.9	0.7		0.1	0.2	3.1		0.1			
Delay (s)		21.4	0.7		12.1	0.2	42.0		0.1			
Level of Service		C	A		B	A	D		A			
Approach Delay (s)		17.7			9.0			26.5			0.0	
Approach LOS		B			A			C			A	
Intersection Summary												
HCM 2000 Control Delay			18.5				HCM 2000 Level of Service				B	
HCM 2000 Volume to Capacity ratio			0.72									
Actuated Cycle Length (s)			135.0				Sum of lost time (s)				9.0	
Intersection Capacity Utilization			68.5%				ICU Level of Service				C	
Analysis Period (min)			15									
c Critical Lane Group												

HCM Signalized Intersection Capacity Analysis

19: I-25 Northbound Ramp & County Line Road

2030 Total PM.syn

04/24/2019

												
Movement	EBL	EBT	EBR	WBL	WBT	WBR	NBL	NBT	NBR	SBL	SBT	SBR
Lane Configurations												
Traffic Volume (vph)	0	895	808	0	1832	631	429	0	76	0	0	0
Future Volume (vph)	0	895	808	0	1832	631	429	0	76	0	0	0
Ideal Flow (vphpl)	1900	1900	1900	1900	1900	1900	1900	1900	1900	1900	1900	1900
Total Lost time (s)		4.5	4.0		4.5	4.0	4.5		4.0			
Lane Util. Factor		0.86	0.86		0.91	1.00	0.97		0.88			
Frt		0.95	0.85		1.00	0.85	1.00		0.85			
Flt Protected		1.00	1.00		1.00	1.00	0.95		1.00			
Satd. Flow (prot)		4578	1362		5085	1583	3433		2787			
Flt Permitted		1.00	1.00		1.00	1.00	0.95		1.00			
Satd. Flow (perm)		4578	1362		5085	1583	3433		2787			
Peak-hour factor, PHF	0.92	0.94	0.92	0.92	0.92	0.92	0.92	0.92	0.92	0.92	0.92	0.92
Adj. Flow (vph)	0	952	878	0	1991	686	466	0	83	0	0	0
RTOR Reduction (vph)	0	62	0	0	0	0	0	0	0	0	0	0
Lane Group Flow (vph)	0	1329	439	0	1991	686	466	0	83	0	0	0
Parking (#/hr)								0				
Turn Type		NA	Free		NA	Free	Perm		Free			
Protected Phases		4			8							
Permitted Phases			Free			Free	2		Free			
Actuated Green, G (s)		91.5	135.0		91.5	135.0	34.5		135.0			
Effective Green, g (s)		91.5	135.0		91.5	135.0	34.5		135.0			
Actuated g/C Ratio		0.68	1.00		0.68	1.00	0.26		1.00			
Clearance Time (s)		4.5			4.5		4.5					
Vehicle Extension (s)		3.0			3.0		3.0					
Lane Grp Cap (vph)		3102	1362		3446	1583	877		2787			
v/s Ratio Prot		0.29			0.39							
v/s Ratio Perm			0.32			0.43	0.14		0.03			
v/c Ratio		0.43	0.32		0.58	0.43	0.53		0.03			
Uniform Delay, d1		9.9	0.0		11.5	0.0	43.3		0.0			
Progression Factor		1.00	1.00		1.00	1.00	1.00		1.00			
Incremental Delay, d2		0.4	0.6		0.7	0.9	2.3		0.0			
Delay (s)		10.3	0.6		12.2	0.9	45.6		0.0			
Level of Service		B	A		B	A	D		A			
Approach Delay (s)		8.0			9.3			38.7			0.0	
Approach LOS		A			A			D			A	
Intersection Summary												
HCM 2000 Control Delay			12.0				HCM 2000 Level of Service				B	
HCM 2000 Volume to Capacity ratio			0.56									
Actuated Cycle Length (s)			135.0				Sum of lost time (s)				9.0	
Intersection Capacity Utilization			54.7%				ICU Level of Service				A	
Analysis Period (min)			15									
c Critical Lane Group												

HCM Signalized Intersection Capacity Analysis

19: I-25 Northbound Ramp & County Line Road

2040 Background AM.syn

04/29/2019

												
Movement	EBL	EBT	EBR	WBL	WBT	WBR	NBL	NBT	NBR	SBL	SBT	SBR
Lane Configurations												
Traffic Volume (vph)	0	2038	522	0	451	194	402	0	425	0	0	0
Future Volume (vph)	0	2038	522	0	451	194	402	0	425	0	0	0
Ideal Flow (vphpl)	1900	1900	1900	1900	1900	1900	1900	1900	1900	1900	1900	1900
Total Lost time (s)		4.5	4.0		4.5	4.0	4.5		4.0			
Lane Util. Factor		0.86	0.86		0.91	1.00	0.97		0.88			
Frt		1.00	0.85		1.00	0.85	1.00		0.85			
Flt Protected		1.00	1.00		1.00	1.00	0.95		1.00			
Satd. Flow (prot)		4788	1362		5085	1583	3433		2787			
Flt Permitted		1.00	1.00		1.00	1.00	0.95		1.00			
Satd. Flow (perm)		4788	1362		5085	1583	3433		2787			
Peak-hour factor, PHF	0.92	0.92	0.92	0.92	0.92	0.92	0.92	0.92	0.92	0.92	0.92	0.92
Adj. Flow (vph)	0	2215	567	0	490	211	437	0	462	0	0	0
RTOR Reduction (vph)	0	2	0	0	0	0	0	0	0	0	0	0
Lane Group Flow (vph)	0	2270	510	0	490	211	437	0	462	0	0	0
Parking (#/hr)	0											
Turn Type		NA	Free		NA	Free	Perm		Free			
Protected Phases		4			8							
Permitted Phases			Free			Free	2		Free			
Actuated Green, G (s)		91.5	135.0		91.5	135.0	34.5		135.0			
Effective Green, g (s)		91.5	135.0		91.5	135.0	34.5		135.0			
Actuated g/C Ratio		0.68	1.00		0.68	1.00	0.26		1.00			
Clearance Time (s)		4.5			4.5		4.5					
Vehicle Extension (s)		3.0			3.0		3.0					
Lane Grp Cap (vph)		3245	1362		3446	1583	877		2787			
v/s Ratio Prot		c0.47			0.10							
v/s Ratio Perm			0.37			0.13	c0.13		0.17			
v/c Ratio		0.70	0.37		0.14	0.13	0.50		0.17			
Uniform Delay, d1		13.3	0.0		7.8	0.0	42.9		0.0			
Progression Factor		1.00	1.00		1.00	1.00	1.00		1.00			
Incremental Delay, d2		1.3	0.8		0.1	0.2	2.0		0.1			
Delay (s)		14.6	0.8		7.8	0.2	44.9		0.1			
Level of Service		B	A		A	A	D		A			
Approach Delay (s)		12.1			5.5			21.9			0.0	
Approach LOS		B			A			C			A	
Intersection Summary												
HCM 2000 Control Delay			13.0		HCM 2000 Level of Service					B		
HCM 2000 Volume to Capacity ratio			0.64									
Actuated Cycle Length (s)			135.0		Sum of lost time (s)					9.0		
Intersection Capacity Utilization			61.8%		ICU Level of Service					B		
Analysis Period (min)			15									
c Critical Lane Group												

HCM Signalized Intersection Capacity Analysis

19: I-25 Northbound Ramp & County Line Road

2040 Background PM.syn

04/29/2019

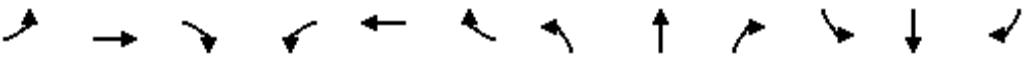
												
Movement	EBL	EBT	EBR	WBL	WBT	WBR	NBL	NBT	NBR	SBL	SBT	SBR
Lane Configurations												
Traffic Volume (vph)	0	828	849	0	1888	663	336	0	80	0	0	0
Future Volume (vph)	0	828	849	0	1888	663	336	0	80	0	0	0
Ideal Flow (vphpl)	1900	1900	1900	1900	1900	1900	1900	1900	1900	1900	1900	1900
Total Lost time (s)		4.5	4.0		4.5	4.0	4.5		4.0			
Lane Util. Factor		0.86	0.86		0.91	1.00	0.97		0.88			
Frt		0.95	0.85		1.00	0.85	1.00		0.85			
Flt Protected		1.00	1.00		1.00	1.00	0.95		1.00			
Satd. Flow (prot)		4558	1362		5085	1583	3433		2787			
Flt Permitted		1.00	1.00		1.00	1.00	0.95		1.00			
Satd. Flow (perm)		4558	1362		5085	1583	3433		2787			
Peak-hour factor, PHF	0.92	0.94	0.92	0.92	0.92	0.92	0.92	0.92	0.92	0.92	0.92	0.92
Adj. Flow (vph)	0	881	923	0	2052	721	365	0	87	0	0	0
RTOR Reduction (vph)	0	70	0	0	0	0	0	0	0	0	0	0
Lane Group Flow (vph)	0	1273	461	0	2052	721	365	0	87	0	0	0
Parking (#/hr)								0				
Turn Type		NA	Free		NA	Free	Perm		Free			
Protected Phases		4			8							
Permitted Phases			Free			Free	2		Free			
Actuated Green, G (s)		90.5	135.0		90.5	135.0	35.5		135.0			
Effective Green, g (s)		90.5	135.0		90.5	135.0	35.5		135.0			
Actuated g/C Ratio		0.67	1.00		0.67	1.00	0.26		1.00			
Clearance Time (s)		4.5			4.5		4.5					
Vehicle Extension (s)		3.0			3.0		3.0					
Lane Grp Cap (vph)		3055	1362		3408	1583	902		2787			
v/s Ratio Prot		0.28			c0.40							
v/s Ratio Perm			0.34			c0.46	0.11		0.03			
v/c Ratio		0.42	0.34		0.60	0.46	0.40		0.03			
Uniform Delay, d1		10.2	0.0		12.3	0.0	41.0		0.0			
Progression Factor		1.00	1.00		1.00	1.00	1.00		1.00			
Incremental Delay, d2		0.4	0.7		0.8	0.9	1.3		0.0			
Delay (s)		10.6	0.7		13.1	0.9	42.4		0.0			
Level of Service		B	A		B	A	D		A			
Approach Delay (s)		8.1			9.9			34.2			0.0	
Approach LOS		A			A			C			A	
Intersection Summary												
HCM 2000 Control Delay			11.4				HCM 2000 Level of Service				B	
HCM 2000 Volume to Capacity ratio			0.58									
Actuated Cycle Length (s)			135.0				Sum of lost time (s)				9.0	
Intersection Capacity Utilization			53.1%				ICU Level of Service				A	
Analysis Period (min)			15									
c Critical Lane Group												

HCM Signalized Intersection Capacity Analysis

19: I-25 Northbound Ramp & County Line Road

2040 Total AM.syn

04/25/2019

												
Movement	EBL	EBT	EBR	WBL	WBT	WBR	NBL	NBT	NBR	SBL	SBT	SBR
Lane Configurations		↑↑↑	↑		↑↑↑	↑	↑↑		↑↑			
Traffic Volume (vph)	0	2066	522	0	555	194	713	0	425	0	0	0
Future Volume (vph)	0	2066	522	0	555	194	713	0	425	0	0	0
Ideal Flow (vphpl)	1900	1900	1900	1900	1900	1900	1900	1900	1900	1900	1900	1900
Total Lost time (s)		4.5	4.0		4.5	4.0	4.5		4.0			
Lane Util. Factor		0.86	0.86		0.91	1.00	0.97		0.88			
Frt		1.00	0.85		1.00	0.85	1.00		0.85			
Flt Protected		1.00	1.00		1.00	1.00	0.95		1.00			
Satd. Flow (prot)		4788	1362		5085	1583	3433		2787			
Flt Permitted		1.00	1.00		1.00	1.00	0.95		1.00			
Satd. Flow (perm)		4788	1362		5085	1583	3433		2787			
Peak-hour factor, PHF	0.92	0.92	0.92	0.92	0.92	0.92	0.92	0.92	0.92	0.92	0.92	0.92
Adj. Flow (vph)	0	2246	567	0	603	211	775	0	462	0	0	0
RTOR Reduction (vph)	0	2	0	0	0	0	0	0	0	0	0	0
Lane Group Flow (vph)	0	2301	510	0	603	211	775	0	462	0	0	0
Parking (#/hr)								0				
Turn Type		NA	Free		NA	Free	Perm		Free			
Protected Phases		4			8							
Permitted Phases			Free			Free	2		Free			
Actuated Green, G (s)		81.5	135.0		81.5	135.0	44.5		135.0			
Effective Green, g (s)		81.5	135.0		81.5	135.0	44.5		135.0			
Actuated g/C Ratio		0.60	1.00		0.60	1.00	0.33		1.00			
Clearance Time (s)		4.5			4.5		4.5					
Vehicle Extension (s)		3.0			3.0		3.0					
Lane Grp Cap (vph)		2890	1362		3069	1583	1131		2787			
v/s Ratio Prot		c0.48			0.12							
v/s Ratio Perm			0.37			0.13	c0.23		0.17			
v/c Ratio		0.80	0.37		0.20	0.13	0.69		0.17			
Uniform Delay, d1		20.4	0.0		12.0	0.0	39.2		0.0			
Progression Factor		1.00	1.00		1.00	1.00	1.00		1.00			
Incremental Delay, d2		2.4	0.8		0.1	0.2	3.4		0.1			
Delay (s)		22.8	0.8		12.2	0.2	42.6		0.1			
Level of Service		C	A		B	A	D		A			
Approach Delay (s)		18.8			9.1			26.7			0.0	
Approach LOS		B			A			C			A	
Intersection Summary												
HCM 2000 Control Delay			19.2				HCM 2000 Level of Service				B	
HCM 2000 Volume to Capacity ratio			0.76									
Actuated Cycle Length (s)			135.0				Sum of lost time (s)				9.0	
Intersection Capacity Utilization			71.2%				ICU Level of Service				C	
Analysis Period (min)			15									
c Critical Lane Group												

HCM Signalized Intersection Capacity Analysis

19: I-25 Northbound Ramp & County Line Road

2040 Total PM.syn

04/25/2019

												
Movement	EBL	EBT	EBR	WBL	WBT	WBR	NBL	NBT	NBR	SBL	SBT	SBR
Lane Configurations												
Traffic Volume (vph)	0	935	849	0	1924	663	445	0	80	0	0	0
Future Volume (vph)	0	935	849	0	1924	663	445	0	80	0	0	0
Ideal Flow (vphpl)	1900	1900	1900	1900	1900	1900	1900	1900	1900	1900	1900	1900
Total Lost time (s)		4.5	4.0		4.5	4.0	4.5		4.0			
Lane Util. Factor		0.86	0.86		0.91	1.00	0.97		0.88			
Frt		0.95	0.85		1.00	0.85	1.00		0.85			
Flt Protected		1.00	1.00		1.00	1.00	0.95		1.00			
Satd. Flow (prot)		4577	1362		5085	1583	3433		2787			
Flt Permitted		1.00	1.00		1.00	1.00	0.95		1.00			
Satd. Flow (perm)		4577	1362		5085	1583	3433		2787			
Peak-hour factor, PHF	0.92	0.94	0.92	0.92	0.92	0.92	0.92	0.92	0.92	0.92	0.92	0.92
Adj. Flow (vph)	0	995	923	0	2091	721	484	0	87	0	0	0
RTOR Reduction (vph)	0	62	0	0	0	0	0	0	0	0	0	0
Lane Group Flow (vph)	0	1395	461	0	2091	721	484	0	87	0	0	0
Parking (#/hr)								0				
Turn Type		NA	Free		NA	Free	Perm		Free			
Protected Phases		4			8							
Permitted Phases			Free			Free	2		Free			
Actuated Green, G (s)		91.5	135.0		91.5	135.0	34.5		135.0			
Effective Green, g (s)		91.5	135.0		91.5	135.0	34.5		135.0			
Actuated g/C Ratio		0.68	1.00		0.68	1.00	0.26		1.00			
Clearance Time (s)		4.5			4.5		4.5					
Vehicle Extension (s)		3.0			3.0		3.0					
Lane Grp Cap (vph)		3102	1362		3446	1583	877		2787			
v/s Ratio Prot		0.30			c0.41							
v/s Ratio Perm			0.34			0.46	c0.14		0.03			
v/c Ratio		0.45	0.34		0.61	0.46	0.55		0.03			
Uniform Delay, d1		10.1	0.0		11.9	0.0	43.6		0.0			
Progression Factor		1.00	1.00		1.00	1.00	1.00		1.00			
Incremental Delay, d2		0.5	0.7		0.8	0.9	2.5		0.0			
Delay (s)		10.6	0.7		12.7	0.9	46.0		0.0			
Level of Service		B	A		B	A	D		A			
Approach Delay (s)		8.2			9.7			39.0			0.0	
Approach LOS		A			A			D			A	
Intersection Summary												
HCM 2000 Control Delay		12.3			HCM 2000 Level of Service				B			
HCM 2000 Volume to Capacity ratio		0.59										
Actuated Cycle Length (s)		135.0			Sum of lost time (s)				9.0			
Intersection Capacity Utilization		57.0%			ICU Level of Service				B			
Analysis Period (min)		15										
c Critical Lane Group												

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	10	0	2	11	0	62	5	173	41	187	194	50
Future Vol, veh/h	10	0	2	11	0	62	5	173	41	187	194	50
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	-	-
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	0	2	12	0	67	5	188	45	203	211	54
Major/Minor	Minor2		Minor1		Major1		Major2					
Conflicting Flow All	898	887	238	866	892	211	265	0	0	233	0	0
Stage 1	644	644	-	221	221	-	-	-	-	-	-	-
Stage 2	254	243	-	645	671	-	-	-	-	-	-	-
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	260	283	801	274	281	829	1299	-	-	1335	-	-
Stage 1	461	468	-	781	720	-	-	-	-	-	-	-
Stage 2	750	705	-	461	455	-	-	-	-	-	-	-
Platoon blocked, %								-	-		-	-
Mov Cap-1 Maneuver	210	239	801	241	237	829	1299	-	-	1335	-	-
Mov Cap-2 Maneuver	210	239	-	241	237	-	-	-	-	-	-	-
Stage 1	459	397	-	778	717	-	-	-	-	-	-	-
Stage 2	686	702	-	390	386	-	-	-	-	-	-	-
Approach	EB		WB		NB		SB					
HCM Control Delay, s	20.9		11.8		0.2		3.5					
HCM LOS	C		B									
Minor Lane/Major Mvmt	NBL	NBT	NBR	EBLn1	WBLn1	SBL	SBT	SBR				
Capacity (veh/h)	1299	-	-	239	606	1335	-	-				
HCM Lane V/C Ratio	0.004	-	-	0.055	0.131	0.152	-	-				
HCM Control Delay (s)	7.8	0	-	20.9	11.8	8.2	-	-				
HCM Lane LOS	A	A	-	C	B	A	-	-				
HCM 95th %tile Q(veh)	0	-	-	0.2	0.4	0.5	-	-				

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	50	0	5	43	0	234	2	204	15	66	140	10
Future Vol, veh/h	50	0	5	43	0	234	2	204	15	66	140	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	-	-
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	54	0	5	47	0	254	2	222	16	72	152	11
Major/Minor	Minor2		Minor1		Major1		Major2					
Conflicting Flow All	663	544	158	538	541	230	163	0	0	238	0	0
Stage 1	302	302	-	234	234	-	-	-	-	-	-	-
Stage 2	361	242	-	304	307	-	-	-	-	-	-	-
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	375	446	887	454	448	809	1416	-	-	1329	-	-
Stage 1	707	664	-	769	711	-	-	-	-	-	-	-
Stage 2	657	705	-	705	661	-	-	-	-	-	-	-
Platoon blocked, %								-	-		-	-
Mov Cap-1 Maneuver	246	421	887	432	423	809	1416	-	-	1329	-	-
Mov Cap-2 Maneuver	246	421	-	432	423	-	-	-	-	-	-	-
Stage 1	706	628	-	767	710	-	-	-	-	-	-	-
Stage 2	450	704	-	663	625	-	-	-	-	-	-	-
Approach	EB		WB		NB		SB					
HCM Control Delay, s	22.7		13.7		0.1		2.4					
HCM LOS	C		B									
Minor Lane/Major Mvmt	NBL	NBT	NBR	EBLn1	WBLn1	SBL	SBT	SBR				
Capacity (veh/h)	1416	-	-	263	712	1329	-	-				
HCM Lane V/C Ratio	0.002	-	-	0.227	0.423	0.054	-	-				
HCM Control Delay (s)	7.5	0	-	22.7	13.7	7.9	-	-				
HCM Lane LOS	A	A	-	C	B	A	-	-				
HCM 95th %tile Q(veh)	0	-	-	0.9	2.1	0.2	-	-				

Intersection						
Int Delay, s/veh	7.7					
Movement	EBL	EBR	NBL	NBT	SBT	SBR
Lane Configurations						
Traffic Vol, veh/h	1	73	69	2	2	1
Future Vol, veh/h	1	73	69	2	2	1
Conflicting Peds, #/hr	0	0	0	0	0	0
Sign Control	Stop	Stop	Free	Free	Free	Free
RT Channelized	-	None	-	None	-	None
Storage Length	-	-	-	-	-	-
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	1	79	75	2	2	1
Major/Minor	Minor2	Major1		Major2		
Conflicting Flow All	155	3	3	0	-	0
Stage 1	3	-	-	-	-	-
Stage 2	152	-	-	-	-	-
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	836	1081	1619	-	-	-
Stage 1	1020	-	-	-	-	-
Stage 2	876	-	-	-	-	-
Platoon blocked, %				-	-	-
Mov Cap-1 Maneuver	798	1081	1619	-	-	-
Mov Cap-2 Maneuver	798	-	-	-	-	-
Stage 1	973	-	-	-	-	-
Stage 2	876	-	-	-	-	-
Approach	EB	NB		SB		
HCM Control Delay, s	8.6	7.1		0		
HCM LOS	A					
Minor Lane/Major Mvmt	NBL	NBT	EBLn1	SBT	SBR	
Capacity (veh/h)	1619	-	1076	-	-	
HCM Lane V/C Ratio	0.046	-	0.075	-	-	
HCM Control Delay (s)	7.3	0	8.6	-	-	
HCM Lane LOS	A	A	A	-	-	
HCM 95th %tile Q(veh)	0.1	-	0.2	-	-	

Intersection						
Int Delay, s/veh	7.6					
Movement	EBL	EBR	NBL	NBT	SBT	SBR
Lane Configurations						
Traffic Vol, veh/h	1	65	122	2	2	1
Future Vol, veh/h	1	65	122	2	2	1
Conflicting Peds, #/hr	0	0	0	0	0	0
Sign Control	Stop	Stop	Free	Free	Free	Free
RT Channelized	-	None	-	None	-	None
Storage Length	-	-	-	-	-	-
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	1	71	133	2	2	1
Major/Minor	Minor2	Major1		Major2		
Conflicting Flow All	271	3	3	0	-	0
Stage 1	3	-	-	-	-	-
Stage 2	268	-	-	-	-	-
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	718	1081	1619	-	-	-
Stage 1	1020	-	-	-	-	-
Stage 2	777	-	-	-	-	-
Platoon blocked, %				-	-	-
Mov Cap-1 Maneuver	659	1081	1619	-	-	-
Mov Cap-2 Maneuver	659	-	-	-	-	-
Stage 1	936	-	-	-	-	-
Stage 2	777	-	-	-	-	-
Approach	EB	NB		SB		
HCM Control Delay, s	8.6	7.3		0		
HCM LOS	A					
Minor Lane/Major Mvmt	NBL	NBT	EBLn1	SBT	SBR	
Capacity (veh/h)	1619	-	1071	-	-	
HCM Lane V/C Ratio	0.082	-	0.067	-	-	
HCM Control Delay (s)	7.4	0	8.6	-	-	
HCM Lane LOS	A	A	A	-	-	
HCM 95th %tile Q(veh)	0.3	-	0.2	-	-	

Intersection

Intersection Delay, s/veh 12.4

Intersection LOS B

Movement	EBL	EBT	EBR	WBL	WBT	WBR	NBL	NBT	NBR	SBL	SBT	SBR
Lane Configurations												
Traffic Vol, veh/h	128	166	166	5	62	34	57	57	5	124	54	28
Future Vol, veh/h	128	166	166	5	62	34	57	57	5	124	54	28
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	139	180	180	5	67	37	62	62	5	135	59	30
Number of Lanes	1	1	0	1	1	0	0	1	0	0	1	0

Approach	EB	WB	NB	SB
Opposing Approach	WB	EB	SB	NB
Opposing Lanes	2	2	1	1
Conflicting Approach Left	SB	NB	EB	WB
Conflicting Lanes Left	1	1	2	2
Conflicting Approach Right	NB	SB	WB	EB
Conflicting Lanes Right	1	1	2	2
HCM Control Delay	13.5	10.1	10.6	12
HCM LOS	B	B	B	B

Lane	NBLn1	EBLn1	EBLn2	WBLn1	WBLn2	SBLn1
Vol Left, %	48%	100%	0%	100%	0%	60%
Vol Thru, %	48%	0%	50%	0%	65%	26%
Vol Right, %	4%	0%	50%	0%	35%	14%
Sign Control	Stop	Stop	Stop	Stop	Stop	Stop
Traffic Vol by Lane	119	128	332	5	96	206
LT Vol	57	128	0	5	0	124
Through Vol	57	0	166	0	62	54
RT Vol	5	0	166	0	34	28
Lane Flow Rate	129	139	361	5	104	224
Geometry Grp	2	7	7	7	7	2
Degree of Util (X)	0.214	0.242	0.542	0.01	0.175	0.357
Departure Headway (Hd)	5.963	6.268	5.407	6.799	6.038	5.744
Convergence, Y/N	Yes	Yes	Yes	Yes	Yes	Yes
Cap	601	573	668	526	593	625
Service Time	4.007	4	3.139	4.546	3.785	3.784
HCM Lane V/C Ratio	0.215	0.243	0.54	0.01	0.175	0.358
HCM Control Delay	10.6	11	14.4	9.6	10.1	12
HCM Lane LOS	B	B	B	A	B	B
HCM 95th-tile Q	0.8	0.9	3.3	0	0.6	1.6

Intersection	
Intersection Delay, s/veh	16.6
Intersection LOS	C

Movement	EBL	EBT	EBR	WBL	WBT	WBR	NBL	NBT	NBR	SBL	SBT	SBR
Lane Configurations												
Traffic Vol, veh/h	33	58	58	5	234	128	213	60	5	44	63	81
Future Vol, veh/h	33	58	58	5	234	128	213	60	5	44	63	81
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	36	63	63	5	254	139	232	65	5	48	68	88
Number of Lanes	1	1	0	1	1	0	0	1	0	0	1	0

Approach	EB	WB	NB	SB
Opposing Approach	WB	EB	SB	NB
Opposing Lanes	2	2	1	1
Conflicting Approach Left	SB	NB	EB	WB
Conflicting Lanes Left	1	1	2	2
Conflicting Approach Right	NB	SB	WB	EB
Conflicting Lanes Right	1	1	2	2
HCM Control Delay	11.2	21.2	16.2	12.6
HCM LOS	B	C	C	B

Lane	NBLn1	EBLn1	EBLn2	WBLn1	WBLn2	SBLn1
Vol Left, %	77%	100%	0%	100%	0%	23%
Vol Thru, %	22%	0%	50%	0%	65%	34%
Vol Right, %	2%	0%	50%	0%	35%	43%
Sign Control	Stop	Stop	Stop	Stop	Stop	Stop
Traffic Vol by Lane	278	33	116	5	362	188
LT Vol	213	33	0	5	0	44
Through Vol	60	0	58	0	234	63
RT Vol	5	0	58	0	128	81
Lane Flow Rate	302	36	126	5	393	204
Geometry Grp	2	7	7	7	7	2
Degree of Util (X)	0.528	0.074	0.231	0.011	0.684	0.351
Departure Headway (Hd)	6.292	7.455	6.583	7.019	6.256	6.186
Convergence, Y/N	Yes	Yes	Yes	Yes	Yes	Yes
Cap	571	480	545	513	582	580
Service Time	4.34	5.205	4.332	4.719	3.956	4.239
HCM Lane V/C Ratio	0.529	0.075	0.231	0.01	0.675	0.352
HCM Control Delay	16.2	10.8	11.3	9.8	21.4	12.6
HCM Lane LOS	C	B	B	A	C	B
HCM 95th-tile Q	3.1	0.2	0.9	0	5.3	1.6

Intersection

Intersection Delay, s/veh 8.6
Intersection LOS A

Movement	EBL	EBT	EBR	WBL	WBT	WBR	NBL	NBT	NBR	SBL	SBT	SBR
Lane Configurations		↕			↕			↕			↕	
Traffic Vol, veh/h	5	104	110	2	28	28	66	41	2	62	11	5
Future Vol, veh/h	5	104	110	2	28	28	66	41	2	62	11	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
Heavy Vehicles, %	2	2	2	2	2	2	2	2	2	2	2	2
Mvmt Flow	5	113	120	2	30	30	72	45	2	67	12	5
Number of Lanes	0	1	0	0	1	0	0	1	0	0	1	0

Approach	EB	WB	NB	SB
Opposing Approach	WB	EB	SB	NB
Opposing Lanes	1	1	1	1
Conflicting Approach Left	SB	NB	EB	WB
Conflicting Lanes Left	1	1	1	1
Conflicting Approach Right	NB	SB	WB	EB
Conflicting Lanes Right	1	1	1	1
HCM Control Delay	8.9	7.8	8.7	8.5
HCM LOS	A	A	A	A

Lane	NBLn1	EBLn1	WBLn1	SBLn1
Vol Left, %	61%	2%	3%	79%
Vol Thru, %	38%	47%	48%	14%
Vol Right, %	2%	50%	48%	6%
Sign Control	Stop	Stop	Stop	Stop
Traffic Vol by Lane	109	219	58	78
LT Vol	66	5	2	62
Through Vol	41	104	28	11
RT Vol	2	110	28	5
Lane Flow Rate	118	238	63	85
Geometry Grp	1	1	1	1
Degree of Util (X)	0.158	0.278	0.077	0.115
Departure Headway (Hd)	4.808	4.21	4.411	4.862
Convergence, Y/N	Yes	Yes	Yes	Yes
Cap	745	855	811	737
Service Time	2.842	2.233	2.441	2.896
HCM Lane V/C Ratio	0.158	0.278	0.078	0.115
HCM Control Delay	8.7	8.9	7.8	8.5
HCM Lane LOS	A	A	A	A
HCM 95th-tile Q	0.6	1.1	0.2	0.4

Intersection

Intersection Delay, s/veh	9.4
Intersection LOS	A

Movement	EBL	EBT	EBR	WBL	WBT	WBR	NBL	NBT	NBR	SBL	SBT	SBR
Lane Configurations												
Traffic Vol, veh/h	5	36	57	2	107	107	177	15	2	22	43	5
Future Vol, veh/h	5	36	57	2	107	107	177	15	2	22	43	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
Heavy Vehicles, %	2	2	2	2	2	2	2	2	2	2	2	2
Mvmt Flow	5	39	62	2	116	116	192	16	2	24	47	5
Number of Lanes	0	1	0	0	1	0	0	1	0	0	1	0

Approach	EB	WB	NB	SB
Opposing Approach	WB	EB	SB	NB
Opposing Lanes	1	1	1	1
Conflicting Approach Left	SB	NB	EB	WB
Conflicting Lanes Left	1	1	1	1
Conflicting Approach Right	NB	SB	WB	EB
Conflicting Lanes Right	1	1	1	1
HCM Control Delay	8.4	9.4	10.1	8.7
HCM LOS	A	A	B	A

Lane	NBLn1	EBLn1	WBLn1	SBLn1
Vol Left, %	91%	5%	1%	31%
Vol Thru, %	8%	37%	50%	61%
Vol Right, %	1%	58%	50%	7%
Sign Control	Stop	Stop	Stop	Stop
Traffic Vol by Lane	194	98	216	70
LT Vol	177	5	2	22
Through Vol	15	36	107	43
RT Vol	2	57	107	5
Lane Flow Rate	211	107	235	76
Geometry Grp	1	1	1	1
Degree of Util (X)	0.292	0.136	0.293	0.106
Departure Headway (Hd)	4.98	4.598	4.49	5.009
Convergence, Y/N	Yes	Yes	Yes	Yes
Cap	717	775	798	710
Service Time	3.038	2.654	2.536	3.077
HCM Lane V/C Ratio	0.294	0.138	0.294	0.107
HCM Control Delay	10.1	8.4	9.4	8.7
HCM Lane LOS	B	A	A	A
HCM 95th-tile Q	1.2	0.5	1.2	0.4

Intersection						
Int Delay, s/veh	8.3					
Movement	EBL	EBR	NBL	NBT	SBT	SBR
Lane Configurations						
Traffic Vol, veh/h	5	166	57	2	5	2
Future Vol, veh/h	5	166	57	2	5	2
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	5	180	62	2	5	2
Major/Minor	Minor2	Major1		Major2		
Conflicting Flow All	132	6	7	0	-	0
Stage 1	6	-	-	-	-	-
Stage 2	126	-	-	-	-	-
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	862	1077	1614	-	-	-
Stage 1	1017	-	-	-	-	-
Stage 2	900	-	-	-	-	-
Platoon blocked, %				-	-	-
Mov Cap-1 Maneuver	829	1077	1614	-	-	-
Mov Cap-2 Maneuver	829	-	-	-	-	-
Stage 1	978	-	-	-	-	-
Stage 2	900	-	-	-	-	-
Approach	EB	NB		SB		
HCM Control Delay, s	9.1	7.1		0		
HCM LOS	A					
Minor Lane/Major Mvmt	NBL	NBT	EBLn1	SBT	SBR	
Capacity (veh/h)	1614	-	1068	-	-	
HCM Lane V/C Ratio	0.038	-	0.174	-	-	
HCM Control Delay (s)	7.3	0	9.1	-	-	
HCM Lane LOS	A	A	A	-	-	
HCM 95th %tile Q(veh)	0.1	-	0.6	-	-	

Intersection						
Int Delay, s/veh	7.6					
Movement	EBL	EBR	NBL	NBT	SBT	SBR
Lane Configurations						
Traffic Vol, veh/h	5	58	213	2	5	2
Future Vol, veh/h	5	58	213	2	5	2
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	5	63	232	2	5	2
Major/Minor	Minor2	Major1		Major2		
Conflicting Flow All	472	6	7	0	-	0
Stage 1	6	-	-	-	-	-
Stage 2	466	-	-	-	-	-
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	551	1077	1614	-	-	-
Stage 1	1017	-	-	-	-	-
Stage 2	632	-	-	-	-	-
Platoon blocked, %				-	-	-
Mov Cap-1 Maneuver	472	1077	1614	-	-	-
Mov Cap-2 Maneuver	472	-	-	-	-	-
Stage 1	871	-	-	-	-	-
Stage 2	632	-	-	-	-	-
Approach	EB	NB		SB		
HCM Control Delay, s	9	7.5		0		
HCM LOS	A					
Minor Lane/Major Mvmt	NBL	NBT	EBLn1	SBT	SBR	
Capacity (veh/h)	1614	-	978	-	-	
HCM Lane V/C Ratio	0.143	-	0.07	-	-	
HCM Control Delay (s)	7.6	0	9	-	-	
HCM Lane LOS	A	A	A	-	-	
HCM 95th %tile Q(veh)	0.5	-	0.2	-	-	

Intersection												
Intersection Delay, s/veh	16.2											
Intersection LOS	C											

Movement	EBL	EBT	EBR	WBL	WBT	WBR	NBL	NBT	NBR	SBL	SBT	SBR
Lane Configurations												
Traffic Vol, veh/h	150	334	37	5	98	23	83	28	10	41	104	42
Future Vol, veh/h	150	334	37	5	98	23	83	28	10	41	104	42
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	163	363	40	5	107	25	90	30	11	45	113	46
Number of Lanes	1	1	0	1	1	1	0	1	0	1	1	0
Approach	EB			WB			NB			SB		
Opposing Approach	WB			EB			SB			NB		
Opposing Lanes	3			2			2			1		
Conflicting Approach Left	SB			NB			EB			WB		
Conflicting Lanes Left	2			1			2			3		
Conflicting Approach Right	NB			SB			WB			EB		
Conflicting Lanes Right	1			2			3			2		
HCM Control Delay	19.3			11.6			13.4			12.5		
HCM LOS	C			B			B			B		

Lane	NBLn1	EBLn1	EBLn2	WBLn1	WBLn2	WBLn3	SBLn1	SBLn2
Vol Left, %	69%	100%	0%	100%	0%	0%	100%	0%
Vol Thru, %	23%	0%	90%	0%	100%	0%	0%	71%
Vol Right, %	8%	0%	10%	0%	0%	100%	0%	29%
Sign Control	Stop	Stop	Stop	Stop	Stop	Stop	Stop	Stop
Traffic Vol by Lane	121	150	371	5	98	23	41	146
LT Vol	83	150	0	5	0	0	41	0
Through Vol	28	0	334	0	98	0	0	104
RT Vol	10	0	37	0	0	23	0	42
Lane Flow Rate	132	163	403	5	107	25	45	159
Geometry Grp	8	8	8	8	8	8	8	8
Degree of Util (X)	0.281	0.307	0.693	0.012	0.217	0.046	0.096	0.31
Departure Headway (Hd)	7.684	6.77	6.191	7.829	7.319	6.604	7.744	7.034
Convergence, Y/N	Yes	Yes	Yes	Yes	Yes	Yes	Yes	Yes
Cap	470	527	577	459	492	544	466	514
Service Time	5.401	4.568	3.988	5.55	5.039	4.324	5.444	4.734
HCM Lane V/C Ratio	0.281	0.309	0.698	0.011	0.217	0.046	0.097	0.309
HCM Control Delay	13.4	12.6	22	10.6	12.1	9.6	11.3	12.9
HCM Lane LOS	B	B	C	B	B	A	B	B
HCM 95th-tile Q	1.1	1.3	5.4	0	0.8	0.1	0.3	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	53	151	74	4	403	85	56	107	12	15	36	154
Future Vol, veh/h	53	151	74	4	403	85	56	107	12	15	36	154
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	58	164	80	4	438	92	61	116	13	16	39	167
Number of Lanes	1	1	0	1	1	1	0	1	0	1	1	0

Approach	EB	WB	NB	SB
Opposing Approach	WB	EB	SB	NB
Opposing Lanes	3	2	2	1
Conflicting Approach Left	SB	NB	EB	WB
Conflicting Lanes Left	2	1	2	3
Conflicting Approach Right	NB	SB	WB	EB
Conflicting Lanes Right	1	2	3	2
HCM Control Delay	18	41.5	18.2	16.4
HCM LOS	C	E	C	C

Lane	NBLn1	EBLn1	EBLn2	WBLn1	WBLn2	WBLn3	SBLn1	SBLn2
Vol Left, %	32%	100%	0%	100%	0%	0%	100%	0%
Vol Thru, %	61%	0%	67%	0%	100%	0%	0%	19%
Vol Right, %	7%	0%	33%	0%	0%	100%	0%	81%
Sign Control	Stop	Stop	Stop	Stop	Stop	Stop	Stop	Stop
Traffic Vol by Lane	175	53	225	4	403	85	15	190
LT Vol	56	53	0	4	0	0	15	0
Through Vol	107	0	151	0	403	0	0	36
RT Vol	12	0	74	0	0	85	0	154
Lane Flow Rate	190	58	245	4	438	92	16	207
Geometry Grp	8	8	8	8	8	8	8	8
Degree of Util (X)	0.451	0.138	0.533	0.01	0.907	0.173	0.04	0.449
Departure Headway (Hd)	8.537	8.596	7.841	7.968	7.456	6.738	8.916	7.821
Convergence, Y/N	Yes	Yes	Yes	Yes	Yes	Yes	Yes	Yes
Cap	422	419	462	451	491	534	402	461
Service Time	6.29	6.319	5.564	5.683	5.17	4.453	6.669	5.572
HCM Lane V/C Ratio	0.45	0.138	0.53	0.009	0.892	0.172	0.04	0.449
HCM Control Delay	18.2	12.7	19.2	10.8	48.3	10.9	12	16.8
HCM Lane LOS	C	B	C	B	E	B	B	C
HCM 95th-tile Q	2.3	0.5	3.1	0	10.3	0.6	0.1	2.3

Intersection												
Intersection Delay, s/veh	11.7											
Intersection LOS	B											

Movement	EBL	EBT	EBR	WBL	WBT	WBR	NBL	NBT	NBR	SBL	SBT	SBR
Lane Configurations												
Traffic Vol, veh/h	5	207	98	23	68	34	53	73	83	62	52	5
Future Vol, veh/h	5	207	98	23	68	34	53	73	83	62	52	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
Heavy Vehicles, %	2	2	2	2	2	2	2	2	2	2	2	2
Mvmt Flow	5	225	107	25	74	37	58	79	90	67	57	5
Number of Lanes	1	1	0	1	1	0	1	1	0	1	1	0

Approach	EB	WB	NB	SB
Opposing Approach	WB	EB	SB	NB
Opposing Lanes	2	2	2	2
Conflicting Approach Left	SB	NB	EB	WB
Conflicting Lanes Left	2	2	2	2
Conflicting Approach Right	NB	SB	WB	EB
Conflicting Lanes Right	2	2	2	2
HCM Control Delay	13.9	9.8	10.5	10.1
HCM LOS	B	A	B	B

Lane	NBLn1	NBLn2	EBLn1	EBLn2	WBLn1	WBLn2	SBLn1	SBLn2
Vol Left, %	100%	0%	100%	0%	100%	0%	100%	0%
Vol Thru, %	0%	47%	0%	68%	0%	67%	0%	91%
Vol Right, %	0%	53%	0%	32%	0%	33%	0%	9%
Sign Control	Stop	Stop	Stop	Stop	Stop	Stop	Stop	Stop
Traffic Vol by Lane	53	156	5	305	23	102	62	57
LT Vol	53	0	5	0	23	0	62	0
Through Vol	0	73	0	207	0	68	0	52
RT Vol	0	83	0	98	0	34	0	5
Lane Flow Rate	58	170	5	332	25	111	67	62
Geometry Grp	7	7	7	7	7	7	7	7
Degree of Util (X)	0.106	0.269	0.009	0.512	0.046	0.179	0.126	0.106
Departure Headway (Hd)	6.603	5.72	6.291	5.559	6.567	5.823	6.748	6.179
Convergence, Y/N	Yes	Yes	Yes	Yes	Yes	Yes	Yes	Yes
Cap	543	627	570	650	546	616	531	580
Service Time	4.339	3.455	4.02	3.288	4.304	3.56	4.489	3.919
HCM Lane V/C Ratio	0.107	0.271	0.009	0.511	0.046	0.18	0.126	0.107
HCM Control Delay	10.1	10.6	9.1	14	9.6	9.8	10.5	9.7
HCM Lane LOS	B	B	A	B	A	A	B	A
HCM 95th-tile Q	0.4	1.1	0	2.9	0.1	0.6	0.4	0.4

Intersection												
Intersection Delay, s/veh	14.7											
Intersection LOS	B											

Movement	EBL	EBT	EBR	WBL	WBT	WBR	NBL	NBT	NBR	SBL	SBT	SBR
Lane Configurations												
Traffic Vol, veh/h	5	73	93	85	256	128	156	65	29	22	58	5
Future Vol, veh/h	5	73	93	85	256	128	156	65	29	22	58	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
Heavy Vehicles, %	2	2	2	2	2	2	2	2	2	2	2	2
Mvmt Flow	5	79	101	92	278	139	170	71	32	24	63	5
Number of Lanes	1	1	0	1	1	0	1	1	0	1	1	0
Approach	EB			WB			NB			SB		
Opposing Approach	WB			EB			SB			NB		
Opposing Lanes	2			2			2			2		
Conflicting Approach Left	SB			NB			EB			WB		
Conflicting Lanes Left	2			2			2			2		
Conflicting Approach Right	NB			SB			WB			EB		
Conflicting Lanes Right	2			2			2			2		
HCM Control Delay	11.5			17.9			12.4			10.8		
HCM LOS	B			C			B			B		

Lane	NBLn1	NBLn2	EBLn1	EBLn2	WBLn1	WBLn2	SBLn1	SBLn2
Vol Left, %	100%	0%	100%	0%	100%	0%	100%	0%
Vol Thru, %	0%	69%	0%	44%	0%	67%	0%	92%
Vol Right, %	0%	31%	0%	56%	0%	33%	0%	8%
Sign Control	Stop	Stop	Stop	Stop	Stop	Stop	Stop	Stop
Traffic Vol by Lane	156	94	5	166	85	384	22	63
LT Vol	156	0	5	0	85	0	22	0
Through Vol	0	65	0	73	0	256	0	58
RT Vol	0	29	0	93	0	128	0	5
Lane Flow Rate	170	102	5	180	92	417	24	68
Geometry Grp	7	7	7	7	7	7	7	7
Degree of Util (X)	0.336	0.182	0.011	0.305	0.167	0.669	0.05	0.132
Departure Headway (Hd)	7.138	6.41	6.986	6.078	6.515	5.773	7.517	6.949
Convergence, Y/N	Yes	Yes	Yes	Yes	Yes	Yes	Yes	Yes
Cap	502	558	511	588	550	626	474	514
Service Time	4.9	4.172	4.751	3.842	4.266	3.524	5.294	4.726
HCM Lane V/C Ratio	0.339	0.183	0.01	0.306	0.167	0.666	0.051	0.132
HCM Control Delay	13.5	10.6	9.8	11.5	10.6	19.5	10.7	10.8
HCM Lane LOS	B	B	A	B	B	C	B	B
HCM 95th-tile Q	1.5	0.7	0	1.3	0.6	5.1	0.2	0.5

Intersection						
Int Delay, s/veh	2.3					
Movement	EBL	EBR	NBL	NBT	SBT	SBR
Lane Configurations						
Traffic Vol, veh/h	41	2	2	104	17	11
Future Vol, veh/h	41	2	2	104	17	11
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	45	2	2	113	18	12
Major/Minor	Minor2	Major1		Major2		
Conflicting Flow All	141	24	30	0	-	0
Stage 1	24	-	-	-	-	-
Stage 2	117	-	-	-	-	-
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	852	1052	1583	-	-	-
Stage 1	999	-	-	-	-	-
Stage 2	908	-	-	-	-	-
Platoon blocked, %				-	-	-
Mov Cap-1 Maneuver	851	1052	1583	-	-	-
Mov Cap-2 Maneuver	851	-	-	-	-	-
Stage 1	998	-	-	-	-	-
Stage 2	908	-	-	-	-	-
Approach	EB	NB		SB		
HCM Control Delay, s	9.4	0.1		0		
HCM LOS	A					
Minor Lane/Major Mvmt	NBL	NBT	EBLn1	SBT	SBR	
Capacity (veh/h)	1583	-	859	-	-	
HCM Lane V/C Ratio	0.001	-	0.054	-	-	
HCM Control Delay (s)	7.3	0	9.4	-	-	
HCM Lane LOS	A	A	A	-	-	
HCM 95th %tile Q(veh)	0	-	0.2	-	-	

Intersection						
Int Delay, s/veh	1.1					
Movement	EBL	EBR	NBL	NBT	SBT	SBR
Lane Configurations						
Traffic Vol, veh/h	15	2	2	36	64	43
Future Vol, veh/h	15	2	2	36	64	43
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	16	2	2	39	70	47
Major/Minor	Minor2	Major1		Major2		
Conflicting Flow All	137	94	117	0	-	0
Stage 1	94	-	-	-	-	-
Stage 2	43	-	-	-	-	-
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	856	963	1471	-	-	-
Stage 1	930	-	-	-	-	-
Stage 2	979	-	-	-	-	-
Platoon blocked, %				-	-	-
Mov Cap-1 Maneuver	855	963	1471	-	-	-
Mov Cap-2 Maneuver	855	-	-	-	-	-
Stage 1	929	-	-	-	-	-
Stage 2	979	-	-	-	-	-
Approach	EB	NB		SB		
HCM Control Delay, s	9.2	0.4		0		
HCM LOS	A					
Minor Lane/Major Mvmt	NBL	NBT	EBLn1	SBT	SBR	
Capacity (veh/h)	1471	-	866	-	-	
HCM Lane V/C Ratio	0.001	-	0.021	-	-	
HCM Control Delay (s)	7.5	0	9.2	-	-	
HCM Lane LOS	A	A	A	-	-	
HCM 95th %tile Q(veh)	0	-	0.1	-	-	

Intersection						
Int Delay, s/veh	0.3					
Movement	WBL	WBR	NBT	NBR	SBL	SBT
Lane Configurations						
Traffic Vol, veh/h	2	2	34	2	2	124
Future Vol, veh/h	2	2	34	2	2	124
Conflicting Peds, #/hr	0	0	0	0	0	0
Sign Control	Stop	Stop	Free	Free	Free	Free
RT Channelized	-	None	-	None	-	None
Storage Length	-	-	-	-	-	-
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	2	2	37	2	2	135
Major/Minor	Minor1	Major1	Major2			
Conflicting Flow All	177	38	0	0	39	0
Stage 1	38	-	-	-	-	-
Stage 2	139	-	-	-	-	-
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	813	1034	-	-	1571	-
Stage 1	984	-	-	-	-	-
Stage 2	888	-	-	-	-	-
Platoon blocked, %			-	-		-
Mov Cap-1 Maneuver	812	1034	-	-	1571	-
Mov Cap-2 Maneuver	812	-	-	-	-	-
Stage 1	983	-	-	-	-	-
Stage 2	888	-	-	-	-	-
Approach	WB	NB		SB		
HCM Control Delay, s	9	0		0.1		
HCM LOS	A					
Minor Lane/Major Mvmt	NBT	NBRWBLn1	SBL	SBT		
Capacity (veh/h)	-	-	910	1571	-	
HCM Lane V/C Ratio	-	-	0.005	0.001	-	
HCM Control Delay (s)	-	-	9	7.3	0	
HCM Lane LOS	-	-	A	A	A	
HCM 95th %tile Q(veh)	-	-	0	0	-	

Intersection						
Int Delay, s/veh	0.3					
Movement	WBL	WBR	NBT	NBR	SBL	SBT
Lane Configurations	W	W	T	T	T	T
Traffic Vol, veh/h	2	2	128	2	2	44
Future Vol, veh/h	2	2	128	2	2	44
Conflicting Peds, #/hr	0	0	0	0	0	0
Sign Control	Stop	Stop	Free	Free	Free	Free
RT Channelized	-	None	-	None	-	None
Storage Length	-	-	-	-	-	-
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	2	2	139	2	2	48
Major/Minor	Minor1	Major1	Major2			
Conflicting Flow All	192	140	0	0	141	0
Stage 1	140	-	-	-	-	-
Stage 2	52	-	-	-	-	-
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	797	908	-	-	1442	-
Stage 1	887	-	-	-	-	-
Stage 2	970	-	-	-	-	-
Platoon blocked, %			-	-		-
Mov Cap-1 Maneuver	796	908	-	-	1442	-
Mov Cap-2 Maneuver	796	-	-	-	-	-
Stage 1	886	-	-	-	-	-
Stage 2	970	-	-	-	-	-
Approach	WB	NB	SB			
HCM Control Delay, s	9.3	0	0.3			
HCM LOS	A					
Minor Lane/Major Mvmt	NBT	NBRWBLn1	SBL	SBT		
Capacity (veh/h)	-	-	848	1442	-	
HCM Lane V/C Ratio	-	-	0.005	0.002	-	
HCM Control Delay (s)	-	-	9.3	7.5	0	
HCM Lane LOS	-	-	A	A	A	
HCM 95th %tile Q(veh)	-	-	0	0	-	

Intersection						
Int Delay, s/veh	0.2					
Movement	EBL	EBR	NBL	NBT	SBT	SBR
Lane Configurations						
Traffic Vol, veh/h	2	2	2	209	179	2
Future Vol, veh/h	2	2	2	209	179	2
Conflicting Peds, #/hr	0	0	0	0	0	0
Sign Control	Stop	Stop	Free	Free	Free	Free
RT Channelized	-	None	-	None	-	None
Storage Length	-	-	-	-	-	-
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	2	2	2	227	195	2
Major/Minor	Minor2	Major1		Major2		
Conflicting Flow All	427	196	197	0	-	0
Stage 1	196	-	-	-	-	-
Stage 2	231	-	-	-	-	-
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	584	845	1376	-	-	-
Stage 1	837	-	-	-	-	-
Stage 2	807	-	-	-	-	-
Platoon blocked, %				-	-	-
Mov Cap-1 Maneuver	583	845	1376	-	-	-
Mov Cap-2 Maneuver	583	-	-	-	-	-
Stage 1	835	-	-	-	-	-
Stage 2	807	-	-	-	-	-
Approach	EB	NB		SB		
HCM Control Delay, s	10.3	0.1		0		
HCM LOS	B					
Minor Lane/Major Mvmt	NBL	NBT	EBLn1	SBT	SBR	
Capacity (veh/h)	1376	-	690	-	-	
HCM Lane V/C Ratio	0.002	-	0.006	-	-	
HCM Control Delay (s)	7.6	0	10.3	-	-	
HCM Lane LOS	A	A	B	-	-	
HCM 95th %tile Q(veh)	0	-	0	-	-	

Intersection						
Int Delay, s/veh	0.1					
Movement	EBL	EBR	NBL	NBT	SBT	SBR
Lane Configurations						
Traffic Vol, veh/h	2	2	2	250	256	2
Future Vol, veh/h	2	2	2	250	256	2
Conflicting Peds, #/hr	0	0	0	0	0	0
Sign Control	Stop	Stop	Free	Free	Free	Free
RT Channelized	-	None	-	None	-	None
Storage Length	-	-	-	-	-	-
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	2	2	2	272	278	2
Major/Minor	Minor2	Major1		Major2		
Conflicting Flow All	555	279	280	0	-	0
Stage 1	279	-	-	-	-	-
Stage 2	276	-	-	-	-	-
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	493	760	1283	-	-	-
Stage 1	768	-	-	-	-	-
Stage 2	771	-	-	-	-	-
Platoon blocked, %				-	-	-
Mov Cap-1 Maneuver	492	760	1283	-	-	-
Mov Cap-2 Maneuver	492	-	-	-	-	-
Stage 1	766	-	-	-	-	-
Stage 2	771	-	-	-	-	-
Approach	EB	NB		SB		
HCM Control Delay, s	11.1	0.1		0		
HCM LOS	B					
Minor Lane/Major Mvmt	NBL	NBT	EBLn1	SBT	SBR	
Capacity (veh/h)	1283	-	597	-	-	
HCM Lane V/C Ratio	0.002	-	0.007	-	-	
HCM Control Delay (s)	7.8	0	11.1	-	-	
HCM Lane LOS	A	A	B	-	-	
HCM 95th %tile Q(veh)	0	-	0	-	-	

Intersection

Intersection Delay, s/veh 20.1

Intersection LOS C

Movement	EBL	EBT	EBR	WBL	WBT	WBR	NBL	NBT	NBR	SBL	SBT	SBR
Lane Configurations												
Traffic Vol, veh/h	2	2	23	73	2	28	83	181	415	104	75	2
Future Vol, veh/h	2	2	23	73	2	28	83	181	415	104	75	2
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	2	2	25	79	2	30	90	197	451	113	82	2
Number of Lanes	0	1	0	0	1	0	1	1	0	1	1	0

Approach	EB	WB	NB	SB
Opposing Approach	WB	EB	SB	NB
Opposing Lanes	1	1	2	2
Conflicting Approach Left	SB	NB	EB	WB
Conflicting Lanes Left	2	2	1	1
Conflicting Approach Right	NB	SB	WB	EB
Conflicting Lanes Right	2	2	1	1
HCM Control Delay	9.1	10.4	24.8	9.9
HCM LOS	A	B	C	A

Lane	NBLn1	NBLn2	EBLn1	WBLn1	SBLn1	SBLn2
Vol Left, %	100%	0%	7%	71%	100%	0%
Vol Thru, %	0%	30%	7%	2%	0%	97%
Vol Right, %	0%	70%	85%	27%	0%	3%
Sign Control	Stop	Stop	Stop	Stop	Stop	Stop
Traffic Vol by Lane	83	596	27	103	104	77
LT Vol	83	0	2	73	104	0
Through Vol	0	181	2	2	0	75
RT Vol	0	415	23	28	0	2
Lane Flow Rate	90	648	29	112	113	84
Geometry Grp	7	7	2	2	7	7
Degree of Util (X)	0.142	0.839	0.047	0.188	0.195	0.132
Departure Headway (Hd)	5.657	4.663	5.786	6.045	6.222	5.697
Convergence, Y/N	Yes	Yes	Yes	Yes	Yes	Yes
Cap	629	771	621	597	580	634
Service Time	3.435	2.44	3.798	4.053	3.922	3.397
HCM Lane V/C Ratio	0.143	0.84	0.047	0.188	0.195	0.132
HCM Control Delay	9.4	26.9	9.1	10.4	10.4	9.3
HCM Lane LOS	A	D	A	B	B	A
HCM 95th-tile Q	0.5	9.6	0.1	0.7	0.7	0.5

Intersection

Intersection Delay, s/veh 17.8

Intersection LOS C

Movement	EBL	EBT	EBR	WBL	WBT	WBR	NBL	NBT	NBR	SBL	SBT	SBR
Lane Configurations												
Traffic Vol, veh/h	2	2	85	277	2	107	29	143	146	36	220	2
Future Vol, veh/h	2	2	85	277	2	107	29	143	146	36	220	2
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	2	2	92	301	2	116	32	155	159	39	239	2
Number of Lanes	0	1	0	0	1	0	1	1	0	1	1	0

Approach	EB	WB	NB	SB
Opposing Approach	WB	EB	SB	NB
Opposing Lanes	1	1	2	2
Conflicting Approach Left	SB	NB	EB	WB
Conflicting Lanes Left	2	2	1	1
Conflicting Approach Right	NB	SB	WB	EB
Conflicting Lanes Right	2	2	1	1
HCM Control Delay	10.7	22.6	16.4	14.8
HCM LOS	B	C	C	B

Lane	NBLn1	NBLn2	EBLn1	WBLn1	SBLn1	SBLn2
Vol Left, %	100%	0%	2%	72%	100%	0%
Vol Thru, %	0%	49%	2%	1%	0%	99%
Vol Right, %	0%	51%	96%	28%	0%	1%
Sign Control	Stop	Stop	Stop	Stop	Stop	Stop
Traffic Vol by Lane	29	289	89	386	36	222
LT Vol	29	0	2	277	36	0
Through Vol	0	143	2	2	0	220
RT Vol	0	146	85	107	0	2
Lane Flow Rate	32	314	97	420	39	241
Geometry Grp	7	7	2	2	7	7
Degree of Util (X)	0.064	0.559	0.17	0.71	0.08	0.46
Departure Headway (Hd)	7.28	6.406	6.339	6.09	7.379	6.86
Convergence, Y/N	Yes	Yes	Yes	Yes	Yes	Yes
Cap	491	562	564	596	485	524
Service Time	5.034	4.159	4.403	4.09	5.136	4.616
HCM Lane V/C Ratio	0.065	0.559	0.172	0.705	0.08	0.46
HCM Control Delay	10.5	17	10.7	22.6	10.8	15.4
HCM Lane LOS	B	C	B	C	B	C
HCM 95th-tile Q	0.2	3.4	0.6	5.8	0.3	2.4

Intersection

Int Delay, s/veh 2.6

Movement	EBT	EBR	WBL	WBT	NBL	NBR
Lane Configurations						
Traffic Vol, veh/h	62	166	41	28	45	11
Future Vol, veh/h	62	166	41	28	45	11
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	67	180	45	30	49	12

Major/Minor	Major1	Major2	Minor1
Conflicting Flow All	0	0	247
Stage 1	-	-	-
Stage 2	-	-	-
Critical Hdwy	-	-	4.12
Critical Hdwy Stg 1	-	-	-
Critical Hdwy Stg 2	-	-	-
Follow-up Hdwy	-	-	2.218
Pot Cap-1 Maneuver	-	-	1319
Stage 1	-	-	-
Stage 2	-	-	-
Platoon blocked, %	-	-	-
Mov Cap-1 Maneuver	-	-	1319
Mov Cap-2 Maneuver	-	-	-
Stage 1	-	-	-
Stage 2	-	-	-

Approach	EB	WB	NB
HCM Control Delay, s	0	4.6	10.5
HCM LOS			B

Minor Lane/Major Mvmt	NBLn1	EBT	EBR	WBL	WBT
Capacity (veh/h)	720	-	-	1319	-
HCM Lane V/C Ratio	0.085	-	-	0.034	-
HCM Control Delay (s)	10.5	-	-	7.8	0
HCM Lane LOS	B	-	-	A	A
HCM 95th %tile Q(veh)	0.3	-	-	0.1	-

Intersection						
Int Delay, s/veh	6					
Movement	EBT	EBR	WBL	WBT	NBL	NBR
Lane Configurations						
Traffic Vol, veh/h	22	58	15	107	170	43
Future Vol, veh/h	22	58	15	107	170	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	92	92	92	92	92	92
Heavy Vehicles, %	2	2	2	2	2	2
Mvmt Flow	24	63	16	116	185	47
Major/Minor	Major1	Major2		Minor1		
Conflicting Flow All	0	0	87	0	204	56
Stage 1	-	-	-	-	56	-
Stage 2	-	-	-	-	148	-
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	-	-	1509	-	784	1011
Stage 1	-	-	-	-	967	-
Stage 2	-	-	-	-	880	-
Platoon blocked, %	-	-		-		
Mov Cap-1 Maneuver	-	-	1509	-	775	1011
Mov Cap-2 Maneuver	-	-	-	-	775	-
Stage 1	-	-	-	-	956	-
Stage 2	-	-	-	-	880	-
Approach	EB	WB		NB		
HCM Control Delay, s	0	0.9		11.2		
HCM LOS	B					
Minor Lane/Major Mvmt	NBLn1	EBT	EBR	WBL	WBT	
Capacity (veh/h)	813	-	-	1509	-	
HCM Lane V/C Ratio	0.285	-	-	0.011	-	
HCM Control Delay (s)	11.2	-	-	7.4	0	
HCM Lane LOS	B	-	-	A	A	
HCM 95th %tile Q(veh)	1.2	-	-	0	-	

Intersection												
Int Delay, s/veh	2.3											
Movement	EBL	EBT	EBR	WBL	WBT	WBR	NBL	NBT	NBR	SBL	SBT	SBR
Lane Configurations												
Traffic Vol, veh/h	80	452	207	21	121	5	57	0	6	2	0	15
Future Vol, veh/h	80	452	207	21	121	5	57	0	6	2	0	15
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	-	-	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	87	491	225	23	132	5	62	0	7	2	0	16

Major/Minor	Major1			Major2			Minor1			Minor2		
Conflicting Flow All	137	0	0	716	0	0	967	961	604	962	1071	135
Stage 1	-	-	-	-	-	-	778	778	-	181	181	-
Stage 2	-	-	-	-	-	-	189	183	-	781	890	-
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	1447	-	-	885	-	-	234	256	498	235	221	914
Stage 1	-	-	-	-	-	-	389	407	-	821	750	-
Stage 2	-	-	-	-	-	-	813	748	-	388	361	-
Platoon blocked, %		-	-		-	-						
Mov Cap-1 Maneuver	1447	-	-	885	-	-	215	234	498	217	202	914
Mov Cap-2 Maneuver	-	-	-	-	-	-	301	313	-	288	270	-
Stage 1	-	-	-	-	-	-	366	383	-	772	731	-
Stage 2	-	-	-	-	-	-	778	729	-	360	339	-

Approach	EB			WB			NB			SB		
HCM Control Delay, s	0.8			1.3			19.7			10.1		
HCM LOS							C			B		

Minor Lane/Major Mvmt	NBLn1	EBL	EBT	EBR	WBL	WBT	WBR	SBLn1
Capacity (veh/h)	313	1447	-	-	885	-	-	728
HCM Lane V/C Ratio	0.219	0.06	-	-	0.026	-	-	0.025
HCM Control Delay (s)	19.7	7.6	-	-	9.2	-	-	10.1
HCM Lane LOS	C	A	-	-	A	-	-	B
HCM 95th %tile Q(veh)	0.8	0.2	-	-	0.1	-	-	0.1

Intersection												
Int Delay, s/veh	10.6											
Movement	EBL	EBT	EBR	WBL	WBT	WBR	NBL	NBT	NBR	SBL	SBT	SBR
Lane Configurations												
Traffic Vol, veh/h	15	123	73	7	520	2	213	0	21	5	0	80
Future Vol, veh/h	15	123	73	7	520	2	213	0	21	5	0	80
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	-	-	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	16	134	79	8	565	2	232	0	23	5	0	87
Major/Minor	Major1			Major2			Minor1			Minor2		
Conflicting Flow All	567	0	0	213	0	0	832	789	174	799	827	566
Stage 1	-	-	-	-	-	-	206	206	-	582	582	-
Stage 2	-	-	-	-	-	-	626	583	-	217	245	-
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	1005	-	-	1357	-	-	288	323	869	304	307	524
Stage 1	-	-	-	-	-	-	796	731	-	499	499	-
Stage 2	-	-	-	-	-	-	472	499	-	785	703	-
Platoon blocked, %		-	-		-	-						
Mov Cap-1 Maneuver	1005	-	-	1357	-	-	236	316	869	291	300	524
Mov Cap-2 Maneuver	-	-	-	-	-	-	317	395	-	392	392	-
Stage 1	-	-	-	-	-	-	783	719	-	491	496	-
Stage 2	-	-	-	-	-	-	391	496	-	752	692	-
Approach	EB			WB			NB			SB		
HCM Control Delay, s	0.6			0.1			42.5			13.5		
HCM LOS							E			B		
Minor Lane/Major Mvmt	NBLn1	EBL	EBT	EBR	WBL	WBT	WBR	SBLn1				
Capacity (veh/h)	336	1005	-	-	1357	-	-	514				
HCM Lane V/C Ratio	0.757	0.016	-	-	0.006	-	-	0.18				
HCM Control Delay (s)	42.5	8.6	-	-	7.7	-	-	13.5				
HCM Lane LOS	E	A	-	-	A	-	-	B				
HCM 95th %tile Q(veh)	5.9	0	-	-	0	-	-	0.6				

Intersection						
Int Delay, s/veh	1.2					
Movement	EBT	EBR	WBL	WBT	NBL	NBR
Lane Configurations						
Traffic Vol, veh/h	207	83	21	73	23	6
Future Vol, veh/h	207	83	21	73	23	6
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	225	90	23	79	25	7
Major/Minor	Major1	Major2		Minor1		
Conflicting Flow All	0	0	315	0	395	270
Stage 1	-	-	-	-	270	-
Stage 2	-	-	-	-	125	-
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	-	-	1245	-	610	769
Stage 1	-	-	-	-	775	-
Stage 2	-	-	-	-	901	-
Platoon blocked, %	-	-	-	-	-	-
Mov Cap-1 Maneuver	-	-	1245	-	598	769
Mov Cap-2 Maneuver	-	-	-	-	598	-
Stage 1	-	-	-	-	760	-
Stage 2	-	-	-	-	901	-
Approach	EB		WB		NB	
HCM Control Delay, s	0		1.8		11	
HCM LOS					B	
Minor Lane/Major Mvmt	NBLn1	EBT	EBR	WBL	WBT	
Capacity (veh/h)	627	-	-	1245	-	
HCM Lane V/C Ratio	0.05	-	-	0.018	-	
HCM Control Delay (s)	11	-	-	7.9	0	
HCM Lane LOS	B	-	-	A	A	
HCM 95th %tile Q(veh)	0.2	-	-	0.1	-	

Intersection						
Int Delay, s/veh	2.7					
Movement	EBT	EBR	WBL	WBT	NBL	NBR
Lane Configurations						
Traffic Vol, veh/h	73	29	7	277	85	21
Future Vol, veh/h	73	29	7	277	85	21
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	79	32	8	301	92	23
Major/Minor	Major1	Major2		Minor1		
Conflicting Flow All	0	0	111	0	412	95
Stage 1	-	-	-	-	95	-
Stage 2	-	-	-	-	317	-
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	-	-	1479	-	596	962
Stage 1	-	-	-	-	929	-
Stage 2	-	-	-	-	738	-
Platoon blocked, %	-	-		-		
Mov Cap-1 Maneuver	-	-	1479	-	592	962
Mov Cap-2 Maneuver	-	-	-	-	592	-
Stage 1	-	-	-	-	923	-
Stage 2	-	-	-	-	738	-
Approach	EB	WB		NB		
HCM Control Delay, s	0	0.2		11.8		
HCM LOS	B					
Minor Lane/Major Mvmt	NBLn1	EBT	EBR	WBL	WBT	
Capacity (veh/h)	641	-	-	1479	-	
HCM Lane V/C Ratio	0.18	-	-	0.005	-	
HCM Control Delay (s)	11.8	-	-	7.4	0	
HCM Lane LOS	B	-	-	A	A	
HCM 95th %tile Q(veh)	0.7	-	-	0	-	

Intersection						
Int Delay, s/veh	2.1					
Movement	WBL	WBR	NBT	NBR	SBL	SBT
Lane Configurations						
Traffic Vol, veh/h	28	17	97	104	62	158
Future Vol, veh/h	28	17	97	104	62	158
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	30	18	105	113	67	172
Major/Minor	Minor1	Major1		Major2		
Conflicting Flow All	468	162	0	0	218	0
Stage 1	162	-	-	-	-	-
Stage 2	306	-	-	-	-	-
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	553	883	-	-	1352	-
Stage 1	867	-	-	-	-	-
Stage 2	747	-	-	-	-	-
Platoon blocked, %			-	-		-
Mov Cap-1 Maneuver	523	883	-	-	1352	-
Mov Cap-2 Maneuver	523	-	-	-	-	-
Stage 1	819	-	-	-	-	-
Stage 2	747	-	-	-	-	-
Approach	WB	NB		SB		
HCM Control Delay, s	11.3	0		2.2		
HCM LOS	B					
Minor Lane/Major Mvmt	NBT	NBRWBLn1		SBL	SBT	
Capacity (veh/h)	-	- 618		1352	-	
HCM Lane V/C Ratio	-	- 0.079		0.05	-	
HCM Control Delay (s)	-	- 11.3		7.8	0	
HCM Lane LOS	-	- B		A	A	
HCM 95th %tile Q(veh)	-	- 0.3		0.2	-	

Intersection						
Int Delay, s/veh	4.4					
Movement	WBL	WBR	NBT	NBR	SBL	SBT
Lane Configurations						
Traffic Vol, veh/h	107	64	209	36	22	99
Future Vol, veh/h	107	64	209	36	22	99
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	116	70	227	39	24	108
Major/Minor	Minor1	Major1	Major2			
Conflicting Flow All	403	247	0	0	266	0
Stage 1	247	-	-	-	-	-
Stage 2	156	-	-	-	-	-
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	603	792	-	-	1298	-
Stage 1	794	-	-	-	-	-
Stage 2	872	-	-	-	-	-
Platoon blocked, %			-	-		-
Mov Cap-1 Maneuver	591	792	-	-	1298	-
Mov Cap-2 Maneuver	591	-	-	-	-	-
Stage 1	778	-	-	-	-	-
Stage 2	872	-	-	-	-	-
Approach	WB	NB		SB		
HCM Control Delay, s	12.7	0		1.4		
HCM LOS	B					
Minor Lane/Major Mvmt	NBT	NBRWBLn1	SBL	SBT		
Capacity (veh/h)	-	-	653	1298	-	
HCM Lane V/C Ratio	-	-	0.285	0.018	-	
HCM Control Delay (s)	-	-	12.7	7.8	0	
HCM Lane LOS	-	-	B	A	A	
HCM 95th %tile Q(veh)	-	-	1.2	0.1	-	

Intersection						
Int Delay, s/veh	5.3					
Movement	EBL	EBR	NBL	NBT	SBT	SBR
Lane Configurations						
Traffic Vol, veh/h	57	28	145	5	5	166
Future Vol, veh/h	57	28	145	5	5	166
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	62	30	158	5	5	180
Major/Minor	Minor2	Major1		Major2		
Conflicting Flow All	416	95	185	0	-	0
Stage 1	95	-	-	-	-	-
Stage 2	321	-	-	-	-	-
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	593	962	1390	-	-	-
Stage 1	929	-	-	-	-	-
Stage 2	735	-	-	-	-	-
Platoon blocked, %				-	-	-
Mov Cap-1 Maneuver	525	962	1390	-	-	-
Mov Cap-2 Maneuver	525	-	-	-	-	-
Stage 1	823	-	-	-	-	-
Stage 2	735	-	-	-	-	-
Approach	EB	NB		SB		
HCM Control Delay, s	11.9	7.7		0		
HCM LOS	B					
Minor Lane/Major Mvmt	NBL	NBT	EBLn1	SBT	SBR	
Capacity (veh/h)	1390	-	617	-	-	
HCM Lane V/C Ratio	0.113	-	0.15	-	-	
HCM Control Delay (s)	7.9	0	11.9	-	-	
HCM Lane LOS	A	A	B	-	-	
HCM 95th %tile Q(veh)	0.4	-	0.5	-	-	

Intersection						
Int Delay, s/veh	9.5					
Movement	EBL	EBR	NBL	NBT	SBT	SBR
Lane Configurations						
Traffic Vol, veh/h	213	107	51	5	5	58
Future Vol, veh/h	213	107	51	5	5	58
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	232	116	55	5	5	63
Major/Minor	Minor2	Major1		Major2		
Conflicting Flow All	152	37	68	0	-	0
Stage 1	37	-	-	-	-	-
Stage 2	115	-	-	-	-	-
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	840	1035	1533	-	-	-
Stage 1	985	-	-	-	-	-
Stage 2	910	-	-	-	-	-
Platoon blocked, %				-	-	-
Mov Cap-1 Maneuver	810	1035	1533	-	-	-
Mov Cap-2 Maneuver	810	-	-	-	-	-
Stage 1	950	-	-	-	-	-
Stage 2	910	-	-	-	-	-
Approach	EB	NB		SB		
HCM Control Delay, s	11.8	6.8		0		
HCM LOS	B					
Minor Lane/Major Mvmt	NBL	NBT	EBLn1	SBT	SBR	
Capacity (veh/h)	1533	-	873	-	-	
HCM Lane V/C Ratio	0.036	-	0.398	-	-	
HCM Control Delay (s)	7.4	0	11.8	-	-	
HCM Lane LOS	A	A	B	-	-	
HCM 95th %tile Q(veh)	0.1	-	1.9	-	-	

Intersection

Int Delay, s/veh 2.1

Movement	EBL	EBT	WBT	WBR	SBL	SBR
Lane Configurations						
Traffic Vol, veh/h	104	300	100	21	6	28
Future Vol, veh/h	104	300	100	21	6	28
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	113	326	109	23	7	30

Major/Minor	Major1	Major2	Minor2
Conflicting Flow All	132	0	0 673 121
Stage 1	-	-	- 121 -
Stage 2	-	-	- 552 -
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	1453	-	- 421 930
Stage 1	-	-	- 904 -
Stage 2	-	-	- 577 -
Platoon blocked, %		-	-
Mov Cap-1 Maneuver	1453	-	- 381 930
Mov Cap-2 Maneuver	-	-	- 381 -
Stage 1	-	-	- 818 -
Stage 2	-	-	- 577 -

Approach	EB	WB	SB
HCM Control Delay, s	2	0	10.1
HCM LOS			B

Minor Lane/Major Mvmt	EBL	EBT	WBT	WBR	SBLn1
Capacity (veh/h)	1453	-	-	-	741
HCM Lane V/C Ratio	0.078	-	-	-	0.05
HCM Control Delay (s)	7.7	0	-	-	10.1
HCM Lane LOS	A	A	-	-	B
HCM 95th %tile Q(veh)	0.3	-	-	-	0.2

Intersection						
Int Delay, s/veh	2.8					
Movement	EBL	EBT	WBT	WBR	SBL	SBR
Lane Configurations						
Traffic Vol, veh/h	36	145	405	7	21	107
Future Vol, veh/h	36	145	405	7	21	107
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	39	158	440	8	23	116
Major/Minor	Major1	Major2		Minor2		
Conflicting Flow All	448	0	-	0	680	444
Stage 1	-	-	-	-	444	-
Stage 2	-	-	-	-	236	-
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	1112	-	-	-	417	614
Stage 1	-	-	-	-	646	-
Stage 2	-	-	-	-	803	-
Platoon blocked, %		-	-	-		
Mov Cap-1 Maneuver	1112	-	-	-	401	614
Mov Cap-2 Maneuver	-	-	-	-	401	-
Stage 1	-	-	-	-	621	-
Stage 2	-	-	-	-	803	-
Approach	EB	WB		SB		
HCM Control Delay, s	1.7	0		13.4		
HCM LOS				B		
Minor Lane/Major Mvmt	EBL	EBT	WBT	WBR	SBLn1	
Capacity (veh/h)	1112	-	-	-	565	
HCM Lane V/C Ratio	0.035	-	-	-	0.246	
HCM Control Delay (s)	8.4	0	-	-	13.4	
HCM Lane LOS	A	A	-	-	B	
HCM 95th %tile Q(veh)	0.1	-	-	-	1	

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	104	41	207	2	11	2	85	0	2	2	0	28
Future Vol, veh/h	104	41	207	2	11	2	85	0	2	2	0	28
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	113	45	225	2	12	2	92	0	2	2	0	30
Major/Minor	Major1			Major2			Minor1			Minor2		
Conflicting Flow All	14	0	0	270	0	0	416	402	158	402	513	13
Stage 1	-	-	-	-	-	-	384	384	-	17	17	-
Stage 2	-	-	-	-	-	-	32	18	-	385	496	-
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	1604	-	-	1293	-	-	547	537	887	559	465	1067
Stage 1	-	-	-	-	-	-	639	611	-	1002	881	-
Stage 2	-	-	-	-	-	-	984	880	-	638	545	-
Platoon blocked, %		-	-		-	-						
Mov Cap-1 Maneuver	1604	-	-	1293	-	-	496	490	887	520	425	1067
Mov Cap-2 Maneuver	-	-	-	-	-	-	496	490	-	520	425	-
Stage 1	-	-	-	-	-	-	585	559	-	917	879	-
Stage 2	-	-	-	-	-	-	954	878	-	582	499	-
Approach	EB			WB			NB			SB		
HCM Control Delay, s	2.2			1			13.9			8.7		
HCM LOS							B			A		
Minor Lane/Major Mvmt	NBLn1	EBL	EBT	EBR	WBL	WBT	WBR	SBLn1				
Capacity (veh/h)	501	1604	-	-	1293	-	-	997				
HCM Lane V/C Ratio	0.189	0.07	-	-	0.002	-	-	0.033				
HCM Control Delay (s)	13.9	7.4	0	-	7.8	0	-	8.7				
HCM Lane LOS	B	A	A	-	A	A	-	A				
HCM 95th %tile Q(veh)	0.7	0.2	-	-	0	-	-	0.1				

Intersection												
Int Delay, s/veh	11.8											
Movement	EBL	EBT	EBR	WBL	WBT	WBR	NBL	NBT	NBR	SBL	SBT	SBR
Lane Configurations		↕			↕			↕			↕	
Traffic Vol, veh/h	36	15	73	2	43	2	320	0	2	2	0	107
Future Vol, veh/h	36	15	73	2	43	2	320	0	2	2	0	107
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	39	16	79	2	47	2	348	0	2	2	0	116
Major/Minor	Major1			Major2			Minor1			Minor2		
Conflicting Flow All	49	0	0	95	0	0	244	187	56	187	225	48
Stage 1	-	-	-	-	-	-	134	134	-	52	52	-
Stage 2	-	-	-	-	-	-	110	53	-	135	173	-
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	1558	-	-	1499	-	-	710	708	1011	774	674	1021
Stage 1	-	-	-	-	-	-	869	785	-	961	852	-
Stage 2	-	-	-	-	-	-	895	851	-	868	756	-
Platoon blocked, %		-	-		-	-						
Mov Cap-1 Maneuver	1558	-	-	1499	-	-	616	688	1011	756	655	1021
Mov Cap-2 Maneuver	-	-	-	-	-	-	616	688	-	756	655	-
Stage 1	-	-	-	-	-	-	846	764	-	935	851	-
Stage 2	-	-	-	-	-	-	792	850	-	843	736	-
Approach	EB			WB			NB			SB		
HCM Control Delay, s	2.1			0.3			18.2			9		
HCM LOS							C			A		
Minor Lane/Major Mvmt	NBLn1	EBL	EBT	EBR	WBL	WBT	WBR	SBLn1				
Capacity (veh/h)	617	1558	-	-	1499	-	-	1014				
HCM Lane V/C Ratio	0.567	0.025	-	-	0.001	-	-	0.117				
HCM Control Delay (s)	18.2	7.4	0	-	7.4	0	-	9				
HCM Lane LOS	C	A	A	-	A	A	-	A				
HCM 95th %tile Q(veh)	3.6	0.1	-	-	0	-	-	0.4				

Intersection						
Int Delay, s/veh	5.6					
Movement	EBL	EBT	WBT	WBR	SBL	SBR
Lane Configurations						
Traffic Vol, veh/h	124	2	2	83	23	34
Future Vol, veh/h	124	2	2	83	23	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	-
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	135	2	2	90	25	37
Major/Minor	Major1	Major2		Minor2		
Conflicting Flow All	92	0	-	0	319	47
Stage 1	-	-	-	-	47	-
Stage 2	-	-	-	-	272	-
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	1503	-	-	-	674	1022
Stage 1	-	-	-	-	975	-
Stage 2	-	-	-	-	774	-
Platoon blocked, %		-	-	-		
Mov Cap-1 Maneuver	1503	-	-	-	613	1022
Mov Cap-2 Maneuver	-	-	-	-	613	-
Stage 1	-	-	-	-	887	-
Stage 2	-	-	-	-	774	-
Approach	EB	WB		SB		
HCM Control Delay, s	7.5	0		9.8		
HCM LOS				A		
Minor Lane/Major Mvmt	EBL	EBT	WBT	WBR	SBLn1	
Capacity (veh/h)	1503	-	-	-	805	
HCM Lane V/C Ratio	0.09	-	-	-	0.077	
HCM Control Delay (s)	7.6	0	-	-	9.8	
HCM Lane LOS	A	A	-	-	A	
HCM 95th %tile Q(veh)	0.3	-	-	-	0.2	

Intersection						
Int Delay, s/veh	8.4					
Movement	EBL	EBT	WBT	WBR	SBL	SBR
Lane Configurations						
Traffic Vol, veh/h	44	2	2	29	85	128
Future Vol, veh/h	44	2	2	29	85	128
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	48	2	2	32	92	139
Major/Minor	Major1	Major2		Minor2		
Conflicting Flow All	34	0	-	0	116	18
Stage 1	-	-	-	-	18	-
Stage 2	-	-	-	-	98	-
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	1578	-	-	-	880	1061
Stage 1	-	-	-	-	1005	-
Stage 2	-	-	-	-	926	-
Platoon blocked, %		-	-	-		
Mov Cap-1 Maneuver	1578	-	-	-	854	1061
Mov Cap-2 Maneuver	-	-	-	-	854	-
Stage 1	-	-	-	-	975	-
Stage 2	-	-	-	-	926	-
Approach	EB	WB		SB		
HCM Control Delay, s	7	0		9.9		
HCM LOS				A		
Minor Lane/Major Mvmt	EBL	EBT	WBT	WBR	SBLn1	
Capacity (veh/h)	1578	-	-	-	967	
HCM Lane V/C Ratio	0.03	-	-	-	0.239	
HCM Control Delay (s)	7.4	0	-	-	9.9	
HCM Lane LOS	A	A	-	-	A	
HCM 95th %tile Q(veh)	0.1	-	-	-	0.9	

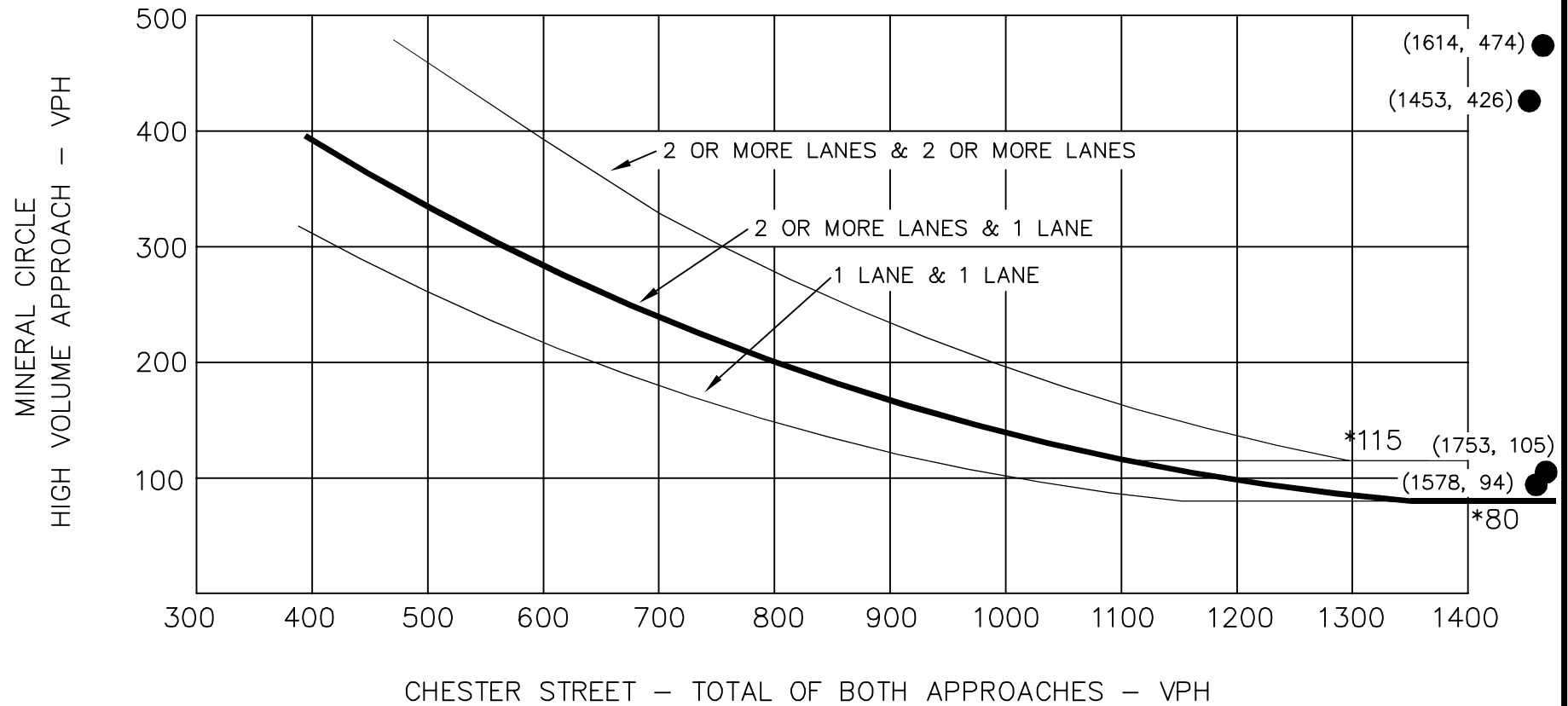
Intersection						
Int Delay, s/veh	6.6					
Movement	EBL	EBT	WBT	WBR	SBL	SBR
Lane Configurations						
Traffic Vol, veh/h	415	104	17	2	0	85
Future Vol, veh/h	415	104	17	2	0	85
Conflicting Peds, #/hr	0	0	0	0	0	0
Sign Control	Free	Free	Free	Free	Stop	Stop
RT Channelized	-	None	-	None	-	None
Storage Length	-	-	-	-	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	451	113	18	2	0	92
Major/Minor	Major1	Major2		Minor2		
Conflicting Flow All	20	0	-	0	1034	19
Stage 1	-	-	-	-	19	-
Stage 2	-	-	-	-	1015	-
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	1596	-	-	-	257	1059
Stage 1	-	-	-	-	1004	-
Stage 2	-	-	-	-	350	-
Platoon blocked, %		-	-	-		
Mov Cap-1 Maneuver	1596	-	-	-	179	1059
Mov Cap-2 Maneuver	-	-	-	-	179	-
Stage 1	-	-	-	-	701	-
Stage 2	-	-	-	-	350	-
Approach	EB	WB		SB		
HCM Control Delay, s	6.5	0		8.7		
HCM LOS				A		
Minor Lane/Major Mvmt	EBL	EBT	WBT	WBR	SBLn1	
Capacity (veh/h)	1596	-	-	-	-	1059
HCM Lane V/C Ratio	0.283	-	-	-	-	0.087
HCM Control Delay (s)	8.1	0	-	-	-	8.7
HCM Lane LOS	A	A	-	-	-	A
HCM 95th %tile Q(veh)	1.2	-	-	-	-	0.3

Intersection						
Int Delay, s/veh	7.9					
Movement	EBL	EBT	WBT	WBR	SBL	SBR
Lane Configurations						
Traffic Vol, veh/h	146	36	64	2	0	320
Future Vol, veh/h	146	36	64	2	0	320
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	159	39	70	2	0	348
Major/Minor	Major1	Major2		Minor2		
Conflicting Flow All	72	0	-	0	428	71
Stage 1	-	-	-	-	71	-
Stage 2	-	-	-	-	357	-
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	1528	-	-	-	584	991
Stage 1	-	-	-	-	952	-
Stage 2	-	-	-	-	708	-
Platoon blocked, %		-	-	-		
Mov Cap-1 Maneuver	1528	-	-	-	522	991
Mov Cap-2 Maneuver	-	-	-	-	522	-
Stage 1	-	-	-	-	851	-
Stage 2	-	-	-	-	708	-
Approach	EB	WB		SB		
HCM Control Delay, s	6.1	0		10.6		
HCM LOS				B		
Minor Lane/Major Mvmt	EBL	EBT	WBT	WBR	SBLn1	
Capacity (veh/h)	1528	-	-	-	991	
HCM Lane V/C Ratio	0.104	-	-	-	0.351	
HCM Control Delay (s)	7.6	0	-	-	10.6	
HCM Lane LOS	A	A	-	-	B	
HCM 95th %tile Q(veh)	0.3	-	-	-	1.6	

APPENDIX E

Signal Warrant Analysis Figure

WARRANT 2 - FOUR HOUR VEHICULAR VOLUME



* 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.

SIGNAL WARRANT ANALYSIS
MINERAL CIRCLE & CHESTER STREET (#7)
FOUR HOUR VOLUME WARRANT

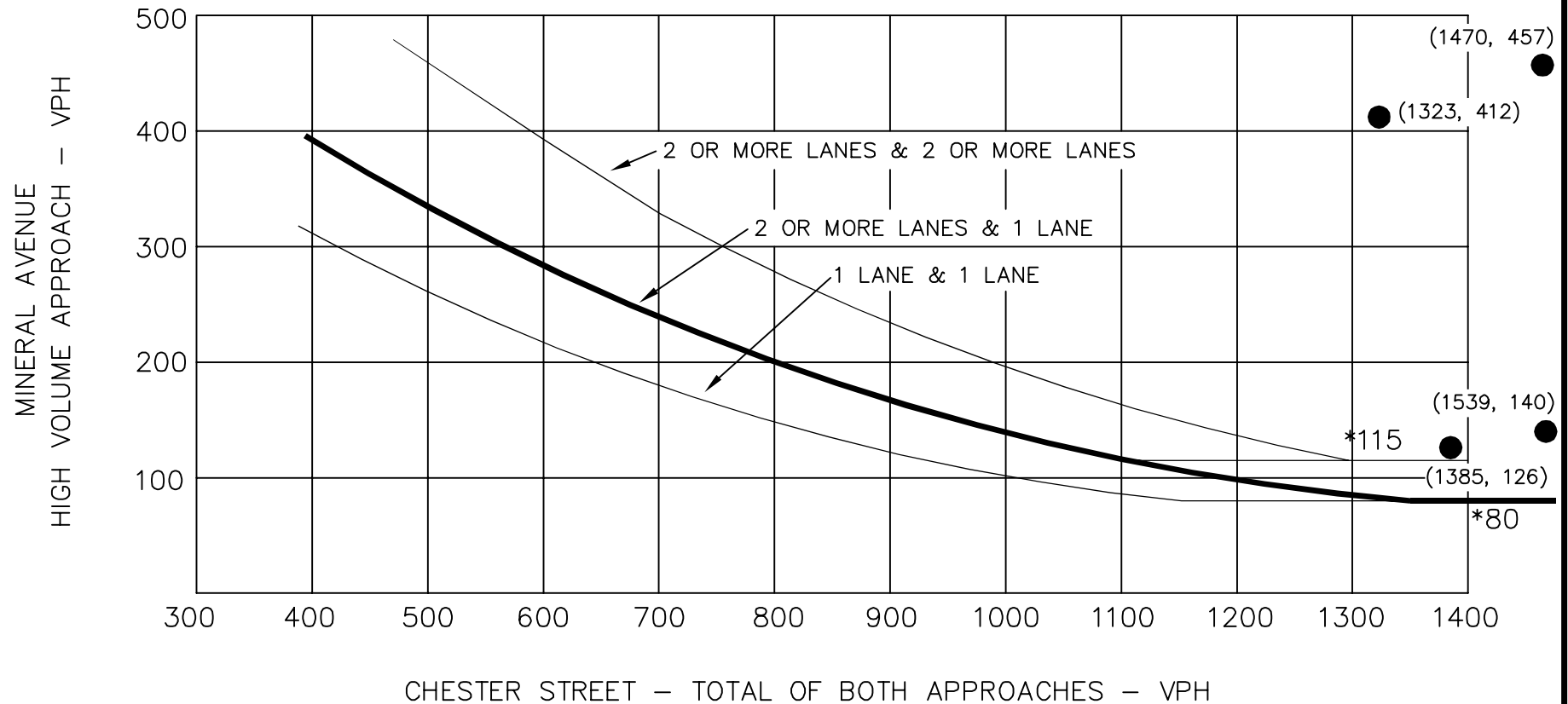
● 2030 TRAFFIC DATA POINT

Source: Manual of Uniform Traffic Control Devices 2009

FIGURE A1

Kimley»Horn

WARRANT 2 - FOUR HOUR VEHICULAR VOLUME



* 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.

SIGNAL WARRANT ANALYSIS
MINERAL AVENUE & CHESTER STREET (#8)
FOUR HOUR VOLUME WARRANT

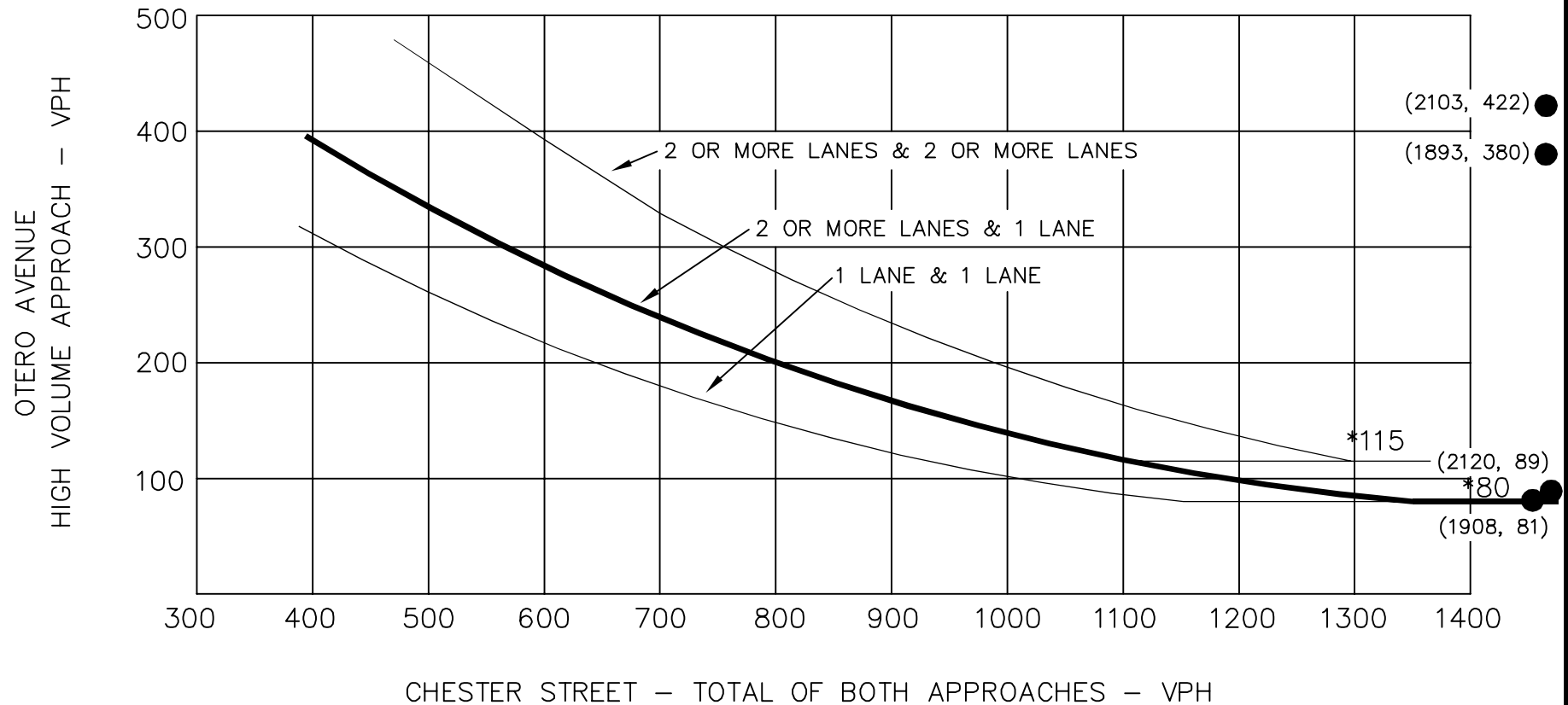
● 2030 TRAFFIC DATA POINT

Source: Manual of Uniform Traffic Control Devices 2009

FIGURE A2

Kimley»Horn

WARRANT 2 - FOUR HOUR VEHICULAR VOLUME



* 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.

SIGNAL WARRANT ANALYSIS
OTERO AVENUE & CHESTER STREET (#14)
FOUR HOUR VOLUME WARRANT

● 2030 TRAFFIC DATA POINT

Source: Manual of Uniform Traffic Control Devices 2009

FIGURE A3

Kimley»Horn

APPENDIX F

Queuing Analysis Worksheets

Queues

2030 Total AM_Imp.syn

1: Yosemite Street & Dry Creek Road

04/25/2019



Lane Group	EBL	EBT	WBL	WBT	WBR	NBL	NBT	NBR	SBL	SBT	SBR
Lane Group Flow (vph)	358	1654	222	609	210	89	789	242	388	273	55
v/c Ratio	0.88	0.94	0.82	0.51	0.31	0.28	1.01	0.15	1.11	0.23	0.09
Control Delay	43.8	49.2	61.8	22.8	4.7	26.0	81.3	0.2	114.4	29.2	1.5
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	43.8	49.2	61.8	22.8	4.7	26.0	81.3	0.2	114.4	29.2	1.5
Queue Length 50th (ft)	167	456	94	206	43	41	~328	0	~293	79	0
Queue Length 95th (ft)	#292	#568	#206	252	71	76	#464	0	#491	114	8
Internal Link Dist (ft)		1209		1045			603			844	
Turn Bay Length (ft)	150		225			175		175	250		
Base Capacity (vph)	409	1760	290	1194	673	321	781	1583	349	1194	597
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	0.88	0.94	0.77	0.51	0.31	0.28	1.01	0.15	1.11	0.23	0.09

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.

Queues

2030 Total PM_Imp.syn

1: Yosemite Street & Dry Creek Road

04/25/2019



Lane Group	EBL	EBT	WBL	WBT	WBR	NBL	NBT	NBR	SBL	SBT	SBR
Lane Group Flow (vph)	130	811	261	1861	474	299	596	298	302	761	322
v/c Ratio	0.96	0.38	0.61	1.05	0.50	1.03	0.99	0.19	0.99	1.20	0.82
Control Delay	93.7	23.8	18.1	68.4	14.5	92.7	79.4	0.3	83.4	147.3	44.4
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	93.7	23.8	18.1	68.4	14.5	92.7	79.4	0.3	83.4	147.3	44.4
Queue Length 50th (ft)	49	148	130	~848	176	~196	245	0	184	~376	143
Queue Length 95th (ft)	#188	196	m157	#982	m242	#367	#368	0	#371	#502	#292
Internal Link Dist (ft)		1209		1045			603			844	
Turn Bay Length (ft)	150		225			175		175	250		
Base Capacity (vph)	135	2122	471	1769	951	290	604	1583	305	634	395
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	0.96	0.38	0.55	1.05	0.50	1.03	0.99	0.19	0.99	1.20	0.82

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.

Queues

2040 Total AM.syn

04/25/2019

1: Yosemite Street & Dry Creek Road



Lane Group	EBL	EBT	WBL	WBT	NBL	NBT	NBR	SBL	SBT	SBR
Lane Group Flow (vph)	375	1726	233	854	95	829	254	397	287	58
v/c Ratio	0.99	1.01	0.85	0.54	0.32	1.15	0.16	1.01	0.23	0.10
Control Delay	69.6	64.1	67.8	19.7	26.9	125.3	0.2	82.1	28.6	1.7
Queue Delay	0.0	0.0	0.0	0.0	0.0	0.0	0.0	0.0	0.0	0.0
Total Delay	69.6	64.1	67.8	19.7	26.9	125.3	0.2	82.1	28.6	1.7
Queue Length 50th (ft)	193	~526	110	178	44	~396	0	~262	82	0
Queue Length 95th (ft)	#397	#624	#229	209	79	#524	0	#471	118	10
Internal Link Dist (ft)		1209		1045		603			844	
Turn Bay Length (ft)	150		225		175		175	250		
Base Capacity (vph)	378	1706	290	1580	300	722	1583	393	1223	609
Starvation Cap Reductn	0	0	0	0	0	0	0	0	0	0
Spillback Cap Reductn	0	0	0	0	0	0	0	0	0	0
Storage Cap Reductn	0	0	0	0	0	0	0	0	0	0
Reduced v/c Ratio	0.99	1.01	0.80	0.54	0.32	1.15	0.16	1.01	0.23	0.10

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.

Queues

2040 Total PM.syn

04/25/2019

1: Yosemite Street & Dry Creek Road



Lane Group	EBL	EBT	WBL	WBT	NBL	NBT	NBR	SBL	SBT	SBR
Lane Group Flow (vph)	138	849	274	2431	314	626	313	313	800	338
v/c Ratio	0.97	0.42	0.70	1.03	0.98	0.87	0.20	1.08	1.21	0.83
Control Delay	93.7	25.9	22.0	59.4	77.1	55.6	0.3	108.2	148.8	46.0
Queue Delay	0.0	0.0	0.0	0.0	0.0	0.0	0.0	0.0	0.0	0.0
Total Delay	93.7	25.9	22.0	59.4	77.1	55.6	0.3	108.2	148.8	46.0
Queue Length 50th (ft)	57	167	146	~745	194	248	0	~218	~397	156
Queue Length 95th (ft)	#193	207	m168	#834	#370	#345	0	#402	#524	#313
Internal Link Dist (ft)		1209		1045		603			844	
Turn Bay Length (ft)	150		225		175		175	250		
Base Capacity (vph)	143	2007	410	2358	320	722	1583	290	663	407
Starvation Cap Reductn	0	0	0	0	0	0	0	0	0	0
Spillback Cap Reductn	0	0	0	0	0	0	0	0	0	0
Storage Cap Reductn	0	0	0	0	0	0	0	0	0	0
Reduced v/c Ratio	0.97	0.42	0.67	1.03	0.98	0.87	0.20	1.08	1.21	0.83

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.

Queues
2: Chester Street & Dry Creek Road

2030 Total AM_Imp.syn

04/25/2019



Lane Group	EBL	EBT	EBR	WBL	WBT	WBR	NBL	NBT	NBR	SBL	SBT
Lane Group Flow (vph)	43	1385	649	1734	872	590	163	60	423	142	179
v/c Ratio	0.17	0.86	1.02	1.03	0.27	0.49	0.44	0.21	0.15	0.26	0.63
Control Delay	18.1	54.1	71.1	50.2	6.0	2.3	35.7	39.6	0.1	38.6	55.8
Queue Delay	0.0	0.0	0.5	8.3	0.0	0.0	0.0	0.0	0.0	0.0	0.0
Total Delay	18.1	54.1	71.6	58.5	6.0	2.3	35.7	39.6	0.1	38.6	55.8
Queue Length 50th (ft)	18	321	~337	~440	88	36	57	46	0	45	125
Queue Length 95th (ft)	m23	m356	m#476	#592	101	49	82	83	0	73	203
Internal Link Dist (ft)		1045			706			357			294
Turn Bay Length (ft)	200		175	350			125			100	
Base Capacity (vph)	258	1610	634	1684	3195	1214	371	287	2787	543	285
Starvation Cap Reductn	0	0	0	0	0	0	0	0	0	0	0
Spillback Cap Reductn	0	0	1	36	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	0.17	0.86	1.03	1.05	0.27	0.49	0.44	0.21	0.15	0.26	0.63

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.

Queues
2: Chester Street & Dry Creek Road

2030 Total PM_Imp.syn

04/25/2019

											
Lane Group	EBL	EBT	EBR	WBL	WBT	WBR	NBL	NBT	NBR	SBL	SBT
Lane Group Flow (vph)	24	1023	223	547	1841	115	761	90	2030	411	164
v/c Ratio	0.17	0.56	0.31	0.71	0.72	0.13	0.88	0.21	0.73	0.55	0.55
Control Delay	11.9	24.9	7.7	55.7	23.7	2.1	43.8	39.0	1.7	31.5	44.6
Queue Delay	0.0	0.0	0.0	0.0	0.0	0.0	4.3	0.0	0.0	0.0	0.0
Total Delay	11.9	24.9	7.7	55.7	23.7	2.1	48.1	39.0	1.7	31.5	44.6
Queue Length 50th (ft)	4	209	40	124	539	3	243	57	0	115	93
Queue Length 95th (ft)	m11	m249	m78	147	592	11	#329	104	0	157	166
Internal Link Dist (ft)		1045			706			357			294
Turn Bay Length (ft)	200			350			125			100	
Base Capacity (vph)	142	1840	715	1101	2563	865	867	428	2787	748	296
Starvation Cap Reductn	0	0	0	0	0	0	61	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	0.17	0.56	0.31	0.50	0.72	0.13	0.94	0.21	0.73	0.55	0.55

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.

Queues

2040 Total AM.syn

2: Chester Street & Dry Creek Road

04/25/2019

											
Lane Group	EBL	EBT	EBR	WBL	WBT	WBR	NBL	NBT	NBR	SBL	SBT
Lane Group Flow (vph)	46	1455	659	1790	917	620	165	63	434	150	189
v/c Ratio	0.19	0.93	1.07	1.04	0.29	0.51	0.46	0.22	0.16	0.28	0.66
Control Delay	17.5	56.9	83.2	53.0	5.8	2.1	35.2	38.7	0.1	38.9	57.7
Queue Delay	0.0	0.0	0.7	11.3	0.0	0.0	0.0	0.0	0.0	0.0	0.0
Total Delay	17.5	56.9	83.8	64.2	5.8	2.1	35.2	38.7	0.1	38.9	57.7
Queue Length 50th (ft)	19	335	~371	~515	87	29	58	47	0	48	133
Queue Length 95th (ft)	m23	m354	m#426	#613	100	m39	83	85	0	77	214
Internal Link Dist (ft)		1045			706			357			294
Turn Bay Length (ft)	200		175	350			125			100	
Base Capacity (vph)	245	1567	616	1725	3195	1224	356	287	2787	541	285
Starvation Cap Reductn	0	0	0	0	0	0	0	0	0	0	0
Spillback Cap Reductn	0	0	1	47	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	0.19	0.93	1.07	1.07	0.29	0.51	0.46	0.22	0.16	0.28	0.66

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.

Queues

2040 Total PM.syn

2: Chester Street & Dry Creek Road

04/25/2019



Lane Group	EBL	EBT	EBR	WBL	WBT	WBR	NBL	NBT	NBR	SBL	SBT
Lane Group Flow (vph)	25	1076	226	563	1936	121	776	96	2092	433	172
v/c Ratio	0.17	0.59	0.32	0.72	0.76	0.14	0.91	0.22	0.75	0.58	0.58
Control Delay	12.7	24.8	7.5	55.3	25.3	2.6	47.2	39.3	1.9	32.3	46.1
Queue Delay	0.0	0.0	0.0	0.0	0.0	0.0	5.6	0.0	0.0	0.0	0.0
Total Delay	12.7	24.8	7.5	55.3	25.3	2.6	52.8	39.3	1.9	32.3	46.1
Queue Length 50th (ft)	4	223	45	128	570	4	249	61	0	123	99
Queue Length 95th (ft)	m12	m267	m79	153	623	16	#310	110	0	165	175
Internal Link Dist (ft)		1045			706			357			294
Turn Bay Length (ft)	200			350			125			100	
Base Capacity (vph)	143	1824	712	1101	2563	865	854	427	2787	744	295
Starvation Cap Reductn	0	0	0	0	0	0	51	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	0.17	0.59	0.32	0.51	0.76	0.14	0.97	0.22	0.75	0.58	0.58

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.

Queues
6: Chester Street & Panorama Circle

2030 Total AM_Imp.syn

04/25/2019



Lane Group	EBL	EBT	WBL	WBT	WBR	NBL	NBT	SBL	SBT
Lane Group Flow (vph)	59	29	3	3	180	52	529	963	1561
v/c Ratio	0.53	0.26	0.03	0.03	0.11	0.22	0.31	0.84	0.57
Control Delay	68.6	46.3	48.7	53.7	0.1	13.8	19.8	51.9	2.4
Queue Delay	0.0	0.0	0.0	0.0	0.0	0.0	0.0	2.4	0.5
Total Delay	68.6	46.3	48.7	53.7	0.1	13.8	19.8	54.3	2.8
Queue Length 50th (ft)	45	15	2	2	0	12	115	384	54
Queue Length 95th (ft)	81	46	11	13	0	29	207	m238	m78
Internal Link Dist (ft)		331		553			962		357
Turn Bay Length (ft)	100		75		125	100		150	
Base Capacity (vph)	112	287	103	287	1583	249	1712	1307	2747
Starvation Cap Reductn	0	0	0	0	0	0	0	219	636
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	0.10	0.03	0.01	0.11	0.21	0.31	0.89	0.74

Intersection Summary

m Volume for 95th percentile queue is metered by upstream signal.

Queues
6: Chester Street & Panorama Circle

2030 Total PM_Imp.syn

04/25/2019



Lane Group	EBL	EBT	WBL	WBT	WBR	NBL	NBT	SBL	SBT
Lane Group Flow (vph)	314	134	158	26	1114	15	1429	171	675
v/c Ratio	0.84	0.46	0.81	0.18	0.70	0.03	0.81	0.43	0.30
Control Delay	51.8	13.0	64.8	41.4	2.6	13.1	29.7	40.0	9.2
Queue Delay	0.0	0.0	0.0	0.0	0.0	0.0	0.0	0.0	0.0
Total Delay	51.8	13.0	64.8	41.4	2.6	13.1	29.7	40.0	9.2
Queue Length 50th (ft)	177	6	~112	14	0	3	347	47	60
Queue Length 95th (ft)	#233	52	116	39	0	m8	#576	76	172
Internal Link Dist (ft)		331		553			962		357
Turn Bay Length (ft)	100		75		125	100		150	
Base Capacity (vph)	372	666	194	496	1583	480	1758	401	2236
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	0.84	0.20	0.81	0.05	0.70	0.03	0.81	0.43	0.30

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.

Queues
6: Chester Street & Panorama Circle

2040 Total AM.syn
04/25/2019



Lane Group	EBL	EBT	WBL	WBT	WBR	NBL	NBT	SBL	SBT
Lane Group Flow (vph)	62	31	3	3	184	54	544	992	1605
v/c Ratio	0.55	0.27	0.03	0.03	0.12	0.23	0.32	0.85	0.59
Control Delay	70.2	46.0	48.7	53.3	0.1	14.8	20.5	49.9	2.5
Queue Delay	0.0	0.0	0.0	0.0	0.0	0.0	0.0	3.5	0.5
Total Delay	70.2	46.0	48.7	53.3	0.1	14.8	20.5	53.3	3.0
Queue Length 50th (ft)	48	16	2	2	0	13	123	378	53
Queue Length 95th (ft)	85	47	11	13	0	31	216	m232	m77
Internal Link Dist (ft)		331		553			962		357
Turn Bay Length (ft)	100		75		125	100		150	
Base Capacity (vph)	112	287	103	287	1583	240	1684	1311	2743
Starvation Cap Reductn	0	0	0	0	0	0	0	226	637
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	0.55	0.11	0.03	0.01	0.12	0.23	0.32	0.91	0.76

Intersection Summary

m Volume for 95th percentile queue is metered by upstream signal.

Queues
6: Chester Street & Panorama Circle

2040 Total PM.syn

04/25/2019



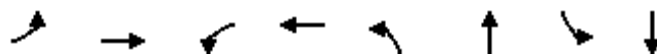
Lane Group	EBL	EBT	WBL	WBT	WBR	NBL	NBT	SBL	SBT
Lane Group Flow (vph)	330	140	165	28	1148	15	1461	173	697
v/c Ratio	0.87	0.46	0.85	0.20	0.73	0.03	0.84	0.43	0.31
Control Delay	53.9	12.3	68.9	41.5	2.9	13.9	32.0	39.9	9.6
Queue Delay	0.0	0.0	0.0	0.0	0.0	0.0	0.0	0.0	0.0
Total Delay	53.9	12.3	68.9	41.5	2.9	13.9	32.0	39.9	9.6
Queue Length 50th (ft)	189	6	~121	15	0	4	378	47	62
Queue Length 95th (ft)	#240	52	118	41	0	m8	#615	77	183
Internal Link Dist (ft)		331		553			962		357
Turn Bay Length (ft)	100		75		125	100		150	
Base Capacity (vph)	380	670	195	476	1583	468	1736	405	2216
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	0.87	0.21	0.85	0.06	0.73	0.03	0.84	0.43	0.31

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.

Queues
7: Chester Street & Mineral Circle

2030 Total AM_Imp.syn
04/25/2019

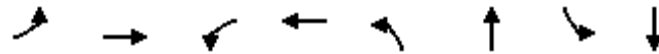


Lane Group	EBL	EBT	WBL	WBT	NBL	NBT	SBL	SBT
Lane Group Flow (vph)	16	12	37	153	38	721	455	671
v/c Ratio	0.13	0.11	0.26	0.22	0.08	0.39	0.64	0.26
Control Delay	42.5	39.7	43.0	0.8	6.7	13.8	8.3	5.3
Queue Delay	0.0	0.0	0.0	0.0	0.0	0.0	0.0	0.0
Total Delay	42.5	39.7	43.0	0.8	6.7	13.8	8.3	5.3
Queue Length 50th (ft)	10	6	23	0	4	97	36	53
Queue Length 95th (ft)	27	23	49	0	16	213	155	118
Internal Link Dist (ft)		228		284		380		962
Turn Bay Length (ft)	75		100		125		125	
Base Capacity (vph)	123	332	145	804	505	1855	815	2586
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	0.13	0.04	0.26	0.19	0.08	0.39	0.56	0.26
Intersection Summary								

Queues
7: Chester Street & Mineral Circle

2030 Total PM_Imp.syn

04/25/2019



Lane Group	EBL	EBT	WBL	WBT	NBL	NBT	SBL	SBT
Lane Group Flow (vph)	95	22	222	591	4	783	162	788
v/c Ratio	1.04	0.06	0.52	0.79	0.01	0.53	0.44	0.39
Control Delay	143.2	11.3	25.6	18.8	14.8	14.9	23.0	14.6
Queue Delay	0.0	0.0	0.0	0.0	0.0	0.0	0.0	0.0
Total Delay	143.2	11.3	25.6	18.8	14.8	14.9	23.0	14.6
Queue Length 50th (ft)	53	0	87	121	1	94	47	98
Queue Length 95th (ft)	#141	18	135	240	m3	137	135	251
Internal Link Dist (ft)		228		284		380		962
Turn Bay Length (ft)	75		100		125		125	
Base Capacity (vph)	116	449	430	852	275	1466	389	2001
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	0.82	0.05	0.52	0.69	0.01	0.53	0.42	0.39

Intersection Summary

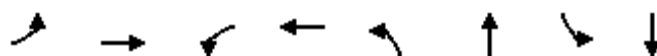
95th percentile volume exceeds capacity, queue may be longer.

Queue shown is maximum after two cycles.

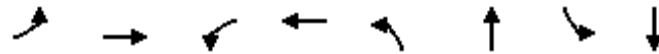
m Volume for 95th percentile queue is metered by upstream signal.

Queues
7: Chester Street & Mineral Circle

2040 Total AM.syn
04/25/2019



Lane Group	EBL	EBT	WBL	WBT	NBL	NBT	SBL	SBT
Lane Group Flow (vph)	17	13	37	153	40	747	455	694
v/c Ratio	0.12	0.10	0.22	0.20	0.08	0.43	0.67	0.28
Control Delay	37.1	35.9	36.9	0.6	5.5	10.9	10.4	6.0
Queue Delay	0.0	0.0	0.0	0.0	0.0	0.0	0.0	0.0
Total Delay	37.1	35.9	36.9	0.6	5.5	10.9	10.4	6.0
Queue Length 50th (ft)	9	5	21	0	4	45	36	55
Queue Length 95th (ft)	26	24	44	0	20	122	175	128
Internal Link Dist (ft)		228		284		380		962
Turn Bay Length (ft)	75		100		125		125	
Base Capacity (vph)	140	371	165	872	485	1755	806	2486
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	0.12	0.04	0.22	0.18	0.08	0.43	0.56	0.28
Intersection Summary								



Lane Group	EBL	EBT	WBL	WBT	NBL	NBT	SBL	SBT
Lane Group Flow (vph)	99	23	226	594	4	811	162	826
v/c Ratio	1.09	0.06	0.52	0.79	0.02	0.56	0.46	0.42
Control Delay	155.8	11.1	25.3	18.8	15.0	15.4	24.1	15.1
Queue Delay	0.0	0.0	0.0	0.0	0.0	0.0	0.0	0.0
Total Delay	155.8	11.1	25.3	18.8	15.0	15.4	24.1	15.1
Queue Length 50th (ft)	55	0	87	122	1	99	51	105
Queue Length 95th (ft)	#151	19	138	246	m3	141	136	265
Internal Link Dist (ft)		228		284		380		962
Turn Bay Length (ft)	75		100		125		125	
Base Capacity (vph)	112	450	438	851	261	1445	375	1981
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	0.88	0.05	0.52	0.70	0.02	0.56	0.43	0.42

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.

Queues
8: Chester Street & Mineral Avenue

2030 Total AM_Imp.syn
04/25/2019



Lane Group	EBL	EBT	WBL	WBT	NBL	NBT	NBR	SBL	SBT
Lane Group Flow (vph)	23	27	93	113	101	636	322	252	348
v/c Ratio	0.13	0.19	0.53	0.49	0.13	0.28	0.28	0.40	0.14
Control Delay	32.8	20.1	45.3	15.9	6.2	12.2	5.0	5.5	6.6
Queue Delay	0.0	0.0	0.0	0.0	0.0	0.0	0.0	0.0	0.0
Total Delay	32.8	20.1	45.3	15.9	6.2	12.2	5.0	5.5	6.6
Queue Length 50th (ft)	13	2	53	2	11	91	23	19	25
Queue Length 95th (ft)	30	26	85	50	55	153	76	78	70
Internal Link Dist (ft)		259		166		104			380
Turn Bay Length (ft)	25		175		100		125	150	
Base Capacity (vph)	176	351	176	430	792	2279	1134	735	2424
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	0.13	0.08	0.53	0.26	0.13	0.28	0.28	0.34	0.14
Intersection Summary									

Queues
8: Chester Street & Mineral Avenue

2030 Total PM_Imp.syn
04/25/2019



Lane Group	EBL	EBT	WBL	WBT	NBL	NBT	NBR	SBL	SBT
Lane Group Flow (vph)	49	150	332	319	24	418	132	180	843
v/c Ratio	0.43	0.50	0.77	0.42	0.07	0.30	0.18	0.34	0.48
Control Delay	48.4	12.9	35.5	4.1	12.2	21.8	2.1	16.2	21.6
Queue Delay	0.0	0.0	0.0	0.0	0.0	0.0	0.0	0.0	0.0
Total Delay	48.4	12.9	35.5	4.1	12.2	21.8	2.1	16.2	21.6
Queue Length 50th (ft)	27	2	146	1	6	86	0	64	163
Queue Length 95th (ft)	60	53	208	50	20	145	19	60	171
Internal Link Dist (ft)		259		166		104			380
Turn Bay Length (ft)	25		175		100		125	150	
Base Capacity (vph)	212	436	448	895	339	1371	724	547	1768
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	0.23	0.34	0.74	0.36	0.07	0.30	0.18	0.33	0.48
Intersection Summary									

Queues
8: Chester Street & Mineral Avenue

2040 Total AM.syn
04/25/2019



Lane Group	EBL	EBT	WBL	WBT	NBL	NBT	NBR	SBL	SBT
Lane Group Flow (vph)	24	28	95	116	107	663	323	254	364
v/c Ratio	0.14	0.20	0.57	0.50	0.14	0.30	0.29	0.42	0.16
Control Delay	33.0	20.1	47.4	15.8	6.4	13.0	5.2	5.9	6.9
Queue Delay	0.0	0.0	0.0	0.0	0.0	0.0	0.0	0.0	0.0
Total Delay	33.0	20.1	47.4	15.8	6.4	13.0	5.2	5.9	6.9
Queue Length 50th (ft)	13	2	54	2	11	95	23	20	26
Queue Length 95th (ft)	31	27	86	50	61	165	82	79	74
Internal Link Dist (ft)		259		166		104			380
Turn Bay Length (ft)	25		175		100		125	150	
Base Capacity (vph)	170	351	169	433	758	2185	1101	701	2310
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	0.14	0.08	0.56	0.27	0.14	0.30	0.29	0.36	0.16
Intersection Summary									

Queues
8: Chester Street & Mineral Avenue

2040 Total PM.syn
04/25/2019



Lane Group	EBL	EBT	WBL	WBT	NBL	NBT	NBR	SBL	SBT
Lane Group Flow (vph)	52	157	333	324	25	438	133	186	880
v/c Ratio	0.45	0.50	0.77	0.43	0.08	0.32	0.18	0.36	0.50
Control Delay	48.7	12.6	35.6	4.2	12.4	22.2	2.2	16.3	21.8
Queue Delay	0.0	0.0	0.0	0.0	0.0	0.0	0.0	0.0	0.1
Total Delay	48.7	12.6	35.6	4.2	12.4	22.2	2.2	16.3	21.9
Queue Length 50th (ft)	28	2	146	3	6	92	0	66	169
Queue Length 95th (ft)	62	54	207	51	20	152	19	61	204
Internal Link Dist (ft)		259		166		104			380
Turn Bay Length (ft)	25		175		100		125	150	
Base Capacity (vph)	211	442	447	896	322	1357	719	533	1756
Starvation Cap Reductn	0	0	0	0	0	0	0	0	117
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	0.25	0.36	0.74	0.36	0.08	0.32	0.18	0.35	0.54
Intersection Summary									



Lane Group	WBL	WBR	NBT	SBL	SBT
Lane Group Flow (vph)	100	29	1797	168	425
v/c Ratio	0.49	0.14	0.79	0.63	0.15
Control Delay	40.6	13.9	16.9	25.8	2.6
Queue Delay	0.0	0.0	0.0	0.0	0.0
Total Delay	40.6	13.9	16.9	25.8	2.6
Queue Length 50th (ft)	55	0	355	41	23
Queue Length 95th (ft)	54	3	504	96	37
Internal Link Dist (ft)	1404		620		470
Turn Bay Length (ft)	125			150	
Base Capacity (vph)	355	341	2276	304	2897
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	0.28	0.09	0.79	0.55	0.15
Intersection Summary					

11: Yosemite Street & Nichols Avenue

04/25/2019



Lane Group	WBL	WBR	NBT	SBL	SBT
Lane Group Flow (vph)	309	232	698	60	1225
v/c Ratio	0.79	0.44	0.32	0.12	0.49
Control Delay	57.8	6.9	12.2	4.8	5.2
Queue Delay	0.0	0.0	0.0	0.0	0.0
Total Delay	57.8	6.9	12.2	4.8	5.2
Queue Length 50th (ft)	227	0	125	8	100
Queue Length 95th (ft)	259	58	203	m14	m131
Internal Link Dist (ft)	1404		620		470
Turn Bay Length (ft)	125			150	
Base Capacity (vph)	612	699	2172	503	2486
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	0.50	0.33	0.32	0.12	0.49

Intersection Summary

m Volume for 95th percentile queue is metered by upstream signal.

11: Yosemite Street & Nichols Avenue

04/25/2019



Lane Group	WBL	WBR	NBT	SBL	SBT
Lane Group Flow (vph)	100	31	1880	176	448
v/c Ratio	0.49	0.15	0.83	0.65	0.15
Control Delay	40.6	13.7	18.6	27.5	2.6
Queue Delay	0.0	0.0	0.0	0.0	0.0
Total Delay	40.6	13.7	18.6	27.5	2.6
Queue Length 50th (ft)	55	0	397	45	25
Queue Length 95th (ft)	54	22	#613	102	40
Internal Link Dist (ft)	1404		620		470
Turn Bay Length (ft)	125			150	
Base Capacity (vph)	355	343	2270	306	2897
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	0.28	0.09	0.83	0.58	0.15

Intersection Summary

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



Lane Group	WBL	WBR	NBT	SBL	SBT
Lane Group Flow (vph)	315	244	731	63	1287
v/c Ratio	0.79	0.45	0.34	0.13	0.52
Control Delay	57.6	6.8	12.7	5.1	5.6
Queue Delay	0.0	0.0	0.0	0.0	0.0
Total Delay	57.6	6.8	12.7	5.1	5.6
Queue Length 50th (ft)	232	0	135	9	108
Queue Length 95th (ft)	262	60	218	m15	m153
Internal Link Dist (ft)	1404		620		470
Turn Bay Length (ft)	125			150	
Base Capacity (vph)	612	707	2158	485	2475
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	0.51	0.35	0.34	0.13	0.52

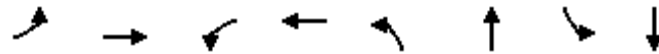
Intersection Summary

m Volume for 95th percentile queue is metered by upstream signal.

Queues
12: Chester Street & Nichols Avenue

2030 Total AM_Imp.syn

04/25/2019



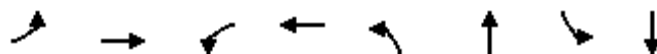
Lane Group	EBL	EBT	WBL	WBT	NBL	NBT	SBL	SBT
Lane Group Flow (vph)	117	141	47	28	59	1066	8	312
v/c Ratio	0.46	0.58	0.23	0.14	0.08	0.45	0.02	0.15
Control Delay	27.1	30.5	31.1	32.7	8.2	10.8	6.4	7.5
Queue Delay	0.0	0.0	0.0	0.0	0.0	0.0	0.0	0.0
Total Delay	27.1	30.5	31.1	32.7	8.2	10.8	6.4	7.5
Queue Length 50th (ft)	46	59	26	14	11	140	2	8
Queue Length 95th (ft)	m62	m84	45	35	m24	258	m6	50
Internal Link Dist (ft)		1404		707		132		267
Turn Bay Length (ft)	100		150		100		75	
Base Capacity (vph)	256	442	208	440	739	2378	378	2065
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	0.46	0.32	0.23	0.06	0.08	0.45	0.02	0.15

Intersection Summary

m Volume for 95th percentile queue is metered by upstream signal.

Queues
12: Chester Street & Nichols Avenue

2030 Total PM_Imp.syn
04/25/2019



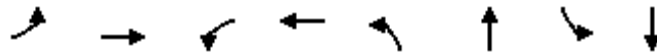
Lane Group	EBL	EBT	WBL	WBT	NBL	NBT	SBL	SBT
Lane Group Flow (vph)	98	142	250	140	68	356	22	1272
v/c Ratio	0.28	0.47	0.69	0.42	0.26	0.20	0.04	0.83
Control Delay	19.8	15.6	31.4	29.5	11.2	12.7	9.1	27.3
Queue Delay	0.0	0.0	0.0	0.0	0.0	0.0	0.0	0.0
Total Delay	19.8	15.6	31.4	29.5	11.2	12.7	9.1	27.3
Queue Length 50th (ft)	33	17	92	55	13	38	4	272
Queue Length 95th (ft)	60	62	140	101	35	94	15	#487
Internal Link Dist (ft)		1404		707		68		267
Turn Bay Length (ft)	100		150		100		75	
Base Capacity (vph)	374	476	360	460	262	1790	567	1537
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	0.26	0.30	0.69	0.30	0.26	0.20	0.04	0.83

Intersection Summary

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

Queues
12: Chester Street & Nichols Avenue

2040 Total AM.syn
04/25/2019



Lane Group	EBL	EBT	WBL	WBT	NBL	NBT	SBL	SBT
Lane Group Flow (vph)	120	145	47	29	62	1102	9	322
v/c Ratio	0.52	0.59	0.20	0.13	0.09	0.46	0.03	0.16
Control Delay	28.8	30.3	27.7	31.7	8.4	11.2	6.4	7.6
Queue Delay	0.0	0.0	0.0	0.0	0.0	0.0	0.0	0.0
Total Delay	28.8	30.3	27.7	31.7	8.4	11.2	6.4	7.6
Queue Length 50th (ft)	46	59	21	13	12	150	2	8
Queue Length 95th (ft)	m61	m83	44	36	m25	270	m7	51
Internal Link Dist (ft)		1404		707		132		267
Turn Bay Length (ft)	100		150		100		75	
Base Capacity (vph)	230	442	241	440	732	2371	368	2058
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	0.52	0.33	0.20	0.07	0.08	0.46	0.02	0.16

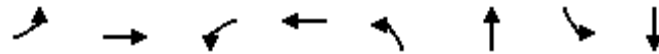
Intersection Summary

m Volume for 95th percentile queue is metered by upstream signal.

Queues
12: Chester Street & Nichols Avenue

2040 Total PM.syn

04/25/2019



Lane Group	EBL	EBT	WBL	WBT	NBL	NBT	SBL	SBT
Lane Group Flow (vph)	102	149	255	144	73	368	23	1313
v/c Ratio	0.31	0.47	0.80	0.45	0.28	0.20	0.04	0.82
Control Delay	21.4	15.0	42.1	30.0	10.7	11.8	8.2	25.6
Queue Delay	0.0	0.0	0.0	0.0	0.0	0.0	0.0	0.0
Total Delay	21.4	15.0	42.1	30.0	10.7	11.8	8.2	25.6
Queue Length 50th (ft)	35	17	97	56	13	37	4	276
Queue Length 95th (ft)	65	63	#165	103	34	93	15	#485
Internal Link Dist (ft)		1404		707		68		267
Turn Bay Length (ft)	100		150		100		75	
Base Capacity (vph)	335	480	320	455	262	1859	582	1604
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	0.30	0.31	0.80	0.32	0.28	0.20	0.04	0.82

Intersection Summary

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

Queues
14: Chester Street & Otero Avenue

2030 Total AM_Imp.syn
04/25/2019



Lane Group	WBL	NBT	SBL	SBT
Lane Group Flow (vph)	89	2064	2	238
v/c Ratio	0.46	0.73	0.02	0.08
Control Delay	44.6	6.4	2.5	1.6
Queue Delay	0.0	0.0	0.0	0.0
Total Delay	44.6	6.4	2.5	1.6
Queue Length 50th (ft)	48	207	0	11
Queue Length 95th (ft)	91	372	m1	21
Internal Link Dist (ft)	551	203		201
Turn Bay Length (ft)	75		75	
Base Capacity (vph)	359	2810	102	2916
Starvation Cap Reductn	0	0	0	0
Spillback Cap Reductn	0	0	0	0
Storage Cap Reductn	0	0	0	0
Reduced v/c Ratio	0.25	0.73	0.02	0.08

Intersection Summary

m Volume for 95th percentile queue is metered by upstream signal.

Queues
14: Chester Street & Otero Avenue

2030 Total PM_Imp.syn
04/25/2019

					
Lane Group	WBL	WBR	NBT	SBL	SBT
Lane Group Flow (vph)	454	8	620	5	1657
v/c Ratio	0.86	0.02	0.30	0.01	0.78
Control Delay	46.2	11.4	5.3	8.8	17.6
Queue Delay	0.0	0.0	0.0	0.0	0.0
Total Delay	46.2	11.4	5.3	8.8	17.6
Queue Length 50th (ft)	236	0	42	1	357
Queue Length 95th (ft)	#352	9	73	6	487
Internal Link Dist (ft)	551		203		201
Turn Bay Length (ft)	75			75	
Base Capacity (vph)	599	541	2094	436	2127
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	0.76	0.01	0.30	0.01	0.78

Intersection Summary

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

Queues
14: Chester Street & Otero Avenue

2040 Total AM.syn
04/25/2019



Lane Group	WBL	NBT	SBL	SBT
Lane Group Flow (vph)	89	2118	2	242
v/c Ratio	0.46	0.75	0.02	0.08
Control Delay	44.6	6.9	3.0	1.7
Queue Delay	0.0	0.0	0.0	0.0
Total Delay	44.6	6.9	3.0	1.7
Queue Length 50th (ft)	48	227	0	12
Queue Length 95th (ft)	91	404	m1	21
Internal Link Dist (ft)	551	203		201
Turn Bay Length (ft)	75		75	
Base Capacity (vph)	359	2810	94	2916
Starvation Cap Reductn	0	0	0	0
Spillback Cap Reductn	0	0	0	0
Storage Cap Reductn	0	0	0	0
Reduced v/c Ratio	0.25	0.75	0.02	0.08

Intersection Summary

m Volume for 95th percentile queue is metered by upstream signal.

Queues

2040 Total PM.syn

04/25/2019

14: Chester Street & Otero Avenue

					
Lane Group	WBL	WBR	NBT	SBL	SBT
Lane Group Flow (vph)	460	9	633	7	1714
v/c Ratio	0.86	0.02	0.30	0.02	0.81
Control Delay	46.5	11.1	5.4	8.8	19.0
Queue Delay	0.0	0.0	0.0	0.0	0.0
Total Delay	46.5	11.1	5.4	8.8	19.0
Queue Length 50th (ft)	238	0	44	2	386
Queue Length 95th (ft)	#377	10	75	8	521
Internal Link Dist (ft)	551		203		201
Turn Bay Length (ft)	75			75	
Base Capacity (vph)	599	542	2089	426	2117
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	0.77	0.02	0.30	0.02	0.81

Intersection Summary

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

Queues

2030 Total AM_Imp.syn

15: Quebec Street & County Line Road

04/25/2019



Lane Group	EBL	EBT	EBR	WBL	WBT	WBR	NBL	NBT	NBR	SBL	SBT
Lane Group Flow (vph)	142	1529	510	177	596	79	523	1305	824	150	669
v/c Ratio	0.67	0.79	0.32	0.61	0.29	0.09	0.92	0.77	1.12	0.64	0.56
Control Delay	77.6	40.6	0.5	50.5	33.9	17.7	78.6	44.4	103.3	74.3	45.0
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	77.6	40.6	0.5	50.5	33.9	17.7	78.6	44.4	103.3	74.3	45.0
Queue Length 50th (ft)	63	431	0	84	161	29	235	377	~808	67	180
Queue Length 95th (ft)	#102	492	0	124	197	74	#336	436	#1061	105	225
Internal Link Dist (ft)		1777			4399			862			5364
Turn Bay Length (ft)	175			250			325			250	
Base Capacity (vph)	216	1939	1583	292	2057	846	572	1686	738	241	1190
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	0.66	0.79	0.32	0.61	0.29	0.09	0.91	0.77	1.12	0.62	0.56

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.

Queues

2030 Total PM_Imp.syn

15: Quebec Street & County Line Road

04/25/2019



Lane Group	EBL	EBT	EBR	WBL	WBT	WBR	NBL	NBT	NBR	SBL	SBT
Lane Group Flow (vph)	140	859	653	766	1634	228	533	832	292	211	1376
v/c Ratio	1.01	0.93	0.41	0.99	0.88	0.30	0.84	0.44	0.28	0.70	1.00
Control Delay	141.5	71.5	0.8	78.2	35.0	2.4	65.6	33.0	8.6	72.6	70.8
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	141.5	71.5	0.8	78.2	35.0	2.4	65.6	33.0	8.6	72.6	70.8
Queue Length 50th (ft)	~64	274	0	330	403	24	232	201	74	93	~461
Queue Length 95th (ft)	#138	#357	0	m#431	445	m30	294	242	122	137	#579
Internal Link Dist (ft)		1777			4399			862			5364
Turn Bay Length (ft)	175			250			325			250	
Base Capacity (vph)	139	922	1583	775	1864	772	699	1887	1029	317	1382
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	1.01	0.93	0.41	0.99	0.88	0.30	0.76	0.44	0.28	0.67	1.00

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.

Queues

2040 Total AM.syn

15: Quebec Street & County Line Road

04/25/2019



Lane Group	EBL	EBT	EBR	WBL	WBT	WBR	NBL	NBT	NBR	SBL	SBT
Lane Group Flow (vph)	150	1596	536	185	623	84	549	1373	860	158	704
v/c Ratio	0.70	0.84	0.34	0.63	0.31	0.10	0.93	0.80	1.15	0.67	0.59
Control Delay	79.4	43.5	0.6	51.4	34.3	17.9	78.3	44.7	114.2	76.0	45.7
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	79.4	43.5	0.6	51.4	34.3	17.9	78.3	44.7	114.2	76.0	45.7
Queue Length 50th (ft)	67	464	0	87	169	32	246	399	~864	70	191
Queue Length 95th (ft)	#113	529	0	128	206	77	#351	460	#1119	109	237
Internal Link Dist (ft)		1777			4399			862			5364
Turn Bay Length (ft)	175			250			325			250	
Base Capacity (vph)	216	1902	1583	292	2016	834	597	1722	750	241	1190
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	0.69	0.84	0.34	0.63	0.31	0.10	0.92	0.80	1.15	0.66	0.59

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.

Queues

2040 Total PM.syn

15: Quebec Street & County Line Road

04/25/2019



Lane Group	EBL	EBT	EBR	WBL	WBT	WBR	NBL	NBT	NBR	SBL	SBT
Lane Group Flow (vph)	147	899	687	799	1706	240	560	875	305	222	1447
v/c Ratio	1.06	1.02	0.43	1.00	0.92	0.30	0.89	0.48	0.30	0.63	1.04
Control Delay	152.7	88.9	0.9	78.0	37.6	2.0	71.4	35.3	9.4	65.8	81.2
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	152.7	88.9	0.9	78.0	37.6	2.0	71.4	35.3	9.4	65.8	81.2
Queue Length 50th (ft)	~72	~298	0	332	417	25	247	217	81	97	~503
Queue Length 95th (ft)	#145	#397	0	m#426	m460	m30	#338	272	142	138	#602
Internal Link Dist (ft)		1777			4399			862			5364
Turn Bay Length (ft)	175			250			325			250	
Base Capacity (vph)	139	885	1583	801	1864	828	648	1810	1017	445	1392
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	1.06	1.02	0.43	1.00	0.92	0.29	0.86	0.48	0.30	0.50	1.04

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.

Queues

2030 Total AM_Imp.syn

16: Yosemite Street & County Line Road

04/25/2019

												
Lane Group	EBL	EBT	EBR	WBL	WBT	WBR	NBL	NBT	NBR	SBL	SBT	SBR
Lane Group Flow (vph)	851	1609	96	64	523	114	97	517	35	100	204	160
v/c Ratio	0.68	0.60	0.11	0.33	0.51	0.27	0.42	0.72	0.08	0.61	0.25	0.10
Control Delay	42.6	26.7	3.6	73.6	72.8	27.8	65.5	57.3	0.3	73.6	44.1	0.1
Queue Delay	0.0	0.0	0.0	0.0	0.0	0.0	0.0	0.0	0.0	0.0	0.0	0.0
Total Delay	42.6	26.7	3.6	73.6	72.8	27.8	65.5	57.3	0.3	73.6	44.1	0.1
Queue Length 50th (ft)	353	457	14	30	174	33	42	225	0	85	77	0
Queue Length 95th (ft)	m386	m464	m15	m46	216	m88	72	#316	0	144	117	0
Internal Link Dist (ft)		4399			1268			759			1074	
Turn Bay Length (ft)	200			550			250			225		
Base Capacity (vph)	1258	2693	895	216	1035	418	292	717	446	216	809	1583
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	0.68	0.60	0.11	0.30	0.51	0.27	0.33	0.72	0.08	0.46	0.25	0.10

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.

Queues

2030 Total PM_Imp.syn

16: Yosemite Street & County Line Road

04/25/2019

												
Lane Group	EBL	EBT	EBR	WBL	WBT	WBR	NBL	NBT	NBR	SBL	SBT	SBR
Lane Group Flow (vph)	239	888	167	149	2161	180	241	387	68	160	673	658
v/c Ratio	0.77	0.37	0.20	0.56	0.91	0.22	0.78	0.59	0.16	0.73	0.86	0.42
Control Delay	53.2	13.8	4.7	54.2	28.7	6.9	77.6	55.0	0.8	75.7	63.0	0.8
Queue Delay	0.0	0.0	0.0	0.0	0.0	0.0	0.0	0.0	0.0	0.0	0.0	0.0
Total Delay	53.2	13.8	4.7	54.2	28.7	6.9	77.6	55.0	0.8	75.7	63.0	0.8
Queue Length 50th (ft)	100	221	47	57	335	12	108	165	0	136	302	0
Queue Length 95th (ft)	m122	m243	m60	m70	m383	m23	#165	228	0	209	#400	0
Internal Link Dist (ft)		4399			1268			759			1074	
Turn Bay Length (ft)	200			550			250			225		
Base Capacity (vph)	317	2429	843	267	2365	802	317	661	424	268	781	1583
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	0.75	0.37	0.20	0.56	0.91	0.22	0.76	0.59	0.16	0.60	0.86	0.42

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.

Queues

2040 Total AM.syn

16: Yosemite Street & County Line Road

04/25/2019

												
Lane Group	EBL	EBT	EBR	WBL	WBT	WBR	NBL	NBT	NBR	SBL	SBT	SBR
Lane Group Flow (vph)	889	1679	100	67	546	120	101	541	36	105	215	166
v/c Ratio	0.71	0.62	0.11	0.35	0.53	0.29	0.43	0.76	0.08	0.62	0.27	0.10
Control Delay	42.8	26.9	3.4	74.2	73.7	29.6	65.6	59.3	0.4	74.2	44.4	0.1
Queue Delay	0.0	0.0	0.0	0.0	0.0	0.0	0.0	0.0	0.0	0.0	0.0	0.0
Total Delay	42.8	26.9	3.4	74.2	73.7	29.6	65.6	59.3	0.4	74.2	44.4	0.1
Queue Length 50th (ft)	373	477	14	31	182	39	44	238	0	90	82	0
Queue Length 95th (ft)	m404	m486	m13	m47	225	m93	73	#342	0	150	123	0
Internal Link Dist (ft)		4399			1268			759			1074	
Turn Bay Length (ft)	200			550			250			225		
Base Capacity (vph)	1258	2691	894	216	1035	418	292	709	443	216	805	1583
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	0.71	0.62	0.11	0.31	0.53	0.29	0.35	0.76	0.08	0.49	0.27	0.10

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.

Queues

2040 Total PM.syn

16: Yosemite Street & County Line Road

04/25/2019

												
Lane Group	EBL	EBT	EBR	WBL	WBT	WBR	NBL	NBT	NBR	SBL	SBT	SBR
Lane Group Flow (vph)	249	931	176	157	2260	189	253	406	73	167	704	685
v/c Ratio	0.80	0.38	0.21	0.59	0.96	0.24	0.81	0.61	0.17	0.76	0.90	0.43
Control Delay	53.1	14.4	4.9	55.0	32.2	7.6	80.3	55.7	0.9	78.9	67.4	0.9
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	53.1	14.4	4.9	55.0	32.2	7.6	80.3	55.7	0.9	78.9	67.4	0.9
Queue Length 50th (ft)	102	232	48	61	369	17	113	175	0	142	319	0
Queue Length 95th (ft)	m122	m246	m64	m71	m389	m22	#178	236	0	220	#430	0
Internal Link Dist (ft)		4399			1268			759			1074	
Turn Bay Length (ft)	200			550			250			225		
Base Capacity (vph)	317	2429	848	267	2362	802	317	661	424	255	778	1583
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	0.79	0.38	0.21	0.59	0.96	0.24	0.80	0.61	0.17	0.65	0.90	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.

Queues

2030 Total AM_Imp.syn

17: Chester Street & County Line Road

04/25/2019



Lane Group	EBL	EBT	EBR	WBL	WBT	NBL	NBT	NBR	SBL	SBT	SBR
Lane Group Flow (vph)	484	1245	23	147	1914	15	398	174	171	74	97
v/c Ratio	0.93	0.40	0.02	0.56	1.34dr	0.11	0.82	0.47	0.84	0.22	0.06
Control Delay	58.2	6.3	0.0	74.2	18.3	64.2	71.4	11.8	96.5	51.2	0.1
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	58.2	6.3	0.0	74.2	18.3	64.2	71.4	11.8	96.5	51.2	0.1
Queue Length 50th (ft)	224	65	0	68	184	6	181	0	53	54	0
Queue Length 95th (ft)	#326	72	m0	m100	246	19	#256	67	#98	109	0
Internal Link Dist (ft)		1268			1351		374			581	
Turn Bay Length (ft)	550			525		150			150		125
Base Capacity (vph)	521	3111	1001	292	3180	139	484	367	203	338	1583
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	0.93	0.40	0.02	0.50	0.60	0.11	0.82	0.47	0.84	0.22	0.06

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.

dr Defacto Right Lane. Recode with 1 though lane as a right lane.

Queues

2030 Total PM_Imp.syn

17: Chester Street & County Line Road

04/25/2019



Lane Group	EBL	EBT	EBR	WBL	WBT	NBL	NBT	NBR	SBL	SBT	SBR
Lane Group Flow (vph)	245	732	64	399	1847	127	261	265	1046	504	597
v/c Ratio	0.69	0.49	0.12	0.67	0.81	0.55	0.48	0.57	0.85	0.81	0.38
Control Delay	89.2	60.9	12.4	68.8	52.8	70.5	56.2	11.1	56.0	53.1	0.7
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	89.2	60.9	12.4	68.8	52.8	70.5	56.2	11.1	56.0	53.1	0.7
Queue Length 50th (ft)	118	198	12	147	369	56	113	0	307	406	0
Queue Length 95th (ft)	164	245	m38	204	418	91	161	83	359	#581	0
Internal Link Dist (ft)		1268			1351		374			581	
Turn Bay Length (ft)	550			525		150			150		125
Base Capacity (vph)	394	1487	548	597	2292	241	543	467	1312	620	1583
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	0.62	0.49	0.12	0.67	0.81	0.53	0.48	0.57	0.80	0.81	0.38

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.

Queues

2040 Total AM.syn

17: Chester Street & County Line Road

04/25/2019



Lane Group	EBL	EBT	EBR	WBL	WBT	NBL	NBT	NBR	SBL	SBT	SBR
Lane Group Flow (vph)	497	1309	24	154	1983	15	409	183	174	75	98
v/c Ratio	1.00	0.43	0.02	0.58	1.39dr	0.11	0.85	0.49	0.63	0.21	0.06
Control Delay	73.7	6.9	0.0	74.2	21.0	64.2	73.4	11.9	73.0	49.2	0.1
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	73.7	6.9	0.0	74.2	21.0	64.2	73.4	11.9	73.0	49.2	0.1
Queue Length 50th (ft)	~233	72	0	72	214	6	186	0	53	53	0
Queue Length 95th (ft)	#347	80	m0	m103	275	19	#268	69	81	109	0
Internal Link Dist (ft)		1268			1351		374			581	
Turn Bay Length (ft)	550			525		150			150		125
Base Capacity (vph)	495	3030	977	292	3141	139	484	374	277	365	1583
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	1.00	0.43	0.02	0.53	0.63	0.11	0.85	0.49	0.63	0.21	0.06

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.
- dr Defacto Right Lane. Recode with 1 though lane as a right lane.

Queues

2040 Total PM.syn

17: Chester Street & County Line Road

04/25/2019



Lane Group	EBL	EBT	EBR	WBL	WBT	NBL	NBT	NBR	SBL	SBT	SBR
Lane Group Flow (vph)	253	769	67	418	1930	134	271	279	1075	521	616
v/c Ratio	0.76	0.58	0.13	0.65	0.86	0.81	0.49	0.58	0.84	0.76	0.39
Control Delay	94.9	71.5	16.0	67.0	55.7	97.2	56.0	11.0	54.1	46.3	0.7
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	94.9	71.5	16.0	67.0	55.7	97.2	56.0	11.0	54.1	46.3	0.7
Queue Length 50th (ft)	122	228	16	156	395	61	116	0	315	399	0
Queue Length 95th (ft)	m#168	275	m44	209	442	#118	166	86	363	544	0
Internal Link Dist (ft)		1268			1351		374			581	
Turn Bay Length (ft)	550			525		150			150		125
Base Capacity (vph)	343	1337	505	648	2245	165	558	484	1386	683	1583
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	0.74	0.58	0.13	0.65	0.86	0.81	0.49	0.58	0.78	0.76	0.39

Intersection Summary

95th percentile volume exceeds capacity, queue may be longer.

Queue shown is maximum after two cycles.

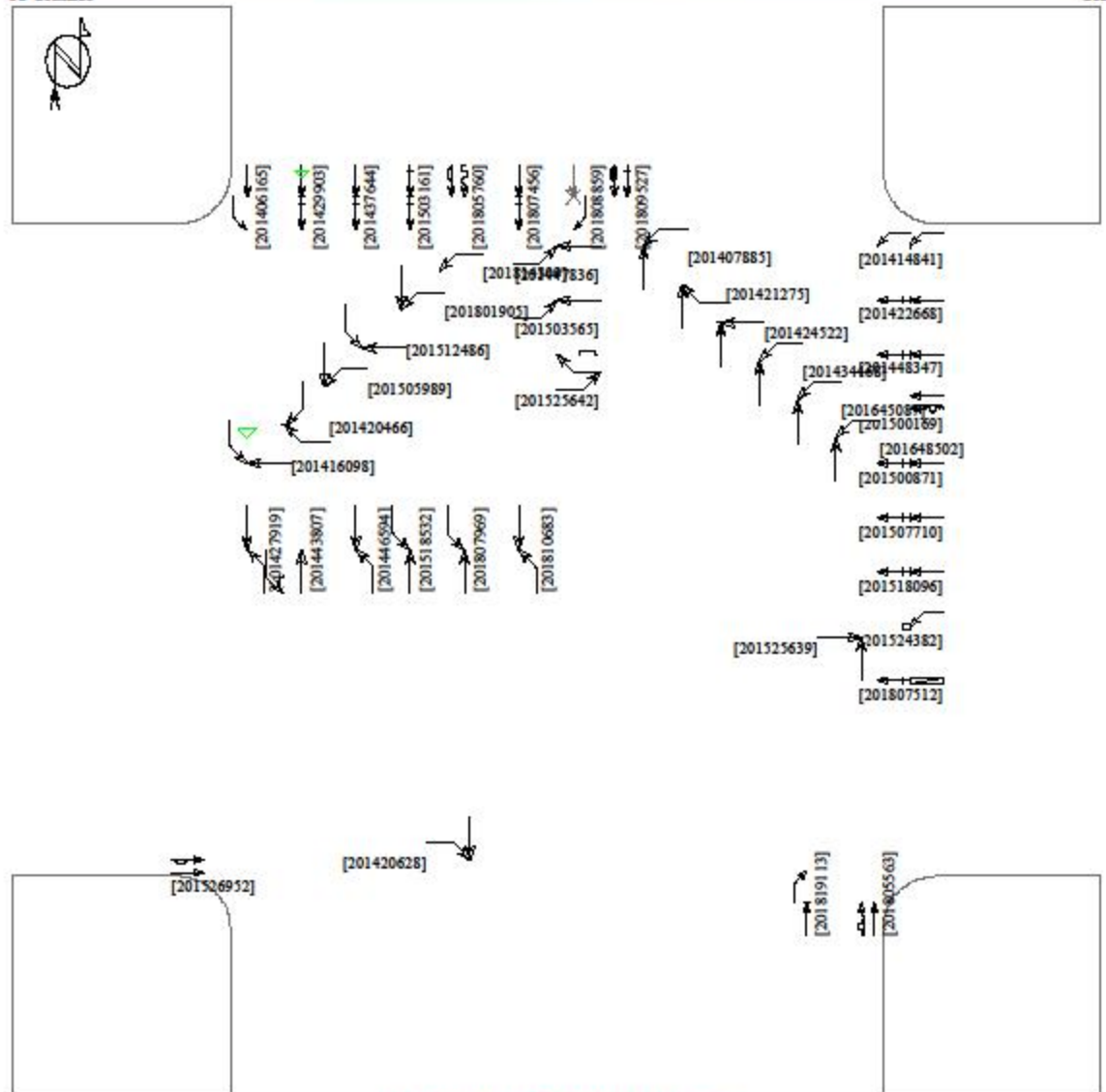
m Volume for 95th percentile queue is metered by upstream signal.

APPENDIX G

Crash Data Summary

E COUNTY LINE RD & S CHESTER ST
1/1/2014 - 1/1/2019

Clear



(25) crashes could not be placed in this schematic

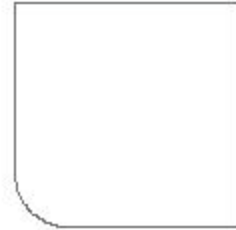
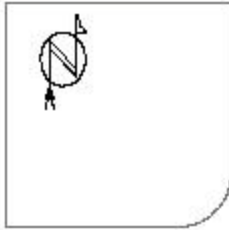
Straight	Parked	Pedestrian	Fixed objects:	
Stopped	Erratic	Bicycle	General	Pole
Unknown	Out of control	Injury	Signal	Curb
Backing	Right turn	Fatality	Tree	Animal
Overtaking	Left turn	Nighttime	3rd vehicle	
Sideswipe	U-turn	DUI	Extra data	

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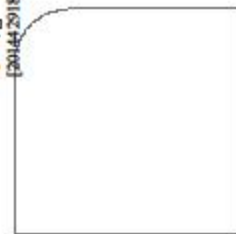
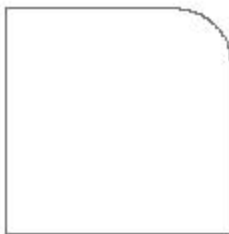
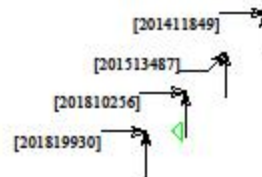
E MINERAL AVE & S CHESTER ST 1/1/2014 - 1/1/2019

13 Crashes

Clear



[201447605]



(5) crashes could not be placed in this schematic

- ← Straight
- ← Stopped
- ← Unknown
- ← Backing
- ← Overtaking
- ← Sideswipe

- Parked
- Erratic
- Out of control
- Right turn
- Left turn
- U-turn

- Pedestrian
- Bicycle
- Injury
- Fatality
- Nighttime
- DUI

Fixed objects:

- General
- Signal
- Tree
- Pole
- Curb
- Animal
- 3rd vehicle
- Extra data

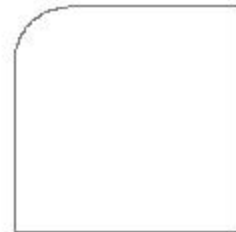
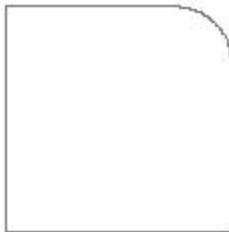
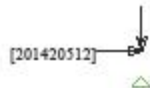
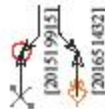
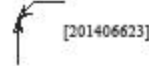
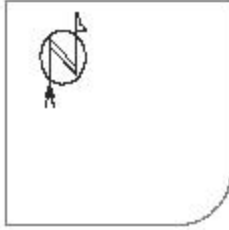
Pd Programmata, Inc. 7/19/2019

Crash Magic Online

E NICHOLS AVE & S CHESTER ST 1/1/2014 - 1/1/2019

8 Crashes

Clear



(3) crashes could not be placed in this schematic

- ← Straight
- ← Stopped
- ← Unknown
- ← Backing
- ← Overtaking
- ← Sideswipe

- Parked
- Erratic
- Out of control
- Right turn
- Left turn
- U-turn

- Pedestrian
- Bicycle
- Injury
- Fatality
- Nighttime
- DUI

Fixed objects:

- ☐ General
- ☐ Signal
- ☐ Tree
- ☐ Pole
- ☐ Curb
- ☐ Animal
- 3rd vehicle
- Extra data

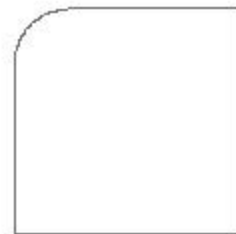
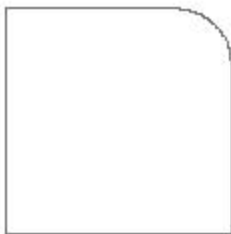
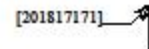
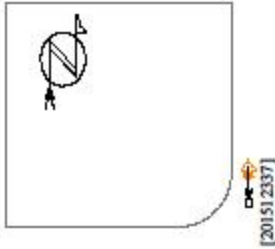
Pd' Programminz, Inc. 7/19/2019

Crash Magic Online

E PANORAMA CIR & S CHESTER ST 1/1/2014 - 1/1/2019

9 Crashes

Clear



(6) crashes could not be placed in this schematic

- ← Straight
- ← Stopped
- ← Unknown
- ← Backing
- ← Overtaking
- ← Sideswipe

- Parked
- Erratic
- Out of control
- Right turn
- Left turn
- U-turn

- Pedestrian
- Bicycle
- Injury
- Fatality
- Nighttime
- DUI

Fixed objects:

- ☐ General
- ☐ Signal
- ☐ Tree
- ☐ Pole
- ☐ Curb
- ☐ Animal
- 3rd vehicle
- Extra data

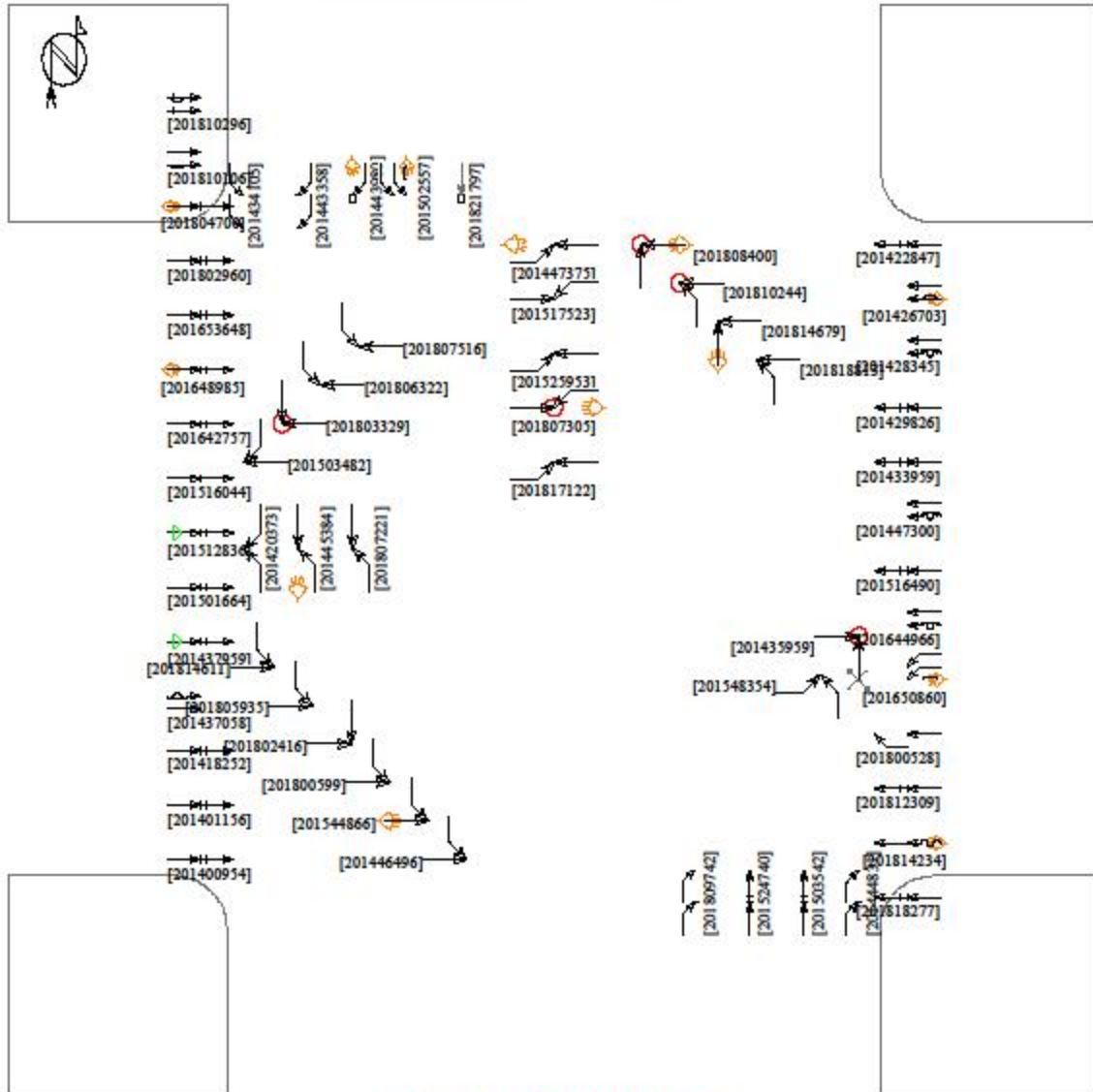
Pd Programmata, Inc. 7/19/2019

Crash Magic Online

E DRY CREEK RD & S CHESTER ST 1/1/2014 - 1/1/2019

108 Crashes

Clear



(47) crashes could not be placed in this schematic

← Straight	Parked	Pedestrian	Fixed objects:	
← Stopped	Erratic	Bicycle	General	Pole
← Unknown	Out of control	Injury	Signal	Curb
← Backing	Right turn	Fatality	Tree	Animal
← Overtaking	Left turn	Nighttime	3rd vehicle	
← Sideswipe	U-turn	DUI	Extra data	

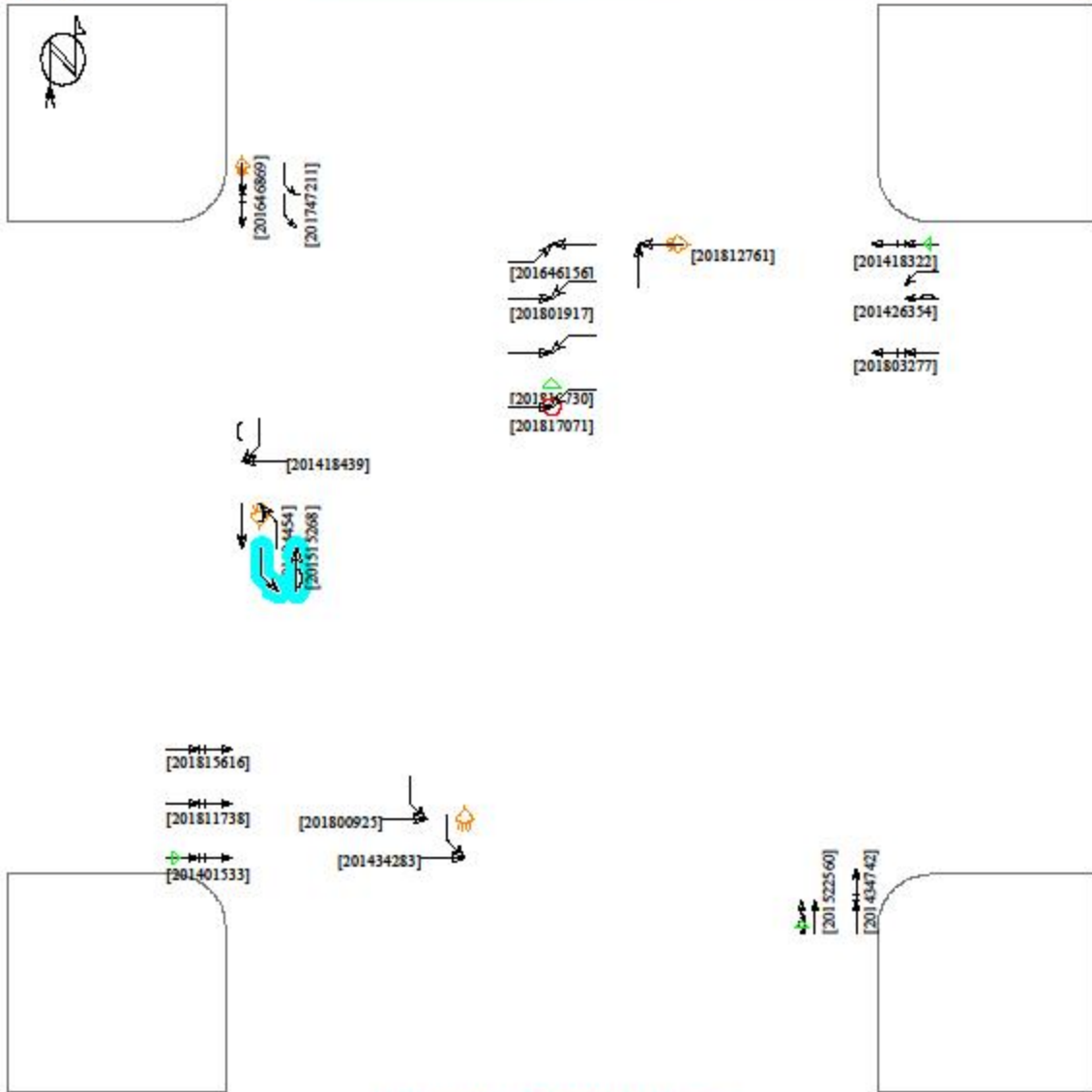
Pd Programming, Inc. 7/19/2019

Crash Magic Online

E DRY CREEK RD & S YOSEMITE ST 1/1/2014 - 1/1/2019

42 Crashes

Clear



(22) crashes could not be placed in this schematic

- ← Straight
- ← Stopped
- ← Unknown
- ← Backing
- ← Overtaking
- ← Sideswipe

- ▭ Parked
- ⚡ Erratic
- ⚡ Out of control
- ↘ Right turn
- ↙ Left turn
- ↻ U-turn

- ⊗ Pedestrian
- ⊗ Bicycle
- Injury
- Fatality
- 👤 Nighttime
- 🚔 DUI

Fixed objects:

- General
- ▣ Signal
- Tree
- ▣ Pole
- ▣ Curb
- ⌘ Animal
- ◀ 3rd vehicle
- ✱ Extra data

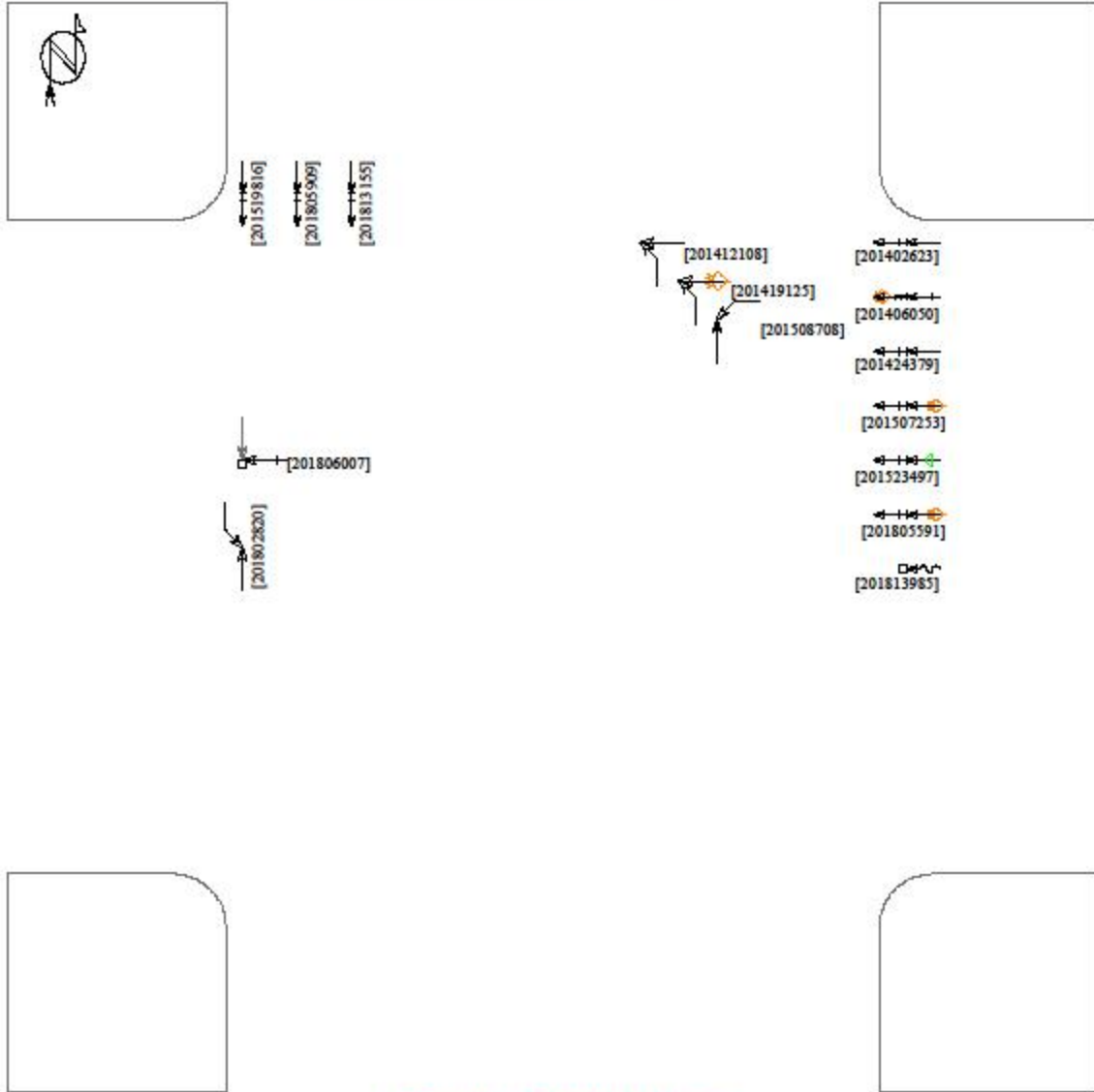
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Crash Magic Online

E COUNTY LINE RD & S YOSEMITE ST 1/1/2014 - 1/1/2019

28 Crashes

Clear



(13) crashes could not be placed in this schematic

Straight
 Stopped
 Unknown
 Backing
 Overtaking
 Sideswipe

Parked
 Erratic
 Out of control
 Right turn
 Left turn
 U-turn

Pedestrian
 Bicycle
 Injury
 Fatality
 Nighttime
 DUI

Fixed objects:

General
 Signal
 Tree
 Pole
 Curb
 Animal
 3rd vehicle
 Extra data

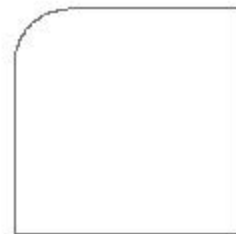
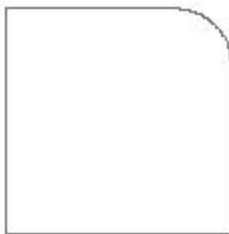
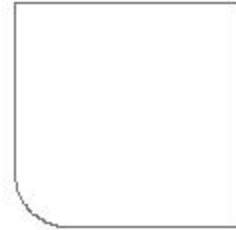
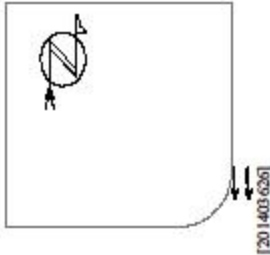
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Crash Magic Online

E MINERAL AVE & S YOSEMITE ST 1/1/2014 - 1/1/2019

2 Crashes

Clear



(1) crashes could not be placed in this schematic

- ← Straight
- ← Stopped
- ← Unknown
- ← Backing
- ← Overtaking
- ← Sideswipe

- Parked
- Erratic
- Out of control
- Right turn
- Left turn
- U-turn

- Pedestrian
- Bicycle
- Injury
- Fatality
- Nighttime
- DUI

Fixed objects:

- ☐ General
- ☐ Signal
- ☐ Tree
- ☐ Pole
- ☐ Curb
- ☐ Animal
- 3rd vehicle
- Extra data

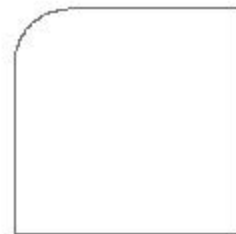
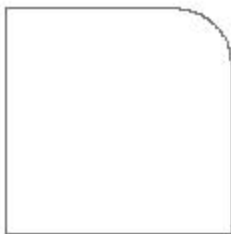
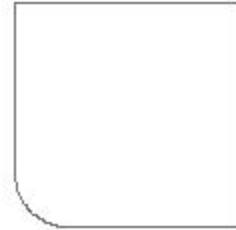
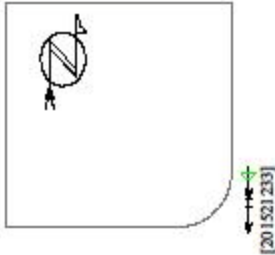
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Crash Magic Online

E NICHOLS AVE & S YOSEMITE ST 1/1/2014 - 1/1/2019

4 Crashes

Clear



(3) crashes could not be placed in this schematic

- ← Straight
- ← Stopped
- ← Unknown
- ← Backing
- ← Overtaking
- ← Sideswipe

- Parked
- Erratic
- Out of control
- Right turn
- Left turn
- U-turn

- Pedestrian
- Bicycle
- Injury
- Fatality
- Nighttime
- DUI

Fixed objects:

- ☐ General
- ☐ Signal
- ☐ Tree
- ☐ Pole
- ☐ Curb
- ☐ Animal
- 3rd vehicle
- Extra data

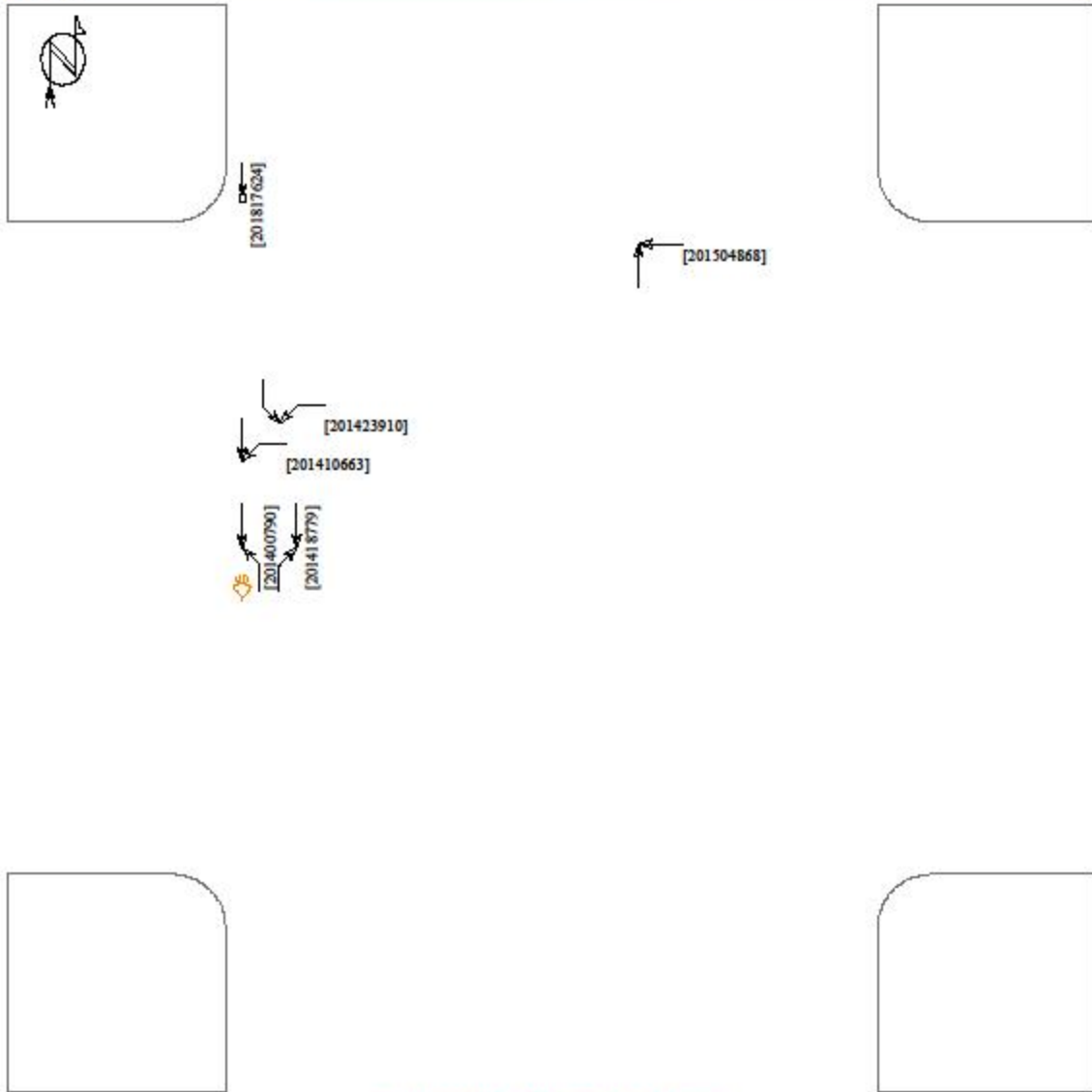
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Crash Magic Online

E PHILLIPS PL & S YOSEMITE ST 1/1/2014 - 1/1/2019

10 Crashes

Clear



(4) crashes could not be placed in this schematic

← Straight
 ← Stopped
 ← Unknown
 ← Backing
 ← Overtaking
 ← Sideswipe

[] Parked
 [] Erratic
 [] Out of control
 [] Right turn
 [] Left turn
 [] U-turn

× Pedestrian
 × Bicycle
 ○ Injury
 ● Fatality
 ☹ Nighttime
 ☹ DUI

Fixed objects:

□ General
 □ Signal
 □ Tree
 □ Pole
 □ Curb
 ☹ Animal
 < 3rd vehicle
 * Extra data

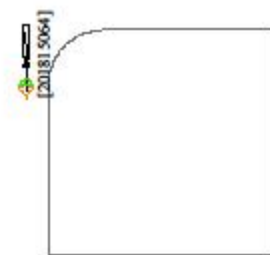
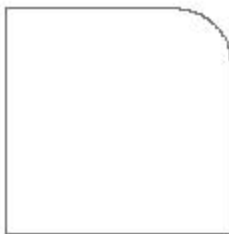
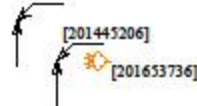
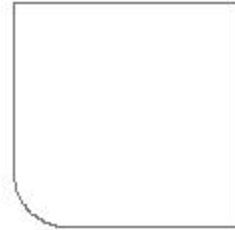
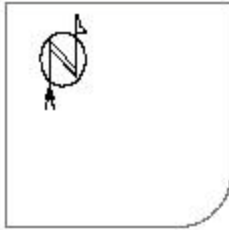
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E OTERO AVE & S CHESTER ST 1/1/2014 - 1/1/2019

7 Crashes

Clear



(3) crashes could not be placed in this schematic

- ← Straight
- ← Stopped
- ← Unknown
- ← Backing
- ← Overtaking
- ← Sideswipe

- Parked
- Erratic
- Out of control
- Right turn
- Left turn
- U-turn

- Pedestrian
- Bicycle
- Injury
- Fatality
- Nighttime
- DUI

Fixed objects:

- ☐ General
- ☐ Signal
- ☐ Tree
- ☐ Pole
- ☐ Curb
- ☐ Animal
- 3rd vehicle
- Extra data

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APPENDIX H

Conceptual Site Plan

A Walkable, Mixed-Use Community

Jones District will be a distinct urban node defined by high-quality, active pedestrian streets, diverse amenities, inviting open spaces and stunning mountain views. A variety of commercial and residential developments will enjoy a dynamic urban environment and flexible building opportunities.

36 gross acres
31 net acres

